

Conceptual Drainage Study For The Eastside Properties

Prepared for:

The Landwell Company
875 West Warm Springs Road
Henderson, NV 89015

Prepared by:

PBS&J
2270 Corporate Circle, Suite 100
Henderson, Nevada 89074-6382

March 4, 2005
PBS&J Reference No.: 511629.28





**CITY OF HENDERSON PUBLIC WORKS
HYDROLOGY STUDY SUBMITTAL FORM**
240 Water Street, Suite 210, Henderson, NV 89015
Questions? (702) 565-2867 or 565-2815

Date: March 4, 2005

Hydrology Study Title: Conceptual Drainage Study For The Eastside Properties

This submittal is: ☒ **New** ☐ **Addendum** (response to comments) ☐ **Update** after original approval
☐ **Supplemental** information for a previous submittal ☐ **Other** _____

INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED:

For all submittals:

- ☒ Completed **Hydrology Study Submittal Form** (this form)
- ☒ **Two (2) copies** of the hydrology study and related maps.
- ☒ **Large maps folded** to the approximate size of the study.
- ☒ Completed **Standard Form 1**, bound into the first page of each copy of the study.
- ☒ **Nevada Professional Engineer's seal, signed and dated**, must be included on the Standard Form 1.

For new submittals:

- ☐ Community Development Permit Number _____
(design review, tentative map, parcel map, etc.) (4 letters) (10-digit number)
- ☒ **\$260.00 submittal fee.**
- ☒ Completed **Standard Form 2**, bound into each copy, behind the Standard Form 1.

For addendum (response to comments):

- ☐ Copy of City of Henderson **comment letter**, bound into each copy, behind the Standard Form 1.

For update to an approved study:

- ☐ **\$54.00** submittal fee for updates within a year of the approval. **\$260.00** fee for submittals over a year after original approval.
- ☐ Copy of **approval letter** for original study, bound into each copy, behind the Standard Form 1.

The above list is the **minimum** required for **submittal**. For adequate review, all items identified in the Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual must be included. Please pay special attention to the City of Henderson section of the manual.

CITY OF HENDERSON USE ONLY: Accepted by: (print name) _____

KIVA # _____

COH Date Stamp: _____



March 4, 2005

Mr. Albert Jankowiak, P.E.
Flood Control Engineer
City of Henderson
240 Water Street
Henderson, Nevada 89009

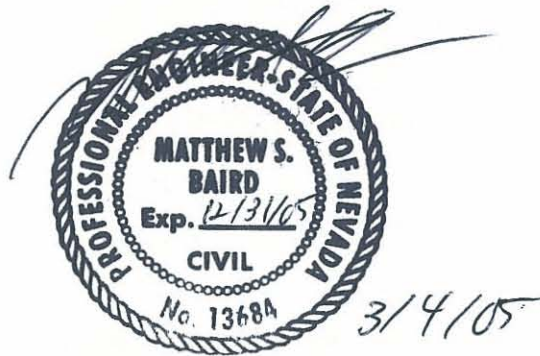
**SUBJECT: CONCEPTUAL DRAINAGE STUDY FOR THE EASTSIDE PROPERTIES
PBS&J REFERENCE NUMBER 511629.28**

Dear Mr. Jankowiak,

Submitted for your review are two copies of the *Conceptual Drainage Study For The Eastside Properties*. If you have any questions regarding this submittal please contact our office at (702) 263-7275

Sincerely,

PBS&J



Matt Baird, P.E., C.F.M.
Senior Program Manager

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Eastside Properties Date: March 4, 2005
Location of Development: a) Descriptive (Cross Streets) North/South Pabco Road East/West Boulder Highway/
b) Sect. 36 Twn. 21S Rng. 62E
31, 32 21S 63E
5, 6, 7, 8, 18 22S 63E

Assessors Parcel No: PT 160-31-001 / PT 160-31-002 / PT 160-31-003 / PT 160-31-004 / PT 160-31-007 / PT 160-31-008 / PT 160-32-008 / PT 161-36-001 / PT 161-36-002
PT 161-36-003 / PT 161-36-004 / PT 161-36-005 / PT 161-36-006 / PT 179-05-001 / PT 179-05-002 / PT 179-05-003 / PT 179-05-004 / PT 179-05-005
PT 179-05-006 / PT 179-05-007 / PT 179-05-008 / PT 179-06-001 / PT 179-06-002 / PT 179-06-003 / PT 179-06-004 / PT 179-06-005 / PT 179-06-006
PT 179-06-007 / PT 179-06-008 / PT 179-07-001 / PT 179-07-002 / PT 179-07-003 / PT 179-07-004 / PT 179-07-005 / PT 179-07-006 / PT 179-07-007
PT 179-07-008 / PT 179-08-001 / PT 179-08-002 / PT 179-08-003 / PT 179-07-007 / PT 179-18-005

Name of Owner: The Landwell Company

Telephone No: (702) 567-0400

Facsimile No: (702) 567-0475

Address: 875 West Warm Springs Road

Henderson, NV 89015

Contact Person Name: Matt Baird

Telephone No: (702) 263-7275

Firm: PBS & J

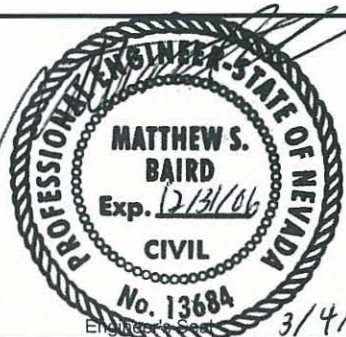
Address: 2270 Corporate Circle, Suite 100

Henderson, Nevada 89074

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☒	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit	☐	

- Total Owned Land Area: At Site: 2,200 +/- acres Being Developed/Disturbed:
- Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☒ YES NO
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ YES NO
- Proposed type of development (Residential, Commercial, Etc.)? Residential, Commercial, Parks, Schools
- Approximate upstream land area which drains to the subject site? 2,000 +/- acres
- Has the site drainage been evaluated in the past? YES* ☒ NO If yes, please identify documentation:
- If known, please briefly identify the proposed discharge point(s) of runoff from the site:
Northern Section of Proposed Development (Approx. 4,500 feet North of Athens Avenue)
- Briefly describe your proposed schedule for the subject project: ASAP



Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

* Review and concurrence of the Clark County Regional Flood Control District is required.

Local Entity File No.

Revision	Date

PBS&J Job Number:

51-1629

STANDARD FORM 1

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

Project Name: The Eastside Properties	Map ID:
Firm Name: PBS&J	Engineer: Matt Baird, P.E.
Address: 2270 CORPORATE CIRCLE, SUITE 100	
City: LAS VEGAS	State: NEVADA Zip: 89074-6382
Phone Number: (702) 263-7275	Fax Number: (702) 263-7200
Property Owner: The Landwell Company	
Address: 875 West Warm Springs Road	
City: Henderson	State: Nevada Zip: 89015
Reviewed By:	Date Received: Date Accepted for Review:

The following checklist is intended as a guide for the engineer preparing a Technical Drainage Study to submit the local entity and Clark County Regional Flood Control District (if necessary). The listed items are the minimum information required prior to the entity performing a review. The engineer will remain responsible to ensure the Technical Drainage Study is prepared within the guidelines as set forth in the Clark County Regional Flood Control District (CCRFCD) Hydrologic Criteria and Drainage Design Manual (MANUAL).

This document is intended as an aid in preparing Technical Drainage Studies. Each study submitted is reviewed for compliance with local and regional criteria. This form is not intended to be all inclusive and does not limit extent of the information, calculations or exhibits which may be necessary to properly evaluate the intended land use.

If items are not applicable for the subject site, provide N/A.

I. GENERAL REQUIREMENT

Yes	No	
<u>X</u>	<u> </u>	Design Manual Standard Form 1 with the engineer's seal and signature.
<u>X</u>	<u> </u>	Design Manual Standard Form 4.
<u>X</u>	<u> </u>	2 copies of the 24" x 36" Drainage Plan.
<u>N/A</u>	<u> </u>	A notarized letter from the adjacent property owner(s) allowing off-site grading or discharge.

REFERENCE: 51-1629

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

II. MAPS AND EXHIBITS

Yes	No	
<u>X</u>	<u> </u>	A copy of a current Flood Insurance Rate Map (FIRM) with the site delineated.
<u>X</u>	<u> </u>	A copy of the current CCRFCD Master Plan Update Figure, (F-x), for Flood Control Facilities and Environmental areas with the site delineated.
<u>X</u>	<u> </u>	Off-site drainage basin maps for existing, interim and future conditions showing the existing topography, basin boundaries, concentration points, and flows in cfs.
<u>X</u>	<u> </u>	On-site drainage basin maps for existing and proposed conditions showing the existing topography, basin boundaries, concentration points, and on-site and off-site flows in cfs.
<u>X</u>	<u> </u>	Vicinity Map with local and major cross streets identified and a north arrow.

III. DRAINAGE PLAN

Yes	No	
<u>N/A</u>	<u> </u>	Sheet size: 24" x 36" sealed by a registered engineer in the State of Nevada.
<u> </u>	<u>X</u>	Minimum scale: 1" = 60'.
<u>X</u>	<u> </u>	Project name.
<u>N/A</u>	<u> </u>	Vicinity Map with local and major cross streets.
<u>N/A</u>	<u> </u>	Revision box.
<u>X</u>	<u> </u>	North arrow and bar scale.
<u>X</u>	<u> </u>	Engineer's/consultant's address and phone number.
<u>N/A</u>	<u> </u>	Elevation datum and benchmark.
<u>X</u>	<u> </u>	Legend for symbols and abbreviations.
<u>N/A</u>	<u> </u>	Cut/fill scarps, where applicable.
<u>N/A</u>	<u> </u>	Street names, grades, widths.
<u>N/A</u>	<u> </u>	Proposed future and existing spot grades for top of curbs and street crowns at lot lines, grade breaks, and along curb returns on both sides of the street.

REFERENCE: 51-1629

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
<u>X</u>	<u> </u>	Existing contours encompassing the site and 100 feet beyond with spot elevations for important locations, where appropriate.
<u>N/A</u>	<u> </u>	Minimum finish floor elevations with top-of-curb elevations at upstream end of lot.
<u>N/A</u>	<u> </u>	Proposed typical street sections.
<u>N/A</u>	<u> </u>	Streets with off-set crowns.
<u>X</u>	<u> </u>	Proposed contours or spot elevations in sufficient detail to exhibit intended drainage patterns and slopes
<u>X</u>	<u> </u>	Property lines.
<u>N/A</u>	<u> </u>	Right-of-way lines and widths, existing and proposed.
<u>N/A</u>	<u> </u>	Existing improvements and their elevations.
<u>X</u>	<u> </u>	Delineation of proposed on-site drainage basins indicating area and 10-year and 100-year storm peak flows at basin concentration points.
<u>N/A</u>	<u> </u>	Concentration points and drainage flow direction with Q_{100} and V_{100} and D_{100} in streets.
<u>X</u>	<u> </u>	Cumulative flows, velocity, and drainage of flow at upstream and downstream ends of site for the 10-year and 100-year flows.
<u>X</u>	<u> </u>	Location and cross-section of street capacity calculations.
<u>N/A</u>	<u> </u>	Cross-sectional detail for channels, including cutoff wall locations.
<u>N/A</u>	<u> </u>	Existing and proposed drainage facilities, appurtenances, and connections, (i.e., Sidewalk, ditches, swales, storm drain systems, unimproved and improved channels, and culverts, etc.) stating size, material, shape, and slope with plan and profile and HGL calculations.
<u>N/A</u>	<u> </u>	Existing and proposed drainage easements and widths shown with sufficient detail. A cross sectional detail must be provided that shows appropriate lining and reinforcement.
<u>N/A</u>	<u> </u>	Location and detail of existing, proposed, and future block wall openings. Minimum size is 16" x 48". Wrought iron gate is required for flows > 10 cfs.
<u>N/A</u>	<u> </u>	Location and detail of flood walls illustrating depth of flow, proposed grouting height, etc.

REFERENCE: 51-1629

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

III. DRAINAGE PLAN (Continued)

Yes	No	
<u>N/A</u>	<u> </u>	Perimeter retaining wall locations. All existing and proposed walls (retaining screen and flood) must be shown with adjacent ground elevations. Flood walls with 8-inch concrete masonry unit.
<u>N/A</u>	<u> </u>	Building and/or lot numbers.
<u>X</u>	<u> </u>	Alignment of all existing, proposed, or future Regional Facilities adjacent to the site.
<u>N/A</u>	<u> </u>	Limits of existing floodplain based on current FIRM or best available information; limits of proposed floodplains based on best available information.
<u>N/A</u>	<u> </u>	For areas in Zone A, AE, AH and AO, base flood elevations(BFEs) must be shown for each lot; BFEs may be listed on each lot, or in a table. Finish floor elevations must be a minimum of 18 inches above BFE.
<u>N/A</u>	<u> </u>	Appropriately elevated "humps" 6 inches above the 100 year water surface elevation at site accesses where the intent is to protect the site from the Q_{100} flows.
<u>N/A</u>	<u> </u>	Street slopes perimeter and interior streets. The minimum slope is 0.4 percent.

IV. HYDROLOGIC ANALYSIS

Yes	No	
<u>X</u>	<u> </u>	Appropriate soil information and Soils Map for existing and future conditions with subbasins and property delineated.
<u>X</u>	<u> </u>	Input and output information for existing conditions from computer models (HEC-1 and TR-55). The flow routing diagram must be provided with HEC-1 models.
<u>X</u>	<u> </u>	Input and output information for future conditions from computer models (HEC-1 and TR-55). The flow routing diagram must be provided with HEC-1 models.
<u>N/A</u>	<u> </u>	Use of correct precipitation values in and around the McCarran Airport rainfall area.
<u>X</u>	<u> </u>	A discussion in the text of the hydrologic analysis justifying subbasin boundaries and cutoffs, supporting assumptions, and calculations.
<u>X</u>	<u> </u>	A summary table of stormwater flows showing basin area, Q_{10} and Q_{100} for both individual basins and combined basin flows, where applicable.
<u>X</u>	<u> </u>	Copies of supporting technical information referenced from a previously approved study and a statement accepting these results.
<u>X</u>	<u> </u>	On-site facilities must perpetuate flows through or around the site without significantly impacting adjacent property owners in accordance with current Nevada Drainage Law.

REFERENCE: 51-1629

STANDARD FORM 2

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE SUBMITTAL CHECKLIST

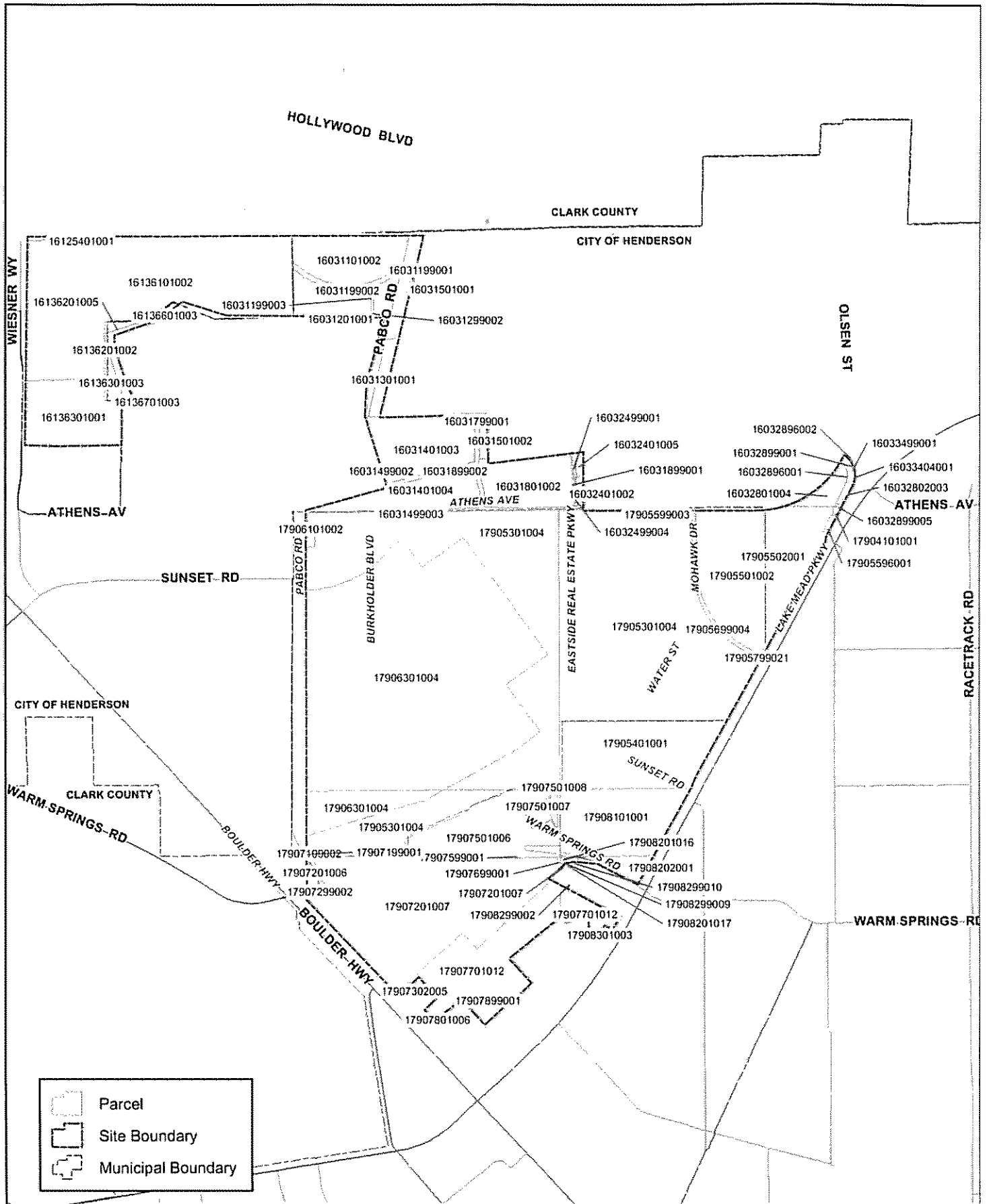
V. HYDRAULIC ANALYSIS

Yes	No	
<u>N/A</u>	<u> </u>	Flow split calculations and supporting documentation or reference for the method of flow split calculations used.
<u>X</u>	<u> </u>	Normal depth street flow calculations and cross section diagrams for all interior and perimeter streets. Provide "d x v" products for the Q_{100} and Q_{10} flows representing the worst case for interior and all perimeter streets. $Q_{100} d \times v \leq 8$. $Q_{10} d \times v \leq 6$ and 12 foot dry lane for rights-of-way ≥ 80 feet. Calculations must be labeled by street name as indicated on the Grading Plan.
<u>X</u>	<u> </u>	A summary table of interior and exterior street capacity calculations showing the street name, Q_{100} flow, slope, depth of flow, velocity and depth times velocity product and streets needing to meet 12 foot dry lane criteria.
<u>N/A</u>	<u> </u>	Appropriate hydraulic calculations for block wall openings assuming a 50 percent vertical clogging factor. (Assume the lower half of the opening is plugged.)
<u>N/A</u>	<u> </u>	Appropriate hydraulic calculations at drainage easement entrance and discharge locations to set finish floor elevations. Hydraulic calculations must include submerged weir, superelevation and tee intersection losses, where appropriate.
<u>N/A</u>	<u> </u>	Provide necessary freeboard requirements to set the finish floor elevations of all proposed buildings, 2 x depth of flow or depth of flow plus 18 inches of freeboard, whichever is less. The minimum requirement is 6 inches above adjacent upstream top of curb. Buildings adjacent to drainage easements must always be provided with 18 inches of freeboard above the Q_{100} weir height of flow depth, which ever is greater.
<u>N/A</u>	<u> </u>	A complete water surface profile analysis (HEC-2, HEC-RAS, etc.) for channel flows and FEMA Zone A flood zones. ▷ Field survey data. ▷ Input and output information. ▷ Plotted cross-sections based on survey with proper encroachments. ▷ A map showing the location of the cross-sections. ▷ Analysis of both sub and super-critical flow segments. ▷ A summary table and a discussion of the results in the text for drop inlets.
<u>N/A</u>	<u> </u>	Provide a 50 percent clogging factor in the capacity calculations for drop inlets.
<u>X</u>	<u> </u>	Hydraulic calculations for culverts and storm drains. D-Load calculations must be provided for storm drain pipes in public rights-of-way, including headwater pool inundation.
<u>N/A</u>	<u> </u>	The mitigation of nuisance water, both during construction and in the fully developed condition, must be addressed.

REFERENCE: 51-1629

STANDARD FORM 2

ASSESSOR'S PARCEL MAPS WITHIN THE PROPOSED DEVELOPMENT			
160-31-101-002	160-32-401-005	161-36-701-003	179-07-302-005
160-31-199-001	160-32-499-001	179-04-101-001	179-07-501-006
160-31-199-002	160-32-499-004	179-05-301-004	179-07-501-007
160-31-199-003	160-32-801-004	179-05-401-001	179-07-501-008
160-31-201-001	160-32-802-003	179-05-501-002	179-07-599-001
160-31-299-002	160-32-896-001	179-05-502-001	179-07-699-001
160-31-301-001	160-32-896-002	179-05-596-001	179-07-701-012
160-31-401-003	160-32-899-001	179-05-599-003	179-07-801-006
160-31-401-004	160-32-899-005	179-05-699-004	179-07-899-001
160-31-499-002	160-33-404-001	179-05-799-021	179-08-101-001
160-31-499-003	160-33-499-001	179-06-101-002	179-08-201-016
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160-31-799-001	161-36-201-002	179-07-199-001	179-08-299-002
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160-32-401-002	161-36-601-003	179-07-299-002	



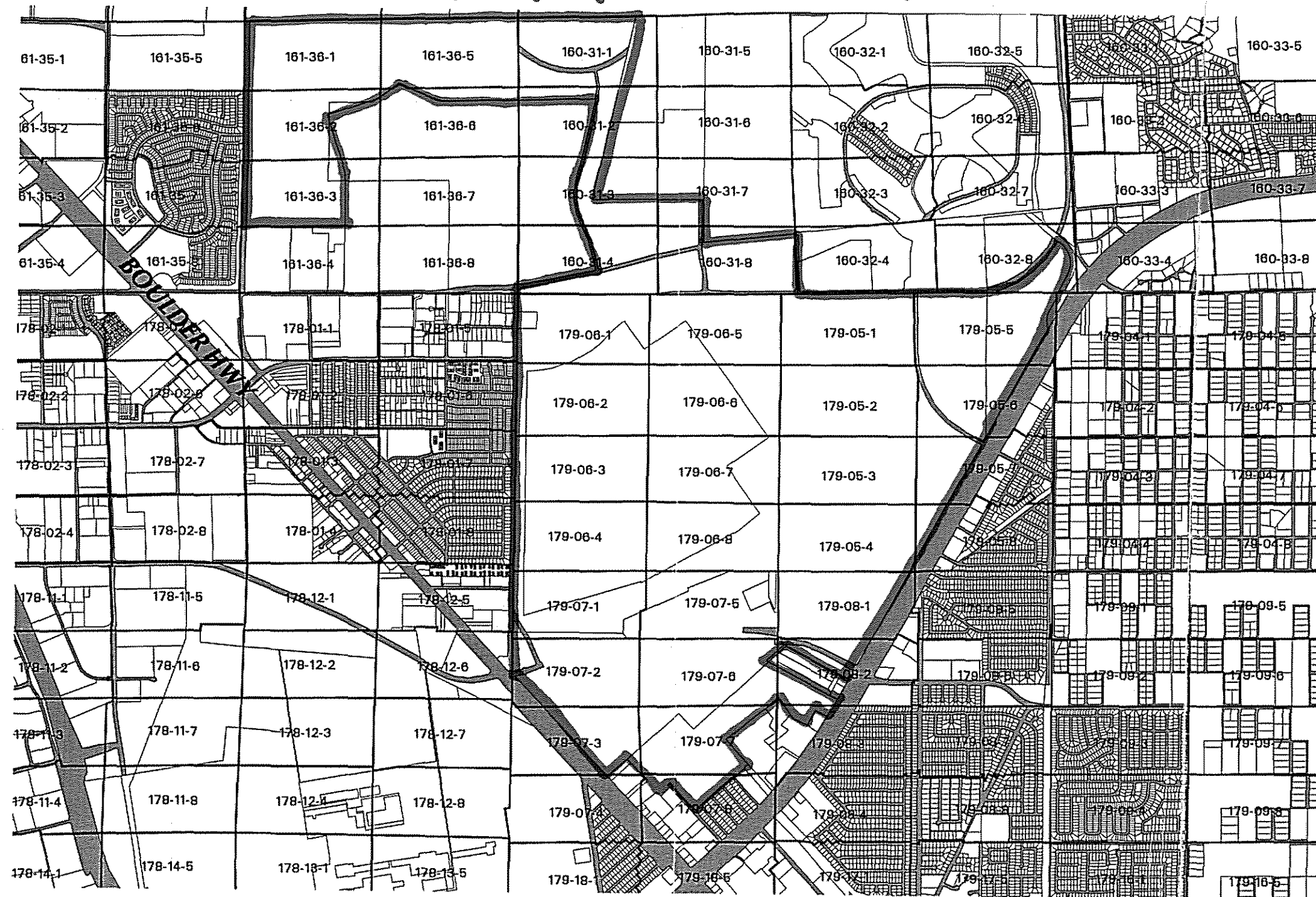
SOURCE: 2004 GISMO



APN IDENTIFICATION MAP

1 inch equals 2,500 feet

ASSESSOR PARCEL INDEX MAP



— SITE BOUNDARY

↑ N
NOT TO SCALE

NOTES

This map is for assessment use only and does NOT represent a survey.

No liability is assumed for the accuracy of the data delineated herein.

Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.

This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.

USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
35

MAP LEGEND

PARCEL BOUNDARY0011.00

SUBD BOUNDARY202

ROAD EASEMENTPB 25-45

PM/LD BOUNDARY5

NON-PARCEL LOT LINE5

MATCH LINE / LEADER LINE

ROAD ID NUMBER001

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK

T21S R62E

SEC.

36

T21S

T20S

T22S

R61E

R62E

R63E

139

140

141

162

161

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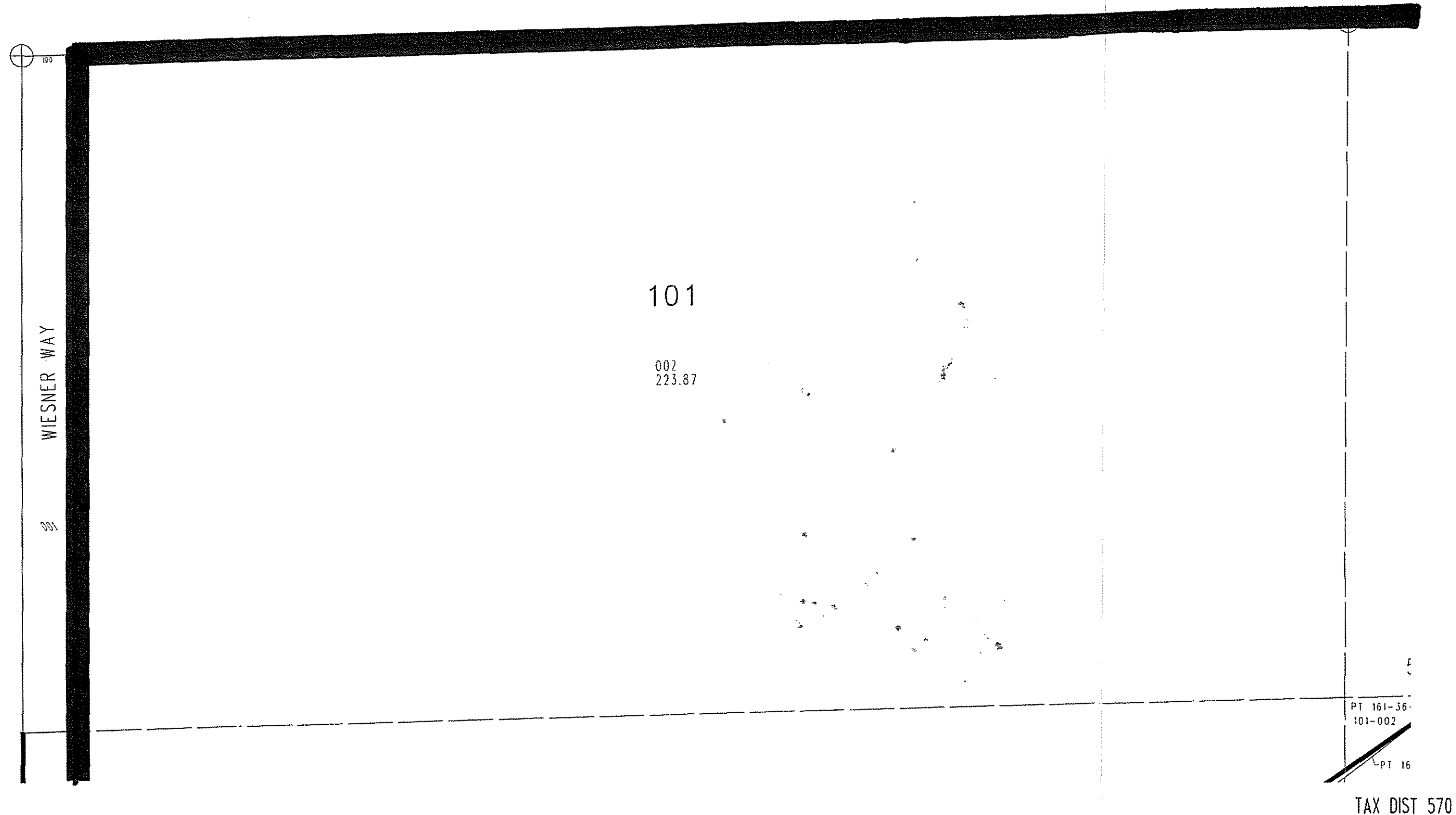
1

161-36-1

CLARK COUNTY
ASSESSOR
NEVADA

Scale:1"=200'

Rev:10/27/03



NOTES

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050100200400600800

USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

MAP LEGEND

AVERAGE
QA VALUE
35

PARCEL BOUNDARY 001
SUBD BOUNDARY 1.00
ROAD EASEMENT 202
PM/LD BOUNDARY PB 25-45
NON-PARCEL LOT LINE 5
MATCH LINE / LEADER LINE 5
ROAD ID NUMBER 001

PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK T21S R62E

R61E R62E R63E

T20S 139 140 141
T21S 162 161 160
T22S 177 178 179

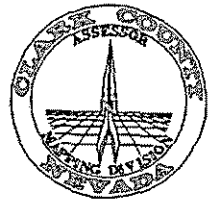
SEC 36

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

TWP S 2 NW 4

8	4	8	4
5	1	5	1
6	2	6	2
7	3	7	3
8	4	8	4
5	1	5	1

161-36-2



Scale: 1"=200'

Rev: 11/02/04

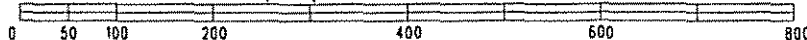
The map displays a parcel boundary (thick black line) and a road (Wiesner Way, also a thick black line). The parcel is labeled with the number 201. The road is labeled with the number 570. The map includes several survey points: PT 161-36-101-002, PT 161-36-601-003, and PT 161-36-301-003. The map also shows a scale bar (0 to 800 feet) and a north arrow.

TAX DIST 516,570

This map is for assessment use only and does NOT represent a survey. No liability is assumed for the accuracy of the data delineated herein. Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.

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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL



MAP LEGEND

AVERAGE
QA VALUE
35

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

_____ PARCEL BOUNDARY
 _____ SUBD BOUNDARY
 - - - - - ROAD EASEMENT
 _____ PM/LD BOUNDARY
 - - - - - NON-PARCEL LOT LINE
 _____ MATCH LINE / LEADER LINE
 001 ROAD ID NUMBER

001	PARCEL NUMBER
1.00	ACREAGE
202	PARCEL SUB/SEQ NUMBER
PG 23-43	PLAT RECORDING NUMBER
5	BLOCK NUMBER
5	LOT NUMBER
GL5	GOV. LOT NUMBER

BOOK	T21S R62E
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36 SEC.

MAP	N 2 SW 4
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161-36-3



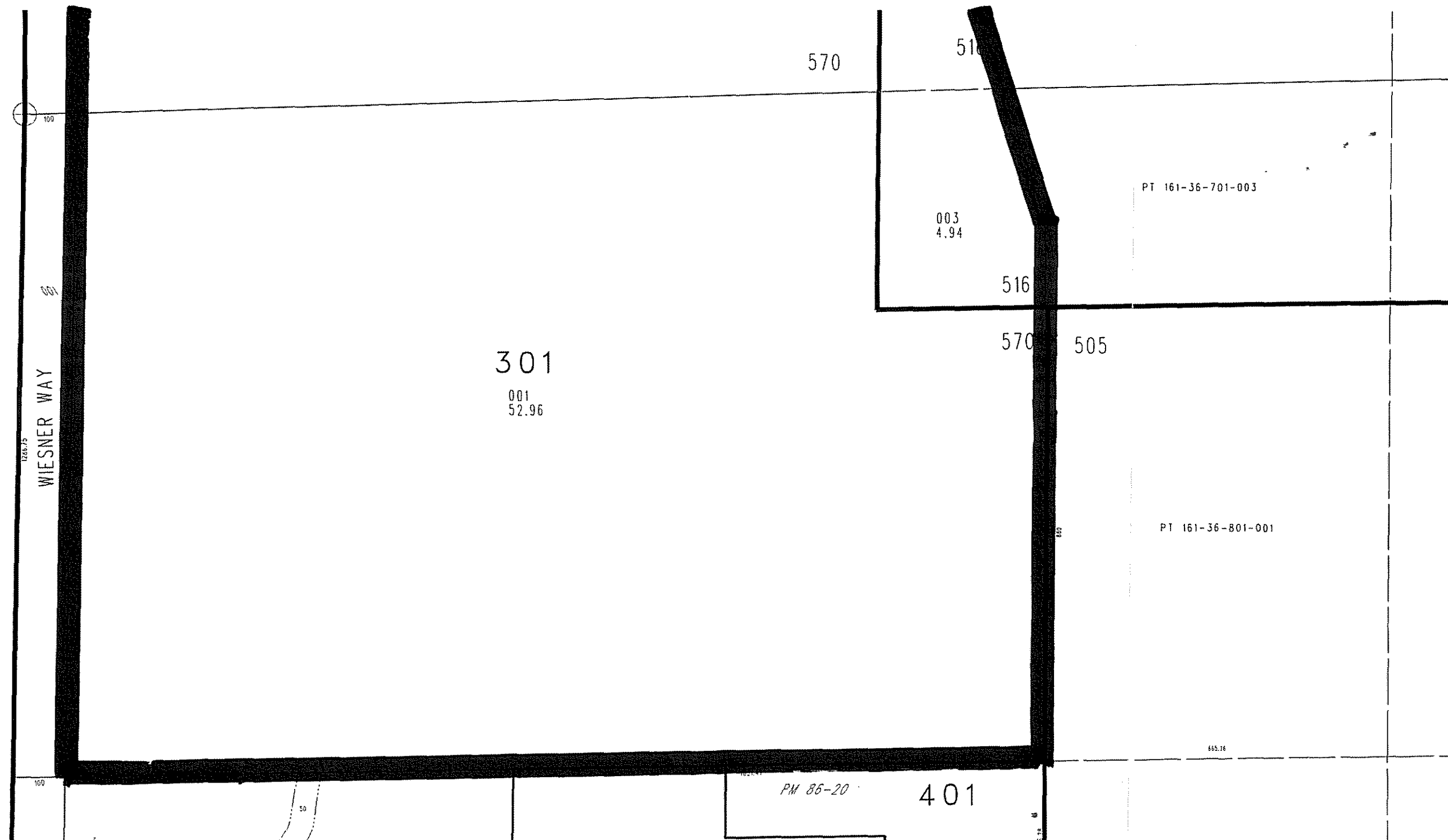
		R61E	R62E	R63
I22S	I20S	139	140	141
	I21S	162	161	160
		177	178	179

6	5	4	3	2
7	8	9	10	11
18	17	16	15	14
19	20	21	22	23
30	29	28	27	26
31	32	33	34	35

8	4	8
5	1	5
6	2	6
7	3	7
8	4	8
5	1	5

Scale: 1" = 200'

Rev:10/27/03



TAX DIST 505,516,570

NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
35

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK

T21S R62E

SEC

36

T21S

R61E

R62E

R63E

139

140

141

T21S

162

161

160

T21S

177

178

179

6

5

4

3

2

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4

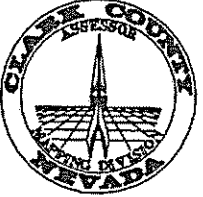
5

1

5

1

161-36-5



MAP LEGEND

PARCEL BOUNDARY

001

1.00

PARCEL NUMBER

SUBD BOUNDARY

202

PB 25-45

ACREAGE

ROAD EASEMENT

5

PB 25-45

PARCEL SUB/SEQ NUMBER

PM/LD BOUNDARY

5

PB 25-45

PLAT RECORDING NUMBER

NON-PARCEL LOT LINE

5

PB 25-45

BLOCK NUMBER

MATCH LINE / LEADER LINE

5

PB 25-45

LOT NUMBER

ROAD ID NUMBER

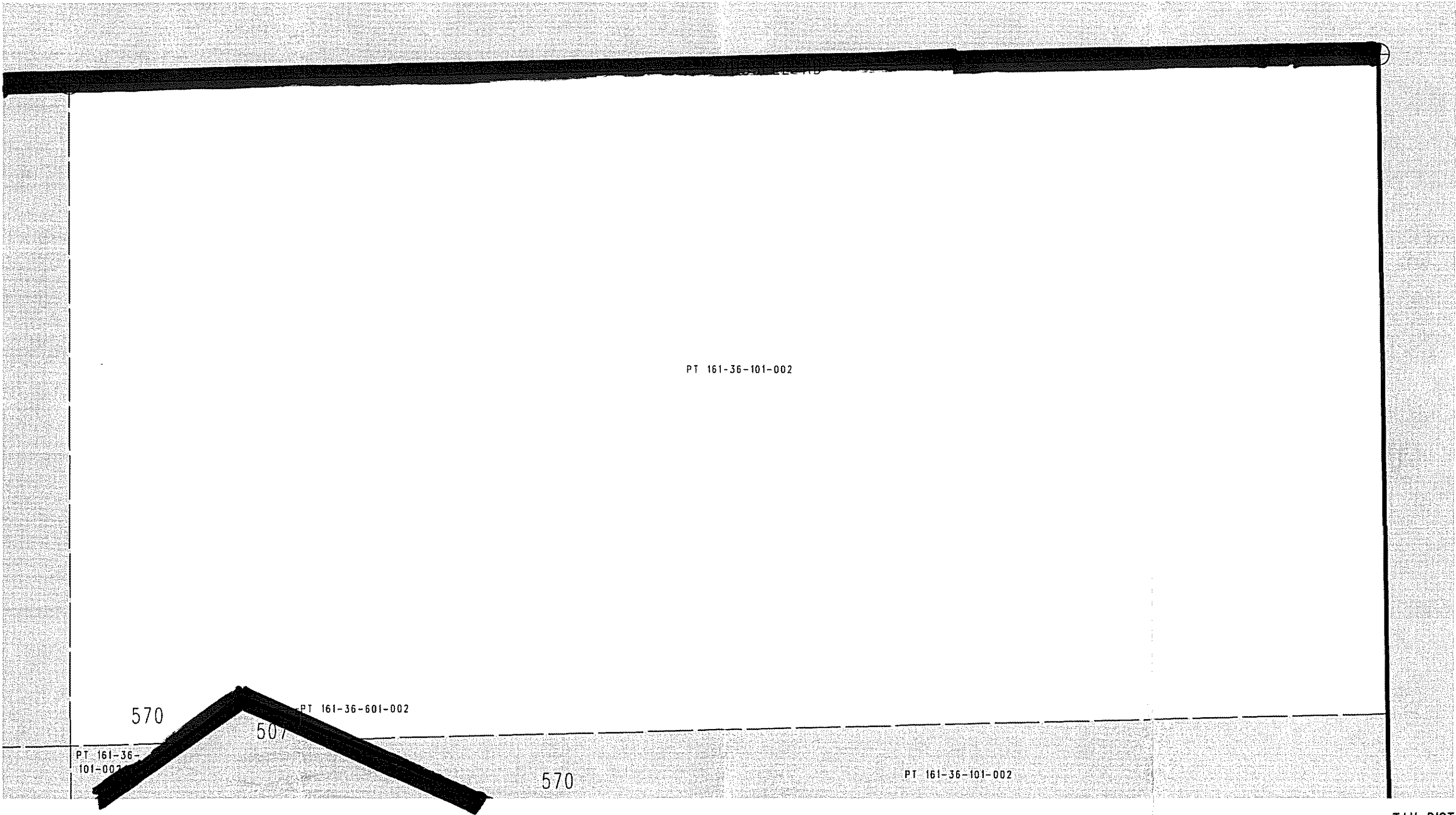
GL5

PB 25-45

GOV. LOT NUMBER

Scale: 1"=200'

Rev: 10/27/03



NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
35

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

MAP LEGEND

—————

PARCEL BOUNDARY001

—————

SUBD BOUNDARY1.00

ROAD EASEMENT202

—————

PM/LD BOUNDARYPB 25-45

NON-PARCEL LOT LINE5

—————

MATCH LINE / LEADER LINE5

001

ROAD ID NUMBERGL5

PARCEL NUMBER

001

ACREAGE

1.00

PARCEL SUB/SEQ NUMBER

202

PLAT RECORDING NUMBER

PB 25-45

BLOCK NUMBER

5

LOT NUMBER

5

GOV. LOT NUMBER

GL5

BOOK

T21S

R62E

R62E

R63E

R63E

T20S

T20S

T21S

T21S

T22S

T22S

R61E

R61E

R62E

R62E

R63E

R63E

139

139

140

140

141

141

162

162

161

161

160

160

177

177

178

178

179

179

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5

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Scale:1"=200'

Scale:1"=200'

Rev:11/03/04

Rev:11/03/04

36

36

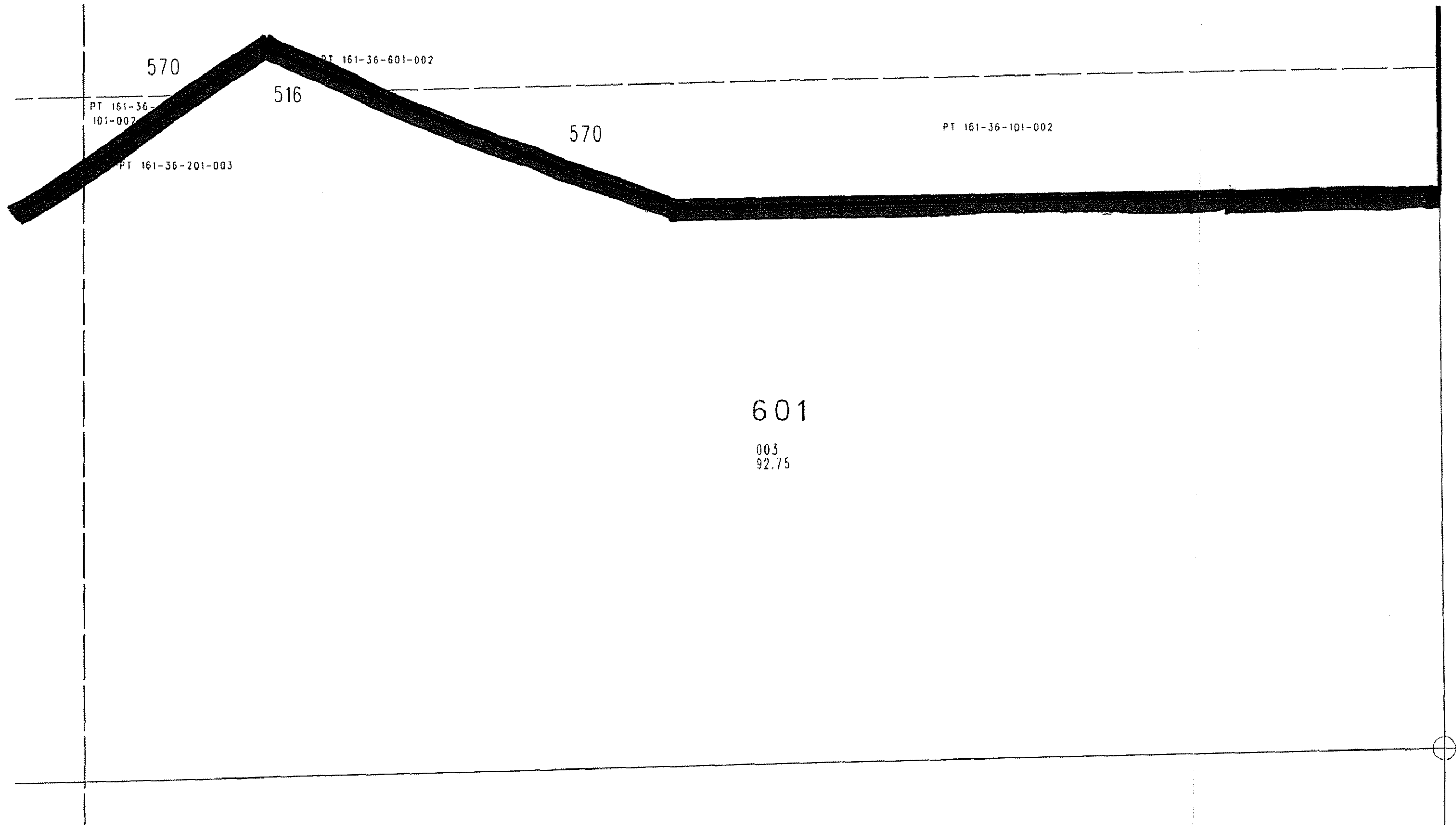
S 2 NE 4

S 2 NE 4

161-36-6

161-36-6





NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

AVERAGE
QA VALUE
35

MAP LEGEND

—————

PARCEL BOUNDARY001
—————

SUBD BOUNDARY1.00
- - - - -

ROAD EASEMENT202
—————

PM/LD BOUNDARYPB 25-45
- - - - -

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T21S R63E

SEC

31

MAP

N 2 NW 4

160-31-1

R62E

R63E

R64E

T20S

140

141

142

T21S

161

160

159

T22S

178

179

180

6

5

4

3

2

1

7

8

9

10

11

12

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17

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36

Scale: 1"=200'

Rev: 03/03/03

8

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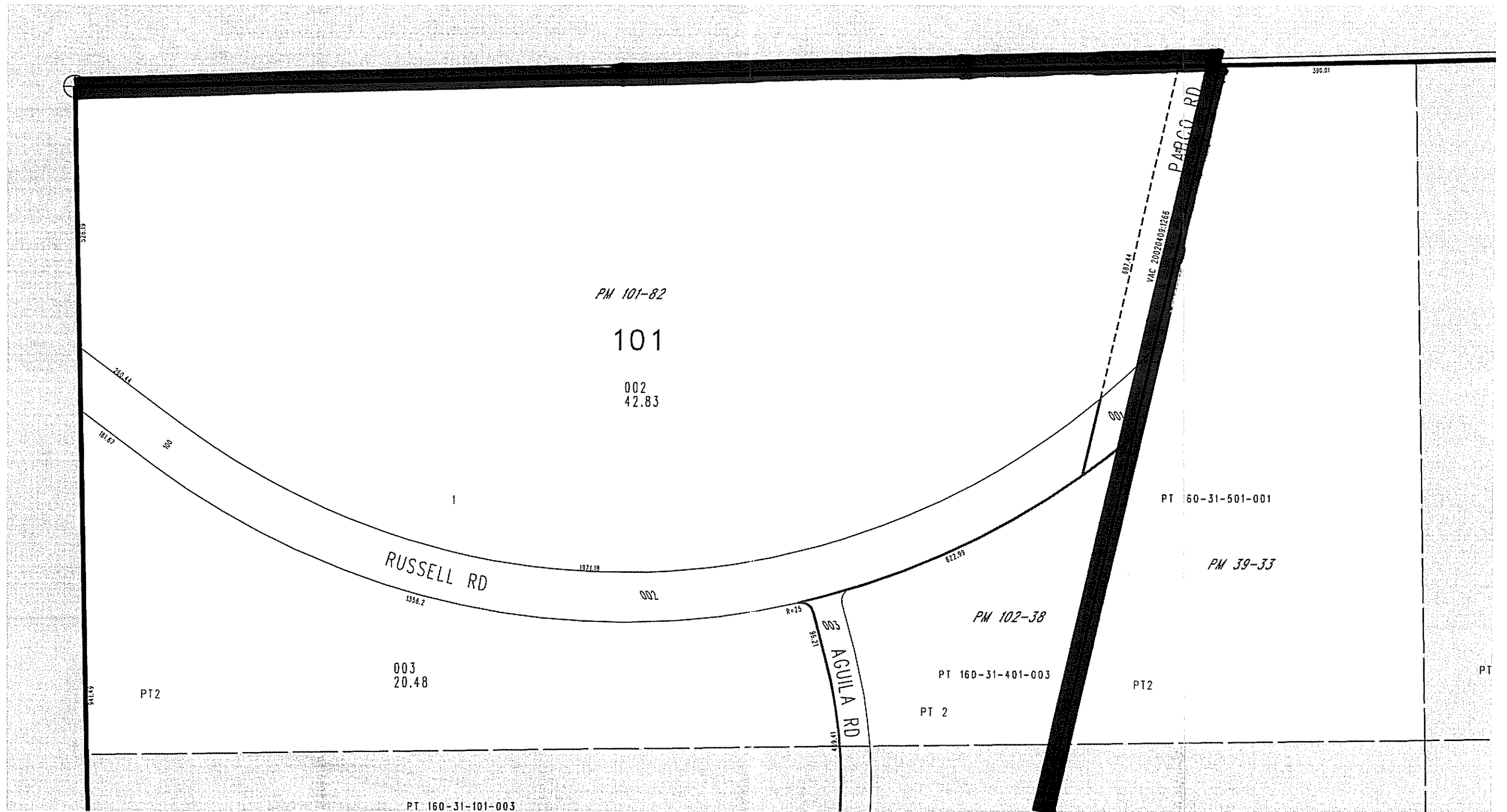
4

5

1

5

1



NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11X17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
35

MAP LEGEND

PARCEL BOUNDARY

001
1.00

PARCEL NUMBER

SUBD BOUNDARY

202

ACREAGE

ROAD EASEMENT

5

PARCEL SUB/SEQ NUMBER

PM/LD BOUNDARY

5

PLAT RECORDING NUMBER

NON-PARCEL LOT LINE

5

BLOCK NUMBER

MATCH LINE / LEADER LINE

5

LOT NUMBER

ROAD ID NUMBER

GL5

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T21S R63E

R62E

R63E

R64E

120S

121S

122S

140

161

178

141

160

179

142

159

180

6

7

18

19

30

31

5

8

17

20

29

32

4

9

16

21

28

33

3

10

15

22

27

34

2

11

14

23

26

35

1

12

13

24

25

36

8

5

6

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5

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5

4

1

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1

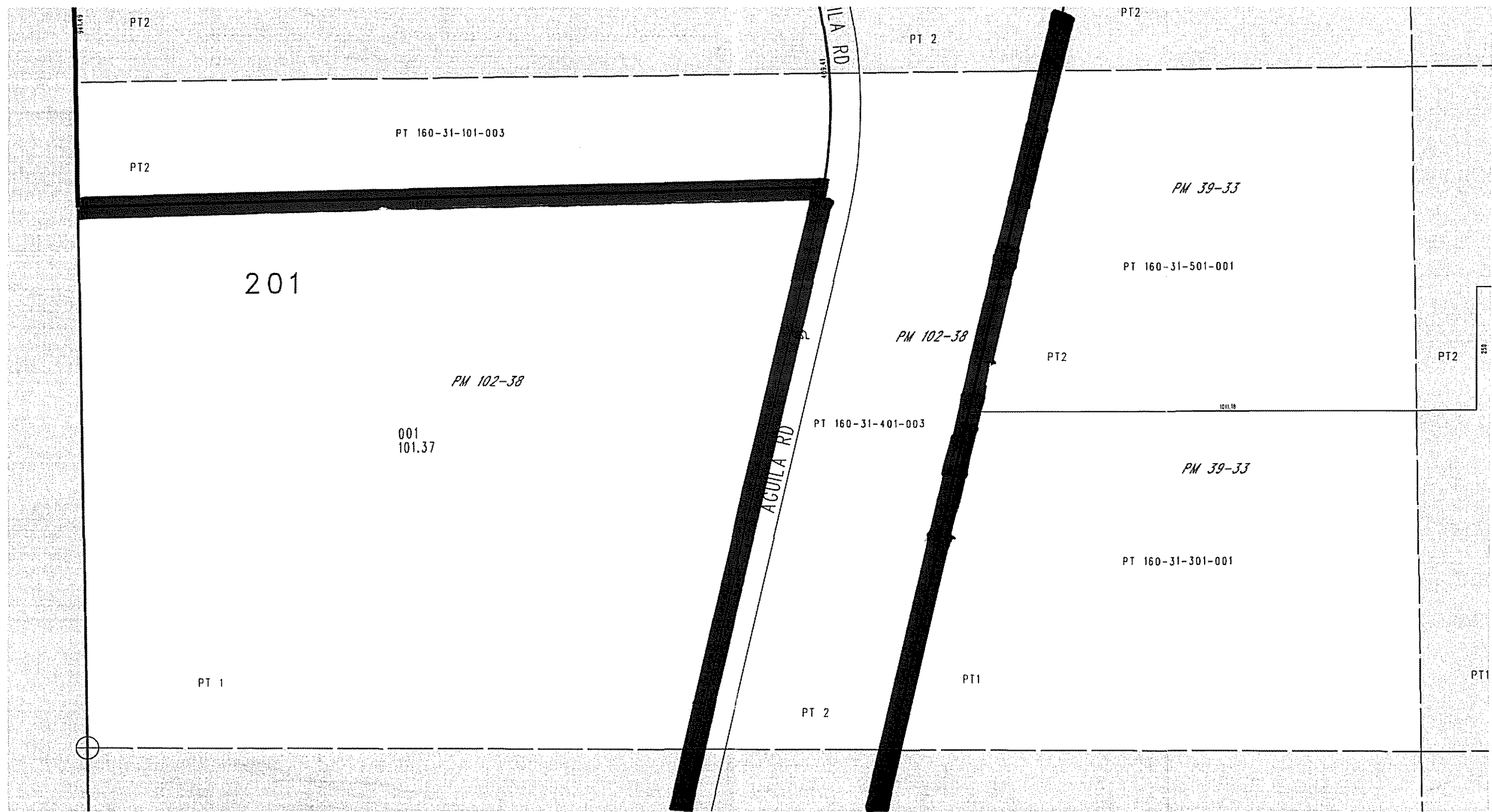
160-31-2

CLARK COUNTY

NEVADA

Scale:1"=200'

Rev:03/03/03



NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11X17 ORIGINAL

0 50 100 200 400 600 800

AVERAGE
QA VALUE
35

MAP LEGEND

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

001
1.00

202
PB 25-45

5

5

GL5

PARCEL NUMBER

ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T21S R63E

SEC

31

MAP

N 2 SW 4

160-31-3

6 5 4 3 2 1

7 8 9 10 11 12

18 17 16 15 14 13

19 20 21 22 23 24

30 29 28 27 26 25

31 32 33 34 35 36

8 4 8 4

5 1 5 1

6 2 6 2

7 3 7 3

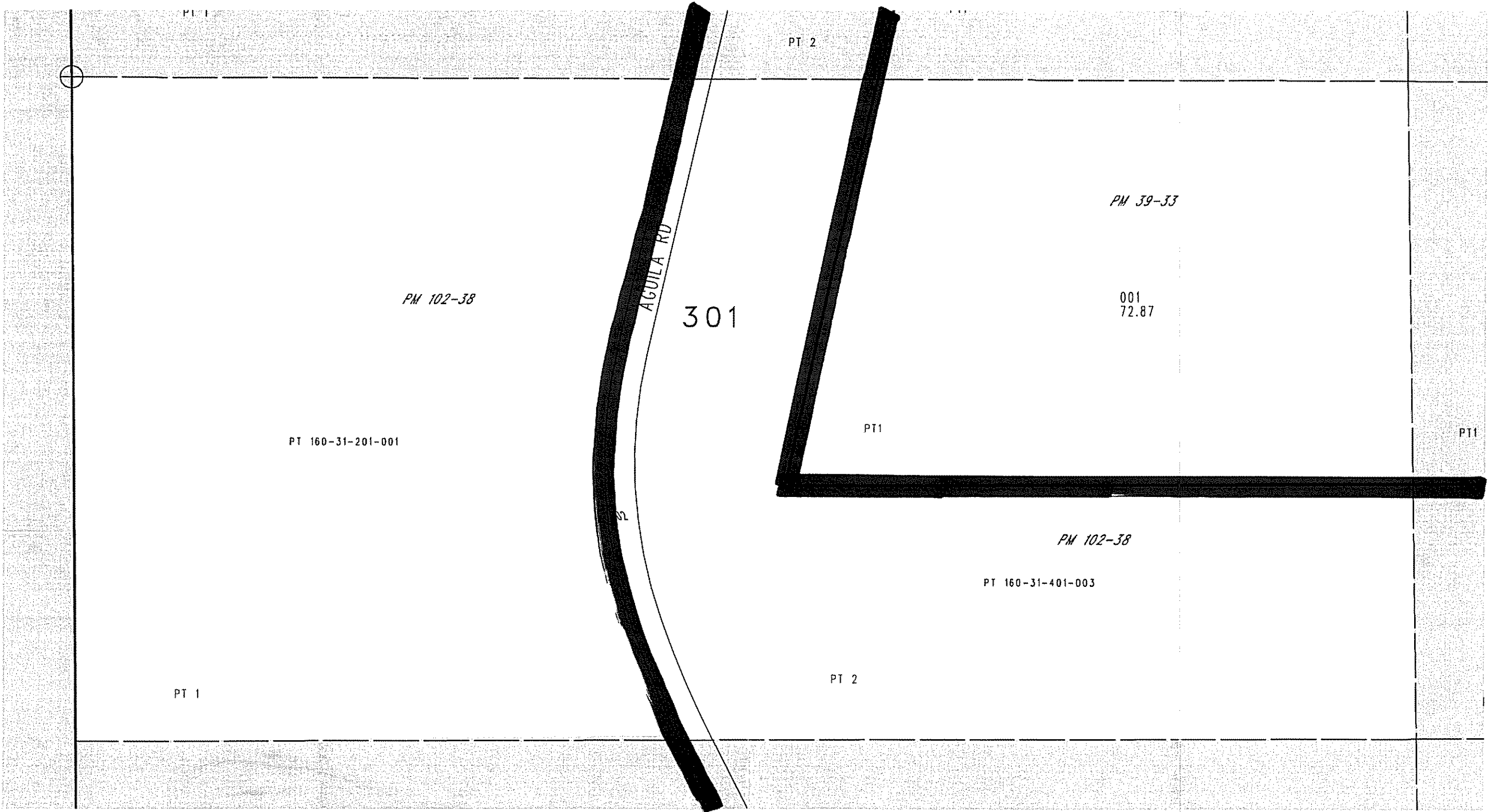
8 4 8 4

5 1 5 1

Scale:1"=200'

Rev:03/03/03

CLARK COUNTY
NEVADA



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

AVERAGE
QA VALUE
35

MAP LEGEND

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

001
1.00

202
PB 25-45

5

5

CL5

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

PARCEL NUMBER
ACREAGE

PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T21S R63E

35

31

MAP

S 2 SW 4

160-31-4

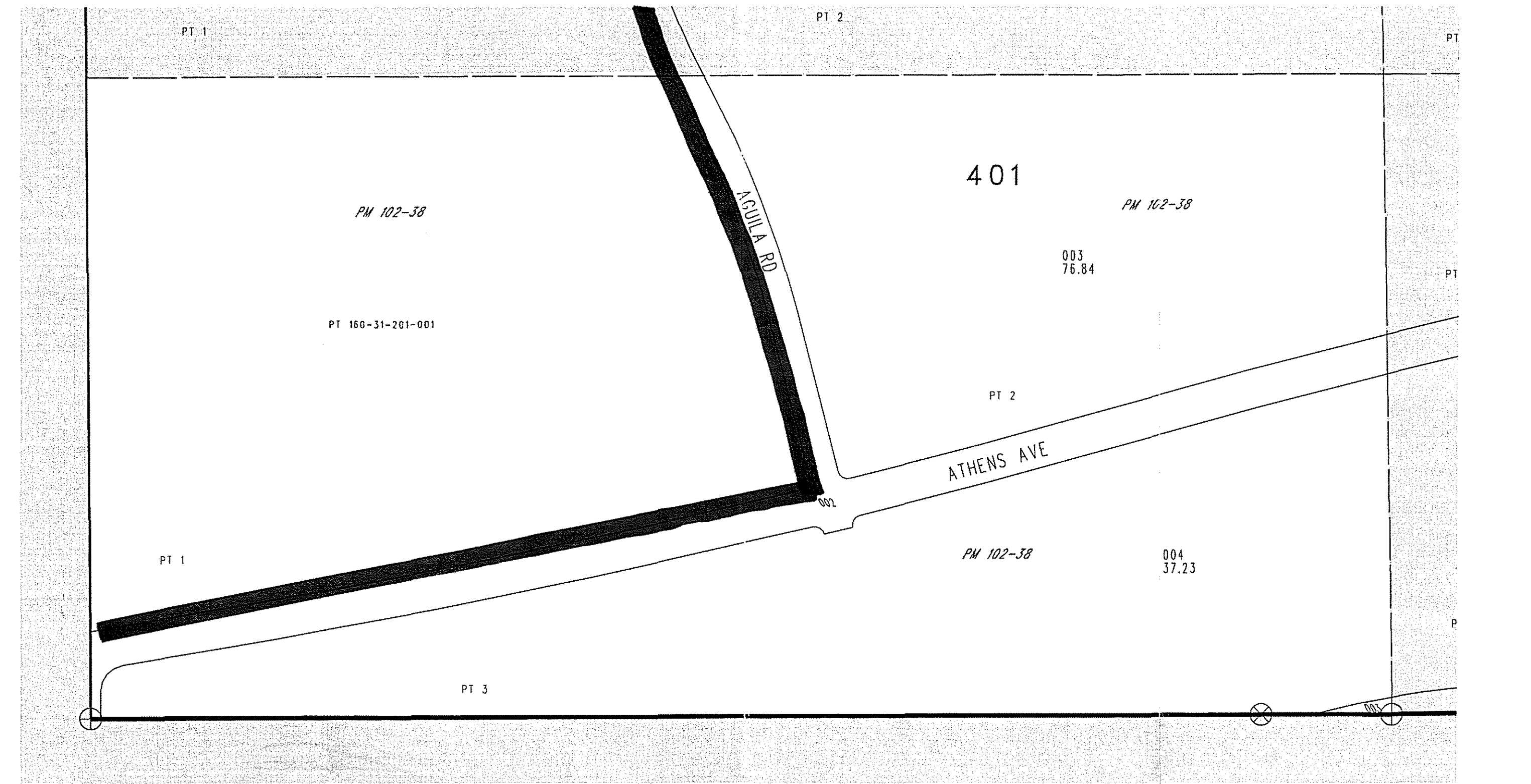
R62E	R63E	R64E
140	141	142
161	160	159
178	179	180

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

8	4	8	4
5	1	5	1
6	2	6	2
7	3	7	3
8	4	8	4
5	1	5	1

Scale: 1"=200'

Rev: 03/03/03



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
45

MAP LEGEND

—————

—————

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—————

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—————

001

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

001

1.00

202

PB 25-45

5

5

GL5

PARCEL NUMBER

ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T22S R63E

R62E

R63E

R64E

121S

122S

123S

161

178

190

160

179

189

159

180

188

SEC

06

6

5

4

3

2

1

7

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10

11

12

18

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16

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14

13

19

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22

23

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27

26

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32

33

34

35

36

MAP

N 2 NW 4

8

4

8

4

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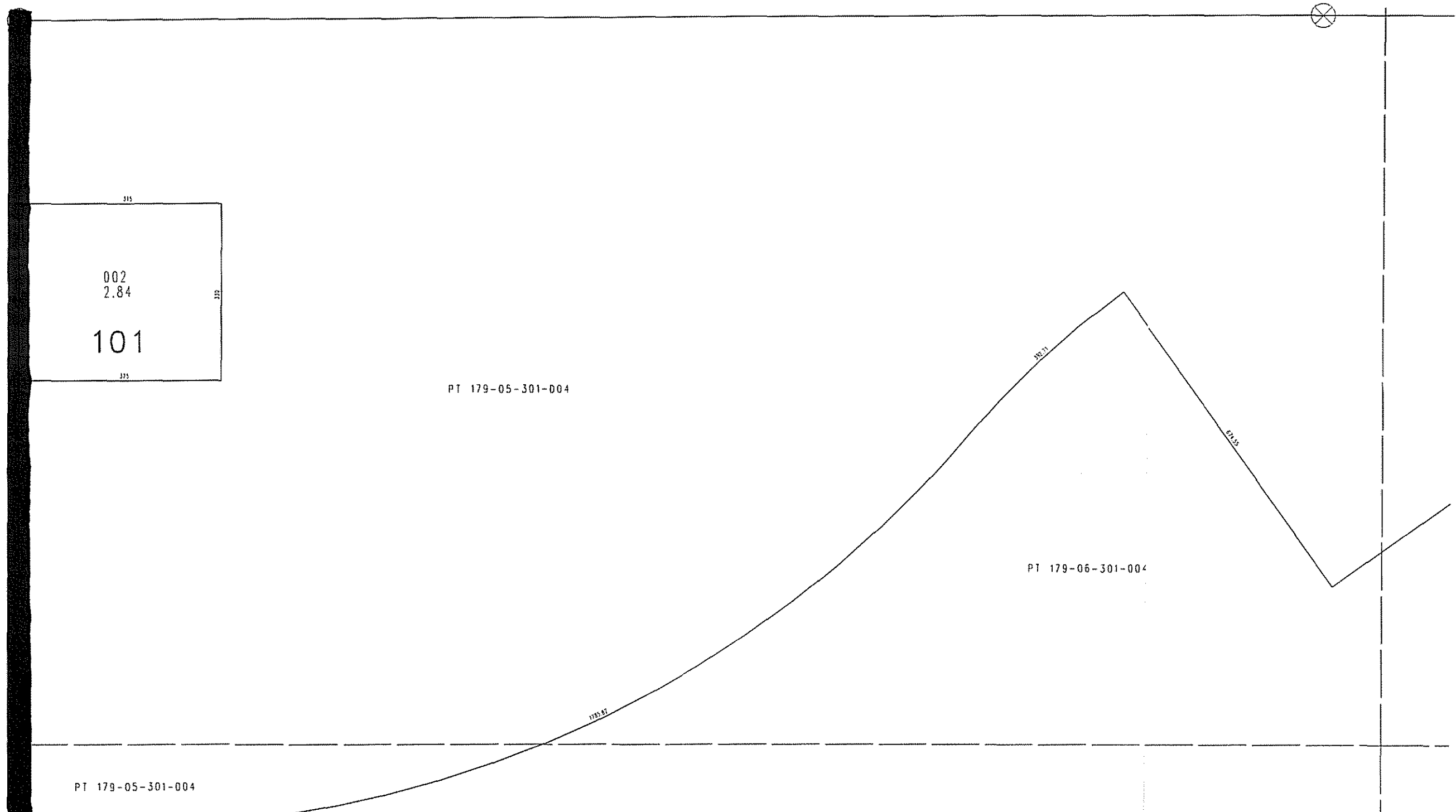
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179-06-1



Scale: 1"=200'

Rev: 04/23/03



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050100200400600800

USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

MAP LEGEND

AVERAGE
QA VALUE
45

PARCEL BOUNDARY
SUBD BOUNDARY
ROAD EASEMENT
PM/LD BOUNDARY
NON-PARCEL LOT LINE
MATCH LINE / LEADER LINE
ROAD ID NUMBER

001
1.00
202
PB 25-45
5
5
GL5

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

161
160
159
178
179
180
190
189
188

BOOK

T22S R63E

35

06

MAP

S 2 NW 4

179-06-2

654321
789101112
181716151413
192021222324
302928272625
313233343536

8484
5151
6262
7373
8484
5151

Scale:1"=200'

Rev:04/23/03

CLARK COUNTY
NEVADA

The map displays a large rectangular area representing land parcels. A thick black line runs vertically along the left edge. A curved line starts from the top left and extends towards the center. Two specific points are labeled: 'PT 179-05-301-004' near the top left and 'PT 179-06-301-004' in the center. A north arrow is located in the upper right corner of the map area. A scale bar is positioned at the bottom left, marked with '0', '200', and '400' feet. The map is bordered by a dashed line on the top and right sides.

TAX DIST 525

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
45

MAP LEGEND

PARCEL BOUNDARY001

SUBD BOUNDARY1.00

ROAD EASEMENT202

PM/LD BOUNDARYPB 25-45

NON-PARCEL LOT LINE5

MATCH LINE / LEADER LINE5

ROAD ID NUMBER001GL5

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T22S R63E

R62E

R63E

R64E

T21S

T22S

T23S

161

178

190

160

179

189

159

180

188

06

6

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N 2 SW 4

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179-06-3

CLARK COUNTY

ASSESSOR

MISSOURI

Scale:1"=200'

Rev:04/23/03

PT 179-05-
301-004

301

004
433.23

NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
45

MAP LEGEND

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

001
1.00

202
PB 23-45

5

5

GL5

PARCEL NUMBER
ACREAGE

PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T22S R63E

SEC.

06

MAP

S 2 SW 4

179-06-4

R62E

R63E

R64E

T21S

T22S

T23S

161

160

159

178

179

180

190

189

188

6

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4

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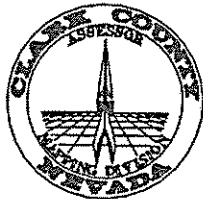
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Scale:1"=200'

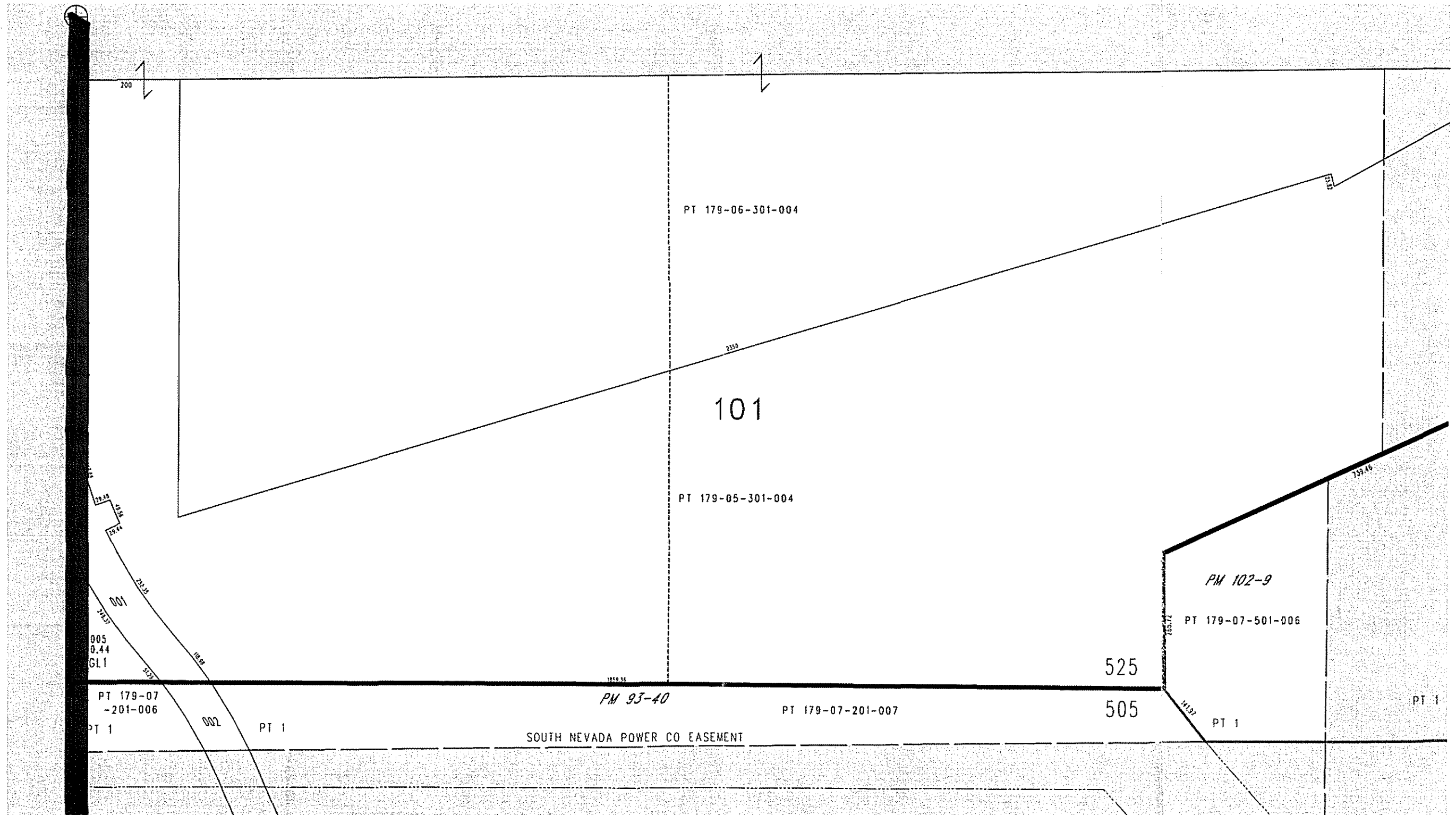
Rev:04/23/03



PT 179-05-301-004

PT 179-06-301-004

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		001 1.00 202 PB 25-45 5 5 GL5	PARCEL NUMBER ACREAGE PARCEL SUB/SEQ NUMBER PLAT RECORDING NUMBER BLOCK NUMBER LOT NUMBER GOV. LOT NUMBER	R62E 161 178 190	R63E 160 179 189	R64E 159 180 188	6 5 4 3 2 1 7 8 9 10 11 12 18 17 16 15 14 13 19 20 21 22 23 24 30 29 28 27 26 25 31 32 33 34 35 36	8 4 8 4 5 1 5 1 6 2 6 2 7 3 7 3 8 4 8 4 5 1 5 1
		Scale: 1"=200'		Rev: 04/23/03				
		USE THIS SCALE (FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL 0 50 100 200 400 600 800						



TAX DIST 505,525

NOTES

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MAP LEGEND

AVERAGE
QA VALUE
45

—

 PARCEL BOUNDARY 001

—

 SUBD BOUNDARY 1.00

 ROAD EASEMENT 202

 PM/LD BOUNDARY PB 25-45

 NON-PARCEL LOT LINE 5

 MATCH LINE / LEADER LINE 5

 ROAD ID NUMBER GL5

PARCEL NUMBER
ACREAGE

PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T22S R63E

SIC

07

SW

S 2 NW 4

179-07-2

R62E R63E R64E

121S 122S 123S

161 160 159

178 179 180

190 189 188

6 5 4 3 2 1

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19 20 21 22 23 24

25 26 27 28 29 30

31 32 33 34 35 36

8 4 8 4

5 1 5 1

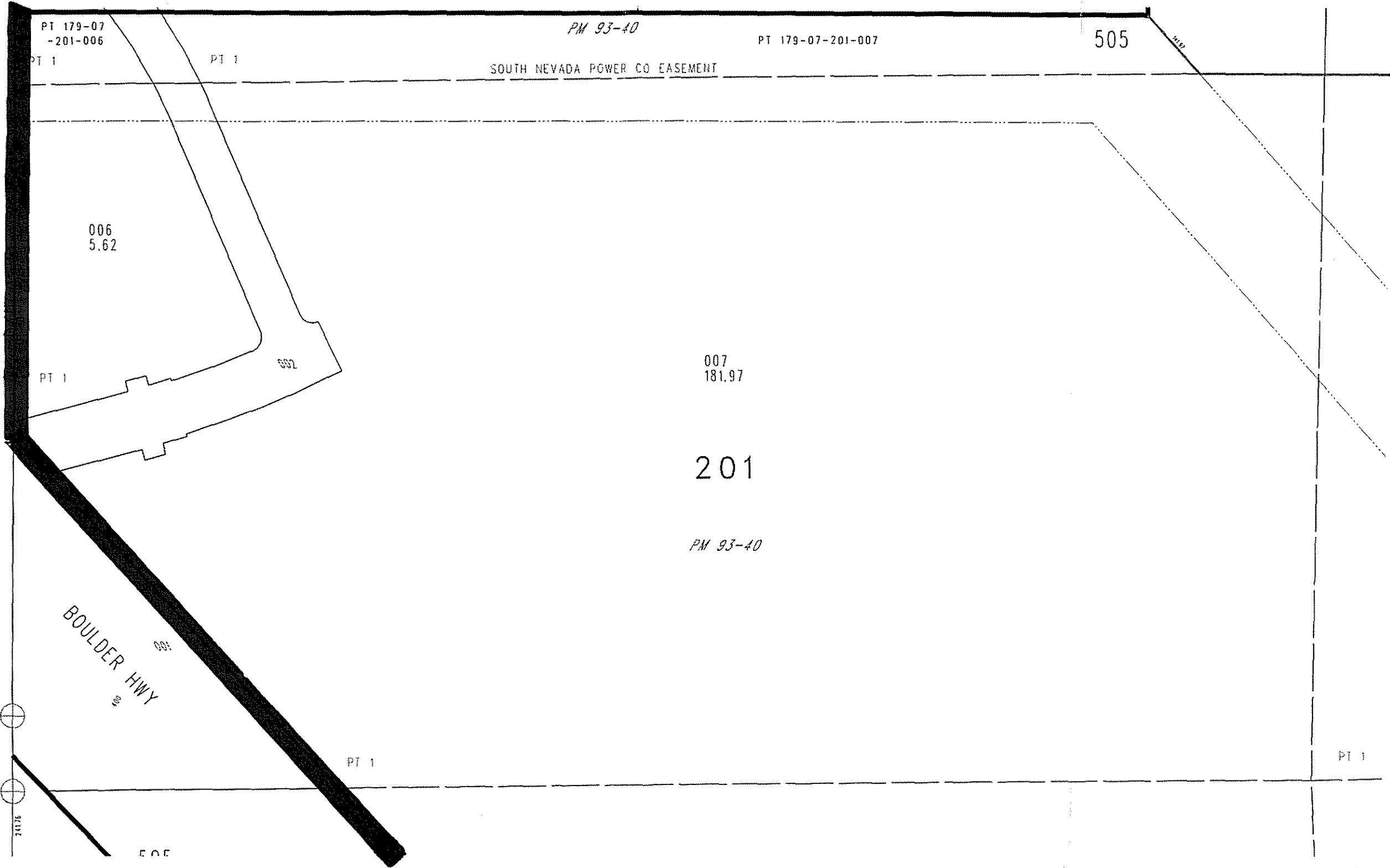
6 2 6 2

7 3 7 3

8 4 8 4

5 1 5 1

Scale: 1"=200' Rev: 03/01/00



NOTES

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SCALE IN FEET

0

50

100

200

400

600

800

AVERAGE
QA VALUE
45

MAP LEGEND

PARCEL BOUNDARY

001

1.00

PARCEL NUMBER

SUBD BOUNDARY

202

PB 25-45

ACREAGE

ROAD EASEMENT

5

PB 25-45

PARCEL SUB/SEQ NUMBER

PM/LD BOUNDARY

5

PLAT RECORDING NUMBER

NON-PARCEL LOT LINE

5

BLOCK NUMBER

MATCH LINE / LEADER LINE

5

LOT NUMBER

ROAD ID NUMBER

GL5

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T22S R63E

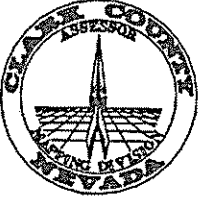
SEC

07

MAP

N 2 SW 4

179-07-3



R62E

R63E

R64E

T21S

T22S

T23S

161

160

159

178

179

180

190

189

188

6

5

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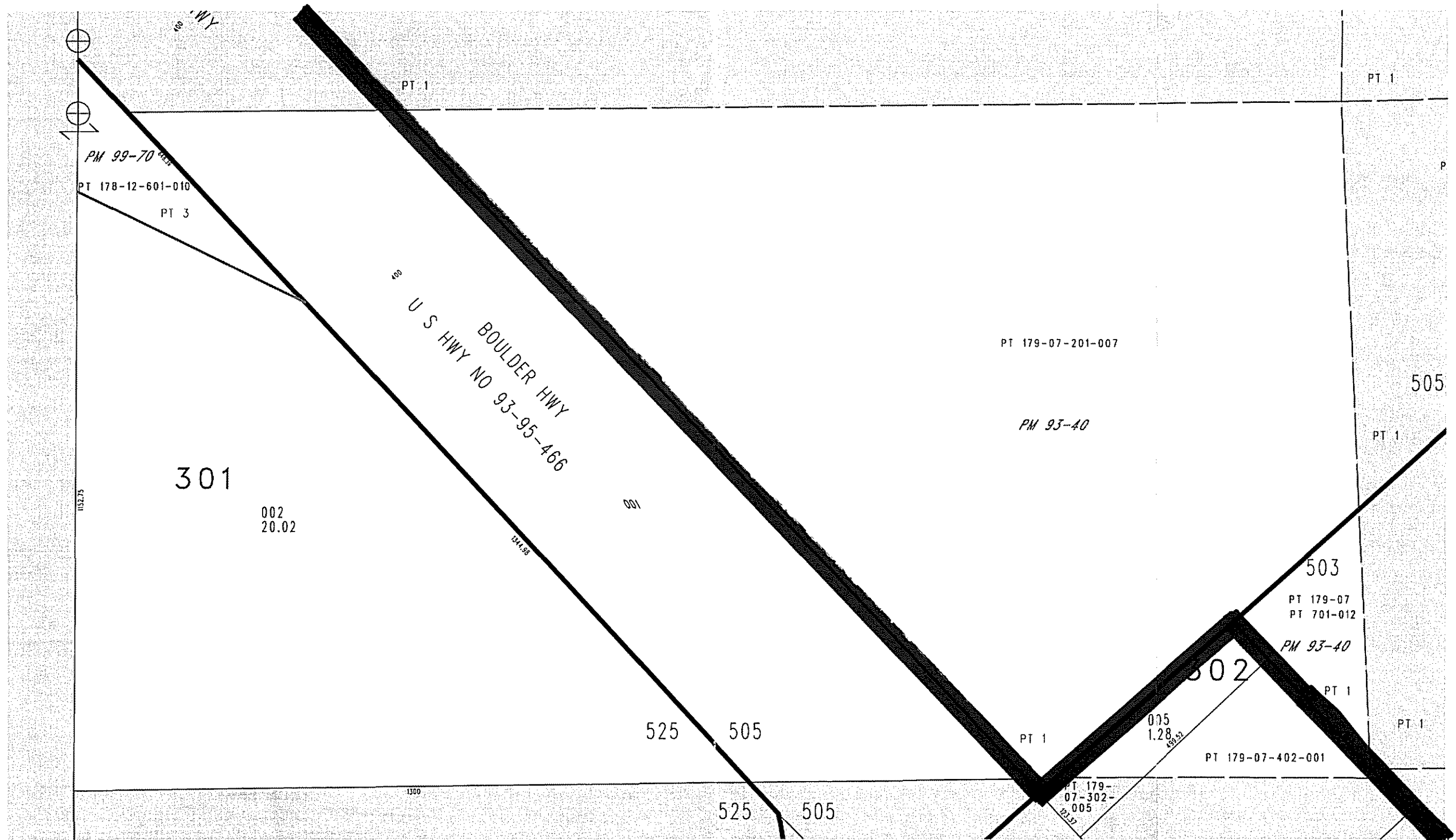
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Scale: 1"=200'

Rev: 02/01/01



TAX DIST 503,505,525

NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

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AVERAGE
QA VALUE
35

MAP LEGEND

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001

1.00

202

PB 25-45

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CL5

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T21S R63E

SEC

31

MAP

N 2 SE 4

160-31-7

R62E

R63E

R64E

T20S

140

141

142

T21S

161

160

159

T22S

178

179

180

6

5

4

3

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8

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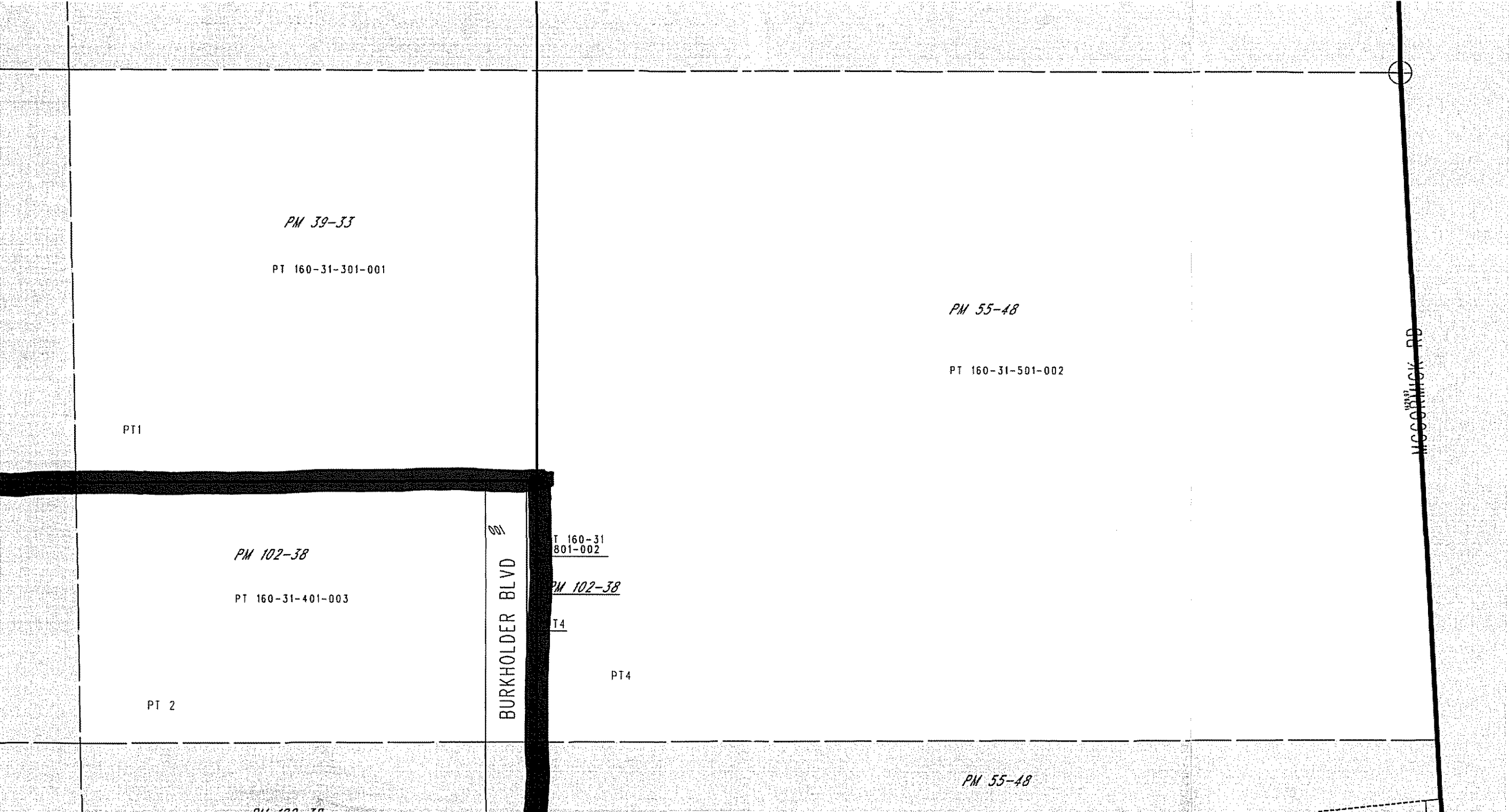
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Scale:1"=200'

Rev:03/03/03

CLARK COUNTY
NEVADA



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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

MAP LEGEND

AVERAGE
QA VALUE
35

—————

PARCEL BOUNDARY001

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SUBD BOUNDARY1.00

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ROAD EASEMENT202

—————

PM/LD BOUNDARYPB 25-45

—————

NON-PARCEL LOT LINE5

—————

MATCH LINE / LEADER LINE5

—————

ROAD ID NUMBERGL5

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T21S R63E

31

S 2 SE 4

160-31-8

R62E

R63E

R64E

140

141

142

161

160

159

178

179

180

6

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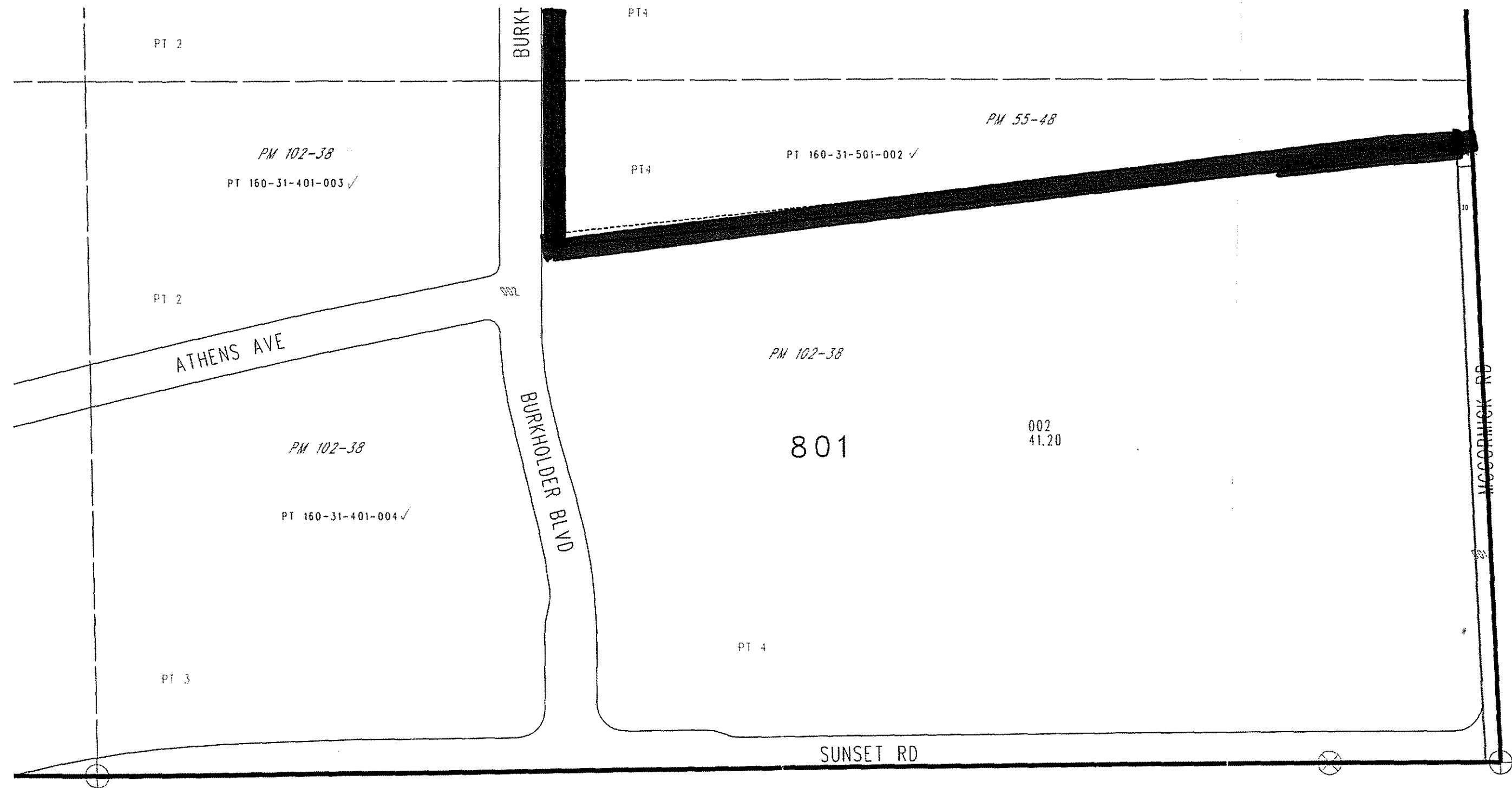
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Scale:1"=200'

Rev:03/03/03



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

AVERAGE DA VALUE
45

MAP LEGEND

PARCEL BOUNDARY
SUBD BOUNDARY
ROAD EASEMENT
PM/LD BOUNDARY
NON-PARCEL LOT LINE
MATCH LINE / LEADER LINE
ROAD ID NUMBER

001
1.00
202
PB 25-45
5
5
GL5

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

001
1.00
202
PB 25-45
5
5
GL5

BOOK
T22S R63E

SEC
06

T22S
R62E
161
178
190

T22S
R63E
160
179
189

T22S
R64E
159
180
188

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Scale: 1"=200'

Rev: 04/23/03

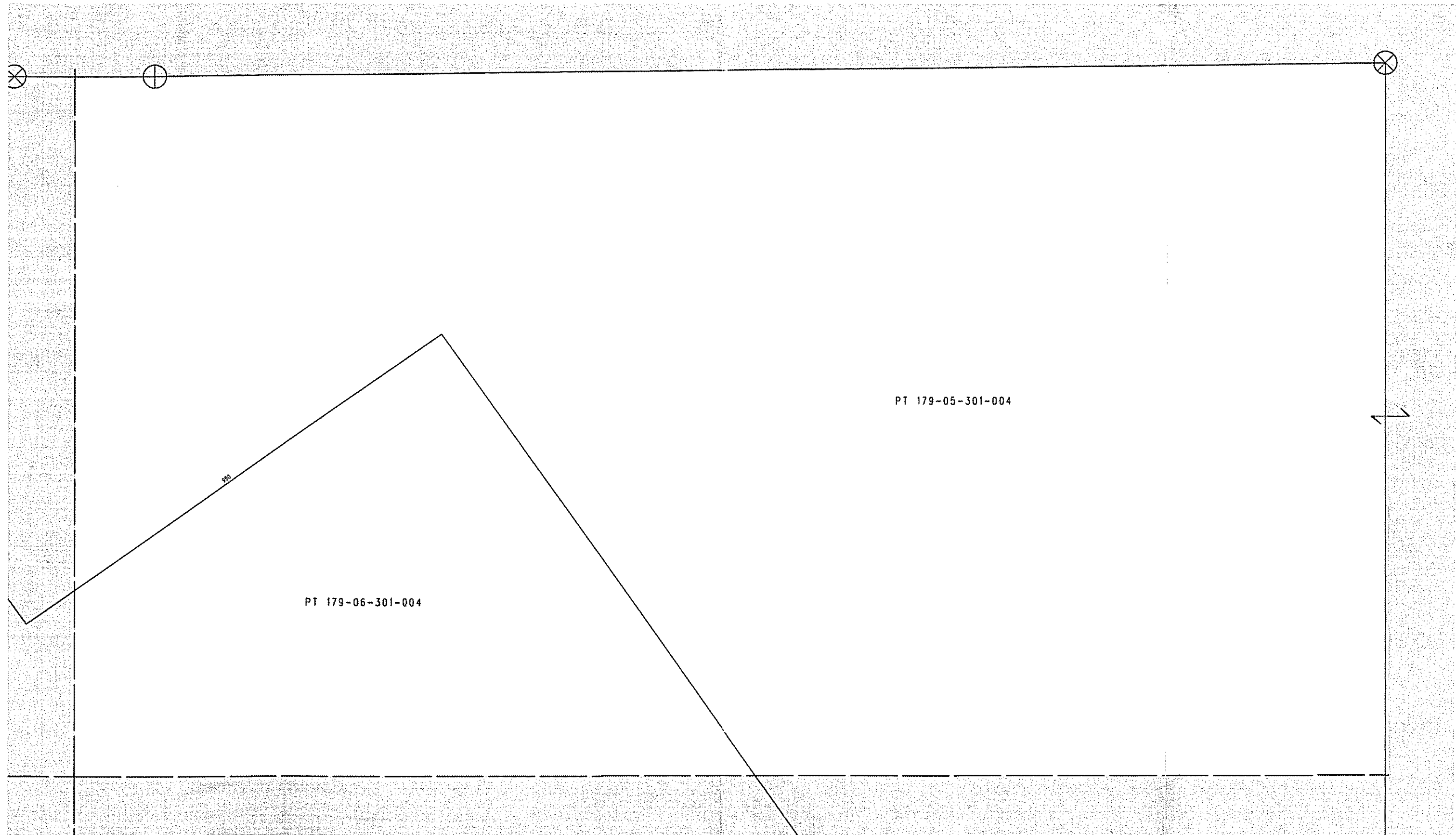
T23S
R62E
161
178
190

T23S
R63E
160
179
189

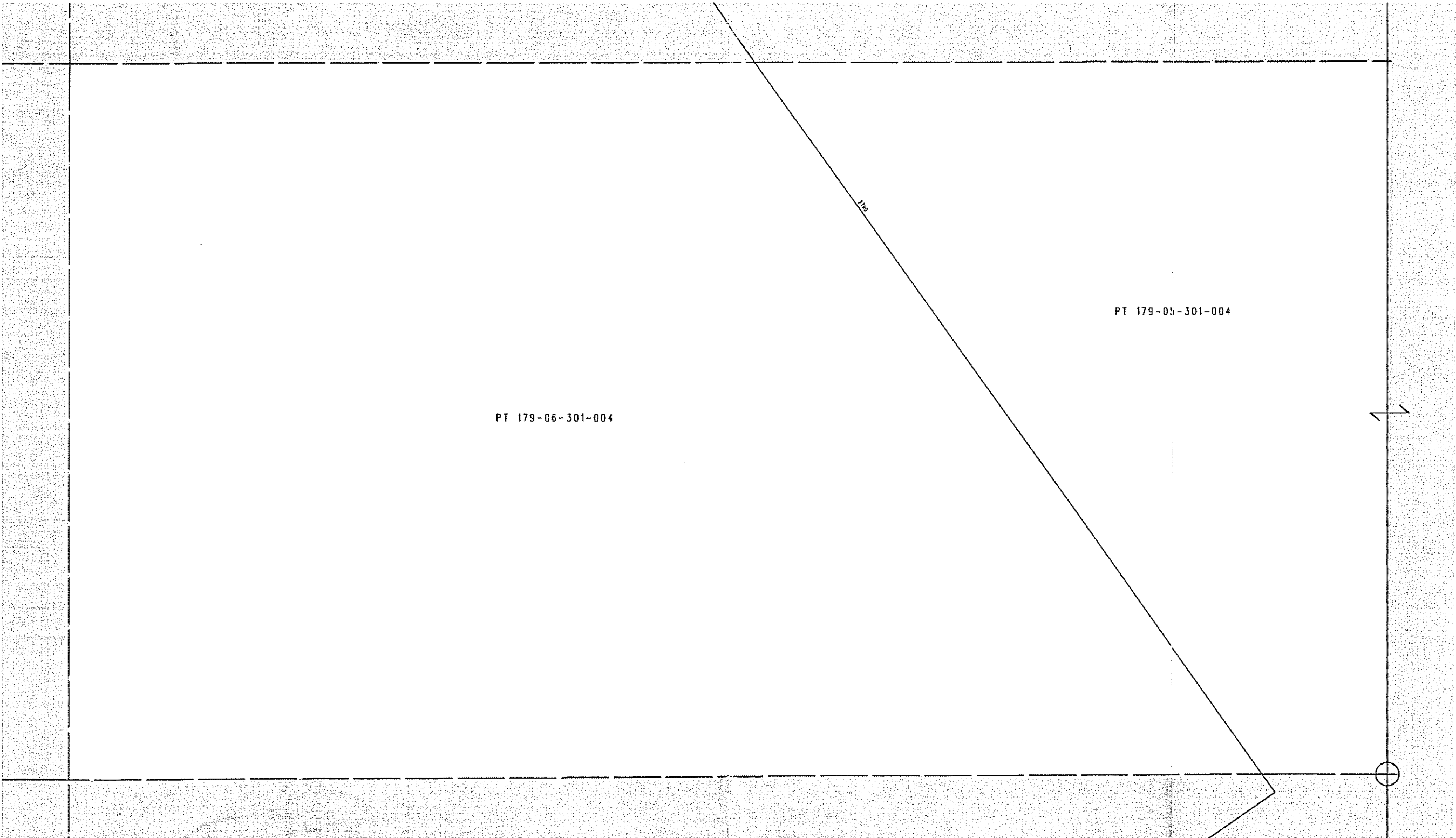
T23S
R64E
159
180
188

8	4	8	4
5	1	5	1
6	2	6	2
7	3	7	3
8	4	8	4
5	1	5	1

179-06-5



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		001 1.00 202 PD 25-45 5 5 GL5	PARCEL NUMBER ACREAGE PARCEL SUB/SEQ NUMBER PLAT RECORDING NUMBER BLOCK NUMBER LOT NUMBER GOV. LOT NUMBER	R62E 161 178 190	R63E 160 179 189	R64E 159 180 188	6 5 4 3 2 1 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	8 4 8 4 5 1 5 1 6 2 6 2 7 3 7 3 8 4 8 4 5 1 5 1
		Scale: 1"=200'		Rev: 04/23/03				
		USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL 0 50 100 200 400 600 800						



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

AVERAGE
QA VALUE
45

MAP LEGEND

—————

PARCEL BOUNDARY001
—————

SUBD BOUNDARY1.00
- - - - -

ROAD EASEMENT202
—————

PM/LD BOUNDARYPB 25-45
- - - - -

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK

T22S R63E

SEC

06

T22S

R62E

R63E

R64E

161

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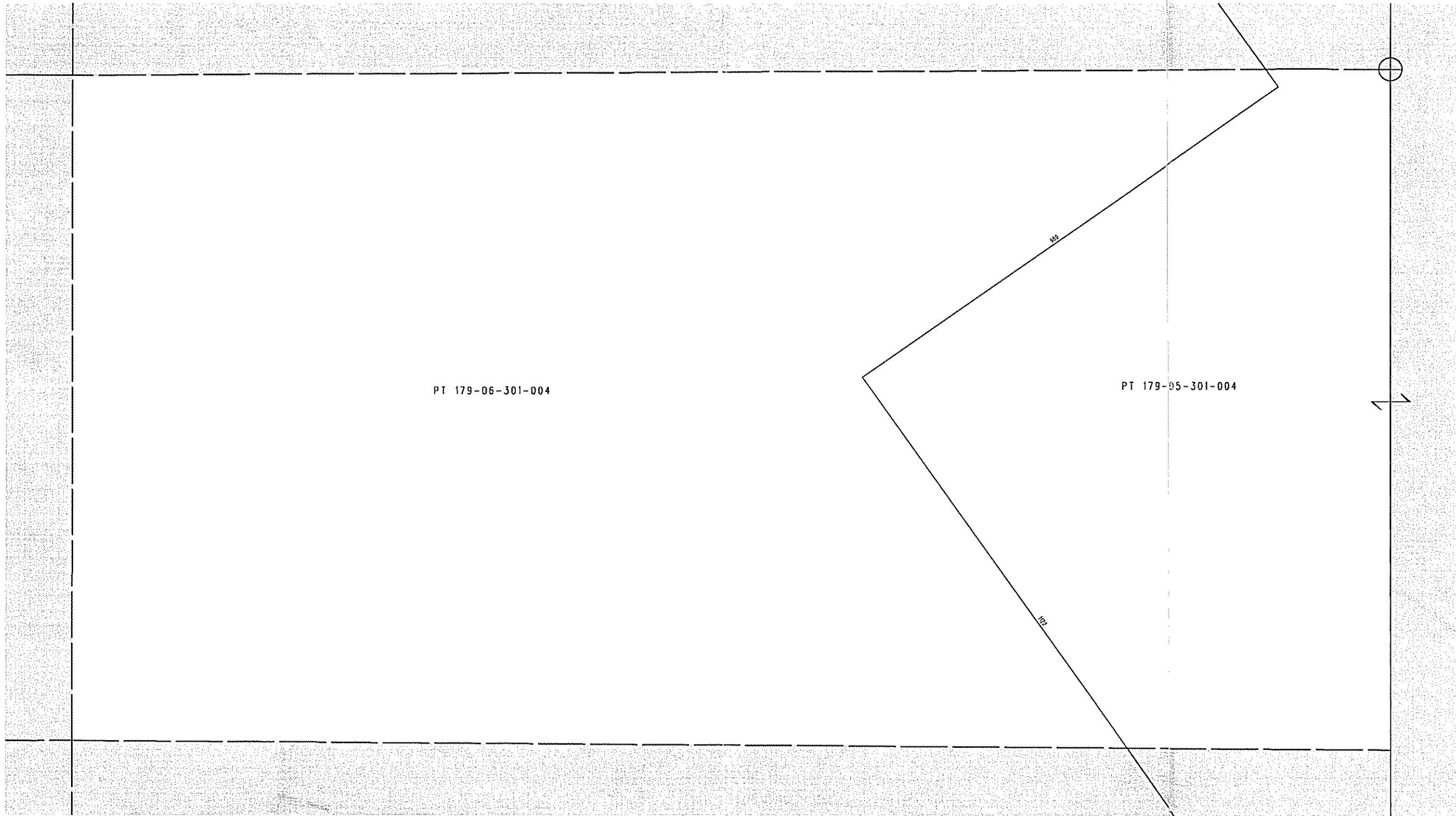
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179-06-7

Scale:1"=200'

Rev:04/23/03



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0 50 100 200 400 600 800

AVERAGE
QA VALUE
45

MAP LEGEND

————— PARCEL BOUNDARY 001

————— SUBD BOUNDARY 1.00

----- ROAD EASEMENT 202

————— PM/LD BOUNDARY PB 25-45

----- NON-PARCEL LOT LINE 5

————— MATCH LINE / LEADER LINE 5

--- ROAD ID NUMBER GL5

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T22S R63E

SEC

06

MAP

S 2 SE 4

179-06-8

R62E R63E R64E

T21S 161 160 159

T22S 178 179 180

T23S 190 189 188

6 5 4 3 2 1

7 8 9 10 11 12

18 17 16 15 14 13

19 20 21 22 23 24

30 29 28 27 26 25

31 32 33 34 35 36

8 4 8 4

5 1 5 1

6 2 6 2

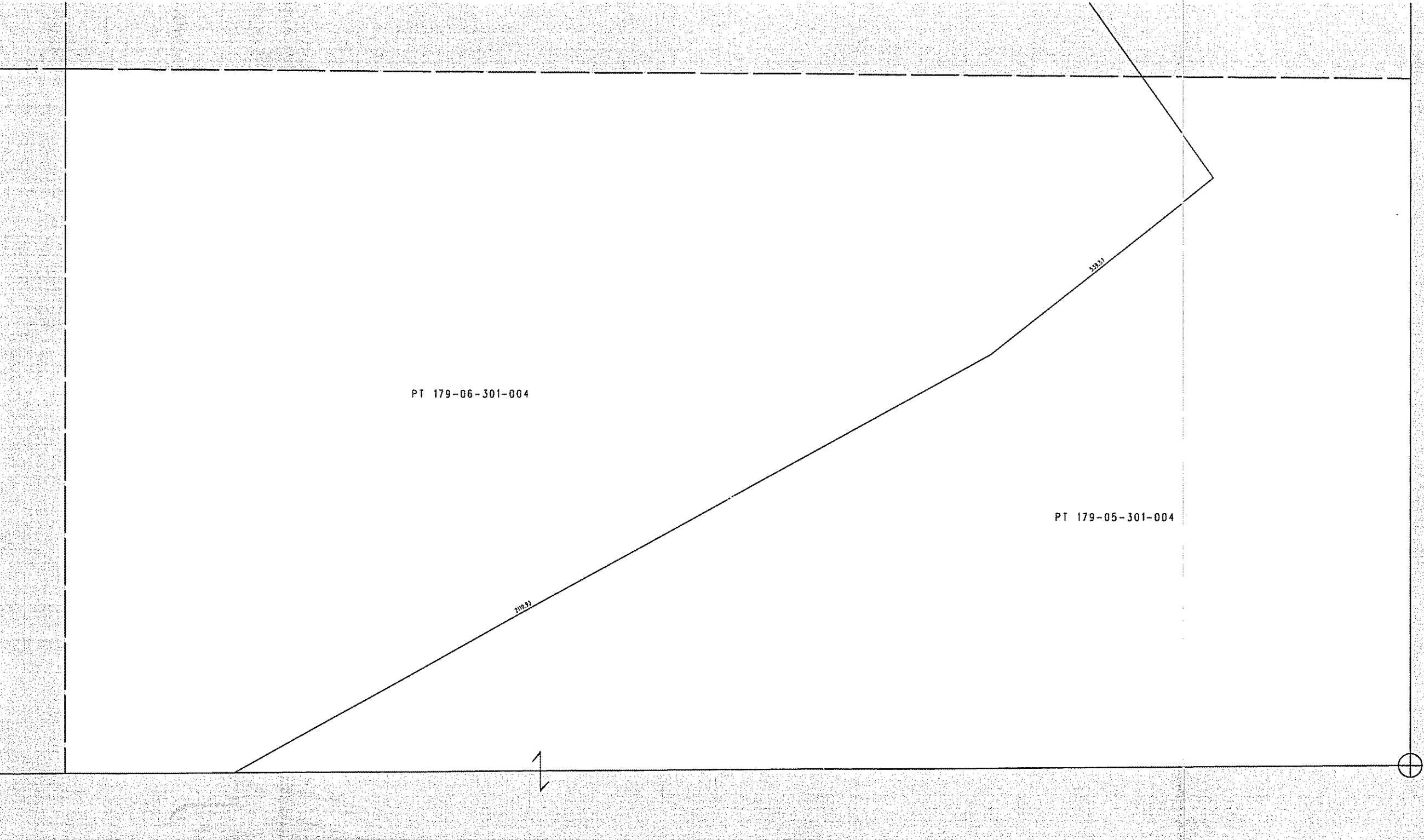
7 3 7 3

8 4 8 4

5 1 5 1

Scale: 1"=200'

Rev: 04/23/03



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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

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AVERAGE
OA VALUE
45

MAP LEGEND

—————

PARCEL BOUNDARY

—————

SUBD BOUNDARY

ROAD EASEMENT

—————

PM/LD BOUNDARY

NON-PARCEL LOT LINE

—————

MATCH LINE / LEADER LINE

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ROAD ID NUMBER

001

PARCEL NUMBER

1.00

ACREAGE

202

PARCEL SUB/SEQ NUMBER

75-45

PLAT RECORDING NUMBER

5

BLOCK NUMBER

5

LOT NUMBER

CL5

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T22S R63E

R62E

161

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1097S

1098S

1099S

1100S

1101S

1102S

1103S

1104S

1105S

1106S

1107S

1108S

1109S

1110S

1111S

1112S

1113S

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1121S

1122S

1123S

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1125S

1126S

1127S

1128S

1129S

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1131S

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1177S

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1179S

1180S

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1183S

1184S

1185S

1186S

1187S

1188S

1189S

1190S

1191S

1192S

1193S

1194S

1195S

1196S

1197S

1198S

1199S

1200S

1201S

1202S

1203S

1204S

1205S

1206S

1207S

1208S

1209S

1210S

1211S

1212S

1213S

1214S

1215S

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1221S

1222S

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1225S

1226S

1227S

1228S

1229S

1230S

1231S

1232S

1233S

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1235S

1236S

1237S

1238S

1239S

1240S

1241S

1242S

1243S

1244S

1245S

1246S

1247S

1248S

1249S

1250S

1251S

1252S

1253S

1254S

1255S

1256S

1257S

1258S

1259S

1260S

1261S

1262S

1263S

1264S

1265S

1266S

1267S

1268S

1269S

1270S

1271S

1272S

1273S

1274S

1275S

1276S

1277S

1278S

1279S

1280S

1281S

1282S

1283S

1284S

1285S

1286S

1287S

1288S

1289S

1290S

1291S

1292S

1293S

1294S

1295S

1296S

1297S

1298S

1299S

1300S

1301S

1302S

1303S

1304S

1305S

1306S

1307S

1308S

1309S

1310S

1311S

1312S

1313S

1314S

1315S

1316S

1317S

1318S

1319S

1320S

1321S

1322S

1323S

1324S

1325S

1326S

1327S

1328S

1329S

1330S

1331S

1332S

1333S

1334S

1335S

1336S

1337S

1338S

1339S

1340S

1341S

1342S

1343S

1344S

1345S

1346S

1347S

13

NOTES

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MAP LEGEND

AVERAGE
QA VALUE
45

—————

PARCEL BOUNDARY001

—————

SUBD BOUNDARY1.00

ROAD EASEMENT202

—————

PM/LD BOUNDARYPB 25-45

NON-PARCEL LOT LINE5

—————

MATCH LINE / LEADER LINE5

001

ROAD ID NUMBERGL5

PARCEL NUMBER
ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T22S R63E

SEC

07

MAP

S 2 NE 4

179-07-6

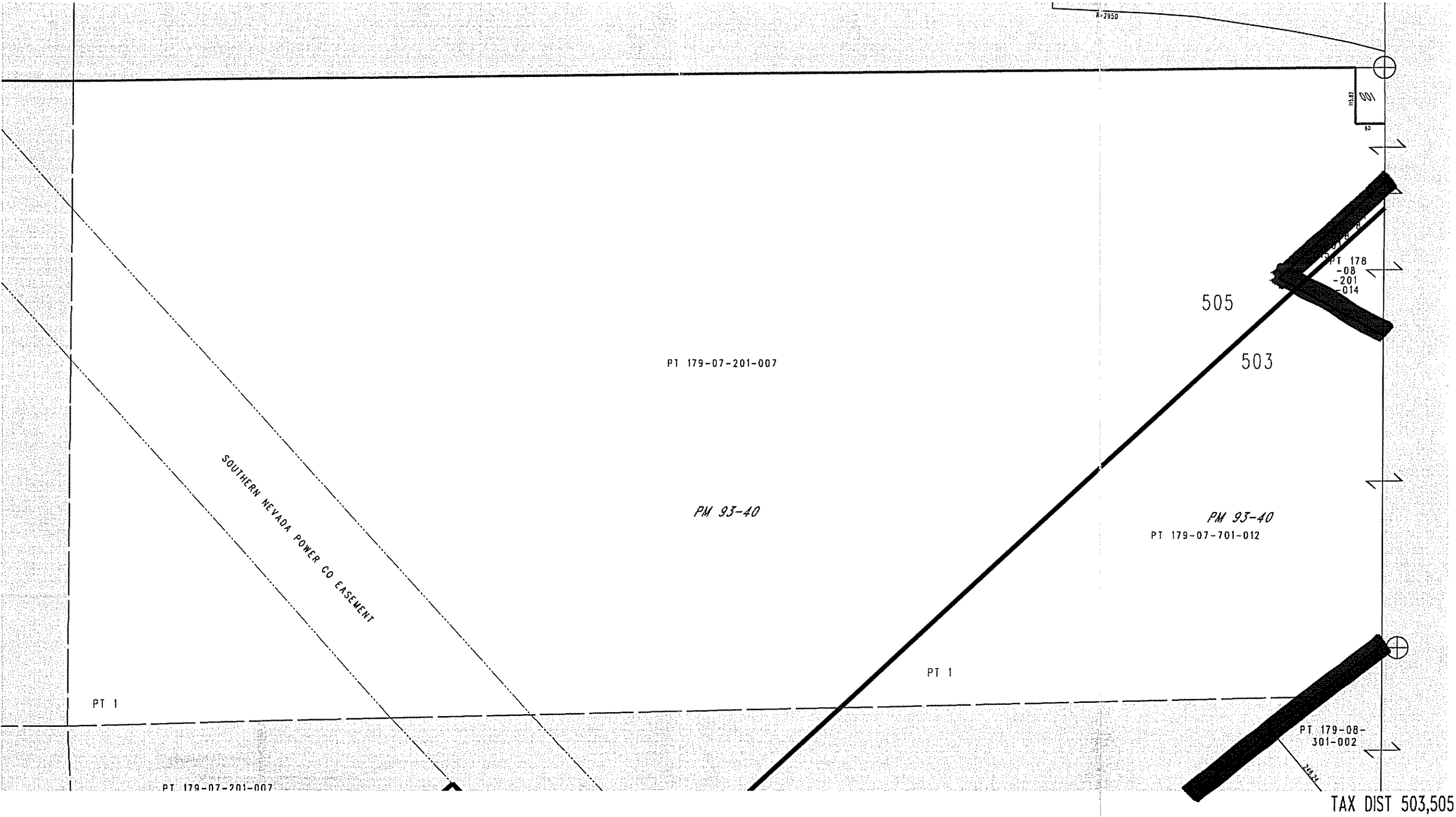
R62E			R63E			R64E		
151	160	159						
178	179	180						
190	189	188						

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

Scale: 1"=200'

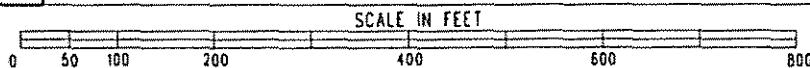
Rev: 03/01/00

CLARK COUNTY
ASSESSOR
MAPPING DIVISION
NEVADA



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MAP LEGEND

AVERAGE
QA VALUE
45

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

_____ PARCEL BOUNDARY
 _____ SUBD BOUNDARY
 - - - - - ROAD EASEMENT
 _____ PM/LD BOUNDARY
 - - - - - NON-PARCEL LOT LINE
 _____ MATCH LINE / LEADER LINE
 001 ROAD ID NUMBER

001	PARCEL NUMBER
1.00	ACREAGE
202	PARCEL SUB/SEQ NUMBER
PG 25-45	PLAT RECORDING NUMBER
5	BLOCK NUMBER
5	LOT NUMBER
GL5	GOV. LOT NUMBER

BOOK	T22S R63E
------	-----------

SEC.	07
------	----

MAP	N 2 SE 4
-----	----------

179-07-7



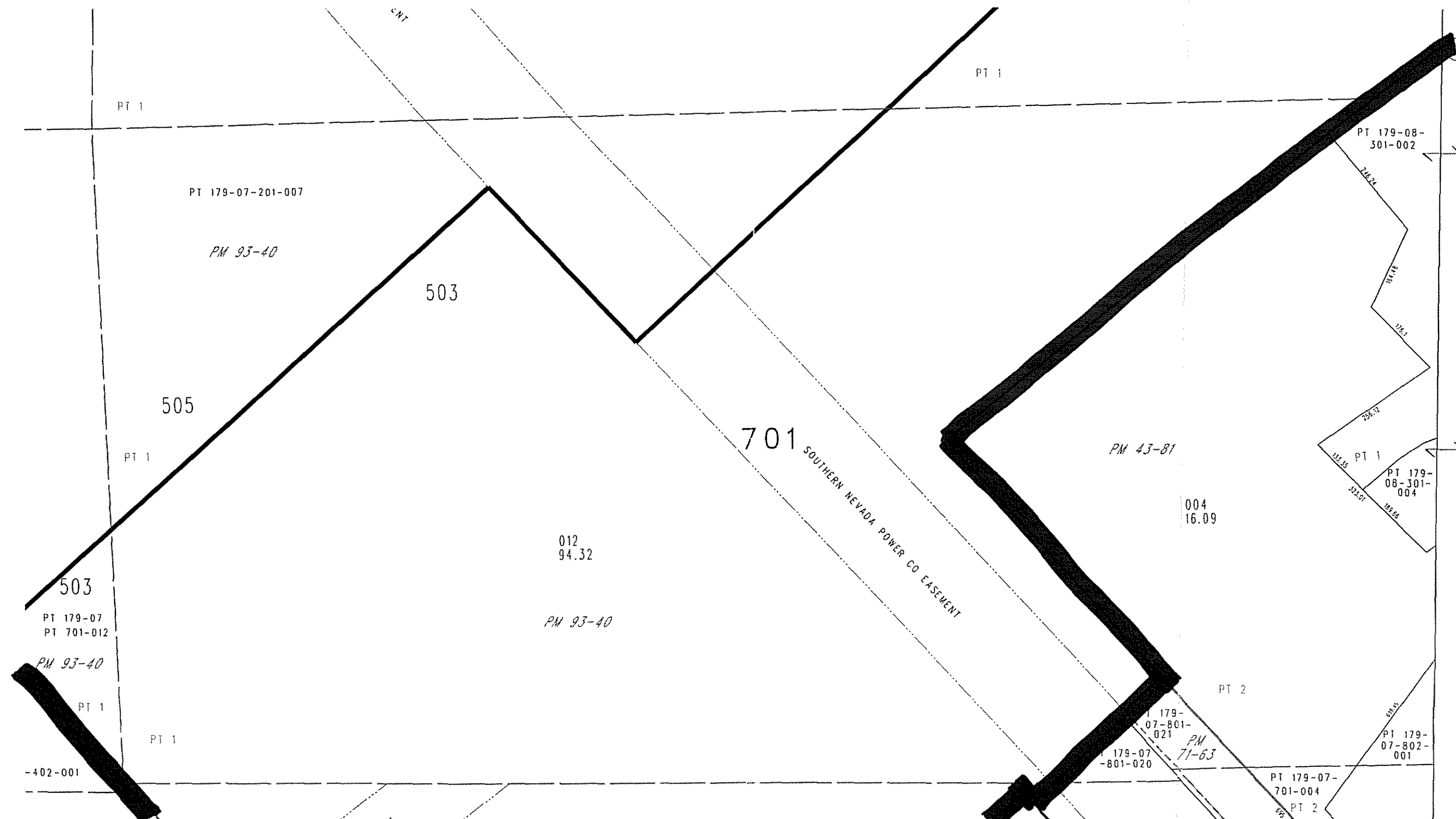
		R62E	R63E	R64
T21S		161	160	159
T22S		178	179	180
T23S		190	189	188

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

8	4	8
5	1	5
6	2	6
7	3	7
8	4	8
5	1	5

Scale: 1"=200'

Rev:09/06/00



TAX DIST 503,505

NOTES

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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

AVERAGE
QA VALUE
45

MAP LEGEND

PARCEL BOUNDARY

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

001

1.00

202

5

5

GL5

PARCEL NUMBER

ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T22S R63E

SEC

07

MAP

S 2 SE 4

179-07-8

6 5 4 3 2 1

7 8 9 10 11 12

18 17 16 15 14 13

19 20 21 22 23 24

30 29 28 27 26 25

31 32 33 34 35 36

161

160

159

178

179

180

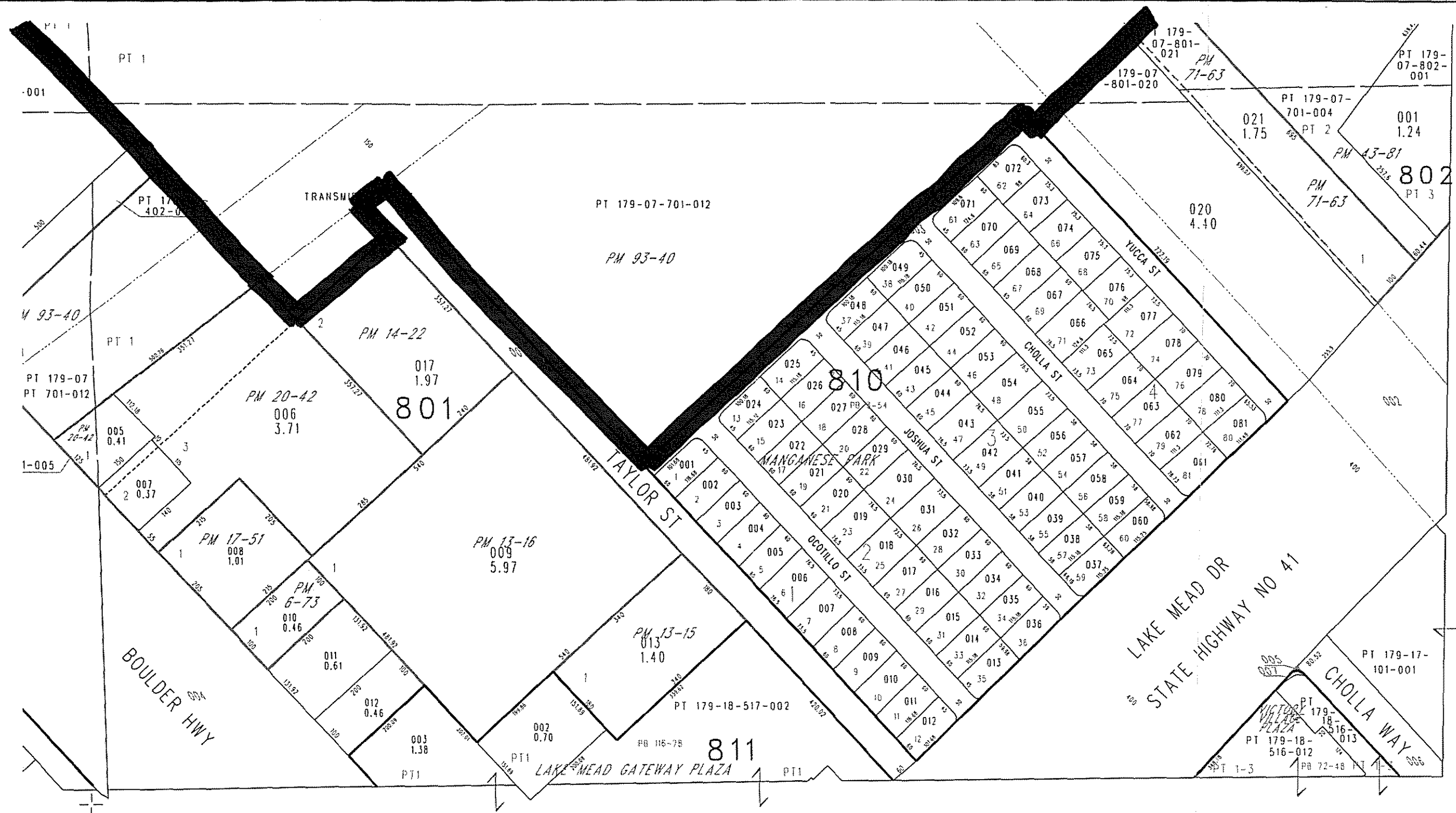
190

189

188

Scale:1"=200'

Rev:06/23/04



NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11X17 ORIGINAL

0 50 100 200 400 600 800

AVERAGE
QA VALUE
45

MAP LEGEND

PARCEL BOUNDARY
SUBD BOUNDARY
ROAD EASEMENT
PM/LD BOUNDARY
NON-PARCEL LOT LINE
MATCH LINE / LEADER LINE
ROAD ID NUMBER

001
1.00
202
PB 25-45
5
5
GL5

PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK

T22S R63E

SEC

05

MAP

N 2 NW 4

6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36

8 4 8 4
5 1 5 1
6 2 6 2
7 3 7 3
8 4 8 4
5 1 5 1

Scale:1"=200'

Rev:04/23/03

179-05-1





NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

MAP LEGEND

AVERAGE
QA VALUE
45

—————

 PARCEL BOUNDARY

—————

 SUBD BOUNDARY

 ROAD EASEMENT

—————

 PM/LD BOUNDARY

 NON-PARCEL LOT LINE

—————

 MATCH LINE / LEADER LINE

 ROAD ID NUMBER

001
1.00

202
PB 25-45

5

5

CL5

PARCEL NUMBER
ACREAGE

PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

BOOK

T22S R63E

SEC

05

MAP

S 2 NW 4

179-05-2

R62E			R63E			R64E		
T21S	161	160	159					
T22S	178	179	180					
T23S	190	189	188					

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

8	4	8	4
5	1	5	1
6	2	6	2
7	3	7	3
8	4	8	4
5	1	5	1

Scale:1"=200'

Rev:04/23/03

PT 179-05-301-004

NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
OA VALUE
45

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BOOK
T22S R63E

05

MAP
N 2 SW 4

179-05-3

001
1.00
202
PG 21-45
5
5
GL5

PARCEL BOUNDARY
SUBD BOUNDARY
ROAD EASEMENT
PM/LD BOUNDARY
NON-PARCEL LOT LINE
MATCH LINE / LEADER LINE
ROAD ID NUMBER

PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

T21S
T22S
T23S

R62E
R63E
R64E

161
178
190

160
179
189

159
180
188

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14
23
26
35

1
12
13
24
25
36

8
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6
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4
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2
3
4
1

8
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6
7
8
5

4
1
2
3
4
1

Scale:1"=200'

Rev:04/23/03

CLARK COUNTY
ASSESSOR
CLARK COUNTY
NEVADA

TAX DIST 525

NOTES

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MAP LEGEND

AVERAGE
QA VALUE
45

—————

 PARCEL BOUNDARY

—————

 SUBD BOUNDARY

 ROAD EASEMENT

—————

 PM/LD BOUNDARY

 NON-PARCEL LOT LINE

—————

 MATCH LINE

001

 ROAD ID NUMBER

001
1.00

 PARCEL NUMBER
ACREAGE

202
PB 25-45

 PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

5

 BLOCK NUMBER

5

 LOT NUMBER

GL5

 GOV. LOT NUMBER

BOOK

T22S R63E

SEC

05

MAP

S 2 SW 4

179-05-4

R62E

R63E

R64E

121S

122S

123S

161

160

159

178

179

180

190

189

188

6

5

4

3

2

1

7

8

9

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11

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1

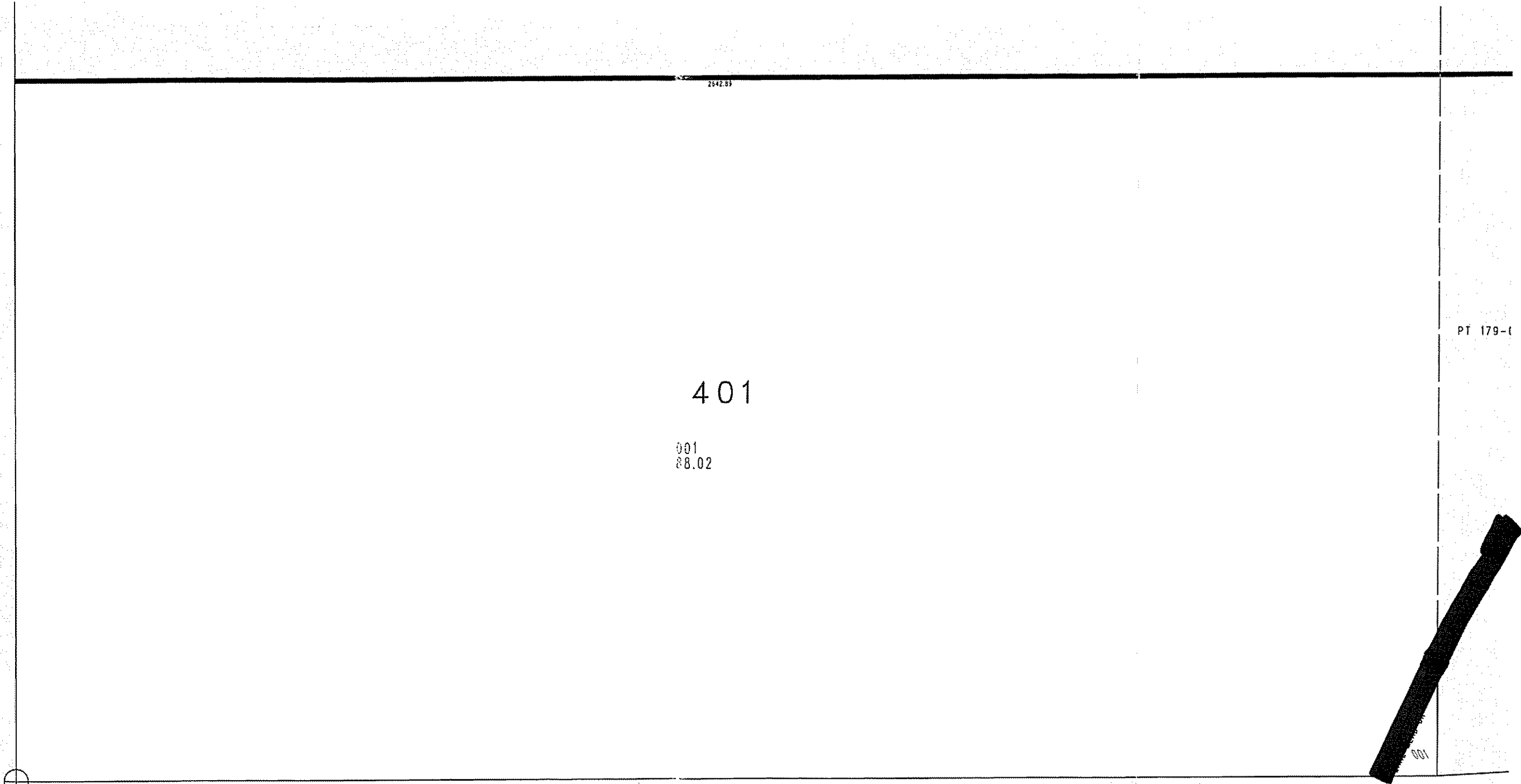
5

1

Scale: 1"=200'

Rev: 06/13/94

CLARK COUNTY
ASSESSOR
PLANNING DIVISION
NEVADA



NOTES

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MAP LEGEND

AVERAGE
QA VALUE
45

PARCEL BOUNDARY

001
1.00

PARCEL NUMBER
ACREAGE

SUBD BOUNDARY

202
PB 25-45

PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER

ROAD EASEMENT

5

BLOCK NUMBER

PM/LD BOUNDARY

5

LOT NUMBER

NON-PARCEL LOT LINE

5

GOV. LOT NUMBER

MATCH LINE

001

ROAD ID NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T22S R63E

08

N 2 NW 4

179-08-1

62E

63E

64E

121S

122S

123S

161

178

190

160

179

189

159

180

188

6

7

18

19

30

31

5

8

17

20

29

32

4

9

16

21

28

33

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22

27

34

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14

23

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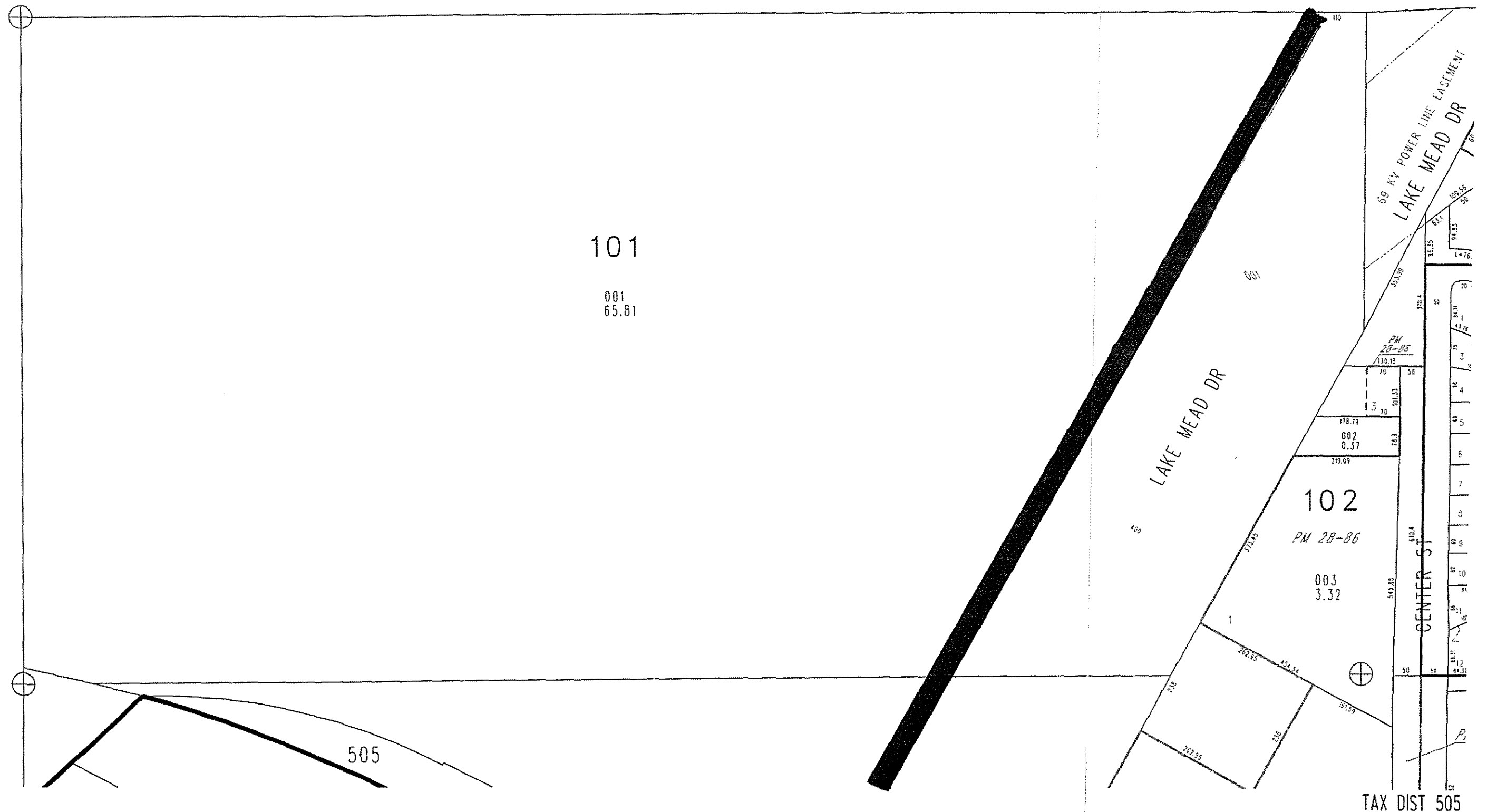
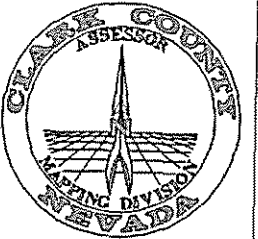
6

7

5

Scale: 1"=200'

Rev: 10/26/98



NOTES

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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
OA VALUE
45

MAP LEGEND

—

PARCEL BOUNDARY

—

SUBD BOUNDARY

ROAD EASEMENT

PM/LD BOUNDARY

NON-PARCEL LOT LINE

MATCH LINE / LEADER LINE

ROAD ID NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

BOOK

T22S R63E

R62E

R63E

R64E

T21S

T22S

T23S

121S

122S

123S

161

178

190

160

179

189

159

180

188

PARCEL NUMBER

001

202

5

5

GL5

ACREAGE

1.00

8.45

25-45

5

5

PARCEL SUB/SEQ NUMBER

001

202

5

5

GL5

PLAT RECORDING NUMBER

001

202

5

5

GL5

BLOCK NUMBER

001

202

5

5

GL5

LOT NUMBER

001

202

5

5

GL5

GOV. LOT NUMBER

001

202

5

5

GL5

Scale: 1"=200'

Rev: 09/18/01

SEC.

08

6

5

4

3

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26

25

31

32

33

34

35

36

MAP

S 2 NW 4

8

4

8

4

5

1

5

1

6

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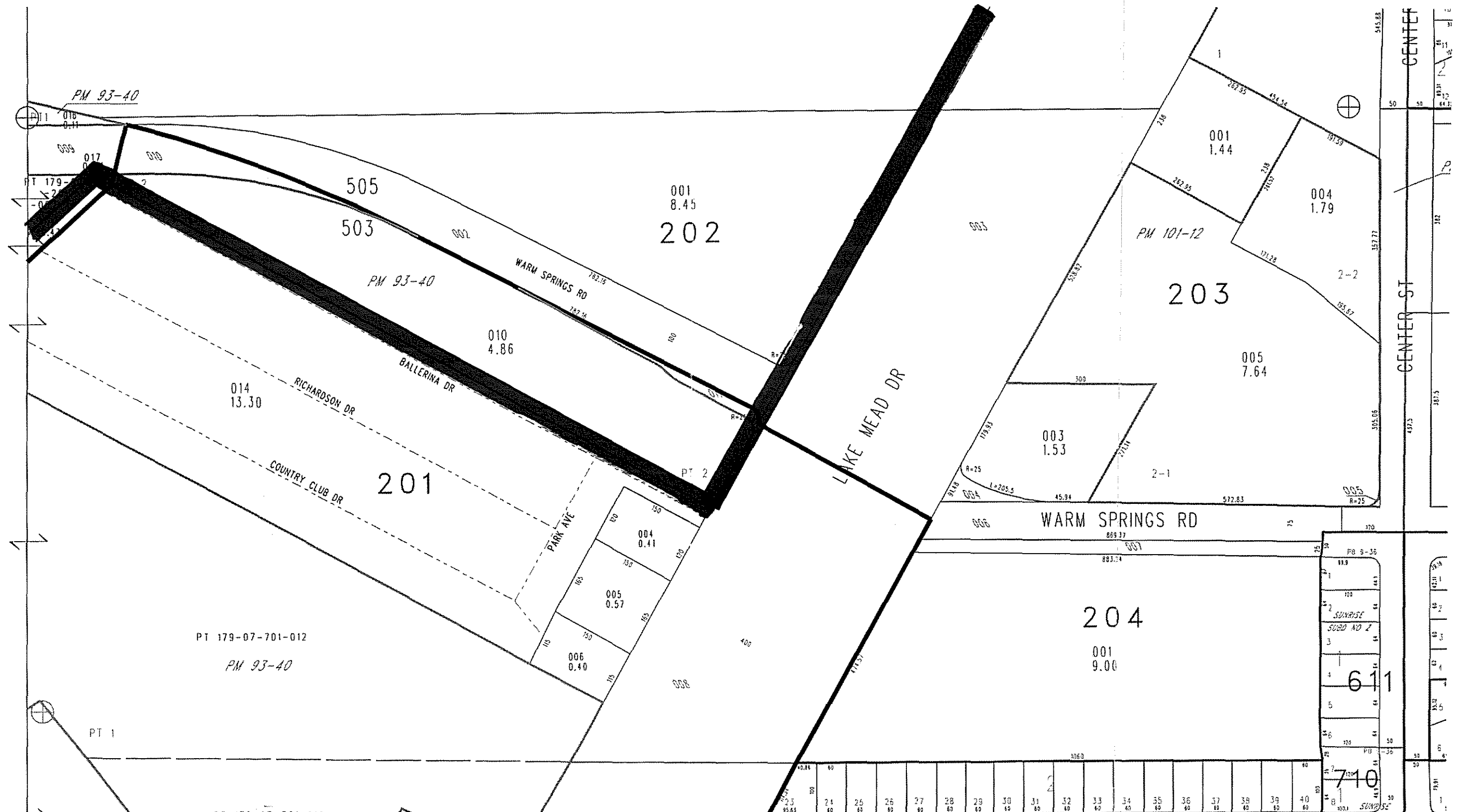
1

5

1

179-08-2

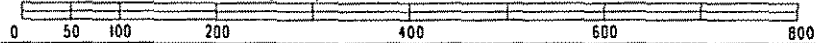




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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11x17 ORIGINAL



AVERAGE
QA VALUE
35

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

MAP LEGEND

- | | | | |
|-----------|--------------------------|----------|-----------------------|
| _____ | PARCEL BOUNDARY | 001 | PARCEL NUMBER |
| _____ | SUBD BOUNDARY | 1.00 | ACREAGE |
| - - - - - | ROAD EASEMENT | 202 | PARCEL SUB/SEQ NUMBER |
| _____ | PM/LD BOUNDARY | FB 25-45 | PLAT RECORDING NUMBER |
| - - - - - | NON-PARCEL LOT LINE | 5 | BLOCK NUMBER |
| _____ | MATCH LINE / LEADER LINE | 5 | LOT NUMBER |
| 001 | ROAD ID NUMBER | GL5 | GOV. LOT NUMBER |

BOOK T21S R63E

SEC. 32

MAP	S 2 SE 4
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160-32-8



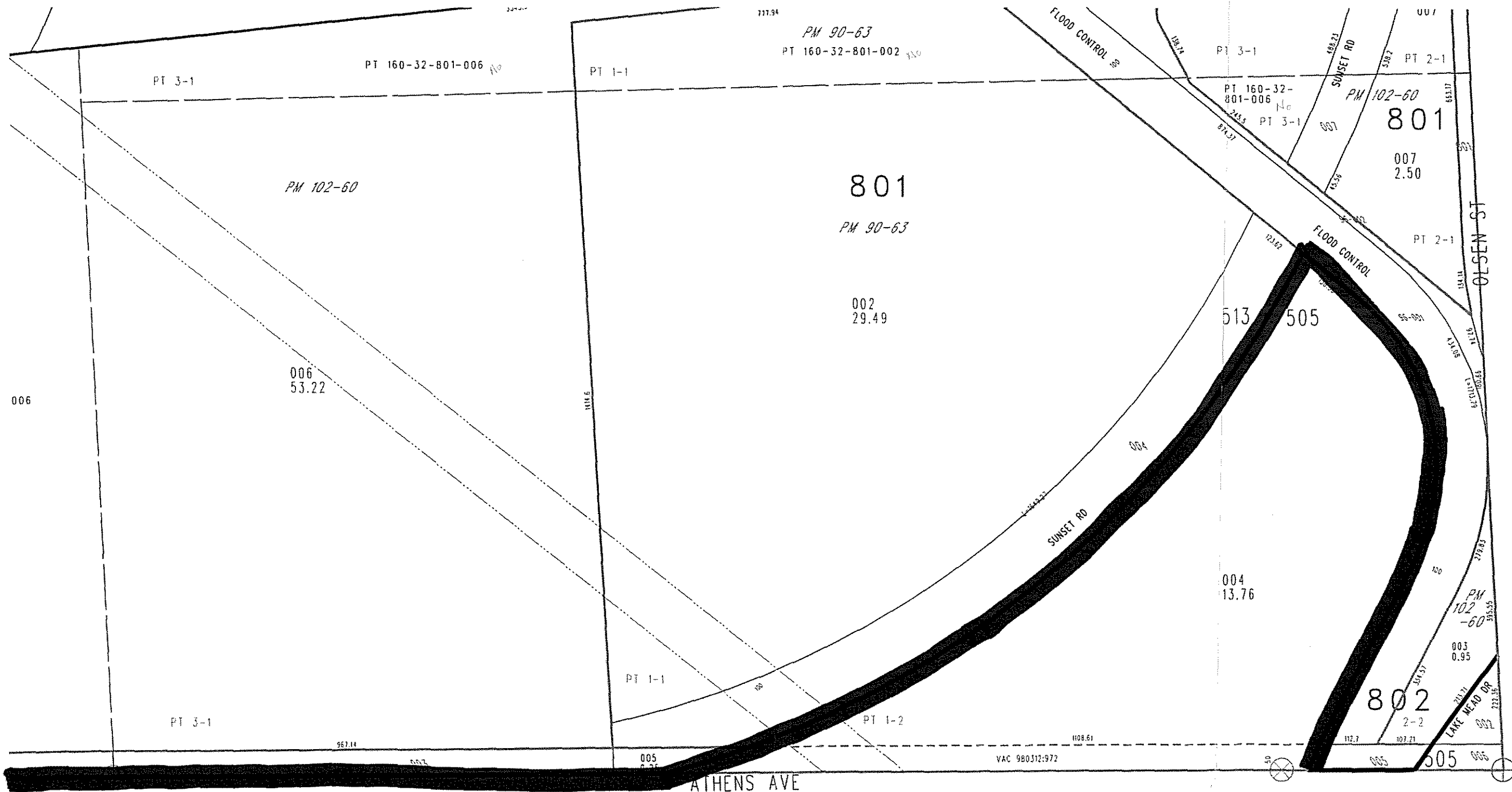
	R62E	R63E	R64E
T20S	140	141	142
T21S	161	160	159
T22S	178	179	180

6	5	4	3	2	1
7	8	9	10	11	12
18	17	15	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

8	4	8
5	1	5
6	2	6
7	3	7
8	4	8
5	1	5

Scale: 1"=200'

Rev:06/20/02



TAX DIST 505,513

NOTES

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USE THIS SCALE(Feet) WHEN MAP REDUCED FROM 11x17 ORIGINAL

0

50

100

200

400

600

800

AVERAGE
QA VALUE
45

MAP LEGEND

——

PARCEL BOUNDARY

——

SUBD BOUNDARY

ROAD EASEMENT

——

PM/LD BOUNDARY

NON-PARCEL LOT LINE

——

MATCH LINE / LEADER LINE

ROAD ID NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T22S R63E

R62E

R63E

R64E

121S

122S

123S

161

178

190

160

179

189

159

180

188

001

1.00

202

PB 25-45

5

5

GL5

PARCEL NUMBER

ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

Scale: 1"=200'

Rev: 04/24/03

05

6

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4

3

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17

16

15

14

13

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28

27

26

25

31

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34

35

36

N 2 NE 4

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4

5

1

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1

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2

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2

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3

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3

8

4

8

4

5

1

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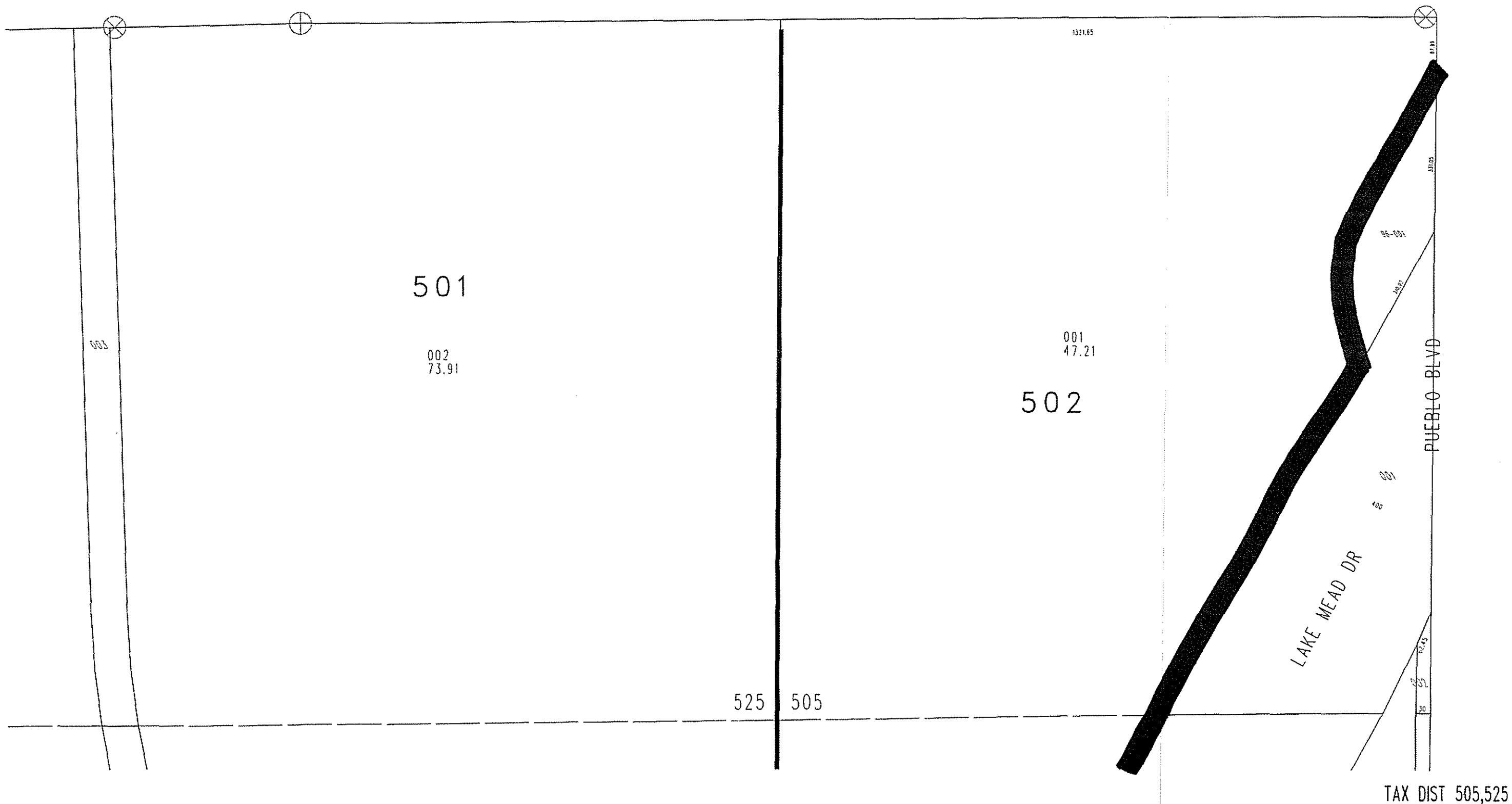
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CLARK COUNTY

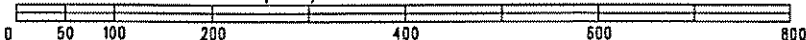
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This map is for assessment use only and does NOT represent a survey. No liability is assumed for the accuracy of the data delineated herein. Information on roads and other non-assessed parcels may be obtained from the Road Document Listing in the Assessor's Office.

This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.

USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL



MAP LEGEND

AVERAGE
QA VALUE
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ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

_____ PARCEL BOUNDARY
 _____ SUBD BOUNDARY
 - - - - - ROAD EASEMENT
 _____ PM/LD BOUNDARY
 - - - - - NON-PARCEL LOT LINE
 _____ MATCH LINE / LEADER LINE
 001 ROAD ID NUMBER

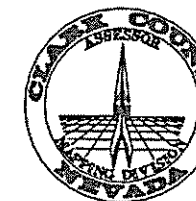
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GL5	GOV. LOT NUMBER

BOOK T22S R63E

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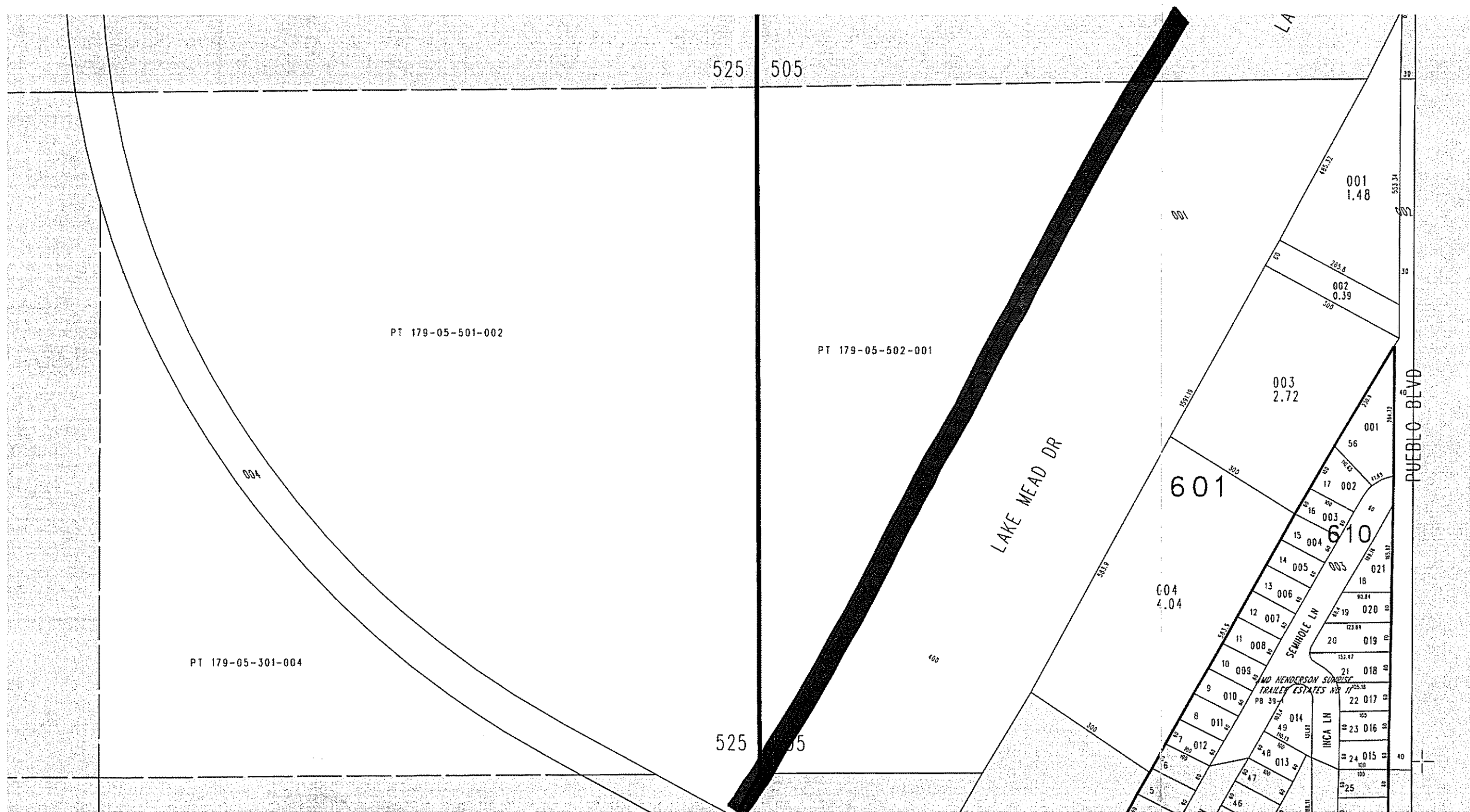
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6	2	6
7	3	7
8	4	8
5	1	5

Scale: 1"=200

Rev:04/23/03



TAX DIST 505,525

NOTES

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USE THIS SCALE(FEET) WHEN MAP REDUCED FROM 11X17 ORIGINAL

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MAP LEGEND

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PARCEL BOUNDARY

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SUBD BOUNDARY

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PB 25-45

ROAD EASEMENT

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PM/LD BOUNDARY

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NON-PARCEL LOT LINE

5

MATCH LINE / LEADER LINE

GL5

ROAD ID NUMBER

PARCEL NUMBER

ACREAGE

PARCEL SUB/SEQ NUMBER

PLAT RECORDING NUMBER

BLOCK NUMBER

LOT NUMBER

GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.

M. W. Schofield, Assessor

T22S R63E

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179-05-7

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Rev:04/23/03

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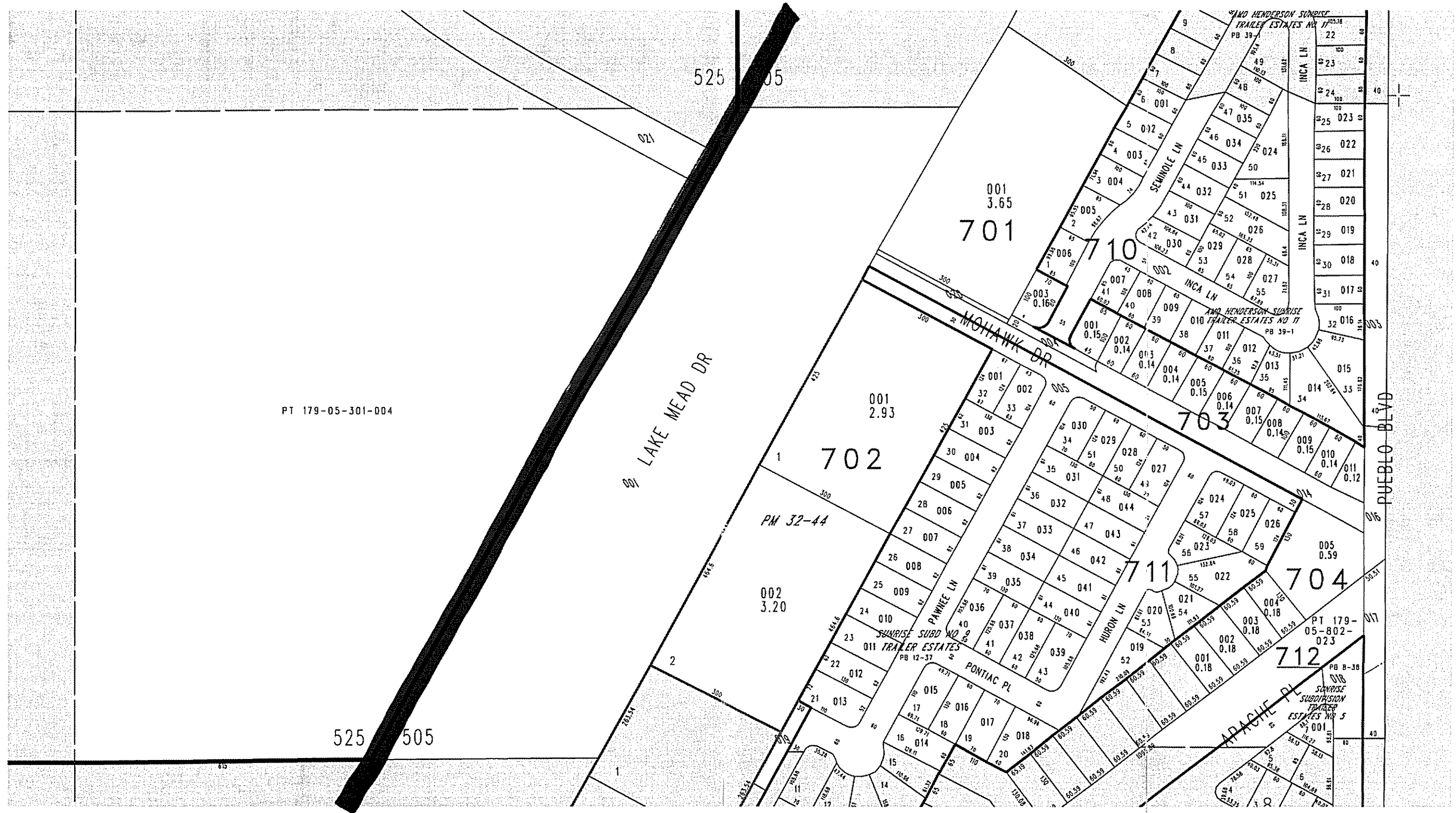
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NOTES

This map is compiled from official records, including surveys and deeds, but only contains the information required for assessment. See the recorded documents for more detailed legal information.

MAP LEGEND

AVERAGE
QA VALUE
45

_____	PARCEL BOUNDARY
_____	SUBD BOUNDARY
- - - - -	ROAD EASEMENT
_____	PM/LD BOUNDARY
- - - - -	NON-PARCEL LOT LINE
_____	MATCH LINE
001	ROAD ID NUMBER

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PB 25-45
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PARCEL NUMBER
ACREAGE
PARCEL SUB/SEQ NUMBER
PLAT RECORDING NUMBER
BLOCK NUMBER
LOT NUMBER
GOV. LOT NUMBER

ASSESSOR'S PARCELS - CLARK CO., NV.
M. W. Schofield, Assessor

BUOK T22S R63E

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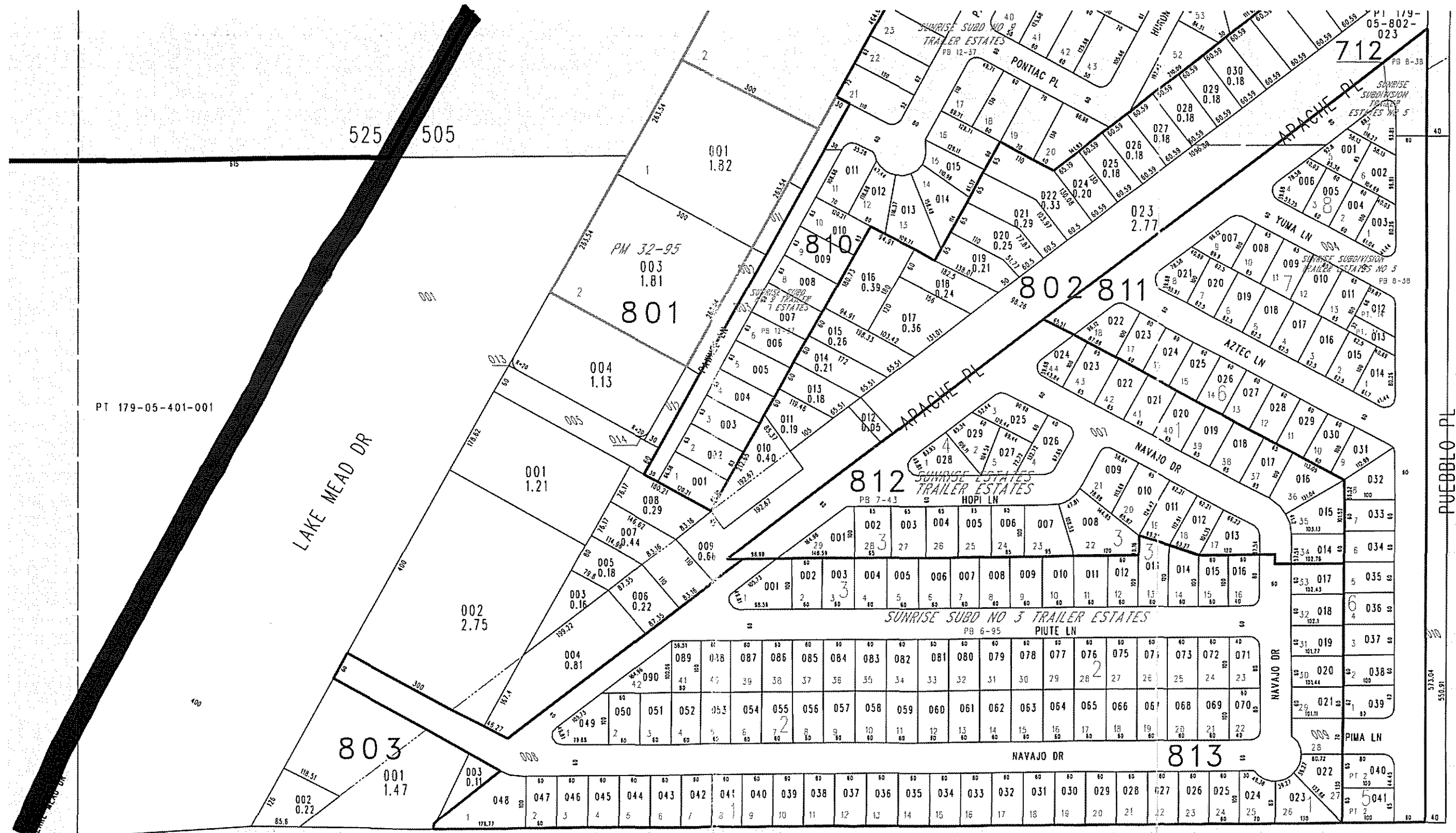
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Rev:02 / 26 / 98

8	4	8
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7	3	7
8	4	8
5	1	5



TAX DIST 505

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INTRODUCTION

This study has been prepared as the Conceptual Drainage Study for the Eastside Properties. The purpose for this study is to develop peak flow rates affecting the site under existing and proposed conditions. The intention of this study is to establish that the proposed development, including drainage facilities, will be able to convey the flows and will not cause adverse impacts to adjacent and downstream properties. Figures one through nine, which indicate the site, are located at the end of the text

This study was conducted in accordance with the criteria set forth by the Clark County Regional Flood Control District (CCRFCD) *Hydrologic Criteria and Drainage Design Manual* (HCDDM) dated August 12, 1999.

GENERAL INFORMATION

SITE LOCATION

The project site is located within a portion of Section 36, Township 21 South, Range 62 East and a portion of Sections 5-8, 18 and 31-32, Township 22 South, Range 63 East, Clark County, Nevada, see **Figure 2**. The northwest corner of the site is approximately 5,000 feet north of Weisner Way. The northeast corner of the site is at approximately Lake Mead Drive and Athens Avenue. The southwest corner of the site is approximately at Boulder Highway and Pabco Road. The southern corner of the site is at approximately Lake Mead Drive and Boulder Highway.

SITE DESCRIPTION

The current site is primarily natural desert, see **Photo 1** in photo log. The site currently consists of detention ponds ranging in sizes from 50 to 200 feet long and averaging 5 feet in depth. The majority of these ponds are located within the area of Pabco Road, Boulder Highway, Lake Mead Drive, and Athens Avenue. The site currently drains in a northerly direction into the Las Vegas Wash. Mohawk Drive is currently the only paved road located within the northeast portion of the site, see **Photo 3** in the photo log and **Figure 9** for location. Mohawk Drive begins at Lake Mead Drive and ends at Athens Avenue.

PROJECT DESCRIPTION

The proposed development consists of utilizing 2,200 acres to construct commercial, industrial, and residential facilities. The land use for the residential facilities will be comprised of a mixture of low and high-density residential units. The site will be developed to include street improvements with onsite and offsite drainage facilities, see **Appendix D-4** for proposed drainage conditions large scale map.

CCRFCD MASTER PLAN INFORMATION

Figures 3, 3A, 4, and 4A, show the property in relation to CCRFCD Master Planned Facilities. The exhibits were reproduced from Figures F-18 and F-22 of the 2002

CCRFC Master Plan Update of the Las Vegas Valley (2002 MPU). The figures show that there are proposed regional facilities on and around the proposed development. On the southern section of Boulder Highway and Pabco Road is the proposed BMI Gate 5 Detention Basin (2002 MPU Facility Number PTPA 0266). Along Lake Mead Drive is a proposed concrete lined channel from Burkholder Boulevard to the confluence point of the C-1 channel (2002 MPU Facility Number C1LM 0000-0184). Along Pabco Road is a proposed concrete lined channel from Boulder Highway to the confluence point of the Las Vegas Wash (2002 MPU Facility Number PTPA 0000-0236). Within the northwest corner of the project site is the Master Planned facility, Pittman-Burns Channel (2002 MPU Facility number PTBR 0000-0029).

The conceptual layout deviates from the Master Plan Update. The BMI Gate 5 Detention Basin would be replaced with two onsite peaking basins and Pabco Channel realigned to traverse through the project site. The realignment of Pabco Channel, improvements to the Pittman-Burns Channel, and the hydrologic impacts from the proposed peaking basins are analyzed in this conceptual study. It is acknowledged that an Amendment to the 2002 MPU will likely be required. Once the conceptual study is approved, a Master Plan Amendment will be prepared if needed.

FEMA FLOODPLAIN INFORMATION

Figures 5, 6, and 7 are reproductions of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Clark County, Nevada Community Panel Numbers 32003C 2585E, 32003C 2605E, and 32003C 2615E effective date September 27, 2002. **Figures 5, 6, and 7** show that the majority of the proposed development lies within an unshaded Zone X and Zone A. One of the two Flood Insurance Studies in the vicinity of the project site is the Las Vegas Wash FIS, which is north of the proposed development. The other FIS is the C-1 channel FIS, which is east of the project site. An unshaded Zone X is defined by FEMA as areas determined to be outside the 500-year floodplain. Zone A is defined by FEMA as special flood hazard areas inundated by the 100-year frequency flood event with no base flood elevations determined. Multiple Conditional Letter of Map Revisions (CLOMR) will likely be required for the project. Letters of Map Revisions (LOMR) will also be required. The timing and approval of FEMA CLOMRs and LOMRs for the project will be as determined by the City of Henderson. All development in the floodplain will be in accordance with the current policies and procedures of the City of Henderson.

HYDROLOGY

HYDROLOGIC PROCEDURE

The rainfall and runoff data developed in this study were prepared for use with the HEC-1 Flood Hydrograph Package. The methodology and calculations used to determine the hydrologic parameters and the HEC-1 runoff models are included in **Appendix A**.

EXISTING CONDITIONS

This study presents the findings of a detailed evaluation of the existing hydrology through the proposed development. Existing drainage patterns are shown in **Figure 8** and **Appendix D-3**. The peak flow rates for the 10-year and 100-year storm events that affect the site are summarized in **Table 4**.

The site is divided into 10 onsite basins. In the existing conditions, subbasins ONE-4, ONE-5, ONE-6, ONE-9, and ONE-10 sheet flow in a northerly direction and are combined at the northern portion of ONE-4. Basin ONE-8 is routed in a northeast direction by a 10-foot tall earth berm that routes flows into the C-1 channel. Basin ONE-7 sheet flows in a northern direction away from the proposed development. Basin ONE-3 drains northerly into the Las Vegas Wash. Basins ONE-1, ONE-2, and OFFE-2B drain northerly into the Pittman Burns channel. Existing land use for the site is comprised of natural desert. The onsite soils consist of Hydrologic Soil Groups A, B and C. See **Appendix A-1** for curve number calculations.

There are 23 offsite basins and a drainage area tributary to the Wastewater Reclamation Facility (WRF) draining into the proposed development. The WRF Technical Drainage Study HEC-1 and drainage map are located in **Appendix C-1**. The offsite basins are comprised of commercial, industrial, residential, open space, and parks land uses. Offsite drainage is collected from areas southeast of Lake Mead Drive and south of Boulder Highway. The offsite basins were delineated based on topography and field surveys. Offsite basins southeast of Lake Mead Drive drain into the proposed development by way of road culverts along Lake Mead Drive. Offsite basins south of Boulder Highway flow north along Water Street to Boulder Highway where the flow is split and diverted into 2-6'x4' reinforced concrete box culverts that cross Boulder Highway. The flow split data and calculations are from the Conceptual Study for The Gate 5 Detention Basin, see **Appendix C-3**. The overflow from the diversion is routed northwest along the west side of Boulder Highway away from the proposed development. The flow through the culverts continues north and is conveyed within the Pabco Channel. Please refer to **Figure 8** for offsite drainage patterns. The offsite land use is based on the 2002 MPU and the soils consist of Hydrologic Soil Groups A, B, and C. See **Appendix A-1** for curve number calculations.

PROPOSED CONDITIONS

This study presents the findings of an evaluation of the proposed hydrology for the proposed development. Peak flow rates for the 10-year and 100-year storm events that affect the site are summarized in **Table 5** and **Table 6**. The peak flow rates for the onsite basins increased due to the proposed development.

The proposed conditions hydrology consists of 28 onsite basins and 24 offsite basins. The onsite basins are delineated based on rough grading plans of the proposed development. Basins tributary to CP 1-24 all drain in a northerly direction into basin OND-3. These basins tributary to OND-3 are routed along the major streets proposed within the site and through storm drain systems.

Two off-line, mixed-use peaking basins are proposed onsite to offset increases in the peak flows from the result of increased imperviousness associated with development. The peaking basins are modeled to ensure the post-development peak flows leaving the site will not exceed 2002 MPU flows. The basins will be designed as dual use facilities area as both a peaking basin during flooding events and as a park/open space during non-flooding time periods. Emergency overflow will be provided for both peaking basins.

Peaking basin one is proposed in the southwest corner of OND-14, the northeast corner of the intersection of Warm Springs Road and Burkholder Boulevard. Peaking basin two is proposed in the southern portion of OND-3, 2100 feet north of the intersection of Athens Avenue and Burkholder Boulevard. Tributary drainage basins to peaking basin one include onsite basins OND-25, OND-26, OND-27, OND-20, OND-21, OND-22, OFF-25, OFF-26, OFF-27A, OFF-27B and the basins south of Boulder Highway. Tributary drainage basins to peaking basin two include all drainage basins with the exception of basins OND-1, OND-2, OND-2A, OND-3, OND-9, OFFD-2B, and the basins southeast of Lake Mead Drive. The location of peaking basins one and two and their tributary drainage basins is shown on **Figure 9**.

Open space, residential, and commercial areas compose the land use for the onsite proposed conditions. The offsite land use for proposed conditions is based on the 2002 MPU. The soils for both the onsite and offsite tributary areas consist of Hydrologic Soil Groups A, B, and C. See **Appendix A-1** for curve number calculations.

It is proposed that MPU facilities C1LM 0000 through C1LM 0125 be constructed as part of the Eastside Properties development to collect flow from all areas tributary to the facility to protect the site and help eliminate the flood zone covering a large part of the site. The design of this facility will be addressed in a separate technical drainage study that has been submitted for review.

A conceptual layout was developed for the project site that includes street conveyance, underground storm drain facilities, two open channels, and two peaking basins. The underground facilities were sized using normal depth hydraulic calculations and using ground surface elevations to obtain pipe slopes. Rating curves were developed for each of the two peaking basins and modeled using the Army Corps of Engineers HEC-1 software program. Detailed analysis of the conceptual drainage facilities will be performed after the conceptual study has been approved and once more detailed information about the project site is available.

The streets that are proposed within the project site were modeled to meet the CCRFCD limitations criteria for both the Minor (Q_{10}) and Major (Q_{100}) Storm Events. The Minor Storm limitations criteria requires a 12 foot dry lane in each direction of traveled way, offset from the 14 foot center turn lane, and the product of the velocity and the gutter flow depth to be less than or equal to 6. The Major Storm limitations criteria requires that the gutter flow depth to be less than or equal to 2 feet and the product of the velocity and gutter flow depth to be less than or equal to 8, please refer to **Appendix B-1** for Street Limitations Criteria and for the street capacity calculations.

Under the conceptual layout, Pabco Channel is realigned to flow through the project site. The proposed 5-6'x4' (2 existing, 3 proposed) reinforced box culverts under Boulder Highway convey all the offsite flows onsite, thus changing the existing drainage patterns. The additional culverts under Boulder Highway will require an encroachment permit from the Nevada Department of Transportation. Under proposed conditions, the Pabco Channel flow of 1369cfs enters into the proposed box culverts and traverses along Warm Springs Road. Proposed onsite drainage for the project site will be conveyed through four storm drain systems. See **Table 1** for storm drain alternatives and sizes. At the time of design the actual sizes and types of storm drains will be finalized, which may include concrete arch culverts. An analysis of the capacity limitations for the proposed streets was performed prior to sizing the storm drain facilities. Once the capacity for a street was met, a storm drain system was considered, see **Appendix B-1** and **B-2** for street and storm drain system distribution. Storm drain system Line A runs along Burkholder Boulevard from the bypass system at peaking basin one, Warm Springs Road, to the bypass system at peaking basin two, 2100 feet north of Athens Avenue. Assuming no losses associated with conveyance, Line A conveys 926cfs at the bypass system at peaking basin one and ends with a total discharge of 3351cfs at peaking basin two. Line B travels along Warm Springs Road and initiates approximately 250 feet northwest of Water Street with a flow of 61cfs. The outlet of Line B discharges a total of 109cfs into peaking basin one. Line C is a storm drain system within Sunset Road that begins 2000 feet southeast of Burkholder Boulevard and collects a total flow of 58cfs. The start of storm drain system Line D is at the intersection of Water Street and Mohawk Drive where the system conveys 29cfs. Line D traverses north to Athens Avenue and then heads west to the intersection with Burkholder Boulevard. Line D intercepts additional flow at the intersection of Athens Avenue and Eastside Real Estate Parkway and the total flow conveyed from this point downstream is 394cfs. Additional storm drains may be required to mitigate for nuisance flow and will be performed in the technical analysis/study. Please refer to the table below for storm drain facility sizes and **Figure 9/Appendix D-4** for the general alignment.

Table 1-Proposed Storm Drain Facilities

	Location	Q10 (cfs)	Q100 (cfs)	Alternative 1 Facility	Alternative 2 Facility	Recommended Facility
LINE A	2-2	859	926	8' RCP	8'x8' RCB	8'x8' RCB
	3-3	999	1109	9' RCP	8'x8' RCB	8'x8' RCB
	4-4	1273	1915	12' RCP	10'x10' RCB	10'x10' RCB
	5-5	1970	3351	-	-	12'x12' RCB
LINE B	6-6	61	-	-	-	36" RCP
	7-7	109	-	-	-	48" RCP
LINE C	10-10	58	37	-	-	36" RCP
LINE D	12-12	29	-	-	-	30" RCP
	13-13	58	-	-	-	36" RCP
	14-14	314	394	78" RCP	6'x6' RCB	6'x6' RCB
PABCO CHANNEL- REALIGNMENT	Boulder Highway at Pabco Road	641	1369	5-6'x4' RCB	10'x10' RCB	5-6'x4' RCB
PITTMAN-BURNS CHANNEL- IMPROVEMENTS	750' East of Wiesner Way	-	5456	-	-	Conc.Channel 40'W, 7.5'D, 2:1SS
OUTLET CHANNEL AT PEAKING BASIN TWO	Downstream of Peaking Basin Two	-	1728	-	-	Earth.Channel 150'W, 3.5'D, 4:1SS

The peaking basins are designed such that the peak flow exiting the site is less than the 2002 MPU peak flow of 2251cfs at the north end of Pabco Channel. The basins are designed with 4:1 side slopes and emergency overflow will be provided for both peaking basins.

The peak flow up to but not exceeding the 10-year storm event (Line A at section 2-2) bypass peaking basin one and are conveyed in an 8' reinforced circular pipe as proposed in Alternative 1 or a 8'x 8' reinforced concrete box as proposed in Alternative 2. Refer to **Table 1** for storm drain alternatives. The design of the bypass structure will be performed in the technical analysis/study.

Peaking basin one is sized to attenuate the peak flows of the 100-year storm event (1776 cfs). A 48-inch diameter pipe serves as the outlet for peaking basin one. The flowline for the outlet is equivalent to the minimum basin elevation. The peak flow exiting the basin is 95cfs. The outflow from the peaking basin converges downstream of the peaking basin with the 10-year diversion for a 100-year peak flow of 831cfs. A summary table for peaking basin one is provided below and a conceptual plan is provided in **Appendix B-3**.

Table 2- Peaking Basin One

Basin Depth	6 feet
Basin Acreage	10 acres
Outlet	1-48 inch RCP
100-year Inflow	1776cfs
10-year Bypass	831cfs
100-year Storage	33 acre-feet
100-year Stage	5.0 feet
100-year Outlet	95cfs
Outlet Combined with Diversion	926cfs
Drain Time	26 hours, 36 minutes

The peak flows for up to but not exceeding the 10-year storm event, bypass peaking basin two and are conveyed in a 10'x10' reinforced concrete box. The design of the bypass structure will be performed in the technical analysis/study.

Peaking basin two is sized to attenuate the peak flows of the 100-year storm event (3375 cfs). One 54-inch diameter pipes serve as the outlet for peaking basin two. The flowline for the outlet is submerged one foot below the minimum basin elevation. The peak flow exiting the basin is 186cfs. A summary table for peaking basin two is provided below and a conceptual plan is provided in Appendix B-3.

Table 3- Peaking Basin Two

Basin Depth	8 feet
Basin Acreage	10 acres
Outlet	1-54" inch RCP
Outlet Flowline	1 foot submerged from the bottom of the peaking basin
100-year Inflow	3375cfs
10-year Bypass	1542cfs
100-year Storage	46 acre-feet
100-year Stage	6.3 feet
100-year Outlet	186cfs
Outlet Combined with Diversion	1728cfs
Drain Time	19 hours, 35 minutes

The outflow from the peaking basin converges downstream of the peaking basin with the 10-year diversion for a 100-year peak flow of 1728cfs and basin OND-3.

North and downstream of peaking basin two, a trapezoidal earthen channel 150' wide is proposed to convey the flows to the Las Vegas Wash. The flow depth is 2.22 feet and the channel velocity is 4.91 feet per second. See **Appendix B-3** for the conceptual channel design.

With the two proposed peaking basins in place, the 100-year peak flow entering the Las Vegas Wash is 1737cfs. This peak flow is 514cfs less than the 2002 MPU peak flow of 2251cfs at this location.

The Pittman-Burns channel will be improved with the development of the site. The conceptual sizing of the improved channel was developed from the hydrology of the 2002 MPU. The hydrology from the 2002 MPU for the Pittman-Burns Channel (2002 MPU Facility Number PTBR 000-0029) is 5456cfs. This flow resulted in a conceptual design of a concrete-lined trapezoidal channel with a 40' bottom width, 2:1 side slopes, and a maximum depth of 7.5'. Please refer to **Appendix B-5** for the conceptual cross-section of the channel.

Table 4-Existing Hydrology and Basin Distribution

Basin Name	CN	Area (Sq. Mi.)	Q10 (CFS)	Q100 (CFS)
ONE-1	77.00	0.072	20	64
ONE-2	77.62	0.180	40	130
ONE-3	83.87	0.271	136	331
ONE-4	78.41	0.214	57	173
ONE-5	84.17	0.870	414	1018
ONE-6	81.70	1.011	224	621
ONE-7	80.41	0.208	86	241
ONE-8	70.27	0.285	24	124
ONE-9	78.15	0.358	93	291
ONE-10	83.94	0.150	70	174
BKPVE	83.70	0.139	50	124
BKLME	84.30	0.345	119	294
CRMJE	85.00	0.206	80	192
BKMJE	85.50	0.034	17	40
WSPVE	79.00	0.265	51	154
WSCORE	79.30	0.161	40	119
WSLME	82.80	0.286	91	238
CRLME	77.80	0.045	11	37
PWLME	82.90	0.294	96	248
DE	84.47	0.072	37	88
EE	82.20	0.032	14	36
FE	77.61	0.018	5	16
GE	81.20	0.015	6	16
OFFE-1	84.74	0.470	206	495
OFFE-2	78.74	0.092	25	75
OFFE-2A	78.38	0.023	7	21
OFFE-2B	73.38	0.137	17	72
OFFE-3	81.26	0.298	87	238
OFFE-3A	88.00	0.031	22	47
OFFE-4	82.70	0.473	133	349
OFFE-9	87.64	0.063	42	90
OFFE-10A	83.94	0.096	48	116
OFFE-10B	84.36	0.042	22	52

Table 4A-Existing Hydrology Concentration Points

Basin Name	Q10 (CFS)	Q100 (CFS)
CP-1	131	351
CP-2	310	894
CP-3	130	380
CP-4	139	342
CP-5	235	657
CP-6	393	1298
CP-7	577	1836
CP-8	62	225
CP-9	106	260
CP-10	153	403
CP-11	175	468
CP-12	196	507
CP-13	55	408
CP-14	225	929
CP-15	34	732
CP-16	369	491
CP-17	378	1221
CP-18	381	1221
CP-19	359	1234

Table 5-Proposed Hydrology and Basin Distribution

Basin Name	CN	Area (Sq. Mi.)	Q10 (CFS)	Q100 (CFS)
OND-1	76.27	0.084	22	71
OND-2	78.10	0.276	76	241
OND-2A	84.30	0.222	115	276
OND-3	77.00	0.047	13	42
OND-4	80.93	0.244	94	257
OND-5	83.85	0.102	56	138
OND-6	85.70	0.404	235	534
OND-7	86.04	0.329	196	441
OND-8	77.73	0.238	69	216
OND-9	65.71	0.026	1	11
OND-10	83.85	0.136	75	186
OND-11	83.89	0.106	60	147
OND-12	84.07	0.015	8	21
OND-13	83.85	0.109	60	149
OND-14	81.54	0.192	80	212
OND-15	84.46	0.146	77	184
OND-16	72.50	0.065	10	44
OND-17	83.11	0.197	94	233
OND-18	94.51	0.034	41	74
OND-19	83.76	0.109	62	153
OND-20	93.44	0.163	186	343
OND-21	88.88	0.089	77	160
OND-22	85.08	0.057	36	85
OND-23	73.85	0.130	25	96
OND-24	79.25	0.128	46	137
OND-25	84.02	0.084	49	119
OND-26	81.78	0.017	8	21
OND-27	86.38	0.087	58	131
BKPVD	83.70	0.139	51	127
BKLMD	85.72	0.345	138	325
CRMJD	85.53	0.206	86	200
BKMJD	85.49	0.034	18	42
WSPVD	79.95	0.265	58	169
WSCRD	79.62	0.161	42	125
WSLMD	82.88	0.286	95	245
CRLMD	91.77	0.045	38	74
PWLMD	84.10	0.277	103	253
DD	86.06	0.072	41	94
ED	83.56	0.032	16	39

FD	94.20	0.018	20	36
GD	94.20	0.004	4	8
OFFD-1	95.42	0.470	448	798
OFFD-2	92.40	0.092	79	151
OFFD-2A	92.30	0.023	21	40
OFFD-2B	61.80	0.137	3	26
OFFD-3	81.26	0.298	89	243
OFFD-3A	94.30	0.031	35	63
OFFD-4	82.70	0.473	138	359
OFFD-25	87.64	0.074	49	106
OFFD-26	94.30	0.012	13	23
OFFD-27A	87.64	0.073	48	104
OFFD-27B	88.36	0.042	29	61

Table 5-Proposed Hydrology Concentration Points

Basin Name	Q10 (CFS)	Q100 (CFS)
CP-1	182	424
CP-2	468	836
CP-2A	641	1369
CP-2B	535	1052
CP-3	96	224
CP-4	20	44
CP-5	117	268
CP-6	131	294
CP-7	158	362
CP-8	371	756
CP-9	831	1776
CP-10	831	926
CP-11	864	1037
CP-12	927	1329
CP-13	929	1344
CP-14	959	1483
CP-15	69	222
CP-16	143	402
CP-17	1055	1916
CP-18	1250	2487
CP-19	157	441
CP-20	323	849
CP-21	1478	3182
CP-22	1542	3375
CP-23	1542	1728
CP-24	1547	1737
CP-25	97	313
CP-25A	116	270
CP-26	171	427
CP-27	181	491
CP-28	188	610
CP-29	221	547
CP-30	248	665
CP-31	268	706
CP-32	439	1263
CP-33	446	1295
CP-34	448	1307
CP-35	448	1307
CP-36	448	1309

CONCLUSION

This study presents the findings of an analysis of the existing and proposed hydrology and preliminary hydraulics through the proposed development. Peak flow rates for the 10-year and 100-year events were established for the site.

The construction of the site and related facilities will not cause any adverse impacts to adjacent or downstream properties.

REFERENCES

- HCDDM Clark County Regional Flood Control District, *Hydrologic Criteria and Drainage Design Manual*, 1999
- 2002 MPU Clark County Regional Flood Control District, *2002 Master Plan Update*. Prepared by PBS&J, Louis Berger and G.C. Wallace.
- HEC-1 *HEC-1 Flood Hydrograph Package*, Version 4.1, U.S. Army Corps of Engineers, Hydrologic Engineering Center, 1998
- Flowmaster *Flowmaster*, Version 6.1, Haested Methods, Inc., 2000
- Flowmaster *Flowmaster 2005*, Service Pack 1, Haested Methods, Inc., 2004

PHOTO LOG



Photo 1-View to the East from Warm Springs Road



Photo 2-View to the East from Warm Springs Road displaying an earth berm



Photo 3-View to the West from Mohawk Drive

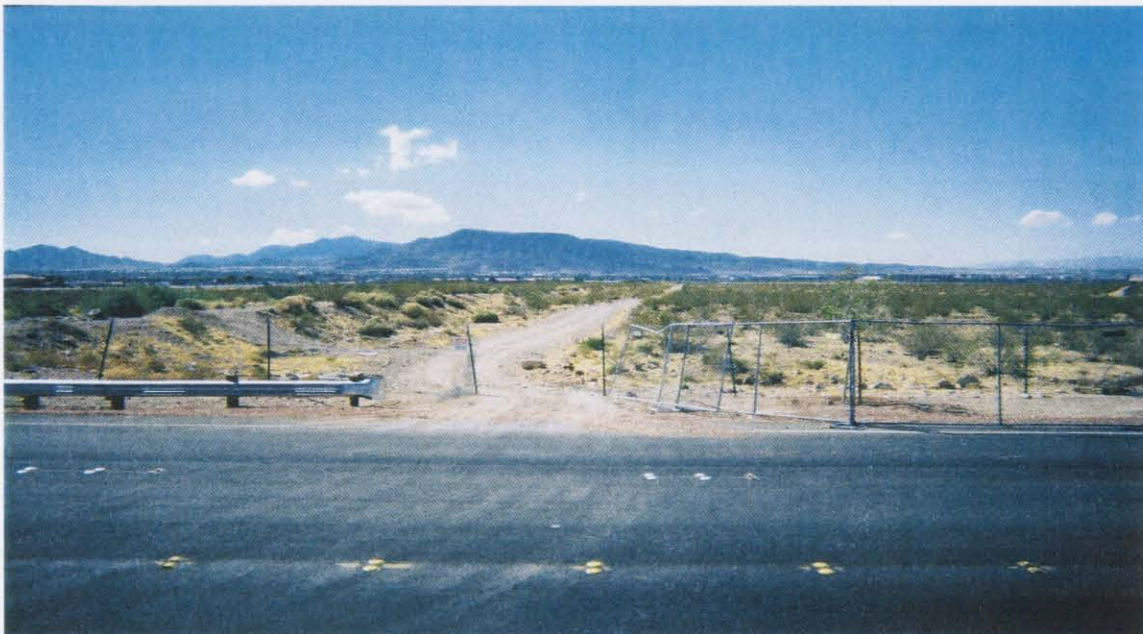


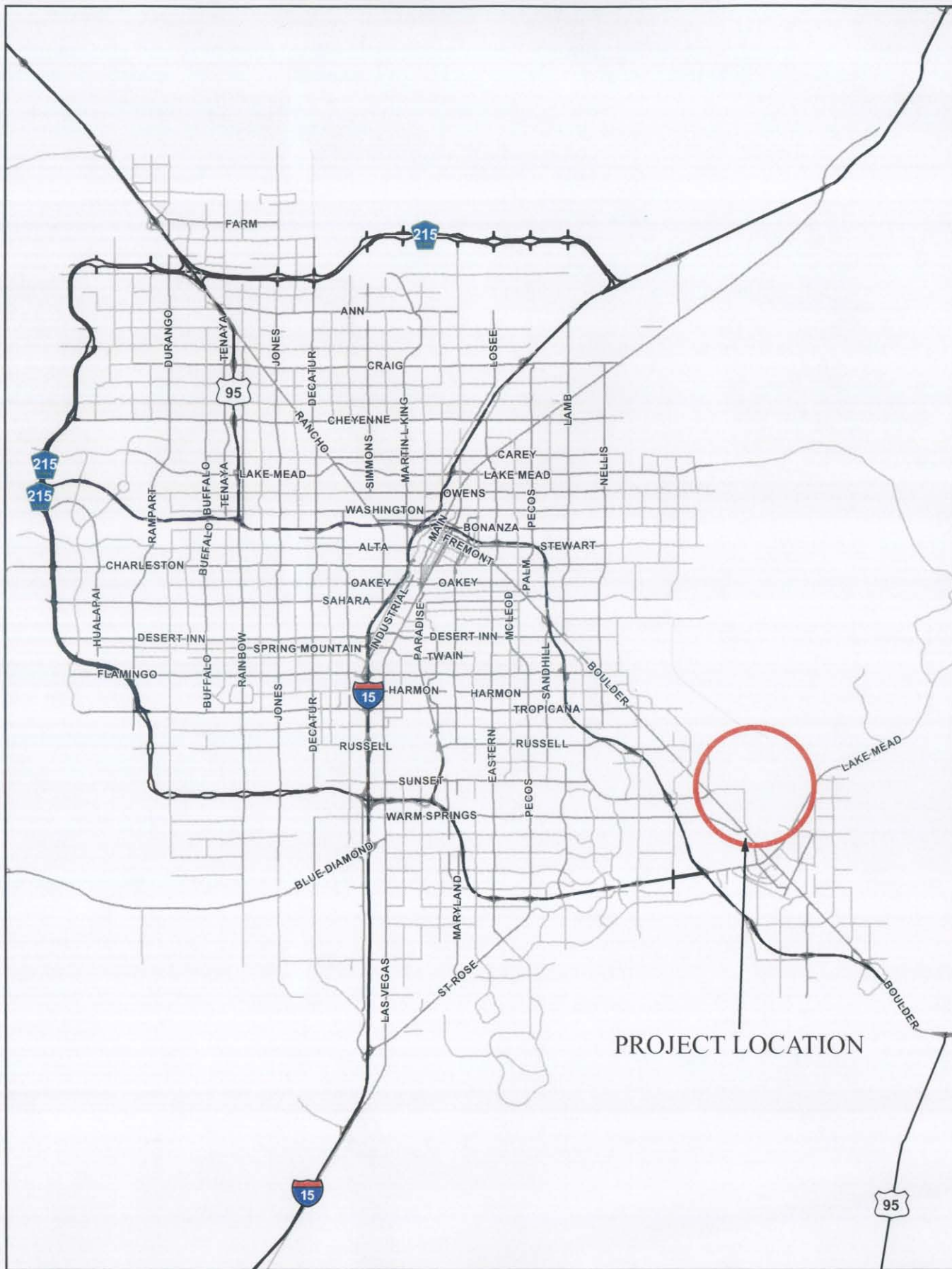
Photo 4-View to the South from Mohawk Drive



Photo 5-View to the Northwest from Lake Mead Drive



Photo 6-View to the Southwest from Lake Mead Drive



VICINITY MAP

1 inch equals 20,000 feet

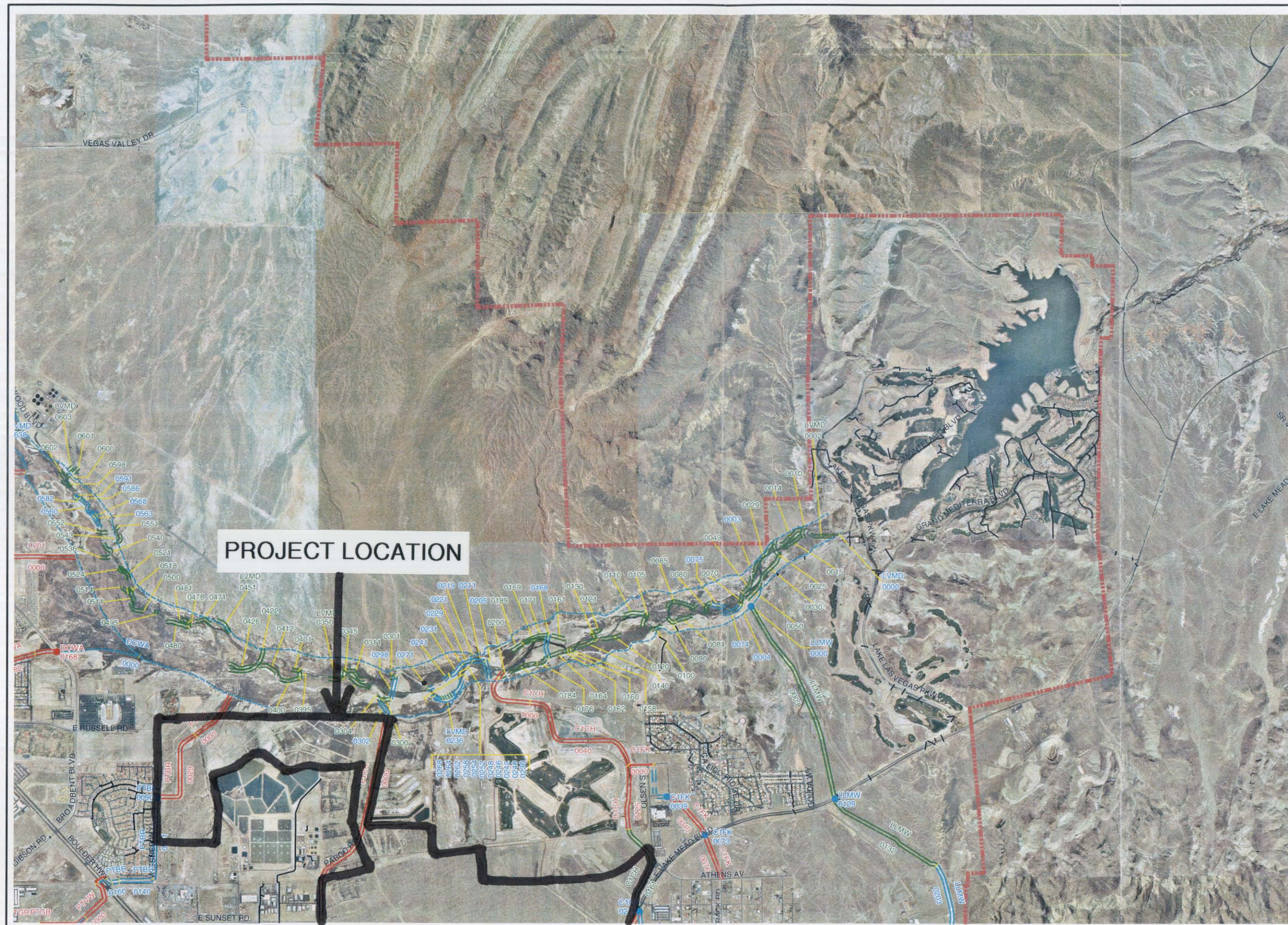
FIGURE 1





GENERAL LOCATION MAP

FIGURE 2



REGIONAL FLOOD CONTROL DISTRICT

**2002
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE**

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Local Proposed Facilities
- Detention Basin
- Culvert
- Bridge
- Pipeline
- Lined Channel
- Unlined Channel
- Dike
- Natural Wash
- ID-Mile Separator

0 1,000 2,000 3,000 4,000 5,000
Feet

SCALE: 1 inch = 3000 feet

US95 I-215

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

FIGURE F-18

PBS&

G.C. WALLACE, INC.

FIGURE 3

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
C1CH		C-1 CHANNEL						
0000	P2	Conc Chnl 75'W 10'D with Rip Rap 5:1 SS	2100	7324	CP61*	C1SDN4	11.92	0.40
0040	P2	Conc Chnl 40'W 10'D 0:1 SS	4200	7324	CP61*	C1SDN4	11.92	1.00
0125	P2	Conc Chnl 40'W 10'D 0:1 SS	2100	7324	CP61*	C1SDN4	11.92	1.00
0159	E	Energy Dissipator		7324	CP61*	C1SDN4	11.92	0.00
0161	E	Earth Chnl 30'-60'W 7'-20'D with Gabion 2:1 SS	2750	7324	CP61*	C1SDN4	11.92	2.00
0161	P0	Conc Chnl 40'W 8'D 0:1 SS	7325	2750	CP61*	C1SDN4	11.92	2.00
0213	E	Energy Dissipator		7324	CP61*	C1SDN4	11.92	0.00
0215	E	2: 12' X 9' RCBC @ Lake Mead Dr	270	7324	CP61*	C1SDN4	11.92	3.20
0220	E	Conc Chnl 15'W 5'D 1:1 SS: West Floodwall	2560	7324	CP61*	C1SDN4	11.92	2.30
C1FK		C-1 CHANNEL - FOUR KIDS						
0000	P2	10' X 5' RCB	770	935	CP72B	C1SDN3	1.00	2.50
0014	E	Earth Chnl 21'W 4'-5'D with Rock 0:1 SS	1280	935	CP72B	C1SDN3	1.00	1.80
0039	E	12' X 4' RCBC @ Eagle Rock Rd	70	935	CP72B	C1SDN3	1.00	2.70
0040	P1	Conc Chnl 10'W 4.5'D 2:1 SS	1750	935	CP72B	C1SDN3	1.00	2.70
0073	E	4: 6' X 3' RCBC @ Lake Mead Dr	160	721	CP72A	C1SDN3	0.78	2.00
0076	P1	Conc Chnl 10'W 5'D 0:1 SS	1400	721	CP72A	C1SDN3	0.78	3.00
C1LM		C-1 CHANNEL - LAKE MEAD						
0000	P1	Conc Chnl 10'W 6'D 2:1 SS	2525	1385	CP71	C1SDN3	1.96	0.90
DCWA		DUCK CREEK WASH						
0000	E	Natural Wash	2700	10146	CLDC020	DUCKPITT	50.83	0.90
0168	E	Dip Section @ Broadbent	80	10139	CLDC020	DUCKPITT	50.83	0.45
0168	P2	4: 28' X 8' RCBC	140	10139	CLDC020	DUCKPITT	50.83	0.45
0169	P2	Conc Chnl 118'W 8.4'D 0:1 SS	500	10139	CLDC020	DUCKPITT	50.83	0.45
0182	P2	Conc Chnl 70'W 9'D 2:1 SS	3000	10078	CLDC010	DUCKPITT	50.38	0.45
LLMW		LAKE LAS VEGAS - MAGIC WAY						
0000	E	5: 8' X 5' RCBC	150	1932	CP80	C1SDN3	3.52	1.00
0003	P0	Conc Chnl 10'W 6'D 2:1 SS	6670	1932	CP80	C1SDN3	3.52	3.50
0129	E	6: 8' X 3' RCBC	160	1842	CP79	C1SDN3	3.04	1.00
0132	P0	Conc Chnl 15'W 5'D 2:1 SS	3720	1564	CP77	C1SDN3	2.30	3.10
0203	E	Conc Chnl 35'W 5'-6'D 0.5:1 SS	3000	1515	C1-85	C1SDN3	2.06	3.10
LV01		LAS VEGAS WASH - BRANCH 01 (TROPICANA AVE CHANNEL)						
0000	E	Earth Chnl 4'W 4'D 1:1 SS	3400	2238	CLLV160	TROPCHNL	3.61	0.35
0000	P1	Conc Chnl 14'W 9'D 1:1 SS	2238	3400	CLLV160	TROPCHNL	3.61	0.35
LV02		LAS VEGAS WASH - BRANCH 02 (MONSON CHANNEL)						
0000	E	Earth Chnl 20'W 6'D 1.5:1 SS	6600	2641	CM7	FLAM3SC	4.57	0.32
0000	P1	Conc Chnl 30'W 6.5'D 2:1 SS	6600	2641	CM7	FLAM3SC	4.57	0.32
LVMD		LAS VEGAS WASH - MIDDLE						
0000	E	SNWA Gradient Control Weir SNWA# = W 3.0	60	22191	CLLV410	LVWSC3	200.00	0.00
0002	P0	SNWA Bank Protection SNWA# = BP 3.0	830	22191	CLLV410	LVWSC3	200.00	0.00
0004	E	Las Vegas Wash Floodway	34000	22191	CLLV410	LVWSC3	200.00	0.00
0010	P0	SNWA Gradient Control Weir SNWA# = W 3.3	430	22191	CLLV410	LVWSC3	200.00	0.00
0014	P0	SNWA Bank Protection SNWA# = BP 3.3	940	22191	CLLV410	LVWSC3	200.00	0.00
0015	P0	SNWA Bank Protection SNWA# = BP 3.3	730	22191	CLLV410	LVWSC3	200.00	0.00
0025	P0	SNWA Gradient Control Weir SNWA# = W 3.5	610	22191	CLLV410	LVWSC3	200.00	0.00
0029	P0	SNWA Bank Protection SNWA# = BP 3.5	1250	22191	CLLV410	LVWSC3	200.00	0.00
0030	P0	SNWA Bank Protection SNWA# = BP 3.7	1030	22191	CLLV410	LVWSC3	200.00	0.00
0049	P0	SNWA Bank Protection SNWA# = BP 3.7	710	22191	CLLV410	LVWSC3	200.00	0.00
0050	P0	SNWA Bank Protection SNWA# = BP 3.7	770	22191	CLLV410	LVWSC3	200.00	0.00
0070	P0	SNWA Gradient Control Weir SNWA# = W 3.9	390	22191	CLLV410	LVWSC3	200.00	0.00
0074	E	SNWA Bank Protection SNWA# = BP 3.9	740	22191	CLLV410	LVWSC3	200.00	0.00
0075	E	SNWA Bank Protection SNWA# = BP 3.9	520	22191	CLLV410	LVWSC3	200.00	0.00

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
LVMD		LAS VEGAS WASH - MIDDLE -- continued						
0080	P0	SNWA Gradient Control Weir SNWA# = W 4.2	470	22191	CLLV410	LVWSC3	200.00	0.00
0084	P0	SNWA Bank Protection SNWA# = BP 4.2	610	22191	CLLV410	LVWSC3	200.00	0.00
0085	P0	SNWA Bank Protection SNWA# = BP 4.2	1220	22191	CLLV410	LVWSC3	200.00	0.00
0090	P0	SNWA Gradient Control Weir SNWA# = W 4.5	370	22191	CLLV410	LVWSC3	200.00	0.00
0100	P0	SNWA Bank Protection SNWA# = BP 4.5	400	22191	CLLV410	LVWSC3	200.00	0.00
0105	P0	SNWA Gradient Control Weir SNWA# = W 4.7	510	22191	CLLV410	LVWSC3	200.00	0.00
0110	P0	SNWA Bank Protection SNWA# = BP 4.7	750	22191	CLLV410	LVWSC3	200.00	0.00
0120	P0	SNWA Bank Protection SNWA# = BP 4.7	680	22191	CLLV410	LVWSC3	200.00	0.00
0121	P0	SNWA Bank Protection SNWA# = BP 4.7	360	22191	CLLV410	LVWSC3	200.00	0.00
0130	P0	SNWA Gradient Control Weir SNWA# = W 5.1	310	22191	CLLV410	LVWSC3	200.00	0.00
0140	P0	SNWA Bank Protection SNWA# = BP 5.1	910	22191	CLLV410	LVWSC3	200.00	0.00
0158	P0	SNWA Bank Protection SNWA# = BP 5.1	50	22191	CLLV410	LVWSC3	200.00	0.00
0160	P0	SNWA Bank Protection SNWA# = BP 5.1	90	22191	CLLV410	LVWSC3	200.00	0.00
0161	P0	SNWA Bank Protection SNWA# = BP 5.1	480	22191	CLLV410	LVWSC3	200.00	0.00
0162	P0	SNWA Bank Protection SNWA# = BP 5.1	50	22191	CLLV410	LVWSC3	200.00	0.00
0164	P0	SNWA Bank Protection SNWA# = BP 5.1	680	22191	CLLV410	LVWSC3	200.00	0.00
0168	E	SNWA Gradient Control Weir SNWA# = W 5.4	790	22191	CLLV410	LVWSC3	200.00	0.00
0169	P0	SNWA Bank Protection SNWA# = BP 5.4	820	22191	CLLV410	LVWSC3	200.00	0.00
0171	P0	SNWA Bank Protection SNWA# = BP 5.4	910	22191	CLLV410	LVWSC3	200.00	0.00
0176	P0	SNWA Bank Protection SNWA# = BP 5.4	440	22191	CLLV410	LVWSC3	200.00	0.00
0184	P0	SNWA Bank Protection SNWA# = BP 5.4	940	22191	CLLV410	LVWSC3	200.00	0.00
0189	P0	SNWA Bank Protection SNWA# = BP 5.4	470	22191	CLLV410	LVWSC3	200.00	0.00
0200	P0	SNWA Bank Protection SNWA# = BP 5.4	290	22191	CLLV410	LVWSC3	200.00	0.00
0205	E	SNWA Gradient Control Weir SNWA# = W 5.8	670	21563	CPBR170	LVWSC6	200.00	0.00
0211	E	SNWA Bank Protection SNWA# = BP 5.8	390	21563	CPBR170	LVWSC6	200.00	0.00
0219	E	SNWA Bank Protection SNWA# = BP 5.8	210	21563	CPBR170	LVWSC6	200.00	0.00
0221	E	SNWA Bank Protection SNWA# = BP 5.8	360	21563	CPBR170	LVWSC6	200.00	0.00
0229	E	SNWA Bank Protection SNWA# = BP 5.8	110	21563	CPBR170	LVWSC6	200.00	0.00
0230	E	SNWA Bank Protection SNWA# = BP 5.8	610	21563	CPBR170	LVWSC6	200.00	0.00
0231	E	SNWA Bank Protection SNWA# = BP 5.8	590	21563	CPBR170	LVWSC6	200.00	0.00
0236	E	SNWA Bank Protection SNWA# = BP 5.8	810	21563	CPBR170	LVWSC6	200.00	0.00
0240	E	SNWA Bank Protection SNWA# = BP 5.8	20	21563	CPBR170	LVWSC6	200.00	0.00
0241	E	SNWA Bank Protection SNWA# = BP 5.8	240	21563	CPBR170	LVWSC6	200.00	0.00
0242	E	SNWA Bank Protection SNWA# = BP 5.8	90	21563	CPBR170	LVWSC6	200.00	0.00
0246	E	SNWA Bank Protection SNWA# = BP 5.8	20	21563	CPBR170	LVWSC6	200.00	0.00
0248	E	SNWA Bank Protection SNWA# = BP 5.8	100	21563	CPBR170	LVWSC6	200.00	0.00
0252	E	SNWA Bank Protection SNWA# = BP 5.8	20	21563	CPBR170	LVWSC6	200.00	0.00
0254	E	SNWA Bank Protection SNWA# = BP 5.8	80	21563	CPBR170	LVWSC6	200.00	0.00
0258	E	SNWA Bank Protection SNWA# = BP 5.8	20	21563	CPBR170	LVWSC6	200.00	0.00
0262	E	SNWA Bank Protection SNWA# = BP 5.8	80	21563	CPBR170	LVWSC6	200.00	0.00
0264	E	SNWA Bank Protection SNWA# = BP 5.8	20	21563	CPBR170	LVWSC6	200.00	0.00
0268	E	SNWA Bank Protection SNWA# = BP 5.8	330	21563	CPBR170	LVWSC6	200.00	0.00
0271	E	SNWA Bank Protection SNWA# = BP 5.8	220	21563	CPBR170	LVWSC6	200.00	0.00
0298	E	SNWA Gradient Control Weir SNWA# = W 6.7	780	21563	CPBR170	LVWSC6	200.00	0.00
0300	P0	SNWA Bank Protection SNWA# = BP 6.7	270	21563	CPBR170	LVWSC6	200.00	0.00
0301	P0	SNWA Bank Protection SNWA# = BP 6.7	220	21563	CPBR170	LVWSC6	200.00	0.00
0302	E	SNWA Gradient Control Weir SNWA# = W 6.7	560	21563	CPBR170	LVWSC6	200.00	0.00
0304	P0	SNWA Bank Protection SNWA# = BP 6.7	200	21563	CPBR170	LVWSC6	200.00	0.00
0310	P0	SNWA Bank Protection SNWA# = BP 6.7	820	21563	CPBR170	LVWSC6	200.00	0.00
0311	P0	SNWA Bank Protection SNWA# = BP 6.7	780	21563	CPBR170	LVWSC6	200.00	0.00
0345	P0	SNWA Gradient Control Weir SNWA# = W 7.1	290	21563	CPBR170	LVWSC6	200.00	0.00

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
LVMD		LAS VEGAS WASH - MIDDLE -- continued						
0350	P0	SNWA Bank Protection SNWA# = BP 7.1	540	21563	CPBR170	LVWSC6	200.00	0.00
0395	P0	SNWA Gradient Control Weir SNWA# = W 7.3	290	21563	CPBR170	LVWSC6	200.00	0.00
0400	P0	SNWA Bank Protection SNWA# = BP 7.3	670	21563	CPBR170	LVWSC6	200.00	0.00
0401	P0	SNWA Bank Protection SNWA# = BP 7.3	270	21563	CPBR170	LVWSC6	200.00	0.00
0412	P0	SNWA Bank Protection SNWA# = BP 7.3	790	21563	CPBR170	LVWSC6	200.00	0.00
0422	P0	SNWA Gradient Control Weir SNWA# = W 7.7	1570	21563	CPBR170	LVWSC6	200.00	0.00
0426	P0	SNWA Bank Protection SNWA# = BP 7.7	820	21563	CPBR170	LVWSC6	200.00	0.00
0451	P0	SNWA Bank Protection SNWA# = BP 7.7	650	18714	CRWSL	LVWSC2	200.00	0.00
0471	P0	SNWA Bank Protection SNWA# = BP 7.7	540	18714	CRWSL	LVWSC2	200.00	0.00
0478	P0	SNWA Gradient Control Weir SNWA# = W 8.2	170	18714	CRWSL	LVWSC2	200.00	0.00
0480	P0	SNWA Bank Protection SNWA# = BP 8.2	750	18714	CRWSL	LVWSC2	200.00	0.00
0481	P0	SNWA Bank Protection SNWA# = BP 8.2	320	18714	CRWSL	LVWSC2	200.00	0.00
0495	P0	SNWA Gradient Control Weir SNWA# = W 8.5	150	18714	CRWSL	LVWSC2	200.00	0.00
0500	P0	SNWA Bank Protection SNWA# = BP 8.5	610	18714	CRWSL	LVWSC2	200.00	0.00
0511	P0	SNWA Bank Protection SNWA# = BP 8.5	440	18714	CRWSL	LVWSC2	200.00	0.00
0514	P0	SNWA Bank Protection SNWA# = BP 8.5	370	18714	CRWSL	LVWSC2	200.00	0.00
0518	P0	SNWA Gradient Control Weir SNWA# = W 8.8	170	18714	CRWSL	LVWSC2	200.00	0.00
0521	P0	SNWA Bank Protection SNWA# = BP 8.8	550	18714	CRWSL	LVWSC2	200.00	0.00
0524	P0	SNWA Bank Protection SNWA# = BP 8.8	340	18714	CRWSL	LVWSC2	200.00	0.00
0536	P0	SNWA Gradient Control Weir SNWA# = W 9.0	330	18714	CRWSL	LVWSC2	200.00	0.00
0540	P0	SNWA Bank Protection SNWA# = BP 8.8	400	18714	CRWSL	LVWSC2	200.00	0.00
0543	P0	SNWA Bank Protection SNWA# = BP 8.8	370	18714	CRWSL	LVWSC2	200.00	0.00
0551	P0	SNWA Gradient Control Weir SNWA# = W 9.2	250	18714	CRWSL	LVWSC2	200.00	0.00
0552	P0	SNWA Gradient Control Weir SNWA# = W 9.2	380	18714	CRWSL	LVWSC2	200.00	0.00
0560	E	SNWA Bank Protection SNWA# = BP 9.3	1210	18714	CRWSL	LVWSC2	200.00	0.00
0563	E	SNWA Bank Protection SNWA# = BP 9.3	340	18714	CRWSL	LVWSC2	200.00	0.00
0568	E	SNWA Gradient Control Weir SNWA# = W 9.3	90	18714	CRWSL	LVWSC2	200.00	0.00
0582	E	SNWA Bank Protection SNWA# = BP 9.3	20	18714	CRWSL	LVWSC2	200.00	0.00
0586	E	SNWA Bank Protection SNWA# = BP 9.3	190	18714	CRWSL	LVWSC2	200.00	0.00
0591	E	SNWA Gradient Control Weir SNWA# = W 9.5	150	18714	CRWSL	LVWSC2	200.00	0.00
0598	P0	SNWA Bank Protection SNWA# = BP 9.5	360	18714	CRWSL	LVWSC2	200.00	0.00
0600	P0	SNWA Gradient Control Weir SNWA# = W 9.6	130	18714	CRWSL	LVWSC2	200.00	0.00
0601	P0	SNWA Gradient Control Weir SNWA# = W 9.6	250	18714	CRWSL	LVWSC2	200.00	0.00
0602	P0	SNWA Gradient Control Weir SNWA# = W 9.6	250	18714	CRWSL	LVWSC2	200.00	0.00
0603	P0	SNWA Gradient Control Weir SNWA# = W 9.6	170	18714	CRWSL	LVWSC2	200.00	0.00
PTBR		PITTMAN WASH - BURNS						
0000	P1	Conc Chnl 40'W 7.5'D 2:1 SS	1750	5456	CPBR170	PIT3SC	6.37	0.68
0029	E	Rip Rap Chnl 35'W 9'D 2:1 SS	2850	5448	CPBR160	PIT3SC	5.85	0.68
0029	P1	Rip Rap Chnl 60'W 9'D 3:1 SS	5448	2850	CPBR160	PIT3SC	5.85	0.68
0090	E	2: 24' X 8.5' RCAC @ Weisner Way	5448	2850	CPBR160	PIT3SC	5.85	0.90
0091	E	Conc Chnl 25'W 9'D 2:1 SS	2570	5448	CPBR160	PIT3SC	5.85	1.10
0140	E	Conc Chnl 25'W 9'D 2:1 SS	1110	5254	CPBR150	PIT3SC	5.54	0.50
0160	E	Conc Chnl 10'W 8'D 2:1 SS	210	2881	CPBR090	PIT3SC	3.19	1.00
0163	E	Conc Chnl 20'W 8'D 0:1 SS	250	2881	CPBR090	PIT3SC	3.19	1.00
0164	P1	Add 4: 16' X 4' RCBC @ Boulder Hwy	330	2881	CPBR090	PIT3SC	3.19	1.50
0165	E	2: 6' X 4' RCBC @ Boulder Hwy	330	2881	CPBR090	PIT3SC	3.19	1.50
PTGB		PITTMAN WASH - GIBSON						
0058	P1	Conc Chnl 15'W 5.5'D 2:1 SS	1560	1532	CPBR080	PIT3SC	1.76	1.50
PTPA		PITTMAN PABCO						
0000	P1	Conc Chnl 30'W 6.5'D 2:1 SS	12430	2251	CPLW120	PIT3SC	4.69	0.30
PTVW		PITTMAN WASH - VAN WAGENEN						
0000	P1	Conc Chnl 25'W 6'D 2:1 SS	1460	2848	CPBR090	PIT3	3.19	1.50
0025	E	12' X 8' RCB	1650	1160	CPBR030	PIT3SC	1.07	1.00



REGIONAL FLOOD CONTROL DISTRICT

2002
LAS VEGAS VALLEY
FLOOD CONTROL
MASTER PLAN UPDATE

LEGEND

- Ultimate Development Boundary
- Existing Facilities
- Category A Proposed Facilities
- Category B Proposed Facilities
- Local Existing Facilities
- Local Proposed Facilities
- Detention Basin
- Culvert
- Bridge
- Pipeline
- Lined Channel
- Unlined Channel
- Dike
- Natural Wash
- ID-Mile Separator

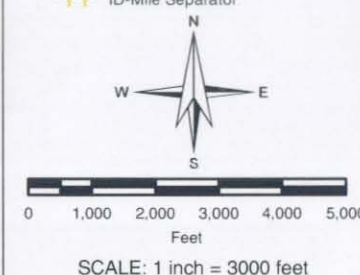


FIGURE F-22

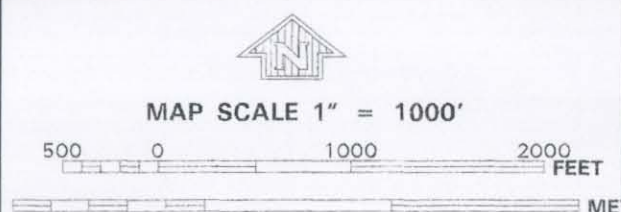
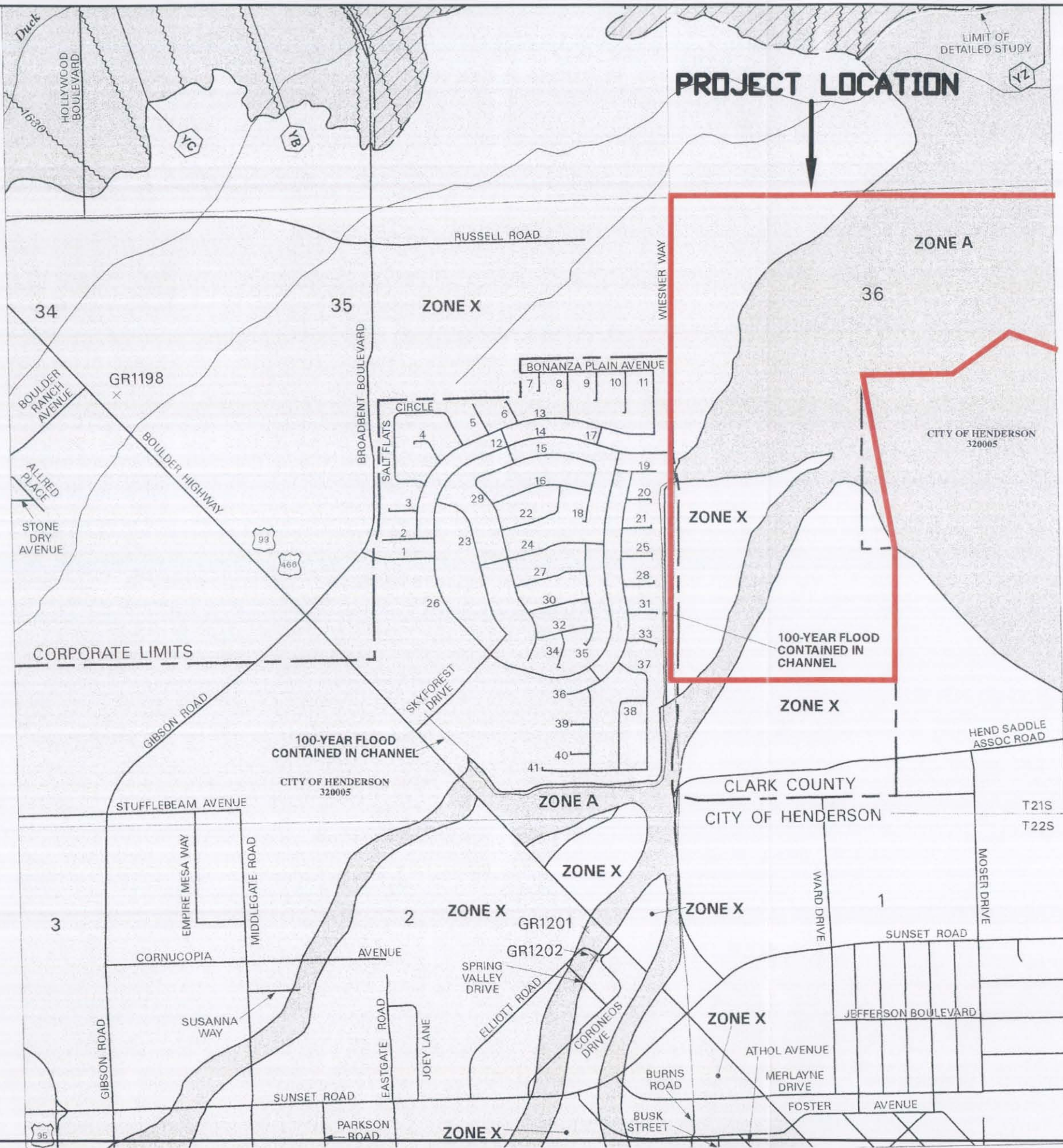


ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
C1BH C-1 CHANNEL - BOULDER HWY								
0000	P1	Conc Chnl 30'W 6'D 2:1 SS	2140	3224	CP22	C1SDN3	3.19	1.00
0040	P1	3: 15' X 6' RCBC @ Horizon Dr	100	3194	CP21	C1SDN3	3.11	1.00
0042	P1	Conc Chnl 30'W 6'D 2:1 SS	1525	3194	CP21	C1SDN3	3.11	1.00
0071	E	10' X 4' RCBC @ Equestrian Dr	100	2842	CP20	C1SDN3	2.77	1.00
0071	P1	3: 14' X 6' RCBC @ Equestrian Dr	100	2842	CP20	C1SDN3	2.77	1.00
0073	P1	Conc Chnl 30'W 6'D 2:1 SS	2000	2842	CP20	C1SDN3	2.77	0.80
0111	P1	Conc Chnl 20'W 6'D 2:1 SS	1960	1937	CP17	C1SDN3	1.53	0.80
0148	E	5: 8' X 4' RCBC @ Robert Way	120	1832	CP16	C1SDN3	1.42	1.00
0150	E	Earth Chnl 80'-90'W 5'D 2:1 SS with Drop Structures	1745	1832	CP16	C1SDN3	1.42	1.30
0150	P0	Conc Chnl 40'W 4'D 2:1 SS	1745	1832	CP16	C1SDN3	1.42	1.30
C1CH C-1 CHANNEL								
0040	P2	Conc Chnl 40'W 10'D 0:1 SS	4200	7324	CP61*	C1SDN4	11.92	1.00
0125	P2	Conc Chnl 40'W 10'D 0:1 SS	2100	7324	CP61*	C1SDN4	11.92	1.00
0159	E	Energy Dissipator	7324	7324	CP61*	C1SDN4	11.92	
0161	E	Earth Chnl 30'-60'W 7'-20'D with Gabion 2:1 SS	2750	7324	CP61*	C1SDN4	11.92	2.00
0161	P0	Conc Chnl 40'W 8'D 0:1 SS	2750	7325	CP61*	C1SDN4	11.92	2.00
0213	E	Energy Dissipator	7324	7324	CP61*	C1SDN4	11.92	
0215	E	2: 12' X 9' RCBC @ Lake Mead Dr	270	7324	CP61*	C1SDN4	11.92	3.20
0220	E	Conc Chnl 15'W 9'D 1:1 SS: West Floodwall	2560	7324	CP61*	C1SDN4	11.92	2.30
0269	E	Conc Chnl 15'W 7'D 2:1 SS: West Floodwall	1740	7324	CP61*	C1SDN4	11.92	2.30
0284	E	Conc Chnl 15'W 9'D 1:1 SS: West Floodwall	1760	7324	CP61*	C1SDN4	11.92	1.70
0335	E	Conc Chnl 50'W 12'D 0:1 SS	280	7324	CP61*	C1SDN4	11.92	1.20
0340	E	Conc Chnl 40'-50'W 12'D 0:1 SS	300	7324	CP61*	C1SDN4	11.92	1.20
0346	E	Conc Chnl 40'W 6'D 2:1 SS: West Floodwall	290	7324	CP61	C1SDN4	11.92	1.20
0351	E	4: 12' X 7' RCBC @ Warm Springs Rd	100	7175	CP59	C1SDN4	11.25	1.00
0353	E	Conc Chnl 14.5'W 6'D 2:1 SS: West Floodwall	1245	6961	CPC1D	C1SDN4	10.44	0.84
0377	E	Conc Chnl 15'W 10'D 2:1 SS: West Floodwall	815	6961	CPC1D	C1SDN4	10.44	0.84
0392	E	Conc Chnl 50'W 14'D 0:1 SS	325	6961	CPC1D	C1SDN4	10.44	0.70
0398	E	Junction Structure	70	6961	CPC1D	C1SDN4	10.44	
0400	E	Conc Chnl 39.5'W 9'-14'D 0:1 SS	450	5919	CP51	C1SDN4	8.52	2.70
0408	E	Conc Chnl 25'W 9'D 2:1 SS	1650	5919	CP51	C1SDN4	8.52	2.00
0439	E	Single Span Bridge @ Burkholder Blvd	100	5919	CP51	C1SDN4	8.52	2.00
0441	E	Conc Chnl 25'W 9'D 2:1 SS	500	5666	CP27	C1SDN3	6.48	2.00
0455	E	Conc Chnl 25'W 7.5'D 2:1 SS	2695	5666	CP27	C1SDN3	6.48	2.60
0502	E	Conc Chnl 25'W 7'D 2:1 SS	1100	5666	CP27	C1SDN3	6.48	2.50
0523	E	Conc Chnl 39'W 8'D 0:1 SS with Junction Structure	310	5630	CP26	C1SDN3	6.33	2.00
0528	E	Conc Chnl 25'W 7'D 2:1 SS	1340	4876	CP23	C1SDN3	5.33	2.00
0554	E	3: 20' X 7' RCBC @ Boulder Hwy	350	4828	CPC1BH	C1SDN3	5.26	2.40
0561	P3	Conc Chnl 20'W 6'D 0:1 SS	1801	1765	CP14	C1SDN3	2.08	2.00
0600	E	3: 10' X 7' RCBC @ Horizon Dr	436	1765	CP14	C1SDN3	2.08	1.20
0603	P3	Conc Chnl 30'W 6'D 0:1 SS	520	1765	CP14	C1SDN3	2.08	5.34
0604	E	Bridge 36'W 8.5'D @ UPRR	50	1765	CP14	C1SDN3	2.08	1.00
0613	P3	Conc Chnl 12.5'W 5'D 2:1 SS	1470	1765	CP14	C1SDN3	2.08	2.40
0641	P3	Conc Chnl 12.5'W 5'D 2:1 SS	1645	1641	CP13	C1SDN3	1.84	2.70
0672	E	4: 10' X 5' RCBC @ Vermillion Dr	115	1641	CP13	C1SDN3	1.84	0.50
0674	E	Conc Chnl 25'W 6'D 2:1 SS	630	1641	CP13	C1SDN3	1.84	0.70
0686	E	NDOT Sediment Basin	1239	1239	CP12	C1SDN3	1.43	
C1DC C-1 CHANNEL - DRAKE CHANNEL								
0000	E	Conc Chnl 25'W 5'-14'D 0:1 SS	700	1778	CP55	C1SDN3	1.92	2.70
0013	E	Earth Chnl 10'W 5'D with Conc 2:1 SS	650	1778	CP55	C1SDN3	1.92	2.70
0013	P1	Conc Chnl 16'W 5'D 2:1 SS	650	1778	CP55	C1SDN3	1.92	2.70
0026	E	Conc Chnl 20.5'W 5'D 0:1 SS South Wall, 2:1 SS North Wall	300	1778	CP55	C1SDN3	1.92	2.70
0031	E	Conc Chnl 26'W 5'D 0:1 SS South Wall, 2:1 SS North Wall	750	1778	CP55	C1SDN3	1.92	2.70
0045	E	Junction Structure	200	1778	CP55	C1SDN3	1.92	
0049	E	2: 12' X 6' RCBC @ Racetrack Rd	92	1628	CP54	C1SDN3	1.69	0.50
0051	E	Earth Chnl 20'-50'W 20'-10'D 2:1 SS with 9'-12' Gabion Drop Structures	2640	1628	CP54	C1SDN3	1.69	0.50
0101	E	Earth Chnl 20'-50'W 20'-10'D 2:1 SS with 9'-12' Gabion Drop Structures	3660	1486	CP53	C1SDN3	1.44	0.50
0170	P1	Soil Cement Levee 7.5'	2950	1132	CP52	C1SDN3B	6.39	2.90
0226	E	Soil Cement Levee 5'	3800	1132	CP52	C1SDN3B	6.39	2.90
0298	E	48" RCPC Outlet	226	90	DB5	C1SDN3B	5.41	0.50
0302	E	20,789 cfs PMF Spillway	20789		C1-54	C1SDN3B	5.41	
0303	E	880 ac-ft East C-1 Detention Basin	3397		C1-54	C1SDN3B	5.41	

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
C1E1 C-1 CHANNEL - EQUESTRIAN TRIBUTARY 1								
0000	P1	Energy Dissipator		688	CP30	C1SDN3B	1.21	
0002	P1	Conc Chnl 10'W 4.5'D 2:1 SS	2200	688	CP30	C1SDN3B	1.21	1.40
C1EO C-1 CHANNEL - EQUESTRIAN D.B. OUTFALL								
0000	P1	Conc Chnl 10'W 5.5'D 2:1 SS	3920	1097	CP48	C1SDN3	1.38	1.40
0074	E	9: 45' X 29' HERCP	220	679	CP46	C1SDN3B	7.82	0.50
0078	E	Grass Chnl 40'W 4.5'D 5:1 SS	1760	679	CP46	C1SDN3B	7.82	1.50
0112	E	Earth Chnl 45'-80'W 4'D 2:1 SS with Drop Structures	1445	679	CP46	C1SDN3B	7.82	1.40
0139	E	5' X 4' RCBC	586	224	DB4	C1SDN3B	7.06	1.90
0151	E	Energy Dissipator		224	DB4	C1SDN3B	7.06	
0152	E	48" RCPC Outlet	325	224	DB4	C1SDN3B	7.06	0.40
0158	E	39,100 cfs PMF Spillway		39100	CP44	C1SDN3B	7.06	
0159	E	409 ac-ft Equestrian Detention Basin		5196	CP44	C1SDN3B	7.06	
0202	E	Conc Chnl 20'W 8.0'D 2:1 SS	5000	3115	CP38	C1SDN3B	4.35	2.40
0297	E	Rip Rap Levee 10'	9000	3115	CP38	C1SDN3B	3.49	2.00
C1FK C-1 CHANNEL - FOUR KIDS								
0000	P2	10' X 5' RCB	770	935	CP72B	C1SDN3	1.00	2.50
0014	E	Earth Chnl 21'W 4'-5'D with Rock 0:1 SS	1280	935	CP72B	C1SDN3	1.00	1.80
0039	E	12' X 4' RCBC @ Eagle Rock Rd	70	935	CP72B	C1SDN3	1.00	2.70
0040	P1	Conc Chnl 10'W 4.5'D 2:1 SS	1750	935	CP72B	C1SDN3	1.00	2.70
0073	E	4: 6' X 3' RCBC @ Lake Mead Dr	160	721	CP72A	C1SDN3	0.78	2.00
0076	P1	Conc Chnl 10'W 5'D 0:1 SS	1400	721	CP72A	C1SDN3	0.78	3.00
C1GW C-1 CHANNEL - GREENWAY								
0000	E	16' X 6' RCBC @ Pueblo Blvd	114	920	CP25	C1SDN3	1.01	1.00
0002	E	Conc Chnl 6'W 9.5'D 1:1 SS	1170	920	CP25	C1SDN3	1.01	0.40
0024	E	2: 12' X 4' RCBC @ Boulder Hwy	200	920	CP25	C1SDN3	1.01	0.40
0028	E	Conc Chnl 15'W 4'D 0:1 SS	490	920	CP25	C1SDN3	1.01	0.40
0037	E	2: 12' X 4' RCBC	40	920	CP25	C1SDN3	1.01	0.90
0038	E	Conc Chnl 15.3'W 4.8'D 1:1 SS	450	920	CP25	C1SDN3	1.01	0.70
0047	E	2: 12' X 4' RCBC @ Mona Ln	70	568	CP24	C1SDN3	0.63	0.60
0048	E	Conc Chnl 17'W 4'D 1:1 SS	685	568	CP24	C1SDN3	0.63	1.60
0061	E	2: 12' X 4' RCBC @ Greenway Rd	190	568	CP24	C1SDN3	0.63	1.00
0064	E	Earth Chnl 16'-20'W 6'-9'D 0:1 SS	300	568	CP24	C1SDN3	0.63	1.20
0064	P0	Conc Chnl 15'W 4'D 0:1 SS	300	568	CP24	C1SDN3	0.63	1.20
0070	E	2: 12' X 4' RCBC @ Van Wagenen Ave	85	568	CP24	C1SDN3	0.63	0.80
0072	E	Earth Chnl 28'W 3'-8'D 2:1 SS	470	568	CP24	C1SDN3	0.63	0.80
0072	P0	Conc Chnl 15'W 4.5'D 0:1 SS	470	568	CP24	C1SDN3	0.63	0.80
0081	E	3: 9.5' X 6.5' CMAP @ UPRR	50	568	CP24	C1SDN3	0.63	0.80
C1IT C-1 CHANNEL - ITHACA								
0000	P1	72" RCP Outlet	6200	424	DB6	C1SDN3B	3.42	2.20
0117	P1	16,830 cfs PMF Spillway		16830	CP64	C1SDN3B	3.42	
0118	P1	310 ac-ft N.E. Detention Basin		1683	CP64	C1SDN3B	3.42	
0155	P1	Soil Cement Levee 11'	4000	1514	C1-65	C1SDN3B	2.54	3.00
0273	P1	Soil Cement Levee 11'	400	1514	C1-65	C1SDN3B	2.54	3.00
C1LM C-1 CHANNEL - LAKE MEAD								
0000	P1	Conc Chnl 10'W 6'D 2:1 SS	2525	1385	CP71	C1SDN3	1.96	0.90
0048	P1	2: 11' X 6' RCBC @ Mohawk Dr	60	1385	CP71	C1SDN3	1.96	0.90
0049	P1	Conc Chnl 10'W 6'D 2:1 SS	1560	1385	CP71	C1SDN3	1.96	0.90
0079	P1	2: 11' X 6' RCBC @ Pawnee Ln	60	1385	CP71	C1SDN3	1.96	0.90
0083	P1	Conc Chnl 10'W 6'D 2:1 SS	570	1385	CP70	C1SDN3	1.77	0.90
0090	P1	2: 11' X 6' RCBC @ Navajo Dr	60	1305	CP70	C1SDN3	1.77	0.90
0092	P1	Conc Chnl 10'W 6'D 2:1 SS	325	1305	CP70	C1SDN3	1.77	0.90
0098	P1	2: 11' X 6' RCBC @ Shoshone Dr	60	1305	CP70	C1SDN3	1.77	0.90
0099	P1	Conc Chnl 10'W 6'D 2:1 SS	345	1305	CP70	C1SDN3	1.77	0.90
0105	P1	2: 11' X 6' RCBC @ Center St	100	1305	CP70	C1SDN3	1.77	0.90
0107	P1	Conc Chnl 10'W 6'D 2:1 SS	555	1305	CP70	C1SDN3	1.77	0.90
0118	P1	2: 11' X 6' RCBC @ Entrance	50	1305	CP70	C1SDN3	1.77	0.90
0119	P1	Conc Chnl 10'W 6'D 2:1 SS	295	1305	CP70	C1SDN3	1.77	0.90
0124	P1	2: 11' X 6' RCBC @ Entrance	50	1305	CP70	C1SDN3	1.77	0.90
0125	P1	Conc Chnl 10'W 6'D 2:1 SS	870	1305	CP70	C1SDN3	1.77	0.90
0142	P1	15' X 6' RCBC @ Warm Springs Rd	125	1054	CP69	C1SDN3	1.44	0.90
0144	P1	Conc Chnl 10'W 4.5'D 2:1 SS	655	682	CP67	C1SDN3	0.81	0.90
0156	P1	11' X 6' RCBC @ Ash St	60	682	CP67	C1SDN3	0.81	0.90
0158	P1	Conc Chnl 10'W 4.5'D 2:1 SS	1305	682	CP67	C1SDN3	0.81	0.90
0182	P1	11' X 6' RCBC @ Ivy St	60	682	CP67	C1SDN3	0.81	0.90
0184	P1	Conc Chnl 10'W 4.5'D 2:1 SS	900	682	CP67	C1SDN3	0.81	0.90

ID / River Mile	Status	Facility Description	Length (ft.)	Flow (cfs)	HEC-1 Node	HEC-1 Model	Tributary Area (sq.mi.)	Channel Slope (%) **
LLMW								
0003	P0	LAKE LAS VEGAS - MAGIC WAY Conc Chnl 10'W 6'D 2:1 SS	6670	1932	CP80	C1SDN3	3.52	3.50
0129	E	6: 8' X 3' RCBC	160	1842	CP79	C1SDN3	3.04	1.00
0132	P0	Conc Chnl 15'W 5'D 2:1 SS	3720	1564	CP77	C1SDN3	2.30	3.10
0203	E	Conc Chnl 35'W 5'-6'D 0.5:1 SS	3000	1515	C1-85	C1SDN3	2.06	3.10
PTBR								
0029	E	PITTMAN WASH - BURNS Rip Rap Chnl 35'W 9'D 2:1 SS	2850	5448	CPBR160	PIT3SC	5.85	0.68
0029	P1	Rip Rap Chnl 60'W 9'D 3:1 SS	2850	5448	CPBR160	PIT3SC	5.85	0.68
0090	E	2: 24' X 8.5' RCAC @ Weisner Way	190	5448	CPBR160	PIT3SC	5.85	0.90
0091	E	Conc Chnl 25'W 9'D 2:1 SS	2570	5448	CPBR160	PIT3SC	5.85	1.10
0140	E	Conc Chnl 25'W 9'D 2:1 SS	1110	5254	CPBR150	PIT3SC	5.54	0.50
0160	E	Conc Chnl 10'W 8'D 2:1 SS	210	2881	CPBR090	PIT3SC	3.19	1.00
0163	E	Conc Chnl 20'W 8'D 0:1 SS	250	2881	CPBR090	PIT3SC	3.19	1.00
0164	P1	Add 4: 16' X 4' RCBC @ Boulder Hwy	330	2881	CPBR090	PIT3SC	3.19	1.50
0165	E	2: 6' X 4' RCBC @ Boulder Hwy	330	2881	CPBR090	PIT3SC	3.19	1.50
PTGB								
0058	P1	PITTMAN WASH - GIBSON Conc Chnl 15'W 5.5'D 2:1 SS	1560	1532	CPBR080	PIT3SC	1.76	1.50
0087	P3	2: 10' X 6' RCB	660	1532	CPBR080	PIT3SC	1.76	0.50
0093	E	Earth/Conc Chnl 8'W 5'D 2:1 SS	550	1532	CPBR080	PIT3SC	1.76	1.50
0093	P1	Conc Chnl 30'W 5'D 0:1 SS	550	1532	CPBR080	PIT3SC	1.76	1.50
PTGL								
0000	E	PITTMAN GAS LINE 72" RCP	1675	678	CPPD030	PIT3SC	0.69	3.40
PTHR								
0000	P1	PITTMAN HORIZON RIDGE Conc Chnl 15'W 5'D 2:1 SS	2300	1652	CPPD170	PIT3SC	1.49	3.00
0043	P1	2: 12' X 6' RCBC @ UPRR	100	1371	CPPD165	PIT3SC	1.25	2.00
0044	P1	Conc Chnl 15'W 5.5'D 2:1 SS	1250	1371	CPPD165	PIT3SC	1.25	1.20
0049	E	12' X 5' RCBC @ Lake Mead Dr	150	1345	CPPD160	PIT3SC	1.20	1.20
0067	E	8' X 5' RCB	1800	1345	CPPD160	PIT3SC	1.20	2.60
0104	P1	Conc Chnl 15'W 4.5'D 2:1 SS	1825	1345	CPPD160	PIT3SC	1.20	4.90
0139	E	36" RCP @ Horizon Ridge Pkwy	100	1065	CPPD135	PIT3SC	0.89	7.00
0139	P1	12' X 6' RCBC @ Horizon Ridge Pkwy	100	1065	CPPD135	PIT3SC	0.89	7.00
0140	P1	Conc Chnl 15'W 4'D 2:1 SS	3425	1065	CPPD135	PIT3SC	0.89	4.00
0203	P1	84" RCP Outlet	200	882	CPPD125	PIT3SC	0.72	4.00
0204	P1	882 cfs Spillway		882	CPPD125	PIT3SC	0.72	
0205	P1	2.5 ac-ft Pitman Horizon Ridge Debris Basin		882	CPPD125	PIT3SC	0.72	
0210	E	Natural Wash	2950	882	CPPD125	PIT3SC	0.72	7.00
PTIS								
0000	P1	PITTMAN WASH - INTERSTATE Conc Chnl 30'W 6'D 2:1 SS	2100	4530	CPPD150	PIT3SC	5.90	3.00
0007	P1	4: 14' X 6' RCBC @ I-151	200	4530	CPPD150	PIT3SC	5.90	1.40
0008	P1	Conc Chnl 30'W 6.5'D 2:1 SS	150	4530	CPPD150	PIT3SC	5.90	1.40
0014	P1	4: 14' X 6' RCBC @ I-151	150	4530	CPPD150	PIT3SC	5.90	1.40
0015	P1	Conc Chnl 30'W 6.5'D 2:1 SS	250	4261	CPPD150	PIT3SC	5.24	1.40
0023	E	Conc Chnl 40'W 7'D 2:1 SS	110	3497	CPPD140	PIT3SC	3.68	3.00
0028	E	4: 8' X 8' RCBC @ I-151	350	3497	CPPD140	PIT3	3.68	2.80
0029	E	Conc Chnl 30'W 5'D 2:1 SS	1100	2520	CPPD070	PIT3	2.57	3.00
0050	E	Conc Chnl 30'W 5'D 2:1 SS	380	2520	CPPD070	PIT3SC	2.57	3.00
0055	E	2: 7' X 7' RCBC @ UPRR	1000	2520	CPPD070	PIT3SC	2.57	3.00
0056	E	Conc Chnl 30'W 5'D 2:1 SS	650	2520	CPPD070	PIT3SC	2.57	3.80
0068	E	Rip Rap Chnl 35'W 6'D 2:1 SS	1000	2520	CPPD070	PIT3SC	2.57	1.10
0087	E	Conc Chnl 35'W 6'D 2:1 SS	800	2380	CPPD060	PIT3SC	2.36	2.50
0102	E	Rip Rap Chnl 35'W 6'D 2:1 SS	3390	2380	CPPD060	PIT3SC	2.36	1.10
0166	E	2: 6' X 6' RCB	950	1365	CPPD045	PIT3SC	1.17	3.50
0184	E	Conc Chnl 5'W 4'D 3:1 SS	750	1962	CPPD050	PIT3SC	1.86	5.00
0197	E	3: 60" RCP @ Horizon Ridge Pkwy	150	681	CPPD030	PIT3SC	0.69	3.00
0198	E	Conc Chnl 10'W 4'D 2:1 SS	3150	681	CPPD030	PIT3SC	0.69	1.30

- ELL COURT9
- HOUSE COURT10
- AIL STREET11
- W RIDGE PLACE12
- N POST DRIVE13
- PEAK14
- IGHT MESA DRIVE15
- BROOK DRIVE16
- DE LANE17
- NT RUN COURT18
- SAND COURT19
- RIDER COURT20
- RASS COURT21
- HAVEN WAY22
- ST DRIVE23
- RK LANE24
- IP COURT25
- PEAK26
- LD LANE27
- CREEK COURT28
- INES STREET29
- REE LANE30
- INE COURT31
- LD LANE32
- IDE COURT33
- ST COURT34
- OAK COURT35
- FLAT DRIVE36
- IS OAKS DRIVE37
- OOK WAY38
- I COURT39
- COURT40
- ROW COURT41



PANEL 2585 E

FIRM

FLOOD INSURANCE RATE MAP

CLARK COUNTY,
NEVADA AND
INCORPORATED AREAS

PANEL 2585 OF 4090

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HENDERSON, CITY OF	320005	2585	E
CLARK COUNTY, UNINCORPORATED AREAS	320003	2585	E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

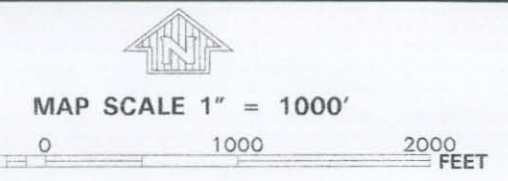
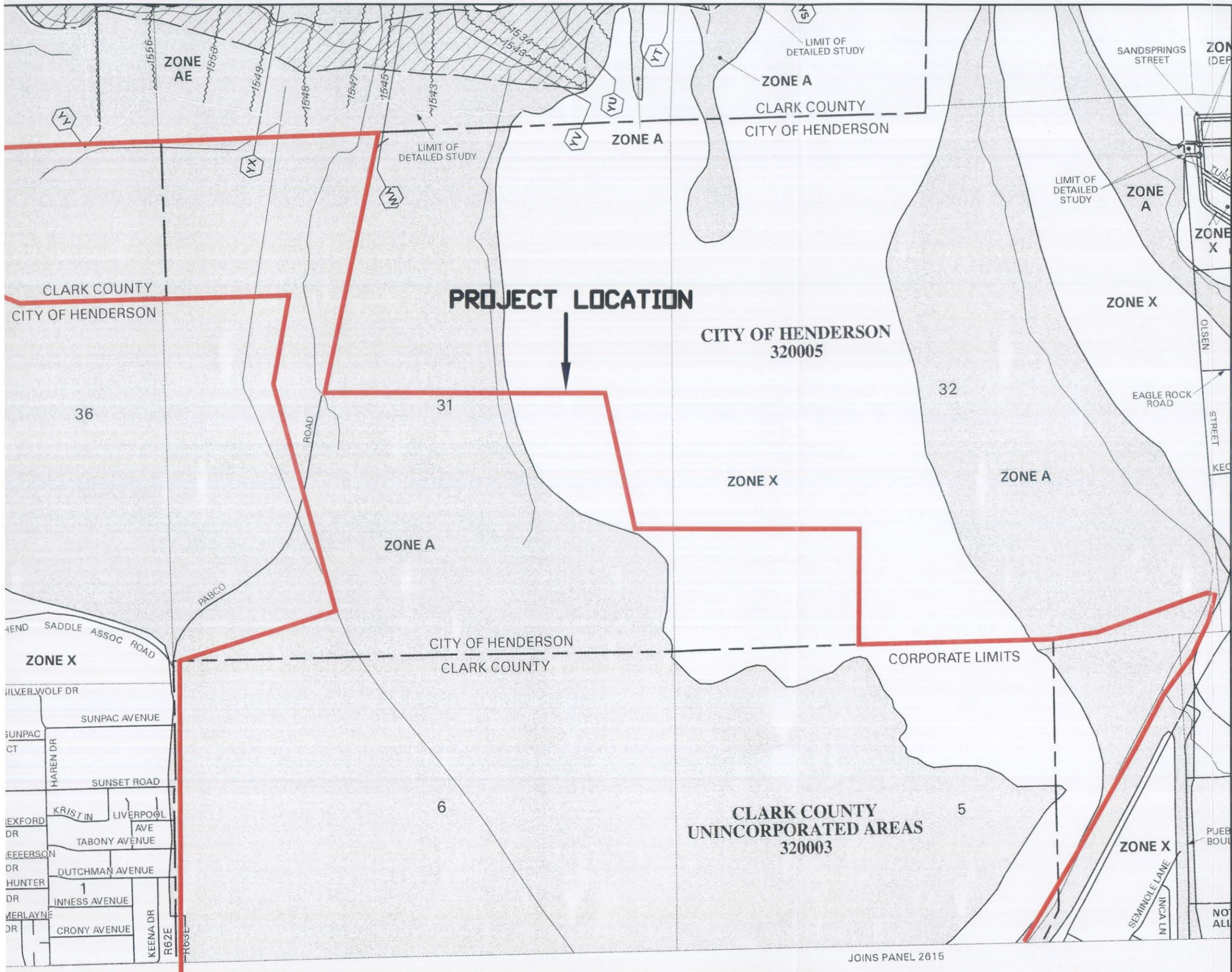
MAP NUMBER
32003C2585 E

MAP REVISED:
SEPTEMBER 27, 2002

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

FIGURE 5



PANEL 2605 E

FIRM **FLOOD INSURANCE RATE MAP** CLARK COUNTY, NEVADA AND INCORPORATED AREAS

PANEL 2605 OF 4090
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HENDERSON, CITY OF	320005	2605	E
CLARK COUNTY, UNINCORPORATED AREAS	320003	2605	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

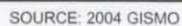


MAP NUMBER
32003C2605 E

MAP REVISED:
SEPTEMBER 27, 2002

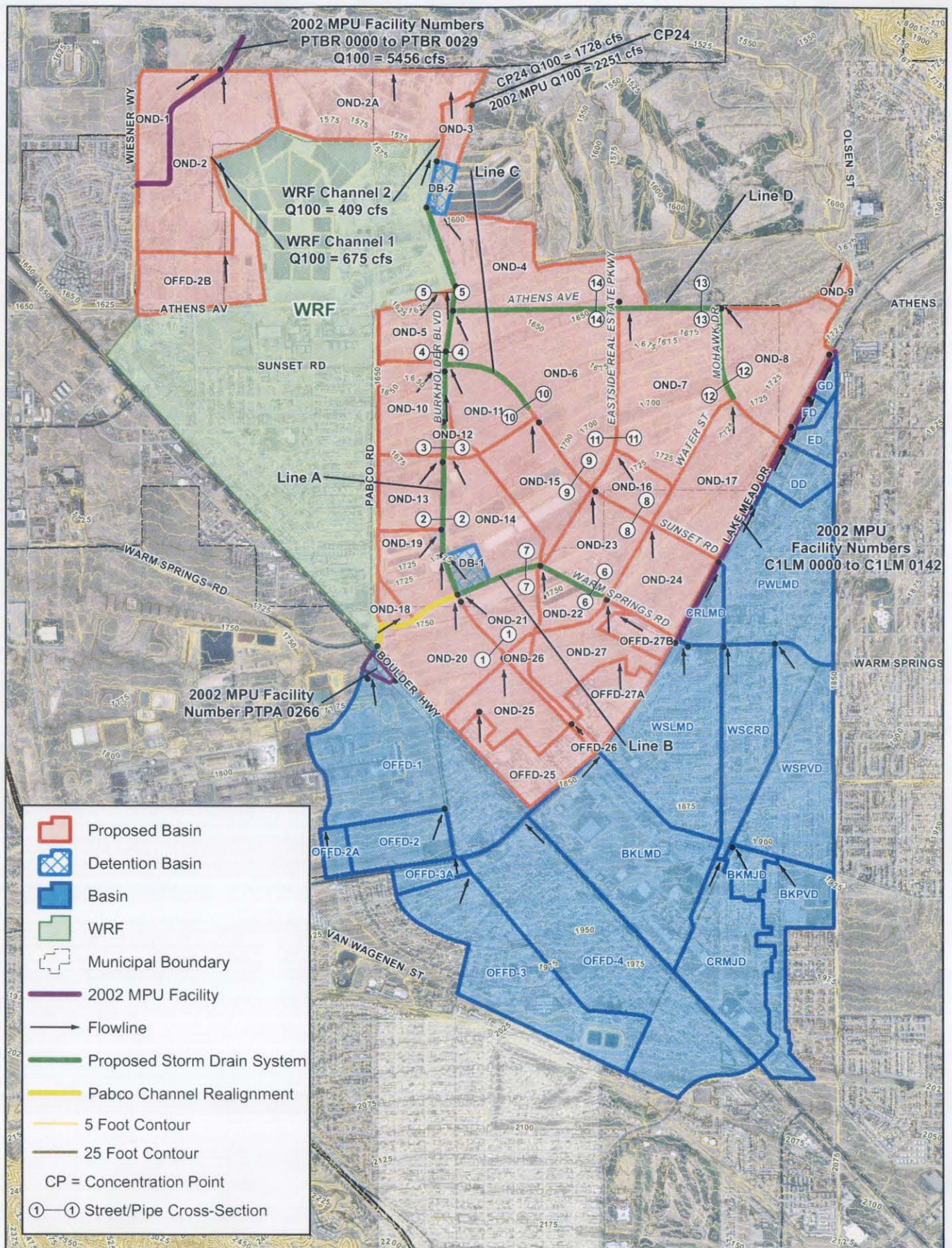
Federal Emergency Management Agency

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1 inch equals 3,000 feet

FIGURE 8



SOURCE: 2004 GISMO



1 inch equals 3,000 feet

PROPOSED CONDITIONS DRAINAGE MAP

NOTE: REFER TO APPENDIX D-4 FOR DETAILED LARGE-SCALE MAP

FIGURE 9

Appendix A: Hydrology

Appendix A-1: Rainfall Methodology and Soils Information

Rainfall Methodology

A. Point Rainfall

According to Figure 513 of the Criteria Manual the site is located outside the McCarran Airport Rainfall area. Offsite basins are also located outside the McCarran Airport Rainfall area.

The 10-year, 6-hour rainfall depth duration frequency values were obtained from Figure 503 of the Criteria Manual. According to Figure 503, the rainfall depth for the 10-year 6-hour event is 1.40 inches. This value was adjusted according to Table 501 by 1.24, 10-year recurrence interval. The adjusted rainfall value is 1.74 inches and is calculated as follows: $(1.4)(1.24) = 1.74$ inches

The 100-year, 6-hour rainfall depth duration frequency values were obtained from Figure 503 of the Criteria Manual. According to Figure 503, the rainfall depth for the 100-year 6-hour event is 2.00 inches. This value was adjusted according to Table 501 by 1.43, 10-year recurrence interval. The adjusted rainfall value is 2.86 inches and is calculated as follows: $(2.0)(1.43) = 2.86$ inches.

B. Storm Distribution

Table 503 in the Criteria Manual specifies that the 6-hour storm distribution, SDN 3 should be used for drainage areas less than eight square miles.

Runoff Methodology

A. Lag Time

The Criteria Manual's Standard Form 4 was completed to determine the time of concentration for each drainage basin. For all basins, which comprise less than 1 square mile, the time of concentration was calculated as follows:

$$T_c = T_i + T_t$$

Where: T_c = Time of Concentration

T_i = Initial, inlet or overland flow time

T_t = Travel time in the ditch, gutter, etc.

The time of concentration is the sum of the initial flow time, T_i and the travel time, T_t . The minimum T_c recommended for non-urban watersheds is 10 minutes and 5 minute minimum for urbane watersheds.

Initial flow time was calculated as follows:

$$T_i = 1.8(1.1 - K)L_o^{1/2}/S^{1/3}$$

Where: T_i = Initial overland flow time (in minutes)

$$K = 0.0132CN - 0.39$$

CN = Curve Number

L_o = Length of overland flow (maximum 500 feet)

S = Average basin slope (in percent)

The lag time was calculated as follows:

$$T_{lag} = 0.6T_c \text{ (in hours)}$$

B. Soils – Curve Number Determination

Soils information, for the drainage basins, was obtained from GIS data from the 2002 MPU. This information is shown in Figure H-18 and H-22 of the 2002 MPU. The soil types were matched to the corresponding SCS Curve Number (CN) for use in the Standard Form 4 and the HEC-1 analysis. The corresponding CN's for these soils are found on Table 602 of the Criteria Manual.

Tables A-1 and A-2 Curve Number Calculations summarizes the computation of the Curve Numbers for onsite and offsite basins.

TABLE A-1 Curve Number Calculations-Existing Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
ONE-1	B	326	16.27	Undeveloped Land, Open Desert	77.00	$(16.27/45.92)*77$	27.28
	B	187	29.65	Undeveloped Land, Open Desert	77.00	$(29.65/45.92)*77$	49.72
	Total ONE-1		45.92		COMPOSITE CURVE NUMBER		77.00
ONE-2	B	326	2.92	Undeveloped Land, Open Desert	77.00	$(2.92/115.31)*77$	1.95
	B	187	63.09	Undeveloped Land, Open Desert	77.00	$(63.09/115.31)*77$	42.13
	C	600	9.00	Undeveloped Land, Open Desert	85.00	$(9.00/115.31)*85$	6.63
	B	184	40.30	Undeveloped Land, Open Desert	77.00	$(40.30/115.31)*77$	26.91
	Total ONE-2		115.31		COMPOSITE CURVE NUMBER		77.62
ONE-3	C	600	148.79	Undeveloped Land, Open Desert	85.00	$(148.79/173.38)*85$	72.94
	B	326	24.59	Undeveloped Land, Open Desert	77.00	$(24.59/173.38)*77$	10.92
	Total ONE-3		173.38				83.87
ONE-4	B	278	0.15	Undeveloped Land, Open Desert	77.00	$(0.15/137.07)*77$	0.08
	B	184	112.69	Undeveloped Land, Open Desert	77.00	$(112.69/137.07)*77$	63.30
	C	600	24.23	Undeveloped Land, Open Desert	85.00	$(24.23/137.07)*85$	15.03
	Total ONE-4		137.07		COMPOSITE CURVE NUMBER		78.41
ONE-5	C	600	498.86	Undeveloped Land, Open Desert	85.00	$(498.86/556.81)*85$	76.15
	B	184	57.95	Undeveloped Land, Open Desert	77.00	$(57.95/556.81)*77$	8.01
	Total ONE-5		556.81		COMPOSITE CURVE NUMBER		84.17
ONE-6	A	117	89.42	Undeveloped Land, Open Desert	65.00	$(89.42/646.96)*65$	8.98
	C	610	6.01	Undeveloped Land, Open Desert	85.00	$(6.01/646.96)*85$	0.79
	C	600	507.91	Undeveloped Land, Open Desert	85.00	$(507.91/646.96)*85$	66.73
	B	184	35.77	Undeveloped Land, Open Desert	77.00	$(35.77/646.96)*77$	4.26
	B	182	7.85	Undeveloped Land, Open Desert	77.00	$(7.85/646.96)*77$	0.93
	Total ONE-6		646.96		COMPOSITE CURVE NUMBER		81.70
ONE-7	A	112	0.58	Undeveloped Land, Open Desert	66.00	$(0.58/133.21)*66$	0.29
	B	184	2.66	Undeveloped Land, Open Desert	77.00	$(2.66/133.21)*77$	1.54
	C	600	57.50	Undeveloped Land, Open Desert	85.00	$(57.50/133.21)*85$	36.69
	B	182	72.47	Undeveloped Land, Open Desert	77.00	$(72.47/133.21)*77$	41.89
	Total ONE-7		133.21		COMPOSITE CURVE NUMBER		80.41
ONE-8	B	184	13.91	Undeveloped Land, Open Desert	77.00	$(13.91/182.26)*77$	5.88
	B	182	64.38	Undeveloped Land, Open Desert	77.00	$(64.38/182.26)*77$	27.20
	A	117	102.18	Undeveloped Land, Open Desert	65.00	$(102.18/182.26)*65$	36.44

TABLE A-1 Curve Number Calculations-Existing Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
	B	187	1.79	Undeveloped Land, Open Desert	77.00	$(1.79/182.26)*77$	0.76
		Total ONE-8	182.26		COMPOSITE CURVE NUMBER		70.27
ONE-9	C	600	4.67	Undeveloped Land, Open Desert	85.40	$(4.67/228.94)*85.40$	1.74
	B	184	224.27	Undeveloped Land, Open Desert	78.00	$(224.27/228.94)*78$	76.41
		Total ONE-9	228.94		COMPOSITE CURVE NUMBER		78.15
ONE-10	B	184	96.29	Undeveloped Land, Open Desert	83.94	$(96.29/96.29)*83.94$	83.94
		Total ONE-10	96.29		COMPOSITE CURVE NUMBER		83.94
CRLME	A	117	14.56	Undeveloped Land, Open Desert	65.00	$(14.56/28.53)*65$	33.17
	A	117	1.14	High-Density Residential, 2-4 units per acre	76.72	$(1.14/28.53)*76.72$	3.06
	A	117	0.01	Multi-Family, 8 units per acre or more	82.32	$(0.01/28.53)*82.32$	0.03
	A	117	12.82	Commercial, Retail, Casino	92.40	$(12.82/28.53)*92.40$	41.54
		TOTAL CRLME	28.53		COMPOSITE CURVE NUMBER		77.80
BKLME	B	184	11.44	Undeveloped Land, Open Desert	77.00	$(11.44/220.79)*77$	3.99
	B	187	17.36	Undeveloped Land, Open Desert	77.00	$(17.36/220.79)*77$	6.05
	B	184	1.91	Parks, Golf Courses	64.45	$(1.91/220.79)*64.45$	0.56
	B	187	45.70	Parks, Golf Courses	64.45	$(45.70/220.79)*64.45$	13.34
	B	184	1.57	High-Density Residential, 2-4 units per acre	83.94	$(1.57/220.79)*83.94$	0.60
	B	187	2.19	High-Density Residential, 2-4 units per acre	83.94	$(2.19/220.79)*83.94$	0.83
	B	184	6.40	Multi-Family, 8 units per acre or more	87.64	$(6.40/220.79)*87.64$	2.54
	B	187	29.91	Multi-Family, 8 units per acre or more	87.64	$(29.91/220.79)*87.64$	11.87
	B	184	60.38	Commercial, Retail, Casino	94.30	$(60.38/220.79)*94.30$	25.75
	B	187	43.94	Commercial, Retail, Casino	94.30	$(43.94/220.79)*94.30$	18.77
		TOTAL PWLME	220.79		COMPOSITE CURVE NUMBER		84.30
BKMJE	B	187	0.05	Undeveloped Land, Open Desert	77.00	$(0.05/21.46)*77$	0.17
	B	187	12.69	High-Density Residential, 2-4 units per acre	83.94	$(12.69/21.46)*83.94$	49.64
	B	187	8.64	Multi-Family, 8 units per acre or more	87.64	$(8.64/21.46)*87.64$	35.29
	B	187	0.08	Commercial, Retail, Casino	94.30	$(0.08/21.46)*94.30$	0.40
		TOTAL BKMJE	21.46		COMPOSITE CURVE NUMBER		85.50
BKPVE	A	117	0.38	High-Density Residential, 2-4 units per acre	76.72	$(0.38/88.97)*76.72$	0.33
	B	187	32.66	High-Density Residential, 2-4 units per acre	83.94	$(32.66/88.97)*83.94$	30.81
	B	187	7.13	Multi-Family, 8 units per acre or more	87.64	$(7.13/88.97)*87.64$	7.03
	B	187	11.84	Commercial, Retail, Casino	94.30	$(11.84/88.97)*94.30$	12.55
	A	117	0.26	Schools	70.00	$(0.26/88.97)*70$	0.20

TABLE A-1 Curve Number Calculations-Existing Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
	B	187	36.70	Schools	79.50	$(36.70/88.97)*79.50$	32.78
		TOTAL BKPVE	88.97			COMPOSITE CURVE NUMBER	83.70
PWLME	A	112	0.05	Undeveloped Land, Open Desert	66.00	$(0.05/188.22)*66$	0.02
	A	117	0.88	Undeveloped Land, Open Desert	65.00	$(0.88/188.22)*65$	0.30
	B	182	11.09	Undeveloped Land, Open Desert	77.00	$(11.09/188.22)*77$	4.54
	A	112	0.04	High-Density Residential, 2-4 units per acre	77.10	$(0.04/188.22)*77.10$	0.02
	A	117	21.09	High-Density Residential, 2-4 units per acre	76.72	$(21.09/188.22)*76.72$	8.60
	B	182	115.79	High-Density Residential, 2-4 units per acre	83.56	$(115.79/188.22)*83.56$	51.40
	A	117	22.85	Multi-Family, 8 units per acre or more	82.32	$(22.85/188.22)*82.32$	9.99
	B	182	3.13	Multi-Family, 8 units per acre or more	87.36	$(3.13/188.22)*87.36$	1.45
	A	117	5.95	Commercial, Retail, Casino	92.40	$(5.95/188.22)*92.40$	2.92
	B	182	7.34	Commercial, Retail, Casino	94.20	$(7.34/188.22)*94.20$	3.65
		TOTAL PWLME	188.22			COMPOSITE CURVE NUMBER	82.90
CRMJE	B	187	27.88	Undeveloped Land, Open Desert	77.00	$(27.88/132.06)*77$	16.25
	B	187	7.60	Parks, Golf Courses	64.45	$(7.60/132.06)*64.45$	3.71
	B	187	39.08	High-Density Residential, 2-4 units per acre	83.94	$(39.08/132.06)*83.94$	24.84
	B	187	17.59	Multi-Family, 8 units per acre or more	87.64	$(17.59/132.06)*87.64$	11.67
	B	187	39.91	Commercial, Retail, Casino	94.30	$(39.91/132.06)*94.30$	28.52
		TOTAL CRMJE	132.06			COMPOSITE CURVE NUMBER	85.00
DE	B	182	5.36	Undeveloped Land, Open Desert	77.00	$(5.36/45.85)*77$	9.00
	B	182	25.78	High-Density Residential, 2-4 units per acre	83.56	$(25.78/45.85)*83.56$	46.99
	B	182	4.96	Multi-Family, 8 units per acre or more	87.36	$(4.96/45.85)*87.36$	9.46
	B	182	9.74	Commercial, Retail, Casino	94.20	$(9.74/45.85)*94.20$	20.01
		TOTAL DE	45.85			COMPOSITE CURVE NUMBER	85.47
EE	B	182	5.24	Undeveloped Land, Open Desert	77.00	$(5.24/20.16)*77$	20.01
	B	182	14.29	High-Density Residential, 2-4 units per acre	83.56	$(14.29/20.16)*83.56$	59.21
	B	182	0.64	Commercial, Retail, Casino	94.20	$(0.64/20.16)*94.20$	2.98
		TOTAL EE	20.16			COMPOSITE CURVE NUMBER	82.20
FE	B	182	10.88	Undeveloped Land, Open Desert	77.00	$(10.88/11.28)*77$	74.27
	B	182	0.40	Commercial, Retail, Casino	94.20	$(0.40/11.28)*94.20$	3.34
		TOTAL FE	11.28			COMPOSITE CURVE NUMBER	77.61
GE	B	182	7.05	Undeveloped Land, Open Desert	77.00	$(7.05/9.82)*77$	55.32
	B	182	0.62	High-Density Residential, 2-4 units per acre	83.56	$(0.62/9.82)*83.56$	5.29

TABLE A-1 Curve Number Calculations-Existing Conditions

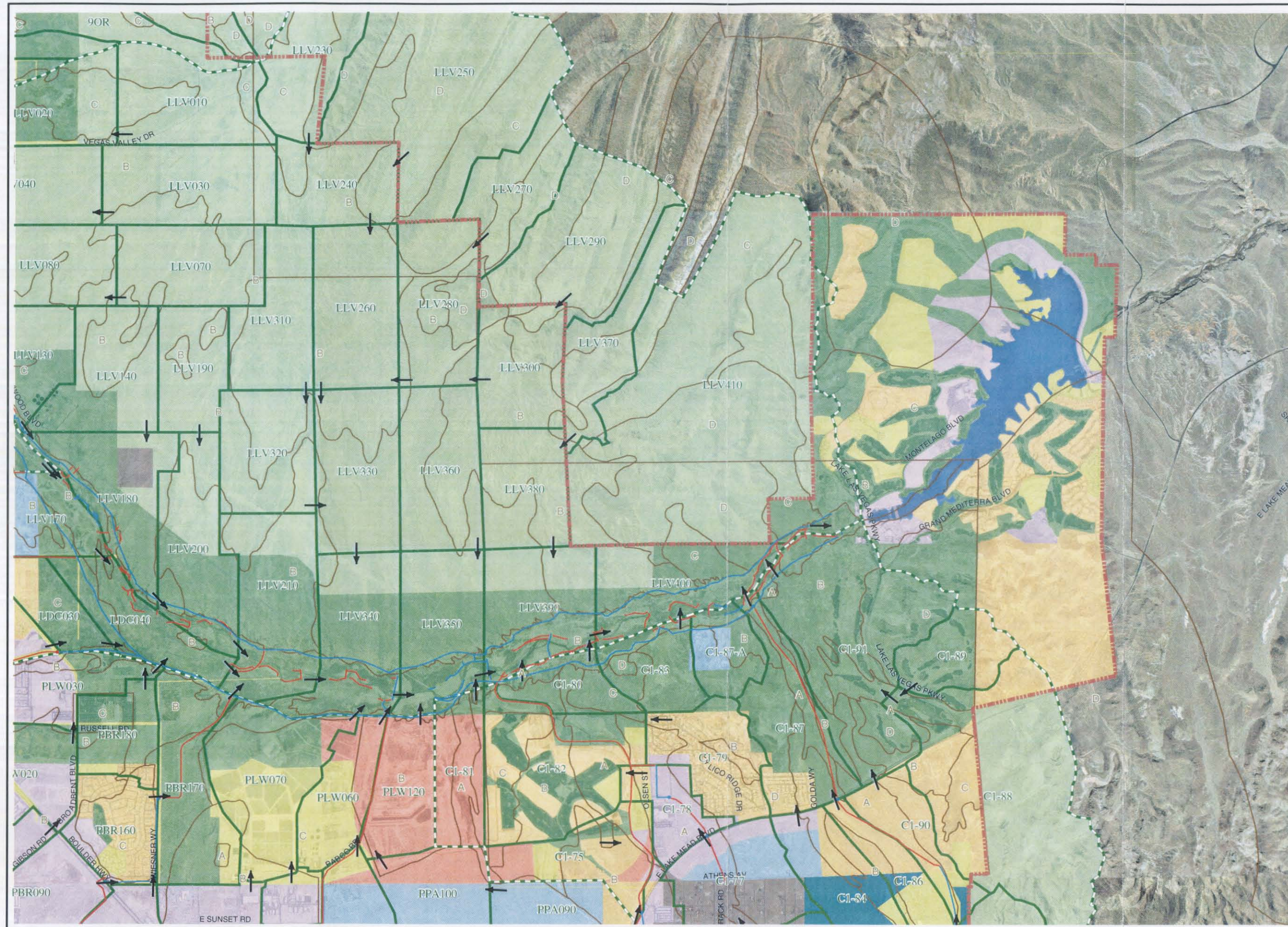
BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
	B	182	2.14	Commercial, Retail, Casino	94.20	(2.14/9.82)*94.20	20.59
		TOTAL GE	9.82		COMPOSITE CURVE NUMBER		81.20
WSCRE	B	187	1.90	Undeveloped Land, Open Desert	77.00	(1.90/102.80)*77	1.43
	B	187	0.004	Parks, Golf Courses	64.45	(0.004/102.80)*64.45	0.00
	A	117	72.78	High-Density Residential, 2-4 units per acre	76.72	(72.78/102.80)*76.72	54.32
	B	187	12.87	High-Density Residential, 2-4 units per acre	83.94	(12.87/102.80)*83.94	10.51
	A	117	0.36	Multi-Family, 8 units per acre or more	82.32	(0.36/102.80)*82.32	0.29
	B	187	13.86	Multi-Family, 8 units per acre or more	87.64	(13.86/102.80)*87.64	11.82
	B	187	1.01	Commercial, Retail, Casino	94.30	(1.01/102.80)*94.30	0.94
		TOTAL WSCRE	102.80		COMPOSITE CURVE NUMBER		79.30
WSLME	A	117	0.41	Undeveloped Land, Open Desert	65.00	(0.41/183.06)*65	0.15
	B	184	0.48	Parks, Golf Courses	64.45	(0.48/183.06)*64.45	0.17
	B	187	2.04	Parks, Golf Courses	64.45	(2.04/183.06)*64.45	0.72
	A	117	26.66	High-Density Residential, 2-4 units per acre	76.72	(26.66/183.06)*76.72	11.17
	B	187	122.99	High-Density Residential, 2-4 units per acre	83.94	(122.99/183.06)*83.94	56.39
	A	117	0.02	Multi-Family, 8 units per acre or more	82.32	(0.02/183.06)*82.32	0.01
	B	184	0.33	Multi-Family, 8 units per acre or more	87.64	(0.33/183.06)*87.64	0.16
	B	187	0.12	Multi-Family, 8 units per acre or more	87.64	(0.12/183.06)*87.64	0.06
	A	117	0.46	Commercial, Retail, Casino	92.40	(0.46/183.06)*92.40	0.23
	B	184	2.95	Commercial, Retail, Casino	94.30	(2.95/183.06)*94.30	1.52
	B	187	14.89	Commercial, Retail, Casino	94.30	(14.89/183.06)*94.30	7.67
	A	117	10.00	Schools	70.00	(10/183.06)*70	3.83
	B	187	1.71	Schools	79.50	(1.71/183.06)*79.50	0.73
		TOTAL WSLME	183.06		COMPOSITE CURVE NUMBER		82.80
WSPVE	A	117	4.49	Undeveloped Land, Open Desert	65.00	(4.49/169.40)*65	1.72
	B	182	2.01	Undeveloped Land, Open Desert	77.00	(2.01/169.40)*77	0.91
	B	187	0.35	Undeveloped Land, Open Desert	77.00	(0.35/169.40)*77	0.16
	A	112	2.26	High-Density Residential, 2-4 units per acre	77.10	(2.26/169.40)*77.10	1.03
	A	117	113.51	High-Density Residential, 2-4 units per acre	76.72	(113.51/169.40)*76.72	51.41
	B	182	0.78	High-Density Residential, 2-4 units per acre	83.56	(0.78/169.40)*83.56	0.38
	B	187	18.67	High-Density Residential, 2-4 units per acre	83.94	(18.67/169.40)*83.94	9.25
	A	117	1.01	Multi-Family, 8 units per acre or more	82.32	(1.01/169.40)*82.32	0.49
	B	187	26.02	Multi-Family, 8 units per acre or more	87.64	(26.02/169.40)*87.64	13.46
	B	187	0.30	Commercial, Retail, Casino	94.30	(0.30/169.40)*94.30	0.18
		TOTAL WSPVE	169.40		COMPOSITE CURVE NUMBER		79.00

TABLE A-1 Curve Number Calculations-Existing Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFE-1	B	184	135.06	High-Density Residential, 2-4 units per acre	83.94	$(135.06/300.49)*83.94$	37.73
	C	615	165.43	Rural	85.40	$(165.43/300.49)*85.40$	47.02
	Total OFFE-1		300.49		COMPOSITE CURVE NUMBER		84.74
OFFE-2	C	615	12.80	Undeveloped Land, Open Desert	85.00	$(12.80/58.87)*85$	18.48
	B	184	46.07	Undeveloped Land, Open Desert	77.00	$(46.07/58.87)*77$	60.26
	Total OFFE-2		58.87		COMPOSITE CURVE NUMBER		78.74
OFFE-2A	C	615	2.52	Undeveloped Land, Open Desert	85.00	$(2.52/14.62)*85$	14.65
	B	184	12.1	Undeveloped Land, Open Desert	77.00	$(12.10/14.62)*77$	63.73
	Total OFFE-2A		14.62		COMPOSITE CURVE NUMBER		78.38
OFFE-2B	B	184	55.74	Undeveloped Land, Open Desert	77.00	$(55.74/87.54)*77$	49.03
		187	25.06	Undeveloped Land, Open Desert	77.00	$(25.06/87.54)*77$	22.04
	A	999	6.74	Undeveloped Land, Open Desert	30.00	$(0.13/87.54)*30$	2.31
	Total OFFE-2B		87.54		COMPOSITE CURVE NUMBER		73.38
OFFE-3	B	184	161.72	High-Density Residential, 2-4 units per acre	83.94	$(161.72/190.88)*83.94$	71.12
	B	187	5.30	High-Density Residential, 2-4 units per acre	83.94	$(5.30/190.88)*83.94$	2.33
	A	117	16.59	High-Density Residential, 2-4 units per acre	76.72	$(16.59/190.88)*76.72$	6.67
	A	999	7.27	High-Density Residential, 2-4 units per acre	30.00	$(7.27/190.88)*30$	1.14
	Total OFFE-3		190.88		COMPOSITE CURVE NUMBER		81.26
OFFE-3A	B	184	19.80	High-Density Residential, 2-4 units per acre	88.00	$(19.80/19.80)*88$	88.00
	Total OFFE-3A		19.80		COMPOSITE CURVE NUMBER		88.00
OFFE-4	A	117	5.94	Parks, Golf Courses	47.10	$(5.94/302.74)*47.10$	0.92
	B	184	30.56	Parks, Golf Courses	64.45	$(30.53/302.74)*64.45$	6.51
	B	187	0.08	Parks, Golf Courses	64.45	$(0.08/302.74)*64.45$	0.02
	A	999	7.27	Parks, Golf Courses	30.00	$(7.27/302.74)*30$	0.72
	A	117	1.02	High-Density Residential, 2-4 units per acre	76.72	$(1.02/302.74)*76.72$	0.26
	B	184	89.51	High-Density Residential, 2-4 units per acre	83.94	$(89.51/302.74)*83.94$	24.82
	B	187	83.92	High-Density Residential, 2-4 units per acre	83.94	$(83.92/302.74)*83.94$	23.27
	A	117	0.17	Multi-Family, 8 units per acre or more	82.32	$(0.17/302.74)*82.32$	0.05
	B	184	5.22	Multi-Family, 8 units per acre or more	87.64	$(5.22/302.74)*87.64$	1.51
	B	184	66.20	Commercial, Retail, Casino	94.30	$(66.20/302.74)*94.30$	20.62
	B	187	12.85	Commercial, Retail, Casino	94.30	$(12.85/302.74)*94.30$	4.00
TOTAL OFFE-4			302.74		COMPOSITE CURVE NUMBER		82.70

TABLE A-1 Curve Number Calculations-Existing Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFE-9	B	184	40.34	Multi-Family, 8 units per acre or more	87.64	(40.34/40.34)*87.64	87.64
		Total OFFE-9	40.34				COMPOSITE CURVE NUMBER	87.64
OFFE-10A	B	184	61.26	High-Density Residential, 2-4 units per acre	83.94	(61.26/61.26)*83.94	83.94
		Total OFFE-10A	61.26				COMPOSITE CURVE NUMBER	83.94
OFFE-10B	A	184	3.12	High-Density Residential, 2-4 units per acre	87.64	(3.12/27.18)*87.64	10.06
	B	187	24.06	High-Density Residential, 2-4 units per acre	83.94	(24.06/27.18)*83.94	74.30
		Total OFFE-10B	27.18			COMPOSITE CURVE NUMBER	84.36



REGIONAL FLOOD CONTROL DISTRICT

2002 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

LEGEND

Ultimate Development Boundary
 Watershed Boundary
 Subarea Boundary
 Flow Arrows

Flood Control Facilities

Existing Facilities
 Proposed Facilities

Hydrologic Soil Groups

A Low Runoff Potential
 B Moderately Low Runoff Potential
 C Moderately High Runoff Potential
 D High Runoff Potential

Typical Land Use

1 Undeveloped Land, Open Desert
 2 Parks, Golf Courses
 3 Rural
 4 Low Density Residential
 5 Medium Density Residential
 6 High Density Residential
 7 Public Facility, Multi Family
 8 Commercial, Office, Retail, Casino
 9 Light Industrial
 10 Heavy Industrial
 11 Schools
 12 Lakes

N
 W E
 S

0 1,000 2,000 3,000 4,000 5,000
 Feet

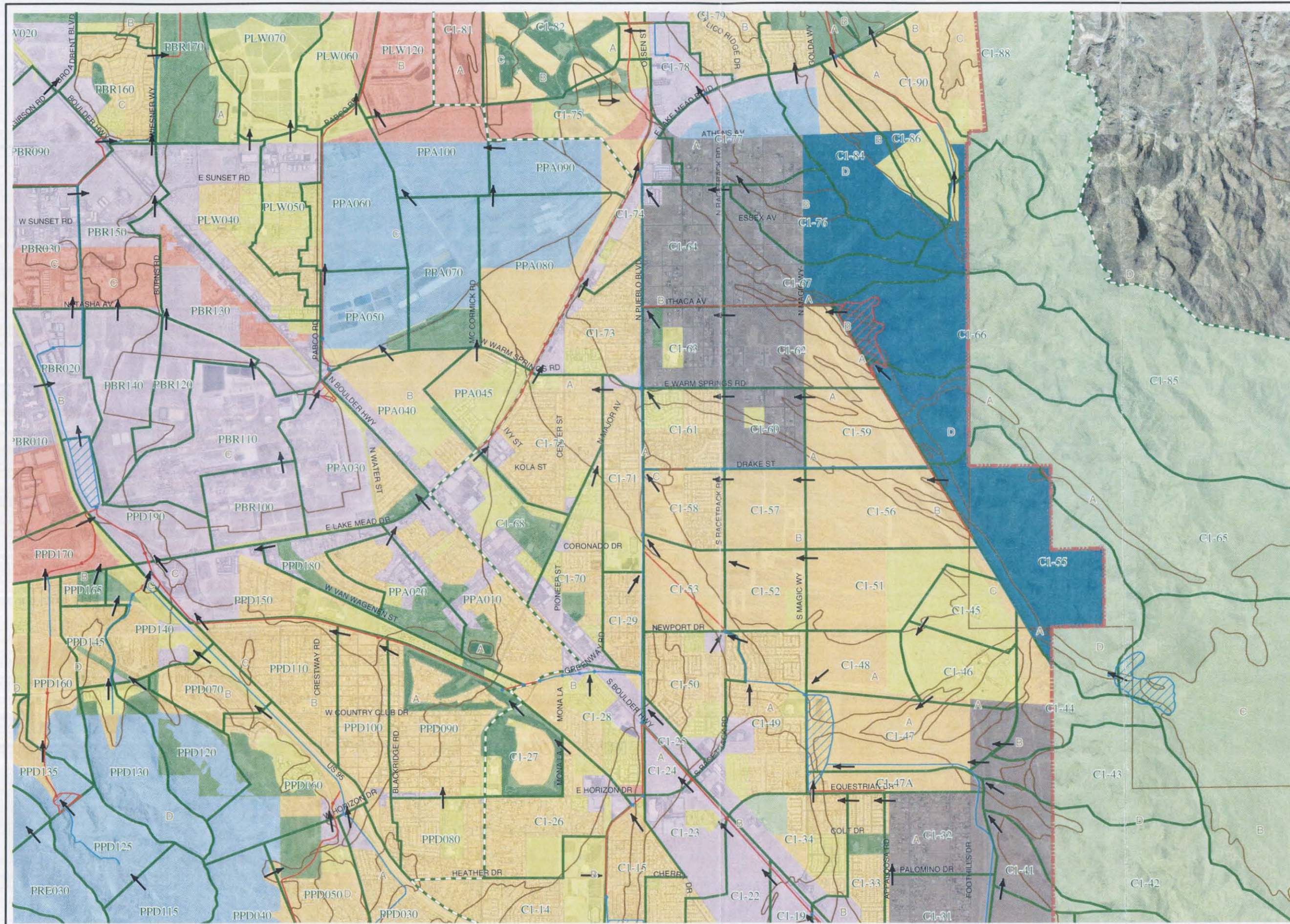
SCALE: 1 inch = 3000 feet

US95 I-215 I-15
 1 2 3 4 5 6
 7 8 9 10
 11 12 13 14
 15 16 17 18
 19 20 21 22
 23 24 25 26
 27 28 29

FIGURE H-18

PBS&J

G.C. WALLACE, INC.



REGIONAL FLOOD CONTROL DISTRICT

2002 LAS VEGAS VALLEY FLOOD CONTROL MASTER PLAN UPDATE

LEGEND

- Ultimate Development Boundary
- Watershed Boundary
- ID Subarea Boundary
- Flow Arrows

Flood Control Facilities

- Existing Facilities
- Proposed Facilities

Type Hydrologic Soil Groups

- A Low Runoff Potential
- B Moderately Low Runoff Potential
- C Moderately High Runoff Potential
- D High Runoff Potential

Typical Land Use

- 1 Undeveloped Land, Open Desert
- 2 Parks, Golf Courses
- 3 Rural
- 4 Low Density Residential
- 5 Medium Density Residential
- 6 High Density Residential
- 7 Public Facility, Multi Family
- 8 Commercial, Office, Retail, Casino
- 9 Light Industrial
- 10 Heavy Industrial
- 11 Schools
- 12 Lakes

0 1,000 2,000 3,000 4,000 5,000 Feet

SCALE: 1 inch = 3000 feet

US95 I-215 I-15

FIGURE H-22

PBS&

G.C. WALLACE, INC.

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-1	B	326	16.45	Low-Density Residential, 1-2 units per acre	75.85	$(16.45/53.87)*75.85$	23.16
	B	187	34.58	Low-Density Residential, 1-2 units per acre	75.85	$(34.58/53.87)*75.85$	48.68
	C	610	2.85	Low-Density Residential, 1-2 units per acre	83.85	$(2.85/53.87)*83.85$	4.43
	TOTAL OND-1		53.87		COMPOSITE CURVE NUMBER		76.27
OND-2	B	326	3.27	Low-Density Residential, 1-2 units per acre	75.85	$(3.27/176.35)*75.85$	1.41
	B	187	88.75	Low-Density Residential, 1-2 units per acre	75.85	$(88.75/176.35)*75.85$	38.17
	C	600	47.96	Low-Density Residential, 1-2 units per acre	83.85	$(47.96/176.35)*83.85$	22.80
	C	610	2.50	Low-Density Residential, 1-2 units per acre	83.85	$(2.50/176.35)*83.85$	1.19
	B	184	33.73	Low-Density Residential, 1-2 units per acre	75.85	$(33.73/176.35)*75.85$	14.51
	A	999	0.13	Undeveloped Land, Open Desert	30.00	$(0.13/176.35)*30.00$	0.02
	TOTAL OND-2		176.35		COMPOSITE CURVE NUMBER		78.10
OND-2A	C	600	129.34	Parks, Golf Courses	85.00	$(129.34/141.82)*85$	77.52
	B	326	12.48	Parks, Golf Courses	77.00	$(12.48/141.82)*77$	6.78
	Total OND-2A		141.82		COMPOSITE CURVE NUMBER		84.30
OND-3	B	184	30.36	Undeveloped Land, Open Desert	77.00	$(30.36/30.36)*77$	77.00
	TOTAL OND-3		30.36		COMPOSITE CURVE NUMBER		77.00
OND-4	B	184	6.48	Schools	79.50	$(6.48/155.98)*79.5$	3.30
			0.81	Undeveloped Land, Open Desert	77.00	$(0.81/155.98)*77$	0.40
			0.81	Low-Density Residential, 1-2 units per acre	75.85	$(0.81/155.98)*75.85$	0.39
	A	117	7.63	Low-Density Residential, 1-2 units per acre	64.05	$(7.63/155.98)*64.05$	3.13
			0.85	Commercial, Retail, Casino	92.40	$(0.85/155.98)*92.40$	0.50
	B	184	51.10	Low-Density Residential, 1-2 units per acre	75.85	$(51.10/155.98)*75.85$	24.85
			12.78	Commercial, Retail, Casino	94.30	$(12.78/155.98)*94.3$	7.73
	C	610	7.17	Low-Density Residential, 1-2 units per acre	83.85	$(7.17/155.98)*83.85$	3.85
	C	600	65.62	Low-Density Residential, 1-2 units per acre	83.85	$(65.62/155.98)*83.85$	35.28
			2.73	Undeveloped Land, Open Desert	85.00	$(2.73/155.98)*85$	1.49
	TOTAL OND-4		155.98		COMPOSITE CURVE NUMBER		80.93
OND-5	C	600	65.01	Low-Density Residential, 1-2 units per acre	83.85	$(65.01/65.01)*83.85$	83.85
	TOTAL OND-5		65.01		COMPOSITE CURVE NUMBER		83.85

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-6	B	184	0.08	Commercial, Retail, Casino	94.30	$(0.08/258.44) \cdot 94.30$	0.03
	A	117	0.03	Undeveloped Land, Open Desert	65.00	$(0.03/258.44) \cdot 65$	0.01
			0.25	Commercial, Retail, Casino	92.40	$(0.25/258.44) \cdot 92.40$	0.09
	C	600	205.35	Low-Density Residential, 1-2 units per acre	83.85	$(205.35/258.44) \cdot 83.85$	66.63
			25.67	Commercial, Retail, Casino	95.60	$(25.67/258.44) \cdot 95.60$	9.50
			12.83	Undeveloped Land, Open Desert	85.00	$(12.83/258.44) \cdot 85$	4.22
			12.83	Commercial, Retail, Casino	95.60	$(12.83/258.44) \cdot 95.60$	4.75
	A	117	0.14	Undeveloped Land, Open Desert	65.00	$(0.14/258.44) \cdot 65$	0.03
			1.25	Commercial, Retail, Casino	92.40	$(1.25/258.44) \cdot 92.40$	0.45
			TOTAL OND-6	258.44	COMPOSITE CURVE NUMBER		85.70
OND-7	B	184	3.93	Low-Density Residential, 1-2 units per acre	75.85	$(3.93/210.63) \cdot 75.85$	1.41
	C	600	17.60	Commercial, Retail, Casino	95.60	$(17.60/210.63) \cdot 95.60$	7.99
			140.73	Low-Density Residential, 1-2 units per acre	83.85	$(140.73/210.63) \cdot 83.85$	56.02
			3.52	Undeveloped Land, Open Desert	85.00	$(3.52/210.63) \cdot 85$	1.42
			14.07	Multi-Family, 8 units per acre or more	91.28	$(14.07/210.63) \cdot 91.28$	6.10
	B	182	11.87	Commercial, Retail, Casino	94.20	$(11.87/210.63) \cdot 94.20$	5.31
	A	117	15.13	Commercial, Retail, Casino	92.40	$(15.13/210.63) \cdot 92.40$	6.64
			3.78	Low-Density Residential, 1-2 units per acre	64.05	$(3.78/210.63) \cdot 64.05$	1.15
			TOTAL OND-7	210.63	COMPOSITE CURVE NUMBER		86.04
OND-8	A	117	1.39	Low-Density Residential, 1-2 units per acre	64.05	$(1.39/152.02) \cdot 64.05$	0.59
	C	600	10.44	Commercial, Retail, Casino	95.60	$(10.44/152.02) \cdot 95.60$	6.57
			1.31	Undeveloped Land, Open Desert	85.00	$(1.31/152.02) \cdot 85$	0.73
			1.31	Low-Density Residential, 1-2 units per acre	83.85	$(1.31/152.02) \cdot 83.85$	0.72
	B	182	130.70	Low-Density Residential, 1-2 units per acre	75.45	$(130.70/152.02) \cdot 75.45$	64.87
			6.88	Commercial, Retail, Casino	94.20	$(6.88/152.02) \cdot 94.20$	4.26
			TOTAL OND-8	152.02	COMPOSITE CURVE NUMBER		77.73
OND-9	A	112	0.58	Low-Density Residential, 1-2 units per acre	64.80	$(0.58/16.73) \cdot 64.80$	2.23
	A	117	13.76	Low-Density Residential, 1-2 units per acre	64.05	$(13.76/16.73) \cdot 64.05$	52.69
	B	182	2.39	Low-Density Residential, 1-2 units per acre	75.45	$(2.39/16.73) \cdot 75.45$	10.78
			TOTAL OND-9	16.73	COMPOSITE CURVE NUMBER		65.71
OND-10	C	600	86.86	Low-Density Residential, 1-2 units per acre	83.85	$(86.86/86.86) \cdot 83.85$	83.85
			TOTAL OND-10	86.86	COMPOSITE CURVE NUMBER		83.85

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-11	C	600	65.97	Low-Density Residential, 1-2 units per acre	83.85	$(65.97/68.01)*83.85$	81.34
			2.04	Undeveloped Land, Open Desert	85.00	$(2.04/68.01)*85$	2.55
		TOTAL OND-11	68.01		COMPOSITE CURVE NUMBER		83.89
OND-12	C	600	7.58	Low-Density Residential, 1-2 units per acre	83.85	$(7.58/9.47)*83.85$	67.07
			1.89	Undeveloped Land, Open Desert	85.00	$(1.89/9.47)*85$	17.00
		TOTAL OND-12	9.47		COMPOSITE CURVE NUMBER		84.07
OND-13	C	600	69.50	Low-Density Residential, 1-2 units per acre	83.85	$(69.50/69.50)*83.85$	83.85
		TOTAL OND-13	69.50		COMPOSITE CURVE NUMBER		83.85
OND-14	C	600	66.78	Low-Density Residential, 1-2 units per acre	83.85	$(66.78/122.67)*83.85$	45.65
			8.35	Undeveloped Land, Open Desert	85.00	$(8.35/122.67)*85$	5.78
			8.35	Schools	86.00	$(8.35/122.67)*86$	5.85
	B	184	37.24	Low-Density Residential, 1-2 units per acre	75.85	$(37.24/122.67)*75.85$	23.03
			1.96	Undeveloped Land, Open Desert	77.00	$(1.96/122.67)*77$	1.23
		TOTAL OND-14	122.67		COMPOSITE CURVE NUMBER		81.54
OND-15	C	600	71.70	Low-Density Residential, 1-2 units per acre	83.85	$(71.70/93.18)*83.85$	64.52
	B	184	8.63	Low-Density Residential, 1-2 units per acre	75.85	$(8.63/93.18)*75.85$	7.02
			8.63	Commercial, Retail, Casino	94.30	$(8.63/93.18)*94.30$	8.73
	A	117	4.23	Commercial, Retail, Casino	92.40	$(4.23/93.18)*92.40$	4.19
		TOTAL OND-15	93.18		COMPOSITE CURVE NUMBER		84.46
OND-16	C	600	2.70	Commercial, Retail, Casino	95.60	$(2.70/41.28)*95.60$	6.26
			0.68	Low-Density Residential, 1-2 units per acre	83.85	$(0.68/41.28)*83.85$	1.37
	A	117	22.74	Schools	70.00	$(22.74/41.28)*70$	38.56
			7.58	Undeveloped Land, Open Desert	65.00	$(7.58/41.28)*65$	11.94
			3.79	Commercial, Retail, Casino	92.40	$(3.79/41.28)*92.40$	8.48
			3.79	Low-Density Residential, 1-2 units per acre	64.05	$(3.79/41.28)*64.05$	5.88
		TOTAL OND-16	41.28		COMPOSITE CURVE NUMBER		72.50
OND-17	C	600	2.16	Commercial, Retail, Casino	95.60	$(2.16/126.07)*95.60$	1.63
	B	182	53.62	Low-Density Residential, 1-2 units per acre	75.45	$(53.62/126.07)*75.45$	32.09
			26.81	Commercial, Retail, Casino	94.20	$(26.81/126.07)*94.20$	20.03
			8.94	Multi-Family, 8 units per acre or more	87.36	$(8.94/126.07)*87.36$	6.19

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
	A	117	17.27	Multi-Family, 8 units per acre or more	82.32	$(17.27/126.07)*82.32$	11.28
			13.83	Commercial, Retail, Casino	92.40	$(13.83/126.07)*92.40$	10.14
			3.45	Low-Density Residential, 1-2 units per acre	64.05	$(3.46/126.07)*64.05$	1.75
	TOTAL OND-17		126.07	COMPOSITE CURVE NUMBER			83.11
OND-18	C	600	3.51	Commercial, Retail, Casino	95.60	$(3.51/21.54)*95.60$	15.56
	B	184	18.03	Commercial, Retail, Casino	94.30	$(18.03/21.54)*94.30$	78.95
	TOTAL OND-18		21.54	COMPOSITE CURVE NUMBER			94.51
OND-19	C	600	39.68	Low-Density Residential, 1-2 units per acre	83.85	$(39.68/69.47)*83.85$	47.89
			4.41	Multi-Family, 8 units per acre or more	91.28	$(4.41/69.47)*91.28$	5.79
	B	184	20.30	High-Density Residential, 2-4 units per acre	83.94	$(20.30/69.47)*83.94$	24.53
			5.08	Low-Density Residential, 1-2 units per acre	75.85	$(5.08/69.47)*75.85$	5.54
	TOTAL OND-19		69.47	COMPOSITE CURVE NUMBER			83.76
OND-20	B	184	99.23	Commercial, Retail, Casino	94.30	$(99.23/104.45)*94.30$	89.59
			5.22	Undeveloped Land, Open Desert	77.00	$(5.22/104.45)*77$	3.85
	TOTAL OND-20		104.45	COMPOSITE CURVE NUMBER			93.44
OND-21	B	184	39.90	Commercial, Retail, Casino	94.30	$(39.90/57.00)*94.30$	66.01
			11.40	Low-Density Residential, 1-2 units per acre	75.85	$(11.40/57.00)*75.85$	15.17
			5.70	Undeveloped Land, Open Desert	77.00	$(5.70/57.00)*77$	7.70
	TOTAL OND-21		57.00	COMPOSITE CURVE NUMBER			88.88
OND-22	B	184	18.36	Low-Density Residential, 1-2 units per acre	75.85	$(18.36/36.71)*75.85$	37.93
			18.36	Commercial, Retail, Casino	94.30	$(18.36/36.71)*94.30$	47.15
	TOTAL OND-22		36.71	COMPOSITE CURVE NUMBER			85.08
OND-23	B	184	38.01	Low-Density Residential, 1-2 units per acre	75.85	$(38.01/83.43)*75.85$	34.55
			4.22	Commercial, Retail, Casino	94.30	$(4.22/83.43)*94.30$	4.77
	A	117	24.71	Low-Density Residential, 1-2 units per acre	64.05	$(24.71/83.43)*64.05$	18.97
			8.24	Undeveloped Land, Open Desert	65.00	$(8.24/83.43)*65$	6.42
			8.24	Commercial, Retail, Casino	92.40	$(8.24/83.43)*92.40$	9.12
	B	187	0.01	Commercial, Retail, Casino	94.30	$(0.01/83.43)*94.30$	0.01
	TOTAL OND-23		83.43	COMPOSITE CURVE NUMBER			73.85

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-24	B	184	1.44	Commercial, Retail, Casino	94.30	$(1.44/81.91)*94.30$	1.66
	B	182	0.18	Commercial, Retail, Casino	94.20	$(0.18/81.91)*94.20$	0.20
	A	117	31.12	Low-Density Residential, 1-2 units per acre	64.05	$(31.12/81.91)*64.05$	24.33
			31.12	Commercial, Retail, Casino	92.40	$(31.12/81.91)*92.40$	35.11
			15.56	Multi-Family, 8 units per acre or more	82.32	$(15.56/81.91)*82.32$	15.64
	B	187	2.49	Low-Density Residential, 1-2 units per acre	75.85	$(2.49/81.91)*75.85$	2.31
			TOTAL OND-24			COMPOSITE CURVE NUMBER	79.25
OND-25	B	184	27.98	Low-Density Residential, 1-2 units per acre	75.85	$(27.98/53.75)*75.85$	39.49
			5.49	Multi-Family, 8 units per acre or more	87.64	$(5.49/53.75)*87.64$	8.95
			20.28	Commercial, Retail, Casino	94.30	$(20.28/53.75)*94.30$	35.58
				TOTAL OND-25		COMPOSITE CURVE NUMBER	84.02
OND-26	B	184	7.37	Undeveloped Land, Open Desert	77.00	$(7.37/10.58)*77$	53.65
			2.92	Commercial, Retail, Casino	94.30	$(2.92/10.58)*94.30$	26.05
	B	187	0.29	Undeveloped Land, Open Desert	77.00	$(0.29/10.58)*77$	2.08
				TOTAL OND-26		COMPOSITE CURVE NUMBER	81.78
OND-27	B	184	11.62	Multi-Family, 8 units per acre or more	87.64	$(11.62/55.64)*87.64$	18.30
			9.62	Commercial, Retail, Casino	94.30	$(9.62/55.64)*94.30$	16.30
			3.14	Undeveloped Land, Open Desert	77.00	$(3.14/55.64)*77$	4.35
	A	117	18.96	Multi-Family, 8 units per acre or more	82.32	$(18.96/55.64)*82.32$	28.05
	B	187	12.30	Multi-Family, 8 units per acre or more	87.64	$(12.30/55.64)*87.64$	19.37
				TOTAL OND-27		COMPOSITE CURVE NUMBER	86.38
BKPVD	A	117	0.38	High-Density Residential, 4-8 units per acre	76.72	$(0.38/88.97)*76.72$	0.33
	B	187	32.66	High-Density Residential, 4-8 units per acre	83.94	$(32.66/88.97)*83.94$	30.81
	B	187	7.13	Multi-Family, 8 units per acre or more	87.64	$(7.13/88.97)*87.64$	7.03
	B	187	11.84	Commercial, Retail, Casino	94.30	$(11.84/88.97)*94.30$	12.55
	A	117	0.26	Schools	70.00	$(0.26/88.97)*70$	0.20
	B	187	36.70	Schools	79.50	$(36.70/88.97)*79.50$	32.79
			TOTAL BKPVD			COMPOSITE CURVE NUMBER	83.70
BKLM D	B	184	1.91	Parks, Golf Courses	64.45	$(1.91/220.79)*64.45$	0.56
	B	187	45.70	Parks, Golf Courses	64.45	$(45.70/220.79)*64.45$	13.34
	B	184	1.57	High-Density Residential, 4-8 units per acre	83.94	$(1.57/220.79)*83.94$	0.60

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
	B	187	2.19	High-Density Residential, 4-8 units per acre	83.94	$(2.19/220.79)*83.94$	0.83
	B	184	17.83	Multi-Family, 8 units per acre or more	87.64	$(17.83/220.79)*87.64$	7.08
	B	187	47.27	Multi-Family, 8 units per acre or more	87.64	$(47.27/220.79)*87.64$	18.76
	B	184	60.38	Commercial, Retail, Casino	94.30	$(60.38/220.79)*94.30$	25.79
	B	187	43.94	Commercial, Retail, Casino	94.30	$(43.94/220.79)*94.30$	18.77
			TOTAL BKLM D	220.79	COMPOSITE CURVE NUMBER		85.72
CRMJD	B	187	21.04	Parks, Golf Courses	64.45	$(21.04/132.06)*64.45$	10.27
	B	187	39.08	High-Density Residential, 4-8 units per acre	83.94	$(39.08/132.06)*83.94$	24.84
	B	187	18.85	Multi-Family, 8 units per acre or more	87.64	$(18.85/132.06)*87.64$	12.51
	B	187	53.09	Commercial, Retail, Casino	94.30	$(53.09/132.06)*94.30$	37.91
			TOTAL CRMJD	132.06	COMPOSITE CURVE NUMBER		85.53
BKMJD	B	187	12.69	High-Density Residential, 4-8 units per acre	83.94	$(12.69/21.46)*83.94$	49.64
	B	187	8.64	Multi-Family, 8 units per acre or more	87.64	$(8.64/21.46)*87.64$	35.29
	B	187	0.13	Commercial, Retail, Casino	94.30	$(0.13/21.46)*94.30$	0.55
			TOTAL BKMJD	21.46	COMPOSITE CURVE NUMBER		85.49
WSPVD	A	112	2.26	High-Density Residential, 4-8 units per acre	77.10	$(2.26/169.40)*77.10$	1.03
	A	117	113.51	High-Density Residential, 4-8 units per acre	76.72	$(113.51/169.40)*76.72$	51.41
	B	182	0.78	High-Density Residential, 4-8 units per acre	83.56	$(0.78/169.40)*83.56$	0.38
	B	187	18.67	High-Density Residential, 4-8 units per acre	83.94	$(18.67/169.40)*83.94$	9.25
	A	117	1.01	Multi-Family, 8 units per acre or more	82.32	$(1.01/169.40)*82.32$	0.49
	B	187	26.02	Multi-Family, 8 units per acre or more	87.64	$(26.02/169.40)*87.64$	13.46
	A	117	4.49	Commercial, Retail, Casino	92.40	$(4.49/169.40)*92.40$	2.45
	B	182	2.01	Commercial, Retail, Casino	94.20	$(2.01/169.40)*94.20$	1.12
	B	187	0.66	Commercial, Retail, Casino	94.30	$(0.66/169.40)*94.30$	0.36
			TOTAL WSPVD	169.40	COMPOSITE CURVE NUMBER		79.95
WSCRD	A	117	72.78	High-Density Residential, 4-8 units per acre	76.72	$(72.78/102.79)*76.72$	54.32
	B	187	12.87	High-Density Residential, 4-8 units per acre	83.94	$(12.87/102.79)*83.94$	10.51
	A	117	0.36	Multi-Family, 8 units per acre or more	82.32	$(0.36/102.79)*82.32$	0.29
	B	187	13.86	Multi-Family, 8 units per acre or more	87.64	$(13.86/102.79)*87.64$	11.82
	A	117	0.01	Commercial, Retail, Casino	92.40	$(0.01/102.79)*92.40$	0.01
	B	187	2.92	Commercial, Retail, Casino	94.30	$(2.92/102.79)*94.30$	2.68
			TOTAL WSCRD	102.79	COMPOSITE CURVE NUMBER		79.62

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
WSLMD	B	184	0.48	Parks, Golf Courses	64.45	$(0.48/183.06)*64.45$	0.17
	B	187	2.04	Parks, Golf Courses	64.45	$(2.04/183.06)*64.45$	0.72
	A	117	26.66	High-Density Residential, 4-8 units per acre	76.72	$(26.66/183.06)*76.72$	11.17
	B	187	122.99	High-Density Residential, 4-8 units per acre	83.94	$(122.99/183.06)*83.94$	56.39
	A	117	0.02	Multi-Family, 8 units per acre or more	82.32	$(0.02/183.06)*82.32$	0.01
	B	184	0.33	Multi-Family, 8 units per acre or more	87.64	$(0.33/183.06)*87.64$	0.16
	B	187	0.12	Multi-Family, 8 units per acre or more	87.64	$(0.12/183.06)*87.64$	0.06
	A	117	0.87	Commercial, Retail, Casino	92.40	$(0.87/183.06)*92.40$	0.44
	B	184	2.95	Commercial, Retail, Casino	94.30	$(2.95/183.06)*94.30$	1.52
	B	187	14.89	Commercial, Retail, Casino	94.30	$(14.89/183.06)*94.30$	7.67
	A	117	10.00	Schools	70.00	$(10.00/183.06)*70.00$	3.83
	B	187	1.71	Schools	79.50	$(1.71/183.06)*79.50$	0.74
			TOTAL WSLMD	183.06	COMPOSITE CURVE NUMBER		82.88
CRLMD	A	117	1.14	High-Density Residential, 4-8 units per acre	76.72	$(1.14/28.53)*76.72$	3.06
	A	117	0.01	Multi-Family, 8 units per acre or more	82.32	$(0.01/28.53)*82.32$	0.03
	A	117	27.38	Commercial, Retail, Casino	92.40	$(27.38/28.53)*92.40$	88.68
			TOTAL CRLMD	28.53	COMPOSITE CURVE NUMBER		91.77
PWLMD	A	112	0.04	High-Density Residential, 4-8 units per acre	77.10	$(0.04/177.54)*77.10$	0.02
	A	117	21.09	High-Density Residential, 4-8 units per acre	76.72	$(21.09/177.54)*76.72$	9.11
	B	182	105.11	High-Density Residential, 4-8 units per acre	83.56	$(105.11/177.54)*83.56$	49.47
	A	117	22.85	Multi-Family, 8 units per acre or more	82.32	$(22.85/177.54)*82.32$	10.59
	B	182	3.13	Multi-Family, 8 units per acre or more	87.36	$(3.13/177.54)*87.36$	1.54
	A	112	0.05	Commercial, Retail, Casino	92.50	$(0.05/177.54)*92.50$	0.03
	A	117	6.83	Commercial, Retail, Casino	92.40	$(6.83/177.54)*92.40$	3.55
	B	182	18.44	Commercial, Retail, Casino	94.20	$(18.44/177.54)*94.20$	9.78
			TOTAL PWLMD	177.54	COMPOSITE CURVE NUMBER		84.10
DD	B	182	31.13	High-Density Residential, 4-8 units per acre	83.56	$(31.13/45.85)*83.56$	56.73
	B	182	6.11	Multi-Family, 8 units per acre or more	87.36	$(6.11/45.85)*87.36$	11.65
	B	182	8.61	Commercial, Retail, Casino	94.20	$(8.61/45.85)*94.20$	17.69
			TOTAL DD	45.85	COMPOSITE CURVE NUMBER		86.06
ED	B	182	20.16	High-Density Residential, 2-4 units per acre	83.56	$(20.16/20.16)*83.56$	83.56
			TOTAL ED	20.16	COMPOSITE CURVE NUMBER		83.56

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
FD	B	182	11.28	Commercial, Retail, Casino	94.20	$(11.28/11.28)*94.20$	94.20
		TOTAL FD	11.28		COMPOSITE CURVE NUMBER		94.20
GD	B	182	9.82	Commercial, Retail, Casino	94.20	$(9.82/9.82)*94.20$	94.20
		TOTAL GD	9.82		COMPOSITE CURVE NUMBER		94.20
OFFD-1	B	184	18.61	Parks, Golf Courses	64.45	$(18.61/300.49)*64.45$	3.99
	B	184	48.16	High-Density Residential, 2-4 units per acre	83.94	$(48.16/300.49)*83.94$	13.45
	B	184	18.73	Multi-Family, 8 units per acre or more	87.64	$(18.73/300.49)*87.64$	5.46
	C	615	0.74	Multi-Family, 8 units per acre or more	91.28	$(0.74/300.49)*91.28$	0.23
	B	184	63.76	Commercial, Retail, Casino	94.30	$(63.76/300.49)*94.30$	20.01
	C	615	150.49	Commercial, Retail, Casino	95.60	$(150.49/300.49)*95.60$	52.28
		TOTAL OFFD-1	300.49		COMPOSITE CURVE NUMBER		95.42
OFFD-2	C	615	12.80	Urban Areas, Commercial and Business	94.00	$(12.80/58.87)*94$	20.40
	B	184	46.07	Urban Areas, Commercial and Business	92.00	$(46.07/58.87)*92$	72.00
		TOTAL OFFD-2	58.87		COMPOSITE CURVE NUMBER		92.40
OFFD-2A	C	615	2.52	Urban Areas, Commercial and Business	94.00	$(2.52/14.62)*94$	16.16
	B	184	12.10	Urban Areas, Commercial and Business	92.00	$(12.10/14.62)*92$	76.14
		Total OFFD-2A	14.62		COMPOSITE CURVE NUMBER		92.30
OFFD-2B	B	184	55.74	Parks, Golf Courses	64.45	$(55.74/87.54)*64.45$	41.04
		187	25.06	Parks, Golf Courses	64.45	$(25.06/87.54)*64.45$	18.45
	A	999	6.74	Parks, Golf Courses	30.00	$(6.74/87.54)*30$	2.31
		Total OFFD-2B	87.54		COMPOSITE CURVE NUMBER		61.80
OFFD-3	B	184	161.72	High-Density Residential, 2-4 units per acre	83.94	$(161.72/190.88)*83.94$	71.12
	B	187	5.30	High-Density Residential, 2-4 units per acre	83.94	$(5.30/190.88)*83.94$	2.33
	A	117	16.59	High-Density Residential, 2-4 units per acre	76.72	$(16.59/190.88)*76.72$	6.67
	A	999	7.27	High-Density Residential, 2-4 units per acre	30.00	$(7.27/190.88)*30$	1.14
		Total OFFD-3	190.88		COMPOSITE CURVE NUMBER		81.26
OFFD-3A	B	184	19.80	High-Density Residential, 2-4 units per acre	94.30	$(19.80/19.80)*94.30$	94.30
		Total OFFD-3A	19.80		COMPOSITE CURVE NUMBER		94.30

TABLE A-2 Curve Number Calculations-Proposed Conditions

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFD-4	A	117	5.94	Parks, Golf Courses	47.10	$(5.94/302.74)*47.10$	0.92
	B	184	30.56	Parks, Golf Courses	64.45	$(30.56/302.74)*64.45$	6.51
	B	187	0.08	Parks, Golf Courses	64.45	$(0.08/302.74)*64.45$	0.02
	A	999	7.27	Parks, Golf Courses	30.00	$(7.27/302.74)*30$	0.72
	A	117	1.02	High-Density Residential, 2-4 units per acre	76.72	$(1.02/302.74)*76.72$	0.26
	B	184	89.51	High-Density Residential, 2-4 units per acre	83.94	$(89.51/302.74)*83.94$	24.82
	B	187	83.92	High-Density Residential, 2-4 units per acre	83.94	$(83.92/302.74)*83.94$	23.27
	A	117	0.17	Multi-Family, 8 units per acre or more	82.32	$(0.17/302.74)*82.32$	0.05
	B	184	5.22	Multi-Family, 8 units per acre or more	87.64	$(5.22/302.74)*87.64$	1.51
	B	184	66.20	Commercial, Retail, Casino	94.30	$(66.20/302.74)*94.30$	20.62
	B	187	12.85	Commercial, Retail, Casino	94.30	$(12.85/302.74)*94.30$	4.00
TOTAL OFFD-4			302.74	COMPOSITE CURVE NUMBER			82.70
OFFD-25	B	184	47.65	Multi-Family, 8 units per acre or more	87.64	$(47.65/47.65)*87.64$	87.64
TOTAL OFFD-25			47.65	COMPOSITE CURVE NUMBER			87.64
OFFD-26	B	184	7.37	Commercial, Retail, Casino	94.30	$(7.37/7.37)*94.30$	94.30
TOTAL OFFD-26			7.37	COMPOSITE CURVE NUMBER			94.30
OFFD-27A	B	184	27.55	Multi-Family, 8 units per acre or more	87.64	$(27.55/46.58)*87.64$	51.84
	B	187	19.03	Multi-Family, 8 units per acre or more	87.64	$(19.03/46.58)*87.64$	35.80
TOTAL OFFD-27A			46.58	COMPOSITE CURVE NUMBER			87.64
OFFD-27B	B	184	7.94	Multi-Family, 8 units per acre or more	87.64	$(7.94/27.18)*87.64$	25.60
			2.94	Commercial, Retail, Casino	94.30	$(2.94/27.18)*94.30$	10.20
	B	187	16.30	Multi-Family, 8 units per acre or more	87.64	$(16.30/27.18)*87.64$	52.56
TOTAL OFFD-27B			27.18	COMPOSITE CURVE NUMBER			88.36

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

PRECIPITATION ADJUSTMENT RATIOS

<u>Recurrence Interval</u>	<u>Ratio to NOAA Atlas 2</u>
2-year	1.00
5-year	1.16
10-year	1.24
25-year	1.33
50-year	1.39
100-year	1.43

- NOTE: 1. Multiply the values obtained from the NOAA Atlas 2 by the above ratios to obtain the adjusted precipitation values.
2. NOAA Atlas 2 values for use with TR-55 shall not be adjusted by the above ratios.
3. Tables 505 and 506 require no adjustments.

<i>Revision</i>	<i>Date</i>

SIX HOUR DEPTH-AREA REDUCTION FACTORS

<u>Drainage Area (Square Miles)</u>	<u>Six-Hour Depth-Area Reduction Factor</u>
0.0	1.00
0.5	0.98
1.0	0.97
2.0	0.93
4.0	0.91
6.0	0.90
8.0	0.88
10.0	0.86
20.0	0.79
30.0	0.74
50.0	0.68
100.0	0.60
150.0	0.55
200.0	0.51
300.0	0.46
400.0	0.42
500.0	0.39

- NOTES: 1. A graphical representation of these factors is presented in Figure 514.
2. Consult with the local entity and/or the CCRFCD for guidance in using the Depth-Area Reduction Factors for drainage areas greater than 200 square miles.

<i>Revision</i>	<i>Date</i>

* ALL BASINS LESS THAN 8 SQUARE MILES

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

SIX-HOUR STORM DISTRIBUTIONS

Percent of Total Storm Depth				Percent of Total Storm Depth			
Storm Time (in Minutes)	* SDN3	SDN4	SDN5	Storm Time (in Minutes)	* SDN3	SDN4	SDN5
0	0.0	0.0	0.0	185	32.2	37.6	43.0
5	2.0	2.0	2.0	190	35.2	41.5	47.7
10	5.7	5.8	5.9	195	40.9	46.2	51.4
15	7.0	7.5	8.0	200	49.9	53.0	56.1
20	8.7	9.9	11.0	205	59.0	61.0	63.0
25	10.8	12.6	14.4	210	71.0	71.0	71.0
30	12.4	13.7	15.0	215	74.4	73.2	72.0
35	13.0	14.5	16.0	220	78.1	75.6	73.1
40	13.0	14.9	16.8	225	81.2	78.2	75.2
45	13.0	15.1	17.1	230	81.9	79.9	77.9
50	13.0	15.5	18.0	235	83.5	81.3	79.0
55	13.0	15.6	18.2	240	85.1	82.3	79.5
60	13.0	15.9	18.7	245	85.6	83.0	80.4
65	13.3	16.2	19.0	250	86.0	83.5	81.0
70	14.0	16.9	19.7	255	86.8	84.4	82.0
75	14.2	17.2	20.2	260	87.6	85.1	82.6
80	14.8	17.9	21.0	265	88.8	86.4	84.0
85	15.8	18.9	22.0	270	91.0	88.5	85.9
90	17.2	20.1	23.0	275	92.6	90.8	88.9
95	18.1	21.1	24.1	280	93.7	92.4	91.0
100	19.0	22.0	25.0	285	95.0	94.4	93.8
105	19.7	22.8	25.9	290	97.0	96.8	96.6
110	19.9	23.2	26.5	295	97.6	97.3	97.0
115	20.0	24.0	28.0	300	98.2	97.8	97.4
120	20.1	24.6	29.0	305	98.5	98.2	97.9
125	20.4	25.2	30.0	310	98.7	98.4	98.1
130	21.4	26.0	30.5	315	98.9	98.6	98.3
135	22.9	26.9	30.9	320	99.0	98.8	98.5
140	24.1	27.6	31.0	325	99.3	99.1	98.9
145	24.9	28.3	31.7	330	99.3	99.2	99.0
150	25.1	28.6	32.1	335	99.4	99.3	99.2
155	25.6	29.2	32.7	340	99.5	99.4	99.3
160	27.0	30.2	33.3	345	99.8	99.7	99.6
165	27.8	31.2	34.6	350	99.8	99.8	99.7
170	28.1	32.1	36.1	355	99.9	99.9	99.9
175	28.3	33.2	38.1	360	100.0	100.0	100.0
180	29.5	35.2	40.8				

- Notes:
1. For drainage areas less than 8 square miles in size, use SDN 3. *
 2. For drainage areas greater than or equal to 8 square miles and less than 12 square miles in size, use SDN 4.
 3. For drainage areas greater than or equal to 12 square miles, use SDN 5.
 4. A graphical representation of these values is presented on Figure 515.

Revision	Date

REFERENCE:

TABLE 503

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DEPTH-DURATION-FREQUENCY VALUES FOR McCARRAN AIRPORT RAINFALL AREA (IN INCHES)

TIME	RECURRENCE INTERVAL					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
5 min.	0.15	0.27	0.35	0.46	0.54	0.63
10 min.	0.25	0.44	0.57	0.74	0.89	1.02
15 min.	0.33	0.57	0.74	0.97	1.15	1.32
30 min.	0.44	0.78	1.01	1.31	1.55	1.79
1 hour	0.52	0.89	1.15	1.50	1.78	2.06
2 hour	0.59	1.01	1.30	1.70	2.01	2.30
3 hour	0.64	1.08	1.39	1.82	2.15	2.48
6 hour	0.72	1.22	1.58	2.05	2.41	2.77
24 hour (TR-55)	1.20	1.60	1.80	2.40	2.70	2.96

- NOTE: 1. Refer to Figure 513 for a description and drawing of the area included in the McCarran Airport Rainfall Area.
2. The 24 hour values presented above are for use with TR-55 only.
3. Table 501 adjustments not required.

Revision	Date

**WRC
ENGINEERING**

REFERENCE:
USACE, Los Angeles District, 1988

TABLE 505

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS (URBAN AREAS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.):					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only)*		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	* 92	* 94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
See Table 602A					
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation)*		77	86	91	94

1 Average runoff condition, and I, = 0.25.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system. Impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using Figure 603.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using Figure 603 based on the impervious area percentage (CN #98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using Figure 603 based on the degree of development impervious area percentage) and the CN's for the newly graded pervious areas.

Revision	Date

WRC
ENGINEERING

REFERENCE:
SCS TR-55, USDA, June 1986.

TABLE 602
1 of 4

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS (SEMIARID RANGELANDS¹)

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition ²	A ³	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	* 77	* 85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹Average runoff condition, and $I_a = 0.2S$.

²Poor: <30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: >70% ground cover.

³Curve numbers for group A have been developed only for desert shrub.

Revision	Date

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RUNOFF CURVE NUMBERS - RESIDENTIAL DISTRICTS

Average Lot Size or Usage ¹	Percent Impervious ²	Curve Number for Hydrologic Soil Groups			
		A	B	C	D
Apartments/Condos	72	81	88	91	93
Townhouses/6,000 sq ft lots or less ³	69	80	87	90	92
7,000 sq ft lots	63	76	*84	89	91
8,000 sq ft lots	58	73	82	88	90
10,000 sq ft lots	38	61	75	83	87
14,000 sq ft lots	30	57	72	81	86
20,000 sq ft lots	25	54	70	80	85
40,000 sq ft lots	20	51	68	79	84
80,000 sq ft lots	12	46	65	77	82

- 1 Lot size should represent the size of the average lot and not the gross acreage divided by the number of lots.
- 2 Actual percent impervious value should be compared to selected land use type.
- 3 In cases where average residential lots are smaller than 6,000 sq ft, commercial/business/industrial land use should be used.

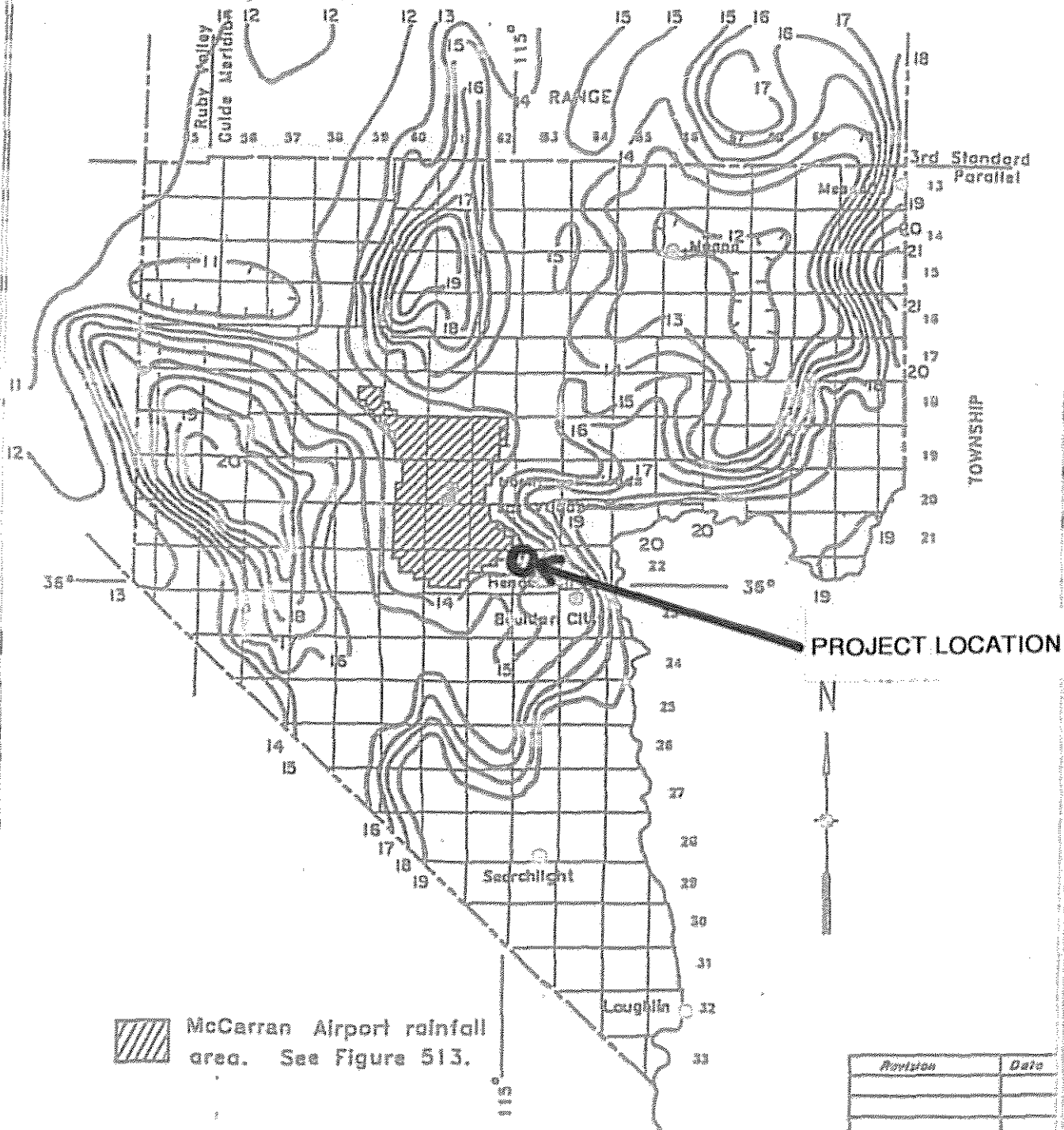
Revisions	Date

REFERENCE:

TABLE 602A

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RAINFALL DEPTH-DURATION-FREQUENCY 10-YEAR, 6-HOUR (DEPTHS IN TENTHS OF INCHES)



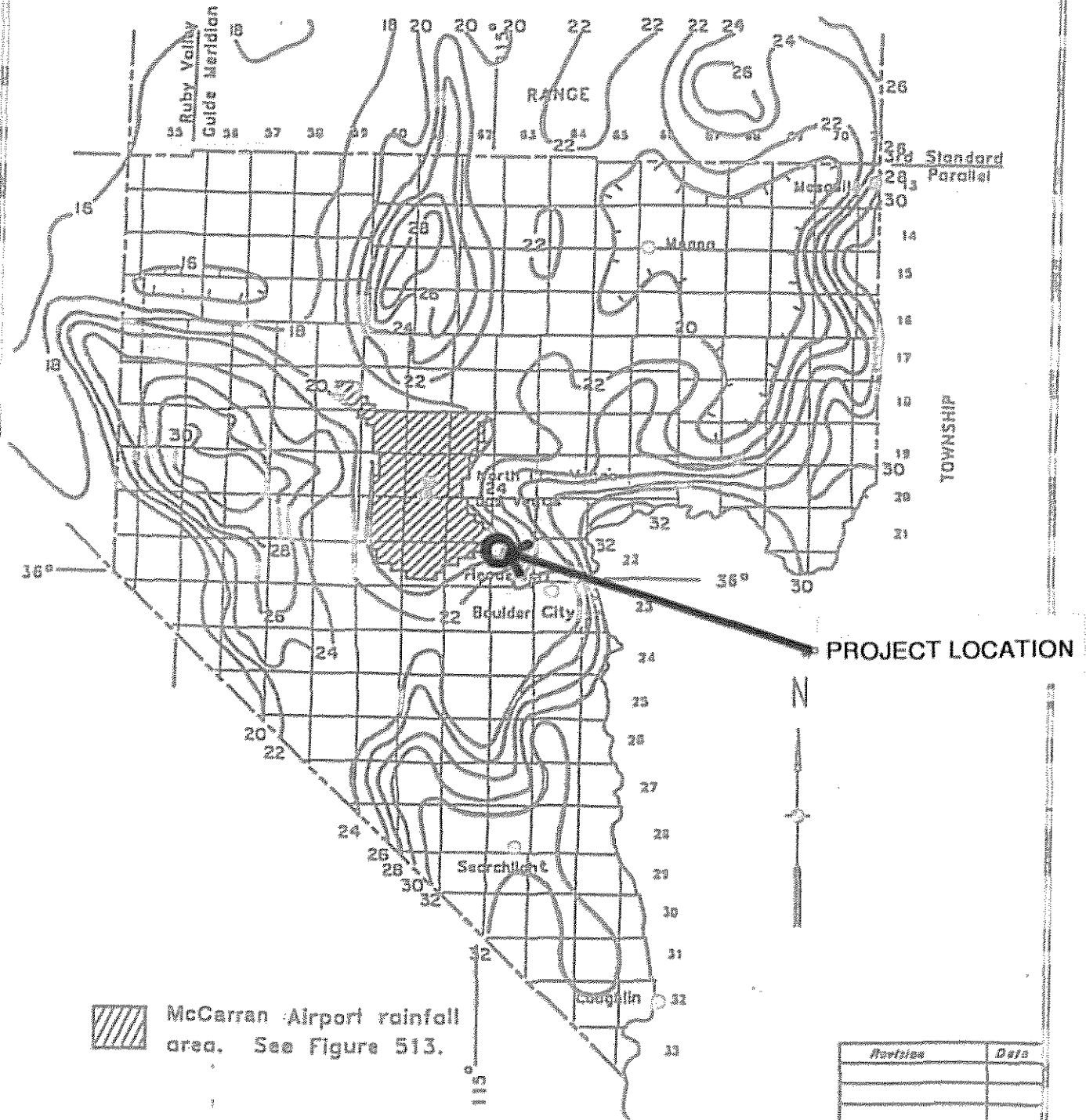
WRC
ENGINEERING

REFERENCE:
NOAA ATLAS 2, VOLUME VII NEVADA, 1973

FIGURE 503

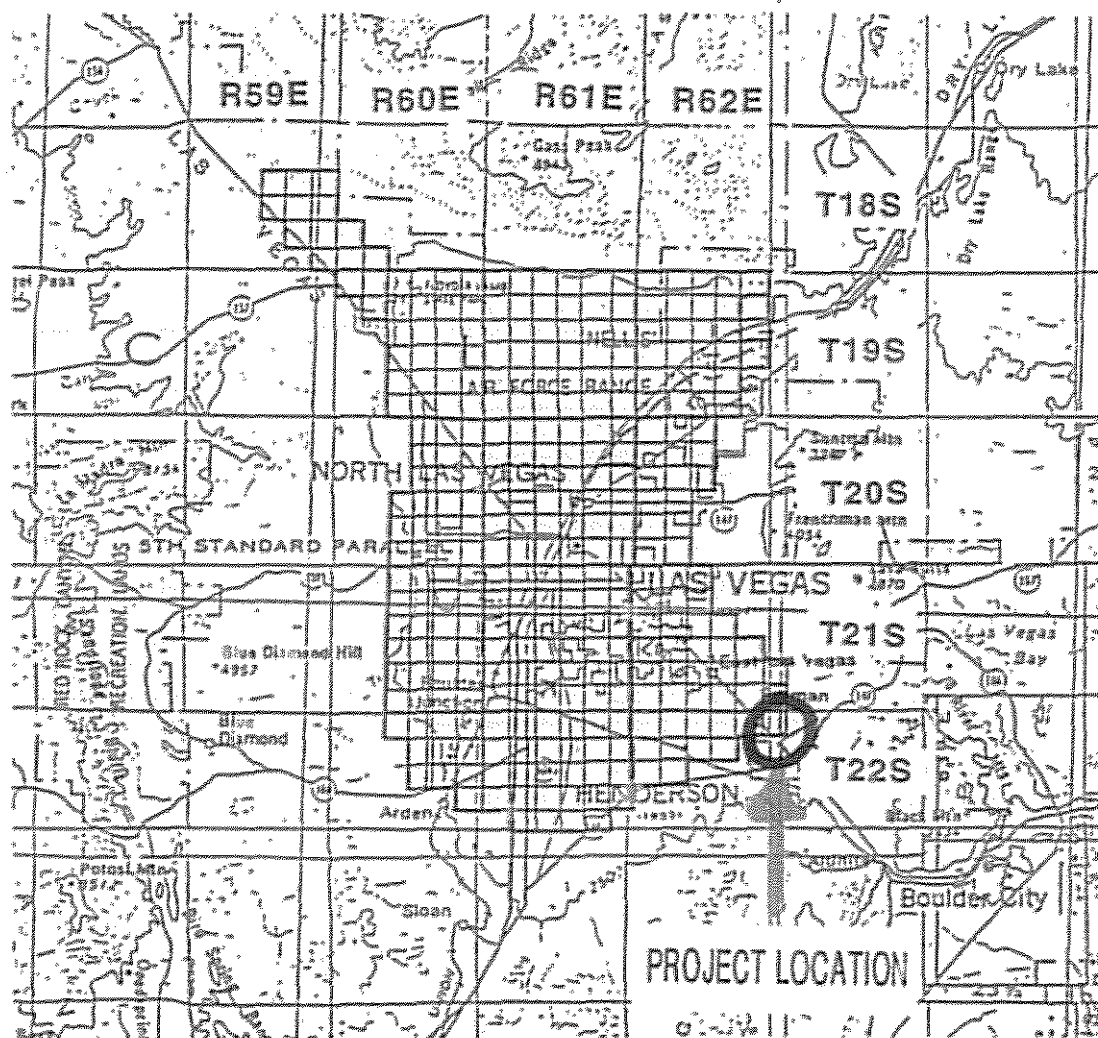
HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

RAINFALL DEPTH-DURATION-FREQUENCY 100-YEAR, 6-HOUR (DEPTHS IN TENTHS OF INCHES)



HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

McCARRAN AIRPORT RAINFALL AREA



TOWNSHIP	RANGE	SECTIONS	TOWNSHIP	RANGE	SECTIONS
18 South	59 East	13-15,22-26,36	20 South	62 East	4-9,16-20,29-32
18 South	60 East	30-32	21 South	60 East	1-4,9-16,21-28,33-36
19 South	60 East	1-6,8-16,21-28,33-36	21 South	61 East	ALL SECTIONS
19 South	61 East	ALL SECTIONS	21 South	62 East	4-9,15-23, 25-36
19 South	62 East	2-11,14-23,27-34	22 South	60 East	1-4,10-15,24
20 South	60 East	1-3,10-15,21-28,33-36	22 South	61 East	1-24,26-29
20 South	61 East	ALL SECTIONS	22 South	62 East	1-10,17-18

Notes:

1. Refer to Table 505 and Figure 516 Depth-Duration-Frequency values in the McCarran Airport Rainfall Area.
2. Refer to Table 506 and Figure 517 for Time-Intensity-Frequency values on the McCarran Airport Rainfall Area.

Revision	Date

WRC
ENGINEERING

REFERENCE:

USACE, Los Angeles District, 1988

FIGURE 513

Appendix A-2: Standard Form 4 and HEC-1 for Existing Conditions

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

TIME OF CONCENTRATION

CLARK COUNTY

File: FORM4.XLS

Conceptual Drainage Study For The Eastside Properties
Existing Conditions

BY:

J.A.Y.

DATE:

1/26/05

SUB-BASIN DATA						INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME (Tt)					Tc	Tc Check	Ttag Basin <1 Mi ²	Ttag Basin >1 Mi ²
DESIGN: (1)	DEV/EX. (D or E)	CN	K (2)	AREA Ac (3)	AREA Mi ²	INITIAL LENGTH Feet (4)	SLOPE % (5)	Ti Min (6)	TRAVEL LENGTH Feet (7)	SLOPE % (8)	V1 VELOCITY FPS (9a)	V2 VELOCITY FPS (9b)	Tt Min (10)	Min (11)	Min (12)	Ttag = 0.6Tc/60 Hours	Ttag = 20*Kn*[L*Lc/(S*.5)]*.33 Hours
ONE-1	E	77.00	0.6264	45.92	0.072	100	0.87	8.9	2932	0.88	1.2	1.8	1.9	10.8	N/A	0.108	-
ONE-2	E	77.82	0.6346	115.31	0.180	500	0.70	21.1	8149	0.81	1.3	1.7	1.9	23.0	N/A	0.230	-
ONE-3	E	83.87	0.7171	173.38	0.271	300	1.39	10.7	4085	1.09	1.5	1.8	2.0	12.7	N/A	0.127	-
ONE-4	E	78.41	0.6450	137.07	0.214	500	1.39	18.4	5835	1.26	1.7	1.9	2.0	18.5	N/A	0.185	-
ONE-5	E	84.17	0.7210	556.81	0.870	500	1.75	12.7	8080	1.49	1.8	2.0	2.1	14.7	N/A	0.147	-
ONE-6	E	81.70	0.6884	848.96	1.011	500	2.00	13.1	7865	2.18	2.2	2.2	2.2	15.3	N/A	Refer to Below	Refer to Below
ONE-7	E	80.41	0.6714	133.21	0.208	100	2.33	5.8	2431	2.67	2.4	2.3	2.2	8.1	N/A	0.081	-
ONE-8	E	70.27	0.5376	182.26	0.285	500	1.08	22.2	7293	0.89	1.2	1.8	1.9	24.1	N/A	0.241	-
ONE-9	E	78.15	0.6416	228.94	0.358	500	1.59	15.8	6980	1.57	1.9	2.0	2.1	17.9	N/A	0.179	-
ONE-10	E	83.94	0.7180	96.29	0.150	500	1.39	13.8	5893	1.44	1.8	2.0	2.1	15.9	N/A	0.159	-
BKPVE	E	83.70	0.7148	88.97	0.139	300	2.50	8.8	4940	2.40	2.3	4.8	19.9	28.7	N/A	0.287	-
BKLME	E	84.30	0.7228	220.79	0.345	200	1.80	7.9	6138	2.09	2.1	4.3	26.0	33.9	N/A	0.339	-
CRUJE	E	85.00	0.7320	132.06	0.206	170	2.35	6.5	5520	2.08	2.1	4.2	23.6	30.1	N/A	0.301	-
BKME	E	85.50	0.7386	21.46	0.034	150	1.00	8.0	1850	1.89	2.0	4.0	9.7	17.8	N/A	0.178	-
WSPVE	E	79.00	0.6528	189.40	0.285	100	1.00	8.0	8485	1.36	1.7	3.4	34.0	42.0	N/A	0.420	-
WSCRE	E	79.30	0.6568	102.80	0.161	150	1.50	8.5	4085	2.08	2.1	4.2	18.0	26.5	N/A	0.265	-
WSLME	E	82.80	0.7030	183.06	0.286	100	1.00	7.1	5100	1.77	2.0	3.9	23.8	31.0	N/A	0.310	-
CRUJE	E	77.80	0.6370	28.53	0.045	100	1.00	8.3	1800	1.88	2.0	4.0	8.7	17.0	N/A	0.170	-
PWLME	E	82.90	0.7043	188.22	0.294	100	1.47	8.3	4800	1.56	1.8	3.7	24.0	30.3	N/A	0.303	-
DE	E	85.47	0.7382	45.85	0.072	100	1.67	6.5	1450	1.00	1.5	2.9	11.0	16.5	N/A	0.165	-
EE	E	82.20	0.6950	20.16	0.032	100	1.43	6.5	1400	2.14	2.2	4.3	7.3	13.8	N/A	0.138	-
FE	E	77.51	0.6345	11.28	0.018	100	1.67	7.1	800	1.88	2.0	4.0	5.3	12.4	N/A	0.124	-
GE	E	81.20	0.6818	9.82	0.015	100	1.43	6.7	700	2.14	2.2	4.3	4.6	11.3	N/A	0.113	-
OFFE-1	E	84.74	0.7286	300.49	0.470	200	2.70	8.8	4033	3.00	2.8	5.1	14.8	21.6	N/A	0.216	-
OFFE-2	E	78.74	0.6494	58.87	0.092	150	2.00	7.9	2825	3.00	2.8	5.1	11.2	19.1	N/A	0.191	-
OFFE-2A	E	78.38	0.6446	14.62	0.023	150	2.00	8.0	1545	3.00	2.8	5.1	8.7	14.8	N/A	0.148	-
OFFE-2B	E	73.38	0.5786	87.54	0.137	100	1.28	8.6	2825	1.19	1.8	3.2	17.8	26.4	N/A	0.264	-
OFFE-3	E	81.26	0.6826	190.86	0.298	100	1.00	7.5	5489	2.70	2.4	4.8	20.6	28.2	N/A	0.282	-
OFFE-3A	E	88.00	0.7718	19.80	0.031	100	2.77	4.2	1154	3.00	2.8	5.1	5.4	9.8	N/A	0.098	-
OFFE-4	E	82.70	0.7018	302.74	0.473	100	1.00	7.2	8038	2.34	2.3	4.5	31.6	38.8	N/A	0.388	-
OFFE-9	E	87.64	0.7868	40.34	0.063	100	2.50	4.4	1600	2.43	2.3	4.6	7.8	12.0	N/A	0.120	-
OFFE-10A	E	83.94	0.7180	61.26	0.096	100	2.00	5.5	1600	2.22	2.2	4.4	8.0	13.4	N/A	0.134	-
OFFE-10B	E	84.36	0.7236	27.18	0.042	100	2.20	5.2	1350	1.78	2.0	3.9	7.8	13.0	N/A	0.130	-

	Kn ROUGH	L LENGTH Mi	Lc CENTROID Mi	S SLOPE Ft/Mi	Ttag Hours
ONE-6	0.050	1.49	0.48	82.0	0.433

$Ttag = 0.6 Tc$ (Basin <1 Mi²)
 $Ttag = 20 * Kn * [(L * Lc / S * .5)]^{.33}$ (Basin >1 Mi²)
 $Tc = Ti + Tt$
 $Ti = 1.8 (1.1 - K) L^{.1/2} / S^{.1/3}$
 $K = 0.0132 (CN) - 0.30$
 $Tc Check = L / 60 * 10$

For the travel time (Tt) calculations, Existing (Natural) V1 = 14.8*(S/100)^{.1/2}
 V1 applies to the first 500 feet of travel distance; Developed (Urban) V1 = 20.2*(S/100)^{.1/2}
 V2 applies to the remaining travel distance. Existing (Natural) V2 = 29.4*(S/100)^{.1/2}
 Developed (Urban) V2 = 30.6*(S/100)^{.1/2}

REFERENCE: CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT HYDROLOGIC AND DRAINAGE DESIGN MANUAL 08/12/1999


```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* SEPTEMBER 1990 *
* VERSION 4.0 *
* RUN DATE 01/26/2005 TIME 16:18:51 *
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

```

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X X XXXXXX XXXX X
X X X X X
X X X X X
XXXXXX XXXX X XXXX X
X X X X X
X X X X X
X X XXXXXX XXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC10S, HEC10B, AND HEC10N.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTICR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DESWRITE STAGE FREQUENCY, DESREAD TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE, GREEN AND AMPT INFILTRATION KINEMATIC WAVE, NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*DIAGRAM
*** FREE ***
1 ID *****
2 ID * THE LANDWELL COMPANY *
3 ID * CONCEPTUAL DRAINAGE STUDY FOR *
4 ID * THE EASTSIDE PROPERTIES *
5 ID * EXISTING CONDITIONS *
6 ID * INPUT FILE = EXIS.DAT *
7 ID * INPUT FILE DATE = 01/26/05 *
8 ID * DESIGN STORM=10-YEAR 6-HOUR *
9 ID * STORM DISTRIBUTION = SON #1 *
10 ID * MODELED BY = ALEX YESCAS, EIT (PES&J) *
11 ID *****
12 ID
13 ID
14 ID DRAINAGE AREA
15 ID (SQUARE MILES) DARP
16 ID 0-0.5 .09
17 ID 0.5-1 .975
18 ID 1-2 .95
19 ID 2-3 .935
20 ID 3-4 .915
21 ID 4-5 .908
22 ID
23 ID
24 IT 5 0 0 300
25 IO 5 0 0
26 IN 5 0 0
27 JR FREE 0.99 0.975 0.95 0.935 0.915 0.908
*
28 KK ONE-1
29 BA 0.072
30 PB 1.74
31 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
32 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
33 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
34 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
35 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.818 0.835 0.851 0.856
36 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
37 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.998 0.998
38 PC 0.998 0.999 1
39 LS 0 77.90
40 UD 0.108
*
41 KK ONE-2
42 BA 0.180
43 PB 1.74
44 LS 0 77.62
45 UD 0.210

```

1 HEC-1 INPUT PAGE 2

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
46 KK OFFR-2B
47 BA 0.117
48 PB 1.74
49 LS 0 73.38
50 UD 0.264
*
51 KK OFFR-2B
52 RM ROUTE OFFR-2B
53 RD 3380 0.019 0.035 0 TRAP
*
54 KK CPE
55 RM COMBINE ONE-1, ONE-2, ROFFR-2B
56 NC 3
*
57 KK ONE-3

```

```

58      RA  0.371
59      PB  1.74
60      LS  0      83.87
61      UD  0.127
      *

62      KK  ONE-9
63      RA  0.158
64      PB  1.74
65      LS  0      78.15
66      UD  0.179
      *

67      KK  OFFE-9
68      RA  0.863
69      PB  1.74
70      LS  0      87.64
71      UD  0.120
      *

72      KK  CP1
73      KM  COMBINE ONE-9, OFFE-9
74      KC  2
      *

75      KK  ONE-10
76      RA  0.150
77      PB  1.74
78      LS  0      83.94
79      UD  0.159
      *

```

1

HEC-1 INPUT

PAGE 3

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

80      KKOFFE-10A
81      RA  0.896
82      PB  1.74
83      LS  0      83.94
84      UD  0.134
      *

85      KKOFFE-10B
86      RA  0.842
87      PB  1.74
88      LS  0      84.26
89      UD  0.130
      *

90      KK  CP4
91      KM  COMBINE ONE-10, OFFE-10A, OFFE-10B
92      KC  3
      *

93      KK  RCP4
94      KM  ROUTE TO ONE-9
95      RD  4940 0.0144 0.035      0      TRAP
      *

96      KK  CP5
97      KM  COMBINE CP1 AND RCP4
98      KC  2
      *

99      KK  RCS
100      KM  ROUTE TO BASIN ONE-9
101      RD  7800 0.015 0.015      0      TRAP
      *

102      KK  ONE-5
103      RA  0.870
104      PB  1.74
105      LS  0      84.17
106      UD  0.147
      *

107      KK  OFFE-3
108      RA  0.892
109      PB  1.74
110      LS  0      78.74
111      UD  0.191
      *

112      KK  OFFE-3
113      RA  0.298
114      PB  1.74
115      LS  0      81.26
116      UD  0.282
      *

```

1

HEC-1 INPUT

PAGE 4

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

117      KK OFFE-1A
118      RA  0.811
119      PB  1.74
120      LS  0      88
121      UD  0.896
      *

122      KKROFFE-1A
123      KM  ROUTE OFFE-1A IN CHANNEL WEST ALONG LAKE HEAD DRIVE
124      RD  2300 0.00453 0.033      0      TRAP      12      4
      *

125      KK  CP1
126      KM  COMBINE ROFFE-1A, OFFE-1, AND OFFE-2
127      KC  3
      *

128      KK  RCI

```

```

139      KM ROUTE TO BOULDER HIGHWAY
140      RD 5000 0.035 0.03 0 TRAP
      *

141      KK OFFK-2A
142      BA 0.023
143      PB 1.74
144      LS 0 78.38
145      UD 0.146
      *

146      KK OFFK-1
147      BA 0.470
148      PB 1.74
149      LS 0 84.74
150      UD 0.216
      *

141      KK OFFK-4
142      BA 0.473
143      PB 1.74
144      LS 0 82.70
145      UD 0.388
      *

146      KK OFFK-4
147      KM ROUTE TO BOULDER HIGHWAY AT PARCO RD
148      RD 12600 0.03 0.03 0 TRAP 1 1
      *

149      KK CP2
150      KM COMBINE ALL BASINS AT BOULDER HIGHWAY
151      KC 4
      *

```

1

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

152      KK OCP2
153      KM FLOW SPLIT AT CULVERT UNDER BOULDER HIGHWAY AT PARCO ROAD
154      KM DIVERT OUT FLOW ALONG BOULDER HIGHWAY
155      DT DCP2
156      DI 0 304.1 310 894 963
157      DQ 0 304.1 362 751 788
      *

```

```

158      KK CP6
159      KM COMBINE ALL BASINS AT ATHENS
160      KC 3
      *

```

```

161      KK RCP6
162      KM ROUTE TO BASIN ONE-4
163      RD 5950 0.0136 0.035 0 TRAP
      *

```

```

164      KK ONE-6
165      BA 1.011
166      PB 1.74
167      LS 0 81.7
168      UD 0.433
      *

```

```

169      KK RONE-6
170      KM ROUTE TO ONE-4
171      RD 5100 0.0143 0.035 0 TRAP
      *

```

```

172      KK ONE-4
173      BA 0.214
174      PB 1.74
175      LS 0 78.41
176      UD 0.185
      *

```

```

177      KK CP7
178      KM COMBINE ALL BASINS TRIBUTARY TO PARCO
179      KC 3
      *

```

```

180      KK BKPVK
181      BA 0.139
182      PB 1.74
183      LS 0 83.7
184      UD 0.287
      *

```

1

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

185      KK BRKPVK
186      KM PALO VERDE
187      RD 5140 0.017 0.015 0 TRAP 80 0
      *

```

```

188      KK BRKJH
189      BA 0.034
190      PB 1.74
191      LS 0 85.5
192      UD 0.176
      *

```

```

193      KK BRKJH
194      KM MAJOR THEN PALO VERDE
195      RD 4720 0.016 0.015 0 TRAP 80 0
      *

```

```

196      KK CRKJH
197      BA 0.206
198      PB 1.74
199      LS 0 85.0

```



```

200      UD      0.101
      *
201      KK      OCRMJE
202      KM      FLOW SPLIT AT MAJOR AND CENTER
203      PM      DIVERT OUT FLOW IN CENTER STREET
204      DT      OCRMJE
205      DI      0      50      100
206      DQ      0      25      150
      *
207      KK      ROCRMJE
208      KM      MAJOR
209      RD      5125      0.017      .015      0      TRAP      20      0
      *
210      KK      CP9
211      KM      COMBINE RRPVVE, RRCMJE, AND ROCRMJE
212      MC      3
      *
213      KK      WSPVE
214      BA      0.265
215      PB      1.74
216      LS      0      79.0
217      UD      0.420
      *

```

HEC-1 INPUT

PAGE 7

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
218      KK      CP10
219      KM      COMBINE CP9, AND WSPVE
220      PM      AT WARM SPRINGS AND PALO VERDE
221      DT      2
      *
222      KK      OCP10
223      KM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
224      PM      DIVERT OUT FLOW IN STORM DRAIN
225      DT      OCP10
226      DI      0      428      600
227      DQ      0      125      125
      *
228      KK      ROCP10
229      KM      WARM SPRINGS
230      RD      1300      0.009      .015      0      TRAP      100      0
      *
231      KK      DCRMJE
232      KM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
233      DT      DCRMJE
      *
234      KK      RDCRMJE
235      KM      CENTER
236      RD      4820      0.020      .015      0      TRAP      100      0
      *
237      KK      WSCRE
238      BA      0.161
239      PB      1.74
240      LS      0      79.3
241      UD      0.265
      *
242      KK      CP11
243      KM      COMBINE ROCP10, RDCRMJE, AND WSCRE
244      PM      AT WARM SPRINGS AND CENTER
245      MC      3
      *
246      KK      OCP11
247      KM      OVERFLOW AT WARM SPRINGS AND CENTER
248      PM      DIVERT OUT FLOW IN STORM DRAIN
249      DT      OCP11
250      DI      0      491      600
251      DQ      0      136      136
      *

```

HEC-1 INPUT

PAGE 8

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
252      KK      ROCP11
253      KM      CENTER
254      RD      1050      0.015      .015      0      TRAP      100      0
      *
255      KK      RRLINE
256      BA      0.345
257      PB      1.74
258      LS      0      84.3
259      UD      0.339
      *
260      KK      RRLINE
261      KM      LAKE HEAD, EARTH CHANNEL
262      RD      1070      0.013      .010      0      TRAP      20      0
      *
263      KK      WELINE
264      BA      0.286
265      PB      1.74
266      LS      0      82.8
267      UD      0.310
      *
268      KK      CP12
269      KM      COMBINE RRLIN AND WELM
270      PM      AT WARM SPRINGS AND LAKE HEAD

```

271 NC 2
 *
 272 KK OCF12
 273 EM OVERFLOW AT WARM SPRINGS AND LAKE HEAD
 274 EM DIVERT OUT FLOW IN CULVERT
 275 DT OCF12
 276 DI 0 171 236 450.5 550
 277 DQ 0 171 236 240.5 251
 *
 278 KK CRIME
 279 BA 0.045
 280 PB 1.74
 281 LS 0 77.8
 282 UD 0.170
 *
 283 KK OCF11
 284 EM RECALL FLOW FROM WARM SPRINGS AND CENTER
 285 EM FLOW IN STORM DRAIN, THEN EARTH CHANNEL
 286 DR OCF11
 *

REC-1 INPUT

PAGE 9

LINE 10.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

287 KK RDCP11
 288 EM STORM DRAIN IN WARM SPRINGS
 289 RD 1200 0.013 .013 0 TRAP 8 0
 *

290 KK CP13
 291 EM COMBINE OCF12, CRIM, AND RDCP11
 292 NC 3
 *

293 KK OCF13
 294 EM OVERFLOW AT CENTER AND LAKE HEAD
 295 EM FLOW FROM CRIM
 296 EM DIVERT OUT FLOW IN 24" CMP CULVERT UNDER LM
 297 DT OCF13
 298 DI 0 17 1500
 299 DQ 0 17 17
 *

300 KK FWLME
 301 BA 0.294
 302 PB 1.74
 303 LS 0 82.9
 304 UD 0.303
 *

305 KK OCF10
 306 EM RECALL FLOW FROM WARM SPRINGS AND PALO VERDE, FLOW IN STORM DRAIN
 307 DR OCF10
 *

308 KK RDCP10
 309 EM CONCRETE CHANNEL, CENTER STREET, EARTH CHANNEL IN LAKE HEAD
 310 RD 4200 0.013 .015 0 TRAP 100 0
 *

311 KK CP14
 312 EM COMBINE RDCP11, OCF13, FWLME, AND RDCP10
 313 EM AT FARMER AND LAKE HEAD (UPSTREAM OF 15X3 CULVERT)
 314 NC 4
 *

315 KK OCF14
 316 EM DIVERT FLOW UNDER LAKE HEAD THROUGH A 3'X10' RCB
 317 DT OCF14
 318 DI 0 230 1500
 319 DQ 0 230 230
 *

REC-1 INPUT

PAGE 10

LINE 10.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

320 KK DE
 321 BA 0.072
 322 PB 1.74
 323 LS 0 85.47
 324 UD 0.165
 *

325 KK CP15
 326 EM COMBINE OCF14 AND DE
 327 EM TOTAL FLOW ON SOUTH SIDE OF LAKE HEAD PARKWAY
 328 NC 2
 *

329 KK OCF12
 330 EM RECALL FLOW FROM WS AND LM
 331 EM FLOW ON SOUTH SIDE OF LM
 332 DR OCF12
 *

333 KK OCF13
 334 EM RECALL FLOW FROM CENTER AND LAKE HEAD, FLOW FROM 24" CMP CULVERT
 335 DR OCF13
 *

336 KK OCF14
 337 EM RECALL FLOW FROM CP14
 338 DR OCF14
 *

339 KK CP16
 340 EM COMBINE OCF12, OCF13, AND OCF14
 341 EM FLOW ON NORTH SIDE OF LAKE HEAD

```

342      HC      3
      *
343      KK      CP17
344      KM      COMBINE ALL FLOWS UPSTREAM OF MOHAWK DRIVE
345      KM      ALL FLOW DRAINS OVER LAKE MEAD PARKWAY TO THE NORTH SIDE
346      HC      2
      *
347      KK      RCP17
348      KM      NATURAL CHANNEL ALONG EARTH BERM
349      RD      2300  0.011  .03      0      TRAP      30      0
      *
350      KK      EE
351      BA      0.032
352      PB      1.74
353      LS      0      82.2
354      UD      0.138
      *

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1

HSC-1 INPUT

PAGE 11

LINE 10.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

355      KK      FE
356      BA      0.018
357      PB      1.74
358      LS      0      77.61
359      UD      0.124
      *
360      KK      GE
361      BA      0.015
362      PB      1.74
363      LS      0      81.20
364      UD      0.113
      *
365      KK      CP18
366      KM      COMBINE ALL FLOWS ON THE NORTH SIDE OF LAKE MEAD PARKWAY
367      HC      4
      *
368      KK      ONE-8
369      BA      0.285
370      PB      1.74
371      LS      0      70.27
372      UD      0.241
      *
373      KK      CP19
374      KM      COMBINE CP18 WITH ONE-8
375      HC      2
      *
376      KK      ONE-7
377      BA      0.288
378      PB      1.74
379      LS      0      80.41
380      UD      0.081
      *
381      EE

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
NO. (.) CONNECTOR (←---) RETURN OF DIVERTED OR PUMPED FLOW
38 ONE-1
.
.
41 . ONE-2
.
.
46 . OFFE-2B
. V
. V
51 . ROFFE-2B
.
.
54 CP3.....
.
.
57 . ONE-3
.
.
62 . ONE-9
.
.
67 . OFFE-9
.
.
72 . CP3.....
.
.
75 . ONE-10
.
.
80 . OFFE-10A
.
.
85 . OFFE-10B
.
.
90 . CP4.....
. V
. V
93 . RCP4
.
.
96 . CP5.....

```


99			V V RC5			
102				ONE-2		
107					OFFE-2	
112						OFFE-3
117						OFFE-3A V V
122						ROFFE-3A
125					CP1	
130					V V RC1	
131						OFFE-2A
136						OFFE-1
141						OFFE-4 V V
146						ROFFE-4
149					CP2	
155						DCP2
152					OCPI	
158					CP6	
161					V V RCPE	
164						ONE-6 V V
169						RONE-6
172						ONE-4
177					CP7	
180						REPVE V V
185						REPVE
188						RENJE V V
193						RENJE
196						CRMJE
204						DCRMJE
201						OCRMJE V V
207						ROCRMJE
210					CP9	
213						WSPVE
218					CP10	
225						DCP10
232					OCPI0 V V	
236					ROCP10	
233						DCRMJE
231						OCRMJE V V
234						ROCRMJE
237						WRCRE
242					CP11	

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION						
				RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6	
				.99	.98	.95	.93	.92	.91	
HYDROGRAPH AT	ONE-1	.87	1	FLOW	20.	19.	18.	16.	15.	
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	ONE-2	.18	1	FLOW	40.	38.	35.	33.	32.	31.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OFFE-2B	.14	1	FLOW	17.	16.	15.	13.	13.	13.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
ROUTED TO	ROFFE-2B	.14	1	FLOW	17.	16.	15.	13.	13.	12.
+				TIME	3.92	4.00	4.00	4.00	4.00	4.00
3 COMBINED AT	CP8	.39	1	FLOW	62.	58.	53.	48.	47.	45.
+				TIME	3.75	3.75	3.75	3.83	3.83	3.83
HYDROGRAPH AT	ONE-3	.27	1	FLOW	136.	131.	125.	118.	115.	113.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	ONE-9	.16	1	FLOW	93.	89.	83.	77.	74.	73.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFE-9	.66	1	FLOW	42.	41.	39.	37.	35.	35.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP1	.42	1	FLOW	130.	125.	116.	108.	105.	103.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	ONE-10	.15	1	FLOW	70.	68.	64.	60.	59.	58.
+				TIME	3.83	3.88	3.88	3.88	3.88	3.88

HYDROGRAPH AT										
+	OFFE-10A	.10	1	FLOW TIME	48. 3.58	46. 3.58	44. 3.58	41. 3.58	40. 3.58	40. 3.58
HYDROGRAPH AT										
+	OFFE-10B	.04	1	FLOW TIME	22. 3.58	21. 3.58	20. 3.58	19. 3.58	18. 3.58	18. 3.58
3 COMBINED AT										
+	CP4	.29	1	FLOW TIME	139. 3.58	138. 3.58	128. 3.58	121. 3.58	118. 3.58	116. 3.58
ROUTED TO										
+	RCP4	.29	1	FLOW TIME	131. 3.75	131. 3.75	124. 3.75	118. 3.75	113. 3.75	110. 3.75
2 COMBINED AT										
+	CP5	.71	1	FLOW TIME	241. 3.75	235. 3.75	222. 3.75	207. 3.75	201. 3.75	198. 3.75
ROUTED TO										
+	RCS	.71	1	FLOW TIME	246. 3.92	239. 3.92	226. 3.92	207. 3.92	201. 3.92	197. 3.92
HYDROGRAPH AT										
+	ONE-S	.87	1	FLOW TIME	427. 3.58	414. 3.58	393. 3.58	371. 3.58	362. 3.58	356. 3.58
HYDROGRAPH AT										
+	OFFE-2	.09	1	FLOW TIME	26. 3.67	24. 3.67	22. 3.67	21. 3.67	20. 3.67	20. 3.67
HYDROGRAPH AT										
+	OFFE-3	.10	1	FLOW TIME	87. 3.75	84. 3.75	79. 3.75	74. 3.75	72. 3.75	70. 3.75
HYDROGRAPH AT										
+	OFFE-3A	.03	1	FLOW TIME	22. 3.50	21. 3.50	20. 3.50	19. 3.50	19. 3.50	19. 3.50
ROUTED TO										
+	ROFFE-3A	.03	1	FLOW TIME	21. 3.75	20. 3.75	19. 3.75	18. 3.75	18. 3.75	17. 3.75
3 COMBINED AT										
+	CP1	.42	1	FLOW TIME	131. 3.75	126. 3.75	119. 3.75	111. 3.75	109. 3.75	106. 3.75
ROUTED TO										
+	RC1	.42	1	FLOW TIME	132. 3.83	127. 3.83	119. 3.83	111. 3.83	108. 3.83	106. 3.83
HYDROGRAPH AT										
+	OFFE-2A	.02	1	FLOW TIME	7. 3.58	6. 3.58	6. 3.58	5. 3.58	5. 3.58	5. 3.58
HYDROGRAPH AT										
+	OFFE-1	.47	1	FLOW TIME	206. 3.67	200. 3.67	190. 3.67	179. 3.67	175. 3.67	173. 3.67
HYDROGRAPH AT										
+	OFFE-4	.47	1	FLOW TIME	133. 3.83	129. 3.83	121. 3.83	114. 3.82	111. 3.82	109. 3.82
ROUTED TO										
+	ROFFE-4	.47	1	FLOW TIME	132. 4.08	127. 4.17	120. 4.17	113. 4.17	110. 4.17	108. 4.17
4 COMBINED AT										
+	CP2	1.39	1	FLOW TIME	342. 3.92	330. 3.92	310. 3.92	290. 3.92	282. 3.92	276. 3.92
DIVERSION TO										
+	DCP2	1.39	1	FLOW TIME	342. 3.92	330. 3.92	310. 3.92	290. 3.92	282. 3.92	276. 3.92
HYDROGRAPH AT										
+	OCP2	1.39	1	FLOW TIME	0. .08	0. .08	0. .08	0. .08	0. .08	0. .08
3 COMBINED AT										
+	CP6	2.97	1	FLOW TIME	471. 3.83	453. 3.83	425. 3.83	393. 3.83	382. 3.83	374. 3.83
ROUTED TO										
+	RCP6	2.97	1	FLOW TIME	455. 4.00	439. 4.00	413. 4.00	382. 3.83	371. 3.83	364. 3.83
HYDROGRAPH AT										
+	ONE-6	1.01	1	FLOW TIME	247. 3.92	238. 3.92	224. 3.92	212. 3.92	204. 3.92	200. 3.92
ROUTED TO										
+	RONE-6	1.01	1	FLOW TIME	244. 4.08	236. 4.08	221. 4.08	209. 4.08	202. 4.08	199. 4.08
HYDROGRAPH AT										
+	ONE-4	.21	1	FLOW TIME	57. 3.67	54. 3.67	51. 3.67	47. 3.67	45. 3.67	44. 3.67
3 COMBINED AT										
+	CP7	4.19	1	FLOW TIME	731. 4.08	695. 4.08	663. 4.08	605. 4.08	588. 4.08	577. 4.08
HYDROGRAPH AT										
+	REEVE	.14	1	FLOW TIME	59. 3.75	48. 3.75	46. 3.75	43. 3.75	42. 3.75	41. 3.75
ROUTED TO										
+	REEVE	.14	1	FLOW TIME	49. 3.92	51. 3.92	48. 3.92	44. 3.92	43. 3.92	41. 3.92

[illegible]

+	CP13	.88	1	FLOW TIME	80.	59.	48.	45.	43.	43.
					3.93	4.00	4.00	4.08	4.08	4.08
	DIVERSION TO									
+	DCP13	.88	1	FLOW TIME	17.	17.	17.	17.	17.	17.
					3.58	3.58	3.67	3.67	3.67	3.67
	HYDROGRAPH AT									
+	OCP13	.88	1	FLOW TIME	43.	38.	31.	28.	26.	26.
					3.92	4.00	4.00	4.08	4.08	4.08
	HYDROGRAPH AT									
+	PHME	.29	1	FLOW TIME	96.	91.	87.	82.	80.	79.
					3.75	3.75	3.75	3.75	3.75	3.75
	HYDROGRAPH AT									
+	DCP18	.00	1	FLOW TIME	46.	45.	43.	41.	40.	40.
					3.92	3.92	4.00	4.00	4.00	4.00
	ROUTED TO									
+	RDCP18	.00	1	FLOW TIME	51.	52.	50.	45.	43.	42.
					4.28	4.28	4.28	4.28	4.28	4.33
	4 COMBINED AT									
+	CP14	1.78	1	FLOW TIME	248.	241.	225.	203.	191.	188.
					4.17	4.17	4.17	4.17	4.17	4.17
	DIVERSION TO									
+	DCP14	1.78	1	FLOW TIME	230.	230.	238.	203.	191.	188.
					4.08	4.17	4.17	4.17	4.17	4.17
	HYDROGRAPH AT									
+	OCP14	1.78	1	FLOW TIME	18.	11.	8.	8.	8.	8.
					4.17	4.17	.08	.08	.08	.08
	HYDROGRAPH AT									
+	DE	.07	1	FLOW TIME	37.	36.	34.	33.	32.	31.
					3.58	3.58	3.58	3.58	3.58	3.58
	2 COMBINED AT									
+	CP15	1.85	1	FLOW TIME	37.	36.	34.	33.	32.	31.
					3.58	3.58	3.58	3.58	3.58	3.58
	HYDROGRAPH AT									
+	DCP12	.00	1	FLOW TIME	187.	183.	178.	171.	168.	165.
					3.83	3.83	3.92	3.92	3.92	3.92
	HYDROGRAPH AT									
+	DCP13	.00	1	FLOW TIME	17.	17.	17.	17.	17.	17.
					3.58	3.58	3.67	3.67	3.67	3.67
	HYDROGRAPH AT									
+	DCP14	.00	1	FLOW TIME	230.	230.	238.	203.	191.	188.
					4.08	4.17	4.17	4.17	4.17	4.17
	3 COMBINED AT									
+	CP16	.00	1	FLOW TIME	488.	397.	369.	340.	328.	321.
					4.08	4.08	4.17	4.17	4.17	4.17
	2 COMBINED AT									
+	CP17	1.85	1	FLOW TIME	424.	407.	378.	348.	335.	328.
					4.08	4.08	4.08	4.17	4.17	4.17
	ROUTED TO									
+	RCP17	1.85	1	FLOW TIME	417.	405.	377.	345.	331.	325.
					4.17	4.17	4.17	4.17	4.17	4.17
	HYDROGRAPH AT									
+	EE	.03	1	FLOW TIME	14.	13.	12.	12.	11.	11.
					3.58	3.58	3.58	3.58	3.58	3.58
	HYDROGRAPH AT									
+	FE	.03	1	FLOW TIME	5.	5.	5.	4.	4.	4.
					3.58	3.58	3.58	3.58	3.58	3.58
	HYDROGRAPH AT									
+	GE	.01	1	FLOW TIME	6.	6.	6.	5.	5.	5.
					3.58	3.58	3.58	3.58	3.58	3.58
	4 COMBINED AT									
+	CP18	1.91	1	FLOW TIME	422.	409.	381.	349.	335.	329.
					4.17	4.17	4.17	4.17	4.17	4.17
	HYDROGRAPH AT									
+	ONE-8	.28	1	FLOW TIME	24.	22.	20.	17.	16.	16.
					3.83	3.83	3.83	3.83	3.83	3.83
	2 COMBINED AT									
+	CP19	2.30	1	FLOW TIME	436.	422.	393.	359.	345.	338.
					4.08	4.17	4.17	4.17	4.17	4.17
	HYDROGRAPH AT									
+	ONE-7	.21	1	FLOW TIME	86.	82.	77.	72.	70.	69.
					3.50	3.50	3.50	3.50	3.50	3.50

1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL			
						DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN - 1	RATIO-	.00							
ROFFE-2B	MAWE	1.75	17.26	238.00	.22	5.00	16.96	235.00	.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1575E+01 EXCESS= .0000E+00 OUTFLOW= .1572E+01 BASIN STORAGE= .1168E+02 PERCENT ERROR= -.2

FOR PLAN - 1	RATIO-	.00							
ROFFE-2B	MAWE	1.75	16.34	238.00	.21	5.00	16.01	240.00	.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1499E+01 EXCESS= .0000E+00 OUTFLOW= .1499E+01 BASIN STORAGE= .1116E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROFFE-2B	MAHE	1.75	14.93	238.00	.19	5.00	14.63	240.00	.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1379E+01 EXCESS= .0000E+00 OUTFLOW= .1381E+01 BASIN STORAGE= .1167E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROFFE-2B	MAHE	1.75	13.33	239.75	.17	5.00	13.29	240.00	.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1265E+01 EXCESS= .0000E+00 OUTFLOW= .1266E+01 BASIN STORAGE= .1182E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROFFE-2B	MAHE	1.75	12.79	239.75	.17	5.00	12.76	240.00	.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1221E+01 EXCESS= .0000E+00 OUTFLOW= .1222E+01 BASIN STORAGE= .1193E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROFFE-2B	MAHE	1.75	12.42	239.75	.16	5.00	12.38	240.00	.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1190E+01 EXCESS= .0000E+00 OUTFLOW= .1191E+01 BASIN STORAGE= .1121E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.50	132.82	224.00	.85	5.00	132.80	225.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8520E+01 EXCESS= .0000E+00 OUTFLOW= .8525E+01 BASIN STORAGE= .2056E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.75	130.81	225.00	.54	5.00	130.81	225.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8248E+01 EXCESS= .0000E+00 OUTFLOW= .8255E+01 BASIN STORAGE= .2116E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.75	123.84	225.00	.51	5.00	123.84	225.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7818E+01 EXCESS= .0000E+00 OUTFLOW= .7823E+01 BASIN STORAGE= .2068E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.50	114.95	224.00	.48	5.00	114.86	225.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7402E+01 EXCESS= .0000E+00 OUTFLOW= .7406E+01 BASIN STORAGE= .1906E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.50	112.12	224.00	.47	5.00	111.94	225.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7234E+01 EXCESS= .0000E+00 OUTFLOW= .7239E+01 BASIN STORAGE= .1988E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP4	MAHE	3.50	110.14	224.00	.46	5.00	110.04	225.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7117E+01 EXCESS= .0000E+00 OUTFLOW= .7122E+01 BASIN STORAGE= .1875E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	5.00	246.36	235.00	.45	5.00	246.36	235.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1749E+02 EXCESS= .0000E+00 OUTFLOW= .1753E+02 BASIN STORAGE= .2983E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	5.00	239.07	235.00	.45	5.00	239.07	235.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1691E+02 EXCESS= .0000E+00 OUTFLOW= .1694E+02 BASIN STORAGE= .2790E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	5.00	225.71	235.00	.42	5.00	225.71	235.00	.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1596E+02 EXCESS= .0000E+00 OUTFLOW= .1599E+02 BASIN STORAGE= .2727E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	4.50	205.75	234.00	.40	5.00	205.53	235.00	.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1507E+02 EXCESS= .0000E+00 OUTFLOW= .1509E+02 BASIN STORAGE= .2789E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	4.50	201.05	234.00	.39	5.00	201.13	235.00	.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1470E+02 EXCESS= .0000E+00 OUTFLOW= .1473E+02 BASIN STORAGE= .2769E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
RCS	MAHE	4.50	199.07	234.00	.38	5.00	197.34	235.00	.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1445E+02 EXCESS= .0000E+00 OUTFLOW= .1447E+02 BASIN STORAGE= .2755E+02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.75 20.81 225.00 .75 5.00 20.81 225.00 .75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1237E+01 EXCESS= .0000E+00 OUTFLOW= .1235E+01 BASIN STORAGE= .3042E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.75 20.26 225.00 .73 5.00 20.26 225.00 .73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1204E+01 EXCESS= .0000E+00 OUTFLOW= .1202E+01 BASIN STORAGE= .3010E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.75 19.37 225.00 .69 5.00 19.37 225.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1150E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .3022E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.75 18.44 225.00 .66 5.00 18.44 225.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1096E+01 EXCESS= .0000E+00 OUTFLOW= .1094E+01 BASIN STORAGE= .2976E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.75 18.07 225.00 .65 5.00 18.07 225.00 .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1074E+01 EXCESS= .0000E+00 OUTFLOW= .1073E+01 BASIN STORAGE= .2957E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-3A MAHE 3.50 17.71 227.50 .64 5.00 17.48 225.00 .64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1059E+01 EXCESS= .0000E+00 OUTFLOW= .1057E+01 BASIN STORAGE= .3202E+02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 131.74 230.00 .45 5.00 131.74 230.00 .45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1009E+02 EXCESS= .0000E+00 OUTFLOW= .1010E+02 BASIN STORAGE= .1735E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 126.94 230.00 .43 5.00 126.94 230.00 .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9750E+01 EXCESS= .0000E+00 OUTFLOW= .9761E+01 BASIN STORAGE= .1710E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 119.11 230.00 .41 5.00 119.11 230.00 .41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9194E+01 EXCESS= .0000E+00 OUTFLOW= .9203E+01 BASIN STORAGE= .1842E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 111.14 230.00 .39 5.00 111.14 230.00 .39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8649E+01 EXCESS= .0000E+00 OUTFLOW= .8658E+01 BASIN STORAGE= .1797E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 107.96 230.00 .38 5.00 107.96 230.00 .38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8431E+01 EXCESS= .0000E+00 OUTFLOW= .8443E+01 BASIN STORAGE= .1779E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MAHE 5.00 105.69 230.00 .37 5.00 105.69 230.00 .37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8281E+01 EXCESS= .0000E+00 OUTFLOW= .8293E+01 BASIN STORAGE= .1585E+02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-4 MAHE 4.50 134.31 247.50 .50 5.00 131.21 245.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1265E+02 EXCESS= .0000E+00 OUTFLOW= .1267E+02 BASIN STORAGE= .4131E+02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MAHE 4.50 129.89 247.50 .49 5.00 127.45 250.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1224E+02 EXCESS= .0000E+00 OUTFLOW= .1226E+02 BASIN STORAGE= .4072E+02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MAHE 4.00 121.28 245.00 .46 5.00 119.87 250.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1154E+02 EXCESS= .0000E+00 OUTFLOW= .1152E+02 BASIN STORAGE= .4132E+02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MAHE 4.00 114.11 248.00 .43 5.00 112.23 250.00 .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1099E+02 EXCESS= .0000E+00 OUTFLOW= .1093E+02 BASIN STORAGE= .3952E+02 PERCENT ERROR= -.3									
FOR PLAN	= 1	RATIO=	.00						
ROFFE-4	MAHE		4.00	111.29	248.00	.42	5.00	110.18	250.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1064E+02 EXCESS= .0000E+00 OUTFLOW= .1067E+02 BASIN STORAGE= .3910E+02 PERCENT ERROR= -.3									
FOR PLAN	= 1	RATIO=	.00						
ROFFE-4	MAHE		4.00	109.35	248.00	.42	5.00	108.37	250.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1046E+02 EXCESS= .0000E+00 OUTFLOW= .1049E+02 BASIN STORAGE= .3834E+02 PERCENT ERROR= -.3									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	455.47	240.00	.25	5.00	455.47	240.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4359E+02 EXCESS= .0000E+00 OUTFLOW= .4362E+02 BASIN STORAGE= .2242E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	439.38	240.00	.27	5.00	439.38	240.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4221E+02 EXCESS= .0000E+00 OUTFLOW= .4224E+02 BASIN STORAGE= .2764E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	412.73	240.00	.25	5.00	412.73	240.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3995E+02 EXCESS= .0000E+00 OUTFLOW= .3997E+02 BASIN STORAGE= .2735E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	382.24	230.00	.24	5.00	382.24	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3777E+02 EXCESS= .0000E+00 OUTFLOW= .3779E+02 BASIN STORAGE= .2534E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	371.29	230.00	.23	5.00	371.29	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3689E+02 EXCESS= .0000E+00 OUTFLOW= .3691E+02 BASIN STORAGE= .2440E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RCPS	MAHE		5.00	363.76	230.00	.23	5.00	363.76	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3627E+02 EXCESS= .0000E+00 OUTFLOW= .3630E+02 BASIN STORAGE= .2430E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		4.00	245.16	244.00	.46	5.00	244.17	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2493E+02 EXCESS= .0000E+00 OUTFLOW= .2494E+02 BASIN STORAGE= .1992E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		4.00	236.50	244.00	.45	5.00	235.65	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2410E+02 EXCESS= .0000E+00 OUTFLOW= .2411E+02 BASIN STORAGE= .1959E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		3.75	221.43	243.75	.42	5.00	221.04	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2273E+02 EXCESS= .0000E+00 OUTFLOW= .2274E+02 BASIN STORAGE= .1938E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		3.50	208.60	245.00	.40	5.00	208.60	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2139E+02 EXCESS= .0000E+00 OUTFLOW= .2139E+02 BASIN STORAGE= .2143E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		3.25	202.55	243.75	.39	5.00	202.28	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2083E+02 EXCESS= .0000E+00 OUTFLOW= .2084E+02 BASIN STORAGE= .2598E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
ROHE-6	MAHE		3.00	198.99	246.00	.38	5.00	198.99	245.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+02 EXCESS= .0000E+00 OUTFLOW= .2050E+02 BASIN STORAGE= .2033E+02 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.00						
RRPVE	MAHE		4.75	50.78	232.75	.55	5.00	49.21	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4012E+01 EXCESS= .0000E+00 OUTFLOW= .4042E+01 BASIN STORAGE= .1000E+01 PERCENT ERROR= -1.0									
FOR PLAN	= 1	RATIO=	.00						
RRPVE	MAHE		4.50	52.72	234.00	.53	5.00	50.95	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3897E+01 EXCESS= .0000E+00 OUTFLOW= .3927E+01 BASIN STORAGE= .1113E+01 PERCENT ERROR= -1.1									

FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.20	42.70	234.00	.50	5.00	42.13	235.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3691E+01 EXCESS= .0000E+00 OUTFLOW= .3732E+01 BASIN STORAGE= .1094E+01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.25	44.37	233.75	.47	5.00	44.25	235.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3485E+01 EXCESS= .0000E+00 OUTFLOW= .3517E+01 BASIN STORAGE= .1059E+01 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.25	42.73	238.00	.46	5.00	42.31	235.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+01 EXCESS= .0000E+00 OUTFLOW= .3436E+01 BASIN STORAGE= .1031E+01 PERCENT ERROR= -1.3									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.25	42.90	238.00	.46	5.00	41.23	235.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3349E+01 EXCESS= .0000E+00 OUTFLOW= .3380E+01 BASIN STORAGE= .1046E+01 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.75	22.31	237.50	.63	5.00	18.96	240.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .8711E+02 PERCENT ERROR= -2.7									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.50	22.29	238.50	.61	5.00	19.43	240.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1095E+01 EXCESS= .0000E+00 OUTFLOW= .1115E+01 BASIN STORAGE= .1094E+01 PERCENT ERROR= -2.8									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	3.75	19.45	240.00	.58	5.00	19.45	240.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1039E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .9174E+02 PERCENT ERROR= -2.8									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	3.75	20.66	240.00	.55	5.00	20.66	240.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9858E+00 EXCESS= .0000E+00 OUTFLOW= .1005E+01 BASIN STORAGE= .9068E+02 PERCENT ERROR= -2.9									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	3.75	20.90	240.00	.54	5.00	20.90	240.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9648E+00 EXCESS= .0000E+00 OUTFLOW= .9838E+00 BASIN STORAGE= .8764E+02 PERCENT ERROR= -2.9									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	3.75	21.00	240.00	.53	5.00	21.00	240.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9499E+00 EXCESS= .0000E+00 OUTFLOW= .9691E+00 BASIN STORAGE= .8734E+02 PERCENT ERROR= -3.0									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	5.00	43.32	235.00	.30	5.00	43.32	235.00	.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3368E+01 EXCESS= .0000E+00 OUTFLOW= .3316E+01 BASIN STORAGE= .9626E+02 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	5.00	41.09	235.00	.29	5.00	41.09	235.00	.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3190E+01 EXCESS= .0000E+00 OUTFLOW= .3218E+01 BASIN STORAGE= .9539E+02 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	5.00	38.84	240.00	.28	5.00	38.84	240.00	.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3022E+01 EXCESS= .0000E+00 OUTFLOW= .3056E+01 BASIN STORAGE= .9103E+02 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.75	41.51	237.50	.26	5.00	35.93	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2865E+01 EXCESS= .0000E+00 OUTFLOW= .2897E+01 BASIN STORAGE= .1190E+01 PERCENT ERROR= -1.4									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.75	40.56	237.50	.26	5.00	35.18	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2805E+01 EXCESS= .0000E+00 OUTFLOW= .2834E+01 BASIN STORAGE= .1171E+01 PERCENT ERROR= -1.4									
FOR PLAN = 1	RATIO=	.00							
RRBPVE	MAHE	4.75	39.80	237.50	.25	5.00	34.98	240.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2761E+01 EXCESS= .0000E+00 OUTFLOW= .2790E+01 BASIN STORAGE= .1164E+01 PERCENT ERROR= -1.5									

FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	3.95	113.31	240.00	.28	5.00	109.99	240.00	.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9699E+01 EXCESS= .0000E+00 OUTFLOW= .9697E+01 BASIN STORAGE= .2990E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	3.99	111.20	243.24	.27	5.00	110.31	240.00	.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9402E+01 EXCESS= .0000E+00 OUTFLOW= .9410E+01 BASIN STORAGE= .3793E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	4.06	106.33	243.64	.26	5.00	103.63	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8891E+01 EXCESS= .0000E+00 OUTFLOW= .8899E+01 BASIN STORAGE= .3390E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	4.14	99.27	244.30	.24	5.00	97.23	240.00	.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8174E+01 EXCESS= .0000E+00 OUTFLOW= .8181E+01 BASIN STORAGE= .3535E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	4.17	95.99	241.74	.24	5.00	91.72	240.00	.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8149E+01 EXCESS= .0000E+00 OUTFLOW= .8155E+01 BASIN STORAGE= .3649E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROCP10	MAHE	4.19	97.93	242.90	.23	5.00	91.49	240.00	.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8017E+01 EXCESS= .0000E+00 OUTFLOW= .8035E+01 BASIN STORAGE= .3190E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	5.00	43.96	235.00	-1.00	5.00	43.96	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	5.00	41.95	235.00	-1.00	5.00	41.95	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	5.00	38.02	240.00	-1.00	5.00	38.02	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	4.75	39.97	237.50	-1.00	5.00	38.19	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	4.75	39.32	237.50	-1.00	5.00	34.60	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCRMJE	MAHE	4.75	40.07	237.50	-1.00	5.00	34.77	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	130.61	245.00	.27	5.00	130.61	245.00	.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1149E+02 EXCESS= .0000E+00 OUTFLOW= .1172E+02 BASIN STORAGE= .6594E+02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	126.88	250.00	.26	5.00	126.88	250.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1133E+02 EXCESS= .0000E+00 OUTFLOW= .1136E+02 BASIN STORAGE= .6508E+02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	123.92	250.00	.25	5.00	123.92	250.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1072E+02 EXCESS= .0000E+00 OUTFLOW= .1074E+02 BASIN STORAGE= .6506E+02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	115.18	250.00	.24	5.00	115.18	250.00	.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1099E+02 EXCESS= .0000E+00 OUTFLOW= .1011E+02 BASIN STORAGE= .6917E+02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	109.90	250.00	.23	5.00	109.90	250.00	.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9812E+01 EXCESS= .0000E+00 OUTFLOW= .9831E+01 BASIN STORAGE= .6912E+02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROCP11	MAHE	5.00	108.93	250.00	.23	5.00	108.93	250.00	.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9642E+01 EXCESS= .0000E+00 OUTFLOW= .9663E+01 BASIN STORAGE= .7487E+02 PERCENT ERROR= -.3									

FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	5.00	120.54	235.00	.57	5.00	120.54	235.00	.57	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1044E+02 EXCESS= .0000E+00 OUTFLOW= .1045E+02 BASIN STORAGE= .4169E+02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	5.00	116.79	235.00	.55	5.00	116.79	235.00	.55	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1011E+02 EXCESS= .0000E+00 OUTFLOW= .1014E+02 BASIN STORAGE= .4111E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	5.00	110.47	235.00	.52	5.00	110.47	235.00	.52	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9600E+01 EXCESS= .0000E+00 OUTFLOW= .9610E+01 BASIN STORAGE= .3188E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	4.75	102.63	237.50	.49	5.00	101.89	235.00	.49	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9074E+01 EXCESS= .0000E+00 OUTFLOW= .9086E+01 BASIN STORAGE= .4007E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	4.75	100.30	237.50	.48	5.00	99.29	235.00	.48	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8871E+01 EXCESS= .0000E+00 OUTFLOW= .8882E+01 BASIN STORAGE= .3967E+02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO=	.00								
BASELINE NAME	4.75	98.69	237.50	.47	5.00	97.61	235.00	.47	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8729E+01 EXCESS= .0000E+00 OUTFLOW= .8740E+01 BASIN STORAGE= .3940E+02 PERCENT ERROR= -.3									
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.64	49.31	242.09	-1.00	5.00	47.73	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.64	48.45	242.66	-1.00	5.00	46.84	240.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.67	46.31	242.82	-1.00	5.00	44.37	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.74	42.41	242.09	-1.00	5.00	41.87	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.78	40.35	243.58	-1.00	5.00	39.73	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP11 NAME	1.79	39.59	242.91	-1.00	5.00	39.35	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	51.48	255.00	-1.00	5.00	51.48	255.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	51.78	255.00	-1.00	5.00	51.78	255.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	49.51	255.00	-1.00	5.00	49.51	255.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	44.78	255.00	-1.00	5.00	44.78	255.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	42.78	255.00	-1.00	5.00	42.78	255.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 NAME	5.00	41.51	260.00	-1.00	5.00	41.51	260.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RCP17 NAME	3.32	420.83	249.19	.50	5.00	417.40	250.00	.50	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4963E+02 EXCESS= .0000E+00 OUTFLOW= .4964E+02 BASIN STORAGE= .4718E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCP17 NAME	3.38	405.09	249.82	.49	5.00	404.75	250.00	.49	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4809E+02 EXCESS= .0000E+00 OUTFLOW= .4810E+02 BASIN STORAGE= .5337E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP17 NAME 3.48 377.70 250.63 .46 5.00 376.86 250.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4549E+02 EXCESS= .0000E+00 OUTFLOW= .4550E+02 BASIN STORAGE= .4221E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP17 NAME 3.60 345.74 251.89 .44 5.00 344.86 250.00 .44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4290E+02 EXCESS= .0000E+00 OUTFLOW= .4291E+02 BASIN STORAGE= .4472E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP17 NAME 3.65 332.59 252.19 .43 5.00 331.20 250.00 .42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4184E+02 EXCESS= .0000E+00 OUTFLOW= .4185E+02 BASIN STORAGE= .4145E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP17 NAME 3.68 325.51 250.34 .42 5.00 324.87 250.00 .42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4113E+02 EXCESS= .0000E+00 OUTFLOW= .4114E+02 BASIN STORAGE= .5421E+03 PERCENT ERROR= .1

*** NORMAL END OF HEC-1 ***

```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* SEPTEMBER 1979
* VERSION 4.0
*
* RUN DATE 01/26/2000 TIME 16:19:04
*
*****

```

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

```

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X X XXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXX XXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC10S, HEC10B, AND HEC10W.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTICR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON SM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DANBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSSWRITE STAGE FREQUENCY, DSSREAD TIME SERIES AT DESIRED CALCULATION INTERVAL, LOSS RATE, GREEN AND AMPT INFILTRATION KINEMATIC WAVE, NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*** FREE ***
1          ID *****
2          ID * THE LANDWELL COMPANY *
3          ID * CONCEPTUAL DRAINAGE STUDY FOR *
4          ID * THE EASTSIDE PROPERTIES *
5          ID * EXISTING CONDITIONS *
6          ID * INPUT FILE = EX100.DAT *
7          ID * INPUT FILE DATE = 01/26/00 *
8          ID * DESIGN STORMS=100-YEAR 6-HOUR *
9          ID * STORM DISTRIBUTION = SN 81 *
10         ID * MODELED BY = ALEX YECAS, EIT (PDSAJ) *
11         ID *****
12         ID
13         ID
14         ID      DRAINAGE AREA
15         ID      (SQUARE MILES)      DANF
16         ID      0-0.5      .99
17         ID      0.5-1      .975
18         ID      1-2      .95
19         ID      2-3      .925
20         ID      3-4      .915
21         ID      4-5      .908
22         ID
23         ID
24         ID      S      0      0      300
25         ID      S      0      0
26         ID      S      0      0
27         ID      J8      PREC      0.99      0.975      0.95      0.925      0.915      0.908
28         ID
29         ID      KK      ONE-1
30         ID      BA      0.072
31         ID      PB      2.86
32         ID      PC      0      0.02      0.057      0.07      0.087      0.108      0.124      0.13      0.13      0.13
33         ID      PC      0.13      0.13      0.13      0.133      0.14      0.142      0.148      0.158      0.172      0.181
34         ID      PC      0.19      0.197      0.199      0.2      0.201      0.204      0.214      0.229      0.241      0.249
35         ID      PC      0.251      0.256      0.27      0.278      0.281      0.283      0.295      0.322      0.352      0.409
36         ID      PC      0.429      0.59      0.71      0.744      0.781      0.812      0.819      0.835      0.851      0.856
37         ID      PC      0.86      0.868      0.876      0.888      0.91      0.916      0.917      0.95      0.97      0.976
38         ID      PC      0.982      0.985      0.987      0.999      0.99      0.993      0.991      0.994      0.995      0.998
39         ID      PC      0.998      0.999      1
40         ID      LS      0      77.00
41         ID      UD      0.108
42         ID
43         ID
44         ID      KK      ONE-2
45         ID      BA      0.190
46         ID      PB      2.86
47         ID      LS      0      77.63
48         ID      UD      0.230

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1 HEC-1 INPUT PAGE 2

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
46         ID      KK      OFFE-2B
47         ID      BA      0.137
48         ID      PB      2.86
49         ID      LS      0      73.38
50         ID      UD      0.264
51         ID
52         ID      KK      OFFE-2B
53         ID      RM      ROUTE OFFE-2B
54         ID      RD      3389      0.019      0.035      0      TRAP
55         ID
56         ID      KK      CFB
57         ID      RM      COMBINE ONE-1, ONE-2, ROFFE-2B
58         ID      MC      3
59         ID
60         ID
61         ID
62         ID
63         ID
64         ID
65         ID
66         ID
67         ID
68         ID
69         ID
70         ID
71         ID
72         ID
73         ID
74         ID
75         ID
76         ID
77         ID
78         ID
79         ID
80         ID
81         ID
82         ID
83         ID
84         ID
85         ID
86         ID
87         ID
88         ID
89         ID
90         ID
91         ID
92         ID
93         ID
94         ID
95         ID
96         ID
97         ID
98         ID
99         ID
100        ID

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```

58      BA  0.271
59      PB  2.86
60      LS  0      83.87
61      UD  0.127
      *

62      KK  ONE-9
63      BA  0.338
64      PB  2.86
65      LS  0      78.15
66      UD  0.179
      *

67      KK  OFFE-9
68      BA  0.063
69      PB  2.86
70      LS  0      87.64
71      UD  0.120
      *

72      KK  CP3
73      KM  COMBINE ONE-9, OFFE-9
74      NC  2
      *

75      KK  ONE-10
76      BA  0.150
77      PB  2.86
78      LS  0      83.94
79      UD  0.159
      *

```

HEC-1 INPUT

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

80      KKOFFE-10A
81      BA  0.096
82      PB  2.86
83      LS  0      81.94
84      UD  0.114
      *

85      KKOFFE-10B
86      BA  0.042
87      PB  2.86
88      LS  0      84.36
89      UD  0.130
      *

90      KK  CP4
91      KM  COMBINE ONE-10, OFFE-10A, OFFE-10B
92      NC  3
      *

93      KK  RCP4
94      KM  ROUTE TO ONE-9
95      RD  4940 0.0144 0.035      0      TRAP
      *

96      KK  CP5
97      KM  COMBINE CP3 AND RCP4
98      NC  2
      *

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```

99      KK  RCS
100     KM  ROUTE TO BASIN ONE-9
101     RD  7000 0.015 0.035      0      TRAP
      *

102     KK  ONE-5
103     BA  0.870
104     PB  2.86
105     LS  0      84.17
106     UD  0.147
      *

107     KK  OFFE-2
108     BA  0.092
109     PB  2.86
110     LS  0      78.74
111     UD  0.191
      *

112     KK  OFFE-1
113     BA  0.298
114     PB  2.86
115     LS  0      81.26
116     UD  0.292
      *

```

HEC-1 INPUT

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

117     KK OFFE-1A
118     BA  0.031
119     PB  2.86
120     LS  0      88
121     UD  0.096
      *

122     KKOFFE-1A
123     KM  ROUTE OFFE-1A IN CHANNEL WEST ALONG LAKE HEAD DRIVE
124     RD  2300 0.00452 0.033      0      TRAP      12      4
      *

125     KK  CP1
126     KM  COMBINE ROFFE-1A, OFFE-1, AND OFFE-2
127     NC  3
      *

128     KK  RCI

```

```

129 KM ROUTE TO BOULDER HIGHWAY
130 RD 5000 0.025 0.03 0 TRAP
*

131 KK OFFE-2A
132 BA 0.523
133 PB 2.86
134 LS 0 78.38
135 UD 0.146
*

136 KK OFFE-1
137 BA 0.470
138 PB 2.86
139 LS 0 84.74
140 UD 0.216
*

141 KK OFFE-4
142 BA 0.473
143 PB 2.86
144 LS 0 82.79
145 UD 0.388
*

146 KK BOFFE-4
147 KM ROUTE TO BOULDER HIGHWAY AT PARCO RD
148 RD 12600 0.03 0.03 0 TRAP 1 1
*

149 KK CP2
150 KM COMBINE ALL BASINS AT BOULDER HIGHWAY
151 HC 4
*

```

1

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

152 KK OCP2
153 KM FLOW SPLIT AT CULVERT UNDER BOULDER HIGHWAY AT PARCO ROAD
154 KM DIVERT OUT FLOW ALONG BOULDER HIGHWAY
155 DT DCP2
156 DI 0 304.1 310 894 963
157 SQ 0 304.1 363 751 788
*

158 KK CP6
159 KM COMBINE ALL BASINS AT ATHENS
160 HC 3
*

161 KK ONE-6
162 KM ROUTE TO BASIN ONE-4
163 RD 5900 0.0126 0.035 0 TRAP
*

164 KK ONE-6
165 BA 1.011
166 PB 2.86
167 LS 0 81.7
168 UD 0.433
*

169 KK ONE-6
170 KM ROUTE TO ONE-4
171 RD 5300 0.0143 0.015 0 TRAP
*

172 KK ONE-4
173 BA 0.214
174 PB 2.86
175 LS 0 78.41
176 UD 0.185
*

177 KK CP7
178 KM COMBINE ALL BASINS TRIBUTARY TO PARCO
179 HC 3
*

180 KK RKPVE
181 BA 0.139
182 PB 2.86
183 LS 0 83.7
184 UD 0.287
*

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1

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

185 KK RKPVE
186 KM PALO VERDE
187 RD 5140 0.017 0.015 0 TRAP 80 0
*

188 KK RMJE
189 BA 0.034
190 PB 2.86
191 LS 0 85.5
192 UD 0.176
*

193 KK RMJE
194 KM MAJOR THEN PALO VERDE
195 RD 4720 0.016 0.015 0 TRAP 80 0
*

196 KK RMJE
197 BA 0.206
198 PB 2.86
199 LS 0 85.0

```



```

200      UD      0.301
      *
201      KK      OCRMJE
202      EM      FLOW SPLIT AT MAJOR AND CENTER
203      SM      DIVERT OUT FLOW IN CENTER STREET
204      DT      DCRMJE
205      DI      0      50      300
206      DQ      0      25      150
      *
207      KK      ROCRMJE
208      EM      MAJOR
209      RD      0.125      0.017      .015      0      TRAP      80      0
      *
210      KK      CP9
211      EM      COMBINE RSKPVE, RSKMJE, AND ROCRMJE
212      MC      3
      *
213      KK      WSPVE
214      BA      0.265
215      PB      2.86
216      LS      0      79.0
217      UD      0.420
      *

```

1

HEC-1 INPUT

PAGE 7

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
218      KK      CP10
219      EM      COMBINE CP9, AND WSPVE
220      SM      AT WARM SPRINGS AND PALO VERDE
221      MC      2
      *
222      KK      OCP10
223      EM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
224      SM      DIVERT OUT FLOW IN STORM DRAIN
225      DT      DCP10
226      DI      0      420      600
227      DQ      0      125      125
      *
228      KK      ROCF10
229      EM      WARM SPRINGS
230      RD      1200      0.009      .015      0      TRAP      100      0
      *
231      KK      DCRMJE
232      EM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
233      DR      DCRMJE
      *
234      KK      RDCRMJE
235      EM      CENTER
236      RD      4860      0.020      .015      0      TRAP      100      0
      *
237      KK      WSCRE
238      BA      0.161
239      PB      2.85
240      LS      0      79.3
241      UD      0.265
      *
242      KK      CP11
243      EM      COMBINE ROCF10, RDCRMJE, AND WSCRE
244      SM      AT WARM SPRINGS AND CENTER
245      MC      3
      *
246      KK      OCP11
247      EM      OVERFLOW AT WARM SPRINGS AND CENTER
248      SM      DIVERT OUT FLOW IN STORM DRAIN
249      DT      DCP11
250      DI      0      491      600
251      DQ      0      128      128
      *

```

1

HEC-1 INPUT

PAGE 8

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
252      KK      ROCF11
253      EM      CENTER
254      RD      3050      0.018      .015      0      TRAP      100      0
      *
255      KK      RSKLME
256      BA      0.145
257      PB      2.86
258      LS      0      84.3
259      UD      0.339
      *
260      KK      RSKLME
261      EM      LAKE HEAD, EARTH CHANNEL
262      RD      3070      0.013      .010      0      TRAP      20      3
      *
263      KK      WSLME
264      BA      0.286
265      PB      2.86
266      LS      0      82.8
267      UD      0.310
      *
268      KK      CP12
269      EM      COMBINE RSKLM AND WSLM
270      SM      AT WARM SPRINGS AND LAKE HEAD

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```

271      NC      2
      *
272      KK      OCP13
273      KM      OVERFLOW AT WARM SPRINGS AND LAKE HEAD
274      KM      DIVERT OUT FLOW IN CULVERT
275      DT      OCP13
276      DI      0      171      236      450.5      560
277      DQ      0      171      203      340.5      251
      *
278      KK      CRIME
279      BA      0.045
280      PB      2.86
281      LB      0      77.8
282      UD      0.170
      *
283      KK      DCP11
284      KM      RECALL FLOW FROM WARM SPRINGS AND CENTER
285      KM      FLOW IN STORM DRAIN, THEN EARTH CHANNEL
286      DR      DCP11
      *

```

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HEC-1 INPUT

PAGE 9

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
287      KK      RDCP11
288      KM      STORM DRAIN IN WARM SPRINGS
289      RD      1200      0.013      .013      0      TRAP      0      0
      *
290      KK      CP13
291      KM      COMBINE OCP13, CRIM, AND RDCP11
292      KC      3
      *
293      KK      OCP13
294      KM      OVERFLOW AT CENTER AND LAKE HEAD
295      KM      FLOW FROM CRIM
296      KM      DIVERT OUT FLOW IN 24" CMP CULVERT UNDER LM
297      DT      DCP13
298      DI      0      17      1000
299      DQ      0      17      17
      *
300      KK      PWLINE
301      BA      0.294
302      PB      2.86
303      LB      0      82.9
304      UD      0.303
      *
305      KK      DCP10
306      KM      RECALL FLOW FROM WARM SPRINGS AND PALO VERDE, FLOW IN STORM DRAIN
307      DR      DCP10
      *
308      KK      RDCP10
309      KM      CONCRETE CHANNEL, CENTER STREET, EARTH CHANNEL IN LAKE HEAD
310      RD      4200      0.013      .013      0      TRAP      100      0
      *
311      KK      CP14
312      KM      COMBINE RDCP11, OCP13, PWLINE, AND RDCP10
313      KM      AT PARKWAY AND LAKE HEAD (UPSTREAM OF 10X3 CULVERT)
314      KC      4
      *
315      KK      OCP14
316      KM      DIVERT FLOW UNDER LAKE HEAD THROUGH A 3'x10' RCB
317      DT      DCP14
318      DI      0      230      1000
319      DQ      0      230      230
      *

```

1

HEC-1 INPUT

PAGE 10

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
320      KK      DS
321      BA      0.072
322      PB      2.86
323      LB      0      85.47
324      UD      0.165
      *
325      KK      CP15
326      KM      COMBINE OCP14 AND DS
327      KM      TOTAL FLOW ON SOUTH SIDE OF LAKE HEAD PARKWAY
328      KC      2
      *
329      KK      DCP12
330      KM      RECALL FLOW FROM NS AND LM
331      KM      FLOW ON SOUTH SIDE OF LM
332      DR      DCP12
      *
333      KK      DCP13
334      KM      RECALL FLOW FROM CENTER AND LAKE HEAD, FLOW FROM 24" CMP CULVERT
335      DR      DCP13
      *
336      KK      DCP14
337      KM      RECALL FLOW FROM CP14
338      DR      DCP14
      *
339      KK      CP16
340      KM      COMBINE DCP12, DCP13, AND DCP14
341      KM      FLOW ON NORTH SIDE OF LAKE HEAD

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142      KC      3
143      KK      CP17
144      KM      COMBINE ALL FLOWS UPSTREAM OF MONARK DRIVE
145      KM      ALL FLOW DRAINS OVER LAKE MEAD PARKWAY TO THE NORTH SIDE
146      KC      2
147      KK      SCP17
148      KM      NATURAL CHANNEL ALONG EARTH BERM
149      KD      2100  0.011  .03  0  TRAP  20  0
150      *
151      KK      EE
152      KA      0.032
153      PB      2.86
154      LB      0  82.2
155      UD      0.132
156      *

```

1

NEC-1 INPUT

PAGE 11

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
155      KK      PE
156      KA      0.018
157      PB      2.86
158      LB      0  77.61
159      UD      0.124
160      *
161      KK      GE
162      KA      0.015
163      PB      2.86
164      LB      0  81.29
165      UD      0.113
166      *
167      KK      CP18
168      KM      COMBINE ALL FLOWS ON THE NORTH SIDE OF LAKE MEAD PARKWAY
169      KC      4
170      *
171      KK      ONE-8
172      KA      0.285
173      PB      2.86
174      LB      0  79.27
175      UD      0.241
176      *
177      KK      CP19
178      KM      COMBINE CP18 WITH ONE-8
179      KC      2
180      *
181      KK      ONE-7
182      KA      0.208
183      PB      2.86
184      LB      0  80.41
185      UD      0.081
186      *
187      KK      EE

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW
NO.      (.) CONNECTOR      (<---) RETURN OF DIVERTED OR PUMPED FLOW
38      ONE-1
41      .      ONE-3
46      .      .      OFFE-2B
51      .      .      OFFE-2B
54      .      .      .
57      .      ONE-3
62      .      .      ONE-9
67      .      .      OFFE-9
72      .      .      CP1.....
75      .      .      ONE-10
80      .      .      .      OFFE-10A
83      .      .      .      .      OFFE-10B
86      .      .      .      .      .
90      .      .      .      CP4.....
93      .      .      .      .      .
96      .      .      .      CP5.....

```

99	V	RCS			
102		ONE-5			
107		OFFE-2			
112		OFFE-3			
117		OFFE-3A			
122		ROFFE-3A			
125		CP1			
128		RC1			
131		OFFE-2A			
136		OFFE-1			
141		OFFE-4			
146		ROFFE-4			
149		CP2			
155		DCP2			
157		DCP2			
158		CP4			
161		RCP4			
164		ONE-6			
169		RONE-6			
172		ONE-4			
177		CP7			
180		BRPVE			
183		RBRPVE			
188		BRMJE			
191		RBRMJE			
196		CRMJE			
204		DCRMJE			
201		OCRME			
207		ROCRMJE			
210		CP9			
213		WRPVE			
218		CP10			
225		DCP10			
227		DCP10			
228		ROCP10			
233		DCRMJE			
231		DCRMJE			
234		ROCRMJE			
237		WRMJE			
242		CP11			

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION					
				RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6
HYDROGRAPH AT				.99	.98	.95	.93	.92	.91
+	ONE-1	.07	1 FLOW TIME	64. 3.58	62. 3.58	59. 3.58	56. 3.58	55. 3.58	54. 3.58
HYDROGRAPH AT	ONE-2	.18	1 FLOW TIME	138. 3.67	126. 3.67	120. 3.67	113. 3.67	111. 3.67	109. 3.67
HYDROGRAPH AT	OPFE-2B	.14	1 FLOW TIME	72. 3.75	69. 3.75	68. 3.75	61. 3.75	60. 3.75	59. 3.75
ROUTED TO	ROFFE-2B	.14	1 FLOW TIME	71. 3.83	69. 3.83	68. 3.83	60. 3.83	59. 3.83	58. 3.83
3 COMBINED AT	CP0	.39	1 FLOW TIME	225. 3.75	218. 3.75	206. 3.75	195. 3.75	190. 3.75	187. 3.75
HYDROGRAPH AT	ONE-3	.27	1 FLOW TIME	331. 3.58	323. 3.58	309. 3.58	296. 3.58	291. 3.58	287. 3.58
HYDROGRAPH AT	ONE-9	.36	1 FLOW TIME	291. 3.58	282. 3.58	267. 3.58	253. 3.58	248. 3.58	244. 3.58
HYDROGRAPH AT	OPFE-9	.26	1 FLOW TIME	89. 3.58	88. 3.58	85. 3.58	82. 3.58	80. 3.58	79. 3.58
2 COMBINED AT	CP3	.43	1 FLOW TIME	388. 3.58	370. 3.58	352. 3.58	335. 3.58	328. 3.58	323. 3.58
HYDROGRAPH AT	ONE-10	.15	1 FLOW TIME	174. 3.58	169. 3.58	162. 3.58	155. 3.58	152. 3.58	151. 3.58

HYDROGRAPH AT										
+	OFFE-1GA	.10	1	FLOW TIME	116. 3.58	114. 3.58	109. 3.58	104. 3.58	102. 3.58	101. 3.58
HYDROGRAPH AT										
+	OFFE-1GB	.04	1	FLOW TIME	92. 3.58	91. 3.58	49. 3.58	47. 3.58	46. 3.58	46. 3.58
3 COMBINED AT										
+	CP4	.29	1	FLOW TIME	342. 3.58	334. 3.58	320. 3.58	306. 3.58	301. 3.58	297. 3.58
ROUTED TO										
+	BCP4	.29	1	FLOW TIME	328. 3.75	321. 3.75	308. 3.75	282. 3.75	278. 3.75	281. 3.75
3 COMBINED AT										
+	CP5	.71	1	FLOW TIME	675. 3.67	687. 3.67	627. 3.67	586. 3.67	575. 3.67	569. 3.67
ROUTED TO										
+	BC5	.71	1	FLOW TIME	677. 3.83	660. 3.83	631. 3.83	591. 3.83	579. 3.83	574. 3.83
HYDROGRAPH AT										
+	ONE-5	.87	1	FLOW TIME	1044. 3.58	1018. 3.58	977. 3.58	935. 3.58	919. 3.58	907. 3.58
HYDROGRAPH AT										
+	OFFE-2	.09	1	FLOW TIME	75. 3.67	73. 3.67	69. 3.67	66. 3.67	64. 3.67	63. 3.67
HYDROGRAPH AT										
+	OFFE-3	.30	1	FLOW TIME	238. 3.75	232. 3.75	221. 3.75	211. 3.75	207. 3.75	204. 3.75
HYDROGRAPH AT										
+	OFFE-3A	.03	1	FLOW TIME	47. 3.50	46. 3.50	45. 3.50	43. 3.50	42. 3.50	42. 3.50
ROUTED TO										
+	BOFFE-3A	.03	1	FLOW TIME	43. 3.67	42. 3.67	41. 3.75	39. 3.67	38. 3.75	38. 3.75
3 COMBINED AT										
+	CP1	.42	1	FLOW TIME	351. 3.67	341. 3.67	325. 3.67	310. 3.67	303. 3.67	298. 3.67
ROUTED TO										
+	BC1	.42	1	FLOW TIME	350. 3.75	341. 3.75	325. 3.83	311. 3.83	305. 3.83	300. 3.83
HYDROGRAPH AT										
+	OFFE-2A	.02	1	FLOW TIME	21. 3.58	20. 3.58	19. 3.58	18. 3.58	18. 3.58	18. 3.58
HYDROGRAPH AT										
+	OFFE-1	.47	1	FLOW TIME	485. 3.67	484. 3.67	464. 3.67	445. 3.67	427. 3.67	422. 3.67
HYDROGRAPH AT										
+	OFFE-4	.47	1	FLOW TIME	348. 3.83	340. 3.83	325. 3.83	311. 3.83	305. 3.83	301. 3.83
ROUTED TO										
+	ROFFE-4	.47	1	FLOW TIME	348. 4.00	339. 4.00	324. 4.00	310. 4.00	305. 4.00	301. 4.00
4 COMBINED AT										
+	CP2	1.39	1	FLOW TIME	963. 3.83	937. 3.83	894. 3.83	851. 3.83	834. 3.83	823. 3.83
DIVERSION TO										
+	DCP2	1.39	1	FLOW TIME	788. 3.83	774. 3.83	751. 3.83	723. 3.83	711. 3.83	703. 3.83
HYDROGRAPH AT										
+	OCF2	1.39	1	FLOW TIME	175. 3.83	163. 3.83	143. 3.83	129. 3.83	123. 3.83	119. 3.83
3 COMBINED AT										
+	CP6	2.97	1	FLOW TIME	1499. 3.75	1451. 3.75	1374. 3.75	1298. 3.75	1258. 3.75	1250. 3.75
ROUTED TO										
+	BCP6	2.97	1	FLOW TIME	1509. 3.83	1463. 3.83	1386. 3.83	1309. 3.83	1279. 3.83	1262. 3.83
HYDROGRAPH AT										
+	ONE-6	1.01	1	FLOW TIME	668. 3.92	650. 3.92	621. 3.92	592. 3.92	581. 3.92	573. 3.92
ROUTED TO										
+	RONE-6	1.01	1	FLOW TIME	670. 4.00	652. 4.00	623. 4.00	594. 4.00	582. 4.00	574. 4.00
HYDROGRAPH AT										
+	ONE-4	.21	1	FLOW TIME	173. 3.58	168. 3.58	159. 3.58	151. 3.58	147. 3.67	146. 3.67
3 COMBINED AT										
+	CP7	4.19	1	FLOW TIME	2192. 3.83	2126. 3.83	2036. 3.83	1986. 3.83	1883. 3.83	1836. 3.83
HYDROGRAPH AT										
+	BEPEVE	.14	1	FLOW TIME	124. 3.75	121. 3.75	116. 3.75	111. 3.75	108. 3.75	108. 3.75
ROUTED TO										
+	BEPEVE	.14	1	FLOW TIME	125. 3.92	123. 3.92	117. 3.92	112. 3.92	110. 3.92	109. 3.92

[illegible]

+	CP13	.68	1	FLOW TIME	424. 1.83	408. 3.83	380. 3.83	353. 3.83	343. 3.83	338. 3.83
DIVERSION TO										
+	DCP13	.68	1	FLOW TIME	17. 3.33	17. 3.33	17. 3.33	17. 3.42	17. 3.42	17. 3.42
HYDROGRAPH AT										
+	DCP13	.68	1	FLOW TIME	407. 3.83	391. 3.83	363. 3.83	336. 3.83	328. 3.83	319. 3.83
HYDROGRAPH AT										
+	FWINE	.29	1	FLOW TIME	242. 3.75	242. 3.75	211. 3.75	221. 3.75	217. 3.75	214. 3.75
HYDROGRAPH AT										
+	DCP10	.80	1	FLOW TIME	121. 3.92	118. 3.92	113. 3.92	108. 3.92	105. 3.92	104. 3.92
ROUTED TO										
+	RDCP10	.80	1	FLOW TIME	131. 4.00	127. 4.00	120. 4.00	113. 4.00	111. 4.00	110. 4.00
4 COMBINED AT										
+	CP14	1.78	1	FLOW TIME	1024. 3.92	989. 3.92	929. 3.92	871. 3.92	849. 3.92	831. 3.92
DIVERSION TO										
+	DCP14	1.78	1	FLOW TIME	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58
HYDROGRAPH AT										
+	DCP14	1.78	1	FLOW TIME	794. 3.92	759. 3.92	699. 3.92	641. 3.92	619. 3.92	601. 3.92
HYDROGRAPH AT										
+	DE	.07	1	FLOW TIME	88. 3.58	86. 3.58	83. 3.58	79. 3.58	78. 3.58	77. 3.58
2 COMBINED AT										
+	CP15	1.85	1	FLOW TIME	829. 3.92	793. 3.92	732. 3.92	673. 3.92	650. 3.92	632. 3.92
HYDROGRAPH AT										
+	DCP13	.80	1	FLOW TIME	247. 3.83	246. 3.83	244. 3.83	242. 3.83	241. 3.83	240. 3.83
HYDROGRAPH AT										
+	DCP13	.80	1	FLOW TIME	17. 3.33	17. 3.33	17. 3.33	17. 3.42	17. 3.42	17. 3.42
HYDROGRAPH AT										
+	DCP14	.80	1	FLOW TIME	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58
3 COMBINED AT										
+	CP16	.80	1	FLOW TIME	494. 3.83	493. 3.83	491. 3.83	489. 3.83	488. 3.83	487. 3.83
2 COMBINED AT										
+	CP17	1.85	1	FLOW TIME	1220. 3.92	1204. 3.92	1221. 3.92	1159. 3.92	1115. 3.92	1115. 3.92
ROUTED TO										
+	RCP17	1.85	1	FLOW TIME	1301. 3.92	1266. 3.92	1201. 3.92	1136. 3.92	1111. 3.92	1093. 3.92
HYDROGRAPH AT										
+	EE	.03	1	FLOW TIME	36. 3.58	35. 3.58	33. 3.58	32. 3.58	31. 3.58	31. 3.58
HYDROGRAPH AT										
+	FE	.02	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	14. 3.58	14. 3.58	14. 3.58
HYDROGRAPH AT										
+	GE	.01	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58
4 COMBINED AT										
+	CP18	1.91	1	FLOW TIME	1323. 3.92	1287. 3.92	1221. 3.92	1159. 3.92	1130. 3.92	1112. 3.92
HYDROGRAPH AT										
+	ONE-8	.28	1	FLOW TIME	124. 3.75	119. 3.75	111. 3.75	104. 3.75	101. 3.75	98. 3.75
3 COMBINED AT										
+	CP19	2.20	1	FLOW TIME	1415. 3.92	1376. 3.92	1305. 3.92	1234. 3.92	1207. 3.92	1187. 3.92
HYDROGRAPH AT										
+	ONE-7	.21	1	FLOW TIME	241. 3.50	235. 3.50	224. 3.50	213. 3.50	209. 3.50	206. 3.50

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SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CORRIG ROUTING
(FLOW IS DIRECT RUMOFF WITHOUT BASE FLOW)

INSTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	DT	INTERPOLATED TO COMPUTATION INTERVAL PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN # 1	RATIO#	.80							
ROFFE-28	NAME	3.50	71.64	231.00	.77	5.00	71.12	230.00	.77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5651E+01 EXCESS= .0000E+00 OUTFLOW= .5651E+01 BASIN STORAGE= .1411E+02 PERCENT ERROR= -.1

FOR PLAN # 1	RATIO#	.80							
ROFFE-28	NAME	3.50	69.18	231.00	.75	5.00	68.62	230.00	.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5464E+01 EXCESS= .0000E+00 OUTFLOW= .5466E+01 BASIN STORAGE= .1388E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
ROFFE-2B	MANE		3.50	65.11	231.00	.71	5.00	64.50	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5156E+01 EXCESS= .0000E+00 OUTFLOW= .5160E+01 BASIN STORAGE= .1348E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
ROFFE-2B	MANE		3.25	61.02	230.75	.66	5.00	60.45	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4853E+01 EXCESS= .0000E+00 OUTFLOW= .4856E+01 BASIN STORAGE= .1109E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
ROFFE-2B	MANE		3.25	59.42	230.75	.65	5.00	58.84	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4734E+01 EXCESS= .0000E+00 OUTFLOW= .4737E+01 BASIN STORAGE= .1095E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
ROFFE-2B	MANE		3.00	58.17	231.00	.64	5.00	57.63	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4653E+01 EXCESS= .0000E+00 OUTFLOW= .4656E+01 BASIN STORAGE= .1439E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		5.00	328.01	225.00	1.38	5.00	328.01	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2118E+02 EXCESS= .0000E+00 OUTFLOW= .2120E+02 BASIN STORAGE= .2856E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		5.00	320.56	225.00	1.35	5.00	320.56	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2065E+02 EXCESS= .0000E+00 OUTFLOW= .2066E+02 BASIN STORAGE= .3825E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		5.00	308.14	225.00	1.29	5.00	308.14	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1977E+02 EXCESS= .0000E+00 OUTFLOW= .1978E+02 BASIN STORAGE= .2692E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		4.75	294.72	223.25	1.23	5.00	282.18	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1888E+02 EXCESS= .0000E+00 OUTFLOW= .1889E+02 BASIN STORAGE= .1880E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		4.75	288.75	223.25	1.21	5.00	277.55	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1893E+02 EXCESS= .0000E+00 OUTFLOW= .1894E+02 BASIN STORAGE= .2056E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCP4	MANE		4.50	281.26	225.00	1.19	5.00	281.26	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1838E+02 EXCESS= .0000E+00 OUTFLOW= .1831E+02 BASIN STORAGE= .1797E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	676.91	230.00	1.22	5.00	676.91	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4616E+02 EXCESS= .0000E+00 OUTFLOW= .4619E+02 BASIN STORAGE= .2536E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	659.69	230.00	1.19	5.00	659.69	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4494E+02 EXCESS= .0000E+00 OUTFLOW= .4496E+02 BASIN STORAGE= .2504E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	630.98	230.00	1.14	5.00	630.98	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4291E+02 EXCESS= .0000E+00 OUTFLOW= .4294E+02 BASIN STORAGE= .3886E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	590.94	230.00	1.08	5.00	590.94	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4086E+02 EXCESS= .0000E+00 OUTFLOW= .4089E+02 BASIN STORAGE= .3724E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	579.11	230.00	1.06	5.00	579.11	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4007E+02 EXCESS= .0000E+00 OUTFLOW= .4009E+02 BASIN STORAGE= .3639E+02 PERCENT ERROR= -.1									
FOR PLAN = 1		RATIO=	.00						
RCS	MANE		5.00	574.48	230.00	1.05	5.00	574.48	230.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3961E+02 EXCESS= .0000E+00 OUTFLOW= .3963E+02 BASIN STORAGE= .3175E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	3.50	44.28	220.50	1.67	5.00	43.45	220.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2763E+01 EXCESS= .0000E+00 OUTFLOW= .2763E+01 BASIN STORAGE= .3220E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	3.50	43.34	220.50	1.63	5.00	42.43	220.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2701E+01 EXCESS= .0000E+00 OUTFLOW= .2698E+01 BASIN STORAGE= .3193E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	3.75	43.09	221.25	1.57	5.00	40.89	225.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2597E+01 EXCESS= .0000E+00 OUTFLOW= .2594E+01 BASIN STORAGE= .2671E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	4.00	39.73	224.00	1.50	5.00	38.73	220.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2486E+01 EXCESS= .0000E+00 OUTFLOW= .2483E+01 BASIN STORAGE= .3261E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	4.25	38.93	221.00	1.48	5.00	38.21	225.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2445E+01 EXCESS= .0000E+00 OUTFLOW= .2443E+01 BASIN STORAGE= .3527E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFE-3A	MAHE	4.25	38.47	221.00	1.46	5.00	37.82	225.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2416E+01 EXCESS= .0000E+00 OUTFLOW= .2415E+01 BASIN STORAGE= .3512E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	350.33	225.00	1.20	5.00	350.33	225.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2701E+02 EXCESS= .0000E+00 OUTFLOW= .2703E+02 BASIN STORAGE= .1506E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	340.60	225.00	1.17	5.00	340.60	225.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2629E+02 EXCESS= .0000E+00 OUTFLOW= .2620E+02 BASIN STORAGE= .1405E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	325.26	230.00	1.12	5.00	325.26	230.00	1.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2509E+02 EXCESS= .0000E+00 OUTFLOW= .2510E+02 BASIN STORAGE= .1475E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	310.50	230.00	1.06	5.00	310.50	230.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2390E+02 EXCESS= .0000E+00 OUTFLOW= .2391E+02 BASIN STORAGE= .1653E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	304.56	230.00	1.04	5.00	304.56	230.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2343E+02 EXCESS= .0000E+00 OUTFLOW= .2344E+02 BASIN STORAGE= .1599E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RC1	MAHE	5.00	300.49	230.00	1.03	5.00	300.49	230.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2310E+02 EXCESS= .0000E+00 OUTFLOW= .2311E+02 BASIN STORAGE= .1588E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFE-4	MAHE	5.00	347.92	240.00	1.29	5.00	347.92	240.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3261E+02 EXCESS= .0000E+00 OUTFLOW= .3263E+02 BASIN STORAGE= .3730E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFE-4	MAHE	5.00	338.67	240.00	1.26	5.00	338.67	240.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3176E+02 EXCESS= .0000E+00 OUTFLOW= .3178E+02 BASIN STORAGE= .3675E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFE-4	MAHE	5.00	324.39	245.00	1.20	5.00	324.39	245.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3038E+02 EXCESS= .0000E+00 OUTFLOW= .3038E+02 BASIN STORAGE= .3600E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFE-4	MAHE	5.00	310.19	245.00	1.15	5.00	310.19	245.00	1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2897E+02 EXCESS= .0000E+00 OUTFLOW= .2900E+02 BASIN STORAGE= .3235E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MAHE	5.00	304.53	245.00	1.13	5.00	304.53	245.00	1.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2843E+02 EXCESS= .0000E+00 OUTFLOW= .2844E+02 BASIN STORAGE= .3194E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MAHE	5.00	300.57	245.00	1.11	5.00	300.57	245.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2804E+02 EXCESS= .0000E+00 OUTFLOW= .2806E+02 BASIN STORAGE= .3172E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1508.75	230.00	.74	5.00	1508.75	230.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1177E+03 EXCESS= .0000E+00 OUTFLOW= .1177E+03 BASIN STORAGE= .2635E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1462.63	230.00	.72	5.00	1462.63	230.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1143E+03 EXCESS= .0000E+00 OUTFLOW= .1143E+03 BASIN STORAGE= .2616E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1386.40	230.00	.69	5.00	1386.40	230.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1088E+03 EXCESS= .0000E+00 OUTFLOW= .1088E+03 BASIN STORAGE= .2514E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1309.49	230.00	.65	5.00	1309.49	230.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1034E+03 EXCESS= .0000E+00 OUTFLOW= .1034E+03 BASIN STORAGE= .2422E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1279.17	230.00	.64	5.00	1279.17	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1013E+03 EXCESS= .0000E+00 OUTFLOW= .1013E+03 BASIN STORAGE= .2349E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MAHE	5.00	1261.68	230.00	.63	5.00	1261.68	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9989E+02 EXCESS= .0000E+00 OUTFLOW= .9991E+02 BASIN STORAGE= .3325E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	669.71	240.00	1.23	5.00	669.71	240.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6625E+02 EXCESS= .0000E+00 OUTFLOW= .6626E+02 BASIN STORAGE= .2512E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	652.03	240.00	1.20	5.00	652.03	240.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6449E+02 EXCESS= .0000E+00 OUTFLOW= .6450E+02 BASIN STORAGE= .2484E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	622.71	240.00	1.14	5.00	622.71	240.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6157E+02 EXCESS= .0000E+00 OUTFLOW= .6159E+02 BASIN STORAGE= .2426E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	593.58	240.00	1.09	5.00	593.58	240.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5868E+02 EXCESS= .0000E+00 OUTFLOW= .5869E+02 BASIN STORAGE= .2367E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	581.98	240.00	1.07	5.00	581.98	240.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5751E+02 EXCESS= .0000E+00 OUTFLOW= .5755E+02 BASIN STORAGE= .2344E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROHE-6	MAHE	5.00	573.88	240.00	1.05	5.00	573.88	240.00	1.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5673E+02 EXCESS= .0000E+00 OUTFLOW= .5675E+02 BASIN STORAGE= .2327E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
REPEVE	MAHE	5.00	124.98	235.00	1.36	5.00	124.98	235.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1010E+02 BASIN STORAGE= .1000E+01 PERCENT ERROR= .4									
FOR PLAN = 1 RATIO= .00									
REKPYE	MAHE	5.00	122.08	235.00	1.33	5.00	122.08	235.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9815E+01 EXCESS= .0000E+00 OUTFLOW= .9843E+01 BASIN STORAGE= .9912E+02 PERCENT ERROR= .4									

FOR PLAN = 1 RATIO=	RRKPYE	MANE	5.00	117.22	235.00	1.27	5.00	117.22	235.00	1.27	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.9394E+01	EXCESS=	.0000E+00	OUTFLOW=	.9421E+01	BASIN STORAGE=	.9761E+03	PERCENT ERROR=	-.4		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	112.33	235.00	1.21	5.00	112.33	235.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.8976E+01	EXCESS=	.0000E+00	OUTFLOW=	.9003E+01	BASIN STORAGE=	.9608E+03	PERCENT ERROR=	-.4		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	110.36	235.00	1.19	5.00	110.36	235.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.8810E+01	EXCESS=	.0000E+00	OUTFLOW=	.8837E+01	BASIN STORAGE=	.9545E+03	PERCENT ERROR=	-.4		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	108.98	235.00	1.18	5.00	108.98	235.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.8694E+01	EXCESS=	.0000E+00	OUTFLOW=	.8722E+01	BASIN STORAGE=	.9502E+03	PERCENT ERROR=	-.4		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	42.25	230.00	1.50	5.00	42.25	230.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2689E+01	EXCESS=	.0000E+00	OUTFLOW=	.2712E+01	BASIN STORAGE=	.1078E+01	PERCENT ERROR=	-1.2		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	41.65	230.00	1.46	5.00	41.65	230.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2634E+01	EXCESS=	.0000E+00	OUTFLOW=	.2646E+01	BASIN STORAGE=	.1070E+01	PERCENT ERROR=	-1.2		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	40.59	230.00	1.40	5.00	40.59	230.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2517E+01	EXCESS=	.0000E+00	OUTFLOW=	.2538E+01	BASIN STORAGE=	.1058E+01	PERCENT ERROR=	-1.2		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	39.47	230.00	1.34	5.00	39.47	230.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2410E+01	EXCESS=	.0000E+00	OUTFLOW=	.2431E+01	BASIN STORAGE=	.1046E+01	PERCENT ERROR=	-1.3		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	40.53	230.00	1.32	5.00	40.53	230.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2368E+01	EXCESS=	.0000E+00	OUTFLOW=	.2390E+01	BASIN STORAGE=	.1101E+01	PERCENT ERROR=	-1.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	40.15	230.00	1.30	5.00	40.15	230.00	1.30
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.2318E+01	EXCESS=	.0000E+00	OUTFLOW=	.2341E+01	BASIN STORAGE=	.1158E+01	PERCENT ERROR=	-1.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	97.17	235.00	.73	5.00	97.17	235.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.7953E+01	EXCESS=	.0000E+00	OUTFLOW=	.7977E+01	BASIN STORAGE=	.9940E+02	PERCENT ERROR=	-.4		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	94.86	235.00	.71	5.00	94.86	235.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.7758E+01	EXCESS=	.0000E+00	OUTFLOW=	.7781E+01	BASIN STORAGE=	.9852E+02	PERCENT ERROR=	-.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	90.95	235.00	.68	5.00	90.95	235.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.7416E+01	EXCESS=	.0000E+00	OUTFLOW=	.7460E+01	BASIN STORAGE=	.3140E+01	PERCENT ERROR=	-.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	86.99	235.00	.65	5.00	86.99	235.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.7116E+01	EXCESS=	.0000E+00	OUTFLOW=	.7141E+01	BASIN STORAGE=	.1123E+01	PERCENT ERROR=	-.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	85.40	235.00	.64	5.00	85.40	235.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.6989E+01	EXCESS=	.0000E+00	OUTFLOW=	.7014E+01	BASIN STORAGE=	.1117E+01	PERCENT ERROR=	-.5		
FOR PLAN = 1 RATIO=	.00	RRKPYE	MANE	5.00	84.28	235.00	.63	5.00	84.28	235.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.6900E+01	EXCESS=	.0000E+00	OUTFLOW=	.6925E+01	BASIN STORAGE=	.1112E+01	PERCENT ERROR=	-.5		

FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	2.68	294.93	235.91	.74	5.00	392.86	235.00	.74	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2539E+02 EXCESS= .0000E+00 OUTFLOW= .2539E+02 BASIN STORAGE= .3286E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	3.71	287.84	235.64	.72	5.00	286.29	235.00	.72	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2473E+02 EXCESS= .0000E+00 OUTFLOW= .2473E+02 BASIN STORAGE= .3165E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	3.76	273.84	234.34	.69	5.00	272.46	235.00	.69	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2360E+02 EXCESS= .0000E+00 OUTFLOW= .2361E+02 BASIN STORAGE= .3050E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	2.81	262.79	235.92	.66	5.00	260.69	235.00	.66	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2253E+02 EXCESS= .0000E+00 OUTFLOW= .2253E+02 BASIN STORAGE= .3189E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	2.83	257.62	235.16	.64	5.00	257.08	235.00	.64	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3209E+02 EXCESS= .0000E+00 OUTFLOW= .3209E+02 BASIN STORAGE= .3871E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	2.86	253.48	236.43	.63	5.00	251.47	235.00	.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2179E+02 EXCESS= .0000E+00 OUTFLOW= .2179E+02 BASIN STORAGE= .3908E+02 PERCENT ERROR= .0										
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	97.17	235.00	-1.00	5.00	97.17	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	94.87	235.00	-1.00	5.00	94.87	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	91.03	235.00	-1.00	5.00	91.03	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	87.08	235.00	-1.00	5.00	87.08	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	85.50	235.00	-1.00	5.00	85.50	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP10	NAME	5.00	84.39	235.00	-1.00	5.00	84.39	235.00	-1.00	
FOR PLAN = 1	RATIO=	.00								
ROCP11	NAME	5.00	349.85	235.00	.71	5.00	349.85	235.00	.71	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3066E+02 EXCESS= .0000E+00 OUTFLOW= .3066E+02 BASIN STORAGE= .7691E+02 PERCENT ERROR= .1										
FOR PLAN = 1	RATIO=	.00								
ROCP11	NAME	5.00	340.06	235.00	.70	5.00	340.06	235.00	.70	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3287E+02 EXCESS= .0000E+00 OUTFLOW= .3289E+02 BASIN STORAGE= .7642E+02 PERCENT ERROR= .1										
FOR PLAN = 1	RATIO=	.00								
ROCP11	NAME	5.00	323.25	235.00	.66	5.00	323.25	235.00	.66	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2852E+02 EXCESS= .0000E+00 OUTFLOW= .2854E+02 BASIN STORAGE= .6652E+02 PERCENT ERROR= .1										
FOR PLAN = 1	RATIO=	.00								
ROCP11	NAME	5.00	306.26	235.00	.63	5.00	306.26	235.00	.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2720E+02 EXCESS= .0000E+00 OUTFLOW= .2723E+02 BASIN STORAGE= .7100E+02 PERCENT ERROR= .1										
FOR PLAN = 1	RATIO=	.00								
ROCP11	NAME	5.00	301.21	240.00	.62	5.00	301.21	240.00	.62	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2669E+02 EXCESS= .0000E+00 OUTFLOW= .2671E+02 BASIN STORAGE										

FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	293.46	230.00	1.40	5.00	293.46	230.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2574E+02 EXCESS= .0000E+00 OUTFLOW= .2574E+02 BASIN STORAGE= .3204E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	286.12	230.00	1.36	5.00	286.12	230.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2510E+02 EXCESS= .0000E+00 OUTFLOW= .2512E+02 BASIN STORAGE= .3160E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	273.93	230.00	1.31	5.00	273.93	230.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2404E+02 EXCESS= .0000E+00 OUTFLOW= .2405E+02 BASIN STORAGE= .3106E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	261.79	230.00	1.25	5.00	261.79	230.00	1.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2299E+02 EXCESS= .0000E+00 OUTFLOW= .2300E+02 BASIN STORAGE= .3044E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	256.95	230.00	1.23	5.00	256.95	230.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2257E+02 EXCESS= .0000E+00 OUTFLOW= .2200E+02 BASIN STORAGE= .3019E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
REKLME	MAHE	5.00	253.78	235.00	1.21	5.00	253.78	235.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2228E+02 EXCESS= .0000E+00 OUTFLOW= .2229E+02 BASIN STORAGE= .3001E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.10	134.15	234.38	-1.00	5.00	134.07	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.11	130.99	234.40	-1.00	5.00	130.95	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.13	124.75	235.49	-1.00	5.00	124.65	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.15	119.26	235.16	-1.00	5.00	119.12	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.15	117.28	235.51	-1.00	5.00	117.01	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP11	MAHE	1.16	115.31	236.12	-1.00	5.00	115.11	235.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	130.57	240.00	-1.00	5.00	130.57	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	126.73	240.00	-1.00	5.00	126.73	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	120.24	240.00	-1.00	5.00	120.24	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	112.64	240.00	-1.00	5.00	112.64	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	111.17	245.00	-1.00	5.00	111.17	245.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP10	MAHE	5.00	110.33	245.00	-1.00	5.00	110.33	245.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	2.11	1305.91	235.29	1.29	5.00	1301.24	235.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1273E+03 EXCESS= .0000E+00 OUTFLOW= .1273E+03 BASIN STORAGE= .4366E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	2.11	1272.96	236.03	1.26	5.00	1265.80	235.00	1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW- .1240E+03 EXCESS- .0000E+00 OUTFLOW- .1340E+03 BASIN STORAGE- .4511E+02 PERCENT ERROR- .0

FOR PLAN = 1 RATIO- .00
RCP17 MAKE 2.18 1212.23 237.29 1.20 5.00 1209.82 235.00 1.20

CONTINUITY SUMMARY (AC-FT) - INFLOW- .1186E+03 EXCESS- .0000E+00 OUTFLOW- .1186E+03 BASIN STORAGE- .4295E+02 PERCENT ERROR- .0

FOR PLAN = 1 RATIO- .00
RCP17 MAKE 2.22 1148.58 237.80 1.15 5.00 1135.93 235.00 1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW- .1132E+03 EXCESS- .0000E+00 OUTFLOW- .1132E+03 BASIN STORAGE- .4252E+02 PERCENT ERROR- .0

FOR PLAN = 1 RATIO- .00
RCP17 MAKE 2.24 1126.84 237.60 1.13 5.00 1111.22 235.00 1.13

CONTINUITY SUMMARY (AC-FT) - INFLOW- .1111E+03 EXCESS- .0000E+00 OUTFLOW- .1111E+03 BASIN STORAGE- .4331E+02 PERCENT ERROR- .0

FOR PLAN = 1 RATIO- .00
RCP17 MAKE 2.26 1107.28 236.97 1.11 5.00 1092.96 235.00 1.11

CONTINUITY SUMMARY (AC-FT) - INFLOW- .1095E+03 EXCESS- .0000E+00 OUTFLOW- .1095E+03 BASIN STORAGE- .4636E+02 PERCENT ERROR- .0

*** NORMAL END OF HEC-1 ***

Appendix A-3: Standard Form 4 and HEC-1 for Proposed Conditions

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

TIME OF CONCENTRATION

CLARK COUNTY

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Figure 1. The effect of the concentration of the inhibitor on the rate of polymerization of α -methylstyrene in the presence of SnCl_4 at 25°C .

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THE CONCORDIA IN MINNESOTA

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2023-2024, 2024-2025, 2025-2026, 2026-2027, 2027-2028, 2028-2029, 2029-2030, 2030-2031, 2031-2032, 2032-2033, 2033-2034, 2034-2035, 2035-2036, 2036-2037, 2037-2038, 2038-2039, 2039-2040, 2040-2041, 2041-2042, 2042-2043, 2043-2044, 2044-2045, 2045-2046, 2046-2047, 2047-2048, 2048-2049, 2049-2050, 2050-2051, 2051-2052, 2052-2053, 2053-2054, 2054-2055, 2055-2056, 2056-2057, 2057-2058, 2058-2059, 2059-2060, 2060-2061, 2061-2062, 2062-2063, 2063-2064, 2064-2065, 2065-2066, 2066-2067, 2067-2068, 2068-2069, 2069-2070, 2070-2071, 2071-2072, 2072-2073, 2073-2074, 2074-2075, 2075-2076, 2076-2077, 2077-2078, 2078-2079, 2079-2080, 2080-2081, 2081-2082, 2082-2083, 2083-2084, 2084-2085, 2085-2086, 2086-2087, 2087-2088, 2088-2089, 2089-2090, 2090-2091, 2091-2092, 2092-2093, 2093-2094, 2094-2095, 2095-2096, 2096-2097, 2097-2098, 2098-2099, 2099-2100, 2100-2101, 2101-2102, 2102-2103, 2103-2104, 2104-2105, 2105-2106, 2106-2107, 2107-2108, 2108-2109, 2109-2110, 2110-2111, 2111-2112, 2112-2113, 2113-2114, 2114-2115, 2115-2116, 2116-2117, 2117-2118, 2118-2119, 2119-2120, 2120-2121, 2121-2122, 2122-2123, 2123-2124, 2124-2125, 2125-2126, 2126-2127, 2127-2128, 2128-2129, 2129-2130, 2130-2131, 2131-2132, 2132-2133, 2133-2134, 2134-2135, 2135-2136, 2136-2137, 2137-2138, 2138-2139, 2139-2140, 2140-2141, 2141-2142, 2142-2143, 2143-2144, 2144-2145, 2145-2146, 2146-2147, 2147-2148, 2148-2149, 2149-2150, 2150-2151, 2151-2152, 2152-2153, 2153-2154, 2154-2155, 2155-2156, 2156-2157, 2157-2158, 2158-2159, 2159-2160, 2160-2161, 2161-2162, 2162-2163, 2163-2164, 2164-2165, 2165-2166, 2166-2167, 2167-2168, 2168-2169, 2169-2170, 2170-2171, 2171-2172, 2172-2173, 2173-2174, 2174-2175, 2175-2176, 2176-2177, 2177-2178, 2178-2179, 2179-2180, 2180-2181, 2181-2182, 2182-2183, 2183-2184, 2184-2185, 2185-2186, 2186-2187, 2187-2188, 2188-2189, 2189-2190, 2190-2191, 2191-2192, 2192-2193, 2193-2194, 2194-2195, 2195-2196, 2196-2197, 2197-2198, 2198-2199, 2199-2200, 2200-2201, 2201-2202, 2202-2203, 2203-2204, 2204-2205, 2205-2206, 2206-2207, 2207-2208, 2208-2209, 2209-2210, 2210-2211, 2211-2212, 2212-2213, 2213-2214, 2214-2215, 2215-2216, 2216-2217, 2217-2218, 2218-2219, 2219-2220, 2220-2221, 2221-2222, 2222-2223, 2223-2224, 2224-2225, 2225-2226, 2226-2227, 2227-2228, 2228-2229, 2229-2230, 2230-2231, 2231-2232, 2232-2233, 2233-2234, 2234-2235, 2235-2236, 2236-2237, 2237-2238, 2238-2239, 2239-2240, 2240-2241, 2241-2242, 2242-2243, 2243-2244, 2244-2245, 2245-2246, 2246-2247, 2247-2248, 2248-2249, 2249-2250, 2250-2251, 2251-2252, 2252-2253, 2253-2254, 2254-2255, 2255-2256, 2256-2257, 2257-2258, 2258-2259, 2259-2260, 2260-2261, 2261-2262, 2262-2263, 2263-2264, 2264-2265, 2265-2266, 2266-2267, 2267-2268, 2268-2269, 2269-2270, 2270-2271, 2271-2272, 2272-2273, 2273-2274, 2274-2275, 2275-2276, 2276-2277, 2277-2278, 2278-2279, 2279-2280, 2280-2281, 2281-2282, 2282-2283, 2283-2284, 2284-2285, 2285-2286, 2286-2287, 2287-2288, 2288-2289, 2289-2290, 2290-2291, 2291-2292, 2292-2293, 2293-2294, 2294-2295, 2295-2296, 2296-2297, 2297-2298, 2298-2299, 2299-2300, 2300-2301, 2301-2302, 2302-2303, 2303-2304, 2304-2305, 2305-2306, 2306-2307, 2307-2308, 2308-2309, 2309-2310, 2310-2311, 2311-2312, 2312-2313, 2313-2314, 2314-2315, 2315-2316, 2316-2317, 2317-2318, 2318-2319, 2319-2320, 2320-2321, 2321-2322, 2322-2323, 2323-2324, 2324-2325, 2325-2326, 2326-2327, 2327-2328, 2328-2329, 2329-2330, 2330-2331, 2331-2332, 2332-2333, 2333-2334, 2334-2335, 2335-2336, 2336-2337, 2337-2338, 2338-2339, 2339-2340, 2340-2341, 2341-2342, 2342-2343, 2343-2344, 2344-2345, 2345-2346, 2346-2347, 2347-2348, 2348-2349, 2349-2350, 2350-2351, 2351-2352, 2352-2353, 2353-2354, 2354-2355, 2355-2356, 2356-2357, 2357-2358, 2358-2359, 2359-2360, 2360-2361, 2361-2362, 2362-2363, 2363-2364, 2364-2365, 2365-2366, 2366-2367, 2367-2368, 2368-2369, 2369-2370, 2370-2371, 2371-2372, 2372-2373, 2373-2374, 2374-2375, 2375-2376, 2376-2377, 2377-2378, 2378-2379, 2379-2380, 2380-2381, 2381-2382, 2382-2383, 2383-2384, 2384-2385, 2385-2386, 2386-2387, 2387-2388, 2388-2389, 2389-2390, 2390-2391, 2391-2392, 2392-2393, 2393-2394, 2394-2395, 23

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THE UNIVERSITY OF CHICAGO

Keywords: child sexual abuse; disclosure; social support

Figure 1. The study area.

Journal of Management Education 36(8) 907-920

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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* SEPTEMBER 1990 *
* VERSION 4.2 *
* WIN DATE 01/24/2006 TIME 16:16:05 *
*****

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```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

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X X XXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXX XXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC108, HEC109, AND HEC109M.

THE DEFINITIONS OF VARIABLES -RTIME- AND -RTION- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL, LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE, NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*** FREE ***
*DIAGRAM
1 ID *****
2 ID * THE LANDWELL COMPANY *
3 ID * CONCEPTUAL DRAINAGE STUDY FOR *
4 ID * THE EASTSIDE PROPERTIES *
5 ID * PROPOSED CONDITIONS *
6 ID * INPUT FILE = FRCIO.DAT *
7 ID * INPUT FILE DATE = 01/20/06 *
8 ID * DESIGN STORM=10-YEAR 6-HOUR *
9 ID * STORM DISTRIBUTION = SDN #3 *
10 ID * MODELED BY-ANN REEDINGTON, EIT (FRC&J) *
11 ID * ALEX YESCAR, EIT (FRC&J) *
12 ID *****
13 ID DRAINAGE AREA
14 ID (SQUARE MILES) DAMP
15 ID 0-0.5 .29
16 ID 0.5-1 .975
17 ID 1-2 .55
18 ID 2-3 .935
19 ID 3-4 .915
20 ID 4-5 .908
21 ID
22 ID
23 ID
24 ID 5 0 0 300
25 ID 5 0 0
26 ID 5 0 0
27 JR FRC 0.99 0.975 0.95 0.925 0.915 0.908
28 *
29 KK CND-1
30 BA 0.084
31 PB 1.74
32 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
33 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
34 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
35 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.323 0.353 0.409
36 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
37 PC 0.86 0.868 0.874 0.888 0.91 0.926 0.927 0.95 0.97 0.976
38 PC 0.982 0.985 0.987 0.999 0.99 0.993 0.993 0.994 0.995 0.998
39 PC 0.998 0.999 1
40 LE 0 76.27
41 UD 0.107
42 *
43 KK CND-2
44 BA 0.276
45 PB 1.74
46 LE 0 78.10
47 UD 0.194

```

1 HEC-1 INPUT PAGE 2

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
48 KK OFFD-2B
49 BA 0.137
50 PB 1.74
51 LE 0 61.80
52 UD 0.268
53 *
54 KKXOFFD-2B
55 RM ROUTE OFFD-2B
56 RD 3380 0.019 0.035 0 TRAP
57 *
58 KK CP25
59 KM COMBINE CND-1, CND-2, KOFFD-2B
60 KC 1
61 *
62 KK CND-2A
63 BA 0.222

```

```

76 XEROFFD-1A
77 IN ROUTE OFFD-1A IN CHANNEL WEST ALONG LAKE MEAD DRIVE
78 ED 3300 0.00463 0.033 0 TRAP 12 4

```

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222

1.1.1 **10** **1** **2** **3** **4** **5** **6** **7** **8** **9** **10**

[illegible]

```

109      XX      REF2A
110      FM      RETTE  PABCO REALIGNMENT IN STORM DRAIN TO DETENTION BASIN 1
111      ED      2400  0.009  0.015      0  TRAP      10      0

```

3

中国音乐史学 音乐史学 音乐史学

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Figure 1. The study area and the location of the sampling stations. The map shows the coastline of the study area with sampling stations numbered 1 through 10. The inset map shows the location of the study area within the larger context of the region.

[illegible]

129 UD 0.082
 *
 130 KK OFFD-26
 131 BA 0.012
 132 PB 1.74
 133 LS 0 94.35
 134 UD 0.091
 *
 135 KK CP4
 136 KM COMBINE OFFD-26 WITH GND-26
 137 KC 2
 *
 138 KK CP5
 139 KM COMBINE BASINS CP1,CP4
 140 KC 2
 *
 141 KK RCP5
 142 KM ROUTE ALONG BURKHOLDER RD TO DETENTION BASIN 1
 143 ED 1750 .0230 .013 0 CIRC 4.5 0
 *
 144 KK GND-20
 145 BA 0.153
 146 PB 1.74
 147 LS 0 93.44
 148 UD 0.060
 *

1

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

149 KK GND-21
 150 BA 0.089
 151 PB 1.74
 152 LS 0 88.88
 153 UD 0.064
 *
 154 KK CP8
 155 KM COMBINE BASINS GND-20,21 WITH RCP5
 156 KC 3
 *
 157 KK GND-27
 158 BA 0.087
 159 PB 1.74
 160 LS 0 86.38
 161 UD 0.084
 *
 162 KK OFFD-27A
 163 BA 0.073
 164 PB 1.74
 165 LS 0 87.64
 166 UD 0.115
 *
 167 KK OFFD-27B
 168 BA 0.042
 169 PB 1.74
 170 LS 0 88.36
 171 UD 0.110
 *
 172 KK CP6
 173 KM COMBINE OFFD-27A AND OFFD-27B WITH GND-27
 174 KC 3
 *
 175 KK RCP6
 176 KM ROUTE ALONG WARM SPRINGS RD TO INTERSECTION WITH EASTSIDE REAL ESTATE PKWY
 177 ED 1555 .0129 .013 0 CIRC 5.5 0
 *
 178 KK GND-22
 179 BA 0.057
 180 PB 1.74
 181 LS 0 85.08
 182 UD 0.073
 *

1

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

183 KK CP7
 184 KM COMBINE BASINS GND-22 AND RCP6
 185 KC 2
 *
 186 KK RCP7
 187 KM ROUTE ALONG WARM SPRINGS RD TO DETENTION BASIN 1
 188 ED 1750 .0046 .013 0 CIRC 7 0
 *
 189 KK CP9
 190 KM COMBINE CP7, CP8, AND CP2A
 191 KC 3
 *
 192 KK DIV1
 193 DT DIV1
 194 DI 0 831 1000 1500 2000
 195 DO 0 831 831 831 831
 *
 196 KK DET1
 197 MD 1 2 0 0 31

```

198      KM MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET
199      RS      1      STOR      -1
200      SV      0      7.97  15.52  23.99  32.70  42.11
201      SE      0      2      3      4      5      6
202      SD      0      28      50      79      94      129
      *

203      KK DIV1
204      KR DIV1
      *

205      KK CP10
206      KC      3
      *

207      KK SCPI0
208      KM ROUTE (FROM DETENTION BASIN 1) ALONG BURNHOLDER RD
209      RD 1400 .0214 .015 0 DEEP 8 0
      *

210      KK CND-18
211      SA 0.034
212      PB 1.74
213      LS 0 94.51
214      UD 0.059
      *

```

1

HEC-1 INPUT

PAGE 7

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

215      KK CND-18
216      KM ROUTE CND-18 THROUGH CND-19 TO COMBINATION CP11
217      RD 2000 .005 .013 0 CIRC 3.5 0
      *

218      KK CND-19
219      SA 0.109
220      PB 1.74
221      LS 0 93.76
222      UD 0.074
      *

223      KK CP11
224      KM COMBINE CND-18,19, AND CP9
225      KC      3
      *

226      KK SCPI1
227      KM ROUTE CP11 ALONG BURNHOLDER BLVD TO COMBINATION WITH CND-13,14
228      RD 1650 .017 .015 0 DEEP 8 0
      *

229      KK CND-13
230      SA 0.109
231      PB 1.74
232      LS 0 93.85
233      UD 0.081
      *

234      KK CND-14
235      SA 0.102
236      PB 1.74
237      LS 0 81.54
238      UD 0.122
      *

239      KK CP12
240      KM COMBINE CND-13,14, AND SCPI1
241      KC      3
      *

242      KK SCPI2
243      KM ROUTE CP12 ALONG BURNHOLDER RD TO COMBINATION WITH CND-12
244      RD 1300 .1218 .015 0 DEEP 8 0
      *

245      KK CND-12
246      SA 0.015
247      PB 1.74
248      LS 0 84.07
249      UD 0.082
      *

```

1

HEC-1 INPUT

PAGE 8

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

250      KK CP13
251      KM COMBINE CND-12 WITH SCPI2
252      KC      2
      *

253      KK SCPI3
254      KM ROUTE CP13 ALONG BURNHOLDER RD TO INTERSECTION WITH SUNSET RD
255      RD 800 .02 .015 0 DEEP 10 0
      *

256      KK CND-10
257      SA 0.136
258      PB 1.74
259      LS 0 83.85
260      UD 0.081
      *

261      KK CP14
262      KM COMBINE CND-10 WITH CP13
263      KC      2
      *

264      KK CND-24
265      SA 0.138
266      PB 1.74

```

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267      LE      0      79.25
268      UD      0.086
      *

269      KK ROND-24
270      KM ROUTE OND-24 ALONG SUNSET RD TO INTERSECTION WITH WATER ST
271      RD      1550 .0168 .013 0 CIRC 3.5 0
      *

272      KK OND-23
273      BA      0.130
274      PB      1.74
275      LE      0      73.85
276      UD      0.104
      *

277      KK CP15
278      KM COMBINE OND-23 WITH OND-24
279      KC      2
      *

280      KK RCP15
281      KM ROUTE C14 ALONG SUNSET RD TO COMBINATION WITH OND-15
282      RD      2050 .0195 .013 0 CIRC 4.5 0
      *

```

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HEC-1 INPUT

PAGE 9

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

283      KK OND-15
284      BA      0.146
285      PB      1.74
286      LE      0      84.46
287      UD      0.116
      *

288      KK CP16
289      KM COMBINE OND-15 WITH CP15
290      KC      2
      *

291      KK RCP16
292      KM ROUTE C15 ALONG SUNSET RD TO INTERSECTION WITH BURKHOLDER RD
293      RD      2350 .0128 .013 0 CIRC 5 0
      *

294      KK OND-11
295      BA      0.106
296      PB      1.74
297      LE      0      83.89
298      UD      0.078
      *

299      KK CP17
300      KM COMBINE OND-11 WITH CP16 AND CP14
301      KC      3
      *

302      KK RCP17
303      KM ROUTE CP17 ALONG BURKHOLDER RD TO ATHENS AVE
304      RD      1350 .0104 .015 0 DEEP 12 0
      *

305      KK OND-5
306      BA      0.102
307      PB      1.74
308      LE      0      81.85
309      UD      0.083
      *

310      KK OND-6
311      BA      0.404
312      PB      1.74
313      LE      0      85.70
314      UD      0.112
      *

315      KK CP18
316      KM COMBINE RCP17 WITH OND-5 AND OND-6
317      KC      3
      *

```

1

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

318      KK OND-17
319      BA      0.197
320      PB      1.74
321      LE      0      93.11
322      UD      0.128
      *

323      KK ROND-17
324      KM ROUTE BASIN OND-17 TO MONARK DRIVE
325      RD      1000 0.0105 0.013 0 CIRC 5
      *

326      KK OND-8
327      BA      0.238
328      PB      1.74
329      LE      0      77.73
330      UD      0.126
      *

331      KK CP19
332      KM COMBINE ROND-17 WITH BASIN OND-8
333      KC      2
      *

334      KK RCP19
335      KM ROUTE FLOWS TO ATHENS AT EASTSIDE PKWY

```

336	RD	3200	0.00571	0.015	0	TRAP	7	0
337	KK	OND-16						
338	BA	0.065						
339	FB	1.74						
340	LS	0	72.50					
341	UD	0.099						
342	KK	OND-16						
343	RM	ROUTE STREET FLOW TO ATHENS AVENUE						
344	RD	3500	0.02	0.015	0	TRAP	80	0
345	KK	OND-7						
346	BA	0.329						
347	FB	1.74						
348	LS	0	86.04					
349	UD	0.114						
350	KK	CP20						
351	RM	COMBINE CP19 WITH OND-16 AND OND-7						
352	HC	3						

REC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

353	KK	BCP20						
354	RM	ROUTE CP20 TO BURKHOLDER BOULEVARD						
355	RD	3900	0.0053	0.015	0	TRAP	8	0
356	KK	CP21						
357	RM	COMBINE BCP20 WITH C17						
358	HC	2						
359	KK	BCP21						
360	RM	ROUTE CP21 ALONG BURKHOLDER BLVD						
361	RD	2100	.0162	.015	0	TRAP	10	0
362	KK	OND-4						
363	BA	0.244						
364	FB	1.74						
365	LS	0	80.93					
366	UD	0.116						
367	KK	CP22						
368	RM	COMBINE BCP21 WITH OND-4						
369	HC	2						
370	KK	DIV2						
371	XD	0	0	0	0	21		
372	DT	DIV2						
373	DI	0	1542	2000	3000			
374	DQ	0	1542	1542	1542			
375	KK	DET2						
376	RM	MULTI-USE DETENTION BASIN, BYPASS 10-YR FLOWS, 1-24" OUTLET, 1' SUBMERGED						
377	RD	1	2					
378	RS	1	STOP	>1				
379	SV	0	10.23	18.12	26.28	34.71	43.42	52.41
380	SE	0	2	3	4	5	6	7
381	EQ	0	56	88	121	170	180	200
382	KK	DIV2						
383	DR	DIV2						
384	KK	CP23						
385	HC	2						

REC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

386	KK	BCP23						
387	RM	ROUTE CP23 ALONG BURKHOLDER TO PROPERTY LINE						
388	RD	956	.0135	.015	0	TRAP	10	0
389	KK	OND-3						
390	BA	0.047						
391	FB	1.74						
392	LS	0	77					
393	UD	0.094						
394	KK	CP24						
395	RM	COMBINE CP23 WITH OND-3						
396	HC	2						
397	KK	OND-9						
398	BA	0.026						
399	FB	1.74						
400	LS	0	65.71					
401	UD	0.096						
402	KK	BKPYD						
403	BA	0.139						
404	FB	1.74						


```

405      LS      0      83.7
406      UD      0.271
      *
407      KK      RSKPVD
408      KM      PALO VERDE
409      RD      5140      0.017      .015      0      TRAP      80      0
      *
410      KK      BRKMD
411      BA      0.034
412      FB      1.74
413      LS      0      85.49
414      UD      0.163
      *
415      KK      BRKMD
416      KM      MAJOR THEN PALO VERDE
417      RD      4720      0.016      .015      0      TRAP      80      0
      *
418      KK      CRMD
419      BA      0.206
420      FB      1.74
421      LS      0      95.53
422      UD      0.282
      *

```

REC-1 INPUT

PAGE 13

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

423      KK      DCRMD
424      KM      FLOW SPLIT AT MAJOR AND CENTER
425      KM      DIVERT OUT FLOW IN CENTER STREET
426      DT      DCRMD
427      DI      0      50      300
428      DQ      0      35      150
      *
429      KK      RDCRMD
430      KM      MAJOR
431      RD      5125      0.017      .015      0      TRAP      80      0
      *
432      KK      CP25A
433      KM      COMBINE RSKPVD, BRKMD, AND RDCRMD
434      KC      3
      *
435      KK      WSPVD
436      BA      0.265
437      FB      1.74
438      LS      0      79.95
439      UD      0.284
      *
440      KK      CP26
441      KM      COMBINE CP25A AND WSPVD
442      KM      AT WARM SPRINGS AND PALO VERDE
443      KC      3
      *
444      KK      DCP26
445      KM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
446      KM      DIVERT OUT FLOW IN STORM DRAIN
447      DT      DCP26
448      DI      0      428      600
449      DQ      0      125      125
      *
450      KK      RDCP26
451      KM      WARM SPRINGS
452      RD      1200      0.009      .015      0      TRAP      100      0
      *
453      KK      DCRMD
454      KM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
455      DR      DCRMD
      *

```

REC-1 INPUT

PAGE 14

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

456      KK      RDCRMD
457      KM      CENTER
458      RD      4860      0.020      .015      0      TRAP      100      0
      *
459      KK      WSCRD
460      BA      0.161
461      FB      1.74
462      LS      0      79.62
463      UD      0.249
      *
464      KK      CP27
465      KM      COMBINE RDCP26, DCRMD, AND WSCRD
466      KM      AT WARM SPRINGS AND CENTER
467      KC      3
      *
468      KK      OCP27
469      KM      OVERFLOW AT WARM SPRINGS AND CENTER
470      KM      DIVERT OUT FLOW IN STORM DRAIN
471      DT      OCP27
472      DI      0      491      600
473      DQ      0      138      138
      *
474      KK      PALMD
475      BA      0.277

```



```

      *
545      KK      CP13
546      EM      COMBINE RCP12 WITH DD
547      HC      2
      *
548      KK      RCP13
549      EM      LINING = CONCRETE
550      RD      920 0.0080 .013      0      TRAP      16      0
      *
551      KK      ED
552      BA      0.012
553      PB      1.74
554      LB      0      81.56
555      UD      0.124
      *

```

1

HRC-1 INPUT

PAGE 17

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

556      KK      CP14
557      EM      COMBINE RCP13 WITH ED
558      HC      2
      *
559      KK      RCP14
560      EM      LINING = CONCRETE
561      RD      980 0.0060 .013      0      TRAP      16      0
      *
562      KK      FD
563      BA      0.016
564      PB      1.74
565      LB      0      84.2
566      UD      0.083
      *
567      KK      CP15
568      EM      COMBINE RCP14 WITH FD
569      HC      2
      *
570      KK      GD
571      BA      0.004
572      PB      1.74
573      LB      0      84.2
574      UD      0.075
      *
575      KK      CP16
576      EM      COMBINE RCP15 WITH GD
577      HC      2
      *
578      KK      RCP16
579      EM      LINING = CONCRETE
580      RD      920 0.0070 .013      0      TRAP      16      0
      *
581      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE (V) ROUTING      (--->) DIVERSION OR PUMP FLOW
NO.  (.) CONNECTOR  (----) RETURN OF DIVERTED OR PUMPED FLOW

27      OHD-1
      .
      .
40      .      OHD-2
      .
      .
49      .      .      OFFD-2B
      .      .      V
      .      .      V
50      .      .      ROFFD-2B
      .      .
      .
53      CP16.....
      .
      .
56      .      OHD-2A
      .
      .
61      .      .      OFFD-2
      .
      .
66      .      .      .      OFFD-3
      .
      .
71      .      .      .      .      OFFD-3A
      .      .      .      .      V
      .      .      .      .      V
76      .      .      .      .      ROFFD-3A
      .      .      .      .
      .
79      .      .      .      .      CP1.....
      .
      .
82      .      .      .      .      OFFD-3A
      .
      .
87      .      .      .      .      OFFD-1
      .
      .
88      .      .      .      .      CP2.....
      .
      .
89      .      .      .      .      OFFD-4
      .
      .

```

100				CP12.....	
				V	
101				RC12	
106				CP12A.....	
				V	
109				RCP12A	
112				OND-25	
117				OFFD-25	
122				CP1.....	
125				OND-26	
130				OFFD-26	
135				CP4.....	
138				CP5.....	
				V	
141				RCP5	
144				OND-28	
149				OND-21	
154				CP8.....	
157				OND-27	
162				OFFD-27A	
167				OFFD-27B	
172				CP6.....	
				V	
175				RCP6	
178				OND-23	
183				CP7.....	
				V	
186				RCP7	
189				CP9.....	
193				-----> DIV1	
192				DIV1	
				V	
196				DET1	
204				-----> DIV1	
203				DIV1	
205				CP10.....	
				V	
207				RCP10	
210				OND-18	
				V	
215				COND-18	
218				OND-19	
223				CP11.....	
				V	
226				RCP11	
229				OND-13	
234				OND-14	
239				CP12.....	
				V	

242	V	ACP13	
245			OND-12
250		CP13.....	
253	V	ACP13	
256			OND-10
261		CP14.....	
264			OND-24
269			ACP13
272			OND-23
277		CP15.....	
280	V	ACP15	
283			OND-15
288		CP16.....	
291	V	ACP16	
294			OND-11
299		CP17.....	
302	V	ACP17	
305			OND-5
310			OND-6
315		CP18.....	
318			OND-17
323			ACP17
326			OND-8
331		CP19.....	
334	V	ACP19	
337			OND-16
342			ACP19
345			OND-7
350		CP20.....	
353	V	ACP20	
356		CP21.....	
359	V	ACP21	
362			OND-4
367		CP22.....	
372			DIV2
375	V	DIV2	
378	V	DET2	
383			DIV2
383			DIV2

[illegible]

```

537          CP11.....
          V
          V
538          RCP11
          V
          V
539          CP12.....
          V
          V
540          RCP12
          V
          V
541          DO
          V
          V
542          CP13.....
          V
          V
543          RCP13
          V
          V
544          DO
          V
          V
545          CP14.....
          V
          V
546          RCP14
          V
          V
547          DO
          V
          V
548          CP15.....
          V
          V
549          RCP15
          V
          V
550          DO
          V
          V
551          CP16.....
          V
          V
552          RCP16
          V
          V

```

(***I) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

*****
* FLOOD HYDROGRAPH PACKAGE (HSC-1) *
* SEPTEMBER 1990 *
* VERSION 4.0 *
* RUN DATE 01/26/2005 TIME 16:16:05 *
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

```

```

*****
* THE LANDWELL COMPANY *
* CONCEPTUAL DRAINAGE STUDY FOR *
* THE EASTSIDE PROPERTIES *
* PROPOSED CONDITIONS *
* INPUT FILE = PROJ0.DAT *
* INPUT FILE DATE = 01/26/05 *
* DESIGN STORMS=10-YEAR 6-HOUR *
* STORM DISTRIBUTION = SON #1 *
* MODELED BY-ANN REDINGTON, EIT (PDS&J) *
* ALEX YUSCAS, EIT (PDS&J) *
*****

```

```

DRAINAGE AREA
(SQUARE MILES) DARY
0-0.5 .99
0.5-1 .975
1-2 .92
2-3 .82
3-4 .915
4-5 .908

```

```

24 10 OUTPUT CONTROL VARIABLES
      IPRINT      5 PRINT CONTROL
      IPLOT       0 PLOT CONTROL
      QSCAL       0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
      IMIN        5 MINUTES IN COMPUTATION INTERVAL
      IDATE       1 0 STARTING DATE
      ITIME       0000 STARTING TIME
      IQ         100 NUMBER OF HYDROGRAPH ORDINATES
      MDATE       2 0 ENDING DATE
      MTIME       0000 ENDING TIME
      ICENT       19 CENTURY MARK

      COMPUTATION INTERVAL .50 HOURS
      TOTAL TIME BASE 24.92 HOURS

```

```

ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

```

```

JP MULTI-PLAN OPTION
      WPLAN      1 NUMBER OF PLANS

```

JR MULTI-RATIO OPTION
RATIOS OF PRECIPITATION
.99 .98 .95 .93 .92 .91

* DET1 *

197 XD OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 2 PLOT CONTROL
OSCAL 0. HYDROGRAPH PLOT SCALE
IPWCH 0 PUNCH COMPUTED HYDROGRAPH
ICUT 21 SAVE HYDROGRAPH ON THIS UNIT
ISAVE 1 FIRST ORIGINATE PUNCHED OR SAVED
ISAVE 100 LAST ORIGINATE PUNCHED OR SAVED
TIMINT .001 TIME INTERVAL IN HOURS

MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET

HYDROGRAPH ROUTING DATA

199 RE STORAGE ROUTING
NETPS 1 NUMBER OF SUBRACHES
ITVP STOR TYPE OF INITIAL CONDITION
REVRIC -1.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

200 EV STORAGE .0 7.9 15.5 24.0 32.7 42.1
201 RE ELEVATION .00 2.00 3.00 4.00 5.00 6.00
202 EQ DISCHARGE 0. 38. 50. 79. 94. 129.

HYDROGRAPH AT STATION DET1
PLAN 1. RATIO = .99

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.	0.	0.	1		0820	101	1.	0.	0.	0.	1		1640	301	0.	0.	0.	0.
1		0005	2	0.	0.	0.	0.	1		0825	102	1.	0.	0.	0.	1		1645	302	0.	0.	0.	0.
1		0010	3	0.	0.	0.	0.	1		0830	103	1.	0.	0.	0.	1		1650	303	0.	0.	0.	0.
1		0015	4	0.	0.	0.	0.	1		0835	104	1.	0.	0.	0.	1		1655	304	0.	0.	0.	0.
1		0020	5	0.	0.	0.	0.	1		0840	105	1.	0.	0.	0.	1		1700	305	0.	0.	0.	0.
1		0025	6	0.	0.	0.	0.	1		0845	106	1.	0.	0.	0.	1		1705	306	0.	0.	0.	0.
1		0030	7	0.	0.	0.	0.	1		0850	107	1.	0.	0.	0.	1		1710	307	0.	0.	0.	0.
1		0035	8	0.	0.	0.	0.	1		0855	108	1.	0.	0.	0.	1		1715	308	0.	0.	0.	0.
1		0040	9	0.	0.	0.	0.	1		0900	109	1.	0.	0.	0.	1		1720	309	0.	0.	0.	0.
1		0045	10	0.	0.	0.	0.	1		0905	110	1.	0.	0.	0.	1		1725	310	0.	0.	0.	0.
1		0050	11	0.	0.	0.	0.	1		0910	111	1.	0.	0.	0.	1		1730	311	0.	0.	0.	0.
1		0055	12	0.	0.	0.	0.	1		0915	112	1.	0.	0.	0.	1		1735	312	0.	0.	0.	0.
1		0100	13	0.	0.	0.	0.	1		0920	113	1.	0.	0.	0.	1		1740	313	0.	0.	0.	0.
1		0105	14	0.	0.	0.	0.	1		0925	114	1.	0.	0.	0.	1		1745	314	0.	0.	0.	0.
1		0110	15	0.	0.	0.	0.	1		0930	115	1.	0.	0.	0.	1		1750	315	0.	0.	0.	0.
1		0115	16	0.	0.	0.	0.	1		0935	116	1.	0.	0.	0.	1		1755	316	0.	0.	0.	0.
1		0120	17	0.	0.	0.	0.	1		0940	117	1.	0.	0.	0.	1		1800	317	0.	0.	0.	0.
1		0125	18	0.	0.	0.	0.	1		0945	118	1.	0.	0.	0.	1		1805	318	0.	0.	0.	0.
1		0130	19	0.	0.	0.	0.	1		0950	119	1.	0.	0.	0.	1		1810	319	0.	0.	0.	0.
1		0135	20	0.	0.	0.	0.	1		0955	120	1.	0.	0.	0.	1		1815	320	0.	0.	0.	0.
1		0140	21	0.	0.	0.	0.	1		1000	121	1.	0.	0.	0.	1		1820	321	0.	0.	0.	0.
1		0145	22	0.	0.	0.	0.	1		1005	122	1.	0.	0.	0.	1		1825	322	0.	0.	0.	0.
1		0150	23	0.	0.	0.	0.	1		1010	123	1.	0.	0.	0.	1		1830	323	0.	0.	0.	0.
1		0155	24	0.	0.	0.	0.	1		1015	124	1.	0.	0.	0.	1		1835	324	0.	0.	0.	0.
1		0200	25	0.	0.	0.	0.	1		1020	125	1.	0.	0.	0.	1		1840	325	0.	0.	0.	0.
1		0205	26	0.	0.	0.	0.	1		1025	126	1.	0.	0.	0.	1		1845	326	0.	0.	0.	0.
1		0210	27	0.	0.	0.	0.	1		1030	127	1.	0.	0.	0.	1		1850	327	0.	0.	0.	0.
1		0215	28	0.	0.	0.	0.	1		1035	128	1.	0.	0.	0.	1		1855	328	0.	0.	0.	0.
1		0220	29	0.	0.	0.	0.	1		1040	129	1.	0.	0.	0.	1		1900	329	0.	0.	0.	0.
1		0225	30	0.	0.	0.	0.	1		1045	130	1.	0.	0.	0.	1		1905	330	0.	0.	0.	0.
1		0230	31	0.	0.	0.	0.	1		1050	131	1.	0.	0.	0.	1		1910	331	0.	0.	0.	0.
1		0235	32	0.	0.	0.	0.	1		1055	132	1.	0.	0.	0.	1		1915	332	0.	0.	0.	0.
1		0240	33	0.	0.	0.	0.	1		1100	133	1.	0.	0.	0.	1		1920	333	0.	0.	0.	0.
1		0245	34	0.	0.	0.	0.	1		1105	134	1.	0.	0.	0.	1		1925	334	0.	0.	0.	0.
1		0250	35	0.	0.	0.	0.	1		1110	135	0.	0.	0.	0.	1		1930	335	0.	0.	0.	0.
1		0255	36	0.	0.	0.	0.	1		1115	136	0.	0.	0.	0.	1		1935	336	0.	0.	0.	0.
1		0300	37	0.	0.	0.	0.	1		1120	137	0.	0.	0.	0.	1		1940	337	0.	0.	0.	0.
1		0305	38	0.	0.	0.	0.	1		1125	138	0.	0.	0.	0.	1		1945	338	0.	0.	0.	0.
1		0310	39	0.	0.	0.	0.	1		1130	139	0.	0.	0.	0.	1		1950	339	0.	0.	0.	0.
1		0315	40	0.	0.	0.	0.	1		1135	140	0.	0.	0.	0.	1		1955	340	0.	0.	0.	0.
1		0320	41	0.	0.	0.	0.	1		1140	141	0.	0.	0.	0.	1		2000	341	0.	0.	0.	0.
1		0325	42	0.	0.	0.	0.	1		1145	142	0.	0.	0.	0.	1		2005	342	0.	0.	0.	0.
1		0330	43	0.	0.	0.	0.	1		1150	143	0.	0.	0.	0.	1		2010	343	0.	0.	0.	0.
1		0335	44	0.	0.	0.	0.	1		1155	144	0.	0.	0.	0.	1		2015	344	0.	0.	0.	0.
1		0340	45	1.	0.	0.	0.	1		1200	145	0.	0.	0.	0.	1		2020	345	0.	0.	0.	0.
1		0345	46	2.	0.	0.	0.	1		1205	146	0.	0.	0.	0.	1		2025	346	0.	0.	0.	0.
1		0350	47	4.	1.1	0.	0.	1		1210	147	0.	0.	0.	0.	1		2030	347	0.	0.	0.	0.
1		0355	48	4.	1.3	0.	0.	1		1215	148	0.	0.	0.	0.	1		2035	348	0.	0.	0.	0.
1		0400	49	4.	1.2	0.	0.	1		1220	149	0.	0.	0.	0.	1		2040	349	0.	0.	0.	0.
1		0405	50	4.	1.1	0.	0.	1		1225	150	0.	0.	0.	0.	1		2045	350	0.	0.	0.	0.
1		0410	51	4.	1.1	0.	0.	1		1230	151	0.	0.	0.	0.	1		2050	351	0.	0.	0.	0.
1		0415	52	4.	1.1	0.	0.	1		1235	152	0.	0.	0.	0.	1		2055	352	0.	0.	0.	0.
1		0420	53	4.	1.0	0.	0.	1		1240	153	0.	0.	0.	0.	1		2100	353	0.	0.	0.	0.
1		0425	54	4.	1.0	0.	0.	1		1245	154	0.	0.	0.	0.	1		2105	354	0.	0.	0.	0.
1		0430	55	4.	1.0	0.	0.	1		1250	155	0.	0.	0.	0.	1		2110	355	0.	0.	0.	0.
1		0435	56	3.	1.0	0.	0.	1		1255	156	0.	0.	0.	0.	1		2115	356	0.	0.	0.	0.
1		0440	57	3.	1.0	0.	0.	1		1300	157	0.	0.	0.	0.	1		2120	357	0.	0.	0.	0.
1		0445	58	3.	0.9	0.	0.	1		1305	158	0.	0.	0.	0.	1		2125	358	0.	0.	0.	0.
1		0450	59	3.	0.9	0.	0.	1		1310	159	0.	0.	0.	0.	1		2130	359	0.	0.	0.	0.
1		0455	60	3.	0.9	0.	0.	1		1315	160	0.	0.	0.	0.	1		2135	360	0.	0.	0.	0.
1		0500	61	3.	0.9	0.	0.	1		1320	161	0.	0.	0.	0.	1		2140	361	0.	0.	0.	0.

1	0505	62	3.	.8	.2	* 1	1335	162	0.	.1	.0	* 1	2145	262	0.	.0	.0
1	0510	63	3.	.8	.2	* 1	1330	163	0.	.1	.0	* 1	2150	263	0.	.0	.0
1	0515	64	3.	.8	.2	* 1	1335	164	0.	.1	.0	* 1	2155	264	0.	.0	.0
1	0520	65	3.	.8	.2	* 1	1340	165	0.	.1	.0	* 1	2200	265	0.	.0	.0
1	0525	66	3.	.8	.2	* 1	1345	166	0.	.1	.0	* 1	2205	266	0.	.0	.0
1	0530	67	3.	.7	.2	* 1	1350	167	0.	.1	.0	* 1	2210	267	0.	.0	.0
1	0535	68	3.	.7	.2	* 1	1355	168	0.	.1	.0	* 1	2215	268	0.	.0	.0
1	0540	69	3.	.7	.2	* 1	1400	169	0.	.1	.0	* 1	2220	269	0.	.0	.0
1	0545	70	3.	.7	.2	* 1	1405	170	0.	.1	.0	* 1	2225	270	0.	.0	.0
1	0550	71	2.	.7	.2	* 1	1410	171	0.	.1	.0	* 1	2230	271	0.	.0	.0
1	0555	72	2.	.7	.3	* 1	1415	172	0.	.1	.0	* 1	2235	272	0.	.0	.0
1	0600	73	2.	.6	.2	* 1	1420	173	0.	.1	.0	* 1	2240	273	0.	.0	.0
1	0605	74	2.	.6	.2	* 1	1425	174	0.	.1	.0	* 1	2245	274	0.	.0	.0
1	0610	75	2.	.6	.2	* 1	1430	175	0.	.1	.0	* 1	2250	275	0.	.0	.0
1	0615	76	2.	.6	.3	* 1	1435	176	0.	.1	.0	* 1	2255	276	0.	.0	.0
1	0620	77	2.	.6	.3	* 1	1440	177	0.	.1	.0	* 1	2300	277	0.	.0	.0
1	0625	78	2.	.6	.1	* 1	1445	178	0.	.0	.0	* 1	2305	278	0.	.0	.0
1	0630	79	2.	.6	.1	* 1	1450	179	0.	.0	.0	* 1	2310	279	0.	.0	.0
1	0635	80	2.	.5	.1	* 1	1455	180	0.	.0	.0	* 1	2315	280	0.	.0	.0
1	0640	81	2.	.5	.1	* 1	1500	181	0.	.0	.0	* 1	2320	281	0.	.0	.0
1	0645	82	2.	.5	.1	* 1	1505	182	0.	.0	.0	* 1	2325	282	0.	.0	.0
1	0650	83	2.	.5	.1	* 1	1510	183	0.	.0	.0	* 1	2330	283	0.	.0	.0
1	0655	84	2.	.5	.1	* 1	1515	184	0.	.0	.0	* 1	2335	284	0.	.0	.0
1	0700	85	2.	.5	.1	* 1	1520	185	0.	.0	.0	* 1	2340	285	0.	.0	.0
1	0705	86	2.	.5	.1	* 2	1525	186	0.	.0	.0	* 1	2345	286	0.	.0	.0
1	0710	87	2.	.5	.1	* 1	1530	187	0.	.0	.0	* 1	2350	287	0.	.0	.0
1	0715	88	2.	.4	.1	* 1	1535	188	0.	.0	.0	* 1	2355	288	0.	.0	.0
1	0720	89	2.	.4	.1	* 1	1540	189	0.	.0	.0	* 2	0000	289	0.	.0	.0
1	0725	90	2.	.4	.1	* 1	1545	190	0.	.0	.0	* 2	0005	290	0.	.0	.0
1	0730	91	1.	.4	.1	* 1	1550	191	0.	.0	.0	* 2	0010	291	0.	.0	.0
1	0735	92	1.	.4	.1	* 1	1555	192	0.	.0	.0	* 2	0015	292	0.	.0	.0
1	0740	93	1.	.4	.1	* 1	1600	193	0.	.0	.0	* 2	0020	293	0.	.0	.0
1	0745	94	1.	.4	.1	* 2	1605	194	0.	.0	.0	* 2	0025	294	0.	.0	.0
1	0750	95	1.	.4	.1	* 1	1610	195	0.	.0	.0	* 2	0030	295	0.	.0	.0
1	0755	96	1.	.4	.1	* 1	1615	196	0.	.0	.0	* 2	0035	296	0.	.0	.0
1	0800	97	1.	.4	.1	* 1	1620	197	0.	.0	.0	* 2	0040	297	0.	.0	.0
1	0805	98	1.	.3	.1	* 1	1625	198	0.	.0	.0	* 2	0045	298	0.	.0	.0
1	0810	99	1.	.3	.1	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	1.	.3	.1	* 1	1635	200	0.	.0	.0	* 2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24-92-HR
+ (CFS)	(HR)					
+ 4,	3.92	(CFS)	2.	1.	1.	1.
		(INCHES)	.009	.011	.011	.011
		(AC-FT)	1.	1.	1.	1.
PEAK STORMSIE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24-92-HR
+ (AC-FT)	(HR)					
+ 1.	3.92		1.	0.	0.	0.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE 24-HR	72-HR	24-92-HR
+ (FEET)	(HR)					
+ .30	3.92		.15	.04	.04	.04
CIRCULATIVE AREA =			2.00 SQ MI			

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PEAK FLOW		TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)		6-HR	24-HR	72-HR	24-92-HR
3.	3.92	(CFS)	1.	0.	0.	0.
		(INCHES)	.006	.007	.007	.007
		(AC-FT)	1.	1.	1.	1.
PEAK STORAGE		TIME	MAXIMUM AVERAGE STORAGE			
(AC-FT)	(HR)		6-HR	24-HR	72-HR	24-92-HR
1.	3.92		0.	0.	0.	0.
PEAK STAGE		TIME	MAXIMUM AVERAGE STAGE			
(FEET)	(HR)		6-HR	24-HR	72-HR	24-92-HR
1.9	3.92		.09	.03	.03	.03
CUMULATIVE AREA =			2.09 SQ MI			

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1	0655	84	0.	.1	.0 * 1	1515	184	0.	.0	.0 * 1	2335	284	0.	.0	.0
1	0700	85	0.	.1	.0 * 1	1520	185	0.	.0	.0 * 1	2340	285	0.	.0	.0
1	0705	86	0.	.1	.0 * 1	1525	186	0.	.0	.0 * 1	2345	286	0.	.0	.0
1	0710	87	0.	.1	.0 * 1	1530	187	0.	.0	.0 * 1	2350	287	0.	.0	.0
1	0715	88	0.	.1	.0 * 1	1535	188	0.	.0	.0 * 1	2355	288	0.	.0	.0
1	0720	89	0.	.1	.0 * 1	1540	189	0.	.0	.0 * 2	2358	289	0.	.0	.0
1	0725	90	0.	.1	.0 * 1	1545	190	0.	.0	.0 * 2	2359	290	0.	.0	.0
1	0730	91	0.	.1	.0 * 1	1550	191	0.	.0	.0 * 2	2400	291	0.	.0	.0
1	0735	92	0.	.1	.0 * 1	1555	192	0.	.0	.0 * 2	2401	292	0.	.0	.0
1	0740	93	0.	.1	.0 * 1	1600	193	0.	.0	.0 * 2	2402	293	0.	.0	.0
1	0745	94	0.	.1	.0 * 1	1605	194	0.	.0	.0 * 2	2403	294	0.	.0	.0
1	0750	95	0.	.1	.0 * 1	1610	195	0.	.0	.0 * 2	2404	295	0.	.0	.0
1	0755	96	0.	.1	.0 * 1	1615	196	0.	.0	.0 * 2	2405	296	0.	.0	.0
1	0800	97	0.	.1	.0 * 1	1620	197	0.	.0	.0 * 2	2406	297	0.	.0	.0
1	0805	98	0.	.1	.0 * 1	1625	198	0.	.0	.0 * 2	2407	298	0.	.0	.0
1	0810	99	0.	.1	.0 * 1	1630	199	0.	.0	.0 * 2	2408	299	0.	.0	.0
1	0815	100	0.	.1	.0 * 1	1635	200	0.	.0	.0 * 2	2409	300	0.	.0	.0

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
1	3.83	0.	0.	0.	0.	0.
		(INCHES)	.002	.003	.002	.003
		(AC-FT)	0.	0.	0.	0.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)					
0.	3.83	0.	0.	0.	0.	0.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
(FEET)	(HR)					
.04	3.83	.03	.01	.01	.01	.01
CUMULATIVE AREA = 2.09 SQ MI						

1	STATION	DKT1
	(I) INFLOW.	(O) OUTFLOW
	0.	5.
	10.	15.
	20.	25.
	30.	35.
	40.	45.
	50.	55.
	60.	65.
	70.	75.
	80.	85.
	90.	95.
	100.	105.
	110.	115.
	120.	125.
	130.	135.
	140.	145.
	150.	155.
	160.	165.
	170.	175.
	180.	185.
	190.	195.
	200.	205.
	210.	215.
	220.	225.
	230.	235.
	240.	245.
	250.	255.
	260.	265.
	270.	275.
	280.	285.
	290.	295.
	300.	305.
	310.	315.
	320.	325.
	330.	335.
	340.	345.
	350.	355.
	360.	365.
	370.	375.
	380.	385.
	390.	395.
	400.	405.
	410.	415.
	420.	425.
	430.	435.
	440.	445.
	450.	455.
	460.	465.
	470.	475.
	480.	485.
	490.	495.
	500.	505.
	510.	515.
	520.	525.
	530.	535.
	540.	545.
	550.	555.
	560.	565.
	570.	575.
	580.	585.
	590.	595.
	600.	605.
	610.	615.
	620.	625.
	630.	635.
	640.	645.
	650.	655.
	660.	665.

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HYDROGRAPH AT STATION 021
PLAN 1, RATIO = .92

1	STATION DATA												
	(1) INFLOW					(2) OUTFLOW					(3) STORAGE		
	.00	.02	.04	.06	.08	.10	.12	.14	.16	.00	.00	.00	.00
	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
DATE	TIME	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
10000	11												
10005	21												
10010	31												
10015	41												
10020	51												
10025	61												
10030	71												
10035	81												
10040	91												
10045	101												
10050	111												
10055	121												
10100	131												
10105	141												
10110	151												
10115	161												
10120	171												
10125	181												
10130	191												
10135	201												
10140	211												
10145	221												
10150	231												
10155	241												
10200	251												
10205	261												
10210	271												
10215	281												
10220	291												
10225	301												
10230	311												
10235	321												
10240	331												
10245	341												
10250	351												
10255	361												
10300	371												
10305	381												
10310	391												
10315	401												
10320	411												
10325	421												
10330	431												
10335	441												
10340	451												
10345	461												
10350	471												
10355	481												
10400	491												
10405	501												
10410	511												
10415	521												
10420	531												
10425	541												
10430	551												
10435	561												
10440	571												
10445	581												
10450	591												
10455	601												
10500	611												
10505	621												
10510	631												
10515	641												
10520	651												
10525	661												
10530	671												
10535	681												
10540	691												
10545	701												
10550	711												
10555	721												
10600	731												
10605	741												
10610	751												
10615	761												
10620	771												

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HYDROGRAPH AT STATION DFT1
PLAN 1, RATIO = .92

DA	MON	HHMM	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HHMM	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HHMM	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		0020	101	0.	.0	.0	1		1640	201	0.	.0	.0
1		0005	2	0.	.0	.0	1		0025	102	0.	.0	.0	1		1645	202	0.	.0	.0
1		0010	3	0.	.0	.0	1		0030	103	0.	.0	.0	1		1650	203	0.	.0	.0
1		0015	4	0.	.0	.0	1		0035	104	0.	.0	.0	1		1655	204	0.	.0	.0
1		0020	5	0.	.0	.0	1		0040	105	0.	.0	.0	1		1700	205	0.	.0	.0
1		0025	6	0.	.0	.0	1		0045	106	0.	.0	.0	1		1705	206	0.	.0	.0
1		0030	7	0.	.0	.0	1		0050	107	0.	.0	.0	1		1710	207	0.	.0	.0
1		0035	8	0.	.0	.0	1		0055	108	0.	.0	.0	1		1715	208	0.	.0	.0
1		0040	9	0.	.0	.0	1		0100	109	0.	.0	.0	1		1720	209	0.	.0	.0
1		0045	10	0.	.0	.0	1		0105	110	0.	.0	.0	1		1725	210	0.	.0	.0
1		0050	11	0.	.0	.0	1		0110	111	0.	.0	.0	1		1730	211	0.	.0	.0
1		0055	12	0.	.0	.0	1		0115	112	0.	.0	.0	1		1735	212	0.	.0	.0
1		0100	13	0.	.0	.0	1		0120	113	0.	.0	.0	1		1740	213	0.	.0	.0
1		0105	14	0.	.0	.0	1		0125	114	0.	.0	.0	1		1745	214	0.	.0	.0
1		0110	15	0.	.0	.0	1		0130	115	0.	.0	.0	1		1750	215	0.	.0	.0
1		0115	16	0.	.0	.0	1		0135	116	0.	.0	.0	1		1755	216	0.	.0	.0
1		0120	17	0.	.0	.0	1		0140	117	0.	.0	.0	1		1800	217	0.	.0	.0
1		0125	18	0.	.0	.0	1		0145	118	0.	.0	.0	1		1805	218	0.	.0	.0
1		0130	19	0.	.0	.0	1		0150	119	0.	.0	.0	1		1810	219	0.	.0	.0
1		0135	20	0.	.0	.0	1		0155	120	0.	.0	.0	1		1815	220	0.	.0	.0
1		0140	21	0.	.0	.0	1		1000	121	0.	.0	.0	1		1820	221	0.	.0	.0
1		0145	22	0.	.0	.0	1		1005	122	0.	.0	.0	1		1825	222	0.	.0	.0
1		0150	23	0.	.0	.0	1		1010	123	0.	.0	.0	1		1830	223	0.	.0	.0
1		0155	24	0.	.0	.0	1		1015	124	0.	.0	.0	1		1835	224	0.	.0	.0
1		0200	25	0.	.0	.0	1		1020	125	0.	.0	.0	1		1840	225	0.	.0	.0
1		0205	26	0.	.0	.0	1		1025	126	0.	.0	.0	1		1845	226	0.	.0	.0
1		0210	27	0.	.0	.0	1		1030	127	0.	.0	.0	1		1850	227	0.	.0	.0
1		0215	28	0.	.0	.0	1		1035	128	0.	.0	.0	1		1855	228	0.	.0	.0
1		0220	29	0.	.0	.0	1		1040	129	0.	.0	.0	1		1900	229	0.	.0	.0
1		0225	30	0.	.0	.0	1		1045	130	0.	.0	.0	1		1905	230	0.	.0	.0
1		0230	31	0.	.0	.0	1		1050	131	0.	.0	.0	1		1910	231	0.	.0	.0
1		0235	32	0.	.0	.0	1		1055	132	0.	.0	.0	1		1915	232	0.	.0	.0
1		0240	33	0.	.0	.0	1		1100	133	0.	.0	.0	1		1920	233	0.	.0	.0
1		0245	34	0.	.0	.0	1		1105	134	0.	.0	.0	1		1925	234	0.	.0	.0
1		0250	35	0.	.0	.0	1		1110	135	0.	.0	.0	1		1930	235	0.	.0	.0
1		0255	36	0.	.0	.0	1		1115	136	0.	.0	.0	1		1935	236	0.	.0	.0
1		0300	37	0.	.0	.0	1		1120	137	0.	.0	.0	1		1940	237	0.	.0	.0
1		0305	38	0.	.0	.0	1		1125	138	0.	.0	.0	1		1945	238	0.	.0	.0
1		0310	39	0.	.0	.0	1		1130	139	0.	.0	.0	1		1950	239	0.	.0	.0
1		0315	40	0.	.0	.0	1		1135	140	0.	.0	.0	1		1955	240	0.	.0	.0
1		0320	41	0.	.0	.0	1		1140	141	0.	.0	.0	1		2000	241	0.	.0	.0
1		0325	42	0.	.0	.0	1		1145	142	0.	.0	.0	1		2005	242	0.	.0	.0
1		0330	43	0.	.0	.0	1		1150	143	0.	.0	.0	1		2010	243	0.	.0	.0
1		0335	44	0.	.0	.0	1		1155	144	0.	.0	.0	1		2015	244	0.	.0	.0
1		0340	45	0.	.0	.0	1		1200	145	0.	.0	.0	1		2020	245	0.	.0	.0
1		0345	46	0.	.0	.0	1		1205	146	0.	.0	.0	1		2025	246	0.	.0	.0
1		0350	47	0.	.0	.0	1		1210	147	0.	.0	.0	1		2030	247	0.	.0	.0
1		0355	48	0.	.0	.0	1		1215	148	0.	.0	.0	1		2035	248	0.	.0	.0
1		0400	49	0.	.0	.0	1		1220	149	0.	.0	.0	1		2040	249	0.	.0	.0
1		0405	50	0.	.0	.0	1		1225	150	0.	.0	.0	1		2045	250	0.	.0	.0
1		0410	51	0.	.0	.0	1		1230	151	0.	.0	.0	1		2050	251	0.	.0	.0
1		0415	52	0.	.0	.0	1		1235	152	0.	.0	.0	1		2055	252	0.	.0	.0
1		0420	53	0.	.0	.0	1		1240	153	0.	.0	.0	1		2100	253	0.	.0	.0
1		0425	54	0.	.0	.0	1		1245	154	0.	.0	.0	1		2105	254	0.	.0	.0
1		0430	55	0.	.0	.0	1		1250	155	0.	.0	.0	1		2110	255	0.	.0	.0
1		0435	56	0.	.0	.0	1		1255	156	0.	.0	.0	1		2115	256	0.	.0	.0
1		0440	57	0.	.0	.0	1		1300	157	0.	.0	.0	1		2120	257	0.	.0	.0
1		0445	58	0.	.0	.0	1		1305	158	0.	.0	.0	1		2125	258	0.	.0	.0
1		0450	59	0.	.0	.0	1		1310	159	0.	.0	.0	1		2130	259	0.	.0	.0
1		0455	60	0.	.0	.0	1		1315	160	0.	.0	.0	1		2135	260	0.	.0	.0
1		0500	61	0.	.0	.0	1		1320	161	0.	.0	.0	1		2140	261	0.	.0	.0
1		0505	62	0.	.0	.0	1		1325	162	0.	.0	.0	1		2145	262	0.	.0	.0
1		0510	63	0.	.0	.0	1		1330	163	0.	.0	.0	1		2150	263	0.	.0	.0
1		0515	64	0.	.0	.0	1		1335	164	0.	.0	.0	1		2155	264	0.	.0	.0
1		0520	65	0.	.0	.0	1		1340	165	0.	.0	.0	1		2200	265	0.	.0	.0
1		0525	66	0.	.0	.0	1		1345	166	0.	.0	.0	1		2205	266	0.	.0	.0
1		0530	67	0.	.0	.0	1		1350	167	0.	.0	.0	1		2210	267	0.	.0	.0
1		0535	68	0.	.0	.0	1		1355	168	0.	.0	.0	1		2215	268	0.	.0	.0
1		0540	69	0.	.0	.0	1		1400	169	0.	.0	.0	1		2220	269	0.	.0	.0
1		0545	70	0.	.0	.0	1		1405	170	0.	.0	.0	1		2225	270	0.	.0	.0
1		0550	71	0.	.0	.0	1		1410	171	0.	.0	.0	1		2230	271	0.	.0	.0
1		0555	72	0.	.0	.0	1		1415	172	0.	.0	.0	1		2235	272	0.	.0	.0
1		0600	73	0.	.0	.0	1		1420	173	0.	.0	.0	1		2240	273	0.	.0	.0
1		0605	74	0.	.0	.0	1		1425	174	0.	.0	.0	1		2245	274	0.	.0	.0
1		0610	75	0.	.0	.0	1		1430	175	0.	.0	.0	1		2250	275	0.	.0	.0
1		0615	76	0.	.0	.0	1		1435	176	0.	.0	.0	1		2255	276	0.	.0	.0
1		0620	77	0.	.0	.0	1		1440	177	0.	.0	.0	1		2300	277	0.	.0	.0
1		0625	78	0.	.0	.0	1		1445	178	0.	.0	.0	1		2305	278	0.	.0	.0
1		0630	79	0.	.0	.0	1		1450	179	0.	.0	.0	1		2310	279	0.	.0	.0
1		0635	80	0.	.0	.0	1		1455	180	0.	.0	.0	1		2315	280	0.	.0	.0
1		0640	81	0.	.0	.0	1		1500	181	0.	.0	.0	1		2320	281	0.	.0	.0
1		0645	82	0.	.0	.0	1		1505	182	0.	.0	.0	1		2325	282	0.	.0	.0
1		0650	83	0.	.0	.0	1		1510	183	0.	.0	.0	1		2330	283	0.	.0	.0
1		0655	84	0.	.0	.0	1		1515	184	0.	.0	.0	1		2335	284	0.	.0	.0
1		0700	85	0.	.0	.0	1		1520	185	0.	.0	.0	1		2340	285	0.	.0	.0
1		0705	86	0.	.0	.0	1		1525	186	0.	.0	.0	1		2345	286	0.	.0	.0
1		0710	87	0.	.0	.0	1		1530	187	0.	.0	.0	1		2350	287	0.	.0	.0
1		0715	88	0.	.0	.0	1		1535	1										

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170 KK      *   DIVE *
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171 NO      OUTPUT CONTROL VARIABLES
          IPLOT      5  PRINT CONTROL
          QSCAL      0  PLOT CONTROL
          IPUNCH     2. HYDROGRAPH PLOT SCALE
          IOUT       0  PUNCH COMPUTED HYDROGRAPH
          ISAVE      21 SAVE HYDROGRAPH ON THIS UNIT
          ISAVE1     1  FIRST ORDINATE PUNCHED OR SAVED
          ISAVE2     300 LAST ORDINATE PUNCHED OR SAVED
          TIMINT     .003 TIME INTERVAL IN HOURS

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*
375 KX * DATE
*

377 KO OUTPUT CONTROL VARIABLES
 IPRINT 1 PRINT CONTROL
 IPLOT 2 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

378 RS STORAGE ROUTING
 MSTPS 1 NUMBER OF SUBREACHES
 ITYP STOR TYPE OF INITIAL CONDITION
 REVRIC -1.00 INITIAL CONDITION
 % .50 WORKING A AND D COEFFICIENT

379 SV	STORAGE	.0	10.2	18.1	26.3	34.7	43.4	52.4	62.0
380 SE	ELEVATION	.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
381 SQ	DISCHARGE	0.	55.	88.	121.	170.	180.	200.	220.

HYDROGRAPH AT STATION DATE
PLAN 1, RATIO = .99

DA	MON	HR	MIN	SEC	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	SEC	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	SEC	OUTFLOW	STORAGE	STAGE
1		0000	1		0.	.0	.0	1		0820	101		3.	.6	.1	1		1640	201		0.	.0	.0
1		0005	2		0.	.0	.0	1		0825	102		3.	.6	.1	1		1645	202		0.	.0	.0
1		0010	3		0.	.0	.0	1		0830	103		3.	.6	.1	1		1650	203		0.	.0	.0
1		0015	4		0.	.0	.0	1		0835	104		3.	.6	.1	1		1655	204		0.	.0	.0
1		0020	5		0.	.0	.0	1		0840	105		3.	.6	.1	1		1700	205		0.	.0	.0
1		0025	6		0.	.0	.0	1		0845	106		3.	.6	.1	1		1705	206		0.	.0	.0
1		0030	7		0.	.0	.0	1		0850	107		3.	.6	.1	1		1710	207		0.	.0	.0
1		0035	8		0.	.0	.0	1		0855	108		3.	.6	.1	1		1715	208		0.	.0	.0
1		0040	9		0.	.0	.0	1		0900	109		3.	.6	.1	1		1720	209		0.	.0	.0
1		0045	10		0.	.0	.0	1		0905	110		3.	.6	.1	1		1725	210		0.	.0	.0
1		0050	11		0.	.0	.0	1		0910	111		3.	.6	.1	1		1730	211		0.	.0	.0
1		0055	12		0.	.0	.0	1		0915	112		2.	.4	.1	1		1735	212		0.	.0	.0
1		0100	13		0.	.0	.0	1		0920	113		2.	.4	.1	1		1740	213		0.	.0	.0
1		0105	14		0.	.0	.0	1		0925	114		2.	.4	.1	1		1745	214		0.	.0	.0
1		0110	15		0.	.0	.0	1		0930	115		2.	.3	.1	1		1750	215		0.	.0	.0
1		0115	16		0.	.0	.0	1		0935	116		2.	.3	.1	1		1755	216		0.	.0	.0
1		0120	17		0.	.0	.0	1		0940	117		2.	.3	.1	1		1800	217		0.	.0	.0
1		0125	18		0.	.0	.0	1		0945	118		2.	.3	.1	1		1805	218		0.	.0	.0
1		0130	19		0.	.0	.0	1		0950	119		2.	.3	.1	1		1810	219		0.	.0	.0
1		0135	20		0.	.0	.0	1		0955	120		2.	.3	.1	1		1815	220		0.	.0	.0
1		0140	21		0.	.0	.0	1		1000	121		1.	.3	.1	1		1820	221		0.	.0	.0
1		0145	22		0.	.0	.0	1		1005	122		1.	.3	.1	1		1825	222		0.	.0	.0
1		0150	23		0.	.0	.0	1		1010	123		1.	.3	.0	1		1830	223		0.	.0	.0
1		0155	24		0.	.0	.0	1		1015	124		1.	.2	.0	1		1835	224		0.	.0	.0
1		0200	25		0.	.0	.0	1		1020	125		1.	.2	.0	1		1840	225		0.	.0	.0
1		0205	26		0.	.0	.0	1		1025	126		1.	.2	.0	1		1845	226		0.	.0	.0
1		0210	27		0.	.0	.0	1		1030	127		1.	.2	.0	1		1850	227		0.	.0	.0
1		0215	28		0.	.0	.0	1		1035	128		1.	.2	.0	1		1855	228		0.	.0	.0
1		0220	29		0.	.0	.0	1		1040	129		1.	.2	.0	1		1900	229		0.	.0	.0
1		0225	30		0.	.0	.0	1		1045	130		1.	.2	.0	1		1905	230		0.	.0	.0
1		0230	31		0.	.0	.0	1		1050	131		1.	.2	.0	1		1910	231		0.	.0	.0
1		0235	32		0.	.0	.0	1		1055	132		1.	.2	.0	1		1915	232		0.	.0	.0
1		0240	33		0.	.0	.0	1		1100	133		1.	.2	.0	1		1920	233		0.	.0	.0
1		0245	34		0.	.0	.0	1		1105	134		1.	.2	.0	1		1925	234		0.	.0	.0
1		0250	35		0.	.0	.0	1		1110	135		1.	.2	.0	1		1930	235		0.	.0	.0
1		0255	36		0.	.0	.0	1		1115	136		1.	.2	.0	1		1935	236		0.	.0	.0
1		0300	37		0.	.0	.0	1		1120	137		1.	.1	.0	1		1940	237		0.	.0	.0
1		0305	38		0.	.0	.0	1		1125	138		1.	.1	.0	1		1945	238		0.	.0	.0
1		0310	39		0.	.0	.0	1		1130	139		1.	.1	.0	1		1950	239		0.	.0	.0
1		0315	40		0.	.0	.0	1		1135	140		1.	.1	.0	1		1955	240		0.	.0	.0
1		0320	41		0.	.0	.0	1		1140	141		1.	.1	.0	1		2000	241		0.	.0	.0
1		0325	42		0.	.0	.0	1		1145	142		1.	.1	.0	1		2005	242		0.	.0	.0
1		0330	43		0.	.0	.0	1		1150	143		1.	.1	.0	1		2010	243		0.	.0	.0
1		0335	44		5.	1.0	.2	1		1155	144		1.	.1	.0	1		2015	244		0.	.0	.0
1		0340	45		16.	2.8	.6	1		1200	145		1.	.1	.0	1		2020	245		0.	.0	.0
1		0345	46		23.	4.1	.8	1		1205	146		1.	.1	.0	1		2025	246		0.	.0	.0
1		0350	47		24.	4.4	.9	1		1210	147		1.	.1	.0	1		2030	247		0.	.0	.0
1		0355	48		23.	4.3	.8	1		1215	148		1.	.1	.0	1		2035	248		0.	.0	.0
1		0400	49		22.	4.1	.8	1		1220	149		1.	.1	.0	1		2040	249		0.	.0	.0
1		0405	50		22.	3.9	.8	1		1225	150		0.	.1	.0	1		2045	250		0.	.0	.0
1		0410	51		22.	3.8	.7	1		1230	151		0.	.1	.0	1		2050	251		0.	.0	.0
1		0415	52		20.	3.7	.7	1		1235	152		0.	.1	.0	1		2055	252		0.	.0	.0
1		0420	53		19.	3.5	.7	1		1240	153		0.	.1	.0	1		2100	253		0.	.0	.0
1		0425	54		19.	3.4	.7	1		1245	154		0.	.1	.0	1		2105	254		0.	.0	.0
1		0430	55		18.	3.3	.6	1		1250	155		0.	.1	.0	1		2110	255		0.	.0	.0
1		0435	56		17.	3.1	.6	1		1255	156		0.	.1	.0	1		2115	256		0.	.0	.0
1		0440	57		17.	3.0	.6	1		1300	157		0.	.1	.0	1		2120	257		0.	.0	.0
1		0445	58		16.	2.9	.6	1		1305	158		0.	.1	.0	1		2125	258		0.	.0	.0
1		0450	59		15.	2.8	.5	1		1310	159		0.	.1	.0	1		2130	259		0.	.0	.0
1		0455	60		15.	2.7	.5	1		1315	160		0.	.1	.0	1		2135	260		0.	.0	.0
1		0500	61		14.	2.6	.5	1		1320	161		0.	.1	.0	1		2140	261		0.	.0	.0
1		0505	62		14.	2.5	.5	1		1325	162		0.	.1	.0	1		2145	262		0.	.0	.0
1		0510	63		13.	2.4	.5	1		1330	163		0.	.1	.0	1		2150	263		0.	.0	.0
1		0515	64		13.	2.3	.5	1		1335	164		0.	.1	.0	1		2155	264		0.	.0	.0
1		0520	65		12.	2.2	.4	1		1340	165		0.	.1	.0	1		2200	265		0.	.0	.0
1		0525	66		12.	2.2	.4	1		1345	166		0.	.0	.0	1		2205	266		0.	.0	.0
1		0530	67		11.	2.1	.4	1		1350	167		0.	.0	.0	1		2210	267		0.	.0	.0
1		0535	68		11.	2.0	.4	1		1355	168		0.	.0	.0	1		2215	268		0.	.0	.0
1		0540	69		11.	1.9	.4	1		1400	169		0.	.0	.0	1		2220	269		0.	.0	.0
1		0545	70		10.	1.9	.4	1		1405	170		0.	.0	.0	1		2225	270		0.	.0	.0
1		0550	71		10.	1.8	.3	1		1410	171		0.	.0	.0	1		2230	271		0.	.0	.0
1		0555	72		9.	1.7	.3	1		1415	172		0.	.0	.0	1		2235	272		0.	.0	.0
1		0600	73		9.	1.7	.3	1		1420	173		0.	.0	.0	1		2240	273		0.	.0	.0

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DA MON HRMM ORD						OUTFLOW	STORAGE	STAGE	DA MON HRMM ORD						OUTFLOW	STORAGE	STAGE	DA MON HRMM ORD						OUTFLOW	STORAGE	STAGE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1	0000	1	0.	0.	0.	0	0	0	1	0000	101	1.	3	1	1	1640	301	0.	0	0	0	0	0	1	0005	2	0.	0.	0.	0	0	0	1	1645	302	0.	0	0	0	1	0010	3	0.	0.	0.	0	0	0	1	1650	303	0.	0	0	0	1	0015	4	0.	0.	0.	0	0	0	1	1655	304	0.	0	0	0	1	0020	5	0.	0.	0.	0	0	0	1	1700	305	0.	0	0	0	1	0025	6	0.	0.	0.	0	0	0	1	1705	306	0.	0	0	0	1	0030	7	0.	0.	0.	0	0	0	1	1710	307	0.	0	0	0	1	0035	8	0.	0.	0.	0	0	0	1	1715	308	0.	0	0	0	1	0040	9	0.	0.	0.	0	0	0	1	1720	309	0.	0	0	0	1	0045	10	0.	0.	0.	0	0	0	1	1725	310	0.	0	0	0	1	0050	11	0.	0.	0.	0	0	0	1	1730	311	0.	0	0	0	1	0055	12	0.	0.	0.	0	0	0	1	1735	312	0.	0	0	0	1	0100	13	0.	0.	0.	0	0	0	1	1740	313	0.	0	0	0	1	0105	14	0.	0.	0.	0	0	0	1	1745	314	0.	0	0	0	1	0110	15	0.	0.	0.	0	0	0	1	1750	315	0.	0	0	0	1	0115	16	0.	0.	0.	0	0	0	1	1755	316	0.	0	0	0	1	0120	17	0.	0.	0.	0	0	0	1	1800	317	0.	0	0	0	1	0125	18	0.	0.	0.	0	0	0	1	1805	318	0.	0	0	0	1	0130	19	0.	0.	0.	0	0	0	1	1810	319	0.	0	0	0	1	0135	20	0.	0.	0.	0	0	0	1	1815	320	0.	0	0	0	1	0140	21	0.	0.	0.	0	0	0	1	1820	321	0.	0	0	0	1	0145	22	0.	0.	0.	0	0	0	1	1825	322	0.	0	0	0	1	0150	23	0.	0.	0.	0	0	0	1	1830	323	0.	0	0	0	1	0155	24	0.	0.	0.	0	0	0	1	1835	324	0.	0	0	0	1	0200	25	0.	0.	0.	0	0	0	1	1840	325	0.	0	0	0	1	0205	26	0.	0.	0.	0	0	0	1	1845	326	0.	0	0	0	1	0210	27	0.	0.	0.	0	0	0	1	1850	327	0.	0	0	0	1	0215	28	0.	0.	0.	0	0	0	1	1855	328	0.	0	0	0	1	0220	29	0.	0.	0.	0	0	0	1	1900	329	0.	0	0	0	1	0225	30	0.	0.	0.	0	0	0	1	1905	330	0.	0	0	0	1	0230	31	0.	0.	0.	0	0	0	1	1910	331	0.	0	0	0	1	0235	32	0.	0.	0.	0	0	0	1	1915	332	0.	0	0	0	1	0240	33	0.	0.	0.	0	0	0	1	1920	333	0.	0	0	0	1	0245	34	0.	0.	0.	0	0	0	1	1925	334	0.	0	0	0	1	0250	35	0.	0.	0.	0	0	0	1	1930	335	0.	0	0	0	1	0255	36	0.	0.	0.	0	0	0	1	1935	336	0.	0	0	0	1	0300	37	0.	0.	0.	0	0	0	1	1940	337	0.	0	0	0	1	0305	38	0.	0.	0.	0	0	0	1	1945	338	0.	0	0	0	1	0310	39	0.	0.	0.	0	0	0	1	1950	339	0.	0	0	0	1	0315	40	0.	0.	0.	0	0	0	1	1955	340	0.	0	0	0	1	0320	41	0.	0.	0.	0	0	0	1	2000	341	0.	0	0	0	1	0325	42	0.	0.	0.	0	0	0	1	2005	342	0.	0	0	0	1	0330	43	0.	0.	0.	0	0	0	1	2010	343	0.	0	0	0	1	0335	44	2.	4	1	3	2	1305	344	0.	0	0	0	1	0340	45	7.	1.3	3	3	2	1309	345	0.	0	0	0	1	0345	46	11.	2.0	4	4	1	1305	346	0.	0	0	0	1	0350	47	11.	2.1	4	4	1	1310	347	0.	0	0	0	1	0355	48	11.	2.0	4	4	1	1315	348	0.	0	0	0	1	0400	49	11.	1.9	4	4	1	1320	349	0.	0	0	0	1	0405	50	10.	1.9	4	4	1	1325	350	0.	0	0	0	1	0410	51	10.	1.8	3	3	1	1330	351	0.	0	0	0	1	0415	52	9.	1.7	3	3	1	1335	352	0.	0	0	0	1	0420	53	9.	1.7	3	3	1	1340	353	0.	0	0	0	1	0425	54	9.	1.6	3	3	1	1345	354	0.	0	0	0	1	0430	55	8.	1.5	3	3	1	1350	355	0.	0	0	0	1	0435	56	8.	1.5	3	3	1	1355	356	0.	0	0	0	1	0440	57	8.	1.4	3	3	1	1350	357	0.	0	0	0	1	0445	58	8.	1.4	3	3	1	1355	358	0.	0	0	0	1	0450	59	7.	1.3	2	2	1	1310	359	0.	0	0	0	1	0455	60	7.	1.3	2	2	1	1315	360	0.	0	0	0	1	0500	61	7.	1.2	2	2	1	1320	361	0.	0	0	0	1	0505	62	6.	1.2	2	2	1	1325	362	0.	0	0	0	1	0510	63	6.	1.1	2	2	1	1330	363	0.	0	0	0	1	0515	64	6.	1.1	2	2	1	1335	364	0.	0	0	0	1	0520	65	6.	1.1	2	2	1	1340	365	0.	0	0	0	1	0525	66	6.	1.0	2	2	1	1345	366	0.	0	0	0	1	0530	67	5.	1.0	2	2	1	1350	367	0.	0	0	0	1	0535	68	5.	0.	2	2	1	1355	368	0.	0	0	0	1	0540	69	5.	0.	2	2	1	1400	369	0.	0	0	0	1	0545	70	5.	0.	2	2	1	1405	370	0.	0	0	0	1	0550	71	5.	0.	2	2	1	1410	371	0.	0	0	0	1	0555	72	4.	0.	2	2	1	1415	372	0.	0	0	0	1	0600	73	4.	0.	2	2	1	1420	373	0.	0	0	0	1	0605	74	4.	0.	1	1	1	1425	374	0.	0	0	0	1	0610	75	4.	0.	1	1	1	1430	375	0.	0	0	0	1	0615	76	4.	0.	1	1	1	1435	376	0.	0	0	0	1	0620	77	4.	0.	1	1	1	1440	377	0.	0	0	0	1	0625	78	4.	0.	1	1	1	1445	378	0.	0	0	0	1	0630	79	3.	0.	1	1	1	1450	379	0.	0	0	0	1	0635	80	3.	0.	1	1	1	1455	380	0.	0	0	0	1	0640	81	3.	0.	1	1	1	1500	381	0.	0	0	0	1	0645	82	3.	0.	1	1	1	1505	382	0.	0	0	0	1	0650	83	3.	0.	1	1	1	1510	383	0.	0	0	0	1	0655	84	3.	0.	1	1	1	1515	384	0.	0	0	0	1	0700	85	3.	0.	1	1	1	1520	385	0.	0	0	0	1	0705	86	3.	0.	1	1	1	1525	386	0.	0	0	0	1	0710	87	3.	0.	1	1	1	1530	387	0.	0	0	0	1	0715	88	2.	0.	1	1	1	1535	388	0.	0	0	0	1	0720	89	2.	0.	1	1	1	1540	389	0.	0	0	0	1	0725	90	2.	0.	1	1	1	1545	390	0.	0	0	0	1	0730	91	2.	0.	1	1	1	1550	391	0.	0	0	0	1	0735	92	2.	0.	1	1	1	1555	392	0.	0	0	0	1	0740	93	2.	0.	1	1	1	1600	393	0.	0	0	0	1	0745	94	2.	0.	1	1	1	1605	394	0.	0	0	0	1	0750	95	2.	0.	1	1	1	1610	395	0.	0	0	0	1	0755	96	2.	0.	1	1	1	1615	396	0.	0	0	0	1	0800	97	2.	0.	1	1	1	1620	397	0.	0	0	0	1	0805	98	2.	0.	1	1	1	1625	398	0.	0	0	0	1	0810	99	2.	0.	1	1	1	1630	399	0.	0	0	0	1	0815	100	2.	0.	1	1	1	1635	400	0.	0	0	0	1	0820	101	2.	0.	1	1	1	1640	401	0.	0	0	0	1	0825	102	2.	0.	1	1	1	1645	402	0.	0	0	0	1	0830	103	2.	0.	1	1	1	1650	403	0.	0	0	0	1	0835	104	2.	0.	1	1	1	1655	404	0.	0	0	0	1	0840	105	2.	0.	1	1	1	1700	405	0.	0	0	0	1	0845	106	2.	0.	1	1	1	1705	406	0.	0	0	0	1	0850	107	2.	0.	1	1	1	1710	407	0.	0	0	0	1	0855	108	2.	0.	1	1	1	1715	408	0.	0	0	0	1	0900	109	2.	0.	1	1	1	1720	409	0.	0	0	0	1	0905	110	2.	0.	1	1	1	1725	410	0.	0	0	0	1	0910	111	2.	0.	1	1	1	1730	411	0.	0	0	0	1	0915	112	2.	0.	1	1	1	1735	412	0.	0	0	0	1	0920	113	2.	0.	1	1	1	1740	413	0.	0	0	0	1	0925	114	2.	0.	1	1	1	1745	414	0.	0	0	0	1	0930	115	2.	0.	1	1	1	1750	415	0.	0	0	0	1	0935	116	2.	0.	1	1	1	1755	416	0.	0	0	0	1	0940	117	2.	0.	1	1	1	1800	417	0.	0	0	0	1	0945	118	2.	0.	1	1	1	1805	418	0.	0	0	0	1	0950	119	2.	0.	1	1	1	1810	419	0.	0	0	0	1	0955	120	2.	0.	1	1	1	1815	420	0.	0	0	0	1	1000	121	2.	0.	1	1	1	1820	421	0.	0	0	0	1	1005	122	2.	0.	1	1	1	1825	422	0.	0	0	0	1	1010	123	2.	0.	1	1	1	1830	423	0.	0	0	0	1	1015	124	2.	0.	1	1	1	1835	424	0.	0	0	0	1	1020	125	2.	0.	1	1	1	1840	425	0.	0	0	0	1	102

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HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .93

DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0 * 1	0820		101	0.	.1	.0 * 1	.0 * 1	1640		201	0.	.0	.0	.0
1		0005	2	0.	.0	.0 * 1	0825		102	0.	.1	.0 * 1	.0 * 1	1645		202	0.	.0	.0	.0
1		0010	3	0.	.0	.0 * 1	0830		103	0.	.1	.0 * 1	.0 * 1	1650		203	0.	.0	.0	.0
1		0015	4	0.	.0	.0 * 1	0835		104	0.	.1	.0 * 1	.0 * 1	1655		204	0.	.0	.0	.0
1		0020	5	0.	.0	.0 * 1	0840		105	0.	.1	.0 * 1	.0 * 1	1700		205	0.	.0	.0	.0
1		0025	6	0.	.0	.0 * 1	0845		106	0.	.1	.0 * 1	.0 * 1	1705		206	0.	.0	.0	.0
1		0030	7	0.	.0	.0 * 1	0850		107	0.	.1	.0 * 1	.0 * 1	1710		207	0.	.0	.0	.0
1		0035	8	0.	.0	.0 * 1	0855		108	0.	.1	.0 * 1	.0 * 1	1715		208	0.	.0	.0	.0
1		0040	9	0.	.0	.0 * 1	0900		109	0.	.1	.0 * 1	.0 * 1	1720		209	0.	.0	.0	.0
1		0045	10	0.	.0	.0 * 1	0905		110	0.	.1	.0 * 1	.0 * 1	1725		210	0.	.0	.0	.0
1		0050	11	0.	.0	.0 * 1	0910		111	0.	.0	.0 * 1	.0 * 1	1730		211	0.	.0	.0	.0
1		0055	12	0.	.0	.0 * 1	0915		112	0.	.0	.0 * 1	.0 * 1	1735		212	0.	.0	.0	.0
1		0100	13	0.	.0	.0 * 1	0920		113	0.	.0	.0 * 1	.0 * 1	1740		213	0.	.0	.0	.0
1		0105	14	0.	.0	.0 * 1	0925		114	0.	.0	.0 * 1	.0 * 1	1745		214	0.	.0	.0	.0
1		0110	15	0.	.0	.0 * 1	0930		115	0.	.0	.0 * 1	.0 * 1	1750		215	0.	.0	.0	.0
1		0115	16	0.	.0	.0 * 1	0935		116	0.	.0	.0 * 1	.0 * 1	1755		216	0.	.0	.0	.0
1		0120	17	0.	.0	.0 * 1	0940		117	0.	.0	.0 * 1	.0 * 1	1800		217	0.	.0	.0	.0
1		0125	18	0.	.0	.0 * 1	0945		118	0.	.0	.0 * 1	.0 * 1	1805		218	0.	.0	.0	.0
1		0130	19	0.	.0	.0 * 1	0950		119	0.	.0	.0 * 1	.0 * 1	1810		219	0.	.0	.0	.0
1		0135	20	0.	.0	.0 * 1	0955		120	0.	.0	.0 * 1	.0 * 1	1815		220	0.	.0	.0	.0
1		0140	21	0.	.0	.0 * 1	1000		121	0.	.0	.0 * 1	.0 * 1	1820		221	0.	.0	.0	.0
1		0145	22	0.	.0	.0 * 1	1005		122	0.	.0	.0 * 1	.0 * 1	1825		222	0.	.0	.0	.0
1		0150	23	0.	.0	.0 * 1	1010		123	0.	.0	.0 * 1	.0 * 1	1830		223	0.	.0	.0	.0
1		0155	24	0.	.0	.0 * 1	1015		124	0.	.0	.0 * 1	.0 * 1	1835		224	0.	.0	.0	.0
1		0200	25	0.	.0	.0 * 1	1020		125	0.	.0	.0 * 1	.0 * 1	1840		225	0.	.0	.0	.0
1		0205	26	0.	.0	.0 * 1	1025		126	0.	.0	.0 * 1	.0 * 1	1845		226	0.	.0	.0	.0
1		0210	27	0.	.0	.0 * 1	1030		127	0.	.0	.0 * 1	.0 * 1	1850		227	0.	.0	.0	.0
1		0215	28	0.	.0	.0 * 1	1035		128	0.	.0	.0 * 1	.0 * 1	1855		228	0.	.0	.0	.0
1		0220	29	0.	.0	.0 * 1	1040		129	0.	.0	.0 * 1	.0 * 1	1900		229	0.	.0	.0	.0
1		0225	30	0.	.0	.0 * 1	1045		130	0.	.0	.0 * 1	.0 * 1	1905		230	0.	.0	.0	.0
1		0230	31	0.	.0	.0 * 1	1050		131	0.	.0	.0 * 1	.0 * 1	1910		231	0.	.0	.0	.0
1		0235	32	0.	.0	.0 * 1	1055		132	0.	.0	.0 * 1	.0 * 1	1915		232	0.	.0	.0	.0
1		0240	33	0.	.0	.0 * 1	1100		133	0.	.0	.0 * 1	.0 * 1	1920		233	0.	.0	.0	.0
1		0245	34	0.	.0	.0 * 1	1105		134	0.	.0	.0 * 1	.0 * 1	1925		234	0.	.0	.0	.0
1		0250	35	0.	.0	.0 * 1	1110		135	0.	.0	.0 * 1	.0 * 1	1930		235	0.	.0	.0	.0
1		0255	36	0.	.0	.0 * 1	1115		136	0.	.0	.0 * 1	.0 * 1	1935		236	0.	.0	.0	.0
1		0300	37	0.	.0	.0 * 1	1120		137	0.	.0	.0 * 1	.0 * 1	1940		237	0.	.0	.0	.0
1		0305	38	0.	.0	.0 * 1	1125		138	0.	.0	.0 * 1	.0 * 1	1945		238	0.	.0	.0	.0
1		0310	39	0.	.0	.0 * 1	1130		139	0.	.0	.0 * 1	.0 * 1	1950		239	0.	.0	.0	.0
1		0315	40	0.	.0	.0 * 1	1135		140	0.	.0	.0 * 1	.0 * 1	1955		240	0.	.0	.0	.0
1		0320	41	0.	.0	.0 * 1	1140		141	0.	.0	.0 * 1	.0 * 1	2000		241	0.	.0	.0	.0
1		0325	42	0.	.0	.0 * 1	1145		142	0.	.0	.0 * 1	.0 * 1	2005		242	0.	.0	.0	.0
1		0330	43	0.	.0	.0 * 1	1150		143	0.	.0	.0 * 1	.0 * 1	2010		243	0.	.0	.0	.0
1		0335	44	1.	.1	.0 * 1	1155		144	0.	.0	.0 * 1	.0 * 1	2015		244	0.	.0	.0	.0
1		0340	45	1.	.4	.1 * 1	1200		145	0.	.0	.0 * 1	.0 * 1	2020		245	0.	.0	.0	.0
1		0345	46	1.	.6	.1 * 1	1205		146	0.	.0	.0 * 1	.0 * 1	2025		246	0.	.0	.0	.0
1		0350	47	1.	.6	.1 * 1	1210		147	0.	.0	.0 * 1	.0 * 1	2030		247	0.	.0	.0	.0
1		0355	48	1.	.9	.1 * 1	1215		148	0.	.0	.0 * 1	.0 * 1	2035		248	0.	.0	.0	.0
1		0400	49	1.	.9	.1 * 1	1220		149	0.	.0	.0 * 1	.0 * 1	2040		249	0.	.0	.0	.0
1		0405	50	1.	.9	.1 * 1	1225		150	0.	.0	.0 * 1	.0 * 1	2045		250	0.	.0	.0	.0
1		0410	51	1.	.9	.1 * 1	1230		151	0.	.0	.0 * 1	.0 * 1	2050		251	0.	.0	.0	.0
1		0415	52	1.	.5	.1 * 1	1235		152	0.	.0	.0 * 1	.0 * 1	2055		252	0.	.0	.0	.0
1		0420	53	1.	.4	.1 * 1	1240		153	0.	.0	.0 * 1	.0 * 1	2100		253	0.	.0	.0	.0
1		0425	54	1.	.4	.1 * 1	1245		154	0.	.0	.0 * 1	.0 * 1	2105		254	0.	.0	.0	.0
1		0430	55	1.	.4	.1 * 1	1250		155	0.	.0	.0 * 1	.0 * 1	2110		255	0.	.0	.0	.0
1		0435	56	1.	.4	.1 * 1	1255		156	0.	.0	.0 * 1	.0 * 1	2115		256	0.	.0	.0	.0
1		0440	57	1.	.4	.1 * 1	1300		157	0.	.0	.0 * 1	.0 * 1	2120		257	0.	.0	.0	.0
1		0445	58	1.	.4	.1 * 1	1305		158	0.	.0	.0 * 1	.0 * 1	2125		258	0.	.0	.0	.0
1		0450	59	1.	.4	.1 * 1	1310		159	0.	.0	.0 * 1	.0 * 1	2130		259	0.	.0	.0	.0
1		0455	60	1.	.3	.1 * 1	1315		160	0.	.0	.0 * 1	.0 * 1	2135		260	0.	.0	.0	.0
1		0500	61	1.	.3	.1 * 1	1320		161	0.	.0	.0 * 1	.0 * 1	2140		261	0.	.0	.0	.0
1		0505	62	1.	.3	.1 * 1	1325		162	0.	.0	.0 * 1	.0 * 1	2145		262	0.	.0	.0	.0
1		0510	63	1.	.3	.1 * 1	1330		163	0.	.0	.0 * 1	.0 * 1	2150		263	0.	.0	.0	.0
1		0515	64	1.	.3	.1 * 1	1335		164	0.	.0	.0 * 1	.0 * 1	2155		264	0.	.0	.0	.0
1		0520	65	1.	.3	.1 * 1	1340		165	0.	.0	.0 * 1	.0 * 1	2200		265	0.	.0	.0	.0
1		0525	66	1.	.3	.1 * 1	1345		166	0.	.0	.0 * 1	.0 * 1	2205		266	0.	.0	.0	.0
1		0530	67	1.	.3	.1 * 1	1350		167	0.	.0	.0 * 1	.0 * 1	2210		267	0.	.0	.0	.0
1		0535	68	1.	.3	.0 * 1	1355		168	0.	.0	.0 * 1	.0 * 1	2215		268	0.	.0	.0	.0
1		0540	69	1.	.2	.0 * 1	1400		169	0.	.0	.0 * 1	.0 * 1	2220		269	0.	.0	.0	.0
1		0545	70	1.	.2	.0 * 1	1405		170	0.	.0	.0 * 1	.0 * 1	2225		270	0.	.0	.0	.0
1		0550	71	1.	.2	.0 * 1	1410		171	0.	.0	.0 * 1	.0 * 1	2230		271	0.	.0	.0	.0
1		0555	72	1.	.2	.0 * 1	1415		172	0.	.0	.0 * 1	.0 * 1	2235		272	0.	.0	.0	.0
1		0600	73	1.	.2	.0 * 1	1420		173	0.	.0	.0 * 1	.0 * 1	2240		273	0.	.0	.0	.0
1		0605	74	1.	.2	.0 * 1	1425		174	0.	.0	.0 * 1	.0 * 1	2245		274	0.	.0	.0	.0
1		0610	75	1.	.2	.0 * 1	1430		175	0.	.0	.0 * 1	.0 * 1	2250		275	0.	.0	.0	.0
1		0615	76	1.	.2	.0 * 1	1435		176	0.	.0	.0 * 1	.0 * 1	2255		276	0.	.0	.0	.0
1		0620	77	1.	.2	.0 * 1	1440		177	0.	.0	.0 * 1	.0 * 1	2300		277	0.	.0	.0	.0
1		0625	78	1.	.2	.0 * 1	1445		178	0.	.0	.0 * 1	.0 * 1	2305		278	0.	.0	.0	.0
1		0630	79	1.	.2	.0 * 1	1450		179	0.	.0	.0 * 1	.0 * 1	2310		279	0.	.0	.0	.0
1		0635	80	1.	.2	.0 * 1	1455		180	0.	.0	.0 * 1	.0 * 1	2315		280	0.	.0	.0	.0
1		0640	81	1.	.2	.0 * 1	1500		181	0.	.0	.0 * 1	.0 * 1	2320		281	0.	.0	.0	.0
1		0645	82	1.	.1	.0 * 1	1505		182	0.	.0	.0 * 1	.0 * 1	2325		282	0.	.0	.0	.0
1		0650	83																	

卷之四十五

33312333 新装

[illegible]

1	0020	5	0.	.0	.0	* 1	0840	105	0.	.0	.0	* 1	1700	205	0.	.0	.0
1	0025	6	0.	.0	.0	* 1	0845	106	0.	.0	.0	* 1	1705	206	0.	.0	.0
1	0030	7	0.	.0	.0	* 1	0850	107	0.	.0	.0	* 1	1710	207	0.	.0	.0
1	0035	8	0.	.0	.0	* 1	0855	108	0.	.0	.0	* 1	1715	208	0.	.0	.0
1	0040	9	0.	.0	.0	* 1	0900	109	0.	.0	.0	* 1	1720	209	0.	.0	.0
1	0045	10	0.	.0	.0	* 1	0905	110	0.	.0	.0	* 1	1725	210	0.	.0	.0
1	0050	11	0.	.0	.0	* 1	0910	111	0.	.0	.0	* 1	1730	211	0.	.0	.0
1	0055	12	0.	.0	.0	* 1	0915	112	0.	.0	.0	* 1	1735	212	0.	.0	.0
1	0100	13	0.	.0	.0	* 1	0920	113	0.	.0	.0	* 1	1740	213	0.	.0	.0
1	0105	14	0.	.0	.0	* 1	0925	114	0.	.0	.0	* 1	1745	214	0.	.0	.0
1	0110	15	0.	.0	.0	* 1	0930	115	0.	.0	.0	* 1	1750	215	0.	.0	.0
1	0115	16	0.	.0	.0	* 1	0935	116	0.	.0	.0	* 1	1755	216	0.	.0	.0
1	0120	17	0.	.0	.0	* 1	0940	117	0.	.0	.0	* 1	1800	217	0.	.0	.0
1	0125	18	0.	.0	.0	* 1	0945	118	0.	.0	.0	* 1	1805	218	0.	.0	.0
1	0130	19	0.	.0	.0	* 1	0950	119	0.	.0	.0	* 1	1810	219	0.	.0	.0
1	0135	20	0.	.0	.0	* 1	0955	120	0.	.0	.0	* 1	1815	220	0.	.0	.0
1	0140	21	0.	.0	.0	* 1	1000	121	0.	.0	.0	* 1	1820	221	0.	.0	.0
1	0145	22	0.	.0	.0	* 1	1005	122	0.	.0	.0	* 1	1825	222	0.	.0	.0
1	0150	23	0.	.0	.0	* 1	1010	123	0.	.0	.0	* 1	1830	223	0.	.0	.0
1	0155	24	0.	.0	.0	* 1	1015	124	0.	.0	.0	* 1	1835	224	0.	.0	.0
1	0200	25	0.	.0	.0	* 1	1020	125	0.	.0	.0	* 1	1840	225	0.	.0	.0
1	0205	26	0.	.0	.0	* 1	1025	126	0.	.0	.0	* 1	1845	226	0.	.0	.0
1	0210	27	0.	.0	.0	* 1	1030	127	0.	.0	.0	* 1	1850	227	0.	.0	.0
1	0215	28	0.	.0	.0	* 1	1035	128	0.	.0	.0	* 1	1855	228	0.	.0	.0
1	0220	29	0.	.0	.0	* 1	1040	129	0.	.0	.0	* 1	1900	229	0.	.0	.0
1	0225	30	0.	.0	.0	* 1	1045	130	0.	.0	.0	* 1	1905	230	0.	.0	.0
1	0230	31	0.	.0	.0	* 1	1050	131	0.	.0	.0	* 1	1910	231	0.	.0	.0
1	0235	32	0.	.0	.0	* 1	1055	132	0.	.0	.0	* 1	1915	232	0.	.0	.0
1	0240	33	0.	.0	.0	* 1	1100	133	0.	.0	.0	* 1	1920	233	0.	.0	.0
1	0245	34	0.	.0	.0	* 1	1105	134	0.	.0	.0	* 1	1925	234	0.	.0	.0
1	0250	35	0.	.0	.0	* 1	1110	135	0.	.0	.0	* 1	1930	235	0.	.0	.0
1	0255	36	0.	.0	.0	* 1	1115	136	0.	.0	.0	* 1	1935	236	0.	.0	.0
1	0300	37	0.	.0	.0	* 1	1120	137	0.	.0	.0	* 1	1940	237	0.	.0	.0
1	0305	38	0.	.0	.0	* 1	1125	138	0.	.0	.0	* 1	1945	238	0.	.0	.0
1	0310	39	0.	.0	.0	* 1	1130	139	0.	.0	.0	* 1	1950	239	0.	.0	.0
1	0315	40	0.	.0	.0	* 1	1135	140	0.	.0	.0	* 1	1955	240	0.	.0	.0
1	0320	41	0.	.0	.0	* 1	1140	141	0.	.0	.0	* 1	2000	241	0.	.0	.0
1	0325	42	0.	.0	.0	* 1	1145	142	0.	.0	.0	* 1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0	* 1	1150	143	0.	.0	.0	* 1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0	* 1	1155	144	0.	.0	.0	* 1	2015	244	0.	.0	.0
1	0340	45	0.	.0	.0	* 1	1200	145	0.	.0	.0	* 1	2020	245	0.	.0	.0
1	0345	46	1.	.1	.0	* 1	1205	146	0.	.0	.0	* 1	2025	246	0.	.0	.0
1	0350	47	1.	.2	.0	* 1	1210	147	0.	.0	.0	* 1	2030	247	0.	.0	.0
1	0355	48	1.	.1	.0	* 1	1215	148	0.	.0	.0	* 1	2035	248	0.	.0	.0
1	0400	49	1.	.1	.0	* 1	1220	149	0.	.0	.0	* 1	2040	249	0.	.0	.0
1	0405	50	1.	.1	.0	* 1	1225	150	0.	.0	.0	* 1	2045	250	0.	.0	.0
1	0410	51	1.	.1	.0	* 1	1230	151	0.	.0	.0	* 1	2050	251	0.	.0	.0
1	0415	52	1.	.1	.0	* 1	1235	152	0.	.0	.0	* 1	2055	252	0.	.0	.0
1	0420	53	1.	.1	.0	* 1	1240	153	0.	.0	.0	* 1	2100	253	0.	.0	.0
1	0425	54	1.	.1	.0	* 1	1245	154	0.	.0	.0	* 1	2105	254	0.	.0	.0
1	0430	55	1.	.1	.0	* 1	1250	155	0.	.0	.0	* 1	2110	255	0.	.0	.0
1	0435	56	1.	.1	.0	* 1	1255	156	0.	.0	.0	* 1	2115	256	0.	.0	.0
1	0440	57	1.	.1	.0	* 1	1300	157	0.	.0	.0	* 1	2120	257	0.	.0	.0
1	0445	58	1.	.1	.0	* 1	1305	158	0.	.0	.0	* 1	2125	258	0.	.0	.0
1	0450	59	1.	.1	.0	* 1	1310	159	0.	.0	.0	* 1	2130	259	0.	.0	.0
1	0455	60	1.	.1	.0	* 1	1315	160	0.	.0	.0	* 1	2135	260	0.	.0	.0
1	0500	61	1.	.1	.0	* 1	1320	161	0.	.0	.0	* 1	2140	261	0.	.0	.0
1	0505	62	0.	.1	.0	* 1	1325	162	0.	.0	.0	* 1	2145	262	0.	.0	.0
1	0510	63	0.	.1	.0	* 1	1330	163	0.	.0	.0	* 1	2150	263	0.	.0	.0
1	0515	64	0.	.1	.0	* 1	1335	164	0.	.0	.0	* 1	2155	264	0.	.0	.0
1	0520	65	0.	.1	.0	* 1	1340	165	0.	.0	.0	* 1	2200	265	0.	.0	.0
1	0525	66	0.	.1	.0	* 1	1345	166	0.	.0	.0	* 1	2205	266	0.	.0	.0
1	0530	67	0.	.1	.0	* 1	1350	167	0.	.0	.0	* 1	2210	267	0.	.0	.0
1	0535	68	0.	.1	.0	* 1	1355	168	0.	.0	.0	* 1	2215	268	0.	.0	.0
1	0540	69	0.	.1	.0	* 1	1400	169	0.	.0	.0	* 1	2220	269	0.	.0	.0
1	0545	70	0.	.1	.0	* 1	1405	170	0.	.0	.0	* 1	2225	270	0.	.0	.0
1	0550	71	0.	.1	.0	* 1	1410	171	0.	.0	.0	* 1	2230	271	0.	.0	.0
1	0555	72	0.	.1	.0	* 1	1415	172	0.	.0	.0	* 1	2235	272	0.	.0	.0
1	0600	73	0.	.1	.0	* 1	1420	173	0.	.0	.0	* 1	2240	273	0.	.0	.0
1	0605	74	0.	.1	.0	* 1	1425	174	0.	.0	.0	* 1	2245	274	0.	.0	.0
1	0610	75	0.	.1	.0	* 1	1430	175	0.	.0	.0	* 1	2250	275	0.	.0	.0
1	0615	76	0.	.1	.0	* 1	1435	176	0.	.0	.0	* 1	2255	276	0.	.0	.0
1	0620	77	0.	.1	.0	* 1	1440	177	0.	.0	.0	* 1	2300	277	0.	.0	.0
1	0625	78	0.	.0	.0	* 1	1445	178	0.	.0	.0	* 1	2305	278	0.	.0	.0
1	0630	79	0.	.0	.0	* 1	1450	179	0.	.0	.0	* 1	2310	279	0.	.0	.0
1	0635	80	0.	.0	.0	* 1	1455	180	0.	.0	.0	* 1	2315	280	0.	.0	.0
1	0640	81	0.	.0	.0	* 1	1500	181	0.	.0	.0	* 1	2320	281	0.	.0	.0
1	0645	82	0.	.0	.0	* 1	1505	182	0.	.0	.0	* 1	2325	282	0.	.0	.0
1	0650	83	0.	.0	.0	* 1	1510	183	0.	.0	.0	* 1	2330	283	0.	.0	.0
1	0655	84	0.	.0	.0	* 1	1515	184	0.	.0	.0	* 1	2335	284	0.	.0	.0
1	0700	85	0.	.0	.0	* 1	1520	185	0.	.0	.0	* 1	2340	285	0.	.0	.0
1	0705	86	0.	.0	.0	* 1	1525	186	0.	.0	.0	* 1	2345	286	0.	.0	.0
1	0710	87	0.	.0	.0	* 1	1530	187	0.	.0	.0	* 1	2350	287	0.	.0	.0
1	0715	88	0.	.0	.0	* 1	1535	188	0.	.0	.0	* 1	2355	288	0.	.0	.0
1	0720	89	0.	.0	.0	* 1	1540	189	0.	.0	.0	* 2	0000	289	0.	.0	.0
1	0725	90	0.	.0	.0	* 1	1545	190	0.	.0	.0	* 2	0005	290	0.	.0	.0
1	0730	91	0.	.0	.0	* 1	1550	191	0.	.0	.0	* 2	0010	291	0.	.0	.0
1	0735	92	0.	.0	.0	* 1	1555	192	0.	.0	.0	* 2	0015	292	0.	.0	.0
1	0740	93	0.	.0	.0	* 1	1600	193	0.	.0	.0	* 2	0020	293	0.	.0	.0
1	0745	94	0.	.0	.0	* 1	1605	194	0.	.0	.0	* 2	0025	294	0.	.0	.0
1	0750	95	0.	.0	.0	* 1	1610	195	0.	.0	.0	* 2	0030	295	0.	.0	.0
1	0755	96	0.	.0	.0	* 1	1615	196	0.	.0	.0	* 2	0035	296	0.	.0	.0
1	0800	97	0.	.0	.0	* 1	1620	197	0.	.0	.0	* 2	0040	297	0.	.0	.0
1	0805	98	0.	.0	.0	* 1	1625	198	0.	.0	.0	* 2	0045	298	0.	.0	.0
1	0810	99	0.	.0	.0	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	0.	.0	.0	* 1	1635	200	0.	.0	.0	* 2	0055	30			

	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		
	.03	3.75	.01	.00
			.00	.00
	CUMULATIVE AREA = 4.77 SQ MI			
1			STATION	DATA
	9.	4.	(1) INFLOW,	(2) OUTFLOW
	8.	12.	16.	20.
	24.	28.	(3) STORAGE	0.
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+	OFFD-2	.02	1	FLOW TIME	79. 3.58	77. 3.58	75. 3.58	73. 3.58	71. 3.58	70. 3.58
+	HYDROGRAPH AT OFFD-3	.30	1	FLOW TIME	89. 3.75	86. 3.75	81. 3.75	76. 3.75	74. 3.75	73. 3.75
+	HYDROGRAPH AT OFFD-1A	.01	1	FLOW TIME	35. 3.50	34. 3.50	33. 3.50	32. 3.50	31. 3.50	31. 3.50
+	ROUTED TO ROFFD-1A	.01	1	FLOW TIME	30. 3.67	29. 3.67	28. 3.67	27. 3.67	27. 3.67	27. 3.67
+	3 COMBINED AT CP1	.42	1	FLOW TIME	182. 3.67	177. 3.67	168. 3.67	160. 3.67	156. 3.67	154. 3.67
+	HYDROGRAPH AT OFFD-2A	.02	1	FLOW TIME	21. 3.50	20. 3.50	19. 3.50	19. 3.50	18. 3.50	18. 3.50
+	HYDROGRAPH AT OFFD-1	.47	1	FLOW TIME	448. 3.58	440. 3.58	426. 3.58	413. 3.58	407. 3.58	401. 3.58
+	2 COMBINED AT CP2	.49	1	FLOW TIME	468. 3.58	460. 3.58	445. 3.58	431. 3.58	425. 3.58	421. 3.58
+	HYDROGRAPH AT OFFD-4	.47	1	FLOW TIME	138. 3.83	133. 3.83	126. 3.83	118. 3.83	115. 3.83	113. 3.83
+	2 COMBINED AT CP2B	.97	1	FLOW TIME	547. 3.58	535. 3.58	515. 3.58	495. 3.58	488. 3.58	482. 3.58
+	ROUTED TO RC2B	.97	1	FLOW TIME	538. 3.83	527. 3.83	506. 3.83	487. 3.83	480. 3.83	474. 3.83
+	2 COMBINED AT CP2A	1.39	1	FLOW TIME	688. 3.75	671. 3.75	641. 3.75	615. 3.83	605. 3.83	598. 3.83
+	ROUTED TO RCP2A	1.39	1	FLOW TIME	682. 3.83	667. 3.83	640. 3.83	613. 3.83	603. 3.83	595. 3.83
+	HYDROGRAPH AT OHD-25	.05	1	FLOW TIME	49. 3.50	47. 3.50	45. 3.50	42. 3.50	41. 3.50	41. 3.50
+	HYDROGRAPH AT OFFD-25	.07	1	FLOW TIME	49. 3.58	48. 3.58	46. 3.58	44. 3.58	43. 3.58	42. 3.58
+	3 COMBINED AT CP3	.16	1	FLOW TIME	96. 3.50	93. 3.50	89. 3.50	84. 3.50	82. 3.50	81. 3.50
+	HYDROGRAPH AT OHD-26	.02	1	FLOW TIME	8. 3.50	8. 3.50	7. 3.50	7. 3.50	7. 3.50	6. 3.50
+	HYDROGRAPH AT OFFD-26	.01	1	FLOW TIME	13. 3.50	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50
+	2 COMBINED AT CP4	.03	1	FLOW TIME	20. 3.50	20. 3.50	19. 3.50	18. 3.50	18. 3.50	18. 3.50
+	2 COMBINED AT CP5	.19	1	FLOW TIME	117. 3.50	113. 3.50	109. 3.50	103. 3.50	100. 3.50	99. 3.50
+	ROUTED TO RCP5	.19	1	FLOW TIME	110. 3.58	107. 3.58	102. 3.58	97. 3.58	85. 3.58	94. 3.58
+	HYDROGRAPH AT OHD-20	.16	1	FLOW TIME	185. 3.50	182. 3.50	176. 3.50	170. 3.50	167. 3.50	166. 3.50
+	HYDROGRAPH AT OHD-21	.09	1	FLOW TIME	77. 3.50	75. 3.50	72. 3.50	69. 3.50	67. 3.50	67. 3.50
+	3 COMBINED AT CP8	.44	1	FLOW TIME	371. 3.50	362. 3.50	347. 3.50	333. 3.50	327. 3.50	323. 3.50
+	HYDROGRAPH AT OHD-27	.09	1	FLOW TIME	58. 3.50	56. 3.50	53. 3.50	51. 3.50	50. 3.50	49. 3.50
+	HYDROGRAPH AT OFFD-27A	.07	1	FLOW TIME	48. 3.58	47. 3.58	45. 3.58	43. 3.58	42. 3.58	42. 3.58
+	HYDROGRAPH AT OFFD-27B	.04	1	FLOW TIME	29. 3.58	28. 3.58	27. 3.58	26. 3.58	26. 3.58	25. 3.58
+	3 COMBINED AT CP6	.20	1	FLOW TIME	131. 3.50	128. 3.50	122. 3.50	116. 3.50	113. 3.50	112. 3.50
+	ROUTED TO RCP6	.20	1	FLOW	129. 3.50	125. 3.50	120. 3.50	114. 3.50	112. 3.50	110. 3.50

				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT										
+	GND-22	.06	1	FLOW	36.	35.	33.	32.	31.	30.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT										
+	CP7	.36	1	FLOW	158.	153.	147.	140.	137.	135.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO										
+	BCP7	.36	1	FLOW	159.	152.	146.	140.	135.	134.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT										
+	CP2	2.09	1	FLOW	832.	809.	869.	831.	816.	806.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
DIVERSION TO										
+	DIV1	2.09	1	FLOW	831.	831.	831.	831.	816.	806.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	DIV1	2.09	1	FLOW	101.	78.	38.	0.	0.	0.
				TIME	3.75	3.75	3.75	3.75	.00	.00
ROUTED TO										
+	DET1	2.09	1	FLOW	4.	3.	1.	0.	0.	0.
				TIME	3.92	3.92	3.83	3.83	.00	.00
** PEAK STAGES IN FEET **										
1	STAGE				.30	.19	.06	.00	.00	.00
	TIME				3.92	3.92	3.83	3.83	5.00	5.00
HYDROGRAPH AT										
+	DIV1	.00	1	FLOW	831.	831.	831.	831.	816.	806.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
2 COMBINED AT										
+	CP10	2.09	1	FLOW	835.	834.	831.	831.	816.	806.
				TIME	3.83	3.83	3.75	3.75	3.75	3.75
ROUTED TO										
+	BCP10	2.09	1	FLOW	834.	833.	829.	823.	807.	797.
				TIME	3.83	3.83	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	GND-18	.03	1	FLOW	41.	40.	39.	38.	37.	37.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO										
+	ROAD-18	.03	1	FLOW	36.	35.	35.	34.	33.	33.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT										
+	GND-19	.11	1	FLOW	62.	60.	57.	54.	53.	52.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT										
+	CP11	2.23	1	FLOW	887.	882.	873.	864.	848.	837.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
ROUTED TO										
+	BCP11	2.23	1	FLOW	885.	878.	871.	855.	839.	828.
				TIME	3.67	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	GND-13	.11	1	FLOW	60.	59.	58.	52.	51.	50.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT										
+	GND-14	.10	1	FLOW	80.	77.	73.	68.	67.	65.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT										
+	CP12	2.53	1	FLOW	990.	974.	946.	937.	909.	897.
				TIME	3.50	3.67	3.75	3.75	3.75	3.75
ROUTED TO										
+	BCP12	2.53	1	FLOW	987.	973.	946.	925.	907.	895.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	GND-12	.01	1	FLOW	8.	8.	8.	7.	7.	7.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT										
+	CP13	2.54	1	FLOW	993.	979.	950.	939.	911.	898.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
ROUTED TO										
+	BCP13	2.54	1	FLOW	991.	976.	950.	936.	908.	895.
				TIME	3.67	3.67	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	GND-10	.14	1	FLOW	75.	73.	69.	65.	64.	63.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT										
+	CP14	2.68	1	FLOW	1040.	1020.	987.	959.	941.	927.
				TIME	3.50	3.67	3.67	3.75	3.75	3.75
HYDROGRAPH AT										
+	GND-24	.13	1	FLOW	46.	44.	41.	38.	37.	36.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO										
+	ROAD-24	.13	1	FLOW	44.	42.	40.	37.	36.	35.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT										
+	GND-23	.13	1	FLOW	25.	24.	21.	19.	18.	18.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50

3 COMBINED AT	CP15	.26	1	FLOW	49.	46.	61.	56.	54.	53.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCP15	.26	1	FLOW	65.	62.	57.	53.	51.	49.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-15	.15	1	FLOW	77.	75.	71.	68.	66.	65.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP16	.40	1	FLOW	143.	137.	129.	126.	117.	114.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCP16	.40	1	FLOW	134.	128.	120.	111.	108.	106.
				TIME	3.58	3.58	3.58	3.67	3.58	3.67
HYDROGRAPH AT	OND-11	.11	1	FLOW	60.	58.	55.	52.	51.	50.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT	CP17	3.19	1	FLOW	1125.	1185.	1138.	1080.	1055.	1040.
				TIME	3.58	3.58	3.67	3.67	3.67	3.75
ROUTED TO	BCP17	3.19	1	FLOW	1106.	1180.	1135.	1076.	1054.	1039.
				TIME	3.67	3.67	3.67	3.67	3.75	3.75
HYDROGRAPH AT	OND-5	.10	1	FLOW	56.	54.	51.	48.	47.	46.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	OND-6	.40	1	FLOW	215.	228.	217.	205.	202.	199.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP18	3.70	1	FLOW	1474.	1429.	1353.	1280.	1250.	1228.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-17	.20	1	FLOW	94.	91.	86.	81.	79.	78.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCPD-17	.20	1	FLOW	88.	83.	80.	75.	73.	73.
				TIME	3.58	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OND-8	.24	1	FLOW	68.	66.	61.	56.	54.	53.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP19	.44	1	FLOW	157.	148.	140.	131.	127.	124.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCP19	.44	1	FLOW	153.	144.	137.	129.	125.	122.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OND-14	.06	1	FLOW	10.	10.	9.	8.	7.	7.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCPD-14	.06	1	FLOW	11.	11.	16.	12.	8.	8.
				TIME	4.00	4.00	3.92	4.00	4.00	4.08
HYDROGRAPH AT	OND-7	.33	1	FLOW	196.	190.	181.	172.	168.	166.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP20	.83	1	FLOW	336.	323.	305.	288.	280.	274.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCP20	.83	1	FLOW	321.	308.	292.	274.	267.	264.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
2 COMBINED AT	CP21	4.53	1	FLOW	1775.	1717.	1621.	1535.	1499.	1478.
				TIME	3.58	3.58	3.67	3.67	3.67	3.67
ROUTED TO	BCP21	4.53	1	FLOW	1739.	1694.	1620.	1533.	1498.	1476.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OND-4	.24	1	FLOW	94.	90.	85.	79.	77.	76.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP22	4.77	1	FLOW	1827.	1773.	1694.	1603.	1546.	1542.
				TIME	3.58	3.67	3.67	3.67	3.67	3.67
DIVERSION TO	DIV2	4.77	1	FLOW	1542.	1542.	1542.	1542.	1542.	1542.
				TIME	3.58	3.58	3.58	3.58	3.67	3.67
HYDROGRAPH AT	DIV2	4.77	1	FLOW	285.	231.	192.	61.	24.	0.
				TIME	3.58	3.67	3.67	3.67	3.67	3.67
ROUTED TO	DET2	4.77	1	FLOW	24.	19.	11.	3.	1.	0.
				TIME	3.83	3.83	3.83	3.75	3.75	3.75

			** PEAK STAGES IN FEET **						
			1	.86	.69	.41	.11	.03	.00
			STAGE	3.83	3.83	3.83	3.75	3.75	3.75
			TIME						
HYDROGRAPH AT									
+	DIV2	.00	1	FLOW	1542.	1542.	1542.	1542.	1542.
				TIME	3.58	3.58	3.58	3.58	3.67
2 COMBINED AT									
+	CP23	4.77	1	FLOW	1545.	1560.	1551.	1544.	1542.
				TIME	3.75	3.75	3.75	3.67	3.67
ROUTED TO									
+	BCP23	4.77	1	FLOW	1554.	1560.	1552.	1544.	1542.
				TIME	3.75	3.75	3.75	3.67	3.67
HYDROGRAPH AT									
+	OND-3	.05	1	FLOW	13.	13.	12.	11.	10.
				TIME	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT									
+	CP24	4.82	1	FLOW	1572.	1568.	1560.	1552.	1550.
				TIME	3.75	3.75	3.75	3.67	3.67
HYDROGRAPH AT									
+	OND-3	.03	1	FLOW	1.	1.	1.	1.	1.
				TIME	3.75	3.75	4.83	4.83	4.83
HYDROGRAPH AT									
+	RRPYD	.14	1	FLOW	51.	49.	47.	44.	43.
				TIME	3.75	3.75	3.75	3.75	3.75
ROUTED TO									
+	RRRPYD	.14	1	FLOW	51.	52.	50.	48.	46.
				TIME	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT									
+	RRDWD	.03	1	FLOW	18.	17.	16.	15.	15.
				TIME	3.58	3.58	3.58	3.58	3.58
ROUTED TO									
+	RRDWD	.03	1	FLOW	19.	18.	17.	16.	16.
				TIME	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT									
+	CRWD	.21	1	FLOW	85.	83.	79.	75.	73.
				TIME	3.75	3.75	3.75	3.75	3.75
DIVERSION TO									
+	OCRWJD	.21	1	FLOW	43.	42.	40.	37.	37.
				TIME	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT									
+	OCRWJD	.21	1	FLOW	43.	42.	40.	37.	37.
				TIME	3.75	3.75	3.75	3.75	3.75
ROUTED TO									
+	ROCRWJD	.21	1	FLOW	47.	46.	45.	42.	40.
				TIME	3.92	3.92	3.92	3.92	4.00
3 COMBINED AT									
+	CP25A	.38	1	FLOW	116.	116.	111.	102.	97.
				TIME	3.92	3.92	3.92	3.92	4.00
HYDROGRAPH AT									
+	RRPYD	.26	1	FLOW	58.	56.	52.	49.	47.
				TIME	3.92	3.92	3.92	3.92	3.92
2 COMBINED AT									
+	CP26	.64	1	FLOW	174.	171.	161.	150.	145.
				TIME	3.92	3.92	3.92	3.92	4.00
DIVERSION TO									
+	DCP26	.64	1	FLOW	51.	50.	48.	44.	42.
				TIME	3.92	3.92	3.92	3.92	4.00
HYDROGRAPH AT									
+	DCP26	.64	1	FLOW	123.	121.	116.	106.	102.
				TIME	3.92	3.92	3.92	3.92	4.00
ROUTED TO									
+	ROCKP26	.64	1	FLOW	123.	116.	110.	103.	100.
				TIME	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT									
+	DCRWJD	.00	1	FLOW	43.	42.	40.	37.	37.
				TIME	3.75	3.75	3.75	3.75	3.75
ROUTED TO									
+	ROCRWJD	.00	1	FLOW	47.	46.	45.	42.	41.
				TIME	3.92	3.92	3.92	3.92	4.00
HYDROGRAPH AT									
+	WECRD	.16	1	FLOW	42.	41.	38.	36.	35.
				TIME	3.75	3.75	3.75	3.75	3.75
3 COMBINED AT									
+	CP27	.81	1	FLOW	189.	181.	171.	162.	159.
				TIME	4.00	4.00	4.00	4.00	4.00
DIVERSION TO									
+	DCP27	.81	1	FLOW	53.	51.	48.	45.	45.
				TIME	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT									
+	DCP27	.81	1	FLOW	136.	133.	123.	116.	114.
				TIME	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT									
+	FWIND	.28	1	FLOW	103.	100.	95.	89.	87.
				TIME	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT									

+	DCP26	.00	1	FLOW TIME	51. 3.92	80. 3.92	48. 3.92	44. 3.92	42. 3.92	40. 4.00
ROUTED TO										
+	RDCP26	.00	1	FLOW TIME	53. 4.25	83. 4.25	51. 4.25	48. 4.25	47. 4.25	44. 4.25
3 COMBINED AT										
+	CP28	1.08	1	FLOW TIME	213. 3.92	202. 3.92	188. 3.92	177. 4.00	173. 4.00	168. 4.00
HYDROGRAPH AT										
+	BEIWD	.34	1	FLOW TIME	138. 3.75	134. 3.75	127. 3.75	121. 3.75	118. 3.75	116. 3.75
ROUTED TO										
+	RBEIWD	.34	1	FLOW TIME	136. 3.83	133. 3.83	125. 3.83	119. 3.83	116. 3.83	116. 3.83
HYDROGRAPH AT										
+	WEIWD	.29	1	FLOW TIME	95. 3.75	92. 3.75	87. 3.75	82. 3.75	80. 3.75	78. 3.75
2 COMBINED AT										
+	CP29	.63	1	FLOW TIME	227. 3.83	221. 3.83	208. 3.83	197. 3.83	193. 3.83	182. 3.83
HYDROGRAPH AT										
+	DCP27	.00	1	FLOW TIME	53. 4.00	51. 4.00	48. 4.00	45. 4.00	45. 4.00	42. 4.00
ROUTED TO										
+	RDCP27	.00	1	FLOW TIME	52. 4.00	50. 4.00	47. 4.00	43. 4.00	42. 4.00	41. 4.00
2 COMBINED AT										
+	CP30	.63	1	FLOW TIME	257. 3.83	248. 3.83	233. 3.83	219. 3.83	213. 3.83	211. 3.83
ROUTED TO										
+	RCP30	.63	1	FLOW TIME	257. 3.92	247. 3.92	232. 3.92	218. 3.92	213. 3.92	209. 3.92
HYDROGRAPH AT										
+	ORLWD	.05	1	FLOW TIME	38. 3.58	37. 3.58	36. 3.58	35. 3.58	34. 3.58	34. 3.58
ROUTED TO										
+	RORLWD	.05	1	FLOW TIME	38. 3.67	37. 3.67	36. 3.67	35. 3.67	34. 3.67	34. 3.67
2 COMBINED AT										
+	CP31	.68	1	FLOW TIME	278. 3.83	268. 3.83	252. 3.83	237. 3.83	231. 3.83	230. 3.83
ROUTED TO										
+	RCP31	.68	1	FLOW TIME	276. 3.92	266. 3.83	250. 3.92	236. 3.92	230. 3.92	228. 3.83
2 COMBINED AT										
+	CP32	1.76	1	FLOW TIME	488. 3.92	468. 3.92	439. 3.92	408. 3.92	396. 3.92	384. 3.92
ROUTED TO										
+	RCP32	1.76	1	FLOW TIME	482. 3.92	461. 3.92	431. 3.92	403. 4.00	394. 4.00	382. 4.00
HYDROGRAPH AT										
+	ED	.07	1	FLOW TIME	41. 3.58	40. 3.58	38. 3.58	36. 3.58	35. 3.58	35. 3.58
2 COMBINED AT										
+	CP33	1.83	1	FLOW TIME	497. 3.92	476. 3.92	446. 3.92	414. 3.92	404. 4.00	392. 4.00
ROUTED TO										
+	RCP33	1.83	1	FLOW TIME	495. 3.92	474. 3.92	443. 3.92	413. 4.00	404. 4.00	392. 4.00
HYDROGRAPH AT										
+	ED	.03	1	FLOW TIME	16. 3.58	15. 3.58	14. 3.58	14. 3.58	13. 3.58	13. 3.58
2 COMBINED AT										
+	CP34	1.86	1	FLOW TIME	500. 3.92	479. 3.92	448. 3.92	417. 4.00	408. 4.00	396. 4.00
ROUTED TO										
+	RCP34	1.86	1	FLOW TIME	497. 3.92	476. 3.92	444. 3.92	417. 4.00	407. 4.00	396. 4.00
HYDROGRAPH AT										
+	FD	.02	1	FLOW TIME	28. 3.50	19. 3.50	19. 3.50	18. 3.50	18. 3.50	17. 3.50
2 COMBINED AT										
+	CP35	1.88	1	FLOW TIME	501. 3.92	479. 3.92	448. 3.92	420. 4.00	410. 4.00	399. 4.00
HYDROGRAPH AT										
+	GD	.00	1	FLOW TIME	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50	4. 3.50
2 COMBINED AT										
+	CP36	1.88	1	FLOW TIME	501. 3.92	480. 3.92	448. 3.92	421. 4.00	411. 4.00	399. 4.00
ROUTED TO										
+	RCP36	1.88	1	FLOW TIME	498. 3.92	477. 3.92	448. 4.00	420. 4.00	410. 4.00	399. 4.00

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SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CORRIGEE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL			
						DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	3.50	2.69	315.00	.04	5.00	2.69	315.00	.04	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2822E+00 EXCESS= .0000E+00 OUTFLOW= .2895E+00 BASIN STORAGE= .1191E+02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	3.50	2.48	315.00	.03	5.00	2.48	315.00	.03	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2331E+00 EXCESS= .0000E+00 OUTFLOW= .2314E+00 BASIN STORAGE= .1143E+02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	3.50	2.16	315.00	.03	5.00	2.16	315.00	.03	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1924E+00 EXCESS= .0000E+00 OUTFLOW= .1929E+00 BASIN STORAGE= .1304E+02 PERCENT ERROR= -.7									
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	4.00	1.84	316.00	.02	5.00	1.83	315.00	.02	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1553E+00 EXCESS= .0000E+00 OUTFLOW= .1554E+00 BASIN STORAGE= .1305E+02 PERCENT ERROR= -.9									
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	4.00	1.71	316.00	.02	5.00	1.70	315.00	.02	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1418E+00 EXCESS= .0000E+00 OUTFLOW= .1416E+00 BASIN STORAGE= .1218E+02 PERCENT ERROR= -.9									
FOR PLAN = 1 RATIO=	.00								
ROFFD-2B NAME	4.00	1.62	315.00	.02	5.00	1.61	315.00	.02	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1323E+00 EXCESS= .0000E+00 OUTFLOW= .1323E+00 BASIN STORAGE= .1189E+02 PERCENT ERROR= -.9									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.25	30.99	221.00	1.16	5.00	30.98	220.00	1.16	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1921E+01 EXCESS= .0000E+00 OUTFLOW= .1920E+01 BASIN STORAGE= .3387E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.25	30.27	221.00	1.14	5.00	29.44	220.00	1.14	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1881E+01 EXCESS= .0000E+00 OUTFLOW= .1881E+01 BASIN STORAGE= .3362E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.25	29.22	221.00	1.10	5.00	28.38	220.00	1.10	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1815E+01 EXCESS= .0000E+00 OUTFLOW= .1814E+01 BASIN STORAGE= .3318E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.25	28.17	221.00	1.06	5.00	27.31	220.00	1.06	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1749E+01 EXCESS= .0000E+00 OUTFLOW= .1748E+01 BASIN STORAGE= .3274E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.25	27.75	221.00	1.04	5.00	26.89	220.00	1.04	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1723E+01 EXCESS= .0000E+00 OUTFLOW= .1722E+01 BASIN STORAGE= .3256E+02 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO=	.00								
ROFFD-3A NAME	3.50	27.02	224.00	1.03	5.00	27.00	220.00	1.03	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1710E+01 EXCESS= .0000E+00 OUTFLOW= .1709E+01 BASIN STORAGE= .3273E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RC2B NAME	4.25	542.37	229.50	.88	5.00	538.23	230.00	.88	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4533E+02 EXCESS= .0000E+00 OUTFLOW= .4539E+02 BASIN STORAGE= .3472E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RC2B NAME	4.25	530.63	229.50	.86	5.00	526.63	230.00	.86	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4428E+02 EXCESS= .0000E+00 OUTFLOW= .4433E+02 BASIN STORAGE= .3419E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RC2B NAME	4.00	513.62	228.00	.83	5.00	506.49	230.00	.83	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4255E+02 EXCESS= .0000E+00 OUTFLOW= .4260E+02 BASIN STORAGE= .4200E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									

RCIS NAME	4.00	493.63	228.00	.79	5.00	487.28	230.00	.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4082E+02 EXCESS= .0000E+00 OUTFLOW= .4087E+02 BASIN STORAGE= .4161E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RCIS NAME	4.00	488.66	228.00	.78	5.00	479.62	230.00	.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4013E+02 EXCESS= .0000E+00 OUTFLOW= .4018E+02 BASIN STORAGE= .4114E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RCIS NAME	4.00	480.25	228.00	.77	5.00	474.17	230.00	.77
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3965E+02 EXCESS= .0000E+00 OUTFLOW= .3969E+02 BASIN STORAGE= .3173E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RCF1A NAME	1.39	488.10	226.71	.80	5.00	582.15	230.00	.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5947E+02 EXCESS= .0000E+00 OUTFLOW= .5948E+02 BASIN STORAGE= .2150E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF1A NAME	1.40	672.33	227.56	.78	5.00	667.30	230.00	.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5803E+02 EXCESS= .0000E+00 OUTFLOW= .5801E+02 BASIN STORAGE= .2389E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF2A NAME	1.43	642.67	227.53	.75	5.00	639.77	230.00	.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5558E+02 EXCESS= .0000E+00 OUTFLOW= .5558E+02 BASIN STORAGE= .2361E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF2A NAME	1.45	615.11	228.37	.72	5.00	613.20	230.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5320E+02 EXCESS= .0000E+00 OUTFLOW= .5328E+02 BASIN STORAGE= .2086E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF2A NAME	1.46	604.21	228.44	.71	5.00	603.02	230.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5226E+02 EXCESS= .0000E+00 OUTFLOW= .5226E+02 BASIN STORAGE= .2320E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF2A NAME	1.47	598.20	228.03	.70	5.00	595.22	230.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5160E+02 EXCESS= .0000E+00 OUTFLOW= .5161E+02 BASIN STORAGE= .2342E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.35	115.80	212.48	.65	5.00	110.05	215.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6528E+01 EXCESS= .0000E+00 OUTFLOW= .6528E+01 BASIN STORAGE= .1596E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.36	112.58	212.35	.64	5.00	107.06	215.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6345E+01 EXCESS= .0000E+00 OUTFLOW= .6345E+01 BASIN STORAGE= .1330E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.37	107.25	211.71	.61	5.00	101.53	215.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6039E+01 EXCESS= .0000E+00 OUTFLOW= .6039E+01 BASIN STORAGE= .1346E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.38	101.80	212.52	.58	5.00	97.08	215.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5742E+01 EXCESS= .0000E+00 OUTFLOW= .5742E+01 BASIN STORAGE= .1336E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.39	89.78	212.03	.56	5.00	84.84	215.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5623E+01 EXCESS= .0000E+00 OUTFLOW= .5623E+01 BASIN STORAGE= .1616E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF5 NAME	1.40	86.29	212.68	.56	5.00	82.43	215.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5541E+01 EXCESS= .0000E+00 OUTFLOW= .5541E+01 BASIN STORAGE= .1665E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF6 NAME	1.50	131.11	212.07	.71	5.00	128.61	215.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7632E+01 EXCESS= .0000E+00 OUTFLOW= .7632E+01 BASIN STORAGE= .1859E+02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCF6 NAME	1.51	127.88	212.25	.69	5.00	124.84	215.00	.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7424E+01 EXCESS= .0000E+00 OUTFLOW= .7424E+01 BASIN STORAGE= .1637E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF6	MAHE	1.53	121.79	212.25	.66	5.00	119.63	215.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7077E+01 EXCESS= .0000E+00 OUTFLOW= .7076E+01 BASIN STORAGE= .1826E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF6	MAHE	1.54	116.50	212.83	.63	5.00	113.83	215.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6737E+01 EXCESS= .0000E+00 OUTFLOW= .6737E+01 BASIN STORAGE= .1523E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF6	MAHE	1.55	113.49	213.15	.61	5.00	111.76	215.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6600E+01 EXCESS= .0000E+00 OUTFLOW= .6600E+01 BASIN STORAGE= .1943E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF6	MAHE	1.55	112.50	212.77	.60	5.00	110.11	215.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6507E+01 EXCESS= .0000E+00 OUTFLOW= .6507E+01 BASIN STORAGE= .1584E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.39	159.28	214.77	.62	5.00	158.72	215.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9472E+01 EXCESS= .0000E+00 OUTFLOW= .9466E+01 BASIN STORAGE= .3113E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.40	152.88	213.64	.67	5.00	152.38	215.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9196E+01 EXCESS= .0000E+00 OUTFLOW= .9190E+01 BASIN STORAGE= .3159E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.42	146.40	215.52	.63	5.00	145.99	215.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8768E+01 EXCESS= .0000E+00 OUTFLOW= .8763E+01 BASIN STORAGE= .3506E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.45	140.01	215.23	.60	5.00	139.71	215.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8344E+01 EXCESS= .0000E+00 OUTFLOW= .8338E+01 BASIN STORAGE= .2932E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.46	135.91	215.05	.59	5.00	135.42	215.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8169E+01 EXCESS= .0000E+00 OUTFLOW= .8164E+01 BASIN STORAGE= .3289E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF7	MAHE	2.46	134.55	214.23	.58	5.00	133.86	215.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8050E+01 EXCESS= .0000E+00 OUTFLOW= .8045E+01 BASIN STORAGE= .2747E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.90	834.66	229.77	.80	5.00	834.17	230.00	.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8883E+02 EXCESS= .0000E+00 OUTFLOW= .8883E+02 BASIN STORAGE= .2361E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.90	833.41	229.86	.78	5.00	832.97	230.00	.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8661E+02 EXCESS= .0000E+00 OUTFLOW= .8660E+02 BASIN STORAGE= .2361E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.90	830.22	229.51	.75	5.00	829.33	225.00	.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8292E+02 EXCESS= .0000E+00 OUTFLOW= .8292E+02 BASIN STORAGE= .2363E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.90	826.60	229.54	.71	5.00	822.51	225.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7933E+02 EXCESS= .0000E+00 OUTFLOW= .7932E+02 BASIN STORAGE= .2190E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.90	812.11	229.70	.70	5.00	807.15	225.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7789E+02 EXCESS= .0000E+00 OUTFLOW= .7788E+02 BASIN STORAGE= .2572E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF10	MAHE	.91	800.93	229.45	.69	5.00	797.05	225.00	.69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7689E+02 EXCESS= .0000E+00 OUTFLOW= .7689E+02 BASIN STORAGE= .2378E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.25 36.97 214.50 1.15 5.00 35.85 215.00 1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2136E+01 EXCESS= .0000E+00 OUTFLOW= .2136E+01 BASIN STORAGE= .4498E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.25 36.29 214.50 1.15 5.00 35.20 215.00 1.15

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2092E+01 EXCESS= .0000E+00 OUTFLOW= .2092E+01 BASIN STORAGE= .4405E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.00 36.77 213.00 1.12 5.00 34.71 215.00 1.12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2030E+01 EXCESS= .0000E+00 OUTFLOW= .2030E+01 BASIN STORAGE= .3397E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.00 35.54 213.00 1.08 5.00 33.61 215.00 1.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1957E+01 EXCESS= .0000E+00 OUTFLOW= .1956E+01 BASIN STORAGE= .3326E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.00 35.05 213.00 1.06 5.00 33.17 215.00 1.06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1927E+01 EXCESS= .0000E+00 OUTFLOW= .1926E+01 BASIN STORAGE= .3286E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROND-18 NAME 3.00 34.70 213.00 1.05 5.00 32.86 215.00 1.05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1907E+01 EXCESS= .0000E+00 OUTFLOW= .1906E+01 BASIN STORAGE= .3278E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP11 NAME 1.14 886.27 221.49 .79 5.00 885.44 220.00 .79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9417E+02 EXCESS= .0000E+00 OUTFLOW= .9417E+02 BASIN STORAGE= .3037E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP11 NAME 1.14 883.38 221.83 .77 5.00 878.47 225.00 .77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9181E+02 EXCESS= .0000E+00 OUTFLOW= .9180E+02 BASIN STORAGE= .3034E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP13 NAME 1.14 870.97 225.81 .74 5.00 870.61 225.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8788E+02 EXCESS= .0000E+00 OUTFLOW= .8788E+02 BASIN STORAGE= .2040E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP11 NAME 1.14 855.36 226.37 .71 5.00 855.32 225.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8405E+02 EXCESS= .0000E+00 OUTFLOW= .8405E+02 BASIN STORAGE= .3445E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP11 NAME 1.15 844.14 226.29 .69 5.00 839.12 225.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8252E+02 EXCESS= .0000E+00 OUTFLOW= .8252E+02 BASIN STORAGE= .3038E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP11 NAME 1.15 833.05 225.85 .69 5.00 827.85 225.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8146E+02 EXCESS= .0000E+00 OUTFLOW= .8146E+02 BASIN STORAGE= .3173E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP12 NAME .35 990.92 215.47 .76 5.00 986.76 220.00 .76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1021E+03 EXCESS= .0000E+00 OUTFLOW= .1021E+03 BASIN STORAGE= .9647E+04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP12 NAME .35 973.53 220.22 .74 5.00 973.04 220.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9945E+02 EXCESS= .0000E+00 OUTFLOW= .9945E+02 BASIN STORAGE= .9662E+04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP12 NAME .36 946.15 220.76 .71 5.00 945.98 225.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9519E+02 EXCESS= .0000E+00 OUTFLOW= .9519E+02 BASIN STORAGE= .9649E+04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP12 NAME .36 928.49 225.12 .67 5.00 924.96 225.00 .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9087E+02 EXCESS= .0000E+00 OUTFLOW= .9087E+02 BASIN STORAGE= .1019E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF12	MAHE	.36	907.67	325.13	.66	5.00	907.03	235.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8917E+02 EXCESS= .0000E+00 OUTFLOW= .8917E+02 BASIN STORAGE= .9756E+04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF12	MAHE	.36	895.45	225.18	.63	5.00	894.61	225.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8798E+02 EXCESS= .0000E+00 OUTFLOW= .8798E+02 BASIN STORAGE= .9647E+04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.50	991.41	220.20	.74	5.00	991.34	220.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1025E+03 EXCESS= .0000E+00 OUTFLOW= .1025E+03 BASIN STORAGE= .1384E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.51	977.42	220.47	.74	5.00	975.21	220.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9991E+02 EXCESS= .0000E+00 OUTFLOW= .9991E+02 BASIN STORAGE= .1384E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.51	949.65	224.63	.70	5.00	949.56	225.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9554E+02 EXCESS= .0000E+00 OUTFLOW= .9554E+02 BASIN STORAGE= .1383E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.51	927.14	225.39	.67	5.00	926.08	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9128E+02 EXCESS= .0000E+00 OUTFLOW= .9128E+02 BASIN STORAGE= .1489E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.51	909.30	225.45	.66	5.00	908.04	225.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8957E+02 EXCESS= .0000E+00 OUTFLOW= .8957E+02 BASIN STORAGE= .1482E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF13	MAHE	.52	895.19	225.21	.65	5.00	895.25	225.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8838E+02 EXCESS= .0000E+00 OUTFLOW= .8838E+02 BASIN STORAGE= .1461E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.50	46.23	213.00	.38	5.00	44.13	215.00	.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2572E+01 EXCESS= .0000E+00 OUTFLOW= .2572E+01 BASIN STORAGE= .1630E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.50	44.42	213.00	.36	5.00	42.45	215.00	.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2478E+01 EXCESS= .0000E+00 OUTFLOW= .2478E+01 BASIN STORAGE= .1625E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.50	41.45	213.00	.34	5.00	39.69	215.00	.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2324E+01 EXCESS= .0000E+00 OUTFLOW= .2324E+01 BASIN STORAGE= .1595E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.25	38.43	212.50	.32	5.00	36.95	215.00	.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2173E+01 EXCESS= .0000E+00 OUTFLOW= .2173E+01 BASIN STORAGE= .1568E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.25	37.26	212.50	.31	5.00	35.87	215.00	.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2114E+01 EXCESS= .0000E+00 OUTFLOW= .2114E+01 BASIN STORAGE= .1543E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROAD-24	MAHE	1.25	36.45	212.50	.30	5.00	35.12	215.00	.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2073E+01 EXCESS= .0000E+00 OUTFLOW= .2073E+01 BASIN STORAGE= .1526E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF15	MAHE	1.75	68.20	217.00	.30	5.00	65.20	215.00	.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4143E+01 EXCESS= .0000E+00 OUTFLOW= .4143E+01 BASIN STORAGE= .2215E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCF15	MAHE	1.75	65.23	217.00	.29	5.00	62.18	215.00	.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3977E+01 EXCESS= .0000E+00 OUTFLOW= .3977E+01 BASIN STORAGE= .2166E+03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
RCF15	MAHE	1.75	60.32	217.00	.27	5.00	57.23	215.00	.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3708E+01 EXCESS= .0000E+00 OUTFLOW= .3708E+01 BASIN STORAGE= .3094E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF15	MAHE	1.50	55.42	217.50	.25	5.00	52.48	215.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3444E+01 EXCESS= .0000E+00 OUTFLOW= .3444E+01 BASIN STORAGE= .2191E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF15	MAHE	1.50	53.57	217.50	.24	5.00	50.77	215.00	.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3341E+01 EXCESS= .0000E+00 OUTFLOW= .3341E+01 BASIN STORAGE= .2156E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF15	MAHE	1.50	52.29	217.50	.24	5.00	49.45	215.00	.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3269E+01 EXCESS= .0000E+00 OUTFLOW= .3270E+01 BASIN STORAGE= .2131E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.22	139.82	217.23	.40	5.00	134.19	215.00	.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8612E+01 EXCESS= .0000E+00 OUTFLOW= .8612E+01 BASIN STORAGE= .2253E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.33	132.46	216.66	.39	5.00	128.22	215.00	.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8312E+01 EXCESS= .0000E+00 OUTFLOW= .8312E+01 BASIN STORAGE= .2781E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.26	126.00	217.27	.36	5.00	120.24	215.00	.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7823E+01 EXCESS= .0000E+00 OUTFLOW= .7823E+01 BASIN STORAGE= .2339E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.29	116.83	217.91	.34	5.00	110.78	215.00	.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7334E+01 EXCESS= .0000E+00 OUTFLOW= .7334E+01 BASIN STORAGE= .2289E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.31	112.91	216.86	.33	5.00	107.89	215.00	.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7149E+01 EXCESS= .0000E+00 OUTFLOW= .7149E+01 BASIN STORAGE= .2263E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF16	MAHE	2.32	111.54	217.74	.33	5.00	106.38	220.00	.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7014E+01 EXCESS= .0000E+00 OUTFLOW= .7013E+01 BASIN STORAGE= .2319E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.03	1221.43	216.46	.70	5.00	1205.60	220.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1193E+03 EXCESS= .0000E+00 OUTFLOW= .1193E+03 BASIN STORAGE= .2989E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.04	1186.88	217.17	.68	5.00	1179.77	220.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1151E+03 EXCESS= .0000E+00 OUTFLOW= .1151E+03 BASIN STORAGE= .2878E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.05	1135.52	220.50	.65	5.00	1134.77	220.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1099E+03 EXCESS= .0000E+00 OUTFLOW= .1079E+03 BASIN STORAGE= .2991E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.06	1079.33	221.26	.62	5.00	1076.46	220.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1048E+03 EXCESS= .0000E+00 OUTFLOW= .1048E+03 BASIN STORAGE= .3263E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.07	1054.87	222.56	.60	5.00	1053.79	225.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1028E+03 EXCESS= .0000E+00 OUTFLOW= .1028E+03 BASIN STORAGE= .3441E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCF17	MAHE	1.07	1039.81	223.29	.60	5.00	1038.76	225.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1013E+03 EXCESS= .0000E+00 OUTFLOW= .1013E+03 BASIN STORAGE= .3051E+03 PERCENT ERROR= .0									

FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	3.41	91.64	219.39	.52	5.00	87.70	219.00	.52	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5441E+01 EXCESS= .0000E+00 OUTFLOW= .5440E+01 BASIN STORAGE= .3661E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	3.43	87.51	215.37	.50	5.00	83.36	220.00	.50	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5263E+01 EXCESS= .0000E+00 OUTFLOW= .5262E+01 BASIN STORAGE= .4076E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	3.47	82.87	218.80	.47	5.00	79.76	220.00	.47	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4981E+01 EXCESS= .0000E+00 OUTFLOW= .4981E+01 BASIN STORAGE= .3460E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	3.00	77.64	216.00	.45	5.00	74.52	220.00	.45	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4699E+01 EXCESS= .0000E+00 OUTFLOW= .4699E+01 BASIN STORAGE= .4838E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	3.00	75.71	215.00	.44	5.00	72.81	220.00	.44	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4589E+01 EXCESS= .0000E+00 OUTFLOW= .4589E+01 BASIN STORAGE= .4774E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROAD-17 MAHE	2.75	72.45	217.25	.43	5.00	72.28	220.00	.43	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4514E+01 EXCESS= .0000E+00 OUTFLOW= .4514E+01 BASIN STORAGE= .4481E+01 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.50	154.90	217.42	.41	5.00	152.66	220.00	.41	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9621E+01 EXCESS= .0000E+00 OUTFLOW= .9620E+01 BASIN STORAGE= .2375E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.55	146.85	219.15	.40	5.00	144.24	220.00	.40	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9280E+01 EXCESS= .0000E+00 OUTFLOW= .9281E+01 BASIN STORAGE= .2281E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.61	138.54	219.33	.38	5.00	136.55	220.00	.38	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8736E+01 EXCESS= .0000E+00 OUTFLOW= .8740E+01 BASIN STORAGE= .2399E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.68	128.86	217.47	.35	5.00	128.70	220.00	.35	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8191E+01 EXCESS= .0000E+00 OUTFLOW= .8193E+01 BASIN STORAGE= .2616E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.72	125.39	220.02	.34	5.00	125.37	220.00	.34	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7977E+01 EXCESS= .0000E+00 OUTFLOW= .7982E+01 BASIN STORAGE= .2109E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
RCP19 MAHE	2.74	121.65	219.30	.34	5.00	122.18	220.00	.34	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7831E+01 EXCESS= .0000E+00 OUTFLOW= .7835E+01 BASIN STORAGE= .2269E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
ROAD-16 MAHE	1.00	18.31	233.00	.20	5.00	11.11	240.00	.19	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6772E+00 EXCESS= .0000E+00 OUTFLOW= .6962E+00 BASIN STORAGE= .6748E+02 PERCENT ERROR= -3.8									
FOR PLAN = 1 RATIO=	.00								
ROAD-16 MAHE	1.00	16.10	234.00	.19	5.00	11.49	240.00	.19	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6445E+00 EXCESS= .0000E+00 OUTFLOW= .6529E+00 BASIN STORAGE= .6781E+02 PERCENT ERROR= -3.9									
FOR PLAN = 1 RATIO=	.00								
ROAD-16 MAHE	1.00	15.55	235.00	.18	5.00	15.55	235.00	.18	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5916E+00 EXCESS= .0000E+00 OUTFLOW= .6097E+00 BASIN STORAGE= .6751E+02 PERCENT ERROR= -4.2									
FOR PLAN = 1 RATIO=	.00								
ROAD-16 MAHE	1.00	11.71	240.00	.16	5.00	11.71	240.00	.16	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5405E+00 EXCESS= .0000E+00 OUTFLOW= .5579E+00 BASIN STORAGE= .7229E+02 PERCENT ERROR= -4.6									

FOR PLAN = 1	RATIO=	.00							
ROND-16	MAHE	1.00	12.85	237.00	.16	5.00	7.64	245.00	.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5205E+00 EXCESS= .0000E+00 OUTFLOW= .5178E+00 BASIN STORAGE= .7190E+02 PERCENT ERROR= -4.7									
FOR PLAN = 1	RATIO=	.00							
ROND-16	MAHE	1.00	11.44	238.00	.15	5.00	7.55	245.00	.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5068E+00 EXCESS= .0000E+00 OUTFLOW= .5233E+00 BASIN STORAGE= .7043E+02 PERCENT ERROR= -4.7									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.52	330.22	218.23	.49	5.00	320.66	220.00	.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2163E+02 EXCESS= .0000E+00 OUTFLOW= .2154E+02 BASIN STORAGE= .4143E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.58	317.02	218.17	.47	5.00	307.54	220.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2096E+02 EXCESS= .0000E+00 OUTFLOW= .2097E+02 BASIN STORAGE= .4587E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.66	294.46	219.62	.45	5.00	292.22	220.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1988E+02 EXCESS= .0000E+00 OUTFLOW= .1990E+02 BASIN STORAGE= .4092E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.50	275.29	217.00	.42	5.00	273.26	220.00	.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1873E+02 EXCESS= .0000E+00 OUTFLOW= .1874E+02 BASIN STORAGE= .4708E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.50	267.92	217.00	.41	5.00	266.81	220.00	.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1829E+02 EXCESS= .0000E+00 OUTFLOW= .1830E+02 BASIN STORAGE= .5073E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP20	MAHE	3.28	245.67	217.75	.41	5.00	243.40	220.00	.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1734E+02 EXCESS= .0000E+00 OUTFLOW= .1735E+02 BASIN STORAGE= .4851E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.76	1773.16	216.37	.65	5.00	1739.22	220.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1565E+03 EXCESS= .0000E+00 OUTFLOW= .1565E+03 BASIN STORAGE= .1672E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.77	1717.52	216.14	.63	5.00	1693.98	220.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1522E+03 EXCESS= .0000E+00 OUTFLOW= .1522E+03 BASIN STORAGE= .1673E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.79	1624.94	216.45	.60	5.00	1620.07	220.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1451E+03 EXCESS= .0000E+00 OUTFLOW= .1451E+03 BASIN STORAGE= .1672E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.81	1534.81	216.40	.57	5.00	1533.39	220.00	.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .1668E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.82	1498.62	220.06	.56	5.00	1498.45	220.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1353E+03 EXCESS= .0000E+00 OUTFLOW= .1353E+03 BASIN STORAGE= .1635E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP21	MAHE	.82	1476.01	219.70	.55	5.00	1475.87	220.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1333E+03 EXCESS= .0000E+00 OUTFLOW= .1333E+03 BASIN STORAGE= .1657E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP23	MAHE	.37	1564.04	225.10	.64	5.00	1563.97	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1623E+03 EXCESS= .0000E+00 OUTFLOW= .1623E+03 BASIN STORAGE= .0151E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP23	MAHE	.37	1559.74	224.99	.62	5.00	1559.72	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1578E+03 EXCESS= .0000E+00 OUTFLOW= .1578E+03 BASIN STORAGE= .7701E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							

RCP23	MANE	.37	1552.42	225.04	.59	5.00	1552.41	225.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1504E+03 EXCESS= .0000E+00 OUTFLOW= .1504E+03 BASIN STORAGE= .7704E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	MANE	.37	1544.01	219.97	.56	5.00	1544.00	220.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1430E+03 EXCESS= .0000E+00 OUTFLOW= .1430E+03 BASIN STORAGE= .7702E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	MANE	.37	1541.74	220.06	.55	5.00	1541.61	220.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1401E+03 EXCESS= .0000E+00 OUTFLOW= .1401E+03 BASIN STORAGE= .7701E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	MANE	.37	1540.06	220.09	.54	5.00	1539.49	220.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1380E+03 EXCESS= .0000E+00 OUTFLOW= .1380E+03 BASIN STORAGE= .8046E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.75	54.98	232.75	.55	5.00	51.48	235.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4012E+01 EXCESS= .0000E+00 OUTFLOW= .4043E+01 BASIN STORAGE= .1195E+01 PERCENT ERROR= -1.1									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.50	54.52	234.00	.53	5.00	52.44	235.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3897E+01 EXCESS= .0000E+00 OUTFLOW= .3936E+01 BASIN STORAGE= .1262E+01 PERCENT ERROR= -1.1									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.50	52.76	234.00	.50	5.00	50.50	235.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3691E+01 EXCESS= .0000E+00 OUTFLOW= .3723E+01 BASIN STORAGE= .1241E+01 PERCENT ERROR= -1.2									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.25	50.43	233.75	.47	5.00	47.72	235.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3485E+01 EXCESS= .0000E+00 OUTFLOW= .3512E+01 BASIN STORAGE= .1191E+01 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.25	48.76	233.75	.46	5.00	46.40	235.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+01 EXCESS= .0000E+00 OUTFLOW= .3438E+01 BASIN STORAGE= .1183E+01 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	MANE	4.25	47.19	233.75	.46	5.00	45.34	235.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3349E+01 EXCESS= .0000E+00 OUTFLOW= .3381E+01 BASIN STORAGE= .1177E+01 PERCENT ERROR= -1.4									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	4.50	22.57	238.50	.63	5.00	18.79	240.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1136E+01 EXCESS= .0000E+00 OUTFLOW= .1146E+01 BASIN STORAGE= .9708E+02 PERCENT ERROR= -2.6									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	4.25	23.41	238.00	.61	5.00	17.82	240.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1091E+01 EXCESS= .0000E+00 OUTFLOW= .1112E+01 BASIN STORAGE= .1117E+01 PERCENT ERROR= -2.9									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	3.75	21.35	236.25	.58	5.00	16.71	240.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1018E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .1097E+01 PERCENT ERROR= -3.0									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	3.75	18.70	240.00	.55	5.00	18.70	240.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9848E+00 EXCESS= .0000E+00 OUTFLOW= .1002E+01 BASIN STORAGE= .1079E+01 PERCENT ERROR= -3.1									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	3.75	19.46	240.00	.54	5.00	19.46	240.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9616E+00 EXCESS= .0000E+00 OUTFLOW= .9830E+00 BASIN STORAGE= .1021E+01 PERCENT ERROR= -3.1									
FOR PLAN = 1 RATIO= .00									
RKRDJD	MANE	3.50	21.79	238.00	.53	5.00	16.34	240.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9499E+00 EXCESS= .0000E+00 OUTFLOW= .9696E+00 BASIN STORAGE= .9858E+02 PERCENT ERROR= -3.1									
FOR PLAN = 1 RATIO= .00									
ROCRMD	MANE	5.00	47.36	235.00	.31	5.00	47.36	235.00	.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1422E+01 EXCESS= .0000E+00 OUTFLOW= .1444E+01 BASIN STORAGE= .9418E-01 PERCENT ERROR= -1.0

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 47.82 235.00 .30 5.00 47.82 235.00 .30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1322E+01 EXCESS= .0000E+00 OUTFLOW= .1350E+01 BASIN STORAGE= .1067E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 45.18 235.00 .29 5.00 45.18 235.00 .29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1158E+01 EXCESS= .0000E+00 OUTFLOW= .1187E+01 BASIN STORAGE= .1005E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 41.82 235.00 .28 5.00 41.82 235.00 .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1294E+01 EXCESS= .0000E+00 OUTFLOW= .1324E+01 BASIN STORAGE= .9899E-02 PERCENT ERROR= -1.1

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 40.16 235.00 .27 5.00 40.16 235.00 .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1291E+01 EXCESS= .0000E+00 OUTFLOW= .1260E+01 BASIN STORAGE= .9835E-02 PERCENT ERROR= -1.1

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 4.75 40.77 237.50 .26 5.00 35.99 240.00 .26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1284E+01 EXCESS= .0000E+00 OUTFLOW= .1208E+01 BASIN STORAGE= .1118E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 3.79 122.71 239.00 .29 5.00 121.64 240.00 .30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+02 EXCESS= .0000E+00 OUTFLOW= .1012E+02 BASIN STORAGE= .1118E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 3.82 116.90 240.27 .28 5.00 116.14 240.00 .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9762E+01 EXCESS= .0000E+00 OUTFLOW= .9778E+01 BASIN STORAGE= .1416E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 3.89 112.78 241.18 .27 5.00 109.95 240.00 .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9248E+01 EXCESS= .0000E+00 OUTFLOW= .9254E+01 BASIN STORAGE= .1249E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 4.02 108.20 241.19 .26 5.00 102.58 240.00 .26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8721E+01 EXCESS= .0000E+00 OUTFLOW= .8729E+01 BASIN STORAGE= .1024E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 4.08 105.66 240.90 .25 5.00 100.18 240.00 .25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8533E+01 EXCESS= .0000E+00 OUTFLOW= .8531E+01 BASIN STORAGE= .1091E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP26 MAKE 4.18 100.21 242.19 .24 5.00 92.72 240.00 .24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8350E+01 EXCESS= .0000E+00 OUTFLOW= .8358E+01 BASIN STORAGE= .1001E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 47.13 235.00 -1.00 5.00 47.13 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 46.17 235.00 -1.00 5.00 46.17 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 45.52 235.00 -1.00 5.00 45.52 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 42.48 235.00 -1.00 5.00 42.48 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 5.00 41.06 235.00 -1.00 5.00 41.06 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJD MAKE 4.75 40.10 237.50 -1.00 5.00 35.75 240.00 -1.00

FOR PLAN = 1 RATIO= .00

RDCP16	MANE	5.00	52.95	255.00	-1.00	5.00	52.95	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	53.22	255.00	-1.00	5.00	53.22	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	51.11	255.00	-1.00	5.00	51.11	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	48.49	255.00	-1.00	5.00	48.49	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	47.24	255.00	-1.00	5.00	47.24	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	44.43	255.00	-1.00	5.00	44.43	255.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.72	126.97	231.31	.63	5.00	125.93	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1162E+02 EXCESS= .0000E+00 OUTFLOW= .1162E+02 BASIN STORAGE= .1966E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.77	133.31	226.78	.61	5.00	132.52	230.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1129E+02 EXCESS= .0000E+00 OUTFLOW= .1129E+02 BASIN STORAGE= .2007E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.85	125.11	232.60	.58	5.00	124.83	230.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1073E+02 EXCESS= .0000E+00 OUTFLOW= .1074E+02 BASIN STORAGE= .2345E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.93	119.80	231.73	.55	5.00	118.51	230.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1019E+02 EXCESS= .0000E+00 OUTFLOW= .1019E+02 BASIN STORAGE= .1854E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.97	116.41	229.42	.54	5.00	116.14	230.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9970E+01 EXCESS= .0000E+00 OUTFLOW= .9976E+01 BASIN STORAGE= .2145E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	4.99	116.59	229.58	.53	5.00	116.26	230.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9819E+01 EXCESS= .0000E+00 OUTFLOW= .9826E+01 BASIN STORAGE= .1766E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.59	52.94	241.65	-1.00	5.00	52.05	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.62	50.27	240.82	-1.00	5.00	49.88	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.65	47.84	241.23	-1.00	5.00	46.68	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.69	45.58	241.71	-1.00	5.00	43.35	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.70	44.56	241.98	-1.00	5.00	42.44	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.74	42.27	242.02	-1.00	5.00	40.87	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.71	297.49	232.54	.72	5.00	258.51	235.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2412E+02 EXCESS= .0000E+00 OUTFLOW= .2412E+02 BASIN STORAGE= .1937E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.74	247.94	232.59	.69	5.00	246.90	235.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2338E+02 EXCESS= .0000E+00 OUTFLOW= .2338E+02 BASIN STORAGE= .1753E+02 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCP10	NAME	1.78	232.27	233.09	.66	5.00	232.09	235.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2217E+02 EXCESS= .0000E+00 OUTFLOW= .2217E+02 BASIN STORAGE= .1910E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP10	NAME	1.82	218.27	233.91	.62	5.00	217.94	235.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2098E+02 EXCESS= .0000E+00 OUTFLOW= .2098E+02 BASIN STORAGE= .1793E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP10	NAME	1.84	212.93	232.23	.61	5.00	212.51	235.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2052E+02 EXCESS= .0000E+00 OUTFLOW= .2052E+02 BASIN STORAGE= .1807E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP10	NAME	1.25	210.94	233.07	.60	5.00	209.17	235.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2017E+02 EXCESS= .0000E+00 OUTFLOW= .2017E+02 BASIN STORAGE= .1902E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	38.30	220.00	.98	5.00	38.30	220.00	.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2242E+01 EXCESS= .0000E+00 OUTFLOW= .2251E+01 BASIN STORAGE= .4871E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	37.46	220.00	.96	5.00	37.46	220.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2288E+01 EXCESS= .0000E+00 OUTFLOW= .2297E+01 BASIN STORAGE= .4834E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	36.06	220.00	.92	5.00	36.06	220.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2199E+01 EXCESS= .0000E+00 OUTFLOW= .2207E+01 BASIN STORAGE= .4770E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	34.65	220.00	.88	5.00	34.65	220.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2110E+01 EXCESS= .0000E+00 OUTFLOW= .2118E+01 BASIN STORAGE= .4705E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	34.09	220.00	.87	5.00	34.09	220.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2074E+01 EXCESS= .0000E+00 OUTFLOW= .2083E+01 BASIN STORAGE= .4678E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCKLAND	NAME	5.00	33.70	220.00	.86	5.00	33.70	220.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+01 EXCESS= .0000E+00 OUTFLOW= .2058E+01 BASIN STORAGE= .4659E+02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.22	277.47	232.31	.73	5.00	275.94	235.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2649E+02 EXCESS= .0000E+00 OUTFLOW= .2649E+02 BASIN STORAGE= .1443E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.24	267.90	231.81	.71	5.00	266.10	230.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2568E+02 EXCESS= .0000E+00 OUTFLOW= .2568E+02 BASIN STORAGE= .1319E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.27	251.52	232.70	.68	5.00	250.50	235.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2438E+02 EXCESS= .0000E+00 OUTFLOW= .2438E+02 BASIN STORAGE= .1430E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.30	235.79	231.84	.64	5.00	235.65	235.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2310E+02 EXCESS= .0000E+00 OUTFLOW= .2310E+02 BASIN STORAGE= .1315E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.31	231.22	231.44	.63	5.00	230.12	235.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2260E+02 EXCESS= .0000E+00 OUTFLOW= .2260E+02 BASIN STORAGE= .1384E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	NAME	1.32	229.62	231.91	.62	5.00	228.03	230.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2223E+02 EXCESS= .0000E+00 OUTFLOW= .2223E+02 BASIN STORAGE= .1404E+02 PERCENT ERROR= .0									

FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.33	483.37	235.83	.55	5.00	481.81	235.00	.53	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5113E+02	EXCESS=	.0000E+00	OUTFLOW=	.5113E+02	BASIN STORAGE=	.1798E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.35	465.97	235.80	.53	5.00	461.25	235.00	.53	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4951E+02	EXCESS=	.0000E+00	OUTFLOW=	.4951E+02	BASIN STORAGE=	.1597E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.38	437.08	235.22	.50	5.00	431.39	235.00	.50	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4694E+02	EXCESS=	.0000E+00	OUTFLOW=	.4694E+02	BASIN STORAGE=	.1503E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.42	406.87	237.23	.47	5.00	402.84	240.00	.47	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4440E+02	EXCESS=	.0000E+00	OUTFLOW=	.4440E+02	BASIN STORAGE=	.1740E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.44	396.36	237.31	.46	5.00	393.67	240.00	.46	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4342E+02	EXCESS=	.0000E+00	OUTFLOW=	.4342E+02	BASIN STORAGE=	.1530E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF12 NAME	1.46	383.67	237.54	.45	5.00	382.08	240.00	.46	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4264E+02	EXCESS=	.0000E+00	OUTFLOW=	.4265E+02	BASIN STORAGE=	.1360E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.47	496.48	235.53	.55	5.00	495.26	235.00	.55	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5365E+02	EXCESS=	.0000E+00	OUTFLOW=	.5365E+02	BASIN STORAGE=	.6474E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.48	475.32	235.31	.53	5.00	474.15	235.00	.53	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5195E+02	EXCESS=	.0000E+00	OUTFLOW=	.5195E+02	BASIN STORAGE=	.6232E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.49	444.97	235.82	.50	5.00	443.33	235.00	.51	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4927E+02	EXCESS=	.0000E+00	OUTFLOW=	.4927E+02	BASIN STORAGE=	.6474E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.50	414.18	235.73	.48	5.00	413.35	240.00	.48	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4661E+02	EXCESS=	.0000E+00	OUTFLOW=	.4661E+02	BASIN STORAGE=	.6229E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.51	403.94	239.60	.47	5.00	403.90	240.00	.47	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4558E+02	EXCESS=	.0000E+00	OUTFLOW=	.4558E+02	BASIN STORAGE=	.6481E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF13 NAME	.51	392.39	239.86	.46	5.00	392.35	240.00	.46	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4477E+02	EXCESS=	.0000E+00	OUTFLOW=	.4477E+02	BASIN STORAGE=	.6576E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF14 NAME	.88	489.71	235.89	.55	5.00	487.19	235.00	.55	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5459E+02	EXCESS=	.0000E+00	OUTFLOW=	.5459E+02	BASIN STORAGE=	.1273E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF14 NAME	.90	477.89	235.44	.53	5.00	475.52	235.00	.53	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5286E+02	EXCESS=	.0000E+00	OUTFLOW=	.5286E+02	BASIN STORAGE=	.1172E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF14 NAME	.92	447.57	236.42	.50	5.00	444.35	235.00	.51	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5013E+02	EXCESS=	.0000E+00	OUTFLOW=	.5013E+02	BASIN STORAGE=	.1257E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCF14 NAME	.95	417.07	236.67	.48	5.00	416.73	240.00	.48	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4742E+02	EXCESS=	.0000E+00	OUTFLOW=	.4742E+02	BASIN STORAGE=	.1248E+02	PERCENT ERROR=	.0

FOR PLAN = 1	RATIO=	.00							
RCP14	NAME	.96	407.18	339.82	.47	5.00	407.05	240.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4638E+02 EXCESS= .0000E+00 OUTFLOW= .4638E+02 BASIN STORAGE= .1168E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP14	NAME	.97	395.76	339.73	.46	5.00	395.56	240.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4555E+02 EXCESS= .0000E+00 OUTFLOW= .4555E+02 BASIN STORAGE= .1254E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.80	501.00	235.87	.56	5.00	498.41	235.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5599E+02 EXCESS= .0000E+00 OUTFLOW= .5599E+02 BASIN STORAGE= .1057E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.81	479.34	235.04	.54	5.00	476.58	235.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5422E+02 EXCESS= .0000E+00 OUTFLOW= .5422E+02 BASIN STORAGE= .1098E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.83	448.59	236.66	.51	5.00	447.89	240.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5144E+02 EXCESS= .0000E+00 OUTFLOW= .5144E+02 BASIN STORAGE= .1131E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.85	420.65	240.23	.48	5.00	419.98	240.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4868E+02 EXCESS= .0000E+00 OUTFLOW= .4868E+02 BASIN STORAGE= .1097E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.86	410.20	239.90	.47	5.00	410.17	240.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4762E+02 EXCESS= .0000E+00 OUTFLOW= .4762E+02 BASIN STORAGE= .1088E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP16	NAME	.87	399.04	240.02	.47	5.00	399.03	240.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4678E+02 EXCESS= .0000E+00 OUTFLOW= .4678E+02 BASIN STORAGE= .1139E+02 PERCENT ERROR= .0									

*** NORMAL END OF REC-1 ***

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*****
* FLOOD HYDROGRAPH PACKAGE (HSC-1) *
* SEPTEMBER 1990 *
* VERSION 4.0 *
* RUN DATE 01/25/2005 TIME 16:16:24 *
*****

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*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

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X X XXXXXX XXXX X
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HSC-1 KNOWN AS HEC1 (JAN 73), HEC102, HEC103, AND HEC104.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMPEX- ON EM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL. LOSS RATE:GREEN AND AMPT INFILTRATION. KINEMATIC WAVE; NEW FINITE DIFFERENCE ALGORITHM.

1 HSC-1 INPUT PAGE 1

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*** FREE ***
*DIAGRAM
1 ID *****
2 ID * THE LANDWELL COMPANY *
3 ID * CONCEPTUAL DRAINAGE STUDY FOR *
4 ID * THE EASTSIDE PROPERTIES *
5 ID * PROPOSED CONDITIONS *
6 ID * INPUT FILE = PRO100.DAT *
7 ID * INPUT FILE DATE = 01/28/05 *
8 ID * DESIGN STORM=100-YEAR 6-HOUR *
9 ID * STORM DISTRIBUTION = SDN #3 *
10 ID * MODELED BY:ANN RENDITION, SIT (PSS&J) *
11 ID * ALEX YESCAR, SIT (PSS&J) *
12 ID *****
13 ID DRAINAGE AREA
14 ID (SQUARE MILES) DARP
15 ID 0-0.5 .99
16 ID 0.5-1 .975
17 ID 1-2 .95
18 ID 2-3 .925
19 ID 3-4 .915
20 ID 4-5 .900
21 ID
22 ID
23 IT 5 0 0 100
24 IO 5 0 0
25 IM 5 0 0
26 JN PREC 0.99 0.975 0.95 0.925 0.915 0.900
*
27 KK CHD-1
28 BA 0.084
29 PB 2.86
30 PC 0 0.02 0.057 0.07 0.087 0.100 0.124 0.13 0.13 0.13
31 PC 0.13 0.13 0.13 0.13 0.14 0.142 0.149 0.158 0.172 0.181
32 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
33 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
34 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.815 0.851 0.856
35 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.927 0.93 0.97 0.975
36 PC 0.992 0.995 0.997 0.999 0.99 0.993 0.993 0.994 0.995 0.999
37 PC 0.999 0.999 1
38 LG 0 76.27
39 UD 0.107
*
40 KK CHD-2
41 BA 0.276
42 PB 2.86
43 LG 0 78.19
44 UD 0.154
*

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1 HSC-1 INPUT PAGE 2

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
45 KK OFFD-2B
46 BA 0.137
47 PB 2.86
48 LG 0 61.80
49 UD 0.268
*
50 KKROFFD-2B
51 KM ROUTE OFFD-2B
52 KD 1380 0.019 0.035 0 TRAP
*
53 KK CFS
54 KM COMBINE CHD-1, CHD-2, ROFFD-2B
55 KC 3
*
56 KK CHD-2A
57 BA 0.222

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58	PK	2.86	
59	LS	0	84.30
60	UD	0.127	
	*		
61	KK	OFFD-2	
62	KA	0.092	
63	PK	2.86	
64	LS	0	92.40
65	UD	0.147	
	*		
66	KK	OFFD-3	
67	KA	0.298	
68	PK	2.86	
69	LS	0	81.26
70	UD	0.266	
	*		
71	KK	OFFD-3A	
72	KA	0.031	
73	PK	2.86	
74	LS	0	94.30
75	UD	0.076	
	*		
76	KK	OFFD-3A	
77	KM	ROUTE OFFD-3A IN CHANNEL WEST ALONG LAKE MEAD DRIVE	
78	RD	2200 0.00483 0.033 0 TRAP 12 4	
	*		

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HEC-1 INPUT

PAGE 3

LINE	ID	1	2	3	4	5	6	7	8	9	10
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79	KK	CP1	
80	KM	COMBINE OFFD-3A, OFFD-3, AND OFFD-2	
81	KC	3	
	*		
82	KK	OFFD-2A	
83	KA	0.023	
84	PK	2.86	
85	LS	0	92.30
86	UD	0.104	
	*		
87	KK	OFFD-1	
88	KA	0.470	
89	PK	2.86	
90	LS	0	95.43
91	UD	0.177	
	*		
92	KK	CP2	
93	KM	COMBINE OFFD-2A WITH OFFD-1	
94	KC	2	
	*		
95	KK	OFFD-4	
96	KA	0.473	
97	PK	2.86	
98	LS	0	82.7
99	UD	0.167	
	*		
100	KK	CP2B	
101	KM	COMBINE BASIN OFF-4	
102	KC	2	
	*		
103	KK	RC2B	
104	KM	ROUTE TO BOULDER HIGHWAY AT PARCO RD	
105	RD	12600 0.03 0.03 0 TRAP 1 1	
	*		
106	KK	CP2A	
107	KM	COMBINE ALL BASINS TRIN TO PARCO CHANNEL AT BOULDER HIGHWAY	
108	KC	2	
	*		
109	KK	RC2A	
110	KM	ROUTE PARCO REALIGNMENT IN STORM DRAIN TO DETENTION BASIN 1	
111	RD	2200 0.009 0.015 0 TRAP 10 0	
	*		

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HEC-1 INPUT

PAGE 4

LINE	ID	1	2	3	4	5	6	7	8	9	10
------	----	---	---	---	---	---	---	---	---	---	----

112	KK	OND-28	
113	KA	0.084	
114	PK	2.86	
115	LS	0	84.93
116	UD	0.075	
	*		
117	KK	OFFD-28	
118	KA	0.074	
119	PK	2.86	
120	LS	0	87.64
121	UD	0.109	
	*		
122	KK	CP3	
123	KM	COMBINE OFFD-28 WITH OND-28	
124	KC	2	
	*		
125	KK	OND-28	
126	KA	0.017	
127	PK	2.86	
128	LS	0	81.78

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129      UD      0.083
      *
130      KK      OFFD-26
131      BA      0.012
132      PB      2.86
133      LS      0      94.39
134      UD      0.093
      *
135      KK      CP4
136      KM      COMBINE OFFD-26 WITH CND-26
137      HC      2
      *
138      KK      CP5
139      KM      COMBINE BASINS CP3,CP4
140      HC      2
      *
141      KK      RCP5
142      KM      ROUTE ALONG BURKHOLDER RD TO DETENTION BASIN 1
143      RD      1700      .0238      .013      0      CIRC      4.5      0
      *
144      KK      CND-20
145      BA      0.163
146      PB      2.86
147      LS      0      93.44
148      UD      0.060
      *

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HBC-1 INPUT

PAGE 5

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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
149      KK      CND-21
150      BA      0.089
151      PB      2.86
152      LS      0      98.88
153      UD      0.064
      *
154      KK      CP6
155      KM      COMBINE BASINS CND-20,21 WITH RCP5
156      HC      3
      *
157      KK      CND-27
158      BA      0.087
159      PB      2.86
160      LS      0      86.38
161      UD      0.084
      *
162      KK      KROFFD-27A
163      BA      0.073
164      PB      2.86
165      LS      0      87.64
166      UD      0.115
      *
167      KK      KROFFD-27B
168      BA      0.043
169      PB      2.86
170      LS      0      88.36
171      UD      0.119
      *
172      KK      CP6
173      KM      COMBINE OFFD-27A AND OFFD-27B WITH CND-27
174      HC      3
      *
175      KK      RCP6
176      KM      ROUTE ALONG WARM SPRINGS RD TO INTERSECTION WITH EASTSIDE REAL ESTATE FENY
177      RD      1555      .0138      .013      0      CIRC      5.5      0
      *
178      KK      CND-22
179      BA      0.057
180      PB      2.86
181      LS      0      85.08
182      UD      0.073
      *

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HBC-1 INPUT

PAGE 6

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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
183      KK      CP7
184      KM      COMBINE BASINS CND-22 AND RCP6
185      HC      2
      *
186      KK      RCP7
187      KM      ROUTE ALONG WARM SPRINGS RD TO DETENTION BASIN 1
188      RD      1750      .0046      .013      0      CIRC      7      0
      *
189      KK      CP8
190      KM      COMBINE CP7, CP8, AND CP2A
191      HC      3
      *
192      KK      DIV1
193      DT      DIV1
194      DI      0      831      1000      1500      2000
195      SQ      0      831      831      831      831
      *
196      KK      DET1
197      RD      1      2      0      0      21

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198      KM  MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET
199      RS      1  STOR      -1
200      SV      0  7.87  19.52  23.99  32.78  42.11
201      SE      0  2      3      4      5      6
202      SQ      0  28     30     79     94    129
      *

203      KK  DIV1
204      OR  DIV1
      *

205      KK  CP10
206      KC  3
      *

207      KK  RCP10
208      KM  ROUTE (FROM DETENTION BASIN 1) ALONG BURKHOLDER RD
209      RD  1400 .0214 .015  0  DEEP  8  0
      *

210      KK  CND-18
211      SA  0.034
212      PB  2.86
213      LS  0  94.91
214      UD  0.059
      *

```

1

HEC-1 INPUT

PAGE 7

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

215      KK  CND-18
216      KM  ROUTE CND-18 THROUGH CND-19 TO COMBINATION CP11
217      RD  2000 .005 .013  0  CIRC  3.5  0
      *

218      KK  CND-19
219      SA  0.109
220      PB  2.86
221      LS  0  83.76
222      UD  0.074
      *

223      KK  CP11
224      KM  COMBINE CND-18,19, AND CP9
225      KC  3
      *

226      KK  RCP11
227      KM  ROUTE CP11 ALONG BURKHOLDER BLVD TO COMBINATION WITH CND-13,14
228      RD  1450 .017 .015  0  DEEP  8  0
      *

229      KK  CND-13
230      SA  0.109
231      PB  2.86
232      LS  0  83.85
233      UD  0.081
      *

234      KK  CND-14
235      SA  0.192
236      PB  2.86
237      LS  0  81.34
238      UD  0.122
      *

239      KK  CP12
240      KM  COMBINE CND-13,14, AND RCP11
241      KC  3
      *

242      KK  RCP12
243      KM  ROUTE CP12 ALONG BURKHOLDER RD TO COMBINATION WITH CND-12
244      RD  1100 .1218 .015  0  DEEP  8  0
      *

245      KK  CND-12
246      SA  0.015
247      PB  2.86
248      LS  0  84.07
249      UD  0.082
      *

```

1

HEC-1 INPUT

PAGE 8

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

250      KK  CP13
251      KM  COMBINE CND-12 WITH RCP12
252      KC  2
      *

253      KK  RCP13
254      KM  ROUTE CP13 ALONG BURKHOLDER RD TO INTERSECTION WITH SUNSET RD
255      RD  800 .02 .015  0  DEEP  10  0
      *

256      KK  CND-10
257      SA  0.136
258      PB  2.86
259      LS  0  81.85
260      UD  0.081
      *

261      KK  CP14
262      KM  COMBINE CND-10 WITH CP13
263      KC  2
      *

264      KK  CND-24
265      SA  0.178
266      PB  2.86

```

```

267      LS      0      79.25
268      UD      0.086
      *

269      KK      RND-24
270      KM      ROUTE RND-24 ALONG SUNSET RD TO INTERSECTION WITH WATER ST
271      RD      1950      .0168      .013      0      CIRC      3.5      0
      *

272      KK      RND-23
273      BA      0.130
274      PB      2.86
275      LS      0      73.85
276      UD      0.104
      *

277      KK      CP16
278      KM      COMBINE RND-23 WITH RND-24
279      HC      2
      *

280      KK      RCP15
281      KM      ROUTE C14 ALONG SUNSET RD TO COMBINATION WITH RND-15
282      RD      2050      .0195      .013      0      CIRC      4.5      0
      *

```

HEC-1 INPUT

PAGE 9

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

283      KK      RND-15
284      BA      0.146
285      PB      2.86
286      LS      0      84.46
287      UD      0.116
      *

288      KK      CP16
289      KM      COMBINE RND-15 WITH CP15
290      HC      2
      *

291      KK      RCP16
292      KM      ROUTE C15 ALONG SUNSET RD TO INTERSECTION WITH BURKHOLDER RD
293      RD      2150      .0128      .013      0      CIRC      5      0
      *

294      KK      RND-11
295      BA      0.106
296      PB      2.86
297      LS      0      83.89
298      UD      0.078
      *

299      KK      CP17
300      KM      COMBINE RND-11 WITH CP16 AND CP14
301      HC      3
      *

302      KK      RCP17
303      KM      ROUTE CP17 ALONG BURKHOLDER RD TO ATHENS AVE
304      RD      1350      .0104      .015      0      DEEP      12      0
      *

305      KK      RND-5
306      BA      0.102
307      PB      2.86
308      LS      0      83.85
309      UD      0.083
      *

310      KK      RND-6
311      BA      0.404
312      PB      2.86
313      LS      0      85.70
314      UD      0.112
      *

315      KK      CP18
316      KM      COMBINE RCP17 WITH RND-5 AND RND-6
317      HC      3
      *

```

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

318      KK      RND-17
319      BA      0.197
320      PB      2.86
321      LS      0      83.11
322      UD      0.120
      *

323      KK      RND-17
324      KM      ROUTE BASIN RND-17 TO MOHAWK DRIVE
325      RD      3000      0.0102      0.013      0      CIRC      5
      *

326      KK      RND-8
327      BA      0.230
328      PB      2.86
329      LS      0      77.73
330      UD      0.126
      *

331      KK      CP19
332      KM      COMBINE RND-17 WITH BASIN RND-8
333      HC      2
      *

334      KK      RCP19
335      KM      ROUTE FLOWS TO ATHENS AT EASTSIDE FLOWY

```

336 RD 2200 0.00571 0.015 0 TRAP 7 0
 *
 337 KK CND-16
 338 BA 0.045
 339 PB 2.86
 340 LS 0 72.50
 341 UD 0.099
 *
 342 KK ROAD-16
 343 RM ROUTE STREET FLOW TO ATHENS AVENUE
 344 RD 3500 0.02 0.016 0 TRAP 80 0
 *
 345 KK CND-7
 346 BA 0.329
 347 PB 2.86
 348 LS 0 86.04
 349 UD 0.114
 *
 350 KK CP20
 351 RM COMBINE CP19 WITH CND-16 AND CND-7
 352 HC 3
 *

1

HEC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 353 KK RCP20
 354 RM ROUTE CP20 TO BURKHOLDER BOULEVARD
 355 RD 3900 0.0053 0.015 0 TRAP 8 0
 *
 356 KK CP21
 357 RM COMBINE RCP20 WITH C17
 358 HC 2
 *
 359 KK RCP21
 360 RM ROUTE CP21 ALONG BURKHOLDER BLVD
 361 RD 2100 .0162 .015 0 TRAP 10 0
 *
 362 KK CND-4
 363 BA 0.344
 364 PB 2.86
 365 LS 0 80.33
 366 UD 0.136
 *
 367 KK CP22
 368 RM COMBINE RCP21 WITH CND-4
 369 HC 2
 *
 370 KK DIV2
 371 RD 0 0 0 0 21
 372 DT DIV2
 373 DI 0 1542 3000 3000
 374 DQ 0 1542 1542 1542
 *
 375 KK DET2
 376 RM MULTI-USE DETENTION BASIN, BYPASS 10-YR FLOWS, 1-54" OUTLET, 1' SUBMERGED
 377 RD 1 2
 378 RS 1 STOR -1
 379 SV 0 10.23 18.12 26.28 34.71 43.42 52.41 61.98
 380 SE 0 2 3 4 5 6 7 8
 381 SQ 0 56 88 121 170 180 200 220
 *
 382 KK DIV2
 383 DR DIV2
 *
 384 KK CP23
 385 HC 2
 *

1

HEC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 386 KK RCP23
 387 RM ROUTE CP23 ALONG BURKHOLDER TO PROPERTY LINE
 388 RD 556 .0155 .015 0 TRAP 10 0
 *
 389 KK CND-3
 390 BA 0.047
 391 PB 2.86
 392 LS 0 77
 393 UD 0.094
 *
 394 KK CP24
 395 RM COMBINE CP23 WITH CND-3
 396 HC 2
 *
 397 KK CND-9
 398 BA 0.026
 399 PB 2.86
 400 LS 0 65.71
 401 UD 0.086
 *
 402 KK BKPYD
 403 BA 0.139
 404 PB 2.86


```

405      LS      0      83.7
406      UD      0.271
*
407      KK      RBEFVD
408      EM      PALO VERDE
409      ED      5140      0.017      .015      0      TRAP      80      0
*
410      KK      RBEFVD
411      BA      0.014
412      PB      2.86
413      LS      0      85.49
414      UD      0.162
*
415      KK      RBEFVD
416      EM      MAJOR THEN PALO VERDE
417      ED      4720      0.016      .015      0      TRAP      80      0
*
418      KK      CEMJD
419      BA      0.206
420      PB      2.86
421      LS      0      85.51
422      UD      0.282
*

```

HEC-1 INPUT

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1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
423      KK      DCRMD
424      EM      FLOW SPLIT AT MAJOR AND CENTER
425      EM      DIVERT OUT FLOW IN CENTER STREET
426      DT      DCRMD
427      DI      0      80      300
428      DQ      0      25      150
*
429      KK      RDCRMD
430      EM      MAJOR
431      ED      5125      0.017      .015      0      TRAP      80      0
*
432      KK      CP25A
433      EM      COMBINE RBEFVD, RBEFVD, AND RDCRMD
434      KC      3
*
435      KK      WSPVD
436      BA      0.265
437      PB      2.86
438      LS      0      79.95
439      UD      0.234
*
440      KK      CP26
441      EM      COMBINE CP25A AND WSPVD
442      EM      AT WARM SPRINGS AND PALO VERDE
443      KC      2
*
444      KK      OCP26
445      EM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
446      EM      DIVERT OUT FLOW IN STORM DRAIN
447      DT      OCP26
448      DI      0      428      600
449      DQ      0      125      125
*
450      KK      RDCP26
451      EM      WARM SPRINGS
452      ED      1200      0.009      .015      0      TRAP      100      0
*
453      KK      DCRMD
454      EM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
455      DE      DCRMD
*

```

HEC-1 INPUT

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1

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
456      KK      RDCRMD
457      EM      CENTER
458      ED      4860      0.020      .015      0      TRAP      100      0
*
459      KK      WSCRD
460      BA      0.161
461      PB      2.86
462      LS      0      79.62
463      UD      0.249
*
464      KK      CP27
465      EM      COMBINE RDCP26, RDCRMD, AND WSCRD
466      EM      AT WARM SPRINGS AND CENTER
467      KC      3
*
468      KK      OCP27
469      EM      OVERFLOW AT WARM SPRINGS AND CENTER
470      EM      DIVERT OUT FLOW IN STORM DRAIN
471      DT      OCP27
472      DI      0      491      600
473      DQ      0      128      128
*
474      KK      PHUSD
475      BA      0.277

```

```

476      PB      2.86
477      LB      0      84.1
478      UD      0.281
      *

479      KK      DCF26
480      KM      RECALL FLOW FROM WARM SPRINGS AND FAJO VERDE, FLOW IN STORM DRAIN
481      DR      DCF26
      *

482      KK      RDCP26
483      KM      CONCRETE CHANNEL, CENTER STREET, EARTH CHANNEL IN LAKE HEAD
484      RD      4200 0.013 .015 0 TRAP 100 0
      *

485      KK      CP28
486      KM      COMBINE DCF27, PWLMD, AND RDCP26
487      KM      AT PANTEE AND LAKE HEAD (UPSTREAM OF 10X3 CULVERT)
488      KC      3
      *

```

1

HEC-1 INPUT

PAGE 15

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

489      KK      RKLMD
490      BA      0.345
491      PB      2.86
492      LB      0      82.72
493      UD      0.316
      *

494      KK      RKLMD
495      KM      LAKE HEAD, FUTURE REGIONAL FACILITY
496      RD      3070 0.011 .013 0 TRAP 20 3
      *

497      KK      WELMD
498      BA      0.286
499      PB      2.86
500      LB      0      82.88
501      UD      0.291
      *

502      KK      CP29
503      KM      COMBINE RKLMD AND WELMD
504      KM      AT WARM SPRINGS AND LAKE HEAD
505      KC      2
      *

506      KK      DCF27
507      KM      RECALL FLOW FROM WARM SPRINGS AND CENTER
508      KM      FLOW IN STORM DRAIN, THEN EARTH CHANNEL
509      DR      DCF27
      *

510      KK      RDCP27
511      KM      STORM DRAIN IN WARM SPRINGS
512      RD      1200 0.013 .013 0 TRAP 8 0
      *

513      KK      CP28
514      KM      COMBINE CP29 AND RDCP27 AT WEST SIDE LAKE HEAD JUST N. OF WARM SPRINGS
515      KC      2
      *

516      KK      RCP10
517      KM      PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
518      RD      1700 0.010 .013 0 TRAP 16 0
      *

519      KK      DCLMD
520      BA      0.248
521      PB      2.86
522      LB      0      91.77
523      UD      0.124
      *

```

1

HEC-1 INPUT

PAGE 16

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

524      KK      RDCRMD
525      KM      MAJOR
526      RD      1970 0.018 .015 0 TRAP 100 0
      *

527      KK      CP31
528      KM      COMBINE RCP10 AND DCLMD
529      KC      2
      *

530      KK      RCP11
531      KM      PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
532      RD      1200 0.011 .013 0 TRAP 16 0
      *

533      KK      CP32
534      KM      COMBINE CP28 AND RCP11
535      KM      AT PANTEE AND LAKE HEAD (PROPOSED FACILITY)
536      KC      2
      *

537      KK      RCP32
538      KM      PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
539      RD      1550 0.0075 .013 0 TRAP 16 0
      *

540      KK      DD
541      BA      0.073
542      PB      2.86
543      LB      0      86.06
544      UD      0.147

```

```

545      KK      CP13
546      KM      COMBINE RCP13 WITH DD
547      KC      2
      *

548      KK      RCP13
549      KM      LINING = CONCRETE
550      KD      320 0.0080 .013      0      TRAP      16      0
      *

551      KK      DD
552      KA      0.013
553      KB      2.86
554      LB      0      81.85
555      UD      0.124
      *

```

1

HEC-1 INPUT

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LINE ID1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

556      KK      CP14
557      KM      COMBINE RCP13 WITH DD
558      KC      2
      *

559      KK      RCP14
560      KM      LINING = CONCRETE
561      KD      380 0.0060 .013      0      TRAP      16      0
      *

562      KK      DD
563      KA      0.018
564      KB      2.86
565      LB      0      94.2
566      UD      0.083
      *

567      KK      CP15
568      KM      COMBINE RCP14 WITH DD
569      KC      2
      *

570      KK      DD
571      KA      0.004
572      KB      2.86
573      LB      0      94.2
574      UD      0.078
      *

575      KK      CP16
576      KM      COMBINE RCP15 WITH DD
577      KC      2
      *

578      KK      RCP16
579      KM      LINING = CONCRETE
580      KD      330 0.0070 .013      0      TRAP      16      0
      *

581      ZZ

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE (V) ROUTING      (--->) DIVERSION OR PUMP FLOW
NO.   (.) CONNECTOR  (<---) RETURN OF DIVERTED OR PUMPED FLOW

27      CND-1
      |
40      |      CND-2
      |      |
45      |      |      OFFD-2B
      |      |      V
      |      |      V
50      |      |      ROFFD-2B
      |      |      |
53      |      |      CP15.....
      |      |      |
56      |      |      CND-2A
      |      |      |
61      |      |      OFFD-2
      |      |      |
66      |      |      |      OFFD-3
      |      |      |      |
71      |      |      |      |      OFFD-3A
      |      |      |      |      V
      |      |      |      |      V
76      |      |      |      |      ROFFD-3A
      |      |      |      |      |
79      |      |      |      |      CP1.....
      |      |      |      |      |
82      |      |      |      |      OFFD-2A
      |      |      |      |      |
87      |      |      |      |      OFFD-1
      |      |      |      |      |
92      |      |      |      |      CP2.....
      |      |      |      |      |
95      |      |      |      |      OFFD-4
      |      |      |      |      |

```

100			CP18.....	
			V	
			V	
101			RC18	
108			CP19.....	
			V	
			V	
109			RC19	
112			OND-15	
117			OFFD-25	
122			CP1.....	
125			OND-26	
130			OFFD-26	
135			CP4.....	
138			CP5.....	
			V	
			V	
141			RC15	
144			OND-28	
149			OND-21	
154			CP8.....	
157			OND-27	
162			OFFD-27A	
167			OFFD-27B	
172			CP6.....	
			V	
			V	
175			RC16	
178			OND-22	
183			CP7.....	
			V	
			V	
186			RC17	
189			CP9.....	
193			DIV1	
192			DIV1	
			V	
			V	
196			DET1	
204			DIV1	
203			DIV1	
205			CP10.....	
			V	
			V	
207			RC110	
210			OND-18	
			V	
			V	
215			RCND-18	
218			OND-19	
223			CP11.....	
			V	
			V	
226			RC111	
229			OND-13	
234			OND-14	
237			CP12.....	
			V	

342	V	RCP12	
345			OND-12
350		CP13.....	
351	V	RCP13	
356			OND-10
361		CP14.....	
364			OND-24
369			OND-24
372			OND-23
377		CP15.....	
380		RCP15	
383			OND-15
388		CP16.....	
391		RCP16	
394			OND-11
399		CP17.....	
402		RCP17	
405			OND-5
410			OND-6
415		CP18.....	
419			OND-17
423			OND-17
426			OND-8
431		CP19.....	
434		RCP19	
437			OND-16
442			OND-16
445			OND-7
450		CP20.....	
451		RCP20	
456		CP21.....	
459		RCP21	
462			OND-4
467		CP22.....	
472			DIV2
479		DIV2	
475		DET2	
483			DIV2
488			DIV2

[illegible]


```

527      CP11.....
      V
      V
530      RCP11
      V
      V
533      CP12.....
      V
      V
537      RCP12
      V
      V
540      DO
      V
      V
543      CP13.....
      V
      V
546      RCP13
      V
      V
551      ED
      V
      V
554      CP14.....
      V
      V
559      RCP14
      V
      V
562      FD
      V
      V
567      CP15.....
      V
      V
570      DO
      V
      V
575      CP16.....
      V
      V
578      RCP16

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* SEPTEMBER 1990 *
* VERSION 4.0 *
* RUN DATE 01/26/2005 TIME 16:16:34 *
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 409 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

```

```

*****
* THE LANDWELL COMPANY *
* CONCEPTUAL DRAINAGE STUDY FOR *
* THE EASTSIDE PROPERTIES *
* PROPOSED CONDITIONS *
* INPUT FILE = PRO100.DAT *
* INPUT FILE DATE = 01/26/05 *
* DESIGN STORMS=100-YEAR 6-HOUR *
* STORM DISTRIBUTION = SDN 01 *
* MODELED BY:ANN REDINGTON, EIT (PDS&J) *
* ALEX YESCAS, EIT (PDS&J) *
*****

```

DRAINAGE AREA (SQUARE MILES)	BARF
0-0.5	.79
0.5-1	.975
1-2	.95
2-3	.925
3-4	.915
4-5	.909

```

24 IO      OUTPUT CONTROL VARIABLES
      IPRT 5 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0. HYDROGRAPH PLOT SCALE

```

```

17      HYDROGRAPH TIME DATA
      BMIN 5 MINUTES IN COMPUTATION INTERVAL
      IDATE 1 0 STARTING DATE
      ITIME 0000 STARTING TIME
      HQ 300 NUMBER OF HYDROGRAPH ORDINATES
      NDATE 2 0 ENDING DATE
      NTIME 0000 ENDING TIME
      ICENT 19 CENTURY MARK

```

```

      COMPUTATION INTERVAL .08 HOURS
      TOTAL TIME BASE 24.92 HOURS

```

```

ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRES-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

```

```

JP      MULTI-PLAN OPTION
      NPLAN 1 NUMBER OF PLANS

```

JR

MULTI-RATIO OPTION

RATIOS OF PRECIPITATION

.99 .98 .95 .93 .92 .91

196 KK

```

*****
*      DET1      *
*      *          *
*****

```

197 KD

OUTPUT CONTROL VARIABLES

```

IPRNT      1  PRINT CONTROL
IPLOT      2  PLOT CONTROL
OSCAL      0.  HYDROGRAPH PLOT SCALE
IPUNCH     0  PUNCH COMPUTED HYDROGRAPH
ICUT       21  SAVE HYDROGRAPH ON THIS UNIT
ISAV1      1  FIRST ORDINATE PUNCHED OR SAVED
ISAV2      300 LAST ORDINATE PUNCHED OR SAVED
TIMINT     .001 TIME INTERVAL IN HOURS

```

MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET

HYDROGRAPH ROUTING DATA

199 KB

STORAGE ROUTING

```

NRTPS      1  NUMBER OF SUBREACHES
ITTP        1  TYPE OF INITIAL CONDITION
RAVRIC     -1.00 INITIAL CONDITION
X           .00 WORKING R AND D COEFFICIENT

```

200 BV

STORAGE

.0 7.9 15.5 24.0 32.7 42.1

201 SE

ELEVATION

.00 2.00 3.00 4.00 5.00 6.00

202 SQ

DISCHARGE

0. 28. 50. 79. 94. 129.

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .99

DA	MON	HEMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HEMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HEMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	0.0	0.0	1	0000	101	49.	13.9	2.8	1	1640	201	4.	1.2	3		
1	0005	2	0.	0.	0.0	0.0	1	0005	102	44.	13.6	2.7	1	1645	202	4.	1.2	3		
1	0010	3	0.	0.	0.0	0.0	1	0010	103	43.	13.3	2.7	1	1650	203	4.	1.2	3		
1	0015	4	0.	0.	0.0	0.0	1	0015	104	43.	13.0	2.7	1	1655	204	4.	1.1	3		
1	0020	5	0.	0.	0.0	0.0	1	0020	105	42.	12.7	2.6	1	1700	205	4.	1.1	3		
1	0025	6	0.	0.	0.0	0.0	1	0025	106	41.	12.4	2.6	1	1705	206	4.	1.1	3		
1	0030	7	0.	0.	0.0	0.0	1	0030	107	40.	12.1	2.6	1	1710	207	4.	1.1	3		
1	0035	8	0.	0.	0.0	0.0	1	0035	108	39.	11.8	2.5	1	1715	208	4.	1.0	3		
1	0040	9	0.	0.	0.0	0.0	1	0040	109	39.	11.6	2.5	1	1720	209	4.	1.0	3		
1	0045	10	0.	0.	0.0	0.0	1	0045	110	38.	11.3	2.4	1	1725	210	4.	1.0	3		
1	0050	11	0.	0.	0.0	0.0	1	0050	111	37.	11.0	2.4	1	1730	211	3.	1.0	2		
1	0055	12	0.	0.	0.0	0.0	1	0055	112	36.	10.8	2.4	1	1735	212	3.	0.9	2		
1	0100	13	0.	0.	0.0	0.0	1	0060	113	36.	10.5	2.3	1	1740	213	3.	0.9	2		
1	0105	14	0.	0.	0.0	0.0	1	0065	114	35.	10.3	2.3	1	1745	214	3.	0.9	2		
1	0110	15	0.	0.	0.0	0.0	1	0070	115	34.	10.1	2.3	1	1750	215	3.	0.9	2		
1	0115	16	0.	0.	0.0	0.0	1	0075	116	34.	9.8	2.3	1	1755	216	3.	0.9	2		
1	0120	17	0.	0.	0.0	0.0	1	0080	117	33.	9.6	2.2	1	1800	217	3.	0.8	2		
1	0125	18	0.	0.	0.0	0.0	1	0085	118	32.	9.4	2.2	1	1805	218	3.	0.8	2		
1	0130	19	0.	0.	0.0	0.0	1	0090	119	32.	9.1	2.2	1	1810	219	3.	0.8	2		
1	0135	20	0.	0.	0.0	0.0	1	0095	120	31.	8.9	2.1	1	1815	220	3.	0.8	2		
1	0140	21	0.	0.	0.0	0.0	1	1000	121	30.	8.7	2.1	1	1820	221	3.	0.8	2		
1	0145	22	0.	0.	0.0	0.0	1	1005	122	30.	8.5	2.1	1	1825	222	3.	0.7	2		
1	0150	23	0.	0.	0.0	0.0	1	1010	123	29.	8.3	2.1	1	1830	223	3.	0.7	2		
1	0155	24	0.	0.	0.0	0.0	1	1015	124	29.	8.1	2.0	1	1835	224	2.	0.7	2		
1	0200	25	0.	0.	0.0	0.0	1	1020	125	28.	7.9	2.0	1	1840	225	2.	0.7	2		
1	0205	26	0.	0.	0.0	0.0	1	1025	126	27.	7.7	2.0	1	1845	226	2.	0.7	2		
1	0210	27	0.	0.	0.0	0.0	1	1030	127	27.	7.5	1.9	1	1850	227	2.	0.6	2		
1	0215	28	0.	0.	0.0	0.0	1	1035	128	26.	7.4	1.9	1	1855	228	2.	0.6	2		
1	0220	29	0.	0.	0.0	0.0	1	1040	129	26.	7.2	1.8	1	1900	229	2.	0.6	2		
1	0225	30	0.	0.	0.0	0.0	1	1045	130	25.	7.0	1.8	1	1905	230	2.	0.6	2		
1	0230	31	0.	0.	0.0	0.0	1	1050	131	24.	6.8	1.7	1	1910	231	2.	0.6	1		
1	0235	32	0.	0.	0.0	0.0	1	1055	132	24.	6.7	1.7	1	1915	232	2.	0.6	1		
1	0240	33	0.	0.	0.0	0.0	1	1100	133	23.	6.5	1.7	1	1920	233	2.	0.6	1		
1	0245	34	0.	0.	0.0	0.0	1	1105	134	23.	6.3	1.6	1	1925	234	2.	0.5	1		
1	0250	35	0.	0.	0.0	0.0	1	1110	135	22.	6.2	1.6	1	1930	235	2.	0.5	1		
1	0255	36	0.	0.	0.0	0.0	1	1115	136	22.	6.0	1.5	1	1935	236	2.	0.5	1		
1	0300	37	0.	0.	0.0	0.0	1	1120	137	21.	5.9	1.5	1	1940	237	2.	0.5	1		
1	0305	38	0.	0.	0.0	0.0	1	1125	138	20.	5.8	1.5	1	1945	238	2.	0.5	1		
1	0310	39	0.	0.	0.0	0.0	1	1130	139	20.	5.6	1.4	1	1950	239	2.	0.5	1		
1	0315	40	0.	0.	0.0	0.0	1	1135	140	19.	5.5	1.4	1	1955	240	2.	0.5	1		
1	0320	41	0.	0.	0.0	0.0	1	1140	141	19.	5.3	1.4	1	2000	241	2.	0.5	1		
1	0325	42	4.	1.1	1.3	1.3	1	1145	142	19.	5.2	1.3	1	2005	242	2.	0.5	1		
1	0330	43	18.	5.0	1.3	1.3	1	1150	143	18.	5.1	1.3	1	2010	243	2.	0.4	1		
1	0335	44	38.	11.4	2.5	1.3	1	1155	144	18.	5.0	1.3	1	2015	244	2.	0.4	1		
1	0340	45	60.	18.5	3.4	1.3	1	1200	145	17.	4.8	1.2	1	2020	245	1.	0.4	1		
1	0345	46	82.	25.8	4.2	1.3	1	1205	146	17.	4.7	1.2	1	2025	246	1.	0.4	1		
1	0350	47	95.	32.3	4.9	1.3	1	1210	147	16.	4.6	1.2	1	2030	247	1.	0.4	1		
1	0355	48	109.	36.8	5.4	1.3	1	1215	148	16.	4.5	1.1	1	2035	248	1.	0.4	1		
1	0400	49	120.	39.6	5.7	1.3	1	1220	149	16.	4.4	1.1	1	2040	249	1.	0.4	1		
1	0405	50	128.	41.0	5.9	1.3	1	1225	150	15.	4.3	1.1	1	2045	250	1.	0.4	1		
1	0410	51	124.	40.8	5.9	1.3	1	1230	151	15.	4.2	1.1	1	2050	251	1.	0.4	1		
1	0415	52	121.	40.0	5.8	1.3	1	1235	152	15.	4.1	1.0	1	2055	252	1.	0.4	1		
1	0420	53	118.	39.2	5.7	1.3	1	1240	153	14.	4.0	1.0	1	2100	253	1.	0.3	1		
1	0425	54	115.	38.4	5.6	1.3	1	1245	154	14.	3.9	1.0	1	2105	254	1.	0.3	1		
1	0430	55	112.	37.6	5.5	1.3	1	1250	155	13.	3.8	1.0	1	2110	255	1.	0.3	1		
1	0435	56	109.	36.8	5.4	1.3	1	1255	156	13.	3.7	0.9	1	2115	256	1.	0.3	1		
1	0440	57	107.	36.1	5.4	1.3	1	1300	157	13.	3.6	0.9	1	2120	257	1.	0.3	1		
1	0445	58	104.	35.4	5.3	1.3	1	1305	158	13.	3.5	0.9	1	2125	258	1.	0.3	1		
1	0450	59	101.	34.6	5.2	1.3	1	1310	159	12.	3.4	0.9	1	2130	259	1.	0.3	1		
1	0455	60	99.	34.0	5.1	1.3	1	1315	160	12.	3.4	0.9	1	2135	260	1.	0.3	1		
1	0500	61	96.	33.3	5.1	1.3	1	1320	161	12.	3.3	0.8	1	2140	261	1.	0.3	1		

1	0505	62	94.	32.6	5.0	*	1	1325	362	11.	3.2	.8	*	1	2145	362	1.	.3	.1
3	0510	63	93.	32.0	4.9	*	1	1330	363	11.	3.1	.8	*	1	2150	363	1.	.3	.1
3	0515	64	92.	31.4	4.8	*	1	1335	364	11.	3.0	.8	*	1	2155	364	1.	.3	.1
1	0520	65	91.	30.7	4.8	*	1	1340	365	11.	3.0	.8	*	1	2200	365	1.	.3	.1
1	0525	66	90.	30.1	4.7	*	1	1345	366	10.	2.9	.7	*	1	2205	366	1.	.3	.1
1	0530	67	89.	29.5	4.6	*	1	1350	367	10.	2.8	.7	*	1	2210	367	1.	.3	.1
1	0535	68	87.	28.9	4.6	*	1	1355	368	10.	2.8	.7	*	1	2215	368	1.	.3	.1
1	0540	69	86.	28.3	4.5	*	1	1400	369	10.	2.7	.7	*	1	2220	369	1.	.3	.1
1	0545	70	85.	27.7	4.4	*	1	1405	370	9.	2.6	.7	*	1	2225	370	1.	.3	.1
1	0550	71	84.	27.1	4.4	*	1	1410	371	9.	2.6	.7	*	1	2230	371	1.	.3	.1
1	0555	72	83.	26.5	4.3	*	1	1415	372	9.	2.6	.6	*	1	2235	372	1.	.3	.1
1	0600	73	82.	26.0	4.2	*	1	1420	373	9.	2.4	.6	*	1	2240	373	1.	.3	.1
1	0605	74	81.	25.4	4.2	*	1	1425	374	8.	2.4	.6	*	1	2245	374	1.	.3	.1
1	0610	75	80.	24.8	4.1	*	1	1430	375	8.	2.3	.6	*	1	2250	375	1.	.3	.1
1	0615	76	80.	24.3	4.0	*	1	1435	376	8.	2.3	.6	*	1	2255	376	1.	.3	.1
1	0620	77	78.	23.7	4.0	*	1	1440	377	8.	2.2	.6	*	1	2300	377	1.	.3	.1
1	0625	78	76.	23.2	3.9	*	1	1445	378	8.	2.2	.5	*	1	2305	378	1.	.3	.1
1	0630	79	75.	22.7	3.8	*	1	1450	379	7.	2.1	.5	*	1	2310	379	1.	.3	.1
1	0635	80	73.	22.2	3.8	*	1	1455	380	7.	2.1	.5	*	1	2315	380	1.	.3	.1
1	0640	81	71.	21.7	3.7	*	1	1500	381	7.	2.0	.5	*	1	2320	381	1.	.3	.1
1	0645	82	69.	21.2	3.7	*	1	1505	382	7.	2.0	.5	*	1	2325	382	1.	.3	.1
1	0650	83	68.	20.7	3.6	*	1	1510	383	7.	1.9	.5	*	1	2330	383	1.	.3	.1
1	0655	84	66.	20.3	3.6	*	1	1515	384	7.	1.9	.5	*	1	2335	384	1.	.3	.1
1	0700	85	65.	19.8	3.5	*	1	1520	385	6.	1.8	.5	*	1	2340	385	1.	.3	.1
1	0705	86	63.	19.4	3.5	*	1	1525	386	6.	1.8	.5	*	1	2345	386	1.	.3	.1
1	0710	87	62.	19.0	3.4	*	1	1530	387	6.	1.7	.4	*	1	2350	387	1.	.3	.1
1	0715	88	60.	18.5	3.4	*	1	1535	388	6.	1.7	.4	*	1	2355	388	1.	.3	.1
1	0720	89	59.	18.1	3.3	*	1	1540	389	6.	1.6	.4	*	1	0000	389	0.	.1	.0
1	0725	90	58.	17.7	3.3	*	1	1545	390	6.	1.6	.4	*	2	0005	390	0.	.1	.0
1	0730	91	56.	17.3	3.2	*	1	1550	391	6.	1.6	.4	*	2	0010	391	0.	.1	.0
1	0735	92	55.	16.9	3.2	*	1	1555	392	5.	1.5	.4	*	2	0015	392	0.	.1	.0
1	0740	93	54.	16.6	3.1	*	1	1600	393	5.	1.5	.4	*	2	0020	393	0.	.1	.0
1	0745	94	53.	16.2	3.1	*	1	1605	394	5.	1.5	.4	*	2	0025	394	0.	.1	.0
1	0750	95	51.	15.9	3.0	*	1	1610	395	5.	1.4	.4	*	2	0030	395	0.	.1	.0
1	0755	96	50.	15.5	3.0	*	1	1615	396	5.	1.4	.4	*	2	0035	396	0.	.1	.0
1	0800	97	49.	15.2	3.0	*	1	1620	397	5.	1.4	.3	*	2	0040	397	0.	.1	.0
1	0805	98	48.	14.8	2.9	*	1	1625	398	5.	1.3	.3	*	2	0045	398	0.	.1	.0
1	0810	99	47.	14.5	2.9	*	1	1630	399	5.	1.3	.3	*	2	0050	399	0.	.1	.0
1	0815	00	46.	14.2	2.8	*	1	1635	400	4.	1.3	.3	*	2	0055	400	0.	.1	.0

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	12.0	72. (INCHES) (AC-FT)	23. ,439 46.	22. ,410 46.	22. ,410 46.
PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE		
(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	41.	23.	7.	7.	7.
PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE		
(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	5.00	1.26	1.22	1.27	1.27
CUMULATIVE AREA *			2.09	SQ MI	

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1	0600	73	80.	24.7	4.1 * 1	1420	173	8.	2.3	.6 * 1	2340	273	1.	.2	.1
1	0605	74	79.	24.1	4.0 * 1	1428	174	8.	2.3	.6 * 1	2345	274	1.	.2	.0
1	0610	75	78.	23.6	4.0 * 1	1430	175	8.	2.3	.6 * 1	2350	275	1.	.2	.0
1	0615	76	76.	23.1	3.9 * 1	1438	176	8.	2.1	.5 * 1	2355	276	1.	.3	.0
1	0620	77	74.	22.6	3.8 * 1	1448	177	7.	2.1	.5 * 1	2360	277	1.	.3	.0
1	0625	78	72.	22.1	3.8 * 2	1445	178	7.	2.0	.5 * 1	2365	278	1.	.3	.0
1	0630	79	71.	21.6	3.7 * 1	1450	179	7.	2.0	.5 * 1	2370	279	1.	.3	.0
1	0635	80	69.	21.1	3.7 * 1	1455	180	7.	1.9	.5 * 1	2375	280	1.	.3	.0
1	0640	81	67.	20.6	3.6 * 1	1500	181	7.	1.9	.5 * 1	2380	281	1.	.2	.0
1	0645	82	66.	20.2	3.5 * 1	1505	182	7.	1.9	.5 * 1	2385	282	1.	.2	.0
1	0650	83	64.	19.7	3.5 * 1	1510	183	6.	1.8	.5 * 1	2390	283	1.	.2	.0
1	0655	84	63.	19.3	3.4 * 1	1515	184	6.	1.8	.4 * 1	2395	284	1.	.2	.0
1	0700	85	61.	18.8	3.4 * 1	1520	185	6.	1.7	.4 * 1	2400	285	1.	.1	.0
1	0705	86	60.	18.4	3.3 * 1	1525	186	6.	1.7	.4 * 1	2405	286	1.	.1	.0
1	0710	87	59.	18.0	3.3 * 1	1530	187	6.	1.6	.4 * 1	2410	287	1.	.1	.0
1	0715	88	57.	17.6	3.2 * 1	1535	188	6.	1.6	.4 * 1	2415	288	0.	.1	.0
1	0720	89	56.	17.2	3.2 * 1	1540	189	6.	1.6	.4 * 2	0000	289	0.	.1	.0
1	0725	90	55.	16.8	3.2 * 1	1545	190	5.	1.6	.4 * 2	0005	290	0.	.1	.0
1	0730	91	53.	16.5	3.1 * 1	1550	191	5.	1.5	.4 * 2	0010	291	0.	.1	.0
1	0735	92	52.	16.1	3.1 * 1	1555	192	5.	1.4	.4 * 2	0015	292	0.	.1	.0
1	0740	93	51.	15.8	3.0 * 1	1600	193	5.	1.4	.4 * 2	0020	293	0.	.1	.0
1	0745	94	50.	15.4	3.0 * 1	1605	194	5.	1.4	.4 * 2	0025	294	0.	.1	.0
1	0750	95	49.	15.1	2.9 * 1	1610	195	5.	1.3	.3 * 2	0030	295	0.	.1	.0
1	0755	96	48.	14.7	2.9 * 1	1615	196	5.	1.3	.3 * 2	0035	296	0.	.1	.0
1	0800	97	47.	14.4	2.9 * 1	1620	197	5.	1.3	.3 * 2	0040	297	0.	.1	.0
1	0805	98	46.	14.1	2.8 * 1	1625	198	4.	1.3	.3 * 2	0045	298	0.	.1	.0
1	0810	99	45.	13.8	2.8 * 1	1630	199	4.	1.2	.3 * 2	0050	299	0.	.1	.0
1	0815	100	44.	13.5	2.7 * 1	1635	200	4.	1.2	.3 * 2	0055	300	0.	.1	.0

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
* (CFS)	(HR)					
* 118.	4.08		69.	23.	21.	21.
		(INCHES)	.305	.391	.391	.391
		(AC-FT)	34.	44.	44.	44.
PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
* (AC-FT)	(HR)					
* 39.	4.08	22.	7.	7.	7.	7.
PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
* (FEET)	(HR)					
* 5.68	4.08	3.73	1.27	1.23	1.23	1.23
CUMULATIVE AREA =		2.09 SQ MI				

STATION	DET1
0.	200.
(1) INFLOW.	(2) OUTFLOW
0.	400.
0.	600.
0.	800.
0.	1000.
0.	1200.
0.	1400.
0.	1600.
0.	1800.
0.	2000.
0.	2200.
0.	2400.
0.	2600.
0.	2800.
0.	3000.
0.	3200.
0.	3400.
0.	3600.
0.	3800.
0.	4000.
0.	4200.
0.	4400.
0.	4600.
0.	4800.
0.	5000.
0.	5200.
0.	5400.
0.	5600.
0.	5800.
0.	6000.
0.	6200.
0.	6400.
0.	6600.
0.	6800.
0.	7000.
0.	7200.
0.	7400.
0.	7600.
0.	7800.
0.	8000.
0.	8200.
0.	8400.
0.	8600.
0.	8800.
0.	9000.
0.	9200.
0.	9400.
0.	9600.
0.	9800.
0.	10000.

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		STATION						DST1							
		(I) INFLOW		(O) OUTFLOW						(S) STORAGE					
		0.	300.	400.	500.	600.	1000.	1200.			0.	30.	40.	0.	0.
HAZARD	PKR	0.	0.	0.	0.	0.	0.	0.	10.	20.	30.	40.	0.	0.	
10000	13														
10000	21														
10010	31														
10010	41														
10020	51														
10020	61														
10030	71														
10030	81														
10040	91														
10040	101														
10050	111														
10050	121														
10100	131														
10100	141														
10110	151														
10110	161														
10120	171														
10120	181														
10130	191														
10130	201														
10140	311														
10140	411														
10150	431														
10150	541														
10200	551														
10200	561														
10210	571														
10210	581														
10220	591														
10220	601														
10230	711														
10230	821														
10240	931														
10240	941														
10250	951														
10250	961														
10300	971														
10300	981														
10310	991														
10310	401														
10320	411														
10320	420														
10330	43.0														
10330	44.0														
10340	45.0														
10340	46.0														
10350	47.0														
10350	48.0														
10400	49.0														
10400	50.0														
10410	511														
10410	521														
10420	531														
10420	541														
10430	551														
10430	561														
10440	571														
10440	581														
10450	591														
10450	601														
10500	611														
10500	621														
10510	631														
10510	641														
10520	651														
10520	661														

[illegible]

[illegible]

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HYDROGRAPH AT STATION      DETI
      FIRM 1,  RATIO =  .0%
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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0800	1	0.	0.	0.	1	0820	101	37.	10.9	2.4	1	1640	201	3.	0.9	0.2			
1	0805	2	0.	0.	0.	1	0825	102	36.	10.6	2.4	1	1645	202	3.	0.9	0.2			
1	0810	3	0.	0.	0.	1	0830	103	35.	10.4	2.3	1	1650	203	3.	0.9	0.2			
1	0815	4	0.	0.	0.	1	0835	104	34.	10.1	2.3	1	1655	204	3.	0.9	0.2			
1	0820	5	0.	0.	0.	1	0840	105	34.	9.9	2.3	1	1700	205	3.	0.9	0.2			
1	0825	6	0.	0.	0.	1	0845	106	33.	9.7	2.2	1	1705	206	3.	0.9	0.2			
1	0830	7	0.	0.	0.	1	0850	107	32.	9.4	2.2	1	1710	207	3.	0.9	0.2			
1	0835	8	0.	0.	0.	1	0855	108	32.	9.2	2.2	1	1715	208	3.	0.9	0.2			
1	0840	9	0.	0.	0.	1	0900	109	31.	9.0	2.1	1	1720	209	3.	0.9	0.2			
1	0845	10	0.	0.	0.	1	0905	110	31.	8.8	2.1	1	1725	210	3.	0.9	0.2			
1	0850	11	0.	0.	0.	1	0910	111	30.	8.6	2.1	1	1730	211	3.	0.7	0.2			
1	0855	12	0.	0.	0.	1	0915	112	29.	8.4	2.1	1	1735	212	3.	0.7	0.2			
1	0900	13	0.	0.	0.	1	0920	113	29.	8.2	2.0	1	1740	213	3.	0.7	0.2			
1	0905	14	0.	0.	0.	1	0925	114	28.	8.0	2.0	1	1745	214	2.	0.7	0.2			
1	0910	15	0.	0.	0.	1	0930	115	28.	7.8	2.0	1	1750	215	2.	0.7	0.2			
1	0915	16	0.	0.	0.	1	0935	116	27.	7.6	1.9	1	1755	216	2.	0.7	0.2			
1	0920	17	0.	0.	0.	1	0940	117	26.	7.4	1.9	1	1800	217	2.	0.6	0.2			
1	0925	18	0.	0.	0.	1	0945	118	26.	7.3	1.8	1	1805	218	2.	0.6	0.2			
1	0930	19	0.	0.	0.	1	0950	119	25.	7.0	1.8	1	1810	219	2.	0.6	0.2			
1	0935	20	0.	0.	0.	1	0955	120	24.	6.9	1.7	1	1815	220	2.	0.6	0.2			
1	0940	21	0.	0.	0.	1	1000	121	34.	6.7	1.7	1	1820	221	2.	0.6	0.1			
1	0945	22	0.	0.	0.	1	1005	122	33.	6.5	1.7	1	1825	222	2.	0.6	0.1			
1	0950	23	0.	0.	0.	1	1010	123	23.	6.4	1.6	1	1830	223	2.	0.6	0.1			
1	0955	24	0.	0.	0.	1	1015	124	22.	6.3	1.6	1	1835	224	2.	0.5	0.1			
1	1000	25	0.	0.	0.	1	1020	125	22.	6.1	1.5	1	1840	225	2.	0.5	0.1			
1	1005	26	0.	0.	0.	1	1025	126	21.	5.9	1.5	1	1845	226	2.	0.5	0.1			
1	1010	27	0.	0.	0.	1	1030	127	21.	5.8	1.5	1	1850	227	2.	0.5	0.1			
1	1015	28	0.	0.	0.	1	1035	128	20.	5.7	1.4	1	1855	228	2.	0.5	0.1			
1	1020	29	0.	0.	0.	1	1040	129	20.	5.5	1.4	1	1900	229	2.	0.5	0.1			
1	1025	30	0.	0.	0.	1	1045	130	19.	5.4	1.4	1	1905	230	2.	0.5	0.1			
1	1030	31	0.	0.	0.	1	1050	131	19.	5.3	1.3	1	1910	231	2.	0.5	0.1			
1	1035	32	0.	0.	0.	1	1055	132	18.	5.1	1.3	1	1915	232	2.	0.4	0.1			
1	1040	33	0.	0.	0.	1	1100	133	18.	5.0	1.3	1	1920	233	2.	0.4	0.1			
1	1045	34	0.	0.	0.	1	1105	134	17.	4.9	1.2	1	1925	234	1.	0.4	0.1			
1	1050	35	0.	0.	0.	1	1110	135	17.	4.8	1.2	1	1930	235	1.	0.4	0.1			
1	1055	36	0.	0.	0.	1	1115	136	17.	4.6	1.2	1	1935	236	1.	0.4	0.1			
1	1100	37	0.	0.	0.	1	1120	137	16.	4.5	1.2	1	1940	237	1.	0.4	0.1			
1	1105	38	0.	0.	0.	1	1125	138	16.	4.4	1.1	1	1945	238	1.	0.4	0.1			
1	1110	39	0.	0.	0.	1	1130	139	15.	4.3	1.1	1	1950	239	1.	0.4	0.1			
1	1115	40	0.	0.	0.	1	1135	140	15.	4.2	1.1	1	1955	240	1.	0.4	0.1			
1	1120	41	0.	0.	0.	1	1140	141	15.	4.1	1.0	1	2000	241	1.	0.4	0.1			
1	1125	42	0.	0.	0.	1	1145	142	14.	4.0	1.0	1	2005	242	1.	0.3	0.1			
1	1130	43	11.	3.6	0.	1	1150	143	14.	3.9	1.0	1	2010	243	1.	0.3	0.1			
1	1135	44	31.	8.8	2.1	1	1155	144	14.	3.8	1.0	1	2015	244	1.	0.3	0.1			
1	1140	45	48.	14.7	2.9	1	1200	145	13.	3.7	0.9	1	2020	245	1.	0.3	0.1			
1	1145	46	63.	20.8	3.6	1	1205	146	13.	3.6	0.9	1	2025	246	1.	0.3	0.1			
1	1150	47	82.	26.1	4.2	1	1210	147	13.	3.5	0.9	1	2030	247	1.	0.3	0.1			
1	1155	48	89.	29.9	4.7	1	1215	148	12.	3.5	0.9	1	2035	248	1.	0.3	0.1			
1	1200	49	93.	32.2	4.9	1	1220	149	12.	3.4	0.9	1	2040	249	1.	0.3	0.1			
1	1205	50	95.	33.1	5.0	1	1225	150	12.	3.3	0.9	1	2045	250	1.	0.3	0.1			
1	1210	51	94.	32.8	5.0	1	1230	151	11.	3.2	0.8	1	2050	251	1.	0.3	0.1			
1	1215	52	93.	32.2	4.9	1	1235	152	11.	3.1	0.8	1	2055	252	1.	0.3	0.1			
1	1220	53	92.	31.5	4.9	1	1240	153	11.	3.1	0.8	1	2100	253	1.	0.3	0.1			
1	1225	54	91.	30.9	4.8	1	1245	154	11.	3.0	0.8	1	2105	254	1.	0.3	0.1			
1	1230	55	90.	30.3	4.7	1	1250	155	10.	2.9	0.7	1	2110	255	1.	0.3	0.1			
1	1235	56	89.	29.7	4.7	1	1255	156	10.	2.8	0.7	1	2115	256	1.	0.3	0.1			
1	1240	57	88.	29.1	4.6	1	1300	157	10.	2.8	0.7	1	2120	257	1.	0.2	0.1			
1	1245	58	87.	28.5	4.5	1	1305	158	10.	2.7	0.7	1	2125	258	1.	0.2	0.1			
1	1250	59	86.	27.9	4.4	1	1310	159	9.	2.6	0.7	1	2130	259	1.	0.2	0.1			
1	1255	60	85.	27.3	4.4	1	1315	160	9.	2.6	0.7	1	2135	260	1.	0.2	0.1			
1	1300	61	84.	26.7	4.3	1	1320	161	9.	2.5	0.6	1	2140	261	1.	0.2	0.1			
1	1305	62	83.	26.1	4.2	1	1325	162	9.	2.5	0.6	1	2145	262	1.	0.2	0.1			
1	1310	63	82.	25.6	4.2	1	1330	163	9.	2.4	0.6	1	2150	263	1.	0.2	0.1			
1	1315	64	81.	25.0	4.1	1	1335	164	8.	2.3	0.6	1	2155	264	1.	0.2	0.1			
1	1320	65	80.	24.4	4.1	1	1340	165	8.	2.3	0.6	1	2200	265	1.	0.2	0.1			
1	1325	66	79.	23.9	4.0	1	1345	166	8.	2.2	0.6	1	2205	266	1.	0.2	0.0			
1	1330	67	77.	23.4	3.9	1	1350	167	8.	2.2	0.6	1	2210	267	1.	0.2	0.0			
1	1335	68	75.	22.8	3.9	1	1355	168	8.	2.1	0.5	1	2215	268	1.	0.2	0.0			
1	1340	69	73.	22.3	3.8	1	1400	169	7.	2.1	0.5	1	2220	269	1.	0.2	0.0			
1	1345	70	72.	21.9	3.7	1	1405	170	7.	2.0	0.5	1	2225	270	1.	0.2	0.0			
1	1350	71	70.	21.3	3.7	1	1410	171	7.	2.0	0.5	1	2230	271	1.	0.2	0.0			
1	1355	72	68.	20.8	3.6	1	1415	172	7.	1.9	0.5	1	2235	272	1.	0.2	0.0			
1	1400	73	67.	20.4	3.6	1	1420	173	7.	1.9	0.5	1	2240	273	1.	0.2	0.0			
1	1405	74	65.	19.9	3.5	1	1425	174	7.	1.8	0.5	1	2245	274	1.	0.2	0.0			
1	1410	75	64.	19.5	3.5	1	1430	175	6.	1.8	0.5	1	2250	275	1.	0.2	0.0			
1	1415	76	62.	19.1	3.4	1	1435	176	6.	1.7	0.4	1	2255	276	1.	0.2	0.0			
1	1420	77	61.	18.6	3.4	1	1440	177	6.	1.7	0.4	1	2300	277	1.	0.1	0.0			
1	1425	78	59.	18.2	3.3	1	1445	178	6.	1.7	0.4	1	2305	278	1.	0.1	0.0			
1	1430	79	58.	17.8	3.3	1	1450	179	6.	1.6	0.4	1	2310	279	0.	0.1	0.0			
1	1435	80	57.	17.4	3.2	1	1455	180	6.	1.6	0.4	1	2315	280	0.	0.1	0.0			
1	1440	81	55.	17.1	3.2	1	1500	181	5.	1.5	0.4	1	2320	281	0.	0.1	0.0			
1	1445	82	54.	16.7	3.1	1	1505	182	5.	1.5	0.4	1	2325	282	0.	0.1				

一、本行在2017年12月31日及2018年12月31日，均无不良资产。本行在2017年12月31日及2018年12月31日，均无不良资产。本行在2017年12月31日及2018年12月31日，均无不良资产。

					STATION	DET1					
		(I) INFLOW	(O) OUTFLOW								
0.	100.	400.	400.	300.	1000.	0.	0.	0.	0.	0.	0.
							(O) STORAGE				
0.	0.	0.	0.	0.	0.	0.	10.	20.	30.	40.	0.

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HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .92

DA	MON	HR	MM	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MM	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MM	ORD	OUTFLOW	STORAGE	STAGE		
1				0000	1	0.	.0	.0	*	1			0000	101	10.4	2.1	*	1			1640	201	3.	.9	.2
1				0005	2	0.	.0	.0	*	1			0005	102	10.1	2.1	*	1			1645	202	3.	.9	.2
1				0010	3	0.	.0	.0	*	1			0010	103	9.9	2.1	*	1			1650	203	3.	.9	.2
1				0015	4	0.	.0	.0	*	1			0015	104	9.7	2.2	*	1			1655	204	3.	.8	.2
1				0020	5	0.	.0	.0	*	1			0020	105	9.4	2.2	*	1			1700	205	3.	.8	.2
1				0025	6	0.	.0	.0	*	1			0025	106	9.2	2.3	*	1			1705	206	3.	.8	.2
1				0030	7	0.	.0	.0	*	1			0030	107	9.0	2.1	*	1			1710	207	3.	.8	.2
1				0035	8	0.	.0	.0	*	1			0035	108	8.8	2.1	*	1			1715	208	3.	.8	.2
1				0040	9	0.	.0	.0	*	1			0040	109	8.6	2.1	*	1			1720	209	3.	.7	.2
1				0045	10	0.	.0	.0	*	1			0045	110	8.4	2.1	*	1			1725	210	3.	.7	.2
1				0050	11	0.	.0	.0	*	1			0050	111	8.3	2.0	*	1			1730	211	3.	.7	.2
1				0055	12	0.	.0	.0	*	1			0055	112	8.0	2.0	*	1			1735	212	2.	.7	.2
1				0100	13	0.	.0	.0	*	1			0100	113	7.8	2.0	*	1			1740	213	2.	.7	.2
1				0105	14	0.	.0	.0	*	1			0105	114	7.6	1.9	*	1			1745	214	2.	.6	.2
1				0110	15	0.	.0	.0	*	1			0110	115	7.4	1.9	*	1			1750	215	2.	.6	.2
1				0115	16	0.	.0	.0	*	1			0115	116	7.3	1.8	*	1			1755	216	2.	.6	.2
1				0120	17	0.	.0	.0	*	1			0120	117	7.1	1.8	*	1			1800	217	2.	.6	.2
1				0125	18	0.	.0	.0	*	1			0125	118	6.9	1.8	*	1			1805	218	2.	.6	.2
1				0130	19	0.	.0	.0	*	1			0130	119	6.7	1.7	*	1			1810	219	2.	.6	.1
1				0135	20	0.	.0	.0	*	1			0135	120	6.6	1.7	*	1			1815	220	2.	.6	.1
1				0140	21	0.	.0	.0	*	1			0140	121	6.4	1.6	*	1			1820	221	2.	.6	.1
1				0145	22	0.	.0	.0	*	1			0145	122	6.2	1.6	*	1			1825	222	2.	.5	.1
1				0150	23	0.	.0	.0	*	1			0150	123	6.1	1.5	*	1			1830	223	2.	.5	.1
1				0155	24	0.	.0	.0	*	1			0155	124	5.9	1.5	*	1			1835	224	2.	.5	.1
1				0200	25	0.	.0	.0	*	1			0200	125	5.8	1.5	*	1			1840	225	2.	.5	.1
1				0205	26	0.	.0	.0	*	1			0205	126	5.7	1.4	*	1			1845	226	2.	.5	.1
1				0210	27	0.	.0	.0	*	1			0210	127	5.5	1.4	*	1			1850	227	2.	.5	.1
1				0215	28	0.	.0	.0	*	1			0215	128	5.4	1.4	*	1			1855	228	2.	.5	.1
1				0220	29	0.	.0	.0	*	1			0220	129	5.3	1.3	*	1			1900	229	2.	.5	.1
1				0225	30	0.	.0	.0	*	1			0225	130	5.1	1.3	*	1			1905	230	2.	.4	.1
1				0230	31	0.	.0	.0	*	1			0230	131	5.0	1.3	*	1			1910	231	2.	.4	.1
1				0235	32	0.	.0	.0	*	1			0235	132	4.9	1.2	*	1			1915	232	1.	.4	.1
1				0240	33	0.	.0	.0	*	1			0240	133	4.8	1.2	*	1			1920	233	1.	.4	.1
1				0245	34	0.	.0	.0	*	1			0245	134	4.7	1.2	*	1			1925	234	1.	.4	.1
1				0250	35	0.	.0	.0	*	1			0250	135	4.6	1.2	*	1			1930	235	1.	.4	.1
1				0255	36	0.	.0	.0	*	1			0255	136	4.4	1.1	*	1			1935	236	1.	.4	.1
1				0300	37	0.	.0	.0	*	1			0300	137	4.3	1.1	*	1			1940	237	1.	.4	.1
1				0305	38	0.	.0	.0	*	1			0305	138	4.2	1.1	*	1			1945	238	1.	.4	.1
1				0310	39	0.	.0	.0	*	1			0310	139	4.1	1.0	*	1			1950	239	1.	.4	.1
1				0315	40	0.	.0	.0	*	1			0315	140	4.0	1.0	*	1			1955	240	1.	.3	.1
1				0320	41	0.	.0	.0	*	1			0320	141	3.9	1.0	*	1			2000	241	1.	.3	.1
1				0325	42	2.	.6	.1	*	1			0325	142	3.8	1.0	*	1			2005	242	1.	.3	.1
1				0330	43	12.	3.4	.9	*	1			0330	143	3.7	.9	*	1			2010	243	1.	.3	.1
1				0335	44	30.	8.4	2.1	*	1			0335	144	3.6	.9	*	1			2015	244	1.	.3	.1
1				0340	45	46.	14.1	2.8	*	1			0340	145	3.6	.9	*	1			2020	245	1.	.3	.1
1				0345	46	66.	20.1	3.5	*	1			0345	146	3.5	.9	*	1			2025	246	1.	.3	.1
1				0350	47	81.	23.2	4.1	*	1			0350	147	3.4	.9	*	1			2030	247	1.	.3	.1
1				0355	48	87.	26.9	4.6	*	1			0355	148	3.3	.8	*	1			2035	248	1.	.3	.1
1				0400	49	94.	31.0	4.8	*	1			0400	149	3.2	.8	*	1			2040	249	1.	.3	.1
1				0405	50	92.	31.8	4.9	*	1			0405	150	3.1	.8	*	1			2045	250	1.	.3	.1
1				0410	51	92.	31.6	4.9	*	1			0410	151	3.1	.8	*	1			2050	251	1.	.3	.1
1				0415	52	91.	30.9	4.8	*	1			0415	152	3.0	.8	*	1			2055	252	1.	.3	.1
1				0420	53	90.	30.3	4.7	*	1			0420	153	2.9	.7	*	1			2100	253	1.	.3	.1
1				0425	54	89.	29.7	4.7	*	1			0425	154	2.9	.7	*	1			2105	254	1.	.2	.1
1				0430	55	88.	29.1	4.6	*	1			0430	155	2.8	.7	*	1			2110	255	1.	.2	.1
1				0435	56	87.	28.5	4.5	*	1			0435	156	2.7	.7	*	1			2115	256	1.	.2	.1
1				0440	57	86.	27.9	4.4	*	1			0440	157	2.6	.7	*	1			2120	257	1.	.2	.1
1				0445	58	85.	27.3	4.4	*	1			0445	158	2.6	.7	*	1			2125	258	1.	.2	.1
1				0450	59	84.	26.7	4.3	*	1			0450	159	2.5	.6	*	1			2130	259	1.	.2	.1
1				0455	60	83.	26.2	4.2	*	1			0455	160	2.5	.6	*	1			2135	260	1.	.2	.1
1				0500	61	82.	25.6	4.2	*	1			0500	161	2.4	.6	*	1			2140	261	1.	.2	.1
1				0505	62	81.	25.0	4.1	*	1			0505	162	2.3	.6	*	1			2145	262	1.	.2	.1
1				0510	63	80.	24.5	4.1	*	1			0510	163	2.3	.6	*	1			2150	263	1.	.2	.1
1				0515	64	79.	23.9	4.0	*	1			0515	164	2.2	.6	*	1			2155	264	1.	.2	.0
1				0520	65	77.	23.4	3.9	*	1			0520	165	2.2	.6	*	1			2200	265	1.	.2	.0
1				0525	66	75.	22.9	3.9	*	1			0525	166	2.1	.5	*	1			2205	266	1.	.2	.0
1				0530	67	73.	22.4	3.8	*	1			0530	167	2.1	.5	*	1			2210	267	1.	.2	.0
1				0535	68	72.	21.9	3.7	*	1			0535	168	2.0	.5	*	1			2215	268	1.	.2	.0
1				0540	69	70.	21.4	3.7	*	1			0540	169	2.0	.5	*	1			2220	269	1.	.2	.0
1				0545	70	69.	20.9	3.6	*	1			0545	170	2.0	.5	*	1			2225	270	1.	.2	.0
1				0550	71	67.	20.4	3.6	*	1			0550	171	2.0	.5	*	1			2230	271	1.	.2	.0
1				0555	72	65.	20.0	3.5	*	1			0555	172	2.0	.5	*	1			2235	272	1.	.2	.0
1				0600	73	64.	19.5	3.5	*	1			0600	173	1.9	.5	*	1			2240	273	1.	.2	.0
1				0605	74	62.	19.1	3.4	*	1			0605	174	1.8	.4	*	1			2245	274	1.	.2	.0
1				0610	75	61.	18.7	3.4	*	1			0610	175	1.7	.4</									

總體而言，本國與外國之利率差，在 2008 年 12 月 31 日以前，均為正數，且其數值在 2008 年 12 月 31 日以前，均為 2.33 個百分點。

1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63																																					

[illegible]

1	0015	4	0.	.0	.0	1	0815	104	32.	9.3	2.2	1	1655	204	3.	.8	.3
1	0020	5	0.	.0	.0	1	0840	105	32.	9.1	2.2	1	1700	205	3.	.8	.3
1	0025	6	0.	.0	.0	1	0845	106	31.	8.9	2.1	1	1705	206	3.	.8	.3
1	0030	7	0.	.0	.0	1	0850	107	30.	8.7	2.1	1	1710	207	3.	.8	.3
1	0035	8	0.	.0	.0	1	0855	108	30.	8.5	2.1	1	1715	208	3.	.7	.3
1	0040	9	0.	.0	.0	1	0900	109	29.	8.3	2.1	1	1720	209	3.	.7	.3
1	0045	10	0.	.0	.0	1	0905	110	29.	8.1	2.0	1	1725	210	2.	.7	.3
1	0050	11	0.	.0	.0	1	0910	111	28.	7.9	2.0	1	1730	211	2.	.7	.3
1	0055	12	0.	.0	.0	1	0915	112	27.	7.7	2.0	1	1735	212	2.	.7	.3
1	0100	13	0.	.0	.0	1	0920	113	27.	7.5	1.9	1	1740	213	2.	.6	.3
1	0105	14	0.	.0	.0	1	0925	114	26.	7.3	1.9	1	1745	214	2.	.6	.3
1	0110	15	0.	.0	.0	1	0930	115	25.	7.2	1.8	1	1750	215	2.	.6	.3
1	0115	16	0.	.0	.0	1	0935	116	25.	7.0	1.8	1	1755	216	2.	.6	.3
1	0120	17	0.	.0	.0	1	0940	117	24.	6.8	1.7	1	1800	217	2.	.6	.3
1	0125	18	0.	.0	.0	1	0945	118	24.	6.6	1.7	1	1805	218	2.	.6	.3
1	0130	19	0.	.0	.0	1	0950	119	23.	6.5	1.6	1	1810	219	2.	.6	.3
1	0135	20	0.	.0	.0	1	0955	120	23.	6.3	1.6	1	1815	220	2.	.5	.3
1	0140	21	0.	.0	.0	1	1000	121	22.	6.2	1.6	1	1820	221	2.	.5	.3
1	0145	22	0.	.0	.0	1	1005	122	21.	6.0	1.5	1	1825	222	2.	.5	.3
1	0150	23	0.	.0	.0	1	1010	123	21.	5.9	1.5	1	1830	223	2.	.5	.3
1	0155	24	0.	.0	.0	1	1015	124	20.	5.7	1.5	1	1835	224	2.	.5	.3
1	0200	25	0.	.0	.0	1	1020	125	20.	5.6	1.4	1	1840	225	2.	.5	.3
1	0205	26	0.	.0	.0	1	1025	126	19.	5.5	1.4	1	1845	226	2.	.5	.3
1	0210	27	0.	.0	.0	1	1030	127	19.	5.3	1.4	1	1850	227	2.	.5	.3
1	0215	28	0.	.0	.0	1	1035	128	19.	5.2	1.3	1	1855	228	2.	.4	.3
1	0220	29	0.	.0	.0	1	1040	129	18.	5.1	1.3	1	1900	229	2.	.4	.3
1	0225	30	0.	.0	.0	1	1045	130	18.	5.0	1.3	1	1905	230	2.	.4	.3
1	0230	31	0.	.0	.0	1	1050	131	17.	4.8	1.2	1	1910	231	1.	.4	.3
1	0235	32	0.	.0	.0	1	1055	132	17.	4.7	1.2	1	1915	232	1.	.4	.3
1	0240	33	0.	.0	.0	1	1100	133	16.	4.6	1.2	1	1920	233	1.	.4	.3
1	0245	34	0.	.0	.0	1	1105	134	16.	4.5	1.1	1	1925	234	1.	.4	.3
1	0250	35	0.	.0	.0	1	1110	135	16.	4.4	1.1	1	1930	235	1.	.4	.3
1	0255	36	0.	.0	.0	1	1115	136	15.	4.3	1.1	1	1935	236	1.	.4	.3
1	0300	37	0.	.0	.0	1	1120	137	15.	4.2	1.1	1	1940	237	1.	.4	.3
1	0305	38	0.	.0	.0	1	1125	138	14.	4.1	1.0	1	1945	238	1.	.4	.3
1	0310	39	0.	.0	.0	1	1130	139	14.	4.0	1.0	1	1950	239	1.	.3	.3
1	0315	40	0.	.0	.0	1	1135	140	14.	3.9	1.0	1	1955	240	1.	.3	.3
1	0320	41	0.	.0	.0	1	1140	141	13.	3.8	1.0	1	2000	241	1.	.3	.3
1	0325	42	0.	.0	.0	1	1145	142	13.	3.7	.9	1	2005	242	1.	.3	.3
1	0330	43	12.	3.2	.8	1	1150	143	13.	3.6	.9	1	2010	243	1.	.3	.3
1	0335	44	29.	8.1	2.0	1	1155	144	13.	3.5	.9	1	2015	244	1.	.3	.3
1	0340	45	45.	13.7	2.8	1	1200	145	12.	3.4	.9	1	2020	245	1.	.3	.3
1	0345	46	64.	19.5	3.5	1	1205	146	12.	3.3	.9	1	2025	246	1.	.3	.3
1	0350	47	80.	24.6	4.1	1	1210	147	12.	3.2	.8	1	2030	247	1.	.3	.3
1	0355	48	86.	26.1	4.5	1	1215	148	11.	3.2	.8	1	2035	248	1.	.3	.3
1	0400	49	90.	30.2	4.7	1	1220	149	11.	3.1	.8	1	2040	249	1.	.3	.3
1	0405	50	91.	30.9	4.8	1	1225	150	11.	3.0	.8	1	2045	250	1.	.3	.3
1	0410	51	90.	30.7	4.8	1	1230	151	11.	3.0	.8	1	2050	251	1.	.3	.3
1	0415	52	89.	30.0	4.7	1	1235	152	10.	2.9	.7	1	2055	252	1.	.3	.3
1	0420	53	88.	29.4	4.5	1	1240	153	10.	2.8	.7	1	2100	253	1.	.3	.3
1	0425	54	87.	28.8	4.6	1	1245	154	10.	2.8	.7	1	2105	254	1.	.3	.3
1	0430	55	86.	28.2	4.5	1	1250	155	10.	2.7	.7	1	2110	255	1.	.3	.3
1	0435	56	85.	27.6	4.4	1	1255	156	9.	2.6	.7	1	2115	256	1.	.3	.3
1	0440	57	84.	27.1	4.4	1	1300	157	9.	2.6	.6	1	2120	257	1.	.3	.3
1	0445	58	83.	26.5	4.3	1	1305	158	9.	2.5	.6	1	2125	258	1.	.3	.3
1	0450	59	82.	25.9	4.2	1	1310	159	9.	2.4	.6	1	2130	259	1.	.3	.3
1	0455	60	81.	25.3	4.2	1	1315	160	8.	2.4	.6	1	2135	260	1.	.3	.3
1	0500	61	80.	24.8	4.1	1	1320	161	8.	2.3	.6	1	2140	261	1.	.3	.3
1	0505	62	79.	24.2	4.0	1	1325	162	8.	2.3	.6	1	2145	262	1.	.3	.3
1	0510	63	78.	23.7	4.0	1	1330	163	8.	2.2	.6	1	2150	263	1.	.3	.3
1	0515	64	76.	23.2	3.9	1	1335	164	8.	2.2	.5	1	2155	264	1.	.3	.3
1	0520	65	74.	22.6	3.8	1	1340	165	7.	2.1	.5	1	2200	265	1.	.3	.3
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17175 12921
17180 12931
17185 12941
17190 12951
17195 12961
17200 12971
17205 12981
17210 12991
17215 13001
17220 13011
17225 13021
17230 13031
17235 13041
17240 13051
17245 13061
17250 13071
17
```

375 KH

DETE

377 KO

OUTPUT CONTROL VARIABLES

IPRINT 1 PRINT CONTROL
IPLOT 2 PLOT CONTROL
OSCAL 3 HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

378 RS

STORAGE ROUTING

NRPTS 1 NUMBER OF SUBREACHES
ITYP STORE TYPE OF INITIAL CONDITION
REVRIC -1.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

379 SV

STORAGE

.0 10.2 18.1 26.3 34.7 43.4 52.4 62.0

380 SE

ELEVATION

.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00

381 SD

DISCHARGE

0. 56. 88. 121. 170. 180. 200. 220.

HYDROGRAPH AT STATION DETE PLAN 1, RATIO = .33

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0020	101	64.	12.2	2.2	* 1	1640	201	2.	.3	.1			
1	0005	2	0.	.0	.0	* 1	0025	102	62.	11.8	2.2	* 1	1645	202	1.	.3	.1			
1	0010	3	0.	.0	.0	* 1	0030	103	60.	11.3	2.1	* 1	1650	203	1.	.3	.1			
1	0015	4	0.	.0	.0	* 1	0035	104	59.	10.9	2.1	* 1	1655	204	1.	.3	.0			
1	0020	5	0.	.0	.0	* 1	0040	105	57.	10.5	2.0	* 1	1700	205	1.	.3	.0			
1	0025	6	0.	.0	.0	* 1	0045	106	55.	10.1	2.0	* 1	1705	206	1.	.2	.0			
1	0030	7	0.	.0	.0	* 1	0050	107	53.	9.8	1.9	* 1	1710	207	1.	.2	.0			
1	0035	8	0.	.0	.0	* 1	0055	108	51.	9.4	1.8	* 1	1715	208	1.	.2	.0			
1	0040	9	0.	.0	.0	* 1	0050	109	50.	9.1	1.8	* 1	1720	209	1.	.2	.0			
1	0045	10	0.	.0	.0	* 1	0055	110	48.	8.7	1.7	* 1	1725	210	1.	.2	.0			
1	0050	11	0.	.0	.0	* 1	0100	111	46.	8.4	1.6	* 1	1730	211	1.	.2	.0			
1	0055	12	0.	.0	.0	* 1	0105	112	44.	8.1	1.6	* 1	1735	212	1.	.2	.0			
1	0100	13	0.	.0	.0	* 1	0110	113	43.	7.8	1.5	* 1	1740	213	1.	.2	.0			
1	0105	14	0.	.0	.0	* 1	0115	114	41.	7.5	1.5	* 1	1745	214	1.	.2	.0			
1	0110	15	0.	.0	.0	* 1	0120	115	40.	7.2	1.4	* 1	1750	215	1.	.2	.0			
1	0115	16	0.	.0	.0	* 1	0125	116	38.	7.0	1.4	* 1	1755	216	1.	.2	.0			
1	0120	17	0.	.0	.0	* 1	0130	117	37.	6.7	1.3	* 1	1800	217	1.	.2	.0			
1	0125	18	0.	.0	.0	* 1	0135	118	35.	6.4	1.3	* 1	1805	218	1.	.1	.0			
1	0130	19	0.	.0	.0	* 1	0140	119	34.	6.2	1.2	* 1	1810	219	1.	.1	.0			
1	0135	20	0.	.0	.0	* 1	0145	120	33.	6.0	1.2	* 1	1815	220	1.	.1	.0			
1	0140	21	0.	.0	.0	* 1	0150	121	32.	5.9	1.1	* 1	1820	221	1.	.1	.0			
1	0145	22	0.	.0	.0	* 1	0155	122	30.	5.6	1.1	* 1	1825	222	1.	.1	.0			
1	0150	23	0.	.0	.0	* 1	0200	123	29.	5.3	1.0	* 1	1830	223	1.	.1	.0			
1	0155	24	0.	.0	.0	* 1	0205	124	28.	5.1	1.0	* 1	1835	224	1.	.1	.0			
1	0200	25	0.	.0	.0	* 1	0210	125	27.	5.0	1.0	* 1	1840	225	1.	.1	.0			
1	0205	26	0.	.0	.0	* 1	0215	126	26.	4.8	.9	* 1	1845	226	1.	.1	.0			
1	0210	27	0.	.0	.0	* 1	0220	127	25.	4.6	.9	* 1	1850	227	1.	.1	.0			
1	0215	28	0.	.0	.0	* 1	0225	128	24.	4.4	.9	* 1	1855	228	1.	.1	.0			
1	0220	29	0.	.0	.0	* 1	0230	129	23.	4.3	.8	* 1	1900	229	1.	.1	.0			
1	0225	30	0.	.0	.0	* 1	0235	130	22.	4.1	.8	* 1	1905	230	1.	.1	.0			
1	0230	31	0.	.0	.0	* 1	0240	131	22.	3.9	.8	* 1	1910	231	0.	.1	.0			
1	0235	32	0.	.0	.0	* 1	0245	132	21.	3.8	.7	* 1	1915	232	0.	.1	.0			
1	0240	33	0.	.0	.0	* 1	0250	133	20.	3.7	.7	* 1	1920	233	0.	.1	.0			
1	0245	34	0.	.0	.0	* 1	0255	134	19.	3.5	.7	* 1	1925	234	0.	.1	.0			
1	0250	35	0.	.0	.0	* 1	0300	135	19.	3.4	.7	* 1	1930	235	0.	.1	.0			
1	0255	36	0.	.0	.0	* 1	0305	136	18.	3.3	.6	* 1	1935	236	0.	.1	.0			
1	0300	37	0.	.0	.0	* 1	0310	137	17.	3.2	.6	* 1	1940	237	0.	.1	.0			
1	0305	38	0.	.0	.0	* 1	0315	138	17.	3.0	.6	* 1	1945	238	0.	.1	.0			
1	0310	39	0.	.0	.0	* 1	0320	139	16.	2.9	.6	* 1	1950	239	0.	.1	.0			
1	0315	40	0.	.0	.0	* 1	0325	140	15.	2.8	.5	* 1	1955	240	0.	.1	.0			
1	0320	41	1.	.3	.3	* 1	0330	141	15.	2.7	.5	* 1	2000	241	0.	.1	.0			
1	0325	42	21.	3.9	.8	* 1	0335	142	14.	2.6	.5	* 1	2005	242	0.	.1	.0			
1	0330	43	70.	13.6	2.4	* 1	0340	143	14.	2.5	.5	* 1	2010	243	0.	.1	.0			
1	0335	44	126.	27.2	4.1	* 1	0345	144	13.	2.4	.5	* 1	2015	244	0.	.1	.0			
1	0340	45	176.	40.2	5.6	* 1	0350	145	13.	2.3	.5	* 1	2020	245	0.	.1	.0			
1	0345	46	195.	50.0	6.7	* 1	0355	146	12.	2.2	.4	* 1	2025	246	0.	.1	.0			
1	0350	47	208.	56.3	7.4	* 1	0400	147	12.	2.2	.4	* 1	2030	247	0.	.0	.0			
1	0355	48	215.	59.5	7.7	* 1	0405	148	11.	2.1	.4	* 1	2035	248	0.	.0	.0			
1	0400	49	217.	60.4	7.8	* 1	0410	149	11.	2.0	.4	* 1	2040	249	0.	.0	.0			
1	0405	50	218.	60.1	7.8	* 1	0415	150	11.	1.9	.4	* 1	2045	250	0.	.0	.0			
1	0410	51	214.	58.9	7.7	* 1	0420	151	10.	1.9	.4	* 1	2050	251	0.	.0	.0			
1	0415	52	210.	57.4	7.5	* 1	0425	152	10.	1.8	.3	* 1	2055	252	0.	.0	.0			
1	0420	53	207.	56.0	7.4	* 1	0430	153	9.	1.7	.3	* 1	2100	253	0.	.0	.0			
1	0425	54	205.	54.6	7.3	* 1	0435	154	9.	1.7	.3	* 1	2105	254	0.	.0	.0			
1	0430	55	202.	53.2	7.1	* 1	0440	155	9.	1.6	.3	* 1	2110	255	0.	.0	.0			
1	0435	56	199.	51.8	6.9	* 1	0445	156	8.	1.5	.3	* 1	2115	256	0.	.0	.0			
1	0440	57	196.	50.4	6.8	* 1	0450	157	8.	1.5	.3	* 1	2120	257	0.	.0	.0			
1	0445	58	193.	49.1	6.6	* 1	0455	158	8.	1.4	.3	* 1	2125	258	0.	.0	.0			
1	0450	59	190.	47.8	6.5	* 1	0500	159	8.	1.4	.3	* 1	2130	259	0.	.0	.0			
1	0455	60	187.	46.5	6.3	* 1	0505	160	7.	1.3	.3	* 1	2135	260	0.	.0	.0			
1	0500	61	184.	45.2	6.2	* 1	0510	161	7.	1.3	.2	* 1	2140	261	0.	.0	.0			
1	0505	62	181.	43.9	6.1	* 1	0515	162	7.	1.2	.2	* 1	2145	262	0.	.0	.0			
1	0510	63	179.	42.7	5.9	* 1	0520	163	6.	1.2	.2	* 1	2150	263	0.	.0	.0			
1	0515	64	178.	41.5	5.8	* 1	0525	164	6.	1.1	.2	* 1	2155	264	0.	.0	.0			
1	0520	65	175.	40.3	5.6	* 1	0530	165	6.	1.1	.2	* 1	2200	265	0.	.0	.0			
1	0525	66	173.	39.0	5.5	* 1	0535	166	6.	1.1	.2	* 1	2205	266	0.	.0	.0			
1	0530	67	174.	37.8	5.4	* 1	0540	167	6.	1.0	.2	* 1	2210	267	0.	.0	.0			
1	0535	68	172.	36.7	5.2	* 1	0545	168	5.	1.0	.2	* 1	2215	268	0.	.0	.0			
1	0540	69	171.	35.5	5.1	* 1	0550	169	5.	.9	.2	* 1	2220	269	0.	.0	.0			
1	0545	70	168.	34.3	5.0	* 1	0555	170	5.	.9	.2	* 1	2225	270	0.	.0	.0			
1	0550	71	163.	33.2	4.8	* 1	0600	171	5.	.9	.2	* 1	2230	271	0.	.0	.0			
1	0555	72	159.	32.1	4.7	* 1	0605	172	5.	.8	.2	* 1	2235	272	0.	.0	.0			
1	0600	73	149.	31.0	4.6	* 1	0610	173	4.	.8	.2	* 1	2240	273	0.	.0	.0			

[illegible]

[illegible]

PEAK FLOW	TIME	5-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24, 72-HR
(CFS)	(HR)					
221.	4.00	119.	33.	32.	32.	
		(INCHES)	.233	.260	.260	.260
		(AC-FT)	59.	66.	66.	66.
PEAK STORAGE	TIME	5-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24, 72-HR
(AC-FT)	(HR)					
99.	4.00	27.	7.	7.	7.	
PEAK STAGE	TIME	5-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24, 72-HR
(FEET)	(HR)					
7.54	4.00	4.01	1.13	1.09	1.09	
CUMULATIVE AREA =			4.77	SQ MI		

Figure 1. The effect of the concentration of the inhibitor on the rate of polymerization of α -methylstyrene in the presence of SnCl_4 at 25°C .

100

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the active ingredient. The subjects were then subjected to a 10-day period of physical activity, followed by a 10-day period of rest. The subjects were then subjected to a 10-day period of physical activity, followed by a 10-day period of rest. The subjects were then subjected to a 10-day period of physical activity, followed by a 10-day period of rest.

[illegible]

[illegible]

11500	1811	11501	1812	11502	1813	11503	1814	11504	1815	11505	1816	11506	1817	11507	1818	11508	1819	11509	1820	11510	1821	11511	1822	11512	1823	11513	1824	11514	1825	11515	1826	11516	1827	11517	1828	11518	1829	11519	1830	11520	1831	11521	1832	11522	1833	11523	1834	11524	1835	11525	1836	11526	1837	11527	1838	11528	1839	11529	1840	11530	1841	11531	1842	11532	1843	11533	1844	11534	1845	11535	1846	11536	1847	11537	1848	11538	1849	11539	1850	11540	1851	11541	1852	11542	1853	11543	1854	11544	1855	11545	1856	11546	1857	11547	1858	11548	1859	11549	1860	11550	1861	11551	1862	11552	1863	11553	1864	11554	1865	11555	1866	11556	1867	11557	1868	11558	1869	11559	1870	11560	1871	11561	1872	11562	1873	11563	1874	11564	1875	11565	1876	11566	1877	11567	1878	11568	1879	11569	1880	11570	1881	11571	1882	11572	1883	11573	1884	11574	1885	11575	1886	11576	1887	11577	1888	11578	1889	11579	1890	11580	1891	11581	1892	11582	1893	11583	1894	11584	1895	11585	1896	11586	1897	11587	1898	11588	1899	11589	1900	11590	1901	11591	1902	11592	1903	11593	1904	11594	1905	11595	1906	11596	1907	11597	1908	11598	1909	11599	1910	11600	1911	11601	1912	11602	1913	11603	1914	11604	1915	11605	1916	11606	1917	11607	1918	11608	1919	11609	1920	11610	1921	11611	1922	11612	1923	11613	1924	11614	1925	11615	1926	11616	1927	11617	1928	11618	1929	11619	1930	11620	1931	11621	1932	11622	1933	11623	1934	11624	1935	11625	1936	11626	1937	11627	1938	11628	1939	11629	1940	11630	1941	11631	1942	11632	1943	11633	1944	11634	1945	11635	1946	11636	1947	11637	1948	11638	1949	11639	1950	11640	1951	11641	1952	11642	1953	11643	1954	11644	1955	11645	1956	11646	1957	11647	1958	11648	1959	11649	1960	11650	1961	11651	1962	11652	1963	11653	1964	11654	1965	11655	1966	11656	1967	11657	1968	11658	1969	11659	1970	11660	1971	11661	1972	11662	1973	11663	1974	11664	1975	11665	1976	11666	1977	11667	1978	11668	1979	11669	1980	11670	1981	11671	1982	11672	1983	11673	1984	11674	1985	11675	1986	11676	1987	11677	1988	11678	1989	11679	1990	11680	1991	11681	1992	11682	1993	11683	1994	11684	1995	11685	1996	11686	1997	11687	1998	11688	1999	11689	19000	19001	19002	19003	19004	19005	19006	19007	19008	19009	19010	19011	19012	19013	19014	19015	19016	19017	19018	19019	19020	19021	19022	19023	19024	19025	19026	19027	19028	19029	19030	19031	19032	19033	19034	19035	19036	19037	19038	19039	19040	19041	19042	19043	19044	19045	19046	19047	19048	19049	19050	19051	19052	19053	19054	19055	19056	19057	19058	19059	19060	19061	19062	19063	19064	19065	19066	19067	19068	19069	19070	19071	19072	19073	19074	19075	19076	19077	19078	19079	19080	19081	19082	19083	19084	19085	19086	19087	19088	19089	19090	19091	19092	19093	19094	19095	19096	19097	19098	19099	19100	19101	19102	19103	19104	19105	19106	19107	19108	19109	19110	19111	19112	19113	19114	19115	19116	19117	19118	19119	19120	19121	19122	19123	19124	19125	19126	19127	19128	19129	19130	19131	19132	19133	19134	19135	19136	19137	19138	19139	19140	19141	19142	19143	19144	19145	19146	19147	19148	19149	19150	19151	19152	19153	19154	19155	19156	19157	19158	19159	19160	19161	19162	19163	19164	19165	19166	19167	19168	19169	19170	19171	19172	19173	19174	19175	19176	19177	19178	19179	19180	19181	19182	19183	19184	19185	19186	19187	19188	19189	19190	19191	19192	19193	19194	19195	19196	19197	19198	19199	19200	19201	19202	19203	19204	19205	19206	19207	19208	19209	19210	19211	19212	19213	19214	19215	19216	19217	19218	19219	19220	19221	19222	19223	19224	19225	19226	19227	19228	19229	19230	19231	19232	19233	19234	19235	19236	19237	19238	19239	19240	19241	19242	19243	19244	19245	19246	19247	19248	19249	19250	19251	19252	19253	19254	19255	19256	19257	19258	19259	19260	19261	19262	19263	19264	19265	19266	19267	19268	19269	19270	19271	19272	19273	19274	19275	19276	19277	19278	19279	19280	19281	19282	19283	19284	19285	19286	19287	19288	19289	19290	19291	19292	19293	19294	19295	19296	19297	19298	19299	19300	19301	19302	19303	19304	19305	19306	19307	19308	19309	19310	19311	19312	19313	19314	19315	19316	19317	19318	19319	19320	19321	19322	19323	19324	19325	19326	19327	19328	19329	19330	19331	19332	19333	19334	19335	19336	19337	19338	19339	19340	19341	19342	19343	19344	19345	19346	19347	19348	19349	19350	19351	19352	19353	19354	19355	19356	19357	19358	19359	19360	19361	19362	19363	19364	19365	19366	19367	19368	19369	19370	19371	19372	19373	19374	19375	19376	19377	19378	19379	19380	19381	19382	19383	19384	19385	19386	19387	19388	19389	19390	19391	19392	19393	19394	19395	19396	19397	19398	19399	19400	19401	19402	19403	19404	19405	19406	19407	19408	19409	19410	19411	19412	19413	19414	19415	19416	19417	19418	19419	19420	19421	19422	19423	19424	19425	19426	19427	19428	19429	19430	19431	19432	19433	19434	19435	19436	19437	19438	19439	19440	19441	19442	19443	19444	19445	19446	19447	19448	19449	19450	19451	19452	19453	19454	19455	19456	19457	19458	19459	19460	19461	19462	19463	19464	19465	19466	19467	19468	19469	19470	19471	19472	19473	19474	19475	19476	19477	19478	19479	19480	19481	19482	19483	19484	19485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失物

1. 凡在本公司工作之员工，其工资由基本工资、绩效工资、奖金、津贴、补贴、福利费、社会保险费、住房公积金等组成。

[illegible]

[illegible]

[illegible]

HYDROGRAPH AT STATION D872
PLAN 1, RATIO = .93

DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		0820	101	48.	8.8	1.7	1		1640	201	1.	.2	.0
1		0005	2	0.	.0	.0	1		0825	102	46.	8.5	1.7	1		1645	202	1.	.2	.0
1		0010	3	0.	.0	.0	1		0830	103	45.	8.2	1.6	1		1650	203	1.	.2	.0
1		0015	4	0.	.0	.0	1		0835	104	43.	7.9	1.5	1		1655	204	1.	.2	.0
1		0020	5	0.	.0	.0	1		0840	105	41.	7.6	1.5	1		1700	205	1.	.2	.0
1		0025	6	0.	.0	.0	1		0845	106	40.	7.3	1.4	1		1705	206	1.	.2	.0
1		0030	7	0.	.0	.0	1		0850	107	38.	7.0	1.4	1		1710	207	1.	.2	.0
1		0035	8	0.	.0	.0	1		0855	108	37.	6.8	1.3	1		1715	208	1.	.2	.0
1		0040	9	0.	.0	.0	1		0900	109	36.	6.5	1.3	1		1720	209	1.	.2	.0
1		0045	10	0.	.0	.0	1		0905	110	34.	6.3	1.2	1		1725	210	1.	.1	.0
1		0050	11	0.	.0	.0	1		0910	111	33.	6.0	1.2	1		1730	211	1.	.1	.0
1		0055	12	0.	.0	.0	1		0915	112	32.	5.8	1.1	1		1735	212	1.	.1	.0
1		0100	13	0.	.0	.0	1		0920	113	31.	5.6	1.1	1		1740	213	1.	.1	.0
1		0105	14	0.	.0	.0	1		0925	114	30.	5.4	1.1	1		1745	214	1.	.1	.0
1		0110	15	0.	.0	.0	1		0930	115	28.	5.2	1.0	1		1750	215	1.	.1	.0
1		0115	16	0.	.0	.0	1		0935	116	27.	5.0	1.0	1		1755	216	1.	.1	.0
1		0120	17	0.	.0	.0	1		0940	117	26.	4.8	.9	1		1800	217	1.	.1	.0
1		0125	18	0.	.0	.0	1		0945	118	25.	4.6	.9	1		1805	218	1.	.1	.0
1		0130	19	0.	.0	.0	1		0950	119	24.	4.5	.9	1		1810	219	1.	.1	.0
1		0135	20	0.	.0	.0	1		0955	120	24.	4.3	.8	1		1815	220	1.	.1	.0
1		0140	21	0.	.0	.0	1		1000	121	23.	4.1	.8	1		1820	221	1.	.1	.0
1		0145	22	0.	.0	.0	1		1005	122	22.	4.0	.8	1		1825	222	1.	.1	.0
1		0150	23	0.	.0	.0	1		1010	123	21.	3.8	.8	1		1830	223	0.	.1	.0
1		0155	24	0.	.0	.0	1		1015	124	20.	3.7	.7	1		1835	224	0.	.1	.0
1		0200	25	0.	.0	.0	1		1020	125	20.	3.6	.7	1		1840	225	0.	.1	.0
1		0205	26	0.	.0	.0	1		1025	126	19.	3.4	.7	1		1845	226	0.	.1	.0
1		0210	27	0.	.0	.0	1		1030	127	18.	3.3	.6	1		1850	227	0.	.1	.0
1		0215	28	0.	.0	.0	1		1035	128	17.	3.2	.6	1		1855	228	0.	.1	.0
1		0220	29	0.	.0	.0	1		1040	129	17.	3.1	.6	1		1900	229	0.	.1	.0
1		0225	30	0.	.0	.0	1		1045	130	16.	3.0	.6	1		1905	230	0.	.1	.0
1		0230	31	0.	.0	.0	1		1050	131	16.	2.8	.6	1		1910	231	0.	.1	.0
1		0235	32	0.	.0	.0	1		1055	132	15.	2.7	.5	1		1915	232	0.	.1	.0
1		0240	33	0.	.0	.0	1		1100	133	14.	2.6	.5	1		1920	233	0.	.1	.0
1		0245	34	0.	.0	.0	1		1105	134	14.	2.5	.5	1		1925	234	0.	.1	.0
1		0250	35	0.	.0	.0	1		1110	135	13.	2.4	.5	1		1930	235	0.	.1	.0
1		0255	36	0.	.0	.0	1		1115	136	13.	2.4	.5	1		1935	236	0.	.1	.0
1		0300	37	0.	.0	.0	1		1120	137	12.	2.3	.4	1		1940	237	0.	.1	.0
1		0305	38	0.	.0	.0	1		1125	138	12.	2.2	.4	1		1945	238	0.	.1	.0
1		0310	39	0.	.0	.0	1		1130	139	12.	2.1	.4	1		1950	239	0.	.0	.0
1		0315	40	0.	.0	.0	1		1135	140	11.	2.0	.4	1		1955	240	0.	.0	.0
1		0320	41	0.	.0	.0	1		1140	141	11.	1.9	.4	1		2000	241	0.	.0	.0
1		0325	42	13.	3.4	.5	1		1145	142	10.	1.9	.4	1		2005	242	0.	.0	.0
1		0330	43	55.	10.1	2.0	1		1150	143	10.	1.8	.4	1		2010	243	0.	.0	.0
1		0335	44	102.	21.6	3.4	1		1155	144	10.	1.7	.3	1		2015	244	0.	.0	.0
1		0340	45	159.	32.8	4.8	1		1200	145	9.	1.7	.3	1		2020	245	0.	.0	.0
1		0345	46	177.	41.0	5.7	1		1205	146	9.	1.6	.3	1		2025	246	0.	.0	.0
1		0350	47	186.	46.2	6.3	1		1210	147	9.	1.6	.3	1		2030	247	0.	.0	.0
1		0355	48	192.	48.6	6.6	1		1215	148	8.	1.5	.3	1		2035	248	0.	.0	.0
1		0400	49	192.	49.0	6.6	1		1220	149	8.	1.4	.3	1		2040	249	0.	.0	.0
1		0405	50	191.	48.3	6.5	1		1225	150	8.	1.4	.3	1		2045	250	0.	.0	.0
1		0410	51	188.	46.8	6.4	1		1230	151	7.	1.3	.3	1		2050	251	0.	.0	.0
1		0415	52	185.	45.2	6.2	1		1235	152	7.	1.3	.3	1		2055	252	0.	.0	.0
1		0420	53	182.	44.3	6.1	1		1240	153	7.	1.2	.2	1		2100	253	0.	.0	.0
1		0425	54	180.	43.0	6.0	1		1245	154	7.	1.2	.2	1		2105	254	0.	.0	.0
1		0430	55	178.	41.8	5.8	1		1250	155	6.	1.1	.2	1		2110	255	0.	.0	.0
1		0435	56	177.	40.6	5.7	1		1255	156	6.	1.1	.2	1		2115	256	0.	.0	.0
1		0440	57	175.	39.4	5.5	1		1300	157	6.	1.1	.2	1		2120	257	0.	.0	.0
1		0445	58	174.	38.2	5.4	1		1305	158	6.	1.0	.2	1		2125	258	0.	.0	.0
1		0450	59	173.	37.0	5.3	1		1310	159	5.	1.0	.2	1		2130	259	0.	.0	.0
1		0455	60	171.	35.8	5.1	1		1315	160	5.	1.0	.2	1		2135	260	0.	.0	.0
1		0500	61	170.	34.6	5.0	1		1320	161	5.	.9	.2	1		2140	261	0.	.0	.0
1		0505	62	163.	33.5	4.8	1		1325	162	5.	.9	.2	1		2145	262	0.	.0	.0
1		0510	63	156.	32.4	4.7	1		1330	163	5.	.9	.2	1		2150	263	0.	.0	.0
1		0515	64	150.	31.3	4.6	1		1335	164	4.	.8	.2	1		2155	264	0.	.0	.0
1		0520	65	144.	30.2	4.5	1		1340	165	4.	.8	.2	1		2200	265	0.	.0	.0
1		0525	66	139.	29.2	4.4	1		1345	166	4.	.8	.1	1		2205	266	0.	.0	.0
1		0530	67	133.	28.4	4.3	1		1350	167	4.	.7	.1	1		2210	267	0.	.0	.0
1		0535	68	128.	27.3	4.1	1		1355	168	4.	.7	.1	1		2215	268	0.	.0	.0
1		0540	69	123.	26.6	4.0	1		1400	169	4.	.7	.1	1		2220	269	0.	.0	.0
1		0545	70	119.	25.8	3.9	1		1405	170	4.	.7	.1	1		2225	270	0.	.0	.0
1		0550	71	116.	25.0	3.8	1		1410	171	3.	.6	.1	1		2230	271	0.	.0	.0
1		0555	72	113.	24.2	3.7	1		1415	172	3.	.6	.1	1		2235	272	0.	.0	.0
1		0600	73	110.	23.4	3.7	1		1420	173	3.	.6	.1	1		2240	273	0.	.0	.0
1		0605	74	107.	22.7	3.6	1		1425	174	3.	.6	.1	1		2245	274	0.	.0	.0
1		0610	75	104.	22.0	3.5	1		1430	175	3.	.6	.1	1		2250	275	0.	.0	.0
1		0615	76	101.	21.3	3.4	1		1435	176	3.	.5	.1	1		2255	276	0.	.0	.0
1		0620	77	98.	20.6	3.3	1		1440	177	3.	.5	.1	1		2300	277	0.	.0	.0
1		0625	78	95.	19.9	3.2	1		1445	178	3.	.5	.1	1		2305	278	0.	.0	.0
1		0630	79	93.	19.3	3.1	1		1450	179	3.	.5	.1	1		2310	279	0.	.0	.0
1		0635	80	90.	18.6	3.1	1		1455	180	2.	.4	.1	1		2315	280	0.	.0	.0
1		0640	81	88.	18.0	3.0	1		1500	181	2.	.4	.1	1		2320	281	0.	.0	.0
1		0645	82	85.	17.4	2.9	1		1505	182	2.	.4	.1	1		2325	282	0.	.0	.0
1		0650	83	83.	16.9	2.8	1		1510	183	2.	.4	.1	1		2330	283	0.	.0	.0
1		0655	84	81.	16.3	2.8	1		1515	184	2.	.4	.1	1		2335	284	0.	.0	.0

+	132.	4.00	(CFS)	102.	28.	27.	27.
			(INCHES)	.380	.231	.221	.221
			(AC-FT)	51.	56.	56.	56.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE			
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
	48.	4.00	22.	6.	6.	6.	
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE			
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
	6.62	4.00	3.39	.95	.91	.91	
CUMULATIVE AREA +				4.77 SQ MI			

STATION DATA													
DANISH PER	(1) INFLOW, (2) OUTFLOW						(3) STORAGE						
	0.	400.	800.	1200.	1600.	2000.	0.	0.	0.	0.	0.	0.	0.
	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10000	11												
10005	21												
10010	31												
10015	41												
10020	51												
10025	61												
10030	71												
10035	81												
10040	91												
10045	101												
10050	111												
10055	121												
10060	131												
10065	141												
10070	151												
10075	161												
10080	171												
10085	181												
10090	191												
10095	201												
10100	211												
10105	221												
10110	231												
10115	241												
10120	251												
10125	261												
10130	271												
10135	281												
10140	291												
10145	301												
10150	311												
10155	321												
10160	331												
10165	341												
10170	351												
10175	361												
10180	371												
10185	381												
10190	391												
10195	401												
10200	411												
10205	420												
10210	43.0												
10215	44.0												
10220	45.0												
10225	46.0												
10230	47.0												
10235	48.0												
10240	49.0												
10245	501												
10250	511												
10255	521												
10260	531												
10265	541												
10270	551												
10275	561												
10280	571												
10285	581												
10290	591												
10295	601												
10300	611												
10305	621												
10310	631												
10315	641												
10320	651												
10325	661												
10330	671												
10335	681												
10340	691												
10345	701												
10350	711												
10355	721												
10360	731												
10365	741												
10370	751												
10375	761												
10380	771												
10385	781												
10390	791												
10395	801												
10400	811												
10405	821												
10410	831												
10415	841												
10420	851												
10425	861												
10430	871												
10435	881												
10440	891												
10445	901												

[illegible]

1	0020	5	0.	0.	0.	1	0840	105	28.	7.2	1.4	1	1700	205	1.	.3	.0
1	0025	6	0.	0.	0.	1	0845	106	28.	6.9	1.4	1	1705	206	1.	.3	.0
1	0030	7	0.	0.	0.	1	0850	107	27.	6.7	1.3	1	1710	207	1.	.3	.0
1	0035	8	0.	0.	0.	1	0855	108	25.	6.4	1.3	1	1715	208	1.	.1	.0
1	0040	9	0.	0.	0.	1	0900	109	24.	6.2	1.2	1	1720	209	1.	.1	.0
1	0045	10	0.	0.	0.	1	0905	110	23.	6.0	1.2	1	1725	210	1.	.1	.0
1	0050	11	0.	0.	0.	1	0910	111	21.	5.7	1.1	1	1730	211	1.	.1	.0
1	0055	12	0.	0.	0.	1	0915	112	20.	5.5	1.1	1	1735	212	1.	.1	.0
1	0100	13	0.	0.	0.	1	0920	113	20.	5.3	1.0	1	1740	213	2.	.1	.0
1	0105	14	0.	0.	0.	1	0925	114	20.	5.1	1.0	1	1745	214	1.	.1	.0
1	0110	15	0.	0.	0.	1	0930	115	27.	4.9	1.0	1	1750	215	1.	.1	.0
1	0115	16	0.	0.	0.	1	0935	116	26.	4.8	.9	1	1755	216	1.	.1	.0
1	0120	17	0.	0.	0.	1	0940	117	25.	4.6	.9	1	1800	217	1.	.1	.0
1	0125	18	0.	0.	0.	1	0945	118	24.	4.4	.9	1	1805	218	1.	.1	.0
1	0130	19	0.	0.	0.	1	0950	119	23.	4.3	.8	1	1810	219	1.	.1	.0
1	0135	20	0.	0.	0.	1	0955	120	22.	4.1	.8	1	1815	220	1.	.1	.0
1	0140	21	0.	0.	0.	1	1000	121	22.	3.9	.8	1	1820	221	0.	.1	.0
1	0145	22	0.	0.	0.	1	1005	122	21.	3.8	.7	1	1825	222	0.	.1	.0
1	0150	23	0.	0.	0.	1	1010	123	20.	3.7	.7	1	1830	223	0.	.1	.0
1	0155	24	0.	0.	0.	1	1015	124	19.	3.5	.7	1	1835	224	0.	.1	.0
1	0200	25	0.	0.	0.	1	1020	125	19.	3.4	.7	1	1840	225	0.	.1	.0
1	0205	26	0.	0.	0.	1	1025	126	18.	3.3	.6	1	1845	226	0.	.1	.0
1	0210	27	0.	0.	0.	1	1030	127	17.	3.1	.6	1	1850	227	0.	.1	.0
1	0215	28	0.	0.	0.	1	1035	128	17.	3.0	.6	1	1855	228	0.	.1	.0
1	0220	29	0.	0.	0.	1	1040	129	16.	2.9	.6	1	1900	229	0.	.1	.0
1	0225	30	0.	0.	0.	1	1045	130	15.	2.8	.5	1	1905	230	0.	.1	.0
1	0230	31	0.	0.	0.	1	1050	131	15.	2.7	.5	1	1910	231	0.	.1	.0
1	0235	32	0.	0.	0.	1	1055	132	14.	2.6	.5	1	1915	232	0.	.1	.0
1	0240	33	0.	0.	0.	1	1100	133	14.	2.5	.5	1	1920	233	0.	.1	.0
1	0245	34	0.	0.	0.	1	1105	134	13.	2.4	.5	1	1925	234	0.	.1	.0
1	0250	35	0.	0.	0.	1	1110	135	13.	2.3	.5	1	1930	235	0.	.1	.0
1	0255	36	0.	0.	0.	1	1115	136	12.	2.2	.4	1	1935	236	0.	.1	.0
1	0300	37	0.	0.	0.	1	1120	137	12.	2.2	.4	1	1940	237	0.	.0	.0
1	0305	38	0.	0.	0.	1	1125	138	11.	2.1	.4	1	1945	238	0.	.0	.0
1	0310	39	0.	0.	0.	1	1130	139	11.	2.0	.4	1	1950	239	0.	.0	.0
1	0315	40	0.	0.	0.	1	1135	140	11.	1.9	.4	1	1955	240	0.	.0	.0
1	0320	41	0.	0.	0.	1	1140	141	10.	1.9	.4	1	2000	241	0.	.0	.0
1	0325	42	53.	2.3	.4	1	1145	142	10.	1.8	.3	1	2005	242	0.	.0	.0
1	0330	43	51.	2.7	1.9	1	1150	143	9.	1.7	.3	1	2010	243	0.	.0	.0
1	0335	44	99.	20.9	3.3	1	1155	144	9.	1.7	.3	1	2015	244	0.	.0	.0
1	0340	45	152.	21.7	4.6	1	1200	145	9.	1.6	.3	1	2020	245	0.	.0	.0
1	0345	46	176.	39.7	5.6	1	1205	146	8.	1.5	.3	1	2025	246	0.	.0	.0
1	0350	47	183.	44.7	6.1	1	1210	147	8.	1.5	.3	1	2030	247	0.	.0	.0
1	0355	48	188.	47.0	6.4	1	1215	148	8.	1.4	.3	1	2035	248	0.	.0	.0
1	0400	49	189.	47.3	6.4	1	1220	149	8.	1.4	.3	1	2040	249	0.	.0	.0
1	0405	50	187.	46.4	6.3	1	1225	150	7.	1.3	.3	1	2045	250	0.	.0	.0
1	0410	51	184.	45.1	6.2	1	1230	151	7.	1.3	.2	1	2050	251	0.	.0	.0
1	0415	52	181.	43.9	6.1	1	1235	152	7.	1.2	.2	1	2055	252	0.	.0	.0
1	0420	53	179.	42.6	6.0	1	1240	153	6.	1.2	.2	1	2100	253	0.	.0	.0
1	0425	54	178.	41.4	5.8	1	1245	154	6.	1.1	.2	1	2105	254	0.	.0	.0
1	0430	55	176.	40.2	5.6	1	1250	155	6.	1.1	.2	1	2110	255	0.	.0	.0
1	0435	56	175.	39.0	5.5	1	1255	156	6.	1.1	.2	1	2115	256	0.	.0	.0
1	0440	57	174.	37.8	5.4	1	1300	157	6.	1.0	.2	1	2120	257	0.	.0	.0
1	0445	58	172.	36.6	5.2	1	1305	158	5.	1.0	.2	1	2125	258	0.	.0	.0
1	0450	59	171.	35.4	5.1	1	1310	159	5.	.9	.2	1	2130	259	0.	.0	.0
1	0455	60	167.	34.3	4.9	1	1315	160	5.	.9	.2	1	2135	260	0.	.0	.0
1	0500	61	163.	33.1	4.8	1	1320	161	5.	.8	.2	1	2140	261	0.	.0	.0
1	0505	62	154.	32.0	4.7	1	1325	162	5.	.8	.2	1	2145	262	0.	.0	.0
1	0510	63	148.	31.0	4.6	1	1330	163	4.	.8	.2	1	2150	263	0.	.0	.0
1	0515	64	143.	30.0	4.4	1	1335	164	4.	.8	.2	1	2155	264	0.	.0	.0
1	0520	65	137.	29.0	4.3	1	1340	165	4.	.8	.1	1	2200	265	0.	.0	.0
1	0525	66	132.	28.1	4.2	1	1345	166	4.	.7	.1	1	2205	266	0.	.0	.0
1	0530	67	126.	27.2	4.1	1	1350	167	4.	.7	.1	1	2210	267	0.	.0	.0
1	0535	68	121.	26.4	4.0	1	1355	168	4.	.7	.1	1	2215	268	0.	.0	.0
1	0540	69	118.	25.5	3.9	1	1400	169	4.	.6	.1	1	2220	269	0.	.0	.0
1	0545	70	115.	24.7	3.8	1	1405	170	3.	.6	.1	1	2225	270	0.	.0	.0
1	0550	71	112.	24.0	3.7	1	1410	171	3.	.6	.1	1	2230	271	0.	.0	.0
1	0555	72	109.	23.2	3.6	1	1415	172	3.	.6	.1	1	2235	272	0.	.0	.0
1	0600	73	106.	22.5	3.5	1	1420	173	3.	.6	.1	1	2240	273	0.	.0	.0
1	0605	74	103.	21.7	3.4	1	1425	174	3.	.5	.1	1	2245	274	0.	.0	.0
1	0610	75	100.	21.0	3.4	1	1430	175	3.	.5	.1	1	2250	275	0.	.0	.0
1	0615	76	97.	20.4	3.3	1	1435	176	3.	.5	.1	1	2255	276	0.	.0	.0
1	0620	77	94.	19.7	3.2	1	1440	177	3.	.5	.1	1	2300	277	0.	.0	.0
1	0625	78	92.	19.1	3.1	1	1445	178	3.	.5	.1	1	2305	278	0.	.0	.0
1	0630	79	89.	18.4	3.0	1	1450	179	2.	.4	.1	1	2310	279	0.	.0	.0
1	0635	80	87.	17.8	3.0	1	1455	180	2.	.4	.1	1	2315	280	0.	.0	.0
1	0640	81	84.	17.2	2.9	1	1500	181	2.	.4	.1	1	2320	281	0.	.0	.0
1	0645	82	82.	16.7	2.8	1	1505	182	2.	.4	.1	1	2325	282	0.	.0	.0
1	0650	83	80.	16.1	2.7	1	1510	183	2.	.4	.1	1	2330	283	0.	.0	.0
1	0655	84	78.	15.6	2.7	1	1515	184	2.	.4	.1	1	2335	284	0.	.0	.0
1	0700	85	76.	15.0	2.6	1	1520	185	2.	.4	.1	1	2340	285	0.	.0	.0
1	0705	86	73.	14.5	2.5	1	1525	186	2.	.3	.1	1	2345	286	0.	.0	.0
1	0710	87	71.	14.0	2.5	1	1530	187	2.	.3	.1	1	2350	287	0.	.0	.0
1	0715	88	69.	13.5	2.4	1	1535	188	2.	.3	.1	1	2355	288	0.	.0	.0
1	0720	89	68.	13.1	2.4	1	1540	189	2.	.3	.1	2	0000	289	0.	.0	.0
1	0725	90	66.	12.6	2.3	1	1545	190	2.	.3	.1	2	0005	290	0.	.0	.0
1	0730	91	64.	12.2	2.2	1	1550	191	2.	.3	.1	2	0010	291	0.	.0	.0
1	0735	92	62.	11.7	2.2	1	1555	192	1.	.3	.1	2	0015	292	0.	.0	.0
1	0740	93	60.	11.3	2.1	1	1600	193	1.	.3	.1	2	0020	293	0.	.0	.0
1	0745	94	59.	10.9	2.1	1	1605	194	1.	.3	.0	2	0025	294	0.	.0	.0
1	0750	95	57.	10.5	2.0	1	1610	195	1.	.2	.0	2	0030	295	0.	.0	.0
1	0755	96	55.	10.1	2.0	1	1615	196	1.	.2	.0	2	0035	296	0.	.0	.0
1	0800	97	53.	9.7	1.9	1	1620	197	1.	.2	.0	2	0040	297	0.	.0	.0
1	0805																

CHIRALITY DATA = 4.79 50 23

2024

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

Figure 1

[illegible]

[illegible]

1	0115	16	0.	.0	.0	* 1	0935	116	35.	4.6	.9	* 1	1755	216	1.	.1	.0
1	0120	17	0.	.0	.0	* 1	0940	117	34.	4.4	.9	* 1	1800	217	1.	.1	.0
1	0125	18	0.	.0	.0	* 1	0945	118	33.	4.3	.8	* 1	1805	218	1.	.1	.0
1	0130	19	0.	.0	.0	* 1	0950	119	33.	4.1	.8	* 1	1810	219	1.	.1	.0
1	0135	20	0.	.0	.0	* 1	0955	120	32.	4.0	.8	* 1	1815	220	1.	.1	.0
1	0140	21	0.	.0	.0	* 1	1000	121	31.	3.8	.7	* 1	1820	221	0.	.1	.0
1	0145	22	0.	.0	.0	* 1	1005	122	30.	3.7	.7	* 1	1825	222	0.	.1	.0
1	0150	23	0.	.0	.0	* 1	1010	123	29.	3.5	.7	* 1	1830	223	0.	.1	.0
1	0155	24	0.	.0	.0	* 1	1015	124	29.	3.4	.7	* 1	1835	224	0.	.1	.0
1	0200	25	0.	.0	.0	* 1	1020	125	28.	3.3	.6	* 1	1840	225	0.	.1	.0
1	0205	26	0.	.0	.0	* 1	1025	126	27.	3.2	.6	* 1	1845	226	0.	.1	.0
1	0210	27	0.	.0	.0	* 1	1030	127	27.	3.0	.6	* 1	1850	227	0.	.1	.0
1	0215	28	0.	.0	.0	* 1	1035	128	26.	2.9	.6	* 1	1855	228	0.	.1	.0
1	0220	29	0.	.0	.0	* 1	1040	129	25.	2.8	.6	* 1	1900	229	0.	.1	.0
1	0225	30	0.	.0	.0	* 1	1045	130	25.	2.7	.5	* 1	1905	230	0.	.1	.0
1	0230	31	0.	.0	.0	* 1	1050	131	24.	2.6	.5	* 1	1910	231	0.	.1	.0
1	0235	32	0.	.0	.0	* 1	1055	132	24.	2.5	.5	* 1	1915	232	0.	.1	.0
1	0240	33	0.	.0	.0	* 1	1100	133	23.	2.4	.5	* 1	1920	233	0.	.1	.0
1	0245	34	0.	.0	.0	* 1	1105	134	23.	2.3	.5	* 1	1925	234	0.	.1	.0
1	0250	35	0.	.0	.0	* 1	1110	135	22.	2.3	.4	* 1	1930	235	0.	.1	.0
1	0255	36	0.	.0	.0	* 1	1115	136	22.	2.2	.4	* 1	1935	236	0.	.1	.0
1	0300	37	0.	.0	.0	* 1	1120	137	21.	2.1	.4	* 1	1940	237	0.	.0	.0
1	0305	38	0.	.0	.0	* 1	1125	138	21.	2.0	.4	* 1	1945	238	0.	.0	.0
1	0310	39	0.	.0	.0	* 1	1130	139	21.	1.9	.4	* 1	1950	239	0.	.0	.0
1	0315	40	0.	.0	.0	* 1	1135	140	20.	1.9	.4	* 1	1955	240	0.	.0	.0
1	0320	41	0.	.0	.0	* 1	1140	141	20.	1.8	.4	* 1	2000	241	0.	.0	.0
1	0325	42	12.	2.2	.4	* 1	1145	142	9.	1.7	.3	* 1	2005	242	0.	.0	.0
1	0330	43	21.	3.4	1.8	* 1	1150	143	9.	1.7	.3	* 1	2010	243	0.	.0	.0
1	0335	44	97.	30.4	3.3	* 1	1155	144	9.	1.6	.3	* 1	2015	244	0.	.0	.0
1	0340	45	149.	31.0	4.6	* 1	1200	145	8.	1.5	.3	* 1	2020	245	0.	.0	.0
1	0345	46	175.	38.9	5.5	* 1	1205	146	8.	1.5	.3	* 1	2025	246	0.	.0	.0
1	0350	47	181.	43.8	6.0	* 1	1210	147	8.	1.4	.3	* 1	2030	247	0.	.0	.0
1	0355	48	186.	46.0	6.3	* 1	1215	148	8.	1.4	.3	* 1	2035	248	0.	.0	.0
1	0400	49	186.	46.2	6.3	* 1	1220	149	7.	1.3	.3	* 1	2040	249	0.	.0	.0
1	0405	50	184.	45.4	6.2	* 1	1225	150	7.	1.3	.3	* 1	2045	250	0.	.0	.0
1	0410	51	183.	44.1	6.1	* 1	1230	151	7.	1.2	.3	* 1	2050	251	0.	.0	.0
1	0415	52	179.	42.9	5.9	* 1	1235	152	7.	1.2	.3	* 1	2055	252	0.	.0	.0
1	0420	53	178.	41.6	5.8	* 1	1240	153	6.	1.1	.3	* 1	2100	253	0.	.0	.0
1	0425	54	177.	40.4	5.7	* 1	1245	154	6.	1.1	.3	* 1	2105	254	0.	.0	.0
1	0430	55	175.	39.2	5.5	* 1	1250	155	6.	1.1	.3	* 1	2110	255	0.	.0	.0
1	0435	56	174.	38.0	5.4	* 1	1255	156	6.	1.0	.2	* 1	2115	256	0.	.0	.0
1	0440	57	172.	36.8	5.2	* 1	1300	157	5.	1.0	.2	* 1	2120	257	0.	.0	.0
1	0445	58	171.	35.6	5.1	* 1	1305	158	5.	.9	.2	* 1	2125	258	0.	.0	.0
1	0450	59	169.	34.5	5.0	* 1	1310	159	5.	.9	.2	* 1	2130	259	0.	.0	.0
1	0455	60	162.	33.3	4.8	* 1	1315	160	5.	.9	.2	* 1	2135	260	0.	.0	.0
1	0500	61	156.	32.2	4.7	* 1	1320	161	5.	.8	.2	* 1	2140	261	0.	.0	.0
1	0505	62	149.	31.2	4.6	* 1	1325	162	4.	.8	.2	* 1	2145	262	0.	.0	.0
1	0510	63	144.	30.2	4.5	* 1	1330	163	4.	.8	.2	* 1	2150	263	0.	.0	.0
1	0515	64	138.	29.2	4.3	* 1	1335	164	4.	.8	.2	* 1	2155	264	0.	.0	.0
1	0520	65	133.	28.3	4.2	* 1	1340	165	4.	.7	.1	* 1	2200	265	0.	.0	.0
1	0525	66	127.	27.4	4.1	* 1	1345	166	4.	.7	.1	* 1	2205	266	0.	.0	.0
1	0530	67	122.	26.5	4.0	* 1	1350	167	4.	.7	.1	* 1	2210	267	0.	.0	.0
1	0535	68	119.	25.7	3.9	* 1	1355	168	4.	.6	.1	* 1	2215	268	0.	.0	.0
1	0540	69	115.	24.9	3.8	* 1	1400	169	3.	.6	.1	* 1	2220	269	0.	.0	.0
1	0545	70	112.	24.1	3.7	* 1	1405	170	3.	.6	.1	* 1	2225	270	0.	.0	.0
1	0550	71	109.	23.3	3.6	* 1	1410	171	3.	.6	.1	* 1	2230	271	0.	.0	.0
1	0555	72	106.	22.6	3.5	* 1	1415	172	3.	.6	.1	* 1	2235	272	0.	.0	.0
1	0600	73	103.	21.9	3.4	* 1	1420	173	3.	.5	.1	* 1	2240	273	0.	.0	.0
1	0605	74	100.	21.2	3.4	* 1	1425	174	3.	.5	.1	* 1	2245	274	0.	.0	.0
1	0610	75	98.	20.5	3.3	* 1	1430	175	3.	.5	.1	* 1	2250	275	0.	.0	.0
1	0615	76	95.	19.8	3.2	* 1	1435	176	3.	.5	.1	* 1	2255	276	0.	.0	.0
1	0620	77	92.	19.2	3.1	* 1	1440	177	3.	.5	.1	* 1	2300	277	0.	.0	.0
1	0625	78	90.	18.6	3.1	* 1	1445	178	2.	.4	.1	* 1	2305	278	0.	.0	.0
1	0630	79	87.	17.9	3.0	* 1	1450	179	2.	.4	.1	* 1	2310	279	0.	.0	.0
1	0635	80	85.	17.4	2.9	* 1	1455	180	2.	.4	.1	* 1	2315	280	0.	.0	.0
1	0640	81	83.	16.8	2.8	* 1	1500	181	2.	.4	.1	* 1	2320	281	0.	.0	.0
1	0645	82	80.	16.2	2.8	* 1	1505	182	2.	.4	.1	* 1	2325	282	0.	.0	.0
1	0650	83	78.	15.7	2.7	* 1	1510	183	2.	.4	.1	* 1	2330	283	0.	.0	.0
1	0655	84	76.	15.1	2.6	* 1	1515	184	2.	.4	.1	* 1	2335	284	0.	.0	.0
1	0700	85	74.	14.6	2.6	* 1	1520	185	2.	.3	.1	* 1	2340	285	0.	.0	.0
1	0705	86	72.	14.1	2.5	* 1	1525	186	2.	.3	.1	* 1	2345	286	0.	.0	.0
1	0710	87	70.	13.6	2.4	* 1	1530	187	2.	.3	.1	* 1	2350	287	0.	.0	.0
1	0715	88	68.	13.2	2.4	* 1	1535	188	2.	.3	.1	* 1	2355	288	0.	.0	.0
1	0720	89	66.	12.7	2.3	* 1	1540	189	2.	.3	.1	* 2	0000	289	0.	.0	.0
1	0725	90	64.	12.3	2.3	* 1	1545	190	2.	.3	.1	* 2	0005	290	0.	.0	.0
1	0730	91	62.	11.8	2.2	* 1	1550	191	1.	.3	.1	* 2	0010	291	0.	.0	.0
1	0735	92	61.	11.4	2.1	* 1	1555	192	1.	.3	.1	* 2	0015	292	0.	.0	.0
1	0740	93	59.	11.0	2.1	* 1	1600	193	1.	.3	.0	* 2	0020	293	0.	.0	.0
1	0745	94	57.	10.6	2.0	* 1	1605	194	1.	.2	.0	* 2	0025	294	0.	.0	.0
1	0750	95	56.	10.2	2.0	* 1	1610	195	1.	.2	.0	* 2	0030	295	0.	.0	.0
1	0755	96	54.	9.8	1.9	* 1	1615	196	1.	.2	.0	* 2	0035	296	0.	.0	.0
1	0800	97	52.	9.4	1.8	* 1	1620	197	1.	.2	.0	* 2	0040	297	0.	.0	.0
1	0805	98	50.	9.1	1.8	* 1	1625	198	1.	.2	.0	* 2	0045	298	0.	.0	.0
1	0810	99	48.	8.8	1.7	* 1	1630	199	1.	.2	.0	* 2	0050	299	0.	.0	.0
1	0815	100	46.	8.4	1.6	* 1	1635	200	1.	.2	.0	* 2	0055	300	0.	.0	.0

PEAK FLOW		TIME	MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	186.	4.00	97.	27.	26.	26.
			(INCHES)	.209	.209	.209
			(AC-FT)	48.	53.	53.
PEAK STORAGE		TIME	MAXIMUM AVERAGE STORAGE			
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	46.	4.00	21.	6.	5.	5.
PEAK STAGE		TIME	MAXIMUM AVERAGE STAGE			
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	5.31	4.00	3.21	.89	.86	.86
CUMULATIVE AREA = 4.77 SQ MI						
1			STATION		DETS	

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+	OFFD-2	.09	1	FLOW TIME	151. 3.58	148. 3.58	144. 3.58	139. 3.58	137. 3.58	136. 3.58
	HYDROGRAPH AT									
+	OFFD-3	.30	1	FLOW TIME	241. 3.67	236. 3.67	226. 3.67	218. 3.67	210. 3.75	208. 3.75
	HYDROGRAPH AT									
+	OFFD-3A	.03	1	FLOW TIME	61. 3.50	62. 3.50	60. 3.50	58. 3.50	58. 3.50	57. 3.50
	ROUTED TO									
+	ROFFD-3A	.03	1	FLOW TIME	58. 3.67	55. 3.67	53. 3.67	53. 3.67	52. 3.67	52. 3.67
	3 COMBINED AT									
+	CP1	.42	1	FLOW TIME	424. 3.67	414. 3.67	398. 3.67	383. 3.67	376. 3.67	372. 3.67
	HYDROGRAPH AT									
+	OFFD-3A	.02	1	FLOW TIME	40. 3.50	39. 3.50	38. 3.50	37. 3.50	36. 3.50	36. 3.50
	HYDROGRAPH AT									
+	OFFD-1	.47	1	FLOW TIME	798. 3.58	785. 3.58	762. 3.58	740. 3.58	731. 3.58	725. 3.58
	2 COMBINED AT									
+	CP2	.40	1	FLOW TIME	826. 3.58	822. 3.58	798. 3.58	775. 3.58	765. 3.58	759. 3.58
	HYDROGRAPH AT									
+	OFFD-4	.47	1	FLOW TIME	359. 3.83	350. 3.83	335. 3.83	320. 3.83	314. 3.83	309. 3.83
	2 COMBINED AT									
+	CP2B	.97	1	FLOW TIME	1073. 3.58	1052. 3.58	1017. 3.58	983. 3.58	959. 3.58	959. 3.58
	ROUTED TO									
+	RC2B	.97	1	FLOW TIME	1064. 3.75	1043. 3.75	1007. 3.75	961. 3.75	947. 3.75	937. 3.75
	2 COMBINED AT									
+	CP2A	1.39	1	FLOW TIME	1449. 3.75	1419. 3.75	1369. 3.75	1309. 3.75	1289. 3.75	1275. 3.75
	ROUTED TO									
+	RCP2A	1.39	1	FLOW TIME	1428. 3.75	1397. 3.75	1348. 3.75	1288. 3.75	1269. 3.75	1255. 3.75
	HYDROGRAPH AT									
+	OND-25	.08	1	FLOW TIME	119. 3.50	116. 3.50	111. 3.50	106. 3.50	104. 3.50	103. 3.50
	HYDROGRAPH AT									
+	OFFD-25	.07	1	FLOW TIME	106. 3.50	103. 3.50	99. 3.50	96. 3.50	94. 3.50	93. 3.50
	2 COMBINED AT									
+	CP3	.16	1	FLOW TIME	224. 3.50	219. 3.50	210. 3.50	202. 3.50	198. 3.50	196. 3.50
	HYDROGRAPH AT									
+	OND-26	.02	1	FLOW TIME	21. 3.50	20. 3.50	20. 3.50	19. 3.50	18. 3.50	18. 3.50
	HYDROGRAPH AT									
+	OFFD-26	.01	1	FLOW TIME	23. 3.50	23. 3.50	22. 3.50	21. 3.50	21. 3.50	21. 3.50
	2 COMBINED AT									
+	CP4	.03	1	FLOW TIME	44. 3.50	43. 3.50	41. 3.50	40. 3.50	39. 3.50	38. 3.50
	2 COMBINED AT									
+	CP5	.19	1	FLOW TIME	268. 3.50	262. 3.50	262. 3.50	242. 3.50	238. 3.50	235. 3.50
	ROUTED TO									
+	RCP5	.19	1	FLOW TIME	254. 3.50	248. 3.50	239. 3.50	228. 3.50	225. 3.50	221. 3.50
	HYDROGRAPH AT									
+	OND-20	.16	1	FLOW TIME	343. 3.50	337. 3.50	327. 3.50	317. 3.50	313. 3.50	310. 3.50
	HYDROGRAPH AT									
+	OND-21	.09	1	FLOW TIME	160. 3.50	157. 3.50	151. 3.50	146. 3.50	143. 3.50	142. 3.50
	3 COMBINED AT									
+	CP6	.44	1	FLOW TIME	756. 3.50	741. 3.50	716. 3.50	690. 3.50	681. 3.50	673. 3.50
	HYDROGRAPH AT									
+	OND-27	.09	1	FLOW TIME	131. 3.50	128. 3.50	123. 3.50	118. 3.50	116. 3.50	115. 3.50
	HYDROGRAPH AT									
+	OFFD-27A	.07	1	FLOW TIME	104. 3.58	102. 3.58	98. 3.58	95. 3.58	93. 3.58	92. 3.58
	HYDROGRAPH AT									
+	OFFD-27B	.04	1	FLOW TIME	61. 3.50	60. 3.50	58. 3.58	56. 3.58	55. 3.58	54. 3.58
	3 COMBINED AT									
+	CP6	.20	1	FLOW TIME	294. 3.50	287. 3.50	276. 3.50	266. 3.50	261. 3.50	258. 3.50
	ROUTED TO									
+	RCP6	.20	1	FLOW	281. 3.50	274. 3.50	265. 3.50	254. 3.50	251. 3.50	247. 3.50

				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-22	.06	1	FLOW	85.	81.	80.	76.	75.	74.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP7	.26	1	FLOW	352.	353.	345.	328.	320.	317.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO	BCP7	.26	1	FLOW	352.	343.	333.	318.	313.	308.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP8	2.09	1	FLOW	1960.	1920.	1893.	1775.	1780.	1731.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75
DIVERSION TO	DIV1	2.09	1	FLOW	831.	831.	831.	831.	831.	831.
+				TIME	3.42	3.42	3.42	3.42	3.42	3.42
HYDROGRAPH AT	DIV1	2.09	1	FLOW	1129.	1089.	1022.	945.	919.	900.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO	DET1	2.09	1	FLOW	125.	118.	107.	95.	92.	91.
+				TIME	4.08	4.08	4.08	4.08	4.08	4.08
				** PEAK STAGES IN FEET **						
			1	STAGE	5.88	5.68	5.36	5.04	4.90	4.80
				TIME	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	DIV1	.09	1	FLOW	831.	831.	831.	831.	831.	831.
+				TIME	2.42	3.42	3.42	3.42	3.42	3.42
2 COMBINED AT	CP10	2.09	1	FLOW	956.	949.	938.	926.	923.	922.
+				TIME	4.08	4.08	4.08	4.08	4.08	4.08
ROUTED TO	BCP10	2.09	1	FLOW	955.	948.	937.	926.	923.	921.
+				TIME	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	OND-18	.03	1	FLOW	74.	72.	70.	68.	67.	67.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO	BCND-18	.03	1	FLOW	63.	62.	60.	58.	58.	57.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	OND-19	.11	1	FLOW	153.	149.	143.	137.	134.	133.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
3 COMBINED AT	CP11	2.23	1	FLOW	1043.	1027.	1047.	1037.	1034.	1031.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO	BCP11	2.23	1	FLOW	1052.	1046.	1037.	1028.	1024.	1022.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-13	.11	1	FLOW	149.	145.	139.	133.	131.	129.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	OND-14	.19	1	FLOW	212.	204.	197.	188.	185.	182.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP12	2.53	1	FLOW	1391.	1376.	1352.	1329.	1319.	1313.
+				TIME	3.50	3.50	3.58	3.58	3.58	3.58
ROUTED TO	BCP12	2.53	1	FLOW	1389.	1375.	1352.	1328.	1319.	1313.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-12	.01	1	FLOW	51.	50.	49.	48.	48.	48.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP13	2.54	1	FLOW	1407.	1392.	1368.	1344.	1335.	1328.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	BCP13	2.54	1	FLOW	1406.	1391.	1367.	1343.	1333.	1327.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-10	.14	1	FLOW	166.	161.	174.	166.	163.	161.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
2 COMBINED AT	CP14	2.68	1	FLOW	1570.	1550.	1516.	1483.	1471.	1464.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-24	.13	1	FLOW	137.	133.	126.	120.	118.	116.
+				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO	BCND-24	.13	1	FLOW	126.	122.	117.	112.	109.	107.
+				TIME	3.50	3.50	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND-23	.13	1	FLOW	96.	93.	88.	83.	81.	79.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58

2 COMBINED AT	CP15	.26	1	FLOW TIME	222. 3.58	215. 3.58	208. 3.58	194. 3.58	190. 3.58	186. 3.58
ROUTED TO	RCP15	.26	1	FLOW TIME	219. 3.58	213. 3.58	201. 3.58	191. 3.58	186. 3.58	184. 3.58
HYDROGRAPH AT	OND-15	.19	1	FLOW TIME	184. 3.58	179. 3.58	172. 3.58	165. 3.58	162. 3.58	160. 3.58
2 COMBINED AT	CP16	.40	1	FLOW TIME	403. 3.58	393. 3.58	373. 3.58	356. 3.58	348. 3.58	344. 3.58
ROUTED TO	RCP16	.40	1	FLOW TIME	392. 3.58	380. 3.58	362. 3.58	345. 3.58	338. 3.58	332. 3.58
HYDROGRAPH AT	OND-11	.11	1	FLOW TIME	147. 3.58	143. 3.58	137. 3.58	132. 3.58	129. 3.58	128. 3.58
3 COMBINED AT	CP17	3.19	1	FLOW TIME	2079. 3.58	2042. 3.58	1988. 3.58	1937. 3.58	1916. 3.58	1901. 3.58
ROUTED TO	RCP17	3.19	1	FLOW TIME	2070. 3.58	2038. 3.58	1981. 3.58	1930. 3.58	1908. 3.58	1894. 3.58
HYDROGRAPH AT	OND-5	.10	1	FLOW TIME	138. 3.58	135. 3.58	129. 3.58	124. 3.58	121. 3.58	120. 3.58
HYDROGRAPH AT	OND-6	.40	1	FLOW TIME	514. 3.58	522. 3.58	502. 3.58	482. 3.58	475. 3.58	469. 3.58
3 COMBINED AT	CP18	3.70	1	FLOW TIME	2723. 3.58	2676. 3.58	2598. 3.58	2519. 3.58	2487. 3.58	2466. 3.58
HYDROGRAPH AT	OND-17	.20	1	FLOW TIME	213. 3.58	228. 3.58	218. 3.58	209. 3.58	208. 3.58	203. 3.58
ROUTED TO	ROND-17	.20	1	FLOW TIME	225. 3.58	232. 3.58	210. 3.58	203. 3.58	197. 3.58	194. 3.58
HYDROGRAPH AT	OND-8	.24	1	FLOW TIME	216. 3.58	210. 3.58	199. 3.58	189. 3.58	185. 3.58	182. 3.58
2 COMBINED AT	CP19	.44	1	FLOW TIME	441. 3.58	430. 3.58	410. 3.58	392. 3.58	383. 3.58	376. 3.58
ROUTED TO	RCP19	.44	1	FLOW TIME	422. 3.58	411. 3.58	390. 3.58	373. 3.58	365. 3.58	358. 3.58
HYDROGRAPH AT	OND-16	.06	1	FLOW TIME	44. 3.58	43. 3.58	40. 3.58	38. 3.58	37. 3.58	36. 3.58
ROUTED TO	ROND-16	.06	1	FLOW TIME	45. 3.75	43. 3.75	43. 3.75	39. 3.67	38. 3.67	39. 3.67
HYDROGRAPH AT	OND-7	.33	1	FLOW TIME	441. 3.58	431. 3.58	415. 3.58	399. 3.58	392. 3.58	388. 3.58
3 COMBINED AT	CP20	.83	1	FLOW TIME	836. 3.58	849. 3.58	808. 3.58	772. 3.58	757. 3.58	746. 3.58
ROUTED TO	RCP20	.83	1	FLOW TIME	811. 3.58	807. 3.58	768. 3.58	736. 3.58	718. 3.58	715. 3.58
2 COMBINED AT	CP21	4.53	1	FLOW TIME	3554. 3.58	3482. 3.58	3362. 3.58	3255. 3.58	3205. 3.58	3182. 3.58
ROUTED TO	RCP21	4.53	1	FLOW TIME	3528. 3.58	3456. 3.58	3337. 3.58	3229. 3.58	3179. 3.58	3155. 3.58
HYDROGRAPH AT	OND-4	.24	1	FLOW TIME	267. 3.58	280. 3.58	239. 3.58	227. 3.58	233. 3.58	220. 3.58
2 COMBINED AT	CP22	4.77	1	FLOW TIME	3785. 3.58	3706. 3.58	3576. 3.58	3457. 3.58	3402. 3.58	3375. 3.58
DIVERSION TO	DIV2	4.77	1	FLOW TIME	1542. 3.33	1542. 3.33	1542. 3.42	1542. 3.42	1542. 3.42	1542. 3.42
HYDROGRAPH AT	DIV2	4.77	1	FLOW TIME	2243. 3.58	2164. 3.58	2034. 3.58	1915. 3.58	1860. 3.58	1833. 3.58
ROUTED TO	DET2	4.77	1	FLOW TIME	217. 4.00	211. 4.00	202. 4.00	192. 4.00	189. 4.00	186. 4.00

[illegible]

+	DCP26	.00	1	FLOW TIME	125. 3.83	125. 3.83	119. 3.83	114. 3.83	112. 3.83	110. 3.83
ROUTED TO										
+	RDCP26	.00	1	FLOW TIME	137. 4.00	135. 4.00	130. 4.00	124. 4.00	121. 4.00	119. 4.00
+	3 COMBINED AT									
+	CP28	1.00	1	FLOW TIME	665. 3.92	641. 3.92	610. 3.92	577. 3.92	566. 3.92	556. 3.92
HYDROGRAPH AT										
+	SKLMD	.34	1	FLOW TIME	325. 3.75	318. 3.75	305. 3.75	292. 3.75	287. 3.75	284. 3.75
ROUTED TO										
+	RKSLMD	.34	1	FLOW TIME	319. 3.83	309. 3.83	298. 3.83	288. 3.83	280. 3.83	279. 3.83
HYDROGRAPH AT										
+	WKLMD	.29	1	FLOW TIME	245. 3.75	239. 3.75	228. 3.75	218. 3.75	214. 3.75	211. 3.75
+	3 COMBINED AT									
+	CP29	.63	1	FLOW TIME	550. 3.75	547. 3.75	522. 3.75	489. 3.75	482. 3.75	486. 3.75
HYDROGRAPH AT										
+	DCP27	.00	1	FLOW TIME	138. 3.83	138. 3.83	131. 3.83	125. 3.92	123. 3.92	121. 3.92
ROUTED TO										
+	RDCP27	.00	1	FLOW TIME	138. 3.92	137. 3.92	131. 3.92	125. 3.92	123. 3.92	121. 3.92
+	3 COMBINED AT									
+	CP30	.83	1	FLOW TIME	682. 3.83	665. 3.83	637. 3.83	611. 3.83	598. 3.83	591. 3.83
ROUTED TO										
+	RCP30	.63	1	FLOW TIME	679. 3.83	663. 3.83	635. 3.83	608. 3.83	595. 3.83	588. 3.83
HYDROGRAPH AT										
+	CRJMD	.05	1	FLOW TIME	74. 3.58	73. 3.58	70. 3.58	68. 3.58	67. 3.58	66. 3.58
ROUTED TO										
+	RCCRJMD	.05	1	FLOW TIME	70. 3.67	69. 3.67	67. 3.67	65. 3.67	64. 3.67	63. 3.67
+	3 COMBINED AT									
+	CP31	.68	1	FLOW TIME	723. 3.83	706. 3.83	676. 3.83	649. 3.83	635. 3.83	628. 3.83
ROUTED TO										
+	RCP31	.68	1	FLOW TIME	722. 3.83	705. 3.83	674. 3.83	646. 3.83	633. 3.83	625. 3.83
+	3 COMBINED AT									
+	CP32	1.76	1	FLOW TIME	1369. 3.83	1327. 3.83	1263. 3.83	1203. 3.83	1178. 3.83	1161. 3.83
ROUTED TO										
+	RCP32	1.76	1	FLOW TIME	1356. 3.83	1315. 3.83	1251. 3.83	1190. 3.83	1168. 3.92	1149. 3.92
HYDROGRAPH AT										
+	DD	.07	1	FLOW TIME	94. 3.58	92. 3.58	88. 3.58	85. 3.58	83. 3.58	82. 3.58
+	3 COMBINED AT									
+	CP33	1.83	1	FLOW TIME	1402. 3.83	1361. 3.83	1295. 3.83	1233. 3.83	1208. 3.83	1189. 3.83
ROUTED TO										
+	RCP33	1.83	1	FLOW TIME	1398. 3.83	1356. 3.83	1291. 3.83	1228. 3.83	1203. 3.83	1185. 3.83
HYDROGRAPH AT										
+	ED	.03	1	FLOW TIME	39. 3.58	38. 3.58	36. 3.58	35. 3.58	34. 3.58	34. 3.58
+	3 COMBINED AT									
+	CP34	1.86	1	FLOW TIME	1415. 3.83	1373. 3.83	1307. 3.83	1244. 3.83	1218. 3.83	1200. 3.83
ROUTED TO										
+	RCP34	1.86	1	FLOW TIME	1407. 3.83	1364. 3.83	1298. 3.83	1235. 3.83	1210. 3.83	1191. 3.83
HYDROGRAPH AT										
+	FD	.02	1	FLOW TIME	36. 3.50	35. 3.50	34. 3.50	33. 3.50	32. 3.50	32. 3.50
+	3 COMBINED AT									
+	CP35	1.88	1	FLOW TIME	1416. 3.83	1373. 3.83	1307. 3.83	1244. 3.83	1219. 3.83	1199. 3.83
HYDROGRAPH AT										
+	GD	.00	1	FLOW TIME	8. 3.50	8. 3.50	8. 3.50	8. 3.50	7. 3.50	7. 3.50
+	3 COMBINED AT									
+	CP36	1.88	1	FLOW TIME	1418. 3.83	1375. 3.83	1309. 3.83	1246. 3.83	1221. 3.83	1201. 3.83
ROUTED TO										
+	RCP36	1.88	1	FLOW TIME	1410. 3.83	1368. 3.83	1301. 3.83	1238. 3.92	1215. 3.92	1195. 3.92

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNNEE ROUTING
(FLOW IS DIRECT RUSHOFF WITHOUT BASE FLOW)

IDTAQ	ELEMENT	DT (MIN)	PEAK (CFE)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL			
						DT (MIN)	PEAK (CFE)	TIME TO PEAK (MIN)	VOLUME (IN)
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	23.53	232.25	.31	5.00	23.11	235.00	.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3390E+01 EXCESS= .0000E+00 OUTFLOW= .3392E+01 BASIN STORAGE= .1173E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	24.05	238.00	.31	5.00	23.66	240.00	.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2274E+01 EXCESS= .0000E+00 OUTFLOW= .2277E+01 BASIN STORAGE= .1134E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	21.75	238.00	.29	5.00	21.49	240.00	.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2091E+01 EXCESS= .0000E+00 OUTFLOW= .2093E+01 BASIN STORAGE= .1286E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	19.51	238.00	.26	5.00	19.37	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1911E+01 EXCESS= .0000E+00 OUTFLOW= .1913E+01 BASIN STORAGE= .1198E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	18.67	238.00	.25	5.00	18.53	240.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1841E+01 EXCESS= .0000E+00 OUTFLOW= .1843E+01 BASIN STORAGE= .1175E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B	MAHE	1.75	18.06	238.00	.25	5.00	17.93	240.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1791E+01 EXCESS= .0000E+00 OUTFLOW= .1793E+01 BASIN STORAGE= .1134E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.25	56.22	221.00	2.21	5.00	55.98	220.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3661E+01 EXCESS= .0000E+00 OUTFLOW= .3659E+01 BASIN STORAGE= .2810E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.25	55.28	221.00	2.17	5.00	55.01	220.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3593E+01 EXCESS= .0000E+00 OUTFLOW= .3590E+01 BASIN STORAGE= .2810E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.25	53.71	221.00	2.10	5.00	53.39	220.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3479E+01 EXCESS= .0000E+00 OUTFLOW= .3477E+01 BASIN STORAGE= .2776E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.50	53.11	220.50	2.04	5.00	52.72	220.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3376E+01 EXCESS= .0000E+00 OUTFLOW= .3374E+01 BASIN STORAGE= .3495E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.50	52.45	220.50	2.01	5.00	52.06	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3330E+01 EXCESS= .0000E+00 OUTFLOW= .3328E+01 BASIN STORAGE= .3477E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.50	51.99	220.50	1.99	5.00	51.59	220.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3298E+01 EXCESS= .0000E+00 OUTFLOW= .3297E+01 BASIN STORAGE= .3465E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.75	1064.16	225.00	1.81	5.00	1064.16	225.00	1.81
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9340E+02 EXCESS= .0000E+00 OUTFLOW= .9347E+02 BASIN STORAGE= .3800E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.75	1042.74	225.00	1.78	5.00	1042.74	225.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9146E+02 EXCESS= .0000E+00 OUTFLOW= .9152E+02 BASIN STORAGE= .3752E+02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAHE	3.75	1008.24	225.00	1.71	5.00	1007.10	225.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8822E+02 EXCESS= .0000E+00 OUTFLOW= .8828E+02 BASIN STORAGE= .3670E+02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									

RC2B NAME	4.25	968.78	229.50	1.65	5.00	961.10	225.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8499E+02 EXCESS= .0000E+00 OUTFLOW= .9506E+02 BASIN STORAGE= .7661E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RC2B NAME	4.25	955.37	229.50	1.63	5.00	947.05	225.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8371E+02 EXCESS= .0000E+00 OUTFLOW= .8378E+02 BASIN STORAGE= .7627E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RC2B NAME	4.25	945.99	229.50	1.61	5.00	937.25	225.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8281E+02 EXCESS= .0000E+00 OUTFLOW= .8288E+02 BASIN STORAGE= .7603E+02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.03	1443.74	225.11	1.71	5.00	1427.74	225.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1262E+03 EXCESS= .0000E+00 OUTFLOW= .1262E+03 BASIN STORAGE= .2085E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.04	1412.94	225.93	1.67	5.00	1397.45	225.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1235E+03 EXCESS= .0000E+00 OUTFLOW= .1235E+03 BASIN STORAGE= .2324E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.06	1364.45	225.04	1.61	5.00	1347.98	225.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1189E+03 EXCESS= .0000E+00 OUTFLOW= .1189E+03 BASIN STORAGE= .2314E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.08	1301.85	225.83	1.55	5.00	1287.82	225.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1146E+03 EXCESS= .0000E+00 OUTFLOW= .1146E+03 BASIN STORAGE= .2102E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.08	1289.67	226.13	1.52	5.00	1268.93	225.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1128E+03 EXCESS= .0000E+00 OUTFLOW= .1128E+03 BASIN STORAGE= .2130E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP2A NAME	1.09	1271.21	226.82	1.51	5.00	1255.10	225.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1115E+03 EXCESS= .0000E+00 OUTFLOW= .1115E+03 BASIN STORAGE= .2121E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.15	264.38	211.97	1.52	5.00	253.62	210.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1520E+02 EXCESS= .0000E+00 OUTFLOW= .1519E+02 BASIN STORAGE= .1384E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.15	258.82	211.80	1.49	5.00	247.55	210.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1484E+02 EXCESS= .0000E+00 OUTFLOW= .1484E+02 BASIN STORAGE= .1504E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.16	250.29	211.17	1.43	5.00	238.58	210.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1425E+02 EXCESS= .0000E+00 OUTFLOW= .1425E+02 BASIN STORAGE= .1567E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.17	239.08	211.74	1.37	5.00	227.95	210.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1365E+02 EXCESS= .0000E+00 OUTFLOW= .1365E+02 BASIN STORAGE= .1617E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.17	236.04	211.78	1.35	5.00	224.62	210.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1342E+02 EXCESS= .0000E+00 OUTFLOW= .1342E+02 BASIN STORAGE= .1657E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP5 NAME	1.18	232.25	211.78	1.33	5.00	221.32	210.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1325E+02 EXCESS= .0000E+00 OUTFLOW= .1325E+02 BASIN STORAGE= .1618E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP6 NAME	1.28	291.70	212.50	1.61	5.00	281.29	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1737E+02 EXCESS= .0000E+00 OUTFLOW= .1737E+02 BASIN STORAGE= .1787E+03 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCP6 NAME	1.29	285.38	212.17	1.57	5.00	274.45	215.00	1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1697E+02 EXCESS= .0000E+00 OUTFLOW= .1697E+02 BASIN STORAGE= .1588E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.30	274.70	212.51	1.51	5.00	245.00	215.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1631E+02 EXCESS= .0000E+00 OUTFLOW= .1631E+02 BASIN STORAGE= .1631E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.31	264.98	211.60	1.45	5.00	254.09	215.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1565E+02 EXCESS= .0000E+00 OUTFLOW= .1564E+02 BASIN STORAGE= .1599E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.31	259.86	212.29	1.43	5.00	250.84	215.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1519E+02 EXCESS= .0000E+00 OUTFLOW= .1519E+02 BASIN STORAGE= .1588E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.31	256.82	211.47	1.41	5.00	247.50	215.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1520E+02 EXCESS= .0000E+00 OUTFLOW= .1520E+02 BASIN STORAGE= .1721E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.03	356.72	214.24	1.59	5.00	351.85	215.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2162E+02 EXCESS= .0000E+00 OUTFLOW= .2160E+02 BASIN STORAGE= .3327E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.03	348.12	213.29	1.54	5.00	343.43	215.00	1.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2129E+02 EXCESS= .0000E+00 OUTFLOW= .2127E+02 BASIN STORAGE= .3297E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.05	334.99	212.86	1.48	5.00	332.60	215.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2047E+02 EXCESS= .0000E+00 OUTFLOW= .2045E+02 BASIN STORAGE= .3659E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.06	320.86	212.61	1.42	5.00	318.50	215.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1961E+02 EXCESS= .0000E+00 OUTFLOW= .1960E+02 BASIN STORAGE= .3055E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.07	316.60	212.33	1.39	5.00	312.76	215.00	1.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1928E+02 EXCESS= .0000E+00 OUTFLOW= .1927E+02 BASIN STORAGE= .3409E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.08	313.49	212.80	1.38	5.00	308.46	215.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1905E+02 EXCESS= .0000E+00 OUTFLOW= .1903E+02 BASIN STORAGE= .3292E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.87	955.76	245.43	1.71	5.00	955.02	245.00	1.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1900E+02 EXCESS= .0000E+00 OUTFLOW= .1900E+02 BASIN STORAGE= .3683E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.87	948.25	245.13	1.67	5.00	948.14	245.00	1.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1858E+02 EXCESS= .0000E+00 OUTFLOW= .1858E+02 BASIN STORAGE= .3531E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.87	937.14	244.99	1.61	5.00	937.12	245.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1790E+02 EXCESS= .0000E+00 OUTFLOW= .1790E+02 BASIN STORAGE= .3240E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.87	925.93	244.87	1.55	5.00	925.67	245.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1723E+02 EXCESS= .0000E+00 OUTFLOW= .1723E+02 BASIN STORAGE= .3021E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.88	923.15	245.05	1.53	5.00	923.14	245.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1696E+02 EXCESS= .0000E+00 OUTFLOW= .1696E+02 BASIN STORAGE= .3912E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.88	921.61	244.28	1.51	5.00	921.36	245.00	1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1677E+03 EXCESS= .0000E+00 OUTFLOW= .1677E+03 BASIN STORAGE= .3819E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.25	45.89	211.25	2.23	5.00	63.12	210.00	2.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4050E+01 EXCESS= .0000E+00 OUTFLOW= .4046E+01 BASIN STORAGE= .3595E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.25	64.73	211.25	2.19	5.00	63.00	210.00	2.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3975E+01 EXCESS= .0000E+00 OUTFLOW= .3971E+01 BASIN STORAGE= .3466E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.25	62.81	211.25	2.12	5.00	60.14	210.00	2.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3850E+01 EXCESS= .0000E+00 OUTFLOW= .3846E+01 BASIN STORAGE= .3491E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.43	61.92	212.09	2.05	5.00	58.09	210.00	2.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3734E+01 EXCESS= .0000E+00 OUTFLOW= .3730E+01 BASIN STORAGE= .3780E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.43	62.01	212.61	2.02	5.00	57.59	210.00	2.02
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3676E+01 EXCESS= .0000E+00 OUTFLOW= .3672E+01 BASIN STORAGE= .3137E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	3.44	62.07	212.29	2.01	5.00	57.32	210.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3644E+01 EXCESS= .0000E+00 OUTFLOW= .3640E+01 BASIN STORAGE= .5181E+03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1061.35	211.71	1.70	5.00	1052.25	215.00	1.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2020E+03 EXCESS= .0000E+00 OUTFLOW= .2020E+03 BASIN STORAGE= .4776E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1055.57	212.00	1.66	5.00	1046.35	215.00	1.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1975E+03 EXCESS= .0000E+00 OUTFLOW= .1975E+03 BASIN STORAGE= .4582E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1049.89	211.40	1.60	5.00	1037.25	215.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1903E+03 EXCESS= .0000E+00 OUTFLOW= .1903E+03 BASIN STORAGE= .4270E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1036.26	211.90	1.54	5.00	1027.67	215.00	1.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1831E+03 EXCESS= .0000E+00 OUTFLOW= .1831E+03 BASIN STORAGE= .3928E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1032.72	212.09	1.52	5.00	1023.82	215.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1802E+03 EXCESS= .0000E+00 OUTFLOW= .1802E+03 BASIN STORAGE= .3786E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.09	1030.30	212.21	1.50	5.00	1021.62	215.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1782E+03 EXCESS= .0000E+00 OUTFLOW= .1782E+03 BASIN STORAGE= .3692E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.32	1391.57	210.52	1.65	5.00	1389.35	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2225E+03 EXCESS= .0000E+00 OUTFLOW= .2225E+03 BASIN STORAGE= .1529E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.32	1376.84	210.75	1.61	5.00	1375.08	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2175E+03 EXCESS= .0000E+00 OUTFLOW= .2175E+03 BASIN STORAGE= .1468E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.33	1352.24	210.70	1.55	5.00	1351.86	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2094E+03 EXCESS= .0000E+00 OUTFLOW= .2094E+03 BASIN STORAGE= .1369E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.33	1328.55	214.89	1.49	5.00	1328.32	215.00	1.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2011E+03 EXCESS= .0000E+00 OUTFLOW= .2011E+03 BASIN STORAGE= .1239E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI2	MAHE	.33	1319.23	214.94	1.47	5.00	1319.27	215.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1981E+03 EXCESS= .0000E+00 OUTFLOW= .1981E+03 BASIN STORAGE= .1214E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI2	MAHE	.33	1313.11	214.86	1.45	5.00	1312.88	215.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1958E+03 EXCESS= .0000E+00 OUTFLOW= .1958E+03 BASIN STORAGE= .1183E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.46	1405.97	214.70	1.65	5.00	1405.71	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2236E+03 EXCESS= .0000E+00 OUTFLOW= .2236E+03 BASIN STORAGE= .1201E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.46	1391.37	214.80	1.61	5.00	1390.96	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2186E+03 EXCESS= .0000E+00 OUTFLOW= .2186E+03 BASIN STORAGE= .1112E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.46	1367.21	214.80	1.55	5.00	1366.90	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2104E+03 EXCESS= .0000E+00 OUTFLOW= .2104E+03 BASIN STORAGE= .1967E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.47	1342.87	214.83	1.49	5.00	1342.61	215.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2023E+03 EXCESS= .0000E+00 OUTFLOW= .2023E+03 BASIN STORAGE= .1810E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.47	1333.14	214.74	1.47	5.00	1333.04	215.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1991E+03 EXCESS= .0000E+00 OUTFLOW= .1991E+03 BASIN STORAGE= .1746E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI3	MAHE	.47	1327.27	215.00	1.45	5.00	1327.27	215.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1968E+03 EXCESS= .0000E+00 OUTFLOW= .1968E+03 BASIN STORAGE= .1782E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.42	135.09	211.77	1.08	5.00	125.64	210.00	1.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7389E+01 EXCESS= .0000E+00 OUTFLOW= .7389E+01 BASIN STORAGE= .1486E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.43	131.44	211.56	1.05	5.00	122.38	210.00	1.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7172E+01 EXCESS= .0000E+00 OUTFLOW= .7171E+01 BASIN STORAGE= .1684E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.44	124.78	212.21	1.00	5.00	116.89	215.00	1.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6825E+01 EXCESS= .0000E+00 OUTFLOW= .6825E+01 BASIN STORAGE= .1793E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.46	118.92	211.48	.95	5.00	110.82	215.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6486E+01 EXCESS= .0000E+00 OUTFLOW= .6485E+01 BASIN STORAGE= .1842E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.48	116.06	212.38	.93	5.00	109.56	215.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6347E+01 EXCESS= .0000E+00 OUTFLOW= .6347E+01 BASIN STORAGE= .1769E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCRD-24	MAHE	1.47	114.67	211.55	.92	5.00	106.98	215.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6255E+01 EXCESS= .0000E+00 OUTFLOW= .6255E+01 BASIN STORAGE= .1860E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI5	MAHE	1.55	220.88	212.95	.94	5.00	218.92	215.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1291E+02 EXCESS= .0000E+00 OUTFLOW= .1291E+02 BASIN STORAGE= .1767E+03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI5	MAHE	1.56	213.27	212.66	.91	5.00	212.84	215.00	.91
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1251E+02 EXCESS= .0000E+00 OUTFLOW= .1251E+02 BASIN STORAGE= .2102E+03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCPI5	MAHE	1.38	283.16	213.20	.86	5.00	301.27	215.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1188E+02 EXCESS= .0000E+00 OUTFLOW= .1188E+02 BASIN STORAGE= .2381E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI5	MAHE	1.60	191.23	215.50	.82	5.00	191.22	215.00	.82
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1124E+02 EXCESS= .0000E+00 OUTFLOW= .1124E+02 BASIN STORAGE= .1779E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI5	MAHE	1.60	188.20	216.45	.80	5.00	186.17	215.00	.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1099E+02 EXCESS= .0000E+00 OUTFLOW= .1099E+02 BASIN STORAGE= .1775E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI5	MAHE	1.61	183.92	215.65	.79	5.00	183.86	215.00	.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1081E+02 EXCESS= .0000E+00 OUTFLOW= .1081E+02 BASIN STORAGE= .1804E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.80	394.19	216.15	1.11	5.00	391.64	215.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2189E+02 EXCESS= .0000E+00 OUTFLOW= .2189E+02 BASIN STORAGE= .3077E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.81	381.36	217.28	1.08	5.00	380.04	215.00	1.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2124E+02 EXCESS= .0000E+00 OUTFLOW= .2124E+02 BASIN STORAGE= .2885E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.83	363.59	215.76	1.03	5.00	362.18	215.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2211E+02 EXCESS= .0000E+00 OUTFLOW= .2211E+02 BASIN STORAGE= .3622E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.85	347.04	215.96	.98	5.00	344.88	215.00	.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2106E+02 EXCESS= .0000E+00 OUTFLOW= .2106E+02 BASIN STORAGE= .2531E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.85	342.51	216.93	.96	5.00	337.83	215.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2063E+02 EXCESS= .0000E+00 OUTFLOW= .2063E+02 BASIN STORAGE= .2592E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI6	MAHE	1.86	333.46	217.47	.94	5.00	332.13	215.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2034E+02 EXCESS= .0000E+00 OUTFLOW= .2034E+02 BASIN STORAGE= .3046E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.90	2079.19	215.04	1.56	5.00	2070.00	215.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2652E+03 EXCESS= .0000E+00 OUTFLOW= .2652E+03 BASIN STORAGE= .4787E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.91	2037.81	215.00	1.52	5.00	2037.77	215.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2591E+03 EXCESS= .0000E+00 OUTFLOW= .2591E+03 BASIN STORAGE= .4586E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.91	1981.95	214.58	1.46	5.00	1981.21	215.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2491E+03 EXCESS= .0000E+00 OUTFLOW= .2491E+03 BASIN STORAGE= .4272E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.92	1930.80	215.09	1.41	5.00	1930.29	215.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2192E+03 EXCESS= .0000E+00 OUTFLOW= .2192E+03 BASIN STORAGE= .3933E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.92	1908.77	214.76	1.38	5.00	1908.02	215.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2352E+03 EXCESS= .0000E+00 OUTFLOW= .2352E+03 BASIN STORAGE= .3781E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MAHE	.92	1894.87	215.16	1.37	5.00	1894.11	215.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2124E+03 EXCESS= .0000E+00 OUTFLOW= .2124E+03 BASIN STORAGE= .3702E+02 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.84	228.35	215.13	1.32	5.00	225.23	215.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1186E+02 EXCESS= .0000E+00 OUTFLOW= .1186E+02 BASIN STORAGE= .4339E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.86	221.93	217.30	1.28	5.00	219.86	215.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1190E+02 EXCESS= .0000E+00 OUTFLOW= .1149E+02 BASIN STORAGE= .4905E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.88	213.90	216.18	1.23	5.00	210.06	215.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1291E+02 EXCESS= .0000E+00 OUTFLOW= .1291E+02 BASIN STORAGE= .4416E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.91	203.67	215.19	1.17	5.00	202.56	215.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1233E+02 EXCESS= .0000E+00 OUTFLOW= .1233E+02 BASIN STORAGE= .3916E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.92	201.14	215.97	1.15	5.00	197.47	215.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1211E+02 EXCESS= .0000E+00 OUTFLOW= .1211E+02 BASIN STORAGE= .4848E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-17	MAHE	2.93	197.93	215.93	1.14	5.00	193.96	215.00	1.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1194E+02 EXCESS= .0000E+00 OUTFLOW= .1193E+02 BASIN STORAGE= .4109E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.65	433.69	215.26	1.14	5.00	421.93	215.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1248E+02 EXCESS= .0000E+00 OUTFLOW= .1248E+02 BASIN STORAGE= .3441E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.67	423.19	216.92	1.11	5.00	410.60	215.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1257E+02 EXCESS= .0000E+00 OUTFLOW= .1257E+02 BASIN STORAGE= .2105E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.70	399.88	215.04	1.06	5.00	390.34	215.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1245E+02 EXCESS= .0000E+00 OUTFLOW= .1245E+02 BASIN STORAGE= .2266E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.73	285.35	215.45	1.01	5.00	372.74	215.00	1.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1338E+02 EXCESS= .0000E+00 OUTFLOW= .1338E+02 BASIN STORAGE= .2141E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.75	378.48	215.75	.99	5.00	364.84	215.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1292E+02 EXCESS= .0000E+00 OUTFLOW= .1292E+02 BASIN STORAGE= .2627E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP19	MAHE	1.76	369.92	215.46	.97	5.00	357.83	215.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1256E+02 EXCESS= .0000E+00 OUTFLOW= .1256E+02 BASIN STORAGE= .2236E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROAD-16	MAHE	3.00	45.27	225.00	.74	5.00	45.27	225.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1254E+01 EXCESS= .0000E+00 OUTFLOW= .1259E+01 BASIN STORAGE= .6667E+02 PERCENT ERROR= -.9									
FOR PLAN = 1	RATIO=	.00							
ROAD-16	MAHE	2.75	43.78	225.50	.71	5.00	43.15	225.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1242E+01 EXCESS= .0000E+00 OUTFLOW= .1246E+01 BASIN STORAGE= .6802E+02 PERCENT ERROR= -.9									
FOR PLAN = 1	RATIO=	.00							
ROAD-16	MAHE	2.50	43.04	225.00	.67	5.00	43.04	225.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1312E+01 EXCESS= .0000E+00 OUTFLOW= .1327E+01 BASIN STORAGE= .7594E+02 PERCENT ERROR= -1.0									
FOR PLAN = 1	RATIO=	.00							
ROAD-16	MAHE	2.00	42.10	224.00	.63	5.00	39.18	220.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1173E+01 EXCESS= .0000E+00 OUTFLOW= .1188E+01 BASIN STORAGE= .7099E+02 PERCENT ERROR= -1.0									

FOR PLAN = 1	RATIO =	.00							
RCHD-16	MAHE	2.00	40.40	224.00	.62	5.00	39.45	220.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2118E+01 EXCESS= .0000E+00 OUTFLOW= .2134E+01 BASIN STORAGE= .7045E+02 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO =	.00							
RCHD-16	MAHE	2.00	39.02	220.00	.60	5.00	39.02	220.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2090E+01 EXCESS= .0000E+00 OUTFLOW= .2096E+01 BASIN STORAGE= .7024E+02 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.40	847.52	215.00	1.26	5.00	831.06	215.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5874E+02 EXCESS= .0000E+00 OUTFLOW= .5875E+02 BASIN STORAGE= .4021E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.43	826.48	216.25	1.23	5.00	806.51	215.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5429E+02 EXCESS= .0000E+00 OUTFLOW= .5430E+02 BASIN STORAGE= .4984E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.48	781.24	219.31	1.17	5.00	767.52	215.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5192E+02 EXCESS= .0000E+00 OUTFLOW= .5193E+02 BASIN STORAGE= .3977E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.52	754.98	217.11	1.12	5.00	736.06	215.00	1.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4957E+02 EXCESS= .0000E+00 OUTFLOW= .4958E+02 BASIN STORAGE= .5113E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.54	734.88	216.22	1.10	5.00	717.98	215.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4866E+02 EXCESS= .0000E+00 OUTFLOW= .4867E+02 BASIN STORAGE= .4669E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP20	MAHE	2.56	732.33	217.26	1.09	5.00	715.20	215.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4803E+02 EXCESS= .0000E+00 OUTFLOW= .4803E+02 BASIN STORAGE= .4601E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.58	3536.79	215.25	1.49	5.00	3527.92	215.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3607E+03 EXCESS= .0000E+00 OUTFLOW= .3607E+03 BASIN STORAGE= .1548E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.58	3465.59	215.27	1.46	5.00	3456.43	215.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3523E+03 EXCESS= .0000E+00 OUTFLOW= .3523E+03 BASIN STORAGE= .1484E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.59	3347.62	215.26	1.40	5.00	3337.20	215.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3382E+03 EXCESS= .0000E+00 OUTFLOW= .3382E+03 BASIN STORAGE= .1413E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.60	3226.56	215.17	1.34	5.00	3229.46	215.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3244E+03 EXCESS= .0000E+00 OUTFLOW= .3244E+03 BASIN STORAGE= .1322E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.60	3189.57	215.31	1.32	5.00	3179.24	215.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3189E+03 EXCESS= .0000E+00 OUTFLOW= .3189E+03 BASIN STORAGE= .1285E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP21	MAHE	.60	3166.36	215.34	1.31	5.00	3154.84	215.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3151E+03 EXCESS= .0000E+00 OUTFLOW= .3151E+03 BASIN STORAGE= .1260E+01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP23	MAHE	.35	1758.70	240.56	1.48	5.00	1758.62	240.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3763E+03 EXCESS= .0000E+00 OUTFLOW= .3763E+03 BASIN STORAGE= .7551E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							
RCP23	MAHE	.35	1752.73	240.53	1.44	5.00	1752.68	240.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3674E+03 EXCESS= .0000E+00 OUTFLOW= .3673E+03 BASIN STORAGE= .7295E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO =	.00							

RCP23	NAME	.35	1743.40	240.33	1.39	5.00	1743.44	240.00	1.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3527E+03 EXCESS= .0000E+00 OUTFLOW= .3527E+03 BASIN STORAGE= .6879E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	NAME	.35	1734.31	240.13	1.33	5.00	1734.30	240.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3381E+03 EXCESS= .0000E+00 OUTFLOW= .3381E+03 BASIN STORAGE= .6434E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	NAME	.35	1730.51	239.99	1.31	5.00	1730.50	240.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3324E+03 EXCESS= .0000E+00 OUTFLOW= .3324E+03 BASIN STORAGE= .6150E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP23	NAME	.35	1728.21	239.75	1.29	5.00	1728.15	240.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3284E+03 EXCESS= .0000E+00 OUTFLOW= .3284E+03 BASIN STORAGE= .6129E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	128.39	230.00	1.36	5.00	128.39	230.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1010E+02 BASIN STORAGE= .1124E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	124.98	230.00	1.33	5.00	124.98	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9816E+01 EXCESS= .0000E+00 OUTFLOW= .9846E+01 BASIN STORAGE= .1089E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	119.28	230.00	1.27	5.00	119.28	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9394E+01 EXCESS= .0000E+00 OUTFLOW= .9423E+01 BASIN STORAGE= .1059E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	114.01	235.00	1.21	5.00	114.01	235.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8975E+01 EXCESS= .0000E+00 OUTFLOW= .9004E+01 BASIN STORAGE= .1043E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	112.10	235.00	1.19	5.00	112.10	235.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8810E+01 EXCESS= .0000E+00 OUTFLOW= .8838E+01 BASIN STORAGE= .1016E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	110.76	235.00	1.18	5.00	110.76	235.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8694E+01 EXCESS= .0000E+00 OUTFLOW= .8732E+01 BASIN STORAGE= .1010E-01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	42.35	230.00	1.50	5.00	42.35	230.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2688E+01 EXCESS= .0000E+00 OUTFLOW= .2712E+01 BASIN STORAGE= .9737E-02 PERCENT ERROR= -1.2									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	41.76	230.00	1.46	5.00	41.76	230.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2623E+01 EXCESS= .0000E+00 OUTFLOW= .2646E+01 BASIN STORAGE= .9451E-02 PERCENT ERROR= -1.2									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	40.84	230.00	1.40	5.00	40.84	230.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2516E+01 EXCESS= .0000E+00 OUTFLOW= .2538E+01 BASIN STORAGE= .9347E-02 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	39.88	230.00	1.34	5.00	39.88	230.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2409E+01 EXCESS= .0000E+00 OUTFLOW= .2431E+01 BASIN STORAGE= .9241E-02 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	39.47	230.00	1.32	5.00	39.47	230.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2366E+01 EXCESS= .0000E+00 OUTFLOW= .2388E+01 BASIN STORAGE= .9198E-02 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	39.19	230.00	1.30	5.00	39.19	230.00	1.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2337E+01 EXCESS= .0000E+00 OUTFLOW= .2358E+01 BASIN STORAGE= .9012E-02 PERCENT ERROR= -1.3									
FOR PLAN = 1 RATIO= .00									
RKRPVD	NAME	5.00	101.73	235.00	.74	5.00	101.73	235.00	.74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8159E+01 EXCESS= .0000E+00 OUTFLOW= .8182E+01 BASIN STORAGE= .1098E+01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	99.47	235.00	.73	5.00	99.47	235.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7962E+01 EXCESS= .0000E+00 OUTFLOW= .7986E+01 BASIN STORAGE= .1098E+01 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	95.68	235.00	.70	5.00	95.68	235.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7616E+01 EXCESS= .0000E+00 OUTFLOW= .7660E+01 BASIN STORAGE= .1049E+01 PERCENT ERROR= -.5									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	92.03	235.00	.67	5.00	92.03	235.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7312E+01 EXCESS= .0000E+00 OUTFLOW= .7338E+01 BASIN STORAGE= .1240E+01 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	90.47	235.00	.66	5.00	90.47	235.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7181E+01 EXCESS= .0000E+00 OUTFLOW= .7209E+01 BASIN STORAGE= .1342E+01 PERCENT ERROR= -.5									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	89.37	235.00	.65	5.00	89.37	235.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7093E+01 EXCESS= .0000E+00 OUTFLOW= .7119E+01 BASIN STORAGE= .1237E+01 PERCENT ERROR= -.2									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.61	312.76	234.04	.76	5.00	312.03	235.00	.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2613E+02 EXCESS= .0000E+00 OUTFLOW= .2613E+02 BASIN STORAGE= .2866E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.65	302.48	235.60	.74	5.00	301.77	235.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2542E+02 EXCESS= .0000E+00 OUTFLOW= .2543E+02 BASIN STORAGE= .3063E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.70	289.26	234.47	.71	5.00	287.95	235.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2428E+02 EXCESS= .0000E+00 OUTFLOW= .2429E+02 BASIN STORAGE= .3583E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.75	275.45	236.20	.67	5.00	274.78	235.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2318E+02 EXCESS= .0000E+00 OUTFLOW= .2318E+02 BASIN STORAGE= .3649E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.77	272.26	235.35	.66	5.00	271.82	235.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2274E+02 EXCESS= .0000E+00 OUTFLOW= .2275E+02 BASIN STORAGE= .3224E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKP26	MANE	2.78	265.91	233.75	.65	5.00	265.84	235.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2242E+02 EXCESS= .0000E+00 OUTFLOW= .2243E+02 BASIN STORAGE= .3259E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	101.60	235.00	-1.00	5.00	101.60	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	99.36	235.00	-1.00	5.00	99.36	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	95.60	235.00	-1.00	5.00	95.60	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	91.81	235.00	-1.00	5.00	91.81	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	90.46	235.00	-1.00	5.00	90.46	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
ROCKWJD	MANE	5.00	89.37	235.00	-1.00	5.00	89.37	235.00	-1.00
FOR PLAN = 1 RATIO= .00									

RDCP16	MANE	5.00	135.80	240.00	-1.00	5.00	135.80	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	135.57	240.00	-1.00	5.00	135.57	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	129.86	240.00	-1.00	5.00	129.86	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	123.97	240.00	-1.00	5.00	123.97	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	121.24	240.00	-1.00	5.00	121.24	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP16	MANE	5.00	119.26	240.00	-1.00	5.00	119.26	240.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.56	321.96	239.28	1.50	5.00	319.33	239.99	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1757E+02 EXCESS= .0000E+00 OUTFLOW= .2758E+02 BASIN STORAGE= .2307E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.61	315.76	227.41	1.46	5.00	309.48	230.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+02 EXCESS= .0000E+00 OUTFLOW= .2692E+02 BASIN STORAGE= .1659E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.66	300.96	226.74	1.40	5.00	298.15	232.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2582E+02 EXCESS= .0000E+00 OUTFLOW= .2582E+02 BASIN STORAGE= .1823E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.71	288.51	229.83	1.34	5.00	287.84	230.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2473E+02 EXCESS= .0000E+00 OUTFLOW= .2474E+02 BASIN STORAGE= .1980E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.73	285.41	227.38	1.32	5.00	280.33	230.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2430E+02 EXCESS= .0000E+00 OUTFLOW= .2431E+02 BASIN STORAGE= .2294E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDKLMD	MANE	3.74	283.11	228.28	1.30	5.00	278.52	230.00	1.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2399E+02 EXCESS= .0000E+00 OUTFLOW= .2400E+02 BASIN STORAGE= .1872E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.08	138.39	232.04	-1.00	5.00	137.88	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.08	138.08	232.08	-1.00	5.00	136.56	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.11	131.17	231.41	-1.00	5.00	130.55	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.13	124.80	231.52	-1.00	5.00	124.72	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.14	123.01	235.00	-1.00	5.00	123.01	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RDCP17	MANE	1.14	120.77	234.48	-1.00	5.00	120.54	235.00	-1.00
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	1.16	679.59	230.36	1.78	5.00	679.24	230.00	1.78
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5976E+02 EXCESS= .0000E+00 OUTFLOW= .5976E+02 BASIN STORAGE= .1730E+02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	1.17	663.69	230.26	1.73	5.00	663.24	230.00	1.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5829E+02 EXCESS= .0000E+00 OUTFLOW= .5829E+02 BASIN STORAGE= .1913E+02 PERCENT ERROR= .0									

FOR PLAN = 1 RATIO=	.00								
RCP10 NAME	1.19	634.99	230.64	1.66	5.00	634.55	230.00	1.66	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5580E+02	EXCESS=	.0000E+00	OUTFLOW=	.5580E+02	BASIN STORAGE=	.1888E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP10 NAME	1.21	608.54	230.93	1.59	5.00	607.91	230.00	1.59	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5334E+02	EXCESS=	.0000E+00	OUTFLOW=	.5334E+02	BASIN STORAGE=	.1738E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP10 NAME	1.22	595.61	230.58	1.56	5.00	594.62	230.00	1.56	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5238E+02	EXCESS=	.0000E+00	OUTFLOW=	.5238E+02	BASIN STORAGE=	.1688E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP10 NAME	1.23	588.93	230.37	1.54	5.00	587.83	230.00	1.54	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5168E+02	EXCESS=	.0000E+00	OUTFLOW=	.5168E+02	BASIN STORAGE=	.1632E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	71.73	216.75	1.98	5.00	70.26	220.00	1.98	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4748E+01	EXCESS=	.0000E+00	OUTFLOW=	.4748E+01	BASIN STORAGE=	.4188E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	70.33	216.75	1.94	5.00	69.39	220.00	1.94	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4652E+01	EXCESS=	.0000E+00	OUTFLOW=	.4652E+01	BASIN STORAGE=	.4168E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	68.00	216.75	1.88	5.00	66.87	220.00	1.87	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4492E+01	EXCESS=	.0000E+00	OUTFLOW=	.4492E+01	BASIN STORAGE=	.4117E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	65.67	216.75	1.81	5.00	64.74	220.00	1.81	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4332E+01	EXCESS=	.0000E+00	OUTFLOW=	.4332E+01	BASIN STORAGE=	.4065E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	64.73	216.75	1.78	5.00	63.89	220.00	1.78	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4269E+01	EXCESS=	.0000E+00	OUTFLOW=	.4269E+01	BASIN STORAGE=	.4044E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
ROCKLAND NAME	4.25	64.08	216.75	1.77	5.00	63.39	220.00	1.76	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.4224E+01	EXCESS=	.0000E+00	OUTFLOW=	.4224E+01	BASIN STORAGE=	.4029E+02	PERCENT ERROR=	-.4
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.83	721.76	230.13	1.79	5.00	721.55	230.00	1.79	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.6456E+02	EXCESS=	.0000E+00	OUTFLOW=	.6456E+02	BASIN STORAGE=	.1357E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.84	704.53	230.60	1.75	5.00	704.53	230.00	1.75	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.6299E+02	EXCESS=	.0000E+00	OUTFLOW=	.6299E+02	BASIN STORAGE=	.1394E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.86	674.87	230.34	1.67	5.00	674.33	230.00	1.68	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.6034E+02	EXCESS=	.0000E+00	OUTFLOW=	.6034E+02	BASIN STORAGE=	.1387E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.87	646.88	230.75	1.60	5.00	646.23	230.00	1.60	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5773E+02	EXCESS=	.0000E+00	OUTFLOW=	.5773E+02	BASIN STORAGE=	.1378E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.88	633.19	230.11	1.57	5.00	632.92	230.00	1.57	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5659E+02	EXCESS=	.0000E+00	OUTFLOW=	.5659E+02	BASIN STORAGE=	.1358E+02	PERCENT ERROR=	.0
FOR PLAN = 1 RATIO=	.00								
RCP11 NAME	.88	625.96	230.26	1.55	5.00	625.27	230.00	1.55	
CONTINUITY SUMMARY (AC-FT) - INFLOW=	.5595E+02	EXCESS=	.0000E+00	OUTFLOW=	.5595E+02	BASIN STORAGE=	.1285E+02	PERCENT ERROR=	.0

FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.88	1265.98	211.32	1.36	5.00	1355.64	230.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1274E+03 EXCESS= .0000E+00 OUTFLOW= .1274E+03 BASIN STORAGE= .1856E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.89	1324.72	211.53	1.32	5.00	1314.88	230.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1241E+03 EXCESS= .0000E+00 OUTFLOW= .1241E+03 BASIN STORAGE= .1761E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.90	1261.54	211.60	1.27	5.00	1261.34	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1188E+03 EXCESS= .0000E+00 OUTFLOW= .1188E+03 BASIN STORAGE= .1743E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.92	1201.96	211.54	1.21	5.00	1190.46	230.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1135E+03 EXCESS= .0000E+00 OUTFLOW= .1135E+03 BASIN STORAGE= .1753E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.93	1177.36	211.63	1.19	5.00	1167.92	235.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1115E+03 EXCESS= .0000E+00 OUTFLOW= .1115E+03 BASIN STORAGE= .1786E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.94	1159.72	211.18	1.17	5.00	1149.22	235.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1100E+03 EXCESS= .0000E+00 OUTFLOW= .1100E+03 BASIN STORAGE= .1913E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF12	MAHE	.91	1400.94	230.40	1.37	5.00	1397.60	230.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1333E+03 EXCESS= .0000E+00 OUTFLOW= .1333E+03 BASIN STORAGE= .6304E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF13	MAHE	.91	1359.44	230.39	1.33	5.00	1356.05	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1299E+03 EXCESS= .0000E+00 OUTFLOW= .1299E+03 BASIN STORAGE= .6193E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF13	MAHE	.92	1294.26	230.49	1.27	5.00	1290.76	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1244E+03 EXCESS= .0000E+00 OUTFLOW= .1244E+03 BASIN STORAGE= .6209E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF13	MAHE	.93	1231.84	230.94	1.22	5.00	1228.11	230.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1189E+03 EXCESS= .0000E+00 OUTFLOW= .1189E+03 BASIN STORAGE= .6264E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF13	MAHE	.93	1206.92	230.47	1.20	5.00	1203.07	230.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1167E+03 EXCESS= .0000E+00 OUTFLOW= .1167E+03 BASIN STORAGE= .6176E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF13	MAHE	.93	1188.46	230.57	1.18	5.00	1184.69	230.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1151E+03 EXCESS= .0000E+00 OUTFLOW= .1151E+03 BASIN STORAGE= .6245E+03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF14	MAHE	.98	1413.17	230.58	1.37	5.00	1406.80	230.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1357E+03 EXCESS= .0000E+00 OUTFLOW= .1357E+03 BASIN STORAGE= .1182E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF14	MAHE	.99	1370.71	231.02	1.33	5.00	1364.31	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1322E+03 EXCESS= .0000E+00 OUTFLOW= .1322E+03 BASIN STORAGE= .1213E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF14	MAHE	.60	1305.42	230.82	1.27	5.00	1298.34	230.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1266E+03 EXCESS= .0000E+00 OUTFLOW= .1266E+03 BASIN STORAGE= .1245E+02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCF14	MAHE	.61	1242.18	231.17	1.22	5.00	1235.29	230.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1209E+03 EXCESS= .0000E+00 OUTFLOW= .1209E+03 BASIN STORAGE= .1178E+02 PERCENT ERROR= .0									

FOR PLAN = 1 RATIO= .00
RCP14 NAME .62 1317.19 230.61 1.20 5.00 1219.35 230.00 1.20

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1188E+03 EXCESS= .0000E+00 OUTFLOW= .1188E+03 BASIN STORAGE= .1168E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP14 NAME .62 1198.66 230.79 1.18 5.00 1191.01 230.00 1.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1171E+03 EXCESS= .0000E+00 OUTFLOW= .1171E+03 BASIN STORAGE= .1251E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP15 NAME .51 1416.43 230.82 1.38 5.00 1409.65 230.00 1.38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1381E+03 EXCESS= .0000E+00 OUTFLOW= .1381E+03 BASIN STORAGE= .1088E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP15 NAME .53 1374.04 231.00 1.34 5.00 1367.66 230.00 1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1348E+03 EXCESS= .0000E+00 OUTFLOW= .1348E+03 BASIN STORAGE= .1124E+02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP16 NAME .54 1308.21 230.72 1.38 5.00 1301.12 230.00 1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1281E+03 EXCESS= .0000E+00 OUTFLOW= .1281E+03 BASIN STORAGE= .1117E+03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP16 NAME .55 1245.07 230.92 1.23 5.00 1237.94 230.00 1.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1234E+03 EXCESS= .0000E+00 OUTFLOW= .1234E+03 BASIN STORAGE= .1069E+02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP16 NAME .56 1220.34 231.13 1.21 5.00 1213.35 230.00 1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1212E+03 EXCESS= .0000E+00 OUTFLOW= .1212E+03 BASIN STORAGE= .1088E+02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP16 NAME .56 1200.85 230.93 1.19 5.00 1193.54 230.00 1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1195E+03 EXCESS= .0000E+00 OUTFLOW= .1195E+03 BASIN STORAGE= .1080E+02 PERCENT ERROR= .0

*** NORMAL END OF HEC-1 ***

Appendix B: Hydraulic Calculations

Appendix B-1: Flowmaster-Street Capacity Calculations

Street Limitations Criteria

Location	Street ROW (ft)	Minor Storm (Q10)				Major Storm (Q100)			
		Q10 (cfs)	10-YR Dry Lane Criteria Met	VD<=6	Minor Storm Limitations Met	Q100 (cfs)	D<= 2'	VD<=8	Major Storm Limitations Met
1-1 Burkholder 100' N of Water	100	119	YES	4.45=Y	YES	269	YES	7.15=Y	YES
2-2 Burkholder 1500' N of Warm Springs	100	75	YES	2.89=Y	YES	227	YES	5.40=Y	YES
3-3 Burkholder 3200' N of Warm Springs	100	75	YES	2.89=Y	YES	405	YES	7.97=Y	YES
4-4 Burkholder 150' N of Sunset	100	92	YES	3.51=Y	YES	370	YES	7.91=Y	YES
5-5 Burkholder 100' N of Athens	120	55	YES	1.81=Y	YES	540	YES	7.91=Y	YES
6-6 Warm Springs 250' N of Water	100	74	YES	2.77=Y	YES	296	YES	6.31=Y	YES
7-7 Warm Springs 200' W of Eastside	100	62	YES	2.33=Y	YES	381	YES	7.13=Y	YES
8-8 Sunset 200' NW Water	100	46	YES	2.30=Y	YES	137	YES	4.19=Y	YES
9-9 Sunset 200' NW Eastside	100	71	YES	2.90=Y	YES	233	YES	5.73=Y	YES
10-10 Sunset 2000' SE of Burkholder	100	90	YES	3.39=Y	YES	380	YES	7.95=Y	YES
11-11 Eastside 3100' S of Athens	80	10	YES	1.34=Y	YES	44	YES	2.57=Y	YES
12-12 Water 150' SW of Mohawk	100	65	YES	2.60=Y	YES	233	YES	5.58=Y	YES
13-13 Athens 100' W of Mohawk	120	105	YES	3.19=Y	YES	449	YES	7.93=Y	YES
14-14 Athens 200' W of Eastside	120	55	YES	1.81=Y	YES	540	YES	7.91=Y	YES

*Flow is Surface Flow

**Storm Drain Flows have been subtracted

***Refer to Street and Storm Distribution table in Appendix B-2

1-1_BURKHOLDER BOULEVARD AT WATER STREET 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	BURK1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0245 ft/ft
Discharge	119.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	19.2 ft ²
Wetted Perimeter	70.76 ft
Top Width	69.40 ft
Actual Depth	0.72 ft
Critical Elevation	0.91 ft
Critical Slope	0.0051 ft/ft
Velocity	6.18 ft/s
Velocity Head	0.59 ft
Specific Energy	1.32 ft
Froude Number	2.07
Flow Type	Supercritical

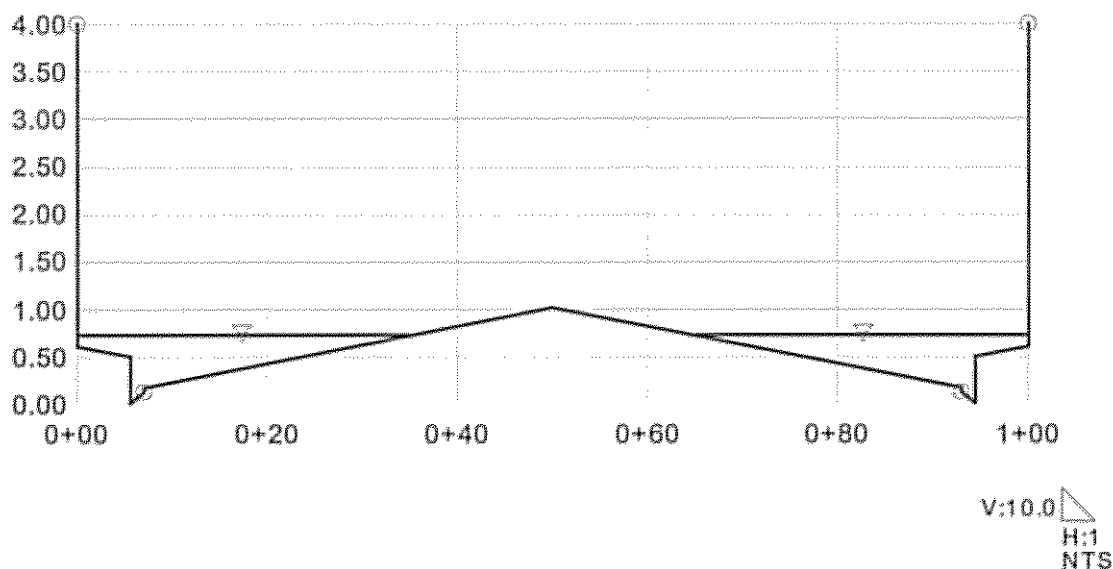
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

1-1_BURKHOLDER BOULEVARD AT WATER STREET 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0245 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	119.00 cfs



1-1_BURKHOLDER BOULEVARD AT WATER STREET 100-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	BURK1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0245 ft/ft
Discharge	269.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.92 ft
Elevation Range	0.00 to 4.00
Flow Area	34.6 ft ²
Wetted Perimeter	90.59 ft
Top Width	88.84 ft
Actual Depth	0.92 ft
Critical Elevation	1.19 ft
Critical Slope	0.0044 ft/ft
Velocity	7.77 ft/s
Velocity Head	0.94 ft
Specific Energy	1.86 ft
Froude Number	2.19
Flow Type	Supercritical

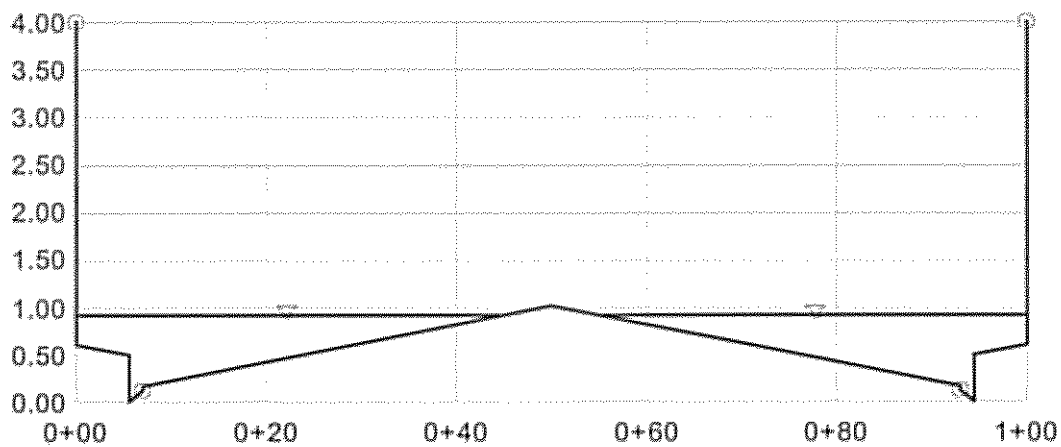
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

1-1_BURKHOLDER BOULEVARD AT WATER STREET 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0245 ft/ft
Water Surface Elevation	0.92 ft
Elevation Range	0.00 to 4.00
Discharge	269.00 cfs



V:10.0
H:1
NTS

2-2_BURKHOLDER BOULEVARD 1500' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	75.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	18.7 ft ²
Wetted Perimeter	70.00 ft
Top Width	68.66 ft
Actual Depth	0.72 ft
Critical Elevation	0.78 ft
Critical Slope	0.0055 ft/ft
Velocity	4.01 ft/s
Velocity Head	0.25 ft
Specific Energy	0.97 ft
Froude Number	1.35
Flow Type	Supercritical

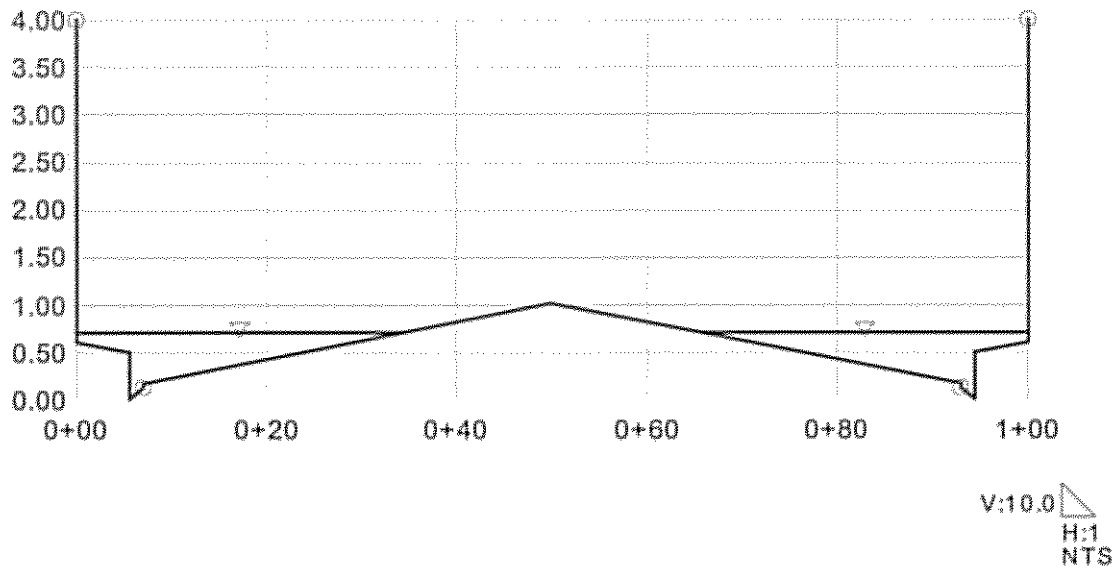
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

2-2_BURKHOLDER BOULEVARD 1500' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	75.00 cfs



2-2_BURKHOLDER BOULEVARD 1500' N of WARM SPRINGS ROAD 100-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	BURK2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	227.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.99 ft
Elevation Range	0.00 to 4.00
Flow Area	41.6 ft ²
Wetted Perimeter	98.32 ft
Top Width	96.42 ft
Actual Depth	0.99 ft
Critical Elevation	1.12 ft
Critical Slope	0.0046 ft/ft
Velocity	5.45 ft/s
Velocity Head	0.46 ft
Specific Energy	1.46 ft
Froude Number	1.46
Flow Type	Supercritical

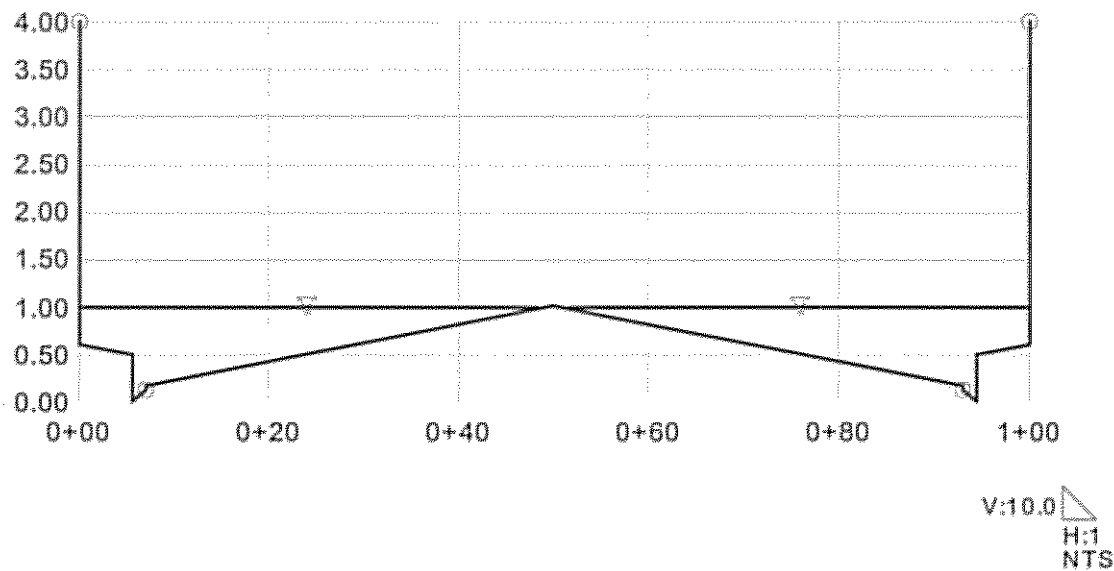
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

2-2_BURKHOLDER BOULEVARD 1500' N of WARM SPRINGS ROAD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.99 ft
Elevation Range	0.00 to 4.00
Discharge	227.00 cfs



3-3_BURKHOLDER BOULEVARD 3200' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	75.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	18.7 ft ²
Wetted Perimeter	70.00 ft
Top Width	68.66 ft
Actual Depth	0.72 ft
Critical Elevation	0.78 ft
Critical Slope	0.0055 ft/ft
Velocity	4.01 ft/s
Velocity Head	0.25 ft
Specific Energy	0.97 ft
Froude Number	1.35
Flow Type	Supercritical

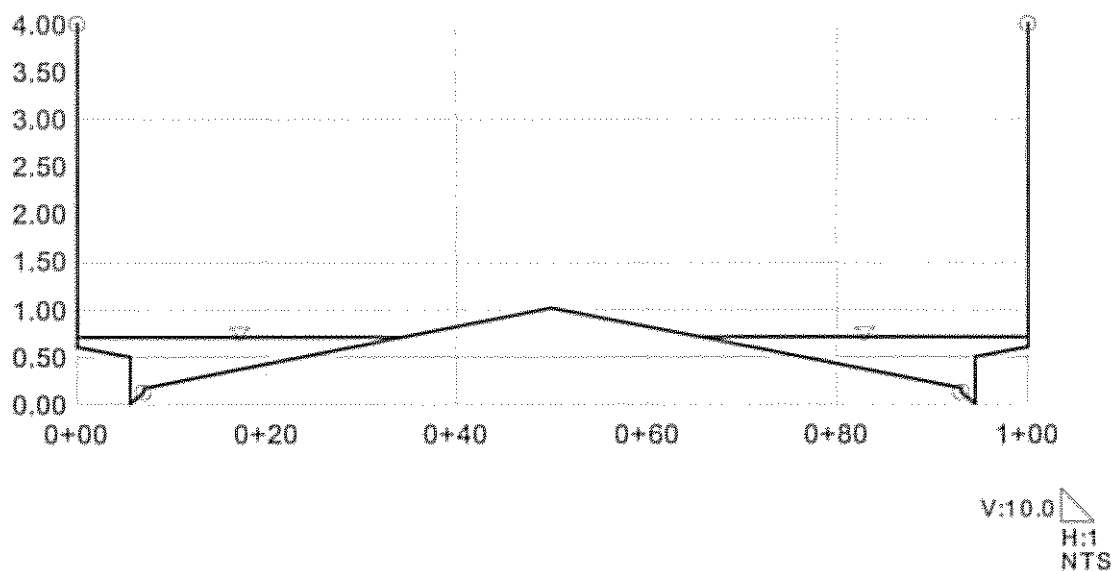
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

3-3_BURKHOLDER BOULEVARD 3200' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	75.00 cfs



3-3_BURKHOLDER BOULEVARD 3200' N of WARM SPRINGS ROAD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK3 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	405.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	1.18 ft
Elevation Range	0.00 to 4.00
Flow Area	60.0 ft ²
Wetted Perimeter	102.27 ft
Top Width	100.00 ft
Actual Depth	1.18 ft
Critical Elevation	1.38 ft
Critical Slope	0.0041 ft/ft
Velocity	6.75 ft/s
Velocity Head	0.71 ft
Specific Energy	1.89 ft
Froude Number	1.54
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

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Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.

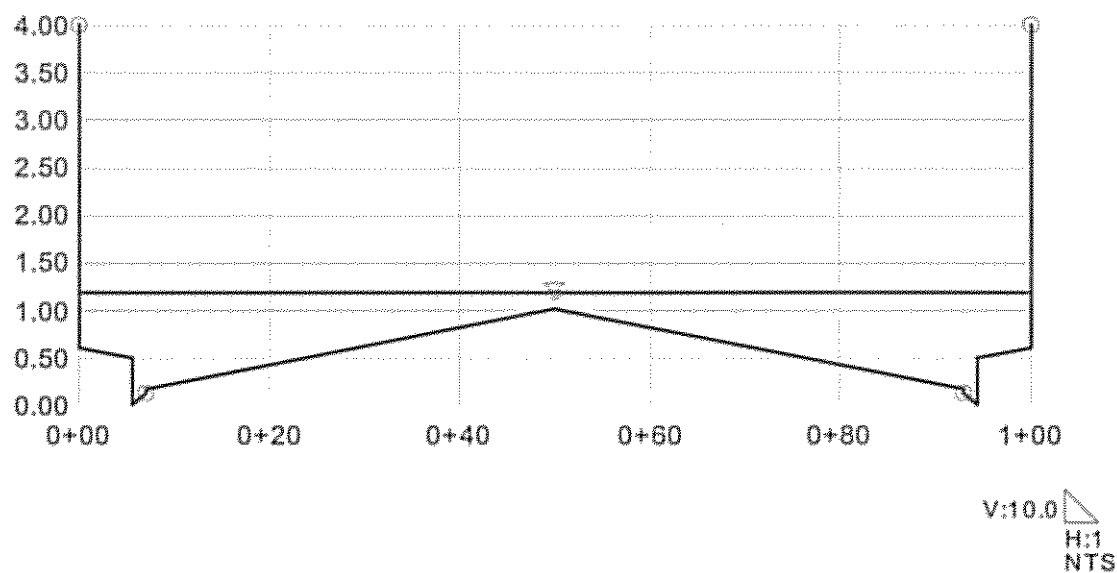
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3-3_BURKHOLDER BOULEVARD 3200' N of WARM SPRINGS ROAD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK3 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	1.18 ft
Elevation Range	0.00 to 4.00
Discharge	405.00 cfs



4-4_BURKHOLDER BOULEVARD AT SUNSET ROAD 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK4 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0154 ft/ft
Discharge	92.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.015
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	18.9 ft ²
Wetted Perimeter	70.25 ft
Top Width	68.91 ft
Actual Depth	0.72 ft
Critical Elevation	0.84 ft
Critical Slope	0.0053 ft/ft
Velocity	4.87 ft/s
Velocity Head	0.37 ft
Specific Energy	1.09 ft
Froude Number	1.64
Flow Type	Supercritical

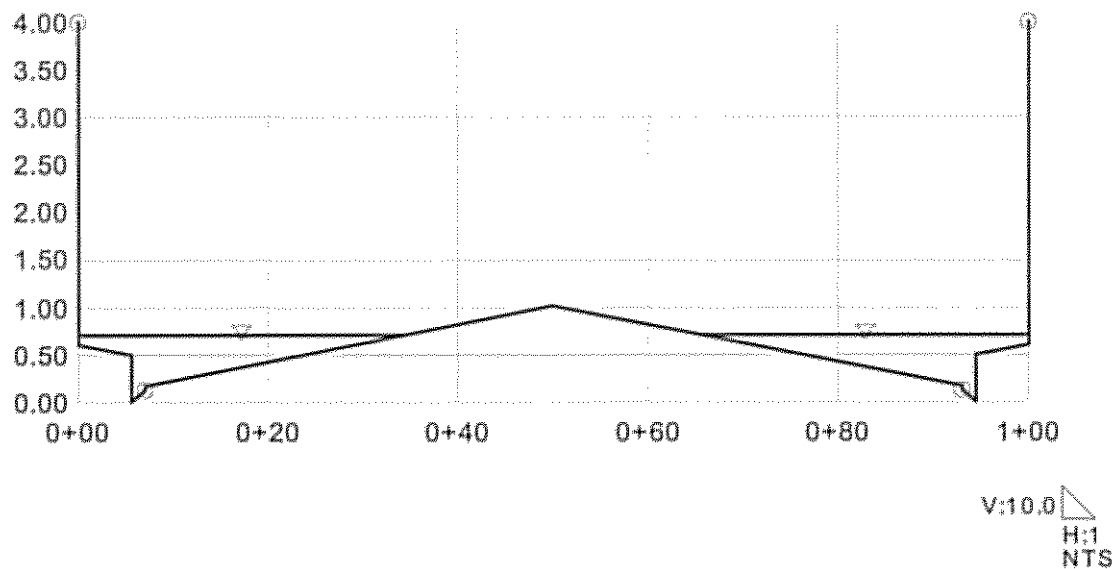
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

4-4_BURKHOLDER BOULEVARD AT SUNSET ROAD 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK4 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0154 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	92.00 cfs



4-4_BURKHOLDER BOULEVARD 150'N of SUNSET ROAD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK4 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0154 ft/ft
Discharge	370.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	1.08 ft
Elevation Range	0.00 to 4.00
Flow Area	50.6 ft ²
Wetted Perimeter	102.08 ft
Top Width	100.00 ft
Actual Depth	1.08 ft
Critical Elevation	1.33 ft
Critical Slope	0.0041 ft/ft
Velocity	7.32 ft/s
Velocity Head	0.83 ft
Specific Energy	1.92 ft
Froude Number	1.81
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

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Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.

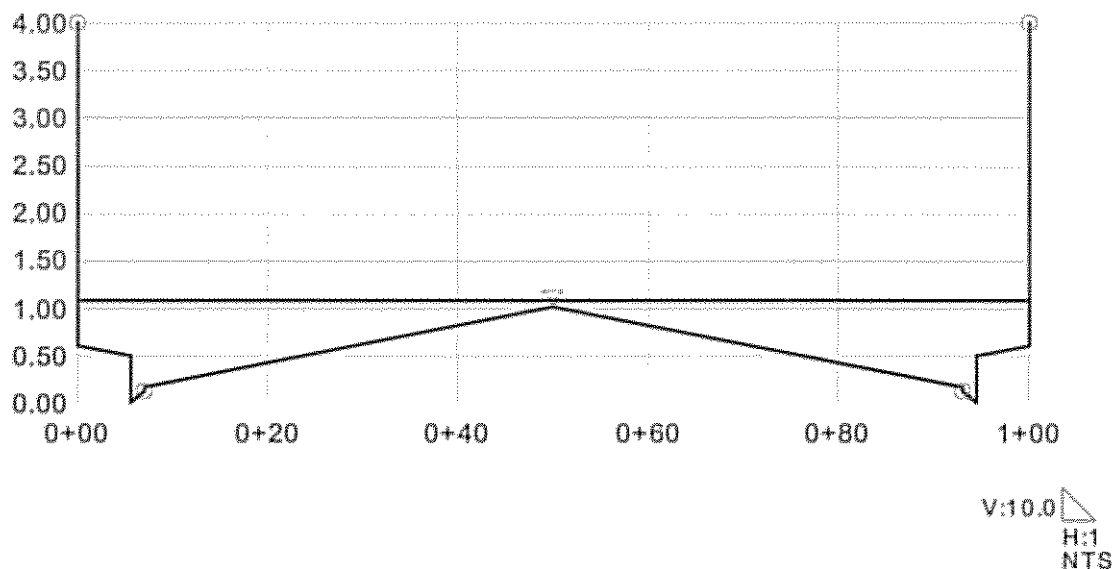
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4-4_BURKHOLDER BOULEVARD 150'N of SUNSET ROAD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	BURK4 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0154 ft/ft
Water Surface Elevation	1.08 ft
Elevation Range	0.00 to 4.00
Discharge	370.00 cfs



5-5_ BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 10-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN3 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	55.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.69 ft
Elevation Range	0.00 to 4.00
Flow Area	21.0 ft ²
Wetted Perimeter	81.83 ft
Top Width	80.54 ft
Actual Depth	0.69 ft
Critical Elevation	0.97 ft
Critical Slope	0.0065 ft/ft
Velocity	2.62 ft/s
Velocity Head	0.11 ft
Specific Energy	0.80 ft
Froude Number	0.90
Flow Type	Subcritical

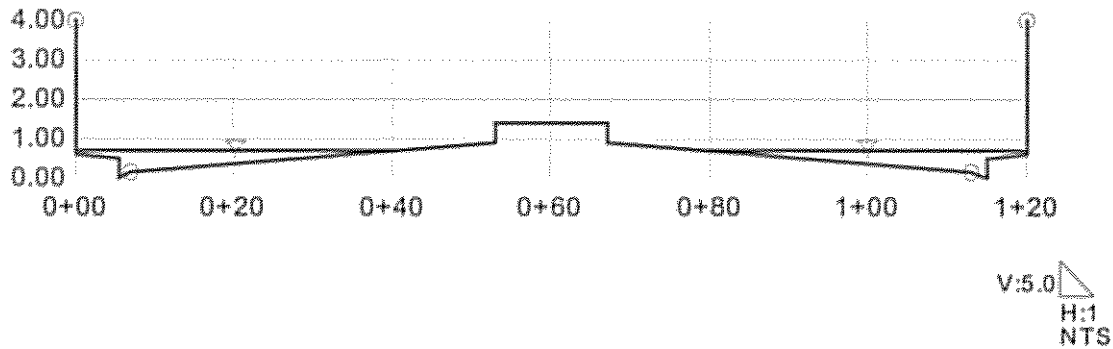
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

5-5_ BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 10-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN3 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	0.69 ft
Elevation Range	0.00 to 4.00
Discharge	55.00 cfs



5-5_ BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 100-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN3 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	540.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

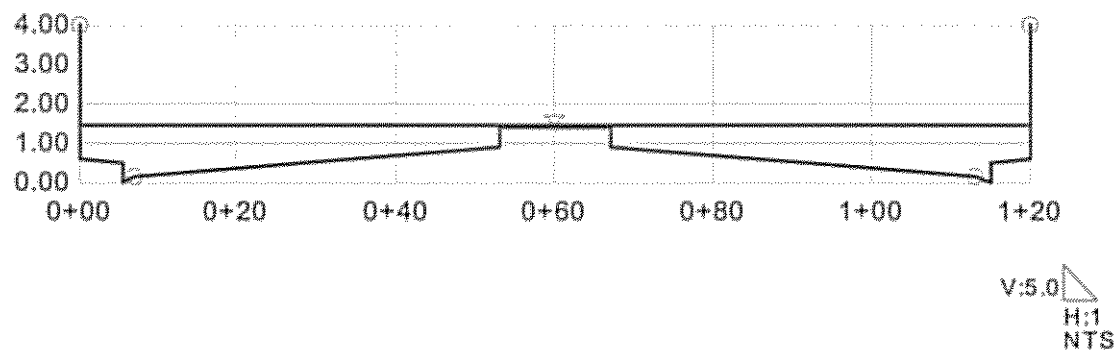
Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Flow Area	97.7 ft ²
Wetted Perimeter	123.77 ft
Top Width	120.00 ft
Actual Depth	1.43 ft
Critical Elevation	1.48 ft
Critical Slope	0.0044 ft/ft
Velocity	5.53 ft/s
Velocity Head	0.47 ft
Specific Energy	1.91 ft
Froude Number	1.08
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

5-5_ BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 100-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN3 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth
Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Discharge	540.00 cfs



6-6_WARM SPRINGS ROAD AT WATER STREET 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	WS1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0095 ft/ft
Discharge	74.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	19.2 ft ²
Wetted Perimeter	70.73 ft
Top Width	69.38 ft
Actual Depth	0.72 ft
Critical Elevation	0.78 ft
Critical Slope	0.0055 ft/ft
Velocity	3.85 ft/s
Velocity Head	0.23 ft
Specific Energy	0.95 ft
Froude Number	1.29
Flow Type	Supercritical

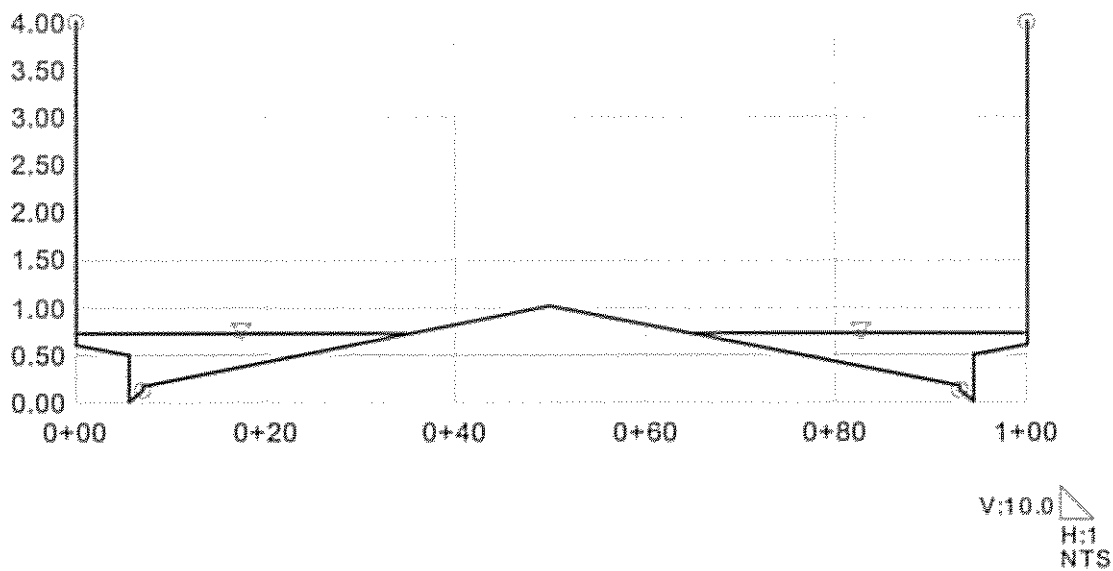
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

6-6_WARM SPRINGS ROAD AT WATER STREET 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	WS1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0095 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	74.00 cfs



6-6_WARM SPRINGS ROAD AT WATER STREET 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	WS1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0095 ft/ft
Discharge	296.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	1.09 ft
Elevation Range	0.00 to 4.00
Flow Area	51.1 ft ²
Wetted Perimeter	102.09 ft
Top Width	100.00 ft
Actual Depth	1.09 ft
Critical Elevation	1.23 ft
Critical Slope	0.0043 ft/ft
Velocity	5.79 ft/s
Velocity Head	0.52 ft
Specific Energy	1.61 ft
Froude Number	1.43
Flow Type	Supercritical

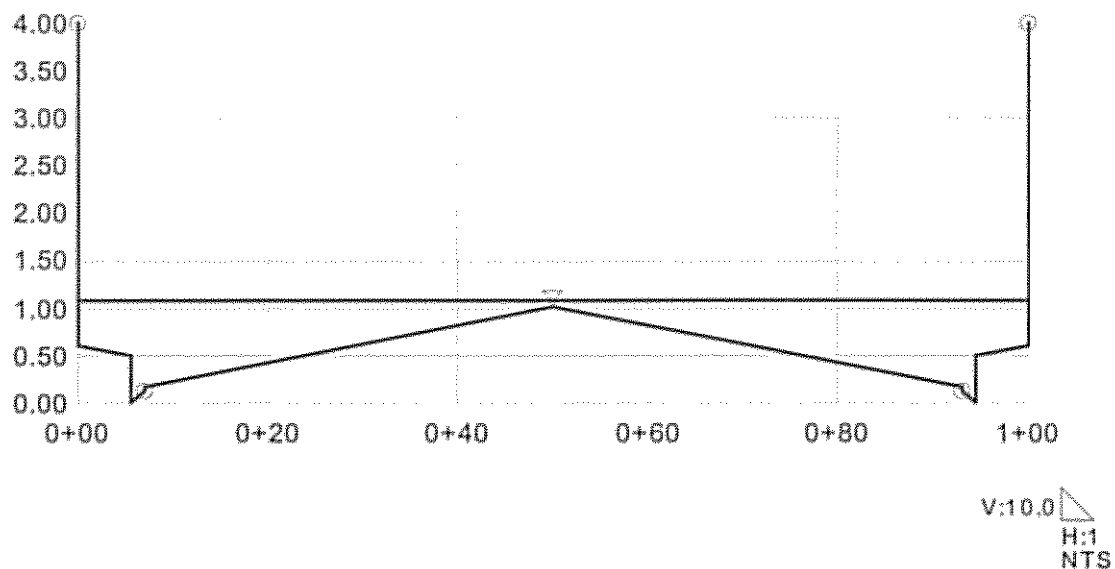
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

6-6_WARM SPRINGS ROAD AT WATER STREET 100-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	WS1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0095 ft/ft
Water Surface Elevation	1.09 ft
Elevation Range	0.00 to 4.00
Discharge	296.00 cfs



7-7_WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY

10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	WS2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0067 ft/ft
Discharge	62.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	19.2 ft ²
Wetted Perimeter	70.68 ft
Top Width	69.33 ft
Actual Depth	0.72 ft
Critical Elevation	0.74 ft
Critical Slope	0.0056 ft/ft
Velocity	3.23 ft/s
Velocity Head	0.16 ft
Specific Energy	0.89 ft
Froude Number	1.08
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

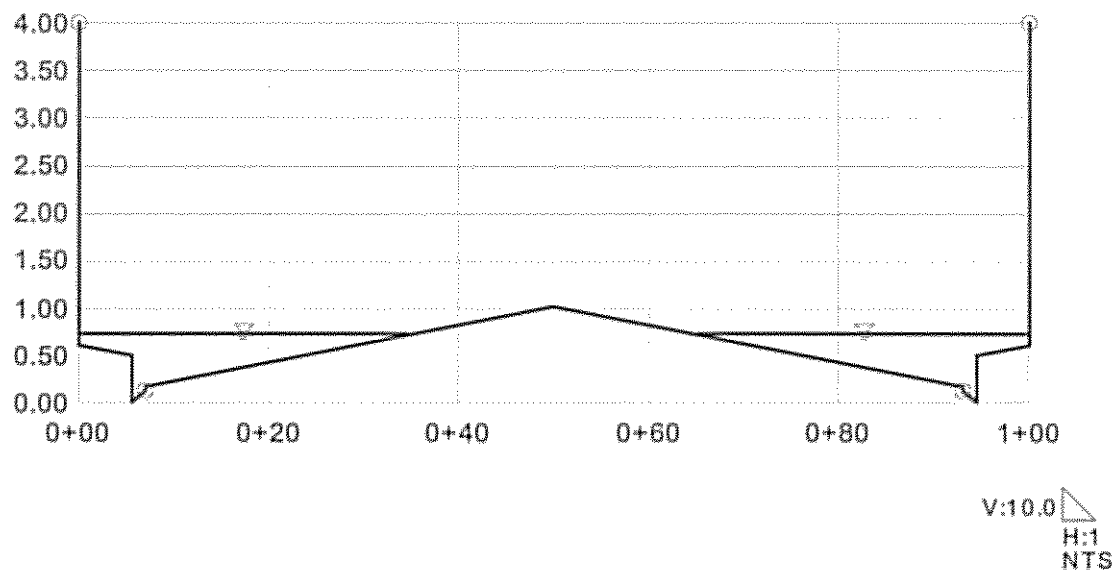
7-7_WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY

10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	WS2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0067 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	62.00 cfs



7-7_WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	WS2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0067 ft/ft
Discharge	381.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	1.24 ft
Elevation Range	0.00 to 4.00
Flow Area	66.2 ft ²
Wetted Perimeter	102.40 ft
Top Width	100.00 ft
Actual Depth	1.24 ft
Critical Elevation	1.35 ft
Critical Slope	0.0041 ft/ft
Velocity	5.75 ft/s
Velocity Head	0.51 ft
Specific Energy	1.76 ft
Froude Number	1.25
Flow Type	Supercritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

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John Powell & Assoc. Inc.

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Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.

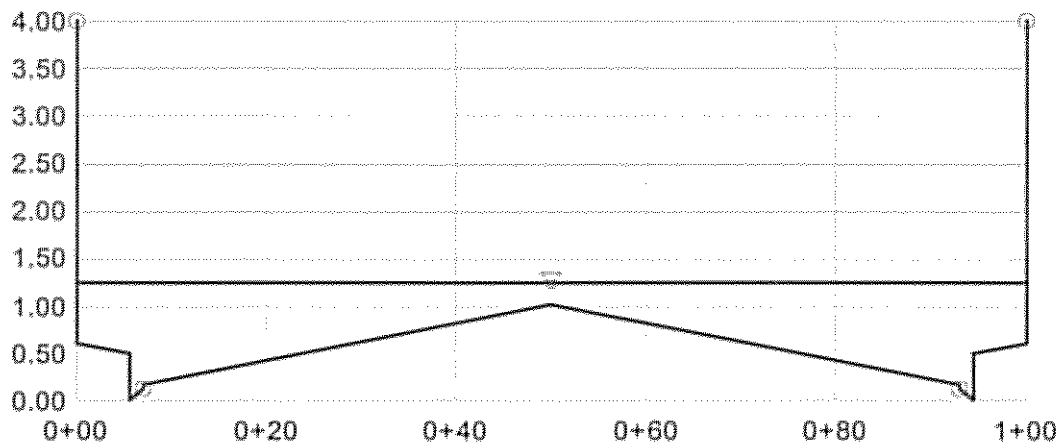
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Page 1

7-7_WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	WS2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0067 ft/ft
Water Surface Elevation	1.24 ft
Elevation Range	0.00 to 4.00
Discharge	381.00 cfs



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8-8_SUNSET ROAD 200'NW of WATER STREET 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	SUNSET1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0125 ft/ft
Discharge	46.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.4 ft ²
Wetted Perimeter	59.86 ft
Top Width	58.72 ft
Actual Depth	0.62 ft
Critical Elevation	0.68 ft
Critical Slope	0.0058 ft/ft
Velocity	3.71 ft/s
Velocity Head	0.21 ft
Specific Energy	0.83 ft
Froude Number	1.42
Flow Type	Supercritical

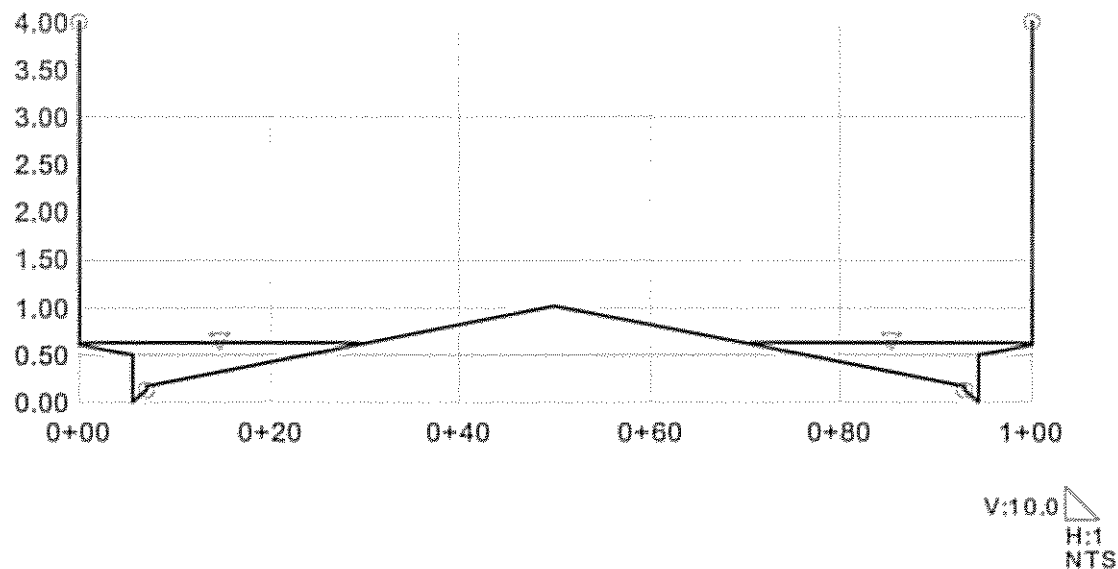
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

8-8_SUNSET ROAD 200'NW of WATER STREET 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	SUNSET1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0125 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	46.00 cfs



8-8_SUNSET ROAD 200'NW of WATER STREET 100-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	SUNSET1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0125 ft/ft
Discharge	137.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.83 ft
Elevation Range	0.00 to 4.00
Flow Area	27.1 ft²
Wetted Perimeter	81.51 ft
Top Width	79.94 ft
Actual Depth	0.83 ft
Critical Elevation	0.95 ft
Critical Slope	0.0050 ft/ft
Velocity	5.05 ft/s
Velocity Head	0.40 ft
Specific Energy	1.23 ft
Froude Number	1.53
Flow Type	Supercritical

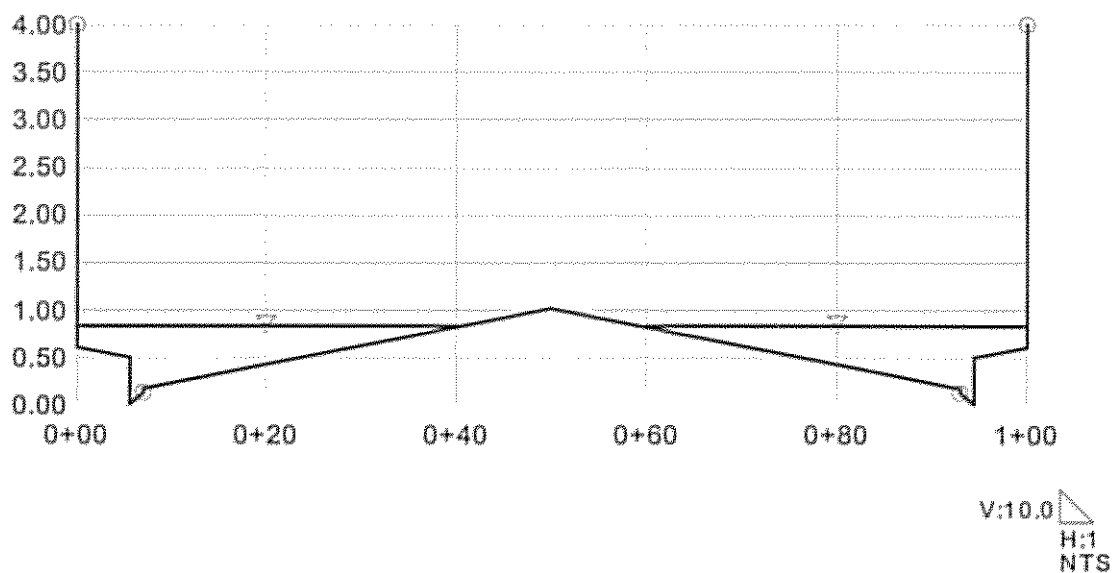
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

8-8_SUNSET ROAD 200'NW of WATER STREET 100-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	SUNSET1 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0125 ft/ft
Water Surface Elevation	0.83 ft
Elevation Range	0.00 to 4.00
Discharge	137.00 cfs



9-9_SUNSET ROAD 200'NW of EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0125 ft/ft
Discharge	71.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.69 ft
Elevation Range	0.00 to 4.00
Flow Area	16.9 ft ²
Wetted Perimeter	67.26 ft
Top Width	65.97 ft
Actual Depth	0.69 ft
Critical Elevation	0.77 ft
Critical Slope	0.0055 ft/ft
Velocity	4.20 ft/s
Velocity Head	0.27 ft
Specific Energy	0.96 ft
Froude Number	1.46
Flow Type	Supercritical

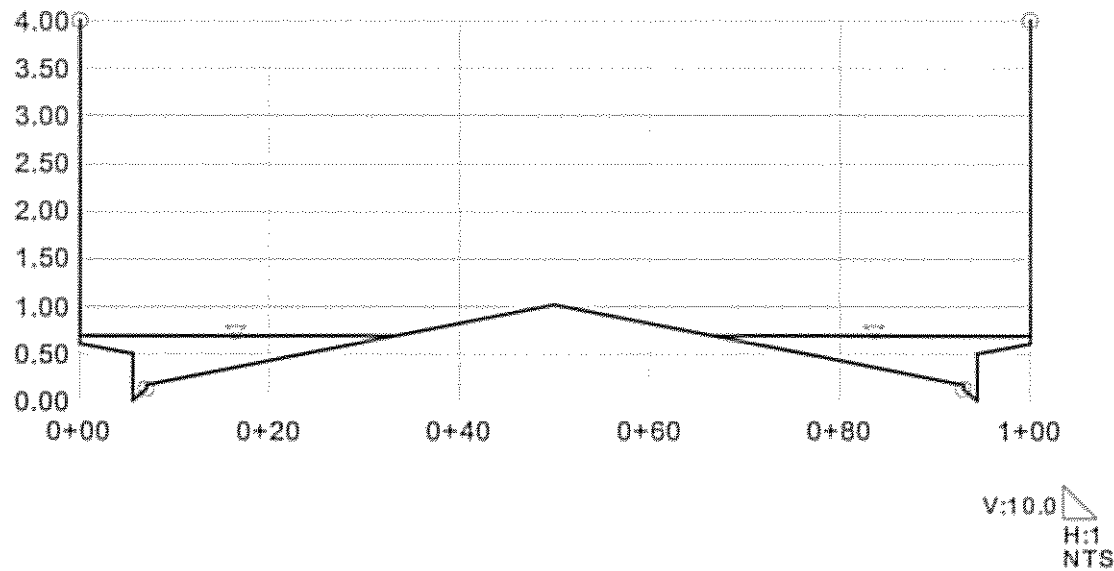
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

9-9_SUNSET ROAD 200'NW of EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0125 ft/ft
Water Surface Elevation	0.89 ft
Elevation Range	0.00 to 4.00
Discharge	71.00 cfs



9-9_SUNSET ROAD 200'NW of EASTSIDE REAL ESTATE PARKWAY 100-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0125 ft/ft
Discharge	233.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.98 ft
Elevation Range	0.00 to 4.00
Flow Area	39.8 ft ²
Wetted Perimeter	96.38 ft
Top Width	94.52 ft
Actual Depth	0.98 ft
Critical Elevation	1.13 ft
Critical Slope	0.0045 ft/ft
Velocity	5.85 ft/s
Velocity Head	0.53 ft
Specific Energy	1.51 ft
Froude Number	1.59
Flow Type	Supercritical

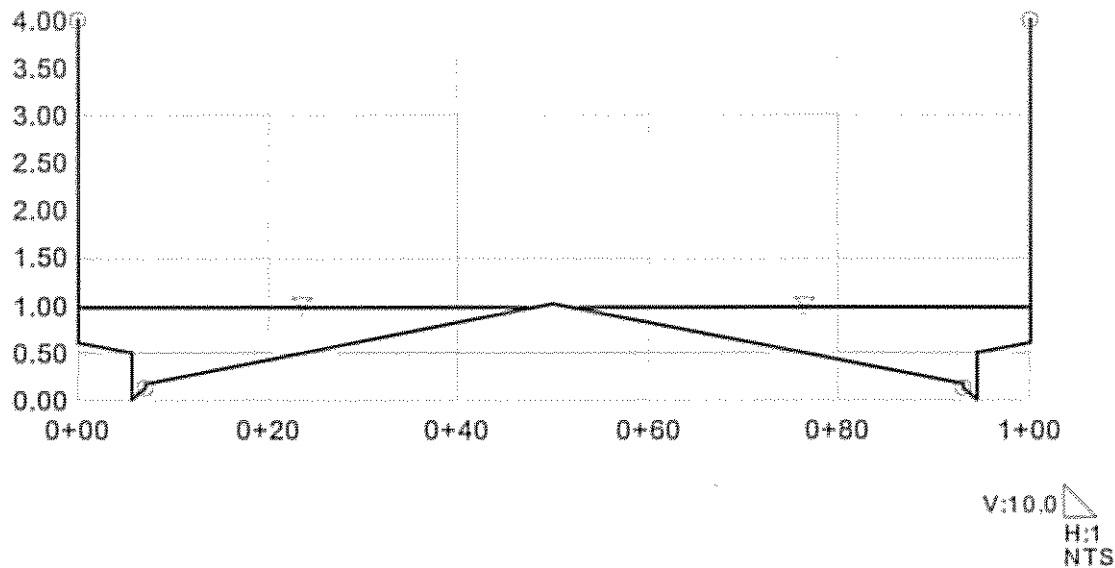
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

9-9_SUNSET ROAD 200'NW of EASTSIDE REAL ESTATE PARKWAY 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET2 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0125 ft/ft
Water Surface Elevation	0.98 ft
Elevation Range	0.00 to 4.00
Discharge	233.00 cfs



10-10_SUNSET ROAD AT BURKHOLDER BOULEVARD 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0143 ft/ft
Discharge	90.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	19.1 ft ²
Wetted Perimeter	70.56 ft
Top Width	69.20 ft
Actual Depth	0.72 ft
Critical Elevation	0.83 ft
Critical Slope	0.0053 ft/ft
Velocity	4.71 ft/s
Velocity Head	0.34 ft
Specific Energy	1.07 ft
Froude Number	1.58
Flow Type	Supercritical

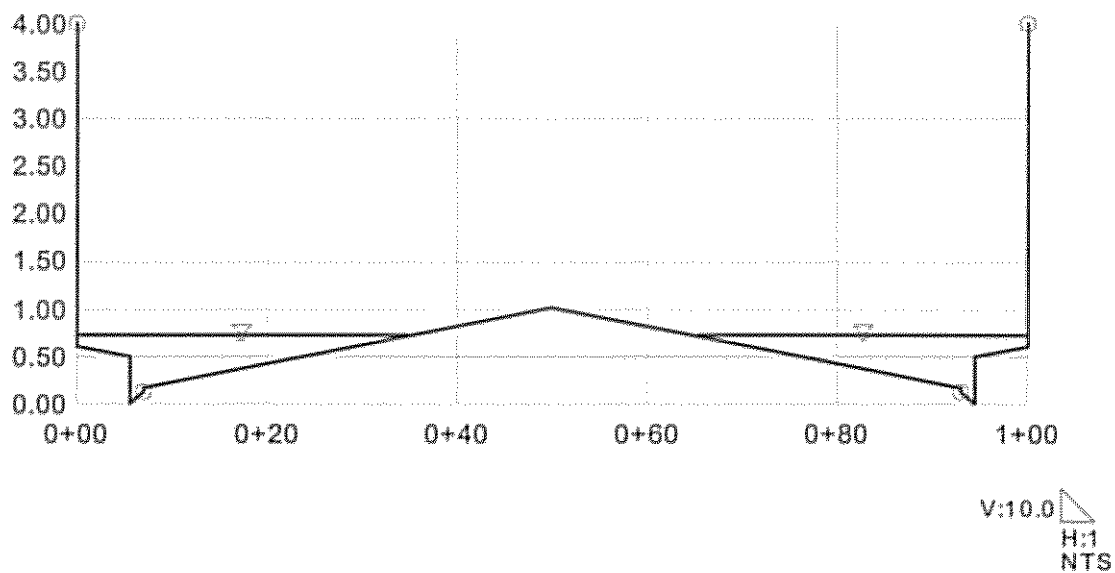
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

10-10_SUNSET ROAD AT BURKHOLDER BOULEVARD 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0143 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	90.00 cfs



10-10_SUNSET ROAD 2000'SE of BURKHOLDER BOULEVARD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET3 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0143 ft/ft
Discharge	380.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	1.10 ft
Elevation Range	0.00 to 4.00
Flow Area	52.5 ft ²
Wetted Perimeter	102.12 ft
Top Width	100.00 ft
Actual Depth	1.10 ft
Critical Elevation	1.34 ft
Critical Slope	0.0041 ft/ft
Velocity	7.23 ft/s
Velocity Head	0.81 ft
Specific Energy	1.92 ft
Froude Number	1.76
Flow Type	Supercritical

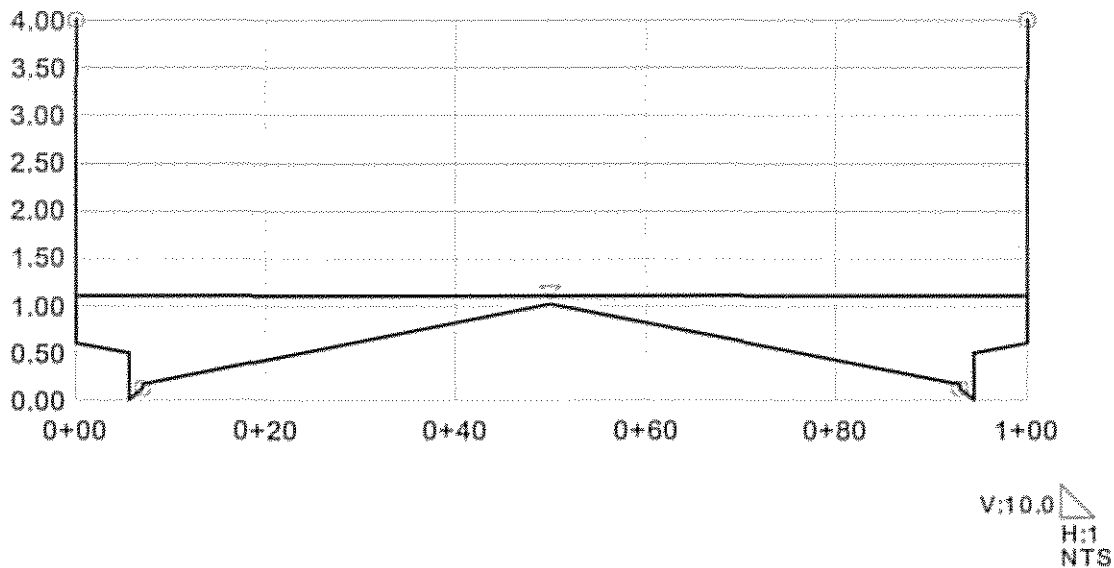
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

10-10_SUNSET ROAD 2000'SE of BURKHOLDER BOULEVARD 100-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	SUNSET3 100YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0143 ft/R
Water Surface Elevation	1.10 ft
Elevation Range	0.00 to 4.00
Discharge	380.00 cfs



11-11_EASTSIDE REAL ESTATE PARKWAY 3100'S of ATHENS AVENUE 10-YR (80' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	EASTSIDE REAL ESTATE PARKWAY 10YR 80' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0200 ft/ft
Discharge	10.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.013
Water Surface Elevation	0.35 ft
Elevation Range	0.00 to 4.00
Flow Area	2.6 ft ²
Wetted Perimeter	22.40 ft
Top Width	21.59 ft
Actual Depth	0.35 ft
Critical Elevation	0.43 ft
Critical Slope	0.0048 ft/ft
Velocity	3.83 ft/s
Velocity Head	0.23 ft
Specific Energy	0.58 ft
Froude Number	1.94
Flow Type	Supercritical

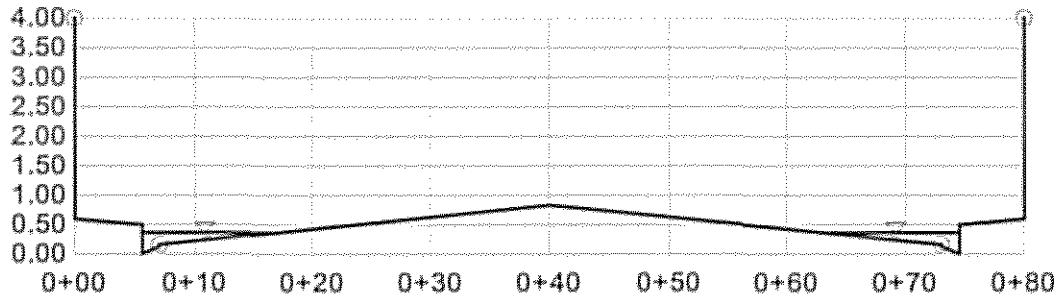
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.013
0+07	0+73	0.016
0+73	0+80	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+40	0.83
0+73	0.17
0+73	0.13
0+75	0.00
0+75	0.50
0+80	0.60
0+80	4.00

11-11_EASTSIDE REAL ESTATE PARKWAY 3100'S of ATHENS AVENUE 10-YR (80' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	EASTSIDE REAL ESTATE PARKWAY 10YR 80' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.013
Slope	0.0200 ft/ft
Water Surface Elevation	0.35 ft
Elevation Range	0.00 to 4.00
Discharge	10.00 cfs



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11-11_EASTSIDE REAL ESTATE PARKWAY 3100'S of ATHENS AVENUE 100-YR (80' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	EASTSIDE REAL ESTATE PARKWAY 100YR 80' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0200 ft/ft
Discharge	44.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.015
Water Surface Elevation	0.57 ft
Elevation Range	0.00 to 4.00
Flow Area	9.7 ft ²
Wetted Perimeter	51.51 ft
Top Width	50.41 ft
Actual Depth	0.57 ft
Critical Elevation	0.67 ft
Critical Slope	0.0056 ft/ft
Velocity	4.51 ft/s
Velocity Head	0.32 ft
Specific Energy	0.88 ft
Froude Number	1.81
Flow Type	Supercritical

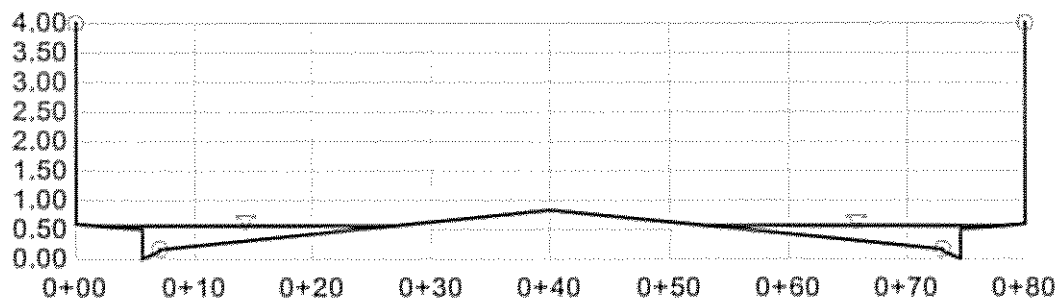
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.013
0+07	0+73	0.016
0+73	0+80	0.013

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+40	0.83
0+73	0.17
0+73	0.13
0+75	0.00
0+75	0.50
0+80	0.60
0+80	4.00

11-11_EASTSIDE REAL ESTATE PARKWAY 3100'S of ATHENS AVENUE 100-YR (80' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	EASTSIDE REAL ESTATE PARKWAY 100YR 80' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.015
Slope	0.0200 ft/ft
Water Surface Elevation	0.57 ft
Elevation Range	0.00 to 4.00
Discharge	44.00 cfs



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12-12_WATER STREET 150'SW of MOHAWK DRIVE 10-YR (100' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	WATER2 10YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	65.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.70 ft
Elevation Range	0.00 to 4.00
Flow Area	17.5 ft ²
Wetted Perimeter	68.15 ft
Top Width	66.84 ft
Actual Depth	0.70 ft
Critical Elevation	0.75 ft
Critical Slope	0.0062 ft/ft
Velocity	3.71 ft/s
Velocity Head	0.21 ft
Specific Energy	0.91 ft
Froude Number	1.28
Flow Type	Supercritical

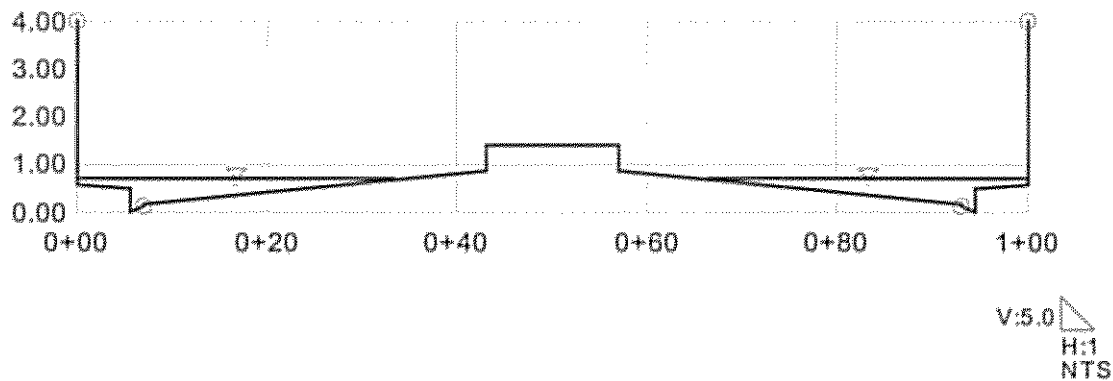
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.017
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+43	0.89
0+43	1.39
0+57	1.39
0+57	0.89
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

12-12_WATER STREET 150'SW of MOHAWK DRIVE 10-YR (100' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	WATER2 10YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0105 ft/ft
Water Surface Elevation	0.70 ft
Elevation Range	0.00 to 4.00
Discharge	65.00 cfs



12-12_WATER STREET 150'SW of MOHAWK DRIVE 100-YR (100' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	WATER2 100YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	233.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.00 ft
Elevation Range	0.00 to 4.00
Flow Area	41.7 ft ²
Wetted Perimeter	88.14 ft
Top Width	86.00 ft
Actual Depth	1.00 ft
Critical Elevation	1.13 ft
Critical Slope	0.0049 ft/ft
Velocity	5.58 ft/s
Velocity Head	0.48 ft
Specific Energy	1.49 ft
Froude Number	1.41
Flow Type	Supercritical

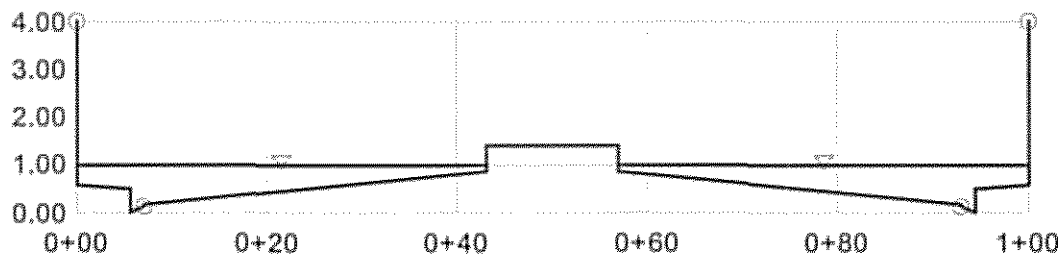
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.017
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+43	0.89
0+43	1.39
0+57	1.39
0+57	0.89
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

12-12_WATER STREET 150'SW of MOHAWK DRIVE 100-YR (100' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	WATER2 100YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0105 ft/ft
Water Surface Elevation	1.00 ft
Elevation Range	0.00 to 4.00
Discharge	233.00 cfs



V:5.0
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NTS

13-13_ATHENS AVENUE 100'W of MOHAWK DRIVE 10-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN1 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0137 ft/ft
Discharge	105.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Flow Area	23.7 ft ²
Wetted Perimeter	86.07 ft
Top Width	84.71 ft
Actual Depth	0.72 ft
Critical Elevation	0.82 ft
Critical Slope	0.0059 ft/ft
Velocity	4.43 ft/s
Velocity Head	0.31 ft
Specific Energy	1.03 ft
Froude Number	1.48
Flow Type	Supercritical

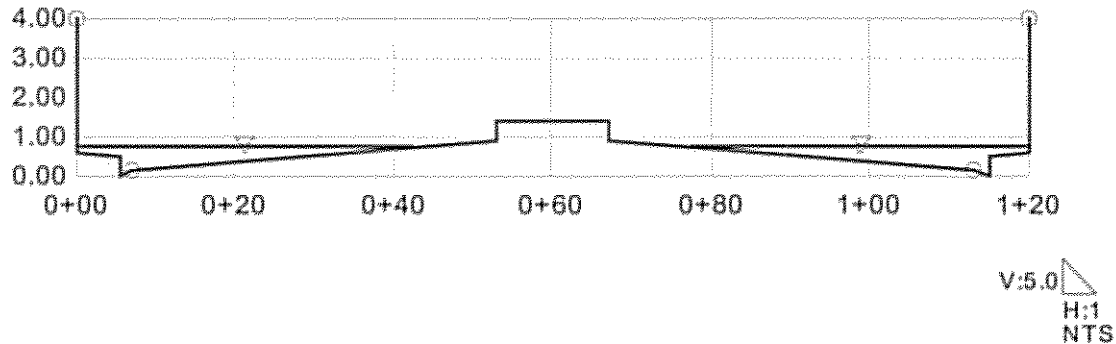
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

13-13_ATHENS AVENUE 100'W of MOHAWK DRIVE 10-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN1 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0137 ft/ft
Water Surface Elevation	0.72 ft
Elevation Range	0.00 to 4.00
Discharge	105.00 cfs



**13-13_ATHENS AVENUE 100'W of MOHAWK DRIVE 100-YR
(120' ROW w/ MEDIAN) Worksheet for Irregular Channel**

Project Description	
Worksheet	ATHEN1 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0137 ft/ft
Discharge	449.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.10 ft
Elevation Range	0.00 to 4.00
Flow Area	62.3 ft²
Wetted Perimeter	108.54 ft
Top Width	106.00 ft
Actual Depth	1.10 ft
Critical Elevation	1.34 ft
Critical Slope	0.0045 ft/ft
Velocity	7.21 ft/s
Velocity Head	0.81 ft
Specific Energy	1.91 ft
Froude Number	1.66
Flow Type	Supercritical

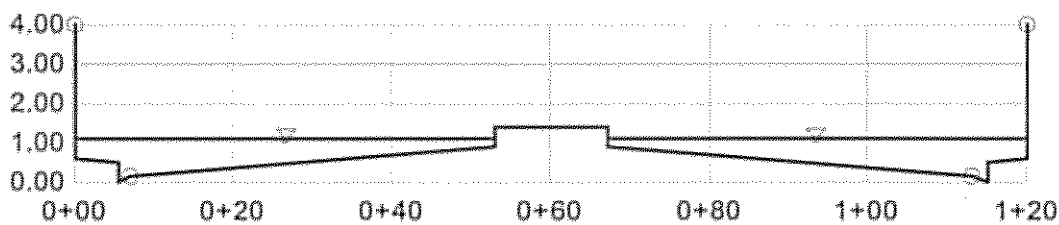
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

13-13_ATHENS AVENUE 100'W of MOHAWK DRIVE 100-YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	ATHEN1 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0137 ft/ft
Water Surface Elevation	1.10 ft
Elevation Range	0.00 to 4.00
Discharge	449.00 cfs



V:5.0
H:1
NTS

**14-14_ATHENS AVENUE 200'W of EASTSIDE REAL ESTATE PARKWAY 10-YR
(120' ROW w/ MEDIAN)
Worksheet for Irregular Channel**

Project Description	
Worksheet	ATHEN2 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	55.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

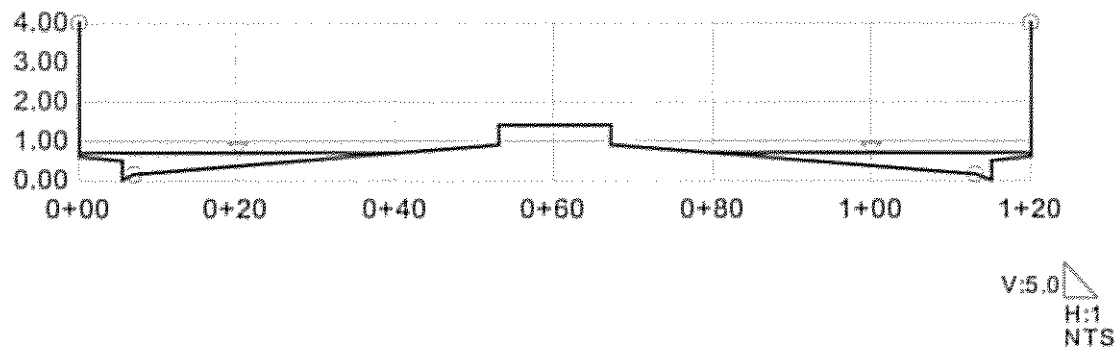
Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.69 ft
Elevation Range	0.00 to 4.00
Flow Area	21.0 ft²
Wetted Perimeter	81.83 ft
Top Width	80.54 ft
Actual Depth	0.69 ft
Critical Elevation	0.67 ft
Critical Slope	0.0065 ft/ft
Velocity	2.62 ft/s
Velocity Head	0.11 ft
Specific Energy	0.80 ft
Froude Number	0.90
Flow Type	Subcritical

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

**14-14_ATHENS AVENUE 200'W of EASTSIDE REAL ESTATE PARKWAY 10-YR
(120' ROW w/ MEDIAN)
Worksheet for Irregular Channel**

Project Description	
Worksheet	ATHEN2 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth
Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	0.69 ft
Elevation Range	0.00 to 4.00
Discharge	55.00 cfs



**14-14_ATHENS AVENUE 200'W of EASTSIDE REAL ESTATE PARKWAY 100-YR
(120' ROW w/ MEDIAN) Worksheet for Irregular Channel**

Project Description	
Worksheet	ATHEN2 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	540.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Flow Area	97.7 ft ²
Wetted Perimeter	123.77 ft
Top Width	120.00 ft
Actual Depth	1.43 ft
Critical Elevation	1.48 ft
Critical Slope	0.0044 ft/ft
Velocity	5.53 ft/s
Velocity Head	0.47 ft
Specific Energy	1.91 ft
Froude Number	1.08
Flow Type	Supercritical

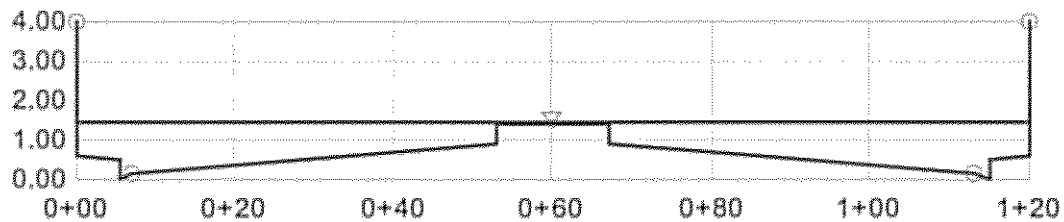
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	0.89
0+53	1.39
0+67	1.39
0+67	0.89
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

**14-14_ATHENS AVENUE 200'W of EASTSIDE REAL ESTATE PARKWAY 100-YR
(120' ROW w/ MEDIAN) Worksheet for Irregular Channel**

Project Description	
Worksheet	ATHEN2 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Discharge	540.00 cfs



V:5.0
H:1
NTS

Appendix B-2: Flowmaster-Storm Drain Systems

Street and Storm Drain System Distribution

Location	Minor Storm (Q10)					Major Storm (Q100)				
	¹ Q10 (cfs)	Q10- STREET (cfs)	² Q10 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)	¹ Q100 (cfs)	Q100- STREET (cfs)	² Q100 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)
1-1 Burkholder 100' N of Water	119	119	-	-	-	269	269	-	-	-
2-2 Burkholder 1500' N of Warm Springs	103	75	28	831*	859	227	227	-	926*	926
3-3 Burkholder 3200' N of Warm Springs	215	75	140	859	999	588	405	183	926	1109
4-4 Burkholder 150' N of Sunset	308	92	216	999	1273**	1139	370	769	1109	1915**
5-5 Burkholder 100' N of Athens	438	55	383	1273	1970***	1582	540	1042	1915	3351***
6-6 Warm Springs 250' N of Water	135	74	61	-	61	296	296	-	-	-
7-7 Warm Springs 200' W of Eastside	110	62	48	61	109	381	381	-	-	-
8-8 Sunset 200' NW Water	46	46	-	-	-	137	137	-	-	-
9-9 Sunset 200" NW Eastside	71	71	-	-	-	233	233	-	-	-
10-10 Sunset 2000' SE of Burkholder	148	90	58	-	58	417	380	37	-	37
11-11 Eastside 3100' S of Athens	10	10	-	-	-	44	44	-	-	-
12-12 Water 150' SW of Mohawk	94	65	29	-	29	233	233	-	-	-
13-13 Athens 100' W of Mohawk	134	105	29	29	58	449	449	-	-	-
14-14 Athens 200' W of Eastside	311	55	256	58	314	934	540	394	-	394

Storm Drain System
Line A
Line B
Line C
Line D

Line A
Line B
Line C
Line D

* Represents the outflow and bypass discharge from detention basin 1

** Represents Inflow from LINE C

*** Represents Inflow from LINE D

¹ Represents the summation of the HEC-1 output for the 10-Year and 100-Year Storm Events for each contributing basin and negates losses due to routing the flows

² Q10 PIPE/ Q100 PIPE= Q10/Q100 - Q10 STREET/ Q100 STREET

Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Full Flow Capacity

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.01050 ft/ft
Normal Depth: 4.00 ft
Height: 4.00 ft
Bottom Width: 6.00 ft
Discharge: 275.10 ft³/s

Results

Flow Area: 24.00 ft²
Wetted Perimeter: 20.00 ft
Top Width: 6.00 ft
Critical Depth: 4.03 ft
Critical Slope: 0.00641 ft/ft
Velocity: 11.46 ft/s
Velocity Head: 2.04 ft
Specific Energy: 6.04 ft
Froude Number: 1.01
Flow Type: Supercritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 1.00 %
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 4.00 ft
Critical Depth: 4.03 ft

FLOW CAPACITY EACH BOX = 275.10 cfs

TOTAL FLOW CAPACITY = 5 X 275.10 cfs = 1375.50 cfs

ACTUAL FLOW = 1369 cfs

* RECOMMENDING 5 BOX CULVERTS TOTAL, UTILIZING
2 EXISTING BOXES.

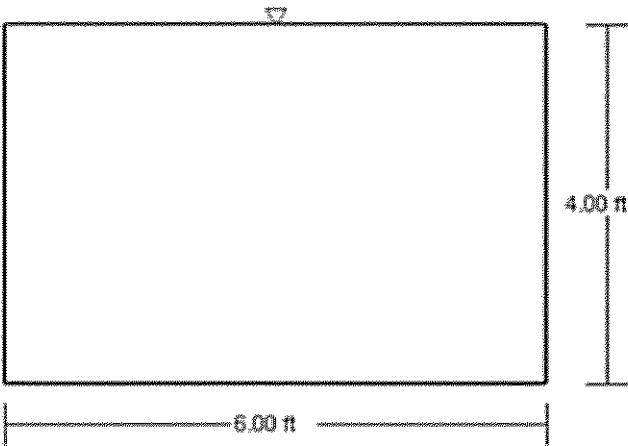
Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00641	ft/ft

Notes

Cross Section for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Full Flow Capacity	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	4.00	ft
Height:	4.00	ft
Bottom Width:	6.00	ft
Discharge:	275.10	ft³/s



V: 1 
H: 1

Worksheet for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1369.00	ft ³ /s

Results

Normal Depth:	6.69	ft
Flow Area:	66.91	ft ²
Wetted Perimeter:	23.38	ft
Top Width:	10.00	ft
Critical Depth:	8.35	ft
Critical Slope:	0.00599	ft/ft
Velocity:	20.46	ft/s
Velocity Head:	6.51	ft
Specific Energy:	13.20	ft
Froude Number:	1.39	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.67	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.69	ft
Critical Depth:	8.35	ft

Worksheet for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00599	ft/ft

Notes

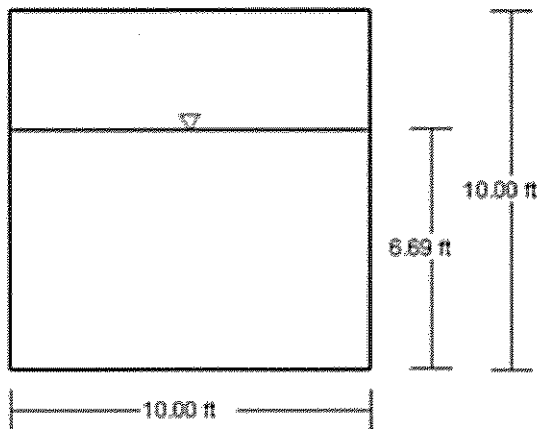
Cross Section for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.69	ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1369.00	ft ³ /s



V:1 
H:1

Worksheet for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road**Project Description**

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	8.00	ft
Discharge:	926.00	ft ³ /s

Results

Normal Depth:	6.49	ft
Flow Area:	43.69	ft ²
Wetted Perimeter:	17.95	ft
Top Width:	6.26	ft
Critical Depth:	7.38	ft
Percent Full:	81.1	%
Critical Slope:	0.00894	ft/ft
Velocity:	21.20	ft/s
Velocity Head:	6.98	ft
Specific Energy:	13.47	ft
Froude Number:	1.41	
Maximum Discharge:	1005.30	ft ³ /s
Discharge Full:	934.55	ft ³ /s
Slope Full:	0.01031	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.81	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.49	ft
Critical Depth:	7.38	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00894	ft/ft

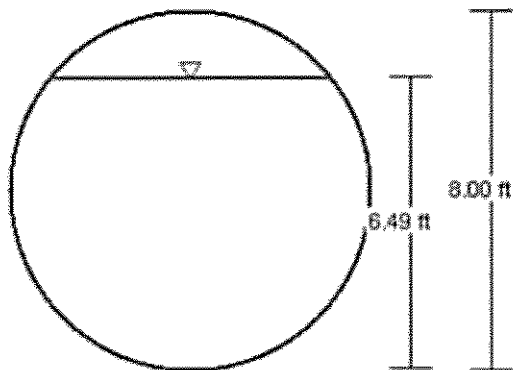
Cross Section for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.013
Channel Slope: 0.01050 ft/ft
Normal Depth: 6.49 ft
Diameter: 8.00 ft
Discharge: 925.00 ft³/s



V: 1
H: 1

Worksheet for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	926.00	ft ³ /s

Results

Normal Depth:	6.28	ft
Flow Area:	50.28	ft ²
Wetted Perimeter:	20.57	ft
Top Width:	8.00	ft
Critical Depth:	7.47	ft
Critical Slope:	0.00683	ft/ft
Velocity:	18.42	ft/s
Velocity Head:	5.27	ft
Specific Energy:	11.56	ft
Froude Number:	1.30	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.79	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.28	ft
Critical Depth:	7.47	ft

Worksheet for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00683	ft/ft

Notes

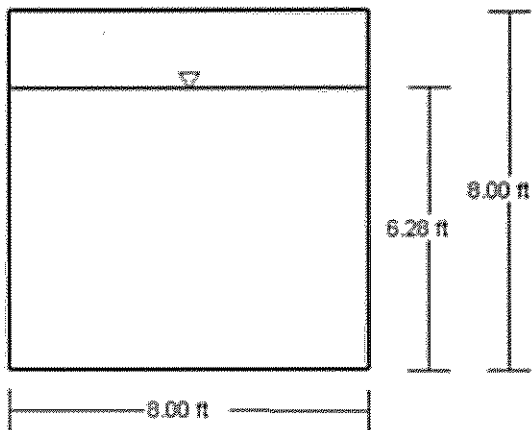
Cross Section for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.28	ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	926.00	ft ³ /s



V: 1
H: 1

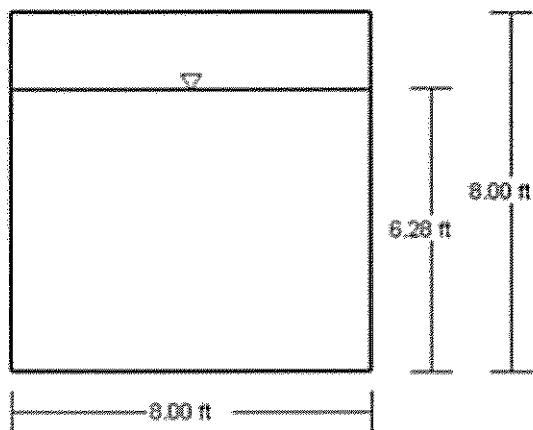
Cross Section for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.01050 ft/ft
Normal Depth: 6.28 ft
Height: 8.00 ft
Bottom Width: 8.00 ft
Discharge: 926.00 ft³/s



V: 1
H: 1

Worksheet for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road**Project Description**

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	8.00	ft
Discharge:	977.00	ft ³ /s

Results

Normal Depth:	6.94	ft
Flow Area:	46.33	ft ²
Wetted Perimeter:	19.18	ft
Top Width:	5.42	ft
Critical Depth:	7.48	ft
Percent Full:	86.8	%
Critical Slope:	0.00992	ft/ft
Velocity:	21.09	ft/s
Velocity Head:	6.91	ft
Specific Energy:	13.85	ft
Froude Number:	1.27	
Maximum Discharge:	1005.30	ft ³ /s
Discharge Full:	934.55	ft ³ /s
Slope Full:	0.01148	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.87	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.94	ft
Critical Depth:	7.48	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00992	ft/ft

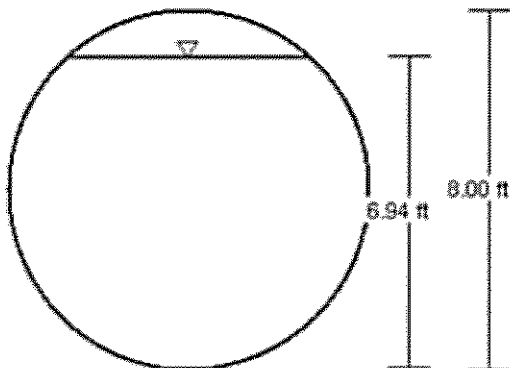
Cross Section for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.013
Channel Slope: 0.01050 ft/ft
Normal Depth: 6.94 ft
Diameter: 8.00 ft
Discharge: 977.00 ft³/s



V: 1
H: 1

Worksheet for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road**Project Description**

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	977.00	ft ³ /s

Results

Normal Depth:	6.56	ft
Flow Area:	52.47	ft ²
Wetted Perimeter:	21.12	ft
Top Width:	8.00	ft
Critical Depth:	7.74	ft
Critical Slope:	0.00696	ft/ft
Velocity:	18.62	ft/s
Velocity Head:	5.39	ft
Specific Energy:	11.95	ft
Froude Number:	1.28	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.82	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.56	ft
Critical Depth:	7.74	ft

Worksheet for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00696	ft/ft

Notes

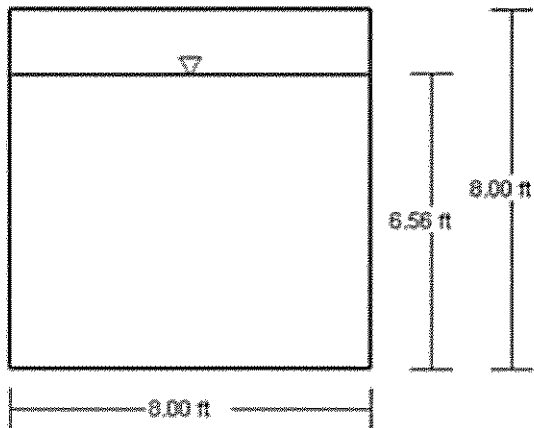
Cross Section for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.01050 ft/ft
Normal Depth: 6.56 ft
Height: 8.00 ft
Bottom Width: 8.00 ft
Discharge: 977.00 ft³/s



V: 1
H: 1

Worksheet for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road**Project Description**

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00900	ft/ft
Diameter:	12.00	ft
Discharge:	1915.00	ft ³ /s

Results

Normal Depth:	7.76	ft
Flow Area:	77.35	ft ²
Wetted Perimeter:	22.42	ft
Top Width:	11.47	ft
Critical Depth:	10.00	ft
Percent Full:	64.7	%
Critical Slope:	0.00493	ft/ft
Velocity:	24.76	ft/s
Velocity Head:	9.53	ft
Specific Energy:	17.28	ft
Froude Number:	1.68	
Maximum Discharge:	2744.10	ft ³ /s
Discharge Full:	2550.98	ft ³ /s
Slope Full:	0.00507	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

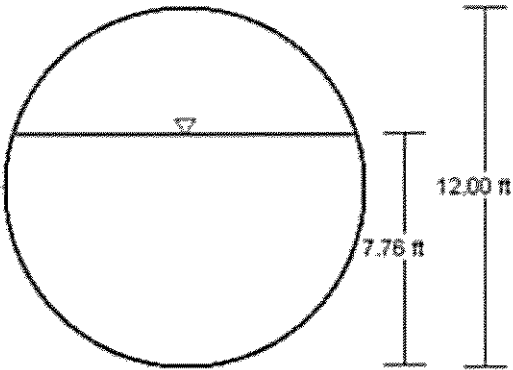
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.65	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	7.76	ft
Critical Depth:	10.00	ft
Channel Slope:	0.00900	ft/ft
Critical Slope:	0.00493	ft/ft

Cross Section for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.00900	ft/ft
Normal Depth:	7.76	ft
Diameter:	12.00	ft
Discharge:	1915.00	ft³/s



V:1
H:1

Worksheet for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01250	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1915.00	ft ³ /s

Results

Normal Depth:	8.14	ft
Flow Area:	81.38	ft ²
Wetted Perimeter:	26.28	ft
Top Width:	10.00	ft
Critical Depth:	10.45	ft
Critical Slope:	0.00675	ft/ft
Velocity:	23.53	ft/s
Velocity Head:	8.61	ft
Specific Energy:	16.74	ft
Froude Number:	1.45	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.81	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	8.14	ft
Critical Depth:	10.45	ft

Worksheet for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Channel Slope:	0.01250	ft/ft
Critical Slope:	0.00675	ft/ft

Notes

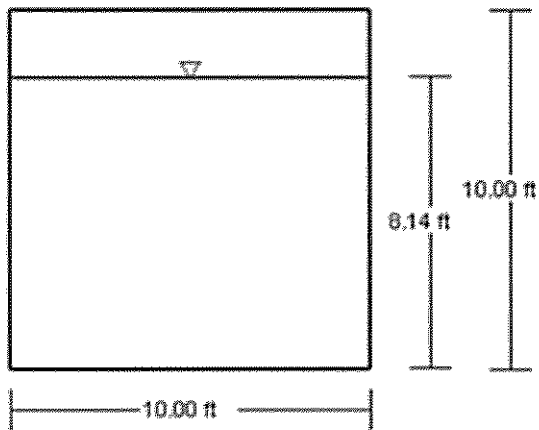
Cross Section for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01250	ft/ft
Normal Depth:	8.14	ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1915.00	ft ³ /s



V:1 
H:1

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description

Flow Element: Box Pipe
 Friction Method: Manning Formula
 Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
 Channel Slope: 0.01000 ft/ft
 Height: 12.00 ft
 Bottom Width: 12.00 ft
 Discharge: 3351.00 ft³/s

Results

Normal Depth: 11.33 ft
 Flow Area: 135.99 ft²
 Wetted Perimeter: 34.67 ft
 Top Width: 12.00 ft
 Critical Depth: 13.43 ft
 Critical Slope: 0.00661 ft/ft
 Velocity: 24.64 ft/s
 Velocity Head: 9.44 ft
 Specific Energy: 20.77 ft
 Froude Number: 1.29
 Flow Type: Supercritical

GVF Input Data

Downstream Depth: 0.00 ft
 Length: 0.00 ft
 Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
 Profile Description:
 Profile Headloss: 0.00 ft
 Average End Depth Over Rise: 0.00 %
 Normal Depth Over Rise: 0.94 %
 Downstream Velocity: Infinity ft/s
 Upstream Velocity: Infinity ft/s
 Normal Depth: 11.33 ft
 Critical Depth: 13.43 ft

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Channel Slope:	0.01000	ft/ft
Critical Slope:	0.00661	ft/ft

Notes

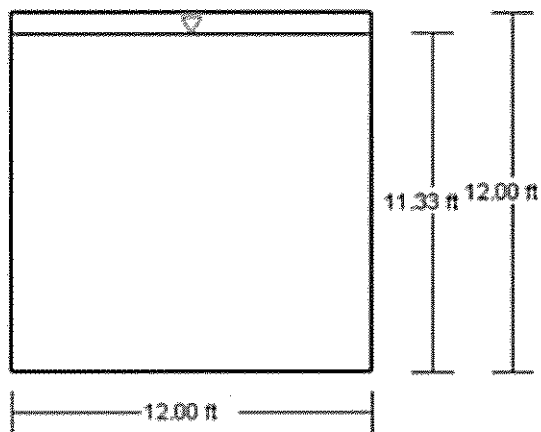
Cross Section for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01000	ft/ft
Normal Depth:	11.33	ft
Height:	12.00	ft
Bottom Width:	12.00	ft
Discharge:	3351.00	ft ³ /s



V:1  H:1

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00950	ft/ft
Diameter:	3.00	ft
Discharge:	61.00	ft ³ /s

Results

Normal Depth:	2.31	ft
Flow Area:	5.83	ft ²
Wetted Perimeter:	6.42	ft
Top Width:	2.53	ft
Critical Depth:	2.52	ft
Percent Full:	76.9	%
Critical Slope:	0.00803	ft/ft
Velocity:	10.45	ft/s
Velocity Head:	1.70	ft
Specific Energy:	4.01	ft
Froude Number:	1.21	
Maximum Discharge:	69.93	ft ³ /s
Discharge Full:	65.01	ft ³ /s
Slope Full:	0.00837	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.77	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.31	ft
Critical Depth:	2.52	ft
Channel Slope:	0.00950	ft/ft
Critical Slope:	0.00803	ft/ft

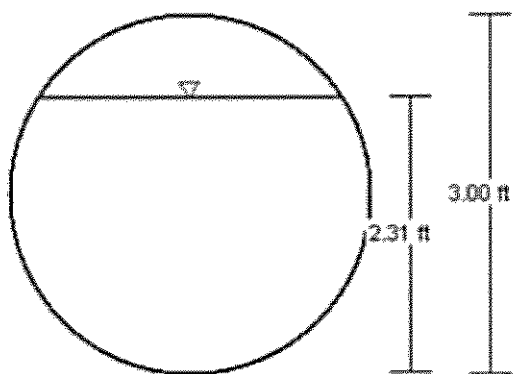
Cross Section for 6-6 Warm Springs Road 250' W of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00950	ft/ft
Normal Depth:	2.31	ft
Diameter:	3.00	ft
Discharge:	61.00	ft ³ /s



V: 1 
H: 1

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00670	ft/ft
Diameter:	4.00	ft
Discharge:	109.00	ft ³ /s

Results

Normal Depth:	3.04	ft
Flow Area:	10.26	ft ²
Wetted Perimeter:	8.48	ft
Top Width:	3.41	ft
Critical Depth:	3.16	ft
Percent Full:	76.1	%
Critical Slope:	0.00619	ft/ft
Velocity:	10.62	ft/s
Velocity Head:	1.75	ft
Specific Energy:	4.80	ft
Froude Number:	1.08	
Maximum Discharge:	126.47	ft ³ /s
Discharge Full:	117.57	ft ³ /s
Slope Full:	0.00576	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.76	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Upstream Velocity:	Infinity	ft/s
Normal Depth:	3.04	ft
Critical Depth:	3.16	ft
Channel Slope:	0.00670	ft/ft
Critical Slope:	0.00619	ft/ft

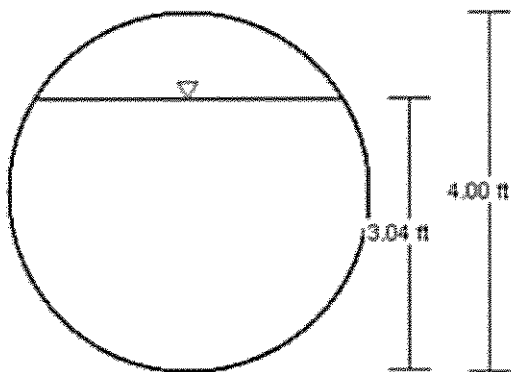
Cross Section for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00670	ft/ft
Normal Depth:	3.04	ft
Diameter:	4.00	ft
Discharge:	109.00	ft ³ /s



V: 1 
H: 1

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Diameter:	3.00	ft
Discharge:	58.00	ft ³ /s

Results

Normal Depth:	1.90	ft
Flow Area:	4.71	ft ²
Wetted Perimeter:	5.52	ft
Top Width:	2.89	ft
Critical Depth:	2.47	ft
Percent Full:	63.3	%
Critical Slope:	0.00753	ft/ft
Velocity:	12.31	ft/s
Velocity Head:	2.35	ft
Specific Energy:	4.25	ft
Froude Number:	1.70	
Maximum Discharge:	85.79	ft ³ /s
Discharge Full:	79.76	ft ³ /s
Slope Full:	0.00756	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.63	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.90	ft
Critical Depth:	2.47	ft
Channel Slope:	0.01430	ft/ft
Critical Slope:	0.00753	ft/ft

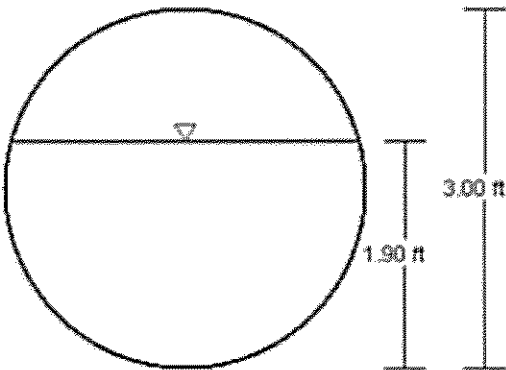
Notes

Q10 Discharge Governs

Cross Section for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description	
Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Normal Depth:	1.90	ft
Diameter:	3.00	ft
Discharge:	58.00	ft ³ /s



V:1 
H:1

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.01050 ft/ft
Diameter: 2.50 ft
Discharge: 29.00 ft³/s

Results

Normal Depth: 1.53 ft
Flow Area: 3.14 ft²
Wetted Perimeter: 4.48 ft
Top Width: 2.44 ft
Critical Depth: 1.84 ft
Percent Full: 61.1 %
Critical Slope: 0.00632 ft/ft
Velocity: 9.24 ft/s
Velocity Head: 1.33 ft
Specific Energy: 2.85 ft
Froude Number: 1.43
Maximum Discharge: 45.21 ft³/s
Discharge Full: 42.03 ft³/s
Slope Full: 0.00500 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.61 %
Downstream Velocity: Infinity ft/s

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.53	ft
Critical Depth:	1.84	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00632	ft/ft

Notes

Q10 DISCHARGE GOVERNS

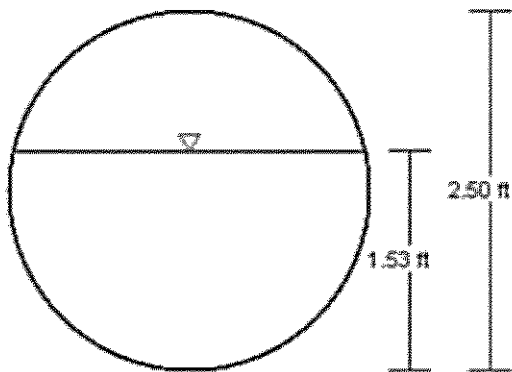
Cross Section for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	1.53	ft
Diameter:	2.50	ft
Discharge:	29.00	ft ³ /s



V:1 
H:1

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	3.00	ft
Discharge:	58.00	ft ³ /s

Results

Normal Depth:	2.12	ft
Flow Area:	5.35	ft ²
Wetted Perimeter:	6.00	ft
Top Width:	2.73	ft
Critical Depth:	2.47	ft
Percent Full:	70.7	%
Critical Slope:	0.00753	ft/ft
Velocity:	10.85	ft/s
Velocity Head:	1.83	ft
Specific Energy:	3.95	ft
Froude Number:	1.37	
Maximum Discharge:	73.52	ft ³ /s
Discharge Full:	68.34	ft ³ /s
Slope Full:	0.00756	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.71	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.12	ft
Critical Depth:	2.47	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00753	ft/ft

Notes

Q10 DISCHARGE GOVERNS

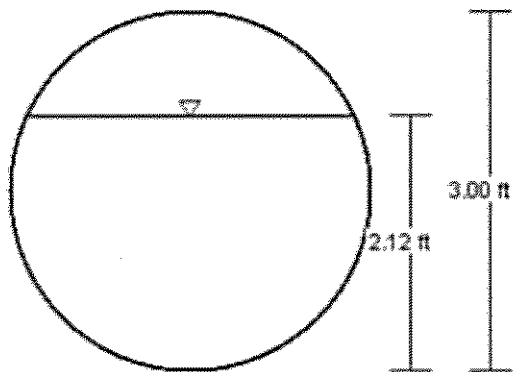
Cross Section for 13-13_Athens Avenue 100' W Mohawk Drive

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.013
Channel Slope: 0.01050 ft/ft
Normal Depth: 2.12 ft
Diameter: 3.00 ft
Discharge: 58.00 ft³/s



V:1 
H:1

Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	

Input Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.00526	ft/ft
Diameter:	6.50	ft
Discharge:	394.00	ft ³ /s

Results		
Normal Depth:	5.57	ft
Flow Area:	30.26	ft ²
Wetted Perimeter:	15.37	ft
Top Width:	4.56	ft
Critical Depth:	5.30	ft
Percent Full:	85.7	%
Critical Slope:	0.00570	ft/ft
Velocity:	13.02	ft/s
Velocity Head:	2.63	ft
Specific Energy:	8.20	ft
Froude Number:	0.89	
Maximum Discharge:	409.00	ft ³ /s
Discharge Full:	380.22	ft ³ /s
Slope Full:	0.00565	ft/ft
Flow Type:	SubCritical	

GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.86	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

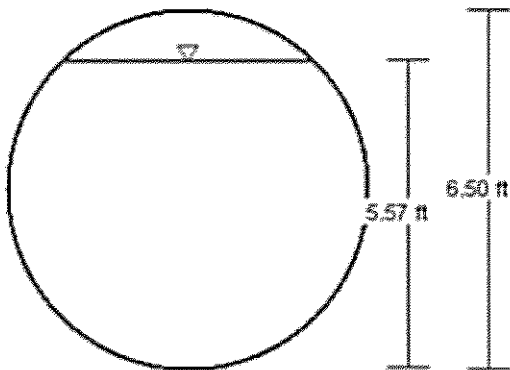
Upstream Velocity:	Infinity	ft/s
Normal Depth:	5.57	ft
Critical Depth:	5.30	ft
Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00570	ft/ft

Notes

Q100 DISCHARGE GOVERNS

Cross Section for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.00526	ft/ft
Normal Depth:	5.57	ft
Diameter:	6.50	ft
Discharge:	394.00	ft³/s



V: 1
H: 1

**Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate
Parkway**

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.00526 ft/ft
Height: 6.00 ft
Bottom Width: 6.00 ft
Discharge: 394.00 ft³/s

Results

Normal Depth: 5.80 ft
Flow Area: 34.81 ft²
Wetted Perimeter: 17.60 ft
Top Width: 6.00 ft
Critical Depth: 5.12 ft
Critical Slope: 0.00717 ft/ft
Velocity: 11.32 ft/s
Velocity Head: 1.99 ft
Specific Energy: 7.79 ft
Froude Number: 0.83
Flow Type: Subcritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.97 %
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 5.80 ft
Critical Depth: 5.12 ft

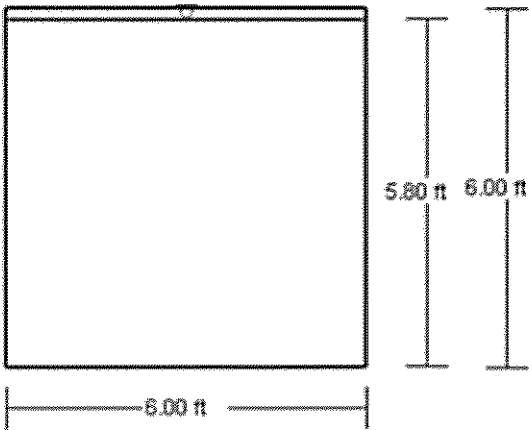
**Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate
Parkway**

Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00717	ft/ft

Notes

Cross Section for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.00526	ft/ft
Normal Depth:	5.80	ft
Height:	6.00	ft
Bottom Width:	6.00	ft
Discharge:	394.00	ft³/s

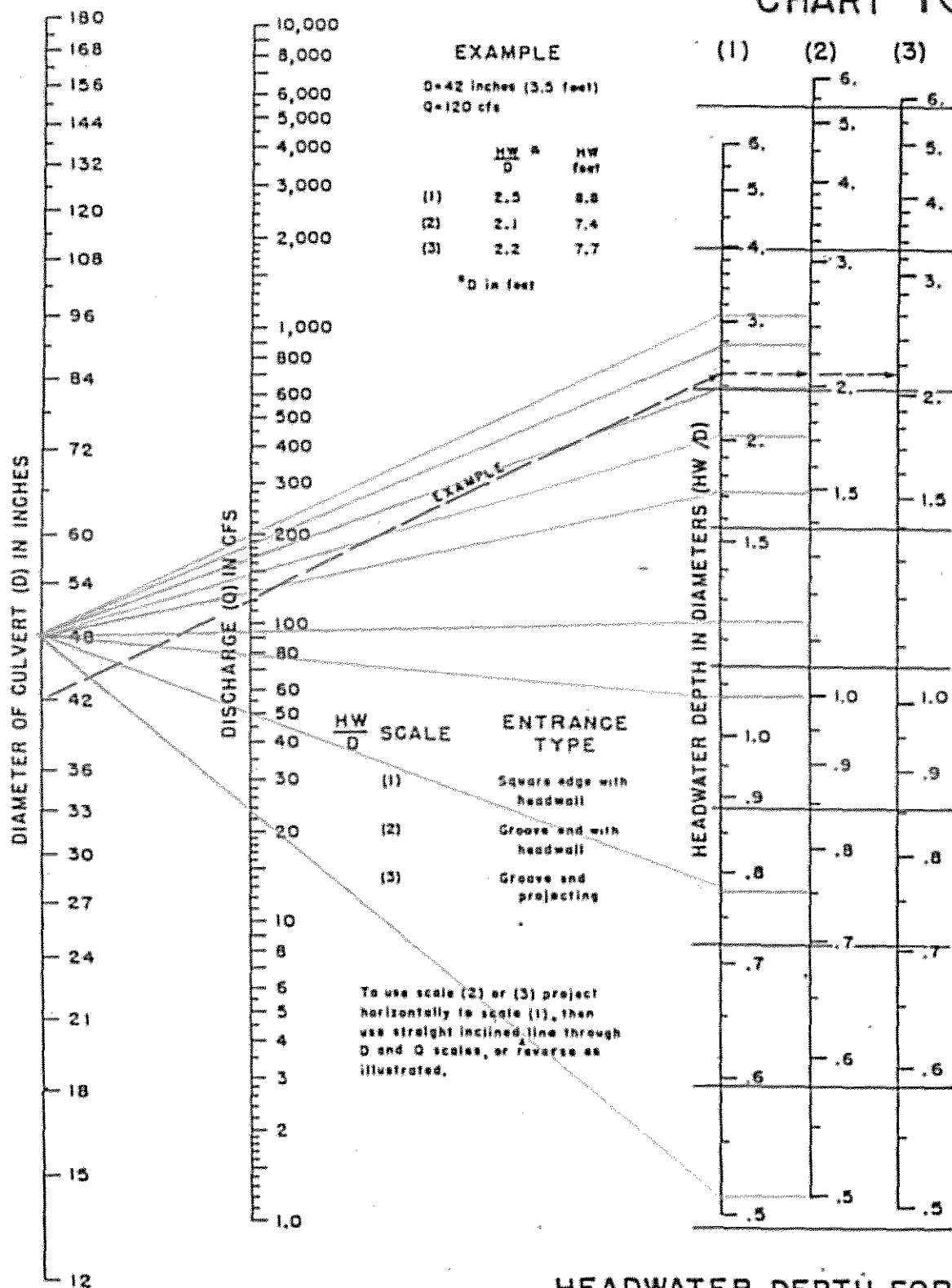


V: 1
H: 1

Appendix B-3: Detention Basins Analysis

48"

CHART 1



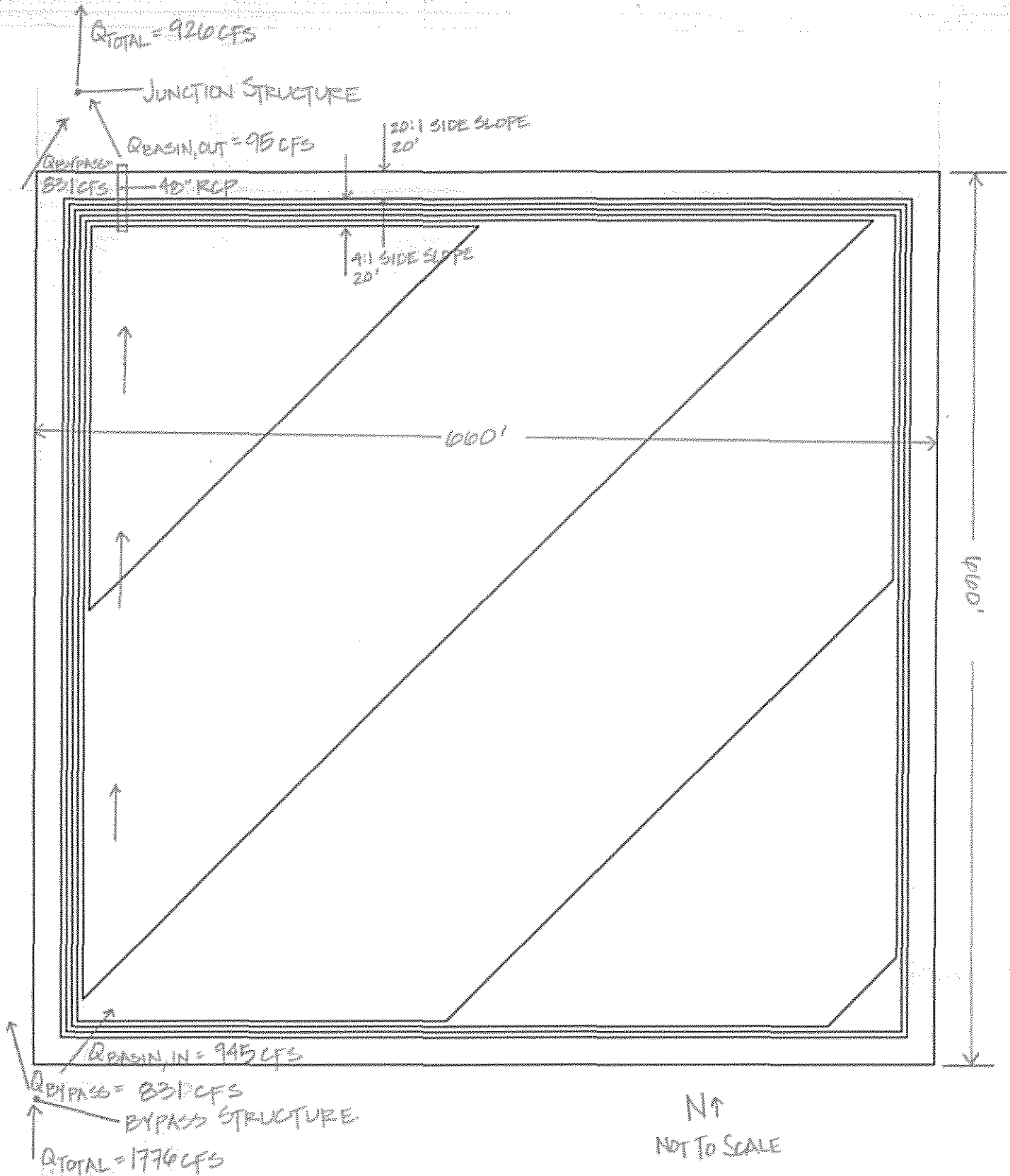
HEADWATER DEPTH FOR CONCRETE PIPE CULVERTS WITH INLET CONTROL

HEADWATER SCALES 2 & 3
REVISED MAY 1964

BUREAU OF PUBLIC ROADS JAN. 1963

DETENTION BASIN 1 - VOLUME CALCULATIONS					
SE		SA		SV	SQ
				CUMULATIVE	
STORAGE	CHANGE IN	SURFACE	INCREMENTAL	STORAGE	
ELEVATION	ELEVATION	AREA	VOLUME	VOLUME	OUTFLOW
(FT)	(FT)	(AC)	(AC-FT)	(AC-FT)	(CFS)
0.0		0.930	0.000	0.000	0.000
	2.0				
2.0		6.940	7.870	7.870	28.000
	1.0				
3.0		8.350	7.645	15.515	50.000
	1.0				
4.0		8.600	8.475	23.990	79.000
	1.0				
5.0		8.820	8.710	32.700	94.000
	1.0				
6.0		10.000	9.410	42.110	129.000

DETENTION BASIN 1
100-YEAR MAJOR STORM EVENT



Worksheet for Bypass System at Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	926.00	ft ³ /s

Results

Normal Depth:	6.28	ft
Flow Area:	50.28	ft ²
Wetted Perimeter:	20.57	ft
Top Width:	8.00	ft
Critical Depth:	7.47	ft
Critical Slope:	0.00683	ft/ft
Velocity:	18.42	ft/s
Velocity Head:	5.27	ft
Specific Energy:	11.56	ft
Froude Number:	1.30	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.79	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.28	ft
Critical Depth:	7.47	ft

Worksheet for Bypass System at Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00683	ft/ft

Notes

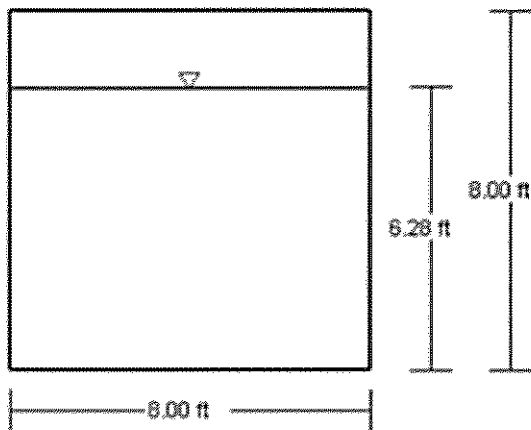
Cross Section for Bypass System at Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

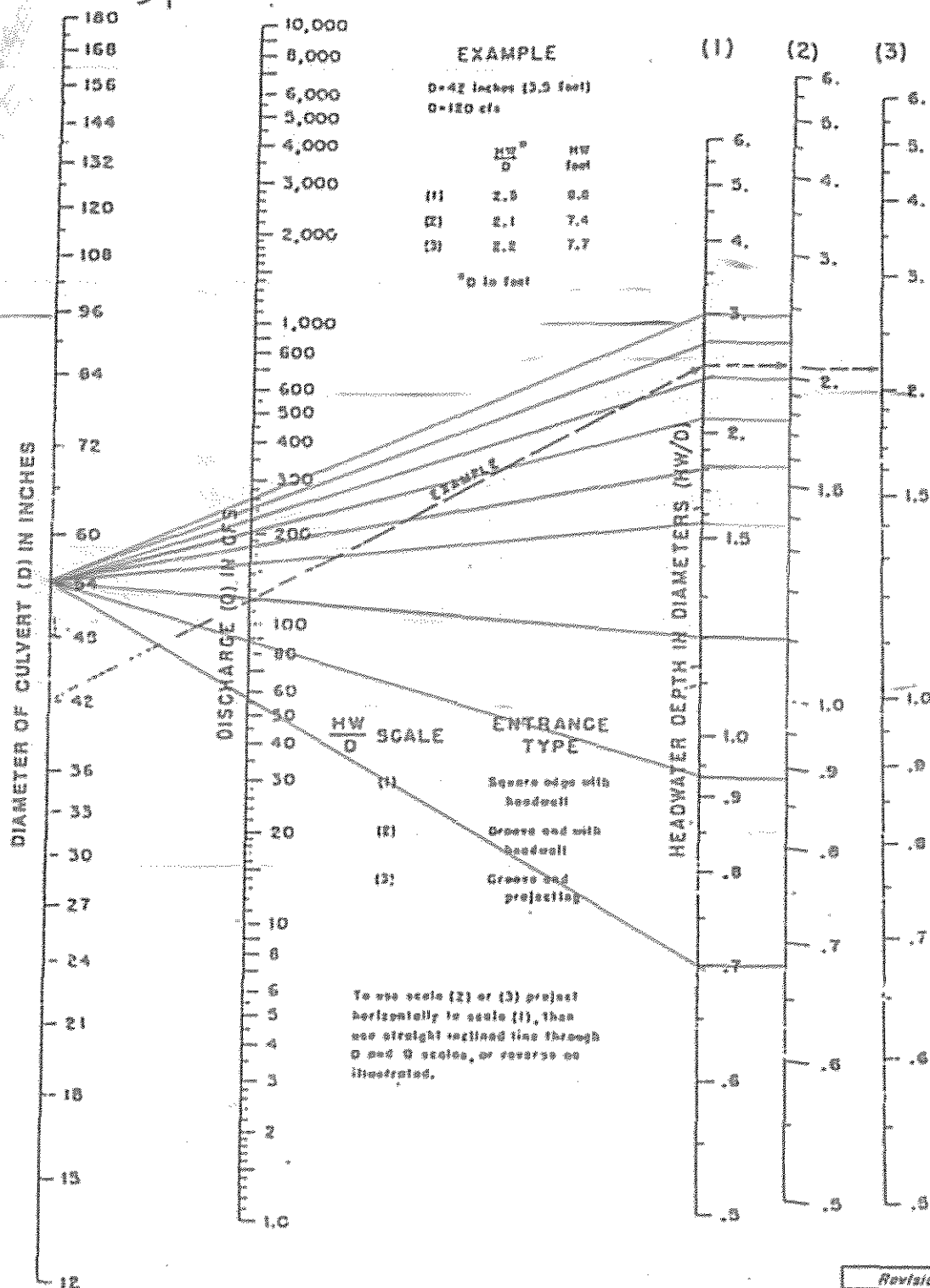
Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.28	ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	926.00	ft ³ /s



V:1 
H:1

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

NOMOGRAPH - INLET CONTROL RCP



Revision	Date

WRC
ENGINEERING

REFERENCE:

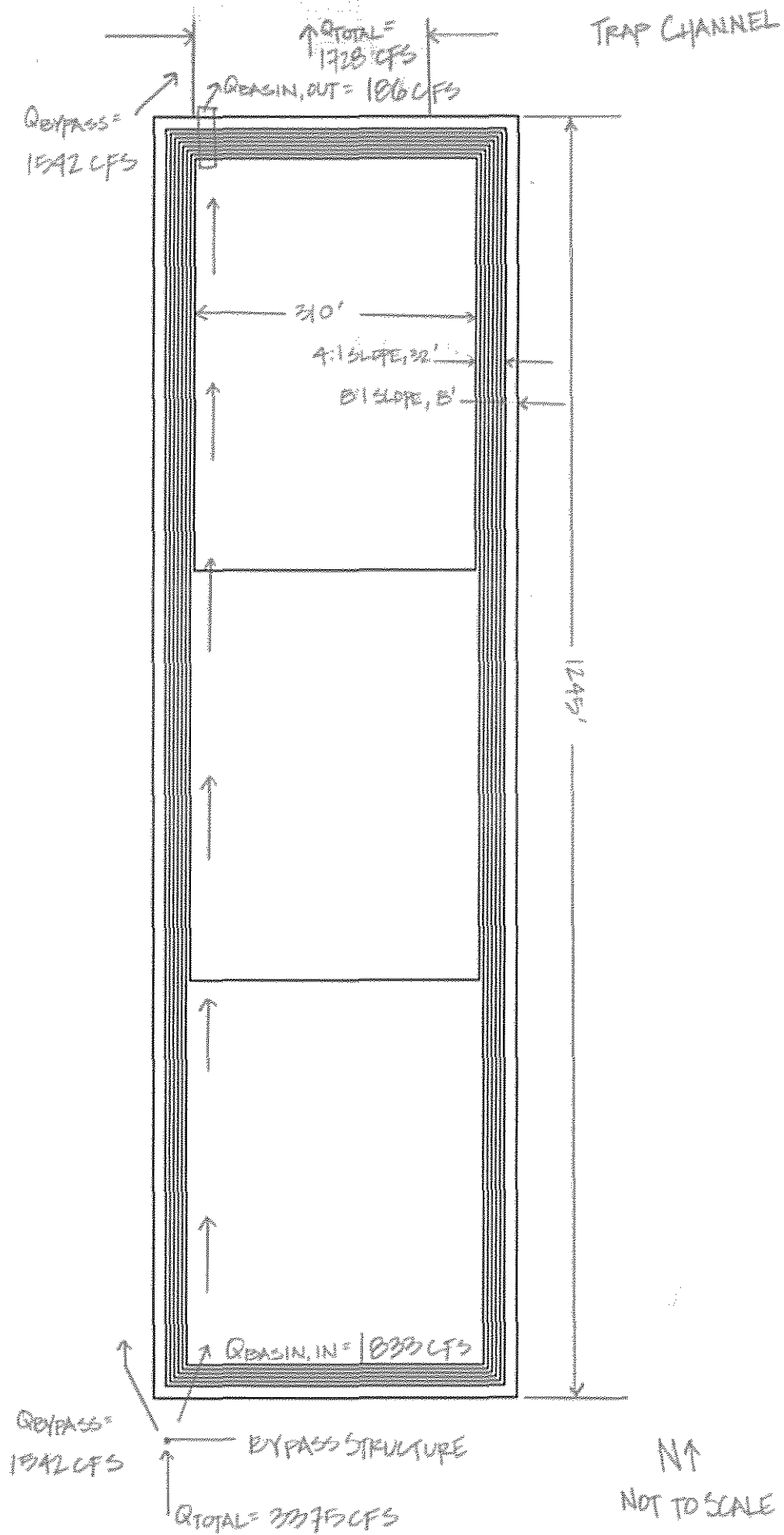
USDOT, FHWA, HDS, No. 5, 1985

FIGURE 1005

DETENTION BASIN 2 - VOLUME CALCULATIONS

SE STORAGE ELEVATION (FT)	CHANGE IN ELEVATION (FT)	SA STORAGE AREA (AC)	INCREMENTAL VOLUME (AC-FT)	SV STORAGE VOLUME (AC-FT)	SQ OUTFLOW (CFS)
0.0		2.480	0.000	0.000	0.000
	2.0				
2.0		7.750	10.230	10.230	56.000
	1.0				
3.0		8.020	7.885	18.115	88.000
	1.0				
4.0		8.300	8.160	26.275	121.000
	1.0				
5.0		8.570	8.435	34.710	170.000
	1.0				
6.0		8.850	8.710	43.420	180.000
	1.0				
7.0		9.130	8.990	52.410	200.000
	1.0				
8.0		10.000	9.565	61.975	220.000

DETENTION BASIN 2
100-YEAR MAJOR STORM EVENT



Worksheet for Bypass System at Detention Basin 2

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01430	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1728.00	ft ³ /s

Results

Normal Depth:	7.11	ft
Flow Area:	71.14	ft ²
Wetted Perimeter:	24.23	ft
Top Width:	10.00	ft
Critical Depth:	9.75	ft
Critical Slope:	0.00649	ft/ft
Velocity:	24.29	ft/s
Velocity Head:	9.17	ft
Specific Energy:	16.28	ft
Froude Number:	1.61	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.71	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	7.11	ft
Critical Depth:	9.75	ft

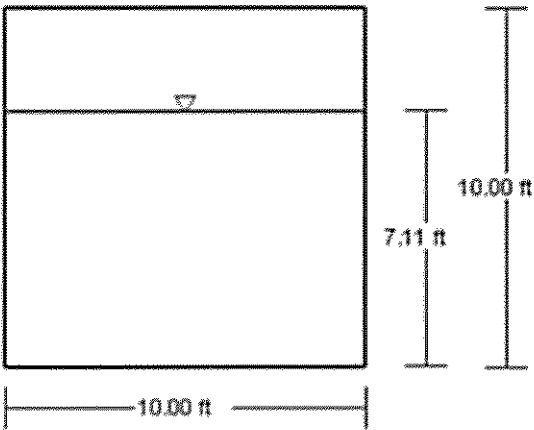
Worksheet for Bypass System at Detention Basin 2

Channel Slope:	0.01430	ft/ft
Critical Slope:	0.00649	ft/ft

Notes

Cross Section for Bypass System at Detention Basin 2

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01430	ft/ft
Normal Depth:	7.11	ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1728.00	ft³/s



V: 1 
H: 1

Appendix B-4: Flowmaster-Outlet Channel at Detention Basin 2

Worksheet for Outlet Channel Downstream of Detention Basin 2

Project Description

Flow Element:	Trapezoidal Channel
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	150.00	ft
Discharge:	1728.00	ft ³ /s

Results

Normal Depth:	2.22	ft
Flow Area:	351.92	ft ²
Wetted Perimeter:	168.27	ft
Top Width:	167.72	ft
Critical Depth:	1.58	ft
Critical Slope:	0.01558	ft/ft
Velocity:	4.91	ft/s
Velocity Head:	0.37	ft
Specific Energy:	2.59	ft
Froude Number:	0.60	
Flow Type:	Subcritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Headloss:	0.00	ft
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.22	ft
Critical Depth:	1.58	ft
Channel Slope:	0.00500	ft/ft

Worksheet for Outlet Channel Downstream of Detention Basin 2

Critical Slope:

0.01558

ft/ft

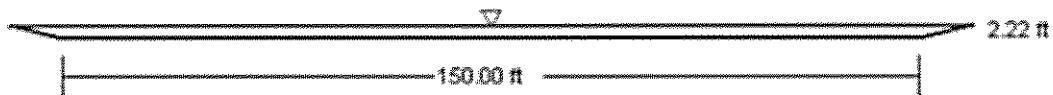
Cross Section for Outlet Channel Downstream of Detention Basin 2

Project Description

Flow Element: Trapezoidal Channel
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Normal Depth:	2.22	ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	150.00	ft
Discharge:	1728.00	ft ³ /s



V: 1
H: 1



Appendix B-5: Flowmaster-Pittman-Burns Channel Improvements

Worksheet for Pittman-Burns Channel Improvements

Project Description		
Flow Element:	Trapezoidal Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	

Input Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.00680	ft/ft
Left Side Slope:	2.00	ft/ft (H:V)
Right Side Slope:	2.00	ft/ft (H:V)
Bottom Width:	40.00	ft
Discharge:	5458.00	ft ³ /s

Results		
Normal Depth:	5.16	ft
Flow Area:	259.91	ft ²
Wetted Perimeter:	63.10	ft
Top Width:	60.66	ft
Critical Depth:	7.32	ft
Critical Slope:	0.00195	ft/ft
Velocity:	20.99	ft/s
Velocity Head:	6.85	ft
Specific Energy:	12.01	ft
Froude Number:	1.79	
Flow Type:	Supercritical	

GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Headloss:	0.00	ft
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	5.16	ft
Critical Depth:	7.32	ft
Channel Slope:	0.00680	ft/ft

Worksheet for Pittman-Burns Channel Improvements

Critical Slope:

0.00195

ft/ft

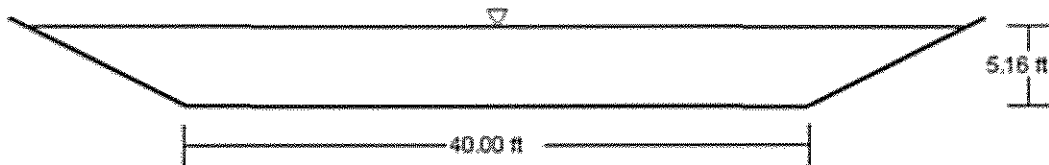
Cross Section for Pittman-Burns Channel Improvements

Project Description

Flow Element: Trapezoidal Channel
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

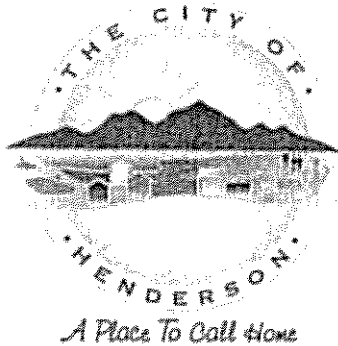
Roughness Coefficient:	0.015	
Channel Slope:	0.00680	ft/ft
Normal Depth:	5.16	ft
Left Side Slope:	2.00	ft/ft (H:V)
Right Side Slope:	2.00	ft/ft (H:V)
Bottom Width:	40.00	ft
Discharge:	5456.00	ft ³ /s



V:1
H:1

Appendix C: Reference Material

*Appendix C-1: Reference Material from The Technical Drainage Study for
The City of Henderson WRF Expansion*



Hydro 011102
AUG - 0 1200
PBS

August 8, 2000

Mark A. Sorensen, P.E.
PBS&J, Inc.
901 North Green Valley Parkway, Suite 100
Henderson, Nevada 89014-6139

Re: Technical Drainage Study for the City of Henderson WRF Expansion

Dear Mr. Sorensen:

This letter provides comments on the above referenced drainage study dated July 20, 2000. The City of Henderson reviewed this study and based on the documents submitted, the subject study is approved. The following items are part of the approved study:

1. Clark County Regional Flood Control District concurrence is required.

Projects which disturb more than five acres of land must submit to the Nevada Department of Environmental Protection: (1) a "Notice of Intent" to discharge, (2) a request for inclusion in the Stormwater General Permit No. GNV0022241, and (3) a stormwater prevention plan. For more information, please call (702) 687-4670, ext. 3138.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, the information submitted by the above named engineering firm may be superseded. Compliance with the regulatory elements and design standards specified in the Uniform Regulations for the Control of Drainage does not imply a guarantee that properties will be free from flooding or flood damage. The City of Henderson, its officials assumes no liability, or employees for the information, data or conclusions presented by the consulting engineer. We therefore make no warranties, either expressed or implied, in conducting this review.

Please let me know if you have any questions concerning these comments.

Sincerely,


Joseph V. Damiani, P.E.
Project Engineer

Cc: Curt Chandler, Janie Nihipali, CCRFCD

**TECHNICAL DRAINAGE STUDY
FOR THE CITY OF HENDERSON
WRF EXPANSION**

Prepared for:
City of Henderson
240 Water Street
Henderson, NV 89015

Prepared by:
PBS&J
901 North Green Valley Parkway Suite #100
Henderson, Nevada 89014

Reference Number 511102.00

July 20, 2000

I. INTRODUCTION

This report has been prepared as the *Technical Drainage Study for the City of Henderson WRF Expansion*. The objective of this study is to establish a technical analysis of peak flow rates affecting the site under existing and developed drainage conditions. This analysis includes an evaluation of both onsite and offsite drainage patterns and flow rates for use as the basis of technical design for permanent flood protection facilities, setting finish floor elevations and determination of impacts to adjacent properties.

II. GENERAL INFORMATION

A. Site Location

The Henderson Waste Water Reclamation Facility is described as being within a portion of Section 31, Township 21 South, Range 63 East and Section 36, Township 21 South, Range 62 East M.D.M., Clark County, Nevada. The 60.4+/- acre site is currently bordered to the north, south, and east by undeveloped land. An existing WRF facility is located to the east of the site. The site is located north of Athens Road and south of Las Vegas Wash (see Figure 1).

B. Project Description

The City of Henderson WRF expansion is comprised of operations buildings and wastewater reclamation facilities. Improvements at the time of development will include exterior half-street improvements to the 80-foot Athens ROW and the 60-foot Street A ROW.

C. CCRFCD Master Plan Information

Figure 2 shows the subject property in relation to Clark County Regional Flood Control District (CCRFCD) Master Planned facilities. The exhibit was reproduced from Figure F-20 of the 1996 CCRFCD Master Plan Update of the Las Vegas Valley (CCRFCD, 1996). The figure shows that the future Pittman - Pabco Channel will be constructed along the southern boundary of the site. The CCRFCD master planned facility is listed below.

PTPA 0000 - Conc. Chnl 7'D 15'W, 13,500' facility length, 1,655-cfs capacity

D. FEMA Floodplain Information

Figure 3 is a reproduction of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Clark County, Nevada, Community-Panel Number 32003C2605 D, effective date August 16, 1995. The property lies within an area designated by FEMA as Zone A. Zone A is defined by FEMA as a special flood hazard area inundated by the 100-year flood with no base flood elevations determined.

III. HYDROLOGIC ANALYSES

The rainfall and runoff data developed in this study was prepared for use with the HEC-1 Flood Hydrograph computer program. This is in accordance with the CCRFCD Hydrologic Criteria and Drainage Design Manual (CCRFCD, 1990). The methodology and calculations used to determine the hydrologic parameters and the HEC-1 runoff models are included in Appendix I and II, respectively.

IV. EXISTING DRAINAGE CONDITIONS

Existing conditions for both onsite and offsite conditions were discussed in the approved *Conceptual Drainage Study for the City of Henderson WRF Phase 1B Expansion* drainage study performed by PBSJ in May 1999. **Figure 4** (included in **Appendix V**) shows the onsite and offsite existing basins for the WRF Phase 1B Expansion. The summary of existing offsite and onsite flows and listed in **Table 2** in **Appendix V**. Referenced material from the conceptual drainage study for the offsite and onsite existing conditions is included in **Appendix V**.

VI. FUTURE CONDITIONS

A. Offsite

Under future drainage conditions, it is assumed that the Pabco Channel is completely constructed (See Figure 4). The Pabco Channel will intercept any offsite flow that will impact the main portion of the site from the south. A HEC-RAS analysis of the channel was performed. The Pabco Channel is a trapezoidal channel that conveys 422-cfs around the south side of the WRF expansion. The HEC-RAS analysis is included in Appendix IV. See Figure 5 for HEC-RAS cross-section locations. The HEC-RAS analysis indicates that the beginning of the Pabco Channel will need riprap protection. The riprap analysis and superelevation calculations are included in Appendix III. The northwest portion of the site where the new detention basin is located will be impacted by offsite flows. However, the offsite flows were calculated in the *Conceptual Drainage Study for the City of Henderson WRF Phase 1B Expansion*. The detention basin is located in basin OND5 from the conceptual drainage study (see Figure 5 included in Appendix V). Therefore, the flows calculated for OND5 (76-cfs) are accepted as the flows impacting the detention from the south. See referenced material for OND5 in Appendix V.

B. Onsite

The onsite future drainage conditions assume that the entire site is developed (see Figure 4). There are five onsite developed basins ONDEV-1 through ONDEV-5. The flow from ONDEV-1 (22-cfs) is conveyed to the southeast corner of the parking lot and collected in a 3'x3' drop inlet. The flow from the drop inlet will be conveyed in a 24-inch storm drain and outfall to the north of the property. The drop inlet orifice calculation is included in Appendix III. The flow from ONDEV-2 (18-cfs), which consists of the emergency storage basin, is detained within the emergency storage basin onsite. The flow from ONDEV-3 (6-cfs) combines with onsite basin ONDEV-4 (25-cfs) and is conveyed to the northeast corner of the site. The combined flow is discharged offsite in the historical flow path. The flow from ONDEV-5 (33-cfs) is conveyed to the northwest corner of the site and discharged to the detention basin where it will combine in the detention basin with the flow from OND5 (76-cfs) as referenced from the *Conceptual Drainage Study for the City of Henderson WRF Phase 1B Expansion*. The combined flows from ONDEV-5 and OND5 will be detained in the 6 ac-ft detention basin with a 24-inch outfall pipe. The peak discharge from the outfall pipe is approximately 27-cfs. See the HEC-1 model in Appendix III for detention basin analysis.

The basin summary of flow, depth, velocity, and DxV for onsite developed conditions is listed in Table 3. Table 1 summarizes the depth of flow, BFE, and the finish floor elevations for the analysis of freeboard. The BFE for the chemical building onsite was calculated because that is noted as the only habitable structure onsite. The remaining structures onsite are not considered habitable structures, therefore no BFE's were calculated. A complete list of depth of flow, finish floor elevations, and freeboard is included in Appendix III. Table 2 summarizes the offsite and onsite existing and developed conditions.

Table 3
Summary of Developed Onsite and Offsite Flows

Basin	Area	Q ₁₀	Q ₁₀₀
	(acres)	(cfs)	(cfs)
OFFD1	52.5	66	137
OFFD2	75.6	22	79
OFFD2A	68.6	45	119
OFFD3	102.7	34	118
OFFD4	94.7	2	25
OFFD5	206.0	156	413
OFFD6	71.3	86	183
OFFD7	4.2	18	37
OFFD8	898.0	399	1192
OFFD9	294.8	47	216
OFFD10	23.0	6	24
OND1	17.5	21	57
OND2	45.5	34	83
OND2A	14.23	4	9
OND3	5.51	5	12
OND4	43.6	40	88
OND5	35.7	34	76
OND6	40.1	36	81
OND7	51.8	44	106
OND8	91.0	82	184
OND9	19.6	16	39
OND10	13.0	19	45
OND11	7.8	7	16
OND12	7.8	5	13

It is proposed for this study that culverts A, B, F and G be replaced. Culverts C, D, and E are existing and will remain. Final determination of the culvert sizes will be determined in the Technical Drainage study.

Table 4
Summary of Culvert Information

Culvert	Com. Point (Hec-1)	Flow (cfs)	Size
A	COFD3	327	4-4X3 RCB
B	COND3	336	2-5X4 RCB
C	COND3	336	1-10X4 (existing)
D	COND1	640	2-10X4 (existing)
E	COND5	675	2-10X4 (existing)
F	COFD9	642	3-6x4 RCB
G	OFFD8	1095	3-7x5 RCB

Table 5
Summary of Channel Information

Chan.	Section	Com. Point (Hec-1)	Flow (cfs)	Bottom Width (ft)	Min. Depth (ft)
1	C1	COFD3	327	15	3.69
1	C2	COND2A	336	15	3.55
1	C3	COND2A	409	15	4.02
2	C4	DIVERT	560	20	4.07
2	C5	COND1	640	N/A	5.50
2	C6	COND5	675	20	4.46
2	C7	COND5	675	20	4.85
3	C8	COFD9	642	20	4.29
4	C9	OFFD8	1095	20	5.17
4	C10	COND7	1522	20	5.75

DEVELOPED ONSITE/OFFSITE ANALYSIS

RUN DATE 05/17/1999 TIME 09:42:49

U.S. ARMY CORPS OF ENGINEERS
 HYDROLOGIC ENGINEERING CENTER
 609 SECOND STREET
 DAVIS, CALIFORNIA 95616
 (916) 756-1104

```

X   X   XXXXXXX   XXXXX   X
X   X   X   X   X   X   XX
X   X   X   X   X   X   X
XXXXXXX XXXX   X   XXXXX   X
X   X   X   X   X   X   X
X   X   X   X   X   X   X
X   X   XXXXXXX   XXXXX   XXX
  
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1G2, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIME- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL, LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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1 ID file:004D7.dat
2 ID
3 ID Post, Buckley, Schuh & Jernigan, Inc.
4 ID
5 ID ONSITE DEVELOPED CONDITIONS RUN
6 ID
7 ID
8 ID
9 ID
10 ID
11 ID
12 ID
13 ID
14 ID
15 ID
16 ID
17 ID
18 ID
19 ID
20 ID
21 ID
22 ID
  
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*DIAGRAM

FREE ***

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23 IT 5 0 0 300
24 IO 5 0 0
25 IM 5 0 0
26 JR PREC 1.0 0.93 0.86 0.57
  
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27 KK OFFD1
28 BA 0.082
29 PB 2.86
30 PC .000 .020 .057 .070 .087 .108 .124 .130 .130 .130
31 PC .130 .130 .130 .133 .140 .142 .148 .158 .172 .181
32 PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
33 PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
34 PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .856
35 PC .860 .868 .876 .888 .910 .926 .937 .950 .970 .976
36 PC .982 .985 .987 .989 .990 .993 .993 .994 .995 .998
37 PC .998 .999 1.00
38 LS 0 93
39 UD 0.156
  
```

```

40 KK RTOFD1
41 RK 7600 0.009 0.016 0 TRAP 40 5
  
```

```

42 KK OFFD2
43 BA 0.118
44 PB 2.86
45 LS 0 79
46 UD 0.333
  
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HEC-1 INPUT

PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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47 KK RTOFD2
48 RK 1400 0.012 0.016 0 TRAP 40 5
  
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49 KK OFFD2A
50 BA 0.107
51 PB 2.86
52 LS 0 85.5
53 UD 0.212
*

54 KK COFD2A
55 HC 3
*

56 KK DIVERSION
57 DT SPLIT 1
58 DI 0 121 312
59 DQ 0 0 39
*

60 KK RCOFD2A
61 RK 1300 0.01 0.016 0 TRAP 40 5
*

62 KK OFFD5
63 BA 0.322
64 PB 2.86
65 LS 0 85.5
66 UD 0.150
*

67 KK COFD5
68 HC 2
*

69 KK RCOFD5
70 RK 1800 0.013 0.016 0 TRAP 40 5
*

71 KK OFFD6
72 BA 0.114
73 PB 2.86
74 LS 0 92
75 UD 0.162
*

76 KK COFD6
77 HC 2
*

REC-1 INPUT

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

78 KK DIVERT
79 DT SPLIT2
80 DI 0 759
81 DQ 0 177
*

82 KK OFFD7
83 BA 0.0222
84 PB 2.86
85 LS 0 92
86 UD 0.135
*

87 KK RTOFFD7
88 RK 500 0.01 0.016 0 TRAP 3 50
*

89 KK OND1
90 BA 0.0433
91 PB 2.77
92 LS 0 88
93 UD 0.197
*

94 KK COND1
95 HC 3
*

96 KK RCOND1
97 KH ROUTE IN GRASS CHANNEL
98 RK 1600 .01 .03 0 TRAP 0 5
*

99 KK OND4
100 BA 0.0681
101 PB 2.77
102 LS 0 90.6
103 UD 0.211
*

104 KK DBOND4
105 KO 3
106 RS 1 ELEV 3.0
107 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
108 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
109 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
*

111 BA 0.0958
 112 PB 2.77
 113 LS 0 90.8
 114 UD 0.196
 *

HEC-1 INPUT

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

115 KK DBONDS
 116 KM 3
 117 RS 1 ELEV 3.0
 118 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
 119 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
 120 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
 *

121 KK OND11
 122 KM ONSITE BASIN OND11
 123 BA 0.0122
 124 PB 2.77
 125 LS 0 91
 126 UD 0.206
 *

127 KK CONDS
 128 HC 4
 *

129 KK RCONDS
 130 KM ROUTE IN RIP RAP CHANNEL TO PONDS
 131 RK 1600 .0125 .04 0 TRAP 15 3
 *

132 KK C101C
 133 KM RUNOFF FROM OFFSITE BASIN C101C
 134 BA 0.1577
 135 PB 2.99
 136 LS 0 76
 137 UD 0.213
 *

138 KK RTC1
 139 KM ROUTE FLOWS FROM C101C THROUGH C101B
 140 RK 4800 0.0167 .02 0 TRAP 3 30
 *

141 KK C101B
 142 KM RUNOFF FROM OFFSITE BASIN C101B
 143 BA 0.4042
 144 PB 2.90
 145 LS 0 74
 146 UD 0.259
 *

147 KK COMC1
 148 KM COMBINE FLOWS FROM RTC1 AND C101B
 149 HC 2
 *

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

150 KK RTC2
 151 KM ROUTE FLOWS FROM COMC1 THROUGH C101D
 152 RK 2900 .025 .02 0 TRAP 3 30
 *

153 KK C101D
 154 KM RUNOFF FROM OFFSITE BASIN C101D
 155 BA 0.1142
 156 PB 2.83
 157 LS 0 84
 158 UD 0.197
 *

159 KK C101A
 160 KM RUNOFF FROM OFFSITE BASIN C101A
 161 BA 0.4133
 162 PB 2.88
 163 LS 0 79
 164 UD 0.224
 *

165 KK RTC3
 166 KM ROUTE FLOWS FROM C101A THROUGH C101D
 167 RK 3000 .0277 .02 0 TRAP 10 2
 *

168 KK COMC2
 169 KM COMBINE FLOWS FROM C101A, RTC2, AND C101D
 170 HC 3
 *

171 KK RTC4
 172 KM ROUTE FLOWS FROM COMC2 TO COMC3 VIA B10C
 173 RK 2100 .025 .02 0 TRAP 10 2

```

174 KK B10C
175 KM RUNOFF FROM OFFSITE BASIN B10C
176 BA 0.6358
177 PB 2.83
178 LS 0 89
179 UD 0.628
*
180 KK COMC3
181 KM COMBINE FLOWS FROM RTC3 AND B10C
182 NC 2
*

```

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

183 KK DIV3
184 KM DIVERT FLOWS THROUGH 2-8X4 RCBS
185 DT DIV-3
186 DI 0 726 1110
187 DQ 0 726 384
*

```

```

188 KK OFFD9
189 BA 0.46
190 PB 2.86
191 LS 0 75
192 UD 0.428
*

```

```

193 KK COFD9
194 NC 2
*

```

```

195 KK RCOFD9
196 KM ROUTE TO OND7
197 RK 7400 .017 .025 0 TRAP 40 5
*

```

```

198 KK OFFD8
199 BA 1.403
200 PB 2.86
201 LS 0 83
202 UD 0.313
*

```

```

203 KK ROFFD8
204 KM ROUTE TO OND7
205 RK 1400 .02 .025 0 TRAP 20 5
*

```

```

206 KK OFFD10
207 BA 0.0359
208 PB 2.77
209 LS 0 78.6
210 UD 0.274
*

```

```

211 KK OND7
212 KM ONSITE BASIN OND7
213 BA 0.0809
214 PB 2.77
215 LS 0 88.8
216 UD 0.179
*

```

HEC-1 INPUT

PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

217 KK OND6
218 KM ONSITE BASIN OND6
219 BA 0.0627
220 PB 2.77
221 LS 0 91
222 UD 0.237
*

```

```

223 KK COND7
224 KM COMBINE OND7 WITH ROFFD9, ROFFD8, OFFD10 AND OND6
225 NC 5
*

```

```

226 KK RCOND7
227 KM ROUTE THROUGH OND8
228 RK 4700 .0134 .02 0 TRAP 20 5
*

```

```

229 KK OND8
230 KM ONSITE BASIN OND8
231 BA 0.1422
232 PB 2.77
233 LS 0 90.8
234 UD 0.223
*

```

```

235 KK COND8

```

247 KK CORDJ
248 HC 3

PAGE 37

249	HK	RCOCD3							
250	HK	800	0.0075	0.025	0	TRAP	20	3	

```

251      KK      OND2A
252      KM      ONSITE BASIN OND2A
253      BA      0.0066
254      PB      ' 2.77
255      LS      0      68
256      UD      0.105

```

257	KK	COND2A
258	HC	2

259	KK	QND3	
260	KM	QNSITE	BASIN QND3
261	BA	0.0086	
262	FB	2.77	
263	LS	0	00
264	UD	0.139	

265	KK	COND3
266	HC	2

267	KK	ACONDO3							
268	KK	1000	0.0075	0.025	0	TRAP	20	3	

269	KK	OND2	
270	BA	0.0711	
271	PD	2.77	
272	LS	0	88
273	UD	0.221	

274	KK	COND2
275	HC	2

276	KK	RCOND2						
277	KK	1400	0.0072	0.016	0	TRAP	20	3

278	KK	OFFD4	
279	BA	0.140	
280	FB	2.86	
281	LS	0	61
282	UP	0.294	

PAGE 9

203	KK	CONF4
204	HC	2

285	KK	CHD12	
286	KM	CHS12E BASIN CHD3	
287	BA	0.0122	
288	FB	2.77	
289	LS	0	85
290	UD	0.183	

```

291      KK  OND10
292      KM  ONSITE BASIN OND10
293      BA  0.0203

```

```

294      KK      91
295      LS      0
296      UD      0.125
      *
297      KK      COND10
298      NM      COMBINE OND10 AND OND3
299      NC      2
      *
300      KK      OND9
301      NM      ONSITE BASIN OND9
302      BA      0.0306
303      PB      2.77
304      LS      0      88
305      UD      .175
      *
306      ZZ

```

SCHEMATIC DIAGRAM OF STREAM NETWORK

PUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
 (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

```

37 OFFD1
38 V
39 V
40 RTOFD1
41 .
42 . OFFD2
43 . V
44 . V
45 . RTOFD2
46 .
47 .
48 . OFFD2A
49 .
50 .
51 COFD2A.....
52 .
53 .
54 .
55 .
56 .
57 .
58 .
59 .
60 .
61 .
62 . OFFD5
63 .
64 .
65 .
66 .
67 . COFD5.....
68 .
69 .
70 .
71 . OFFD6
72 .
73 .
74 .
75 .
76 . COFD6.....
77 .
78 .
79 .
80 .
81 .
82 . OFFD7
83 . V
84 . V
85 . RTOFD7
86 .
87 .
88 .
89 . OND1
90 .
91 .
92 .
93 .
94 . COND1.....
95 .
96 .
97 .
98 .
99 .
100 .
101 .
102 .
103 .
104 . OND4
105 . V
106 . V
107 . DBOND4
108 .
109 .
110 .
111 .
112 .
113 .
114 .
115 . OND5
116 . V
117 . V
118 . DBOND5
119 .
120 .
121 . OND11
122 .
123 .
124 .
125 .
126 .
127 . COND5.....

```

```

V
RECHD3
C101C
V
V
RTC1
.
.
C101B
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.
COMC1.....
V
V
RTC2
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.
C101D
.
.
C101A
V
V
RTC3
.
.
COMC2.....
V
V
RTC4
.
.
S1GC
.
.
COMC3.....
.
.
DIV3
-----> DIV-3
DIV3
.
.
OFFD9
.
.
COFD9.....
V
V
RCOFD9
.
.
OFFD8
V
V
ROFFD8
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OFFD10
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OND7
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OND6
.
.
COND7.....
V
V
RCOND7
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OND8
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COND8.....
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SPLIT
<-----
RETURN1
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.
SPLIT2
<-----
RETURN2
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OFFD3
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COFD3.....
V
V
RCOFD3
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OND2A
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COND2A.....
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OND3
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COND3.....
V
V
RCOND3
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OND2
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COND2.....
V
V
RCOND2
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OFFD4
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COND4.....
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OND12
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OND10
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COND10.....
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OND9

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*) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

FLOOD HYDROGRAPH PACKAGE (HEC-1)
SEPTEMBER 1990
VERSION 4.0
RUN DATE 03/17/1999 TIME 09:42:49

```

```

*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*

```

File:004D7.dat

Post, Buckley, Schuh & Jernigan, Inc.

ONSITE DEVELOPED CONDITIONS RUN

```

*****
* DEVELOPED
* ONSITE/OFFSITE CONDITIONS
* HENDERSON WRF 1B
*
*****

```

100-YEAR AND 10-YEAR STORM MODELS
6-HOUR RAINFALL STORM DISTRIBUTION
5 MINUTE COMPUTATION INTERVAL
STORM DISTRIBUTION NUMBER 3 (SDN3)

OUTPUT CONTROL VARIABLES

```

IPRNT      5  PRINT CONTROL
IPLOT      0  PLOT CONTROL
QSCAL      0.  HYDROGRAPH PLOT SCALE

```

HYDROGRAPH TIME DATA

```

NMIN      5  MINUTES IN COMPUTATION INTERVAL
IDATE      1  0  STARTING DATE
ITIME      0000  STARTING TIME
NQ        300  NUMBER OF HYDROGRAPH ORDINATES
NDDATE      2  0  ENDING DATE
NDTIME      0055  ENDING TIME
ICENT      19  CENTURY MARK

```

```

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 HOURS

```

ENGLISH UNITS

```

DRAINAGE AREA      SQUARE MILES
PRECIPITATION DEPTH  INCHES
LENGTH, ELEVATION  FEET
FLOW                CUBIC FEET PER SECOND
STORAGE VOLUME      ACRE-FEET

```

TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
RATIOS OF PRECIPITATION
1.00 .93 .86 .57

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

DBOND4

OUTPUT CONTROL VARIABLES

IPRINT 3 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

STORAGE ROUTING

NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
NSVRIC 3.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
DISCHARGE	0.	13.	13.	14.	15.	16.	17.

HYDROGRAPH AT STATION DBOND4 FOR PLAN 1, RATIO = 1.00

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
15.	5.08	13.	5.	5.	5.
(INCHES)		1.728	2.942	2.942	2.942
(AC-FT)		6.	11.	11.	11.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
5.	5.08	4.	1.	1.	1.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
3.33	5.08	2.74	1.15	1.11	1.11

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4 FOR PLAN 1, RATIO = .93

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
14.	5.08	12.	5.	5.	5.
(INCHES)		1.666	2.765	2.765	2.765
(AC-FT)		6.	10.	10.	10.

PEAK STORAGE (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
5.	5.08	3.	1.	1.	1.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
3.19	5.08	2.62	1.08	1.04	1.04

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4
FOR PLAN 1, RATIO = .86

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
14.	4.25	(CFS)	12.	5.	5.	5.
		(INCHES)	1.628	2.591	2.591	2.591
		(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)					
4.	4.25		3.	1.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)					
3.05	4.25		2.54	1.00	.97	.97
CUMULATIVE AREA =			.07 SQ MI			

HYDROGRAPH AT STATION DBOND4
FOR PLAN 1, RATIO = .57

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
14.	.00	(CFS)	10.	3.	3.	3.
		(INCHES)	1.392	1.900	1.900	1.900
		(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)					
4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)					
3.00	.00		2.13	.73	.70	.70
CUMULATIVE AREA =			.07 SQ MI			

15 KK

DBOND5

116 MO

OUTPUT CONTROL VARIABLES

IPRINT 3 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

17 R2

STORAGE ROUTING

NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 3.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

18 SV

STORAGE

.0 2.8 3.4 4.4 5.1 6.2 7.6

19 SE

ELEVATION

.00 2.60 2.80 3.10 3.30 3.60 4.00

120 SQ

DISCHARGE

0. 13. 13. 14. 15. 16. 17.

HYDROGRAPH AT STATION DBOND5
FOR PLAN 1, RATIO = 1.00

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)					
14.	4.25	(CFS)	12.	5.	5.	5.
		(INCHES)	2.014	3.206	3.206	3.206
		(AC-FT)	6.	10.	10.	10.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)					
4.	4.25		3.	1.	1.	1.

AK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)				
3.00	4.25	2.50	1.02	.90	.90
CUMULATIVE AREA =		.06 SQ MI			

HYDROGRAPH AT STATION DBONDS
FOR PLAN 1, RATIO = .93

AK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)				
14.	.08	12.	5.	4.	4.
(INCHES)		1.974	3.028	3.029	3.029
(AC-FT)		6.	9.	9.	9.

AK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)				
4.	.08	3.	1.	1.	1.

AK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)				
3.00	.00	2.51	.96	.92	.92
CUMULATIVE AREA =		.06 SQ MI			

HYDROGRAPH AT STATION DBONDS
FOR PLAN 1, RATIO = .86

AK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)				
14.	.08	12.	4.	4.	4.
(INCHES)		1.933	2.853	2.854	2.854
(AC-FT)		6.	8.	8.	8.

AK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)				
4.	.08	3.	1.	1.	1.

AK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)				
3.00	.00	2.44	.90	.87	.87
CUMULATIVE AREA =		.06 SQ MI			

HYDROGRAPH AT STATION DBONDS
FOR PLAN 1, RATIO = .57

AK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)				
14.	.08	10.	3.	3.	3.
(INCHES)		1.620	2.158	2.159	2.159
(AC-FT)		5.	6.	6.	6.

AK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)				
4.	.08	2.	1.	1.	1.

AK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)				
3.00	.00	2.03	.68	.65	.65
CUMULATIVE AREA =		.06 SQ MI			

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

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HYDROGRAPH AT	SPLIT	.31	1	FLOW TIME	3.75	3.75	3.75	3.83
ROUTED TO	DIVERSIO	.31	1	FLOW TIME	276. 3.75	247. 3.75	225. 3.75	121. 3.83
ROUTED TO	RCOFD2A	.31	1	FLOW TIME	271. 3.75	242. 3.75	219. 3.75	117. 3.83
HYDROGRAPH AT	OFFD5	.32	1	FLOW TIME	413. 3.58	369. 3.58	326. 3.58	156. 3.58
COMBINED AT	COFD5	.63	1	FLOW TIME	603. 3.58	537. 3.58	473. 3.67	211. 3.67
ROUTED TO	RCOFD5	.63	1	FLOW TIME	600. 3.67	535. 3.67	472. 3.67	210. 3.75
HYDROGRAPH AT	OFFD6	.11	1	FLOW TIME	183. 3.58	167. 3.58	151. 3.58	86. 3.58
COMBINED AT	COFD6	.74	1	FLOW TIME	759. 3.67	681. 3.67	605. 3.67	285. 3.67
DIVERSION TO	SPLIT2	.74	1	FLOW TIME	177. 3.67	159. 3.67	141. 3.67	66. 3.67
HYDROGRAPH AT	DIVERT	.74	1	FLOW TIME	582. 3.67	522. 3.67	464. 3.67	219. 3.67
HYDROGRAPH AT	OFFD7	.02	1	FLOW TIME	37. 3.58	34. 3.58	31. 3.58	18. 3.58
ROUTED TO	RTOFD7	.02	1	FLOW TIME	36. 3.58	33. 3.58	30. 3.58	17. 3.58
HYDROGRAPH AT	OND1	.84	1	FLOW TIME	52. 3.58	47. 3.58	42. 3.58	21. 3.67
COMBINED AT	COND1	.81	1	FLOW TIME	668. 3.58	598. 3.58	531. 3.67	255. 3.67
ROUTED TO	RCOND1	.81	1	FLOW TIME	666. 3.67	597. 3.67	530. 3.67	251. 3.67
HYDROGRAPH AT	OND4	.07	1	FLOW TIME	88. 3.67	80. 3.67	72. 3.67	40. 3.67
ROUTED TO	DBOND4	.07	1	FLOW TIME	15. 5.08	14. 5.08	14. 4.25	14. .08
** PEAK STAGES IN FEET **								
1	STAGE				3.33	3.19	3.05	3.00
1	TIME				5.08	5.08	4.25	.00
HYDROGRAPH AT	OND5	.06	1	FLOW TIME	76. 3.58	69. 3.58	62. 3.58	34. 3.58
ROUTED TO	DBOND5	.06	1	FLOW TIME	14. 4.25	14. .08	14. .08	14. .08
** PEAK STAGES IN FEET **								
1	STAGE				3.08	3.00	3.00	3.00
1	TIME				4.25	.00	.00	.00
HYDROGRAPH AT	OND11	.01	1	FLOW TIME	16. 3.58	15. 3.58	13. 3.58	7. 3.67
COMBINED AT	COND5	.94	1	FLOW TIME	708. 3.67	638. 3.67	568. 3.67	277. 3.67
ROUTED TO	RCOND5	.94	1	FLOW TIME	694. 3.67	623. 3.67	553. 3.67	273. 3.75
HYDROGRAPH AT	C101C	.16	1	FLOW TIME	119. 3.67	103. 3.67	87. 3.67	29. 3.75

ROUTED TO	RTC1	.16	1	FLOW TIME	3.83	3.83	3.83	3.92
HYDROGRAPH AT	C101B	.40	1	FLOW TIME	234. 3.75	199. 3.75	165. 3.75	48. 3.83
COMBINED AT	COMC1	.56	1	FLOW TIME	346. 3.75	296. 3.75	242. 3.75	72. 3.92
ROUTED TO	RTC2	.56	1	FLOW TIME	340. 3.83	292. 3.83	241. 3.83	71. 4.00
HYDROGRAPH AT	C101D	.11	1	FLOW TIME	119. 3.58	105. 3.58	92. 3.67	42. 3.67
HYDROGRAPH AT	C101A	.41	1	FLOW TIME	336. 3.67	293. 3.67	250. 3.67	93. 3.67
ROUTED TO	RTC3	.41	1	FLOW TIME	327. 3.67	284. 3.67	241. 3.67	93. 3.75
COMBINED AT	COMC2	1.09	1	FLOW TIME	745. 3.75	641. 3.75	538. 3.75	171. 3.83
ROUTED TO	RTC4	1.09	1	FLOW TIME	736. 3.75	631. 3.75	529. 3.75	171. 3.83
HYDROGRAPH AT	B10C	.66	1	FLOW TIME	485. 4.08	437. 4.08	391. 4.08	203. 4.08
COMBINED AT	COMC3	1.75	1	FLOW TIME	1110. 3.83	976. 3.83	841. 3.83	353. 4.00
CONVERSION TO	DIV-3	1.75	1	FLOW TIME	725. 4.25	719. 4.17	717. 4.08	353. 4.00
HYDROGRAPH AT	DIV3	1.75	1	FLOW TIME	726. 3.83	472. 3.83	218. 3.83	0. .08
HYDROGRAPH AT	OFFD9	.46	1	FLOW TIME	216. 3.92	184. 3.92	153. 3.92	47. 4.00
COMBINED AT	COFD9	2.21	1	FLOW TIME	935. 3.83	649. 3.83	364. 3.83	47. 4.00
ROUTED TO	RCOFD9	2.21	1	FLOW TIME	907. 3.92	620. 4.00	354. 4.00	46. 4.33
HYDROGRAPH AT	OFFD8	1.40	1	FLOW TIME	1192. 3.75	1053. 3.75	918. 3.75	399. 3.75
ROUTED TO	ROFFD8	1.40	1	FLOW TIME	1179. 3.75	1041. 3.75	906. 3.75	397. 3.83
HYDROGRAPH AT	OFFD10	.04	1	FLOW TIME	24. 3.75	21. 3.75	18. 3.75	6. 3.75
HYDROGRAPH AT	OND7	.08	1	FLOW TIME	106. 3.58	96. 3.58	86. 3.58	44. 3.58
HYDROGRAPH AT	OND6	.06	1	FLOW TIME	81. 3.67	73. 3.67	66. 3.67	36. 3.67
COMBINED AT	COND7	3.79	1	FLOW TIME	2050. 3.92	1631. 3.92	1145. 3.92	464. 3.75
ROUTED TO	RCOND7	3.79	1	FLOW TIME	2035. 3.92	1556. 4.00	1129. 4.00	463. 3.83
HYDROGRAPH AT	OND8	.14	1	FLOW TIME	184. 3.67	167. 3.67	151. 3.67	82. 3.67
COMBINED AT	COND8	3.93	1	FLOW TIME	2138. 3.92	1647. 3.92	1203. 3.92	525. 3.83

	RETURN1	.00	1	FLOW TIME	40. 3.75	32. 3.75	27. 3.75	0. 3.83
HYDROGRAPH AT	RETURN2	.00	1	FLOW TIME	177. 3.67	159. 3.67	141. 3.67	66. 3.67
HYDROGRAPH AT	OFFD3	.16	1	FLOW TIME	118. 3.75	103. 3.75	88. 3.75	34. 3.75
COMBINED AT	COFD3	.16	1	FLOW TIME	330. 3.67	289. 3.67	249. 3.67	98. 3.67
ROUTED TO	RCOFD3	.16	1	FLOW TIME	324. 3.67	284. 3.67	245. 3.75	97. 3.75
HYDROGRAPH AT	OND2A	.01	1	FLOW TIME	9. 3.50	8. 3.50	8. 3.50	4. 3.58
COMBINED AT	COND2A	.17	1	FLOW TIME	331. 3.67	289. 3.67	249. 3.67	99. 3.75
HYDROGRAPH AT	OND3	.01	1	FLOW TIME	12. 3.58	11. 3.58	10. 3.58	5. 3.58
COMBINED AT	COND3	.18	1	FLOW TIME	340. 3.67	298. 3.67	257. 3.67	102. 3.75
ROUTED TO	RCOND3	.18	1	FLOW TIME	334. 3.75	293. 3.75	255. 3.75	102. 3.75
HYDROGRAPH AT	OND2	.07	1	FLOW TIME	83. 3.67	75. 3.67	66. 3.67	34. 3.67
COMBINED AT	COND2	.25	1	FLOW TIME	415. 3.67	364. 3.67	315. 3.67	133. 3.75
ROUTED TO	RCOND2	.25	1	FLOW TIME	410. 3.75	361. 3.75	315. 3.75	132. 3.75
HYDROGRAPH AT	OFFD4	.15	1	FLOW TIME	25. 3.83	19. 3.83	13. 3.92	2. 5.00
COMBINED AT	COFD4	.33	1	FLOW TIME	433. 3.75	378. 3.75	326. 3.75	132. 3.75
HYDROGRAPH AT	OND12	.01	1	FLOW TIME	13. 3.58	12. 3.58	10. 3.58	5. 3.67
HYDROGRAPH AT	OND10	.02	1	FLOW TIME	32. 3.58	29. 3.58	26. 3.58	14. 3.58
COMBINED AT	COND10	.03	1	FLOW TIME	45. 3.58	41. 3.58	36. 3.58	19. 3.58
HYDROGRAPH AT	OND9	.03	1	FLOW TIME	39. 3.58	35. 3.58	31. 3.58	16. 3.58

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	DT	INTERPOLATED TO COMPUTATION INTERVAL		
							PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN = 1	RATIO= 1.00								
RTOFD1	MAHE	4.96	136.29	225.32	2.19	5.00	134.84	225.00	2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9273E+01 EXCESS= .0000E+00 OUTFLOW= .9577E+01 BASIN STORAGE= .4066E-03 PERCENT ERROR= -3.3

FOR PLAN = 1	RATIO= .93								
RTOFD1	MAHE	5.00	123.34	226.13	1.98	5.00	119.28	225.00	1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8442E+01 EXCESS= .0000E+00 OUTFLOW= .8656E+01 BASIN STORAGE= .3918E-03 PERCENT ERROR= -2.5

FOR PLAN = 1 RATIO= .86

CHANNEL NORMAL DEPTH CALCULATIONS

Section C3 100-Year Developed
Worksheet for Trapezoidal Channel

Project Description	
Project File	c:\projects\511004\flow\channels.fm2
Worksheet	Section C3 100-Year
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

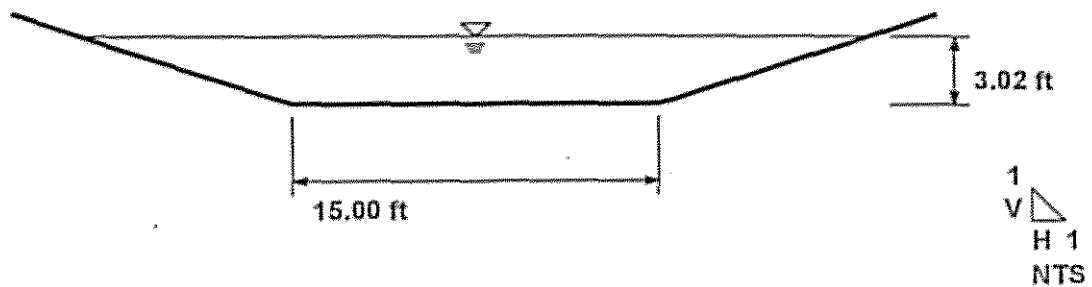
Input Data	
Mannings Coefficient	0.031
Channel Slope	0.005000 ft/ft
Left Side Slope	3.000000 H : V
Right Side Slope	3.000000 H : V
Bottom Width	15.00 ft
Discharge	409.00 cfs

Results	
Depth	3.02 ft
Flow Area	72.81 ft ²
Wetted Perimeter	34.13 ft
Top Width	33.15 ft
Critical Depth	2.41 ft
Critical Slope	0.011884 ft/ft
Velocity	5.62 ft/s
Velocity Head	0.49 ft
Specific Energy	3.51 ft
Froude Number	0.67
Flow is subcritical.	

Section C3 10⁰-Year Developed
Cross Section for Trapezoidal Channel

Project Description	
Project File	c:\projects\511004\flow\channels.fm2
Worksheet	Section C3 100-Year
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.031
Channel Slope	0.005000 ft/ft
Depth	3.02 ft
Left Side Slope	3.000000 H : V
Right Side Slope	3.000000 H : V
Bottom Width	15.00 ft
Discharge	409.00 cfs



Section C7 100-Year Developed
Worksheet for Trapezoidal Channel

Project Description	
Project File	c:\projects\511004\flow\channels.fm2
Worksheet	Section C7 100-Year
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

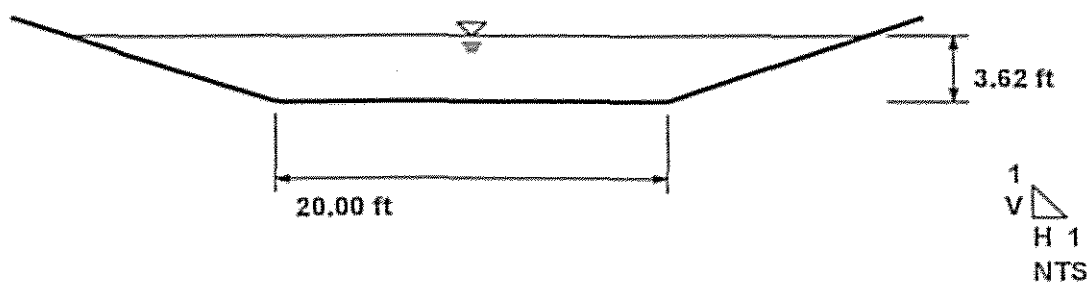
Input Data		
Mannings Coefficient	0.033	
Channel Slope	0.005000	ft/ft
Left Side Slope	3.000000	H : V
Right Side Slope	3.000000	H : V
Bottom Width	20.00	ft
Discharge	675.00	cfs

Results		
Depth	3.62	ft
Flow Area	111.92	ft ²
Wetted Perimeter	42.93	ft
Top Width	41.75	ft
Critical Depth	2.83	ft
Critical Slope	0.012646	ft/ft
Velocity	6.03	ft/s
Velocity Head	0.57	ft
Specific Energy	4.19	ft
Froude Number	0.65	
Flow is subcritical.		

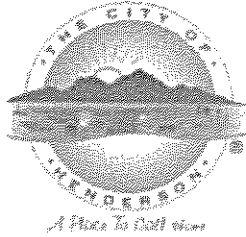
Section C7 100-Year Developed
Cross Section for Trapezoidal Channel

Project Description	
Project File	c:\projects\511004\flow\channels.fm2
Worksheet	Section C7 100-Year
Flow Element	Trapezoidal Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.033
Channel Slope	0.005000 ft/ft
Depth	3.62 ft
Left Side Slope	3.000000 H : V
Right Side Slope	3.000000 H : V
Bottom Width	20.00 ft
Discharge	675.00 cfs



*Appendix C-2: Reference Material from The Water Street Parcel
Conceptual Drainage Study*



RECEIVED

NOV 16 2004

PBS&J

CITY OF HENDERSON
240 Water Street
P. O. Box 95050
Henderson, NV 89009

November 10, 2004

Matt Baird, P.E.
PBS&J
2270 Corporate Circle, Suite 100
Henderson, NV 89074

Re: Water Street Parcel Conceptual Drainage Study
City of Henderson Permit Number 2004780170

Dear Mr. Baird;

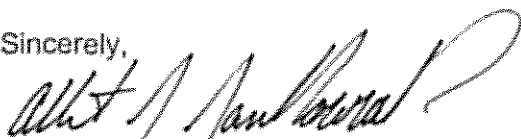
This letter provides comments on the above referenced drainage study dated September 24, 2004. The City of Henderson reviewed this study and based on the documents submitted, the subject study is approved. The following items are part of the approved study:

1. A portion of the site is located within a FEMA Flood Zone 'A'. Therefore, Clark County Regional Flood Control District (CCRFCD) concurrence is required.
2. The project site is adjacent to land within Clark County jurisdiction. Therefore, Clark County Department of Development Services (CCDDS) concurrence is required.
3. The study proposes to make revisions to the drainage facilities to be constructed as part of the Water Street Redevelopment improvements. The Engineer must meet with City of Henderson staff to discuss coordination issues for the site and street improvements.
4. This study is conceptual in nature and identifies alternatives for conveying offsite and onsite generated runoff to the ultimate discharge point. Also, normal depth calculations were provided to preliminarily size the proposed drainage facilities. A technical drainage study must be submitted and approved prior to permits being issued for the site improvements.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, the information submitted by the above named engineering firm may be superseded. Compliance with the regulatory elements and design standards specified in the Uniform Regulations for the Control of Drainage does not imply a guarantee that properties will be free from flooding or flood damage.

Please let me know if you have any questions concerning these comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Albert J. Jankowiak', written in a cursive style.

Albert J. Jankowiak, P.E.
Project Engineer II

cc: Curt Chandler, Janet Kapke, CCRFCD

**WATER STREET PARCEL
CONCEPTUAL DRAINAGE STUDY**

Prepared for:

The Landwell Company
875 West Warm Springs Road
Henderson, NV 89015

Prepared by:

PBS&J
2270 Corporate Circle, Suite 100
Henderson, Nevada 89074-6382

September 24, 2004
PBS&J Reference No.: 511629.39

INTRODUCTION

This study has been prepared as the Water Street Parcel Conceptual Drainage Study. The intention of this study is to establish that the proposed development, including drainage facilities, will be able to convey the flows and will not cause adverse impacts to adjacent and downstream properties.

This study was conducted in accordance with the criteria set forth by the Clark County Regional Flood Control District (CCRFCDD) *Hydrologic Criteria and Drainage Design Manual* (HCDDM) dated August 12, 1999.

GENERAL INFORMATION

SITE LOCATION

The project site is located within a portion of Section 13, Township 22 South, Range 62 East and a portion of Section 18, Township 22 South, Range 63 East, Clark County, Nevada. The site is bounded by Water Street to the east and Lake Mead Drive to the south, see **Figure 1**. The northern boundary of the site is approximately 1,120 feet north of Lake Mead Drive. The northeast corner of the site is at approximately Water Street and Laswell Street. The western boundary is approximately 2,860 feet west of the Water Street. The southwest corner of the site is at approximately Lake Mead Drive and Perlite Way. **Appendix A** contains a site exhibit.

SITE DESCRIPTION

The current site is primarily natural desert with little vegetation. A small baseball field is located in the southeastern corner of the site. The northeast corner of the site has previously been graded. The site also contains four private driveway entrances onto Lake Mead Drive. These driveways connect to private paved roads that run north-south across the site. There are also various dirt roads throughout the site. There is an existing channel located along Lake Mead Drive that consists of a rock bottom with rock side slopes that vary from 4 to 1 to vertical. A high point in the channel exists at the driveway entrance at Atlantic Avenue and Lake Mead Drive, which drains the eastern portion of the channel toward Water Street and the western portion to the west away from the site.

PROJECT DESCRIPTION

The proposed development consists of utilizing 73.5 acres to construct commercial and industrial facilities. The site will be developed to include street improvements with onsite and offsite drainage facilities, see **Figure 2**.

CCRFCDD MASTER PLAN INFORMATION

Figures 3 and 3A, show the property in relation to CCRFCDD Master Planned Facilities. The exhibits were reproduced from Figure F-22 of the 2002 CCRFCDD Master Plan Update of the Las Vegas Valley (2002 MPU). The figure shows that there are no existing regional facilities on or around the proposed development. Approximately 3,500 feet

Rainfall Methodology and Soils Information

Rainfall Methodology

A. Point Rainfall

According to Figure 513 of the Criteria Manual the site is located outside the McCarran Airport Rainfall area. Offsite basins are also located outside the McCarran Airport Rainfall area.

The 10-year, 6-hour rainfall depth-duration-frequency values were obtained from Figure 503 of the Criteria Manual. According to Figure 503, the rainfall depth for the 10-year 6-hour event is 1.4 inches. This value was adjusted according to Table 501 by 1.24, the 10-year recurrence interval. The adjusted rainfall value is 1.74 inches and is calculated as follows: $(1.4)(1.24) = 1.74$ inches.

The 100-year, 6-hour rainfall depth duration frequency values were obtained from Figure 506 of the Criteria Manual. According to Figure 506, the rainfall depth for the 100-year 6-hour event is 2.0 inches. This value was adjusted according to Table 501 by 1.43, the 100-year recurrence interval. The adjusted rainfall value is 2.86 inches and is calculated as follows: $(2.0)(1.43) = 2.86$ inches.

The HEC-1 multi-ratio option (HEC 1990) was used to model the 10-year and 100-year design storms in the HEC-1 input file. The HEC-1 JR card was used to specify the precipitation by which to multiply the 100-year precipitation values (point rainfall). The 10-year and 100-year ratios are 0.61 and 1.00, respectively.

B. Storm Distribution

Table 503 in the Criteria Manual specifies that the 6-hour storm distribution, SDN 3 should be used for drainage areas less than eight square miles.

Runoff Methodology

A. Lag Time

The Criteria Manual's Standard Form 4 was completed to determine the time of concentration for each drainage basin. For all basins which comprise less than 1 square mile, the time of concentration was calculated as follows:

$$T_c = T_i + T_t$$

Where: T_c = Time of Concentration

T_i = Initial, inlet or overland flow time

T_t = Travel time in the ditch, gutter, etc.

The time of concentration is the sum of the initial flow time, T_i and the travel time, T_t . The minimum T_c recommended for non-urban watersheds is 10 minutes and 5 minute minimum for urban watersheds.

Initial flow time was calculated as follows:

$$T_i = 1.8(1.1 - K)L_o^{1/2}/S^{1/3}$$

Where: T_i = Initial overland flow time (in minutes)

$$K = 0.0132CN - 0.39$$

CN = Curve Number

L_o = Length of overland flow (maximum 500 feet)

S = Average basin slope (in percent)

The lag time was calculated as follows:

$$T_{lag} = 0.6T_c \text{ (in hours)}$$

B. Soils – Curve Number Determination

Soils information, for the onsite drainage basins, was obtained from GIS data from the 2002 MPU. This information is shown in Figure H-22 of the 2002 MPU. The hydrologic group classification for the onsite basins is shown. The soil types were matched to the corresponding SCS Curve Number (CN) for use in the Standard Form 4 and the HEC-1 analysis. The corresponding CN's for these soils are found on Table 602 of the Criteria Manual.

Table B-1, Curve Number Calculations, summarizes the computation of the Curve Numbers for onsite basins.

Curve numbers for offsite basins were taken directly from the 2002 MPU.

Table 1
Curve Number Calculations

Existing Conditions

Basin Name	Area (acres)	Landuse	Soil Type	Curve#	Curve # Calc	Composite Curve Number
ON-1	2.52	Semiarid Rangeland, Desert Shrub	C	85	$(2.52/14.62)*85$	14.65
ON-1	12.1	Semiarid Rangeland, Desert Shrub	B	77	$(12.10/14.62)*77$	63.73
Total ON-1	14.62	ON-1 Composite CN				78.4

Basin Name	Area (acres)	Landuse	Soil Type	Curve#	Curve # Calc	Composite Curve Number
ON-2	12.8	Semiarid Rangeland, Desert Shrub	C	85	$(12.80/58.87)*85$	18.48
ON-2	46.07	Semiarid Rangeland, Desert Shrub	B	77	$(46.07/58.87)*77$	60.26
Total ON-2	58.87	ON-2 Composite CN				78.7

Proposed Conditions

Basin Name	Area (acres)	Landuse	Soil Type	Curve#	Curve # Calc	Composite Curve Number
ON-1	2.52	Urban Areas, Commercial and Business	C	94	$(2.52/14.62)*94$	16.20
ON-1	12.1	Urban Areas, Commercial and Business	B	92	$(12.10/14.62)*92$	76.14
Total ON-1	14.62	ON-1 Composite CN				92.3

Basin Name	Area (acres)	Landuse	Soil Type	Curve#	Curve # Calc	Composite Curve Number
ON-2	12.8	Urban Areas, Commercial and Business	C	94	$(12.80/58.87)*94$	20.44
ON-2	46.07	Urban Areas, Commercial and Business	B	92	$(46.07/58.87)*92$	72.00
Total ON-2	58.87	ON-2 Composite CN				92.4

```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* SEPTEMBER 1999 *
* VERSION 4.0 *
* RUN DATE 09/24/2004 TIME 15:43:58 *
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

```

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X X XXXXXX XXXX X
X X X X X XX
X X X X X X
XXXXXX XXXX X XXXX X
X X X X X X
X X X X X X
X X XXXXXX XXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC10S, HEC10B, AND HEC10W.

THE DEFINITIONS OF VARIABLES -STIMP- AND -RTION- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON SM-CARD WAS CHANGED WITH REVISIONS DATED 30 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, OSS,WRITE STAGE FREQUENCY, OSS,READ TIME SERIES AT DESIRED CALCULATION INTERVAL, LOSS RATE, GREEN AND AMPT INFILTRATION. KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM.

1 HEC-1 INPUT PAGE 1

```

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
*** FREE ***
*DIAGRAM
1 ID THE LAHWELL COMPANY
2 ID WATER STREET PARCEL CONCEPTUAL DRAINAGE STUDY
3 ID EXISTING CONDITIONS
4 ID INPUT FILE = EXIST.DAT
5 ID INPUT FILE DATE = SEPTEMBER 23, 2004
6 ID DESIGN STORM = 100-YEAR 6-HR STORM, 10-YEAR 6-HR STORM
7 ID STORM DISTRIBUTION = SDN #3
8 ID
9 ID JR CARDS DESCRIPTION:
10 ID 1.0: 100-YEAR STORM FLOW
11 ID 0.61: 10-YEAR STORM FLOW
12 ID
13 ID
14 IT 5 0 0 300
15 IO 5 0 0
16 IN 5 0 0
17 JR PREC 1.0 .61
*
18 KK FRAG20
19 BA 0.271
20 PB 2.86
21 PC .000 .020 .027 .070 .087 .108 .124 .130 .130 .130
22 PC .130 .130 .130 .133 .140 .148 .158 .172 .181
23 PC .190 .197 .199 .200 .201 .204 .214 .229 .241 .249
24 PC .251 .256 .270 .278 .281 .283 .295 .322 .352 .409
25 PC .499 .590 .710 .744 .781 .812 .819 .835 .851 .886
26 PC .860 .868 .876 .888 .910 .916 .937 .950 .970 .976
27 PC .982 .985 .987 .989 .990 .992 .993 .994 .995 .998
28 PC .998 .999 1.00
29 LS 0 78.1
30 UD 0.256
*
31 KK OFF-2
32 BA 0.031
33 PB 2.86
34 LS 0 80
35 UD 0.098
*
36 KK ROFF-2
37 KM ROUTE OFF-2 TO NORTHEAST CORNER OF SITE
38 RD 1200 0.03 0.03 5 TRAP 1 1
*
39 KK ON-2
40 BA 0.093
41 PB 2.86
42 LS 0 78.7
43 UD 0.319
*

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1 HEC-1 INPUT PAGE 2

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
44 KK C3
45 KM COMBINE ON-2 WITH ROFF-2 AT NORTHEAST CORNER OF SITE
46 MC 2
*
47 KK ON-1
48 BA 0.073

```

*Appendix C3: Reference Material of Flow Split-
The Conceptual Drainage Study for
BMI Gate 5 Detention Basin*

COMP. BY: V7
 CHK. BY: _____
 DATE: 4/25/02
 SHEET NO.: 1
 JOB NO.: 511429

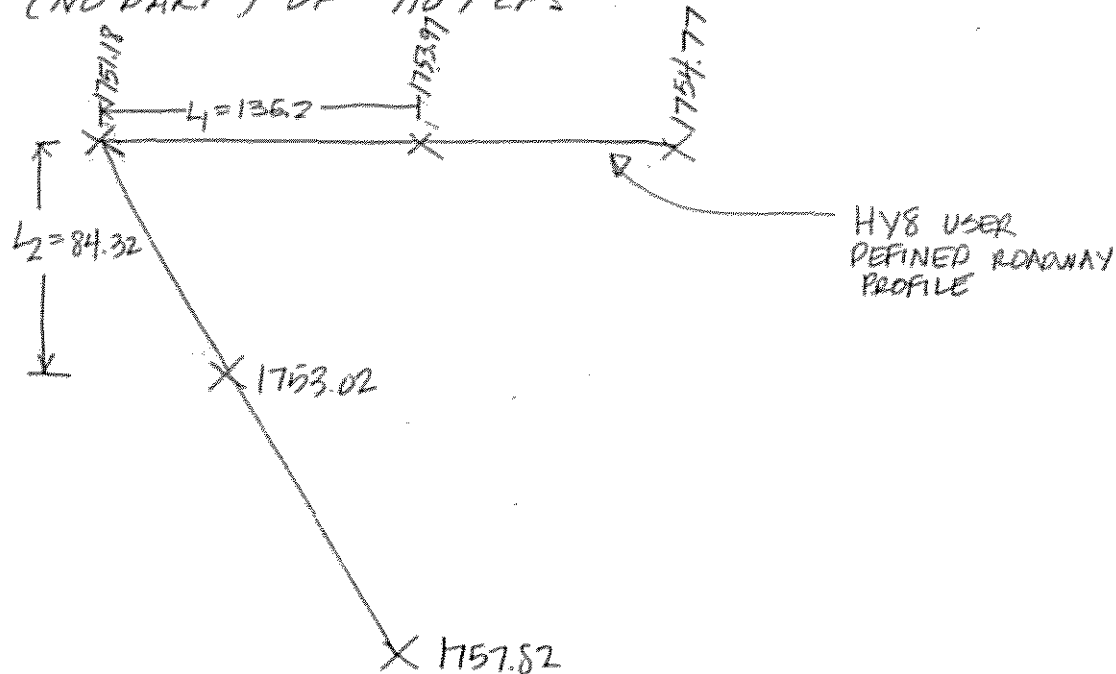
Subject: FLOW SPLIT AT BOULDER HWY
CULVERT - EXISTING CONDITIONS

REFER TO HYS ANALYSES BMI-1 (10 YR/100 YR FLOWS WITHOUT DARP) AND BMI-2 (10 YR/100 YR FLOWS WITH 100 YR DARPED FLOW)
 HEC-1 FLOW AT COMC3 (HEC-1 FILE: BM15-EX)

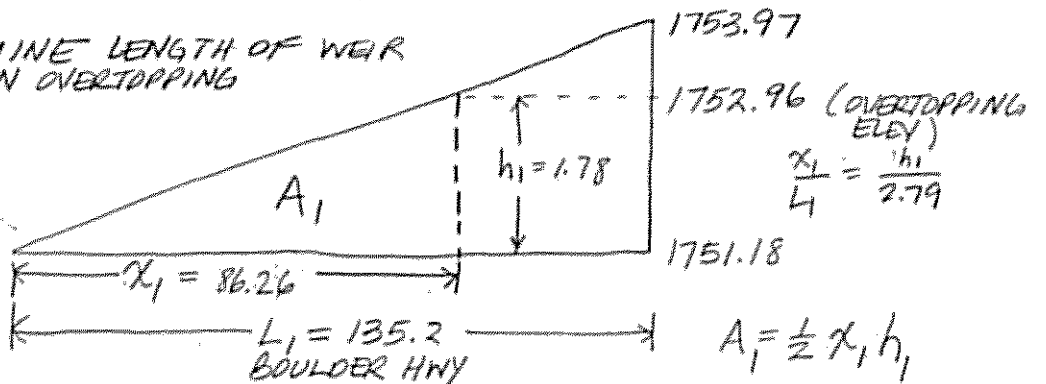
BMI-1 (NO DARP) $Q_{100} = 1108$ $Q_{10} = 410$

OVERTOPPING OCCURS BETWEEN ELEVATIONS 1753.97 AND 1753.02

OVERTOPPING ELEV FROM HYS = 1752.96 FOR 100 YR FLOW (NO DARP) OF 1107 CFS



DETERMINE LENGTH OF WEIR BASED ON OVERTOPPING ELEV:



$$A_1 = \frac{1}{2} X_1 h_1$$

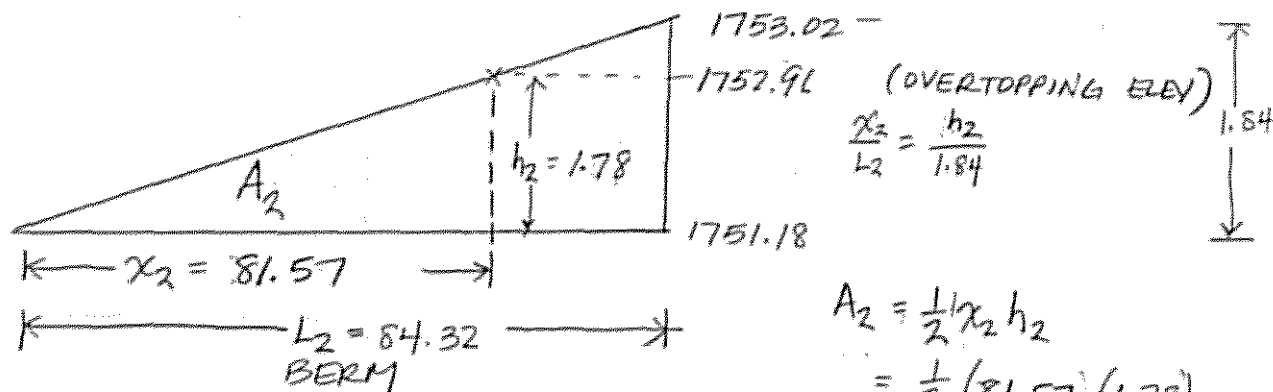
$$= \frac{1}{2} (.86.26)(1.78)$$

$$= 76.8 \text{ FT}^2$$



COMP. BY: VA
 CHK. BY: _____
 DATE: 4/25/02
 SHEET NO.: 2
 JOB NO.: 511429

Project: FLOW SPLIT AT BOULDER HIGHWAY
CULVERT - EXISTING CONDITIONS



$$Q_{100} \text{ (TOTAL W/O DAF)} = 1108 \text{ CFS}$$

$$Q_{\text{OVERTOP}} = 666.4 \text{ CFS}$$

$$Q_1 + Q_2 = Q_{\text{OVERTOP}}$$

$$\frac{Q_1}{Q_{\text{OVERTOP}}} = \frac{A_1}{A_1 + A_2} \quad \frac{Q_2}{Q_{\text{OVERTOP}}} = \frac{A_2}{A_1 + A_2}$$

$$Q_1 = \frac{A_1 Q_{\text{OVERTOP}}}{A_1 + A_2} = \frac{76.8 (666.4)}{76.8 + 72.6} = 342.6$$

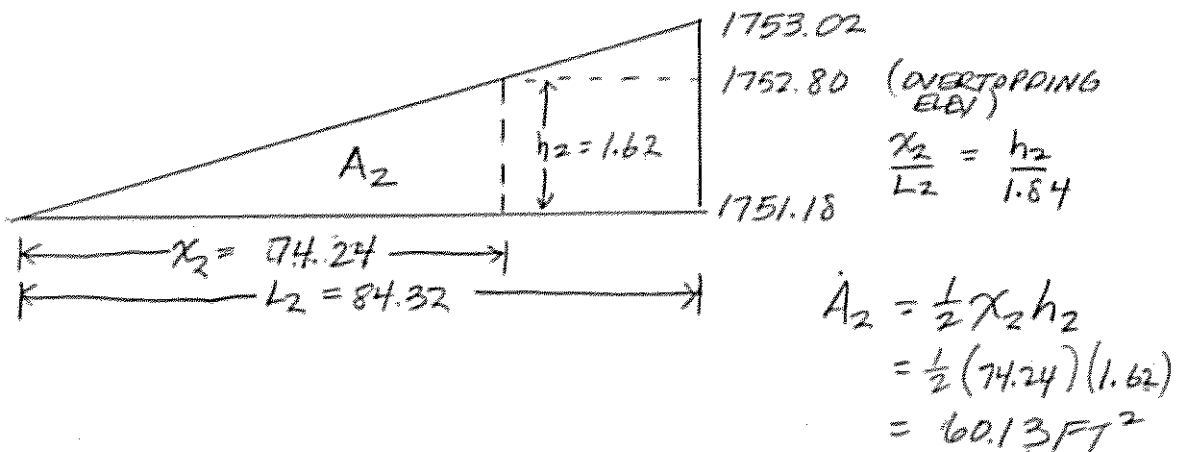
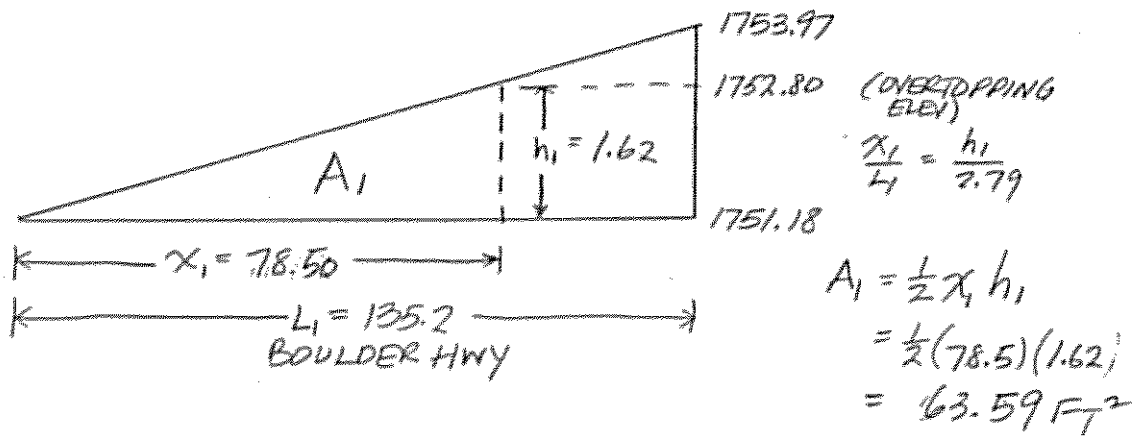
$$Q_2 = \frac{A_2 Q_{\text{OVERTOP}}}{A_1 + A_2} = \frac{72.6 (666.4)}{76.8 + 72.6} = 323.8$$

Subject: FLOW SPLIT AT BOULDER HIGHWAY
CULVERT - EXISTING CONDITIONS

BM1-2 (WITH DARP) $Q_{100} = 992$ $Q_{10} = 410$

OVERTOPPING ELEV FROM HY8 = 1752.80 FOR 100YR FLOW
(WITH DARP) OF 992 CFS

DETERMINE LENGTH OF WEIR
BASED ON OVERTOPPING ELEV:



Subject: FLOW SPLIT AT BOULDER HIGHWAY
CULVERT - EXISTING CONDITIONS

$$Q_{100} \text{ (TOTAL W/DARF)} = 992$$

$$Q_{\text{OVERTOP}} = 547.6$$

$$Q_1 + Q_2 = Q_{\text{OVERTOP}}$$

$$Q_1 = \frac{A_1 Q_{\text{OVERTOP}}}{A_1 + A_2} = \frac{63.59(547.6)}{(63.59 + 60.13)} = 281.5$$

$$Q_2 = \frac{A_2 Q_{\text{OVERTOP}}}{A_1 + A_2} = \frac{60.13(547.6)}{(63.59 + 60.13)} = 266.1$$

V4
 9/23/02
 I think this
 should be
 304.1 (see HYS)

FOR HEC-1 DIVERT DIV1-N

DI	0	364	410	992	1108
DQ	0	364	362 ^③	726 ^①	784 ^②

① CULVERT FLOW + Q_1 (DARF) ~~444.4~~ ^{441.6 on} + ~~281.5~~ ^{342.6 on} = ~~725.9~~ ^{784.2 on} ≈ 726

② CULVERT FLOW + Q_2 (DARF) = 441.6 + 342.6 = 784.2

③ CULVERT FLOW

Appendix D: Maps

Appendix D-1: Conceptual Grading

Appendix D-2: Proposed Land Use

Appendix D-3: Existing Conditions

Appendix D-4: Proposed Conditions

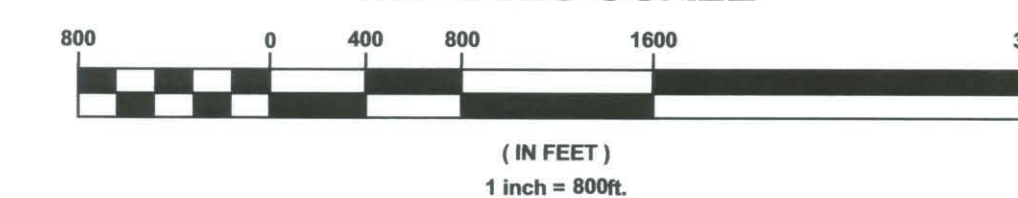


LEGEND

- PROPERTY BOUNDARY
- MASS GRADING COUNTOURS
- EXISTING CONTOURS
- CENTER LINE OF FUTURE ROADS



GRAPHIC SCALE



511629.28

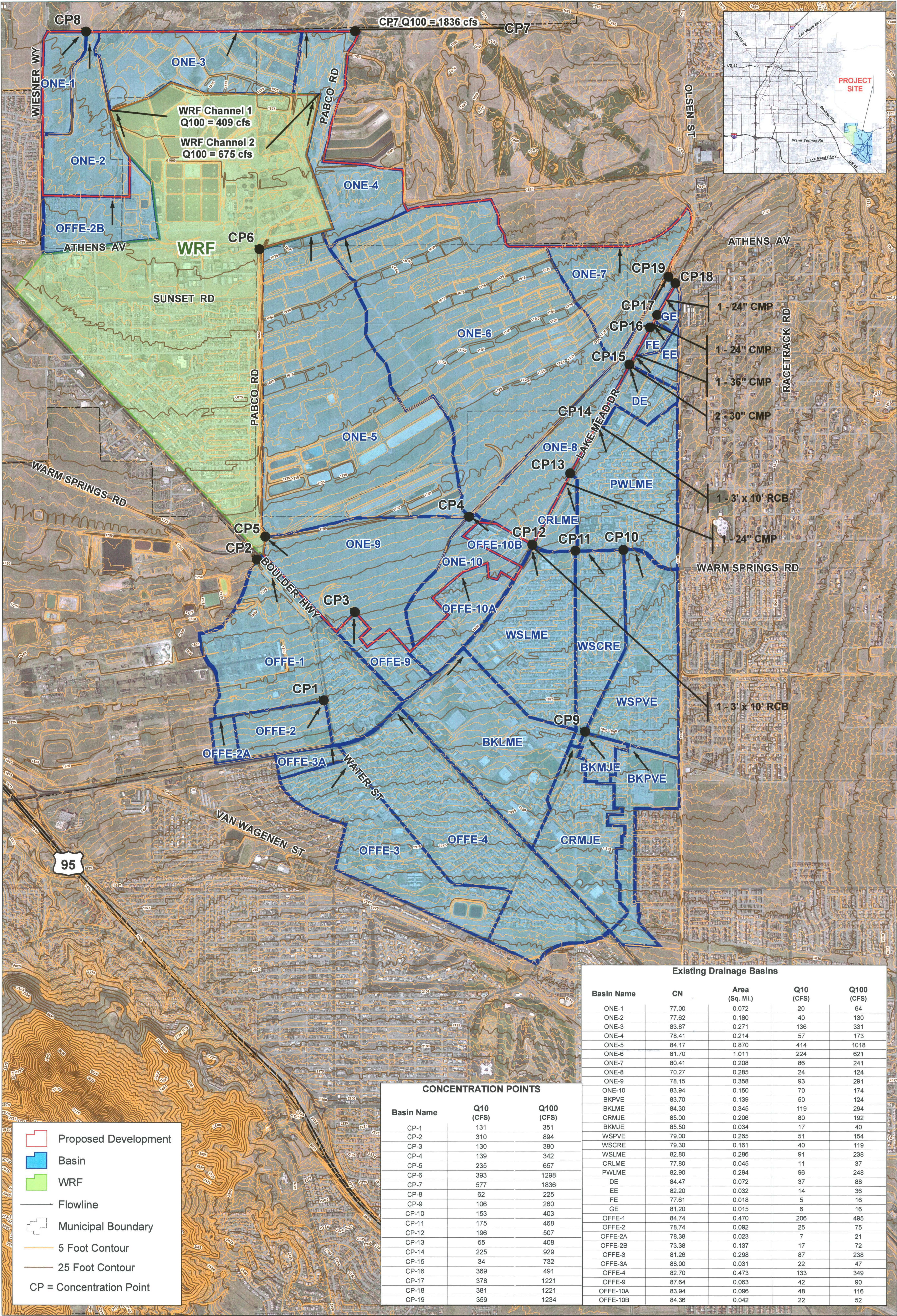
March 2005

Conceptual Mass Grading



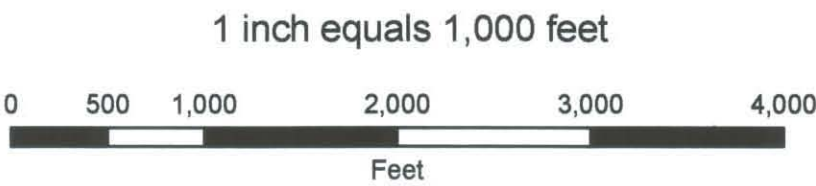
2270 Corporate Circle
Suite 100
Henderson, Nevada 89074-6382
Telephone: 702/263-7275
Fax: 702/263-7200

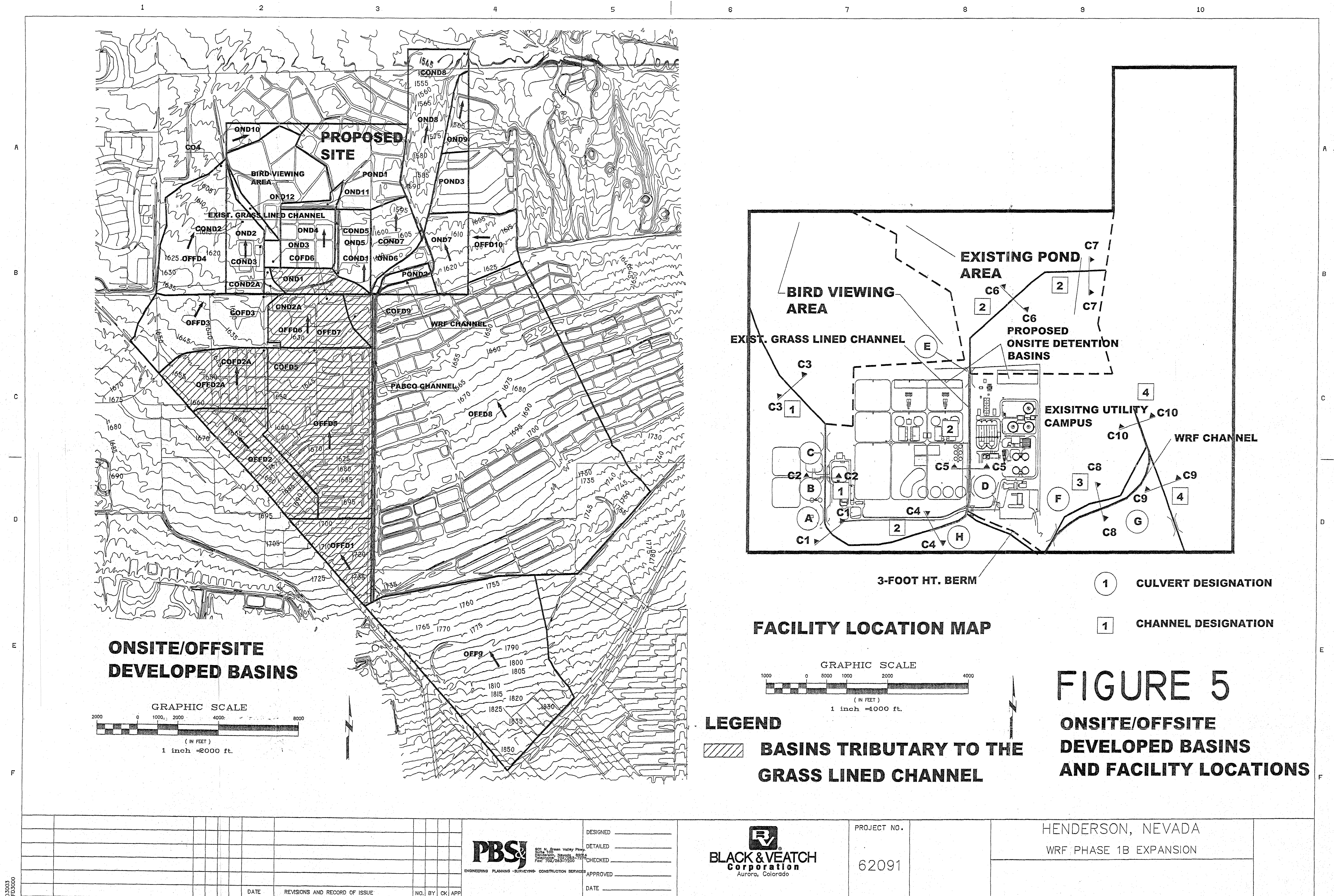
ENGINEERING PLANNING SURVEYING CONSTRUCTION SERVICES

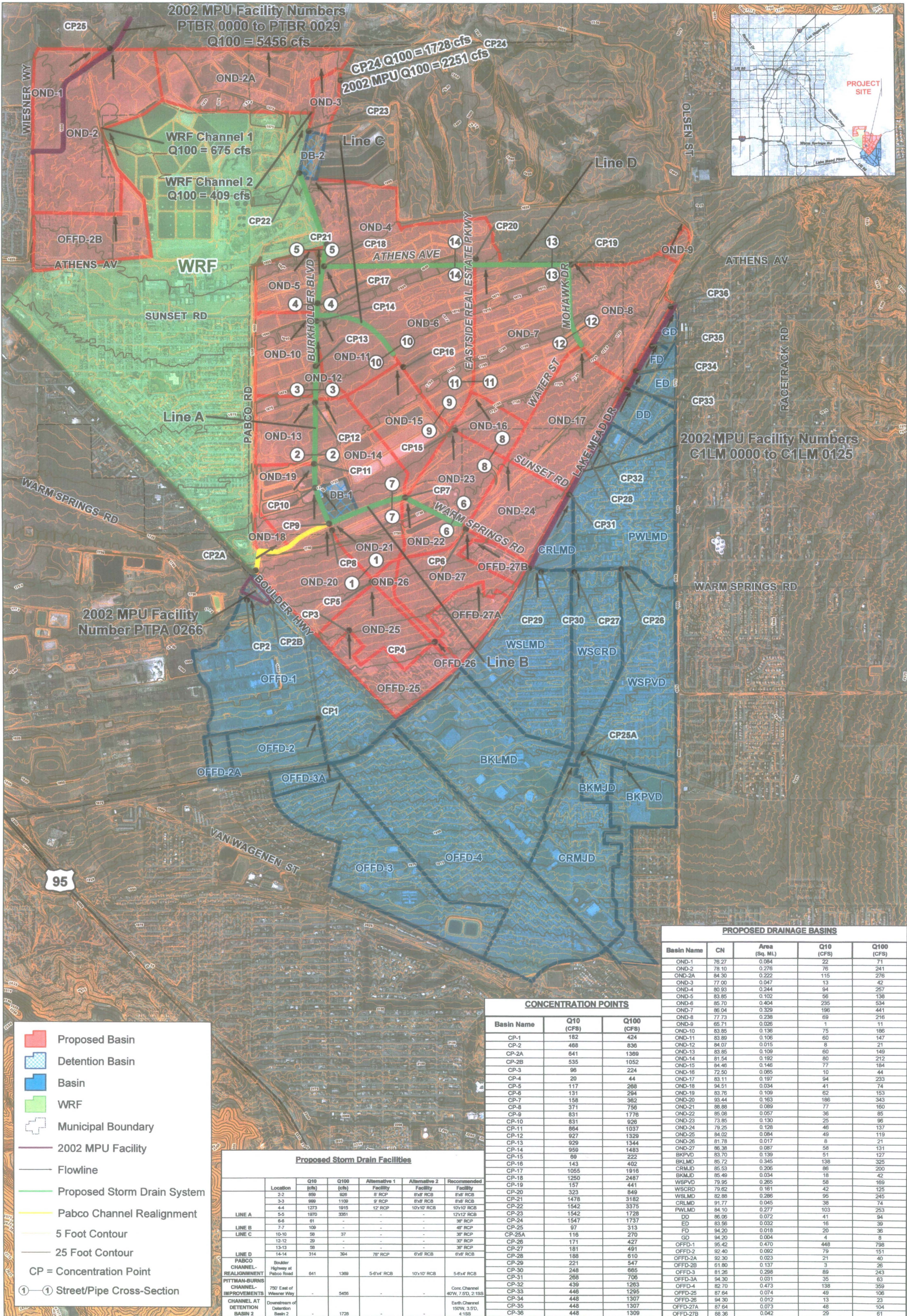


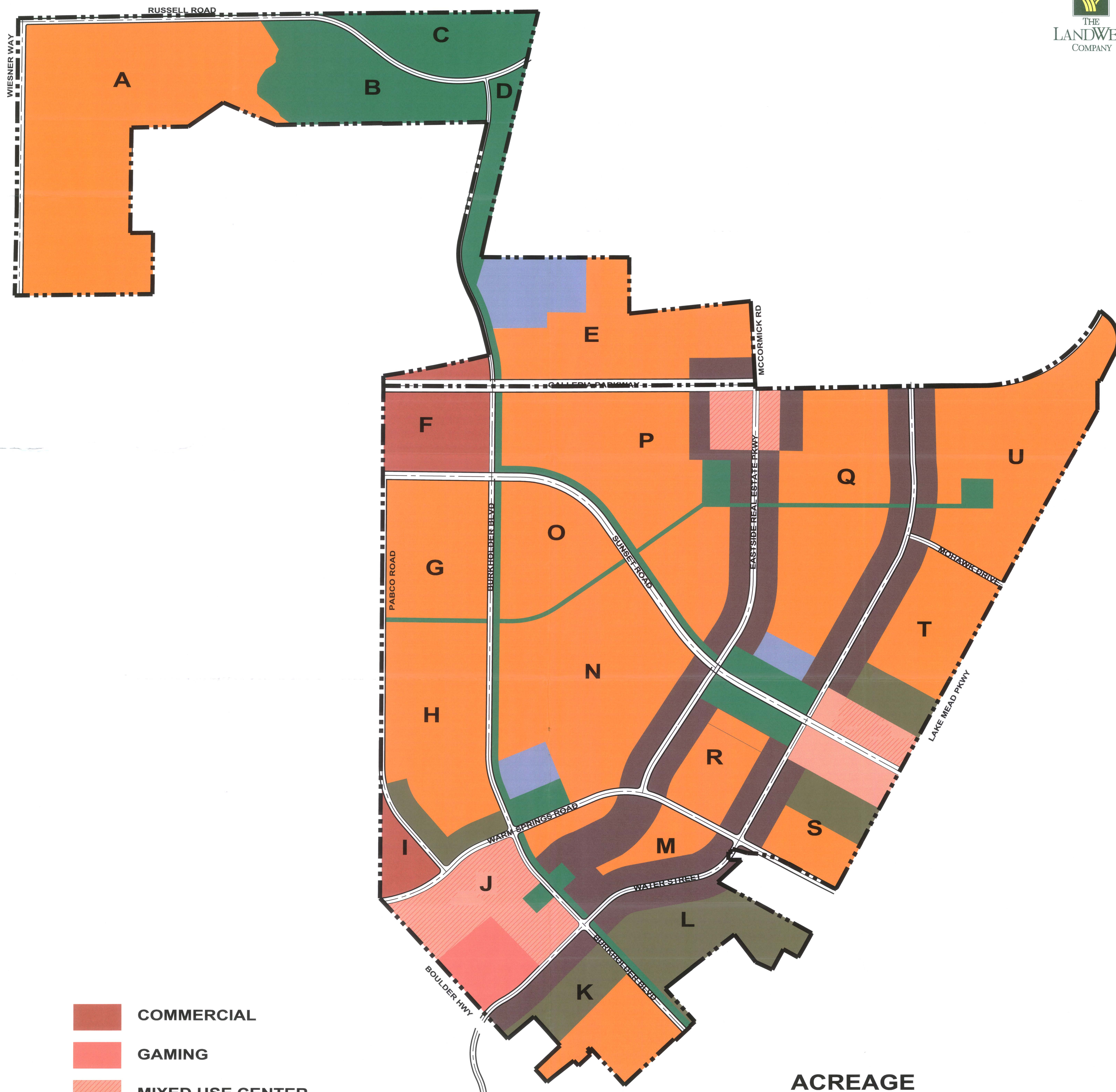
SOURCE: 2004 GISMO

EXISTING CONDITIONS DRAINAGE MAP





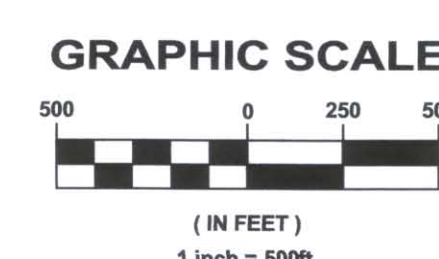




ACREAGE

DEVELOPABLE	1,769.6 ACRES
OPEN SPACE	240.3 ACRES
TOTAL	2,009.9 ACRES

EASTSIDE REAL ESTATE
LAND USE PLAN 01/31/05



**Addendum #1 To The
Conceptual Drainage Study
For The Eastside Properties**
KIVA # 20055780056

Prepared for



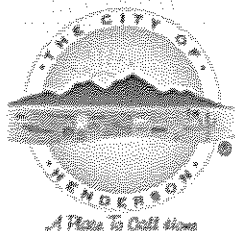
The Landwell Company
875 West Warm Springs Road
Henderson, NV 89015

Prepared by



2270 Corporate Circle, Suite 100
Henderson, NV 89074
(702) 263-7275

May 2005



**CITY OF HENDERSON PUBLIC WORKS
HYDROLOGY STUDY SUBMITTAL FORM**
240 Water Street, Suite 210, Henderson, NV 89015
Questions? (702) 565-2867 or 565-2815

Date: May 2, 2005

Hydrology Study Title: Conceptual Drainage Study For The Eastside Properties

This submittal is: ☐ New ☒ Addendum (response to comments) ☐ Update after original approval
☐ Supplemental information for a previous submittal ☐ Other _____

INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED:

For all submittals:

- ☒ Completed Hydrology Study Submittal Form (this form)
- ☒ Two (2) copies of the hydrology study and related maps.
- ☒ Large maps folded to the approximate size of the study.
- ☒ Completed Standard Form 1, bound into the first page of each copy of the study.
- ☒ Nevada Professional Engineer's seal, signed and dated, must be included on the Standard Form 1.

For new submittals:

- _____ Community Development Permit Number _____
(design review, tentative map, parcel map, etc.) (4 letters) (10-digit number)
- _____ \$260.00 submittal fee.
- _____ Completed Standard Form 2, bound into each copy, behind the Standard Form 1.

For addendum (response to comments):

- _____ Copy of City of Henderson comment letter, bound into each copy, behind the Standard Form 1.

For update to an approved study:

- _____ \$54.00 submittal fee for updates within a year of the approval. \$260.00 fee for submittals over a year after original approval.
- _____ Copy of approval letter for original study, bound into each copy, behind the Standard Form 1.

The above list is the **minimum** required for **submittal**. For adequate review, all items identified in the Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual must be included. Please pay special attention to the City of Henderson section of the manual.

CITY OF HENDERSON USE ONLY: Accepted by: (print name) _____

KIVA # _____

COH Date Stamp: _____

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Addendum #1 to Eastside Properties Date: May 2, 2005

Location of Development: a) Descriptive (Cross Streets) North/South Pabco Road East/West Boulder Highway/
b) Sect. 36 Twn. 21S Rng. 62E
31, 32 21S 63E
5, 6, 7, 8, 18 22S 63E

Assessors Parcel No: PT 160-31-001 / PT 160-31-002 / PT 160-31-003 / PT 160-31-004 / PT 160-31-007 / PT 160-31-008 / PT 160-32-008 / PT 161-36-001 / PT 161-36-002
PT 161-36-003 / PT 161-36-004 / PT 161-36-005 / PT 161-36-006 / PT 179-05-001 / PT 179-05-002 / PT 179-05-003 / PT 179-05-004 / PT 179-05-005
PT 179-05-006 / PT 179-05-007 / PT 179-05-008 / PT 179-06-001 / PT 179-06-002 / PT 179-06-003 / PT 179-06-004 / PT 179-06-005 / PT 179-06-006
PT 179-06-007 / PT 179-06-008 / PT 179-07-001 / PT 179-07-002 / PT 179-07-003 / PT 179-07-004 / PT 179-07-005 / PT 179-07-006 / PT 179-07-007
PT 179-07-008 / PT 179-08-001 / PT 179-08-002 / PT 179-08-003 / PT 179-07-007 / PT 179-18-005

Name of Owner: The Landwell Company

Telephone No: (702) 567-0400 Facsimile No: (702) 567-0475

Address: 875 West Warm Springs Road

Henderson, NV 89015

Contact Person Name: Matt Baird Telephone No: (702) 263-7275

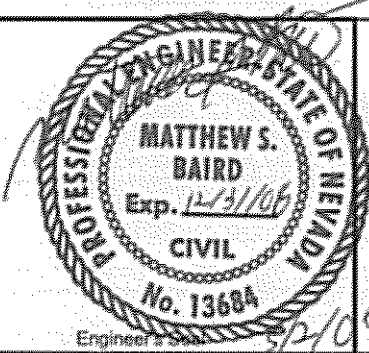
Firm: PBS & J

Address: 2270 Corporate Circle, Suite 100 Henderson, Nevada 89074

Type of Land Development/Land Disturbance Process:

☐ Rezoning	☐ Subdivision Map	☐ Clearing and Grading Only
☐ Parcel Map	☒ Planned Unit Development	☐ Other (Please specify below)
☐ Large Parcel Map	☐ Building Permit	

- Total Owned Land Area: At Site: 2,200 +/- acres Being Developed/Disturbed:
- Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☒ YES ☐ NO
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ YES ☐ NO
- Proposed type of development (Residential, Commercial, Etc.)? Residential, Commercial, Parks, Schools
- Approximate upstream land area which drains to the subject site? 2,000 +/- acres
- Has the site drainage been evaluated in the past? YES* ☒ NO If yes, please identify documentation:
- If known, please briefly identify the proposed discharge point(s) of runoff from the site:
Northern Section of Proposed Development (Approx. 4,500 feet North of Athens Avenue)
- Briefly describe your proposed schedule for the subject project: ASAP



Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

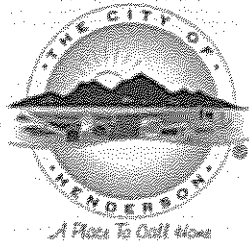
* Review and concurrence of the Clark County Regional Flood Control District is required.

Local Entity File No.

Revision	Date

PBS&J Job Number: 51-1629

STANDARD FORM 1



RECEIVED

APR 05 2005

PBS&J

CITY OF HENDERSON
240 Water Street
P.O. Box 95050
Henderson, NV 89009

April 4, 2005

Matt Baird, P.E.
PBS&J
2270 Corporate Circle, Suite 100
Henderson, NV 89074

Re: Eastside Properties Conceptual Study
City of Henderson Permit Number 2005780056

Dear Mr. Baird;

This letter provides comments on the above referenced drainage study dated 3-4-05. The City of Henderson reviewed this study and based on the documents submitted, **we have the following comments:**

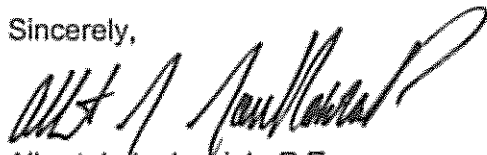
- 1) The site is adjacent to or crosses a Clark County Regional Flood Control District (CCRFCDD) Master Plan Facility. Also, a portion of the site is located within a FEMA Special Hazard Area Zone "A". Therefore, CCRFCDD concurrence is required.
- 2) The project site is located in a FEMA Special Flood Hazard Area (SFHA) Zone 'A'. Therefore, the City of Henderson requires that a Conditional Letter of Map Revision must be obtained prior to construction activity within the boundaries of the SFHA. Also a Letter of Map Revision must be submitted to FEMA prior to approval of the elevation certificate for lots within the 100-year floodplain.
- 3) The drainage study proposes flood control improvements located on property within Nevada Department of Transportation (NDOT) jurisdiction. Therefore, NDOT concurrence for the drainage study is required and an NDOT encroachment permit must be obtained.
- 4) This study proposes to revise the facilities of the proposed Pittman Pabco channel system identified in the 2002 MPU. An amendment to the 2002 MPU must be submitted to CCRFCDD and approved prior to permits being issued for the channel improvements.
- 5) Approval from the Nevada State Engineer must be obtained prior to the construction of the two proposed detention basins. This is due to the storage volume exceeding 10 acre-feet in both basins respectively.
- 6) In the study it was stated that the proposed 150-foot earth lined channel from detention basin two will convey a 100/year flow of 1728 cfs that discharges into the Las Vegas Wash. Discuss further the proposed alignment of the channel and any facilities needed to prevent negatively impacting the wash at the discharge point. Also discuss proposed measures to avoid a negative impact to Russell Road and the C.O.H. WRF discharge facilities.

- 7) In the hydraulic analysis for the proposed storm drain system, the cross section for Alternative 1 Pabco Channel Realignment to Detention Basin 1 a full flow capacity analysis was utilized. Whereas a normal depth analysis was used for the remaining hydraulic cross sections. Review and revise analysis for Pabco Alternative 1 using a normal depth calculation to provide consistency.
- 8) Provide additional discussion for clarification of proposed detention basin bypass system and facilities to accomplish flow bypass.
- 9) The study indicates that the 10 year dry lane criteria has been met in the hydraulic street section analysis. After review it appears that the dry lane criteria has not been met except for sections 8-8 & 11-11. Provide solution to meet dry lane criteria and discuss possible impact to storm drain system. Review and revise storm drain analysis accordingly.
- 10) Coordinate with the City of Henderson Traffic Engineering Department regarding the Burkholder Blvd. right-of-way width. There have been discussions to reduce the right-of-way to 80-feet. If so then the affected street section analysis must be revised.
- 11) It is stated in the study that the project site lies outside the McCarran Airport Rainfall Area. After review it was found that a section does lie inside the McCarran Airport Rainfall Area. Since the adjusted rainfall depth is greater than the McCarran rainfall depth no revision to the HEC-1 analysis is required.
- 12) Before next submittal please contact the City of Henderson Flood Control Department (267-3680) to set up a meeting to discuss issues.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, the information submitted by the above named engineering firm may be superseded. Compliance with the regulatory elements and design standards specified in the Uniform Regulations for the Control of Drainage does not imply a guarantee that properties will be free from flooding or flood damage.

Please let me know if you have any questions concerning these comments.

Sincerely,



Albert J. Jankowiak, P.E.
Project Engineer II

cc: Curt Chandler, Janet Kapke, Jeff Swartzlander, CCRFCD

May 2, 2005

Mr. Albert Jankowiak, P.E.
City of Henderson Public Works
240 Water Street
Henderson, Nevada 89009

**RE: CONCEPTUAL DRAINAGE STUDY FOR THE EASTSIDE PROPERTIES
PBS&J PROJECT NO: 511629.28**

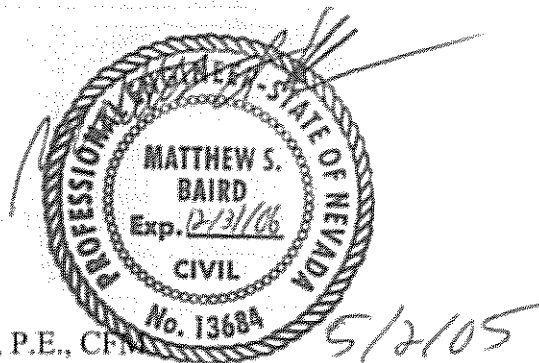
Mr. Jankowiak:

PBS&J has enclosed two copies of *Addendum 1 to the Technical Drainage Study for the Eastside Properties* for your review.

If you have any questions regarding this submittal please contact us at 263-7275.

Sincerely,

PBS&J



Matt Baird, P.E., CFM
Senior Program Manager

This report is intended to serve as the *Addendum #1 to the Eastside Properties Conceptual Study*. The revisions in this addendum are intended to supersede the data contained in the *Eastside Properties Conceptual Study* dated March 4, 2005 (City of Henderson Permit Number 2005780056).

The comments in a letter dated April 4, 2005 from the City of Henderson Department of Public Works and the responses are included below:

Comment 1: The site is adjacent to or crosses a Clark County Regional Flood Control District (CCRFC) Master Plan Facility. Also, a portion of the site is located within a FEMA Special Hazard Area Zone "A". Therefore, CCRFC concurrence is required.

Response 1: PBS&J will obtain CCRFC concurrence.

Comment 2: The project site is located in a FEMA Special Flood Hazard Area (SFHA) Zone 'A'. Therefore, the City of Henderson requires that a Conditional Letter of Map Revision must be obtained prior to construction activity within the boundaries of the SFHA. Also a Letter of Map Revision must be submitted to FEMA prior to approval of the elevation certificate for lots within the 100-year floodplain.

Response 2: PBS&J will obtain the proper approval from FEMA.

Comment 3: The drainage study proposes flood control improvements located on property within Nevada Department of Transportation (NDOT) jurisdiction. Therefore, NDOT concurrence for the drainage study is required and an NDOT encroachment permit must be obtained.

Response 3: In a meeting held with City of Henderson staff on April 21, 2005, it was determined that PBS&J would contact NDOT to discuss the project so that they would be aware of what is proposed and obtain some initial feedback. PBS&J contacted Paul Frost with the NDOT Hydraulics Division. The e-mail correspondence with Mr. Frost is included in Appendix A. It was also decided that PBS&J will obtain NDOT concurrence on any technical drainage studies that affect NDOT right-of-way and will obtain NDOT encroachment permits when the technical drainage studies and plans are developed. This primarily affects the culvert crossing under Boulder Highway at Pabco Road and the C-1 Lake Mead facility. However, the C-1 Lake Mead facility is part of a separate technical drainage study and the NDOT is already aware of that project. Subsequently the e-mail correspondence only deals with the Boulder Highway culvert crossing.

Comment 4: The study proposes to revise the facilities of the proposed Pittman Pabco channel system identified in the 2002 MPU. An amendment to

the 2002 MPU must be submitted to CCRFCD and approved prior to permits being issued for the channel improvements.

Response 4: A Master Plan Amendment to the 2002 MPU will be coordinated with and submitted to COH and CCRFCD.

Comment 5: Approval from the Nevada State Engineer must be obtained prior to the construction of the two proposed detention basins. This is due to the storage volume exceeding 10 acre-feet in both basins respectively.

Response 5: Approval from the Nevada State Engineer will be obtained if the detention basins require a dam safety permit per state regulations. Typically the detention basin must have a dam height of 20 feet or impound 20 acre-feet of water to require a dam safety permit unless the structure is considered high hazard. Regardless of this, when the detention basins are designed a determination will be made regarding any required approvals from the Nevada State Engineer. If a dam safety permit is not required then the location and sections of the detention basins will be submitted to the Nevada State Engineer for information only as is required per current regulations.

Comment 6: In the study it was stated that the proposed 150-foot earth lined channel from detention basin two will convey a 100-year flow of 1728 cfs that discharges into the Las Vegas Wash. Discuss further the proposed alignment of the channel and any facilities needed to prevent negatively impacting the wash at the discharge point. Also discuss proposed measures to avoid a negative impact to Russell Road and the C.O.H. WRF discharge facilities.

Response 6: All existing facilities will be protected in place. Proposed facilities will be coordinated with the future Russell Road alignment and facilities. The facilities will also be coordinated with the Clark County Public Works Wetlands Park proposed Scenic Route. Coordination has begun with SNWA regarding discharges to the Las Vegas Wash. The proposed alignment and discharge point is the same as shown in the 2002 MPU. The U.S. Army Corps of Engineers will be contacted regarding wetlands and 404 permits. The facility discharging to the Las Vegas Wash will be designed such that it will be acceptable to all agencies having regulatory authority over the facility. A portion of the site is currently within Clark County, but will soon be annexed into the City of Henderson. The Las Vegas Wash is maintained by Clark County. It was agreed in the meeting with COH on April 21, 2005 that they would discuss with Clark County whether or not Clark County concurrence is necessary for the conceptual drainage study.

Comment 7: In the hydraulic analysis for the proposed storm drain system, the cross section for Alternative 1 Pabco Channel Realignment to Detention Basin 1 a full flow capacity analysis was utilized. Whereas a normal

depth analysis was used for the remaining hydraulic cross sections. Review and revise analysis for Pabco Alternative 1 using a normal depth calculation to provide consistency.

Response 7: The analysis for Pabco Alternative 1 has been revised to use a normal depth calculation. The capacity of the proposed facility remains the same. The revised calculation is included in Appendix B.

Comment 8: Provide additional discussion for clarification of proposed detention basin bypass system and facilities to accomplish flow bypass.

Response 8: There are several conceptual alternatives for accomplishing the flow bypass. These will be explored more thoroughly in the design phase. However there are several examples of this type of detention basin in use around the valley and are maintained as regional facilities. Some options for the bypass design are:

- A low flow channel that would convey the bypass flow with a side weir into the detention basin for the excess flow.
- An outlet structure that only has the capacity to convey the bypass flow.

The detention basin may also be a tiered structure to allow a portion of the detention basin to be utilized as open space. PBS&J understands that the open space would need to be elevated above the 25-year event.

Comment 9: The study indicates that the 10 year dry lane criteria has been met in the hydraulic street section analysis. After review it appears that the dry lane criteria has not been met except for sections 8-8 & 11-11. Provide solution to meet dry lane criteria and discuss possible impact to storm drain system. Review and revise storm drain analysis accordingly.

Response 9: All affected street calculation sections have been revised and are included in Appendix C along with a summary table. All sections now meet dry lane criteria. The proposed storm drain system has been re-evaluated and all affected storm drain calculations have been included in Appendix D along with summary tables. The sizes of some of the proposed storm drains have been increase and the storm drains in Sunset Road and Burkholder Blvd. have been extended upstream. Figure 9 the Proposed Conditions Drainage Map from the previous submittal has been revised and is included at the end of this section. The large format Proposed Conditions Drainage Map has also been revised and is included in Appendix E.

Comment 10: Coordinate with the City of Henderson Traffic Engineering Department regarding the Burkholder Blvd. right-of-way width. There

have been discussions to reduce the right-of-way to 80-feet. If so then the affected street section analysis must be revised.

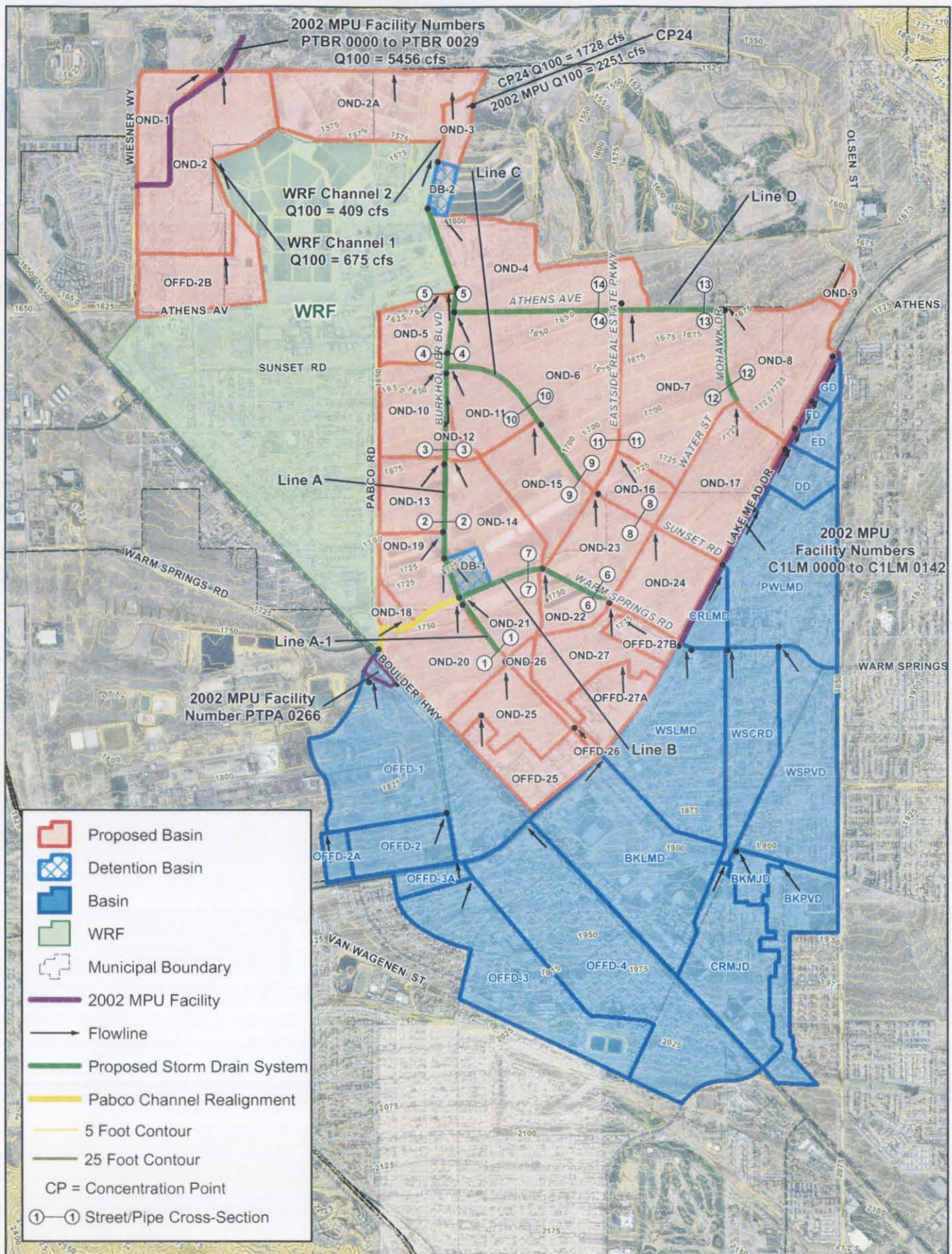
Response 10: PBS&J will coordinate with the Traffic Engineering Department. Whatever the final street section or right-of-way width, all applicable criteria will be met and will be addressed in the design phase.

Comment 11: It is stated in the study that the project site lies outside the McCarran Airport Rainfall Area. After review it was found that a section does lie inside the McCarran Airport Rainfall Area. Since the adjusted rainfall depth is greater than the McCarran rainfall depth no revision to the HEC-1 analysis is required.

Response 11: Comment noted.

Comment 12: Before next submittal please contact the City of Henderson Flood Control Department (267-3680) to set up a meeting to discuss issues.

Response 12: The Flood Control Department was contacted and a meeting was held, as noted above, on April 21, 2005.



SOURCE: 2004 GISMO



1 inch equals 3,000 feet

PROPOSED CONDITIONS DRAINAGE MAP

NOTE: REFER TO APPENDIX D-4 FOR DETAILED LARGE-SCALE MAP

PBSJ

FIGURE 9

Appendix A

Correspondence with NDOT

Baird, Matt

From: Frost, Paul [pfrost@dot.state.nv.us]
Sent: Thursday, April 28, 2005 9:45 AM
To: Baird, Matt
Subject: RE: Pabco Channel

Hello Matt,

I do not see any problems out of the ordinary for this. If flows are diverted from their existing path, we would want assurance that the downstream system can handle the additional flows without adverse impacts.

Typically, MPU facilities are maintained by the local agency. I am assuming this would be the case here.

I can't see any reason NDOT would not be in support of this. Hopefully the utilities there will not be too large of a problem.

Let me know if you need anything from us, or need any clarification of our criteria or encroachment permit requirements.

Paul

-----Original Message-----

From: Baird, Matt [mailto:mbaird@pbsj.com]
Sent: Wednesday, April 27, 2005 7:29 PM
To: Frost, Paul
Subject: Pabco Channel

Paul,

As you know we are working for the Landwell company for the design of the C-1 Channel – Lake Mead branch along the north side of Lake Mead Drive, northeast of Boulder Hwy. We will be submitting the drainage study and applying for the encroachment permit soon on this project. I would like to get some initial input from you on another system we will be looking at in the near future. This system is the Pabco Channel system (MPU system PTPA on sheet F-22), which is west of the Lake Mead system at Pabco Road. This proposed master plan system proposes a detention basin on the west side of Boulder Highway draining to a channel system on the east side of Boulder Highway, which then continues north along Pabco Road to the Las Vegas Wash. A couple of years ago we did a conceptual design of the proposed detention basin and found that it would be problematic to put the detention basin where it is shown in the MPU due to existing utilities in this area. As an alternative to this Landwell is considering conveying all of the 100-year flow under Boulder Highway. Obviously this would require construction of additional box culverts under Boulder Highway in the vicinity of the existing box culverts and an encroachment permit from NDOT as well as all of the local approvals. Under existing conditions during the 100-year event past analysis has shown that there is a flow split at this location. A portion of the flow crosses Boulder Highway and a portion of the flow drains northwest in Boulder Highway. The exact ratio of the flow split has been a topic of debate over the years, but of the 100-year flow of 1,100 cfs at this location it is believed that somewhere between 50 and 75% of the flow crosses Boulder Highway (over and under, culverts have a capacity of approximately 450 cfs) and the remainder drains northwest on Boulder Highway. I wanted to let you know in advance what is being considered and get any preliminary feedback you may have on the construction of additional culverts across Boulder Highway to convey all of the 100-year flow.

Thanks,

5/1/2005

Matt Baird, P.E., CFM
Sr. Program Manager
PBS&J
mbaird@pbsj.com
Office: (702) 263-7275
Cell: (702) 528-0982
Fax: (702) 263-7200

Appendix B

Pabco Alternative 1

Revised per comment #7

Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.01050 ft/ft
Height: 4.00 ft
Bottom Width: 6.00 ft
Discharge: 275.10 ft³/s

Results

Normal Depth: 3.33 ft
Flow Area: 19.99 ft²
Wetted Perimeter: 12.66 ft
Top Width: 6.00 ft
Critical Depth: 4.03 ft
Critical Slope: 0.00641 ft/ft
Velocity: 13.76 ft/s
Velocity Head: 2.94 ft
Specific Energy: 6.27 ft
Froude Number: 1.33
Flow Type: Supercritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.83 %
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 3.33 ft
Critical Depth: 4.03 ft

Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00641	ft/ft

Notes

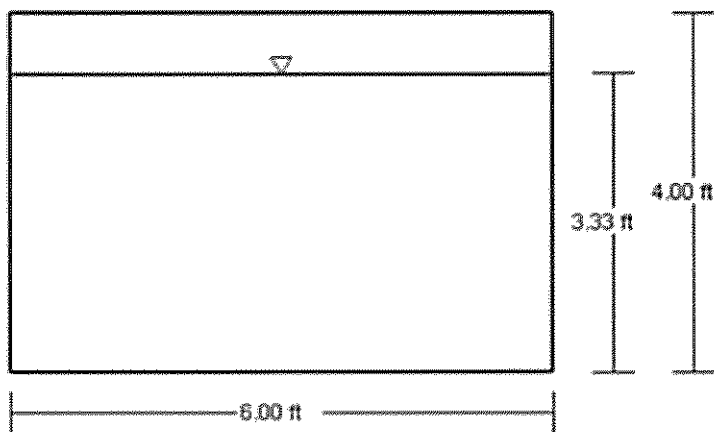
Cross Section for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	3.33	ft
Height:	4.00	ft
Bottom Width:	6.00	ft
Discharge:	275.10	ft ³ /s



V: 1
H: 1

Appendix C

Revised Street Calculations

Street Limitations Criteria

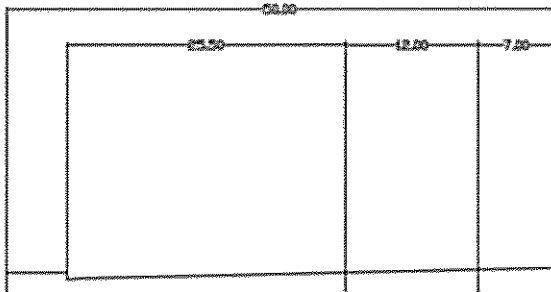
Location	Street ROW (ft)	Minor Storm (Q10)				Major Storm (Q100)			
		Q10 (cfs)	10-YR Dry Lane Criteria Met	VD<=6	Minor Storm Limitations Met	Q100 (cfs)	D<= 2'	VD<=8	Major Storm Limitations Met
1-1 Burkholder 100' N of Water	100	67	YES	3.26=Y	YES	269	YES	7.15=Y	YES
2-2 Burkholder 1500' N of Warm Springs	100	44	YES	2.13=Y	YES	227	YES	5.40=Y	YES
3-3 Burkholder 3200' N of Warm Springs	100	42	YES	2.11=Y	YES	405	YES	7.97=Y	YES
4-4 Burkholder 150' N of Sunset	100	53	YES	2.58=Y	YES	370	YES	7.91=Y	YES
5-5 Burkholder 100' N of Athens	120	31	YES	1.49=Y	YES	485	YES	7.97=Y	YES
6-6 Warm Springs 250' N of Water	100	42	YES	2.03=Y	YES	296	YES	6.31=Y	YES
7-7 Warm Springs 200' W of Eastside	100	35	YES	1.71=Y	YES	381	YES	7.13=Y	YES
8-8 Sunset 200' NW Water	100	46	YES	2.30=Y	YES	137	YES	4.19=Y	YES
9-9 Sunset 200" NW Eastside	100	48	YES	2.33=Y	YES	233	YES	5.73=Y	YES
10-10 Sunset 2000' SE of Burkholder	100	51	YES	2.49=Y	YES	380	YES	7.95=Y	YES
11-11 Eastside 3100' S of Athens	80	10	YES	1.34=Y	YES	44	YES	2.57=Y	YES
12-12 Water 150' SW of Mohawk	100	36	YES	1.88=Y	YES	233	YES	5.58=Y	YES
13-13 Athens 100' W of Mohawk	120	58	YES	2.58=Y	YES	401	YES	7.97=Y	YES
14-14 Athens 200' W of Eastside	120	36	YES	1.60=Y	YES	485	YES	7.97=Y	YES

*Flow is Surface Flow

**Storm Drain Flows have been subtracted

***Refer to Street and Storm Drain System Distribution Table

HALF STREET SECTIONS

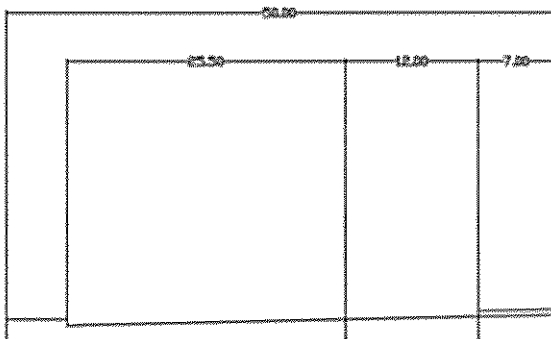


100 ROW WITH 14' CENTER TURN LANE

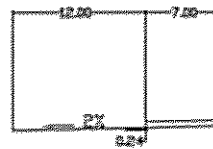


(19 feet from centerline) * (.02 feet/feet slope) = 0.38 feet
crown height = 1.03 feet

max water surface elevation = 1.03 feet - 0.38 feet = 0.65 feet

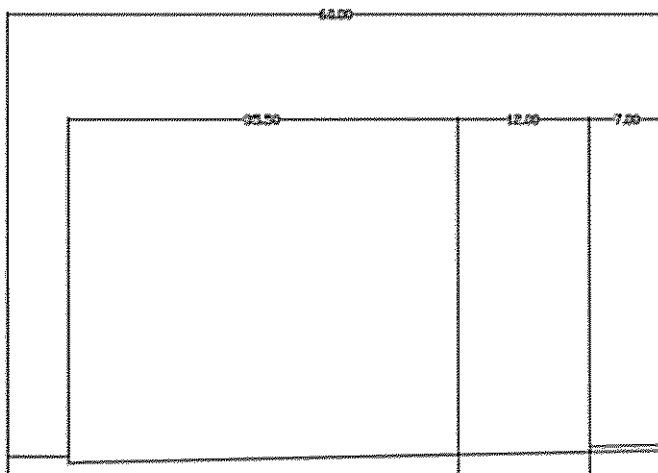


100 ROW WITH 14' MEDIAN

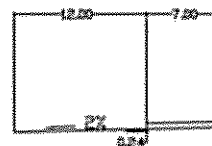


(12 feet from edge of median) * (.02 feet/feet slope) = 0.24 feet
street height at edge of median = 0.89 feet

max water surface elevation = 0.89 feet - 0.24 feet = 0.65 feet



120 ROW WITH 14' MEDIAN



(12 feet from edge of median) * (.02 feet/feet slope) = 0.24 feet
street height at edge of median = 1.09 feet

max water surface elevation = 1.09 feet - 0.24 feet = 0.85 feet

1-1_BURKHOLDER BOULEVARD AT WATER STREET 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	1-1_BURK1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0245 ft/ft
Discharge	67.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.8 ft ²
Wetted Perimeter	60.48 ft
Top Width	59.32 ft
Actual Depth	0.62 ft
Critical Elevation	0.76 ft
Critical Slope	0.0055 ft/ft
Velocity	5.25 ft/s
Velocity Head	0.43 ft
Specific Energy	1.05 ft
Froude Number	2.00
Flow Type	Supercritical

Calculation Messages:

Flow is divided.

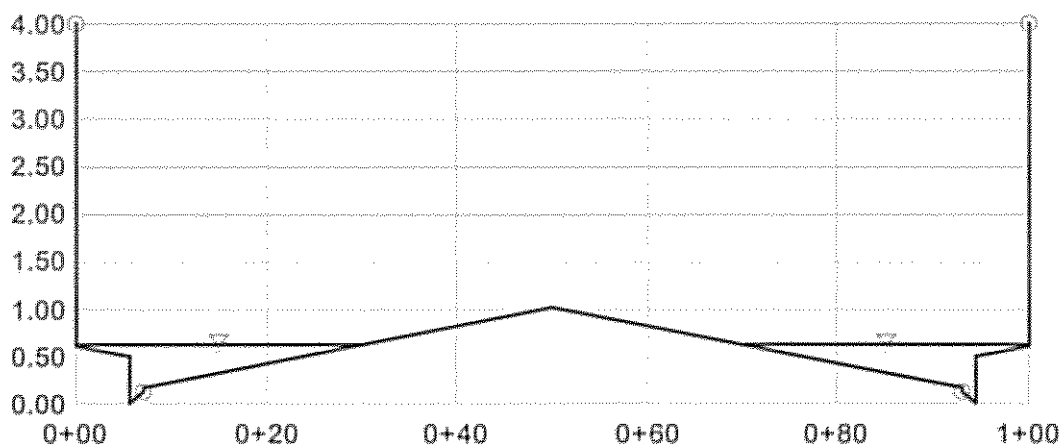
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

1-1_BURKHOLDER BOULEVARD AT WATER STREET 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	1-1_BURK1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0245 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	67.00 cfs



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2-2_BURKHOLDER BOULEVARD 1500' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	2-2 BURK2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	44.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.8 ft ²
Wetted Perimeter	60.53 ft
Top Width	59.37 ft
Actual Depth	0.62 ft
Critical Elevation	0.67 ft
Critical Slope	0.0059 ft/ft
Velocity	3.44 ft/s
Velocity Head	0.18 ft
Specific Energy	0.81 ft
Froude Number	1.31
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

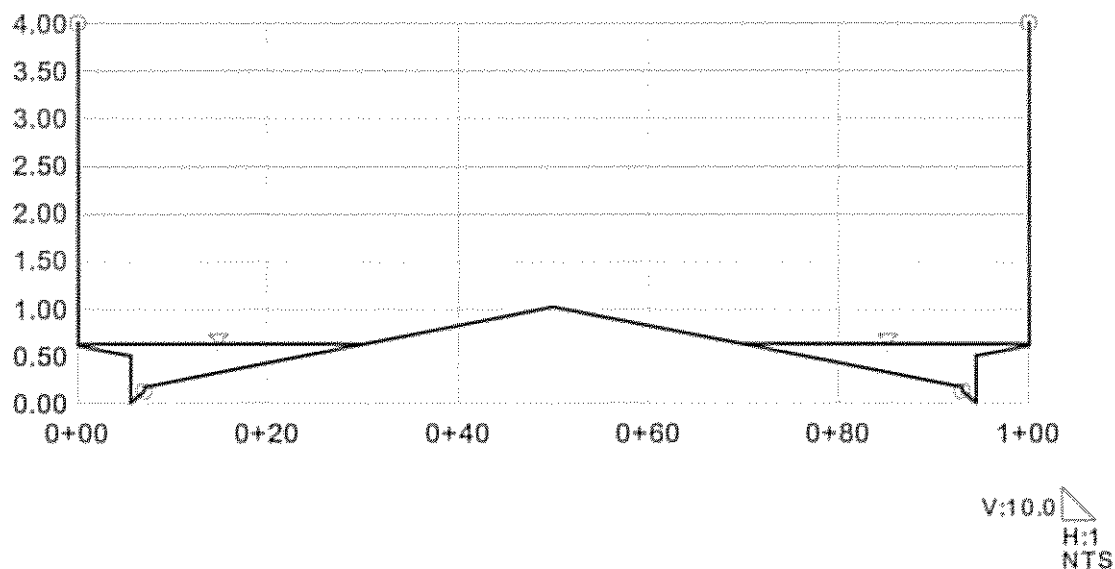
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

2-2_BURKHOLDER BOULEVARD 1500' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	2-2 BURK2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	44.00 cfs



3-3 BURKHOLDER BOULEVARD 3200' N of EASTSIDE 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	3-3 BURK3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	42.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.4 ft ²
Wetted Perimeter	59.80 ft
Top Width	58.66 ft
Actual Depth	0.62 ft
Critical Elevation	0.66 ft
Critical Slope	0.0059 ft/ft
Velocity	3.40 ft/s
Velocity Head	0.18 ft
Specific Energy	0.80 ft
Froude Number	1.30
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

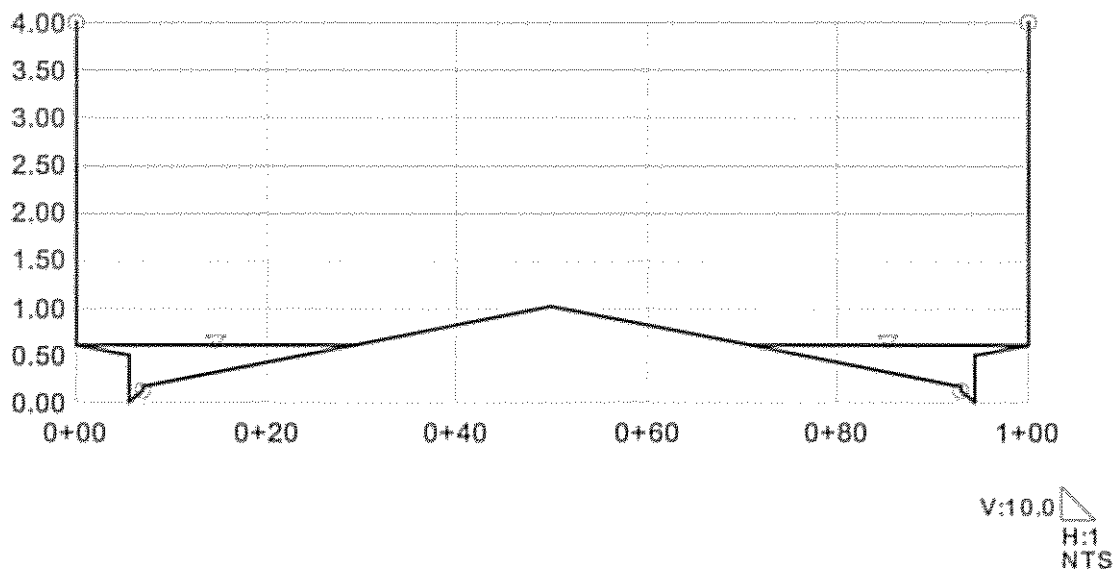
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

3-3 BURKHOLDER BOULEVARD 3200' N of EASTSIDE 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	3-3 BURK3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	42.00 cfs



4-4 BURKHOLDER BOULEVARD AT SUNSET ROAD 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	4-4 BURK4 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0154 ft/ft
Discharge	53.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.7 ft ²
Wetted Perimeter	60.44 ft
Top Width	59.29 ft
Actual Depth	0.62 ft
Critical Elevation	0.71 ft
Critical Slope	0.0057 ft/ft
Velocity	4.16 ft/s
Velocity Head	0.27 ft
Specific Energy	0.89 ft
Froude Number	1.58
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

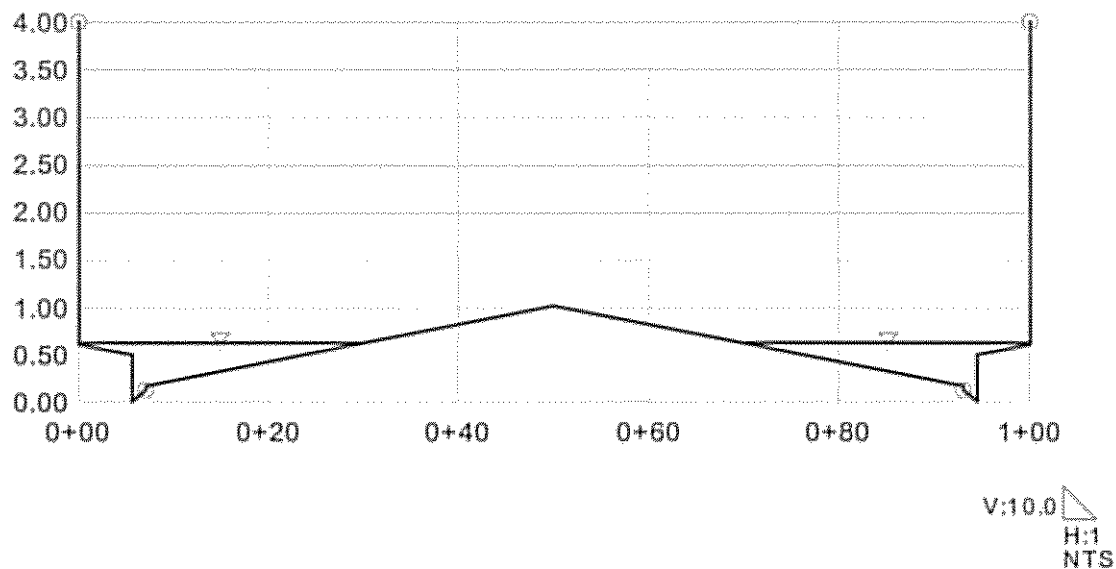
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

4-4 BURKHOLDER BOULEVARD AT SUNSET ROAD 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	4-4 BURK4 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0154 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	53.00 cfs



5-5 BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 10 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	5-5 BURK5 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	31.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.63 ft
Elevation Range	0.00 to 4.00
Flow Area	13.2 ft ²
Wetted Perimeter	60.75 ft
Top Width	59.60 ft
Actual Depth	0.63 ft
Critical Elevation	0.61 ft
Critical Slope	0.0069 ft/ft
Velocity	2.36 ft/s
Velocity Head	0.09 ft
Specific Energy	0.71 ft
Froude Number	0.88
Flow Type	Subcritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+53	1.09
	0+53	1.59
	0+67	1.59
	0+67	1.09
	1+13	0.17
	1+13	0.13
	1+15	0.00
	1+15	0.50
	1+20	0.60
	1+20	4.00

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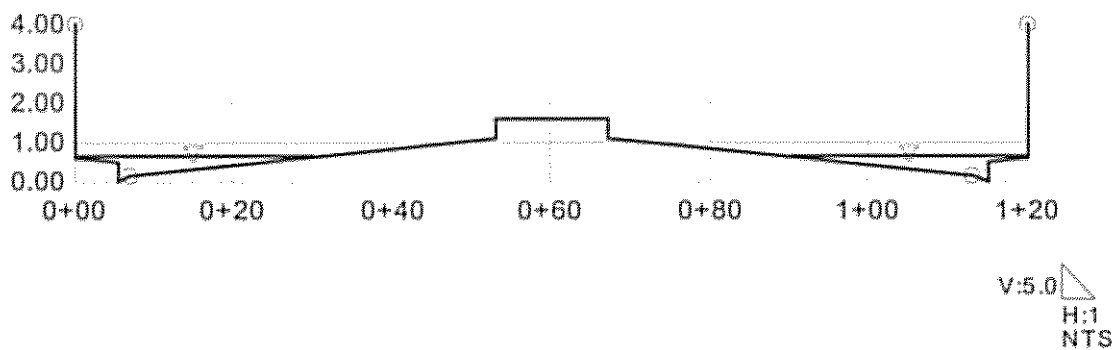
Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.

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5-5 BURKHOLDER BOULEVARD 150'N of ATHENS AVENUE 10 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	5-5 BURK5 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth
Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	0.63 ft
Elevation Range	0.00 to 4.00
Discharge	31.00 cfs



5-5 ATHENS AVENUE AT BURKHOLDER BOULEVARD 100 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	5-5 BURK5 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	485.00 cfs
Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Flow Area	87.1 ft ²
Wetted Perimeter	109.44 ft
Top Width	106.00 ft
Actual Depth	1.43 ft
Critical Elevation	1.47 ft
Critical Slope	0.0044 ft/ft
Velocity	5.57 ft/s
Velocity Head	0.48 ft
Specific Energy	1.91 ft
Froude Number	1.08
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

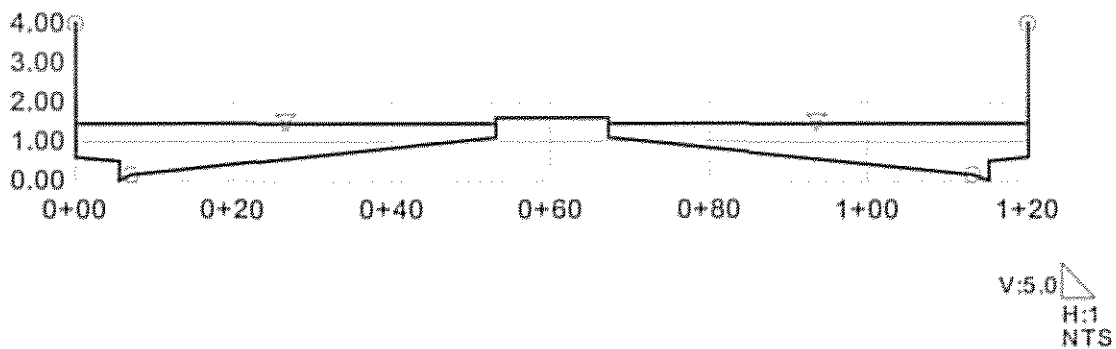
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+53	1.09
	0+53	1.59
	0+67	1.59
	0+67	1.09
	1+13	0.17
	1+13	0.13
	1+15	0.00
	1+15	0.50
	1+20	0.60
	1+20	4.00

5-5 ATHENS AVENUE AT BURKHOLDER BOULEVARD 100 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	5-5 BURK5 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Discharge	485.00 cfs



6-6 WARM SPRINGS ROAD AT WATER STREET 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	6-6 WS1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0095 ft/ft
Discharge	42.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.8 ft ²
Wetted Perimeter	60.58 ft
Top Width	59.43 ft
Actual Depth	0.62 ft
Critical Elevation	0.66 ft
Critical Slope	0.0059 ft/ft
Velocity	3.28 ft/s
Velocity Head	0.17 ft
Specific Energy	0.79 ft
Froude Number	1.24
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

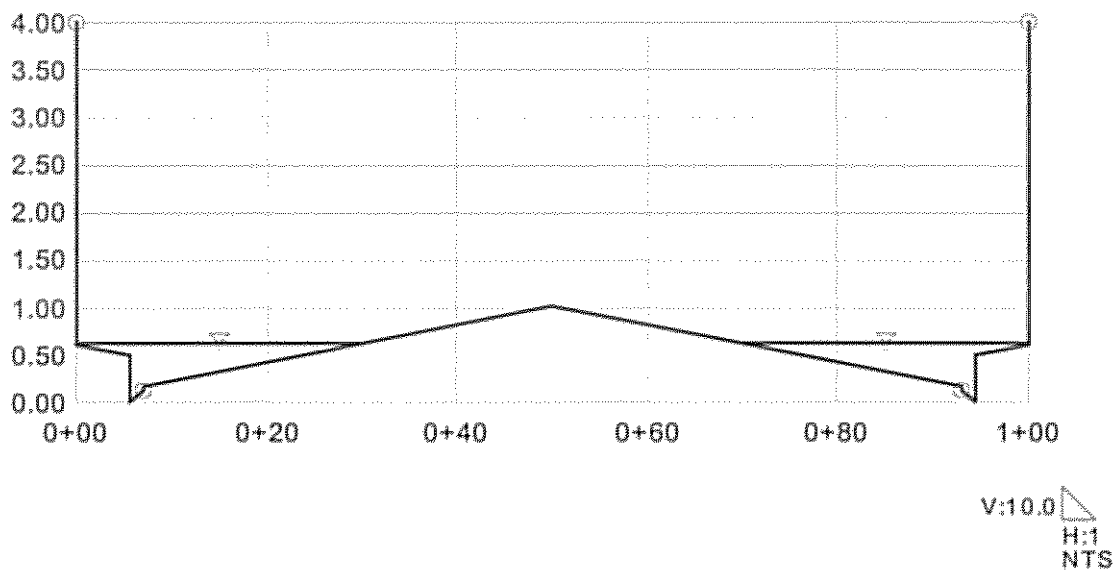
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

6-6 WARM SPRINGS ROAD AT WATER STREET 10-YR (100' ROW) **Worksheet for Irregular Channel**

Project Description	
Worksheet	6-6 WS1 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0095 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	42.00 cfs



7-7 WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	7-7 WS2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0067 ft/ft
Discharge	35.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.7 ft ²
Wetted Perimeter	60.46 ft
Top Width	59.31 ft
Actual Depth	0.62 ft
Critical Elevation	0.63 ft
Critical Slope	0.0061 ft/ft
Velocity	2.75 ft/s
Velocity Head	0.12 ft
Specific Energy	0.74 ft
Froude Number	1.04
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

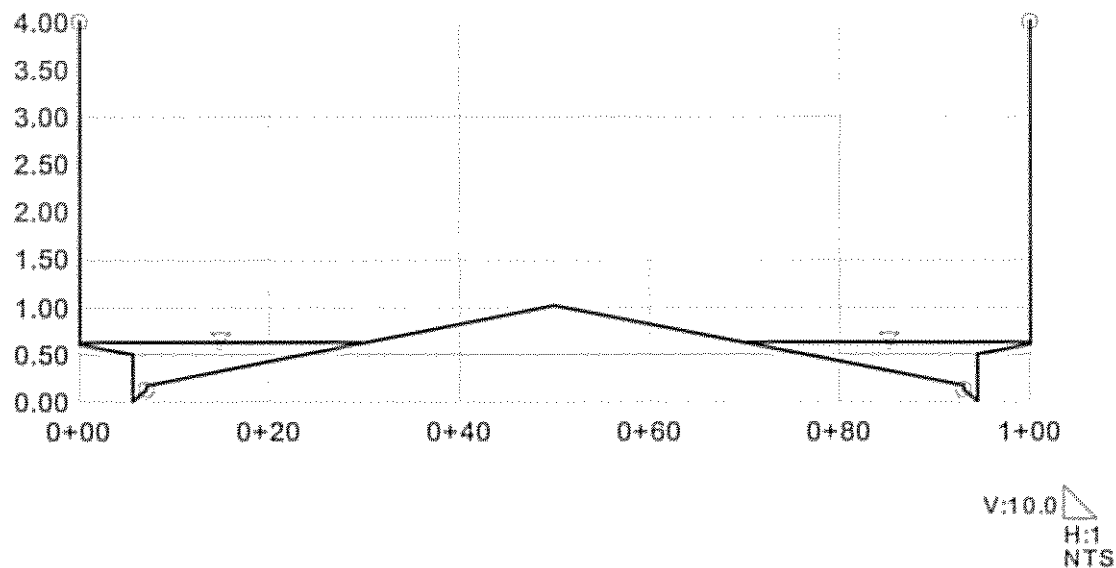
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+50	1.03
	0+93	0.17
	0+93	0.13
	0+95	0.00
	0+95	0.50
	1+00	0.60
	1+00	4.00

7-7 WARM SPRINGS ROAD AT EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	7-7 WS2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0067 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	35.00 cfs



9-9 SUNSET ROAD AT EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	9-9 SUNSET2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0125 ft/ft
Discharge	48.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.8 ft ²
Wetted Perimeter	60.52 ft
Top Width	59.37 ft
Actual Depth	0.62 ft
Critical Elevation	0.69 ft
Critical Slope	0.0058 ft/ft
Velocity	3.76 ft/s
Velocity Head	0.22 ft
Specific Energy	0.84 ft
Froude Number	1.43
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

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John Powell & Assoc. Inc.

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Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.

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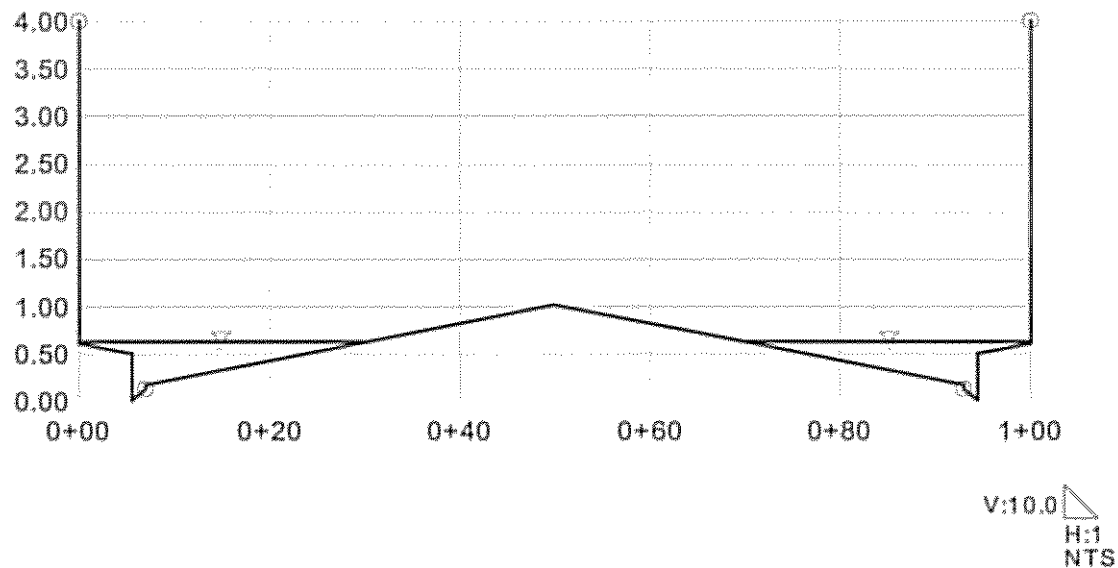
Page 1

9-9 SUNSET ROAD AT EASTSIDE REAL ESTATE PARKWAY 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	9-9 SUNSET2 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0125 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	48.00 cfs



10-10 SUNSET ROAD AT BURKHOLDER BOULEVARD 10-YR (100' ROW)

Worksheet for Irregular Channel

Project Description	
Worksheet	10-10 SUNSET3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0143 ft/ft
Discharge	51.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Flow Area	12.7 ft ²
Wetted Perimeter	60.42 ft
Top Width	59.27 ft
Actual Depth	0.62 ft
Critical Elevation	0.70 ft
Critical Slope	0.0057 ft/ft
Velocity	4.01 ft/s
Velocity Head	0.25 ft
Specific Energy	0.87 ft
Froude Number	1.53
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

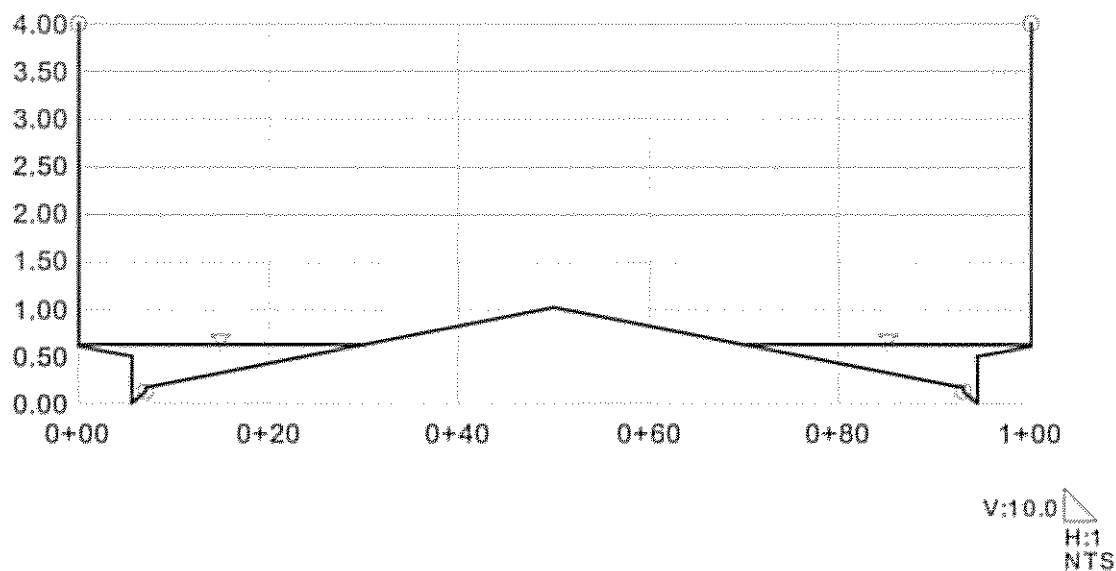
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.016
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+50	1.03
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

10-10 SUNSET ROAD AT BURKHOLDER BOULEVARD 10-YR (100' ROW) Worksheet for Irregular Channel

Project Description	
Worksheet	10-10 SUNSET3 10YR 100' ROW
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0143 ft/ft
Water Surface Elevation	0.62 ft
Elevation Range	0.00 to 4.00
Discharge	51.00 cfs



12-12 WATER STREET AT MOHAWK DRIVE 10 YR (100' ROW w/ MEDIAN)

Worksheet for Irregular Channel

Project Description	
Worksheet	12-12 WATER2 10YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0105 ft/ft
Discharge	36.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.016
Water Surface Elevation	0.60 ft
Elevation Range	0.00 to 4.00
Flow Area	11.5 ft²
Wetted Perimeter	58.23 ft
Top Width	57.12 ft
Actual Depth	0.60 ft
Critical Elevation	0.63 ft
Critical Slope	0.0067 ft/ft
Velocity	3.14 ft/s
Velocity Head	0.15 ft
Specific Energy	0.75 ft
Froude Number	1.23
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

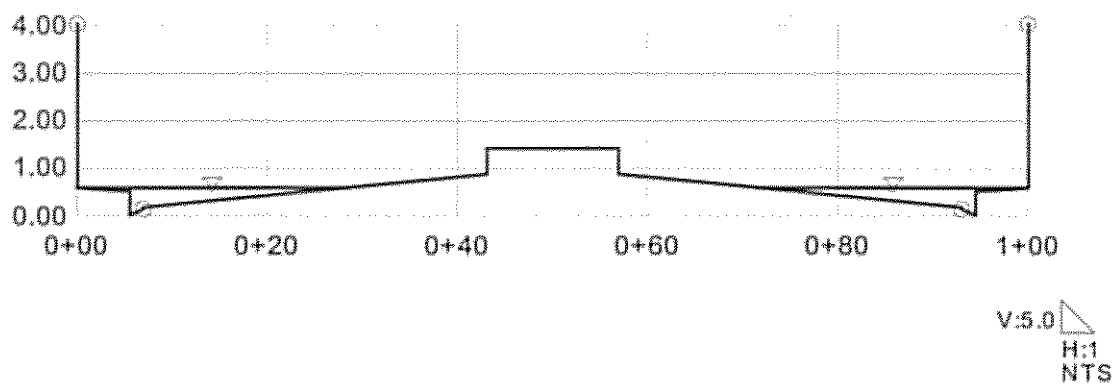
Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	0+93	0.017
0+93	1+00	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+43	0.89
0+43	1.39
0+57	1.39
0+57	0.89
0+93	0.17
0+93	0.13
0+95	0.00
0+95	0.50
1+00	0.60
1+00	4.00

12-12 WATER STREET AT MOHAWK DRIVE 10 YR (100' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	12-12 WATER2 10YR 100' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.016
Slope	0.0105 ft/ft
Water Surface Elevation	0.60 ft
Elevation Range	0.00 to 4.00
Discharge	36.00 cfs



13-13 ATHENS AVENUE AT MOHAWK DRIVE 10 YR (120' ROW w/ MEDIAN)

Worksheet for Irregular Channel

Project Description	
Worksheet	13-13 ATHEN1 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0137 ft/ft
Discharge	58.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.65 ft
Elevation Range	0.00 to 4.00
Flow Area	14.6 ft ²
Wetted Perimeter	63.20 ft
Top Width	62.00 ft
Actual Depth	0.65 ft
Critical Elevation	0.72 ft
Critical Slope	0.0062 ft/ft
Velocity	3.97 ft/s
Velocity Head	0.24 ft
Specific Energy	0.89 ft
Froude Number	1.44
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+53	1.09
	0+53	1.59
	0+67	1.59
	0+67	1.09
	1+13	0.17

13-13 ATHENS AVENUE AT MOHAWK DRIVE 10 YR (120' ROW w/ MEDIAN) **Worksheet for Irregular Channel**

Natural Channel Points		
Station (ft)		Elevation (ft)
	1+13	0.13
	1+15	0.00
	1+15	0.50
	1+20	0.60
	1+20	4.00

13-13 ATHENS AVENUE AT MOHAWK DRIVE 100 YR (120' ROW w/ MEDIAN)

Worksheet for Irregular Channel

Project Description	
Worksheet	13-13 ATHEN1 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0137 ft/ft
Discharge	401.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.15 ft
Elevation Range	0.00 to 4.00
Flow Area	57.9 ft²
Wetted Perimeter	108.33 ft
Top Width	106.00 ft
Actual Depth	1.15 ft
Critical Elevation	1.37 ft
Critical Slope	0.0045 ft/ft
Velocity	6.93 ft/s
Velocity Head	0.75 ft
Specific Energy	1.90 ft
Froude Number	1.65
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	1.09
0+53	1.59
0+67	1.59
0+67	1.09
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

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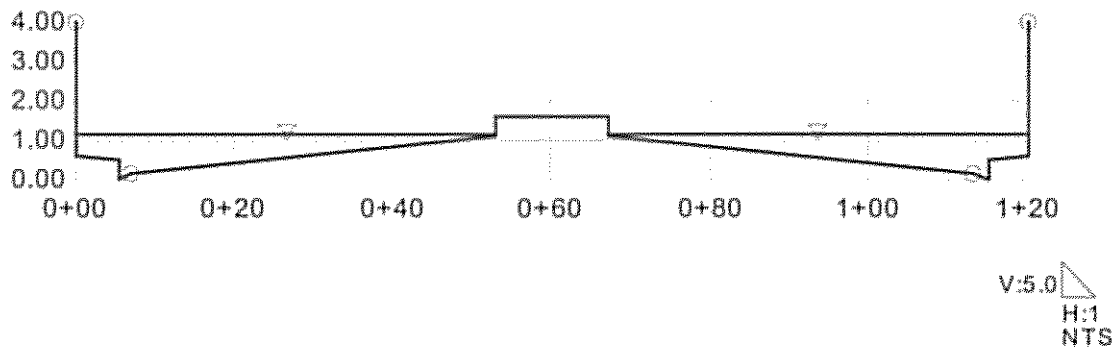
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13-13 ATHENS AVENUE AT MOHAWK DRIVE 100 YR (120' ROW w/ MEDIAN) **Worksheet for Irregular Channel**

Project Description	
Worksheet	13-13 ATHEN1 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0137 ft/ft
Water Surface Elevation	1.15 ft
Elevation Range	0.00 to 4.00
Discharge	401.00 cfs



14-14 ATHENS AVENUE AT EASTSIDE REAL ESTATE PARKWAY 10 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	14-14 ATHEN2 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	36.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	0.65 ft
Elevation Range	0.00 to 4.00
Flow Area	14.6 ft ²
Wetted Perimeter	63.23 ft
Top Width	62.03 ft
Actual Depth	0.65 ft
Critical Elevation	0.63 ft
Critical Slope	0.0067 ft/ft
Velocity	2.46 ft/s
Velocity Head	0.09 ft
Specific Energy	0.74 ft
Froude Number	0.89
Flow Type	Subcritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points		
Station (ft)	Elevation (ft)	
	0+00	4.00
	0+00	0.60
	0+06	0.50
	0+06	0.00
	0+07	0.13
	0+07	0.17
	0+53	1.09
	0+53	1.59
	0+67	1.59
	0+67	1.09
	1+13	0.17
	1+13	0.13
	1+15	0.00
	1+15	0.50
	1+20	0.60
	1+20	4.00

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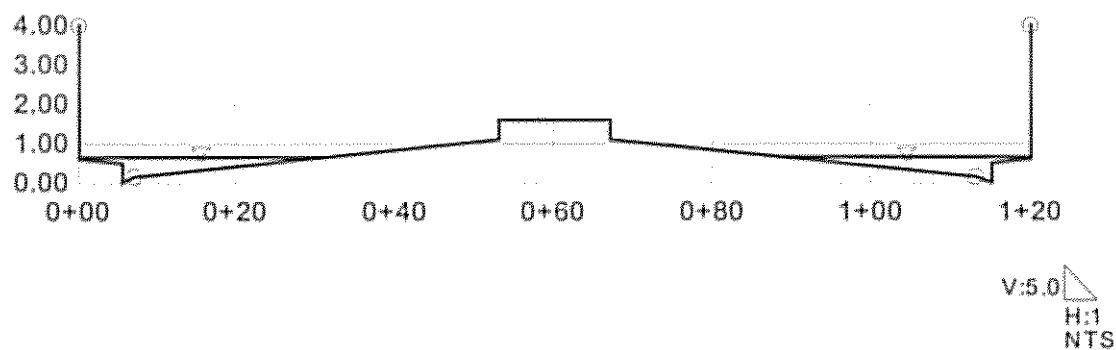
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14-14 ATHENS AVENUE AT EASTSIDE REAL ESTATE PARKWAY 10 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	14-14 ATHEN2 10YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	0.65 ft
Elevation Range	0.00 to 4.00
Discharge	36.00 cfs



14-14 ATHENS AVENUE AT EASTSIDE REAL ESTATE PARKWAY 100 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	14-14 ATHEN2 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Input Data	
Slope	0.0053 ft/ft
Discharge	485.00 cfs

Options	
Current Roughness Method	Improved Lotter's Method
Open Channel Weighting Method	Improved Lotter's Method
Closed Channel Weighting Method	Horton's Method

Results	
Mannings Coefficient	0.017
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Flow Area	87.1 ft ²
Wetted Perimeter	109.44 ft
Top Width	106.00 ft
Actual Depth	1.43 ft
Critical Elevation	1.47 ft
Critical Slope	0.0044 ft/ft
Velocity	5.57 ft/s
Velocity Head	0.48 ft
Specific Energy	1.91 ft
Froude Number	1.08
Flow Type	Supercritical

Calculation Messages:
Flow is divided.

Roughness Segments		
Start Station	End Station	Mannings Coefficient
0+00	0+07	0.015
0+07	1+13	0.017
1+13	1+20	0.015

Natural Channel Points	
Station (ft)	Elevation (ft)
0+00	4.00
0+00	0.60
0+06	0.50
0+06	0.00
0+07	0.13
0+07	0.17
0+53	1.09
0+53	1.59
0+67	1.59
0+67	1.09
1+13	0.17
1+13	0.13
1+15	0.00
1+15	0.50
1+20	0.60
1+20	4.00

Title: untitled

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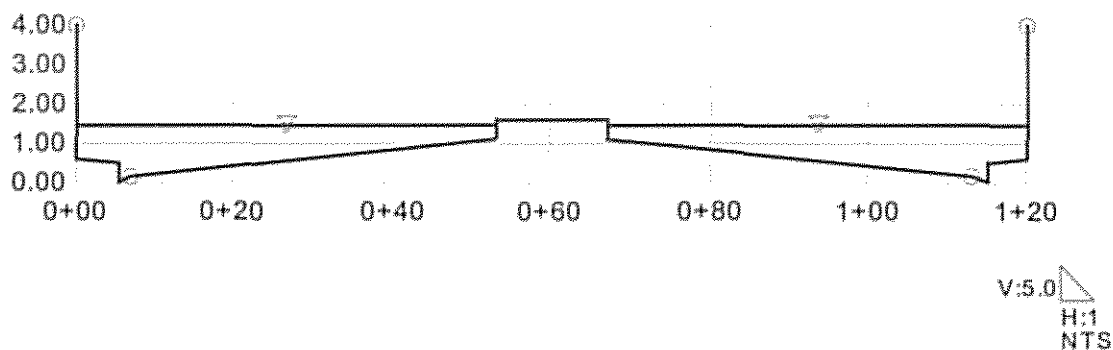
Project Engineer: Post, Buckley, Schuh & Jernigan, Inc.
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Page 1

14-14 ATHENS AVENUE AT EASTSIDE REAL ESTATE PARKWAY 100 YR (120' ROW w/ MEDIAN) Worksheet for Irregular Channel

Project Description	
Worksheet	14-14 ATHEN2 100YR 120' ROW w/ MEDIAN
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data	
Mannings Coefficient	0.017
Slope	0.0053 ft/ft
Water Surface Elevation	1.43 ft
Elevation Range	0.00 to 4.00
Discharge	485.00 cfs



Appendix D

Revised Storm Drain Calculations

Proposed Storm Drain Facilities

	Location	Q10 (cfs)	Q100 (cfs)	Alternative 1 Facility	Alternative 2 Facility	Recommended Facility	
LINE A-1	1-1	52	-	-	-	30" RCP	added
LINE A	2-2	890	926	8" RCP	8"x8" RCB	8"x8" RCB	revised q10
	3-3	1032	1109	9" RCP	8"x8" RCB	8"x8" RCB	revised q10
	4-4	1312	1915	12" RCP	10"x10" RCB	10"x10" RCB	revised q10
	5-5	1999	3406	-	-	12"x12" RCB	revised q10 & q100
LINE B	6-6	93	-	-	-	42" RCP	revised q10, upsize pipe
	7-7	136	-	-	-	54" RCP	revised q10, upsize pipe
LINE C	9-9	23	-	-	-	24" RCP	added
	10-10	97	37	-	-	42" RCP	revised q10, upsize pipe
LINE D	12-12	58	-	-	-	36" RCP	revised q10, upsize pipe
	13-13	105	48	-	-	42" RCP	revised q10 & q100, upsize pipe
	14-14	333	449	84" RCP	6"x8" RCB	6"x8" RCB	revised q10 & q100, upsize pipe-box
PABCO CHANNEL- REALIGNMENT	Boulder Highway at Pabco Road	641	1369	5-6"x4" RCB	10"x10" RCB	5-6"x4" RCB	
PITTMAN-BURNS CHANNEL- IMPROVEMENTS	750' East of Wiesner Way	-	5456	-	-	Conc.Channel 40"W, 7.5'D, 2:1SS	
OUTLET CHANNEL AT DETENTION BASIN 2	Downstream of Detention Basin 2	-	1728	-	-	Earth.Channel 150"W, 3.5'D, 4:1SS	

REVISIONS

Street and Storm Drain System Distribution

Location	Minor Storm (Q10)					Major Storm (Q100)				
	¹ Q10 (cfs)	Q10- STREET (cfs)	² Q10 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)	¹ Q100 (cfs)	Q100- STREET (cfs)	² Q100 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)
1-1 Burkholder 100' N of Water	119	67	52	-	52	269	269	-	-	-
2-2 Burkholder 1500' N of Warm Springs	103	44	59	831*	890	227	227	-	926*	926
3-3 Burkholder 3200' N of Warm Springs	184	42	142	890	1032	588	405	183	926	1109
4-4 Burkholder 150' N of Sunset	236	53	183	1032	1312**	1139	370	769	1109	1915**
5-5 Burkholder 100' N of Athens	380	31	349	1312	1999***	1527	485	1042	1915	3406***
6-6 Warm Springs 250' N of Water	135	42	93	-	93	296	296	-	-	-
7-7 Warm Springs 200' W of Eastside	78	35	43	93	136	381	381	-	-	-
8-8 Sunset 200' NW Water	46	46	-	-	-	137	137	-	-	-
9-9 Sunset 200" NW Eastside	71	48	23	-	23	233	233	-	-	-
10-10 Sunset 2000' SE of Burkholder	125	51	74	23	97	417	380	37	-	37
11-11 Eastside 3100' S of Athens	10	10	-	-	-	44	44	-	-	-
12-12 Water 150' SW of Mohawk	94	36	58	-	58	233	233	-	-	-
13-13 Athens 100' W of Mohawk	105	58	47	58	105	449	401	48	-	48
14-14 Athens 200' W of Eastside	264	36	228	105	333	886	485	401	48	449

Storm Drain System
Line A-1
Line A
Line B
Line C
Line D

* Represents the outflow and bypass discharge from detention basin 1

** Represents Inflow from LINE C

*** Represents Inflow from LINE D

¹ Represents the summation of the HEC-1 output for the 10-Year and 100-Year Storm Events for each contributing basin and negates losses due to routing the flows

² $Q10 \text{ PIPE} / Q100 \text{ PIPE} = Q10 / Q100 - Q10 \text{ STREET} / Q100 \text{ STREET}$

Worksheet for 1-1 Burkholder Boulevard 100' N of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.02450	ft/ft
Diameter:	2.50	ft
Discharge:	52.00	ft ³ /s

Results

Normal Depth:	1.71	ft
Flow Area:	3.57	ft ²
Wetted Perimeter:	4.86	ft
Top Width:	2.33	ft
Critical Depth:	2.32	ft
Percent Full:	68.3	%
Critical Slope:	0.01391	ft/ft
Velocity:	14.56	ft/s
Velocity Head:	3.30	ft
Specific Energy:	5.00	ft
Froude Number:	2.07	
Maximum Discharge:	69.06	ft ³ /s
Discharge Full:	64.20	ft ³ /s
Slope Full:	0.01607	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

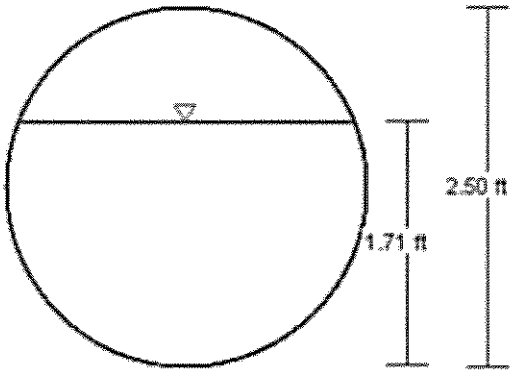
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.68	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 1-1 Burkholder Boulevard 100' N of Water Street

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.71	ft
Critical Depth:	2.32	ft
Channel Slope:	0.02450	ft/ft
Critical Slope:	0.01391	ft/ft

Cross Section for 1-1 Burkholder Boulevard 100' N of Water Street

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.02450	ft/ft
Normal Depth:	1.71	ft
Diameter:	2.50	ft
Discharge:	52.00	ft³/s



V:1 
H:1

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01000	ft/ft
Height:	12.00	ft
Bottom Width:	12.00	ft
Discharge:	3406.00	ft ³ /s

Results

Normal Depth:	11.48	ft
Flow Area:	137.81	ft ²
Wetted Perimeter:	34.97	ft
Top Width:	12.00	ft
Critical Depth:	13.58	ft
Critical Slope:	0.00665	ft/ft
Velocity:	24.72	ft/s
Velocity Head:	9.49	ft
Specific Energy:	20.98	ft
Froude Number:	1.29	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.96	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	11.48	ft
Critical Depth:	13.58	ft

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Channel Slope:	0.01000	ft/ft
Critical Slope:	0.00665	ft/ft

Notes

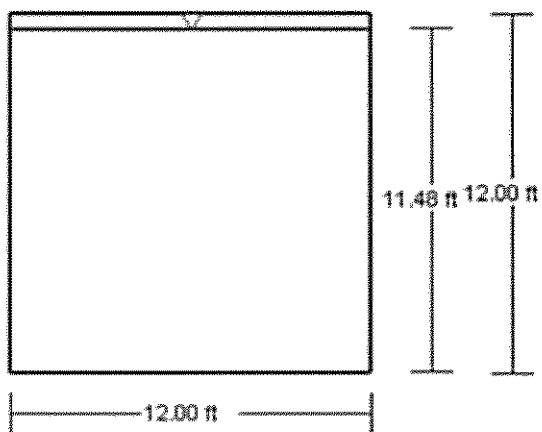
Cross Section for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01000	ft/ft
Normal Depth:	11.48	ft
Height:	12.00	ft
Bottom Width:	12.00	ft
Discharge:	3406.00	ft ³ /s



V: 1
H: 1

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00950	ft/ft
Diameter:	3.50	ft
Discharge:	93.00	ft ³ /s

Results

Normal Depth:	2.72	ft
Flow Area:	8.02	ft ²
Wetted Perimeter:	7.55	ft
Top Width:	2.91	ft
Critical Depth:	2.98	ft
Percent Full:	77.7	%
Critical Slope:	0.00801	ft/ft
Velocity:	11.60	ft/s
Velocity Head:	2.09	ft
Specific Energy:	4.81	ft
Froude Number:	1.23	
Maximum Discharge:	105.48	ft ³ /s
Discharge Full:	98.06	ft ³ /s
Slope Full:	0.00855	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.78	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.72	ft
Critical Depth:	2.98	ft
Channel Slope:	0.00950	ft/ft
Critical Slope:	0.00801	ft/ft

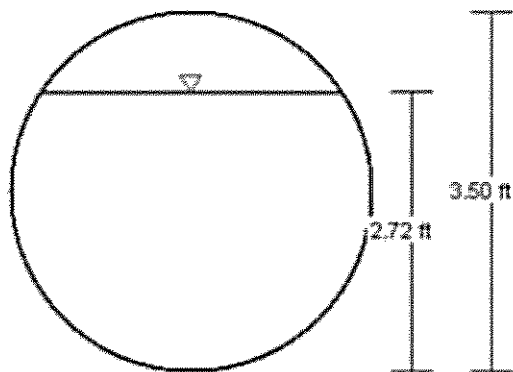
Cross Section for 6-6 Warm Springs Road 250' W of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00950	ft/ft
Normal Depth:	2.72	ft
Diameter:	3.50	ft
Discharge:	93.00	ft ³ /s



V:1 
H:1

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00670	ft/ft
Diameter:	4.50	ft
Discharge:	136.00	ft ³ /s

Results

Normal Depth:	3.17	ft
Flow Area:	11.98	ft ²
Wetted Perimeter:	8.97	ft
Top Width:	4.10	ft
Critical Depth:	3.43	ft
Percent Full:	70.5	%
Critical Slope:	0.00554	ft/ft
Velocity:	11.35	ft/s
Velocity Head:	2.00	ft
Specific Energy:	5.17	ft
Froude Number:	1.17	
Maximum Discharge:	173.14	ft ³ /s
Discharge Full:	160.96	ft ³ /s
Slope Full:	0.00478	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.70	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Upstream Velocity:	Infinity	ft/s
Normal Depth:	3.17	ft
Critical Depth:	3.43	ft
Channel Slope:	0.00670	ft/ft
Critical Slope:	0.00554	ft/ft

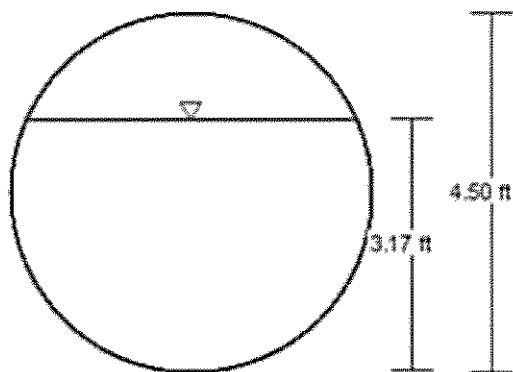
Cross Section for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00670	ft/ft
Normal Depth:	3.17	ft
Diameter:	4.50	ft
Discharge:	136.00	ft ³ /s



V:1 
H:1

Worksheet for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Diameter:	2.00	ft
Discharge:	23.00	ft ³ /s

Results

Normal Depth:	1.50	ft
Flow Area:	2.52	ft ²
Wetted Perimeter:	4.18	ft
Top Width:	1.74	ft
Critical Depth:	1.71	ft
Percent Full:	74.8	%
Critical Slope:	0.00968	ft/ft
Velocity:	9.12	ft/s
Velocity Head:	1.29	ft
Specific Energy:	2.79	ft
Froude Number:	1.33	
Maximum Discharge:	27.21	ft ³ /s
Discharge Full:	25.29	ft ³ /s
Slope Full:	0.01034	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.75	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.50	ft
Critical Depth:	1.71	ft
Channel Slope:	0.01250	ft/ft
Critical Slope:	0.00968	ft/ft

Notes

Q10 Discharge Governs

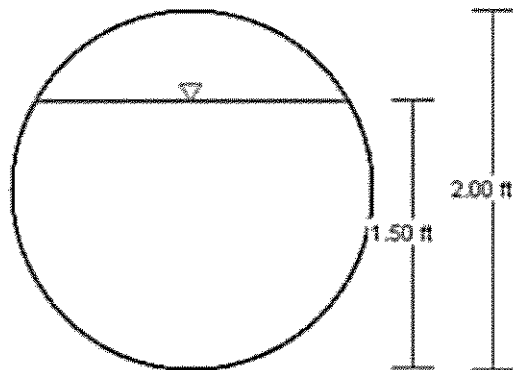
Cross Section for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Normal Depth:	1.50	ft
Diameter:	2.00	ft
Discharge:	23.00	ft ³ /s



V:1
H:1

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Diameter:	3.50	ft
Discharge:	97.00	ft ³ /s

Results

Normal Depth:	2.38	ft
Flow Area:	6.97	ft ²
Wetted Perimeter:	6.79	ft
Top Width:	3.26	ft
Critical Depth:	3.03	ft
Percent Full:	68.0	%
Critical Slope:	0.00852	ft/ft
Velocity:	13.91	ft/s
Velocity Head:	3.01	ft
Specific Energy:	5.39	ft
Froude Number:	1.68	
Maximum Discharge:	129.41	ft ³ /s
Discharge Full:	120.31	ft ³ /s
Slope Full:	0.00930	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.68	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

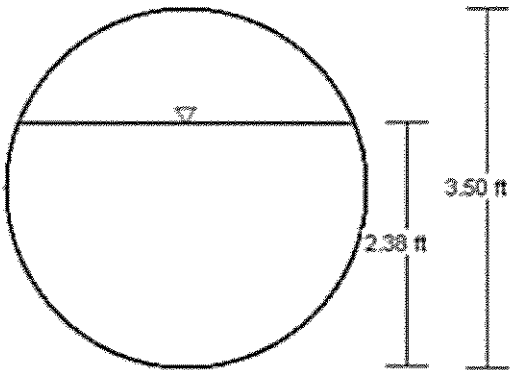
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.38	ft
Critical Depth:	3.03	ft
Channel Slope:	0.01430	ft/ft
Critical Slope:	0.00852	ft/ft

Notes

Q10 Discharge Governs

Cross Section for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Normal Depth:	2.38	ft
Diameter:	3.50	ft
Discharge:	97.00	ft³/s



V: 1 
H: 1

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	3.00	ft
Discharge:	58.00	ft ³ /s

Results

Normal Depth:	2.12	ft
Flow Area:	5.35	ft ²
Wetted Perimeter:	6.00	ft
Top Width:	2.73	ft
Critical Depth:	2.47	ft
Percent Full:	70.7	%
Critical Slope:	0.00753	ft/ft
Velocity:	10.85	ft/s
Velocity Head:	1.83	ft
Specific Energy:	3.95	ft
Froude Number:	1.37	
Maximum Discharge:	73.52	ft ³ /s
Discharge Full:	68.34	ft ³ /s
Slope Full:	0.00756	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.71	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.12	ft
Critical Depth:	2.47	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00753	ft/ft

Notes

Q10 DISCHARGE GOVERNS

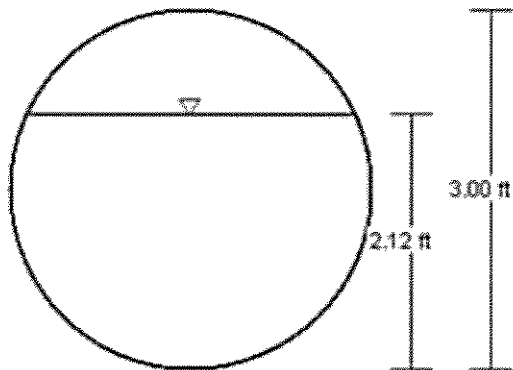
Cross Section for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	2.12	ft
Diameter:	3.00	ft
Discharge:	58.00	ft ³ /s



V:1 
H:1

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	3.50	ft
Discharge:	105.00	ft ³ /s

Results

Normal Depth:	2.93	ft
Flow Area:	8.60	ft ²
Wetted Perimeter:	8.09	ft
Top Width:	2.58	ft
Critical Depth:	3.12	ft
Percent Full:	83.7	%
Critical Slope:	0.00966	ft/ft
Velocity:	12.20	ft/s
Velocity Head:	2.31	ft
Specific Energy:	5.25	ft
Froude Number:	1.18	
Maximum Discharge:	110.89	ft ³ /s
Discharge Full:	103.09	ft ³ /s
Slope Full:	0.01089	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.84	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.93	ft
Critical Depth:	3.12	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00966	ft/ft

Notes

Q10 DISCHARGE GOVERNS

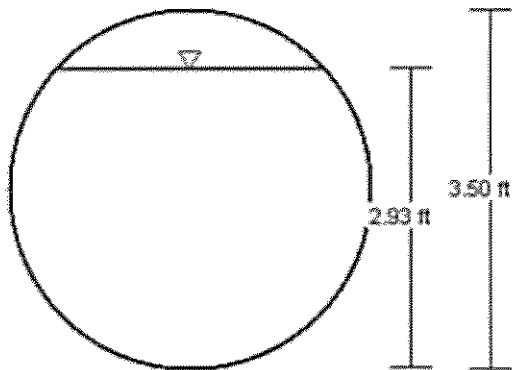
Cross Section for 13-13_Athens Avenue 100' W Mohawk Drive

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	2.93	ft
Diameter:	3.50	ft
Discharge:	105.00	ft ³ /s



V:1 
H:1

Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.00526 ft/ft
Diameter: 7.00 ft
Discharge: 449.00 ft³/s

Results

Normal Depth: 5.55 ft
Flow Area: 32.74 ft²
Wetted Perimeter: 15.38 ft
Top Width: 5.67 ft
Critical Depth: 5.57 ft
Percent Full: 79.3 %
Critical Slope: 0.00523 ft/ft
Velocity: 13.72 ft/s
Velocity Head: 2.92 ft
Specific Energy: 8.48 ft
Froude Number: 1.01
Maximum Discharge: 498.37 ft³/s
Discharge Full: 463.29 ft³/s
Slope Full: 0.00494 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.79 %
Downstream Velocity: Infinity ft/s

**Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate
Parkway**

Upstream Velocity:	Infinity	ft/s
Normal Depth:	5.55	ft
Critical Depth:	5.57	ft
Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00523	ft/ft

Notes

Q100 DISCHARGE GOVERNS

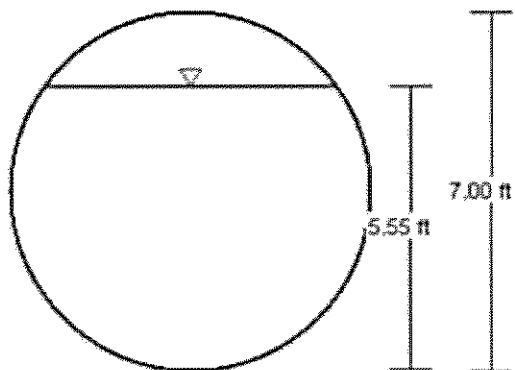
Cross Section for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00526	ft/ft
Normal Depth:	5.55	ft
Diameter:	7.00	ft
Discharge:	449.00	ft ³ /s



V: 1
H: 1

Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.00526 ft/ft
Height: 6.00 ft
Bottom Width: 8.00 ft
Discharge: 449.00 ft³/s

Results

Normal Depth: 4.68 ft
Flow Area: 37.44 ft²
Wetted Perimeter: 17.36 ft
Top Width: 8.00 ft
Critical Depth: 4.61 ft
Critical Slope: 0.00547 ft/ft
Velocity: 11.99 ft/s
Velocity Head: 2.24 ft
Specific Energy: 6.92 ft
Froude Number: 0.98
Flow Type: Subcritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.78 %
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 4.68 ft
Critical Depth: 4.61 ft

Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00547	ft/ft

Notes

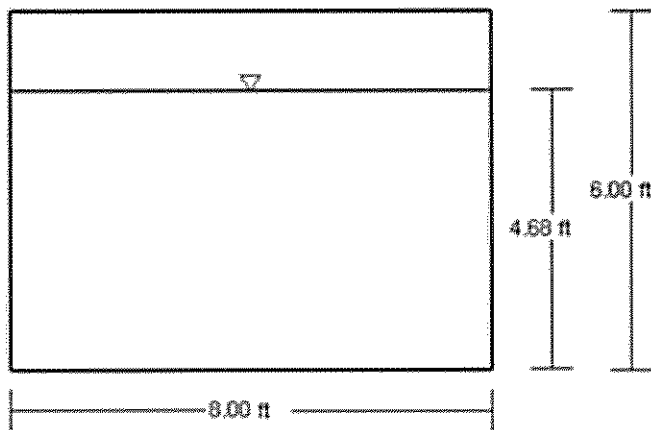
Cross Section for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

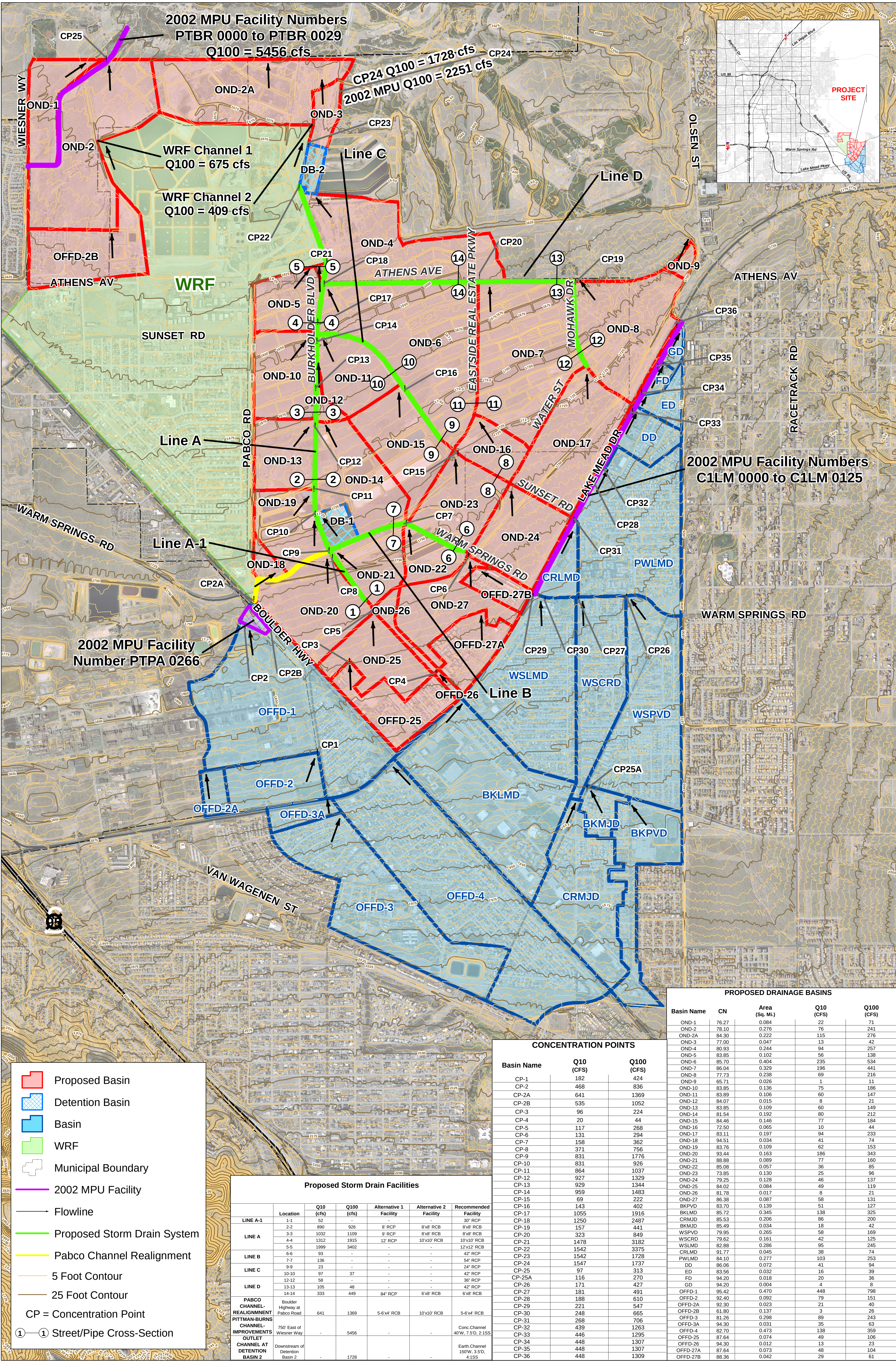
Roughness Coefficient: 0.015
Channel Slope: 0.00526 ft/ft
Normal Depth: 4.68 ft
Height: 6.00 ft
Bottom Width: 8.00 ft
Discharge: 449.00 ft³/s



V: 1
H: 1

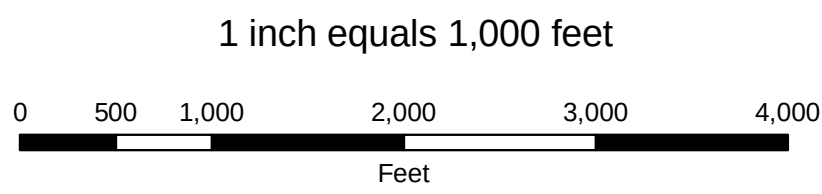
Appendix E

Proposed Conditions Drainage Map



SOURCE: 2004 GISMO

PROPOSED CONDITIONS DRAINAGE MAP



**ADDENDUM #2 TO THE
CONCEPTUAL DRAINAGE STUDY FOR
THE EASTSIDE PROPERTIES
(ESR 2200)**

Prepared for:



875 West Warm Springs Road
Henderson, NV 89105
Phone # (702)567-0400
Fax # (702) 567-0475

CENTEX HOMES
50 Years of Homebuilding

3606 North Rancho Drive, Suite 102
Las Vegas, NV 89130
Phone # (702) 647-2660
Fax # (702) 647-2666

Prepared by:



2270 Corporate Circle, Suite 100
Henderson, Nevada 89074-6382
Phone # 702-263-7275
Fax # 702-263-7200

January 2006
PBS&J Reference No.: 511629.28



Date Submitted _____
PIN # _____



CLARK COUNTY DEPARTMENT OF DEVELOPMENT SERVICES
CIVIL ENGINEERING DIVISION

HTE # 05-27538

DRAINAGE STUDY SUBMITTAL SHEET

(Each Drainage Study must have a separate submittal sheet and a separate check).

Is this project located within a Major Project?

☐ Yes

☒ No

If yes, which Major Project is it? _____

Assessor's Parcel Number (APN)

1 PT160-31-001 thru 004, PT 160-31-007 & 008, PT 160-32-008

2 PT 161-36-001 thru 006, PT 179-05-001 thru 008

3 PT 179-06-001 thru 008

4 PT179-07-001 thru 008, PT 179-08-001 thru 003

5 PT 179-07-007, PT 179-18-005

6 _____

This project is within the city limits of :

☒ Henderson

☐ Las Vegas

☐ North Las Vegas

☒ Other Clark County

Type of Submittal

☐ New (never submitted before)

☐ Over 2 Study Reviews

Number of Acres

☐ up to 5 acres

☐ up to 40 acres

☐ up to 320 acres

☒ up to 2560 acres

☐ over 2560 acres

Note: Addendum 2 is only the second review, the Technical Drainage Study and Addendum 1 were submitted together.

Project Name

Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200)

Street Location

East/West

Boulder Highway/Lake Mead Drive

North/South

Pabco Road

Land Use Applications

1 N/A

2 _____

3 _____

Engineering Firm

PBS&J

Responsible Engineer

Matt Baird P.E., CFM

Address

2270 Corporate Circle, Suite 100

City/State/Zip

Henderson, Nevada 89074-6382

Phone number

(702)

263-7275

Owner/Developer

The Landwell Company

Address

875 West Warm springs Road

City/State/Zip

Henderson, NV 89015

Phone number

(702)

567-0400

January 24, 2006

Mr. Todd Myers, P.E.
Clark County Department of Development Services
500 South Grand Central Parkway
Las Vegas, NV 89106

**RE: ADDENDUM # 2 TO THE CONCEPTUAL DRAINAGE STUDY FOR THE
EASTSIDE PROPERTIES (ESR 2200)
HTE NO.: 05-27538
PBS&J REFERENCE NO.: 511629.28**

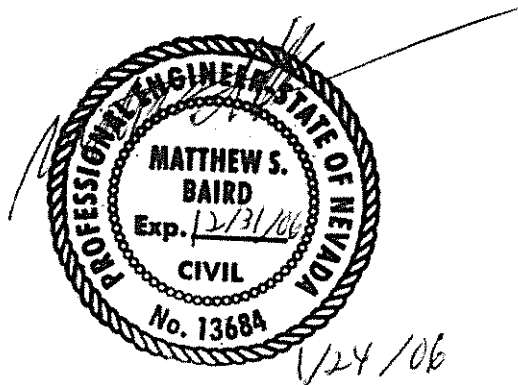
Dear Mr. Myers:

PBS&J has enclosed two copies of the *Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200)* for your review. It should be noted that the City of Henderson recently annexed all of the parcels of land of this project that were previously within unincorporated Clark County.

If you have any questions regarding this submittal please contact us at 263-7275.

Sincerely,

PBS&J



Matt Baird, P.E., CFM
Senior Program Manager



**CITY OF HENDERSON PUBLIC WORKS
HYDROLOGY STUDY SUBMITTAL FORM**
240 Water Street, Suite 210, Henderson, NV 89015
Questions? (702) 565-2867 or 565-2815

Date: January 24, 2006

KIVA NUMBER: PHYD 2005780056
(for Addendums, Updates, and Supplemental Information)

Hydrology Study Title: Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200)

This submittal is: ☐ New ☐ Addendum (response to comments) ☐ Update after original approval
☐ Supplemental information for a previous submittal ☒ Other Response to Clark County
Comments: City of Henderson has already approved study.

INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED:

For all submittals:

- ☒ Completed Hydrology Study Submittal Form (this form)
- ☒ Two (2) copies of the hydrology study and related maps.
- ☒ Large maps folded to the approximate size of the study.
- ☒ Completed Standard Form 1, bound into the first page of each copy of the study.
- ☒ Nevada Professional Engineer's seal, signed and dated, must be included on the Standard Form 1.

For new submittals:

- ☐ Community Development Permit Number: C _____ 200 _____
(design review, tentative map, parcel map, etc.) (4 letters) (10-digit number)
- ☐ Submittal fee based on acreage: \$750.00 – under 5 acres
\$2,000.00 – 5.1 to 320 acres
\$4,000.00 – 320.1 to 2,560 acres
\$6,000.00 – 2,560.1 + acres
- ☐ Completed Standard Form 2, bound into each copy, behind the Standard Form 1.

For addendum (response to comments): Response to Clark County comments.

- ☐ Copy of City of Henderson comment letter, bound into each copy, behind the Standard Form 1.
- ☒ No Charge for first addendum. \$400.00 submittal fee for subsequent addenda.

For update (revision) to an approved study:

- ☐ \$400.00 submittal fee under 1 year from approval. Over 1 year from approval – new study & fees.
- ☐ Copy of approval letter for original study, bound into each copy, behind the Standard Form 1.

The above list is the **minimum** required for **submittal**. For adequate review, all items identified in the Clark County Regional Flood Control District Hydrologic Criteria and Drainage Design Manual must be included. Please pay special attention to the City of Henderson section of the manual.

CITY OF HENDERSON USE ONLY: Accepted by: (print name) _____

KIVA # _____

COH Date Stamp: _____

January 24, 2006

Mr. Albert Jankowiak, P.E.
City of Henderson Public Works
240 Water Street
Henderson, Nevada 89009

**RE: ADDENDUM # 2 TO THE CONCEPTUAL DRAINAGE STUDY FOR THE
EASTSIDE PROPERTIES (ESR 2200)
KIVA NO.: PHYD 2005780056
PBS&J REFERENCE NO.: 511629.28**

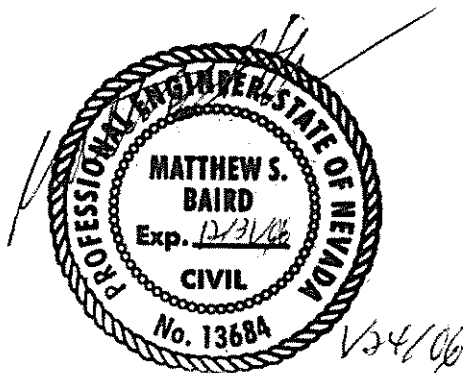
Dear Mr. Jankowiak:

PBS&J has enclosed two copies of the *Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200)* for your review. Note that the City of Henderson has already approved the study; this submittal addresses Clark County comments.

If you have any questions regarding this submittal please contact us at 263-7275.

Sincerely,

PBS&J



Matt Baird, P.E., CFM
Senior Program Manager

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200) Date: January 24, 2006
 Location of Development: a) Descriptive (Cross Streets) North/South Pabco Road East/West Boulder Highway/
 b) Sect. 36 Twn. 21S Rng. 62E
31, 32 21S 63E
5, 6, 7, 8, 18 22S 63E

Assessors Parcel No: PT 160-31-001 / PT 160-31-002 / PT 160-31-003 / PT 160-31-004 / PT 160-31-007 / PT 160-31-008 / PT 160-32-008 / PT 161-36-001 / PT 161-36-002
PT 161-36-003 / PT 161-36-004 / PT 161-36-005 / PT 161-36-006 / PT 179-05-001 / PT 179-05-002 / PT 179-05-003 / PT 179-05-004 / PT 179-05-005
PT 179-05-006 / PT 179-05-007 / PT 179-05-008 / PT 179-06-001 / PT 179-06-002 / PT 179-06-003 / PT 179-06-004 / PT 179-06-005 / PT 179-06-006
PT 179-06-007 / PT 179-06-008 / PT 179-07-001 / PT 179-07-002 / PT 179-07-003 / PT 179-07-004 / PT 179-07-005 / PT 179-07-006 / PT 179-07-007
PT 179-07-008 / PT 179-08-001 / PT 179-08-002 / PT 179-08-003 / PT 179-07-007 / PT 179-18-005

Name of Owner: The LandWell Company

Telephone No: (702) 567-0400 Facsimile No: (702) 567-0475

Address: 875 West Warm Springs Road
Henderson, NV 89015

Contact Person Name: Matt Baird P.E., CFM Telephone No: (702) 263-7275

Firm: PBS & J

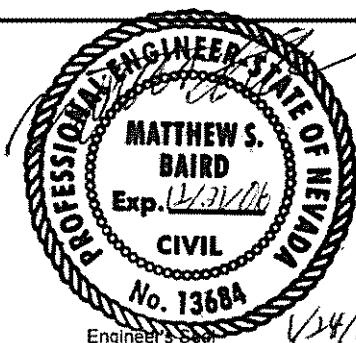
Address: 2270 Corporate Circle, Suite 100 Henderson, Nevada 89074

Type of Land Development/Land Disturbance Process:

☐ Rezoning	☐ Subdivision Map	☐ Clearing and Grading Only
☐ Parcel Map	☒ Planned Unit Development	☐ Other (Please specify below)
☐ Large Parcel Map	☐ Building Permit	

- Total Owned Land Area: At Site: 2,200 +/- acres Being Developed/Disturbed:
- Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☒ YES NO
- Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ YES NO
- Proposed type of development (Residential, Commercial, Etc.)? Residential, Commercial, Parks, Schools
- Approximate upstream land area which drains to the subject site? 2,000 +/- acres
- Has the site drainage been evaluated in the past? YES* ☒ NO If yes, please identify documentation:

- If known, please briefly identify the proposed discharge point(s) of runoff from the site:
Northern Section of Proposed Development (Approx. 4,500 feet North of Athens Avenue)
- Briefly describe your proposed schedule for the subject project: ASAP



Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

* Review and concurrence of the Clark County Regional Flood Control District is required.

Local Entity File No. _____

Revision	Date

PBS&J Job Number: 51-1629.28

STANDARD FORM 1

This report is entitled *Addendum #2 to the Conceptual Drainage Study for the Eastside Properties (ESR 2200)*. The revisions in this addendum are intended to supersede the data contained in the *Conceptual Drainage Study for the Eastside Properties* dated March 4, 2005 and *Addendum #1 to the Eastside Conceptual Study* dated May 2, 2005 (City of Henderson Permit No. 2005780056; Clark County HTE# 05-27538; RFCD No. 05-6422).

This report is intended to address written comments from Clark County Department of Development Services (CCDDS) signed August 1, 2005. See Appendix A for a copy of the comment letter.

While addressing the comments from CCDDS, PBS&J found an error in the computation of lag times for several subbasins in both existing and proposed conditions. This report also corrects the lag time calculations, the HEC-1 hydrologic models, and the appropriate hydraulic calculations. The existing conditions subbasins affected by this change are ONE-1, ONE-2, ONE-3, ONE-4, ONE-5, ONE-7, ONE-8, ONE-9, ONE-10, OND2*, OND7*, OND8*, and OND11A*. The proposed conditions subbasins affected are OND-1, OND-2, OND-3, OND-4, OND-5, OND-6, OND-7, OND-8, OND-9, OND-10, OND-11, OND-12, OND-13, OND-14, OND-15, OND-16, OND-17, OND-18, OND-19, OND-20, OND-21, OND-22, OND-23, OND-24, OND-25, OND-26, OND-27, DB-1, DB-2, OND2*, OND7*, OND8*, and OND11A*.

The comments from CCDDS and the responses are included below.

Comment #1: The study must provide clarification for how flows exiting the Water Reclamation Facility are conveyed through the site in the existing and proposed conditions.

Response #1: The wastewater effluent from the Water Reclamation Facility (WRF) discharges at the northeast corner of the project site, just north of the Russell Road alignment. The wastewater effluent outfall facilities will be protected in place.

In the existing condition the storm runoff exiting the WRF site on the west side is conveyed in an existing earthen channel (WRF Channel 1) to the LandWell north property line (see WRF Basin Map in Appendix E). In the proposed condition these flows will be collected and conveyed in either a pipe or in a channel to the Pittman-Burns system. The proposed facility will be extended as shown in the Proposed Conditions Drainage Map in Appendix E. The hydraulic calculations for this facility are included in Appendix C-5.

In the existing condition the storm runoff exiting the WRF site on the east side is conveyed in an existing earthen channel (WRF Channel 2) to the LandWell north property line (see WRF Basin Map in Appendix E). In the proposed condition these flows will be collected and conveyed in a riprap channel to the north LandWell property line. The proposed

facility will be extended as shown in the Proposed Conditions Drainage Map in Appendix E. The hydraulic calculations for this facility are included in Appendix C-6.

In the existing condition the storm runoff from three onsite WRF basins (OND7*, OND6*, and OND8*) discharge to the existing earthen channel to the east of the WRF site. In the proposed condition the runoff from OND7* and OND6* will discharge to the proposed Detention Basin 2 and the runoff from OND8* will discharge to the proposed earthen Detention Basin 2 Outlet Channel.

The existing ponds (Bird Viewing Area ponds and retention area labeled POND1* on WRF Basin Map in Appendix E) do not convey flow to LandWell property. Please refer to the original study, Appendix C-1, for the WRF reference material. The WRF Basin Map in Appendix E shows how the WRF basins coincide with the Eastside basins. See responses to Comments #17 and 18.

Comment #2: The DI/DQ information used at CP2 in the existing condition HEC-1 models does not agree with the referenced information provided. This must be addressed.

Response #2: The DI/DQ information used at CP2 in the existing condition HEC-1 models has been corrected to agree with the referenced information. See Appendix B-2 for the revised HEC-1 models.

Comment #3: Appendix B-3 includes calculations for the outfall rating curves for detention basin 1. The outflow value for elevation 5.00 appears incorrect. It appears that the value of 94 cfs was obtained by using scale (1) on the nomograph. Using scale (2), the value is approximately 108 cfs. This must be addressed.

Response #3: A value of 108 cfs for elevation 5.00 should have been used. The table and HEC-1 model have been corrected. See Appendix B-3 for the revised HEC-1 model and Appendix C-3 for the revised table.

Comment #4: A comparison made between the existing hydrographs of the existing and proposed models reveals a discrepancy in the overall area modeled. The existing model analyzes 7.26 sq. mi. (CP8 + ONE3 + CP7 + CP19 + ONE7) whereas the proposed model analyzes 7.45 sq. mi (CP25 + OND-2A + CP24 + OND9 + CP36). The study must discuss the difference of approximately 122 acres and revise as necessary.

Response #4: A slight discrepancy was discovered in several basins that resulted in the difference in overall area modeled. This discrepancy has been corrected.

Curve number calculations, Standard Form 4, and HEC-1 models have been revised for both existing and proposed conditions and can be found in Appendix B.

Comment #5: The existing condition HEC-1 models basin PWLME as 188.22 acres whereas the proposed condition HEC-1 models the basin PWLMD as 177.54 acres. The discrepancy must be addressed.

Response #5: The discrepancy has been corrected. The correct area for basin PWLMD is 188.22 acres. See Appendix B.

Comment #6: The original submittal includes a hydraulic section for Worksheet 3-3 Alternative 1 which analyzes 977 cfs in a 96" RCP. It appears that the worksheet should analyze 1109 cfs in a 108" RCP. The study must be revised accordingly.

Response #6: The discrepancy has been corrected. Due to revised hydrology, the flow used at this location has changed from the previous submittal. Both Worksheet 3-3 Alternative 1 and the summary table of proposed storm drain facilities analyze 905 cfs in a 96" RCP. See Appendix C-2.

Comment #7: The composite curve numbers use a majority of land use as "Low-Density Residential, 1-2 units per acre". The submitted land use exhibit indicates the majority of the land use to be "Low Density – up to 6 units per acre". The study must address the discrepancy in land use designation and revise the study as necessary.

Response #7: The land use designation in the curve number calculations has been revised. The revised curve number calculations use a land use of "High Density Residential, 4-8 units per acre". See Appendix B-1 for the revised curve number calculations.

Comment #8: The composite curve number for OND-5 uses the land use of "Low-Density Residential, 1-2 units per acre whereas the land use exhibit indicates "Commercial". The study must be revised accordingly.

Response #8: The curve number calculation for basin OND-5 has been revised using commercial land use. See Appendix B-1 for the revised curve number calculations.

Comment #9: Deleted by Clark County

Comment #10: The proposed condition HEC-1 combines all flows south of Lake Mead Drive and east of Boulder Highway at CP36. The study indicates that a separate technical drainage study for the design of this facility has been submitted for review. The subject study

however must clarify on the exhibits if the flow at CP36 is proposed to cross Lake Mead Drive and continue north along the boundary of OND-9.

Response #10: This C-1 Channel-Lake Mead facility will be located on the north side of Lake Mead Parkway. Along the length of the facility flows cross from the south to the north side of Lake Mead Parkway via several existing culverts that will be extended to the proposed facility. The facility ties into the C-1 Channel, which continues north along the boundary of OND-9. The Proposed Condition Drainage Map in Appendix E has been revised.

Comment #11: The study indicates a proposed increase of flow at northwest corner of the site from 225 cfs at CP8 (Existing Condition) to 313 cfs at CP25 (Proposed Condition). The study must address mitigation of this flow increase.

Response #11: Revisions have been made to the hydrology based on previous comments (see above). The flow at CP8 in the existing condition is 438 cfs and the flow at CP25 in the proposed condition is 615 cfs. The difference is 177 cfs. It should be noted that these flow rates do not represent the entire flow at this point. These flows are from the local tributary area and do not include tributary areas southwest of Wiesner Way and Athens Avenue (Galleria Drive). The flow rate in the 2002 MPU does account for the entire watershed tributary at this point. The 2002 MPU flow rate is 5,456 cfs. The Pittman-Burns Channel will be designed for the full 2002 MPU flow (see response to Comment #15). After accounting for the flow from the entire watershed area, the flow increase is insignificant at the Las Vegas Wash. The impact on the Pittman-Burns facility is minor considering it will be designed for the future, fully developed flow from the entire watershed area. In addition, the facility will be constructed such that at the facility outlet at the property line the 100-year flow depths and velocities will match existing conditions. See response to Comment #15.

Comment #12: All conditions and stipulations stated in the City of Henderson approval memorandum dated May 24, 2005 are noted.

Response #12: Comment is noted. Required conditions and stipulations have either been met or are currently being addressed. See Appendix A for approval letter.

Comment #13: The study must provide further discussion as to how the site's design of the Pabco Channel re-alignment will be incorporated into the future CCRFCD Regional Facility downstream.

Response #13: The proposed alignment north of Athens Road and the discharge point is the same as shown in the 2002 MPU. The regional facility will extend to the north LandWell property line. Additionally, CCRFCD has previously reviewed and approved the study. The CCRFCD approval letter is included in Appendix A.

Comment #14: The majority of the site lies within a SFHA Zone A. The Conceptual Drainage Study must also provide a copy of the effective FIS model, which was used to define the limits of the SFHA Zone. The quantity of the flow from the washes tributary to the site in the FIS study must also be included on the exhibits. Clark County Department of Developmental Services require the submittal of the post developed, revised effective FIS analysis with the submittal of the Technical Drainage Study for Concurrence which will evaluate the impacts to the Floodway Fringe and Floodway north of the site.

Response #14: Special Flood Hazard Areas (SFHA) labeled Zone A "indicate approximate floodplain boundaries. No detailed study has been performed to determine base flood elevations in these areas." (*National Flood Insurance Program (NFIP) Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials, FEMA 480, Federal Emergency Management Agency, February 2005, page 4-11, see Appendix D*). There are no FEMA effective FIS models or flow quantities from washes tributary to the site. Copies of pertinent pages from the effective FIS for this area are included in Appendix D. It should be noted that the FIS shows that some of the flood zones in Henderson do have effective flow rates and were studied using detailed methods, however, the flood zone that encompasses the Eastside site is not listed as having an effective flow rate or a detailed methods model.

Any impacts to the floodway or floodway fringe of the Las Vegas Wash will be submitted with future Technical Drainage Studies for the site. However, it should be noted that the proposed development does not encroach into the floodway or floodway fringe of the Las Vegas Wash and therefore, no impacts are anticipated.

It should also be noted that a CLOMR has been prepared for the proposed mass grading on Eastside Properties and the proposed C-1 Lake Mead Channel improvements. Both Clark County and City of Henderson have signed the CLOMR and it will be submitted to FEMA soon. The revisions to the SFHAs proposed with this CLOMR include the removal of all Zone A flood zone east of the existing Pabco Channel to the intersection of the C-1 Channel and Lake Mead Drive.

Comment #15: The outlet facility in Wiesner Way will be picked up in a proposed CCRFCD Regional Facility PTBR0000. The exhibit suggests that

this facility will be constructed for the site's conveyance system. The study must clarify the time frame for this facility and how the interim drainage conditions will affect Clark County properties downstream.

Response #15: It is anticipated that the facility will be built prior to or at the same time as the Eastside Properties development. The facility will be constructed such that at the facility outlet at the property line the 100-year flow depths and velocities will match existing conditions. This proposed scenario is being coordinated with Clark County Parks and Community Services (CCPCS), Clark County Department of Public Works (CCPW), and Southern Nevada Water Authority (SNWA).

Comment #16: The flow quantity in the by pass system, normal flow depth doesn't match the detention basin 2 exhibit flow and must be addressed.

Response #16: The discrepancy has been revised. See Appendix C-3.

Comment #17: It doesn't appear the total flow at CP25 accounted for the tributary flows from WRF Channel 1 and must be addressed.

Response #17: The HEC-1 model has been revised to account for the tributary flows from WRF Channel 1. Please refer to the original study, Appendix C-1, for the WRF reference material. The WRF Basin Map in Appendix E shows how the WRF basins coincide with the Eastside basins. See response to Comment #1.

Comment #18: The total flow at CP24 doesn't appear to include WRF Channel 2 flows and must be addressed.

Response #18: In the proposed condition the flows from WRF Channel 2 will be collected and conveyed in a riprap channel to the north LandWell property line. The HEC-1 model has been revised to add the tributary basins to the WRF Channel 2; however the flow from WRF Channel 2 does not drain to CP24. See the Proposed Conditions Drainage Map and the WRF Basin Map in Appendix E. See response to Comment #1.

Comment #19: The total flow at CP24 on the proposed conditions map doesn't appear to match the amounts shown in the HEC-1 model output and must be addressed.

Response #19: This discrepancy has been revised. See Appendix E for the revised Proposed Conditions Drainage Map.

Comment #20: The Conceptual Drainage Study's concurrence approval will be conditioned on the annexation of the Clark County property. The

engineer should note that if the annexation of the property exceeds 1 year a new Conceptual or Technical Drainage Study may be required for the concurrence approval.

Response #20: Comment noted.

LIST OF APPENDICES

- APPENDIX A:** Agency Comment and Approval Letters
- APPENDIX B:** Hydrology
- B-1:** Curve Number Calculations
 - B-2:** Standard Form 4 and HEC-1 for Existing Conditions
 - B-3:** Standard Form 4 and HEC-1 for Proposed Conditions
- APPENDIX C:** Hydraulics
- C-1:** Flowmaster-Street Capacity Calculations
 - C-2:** Flowmaster-Storm Drain Systems
 - C-3:** Detention Basin Analysis
 - C-4:** Flowmaster-Outlet Channel at Detention Basin 2
 - C-5:** Flowmaster-Continuation of WRF Channel 1
 - C-6:** Flowmaster-Continuation of WRF Channel 2
- APPENDIX D:** Reference Material
- Excerpts from the Effective FIS
 - Excerpts from *FEMA 480*
- APPENDIX E:** Figures
- Existing Conditions Drainage Map
 - Proposed Conditions Drainage Map
 - WRF Basin Map

Appendix A: Agency Comment & Approval Letters

6.16.05



7221 Thacker Road, Suite 100
Las Vegas, Nevada 89121
702/734-1001 Fax 702/734-0588
www.willdan.com

MEMORANDUM

TO: Kevin K. Elliott, P.E.
FROM: Chris O. Stone, P.E. COS
OFFICE: Las Vegas
DATE: July 21, 2005

Post-it* Fax Note	7671	Date	8-10-05	# of pages	+
To	MATT WILKINSON	From	C. LONG		
Co./Dept	PBS+J	Co.	CCDS		
Phone #	263-7275 x 3171	Phone #	455-4600		
Fax #	263-7200	Fax #			

SUBJECT: WILLDAN / Clark County Development Services Dept. Plan Review Contract
Conceptual Drainage Study for The Eastside Properties (4947)
Study Dated: March 4, 2005
Addendum Dated: May 2, 2005
Location: North of Lake Mead Drive, east of Pabco Road
(Sec. 34, T. 20 S., R. 62 E.)
HTE # 05-27538
Prepared by PBS & J

The subject information was submitted to Clark County to obtain concurrence as the study has received conditional approval from the City of Henderson. We have completed our initial review of the above-referenced **Conceptual Drainage Study**, and have the following comments:

1. The study must provide clarification for how flows exiting the Water Reclamation Facility are conveyed through the site in the existing and proposed conditions;
2. The DI/DQ information used at CP2 in the existing condition HEC-1 models does not agree with the referenced information provided. This must be addressed;
3. Appendix B-3 includes calculations for the outfall rating curves for detention basin 1. The outflow value for elevation 5.00 appears incorrect. It appears that the value of 94 cfs was obtained by using scale (1) on the nomograph. Using scale (2), the value is approximately 108 cfs. This must be addressed;
4. A comparison made between the exiting hydrographs of the existing and proposed models reveals a discrepancy in the overall area modeled. The existing model analyzes 7.26 sq. mi. (CP8 + ONE3 + CP7 + CP19 + ONE7) whereas the proposed model analyzes 7.45 sq. mi. (CP25 + OND-2A + CP24 + OND9 + CP36). The study must discuss this difference of approximately 122 acres and revise as necessary;



Kevin K. Elliott, P.E.
The Eastside Properties (4947)
July 21, 2005
Page 2

5. The existing condition HEC-1 models basin PWLME as 188.22 acres whereas the proposed condition HEC-1 models the basin PWLMD as 177.54 acres. The discrepancy must be addressed;
6. The original submittal includes a hydraulic section for Worksheet 3-3 Alternative 1 which analyzes 977 cfs in a 96" RCP. It appears that the worksheet should analyze 1109 cfs in a 108" RCP. The study must be revised accordingly;
7. The composite curve numbers use a majority of land use as "Low-Density Residential, 1-2 units per acre". The submitted land use exhibit indicates the majority of the land use to be "Low Density - up to 6 units per acre". The study must address the discrepancy in land use designation and revise the study as necessary;
8. The composite curve number for OND-5 uses the land use of "Low-Density Residential, 1-2 units per acre whereas the land use exhibit indicates "Commercial". The study must be revised accordingly;
- detected* 9. The HEC-1 models include many flow splits and diversions within the basins south of Lake Mead Drive. Supporting calculations or reference material must be provided;
10. The proposed condition HEC-1 combines all flows south of Lake Mead Drive and east of Boulder Highway at CP36. The study indicates that a separate technical drainage study for the design of this facility has been submitted for review. The subject study however must clarify on the exhibits if the flow at CP36 is proposed to cross Lake Mead Drive and continue north along the boundary of OND-9;
11. The study indicates a proposed increase of flow at the northwest corner of the site from 225 cfs at CP8 (Existing Condition) to 313 cfs at CP25 (Proposed Condition). The study must address mitigation of this flow increase;
12. All conditions and stipulations stated in the City of Henderson approval memorandum dated May 24, 2005 are noted;

All addenda must be submitted directly to Clark County. Any drainage studies or addenda submitted directly to WILLDAN will be returned to Clark County for the necessary log-in procedures.

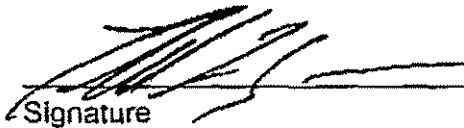


Kevin K. Elliott, P.E.
The Eastside Properties (4947)
July 21, 2005
Page 3

The items listed herein must be thoroughly addressed and submitted for review prior to acceptance of this study.

A study review workshop with WILLDAN may be scheduled if there are questions concerning the above listed comments.

CONCURRENCE BY CLARK COUNTY DEVELOPMENT SERVICES DEPARTMENT:


Signature

8/1/05
Date

COMMENTS: _____

cc: The Landwell Company

The Eastside Properties
July 29, 2005
Page 4

HTE# 05-27538

13. The study must provide further discussion as to how the site's design of the Pabco Channel re-alignment will be incorporated into the future CCRFCD Regional Facility downstream.
14. The majority of the site lies within a SFHA Zone A. The Conceptual Drainage Study must also provide a copy of the effective FIS model, which was used to define the limits of the SFHA Zone. The quantity of the flow from the washes tributary to the site in the FIS study must also will be included on the exhibits. Clark County Department of Development Services require the submittal of the post developed, revised effective FIS analysis with the submittal of the Technical Drainage Study for Concurrence which will evaluate the impacts to the Floodway Fringe and Floodway north of the site.
15. The outlet facility in Wiesner Way will be picked up in a proposed CCRFCD Regional Facility PTBR0000. The exhibit suggests that this facility will be constructed for the site's conveyance system. The study must clarify the time frame for this facility and how the interim drainage conditions will affect Clark County properties downstream.
16. The flow quantity in the by pass system, normal flow depth doesn't match the detention basin 2 exhibit flow and must be addressed.
17. It doesn't appear the total flow at CP25 accounted for the tributary flows from WRF Channel 1 and must be addressed.
18. The total flow at CP24 doesn't appear to include WRF Channel 2 flows and must be addressed.
19. The total flow at CP24 on the proposed conditions map doesn't appear to match the amounts shown in the HEC-1 model output and must be addressed.
20. The Conceptual Drainage Study's concurrence approval will be conditioned on the annexation of the Clark County property. The engineer should note that if the annexation of the property exceeds 1 year a new Conceptual or Technical Drainage Study may be required for concurrence approval.

JJ/gh

C L A R K C O U N T Y
REGIONAL FLOOD CONTROL DISTRICT



July 14, 2005

Gale Wm. Fraser, II, P.E.
General Manager/Chief
Engineer

BOARD OF DIRECTORS

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Bruce L. Woodbury
Clark County

Mr. Curt Chandler, P.E.
City of Henderson Public Works
240 Water St
Henderson, NV 89015

DISTRICT CONCURRENCE: EASTSIDE PROPERTIES
(PN #2005780056) (RFCD NO. 05-6422)

Dear Mr. Chandler:

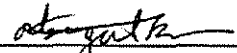
Clark County Regional Flood Control District (District) reviewed Conceptual Drainage Study dated March 4, 2005 and Addendum No. 1 dated May 2, 2005, for the above-mentioned project as submitted by PBS & J, Inc. In addition, District is in receipt of the Conditional Letter of Acceptance from City of Henderson Public Works dated May 24, 2005.

District concurs with acceptance of this Conceptual Drainage Study by City of Henderson Public Works.

District's review of this project was limited to issues of Regional Flood Control Significance as defined in *Uniform Regulations for the Control of Drainage*. As noted in study, site resides in a Special Flood Hazard Area (SFHA) designated as "Zone A" per the effective Flood Insurance Rate Map (FIRM). Therefore, consultant should be advised that this acceptance does not serve to amend the FIRM or remove the SFHA.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, information submitted by PBS & J, Inc. may be superseded. Compliance with regulatory elements and design standards specified in *Uniform Regulations for the Control of Drainage* does not imply a guarantee that properties will be free from flooding or flood damage. The District, its officials, or employees assume no liability for information, data, or conclusions presented by consulting engineers. We, therefore, make no warranties, either expressed or implied, in conducting this review.

GALE WM. FRASER, II, P.E.
General Manager/Chief Engineer

BY: 
Abigail Mayrena, E.I.
Associate Engineer


Andrew R. Trelease, P.E.
Senior Civil Engineer

AM:ART:css

c: Matthew S. Baird, P.E., PBS & J, Inc.

File: 21-62-36.PBS



CITY OF HENDERSON
240 Water Street
P. O. Box 95050
Henderson, NV 89009

May 24, 2005

Matt Baird, P.E.
PBS&J
2270 Corporate Circle, Suite 100
Henderson, NV 89074

Re: Addendum1 to the Conceptual Drainage Study for Eastside Properties
City of Henderson Permit Number 2005780056

Dear Mr. Baird;

This letter provides comments on the above referenced drainage study dated 5-2-05. The City of Henderson reviewed this study and based on the documents submitted, **the subject study is approved.** The following items are part of the approved study:

- 1) The site is adjacent to or crosses a Clark County Regional Flood Control District (CCRFCD) Master Plan Facility. Also, a portion of the site is located within a FEMA Special Hazard Area Zone "A". Therefore, CCRFCD concurrence is required.
- 2) The project site is located in a FEMA Special Flood Hazard Area (SFHA) Zone "A". Therefore, the City of Henderson requires that a Conditional Letter of Map Revision must be obtained prior to construction activity within the boundaries of the SFHA. Also a Letter of Map Revision must be submitted to FEMA prior to approval of the elevation certificate for lots within the 100-year floodplain.
- 3) The drainage study proposes flood control improvements located on property within Clark County Wellands Park boundary. The Engineer must coordinate the site improvements with Clark County Department of Parks and Community Services (CCDPCS). Please contact Bruce Sillitoe, Principal Parks Planner, concerning coordination issues at (702) 455-8287.
- 4) Clark County Department of Developmental Services (CCDDS) concurrence is required since the site is adjacent to property within Clark County jurisdiction.
- 5) The drainage study proposes flood control improvements that discharge into the Las Vegas Wash, which is within Southern Nevada Water Authority (SNWA) jurisdiction. Therefore, SNWA concurrence is required.
- 6) The drainage study proposes flood control improvements that discharge onto property within U.S. Bureau of Reclamation (BOR) jurisdiction. Therefore, BOR concurrence is required. Please contact Richard Murphy, Natural Resource Specialist, concerning concurrence and coordination issues at (702) 293-8171.

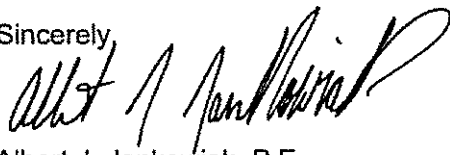
- 7) The drainage study proposes flood control improvements located on property within Nevada Department of Transportation (NDOT) jurisdiction. The Engineer has been coordinating with NDOT staff concerning the project. Based upon the coordination efforts, NDOT concurrence will be required for the technical drainage studies that impact NDOT rights-of-way.
- 8) The study proposes to revise the facilities of the proposed Pittman Pabco channel system identified in the 2002 MPU. An amendment to the 2002 MPU must be submitted to CCRFCD and approved prior to permits being issued for the channel improvements.
- 9) This study is conceptual in nature and identifies alternatives for conveying offsite and onsite generated runoff to the ultimate discharge point. Also, normal depth calculations were provided to preliminarily size the proposed drainage facilities. Technical drainage studies that provide detailed analysis and in depth discussion of the proposed improvements must be submitted and approved prior to permits being issued for the site improvements.

Projects that disturb over One acre of land or any area adjacent to a waterway must submit to the Nevada Division of Environmental Protection: (1) a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site, (2) a request for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until paving, building construction or planting has covered all stripped or disturbed surface areas. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, the information submitted by the above named engineering firm may be superseded. Compliance with the regulatory elements and design standards specified in the Uniform Regulations for the Control of Drainage does not imply a guarantee that properties will be free from flooding or flood damage.

Please contact the reviewer if you have any questions concerning these comments.

Sincerely,



Albert J. Jankowiak, P.E.
Project Engineer II

Reviewer: Jeff Swartzlander
267-3679

cc: CCRFCD, BOR, CCDDS, SNWA, CCDPCS, NDOT

Appendix B: Hydrology

Appendix B-1: Curve Number Calculations

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
ONE-1	B	326	16.27	Undeveloped Land, Open Desert	77.00	$(16.27/45.92)*77$	27.28
	B	187	29.65	Undeveloped Land, Open Desert	77.00	$(29.65/45.92)*77$	49.72
	Total ONE-1		45.92		COMPOSITE CURVE NUMBER		77.00
ONE-2	B	326	2.54	Undeveloped Land, Open Desert	77.00	$(2.54/115.31)*77$	1.70
	B	187	78.39	Undeveloped Land, Open Desert	77.00	$(78.39/115.31)*77$	52.35
	C	600	8.29	Undeveloped Land, Open Desert	85.00	$(8.29/115.31)*85$	6.11
	B	184	26.07	Undeveloped Land, Open Desert	77.00	$(26.07/115.31)*77$	17.41
	A	999	0.02	Undeveloped Land, Open Desert	30.00	$(0.02/115.31)*30$	0.01
Total ONE-2			115.31		COMPOSITE CURVE NUMBER		77.57
ONE-3	C	600	148.79	Undeveloped Land, Open Desert	85.00	$(148.79/173.38)*85$	72.94
	B	326	24.59	Undeveloped Land, Open Desert	77.00	$(24.59/173.38)*77$	10.92
	Total ONE-3		173.38				83.87
ONE-4	B	278	0.17	Undeveloped Land, Open Desert	77.00	$(0.17/137.07)*77$	0.10
	B	184	115.72	Undeveloped Land, Open Desert	77.00	$(115.72/137.07)*77$	65.01
	C	600	21.18	Undeveloped Land, Open Desert	85.00	$(21.18/137.07)*85$	13.13
	Total ONE-4		137.07		COMPOSITE CURVE NUMBER		78.24
ONE-5	C	600	498.86	Undeveloped Land, Open Desert	85.00	$(498.86/556.81)*85$	76.15
	B	184	57.95	Undeveloped Land, Open Desert	77.00	$(57.95/556.81)*77$	8.01
	Total ONE-5		556.81		COMPOSITE CURVE NUMBER		84.17
ONE-6	A	117	89.42	Undeveloped Land, Open Desert	65.00	$(89.42/646.96)*65$	8.98
	C	610	6.01	Undeveloped Land, Open Desert	85.00	$(6.01/646.96)*85$	0.79
	C	600	507.91	Undeveloped Land, Open Desert	85.00	$(507.91/646.96)*85$	66.73
	B	184	35.77	Undeveloped Land, Open Desert	77.00	$(35.77/646.96)*77$	4.26
	B	182	7.85	Undeveloped Land, Open Desert	77.00	$(7.85/646.96)*77$	0.93
Total ONE-6			646.96		COMPOSITE CURVE NUMBER		81.70
ONE-7	A	112	0.58	Undeveloped Land, Open Desert	66.00	$(0.58/133.21)*66$	0.29
	B	184	2.66	Undeveloped Land, Open Desert	77.00	$(2.66/133.21)*77$	1.54
	C	600	57.50	Undeveloped Land, Open Desert	85.00	$(57.50/133.21)*85$	36.69
	B	182	72.47	Undeveloped Land, Open Desert	77.00	$(72.47/133.21)*77$	41.89
Total ONE-7			133.21		COMPOSITE CURVE NUMBER		80.41

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
ONE-8	B	184	9.86	Undeveloped Land, Open Desert	77.00	$(9.86/130.56)*77$	5.82
	B	182	40.56	Undeveloped Land, Open Desert	77.00	$(40.56/130.56)*77$	23.92
	A	117	78.35	Undeveloped Land, Open Desert	65.00	$(78.35/130.56)*65$	39.01
	B	187	1.79	Undeveloped Land, Open Desert	77.00	$(1.79/130.56)*77$	1.06
	Total ONE-8		130.56		COMPOSITE CURVE NUMBER		69.80
ONE-9	C	600	4.67	Undeveloped Land, Open Desert	85.40	$(4.67/215.04)*85.40$	1.85
	B	184	210.37	Undeveloped Land, Open Desert	78.00	$(210.37/215.04)*78$	76.31
	Total ONE-9		215.04		COMPOSITE CURVE NUMBER		78.16
ONE-10	B	184	57.60	Undeveloped Land, Open Desert	83.94	$(57.6/57.6)*83.94$	83.94
	Total ONE-10		57.60		COMPOSITE CURVE NUMBER		83.94
CRLME	A	117	14.56	Undeveloped Land, Open Desert	65.00	$(14.56/28.53)*65$	33.17
	A	117	1.14	High-Density Residential, 2-4 units per acre	76.72	$(1.14/28.53)*76.72$	3.06
	A	117	0.01	Multi-Family, 8 units per acre or more	82.32	$(0.01/28.53)*82.32$	0.03
	A	117	12.82	Commercial, Retail, Casino	92.40	$(12.82/28.53)*92.40$	41.54
	TOTAL CRLME		28.53		COMPOSITE CURVE NUMBER		77.80
BKLME	B	184	11.44	Undeveloped Land, Open Desert	77.00	$(11.44/220.79)*77$	3.99
	B	187	17.36	Undeveloped Land, Open Desert	77.00	$(17.36/220.79)*77$	6.05
	B	184	1.91	Parks, Golf Courses	64.45	$(1.91/220.79)*64.45$	0.56
	B	187	45.70	Parks, Golf Courses	64.45	$(45.70/220.79)*64.45$	13.34
	B	184	1.57	High-Density Residential, 2-4 units per acre	83.94	$(1.57/220.79)*83.94$	0.60
	B	187	2.19	High-Density Residential, 2-4 units per acre	83.94	$(2.19/220.79)*83.94$	0.83
	B	184	6.40	Multi-Family, 8 units per acre or more	87.64	$(6.40/220.79)*87.64$	2.54
	B	187	29.91	Multi-Family, 8 units per acre or more	87.64	$(29.91/220.79)*87.64$	11.87
	B	184	60.38	Commercial, Retail, Casino	94.30	$(60.38/220.79)*94.30$	25.75
	B	187	43.94	Commercial, Retail, Casino	94.30	$(43.94/220.79)*94.30$	18.77
TOTAL BKLME			220.79		COMPOSITE CURVE NUMBER		84.30

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
BKMJE	B	187	0.05	Undeveloped Land, Open Desert	77.00	$(0.05/21.46)*77$	0.17
	B	187	12.69	High-Density Residential, 2-4 units per acre	83.94	$(12.69/21.46)*83.94$	49.64
	B	187	8.64	Multi-Family, 8 units per acre or more	87.64	$(8.64/21.46)*87.64$	35.29
	B	187	0.08	Commercial, Retail, Casino	94.30	$(0.08/21.46)*94.30$	0.40
	TOTAL BKMJE		21.46		COMPOSITE CURVE NUMBER		85.50
BKPVE	A	117	0.38	High-Density Residential, 2-4 units per acre	76.72	$(0.38/88.97)*76.72$	0.33
	B	187	32.66	High-Density Residential, 2-4 units per acre	83.94	$(32.66/88.97)*83.94$	30.81
	B	187	7.13	Multi-Family, 8 units per acre or more	87.64	$(7.13/88.97)*87.64$	7.03
	B	187	11.84	Commercial, Retail, Casino	94.30	$(11.84/88.97)*94.30$	12.55
	A	117	0.26	Schools	70.00	$(0.26/88.97)*70$	0.20
	B	187	36.70	Schools	79.50	$(36.70/88.97)*79.50$	32.78
	TOTAL BKPVE		88.97		COMPOSITE CURVE NUMBER		83.70
PWLME	A	112	0.05	Undeveloped Land, Open Desert	66.00	$(0.05/188.22)*66$	0.02
	A	117	0.88	Undeveloped Land, Open Desert	65.00	$(0.88/188.22)*65$	0.30
	B	182	11.09	Undeveloped Land, Open Desert	77.00	$(11.09/188.22)*77$	4.54
	A	112	0.04	High-Density Residential, 2-4 units per acre	77.10	$(0.04/188.22)*77.10$	0.02
	A	117	21.09	High-Density Residential, 2-4 units per acre	76.72	$(21.09/188.22)*76.72$	8.60
	B	182	115.79	High-Density Residential, 2-4 units per acre	83.56	$(115.79/188.22)*83.56$	51.40
	A	117	22.85	Multi-Family, 8 units per acre or more	82.32	$(22.85/188.22)*82.32$	9.99
	B	182	3.13	Multi-Family, 8 units per acre or more	87.36	$(3.13/188.22)*87.36$	1.45
	A	117	5.95	Commercial, Retail, Casino	92.40	$(5.95/188.22)*92.40$	2.92
	B	182	7.34	Commercial, Retail, Casino	94.20	$(7.34/188.22)*94.20$	3.65
	TOTAL PWLME		188.22		COMPOSITE CURVE NUMBER		82.90
CRMJE	B	187	27.88	Undeveloped Land, Open Desert	77.00	$(27.88/132.06)*77$	16.25
	B	187	7.60	Parks, Golf Courses	64.45	$(7.60/132.06)*64.45$	3.71
	B	187	39.08	High-Density Residential, 2-4 units per acre	83.94	$(39.08/132.06)*83.94$	24.84
	B	187	17.59	Multi-Family, 8 units per acre or more	87.64	$(17.59/132.06)*87.64$	11.67
	B	187	39.91	Commercial, Retail, Casino	94.30	$(39.91/132.06)*94.30$	28.52
	TOTAL CRMJE		132.06		COMPOSITE CURVE NUMBER		85.00

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
DE	B	182	5.36	Undeveloped Land, Open Desert	77.00	$(5.36/35.20)*77$	11.73
	B	182	18.17	High-Density Residential, 2-4 units per acre	83.56	$(18.17/35.20)*83.56$	43.13
	B	182	4.09	Multi-Family, 8 units per acre or more	87.36	$(4.09/35.20)*87.36$	10.15
	B	182	7.58	Commercial, Retail, Casino	94.20	$(7.58/35.20)*94.20$	20.28
	TOTAL DE		35.20		COMPOSITE CURVE NUMBER		85.29
EE	B	182	5.24	Undeveloped Land, Open Desert	77.00	$(5.24/20.16)*77$	20.01
	B	182	14.29	High-Density Residential, 2-4 units per acre	83.56	$(14.29/20.16)*83.56$	59.21
	B	182	0.64	Commercial, Retail, Casino	94.20	$(0.64/20.16)*94.20$	2.98
	TOTAL EE		20.16		COMPOSITE CURVE NUMBER		82.20
FE	B	182	8.56	Undeveloped Land, Open Desert	77.00	$(8.56/8.96)*77$	73.56
	B	182	0.40	Commercial, Retail, Casino	94.20	$(0.40/8.96)*94.20$	4.21
	TOTAL FE		8.96		COMPOSITE CURVE NUMBER		77.77
GE	B	182	7.05	Undeveloped Land, Open Desert	77.00	$(7.05/9.82)*77$	55.32
	B	182	0.62	High-Density Residential, 2-4 units per acre	83.56	$(0.62/9.82)*83.56$	5.29
	B	182	2.14	Commercial, Retail, Casino	94.20	$(2.14/9.82)*94.20$	20.59
	TOTAL GE		9.82		COMPOSITE CURVE NUMBER		81.20
WSCRE	B	187	1.90	Undeveloped Land, Open Desert	77.00	$(1.90/102.80)*77$	1.43
	B	187	0.004	Parks, Golf Courses	64.45	$(0.004/102.80)*64.45$	0.00
	A	117	72.78	High-Density Residential, 2-4 units per acre	76.72	$(72.78/102.80)*76.72$	54.32
	B	187	12.87	High-Density Residential, 2-4 units per acre	83.94	$(12.87/102.80)*83.94$	10.51
	A	117	0.36	Multi-Family, 8 units per acre or more	82.32	$(0.36/102.80)*82.32$	0.29
	B	187	13.86	Multi-Family, 8 units per acre or more	87.64	$(13.86/102.80)*87.64$	11.82
	B	187	1.01	Commercial, Retail, Casino	94.30	$(1.01/102.80)*94.30$	0.94
	TOTAL WSCRE		102.80		COMPOSITE CURVE NUMBER		79.30

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
WSLME	A	117	0.41	Undeveloped Land, Open Desert	65.00	$(0.41/183.06)*65$	0.15
	B	184	0.48	Parks, Golf Courses	64.45	$(0.48/183.06)*64.45$	0.17
	B	187	2.04	Parks, Golf Courses	64.45	$(2.04/183.06)*64.45$	0.72
	A	117	26.66	High-Density Residential, 2-4 units per acre	76.72	$(26.66/183.06)*76.72$	11.17
	B	187	122.99	High-Density Residential, 2-4 units per acre	83.94	$(122.99/183.06)*83.94$	56.39
	A	117	0.02	Multi-Family, 8 units per acre or more	82.32	$(0.02/183.06)*82.32$	0.01
	B	184	0.33	Multi-Family, 8 units per acre or more	87.64	$(0.33/183.06)*87.64$	0.16
	B	187	0.12	Multi-Family, 8 units per acre or more	87.64	$(0.12/183.06)*87.64$	0.06
	A	117	0.46	Commercial, Retail, Casino	92.40	$(0.46/183.06)*92.40$	0.23
	B	184	2.95	Commercial, Retail, Casino	94.30	$(2.95/183.06)*94.30$	1.52
	B	187	14.89	Commercial, Retail, Casino	94.30	$(14.89/183.06)*94.30$	7.67
	A	117	10.00	Schools	70.00	$(10/183.06)*70$	3.83
	B	187	1.71	Schools	79.50	$(1.71/183.06)*79.50$	0.73
TOTAL WSLME			183.06	COMPOSITE CURVE NUMBER			82.80
WSPVE	A	117	4.49	Undeveloped Land, Open Desert	65.00	$(4.49/169.40)*65$	1.72
	B	182	2.01	Undeveloped Land, Open Desert	77.00	$(2.01/169.40)*77$	0.91
	B	187	0.35	Undeveloped Land, Open Desert	77.00	$(0.35/169.40)*77$	0.16
	A	112	2.26	High-Density Residential, 2-4 units per acre	77.10	$(2.26/169.40)*77.10$	1.03
	A	117	113.51	High-Density Residential, 2-4 units per acre	76.72	$(113.51/169.40)*76.72$	51.41
	B	182	0.78	High-Density Residential, 2-4 units per acre	83.56	$(0.78/169.40)*83.56$	0.38
	B	187	18.67	High-Density Residential, 2-4 units per acre	83.94	$(18.67/169.40)*83.94$	9.25
	A	117	1.01	Multi-Family, 8 units per acre or more	82.32	$(1.01/169.40)*82.32$	0.49
	B	187	26.02	Multi-Family, 8 units per acre or more	87.64	$(26.02/169.40)*87.64$	13.46
	B	187	0.30	Commercial, Retail, Casino	94.30	$(0.30/169.40)*94.30$	0.18
TOTAL WSPVE			169.40	COMPOSITE CURVE NUMBER			79.00
OFFE-1	B	184	116.02	High-Density Residential, 2-4 units per acre	83.94	$(116.02/262.40)*83.94$	37.11
	C	615	146.38	Rural	85.40	$(146.38/262.40)*85.40$	47.64
Total OFFE-1			262.40	COMPOSITE CURVE NUMBER			84.75
OFFE-2	C	615	12.80	Undeveloped Land, Open Desert	85.00	$(12.80/58.87)*85$	18.48
	B	184	46.07	Undeveloped Land, Open Desert	77.00	$(46.07/58.87)*77$	60.26
Total OFFE-2			58.87	COMPOSITE CURVE NUMBER			78.74

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFE-2A	C	615	2.52	Undeveloped Land, Open Desert	85.00	$(2.52/14.62)*85$	14.65
	B	184	12.1	Undeveloped Land, Open Desert	77.00	$(12.10/14.62)*77$	63.73
	Total OFFE-2A		14.62		COMPOSITE CURVE NUMBER		78.38
OFFE-2B	B	184	43.81	Undeveloped Land, Open Desert	77.00	$(43.81/58.72)*77$	57.45
	B	187	13.44	Undeveloped Land, Open Desert	77.00	$(13.44/58.72)*77$	17.62
	A	999	1.47	Undeveloped Land, Open Desert	30.00	$(1.47/58.72)*30$	0.75
	Total OFFE-2B		58.72		COMPOSITE CURVE NUMBER		75.82
OFFE-3	B	184	161.52	High-Density Residential, 2-4 units per acre	83.94	$(161.52/190.08)*83.94$	71.33
	B	187	5.10	High-Density Residential, 2-4 units per acre	83.94	$(5.10/190.08)*83.94$	2.25
	A	117	16.39	High-Density Residential, 2-4 units per acre	76.72	$(16.39/190.08)*76.72$	6.62
	A	999	7.07	High-Density Residential, 2-4 units per acre	30.00	$(7.07/190.08)*30$	1.12
	Total OFFE-3		190.08		COMPOSITE CURVE NUMBER		81.31
OFFE-3A	B	184	19.20	High-Density Residential, 2-4 units per acre	88.00	$(19.20/19.20)*88$	88.00
	Total OFFE-3A		19.20		COMPOSITE CURVE NUMBER		88.00
OFFE-4	A	117	6.63	Parks, Golf Courses	47.10	$(6.63/310.40)*47.10$	1.01
	B	184	31.25	Parks, Golf Courses	64.45	$(31.25/310.40)*64.45$	6.49
	B	187	0.77	Parks, Golf Courses	64.45	$(0.77/310.40)*64.45$	0.16
	A	999	7.96	Parks, Golf Courses	30.00	$(7.96/310.40)*30$	0.77
	A	117	1.71	High-Density Residential, 2-4 units per acre	76.72	$(1.71/310.40)*76.72$	0.42
	B	184	90.20	High-Density Residential, 2-4 units per acre	83.94	$(90.20/310.40)*83.94$	24.39
	B	187	84.61	High-Density Residential, 2-4 units per acre	83.94	$(84.61/310.40)*83.94$	22.88
	A	117	0.86	Multi-Family, 8 units per acre or more	82.32	$(0.86/310.40)*82.32$	0.23
	B	184	5.91	Multi-Family, 8 units per acre or more	87.64	$(5.91/310.40)*87.64$	1.67
	B	184	66.89	Commercial, Retail, Casino	94.30	$(66.89/310.40)*94.30$	20.32
	B	187	13.61	Commercial, Retail, Casino	94.30	$(13.61/310.40)*94.30$	4.13
	TOTAL OFFE-4		310.40		COMPOSITE CURVE NUMBER		82.47
OFFE-9	B	184	40.34	Multi-Family, 8 units per acre or more	87.64	$(40.34/40.34)*87.64$	87.64
	Total OFFE-9		40.34		COMPOSITE CURVE NUMBER		87.64
OFFE-10A	B	184	61.26	High-Density Residential, 2-4 units per acre	83.94	$(61.26/61.26)*83.94$	83.94
	Total OFFE-10A		61.26		COMPOSITE CURVE NUMBER		83.94

TABLE B-1-1 Existing Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	EXISTING LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFE-10B	A	184	3.12	High-Density Residential, 2-4 units per acre	87.64	$(3.12/27.18)*87.64$	10.06
	B	187	24.06	High-Density Residential, 2-4 units per acre	83.94	$(24.06/27.18)*83.94$	74.30
	Total OFFE-10B		27.18		COMPOSITE CURVE NUMBER		84.36
OND2*	B	184	23.7	Light Industrial	89.30	$(23.7/29.32)*89.30$	72.18
	A	999	5.62	Light Industrial	30.00	$(5.62/29.32)*30.00$	5.75
	Total OND2*		29.32		COMPOSITE CURVE NUMBER		77.93
OND7*	C	600	14.93	Light Industrial	92.50	$(14.93/14.93)*92.5$	92.50
	TOTAL OND7*		14.93		COMPOSITE CURVE NUMBER		92.50
OND8*	C	600	2.64	Light Industrial	92.50	$(2.64/13.90)*92.5$	17.57
	B	184	11.26	Light Industrial	89.30	$(11.26/13.90)*89.3$	72.34
	Total OND8*		13.90		COMPOSITE CURVE NUMBER		89.91
OND11A*	C	600	47.79	Undeveloped Land, Open Desert	85.00	$(47.79/47.79)*85.0$	85.00
	Total OND11A*		47.79		COMPOSITE CURVE NUMBER		85.00

* Indicates the basins referenced from the Conceptual Drainage Study for the City of Henderson WRF Phase 1B Expansion that are modified.

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-1	B	326	16.22	High Density Res. 4 - 8 units/ac	83.90	$(16.22/50.56)*83.90$	26.92
	B	187	34.34	High Density Res. 4 - 8 units/ac	83.90	$(34.34/50.56)*83.90$	56.98
	TOTAL OND-1		50.56		COMPOSITE CURVE NUMBER		83.90
OND-2	B	326	10.15	High Density Res. 4 - 8 units/ac	83.90	$(10.15/173.44)*83.90$	4.91
	B	187	77.33	High Density Res. 4 - 8 units/ac	83.90	$(77.33/173.44)*83.90$	37.41
	C	600	53.56	High Density Res. 4 - 8 units/ac	88.90	$(53.56/173.44)*88.90$	27.45
	B	184	28.36	High Density Res. 4 - 8 units/ac	83.90	$(28.36/173.44)*83.90$	13.72
	A	999	4.04	High Density Res. 4 - 8 units/ac	30.00	$(4.04/173.44)*30$	0.70
TOTAL OND-2			173.44		COMPOSITE CURVE NUMBER		84.19
OND-2A	C	600	95.03	Open Space	85.00	$(95.03/141.82)*85$	56.96
	C	600	13.68	High Density Res. 4 - 8 units/ac	88.90	$(13.68/141.82)*88.90$	8.57
	B	326	5.02	High Density Res. 4 - 8 units/ac	83.90	$(5.02/141.82)*88.90$	2.97
	B	326	8.66	Open Space	77.00	$(8.66/141.82)*77$	4.70
	B	184	19.43	Open Space	77.00	$(19.43/141.82)*77$	10.55
Total OND-2A			141.82		COMPOSITE CURVE NUMBER		83.75
OND-3	B	184	19.20	Open Space	77.00	$(19.2/19.2)*77$	77.00
	TOTAL OND-3		19.20		COMPOSITE CURVE NUMBER		77.00
OND-4	B	184	36.70	High Density Res. 4 - 8 units/ac	83.90	$(36.70/152.96)*83.90$	20.13
	B	184	37.95	School	79.50	$(37.95/152.96)*79.50$	19.72
	A	117	5.51	High Density Res. 4 - 8 units/ac	76.70	$(5.51/152.96)*76.70$	2.76
	A	117	1.75	Boulevard Density - Up to 24 DU	82.30	$(1.75/152.96)*82.30$	0.94
	C	600	59.19	High Density Res. 4 - 8 units/ac	88.90	$(59.19/152.96)*88.90$	34.40
	C	600	5.77	Boulevard Density - Up to 24 DU	91.30	$(5.77/152.96)*91.30$	3.44
	C	600	6.10	Open Space	85.00	$(6.10/152.96)*85$	3.39
TOTAL OND-4			152.96		COMPOSITE CURVE NUMBER		84.79
OND-5	C	600	49.28	Commercial	95.60	$(49.28/49.28)*95.6$	95.60
	TOTAL OND-5		49.28		COMPOSITE CURVE NUMBER		95.60

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-6	C	600	22.52	Open Space	85.00	$(22.52/209.28)*85$	9.15
	C	600	143.08	High Density Res. 4 - 8 units/ac	88.90	$(143.08/209.28)*88.90$	60.78
	C	600	31.19	Boulevard Density - Up to 24 DU	91.30	$(31.19/209.28)*91.30$	13.61
	C	600	12.49	Mixed Use Center	95.60	$(12.49/209.28)*95.60$	5.71
	TOTAL OND-6		209.28		COMPOSITE CURVE NUMBER		89.24
OND-7	B	184	4.93	Mixed Use Center	94.30	$(4.93/179.20)*94.30$	2.59
	C	600	165.32	High Density Res. 4 - 8 units/ac	88.90	$(165.32/179.20)*88.90$	82.02
	A	117	8.95	Boulevard Density - Up to 24 DU	82.30	$(8.95/179.20)*82.30$	4.11
	TOTAL OND-7		179.20		COMPOSITE CURVE NUMBER		88.72
OND-8	A	182	74.80	High Density Res. 4 - 8 units/ac	83.60	$(74.80/126.72)*83.60$	49.35
	A	182	1.53	Boulevard Density - Up to 24 DU	87.40	$(1.53/126.72)*87.40$	1.06
	C	600	5.37	Open Space	85.00	$(5.37/126.72)*85$	3.60
	C	600	10.75	Boulevard Density - Up to 24 DU	91.30	$(10.75/126.72)*91.30$	7.75
	C	600	32.85	High Density Res. 4 - 8 units/ac	88.90	$(32.85/126.72)*88.90$	23.04
	B	184	1.43	Boulevard Density - Up to 24 DU	87.60	$(1.43/126.72)*87.60$	0.99
	TOTAL OND-8		126.72		COMPOSITE CURVE NUMBER		85.78
OND-9	A	112	0.58	High Density Res. 4 - 8 units/ac	77.10	$(0.58/7.04)*77.10$	6.32
	B	182	6.46	High Density Res. 4 - 8 units/ac	83.60	$(6.46/7.04)*83.60$	76.75
	TOTAL OND-9		7.04		COMPOSITE CURVE NUMBER		83.07
OND-10	C	600	71.68	High Density Res. 4 - 8 units/ac	88.90	$(71.68/71.68)*88.9$	88.90
	TOTAL OND-10		71.68		COMPOSITE CURVE NUMBER		88.90
OND-11	C	600	1.60	Open Space	85.00	$(1.60/60.16)*85$	2.26
	C	600	58.56	High Density Res. 4 - 8 units/ac	88.90	$(58.56/60.16)*88.90$	86.53
	TOTAL OND-11		60.16		COMPOSITE CURVE NUMBER		88.80
OND-12	C	600	2.80	Open Space	85.00	$(2.80/8.32)*85$	28.65
	C	600	5.52	High Density Res. 4 - 8 units/ac	88.90	$(5.52/8.32)*88.90$	58.94
	TOTAL OND-12		8.32		COMPOSITE CURVE NUMBER		87.59

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-13	C	600	2.32	Open Space	85.00	$(2.32/56.96)*85$	3.46
	C	600	54.64	High Density Res. 4 - 8 units/ac	88.90	$(54.64/56.96)*88.90$	85.28
	TOTAL OND-13		56.96	COMPOSITE CURVE NUMBER			88.74
OND-14	C	600	11.55	Open Space	85.00	$(11.55/92.80)*85$	10.58
	C	600	8.85	School	86.00	$(8.85/92.80)*86$	8.20
	C	600	72.40	High Density Res. 4 - 8 units/ac	88.90	$(72.40/92.80)*88.90$	69.36
	TOTAL OND-14		92.80	COMPOSITE CURVE NUMBER			88.14
OND-15	C	600	75.37	High Density Res. 4 - 8 units/ac	88.90	$(75.37/82.56)*88.90$	81.16
	C	600	7.19	Boulevard Density - Up to 24 DU	91.30	$(7.19/82.56)*91.30$	7.95
	TOTAL OND-15		82.56	COMPOSITE CURVE NUMBER			89.11
OND-16	C	600	3.71	High Density Res. 4 - 8 units/ac	88.90	$(3.71/36.48)*88.90$	9.03
	C	600	5.09	Boulevard Density - Up to 24 DU	91.30	$(5.09/36.48)*91.30$	12.75
	C	600	6.41	Open Space	85.00	$(6.41/36.48)*85$	14.93
	C	600	5.61	School	86.00	$(5.61/36.48)*86$	13.21
	A	117	4.21	Boulevard Density - Up to 24 DU	82.30	$(4.21/36.48)*82.30$	9.50
	A	117	2.79	School	70.00	$(2.79/36.48)*70$	5.36
	A	117	8.66	Open Space	65.00	$(8.66/36.48)*65$	15.44
	TOTAL OND-16		36.48	COMPOSITE CURVE NUMBER			80.22
OND-17	C	600	10.97	Boulevard Density - Up to 24 DU	91.30	$(10.97/117.76)*91.30$	8.50
	C	600	12.45	High Density Res. 4 - 8 units/ac	88.90	$(12.45/117.76)*88.90$	9.40
	B	182	21.19	High Density Res. 4 - 8 units/ac	83.60	$(21.19/117.76)*83.60$	15.04
	A	117	25.94	High Density Res. 4 - 8 units/ac	76.70	$(25.94/117.76)*76.70$	16.90
	A	117	9.90	Boulevard Density - Up to 24 DU	82.30	$(9.90/117.76)*82.30$	6.92
	A	117	19.27	Mixed Use Center	92.40	$(19.27/117.76)*92.40$	15.12
	A	117	18.05	Multi Family - Up to 18 DU	82.30	$(18.05/117.76)*82.30$	12.61
	TOTAL OND-17		117.76	COMPOSITE CURVE NUMBER			84.49

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-18	C	600	10.72	Commercial	95.60	$(10.72/11.52)*95.60$	88.96
	B	184	0.80	Commercial	94.30	$(0.80/11.52)*94.30$	6.55
	TOTAL OND-18		11.52		COMPOSITE CURVE NUMBER		95.51
OND-19	C	600	41.08	High Density Res. 4 - 8 units/ac	83.60	$(41.08/59.52)*83.60$	57.69
	C	600	18.44	Multi Family - Up to 18 DU	91.30	$(18.44/59.52)*91.30$	28.29
	TOTAL OND-19		59.52		COMPOSITE CURVE NUMBER		85.99
OND-20	B	184	2.75	Open Space	77.00	$(2.75/95.36)*77$	2.22
	B	184	61.15	Mixed Use Center	94.30	$(61.15/95.36)*94.30$	60.47
	B	184	27.73	Gaming	94.30	$(27.73/95.36)*94.30$	27.42
	C	600	3.74	Mixed Use Center	95.60	$(3.74/95.36)*95.60$	3.75
TOTAL OND-20			95.36		COMPOSITE CURVE NUMBER		93.85
OND-21	B	184	9.66	High Density Res. 4 - 8 units/ac	83.90	$(9.66/50.56)*83.90$	16.03
	B	184	5.89	Open Space	77.00	$(5.89/50.56)*77.00$	8.98
	B	184	31.59	Boulevard Density - Up to 24 DU	87.60	$(31.59/50.56)*87.60$	54.73
	C	600	3.25	High Density Res. 4 - 8 units/ac	88.90	$(3.25/50.56)*88.90$	5.72
	C	600	0.17	Open Space	85.00	$(0.17/50.56)*85.00$	0.29
TOTAL OND-21			50.56		COMPOSITE CURVE NUMBER		85.73
OND-22	B	184	17.45	Boulevard Density - Up to 24 DU	87.60	$(17.45/32.64)*87.60$	46.84
	B	184	15.19	High Density Res. 4 - 8 units/ac	83.90	$(15.19/32.64)*83.90$	39.04
	TOTAL OND-22		32.64		COMPOSITE CURVE NUMBER		85.88
OND-23	B	184	12.22	Boulevard Density - Up to 24 DU	87.60	$(12.22/74.24)*87.60$	14.42
	B	184	28.36	High Density Res. 4 - 8 units/ac	83.90	$(28.36/74.24)*83.90$	32.05
	B	184	0.28	Open Space	77.00	$(0.28/74.24)*77$	0.29
	A	117	1.11	High Density Res. 4 - 8 units/ac	76.70	$(1.11/74.24)*76.70$	1.15
	A	117	2.33	Boulevard Density - Up to 24 DU	82.30	$(2.33/74.24)*82.30$	2.59
	A	117	10.20	Open Space	65.00	$(10.20/74.24)*65$	8.93
	C	600	13.79	Boulevard Density - Up to 24 DU	91.30	$(13.79/74.24)*91.30$	16.96
	C	600	5.95	Open Space	85.00	$(5.95/74.24)*85$	6.81
TOTAL OND-23			74.24		COMPOSITE CURVE NUMBER		83.19

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND-24	B	184	8.43	Boulevard Density - Up to 24 DU	87.60	$(8.43/77.44)*87.60$	9.54
	B	184	11.82	High Density Res. 4 - 8 units/ac	83.90	$(11.82/77.44)*83.90$	12.81
	B	184	0.25	Multi Family - Up to 18 DU	87.60	$(0.25/77.44)*87.60$	0.28
	A	117	8.97	High Density Res. 4 - 8 units/ac	76.70	$(8.97/77.44)*76.70$	8.89
	A	117	3.12	Boulevard Density - Up to 24 DU	82.30	$(3.12/77.44)*82.30$	3.31
	A	117	24.04	Mixed Use Center	92.40	$(24.04/77.44)*92.40$	28.68
	A	117	18.47	Multi Family - Up to 18 DU	82.30	$(18.74/77.44)*82.30$	19.63
	B	187	2.35	High Density Res. 4 - 8 units/ac	83.90	$(2.35/77.44)*83.90$	2.54
TOTAL OND-24			77.44	COMPOSITE CURVE NUMBER			85.67
OND-25	B	184	32.07	High Density Res. 4 - 8 units/ac	83.90	$(32.07/63.36)*83.90$	42.47
	B	184	11.69	Boulevard Density - Up to 24 DU	87.60	$(11.69/63.36)*87.60$	16.16
	B	184	19.60	Multi Family - Up to 18 DU	87.60	$(19.60/63.36)*87.60$	27.09
TOTAL OND-25			63.36	COMPOSITE CURVE NUMBER			85.73
OND-26	B	184	8.19	Boulevard Density - Up to 24 DU	87.60	$(8.19/13.44)*87.60$	53.40
	B	184	1.35	Multi Family - Up to 18 DU	87.60	$(1.35/13.44)*87.60$	8.81
	B	184	3.89	Open Space	77.00	$(3.89/13.44)*77.00$	22.31
TOTAL OND-26			13.44	COMPOSITE CURVE NUMBER			84.53
OND-27	B	184	16.32	Boulevard Density - Up to 24 DU	87.60	$(16.32/71.04)*87.60$	20.13
	B	184	54.46	Multi Family - Up to 18 DU	87.60	$(54.46/71.04)*87.60$	67.15
	B	187	0.26	Boulevard Density - Up to 24 DU	87.60	$(0.26/71.04)*87.60$	0.32
TOTAL OND-27			71.04	COMPOSITE CURVE NUMBER			87.60
DB-1	C	600	16.12	Parks, Golf Courses	76.30	$(16.12/16.12)*76.3$	76.30
		Total DB-1	16.12	COMPOSITE CURVE NUMBER			76.30
DB-2	B	184	11.12	Parks, Golf Courses	64.50	$(11.12/11.12)*64.5$	64.50
		Total DB-2	11.12	COMPOSITE CURVE NUMBER			64.50
OFFD-25	B	184	47.65	Multi-Family, 8 units per acre or more	87.64	$(47.65/47.65)*87.64$	87.64
		TOTAL OFFD-25	47.65	COMPOSITE CURVE NUMBER			87.64
OFFD-26	B	184	7.37	Commercial, Retail, Casino	94.30	$(7.37/7.37)*94.30$	94.30
		TOTAL OFFD-26	7.37	COMPOSITE CURVE NUMBER			94.30

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFD-27A	B	184	27.55	Multi-Family, 8 units per acre or more	87.64	$(27.55/46.58)*87.64$	51.84
	B	187	19.03	Multi-Family, 8 units per acre or more	87.64	$(19.03/46.58)*87.64$	35.80
	TOTAL OFFD-27A		46.58		COMPOSITE CURVE NUMBER		87.64
OFFD-27B	B	184	7.94	Multi-Family, 8 units per acre or more	87.64	$(7.94/27.18)*87.64$	25.60
			2.94	Commercial, Retail, Casino	94.30	$(2.94/27.18)*94.30$	10.20
	B	187	16.30	Multi-Family, 8 units per acre or more	87.64	$(16.30/27.18)*87.64$	52.56
	TOTAL OFFD-27B		27.18		COMPOSITE CURVE NUMBER		88.36
BKPVD	A	117	0.38	High-Density Residential, 4-8 units per acre	76.72	$(0.38/88.97)*76.72$	0.33
	B	187	32.66	High-Density Residential, 4-8 units per acre	83.94	$(32.66/88.97)*83.94$	30.81
	B	187	7.13	Multi-Family, 8 units per acre or more	87.64	$(7.13/88.97)*87.64$	7.03
	B	187	11.84	Commercial, Retail, Casino	94.30	$(11.84/88.97)*94.30$	12.55
	A	117	0.26	Schools	70.00	$(0.26/88.97)*70$	0.20
	B	187	36.70	Schools	79.50	$(36.70/88.97)*79.50$	32.79
	TOTAL BKPVD		88.97		COMPOSITE CURVE NUMBER		83.70
BKLM D	B	184	1.91	Parks, Golf Courses	64.45	$(1.91/220.79)*64.45$	0.56
	B	187	45.70	Parks, Golf Courses	64.45	$(45.70/220.79)*64.45$	13.34
	B	184	1.57	High-Density Residential, 4-8 units per acre	83.94	$(1.57/220.79)*83.94$	0.60
	B	187	2.19	High-Density Residential, 4-8 units per acre	83.94	$(2.19/220.79)*83.94$	0.83
	B	184	17.83	Multi-Family, 8 units per acre or more	87.64	$(17.83/220.79)*87.64$	7.08
	B	187	47.27	Multi-Family, 8 units per acre or more	87.64	$(47.27/220.79)*87.64$	18.76
	B	184	60.38	Commercial, Retail, Casino	94.30	$(60.38/220.79)*94.30$	25.79
	B	187	43.94	Commercial, Retail, Casino	94.30	$(43.94/220.79)*94.30$	18.77
TOTAL BKLM D			220.79		COMPOSITE CURVE NUMBER		85.72
CRMJD	B	187	21.04	Parks, Golf Courses	64.45	$(21.04/132.06)*64.45$	10.27
	B	187	39.08	High-Density Residential, 4-8 units per acre	83.94	$(39.08/132.06)*83.94$	24.84
	B	187	18.85	Multi-Family, 8 units per acre or more	87.64	$(18.85/132.06)*87.64$	12.51
	B	187	53.09	Commercial, Retail, Casino	94.30	$(53.09/132.06)*94.30$	37.91
TOTAL CRMJD			132.06		COMPOSITE CURVE NUMBER		85.53
BKMJD	B	187	12.69	High-Density Residential, 4-8 units per acre	83.94	$(12.69/21.46)*83.94$	49.64
	B	187	8.64	Multi-Family, 8 units per acre or more	87.64	$(8.64/21.46)*87.64$	35.29
	B	187	0.13	Commercial, Retail, Casino	94.30	$(0.13/21.46)*94.30$	0.55
	TOTAL BKMJD		21.46		COMPOSITE CURVE NUMBER		85.49

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
WSPVD	A	112	2.26	High-Density Residential, 4-8 units per acre	77.10	$(2.26/169.40)*77.10$	1.03
	A	117	113.51	High-Density Residential, 4-8 units per acre	76.72	$(113.51/169.40)*76.72$	51.41
	B	182	0.78	High-Density Residential, 4-8 units per acre	83.56	$(0.78/169.40)*83.56$	0.38
	B	187	18.67	High-Density Residential, 4-8 units per acre	83.94	$(18.67/169.40)*83.94$	9.25
	A	117	1.01	Multi-Family, 8 units per acre or more	82.32	$(1.01/169.40)*82.32$	0.49
	B	187	26.02	Multi-Family, 8 units per acre or more	87.64	$(26.02/169.40)*87.64$	13.46
	A	117	4.49	Commercial, Retail, Casino	92.40	$(4.49/169.40)*92.40$	2.45
	B	182	2.01	Commercial, Retail, Casino	94.20	$(2.01/169.40)*94.20$	1.12
	B	187	0.66	Commercial, Retail, Casino	94.30	$(0.66/169.40)*94.30$	0.36
TOTAL WSPVD			169.40	COMPOSITE CURVE NUMBER			79.95
WSCRD	A	117	72.78	High-Density Residential, 4-8 units per acre	76.72	$(72.78/102.80)*76.72$	54.32
	B	187	12.87	High-Density Residential, 4-8 units per acre	83.94	$(12.87/102.80)*83.94$	10.51
	A	117	0.36	Multi-Family, 8 units per acre or more	82.32	$(0.36/102.80)*82.32$	0.29
	B	187	13.86	Multi-Family, 8 units per acre or more	87.64	$(13.86/102.80)*87.64$	11.82
	A	117	0.01	Commercial, Retail, Casino	92.40	$(0.01/102.80)*92.40$	0.01
	B	187	2.92	Commercial, Retail, Casino	94.30	$(2.92/102.80)*94.30$	2.68
TOTAL WSCRD			102.80	COMPOSITE CURVE NUMBER			79.62
WSLMD	B	184	0.48	Parks, Golf Courses	64.45	$(0.48/183.06)*64.45$	0.17
	B	187	2.04	Parks, Golf Courses	64.45	$(2.04/183.06)*64.45$	0.72
	A	117	26.66	High-Density Residential, 4-8 units per acre	76.72	$(26.66/183.06)*76.72$	11.17
	B	187	122.99	High-Density Residential, 4-8 units per acre	83.94	$(122.99/183.06)*83.94$	56.39
	A	117	0.02	Multi-Family, 8 units per acre or more	82.32	$(0.02/183.06)*82.32$	0.01
	B	184	0.33	Multi-Family, 8 units per acre or more	87.64	$(0.33/183.06)*87.64$	0.16
	B	187	0.12	Multi-Family, 8 units per acre or more	87.64	$(0.12/183.06)*87.64$	0.06
	A	117	0.87	Commercial, Retail, Casino	92.40	$(0.87/183.06)*92.40$	0.44
	B	184	2.95	Commercial, Retail, Casino	94.30	$(2.95/183.06)*94.30$	1.52
	B	187	14.89	Commercial, Retail, Casino	94.30	$(14.89/183.06)*94.30$	7.67
	A	117	10.00	Schools	70.00	$(10.00/183.06)*70$	3.83
	B	187	1.71	Schools	79.50	$(1.71/183.06)*79.50$	0.74
TOTAL WSLMD			183.06	COMPOSITE CURVE NUMBER			82.88
CRLMD	A	117	1.14	High-Density Residential, 4-8 units per acre	76.72	$(1.14/28.53)*76.72$	3.06
	A	117	0.01	Multi-Family, 8 units per acre or more	82.32	$(0.01/28.53)*82.32$	0.03
	A	117	27.38	Commercial, Retail, Casino	92.40	$(27.38/28.53)*92.40$	88.68
TOTAL CRLMD			28.53	COMPOSITE CURVE NUMBER			91.77

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
PWLMD	A	112	0.04	High-Density Residential, 4-8 units per acre	77.10	(0.04/188.22)*77.10	0.02
	A	117	21.09	High-Density Residential, 4-8 units per acre	76.72	(21.09/188.22)*76.72	8.60
	B	182	115.79	High-Density Residential, 4-8 units per acre	83.56	(115.79/188.22)*83.56	51.40
	A	117	22.85	Multi-Family, 8 units per acre or more	82.32	(22.85/188.22)*82.32	9.99
	B	182	3.13	Multi-Family, 8 units per acre or more	87.36	(3.13/188.22)*87.36	1.45
	A	112	0.05	Commercial, Retail, Casino	92.50	(0.05/188.22)*92.50	0.03
	A	117	6.83	Commercial, Retail, Casino	92.40	(6.83/188.22)*92.40	3.35
	B	182	18.44	Commercial, Retail, Casino	94.20	(18.44/188.22)*94.20	9.23
TOTAL PWLMD			188.22	COMPOSITE CURVE NUMBER			84.1
DD	B	182	23.53	High-Density Residential, 4-8 units per acre	83.56	(23.53/35.2)*83.56	55.85
	B	182	4.09	Multi-Family, 8 units per acre or more	87.36	(4.09/35.2)*87.36	10.16
	B	182	7.58	Commercial, Retail, Casino	94.20	(7.58/35.2)*94.20	20.29
TOTAL DD			35.20	COMPOSITE CURVE NUMBER			86.29
ED	B	182	20.16	High-Density Residential, 4-8 units per acre	83.56	(20.16/20.16)*83.56	83.56
TOTAL ED			20.16	COMPOSITE CURVE NUMBER			83.56
FD	B	182	8.96	Commercial, Retail, Casino	94.20	(8.96/8.96)*94.20	94.20
TOTAL FD			8.96	COMPOSITE CURVE NUMBER			94.20
GD	B	182	9.82	Commercial, Retail, Casino	94.20	(9.82/9.82)*94.20	94.20
TOTAL GD			9.82	COMPOSITE CURVE NUMBER			94.20
262.40							
OFFD-1	B	184	12.27	Parks, Golf Courses	64.45	(12.27/262.40)*64.45	3.01
	B	184	41.81	High-Density Residential, 4-8 units per acre	83.94	(41.81/262.40)*83.94	13.37
	B	184	12.18	Multi-Family, 8 units per acre or more	87.64	(12.18/262.40)*87.64	4.07
	C	615	0.64	Multi-Family, 8 units per acre or more	91.28	(0.64/262.40)*91.28	0.22
	B	184	57.21	Commercial, Retail, Casino	94.30	(57.21/262.40)*94.30	20.56
	C	615	138.29	Commercial, Retail, Casino	95.60	(138.29/262.40)*95.60	50.38
TOTAL OFFD-1			262.40	COMPOSITE CURVE NUMBER			91.62
OFFD-2	C	615	12.80	Urban Areas, Commercial and Business	94.00	(12.80/58.87)*94	20.44
	B	184	46.07	Urban Areas, Commercial and Business	92.00	(46.07/58.87)*92	72.00
TOTAL OFFD-2			58.87	COMPOSITE CURVE NUMBER			92.43

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OFFD-2A	C	615	2.52	Urban Areas, Commercial and Business	94.00	(2.52/14.62)*94	16.20
	B	184	12.10	Urban Areas, Commercial and Business	92.00	(12.10/14.62)*92	76.14
	Total OFFD-2A		14.62		COMPOSITE CURVE NUMBER		92.34
OFFD-2B	B	184	43.81	Parks, Golf Courses	64.45	(43.81/58.72)*64.45	48.09
	C	187	13.44	Parks, Golf Courses	64.45	(13.44/58.72)*64.45	14.75
	A	999	1.47	Parks, Golf Courses	30.00	(1.47/58.72)*30	0.75
	Total OFFD-2B		58.72		COMPOSITE CURVE NUMBER		63.59
OFFD-3	B	184	161.52	High-Density Residential, 4-8 units per acre	83.94	(161.52/190.08)*83.94	71.33
	B	187	5.10	High-Density Residential, 4-8 units per acre	83.94	(5.10/190.08)*83.94	2.25
	A	117	16.39	High-Density Residential, 4-8 units per acre	76.72	(16.39/190.08)*76.72	6.62
	A	999	7.07	High-Density Residential, 4-8 units per acre	30.00	(7.07/190.08)*30	1.12
	Total OFFD-3		190.08		COMPOSITE CURVE NUMBER		81.31
OFFD-3A	B	184	19.20	High-Density Residential, 4-8 units per acre	94.30	(19.20/19.20)*94.30	94.30
	Total OFFD-3A		19.20		COMPOSITE CURVE NUMBER		94.30
310.40							
OFFD-4	A	117	6.63	Parks, Golf Courses	47.10	(6.63/310.40)*47.10	1.01
	B	184	31.25	Parks, Golf Courses	64.45	(31.25/310.40)*64.45	6.49
	B	187	0.77	Parks, Golf Courses	64.45	(0.77/310.40)*64.45	0.16
	A	999	7.96	Parks, Golf Courses	30.00	(7.96/310.40)*30	0.77
	A	117	1.71	High-Density Residential, 4-8 units per acre	76.72	(1.71/310.40)*76.72	0.42
	B	184	90.20	High-Density Residential, 4-8 units per acre	83.94	(90.20/310.40)*83.94	24.39
	B	187	84.61	High-Density Residential, 4-8 units per acre	83.94	(84.61/310.40)*83.94	22.88
	A	117	0.86	Multi-Family, 8 units per acre or more	82.32	(0.86/310.40)*82.32	0.23
	B	184	5.91	Multi-Family, 8 units per acre or more	87.64	(5.91/310.40)*87.64	1.67
	B	184	66.89	Commercial, Retail, Casino	94.30	(66.89/310.40)*94.30	20.32
	B	187	13.61	Commercial, Retail, Casino	94.30	(13.61/310.40)*94.30	4.13
	Total OFFD-4		310.40		COMPOSITE CURVE NUMBER		82.47
OND2*	B	184	23.7	Light Industrial	89.30	(23.7/29.32)*89.30	72.18
	A	999	5.62	Light Industrial	30.00	(5.62/29.32)*30.00	5.75
	Total OND2*		29.32		COMPOSITE CURVE NUMBER		77.93
OND7*	C	600	14.93	Light Industrial	92.50	(14.93/14.93)*92.5	92.50
	TOTAL OND7*		14.93		COMPOSITE CURVE NUMBER		92.50

TABLE B-2-1 Proposed Condition: Curve Number Calculation

BASIN	SOIL TYPE	SOIL #	ACRES	PROPOSED LANDUSE	LAND USE CN	CN CALC	COMPOSITE CN
OND8*	C	600	2.64	Light Industrial	92.50	$(2.64/13.90)*92.5$	17.57
	B	184	11.26	Light Industrial	89.30	$(11.26/13.90)*89.3$	72.34
	Total OND8*		13.90		COMPOSITE CURVE NUMBER		89.91
OND11A*	C	600	47.79	Undeveloped Land, Open Desert	85.00	$(47.79/47.79)*85.0$	85.00
	Total OND11A*		47.79		COMPOSITE CURVE NUMBER		85.00

* Indicates the basins referenced from the Conceptual Drainage Study for the City of Henderson WRF Phase 1B Expansion that are modified.

Appendix B-2: Standard Form 4 and HEC-1 for Existing Conditions

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL

TIME OF CONCENTRATION

CLARK COUNTY

Conceptual Drainage Study for the Eastside Properties
Existing Condition

PBS&J

File: FORM4.XLS

BY:

K.L.

DATE:

12/21/05

SUB-BASIN DATA						INITIAL / OVERLAND TIME (T _i)			TRAVEL TIME (T _t)					T _c	T _c Check	T _{lag} Basin < 1 Mi ²	T _{lag} Basin > 1 Mi ²
DESIGN:	DEV/EX. (D or E)	CN	K	AREA A _c (1)	AREA A _t (2)	INITIAL LENGTH (4)	SLOPE % (5)	T _i Min (6)	TRAVEL LENGTH (7)	SLOPE % (8)	V ₁ VELOCITY FPS (9a)	V ₂ VELOCITY FPS (9b)	T _t Min (10)	Min (11)	Min (14)	T _{lag} = 0.81C/60 Hours	T _{lag} = 20*Kn*((L+L _c)/S*.33) Hours
ONE-1	E	77.00	0.6284	45.62	0.072	100	0.87	8.9	2032	0.68	1.2	1.6	31.6	40.5	N/A	0.405	-
ONE-2	E	77.57	0.6339	115.31	0.180	500	0.70	21.1	8149	0.81	1.3	1.7	61.4	82.5	N/A	0.825	-
ONE-3	E	83.87	0.7171	173.38	0.271	300	1.39	10.7	4095	1.09	1.5	1.8	38.0	48.7	N/A	0.487	-
ONE-4	E	78.24	0.6428	137.07	0.214	500	1.39	18.5	5935	1.26	1.7	1.9	52.5	69.0	N/A	0.690	-
ONE-5	E	84.17	0.7210	550.81	0.870	500	1.75	12.7	8080	1.49	1.8	2.0	68.1	90.8	N/A	0.808	-
ONE-6	E	81.70	0.6884	846.96	1.011	500	2.00	13.1	7865	2.18	2.2	2.2	59.9	73.1	N/A	Refer to Below	Refer to Below
ONE-7	E	80.41	0.6714	133.21	0.208	100	2.33	5.8	2431	2.67	2.4	2.3	17.4	23.2	N/A	0.232	-
ONE-8	E	69.80	0.5314	130.56	0.204	500	1.06	22.4	7293	0.69	1.2	1.6	75.8	98.2	N/A	0.982	-
ONE-9	E	78.18	0.6417	215.04	0.336	500	1.59	15.8	6980	1.57	1.9	2.0	58.1	73.9	N/A	0.739	-
ONE-10	E	83.04	0.7180	57.60	0.090	500	1.39	13.8	5693	1.44	1.8	2.0	48.6	62.4	N/A	0.624	-
BKPYE	E	83.70	0.7148	88.97	0.130	300	2.50	8.8	4940	2.40	2.3	4.6	10.9	26.7	N/A	0.267	-
BKLMF	E	84.30	0.7228	220.79	0.345	200	1.80	7.9	6138	2.09	2.1	4.3	26.0	33.9	N/A	0.339	-
CRNJE	E	85.00	0.7320	132.06	0.206	170	2.35	6.5	5520	2.08	2.1	4.2	23.6	30.1	N/A	0.301	-
BKLMF	E	85.50	0.7386	21.46	0.034	150	1.00	8.0	1850	1.89	2.0	4.0	9.7	17.6	N/A	0.176	-
WSPVE	E	79.00	0.6528	169.40	0.265	100	1.00	8.0	6495	1.36	1.7	3.4	34.0	42.0	N/A	0.420	-
WSCRE	E	79.30	0.6568	102.80	0.181	150	1.50	8.5	4085	2.08	2.1	4.2	18.0	26.5	N/A	0.265	-
WSLME	E	82.60	0.7030	183.06	0.286	100	1.00	7.1	5100	1.77	2.0	3.9	23.8	31.0	N/A	0.310	-
CRLME	E	77.80	0.6370	28.53	0.045	100	1.00	8.3	1600	1.88	2.0	4.0	8.7	17.0	N/A	0.170	-
PWLME	E	82.90	0.7043	188.22	0.294	100	1.47	6.3	4800	1.56	1.8	3.7	24.0	30.3	N/A	0.303	-
DE	E	85.29	0.7358	35.20	0.055	100	1.87	5.5	1450	1.00	1.5	2.9	11.0	16.5	N/A	0.165	-
EE	E	82.20	0.6950	20.18	0.032	100	1.43	6.5	1400	2.14	2.2	4.3	7.3	13.6	N/A	0.136	-
FE	E	77.77	0.6368	8.96	0.014	100	1.87	7.0	800	1.88	2.0	4.0	5.3	12.4	N/A	0.124	-
GE	E	81.20	0.6818	9.82	0.015	100	1.43	6.7	700	2.14	2.2	4.3	4.6	11.3	N/A	0.113	-
OFFE-1	E	84.75	0.7287	262.40	0.410	200	2.70	6.8	4033	3.00	2.6	5.1	14.8	21.6	N/A	0.216	-
OFFE-2	E	78.74	0.6494	58.87	0.092	150	2.00	7.9	2925	3.00	2.6	5.1	11.2	19.1	N/A	0.191	-
OFFE-2A	E	78.38	0.6440	14.62	0.023	150	2.00	8.0	1545	3.00	2.6	5.1	6.7	14.6	N/A	0.146	-
OFFE-2B	E	75.82	0.6108	58.72	0.092	100	1.28	8.1	2925	1.19	1.6	3.2	17.8	25.9	N/A	0.259	-
OFFE-3	E	81.31	0.6833	190.08	0.297	100	1.00	7.5	5489	2.70	2.4	4.8	20.6	28.1	N/A	0.281	-
OFFE-3A	E	88.00	0.7716	19.20	0.030	100	2.77	4.2	1154	3.00	2.6	5.1	5.4	9.8	N/A	0.098	-
OFFE-4	E	82.47	0.6988	310.40	0.465	100	1.00	7.2	8038	2.34	2.3	4.5	31.6	38.9	N/A	0.389	-
OFFE-9	E	87.64	0.7668	40.34	0.063	100	2.50	4.4	1600	2.43	2.3	4.6	7.6	12.0	N/A	0.120	-
OFFE-10A	E	83.94	0.7180	81.26	0.096	100	2.00	5.5	1600	2.22	2.2	4.4	8.0	13.4	N/A	0.134	-
OFFE-10B	E	84.38	0.7238	27.18	0.042	100	2.20	5.2	1350	1.78	2.0	3.9	7.8	13.0	N/A	0.130	-
OND2*	D	77.03	0.6387	29.32	0.048	325	1.00	15.0	2200	1.00	2.0	2.1	17.6	32.8	24.0	0.240	-
OND7*	D	82.50	0.8310	14.93	0.023	125	1.00	5.4	1600	1.00	2.0	2.1	12.8	18.3	19.8	0.183	-
OND8*	D	89.91	0.7968	13.90	0.022	180	1.00	7.3	2700	1.00	2.0	2.1	21.6	28.9	26.0	0.260	-
OND11A*	D	65.00	0.7320	47.79	0.075	500	0.50	18.7	1950	1.20	2.2	2.2	14.7	33.4	23.6	0.236	-

	Kn	L	Lc	S	Tlag	
	ROUGH	LENGTH	CENTROID	SLOPE		
		MI	MI	F/MI	Hours	
Tlag = 0.8 Tc (Basin < 1 Mi^2)	ONE-6	0.050	1.49	0.48	82.0	0.433
Tlag = 20*Kn*((L+Lc)/S*.33) (Basin > 1 Mi^2)						
Tc = Ti + Tt						
For the travel time (Ti) calculations,	Existing (Natural)	V1 = 14.8*(S/100)^1/2	Developed (Urban)	V1 = 20.2*(S/100)^1/2		
Ti = 1.8 (1.1 - K) L^1/2 / S^1/3						
V1 applies to the first 500 feet of travel distance;						
K = 0.0132 (CN) - 0.39	Existing (Natural)	V2 = 29.4*(S/100)^1/2	Developed (Urban)	V2 = 30.8*(S/100)^1/2		
V2 applies to the remaining travel distance.						
Tc Check = L/180+10						
REFERENCE :	CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT HYDROLOGIC AND DRAINAGE DESIGN MANUAL 08/12/1999					

REFERENCE : CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT HYDROLOGIC AND DRAINAGE DESIGN MANUAL 08/12/1999

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1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 19DEC05 TIME 15:24:24
*
*****

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*****
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

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X X XXXXXXX XXXXX X
X X X X X XX
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XXXXXXX XXXX X XXXXX X
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X X X X X X
X X XXXXXXX XXXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
 DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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1 ID *****
2 ID *
3 ID * THE LANDWELL COMPANY *
4 ID * CONCEPTUAL DRAINAGE STUDY FOR *
5 ID * THE EASTSIDE PROPERTIES *
6 ID * EXISTING CONDITIONS *
7 ID * INPUT FILE:EXISTING-10.DAT *
8 ID * INPUT FILE DATE:12/19/05 *
9 ID * STORM DISTRIBUTION = SDN#3 *
10 ID * DESIGN STORM = 10 YEAR, 6 HOUR *
11 ID * MODELED BY=Mahesh Kumar (PBS4J) *
12 ID *
13 ID *****

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*DIAGRAM

*** FREE ***

```

14 ID
15 ID
16 ID DRAINAGE AREA
17 ID (SQUARE MILES) DARF
18 ID 0-0.5 .99
19 ID 0.5-1 .975
20 ID 1-2 .95
21 ID 2-3 .925
22 ID 3-4 .915
23 ID 4-5 .908
24 IT 5 0 0 300
25 IO 5 0 0
26 IN 5 0 0
27 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908

```

```

28 KK ONE-9
29 BA 0.336
30 PB 1.74
31 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
32 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
33 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
34 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
35 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
36 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
37 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
38 PC 0.998 0.999 1
39 LS 0 78.16
40 UD 0.739

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41 KK OFFE-9
42 BA 0.063
43 PB 1.74
44 LS 0 87.64
45 UD 0.120

```

1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

46 KK CP3
47 RM COMBINE ONE-9, OFFE-9
48 HC 2

```

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49 KK ONE-10
50 BA 0.090
51 PB 1.74
52 LS 0 83.94
53 UD 0.624

```

54 KKOFFE-10A
 55 BA 0.096
 56 PB 1.74
 57 LS 0 83.94
 58 UD 0.134
 *
 59 KKOFFE-10B
 60 BA 0.042
 61 PB 1.74
 62 LS 0 84.36
 63 UD 0.130
 *
 64 KK CP4
 65 KM COMBINE ONE-10, OFFE-10A, OFFE-10B
 66 HC 3
 *
 67 KK RCP4
 68 KM ROUTE TO ONE-9
 69 RD 4940 0.0144 0.035 0 TRAP
 *
 70 KK CP5
 71 KM COMBINE CP3 AND RCP4
 72 HC 2
 *
 73 KK RCS
 74 KM ROUTE TO BASIN ONE-5
 75 RD 7000 0.015 0.035 0 TRAP
 *
 76 KK ONE-5
 77 BA 0.870
 78 PB 1.74
 79 LS 0 84.17
 80 UD 0.808
 *

HEC-1 INPUT

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

81 KK OFFE-2
 82 BA 0.092
 83 PB 1.74
 84 LS 0 78.74
 85 UD 0.191
 *
 86 KK OFFE-3
 87 BA 0.297
 88 PB 1.74
 89 LS 0 81.31
 90 UD 0.281
 *
 91 KK OFFE-3A
 92 BA 0.030
 93 PB 1.74
 94 LS 0 88
 95 UD 0.096
 *
 96 KKOFFE-3A
 97 KM ROUTE OFFE-3A IN CHANNEL WEST ALONG LAKE MEAD DRIVE
 98 RD 2200 0.00453 0.033 0 TRAP 12 4
 *
 99 KK CP1
 100 KM COMBINE OFFE-3A, OFFE-3, AND OFFE-2
 101 HC 3
 *
 102 KK RC1
 103 KM ROUTE TO BOULDER HIGHWAY
 104 RD 5000 0.025 0.03 0 TRAP
 *
 105 KK OFFE-2A
 106 BA 0.023
 107 PB 1.74
 108 LS 0 78.38
 109 UD 0.146
 *
 110 KK OFFE-1
 111 BA 0.410
 112 PB 1.74
 113 LS 0 84.75
 114 UD 0.216
 *

HEC-1 INPUT

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

115 KK OFFE-4
 116 BA 0.485
 117 PB 1.74
 118 LS 0 82.47
 119 UD 0.389
 *

```

120 KK ROFFE-4
121 KM ROUTE TO BOULDER HIGHWAY AT PABCO RD
122 RD 12600 0.03 0.03 0 TRAP 1 1
*

123 KK CP2
124 KM COMBINE ALL BASINS AT BOULDER HIGHWAY
125 HC 4
*

126 KK OCP2
127 KM FLOW SPLIT AT CULVERT UNDER BOULDER HIGHWAY AT PABCO ROAD
128 KM DIVERT OUT FLOW ALONG BOULDER HIGHWAY
129 DT DCP2
130 DI 0 364 410 992 1108
131 DQ 0 0 48 266 324
*

132 KK CP6
133 KM COMBINE ALL BASINS AT ATHENS
134 HC 3
*

135 KK RCP6
136 KM ROUTE TO BASIN OND7
137 RD 1588 0.006 0.035 0 TRAP
*

138 KK OND7*
139 KM MODIFIED WRF ONSITE BASIN OND7*
140 BA 0.023
141 PB 1.58
142 LS 0 92.5
143 UD 0.183
*

144 KK CP6A
145 KM COMBINE RCP6 AND OND7*
146 HC 2
*

147 KK RCP6A
148 KM ROUTE TO OND6*
149 RD 1266 0.013 0.035 0 TRAP
*

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1

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

150 KK OND6*
151 KM WRF ONSITE BASIN OND6*
152 BA 0.0627
153 PB 1.58
154 LS 0 91
155 UD 0.237
*

156 KK CP6B
157 KM COMBINE OND6* AND RCP6B
158 HC 2
*

159 KK RCP6B
160 KM ROUTE TO OND8*
161 RD 1445 0.012 0.035 0 TRAP
*

162 KK OND8*
163 KM MODIFIED WRF ONSITE BASIN OND8*
164 BA 0.022
165 PB 1.58
166 LS 0 89.91
167 UD 0.260
*

168 KK CP6C
169 KM ROUTE TO CP7
170 HC 2
*

171 KK RCP6C
172 KM ROUTE TO CP7
173 RD 1750 0.012 0.035 0 TRAP
*

174 KK ONE-6
175 BA 1.011
176 PB 1.74
177 LS 0 81.7
178 UD 0.433
*

179 KK RONE-6
180 KM ROUTE TO ONE-4
181 RD 5300 0.014 0.035 0 TRAP
*

182 KK ONE-4
183 BA 0.214
184 PB 1.74
185 LS 0 78.24
186 UD 0.690
*

```

1

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

187      KK      CP7
188      KM      COMBINE ALL BASINS TRIBUTARY TO PABCO
189      HC      3
      *

190      KK      BKPVE
191      BA      0.139
192      PB      1.74
193      LS      0      83.7
194      UD      0.287
      *

195      KK      RBKPVE
196      KM      PALO VERDE
197      RD      5140      0.017      .015      0      TRAP      80      0
      *

198      KK      RBKMJE
199      BA      0.034
200      PB      1.74
201      LS      0      85.5
202      UD      0.176
      *

203      KK      RBKMJE
204      KM      MAJOR THEN PALO VERDE
205      RD      4720      0.016      .015      0      TRAP      80      0
      *

206      KK      CRMJE
207      BA      0.206
208      PB      1.74
209      LS      0      85.0
210      UD      0.301
      *

211      KK      OCRMJE
212      KM      FLOW SPLIT AT MAJOR AND CENTER
213      KM      DIVERT OUT FLOW IN CENTER STREET
214      DT      DCRMJE
215      DI      0      50      300
216      DQ      0      25      150
      *

217      KK      ROCRMJE
218      KM      MAJOR
219      RD      5125      0.017      .015      0      TRAP      80      0
      *

220      KK      CP9
221      KM      COMBINE RBKPVE, RBKMJE, AND ROCRMJE
222      HC      3
      *

223      KK      WSPVE
224      BA      0.265
225      PB      1.74
226      LS      0      79.0
227      UD      0.420
      *

228      KK      CP10
229      KM      COMBINE CP9, AND WSPVE
230      KM      AT WARM SPRINGS AND PALO VERDE
231      HC      2
      *

232      KK      OCP10
233      KM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
234      KM      DIVERT OUT FLOW IN STORM DRAIN
235      DT      DCP10
236      DI      0      428      600
237      DQ      0      125      125
      *

238      KK      ROCP10
239      KM      WARM SPRINGS
240      RD      1200      0.009      .015      0      TRAP      100      0
      *

241      KK      DCRMJE
242      KM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
243      DR      DCRMJE
      *

244      KK      RDCRMJE
245      KM      CENTER
246      RD      4860      0.020      .015      0      TRAP      100      0
      *

247      KK      WSCRE
248      BA      0.161
249      PB      1.74
250      LS      0      79.3
251      UD      0.265
      *

252      KK      CP11
253      KM      COMBINE ROCP10, RDCRMJE, AND WSCRE
254      KM      AT WARM SPRINGS AND CENTER
255      HC      3

```

HEC-1 INPUT

PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

REC-1 INPUT

[illegible]

323 KM AT PAMNEE AND LAKE MEAD (UPSTREAM OF 10X3 CULVERT)
 324 HC 4
 *

325 KK OCP14
 326 KM DIVERT FLOW UNDER LAKE MEAD THROUGH A 3'x10' RCB
 327 DT DCP14
 328 DI 0 230 1000
 329 DQ 0 230 230
 *

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

330 KK DE
 331 BA 0.055
 332 FB 1.74
 333 LS 0 85.29
 334 UD 0.165
 *

335 KK CP15
 336 KM COMBINE OCP14 AND DE
 337 KM TOTAL FLOW ON SOUTH SIDE OF LAKE MEAD PARKWAY
 338 HC 2
 *

339 KK DCP12
 340 KM RECALL FLOW FROM WS AND LM
 341 KM FLOW ON SOUTH SIDE OF LM
 342 DR DCP12
 *

343 KK DCP13
 344 KM RECALL FLOW FROM CENTER AND LAKE MEAD, FLOW FROM 24" CMP CULVERT
 345 DR DCP13
 *

346 KK DCP14
 347 KM RECALL FLOW FROM CP14
 348 DR DCP14
 *

349 KK CP16
 350 KM COMBINE DCP12,DCP13, AND DCP14
 351 KM FLOW ON NORTH SIDE OF LAKE MEAD
 352 HC 3
 *

353 KK CP17
 354 KM COMBINE ALL FLOWS UPSTREAM OF MOHAWK DRIVE
 355 KM ALL FLOW DRAINS OVER LAKE MEAD PARKWAY TO THE NORTH SIDE
 356 HC 2
 *

357 KK RCP17
 358 KM NATURAL CHANNEL ALONG EARTH BERM
 359 RD 2300 0.011 .03 0 TRAP 20 0
 *

360 KK EE
 361 BA 0.032
 362 FB 1.74
 363 LS 0 82.2
 364 UD 0.138
 *

HEC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

365 KK FE
 366 BA 0.014
 367 FB 1.74
 368 LS 0 77.77
 369 UD 0.124
 *

370 KK GE
 371 BA 0.015
 372 FB 1.74
 373 LS 0 81.20
 374 UD 0.113
 *

375 KK CP18
 376 KM COMBINE ALL FLOWS ON THE NORTH SIDE OF LAKE MEAD PARKWAY
 377 HC 4
 *

378 KK ONE-8
 379 BA 0.204
 380 FB 1.74
 381 LS 0 69.8
 382 UD 0.982
 *

383 KK CP19
 384 KM COMBINE CP18 WITH ONE-8
 385 HC 2
 *

386 KK ONE-7
 387 BA 0.208
 388 FB 1.74
 389 LS 0 80.41

390 UD 0.232
 *
 391 KK OFFD1*
 392 KM START OF CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS*****
 393 KM THE PB CARDS FOR WRF BASINS INSIDE THE MACARRAN AIRPORT AREA ARE
 394 KM 1.58 FOR 10 Y- 6 HOUR AND 1.74 FOR WRF BASINS OUTSIDE THE MACARRAN AIRPORT A
 395 BA 0.082
 396 PB 1.74
 397 LS 0 93.0
 398 UD 0.156
 *

399 KKRTOFFD1*
 400 RD 7600 0.009 0.016 0 TRAP 40 5
 *

HEC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

401 KK OFFD2*
 402 BA 0.118
 403 PB 1.74
 404 LS 0 79.0
 405 UD 0.333
 *

406 KKRTOFFD2*
 407 RD 1400 0.012 0.016 0 TRAP 40 5
 *

408 KK OFFD2A*
 409 BA 0.107
 410 PB 1.74
 411 LS 0 85.5
 412 UD 0.212
 *

413 KK COFD2A*
 414 HC 3
 *

415 KKDIVERSION*
 416 DT SPLIT1*
 417 DI 0 121 312
 418 DQ 0 0 39
 *

419 KKRCOFD2A*
 420 RD 1300 0.01 0.016 0 TRAP 40 5
 *

421 KK OFFD5*
 422 BA 0.322
 423 PB 1.74
 424 LS 0 85.5
 425 UD 0.150
 *

426 KK COFD5*
 427 HC 2
 *

428 KKRCOFD5*
 429 RD 1800 0.013 0.016 0 TRAP 40 5
 *

430 KK OFFD6*
 431 BA 0.114
 432 PB 1.74
 433 LS 0 92.0
 434 UD 0.162
 *

HEC-1 INPUT

PAGE 13

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

435 KK COFD6*
 436 HC 2
 *

437 KK DIVERT*
 438 DT SPLIT2*
 439 DI 0 759
 440 DQ 0 177
 *

441 KK OFFD7*
 442 BA 0.0222
 443 PB 1.74
 444 LS 0 92
 445 UD 0.135
 *

446 KKRTOFFD7*
 447 RK 500 0.01 0.016 0 TRAP 3 50
 *

448 KK OND1*
 449 BA 0.0433
 450 PB 1.58
 451 LS 0 88
 452 UD 0.197
 *

```

453 KK COND1*
454 HC 3
*

455 KK RCOND1*
456 RM ROUTE IN GRASS CHANNEL
457 RK 1600 .01 .03 0 TRAP 0 5
*

458 KK OND4*
459 BA 0.0681
460 PB 1.58
461 LS 0 90.6
462 UD 0.211
*

463 KK DBOND4*
464 KO 3
465 RS 1 ELEV 3.0
466 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
467 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
468 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
*

```

HEC-1 INPUT

PAGE 14

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

469 KK OND5*
470 BA 0.0558
471 PB 1.58
472 LS 0 90.8
473 UD 0.196
*

474 KK DBOND5*
475 KO 3
476 RS 1 ELEV 3.0
477 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
478 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
479 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
*

480 KK COND5*
481 HC 3
*

482 KK RCOND5*
483 RM ROUTE IN RIP RAP CHANNEL TO PONDS
484 RK 1600 0.125 .04 0 TRAP 15 3
*

485 KK OND11*
486 RM WRF ONSITE BASIN OND11
487 BA 0.0122
488 PB 1.58
489 LS 0 91
490 UD 0.206
*

491 KK ROND11*
492 RD 1950 0.0120 .025 0 TRAP 15 3
*

493 KK OND11A*
494 RM MODIFIED WRF ONSITE BASIN POND1
495 BA 0.075
496 PB 1.58
497 LS 0 85
498 UD 0.236
*

499 KKCHANNEL2
500 RM WRF CHANNEL2
501 HC 3
*

```

HEC-1 INPUT

PAGE 15

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

502 KKRETURN1*
503 DR SPLIT1*
*

504 KKRETURN2*
505 DR SPLIT2*
*

506 KK OFFD3*
507 BA 0.160
508 PB 1.74
509 LS 0 79.0
510 UD 0.264
*

511 KK COFD3*
512 HC 3
*

513 KK RCOFD3*
514 RD 800 0.0075 .025 0 TRAP 20 3
*

515 KK OND2A*
516 BA 0.0066
517 PB 1.58

```

518 LS 0 88.0
 519 UD 0.105
 *

520 KK COND2A*
 521 HC 2
 *

522 KK OND3*
 523 BA 0.0086
 524 PB 1.58
 525 LS 0 88.0
 526 UD 0.139
 *

527 KK COND3*
 528 HC 2
 *

529 KK OND2*
 530 KM MODIFIED WRF ONSITE BASIN
 531 BA 0.046
 532 PB 1.58
 533 LS 0 77.93
 534 UD 0.240
 *

1

HEC-1 INPUT

PAGE 16

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

535 KK CP1*
 536 KM COMBINE FLOW FROM COFD3 AND OND-2*
 537 HC 2
 *

538 KK OND12*
 539 BA 0.0122
 540 PB 1.58
 541 LS 0 85
 542 UD 0.183
 *

* ****END CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS****
 * ****PBS&J MAY 1999****
 *

543 KK OFFE-2B
 544 BA 0.092
 545 PB 1.74
 546 LS 0 75.82
 547 UD 0.259
 *

548 KKROFFE-2B
 549 KM ROUTE OFFE-2B TO CHANNEL 1
 550 RD 2200 0.019 0.035 0 TRAP
 *

551 KKCHANNEL1
 552 KM COMBINE CP1*,ROFFE-2B AND OND-12*
 553 HC 3
 *

554 KKCHANNEL1
 555 KM ROUTE CHANNEL1 TO CP8
 556 RD 2200 0.005 0.035 0 TRAP
 *

557 KK ONE-1
 558 BA 0.072
 559 PB 1.74
 560 LS 0 77.00
 561 UD 0.405
 *

562 KK ONE-2
 563 BA 0.180
 564 PB 1.74
 565 LS 0 77.57
 566 UD 0.825
 *

1

HEC-1 INPUT

PAGE 17

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

567 KK CP8
 568 KM COMBINE ONE-1, ONE-2, ROFFE-2B
 569 HC 3
 *

570 KK ONE-3
 571 BA 0.271
 572 PB 1.74
 573 LS 0 83.87
 574 UD 0.487
 *

575 ZZ

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
 LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
 NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW
 28 ONE-9
 .

41	.	OFFE-9	.
46	CP3	.....	.
49	.	ONE-10	.
54	.	OFFE-10A	.
59	.	OFFE-10B	.
64	CP4	.....	.
67	.	RCP4	.
70	CP5	.....	.
73	RCS	.	.
76	.	ONE-5	.
81	.	OFFE-2	.
86	.	OFFE-3	.
91	.	OFFE-3A	.
96	.	ROFFE-3A	.
99	CP1	.....	.
102	.	RC1	.
105	.	OFFE-2A	.
110	.	OFFE-1	.
115	.	OFFE-4	.
120	.	ROFFE-4	.
123	CP2	.....	.
129	.	DCP2	.
126	GCP2	----->	.
132	CP6	.....	.
135	RCP6	.	.
138	.	OND7*	.
144	CP6A	.....	.
147	RCP6A	.	.
150	.	OND6*	.
156	CP6B	.....	.
159	RCP6B	.	.
162	.	OND8*	.
168	CP6C	.....	.
171	RCP6C	.	.
174	.	ONE-6	.
179	.	RCNE-6	.

```

192 . . . ONE-4
187 CP7.....
190 . . . BKPVE
    . . . V
    . . . V
195 . . . RBKPVE
    . . .
198 . . . . . BKMJE
    . . . . . V
    . . . . . V
203 . . . . . RBKMJE
    . . . . .
206 . . . . . CRMJE
    . . . . .
214 . . . . . OCRMJE -----> DCRMJE
211 . . . . . V
    . . . . . V
217 . . . . . ROCRMJE
    . . . . .
220 . . . CP9.....
    . . .
223 . . . . . WSPVE
    . . .
228 . . . CP10.....
    . . .
235 . . . -----> DCP10
232 . . . OCP10
    . . . V
    . . . V
238 . . . ROCP10
    . . .
243 . . . . . <----- DCRMJE
241 . . . . . DCRMJE
    . . . . . V
    . . . . . V
244 . . . . . RDCRMJE
    . . . . .
247 . . . . . WSCRE
    . . . . .
252 . . . CP11.....
    . . .
259 . . . -----> DCP11
256 . . . OCP11
    . . . V
    . . . V
262 . . . ROCP11
    . . .
265 . . . . . BKIME
    . . . . . V
    . . . . . V
270 . . . . . RBKIME
    . . . . .
273 . . . . . WSLME
    . . . . .
278 . . . . . CP12.....
    . . . . .
285 . . . . . -----> DCP12
282 . . . . . OCP12
    . . . . .
288 . . . . . CRLME
    . . . . .
296 . . . . . <----- DCP11
293 . . . . . DCP11
    . . . . . V
    . . . . . V
297 . . . . . RDCP11
    . . . . .
300 . . . . . CP13.....
    . . . . .
307 . . . . . -----> DCP13
303 . . . . . OCP13
    . . . . .
310 . . . . . FWLME
    . . . . .
317 . . . . . <----- DCP10
315 . . . . . DCP10
    . . . . . V
    . . . . . V
318 . . . . . RDCP10
    . . . . .

```



```

321      CP14.....
327      |-----> DCP14
325      GCP14
330      |
330      DE
335      CP15.....
342      |
339      DCP12<----- DCP12
345      |
343      DCP13<----- DCP13
348      |
346      DCP14<----- DCP14
349      CP16.....
353      CP17.....
357      RCP17
360      |
365      EE
370      |
375      CP18.....
378      |
383      CP19.....
386      |
391      |
399      |
401      |
406      |
408      |
413      |
416      |
415      |
419      |
421      |
426      |
428      |
430      |
435      |
438      |
437      |
441      |
446      |
448      |

```

ONE-8
 ONE-7
 OFFD1*
 RTOFFD1*
 OFFD2*
 RTOFFD2*
 OFFD2A*
 COFD2A*
 SPLIT1*
 DIVERSIO
 RCOFD2A*
 OFFD5*
 COFD5*
 RCOFD5*
 OFFD6*
 COFD6*
 SPLIT2*
 DIVERT*
 OFFD7*
 RTOFFD7*
 OND1*

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453      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .
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562      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .
567      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .
570      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .      .

```

COND1*
V
V
RCOND1*

OND4*
V
V
DBOND4*

OND5*
V
V
DBOND5*

COND5*
V
V
RCOND5*

OND11*
V
V
ROND11*

OND11A*

CHANNEL2

RETURN1* SPLIT1*

RETURN2* SPLIT2*

OFFD3*

COFD3*
V
V
RCOFD3*

OND2A*

COND2A*

OND3*

COND3*

OND2*

CP1*

OND12*

OFFE-2B
V
V
ROFFE-2B

CHANNEL1
V
V
RCHANNEL

ONE-1

ONE-2

CP8

ONE-3

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 19DEC05 TIME 15:24:24 *
*

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*

```

```

*****
*   THE LANDWELL COMPANY
*   CONCEPTUAL DRAINAGE STUDY FOR
*   THE EASTSIDE PROPERTIES
*   EXISTING CONDITIONS
*   INPUT FILE:EXISTING-10.DAT
*   INPUT FILE DATE:12/19/05
*   STORM DISTRIBUTION = SDN#3
*   DESIGN STORM = 10 YEAR, 6 HOUR
*   MODELED BY=Mahesh Kumar (PBS&J)
*****

```

```

DRAINAGE AREA
(SQUARE MILES)   DARF
0-0.5            .99
0.5-1            .975
1-2              .95
2-3              .925
3-4              .915
4-5              .908

```

```

25 IO      OUTPUT CONTROL VARIABLES
           IPRINT      5  PRINT CONTROL
           IPLOT       0  PLOT CONTROL
           QSCAL       0.  HYDROGRAPH PLOT SCALE

```

```

IT      HYDROGRAPH TIME DATA
        NMIN          5  MINUTES IN COMPUTATION INTERVAL
        IDATE         1  0  STARTING DATE
        ITIME         0000 STARTING TIME
        NQ            300 NUMBER OF HYDROGRAPH ORDINATES
        NDDATE         2  0  ENDING DATE
        NDDTIME        0055 ENDING TIME
        ICENT          19  CENTURY MARK

```

```

        COMPUTATION INTERVAL      .08 HOURS
        TOTAL TIME BASE           24.92 HOURS

```

```

ENGLISH UNITS
DRAINAGE AREA      SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW               CUBIC FEET PER SECOND
STORAGE VOLUME     ACRE-FEET
SURFACE AREA       ACRES
TEMPERATURE        DEGREES FAHRENHEIT

```

```

JP      MULTI-PLAN OPTION
        NPLAN          1  NUMBER OF PLANS

```

```

JR      MULTI-RATIO OPTION
        RATIOS OF PRECIPITATION
        .99      .98      .95      .93      .92      .91

```

*** ** ** ** **

```

*****
*   DBOND4*
*
*****

```

```

464 KQ      OUTPUT CONTROL VARIABLES
           IPRINT      3  PRINT CONTROL
           IPLOT       0  PLOT CONTROL
           QSCAL       0.  HYDROGRAPH PLOT SCALE

```

HYDROGRAPH ROUTING DATA

```

465 RS      STORAGE ROUTING
           NSTPS        1  NUMBER OF SUBREACHES
           ITYP         ELEV TYPE OF INITIAL CONDITION
           RSVRIC        3.00 INITIAL CONDITION
           X             .00 WORKING R AND D COEFFICIENT

```

	STORAGE	.0	2.0	3.4	4.4	5.1	6.2	7.6
466 SV								
467 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
468 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

*** ** ** ** *

```

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .99

```

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	.00	(CFS)			
			10.	3.	3.	3.
		(INCHES)	1.386	1.888	1.888	1.888
		(AC-FT)	5.	7.	7.	7.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR	72-HR
4.	.00		2.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR	72-HR
3.00	.00		2.12	.72	.70

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR	72-HR
14.	.00	(CFS)	10.	3.	3.
		(INCHES)	1.375	1.869	1.869
		(AC-FT)	5.	7.	7.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR	72-HR
4.	.00		2.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR	72-HR
3.00	.00		2.11	.71	.69

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR	72-HR
14.	.00	(CFS)	10.	3.	3.
		(INCHES)	1.358	1.837	1.837
		(AC-FT)	5.	7.	7.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR	72-HR
4.	.00		2.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR	72-HR
3.00	.00		2.08	.70	.68

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR	72-HR
14.	.00	(CFS)	10.	3.	3.
		(INCHES)	1.341	1.805	1.805
		(AC-FT)	5.	7.	7.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR	72-HR
4.	.00		2.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR	72-HR
3.00	.00		2.05	.69	.67

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR	72-HR
14.	.00	(CFS)	10.	3.	3.
		(INCHES)	1.335	1.793	1.793
		(AC-FT)	5.	7.	7.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
				24-HR	72-HR

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .91

CUMULATIVE AREA = .07 SQ MI

474 KK

475 KO

HYDROGRAPH ROUTING DATA

477 SV	STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
478 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
479 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

HYDROGRAPH AT STATION DBCND5*
FOR PLAN 1, RATIO = .99

CUMULATIVE AREA = .06 SQ MI

4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+					
+	14.	10.	3.	3.	3.
		(INCHES)			
	.00	1.603	2.127	2.127	2.127
		(AC-FT)	5.	6.	6.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR 72-HR	
4.	.00		2.	1. 1.	1.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR 72-HR	
3.00	.00		2.01	.67 .64	.64

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR 72-HR	
14.	.00	(CFS)	10.	3. 3.	3.
		(INCHES)	1.586	2.095 2.095	2.095
		(AC-FT)	5.	6. 6.	6.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR 72-HR	
4.	.00		2.	1. 1.	1.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR 72-HR	
3.00	.00		1.99	.66 .63	.63

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR 72-HR	
14.	.00	(CFS)	9.	3. 3.	3.
		(INCHES)	1.569	2.063 2.064	2.064
		(AC-FT)	5.	6. 6.	6.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR 72-HR	
4.	.00		2.	1. 1.	1.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR 72-HR	
3.00	.00		1.97	.65 .62	.62

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR 72-HR	
14.	.00	(CFS)	9.	3. 3.	3.
		(INCHES)	1.562	2.051 2.051	2.051
		(AC-FT)	5.	6. 6.	6.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
+ (AC-FT)	(HR)			24-HR 72-HR	
4.	.00		2.	1. 1.	1.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24.92-HR
+ (FEET)	(HR)			24-HR 72-HR	
3.00	.00		1.96	.64 .62	.62

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.92-HR
+ (CFS)	(HR)			24-HR 72-HR	
14.	.00	(CFS)	9.	3. 3.	3.
		(INCHES)	1.557	2.042 2.042	2.042
		(AC-FT)	5.	6. 6.	6.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24.92-HR
				24-HR 72-HR	

+	(AC-FT)	(HR)				
	4.	.00	2.	1.	1.	1.
	PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.00	.00	1.95	.64	.62	.62
CUMULATIVE AREA =			.06 SQ MI			

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PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
 TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION						
				RATIO 1 .99	RATIO 2 .98	RATIO 3 .95	RATIO 4 .93	RATIO 5 .92	RATIO 6 .91	
HYDROGRAPH AT										
+	ONE-9	.34	1	FLOW	42.	40.	37.	34.	33.	33.
				TIME	4.33	4.33	4.33	4.33	4.33	4.33
HYDROGRAPH AT										
+	OFFE-9	.06	1	FLOW	42.	41.	39.	37.	36.	36.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT										
+	CP3	.40	1	FLOW	47.	46.	43.	41.	40.	40.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT										
+	ONE-10	.09	1	FLOW	21.	21.	19.	18.	18.	18.
				TIME	4.08	4.08	4.17	4.17	4.17	4.17
HYDROGRAPH AT										
+	OFFE-10A	.10	1	FLOW	48.	46.	44.	41.	40.	40.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT										
+	OFFE-10B	.04	1	FLOW	22.	21.	20.	19.	18.	18.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT										
+	CP4	.23	1	FLOW	75.	73.	69.	65.	64.	63.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO										
+	RCP4	.23	1	FLOW	71.	69.	66.	61.	60.	59.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT										
+	CP5	.63	1	FLOW	111.	107.	101.	95.	93.	91.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO										
+	RC5	.63	1	FLOW	108.	105.	99.	94.	92.	90.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00
HYDROGRAPH AT										
+	ONE-5	.87	1	FLOW	177.	171.	162.	153.	149.	147.
				TIME	4.33	4.33	4.33	4.33	4.33	4.33
HYDROGRAPH AT										
+	OFFE-2	.09	1	FLOW	25.	24.	22.	21.	20.	20.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT										
+	OFFE-3	.30	1	FLOW	87.	84.	79.	74.	72.	71.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT										
+	OFFE-3A	.03	1	FLOW	21.	20.	20.	19.	18.	18.
				TIME	3.50	3.50	3.50	3.50	3.50	3.50
ROUTED TO										
+	ROFFE-3A	.03	1	FLOW	20.	20.	19.	18.	17.	17.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
3 COMBINED AT										
+	CP1	.42	1	FLOW	130.	126.	118.	111.	108.	106.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO										
+	RC1	.42	1	FLOW	131.	127.	119.	111.	108.	105.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT										
+	OFFE-2A	.02	1	FLOW	7.	6.	6.	5.	5.	5.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT										
+	OFFE-1	.41	1	FLOW	180.	175.	166.	157.	153.	151.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT										
+	OFFE-4	.49	1	FLOW	133.	129.	121.	114.	111.	109.
				TIME	3.83	3.83	3.92	3.92	3.92	3.92
ROUTED TO										
+	ROFFE-4	.49	1	FLOW	132.	128.	120.	113.	110.	109.
				TIME	4.17	4.17	4.17	4.17	4.17	4.17
4 COMBINED AT										
+	CP2	1.34	1	FLOW	326.	314.	295.	275.	267.	261.

[illegible]

+	WSPVE	.26	1	FLOW TIME	51. 3.92	49. 3.92	46. 3.92	42. 3.92	41. 3.92	40. 3.92
2 COMBINED AT										
+	CP10	.64	1	FLOW TIME	157. 3.92	153. 3.92	147. 4.00	140. 4.00	137. 4.00	136. 4.00
DIVERSION TO										
+	DCP10	.64	1	FLOW TIME	46. 3.92	45. 3.92	43. 4.00	41. 4.00	40. 4.00	40. 4.00
HYDROGRAPH AT										
+	OCP10	.64	1	FLOW TIME	111. 3.92	109. 3.92	104. 4.00	99. 4.00	97. 4.00	96. 4.00
ROUTED TO										
+	ROCP10	.64	1	FLOW TIME	110. 4.00	110. 4.00	104. 4.00	97. 4.00	92. 4.00	91. 4.00
HYDROGRAPH AT										
+	DCRMJE	.00	1	FLOW TIME	40. 3.75	39. 3.75	37. 3.75	35. 3.75	34. 3.75	34. 3.75
ROUTED TO										
+	RDCRMJE	.00	1	FLOW TIME	44. 3.92	42. 3.92	38. 4.00	35. 4.00	35. 4.00	35. 4.00
HYDROGRAPH AT										
+	WSCRE	.16	1	FLOW TIME	40. 3.75	39. 3.75	36. 3.75	34. 3.75	33. 3.75	32. 3.75
3 COMBINED AT										
+	CP11	.81	1	FLOW TIME	176. 4.00	175. 4.00	166. 4.00	150. 4.00	143. 4.00	141. 4.00
DIVERSION TO										
+	DCP11	.81	1	FLOW TIME	49. 4.00	49. 4.00	47. 4.00	42. 4.00	40. 4.00	40. 4.00
HYDROGRAPH AT										
+	OCP11	.81	1	FLOW TIME	126. 4.00	126. 4.00	119. 4.00	108. 4.00	103. 4.00	101. 4.00
ROUTED TO										
+	ROCP11	.81	1	FLOW TIME	131. 4.00	127. 4.17	124. 4.17	115. 4.17	110. 4.17	109. 4.17
HYDROGRAPH AT										
+	BKLME	.34	1	FLOW TIME	119. 3.83	116. 3.83	110. 3.83	104. 3.83	101. 3.83	100. 3.83
ROUTED TO										
+	RBKLME	.34	1	FLOW TIME	121. 3.92	117. 3.92	110. 3.92	102. 3.92	99. 3.92	98. 3.92
HYDROGRAPH AT										
+	WSLME	.29	1	FLOW TIME	91. 3.75	88. 3.75	83. 3.75	78. 3.75	76. 3.75	75. 3.75
2 COMBINED AT										
+	CP12	.63	1	FLOW TIME	203. 3.83	196. 3.83	185. 3.92	172. 3.92	168. 3.92	165. 3.92
DIVERSION TO										
+	DCP12	.63	1	FLOW TIME	187. 3.83	183. 3.83	178. 3.92	171. 3.92	168. 3.92	165. 3.92
HYDROGRAPH AT										
+	OCP12	.63	1	FLOW TIME	16. 3.83	13. 3.83	7. 3.92	0. 3.92	0. .00	0. .00
HYDROGRAPH AT										
+	CRIME	.05	1	FLOW TIME	11. 3.67	11. 3.67	10. 3.67	9. 3.67	9. 3.67	9. 3.67
HYDROGRAPH AT										
+	DCP11	.00	1	FLOW TIME	49. 4.00	49. 4.00	47. 4.00	42. 4.00	40. 4.00	40. 4.00
ROUTED TO										
+	RDCP11	.00	1	FLOW TIME	48. 4.00	47. 4.00	44. 4.00	42. 4.00	40. 4.00	39. 4.00
3 COMBINED AT										
+	CP13	.68	1	FLOW TIME	60. 3.92	55. 4.00	49. 4.00	45. 4.00	43. 4.00	43. 4.00
DIVERSION TO										
+	DCP13	.68	1	FLOW TIME	17. 3.58	17. 3.58	17. 3.67	17. 3.67	17. 3.67	17. 3.67
HYDROGRAPH AT										
+	OCP13	.68	1	FLOW TIME	43. 3.92	38. 4.00	31. 4.00	28. 4.00	26. 4.00	26. 4.00
HYDROGRAPH AT										
+	PWLME	.29	1	FLOW TIME	96. 3.75	93. 3.75	87. 3.75	82. 3.75	80. 3.75	79. 3.75
HYDROGRAPH AT										
+	DCP10	.00	1	FLOW TIME	46. 3.92	45. 3.92	43. 4.00	41. 4.00	40. 4.00	40. 4.00
ROUTED TO										
+	RDCP10	.00	1	FLOW TIME	51. 4.25	52. 4.25	50. 4.25	45. 4.25	43. 4.25	42. 4.33

4 COMBINED AT	CP14	1.78	1	FLOW TIME	248. 4.17	241. 4.17	225. 4.17	203. 4.17	193. 4.17	188. 4.17
DIVERSION TO	DCP14	1.78	1	FLOW TIME	230. 4.08	230. 4.17	225. 4.17	203. 4.17	193. 4.17	188. 4.17
HYDROGRAPH AT	OCP14	1.78	1	FLOW TIME	18. 4.17	11. 4.17	0. .00	0. .00	0. .00	0. .00
HYDROGRAPH AT	DE	.05	1	FLOW TIME	28. 3.58	27. 3.58	26. 3.58	24. 3.58	24. 3.58	24. 3.58
2 COMBINED AT	CP15	1.83	1	FLOW TIME	28. 3.58	27. 3.58	26. 3.58	24. 3.58	24. 3.58	24. 3.58
HYDROGRAPH AT	DCP12	.00	1	FLOW TIME	187. 3.83	183. 3.83	178. 3.92	171. 3.92	168. 3.92	165. 3.92
HYDROGRAPH AT	DCP13	.00	1	FLOW TIME	17. 3.58	17. 3.58	17. 3.67	17. 3.67	17. 3.67	17. 3.67
HYDROGRAPH AT	DCP14	.00	1	FLOW TIME	230. 4.08	230. 4.17	225. 4.17	203. 4.17	193. 4.17	188. 4.17
3 COMBINED AT	CP16	.00	1	FLOW TIME	408. 4.08	397. 4.08	369. 4.17	340. 4.17	328. 4.17	321. 4.17
2 COMBINED AT	CP17	1.83	1	FLOW TIME	422. 4.08	405. 4.08	375. 4.08	346. 4.17	333. 4.17	327. 4.17
ROUTED TO	RCP17	1.83	1	FLOW TIME	416. 4.17	401. 4.17	374. 4.17	343. 4.17	329. 4.17	322. 4.17
HYDROGRAPH AT	EE	.03	1	FLOW TIME	14. 3.58	13. 3.58	12. 3.58	12. 3.58	11. 3.58	11. 3.58
HYDROGRAPH AT	FE	.01	1	FLOW TIME	4. 3.58	4. 3.58	4. 3.58	3. 3.58	3. 3.58	3. 3.58
HYDROGRAPH AT	GE	.01	1	FLOW TIME	6. 3.58	6. 3.58	6. 3.58	5. 3.58	5. 3.58	5. 3.58
4 COMBINED AT	CP18	1.89	1	FLOW TIME	421. 4.17	405. 4.17	378. 4.17	347. 4.17	333. 4.17	326. 4.17
HYDROGRAPH AT	ONE-8	.20	1	FLOW TIME	8. 5.25	8. 5.25	7. 5.33	6. 5.33	6. 5.33	6. 5.33
2 COMBINED AT	CP19	2.10	1	FLOW TIME	425. 4.17	409. 4.17	381. 4.17	350. 4.17	336. 4.17	329. 4.17
HYDROGRAPH AT	ONE-7	.21	1	FLOW TIME	61. 3.67	58. 3.67	55. 3.67	51. 3.67	49. 3.67	48. 3.67
HYDROGRAPH AT	OFFD1*	.08	1	FLOW TIME	72. 3.58	70. 3.58	68. 3.58	65. 3.58	64. 3.58	64. 3.58
ROUTED TO	RTOFFD1*	.08	1	FLOW TIME	69. 3.92	68. 3.92	67. 3.92	66. 3.92	66. 3.92	65. 3.92
HYDROGRAPH AT	OFFD2*	.12	1	FLOW TIME	26. 3.83	25. 3.83	23. 3.83	21. 3.83	21. 3.83	20. 3.83
ROUTED TO	RTOFFD2*	.12	1	FLOW TIME	26. 3.92	25. 3.92	23. 3.92	21. 3.92	21. 3.92	20. 3.92
HYDROGRAPH AT	OFFD2A*	.11	1	FLOW TIME	50. 3.67	49. 3.67	46. 3.67	44. 3.67	43. 3.67	42. 3.67
3 COMBINED AT	COFD2A*	.31	1	FLOW TIME	127. 3.83	122. 3.83	117. 3.92	114. 3.92	112. 3.92	111. 3.92
DIVERSION TO	SPLIT1*	.31	1	FLOW TIME	1. 3.83	0. 3.83	0. .00	0. .00	0. .00	0. .00
HYDROGRAPH AT	DIVERSIO	.31	1	FLOW TIME	126. 3.83	122. 3.83	117. 3.92	114. 3.92	112. 3.92	111. 3.92
ROUTED TO	RCOFD2A*	.31	1	FLOW TIME	127. 3.92	125. 3.92	119. 3.92	109. 3.92	109. 3.92	105. 3.92

HYDROGRAPH AT	OFFD5*	.32	1	FLOW	174.	169.	160.	152.	149.	146.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COFD5*	.63	1	FLOW	218.	212.	201.	189.	185.	182.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RCOFD5*	.63	1	FLOW	218.	210.	199.	189.	184.	180.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD6*	.11	1	FLOW	93.	91.	88.	84.	83.	82.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COFD6*	.74	1	FLOW	301.	291.	277.	264.	257.	253.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
DIVERSION TO	SPLIT2*	.74	1	FLOW	70.	68.	65.	62.	60.	59.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	DIVERT*	.74	1	FLOW	231.	223.	212.	202.	197.	194.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD7*	.02	1	FLOW	19.	19.	18.	17.	17.	17.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RTOFFD7*	.02	1	FLOW	18.	18.	17.	17.	16.	16.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND1*	.04	1	FLOW	21.	20.	19.	18.	18.	18.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT	COND1*	.81	1	FLOW	268.	259.	247.	236.	230.	226.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	RCOND1*	.81	1	FLOW	264.	255.	242.	231.	225.	222.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OND4*	.07	1	FLOW	39.	38.	36.	35.	34.	34.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	DBOND4*	.07	1	FLOW	14.	14.	14.	14.	14.	14.
				TIME	.00	.00	.00	.00	.00	.00
			1	** PEAK STAGES IN FEET **						
				STAGE	3.00	3.00	3.00	3.00	3.00	3.00
				TIME	.00	.00	.00	.00	.00	.00
HYDROGRAPH AT	OND5*	.06	1	FLOW	33.	32.	31.	30.	29.	29.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	DBOND5*	.06	1	FLOW	14.	14.	14.	14.	14.	14.
				TIME	.00	.00	.00	.00	.00	.00
			1	** PEAK STAGES IN FEET **						
				STAGE	3.00	3.00	3.00	3.00	3.00	3.00
				TIME	.00	.00	.00	.00	.00	.00
3 COMBINED AT	COND5*	.93	1	FLOW	281.	272.	260.	248.	242.	238.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	RCOND5*	.93	1	FLOW	274.	265.	253.	241.	236.	232.
				TIME	3.67	3.67	3.67	3.67	3.75	3.75
HYDROGRAPH AT	OND11*	.01	1	FLOW	7.	7.	7.	6.	6.	6.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	ROND11*	.01	1	FLOW	7.	7.	7.	7.	6.	6.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	OND11A*	.08	1	FLOW	27.	26.	24.	23.	22.	22.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT	CHANNEL2	1.02	1	FLOW	306.	296.	282.	269.	264.	260.
				TIME	3.67	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	RETURN1*	.00	1	FLOW	1.	0.	0.	0.	0.	0.
				TIME	3.83	3.83	.00	.00	.00	.00
HYDROGRAPH AT	RETURN2*	.00	1	FLOW	70.	68.	65.	62.	60.	59.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD3*	.16	1	FLOW	39.	37.	35.	32.	31.	31.

				TIME	3.75	3.75	3.75	3.75	3.75	3.75
3 COMBINED AT	COFD3*	.16	1	FLOW	107.	103.	97.	91.	89.	87.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	RCOFD3*	.16	1	FLOW	104.	101.	96.	89.	87.	86.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND2A*	.01	1	FLOW	4.	4.	4.	3.	3.	3.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COND2A*	.17	1	FLOW	106.	103.	98.	91.	89.	88.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND3*	.01	1	FLOW	5.	5.	4.	4.	4.	4.
				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COND3*	.18	1	FLOW	109.	106.	100.	94.	92.	90.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND2*	.05	1	FLOW	8.	7.	7.	6.	6.	6.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT	CP1*	.22	1	FLOW	117.	113.	107.	100.	98.	96.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND12*	.01	1	FLOW	5.	5.	4.	4.	4.	4.
				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFE-2B	.09	1	FLOW	16.	15.	14.	13.	12.	12.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO	ROFFE-2B	.09	1	FLOW	16.	15.	14.	13.	12.	12.
				TIME	3.83	3.92	3.92	3.92	3.92	3.92
3 COMBINED AT	CHANNEL1	.33	1	FLOW	134.	130.	122.	114.	111.	109.
				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO	RCHANNEL	.33	1	FLOW	133.	128.	121.	112.	109.	107.
				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	ONE-1	.07	1	FLOW	11.	11.	10.	9.	9.	9.
				TIME	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT	ONE-2	.18	1	FLOW	19.	19.	17.	16.	15.	15.
				TIME	4.42	4.42	4.42	4.42	4.42	4.42
3 COMBINED AT	CP8	.58	1	FLOW	152.	146.	137.	128.	124.	122.
				TIME	3.83	3.83	3.83	3.92	3.92	3.92
HYDROGRAPH AT	ONE-3	.27	1	FLOW	75.	72.	68.	64.	63.	62.
				TIME	4.00	4.00	4.00	4.00	4.00	4.00

1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
INTERPOLATED TO
COMPUTATION INTERVAL

ISTAQ	ELEMENT	DT	PEAK	TIME TO	VOLUME	DT	PEAK	TIME TO	VOLUME
		(MIN)	(CFS)	PEAK	(IN)	(MIN)	(CFS)	PEAK	(IN)
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.50	72.83	227.50	.56	5.00	71.24	225.00	.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6753E+01 EXCESS= .0000E+00 OUTFLOW= .6756E+01 BASIN STORAGE= .1840E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.50	70.60	227.50	.54	5.00	68.83	225.00	.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6546E+01 EXCESS= .0000E+00 OUTFLOW= .6549E+01 BASIN STORAGE= .1780E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.75	66.35	228.75	.51	5.00	65.63	225.00	.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6199E+01 EXCESS= .0000E+00 OUTFLOW= .6204E+01 BASIN STORAGE= .1853E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.50	63.23	227.50	.48	5.00	60.88	225.00	.48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5868E+01 EXCESS= .0000E+00 OUTFLOW= .5871E+01 BASIN STORAGE= .1998E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.75	61.40	228.75	.47	5.00	60.02	225.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5730E+01 EXCESS= .0000E+00 OUTFLOW= .5735E+01 BASIN STORAGE= .1794E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCP4	MANE	3.75	60.41	228.75	.46	5.00	58.91	225.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5638E+01 EXCESS= .0000E+00 OUTFLOW= .5642E+01 BASIN STORAGE= .2147E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.75	108.94	242.25	.46	5.00	108.48	240.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1532E+02 EXCESS= .0000E+00 OUTFLOW= .1533E+02 BASIN STORAGE= .2522E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.75	105.47	242.25	.44	5.00	104.74	240.00	.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1481E+02 EXCESS= .0000E+00 OUTFLOW= .1483E+02 BASIN STORAGE= .3202E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.75	100.34	242.25	.42	5.00	98.84	240.00	.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1398E+02 EXCESS= .0000E+00 OUTFLOW= .1399E+02 BASIN STORAGE= .2972E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.50	94.99	243.00	.39	5.00	93.79	240.00	.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1319E+02 EXCESS= .0000E+00 OUTFLOW= .1319E+02 BASIN STORAGE= .2598E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.50	93.36	243.00	.38	5.00	91.60	240.00	.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1286E+02 EXCESS= .0000E+00 OUTFLOW= .1287E+02 BASIN STORAGE= .2662E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC5	MANE	4.50	91.82	243.00	.38	5.00	89.81	240.00	.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1264E+02 EXCESS= .0000E+00 OUTFLOW= .1265E+02 BASIN STORAGE= .2608E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.75	20.13	225.00	.75	5.00	20.13	225.00	.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1197E+01 EXCESS= .0000E+00 OUTFLOW= .1195E+01 BASIN STORAGE= .2958E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.75	19.59	225.00	.73	5.00	19.59	225.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1165E+01 EXCESS= .0000E+00 OUTFLOW= .1163E+01 BASIN STORAGE= .2931E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.75	18.72	225.00	.69	5.00	18.72	225.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1113E+01 EXCESS= .0000E+00 OUTFLOW= .1111E+01 BASIN STORAGE= .2982E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.75	17.82	225.00	.66	5.00	17.82	225.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1060E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .2935E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.75	17.46	225.00	.65	5.00	17.46	225.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1048E+01 EXCESS= .0000E+00 OUTFLOW= .1038E+01 BASIN STORAGE= .2916E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFE-3A	MANE	3.50	17.17	227.50	.64	5.00	16.88	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1025E+01 EXCESS= .0000E+00 OUTFLOW= .1023E+01 BASIN STORAGE= .3238E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
RC1	MANE	5.00	131.29	230.00	.45	5.00	131.29	230.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1005E+02 EXCESS= .0000E+00 OUTFLOW= .1007E+02 BASIN STORAGE= .1702E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC1	MANE	5.00	126.50	230.00	.44	5.00	126.50	230.00	.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9717E+01 EXCESS= .0000E+00 OUTFLOW= .9728E+01 BASIN STORAGE= .1631E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MANE 5.00 118.67 230.00 .41 5.00 118.67 230.00 .41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9163E+01 EXCESS= .0000E+00 OUTFLOW= .9173E+01 BASIN STORAGE= .1813E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MANE 5.00 110.72 230.00 .39 5.00 110.72 230.00 .39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8620E+01 EXCESS= .0000E+00 OUTFLOW= .8629E+01 BASIN STORAGE= .1769E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MANE 5.00 107.54 230.00 .38 5.00 107.54 230.00 .38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8406E+01 EXCESS= .0000E+00 OUTFLOW= .8415E+01 BASIN STORAGE= .1752E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RC1 MANE 5.00 105.29 230.00 .37 5.00 105.29 230.00 .37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8255E+01 EXCESS= .0000E+00 OUTFLOW= .8266E+01 BASIN STORAGE= .1560E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.50 134.84 247.50 .49 5.00 132.30 250.00 .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1273E+02 EXCESS= .0000E+00 OUTFLOW= .1276E+02 BASIN STORAGE= .4293E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.25 130.41 246.50 .48 5.00 128.20 250.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1231E+02 EXCESS= .0000E+00 OUTFLOW= .1234E+02 BASIN STORAGE= .3235E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.00 121.60 248.00 .45 5.00 120.30 250.00 .45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1163E+02 EXCESS= .0000E+00 OUTFLOW= .1165E+02 BASIN STORAGE= .4215E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.00 114.35 248.00 .42 5.00 113.25 250.00 .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1096E+02 EXCESS= .0000E+00 OUTFLOW= .1099E+02 BASIN STORAGE= .4027E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.00 111.54 248.00 .41 5.00 110.46 250.00 .42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1070E+02 EXCESS= .0000E+00 OUTFLOW= .1072E+02 BASIN STORAGE= .3984E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROFFE-4 MANE 4.00 109.60 248.00 .41 5.00 108.52 250.00 .41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1052E+02 EXCESS= .0000E+00 OUTFLOW= .1054E+02 BASIN STORAGE= .3953E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
RCP6 MANE 3.33 560.33 242.83 .51 5.00 558.83 245.00 .51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7745E+02 EXCESS= .0000E+00 OUTFLOW= .7744E+02 BASIN STORAGE= .9384E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP6 MANE 3.36 540.84 244.96 .50 5.00 540.78 245.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7500E+02 EXCESS= .0000E+00 OUTFLOW= .7500E+02 BASIN STORAGE= .9928E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP6 MANE 3.41 510.44 245.19 .47 5.00 510.23 245.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7101E+02 EXCESS= .0000E+00 OUTFLOW= .7100E+02 BASIN STORAGE= .7946E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP6 MANE 3.46 480.61 245.53 .44 5.00 479.99 245.00 .44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6705E+02 EXCESS= .0000E+00 OUTFLOW= .6704E+02 BASIN STORAGE= .9945E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP6 MANE 3.48 469.02 243.61 .43 5.00 468.93 245.00 .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6547E+02 EXCESS= .0000E+00 OUTFLOW= .6546E+02 BASIN STORAGE= .9873E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	3.50	460.74	244.69	.43	5.00	460.61	245.00	.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6438E+02 EXCESS= .0000E+00 OUTFLOW= .6437E+02 BASIN STORAGE= .7919E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.98	560.54	246.09	.52	5.00	560.49	245.00	.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7853E+02 EXCESS= .0000E+00 OUTFLOW= .7853E+02 BASIN STORAGE= .5215E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	2.00	542.07	246.11	.50	5.00	541.50	245.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7606E+02 EXCESS= .0000E+00 OUTFLOW= .7606E+02 BASIN STORAGE= .5401E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	2.03	512.13	247.67	.47	5.00	509.79	245.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7202E+02 EXCESS= .0000E+00 OUTFLOW= .7202E+02 BASIN STORAGE= .4807E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	2.06	482.40	247.35	.45	5.00	478.92	245.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6802E+02 EXCESS= .0000E+00 OUTFLOW= .6802E+02 BASIN STORAGE= .4967E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	2.07	470.46	246.72	.44	5.00	467.78	245.00	.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6643E+02 EXCESS= .0000E+00 OUTFLOW= .6643E+02 BASIN STORAGE= .5481E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	2.08	462.71	247.82	.43	5.00	459.30	250.00	.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6532E+02 EXCESS= .0000E+00 OUTFLOW= .6532E+02 BASIN STORAGE= .5307E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.32	571.42	248.54	.52	5.00	568.06	250.00	.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8118E+02 EXCESS= .0000E+00 OUTFLOW= .8117E+02 BASIN STORAGE= .6566E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.34	552.73	248.33	.51	5.00	549.95	250.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7864E+02 EXCESS= .0000E+00 OUTFLOW= .7864E+02 BASIN STORAGE= .5710E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.38	521.27	249.69	.48	5.00	520.44	250.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7449E+02 EXCESS= .0000E+00 OUTFLOW= .7449E+02 BASIN STORAGE= .5709E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.42	490.66	248.75	.45	5.00	489.31	250.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7037E+02 EXCESS= .0000E+00 OUTFLOW= .7037E+02 BASIN STORAGE= .6798E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.43	478.87	250.20	.44	5.00	478.86	250.00	.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6876E+02 EXCESS= .0000E+00 OUTFLOW= .6876E+02 BASIN STORAGE= .6384E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	2.44	470.16	249.13	.43	5.00	469.28	250.00	.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6761E+02 EXCESS= .0000E+00 OUTFLOW= .6761E+02 BASIN STORAGE= .5823E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6C	MANE	2.82	573.43	250.57	.52	5.00	572.97	250.00	.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8203E+02 EXCESS= .0000E+00 OUTFLOW= .8203E+02 BASIN STORAGE= .7004E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6C	MANE	2.84	553.66	249.81	.51	5.00	553.53	250.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7947E+02 EXCESS= .0000E+00 OUTFLOW= .7947E+02 BASIN STORAGE= .7011E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCP6C	MANE	2.88	523.67	250.39	.48	5.00	522.96	250.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7529E+02 EXCESS= .0000E+00 OUTFLOW= .7529E+02 BASIN STORAGE= .6862E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP6C	MANE	2.92	491.59	251.35	.45	5.00	489.37	250.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7110E+02 EXCESS= .0000E+00 OUTFLOW= .7110E+02 BASIN STORAGE= .7358E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP6C	MANE	2.94	480.52	252.71	.44	5.00	478.72	250.00	.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6952E+02 EXCESS= .0000E+00 OUTFLOW= .6952E+02 BASIN STORAGE= .7365E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP6C	MANE	2.95	478.58	251.03	.44	5.00	468.21	250.00	.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6832E+02 EXCESS= .0000E+00 OUTFLOW= .6832E+02 BASIN STORAGE= .7335E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	4.00	245.12	244.00	.46	5.00	244.17	245.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2493E+02 EXCESS= .0000E+00 OUTFLOW= .2494E+02 BASIN STORAGE= .2015E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	4.00	236.46	244.00	.45	5.00	235.64	245.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2410E+02 EXCESS= .0000E+00 OUTFLOW= .2411E+02 BASIN STORAGE= .1982E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	3.75	221.39	243.75	.42	5.00	221.04	245.00	.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2273E+02 EXCESS= .0000E+00 OUTFLOW= .2274E+02 BASIN STORAGE= .1962E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	3.50	208.58	245.00	.40	5.00	208.58	245.00	.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2139E+02 EXCESS= .0000E+00 OUTFLOW= .2139E+02 BASIN STORAGE= .2168E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	3.25	202.48	243.75	.39	5.00	202.26	245.00	.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2085E+02 EXCESS= .0000E+00 OUTFLOW= .2086E+02 BASIN STORAGE= .2629E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCNE-6	MANE	3.00	199.10	246.00	.38	5.00	198.57	245.00	.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+02 EXCESS= .0000E+00 OUTFLOW= .2050E+02 BASIN STORAGE= .2273E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKPE	MANE	4.75	50.78	232.75	.55	5.00	49.21	235.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4012E+01 EXCESS= .0000E+00 OUTFLOW= .4042E+01 BASIN STORAGE= .1008E-01 PERCENT ERROR= -1.0									
FOR PLAN = 1	RATIO=	.00							
RBKPE	MANE	4.50	52.72	234.00	.53	5.00	50.85	235.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3897E+01 EXCESS= .0000E+00 OUTFLOW= .3927E+01 BASIN STORAGE= .1112E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO=	.00							
RBKPE	MANE	4.50	49.70	234.00	.50	5.00	48.12	235.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3691E+01 EXCESS= .0000E+00 OUTFLOW= .3722E+01 BASIN STORAGE= .1094E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO=	.00							
RBKPE	MANE	4.25	44.97	233.75	.47	5.00	44.25	235.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3485E+01 EXCESS= .0000E+00 OUTFLOW= .3517E+01 BASIN STORAGE= .1059E-01 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO=	.00							
RBKPE	MANE	4.25	42.72	238.00	.46	5.00	42.51	235.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+01 EXCESS= .0000E+00 OUTFLOW= .3436E+01 BASIN STORAGE= .1051E-01 PERCENT ERROR= -1.2									
FOR PLAN = 1 RATIO= .00									

RBKPVE	MANE	4.25	42.90	238.00	.46	5.00	41.22	235.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3349E+01 EXCESS= .0000E+00 OUTFLOW= .3380E+01 BASIN STORAGE= .1046E-01 PERCENT ERROR= -1.2									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	4.75	22.81	237.50	.63	5.00	18.96	240.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .8711E-02 PERCENT ERROR= -2.7									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	4.50	22.99	238.50	.61	5.00	19.43	240.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1095E+01 EXCESS= .0000E+00 OUTFLOW= .1115E+01 BASIN STORAGE= .1094E-01 PERCENT ERROR= -2.8									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	3.75	19.45	240.00	.58	5.00	19.45	240.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1039E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .9174E-02 PERCENT ERROR= -2.8									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	3.75	20.66	240.00	.55	5.00	20.66	240.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9858E+00 EXCESS= .0000E+00 OUTFLOW= .1005E+01 BASIN STORAGE= .9068E-02 PERCENT ERROR= -2.9									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	3.75	20.90	240.00	.54	5.00	20.90	240.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9646E+00 EXCESS= .0000E+00 OUTFLOW= .9838E+00 BASIN STORAGE= .8764E-02 PERCENT ERROR= -2.9									
FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	3.75	21.00	240.00	.53	5.00	21.00	240.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9499E+00 EXCESS= .0000E+00 OUTFLOW= .9693E+00 BASIN STORAGE= .8734E-02 PERCENT ERROR= -3.0									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	43.32	235.00	.30	5.00	43.32	235.00	.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3288E+01 EXCESS= .0000E+00 OUTFLOW= .3316E+01 BASIN STORAGE= .9626E-02 PERCENT ERROR= -1.2									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	41.09	235.00	.29	5.00	41.09	235.00	.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3190E+01 EXCESS= .0000E+00 OUTFLOW= .3218E+01 BASIN STORAGE= .9539E-02 PERCENT ERROR= -1.2									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	38.84	240.00	.28	5.00	38.84	240.00	.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3029E+01 EXCESS= .0000E+00 OUTFLOW= .3056E+01 BASIN STORAGE= .9393E-02 PERCENT ERROR= -1.2									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	4.75	41.51	237.50	.26	5.00	35.93	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2868E+01 EXCESS= .0000E+00 OUTFLOW= .2897E+01 BASIN STORAGE= .1190E-01 PERCENT ERROR= -1.4									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	4.75	40.56	237.50	.26	5.00	35.38	240.00	.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2805E+01 EXCESS= .0000E+00 OUTFLOW= .2834E+01 BASIN STORAGE= .1171E-01 PERCENT ERROR= -1.4									
FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	4.75	39.80	237.50	.25	5.00	34.98	240.00	.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2761E+01 EXCESS= .0000E+00 OUTFLOW= .2790E+01 BASIN STORAGE= .1166E-01 PERCENT ERROR= -1.5									
FOR PLAN	= 1	RATIO=	.00						
ROCP10	MANE	3.95	113.31	240.00	.28	5.00	109.99	240.00	.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9690E+01 EXCESS= .0000E+00 OUTFLOW= .9697E+01 BASIN STORAGE= .2990E-02 PERCENT ERROR= -1.1									
FOR PLAN	= 1	RATIO=	.00						
ROCP10	MANE	3.99	111.20	243.24	.27	5.00	110.31	240.00	.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9402E+01 EXCESS= .0000E+00 OUTFLOW= .9410E+01 BASIN STORAGE= .3792E-02 PERCENT ERROR= -1.1									
FOR PLAN	= 1	RATIO=	.00						
ROCP10	MANE	4.06	106.32	243.64	.26	5.00	103.63	240.00	.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8891E+01 EXCESS= .0000E+00 OUTFLOW= .8898E+01 BASIN STORAGE= .3390E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 4.14 99.27 244.30 .24 5.00 97.23 245.00 .24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8374E+01 EXCESS= .0000E+00 OUTFLOW= .8381E+01 BASIN STORAGE= .3535E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 4.17 95.99 241.74 .24 5.00 91.72 245.00 .24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8148E+01 EXCESS= .0000E+00 OUTFLOW= .8155E+01 BASIN STORAGE= .3849E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 4.19 97.92 242.90 .23 5.00 91.49 245.00 .23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8017E+01 EXCESS= .0000E+00 OUTFLOW= .8025E+01 BASIN STORAGE= .3190E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 43.96 235.00 -1.00 5.00 43.96 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 41.95 235.00 -1.00 5.00 41.95 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 38.02 240.00 -1.00 5.00 38.02 240.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 4.75 39.97 237.50 -1.00 5.00 35.19 240.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 4.75 39.32 237.50 -1.00 5.00 34.60 240.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 4.75 40.07 237.50 -1.00 5.00 34.77 240.00 -1.00

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 130.61 245.00 .27 5.00 130.61 245.00 .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1169E+02 EXCESS= .0000E+00 OUTFLOW= .1172E+02 BASIN STORAGE= .6504E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 126.88 250.00 .26 5.00 126.88 250.00 .26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1133E+02 EXCESS= .0000E+00 OUTFLOW= .1136E+02 BASIN STORAGE= .6508E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 123.92 250.00 .25 5.00 123.92 250.00 .25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1072E+02 EXCESS= .0000E+00 OUTFLOW= .1074E+02 BASIN STORAGE= .6506E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 115.18 250.00 .24 5.00 115.18 250.00 .24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1009E+02 EXCESS= .0000E+00 OUTFLOW= .1011E+02 BASIN STORAGE= .6917E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 109.90 250.00 .23 5.00 109.90 250.00 .23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9812E+01 EXCESS= .0000E+00 OUTFLOW= .9831E+01 BASIN STORAGE= .6912E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 108.93 250.00 .23 5.00 108.93 250.00 .23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9642E+01 EXCESS= .0000E+00 OUTFLOW= .9663E+01 BASIN STORAGE= .7487E-02 PERCENT ERROR= -.3

FOR PLAN = 1 RATIO= .00
RBKLME MANE 5.00 120.54 235.00 .57 5.00 120.54 235.00 .57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1044E+02 EXCESS= .0000E+00 OUTFLOW= .1045E+02 BASIN STORAGE= .4169E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RBKLME MANE 5.00 116.79 235.00 .55 5.00 116.79 235.00 .55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+02 EXCESS= .0000E+00 OUTFLOW= .1014E+02 BASIN STORAGE= .4111E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RBLME MANE 5.00 110.47 235.00 .52 5.00 110.47 235.00 .52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9600E+01 EXCESS= .0000E+00 OUTFLOW= .9610E+01 BASIN STORAGE= .3188E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RBLME MANE 4.75 102.62 237.50 .49 5.00 101.69 235.00 .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9074E+01 EXCESS= .0000E+00 OUTFLOW= .9086E+01 BASIN STORAGE= .4007E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RBLME MANE 4.75 100.30 237.50 .48 5.00 99.29 235.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8871E+01 EXCESS= .0000E+00 OUTFLOW= .8882E+01 BASIN STORAGE= .3967E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RBLME MANE 4.75 98.69 237.50 .47 5.00 97.61 235.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8729E+01 EXCESS= .0000E+00 OUTFLOW= .8740E+01 BASIN STORAGE= .3940E-02 PERCENT ERROR= -.2

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.64 49.31 242.09 -1.00 5.00 47.72 245.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.64 48.45 242.66 -1.00 5.00 46.84 240.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.67 46.31 242.52 -1.00 5.00 44.37 245.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.74 42.41 242.09 -1.00 5.00 41.87 245.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.78 40.35 243.58 -1.00 5.00 39.73 245.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.79 39.59 242.91 -1.00 5.00 39.35 245.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 51.48 255.00 -1.00 5.00 51.48 255.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 51.78 255.00 -1.00 5.00 51.78 255.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 49.51 255.00 -1.00 5.00 49.51 255.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 44.78 255.00 -1.00 5.00 44.78 255.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 42.78 255.00 -1.00 5.00 42.78 255.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 41.51 260.00 -1.00 5.00 41.51 260.00 -1.00

FOR PLAN = 1 RATIO= .00
RCP17 MANE 3.33 417.52 249.79 .50 5.00 416.49 250.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4905E+02 EXCESS= .0000E+00 OUTFLOW= .4906E+02 BASIN STORAGE= .4320E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP17 MANE 3.39 401.22 250.53 .49 5.00 400.96 250.00 .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4751E+02 EXCESS= .0000E+00 OUTFLOW= .4752E+02 BASIN STORAGE= .4674E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RCPI7	MANE	3.49	374.37	251.27	.46	5.00	373.75	250.00	.46
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .4494E+02 EXCESS= .0000E+00 OUTFLOW= .4496E+02 BASIN STORAGE= .4063E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
RCPI7	MANE	3.61	343.32	252.39	.43	5.00	343.14	250.00	.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4239E+02 EXCESS= .0000E+00 OUTFLOW= .4240E+02 BASIN STORAGE= .4167E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
RCPI7	MANE	3.66	330.29	252.61	.42	5.00	329.48	250.00	.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4134E+02 EXCESS= .0000E+00 OUTFLOW= .4135E+02 BASIN STORAGE= .4091E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO= .00								
RCPI7	MANE	3.69	323.89	250.84	.42	5.00	322.33	250.00	.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4063E+02 EXCESS= .0000E+00 OUTFLOW= .4065E+02 BASIN STORAGE= .4023E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	70.36	234.00	1.07	5.00	69.14	235.00	1.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4647E+01 EXCESS= .0000E+00 OUTFLOW= .4603E+01 BASIN STORAGE= .9080E-02 PERCENT ERROR= -1.0

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	69.56	234.00	1.05	5.00	68.18	235.00	1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4545E+01 EXCESS= .0000E+00 OUTFLOW= .4501E+01 BASIN STORAGE= .9021E-02 PERCENT ERROR= -1.0

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	68.28	234.00	1.01	5.00	66.63	235.00	1.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4376E+01 EXCESS= .0000E+00 OUTFLOW= .4410E+01 BASIN STORAGE= .9721E-02 PERCENT ERROR= -1.0

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	69.23	234.00	.97	5.00	66.46	235.00	.97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4207E+01 EXCESS= .0000E+00 OUTFLOW= .4242E+01 BASIN STORAGE= .7208E-02 PERCENT ERROR= -1.0

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	68.65	234.00	.95	5.00	65.82	235.00	.95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4140E+01 EXCESS= .0000E+00 OUTFLOW= .4174E+01 BASIN STORAGE= .1019E-01 PERCENT ERROR= -1.1

FOR PLAN = 1	RATIO= .00								
RTOFFD1*	MANE	4.50	68.21	234.00	.94	5.00	65.36	235.00	.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4093E+01 EXCESS= .0000E+00 OUTFLOW= .4127E+01 BASIN STORAGE= .1016E-01 PERCENT ERROR= -1.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.50	25.58	235.00	.37	5.00	25.58	235.00	.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2319E+01 EXCESS= .0000E+00 OUTFLOW= .2321E+01 BASIN STORAGE= .1315E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.50	24.57	235.00	.36	5.00	24.57	235.00	.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2234E+01 EXCESS= .0000E+00 OUTFLOW= .2235E+01 BASIN STORAGE= .1265E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.50	22.91	235.00	.33	5.00	22.91	235.00	.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2094E+01 EXCESS= .0000E+00 OUTFLOW= .2095E+01 BASIN STORAGE= .1216E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.25	21.22	234.00	.31	5.00	21.16	235.00	.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1957E+01 EXCESS= .0000E+00 OUTFLOW= .1958E+01 BASIN STORAGE= .1260E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.25	20.56	234.00	.30	5.00	20.52	235.00	.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1903E+01 EXCESS= .0000E+00 OUTFLOW= .1904E+01 BASIN STORAGE= .1244E-02 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO= .00								
RTOFFD2*	MANE	2.25	20.11	234.00	.30	5.00	20.07	235.00	.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1866E+01 EXCESS= .0000E+00 OUTFLOW= .1867E+01 BASIN STORAGE= .1232E-02 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.18 128.37 235.42 .64 5.00 126.96 235.00 .64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1052E+02 EXCESS= .0000E+00 OUTFLOW= .1052E+02 BASIN STORAGE= .1228E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.21 125.98 234.56 .63 5.00 125.09 235.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1023E+02 EXCESS= .0000E+00 OUTFLOW= .1024E+02 BASIN STORAGE= .1447E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.26 119.35 234.56 .60 5.00 118.75 235.00 .60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9757E+01 EXCESS= .0000E+00 OUTFLOW= .9759E+01 BASIN STORAGE= .1370E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.29 113.08 236.73 .57 5.00 109.45 235.00 .57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9292E+01 EXCESS= .0000E+00 OUTFLOW= .9294E+01 BASIN STORAGE= .1531E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.31 108.98 237.98 .56 5.00 108.83 235.00 .56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9098E+01 EXCESS= .0000E+00 OUTFLOW= .9099E+01 BASIN STORAGE= .1561E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 3.32 108.54 235.56 .55 5.00 105.41 235.00 .55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8970E+01 EXCESS= .0000E+00 OUTFLOW= .8972E+01 BASIN STORAGE= .1308E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.36 218.65 221.82 .63 5.00 218.33 220.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2120E+02 EXCESS= .0000E+00 OUTFLOW= .2121E+02 BASIN STORAGE= .1661E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.40 211.37 220.68 .61 5.00 210.02 220.00 .61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2061E+02 EXCESS= .0000E+00 OUTFLOW= .2061E+02 BASIN STORAGE= .2011E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.46 200.30 221.23 .59 5.00 198.93 220.00 .59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1962E+02 EXCESS= .0000E+00 OUTFLOW= .1963E+02 BASIN STORAGE= .1629E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.53 189.04 222.20 .56 5.00 189.03 220.00 .56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1864E+02 EXCESS= .0000E+00 OUTFLOW= .1864E+02 BASIN STORAGE= .1519E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.55 184.45 220.28 .54 5.00 183.59 220.00 .54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1825E+02 EXCESS= .0000E+00 OUTFLOW= .1826E+02 BASIN STORAGE= .2000E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 3.57 181.39 221.57 .54 5.00 180.17 220.00 .54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1797E+02 EXCESS= .0000E+00 OUTFLOW= .1798E+02 BASIN STORAGE= .1544E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .99
 RTOFFD7* MANE .86 18.73 216.04 .99 5.00 18.46 215.00 .99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1174E+01 EXCESS= .0000E+00 OUTFLOW= .1175E+01 BASIN STORAGE= .7654E-09 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .98
 RTOFFD7* MANE .86 18.32 216.34 .97 5.00 18.05 215.00 .97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1147E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .6066E-09 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .95
 RTOFFD7* MANE .73 17.77 216.21 .93 5.00 17.39 215.00 .93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1103E+01 EXCESS= .0000E+00 OUTFLOW= .1104E+01 BASIN STORAGE= .4925E-09 PERCENT ERROR= -.1

FOR PLAN = 1	RATIO=	.93							
RTOFFD7*	MANE	.87	16.97	215.98	.89	5.00	16.71	215.00	.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1059E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .5163E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.92							
RTOFFD7*	MANE	.90	16.69	216.45	.88	5.00	16.44	215.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+01 EXCESS= .0000E+00 OUTFLOW= .1042E+01 BASIN STORAGE= .4791E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.91							
RTOFFD7*	MANE	.85	16.52	216.06	.87	5.00	16.25	215.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1029E+01 EXCESS= .0000E+00 OUTFLOW= .1029E+01 BASIN STORAGE= .7381E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.99							
RCOND1*	MANE	1.09	267.01	222.00	.55	5.00	263.66	220.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2351E+02 EXCESS= .0000E+00 OUTFLOW= .2352E+02 BASIN STORAGE= .4875E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.98							
RCOND1*	MANE	1.19	257.33	221.70	.53	5.00	254.66	220.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2288E+02 EXCESS= .0000E+00 OUTFLOW= .2289E+02 BASIN STORAGE= .7336E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.95							
RCOND1*	MANE	1.16	245.89	222.24	.51	5.00	242.47	220.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2184E+02 EXCESS= .0000E+00 OUTFLOW= .2185E+02 BASIN STORAGE= .7559E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.93							
RCOND1*	MANE	1.21	233.58	222.55	.48	5.00	231.02	220.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2081E+02 EXCESS= .0000E+00 OUTFLOW= .2082E+02 BASIN STORAGE= .6356E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.92							
RCOND1*	MANE	1.17	226.95	222.13	.47	5.00	225.01	220.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2039E+02 EXCESS= .0000E+00 OUTFLOW= .2040E+02 BASIN STORAGE= .7310E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.91							
RCOND1*	MANE	1.16	225.02	222.45	.47	5.00	221.72	220.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2010E+02 EXCESS= .0000E+00 OUTFLOW= .2011E+02 BASIN STORAGE= .5981E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.99							
RCOND5*	MANE	.62	280.62	221.30	.74	5.00	274.11	220.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3676E+02 EXCESS= .0000E+00 OUTFLOW= .3688E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.98							
RCOND5*	MANE	.65	271.30	221.45	.73	5.00	265.09	220.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3599E+02 EXCESS= .0000E+00 OUTFLOW= .3610E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .2									
FOR PLAN = 1	RATIO=	.95							
RCOND5*	MANE	.65	258.93	221.26	.70	5.00	252.59	220.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3475E+02 EXCESS= .0000E+00 OUTFLOW= .3487E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .2									
FOR PLAN = 1	RATIO=	.93							
RCOND5*	MANE	.61	247.24	221.33	.68	5.00	240.73	220.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3350E+02 EXCESS= .0000E+00 OUTFLOW= .3362E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .2									
FOR PLAN = 1	RATIO=	.92							
RCOND5*	MANE	.61	240.97	221.50	.67	5.00	236.15	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3301E+02 EXCESS= .0000E+00 OUTFLOW= .3313E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .2									
FOR PLAN = 1	RATIO=	.91							
RCOND5*	MANE	.63	237.39	221.13	.66	5.00	232.03	225.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3266E+02 EXCESS= .0000E+00 OUTFLOW= .3278E+02 BASIN STORAGE= -.1689E+00 PERCENT ERROR= .2									

FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	7.29	230.00	.79	5.00	7.29	230.00	.79	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5158E+00 EXCESS= .0000E+00 OUTFLOW= .5166E+00 BASIN STORAGE= .1447E-02 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	7.13	230.00	.77	5.00	7.13	230.00	.77	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5031E+00 EXCESS= .0000E+00 OUTFLOW= .5039E+00 BASIN STORAGE= .1420E-02 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	6.86	230.00	.74	5.00	6.86	230.00	.74	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4821E+00 EXCESS= .0000E+00 OUTFLOW= .4830E+00 BASIN STORAGE= .1923E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	6.59	230.00	.71	5.00	6.59	230.00	.71	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4613E+00 EXCESS= .0000E+00 OUTFLOW= .4621E+00 BASIN STORAGE= .1888E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	6.48	230.00	.70	5.00	6.48	230.00	.70	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4530E+00 EXCESS= .0000E+00 OUTFLOW= .4538E+00 BASIN STORAGE= .1874E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
ROND11* MANE	5.00	6.40	230.00	.69	5.00	6.40	230.00	.69	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4472E+00 EXCESS= .0000E+00 OUTFLOW= .4480E+00 BASIN STORAGE= .1864E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.51	105.26	223.30	1.11	5.00	103.98	225.00	1.11	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9509E+01 EXCESS= .0000E+00 OUTFLOW= .9509E+01 BASIN STORAGE= .8499E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.54	101.61	223.46	1.08	5.00	100.61	225.00	1.08	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9210E+01 EXCESS= .0000E+00 OUTFLOW= .9210E+01 BASIN STORAGE= .8184E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.59	95.88	222.54	1.02	5.00	95.56	225.00	1.03	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8743E+01 EXCESS= .0000E+00 OUTFLOW= .8743E+01 BASIN STORAGE= .8642E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.64	90.14	224.13	.97	5.00	89.34	225.00	.97	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8269E+01 EXCESS= .0000E+00 OUTFLOW= .8269E+01 BASIN STORAGE= .9153E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.66	87.91	223.51	.95	5.00	87.29	225.00	.95	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8082E+01 EXCESS= .0000E+00 OUTFLOW= .8082E+01 BASIN STORAGE= .8272E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCOFD3* MANE	2.68	86.08	224.88	.93	5.00	85.94	225.00	.93	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7954E+01 EXCESS= .0000E+00 OUTFLOW= .7954E+01 BASIN STORAGE= .8153E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
ROFFE-2B MANE	1.75	15.85	232.75	.28	5.00	15.59	230.00	.28	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1351E+01 EXCESS= .0000E+00 OUTFLOW= .1351E+01 BASIN STORAGE= .7273E-03 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
ROFFE-2B MANE	1.75	15.10	232.75	.26	5.00	14.89	235.00	.26	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1294E+01 EXCESS= .0000E+00 OUTFLOW= .1295E+01 BASIN STORAGE= .8299E-03 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
ROFFE-2B MANE	1.75	13.88	232.75	.25	5.00	13.74	235.00	.25	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1203E+01 EXCESS= .0000E+00 OUTFLOW= .1203E+01 BASIN STORAGE= .7925E-03 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO=	.00								
ROFFE-2B MANE	1.75	12.69	232.75	.23	5.00	12.62	235.00	.23	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1113E+01 EXCESS= .0000E+00 OUTFLOW= .1113E+01 BASIN STORAGE= .7532E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MAHE 1.75 12.24 234.50 .22 5.00 12.18 235.00 .22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1078E+01 EXCESS= .0000E+00 OUTFLOW= .1078E+01 BASIN STORAGE= .7295E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MAHE 1.75 11.92 234.50 .21 5.00 11.87 235.00 .21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1054E+01 EXCESS= .0000E+00 OUTFLOW= .1054E+01 BASIN STORAGE= .7208E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 133.36 230.00 .71 5.00 133.36 230.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1233E+02 EXCESS= .0000E+00 OUTFLOW= .1232E+02 BASIN STORAGE= .1362E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 128.23 230.00 .69 5.00 128.23 230.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1192E+02 EXCESS= .0000E+00 OUTFLOW= .1192E+02 BASIN STORAGE= .1428E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 120.91 230.00 .65 5.00 120.91 230.00 .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1129E+02 EXCESS= .0000E+00 OUTFLOW= .1129E+02 BASIN STORAGE= .1444E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 112.36 230.00 .61 5.00 112.36 230.00 .61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1063E+02 EXCESS= .0000E+00 OUTFLOW= .1063E+02 BASIN STORAGE= .1422E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 109.21 230.00 .60 5.00 109.21 230.00 .60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1038E+02 EXCESS= .0000E+00 OUTFLOW= .1037E+02 BASIN STORAGE= .1423E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MAHE 5.00 107.24 230.00 .59 5.00 107.24 230.00 .59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1021E+02 EXCESS= .0000E+00 OUTFLOW= .1021E+02 BASIN STORAGE= .1433E-02 PERCENT ERROR= .0

*** NORMAL END OF HEC-1 ***


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1*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 19DEC05 TIME 15:10:00 *
*****

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*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

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X X XXXXXX XXXXX X
X X X X X XX
X X X X X
XXXXXX XXXX X XXXXX X
X X X X X
X X X X X
X X XXXXXX XXXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,

DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION

KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

1 ID *****
2 ID *
3 ID * THE LANDWELL COMPANY *
4 ID * CONCEPTUAL DRAINAGE STUDY FOR *
5 ID * THE EASTSIDE PROPERTIES *
6 ID * EXISTING CONDITIONS *
7 ID * INPUT FILE:EXISTING-100.DAT *
8 ID * INPUT FILE DATE:12/19/05 *
9 ID * STORM DISTRIBUTION = SDN#3 *
10 ID * DESIGN STORM = 100 YEAR, 6 HOUR *
11 ID * MODELED BY=Mahesh Kumar (PBS&J) *
12 ID *
13 ID *****

```

*DIAGRAM

*** FREE ***

```

14 ID
15 ID
16 ID DRAINAGE AREA
17 ID (SQUARE MILES) DARF
18 ID 0-0.5 .99
19 ID 0.5-1 .975
20 ID 1-2 .95
21 ID 2-3 .925
22 ID 3-4 .915
23 ID 4-5 .908
24 IT 5 0 0 300
25 IO 5 0 0
26 IN 5 0 0
27 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908

```

```

28 KK ONE-9
29 BA 0.336
30 PB 2.86
31 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
32 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
33 PC 0.19 0.197 0.198 0.2 0.201 0.204 0.214 0.229 0.241 0.249
34 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
35 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
36 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
37 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
38 PC 0.998 0.999 1
39 LS 0 78.16
40 UD 0.739

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41 KK OFFE-9
42 BA 0.063
43 PB 2.86
44 LS 0 87.64
45 UD 0.120

```

1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

46 KK CP3
47 KM COMBINE ONE-9, OFFE-9
48 HC 2

```

```

49 KK ONE-10
50 BA 0.090
51 PB 2.86
52 LS 0 63.94
53 UD 0.624

```

54 KKOFFE-10A
 55 BA 0.096
 56 FB 2.86
 57 LS 0 83.94
 58 UD 0.134
 *
 59 KKOFFE-10B
 60 BA 0.042
 61 FB 2.86
 62 LS 0 84.36
 63 UD 0.130
 *
 64 KK CP4
 65 KM COMBINE ONE-10, OFFE-10A, OFFE-10B
 66 HC 3
 *
 67 KK RCP4
 68 KM ROUTE TO ONE-9
 69 RD 4940 0.0144 0.035 0 TRAP
 *
 70 KK CP5
 71 KM COMBINE CP3 AND RCP4
 72 HC 2
 *
 73 KK RC5
 74 KM ROUTE TO BASIN ONE-5
 75 RD 7000 0.015 0.035 0 TRAP
 *
 76 KK ONE-5
 77 BA 0.870
 78 FB 2.86
 79 LS 0 84.17
 80 UD 0.808
 *

1

HEC-1 INPUT

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

81 KK OFFE-2
 82 BA 0.092
 83 FB 2.86
 84 LS 0 78.74
 85 UD 0.191
 *
 86 KK OFFE-3
 87 BA 0.297
 88 FB 2.86
 89 LS 0 81.31
 90 UD 0.281
 *
 91 KK OFFE-3A
 92 BA 0.030
 93 FB 2.86
 94 LS 0 88
 95 UD 0.096
 *
 96 KKOFFE-3A
 97 KM ROUTE OFFE-3A IN CHANNEL WEST ALONG LAKE MEAD DRIVE
 98 RD 2200 0.00453 0.033 0 TRAP 12 4
 *
 99 KK CP1
 100 KM COMBINE ROFFE-3A, OFFE-3, AND OFFE-2
 101 HC 3
 *
 102 KK RC1
 103 KM ROUTE TO BOULDER HIGHWAY
 104 RD 5000 0.025 0.03 0 TRAP
 *
 105 KK OFFE-2A
 106 BA 0.023
 107 FB 2.86
 108 LS 0 78.38
 109 UD 0.146
 *
 110 KK OFFE-1
 111 BA 0.410
 112 FB 2.86
 113 LS 0 84.75
 114 UD 0.216
 *

1

HEC-1 INPUT

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

115 KK OFFE-4
 116 BA 0.485
 117 FB 2.86
 118 LS 0 82.47
 119 UD 0.389
 *

120	KK	ROFFE-4							
121	KM	ROUTE TO BOULDER HIGHWAY AT PABCO RD							
122	RD	12600	0.03	0.03	0	TRAP	1	1	
	*								
123	KK	CP2							
124	KM	COMBINE ALL BASINS AT BOULDER HIGHWAY							
125	HC	4							
	*								
126	KK	OCP2							
127	KM	FLOW SPLIT AT CULVERT UNDER BOULDER HIGHWAY AT PABCO ROAD							
128	KM	DIVERT OUT FLOW ALONG BOULDER HIGHWAY							
129	DT	DCP2							
130	DI	0	364	410	992	1108			
131	DQ	0	0	48	266	324			
	*								
132	KK	CP6							
133	KM	COMBINE ALL BASINS AT ATHENS							
134	HC	3							
	*								
135	KK	RCP6							
136	KM	ROUTE TO BASIN OND7							
137	RD	1588	0.006	0.035	0	TRAP			
	*								
138	KK	OND7*							
139	KM	MODIFIED WRF ONSITE BASIN OND7*							
140	BA	0.023							
141	PB	2.77							
142	LS	0	92.5						
143	UD	0.183							
	*								
144	KK	CP6A							
145	KM	COMBINE RCP6 AND OND7*							
146	HC	2							
	*								
147	KK	RCP6A							
148	KM	ROUTE TO OND6*							
149	RD	1266	0.013	0.035	0	TRAP			
	*								

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

150	KK	OND6*							
151	KM	WRF ONSITE BASIN OND6*							
152	BA	0.0627							
153	PB	2.77							
154	LS	0	91						
155	UD	0.237							
	*								
156	KK	CP6B							
157	KM	COMBINE OND6* AND RCP6B							
158	HC	2							
	*								
159	KK	RCP6B							
160	KM	ROUTE TO OND8*							
161	RD	1445	0.012	0.035	0	TRAP			
	*								
162	KK	OND8*							
163	KM	MODIFIED WRF ONSITE BASIN OND8*							
164	BA	0.022							
165	PB	2.77							
166	LS	0	89.91						
167	UD	0.260							
	*								
168	KK	CP6C							
169	KM	ROUTE TO CP7							
170	HC	2							
	*								
171	KK	RCP6C							
172	KM	ROUTE TO CP7							
173	RD	1750	0.012	0.035	0	TRAP			
	*								
174	KK	ONE-6							
175	BA	1.011							
176	PB	2.86							
177	LS	0	81.7						
178	UD	0.433							
	*								
179	KK	ONE-6							
180	KM	ROUTE TO ONE-4							
181	RD	5300	0.014	0.035	0	TRAP			
	*								

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

182	KK	ONE-4							
183	BA	0.214							
184	PB	2.86							
185	LS	0	78.24						
186	UD	0.690							
	*								

```

187      KK      CP7
188      KM      COMBINE ALL BASINS TRIBUTARY TO PABCO
189      HC      3
      *

190      KK      BKPVE
191      BA      0.139
192      PB      2.86
193      LS      0      83.7
194      UD      0.287
      *

195      KK      RBKPVE
196      KM      PALO VERDE
197      RD      5140  0.017  .015      0      TRAP      80      0
      *

198      KK      RBKMJE
199      BA      0.034
200      PB      2.86
201      LS      0      85.5
202      UD      0.176
      *

203      KK      RBKMJE
204      KM      MAJOR THEN PALO VERDE
205      RD      4720  0.016  .015      0      TRAP      80      0
      *

206      KK      CRMJE
207      BA      0.206
208      PB      2.86
209      LS      0      85.0
210      UD      0.301
      *

211      KK      OCRMJE
212      KM      FLOW SPLIT AT MAJOR AND CENTER
213      KM      DIVERT OUT FLOW IN CENTER STREET
214      DT      DCRMJE
215      DI      0      50      300
216      DQ      0      25      150
      *

217      KK      ROCRME
218      KM      MAJOR
219      RD      5125  0.017  .015      0      TRAP      80      0
      *

```

HEC-1 INPUT

PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

220      KK      CP9
221      KM      COMBINE RBKPVE, RBKMJE, AND ROCRME
222      HC      3
      *

223      KK      WSPVE
224      BA      0.265
225      PB      2.86
226      LS      0      79.0
227      UD      0.420
      *

228      KK      CP10
229      KM      COMBINE CP9, AND WSPVE
230      KM      AT WARM SPRINGS AND PALO VERDE
231      HC      2
      *

232      KK      OCP10
233      KM      OVERFLOW AT WARM SPRINGS AND PALO VERDE
234      KM      DIVERT OUT FLOW IN STORM DRAIN
235      DT      OCP10
236      DI      0      428      600
237      DQ      0      125      125
      *

238      KK      ROCP10
239      KM      WARM SPRINGS
240      RD      1200  0.009  .015      0      TRAP      100      0
      *

241      KK      DCRMJE
242      KM      RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
243      DR      DCRMJE
      *

244      KK      RDCRMJE
245      KM      CENTER
246      RD      4860  0.020  .015      0      TRAP      100      0
      *

247      KK      WSCRE
248      BA      0.161
249      PB      2.86
250      LS      0      79.3
251      UD      0.265
      *

252      KK      CP11
253      KM      COMBINE ROCP10, RDCRMJE, AND WSCRE
254      KM      AT WARM SPRINGS AND CENTER
255      HC      3

```


323 KM AT PANNEE AND LAKE MEAD (UPSTREAM OF 10X3 CULVERT)
 324 HC 4
 *
 325 KK OCP14
 326 KM DIVERT FLOW UNDER LAKE MEAD THROUGH A 3'x10' RCB
 327 DT DCP14
 328 D1 0 230 1000
 329 DQ 0 230 230
 *

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

330 KK DE
 331 BA 0.055
 332 PB 2.86
 333 LS 0 85.29
 334 UD 0.165
 *
 335 KK CP15
 336 KM COMBINE OCP14 AND DE
 337 KM TOTAL FLOW ON SOUTH SIDE OF LAKE MEAD PARKWAY
 338 HC 2
 *
 339 KK DCP12
 340 KM RECALL FLOW FROM WS AND LM
 341 KM FLOW ON SOUTH SIDE OF LM
 342 DR DCP12
 *
 343 KK DCP13
 344 KM RECALL FLOW FROM CENTER AND LAKE MEAD, FLOW FROM 24" CMP CULVERT
 345 DR DCP13
 *
 346 KK DCP14
 347 KM RECALL FLOW FROM CP14
 348 DR DCP14
 *
 349 KK CP16
 350 KM COMBINE DCP12, DCP13, AND DCP14
 351 KM FLOW ON NORTH SIDE OF LAKE MEAD
 352 HC 3
 *
 353 KK CP17
 354 KM COMBINE ALL FLOWS UPSTREAM OF MOHAWK DRIVE
 355 KM ALL FLOW DRAINS OVER LAKE MEAD PARKWAY TO THE NORTH SIDE
 356 HC 2
 *

357 KK RCP17
 358 KM NATURAL CHANNEL ALONG EARTH BERM
 359 RD 2300 0.011 .03 0 TRAP 20 0
 *

360 KK EE
 361 BA 0.032
 362 PB 2.86
 363 LS 0 82.2
 364 UD 0.138
 *

HEC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

365 KK FE
 366 BA 0.014
 367 PB 2.86
 368 LS 0 77.77
 369 UD 0.124
 *
 370 KK GE
 371 BA 0.015
 372 PB 2.86
 373 LS 0 81.20
 374 UD 0.113
 *
 375 KK CP18
 376 KM COMBINE ALL FLOWS ON THE NORTH SIDE OF LAKE MEAD PARKWAY
 377 HC 4
 *
 378 KK ONE-8
 379 BA 0.204
 380 PB 2.86
 381 LS 0 69.8
 382 UD 0.982
 *
 383 KK CP19
 384 KM COMBINE CP18 WITH ONE-8
 385 HC 2
 *
 386 KK ONE-7
 387 BA 0.208
 388 PB 2.86
 389 LS 0 80.41


```

390      UD      0.232
      *
391      KK OFFD1*
392      KM      START OF CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS*****
393      KM      THE PB CARDS FOR WRF BASINS INSIDE THE MACARRAN AIRPORT AREA ARE
394      KM      2.77 FOR 100 Y- 6 HOUR AND 2.86 FOR WRF BASINS OUTSIDE THE MACARRAN AIRPORT
395      BA      0.082
396      PB      2.86
397      LS      0      93.0
398      UD      0.156
      *

```

```

399      KKRTOFFD1*
400      RD      7600      0.009      0.016      0      TRAP      40      5
      *

```

HEC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

401      KK OFFD2*
402      BA      0.118
403      PB      2.86
404      LS      0      79.0
405      UD      0.333
      *

```

```

406      KKRTOFFD2*
407      RD      1400      0.012      0.016      0      TRAP      40      5
      *

```

```

408      KK OFFD2A*
409      BA      0.107
410      PB      2.86
411      LS      0      85.5
412      UD      0.212
      *

```

```

413      KK COFD2A*
414      HC      3
      *

```

```

415      KKDIVERSION*
416      DT SPLIT1*
417      DI      0      121      312
418      DQ      0      0      39
      *

```

```

419      KKRCOFD2A*
420      RD      1300      0.01      0.016      0      TRAP      40      5
      *

```

```

421      KK OFFD5*
422      BA      0.322
423      PB      2.86
424      LS      0      85.5
425      UD      0.150
      *

```

```

426      KK COFD5*
427      HC      2
      *

```

```

428      KK RCOFD5*
429      RD      1800      0.013      0.016      0      TRAP      40      5
      *

```

```

430      KK OFFD6*
431      BA      0.114
432      PB      2.86
433      LS      0      92.0
434      UD      0.162
      *

```

HEC-1 INPUT

PAGE 13

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

435      KK COFD6*
436      HC      2
      *

```

```

437      KK DIVERT*
438      DT SPLIT2*
439      DI      0      759
440      DQ      0      177
      *

```

```

441      KK OFFD7*
442      BA      0.0222
443      PB      2.86
444      LS      0      92
445      UD      0.135
      *

```

```

446      KKRTOFFD7*
447      RK      500      0.01      0.016      0      TRAP      3      50
      *

```

```

448      KK OND1*
449      BA      0.0433
450      PB      2.77
451      LS      0      88
452      UD      0.197
      *

```

```

453      KK COND1*
454      HC      3
      *

455      KK RCOND1*
456      KM ROUTE IN GRASS CHANNEL
457      RK      1600      .01      .03      0      TRAP      0      5
      *

458      KK OND4*
459      BA 0.0681
460      PB 2.77
461      LS      0      90.6
462      UD 0.211
      *

463      KK DBOND4*
464      KO      3
465      RS      1      ELEV      3.0
466      SV      0      2.8      3.4      4.4      5.1      6.2      7.6
467      SE      0      2.6      2.8      3.1      3.3      3.6      4.0
468      SQ      0      12.5      13.2      14.13      14.72      15.56      16.6
      *

```

1

HEC-1 INPUT

PAGE 14

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

469      KK OND5*
470      BA 0.0558
471      PB 2.77
472      LS      0      90.8
473      UD 0.196
      *

474      KK DBOND5*
475      KO      3
476      RS      1      ELEV      3.0
477      SV      0      2.8      3.4      4.4      5.1      6.2      7.6
478      SE      0      2.6      2.8      3.1      3.3      3.6      4.0
479      SQ      0      12.5      13.2      14.13      14.72      15.56      16.6
      *

480      KK COND5*
481      HC      3
      *

482      KK RCOND5*
483      KM ROUTE IN RIP RAP CHANNEL TO PONDS
484      RK      1600      0.125      .04      0      TRAP      15      3
      *

485      KK OND11*
486      KM WRF ONSITE BASIN OND11
487      BA 0.0122
488      PB 2.77
489      LS      0      91
490      UD 0.206
      *

491      KK ROND11*
492      RD      1950      0.0120      .025      0      TRAP      15      3
      *

493      KK OND11A*
494      KM MODIFIED WRF ONSITE BASIN POND1
495      BA 0.075
496      PB 2.77
497      LS      0      85
498      UD 0.236
      *

499      KKCHANNEL2
500      KM WRF CHANNEL2
501      HC      3
      *

```

1

HEC-1 INPUT

PAGE 15

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

502      KKRETURN1*
503      DR SPLIT1*
      *

504      KKRETURN2*
505      DR SPLIT2*
      *

506      KK OFFD3*
507      BA 0.160
508      PB 2.86
509      LS      0      79.0
510      UD 0.264
      *

511      KK COFD3*
512      HC      3
      *

513      KK RCOFD3*
514      RD      800      0.0075      .025      0      TRAP      20      3
      *

515      KK OND2A*
516      BA 0.0066
517      PB 2.77

```

518 LS 0 88.0
 519 UD 0.105
 *
 520 KK COND2A*
 521 HC 2
 *
 522 KK OND3*
 523 BA 0.0086
 524 FB 2.77
 525 LS 0 88.0
 526 UD 0.139
 *

527 KK COND3*
 528 HC 2
 *

529 KK OND2*
 530 BA 0.046
 531 FB 2.77
 532 LS 0 77.93
 533 UD 0.240
 *

HEC-1 INPUT

PAGE 16

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

534 KK CP1*
 535 KM COMBINE FLOW FROM COFD3 AND OND-2*
 536 HC 2
 *

537 KK OND12*
 538 BA 0.0122
 539 FB 2.77
 540 LS 0 85
 541 UD 0.183
 *

* ****END CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS****
 * ****PBS&J MAY 1999****
 *

542 KK OFFE-2B
 543 BA 0.092
 544 FB 2.86
 545 LS 0 75.82
 546 UD 0.259
 *

547 KKROFFE-2B
 548 KM ROUTE OFFE-2B
 549 RD 2200 0.019 0.035 0 TRAP
 *

550 KKCHANNEL1
 551 KM COMBINE CP1*,ROFFE-2B AND OND-12*
 552 HC 3
 *

553 KKCHANNEL1
 554 KM ROUTE CHANNEL1 TO CP8
 555 RD 2200 0.005 0.035 0 TRAP
 *

556 KK ONE-1
 557 BA 0.072
 558 FB 2.86
 559 LS 0 77.00
 560 UD 0.405
 *

561 KK ONE-2
 562 BA 0.180
 563 FB 2.86
 564 LS 0 77.57
 565 UD 0.825
 *

HEC-1 INPUT

PAGE 17

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

566 KK CP8
 567 KM COMBINE ONE-1, ONE-2, ROFFE-2B
 568 HC 3
 *

569 KK ONE-3
 570 BA 0.271
 571 FB 2.86
 572 LS 0 83.87
 573 UD 0.487
 574 ZZ
 *

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
 LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
 NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW
 28 ONE-9
 .
 .

41	.	OFFE-9	.
46	CP3	.....	.
49	.	ONE-10	.
54	.	OFFE-10A	.
59	.	OFFE-10B	.
64	CP4	.....	.
67	.	V	.
70	CP5	.....	.
73	.	V	.
76	RC5	.	.
81	.	ONE-5	.
86	.	OFFE-2	.
91	.	OFFE-3	.
96	.	OFFE-3A	.
99	.	V	.
102	.	RC1	.
105	.	OFFE-2A	.
110	.	OFFE-1	.
115	.	OFFE-4	.
120	.	V	.
123	.	ROFFE-4	.
126	.	CP2	.....
129	.	----->	DCP2
132	CP6	.....	.
135	.	V	.
138	RCP6	.	.
144	CP6A	.....	.
147	.	V	.
150	RCP6A	.	.
156	CP6B	.....	.
159	.	V	.
162	RCP6B	.	.
168	CP6C	.....	.
171	.	V	.
174	RCP6C	.	.
179	.	ONE-6	.
182	.	V	.
	.	RCNE-6	.
	.	ONE-4	.

```

187 CP7.....
190     BKPVE
191     V
192     V
195     RBKPVE
196
198     BKMJE
199     V
200     V
203     RBKMJE
204
206     CRMJE
207
214     OCRMJE-----> DCRMJE
211     V
212     V
217     ROCRME
218
220 CP9.....
221
223     WSPVE
224
228 CP10.....
229
235     OCP10-----> DCP10
232     V
233     V
238     ROCP10
239
243     DCRMJE<----- DCRMJE
241     V
242     V
244     RDCRMJE
245
247     WSCRE
248
252 CP11.....
253
259     OCP11-----> DCP11
256     V
257     V
262     ROCP11
263
265     BKLME
266     V
267     V
270     RBKLME
271
273     WSLME
274
278 CP12.....
279
285     OCP12-----> DCP12
282
288     CRLME
289
296     DCP11<----- DCP11
293     V
294     V
297     RDCP11
298
300 CP13.....
301
307     OCP13-----> DCP13
303
310     FWLME
311
317     DCP10<----- DCP10
315     V
316     V
318     RDCP10
319
321 CP14.....

```

```

327 .-----> DCP14
328 OCP14
330 . DE
335 CP15.....
342 .<----- DCP12
343 DCP12
345 .<----- DCP13
346 DCP13
348 .<----- DCP14
349 DCP14
353 CP16.....
357 CP17.....
360 V
365 RCP17
370 EE
375 FE
380 GE
383 CP18.....
386 ONE-8
391 CP19.....
396 ONE-7
399 OFFD1*
401 V
406 RTOFFD1*
408 OFFD2*
413 V
416 RTOFFD2*
419 OFFD2A*
421 COFD2A*
426 DIVERSIO
428 V
430 RCOFD2A*
435 OFFD5*
438 COFD5*
441 V
446 RCOFD5*
448 OFFD6*
451 COFD6*
454 DIVERSIO
457 V
460 RCOFD6*
463 OFFD7*
466 V
469 RTOFFD7*
472 OND1*

```



```

453      COND1* .....
455      RCOND1* .....
458      OND4* .....
463      DBCOND4* .....
469      OND5* .....
474      DBCOND5* .....
480      COND5* .....
482      RCOND5* .....
485      OND11* .....
491      ROND11* .....
493      OND11A* .....
499      CHANNEL2 .....
503      RETURN1* .....
504      RETURN2* .....
505      OFFD3* .....
506      COFD3* .....
511      RCOFD3* .....
513      OND2A* .....
515      COND2A* .....
520      OND3* .....
522      COND3* .....
527      OND2* .....
529      CP1* .....
534      OND12* .....
537      OFFE-2B .....
542      ROFFE-2B .....
547      CHANNEL1 .....
550      RCHANNEL .....
553      ONE-1 .....
556      ONE-2 .....
561      CP8 .....
566      ONE-3 .....
569

```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1 .....
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 19DEC05 TIME 15:18:00
* .....

```

```

* .....
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
* .....

```

```

*****
*   THE LANDWELL COMPANY   *
*   CONCEPTUAL DRAINAGE STUDY FOR *
*   THE EASTSIDE PROPERTIES *
*   EXISTING CONDITIONS   *
*   INPUT FILE:EXISTING-100.DAT *
*   INPUT FILE DATE:12/19/05 *
*   STORM DISTRIBUTION = SDN#3 *
*   DESIGN STORM = 100 YEAR, 6 HOUR *
*   MODELED BY=Mahesh Kumar (PRS&J) *
*****

```

```

DRAINAGE AREA
(SQUARE MILES)  DART
0-0.5          .99
0.5-1          .975
1-2            .95
2-3            .925
3-4            .915
4-5            .908

```

```

25 IO  OUTPUT CONTROL VARIABLES
        IPRINT      5  PRINT CONTROL
        IPLOT       0  PLOT CONTROL
        QSCAL       0.  HYDROGRAPH PLOT SCALE

```

```

IT  HYDROGRAPH TIME DATA
      NMIN      5  MINUTES IN COMPUTATION INTERVAL
      IDATE     1  0  STARTING DATE
      ITIME     0000 STARTING TIME
      NQ        300 NUMBER OF HYDROGRAPH ORDINATES
      NDDATE    2  0  ENDING DATE
      NDTIME    0055 ENDING TIME
      ICENT     19  CENTURY MARK

```

```

      COMPUTATION INTERVAL .08 HOURS
      TOTAL TIME BASE     24.92 HOURS

```

```

ENGLISH UNITS
DRAINAGE AREA      SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION  FEET
FLOW               CUBIC FEET PER SECOND
STORAGE VOLUME     ACRE-FEET
SURFACE AREA       ACRES
TEMPERATURE        DEGREES FAHRENHEIT

```

```

JP  MULTI-PLAN OPTION
      NPLAN      1  NUMBER OF PLANS

```

```

JR  MULTI-RATIO OPTION
      RATIOS OF PRECIPITATION
      .99      .98      .95      .93      .92      .91

```

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

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*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** **

```

*****
*   DBOND4*   *
*   *   *   *
463 KK

```

```

464 KO          OUTPUT CONTROL VARIABLES
                   IPRNT      3  PRINT CONTROL
                   IPLPT      0  PLOT CONTROL
                   QSCAL      0.  HYDROGRAPH PLOT SCALE

```

```

465 RS      STORAGE ROUTING
              NSTPS      1  NUMBER OF SUBREACHES
              ITYP      ELEV TYPE OF INITIAL CONDITION
              RSVRIC    3.00 INITIAL CONDITION
              X          .00 WORKING R AND D COEFFICIENT

```

466 SV	STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
467 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
468 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(CFS)			
+	15.	13.	5.	5.	5.
		(INCHES)			
		1.717	2.917	2.917	2.917
	(AC-FT)	6.	11.	11.	11.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
* (AC-FT)	(HR)				
5.	5.08	4.	1.	1.	1.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ {FEET}	{HR}				
3.31	5.08	2.72	1.14	1.10	1.10

◆ ◆ ◆

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR	
+		(CFS)				
+	15.	12.	5.	5.	5.	
		(INCHES)	1.701	2.879	2.879	2.879
		(AC-FT)	5.	10.	10.	10.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
5.	5.08	4.	1.	1.	1.

PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
	3.28	5.08	2.69	1.12	1.08

考 考 考 考 考 考 考 考 考 考 考 考 考 考 考

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
(CFS)	(HR)	6-HR	24-HR	72-HR	24, 92-HR	
15.	5.08	12.	5.	5.	5.	
		(INCHES)	1.677	2.816	2.816	2.816
		(AC-FT)	6.	10.	10.	10.

PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
5.	5.08	3.	1.	1.	1.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
3.23	5.00	2.64	1.10	1.06	1.06

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW
-----------	------	----------------------

	(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	14.	5.08	(CFS)	12.	5.	5.	5.
			(INCHES)	1.663	2.753	2.753	2.753
			(AC-FT)	6.	10.	10.	10.
PEAK STORAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)		3.	1.	1.	1.
	5.	5.08					
PEAK STAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		2.61	1.07	1.03	1.03
	3.18	5.08					
CUMULATIVE AREA =				.07 SQ MI			

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .92

	(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	14.	5.00	(CFS)	12.	5.	5.	5.
			(INCHES)	1.658	2.728	2.728	2.728
			(AC-FT)	6.	10.	10.	10.
PEAK STORAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)		3.	1.	1.	1.
	5.	5.08					
PEAK STAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		2.60	1.06	1.02	1.02
	3.16	5.08					
CUMULATIVE AREA =				.07 SQ MI			

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .91

	(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	14.	5.00	(CFS)	12.	5.	5.	5.
			(INCHES)	1.654	2.710	2.711	2.711
			(AC-FT)	6.	10.	10.	10.
PEAK STORAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)		3.	1.	1.	1.
	5.	5.00					
PEAK STAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		2.59	1.05	1.01	1.01
	3.14	5.08					
CUMULATIVE AREA =				.07 SQ MI			

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474 KK *****
* DBOND5* *

475 KO OUTPUT CONTROL VARIABLES
IPRNT 3 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

476 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 3.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

	STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
477 SV								
478 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
479 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

HYDROGRAPH AT STATION DBOND5*

FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	4.25	(CFS)	12.	5.	5.
			(INCHES)	2.009	3.180	3.181
			(AC-FT)	6.	9.	9.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	4.	4.25		3.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.07	4.25		2.57	1.01	.97
CUMULATIVE AREA =			.06 SQ MI			

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	4.25	(CFS)	12.	5.	5.
			(INCHES)	2.000	3.142	3.143
			(AC-FT)	6.	9.	9.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	4.	4.25		3.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.04	4.25		2.55	1.00	.96
CUMULATIVE AREA =			.06 SQ MI			

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	4.17	(CFS)	12.	5.	4.
			(INCHES)	1.986	3.079	3.079
			(AC-FT)	6.	9.	9.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	4.	4.17		3.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.01	4.17		2.53	.97	.94
CUMULATIVE AREA =			.06 SQ MI			

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	.00	(CFS)	12.	5.	4.
			(INCHES)	1.971	3.016	3.016
			(AC-FT)	6.	9.	9.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	4.	.00		3.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.00	.00		2.51	.95	.92
CUMULATIVE AREA =			.06 SQ MI			

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				

+	(CFS)	(HR)		6-HR	24-HR	72-HR	24.92-HR
+	14.	.00	(CFS)	12.	4.	4.	4.
			(INCHES)	1.965	2.991	2.991	2.991
			(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)		3.	1.	1.	1.
	4.	.00					
PEAK STAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		2.50	.94	.91	.91
	3.00	.00					
CUMULATIVE AREA =				.06 SQ MI			

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)	(CFS)	12.	4.	4.	4.
	14.	.00	(INCHES)	1.961	2.973	2.974	2.974
			(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)		3.	1.	1.	1.
	4.	.00					
PEAK STAGE	TIME			6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)		2.49	.94	.90	.90
	3.00	.00					
CUMULATIVE AREA =				.06 SQ MI			

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN		RATIOS APPLIED TO PRECIPITATION					
					RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6
					.99	.98	.95	.93	.92	.91
HYDROGRAPH AT	ONE-9	.34	1	FLOW	132.	128.	122.	115.	113.	111.
+				TIME	4.25	4.25	4.25	4.25	4.25	4.25
HYDROGRAPH AT	OFFE-9	.06	1	FLOW	90.	88.	85.	82.	80.	79.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP3	.40	1	FLOW	142.	138.	131.	124.	121.	120.
+				TIME	4.17	4.17	4.17	4.17	4.17	4.17
HYDROGRAPH AT	ONE-10	.09	1	FLOW	54.	52.	50.	48.	47.	46.
+				TIME	4.08	4.08	4.08	4.08	4.08	4.08
HYDROGRAPH AT	OFFE-10A	.10	1	FLOW	116.	114.	109.	104.	102.	101.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OFFE-10B	.04	1	FLOW	52.	51.	49.	47.	46.	45.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	CP4	.23	1	FLOW	188.	183.	176.	168.	165.	163.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RCP4	.23	1	FLOW	185.	180.	173.	159.	156.	154.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT	CP5	.63	1	FLOW	299.	292.	279.	259.	254.	251.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO	RC5	.63	1	FLOW	300.	292.	279.	260.	255.	251.
+				TIME	3.92	3.92	3.92	3.92	3.92	3.92
HYDROGRAPH AT	ONE-5	.87	1	FLOW	439.	428.	410.	392.	385.	380.
+				TIME	4.25	4.25	4.25	4.25	4.25	4.25
HYDROGRAPH AT	OFFE-2	.09	1	FLOW	75.	73.	69.	66.	64.	63.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFE-3	.30	1	FLOW	238.	232.	222.	211.	207.	204.
+				TIME	3.75	3.75	3.75	3.75	3.75	3.75

HYDROGRAPH AT +	OFFE-3A	.03	1	FLOW TIME	46. 3.50	45. 3.50	43. 3.50	42. 3.50	41. 3.50	40. 3.50
ROUTED TO +	ROFFE-3A	.03	1	FLOW TIME	42. 3.67	41. 3.67	40. 3.75	37. 3.75	37. 3.75	37. 3.75
3 COMBINED AT +	CP1	.42	1	FLOW TIME	350. 3.67	340. 3.67	324. 3.67	309. 3.67	302. 3.67	298. 3.67
ROUTED TO +	RC1	.42	1	FLOW TIME	349. 3.75	340. 3.75	324. 3.83	309. 3.83	304. 3.83	299. 3.83
HYDROGRAPH AT +	OFFE-2A	.02	1	FLOW TIME	21. 3.58	20. 3.58	19. 3.58	18. 3.58	18. 3.58	18. 3.58
HYDROGRAPH AT +	OFFE-1	.41	1	FLOW TIME	432. 3.67	422. 3.67	405. 3.67	388. 3.67	381. 3.67	377. 3.67
HYDROGRAPH AT +	OFFE-4	.49	1	FLOW TIME	354. 3.83	345. 3.83	329. 3.83	314. 3.83	308. 3.83	304. 3.83
ROUTED TO +	ROFFE-4	.49	1	FLOW TIME	352. 4.00	343. 4.08	328. 4.08	314. 4.08	308. 4.08	304. 4.08
4 COMBINED AT +	CP2	1.34	1	FLOW TIME	917. 3.83	892. 3.83	851. 3.83	810. 3.83	794. 3.83	782. 3.83
DIVERSION TO +	DCP2	1.34	1	FLOW TIME	238. 3.83	229. 3.83	213. 3.83	198. 3.83	192. 3.83	187. 3.83
HYDROGRAPH AT +	CCP2	1.34	1	FLOW TIME	679. 3.83	664. 3.83	638. 3.83	612. 3.83	602. 3.83	595. 3.83
3 COMBINED AT +	CP6	2.83	1	FLOW TIME	1276. 3.92	1246. 3.92	1196. 3.92	1139. 3.92	1119. 3.92	1105. 3.92
ROUTED TO +	RCP6	2.83	1	FLOW TIME	1268. 4.00	1239. 4.00	1190. 4.00	1136. 4.00	1116. 4.00	1103. 4.00
HYDROGRAPH AT +	OND7*	.02	1	FLOW TIME	34. 3.58	33. 3.58	32. 3.58	31. 3.58	31. 3.58	30. 3.58
2 COMBINED AT +	CP6A	2.86	1	FLOW TIME	1278. 4.00	1250. 4.00	1201. 4.00	1147. 4.00	1126. 4.00	1113. 4.00
ROUTED TO +	RCP6A	2.86	1	FLOW TIME	1274. 4.00	1245. 4.00	1195. 4.00	1140. 4.00	1120. 4.00	1106. 4.00
HYDROGRAPH AT +	OND6*	.06	1	FLOW TIME	79. 3.67	78. 3.67	75. 3.67	73. 3.67	72. 3.67	71. 3.67
2 COMBINED AT +	CP6B	2.92	1	FLOW TIME	1311. 4.00	1282. 4.00	1230. 4.00	1174. 4.00	1154. 4.00	1139. 4.00
ROUTED TO +	RCP6B	2.92	1	FLOW TIME	1304. 4.00	1274. 4.00	1222. 4.00	1165. 4.00	1145. 4.00	1131. 4.08
HYDROGRAPH AT +	OND8*	.02	1	FLOW TIME	26. 3.67	25. 3.67	24. 3.67	23. 3.67	23. 3.67	23. 3.67
2 COMBINED AT +	CP6C	2.94	1	FLOW TIME	1318. 4.00	1287. 4.00	1235. 4.00	1177. 4.00	1157. 4.00	1142. 4.00
ROUTED TO +	RCP6C	2.94	1	FLOW TIME	1311. 4.08	1280. 4.08	1229. 4.08	1177. 4.08	1156. 4.08	1141. 4.08
HYDROGRAPH AT +	ONE-6	1.01	1	FLOW TIME	668. 3.92	650. 3.92	621. 3.92	592. 3.92	581. 3.92	573. 3.92
ROUTED TO +	RONE-6	1.01	1	FLOW TIME	670. 4.00	652. 4.00	623. 4.00	594. 4.00	582. 4.00	574. 4.00
HYDROGRAPH AT +	ONE-4	.21	1	FLOW TIME	89. 4.17	86. 4.17	82. 4.17	77. 4.17	76. 4.17	74. 4.17
3 COMBINED AT +	CP7	4.17	1	FLOW TIME	2055. 4.00	2001. 4.00	1914. 4.00	1828. 4.08	1795. 4.08	1771. 4.08
HYDROGRAPH AT +	BKPVE	.14	1	FLOW	124. 4.00	121. 4.00	116. 4.00	111. 4.00	109. 4.00	108. 4.00

[illegible]

+	CRLME	.05	1	FLOW TIME	37. 3.58	36. 3.58	34. 3.58	32. 3.58	31. 3.58	31. 3.58
	HYDROGRAPH AT									
+	DCP11	.00	1	FLOW TIME	135. 3.92	131. 3.92	125. 3.92	120. 3.92	118. 3.92	116. 3.92
	ROUTED TO									
+	RDCP11	.00	1	FLOW TIME	134. 3.92	131. 3.92	125. 3.92	119. 3.92	117. 3.92	115. 3.92
	3 COMBINED AT									
+	CP13	.68	1	FLOW TIME	424. 3.83	408. 3.83	380. 3.83	353. 3.83	343. 3.83	335. 3.83
	DIVERSION TO									
+	DCP13	.68	1	FLOW TIME	17. 3.33	17. 3.33	17. 3.33	17. 3.42	17. 3.42	17. 3.42
	HYDROGRAPH AT									
+	OCP13	.68	1	FLOW TIME	407. 3.83	391. 3.83	363. 3.83	336. 3.83	326. 3.83	318. 3.83
	HYDROGRAPH AT									
+	PWLME	.29	1	FLOW TIME	248. 3.75	242. 3.75	231. 3.75	221. 3.75	217. 3.75	214. 3.75
	HYDROGRAPH AT									
+	DCP10	.00	1	FLOW TIME	121. 3.92	118. 3.92	113. 3.92	108. 3.92	105. 3.92	104. 3.92
	ROUTED TO									
+	RDCP10	.00	1	FLOW TIME	131. 4.00	127. 4.00	120. 4.00	113. 4.00	111. 4.00	110. 4.00
	4 COMBINED AT									
+	CP14	1.78	1	FLOW TIME	1024. 3.92	989. 3.92	929. 3.92	871. 3.92	849. 3.92	831. 3.92
	DIVERSION TO									
+	DCP14	1.78	1	FLOW TIME	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58
	HYDROGRAPH AT									
+	OCP14	1.78	1	FLOW TIME	794. 3.92	759. 3.92	699. 3.92	641. 3.92	619. 3.92	601. 3.92
	HYDROGRAPH AT									
+	DE	.05	1	FLOW TIME	67. 3.58	65. 3.58	63. 3.58	60. 3.58	59. 3.58	58. 3.58
	2 COMBINED AT									
+	CP15	1.83	1	FLOW TIME	820. 3.92	785. 3.92	724. 3.92	666. 3.92	643. 3.92	625. 3.92
	HYDROGRAPH AT									
+	DCP12	.00	1	FLOW TIME	247. 3.83	246. 3.83	244. 3.83	242. 3.83	241. 3.83	240. 3.83
	HYDROGRAPH AT									
+	DCP13	.00	1	FLOW TIME	17. 3.33	17. 3.33	17. 3.33	17. 3.42	17. 3.42	17. 3.42
	HYDROGRAPH AT									
+	DCP14	.00	1	FLOW TIME	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58	230. 3.58
	3 COMBINED AT									
+	CP16	.00	1	FLOW TIME	494. 3.83	493. 3.83	491. 3.83	489. 3.83	488. 3.83	487. 3.83
	2 COMBINED AT									
+	CP17	1.83	1	FLOW TIME	1312. 3.92	1275. 3.92	1213. 3.92	1151. 3.92	1127. 3.92	1108. 3.92
	ROUTED TO									
+	RCP17	1.83	1	FLOW TIME	1294. 3.92	1255. 3.92	1189. 3.92	1126. 3.92	1101. 3.92	1083. 3.92
	HYDROGRAPH AT									
+	EE	.03	1	FLOW TIME	36. 3.58	35. 3.58	33. 3.58	32. 3.58	31. 3.58	31. 3.58
	HYDROGRAPH AT									
+	FE	.01	1	FLOW TIME	13. 3.58	12. 3.58	12. 3.58	11. 3.58	11. 3.58	11. 3.58
	HYDROGRAPH AT									
+	GE	.01	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58
	4 COMBINED AT									
+	CP18	1.89	1	FLOW TIME	1314. 3.92	1275. 3.92	1208. 3.92	1145. 3.92	1119. 3.92	1101. 3.92
	HYDROGRAPH AT									
+	ONE-8	.20	1	FLOW TIME	38. 4.58	36. 4.58	34. 4.58	32. 4.67	31. 4.67	30. 4.67
	2 COMBINED AT									
+	CP19	2.10	1	FLOW TIME	1330. 3.92	1290. 3.92	1222. 3.92	1158. 3.92	1131. 3.92	1113. 3.92
	HYDROGRAPH AT									
+	ONE-7	.21	1	FLOW TIME	174. 3.67	170. 3.67	162. 3.67	154. 3.67	151. 3.67	148. 3.67

HYDROGRAPH AT	OFFD1*	.08	1	FLOW	135.	133.	129.	125.	123.	122.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RTOFFD1*	.08	1	FLOW	129.	127.	123.	118.	118.	116.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	OFFD2*	.12	1	FLOW	77.	75.	71.	68.	66.	65.
+				TIME	3.75	3.75	3.75	3.75	3.83	3.83
ROUTED TO	RTOFFD2*	.12	1	FLOW	77.	75.	72.	68.	66.	65.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	OFFD2A*	.11	1	FLOW	117.	114.	110.	105.	104.	102.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT	COFD2A*	.31	1	FLOW	290.	284.	273.	262.	258.	255.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
DIVERSION TO	SPLIT1*	.31	1	FLOW	34.	33.	31.	29.	28.	27.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	DIVERSIO	.31	1	FLOW	255.	251.	242.	233.	230.	228.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
ROUTED TO	RCOFD2A*	.31	1	FLOW	255.	251.	242.	233.	230.	229.
+				TIME	3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	OFFD5*	.32	1	FLOW	407.	397.	382.	366.	360.	356.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COFD5*	.63	1	FLOW	546.	532.	510.	489.	481.	475.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RCOFD5*	.63	1	FLOW	541.	531.	506.	483.	481.	471.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD6*	.11	1	FLOW	180.	177.	171.	166.	163.	162.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COFD6*	.74	1	FLOW	699.	686.	655.	628.	624.	612.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
DIVERSION TO	SPLIT2*	.74	1	FLOW	163.	160.	153.	146.	146.	143.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	DIVERT*	.74	1	FLOW	536.	526.	502.	481.	479.	470.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD7*	.02	1	FLOW	36.	36.	35.	34.	33.	33.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	RTOFFD7*	.02	1	FLOW	36.	35.	34.	33.	33.	32.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OND1*	.04	1	FLOW	52.	51.	49.	47.	46.	45.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
3 COMBINED AT	COND1*	.81	1	FLOW	617.	605.	580.	556.	552.	542.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	RCOND1*	.81	1	FLOW	616.	604.	578.	554.	549.	540.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OND4*	.07	1	FLOW	87.	85.	83.	80.	79.	78.
+				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	DBOND4*	.07	1	FLOW	15.	15.	15.	14.	14.	14.
+				TIME	5.08	5.08	5.08	5.08	5.00	5.00
** PEAK STAGES IN FEET **										
1	STAGE				3.31	3.28	3.23	3.18	3.16	3.14
	TIME				5.08	5.08	5.08	5.08	5.08	5.08
HYDROGRAPH AT	OND5*	.06	1	FLOW	75.	73.	71.	68.	67.	67.
+				TIME	3.58	3.58	3.58	3.58	3.58	3.58
ROUTED TO	DBOND5*	.06	1	FLOW	14.	14.	14.	14.	14.	14.
+				TIME	4.25	4.25	4.17	.00	.00	.00
** PEAK STAGES IN FEET **										
1	STAGE				3.07	3.04	3.01	3.00	3.00	3.00
	TIME				4.25	4.25	4.17	.00	.00	.00

3 COMBINED AT	COND5*	.93	1	FLOW TIME	642. 3.67	630. 3.67	604. 3.67	580. 3.67	575. 3.67	566. 3.67
ROUTED TO	RCOND5*	.93	1	FLOW TIME	635. 3.67	623. 3.67	597. 3.67	573. 3.67	568. 3.67	558. 3.67
HYDROGRAPH AT	OND11*	.01	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58
ROUTED TO	ROND11*	.01	1	FLOW TIME	16. 3.75	16. 3.75	15. 3.75	15. 3.75	15. 3.75	14. 3.75
HYDROGRAPH AT	OND11A*	.08	1	FLOW TIME	74. 3.67	72. 3.67	69. 3.67	66. 3.67	65. 3.67	64. 3.67
3 COMBINED AT	CHANNEL2	1.02	1	FLOW TIME	724. 3.67	709. 3.67	680. 3.67	652. 3.67	646. 3.67	635. 3.67
HYDROGRAPH AT	RETURN1*	.00	1	FLOW TIME	34. 3.83	33. 3.83	31. 3.83	29. 3.83	28. 3.83	27. 3.83
HYDROGRAPH AT	RETURN2*	.00	1	FLOW TIME	163. 3.67	160. 3.67	153. 3.67	146. 3.67	146. 3.67	143. 3.67
HYDROGRAPH AT	OFFD3*	.16	1	FLOW TIME	116. 3.75	113. 3.75	108. 3.75	102. 3.75	100. 3.75	99. 3.75
3 COMBINED AT	COFD3*	.16	1	FLOW TIME	302. 3.67	294. 3.67	278. 3.67	264. 3.75	260. 3.75	256. 3.75
ROUTED TO	RCOFD3*	.16	1	FLOW TIME	300. 3.75	292. 3.75	278. 3.75	263. 3.75	260. 3.75	255. 3.75
HYDROGRAPH AT	OND2A*	.01	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50
2 COMBINED AT	COND2A*	.17	1	FLOW TIME	305. 3.75	297. 3.75	282. 3.75	268. 3.75	264. 3.75	260. 3.75
HYDROGRAPH AT	OND3*	.01	1	FLOW TIME	12. 3.58	11. 3.58	11. 3.58	11. 3.58	10. 3.58	10. 3.58
2 COMBINED AT	COND3*	.18	1	FLOW TIME	312. 3.75	304. 3.75	289. 3.75	274. 3.75	271. 3.75	266. 3.75
HYDROGRAPH AT	OND2*	.05	1	FLOW TIME	31. 3.67	30. 3.67	29. 3.67	27. 3.67	26. 3.67	26. 3.67
2 COMBINED AT	CP1*	.22	1	FLOW TIME	342. 3.75	333. 3.75	317. 3.75	301. 3.75	297. 3.75	292. 3.75
HYDROGRAPH AT	OND12*	.01	1	FLOW TIME	13. 3.58	13. 3.58	12. 3.58	12. 3.58	12. 3.58	11. 3.58
HYDROGRAPH AT	OFFE-2B	.09	1	FLOW TIME	56. 3.75	55. 3.75	52. 3.75	49. 3.75	48. 3.75	47. 3.75
ROUTED TO	ROFFE-2B	.09	1	FLOW TIME	55. 3.83	53. 3.83	51. 3.83	48. 3.83	47. 3.83	47. 3.83
3 COMBINED AT	CHANNEL1	.33	1	FLOW TIME	407. 3.75	396. 3.75	377. 3.75	358. 3.75	352. 3.75	346. 3.75
ROUTED TO	RCHANNEL	.33	1	FLOW TIME	402. 3.83	391. 3.83	373. 3.83	354. 3.83	348. 3.83	342. 3.83
HYDROGRAPH AT	ONE-1	.07	1	FLOW TIME	38. 3.92	37. 3.92	35. 3.92	33. 3.92	32. 3.92	32. 3.92
HYDROGRAPH AT	ONE-2	.18	1	FLOW TIME	63. 4.33	62. 4.33	58. 4.33	55. 4.33	54. 4.33	53. 4.33
3 COMBINED AT	CP8	.58	1	FLOW TIME	474. 3.83	461. 3.83	438. 3.83	415. 3.83	408. 3.83	401. 3.83
HYDROGRAPH AT	ONE-3	.27	1	FLOW TIME	186. 3.92	182. 3.92	174. 3.92	166. 3.92	163. 3.92	161. 3.92

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SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL		VOLUME (IN)
						PEAK (CFS)	TIME TO PEAK (MIN)	
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	5.00	184.69	225.00	1.38	5.00	184.69	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1678E+02 EXCESS= .0000E+00 OUTFLOW= .1679E+02 BASIN STORAGE= .2059E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	5.00	180.28	225.00	1.35	5.00	180.28	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1636E+02 EXCESS= .0000E+00 OUTFLOW= .1637E+02 BASIN STORAGE= .2031E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	5.00	172.94	225.00	1.29	5.00	172.94	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1566E+02 EXCESS= .0000E+00 OUTFLOW= .1567E+02 BASIN STORAGE= .1935E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	4.75	161.73	223.25	1.23	5.00	158.88	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1496E+02 EXCESS= .0000E+00 OUTFLOW= .1497E+02 BASIN STORAGE= .2072E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	4.75	158.73	223.25	1.21	5.00	156.05	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1468E+02 EXCESS= .0000E+00 OUTFLOW= .1469E+02 BASIN STORAGE= .2051E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RCP4	MANE	4.75	156.64	223.25	1.19	5.00	154.07	225.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1449E+02 EXCESS= .0000E+00 OUTFLOW= .1450E+02 BASIN STORAGE= .2036E-02 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	299.76	235.00	1.21	5.00	299.76	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4057E+02 EXCESS= .0000E+00 OUTFLOW= .4058E+02 BASIN STORAGE= .2789E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	291.97	235.00	1.18	5.00	291.97	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3949E+02 EXCESS= .0000E+00 OUTFLOW= .3950E+02 BASIN STORAGE= .2691E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	278.99	235.00	1.13	5.00	278.99	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3770E+02 EXCESS= .0000E+00 OUTFLOW= .3772E+02 BASIN STORAGE= .2617E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	259.57	235.00	1.07	5.00	259.57	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3591E+02 EXCESS= .0000E+00 OUTFLOW= .3593E+02 BASIN STORAGE= .2518E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	254.52	235.00	1.05	5.00	254.52	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3521E+02 EXCESS= .0000E+00 OUTFLOW= .3523E+02 BASIN STORAGE= .2491E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
RC5	MANE	5.00	250.98	235.00	1.04	5.00	250.98	235.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3472E+02 EXCESS= .0000E+00 OUTFLOW= .3474E+02 BASIN STORAGE= .3360E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
ROFFE-3A	MANE	3.50	42.76	220.50	1.67	5.00	41.94	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2674E+01 EXCESS= .0000E+00 OUTFLOW= .2671E+01 BASIN STORAGE= .3172E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
ROFFE-3A	MANE	3.50	41.90	224.00	1.63	5.00	40.95	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2614E+01 EXCESS= .0000E+00 OUTFLOW= .2611E+01 BASIN STORAGE= .3145E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO=	MANE	.00						
ROFFE-3A	MANE	3.75	40.67	221.25	1.57	5.00	39.68	225.00

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2514E+01 EXCESS= .0000E+00 OUTFLOW= .2511E+01 BASIN STORAGE= .2633E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFE-3A	MANE	4.00	38.49	224.00	1.50	5.00	37.39	225.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2406E+01 EXCESS= .0000E+00 OUTFLOW= .2403E+01 BASIN STORAGE= .3214E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFE-3A	MANE	4.25	37.60	221.00	1.48	5.00	37.06	225.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2366E+01 EXCESS= .0000E+00 OUTFLOW= .2364E+01 BASIN STORAGE= .3474E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-3A	MANE	4.25	37.15	221.00	1.46	5.00	36.69	225.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2338E+01 EXCESS= .0000E+00 OUTFLOW= .2337E+01 BASIN STORAGE= .3459E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	349.32	225.00	1.20	5.00	349.32	225.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2691E+02 EXCESS= .0000E+00 OUTFLOW= .2692E+02 BASIN STORAGE= .1473E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	339.62	225.00	1.17	5.00	339.62	225.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2619E+02 EXCESS= .0000E+00 OUTFLOW= .2620E+02 BASIN STORAGE= .1453E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	324.13	230.00	1.12	5.00	324.13	230.00	1.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2499E+02 EXCESS= .0000E+00 OUTFLOW= .2501E+02 BASIN STORAGE= .1445E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	309.41	230.00	1.07	5.00	309.41	230.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2381E+02 EXCESS= .0000E+00 OUTFLOW= .2382E+02 BASIN STORAGE= .1622E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	303.51	230.00	1.04	5.00	303.51	230.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2334E+02 EXCESS= .0000E+00 OUTFLOW= .2335E+02 BASIN STORAGE= .1568E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RC1	MANE	5.00	299.46	230.00	1.03	5.00	299.46	230.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2301E+02 EXCESS= .0000E+00 OUTFLOW= .2302E+02 BASIN STORAGE= .1557E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	352.08	240.00	1.28	5.00	352.08	240.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3305E+02 EXCESS= .0000E+00 OUTFLOW= .3307E+02 BASIN STORAGE= .3809E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	343.01	245.00	1.25	5.00	343.01	245.00	1.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3219E+02 EXCESS= .0000E+00 OUTFLOW= .3221E+02 BASIN STORAGE= .3763E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	328.47	245.00	1.19	5.00	328.47	245.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3076E+02 EXCESS= .0000E+00 OUTFLOW= .3078E+02 BASIN STORAGE= .3686E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	313.97	245.00	1.14	5.00	313.97	245.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2934E+02 EXCESS= .0000E+00 OUTFLOW= .2937E+02 BASIN STORAGE= .3608E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	308.19	245.00	1.11	5.00	308.19	245.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2878E+02 EXCESS= .0000E+00 OUTFLOW= .2881E+02 BASIN STORAGE= .3577E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFE-4	MANE	5.00	304.15	245.00	1.10	5.00	304.15	245.00	1.10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2839E+02 EXCESS= .0000E+00 OUTFLOW= .2841E+02 BASIN STORAGE= .3554E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.71	1270.89	238.61	1.23	5.00	1267.56	240.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1857E+03 EXCESS= .0000E+00 OUTFLOW= .1857E+03 BASIN STORAGE= .1005E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.73	1239.36	240.05	1.20	5.00	1239.35	240.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1812E+03 EXCESS= .0000E+00 OUTFLOW= .1812E+03 BASIN STORAGE= .9028E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.76	1190.84	239.77	1.15	5.00	1190.24	240.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1736E+03 EXCESS= .0000E+00 OUTFLOW= .1736E+03 BASIN STORAGE= .8307E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.79	1136.61	239.91	1.10	5.00	1136.47	240.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1663E+03 EXCESS= .0000E+00 OUTFLOW= .1662E+03 BASIN STORAGE= .8782E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.80	1116.64	238.16	1.08	5.00	1116.41	240.00	1.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1634E+03 EXCESS= .0000E+00 OUTFLOW= .1634E+03 BASIN STORAGE= .8829E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	2.81	1103.27	238.90	1.07	5.00	1102.68	240.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1613E+03 EXCESS= .0000E+00 OUTFLOW= .1613E+03 BASIN STORAGE= .9145E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.62	1275.46	240.91	1.23	5.00	1274.21	240.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1881E+03 EXCESS= .0000E+00 OUTFLOW= .1881E+03 BASIN STORAGE= .5691E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.63	1246.36	240.64	1.20	5.00	1245.29	240.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1835E+03 EXCESS= .0000E+00 OUTFLOW= .1835E+03 BASIN STORAGE= .5555E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.64	1198.17	241.43	1.15	5.00	1194.96	240.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1759E+03 EXCESS= .0000E+00 OUTFLOW= .1759E+03 BASIN STORAGE= .4815E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.66	1142.84	240.91	1.11	5.00	1140.38	240.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1684E+03 EXCESS= .0000E+00 OUTFLOW= .1684E+03 BASIN STORAGE= .5300E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.67	1124.02	241.98	1.09	5.00	1120.29	240.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1655E+03 EXCESS= .0000E+00 OUTFLOW= .1655E+03 BASIN STORAGE= .5581E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6A	MANE	1.67	1109.19	241.06	1.07	5.00	1106.12	240.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1635E+03 EXCESS= .0000E+00 OUTFLOW= .1635E+03 BASIN STORAGE= .5249E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	1.89	1308.27	241.88	1.25	5.00	1304.38	240.00	1.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1942E+03 EXCESS= .0000E+00 OUTFLOW= .1942E+03 BASIN STORAGE= .6406E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	1.90	1276.98	241.37	1.22	5.00	1273.59	240.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1895E+03 EXCESS= .0000E+00 OUTFLOW= .1895E+03 BASIN STORAGE= .6545E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6B	MANE	1.92	1227.39	241.93	1.17	5.00	1221.72	240.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1817E+03 EXCESS= .0000E+00 OUTFLOW= .1817E+03 BASIN STORAGE= .6333E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
RCP6B	MANE	1.94	1171.06	242.81	1.12	5.00	1164.75	240.00	1.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1740E+03 EXCESS= .0000E+00 OUTFLOW= .1740E+03 BASIN STORAGE= .6356E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6B	MANE	1.95	1151.56	241.93	1.10	5.00	1145.11	240.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1710E+03 EXCESS= .0000E+00 OUTFLOW= .1710E+03 BASIN STORAGE= .5640E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6B	MANE	1.96	1136.68	242.70	1.08	5.00	1130.84	245.00	1.08
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1689E+03 EXCESS= .0000E+00 OUTFLOW= .1689E+03 BASIN STORAGE= .6900E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.29	1314.34	242.27	1.25	5.00	1311.17	245.00	1.25
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1963E+03 EXCESS= .0000E+00 OUTFLOW= .1963E+03 BASIN STORAGE= .7274E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.30	1283.99	243.72	1.22	5.00	1279.89	245.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1915E+03 EXCESS= .0000E+00 OUTFLOW= .1915E+03 BASIN STORAGE= .8208E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.32	1232.71	243.94	1.17	5.00	1229.42	245.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1836E+03 EXCESS= .0000E+00 OUTFLOW= .1836E+03 BASIN STORAGE= .8812E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.35	1178.00	244.51	1.12	5.00	1176.51	245.00	1.12
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1759E+03 EXCESS= .0000E+00 OUTFLOW= .1759E+03 BASIN STORAGE= .8125E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.36	1155.99	243.19	1.10	5.00	1155.58	245.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1728E+03 EXCESS= .0000E+00 OUTFLOW= .1728E+03 BASIN STORAGE= .7910E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6C	MANE	2.37	1142.35	244.03	1.09	5.00	1140.84	245.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1707E+03 EXCESS= .0000E+00 OUTFLOW= .1707E+03 BASIN STORAGE= .7374E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	669.70	240.00	1.23	5.00	669.70	240.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6625E+02 EXCESS= .0000E+00 OUTFLOW= .6626E+02 BASIN STORAGE= .2547E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	652.01	240.00	1.20	5.00	652.01	240.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6449E+02 EXCESS= .0000E+00 OUTFLOW= .6450E+02 BASIN STORAGE= .2512E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	622.68	240.00	1.14	5.00	622.68	240.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6157E+02 EXCESS= .0000E+00 OUTFLOW= .6158E+02 BASIN STORAGE= .2454E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	593.53	240.00	1.09	5.00	593.53	240.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5868E+02 EXCESS= .0000E+00 OUTFLOW= .5869E+02 BASIN STORAGE= .2394E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	581.92	240.00	1.07	5.00	581.92	240.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5753E+02 EXCESS= .0000E+00 OUTFLOW= .5755E+02 BASIN STORAGE= .2371E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RONE-6	MANE	5.00	573.82	240.00	1.05	5.00	573.82	240.00	1.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5673E+02 EXCESS= .0000E+00 OUTFLOW= .5675E+02 BASIN STORAGE= .2354E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									

RBKPVE	MANE	5.00	124.98	235.00	1.36	5.00	124.98	235.00	1.36
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CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1010E+02 BASIN STORAGE= .1000E-01 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKPVE	MANE	5.00	122.08	235.00	1.33	5.00	122.08	235.00	1.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9816E+01 EXCESS= .0000E+00 OUTFLOW= .9843E+01 BASIN STORAGE= .9912E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKPVE	MANE	5.00	117.22	235.00	1.27	5.00	117.22	235.00	1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9394E+01 EXCESS= .0000E+00 OUTFLOW= .9421E+01 BASIN STORAGE= .9761E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKPVE	MANE	5.00	112.33	235.00	1.21	5.00	112.33	235.00	1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8976E+01 EXCESS= .0000E+00 OUTFLOW= .9003E+01 BASIN STORAGE= .9608E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKPVE	MANE	5.00	110.36	235.00	1.19	5.00	110.36	235.00	1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8810E+01 EXCESS= .0000E+00 OUTFLOW= .8837E+01 BASIN STORAGE= .9545E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKPVE	MANE	5.00	108.98	235.00	1.18	5.00	108.98	235.00	1.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8694E+01 EXCESS= .0000E+00 OUTFLOW= .8722E+01 BASIN STORAGE= .9502E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	42.25	230.00	1.50	5.00	42.25	230.00	1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2689E+01 EXCESS= .0000E+00 OUTFLOW= .2711E+01 BASIN STORAGE= .1078E-01 PERCENT ERROR= -1.2

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	41.65	230.00	1.46	5.00	41.65	230.00	1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2624E+01 EXCESS= .0000E+00 OUTFLOW= .2646E+01 BASIN STORAGE= .1070E-01 PERCENT ERROR= -1.2

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	40.59	230.00	1.40	5.00	40.59	230.00	1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2517E+01 EXCESS= .0000E+00 OUTFLOW= .2538E+01 BASIN STORAGE= .1058E-01 PERCENT ERROR= -1.2

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	39.47	230.00	1.34	5.00	39.47	230.00	1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2410E+01 EXCESS= .0000E+00 OUTFLOW= .2431E+01 BASIN STORAGE= .1046E-01 PERCENT ERROR= -1.3

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	40.53	230.00	1.32	5.00	40.53	230.00	1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2368E+01 EXCESS= .0000E+00 OUTFLOW= .2390E+01 BASIN STORAGE= .1161E-01 PERCENT ERROR= -1.5

FOR PLAN	= 1	RATIO=	.00						
RBKMJE	MANE	5.00	40.15	230.00	1.30	5.00	40.15	230.00	1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2338E+01 EXCESS= .0000E+00 OUTFLOW= .2361E+01 BASIN STORAGE= .1158E-01 PERCENT ERROR= -1.5

FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	97.17	235.00	.73	5.00	97.17	235.00	.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7953E+01 EXCESS= .0000E+00 OUTFLOW= .7977E+01 BASIN STORAGE= .9940E-02 PERCENT ERROR= -.4

FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	94.86	235.00	.71	5.00	94.86	235.00	.71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7758E+01 EXCESS= .0000E+00 OUTFLOW= .7783E+01 BASIN STORAGE= .9852E-02 PERCENT ERROR= -.5

FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	90.95	235.00	.68	5.00	90.95	235.00	.68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7436E+01 EXCESS= .0000E+00 OUTFLOW= .7460E+01 BASIN STORAGE= .1140E-01 PERCENT ERROR= -.5

FOR PLAN	= 1	RATIO=	.00						
ROCRMJE	MANE	5.00	86.99	235.00	.65	5.00	86.99	235.00	.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7116E+01 EXCESS= .0000E+00 OUTFLOW= .7141E+01 BASIN STORAGE= .1123E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 85.40 235.00 .64 5.00 85.40 235.00 .64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6989E+01 EXCESS= .0000E+00 OUTFLOW= .7014E+01 BASIN STORAGE= .1117E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 84.28 235.00 .63 5.00 84.28 235.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6900E+01 EXCESS= .0000E+00 OUTFLOW= .6925E+01 BASIN STORAGE= .1112E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.68 294.53 235.91 .74 5.00 292.85 235.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2539E+02 EXCESS= .0000E+00 OUTFLOW= .2539E+02 BASIN STORAGE= .3286E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.71 287.84 235.64 .72 5.00 286.29 235.00 .72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2473E+02 EXCESS= .0000E+00 OUTFLOW= .2473E+02 BASIN STORAGE= .3365E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.76 272.84 234.34 .69 5.00 272.46 235.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2360E+02 EXCESS= .0000E+00 OUTFLOW= .2361E+02 BASIN STORAGE= .3550E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.81 262.79 235.92 .66 5.00 260.69 235.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2253E+02 EXCESS= .0000E+00 OUTFLOW= .2253E+02 BASIN STORAGE= .3189E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.83 257.62 235.16 .64 5.00 257.08 235.00 .64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2209E+02 EXCESS= .0000E+00 OUTFLOW= .2209E+02 BASIN STORAGE= .2871E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP10 MANE 2.85 253.48 236.43 .63 5.00 251.47 235.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2179E+02 EXCESS= .0000E+00 OUTFLOW= .2179E+02 BASIN STORAGE= .2908E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 97.17 235.00 -1.00 5.00 97.17 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 94.87 235.00 -1.00 5.00 94.87 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 91.03 235.00 -1.00 5.00 91.03 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 87.08 235.00 -1.00 5.00 87.08 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 85.50 235.00 -1.00 5.00 85.50 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCRMJE MANE 5.00 84.39 235.00 -1.00 5.00 84.39 235.00 -1.00

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 349.85 235.00 .71 5.00 349.85 235.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3066E+02 EXCESS= .0000E+00 OUTFLOW= .3068E+02 BASIN STORAGE= .7691E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 340.06 235.00 .70 5.00 340.06 235.00 .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2987E+02 EXCESS= .0000E+00 OUTFLOW= .2989E+02 BASIN STORAGE= .7643E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP11 MANE 5.00 323.25 235.00 .66 5.00 323.25 235.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2852E+02 EXCESS= .0000E+00 OUTFLOW= .2854E+02 BASIN STORAGE= .6653E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 5.00 306.26 235.00 .63 5.00 306.26 235.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2720E+02 EXCESS= .0000E+00 OUTFLOW= .2723E+02 BASIN STORAGE= .7100E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 5.00 301.20 240.00 .62 5.00 301.20 240.00 .62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2669E+02 EXCESS= .0000E+00 OUTFLOW= .2671E+02 BASIN STORAGE= .7295E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 5.00 296.62 240.00 .61 5.00 296.62 240.00 .61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2630E+02 EXCESS= .0000E+00 OUTFLOW= .2632E+02 BASIN STORAGE= .7274E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 293.46 230.00 1.40 5.00 293.46 230.00 1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2574E+02 EXCESS= .0000E+00 OUTFLOW= .2576E+02 BASIN STORAGE= .3204E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 286.12 230.00 1.36 5.00 286.12 230.00 1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2510E+02 EXCESS= .0000E+00 OUTFLOW= .2512E+02 BASIN STORAGE= .3168E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 273.93 230.00 1.31 5.00 273.93 230.00 1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2404E+02 EXCESS= .0000E+00 OUTFLOW= .2405E+02 BASIN STORAGE= .3106E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 261.79 230.00 1.25 5.00 261.79 230.00 1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2299E+02 EXCESS= .0000E+00 OUTFLOW= .2300E+02 BASIN STORAGE= .3044E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 256.95 230.00 1.23 5.00 256.95 230.00 1.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2257E+02 EXCESS= .0000E+00 OUTFLOW= .2258E+02 BASIN STORAGE= .3019E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDKLME MANE 5.00 253.78 235.00 1.21 5.00 253.78 235.00 1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2228E+02 EXCESS= .0000E+00 OUTFLOW= .2229E+02 BASIN STORAGE= .3001E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.10 134.18 234.38 -1.00 5.00 134.07 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.11 130.90 234.40 -1.00 5.00 130.85 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.13 124.75 235.49 -1.00 5.00 124.65 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.15 119.26 235.16 -1.00 5.00 119.12 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.15 117.28 235.51 -1.00 5.00 117.01 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP11 MANE 1.16 115.31 236.12 -1.00 5.00 115.11 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 130.57 240.00 -1.00 5.00 130.57 240.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP10 MANE 5.00 126.73 240.00 -1.00 5.00 126.73 240.00 -1.00

FOR PLAN = 1 RATIO=	.00								
RDCP10 MANE	5.00	120.24	240.00	-1.00	5.00	120.24	240.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 MANE	5.00	112.64	240.00	-1.00	5.00	112.64	240.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 MANE	5.00	111.17	245.00	-1.00	5.00	111.17	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RDCP10 MANE	5.00	110.33	245.00	-1.00	5.00	110.33	245.00	-1.00	
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.12	1301.19	236.90	1.29	5.00	1293.90	235.00	1.29	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1259E+03 EXCESS= .0000E+00 OUTFLOW= .1259E+03 BASIN STORAGE= .4657E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.14	1263.60	237.45	1.26	5.00	1255.25	235.00	1.26	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1227E+03 EXCESS= .0000E+00 OUTFLOW= .1227E+03 BASIN STORAGE= .5006E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.18	1198.94	237.91	1.20	5.00	1188.81	235.00	1.20	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1173E+03 EXCESS= .0000E+00 OUTFLOW= .1173E+03 BASIN STORAGE= .4482E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.23	1137.04	236.21	1.15	5.00	1126.38	235.00	1.15	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1119E+03 EXCESS= .0000E+00 OUTFLOW= .1119E+03 BASIN STORAGE= .4541E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.25	1115.49	238.24	1.13	5.00	1100.96	235.00	1.13	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1098E+03 EXCESS= .0000E+00 OUTFLOW= .1098E+03 BASIN STORAGE= .4630E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RCPI7 MANE	2.26	1100.70	237.62	1.11	5.00	1083.21	235.00	1.11	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1083E+03 EXCESS= .0000E+00 OUTFLOW= .1083E+03 BASIN STORAGE= .4121E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	4.00	131.15	232.00	2.10	5.00	129.15	230.00	2.10	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9148E+01 EXCESS= .0000E+00 OUTFLOW= .9200E+01 BASIN STORAGE= .9153E-02 PERCENT ERROR= -.7									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	4.00	129.04	232.00	2.06	5.00	126.71	230.00	2.06	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8969E+01 EXCESS= .0000E+00 OUTFLOW= .9021E+01 BASIN STORAGE= .9097E-02 PERCENT ERROR= -.7									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	4.00	125.44	232.00	1.99	5.00	122.61	230.00	1.99	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8673E+01 EXCESS= .0000E+00 OUTFLOW= .8722E+01 BASIN STORAGE= .8903E-02 PERCENT ERROR= -.7									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	4.00	122.49	232.00	1.93	5.00	118.20	230.00	1.92	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8377E+01 EXCESS= .0000E+00 OUTFLOW= .8422E+01 BASIN STORAGE= .1009E-01 PERCENT ERROR= -.7									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	3.75	119.00	232.50	1.90	5.00	117.68	230.00	1.90	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8258E+01 EXCESS= .0000E+00 OUTFLOW= .8302E+01 BASIN STORAGE= .8828E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
RTOFFD1* MANE	3.75	118.05	232.50	1.88	5.00	116.48	230.00	1.89	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8175E+01 EXCESS= .0000E+00 OUTFLOW= .8219E+01 BASIN STORAGE= .8800E-02 PERCENT ERROR= -.6									
FOR PLAN = 1 RATIO=	.00								
RTOFFD2* MANE	3.79	76.96	231.00	1.07	5.00	76.69	230.00	1.07	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6714E+01 EXCESS= .0000E+00 OUTFLOW= .6716E+01 BASIN STORAGE= .1268E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RTOFFD2* MANE 3.82 75.39 229.45 1.04 5.00 75.25 230.00 1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6520E+01 EXCESS= .0000E+00 OUTFLOW= .6522E+01 BASIN STORAGE= .1210E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RTOFFD2* MANE 3.89 71.72 229.47 .99 5.00 71.59 230.00 .99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6204E+01 EXCESS= .0000E+00 OUTFLOW= .6206E+01 BASIN STORAGE= .1543E-02 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .00
 RTOFFD2* MANE 3.96 68.05 229.59 .94 5.00 67.96 230.00 .94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5892E+01 EXCESS= .0000E+00 OUTFLOW= .5894E+01 BASIN STORAGE= .1513E-02 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .00
 RTOFFD2* MANE 3.99 66.14 231.22 .92 5.00 65.69 230.00 .92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5769E+01 EXCESS= .0000E+00 OUTFLOW= .5771E+01 BASIN STORAGE= .1216E-02 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .00
 RTOFFD2* MANE 4.01 65.04 228.36 .90 5.00 64.99 230.00 .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5683E+01 EXCESS= .0000E+00 OUTFLOW= .5685E+01 BASIN STORAGE= .1339E-02 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.52 255.83 228.97 1.42 5.00 254.93 230.00 1.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2324E+02 EXCESS= .0000E+00 OUTFLOW= .2324E+02 BASIN STORAGE= .1318E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.53 251.57 230.34 1.39 5.00 251.14 230.00 1.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2272E+02 EXCESS= .0000E+00 OUTFLOW= .2272E+02 BASIN STORAGE= .1281E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.56 242.40 230.47 1.34 5.00 241.05 230.00 1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2186E+02 EXCESS= .0000E+00 OUTFLOW= .2186E+02 BASIN STORAGE= .1214E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.59 233.16 230.73 1.28 5.00 232.71 230.00 1.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2100E+02 EXCESS= .0000E+00 OUTFLOW= .2101E+02 BASIN STORAGE= .1366E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.60 230.34 229.18 1.26 5.00 229.63 230.00 1.26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2070E+02 EXCESS= .0000E+00 OUTFLOW= .2071E+02 BASIN STORAGE= .1274E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD2A* MANE 2.61 229.17 229.91 1.25 5.00 229.00 230.00 1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2048E+02 EXCESS= .0000E+00 OUTFLOW= .2048E+02 BASIN STORAGE= .1406E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 2.48 544.93 218.37 1.45 5.00 541.25 220.00 1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4871E+02 EXCESS= .0000E+00 OUTFLOW= .4871E+02 BASIN STORAGE= .1756E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 2.50 531.19 220.21 1.42 5.00 531.10 220.00 1.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4756E+02 EXCESS= .0000E+00 OUTFLOW= .4757E+02 BASIN STORAGE= .1517E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 2.54 508.55 218.27 1.36 5.00 505.74 220.00 1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4569E+02 EXCESS= .0000E+00 OUTFLOW= .4569E+02 BASIN STORAGE= .1639E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD5* MANE 2.57 487.37 218.80 1.31 5.00 483.09 220.00 1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4379E+02 EXCESS= .0000E+00 OUTFLOW= .4380E+02 BASIN STORAGE= .1643E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCOFD5* MANE		2.59	481.42	220.01	1.29	5.00	481.41	220.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4315E+02 EXCESS= .0000E+00 OUTFLOW= .4316E+02 BASIN STORAGE= .2024E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCOFD5* MANE		2.60	473.28	218.35	1.27	5.00	471.01	220.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4262E+02 EXCESS= .0000E+00 OUTFLOW= .4262E+02 BASIN STORAGE= .1537E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.99							
RTOFFD7* MANE		.70	36.20	215.93	2.00	5.00	35.90	215.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2371E+01 EXCESS= .0000E+00 OUTFLOW= .2372E+01 BASIN STORAGE= .4827E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.98							
RTOFFD7* MANE		.62	35.58	216.36	1.96	5.00	35.23	215.00	1.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2323E+01 EXCESS= .0000E+00 OUTFLOW= .2325E+01 BASIN STORAGE= .6120E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.95							
RTOFFD7* MANE		.76	34.36	215.95	1.90	5.00	34.09	215.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2244E+01 EXCESS= .0000E+00 OUTFLOW= .2245E+01 BASIN STORAGE= .7734E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.93							
RTOFFD7* MANE		.62	33.51	216.22	1.83	5.00	32.97	215.00	1.83
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2165E+01 EXCESS= .0000E+00 OUTFLOW= .2167E+01 BASIN STORAGE= .5609E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.92							
RTOFFD7* MANE		.79	32.76	215.64	1.80	5.00	32.51	215.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2133E+01 EXCESS= .0000E+00 OUTFLOW= .2134E+01 BASIN STORAGE= .4842E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.91							
RTOFFD7* MANE		.61	32.68	216.04	1.78	5.00	32.20	215.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2111E+01 EXCESS= .0000E+00 OUTFLOW= .2113E+01 BASIN STORAGE= .8193E-09 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.99							
RCOND1* MANE		.86	616.83	221.25	1.22	5.00	616.05	220.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5273E+02 EXCESS= .0000E+00 OUTFLOW= .5276E+02 BASIN STORAGE= .7340E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.98							
RCOND1* MANE		1.00	604.29	221.12	1.20	5.00	603.89	220.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5153E+02 EXCESS= .0000E+00 OUTFLOW= .5155E+02 BASIN STORAGE= .5695E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.95							
RCOND1* MANE		1.01	578.55	220.65	1.15	5.00	578.12	220.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4955E+02 EXCESS= .0000E+00 OUTFLOW= .4957E+02 BASIN STORAGE= .4337E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.93							
RCOND1* MANE		1.05	554.46	220.18	1.10	5.00	554.33	220.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4756E+02 EXCESS= .0000E+00 OUTFLOW= .4758E+02 BASIN STORAGE= .7233E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.92							
RCOND1* MANE		1.07	550.36	220.89	1.09	5.00	549.41	220.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4693E+02 EXCESS= .0000E+00 OUTFLOW= .4695E+02 BASIN STORAGE= .6483E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.91							
RCOND1* MANE		1.02	540.74	221.22	1.07	5.00	540.16	220.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4627E+02 EXCESS= .0000E+00 OUTFLOW= .4630E+02 BASIN STORAGE= .4461E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.99							
RCOND5* MANE		.52	639.95	220.77	1.47	5.00	635.15	220.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7282E+02 EXCESS= .0000E+00 OUTFLOW= .7294E+02 BASIN STORAGE= -.1684E+00 PERCENT ERROR= .1									

FOR PLAN = 1	RATIO= .98								
RCOND5* MANE	.52	627.49	220.68	1.44	5.00	622.62	220.00	1.44	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7138E+02 EXCESS= .0000E+00 OUTFLOW= .7149E+02 BASIN STORAGE=-.1684E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .95								
RCOND5* MANE	.54	601.71	220.84	1.39	5.00	596.77	220.00	1.39	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6897E+02 EXCESS= .0000E+00 OUTFLOW= .6909E+02 BASIN STORAGE=-.1684E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .93								
RCOND5* MANE	.54	577.82	220.84	1.34	5.00	572.84	220.00	1.34	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6655E+02 EXCESS= .0000E+00 OUTFLOW= .6667E+02 BASIN STORAGE=-.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .92								
RCOND5* MANE	.53	573.47	221.02	1.33	5.00	567.54	220.00	1.33	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6577E+02 EXCESS= .0000E+00 OUTFLOW= .6589E+02 BASIN STORAGE=-.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .91								
RCOND5* MANE	.53	563.40	220.72	1.31	5.00	558.39	220.00	1.31	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6500E+02 EXCESS= .0000E+00 OUTFLOW= .6511E+02 BASIN STORAGE=-.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	16.20	225.00	1.84	5.00	16.20	225.00	1.84	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1193E+01 EXCESS= .0000E+00 OUTFLOW= .1194E+01 BASIN STORAGE= .1489E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	15.87	225.00	1.80	5.00	15.87	225.00	1.80	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1168E+01 EXCESS= .0000E+00 OUTFLOW= .1169E+01 BASIN STORAGE= .1474E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	15.34	225.00	1.73	5.00	15.34	225.00	1.74	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+01 EXCESS= .0000E+00 OUTFLOW= .1128E+01 BASIN STORAGE= .1450E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.80	225.00	1.67	5.00	14.80	225.00	1.68	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1085E+01 EXCESS= .0000E+00 OUTFLOW= .1087E+01 BASIN STORAGE= .1425E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.59	225.00	1.64	5.00	14.59	225.00	1.65	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1069E+01 EXCESS= .0000E+00 OUTFLOW= .1070E+01 BASIN STORAGE= .1967E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.44	225.00	1.63	5.00	14.44	225.00	1.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1057E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .1957E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
RCOND3* MANE	1.79	301.88	222.52	2.86	5.00	299.75	225.00	2.86	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2443E+02 EXCESS= .0000E+00 OUTFLOW= .2443E+02 BASIN STORAGE= .9043E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOND3* MANE	1.81	293.89	222.67	2.79	5.00	292.05	225.00	2.79	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2378E+02 EXCESS= .0000E+00 OUTFLOW= .2378E+02 BASIN STORAGE= .8751E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOND3* MANE	1.84	278.80	222.89	2.66	5.00	277.51	225.00	2.66	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2272E+02 EXCESS= .0000E+00 OUTFLOW= .2272E+02 BASIN STORAGE= .9149E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOND3* MANE	1.87	263.96	223.06	2.54	5.00	263.42	225.00	2.54	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2166E+02 EXCESS= .0000E+00 OUTFLOW= .2165E+02 BASIN STORAGE= .8848E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOND3* MANE	1.88	261.06	224.01	2.50	5.00	259.92	225.00	2.50	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2130E+02 EXCESS= .0000E+00 OUTFLOW= .2130E+02 BASIN STORAGE= .9242E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCOFD3* MANE 1.89 256.29 223.32 2.46 5.00 255.43 225.00 2.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2097E+02 EXCESS= .0000E+00 OUTFLOW= .2097E+02 BASIN STORAGE= .8801E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.75 56.28 228.00 .89 5.00 54.88 230.00 .89

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4382E+01 EXCESS= .0000E+00 OUTFLOW= .4383E+01 BASIN STORAGE= .7323E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.75 54.50 228.00 .87 5.00 53.19 230.00 .86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4246E+01 EXCESS= .0000E+00 OUTFLOW= .4248E+01 BASIN STORAGE= .7201E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.50 51.88 229.50 .82 5.00 51.42 230.00 .82

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4032E+01 EXCESS= .0000E+00 OUTFLOW= .4034E+01 BASIN STORAGE= .9832E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.25 48.87 229.50 .78 5.00 48.48 230.00 .78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3808E+01 EXCESS= .0000E+00 OUTFLOW= .3808E+01 BASIN STORAGE= .8347E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.25 47.74 229.50 .76 5.00 47.36 230.00 .76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3719E+01 EXCESS= .0000E+00 OUTFLOW= .3721E+01 BASIN STORAGE= .8247E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROFFE-2B MANE 4.25 46.95 229.50 .75 5.00 46.58 230.00 .75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3659E+01 EXCESS= .0000E+00 OUTFLOW= .3660E+01 BASIN STORAGE= .8178E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 402.08 230.00 1.92 5.00 402.08 230.00 1.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3331E+02 EXCESS= .0000E+00 OUTFLOW= .3329E+02 BASIN STORAGE= .1235E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 391.48 230.00 1.87 5.00 391.48 230.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3241E+02 EXCESS= .0000E+00 OUTFLOW= .3239E+02 BASIN STORAGE= .1255E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 373.12 230.00 1.78 5.00 373.12 230.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3095E+02 EXCESS= .0000E+00 OUTFLOW= .3093E+02 BASIN STORAGE= .1241E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 353.60 230.00 1.70 5.00 353.60 230.00 1.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2945E+02 EXCESS= .0000E+00 OUTFLOW= .2944E+02 BASIN STORAGE= .1673E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 348.16 230.00 1.67 5.00 348.16 230.00 1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2893E+02 EXCESS= .0000E+00 OUTFLOW= .2892E+02 BASIN STORAGE= .1349E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 342.37 230.00 1.64 5.00 342.37 230.00 1.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2849E+02 EXCESS= .0000E+00 OUTFLOW= .2847E+02 BASIN STORAGE= .1346E-02 PERCENT ERROR= .0

*** NORMAL END OF HEC-1 ***

Appendix B-3: Standard Form 4 and HEC-1 for Proposed Conditions


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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 09JAN06 TIME 19:58:51 *
*****

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*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

*DIAGRAM

*** FREE ***

```

1 ID *****
2 ID * THE LANDWELL COMPANY *
3 ID * CONCEPTUAL DRAINAGE STUDY FOR *
4 ID * THE EASTSIDE PROPERTIES *
5 ID * PROPOSED CONDITIONS *
6 ID * INPUT FILE = PROPOSED10.DAT *
7 ID * INPUT FILE DATE = 12/21/05 *
8 ID * DESIGN STORM=10-YEAR 6-HOUR *
9 ID * STORM DISTRIBUTION = SDN #3 *
10 ID * MODELED BY=Matt Wilkinson, P.E. (PBS&J) *
11 ID *
12 ID *****
13 ID DRAINAGE AREA
14 ID (SQUARE MILES) DARF
15 ID 0-0.5 .99
16 ID 0.5-1 .975
17 ID 1-2 .95
18 ID 2-3 .925
19 ID 3-4 .915
20 ID 4-5 .908
21 ID
22 ID
23 IT 5 0 0 300
24 IO 5 0 0
25 IN 5 0 0
26 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908
*
27 KK OFFD-2
28 BA 0.092
29 PB 1.74
30 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
31 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
32 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
33 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
34 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
35 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
36 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
37 PC 0.998 0.999 1
38 LS 0 92.43
39 UD 0.147
*
40 KK OFFD-3
41 BA 0.297
42 PB 1.74
43 LS 0 81.31
44 UD 0.265
*

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1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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45 KK OFFD-3A
46 BA 0.030
47 PB 1.74
48 LS 0 94.30
49 UD 0.076
*
50 KKROFFD-3A
51 RM ROUTE OFFD-3A IN CHANNEL WEST ALONG LAKE MEAD DRIVE
52 RD 2200 0.00453 0.033 0 TRAP 12 4
*

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53 KK CP1
54 KM COMBINE ROFFD-3A, OFFD-3, AND OFFD-2
55 HC 3
*

56 KK OFFD-2A
57 BA 0.023
58 PB 1.74
59 LS 0 92.34
60 UD 0.104
*

61 KK OFFD-1
62 BA 0.410
63 PB 1.74
64 LS 0 91.62
65 UD 0.106
*

66 KK CP2
67 KM COMBINE OFFD-2A WITH OFFD-1
68 HC 2
*

69 KK OFFD-4
70 BA 0.485
71 PB 1.74
72 LS 0 82.47
73 UD 0.368
*

74 KK CP2B
75 KM COMBINE BASIN OFF-4
76 HC 2
*

77 KK RC2B
78 KM ROUTE TO BOULDER HIGHWAY AT PABCO RD
79 RD 12600 0.03 0.03 0 TRAP 1 1
*

HEC-1 INPUT

PAGE 3

1
LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

80 KK CP2A
81 KM COMBINE ALL BASINS TRIB TO PABCO CHANNEL AT BOULDER HIGHWAY
82 HC 2
*

83 KK RCP2A
84 KM ROUTE PABCO REALIGNMENT IN STORM DRAIN TO DETENTION BASIN 1
85 RD 2200 0.009 0.015 0 TRAP 10 0
*

86 KK OND-25
87 BA 0.099
88 PB 1.74
89 LS 0 85.73
90 UD 0.182
*

91 KK OFFD-25
92 BA 0.074
93 PB 1.74
94 LS 0 87.64
95 UD 0.109
*

96 KK CP3
97 KM COMBINE OFFD-25 WITH OND-25
98 HC 2
*

99 KK OND-26
100 BA 0.021
101 PB 1.74
102 LS 0 84.53
103 UD 0.181
*

104 KK OFFD-26
105 BA 0.012
106 PB 1.74
107 LS 0 94.30
108 UD 0.093
*

109 KK CP4
110 KM COMBINE OFFD-26 WITH OND-26
111 HC 2
*

112 KK CP5
113 KM COMBINE BASINS CP3,CP4
114 HC 2
*

HEC-1 INPUT

PAGE 4

1
LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

115 KK RCP5
116 KM ROUTE ALONG BURKHOLDER RD TO DETENTION BASIN 1
117 RD 1700 .0238 .013 0 CIRC 4.5 0
*

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118      KK  OND-20
119      BA  0.149
120      PB  1.74
121      LS      0    93.85
122      UD  0.200
      *

123      KK  OND-21
124      BA  0.079
125      PB  1.74
126      LS      0    85.73
127      UD  0.149
      *

128      KK      CP8
129      KM  COMBINE BASINS OND-20,21 WITH RCP5
130      HC      3
      *

131      KK  OND-27
132      BA  0.111
133      PB  1.74
134      LS      0    87.60
135      UD  0.142
      *

136      KKOFFD-27A
137      BA  0.073
138      PB  1.74
139      LS      0    87.64
140      UD  0.115
      *

141      KKOFFD-27B
142      BA  0.042
143      PB  1.74
144      LS      0    88.36
145      UD  0.110
      *

146      KK      CP6
147      KM  COMBINE OFFD-27A AND OFFD-27B WITH OND-27
148      HC      3
      *

```

1

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

149      KK  RCP6
150      KM  ROUTE ALONG WARM SPRINGS RD TO INTERSECTION WITH EASTSIDE REAL ESTATE PKWY
151      RD  1555 .0129 .013 0 CIRC 5.5 0
      *

152      KK  OND-22
153      BA  0.051
154      PB  1.74
155      LS      0    85.88
156      UD  0.120
      *

157      KK      CP7
158      KM  COMBINE BASINS OND-22 AND RCP6
159      HC      2
      *

160      KK  RCP7
161      KM  ROUTE ALONG WARM SPRINGS RD TO DETENTION BASIN 1
162      RD  1750 .0046 .013 0 CIRC 7 0
      *

163      KK      CP9
164      KM  COMBINE CP7, CP8, AND CP2A
165      HC      3
      *

166      KK  ODIV1
167      DT  DIV1
168      DI      0    757 1000 1500 2000
169      DQ      0    757 757 757 757
      *

170      KK  DB-1
171      KM  Detention Basin 1
172      BA  0.025
173      PB  1.74
174      LS      0    76.3
175      UD  0.185
      *

176      KK  CP9A
177      KM  COMBINE DB-1 AND ODIV1 (EXCESS FLOW BEYOND 10-YEAR EVENT)
178      HC      2
      *

179      KK  DET1
180      KO      1
181      KM  MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET
182      RS      1  STOR -1
183      SV      0  7.87 15.52 23.99 32.70 42.11
184      SE      0    2    3    4    5    6
185      SQ      0    28   50   79  108  129
      *

```

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HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

186      KK      DIV1
187      DR      DIV1
      *
188      KK      CP10
189      HC      2
      *
190      KK      RCP10
191      KM      ROUTE (FROM DETENTION BASIN 1) ALONG BURKHOLDER RD
192      RD      1400 .0214 .015 0 DEEP 8 0
      *
193      KK      OND-18
194      BA      0.018
195      PB      1.74
196      LS      0 95.51
197      UD      0.143
      *
198      KK      ROND-18
199      KM      ROUTE OND-18 THROUGH OND-19 TO COMBINATION CP11
200      RD      2000 .005 .013 0 CIRC 3.5 0
      *
201      KK      OND-19
202      BA      0.093
203      PB      1.74
204      LS      0 85.99
205      UD      0.194
      *
206      KK      CP11
207      KM      COMBINE OND-18,19, AND CP9
208      HC      3
      *
209      KK      RCP11
210      KM      ROUTE CP11 ALONG BURKHOLDER BLVD TO COMBINATION WITH OND-13,14
211      RD      1650 .017 .015 0 DEEP 8 0
      *
212      KK      OND-13
213      BA      0.089
214      PB      1.74
215      LS      0 88.74
216      UD      0.196
      *

```

1

HEC-1 INPUT

PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

217      KK      OND-14
218      BA      0.145
219      PB      1.74
220      LS      0 88.14
221      UD      0.278
      *
222      KK      CP12
223      KM      COMBINE OND-13,14, AND RCP11
224      HC      3
      *
225      KK      RCP12
226      KM      ROUTE CP12 ALONG BURKHOLDER RD TO COMBINATION WITH OND-12
227      RD      1100 .1218 .015 0 DEEP 8 0
      *
228      KK      OND-12
229      BA      0.013
230      PB      1.74
231      LS      0 87.59
232      UD      0.152
      *
233      KK      CP13
234      KM      COMBINE OND-12 WITH RCP12
235      HC      2
      *
236      KK      RCP13
237      KM      ROUTE CP13 ALONG BURKHOLDER RD TO INTERSECTION WITH SUNSET RD
238      RD      800 .02 .015 0 DEEP 10 0
      *
239      KK      OND-10
240      BA      0.112
241      PB      1.74
242      LS      0 88.90
243      UD      0.210
      *
244      KK      CP14
245      KM      COMBINE OND-10 WITH CP13
246      HC      2
      *
247      KK      OND-24
248      BA      0.121
249      PB      1.74
250      LS      0 85.67
251      UD      0.213
      *

```

1

HEC-1 INPUT

PAGE 8

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

252 KK ROND-24
253 KM ROUTE OND-24 ALONG SUNSET RD TO INTERSECTION WITH WATER ST
254 RD 1550 .0168 .013 0 CIRC 3.5 0
*

255 KK OND-23
256 BA 0.116
257 PB 1.74
258 LS 0 83.19
259 UD 0.212
*

260 KK CP15
261 KM COMBINE OND-23 WITH OND-24
262 HC 2
*

263 KK RCP15
264 KM ROUTE C14 ALONG SUNSET RD TO COMBINATION WITH OND-15
265 RD 2050 .0195 .013 0 CIRC 4.5 0
*

266 KK OND-15
267 BA 0.129
268 PB 1.74
269 LS 0 89.11
270 UD 0.276
*

271 KK CP16
272 KM COMBINE OND-15 WITH CP15
273 HC 2
*

274 KK RCP16
275 KM ROUTE C15 ALONG SUNSET RD TO INTERSECTION WITH BURKHOLDER RD
276 RD 2350 .0128 .013 0 CIRC 6 0
*

277 KK OND-11
278 BA 0.094
279 PB 1.74
280 LS 0 88.80
281 UD 0.176
*

282 KK CP17
283 KM COMBINE OND-11 WITH CP16 AND CP14
284 HC 3
*

HEC-1 INPUT

PAGE 9

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

285 KK RCP17
286 KM ROUTE CP17 ALONG BURKHOLDER RD TO ATHENS AVE
287 RD 1350 .0104 .015 0 DEEP 12 0
*

288 KK OND-5
289 BA 0.077
290 PB 1.74
291 LS 0 95.60
292 UD 0.172
*

293 KK OND-6
294 BA 0.327
295 PB 1.74
296 LS 0 89.24
297 UD 0.386
*

298 KK CP18
299 KM COMBINE RCP17 WITH OND-5 AND OND-6
300 HC 3
*

301 KK OND-17
302 BA 0.184
303 PB 1.74
304 LS 0 84.49
305 UD 0.307
*

306 KK ROND-17
307 KM ROUTE BASIN OND-17 TO MCHAWK DRIVE
308 RD 3000 0.0105 0.013 0 CIRC 5
*

309 KK OND-8
310 BA 0.198
311 PB 1.74
312 LS 0 85.78
313 UD 0.264
*

314 KK CP19
315 KM COMBINE ROND-17 WITH BASIN OND-8
316 HC 2
*

317 KK RCP19
 318 KM ROUTE FLOWS TO ATHENS AT EASTSIDE PKWY
 319 RD 2200 0.00571 0.015 0 TRAP 7 0
 *

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

320 KK OND-16
 321 BA 0.057
 322 PB 1.74
 323 LS 0 80.22
 324 UD 0.166
 *

325 KK ROND-16
 326 KM ROUTE STREET FLOW TO ATHENS AVENUE
 327 RD 3500 0.02 0.016 0 TRAP 80 0
 *

328 KK OND-7
 329 BA 0.280
 330 PB 1.74
 331 LS 0 88.72
 332 UD 0.336
 *

333 KK CP20
 334 KM COMBINE CP19 WITH OND-16 AND OND-7
 335 HC 3
 *

336 KK RCP20
 337 KM ROUTE CP20 TO BURKHOLDER BOULEVARD
 338 RD 3900 0.0053 0.015 0 TRAP 8 0
 *

339 KK OND7*
 340 KM MODIFIED WRF ONSITE BASIN OND7*
 341 BA 0.023
 342 PB 1.58
 343 LS 0 92.5
 344 UD 0.183
 *

345 KK CP21
 346 KM COMBINE RCP20 WITH C17 AND OND7*
 347 HC 3
 *

348 KK RCP21
 349 KM ROUTE CP21 ALONG BURKHOLDER BLVD
 350 RD 2100 .0162 .015 0 TRAP 10 0
 *

351 KK OND-4
 352 BA 0.239
 353 PB 1.74
 354 LS 0 84.79
 355 UD 0.364
 *

HEC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

356 KK OND6*
 357 KM WRF ONSITE BASIN OND6*
 358 BA 0.0627
 359 PB 1.58
 360 LS 0 91
 361 UD 0.237
 *

362 KK CP22
 363 KM COMBINE RCP21 WITH OND-4 AND OND6*
 364 HC 3
 *

365 KK ODIV2
 366 DT DIV2
 367 DI 0 1580 2000 3000
 368 DQ 0 1580 1580 1580
 *

369 KK DB-2
 370 BA 0.017
 371 PB 1.74
 372 LS 0 64.5
 373 UD 0.186
 *

374 KK CP22A
 375 KM COMBINE DB-2 AND ODIV2
 376 HC 2
 *

377 KK DET2
 378 KM MULTI-USE DETENTION BASIN, BYPASS 10-YR FLOWS, 1-54" OUTLET, 1' SUBMERGED
 379 KO 1
 380 RS 1 STOR -1
 381 SV 0 10.23 18.12 26.28 34.71 43.42 52.41 61.98
 382 SE 0 2 3 4 5 6 7 8
 383 SQ 0 56 88 121 170 180 200 220
 *

384 KK DIV2
 385 DR DIV2
 *
 386 KK CP23
 387 HC 2
 *
 388 KK RCP23
 389 RM ROUTE CP23 ALONG BURKHOLDER TO PROPERTY LINE
 390 RD 956 .0155 .015 0 TRAP 10 0
 *

HEC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

391 KK OND-3
 392 BA 0.030
 393 PB 1.74
 394 LS 0 77.00
 395 UD 0.236
 *
 396 KK OND8*
 397 RM MODIFIED WRF ONSITE BASIN OND8*
 398 BA 0.022
 399 PB 1.58
 400 LS 0 89.91
 401 UD 0.260
 *

402 KK CP24
 403 RM COMBINE CP23 WITH OND-3 AND OND8*
 404 HC 3
 *

405 KK OND-9
 406 BA 0.011
 407 PB 1.74
 408 LS 0 83.07
 409 UD 0.097
 *

410 KK BKEPVD
 411 BA 0.139
 412 PB 1.74
 413 LS 0 83.7
 414 UD 0.271
 *

415 KK RBKEPVD
 416 RM PALO VERDE
 417 RD 5140 0.017 .015 0 TRAP 80 0
 *

418 KK BKMJD
 419 BA 0.034
 420 PB 1.74
 421 LS 0 85.49
 422 UD 0.163
 *

423 KK RBKMJD
 424 RM MAJOR THEN PALO VERDE
 425 RD 4720 0.016 .015 0 TRAP 80 0
 *

HEC-1 INPUT

PAGE 13

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

426 KK CRMJD
 427 BA 0.206
 428 PB 1.74
 429 LS 0 85.53
 430 UD 0.282
 *

431 KK OCRMJD
 432 RM FLOW SPLIT AT MAJOR AND CENTER
 433 RM DIVERT OUT FLOW IN CENTER STREET
 434 DT DCRMJD
 435 DI 0 50 300
 436 DQ 0 25 150
 *

437 KK ROCRMD
 438 RM MAJOR
 439 RD 5125 0.017 .015 0 TRAP 80 0
 *

440 KK CP25A
 441 RM COMBINE RBKEPVD, RBKMJD, AND ROCRMD
 442 HC 3
 *

443 KK WSPVD
 444 BA 0.265
 445 PB 1.74
 446 LS 0 79.95
 447 UD 0.394
 *

448 KK CP26
 449 RM COMBINE CP25A AND WSPVD
 450 RM AT WARM SPRINGS AND PALO VERDE

451 HC 2
 *
 452 KK OCP26
 453 KM OVERFLOW AT WARM SPRINGS AND PALO VERDE
 454 KM DIVERT OUT FLOW IN STORM DRAIN
 455 DT DCP26
 456 DI 0 428 600
 457 DQ 0 125 125
 *
 458 KK ROCP26
 459 KM WARM SPRINGS
 460 RD 1200 0.009 .015 0 TRAP 100 0
 *

HEC-1 INPUT

PAGE 14

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

461 KK DCRMJD
 462 KM RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
 463 DR DCRMJD
 *
 464 KK RDCRMJD
 465 KM CENTER
 466 RD 4860 0.020 .015 0 TRAP 100 0
 *
 467 KK WSCRD
 468 BA 0.161
 469 PB 1.74
 470 LS 0 79.62
 471 UD 0.249
 *
 472 KK CP27
 473 KM COMBINE ROCP26, RDCRMJD, AND WSCRD
 474 KM AT WARM SPRINGS AND CENTER
 475 HC 3
 *
 476 KK OCP27
 477 KM OVERFLOW AT WARM SPRINGS AND CENTER
 478 KM DIVERT OUT FLOW IN STORM DRAIN
 479 DT DCP27
 480 DI 0 491 600
 481 DQ 0 138 138
 *
 482 KK FWLMD
 483 BA 0.294
 484 PB 1.74
 485 LS 0 84.1
 486 UD 0.281
 *
 487 KK DCP26
 488 KM RECALL FLOW FROM WARM SPRINGS AND PALO VERDE, FLOW IN STORM DRAIN
 489 DR DCP26
 *
 490 KK RDCP26
 491 KM CONCRETE CHANNEL, CENTER STREET, EARTH CHANNEL IN LAKE MEAD
 492 RD 4200 0.013 .015 0 TRAP 100 0
 *
 493 KK CP28
 494 KM COMBINE OCP27, FWLMD, AND RDCP26
 495 KM AT PANNEE AND LAKE MEAD (UPSTREAM OF 10X3 CULVERT)
 496 HC 3
 *

HEC-1 INPUT

PAGE 15

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

497 KK BKLMMD
 498 BA 0.345
 499 PB 1.74
 500 LS 0 85.72
 501 UD 0.316
 *
 502 KK RBKLMMD
 503 KM LAKE MEAD, FUTURE REGIONAL FACILITY
 504 RD 3070 0.013 .013 0 TRAP 20 3
 *
 505 KK WSLMD
 506 BA 0.286
 507 PB 1.74
 508 LS 0 82.88
 509 UD 0.291
 *
 510 KK CP29
 511 KM COMBINE RBKLMMD AND WSLMD
 512 KM AT WARM SPRINGS AND LAKE MEAD
 513 HC 2
 *
 514 KK DCP27
 515 KM RECALL FLOW FROM WARM SPRINGS AND CENTER
 516 KM FLOW IN STORM DRAIN, THEN EARTH CHANNEL
 517 DR DCP27

```

*
518 KK RDCP27
519 KM STORM DRAIN IN WARM SPRINGS
520 RD 1200 0.013 .013 0 TRAP 8 0
*

521 KK CP30
522 KM COMBINE CP29 AND RDCP27 AT WEST SIDE LAKE MEAD JUST N. OF WARM SPRINGS
523 HC 2
*

524 KK RCP30
525 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
526 RD 1700 0.010 .013 0 TRAP 16 0
*

527 KK CRLMD
528 BA 0.045
529 PB 1.74
530 LS 0 91.77
531 UD 0.124
*

```

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HEC-1 INPUT

PAGE 16

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

532 KK RDCRLMD
533 KM MAJOR
534 RD 1970 0.018 .015 0 TRAP 100 0
*

535 KK CP31
536 KM COMBINE RCP30 AND DCRLMD
537 HC 2
*

538 KK RCP31
539 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
540 RD 1290 0.011 .013 0 TRAP 16 0
*

541 KK CP32
542 KM COMBINE CP28 AND RCP31
543 KM AT PAWNEE AND LAKE MEAD (PROPOSED FACILITY)
544 HC 2
*

545 KK RCP32
546 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
547 RD 1560 0.0075 .013 0 TRAP 16 0
*

548 KK DD
549 BA 0.055
550 PB 1.74
551 LS 0 86.29
552 UD 0.146
*

553 KK CP33
554 KM COMBINE RCP32 WITH DD
555 HC 2
*

556 KK RCP33
557 KM LINING = CONCRETE
558 RD 520 0.0060 .013 0 TRAP 16 0
*

559 KK ED
560 BA 0.032
561 PB 1.74
562 LS 0 83.56
563 UD 0.124
*

```

1

HEC-1 INPUT

PAGE 17

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

564 KK CP34
565 KM COMBINE RCP33 WITH ED
566 HC 2
*

567 KK RCP34
568 KM LINING = CONCRETE
569 RD 980 0.0060 .013 0 TRAP 16 0
*

570 KK FD
571 BA 0.014
572 PB 1.74
573 LS 0 94.2
574 UD 0.083
*

575 KK CP35
576 KM COMBINE RCP34 WITH FD
577 HC 2
*

578 KK GD
579 BA 0.015
580 PB 1.74

```

581 LS 0 94.2
 582 UD 0.075
 *
 583 KK CP36
 584 KM COMBINE RCP35 WITH GD
 585 HC 2
 *
 586 KK RCP36
 587 KM LINING = CONCRETE
 588 RD 930 0.0070 .013 0 TRAP 16 0
 *
 589 KK OFFD1*
 590 KM START OF CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS *****
 591 KM THE PB CARDS FOR WRF BASINS INSIDE THE MACARRAN AIRPORT AREA ARE
 592 KM 1.58 FOR 10 Y- 6 HOUR. THE PB CARDS FOR WRF BASINS OUTSIDE THE MACARRAN AIRP
 593 KM 1.74 FOR 10 Y- 6HOUR
 *
 594 BA 0.092
 595 PB 1.74
 596 LS 0 93.0
 597 UD 0.156
 *

1

HEC-1 INPUT

PAGE 18

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

598 KKRTOFFD1*
 599 RD 7600 0.009 0.016 0 TRAP 40 5
 *

600 KK OFFD2*
 601 BA 0.118
 602 PB 1.74
 603 LS 0 79.0
 604 UD 0.333
 *

605 KKRTOFFD2*
 606 RD 1400 0.012 0.016 0 TRAP 40 5
 *

607 KK OFFD2A*
 608 BA 0.107
 609 PB 1.74
 610 LS 0 85.5
 611 UD 0.212
 *

612 KK COFD2A*
 613 HC 3
 *

614 KKDIVERSION*
 615 DT SPLIT1*
 616 DI 0 121 312
 617 DQ 0 0 39
 *

618 KKRCOFD2A*
 619 RD 1300 0.01 0.016 0 TRAP 40 5
 *

620 KK OFFD5*
 621 BA 0.322
 622 PB 1.74
 623 LS 0 85.5
 624 UD 0.150
 *

625 KK COFD5*
 626 HC 2
 *

627 KKRCOFD5*
 628 RD 1800 0.013 0.016 0 TRAP 40 5
 *

1

HEC-1 INPUT

PAGE 19

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

629 KK OFFD6*
 630 BA 0.114
 631 PB 1.74
 632 LS 0 92.0
 633 UD 0.162
 *

634 KK COFD6*
 635 HC 2
 *

636 KK DIVERT*
 637 DT SPLIT2*
 638 DI 0 759
 639 DQ 0 177
 *

640 KK OFFD7*
 641 BA 0.0222
 642 PB 1.74
 643 LS 0 92
 644 UD 0.135

```

*
645 KKRTOFFD7*
646 RK 500 0.01 0.016 0 TRAP 3 50
*
647 KK OND1*
648 BA 0.0433
649 PB 1.58
650 LS 0 88
651 UD 0.197
*
652 KK CONDI*
653 HC 3
*
654 KK RCONDI*
655 KM ROUTE IN GRASS CHANNEL
656 RK 1600 .01 .03 0 TRAP 0 5
*
657 KK OND4*
658 BA 0.0681
659 PB 1.58
660 LS 0 90.6
661 UD 0.211
*

```

1

HEC-1 INPUT

PAGE 20

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

662 KK DBCND4*
663 KO 3
664 RS 1 ELEV 3.0
665 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
666 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
667 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
*

```

```

668 KK OND5*
669 BA 0.0558
670 PB 1.58
671 LS 0 90.8
672 UD 0.196
*

```

```

673 KK DBCND5*
674 KO 3
675 RS 1 ELEV 3.0
676 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
677 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
678 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
*

```

```

679 KK CONDS*
680 HC 3
*

```

```

681 KK RCONDS*
682 KM ROUTE IN RIP RAP CHANNEL TO PONDS
683 RK 1600 0.125 .04 0 TRAP 15 3
*

```

```

684 KK OND11*
685 KM WRF ONSITE BASIN OND11
686 BA 0.0122
687 PB 1.58
688 LS 0 91
689 UD 0.206
*

```

```

690 KK ROND11*
691 RD 1950 0.0120 .025 0 TRAP 15 3
*

```

```

692 KK OND11A*
693 KM MODIFIED WRF ONSITE BASIN POND1
694 BA 0.075
695 PB 1.58
696 LS 0 85
697 UD 0.236
*

```

1

HEC-1 INPUT

PAGE 21

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

698 KKCHANNEL2
699 KM COMBINE RCONDS*, ROND11*, AND OND11A* AT WRF CHANNEL2
700 HC 3
*

```

```

701 KKRETURN1*
702 DR SPLIT1*
*

```

```

703 KKRETURN2*
704 DR SPLIT2*
*

```

```

705 KK OFFD3*
706 BA 0.160
707 PB 1.74
708 LS 0 79.0
709 UD 0.264

```



```

*
710 KK COFD3*
711 HC 3
*
712 KK RCOFD3*
713 RD 800 0.0075 .025 0 TRAP 20 3
*
714 KK OND2A*
715 BA 0.0066
716 PB 1.58
717 LS 0 88.0
718 UD 0.105
*
719 KK COND2A*
720 HC 2
*
721 KK OND3*
722 BA 0.0086
723 PB 1.58
724 LS 0 88.0
725 UD 0.139
*
726 KK COND3*
727 HC 2
*

```

HEC-1 INPUT

PAGE 22

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

728 KK OND2*
729 KM MODIFIED WRF ONSITE BASIN OND2
730 BA 0.046
731 PB 1.58
732 LS 0 77.93
733 UD 0.240
*
734 KK CP1*
735 KM COMBINE FLOW FROM COFD3 AND OND-2*
736 HC 2
*
737 KK OND12*
738 BA 0.0122
739 PB 1.58
740 LS 0 85
741 UD 0.183
*
* ****END CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS*****
* ****PBS&J MAY 1999****
*

```

```

742 KK OFFD-2B
743 BA 0.092
744 PB 1.74
745 LS 0 63.59
746 UD 0.267
*
747 KKROFFD-2B
748 KM ROUTE OFFD-2B
749 RD 2200 0.019 0.035 0 TRAP
*

```

```

750 KKCHANNEL1
751 KM COMBINE CP1*, OND-12* AND ROFFD-2B
752 HC 3
*

```

```

753 KKCHANNEL1
754 KM ROUTE CHANNEL1 TO CP25
755 RD 2200 0.005 0.013 0 TRAP 20 2
*

```

```

756 KK OND-1
757 BA 0.079
758 PB 1.74
759 LS 0 83.90
760 UD 0.261
*

```

HEC-1 INPUT

PAGE 23

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

761 KK OND-2
762 BA 0.271
763 PB 1.74
764 LS 0 84.19
765 UD 0.331
*
766 KK CP25
767 KM COMBINE OND-1, OND-2, AND RCHANNEL1
768 HC 3
*
769 KK OND-2A
770 BA 0.222
771 PB 1.74

```

772 LS 0 83.75
 773 UD 0.344
 774 ZZ

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW
NO.	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW
27	OFFD-2	
40	OFFD-3	
45	OFFD-3A	
50	ROFFD-3A	
53	CP1	
56	OFFD-2A	
61	OFFD-1	
66	CP2	
69	OFFD-4	
74	CP2B	
77	RC2B	
80	CP2A	
83	RCP2A	
86	OND-25	
91	OFFD-25	
96	CP3	
99	OND-26	
104	OFFD-26	
109	CP4	
112	CP5	
115	RCP5	
118	OND-20	
123	OND-21	
126	CP8	
131	OND-27	
136	OFFD-27A	
141	OFFD-27B	
146	CP6	
149	RCP6	
152	OND-22	
157	CP7	
160	RCP7	

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163      CP9.....
167      .----->   DIV1
166      ODIV1
170      .          DB-1
176      CP9A.....
179      DET1
187      .          <----- DIV1
186      .          DIV1
188      CP10.....
190      RCP10
193      .          OND-18
198      .          ROND-18
201      .          OND-19
206      CP11.....
209      RCP11
212      .          OND-13
217      .          OND-14
222      CP12.....
225      RCP12
228      .          OND-12
233      CP13.....
236      RCP13
239      .          OND-10
244      CP14.....
247      .          OND-24
252      .          ROND-24
255      .          OND-23
260      .          CP15.....
263      .          RCP15
266      .          OND-15
271      .          CP16.....
274      .          RCP16
277      .          OND-11
282      CP17.....
285      RCP17
288      .          OND-5
293      .          OND-6

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298 CP18.....
301 . OND-17
306 . V
306 . ROND-17
309 . OND-8
314 . CP19.....
317 . V
317 . RCP19
320 . OND-16
325 . V
325 . ROND-16
328 . OND-7
333 . CP20.....
336 . V
336 . RCP20
339 . OND7*
345 . CP21.....
348 . V
348 . RCP21
351 . OND-4
356 . OND6*
362 . CP22.....
366 . -----> DIV2
365 ODIV2
369 . DB-2
374 . CP22A.....
377 . V
377 . DET2
385 . DIV2<----- DIV2
384 . DIV2
386 . CP23.....
388 . V
388 . RCP23
391 . OND-3
396 . OND8*
402 . CP24.....
405 . OND-9
410 . BKFPD
415 . V
415 . RBKFPD
418 . BKMJD
423 . V
423 . RBKMJD
426 . CRMJD
434 . -----> DCRMJD
431 . OCRMJD
437 . V
437 . ROCRMJD

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440      .          .          CP25A.....
443      .          .          WSPVD
448      .          .          CP26.....
455      .          .          -----> DCP26
452      .          .          OCP26
452      .          .          V
452      .          .          V
458      .          .          RDCP26
463      .          .          .<----- DCRMJD
461      .          .          DCRMJD
461      .          .          V
461      .          .          V
464      .          .          RDCRMJD
467      .          .          .
467      .          .          WSCRD
472      .          .          CP27.....
479      .          .          -----> DCP27
476      .          .          OCP27
482      .          .          PWLMD
489      .          .          .<----- DCP26
487      .          .          DCP26
487      .          .          V
490      .          .          V
490      .          .          RDCP26
493      .          .          CP28.....
497      .          .          BKLMd
497      .          .          V
497      .          .          V
502      .          .          RBKLMd
505      .          .          .
505      .          .          WSLMD
510      .          .          CP29.....
517      .          .          .<----- DCP27
514      .          .          DCP27
514      .          .          V
514      .          .          V
518      .          .          RDCP27
521      .          .          CP30.....
521      .          .          V
524      .          .          RCP30
527      .          .          .
527      .          .          CRLMD
527      .          .          V
532      .          .          ROCRLMD
532      .          .          V
535      .          .          CP31.....
535      .          .          V
538      .          .          RCP31
541      .          .          CP32.....
541      .          .          V
545      .          .          RCP32
548      .          .          DD
553      .          .          CP33.....
553      .          .          V
556      .          .          RCP33
559      .          .          ED
564      .          .          CP34.....
564      .          .          V
567      .          .          RCP34

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[illegible]

NQ 300 NUMBER OF HYDROGRAPH ORDINATES
NDDATE 2 0 ENDING DATE
NDTIME 0055 ENDING TIME
ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .08 HOURS
TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
RATIOS OF PRECIPITATION
.99 .98 .95 .93 .92 .91

179 KK *****
* DET1 *

180 KO OUTPUT CONTROL VARIABLES
IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE
MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET

HYDROGRAPH ROUTING DATA

182 RS STORAGE ROUTING
NSTFS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC -1.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

183 SV STORAGE .0 7.9 15.5 24.0 32.7 42.1

184 SE ELEVATION .00 2.00 3.00 4.00 5.00 6.00

185 SQ DISCHARGE 0. 28. 50. 79. 108. 129.

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	1	0820	101	2.	.5	.1	1	1640	201	0.	.0	.0			
1	0005	2	0.	.0	.0	1	0825	102	2.	.5	.1	1	1645	202	0.	.0	.0			
1	0010	3	0.	.0	.0	1	0830	103	2.	.5	.1	1	1650	203	0.	.0	.0			
1	0015	4	0.	.0	.0	1	0835	104	2.	.5	.1	1	1655	204	0.	.0	.0			
1	0020	5	0.	.0	.0	1	0840	105	2.	.5	.1	1	1700	205	0.	.0	.0			
1	0025	6	0.	.0	.0	1	0845	106	2.	.5	.1	1	1705	206	0.	.0	.0			
1	0030	7	0.	.0	.0	1	0850	107	2.	.5	.1	1	1710	207	0.	.0	.0			
1	0035	8	0.	.0	.0	1	0855	108	2.	.5	.1	1	1715	208	0.	.0	.0			
1	0040	9	0.	.0	.0	1	0900	109	2.	.5	.1	1	1720	209	0.	.0	.0			
1	0045	10	0.	.0	.0	1	0905	110	2.	.4	.1	1	1725	210	0.	.0	.0			
1	0050	11	0.	.0	.0	1	0910	111	2.	.4	.1	1	1730	211	0.	.0	.0			
1	0055	12	0.	.0	.0	1	0915	112	1.	.4	.1	1	1735	212	0.	.0	.0			
1	0100	13	0.	.0	.0	1	0920	113	1.	.4	.1	1	1740	213	0.	.0	.0			
1	0105	14	0.	.0	.0	1	0925	114	1.	.4	.1	1	1745	214	0.	.0	.0			
1	0110	15	0.	.0	.0	1	0930	115	1.	.4	.1	1	1750	215	0.	.0	.0			
1	0115	16	0.	.0	.0	1	0935	116	1.	.4	.1	1	1755	216	0.	.0	.0			
1	0120	17	0.	.0	.0	1	0940	117	1.	.4	.1	1	1800	217	0.	.0	.0			
1	0125	18	0.	.0	.0	1	0945	118	1.	.4	.1	1	1805	218	0.	.0	.0			
1	0130	19	0.	.0	.0	1	0950	119	1.	.4	.1	1	1810	219	0.	.0	.0			
1	0135	20	0.	.0	.0	1	0955	120	1.	.3	.1	1	1815	220	0.	.0	.0			
1	0140	21	0.	.0	.0	1	1000	121	1.	.3	.1	1	1820	221	0.	.0	.0			
1	0145	22	0.	.0	.0	1	1005	122	1.	.3	.1	1	1825	222	0.	.0	.0			
1	0150	23	0.	.0	.0	1	1010	123	1.	.3	.1	1	1830	223	0.	.0	.0			
1	0155	24	0.	.0	.0	1	1015	124	1.	.3	.1	1	1835	224	0.	.0	.0			
1	0200	25	0.	.0	.0	1	1020	125	1.	.3	.1	1	1840	225	0.	.0	.0			
1	0205	26	0.	.0	.0	1	1025	126	1.	.3	.1	1	1845	226	0.	.0	.0			
1	0210	27	0.	.0	.0	1	1030	127	1.	.3	.1	1	1850	227	0.	.0	.0			
1	0215	28	0.	.0	.0	1	1035	128	1.	.3	.1	1	1855	228	0.	.0	.0			
1	0220	29	0.	.0	.0	1	1040	129	1.	.3	.1	1	1900	229	0.	.0	.0			
1	0225	30	0.	.0	.0	1	1045	130	1.	.3	.1	1	1905	230	0.	.0	.0			
1	0230	31	0.	.0	.0	1	1050	131	1.	.3	.1	1	1910	231	0.	.0	.0			
1	0235	32	0.	.0	.0	1	1055	132	1.	.3	.1	1	1915	232	0.	.0	.0			
1	0240	33	0.	.0	.0	1	1100	133	1.	.3	.1	1	1920	233	0.	.0	.0			
1	0245	34	0.	.0	.0	1	1105	134	1.	.2	.1	1	1925	234	0.	.0	.0			
1	0250	35	0.	.0	.0	1	1110	135	1.	.2	.1	1	1930	235	0.	.0	.0			
1	0255	36	0.	.0	.0	1	1115	136	1.	.2	.1	1	1935	236	0.	.0	.0			
1	0300	37	0.	.0	.0	1	1120	137	1.	.2	.1	1	1940	237	0.	.0	.0			
1	0305	38	0.	.0	.0	1	1125	138	1.	.2	.1	1	1945	238	0.	.0	.0			
1	0310	39	0.	.0	.0	1	1130	139	1.	.2	.1	1	1950	239	0.	.0	.0			
1	0315	40	0.	.0	.0	1	1135	140	1.	.2	.1	1	1955	240	0.	.0	.0			
1	0320	41	0.	.0	.0	1	1140	141	1.	.2	.1	1	2000	241	0.	.0	.0			

1	0325	42	0.	.0	.0	* 1	1145	142	1.	.2	.1	* 1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0	* 1	1150	143	1.	.2	.0	* 1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0	* 1	1155	144	1.	.2	.0	* 1	2015	244	0.	.0	.0
1	0340	45	1.	.3	.1	* 1	1200	145	1.	.2	.0	* 1	2020	245	0.	.0	.0
1	0345	46	3.	.8	.2	* 1	1205	146	1.	.2	.0	* 1	2025	246	0.	.0	.0
1	0350	47	5.	1.5	.4	* 1	1210	147	1.	.2	.0	* 1	2030	247	0.	.0	.0
1	0355	48	6.	1.7	.4	* 1	1215	148	1.	.2	.0	* 1	2035	248	0.	.0	.0
1	0400	49	6.	1.7	.4	* 1	1220	149	1.	.2	.0	* 1	2040	249	0.	.0	.0
1	0405	50	6.	1.7	.4	* 1	1225	150	1.	.2	.0	* 1	2045	250	0.	.0	.0
1	0410	51	6.	1.7	.4	* 1	1230	151	1.	.2	.0	* 1	2050	251	0.	.0	.0
1	0415	52	6.	1.6	.4	* 1	1235	152	1.	.2	.0	* 1	2055	252	0.	.0	.0
1	0420	53	6.	1.6	.4	* 1	1240	153	1.	.2	.0	* 1	2100	253	0.	.0	.0
1	0425	54	6.	1.6	.4	* 1	1245	154	1.	.2	.0	* 1	2105	254	0.	.0	.0
1	0430	55	6.	1.5	.4	* 1	1250	155	1.	.1	.0	* 1	2110	255	0.	.0	.0
1	0435	56	5.	1.5	.4	* 1	1255	156	1.	.1	.0	* 1	2115	256	0.	.0	.0
1	0440	57	5.	1.5	.4	* 1	1300	157	0.	.1	.0	* 1	2120	257	0.	.0	.0
1	0445	58	5.	1.5	.4	* 1	1305	158	0.	.1	.0	* 1	2125	258	0.	.0	.0
1	0450	59	5.	1.5	.4	* 1	1310	159	0.	.1	.0	* 1	2130	259	0.	.0	.0
1	0455	60	5.	1.4	.4	* 1	1315	160	0.	.1	.0	* 1	2135	260	0.	.0	.0
1	0500	61	5.	1.4	.4	* 1	1320	161	0.	.1	.0	* 1	2140	261	0.	.0	.0
1	0505	62	5.	1.4	.4	* 1	1325	162	0.	.1	.0	* 1	2145	262	0.	.0	.0
1	0510	63	5.	1.4	.3	* 1	1330	163	0.	.1	.0	* 1	2150	263	0.	.0	.0
1	0515	64	5.	1.3	.3	* 1	1335	164	0.	.1	.0	* 1	2155	264	0.	.0	.0
1	0520	65	5.	1.3	.3	* 1	1340	165	0.	.1	.0	* 1	2200	265	0.	.0	.0
1	0525	66	5.	1.3	.3	* 1	1345	166	0.	.1	.0	* 1	2205	266	0.	.0	.0
1	0530	67	4.	1.3	.3	* 1	1350	167	0.	.1	.0	* 1	2210	267	0.	.0	.0
1	0535	68	4.	1.2	.3	* 1	1355	168	0.	.1	.0	* 1	2215	268	0.	.0	.0
1	0540	69	4.	1.2	.3	* 1	1400	169	0.	.1	.0	* 1	2220	269	0.	.0	.0
1	0545	70	4.	1.2	.3	* 1	1405	170	0.	.1	.0	* 1	2225	270	0.	.0	.0
1	0550	71	4.	1.1	.3	* 1	1410	171	0.	.1	.0	* 1	2230	271	0.	.0	.0
1	0555	72	4.	1.1	.3	* 1	1415	172	0.	.1	.0	* 1	2235	272	0.	.0	.0
1	0600	73	4.	1.1	.3	* 1	1420	173	0.	.1	.0	* 1	2240	273	0.	.0	.0
1	0605	74	4.	1.1	.3	* 1	1425	174	0.	.1	.0	* 1	2245	274	0.	.0	.0
1	0610	75	4.	1.0	.3	* 1	1430	175	0.	.1	.0	* 1	2250	275	0.	.0	.0
1	0615	76	4.	1.0	.3	* 1	1435	176	0.	.1	.0	* 1	2255	276	0.	.0	.0
1	0620	77	4.	1.0	.3	* 1	1440	177	0.	.1	.0	* 1	2300	277	0.	.0	.0
1	0625	78	3.	1.0	.2	* 1	1445	178	0.	.1	.0	* 1	2305	278	0.	.0	.0
1	0630	79	3.	.9	.2	* 1	1450	179	0.	.1	.0	* 1	2310	279	0.	.0	.0
1	0635	80	3.	.9	.2	* 1	1455	180	0.	.1	.0	* 1	2315	280	0.	.0	.0
1	0640	81	3.	.9	.2	* 1	1500	181	0.	.1	.0	* 1	2320	281	0.	.0	.0
1	0645	82	3.	.9	.2	* 1	1505	182	0.	.1	.0	* 1	2325	282	0.	.0	.0
1	0650	83	3.	.9	.2	* 1	1510	183	0.	.1	.0	* 1	2330	283	0.	.0	.0
1	0655	84	3.	.8	.2	* 1	1515	184	0.	.1	.0	* 1	2335	284	0.	.0	.0
1	0700	85	3.	.8	.2	* 1	1520	185	0.	.1	.0	* 1	2340	285	0.	.0	.0
1	0705	86	3.	.8	.2	* 1	1525	186	0.	.1	.0	* 1	2345	286	0.	.0	.0
1	0710	87	3.	.8	.2	* 1	1530	187	0.	.1	.0	* 1	2350	287	0.	.0	.0
1	0715	88	3.	.8	.2	* 1	1535	188	0.	.1	.0	* 1	2355	288	0.	.0	.0
1	0720	89	3.	.7	.2	* 1	1540	189	0.	.1	.0	* 2	0000	289	0.	.0	.0
1	0725	90	3.	.7	.2	* 1	1545	190	0.	.1	.0	* 2	0005	290	0.	.0	.0
1	0730	91	2.	.7	.2	* 1	1550	191	0.	.1	.0	* 2	0010	291	0.	.0	.0
1	0735	92	2.	.7	.2	* 1	1555	192	0.	.1	.0	* 2	0015	292	0.	.0	.0
1	0740	93	2.	.7	.2	* 1	1600	193	0.	.1	.0	* 2	0020	293	0.	.0	.0
1	0745	94	2.	.7	.2	* 1	1605	194	0.	.1	.0	* 2	0025	294	0.	.0	.0
1	0750	95	2.	.6	.2	* 1	1610	195	0.	.1	.0	* 2	0030	295	0.	.0	.0
1	0755	96	2.	.6	.2	* 1	1615	196	0.	.1	.0	* 2	0035	296	0.	.0	.0
1	0800	97	2.	.6	.2	* 1	1620	197	0.	.1	.0	* 2	0040	297	0.	.0	.0
1	0805	98	2.	.6	.2	* 1	1625	198	0.	.1	.0	* 2	0045	298	0.	.0	.0
1	0810	99	2.	.6	.1	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	2.	.6	.1	* 1	1635	200	0.	.0	.0	* 2	0055	300	0.	.0	.0

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PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
* (CFS)	(HR)	(CFS)				
* 6.	3.92		3.	1.	1.	1.
		(INCHES)	.015	.018	.018	.018
		(AC-FT)	2.	2.	2.	2.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
* (AC-FT)	(HR)					
* 2.	3.92		1.	0.	0.	0.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
* (FEET)	(HR)					
* .44	3.92		.24	.07	.07	.07
CUMULATIVE AREA =			2.07 SQ MI			

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HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .98

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	1.	.4	.1	* 1	1640	201	0.	.0	.0			
1	0005	2	0.	.0	.0	* 1	0825	102	1.	.4	.1	* 1	1645	202	0.	.0	.0			
1	0010	3	0.	.0	.0	* 1	0830	103	1.	.4	.1	* 1	1650	203	0.	.0	.0			
1	0015	4	0.	.0	.0	* 1	0835	104	1.	.4	.1	* 1	1655	204	0.	.0	.0			
1	0020	5	0.	.0	.0	* 1	0840	105	1.	.4	.1	* 1	1700	205	0.	.0	.0			
1	0025	6	0.	.0	.0	* 1	0845	106	1.	.4	.1	* 1	1705	206	0.	.0	.0			
1	0030	7	0.	.0	.0	* 1	0850	107	1.	.4	.1	* 1	1710	207	0.	.0	.0			
1	0035	8	0.	.0	.0	* 1	0855	108	1.	.4	.1	* 1	1715	208	0.	.0	.0			
1	0040	9	0.	.0	.0	* 1	0900	109	1.	.3	.1	* 1	1720	209	0.	.0	.0			
1	0045	10	0.	.0	.0	* 1	0905	110	1.	.3	.1	* 1	1725	210	0.	.0	.0			
1	0050	11	0.	.0	.0	* 1	0910	111	1.	.3	.1	* 1	1730	211	0.	.0	.0			
1	0055	12	0.	.0	.0	* 1	0915	112	1.	.3	.1	* 1	1735	212	0.	.0	.0			
1	0100	13	0.	.0	.0	* 1	0920	113	1.	.3	.1	* 1	1740	213	0.	.0	.0			
1	0105	14	0.	.0	.0	* 1	0925	114	1.	.3	.1	* 1	1745	214	0.	.0	.0			
1	0110	15	0.	.0	.0	* 1	0930	115	1.	.3	.1	* 1	1750	215	0.	.0	.0			

1	0115	16	0.	.0	.0 *	1	0935	116	1.	.3	.1 *	1	1755	216	0.	.0	.0
1	0120	17	0.	.0	.0 *	1	0940	117	1.	.3	.1 *	1	1800	217	0.	.0	.0
1	0125	18	0.	.0	.0 *	1	0945	118	1.	.3	.1 *	1	1805	218	0.	.0	.0
1	0130	19	0.	.0	.0 *	1	0950	119	1.	.3	.1 *	1	1810	219	0.	.0	.0
1	0135	20	0.	.0	.0 *	1	0955	120	1.	.3	.1 *	1	1815	220	0.	.0	.0
1	0140	21	0.	.0	.0 *	1	1000	121	1.	.3	.1 *	1	1820	221	0.	.0	.0
1	0145	22	0.	.0	.0 *	1	1005	122	1.	.2	.1 *	1	1825	222	0.	.0	.0
1	0150	23	0.	.0	.0 *	1	1010	123	1.	.2	.1 *	1	1830	223	0.	.0	.0
1	0155	24	0.	.0	.0 *	1	1015	124	1.	.2	.1 *	1	1835	224	0.	.0	.0
1	0200	25	0.	.0	.0 *	1	1020	125	1.	.2	.1 *	1	1840	225	0.	.0	.0
1	0205	26	0.	.0	.0 *	1	1025	126	1.	.2	.1 *	1	1845	226	0.	.0	.0
1	0210	27	0.	.0	.0 *	1	1030	127	1.	.2	.1 *	1	1850	227	0.	.0	.0
1	0215	28	0.	.0	.0 *	1	1035	128	1.	.2	.1 *	1	1855	228	0.	.0	.0
1	0220	29	0.	.0	.0 *	1	1040	129	1.	.2	.1 *	1	1900	229	0.	.0	.0
1	0225	30	0.	.0	.0 *	1	1045	130	1.	.2	.1 *	1	1905	230	0.	.0	.0
1	0230	31	0.	.0	.0 *	1	1050	131	1.	.2	.1 *	1	1910	231	0.	.0	.0
1	0235	32	0.	.0	.0 *	1	1055	132	1.	.2	.1 *	1	1915	232	0.	.0	.0
1	0240	33	0.	.0	.0 *	1	1100	133	1.	.2	.0 *	1	1920	233	0.	.0	.0
1	0245	34	0.	.0	.0 *	1	1105	134	1.	.2	.0 *	1	1925	234	0.	.0	.0
1	0250	35	0.	.0	.0 *	1	1110	135	1.	.2	.0 *	1	1930	235	0.	.0	.0
1	0255	36	0.	.0	.0 *	1	1115	136	1.	.2	.0 *	1	1935	236	0.	.0	.0
1	0300	37	0.	.0	.0 *	1	1120	137	1.	.2	.0 *	1	1940	237	0.	.0	.0
1	0305	38	0.	.0	.0 *	1	1125	138	1.	.2	.0 *	1	1945	238	0.	.0	.0
1	0310	39	0.	.0	.0 *	1	1130	139	1.	.2	.0 *	1	1950	239	0.	.0	.0
1	0315	40	0.	.0	.0 *	1	1135	140	1.	.2	.0 *	1	1955	240	0.	.0	.0
1	0320	41	0.	.0	.0 *	1	1140	141	1.	.2	.0 *	1	2000	241	0.	.0	.0
1	0325	42	0.	.0	.0 *	1	1145	142	1.	.2	.0 *	1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0 *	1	1150	143	1.	.1	.0 *	1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0 *	1	1155	144	1.	.1	.0 *	1	2015	244	0.	.0	.0
1	0340	45	1.	.2	.0 *	1	1200	145	1.	.1	.0 *	1	2020	245	0.	.0	.0
1	0345	46	2.	.6	.1 *	1	1205	146	0.	.1	.0 *	1	2025	246	0.	.0	.0
1	0350	47	4.	1.1	.3 *	1	1210	147	0.	.1	.0 *	1	2030	247	0.	.0	.0
1	0355	48	5.	1.3	.3 *	1	1215	148	0.	.1	.0 *	1	2035	248	0.	.0	.0
1	0400	49	4.	1.3	.3 *	1	1220	149	0.	.1	.0 *	1	2040	249	0.	.0	.0
1	0405	50	4.	1.2	.3 *	1	1225	150	0.	.1	.0 *	1	2045	250	0.	.0	.0
1	0410	51	4.	1.2	.3 *	1	1230	151	0.	.1	.0 *	1	2050	251	0.	.0	.0
1	0415	52	4.	1.2	.3 *	1	1235	152	0.	.1	.0 *	1	2055	252	0.	.0	.0
1	0420	53	4.	1.2	.3 *	1	1240	153	0.	.1	.0 *	1	2100	253	0.	.0	.0
1	0425	54	4.	1.2	.3 *	1	1245	154	0.	.1	.0 *	1	2105	254	0.	.0	.0
1	0430	55	4.	1.1	.3 *	1	1250	155	0.	.1	.0 *	1	2110	255	0.	.0	.0
1	0435	56	4.	1.1	.3 *	1	1255	156	0.	.1	.0 *	1	2115	256	0.	.0	.0
1	0440	57	4.	1.1	.3 *	1	1300	157	0.	.1	.0 *	1	2120	257	0.	.0	.0
1	0445	58	4.	1.1	.3 *	1	1305	158	0.	.1	.0 *	1	2125	258	0.	.0	.0
1	0450	59	4.	1.1	.3 *	1	1310	159	0.	.1	.0 *	1	2130	259	0.	.0	.0
1	0455	60	4.	1.1	.3 *	1	1315	160	0.	.1	.0 *	1	2135	260	0.	.0	.0
1	0500	61	4.	1.1	.3 *	1	1320	161	0.	.1	.0 *	1	2140	261	0.	.0	.0
1	0505	62	4.	1.0	.3 *	1	1325	162	0.	.1	.0 *	1	2145	262	0.	.0	.0
1	0510	63	4.	1.0	.3 *	1	1330	163	0.	.1	.0 *	1	2150	263	0.	.0	.0
1	0515	64	4.	1.0	.3 *	1	1335	164	0.	.1	.0 *	1	2155	264	0.	.0	.0
1	0520	65	4.	1.0	.3 *	1	1340	165	0.	.1	.0 *	1	2200	265	0.	.0	.0
1	0525	66	3.	1.0	.2 *	1	1345	166	0.	.1	.0 *	1	2205	266	0.	.0	.0
1	0530	67	3.	.9	.2 *	1	1350	167	0.	.1	.0 *	1	2210	267	0.	.0	.0
1	0535	68	3.	.9	.2 *	1	1355	168	0.	.1	.0 *	1	2215	268	0.	.0	.0
1	0540	69	3.	.9	.2 *	1	1400	169	0.	.1	.0 *	1	2220	269	0.	.0	.0
1	0545	70	3.	.9	.2 *	1	1405	170	0.	.1	.0 *	1	2225	270	0.	.0	.0
1	0550	71	3.	.9	.2 *	1	1410	171	0.	.1	.0 *	1	2230	271	0.	.0	.0
1	0555	72	3.	.8	.2 *	1	1415	172	0.	.1	.0 *	1	2235	272	0.	.0	.0
1	0600	73	3.	.8	.2 *	1	1420	173	0.	.1	.0 *	1	2240	273	0.	.0	.0
1	0605	74	3.	.8	.2 *	1	1425	174	0.	.1	.0 *	1	2245	274	0.	.0	.0
1	0610	75	3.	.8	.2 *	1	1430	175	0.	.1	.0 *	1	2250	275	0.	.0	.0
1	0615	76	3.	.8	.2 *	1	1435	176	0.	.1	.0 *	1	2255	276	0.	.0	.0
1	0620	77	3.	.7	.2 *	1	1440	177	0.	.1	.0 *	1	2300	277	0.	.0	.0
1	0625	78	3.	.7	.2 *	1	1445	178	0.	.1	.0 *	1	2305	278	0.	.0	.0
1	0630	79	3.	.7	.2 *	1	1450	179	0.	.1	.0 *	1	2310	279	0.	.0	.0
1	0635	80	2.	.7	.2 *	1	1455	180	0.	.1	.0 *	1	2315	280	0.	.0	.0
1	0640	81	2.	.7	.2 *	1	1500	181	0.	.1	.0 *	1	2320	281	0.	.0	.0
1	0645	82	2.	.7	.2 *	1	1505	182	0.	.1	.0 *	1	2325	282	0.	.0	.0
1	0650	83	2.	.6	.2 *	1	1510	183	0.	.1	.0 *	1	2330	283	0.	.0	.0
1	0655	84	2.	.6	.2 *	1	1515	184	0.	.1	.0 *	1	2335	284	0.	.0	.0
1	0700	85	2.	.6	.2 *	1	1520	185	0.	.1	.0 *	1	2340	285	0.	.0	.0
1	0705	86	2.	.6	.2 *	1	1525	186	0.	.1	.0 *	1	2345	286	0.	.0	.0
1	0710	87	2.	.6	.1 *	1	1530	187	0.	.1	.0 *	1	2350	287	0.	.0	.0
1	0715	88	2.	.6	.1 *	1	1535	188	0.	.0	.0 *	1	2355	288	0.	.0	.0
1	0720	89	2.	.6	.1 *	1	1540	189	0.	.0	.0 *	2	0000	289	0.	.0	.0
1	0725	90	2.	.5	.1 *	1	1545	190	0.	.0	.0 *	2	0005	290	0.	.0	.0
1	0730	91	2.	.5	.1 *	1	1550	191	0.	.0	.0 *	2	0010	291	0.	.0	.0
1	0735	92	2.	.5	.1 *	1	1555	192	0.	.0	.0 *	2	0015	292	0.	.0	.0
1	0740	93	2.	.5	.1 *	1	1600	193	0.	.0	.0 *	2	0020	293	0.	.0	.0
1	0745	94	2.	.5	.1 *	1	1605	194	0.	.0	.0 *	2	0025	294	0.	.0	.0
1	0750	95	2.	.5	.1 *	1	1610	195	0.	.0	.0 *	2	0030	295	0.	.0	.0
1	0755	96	2.	.5	.1 *	1	1615	196	0.	.0	.0 *	2	0035	296	0.	.0	.0
1	0800	97	2.	.5	.1 *	1	1620	197	0.	.0	.0 *	2	0040	297	0.	.0	.0
1	0805	98	2.	.4	.1 *	1	1625	198	0.	.0	.0 *	2	0045	298	0.	.0	.0
1	0810	99	2.	.4	.1 *	1	1630	199	0.	.0	.0 *	2	0050	299	0.	.0	.0
1	0815	100	2.	.4	.1 *	1	1635	200	0.	.0	.0 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	5.	3.92	1.	1.	1.
		(INCHES)	.011	.014	.014
		(AC-FT)	1.	2.	2.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	1.	3.92	1.	0.	0.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	.32	3.92	.18	.06	.05
CUMULATIVE AREA =			2.07	SQ MI	

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .95

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0 * 1			0820	101	1.	.2	.1 * 1			1640	201	0.	.0	.0
1		0005	2	0.	.0	.0 * 1			0825	102	1.	.2	.1 * 1			1645	202	0.	.0	.0
1		0010	3	0.	.0	.0 * 1			0830	103	1.	.2	.1 * 1			1650	203	0.	.0	.0
1		0015	4	0.	.0	.0 * 1			0835	104	1.	.2	.1 * 1			1655	204	0.	.0	.0
1		0020	5	0.	.0	.0 * 1			0840	105	1.	.2	.0 * 1			1700	205	0.	.0	.0
1		0025	6	0.	.0	.0 * 1			0845	106	1.	.2	.0 * 1			1705	206	0.	.0	.0
1		0030	7	0.	.0	.0 * 1			0850	107	1.	.2	.0 * 1			1710	207	0.	.0	.0
1		0035	8	0.	.0	.0 * 1			0855	108	1.	.2	.0 * 1			1715	208	0.	.0	.0
1		0040	9	0.	.0	.0 * 1			0900	109	1.	.2	.0 * 1			1720	209	0.	.0	.0
1		0045	10	0.	.0	.0 * 1			0905	110	1.	.2	.0 * 1			1725	210	0.	.0	.0
1		0050	11	0.	.0	.0 * 1			0910	111	1.	.2	.0 * 1			1730	211	0.	.0	.0
1		0055	12	0.	.0	.0 * 1			0915	112	1.	.2	.0 * 1			1735	212	0.	.0	.0
1		0100	13	0.	.0	.0 * 1			0920	113	1.	.2	.0 * 1			1740	213	0.	.0	.0
1		0105	14	0.	.0	.0 * 1			0925	114	1.	.2	.0 * 1			1745	214	0.	.0	.0
1		0110	15	0.	.0	.0 * 1			0930	115	1.	.2	.0 * 1			1750	215	0.	.0	.0
1		0115	16	0.	.0	.0 * 1			0935	116	1.	.2	.0 * 1			1755	216	0.	.0	.0
1		0120	17	0.	.0	.0 * 1			0940	117	1.	.1	.0 * 1			1800	217	0.	.0	.0
1		0125	18	0.	.0	.0 * 1			0945	118	1.	.1	.0 * 1			1805	218	0.	.0	.0
1		0130	19	0.	.0	.0 * 1			0950	119	0.	.1	.0 * 1			1810	219	0.	.0	.0
1		0135	20	0.	.0	.0 * 1			0955	120	0.	.1	.0 * 1			1815	220	0.	.0	.0
1		0140	21	0.	.0	.0 * 1			1000	121	0.	.1	.0 * 1			1820	221	0.	.0	.0
1		0145	22	0.	.0	.0 * 1			1005	122	0.	.1	.0 * 1			1825	222	0.	.0	.0
1		0150	23	0.	.0	.0 * 1			1010	123	0.	.1	.0 * 1			1830	223	0.	.0	.0
1		0155	24	0.	.0	.0 * 1			1015	124	0.	.1	.0 * 1			1835	224	0.	.0	.0
1		0200	25	0.	.0	.0 * 1			1020	125	0.	.1	.0 * 1			1840	225	0.	.0	.0
1		0205	26	0.	.0	.0 * 1			1025	126	0.	.1	.0 * 1			1845	226	0.	.0	.0
1		0210	27	0.	.0	.0 * 1			1030	127	0.	.1	.0 * 1			1850	227	0.	.0	.0
1		0215	28	0.	.0	.0 * 1			1035	128	0.	.1	.0 * 1			1855	228	0.	.0	.0
1		0220	29	0.	.0	.0 * 1			1040	129	0.	.1	.0 * 1			1900	229	0.	.0	.0
1		0225	30	0.	.0	.0 * 1			1045	130	0.	.1	.0 * 1			1905	230	0.	.0	.0
1		0230	31	0.	.0	.0 * 1			1050	131	0.	.1	.0 * 1			1910	231	0.	.0	.0
1		0235	32	0.	.0	.0 * 1			1055	132	0.	.1	.0 * 1			1915	232	0.	.0	.0
1		0240	33	0.	.0	.0 * 1			1100	133	0.	.1	.0 * 1			1920	233	0.	.0	.0
1		0245	34	0.	.0	.0 * 1			1105	134	0.	.1	.0 * 1			1925	234	0.	.0	.0
1		0250	35	0.	.0	.0 * 1			1110	135	0.	.1	.0 * 1			1930	235	0.	.0	.0
1		0255	36	0.	.0	.0 * 1			1115	136	0.	.1	.0 * 1			1935	236	0.	.0	.0
1		0300	37	0.	.0	.0 * 1			1120	137	0.	.1	.0 * 1			1940	237	0.	.0	.0
1		0305	38	0.	.0	.0 * 1			1125	138	0.	.1	.0 * 1			1945	238	0.	.0	.0
1		0310	39	0.	.0	.0 * 1			1130	139	0.	.1	.0 * 1			1950	239	0.	.0	.0
1		0315	40	0.	.0	.0 * 1			1135	140	0.	.1	.0 * 1			1955	240	0.	.0	.0
1		0320	41	0.	.0	.0 * 1			1140	141	0.	.1	.0 * 1			2000	241	0.	.0	.0
1		0325	42	0.	.0	.0 * 1			1145	142	0.	.1	.0 * 1			2005	242	0.	.0	.0
1		0330	43	0.	.0	.0 * 1			1150	143	0.	.1	.0 * 1			2010	243	0.	.0	.0
1		0335	44	0.	.0	.0 * 1			1155	144	0.	.1	.0 * 1			2015	244	0.	.0	.0
1		0340	45	0.	.1	.0 * 1			1200	145	0.	.1	.0 * 1			2020	245	0.	.0	.0
1		0345	46	1.	.2	.1 * 1			1205	146	0.	.1	.0 * 1			2025	246	0.	.0	.0
1		0350	47	2.	.5	.1 * 1			1210	147	0.	.1	.0 * 1			2030	247	0.	.0	.0
1		0355	48	2.	.6	.1 * 1			1215	148	0.	.1	.0 * 1			2035	248	0.	.0	.0
1		0400	49	2.	.6	.1 * 1			1220	149	0.	.1	.0 * 1			2040	249	0.	.0	.0
1		0405	50	2.	.6	.1 * 1			1225	150	0.	.1	.0 * 1			2045	250	0.	.0	.0
1		0410	51	2.	.6	.1 * 1			1230	151	0.	.1	.0 * 1			2050	251	0.	.0	.0
1		0415	52	2.	.6	.1 * 1			1235	152	0.	.1	.0 * 1			2055	252	0.	.0	.0
1		0420	53	2.	.5	.1 * 1			1240	153	0.	.1	.0 * 1			2100	253	0.	.0	.0
1		0425	54	2.	.5	.1 * 1			1245	154	0.	.1	.0 * 1			2105	254	0.	.0	.0
1		0430	55	2.	.5	.1 * 1			1250	155	0.	.1	.0 * 1			2110	255	0.	.0	.0
1		0435	56	2.	.5	.1 * 1			1255	156	0.	.1	.0 * 1			2115	256	0.	.0	.0
1		0440	57	2.	.5	.1 * 1			1300	157	0.	.1	.0 * 1			2120	257	0.	.0	.0
1		0445	58	2.	.5	.1 * 1			1305	158	0.	.1	.0 * 1			2125	258	0.	.0	.0
1		0450	59	2.	.5	.1 * 1			1310	159	0.	.1	.0 * 1			2130	259	0.	.0	.0
1		0455	60	2.	.5	.1 * 1			1315	160	0.	.1	.0 * 1			2135	260	0.	.0	.0
1		0500	61	2.	.5	.1 * 1			1320	161	0.	.0	.0 * 1			2140	261	0.	.0	.0
1		0505	62	2.	.5	.1 * 1			1325	162	0.	.0	.0 * 1			2145	262	0.	.0	.0
1		0510	63	2.	.5	.1 * 1			1330	163	0.	.0	.0 * 1			2150	263	0.	.0	.0
1		0515	64	2.	.5	.1 * 1			1335	164	0.	.0	.0 * 1			2155	264	0.	.0	.0
1		0520	65	2.	.5	.1 * 1			1340	165	0.	.0	.0 * 1			2200	265	0.	.0	.0
1		0525	66	2.	.5	.1 * 1			1345	166	0.	.0	.0 * 1			2205	266	0.	.0	.0
1		0530	67	2.	.5	.1 * 1			1350	167	0.	.0	.0 * 1			2210	267	0.	.0	.0
1		0535	68	2.	.5	.1 * 1			1355	168	0.	.0	.0 * 1			2215	268	0.	.0	.0
1		0540	69	2.	.5	.1 * 1			1400	169	0.	.0	.0 * 1			2220	269	0.	.0	.0
1		0545	70	2.	.5	.1 * 1			1405	170	0.	.0	.0 * 1			2225	270	0.	.0	.0
1		0550	71	2.	.4	.1 * 1			1410	171	0.	.0	.0 * 1			2230	271	0.	.0	.0
1		0555	72	2.	.4	.1 * 1			1415	172	0.	.0	.0 * 1			2235	272	0.	.0	.0
1		0600	73	2.	.4	.1 * 1			1420	173	0.	.0	.0 * 1			2240	273	0.	.0	.0
1		0605	74	1.	.4	.1 * 1			1425	174	0.	.0	.0 * 1			2245	274	0.	.0	.0
1		0610	75	1.	.4	.1 * 1			1430	175	0.	.0	.0 * 1			2250	275	0.	.0	.0
1		0615	76	1.	.4	.1 * 1			1435	176	0.	.0	.0 * 1			2255	276	0.	.0	.0
1		0620	77	1.	.4	.1 * 1			1440	177	0.	.0	.0 * 1			2300	277	0.	.0	.0
1		0625	78	1.	.4	.1 * 1			1445	178	0.	.0	.0 * 1			2305	278	0.	.0	.0
1		0630	79	1.	.4	.1 * 1			1450	179	0.	.0	.0 * 1			2310	279	0.	.0	.0
1		0635	80	1.	.4	.1 * 1			1455	180	0.	.0	.0 * 1			2315	280	0.	.0	.0
1		0640	81	1.	.4	.1 * 1			1500	181	0.	.0	.0 * 1			2320	281	0.	.0	.0
1		0645	82	1.	.3	.1 * 1			1505	182	0.	.0	.0 * 1			2325	282	0.	.0	.0
1		0650	83	1.	.3	.1 * 1			1510	183	0.	.0	.0 * 1			2330	283	0.	.0	.0
1		0655	84	1.	.3	.1 * 1			1515	184	0.	.0	.0 * 1			2335	284	0.	.0	.0
1		0700	85	1.	.3	.1 * 1			1520	185	0.	.0	.0 * 1			2340	285	0.	.0	.0
1		0705	86	1.	.3	.1 * 1			1525	186	0.	.0	.0 * 1			2345	286	0.	.0	.0
1		0710																		

1	0800	97	1.	.2	.1	*	1	1620	197	0.	.0	.0	*	2	0040	297	0.	.0	.0
1	0805	98	1.	.2	.1	*	1	1625	198	0.	.0	.0	*	2	0045	298	0.	.0	.0
1	0810	99	1.	.2	.1	*	1	1630	199	0.	.0	.0	*	2	0050	299	0.	.0	.0
1	0815	100	1.	.2	.1	*	1	1635	200	0.	.0	.0	*	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
(CFS)	(HR)	(CFS)				
2.	4.08		1.	0.	0.	0.
		(INCHES)	.006	.007	.007	.007
		(AC-FT)	1.	1.	1.	1.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(AC-FT)	(HR)					
1.	4.08		0.	0.	0.	0.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
(FEET)	(HR)					
.14	4.08		.09	.03	.03	.03

CUMULATIVE AREA = 2.07 SQ MI

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .93

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	*	1	0820	101	0.	.1	.0	*	1	1640	201	0.	.0	.0				
1	0005	2	0.	.0	.0	*	1	0825	102	0.	.1	.0	*	1	1645	202	0.	.0	.0				
1	0010	3	0.	.0	.0	*	1	0830	103	0.	.1	.0	*	1	1650	203	0.	.0	.0				
1	0015	4	0.	.0	.0	*	1	0835	104	0.	.1	.0	*	1	1655	204	0.	.0	.0				
1	0020	5	0.	.0	.0	*	1	0840	105	0.	.1	.0	*	1	1700	205	0.	.0	.0				
1	0025	6	0.	.0	.0	*	1	0845	106	0.	.1	.0	*	1	1705	206	0.	.0	.0				
1	0030	7	0.	.0	.0	*	1	0850	107	0.	.1	.0	*	1	1710	207	0.	.0	.0				
1	0035	8	0.	.0	.0	*	1	0855	108	0.	.1	.0	*	1	1715	208	0.	.0	.0				
1	0040	9	0.	.0	.0	*	1	0900	109	0.	.1	.0	*	1	1720	209	0.	.0	.0				
1	0045	10	0.	.0	.0	*	1	0905	110	0.	.1	.0	*	1	1725	210	0.	.0	.0				
1	0050	11	0.	.0	.0	*	1	0910	111	0.	.1	.0	*	1	1730	211	0.	.0	.0				
1	0055	12	0.	.0	.0	*	1	0915	112	0.	.1	.0	*	1	1735	212	0.	.0	.0				
1	0100	13	0.	.0	.0	*	1	0920	113	0.	.1	.0	*	1	1740	213	0.	.0	.0				
1	0105	14	0.	.0	.0	*	1	0925	114	0.	.1	.0	*	1	1745	214	0.	.0	.0				
1	0110	15	0.	.0	.0	*	1	0930	115	0.	.1	.0	*	1	1750	215	0.	.0	.0				
1	0115	16	0.	.0	.0	*	1	0935	116	0.	.1	.0	*	1	1755	216	0.	.0	.0				
1	0120	17	0.	.0	.0	*	1	0940	117	0.	.1	.0	*	1	1800	217	0.	.0	.0				
1	0125	18	0.	.0	.0	*	1	0945	118	0.	.1	.0	*	1	1805	218	0.	.0	.0				
1	0130	19	0.	.0	.0	*	1	0950	119	0.	.1	.0	*	1	1810	219	0.	.0	.0				
1	0135	20	0.	.0	.0	*	1	0955	120	0.	.1	.0	*	1	1815	220	0.	.0	.0				
1	0140	21	0.	.0	.0	*	1	1000	121	0.	.1	.0	*	1	1820	221	0.	.0	.0				
1	0145	22	0.	.0	.0	*	1	1005	122	0.	.1	.0	*	1	1825	222	0.	.0	.0				
1	0150	23	0.	.0	.0	*	1	1010	123	0.	.1	.0	*	1	1830	223	0.	.0	.0				
1	0155	24	0.	.0	.0	*	1	1015	124	0.	.1	.0	*	1	1835	224	0.	.0	.0				
1	0200	25	0.	.0	.0	*	1	1020	125	0.	.1	.0	*	1	1840	225	0.	.0	.0				
1	0205	26	0.	.0	.0	*	1	1025	126	0.	.1	.0	*	1	1845	226	0.	.0	.0				
1	0210	27	0.	.0	.0	*	1	1030	127	0.	.1	.0	*	1	1850	227	0.	.0	.0				
1	0215	28	0.	.0	.0	*	1	1035	128	0.	.1	.0	*	1	1855	228	0.	.0	.0				
1	0220	29	0.	.0	.0	*	1	1040	129	0.	.0	.0	*	1	1900	229	0.	.0	.0				
1	0225	30	0.	.0	.0	*	1	1045	130	0.	.0	.0	*	1	1905	230	0.	.0	.0				
1	0230	31	0.	.0	.0	*	1	1050	131	0.	.0	.0	*	1	1910	231	0.	.0	.0				
1	0235	32	0.	.0	.0	*	1	1055	132	0.	.0	.0	*	1	1915	232	0.	.0	.0				
1	0240	33	0.	.0	.0	*	1	1100	133	0.	.0	.0	*	1	1920	233	0.	.0	.0				
1	0245	34	0.	.0	.0	*	1	1105	134	0.	.0	.0	*	1	1925	234	0.	.0	.0				
1	0250	35	0.	.0	.0	*	1	1110	135	0.	.0	.0	*	1	1930	235	0.	.0	.0				
1	0255	36	0.	.0	.0	*	1	1115	136	0.	.0	.0	*	1	1935	236	0.	.0	.0				
1	0300	37	0.	.0	.0	*	1	1120	137	0.	.0	.0	*	1	1940	237	0.	.0	.0				
1	0305	38	0.	.0	.0	*	1	1125	138	0.	.0	.0	*	1	1945	238	0.	.0	.0				
1	0310	39	0.	.0	.0	*	1	1130	139	0.	.0	.0	*	1	1950	239	0.	.0	.0				
1	0315	40	0.	.0	.0	*	1	1135	140	0.	.0	.0	*	1	1955	240	0.	.0	.0				
1	0320	41	0.	.0	.0	*	1	1140	141	0.	.0	.0	*	1	2000	241	0.	.0	.0				
1	0325	42	0.	.0	.0	*	1	1145	142	0.	.0	.0	*	1	2005	242	0.	.0	.0				
1	0330	43	0.	.0	.0	*	1	1150	143	0.	.0	.0	*	1	2010	243	0.	.0	.0				
1	0335	44	0.	.0	.0	*	1	1155	144	0.	.0	.0	*	1	2015	244	0.	.0	.0				
1	0340	45	0.	.1	.0	*	1	1200	145	0.	.0	.0	*	1	2020	245	0.	.0	.0				
1	0345	46	0.	.1	.0	*	1	1205	146	0.	.0	.0	*	1	2025	246	0.	.0	.0				
1	0350	47	0.	.1	.0	*	1	1210	147	0.	.0	.0	*	1	2030	247	0.	.0	.0				
1	0355	48	0.	.1	.0	*	1	1215	148	0.	.0	.0	*	1	2035	248	0.	.0	.0				
1	0400	49	1.	.1	.0	*	1	1220	149	0.	.0	.0	*	1	2040	249	0.	.0	.0				
1	0405	50	1.	.2	.0	*	1	1225	150	0.	.0	.0	*	1	2045	250	0.	.0	.0				
1	0410	51	1.	.2	.0	*	1	1230	151	0.	.0	.0	*	1	2050	251	0.	.0	.0				
1	0415	52	1.	.2	.0	*	1	1235	152	0.	.0	.0	*	1	2055	252	0.	.0	.0				
1	0420	53	1.	.2	.0	*	1	1240	153	0.	.0	.0	*	1	2100	253	0.	.0	.0				
1	0425	54	1.	.2	.0	*	1	1245	154	0.	.0	.0	*	1	2105	254	0.	.0	.0				
1	0430	55	1.	.2	.0	*	1	1250	155	0.	.0	.0	*	1	2110	255	0.	.0	.0				
1	0435	56	1.	.2	.0	*	1	1255	156	0.	.0	.0	*	1	2115	256	0.	.0	.0				
1	0440	57	1.	.2	.0	*	1	1300	157	0.	.0	.0	*	1	2120	257	0.	.0	.0				
1	0445	58	1.	.2	.0	*	1	1305	158	0.	.0	.0	*	1	2125	258	0.	.0	.0				
1	0450	59	1.	.2	.1	*	1	1310	159	0.	.0	.0	*	1	2130	259	0.	.0	.0				
1	0455	60	1.	.2	.1	*	1	1315	160	0.	.0	.0	*	1	2135	260	0.	.0	.0				
1	0500	61	1.	.2	.1	*	1	1320	161	0.	.0	.0	*	1	2140	261	0.	.0	.0				
1	0505	62	1.	.2	.1	*	1	1325	162	0.	.0	.0	*	1	2145	262	0.	.0	.0				
1	0510	63	1.	.2	.1	*	1	1330	163	0.	.0	.0	*	1	2150	263	0.	.0	.0				
1	0515	64	1.	.2	.1	*	1	1335	164	0.	.0	.0	*	1	2155	264	0.	.0	.0				
1	0520	65	1.	.2	.1	*	1	1340	165	0.	.0	.0	*	1	2200	265	0.	.0	.0				
1	0525	66	1.	.2	.1	*	1	1345	166	0.	.0	.0	*	1	2205	266	0.	.0	.0				
1	0530	67	1.	.2	.1	*	1	1350	167	0.	.0	.0	*	1	2210	267	0.	.0	.0				
1	0535	68	1.	.2	.1	*	1	1355	168	0.	.0	.0	*	1	2215	268	0.	.0	.0				
1	0540	69	1.	.2	.1	*	1	1400	169	0.	.0	.0	*	1	2220	269	0.	.0	.0				
1	0545	70	1.	.2	.1	*	1	1405	170	0.	.0	.0	*	1	2225	270	0.	.0	.0				

1	0550	71	1.	.2	.1	*	1	1410	171	0.	.0	.0	*	1	2230	271	0.	.0	.0
1	0555	72	1.	.2	.0	*	1	1415	172	0.	.0	.0	*	1	2235	272	0.	.0	.0
1	0600	73	1.	.2	.0	*	1	1420	173	0.	.0	.0	*	1	2240	273	0.	.0	.0
1	0605	74	1.	.2	.0	*	1	1425	174	0.	.0	.0	*	1	2245	274	0.	.0	.0
1	0610	75	1.	.2	.0	*	1	1430	175	0.	.0	.0	*	1	2250	275	0.	.0	.0
1	0615	76	1.	.2	.0	*	1	1435	176	0.	.0	.0	*	1	2255	276	0.	.0	.0
1	0620	77	1.	.2	.0	*	1	1440	177	0.	.0	.0	*	1	2300	277	0.	.0	.0
1	0625	78	1.	.2	.0	*	1	1445	178	0.	.0	.0	*	1	2305	278	0.	.0	.0
1	0630	79	1.	.2	.0	*	1	1450	179	0.	.0	.0	*	1	2310	279	0.	.0	.0
1	0635	80	1.	.2	.0	*	1	1455	180	0.	.0	.0	*	1	2315	280	0.	.0	.0
1	0640	81	1.	.2	.0	*	1	1500	181	0.	.0	.0	*	1	2320	281	0.	.0	.0
1	0645	82	1.	.2	.0	*	1	1505	182	0.	.0	.0	*	1	2325	282	0.	.0	.0
1	0650	83	1.	.2	.0	*	1	1510	183	0.	.0	.0	*	1	2330	283	0.	.0	.0
1	0655	84	1.	.1	.0	*	1	1515	184	0.	.0	.0	*	1	2335	284	0.	.0	.0
1	0700	85	1.	.1	.0	*	1	1520	185	0.	.0	.0	*	1	2340	285	0.	.0	.0
1	0705	86	0.	.1	.0	*	1	1525	186	0.	.0	.0	*	1	2345	286	0.	.0	.0
1	0710	87	0.	.1	.0	*	1	1530	187	0.	.0	.0	*	1	2350	287	0.	.0	.0
1	0715	88	0.	.1	.0	*	1	1535	188	0.	.0	.0	*	1	2355	288	0.	.0	.0
1	0720	89	0.	.1	.0	*	1	1540	189	0.	.0	.0	*	2	0000	289	0.	.0	.0
1	0725	90	0.	.1	.0	*	1	1545	190	0.	.0	.0	*	2	0005	290	0.	.0	.0
1	0730	91	0.	.1	.0	*	1	1550	191	0.	.0	.0	*	2	0010	291	0.	.0	.0
1	0735	92	0.	.1	.0	*	1	1555	192	0.	.0	.0	*	2	0015	292	0.	.0	.0
1	0740	93	0.	.1	.0	*	1	1600	193	0.	.0	.0	*	2	0020	293	0.	.0	.0
1	0745	94	0.	.1	.0	*	1	1605	194	0.	.0	.0	*	2	0025	294	0.	.0	.0
1	0750	95	0.	.1	.0	*	1	1610	195	0.	.0	.0	*	2	0030	295	0.	.0	.0
1	0755	96	0.	.1	.0	*	1	1615	196	0.	.0	.0	*	2	0035	296	0.	.0	.0
1	0800	97	0.	.1	.0	*	1	1620	197	0.	.0	.0	*	2	0040	297	0.	.0	.0
1	0805	98	0.	.1	.0	*	1	1625	198	0.	.0	.0	*	2	0045	298	0.	.0	.0
1	0810	99	0.	.1	.0	*	1	1630	199	0.	.0	.0	*	2	0050	299	0.	.0	.0
1	0815	100	0.	.1	.0	*	1	1635	200	0.	.0	.0	*	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	1.	5.17	1.	0.	0.	0.	0.
			(INCHES)	.002	.003	.003	.003
			(AC-FT)	0.	0.	0.	0.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
	0.	5.17	0.	0.	0.	0.	0.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
	.06	5.25	.04	.01	.01	.01	.01
CUMULATIVE AREA =			2.07 SQ MI				

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .92

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1			0.	.0	.0	*	1	0820	101			0.	.1	.0	*	1	1640	201			0.	.0	.0
1	0005	2			0.	.0	.0	*	1	0825	102			0.	.1	.0	*	1	1645	202			0.	.0	.0
1	0010	3			0.	.0	.0	*	1	0830	103			0.	.1	.0	*	1	1650	203			0.	.0	.0
1	0015	4			0.	.0	.0	*	1	0835	104			0.	.1	.0	*	1	1655	204			0.	.0	.0
1	0020	5			0.	.0	.0	*	1	0840	105			0.	.1	.0	*	1	1700	205			0.	.0	.0
1	0025	6			0.	.0	.0	*	1	0845	106			0.	.1	.0	*	1	1705	206			0.	.0	.0
1	0030	7			0.	.0	.0	*	1	0850	107			0.	.1	.0	*	1	1710	207			0.	.0	.0
1	0035	8			0.	.0	.0	*	1	0855	108			0.	.1	.0	*	1	1715	208			0.	.0	.0
1	0040	9			0.	.0	.0	*	1	0900	109			0.	.1	.0	*	1	1720	209			0.	.0	.0
1	0045	10			0.	.0	.0	*	1	0905	110			0.	.1	.0	*	1	1725	210			0.	.0	.0
1	0050	11			0.	.0	.0	*	1	0910	111			0.	.1	.0	*	1	1730	211			0.	.0	.0
1	0055	12			0.	.0	.0	*	1	0915	112			0.	.1	.0	*	1	1735	212			0.	.0	.0
1	0100	13			0.	.0	.0	*	1	0920	113			0.	.1	.0	*	1	1740	213			0.	.0	.0
1	0105	14			0.	.0	.0	*	1	0925	114			0.	.1	.0	*	1	1745	214			0.	.0	.0
1	0110	15			0.	.0	.0	*	1	0930	115			0.	.1	.0	*	1	1750	215			0.	.0	.0
1	0115	16			0.	.0	.0	*	1	0935	116			0.	.1	.0	*	1	1755	216			0.	.0	.0
1	0120	17			0.	.0	.0	*	1	0940	117			0.	.1	.0	*	1	1800	217			0.	.0	.0
1	0125	18			0.	.0	.0	*	1	0945	118			0.	.1	.0	*	1	1805	218			0.	.0	.0
1	0130	19			0.	.0	.0	*	1	0950	119			0.	.1	.0	*	1	1810	219			0.	.0	.0
1	0135	20			0.	.0	.0	*	1	0955	120			0.	.1	.0	*	1	1815	220			0.	.0	.0
1	0140	21			0.	.0	.0	*	1	1000	121			0.	.1	.0	*	1	1820	221			0.	.0	.0
1	0145	22			0.	.0	.0	*	1	1005	122			0.	.1	.0	*	1	1825	222			0.	.0	.0
1	0150	23			0.	.0	.0	*	1	1010	123			0.	.1	.0	*	1	1830	223			0.	.0	.0
1	0155	24			0.	.0	.0	*	1	1015	124			0.	.1	.0	*	1	1835	224			0.	.0	.0
1	0200	25			0.	.0	.0	*	1	1020	125			0.	.1	.0	*	1	1840	225			0.	.0	.0
1	0205	26			0.	.0	.0	*	1	1025	126			0.	.1	.0	*	1	1845	226			0.	.0	.0
1	0210	27			0.	.0	.0	*	1	1030	127			0.	.0	.0	*	1	1850	227			0.	.0	.0
1	0215	28			0.	.0	.0	*	1	1035	128			0.	.0	.0	*	1	1855	228			0.	.0	.0
1	0220	29			0.	.0	.0	*	1	1040	129			0.	.0	.0	*	1	1900	229			0.	.0	.0
1	0225	30			0.	.0	.0	*	1	1045	130			0.	.0	.0	*	1	1905	230			0.	.0	.0
1	0230	31			0.	.0	.0	*	1	1050	131			0.	.0	.0	*	1	1910	231			0.	.0	.0
1	0235	32			0.	.0	.0	*	1	1055	132			0.	.0	.0	*	1	1915	232			0.	.0	.0
1	0240	33			0.	.0	.0	*	1	1100	133			0.	.0	.0	*	1	1920	233			0.	.0	.0
1	0245	34			0.	.0	.0	*	1	1105	134			0.	.0	.0	*	1	1925	234			0.	.0	.0
1	0250	35			0.	.0	.0	*	1	1110	135			0.	.0	.0	*	1	1930	235			0.	.0	.0
1	0255	36			0.	.0	.0	*	1	1115	136			0.	.0	.0	*	1	1935	236			0.	.0	.0
1	0300	37			0.	.0	.0	*	1	1120	137			0.	.0	.0	*	1	1940	237			0.	.0	.0
1	0305	38			0.	.0	.0	*	1	1125	138			0.	.0	.0	*	1	1945	238			0.	.0	.0
1	0310	39			0.	.0	.0	*	1	1130	139			0.	.0	.0	*	1	1950	239			0.	.0	.0
1	0315	40			0.	.0	.0	*	1	1135	140			0.	.0	.0	*	1	1955	240			0.	.0	.0
1	0320	41			0.	.0	.0	*	1	1140	141			0.	.0	.0	*	1	2000	241			0.	.0	.0
1	0325	42			0.	.0	.0	*	1	1145	142			0.	.0	.0	*	1	2005	242			0.	.0	.0
1	0330	43			0.	.0	.0	*	1	1150	143			0.	.0	.0	*	1	2010	243			0.	.0	.0
1	0335	44			0.	.0	.0	*	1	1155	144			0.	.0	.0	*	1	2015	244			0.	.0	.0

1	0340	45	0.	.1	.0 *	1	1200	145	0.	.0	.0 *	1	2020	245	0.	.0	.0
1	0345	46	0.	.1	.0 *	1	1205	146	0.	.0	.0 *	1	2025	246	0.	.0	.0
1	0350	47	0.	.1	.0 *	1	1210	147	0.	.0	.0 *	1	2030	247	0.	.0	.0
1	0355	48	0.	.1	.0 *	1	1215	148	0.	.0	.0 *	1	2035	248	0.	.0	.0
1	0400	49	0.	.1	.0 *	1	1220	149	0.	.0	.0 *	1	2040	249	0.	.0	.0
1	0405	50	1.	.1	.0 *	1	1225	150	0.	.0	.0 *	1	2045	250	0.	.0	.0
1	0410	51	1.	.2	.0 *	1	1230	151	0.	.0	.0 *	1	2050	251	0.	.0	.0
1	0415	52	1.	.2	.0 *	1	1235	152	0.	.0	.0 *	1	2055	252	0.	.0	.0
1	0420	53	1.	.2	.0 *	1	1240	153	0.	.0	.0 *	1	2100	253	0.	.0	.0
1	0425	54	1.	.2	.0 *	1	1245	154	0.	.0	.0 *	1	2105	254	0.	.0	.0
1	0430	55	1.	.2	.0 *	1	1250	155	0.	.0	.0 *	1	2110	255	0.	.0	.0
1	0435	56	1.	.2	.0 *	1	1255	156	0.	.0	.0 *	1	2115	256	0.	.0	.0
1	0440	57	1.	.2	.0 *	1	1300	157	0.	.0	.0 *	1	2120	257	0.	.0	.0
1	0445	58	1.	.2	.0 *	1	1305	158	0.	.0	.0 *	1	2125	258	0.	.0	.0
1	0450	59	1.	.2	.0 *	1	1310	159	0.	.0	.0 *	1	2130	259	0.	.0	.0
1	0455	60	1.	.2	.1 *	1	1315	160	0.	.0	.0 *	1	2135	260	0.	.0	.0
1	0500	61	1.	.2	.1 *	1	1320	161	0.	.0	.0 *	1	2140	261	0.	.0	.0
1	0505	62	1.	.2	.1 *	1	1325	162	0.	.0	.0 *	1	2145	262	0.	.0	.0
1	0510	63	1.	.2	.1 *	1	1330	163	0.	.0	.0 *	1	2150	263	0.	.0	.0
1	0515	64	1.	.2	.1 *	1	1335	164	0.	.0	.0 *	1	2155	264	0.	.0	.0
1	0520	65	1.	.2	.1 *	1	1340	165	0.	.0	.0 *	1	2200	265	0.	.0	.0
1	0525	66	1.	.2	.1 *	1	1345	166	0.	.0	.0 *	1	2205	266	0.	.0	.0
1	0530	67	1.	.2	.1 *	1	1350	167	0.	.0	.0 *	1	2210	267	0.	.0	.0
1	0535	68	1.	.2	.1 *	1	1355	168	0.	.0	.0 *	1	2215	268	0.	.0	.0
1	0540	69	1.	.2	.1 *	1	1400	169	0.	.0	.0 *	1	2220	269	0.	.0	.0
1	0545	70	1.	.2	.0 *	1	1405	170	0.	.0	.0 *	1	2225	270	0.	.0	.0
1	0550	71	1.	.2	.0 *	1	1410	171	0.	.0	.0 *	1	2230	271	0.	.0	.0
1	0555	72	1.	.2	.0 *	1	1415	172	0.	.0	.0 *	1	2235	272	0.	.0	.0
1	0600	73	1.	.2	.0 *	1	1420	173	0.	.0	.0 *	1	2240	273	0.	.0	.0
1	0605	74	1.	.2	.0 *	1	1425	174	0.	.0	.0 *	1	2245	274	0.	.0	.0
1	0610	75	1.	.2	.0 *	1	1430	175	0.	.0	.0 *	1	2250	275	0.	.0	.0
1	0615	76	1.	.2	.0 *	1	1435	176	0.	.0	.0 *	1	2255	276	0.	.0	.0
1	0620	77	1.	.2	.0 *	1	1440	177	0.	.0	.0 *	1	2300	277	0.	.0	.0
1	0625	78	1.	.2	.0 *	1	1445	178	0.	.0	.0 *	1	2305	278	0.	.0	.0
1	0630	79	1.	.2	.0 *	1	1450	179	0.	.0	.0 *	1	2310	279	0.	.0	.0
1	0635	80	1.	.2	.0 *	1	1455	180	0.	.0	.0 *	1	2315	280	0.	.0	.0
1	0640	81	1.	.2	.0 *	1	1500	181	0.	.0	.0 *	1	2320	281	0.	.0	.0
1	0645	82	1.	.2	.0 *	1	1505	182	0.	.0	.0 *	1	2325	282	0.	.0	.0
1	0650	83	1.	.1	.0 *	1	1510	183	0.	.0	.0 *	1	2330	283	0.	.0	.0
1	0655	84	1.	.1	.0 *	1	1515	184	0.	.0	.0 *	1	2335	284	0.	.0	.0
1	0700	85	0.	.1	.0 *	1	1520	185	0.	.0	.0 *	1	2340	285	0.	.0	.0
1	0705	86	0.	.1	.0 *	1	1525	186	0.	.0	.0 *	1	2345	286	0.	.0	.0
1	0710	87	0.	.1	.0 *	1	1530	187	0.	.0	.0 *	1	2350	287	0.	.0	.0
1	0715	88	0.	.1	.0 *	1	1535	188	0.	.0	.0 *	1	2355	288	0.	.0	.0
1	0720	89	0.	.1	.0 *	1	1540	189	0.	.0	.0 *	2	0000	289	0.	.0	.0
1	0725	90	0.	.1	.0 *	1	1545	190	0.	.0	.0 *	2	0005	290	0.	.0	.0
1	0730	91	0.	.1	.0 *	1	1550	191	0.	.0	.0 *	2	0010	291	0.	.0	.0
1	0735	92	0.	.1	.0 *	1	1555	192	0.	.0	.0 *	2	0015	292	0.	.0	.0
1	0740	93	0.	.1	.0 *	1	1600	193	0.	.0	.0 *	2	0020	293	0.	.0	.0
1	0745	94	0.	.1	.0 *	1	1605	194	0.	.0	.0 *	2	0025	294	0.	.0	.0
1	0750	95	0.	.1	.0 *	1	1610	195	0.	.0	.0 *	2	0030	295	0.	.0	.0
1	0755	96	0.	.1	.0 *	1	1615	196	0.	.0	.0 *	2	0035	296	0.	.0	.0
1	0800	97	0.	.1	.0 *	1	1620	197	0.	.0	.0 *	2	0040	297	0.	.0	.0
1	0805	98	0.	.1	.0 *	1	1625	198	0.	.0	.0 *	2	0045	298	0.	.0	.0
1	0810	99	0.	.1	.0 *	1	1630	199	0.	.0	.0 *	2	0050	299	0.	.0	.0
1	0815	100	0.	.1	.0 *	1	1635	200	0.	.0	.0 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	{CFS}	{HR}				
+	1.	5.17	{CFS}	0.	0.	0.
			{INCHES}	.002	.003	.003
			{AC-FT}	0.	0.	0.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	{AC-FT}	{HR}				
+	0.	5.17	0.	0.	0.	0.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	{FEET}	{HR}				
+	.05	5.25	.03	.01	.01	.01
CUMULATIVE AREA =			2.07 SQ MI			

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	.0	.0 *	1	0820	101	0.	.1	.0 *	1	1640	201	0.	.0	.0	.0	.0
1	0005	2	0.	0.	.0	.0 *	1	0825	102	0.	.1	.0 *	1	1645	202	0.	.0	.0	.0	.0
1	0010	3	0.	0.	.0	.0 *	1	0830	103	0.	.1	.0 *	1	1650	203	0.	.0	.0	.0	.0
1	0015	4	0.	0.	.0	.0 *	1	0835	104	0.	.1	.0 *	1	1655	204	0.	.0	.0	.0	.0
1	0020	5	0.	0.	.0	.0 *	1	0840	105	0.	.1	.0 *	1	1700	205	0.	.0	.0	.0	.0
1	0025	6	0.	0.	.0	.0 *	1	0845	106	0.	.1	.0 *	1	1705	206	0.	.0	.0	.0	.0
1	0030	7	0.	0.	.0	.0 *	1	0850	107	0.	.1	.0 *	1	1710	207	0.	.0	.0	.0	.0
1	0035	8	0.	0.	.0	.0 *	1	0855	108	0.	.1	.0 *	1	1715	208	0.	.0	.0	.0	.0
1	0040	9	0.	0.	.0	.0 *	1	0900	109	0.	.1	.0 *	1	1720	209	0.	.0	.0	.0	.0
1	0045	10	0.	0.	.0	.0 *	1	0905	110	0.	.1	.0 *	1	1725	210	0.	.0	.0	.0	.0
1	0050	11	0.	0.	.0	.0 *	1	0910	111	0.	.1	.0 *	1	1730	211	0.	.0	.0	.0	.0
1	0055	12	0.	0.	.0	.0 *	1	0915	112	0.	.1	.0 *	1	1735	212	0.	.0	.0	.0	.0
1	0100	13	0.	0.	.0	.0 *	1	0920	113	0.	.1	.0 *	1	1740	213	0.	.0	.0	.0	.0
1	0105	14	0.	0.	.0	.0 *	1	0925	114	0.	.1	.0 *	1	1745	214	0.	.0	.0	.0	.0
1	0110	15	0.	0.	.0	.0 *	1	0930	115	0.	.1	.0 *	1	1750	215	0.	.0	.0	.0	.0
1	0115	16	0.	0.	.0	.0 *	1	0935	116	0.	.1	.0 *	1	1755	216	0.	.0	.0	.0	.0
1	0120	17	0.	0.	.0	.0 *	1	0940	117	0.	.1	.0 *	1	1800	217	0.	.0	.0	.0	.0
1	0125	18	0.	0.	.0	.0 *	1	0945	118	0.	.1	.0 *	1	1805	218	0.	.0	.0	.0	.0

1	0130	19	0.	.0	.0 * 1	0950	119	0.	.1	.0 * 1	1810	219	0.	.0	.0
1	0135	20	0.	.0	.0 * 1	0955	120	0.	.1	.0 * 1	1815	220	0.	.0	.0
1	0140	21	0.	.0	.0 * 1	1000	121	0.	.1	.0 * 1	1820	221	0.	.0	.0
1	0145	22	0.	.0	.0 * 1	1005	122	0.	.1	.0 * 1	1825	222	0.	.0	.0
1	0150	23	0.	.0	.0 * 1	1010	123	0.	.1	.0 * 1	1830	223	0.	.0	.0
1	0155	24	0.	.0	.0 * 1	1015	124	0.	.1	.0 * 1	1835	224	0.	.0	.0
1	0200	25	0.	.0	.0 * 1	1020	125	0.	.1	.0 * 1	1840	225	0.	.0	.0
1	0205	26	0.	.0	.0 * 1	1025	126	0.	.1	.0 * 1	1845	226	0.	.0	.0
1	0210	27	0.	.0	.0 * 1	1030	127	0.	.0	.0 * 1	1850	227	0.	.0	.0
1	0215	28	0.	.0	.0 * 1	1035	128	0.	.0	.0 * 1	1855	228	0.	.0	.0
1	0220	29	0.	.0	.0 * 1	1040	129	0.	.0	.0 * 1	1900	229	0.	.0	.0
1	0225	30	0.	.0	.0 * 1	1045	130	0.	.0	.0 * 1	1905	230	0.	.0	.0
1	0230	31	0.	.0	.0 * 1	1050	131	0.	.0	.0 * 1	1910	231	0.	.0	.0
1	0235	32	0.	.0	.0 * 1	1055	132	0.	.0	.0 * 1	1915	232	0.	.0	.0
1	0240	33	0.	.0	.0 * 1	1100	133	0.	.0	.0 * 1	1920	233	0.	.0	.0
1	0245	34	0.	.0	.0 * 1	1105	134	0.	.0	.0 * 1	1925	234	0.	.0	.0
1	0250	35	0.	.0	.0 * 1	1110	135	0.	.0	.0 * 1	1930	235	0.	.0	.0
1	0255	36	0.	.0	.0 * 1	1115	136	0.	.0	.0 * 1	1935	236	0.	.0	.0
1	0300	37	0.	.0	.0 * 1	1120	137	0.	.0	.0 * 1	1940	237	0.	.0	.0
1	0305	38	0.	.0	.0 * 1	1125	138	0.	.0	.0 * 1	1945	238	0.	.0	.0
1	0310	39	0.	.0	.0 * 1	1130	139	0.	.0	.0 * 1	1950	239	0.	.0	.0
1	0315	40	0.	.0	.0 * 1	1135	140	0.	.0	.0 * 1	1955	240	0.	.0	.0
1	0320	41	0.	.0	.0 * 1	1140	141	0.	.0	.0 * 1	2000	241	0.	.0	.0
1	0325	42	0.	.0	.0 * 1	1145	142	0.	.0	.0 * 1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0 * 1	1150	143	0.	.0	.0 * 1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0 * 1	1155	144	0.	.0	.0 * 1	2015	244	0.	.0	.0
1	0340	45	0.	.1	.0 * 1	1200	145	0.	.0	.0 * 1	2020	245	0.	.0	.0
1	0345	46	0.	.1	.0 * 1	1205	146	0.	.0	.0 * 1	2025	246	0.	.0	.0
1	0350	47	0.	.1	.0 * 1	1210	147	0.	.0	.0 * 1	2030	247	0.	.0	.0
1	0355	48	0.	.1	.0 * 1	1215	148	0.	.0	.0 * 1	2035	248	0.	.0	.0
1	0400	49	0.	.1	.0 * 1	1220	149	0.	.0	.0 * 1	2040	249	0.	.0	.0
1	0405	50	1.	.1	.0 * 1	1225	150	0.	.0	.0 * 1	2045	250	0.	.0	.0
1	0410	51	1.	.1	.0 * 1	1230	151	0.	.0	.0 * 1	2050	251	0.	.0	.0
1	0415	52	1.	.2	.0 * 1	1235	152	0.	.0	.0 * 1	2055	252	0.	.0	.0
1	0420	53	1.	.2	.0 * 1	1240	153	0.	.0	.0 * 1	2100	253	0.	.0	.0
1	0425	54	1.	.2	.0 * 1	1245	154	0.	.0	.0 * 1	2105	254	0.	.0	.0
1	0430	55	1.	.2	.0 * 1	1250	155	0.	.0	.0 * 1	2110	255	0.	.0	.0
1	0435	56	1.	.2	.0 * 1	1255	156	0.	.0	.0 * 1	2115	256	0.	.0	.0
1	0440	57	1.	.2	.0 * 1	1300	157	0.	.0	.0 * 1	2120	257	0.	.0	.0
1	0445	58	1.	.2	.0 * 1	1305	158	0.	.0	.0 * 1	2125	258	0.	.0	.0
1	0450	59	1.	.2	.0 * 1	1310	159	0.	.0	.0 * 1	2130	259	0.	.0	.0
1	0455	60	1.	.2	.0 * 1	1315	160	0.	.0	.0 * 1	2135	260	0.	.0	.0
1	0500	61	1.	.2	.1 * 1	1320	161	0.	.0	.0 * 1	2140	261	0.	.0	.0
1	0505	62	1.	.2	.1 * 1	1325	162	0.	.0	.0 * 1	2145	262	0.	.0	.0
1	0510	63	1.	.2	.1 * 1	1330	163	0.	.0	.0 * 1	2150	263	0.	.0	.0
1	0515	64	1.	.2	.1 * 1	1335	164	0.	.0	.0 * 1	2155	264	0.	.0	.0
1	0520	65	1.	.2	.1 * 1	1340	165	0.	.0	.0 * 1	2200	265	0.	.0	.0
1	0525	66	1.	.2	.1 * 1	1345	166	0.	.0	.0 * 1	2205	266	0.	.0	.0
1	0530	67	1.	.2	.1 * 1	1350	167	0.	.0	.0 * 1	2210	267	0.	.0	.0
1	0535	68	1.	.2	.1 * 1	1355	168	0.	.0	.0 * 1	2215	268	0.	.0	.0
1	0540	69	1.	.2	.0 * 1	1400	169	0.	.0	.0 * 1	2220	269	0.	.0	.0
1	0545	70	1.	.2	.0 * 1	1405	170	0.	.0	.0 * 1	2225	270	0.	.0	.0
1	0550	71	1.	.2	.0 * 1	1410	171	0.	.0	.0 * 1	2230	271	0.	.0	.0
1	0555	72	1.	.2	.0 * 1	1415	172	0.	.0	.0 * 1	2235	272	0.	.0	.0
1	0600	73	1.	.2	.0 * 1	1420	173	0.	.0	.0 * 1	2240	273	0.	.0	.0
1	0605	74	1.	.2	.0 * 1	1425	174	0.	.0	.0 * 1	2245	274	0.	.0	.0
1	0610	75	1.	.2	.0 * 1	1430	175	0.	.0	.0 * 1	2250	275	0.	.0	.0
1	0615	76	1.	.2	.0 * 1	1435	176	0.	.0	.0 * 1	2255	276	0.	.0	.0
1	0620	77	1.	.2	.0 * 1	1440	177	0.	.0	.0 * 1	2300	277	0.	.0	.0
1	0625	78	1.	.2	.0 * 1	1445	178	0.	.0	.0 * 1	2305	278	0.	.0	.0
1	0630	79	1.	.2	.0 * 1	1450	179	0.	.0	.0 * 1	2310	279	0.	.0	.0
1	0635	80	1.	.2	.0 * 1	1455	180	0.	.0	.0 * 1	2315	280	0.	.0	.0
1	0640	81	1.	.2	.0 * 1	1500	181	0.	.0	.0 * 1	2320	281	0.	.0	.0
1	0645	82	1.	.1	.0 * 1	1505	182	0.	.0	.0 * 1	2325	282	0.	.0	.0
1	0650	83	1.	.1	.0 * 1	1510	183	0.	.0	.0 * 1	2330	283	0.	.0	.0
1	0655	84	0.	.1	.0 * 1	1515	184	0.	.0	.0 * 1	2335	284	0.	.0	.0
1	0700	85	0.	.1	.0 * 1	1520	185	0.	.0	.0 * 1	2340	285	0.	.0	.0
1	0705	86	0.	.1	.0 * 1	1525	186	0.	.0	.0 * 1	2345	286	0.	.0	.0
1	0710	87	0.	.1	.0 * 1	1530	187	0.	.0	.0 * 1	2350	287	0.	.0	.0
1	0715	88	0.	.1	.0 * 1	1535	188	0.	.0	.0 * 1	2355	288	0.	.0	.0
1	0720	89	0.	.1	.0 * 1	1540	189	0.	.0	.0 * 2	0000	289	0.	.0	.0
1	0725	90	0.	.1	.0 * 1	1545	190	0.	.0	.0 * 2	0005	290	0.	.0	.0
1	0730	91	0.	.1	.0 * 1	1550	191	0.	.0	.0 * 2	0010	291	0.	.0	.0
1	0735	92	0.	.1	.0 * 1	1555	192	0.	.0	.0 * 2	0015	292	0.	.0	.0
1	0740	93	0.	.1	.0 * 1	1600	193	0.	.0	.0 * 2	0020	293	0.	.0	.0
1	0745	94	0.	.1	.0 * 1	1605	194	0.	.0	.0 * 2	0025	294	0.	.0	.0
1	0750	95	0.	.1	.0 * 1	1610	195	0.	.0	.0 * 2	0030	295	0.	.0	.0
1	0755	96	0.	.1	.0 * 1	1615	196	0.	.0	.0 * 2	0035	296	0.	.0	.0
1	0800	97	0.	.1	.0 * 1	1620	197	0.	.0	.0 * 2	0040	297	0.	.0	.0
1	0805	98	0.	.1	.0 * 1	1625	198	0.	.0	.0 * 2	0045	298	0.	.0	.0
1	0810	99	0.	.1	.0 * 1	1630	199	0.	.0	.0 * 2	0050	299	0.	.0	.0
1	0815	100	0.	.1	.0 * 1	1635	200	0.	.0	.0 * 2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	1.	5.17	0.	0.	0.	0.
		(INCHES)	.002	.003	.003	.003
		(AC-FT)	0.	0.	0.	0.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	0.	5.17	0.	0.	0.	0.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	.05	5.25	.03	.01	.01	.01

CUMULATIVE AREA = 2.07 SQ MI

377 KK

DET2

379 KO

OUTPUT CONTROL VARIABLES

IPRNT 1 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

380 RS

STORAGE ROUTING

NSTPS 1 NUMBER OF SUBREACHES
 ITYP STOR TYPE OF INITIAL CONDITION
 RSVRIC -1.00 INITIAL CONDITION
 X .00 WORKING R AND D COEFFICIENT

381 EV

STORAGE

.0 10.2 18.1 26.3 34.7 43.4 52.4 62.0

382 SE

ELEVATION

.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00

383 SQ

DISCHARGE

0. 56. 88. 121. 170. 180. 200. 220.

HYDROGRAPH AT STATION DET2
 PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	3.	.5	.1	* 1	1640	201	0.	.0	.0			
1	0005	2	0.	.0	.0	* 1	0925	102	3.	.5	.1	* 1	1645	202	0.	.0	.0			
1	0010	3	0.	.0	.0	* 1	0930	103	2.	.5	.1	* 1	1650	203	0.	.0	.0			
1	0015	4	0.	.0	.0	* 1	0935	104	2.	.4	.1	* 1	1655	204	0.	.0	.0			
1	0020	5	0.	.0	.0	* 1	0940	105	2.	.4	.1	* 1	1700	205	0.	.0	.0			
1	0025	6	0.	.0	.0	* 1	0945	106	2.	.4	.1	* 1	1705	206	0.	.0	.0			
1	0030	7	0.	.0	.0	* 1	0950	107	2.	.4	.1	* 1	1710	207	0.	.0	.0			
1	0035	8	0.	.0	.0	* 1	0955	108	2.	.4	.1	* 1	1715	208	0.	.0	.0			
1	0040	9	0.	.0	.0	* 1	0900	109	2.	.4	.1	* 1	1720	209	0.	.0	.0			
1	0045	10	0.	.0	.0	* 1	0905	110	2.	.3	.1	* 1	1725	210	0.	.0	.0			
1	0050	11	0.	.0	.0	* 1	0910	111	2.	.3	.1	* 1	1730	211	0.	.0	.0			
1	0055	12	0.	.0	.0	* 1	0915	112	2.	.3	.1	* 1	1735	212	0.	.0	.0			
1	0100	13	0.	.0	.0	* 1	0920	113	2.	.3	.1	* 1	1740	213	0.	.0	.0			
1	0105	14	0.	.0	.0	* 1	0925	114	2.	.3	.1	* 1	1745	214	0.	.0	.0			
1	0110	15	0.	.0	.0	* 1	0930	115	2.	.3	.1	* 1	1750	215	0.	.0	.0			
1	0115	16	0.	.0	.0	* 1	0935	116	2.	.3	.1	* 1	1755	216	0.	.0	.0			
1	0120	17	0.	.0	.0	* 1	0940	117	1.	.3	.1	* 1	1800	217	0.	.0	.0			
1	0125	18	0.	.0	.0	* 1	0945	118	1.	.3	.1	* 1	1805	218	0.	.0	.0			
1	0130	19	0.	.0	.0	* 1	0950	119	1.	.2	.0	* 1	1810	219	0.	.0	.0			
1	0135	20	0.	.0	.0	* 1	0955	120	1.	.2	.0	* 1	1815	220	0.	.0	.0			
1	0140	21	0.	.0	.0	* 1	1000	121	1.	.2	.0	* 1	1820	221	0.	.0	.0			
1	0145	22	0.	.0	.0	* 1	1005	122	1.	.2	.0	* 1	1825	222	0.	.0	.0			
1	0150	23	0.	.0	.0	* 1	1010	123	1.	.2	.0	* 1	1830	223	0.	.0	.0			
1	0155	24	0.	.0	.0	* 1	1015	124	1.	.2	.0	* 1	1835	224	0.	.0	.0			
1	0200	25	0.	.0	.0	* 1	1020	125	1.	.2	.0	* 1	1840	225	0.	.0	.0			
1	0205	26	0.	.0	.0	* 1	1025	126	1.	.2	.0	* 1	1845	226	0.	.0	.0			
1	0210	27	0.	.0	.0	* 1	1030	127	1.	.2	.0	* 1	1850	227	0.	.0	.0			
1	0215	28	0.	.0	.0	* 1	1035	128	1.	.2	.0	* 1	1855	228	0.	.0	.0			
1	0220	29	0.	.0	.0	* 1	1040	129	1.	.2	.0	* 1	1900	229	0.	.0	.0			
1	0225	30	0.	.0	.0	* 1	1045	130	1.	.2	.0	* 1	1905	230	0.	.0	.0			
1	0230	31	0.	.0	.0	* 1	1050	131	1.	.2	.0	* 1	1910	231	0.	.0	.0			
1	0235	32	0.	.0	.0	* 1	1055	132	1.	.2	.0	* 1	1915	232	0.	.0	.0			
1	0240	33	0.	.0	.0	* 1	1100	133	1.	.1	.0	* 1	1920	233	0.	.0	.0			
1	0245	34	0.	.0	.0	* 1	1105	134	1.	.1	.0	* 1	1925	234	0.	.0	.0			
1	0250	35	0.	.0	.0	* 1	1110	135	1.	.1	.0	* 1	1930	235	0.	.0	.0			
1	0255	36	0.	.0	.0	* 1	1115	136	1.	.1	.0	* 1	1935	236	0.	.0	.0			
1	0300	37	0.	.0	.0	* 1	1120	137	1.	.1	.0	* 1	1940	237	0.	.0	.0			
1	0305	38	0.	.0	.0	* 1	1125	138	1.	.1	.0	* 1	1945	238	0.	.0	.0			
1	0310	39	0.	.0	.0	* 1	1130	139	1.	.1	.0	* 1	1950	239	0.	.0	.0			
1	0315	40	0.	.0	.0	* 1	1135	140	1.	.1	.0	* 1	1955	240	0.	.0	.0			
1	0320	41	0.	.0	.0	* 1	1140	141	1.	.1	.0	* 1	2000	241	0.	.0	.0			
1	0325	42	0.	.0	.0	* 1	1145	142	1.	.1	.0	* 1	2005	242	0.	.0	.0			
1	0330	43	0.	.0	.0	* 1	1150	143	1.	.1	.0	* 1	2010	243	0.	.0	.0			
1	0335	44	0.	.0	.0	* 1	1155	144	1.	.1	.0	* 1	2015	244	0.	.0	.0			
1	0340	45	1.	.2	.0	* 1	1200	145	1.	.1	.0	* 1	2020	245	0.	.0	.0			
1	0345	46	6.	1.1	.2	* 1	1205	146	0.	.1	.0	* 1	2025	246	0.	.0	.0			
1	0350	47	13.	2.3	.5	* 1	1210	147	0.	.1	.0	* 1	2030	247	0.	.0	.0			
1	0355	48	18.	3.2	.6	* 1	1215	148	0.	.1	.0	* 1	2035	248	0.	.0	.0			
1	0400	49	19.	3.4	.7	* 1	1220	149	0.	.1	.0	* 1	2040	249	0.	.0	.0			
1	0405	50	18.	3.3	.6	* 1	1225	150	0.	.1	.0	* 1	2045	250	0.	.0	.0			
1	0410	51	17.	3.2	.6	* 1	1230	151	0.	.1	.0	* 1	2050	251	0.	.0	.0			
1	0415	52	17.	3.1	.6	* 1	1235	152	0.	.1	.0	* 1	2055	252	0.	.0	.0			
1	0420	53	16.	2.9	.6	* 1	1240	153	0.	.1	.0	* 1	2100	253	0.	.0	.0			
1	0425	54	16.	2.8	.6	* 1	1245	154	0.	.1	.0	* 1	2105	254	0.	.0	.0			
1	0430	55	15.	2.7	.5	* 1	1250	155	0.	.1	.0	* 1	2110	255	0.	.0	.0			
1	0435	56	14.	2.6	.5	* 1	1255	156	0.	.1	.0	* 1	2115	256	0.	.0	.0			
1	0440	57	14.	2.5	.5	* 1	1300	157	0.	.1	.0	* 1	2120	257	0.	.0	.0			
1	0445	58	13.	2.4	.5	* 1	1305	158	0.	.1	.0	* 1	2125	258	0.	.0	.0			
1	0450	59	13.	2.4	.5	* 1	1310	159	0.	.1	.0	* 1	2130	259	0.	.0	.0			
1	0455	60	12.	2.3	.4	* 1	1315	160	0.	.1	.0	* 1	2135	260	0.	.0	.0			
1	0500	61	12.	2.2	.4	* 1	1320	161	0.	.1	.0	* 1	2140	261	0.	.0	.0			
1	0505	62	12.	2.1	.4	* 1	1325	162	0.	.0	.0	* 1	2145	262	0.	.0	.0			
1	0510	63	11.	2.0	.4	* 1	1330	163	0.	.0	.0	* 1	2150	263	0.	.0	.0			
1	0515	64	11.	2.0	.4	* 1	1335	164	0.	.0	.0	* 1	2155	264	0.	.0	.0			
1	0520	65	10.	1.9	.4	* 1	1340	165	0.	.0	.0	* 1	2200	265	0.	.0	.0			
1	0525	66	10.	1.8	.4	* 1	1345	166	0.	.0	.0	* 1	2205	266	0.	.0	.0			
1	0530	67	10.	1.8	.3	* 1	1350	167	0.	.0	.0	* 1	2210	267	0.	.0	.0			

1	0535	68	9.	1.7	.3 *	1	1355	168	0.	.0	.0 *	1	2215	268	0.	.0	.0
1	0540	69	9.	1.6	.3 *	1	1400	169	0.	.0	.0 *	1	2220	269	0.	.0	.0
1	0545	70	9.	1.6	.3 *	1	1405	170	0.	.0	.0 *	1	2225	270	0.	.0	.0
1	0550	71	8.	1.5	.3 *	1	1410	171	0.	.0	.0 *	1	2230	271	0.	.0	.0
1	0555	72	8.	1.5	.3 *	1	1415	172	0.	.0	.0 *	1	2235	272	0.	.0	.0
1	0600	73	8.	1.4	.3 *	1	1420	173	0.	.0	.0 *	1	2240	273	0.	.0	.0
1	0605	74	7.	1.4	.3 *	1	1425	174	0.	.0	.0 *	1	2245	274	0.	.0	.0
1	0610	75	7.	1.3	.3 *	1	1430	175	0.	.0	.0 *	1	2250	275	0.	.0	.0
1	0615	76	7.	1.3	.2 *	1	1435	176	0.	.0	.0 *	1	2255	276	0.	.0	.0
1	0620	77	7.	1.2	.2 *	1	1440	177	0.	.0	.0 *	1	2300	277	0.	.0	.0
1	0625	78	6.	1.2	.2 *	1	1445	178	0.	.0	.0 *	1	2305	278	0.	.0	.0
1	0630	79	6.	1.1	.2 *	1	1450	179	0.	.0	.0 *	1	2310	279	0.	.0	.0
1	0635	80	6.	1.1	.2 *	1	1455	180	0.	.0	.0 *	1	2315	280	0.	.0	.0
1	0640	81	6.	1.0	.2 *	1	1500	181	0.	.0	.0 *	1	2320	281	0.	.0	.0
1	0645	82	5.	1.0	.2 *	1	1505	182	0.	.0	.0 *	1	2325	282	0.	.0	.0
1	0650	83	5.	1.0	.2 *	1	1510	183	0.	.0	.0 *	1	2330	283	0.	.0	.0
1	0655	84	5.	.9	.2 *	1	1515	184	0.	.0	.0 *	1	2335	284	0.	.0	.0
1	0700	85	5.	.9	.2 *	1	1520	185	0.	.0	.0 *	1	2340	285	0.	.0	.0
1	0705	86	5.	.9	.2 *	1	1525	186	0.	.0	.0 *	1	2345	286	0.	.0	.0
1	0710	87	5.	.8	.2 *	1	1530	187	0.	.0	.0 *	1	2350	287	0.	.0	.0
1	0715	88	4.	.8	.2 *	1	1535	188	0.	.0	.0 *	1	2355	288	0.	.0	.0
1	0720	89	4.	.8	.2 *	1	1540	189	0.	.0	.0 *	2	0000	289	0.	.0	.0
1	0725	90	4.	.7	.1 *	1	1545	190	0.	.0	.0 *	2	0005	290	0.	.0	.0
1	0730	91	4.	.7	.1 *	1	1550	191	0.	.0	.0 *	2	0010	291	0.	.0	.0
1	0735	92	4.	.7	.1 *	1	1555	192	0.	.0	.0 *	2	0015	292	0.	.0	.0
1	0740	93	4.	.7	.1 *	1	1600	193	0.	.0	.0 *	2	0020	293	0.	.0	.0
1	0745	94	3.	.6	.1 *	1	1605	194	0.	.0	.0 *	2	0025	294	0.	.0	.0
1	0750	95	3.	.6	.1 *	1	1610	195	0.	.0	.0 *	2	0030	295	0.	.0	.0
1	0755	96	3.	.6	.1 *	1	1615	196	0.	.0	.0 *	2	0035	296	0.	.0	.0
1	0800	97	3.	.6	.1 *	1	1620	197	0.	.0	.0 *	2	0040	297	0.	.0	.0
1	0805	98	3.	.5	.1 *	1	1625	198	0.	.0	.0 *	2	0045	298	0.	.0	.0
1	0810	99	3.	.5	.1 *	1	1630	199	0.	.0	.0 *	2	0050	299	0.	.0	.0
1	0815	100	3.	.5	.1 *	1	1635	200	0.	.0	.0 *	2	0055	300	0.	.0	.0

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PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	19.	4.00	(CFS)	7.	2.	2.	2.
			(INCHES)	.015	.016	.016	.016
			(AC-FT)	4.	4.	4.	4.

PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	3.	4.00		1.	0.	0.	0.

PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	.67	4.00		.25	.07	.07	.07

CUMULATIVE AREA = 4.47 SQ MI

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HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .98

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0 *	1		0820	101	2.	.4	.1 *	1	1640	201	0.	.0	.0				
1	0005	2	0.	.0	.0 *	1		0825	102	2.	.4	.1 *	1	1645	202	0.	.0	.0				
1	0010	3	0.	.0	.0 *	1		0830	103	2.	.3	.1 *	1	1650	203	0.	.0	.0				
1	0015	4	0.	.0	.0 *	1		0835	104	2.	.3	.1 *	1	1655	204	0.	.0	.0				
1	0020	5	0.	.0	.0 *	1		0840	105	2.	.3	.1 *	1	1700	205	0.	.0	.0				
1	0025	6	0.	.0	.0 *	1		0845	106	2.	.3	.1 *	1	1705	206	0.	.0	.0				
1	0030	7	0.	.0	.0 *	1		0850	107	2.	.3	.1 *	1	1710	207	0.	.0	.0				
1	0035	8	0.	.0	.0 *	1		0855	108	2.	.3	.1 *	1	1715	208	0.	.0	.0				
1	0040	9	0.	.0	.0 *	1		0900	109	2.	.3	.1 *	1	1720	209	0.	.0	.0				
1	0045	10	0.	.0	.0 *	1		0905	110	1.	.3	.1 *	1	1725	210	0.	.0	.0				
1	0050	11	0.	.0	.0 *	1		0910	111	1.	.3	.0 *	1	1730	211	0.	.0	.0				
1	0055	12	0.	.0	.0 *	1		0915	112	1.	.2	.0 *	1	1735	212	0.	.0	.0				
1	0100	13	0.	.0	.0 *	1		0920	113	1.	.2	.0 *	1	1740	213	0.	.0	.0				
1	0105	14	0.	.0	.0 *	1		0925	114	1.	.2	.0 *	1	1745	214	0.	.0	.0				
1	0110	15	0.	.0	.0 *	1		0930	115	1.	.2	.0 *	1	1750	215	0.	.0	.0				
1	0115	16	0.	.0	.0 *	1		0935	116	1.	.2	.0 *	1	1755	216	0.	.0	.0				
1	0120	17	0.	.0	.0 *	1		0940	117	1.	.2	.0 *	1	1800	217	0.	.0	.0				
1	0125	18	0.	.0	.0 *	1		0945	118	1.	.2	.0 *	1	1805	218	0.	.0	.0				
1	0130	19	0.	.0	.0 *	1		0950	119	1.	.2	.0 *	1	1810	219	0.	.0	.0				
1	0135	20	0.	.0	.0 *	1		0955	120	1.	.2	.0 *	1	1815	220	0.	.0	.0				
1	0140	21	0.	.0	.0 *	1		1000	121	1.	.2	.0 *	1	1820	221	0.	.0	.0				
1	0145	22	0.	.0	.0 *	1		1005	122	1.	.2	.0 *	1	1825	222	0.	.0	.0				
1	0150	23	0.	.0	.0 *	1		1010	123	1.	.2	.0 *	1	1830	223	0.	.0	.0				
1	0155	24	0.	.0	.0 *	1		1015	124	1.	.2	.0 *	1	1835	224	0.	.0	.0				
1	0200	25	0.	.0	.0 *	1		1020	125	1.	.2	.0 *	1	1840	225	0.	.0	.0				
1	0205	26	0.	.0	.0 *	1		1025	126	1.	.1	.0 *	1	1845	226	0.	.0	.0				
1	0210	27	0.	.0	.0 *	1		1030	127	1.	.1	.0 *	1	1850	227	0.	.0	.0				
1	0215	28	0.	.0	.0 *	1		1035	128	1.	.1	.0 *	1	1855	228	0.	.0	.0				
1	0220	29	0.	.0	.0 *	1		1040	129	1.	.1	.0 *	1	1900	229	0.	.0	.0				
1	0225	30	0.	.0	.0 *	1		1045	130	1.	.1	.0 *	1	1905	230	0.	.0	.0				
1	0230	31	0.	.0	.0 *	1		1050	131	1.	.1	.0 *	1	1910	231	0.	.0	.0				
1	0235	32	0.	.0	.0 *	1		1055	132	1.	.1	.0 *	1	1915	232	0.	.0	.0				
1	0240	33	0.	.0	.0 *	1		1100	133	1.	.1	.0 *	1	1920	233	0.	.0	.0				
1	0245	34	0.	.0	.0 *	1		1105	134	1.	.1	.0 *	1	1925	234	0.	.0	.0				
1	0250	35	0.	.0	.0 *	1		1110	135	1.	.1	.0 *	1	1930	235	0.	.0	.0				
1	0255	36	0.	.0	.0 *	1		1115	136	1.	.1	.0 *	1	1935	236	0.	.0	.0				
1	0300	37	0.	.0	.0 *	1		1120	137	1.	.1	.0 *	1	1940	237	0.	.0	.0				
1	0305	38	0.	.0	.0 *	1		1125	138	1.	.1	.0 *	1	1945	238	0.	.0	.0				
1	0310	39	0.	.0	.0 *	1		1130	139	0.	.1	.0 *	1	1950	239	0.	.0	.0				
1	0315	40	0.	.0	.0 *	1		1135	140	0.	.1	.0 *	1	1955	240	0.	.0	.0				
1	0320	41	0.	.0	.0 *	1		1140	141	0.	.1	.0 *	1	2000	241	0.	.0	.0				

1	0325	42	0.	.0	.0	* 1	1145	142	0.	.1	.0	* 1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0	* 1	1150	143	0.	.1	.0	* 1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0	* 1	1155	144	0.	.1	.0	* 1	2015	244	0.	.0	.0
1	0340	45	0.	.1	.0	* 1	1200	145	0.	.1	.0	* 1	2020	245	0.	.0	.0
1	0345	46	4.	.7	.1	* 1	1205	146	0.	.1	.0	* 1	2025	246	0.	.0	.0
1	0350	47	10.	1.8	.4	* 1	1210	147	0.	.1	.0	* 1	2030	247	0.	.0	.0
1	0355	48	14.	2.5	.5	* 1	1215	148	0.	.1	.0	* 1	2035	248	0.	.0	.0
1	0400	49	14.	2.6	.5	* 1	1220	149	0.	.1	.0	* 1	2040	249	0.	.0	.0
1	0405	50	14.	2.5	.5	* 1	1225	150	0.	.1	.0	* 1	2045	250	0.	.0	.0
1	0410	51	13.	2.4	.5	* 1	1230	151	0.	.1	.0	* 1	2050	251	0.	.0	.0
1	0415	52	13.	2.3	.5	* 1	1235	152	0.	.1	.0	* 1	2055	252	0.	.0	.0
1	0420	53	12.	2.2	.4	* 1	1240	153	0.	.1	.0	* 1	2100	253	0.	.0	.0
1	0425	54	12.	2.1	.4	* 1	1245	154	0.	.1	.0	* 1	2105	254	0.	.0	.0
1	0430	55	11.	2.1	.4	* 1	1250	155	0.	.0	.0	* 1	2110	255	0.	.0	.0
1	0435	56	11.	2.0	.4	* 1	1255	156	0.	.0	.0	* 1	2115	256	0.	.0	.0
1	0440	57	11.	1.9	.4	* 1	1300	157	0.	.0	.0	* 1	2120	257	0.	.0	.0
1	0445	58	10.	1.9	.4	* 1	1305	158	0.	.0	.0	* 1	2125	258	0.	.0	.0
1	0450	59	10.	1.8	.4	* 1	1310	159	0.	.0	.0	* 1	2130	259	0.	.0	.0
1	0455	60	9.	1.7	.3	* 1	1315	160	0.	.0	.0	* 1	2135	260	0.	.0	.0
1	0500	61	9.	1.7	.3	* 1	1320	161	0.	.0	.0	* 1	2140	261	0.	.0	.0
1	0505	62	9.	1.6	.3	* 1	1325	162	0.	.0	.0	* 1	2145	262	0.	.0	.0
1	0510	63	8.	1.6	.3	* 1	1330	163	0.	.0	.0	* 1	2150	263	0.	.0	.0
1	0515	64	8.	1.5	.3	* 1	1335	164	0.	.0	.0	* 1	2155	264	0.	.0	.0
1	0520	65	8.	1.4	.3	* 1	1340	165	0.	.0	.0	* 1	2200	265	0.	.0	.0
1	0525	66	8.	1.4	.3	* 1	1345	166	0.	.0	.0	* 1	2205	266	0.	.0	.0
1	0530	67	7.	1.3	.3	* 1	1350	167	0.	.0	.0	* 1	2210	267	0.	.0	.0
1	0535	68	7.	1.3	.3	* 1	1355	168	0.	.0	.0	* 1	2215	268	0.	.0	.0
1	0540	69	7.	1.2	.2	* 1	1400	169	0.	.0	.0	* 1	2220	269	0.	.0	.0
1	0545	70	7.	1.2	.2	* 1	1405	170	0.	.0	.0	* 1	2225	270	0.	.0	.0
1	0550	71	6.	1.2	.2	* 1	1410	171	0.	.0	.0	* 1	2230	271	0.	.0	.0
1	0555	72	6.	1.1	.2	* 1	1415	172	0.	.0	.0	* 1	2235	272	0.	.0	.0
1	0600	73	6.	1.1	.2	* 1	1420	173	0.	.0	.0	* 1	2240	273	0.	.0	.0
1	0605	74	6.	1.0	.2	* 1	1425	174	0.	.0	.0	* 1	2245	274	0.	.0	.0
1	0610	75	5.	1.0	.2	* 1	1430	175	0.	.0	.0	* 1	2250	275	0.	.0	.0
1	0615	76	5.	1.0	.2	* 1	1435	176	0.	.0	.0	* 1	2255	276	0.	.0	.0
1	0620	77	5.	.9	.2	* 1	1440	177	0.	.0	.0	* 1	2300	277	0.	.0	.0
1	0625	78	5.	.9	.2	* 1	1445	178	0.	.0	.0	* 1	2305	278	0.	.0	.0
1	0630	79	5.	.9	.2	* 1	1450	179	0.	.0	.0	* 1	2310	279	0.	.0	.0
1	0635	80	5.	.8	.2	* 1	1455	180	0.	.0	.0	* 1	2315	280	0.	.0	.0
1	0640	81	4.	.8	.2	* 1	1500	181	0.	.0	.0	* 1	2320	281	0.	.0	.0
1	0645	82	4.	.8	.1	* 1	1505	182	0.	.0	.0	* 1	2325	282	0.	.0	.0
1	0650	83	4.	.7	.1	* 1	1510	183	0.	.0	.0	* 1	2330	283	0.	.0	.0
1	0655	84	4.	.7	.1	* 1	1515	184	0.	.0	.0	* 1	2335	284	0.	.0	.0
1	0700	85	4.	.7	.1	* 1	1520	185	0.	.0	.0	* 1	2340	285	0.	.0	.0
1	0705	86	4.	.7	.1	* 1	1525	186	0.	.0	.0	* 1	2345	286	0.	.0	.0
1	0710	87	3.	.6	.1	* 1	1530	187	0.	.0	.0	* 1	2350	287	0.	.0	.0
1	0715	88	3.	.6	.1	* 1	1535	188	0.	.0	.0	* 1	2355	288	0.	.0	.0
1	0720	89	3.	.6	.1	* 1	1540	189	0.	.0	.0	* 2	0000	289	0.	.0	.0
1	0725	90	3.	.6	.1	* 1	1545	190	0.	.0	.0	* 2	0005	290	0.	.0	.0
1	0730	91	3.	.5	.1	* 1	1550	191	0.	.0	.0	* 2	0010	291	0.	.0	.0
1	0735	92	3.	.5	.1	* 1	1555	192	0.	.0	.0	* 2	0015	292	0.	.0	.0
1	0740	93	3.	.5	.1	* 1	1600	193	0.	.0	.0	* 2	0020	293	0.	.0	.0
1	0745	94	3.	.5	.1	* 1	1605	194	0.	.0	.0	* 2	0025	294	0.	.0	.0
1	0750	95	3.	.5	.1	* 1	1610	195	0.	.0	.0	* 2	0030	295	0.	.0	.0
1	0755	96	2.	.4	.1	* 1	1615	196	0.	.0	.0	* 2	0035	296	0.	.0	.0
1	0800	97	2.	.4	.1	* 1	1620	197	0.	.0	.0	* 2	0040	297	0.	.0	.0
1	0805	98	2.	.4	.1	* 1	1625	198	0.	.0	.0	* 2	0045	298	0.	.0	.0
1	0810	99	2.	.4	.1	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	2.	.4	.1	* 1	1635	200	0.	.0	.0	* 2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	14.	4.00	5.	1.	1.	1.
			.011	.012	.012	.012
		(INCHES)	3.	3.	3.	3.
		(AC-FT)				
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	3.	4.00	1.	0.	0.	0.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	.51	4.00	.19	.05	.05	.05
CUMULATIVE AREA = 4.47 SQ MI						

HYDROGRAPH AT STATION DET2																				
PLAN 1, RATIO = .95																				
.....																				
DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1		0.	.0	.0 * 1	0820	101		1.	.2	.0 * 1	1640	201		0.	.0	.0	.0	.0
1	0005	2		0.	.0	.0 * 1	0825	102		1.	.2	.0 * 1	1645	202		0.	.0	.0	.0	.0
1	0010	3		0.	.0	.0 * 1	0830	103		1.	.2	.0 * 1	1650	203		0.	.0	.0	.0	.0
1	0015	4		0.	.0	.0 * 1	0835	104		1.	.2	.0 * 1	1655	204		0.	.0	.0	.0	.0
1	0020	5		0.	.0	.0 * 1	0840	105		1.	.2	.0 * 1	1700	205		0.	.0	.0	.0	.0
1	0025	6		0.	.0	.0 * 1	0845	106		1.	.2	.0 * 1	1705	206		0.	.0	.0	.0	.0
1	0030	7		0.	.0	.0 * 1	0850	107		1.	.2	.0 * 1	1710	207		0.	.0	.0	.0	.0
1	0035	8		0.	.0	.0 * 1	0855	108		1.	.2	.0 * 1	1715	208		0.	.0	.0	.0	.0
1	0040	9		0.	.0	.0 * 1	0900	109		1.	.2	.0 * 1	1720	209		0.	.0	.0	.0	.0
1	0045	10		0.	.0	.0 * 1	0905	110		1.	.1	.0 * 1	1725	210		0.	.0	.0	.0	.0
1	0050	11		0.	.0	.0 * 1	0910	111		1.	.1	.0 * 1	1730	211		0.	.0	.0	.0	.0
1	0055	12		0.	.0	.0 * 1	0915	112		1.	.1	.0 * 1	1735	212		0.	.0	.0	.0	.0
1	0100	13		0.	.0	.0 * 1	0920	113		1.	.1	.0 * 1	1740	213		0.	.0	.0	.0	.0
1	0105	14		0.	.0	.0 * 1	0925	114		1.	.1	.0 * 1	1745	214		0.	.0	.0	.0	.0
1	0110	15		0.	.0	.0 * 1	0930	115		1.	.1	.0 * 1	1750	215		0.	.0	.0	.0	.0

1	0115	16	0.	.0	.0 * 1	0935	116	1.	.1	.0 * 1	1755	216	0.	.0	.0
1	0120	17	0.	.0	.0 * 1	0940	117	1.	.1	.0 * 1	1800	217	0.	.0	.0
1	0125	18	0.	.0	.0 * 1	0945	118	1.	.1	.0 * 1	1805	218	0.	.0	.0
1	0130	19	0.	.0	.0 * 1	0950	119	1.	.1	.0 * 1	1810	219	0.	.0	.0
1	0135	20	0.	.0	.0 * 1	0955	120	1.	.1	.0 * 1	1815	220	0.	.0	.0
1	0140	21	0.	.0	.0 * 1	1000	121	1.	.1	.0 * 1	1820	221	0.	.0	.0
1	0145	22	0.	.0	.0 * 1	1005	122	1.	.1	.0 * 1	1825	222	0.	.0	.0
1	0150	23	0.	.0	.0 * 1	1010	123	1.	.1	.0 * 1	1830	223	0.	.0	.0
1	0155	24	0.	.0	.0 * 1	1015	124	0.	.1	.0 * 1	1835	224	0.	.0	.0
1	0200	25	0.	.0	.0 * 1	1020	125	0.	.1	.0 * 1	1840	225	0.	.0	.0
1	0205	26	0.	.0	.0 * 1	1025	126	0.	.1	.0 * 1	1845	226	0.	.0	.0
1	0210	27	0.	.0	.0 * 1	1030	127	0.	.1	.0 * 1	1850	227	0.	.0	.0
1	0215	28	0.	.0	.0 * 1	1035	128	0.	.1	.0 * 1	1855	228	0.	.0	.0
1	0220	29	0.	.0	.0 * 1	1040	129	0.	.1	.0 * 1	1900	229	0.	.0	.0
1	0225	30	0.	.0	.0 * 1	1045	130	0.	.1	.0 * 1	1905	230	0.	.0	.0
1	0230	31	0.	.0	.0 * 1	1050	131	0.	.1	.0 * 1	1910	231	0.	.0	.0
1	0235	32	0.	.0	.0 * 1	1055	132	0.	.1	.0 * 1	1915	232	0.	.0	.0
1	0240	33	0.	.0	.0 * 1	1100	133	0.	.1	.0 * 1	1920	233	0.	.0	.0
1	0245	34	0.	.0	.0 * 1	1105	134	0.	.1	.0 * 1	1925	234	0.	.0	.0
1	0250	35	0.	.0	.0 * 1	1110	135	0.	.1	.0 * 1	1930	235	0.	.0	.0
1	0255	36	0.	.0	.0 * 1	1115	136	0.	.1	.0 * 1	1935	236	0.	.0	.0
1	0300	37	0.	.0	.0 * 1	1120	137	0.	.1	.0 * 1	1940	237	0.	.0	.0
1	0305	38	0.	.0	.0 * 1	1125	138	0.	.1	.0 * 1	1945	238	0.	.0	.0
1	0310	39	0.	.0	.0 * 1	1130	139	0.	.1	.0 * 1	1950	239	0.	.0	.0
1	0315	40	0.	.0	.0 * 1	1135	140	0.	.0	.0 * 1	1955	240	0.	.0	.0
1	0320	41	0.	.0	.0 * 1	1140	141	0.	.0	.0 * 1	2000	241	0.	.0	.0
1	0325	42	0.	.0	.0 * 1	1145	142	0.	.0	.0 * 1	2005	242	0.	.0	.0
1	0330	43	0.	.0	.0 * 1	1150	143	0.	.0	.0 * 1	2010	243	0.	.0	.0
1	0335	44	0.	.0	.0 * 1	1155	144	0.	.0	.0 * 1	2015	244	0.	.0	.0
1	0340	45	0.	.0	.0 * 1	1200	145	0.	.0	.0 * 1	2020	245	0.	.0	.0
1	0345	46	2.	.4	.1 * 1	1205	146	0.	.0	.0 * 1	2025	246	0.	.0	.0
1	0350	47	6.	1.1	.2 * 1	1210	147	0.	.0	.0 * 1	2030	247	0.	.0	.0
1	0355	48	8.	1.5	.3 * 1	1215	148	0.	.0	.0 * 1	2035	248	0.	.0	.0
1	0400	49	8.	1.4	.3 * 1	1220	149	0.	.0	.0 * 1	2040	249	0.	.0	.0
1	0405	50	8.	1.4	.3 * 1	1225	150	0.	.0	.0 * 1	2045	250	0.	.0	.0
1	0410	51	7.	1.3	.3 * 1	1230	151	0.	.0	.0 * 1	2050	251	0.	.0	.0
1	0415	52	7.	1.3	.3 * 1	1235	152	0.	.0	.0 * 1	2055	252	0.	.0	.0
1	0420	53	7.	1.2	.2 * 1	1240	153	0.	.0	.0 * 1	2100	253	0.	.0	.0
1	0425	54	7.	1.2	.2 * 1	1245	154	0.	.0	.0 * 1	2105	254	0.	.0	.0
1	0430	55	6.	1.2	.2 * 1	1250	155	0.	.0	.0 * 1	2110	255	0.	.0	.0
1	0435	56	6.	1.1	.2 * 1	1255	156	0.	.0	.0 * 1	2115	256	0.	.0	.0
1	0440	57	6.	1.1	.2 * 1	1300	157	0.	.0	.0 * 1	2120	257	0.	.0	.0
1	0445	58	6.	1.0	.2 * 1	1305	158	0.	.0	.0 * 1	2125	258	0.	.0	.0
1	0450	59	5.	1.0	.2 * 1	1310	159	0.	.0	.0 * 1	2130	259	0.	.0	.0
1	0455	60	5.	1.0	.2 * 1	1315	160	0.	.0	.0 * 1	2135	260	0.	.0	.0
1	0500	61	5.	.9	.2 * 1	1320	161	0.	.0	.0 * 1	2140	261	0.	.0	.0
1	0505	62	5.	.9	.2 * 1	1325	162	0.	.0	.0 * 1	2145	262	0.	.0	.0
1	0510	63	5.	.9	.2 * 1	1330	163	0.	.0	.0 * 1	2150	263	0.	.0	.0
1	0515	64	5.	.8	.2 * 1	1335	164	0.	.0	.0 * 1	2155	264	0.	.0	.0
1	0520	65	4.	.8	.2 * 1	1340	165	0.	.0	.0 * 1	2200	265	0.	.0	.0
1	0525	66	4.	.8	.2 * 1	1345	166	0.	.0	.0 * 1	2205	266	0.	.0	.0
1	0530	67	4.	.8	.1 * 1	1350	167	0.	.0	.0 * 1	2210	267	0.	.0	.0
1	0535	68	4.	.7	.1 * 1	1355	168	0.	.0	.0 * 1	2215	268	0.	.0	.0
1	0540	69	4.	.7	.1 * 1	1400	169	0.	.0	.0 * 1	2220	269	0.	.0	.0
1	0545	70	4.	.7	.1 * 1	1405	170	0.	.0	.0 * 1	2225	270	0.	.0	.0
1	0550	71	4.	.6	.1 * 1	1410	171	0.	.0	.0 * 1	2230	271	0.	.0	.0
1	0555	72	3.	.6	.1 * 1	1415	172	0.	.0	.0 * 1	2235	272	0.	.0	.0
1	0600	73	3.	.6	.1 * 1	1420	173	0.	.0	.0 * 1	2240	273	0.	.0	.0
1	0605	74	3.	.6	.1 * 1	1425	174	0.	.0	.0 * 1	2245	274	0.	.0	.0
1	0610	75	3.	.6	.1 * 1	1430	175	0.	.0	.0 * 1	2250	275	0.	.0	.0
1	0615	76	3.	.5	.1 * 1	1435	176	0.	.0	.0 * 1	2255	276	0.	.0	.0
1	0620	77	3.	.5	.1 * 1	1440	177	0.	.0	.0 * 1	2300	277	0.	.0	.0
1	0625	78	3.	.5	.1 * 1	1445	178	0.	.0	.0 * 1	2305	278	0.	.0	.0
1	0630	79	3.	.5	.1 * 1	1450	179	0.	.0	.0 * 1	2310	279	0.	.0	.0
1	0635	80	3.	.5	.1 * 1	1455	180	0.	.0	.0 * 1	2315	280	0.	.0	.0
1	0640	81	2.	.4	.1 * 1	1500	181	0.	.0	.0 * 1	2320	281	0.	.0	.0
1	0645	82	2.	.4	.1 * 1	1505	182	0.	.0	.0 * 1	2325	282	0.	.0	.0
1	0650	83	2.	.4	.1 * 1	1510	183	0.	.0	.0 * 1	2330	283	0.	.0	.0
1	0655	84	2.	.4	.1 * 1	1515	184	0.	.0	.0 * 1	2335	284	0.	.0	.0
1	0700	85	2.	.4	.1 * 1	1520	185	0.	.0	.0 * 1	2340	285	0.	.0	.0
1	0705	86	2.	.4	.1 * 1	1525	186	0.	.0	.0 * 1	2345	286	0.	.0	.0
1	0710	87	2.	.4	.1 * 1	1530	187	0.	.0	.0 * 1	2350	287	0.	.0	.0
1	0715	88	2.	.3	.1 * 1	1535	188	0.	.0	.0 * 1	2355	288	0.	.0	.0
1	0720	89	2.	.3	.1 * 1	1540	189	0.	.0	.0 * 2	0000	289	0.	.0	.0
1	0725	90	2.	.3	.1 * 1	1545	190	0.	.0	.0 * 2	0005	290	0.	.0	.0
1	0730	91	2.	.3	.1 * 1	1550	191	0.	.0	.0 * 2	0010	291	0.	.0	.0
1	0735	92	2.	.3	.1 * 1	1555	192	0.	.0	.0 * 2	0015	292	0.	.0	.0
1	0740	93	2.	.3	.1 * 1	1600	193	0.	.0	.0 * 2	0020	293	0.	.0	.0
1	0745	94	1.	.3	.1 * 1	1605	194	0.	.0	.0 * 2	0025	294	0.	.0	.0
1	0750	95	1.	.3	.1 * 1	1610	195	0.	.0	.0 * 2	0030	295	0.	.0	.0
1	0755	96	1.	.3	.0 * 1	1615	196	0.	.0	.0 * 2	0035	296	0.	.0	.0
1	0800	97	1.	.2	.0 * 1	1620	197	0.	.0	.0 * 2	0040	297	0.	.0	.0
1	0805	98	1.	.2	.0 * 1	1625	198	0.	.0	.0 * 2	0045	298	0.	.0	.0
1	0810	99	1.	.2	.0 * 1	1630	199	0.	.0	.0 * 2	0050	299	0.	.0	.0
1	0815	100	1.	.2	.0 * 1	1635	200	0.	.0	.0 * 2	0055	300	0.	.0	.0

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	8.	3.92	3.	1.	1.
			.006	.007	.007
			1.	2.	2.
			(INCHES)		
			(AC-FT)		
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	1.	3.92	1.	0.	0.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	.29	3.92	.11	.03	.03
CUMULATIVE AREA =			4.47	SQ MI	

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0 * 1	0820	101	1.	.1	.0 * 1	1640	201	0.	.0	.0				
1		0005	2	0.	.0	.0 * 1	0825	102	0.	.1	.0 * 1	1645	202	0.	.0	.0				
1		0010	3	0.	.0	.0 * 1	0830	103	0.	.1	.0 * 1	1650	203	0.	.0	.0				
1		0015	4	0.	.0	.0 * 1	0835	104	0.	.1	.0 * 1	1655	204	0.	.0	.0				
1		0020	5	0.	.0	.0 * 1	0840	105	0.	.1	.0 * 1	1700	205	0.	.0	.0				
1		0025	6	0.	.0	.0 * 1	0845	106	0.	.1	.0 * 1	1705	206	0.	.0	.0				
1		0030	7	0.	.0	.0 * 1	0850	107	0.	.1	.0 * 1	1710	207	0.	.0	.0				
1		0035	8	0.	.0	.0 * 1	0855	108	0.	.1	.0 * 1	1715	208	0.	.0	.0				
1		0040	9	0.	.0	.0 * 1	0900	109	0.	.1	.0 * 1	1720	209	0.	.0	.0				
1		0045	10	0.	.0	.0 * 1	0905	110	0.	.1	.0 * 1	1725	210	0.	.0	.0				
1		0050	11	0.	.0	.0 * 1	0910	111	0.	.1	.0 * 1	1730	211	0.	.0	.0				
1		0055	12	0.	.0	.0 * 1	0915	112	0.	.1	.0 * 1	1735	212	0.	.0	.0				
1		0100	13	0.	.0	.0 * 1	0920	113	0.	.1	.0 * 1	1740	213	0.	.0	.0				
1		0105	14	0.	.0	.0 * 1	0925	114	0.	.1	.0 * 1	1745	214	0.	.0	.0				
1		0110	15	0.	.0	.0 * 1	0930	115	0.	.1	.0 * 1	1750	215	0.	.0	.0				
1		0115	16	0.	.0	.0 * 1	0935	116	0.	.1	.0 * 1	1755	216	0.	.0	.0				
1		0120	17	0.	.0	.0 * 1	0940	117	0.	.1	.0 * 1	1800	217	0.	.0	.0				
1		0125	18	0.	.0	.0 * 1	0945	118	0.	.0	.0 * 1	1805	218	0.	.0	.0				
1		0130	19	0.	.0	.0 * 1	0950	119	0.	.0	.0 * 1	1810	219	0.	.0	.0				
1		0135	20	0.	.0	.0 * 1	0955	120	0.	.0	.0 * 1	1815	220	0.	.0	.0				
1		0140	21	0.	.0	.0 * 1	1000	121	0.	.0	.0 * 1	1820	221	0.	.0	.0				
1		0145	22	0.	.0	.0 * 1	1005	122	0.	.0	.0 * 1	1825	222	0.	.0	.0				
1		0150	23	0.	.0	.0 * 1	1010	123	0.	.0	.0 * 1	1830	223	0.	.0	.0				
1		0155	24	0.	.0	.0 * 1	1015	124	0.	.0	.0 * 1	1835	224	0.	.0	.0				
1		0200	25	0.	.0	.0 * 1	1020	125	0.	.0	.0 * 1	1840	225	0.	.0	.0				
1		0205	26	0.	.0	.0 * 1	1025	126	0.	.0	.0 * 1	1845	226	0.	.0	.0				
1		0210	27	0.	.0	.0 * 1	1030	127	0.	.0	.0 * 1	1850	227	0.	.0	.0				
1		0215	28	0.	.0	.0 * 1	1035	128	0.	.0	.0 * 1	1855	228	0.	.0	.0				
1		0220	29	0.	.0	.0 * 1	1040	129	0.	.0	.0 * 1	1900	229	0.	.0	.0				
1		0225	30	0.	.0	.0 * 1	1045	130	0.	.0	.0 * 1	1905	230	0.	.0	.0				
1		0230	31	0.	.0	.0 * 1	1050	131	0.	.0	.0 * 1	1910	231	0.	.0	.0				
1		0235	32	0.	.0	.0 * 1	1055	132	0.	.0	.0 * 1	1915	232	0.	.0	.0				
1		0240	33	0.	.0	.0 * 1	1100	133	0.	.0	.0 * 1	1920	233	0.	.0	.0				
1		0245	34	0.	.0	.0 * 1	1105	134	0.	.0	.0 * 1	1925	234	0.	.0	.0				
1		0250	35	0.	.0	.0 * 1	1110	135	0.	.0	.0 * 1	1930	235	0.	.0	.0				
1		0255	36	0.	.0	.0 * 1	1115	136	0.	.0	.0 * 1	1935	236	0.	.0	.0				
1		0300	37	0.	.0	.0 * 1	1120	137	0.	.0	.0 * 1	1940	237	0.	.0	.0				
1		0305	38	0.	.0	.0 * 1	1125	138	0.	.0	.0 * 1	1945	238	0.	.0	.0				
1		0310	39	0.	.0	.0 * 1	1130	139	0.	.0	.0 * 1	1950	239	0.	.0	.0				
1		0315	40	0.	.0	.0 * 1	1135	140	0.	.0	.0 * 1	1955	240	0.	.0	.0				
1		0320	41	0.	.0	.0 * 1	1140	141	0.	.0	.0 * 1	2000	241	0.	.0	.0				
1		0325	42	0.	.0	.0 * 1	1145	142	0.	.0	.0 * 1	2005	242	0.	.0	.0				
1		0330	43	0.	.0	.0 * 1	1150	143	0.	.0	.0 * 1	2010	243	0.	.0	.0				
1		0335	44	0.	.0	.0 * 1	1155	144	0.	.0	.0 * 1	2015	244	0.	.0	.0				
1		0340	45	0.	.0	.0 * 1	1200	145	0.	.0	.0 * 1	2020	245	0.	.0	.0				
1		0345	46	1.	.1	.0 * 1	1205	146	0.	.0	.0 * 1	2025	246	0.	.0	.0				
1		0350	47	3.	.5	.1 * 1	1210	147	0.	.0	.0 * 1	2030	247	0.	.0	.0				
1		0355	48	3.	.6	.1 * 1	1215	148	0.	.0	.0 * 1	2035	248	0.	.0	.0				
1		0400	49	3.	.6	.1 * 1	1220	149	0.	.0	.0 * 1	2040	249	0.	.0	.0				
1		0405	50	3.	.6	.1 * 1	1225	150	0.	.0	.0 * 1	2045	250	0.	.0	.0				
1		0410	51	3.	.6	.1 * 1	1230	151	0.	.0	.0 * 1	2050	251	0.	.0	.0				
1		0415	52	3.	.6	.1 * 1	1235	152	0.	.0	.0 * 1	2055	252	0.	.0	.0				
1		0420	53	3.	.5	.1 * 1	1240	153	0.	.0	.0 * 1	2100	253	0.	.0	.0				
1		0425	54	3.	.5	.1 * 1	1245	154	0.	.0	.0 * 1	2105	254	0.	.0	.0				
1		0430	55	3.	.5	.1 * 1	1250	155	0.	.0	.0 * 1	2110	255	0.	.0	.0				
1		0435	56	3.	.5	.1 * 1	1255	156	0.	.0	.0 * 1	2115	256	0.	.0	.0				
1		0440	57	3.	.5	.1 * 1	1300	157	0.	.0	.0 * 1	2120	257	0.	.0	.0				
1		0445	58	2.	.5	.1 * 1	1305	158	0.	.0	.0 * 1	2125	258	0.	.0	.0				
1		0450	59	2.	.4	.1 * 1	1310	159	0.	.0	.0 * 1	2130	259	0.	.0	.0				
1		0455	60	2.	.4	.1 * 1	1315	160	0.	.0	.0 * 1	2135	260	0.	.0	.0				
1		0500	61	2.	.4	.1 * 1	1320	161	0.	.0	.0 * 1	2140	261	0.	.0	.0				
1		0505	62	2.	.4	.1 * 1	1325	162	0.	.0	.0 * 1	2145	262	0.	.0	.0				
1		0510	63	2.	.4	.1 * 1	1330	163	0.	.0	.0 * 1	2150	263	0.	.0	.0				
1		0515	64	2.	.4	.1 * 1	1335	164	0.	.0	.0 * 1	2155	264	0.	.0	.0				
1		0520	65	2.	.4	.1 * 1	1340	165	0.	.0	.0 * 1	2200	265	0.	.0	.0				
1		0525	66	2.	.3	.1 * 1	1345	166	0.	.0	.0 * 1	2205	266	0.	.0	.0				
1		0530	67	2.	.3	.1 * 1	1350	167	0.	.0	.0 * 1	2210	267	0.	.0	.0				
1		0535	68	2.	.3	.1 * 1	1355	168	0.	.0	.0 * 1	2215	268	0.	.0	.0				
1		0540	69	2.	.3	.1 * 1	1400	169	0.	.0	.0 * 1	2220	269	0.	.0	.0				
1		0545	70	2.	.3	.1 * 1	1405	170	0.	.0	.0 * 1	2225	270	0.	.0	.0				
1		0550	71	2.	.3	.1 * 1	1410	171	0.	.0	.0 * 1	2230	271	0.	.0	.0				
1		0555	72	2.	.3	.1 * 1	1415	172	0.	.0	.0 * 1	2235	272	0.	.0	.0				
1		0600	73	1.	.3	.1 * 1	1420	173	0.	.0	.0 * 1	2240	273	0.	.0	.0				
1		0605	74	1.	.3	.1 * 1	1425	174	0.	.0	.0 * 1	2245	274	0.	.0	.0				
1		0610	75	1.	.2	.0 * 1	1430	175	0.	.0	.0 * 1	2250	275	0.	.0	.0				
1		0615	76	1.	.2	.0 * 1	1435	176	0.	.0	.0 * 1	2255	276	0.	.0	.0				
1		0620	77	1.	.2	.0 * 1	1440	177	0.	.0	.0 * 1	2300	277	0.	.0	.0				
1		0625	78	1.	.2	.0 * 1	1445	178	0.	.0	.0 * 1	2305	278	0.	.0	.0				
1		0630	79	1.	.2	.0 * 1	1450	179	0.	.0	.0 * 1	2310	279	0.	.0	.0				
1		0635	80	1.	.2	.0 * 1	1455	180	0.	.0	.0 * 1	2315	280	0.	.0	.0				
1		0640	81	1.	.2	.0 * 1	1500	181	0.	.0	.0 * 1	2320	281	0.	.0	.0				
1		0645	82	1.	.2	.0 * 1	1505	182	0.	.0	.0 * 1	2325	282	0.	.0	.0				
1		0650	83	1.	.2	.0 * 1	1510	183	0.	.0	.0 * 1	2330	283	0.	.0	.0				
1		0655	84	1.	.2	.0 * 1	1515	184	0.	.0	.0 * 1	2335	284	0.	.0	.0				
1		0700	85	1.	.2	.0 * 1	1520	185	0.	.0	.0 * 1	2340	285	0.	.0	.0				
1		0705	86	1.	.2	.0 * 1	1525	186	0.	.0	.0 * 1	2345	286	0.	.0	.0				
1		0710	87	1.																

1	0800	97	1.	.1	.0	* 1	1620	197	0.	.0	.0	* 2	0040	297	0.	.0	.0
1	0805	98	1.	.1	.0	* 1	1625	198	0.	.0	.0	* 2	0045	298	0.	.0	.0
1	0810	99	1.	.1	.0	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	1.	.1	.0	* 1	1635	200	0.	.0	.0	* 2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	3.	3.92				
		(CFS)	1.	0.	0.	0.
		(INCHES)	.003	.003	.003	.003
		(AC-FT)	1.	1.	1.	1.

PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	1.	3.92				
			0.	0.	0.	0.

PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	.12	3.92				
			.05	.01	.01	.01

CUMULATIVE AREA = 4.47 SQ MI

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .92

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	0.	.0	.0	* 1	1640	201	0.	.0	.0	.0					
1	0005	2	0.	.0	.0	* 1	0825	102	0.	.0	.0	* 1	1645	202	0.	.0	.0	.0					
1	0010	3	0.	.0	.0	* 1	0830	103	0.	.0	.0	* 1	1650	203	0.	.0	.0	.0					
1	0015	4	0.	.0	.0	* 1	0835	104	0.	.0	.0	* 1	1655	204	0.	.0	.0	.0					
1	0020	5	0.	.0	.0	* 1	0840	105	0.	.0	.0	* 1	1700	205	0.	.0	.0	.0					
1	0025	6	0.	.0	.0	* 1	0845	106	0.	.0	.0	* 1	1705	206	0.	.0	.0	.0					
1	0030	7	0.	.0	.0	* 1	0850	107	0.	.0	.0	* 1	1710	207	0.	.0	.0	.0					
1	0035	8	0.	.0	.0	* 1	0855	108	0.	.0	.0	* 1	1715	208	0.	.0	.0	.0					
1	0040	9	0.	.0	.0	* 1	0900	109	0.	.0	.0	* 1	1720	209	0.	.0	.0	.0					
1	0045	10	0.	.0	.0	* 1	0905	110	0.	.0	.0	* 1	1725	210	0.	.0	.0	.0					
1	0050	11	0.	.0	.0	* 1	0910	111	0.	.0	.0	* 1	1730	211	0.	.0	.0	.0					
1	0055	12	0.	.0	.0	* 1	0915	112	0.	.0	.0	* 1	1735	212	0.	.0	.0	.0					
1	0100	13	0.	.0	.0	* 1	0920	113	0.	.0	.0	* 1	1740	213	0.	.0	.0	.0					
1	0105	14	0.	.0	.0	* 1	0925	114	0.	.0	.0	* 1	1745	214	0.	.0	.0	.0					
1	0110	15	0.	.0	.0	* 1	0930	115	0.	.0	.0	* 1	1750	215	0.	.0	.0	.0					
1	0115	16	0.	.0	.0	* 1	0935	116	0.	.0	.0	* 1	1755	216	0.	.0	.0	.0					
1	0120	17	0.	.0	.0	* 1	0940	117	0.	.0	.0	* 1	1800	217	0.	.0	.0	.0					
1	0125	18	0.	.0	.0	* 1	0945	118	0.	.0	.0	* 1	1805	218	0.	.0	.0	.0					
1	0130	19	0.	.0	.0	* 1	0950	119	0.	.0	.0	* 1	1810	219	0.	.0	.0	.0					
1	0135	20	0.	.0	.0	* 1	0955	120	0.	.0	.0	* 1	1815	220	0.	.0	.0	.0					
1	0140	21	0.	.0	.0	* 1	1000	121	0.	.0	.0	* 1	1820	221	0.	.0	.0	.0					
1	0145	22	0.	.0	.0	* 1	1005	122	0.	.0	.0	* 1	1825	222	0.	.0	.0	.0					
1	0150	23	0.	.0	.0	* 1	1010	123	0.	.0	.0	* 1	1830	223	0.	.0	.0	.0					
1	0155	24	0.	.0	.0	* 1	1015	124	0.	.0	.0	* 1	1835	224	0.	.0	.0	.0					
1	0200	25	0.	.0	.0	* 1	1020	125	0.	.0	.0	* 1	1840	225	0.	.0	.0	.0					
1	0205	26	0.	.0	.0	* 1	1025	126	0.	.0	.0	* 1	1845	226	0.	.0	.0	.0					
1	0210	27	0.	.0	.0	* 1	1030	127	0.	.0	.0	* 1	1850	227	0.	.0	.0	.0					
1	0215	28	0.	.0	.0	* 1	1035	128	0.	.0	.0	* 1	1855	228	0.	.0	.0	.0					
1	0220	29	0.	.0	.0	* 1	1040	129	0.	.0	.0	* 1	1900	229	0.	.0	.0	.0					
1	0225	30	0.	.0	.0	* 1	1045	130	0.	.0	.0	* 1	1905	230	0.	.0	.0	.0					
1	0230	31	0.	.0	.0	* 1	1050	131	0.	.0	.0	* 1	1910	231	0.	.0	.0	.0					
1	0235	32	0.	.0	.0	* 1	1055	132	0.	.0	.0	* 1	1915	232	0.	.0	.0	.0					
1	0240	33	0.	.0	.0	* 1	1100	133	0.	.0	.0	* 1	1920	233	0.	.0	.0	.0					
1	0245	34	0.	.0	.0	* 1	1105	134	0.	.0	.0	* 1	1925	234	0.	.0	.0	.0					
1	0250	35	0.	.0	.0	* 1	1110	135	0.	.0	.0	* 1	1930	235	0.	.0	.0	.0					
1	0255	36	0.	.0	.0	* 1	1115	136	0.	.0	.0	* 1	1935	236	0.	.0	.0	.0					
1	0300	37	0.	.0	.0	* 1	1120	137	0.	.0	.0	* 1	1940	237	0.	.0	.0	.0					
1	0305	38	0.	.0	.0	* 1	1125	138	0.	.0	.0	* 1	1945	238	0.	.0	.0	.0					
1	0310	39	0.	.0	.0	* 1	1130	139	0.	.0	.0	* 1	1950	239	0.	.0	.0	.0					
1	0315	40	0.	.0	.0	* 1	1135	140	0.	.0	.0	* 1	1955	240	0.	.0	.0	.0					
1	0320	41	0.	.0	.0	* 1	1140	141	0.	.0	.0	* 1	2000	241	0.	.0	.0	.0					
1	0325	42	0.	.0	.0	* 1	1145	142	0.	.0	.0	* 1	2005	242	0.	.0	.0	.0					
1	0330	43	0.	.0	.0	* 1	1150	143	0.	.0	.0	* 1	2010	243	0.	.0	.0	.0					
1	0335	44	0.	.0	.0	* 1	1155	144	0.	.0	.0	* 1	2015	244	0.	.0	.0	.0					
1	0340	45	0.	.0	.0	* 1	1200	145	0.	.0	.0	* 1	2020	245	0.	.0	.0	.0					
1	0345	46	0.	.0	.0	* 1	1205	146	0.	.0	.0	* 1	2025	246	0.	.0	.0	.0					
1	0350	47	1.	.1	.0	* 1	1210	147	0.	.0	.0	* 1	2030	247	0.	.0	.0	.0					
1	0355	48	1.	.2	.0	* 1	1215	148	0.	.0	.0	* 1	2035	248	0.	.0	.0	.0					
1	0400	49	1.	.2	.0	* 1	1220	149	0.	.0	.0	* 1	2040	249	0.	.0	.0	.0					
1	0405	50	1.	.2	.0	* 1	1225	150	0.	.0	.0	* 1	2045	250	0.	.0	.0	.0					
1	0410	51	1.	.2	.0	* 1	1230	151	0.	.0	.0	* 1	2050	251	0.	.0	.0	.0					
1	0415	52	1.	.2	.0	* 1	1235	152	0.	.0	.0	* 1	2055	252	0.	.0	.0	.0					
1	0420	53	1.	.2	.0	* 1	1240	153	0.	.0	.0	* 1	2100	253	0.	.0	.0	.0					
1	0425	54	1.	.2	.0	* 1	1245	154	0.	.0	.0	* 1	2105	254	0.	.0	.0	.0					
1	0430	55	1.	.2	.0	* 1	1250	155	0.	.0	.0	* 1	2110	255	0.	.0	.0	.0					
1	0435	56	1.	.1	.0	* 1	1255	156	0.	.0	.0	* 1	2115	256	0.	.0	.0	.0					
1	0440	57	1.	.1	.0	* 1	1300	157	0.	.0	.0	* 1	2120	257	0.	.0	.0	.0					
1	0445	58	1.	.1	.0	* 1	1305	158	0.	.0	.0	* 1	2125	258	0.	.0	.0	.0					
1	0450	59	1.	.1	.0	* 1	1310	159	0.	.0	.0	* 1	2130	259	0.	.0	.0	.0					
1	0455	60	1.	.1	.0	* 1	1315	160	0.	.0	.0	* 1	2135	260	0.	.0	.0	.0					
1	0500	61	1.	.1	.0	* 1	1320	161	0.	.0	.0	* 1	2140	261	0.	.0	.0	.0					
1	0505	62	1.	.1	.0	* 1	1325	162	0.	.0	.0	* 1	2145	262	0.	.0	.0	.0					
1	0510	63	1.	.1	.0	* 1	1330	163	0.	.0	.0	* 1	2150	263	0.	.0	.0	.0					
1	0515	64	1.	.1	.0	* 1	1335	164	0.	.0	.0	* 1	2155	264	0.	.0	.0	.0					
1	0520	65	1.	.1	.0	* 1	1340	165	0.	.0	.0	* 1	2200	265	0.	.0	.0	.0					
1	0525	66	1.	.1	.0	* 1	1345	166	0.	.0	.0	* 1	2205	266	0.	.0	.0	.0					
1	0530	67	1.	.1	.0	* 1	1350	167	0.	.0	.0	* 1	2210	267	0.	.0	.0	.0					
1	0535	68	1.	.1	.0	* 1	1355	168	0.	.0	.0	* 1	2215	268	0.	.0	.0	.0					
1	0540	69	1.	.1	.0	* 1	1400	169	0.	.0	.0	* 1	2220	269	0.	.0	.0	.0					
1	0545	70	1.	.1	.0	* 1	1405	170	0.	.0	.0	* 1	2225	270	0.	.0	.0	.0					

1	0550	71	1.	.1	.0	* 1	1410	171	0.	.0	.0	* 1	2230	271	0.	.0	.0
1	0555	72	1.	.1	.0	* 1	1415	172	0.	.0	.0	* 1	2235	272	0.	.0	.0
1	0600	73	0.	.1	.0	* 1	1420	173	0.	.0	.0	* 1	2240	273	0.	.0	.0
1	0605	74	0.	.1	.0	* 1	1425	174	0.	.0	.0	* 1	2245	274	0.	.0	.0
1	0610	75	0.	.1	.0	* 1	1430	175	0.	.0	.0	* 1	2250	275	0.	.0	.0
1	0615	76	0.	.1	.0	* 1	1435	176	0.	.0	.0	* 1	2255	276	0.	.0	.0
1	0620	77	0.	.1	.0	* 1	1440	177	0.	.0	.0	* 1	2300	277	0.	.0	.0
1	0625	78	0.	.1	.0	* 1	1445	178	0.	.0	.0	* 1	2305	278	0.	.0	.0
1	0630	79	0.	.1	.0	* 1	1450	179	0.	.0	.0	* 1	2310	279	0.	.0	.0
1	0635	80	0.	.1	.0	* 1	1455	180	0.	.0	.0	* 1	2315	280	0.	.0	.0
1	0640	81	0.	.1	.0	* 1	1500	181	0.	.0	.0	* 1	2320	281	0.	.0	.0
1	0645	82	0.	.1	.0	* 1	1505	182	0.	.0	.0	* 1	2325	282	0.	.0	.0
1	0650	83	0.	.1	.0	* 1	1510	183	0.	.0	.0	* 1	2330	283	0.	.0	.0
1	0655	84	0.	.1	.0	* 1	1515	184	0.	.0	.0	* 1	2335	284	0.	.0	.0
1	0700	85	0.	.1	.0	* 1	1520	185	0.	.0	.0	* 1	2340	285	0.	.0	.0
1	0705	86	0.	.1	.0	* 1	1525	186	0.	.0	.0	* 1	2345	286	0.	.0	.0
1	0710	87	0.	.1	.0	* 1	1530	187	0.	.0	.0	* 1	2350	287	0.	.0	.0
1	0715	88	0.	.1	.0	* 1	1535	188	0.	.0	.0	* 1	2355	288	0.	.0	.0
1	0720	89	0.	.1	.0	* 1	1540	189	0.	.0	.0	* 2	0000	289	0.	.0	.0
1	0725	90	0.	.0	.0	* 1	1545	190	0.	.0	.0	* 2	0005	290	0.	.0	.0
1	0730	91	0.	.0	.0	* 1	1550	191	0.	.0	.0	* 2	0010	291	0.	.0	.0
1	0735	92	0.	.0	.0	* 1	1555	192	0.	.0	.0	* 2	0015	292	0.	.0	.0
1	0740	93	0.	.0	.0	* 1	1600	193	0.	.0	.0	* 2	0020	293	0.	.0	.0
1	0745	94	0.	.0	.0	* 1	1605	194	0.	.0	.0	* 2	0025	294	0.	.0	.0
1	0750	95	0.	.0	.0	* 1	1610	195	0.	.0	.0	* 2	0030	295	0.	.0	.0
1	0755	96	0.	.0	.0	* 1	1615	196	0.	.0	.0	* 2	0035	296	0.	.0	.0
1	0800	97	0.	.0	.0	* 1	1620	197	0.	.0	.0	* 2	0040	297	0.	.0	.0
1	0805	98	0.	.0	.0	* 1	1625	198	0.	.0	.0	* 2	0045	298	0.	.0	.0
1	0810	99	0.	.0	.0	* 1	1630	199	0.	.0	.0	* 2	0050	299	0.	.0	.0
1	0815	100	0.	.0	.0	* 1	1635	200	0.	.0	.0	* 2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	1.	3.92	(CFS)	0.	0.	0.	0.
			(INCHES)	.001	.001	.001	.001
			(AC-FT)	0.	0.	0.	0.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	0.	3.92		0.	0.	0.	0.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	.04	3.92		.02	.00	.00	.00
CUMULATIVE AREA =				4.47 SQ MI			

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .91

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	.0	.0	.0	* 1	0820	101	0.	.0	.0	.0	.0	.0	* 1	1640	201	0.	.0	.0	.0	.0	.0
1	0005	2	0.	0.	.0	.0	.0	* 1	0825	102	0.	.0	.0	.0	.0	.0	* 1	1645	202	0.	.0	.0	.0	.0	.0
1	0010	3	0.	0.	.0	.0	.0	* 1	0830	103	0.	.0	.0	.0	.0	.0	* 1	1650	203	0.	.0	.0	.0	.0	.0
1	0015	4	0.	0.	.0	.0	.0	* 1	0835	104	0.	.0	.0	.0	.0	.0	* 1	1655	204	0.	.0	.0	.0	.0	.0
1	0020	5	0.	0.	.0	.0	.0	* 1	0840	105	0.	.0	.0	.0	.0	.0	* 1	1700	205	0.	.0	.0	.0	.0	.0
1	0025	6	0.	0.	.0	.0	.0	* 1	0845	106	0.	.0	.0	.0	.0	.0	* 1	1705	206	0.	.0	.0	.0	.0	.0
1	0030	7	0.	0.	.0	.0	.0	* 1	0850	107	0.	.0	.0	.0	.0	.0	* 1	1710	207	0.	.0	.0	.0	.0	.0
1	0035	8	0.	0.	.0	.0	.0	* 1	0855	108	0.	.0	.0	.0	.0	.0	* 1	1715	208	0.	.0	.0	.0	.0	.0
1	0040	9	0.	0.	.0	.0	.0	* 1	0900	109	0.	.0	.0	.0	.0	.0	* 1	1720	209	0.	.0	.0	.0	.0	.0
1	0045	10	0.	0.	.0	.0	.0	* 1	0905	110	0.	.0	.0	.0	.0	.0	* 1	1725	210	0.	.0	.0	.0	.0	.0
1	0050	11	0.	0.	.0	.0	.0	* 1	0910	111	0.	.0	.0	.0	.0	.0	* 1	1730	211	0.	.0	.0	.0	.0	.0
1	0055	12	0.	0.	.0	.0	.0	* 1	0915	112	0.	.0	.0	.0	.0	.0	* 1	1735	212	0.	.0	.0	.0	.0	.0
1	0100	13	0.	0.	.0	.0	.0	* 1	0920	113	0.	.0	.0	.0	.0	.0	* 1	1740	213	0.	.0	.0	.0	.0	.0
1	0105	14	0.	0.	.0	.0	.0	* 1	0925	114	0.	.0	.0	.0	.0	.0	* 1	1745	214	0.	.0	.0	.0	.0	.0
1	0110	15	0.	0.	.0	.0	.0	* 1	0930	115	0.	.0	.0	.0	.0	.0	* 1	1750	215	0.	.0	.0	.0	.0	.0
1	0115	16	0.	0.	.0	.0	.0	* 1	0935	116	0.	.0	.0	.0	.0	.0	* 1	1755	216	0.	.0	.0	.0	.0	.0
1	0120	17	0.	0.	.0	.0	.0	* 1	0940	117	0.	.0	.0	.0	.0	.0	* 1	1800	217	0.	.0	.0	.0	.0	.0
1	0125	18	0.	0.	.0	.0	.0	* 1	0945	118	0.	.0	.0	.0	.0	.0	* 1	1805	218	0.	.0	.0	.0	.0	.0
1	0130	19	0.	0.	.0	.0	.0	* 1	0950	119	0.	.0	.0	.0	.0	.0	* 1	1810	219	0.	.0	.0	.0	.0	.0
1	0135	20	0.	0.	.0	.0	.0	* 1	0955	120	0.	.0	.0	.0	.0	.0	* 1	1815	220	0.	.0	.0	.0	.0	.0
1	0140	21	0.	0.	.0	.0	.0	* 1	1000	121	0.	.0	.0	.0	.0	.0	* 1	1820	221	0.	.0	.0	.0	.0	.0
1	0145	22	0.	0.	.0	.0	.0	* 1	1005	122	0.	.0	.0	.0	.0	.0	* 1	1825	222	0.	.0	.0	.0	.0	.0
1	0150	23	0.	0.	.0	.0	.0	* 1	1010	123	0.	.0	.0	.0	.0	.0	* 1	1830	223	0.	.0	.0	.0	.0	.0
1	0155	24	0.	0.	.0	.0	.0	* 1	1015	124	0.	.0	.0	.0	.0	.0	* 1	1835	224	0.	.0	.0	.0	.0	.0
1	0200	25	0.	0.	.0	.0	.0	* 1	1020	125	0.	.0	.0	.0	.0	.0	* 1	1840	225	0.	.0	.0	.0	.0	.0
1	0205	26	0.	0.	.0	.0	.0	* 1	1025	126	0.	.0	.0	.0	.0	.0	* 1	1845	226	0.	.0	.0	.0	.0	.0
1	0210	27	0.	0.	.0	.0	.0	* 1	1030	127	0.	.0	.0	.0	.0	.0	* 1	1850	227	0.	.0	.0	.0	.0	.0
1	0215	28	0.	0.	.0	.0	.0	* 1	1035	128	0.	.0	.0	.0	.0	.0	* 1	1855	228	0.	.0	.0	.0	.0	.0
1	0220	29	0.	0.	.0	.0	.0	* 1	1040	129	0.	.0	.0	.0	.0	.0	* 1	1900	229	0.	.0	.0	.0	.0	.0
1	0225	30	0.	0.	.0	.0	.0	* 1	1045	130	0.	.0	.0	.0	.0	.0	* 1	1905	230	0.	.0	.0	.0	.0	.0
1	0230	31	0.	0.	.0	.0	.0	* 1	1050	131	0.	.0	.0	.0	.0	.0	* 1	1910	231	0.	.0	.0	.0	.0	.0
1	0235	32	0.	0.	.0	.0	.0	* 1	1055	132	0.	.0	.0	.0	.0	.0	* 1	1915	232	0.	.0	.0	.0	.0	.0
1	0240	33	0.	0.	.0	.0	.0	* 1	1100	133	0.	.0	.0	.0	.0	.0	* 1	1920	233	0.	.0	.0	.0	.0	.0
1	0245	34	0.	0.	.0	.0	.0	* 1	1105	134	0.	.0	.0	.0	.0	.0	* 1	1925	234	0.	.0	.0	.0	.0	.0
1	0250	35	0.	0.	.0	.0	.0	* 1	1110	135	0.	.0	.0	.0	.0	.0	* 1	1930	235	0.	.0	.0	.0	.0	.0
1	0255	36	0.	0.	.0	.0	.0	* 1	1115	136	0.	.0	.0	.0	.0	.0	* 1	1935	236	0.	.0	.0	.0	.0	.0
1	0300	37	0.	0.	.0	.0	.0	* 1	1120	137	0.	.0	.0	.0	.0	.0	* 1	1940	237	0.	.0	.0	.0	.0	.0
1	0305	38	0.	0.	.0	.0	.0	* 1	1125	138	0.	.0	.0	.0	.0	.0	* 1	1945	238	0.	.0	.0	.0	.0	.0
1	0310	39	0.	0.	.0	.0	.0	* 1	1130	139	0.	.0	.0	.0	.0	.0	* 1	1950	239	0.	.0	.0	.0	.0	.0
1	0315	40	0.	0.	.0	.0	.0	* 1	1135	140	0.	.0	.0	.0	.0	.0	* 1	1955	240	0.	.0	.0	.0	.0	.0
1	0320	41	0.	0.	.0	.0	.0	* 1	1140	141	0.	.0	.0	.0	.0	.0	* 1	2000	241	0.	.0	.0	.0	.0	.0
1	0325	42	0.	0.	.0	.0	.0	* 1	1145	142	0.	.0	.0	.0	.0	.0	* 1	2005	242	0.	.0	.0	.0	.0	.0
1	0330	43	0.	0.	.0	.0	.0	* 1	1150	143	0.	.0	.0	.0	.0	.0	* 1	2010	243	0.	.0	.0	.0	.0	.0
1	0335	44	0.	0.	.0	.0	.0	* 1	1155	144	0.	.0	.0	.0	.0	.0	* 1	2015	244	0.	.0	.0	.0	.0	.0

1	0340	45	0.	.0	.0 * 1	1200 145	0.	.0	.0 * 1	2020 245	0.	.0	.0
1	0345	46	0.	.0	.0 * 1	1205 146	0.	.0	.0 * 1	2025 246	0.	.0	.0
1	0350	47	0.	.0	.0 * 1	1210 147	0.	.0	.0 * 1	2030 247	0.	.0	.0
1	0355	48	0.	.0	.0 * 1	1215 148	0.	.0	.0 * 1	2035 248	0.	.0	.0
1	0400	49	0.	.0	.0 * 1	1220 149	0.	.0	.0 * 1	2040 249	0.	.0	.0
1	0405	50	0.	.0	.0 * 1	1225 150	0.	.0	.0 * 1	2045 250	0.	.0	.0
1	0410	51	0.	.0	.0 * 1	1230 151	0.	.0	.0 * 1	2050 251	0.	.0	.0
1	0415	52	0.	.0	.0 * 1	1235 152	0.	.0	.0 * 1	2055 252	0.	.0	.0
1	0420	53	0.	.0	.0 * 1	1240 153	0.	.0	.0 * 1	2100 253	0.	.0	.0
1	0425	54	0.	.0	.0 * 1	1245 154	0.	.0	.0 * 1	2105 254	0.	.0	.0
1	0430	55	0.	.0	.0 * 1	1250 155	0.	.0	.0 * 1	2110 255	0.	.0	.0
1	0435	56	0.	.0	.0 * 1	1255 156	0.	.0	.0 * 1	2115 256	0.	.0	.0
1	0440	57	0.	.0	.0 * 1	1300 157	0.	.0	.0 * 1	2120 257	0.	.0	.0
1	0445	58	0.	.0	.0 * 1	1305 158	0.	.0	.0 * 1	2125 258	0.	.0	.0
1	0450	59	0.	.0	.0 * 1	1310 159	0.	.0	.0 * 1	2130 259	0.	.0	.0
1	0455	60	0.	.0	.0 * 1	1315 160	0.	.0	.0 * 1	2135 260	0.	.0	.0
1	0500	61	0.	.0	.0 * 1	1320 161	0.	.0	.0 * 1	2140 261	0.	.0	.0
1	0505	62	0.	.0	.0 * 1	1325 162	0.	.0	.0 * 1	2145 262	0.	.0	.0
1	0510	63	0.	.0	.0 * 1	1330 163	0.	.0	.0 * 1	2150 263	0.	.0	.0
1	0515	64	0.	.0	.0 * 1	1335 164	0.	.0	.0 * 1	2155 264	0.	.0	.0
1	0520	65	0.	.0	.0 * 1	1340 165	0.	.0	.0 * 1	2200 265	0.	.0	.0
1	0525	66	0.	.0	.0 * 1	1345 166	0.	.0	.0 * 1	2205 266	0.	.0	.0
1	0530	67	0.	.0	.0 * 1	1350 167	0.	.0	.0 * 1	2210 267	0.	.0	.0
1	0535	68	0.	.0	.0 * 1	1355 168	0.	.0	.0 * 1	2215 268	0.	.0	.0
1	0540	69	0.	.0	.0 * 1	1400 169	0.	.0	.0 * 1	2220 269	0.	.0	.0
1	0545	70	0.	.0	.0 * 1	1405 170	0.	.0	.0 * 1	2225 270	0.	.0	.0
1	0550	71	0.	.0	.0 * 1	1410 171	0.	.0	.0 * 1	2230 271	0.	.0	.0
1	0555	72	0.	.0	.0 * 1	1415 172	0.	.0	.0 * 1	2235 272	0.	.0	.0
1	0600	73	0.	.0	.0 * 1	1420 173	0.	.0	.0 * 1	2240 273	0.	.0	.0
1	0605	74	0.	.0	.0 * 1	1425 174	0.	.0	.0 * 1	2245 274	0.	.0	.0
1	0610	75	0.	.0	.0 * 1	1430 175	0.	.0	.0 * 1	2250 275	0.	.0	.0
1	0615	76	0.	.0	.0 * 1	1435 176	0.	.0	.0 * 1	2255 276	0.	.0	.0
1	0620	77	0.	.0	.0 * 1	1440 177	0.	.0	.0 * 1	2300 277	0.	.0	.0
1	0625	78	0.	.0	.0 * 1	1445 178	0.	.0	.0 * 1	2305 278	0.	.0	.0
1	0630	79	0.	.0	.0 * 1	1450 179	0.	.0	.0 * 1	2310 279	0.	.0	.0
1	0635	80	0.	.0	.0 * 1	1455 180	0.	.0	.0 * 1	2315 280	0.	.0	.0
1	0640	81	0.	.0	.0 * 1	1500 181	0.	.0	.0 * 1	2320 281	0.	.0	.0
1	0645	82	0.	.0	.0 * 1	1505 182	0.	.0	.0 * 1	2325 282	0.	.0	.0
1	0650	83	0.	.0	.0 * 1	1510 183	0.	.0	.0 * 1	2330 283	0.	.0	.0
1	0655	84	0.	.0	.0 * 1	1515 184	0.	.0	.0 * 1	2335 284	0.	.0	.0
1	0700	85	0.	.0	.0 * 1	1520 185	0.	.0	.0 * 1	2340 285	0.	.0	.0
1	0705	86	0.	.0	.0 * 1	1525 186	0.	.0	.0 * 1	2345 286	0.	.0	.0
1	0710	87	0.	.0	.0 * 1	1530 187	0.	.0	.0 * 1	2350 287	0.	.0	.0
1	0715	88	0.	.0	.0 * 1	1535 188	0.	.0	.0 * 1	2355 288	0.	.0	.0
1	0720	89	0.	.0	.0 * 1	1540 189	0.	.0	.0 * 2	0000 289	0.	.0	.0
1	0725	90	0.	.0	.0 * 1	1545 190	0.	.0	.0 * 2	0005 290	0.	.0	.0
1	0730	91	0.	.0	.0 * 1	1550 191	0.	.0	.0 * 2	0010 291	0.	.0	.0
1	0735	92	0.	.0	.0 * 1	1555 192	0.	.0	.0 * 2	0015 292	0.	.0	.0
1	0740	93	0.	.0	.0 * 1	1600 193	0.	.0	.0 * 2	0020 293	0.	.0	.0
1	0745	94	0.	.0	.0 * 1	1605 194	0.	.0	.0 * 2	0025 294	0.	.0	.0
1	0750	95	0.	.0	.0 * 1	1610 195	0.	.0	.0 * 2	0030 295	0.	.0	.0
1	0755	96	0.	.0	.0 * 1	1615 196	0.	.0	.0 * 2	0035 296	0.	.0	.0
1	0800	97	0.	.0	.0 * 1	1620 197	0.	.0	.0 * 2	0040 297	0.	.0	.0
1	0805	98	0.	.0	.0 * 1	1625 198	0.	.0	.0 * 2	0045 298	0.	.0	.0
1	0810	99	0.	.0	.0 * 1	1630 199	0.	.0	.0 * 2	0050 299	0.	.0	.0
1	0815	100	0.	.0	.0 * 1	1635 200	0.	.0	.0 * 2	0055 300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	0.	5.25	(CFS)	0.	0.	0.
			(INCHES)	.000	.000	.000
			(AC-FT)	0.	0.	0.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	0.	5.25	0.	0.	0.	0.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	.00	5.33	.00	.00	.00	.00
CUMULATIVE AREA =			4.47 SQ MI			

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662 KK  * DBOND4 *
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663 KO  OUTPUT CONTROL VARIABLES
        IPRINT      3  PRINT CONTROL
        IPLOT       0  PLOT CONTROL
        QSCAL       0.  HYDROGRAPH PLOT SCALE

        HYDROGRAPH ROUTING DATA

664 RS  STORAGE ROUTING
        NSTPS       1  NUMBER OF SUBREACHES
        ITYP        ELEV TYPE OF INITIAL CONDITION
        RSVRIC      3.00 INITIAL CONDITION
        X           .00 WORKING R AND D COEFFICIENT

665 SV  STORAGE      .0    2.8    3.4    4.4    5.1    6.2    7.6
666 SE  ELEVATION    .00   2.60   2.80   3.10   3.30   3.60   4.00

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667 SQ DISCHARGE 0. 13. 13. 14. 15. 16. 17.

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	.00	(CFS)	10.	3.	3.	3.
		(INCHES)	1.386	1.888	1.888	1.888
		(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)		6-HR			
+ 4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)		6-HR			
+ 3.00	.00		2.12	.72	.70	.70

CUMULATIVE AREA = .07 SQ MI

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	.00	(CFS)	10.	3.	3.	3.
		(INCHES)	1.375	1.869	1.869	1.869
		(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)		6-HR			
+ 4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)		6-HR			
+ 3.00	.00		2.11	.71	.69	.69

CUMULATIVE AREA = .07 SQ MI

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	.00	(CFS)	10.	3.	3.	3.
		(INCHES)	1.358	1.837	1.837	1.837
		(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)		6-HR			
+ 4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)		6-HR			
+ 3.00	.00		2.08	.70	.68	.68

CUMULATIVE AREA = .07 SQ MI

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	.00	(CFS)	10.	3.	3.	3.
		(INCHES)	1.341	1.805	1.805	1.805
		(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME			MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)		6-HR			
+ 4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME			MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)		6-HR			
+ 3.00	.00		2.05	.69	.67	.67

CUMULATIVE AREA = .07 SQ MI

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	14.	.00	(CFS)	10.	3.	3.	3.
			(INCHES)	1.335	1.793	1.793	1.793
			(AC-FT)	5.	7.	7.	7.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3.00	.00		2.04	.69	.66	.66
			CUMULATIVE AREA = .07 SQ MI				

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HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	14.	.00	(CFS)	10.	3.	3.	3.
			(INCHES)	1.330	1.784	1.784	1.784
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	3.00	.00		2.04	.68	.66	.66
			CUMULATIVE AREA = .07 SQ MI				

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673 KK *****
 * DBOND5* *

674 KO OUTPUT CONTROL VARIABLES
 IFRNT 3 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

675 RS	STORAGE ROUTING						
	NSTPS	1	NUMBER OF SUBREACHES				
	ITYP	ELEV	TYPE OF INITIAL CONDITION				
	RSVRIC	3.00	INITIAL CONDITION				
	X	.00	WORKING R AND D COEFFICIENT				
676 SV	STORAGE	.0	2.8	3.4	4.4	5.1	6.2
677 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60
678 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.
							17.

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	14.	.00	(CFS)	10.	3.	3.	3.
			(INCHES)	1.614	2.146	2.147	2.147
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	4.	.00		2.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					

3.00 .00 2.03 .67 .65 .65

CUMULATIVE AREA = .06 SQ MI

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(CFS)	(HR)					
+	14.	.00	(CFS)	10.	3.	3.	3.
			(INCHES)	1.603	2.127	2.127	2.127
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(AC-FT)	(HR)					
+	4.	.00	2.	1.	1.	1.	
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(FEET)	(HR)					
+	3.00	.00	2.01	.67	.64	.64	

CUMULATIVE AREA = .06 SQ MI

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(CFS)	(HR)					
+	14.	.00	(CFS)	10.	3.	3.	3.
			(INCHES)	1.586	2.095	2.095	2.095
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(AC-FT)	(HR)					
+	4.	.00	2.	1.	1.	1.	
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(FEET)	(HR)					
+	3.00	.00	1.99	.66	.63	.63	

CUMULATIVE AREA = .06 SQ MI

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(CFS)	(HR)					
+	14.	.00	(CFS)	9.	3.	3.	3.
			(INCHES)	1.569	2.063	2.064	2.064
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(AC-FT)	(HR)					
+	4.	.00	2.	1.	1.	1.	
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(FEET)	(HR)					
+	3.00	.00	1.97	.65	.62	.62	

CUMULATIVE AREA = .06 SQ MI

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(CFS)	(HR)					
+	14.	.00	(CFS)	9.	3.	3.	3.
			(INCHES)	1.562	2.051	2.051	2.051
			(AC-FT)	5.	6.	6.	6.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(AC-FT)	(HR)					
+	4.	.00	2.	1.	1.	1.	
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR	
+	(FEET)	(HR)					
+	3.00	.00	1.96	.64	.62	.62	

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5+
FOR PLAN 1, RATIO = .91

PEAK FLOW		TIME	MAXIMUM AVERAGE FLOW			
+	(CFS)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	14.	.00	9. (INCHES) 1.557 5.	3. 2.042 6.	3. 2.042 6.	3. 2.042 6.
PEAK STORAGE		TIME	MAXIMUM AVERAGE STORAGE			
+	(AC-FT)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	4.	.00	2.	1.	1.	1.
PEAK STAGE		TIME	MAXIMUM AVERAGE STAGE			
+	(FEET)	(HR)	6-HR	24-HR	72-HR	24.92-HR
+	3.00	.00	1.95	.64	.62	.62
CUMULATIVE AREA =				.06 SQ MI		

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

[illegible]

+	OFFD-26	.01	1	FLOW TIME	13. 3.50	12. 3.50	12. 3.50	12. 3.50	11. 3.50	11. 3.50
+	2 COMBINED AT CP4	.03	1	FLOW TIME	21. 3.58	20. 3.58	19. 3.58	19. 3.58	18. 3.58	18. 3.58
+	2 COMBINED AT CP5	.21	1	FLOW TIME	119. 3.58	116. 3.58	111. 3.58	105. 3.58	103. 3.58	102. 3.58
+	ROUTED TO RCP5	.21	1	FLOW TIME	116. 3.58	113. 3.58	107. 3.58	102. 3.58	100. 3.58	98. 3.58
+	HYDROGRAPH AT OND-20	.15	1	FLOW TIME	123. 3.58	121. 3.58	116. 3.58	112. 3.58	111. 3.58	110. 3.58
+	HYDROGRAPH AT OND-21	.08	1	FLOW TIME	44. 3.58	42. 3.58	40. 3.58	38. 3.58	37. 3.58	37. 3.58
+	3 COMBINED AT CP8	.43	1	FLOW TIME	282. 3.58	275. 3.58	264. 3.58	252. 3.58	248. 3.58	245. 3.58
+	HYDROGRAPH AT OND-27	.11	1	FLOW TIME	71. 3.58	69. 3.58	66. 3.58	63. 3.58	62. 3.58	61. 3.58
+	HYDROGRAPH AT OFFD-27A	.07	1	FLOW TIME	48. 3.58	47. 3.58	45. 3.58	43. 3.58	42. 3.58	42. 3.58
+	HYDROGRAPH AT OFFD-27B	.04	1	FLOW TIME	29. 3.58	28. 3.58	27. 3.58	26. 3.58	26. 3.58	25. 3.58
+	3 COMBINED AT CP6	.23	1	FLOW TIME	148. 3.58	145. 3.58	138. 3.58	132. 3.58	129. 3.58	128. 3.58
+	ROUTED TO RCP6	.23	1	FLOW TIME	144. 3.58	141. 3.58	134. 3.58	128. 3.58	125. 3.58	124. 3.58
+	HYDROGRAPH AT OND-22	.05	1	FLOW TIME	30. 3.58	29. 3.58	28. 3.58	26. 3.58	26. 3.58	25. 3.58
+	2 COMBINED AT CP7	.28	1	FLOW TIME	174. 3.58	170. 3.58	162. 3.58	154. 3.58	151. 3.58	149. 3.58
+	ROUTED TO RCP7	.28	1	FLOW TIME	164. 3.58	159. 3.58	151. 3.58	144. 3.58	141. 3.58	140. 3.58
+	3 COMBINED AT CP9	2.05	1	FLOW TIME	863. 3.75	838. 3.75	798. 3.75	757. 3.75	741. 3.75	730. 3.75
+	DIVERSION TO DIV1	2.05	1	FLOW TIME	757. 3.67	757. 3.67	757. 3.75	757. 3.75	741. 3.75	730. 3.75
+	HYDROGRAPH AT ODIV1	2.05	1	FLOW TIME	106. 3.75	81. 3.75	41. 3.75	0. .00	0. .00	0. .00
+	HYDROGRAPH AT DB-1	.03	1	FLOW TIME	5. 3.67	5. 3.67	5. 3.67	4. 3.67	4. 3.67	4. 3.67
+	2 COMBINED AT CP9A	2.07	1	FLOW TIME	111. 3.75	86. 3.75	45. 3.75	4. 3.67	4. 3.67	4. 3.67
+	ROUTED TO DET1	2.07	1	FLOW TIME	6. 3.92	5. 3.92	2. 4.08	1. 5.17	1. 5.17	1. 5.17
				** PEAK STAGES IN FEET **						
			1	STAGE TIME	.44 3.92	.32 3.92	.14 4.08	.06 5.25	.05 5.25	.05 5.25
+	HYDROGRAPH AT DIV1	.00	1	FLOW TIME	757. 3.67	757. 3.67	757. 3.75	757. 3.75	741. 3.75	730. 3.75
+	2 COMBINED AT CP10	2.07	1	FLOW TIME	762. 3.83	761. 3.83	759. 3.83	757. 3.75	742. 3.75	731. 3.75
+	ROUTED TO RCP10	2.07	1	FLOW TIME	762. 3.83	760. 3.83	758. 3.83	749. 3.75	733. 3.75	722. 3.75
+	HYDROGRAPH AT OND-18	.02	1	FLOW TIME	18. 3.58	18. 3.58	17. 3.58	17. 3.58	17. 3.58	16. 3.58
+	ROUTED TO ROND-18	.02	1	FLOW TIME	17. 3.67	17. 3.67	16. 3.67	16. 3.67	16. 3.67	16. 3.67

HYDROGRAPH AT										
+	OND-19	.09	1	FLOW TIME	46. 3.67	45. 3.67	43. 3.67	41. 3.67	40. 3.67	39. 3.67
3 COMBINED AT										
+	CP11	2.18	1	FLOW TIME	814. 3.75	812. 3.75	807. 3.75	798. 3.75	781. 3.75	770. 3.75
ROUTED TO										
+	RCP11	2.18	1	FLOW TIME	814. 3.75	811. 3.75	803. 3.75	787. 3.75	771. 3.83	760. 3.83
HYDROGRAPH AT										
+	OND-13	.09	1	FLOW TIME	53. 3.58	52. 3.58	50. 3.67	47. 3.67	47. 3.67	46. 3.67
HYDROGRAPH AT										
+	OND-14	.14	1	FLOW TIME	73. 3.75	71. 3.75	68. 3.75	65. 3.75	64. 3.75	63. 3.75
3 COMBINED AT										
+	CP12	2.42	1	FLOW TIME	933. 3.75	927. 3.75	914. 3.75	894. 3.75	875. 3.75	862. 3.75
ROUTED TO										
+	RCP12	2.42	1	FLOW TIME	932. 3.75	925. 3.75	912. 3.75	890. 3.75	871. 3.75	858. 3.75
HYDROGRAPH AT										
+	OND-12	.01	1	FLOW TIME	8. 3.58	8. 3.58	8. 3.58	7. 3.58	7. 3.58	7. 3.58
2 COMBINED AT										
+	CP13	2.43	1	FLOW TIME	938. 3.75	931. 3.75	917. 3.75	895. 3.75	876. 3.75	863. 3.75
ROUTED TO										
+	RCP13	2.43	1	FLOW TIME	936. 3.75	928. 3.75	913. 3.75	889. 3.75	870. 3.75	857. 3.75
HYDROGRAPH AT										
+	OND-10	.11	1	FLOW TIME	67. 3.67	65. 3.67	62. 3.67	60. 3.67	59. 3.67	58. 3.67
2 COMBINED AT										
+	CP14	2.54	1	FLOW TIME	995. 3.75	986. 3.75	969. 3.75	942. 3.75	922. 3.75	909. 3.75
HYDROGRAPH AT										
+	OND-24	.12	1	FLOW TIME	57. 3.67	56. 3.67	53. 3.67	50. 3.67	49. 3.67	48. 3.67
ROUTED TO										
+	ROND-24	.12	1	FLOW TIME	56. 3.67	54. 3.67	52. 3.67	49. 3.67	48. 3.67	47. 3.67
HYDROGRAPH AT										
+	OND-23	.12	1	FLOW TIME	45. 3.67	44. 3.67	41. 3.67	39. 3.67	38. 3.67	37. 3.67
2 COMBINED AT										
+	CP15	.24	1	FLOW TIME	101. 3.67	98. 3.67	93. 3.67	88. 3.67	86. 3.67	84. 3.67
ROUTED TO										
+	RCP15	.24	1	FLOW TIME	98. 3.67	95. 3.67	89. 3.67	85. 3.75	83. 3.75	82. 3.75
HYDROGRAPH AT										
+	OND-15	.13	1	FLOW TIME	69. 3.75	68. 3.75	65. 3.75	62. 3.75	61. 3.75	60. 3.75
2 COMBINED AT										
+	CP16	.37	1	FLOW TIME	167. 3.67	162. 3.67	154. 3.75	147. 3.75	144. 3.75	142. 3.75
ROUTED TO										
+	RCP16	.37	1	FLOW TIME	167. 3.75	163. 3.75	155. 3.75	147. 3.75	143. 3.75	142. 3.75
HYDROGRAPH AT										
+	OND-11	.09	1	FLOW TIME	60. 3.58	58. 3.58	56. 3.58	53. 3.58	52. 3.58	52. 3.58
3 COMBINED AT										
+	CP17	3.00	1	FLOW TIME	1209. 3.75	1195. 3.75	1168. 3.75	1132. 3.75	1107. 3.75	1091. 3.75
ROUTED TO										
+	RCP17	3.00	1	FLOW TIME	1204. 3.75	1189. 3.75	1159. 3.75	1119. 3.75	1094. 3.75	1079. 3.75
HYDROGRAPH AT										
+	OND-5	.08	1	FLOW TIME	75. 3.58	74. 3.58	71. 3.58	69. 3.58	68. 3.58	67. 3.58
HYDROGRAPH AT										
+	OND-6	.33	1	FLOW TIME	153. 3.83	149. 3.83	143. 3.83	136. 3.83	134. 3.83	132. 3.83
3 COMBINED AT										
+	CP18	3.41	1	FLOW TIME	1404. 3.75	1385. 3.75	1346. 3.75	1299. 3.75	1271. 3.75	1254. 3.75
HYDROGRAPH AT										
+	OND-17	.18	1	FLOW TIME	68. 3.75	66. 3.75	62. 3.75	59. 3.75	58. 3.75	57. 3.75

ROUTED TO										
+	ROND-17	.18	1	FLOW TIME	67. 3.83	65. 3.83	62. 3.83	58. 3.83	57. 3.83	56. 3.83
HYDROGRAPH AT										
+	OND-8	.20	1	FLOW TIME	86. 3.75	83. 3.75	79. 3.75	75. 3.75	74. 3.75	72. 3.75
2 COMBINED AT										
+	CP19	.38	1	FLOW TIME	150. 3.75	145. 3.75	138. 3.75	131. 3.75	127. 3.75	125. 3.75
ROUTED TO										
+	RCP19	.38	1	FLOW TIME	146. 3.83	142. 3.83	135. 3.83	128. 3.83	126. 3.83	123. 3.83
HYDROGRAPH AT										
+	OND-16	.06	1	FLOW TIME	19. 3.58	18. 3.58	17. 3.58	16. 3.58	15. 3.58	15. 3.58
ROUTED TO										
+	ROND-16	.06	1	FLOW TIME	17. 3.92	17. 3.92	18. 3.83	19. 3.83	18. 3.93	17. 3.83
HYDROGRAPH AT										
+	OND-7	.28	1	FLOW TIME	135. 3.75	132. 3.75	126. 3.75	120. 3.75	118. 3.75	116. 3.75
3 COMBINED AT										
+	CP20	.72	1	FLOW TIME	294. 3.83	289. 3.83	278. 3.83	266. 3.83	260. 3.83	256. 3.83
ROUTED TO										
+	RCP20	.72	1	FLOW TIME	289. 3.83	279. 3.83	267. 3.92	257. 3.92	253. 3.92	247. 3.92
HYDROGRAPH AT										
+	OND7*	.02	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	14. 3.58	14. 3.58	14. 3.58
3 COMBINED AT										
+	CP21	4.15	1	FLOW TIME	1678. 3.75	1652. 3.75	1599. 3.75	1539. 3.83	1510. 3.83	1486. 3.83
ROUTED TO										
+	RCP21	4.15	1	FLOW TIME	1665. 3.75	1638. 3.75	1589. 3.83	1539. 3.83	1510. 3.83	1485. 3.83
HYDROGRAPH AT										
+	OND-4	.24	1	FLOW TIME	83. 3.83	81. 3.83	76. 3.83	72. 3.83	71. 3.83	70. 3.83
HYDROGRAPH AT										
+	OND6*	.06	1	FLOW TIME	36. 3.67	35. 3.67	33. 3.67	32. 3.67	31. 3.67	31. 3.67
3 COMBINED AT										
+	CP22	4.45	1	FLOW TIME	1778. 3.75	1748. 3.75	1692. 3.83	1637. 3.83	1605. 3.83	1580. 3.83
DIVERSION TO										
+	DIV2	4.45	1	FLOW TIME	1580. 3.67	1580. 3.67	1580. 3.75	1580. 3.75	1580. 3.75	1580. 3.83
HYDROGRAPH AT										
+	ODIV2	4.45	1	FLOW TIME	198. 3.75	168. 3.75	112. 3.83	57. 3.83	25. 3.83	0. .00
HYDROGRAPH AT										
+	DB-2	.02	1	FLOW TIME	1. 4.92	1. 4.92	0. 4.92	0. 4.92	0. 4.92	0. 4.92
2 COMBINED AT										
+	CP22A	4.47	1	FLOW TIME	199. 3.75	168. 3.75	112. 3.83	57. 3.83	26. 3.83	0. 4.92
ROUTED TO										
+	DET2	4.47	1	FLOW TIME	19. 4.00	14. 4.00	8. 3.92	3. 3.92	1. 3.92	0. 5.25
** PEAK STAGES IN FEET **										
			1	STAGE TIME	.67 4.00	.51 4.00	.29 3.92	.12 3.92	.04 3.92	.00 5.33
HYDROGRAPH AT										
+	DIV2	.00	1	FLOW TIME	1580. 3.67	1580. 3.67	1580. 3.75	1580. 3.75	1580. 3.75	1580. 3.83
2 COMBINED AT										
+	CP23	4.47	1	FLOW TIME	1598. 3.92	1594. 3.92	1588. 3.92	1583. 3.83	1581. 3.83	1580. 3.83
ROUTED TO										
+	RCP23	4.47	1	FLOW TIME	1597. 3.92	1593. 3.92	1587. 3.92	1582. 3.83	1580. 3.83	1578. 3.83
HYDROGRAPH AT										
+	OND-3	.03	1	FLOW TIME	6. 3.75	6. 3.75	5. 3.75	5. 3.75	5. 3.75	5. 3.75
HYDROGRAPH AT										
+	OND8*	.02	1	FLOW TIME	11. 3.67	11. 3.67	10. 3.67	10. 3.67	10. 3.67	10. 3.67
3 COMBINED AT										
+	CP24	4.52	1	FLOW	1610.	1605.	1600.	1596.	1593.	1591.

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+	RBKLM	.34	1	FLOW TIME	136. 3.83	133. 3.83	125. 3.83	119. 3.83	116. 3.83	116. 3.83
HYDROGRAPH AT										
+	WSLM	.29	1	FLOW TIME	95. 3.75	92. 3.75	87. 3.75	82. 3.75	80. 3.75	78. 3.75
2 COMBINED AT										
+	CP29	.63	1	FLOW TIME	227. 3.83	221. 3.83	208. 3.83	197. 3.83	193. 3.83	192. 3.83
HYDROGRAPH AT										
+	DCP27	.00	1	FLOW TIME	53. 4.00	51. 4.00	48. 4.00	45. 4.00	45. 4.00	42. 4.00
ROUTED TO										
+	RDCP27	.00	1	FLOW TIME	52. 4.00	50. 4.00	47. 4.00	43. 4.00	42. 4.00	41. 4.00
2 COMBINED AT										
+	CP30	.63	1	FLOW TIME	257. 3.83	248. 3.83	233. 3.92	219. 3.92	213. 3.92	211. 3.83
ROUTED TO										
+	RCP30	.63	1	FLOW TIME	257. 3.92	247. 3.92	232. 3.92	218. 3.92	213. 3.92	209. 3.92
HYDROGRAPH AT										
+	CRIM	.05	1	FLOW TIME	38. 3.58	37. 3.58	36. 3.58	35. 3.58	34. 3.58	34. 3.58
ROUTED TO										
+	ROCRIM	.05	1	FLOW TIME	38. 3.67	37. 3.67	36. 3.67	35. 3.67	34. 3.67	34. 3.67
2 COMBINED AT										
+	CP31	.68	1	FLOW TIME	278. 3.83	268. 3.83	252. 3.83	237. 3.83	231. 3.83	230. 3.83
ROUTED TO										
+	RCP31	.68	1	FLOW TIME	276. 3.92	266. 3.83	250. 3.92	236. 3.92	230. 3.92	228. 3.83
2 COMBINED AT										
+	CP32	1.78	1	FLOW TIME	494. 3.92	473. 3.92	443. 3.92	412. 3.92	401. 3.92	388. 3.92
ROUTED TO										
+	RCP32	1.78	1	FLOW TIME	487. 3.92	466. 3.92	436. 3.92	406. 4.00	397. 4.00	386. 4.00
HYDROGRAPH AT										
+	DD	.05	1	FLOW TIME	32. 3.58	31. 3.58	29. 3.58	28. 3.58	27. 3.58	27. 3.58
2 COMBINED AT										
+	CP33	1.83	1	FLOW TIME	499. 3.92	478. 3.92	447. 3.92	416. 3.92	405. 4.00	394. 3.92
ROUTED TO										
+	RCP33	1.83	1	FLOW TIME	497. 3.92	476. 3.92	445. 3.92	415. 4.00	405. 4.00	394. 4.00
HYDROGRAPH AT										
+	ED	.03	1	FLOW TIME	16. 3.58	15. 3.58	14. 3.58	14. 3.58	13. 3.58	13. 3.58
2 COMBINED AT										
+	CP34	1.86	1	FLOW TIME	502. 3.92	481. 3.92	450. 3.92	418. 3.92	409. 4.00	397. 4.00
ROUTED TO										
+	RCP34	1.86	1	FLOW TIME	498. 3.92	477. 3.92	446. 3.92	418. 4.00	408. 4.00	397. 4.00
HYDROGRAPH AT										
+	FD	.01	1	FLOW TIME	15. 3.50	15. 3.50	14. 3.50	14. 3.50	14. 3.50	14. 3.50
2 COMBINED AT										
+	CP35	1.88	1	FLOW TIME	501. 3.92	480. 3.92	449. 3.92	421. 4.00	411. 4.00	399. 4.00
HYDROGRAPH AT										
+	GD	.01	1	FLOW TIME	17. 3.50	16. 3.50	16. 3.50	15. 3.50	15. 3.50	15. 3.50
2 COMBINED AT										
+	CP36	1.89	1	FLOW TIME	504. 3.92	483. 3.92	451. 3.92	423. 4.00	413. 4.00	402. 4.00
ROUTED TO										
+	RCP36	1.89	1	FLOW TIME	501. 3.92	479. 3.92	450. 4.00	423. 4.00	412. 4.00	401. 4.00
HYDROGRAPH AT										
+	OFFD1*	.08	1	FLOW TIME	72. 3.58	70. 3.58	68. 3.58	65. 3.58	64. 3.58	64. 3.58
ROUTED TO										
+	RTOFFD1*	.08	1	FLOW TIME	69. 3.92	68. 3.92	67. 3.92	66. 3.92	66. 3.92	65. 3.92
HYDROGRAPH AT										
+	OFFD2*	.12	1	FLOW TIME	26. 3.83	25. 3.83	23. 3.83	21. 3.83	21. 3.83	20. 3.83

ROUTED TO										
+	RTOFFD2*	.12	1	FLOW TIME	26. 3.92	25. 3.92	23. 3.92	21. 3.92	21. 3.92	20. 3.92
HYDROGRAPH AT										
+	OFFD2A*	.11	1	FLOW TIME	50. 3.67	49. 3.67	46. 3.67	44. 3.67	43. 3.67	42. 3.67
3 COMBINED AT										
+	COFD2A*	.31	1	FLOW TIME	127. 3.83	122. 3.83	117. 3.92	114. 3.92	112. 3.92	111. 3.92
DIVERSION TO										
+	SPLIT1*	.31	1	FLOW TIME	1. 3.83	0. 3.83	0. .00	0. .00	0. .00	0. .00
HYDROGRAPH AT										
+	DIVERSIO	.31	1	FLOW TIME	126. 3.83	122. 3.83	117. 3.92	114. 3.92	112. 3.92	111. 3.92
ROUTED TO										
+	RCOFD2A*	.31	1	FLOW TIME	127. 3.92	125. 3.92	119. 3.92	109. 3.92	109. 3.92	105. 3.92
HYDROGRAPH AT										
+	OFFD5*	.32	1	FLOW TIME	174. 3.58	169. 3.58	160. 3.58	152. 3.58	149. 3.58	146. 3.58
2 COMBINED AT										
+	COFD5*	.63	1	FLOW TIME	218. 3.58	212. 3.58	201. 3.58	189. 3.58	185. 3.58	182. 3.58
ROUTED TO										
+	RCOFD5*	.63	1	FLOW TIME	218. 3.67	210. 3.67	199. 3.67	189. 3.67	184. 3.67	180. 3.67
HYDROGRAPH AT										
+	OFFD6*	.11	1	FLOW TIME	93. 3.58	91. 3.58	88. 3.58	84. 3.58	83. 3.58	82. 3.58
2 COMBINED AT										
+	COFD6*	.74	1	FLOW TIME	301. 3.67	291. 3.67	277. 3.67	264. 3.67	257. 3.67	253. 3.67
DIVERSION TO										
+	SPLIT2*	.74	1	FLOW TIME	70. 3.67	68. 3.67	65. 3.67	62. 3.67	60. 3.67	59. 3.67
HYDROGRAPH AT										
+	DIVERT*	.74	1	FLOW TIME	231. 3.67	223. 3.67	212. 3.67	202. 3.67	197. 3.67	194. 3.67
HYDROGRAPH AT										
+	OFFD7*	.02	1	FLOW TIME	19. 3.58	19. 3.58	18. 3.58	17. 3.58	17. 3.58	17. 3.58
ROUTED TO										
+	RTOFFD7*	.02	1	FLOW TIME	18. 3.58	18. 3.58	17. 3.58	17. 3.58	16. 3.58	16. 3.58
HYDROGRAPH AT										
+	CND1*	.04	1	FLOW TIME	21. 3.67	20. 3.67	19. 3.67	18. 3.67	18. 3.67	18. 3.67
3 COMBINED AT										
+	COND1*	.81	1	FLOW TIME	268. 3.67	259. 3.67	247. 3.67	236. 3.67	230. 3.67	226. 3.67
ROUTED TO										
+	RCOND1*	.81	1	FLOW TIME	264. 3.67	255. 3.67	242. 3.67	231. 3.67	225. 3.67	222. 3.67
HYDROGRAPH AT										
+	CND4*	.07	1	FLOW TIME	39. 3.67	38. 3.67	36. 3.67	35. 3.67	34. 3.67	34. 3.67
ROUTED TO										
+	DBOND4*	.07	1	FLOW TIME	14. .00	14. .00	14. .00	14. .00	14. .00	14. .00
** PEAK STAGES IN FEET **										
			1	STAGE TIME	3.00 .00	3.00 .00	3.00 .00	3.00 .00	3.00 .00	3.00 .00
HYDROGRAPH AT										
+	CND5*	.06	1	FLOW TIME	33. 3.58	32. 3.58	31. 3.58	30. 3.58	29. 3.58	29. 3.58
ROUTED TO										
+	DBOND5*	.06	1	FLOW TIME	14. .00	14. .00	14. .00	14. .00	14. .00	14. .00
** PEAK STAGES IN FEET **										
			1	STAGE TIME	3.00 .00	3.00 .00	3.00 .00	3.00 .00	3.00 .00	3.00 .00
3 COMBINED AT										
+	COND5*	.93	1	FLOW TIME	281. 3.67	272. 3.67	260. 3.67	248. 3.67	242. 3.67	238. 3.67
ROUTED TO										
+	RCOND5*	.93	1	FLOW TIME	274. 3.67	265. 3.67	253. 3.67	241. 3.67	236. 3.75	232. 3.75
HYDROGRAPH AT										
+	CND11*	.01	1	FLOW TIME	7. 3.67	7. 3.67	7. 3.67	6. 3.67	6. 3.67	6. 3.67

ROUTED TO	ROND11*	.01	1	FLOW TIME	7.	7.	7.	7.	6.	6.
					3.83	3.83	3.83	3.83	3.83	3.83
HYDROGRAPH AT	OND11A*	.08	1	FLOW TIME	27.	26.	24.	23.	22.	22.
					3.67	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT	CHANNEL2	1.02	1	FLOW TIME	306.	296.	282.	269.	264.	260.
					3.67	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	RETURN1*	.00	1	FLOW TIME	1.	0.	0.	0.	0.	0.
					3.83	3.83	.00	.00	.00	.00
HYDROGRAPH AT	RETURN2*	.00	1	FLOW TIME	70.	68.	65.	62.	60.	59.
					3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD3*	.16	1	FLOW TIME	39.	37.	35.	32.	31.	31.
					3.75	3.75	3.75	3.75	3.75	3.75
3 COMBINED AT	COFD3*	.16	1	FLOW TIME	107.	103.	97.	91.	89.	87.
					3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO	RCOFD3*	.16	1	FLOW TIME	104.	101.	96.	89.	87.	86.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND2A*	.01	1	FLOW TIME	4.	4.	4.	3.	3.	3.
					3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COND2A*	.17	1	FLOW TIME	106.	103.	98.	91.	89.	88.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND3*	.01	1	FLOW TIME	5.	5.	4.	4.	4.	4.
					3.58	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	COND3*	.18	1	FLOW TIME	109.	106.	100.	94.	92.	90.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND2*	.05	1	FLOW TIME	8.	7.	7.	6.	6.	6.
					3.75	3.75	3.75	3.75	3.75	3.75
2 COMBINED AT	CP1*	.22	1	FLOW TIME	117.	113.	107.	100.	98.	96.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND12*	.01	1	FLOW TIME	5.	5.	4.	4.	4.	4.
					3.67	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD-2B	.09	1	FLOW TIME	2.	2.	2.	2.	2.	2.
					5.00	5.00	5.00	5.00	5.00	5.00
ROUTED TO	ROFFD-2B	.09	1	FLOW TIME	2.	2.	2.	2.	2.	2.
					5.17	5.17	5.17	5.17	5.17	5.17
3 COMBINED AT	CHANNEL1	.33	1	FLOW TIME	121.	117.	111.	104.	101.	100.
					3.75	3.75	3.75	3.75	3.75	3.75
ROUTED TO	RCHANNEL	.33	1	FLOW TIME	121.	114.	108.	101.	100.	100.
					3.75	3.75	3.83	3.83	3.83	3.75
HYDROGRAPH AT	OND-1	.08	1	FLOW TIME	30.	29.	27.	26.	25.	25.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND-2	.27	1	FLOW TIME	93.	91.	86.	81.	79.	78.
					3.83	3.83	3.83	3.83	3.83	3.83
3 COMBINED AT	CP25	.68	1	FLOW TIME	244.	233.	220.	206.	203.	202.
					3.75	3.75	3.75	3.75	3.75	3.75
HYDROGRAPH AT	OND-2A	.22	1	FLOW TIME	73.	71.	67.	63.	62.	61.
					3.83	3.83	3.83	3.83	3.83	3.83

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SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MANE	3.25	29.86	221.00	1.16	5.00	29.03	220.00	1.16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1859E+01 EXCESS= .0000E+00 OUTFLOW= .1859E+01 BASIN STORAGE= .3339E-02 PERCENT ERROR= -.2

FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAINE	3.25	29.25	221.00	1.14	5.00	28.42	220.00	1.14
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1820E+01 EXCESS= .0000E+00 OUTFLOW= .1820E+01 BASIN STORAGE= .3314E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAINE	3.25	28.23	221.00	1.10	5.00	27.39	220.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1756E+01 EXCESS= .0000E+00 OUTFLOW= .1756E+01 BASIN STORAGE= .3271E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAINE	3.25	27.21	221.00	1.06	5.00	26.35	220.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1692E+01 EXCESS= .0000E+00 OUTFLOW= .1692E+01 BASIN STORAGE= .3153E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAINE	3.25	26.80	221.00	1.04	5.00	26.02	225.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1667E+01 EXCESS= .0000E+00 OUTFLOW= .1666E+01 BASIN STORAGE= .3136E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
ROFFD-3A	MAINE	3.50	26.98	224.00	1.03	5.00	26.07	225.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1655E+01 EXCESS= .0000E+00 OUTFLOW= .1654E+01 BASIN STORAGE= .2685E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	426.87	230.00	.72	5.00	426.87	230.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3509E+02 EXCESS= .0000E+00 OUTFLOW= .3514E+02 BASIN STORAGE= .4351E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	415.64	230.00	.70	5.00	415.64	230.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3416E+02 EXCESS= .0000E+00 OUTFLOW= .3420E+02 BASIN STORAGE= .4284E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	398.13	230.00	.67	5.00	398.13	230.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3262E+02 EXCESS= .0000E+00 OUTFLOW= .3266E+02 BASIN STORAGE= .4403E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	379.58	230.00	.64	5.00	379.58	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3109E+02 EXCESS= .0000E+00 OUTFLOW= .3114E+02 BASIN STORAGE= .4286E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	372.18	230.00	.62	5.00	372.18	230.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3049E+02 EXCESS= .0000E+00 OUTFLOW= .3053E+02 BASIN STORAGE= .4240E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
RC2B	MAINE	5.00	367.01	230.00	.62	5.00	367.01	230.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3007E+02 EXCESS= .0000E+00 OUTFLOW= .3011E+02 BASIN STORAGE= .4207E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
RCP2A	MAINE	1.50	566.52	230.77	.69	5.00	562.16	230.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4910E+02 EXCESS= .0000E+00 OUTFLOW= .4910E+02 BASIN STORAGE= .2302E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP2A	MAINE	1.51	551.15	231.75	.67	5.00	547.32	230.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4778E+02 EXCESS= .0000E+00 OUTFLOW= .4778E+02 BASIN STORAGE= .2388E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP2A	MAINE	1.54	528.83	231.25	.64	5.00	521.34	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4559E+02 EXCESS= .0000E+00 OUTFLOW= .4559E+02 BASIN STORAGE= .2307E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP2A	MAINE	1.57	502.51	231.02	.61	5.00	496.11	230.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4343E+02 EXCESS= .0000E+00 OUTFLOW= .4343E+02 BASIN STORAGE= .2148E-02 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
RCP2A	MAHE	1.58	493.93	231.27	.60	5.00	485.75	230.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4257E+02 EXCESS= .0000E+00 OUTFLOW= .4258E+02 BASIN STORAGE= .2302E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP2A	MAHE	1.59	485.19	230.97	.59	5.00	479.10	230.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4198E+02 EXCESS= .0000E+00 OUTFLOW= .4198E+02 BASIN STORAGE= .2347E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.35	117.26	215.58	.69	5.00	115.60	215.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7603E+01 EXCESS= .0000E+00 OUTFLOW= .7603E+01 BASIN STORAGE= .1357E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.35	114.00	216.78	.67	5.00	112.54	215.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7394E+01 EXCESS= .0000E+00 OUTFLOW= .7394E+01 BASIN STORAGE= .1413E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.37	109.46	216.10	.64	5.00	107.19	215.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7048E+01 EXCESS= .0000E+00 OUTFLOW= .7048E+01 BASIN STORAGE= .1413E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.38	103.38	216.86	.61	5.00	101.94	215.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6707E+01 EXCESS= .0000E+00 OUTFLOW= .6707E+01 BASIN STORAGE= .1392E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.39	102.42	216.36	.60	5.00	100.08	215.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6572E+01 EXCESS= .0000E+00 OUTFLOW= .6572E+01 BASIN STORAGE= .1325E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP5	MAHE	1.39	99.92	215.59	.59	5.00	98.33	215.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6477E+01 EXCESS= .0000E+00 OUTFLOW= .6477E+01 BASIN STORAGE= .1348E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.47	146.00	215.70	.73	5.00	144.21	215.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8848E+01 EXCESS= .0000E+00 OUTFLOW= .8847E+01 BASIN STORAGE= .1758E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.48	141.50	215.36	.71	5.00	140.61	215.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8610E+01 EXCESS= .0000E+00 OUTFLOW= .8610E+01 BASIN STORAGE= .1553E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.49	136.02	215.83	.68	5.00	133.99	215.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8216E+01 EXCESS= .0000E+00 OUTFLOW= .8216E+01 BASIN STORAGE= .1736E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.50	130.36	216.37	.65	5.00	127.88	215.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7830E+01 EXCESS= .0000E+00 OUTFLOW= .7830E+01 BASIN STORAGE= .1864E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.51	126.90	215.70	.64	5.00	125.31	215.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7672E+01 EXCESS= .0000E+00 OUTFLOW= .7672E+01 BASIN STORAGE= .1835E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP6	MAHE	1.51	126.04	216.29	.63	5.00	123.52	215.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7568E+01 EXCESS= .0000E+00 OUTFLOW= .7567E+01 BASIN STORAGE= .1542E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP7	MAHE	2.34	169.38	217.61	.72	5.00	164.44	215.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1060E+02 EXCESS= .0000E+00 OUTFLOW= .1059E+02 BASIN STORAGE= .3080E-03 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO= .00								
RCP7	MAHE	2.35	163.61	216.39	.70	5.00	158.97	215.00	.70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1030E+02 EXCESS= .0000E+00 OUTFLOW= .1029E+02 BASIN STORAGE= .3157E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.37	155.35	216.12	.66	5.00	151.29	215.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9824E+01 EXCESS= .0000E+00 OUTFLOW= .9819E+01 BASIN STORAGE= .3534E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.40	148.75	218.16	.63	5.00	144.02	215.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9357E+01 EXCESS= .0000E+00 OUTFLOW= .9352E+01 BASIN STORAGE= .2696E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.41	146.02	216.66	.62	5.00	141.18	215.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9166E+01 EXCESS= .0000E+00 OUTFLOW= .9162E+01 BASIN STORAGE= .3066E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.41	145.22	217.29	.61	5.00	140.30	215.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9050E+01 EXCESS= .0000E+00 OUTFLOW= .9045E+01 BASIN STORAGE= .2521E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.92	761.74	238.46	.72	5.00	761.74	230.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7934E+02 EXCESS= .0000E+00 OUTFLOW= .7934E+02 BASIN STORAGE= .3203E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.92	760.43	229.66	.70	5.00	760.20	230.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7720E+02 EXCESS= .0000E+00 OUTFLOW= .7720E+02 BASIN STORAGE= .2600E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.92	758.48	229.82	.67	5.00	758.12	230.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7372E+02 EXCESS= .0000E+00 OUTFLOW= .7372E+02 BASIN STORAGE= .2365E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.92	756.09	226.25	.64	5.00	748.82	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7030E+02 EXCESS= .0000E+00 OUTFLOW= .7030E+02 BASIN STORAGE= .2358E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.92	740.44	226.51	.62	5.00	733.01	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6891E+02 EXCESS= .0000E+00 OUTFLOW= .6891E+02 BASIN STORAGE= .2363E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.93	729.61	226.43	.62	5.00	722.17	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6802E+02 EXCESS= .0000E+00 OUTFLOW= .6802E+02 BASIN STORAGE= .2357E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MANE	4.25	17.52	216.75	1.26	5.00	17.11	220.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1211E+01 EXCESS= .0000E+00 OUTFLOW= .1211E+01 BASIN STORAGE= .4191E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MANE	4.25	17.19	216.75	1.24	5.00	16.01	220.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1188E+01 EXCESS= .0000E+00 OUTFLOW= .1187E+01 BASIN STORAGE= .4140E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MANE	4.25	16.65	216.75	1.20	5.00	16.30	220.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1148E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .4054E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MANE	4.00	16.13	220.00	1.16	5.00	16.13	220.00	1.16
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1109E+01 EXCESS= .0000E+00 OUTFLOW= .1109E+01 BASIN STORAGE= .3396E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MANE	4.00	15.92	220.00	1.14	5.00	15.92	220.00	1.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1094E+01 EXCESS= .0000E+00 OUTFLOW= .1093E+01 BASIN STORAGE= .3366E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-18	MAHE	4.00	15.77	220.00	1.13	5.00	15.77	220.00	1.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1083E+01 EXCESS= .0000E+00 OUTFLOW= .1082E+01 BASIN STORAGE= .3345E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.16	813.94	225.11	.72	5.00	813.79	225.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8378E+02 EXCESS= .0000E+00 OUTFLOW= .8378E+02 BASIN STORAGE= .4171E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.16	811.20	226.42	.70	5.00	810.74	225.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8152E+02 EXCESS= .0000E+00 OUTFLOW= .8152E+02 BASIN STORAGE= .3388E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.16	806.03	226.78	.67	5.00	802.97	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7786E+02 EXCESS= .0000E+00 OUTFLOW= .7786E+02 BASIN STORAGE= .3042E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.17	796.47	226.27	.64	5.00	787.48	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7425E+02 EXCESS= .0000E+00 OUTFLOW= .7425E+02 BASIN STORAGE= .3031E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.17	779.84	226.30	.62	5.00	771.00	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7279E+02 EXCESS= .0000E+00 OUTFLOW= .7279E+02 BASIN STORAGE= .3032E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP11	MAHE	1.18	768.33	227.14	.62	5.00	759.99	230.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7184E+02 EXCESS= .0000E+00 OUTFLOW= .7184E+02 BASIN STORAGE= .3043E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	932.19	225.47	.72	5.00	931.91	225.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9339E+02 EXCESS= .0000E+00 OUTFLOW= .9339E+02 BASIN STORAGE= .1340E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	926.14	225.48	.70	5.00	925.43	225.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9088E+02 EXCESS= .0000E+00 OUTFLOW= .9088E+02 BASIN STORAGE= .1087E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	913.44	225.54	.67	5.00	911.74	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8681E+02 EXCESS= .0000E+00 OUTFLOW= .8681E+02 BASIN STORAGE= .9646E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	893.35	225.38	.64	5.00	889.82	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8278E+02 EXCESS= .0000E+00 OUTFLOW= .8278E+02 BASIN STORAGE= .9657E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	874.55	225.49	.63	5.00	870.84	225.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8115E+02 EXCESS= .0000E+00 OUTFLOW= .8115E+02 BASIN STORAGE= .9645E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP12	MAHE	.36	861.90	225.58	.62	5.00	858.29	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8009E+02 EXCESS= .0000E+00 OUTFLOW= .8009E+02 BASIN STORAGE= .9660E-04 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP13	MAHE	.51	936.60	225.36	.72	5.00	935.64	225.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9391E+02 EXCESS= .0000E+00 OUTFLOW= .9391E+02 BASIN STORAGE= .1930E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP13	MAHE	.51	929.62	225.76	.70	5.00	928.35	225.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9140E+02 EXCESS= .0000E+00 OUTFLOW= .9140E+02 BASIN STORAGE= .1565E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
RCP13	MANE	.51	916.28	225.59	.67	5.00	913.26	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8730E+02 EXCESS= .0000E+00 OUTFLOW= .8730E+02 BASIN STORAGE= .1383E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP13	MANE	.52	894.21	225.94	.64	5.00	888.88	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8325E+02 EXCESS= .0000E+00 OUTFLOW= .8325E+02 BASIN STORAGE= .1381E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP13	MANE	.52	875.19	225.60	.63	5.00	869.86	225.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8161E+02 EXCESS= .0000E+00 OUTFLOW= .8161E+02 BASIN STORAGE= .1384E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP13	MANE	.52	862.70	225.89	.62	5.00	857.24	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8055E+02 EXCESS= .0000E+00 OUTFLOW= .8055E+02 BASIN STORAGE= .1384E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.69	57.00	221.53	.63	5.00	55.96	220.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4063E+01 EXCESS= .0000E+00 OUTFLOW= .4063E+01 BASIN STORAGE= .1462E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.70	55.03	221.14	.61	5.00	54.43	220.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3944E+01 EXCESS= .0000E+00 OUTFLOW= .3944E+01 BASIN STORAGE= .1599E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.72	52.67	221.67	.58	5.00	51.57	220.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3752E+01 EXCESS= .0000E+00 OUTFLOW= .3752E+01 BASIN STORAGE= .1719E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.74	49.70	222.28	.55	5.00	48.95	220.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3559E+01 EXCESS= .0000E+00 OUTFLOW= .3558E+01 BASIN STORAGE= .1519E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.74	48.74	221.51	.54	5.00	47.88	220.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3483E+01 EXCESS= .0000E+00 OUTFLOW= .3483E+01 BASIN STORAGE= .1476E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROND-24	MANE	1.75	47.97	222.19	.53	5.00	47.09	220.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3430E+01 EXCESS= .0000E+00 OUTFLOW= .3430E+01 BASIN STORAGE= .1555E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP15	MANE	1.82	100.89	221.83	.58	5.00	97.69	220.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7283E+01 EXCESS= .0000E+00 OUTFLOW= .7283E+01 BASIN STORAGE= .1755E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP15	MANE	1.83	97.18	223.17	.56	5.00	94.81	220.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7064E+01 EXCESS= .0000E+00 OUTFLOW= .7064E+01 BASIN STORAGE= .1973E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP15	MANE	1.85	92.60	221.96	.53	5.00	89.46	220.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6700E+01 EXCESS= .0000E+00 OUTFLOW= .6700E+01 BASIN STORAGE= .2101E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP15	MANE	1.87	87.58	222.56	.50	5.00	84.92	225.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6347E+01 EXCESS= .0000E+00 OUTFLOW= .6347E+01 BASIN STORAGE= .1857E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP15	MANE	1.88	85.24	221.72	.49	5.00	82.77	225.00	.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6203E+01 EXCESS= .0000E+00 OUTFLOW= .6203E+01 BASIN STORAGE= .1788E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									

RCPI5	MANE	1.89	84.19	222.48	.48	5.00	81.73	225.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6107E+01 EXCESS= .0000E+00 OUTFLOW= .6107E+01 BASIN STORAGE= .1894E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.15	167.74	223.41	.66	5.00	166.51	225.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1285E+02 EXCESS= .0000E+00 OUTFLOW= .1285E+02 BASIN STORAGE= .2372E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.16	163.30	224.68	.64	5.00	162.82	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1249E+02 EXCESS= .0000E+00 OUTFLOW= .1249E+02 BASIN STORAGE= .2254E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.18	155.26	224.76	.61	5.00	154.94	225.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1189E+02 EXCESS= .0000E+00 OUTFLOW= .1189E+02 BASIN STORAGE= .2827E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.20	147.70	224.75	.58	5.00	147.40	225.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1130E+02 EXCESS= .0000E+00 OUTFLOW= .1130E+02 BASIN STORAGE= .2825E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.21	144.14	223.55	.57	5.00	143.39	225.00	.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1106E+02 EXCESS= .0000E+00 OUTFLOW= .1106E+02 BASIN STORAGE= .2866E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI6	MANE	2.22	142.53	224.13	.56	5.00	141.61	225.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1090E+02 EXCESS= .0000E+00 OUTFLOW= .1090E+02 BASIN STORAGE= .2543E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.03	1205.08	225.46	.72	5.00	1203.83	225.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1155E+03 EXCESS= .0000E+00 OUTFLOW= .1155E+03 BASIN STORAGE= .4204E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.04	1191.65	226.10	.70	5.00	1189.40	225.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1124E+03 EXCESS= .0000E+00 OUTFLOW= .1124E+03 BASIN STORAGE= .3410E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.04	1163.23	226.36	.67	5.00	1158.75	225.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1073E+03 EXCESS= .0000E+00 OUTFLOW= .1073E+03 BASIN STORAGE= .2981E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.05	1128.78	226.04	.64	5.00	1119.38	225.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1023E+03 EXCESS= .0000E+00 OUTFLOW= .1023E+03 BASIN STORAGE= .2981E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.06	1103.74	226.24	.63	5.00	1094.09	225.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1003E+03 EXCESS= .0000E+00 OUTFLOW= .1003E+03 BASIN STORAGE= .2993E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCPI7	MANE	1.06	1088.05	225.98	.62	5.00	1079.14	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9899E+02 EXCESS= .0000E+00 OUTFLOW= .9899E+02 BASIN STORAGE= .2992E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-17	MANE	3.64	67.60	229.33	.58	5.00	67.28	230.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5649E+01 EXCESS= .0000E+00 OUTFLOW= .5649E+01 BASIN STORAGE= .3713E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-17	MANE	3.66	64.89	227.12	.56	5.00	64.67	230.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5479E+01 EXCESS= .0000E+00 OUTFLOW= .5479E+01 BASIN STORAGE= .3895E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROND-17	MANE	3.70	62.01	229.60	.53	5.00	61.85	230.00	.53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5197E+01 EXCESS= .0000E+00 OUTFLOW= .5197E+01 BASIN STORAGE= .3493E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-17	MANE		3.75	58.83	228.48	.50	5.00	58.39	230.00
								.50	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4920E+01 EXCESS= .0000E+00 OUTFLOW= .4921E+01 BASIN STORAGE= .4049E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-17	MANE		3.76	57.34	229.56	.49	5.00	57.18	230.00
								.49	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4811E+01 EXCESS= .0000E+00 OUTFLOW= .4811E+01 BASIN STORAGE= .3454E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-17	MANE		3.78	56.08	230.32	.48	5.00	55.98	230.00
								.48	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4735E+01 EXCESS= .0000E+00 OUTFLOW= .4735E+01 BASIN STORAGE= .4037E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.54	148.01	228.95	.61	5.00	146.49	230.00
								.61	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1235E+02 EXCESS= .0000E+00 OUTFLOW= .1235E+02 BASIN STORAGE= .2397E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.57	143.51	229.03	.59	5.00	142.04	230.00
								.59	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1198E+02 EXCESS= .0000E+00 OUTFLOW= .1198E+02 BASIN STORAGE= .2281E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.63	136.19	228.89	.56	5.00	135.01	230.00
								.56	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1138E+02 EXCESS= .0000E+00 OUTFLOW= .1138E+02 BASIN STORAGE= .2419E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.69	129.27	228.30	.53	5.00	128.33	230.00
								.53	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1080E+02 EXCESS= .0000E+00 OUTFLOW= .1080E+02 BASIN STORAGE= .2107E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.71	126.25	227.98	.52	5.00	125.68	230.00
								.52	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1056E+02 EXCESS= .0000E+00 OUTFLOW= .1057E+02 BASIN STORAGE= .2210E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCP19	MANE		2.73	123.89	229.50	.51	5.00	123.29	230.00
								.51	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1039E+02 EXCESS= .0000E+00 OUTFLOW= .1040E+02 BASIN STORAGE= .2147E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		2.00	25.51	228.00	.41	5.00	17.14	235.00
								.39	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1243E+01 EXCESS= .0000E+00 OUTFLOW= .1259E+01 BASIN STORAGE= .7603E-02 PERCENT ERROR= -1.8									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		2.00	23.74	226.00	.40	5.00	17.38	235.00
								.39	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1200E+01 EXCESS= .0000E+00 OUTFLOW= .1214E+01 BASIN STORAGE= .6865E-02 PERCENT ERROR= -1.8									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		1.75	23.77	229.25	.38	5.00	18.34	230.00
								.37	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1128E+01 EXCESS= .0000E+00 OUTFLOW= .1143E+01 BASIN STORAGE= .7433E-02 PERCENT ERROR= -2.0									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		1.75	21.04	229.25	.35	5.00	19.12	230.00
								.37	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1058E+01 EXCESS= .0000E+00 OUTFLOW= .1074E+01 BASIN STORAGE= .7607E-02 PERCENT ERROR= -2.2									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		1.75	19.06	231.00	.34	5.00	18.21	230.00
								.37	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1030E+01 EXCESS= .0000E+00 OUTFLOW= .1046E+01 BASIN STORAGE= .7440E-02 PERCENT ERROR= -2.3									
FOR PLAN	= 1	RATIO=	.00						
ROND-16	MANE		1.75	20.56	231.00	.34	5.00	17.21	230.00
								.36	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1011E+01 EXCESS= .0000E+00 OUTFLOW= .1026E+01 BASIN STORAGE= .7341E-02 PERCENT ERROR= -2.3									

FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.71	298.62	233.93	.66	5.00	288.59	230.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2530E+02 EXCESS= .0000E+00 OUTFLOW= .2531E+02 BASIN STORAGE= .4482E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.74	283.18	232.00	.64	5.00	279.19	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2461E+02 EXCESS= .0000E+00 OUTFLOW= .2462E+02 BASIN STORAGE= .4462E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.80	269.51	231.79	.61	5.00	267.37	235.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2343E+02 EXCESS= .0000E+00 OUTFLOW= .2344E+02 BASIN STORAGE= .4650E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.86	257.69	231.85	.58	5.00	256.55	235.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2236E+02 EXCESS= .0000E+00 OUTFLOW= .2237E+02 BASIN STORAGE= .4848E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.90	257.34	233.89	.57	5.00	253.08	235.00	.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2193E+02 EXCESS= .0000E+00 OUTFLOW= .2194E+02 BASIN STORAGE= .4772E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	3.93	247.14	235.68	.56	5.00	247.14	235.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2159E+02 EXCESS= .0000E+00 OUTFLOW= .2160E+02 BASIN STORAGE= .4902E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.78	1677.69	225.92	.73	5.00	1665.11	225.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1614E+03 EXCESS= .0000E+00 OUTFLOW= .1614E+03 BASIN STORAGE= .2214E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.78	1651.55	225.79	.71	5.00	1638.37	225.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1572E+03 EXCESS= .0000E+00 OUTFLOW= .1572E+03 BASIN STORAGE= .1876E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.79	1599.25	226.37	.68	5.00	1589.07	230.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1501E+03 EXCESS= .0000E+00 OUTFLOW= .1501E+03 BASIN STORAGE= .1675E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.81	1541.34	226.62	.65	5.00	1538.78	230.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1432E+03 EXCESS= .0000E+00 OUTFLOW= .1432E+03 BASIN STORAGE= .1668E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.81	1509.70	229.97	.63	5.00	1509.58	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1404E+03 EXCESS= .0000E+00 OUTFLOW= .1404E+03 BASIN STORAGE= .1669E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.82	1486.40	226.55	.63	5.00	1485.38	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1386E+03 EXCESS= .0000E+00 OUTFLOW= .1386E+03 BASIN STORAGE= .1668E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1597.31	234.95	.72	5.00	1597.16	235.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1718E+03 EXCESS= .0000E+00 OUTFLOW= .1718E+03 BASIN STORAGE= .1083E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1593.22	234.83	.70	5.00	1592.76	235.00	.70
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1672E+03 EXCESS= .0000E+00 OUTFLOW= .1672E+03 BASIN STORAGE= .9179E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1587.80	234.79	.67	5.00	1587.06	235.00	.67
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1596E+03 EXCESS= .0000E+00 OUTFLOW= .1596E+03 BASIN STORAGE= .7699E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1582.41	229.96	.64	5.00	1582.33	230.00	.64
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1523E+03 EXCESS= .0000E+00 OUTFLOW= .1523E+03 BASIN STORAGE= .7695E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1580.84	225.66	.63	5.00	1580.31	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1493E+03 EXCESS= .0000E+00 OUTFLOW= .1493E+03 BASIN STORAGE= .7701E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP23	MAHE	.37	1578.37	230.13	.62	5.00	1578.16	230.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1473E+03 EXCESS= .0000E+00 OUTFLOW= .1473E+03 BASIN STORAGE= .7693E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.75	54.98	232.75	.55	5.00	51.48	235.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4012E+01 EXCESS= .0000E+00 OUTFLOW= .4043E+01 BASIN STORAGE= .1195E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.50	54.55	234.00	.53	5.00	52.44	235.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3897E+01 EXCESS= .0000E+00 OUTFLOW= .3926E+01 BASIN STORAGE= .1262E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.50	52.76	234.00	.50	5.00	50.50	235.00	.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3691E+01 EXCESS= .0000E+00 OUTFLOW= .3723E+01 BASIN STORAGE= .1241E-01 PERCENT ERROR= -1.2									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.25	50.63	233.75	.47	5.00	47.72	235.00	.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3485E+01 EXCESS= .0000E+00 OUTFLOW= .3519E+01 BASIN STORAGE= .1191E-01 PERCENT ERROR= -1.3									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.25	48.76	233.75	.46	5.00	46.40	235.00	.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3405E+01 EXCESS= .0000E+00 OUTFLOW= .3438E+01 BASIN STORAGE= .1183E-01 PERCENT ERROR= -1.3									
FOR PLAN = 1	RATIO= .00								
RBPVD	MAHE	4.25	47.19	233.75	.46	5.00	45.34	235.00	.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3349E+01 EXCESS= .0000E+00 OUTFLOW= .3383E+01 BASIN STORAGE= .1177E-01 PERCENT ERROR= -1.4									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	4.50	22.57	238.50	.63	5.00	18.79	240.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+01 EXCESS= .0000E+00 OUTFLOW= .1146E+01 BASIN STORAGE= .9708E-02 PERCENT ERROR= -2.6									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	4.25	23.41	238.00	.61	5.00	17.82	240.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1091E+01 EXCESS= .0000E+00 OUTFLOW= .1112E+01 BASIN STORAGE= .1117E-01 PERCENT ERROR= -2.9									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	3.75	21.35	236.25	.58	5.00	16.71	240.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1038E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .1097E-01 PERCENT ERROR= -3.0									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	3.75	18.70	240.00	.55	5.00	18.70	240.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9848E+00 EXCESS= .0000E+00 OUTFLOW= .1005E+01 BASIN STORAGE= .1079E-01 PERCENT ERROR= -3.1									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	3.75	19.46	240.00	.54	5.00	19.46	240.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9636E+00 EXCESS= .0000E+00 OUTFLOW= .9830E+00 BASIN STORAGE= .1053E-01 PERCENT ERROR= -3.1									
FOR PLAN = 1	RATIO= .00								
RBMJD	MAHE	3.50	21.79	238.00	.53	5.00	16.34	240.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9499E+00 EXCESS= .0000E+00 OUTFLOW= .9698E+00 BASIN STORAGE= .9858E-02 PERCENT ERROR= -3.1									
FOR PLAN = 1	RATIO= .00								
ROCRMJD	MAHE	5.00	47.36	235.00	.31	5.00	47.36	235.00	.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3422E+01 EXCESS= .0000E+00 OUTFLOW= .3446E+01 BASIN STORAGE= .9438E-02 PERCENT ERROR= -1.0

FOR PLAN = 1 RATIO= .00
ROCRMJD MANE 5.00 47.82 235.00 .30 5.00 47.82 235.00 .30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3322E+01 EXCESS= .0000E+00 OUTFLOW= .3358E+01 BASIN STORAGE= .1067E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
ROCRMJD MANE 5.00 45.18 235.00 .29 5.00 45.18 235.00 .29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3158E+01 EXCESS= .0000E+00 OUTFLOW= .3187E+01 BASIN STORAGE= .1005E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
ROCRMJD MANE 5.00 41.82 235.00 .28 5.00 41.82 235.00 .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2996E+01 EXCESS= .0000E+00 OUTFLOW= .3024E+01 BASIN STORAGE= .9899E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
ROCRMJD MANE 5.00 40.16 235.00 .27 5.00 40.16 235.00 .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2931E+01 EXCESS= .0000E+00 OUTFLOW= .2960E+01 BASIN STORAGE= .9836E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
ROCRMJD MANE 4.75 40.77 237.50 .26 5.00 35.99 240.00 .26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2884E+01 EXCESS= .0000E+00 OUTFLOW= .2908E+01 BASIN STORAGE= .1118E-01 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 3.79 122.71 239.00 .29 5.00 121.64 240.00 .30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1012E+02 EXCESS= .0000E+00 OUTFLOW= .1012E+02 BASIN STORAGE= .3118E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 3.82 116.90 240.37 .28 5.00 116.16 240.00 .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9762E+01 EXCESS= .0000E+00 OUTFLOW= .9770E+01 BASIN STORAGE= .3436E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 3.89 112.78 241.18 .27 5.00 109.95 240.00 .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9248E+01 EXCESS= .0000E+00 OUTFLOW= .9254E+01 BASIN STORAGE= .2949E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 4.02 108.20 241.19 .25 5.00 102.68 240.00 .25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8721E+01 EXCESS= .0000E+00 OUTFLOW= .8729E+01 BASIN STORAGE= .3026E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 4.08 105.66 240.90 .25 5.00 100.18 240.00 .25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8523E+01 EXCESS= .0000E+00 OUTFLOW= .8531E+01 BASIN STORAGE= .3093E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
ROCP26 MANE 4.18 100.21 242.19 .24 5.00 92.72 240.00 .24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8350E+01 EXCESS= .0000E+00 OUTFLOW= .8358E+01 BASIN STORAGE= .3001E-02 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00
RDRCMJJD MANE 5.00 47.13 235.00 -1.00 5.00 47.13 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDRCMJJD MANE 5.00 46.17 235.00 -1.00 5.00 46.17 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDRCMJJD MANE 5.00 45.52 235.00 -1.00 5.00 45.52 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDRCMJJD MANE 5.00 42.48 235.00 -1.00 5.00 42.48 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDRCMJJD MANE 5.00 41.06 235.00 -1.00 5.00 41.06 235.00 -1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MAVE	4.75	40.10	237.50	-1.00	5.00	35.75	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	52.95	255.00	-1.00	5.00	52.95	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	53.22	255.00	-1.00	5.00	53.22	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	51.11	255.00	-1.00	5.00	51.11	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	46.49	255.00	-1.00	5.00	46.49	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	47.24	255.00	-1.00	5.00	47.24	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP26	MAVE	5.00	44.43	255.00	-1.00	5.00	44.43	255.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.72	136.97	231.31	.63	5.00	135.93	230.00	.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1162E+02 EXCESS= .0000E+00 OUTFLOW= .1162E+02 BASIN STORAGE= .1966E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.77	133.31	228.78	.61	5.00	132.52	230.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1129E+02 EXCESS= .0000E+00 OUTFLOW= .1129E+02 BASIN STORAGE= .2006E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.85	125.11	232.60	.58	5.00	124.83	230.00	.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1073E+02 EXCESS= .0000E+00 OUTFLOW= .1074E+02 BASIN STORAGE= .2345E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.93	119.80	231.73	.55	5.00	118.51	230.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1019E+02 EXCESS= .0000E+00 OUTFLOW= .1019E+02 BASIN STORAGE= .1854E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.97	116.41	228.42	.54	5.00	116.14	230.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9970E+01 EXCESS= .0000E+00 OUTFLOW= .9976E+01 BASIN STORAGE= .2145E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RBKLMJ	MAVE	4.99	116.59	229.58	.53	5.00	116.26	230.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9819E+01 EXCESS= .0000E+00 OUTFLOW= .9826E+01 BASIN STORAGE= .1766E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.59	52.94	241.65	-1.00	5.00	52.05	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.62	50.37	240.82	-1.00	5.00	49.88	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.65	47.84	241.23	-1.00	5.00	46.68	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.69	45.58	241.71	-1.00	5.00	43.35	240.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.70	44.56	241.98	-1.00	5.00	42.44	245.00	-1.00
FOR PLAN = 1	RATIO=	.00							
RDCP27	MAVE	1.74	42.27	242.02	-1.00	5.00	40.87	245.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.71	257.49	232.54	.72	5.00	256.51	235.00	.72
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2412E+02 EXCESS= .0000E+00 OUTFLOW= .2412E+02 BASIN STORAGE= .1837E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.74	247.94	232.59	.69	5.00	246.89	235.00	.69
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2338E+02 EXCESS= .0000E+00 OUTFLOW= .2338E+02 BASIN STORAGE= .1753E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.78	232.27	233.09	.66	5.00	232.09	235.00	.66
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2217E+02 EXCESS= .0000E+00 OUTFLOW= .2217E+02 BASIN STORAGE= .1910E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.82	218.27	233.51	.62	5.00	217.94	235.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2098E+02 EXCESS= .0000E+00 OUTFLOW= .2098E+02 BASIN STORAGE= .1752E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.84	212.93	232.23	.61	5.00	212.50	235.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2052E+02 EXCESS= .0000E+00 OUTFLOW= .2052E+02 BASIN STORAGE= .1807E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP30	MANE	1.85	210.94	233.87	.60	5.00	209.17	235.00	.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2017E+02 EXCESS= .0000E+00 OUTFLOW= .2017E+02 BASIN STORAGE= .1902E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	38.30	220.00	.98	5.00	38.30	220.00	.98
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2342E+01 EXCESS= .0000E+00 OUTFLOW= .2351E+01 BASIN STORAGE= .4871E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	37.46	220.00	.96	5.00	37.46	220.00	.96
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2288E+01 EXCESS= .0000E+00 OUTFLOW= .2297E+01 BASIN STORAGE= .4834E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	36.06	220.00	.92	5.00	36.06	220.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2199E+01 EXCESS= .0000E+00 OUTFLOW= .2207E+01 BASIN STORAGE= .4770E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	34.65	220.00	.88	5.00	34.65	220.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2110E+01 EXCESS= .0000E+00 OUTFLOW= .2118E+01 BASIN STORAGE= .4705E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	34.09	220.00	.87	5.00	34.09	220.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2074E+01 EXCESS= .0000E+00 OUTFLOW= .2083E+01 BASIN STORAGE= .4678E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
ROCR1MD	MANE	5.00	33.70	220.00	.86	5.00	33.70	220.00	.86
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+01 EXCESS= .0000E+00 OUTFLOW= .2058E+01 BASIN STORAGE= .4659E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
RCP31	MANE	1.22	277.47	232.31	.73	5.00	275.94	235.00	.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2649E+02 EXCESS= .0000E+00 OUTFLOW= .2649E+02 BASIN STORAGE= .1445E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP31	MANE	1.24	267.90	231.81	.71	5.00	266.10	230.00	.71
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2568E+02 EXCESS= .0000E+00 OUTFLOW= .2568E+02 BASIN STORAGE= .1319E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP31	MANE	1.27	251.52	232.70	.68	5.00	250.50	235.00	.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2438E+02 EXCESS= .0000E+00 OUTFLOW= .2438E+02 BASIN STORAGE= .1430E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP31	MANE	1.30	236.79	231.84	.64	5.00	235.65	235.00	.64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2310E+02 EXCESS= .0000E+00 OUTFLOW= .2310E+02 BASIN STORAGE= .1315E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP31 MANE 1.31 231.22 231.44 .63 5.00 230.11 235.00 .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2260E+02 EXCESS= .0000E+00 OUTFLOW= .2260E+02 BASIN STORAGE= .1384E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP31 MANE 1.32 229.62 231.91 .62 5.00 228.03 230.00 .62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2223E+02 EXCESS= .0000E+00 OUTFLOW= .2223E+02 BASIN STORAGE= .1404E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.32 490.77 235.65 .55 5.00 487.10 235.00 .55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5164E+02 EXCESS= .0000E+00 OUTFLOW= .5164E+02 BASIN STORAGE= .1741E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.34 470.24 235.80 .53 5.00 466.34 235.00 .53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5000E+02 EXCESS= .0000E+00 OUTFLOW= .5000E+02 BASIN STORAGE= .1837E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.38 442.06 236.59 .50 5.00 436.00 235.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4741E+02 EXCESS= .0000E+00 OUTFLOW= .4741E+02 BASIN STORAGE= .1790E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.42 411.80 236.49 .47 5.00 406.37 240.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4484E+02 EXCESS= .0000E+00 OUTFLOW= .4485E+02 BASIN STORAGE= .1921E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.43 408.41 237.78 .46 5.00 397.18 240.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4385E+02 EXCESS= .0000E+00 OUTFLOW= .4385E+02 BASIN STORAGE= .1816E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP32 MANE 1.45 387.93 236.48 .45 5.00 385.59 240.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4307E+02 EXCESS= .0000E+00 OUTFLOW= .4307E+02 BASIN STORAGE= .1835E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .47 497.95 235.67 .55 5.00 496.79 235.00 .55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5361E+02 EXCESS= .0000E+00 OUTFLOW= .5361E+02 BASIN STORAGE= .6493E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .48 477.35 235.49 .53 5.00 475.93 235.00 .53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5191E+02 EXCESS= .0000E+00 OUTFLOW= .5191E+02 BASIN STORAGE= .6507E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .49 446.66 235.50 .50 5.00 444.99 235.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4922E+02 EXCESS= .0000E+00 OUTFLOW= .4922E+02 BASIN STORAGE= .6199E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .50 415.90 235.84 .48 5.00 414.52 240.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4656E+02 EXCESS= .0000E+00 OUTFLOW= .4656E+02 BASIN STORAGE= .6236E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .51 405.18 239.84 .47 5.00 405.02 240.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4553E+02 EXCESS= .0000E+00 OUTFLOW= .4553E+02 BASIN STORAGE= .6512E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP33 MANE .51 393.96 235.89 .46 5.00 393.58 240.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4473E+02 EXCESS= .0000E+00 OUTFLOW= .4473E+02 BASIN STORAGE= .6424E-03 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP34 MANE .88 500.46 235.60 .55 5.00 498.29 235.00 .55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5455E+02 EXCESS= .0000E+00 OUTFLOW= .5455E+02 BASIN STORAGE= .1264E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP34 MANE .89 480.13 236.09 .53 5.00 477.28 235.00 .53

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5282E+02 EXCESS= .0000E+00 OUTFLOW= .5282E+02 BASIN STORAGE= .1164E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP34 MANE .92 449.35 236.07 .50 5.00 446.02 235.00 .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5008E+02 EXCESS= .0000E+00 OUTFLOW= .5008E+02 BASIN STORAGE= .1250E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP34 MANE .95 418.55 236.36 .48 5.00 418.12 240.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4738E+02 EXCESS= .0000E+00 OUTFLOW= .4738E+02 BASIN STORAGE= .1179E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP34 MANE .95 408.31 239.56 .47 5.00 408.12 240.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4633E+02 EXCESS= .0000E+00 OUTFLOW= .4633E+02 BASIN STORAGE= .1257E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP34 MANE .97 397.15 239.41 .46 5.00 396.89 240.00 .46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4551E+02 EXCESS= .0000E+00 OUTFLOW= .4551E+02 BASIN STORAGE= .1204E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .80 503.13 236.22 .56 5.00 500.60 235.00 .56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5637E+02 EXCESS= .0000E+00 OUTFLOW= .5637E+02 BASIN STORAGE= .1100E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .81 482.23 236.26 .54 5.00 479.48 235.00 .54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5460E+02 EXCESS= .0000E+00 OUTFLOW= .5460E+02 BASIN STORAGE= .1071E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .83 451.25 236.06 .51 5.00 450.16 240.00 .51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5180E+02 EXCESS= .0000E+00 OUTFLOW= .5180E+02 BASIN STORAGE= .1075E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .85 422.56 239.63 .49 5.00 422.52 240.00 .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4903E+02 EXCESS= .0000E+00 OUTFLOW= .4903E+02 BASIN STORAGE= .1160E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .86 412.50 240.23 .48 5.00 412.37 240.00 .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4796E+02 EXCESS= .0000E+00 OUTFLOW= .4796E+02 BASIN STORAGE= .1138E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP36 MANE .87 401.38 240.29 .47 5.00 401.35 240.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4713E+02 EXCESS= .0000E+00 OUTFLOW= .4713E+02 BASIN STORAGE= .1054E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RTOFFD1* MANE 4.50 70.36 234.00 1.07 5.00 69.14 235.00 1.07

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4647E+01 EXCESS= .0000E+00 OUTFLOW= .4683E+01 BASIN STORAGE= .9880E-02 PERCENT ERROR= -1.0
 FOR PLAN = 1 RATIO= .00
 RTOFFD1* MANE 4.50 69.56 234.00 1.05 5.00 68.18 235.00 1.04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4545E+01 EXCESS= .0000E+00 OUTFLOW= .4581E+01 BASIN STORAGE= .9821E-02 PERCENT ERROR= -1.0
 FOR PLAN = 1 RATIO= .00
 RTOFFD1* MANE 4.50 68.28 234.00 1.01 5.00 66.63 235.00 1.01

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4376E+01 EXCESS= .0000E+00 OUTFLOW= .4418E+01 BASIN STORAGE= .9721E-02 PERCENT ERROR= -1.0
 FOR PLAN = 1 RATIO= .00
 RTOFFD1* MANE 4.50 69.23 234.00 .97 5.00 66.46 235.00 .97

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4207E+01 EXCESS= .0000E+00 OUTFLOW= .4242E+01 BASIN STORAGE= .7208E-02 PERCENT ERROR= -1.0

FOR PLAN = 1	RATIO= .00								
RTOFFD1* MANE	4.50	68.65	234.00	.95	5.00	65.82	235.00	.95	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4140E+01 EXCESS= .0000E+00 OUTFLOW= .4174E+01 BASIN STORAGE= .1019E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD1* MANE	4.50	68.21	234.00	.94	5.00	65.36	235.00	.94	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4093E+01 EXCESS= .0000E+00 OUTFLOW= .4127E+01 BASIN STORAGE= .1016E-01 PERCENT ERROR= -1.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.50	25.58	235.00	.37	5.00	25.58	235.00	.37	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2319E+01 EXCESS= .0000E+00 OUTFLOW= .2321E+01 BASIN STORAGE= .1315E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.50	24.57	235.00	.36	5.00	24.57	235.00	.35	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2234E+01 EXCESS= .0000E+00 OUTFLOW= .2235E+01 BASIN STORAGE= .1265E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.50	22.91	235.00	.33	5.00	22.91	235.00	.33	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2094E+01 EXCESS= .0000E+00 OUTFLOW= .2095E+01 BASIN STORAGE= .1216E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.25	21.22	234.00	.31	5.00	21.16	235.00	.31	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1957E+01 EXCESS= .0000E+00 OUTFLOW= .1958E+01 BASIN STORAGE= .1260E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.25	20.56	234.00	.30	5.00	20.52	235.00	.30	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1903E+01 EXCESS= .0000E+00 OUTFLOW= .1904E+01 BASIN STORAGE= .1244E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RTOFFD2* MANE	2.25	20.11	234.00	.30	5.00	20.07	235.00	.30	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1866E+01 EXCESS= .0000E+00 OUTFLOW= .1867E+01 BASIN STORAGE= .1232E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.18	128.37	235.42	.64	5.00	126.96	235.00	.64	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1052E+02 EXCESS= .0000E+00 OUTFLOW= .1052E+02 BASIN STORAGE= .1228E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.21	125.98	234.56	.63	5.00	125.09	235.00	.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1023E+02 EXCESS= .0000E+00 OUTFLOW= .1024E+02 BASIN STORAGE= .1447E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.26	119.35	234.56	.60	5.00	118.75	235.00	.60	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9757E+01 EXCESS= .0000E+00 OUTFLOW= .9759E+01 BASIN STORAGE= .1370E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.29	113.08	236.73	.57	5.00	109.45	235.00	.57	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9292E+01 EXCESS= .0000E+00 OUTFLOW= .9294E+01 BASIN STORAGE= .1531E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.31	108.98	237.98	.56	5.00	108.83	235.00	.56	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9098E+01 EXCESS= .0000E+00 OUTFLOW= .9099E+01 BASIN STORAGE= .1561E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD2A* MANE	3.32	108.54	235.56	.55	5.00	105.41	235.00	.55	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8970E+01 EXCESS= .0000E+00 OUTFLOW= .8972E+01 BASIN STORAGE= .1308E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD5* MANE	3.36	218.65	221.82	.63	5.00	218.33	220.00	.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2120E+02 EXCESS= .0000E+00 OUTFLOW= .2121E+02 BASIN STORAGE= .1661E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									

RCOFD5* MANE	3.40	211.37	220.68	.61	5.00	210.02	220.00	.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2061E+02 EXCESS= .0000E+00 OUTFLOW= .2061E+02 BASIN STORAGE= .2011E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCOFD5* MANE	3.46	200.30	221.23	.59	5.00	198.93	220.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1962E+02 EXCESS= .0000E+00 OUTFLOW= .1963E+02 BASIN STORAGE= .1629E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCOFD5* MANE	3.53	189.04	222.20	.56	5.00	189.03	220.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1864E+02 EXCESS= .0000E+00 OUTFLOW= .1864E+02 BASIN STORAGE= .1519E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCOFD5* MANE	3.55	184.45	220.28	.54	5.00	183.59	220.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1825E+02 EXCESS= .0000E+00 OUTFLOW= .1826E+02 BASIN STORAGE= .2000E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .00								
RCOFD5* MANE	3.57	181.39	221.57	.54	5.00	180.17	220.00	.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1797E+02 EXCESS= .0000E+00 OUTFLOW= .1798E+02 BASIN STORAGE= .1544E-02 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .99								
RTOFFD7* MANE	.86	18.73	216.04	.99	5.00	18.46	215.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1174E+01 EXCESS= .0000E+00 OUTFLOW= .1175E+01 BASIN STORAGE= .7654E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .98								
RTOFFD7* MANE	.86	18.32	216.34	.97	5.00	18.05	215.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1147E+01 EXCESS= .0000E+00 OUTFLOW= .1148E+01 BASIN STORAGE= .6066E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .95								
RTOFFD7* MANE	.73	17.77	216.21	.93	5.00	17.39	215.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1103E+01 EXCESS= .0000E+00 OUTFLOW= .1104E+01 BASIN STORAGE= .4925E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .93								
RTOFFD7* MANE	.87	16.97	215.98	.89	5.00	16.71	215.00	.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1059E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .5163E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .92								
RTOFFD7* MANE	.90	16.69	216.45	.88	5.00	16.44	215.00	.88
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1041E+01 EXCESS= .0000E+00 OUTFLOW= .1042E+01 BASIN STORAGE= .4791E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .91								
RTOFFD7* MANE	.85	16.52	216.06	.87	5.00	16.25	215.00	.87
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1029E+01 EXCESS= .0000E+00 OUTFLOW= .1029E+01 BASIN STORAGE= .7381E-09 PERCENT ERROR= -.1								
FOR PLAN = 1 RATIO= .99								
RCOND1* MANE	1.09	267.01	222.00	.55	5.00	263.66	220.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2351E+02 EXCESS= .0000E+00 OUTFLOW= .2352E+02 BASIN STORAGE= .4875E-07 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .98								
RCOND1* MANE	1.19	257.33	221.70	.53	5.00	254.66	220.00	.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2288E+02 EXCESS= .0000E+00 OUTFLOW= .2289E+02 BASIN STORAGE= .7336E-07 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .95								
RCOND1* MANE	1.16	245.89	222.24	.51	5.00	242.47	220.00	.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2184E+02 EXCESS= .0000E+00 OUTFLOW= .2185E+02 BASIN STORAGE= .7559E-07 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .93								
RCOND1* MANE	1.21	233.58	222.55	.48	5.00	231.02	220.00	.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2081E+02 EXCESS= .0000E+00 OUTFLOW= .2082E+02 BASIN STORAGE= .6356E-07 PERCENT ERROR= .0								
FOR PLAN = 1 RATIO= .92								
RCOND1* MANE	1.17	228.95	222.13	.47	5.00	225.01	220.00	.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2039E+02 EXCESS= .0000E+00 OUTFLOW= .2040E+02 BASIN STORAGE= .7310E-07 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .91
 RCOND1* MANE 1.16 225.02 222.45 .47 5.00 221.72 220.00 .47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2010E+02 EXCESS= .0000E+00 OUTFLOW= .2011E+02 BASIN STORAGE= .5981E-07 PERCENT ERROR= -.1
 FOR PLAN = 1 RATIO= .99
 RCOND5* MANE .62 280.62 221.30 .74 5.00 274.11 220.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3676E+02 EXCESS= .0000E+00 OUTFLOW= .3688E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .1
 FOR PLAN = 1 RATIO= .98
 RCOND5* MANE .65 271.30 221.45 .73 5.00 265.09 220.00 .73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3599E+02 EXCESS= .0000E+00 OUTFLOW= .3610E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .2
 FOR PLAN = 1 RATIO= .95
 RCOND5* MANE .65 258.93 221.26 .70 5.00 252.59 220.00 .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3475E+02 EXCESS= .0000E+00 OUTFLOW= .3487E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .2
 FOR PLAN = 1 RATIO= .93
 RCOND5* MANE .61 247.24 221.33 .68 5.00 240.73 220.00 .68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3350E+02 EXCESS= .0000E+00 OUTFLOW= .3362E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .2
 FOR PLAN = 1 RATIO= .92
 RCOND5* MANE .61 240.97 221.50 .67 5.00 236.15 225.00 .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3301E+02 EXCESS= .0000E+00 OUTFLOW= .3313E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .2
 FOR PLAN = 1 RATIO= .91
 RCOND5* MANE .63 237.39 221.13 .66 5.00 232.03 225.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3266E+02 EXCESS= .0000E+00 OUTFLOW= .3278E+02 BASIN STORAGE=-.1689E+00 PERCENT ERROR= .2
 FOR PLAN = 1 RATIO= .80
 ROND11* MANE 5.00 7.29 230.00 .79 5.00 7.29 230.00 .79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5158E+00 EXCESS= .0000E+00 OUTFLOW= .5166E+00 BASIN STORAGE= .1447E-02 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 ROND11* MANE 5.00 7.13 230.00 .77 5.00 7.13 230.00 .77

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5031E+00 EXCESS= .0000E+00 OUTFLOW= .5039E+00 BASIN STORAGE= .1420E-02 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 ROND11* MANE 5.00 6.86 230.00 .74 5.00 6.86 230.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4821E+00 EXCESS= .0000E+00 OUTFLOW= .4830E+00 BASIN STORAGE= .1923E-02 PERCENT ERROR= -.6
 FOR PLAN = 1 RATIO= .00
 ROND11* MANE 5.00 6.59 230.00 .71 5.00 6.59 230.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4613E+00 EXCESS= .0000E+00 OUTFLOW= .4621E+00 BASIN STORAGE= .1888E-02 PERCENT ERROR= -.6
 FOR PLAN = 1 RATIO= .00
 ROND11* MANE 5.00 6.48 230.00 .70 5.00 6.48 230.00 .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4530E+00 EXCESS= .0000E+00 OUTFLOW= .4538E+00 BASIN STORAGE= .1874E-02 PERCENT ERROR= -.6
 FOR PLAN = 1 RATIO= .00
 ROND11* MANE 5.00 6.40 230.00 .69 5.00 6.40 230.00 .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4472E+00 EXCESS= .0000E+00 OUTFLOW= .4480E+00 BASIN STORAGE= .1864E-02 PERCENT ERROR= -.6
 FOR PLAN = 1 RATIO= .00
 RCOFD3* MANE 2.51 105.26 223.30 1.11 5.00 103.98 225.00 1.11

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9509E+01 EXCESS= .0000E+00 OUTFLOW= .9509E+01 BASIN STORAGE= .8499E-03 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCOFD3* MANE 2.54 101.61 223.46 1.08 5.00 100.61 225.00 1.08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9210E+01 EXCESS= .0000E+00 OUTFLOW= .9210E+01 BASIN STORAGE= .8184E-03 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RCOFD3* MANE		2.59	95.88	222.54	1.02	5.00	95.56	225.00	1.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8743E+01 EXCESS= .0000E+00 OUTFLOW= .8743E+01 BASIN STORAGE= .8842E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCOFD3* MANE		2.64	90.14	224.13	.97	5.00	89.34	225.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8269E+01 EXCESS= .0000E+00 OUTFLOW= .8269E+01 BASIN STORAGE= .9153E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCOFD3* MANE		2.66	87.91	223.51	.95	5.00	87.29	225.00	.95
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8082E+01 EXCESS= .0000E+00 OUTFLOW= .8082E+01 BASIN STORAGE= .8272E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCOFD3* MANE		2.68	86.08	224.88	.93	5.00	85.94	225.00	.93
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7954E+01 EXCESS= .0000E+00 OUTFLOW= .7954E+01 BASIN STORAGE= .8153E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.00	2.38	309.00	.05	5.00	2.36	310.00	.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2596E+00 EXCESS= .0000E+00 OUTFLOW= .2596E+00 BASIN STORAGE= .8089E-03 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.25	2.23	308.75	.05	5.00	2.21	310.00	.05
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2376E+00 EXCESS= .0000E+00 OUTFLOW= .2377E+00 BASIN STORAGE= .7199E-03 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.50	1.99	308.00	.04	5.00	1.97	310.00	.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2030E+00 EXCESS= .0000E+00 OUTFLOW= .2031E+00 BASIN STORAGE= .8296E-03 PERCENT ERROR= -.5									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.25	1.75	308.75	.03	5.00	1.74	310.00	.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1709E+00 EXCESS= .0000E+00 OUTFLOW= .1710E+00 BASIN STORAGE= .7484E-03 PERCENT ERROR= -.5									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.50	1.65	308.00	.03	5.00	1.65	310.00	.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1588E+00 EXCESS= .0000E+00 OUTFLOW= .1589E+00 BASIN STORAGE= .7500E-03 PERCENT ERROR= -.5									
FOR PLAN = 1	RATIO=	.00							
ROFFD-2B MANE		3.50	1.59	308.00	.03	5.00	1.59	310.00	.03
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1506E+00 EXCESS= .0000E+00 OUTFLOW= .1507E+00 BASIN STORAGE= .7341E-03 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO=	.00							
RCHANNEL MANE		4.70	122.17	225.47	.65	5.00	120.78	225.00	.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1125E+02 EXCESS= .0000E+00 OUTFLOW= .1126E+02 BASIN STORAGE= .2356E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCHANNEL MANE		4.75	116.70	228.02	.63	5.00	114.26	225.00	.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1085E+02 EXCESS= .0000E+00 OUTFLOW= .1086E+02 BASIN STORAGE= .2279E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCHANNEL MANE		4.84	111.00	227.27	.59	5.00	108.09	230.00	.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1029E+02 EXCESS= .0000E+00 OUTFLOW= .1029E+02 BASIN STORAGE= .1823E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCHANNEL MANE		4.95	103.73	227.51	.56	5.00	101.22	230.00	.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9690E+01 EXCESS= .0000E+00 OUTFLOW= .9696E+01 BASIN STORAGE= .2231E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.00							
RCHANNEL MANE		4.99	100.78	229.33	.55	5.00	99.77	230.00	.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9456E+01 EXCESS= .0000E+00 OUTFLOW= .9462E+01 BASIN STORAGE= .2346E-02 PERCENT ERROR= -.1									

FOR PLAN = 1 RATIO= .00
RCHANNEL MANE 5.00 99.88 225.00 .54 5.00 99.88 225.00 .54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9308E+01 EXCESS= .0000E+00 OUTFLOW= .9313E+01 BASIN STORAGE= .2198E-02 PERCENT ERROR= -.1

*** NORMAL END OF HEC-1 ***

```

1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 09JAN06 TIME 19:54:01
*
*****

```

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*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****

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X X XXXXXXX XXXXX X
X X X X X XX
X X X X X X
XXXXXXX XXXX X XXXXX X
X X X X X X
X X X X X X
X X XXXXXXX XXXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION. NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

*DIAGRAM

*** FREE ***

```

1 ID *****
2 ID * THE LANDWELL COMPANY *
3 ID * CONCEPTUAL DRAINAGE STUDY FOR *
4 ID * THE EASTSIDE PROPERTIES *
5 ID * PROPOSED CONDITIONS *
6 ID * INPUT FILE = PROPOSED100.DAT *
7 ID * INPUT FILE DATE = 12/21/05 *
8 ID * DESIGN STORM=100-YEAR 6-HOUR *
9 ID * STORM DISTRIBUTION = SDN #3 *
10 ID * MODELED BY=Matt Wilkinson, P.E. (PBS&J) *
11 ID *
12 ID *****
13 ID DRAINAGE AREA
14 ID (SQUARE MILES) DARE
15 ID 0-0.5 .99
16 ID 0.5-1 .975
17 ID 1-2 .95
18 ID 2-3 .925
19 ID 3-4 .915
20 ID 4-5 .908
21 ID
22 ID
23 IT 5 0 0 300
24 IO 5 0 0
25 IN 5 0 0
26 JR PREC 0.99 0.975 0.95 0.925 0.915 0.908
*
*
27 KK OFFD-2
28 BA 0.092
29 FB 2.86
30 PC 0 0.02 0.057 0.07 0.087 0.108 0.124 0.13 0.13 0.13
31 PC 0.13 0.13 0.13 0.133 0.14 0.142 0.148 0.158 0.172 0.181
32 PC 0.19 0.197 0.199 0.2 0.201 0.204 0.214 0.229 0.241 0.249
33 PC 0.251 0.256 0.27 0.278 0.281 0.283 0.295 0.322 0.352 0.409
34 PC 0.499 0.59 0.71 0.744 0.781 0.812 0.819 0.835 0.851 0.856
35 PC 0.86 0.868 0.876 0.888 0.91 0.926 0.937 0.95 0.97 0.976
36 PC 0.982 0.985 0.987 0.989 0.99 0.993 0.993 0.994 0.995 0.998
37 FC 0.998 0.999 1
38 LS 0 92.43
39 UD 0.147
*
*
40 KK OFFD-3
41 BA 0.297
42 FB 2.86
43 LS 0 81.31
44 UD 0.265
*

```

1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

45 KK OFFD-3A
46 BA 0.030
47 FB 2.86
48 LS 0 94.30
49 UD 0.076
*
*
50 KKROFFD-3A
51 RM ROUTE OFFD-3A IN CHANNEL WEST ALONG LAKE HEAD DRIVE
52 RD 2200 0.00453 0.033 0 TRAP 12 4
*

```

53 KK CP1
54 KM COMBINE OFFD-3A, OFFD-3, AND OFFD-2
55 HC 3
*

56 KK OFFD-2A
57 BA 0.023
58 FB 2.86
59 LS 0 92.34
60 UD 0.104
*

61 KK OFFD-1
62 BA 0.410
63 FB 2.86
64 LS 0 91.62
65 UD 0.186
*

66 KK CP2
67 KM COMBINE OFFD-2A WITH OFFD-1
68 HC 2
*

69 KK OFFD-4
70 BA 0.485
71 FB 2.86
72 LS 0 82.47
73 UD 0.368
*

74 KK CP2B
75 KM COMBINE BASIN OFF-4
76 HC 2
*

77 KK RC2B
78 KM ROUTE TO BOULDER HIGHWAY AT PABCO RD
79 RD 12600 0.03 0.03 0 TRAP 1 1
*

HEC-1 INPUT

PAGE 3

1
LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

80 KK CP2A
81 KM COMBINE ALL BASINS TRIB TO PABCO CHANNEL AT BOULDER HIGHWAY
82 HC 2
*

83 KK RCP2A
84 KM ROUTE PABCO REALIGNMENT IN STORM DRAIN TO DETENTION BASIN 1
85 RD 2200 0.009 0.015 0 TRAP 10 0
*

86 KK CHD-25
87 BA 0.099
88 FB 2.86
89 LS 0 85.73
90 UD 0.182
*

91 KK OFFD-25
92 BA 0.074
93 FB 2.86
94 LS 0 87.64
95 UD 0.109
*

96 KK CP3
97 KM COMBINE OFFD-25 WITH CHD-25
98 HC 2
*

99 KK CHD-26
100 BA 0.021
101 FB 2.86
102 LS 0 84.53
103 UD 0.181
*

104 KK OFFD-26
105 BA 0.012
106 FB 2.86
107 LS 0 94.30
108 UD 0.093
*

109 KK CP4
110 KM COMBINE OFFD-26 WITH CHD-26
111 HC 2
*

112 KK CP5
113 KM COMBINE BASINS CP3,CP4
114 HC 2
*

HEC-1 INPUT

PAGE 4

1
LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

115 KK RCP5
116 KM ROUTE ALONG BURKHOLDER RD TO DETENTION BASIN 1
117 RD 1700 .0238 .013 0 CIRC 4.5 0
*

```

118      KK  OND-20
119      BA  0.149
120      PB  2.86
121      LS  0    93.85
122      UD  0.200
      *

123      KK  OND-21
124      BA  0.079
125      PB  2.86
126      LS  0    85.73
127      UD  0.149
      *

128      KK  CP8
129      KM  COMBINE BASINS OND-20,21 WITH RCP5
130      HC  3
      *

131      KK  OND-27
132      BA  0.111
133      PB  2.86
134      LS  0    87.60
135      UD  0.142
      *

136      KKOFFD-27A
137      BA  0.073
138      PB  2.86
139      LS  0    87.64
140      UD  0.115
      *

141      KKOFFD-27B
142      BA  0.042
143      PB  2.86
144      LS  0    88.36
145      UD  0.110
      *

146      KK  CP6
147      KM  COMBINE OFFD-27A AND OFFD-27B WITH OND-27
148      HC  3
      *

```

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

149      KK  RCP6
150      KM  ROUTE ALONG WARM SPRINGS RD TO INTERSECTION WITH EASTSIDE REAL ESTATE PKWY
151      RD  1555 .0129 .013 0 CIRC 5.5 0
      *

152      KK  OND-22
153      BA  0.051
154      PB  2.86
155      LS  0    85.88
156      UD  0.120
      *

157      KK  CP7
158      KM  COMBINE BASINS OND-22 AND RCP6
159      HC  2
      *

160      KK  RCP7
161      KM  ROUTE ALONG WARM SPRINGS RD TO DETENTION BASIN 1
162      RD  1750 .0046 .013 0 CIRC 7 0
      *

163      KK  CP9
164      KM  COMBINE CP7, CP8, AND CP2A
165      HC  3
      *

166      KK  ODIV1
167      DT  DIV1
168      DI  0 757 1000 1500 2000
169      DQ  0 757 757 757 757
      *

170      KK  DB-1
171      KM  Detention Basin 1
172      BA  0.025
173      PB  2.86
174      LS  0    76.3
175      UD  0.185
      *

176      KK  CP9A
177      KM  COMBINE DB-1 AND ODIV1 (EXCESS FLOW BEYOND 10-YEAR EVENT)
178      HC  2
      *

179      KK  DET1
180      KO  1
181      KM  MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET
182      RS  1 STOR -1
183      SV  0 7.87 15.52 23.99 32.70 42.11
184      SE  0 2 3 4 5 6
185      SQ  0 28 50 79 94 129
      *

```

HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

186	KK	DIV1						
187	DR	DIV1						
	*							
188	KK	CP10						
189	HC	2						
	*							
190	KK	RCP10						
191	KM	ROUTE (FROM DETENTION BASIN 1) ALONG BURKHOLDER RD						
192	RD	1400 .0214 .015 0 DEEP 8 0						
	*							
193	KK	OND-18						
194	BA	0.018						
195	PB	2.86						
196	LS	0 95.51						
197	UD	0.143						
	*							
198	KK	ROND-18						
199	KM	ROUTE OND-18 THROUGH OND-19 TO COMBINATION CP11						
200	RD	2000 .005 .013 0 CIRC 3.5 0						
	*							
201	KK	OND-19						
202	BA	0.093						
203	PB	2.86						
204	LS	0 85.99						
205	UD	0.194						
	*							
206	KK	CP11						
207	KM	COMBINE OND-18,19, AND CP9						
208	HC	3						
	*							
209	KK	RCP11						
210	KM	ROUTE CP11 ALONG BURKHOLDER BLVD TO COMBINATION WITH OND-13,14						
211	RD	1650 .017 .015 0 DEEP 8 0						
	*							
212	KK	OND-13						
213	BA	0.089						
214	PB	2.86						
215	LS	0 88.74						
216	UD	0.196						
	*							

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HEC-1 INPUT

PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

217	KK	OND-14						
218	BA	0.145						
219	PB	2.86						
220	LS	0 88.14						
221	UD	0.278						
	*							
222	KK	CP12						
223	KM	COMBINE OND-13,14, AND RCP11						
224	HC	3						
	*							
225	KK	RCP12						
226	KM	ROUTE CP12 ALONG BURKHOLDER RD TO COMBINATION WITH OND-12						
227	RD	1100 .1218 .015 0 DEEP 8 0						
	*							
228	KK	OND-12						
229	BA	0.013						
230	PB	2.86						
231	LS	0 87.59						
232	UD	0.152						
	*							
233	KK	CP13						
234	KM	COMBINE OND-12 WITH RCP12						
235	HC	2						
	*							
236	KK	RCP13						
237	KM	ROUTE CP13 ALONG BURKHOLDER RD TO INTERSECTION WITH SUNSET RD						
238	RD	800 .02 .015 0 DEEP 10 0						
	*							
239	KK	OND-10						
240	BA	0.112						
241	PB	2.86						
242	LS	0 88.90						
243	UD	0.210						
	*							
244	KK	CP14						
245	KM	COMBINE OND-10 WITH CP13						
246	HC	2						
	*							
247	KK	OND-24						
248	BA	0.121						
249	PB	2.86						
250	LS	0 85.67						
251	UD	0.213						
	*							

1

HEC-1 INPUT

PAGE 8

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

252 KK ROND-24
253 KM ROUTE OND-24 ALONG SUNSET RD TO INTERSECTION WITH WATER ST
254 RD 1550 .0168 .013 0 CIRC 3.5 0
*

255 KK OND-23
256 BA 0.116
257 FB 2.86
258 LS 0 83.19
259 UD 0.212
*

260 KK CP15
261 KM COMBINE OND-23 WITH OND-24
262 HC 2
*

263 KK RCP15
264 KM ROUTE C14 ALONG SUNSET RD TO COMBINATION WITH OND-15
265 RD 2050 .0195 .013 0 CIRC 4.5 0
*

266 KK OND-15
267 BA 0.129
268 FB 2.86
269 LS 0 89.11
270 UD 0.276
*

271 KK CP16
272 KM COMBINE OND-15 WITH CP15
273 HC 2
*

274 KK RCP16
275 KM ROUTE C15 ALONG SUNSET RD TO INTERSECTION WITH BURKHOLDER RD
276 RD 2350 .0128 .013 0 CIRC 6 0
*

277 KK OND-11
278 BA 0.094
279 FB 2.86
280 LS 0 88.80
281 UD 0.176
*

282 KK CP17
283 KM COMBINE OND-11 WITH CP16 AND CP14
284 HC 3
*

1

HEC-1 INPUT

PAGE 9

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

285 KK RCP17
286 KM ROUTE CP17 ALONG BURKHOLDER RD TO ATHENS AVE
287 RD 1350 .0104 .015 0 DEEP 12 0
*

288 KK OND-5
289 BA 0.077
290 FB 2.86
291 LS 0 95.60
292 UD 0.172
*

293 KK OND-6
294 BA 0.327
295 FB 2.86
296 LS 0 89.24
297 UD 0.386
*

298 KK CP18
299 KM COMBINE RCP17 WITH OND-5 AND OND-6
300 HC 3
*

301 KK OND-17
302 BA 0.184
303 FB 2.86
304 LS 0 84.49
305 UD 0.307
*

306 KK ROND-17
307 KM ROUTE BASIN OND-17 TO MOHAWK DRIVE
308 RD 3000 0.0105 0.013 0 CIRC 5
*

309 KK OND-8
310 BA 0.198
311 FB 2.86
312 LS 0 85.78
313 UD 0.264
*

314 KK CP19
315 KM COMBINE ROND-17 WITH BASIN OND-8
316 HC 2
*

317 KK RCP19
 318 KM ROUTE FLOWS TO ATHENS AT EASTSIDE PKWY
 319 RD 2200 0.00571 0.015 0 TRAP 7 0
 *

HEC-1 INPUT

PAGE 10

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

320 KK OND-16
 321 BA 0.057
 322 PB 2.86
 323 LS 0 80.22
 324 UD 0.166
 *

325 KK ROND-16
 326 KM ROUTE STREET FLOW TO ATHENS AVENUE
 327 RD 3500 0.02 0.016 0 TRAP 80 0
 *

328 KK OND-7
 329 BA 0.288
 330 PB 2.86
 331 LS 0 88.72
 332 UD 0.336
 *

333 KK CP20
 334 KM COMBINE CP19 WITH OND-16 AND OND-7
 335 HC 3
 *

336 KK RCP20
 337 KM ROUTE CP20 TO BURKHOLDER BOULEVARD
 338 RD 3900 0.0053 0.015 0 TRAP 8 0
 *

339 KK OND7*
 340 KM MODIFIED WRF ONSITE BASIN OND7*
 341 BA 0.023
 342 PB 2.77
 343 LS 0 92.5
 344 UD 0.183
 *

345 KK CP21
 346 KM COMBINE RCP20 WITH C17 AND OND7*
 347 HC 3
 *

348 KK RCP21
 349 KM ROUTE CP21 ALONG BURKHOLDER BLVD
 350 RD 2100 .0162 .015 0 TRAP 10 0
 *

351 KK OND-4
 352 BA 0.239
 353 PB 2.86
 354 LS 0 84.79
 355 UD 0.364
 *

HEC-1 INPUT

PAGE 11

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

356 KK OND6*
 357 KM WRF ONSITE BASIN OND6*
 358 BA 0.0627
 359 PB 2.77
 360 LS 0 91
 361 UD 0.237
 *

362 KK CP22
 363 KM COMBINE RCP21 WITH OND-4 AND OND6*
 364 HC 3
 *

365 KK ODIV2
 366 DT DIV2
 367 DI 0 1580 2000 3000
 368 DQ 0 1580 1580 1580
 *

369 KK DB-2
 370 BA 0.017
 371 PB 2.86
 372 LS 0 64.5
 373 UD 0.186
 *

374 KK CP22A
 375 KM COMBINE DB-2 AND ODIV2
 376 HC 2
 *

377 KK DET2
 378 KM MULTI-USE DETENTION BASIN, BYPASS 10-YR FLOWS, 1-54" OUTLET, 1' SUBMERGED
 379 KO 1
 380 RS 1 STOR -1
 381 SV 0 10.23 18.12 26.28 34.71 43.42 52.41 61.98
 382 SE 0 2 3 4 5 6 7 8
 383 SQ 0 56 88 121 170 180 200 220
 *

384 KK DIV2
 385 DR DIV2
 *
 386 KK CP23
 387 HC 2
 *
 388 KK RCP23
 389 KM ROUTE CP23 ALONG BURKHOLDER TO PROPERTY LINE
 390 RD 956 .0155 .015 0 TRAP 10 0
 *

HEC-1 INPUT

PAGE 12

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

391 KK OND-3
 392 BA 0.030
 393 PB 2.86
 394 LS 0 77.00
 395 UD 0.236
 *

396 KK OND8*
 397 KM MODIFIED WRF ONSITE BASIN OND8*
 398 BA 0.022
 399 PB 2.77
 400 LS 0 89.91
 401 UD 0.260
 *

402 KK CP24
 403 KM COMBINE CP23 WITH OND-3 AND OND8*
 404 HC 3
 *

405 KK OND-9
 406 BA 0.011
 407 PB 2.86
 408 LS 0 83.07
 409 UD 0.097
 *

410 KK BKPVD
 411 BA 0.139
 412 PB 2.86
 413 LS 0 83.7
 414 UD 0.271
 *

415 KK RBKFPVD
 416 KM PALO VERDE
 417 RD 5140 0.017 .015 0 TRAP 80 0
 *

418 KK BKMJD
 419 BA 0.034
 420 PB 2.86
 421 LS 0 85.49
 422 UD 0.163
 *

423 KK RBKMJD
 424 KM MAJOR THEN PALO VERDE
 425 RD 4720 0.016 .015 0 TRAP 80 0
 *

HEC-1 INPUT

PAGE 13

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

426 KK CRMJD
 427 BA 0.206
 428 PB 2.86
 429 LS 0 85.53
 430 UD 0.282
 *

431 KK OCRMJD
 432 KM FLOW SPLIT AT MAJOR AND CENTER
 433 KM DIVERT OUT FLOW IN CENTER STREET
 434 DT DCRMJD
 435 DI 0 50 300
 436 DQ 0 25 150
 *

437 KK ROCRMJD
 438 KM MAJOR
 439 RD 5125 0.017 .015 0 TRAP 80 0
 *

440 KK CP25A
 441 KM COMBINE RBKFPVD, RBKMJD, AND ROCRMJD
 442 HC 3
 *

443 KK WSPVD
 444 BA 0.265
 445 PB 2.86
 446 LS 0 79.95
 447 UD 0.394
 *

448 KK CP26
 449 KM COMBINE CP25A AND WSPVD
 450 KM AT WARM SPRINGS AND PALO VERDE

451 HC 2
 *
 452 KK OCP26
 453 KM OVERFLOW AT WARM SPRINGS AND PALO VERDE
 454 KM DIVERT OUT FLOW IN STORM DRAIN
 455 DT DCP26
 456 DI 0 428 600
 457 DQ 0 125 125
 *

458 KK ROCP26
 459 KM WARM SPRINGS
 460 RD 1200 0.009 .015 0 TRAP 100 0
 *

HEC-1 INPUT

PAGE 14

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

461 KK DCRMJD
 462 KM RECALL FLOW FROM MAJOR AND CENTER, FLOW IN CENTER STREET
 463 DR DCRMJD
 *

464 KK RDCRMJD
 465 KM CENTER
 466 RD 4860 0.020 .015 0 TRAP 100 0
 *

467 KK WSCRD
 468 BA 0.161
 469 PB 2.86
 470 LS 0 79.62
 471 UD 0.249
 *

472 KK CP27
 473 KM COMBINE ROCP26, RDCRMJD, AND WSCRD
 474 KM AT WARM SPRINGS AND CENTER
 475 HC 3
 *

476 KK OCP27
 477 KM OVERFLOW AT WARM SPRINGS AND CENTER
 478 KM DIVERT OUT FLOW IN STORM DRAIN
 479 DT DCP27
 480 DI 0 491 600
 481 DQ 0 138 138
 *

482 KK FWLMD
 483 BA 0.294
 484 PB 2.86
 485 LS 0 84.1
 486 UD 0.281
 *

487 KK DCP26
 488 KM RECALL FLOW FROM WARM SPRINGS AND PALO VERDE, FLOW IN STORM DRAIN
 489 DR DCP26
 *

490 KK RDCP26
 491 KM CONCRETE CHANNEL, CENTER STREET, EARTH CHANNEL IN LAKE MEAD
 492 RD 4200 0.013 .015 0 TRAP 100 0
 *

493 KK CP28
 494 KM COMBINE OCP27, FWLMD, AND RDCP26
 495 KM AT PAWNEE AND LAKE MEAD (UPSTREAM OF 10X3 CULVERT)
 496 HC 3
 *

HEC-1 INPUT

PAGE 15

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

497 KK BKLMMD
 498 BA 0.345
 499 PB 2.86
 500 LS 0 85.72
 501 UD 0.316
 *

502 KK RBKLMMD
 503 KM LAKE MEAD, FUTURE REGIONAL FACILITY
 504 RD 3070 0.013 .013 0 TRAP 20 3
 *

505 KK WSLMD
 506 BA 0.286
 507 PB 2.86
 508 LS 0 82.88
 509 UD 0.291
 *

510 KK CP29
 511 KM COMBINE RBKLMMD AND WSLMD
 512 KM AT WARM SPRINGS AND LAKE MEAD
 513 HC 2
 *

514 KK DCP27
 515 KM RECALL FLOW FROM WARM SPRINGS AND CENTER
 516 KM FLOW IN STORM DRAIN, THEN EARTH CHANNEL
 517 DR DCP27

```

*
518 KK RDCP27
519 KM STORM DRAIN IN WARM SPRINGS
520 RD 1200 0.013 .013 0 TRAP 8 0
*

521 KK CP30
522 KM COMBINE CP29 AND RDCP27 AT WEST SIDE LAKE MEAD JUST N. OF WARM SPRINGS
523 HC 2
*

524 KK RCP30
525 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
526 RD 1700 0.010 .013 0 TRAP 16 0
*

527 KK CRCLMD
528 BA 0.045
529 PB 2.86
530 LS 0 91.77
531 UD 0.124
*

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HEC-1 INPUT

PAGE 16

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

532 KK ROCRLMD
533 KM MAJOR
534 RD 1970 0.018 .015 0 TRAP 100 0
*

535 KK CP31
536 KM COMBINE RCP30 AND DCRLMD
537 HC 2
*

538 KK RCP31
539 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
540 RD 1290 0.011 .013 0 TRAP 16 0
*

541 KK CP32
542 KM COMBINE CP28 AND RCP31
543 KM AT PAMNEE AND LAKE MEAD (PROPOSED FACILITY)
544 HC 2
*

545 KK RCP32
546 KM PROPOSED FACILITY, CONCRETE ARCH STORM DRAIN
547 RD 1560 0.0075 .013 0 TRAP 16 0
*

548 KK DD
549 BA 0.055
550 PB 2.86
551 LS 0 86.29
552 UD 0.146
*

553 KK CP33
554 KM COMBINE RCP32 WITH DD
555 HC 2
*

556 KK RCP33
557 KM LINING = CONCRETE
558 RD 520 0.0060 .013 0 TRAP 16 0
*

559 KK ED
560 BA 0.032
561 PB 2.86
562 LS 0 83.56
563 UD 0.124
*

```

1

HEC-1 INPUT

PAGE 17

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

564 KK CP34
565 KM COMBINE RCP33 WITH ED
566 HC 2
*

567 KK RCP34
568 KM LINING = CONCRETE
569 RD 980 0.0060 .013 0 TRAP 16 0
*

570 KK FD
571 BA 0.014
572 PB 2.86
573 LS 0 94.2
574 UD 0.083
*

575 KK CP35
576 KM COMBINE RCP34 WITH FD
577 HC 2
*

578 KK GD
579 BA 0.015
580 PB 2.86

```

```

581      LS      0      94.2
582      UD      0.075
*
583      KK      CP36
584      KM      COMBINE RCP35 WITH GD
585      HC      2
*
586      KK      RCP36
587      KM      LINING = CONCRETE
588      RD      930 0.0070 .013      0      TRAP      16      0
*
589      KK      OFFD1*
590      KM      START OF CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS*****
*
591      BA      0.082
592      PB      2.86
593      LS      0      93.0
594      UD      0.156
*
595      KKRTOFFD1*
596      RD      7600 0.009 0.016      0      TRAP      40      5
*

```

HEC-1 INPUT

PAGE 18

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

597      KK      OFFD2*
598      BA      0.118
599      PB      2.86
600      LS      0      79.0
601      UD      0.333
*
602      KKRTOFFD2*
603      RD      1400 0.012 0.016      0      TRAP      40      5
*
604      KK      OFFD2A*
605      BA      0.107
606      PB      2.86
607      LS      0      85.5
608      UD      0.212
*
609      KK      COFD2A*
610      HC      3
*
611      KKDIVERSION*
612      DT      SPLIT1*
613      DI      0      121      312
614      DQ      0      0      39
*
615      KKRCOFD2A*
616      RD      1300 0.01 0.016      0      TRAP      40      5
*
617      KK      OFFD5*
618      BA      0.322
619      PB      2.86
620      LS      0      85.5
621      UD      0.150
*
622      KK      COFD5*
623      HC      2
*
624      KK      RCOFD5*
625      RD      1800 0.013 0.016      0      TRAP      40      5
*
626      KK      OFFD6*
627      BA      0.114
628      PB      2.86
629      LS      0      92.0
630      UD      0.162
*

```

HEC-1 INPUT

PAGE 19

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

631      KK      COFD6*
632      HC      2
*
633      KK      DIVERT*
634      DT      SPLIT2*
635      DI      0      759
636      DQ      0      177
*
637      KK      OFFD7*
638      BA      0.0222
639      PB      2.86
640      LS      0      92
641      UD      0.135
*
642      KKRTOFFD7*

```

643 RK 500 0.01 0.016 0 TRAP 3 50
 *
 644 KK OND1*
 645 BA 0.0433
 646 PB 2.77
 647 LS 0 88
 648 UD 0.197
 *
 649 KK CONDI*
 650 HC 3
 *
 651 KK RCONDI*
 652 KM ROUTE IN GRASS CHANNEL
 653 RK 1600 .01 .03 0 TRAP 0 5
 *
 654 KK OND4*
 655 BA 0.0681
 656 PB 2.77
 657 LS 0 90.6
 658 UD 0.211
 *
 659 KK DBOND4*
 660 KO 3
 661 RS 1 ELEV 3.0
 662 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
 663 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
 664 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
 *

1

HEC-1 INPUT

PAGE 20

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

665 KK OND5*
 666 BA 0.0558
 667 PB 2.77
 668 LS 0 90.8
 669 UD 0.196
 *
 670 KK DBOND5*
 671 KO 3
 672 RS 1 ELEV 3.0
 673 SV 0 2.8 3.4 4.4 5.1 6.2 7.6
 674 SE 0 2.6 2.8 3.1 3.3 3.6 4.0
 675 SQ 0 12.5 13.2 14.13 14.72 15.56 16.6
 *
 676 KK CONDS*
 677 HC 3
 *
 678 KK RCONDS*
 679 KM ROUTE IN RIP RAP CHANNEL TO PONDS
 680 RK 1600 0.125 .04 0 TRAP 15 3
 *
 681 KK OND11*
 682 KM WRF ONSITE BASIN OND11
 683 BA 0.0122
 684 PB 2.77
 685 LS 0 91
 686 UD 0.206
 *
 687 KK ROND11*
 688 RD 1950 0.0120 .025 0 TRAP 15 3
 *
 689 KK OND11A*
 690 KM MODIFIED WRF ONSITE BASIN POND1
 691 BA 0.075
 692 PB 2.77
 693 LS 0 85
 694 UD 0.236
 *
 695 KKCHANNEL2
 696 KM COMBINE RCONDS*, ROND11*, AND OND11A* AT WRF CHANNEL2
 697 HC 3
 *

1

HEC-1 INPUT

PAGE 21

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

698 KKRETURN1*
 699 DR SPLIT1*
 *
 700 KKRETURN2*
 701 DR SPLIT2*
 *
 702 KK OFFD3*
 703 BA 0.160
 704 PB 2.86
 705 LS 0 79.0
 706 UD 0.264
 *
 707 KK COFD3*


```

708      HC      3
      *
709      KK RCOFD3*
710      RD      800 0.0075 .025      0      TRAP      20      3
      *
711      KK COND2A*
712      BA 0.0066
713      PB 2.77
714      LS      0      88.0
715      UD 0.105
      *
716      KK COND2A*
717      HC      2
      *
718      KK COND3*
719      BA 0.0086
720      PB 2.77
721      LS      0      88.0
722      UD 0.139
      *
723      KK COND3*
724      HC      2
      *
725      KK COND2*
726      KM MODIFIED WRF ONSITE BASIN COND2
727      BA 0.046
728      PB 2.77
729      LS      0      77.93
730      UD 0.240
      *

```

1

HEC-1 INPUT

PAGE 22

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

731      KK CP1*
732      KM COMBINE FLOW FROM COFD3 AND COND-2*
733      HC      2
      *
734      KK COND12*
735      BA 0.0122
736      PB 2.77
737      LS      0      85
738      UD 0.183
      *
      * *****END CITY OF HENDERSON WRF PHASE 1B EXPANSION BASINS*****
      * *****FBS&J MAY 1999*****
      *
739      KK OFFD-2B
740      BA 0.092
741      PB 2.86
742      LS      0      63.59
743      UD 0.267
      *
744      KKROFFD-2B
745      KM ROUTE OFFD-2B
746      RD 3380 0.019 0.035      0      TRAP
      *
747      KKCHANNEL1
748      KM COMBINE CP1*, COND-12* AND ROFFD-2B
749      HC      3
      *
750      KKCHANNEL1
751      KM ROUTE CHANNEL1 TO CP25
752      RD 2200 0.005 0.013      0      TRAP      20      2
      *
753      KK COND-1
754      BA 0.079
755      PB 2.86
756      LS      0      83.90
757      UD 0.261
      *
758      KK COND-2
759      BA 0.271
760      PB 2.86
761      LS      0      84.19
762      UD 0.331
      *

```

1

HEC-1 INPUT

PAGE 23

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

763      KK CP25
764      KM COMBINE COND-1, COND-2, AND RCHANNEL1
765      HC      3
      *
766      KK COND-2A
767      BA 0.222
768      PB 2.86
769      LS      0      83.75
770      UD 0.344
      *

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT LINE	(V) ROUTING	(--->) DIVERSION OR PUMP FLOW
NO.	(.) CONNECTOR	(<---) RETURN OF DIVERTED OR PUMPED FLOW
27	OFFD-2	
40	OFFD-3	
45	OFFD-3A	
50	ROFFD-3A	
53	CP1	
56	OFFD-2A	
61	OFFD-1	
66	CP2	
69	OFFD-4	
74	CP2B	
77	RC2B	
80	CP2A	
83	RCP2A	
86	OND-25	
91	OFFD-25	
96	CP3	
99	OND-26	
104	OFFD-26	
109	CP4	
112	CP5	
115	RCP5	
118	OND-20	
123	OND-21	
128	CP8	
131	OND-27	
136	OFFD-27A	
141	OFFD-27B	
146	CP6	
149	RCP6	
152	OND-22	
157	CP7	
160	RCP7	
163	CP9	

```

167 .-----> DIV1
166 ODIV1
.
.
170 . DB-1
.
176 CP9A.....
.
V
V
179 DET1
.
.
187 .<----- DIV1
186 . DIV1
.
.
188 CP10.....
.
V
V
190 RCP10
.
.
193 . OND-18
.
V
V
198 . ROND-18
.
.
201 . OND-19
.
.
206 CP11.....
.
V
V
209 RCP11
.
.
212 . OND-13
.
.
217 . OND-14
.
.
222 CP12.....
.
V
V
225 RCP12
.
.
228 . OND-12
.
.
233 CP13.....
.
V
V
236 RCP13
.
.
239 . OND-10
.
.
244 CP14.....
.
.
247 . OND-24
.
V
V
252 . ROND-24
.
.
255 . OND-23
.
.
260 CP15.....
.
V
V
263 RCP15
.
.
266 . OND-15
.
.
271 CP16.....
.
V
V
274 RCP16
.
.
277 . OND-11
.
.
282 CP17.....
.
V
V
285 RCP17
.
.
288 . OND-5
.
.
293 . OND-6
.
.
298 CP18.....
.

```

```

301      .          OND-17  

       .          V  

       .          V  

306      .          ROND-17  

       .  

       .  

309      .          .          OND-8  

       .          .  

       .  

314      .          CP19.....  

       .          V  

       .          V  

317      .          RCP19  

       .  

       .  

320      .          .          OND-16  

       .          .          V  

       .          .          V  

325      .          .          ROND-16  

       .  

       .  

328      .          .          .          OND-7  

       .          .  

       .  

333      .          CP20.....  

       .          V  

       .          V  

336      .          RCP20  

       .  

       .  

339      .          .          OND7*  

       .          .  

       .  

345      .          CP21.....  

       .          V  

       .          V  

348      .          RCP21  

       .  

       .  

351      .          .          OND-4  

       .          .          V  

       .          .  

356      .          .          .          OND6*  

       .          .  

       .  

362      .          CP22.....  

       .  

366      .          ----->    DIV2  

365      .          ODIV2  

       .  

       .  

369      .          .          DB-2  

       .          .  

       .  

374      .          CP22A.....  

       .          V  

       .          V  

377      .          DET2  

       .  

       .  

385      .          .          <-----    DIV2  

384      .          .          DIV2  

       .          .  

       .  

386      .          CP23.....  

       .          V  

       .          V  

388      .          RCP23  

       .  

       .  

391      .          .          OND-3  

       .          .  

       .  

396      .          .          .          OND8*  

       .          .  

       .  

402      .          CP24.....  

       .  

       .  

405      .          .          OND-9  

       .          .  

       .  

410      .          .          .          BKPVD  

       .          .          V  

       .          .          V  

415      .          .          RBKPDV  

       .          .  

       .  

418      .          .          .          BRMJD  

       .          .          V  

       .          .          V  

423      .          .          .          RBKMJD  

       .          .  

       .  

426      .          .          .          CRMJD  

       .          .          .  

       .  

434      .          .          .          -----> DCRMJD  

431      .          .          .          OCRMJD  

       .          .          V  

       .          .          V  

437      .          .          .          ROCRMJD  

       .          .  

       .  

440      .          .          .          CP25A.....

```

```

443      .          .          .          .          WSPVD
         .          .          .          .          .
448      .          .          CP26.....
         .          .          .          .          .
455      .          .          .          .          DCP26
452      .          .          OCP26
         .          .          V
         .          .          V
458      .          .          ROCP26
         .          .          .          .          .
463      .          .          .          .          .<----- DCRMJD
461      .          .          DCRMJD
         .          .          V
         .          .          V
464      .          .          RDCRMJD
         .          .          .          .          .
467      .          .          .          .          WSCRD
         .          .          .          .          .
472      .          .          CP27.....
         .          .          .          .          .
479      .          .          .          .          DCP27
476      .          .          OCP27
         .          .          .          .          .
482      .          .          FWLMD
         .          .          .          .          .
489      .          .          .          .          .<----- DCP26
487      .          .          .          .          DCP26
         .          .          V
         .          .          V
490      .          .          RDCP26
         .          .          .          .          .
493      .          .          CP28.....
         .          .          .          .          .
497      .          .          BKLMd
         .          .          V
         .          .          V
502      .          .          RBKLMd
         .          .          .          .          .
505      .          .          .          .          WSLMD
         .          .          .          .          .
510      .          .          CP29.....
         .          .          .          .          .
517      .          .          .          .          .<----- DCP27
514      .          .          .          .          DCP27
         .          .          V
         .          .          V
518      .          .          RDCP27
         .          .          .          .          .
521      .          .          CP30.....
         .          .          V
         .          .          V
524      .          .          RCP30
         .          .          .          .          .
527      .          .          .          .          CRlMD
         .          .          .          .          V
         .          .          .          .          V
532      .          .          .          .          ROCRLMD
         .          .          .          .          .
535      .          .          CP31.....
         .          .          V
         .          .          V
538      .          .          RCP31
         .          .          .          .          .
541      .          .          CP32.....
         .          .          V
         .          .          V
545      .          .          RCP32
         .          .          .          .          .
548      .          .          .          .          DD
         .          .          .          .          .
553      .          .          CP33.....
         .          .          V
         .          .          V
556      .          .          RCP33
         .          .          .          .          .
559      .          .          .          .          ED
         .          .          .          .          .
564      .          .          CP34.....
         .          .          V
         .          .          V
567      .          .          RCP34
         .          .          .          .          .
570      .          .          .          .          FD

```

```

575      CP35.....
578      GD
583      CP36.....
586      RCP36
589      OFFD1*
595      RTOFFD1*
597      OFFD2*
602      RTOFFD2*
604      OFFD2A*
609      COFD2A*
612      -----> SPLIT1*
611      DIVERSIO
615      RCOFD2A*
617      OFFD5*
622      COFD5*
624      RCOFD5*
626      OFFD6*
631      COFD6*
634      -----> SPLIT2*
633      DIVERT*
637      OFFD7*
642      RTOFFD7*
644      OND1*
649      CONDI*
651      RCONDI*
654      OND4*
659      DBOND4*
665      OND5*
670      DBOND5*
676      CONDS*
678      RCONDS*
681      OND11*
687      ROND11*
689      OND11A*
695      CHANNEL2
699      <----- SPLIT1*
698      RETURN1*

```

```

701 . . . . .<----- SPLIT2*
702 . . . . .RETURN2*
703 . . . . .
704 . . . . .OFFD3*
705 . . . . .
706 . . . . .
707 . . . . .COFD3*
708 . . . . .V
709 . . . . .V
710 . . . . .RCOFD3*
711 . . . . .
712 . . . . .OND2A*
713 . . . . .
714 . . . . .COND2A*
715 . . . . .
716 . . . . .
717 . . . . .OND3*
718 . . . . .
719 . . . . .COND3*
720 . . . . .
721 . . . . .OND2*
722 . . . . .
723 . . . . .CP1*
724 . . . . .
725 . . . . .OND12*
726 . . . . .
727 . . . . .OFFD-2B
728 . . . . .V
729 . . . . .V
730 . . . . .ROFFD-2B
731 . . . . .
732 . . . . .CHANNEL1
733 . . . . .V
734 . . . . .V
735 . . . . .RCHANNEL
736 . . . . .
737 . . . . .OND-1
738 . . . . .
739 . . . . .OND-2
740 . . . . .
741 . . . . .CP25
742 . . . . .
743 . . . . .OND-2A
744 . . . . .
745 . . . . .
746 . . . . .
747 . . . . .
748 . . . . .
749 . . . . .
750 . . . . .
751 . . . . .
752 . . . . .
753 . . . . .
754 . . . . .
755 . . . . .
756 . . . . .
757 . . . . .
758 . . . . .
759 . . . . .
760 . . . . .
761 . . . . .
762 . . . . .
763 . . . . .
764 . . . . .
765 . . . . .
766 . . . . .

```

{***} RUNOFF ALSO COMPUTED AT THIS LOCATION

```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 09JAN86 TIME 19:54:01 *
*****

```

```

*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****

```

```

*****
* THE LANDWELL COMPANY *
* CONCEPTUAL DRAINAGE STUDY FOR *
* THE EASTSIDE PROPERTIES *
* PROPOSED CONDITIONS *
* INPUT FILE = PROPOSED100.DAT *
* INPUT FILE DATE = 12/21/05 *
* DESIGN STORM=100-YEAR 6-HOUR *
* STORM DISTRIBUTION = SDH #3 *
* MODELED BY=Matt Wilkinsch, P.E. (PBS&J) *
*****

```

```

DRAINAGE AREA
(SQUARE MILES) DARF
0-0.5 .99
0.5-1 .975
1-2 .95
2-3 .925
3-4 .915
4-5 .908

```

```

24 IO OUTPUT CONTROL VARIABLES
      IPRINT 5 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
      NMIN 5 MINUTES IN COMPUTATION INTERVAL
      IDATE 1 0 STARTING DATE
      ITIME 0000 STARTING TIME
      NQ 300 NUMBER OF HYDROGRAPH ORDINATES
      NDDATE 2 0 ENDING DATE
      NDTIME 0055 ENDING TIME

```


ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .09 HOURS
TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION
NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION
RATIOS OF PRECIPITATION
.99 .98 .95 .93 .92 .91

179 KK

* DET1 *

180 KO

OUTPUT CONTROL VARIABLES
IFRINT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE
MULTI-USE DETENTION BASIN, BYPASS 10-YR STORM, 48" OUTLET

HYDROGRAPH ROUTING DATA

182 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP STOR TYPE OF INITIAL CONDITION
RSVRIC -1.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

183 SV	STORAGE	.0	7.9	15.5	24.0	32.7	42.1
184 SE	ELEVATION	.00	2.00	3.00	4.00	5.00	6.00
185 SQ	DISCHARGE	0.	28.	50.	79.	94.	129.

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	47.	14.6	2.9	* 1	1640	201	5.	1.3	.3			
1	0005	2	0.	.0	.0	* 1	0825	102	47.	14.3	2.8	* 1	1645	202	5.	1.3	.3			
1	0010	3	0.	.0	.0	* 1	0830	103	46.	14.0	2.8	* 1	1650	203	4.	1.2	.3			
1	0015	4	0.	.0	.0	* 1	0835	104	45.	13.7	2.8	* 1	1655	204	4.	1.2	.3			
1	0020	5	0.	.0	.0	* 1	0840	105	44.	13.4	2.7	* 1	1700	205	4.	1.2	.3			
1	0025	6	0.	.0	.0	* 1	0845	106	43.	13.1	2.7	* 1	1705	206	4.	1.2	.3			
1	0030	7	0.	.0	.0	* 1	0850	107	42.	12.8	2.6	* 1	1710	207	4.	1.1	.3			
1	0035	8	0.	.0	.0	* 1	0855	108	41.	12.5	2.6	* 1	1715	208	4.	1.1	.3			
1	0040	9	0.	.0	.0	* 1	0900	109	41.	12.2	2.6	* 1	1720	209	4.	1.1	.3			
1	0045	10	0.	.0	.0	* 1	0905	110	40.	11.9	2.5	* 1	1725	210	4.	1.0	.3			
1	0050	11	0.	.0	.0	* 1	0910	111	39.	11.7	2.5	* 1	1730	211	4.	1.0	.3			
1	0055	12	0.	.0	.0	* 1	0915	112	38.	11.4	2.5	* 1	1735	212	4.	1.0	.3			
1	0100	13	0.	.0	.0	* 1	0920	113	37.	11.2	2.4	* 1	1740	213	3.	1.0	.2			
1	0105	14	0.	.0	.0	* 1	0925	114	37.	10.9	2.4	* 1	1745	214	3.	.9	.2			
1	0110	15	0.	.0	.0	* 1	0930	115	36.	10.6	2.4	* 1	1750	215	3.	.9	.2			
1	0115	16	0.	.0	.0	* 1	0935	116	35.	10.4	2.3	* 1	1755	216	3.	.9	.2			
1	0120	17	0.	.0	.0	* 1	0940	117	35.	10.2	2.3	* 1	1800	217	3.	.9	.2			
1	0125	18	0.	.0	.0	* 1	0945	118	34.	9.9	2.3	* 1	1805	218	3.	.9	.2			
1	0130	19	0.	.0	.0	* 1	0950	119	33.	9.7	2.2	* 1	1810	219	3.	.8	.2			
1	0135	20	0.	.0	.0	* 1	0955	120	33.	9.5	2.2	* 1	1815	220	3.	.8	.2			
1	0140	21	0.	.0	.0	* 1	1000	121	32.	9.2	2.2	* 1	1820	221	3.	.8	.2			
1	0145	22	0.	.0	.0	* 1	1005	122	31.	9.0	2.2	* 1	1825	222	3.	.8	.2			
1	0150	23	0.	.0	.0	* 1	1010	123	31.	8.8	2.1	* 1	1830	223	3.	.8	.2			
1	0155	24	0.	.0	.0	* 1	1015	124	30.	8.6	2.1	* 1	1835	224	3.	.7	.2			
1	0200	25	0.	.0	.0	* 1	1020	125	30.	8.4	2.1	* 1	1840	225	3.	.7	.2			
1	0205	26	0.	.0	.0	* 1	1025	126	29.	8.2	2.0	* 1	1845	226	3.	.7	.2			
1	0210	27	0.	.0	.0	* 1	1030	127	28.	8.0	2.0	* 1	1850	227	2.	.7	.2			
1	0215	28	0.	.0	.0	* 1	1035	128	28.	7.8	2.0	* 1	1855	228	2.	.7	.2			
1	0220	29	0.	.0	.0	* 1	1040	129	27.	7.6	1.9	* 1	1900	229	2.	.7	.2			
1	0225	30	0.	.0	.0	* 1	1045	130	26.	7.4	1.9	* 1	1905	230	2.	.6	.2			
1	0230	31	0.	.0	.0	* 1	1050	131	26.	7.3	1.8	* 1	1910	231	2.	.6	.2			
1	0235	32	0.	.0	.0	* 1	1055	132	25.	7.1	1.8	* 1	1915	232	2.	.6	.2			
1	0240	33	0.	.0	.0	* 1	1100	133	25.	6.9	1.8	* 1	1920	233	2.	.6	.2			
1	0245	34	0.	.0	.0	* 1	1105	134	24.	6.7	1.7	* 1	1925	234	2.	.6	.1			
1	0250	35	0.	.0	.0	* 1	1110	135	23.	6.6	1.7	* 1	1930	235	2.	.6	.1			
1	0255	36	0.	.0	.0	* 1	1115	136	23.	6.4	1.6	* 1	1935	236	2.	.6	.1			
1	0300	37	0.	.0	.0	* 1	1120	137	22.	6.3	1.6	* 1	1940	237	2.	.5	.1			
1	0305	38	0.	.0	.0	* 1	1125	138	22.	6.1	1.6	* 1	1945	238	2.	.5	.1			
1	0310	39	0.	.0	.0	* 1	1130	139	21.	6.0	1.5	* 1	1950	239	2.	.5	.1			
1	0315	40	0.	.0	.0	* 1	1135	140	21.	5.8	1.5	* 1	1955	240	2.	.5	.1			
1	0320	41	0.	.0	.0	* 1	1140	141	20.	5.7	1.4	* 1	2000	241	2.	.5	.1			
1	0325	42	1.	.4	.1	* 1	1145	142	20.	5.5	1.4	* 1	2005	242	2.	.5	.1			
1	0330	43	9.	2.6	.7	* 1	1150	143	19.	5.4	1.4	* 1	2010	243	2.	.5	.1			
1	0335	44	28.	7.8	2.0	* 1	1155	144	19.	5.3	1.3	* 1	2015	244	2.	.5	.1			

1	0340	45	49.	15.2	3.0 *	1	1200	145	18.	5.1	1.3 *	1	2020	245	2.	.4	.1
1	0345	46	76.	23.0	3.9 *	1	1205	146	18.	5.0	1.3 *	1	2025	246	2.	.4	.1
1	0350	47	90.	30.2	4.7 *	1	1210	147	17.	4.9	1.2 *	1	2030	247	2.	.4	.1
1	0355	48	106.	35.8	5.3 *	1	1215	148	17.	4.8	1.2 *	1	2035	248	1.	.4	.1
1	0400	49	119.	39.5	5.7 *	1	1220	149	17.	4.7	1.2 *	1	2040	249	1.	.4	.1
1	0405	50	127.	41.5	5.9 *	1	1225	150	16.	4.6	1.2 *	1	2045	250	1.	.4	.1
1	0410	51	129.	42.1	6.0 *	1	1230	151	16.	4.4	1.1 *	1	2050	251	1.	.4	.1
1	0415	52	127.	41.6	5.9 *	1	1235	152	15.	4.3	1.1 *	1	2055	252	1.	.4	.1
1	0420	53	124.	40.8	5.9 *	1	1240	153	15.	4.2	1.1 *	1	2100	253	1.	.4	.1
1	0425	54	121.	40.0	5.8 *	1	1245	154	15.	4.1	1.0 *	1	2105	254	1.	.4	.1
1	0430	55	118.	39.2	5.7 *	1	1250	155	14.	4.0	1.0 *	1	2110	255	1.	.3	.1
1	0435	56	115.	38.4	5.6 *	1	1255	156	14.	3.9	1.0 *	1	2115	256	1.	.3	.1
1	0440	57	112.	37.6	5.5 *	1	1300	157	14.	3.8	1.0 *	1	2120	257	1.	.3	.1
1	0445	58	110.	36.9	5.4 *	1	1305	158	13.	3.7	1.0 *	1	2125	258	1.	.3	.1
1	0450	59	107.	36.2	5.4 *	1	1310	159	13.	3.7	.9 *	1	2130	259	1.	.3	.1
1	0455	60	104.	35.5	5.3 *	1	1315	160	13.	3.6	.9 *	1	2135	260	1.	.3	.1
1	0500	61	102.	34.8	5.2 *	1	1320	161	12.	3.5	.9 *	1	2140	261	1.	.3	.1
1	0505	62	99.	34.2	5.2 *	1	1325	162	12.	3.4	.9 *	1	2145	262	1.	.3	.1
1	0510	63	97.	33.5	5.1 *	1	1330	163	12.	3.3	.8 *	1	2150	263	1.	.3	.1
1	0515	64	95.	32.9	5.0 *	1	1335	164	11.	3.2	.8 *	1	2155	264	1.	.3	.1
1	0520	65	93.	32.2	4.9 *	1	1340	165	11.	3.2	.8 *	1	2200	265	1.	.3	.1
1	0525	66	92.	31.6	4.9 *	1	1345	166	11.	3.1	.8 *	1	2205	266	1.	.3	.1
1	0530	67	91.	31.0	4.8 *	1	1350	167	11.	3.0	.8 *	1	2210	267	1.	.3	.1
1	0535	68	90.	30.4	4.7 *	1	1355	168	10.	2.9	.7 *	1	2215	268	1.	.3	.1
1	0540	69	89.	29.7	4.7 *	1	1400	169	10.	2.9	.7 *	1	2220	269	1.	.2	.1
1	0545	70	88.	29.1	4.6 *	1	1405	170	10.	2.8	.7 *	1	2225	270	1.	.2	.1
1	0550	71	87.	28.5	4.5 *	1	1410	171	10.	2.7	.7 *	1	2230	271	1.	.2	.1
1	0555	72	86.	27.9	4.5 *	1	1415	172	9.	2.7	.7 *	1	2235	272	1.	.2	.1
1	0600	73	85.	27.4	4.4 *	1	1420	173	9.	2.6	.7 *	1	2240	273	1.	.2	.1
1	0605	74	84.	26.8	4.3 *	1	1425	174	9.	2.5	.6 *	1	2245	274	1.	.2	.1
1	0610	75	83.	26.2	4.3 *	1	1430	175	9.	2.5	.6 *	1	2250	275	1.	.2	.1
1	0615	76	82.	25.6	4.2 *	1	1435	176	9.	2.4	.6 *	1	2255	276	1.	.2	.1
1	0620	77	81.	25.1	4.1 *	1	1440	177	8.	2.3	.6 *	1	2300	277	1.	.2	.1
1	0625	78	80.	24.5	4.1 *	1	1445	178	8.	2.3	.6 *	1	2305	278	1.	.2	.1
1	0630	79	79.	24.0	4.0 *	1	1450	179	8.	2.2	.6 *	1	2310	279	1.	.2	.0
1	0635	80	77.	23.4	3.9 *	1	1455	180	8.	2.2	.6 *	1	2315	280	1.	.2	.0
1	0640	81	75.	22.9	3.9 *	1	1500	181	8.	2.1	.5 *	1	2320	281	1.	.2	.0
1	0645	82	74.	22.4	3.8 *	1	1505	182	7.	2.1	.5 *	1	2325	282	1.	.2	.0
1	0650	83	72.	21.9	3.8 *	1	1510	183	7.	2.0	.5 *	1	2330	283	1.	.2	.0
1	0655	84	70.	21.4	3.7 *	1	1515	184	7.	2.0	.5 *	1	2335	284	1.	.2	.0
1	0700	85	69.	20.9	3.6 *	1	1520	185	7.	1.9	.5 *	1	2340	285	1.	.2	.0
1	0705	86	67.	20.5	3.6 *	1	1525	186	7.	1.9	.5 *	1	2345	286	1.	.2	.0
1	0710	87	65.	20.0	3.5 *	1	1530	187	7.	1.8	.5 *	1	2350	287	1.	.2	.0
1	0715	88	64.	19.6	3.5 *	1	1535	188	6.	1.8	.5 *	1	2355	288	1.	.2	.0
1	0720	89	62.	19.1	3.4 *	1	1540	189	6.	1.8	.4 *	2	0000	289	1.	.2	.0
1	0725	90	61.	18.7	3.4 *	1	1545	190	6.	1.7	.4 *	2	0005	290	1.	.1	.0
1	0730	91	60.	18.3	3.3 *	1	1550	191	6.	1.7	.4 *	2	0010	291	1.	.1	.0
1	0735	92	58.	17.9	3.3 *	1	1555	192	6.	1.6	.4 *	2	0015	292	0.	.1	.0
1	0740	93	57.	17.5	3.2 *	1	1600	193	6.	1.6	.4 *	2	0020	293	0.	.1	.0
1	0745	94	55.	17.1	3.2 *	1	1605	194	6.	1.5	.4 *	2	0025	294	0.	.1	.0
1	0750	95	54.	16.7	3.1 *	1	1610	195	5.	1.5	.4 *	2	0030	295	0.	.1	.0
1	0755	96	53.	16.4	3.1 *	1	1615	196	5.	1.5	.4 *	2	0035	296	0.	.1	.0
1	0800	97	52.	16.0	3.1 *	1	1620	197	5.	1.4	.4 *	2	0040	297	0.	.1	.0
1	0805	98	50.	15.7	3.0 *	1	1625	198	5.	1.4	.4 *	2	0045	298	0.	.1	.0
1	0810	99	49.	15.3	3.0 *	1	1630	199	5.	1.4	.3 *	2	0050	299	0.	.1	.0
1	0815	100	48.	15.0	2.9 *	1	1635	200	5.	1.3	.3 *	2	0055	300	0.	.1	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
		(CFS)				
+	129.	4.17	74.	24.	23.	23.
		(INCHES)	.334	.429	.429	.429
		(AC-FT)	37.	47.	47.	47.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	42.	4.17	24.	7.	7.	7.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	6.00	4.17	3.96	1.36	1.31	1.31
CUMULATIVE AREA =			2.07 SQ MI			

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .98

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1			0.	.0	.0	*	1	0820	101			45.	13.9	2.8	*	1	1640	201			4.	1.2	.3
1	0005	2			0.	.0	.0	*	1	0825	102			44.	13.6	2.7	*	1	1645	202			4.	1.2	.3
1	0010	3			0.	.0	.0	*	1	0830	103			44.	13.3	2.7	*	1	1650	203			4.	1.2	.3
1	0015	4			0.	.0	.0	*	1	0835	104			43.	13.0	2.7	*	1	1655	204			4.	1.1	.3
1	0020	5			0.	.0	.0	*	1	0840	105			42.	12.7	2.6	*	1	1700	205			4.	1.1	.3
1	0025	6			0.	.0	.0	*	1	0845	106			41.	12.4	2.6	*	1	1705	206			4.	1.1	.3
1	0030	7			0.	.0	.0	*	1	0850	107			40.	12.1	2.6	*	1	1710	207			4.	1.1	.3
1	0035	8			0.	.0	.0	*	1	0855	108			40.	11.9	2.5	*	1	1715	208			4.	1.0	.3
1	0040	9			0.	.0	.0	*	1	0900	109			39.	11.6	2.5	*	1	1720	209			4.	1.0	.3
1	0045	10			0.	.0	.0	*	1	0905	110			38.	11.3	2.5	*	1	1725	210			4.	1.0	.3
1	0050	11			0.	.0	.0	*	1	0910	111			37.	11.1	2.4	*	1	1730	211			3.	1.0	.2
1	0055	12			0.	.0	.0	*	1	0915	112			36.	10.8	2.4	*	1	1735	212			3.	.9	.2
1	0100	13			0.	.0	.0	*	1	0920	113			36.	10.6	2.4	*	1	1740	213			3.	.9	.2
1	0105	14			0.	.0	.0	*	1	0925	114			35.	10.3	2.3	*	1	1745	214			3.	.9	.2
1	0110	15			0.	.0	.0	*	1	0930	115			34.	10.1	2.3	*	1	1750	215			3.	.9	.2
1	0115	16			0.	.0	.0	*	1	0935	116			34.	9.9	2.3	*	1	1755	216			3.	.9	.2
1	0120	17			0.	.0	.0	*	1	0940	117			33.	9.6	2.2	*	1	1800	217			3.	.8	.2
1	0125	18			0.	.0	.0	*	1	0945	118			32.	9.4	2.2	*	1	1805	218			3.	.8	.2

1	0130	19	0.	.0	.0 * 1	0950 119	32.	9.2	2.2 * 1	1810 219	3.	.8	.2
1	0135	20	0.	.0	.0 * 1	0955 120	31.	9.0	2.1 * 1	1815 220	3.	.8	.2
1	0140	21	0.	.0	.0 * 1	1000 121	31.	8.8	2.1 * 1	1820 221	3.	.8	.2
1	0145	22	0.	.0	.0 * 1	1005 122	30.	8.5	2.1 * 1	1825 222	3.	.7	.2
1	0150	23	0.	.0	.0 * 1	1010 123	29.	8.3	2.1 * 1	1830 223	3.	.7	.2
1	0155	24	0.	.0	.0 * 1	1015 124	29.	8.1	2.0 * 1	1835 224	2.	.7	.2
1	0200	25	0.	.0	.0 * 1	1020 125	28.	7.9	2.0 * 1	1840 225	2.	.7	.2
1	0205	26	0.	.0	.0 * 1	1025 126	28.	7.8	2.0 * 1	1845 226	2.	.7	.2
1	0210	27	0.	.0	.0 * 1	1030 127	27.	7.6	1.9 * 1	1850 227	2.	.7	.2
1	0215	28	0.	.0	.0 * 1	1035 128	26.	7.4	1.9 * 1	1855 228	2.	.6	.2
1	0220	29	0.	.0	.0 * 1	1040 129	26.	7.2	1.8 * 1	1900 229	2.	.6	.2
1	0225	30	0.	.0	.0 * 1	1045 130	25.	7.0	1.8 * 1	1905 230	2.	.6	.2
1	0230	31	0.	.0	.0 * 1	1050 131	24.	6.9	1.7 * 1	1910 231	2.	.6	.2
1	0235	32	0.	.0	.0 * 1	1055 132	24.	6.7	1.7 * 1	1915 232	2.	.6	.1
1	0240	33	0.	.0	.0 * 1	1100 133	23.	6.5	1.7 * 1	1920 233	2.	.6	.1
1	0245	34	0.	.0	.0 * 1	1105 134	23.	6.4	1.6 * 1	1925 234	2.	.5	.1
1	0250	35	0.	.0	.0 * 1	1110 135	22.	6.2	1.6 * 1	1930 235	2.	.5	.1
1	0255	36	0.	.0	.0 * 1	1115 136	22.	6.1	1.5 * 1	1935 236	2.	.5	.1
1	0300	37	0.	.0	.0 * 1	1120 137	21.	5.9	1.5 * 1	1940 237	2.	.5	.1
1	0305	38	0.	.0	.0 * 1	1125 138	21.	5.8	1.5 * 1	1945 238	2.	.5	.1
1	0310	39	0.	.0	.0 * 1	1130 139	20.	5.6	1.4 * 1	1950 239	2.	.5	.1
1	0315	40	0.	.0	.0 * 1	1135 140	20.	5.5	1.4 * 1	1955 240	2.	.5	.1
1	0320	41	0.	.0	.0 * 1	1140 141	19.	5.4	1.4 * 1	2000 241	2.	.5	.1
1	0325	42	1.	.3	.1 * 1	1145 142	19.	5.2	1.3 * 1	2005 242	2.	.5	.1
1	0330	43	8.	2.3	.6 * 1	1150 143	18.	5.1	1.3 * 1	2010 243	2.	.4	.1
1	0335	44	26.	7.3	1.9 * 1	1155 144	18.	5.0	1.3 * 1	2015 244	2.	.4	.1
1	0340	45	47.	14.3	2.8 * 1	1200 145	17.	4.9	1.2 * 1	2020 245	1.	.4	.1
1	0345	46	72.	21.9	3.8 * 1	1205 146	17.	4.7	1.2 * 1	2025 246	1.	.4	.1
1	0350	47	87.	28.9	4.6 * 1	1210 147	16.	4.6	1.2 * 1	2030 247	1.	.4	.1
1	0355	48	100.	34.2	5.2 * 1	1215 148	16.	4.5	1.1 * 1	2035 248	1.	.4	.1
1	0400	49	113.	37.8	5.5 * 1	1220 149	16.	4.4	1.1 * 1	2040 249	1.	.4	.1
1	0405	50	120.	39.6	5.7 * 1	1225 150	15.	4.3	1.1 * 1	2045 250	1.	.4	.1
1	0410	51	122.	40.2	5.8 * 1	1230 151	15.	4.2	1.1 * 1	2050 251	1.	.4	.1
1	0415	52	120.	39.7	5.7 * 1	1235 152	15.	4.1	1.0 * 1	2055 252	1.	.4	.1
1	0420	53	117.	38.9	5.7 * 1	1240 153	14.	4.0	1.0 * 1	2100 253	1.	.3	.1
1	0425	54	114.	38.1	5.6 * 1	1245 154	14.	3.9	1.0 * 1	2105 254	1.	.3	.1
1	0430	55	111.	37.4	5.5 * 1	1250 155	14.	3.8	1.0 * 1	2110 255	1.	.3	.1
1	0435	56	109.	36.6	5.4 * 1	1255 156	13.	3.7	.9 * 1	2115 256	1.	.3	.1
1	0440	57	106.	35.9	5.3 * 1	1300 157	13.	3.6	.9 * 1	2120 257	1.	.3	.1
1	0445	58	103.	35.2	5.3 * 1	1305 158	13.	3.5	.9 * 1	2125 258	1.	.3	.1
1	0450	59	101.	34.6	5.2 * 1	1310 159	12.	3.5	.9 * 1	2130 259	1.	.3	.1
1	0455	60	98.	33.9	5.1 * 1	1315 160	12.	3.4	.9 * 1	2135 260	1.	.3	.1
1	0500	61	96.	33.3	5.1 * 1	1320 161	12.	3.3	.8 * 1	2140 261	1.	.3	.1
1	0505	62	94.	32.6	5.0 * 1	1325 162	11.	3.2	.8 * 1	2145 262	1.	.3	.1
1	0510	63	93.	32.0	4.9 * 1	1330 163	11.	3.1	.8 * 1	2150 263	1.	.3	.1
1	0515	64	92.	31.4	4.9 * 1	1335 164	11.	3.1	.8 * 1	2155 264	1.	.3	.1
1	0520	65	91.	30.8	4.8 * 1	1340 165	11.	3.0	.8 * 1	2200 265	1.	.3	.1
1	0525	66	90.	30.2	4.7 * 1	1345 166	10.	2.9	.7 * 1	2205 266	1.	.3	.1
1	0530	67	89.	29.6	4.6 * 1	1350 167	10.	2.8	.7 * 1	2210 267	1.	.2	.1
1	0535	68	88.	29.0	4.6 * 1	1355 168	10.	2.8	.7 * 1	2215 268	1.	.2	.1
1	0540	69	87.	28.4	4.5 * 1	1400 169	10.	2.7	.7 * 1	2220 269	1.	.2	.1
1	0545	70	86.	27.8	4.4 * 1	1405 170	9.	2.6	.7 * 1	2225 270	1.	.2	.1
1	0550	71	85.	27.2	4.4 * 1	1410 171	9.	2.6	.7 * 1	2230 271	1.	.2	.1
1	0555	72	84.	26.6	4.3 * 1	1415 172	9.	2.5	.6 * 1	2235 272	1.	.2	.1
1	0600	73	83.	26.0	4.2 * 1	1420 173	9.	2.5	.6 * 1	2240 273	1.	.2	.1
1	0605	74	82.	25.5	4.2 * 1	1425 174	9.	2.4	.6 * 1	2245 274	1.	.2	.1
1	0610	75	81.	24.9	4.1 * 1	1430 175	8.	2.3	.6 * 1	2250 275	1.	.2	.1
1	0615	76	80.	24.4	4.0 * 1	1435 176	8.	2.3	.6 * 1	2255 276	1.	.2	.0
1	0620	77	78.	23.8	4.0 * 1	1440 177	8.	2.2	.6 * 1	2300 277	1.	.2	.0
1	0625	78	77.	23.3	3.9 * 1	1445 178	8.	2.2	.6 * 1	2305 278	1.	.2	.0
1	0630	79	75.	22.8	3.9 * 1	1450 179	8.	2.1	.5 * 1	2310 279	1.	.2	.0
1	0635	80	73.	22.3	3.8 * 1	1455 180	7.	2.1	.5 * 1	2315 280	1.	.2	.0
1	0640	81	71.	21.8	3.7 * 1	1500 181	7.	2.0	.5 * 1	2320 281	1.	.2	.0
1	0645	82	70.	21.3	3.7 * 1	1505 182	7.	2.0	.5 * 1	2325 282	1.	.2	.0
1	0650	83	68.	20.8	3.6 * 1	1510 183	7.	1.9	.5 * 1	2330 283	1.	.2	.0
1	0655	84	67.	20.3	3.6 * 1	1515 184	7.	1.9	.5 * 1	2335 284	1.	.2	.0
1	0700	85	65.	19.9	3.5 * 1	1520 185	6.	1.8	.5 * 1	2340 285	1.	.2	.0
1	0705	86	63.	19.5	3.5 * 1	1525 186	6.	1.8	.5 * 1	2345 286	1.	.2	.0
1	0710	87	62.	19.0	3.4 * 1	1530 187	6.	1.7	.4 * 1	2350 287	1.	.1	.0
1	0715	88	61.	18.6	3.4 * 1	1535 188	6.	1.7	.4 * 1	2355 288	1.	.1	.0
1	0720	89	59.	18.2	3.3 * 1	1540 189	6.	1.7	.4 * 2	0000 289	1.	.1	.0
1	0725	90	58.	17.8	3.2 * 1	1545 190	6.	1.6	.4 * 2	0005 290	0.	.1	.0
1	0730	91	56.	17.4	3.2 * 1	1550 191	6.	1.6	.4 * 2	0010 291	0.	.1	.0
1	0735	92	55.	17.0	3.2 * 1	1555 192	5.	1.5	.4 * 2	0015 292	0.	.1	.0
1	0740	93	54.	16.6	3.1 * 1	1600 193	5.	1.5	.4 * 2	0020 293	0.	.1	.0
1	0745	94	53.	16.3	3.1 * 1	1605 194	5.	1.5	.4 * 2	0025 294	0.	.1	.0
1	0750	95	51.	15.9	3.0 * 1	1610 195	5.	1.4	.4 * 2	0030 295	0.	.1	.0
1	0755	96	50.	15.6	3.0 * 1	1615 196	5.	1.4	.4 * 2	0035 296	0.	.1	.0
1	0800	97	49.	15.2	3.0 * 1	1620 197	5.	1.4	.3 * 2	0040 297	0.	.1	.0
1	0805	98	48.	14.9	2.9 * 1	1625 198	5.	1.3	.3 * 2	0045 298	0.	.1	.0
1	0810	99	47.	14.6	2.9 * 1	1630 199	5.	1.3	.3 * 2	0050 299	0.	.1	.0
1	0815	100	46.	14.2	2.8 * 1	1635 200	4.	1.3	.3 * 2	0055 300	0.	.1	.0

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(CFS)				
+	122.	4.17	71.	23.	22.
	(INCHES)		.319	.408	.408
	(AC-FT)		35.	45.	45.
PEAK STORAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)				
+	40.	4.17	23.	7.	7.
PEAK STAGE	TIME	6-HR	24-HR	72-HR	24.92-HR
+	(FEET)				
+	5.79	4.17	3.83	1.31	1.26

CUMULATIVE AREA = 2.07 SQ MI

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .95

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1		0.	.0	.0	1		0820	101		42.	12.7	2.6	1		1640	201		4.	1.1	.3
1		0005	2		0.	.0	.0	1		0825	102		41.	12.4	2.6	1		1645	202		4.	1.1	.3
1		0010	3		0.	.0	.0	1		0830	103		40.	12.1	2.6	1		1650	203		4.	1.1	.3
1		0015	4		0.	.0	.0	1		0835	104		39.	11.8	2.5	1		1655	204		4.	1.0	.3
1		0020	5		0.	.0	.0	1		0840	105		39.	11.6	2.5	1		1700	205		4.	1.0	.3
1		0025	6		0.	.0	.0	1		0845	106		38.	11.3	2.4	1		1705	206		4.	1.0	.3
1		0030	7		0.	.0	.0	1		0850	107		37.	11.0	2.4	1		1710	207		3.	1.0	.2
1		0035	8		0.	.0	.0	1		0855	108		36.	10.8	2.4	1		1715	208		3.	.9	.2
1		0040	9		0.	.0	.0	1		0900	109		36.	10.5	2.3	1		1720	209		3.	.9	.2
1		0045	10		0.	.0	.0	1		0905	110		35.	10.3	2.3	1		1725	210		3.	.9	.2
1		0050	11		0.	.0	.0	1		0910	111		34.	10.1	2.3	1		1730	211		3.	.9	.2
1		0055	12		0.	.0	.0	1		0915	112		34.	9.8	2.3	1		1735	212		3.	.9	.2
1		0100	13		0.	.0	.0	1		0920	113		33.	9.6	2.2	1		1740	213		3.	.8	.2
1		0105	14		0.	.0	.0	1		0925	114		32.	9.4	2.2	1		1745	214		3.	.8	.2
1		0110	15		0.	.0	.0	1		0930	115		32.	9.2	2.2	1		1750	215		3.	.8	.2
1		0115	16		0.	.0	.0	1		0935	116		31.	8.9	2.1	1		1755	216		3.	.8	.2
1		0120	17		0.	.0	.0	1		0940	117		30.	8.7	2.1	1		1800	217		3.	.8	.2
1		0125	18		0.	.0	.0	1		0945	118		30.	8.5	2.1	1		1805	218		3.	.7	.2
1		0130	19		0.	.0	.0	1		0950	119		29.	8.3	2.1	1		1810	219		3.	.7	.2
1		0135	20		0.	.0	.0	1		0955	120		29.	8.1	2.0	1		1815	220		2.	.7	.2
1		0140	21		0.	.0	.0	1		1000	121		28.	7.9	2.0	1		1820	221		2.	.7	.2
1		0145	22		0.	.0	.0	1		1005	122		27.	7.7	2.0	1		1825	222		2.	.7	.2
1		0150	23		0.	.0	.0	1		1010	123		27.	7.5	1.9	1		1830	223		2.	.7	.2
1		0155	24		0.	.0	.0	1		1015	124		26.	7.4	1.9	1		1835	224		2.	.6	.2
1		0200	25		0.	.0	.0	1		1020	125		26.	7.2	1.8	1		1840	225		2.	.6	.2
1		0205	26		0.	.0	.0	1		1025	126		25.	7.0	1.8	1		1845	226		2.	.6	.2
1		0210	27		0.	.0	.0	1		1030	127		24.	6.8	1.7	1		1850	227		2.	.6	.1
1		0215	28		0.	.0	.0	1		1035	128		24.	6.7	1.7	1		1855	228		2.	.6	.1
1		0220	29		0.	.0	.0	1		1040	129		23.	6.5	1.7	1		1900	229		2.	.6	.1
1		0225	30		0.	.0	.0	1		1045	130		23.	6.4	1.6	1		1905	230		2.	.5	.1
1		0230	31		0.	.0	.0	1		1050	131		22.	6.2	1.6	1		1910	231		2.	.5	.1
1		0235	32		0.	.0	.0	1		1055	132		22.	6.0	1.5	1		1915	232		2.	.5	.1
1		0240	33		0.	.0	.0	1		1100	133		21.	5.9	1.5	1		1920	233		2.	.5	.1
1		0245	34		0.	.0	.0	1		1105	134		20.	5.8	1.5	1		1925	234		2.	.5	.1
1		0250	35		0.	.0	.0	1		1110	135		20.	5.6	1.4	1		1930	235		2.	.5	.1
1		0255	36		0.	.0	.0	1		1115	136		20.	5.5	1.4	1		1935	236		2.	.5	.1
1		0300	37		0.	.0	.0	1		1120	137		19.	5.4	1.4	1		1940	237		2.	.5	.1
1		0305	38		0.	.0	.0	1		1125	138		19.	5.2	1.3	1		1945	238		2.	.5	.1
1		0310	39		0.	.0	.0	1		1130	139		18.	5.1	1.3	1		1950	239		2.	.4	.1
1		0315	40		0.	.0	.0	1		1135	140		18.	5.0	1.3	1		1955	240		2.	.4	.1
1		0320	41		0.	.0	.0	1		1140	141		17.	4.9	1.2	1		2000	241		1.	.4	.1
1		0325	42		1.	.2	.0	1		1145	142		17.	4.7	1.2	1		2005	242		1.	.4	.1
1		0330	43		7.	1.9	.5	1		1150	143		16.	4.6	1.2	1		2010	243		1.	.4	.1
1		0335	44		23.	6.4	1.6	1		1155	144		16.	4.5	1.1	1		2015	244		1.	.4	.1
1		0340	45		43.	12.9	2.7	1		1200	145		16.	4.4	1.1	1		2020	245		1.	.4	.1
1		0345	46		66.	20.0	3.5	1		1205	146		15.	4.3	1.1	1		2025	246		1.	.4	.1
1		0350	47		83.	26.6	4.3	1		1210	147		15.	4.2	1.1	1		2030	247		1.	.4	.1
1		0355	48		92.	31.6	4.9	1		1215	148		15.	4.1	1.0	1		2035	248		1.	.4	.1
1		0400	49		102.	34.8	5.2	1		1220	149		14.	4.0	1.0	1		2040	249		1.	.3	.1
1		0405	50		108.	36.5	5.4	1		1225	150		14.	3.9	1.0	1		2045	250		1.	.3	.1
1		0410	51		110.	36.9	5.4	1		1230	151		14.	3.8	1.0	1		2050	251		1.	.3	.1
1		0415	52		108.	36.4	5.4	1		1235	152		13.	3.7	.9	1		2055	252		1.	.3	.1
1		0420	53		105.	35.7	5.3	1		1240	153		13.	3.6	.9	1		2100	253		1.	.3	.1
1		0425	54		103.	35.0	5.2	1		1245	154		13.	3.5	.9	1		2105	254		1.	.3	.1
1		0430	55		100.	34.3	5.2	1		1250	155		12.	3.4	.9	1		2110	255		1.	.3	.1
1		0435	56		98.	33.7	5.1	1		1255	156		12.	3.4	.9	1		2115	256		1.	.3	.1
1		0440	57		95.	33.1	5.0	1		1300	157		12.	3.3	.8	1		2120	257		1.	.3	.1
1		0445	58		94.	32.4	5.0	1		1305	158		11.	3.2	.8	1		2125	258		1.	.3	.1
1		0450	59		92.	31.8	4.9	1		1310	159		11.	3.1	.8	1		2130	259		1.	.3	.1
1		0455	60		91.	31.2	4.8	1		1315	160		11.	3.0	.8	1		2135	260		1.	.3	.1
1		0500	61		90.	30.6	4.8	1		1320	161		11.	3.0	.8	1		2140	261		1.	.3	.1
1		0505	62		89.	30.0	4.7	1		1325	162		10.	2.9	.7	1		2145	262		1.	.3	.1
1		0510	63		88.	29.4	4.6	1		1330	163		10.	2.8	.7	1		2150	263		1.	.2	.1
1		0515	64		87.	28.9	4.6	1		1335	164		10.	2.8	.7	1		2155	264		1.	.2	.1
1		0520	65		86.	28.3	4.5	1		1340	165		10.	2.7	.7	1		2200	265		1.	.2	.1
1		0525	66		85.	27.7	4.4	1		1345	166		9.	2.6	.7	1		2205	266		1.	.2	.1
1		0530	67		84.	27.1	4.4	1		1350	167		9.	2.6	.7	1		2210	267		1.	.2	.1
1		0535	68		83.	26.5	4.3	1		1355	168		9.	2.5	.6	1		2215	268		1.	.2	.1
1		0540	69		82.	26.0	4.2	1		1400	169		9.	2.4	.6	1		2220	269		1.	.2	.1
1		0545	70		81.	25.4	4.2	1		1405	170		8.	2.4	.6	1		2225	270		1.	.2	.1
1		0550	71		80.	24.8	4.1	1		1410	171		8.	2.3	.6	1		2230	271		1.	.2	.1
1		0555	72		80.	24.3	4.0	1		1415	172		8.	2.3	.6	1		2235	272		1.	.2	.0
1		0600	73		78.	23.8	4.0	1		1420	173		8.	2.2	.6	1		2240	273		1.	.2	.0
1		0605	74		76.	23.2	3.9	1		1425	174		8.	2.2	.5	1		2245	274		1.	.2	.0
1		0610	75		75.	22.7	3.8	1		1430	175		8.	2.1	.5	1		2250	275		1.	.2	.0
1		0615	76		73.	22.2	3.8	1		1435	176		7.	2.1	.5	1		2255	276		1.	.2	.0
1		0620	77		71.	21.7	3.7	1		1440	177		7.	2.0	.5	1		23					

1 0815 100 43. 13.0 2.7 * 1 1635 200 4. 1.1 .3 * 2 0055 300 0. .1 .0

PEAK FLOW TIME
+ (CFS) (HR)
+ 110. 4.17
(CFS)
(INCHES)
(AC-FT)

PEAK STORAGE TIME
+ (AC-FT) (HR)
+ 37. 4.17

PEAK STAGE TIME
+ (FEET) (HR)
+ 5.45 4.17

CUMULATIVE AREA = 2.07 SQ MI

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .93

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	38.	11.4	2.5	* 1	1640	201	4.	1.0	.3			
1	0005	2	0.	.0	.0	* 1	0825	102	37.	11.2	2.4	* 1	1645	202	3.	1.0	.2			
1	0010	3	0.	.0	.0	* 1	0830	103	37.	10.9	2.4	* 1	1650	203	3.	.9	.2			
1	0015	4	0.	.0	.0	* 1	0835	104	36.	10.6	2.4	* 1	1655	204	3.	.9	.2			
1	0020	5	0.	.0	.0	* 1	0840	105	35.	10.4	2.3	* 1	1700	205	3.	.9	.2			
1	0025	6	0.	.0	.0	* 1	0845	106	35.	10.2	2.3	* 1	1705	206	3.	.9	.2			
1	0030	7	0.	.0	.0	* 1	0850	107	34.	9.9	2.3	* 1	1710	207	3.	.9	.2			
1	0035	8	0.	.0	.0	* 1	0855	108	33.	9.7	2.2	* 1	1715	208	3.	.8	.2			
1	0040	9	0.	.0	.0	* 1	0900	109	33.	9.5	2.2	* 1	1720	209	3.	.8	.2			
1	0045	10	0.	.0	.0	* 1	0905	110	32.	9.2	2.2	* 1	1725	210	3.	.8	.2			
1	0050	11	0.	.0	.0	* 1	0910	111	31.	9.0	2.2	* 1	1730	211	3.	.8	.2			
1	0055	12	0.	.0	.0	* 1	0915	112	31.	8.8	2.1	* 1	1735	212	3.	.8	.2			
1	0100	13	0.	.0	.0	* 1	0920	113	30.	8.6	2.1	* 1	1740	213	3.	.7	.2			
1	0105	14	0.	.0	.0	* 1	0925	114	30.	8.4	2.1	* 1	1745	214	3.	.7	.2			
1	0110	15	0.	.0	.0	* 1	0930	115	29.	8.2	2.0	* 1	1750	215	3.	.7	.2			
1	0115	16	0.	.0	.0	* 1	0935	116	28.	8.0	2.0	* 1	1755	216	2.	.7	.2			
1	0120	17	0.	.0	.0	* 1	0940	117	28.	7.8	2.0	* 1	1800	217	2.	.7	.2			
1	0125	18	0.	.0	.0	* 1	0945	118	27.	7.6	1.9	* 1	1805	218	2.	.7	.2			
1	0130	19	0.	.0	.0	* 1	0950	119	26.	7.4	1.9	* 1	1810	219	2.	.6	.2			
1	0135	20	0.	.0	.0	* 1	0955	120	26.	7.3	1.8	* 1	1815	220	2.	.6	.2			
1	0140	21	0.	.0	.0	* 1	1000	121	25.	7.1	1.8	* 1	1820	221	2.	.6	.2			
1	0145	22	0.	.0	.0	* 1	1005	122	25.	6.9	1.8	* 1	1825	222	2.	.6	.2			
1	0150	23	0.	.0	.0	* 1	1010	123	24.	6.7	1.7	* 1	1830	223	2.	.6	.1			
1	0155	24	0.	.0	.0	* 1	1015	124	23.	6.6	1.7	* 1	1835	224	2.	.6	.1			
1	0200	25	0.	.0	.0	* 1	1020	125	23.	6.4	1.6	* 1	1840	225	2.	.6	.1			
1	0205	26	0.	.0	.0	* 1	1025	126	22.	6.3	1.6	* 1	1845	226	2.	.5	.1			
1	0210	27	0.	.0	.0	* 1	1030	127	22.	6.1	1.6	* 1	1850	227	2.	.5	.1			
1	0215	28	0.	.0	.0	* 1	1035	128	21.	6.0	1.5	* 1	1855	228	2.	.5	.1			
1	0220	29	0.	.0	.0	* 1	1040	129	21.	5.8	1.5	* 1	1900	229	2.	.5	.1			
1	0225	30	0.	.0	.0	* 1	1045	130	20.	5.7	1.4	* 1	1905	230	2.	.5	.1			
1	0230	31	0.	.0	.0	* 1	1050	131	20.	5.5	1.4	* 1	1910	231	2.	.5	.1			
1	0235	32	0.	.0	.0	* 1	1055	132	19.	5.4	1.4	* 1	1915	232	2.	.5	.1			
1	0240	33	0.	.0	.0	* 1	1100	133	19.	5.3	1.3	* 1	1920	233	2.	.5	.1			
1	0245	34	0.	.0	.0	* 1	1105	134	18.	5.1	1.3	* 1	1925	234	2.	.4	.1			
1	0250	35	0.	.0	.0	* 1	1110	135	18.	5.0	1.3	* 1	1930	235	2.	.4	.1			
1	0255	36	0.	.0	.0	* 1	1115	136	17.	4.9	1.2	* 1	1935	236	2.	.4	.1			
1	0300	37	0.	.0	.0	* 1	1120	137	17.	4.8	1.2	* 1	1940	237	1.	.4	.1			
1	0305	38	0.	.0	.0	* 1	1125	138	17.	4.7	1.2	* 1	1945	238	1.	.4	.1			
1	0310	39	0.	.0	.0	* 1	1130	139	16.	4.6	1.2	* 1	1950	239	1.	.4	.1			
1	0315	40	0.	.0	.0	* 1	1135	140	16.	4.4	1.1	* 1	1955	240	1.	.4	.1			
1	0320	41	0.	.0	.0	* 1	1140	141	15.	4.3	1.1	* 1	2000	241	1.	.4	.1			
1	0325	42	0.	.1	.0	* 1	1145	142	15.	4.2	1.1	* 1	2005	242	1.	.4	.1			
1	0330	43	5.	1.5	.4	* 1	1150	143	15.	4.1	1.0	* 1	2010	243	1.	.4	.1			
1	0335	44	20.	5.6	1.4	* 1	1155	144	14.	4.0	1.0	* 1	2015	244	1.	.3	.1			
1	0340	45	39.	11.6	2.5	* 1	1200	145	14.	3.9	1.0	* 1	2020	245	1.	.3	.1			
1	0345	46	59.	18.3	3.3	* 1	1205	146	14.	3.8	1.0	* 1	2025	246	1.	.3	.1			
1	0350	47	80.	24.3	4.0	* 1	1210	147	13.	3.7	1.0	* 1	2030	247	1.	.3	.1			
1	0355	48	88.	29.0	4.6	* 1	1215	148	13.	3.7	.9	* 1	2035	248	1.	.3	.1			
1	0400	49	93.	32.0	4.9	* 1	1220	149	13.	3.6	.9	* 1	2040	249	1.	.3	.1			
1	0405	50	97.	33.5	5.1	* 1	1225	150	12.	3.5	.9	* 1	2045	250	1.	.3	.1			
1	0410	51	98.	33.7	5.1	* 1	1230	151	12.	3.4	.9	* 1	2050	251	1.	.3	.1			
1	0415	52	96.	33.2	5.1	* 1	1235	152	12.	3.3	.8	* 1	2055	252	1.	.3	.1			
1	0420	53	94.	32.6	5.0	* 1	1240	153	11.	3.2	.8	* 1	2100	253	1.	.3	.1			
1	0425	54	93.	32.0	4.9	* 1	1245	154	11.	3.2	.8	* 1	2105	254	1.	.3	.1			
1	0430	55	92.	31.3	4.8	* 1	1250	155	11.	3.1	.8	* 1	2110	255	1.	.3	.1			
1	0435	56	91.	30.7	4.8	* 1	1255	156	11.	3.0	.8	* 1	2115	256	1.	.3	.1			
1	0440	57	90.	30.1	4.7	* 1	1300	157	10.	2.9	.7	* 1	2120	257	1.	.3	.1			
1	0445	58	89.	29.6	4.6	* 1	1305	158	10.	2.9	.7	* 1	2125	258	1.	.2	.1			
1	0450	59	88.	29.0	4.6	* 1	1310	159	10.	2.8	.7	* 1	2130	259	1.	.2	.1			
1	0455	60	87.	28.4	4.5	* 1	1315	160	10.	2.7	.7	* 1	2135	260	1.	.2	.1			
1	0500	61	86.	27.8	4.4	* 1	1320	161	9.	2.7	.7	* 1	2140	261	1.	.2	.1			
1	0505	62	85.	27.3	4.4	* 1	1325	162	9.	2.6	.7	* 1	2145	262	1.	.2	.1			
1	0510	63	84.	26.7	4.3	* 1	1330	163	9.	2.5	.6	* 1	2150	263	1.	.2	.1			
1	0515	64	83.	26.2	4.2	* 1	1335	164	9.	2.5	.6	* 1	2155	264	1.	.2	.1			
1	0520	65	82.	25.6	4.2	* 1	1340	165	9.	2.4	.6	* 1	2200	265	1.	.2	.1			
1	0525	66	81.	25.1	4.1	* 1	1345	166	8.	2.4	.6	* 1	2205	266	1.	.2	.1			
1	0530	67	80.	24.5	4.1	* 1	1350	167	8.	2.3	.6	* 1	2210	267	1.	.2	.1			
1	0535	68	79.	24.0	4.0	* 1	1355	168	8.	2.2	.6	* 1	2215	268	1.	.2	.0			
1	0540	69	77.	23.4	3.9	* 1	1400	169	8.	2.2	.6	* 1	2220	269	1.	.2	.0			
1	0545	70	75.	22.9	3.9	* 1	1405	170	8.	2.1	.5	* 1	2225	270	1.	.2	.0			
1	0550	71	74.	22.4	3.8	* 1	1410	171	7.	2.1	.5	* 1	2230	271	1.	.2	.0			
1	0555	72	72.	21.9	3.8	* 1	1415	172	7.	2.0	.5	* 1	2235	272	1.	.2	.0			
1	0600	73	70.	21.4	3.7	* 1	1420	173	7.	2.0	.5	* 1	2240	273	1.	.2	.0			

1	0605	74	69.	20.9	3.6 *	1	1425	174	7.	1.9	.5 *	1	2245	274	1.	.2	.0
1	0610	75	67.	20.5	3.6 *	1	1430	175	7.	1.9	.5 *	1	2250	275	1.	.2	.0
1	0615	76	65.	20.0	3.5 *	1	1435	176	7.	1.8	.5 *	1	2255	276	1.	.2	.0
1	0620	77	64.	19.6	3.5 *	1	1440	177	6.	1.8	.5 *	1	2300	277	1.	.2	.0
1	0625	78	62.	19.1	3.4 *	1	1445	178	6.	1.8	.4 *	1	2305	278	1.	.2	.0
1	0630	79	61.	18.7	3.4 *	1	1450	179	6.	1.7	.4 *	1	2310	279	1.	.1	.0
1	0635	80	60.	18.3	3.3 *	1	1455	180	6.	1.7	.4 *	1	2315	280	1.	.1	.0
1	0640	81	58.	17.9	3.3 *	1	1500	181	6.	1.6	.4 *	1	2320	281	0.	.1	.0
1	0645	82	57.	17.5	3.2 *	1	1505	182	6.	1.6	.4 *	1	2325	282	0.	.1	.0
1	0650	83	55.	17.1	3.2 *	1	1510	183	6.	1.5	.4 *	1	2330	283	0.	.1	.0
1	0655	84	54.	16.7	3.1 *	1	1515	184	5.	1.5	.4 *	1	2335	284	0.	.1	.0
1	0700	85	53.	16.4	3.1 *	1	1520	185	5.	1.5	.4 *	1	2340	285	0.	.1	.0
1	0705	86	52.	16.0	3.1 *	1	1525	186	5.	1.4	.4 *	1	2345	286	0.	.1	.0
1	0710	87	50.	15.7	3.0 *	1	1530	187	5.	1.4	.4 *	1	2350	287	0.	.1	.0
1	0715	88	49.	15.3	3.0 *	1	1535	188	5.	1.4	.3 *	1	2355	288	0.	.1	.0
1	0720	89	48.	15.0	2.9 *	1	1540	189	5.	1.3	.3 *	2	0000	289	0.	.1	.0
1	0725	90	47.	14.6	2.9 *	1	1545	190	5.	1.3	.3 *	2	0005	290	0.	.1	.0
1	0730	91	47.	14.3	2.8 *	1	1550	191	5.	1.3	.3 *	2	0010	291	0.	.1	.0
1	0735	92	46.	14.0	2.8 *	1	1555	192	4.	1.2	.3 *	2	0015	292	0.	.1	.0
1	0740	93	45.	13.7	2.8 *	1	1600	193	4.	1.2	.3 *	2	0020	293	0.	.1	.0
1	0745	94	44.	13.4	2.7 *	1	1605	194	4.	1.2	.3 *	2	0025	294	0.	.1	.0
1	0750	95	43.	13.1	2.7 *	1	1610	195	4.	1.2	.3 *	2	0030	295	0.	.1	.0
1	0755	96	42.	12.8	2.6 *	1	1615	196	4.	1.1	.3 *	2	0035	296	0.	.1	.0
1	0800	97	41.	12.5	2.6 *	1	1620	197	4.	1.1	.3 *	2	0040	297	0.	.1	.0
1	0805	98	41.	12.2	2.6 *	1	1625	198	4.	1.1	.3 *	2	0045	298	0.	.1	.0
1	0810	99	40.	12.0	2.5 *	1	1630	199	4.	1.0	.3 *	2	0050	299	0.	.1	.0
1	0815	100	39.	11.7	2.5 *	1	1635	200	4.	1.0	.3 *	2	0055	300	0.	.1	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	98.	4.17	60.	19.	18.	18.
			.269	.342	.342	.342
		(INCHES)	30.	38.	38.	38.
		(AC-FT)				
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	34.	4.17	19.	6.	6.	6.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	5.11	4.17	3.37	1.13	1.09	1.09
CUMULATIVE AREA =			2.07 SQ MI			

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .92

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	0.	0.	0.	0.	+	1	0820	101	37.	10.9	2.4	+	1	1640	201	3.	1.0	.2				
1	0005	2	0.	0.	0.	0.	0.	+	1	0825	102	36.	10.7	2.4	+	1	1645	202	3.	.9	.2				
1	0010	3	0.	0.	0.	0.	0.	+	1	0830	103	35.	10.4	2.3	+	1	1650	203	3.	.9	.2				
1	0015	4	0.	0.	0.	0.	0.	+	1	0835	104	35.	10.2	2.3	+	1	1655	204	3.	.9	.2				
1	0020	5	0.	0.	0.	0.	0.	+	1	0840	105	34.	10.0	2.3	+	1	1700	205	3.	.9	.2				
1	0025	6	0.	0.	0.	0.	0.	+	1	0845	106	33.	9.7	2.2	+	1	1705	206	3.	.8	.2				
1	0030	7	0.	0.	0.	0.	0.	+	1	0850	107	33.	9.5	2.2	+	1	1710	207	3.	.8	.2				
1	0035	8	0.	0.	0.	0.	0.	+	1	0855	108	32.	9.3	2.2	+	1	1715	208	3.	.8	.2				
1	0040	9	0.	0.	0.	0.	0.	+	1	0900	109	31.	9.1	2.2	+	1	1720	209	3.	.8	.2				
1	0045	10	0.	0.	0.	0.	0.	+	1	0905	110	31.	8.8	2.1	+	1	1725	210	3.	.8	.2				
1	0050	11	0.	0.	0.	0.	0.	+	1	0910	111	30.	8.6	2.1	+	1	1730	211	3.	.7	.2				
1	0055	12	0.	0.	0.	0.	0.	+	1	0915	112	30.	8.4	2.1	+	1	1735	212	3.	.7	.2				
1	0100	13	0.	0.	0.	0.	0.	+	1	0920	113	29.	8.2	2.0	+	1	1740	213	3.	.7	.2				
1	0105	14	0.	0.	0.	0.	0.	+	1	0925	114	28.	8.0	2.0	+	1	1745	214	2.	.7	.2				
1	0110	15	0.	0.	0.	0.	0.	+	1	0930	115	28.	7.8	2.0	+	1	1750	215	2.	.7	.2				
1	0115	16	0.	0.	0.	0.	0.	+	1	0935	116	27.	7.6	1.9	+	1	1755	216	2.	.7	.2				
1	0120	17	0.	0.	0.	0.	0.	+	1	0940	117	27.	7.5	1.9	+	1	1800	217	2.	.6	.2				
1	0125	18	0.	0.	0.	0.	0.	+	1	0945	118	26.	7.3	1.8	+	1	1805	218	2.	.6	.2				
1	0130	19	0.	0.	0.	0.	0.	+	1	0950	119	25.	7.1	1.8	+	1	1810	219	2.	.6	.2				
1	0135	20	0.	0.	0.	0.	0.	+	1	0955	120	25.	6.9	1.8	+	1	1815	220	2.	.6	.2				
1	0140	21	0.	0.	0.	0.	0.	+	1	1000	121	24.	6.8	1.7	+	1	1820	221	2.	.6	.1				
1	0145	22	0.	0.	0.	0.	0.	+	1	1005	122	23.	6.6	1.7	+	1	1825	222	2.	.6	.1				
1	0150	23	0.	0.	0.	0.	0.	+	1	1010	123	23.	6.4	1.6	+	1	1830	223	2.	.6	.1				
1	0155	24	0.	0.	0.	0.	0.	+	1	1015	124	22.	6.3	1.6	+	1	1835	224	2.	.5	.1				
1	0200	25	0.	0.	0.	0.	0.	+	1	1020	125	22.	6.1	1.6	+	1	1840	225	2.	.5	.1				
1	0205	26	0.	0.	0.	0.	0.	+	1	1025	126	21.	6.0	1.5	+	1	1845	226	2.	.5	.1				
1	0210	27	0.	0.	0.	0.	0.	+	1	1030	127	21.	5.8	1.5	+	1	1850	227	2.	.5	.1				
1	0215	28	0.	0.	0.	0.	0.	+	1	1035	128	20.	5.7	1.4	+	1	1855	228	2.	.5	.1				
1	0220	29	0.	0.	0.	0.	0.	+	1	1040	129	20.	5.6	1.4	+	1	1900	229	2.	.5	.1				
1	0225	30	0.	0.	0.	0.	0.	+	1	1045	130	19.	5.4	1.4	+	1	1905	230	2.	.5	.1				
1	0230	31	0.	0.	0.	0.	0.	+	1	1050	131	19.	5.3	1.3	+	1	1910	231	2.	.5	.1				
1	0235	32	0.	0.	0.	0.	0.	+	1	1055	132	18.	5.2	1.3	+	1	1915	232	2.	.4	.1				
1	0240	33	0.	0.	0.	0.	0.	+	1	1100	133	18.	5.0	1.3	+	1	1920	233	2.	.4	.1				
1	0245	34	0.	0.	0.	0.	0.	+	1	1105	134	17.	4.9	1.2	+	1	1925	234	2.	.4	.1				
1	0250	35	0.	0.	0.	0.	0.	+	1	1110	135	17.	4.8	1.2	+	1	1930	235	1.	.4	.1				
1	0255	36	0.	0.	0.	0.	0.	+	1	1115	136	17.	4.7	1.2	+	1	1935	236	1.	.4	.1				
1	0300	37	0.	0.	0.	0.	0.	+	1	1120	137	16.	4.6	1.2	+	1	1940	237	1.	.4	.1				
1	0305	38	0.	0.	0.	0.	0.	+	1	1125	138	16.	4.5	1.1	+	1	1945	238	1.	.4	.1				
1	0310	39	0.	0.	0.	0.	0.	+	1	1130	139	15.	4.3	1.1	+	1	1950	239	1.	.4	.1				
1	0315	40	0.	0.	0.	0.	0.	+	1	1135	140	15.	4.2	1.1	+	1	1955	240	1.	.4	.1				
1	0320	41	0.	0.	0.	0.	0.	+	1	1140	141	15.	4.1	1.1	+	1	2000	241	1.	.4	.1				
1	0325	42	0.	.1	0.	0.	0.	+	1	1145	142	14.	4.0	1.0	+	1	2005	242	1.	.3	.1				
1	0330	43	5.	1.4	.4	+	1	1150	143	14.	3.9	1.0	+	1	2010	243	1.	.3	.1						
1	0335	44	19.	5.4	1.4	+	1	1155	144	14.	3.8	1.0	+	1	2015	244	1.	.3	.1						
1	0340	45	38.	11.2	2.4	+	1	1200	145	13.	3.8	1.0	+	1	2020	245	1.	.3	.1						
1	0345	46	57.	17.6	3.3	+	1	1205	146	13.	3.7	.9	+	1	2025	246	1.	.3	.1						
1	0350	47	77.	23.5	3.9	+	1	1210	147	13.	3.6	.9	+	1	2030	247	1.	.3	.1						

1	0355	48	86.	28.1	4.5 *	1	1215	148	12.	3.5	.9 *	1	2035	248	1.	.3	.1
1	0400	49	91.	30.9	4.8 *	1	1220	149	12.	3.4	.9 *	1	2040	249	1.	.3	.1
1	0405	50	93.	32.3	5.0 *	1	1225	150	12.	3.3	.8 *	1	2045	250	1.	.3	.1
1	0410	51	94.	32.5	5.0 *	1	1230	151	12.	3.2	.8 *	1	2050	251	1.	.3	.1
1	0415	52	93.	32.0	4.9 *	1	1235	152	11.	3.2	.8 *	1	2055	252	1.	.3	.1
1	0420	53	92.	31.4	4.8 *	1	1240	153	11.	3.1	.8 *	1	2100	253	1.	.3	.1
1	0425	54	91.	30.8	4.8 *	1	1245	154	11.	3.0	.8 *	1	2105	254	1.	.3	.1
1	0430	55	90.	30.2	4.7 *	1	1250	155	10.	2.9	.7 *	1	2110	255	1.	.3	.1
1	0435	56	89.	29.6	4.6 *	1	1255	156	10.	2.9	.7 *	1	2115	256	1.	.2	.1
1	0440	57	88.	29.0	4.6 *	1	1300	157	10.	2.8	.7 *	1	2120	257	1.	.2	.1
1	0445	58	87.	28.4	4.5 *	1	1305	158	10.	2.7	.7 *	1	2125	258	1.	.2	.1
1	0450	59	86.	27.9	4.4 *	1	1310	159	9.	2.7	.7 *	1	2130	259	1.	.2	.1
1	0455	60	85.	27.3	4.4 *	1	1315	160	9.	2.6	.7 *	1	2135	260	1.	.2	.1
1	0500	61	84.	26.7	4.3 *	1	1320	161	9.	2.5	.6 *	1	2140	261	1.	.2	.1
1	0505	62	83.	26.2	4.3 *	1	1325	162	9.	2.5	.6 *	1	2145	262	1.	.2	.1
1	0510	63	82.	25.6	4.2 *	1	1330	163	9.	2.4	.6 *	1	2150	263	1.	.2	.1
1	0515	64	81.	25.1	4.1 *	1	1335	164	8.	2.4	.6 *	1	2155	264	1.	.2	.1
1	0520	65	80.	24.6	4.1 *	1	1340	165	8.	2.3	.6 *	1	2200	265	1.	.2	.1
1	0525	66	79.	24.9	4.0 *	1	1345	166	8.	2.2	.6 *	1	2205	266	1.	.2	.0
1	0530	67	77.	23.5	3.9 *	1	1350	167	8.	2.2	.6 *	1	2210	267	1.	.2	.0
1	0535	68	75.	23.0	3.9 *	1	1355	168	8.	2.1	.5 *	1	2215	268	1.	.2	.0
1	0540	69	74.	22.5	3.8 *	1	1400	169	7.	2.1	.5 *	1	2220	269	1.	.2	.0
1	0545	70	72.	22.0	3.8 *	1	1405	170	7.	2.0	.5 *	1	2225	270	1.	.2	.0
1	0550	71	70.	21.5	3.7 *	1	1410	171	7.	2.0	.5 *	1	2230	271	1.	.2	.0
1	0555	72	69.	21.0	3.6 *	1	1415	172	7.	1.9	.5 *	1	2235	272	1.	.2	.0
1	0600	73	67.	20.5	3.6 *	1	1420	173	7.	1.9	.5 *	1	2240	273	1.	.2	.0
1	0605	74	66.	20.1	3.5 *	1	1425	174	7.	1.8	.5 *	1	2245	274	1.	.2	.0
1	0610	75	64.	19.6	3.5 *	1	1430	175	6.	1.8	.5 *	1	2250	275	1.	.2	.0
1	0615	76	63.	19.2	3.4 *	1	1435	176	6.	1.8	.4 *	1	2255	276	1.	.2	.0
1	0620	77	61.	18.8	3.4 *	1	1440	177	6.	1.7	.4 *	1	2300	277	1.	.1	.0
1	0625	78	60.	18.3	3.3 *	1	1445	178	6.	1.7	.4 *	1	2305	278	1.	.1	.0
1	0630	79	58.	17.9	3.3 *	1	1450	179	6.	1.6	.4 *	1	2310	279	1.	.1	.0
1	0635	80	57.	17.5	3.2 *	1	1455	180	6.	1.6	.4 *	1	2315	280	0.	.1	.0
1	0640	81	56.	17.2	3.2 *	1	1500	181	6.	1.6	.4 *	1	2320	281	0.	.1	.0
1	0645	82	54.	16.8	3.1 *	1	1505	182	5.	1.5	.4 *	1	2325	282	0.	.1	.0
1	0650	83	53.	16.4	3.1 *	1	1510	183	5.	1.5	.4 *	1	2330	283	0.	.1	.0
1	0655	84	52.	16.0	3.1 *	1	1515	184	5.	1.4	.4 *	1	2335	284	0.	.1	.0
1	0700	85	51.	15.7	3.0 *	1	1520	185	5.	1.4	.4 *	1	2340	285	0.	.1	.0
1	0705	86	50.	15.4	3.0 *	1	1525	186	5.	1.4	.3 *	1	2345	286	0.	.1	.0
1	0710	87	49.	15.0	2.9 *	1	1530	187	5.	1.3	.3 *	1	2350	287	0.	.1	.0
1	0715	88	48.	14.7	2.9 *	1	1535	188	5.	1.3	.3 *	1	2355	288	0.	.1	.0
1	0720	89	47.	14.4	2.8 *	1	1540	189	5.	1.3	.3 *	2	0000	289	0.	.1	.0
1	0725	90	46.	14.0	2.8 *	1	1545	190	4.	1.2	.3 *	2	0005	290	0.	.1	.0
1	0730	91	45.	13.7	2.8 *	1	1550	191	4.	1.2	.3 *	2	0010	291	0.	.1	.0
1	0735	92	44.	13.4	2.7 *	1	1555	192	4.	1.2	.3 *	2	0015	292	0.	.1	.0
1	0740	93	43.	13.1	2.7 *	1	1600	193	4.	1.2	.3 *	2	0020	293	0.	.1	.0
1	0745	94	42.	12.8	2.6 *	1	1605	194	4.	1.1	.3 *	2	0025	294	0.	.1	.0
1	0750	95	41.	12.5	2.6 *	1	1610	195	4.	1.1	.3 *	2	0030	295	0.	.1	.0
1	0755	96	41.	12.3	2.6 *	1	1615	196	4.	1.1	.3 *	2	0035	296	0.	.1	.0
1	0800	97	40.	12.0	2.5 *	1	1620	197	4.	1.0	.3 *	2	0040	297	0.	.1	.0
1	0805	98	39.	11.7	2.5 *	1	1625	198	4.	1.0	.3 *	2	0045	298	0.	.1	.0
1	0810	99	38.	11.4	2.5 *	1	1630	199	4.	1.0	.3 *	2	0050	299	0.	.1	.0
1	0815	100	38.	11.2	2.4 *	1	1635	200	3.	1.0	.2 *	2	0055	300	0.	.1	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	94.	4.17	(CFS)			
			(INCHES)			
			(AC-FT)			
			58.	18.	18.	18.
			.260	.329	.329	.329
			29.	36.	36.	36.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	33.	4.17	18.	6.	5.	5.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	4.98	4.17	3.28	1.10	1.06	1.06
CUMULATIVE AREA =			2.07 SQ MI			

HYDROGRAPH AT STATION DET1
PLAN 1, RATIO = .91

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000		1	0.	.0	.0	*	1		0820		101	36.	10.6	2.4	*	1		1640		201	3.	.9	.2
1		0005		2	0.	.0	.0	*	1		0825		102	35.	10.3	2.3	*	1		1645		202	3.	.9	.2
1		0010		3	0.	.0	.0	*	1		0830		103	34.	10.1	2.3	*	1		1650		203	3.	.9	.2
1		0015		4	0.	.0	.0	*	1		0835		104	34.	9.9	2.3	*	1		1655		204	3.	.9	.2
1		0020		5	0.	.0	.0	*	1		0840		105	33.	9.6	2.2	*	1		1700		205	3.	.8	.2
1		0025		6	0.	.0	.0	*	1		0845		106	32.	9.4	2.2	*	1		1705		206	3.	.8	.2
1		0030		7	0.	.0	.0	*	1		0850		107	32.	9.2	2.2	*	1		1710		207	3.	.8	.2
1		0035		8	0.	.0	.0	*	1		0855		108	31.	9.0	2.1	*	1		1715		208	3.	.8	.2
1		0040		9	0.	.0	.0	*	1		0900		109	31.	8.8	2.1	*	1		1720		209	3.	.8	.2
1		0045		10	0.	.0	.0	*	1		0905		110	30.	8.5	2.1	*	1		1725		210	3.	.7	.2
1		0050		11	0.	.0	.0	*	1		0910		111	29.	8.3	2.1	*	1		1730		211	3.	.7	.2
1		0055		12	0.	.0	.0	*	1		0915		112	29.	8.1	2.0	*	1		1735		212	2.	.7	.2
1		0100		13	0.	.0	.0	*	1		0920		113	28.	7.9	2.0	*	1		1740		213	2.	.7	.2
1		0105		14	0.	.0	.0	*	1		0925		114	28.	7.8	2.0	*	1		1745		214	2.	.7	.2
1		0110		15	0.	.0	.0	*	1		0930		115	27.	7.6	1.9	*	1		1750		215	2.	.7	.2
1		0115		16	0.	.0	.0	*	1		0935		116	26.	7.4	1.9	*	1		1755		216	2.	.6	.2
1		0120		17	0.	.0	.0	*	1		0940		117	26.	7.2	1.8	*	1		1800		217	2.	.6	.2
1		0125		18	0.	.0	.0	*	1		0945		118	25.	7.0	1.8	*	1		1805		218	2.	.6	.2
1		0130		19	0.	.0	.0	*	1		0950		119	24.	6.9	1.7	*	1		1810		219	2.	.6	.2
1		0135		20	0.	.0	.0	*	1		0955		120	24.	6.7	1.7	*	1		1815		220	2.	.6	.1
1		0140		21	0.	.0	.0	*	1		1000		121	23.	6.5	1.7	*	1		1820		221	2.	.6	.1

1	0145	22	0.	.0	.0 *	1	1005	122	23.	6.4	1.6 *	1	1825	222	2.	.5	.1
1	0150	23	0.	.0	.0 *	1	1010	123	22.	6.2	1.6 *	1	1830	223	2.	.5	.1
1	0155	24	0.	.0	.0 *	1	1015	124	22.	6.1	1.5 *	1	1835	224	2.	.5	.1
1	0200	25	0.	.0	.0 *	1	1020	125	21.	5.9	1.5 *	1	1840	225	2.	.5	.1
1	0205	26	0.	.0	.0 *	1	1025	126	21.	5.8	1.5 *	1	1845	226	2.	.5	.1
1	0210	27	0.	.0	.0 *	1	1030	127	20.	5.6	1.4 *	1	1850	227	2.	.5	.1
1	0215	28	0.	.0	.0 *	1	1035	128	20.	5.5	1.4 *	1	1855	228	2.	.5	.1
1	0220	29	0.	.0	.0 *	1	1040	129	19.	5.4	1.4 *	1	1900	229	2.	.5	.1
1	0225	30	0.	.0	.0 *	1	1045	130	19.	5.2	1.3 *	1	1905	230	2.	.5	.1
1	0230	31	0.	.0	.0 *	1	1050	131	18.	5.1	1.3 *	1	1910	231	2.	.4	.1
1	0235	32	0.	.0	.0 *	1	1055	132	18.	5.0	1.3 *	1	1915	232	2.	.4	.1
1	0240	33	0.	.0	.0 *	1	1100	133	17.	4.9	1.2 *	1	1920	233	1.	.4	.1
1	0245	34	0.	.0	.0 *	1	1105	134	17.	4.7	1.2 *	1	1925	234	1.	.4	.1
1	0250	35	0.	.0	.0 *	1	1110	135	16.	4.6	1.2 *	1	1930	235	1.	.4	.1
1	0255	36	0.	.0	.0 *	1	1115	136	16.	4.5	1.1 *	1	1935	236	1.	.4	.1
1	0300	37	0.	.0	.0 *	1	1120	137	16.	4.4	1.1 *	1	1940	237	1.	.4	.1
1	0305	38	0.	.0	.0 *	1	1125	138	15.	4.3	1.1 *	1	1945	238	1.	.4	.1
1	0310	39	0.	.0	.0 *	1	1130	139	15.	4.2	1.1 *	1	1950	239	1.	.4	.1
1	0315	40	0.	.0	.0 *	1	1135	140	15.	4.1	1.0 *	1	1955	240	1.	.4	.1
1	0320	41	0.	.0	.0 *	1	1140	141	14.	4.0	1.0 *	1	2000	241	1.	.3	.1
1	0325	42	0.	.1	.0 *	1	1145	142	14.	3.9	1.0 *	1	2005	242	1.	.3	.1
1	0330	43	5.	1.3	.3 *	1	1150	143	14.	3.8	1.0 *	1	2010	243	1.	.3	.1
1	0335	44	18.	5.2	1.3 *	1	1155	144	13.	3.7	.9 *	1	2015	244	1.	.3	.1
1	0340	45	37.	10.9	2.4 *	1	1200	145	13.	3.6	.9 *	1	2020	245	1.	.3	.1
1	0345	46	56.	17.2	3.2 *	1	1205	146	13.	3.5	.9 *	1	2025	246	1.	.3	.1
1	0350	47	76.	23.0	3.9 *	1	1210	147	12.	3.5	.9 *	1	2030	247	1.	.3	.1
1	0355	48	85.	27.4	4.4 *	1	1215	148	12.	3.4	.9 *	1	2035	248	1.	.3	.1
1	0400	49	90.	30.2	4.7 *	1	1220	149	12.	3.3	.8 *	1	2040	249	1.	.3	.1
1	0405	50	92.	31.5	4.9 *	1	1225	150	11.	3.2	.8 *	1	2045	250	1.	.3	.1
1	0410	51	92.	31.6	4.9 *	1	1230	151	11.	3.1	.8 *	1	2050	251	1.	.3	.1
1	0415	52	91.	31.1	4.8 *	1	1235	152	11.	3.1	.8 *	1	2055	252	1.	.3	.1
1	0420	53	90.	30.5	4.7 *	1	1240	153	11.	3.0	.8 *	1	2100	253	1.	.3	.1
1	0425	54	89.	29.9	4.7 *	1	1245	154	10.	2.9	.7 *	1	2105	254	1.	.3	.1
1	0430	55	88.	29.3	4.6 *	1	1250	155	10.	2.8	.7 *	1	2110	255	1.	.2	.1
1	0435	56	87.	28.7	4.5 *	1	1255	156	10.	2.8	.7 *	1	2115	256	1.	.2	.1
1	0440	57	86.	28.1	4.5 *	1	1300	157	10.	2.7	.7 *	1	2120	257	1.	.2	.1
1	0445	58	85.	27.6	4.4 *	1	1305	158	9.	2.6	.7 *	1	2125	258	1.	.2	.1
1	0450	59	84.	27.0	4.3 *	1	1310	159	9.	2.6	.7 *	1	2130	259	1.	.2	.1
1	0455	60	83.	26.5	4.3 *	1	1315	160	9.	2.5	.6 *	1	2135	260	1.	.2	.1
1	0500	61	82.	25.9	4.2 *	1	1320	161	9.	2.5	.6 *	1	2140	261	1.	.2	.1
1	0505	62	81.	25.4	4.2 *	1	1325	162	9.	2.4	.6 *	1	2145	262	1.	.2	.1
1	0510	63	81.	24.9	4.1 *	1	1330	163	8.	2.3	.6 *	1	2150	263	1.	.2	.1
1	0515	64	80.	24.3	4.0 *	1	1335	164	8.	2.3	.6 *	1	2155	264	1.	.2	.0
1	0520	65	78.	23.8	4.0 *	1	1340	165	8.	2.2	.6 *	1	2200	265	1.	.2	.0
1	0525	66	77.	23.3	3.9 *	1	1345	166	8.	2.2	.6 *	1	2205	266	1.	.2	.0
1	0530	67	75.	22.8	3.9 *	1	1350	167	8.	2.1	.5 *	1	2210	267	1.	.2	.0
1	0535	68	73.	22.2	3.8 *	1	1355	168	7.	2.1	.5 *	1	2215	268	1.	.2	.0
1	0540	69	71.	21.8	3.7 *	1	1400	169	7.	2.0	.5 *	1	2220	269	1.	.2	.0
1	0545	70	70.	21.3	3.7 *	1	1405	170	7.	2.0	.5 *	1	2225	270	1.	.2	.0
1	0550	71	68.	20.8	3.6 *	1	1410	171	7.	1.9	.5 *	1	2230	271	1.	.2	.0
1	0555	72	66.	20.3	3.6 *	1	1415	172	7.	1.9	.5 *	1	2235	272	1.	.2	.0
1	0600	73	65.	19.9	3.5 *	1	1420	173	6.	1.8	.5 *	1	2240	273	1.	.2	.0
1	0605	74	63.	19.4	3.5 *	1	1425	174	6.	1.8	.5 *	1	2245	274	1.	.2	.0
1	0610	75	62.	19.0	3.4 *	1	1430	175	6.	1.7	.4 *	1	2250	275	1.	.2	.0
1	0615	76	61.	18.6	3.4 *	1	1435	176	6.	1.7	.4 *	1	2255	276	1.	.1	.0
1	0620	77	59.	18.2	3.3 *	1	1440	177	6.	1.7	.4 *	1	2300	277	1.	.1	.0
1	0625	78	58.	17.8	3.3 *	1	1445	178	6.	1.6	.4 *	1	2305	278	0.	.1	.0
1	0630	79	56.	17.4	3.2 *	1	1450	179	6.	1.6	.4 *	1	2310	279	0.	.1	.0
1	0635	80	55.	17.0	3.2 *	1	1455	180	5.	1.5	.4 *	1	2315	280	0.	.1	.0
1	0640	81	54.	16.6	3.1 *	1	1500	181	5.	1.5	.4 *	1	2320	281	0.	.1	.0
1	0645	82	53.	16.3	3.1 *	1	1505	182	5.	1.5	.4 *	1	2325	282	0.	.1	.0
1	0650	83	51.	15.9	3.0 *	1	1510	183	5.	1.4	.4 *	1	2330	283	0.	.1	.0
1	0655	84	50.	15.6	3.0 *	1	1515	184	5.	1.4	.4 *	1	2335	284	0.	.1	.0
1	0700	85	49.	15.2	3.0 *	1	1520	185	5.	1.4	.3 *	1	2340	285	0.	.1	.0
1	0705	86	48.	14.9	2.9 *	1	1525	186	5.	1.3	.3 *	1	2345	286	0.	.1	.0
1	0710	87	47.	14.6	2.9 *	1	1530	187	5.	1.3	.3 *	1	2350	287	0.	.1	.0
1	0715	88	46.	14.2	2.8 *	1	1535	188	4.	1.3	.3 *	1	2355	288	0.	.1	.0
1	0720	89	45.	13.9	2.8 *	1	1540	189	4.	1.2	.3 *	2	0000	289	0.	.1	.0
1	0725	90	44.	13.6	2.7 *	1	1545	190	4.	1.2	.3 *	2	0005	290	0.	.1	.0
1	0730	91	44.	13.3	2.7 *	1	1550	191	4.	1.2	.3 *	2	0010	291	0.	.1	.0
1	0735	92	43.	13.0	2.7 *	1	1555	192	4.	1.1	.3 *	2	0015	292	0.	.1	.0
1	0740	93	42.	12.7	2.6 *	1	1600	193	4.	1.1	.3 *	2	0020	293	0.	.1	.0
1	0745	94	41.	12.4	2.6 *	1	1605	194	4.	1.1	.3 *	2	0025	294	0.	.1	.0
1	0750	95	40.	12.1	2.6 *	1	1610	195	4.	1.1	.3 *	2	0030	295	0.	.1	.0
1	0755	96	40.	11.9	2.5 *	1	1615	196	4.	1.0	.3 *	2	0035	296	0.	.1	.0
1	0800	97	39.	11.6	2.5 *	1	1620	197	4.	1.0	.3 *	2	0040	297	0.	.1	.0
1	0805	98	38.	11.3	2.5 *	1	1625	198	4.	1.0	.3 *	2	0045	298	0.	.1	.0
1	0810	99	37.	11.1	2.4 *	1	1630	199	3.	1.0	.2 *	2	0050	299	0.	.1	.0
1	0815	100	37.	10.8	2.4 *	1	1635	200	3.	.9	.2 *	2	0055	300	0.	.1	.0

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
+	(CFS)	6-HR	24-HR	72-HR	24.92-HR
+	92.	57.	18.	17.	17.
	4.17	.254	.321	.321	.321
		(INCHES)			
		(AC-FT)	28.	35.	35.
PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
+	(AC-FT)	6-HR	24-HR	72-HR	24.92-HR
+	32.	18.	5.	5.	5.
	4.17				
PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
+	(FEET)	6-HR	24-HR	72-HR	24.92-HR
+	4.88	3.21	1.07	1.03	1.03
	4.17				

CUMULATIVE AREA = 2.07 SQ MI

*** **

377 KK

DET2

379 KO

OUTPUT CONTROL VARIABLES

1 PRINT CONTROL
0 PLOT CONTROL
0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

380 RS

STORAGE ROUTING

1 NUMBER OF SUBREACHES
STOR TYPE OF INITIAL CONDITION
-1.00 INITIAL CONDITION
.00 WORKING R AND D COEFFICIENT

381 SV	STORAGE	.0	10.2	18.1	26.3	34.7	43.4	52.4	62.0
382 SE	ELEVATION	.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00
383 SQ	DISCHARGE	0.	56.	88.	121.	170.	180.	200.	220.

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .99

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	.0	* 1	0820	101	64.	12.1	2.2	* 1	1640	201	2.	.3	.1			
1	0005	2	0.	.0	.0	* 1	0825	102	62.	11.7	2.2	* 1	1645	202	1.	.3	.1			
1	0010	3	0.	.0	.0	* 1	0830	103	60.	11.3	2.1	* 1	1650	203	1.	.3	.1			
1	0015	4	0.	.0	.0	* 1	0835	104	59.	10.9	2.1	* 1	1655	204	1.	.3	.0			
1	0020	5	0.	.0	.0	* 1	0840	105	57.	10.5	2.0	* 1	1700	205	1.	.2	.0			
1	0025	6	0.	.0	.0	* 1	0845	106	55.	10.1	2.0	* 1	1705	206	1.	.2	.0			
1	0030	7	0.	.0	.0	* 1	0850	107	53.	9.7	1.9	* 1	1710	207	1.	.2	.0			
1	0035	8	0.	.0	.0	* 1	0855	108	51.	9.4	1.8	* 1	1715	208	1.	.2	.0			
1	0040	9	0.	.0	.0	* 1	0900	109	49.	9.0	1.8	* 1	1720	209	1.	.2	.0			
1	0045	10	0.	.0	.0	* 1	0905	110	48.	8.7	1.7	* 1	1725	210	1.	.2	.0			
1	0050	11	0.	.0	.0	* 1	0910	111	46.	8.4	1.6	* 1	1730	211	1.	.2	.0			
1	0055	12	0.	.0	.0	* 1	0915	112	44.	8.1	1.6	* 1	1735	212	1.	.2	.0			
1	0100	13	0.	.0	.0	* 1	0920	113	42.	7.8	1.5	* 1	1740	213	1.	.2	.0			
1	0105	14	0.	.0	.0	* 1	0925	114	41.	7.5	1.5	* 1	1745	214	1.	.2	.0			
1	0110	15	0.	.0	.0	* 1	0930	115	39.	7.2	1.4	* 1	1750	215	1.	.2	.0			
1	0115	16	0.	.0	.0	* 1	0935	116	38.	6.9	1.4	* 1	1755	216	1.	.2	.0			
1	0120	17	0.	.0	.0	* 1	0940	117	36.	6.7	1.3	* 1	1800	217	1.	.2	.0			
1	0125	18	0.	.0	.0	* 1	0945	118	35.	6.4	1.3	* 1	1805	218	1.	.1	.0			
1	0130	19	0.	.0	.0	* 1	0950	119	34.	6.2	1.2	* 1	1810	219	1.	.1	.0			
1	0135	20	0.	.0	.0	* 1	0955	120	33.	6.0	1.2	* 1	1815	220	1.	.1	.0			
1	0140	21	0.	.0	.0	* 1	1000	121	31.	5.7	1.1	* 1	1820	221	1.	.1	.0			
1	0145	22	0.	.0	.0	* 1	1005	122	30.	5.5	1.1	* 1	1825	222	1.	.1	.0			
1	0150	23	0.	.0	.0	* 1	1010	123	29.	5.3	1.0	* 1	1830	223	1.	.1	.0			
1	0155	24	0.	.0	.0	* 1	1015	124	28.	5.1	1.0	* 1	1835	224	1.	.1	.0			
1	0200	25	0.	.0	.0	* 1	1020	125	27.	4.9	1.0	* 1	1840	225	1.	.1	.0			
1	0205	26	0.	.0	.0	* 1	1025	126	26.	4.7	.9	* 1	1845	226	1.	.1	.0			
1	0210	27	0.	.0	.0	* 1	1030	127	25.	4.6	.9	* 1	1850	227	1.	.1	.0			
1	0215	28	0.	.0	.0	* 1	1035	128	24.	4.4	.9	* 1	1855	228	1.	.1	.0			
1	0220	29	0.	.0	.0	* 1	1040	129	23.	4.2	.8	* 1	1900	229	1.	.1	.0			
1	0225	30	0.	.0	.0	* 1	1045	130	22.	4.1	.8	* 1	1905	230	1.	.1	.0			
1	0230	31	0.	.0	.0	* 1	1050	131	22.	3.9	.8	* 1	1910	231	0.	.1	.0			
1	0235	32	0.	.0	.0	* 1	1055	132	21.	3.8	.7	* 1	1915	232	0.	.1	.0			
1	0240	33	0.	.0	.0	* 1	1100	133	20.	3.6	.7	* 1	1920	233	0.	.1	.0			
1	0245	34	0.	.0	.0	* 1	1105	134	19.	3.5	.7	* 1	1925	234	0.	.1	.0			
1	0250	35	0.	.0	.0	* 1	1110	135	19.	3.4	.7	* 1	1930	235	0.	.1	.0			
1	0255	36	0.	.0	.0	* 1	1115	136	18.	3.3	.6	* 1	1935	236	0.	.1	.0			
1	0300	37	0.	.0	.0	* 1	1120	137	17.	3.1	.6	* 1	1940	237	0.	.1	.0			
1	0305	38	0.	.0	.0	* 1	1125	138	17.	3.0	.6	* 1	1945	238	0.	.1	.0			
1	0310	39	0.	.0	.0	* 1	1130	139	16.	2.9	.6	* 1	1950	239	0.	.1	.0			
1	0315	40	0.	.0	.0	* 1	1135	140	15.	2.8	.5	* 1	1955	240	0.	.1	.0			
1	0320	41	0.	.0	.0	* 1	1140	141	15.	2.7	.5	* 1	2000	241	0.	.1	.0			
1	0325	42	0.	.0	.0	* 1	1145	142	14.	2.6	.5	* 1	2005	242	0.	.1	.0			
1	0330	43	9.	1.7	.3	* 1	1150	143	14.	2.5	.5	* 1	2010	243	0.	.1	.0			
1	0335	44	38.	7.0	1.4	* 1	1155	144	13.	2.4	.5	* 1	2015	244	0.	.1	.0			
1	0340	45	77.	15.4	2.7	* 1	1200	145	13.	2.3	.5	* 1	2020	245	0.	.1	.0			
1	0345	46	118.	25.4	3.9	* 1	1205	146	12.	2.2	.4	* 1	2025	246	0.	.1	.0			
1	0350	47	170.	35.1	5.0	* 1	1210	147	12.	2.2	.4	* 1	2030	247	0.	.0	.0			
1	0355	48	180.	43.3	6.0	* 1	1215	148	11.	2.1	.4	* 1	2035	248	0.	.0	.0			
1	0400	49	194.	49.5	6.7	* 1	1220	149	11.	2.0	.4	* 1	2040	249	0.	.0	.0			
1	0405	50	203.	53.6	7.1	* 1	1225	150	11.	1.9	.4	* 1	2045	250	0.	.0	.0			
1	0410	51	207.	55.9	7.4	* 1	1230	151	10.	1.9	.4	* 1	2050	251	0.	.0	.0			
1	0415	52	208.	56.5	7.4	* 1	1235	152	10.	1.8	.3	* 1	2055	252	0.	.0	.0			
1	0420	53	207.	55.7	7.3	* 1	1240	153	9.	1.7	.3	* 1	2100	253	0.	.0	.0			
1	0425	54	204.	54.2	7.2	* 1	1245	154	9.	1.7	.3	* 1	2105	254	0.	.0	.0			
1	0430	55	201.	52.9	7.0	* 1	1250	155	9.	1.6	.3	* 1	2110	255	0.	.0	.0			
1	0435	56	198.	51.5	6.9	* 1	1255	156	8.	1.5	.3	* 1	2115	256	0.	.0	.0			
1	0440	57	195.	50.2	6.7	* 1	1300	157	8.	1.5	.3	* 1	2120	257	0.	.0	.0			
1	0445	58	192.	48.8	6.6	* 1	1305	158	8.	1.4	.3	* 1	2125	258	0.	.0	.0			
1	0450	59	189.	47.5	6.5	* 1	1310	159	7.	1.4	.3	* 1	2130	259	0.	.0	.0			
1	0455	60	186.	46.3	6.3	* 1	1315	160	7.	1.3	.3	* 1	2135	260	0.	.0	.0			
1	0500	61	184.	45.0	6.2	* 1	1320	161	7.	1.3	.2	* 1	2140	261	0.	.0	.0			
1	0505	62	181.	43.8	6.0	* 1	1325	162	7.	1.2	.2	* 1	2145	262	0.	.0	.0			
1	0510	63	179.	42.5	5.9	* 1	1330	163	6.	1.2	.2	* 1	2150	263	0.	.0	.0			
1	0515	64	178.	41.3	5.8	* 1	1335	164	6.	1.1	.2	* 1	2155	264	0.	.0	.0			
1	0520	65	176.	40.1	5.6	* 1	1340	165	6.	1.1	.2	* 1	2200	265	0.	.0	.0			
1	0525	66	175.	38.9	5.5	* 1	1345	166	6.	1.1	.2	* 1	2205	266	0.	.0	.0			
1	0530	67	173.	37.7	5.3	* 1	1350	167	6.	1.0	.2	* 1	2210	267	0.	.0	.0			
1	0535	68	172.	36.5	5.2	* 1	1355	168	5.	1.0	.2	* 1	2215	268	0.	.0	.0			
1	0540	69	171.	35.3	5.1	* 1	1400	169	5.	.9	.2	* 1	2220	269	0.	.0	.0			
1	0545	70	167.	34.2	4.9	* 1	1405	170	5.	.9	.2	* 1	2225	270	0.	.0	.0			

1	0550	71	160.	33.0	4.8 *	1	1410	171	5.	.9	.2 *	1	2230	271	0.	.0	.0
1	0555	72	154.	32.0	4.7 *	1	1415	172	5.	.8	.2 *	1	2235	272	0.	.0	.0
1	0600	73	148.	30.9	4.6 *	1	1420	173	4.	.8	.2 *	1	2240	273	0.	.0	.0
1	0605	74	142.	29.9	4.4 *	1	1425	174	4.	.8	.2 *	1	2245	274	0.	.0	.0
1	0610	75	137.	29.0	4.3 *	1	1430	175	4.	.7	.1 *	1	2250	275	0.	.0	.0
1	0615	76	131.	28.0	4.2 *	1	1435	176	4.	.7	.1 *	1	2255	276	0.	.0	.0
1	0620	77	126.	27.2	4.1 *	1	1440	177	4.	.7	.1 *	1	2300	277	0.	.0	.0
1	0625	78	121.	26.3	4.0 *	1	1445	178	4.	.7	.1 *	1	2305	278	0.	.0	.0
1	0630	79	118.	25.5	3.9 *	1	1450	179	4.	.6	.1 *	1	2310	279	0.	.0	.0
1	0635	80	115.	24.7	3.8 *	1	1455	180	3.	.6	.1 *	1	2315	280	0.	.0	.0
1	0640	81	111.	23.9	3.7 *	1	1500	181	3.	.6	.1 *	1	2320	281	0.	.0	.0
1	0645	82	109.	23.1	3.6 *	1	1505	182	3.	.6	.1 *	1	2325	282	0.	.0	.0
1	0650	83	105.	22.4	3.5 *	1	1510	183	3.	.6	.1 *	1	2330	283	0.	.0	.0
1	0655	84	102.	21.7	3.4 *	1	1515	184	3.	.5	.1 *	1	2335	284	0.	.0	.0
1	0700	85	100.	21.0	3.4 *	1	1520	185	3.	.5	.1 *	1	2340	285	0.	.0	.0
1	0705	86	97.	20.3	3.3 *	1	1525	186	3.	.5	.1 *	1	2345	286	0.	.0	.0
1	0710	87	94.	19.7	3.2 *	1	1530	187	3.	.5	.1 *	1	2350	287	0.	.0	.0
1	0715	88	92.	19.0	3.1 *	1	1535	188	3.	.5	.1 *	1	2355	288	0.	.0	.0
1	0720	89	89.	18.4	3.0 *	1	1540	189	2.	.4	.1 *	2	0000	289	0.	.0	.0
1	0725	90	87.	17.8	3.0 *	1	1545	190	2.	.4	.1 *	2	0005	290	0.	.0	.0
1	0730	91	84.	17.2	2.9 *	1	1550	191	2.	.4	.1 *	2	0010	291	0.	.0	.0
1	0735	92	82.	16.6	2.8 *	1	1555	192	2.	.4	.1 *	2	0015	292	0.	.0	.0
1	0740	93	80.	16.1	2.7 *	1	1600	193	2.	.4	.1 *	2	0020	293	0.	.0	.0
1	0745	94	78.	15.5	2.7 *	1	1605	194	2.	.4	.1 *	2	0025	294	0.	.0	.0
1	0750	95	75.	15.0	2.6 *	1	1610	195	2.	.4	.1 *	2	0030	295	0.	.0	.0
1	0755	96	73.	14.5	2.5 *	1	1615	196	2.	.3	.1 *	2	0035	296	0.	.0	.0
1	0800	97	71.	14.0	2.5 *	1	1620	197	2.	.3	.1 *	2	0040	297	0.	.0	.0
1	0805	98	69.	13.5	2.4 *	1	1625	198	2.	.3	.1 *	2	0045	298	0.	.0	.0
1	0810	99	67.	13.0	2.4 *	1	1630	199	2.	.3	.1 *	2	0050	299	0.	.0	.0
1	0815	100	66.	12.6	2.3 *	1	1635	200	2.	.3	.1 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	208.	4.25	119.	33.	32.	32.
			.248	.278	.278	.278
		(INCHES)				
		(AC-FT)	59.	66.	66.	66.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	56.	4.25	27.	7.	7.	7.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	7.42	4.25	3.98	1.12	1.08	1.08
CUMULATIVE AREA =			4.47 SQ MI			

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .98

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	.0 *	1		0820	101	61.	11.3	2.1 *	1		1640	201	1.	.3	.1		
1		0005	2	0.	.0	.0	.0 *	1		0825	102	59.	10.9	2.1 *	1		1645	202	1.	.3	.0		
1		0010	3	0.	.0	.0	.0 *	1		0830	103	57.	10.5	2.0 *	1		1650	203	1.	.2	.0		
1		0015	4	0.	.0	.0	.0 *	1		0835	104	56.	10.1	2.0 *	1		1655	204	1.	.2	.0		
1		0020	5	0.	.0	.0	.0 *	1		0840	105	54.	9.8	1.9 *	1		1700	205	1.	.2	.0		
1		0025	6	0.	.0	.0	.0 *	1		0845	106	52.	9.4	1.8 *	1		1705	206	1.	.2	.0		
1		0030	7	0.	.0	.0	.0 *	1		0850	107	50.	9.1	1.8 *	1		1710	207	1.	.2	.0		
1		0035	8	0.	.0	.0	.0 *	1		0855	108	48.	8.7	1.7 *	1		1715	208	1.	.2	.0		
1		0040	9	0.	.0	.0	.0 *	1		0900	109	46.	8.4	1.6 *	1		1720	209	1.	.2	.0		
1		0045	10	0.	.0	.0	.0 *	1		0905	110	44.	8.1	1.6 *	1		1725	210	1.	.2	.0		
1		0050	11	0.	.0	.0	.0 *	1		0910	111	43.	7.8	1.5 *	1		1730	211	1.	.2	.0		
1		0055	12	0.	.0	.0	.0 *	1		0915	112	41.	7.5	1.5 *	1		1735	212	1.	.2	.0		
1		0100	13	0.	.0	.0	.0 *	1		0920	113	40.	7.2	1.4 *	1		1740	213	1.	.2	.0		
1		0105	14	0.	.0	.0	.0 *	1		0925	114	38.	7.0	1.4 *	1		1745	214	1.	.2	.0		
1		0110	15	0.	.0	.0	.0 *	1		0930	115	37.	6.7	1.3 *	1		1750	215	1.	.2	.0		
1		0115	16	0.	.0	.0	.0 *	1		0935	116	35.	6.5	1.3 *	1		1755	216	1.	.1	.0		
1		0120	17	0.	.0	.0	.0 *	1		0940	117	34.	6.2	1.2 *	1		1800	217	1.	.1	.0		
1		0125	18	0.	.0	.0	.0 *	1		0945	118	33.	6.0	1.2 *	1		1805	218	1.	.1	.0		
1		0130	19	0.	.0	.0	.0 *	1		0950	119	32.	5.8	1.1 *	1		1810	219	1.	.1	.0		
1		0135	20	0.	.0	.0	.0 *	1		0955	120	30.	5.6	1.1 *	1		1815	220	1.	.1	.0		
1		0140	21	0.	.0	.0	.0 *	1		1000	121	29.	5.3	1.0 *	1		1820	221	1.	.1	.0		
1		0145	22	0.	.0	.0	.0 *	1		1005	122	28.	5.1	1.0 *	1		1825	222	1.	.1	.0		
1		0150	23	0.	.0	.0	.0 *	1		1010	123	27.	5.0	1.0 *	1		1830	223	1.	.1	.0		
1		0155	24	0.	.0	.0	.0 *	1		1015	124	26.	4.8	.9 *	1		1835	224	1.	.1	.0		
1		0200	25	0.	.0	.0	.0 *	1		1020	125	25.	4.6	.9 *	1		1840	225	1.	.1	.0		
1		0205	26	0.	.0	.0	.0 *	1		1025	126	24.	4.4	.9 *	1		1845	226	1.	.1	.0		
1		0210	27	0.	.0	.0	.0 *	1		1030	127	23.	4.3	.8 *	1		1850	227	1.	.1	.0		
1		0215	28	0.	.0	.0	.0 *	1		1035	128	22.	4.1	.8 *	1		1855	228	1.	.1	.0		
1		0220	29	0.	.0	.0	.0 *	1		1040	129	22.	4.0	.8 *	1		1900	229	0.	.1	.0		
1		0225	30	0.	.0	.0	.0 *	1		1045	130	21.	3.8	.7 *	1		1905	230	0.	.1	.0		
1		0230	31	0.	.0	.0	.0 *	1		1050	131	20.	3.7	.7 *	1		1910	231	0.	.1	.0		
1		0235	32	0.	.0	.0	.0 *	1		1055	132	19.	3.5	.7 *	1		1915	232	0.	.1	.0		
1		0240	33	0.	.0	.0	.0 *	1		1100	133	19.	3.4	.7 *	1		1920	233	0.	.1	.0		
1		0245	34	0.	.0	.0	.0 *	1		1105	134	18.	3.3	.6 *	1		1925	234	0.	.1	.0		
1		0250	35	0.	.0	.0	.0 *	1		1110	135	17.	3.2	.6 *	1		1930	235	0.	.1	.0		
1		0255	36	0.	.0	.0	.0 *	1		1115	136	17.	3.0	.6 *	1		1935	236	0.	.1	.0		
1		0300	37	0.	.0	.0	.0 *	1		1120	137	16.	2.9	.6 *	1		1940	237	0.	.1	.0		
1		0305	38	0.	.0	.0	.0 *	1		1125	138	15.	2.8	.6 *	1		1945	238	0.	.1	.0		
1		0310	39	0.	.0	.0	.0 *	1		1130	139	15.	2.7	.5 *	1		1950	239	0.	.1	.0		
1		0315	40	0.	.0	.0	.0 *	1		1135	140	14.	2.6	.5 *	1		1955	240	0.	.1	.0		
1		0320	41	0.	.0	.0	.0 *	1		1140	141	14.	2.5	.5 *	1		2000	241	0.	.1	.0		
1		0325	42	0.	.0	.0	.0 *	1		1145	142	13.	2.4	.5 *	1		2005	242	0.	.1	.0		
1		0330	43	8.	1.6	.3 *	1			1150	143	13.	2.3	.5 *	1		2010	243	0.	.1	.0		
1		0335	44	36.	6.6	1.3 *	1			1155	144	12.	2.2	.4 *	1		2015	244	0.	.1	.0		

1	0340	45	74.	14.7	2.6 *	1	1200	145	12.	2.2	.4 *	1	2020	245	0.	.0	.0
1	0345	46	113.	24.4	3.8 *	1	1205	146	11.	2.1	.4 *	1	2025	246	0.	.0	.0
1	0350	47	164.	33.7	4.9 *	1	1210	147	11.	2.0	.4 *	1	2030	247	0.	.0	.0
1	0355	48	178.	41.6	5.8 *	1	1215	148	11.	1.9	.4 *	1	2035	248	0.	.0	.0
1	0400	49	189.	47.5	6.5 *	1	1220	149	10.	1.9	.4 *	1	2040	249	0.	.0	.0
1	0405	50	198.	51.4	6.9 *	1	1225	150	10.	1.8	.4 *	1	2045	250	0.	.0	.0
1	0410	51	202.	53.5	7.1 *	1	1230	151	9.	1.7	.3 *	1	2050	251	0.	.0	.0
1	0415	52	203.	53.9	7.2 *	1	1235	152	9.	1.7	.3 *	1	2055	252	0.	.0	.0
1	0420	53	201.	53.0	7.1 *	1	1240	153	9.	1.6	.3 *	1	2100	253	0.	.0	.0
1	0425	54	198.	51.7	6.9 *	1	1245	154	8.	1.5	.3 *	1	2105	254	0.	.0	.0
1	0430	55	195.	50.3	6.8 *	1	1250	155	8.	1.5	.3 *	1	2110	255	0.	.0	.0
1	0435	56	192.	49.0	6.6 *	1	1255	156	8.	1.4	.3 *	1	2115	256	0.	.0	.0
1	0440	57	190.	47.7	6.5 *	1	1300	157	8.	1.4	.3 *	1	2120	257	0.	.0	.0
1	0445	58	187.	46.4	6.3 *	1	1305	158	7.	1.3	.3 *	1	2125	258	0.	.0	.0
1	0450	59	184.	45.2	6.2 *	1	1310	159	7.	1.3	.2 *	1	2130	259	0.	.0	.0
1	0455	60	181.	43.9	6.1 *	1	1315	160	7.	1.2	.2 *	1	2135	260	0.	.0	.0
1	0500	61	179.	42.7	5.9 *	1	1320	161	6.	1.2	.2 *	1	2140	261	0.	.0	.0
1	0505	62	178.	41.5	5.8 *	1	1325	162	6.	1.1	.2 *	1	2145	262	0.	.0	.0
1	0510	63	176.	40.3	5.6 *	1	1330	163	6.	1.1	.2 *	1	2150	263	0.	.0	.0
1	0515	64	175.	39.1	5.5 *	1	1335	164	6.	1.1	.2 *	1	2155	264	0.	.0	.0
1	0520	65	174.	37.9	5.4 *	1	1340	165	6.	1.0	.2 *	1	2200	265	0.	.0	.0
1	0525	66	172.	36.7	5.2 *	1	1345	166	5.	1.0	.2 *	1	2205	266	0.	.0	.0
1	0530	67	171.	35.5	5.1 *	1	1350	167	5.	.9	.2 *	1	2210	267	0.	.0	.0
1	0535	68	166.	34.3	5.0 *	1	1355	168	5.	.9	.2 *	1	2215	268	0.	.0	.0
1	0540	69	161.	33.2	4.8 *	1	1400	169	5.	.9	.2 *	1	2220	269	0.	.0	.0
1	0545	70	155.	32.1	4.7 *	1	1405	170	5.	.8	.2 *	1	2225	270	0.	.0	.0
1	0550	71	149.	31.1	4.6 *	1	1410	171	4.	.8	.2 *	1	2230	271	0.	.0	.0
1	0555	72	143.	30.1	4.4 *	1	1415	172	4.	.8	.2 *	1	2235	272	0.	.0	.0
1	0600	73	137.	29.1	4.3 *	1	1420	173	4.	.8	.1 *	1	2240	273	0.	.0	.0
1	0605	74	132.	28.2	4.2 *	1	1425	174	4.	.7	.1 *	1	2245	274	0.	.0	.0
1	0610	75	127.	27.3	4.1 *	1	1430	175	4.	.7	.1 *	1	2250	275	0.	.0	.0
1	0615	76	122.	26.4	4.0 *	1	1435	176	4.	.7	.1 *	1	2255	276	0.	.0	.0
1	0620	77	118.	25.6	3.9 *	1	1440	177	4.	.6	.1 *	1	2300	277	0.	.0	.0
1	0625	78	115.	24.8	3.8 *	1	1445	178	3.	.6	.1 *	1	2305	278	0.	.0	.0
1	0630	79	112.	24.0	3.7 *	1	1450	179	3.	.6	.1 *	1	2310	279	0.	.0	.0
1	0635	80	109.	23.3	3.6 *	1	1455	180	3.	.6	.1 *	1	2315	280	0.	.0	.0
1	0640	81	106.	22.5	3.5 *	1	1500	181	3.	.6	.1 *	1	2320	281	0.	.0	.0
1	0645	82	103.	21.8	3.5 *	1	1505	182	3.	.5	.1 *	1	2325	282	0.	.0	.0
1	0650	83	100.	21.1	3.4 *	1	1510	183	3.	.5	.1 *	1	2330	283	0.	.0	.0
1	0655	84	97.	20.4	3.3 *	1	1515	184	3.	.5	.1 *	1	2335	284	0.	.0	.0
1	0700	85	95.	19.8	3.2 *	1	1520	185	3.	.5	.1 *	1	2340	285	0.	.0	.0
1	0705	86	92.	19.1	3.1 *	1	1525	186	3.	.5	.1 *	1	2345	286	0.	.0	.0
1	0710	87	90.	18.5	3.0 *	1	1530	187	2.	.4	.1 *	1	2350	287	0.	.0	.0
1	0715	88	87.	17.9	3.0 *	1	1535	188	2.	.4	.1 *	1	2355	288	0.	.0	.0
1	0720	89	85.	17.3	2.9 *	1	1540	189	2.	.4	.1 *	2	0000	289	0.	.0	.0
1	0725	90	82.	16.7	2.8 *	1	1545	190	2.	.4	.1 *	2	0005	290	0.	.0	.0
1	0730	91	80.	16.2	2.8 *	1	1550	191	2.	.4	.1 *	2	0010	291	0.	.0	.0
1	0735	92	78.	15.6	2.7 *	1	1555	192	2.	.4	.1 *	2	0015	292	0.	.0	.0
1	0740	93	76.	15.1	2.6 *	1	1600	193	2.	.4	.1 *	2	0020	293	0.	.0	.0
1	0745	94	74.	14.6	2.6 *	1	1605	194	2.	.3	.1 *	2	0025	294	0.	.0	.0
1	0750	95	72.	14.1	2.5 *	1	1610	195	2.	.3	.1 *	2	0030	295	0.	.0	.0
1	0755	96	70.	13.6	2.4 *	1	1615	196	2.	.3	.1 *	2	0035	296	0.	.0	.0
1	0800	97	68.	13.1	2.4 *	1	1620	197	2.	.3	.1 *	2	0040	297	0.	.0	.0
1	0805	98	66.	12.7	2.3 *	1	1625	198	2.	.3	.1 *	2	0045	298	0.	.0	.0
1	0810	99	64.	12.2	2.3 *	1	1630	199	2.	.3	.1 *	2	0050	299	0.	.0	.0
1	0815	100	62.	11.8	2.2 *	1	1635	200	1.	.3	.1 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	203.	4.25	(CFS)	114.	32.	31.	31.
			(INCHES)	.238	.266	.266	.266
			(AC-FT)	57.	63.	63.	63.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	54.	4.25		25.	7.	7.	7.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	7.16	4.25		3.81	1.07	1.03	1.03
CUMULATIVE AREA =				4.47 SQ MI			

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .95

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000		1	0.	0.	0.	0.	1		0820		101	55.	10.1	2.0	0.	1		1640		201	1.	.2	0.
1		0005		2	0.	0.	0.	0.	1		0825		102	53.	9.7	1.9	0.	1		1645		202	1.	.2	0.
1		0010		3	0.	0.	0.	0.	1		0830		103	51.	9.3	1.8	0.	1		1650		203	1.	.2	0.
1		0015		4	0.	0.	0.	0.	1		0835		104	49.	9.0	1.8	0.	1		1655		204	1.	.2	0.
1		0020		5	0.	0.	0.	0.	1		0840		105	47.	8.7	1.7	0.	1		1700		205	1.	.2	0.
1		0025		6	0.	0.	0.	0.	1		0845		106	46.	8.3	1.6	0.	1		1705		206	1.	.2	0.
1		0030		7	0.	0.	0.	0.	1		0850		107	44.	8.0	1.6	0.	1		1710		207	1.	.2	0.
1		0035		8	0.	0.	0.	0.	1		0855		108	42.	7.7	1.5	0.	1		1715		208	1.	.2	0.
1		0040		9	0.	0.	0.	0.	1		0900		109	41.	7.4	1.5	0.	1		1720		209	1.	.2	0.
1		0045		10	0.	0.	0.	0.	1		0905		110	39.	7.2	1.4	0.	1		1725		210	1.	.2	0.
1		0050		11	0.	0.	0.	0.	1		0910		111	38.	6.9	1.3	0.	1		1730		211	1.	.2	0.
1		0055		12	0.	0.	0.	0.	1		0915		112	36.	6.6	1.3	0.	1		1735		212	1.	.2	0.
1		0100		13	0.	0.	0.	0.	1		0920		113	35.	6.4	1.3	0.	1		1740		213	1.	.1	0.
1		0105		14	0.	0.	0.	0.	1		0925		114	34.	6.2	1.2	0.	1		1745		214	1.	.1	0.
1		0110		15	0.	0.	0.	0.	1		0930		115	32.	5.9	1.2	0.	1		1750		215	1.	.1	0.
1		0115		16	0.	0.	0.	0.	1		0935		116	31.	5.7	1.1	0.	1		1755		216	1.	.1	0.
1		0120		17	0.	0.	0.	0.	1		0940		117	30.	5.5	1.1	0.	1		1800		217	1.	.1	0.
1		0125		18	0.	0.	0.	0.	1		0945		118	29.	5.3	1.0	0.	1		1805		218	1.	.1	0.

1	0130	19	0.	.0	.0	*	1	0950	119	28.	5.1	1.0	*	1	1810	219	1.	.1	.0
1	0135	20	0.	.0	.0	*	1	0955	120	27.	4.9	1.0	*	1	1815	220	1.	.1	.0
1	0140	21	0.	.0	.0	*	1	1000	121	26.	4.7	.9	*	1	1820	221	1.	.1	.0
1	0145	22	0.	.0	.0	*	1	1005	122	25.	4.6	.9	*	1	1825	222	1.	.1	.0
1	0150	23	0.	.0	.0	*	1	1010	123	24.	4.4	.9	*	1	1830	223	1.	.1	.0
1	0155	24	0.	.0	.0	*	1	1015	124	23.	4.2	.8	*	1	1835	224	1.	.1	.0
1	0200	25	0.	.0	.0	*	1	1020	125	22.	4.1	.8	*	1	1840	225	1.	.1	.0
1	0205	26	0.	.0	.0	*	1	1025	126	21.	3.9	.8	*	1	1845	226	0.	.1	.0
1	0210	27	0.	.0	.0	*	1	1030	127	21.	3.8	.7	*	1	1850	227	0.	.1	.0
1	0215	28	0.	.0	.0	*	1	1035	128	20.	3.6	.7	*	1	1855	228	0.	.1	.0
1	0220	29	0.	.0	.0	*	1	1040	129	19.	3.5	.7	*	1	1900	229	0.	.1	.0
1	0225	30	0.	.0	.0	*	1	1045	130	18.	3.4	.7	*	1	1905	230	0.	.1	.0
1	0230	31	0.	.0	.0	*	1	1050	131	18.	3.2	.6	*	1	1910	231	0.	.1	.0
1	0235	32	0.	.0	.0	*	1	1055	132	17.	3.1	.6	*	1	1915	232	0.	.1	.0
1	0240	33	0.	.0	.0	*	1	1100	133	16.	3.0	.6	*	1	1920	233	0.	.1	.0
1	0245	34	0.	.0	.0	*	1	1105	134	16.	2.9	.6	*	1	1925	234	0.	.1	.0
1	0250	35	0.	.0	.0	*	1	1110	135	15.	2.8	.5	*	1	1930	235	0.	.1	.0
1	0255	36	0.	.0	.0	*	1	1115	136	15.	2.7	.5	*	1	1935	236	0.	.1	.0
1	0300	37	0.	.0	.0	*	1	1120	137	14.	2.6	.5	*	1	1940	237	0.	.1	.0
1	0305	38	0.	.0	.0	*	1	1125	138	14.	2.5	.5	*	1	1945	238	0.	.1	.0
1	0310	39	0.	.0	.0	*	1	1130	139	13.	2.4	.5	*	1	1950	239	0.	.1	.0
1	0315	40	0.	.0	.0	*	1	1135	140	13.	2.3	.5	*	1	1955	240	0.	.1	.0
1	0320	41	0.	.0	.0	*	1	1140	141	12.	2.2	.4	*	1	2000	241	0.	.1	.0
1	0325	42	0.	.0	.0	*	1	1145	142	12.	2.1	.4	*	1	2005	242	0.	.0	.0
1	0330	43	7.	1.3	.3	*	1	1150	143	11.	2.1	.4	*	1	2010	243	0.	.0	.0
1	0335	44	32.	5.9	1.1	*	1	1155	144	11.	2.0	.4	*	1	2015	244	0.	.0	.0
1	0340	45	69.	13.5	2.4	*	1	1200	145	10.	1.9	.4	*	1	2020	245	0.	.0	.0
1	0345	46	106.	22.5	3.5	*	1	1205	146	10.	1.8	.4	*	1	2025	246	0.	.0	.0
1	0350	47	150.	31.3	4.6	*	1	1210	147	10.	1.8	.3	*	1	2030	247	0.	.0	.0
1	0355	48	175.	38.7	5.5	*	1	1215	148	9.	1.7	.3	*	1	2035	248	0.	.0	.0
1	0400	49	182.	44.2	6.1	*	1	1220	149	9.	1.6	.3	*	1	2040	249	0.	.0	.0
1	0405	50	190.	47.7	6.5	*	1	1225	150	9.	1.6	.3	*	1	2045	250	0.	.0	.0
1	0410	51	194.	49.5	6.7	*	1	1230	151	8.	1.5	.3	*	1	2050	251	0.	.0	.0
1	0415	52	194.	49.7	6.7	*	1	1235	152	8.	1.5	.3	*	1	2055	252	0.	.0	.0
1	0420	53	192.	48.7	6.6	*	1	1240	153	8.	1.4	.3	*	1	2100	253	0.	.0	.0
1	0425	54	189.	47.4	6.4	*	1	1245	154	7.	1.4	.3	*	1	2105	254	0.	.0	.0
1	0430	55	186.	46.1	6.3	*	1	1250	155	7.	1.3	.3	*	1	2110	255	0.	.0	.0
1	0435	56	183.	44.8	6.2	*	1	1255	156	7.	1.3	.2	*	1	2115	256	0.	.0	.0
1	0440	57	180.	43.6	6.0	*	1	1300	157	7.	1.2	.2	*	1	2120	257	0.	.0	.0
1	0445	58	179.	42.4	5.9	*	1	1305	158	6.	1.2	.2	*	1	2125	258	0.	.0	.0
1	0450	59	177.	41.1	5.7	*	1	1310	159	6.	1.1	.2	*	1	2130	259	0.	.0	.0
1	0455	60	176.	39.9	5.6	*	1	1315	160	6.	1.1	.2	*	1	2135	260	0.	.0	.0
1	0500	61	175.	38.7	5.5	*	1	1320	161	6.	1.0	.2	*	1	2140	261	0.	.0	.0
1	0505	62	173.	37.6	5.3	*	1	1325	162	6.	1.0	.2	*	1	2145	262	0.	.0	.0
1	0510	63	172.	36.4	5.2	*	1	1330	163	5.	1.0	.2	*	1	2150	263	0.	.0	.0
1	0515	64	171.	35.2	5.1	*	1	1335	164	5.	.9	.2	*	1	2155	264	0.	.0	.0
1	0520	65	166.	34.1	4.9	*	1	1340	165	5.	.9	.2	*	1	2200	265	0.	.0	.0
1	0525	66	160.	32.9	4.8	*	1	1345	166	5.	.9	.2	*	1	2205	266	0.	.0	.0
1	0530	67	153.	31.9	4.7	*	1	1350	167	5.	.8	.2	*	1	2210	267	0.	.0	.0
1	0535	68	147.	30.8	4.5	*	1	1355	168	4.	.8	.2	*	1	2215	268	0.	.0	.0
1	0540	69	142.	29.8	4.4	*	1	1400	169	4.	.8	.2	*	1	2220	269	0.	.0	.0
1	0545	70	136.	28.9	4.3	*	1	1405	170	4.	.7	.1	*	1	2225	270	0.	.0	.0
1	0550	71	131.	28.0	4.2	*	1	1410	171	4.	.7	.1	*	1	2230	271	0.	.0	.0
1	0555	72	126.	27.1	4.1	*	1	1415	172	4.	.7	.1	*	1	2235	272	0.	.0	.0
1	0600	73	121.	26.2	4.0	*	1	1420	173	4.	.7	.1	*	1	2240	273	0.	.0	.0
1	0605	74	117.	25.4	3.9	*	1	1425	174	4.	.6	.1	*	1	2245	274	0.	.0	.0
1	0610	75	114.	24.6	3.8	*	1	1430	175	3.	.6	.1	*	1	2250	275	0.	.0	.0
1	0615	76	111.	23.8	3.7	*	1	1435	176	3.	.6	.1	*	1	2255	276	0.	.0	.0
1	0620	77	108.	23.1	3.6	*	1	1440	177	3.	.6	.1	*	1	2300	277	0.	.0	.0
1	0625	78	105.	22.3	3.5	*	1	1445	178	3.	.6	.1	*	1	2305	278	0.	.0	.0
1	0630	79	102.	21.6	3.4	*	1	1450	179	3.	.5	.1	*	1	2310	279	0.	.0	.0
1	0635	80	99.	20.9	3.3	*	1	1455	180	3.	.5	.1	*	1	2315	280	0.	.0	.0
1	0640	81	97.	20.3	3.3	*	1	1500	181	3.	.5	.1	*	1	2320	281	0.	.0	.0
1	0645	82	94.	19.6	3.2	*	1	1505	182	3.	.5	.1	*	1	2325	282	0.	.0	.0
1	0650	83	91.	19.0	3.1	*	1	1510	183	3.	.5	.1	*	1	2330	283	0.	.0	.0
1	0655	84	89.	18.3	3.0	*	1	1515	184	2.	.4	.1	*	1	2335	284	0.	.0	.0
1	0700	85	86.	17.7	3.0	*	1	1520	185	2.	.4	.1	*	1	2340	285	0.	.0	.0
1	0705	86	84.	17.2	2.9	*	1	1525	186	2.	.4	.1	*	1	2345	286	0.	.0	.0
1	0710	87	82.	16.6	2.8	*	1	1530	187	2.	.4	.1	*	1	2350	287	0.	.0	.0
1	0715	88	80.	16.0	2.7	*	1	1535	188	2.	.4	.1	*	1	2355	288	0.	.0	.0
1	0720	89	77.	15.5	2.7	*	1	1540	189	2.	.4	.1	*	2	0000	289	0.	.0	.0
1	0725	90	75.	15.0	2.6	*	1	1545	190	2.	.4	.1	*	2	0005	290	0.	.0	.0
1	0730	91	73.	14.5	2.5	*	1	1550	191	2.	.3	.1	*	2	0010	291	0.	.0	.0
1	0735	92	71.	14.0	2.5	*	1	1555	192	2.	.3	.1	*	2	0015	292	0.	.0	.0
1	0740	93	69.	13.5	2.4	*	1	1600	193	2.	.3	.1	*	2	0020	293	0.	.0	.0
1	0745	94	67.	13.0	2.4	*	1	1605	194	2.	.3	.1	*	2	0025	294	0.	.0	.0
1	0750	95	65.	12.5	2.3	*	1	1610	195	2.	.3	.1	*	2	0030	295	0.	.0	.0
1	0755	96	64.	12.1	2.2	*	1	1615	196	2.	.3	.1	*	2	0035	296	0.	.0	.0
1	0800	97	62.	11.7	2.2	*	1	1620	197	1.	.3	.1	*	2	0040	297	0.	.0	.0
1	0805	98	60.	11.3	2.1	*	1	1625	198	1.	.3	.1	*	2	0045	298	0.	.0	.0
1	0810	99	58.	10.8	2.1	*	1	1630	199	1.	.2	.0	*	2	0050	299	0.	.0	.0
1	0815	100	57.	10.4	2.0	*	1	1635	200	1.	.2	.0	*	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	194.	4.25	106.	29.	28.	28.
		(INCHES)	.220	.245	.245	.245
		(AC-FT)	53.	58.	58.	58.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	50.	4.25	23.	6.	6.	6.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	6.70	4.25	3.51	.98	.95	.95

CUMULATIVE AREA = 4.47 SQ MI

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .93

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1		0.	.0	.0	1		0820	101		49.	8.9	1.7	1		1640	201		1.	.2	.0
1		0005	2		0.	.0	.0	1		0825	102		47.	8.5	1.7	1		1645	202		1.	.2	.0
1		0010	3		0.	.0	.0	1		0830	103		45.	8.2	1.6	1		1650	203		1.	.2	.0
1		0015	4		0.	.0	.0	1		0835	104		43.	7.9	1.5	1		1655	204		1.	.2	.0
1		0020	5		0.	.0	.0	1		0840	105		42.	7.6	1.5	1		1700	205		1.	.2	.0
1		0025	6		0.	.0	.0	1		0845	106		40.	7.3	1.4	1		1705	206		1.	.2	.0
1		0030	7		0.	.0	.0	1		0850	107		39.	7.1	1.4	1		1710	207		1.	.2	.0
1		0035	8		0.	.0	.0	1		0855	108		37.	6.8	1.3	1		1715	208		1.	.2	.0
1		0040	9		0.	.0	.0	1		0900	109		36.	6.6	1.3	1		1720	209		1.	.2	.0
1		0045	10		0.	.0	.0	1		0905	110		35.	6.3	1.2	1		1725	210		1.	.1	.0
1		0050	11		0.	.0	.0	1		0910	111		33.	6.1	1.2	1		1730	211		1.	.1	.0
1		0055	12		0.	.0	.0	1		0915	112		32.	5.9	1.1	1		1735	212		1.	.1	.0
1		0100	13		0.	.0	.0	1		0920	113		31.	5.6	1.1	1		1740	213		1.	.1	.0
1		0105	14		0.	.0	.0	1		0925	114		30.	5.4	1.1	1		1745	214		1.	.1	.0
1		0110	15		0.	.0	.0	1		0930	115		29.	5.2	1.0	1		1750	215		1.	.1	.0
1		0115	16		0.	.0	.0	1		0935	116		28.	5.0	1.0	1		1755	216		1.	.1	.0
1		0120	17		0.	.0	.0	1		0940	117		27.	4.9	.9	1		1800	217		1.	.1	.0
1		0125	18		0.	.0	.0	1		0945	118		26.	4.7	.9	1		1805	218		1.	.1	.0
1		0130	19		0.	.0	.0	1		0950	119		25.	4.5	.9	1		1810	219		1.	.1	.0
1		0135	20		0.	.0	.0	1		0955	120		24.	4.3	.8	1		1815	220		1.	.1	.0
1		0140	21		0.	.0	.0	1		1000	121		23.	4.2	.8	1		1820	221		1.	.1	.0
1		0145	22		0.	.0	.0	1		1005	122		22.	4.0	.8	1		1825	222		1.	.1	.0
1		0150	23		0.	.0	.0	1		1010	123		21.	3.9	.8	1		1830	223		0.	.1	.0
1		0155	24		0.	.0	.0	1		1015	124		20.	3.7	.7	1		1835	224		0.	.1	.0
1		0200	25		0.	.0	.0	1		1020	125		20.	3.6	.7	1		1840	225		0.	.1	.0
1		0205	26		0.	.0	.0	1		1025	126		19.	3.5	.7	1		1845	226		0.	.1	.0
1		0210	27		0.	.0	.0	1		1030	127		18.	3.3	.7	1		1850	227		0.	.1	.0
1		0215	28		0.	.0	.0	1		1035	128		18.	3.2	.6	1		1855	228		0.	.1	.0
1		0220	29		0.	.0	.0	1		1040	129		17.	3.1	.6	1		1900	229		0.	.1	.0
1		0225	30		0.	.0	.0	1		1045	130		16.	3.0	.6	1		1905	230		0.	.1	.0
1		0230	31		0.	.0	.0	1		1050	131		16.	2.9	.6	1		1910	231		0.	.1	.0
1		0235	32		0.	.0	.0	1		1055	132		15.	2.8	.5	1		1915	232		0.	.1	.0
1		0240	33		0.	.0	.0	1		1100	133		15.	2.7	.5	1		1920	233		0.	.1	.0
1		0245	34		0.	.0	.0	1		1105	134		14.	2.6	.5	1		1925	234		0.	.1	.0
1		0250	35		0.	.0	.0	1		1110	135		13.	2.5	.5	1		1930	235		0.	.1	.0
1		0255	36		0.	.0	.0	1		1115	136		13.	2.4	.5	1		1935	236		0.	.1	.0
1		0300	37		0.	.0	.0	1		1120	137		12.	2.3	.4	1		1940	237		0.	.1	.0
1		0305	38		0.	.0	.0	1		1125	138		12.	2.2	.4	1		1945	238		0.	.1	.0
1		0310	39		0.	.0	.0	1		1130	139		12.	2.1	.4	1		1950	239		0.	.0	.0
1		0315	40		0.	.0	.0	1		1135	140		11.	2.0	.4	1		1955	240		0.	.0	.0
1		0320	41		0.	.0	.0	1		1140	141		11.	2.0	.4	1		2000	241		0.	.0	.0
1		0325	42		0.	.0	.0	1		1145	142		10.	1.9	.4	1		2005	242		0.	.0	.0
1		0330	43		0.	1.1	.2	1		1150	143		10.	1.8	.4	1		2010	243		0.	.0	.0
1		0335	44		28.	5.2	1.0	1		1155	144		10.	1.8	.3	1		2015	244		0.	.0	.0
1		0340	45		64.	12.2	2.3	1		1200	145		9.	1.7	.3	1		2020	245		0.	.0	.0
1		0345	46		98.	20.7	3.3	1		1205	146		9.	1.6	.3	1		2025	246		0.	.0	.0
1		0350	47		137.	29.0	4.3	1		1210	147		9.	1.6	.3	1		2030	247		0.	.0	.0
1		0355	48		171.	35.9	5.1	1		1215	148		8.	1.5	.3	1		2035	248		0.	.0	.0
1		0400	49		177.	41.0	5.7	1		1220	149		8.	1.5	.3	1		2040	249		0.	.0	.0
1		0405	50		182.	44.1	6.1	1		1225	150		8.	1.4	.3	1		2045	250		0.	.0	.0
1		0410	51		185.	45.6	6.2	1		1230	151		7.	1.3	.3	1		2050	251		0.	.0	.0
1		0415	52		185.	45.5	6.2	1		1235	152		7.	1.3	.3	1		2055	252		0.	.0	.0
1		0420	53		182.	44.4	6.1	1		1240	153		7.	1.2	.2	1		2100	253		0.	.0	.0
1		0425	54		180.	43.1	6.0	1		1245	154		7.	1.2	.2	1		2105	254		0.	.0	.0
1		0430	55		178.	41.9	5.8	1		1250	155		6.	1.2	.2	1		2110	255		0.	.0	.0
1		0435	56		177.	40.7	5.7	1		1255	156		6.	1.1	.2	1		2115	256		0.	.0	.0
1		0440	57		176.	39.5	5.6	1		1300	157		6.	1.1	.2	1		2120	257		0.	.0	.0
1		0445	58		174.	38.3	5.4	1		1305	158		6.	1.0	.2	1		2125	258		0.	.0	.0
1		0450	59		173.	37.1	5.3	1		1310	159		5.	1.0	.2	1		2130	259		0.	.0	.0
1		0455	60		171.	36.0	5.1	1		1315	160		5.	1.0	.2	1		2135	260		0.	.0	.0
1		0500	61		170.	34.8	5.0	1		1320	161		5.	.9	.2	1		2140	261		0.	.0	.0
1		0505	62		164.	33.7	4.9	1		1325	162		5.	.9	.2	1		2145	262		0.	.0	.0
1		0510	63		157.	32.6	4.7	1		1330	163		5.	.9	.2	1		2150	263		0.	.0	.0
1		0515	64		151.	31.5	4.6	1		1335	164		5.	.8	.2	1		2155	264		0.	.0	.0
1		0520	65		145.	30.5	4.5	1		1340	165		4.	.8	.2	1		2200	265		0.	.0	.0
1		0525	66		140.	29.5	4.4	1		1345	166		4.	.8	.1	1		2205	266		0.	.0	.0
1		0530	67		134.	28.6	4.3	1		1350	167		4.	.7	.1	1		2210	267		0.	.0	.0
1		0535	68		129.	27.7	4.2	1		1355	168		4.	.7	.1	1		2215	268		0.	.0	.0
1		0540	69		124.	26.8	4.1	1		1400	169		4.	.7	.1	1		2220	269		0.	.0	.0
1		0545	70		120.	25.9	4.0	1		1405	170		4.	.7	.1	1		2225	270		0.	.0	.0
1		0550	71		116.	25.1	3.9	1		1410	171		3.	.6	.1	1		2230	271		0.	.0	.0
1		0555	72		113.	24.3	3.8	1		1415	172		3.	.6	.1	1		2235	272		0.	.0	.0
1		0600	73		110.	23.6	3.7	1		1420	173		3.	.6	.1	1		2240	273		0.	.0	.0
1		0605	74		107.	22.8	3.6	1		1425	174		3.	.6	.1	1		2245	274		0.	.0	.0
1		0610	75		104.	22.1	3.5	1		1430	175		3.	.5	.1	1		2250	275		0.	.0	.0
1		0615	76		101.	21.4	3.4	1		1435	176		3.	.5	.1	1		2255	276		0.	.0	.0
1		0620	77		98.	20.7	3.3	1		1440	177		3.	.5	.1	1		2300	277		0.	.0	.0
1		0625	78		96.	20.0	3.2	1		1445	178												

1 0815 100 50. 9.2 1.0 * 1 1635 200 1. .2 .0 * 2 0055 300 0. .0 .0

PEAK FLOW TIME
+ (CFS) (HR)
+ 185. 4.17
(CFS)
(INCHES)
(AC-FT)

	6-HR	24-HR	72-HR	24.92-HR
98.	27.	26.	26.	
.203	.225	.225	.225	
48.	54.	54.	54.	

PEAK STORAGE TIME
+ (AC-FT) (HR)
+ 46. 4.17

	6-HR	24-HR	72-HR	24.92-HR
21.	6.	5.	5.	

PEAK STAGE TIME
+ (FEET) (HR)
+ 6.25 4.17

	6-HR	24-HR	72-HR	24.92-HR
3.23	.90	.87	.87	

CUMULATIVE AREA = 4.47 SQ MI

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .92

DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HR	MIN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.	0.	0.	1		0820	101	46.	8.4	1.6	1	1640	201	1.	.2	.0			
1		0005	2	0.	0.	0.	0.	1		0825	102	44.	8.1	1.6	1	1645	202	1.	.2	.0			
1		0010	3	0.	0.	0.	0.	1		0830	103	43.	7.8	1.5	1	1650	203	1.	.2	.0			
1		0015	4	0.	0.	0.	0.	1		0835	104	41.	7.5	1.5	1	1655	204	1.	.2	.0			
1		0020	5	0.	0.	0.	0.	1		0840	105	40.	7.2	1.4	1	1700	205	1.	.2	.0			
1		0025	6	0.	0.	0.	0.	1		0845	106	38.	7.0	1.4	1	1705	206	1.	.2	.0			
1		0030	7	0.	0.	0.	0.	1		0850	107	37.	6.7	1.3	1	1710	207	1.	.2	.0			
1		0035	8	0.	0.	0.	0.	1		0855	108	35.	6.4	1.3	1	1715	208	1.	.1	.0			
1		0040	9	0.	0.	0.	0.	1		0900	109	34.	6.2	1.2	1	1720	209	1.	.1	.0			
1		0045	10	0.	0.	0.	0.	1		0905	110	33.	6.0	1.2	1	1725	210	1.	.1	.0			
1		0050	11	0.	0.	0.	0.	1		0910	111	32.	5.8	1.1	1	1730	211	1.	.1	.0			
1		0055	12	0.	0.	0.	0.	1		0915	112	30.	5.5	1.1	1	1735	212	1.	.1	.0			
1		0100	13	0.	0.	0.	0.	1		0920	113	29.	5.3	1.0	1	1740	213	1.	.1	.0			
1		0105	14	0.	0.	0.	0.	1		0925	114	28.	5.1	1.0	1	1745	214	1.	.1	.0			
1		0110	15	0.	0.	0.	0.	1		0930	115	27.	5.0	1.0	1	1750	215	1.	.1	.0			
1		0115	16	0.	0.	0.	0.	1		0935	116	26.	4.8	.9	1	1755	216	1.	.1	.0			
1		0120	17	0.	0.	0.	0.	1		0940	117	25.	4.6	.9	1	1800	217	1.	.1	.0			
1		0125	18	0.	0.	0.	0.	1		0945	118	24.	4.4	.9	1	1805	218	1.	.1	.0			
1		0130	19	0.	0.	0.	0.	1		0950	119	23.	4.3	.8	1	1810	219	1.	.1	.0			
1		0135	20	0.	0.	0.	0.	1		0955	120	22.	4.1	.8	1	1815	220	1.	.1	.0			
1		0140	21	0.	0.	0.	0.	1		1000	121	22.	3.9	.8	1	1820	221	0.	.1	.0			
1		0145	22	0.	0.	0.	0.	1		1005	122	21.	3.8	.7	1	1825	222	0.	.1	.0			
1		0150	23	0.	0.	0.	0.	1		1010	123	20.	3.7	.7	1	1830	223	0.	.1	.0			
1		0155	24	0.	0.	0.	0.	1		1015	124	19.	3.5	.7	1	1835	224	0.	.1	.0			
1		0200	25	0.	0.	0.	0.	1		1020	125	19.	3.4	.7	1	1840	225	0.	.1	.0			
1		0205	26	0.	0.	0.	0.	1		1025	126	18.	3.3	.6	1	1845	226	0.	.1	.0			
1		0210	27	0.	0.	0.	0.	1		1030	127	17.	3.1	.6	1	1850	227	0.	.1	.0			
1		0215	28	0.	0.	0.	0.	1		1035	128	17.	3.0	.6	1	1855	228	0.	.1	.0			
1		0220	29	0.	0.	0.	0.	1		1040	129	16.	2.9	.6	1	1900	229	0.	.1	.0			
1		0225	30	0.	0.	0.	0.	1		1045	130	15.	2.8	.5	1	1905	230	0.	.1	.0			
1		0230	31	0.	0.	0.	0.	1		1050	131	15.	2.7	.5	1	1910	231	0.	.1	.0			
1		0235	32	0.	0.	0.	0.	1		1055	132	14.	2.6	.5	1	1915	232	0.	.1	.0			
1		0240	33	0.	0.	0.	0.	1		1100	133	14.	2.5	.5	1	1920	233	0.	.1	.0			
1		0245	34	0.	0.	0.	0.	1		1105	134	13.	2.4	.5	1	1925	234	0.	.1	.0			
1		0250	35	0.	0.	0.	0.	1		1110	135	13.	2.3	.5	1	1930	235	0.	.1	.0			
1		0255	36	0.	0.	0.	0.	1		1115	136	12.	2.2	.4	1	1935	236	0.	.1	.0			
1		0300	37	0.	0.	0.	0.	1		1120	137	12.	2.2	.4	1	1940	237	0.	.0	.0			
1		0305	38	0.	0.	0.	0.	1		1125	138	11.	2.1	.4	1	1945	238	0.	.0	.0			
1		0310	39	0.	0.	0.	0.	1		1130	139	11.	2.0	.4	1	1950	239	0.	.0	.0			
1		0315	40	0.	0.	0.	0.	1		1135	140	11.	1.9	.4	1	1955	240	0.	.0	.0			
1		0320	41	0.	0.	0.	0.	1		1140	141	10.	1.9	.4	1	2000	241	0.	.0	.0			
1		0325	42	0.	0.	0.	0.	1		1145	142	10.	1.8	.3	1	2005	242	0.	.0	.0			
1		0330	43	5.	1.0	.2	.2	1		1150	143	9.	1.7	.3	1	2010	243	0.	.0	.0			
1		0335	44	26.	4.8	.9	.9	1		1155	144	9.	1.7	.3	1	2015	244	0.	.0	.0			
1		0340	45	62.	11.6	2.2	2.2	1		1200	145	9.	1.6	.3	1	2020	245	0.	.0	.0			
1		0345	46	95.	19.8	3.2	3.2	1		1205	146	8.	1.5	.3	1	2025	246	0.	.0	.0			
1		0350	47	130.	27.9	4.2	4.2	1		1210	147	8.	1.5	.3	1	2030	247	0.	.0	.0			
1		0355	48	170.	34.6	5.0	5.0	1		1215	148	8.	1.4	.3	1	2035	248	0.	.0	.0			
1		0400	49	176.	39.5	5.6	5.6	1		1220	149	8.	1.4	.3	1	2040	249	0.	.0	.0			
1		0405	50	179.	42.6	5.9	5.9	1		1225	150	7.	1.3	.3	1	2045	250	0.	.0	.0			
1		0410	51	181.	43.9	6.1	6.1	1		1230	151	7.	1.3	.2	1	2050	251	0.	.0	.0			
1		0415	52	181.	43.7	6.0	6.0	1		1235	152	7.	1.2	.2	1	2055	252	0.	.0	.0			
1		0420	53	179.	42.6	5.9	5.9	1		1240	153	6.	1.2	.2	1	2100	253	0.	.0	.0			
1		0425	54	178.	41.3	5.8	5.8	1		1245	154	6.	1.1	.2	1	2105	254	0.	.0	.0			
1		0430	55	176.	40.1	5.6	5.6	1		1250	155	6.	1.1	.2	1	2110	255	0.	.0	.0			
1		0435	56	175.	38.9	5.5	5.5	1		1255	156	6.	1.1	.2	1	2115	256	0.	.0	.0			
1		0440	57	173.	37.7	5.3	5.3	1		1300	157	6.	1.0	.2	1	2120	257	0.	.0	.0			
1		0445	58	172.	36.6	5.2	5.2	1		1305	158	5.	1.0	.2	1	2125	258	0.	.0	.0			
1		0450	59	171.	35.4	5.1	5.1	1		1310	159	5.	.9	.2	1	2130	259	0.	.0	.0			
1		0455	60	167.	34.2	4.9	4.9	1		1315	160	5.	.9	.2	1	2135	260	0.	.0	.0			
1		0500	61	161.	33.1	4.8	4.8	1		1320	161	5.	.9	.2	1	2140	261	0.	.0	.0			
1		0505	62	154.	32.0	4.7	4.7	1		1325	162	5.	.8	.2	1	2145	262	0.	.0	.0			
1		0510	63	148.	31.0	4.6	4.6	1		1330	163	4.	.8	.2	1	2150	263	0.	.0	.0			
1		0515	64	143.	30.0	4.4	4.4	1		1335	164	4.	.8	.2	1	2155	264	0.	.0	.0			
1		0520	65	137.	29.0	4.3	4.3	1		1340	165	4.	.8	.1	1	2200	265	0.	.0	.0			
1		0525	66	132.	28.1	4.2	4.2	1		1345	166	4.	.7	.1	1	2205	266	0.	.0	.0			
1		0530	67	127.	27.2	4.1	4.1	1		1350	167	4.	.7	.1	1	2210	267	0.	.0	.0			
1		0535	68	122.	26.4	4.0	4.0	1		1355	168	4.	.7	.1	1	2215	268	0.	.0	.0			
1		0540	69	118.	25.6	3.9	3.9	1		1400	169	4.	.6	.1	1	2220	269	0.	.0	.0			
1		0545	70	115.	24.8	3.8	3.8	1		1405	170	3.	.6	.1	1	2225	270	0.	.0	.0			
1		0550	71	112.	24.0	3.7	3.7	1		1410	171	3.	.6	.1	1	2230	271	0.	.0	.0			
1		0555	72	109.	23.2	3.6	3.6	1		1415	172	3.	.6	.1	1	2235	272	0.	.0	.0			
1		0600	73	106.	22.5	3.5	3.5	1		1420	173	3.	.6	.1	1	2240	273	0.	.0	.0			

1	0605	74	103.	21.8	3.4 *	1	1425	174	3.	.5	.1 *	1	2245	274	0.	.0	.0
1	0610	75	100.	21.1	3.4 *	1	1430	175	3.	.5	.1 *	1	2250	275	0.	.0	.0
1	0615	76	97.	20.4	3.3 *	1	1435	176	3.	.5	.1 *	1	2255	276	0.	.0	.0
1	0620	77	95.	19.7	3.2 *	1	1440	177	3.	.5	.1 *	1	2300	277	0.	.0	.0
1	0625	78	92.	19.1	3.1 *	1	1445	178	3.	.5	.1 *	1	2305	278	0.	.0	.0
1	0630	79	89.	18.5	3.0 *	1	1450	179	2.	.4	.1 *	1	2310	279	0.	.0	.0
1	0635	80	87.	17.9	3.0 *	1	1455	180	2.	.4	.1 *	1	2315	280	0.	.0	.0
1	0640	81	85.	17.3	2.9 *	1	1500	181	2.	.4	.1 *	1	2320	281	0.	.0	.0
1	0645	82	82.	16.7	2.8 *	1	1505	182	2.	.4	.1 *	1	2325	282	0.	.0	.0
1	0650	83	80.	16.1	2.7 *	1	1510	183	2.	.4	.1 *	1	2330	283	0.	.0	.0
1	0655	84	78.	15.6	2.7 *	1	1515	184	2.	.4	.1 *	1	2335	284	0.	.0	.0
1	0700	85	76.	15.1	2.6 *	1	1520	185	2.	.4	.1 *	1	2340	285	0.	.0	.0
1	0705	86	74.	14.6	2.5 *	1	1525	186	2.	.3	.1 *	1	2345	286	0.	.0	.0
1	0710	87	72.	14.1	2.5 *	1	1530	187	2.	.3	.1 *	1	2350	287	0.	.0	.0
1	0715	88	70.	13.6	2.4 *	1	1535	188	2.	.3	.1 *	1	2355	288	0.	.0	.0
1	0720	89	68.	13.1	2.4 *	1	1540	189	2.	.3	.1 *	2	0000	289	0.	.0	.0
1	0725	90	66.	12.6	2.3 *	1	1545	190	2.	.3	.1 *	2	0005	290	0.	.0	.0
1	0730	91	64.	12.2	2.2 *	1	1550	191	2.	.3	.1 *	2	0010	291	0.	.0	.0
1	0735	92	62.	11.8	2.2 *	1	1555	192	1.	.3	.1 *	2	0015	292	0.	.0	.0
1	0740	93	60.	11.3	2.1 *	1	1600	193	1.	.3	.1 *	2	0020	293	0.	.0	.0
1	0745	94	59.	10.9	2.1 *	1	1605	194	1.	.3	.0 *	2	0025	294	0.	.0	.0
1	0750	95	57.	10.5	2.0 *	1	1610	195	1.	.2	.0 *	2	0030	295	0.	.0	.0
1	0755	96	55.	10.1	2.0 *	1	1615	196	1.	.2	.0 *	2	0035	296	0.	.0	.0
1	0800	97	53.	9.8	1.9 *	1	1620	197	1.	.2	.0 *	2	0040	297	0.	.0	.0
1	0805	98	51.	9.4	1.8 *	1	1625	198	1.	.2	.0 *	2	0045	298	0.	.0	.0
1	0810	99	50.	9.1	1.8 *	1	1630	199	1.	.2	.0 *	2	0050	299	0.	.0	.0
1	0815	100	48.	8.7	1.7 *	1	1635	200	1.	.2	.0 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)					
+	181.	4.17	94.	26.	25.	25.	
	(INCHES)		.196	.216	.216	.216	
	(AC-FT)		47.	52.	52.	52.	
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)					
+	44.	4.17	20.	5.	5.	5.	
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)					
+	6.06	4.17	3.10	.86	.83	.83	
CUMULATIVE AREA =			4.47 SQ MI				

HYDROGRAPH AT STATION DET2
PLAN 1, RATIO = .91

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	+	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	*	1		0820	101	44.	8.1	1.6	*	1		1640	201	1.	.2	.0
1		0005	2	0.	.0	.0	*	1		0825	102	43.	7.8	1.5	*	1		1645	202	1.	.2	.0
1		0010	3	0.	.0	.0	*	1		0830	103	41.	7.5	1.5	*	1		1650	203	1.	.2	.0
1		0015	4	0.	.0	.0	*	1		0835	104	40.	7.2	1.4	*	1		1655	204	1.	.2	.0
1		0020	5	0.	.0	.0	*	1		0840	105	38.	7.0	1.4	*	1		1700	205	1.	.2	.0
1		0025	6	0.	.0	.0	*	1		0845	106	37.	6.7	1.3	*	1		1705	206	1.	.2	.0
1		0030	7	0.	.0	.0	*	1		0850	107	35.	6.5	1.3	*	1		1710	207	1.	.1	.0
1		0035	8	0.	.0	.0	*	1		0855	108	34.	6.2	1.2	*	1		1715	208	1.	.1	.0
1		0040	9	0.	.0	.0	*	1		0900	109	33.	6.0	1.2	*	1		1720	209	1.	.1	.0
1		0045	10	0.	.0	.0	*	1		0905	110	32.	5.8	1.1	*	1		1725	210	1.	.1	.0
1		0050	11	0.	.0	.0	*	1		0910	111	30.	5.6	1.1	*	1		1730	211	1.	.1	.0
1		0055	12	0.	.0	.0	*	1		0915	112	29.	5.3	1.0	*	1		1735	212	1.	.1	.0
1		0100	13	0.	.0	.0	*	1		0920	113	28.	5.1	1.0	*	1		1740	213	1.	.1	.0
1		0105	14	0.	.0	.0	*	1		0925	114	27.	5.0	1.0	*	1		1745	214	1.	.1	.0
1		0110	15	0.	.0	.0	*	1		0930	115	26.	4.8	.9	*	1		1750	215	1.	.1	.0
1		0115	16	0.	.0	.0	*	1		0935	116	25.	4.6	.9	*	1		1755	216	1.	.1	.0
1		0120	17	0.	.0	.0	*	1		0940	117	24.	4.4	.9	*	1		1800	217	1.	.1	.0
1		0125	18	0.	.0	.0	*	1		0945	118	23.	4.3	.8	*	1		1805	218	1.	.1	.0
1		0130	19	0.	.0	.0	*	1		0950	119	22.	4.1	.8	*	1		1810	219	1.	.1	.0
1		0135	20	0.	.0	.0	*	1		0955	120	22.	4.0	.8	*	1		1815	220	0.	.1	.0
1		0140	21	0.	.0	.0	*	1		1000	121	21.	3.8	.7	*	1		1820	221	0.	.1	.0
1		0145	22	0.	.0	.0	*	1		1005	122	20.	3.7	.7	*	1		1825	222	0.	.1	.0
1		0150	23	0.	.0	.0	*	1		1010	123	19.	3.5	.7	*	1		1830	223	0.	.1	.0
1		0155	24	0.	.0	.0	*	1		1015	124	19.	3.4	.7	*	1		1835	224	0.	.1	.0
1		0200	25	0.	.0	.0	*	1		1020	125	18.	3.3	.6	*	1		1840	225	0.	.1	.0
1		0205	26	0.	.0	.0	*	1		1025	126	17.	3.2	.6	*	1		1845	226	0.	.1	.0
1		0210	27	0.	.0	.0	*	1		1030	127	17.	3.0	.6	*	1		1850	227	0.	.1	.0
1		0215	28	0.	.0	.0	*	1		1035	128	16.	2.9	.6	*	1		1855	228	0.	.1	.0
1		0220	29	0.	.0	.0	*	1		1040	129	15.	2.8	.6	*	1		1900	229	0.	.1	.0
1		0225	30	0.	.0	.0	*	1		1045	130	15.	2.7	.5	*	1		1905	230	0.	.1	.0
1		0230	31	0.	.0	.0	*	1		1050	131	14.	2.6	.5	*	1		1910	231	0.	.1	.0
1		0235	32	0.	.0	.0	*	1		1055	132	14.	2.5	.5	*	1		1915	232	0.	.1	.0
1		0240	33	0.	.0	.0	*	1		1100	133	13.	2.4	.5	*	1		1920	233	0.	.1	.0
1		0245	34	0.	.0	.0	*	1		1105	134	13.	2.3	.5	*	1		1925	234	0.	.1	.0
1		0250	35	0.	.0	.0	*	1		1110	135	12.	2.2	.4	*	1		1930	235	0.	.1	.0
1		0255	36	0.	.0	.0	*	1		1115	136	12.	2.2	.4	*	1		1935	236	0.	.0	.0
1		0300	37	0.	.0	.0	*	1		1120	137	11.	2.1	.4	*	1		1940	237	0.	.0	.0
1		0305	38	0.	.0	.0	*	1		1125	138	11.	2.0	.4	*	1		1945	238	0.	.0	.0
1		0310	39	0.	.0	.0	*	1		1130	139	11.	1.9	.4	*	1		1950	239	0.	.0	.0
1		0315	40	0.	.0	.0	*	1		1135	140	10.	1.9	.4	*	1		1955	240	0.	.0	.0
1		0320	41	0.	.0	.0	*	1		1140	141	10.	1.8	.4	*	1		2000	241	0.	.0	.0
1		0325	42	0.	.0	.0	*	1		1145	142	9.	1.7	.3	*	1		2005	242	0.	.0	.0
1		0330	43	5.	.9	.2	*	1		1150	143	9.	1.7	.3	*	1		2010	243	0.	.0	.0
1		0335	44	25.	4.6	.9	*	1		1155	144	9.	1.6	.3	*	1		2015	244	0.	.0	.0
1		0340	45	60.	11.3	2.1	*	1		1200	145	8.	1.5	.3	*	1		2020	245	0.	.0	.0
1		0345	46	93.	19.3	3.1	*	1		1205	146	8.	1.5	.3	*	1		2025	246	0.	.0	.0
1		0350	47	127.	27.2	4.1	*	1		1210	147	8.	1.4	.3	*	1		2030	247	0.	.0	.0

1	0355	48	165.	33.9	4.9 *	1	1215	148	8.	1.4	.3 *	1	2035	248	0.	.0	.0
1	0400	49	175.	38.6	5.5 *	1	1220	149	7.	1.3	.3 *	1	2040	249	0.	.0	.0
1	0405	50	178.	41.6	5.8 *	1	1225	150	7.	1.3	.2 *	1	2045	250	0.	.0	.0
1	0410	51	179.	42.9	5.9 *	1	1230	151	7.	1.2	.2 *	1	2050	251	0.	.0	.0
1	0415	52	179.	42.6	5.9 *	1	1235	152	6.	1.2	.2 *	1	2055	252	0.	.0	.0
1	0420	53	178.	41.4	5.8 *	1	1240	153	6.	1.1	.2 *	1	2100	253	0.	.0	.0
1	0425	54	176.	40.2	5.6 *	1	1245	154	6.	1.1	.2 *	1	2105	254	0.	.0	.0
1	0430	55	175.	39.0	5.5 *	1	1250	155	6.	1.1	.2 *	1	2110	255	0.	.0	.0
1	0435	56	174.	37.8	5.4 *	1	1255	156	6.	1.0	.2 *	1	2115	256	0.	.0	.0
1	0440	57	172.	36.6	5.2 *	1	1300	157	5.	1.0	.2 *	1	2120	257	0.	.0	.0
1	0445	58	171.	35.4	5.1 *	1	1305	158	5.	.9	.2 *	1	2125	258	0.	.0	.0
1	0450	59	167.	34.3	4.9 *	1	1310	159	5.	.9	.2 *	1	2130	259	0.	.0	.0
1	0455	60	161.	33.2	4.8 *	1	1315	160	5.	.9	.2 *	1	2135	260	0.	.0	.0
1	0500	61	155.	32.1	4.7 *	1	1320	161	5.	.8	.2 *	1	2140	261	0.	.0	.0
1	0505	62	149.	31.0	4.6 *	1	1325	162	4.	.8	.2 *	1	2145	262	0.	.0	.0
1	0510	63	143.	30.0	4.4 *	1	1330	163	4.	.8	.2 *	1	2150	263	0.	.0	.0
1	0515	64	137.	29.1	4.3 *	1	1335	164	4.	.8	.1 *	1	2155	264	0.	.0	.0
1	0520	65	132.	28.2	4.2 *	1	1340	165	4.	.7	.1 *	1	2200	265	0.	.0	.0
1	0525	66	127.	27.3	4.1 *	1	1345	166	4.	.7	.1 *	1	2205	266	0.	.0	.0
1	0530	67	122.	26.4	4.0 *	1	1350	167	4.	.7	.1 *	1	2210	267	0.	.0	.0
1	0535	68	118.	25.6	3.9 *	1	1355	168	4.	.6	.1 *	1	2215	268	0.	.0	.0
1	0540	69	115.	24.8	3.8 *	1	1400	169	3.	.6	.1 *	1	2220	269	0.	.0	.0
1	0545	70	112.	24.0	3.7 *	1	1405	170	3.	.6	.1 *	1	2225	270	0.	.0	.0
1	0550	71	109.	23.3	3.6 *	1	1410	171	3.	.6	.1 *	1	2230	271	0.	.0	.0
1	0555	72	106.	22.5	3.5 *	1	1415	172	3.	.6	.1 *	1	2235	272	0.	.0	.0
1	0600	73	103.	21.8	3.5 *	1	1420	173	3.	.5	.1 *	1	2240	273	0.	.0	.0
1	0605	74	100.	21.1	3.4 *	1	1425	174	3.	.5	.1 *	1	2245	274	0.	.0	.0
1	0610	75	97.	20.4	3.3 *	1	1430	175	3.	.5	.1 *	1	2250	275	0.	.0	.0
1	0615	76	95.	19.8	3.2 *	1	1435	176	3.	.5	.1 *	1	2255	276	0.	.0	.0
1	0620	77	92.	19.1	3.1 *	1	1440	177	3.	.5	.1 *	1	2300	277	0.	.0	.0
1	0625	78	90.	18.5	3.0 *	1	1445	178	2.	.4	.1 *	1	2305	278	0.	.0	.0
1	0630	79	87.	17.9	3.0 *	1	1450	179	2.	.4	.1 *	1	2310	279	0.	.0	.0
1	0635	80	85.	17.3	2.9 *	1	1455	180	2.	.4	.1 *	1	2315	280	0.	.0	.0
1	0640	81	82.	16.7	2.8 *	1	1500	181	2.	.4	.1 *	1	2320	281	0.	.0	.0
1	0645	82	80.	16.2	2.8 *	1	1505	182	2.	.4	.1 *	1	2325	282	0.	.0	.0
1	0650	83	78.	15.6	2.7 *	1	1510	183	2.	.4	.1 *	1	2330	283	0.	.0	.0
1	0655	84	76.	15.1	2.6 *	1	1515	184	2.	.4	.1 *	1	2335	284	0.	.0	.0
1	0700	85	74.	14.6	2.6 *	1	1520	185	2.	.3	.1 *	1	2340	285	0.	.0	.0
1	0705	86	72.	14.1	2.5 *	1	1525	186	2.	.3	.1 *	1	2345	286	0.	.0	.0
1	0710	87	70.	13.6	2.4 *	1	1530	187	2.	.3	.1 *	1	2350	287	0.	.0	.0
1	0715	88	68.	13.1	2.4 *	1	1535	188	2.	.3	.1 *	1	2355	288	0.	.0	.0
1	0720	89	66.	12.7	2.3 *	1	1540	189	2.	.3	.1 *	2	0000	289	0.	.0	.0
1	0725	90	64.	12.2	2.3 *	1	1545	190	2.	.3	.1 *	2	0005	290	0.	.0	.0
1	0730	91	62.	11.8	2.2 *	1	1550	191	1.	.3	.1 *	2	0010	291	0.	.0	.0
1	0735	92	61.	11.4	2.1 *	1	1555	192	1.	.3	.1 *	2	0015	292	0.	.0	.0
1	0740	93	59.	10.9	2.1 *	1	1600	193	1.	.3	.0 *	2	0020	293	0.	.0	.0
1	0745	94	57.	10.5	2.0 *	1	1605	194	1.	.2	.0 *	2	0025	294	0.	.0	.0
1	0750	95	56.	10.2	2.0 *	1	1610	195	1.	.2	.0 *	2	0030	295	0.	.0	.0
1	0755	96	54.	9.8	1.9 *	1	1615	196	1.	.2	.0 *	2	0035	296	0.	.0	.0
1	0800	97	52.	9.4	1.8 *	1	1620	197	1.	.2	.0 *	2	0040	297	0.	.0	.0
1	0805	98	50.	9.1	1.8 *	1	1625	198	1.	.2	.0 *	2	0045	298	0.	.0	.0
1	0810	99	48.	8.7	1.7 *	1	1630	199	1.	.2	.0 *	2	0050	299	0.	.0	.0
1	0815	100	46.	8.4	1.6 *	1	1635	200	1.	.2	.0 *	2	0055	300	0.	.0	.0

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	179.	4.17	92.	25.	24.	24.
		(INCHES)	.191	.211	.211	.211
		(AC-FT)	46.	50.	50.	50.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	43.	4.17	19.	5.	5.	5.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	5.94	4.17	3.03	.84	.81	.81

CUMULATIVE AREA = 4.47 SQ MI

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

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659 KK *****
 * DBOND4* *
 * *****

660 KO OUTPUT CONTROL VARIABLES
 IFRNT 3 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

661 RS STORAGE ROUTING
 NSTPS 1 NUMBER OF SUBREACHES
 ITYP ELEV TYPE OF INITIAL CONDITION
 RSVRIC 3.00 INITIAL CONDITION
 X .00 WORKING R AND D COEFFICIENT

662 SV	STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
663 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
664 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

*** **

HYDROGRAPH AT STATION DBOND4* FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	15.	5.08	13.	5.	5.	5.
	(INCHES)		1.717	2.917	2.917	2.917
	(AC-FT)		6.	11.	11.	11.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	5.	5.08	4.	1.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.31	5.08	2.72	1.14	1.10	1.10

CUMULATIVE AREA = .07 SQ MI

*** **

HYDROGRAPH AT STATION DBOND4* FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	15.	5.08	12.	5.	5.	5.
	(INCHES)		1.701	2.879	2.879	2.879
	(AC-FT)		6.	10.	10.	10.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	5.	5.08	4.	1.	1.	1.
PEAK STAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
+	3.28	5.08	2.69	1.12	1.08	1.08

CUMULATIVE AREA = .07 SQ MI

*** **

HYDROGRAPH AT STATION DBOND4* FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
+	15.	5.08	12.	5.	5.	5.
	(INCHES)		1.677	2.816	2.816	2.816
	(AC-FT)		6.	10.	10.	10.
PEAK STORAGE	TIME		6-HR	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
+	5.	5.08	3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.23	5.08	2.64	1.10	1.06	1.06

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
	14.	5.08	(CFS)	12.	5.	5.
			(INCHES)	1.663	2.753	2.753
			(AC-FT)	6.	10.	10.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	5.	5.08	3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.18	5.08	2.61	1.07	1.03	1.03

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
	14.	5.00	(CFS)	12.	5.	5.
			(INCHES)	1.658	2.728	2.728
			(AC-FT)	6.	10.	10.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	5.	5.08	3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.16	5.08	2.60	1.06	1.02	1.02

CUMULATIVE AREA = .07 SQ MI

HYDROGRAPH AT STATION DBOND4*
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
	14.	5.00	(CFS)	12.	5.	5.
			(INCHES)	1.654	2.710	2.711
			(AC-FT)	6.	10.	10.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	5.	5.00	3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.14	5.08	2.59	1.05	1.01	1.01

CUMULATIVE AREA = .07 SQ MI

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670 KK

* DBONDS*

671 KO

OUTPUT CONTROL VARIABLES

IPRNT	3	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

HYDROGRAPH ROUTING DATA

672 RS

STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
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	ITYP RSVRIC X	ELEV 3.00 .00	TYPE OF INITIAL CONDITION INITIAL CONDITION WORKING R AND D COEFFICIENT					
673 SV	STORAGE	.0	2.8	3.4	4.4	5.1	6.2	7.6
674 SE	ELEVATION	.00	2.60	2.80	3.10	3.30	3.60	4.00
675 SQ	DISCHARGE	0.	13.	13.	14.	15.	16.	17.

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .99

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	4.25	(CFS)	12.	5.	5.	5.
		(INCHES)	2.009	3.180	3.181	3.181
		(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 4.	4.25		3.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3.07	4.25		2.57	1.01	.97	.97
CUMULATIVE AREA =			.06 SQ MI			

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .98

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	4.25	(CFS)	12.	5.	5.	5.
		(INCHES)	2.000	3.142	3.143	3.143
		(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 4.	4.25		3.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3.04	4.25		2.55	1.00	.96	.96
CUMULATIVE AREA =			.06 SQ MI			

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .95

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	4.17	(CFS)	12.	5.	4.	4.
		(INCHES)	1.986	3.079	3.079	3.079
		(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 4.	4.17		3.	1.	1.	1.
PEAK STAGE	TIME		6-HR	MAXIMUM AVERAGE STAGE 24-HR	72-HR	24.92-HR
+ (FEET)	(HR)					
+ 3.01	4.17		2.53	.97	.94	.94
CUMULATIVE AREA =			.06 SQ MI			

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HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .93

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
+ 14.	.00	(CFS)	12.	5.	4.	4.
		(INCHES)	1.971	3.016	3.016	3.016
		(AC-FT)	6.	9.	9.	9.
PEAK STORAGE	TIME		6-HR	MAXIMUM AVERAGE STORAGE 24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)					
+ 4.	.00		3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.00	.00				
			2.51	.95	.92	.92

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .92

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
	14.	.00				
			12.	4.	4.	4.
		(INCHES)	1.965	2.991	2.991	2.991
		(AC-FT)	6.	9.	9.	9.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	4.	.00				
			3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.00	.00				
			2.50	.94	.91	.91

CUMULATIVE AREA = .06 SQ MI

HYDROGRAPH AT STATION DBOND5*
FOR PLAN 1, RATIO = .91

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.92-HR
+	(CFS)	(HR)				
	14.	.00				
			12.	4.	4.	4.
		(INCHES)	1.961	2.973	2.974	2.974
		(AC-FT)	6.	9.	9.	9.

PEAK STORAGE	TIME	6-HR	MAXIMUM AVERAGE STORAGE	24-HR	72-HR	24.92-HR
+	(AC-FT)	(HR)				
	4.	.00				
			3.	1.	1.	1.

PEAK STAGE	TIME	6-HR	MAXIMUM AVERAGE STAGE	24-HR	72-HR	24.92-HR
+	(FEET)	(HR)				
	3.00	.00				
			2.49	.94	.90	.90

CUMULATIVE AREA = .06 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION					
				RATIO 1	RATIO 2	RATIO 3	RATIO 4	RATIO 5	RATIO 6
				.99	.98	.95	.93	.92	.91
HYDROGRAPH AT	OFFD-2	.09	1	FLOW	151.	148.	144.	139.	137.
+				TIME	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OFFD-3	.30	1	FLOW	243.	237.	226.	215.	211.
+				TIME	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD-3A	.03	1	FLOW	61.	60.	58.	56.	56.
+				TIME	3.50	3.50	3.50	3.50	3.50
ROUTED TO	ROFFD-3A	.03	1	FLOW	54.	53.	52.	51.	50.
+				TIME	3.67	3.67	3.67	3.67	3.67
3 COMBINED AT	CP1	.42	1	FLOW	423.	413.	397.	381.	375.
+				TIME	3.67	3.67	3.67	3.67	3.67
HYDROGRAPH AT	OFFD-2A	.02	1	FLOW	40.	39.	38.	37.	36.
+				TIME	3.50	3.50	3.50	3.50	3.50
HYDROGRAPH AT	OFFD-1	.41	1	FLOW	607.	596.	576.	557.	549.
+				TIME	3.58	3.58	3.58	3.58	3.58
2 COMBINED AT	CP2	.43	1	FLOW	645.	633.	612.	591.	583.
+				TIME	3.58	3.58	3.58	3.58	3.58
HYDROGRAPH AT	OFFD-4	.49	1	FLOW	364.	354.	339.	323.	317.
+				TIME	3.83	3.83	3.83	3.83	3.83

2 COMBINED AT	CP2B	.92	1	FLOW TIME	907. 3.67	888. 3.67	855. 3.67	822. 3.67	809. 3.67	800. 3.67
ROUTED TO	AC2B	.92	1	FLOW TIME	922. 3.83	903. 3.83	870. 3.83	837. 3.83	824. 3.83	815. 3.83
2 COMBINED AT	CP2A	1.34	1	FLOW TIME	1267. 3.75	1237. 3.75	1190. 3.75	1142. 3.75	1123. 3.75	1109. 3.75
ROUTED TO	RCP2A	1.34	1	FLOW TIME	1248. 3.83	1221. 3.83	1176. 3.83	1130. 3.83	1113. 3.83	1100. 3.83
HYDROGRAPH AT	OND-25	.10	1	FLOW TIME	117. 3.58	114. 3.58	110. 3.58	105. 3.58	103. 3.58	102. 3.58
HYDROGRAPH AT	OFFD-25	.07	1	FLOW TIME	106. 3.50	103. 3.50	99. 3.50	96. 3.58	94. 3.58	93. 3.58
2 COMBINED AT	CP3	.17	1	FLOW TIME	222. 3.58	217. 3.58	209. 3.58	201. 3.58	198. 3.58	195. 3.58
HYDROGRAPH AT	OND-26	.02	1	FLOW TIME	24. 3.58	23. 3.58	22. 3.58	21. 3.58	21. 3.58	20. 3.58
HYDROGRAPH AT	OFFD-26	.01	1	FLOW TIME	23. 3.50	23. 3.50	22. 3.50	21. 3.50	21. 3.50	21. 3.50
2 COMBINED AT	CP4	.03	1	FLOW TIME	44. 3.58	43. 3.58	41. 3.58	40. 3.58	39. 3.58	39. 3.58
2 COMBINED AT	CP5	.21	1	FLOW TIME	266. 3.58	260. 3.58	250. 3.58	241. 3.58	237. 3.58	234. 3.58
ROUTED TO	RCP5	.21	1	FLOW TIME	261. 3.58	255. 3.58	246. 3.58	236. 3.58	233. 3.58	229. 3.58
HYDROGRAPH AT	OND-20	.15	1	FLOW TIME	229. 3.58	225. 3.58	218. 3.58	212. 3.58	209. 3.58	207. 3.58
HYDROGRAPH AT	OND-21	.08	1	FLOW TIME	101. 3.58	99. 3.58	95. 3.58	91. 3.58	89. 3.58	88. 3.58
3 COMBINED AT	CP8	.43	1	FLOW TIME	591. 3.58	579. 3.58	559. 3.58	538. 3.58	531. 3.58	524. 3.58
HYDROGRAPH AT	OND-27	.11	1	FLOW TIME	155. 3.58	152. 3.58	146. 3.58	141. 3.58	138. 3.58	137. 3.58
HYDROGRAPH AT	OFFD-27A	.07	1	FLOW TIME	104. 3.58	102. 3.58	98. 3.58	95. 3.58	93. 3.58	92. 3.58
HYDROGRAPH AT	OFFD-27B	.04	1	FLOW TIME	61. 3.50	60. 3.50	58. 3.58	56. 3.58	55. 3.58	54. 3.58
3 COMBINED AT	CP6	.23	1	FLOW TIME	320. 3.58	314. 3.58	302. 3.58	291. 3.58	286. 3.58	283. 3.58
ROUTED TO	RCP6	.23	1	FLOW TIME	316. 3.58	309. 3.58	298. 3.58	286. 3.58	282. 3.58	278. 3.58
HYDROGRAPH AT	OND-22	.05	1	FLOW TIME	68. 3.58	66. 3.58	64. 3.58	61. 3.58	60. 3.58	60. 3.58
2 COMBINED AT	CP7	.28	1	FLOW TIME	384. 3.58	375. 3.58	362. 3.58	347. 3.58	342. 3.58	338. 3.58
ROUTED TO	RCP7	.28	1	FLOW TIME	369. 3.58	362. 3.58	348. 3.58	333. 3.58	329. 3.58	326. 3.58
3 COMBINED AT	CP9	2.05	1	FLOW TIME	1950. 3.75	1907. 3.75	1835. 3.75	1765. 3.75	1736. 3.75	1716. 3.75
DIVERSION TO	DIV1	2.05	1	FLOW TIME	757. 3.42	757. 3.42	757. 3.42	757. 3.50	757. 3.50	757. 3.50
HYDROGRAPH AT	ODIV1	2.05	1	FLOW TIME	1193. 3.75	1150. 3.75	1078. 3.75	1008. 3.75	979. 3.75	959. 3.75
HYDROGRAPH AT	DB-1	.03	1	FLOW TIME	18. 3.67	17. 3.67	16. 3.67	16. 3.67	15. 3.67	15. 3.67

2 COMBINED AT	CP9A	2.07	1	FLOW TIME	1209. 3.75	1165. 3.75	1093. 3.75	1022. 3.75	992. 3.75	972. 3.75
ROUTED TO	DET1	2.07	1	FLOW TIME	129. 4.17	122. 4.17	110. 4.17	98. 4.17	94. 4.17	92. 4.17
				** PEAK STAGES IN FEET **						
			1	STAGE TIME	6.00 4.17	5.79 4.17	5.45 4.17	5.11 4.17	4.98 4.17	4.88 4.17
HYDROGRAPH AT	DIV1	.00	1	FLOW TIME	757. 3.42	757. 3.42	757. 3.42	757. 3.50	757. 3.50	757. 3.50
2 COMBINED AT	CP10	2.07	1	FLOW TIME	886. 4.17	879. 4.17	867. 4.17	855. 4.17	851. 4.17	849. 4.17
ROUTED TO	RCP10	2.07	1	FLOW TIME	885. 4.17	878. 4.17	866. 4.17	854. 4.17	850. 4.17	849. 4.08
HYDROGRAPH AT	OND-18	.02	1	FLOW TIME	32. 3.58	32. 3.58	31. 3.58	30. 3.58	30. 3.58	29. 3.58
ROUTED TO	ROND-18	.02	1	FLOW TIME	30. 3.58	30. 3.58	29. 3.58	28. 3.58	28. 3.58	28. 3.58
HYDROGRAPH AT	OND-19	.09	1	FLOW TIME	107. 3.58	105. 3.58	101. 3.58	97. 3.58	95. 3.58	94. 3.58
3 COMBINED AT	CP11	2.18	1	FLOW TIME	943. 3.75	937. 3.75	927. 3.75	917. 3.75	914. 3.75	911. 3.75
ROUTED TO	RCP11	2.18	1	FLOW TIME	942. 3.75	936. 3.75	926. 3.75	917. 3.75	914. 3.75	911. 3.75
HYDROGRAPH AT	OND-13	.09	1	FLOW TIME	115. 3.58	113. 3.58	109. 3.58	104. 3.58	103. 3.58	102. 3.58
HYDROGRAPH AT	OND-14	.14	1	FLOW TIME	159. 3.67	155. 3.67	150. 3.67	144. 3.67	142. 3.67	140. 3.67
3 COMBINED AT	CP12	2.42	1	FLOW TIME	1205. 3.67	1195. 3.67	1176. 3.67	1158. 3.67	1152. 3.67	1147. 3.67
ROUTED TO	RCP12	2.42	1	FLOW TIME	1203. 3.67	1192. 3.67	1174. 3.67	1156. 3.67	1149. 3.67	1145. 3.67
HYDROGRAPH AT	OND-12	.01	1	FLOW TIME	18. 3.58	17. 3.58	17. 3.58	16. 3.58	16. 3.58	16. 3.58
2 COMBINED AT	CP13	2.43	1	FLOW TIME	1218. 3.67	1207. 3.67	1188. 3.67	1170. 3.67	1163. 3.67	1158. 3.67
ROUTED TO	RCP13	2.43	1	FLOW TIME	1214. 3.67	1204. 3.67	1185. 3.67	1167. 3.67	1160. 3.67	1155. 3.67
HYDROGRAPH AT	OND-10	.11	1	FLOW TIME	141. 3.67	138. 3.67	133. 3.67	128. 3.67	126. 3.67	125. 3.67
2 COMBINED AT	CP14	2.54	1	FLOW TIME	1355. 3.67	1341. 3.67	1318. 3.67	1295. 3.67	1286. 3.67	1280. 3.67
HYDROGRAPH AT	OND-24	.12	1	FLOW TIME	133. 3.67	130. 3.67	125. 3.67	120. 3.67	118. 3.67	117. 3.67
ROUTED TO	ROND-24	.12	1	FLOW TIME	132. 3.67	129. 3.67	124. 3.67	119. 3.67	117. 3.67	115. 3.67
HYDROGRAPH AT	OND-23	.12	1	FLOW TIME	115. 3.67	112. 3.67	107. 3.67	102. 3.67	100. 3.67	99. 3.67
2 COMBINED AT	CP15	.24	1	FLOW TIME	247. 3.67	241. 3.67	231. 3.67	221. 3.67	217. 3.67	214. 3.67
ROUTED TO	RCP15	.24	1	FLOW TIME	242. 3.67	236. 3.67	227. 3.67	217. 3.67	213. 3.67	210. 3.67
HYDROGRAPH AT	OND-15	.13	1	FLOW TIME	148. 3.67	145. 3.67	140. 3.67	134. 3.67	132. 3.67	131. 3.67
2 COMBINED AT	CP16	.37	1	FLOW	390.	381.	366.	351.	345.	341.

				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO										
+	RCP16	.37	1	FLOW TIME	380.3.75	371.3.75	357.3.75	343.3.75	337.3.75	333.3.75
HYDROGRAPH AT										
+	OND-11	.09	1	FLOW TIME	128.3.58	126.3.58	121.3.58	117.3.58	115.3.58	114.3.58
3 COMBINED AT										
+	CP17	3.00	1	FLOW TIME	1849.3.67	1823.3.67	1781.3.67	1740.3.67	1723.3.67	1712.3.67
ROUTED TO										
+	RCP17	3.00	1	FLOW TIME	1832.3.67	1807.3.67	1765.3.67	1725.3.67	1707.3.67	1697.3.67
HYDROGRAPH AT										
+	OND-5	.08	1	FLOW TIME	133.3.58	130.3.58	127.3.58	123.3.58	122.3.58	121.3.58
HYDROGRAPH AT										
+	OND-6	.33	1	FLOW TIME	322.3.83	316.3.83	304.3.83	293.3.83	289.3.83	286.3.83
3 COMBINED AT										
+	CP18	3.41	1	FLOW TIME	2228.3.67	2195.3.67	2139.3.67	2086.3.67	2063.3.67	2049.3.67
HYDROGRAPH AT										
+	OND-17	.18	1	FLOW TIME	166.3.75	162.3.75	156.3.75	149.3.75	146.3.75	144.3.75
ROUTED TO										
+	ROND-17	.18	1	FLOW TIME	163.3.75	158.3.75	152.3.83	145.3.83	143.3.83	141.3.83
HYDROGRAPH AT										
+	OND-8	.20	1	FLOW TIME	202.3.67	197.3.67	190.3.67	182.3.67	179.3.67	176.3.67
2 COMBINED AT										
+	CP19	.38	1	FLOW TIME	360.3.75	351.3.75	337.3.75	322.3.75	317.3.75	313.3.75
ROUTED TO										
+	RCP19	.38	1	FLOW TIME	355.3.75	346.3.75	332.3.75	318.3.75	313.3.75	308.3.75
HYDROGRAPH AT										
+	OND-16	.06	1	FLOW TIME	54.3.58	53.3.58	50.3.58	48.3.58	47.3.58	46.3.58
ROUTED TO										
+	ROND-16	.06	1	FLOW TIME	53.3.75	50.3.75	49.3.75	46.3.75	45.3.75	44.3.75
HYDROGRAPH AT										
+	OND-7	.28	1	FLOW TIME	291.3.75	285.3.75	274.3.75	264.3.75	260.3.75	257.3.75
3 COMBINED AT										
+	CP20	.72	1	FLOW TIME	699.3.75	682.3.75	656.3.75	628.3.75	617.3.75	610.3.75
ROUTED TO										
+	RCP20	.72	1	FLOW TIME	684.3.83	668.3.83	643.3.83	620.3.83	606.3.83	602.3.83
HYDROGRAPH AT										
+	OND7*	.02	1	FLOW TIME	34.3.58	33.3.58	32.3.58	31.3.58	31.3.58	30.3.58
3 COMBINED AT										
+	CP21	4.15	1	FLOW TIME	2922.3.75	2874.3.75	2789.3.75	2711.3.75	2674.3.75	2654.3.75
ROUTED TO										
+	RCP21	4.15	1	FLOW TIME	2913.3.75	2865.3.75	2781.3.75	2702.3.75	2666.3.75	2646.3.75
HYDROGRAPH AT										
+	OND-4	.24	1	FLOW TIME	200.3.83	196.3.83	188.3.83	180.3.83	177.3.83	174.3.83
HYDROGRAPH AT										
+	OND6*	.06	1	FLOW TIME	79.3.67	78.3.67	75.3.67	73.3.67	72.3.67	71.3.67
3 COMBINED AT										
+	CP22	4.45	1	FLOW TIME	3183.3.75	3129.3.75	3035.3.75	2945.3.75	2906.3.75	2882.3.75
DIVERSION TO										
+	DIV2	4.45	1	FLOW TIME	1580.3.50	1580.3.50	1580.3.50	1580.3.50	1580.3.50	1580.3.50
HYDROGRAPH AT										
+	ODIV2	4.45	1	FLOW TIME	1603.3.75	1549.3.75	1455.3.75	1365.3.75	1326.3.75	1302.3.75
HYDROGRAPH AT										
+	DB-2	.02	1	FLOW TIME	5.3.67	5.3.67	4.3.67	4.3.67	4.3.67	4.3.67
2 COMBINED AT										

+	CP22A	4.47	1	FLOW TIME	1608. 3.75	1554. 3.75	1459. 3.75	1369. 3.75	1329. 3.75	1306. 3.75
ROUTED TO										
+	DET2	4.47	1	FLOW TIME	208. 4.25	203. 4.25	194. 4.25	185. 4.17	181. 4.17	179. 4.17
** PEAK STAGES IN FEET **										
			1	STAGE TIME	7.42 4.25	7.16 4.25	6.70 4.25	6.25 4.17	6.06 4.17	5.94 4.17
HYDROGRAPH AT										
+	DIV2	.00	1	FLOW TIME	1580. 3.50	1580. 3.50	1580. 3.50	1580. 3.50	1580. 3.50	1580. 3.50
2 COMBINED AT										
+	CP23	4.47	1	FLOW TIME	1788. 4.25	1783. 4.25	1774. 4.25	1765. 4.17	1761. 4.17	1759. 4.17
ROUTED TO										
+	RCP23	4.47	1	FLOW TIME	1788. 4.25	1783. 4.25	1773. 4.17	1765. 4.17	1761. 4.17	1759. 4.17
HYDROGRAPH AT										
+	OND-3	.03	1	FLOW TIME	21. 3.67	20. 3.67	19. 3.67	18. 3.67	18. 3.67	17. 3.67
HYDROGRAPH AT										
+	OND8*	.02	1	FLOW TIME	26. 3.67	25. 3.67	24. 3.67	23. 3.67	23. 3.67	23. 3.67
3 COMBINED AT										
+	CP24	4.52	1	FLOW TIME	1803. 4.17	1797. 4.17	1788. 4.17	1779. 4.08	1777. 4.00	1776. 4.00
HYDROGRAPH AT										
+	OND-9	.01	1	FLOW TIME	14. 3.50	13. 3.50	13. 3.50	12. 3.50	12. 3.50	12. 3.50
HYDROGRAPH AT										
+	BKFPD	.14	1	FLOW TIME	127. 3.67	124. 3.67	118. 3.67	113. 3.67	111. 3.67	109. 3.67
ROUTED TO										
+	RBKFPD	.14	1	FLOW TIME	126. 3.83	125. 3.83	119. 3.83	114. 3.92	112. 3.92	111. 3.92
HYDROGRAPH AT										
+	BKMD	.03	1	FLOW TIME	42. 3.58	41. 3.58	39. 3.58	38. 3.58	37. 3.58	36. 3.58
ROUTED TO										
+	RBKMD	.03	1	FLOW TIME	42. 3.83	42. 3.83	41. 3.83	40. 3.83	39. 3.83	39. 3.83
HYDROGRAPH AT										
+	CRMJD	.21	1	FLOW TIME	200. 3.75	196. 3.75	188. 3.75	180. 3.75	177. 3.75	175. 3.75
DIVERSION TO										
+	DCRMJD	.21	1	FLOW TIME	100. 3.75	98. 3.75	94. 3.75	90. 3.75	89. 3.75	88. 3.75
HYDROGRAPH AT										
+	OCRMJD	.21	1	FLOW TIME	100. 3.75	98. 3.75	94. 3.75	90. 3.75	89. 3.75	88. 3.75
ROUTED TO										
+	ROCRMJD	.21	1	FLOW TIME	102. 3.92	99. 3.92	96. 3.92	92. 3.92	90. 3.92	89. 3.92
3 COMBINED AT										
+	CP25A	.38	1	FLOW TIME	270. 3.83	263. 3.83	253. 3.83	241. 3.83	237. 3.83	234. 3.83
HYDROGRAPH AT										
+	WSPVD	.26	1	FLOW TIME	169. 3.83	164. 3.83	156. 3.83	148. 3.83	145. 3.83	143. 3.83
2 COMBINED AT										
+	CP26	.64	1	FLOW TIME	439. 3.83	427. 3.83	409. 3.83	390. 3.83	382. 3.83	377. 3.83
DIVERSION TO										
+	DCP26	.64	1	FLOW TIME	125. 3.83	125. 3.83	119. 3.83	114. 3.83	112. 3.83	110. 3.83
HYDROGRAPH AT										
+	OCP26	.64	1	FLOW TIME	314. 3.83	302. 3.83	289. 3.83	276. 3.83	271. 3.83	267. 3.83
ROUTED TO										
+	ROCP26	.64	1	FLOW TIME	312. 3.92	302. 3.92	288. 3.92	275. 3.92	272. 3.92	266. 3.92
HYDROGRAPH AT										
+	DCRMJD	.00	1	FLOW TIME	100. 3.75	98. 3.75	94. 3.75	90. 3.75	89. 3.75	88. 3.75
ROUTED TO										
+	RDCRMJD	.00	1	FLOW TIME	102. 3.92	99. 3.92	96. 3.92	92. 3.92	90. 3.92	89. 3.92
HYDROGRAPH AT										
+	WSCRD	.16	1	FLOW TIME	125. 3.67	122. 3.67	116. 3.67	110. 3.67	108. 3.67	106. 3.67

3 COMBINED AT										
+	CP27	.81	1	FLOW TIME	506. 3.83	491. 3.83	466. 3.83	443. 3.92	438. 3.92	430. 3.92
DIVERSION TO										
+	DCP27	.81	1	FLOW TIME	138. 3.83	138. 3.83	131. 3.83	125. 3.92	123. 3.92	121. 3.92
HYDROGRAPH AT										
+	GCP27	.81	1	FLOW TIME	368. 3.83	353. 3.83	335. 3.83	319. 3.92	315. 3.92	309. 3.92
HYDROGRAPH AT										
+	FWLMD	.29	1	FLOW TIME	269. 3.75	262. 3.75	252. 3.75	241. 3.75	236. 3.75	234. 3.75
HYDROGRAPH AT										
+	DCP26	.00	1	FLOW TIME	125. 3.83	125. 3.83	119. 3.83	114. 3.83	112. 3.83	110. 3.83
ROUTED TO										
+	RDCP26	.00	1	FLOW TIME	137. 4.00	136. 4.00	130. 4.00	124. 4.00	121. 4.00	119. 4.00
3 COMBINED AT										
+	CP28	1.10	1	FLOW TIME	678. 3.92	655. 3.92	622. 3.92	588. 3.92	577. 3.92	566. 3.92
HYDROGRAPH AT										
+	BKLMD	.34	1	FLOW TIME	325. 3.75	318. 3.75	305. 3.75	292. 3.75	287. 3.75	284. 3.75
ROUTED TO										
+	RBKLMD	.34	1	FLOW TIME	319. 3.83	309. 3.83	298. 3.83	288. 3.83	280. 3.83	279. 3.83
HYDROGRAPH AT										
+	WSLMD	.29	1	FLOW TIME	245. 3.75	239. 3.75	228. 3.75	218. 3.75	214. 3.75	211. 3.75
2 COMBINED AT										
+	CP29	.63	1	FLOW TIME	558. 3.75	547. 3.75	522. 3.75	499. 3.75	492. 3.75	486. 3.75
HYDROGRAPH AT										
+	DCP27	.00	1	FLOW TIME	138. 3.83	138. 3.83	131. 3.83	125. 3.92	123. 3.92	121. 3.92
ROUTED TO										
+	RDCP27	.00	1	FLOW TIME	138. 3.92	137. 3.92	131. 3.92	125. 3.92	123. 3.92	121. 3.92
2 COMBINED AT										
+	CP30	.63	1	FLOW TIME	682. 3.83	665. 3.83	637. 3.83	611. 3.83	598. 3.83	591. 3.83
ROUTED TO										
+	RCP30	.63	1	FLOW TIME	679. 3.83	663. 3.83	635. 3.83	608. 3.83	595. 3.83	588. 3.83
HYDROGRAPH AT										
+	CRLMD	.05	1	FLOW TIME	74. 3.58	73. 3.58	70. 3.58	68. 3.58	67. 3.58	66. 3.58
ROUTED TO										
+	ROCRMD	.05	1	FLOW TIME	70. 3.67	69. 3.67	67. 3.67	65. 3.67	64. 3.67	63. 3.67
2 COMBINED AT										
+	CP31	.68	1	FLOW TIME	723. 3.83	706. 3.83	676. 3.83	649. 3.83	635. 3.83	628. 3.83
ROUTED TO										
+	RCP31	.68	1	FLOW TIME	722. 3.83	705. 3.83	674. 3.83	646. 3.83	633. 3.83	625. 3.83
2 COMBINED AT										
+	CP32	1.78	1	FLOW TIME	1383. 3.83	1341. 3.83	1277. 3.83	1216. 3.83	1191. 3.83	1173. 3.83
ROUTED TO										
+	RCP32	1.78	1	FLOW TIME	1370. 3.83	1329. 3.83	1265. 3.83	1203. 3.83	1179. 3.92	1161. 3.83
HYDROGRAPH AT										
+	DD	.05	1	FLOW TIME	72. 3.58	71. 3.58	68. 3.58	65. 3.58	64. 3.58	64. 3.58
2 COMBINED AT										
+	CP33	1.83	1	FLOW TIME	1406. 3.83	1364. 3.83	1298. 3.83	1236. 3.83	1211. 3.83	1192. 3.83
ROUTED TO										
+	RCP33	1.83	1	FLOW TIME	1401. 3.83	1359. 3.83	1294. 3.83	1231. 3.83	1206. 3.83	1188. 3.83
HYDROGRAPH AT										
+	ED	.03	1	FLOW TIME	39. 3.58	38. 3.58	36. 3.58	35. 3.58	34. 3.58	34. 3.58
2 COMBINED AT										
+	CP34	1.86	1	FLOW TIME	1418. 3.83	1376. 3.83	1310. 3.83	1247. 3.83	1221. 3.83	1203. 3.83
ROUTED TO										
+	RCP34	1.86	1	FLOW TIME	1409. 3.83	1367. 3.83	1302. 3.83	1238. 3.83	1212. 3.83	1194. 3.83

HYDROGRAPH AT										
+	FD	.01	1	FLOW TIME	28. 3.50	27. 3.50	26. 3.50	26. 3.50	25. 3.50	25. 3.50
+ 2 COMBINED AT	CP35	1.88	1	FLOW TIME	1416. 3.83	1374. 3.83	1309. 3.83	1244. 3.83	1219. 3.83	1201. 3.83
HYDROGRAPH AT										
+	GD	.01	1	FLOW TIME	30. 3.50	30. 3.50	29. 3.50	28. 3.50	28. 3.50	28. 3.50
+ 2 COMBINED AT	CP36	1.89	1	FLOW TIME	1423. 3.83	1381. 3.83	1316. 3.83	1251. 3.83	1225. 3.83	1207. 3.83
ROUTED TO										
+	RCP36	1.89	1	FLOW TIME	1416. 3.83	1373. 3.83	1308. 3.83	1244. 3.92	1220. 3.92	1202. 3.92
HYDROGRAPH AT										
+	OFFFD1*	.08	1	FLOW TIME	135. 3.58	133. 3.58	129. 3.58	125. 3.58	123. 3.58	122. 3.58
ROUTED TO										
+	RTOFFD1*	.08	1	FLOW TIME	129. 3.83	127. 3.83	123. 3.83	118. 3.83	118. 3.83	116. 3.83
HYDROGRAPH AT										
+	OFFD2*	.12	1	FLOW TIME	77. 3.75	75. 3.75	71. 3.75	68. 3.75	66. 3.83	65. 3.83
ROUTED TO										
+	RTOFFD2*	.12	1	FLOW TIME	77. 3.83	75. 3.83	72. 3.83	68. 3.83	66. 3.83	65. 3.83
HYDROGRAPH AT										
+	OFFD2A*	.11	1	FLOW TIME	117. 3.67	114. 3.67	110. 3.67	105. 3.67	104. 3.67	102. 3.67
+ 3 COMBINED AT	COFD2A*	.31	1	FLOW TIME	290. 3.83	284. 3.83	273. 3.83	262. 3.83	258. 3.83	255. 3.83
DIVERSION TO										
+	SPLIT1*	.31	1	FLOW TIME	34. 3.83	33. 3.83	31. 3.83	29. 3.83	28. 3.83	27. 3.83
HYDROGRAPH AT										
+	DIVERSIO	.31	1	FLOW TIME	255. 3.83	251. 3.83	242. 3.83	233. 3.83	230. 3.83	228. 3.83
ROUTED TO										
+	RCOFD2A*	.31	1	FLOW TIME	255. 3.83	251. 3.83	242. 3.83	233. 3.83	230. 3.83	229. 3.83
HYDROGRAPH AT										
+	OFFD5*	.32	1	FLOW TIME	407. 3.58	397. 3.58	382. 3.58	366. 3.58	360. 3.58	356. 3.58
+ 2 COMBINED AT	COFD5*	.63	1	FLOW TIME	546. 3.58	532. 3.58	510. 3.58	489. 3.58	481. 3.58	475. 3.58
ROUTED TO										
+	RCOFD5*	.63	1	FLOW TIME	541. 3.67	531. 3.67	506. 3.67	483. 3.67	481. 3.67	471. 3.67
HYDROGRAPH AT										
+	OFFD6*	.11	1	FLOW TIME	180. 3.58	177. 3.58	171. 3.58	166. 3.58	163. 3.58	162. 3.58
+ 2 COMBINED AT	COFD6*	.74	1	FLOW TIME	699. 3.67	686. 3.67	655. 3.67	628. 3.67	624. 3.67	612. 3.67
DIVERSION TO										
+	SPLIT2*	.74	1	FLOW TIME	163. 3.67	160. 3.67	153. 3.67	146. 3.67	146. 3.67	143. 3.67
HYDROGRAPH AT										
+	DIVERT*	.74	1	FLOW TIME	536. 3.67	526. 3.67	502. 3.67	481. 3.67	479. 3.67	470. 3.67
HYDROGRAPH AT										
+	OFFD7*	.02	1	FLOW TIME	36. 3.58	36. 3.58	35. 3.58	34. 3.58	33. 3.58	33. 3.58
ROUTED TO										
+	RTOFFD7*	.02	1	FLOW TIME	36. 3.58	35. 3.58	34. 3.58	33. 3.58	33. 3.58	32. 3.58
HYDROGRAPH AT										
+	OND1*	.04	1	FLOW TIME	52. 3.58	51. 3.58	49. 3.58	47. 3.58	46. 3.58	45. 3.58
+ 3 COMBINED AT	COND1*	.81	1	FLOW TIME	617. 3.67	605. 3.67	580. 3.67	556. 3.67	552. 3.67	542. 3.67
ROUTED TO										
+	RCOND1*	.81	1	FLOW TIME	616. 3.67	604. 3.67	578. 3.67	554. 3.67	549. 3.67	540. 3.67
HYDROGRAPH AT										
+	OND4*	.07	1	FLOW TIME	87. 3.58	85. 3.58	83. 3.58	80. 3.58	79. 3.58	78. 3.58

				TIME	3.67	3.67	3.67	3.67	3.67	3.67
ROUTED TO										
+	DBOND4*	.07	1	FLOW TIME	15. 5.08	15. 5.08	15. 5.08	14. 5.08	14. 5.00	14. 5.00
				** PEAK STAGES IN FEET **						
			1	STAGE TIME	3.31 5.08	3.28 5.08	3.23 5.08	3.18 5.08	3.16 5.08	3.14 5.08
HYDROGRAPH AT										
+	OND5*	.06	1	FLOW TIME	75. 3.58	73. 3.58	71. 3.58	68. 3.58	67. 3.58	67. 3.58
ROUTED TO										
+	DBOND5*	.06	1	FLOW TIME	14. 4.25	14. 4.25	14. 4.17	14. .00	14. .00	14. .00
				** PEAK STAGES IN FEET **						
			1	STAGE TIME	3.07 4.25	3.04 4.25	3.01 4.17	3.00 .00	3.00 .00	3.00 .00
3 COMBINED AT										
+	COND5*	.93	1	FLOW TIME	642. 3.67	630. 3.67	604. 3.67	580. 3.67	575. 3.67	566. 3.67
ROUTED TO										
+	RCOND5*	.93	1	FLOW TIME	635. 3.67	623. 3.67	597. 3.67	573. 3.67	568. 3.67	558. 3.67
HYDROGRAPH AT										
+	OND11*	.01	1	FLOW TIME	16. 3.58	16. 3.58	15. 3.58	15. 3.58	14. 3.58	14. 3.58
ROUTED TO										
+	RCND11*	.01	1	FLOW TIME	16. 3.75	16. 3.75	15. 3.75	15. 3.75	15. 3.75	14. 3.75
HYDROGRAPH AT										
+	OND11A*	.08	1	FLOW TIME	74. 3.67	72. 3.67	69. 3.67	66. 3.67	65. 3.67	64. 3.67
3 COMBINED AT										
+	CHANNEL2	1.02	1	FLOW TIME	724. 3.67	709. 3.67	680. 3.67	652. 3.67	646. 3.67	635. 3.67
HYDROGRAPH AT										
+	RETURN1*	.00	1	FLOW TIME	34. 3.83	33. 3.83	31. 3.83	29. 3.83	28. 3.83	27. 3.83
HYDROGRAPH AT										
+	RETURN2*	.00	1	FLOW TIME	163. 3.67	160. 3.67	153. 3.67	146. 3.67	146. 3.67	143. 3.67
HYDROGRAPH AT										
+	OFFD3*	.16	1	FLOW TIME	116. 3.75	113. 3.75	108. 3.75	102. 3.75	100. 3.75	99. 3.75
3 COMBINED AT										
+	COFD3*	.16	1	FLOW TIME	302. 3.67	294. 3.67	278. 3.67	264. 3.75	260. 3.75	256. 3.75
ROUTED TO										
+	RCOFD3*	.16	1	FLOW TIME	300. 3.75	292. 3.75	278. 3.75	263. 3.75	260. 3.75	255. 3.75
HYDROGRAPH AT										
+	OND2A*	.01	1	FLOW TIME	9. 3.50	9. 3.50	9. 3.50	8. 3.50	8. 3.50	8. 3.50
2 COMBINED AT										
+	COND2A*	.17	1	FLOW TIME	305. 3.75	297. 3.75	282. 3.75	268. 3.75	264. 3.75	260. 3.75
HYDROGRAPH AT										
+	OND3*	.01	1	FLOW TIME	12. 3.58	11. 3.58	11. 3.58	11. 3.58	10. 3.58	10. 3.58
2 COMBINED AT										
+	COND3*	.18	1	FLOW TIME	312. 3.75	304. 3.75	289. 3.75	274. 3.75	271. 3.75	266. 3.75
HYDROGRAPH AT										
+	OND2*	.05	1	FLOW TIME	31. 3.67	30. 3.67	29. 3.67	27. 3.67	26. 3.67	26. 3.67
2 COMBINED AT										
+	CP1*	.22	1	FLOW TIME	342. 3.75	333. 3.75	317. 3.75	301. 3.75	297. 3.75	292. 3.75
HYDROGRAPH AT										
+	OND12*	.01	1	FLOW TIME	13. 3.58	13. 3.58	12. 3.58	12. 3.58	12. 3.58	11. 3.58
HYDROGRAPH AT										
+	OFFD-2B	.09	1	FLOW TIME	21. 3.83	20. 3.83	18. 3.83	17. 3.83	16. 3.83	15. 3.83
ROUTED TO										
+	ROFFD-2B	.09	1	FLOW TIME	21. 3.92	20. 3.92	18. 3.92	16. 4.00	16. 4.00	15. 4.00
3 COMBINED AT										
+	CHANNEL1	.33	1	FLOW TIME	364. 3.75	354. 3.75	335. 3.75	317. 3.75	312. 3.75	306. 3.75
ROUTED TO										

+	RCHANNEL	.33	1	FLOW TIME	357. 3.75	347. 3.75	329. 3.75	311. 3.75	305. 3.75	301. 3.75
HYDROGRAPH AT										
+	OND-1	.08	1	FLOW TIME	74. 3.67	73. 3.67	69. 3.67	66. 3.67	65. 3.67	64. 3.67
HYDROGRAPH AT										
+	OND-2	.27	1	FLOW TIME	233. 3.75	227. 3.75	218. 3.75	208. 3.75	204. 3.75	202. 3.75
3 COMBINED AT										
+	CP25	.68	1	FLOW TIME	662. 3.75	645. 3.75	615. 3.75	584. 3.75	574. 3.75	566. 3.75
HYDROGRAPH AT										
+	OND-2A	.22	1	FLOW TIME	182. 3.75	178. 3.75	170. 3.75	163. 3.75	160. 3.75	157. 3.75

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SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	INTERPOLATED TO COMPUTATION INTERVAL			
						DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.25	54.46	221.00	2.21	5.00	54.18	220.00	2.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3543E+01 EXCESS= .0000E+00 OUTFLOW= .3541E+01 BASIN STORAGE= .2789E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.25	53.55	221.00	2.17	5.00	53.24	220.00	2.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3477E+01 EXCESS= .0000E+00 OUTFLOW= .3475E+01 BASIN STORAGE= .2769E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.25	52.03	221.00	2.10	5.00	51.67	220.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3367E+01 EXCESS= .0000E+00 OUTFLOW= .3365E+01 BASIN STORAGE= .2735E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.50	51.40	220.50	2.04	5.00	51.01	220.00	2.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3267E+01 EXCESS= .0000E+00 OUTFLOW= .3265E+01 BASIN STORAGE= .3445E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.50	50.76	220.50	2.01	5.00	50.36	220.00	2.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3222E+01 EXCESS= .0000E+00 OUTFLOW= .3221E+01 BASIN STORAGE= .3428E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
ROFFD-3A	MANE	3.50	50.32	220.50	1.99	5.00	49.91	220.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3192E+01 EXCESS= .0000E+00 OUTFLOW= .3190E+01 BASIN STORAGE= .3416E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	922.38	230.00	1.61	5.00	922.38	230.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7859E+02 EXCESS= .0000E+00 OUTFLOW= .7868E+02 BASIN STORAGE= .4611E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	902.83	230.00	1.57	5.00	902.83	230.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7680E+02 EXCESS= .0000E+00 OUTFLOW= .7689E+02 BASIN STORAGE= .4551E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	869.83	230.00	1.51	5.00	869.83	230.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7383E+02 EXCESS= .0000E+00 OUTFLOW= .7391E+02 BASIN STORAGE= .3267E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	837.33	230.00	1.45	5.00	837.33	230.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7089E+02 EXCESS= .0000E+00 OUTFLOW= .7096E+02 BASIN STORAGE= .3196E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	824.35	230.00	1.43	5.00	824.35	230.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6971E+02 EXCESS= .0000E+00 OUTFLOW= .6978E+02 BASIN STORAGE= .3167E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RC2B	MANE	5.00	815.27	230.00	1.41	5.00	815.27	230.00	1.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6889E+02 EXCESS= .0000E+00 OUTFLOW= .6896E+02 BASIN STORAGE= .3147E-02 PERCENT ERROR= -.1									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.09	1265.09	226.62	1.56	5.00	1248.48	230.00	1.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1113E+03 EXCESS= .0000E+00 OUTFLOW= .1113E+03 BASIN STORAGE= .2101E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.10	1236.33	226.55	1.53	5.00	1221.20	230.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1087E+03 EXCESS= .0000E+00 OUTFLOW= .1087E+03 BASIN STORAGE= .2287E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.12	1189.27	226.76	1.47	5.00	1175.85	230.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1045E+03 EXCESS= .0000E+00 OUTFLOW= .1045E+03 BASIN STORAGE= .2283E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.14	1141.87	227.11	1.41	5.00	1129.72	230.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1003E+03 EXCESS= .0000E+00 OUTFLOW= .1003E+03 BASIN STORAGE= .2115E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.14	1122.44	226.38	1.38	5.00	1112.90	230.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9857E+02 EXCESS= .0000E+00 OUTFLOW= .9857E+02 BASIN STORAGE= .2093E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP2A	MANE	1.15	1108.98	226.33	1.37	5.00	1100.22	230.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9739E+02 EXCESS= .0000E+00 OUTFLOW= .9739E+02 BASIN STORAGE= .2308E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.15	263.03	215.76	1.58	5.00	261.08	215.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1740E+02 EXCESS= .0000E+00 OUTFLOW= .1740E+02 BASIN STORAGE= .1433E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.15	256.85	215.57	1.55	5.00	255.02	215.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1699E+02 EXCESS= .0000E+00 OUTFLOW= .1699E+02 BASIN STORAGE= .1497E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.16	248.25	216.07	1.49	5.00	245.97	215.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1633E+02 EXCESS= .0000E+00 OUTFLOW= .1633E+02 BASIN STORAGE= .1517E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.17	237.27	215.45	1.43	5.00	235.64	215.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1566E+02 EXCESS= .0000E+00 OUTFLOW= .1566E+02 BASIN STORAGE= .1521E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.17	234.87	216.15	1.40	5.00	232.58	215.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1540E+02 EXCESS= .0000E+00 OUTFLOW= .1540E+02 BASIN STORAGE= .1477E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP5	MANE	1.18	230.76	215.48	1.38	5.00	229.08	215.00	1.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1521E+02 EXCESS= .0000E+00 OUTFLOW= .1521E+02 BASIN STORAGE= .1505E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.26	316.74	215.13	1.65	5.00	316.16	215.00	1.65
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1989E+02 EXCESS= .0000E+00 OUTFLOW= .1989E+02 BASIN STORAGE= .1646E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.26	309.90	216.06	1.61	5.00	309.05	215.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1944E+02 EXCESS= .0000E+00 OUTFLOW= .1944E+02 BASIN STORAGE= .1849E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.27	298.64	215.11	1.55	5.00	298.12	215.00	1.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1869E+02 EXCESS= .0000E+00 OUTFLOW= .1869E+02 BASIN STORAGE= .1687E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.28	287.39	215.48	1.49	5.00	285.88	215.00	1.49
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1794E+02 EXCESS= .0000E+00 OUTFLOW= .1794E+02 BASIN STORAGE= .1853E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.29	282.99	216.16	1.46	5.00	282.12	215.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1765E+02 EXCESS= .0000E+00 OUTFLOW= .1765E+02 BASIN STORAGE= .1842E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP6	MANE	1.29	279.73	215.35	1.45	5.00	278.46	215.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1744E+02 EXCESS= .0000E+00 OUTFLOW= .1744E+02 BASIN STORAGE= .1571E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.00	372.71	215.72	1.62	5.00	369.11	215.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2402E+02 EXCESS= .0000E+00 OUTFLOW= .2400E+02 BASIN STORAGE= .2882E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.01	366.00	216.70	1.59	5.00	362.09	215.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2347E+02 EXCESS= .0000E+00 OUTFLOW= .2345E+02 BASIN STORAGE= .2907E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.02	351.87	216.27	1.53	5.00	347.75	215.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2256E+02 EXCESS= .0000E+00 OUTFLOW= .2254E+02 BASIN STORAGE= .3419E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.04	337.01	216.04	1.46	5.00	333.11	215.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2164E+02 EXCESS= .0000E+00 OUTFLOW= .2162E+02 BASIN STORAGE= .2622E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.04	333.53	216.64	1.44	5.00	329.24	215.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2129E+02 EXCESS= .0000E+00 OUTFLOW= .2127E+02 BASIN STORAGE= .3069E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP7	MANE	2.05	329.02	217.20	1.42	5.00	325.73	215.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2103E+02 EXCESS= .0000E+00 OUTFLOW= .2102E+02 BASIN STORAGE= .2540E-03 PERCENT ERROR= .1									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.88	885.38	249.37	1.61	5.00	885.26	250.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1775E+03 EXCESS= .0000E+00 OUTFLOW= .1775E+03 BASIN STORAGE= .3849E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.89	878.42	249.89	1.57	5.00	878.19	250.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1735E+03 EXCESS= .0000E+00 OUTFLOW= .1735E+03 BASIN STORAGE= .3686E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.89	866.46	249.86	1.51	5.00	866.07	250.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1668E+03 EXCESS= .0000E+00 OUTFLOW= .1668E+03 BASIN STORAGE= .3419E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.89	854.63	249.83	1.45	5.00	854.04	250.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1601E+03 EXCESS= .0000E+00 OUTFLOW= .1601E+03 BASIN STORAGE= .3144E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.89	850.57	249.24	1.42	5.00	850.06	250.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1575E+03 EXCESS= .0000E+00 OUTFLOW= .1575E+03 BASIN STORAGE= .3037E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP10	MANE	.89	849.10	249.35	1.41	5.00	848.59	245.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1556E+03 EXCESS= .0000E+00 OUTFLOW= .1556E+03 BASIN STORAGE= .2962E-02 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	31.65	217.00	2.34	5.00	30.50	215.00	2.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2244E+01 EXCESS= .0000E+00 OUTFLOW= .2243E+01 BASIN STORAGE= .3273E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	31.12	217.00	2.29	5.00	29.97	215.00	2.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2203E+01 EXCESS= .0000E+00 OUTFLOW= .2202E+01 BASIN STORAGE= .3234E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	30.24	217.00	2.22	5.00	29.11	215.00	2.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2136E+01 EXCESS= .0000E+00 OUTFLOW= .2135E+01 BASIN STORAGE= .3169E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	29.36	217.00	2.15	5.00	28.24	215.00	2.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2069E+01 EXCESS= .0000E+00 OUTFLOW= .2068E+01 BASIN STORAGE= .3104E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	29.00	217.00	2.13	5.00	27.89	215.00	2.13
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2042E+01 EXCESS= .0000E+00 OUTFLOW= .2042E+01 BASIN STORAGE= .3077E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-18	MANE	3.50	28.76	217.00	2.11	5.00	27.65	215.00	2.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2024E+01 EXCESS= .0000E+00 OUTFLOW= .2023E+01 BASIN STORAGE= .3059E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.12	942.33	225.96	1.61	5.00	941.93	225.00	1.61
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1873E+03 EXCESS= .0000E+00 OUTFLOW= .1873E+03 BASIN STORAGE= .5000E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.12	936.33	226.32	1.57	5.00	936.12	225.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1831E+03 EXCESS= .0000E+00 OUTFLOW= .1831E+03 BASIN STORAGE= .4789E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.12	926.63	225.80	1.51	5.00	926.43	225.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1768E+03 EXCESS= .0000E+00 OUTFLOW= .1768E+03 BASIN STORAGE= .4448E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.13	917.08	226.40	1.45	5.00	917.01	225.00	1.45
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1690E+03 EXCESS= .0000E+00 OUTFLOW= .1690E+03 BASIN STORAGE= .4084E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.13	913.56	225.49	1.43	5.00	913.52	225.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1662E+03 EXCESS= .0000E+00 OUTFLOW= .1662E+03 BASIN STORAGE= .3941E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP11	MANE	1.13	911.09	224.52	1.41	5.00	911.07	225.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1642E+03 EXCESS= .0000E+00 OUTFLOW= .1642E+03 BASIN STORAGE= .3844E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP12	MANE	.34	1205.10	220.52	1.62	5.00	1202.89	220.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2085E+03 EXCESS= .0000E+00 OUTFLOW= .2085E+03 BASIN STORAGE= .1603E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP12	MANE	.34	1194.34	220.35	1.58	5.00	1192.20	220.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2038E+03 EXCESS= .0000E+00 OUTFLOW= .2038E+03 BASIN STORAGE= .1536E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP12	MANE	.34	1176.05	220.52	1.52	5.00	1173.98	220.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1960E+03 EXCESS= .0000E+00 OUTFLOW= .1960E+03 BASIN STORAGE= .1426E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									

RCPI2	MANE	.34	1158.28	220.36	1.46	5.00	1156.28	220.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1882E+03 EXCESS= .0000E+00 OUTFLOW= .1882E+03 BASIN STORAGE= .1309E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI2	MANE	.34	1151.49	220.34	1.44	5.00	1149.49	220.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1851E+03 EXCESS= .0000E+00 OUTFLOW= .1851E+03 BASIN STORAGE= .1263E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI2	MANE	.34	1146.51	220.57	1.42	5.00	1144.59	220.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1829E+03 EXCESS= .0000E+00 OUTFLOW= .1829E+03 BASIN STORAGE= .1232E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1217.52	220.66	1.62	5.00	1214.47	220.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2097E+03 EXCESS= .0000E+00 OUTFLOW= .2097E+03 BASIN STORAGE= .2305E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1206.48	220.68	1.58	5.00	1203.52	220.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2049E+03 EXCESS= .0000E+00 OUTFLOW= .2049E+03 BASIN STORAGE= .2209E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1187.80	220.58	1.52	5.00	1184.93	220.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1971E+03 EXCESS= .0000E+00 OUTFLOW= .1970E+03 BASIN STORAGE= .2049E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1169.54	220.47	1.46	5.00	1166.91	220.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1892E+03 EXCESS= .0000E+00 OUTFLOW= .1892E+03 BASIN STORAGE= .1883E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1162.35	220.80	1.44	5.00	1159.65	220.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1861E+03 EXCESS= .0000E+00 OUTFLOW= .1861E+03 BASIN STORAGE= .1817E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI3	MANE	.48	1157.52	220.55	1.42	5.00	1154.72	220.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1839E+03 EXCESS= .0000E+00 OUTFLOW= .1839E+03 BASIN STORAGE= .1772E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.43	132.52	221.40	1.50	5.00	132.10	220.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9648E+01 EXCESS= .0000E+00 OUTFLOW= .9648E+01 BASIN STORAGE= .1550E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.44	129.54	221.00	1.46	5.00	128.79	220.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9417E+01 EXCESS= .0000E+00 OUTFLOW= .9417E+01 BASIN STORAGE= .1431E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.45	124.43	221.32	1.40	5.00	123.81	220.00	1.40
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9033E+01 EXCESS= .0000E+00 OUTFLOW= .9033E+01 BASIN STORAGE= .1560E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.46	118.99	220.25	1.34	5.00	118.84	220.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8651E+01 EXCESS= .0000E+00 OUTFLOW= .8651E+01 BASIN STORAGE= .1679E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.46	117.41	221.00	1.32	5.00	116.55	220.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8500E+01 EXCESS= .0000E+00 OUTFLOW= .8499E+01 BASIN STORAGE= .1669E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
ROND-24	MANE	1.47	115.82	221.53	1.30	5.00	115.36	220.00	1.30
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8394E+01 EXCESS= .0000E+00 OUTFLOW= .8393E+01 BASIN STORAGE= .1469E-03 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCPI5	MANE	1.52	243.97	220.64	1.41	5.00	242.31	220.00	1.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1785E+02 EXCESS= .0000E+00 OUTFLOW= .1785E+02 BASIN STORAGE= .2094E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP15	MAHE	1.53	238.79	221.76	1.38	5.00	236.29	220.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1741E+02 EXCESS= .0000E+00 OUTFLOW= .1741E+02 BASIN STORAGE= .1907E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP15	MAHE	1.54	228.24	222.05	1.32	5.00	226.57	220.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1667E+02 EXCESS= .0000E+00 OUTFLOW= .1667E+02 BASIN STORAGE= .1732E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP15	MAHE	1.56	218.93	220.85	1.26	5.00	216.75	220.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1595E+02 EXCESS= .0000E+00 OUTFLOW= .1595E+02 BASIN STORAGE= .1932E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP15	MAHE	1.56	215.85	221.69	1.24	5.00	212.69	220.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1566E+02 EXCESS= .0000E+00 OUTFLOW= .1566E+02 BASIN STORAGE= .1699E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP15	MAHE	1.56	211.78	222.20	1.22	5.00	210.24	220.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1546E+02 EXCESS= .0000E+00 OUTFLOW= .1546E+02 BASIN STORAGE= .2037E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.81	387.68	222.94	1.53	5.00	379.72	225.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2994E+02 EXCESS= .0000E+00 OUTFLOW= .2994E+02 BASIN STORAGE= .2560E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.82	379.50	222.17	1.50	5.00	370.89	225.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2924E+02 EXCESS= .0000E+00 OUTFLOW= .2924E+02 BASIN STORAGE= .2442E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.84	364.67	222.12	1.44	5.00	356.82	225.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2807E+02 EXCESS= .0000E+00 OUTFLOW= .2806E+02 BASIN STORAGE= .2438E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.85	349.77	222.14	1.38	5.00	342.78	225.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2690E+02 EXCESS= .0000E+00 OUTFLOW= .2690E+02 BASIN STORAGE= .2399E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.86	343.34	222.92	1.35	5.00	336.93	225.00	1.35
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2644E+02 EXCESS= .0000E+00 OUTFLOW= .2643E+02 BASIN STORAGE= .2503E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP16	MAHE	1.86	339.09	223.43	1.34	5.00	332.73	225.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2611E+02 EXCESS= .0000E+00 OUTFLOW= .2611E+02 BASIN STORAGE= .2763E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP17	MAHE	.93	1843.32	221.32	1.62	5.00	1831.68	220.00	1.62
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2587E+03 EXCESS= .0000E+00 OUTFLOW= .2587E+03 BASIN STORAGE= .5011E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP17	MAHE	.93	1818.42	221.17	1.58	5.00	1806.79	220.00	1.58
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2529E+03 EXCESS= .0000E+00 OUTFLOW= .2529E+03 BASIN STORAGE= .4797E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP17	MAHE	.94	1775.23	221.52	1.52	5.00	1764.59	220.00	1.52
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2431E+03 EXCESS= .0000E+00 OUTFLOW= .2431E+03 BASIN STORAGE= .4456E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP17	MAHE	.94	1735.90	220.95	1.46	5.00	1724.76	220.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2334E+03 EXCESS= .0000E+00 OUTFLOW= .2334E+03 BASIN STORAGE= .4093E-02 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCPI7	MANE	.95	1717.78	221.47	1.43	5.00	1706.72	220.00	1.43
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2296E+03 EXCESS= .0000E+00 OUTFLOW= .2295E+03 BASIN STORAGE= .3955E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI7	MANE	.95	1707.56	220.88	1.42	5.00	1696.56	220.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2269E+03 EXCESS= .0000E+00 OUTFLOW= .2268E+03 BASIN STORAGE= .3849E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-17	MANE	3.04	164.60	228.27	1.41	5.00	162.59	225.00	1.41
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1386E+02 EXCESS= .0000E+00 OUTFLOW= .1386E+02 BASIN STORAGE= .3301E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-17	MANE	3.06	161.01	226.33	1.38	5.00	158.33	225.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1352E+02 EXCESS= .0000E+00 OUTFLOW= .1351E+02 BASIN STORAGE= .3576E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.80							
ROND-17	MANE	3.08	154.27	228.24	1.32	5.00	151.94	230.00	1.32
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1295E+02 EXCESS= .0000E+00 OUTFLOW= .1295E+02 BASIN STORAGE= .3237E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-17	MANE	3.11	147.97	227.12	1.26	5.00	145.19	230.00	1.26
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1238E+02 EXCESS= .0000E+00 OUTFLOW= .1238E+02 BASIN STORAGE= .3948E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.80							
ROND-17	MANE	3.12	145.45	227.94	1.24	5.00	143.00	230.00	1.24
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1216E+02 EXCESS= .0000E+00 OUTFLOW= .1216E+02 BASIN STORAGE= .3332E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-17	MANE	3.13	142.87	228.52	1.22	5.00	141.07	230.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1200E+02 EXCESS= .0000E+00 OUTFLOW= .1200E+02 BASIN STORAGE= .4017E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.79	355.89	225.72	1.46	5.00	354.86	225.00	1.46
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2973E+02 EXCESS= .0000E+00 OUTFLOW= .2973E+02 BASIN STORAGE= .2085E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.81	347.97	226.15	1.42	5.00	346.49	225.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2900E+02 EXCESS= .0000E+00 OUTFLOW= .2900E+02 BASIN STORAGE= .2233E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.84	334.00	226.15	1.36	5.00	332.35	225.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2781E+02 EXCESS= .0000E+00 OUTFLOW= .2781E+02 BASIN STORAGE= .2191E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.87	319.96	226.48	1.31	5.00	318.04	225.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2662E+02 EXCESS= .0000E+00 OUTFLOW= .2662E+02 BASIN STORAGE= .2427E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.88	313.87	226.06	1.28	5.00	312.50	225.00	1.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2614E+02 EXCESS= .0000E+00 OUTFLOW= .2615E+02 BASIN STORAGE= .2171E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCPI9	MANE	1.89	310.83	227.20	1.27	5.00	308.48	225.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2581E+02 EXCESS= .0000E+00 OUTFLOW= .2581E+02 BASIN STORAGE= .2099E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
ROND-16	MANE	4.50	52.93	225.00	1.14	5.00	52.93	225.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3460E+01 EXCESS= .0000E+00 OUTFLOW= .3473E+01 BASIN STORAGE= .6916E-02 PERCENT ERROR= -.6									

FOR PLAN = 1	RATIO= .00								
ROND-16	MAHE	4.75	50.71	228.00	1.11	5.00	50.40	225.00	1.11
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3361E+01 EXCESS= .8000E+00 OUTFLOW= .3377E+01 BASIN STORAGE= .7879E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO= .00								
ROND-16	MAHE	4.50	48.78	225.00	1.06	5.00	48.78	225.00	1.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3207E+01 EXCESS= .8000E+00 OUTFLOW= .3220E+01 BASIN STORAGE= .6759E-02 PERCENT ERROR= -.6									
FOR PLAN = 1	RATIO= .00								
ROND-16	MAHE	4.50	46.24	225.00	1.01	5.00	46.24	225.00	1.01
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3050E+01 EXCESS= .8000E+00 OUTFLOW= .3064E+01 BASIN STORAGE= .6658E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO= .00								
ROND-16	MAHE	4.75	45.30	228.00	.99	5.00	44.71	225.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2985E+01 EXCESS= .8000E+00 OUTFLOW= .3000E+01 BASIN STORAGE= .7230E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO= .00								
ROND-16	MAHE	4.75	44.66	228.00	.97	5.00	44.05	225.00	.97
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2942E+01 EXCESS= .8000E+00 OUTFLOW= .2956E+01 BASIN STORAGE= .7199E-02 PERCENT ERROR= -.7									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.63	690.60	228.55	1.54	5.00	683.52	230.00	1.54
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5897E+02 EXCESS= .8000E+00 OUTFLOW= .5897E+02 BASIN STORAGE= .5205E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.65	674.17	228.18	1.50	5.00	668.17	230.00	1.50
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5759E+02 EXCESS= .8000E+00 OUTFLOW= .5759E+02 BASIN STORAGE= .4258E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.69	647.75	229.07	1.44	5.00	642.54	230.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5527E+02 EXCESS= .8000E+00 OUTFLOW= .5528E+02 BASIN STORAGE= .4434E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.74	623.10	227.49	1.38	5.00	619.87	230.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5301E+02 EXCESS= .8000E+00 OUTFLOW= .5301E+02 BASIN STORAGE= .4535E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.76	610.18	229.13	1.36	5.00	605.94	230.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5206E+02 EXCESS= .8000E+00 OUTFLOW= .5207E+02 BASIN STORAGE= .4389E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP20	MAHE	2.77	604.44	227.48	1.34	5.00	601.69	230.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5144E+02 EXCESS= .8000E+00 OUTFLOW= .5144E+02 BASIN STORAGE= .4571E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.62	2916.17	225.30	1.63	5.00	2912.61	225.00	1.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3606E+03 EXCESS= .8000E+00 OUTFLOW= .3606E+03 BASIN STORAGE= .1605E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.63	2869.51	225.55	1.59	5.00	2865.02	225.00	1.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3525E+03 EXCESS= .8000E+00 OUTFLOW= .3525E+03 BASIN STORAGE= .1551E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.64	2784.47	225.71	1.53	5.00	2780.72	225.00	1.53
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3389E+03 EXCESS= .8000E+00 OUTFLOW= .3389E+03 BASIN STORAGE= .1461E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.64	2705.89	225.74	1.47	5.00	2701.95	225.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3255E+03 EXCESS= .8000E+00 OUTFLOW= .3255E+03 BASIN STORAGE= .1366E-01 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCP21	MAHE	.65	2671.09	225.66	1.45	5.00	2666.19	225.00	1.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3201E+03 EXCESS= .0000E+00 OUTFLOW= .3201E+03 BASIN STORAGE= .1329E-01 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP21 MAHE .65 2650.40 225.70 1.43 5.00 2645.66 225.00 1.43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3164E+03 EXCESS= .0000E+00 OUTFLOW= .3164E+03 BASIN STORAGE= .1300E-01 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1788.36 254.71 1.62 5.00 1788.25 255.00 1.62

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3855E+03 EXCESS= .0000E+00 OUTFLOW= .3855E+03 BASIN STORAGE= .7804E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1783.09 254.67 1.58 5.00 1783.06 255.00 1.58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3768E+03 EXCESS= .0000E+00 OUTFLOW= .3768E+03 BASIN STORAGE= .7547E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1773.87 254.85 1.52 5.00 1773.37 250.00 1.52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3622E+03 EXCESS= .0000E+00 OUTFLOW= .3622E+03 BASIN STORAGE= .7094E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1764.90 250.44 1.46 5.00 1764.72 250.00 1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3479E+03 EXCESS= .0000E+00 OUTFLOW= .3479E+03 BASIN STORAGE= .6634E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1761.10 250.65 1.44 5.00 1761.01 250.00 1.44

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3420E+03 EXCESS= .0000E+00 OUTFLOW= .3420E+03 BASIN STORAGE= .6449E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RCP23 MAHE .35 1759.36 250.40 1.42 5.00 1759.28 250.00 1.42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3381E+03 EXCESS= .0000E+00 OUTFLOW= .3381E+03 BASIN STORAGE= .6309E-02 PERCENT ERROR= .0
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 128.39 230.00 1.36 5.00 128.39 230.00 1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1007E+02 EXCESS= .0000E+00 OUTFLOW= .1010E+02 BASIN STORAGE= .1124E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 124.98 230.00 1.33 5.00 124.98 230.00 1.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9816E+01 EXCESS= .0000E+00 OUTFLOW= .9846E+01 BASIN STORAGE= .1089E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 119.28 230.00 1.27 5.00 119.28 230.00 1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9394E+01 EXCESS= .0000E+00 OUTFLOW= .9423E+01 BASIN STORAGE= .1058E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 114.01 235.00 1.21 5.00 114.01 235.00 1.21

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8976E+01 EXCESS= .0000E+00 OUTFLOW= .9004E+01 BASIN STORAGE= .1042E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 112.10 235.00 1.19 5.00 112.10 235.00 1.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8810E+01 EXCESS= .0000E+00 OUTFLOW= .8838E+01 BASIN STORAGE= .1035E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKPV D MAHE 5.00 110.76 235.00 1.18 5.00 110.76 235.00 1.18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8694E+01 EXCESS= .0000E+00 OUTFLOW= .8722E+01 BASIN STORAGE= .1030E-01 PERCENT ERROR= -.4
 FOR PLAN = 1 RATIO= .00
 RBKQJ D MAHE 5.00 42.35 230.00 1.50 5.00 42.35 230.00 1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2688E+01 EXCESS= .0000E+00 OUTFLOW= .2712E+01 BASIN STORAGE= .9727E-02 PERCENT ERROR= -1.2
 FOR PLAN = 1 RATIO= .00
 RBKQJ D MAHE 5.00 41.76 230.00 1.46 5.00 41.76 230.00 1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2623E+01 EXCESS= .0000E+00 OUTFLOW= .2646E+01 BASIN STORAGE= .9451E-02 PERCENT ERROR= -1.2

FOR PLAN = 1 RATIO= .00
RBMJJD MAHE 5.00 40.84 230.00 1.40 5.00 40.84 230.00 1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2516E+01 EXCESS= .0000E+00 OUTFLOW= .2538E+01 BASIN STORAGE= .9347E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
RBMJJD MAHE 5.00 39.88 230.00 1.34 5.00 39.88 230.00 1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2409E+01 EXCESS= .0000E+00 OUTFLOW= .2431E+01 BASIN STORAGE= .9241E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
RBMJJD MAHE 5.00 39.47 230.00 1.32 5.00 39.47 230.00 1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2366E+01 EXCESS= .0000E+00 OUTFLOW= .2388E+01 BASIN STORAGE= .9198E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
RBMJJD MAHE 5.00 39.19 230.00 1.30 5.00 39.19 230.00 1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2337E+01 EXCESS= .0000E+00 OUTFLOW= .2358E+01 BASIN STORAGE= .9012E-02 PERCENT ERROR= -1.3

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 101.73 235.00 .74 5.00 101.73 235.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8159E+01 EXCESS= .0000E+00 OUTFLOW= .8182E+01 BASIN STORAGE= .1098E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 99.47 235.00 .73 5.00 99.47 235.00 .73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7962E+01 EXCESS= .0000E+00 OUTFLOW= .7986E+01 BASIN STORAGE= .1088E-01 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 95.68 235.00 .70 5.00 95.68 235.00 .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7636E+01 EXCESS= .0000E+00 OUTFLOW= .7660E+01 BASIN STORAGE= .1049E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 92.03 235.00 .67 5.00 92.03 235.00 .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7312E+01 EXCESS= .0000E+00 OUTFLOW= .7338E+01 BASIN STORAGE= .1250E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 90.47 235.00 .66 5.00 90.47 235.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7183E+01 EXCESS= .0000E+00 OUTFLOW= .7209E+01 BASIN STORAGE= .1242E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
ROCRMJJD MAHE 5.00 89.37 235.00 .65 5.00 89.37 235.00 .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7093E+01 EXCESS= .0000E+00 OUTFLOW= .7119E+01 BASIN STORAGE= .1237E-01 PERCENT ERROR= -.5

FOR PLAN = 1 RATIO= .00
ROCP26 MAHE 2.61 312.76 234.84 .76 5.00 312.03 235.00 .76

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2613E+02 EXCESS= .0000E+00 OUTFLOW= .2613E+02 BASIN STORAGE= .2866E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP26 MAHE 2.65 302.48 235.60 .74 5.00 301.77 235.00 .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2542E+02 EXCESS= .0000E+00 OUTFLOW= .2543E+02 BASIN STORAGE= .3062E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP26 MAHE 2.70 289.26 234.47 .71 5.00 287.95 235.00 .71

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2428E+02 EXCESS= .0000E+00 OUTFLOW= .2429E+02 BASIN STORAGE= .3683E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP26 MAHE 2.75 275.46 236.20 .67 5.00 274.78 235.00 .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2318E+02 EXCESS= .0000E+00 OUTFLOW= .2318E+02 BASIN STORAGE= .3649E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCP26 MAHE 2.77 272.27 235.25 .66 5.00 271.82 235.00 .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2274E+02 EXCESS= .0000E+00 OUTFLOW= .2275E+02 BASIN STORAGE= .3234E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
ROCP26	MANE	2.78	265.91	233.75	.65	5.00	265.84	235.00	.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2242E+02 EXCESS= .0000E+00 OUTFLOW= .2243E+02 BASIN STORAGE= .3259E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	101.60	235.00	-1.00	5.00	101.60	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	99.36	235.00	-1.00	5.00	99.36	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	95.60	235.00	-1.00	5.00	95.60	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	91.81	235.00	-1.00	5.00	91.81	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	90.46	235.00	-1.00	5.00	90.46	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCRMJD	MANE	5.00	89.37	235.00	-1.00	5.00	89.37	235.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	136.80	240.00	-1.00	5.00	136.80	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	135.57	240.00	-1.00	5.00	135.57	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	129.86	240.00	-1.00	5.00	129.86	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	123.97	240.00	-1.00	5.00	123.97	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	121.24	240.00	-1.00	5.00	121.24	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RDCP26	MANE	5.00	119.26	240.00	-1.00	5.00	119.26	240.00	-1.00

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.50	321.96	229.28	1.50	5.00	319.33	230.00	1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2757E+02 EXCESS= .0000E+00 OUTFLOW= .2758E+02 BASIN STORAGE= .2306E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.61	315.76	227.41	1.46	5.00	309.48	230.00	1.46

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2692E+02 EXCESS= .0000E+00 OUTFLOW= .2692E+02 BASIN STORAGE= .1659E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.66	300.96	226.74	1.40	5.00	298.15	230.00	1.40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2582E+02 EXCESS= .0000E+00 OUTFLOW= .2582E+02 BASIN STORAGE= .1823E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.71	288.51	229.83	1.34	5.00	287.94	230.00	1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2473E+02 EXCESS= .0000E+00 OUTFLOW= .2474E+02 BASIN STORAGE= .1980E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.73	285.41	227.38	1.32	5.00	280.33	230.00	1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2430E+02 EXCESS= .0000E+00 OUTFLOW= .2431E+02 BASIN STORAGE= .2254E-02 PERCENT ERROR= .0

FOR PLAN = 1	RATIO=	.00							
RBKLMD	MANE	3.74	283.11	226.28	1.30	5.00	278.52	230.00	1.30

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2399E+02 EXCESS= .0000E+00 OUTFLOW= .2400E+02 BASIN STORAGE= .1872E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.08 138.39 232.04 -1.00 5.00 137.88 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.08 138.08 232.08 -1.00 5.00 136.56 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.11 131.17 231.41 -1.00 5.00 130.55 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.13 124.90 231.52 -1.00 5.00 124.72 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.14 123.01 235.00 -1.00 5.00 123.01 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RDCP27 MANE 1.14 120.77 234.48 -1.00 5.00 120.54 235.00 -1.00

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.16 679.59 230.36 1.78 5.00 679.24 230.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5976E+02 EXCESS= .0000E+00 OUTFLOW= .5976E+02 BASIN STORAGE= .1729E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.17 663.69 230.26 1.73 5.00 663.24 230.00 1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5829E+02 EXCESS= .0000E+00 OUTFLOW= .5829E+02 BASIN STORAGE= .1933E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.19 634.99 230.66 1.66 5.00 634.55 230.00 1.66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5580E+02 EXCESS= .0000E+00 OUTFLOW= .5580E+02 BASIN STORAGE= .1887E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.21 608.54 230.93 1.59 5.00 607.91 230.00 1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5334E+02 EXCESS= .0000E+00 OUTFLOW= .5335E+02 BASIN STORAGE= .1738E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.22 595.61 230.58 1.56 5.00 594.62 230.00 1.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5238E+02 EXCESS= .0000E+00 OUTFLOW= .5238E+02 BASIN STORAGE= .1888E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCP30 MANE 1.23 588.93 230.37 1.54 5.00 587.82 230.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5168E+02 EXCESS= .0000E+00 OUTFLOW= .5168E+02 BASIN STORAGE= .1932E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
ROCRIMD MANE 4.25 71.73 216.75 1.98 5.00 70.26 220.00 1.98

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4748E+01 EXCESS= .0000E+00 OUTFLOW= .4761E+01 BASIN STORAGE= .4198E-02 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRIMD MANE 4.25 70.33 216.75 1.94 5.00 68.99 220.00 1.94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4652E+01 EXCESS= .0000E+00 OUTFLOW= .4665E+01 BASIN STORAGE= .4168E-02 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRIMD MANE 4.25 68.00 216.75 1.88 5.00 66.87 220.00 1.87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4492E+01 EXCESS= .0000E+00 OUTFLOW= .4505E+01 BASIN STORAGE= .4117E-02 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRIMD MANE 4.25 65.67 216.75 1.81 5.00 64.74 220.00 1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4332E+01 EXCESS= .0000E+00 OUTFLOW= .4345E+01 BASIN STORAGE= .4065E-02 PERCENT ERROR= -.4

FOR PLAN = 1 RATIO= .00
ROCRIMD MANE 4.25 64.73 216.75 1.78 5.00 63.89 220.00 1.78

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4269E+01 EXCESS= .0000E+00 OUTFLOW= .4282E+01 BASIN STORAGE= .4044E-02 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
ROCRLMD	MANE	4.25	64.08	216.75	1.77	5.00	63.29	220.00	1.76
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4224E+01 EXCESS= .0000E+00 OUTFLOW= .4237E+01 BASIN STORAGE= .4029E-02 PERCENT ERROR= -.4									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.83	721.76	230.13	1.79	5.00	721.54	230.00	1.79
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6456E+02 EXCESS= .0000E+00 OUTFLOW= .6456E+02 BASIN STORAGE= .1357E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.84	704.55	230.60	1.75	5.00	704.53	230.00	1.75
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6299E+02 EXCESS= .0000E+00 OUTFLOW= .6299E+02 BASIN STORAGE= .1394E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.86	674.86	230.34	1.67	5.00	674.32	230.00	1.68
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6034E+02 EXCESS= .0000E+00 OUTFLOW= .6035E+02 BASIN STORAGE= .1387E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.87	646.88	230.75	1.60	5.00	646.23	230.00	1.60
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5773E+02 EXCESS= .0000E+00 OUTFLOW= .5773E+02 BASIN STORAGE= .1378E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.88	633.19	230.11	1.57	5.00	632.92	230.00	1.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5669E+02 EXCESS= .0000E+00 OUTFLOW= .5669E+02 BASIN STORAGE= .1385E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP31	MANE	.88	625.96	230.27	1.55	5.00	625.27	230.00	1.55
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5595E+02 EXCESS= .0000E+00 OUTFLOW= .5595E+02 BASIN STORAGE= .1286E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.87	1380.11	231.24	1.36	5.00	1370.07	230.00	1.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1287E+03 EXCESS= .0000E+00 OUTFLOW= .1287E+03 BASIN STORAGE= .1745E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.88	1338.36	231.45	1.32	5.00	1328.81	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1254E+03 EXCESS= .0000E+00 OUTFLOW= .1254E+03 BASIN STORAGE= .1858E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.90	1274.55	231.54	1.27	5.00	1264.70	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1200E+03 EXCESS= .0000E+00 OUTFLOW= .1200E+03 BASIN STORAGE= .1801E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.92	1214.43	231.48	1.21	5.00	1203.32	230.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1147E+03 EXCESS= .0000E+00 OUTFLOW= .1147E+03 BASIN STORAGE= .1857E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.93	1189.55	231.58	1.19	5.00	1178.84	235.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+03 EXCESS= .0000E+00 OUTFLOW= .1126E+03 BASIN STORAGE= .1888E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP32	MANE	.93	1171.93	231.13	1.17	5.00	1160.72	230.00	1.17
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1111E+03 EXCESS= .0000E+00 OUTFLOW= .1111E+03 BASIN STORAGE= .1772E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP33	MANE	.31	1404.29	230.48	1.37	5.00	1400.94	230.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1333E+03 EXCESS= .0000E+00 OUTFLOW= .1333E+03 BASIN STORAGE= .6334E-03 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									
RCP33	MANE	.31	1362.59	230.48	1.33	5.00	1359.08	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1299E+03 EXCESS= .0000E+00 OUTFLOW= .1299E+03 BASIN STORAGE= .6285E-03 PERCENT ERROR= .0									

FOR PLAN = 1	RATIO=	.00							
RCP33	MANE	.32	1297.30	230.59	1.27	5.00	1294.00	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1243E+03 EXCESS= .0000E+00 OUTFLOW= .1243E+03 BASIN STORAGE= .6323E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP33	MANE	.33	1234.86	230.31	1.22	5.00	1231.39	230.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1168E+03 EXCESS= .0000E+00 OUTFLOW= .1168E+03 BASIN STORAGE= .6189E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP33	MANE	.33	1209.81	230.58	1.20	5.00	1206.02	230.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1167E+03 EXCESS= .0000E+00 OUTFLOW= .1167E+03 BASIN STORAGE= .6323E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP33	MANE	.33	1191.64	230.33	1.18	5.00	1188.06	230.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1151E+03 EXCESS= .0000E+00 OUTFLOW= .1151E+03 BASIN STORAGE= .6330E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.58	1415.73	230.94	1.37	5.00	1409.05	230.00	1.37
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1356E+03 EXCESS= .0000E+00 OUTFLOW= .1356E+03 BASIN STORAGE= .1193E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.59	1374.19	230.82	1.33	5.00	1367.00	230.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1321E+03 EXCESS= .0000E+00 OUTFLOW= .1321E+03 BASIN STORAGE= .1163E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.60	1308.83	230.59	1.27	5.00	1302.17	230.00	1.27
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1265E+03 EXCESS= .0000E+00 OUTFLOW= .1265E+03 BASIN STORAGE= .1202E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.61	1245.67	230.92	1.22	5.00	1237.71	230.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1209E+03 EXCESS= .0000E+00 OUTFLOW= .1209E+03 BASIN STORAGE= .1173E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.62	1220.28	231.00	1.20	5.00	1212.40	230.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1187E+03 EXCESS= .0000E+00 OUTFLOW= .1187E+03 BASIN STORAGE= .1257E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP34	MANE	.62	1202.02	231.15	1.18	5.00	1194.38	230.00	1.18
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1171E+03 EXCESS= .0000E+00 OUTFLOW= .1171E+03 BASIN STORAGE= .1242E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP36	MANE	.52	1421.73	231.00	1.38	5.00	1415.67	230.00	1.38
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1391E+03 EXCESS= .0000E+00 OUTFLOW= .1391E+03 BASIN STORAGE= .1115E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP36	MANE	.53	1380.10	230.61	1.34	5.00	1373.41	230.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1355E+03 EXCESS= .0000E+00 OUTFLOW= .1355E+03 BASIN STORAGE= .1076E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP36	MANE	.54	1314.96	230.78	1.29	5.00	1307.76	230.00	1.29
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1298E+03 EXCESS= .0000E+00 OUTFLOW= .1298E+03 BASIN STORAGE= .1101E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP36	MANE	.55	1250.55	231.08	1.23	5.00	1244.24	235.00	1.23
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1241E+03 EXCESS= .0000E+00 OUTFLOW= .1241E+03 BASIN STORAGE= .1137E-02 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.00							
RCP36	MANE	.56	1225.04	230.76	1.21	5.00	1220.26	235.00	1.21
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1218E+03 EXCESS= .0000E+00 OUTFLOW= .1218E+03 BASIN STORAGE= .1140E-02 PERCENT ERROR= .0									
FOR PLAN = 1 RATIO= .00									

	RCP36	MANE	.56	1207.05	231.01	1.19	5.00	1201.75	235.00	1.19
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1202E+03 EXCESS= .0000E+00 OUTFLOW= .1202E+03 BASIN STORAGE= .1073E-02 PERCENT ERROR= .0										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		4.00	131.15	232.00	2.10	5.00	129.15	230.00	2.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .9148E+01 EXCESS= .0000E+00 OUTFLOW= .9200E+01 BASIN STORAGE= .9153E-02 PERCENT ERROR= -.7										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		4.00	129.04	232.00	2.06	5.00	126.71	230.00	2.06
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8969E+01 EXCESS= .0000E+00 OUTFLOW= .9021E+01 BASIN STORAGE= .9097E-02 PERCENT ERROR= -.7										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		4.00	125.44	232.00	1.99	5.00	122.61	230.00	1.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8673E+01 EXCESS= .0000E+00 OUTFLOW= .8722E+01 BASIN STORAGE= .8903E-02 PERCENT ERROR= -.7										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		4.00	122.49	232.00	1.93	5.00	118.20	230.00	1.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8377E+01 EXCESS= .0000E+00 OUTFLOW= .8422E+01 BASIN STORAGE= .1009E-01 PERCENT ERROR= -.7										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		3.75	119.00	232.50	1.90	5.00	117.68	230.00	1.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8258E+01 EXCESS= .0000E+00 OUTFLOW= .8302E+01 BASIN STORAGE= .8028E-02 PERCENT ERROR= -.6										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD1*	MANE		3.75	118.05	232.50	1.88	5.00	116.48	230.00	1.89
CONTINUITY SUMMARY (AC-FT) - INFLOW= .8175E+01 EXCESS= .0000E+00 OUTFLOW= .8219E+01 BASIN STORAGE= .8800E-02 PERCENT ERROR= -.6										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		3.79	76.96	231.00	1.07	5.00	76.69	230.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6714E+01 EXCESS= .0000E+00 OUTFLOW= .6716E+01 BASIN STORAGE= .1268E-02 PERCENT ERROR= .0										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		3.82	75.39	229.45	1.04	5.00	75.25	230.00	1.04
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6520E+01 EXCESS= .0000E+00 OUTFLOW= .6522E+01 BASIN STORAGE= .1210E-02 PERCENT ERROR= .0										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		3.89	71.72	229.47	.99	5.00	71.59	230.00	.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6204E+01 EXCESS= .0000E+00 OUTFLOW= .6206E+01 BASIN STORAGE= .1543E-02 PERCENT ERROR= -.1										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		3.96	68.05	229.59	.94	5.00	67.96	230.00	.94
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5892E+01 EXCESS= .0000E+00 OUTFLOW= .5894E+01 BASIN STORAGE= .1513E-02 PERCENT ERROR= -.1										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		3.99	66.14	231.22	.92	5.00	65.69	230.00	.92
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5769E+01 EXCESS= .0000E+00 OUTFLOW= .5771E+01 BASIN STORAGE= .1216E-02 PERCENT ERROR= -.1										
FOR PLAN	= 1	RATIO=	.00							
RTOFFD2*	MANE		4.01	65.04	228.36	.90	5.00	64.99	230.00	.90
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5683E+01 EXCESS= .0000E+00 OUTFLOW= .5685E+01 BASIN STORAGE= .1339E-02 PERCENT ERROR= -.1										
FOR PLAN	= 1	RATIO=	.00							
RCOFD2A*	MANE		2.52	255.83	228.97	1.42	5.00	254.93	230.00	1.42
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2324E+02 EXCESS= .0000E+00 OUTFLOW= .2324E+02 BASIN STORAGE= .1318E-02 PERCENT ERROR= .0										
FOR PLAN	= 1	RATIO=	.00							
RCOFD2A*	MANE		2.53	251.57	230.34	1.39	5.00	251.14	230.00	1.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2272E+02 EXCESS= .0000E+00 OUTFLOW= .2272E+02 BASIN STORAGE= .1281E-02 PERCENT ERROR= .0										
FOR PLAN	= 1	RATIO=	.00							
RCOFD2A*	MANE		2.56	242.40	230.47	1.34	5.00	241.85	230.00	1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2186E+02 EXCESS= .0000E+00 OUTFLOW= .2186E+02 BASIN STORAGE= .1214E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD2A*	MANE		2.59	233.16	230.73	1.28	5.00	232.71	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2100E+02 EXCESS= .0000E+00 OUTFLOW= .2101E+02 BASIN STORAGE= .1366E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD2A*	MANE		2.60	230.34	229.18	1.26	5.00	229.63	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2070E+02 EXCESS= .0000E+00 OUTFLOW= .2071E+02 BASIN STORAGE= .1274E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD2A*	MANE		2.61	229.17	229.91	1.25	5.00	229.00	230.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2048E+02 EXCESS= .0000E+00 OUTFLOW= .2048E+02 BASIN STORAGE= .1406E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.48	544.93	218.37	1.45	5.00	541.25	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4871E+02 EXCESS= .0000E+00 OUTFLOW= .4871E+02 BASIN STORAGE= .1756E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.50	531.19	220.21	1.42	5.00	531.10	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4756E+02 EXCESS= .0000E+00 OUTFLOW= .4757E+02 BASIN STORAGE= .1517E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.54	508.55	218.27	1.36	5.00	505.74	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4569E+02 EXCESS= .0000E+00 OUTFLOW= .4569E+02 BASIN STORAGE= .1639E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.57	487.37	218.80	1.31	5.00	483.09	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4379E+02 EXCESS= .0000E+00 OUTFLOW= .4380E+02 BASIN STORAGE= .1643E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.59	481.42	220.01	1.29	5.00	481.41	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4315E+02 EXCESS= .0000E+00 OUTFLOW= .4316E+02 BASIN STORAGE= .2024E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.00						
RCOFD5*	MANE		2.60	473.28	218.35	1.27	5.00	471.01	220.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4262E+02 EXCESS= .0000E+00 OUTFLOW= .4262E+02 BASIN STORAGE= .1537E-02 PERCENT ERROR= .0									
FOR PLAN	= 1	RATIO=	.99						
RTOFFD7*	MANE		.70	36.20	215.93	2.00	5.00	35.90	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2371E+01 EXCESS= .0000E+00 OUTFLOW= .2372E+01 BASIN STORAGE= .4827E-09 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.98						
RTOFFD7*	MANE		.62	35.58	216.36	1.96	5.00	35.23	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2323E+01 EXCESS= .0000E+00 OUTFLOW= .2325E+01 BASIN STORAGE= .6120E-09 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.95						
RTOFFD7*	MANE		.76	34.36	215.95	1.90	5.00	34.09	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2244E+01 EXCESS= .0000E+00 OUTFLOW= .2245E+01 BASIN STORAGE= .7734E-09 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.93						
RTOFFD7*	MANE		.62	33.51	216.22	1.83	5.00	32.97	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2165E+01 EXCESS= .0000E+00 OUTFLOW= .2167E+01 BASIN STORAGE= .5609E-09 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.92						
RTOFFD7*	MANE		.79	32.76	215.64	1.80	5.00	32.51	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2133E+01 EXCESS= .0000E+00 OUTFLOW= .2134E+01 BASIN STORAGE= .4842E-09 PERCENT ERROR= -.1									
FOR PLAN	= 1	RATIO=	.91						
RTOFFD7*	MANE		.61	32.68	216.04	1.78	5.00	32.20	215.00
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2111E+01 EXCESS= .0000E+00 OUTFLOW= .2113E+01 BASIN STORAGE= .8193E-09 PERCENT ERROR= -.1									

FOR PLAN = 1	RATIO=	.99							
RCOND1*	MAHE	.86	616.03	221.25	1.22	5.00	616.05	220.00	1.22
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5273E+02 EXCESS= .0000E+00 OUTFLOW= .5276E+02 BASIN STORAGE= .7340E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.98							
RCOND1*	MAHE	1.00	604.29	221.12	1.20	5.00	603.89	220.00	1.20
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5153E+02 EXCESS= .0000E+00 OUTFLOW= .5155E+02 BASIN STORAGE= .5695E-07 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO=	.95							
RCOND1*	MAHE	1.01	578.55	220.65	1.15	5.00	578.12	220.00	1.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4955E+02 EXCESS= .0000E+00 OUTFLOW= .4957E+02 BASIN STORAGE= .4337E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.93							
RCOND1*	MAHE	1.05	554.46	220.18	1.10	5.00	554.33	220.00	1.10
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4756E+02 EXCESS= .0000E+00 OUTFLOW= .4758E+02 BASIN STORAGE= .7233E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.92							
RCOND1*	MAHE	1.07	550.36	220.89	1.09	5.00	549.41	220.00	1.09
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4693E+02 EXCESS= .0000E+00 OUTFLOW= .4695E+02 BASIN STORAGE= .6483E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.91							
RCOND1*	MAHE	1.02	540.74	221.22	1.07	5.00	540.16	220.00	1.07
CONTINUITY SUMMARY (AC-FT) - INFLOW= .4627E+02 EXCESS= .0000E+00 OUTFLOW= .4630E+02 BASIN STORAGE= .4461E-07 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO=	.99							
RCOND5*	MAHE	.52	639.95	220.77	1.47	5.00	635.15	220.00	1.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7282E+02 EXCESS= .0000E+00 OUTFLOW= .7294E+02 BASIN STORAGE= -.1684E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.98							
RCOND5*	MAHE	.52	627.49	220.68	1.44	5.00	622.62	220.00	1.44
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7138E+02 EXCESS= .0000E+00 OUTFLOW= .7149E+02 BASIN STORAGE= -.1684E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.95							
RCOND5*	MAHE	.54	601.71	220.84	1.39	5.00	596.77	220.00	1.39
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6897E+02 EXCESS= .0000E+00 OUTFLOW= .6909E+02 BASIN STORAGE= -.1684E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.93							
RCOND5*	MAHE	.54	577.82	220.84	1.34	5.00	572.84	220.00	1.34
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6655E+02 EXCESS= .0000E+00 OUTFLOW= .6667E+02 BASIN STORAGE= -.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.92							
RCOND5*	MAHE	.53	573.47	221.02	1.33	5.00	567.54	220.00	1.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6577E+02 EXCESS= .0000E+00 OUTFLOW= .6589E+02 BASIN STORAGE= -.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.91							
RCOND5*	MAHE	.53	563.40	220.72	1.31	5.00	558.39	220.00	1.31
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6500E+02 EXCESS= .0000E+00 OUTFLOW= .6511E+02 BASIN STORAGE= -.1685E+00 PERCENT ERROR= .1									
FOR PLAN = 1	RATIO=	.00							
ROND11*	MAHE	4.50	16.20	225.00	1.84	5.00	16.20	225.00	1.84
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1193E+01 EXCESS= .0000E+00 OUTFLOW= .1194E+01 BASIN STORAGE= .1489E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO=	.00							
ROND11*	MAHE	4.50	15.87	225.00	1.80	5.00	15.87	225.00	1.80
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1168E+01 EXCESS= .0000E+00 OUTFLOW= .1169E+01 BASIN STORAGE= .1474E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO=	.00							
ROND11*	MAHE	4.50	15.34	225.00	1.73	5.00	15.34	225.00	1.74
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1126E+01 EXCESS= .0000E+00 OUTFLOW= .1128E+01 BASIN STORAGE= .1450E-02 PERCENT ERROR= -.2									

FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.80	225.00	1.67	5.00	14.80	225.00	1.68	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1085E+01 EXCESS= .0000E+00 OUTFLOW= .1087E+01 BASIN STORAGE= .1425E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.59	225.00	1.64	5.00	14.59	225.00	1.65	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1069E+01 EXCESS= .0000E+00 OUTFLOW= .1070E+01 BASIN STORAGE= .1967E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
ROND11* MANE	4.50	14.44	225.00	1.63	5.00	14.44	225.00	1.63	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1057E+01 EXCESS= .0000E+00 OUTFLOW= .1059E+01 BASIN STORAGE= .1957E-02 PERCENT ERROR= -.3									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.79	301.88	222.52	2.86	5.00	299.75	225.00	2.86	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2443E+02 EXCESS= .0000E+00 OUTFLOW= .2443E+02 BASIN STORAGE= .9043E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.81	293.89	222.67	2.79	5.00	292.05	225.00	2.79	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2378E+02 EXCESS= .0000E+00 OUTFLOW= .2378E+02 BASIN STORAGE= .8751E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.84	278.80	222.89	2.66	5.00	277.51	225.00	2.66	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2272E+02 EXCESS= .0000E+00 OUTFLOW= .2272E+02 BASIN STORAGE= .9149E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.87	263.96	223.06	2.54	5.00	263.42	225.00	2.54	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2166E+02 EXCESS= .0000E+00 OUTFLOW= .2165E+02 BASIN STORAGE= .8848E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.88	261.06	224.01	2.50	5.00	259.92	225.00	2.50	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2130E+02 EXCESS= .0000E+00 OUTFLOW= .2130E+02 BASIN STORAGE= .9242E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
RCOFD3* MANE	1.89	256.29	223.32	2.46	5.00	255.43	225.00	2.46	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2097E+02 EXCESS= .0000E+00 OUTFLOW= .2097E+02 BASIN STORAGE= .8801E-03 PERCENT ERROR= .0									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	2.00	20.94	238.00	.38	5.00	20.76	235.00	.38	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1882E+01 EXCESS= .0000E+00 OUTFLOW= .1884E+01 BASIN STORAGE= .1117E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	1.75	19.88	236.25	.37	5.00	19.63	235.00	.37	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1798E+01 EXCESS= .0000E+00 OUTFLOW= .1799E+01 BASIN STORAGE= .1143E-02 PERCENT ERROR= -.1									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	1.75	18.16	238.00	.34	5.00	17.80	235.00	.34	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1661E+01 EXCESS= .0000E+00 OUTFLOW= .1662E+01 BASIN STORAGE= .1298E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	1.75	16.48	238.00	.31	5.00	16.22	240.00	.31	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1528E+01 EXCESS= .0000E+00 OUTFLOW= .1529E+01 BASIN STORAGE= .1232E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	1.75	15.82	238.00	.30	5.00	15.60	240.00	.30	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1476E+01 EXCESS= .0000E+00 OUTFLOW= .1477E+01 BASIN STORAGE= .1212E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
ROFFD-2B MANE	1.75	15.36	238.00	.29	5.00	15.18	240.00	.29	
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1440E+01 EXCESS= .0000E+00 OUTFLOW= .1442E+01 BASIN STORAGE= .1177E-02 PERCENT ERROR= -.2									
FOR PLAN = 1	RATIO= .00								
RCHANNEL MANE	3.25	361.90	227.26	1.78	5.00	356.64	225.00	1.77	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3080E+02 EXCESS= .0000E+00 OUTFLOW= .3081E+02 BASIN STORAGE= .1865E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL NAME 3.28 350.10 226.16 1.73 5.00 346.90 225.00 1.73

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2996E+02 EXCESS= .0000E+00 OUTFLOW= .2996E+02 BASIN STORAGE= .2234E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL NAME 3.34 333.03 226.94 1.65 5.00 329.00 225.00 1.65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2856E+02 EXCESS= .0000E+00 OUTFLOW= .2857E+02 BASIN STORAGE= .1865E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL NAME 3.40 315.72 227.84 1.57 5.00 310.89 225.00 1.57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2717E+02 EXCESS= .0000E+00 OUTFLOW= .2717E+02 BASIN STORAGE= .2164E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL NAME 3.42 308.39 229.11 1.54 5.00 305.24 225.00 1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2668E+02 EXCESS= .0000E+00 OUTFLOW= .2668E+02 BASIN STORAGE= .1821E-02 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00
RCHANNEL NAME 3.44 304.54 227.09 1.51 5.00 301.20 225.00 1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2627E+02 EXCESS= .0000E+00 OUTFLOW= .2627E+02 BASIN STORAGE= .1871E-02 PERCENT ERROR= .0

*** NORMAL END OF HEC-1 ***

Appendix C: Hydraulics

Appendix C-1: Flowmaster-Street Capacity Calculations

Street Limitations Criteria

Location	Street ROW (ft)	Minor Storm (Q10)				Major Storm (Q100)			
		Q10 (cfs)	10-YR Dry Lane Criteria Met	VD<=6	Minor Storm Limitations Met	Q100 (cfs)	D<= 2'	VD<=8	Major Storm Limitations Met
1-1 Burkholder 100' N of Water	100	67	YES	3.26=Y	YES	270	YES	7.16=Y	YES
2-2 Burkholder 1500' N of Warm Springs	100	44	YES	2.13=Y	YES	139	YES	4.05=Y	YES
3-3 Burkholder 3200' N of Warm Springs	100	42	YES	2.11=Y	YES	405	YES	7.97=Y	YES
4-4 Burkholder 150' N of Sunset	100	53	YES	2.58=Y	YES	370	YES	7.91=Y	YES
5-5 Burkholder 100' N of Athens	120	31	YES	1.49=Y	YES	485	YES	7.97=Y	YES
6-6 Warm Springs 250' N of Water	100	42	YES	2.03=Y	YES	320	YES	6.63=Y	YES
7-7 Warm Springs 200' W of Eastside	100	35	YES	1.71=Y	YES	388	YES	7.24=Y	YES
8-8 Sunset 200' NW Water	100	48	YES	2.33=Y	YES	133	YES	4.11=Y	YES
9-9 Sunset 200" NW Eastside	100	48	YES	2.33=Y	YES	248	YES	5.89=Y	YES
10-10 Sunset 2000' SE of Burkholder	100	51	YES	2.49=Y	YES	380	YES	7.95=Y	YES
11-11 Eastside 3100' S of Athens	80	19	YES	1.82=Y	YES	54	YES	2.81=Y	YES
12-12 Water 150' SW of Mohawk	100	36	YES	1.88=Y	YES	166	YES	4.45=Y	YES
13-13 Athens 100' W of Mohawk	120	58	YES	2.58=Y	YES	368	YES	7.50=Y	YES
14-14 Athens 200' W of Eastside	120	36	YES	1.60=Y	YES	485	YES	7.97=Y	YES

*Flow is Surface Flow

**Storm Drain Flows have been subtracted

***Refer to Street and Storm Drain System Distribution Table in Appendix C-2.

Highlighted cells have been revised for this submittal. Corresponding normal depth calculations have been reprinted for this submittal.

Worksheet for Section 1-1 at Burkholder Boulevard at Water Street 100yr- 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.02450 ft/ft
Discharge: 311.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 0.96 ft
Elevation Range: 0.00 to 4.00
Flow Area: 38.46 ft²
Wetted Perimeter: 94.90 ft
Top Width: 93.06 ft
Normal Depth: 0.96 ft
Critical Depth: 1.25 ft
Critical Slope: 0.00427 ft/ft
Velocity: 8.09 ft/s
Velocity Head: 1.02 ft
Specific Energy: 1.98 ft
Froude Number: 2.22
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

Station	Elevation
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Worksheet for Section 1-1 at Burkholder Boulevard at Water Street 100yr- 100' ROW

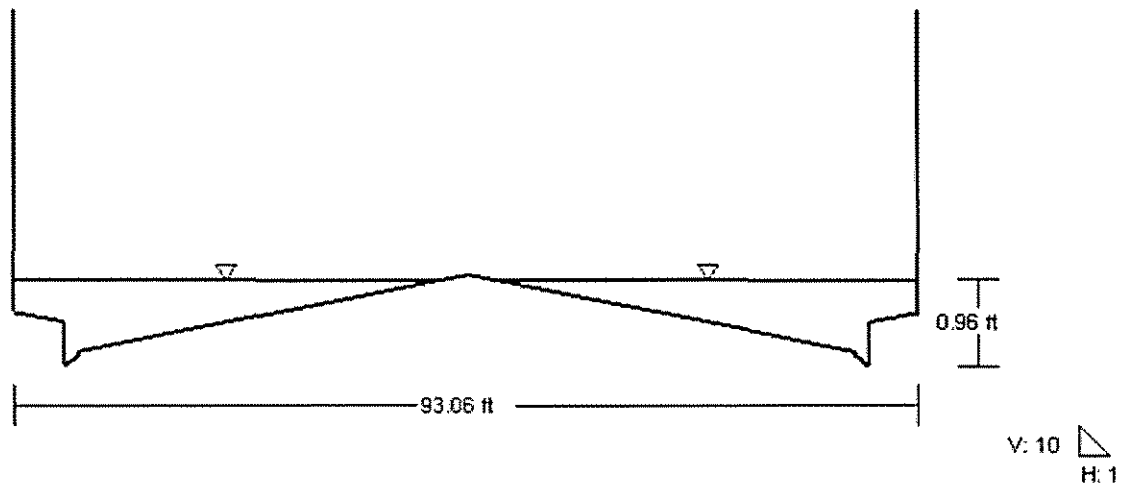
Station	Elevation
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0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

Cross Section for Section 1-1 at Burkholder Boulevard at Water Street 100yr- 100' ROW

Project Description: Burkholder Boulevard at Water Street 100yr- 100' ROW
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data: Burkholder Boulevard at Water Street 100yr- 100' ROW
Roughness Coefficient: 0.016
Channel Slope: 0.02450 ft/ft
Normal Depth: 0.96 ft
Elevation Range: 0.00 to 4.00
Discharge: 311.00 ft³/s



Worksheet for Section 2-2 at Burkholder Boulevard 1500' N of Eastside 100yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.01050 ft/ft
Discharge: 186.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 0.93 ft
Elevation Range: 0.00 to 4.00
Flow Area: 36.02 ft²
Wetted Perimeter: 92.19 ft
Top Width: 90.40 ft
Normal Depth: 0.93 ft
Critical Depth: 1.05 ft
Critical Slope: 0.00476 ft/ft
Velocity: 5.16 ft/s
Velocity Head: 0.41 ft
Specific Energy: 1.35 ft
Froude Number: 1.44
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

**Worksheet for Section 2-2 at Burkholder Boulevard 1500' N of Eastside 100yr - 100'
ROW**

Station Elevation

0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

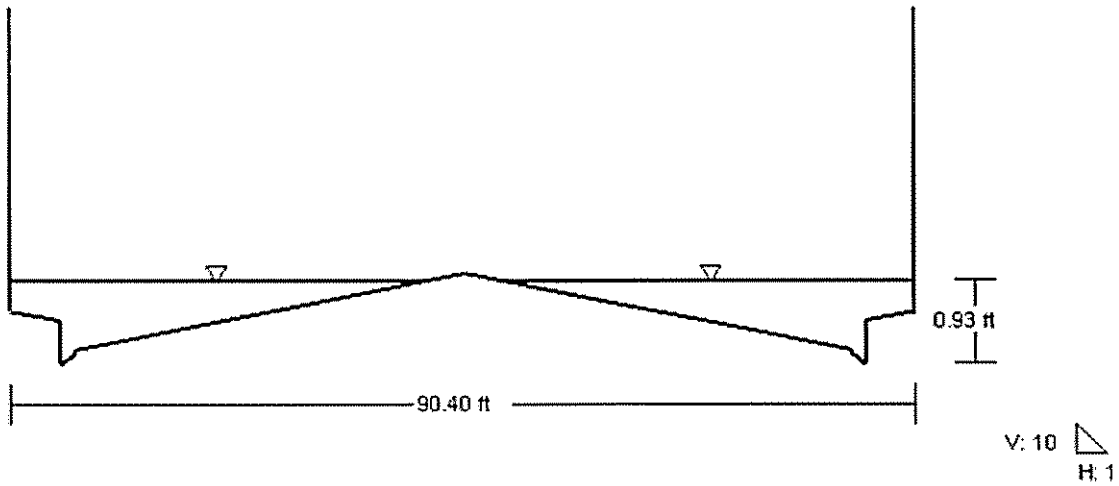
Cross Section for Section 2-2 at Burkholder Boulevard 1500' N of Eastside 100yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.016
Channel Slope: 0.01050 ft/ft
Normal Depth: 0.93 ft
Elevation Range: 0.00 to 4.00
Discharge: 186.00 ft³/s



Worksheet for Section 6-6 at Warm Springs Road at Water Street 100 yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.00950 ft/ft
Discharge: 342.00 ft³/s

Options

Current Roughness Weighted Meth: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 1.14 ft
Elevation Range: 0.00 to 4.00
Flow Area: 55.81 ft²
Wetted Perimeter: 102.19 ft
Top Width: 100.00 ft
Normal Depth: 1.14 ft
Critical Depth: 1.29 ft
Critical Slope: 0.00420 ft/ft
Velocity: 6.13 ft/s
Velocity Head: 0.58 ft
Specific Energy: 1.72 ft
Froude Number: 1.45
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

Station	Elevation
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Worksheet for Section 6-6 at Warm Springs Road at Water Street 100 yr - 100' ROW

Station	Elevation
---------	-----------

0+00.00	4.00
---------	------

0+00.00	0.60
---------	------

0+05.50	0.50
---------	------

0+05.50	0.00
---------	------

0+07.00	0.13
---------	------

0+07.00	0.17
---------	------

0+50.00	1.03
---------	------

0+93.00	0.17
---------	------

0+93.00	0.13
---------	------

0+94.50	0.00
---------	------

0+94.50	0.50
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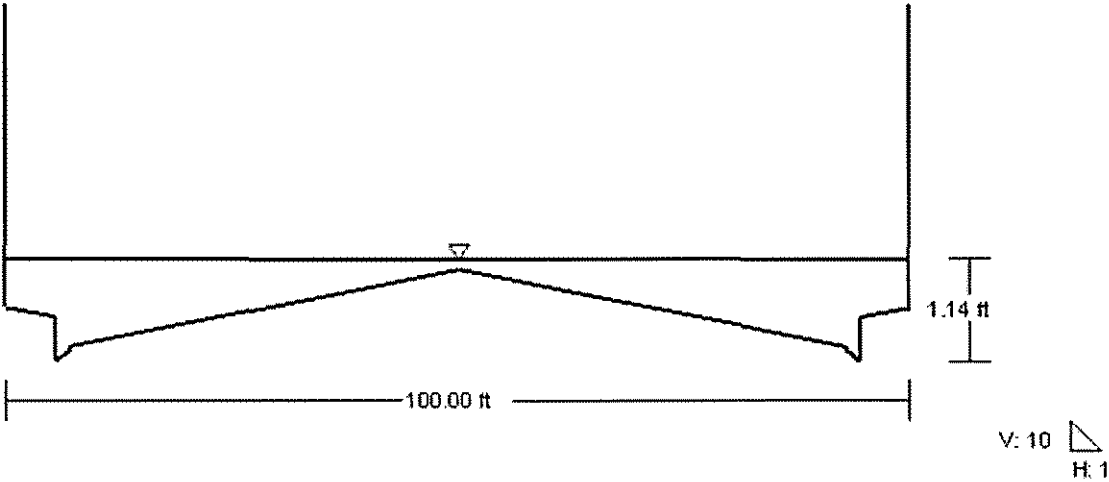
1+00.00	0.60
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1+00.00	4.00
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Cross Section for Section 6-6 at Warm Springs Road at Water Street 100 yr - 100' ROW

Project Description
Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data
Roughness Coefficient: 0.016
Channel Slope: 0.00950 ft/ft
Normal Depth: 1.14 ft
Elevation Range: 0.00 to 4.00
Discharge: 342.00 ft³/s



Worksheet for Section 7-7 at Warm Springs Road at Eastside Real Estate Parkway **100 yr - 100' ROW**

Project Description

Flow Element: Irregular Section
 Friction Method: Manning Formula
 Solve For: Normal Depth

Input Data

Channel Slope: 0.00670 ft/ft
 Discharge: 421.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
 Open Channel Weighted Roughness: Improved Lotters
 Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
 Water Surface Elevation: 1.28 ft
 Elevation Range: 0.00 to 4.00
 Flow Area: 70.35 ft²
 Wetted Perimeter: 102.48 ft
 Top Width: 100.00 ft
 Normal Depth: 1.28 ft
 Critical Depth: 1.40 ft
 Critical Slope: 0.00404 ft/ft
 Velocity: 5.98 ft/s
 Velocity Head: 0.56 ft
 Specific Energy: 1.84 ft
 Froude Number: 1.26
 Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

Worksheet for Section 7-7 at Warm Springs Road at Eastside Real Estate Parkway
100 yr - 100' ROW

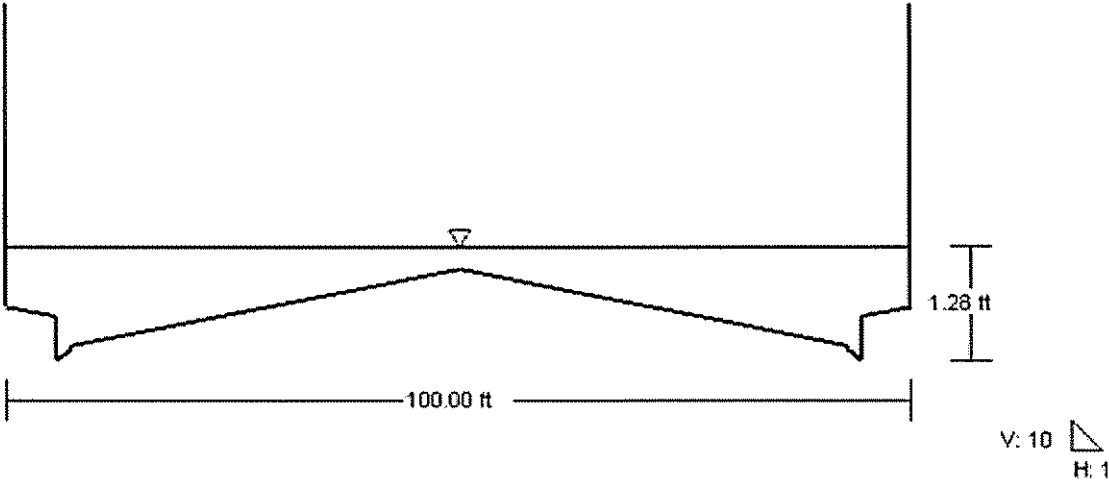
Station	Elevation
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0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

Cross Section for Section 7-7 at Warm Springs Road at Eastside Real Estate Parkway 100 yr - 100' ROW

Project Description	
Flow Element:	Irregular Section
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data		
Roughness Coefficient:	0.016	
Channel Slope:	0.00670	ft/ft
Normal Depth:	1.28	ft
Elevation Range:	0.00 to 4.00	
Discharge:	421.00	ft³/s



Worksheet for Section 8-8 at Sunset Road 200' NW of Water Street 10yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.01250 ft/ft
Discharge: 48.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 0.62 ft
Elevation Range: 0.00 to 4.00
Flow Area: 12.78 ft²
Wetted Perimeter: 60.53 ft
Top Width: 59.37 ft
Normal Depth: 0.62 ft
Critical Depth: 0.69 ft
Critical Slope: 0.00580 ft/ft
Velocity: 3.75 ft/s
Velocity Head: 0.22 ft
Specific Energy: 0.84 ft
Froude Number: 1.43
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

Station	Elevation
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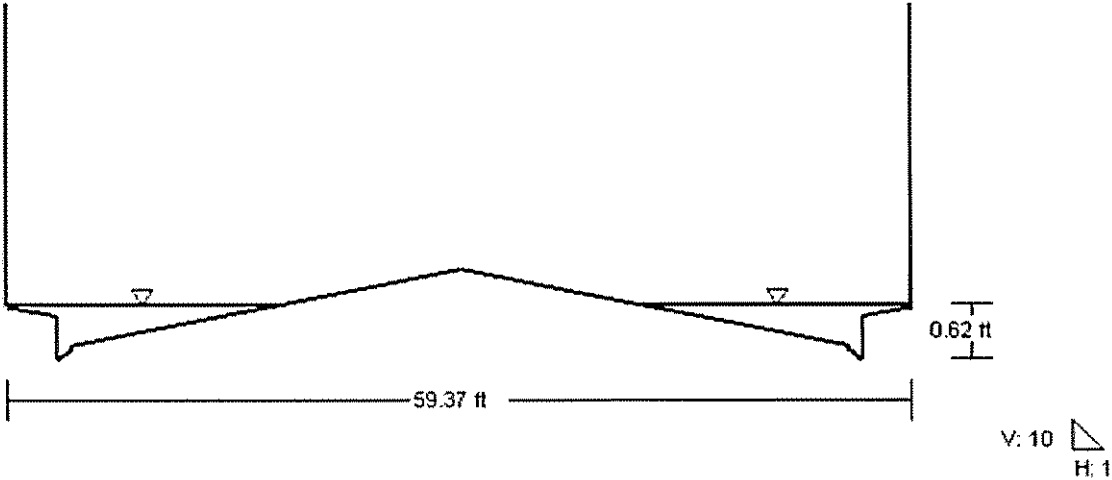
Worksheet for Section 8-8 at Sunset Road 200' NW of Water Street 10yr - 100' ROW

Station	Elevation
0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

Cross Section for Section 8-8 at Sunset Road 200' NW of Water Street 10yr - 100' ROW

Project Description	
Flow Element:	Irregular Section
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data		
Roughness Coefficient:	0.016	
Channel Slope:	0.01250	ft/ft
Normal Depth:	0.62	ft
Elevation Range:	0.00 to 4.00	
Discharge:	48.00	ft ³ /s



Worksheet for Section 8-8 at Sunset Road 200' NW of Water Street 100yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.01250 ft/ft
Discharge: 184.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 0.91 ft
Elevation Range: 0.00 to 4.00
Flow Area: 33.55 ft²
Wetted Perimeter: 89.35 ft
Top Width: 87.63 ft
Normal Depth: 0.91 ft
Critical Depth: 1.05 ft
Critical Slope: 0.00478 ft/ft
Velocity: 5.48 ft/s
Velocity Head: 0.47 ft
Specific Energy: 1.37 ft
Froude Number: 1.56
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

Station	Elevation
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Worksheet for Section 8-8 at Sunset Road 200' NW of Water Street 100yr - 100' ROW

Station	Elevation
---------	-----------

0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

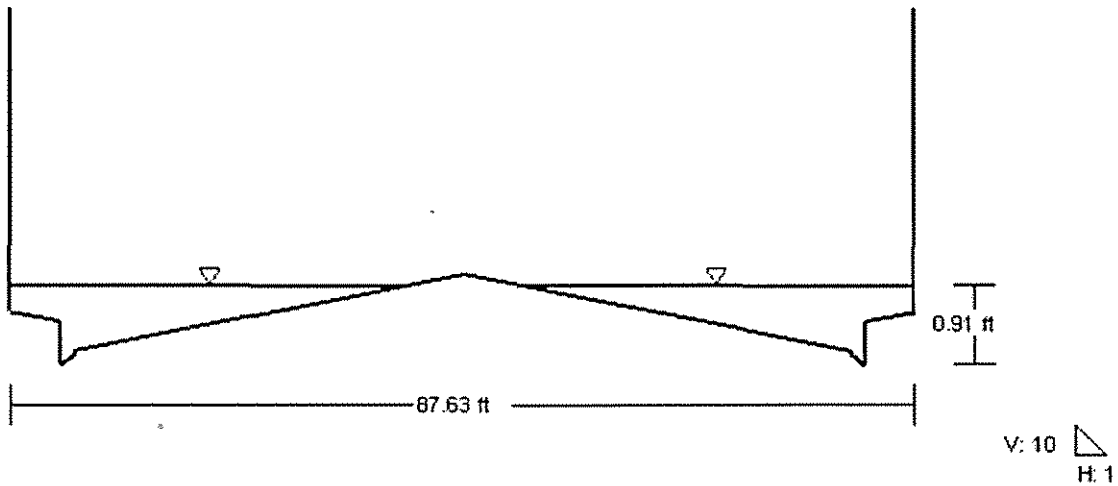
Cross Section for Section 8-8 at Sunset Road 200' NW of Water Street 100yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.016
Channel Slope: 0.01250 ft/ft
Normal Depth: 0.91 ft
Elevation Range: 0.00 to 4.00
Discharge: 184.00 ft³/s



Worksheet for Section 9-9 at Sunset Road at Eastside Real Estate Parkway 100 yr - 100' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.01250 ft/ft
Discharge: 248.00 ft³/s

Options

Current Roughness Weighted Meth: ImprovedLotters
Open Channel Weighted Roughnes: ImprovedLotters
Closed Channel Weighted Roughne: Hortons

Results

Roughness Coefficient: 0.016
Water Surface Elevation: 0.99 ft
Elevation Range: 0.00 to 4.00
Flow Area: 41.68 ft²
Wetted Perimeter: 98.36 ft
Top Width: 96.46 ft
Normal Depth: 0.99 ft
Critical Depth: 1.15 ft
Critical Slope: 0.00447 ft/ft
Velocity: 5.95 ft/s
Velocity Head: 0.55 ft
Specific Energy: 1.54 ft
Froude Number: 1.60
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.016
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

**Worksheet for Section 9-9 at Sunset Road at Eastside Real Estate Parkway 100 yr -
100' ROW**

Station	Elevation
0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+50.00	1.03
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

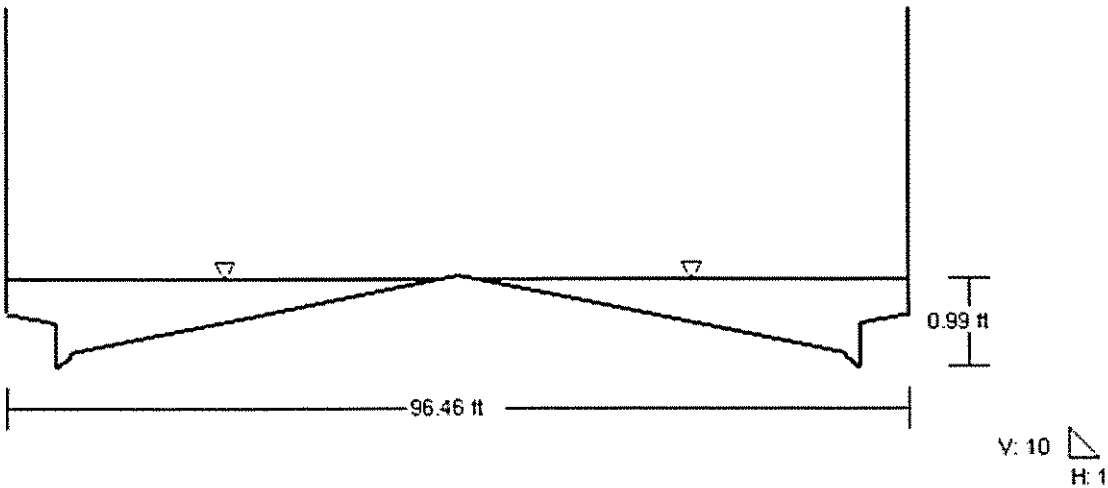
**Cross Section for Section 9-9 at Sunset Road at Eastside Real Estate Parkway 100 yr
- 100' ROW**

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.016
Channel Slope: 0.01250 ft/ft
Normal Depth: 0.99 ft
Elevation Range: 0.00 to 4.00
Discharge: 248.00 ft³/s



Worksheet for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens Avenue 10 yr - 80' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.02000 ft/ft
Discharge: 22.00 ft³/s

Options

Current Roughness Weighted Meth: Improved Lotters
Open Channel Weighted Roughnes: Improved Lotters
Closed Channel Weighted Roughne: Hortons

Results

Roughness Coefficient: 0.014
Water Surface Elevation: 0.45 ft
Elevation Range: 0.00 to 4.00 ft
Flow Area: 5.07 ft²
Wetted Perimeter: 31.92 ft
Top Width: 30.92 ft
Normal Depth: 0.45 ft
Critical Depth: 0.55 ft
Critical Slope: 0.00524 ft/ft
Velocity: 4.34 ft/s
Velocity Head: 0.29 ft
Specific Energy: 0.74 ft
Froude Number: 1.89
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.17)	0.013
(0+07.00, 0.17)	(0+73.00, 0.17)	0.016
(0+73.00, 0.17)	(0+80.00, 4.00)	0.013

Section Geometry

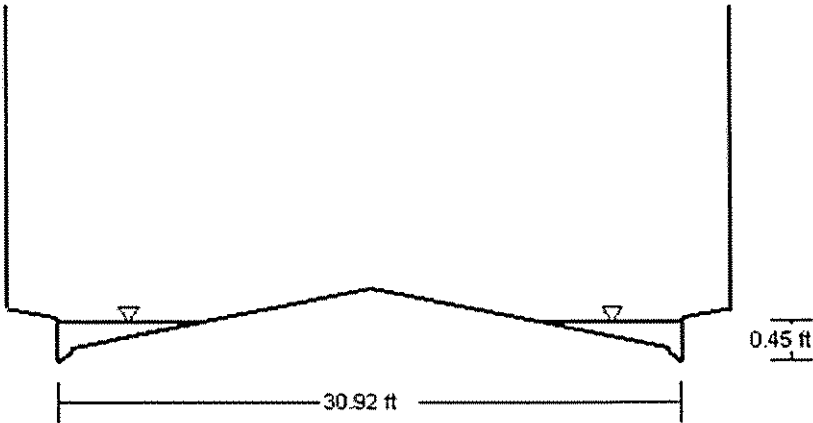
**Worksheet for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens Avenue
10 yr - 80' ROW**

Station	Elevation
0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.50
0+80.00	0.60
0+80.00	4.00

**Cross Section for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens
Avenue 10 yr - 80' ROW**

Project Description	
Flow Element:	Irregular Section
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data		
Roughness Coefficient:	0.014	
Channel Slope:	0.02000	ft/ft
Normal Depth:	0.45	ft
Elevation Range:	0.00 to 4.00 ft	
Discharge:	22.00	ft³/s



V: 10
H: 1

Worksheet for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens Avenue 100 yr - 80' ROW

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.02000 ft/ft
Discharge: 64.00 ft³/s

Options

Current Roughness Weighted Method: Improved Lotters
Open Channel Weighted Roughness: Improved Lotters
Closed Channel Weighted Roughness: Hortons

Results

Roughness Coefficient: 0.015
Water Surface Elevation: 0.63 ft
Elevation Range: 0.00 to 4.00
Flow Area: 13.02 ft²
Wetted Perimeter: 60.89 ft
Top Width: 59.73 ft
Normal Depth: 0.63 ft
Critical Depth: 0.75 ft
Critical Slope: 0.00527 ft/ft
Velocity: 4.92 ft/s
Velocity Head: 0.38 ft
Specific Energy: 1.00 ft
Froude Number: 1.86
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.17)	0.013
(0+07.00, 0.17)	(0+73.00, 0.17)	0.016
(0+73.00, 0.17)	(0+80.00, 4.00)	0.013

Section Geometry

**Worksheet for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens Avenue
100 yr - 80' ROW**

Station	Elevation
---------	-----------

0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.50
0+80.00	0.60
0+80.00	4.00

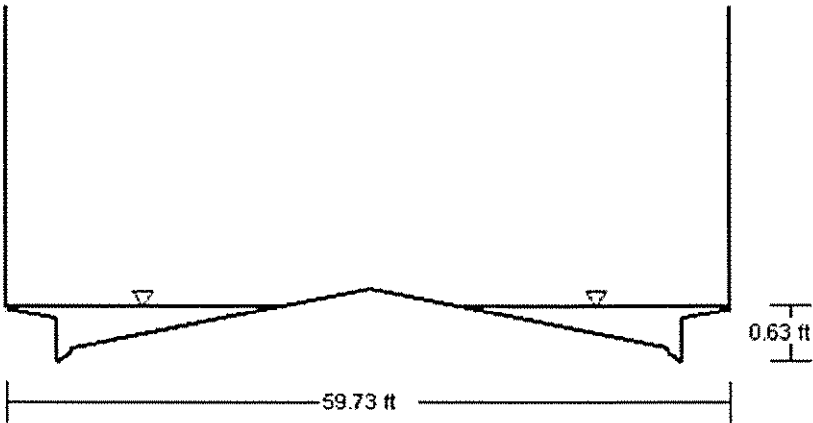
**Cross Section for Section 11-11 Eastside Real Estate Parkway 3100' S of Athens
Avenue 100 yr - 80' ROW**

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.02000 ft/ft
Normal Depth: 0.63 ft
Elevation Range: 0.00 to 4.00
Discharge: 64.00 ft³/s



V: 10
H: 1

Worksheet for Section 12-12 at Water Street at Mohawk Drive 100 yr - 100' ROW w/ Median

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Channel Slope: 0.01050 ft/ft
Discharge: 232.00 ft³/s

Options

Current Roughness Weighted Meth: ImprovedLotters
Open Channel Weighted Roughnes: ImprovedLotters
Closed Channel Weighted Roughne: Hortons

Results

Roughness Coefficient: 0.017
Water Surface Elevation: 1.00 ft
Elevation Range: 0.00 to 4.00
Flow Area: 41.64 ft²
Wetted Perimeter: 88.13 ft
Top Width: 86.00 ft
Normal Depth: 1.00 ft
Critical Depth: 1.13 ft
Critical Slope: 0.00492 ft/ft
Velocity: 5.57 ft/s
Velocity Head: 0.48 ft
Specific Energy: 1.48 ft
Froude Number: 1.41
Flow Type: Supercritical

Segment Roughness

Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(0+93.00, 0.13)	0.017
(0+93.00, 0.13)	(1+00.00, 4.00)	0.015

Section Geometry

**Worksheet for Section 12-12 at Water Street at Mohawk Drive 100 yr - 100' ROW w/
Median**

Station	Elevation
0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+43.00	0.89
0+43.00	1.39
0+57.00	1.39
0+57.00	0.89
0+93.00	0.17
0+93.00	0.13
0+94.50	0.00
0+94.50	0.50
1+00.00	0.60
1+00.00	4.00

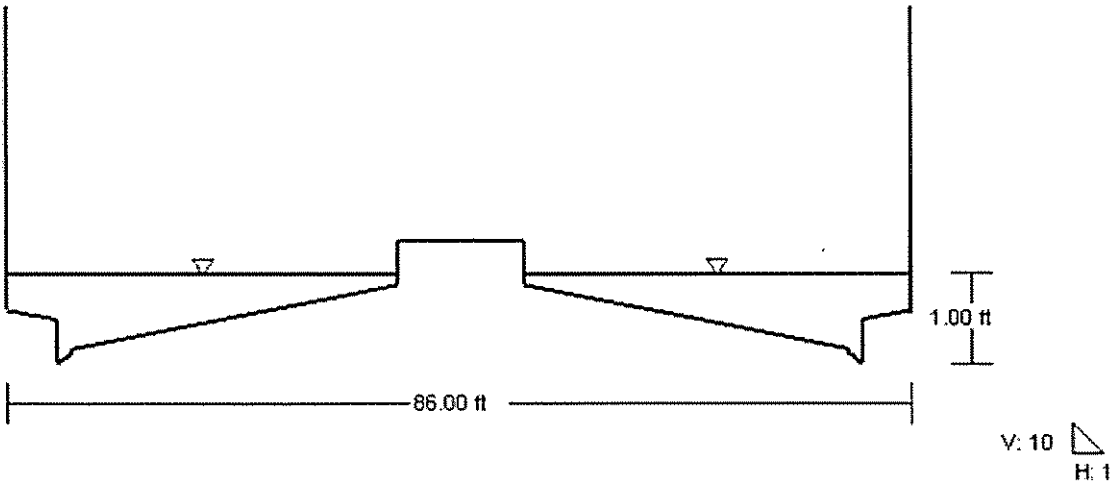
**Cross Section for Section 12-12 at Water Street at Mohawk Drive 100 yr - 100' ROW
w/ Median**

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.017
Channel Slope: 0.01050 ft/ft
Normal Depth: 1.00 ft
Elevation Range: 0.00 to 4.00
Discharge: 232.00 ft³/s



**Worksheet for Section 13-13 at Athens Avenue at Mohawk Drive 100 yr - 120' ROW w/
Median**

Project Description		
Flow Element:	Irregular Section	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	

Input Data		
Channel Slope:	0.01370	ft/ft
Discharge:	368.00	ft ³ /s

Options		
Current Roughness Weighted Meth:	ImprovedLotters	
Open Channel Weighted Roughnes:	ImprovedLotters	
Closed Channel Weighted Roughne	Hortons	

Results		
Roughness Coefficient:	0.017	
Water Surface Elevation:	1.12	ft
Elevation Range:	0.00 to 4.00	
Flow Area:	54.90	ft ²
Wetted Perimeter:	108.22	ft
Top Width:	106.00	ft
Normal Depth:	1.12	ft
Critical Depth:	1.32	ft
Critical Slope:	0.00460	ft/ft
Velocity:	6.70	ft/s
Velocity Head:	0.70	ft
Specific Energy:	1.82	ft
Froude Number:	1.64	
Flow Type:	Supercritical	

Segment Roughness		
Start Station	End Station	Roughness Coefficient
(0+00.00, 4.00)	(0+07.00, 0.13)	0.015
(0+07.00, 0.13)	(1+13.00, 0.13)	0.017
(1+13.00, 0.13)	(1+20.00, 4.00)	0.015

Section Geometry

**Worksheet for Section 13-13 at Athens Avenue at Mohawk Drive 100 yr - 120' ROW w/
Median**

Station	Elevation
0+00.00	4.00
0+00.00	0.60
0+05.50	0.50
0+05.50	0.00
0+07.00	0.13
0+07.00	0.17
0+53.00	1.09
0+53.00	1.59
0+67.00	1.59
0+67.00	1.09
1+13.00	0.17
1+13.00	0.13
1+15.00	0.00
1+15.00	0.50
1+20.00	0.60
1+20.00	4.00

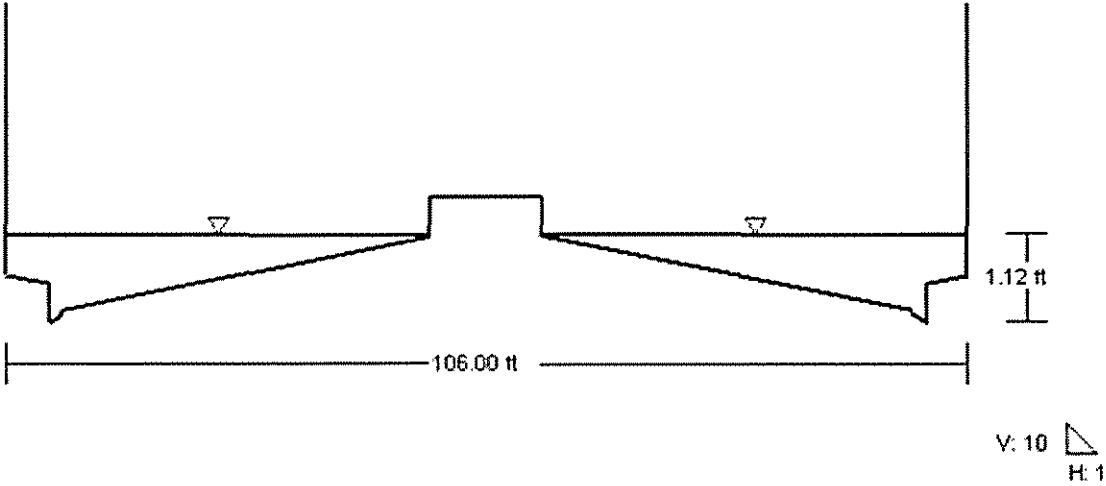
Cross Section for Section 13-13 at Athens Avenue at Mohawk Drive 100 yr - 120' ROW w/ Median

Project Description

Flow Element: Irregular Section
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.017
Channel Slope: 0.01370 ft/ft
Normal Depth: 1.12 ft
Elevation Range: 0.00 to 4.00
Discharge: 368.00 ft³/s



Appendix C-2: Flowmaster-Storm Drain System

Proposed Storm Drain Facilities							
	Location	Q10 (cfs)	Q100 (cfs)	Alternative 1 Facility	Alternative 2 Facility	Recommended Facility	Revisions made with this Submittal (Addendum #2)
LINE A-1	1-1	54	-	-	-	36" RCP	revised Q10, upsize pipe
LINE A	2-2	777	855	8' RCP	8'x8' RCB	8'x8' RCB	revised Q10 & Q100
	3-3	905	863	8' RCP	8'x8' RCB	8'x8' RCB	revised Q10 & Q100
	4-4	1,200	1,581	10' RCP	10'x10' RCB	10'x10' RCB	revised Q10 & Q100
	5-5	1,758	2,634	-	-	12'x12' RCB	revised Q10 & Q100
LINE B	6-6	106	-	-	-	48" RCP	revised Q10, upsize pipe
	7-7	143	-	-	-	54" RCP	revised Q10
LINE C	8-8	9	-	-	-	18" RCP	added
	9-9	54	-	-	-	36" RCP	revised Q10, upsize pipe
	10-10	120	16	-	-	48" RCP	revised Q10 & Q100, upsize pipe
LINE D	11-11	-	-	-	-	-	-
	12-12	32	-	-	-	30" RCP	revised Q10
	13-13	96	-	-	-	48" RCP	revised Q10 & Q100, upsize pipe
	14-14	272	228	78" RCP	6'x6' RCB	6'x6' RCB	revised Q10 & Q100, upsize pipe
PABCO CHANNEL- REALIGNMENT (CP2A)	Boulder Highway at Pabco Road	532	1,190	5-6'x4' RCB	10'x10' RCB	5-6'x4' RCB	revised Q10 & Q100
PITTMAN-BURNS CHANNEL- IMPROVEMENTS	750' East of Wiesner Way	-	5,456	-	-	Conc. Channel 40"W, 7.5'D, 2:1SS	none
CONTINUATION OF WRF CHANNEL 1	1,500' East of Wiesner Way	111	335	Conc. Channel 12"W, 3.5'D, 2:1SS	9'x6' RCB	9'x6' RCB	added
CONTINUATION OF WRF CHANNEL 2	West of Detention Basin 2 Outlet Channel	282	680	-	-	Riprap Channel 25"W, 4.5'D, 2:1SS	added
OUTLET CHANNEL AT DETENTION BASIN 2 (CP23)	Downstream of Detention Basin 2	1,580	1,759	-	-	Earth. Channel 170"W, 3.5'D, 4:1SS	revised Q10 & Q100, upsize channel
OUTLET CHANNEL AT DETENTION BASIN 2 (CP24)	Downstream of Detention Basin 2	1,591	1,776	-	-	Earth. Channel 170"W, 3.5'D, 4:1SS	-

Street and Storm Drain System Distribution

Storm Drain System	Location	Minor Storm (Q10)					Major Storm (Q100)					Q10 and Q100 Flow Explanation
		¹ Q10 (cfs)	Q10-STREET (cfs)	³ Q10 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)	² Q100 (cfs)	Q100-STREET (cfs)	⁴ Q100 PIPE (cfs)	Q-Bypass (cfs)	Qpipe+ Qbypass (cfs)	
Line A-1	1-1 Burkholder 100' N of Water	121	67	54	-	54	270	270	-	-	-	OND-25 + OND-26 + OFFD-25 + OFFD-26
Line A	2-2 Burkholder 1500' N of Warm Springs	64	44	20	757*	777	139	139	-	855*	855	OND-18 + OND-19
	3-3 Burkholder 3200' N of Warm Springs	170	42	128	777	905	413	405	8	855	863	OND-13 + OND-14 + Q STREET @ 2-2
	4-4 Burkholder 150' N of Sunset	228	53	175	905	1,200**	1,072	370	702	863	1,581**	OND-10 + OND-11 + OND-12 + Q STREET @ 3-3 + Q STREET @ 10-10
	5-5 Burkholder 100' N of Athens	317	31	286	1,200	1,758***	1,310	485	825	1,581	2,634***	OND-5 + OND-6 + Q STREET @ 4-4 + Q STREET @ 14-14
	6-6 Warm Springs 250' N of Water	148	42	106	-	106	320	320	-	-	-	OND-27 + OFFD-27A + OFFD-27B
Line B	7-7 Warm Springs 200' W of Eastside	72	35	37	106	143	388	388	-	-	-	OND-22 + Q STREET @ 6-6
Line C	8-8 Sunset 200' NW Water	57	48	9	-	9	133	133	-	-	-	OND-24
	9-9 Sunset 200' NW Eastside	93	48	45	9	54	248	248	-	-	-	OND-23 + Q STREET @ 8-8
	10-10 Sunset 2000' SE of Burkholder	117	51	66	54	120	396	380	16	-	16	OND-15 + Q STREET @ 9-9
Line D	11-11 Eastside 3100' S of Athens	19	19	-	-	-	54	54	-	-	-	OND-16
	12-12 Water 150' SW of Mohawk	68	36	32	-	32	166	166	-	-	-	OND-17
	13-13 Athens 100' W of Mohawk	122	58	64	32	96	368	368	-	-	-	OND-8 + Q STREET @ 12-12
	14-14 Athens 200' W of Eastside	212	36	176	96	272	713	485	228	-	228	OND-7 + Q STREET @ 11-11 + Q STREET @ 13-13

Storm Drain System	
	Line A-1
	Line A
	Line B
	Line C
	Line D

Notes:

* Represents the outflow and bypass discharge from detention basin 1 (CP10).

** Represents Inflow from LINE C

*** Represents Inflow from LINE D

1 Represents the summation of the HEC-1 output for the 10-Year Storm Event for each contributing basin and negates losses due to routing the flows. See column labeled "Q10 and Q100 Flow explanation".

2 Represents the summation of the HEC-1 output for the 100-Year Storm Event for each contributing basin and negates losses due to routing the flows. See column labeled "Q10 and Q100 Flow explanation".

3 Q10 PIPE = Q10 - Q10 STREET

4 Q100 PIPE = Q100 - Q100 STREET

Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	4.00	ft
Bottom Width:	6.00	ft
Discharge:	238.00	ft ³ /s

Results

Normal Depth:	2.99	ft
Flow Area:	17.92	ft ²
Wetted Perimeter:	11.97	ft
Top Width:	6.00	ft
Critical Depth:	3.66	ft
Critical Slope:	0.00616	ft/ft
Velocity:	13.28	ft/s
Velocity Head:	2.74	ft
Specific Energy:	5.73	ft
Froude Number:	1.35	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.75	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.99	ft
Critical Depth:	3.66	ft

Total flow = 1,190 cfs
 divided between 5 - 6' x 4' RCBs
 $1190 \text{ cfs} / 5 \text{ barrels} = 238 \text{ cfs} / \text{barrel}$

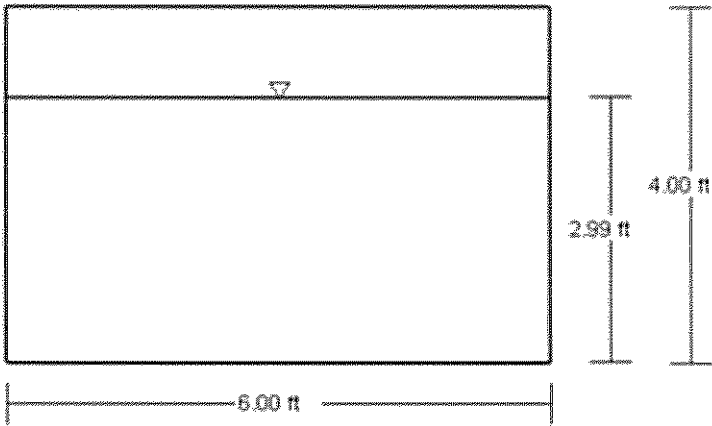
Worksheet for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00616	ft/ft

Notes

Cross Section for Alternative 1_Pabco Channel Realignment to Detention Basin 1

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	2.99	ft
Height:	4.00	ft
Bottom Width:	6.00	ft
Discharge:	238.00	ft³/s



V: 1
H: 1

Worksheet for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1190.00	ft ³ /s

Results

Normal Depth:	6.00	ft
Flow Area:	60.04	ft ²
Wetted Perimeter:	22.01	ft
Top Width:	10.00	ft
Critical Depth:	7.61	ft
Critical Slope:	0.00572	ft/ft
Velocity:	19.82	ft/s
Velocity Head:	6.10	ft
Specific Energy:	12.11	ft
Froude Number:	1.43	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.60	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.00	ft
Critical Depth:	7.61	ft

Worksheet for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00572	ft/ft

Notes

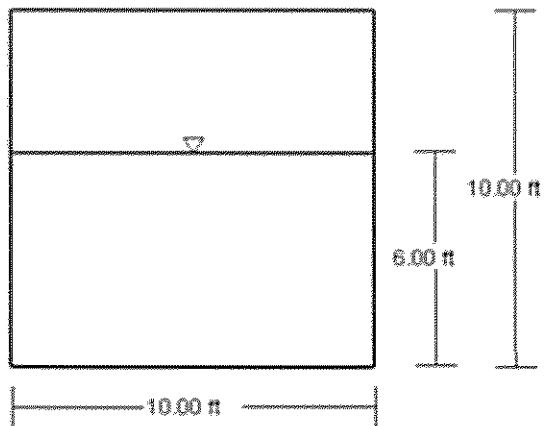
Cross Section for Alternative 2_Pabco Channel Realignment to Detention Basin 1

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.01050 ft/ft
Normal Depth: 6.00 ft
Height: 10.00 ft
Bottom Width: 10.00 ft
Discharge: 1190.00 ft³/s



V: 1
H: 1

Worksheet for 1-1 Burkholder Boulevard 100' N of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.02450	ft/ft
Diameter:	3.00	ft
Discharge:	54.00	ft ³ /s

Results

Normal Depth:	1.53	ft
Flow Area:	3.63	ft ²
Wetted Perimeter:	4.77	ft
Top Width:	3.00	ft
Critical Depth:	2.39	ft
Percent Full:	51.0	%
Critical Slope:	0.00694	ft/ft
Velocity:	14.90	ft/s
Velocity Head:	3.45	ft
Specific Energy:	4.98	ft
Froude Number:	2.39	
Maximum Discharge:	112.30	ft ³ /s
Discharge Full:	104.39	ft ³ /s
Slope Full:	0.00656	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.51	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 1-1 Burkholder Boulevard 100' N of Water Street

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.53	ft
Critical Depth:	2.39	ft
Channel Slope:	0.02450	ft/ft
Critical Slope:	0.00694	ft/ft

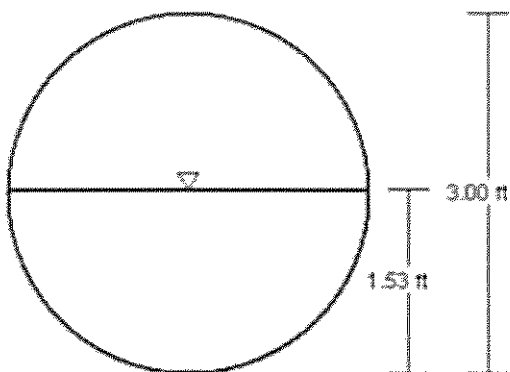
Cross Section for 1-1 Burkholder Boulevard 100' N of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.02450	ft/ft
Normal Depth:	1.53	ft
Diameter:	3.00	ft
Discharge:	54.00	ft ³ /s



V:1 
H:1

Worksheet for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	8.00	ft
Discharge:	855.00	ft ³ /s

Results

Normal Depth:	6.02	ft
Flow Area:	40.56	ft ²
Wetted Perimeter:	16.79	ft
Top Width:	6.91	ft
Critical Depth:	7.21	ft
Percent Full:	75.2	%
Critical Slope:	0.00773	ft/ft
Velocity:	21.08	ft/s
Velocity Head:	6.91	ft
Specific Energy:	12.92	ft
Froude Number:	1.53	
Maximum Discharge:	1005.30	ft ³ /s
Discharge Full:	934.55	ft ³ /s
Slope Full:	0.00879	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

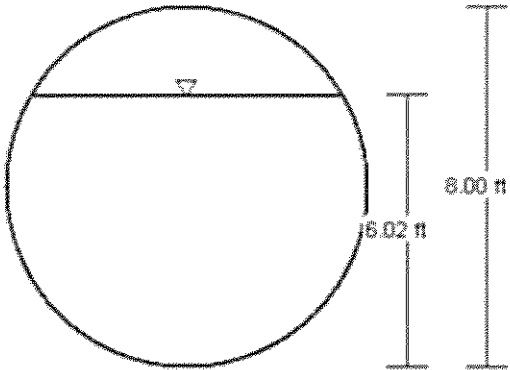
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.75	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.02	ft
Critical Depth:	7.21	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00773	ft/ft

Cross Section for 2-2 Alternative1_Burkholder Boulevard 1500' N of Warm Springs Road

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.02	ft
Diameter:	8.00	ft
Discharge:	855.00	ft³/s



v.1
H.1

Worksheet for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	855.00	ft ³ /s

Results

Normal Depth:	5.90	ft
Flow Area:	47.20	ft ²
Wetted Perimeter:	19.80	ft
Top Width:	8.00	ft
Critical Depth:	7.08	ft
Critical Slope:	0.00664	ft/ft
Velocity:	18.11	ft/s
Velocity Head:	5.10	ft
Specific Energy:	11.00	ft
Froude Number:	1.31	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.74	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	5.90	ft
Critical Depth:	7.08	ft

Worksheet for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00664	ft/ft

Notes

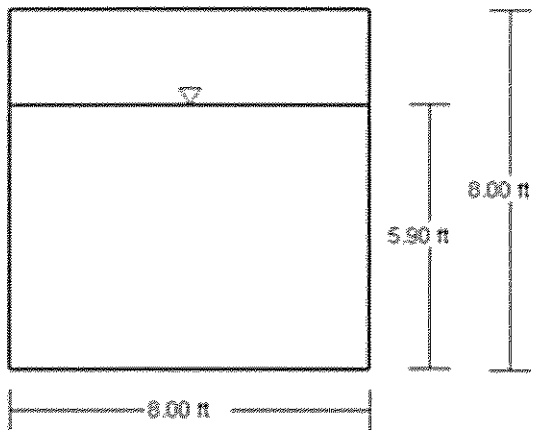
Cross Section for 2-2 Alternative2_ Burkholder Boulevard 1500' N of Warm Springs Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	5.90	ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	855.00	ft ³ /s



V.1 
H.1

Worksheet for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.01050 ft/ft
Diameter: 8.00 ft
Discharge: 905.00 ft³/s

Results

Normal Depth: 6.34 ft
Flow Area: 42.72 ft²
Wetted Perimeter: 17.57 ft
Top Width: 6.49 ft
Critical Depth: 7.33 ft
Percent Full: 79.3 %
Critical Slope: 0.00856 ft/ft
Velocity: 21.18 ft/s
Velocity Head: 6.97 ft
Specific Energy: 13.31 ft
Froude Number: 1.46
Maximum Discharge: 1005.30 ft³/s
Discharge Full: 934.55 ft³/s
Slope Full: 0.00985 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.79 %
Downstream Velocity: Infinity ft/s

Worksheet for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.34	ft
Critical Depth:	7.33	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00856	ft/ft

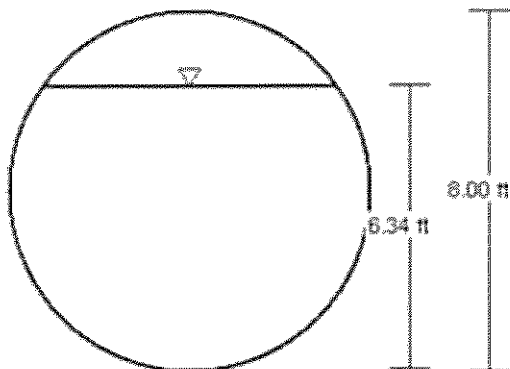
Cross Section for 3-3 Alternative1_ Burkholder Boulevard 3200' N of Warm Springs Road

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.34	ft
Diameter:	8.00	ft
Discharge:	905.00	ft ³ /s



V: 1
H: 1

Worksheet for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road**Project Description**

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	905.00	ft ³ /s

Results

Normal Depth:	6.17	ft
Flow Area:	49.37	ft ²
Wetted Perimeter:	20.34	ft
Top Width:	8.00	ft
Critical Depth:	7.35	ft
Critical Slope:	0.00678	ft/ft
Velocity:	18.33	ft/s
Velocity Head:	5.22	ft
Specific Energy:	11.39	ft
Froude Number:	1.30	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.77	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.17	ft
Critical Depth:	7.35	ft

Worksheet for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road

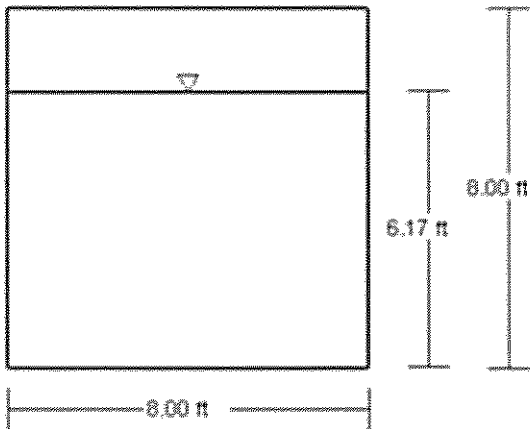
Channel Slope: 0.01050 ft/ft

Critical Slope: 0.00678 ft/ft

Notes

Cross Section for 3-3 Alternative2_ Burkholder Boulevard 3200' N of Warm Springs Road

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	6.17	ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	905.00	ft³/s



V: 1
H: 1

Worksheet for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road**Project Description**

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00900	ft/ft
Diameter:	10.00	ft
Discharge:	1581.00	ft ³ /s

Results

Normal Depth:	8.27	ft
Flow Area:	69.45	ft ²
Wetted Perimeter:	22.83	ft
Top Width:	7.57	ft
Critical Depth:	9.17	ft
Percent Full:	82.7	%
Critical Slope:	0.00795	ft/ft
Velocity:	22.76	ft/s
Velocity Head:	8.05	ft
Specific Energy:	16.32	ft
Froude Number:	1.32	
Maximum Discharge:	1687.52	ft ³ /s
Discharge Full:	1568.76	ft ³ /s
Slope Full:	0.00914	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.83	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road

Upstream Velocity:	Infinity	ft/s
Normal Depth:	8.27	ft
Critical Depth:	9.17	ft
Channel Slope:	0.00900	ft/ft
Critical Slope:	0.00795	ft/ft

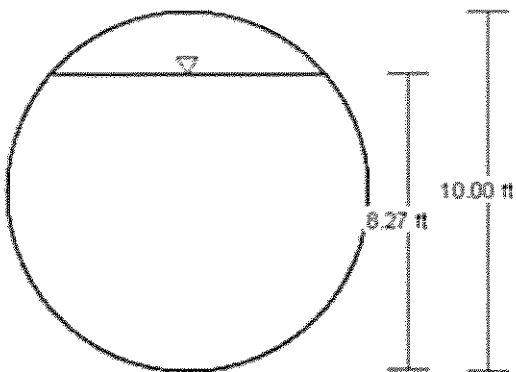
Cross Section for 4-4 Alternative1_ Burkholder Boulevard 150' N of Sunset Road

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.00900	ft/ft
Normal Depth:	8.27	ft
Diameter:	10.00	ft
Discharge:	1581.00	ft ³ /s



V: 1
H: 1

Worksheet for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01250	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1581.00	ft ³ /s

Results

Normal Depth:	6.99	ft
Flow Area:	69.94	ft ²
Wetted Perimeter:	23.99	ft
Top Width:	10.00	ft
Critical Depth:	9.19	ft
Critical Slope:	0.00629	ft/ft
Velocity:	22.60	ft/s
Velocity Head:	7.94	ft
Specific Energy:	14.93	ft
Froude Number:	1.51	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.70	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	6.99	ft
Critical Depth:	9.19	ft

Worksheet for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Channel Slope:	0.01250	ft/ft
Critical Slope:	0.00629	ft/ft

Notes

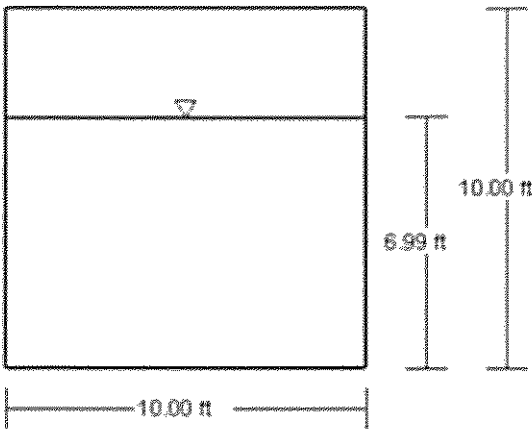
Cross Section for 4-4 Alternative2_ Burkholder Boulevard 150' N of Sunset Road

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.01250 ft/ft
Normal Depth: 6.99 ft
Height: 10.00 ft
Bottom Width: 10.00 ft
Discharge: 1581.00 ft³/s



V: 1
H: 1

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01000	ft/ft
Height:	12.00	ft
Bottom Width:	12.00	ft
Discharge:	2634.00	ft ³ /s

Results

Normal Depth:	9.34	ft
Flow Area:	112.09	ft ²
Wetted Perimeter:	30.68	ft
Top Width:	12.00	ft
Critical Depth:	11.44	ft
Critical Slope:	0.00604	ft/ft
Velocity:	23.50	ft/s
Velocity Head:	8.58	ft
Specific Energy:	17.92	ft
Froude Number:	1.36	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.78	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	9.34	ft
Critical Depth:	11.44	ft

Worksheet for 5-5 Burkholder Boulevard 100' N of Athens Avenue

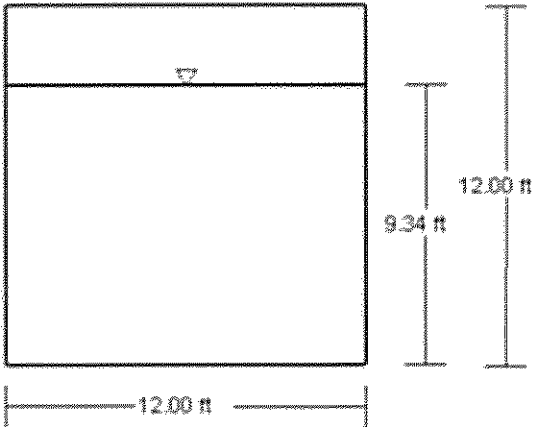
Channel Slope: 0.01000 ft/ft

Critical Slope: 0.00604 ft/ft

Notes

Cross Section for 5-5 Burkholder Boulevard 100' N of Athens Avenue

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01000	ft/ft
Normal Depth:	9.34	ft
Height:	12.00	ft
Bottom Width:	12.00	ft
Discharge:	2634.00	ft³/s



V.1 
H.1

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.00950 ft/ft
Diameter: 4.00 ft
Discharge: 106.00 ft³/s

Results

Normal Depth: 2.60 ft
Flow Area: 8.65 ft²
Wetted Perimeter: 7.51 ft
Top Width: 3.81 ft
Critical Depth: 3.12 ft
Percent Full: 65.0 %
Critical Slope: 0.00602 ft/ft
Velocity: 12.25 ft/s
Velocity Head: 2.33 ft
Specific Energy: 4.93 ft
Froude Number: 1.43
Maximum Discharge: 150.60 ft³/s
Discharge Full: 140.00 ft³/s
Slope Full: 0.00545 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

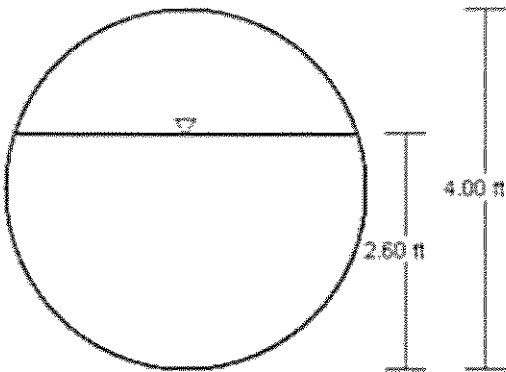
Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.65 %
Downstream Velocity: Infinity ft/s

Worksheet for 6-6 Warm Springs Road 250' W of Water Street

Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.60	ft
Critical Depth:	3.12	ft
Channel Slope:	0.00950	ft/ft
Critical Slope:	0.00602	ft/ft

Cross Section for 6-6 Warm Springs Road 250' W of Water Street

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.00950	ft/ft
Normal Depth:	2.60	ft
Diameter:	4.00	ft
Discharge:	106.00	ft³/s



V. 1 
H. 1

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.00670 ft/ft
Diameter: 4.50 ft
Discharge: 143.00 ft³/s

Results

Normal Depth: 3.30 ft
Flow Area: 12.51 ft²
Wetted Perimeter: 9.26 ft
Top Width: 3.98 ft
Critical Depth: 3.51 ft
Percent Full: 73.4 %
Critical Slope: 0.00581 ft/ft
Velocity: 11.43 ft/s
Velocity Head: 2.03 ft
Specific Energy: 5.33 ft
Froude Number: 1.14
Maximum Discharge: 173.14 ft³/s
Discharge Full: 160.96 ft³/s
Slope Full: 0.00529 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

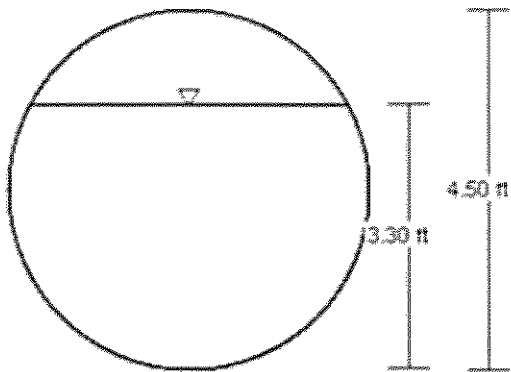
Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.73 %
Downstream Velocity: Infinity ft/s

Worksheet for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Upstream Velocity:	Infinity	ft/s
Normal Depth:	3.30	ft
Critical Depth:	3.51	ft
Channel Slope:	0.00670	ft/ft
Critical Slope:	0.00581	ft/ft

Cross Section for 7-7 Warm Springs Road 200' W of Eastside Real Estate Parkway

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.00670	ft/ft
Normal Depth:	3.30	ft
Diameter:	4.50	ft
Discharge:	143.00	ft³/s



V: 1
H: 1

Worksheet for 8-8 Sunset Road 200' NW of Water Street

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Diameter:	1.50	ft
Discharge:	9.00	ft ³ /s

Results

Normal Depth:	0.98	ft
Flow Area:	1.23	ft ²
Wetted Perimeter:	2.83	ft
Top Width:	1.43	ft
Critical Depth:	1.16	ft
Percent Full:	65.6	%
Critical Slope:	0.00823	ft/ft
Velocity:	7.32	ft/s
Velocity Head:	0.83	ft
Specific Energy:	1.82	ft
Froude Number:	1.39	
Maximum Discharge:	12.63	ft ³ /s
Discharge Full:	11.74	ft ³ /s
Slope Full:	0.00734	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.66	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 8-8 Sunset Road 200' NW of Water Street

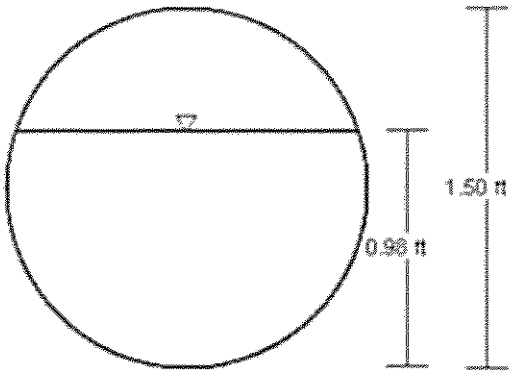
Upstream Velocity:	Infinity	ft/s
Normal Depth:	0.98	ft
Critical Depth:	1.16	ft
Channel Slope:	0.01250	ft/ft
Critical Slope:	0.00823	ft/ft

Notes

Q10 Discharge Governs

Cross Section for 8-8 Sunset Road 200' NW of Water Street

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Normal Depth:	0.98	ft
Diameter:	1.50	ft
Discharge:	9.00	ft³/s



V:1
H:1

Worksheet for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Diameter:	3.00	ft
Discharge:	54.00	ft ³ /s

Results

Normal Depth:	1.89	ft
Flow Area:	4.70	ft ²
Wetted Perimeter:	5.51	ft
Top Width:	2.90	ft
Critical Depth:	2.39	ft
Percent Full:	63.1	%
Critical Slope:	0.00694	ft/ft
Velocity:	11.50	ft/s
Velocity Head:	2.05	ft
Specific Energy:	3.95	ft
Froude Number:	1.59	
Maximum Discharge:	80.21	ft ³ /s
Discharge Full:	74.57	ft ³ /s
Slope Full:	0.00656	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.63	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

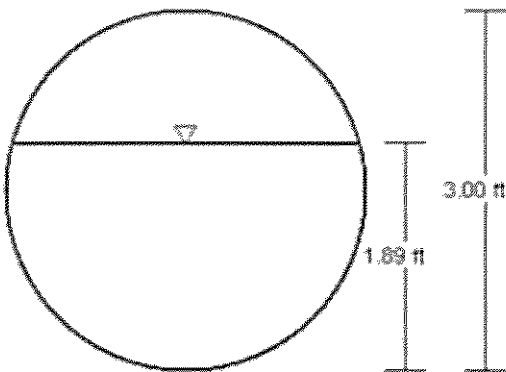
Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.89	ft
Critical Depth:	2.39	ft
Channel Slope:	0.01250	ft/ft
Critical Slope:	0.00694	ft/ft

Notes

Q10 Discharge Governs

Cross Section for 9-9 Sunset Road 200' NW of Eastside Real Estate Parkway

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01250	ft/ft
Normal Depth:	1.89	ft
Diameter:	3.00	ft
Discharge:	54.00	ft³/s



V:1
H:1

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Input Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Diameter:	4.00	ft
Discharge:	120.00	ft ³ /s
Results		
Normal Depth:	2.46	ft
Flow Area:	8.12	ft ²
Wetted Perimeter:	7.22	ft
Top Width:	3.89	ft
Critical Depth:	3.30	ft
Percent Full:	61.6	%
Critical Slope:	0.00690	ft/ft
Velocity:	14.78	ft/s
Velocity Head:	3.40	ft
Specific Energy:	5.86	ft
Froude Number:	1.80	
Maximum Discharge:	184.77	ft ³ /s
Discharge Full:	171.76	ft ³ /s
Slope Full:	0.00698	ft/ft
Flow Type:	SuperCritical	
GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	
GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.62	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 10-10_Sunset Road 2300' East of Burkholder Boulevard

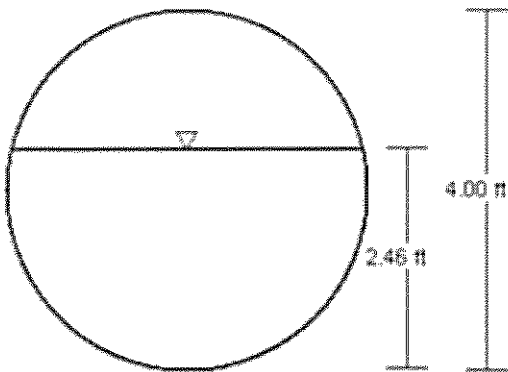
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.46	ft
Critical Depth:	3.30	ft
Channel Slope:	0.01430	ft/ft
Critical Slope:	0.00690	ft/ft

Notes

Q10 Discharge Governs

Cross Section for 10-10_Sunset Road 2300' East of Burkholder Boulevard

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01430	ft/ft
Normal Depth:	2.46	ft
Diameter:	4.00	ft
Discharge:	120.00	ft³/s



V: 1
H: 1

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	2.50	ft
Discharge:	32.00	ft ³ /s

Results

Normal Depth:	1.63	ft
Flow Area:	3.40	ft ²
Wetted Perimeter:	4.70	ft
Top Width:	2.38	ft
Critical Depth:	1.93	ft
Percent Full:	65.3	%
Critical Slope:	0.00688	ft/ft
Velocity:	9.42	ft/s
Velocity Head:	1.38	ft
Specific Energy:	3.01	ft
Froude Number:	1.39	
Maximum Discharge:	45.21	ft ³ /s
Discharge Full:	42.03	ft ³ /s
Slope Full:	0.00609	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.65	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 12-12_Water Street 150' SW of Mohawk Drive

Upstream Velocity:	Infinity	ft/s
Normal Depth:	1.63	ft
Critical Depth:	1.93	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00688	ft/ft

Notes

Q10 DISCHARGE GOVERNS

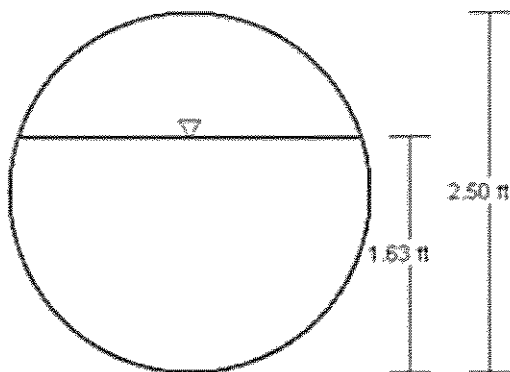
Cross Section for 12-12_Water Street 150' SW of Mohawk Drive

Project Description

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	1.63	ft
Diameter:	2.50	ft
Discharge:	32.00	ft ³ /s



V:1 
H:1

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive**Project Description**

Flow Element:	Circular Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Diameter:	4.00	ft
Discharge:	96.00	ft ³ /s

Results

Normal Depth:	2.35	ft
Flow Area:	7.69	ft ²
Wetted Perimeter:	7.00	ft
Top Width:	3.94	ft
Critical Depth:	2.97	ft
Percent Full:	58.9	%
Critical Slope:	0.00550	ft/ft
Velocity:	12.46	ft/s
Velocity Head:	2.42	ft
Specific Energy:	4.77	ft
Froude Number:	1.57	
Maximum Discharge:	158.33	ft ³ /s
Discharge Full:	147.18	ft ³ /s
Slope Full:	0.00447	ft/ft
Flow Type:	SuperCritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.59	%
Downstream Velocity:	Infinity	ft/s

Worksheet for 13-13_Athens Avenue 100' W Mohawk Drive

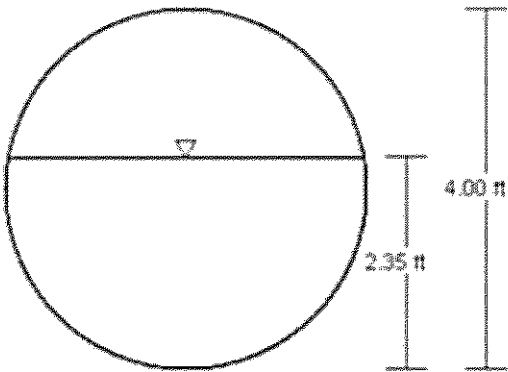
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.35	ft
Critical Depth:	2.97	ft
Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00550	ft/ft

Notes

Q10 DISCHARGE GOVERNS

Cross Section for 13-13_Athens Avenue 100' W Mohawk Drive

Project Description		
Flow Element:	Circular Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.013	
Channel Slope:	0.01050	ft/ft
Normal Depth:	2.35	ft
Diameter:	4.00	ft
Discharge:	96.00	ft³/s



V: 1
H: 1

Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.00526 ft/ft
Diameter: 6.50 ft
Discharge: 272.00 ft³/s

Results

Normal Depth: 4.07 ft
Flow Area: 21.84 ft²
Wetted Perimeter: 11.86 ft
Top Width: 6.29 ft
Critical Depth: 4.43 ft
Percent Full: 62.6 %
Critical Slope: 0.00413 ft/ft
Velocity: 12.45 ft/s
Velocity Head: 2.41 ft
Specific Energy: 6.48 ft
Froude Number: 1.18
Maximum Discharge: 409.00 ft³/s
Discharge Full: 380.22 ft³/s
Slope Full: 0.00269 ft/ft
Flow Type: SuperCritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.63 %
Downstream Velocity: Infinity ft/s

**Worksheet for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate
Parkway**

Upstream Velocity:	Infinity	ft/s
Normal Depth:	4.07	ft
Critical Depth:	4.43	ft
Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00413	ft/ft

Notes

Q100 DISCHARGE GOVERNS

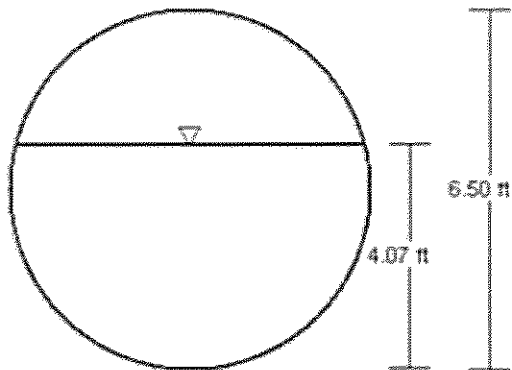
Cross Section for 14-14 Alternative1_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.013
Channel Slope: 0.00526 ft/ft
Normal Depth: 4.07 ft
Diameter: 6.50 ft
Discharge: 272.00 ft³/s



V: 1 
H: 1

Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.00526 ft/ft
Height: 6.00 ft
Bottom Width: 6.00 ft
Discharge: 272.00 ft³/s

Results

Normal Depth: 4.31 ft
Flow Area: 25.88 ft²
Wetted Perimeter: 14.63 ft
Top Width: 6.00 ft
Critical Depth: 4.00 ft
Critical Slope: 0.00639 ft/ft
Velocity: 10.51 ft/s
Velocity Head: 1.72 ft
Specific Energy: 6.03 ft
Froude Number: 0.89
Flow Type: Subcritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 ft
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 0.72 %
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 4.31 ft
Critical Depth: 4.00 ft

**Worksheet for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate
Parkway**

Channel Slope:	0.00526	ft/ft
Critical Slope:	0.00639	ft/ft

Notes

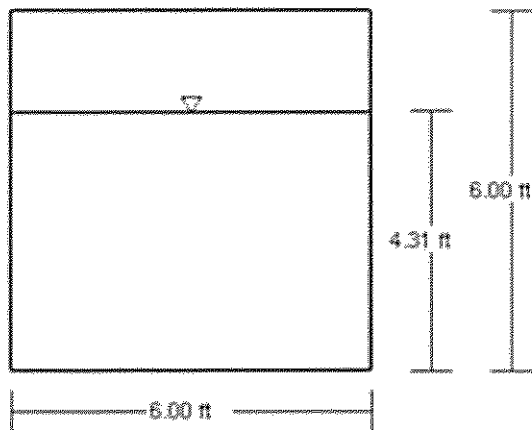
Cross Section for 14-14 Alternative2_Athens Avenue 200' W of Eastside Real Estate Parkway

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient:	0.015	
Channel Slope:	0.00526	ft/ft
Normal Depth:	4.31	ft
Height:	6.00	ft
Bottom Width:	6.00	ft
Discharge:	272.00	ft ³ /s



V.1
H.1

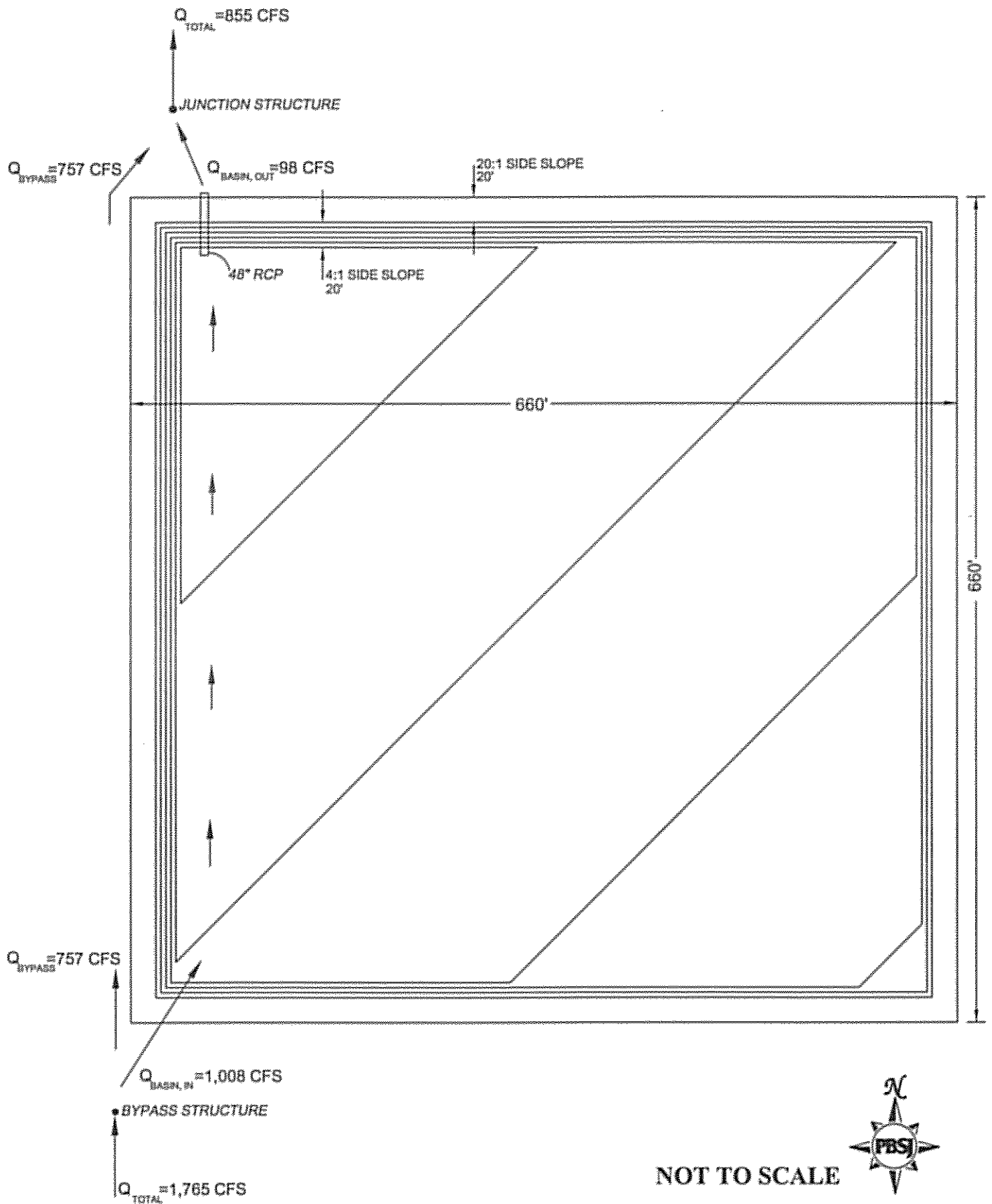
Appendix C-3: Detention Basin Analysis

Peaking Basin One

Basin Depth	6 feet
Basin Acreage	10 acres
Outlet	1-48 inch RCP
100-year Inflow	1,765 cfs
10-year Bypass	757 cfs
100-year Storage	34 acre-feet
100-year Stage	5.11 feet
100-year Outlet	98 cfs
Outlet Combined with Diversion	855 cfs
Drain Time	26 hours, 56 minutes

DETENTION BASIN 1 - VOLUME CALCULATIONS					
SE		SA		SV	SQ
				CUMULATIVE	
STORAGE	CHANGE IN	SURFACE	INCREMENTAL	STORAGE	
ELEVATION	ELEVATION	AREA	VOLUME	VOLUME	OUTFLOW
(FT)	(FT)	(AC)	(AC-FT)	(AC-FT)	(CFS)
0.0		0.930	0.000	0.000	0.000
	2.0				
2.0		6.940	7.870	7.870	28.000
	1.0				
3.0		8.350	7.645	15.515	50.000
	1.0				
4.0		8.600	8.475	23.990	79.000
	1.0				
5.0		8.820	8.710	32.700	108.000
	1.0				
6.0		10.000	9.410	42.110	129.000

DETENTION BASIN 1 100-YEAR MAJOR STORM EVENT



Worksheet for Bypass System at Detention Basin 1

Project Description

Flow Element:	Box Pipe
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	855.00	ft ³ /s

Results

Normal Depth:	5.90	ft
Flow Area:	47.20	ft ²
Wetted Perimeter:	19.80	ft
Top Width:	8.00	ft
Critical Depth:	7.08	ft
Critical Slope:	0.00664	ft/ft
Velocity:	18.11	ft/s
Velocity Head:	5.10	ft
Specific Energy:	11.00	ft
Froude Number:	1.31	
Flow Type:	Supercritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.74	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	5.90	ft
Critical Depth:	7.08	ft

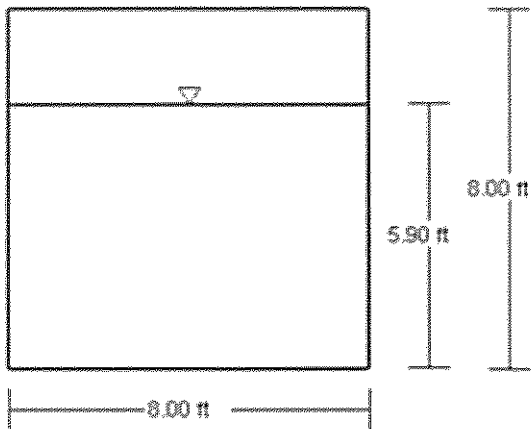
Worksheet for Bypass System at Detention Basin 1

Channel Slope:	0.01050	ft/ft
Critical Slope:	0.00664	ft/ft

Notes

Cross Section for Bypass System at Detention Basin 1

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01050	ft/ft
Normal Depth:	5.90	ft
Height:	8.00	ft
Bottom Width:	8.00	ft
Discharge:	855.00	ft³/s



V:1
H:1

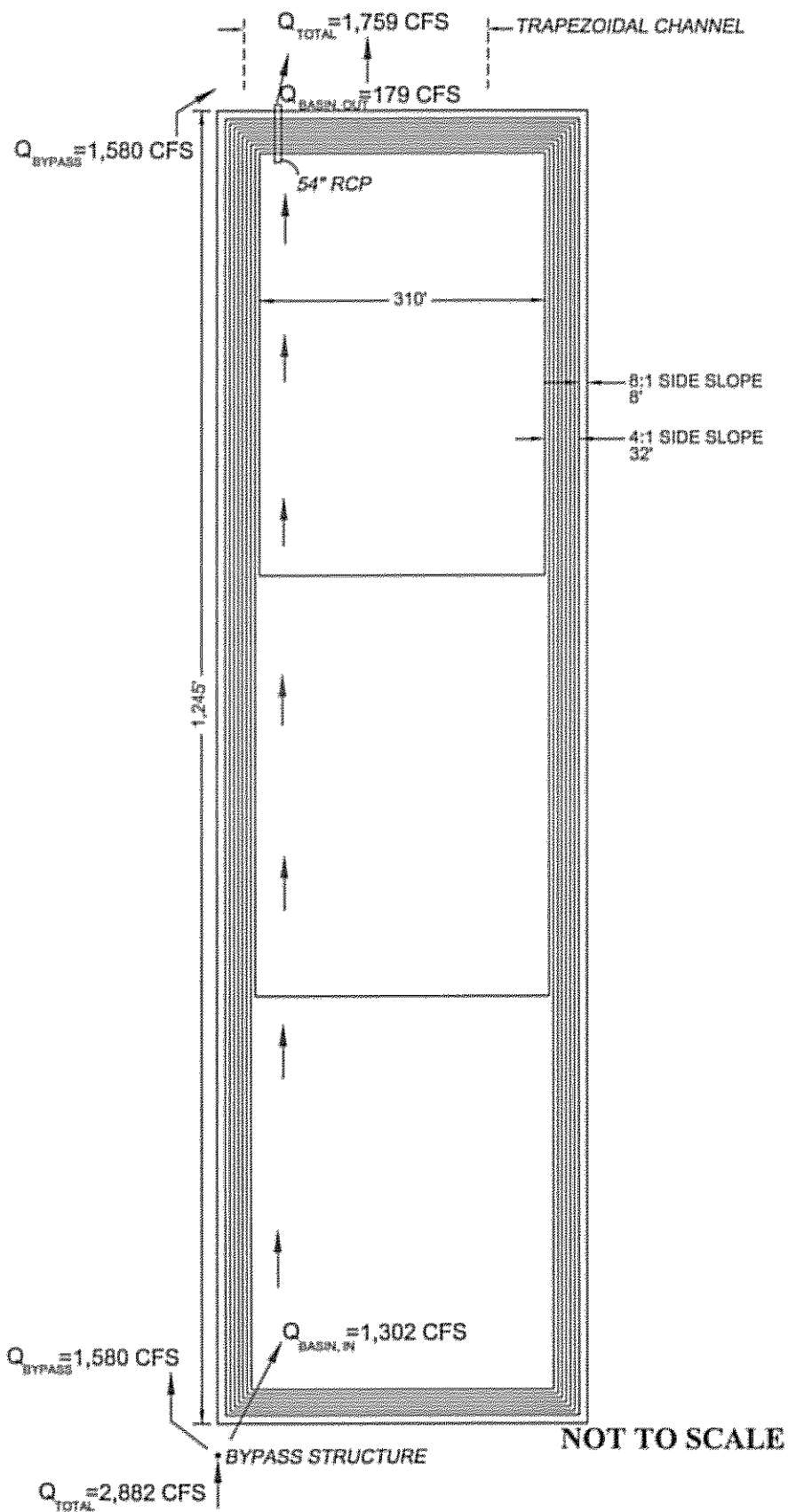
Peaking Basin Two

Basin Depth	8 feet
Basin Acreage	10 acres
Outlet	1-54" inch RCP
Outlet Flowline	1 foot submerged from the bottom of the peaking basin
100-year Inflow	2,882 cfs
10-year Bypass	1,580 cfs
100-year Storage	43 acre-feet
100-year Stage	5.94 feet
100-year Outlet	179 cfs
Outlet Combined with Diversion	1,759 cfs
Drain Time	18 hours, 56 minutes

DETENTION BASIN 2 - VOLUME CALCULATIONS

SE STORAGE ELEVATION (FT)	CHANGE IN ELEVATION (FT)	SA STORAGE AREA (AC)	INCREMENTAL VOLUME (AC-FT)	SV STORAGE VOLUME (AC-FT)	SQ OUTFLOW (CFS)
0.0		2.480	0.000	0.000	0.000
	2.0				
2.0		7.750	10.230	10.230	56.000
	1.0				
3.0		8.020	7.885	18.115	88.000
	1.0				
4.0		8.300	8.160	26.275	121.000
	1.0				
5.0		8.570	8.435	34.710	170.000
	1.0				
6.0		8.850	8.710	43.420	180.000
	1.0				
7.0		9.130	8.990	52.410	200.000
	1.0				
8.0		10.000	9.565	61.975	220.000

DETENTION BASIN 2 100-YEAR MAJOR STORM EVENT



Worksheet for Bypass System at Detention Basin 2

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Input Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01430	ft/ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1759.00	ft³/s
Results		
Normal Depth:	7.21	ft
Flow Area:	72.14	ft²
Wetted Perimeter:	24.43	ft
Top Width:	10.00	ft
Critical Depth:	9.87	ft
Critical Slope:	0.00654	ft/ft
Velocity:	24.38	ft/s
Velocity Head:	9.24	ft
Specific Energy:	16.45	ft
Froude Number:	1.60	
Flow Type:	Supercritical	
GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	
GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.72	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	7.21	ft
Critical Depth:	9.87	ft

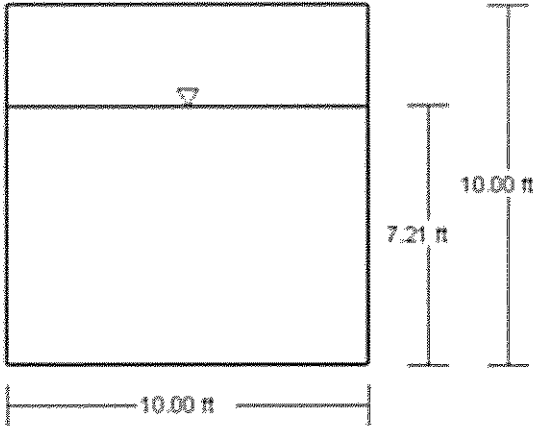
Worksheet for Bypass System at Detention Basin 2

Channel Slope:	0.01430	ft/ft
Critical Slope:	0.00654	ft/ft

Notes

Cross Section for Bypass System at Detention Basin 2

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.01430	ft/ft
Normal Depth:	7.21	ft
Height:	10.00	ft
Bottom Width:	10.00	ft
Discharge:	1759.00	ft³/s



V:1
H:1

Appendix C-4: Flowmaster-Outlet Channel at Detention Basin 2

Worksheet for Outlet Channel Downstream of Detention Basin 2 (CP23)

Project Description

Flow Element:	Trapezoidal Channel
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	170.00	ft
Discharge:	1759.00	ft ³ /s

Results

Normal Depth:	2.08	ft
Flow Area:	371.24	ft ²
Wetted Perimeter:	187.17	ft
Top Width:	186.65	ft
Critical Depth:	1.48	ft
Critical Slope:	0.01590	ft/ft
Velocity:	4.74	ft/s
Velocity Head:	0.35	ft
Specific Energy:	2.43	ft
Froude Number:	0.59	
Flow Type:	Subcritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Headloss:	0.00	ft
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.08	ft
Critical Depth:	1.48	ft
Channel Slope:	0.00500	ft/ft

Worksheet for Outlet Channel Downstream of Detention Basin 2 (CP23)

Critical Slope:

0.01590

ft/ft

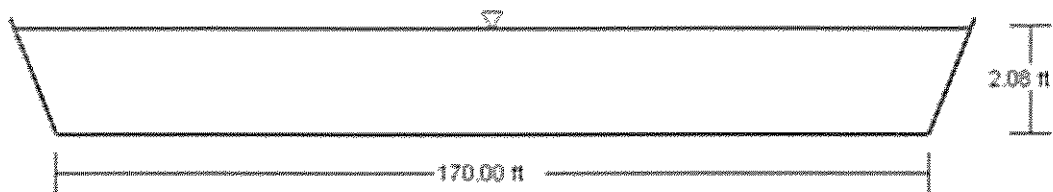
Cross Section for Outlet Channel Downstream of Detention Basin 2 (CP23)

Project Description

Flow Element:	Trapezoidal Channel
Friction Method:	Manning Formula
Solve For:	Normal Depth

Section Data

Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Normal Depth:	2.08	ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	170.00	ft
Discharge:	1759.00	ft ³ /s



V: 10
H: 1

Worksheet for Outlet Channel Downstream of Detention Basin 2 (CP24)

Project Description

Flow Element:	Trapezoidal Channel
Friction Method:	Manning Formula
Solve For:	Normal Depth

Input Data

Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	170.00	ft
Discharge:	1776.00	ft ³ /s

Results

Normal Depth:	2.09	ft
Flow Area:	373.38	ft ²
Wetted Perimeter:	187.26	ft
Top Width:	186.75	ft
Critical Depth:	1.48	ft
Critical Slope:	0.01586	ft/ft
Velocity:	4.76	ft/s
Velocity Head:	0.35	ft
Specific Energy:	2.44	ft
Froude Number:	0.59	
Flow Type:	Subcritical	

GVF Input Data

Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data

Upstream Depth:	0.00	ft
Profile Description:		
Headloss:	0.00	ft
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	2.09	ft
Critical Depth:	1.48	ft
Channel Slope:	0.00500	ft/ft

Worksheet for Outlet Channel Downstream of Detention Basin 2 (CP24)

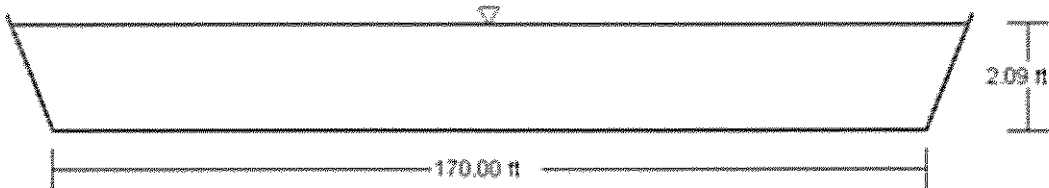
Critical Slope:

0.01586

ft/ft

Cross Section for Outlet Channel Downstream of Detention Basin 2 (CP24)

Project Description		
Flow Element:	Trapezoidal Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.035	
Channel Slope:	0.00500	ft/ft
Normal Depth:	2.09	ft
Left Side Slope:	4.00	ft/ft (H:V)
Right Side Slope:	4.00	ft/ft (H:V)
Bottom Width:	170.00	ft
Discharge:	1776.00	ft³/s



V: 10
H: 1

Appendix C-5: Flowmaster-Continuation of WRF Channel 1

Worksheet for Continuation of WRF Channel 1 - Alternative 1

Project Description

Flow Element: Trapezoidal Channel
Friction Method: Manning Formula
Solve For: Normal Depth

Input Data

Roughness Coefficient: 0.015
Channel Slope: 0.00500 ft/ft
Left Side Slope: 2.00 ft/ft (H:V)
Right Side Slope: 2.00 ft/ft (H:V)
Bottom Width: 12.00 ft
Discharge: 335.00 ft³/s

Results

Normal Depth: 2.14 ft
Flow Area: 34.77 ft²
Wetted Perimeter: 21.55 ft
Top Width: 20.55 ft
Critical Depth: 2.50 ft
Critical Slope: 0.00282 ft/ft
Velocity: 9.64 ft/s
Velocity Head: 1.44 ft
Specific Energy: 3.58 ft
Froude Number: 1.31
Flow Type: Supercritical

GVF Input Data

Downstream Depth: 0.00 ft
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

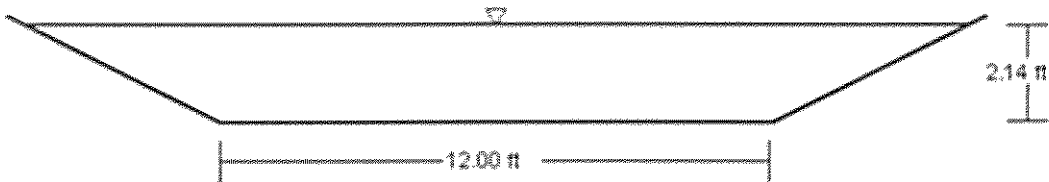
Upstream Depth: 0.00 ft
Profile Description:
Headloss: 0.00 ft
Downstream Velocity: Infinity ft/s
Upstream Velocity: Infinity ft/s
Normal Depth: 2.14 ft
Critical Depth: 2.50 ft
Channel Slope: 0.00500 ft/ft

Worksheet for Continuation of WRF Channel 1 - Alternative 1

Critical Slope: 0.00282 ft/ft

Cross Section for Continuation of WRF Channel 1 - Alternative 1

Project Description		
Flow Element:	Trapezoidal Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.00500	ft/ft
Normal Depth:	2.14	ft
Left Side Slope:	2.00	ft/ft (H:V)
Right Side Slope:	2.00	ft/ft (H:V)
Bottom Width:	12.00	ft
Discharge:	335.00	ft³/s



V: 1
H: 1

Worksheet for Continuation of WRF Channel 1 - Alternative 2

Project Description		
Flow Element:	Box Pipe	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Input Data		
Roughness Coefficient:	0.015	
Channel Slope:	0.00500	ft/ft
Height:	6.00	ft
Bottom Width:	9.00	ft
Discharge:	335.00	ft³/s
Results		
Normal Depth:	3.41	ft
Flow Area:	30.73	ft²
Wetted Perimeter:	15.83	ft
Top Width:	9.00	ft
Critical Depth:	3.51	ft
Critical Slope:	0.00465	ft/ft
Velocity:	10.90	ft/s
Velocity Head:	1.85	ft
Specific Energy:	5.26	ft
Froude Number:	1.04	
Flow Type:	Supercritical	
GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	
GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Profile Headloss:	0.00	ft
Average End Depth Over Rise:	0.00	%
Normal Depth Over Rise:	0.57	%
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	3.41	ft
Critical Depth:	3.51	ft

Worksheet for Continuation of WRF Channel 1 - Alternative 2

Channel Slope:	0.00500	ft/ft
Critical Slope:	0.00465	ft/ft

Notes

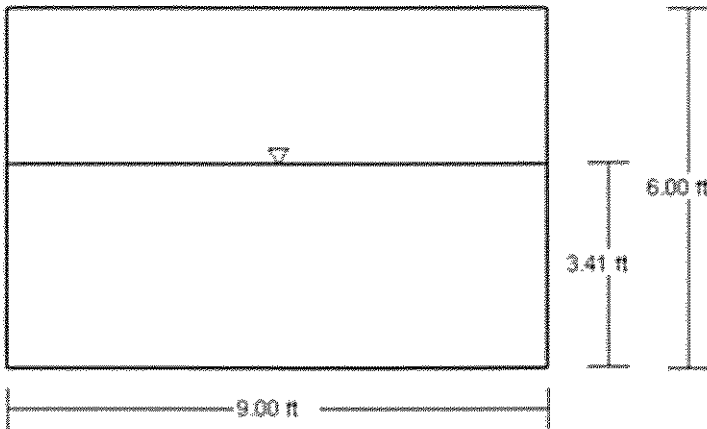
Cross Section for Continuation of WRF Channel 1 - Alternative 2

Project Description

Flow Element: Box Pipe
Friction Method: Manning Formula
Solve For: Normal Depth

Section Data

Roughness Coefficient: 0.015
Channel Slope: 0.00500 ft/ft
Normal Depth: 3.41 ft
Height: 6.00 ft
Bottom Width: 9.00 ft
Discharge: 335.00 ft³/s



V:1
H:1

Appendix C-6: Flowmaster-Continuation of WRF Channel 2

Worksheet for Continuation of WRF Channel 2

Project Description		
Flow Element:	Trapezoidal Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	

Input Data		
Roughness Coefficient:	0.040	
Channel Slope:	0.01000	ft/ft
Left Side Slope:	2.00	ft/ft (H:V)
Right Side Slope:	2.00	ft/ft (H:V)
Bottom Width:	25.00	ft
Discharge:	680.00	ft ³ /s

Results		
Normal Depth:	3.15	ft
Flow Area:	98.72	ft ²
Wetted Perimeter:	39.10	ft
Top Width:	37.61	ft
Critical Depth:	2.64	ft
Critical Slope:	0.01863	ft/ft
Velocity:	6.89	ft/s
Velocity Head:	0.74	ft
Specific Energy:	3.89	ft
Froude Number:	0.75	
Flow Type:	Subcritical	

GVF Input Data		
Downstream Depth:	0.00	ft
Length:	0.00	ft
Number Of Steps:	0	

GVF Output Data		
Upstream Depth:	0.00	ft
Profile Description:		
Headloss:	0.00	ft
Downstream Velocity:	Infinity	ft/s
Upstream Velocity:	Infinity	ft/s
Normal Depth:	3.15	ft
Critical Depth:	2.64	ft
Channel Slope:	0.01000	ft/ft

Worksheet for Continuation of WRF Channel 2

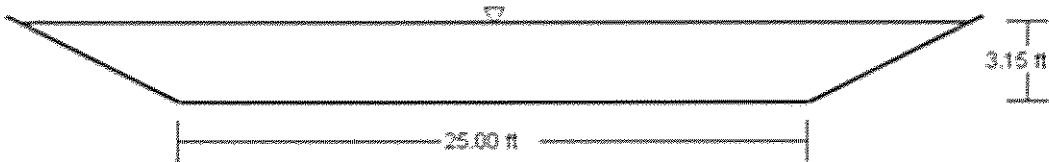
Critical Slope:

0.01863

ft/ft

Cross Section for Continuation of WRF Channel 2

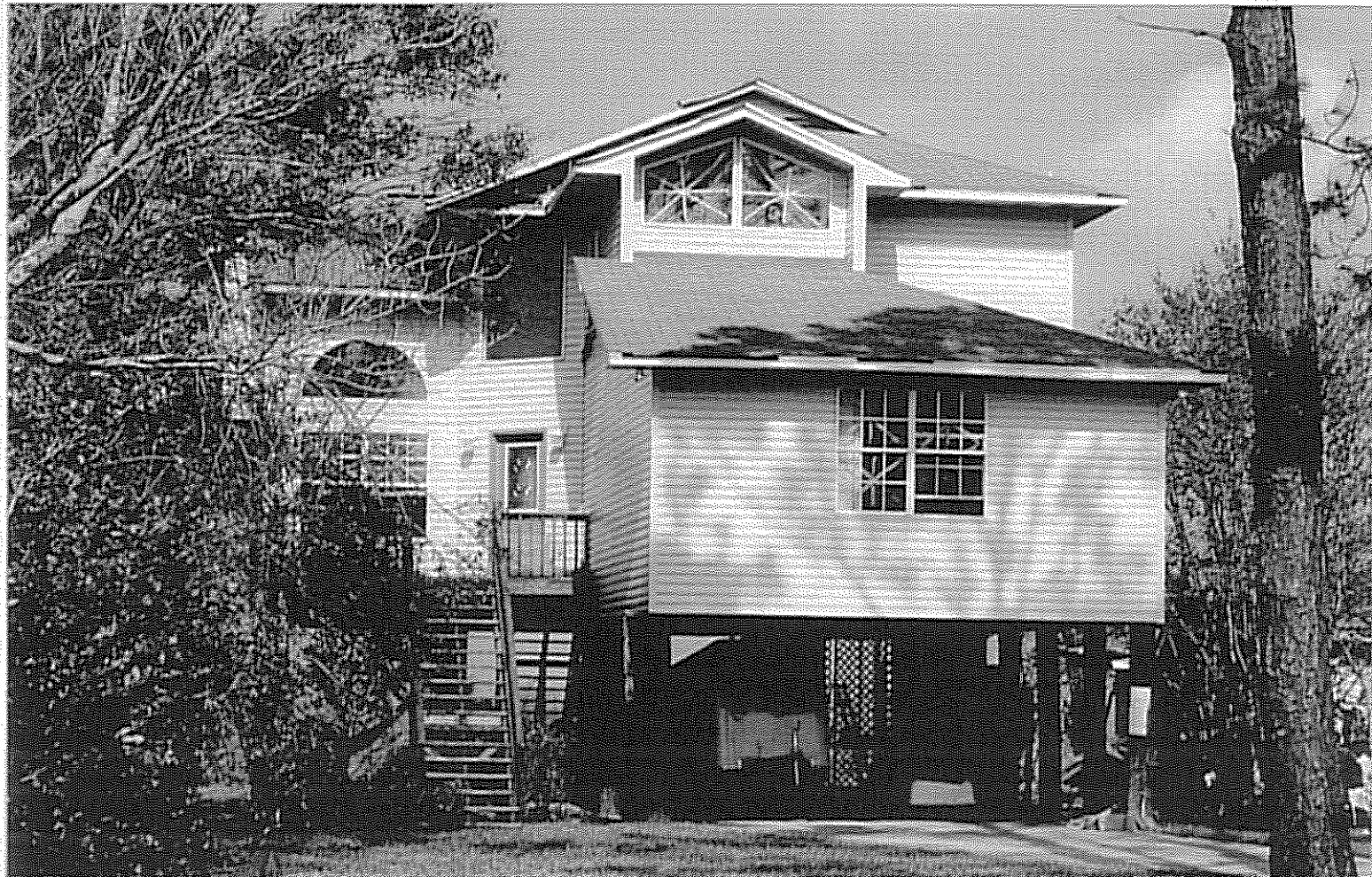
Project Description		
Flow Element:	Trapezoidal Channel	
Friction Method:	Manning Formula	
Solve For:	Normal Depth	
Section Data		
Roughness Coefficient:	0.040	
Channel Slope:	0.01000	ft/ft
Normal Depth:	3.15	ft
Left Side Slope:	2.00	ft/ft (H:V)
Right Side Slope:	2.00	ft/ft (H:V)
Bottom Width:	25.00	ft
Discharge:	680.00	ft³/s



V: 1
H: 1

Appendix D: Reference Material

Excerpts from *FEMA 480*



National Flood Insurance Program (NFIP)

Floodplain Management Requirements

A Study Guide and Desk Reference for Local Officials

FEMA 480

February 2005



FEMA

BASE FLOOD ELEVATIONS FROM MAPS

BFEs are shown on the FIRMs as whole numbers. For AE Zones, or coastal and lake floodplains, use the BFE printed in parentheses below the flood zone designation. *No interpolation is necessary.* The same holds true for AH Zones with whole number base flood elevations.

The base flood elevation for properties in the vicinity of the Rocky River at the confluence of Cobb Brook is 10 feet (NGVD or above mean sea level).

For other numbered AE Zones, read the BFE from the nearest wavy "base flood elevation line." Refer to the map legend or key if you are unsure of the line markings.

For the Site B example, the base flood elevations on the FIRM, are marked "10," above and below the site. If the site fell between the base flood elevations of 10 and 11, such as the area north of Site B between Glebe Way and Martling Way along the Rocky River, we could interpolate to find a correct base flood elevation based on the distance of the site from the base flood elevation lines. We could also locate the site on the profile based on how far upstream or downstream it is from cross-section A or B. Lastly, we could chose the higher base flood elevation, (e.g., 11) to best ensure protection from flooding.

*

Zone A areas indicate approximate floodplain boundaries. No detailed study has been performed to determine base flood elevations in these areas.

There are no base flood elevations in AO Zones with base flood depths. Instead, the equivalent flood protection level is the number of feet shown in parentheses after the "Zone AO." This is not an elevation above sea level, it is the depth of flooding measured above ground level. The zones are also described in the Flood County FIS report Section 5.0, page 18, *Insurance Applications*.

West of the intersection between Barclay Lane and Argyle Way on FIRM panel 38 is a small Zone AO (Depth 2 feet). The base flood elevation for a site in this zone would be two feet above the grade of any adjacent building.

LOCATING THE FLOODWAY BOUNDARY

If the site is at a surveyed cross section, floodway width data from the Floodway Data Table may be used as a more accurate measure than field and map measurements. Remember that the width listed in the table is the distance from the floodway boundary on one side of the stream to the floodway boundary on the other side of the stream.

If the floodway width measured on the map at that site is at a cross section, the map should be used because it is the floodway officially adopted by the community. If there is

Excerpts from the Effective FIS

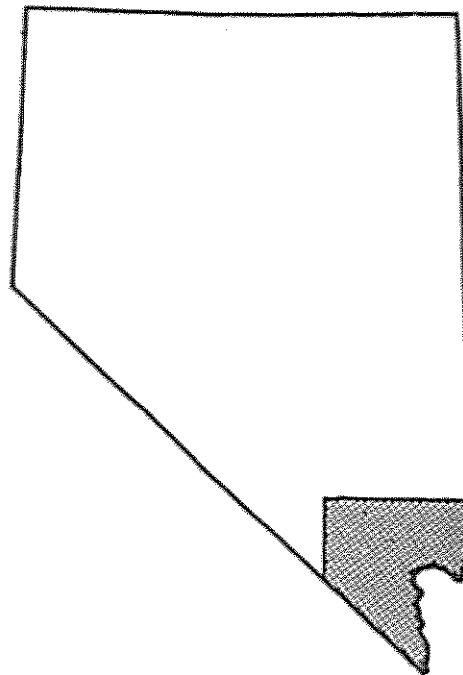
FLOOD INSURANCE STUDY



CLARK COUNTY, NEVADA AND INCORPORATED AREAS

32003CV000

COMMUNITY NAME	COMMUNITY NUMBER
BOULDER CITY, CITY OF	320004
HENDERSON, CITY OF	320005
LAS VEGAS, CITY OF	325278
MESQUITE, CITY OF	320035
NORTH LAS VEGAS, CITY OF	320007
CLARK COUNTY, UNINCORPORATED AREAS	320003



REVISED: SEPTEMBER 27, 2002



Federal Emergency Management Agency

In the Laughlin area, flows in the Colorado River are regulated by Hoover Dam and Davis distribution was adopted Dam, north of the area. These structures offer flood protection from events larger than the 100-year flood on the Colorado River.

Additionally, the USBR has constructed a levee for flood protection along the Colorado River through the area. The levee, designed to contain the 100-year discharge, is armored with rock riprap to protect it from erosion.

Current county ordinances require that any new construction be elevated 18 inches above the 100-year water-surface elevation, as determined by the developer.

3.0 ENGINEERING METHODS

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood-hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

Peak discharges for the desired return periods were computed for flooding sources in Clark County primarily through the use of the TR-20 Project Formulation-Hydrology computer program (Reference 15) or by using log-Pearson Type III procedures. The TR-20 program was developed by the SCS to implement the SCS unit hydrograph procedures.

Aspects for the hydrologic analysis which are common to all of the study areas are discussed in the following paragraphs, after which specific procedures applied to each individual area are described.

An investigation of flood-producing storms typical of Southern Nevada was conducted. It was determined, based on a review of published historical storm events, that thunderstorms in the study area are generally of approximately 3-hour duration, and cover at most 150 to 200 square miles. Qualitative descriptions of historical events were used to develop a

synthetic cumulative time distribution for a 3-hour thunderstorm in Southern Nevada. This rather than any of the SCS standard dimensionless storm patterns. This approach was coordinated with local meteorologists.

Point precipitation values for the 10-year, 50-year, and 100-year 3-hour storms were obtained from the National Oceanic and Atmospheric Administration (NOAA) Precipitation-Frequency Atlas for the State of Nevada (Reference 16). Depth-area reduction factors from a recent publication of NOAA called HYDRO-40 (Reference 17) were used to estimate average rainfall over each of the study watersheds. Although HYDRO-40 was developed using actual storm data from Arizona and western New Mexico, common storm-producing mechanisms would appear to justify application of the results to southern Nevada as well. Peak 500-year floodflows for the study streams analyzed with TR-20 were estimated by extrapolating graphically from the computed 10-, 50-, and 100-year discharges.

All peak flows adopted for use in this study are considered to be clear water flows. That is, no sediment or debris bulking factors have been applied to the results of the TR-20 or log-Pearson Type III analyses. Bulking has not been used in this study based on discussions with Clark County Public Works engineers, who indicated that channels and storage facilities in the study reaches do not seem to exhibit large widespread amounts of sedimentation or erosion.

This primary flooding source in the Moapa valley is the Muddy River. This is a major watercourse with a USGS stream gage located in "The Narrows" between the Upper and Lower Moapa Valley. The gage has a 33-year period of systematic record, as well as historical peak estimates, which was considered adequate for use in a statistical analysis. The log-Pearson Type III method recommended by Water Resources Council Bulletin 17B (Reference 18), was used to determine 10-, 50-, 100-, and 500-year peak flows at the gage site. This analysis made use of the full systematic record up to the 1983 water year, and incorporated the 15 historical peaks as per Bulletin 17B.

Subsequent to the initial statistical analysis and preliminary hydraulic calculations, a large flood occurred on the Muddy River in August 1984, which generated the highest peak flow in the systematic record. As a result, frequency statistics were recomputed, including the new flow. However, it was determined that the previously estimated discharges fell within the 50-percent confidence interval of the more recent estimates and thus, in accordance with FIS Guidelines, the original discharges were adopted.

Peak discharges at the Muddy River gage were translated downstream by two compensating methods: (1) flows were increased by the ratio of the increased drainage area; and (2) flows were routed through the Moapa Valley floodplain using the normal depth routing method, assuming a hydrograph shape similar to that developed by the COE in the Flood Plain Information Report for the Muddy River (Reference 19). In addition, peak flows for all recurrence intervals were reduced by 1,000 cfs downstream of Wells Siding to account for water supply diversions to Bowman Reservoir. This is the maximum capacity of the diversion facility.

Peak flows for the Muddy River upstream of Meadow Valley Wash were determined by a discharge-drainage area relationship developed using log-Pearson analyses of records from two gages: the Muddy River near Glendale and Meadow Wash near Caliente.

Peak floodflows for Overton Wash were originally scheduled to be determined using a regional regression approach. However, the best available regional methods had questionable reliability, so a recent TR-20 analysis by the SCS was used for Overton Wash hydrology.

Peak 100-year floodflows at the apexes of the four major alluvial fans in the Laughlin area (Hiko Springs Wash, Bridge Canyon Wash, Dripping Springs Wash, and Southwest Unnamed Wash) were computed using a TR-20 model developed by the Clark County Department of Comprehensive Planning. The flood magnitude-frequency relationships for these washes were assumed to be normal distributions of the base 10 logarithms of the peak discharges. The distributions were assumed to have a standard deviation of 0.8.

This area had originally been scheduled for analysis with regional regression methods. However, during the course of the study, the Department of Comprehensive Planning conducted a floodplain study for the Laughlin Area which included a TR-20 model for each of the fan tributary areas. After review and some minor revisions, this model was adopted for the FIS hydrology as the best available information. There is no historical rainfall-runoff data available from the Laughlin flooding sources with which to calibrate the hydrologic model. Critical storms were assumed to occur independently over each of the four fan watersheds, which have areas ranging from 4 to 18 square miles.

Peak discharge-frequency relationships for the Colorado River were based on operating procedures for the Hoover Dam (Reference 20) and USBR information (Reference 14). These discharges were adopted for the Bullhead City study area. The 100-year peak discharge is equivalent to the "levee design flood" used by the USBR. The 10-, 50-, and 500-year peak discharge relationships were based on operating procedures for Hoover Dam and additional information provided by the USBR (References 14 and 20).

* Estimates of flood discharges for the alluvial fan analysis in the City of Henderson were based on published USGS data (Reference 21).

The Las Vegas Wash watershed in North Las Vegas was divided into 78 subbasins to model the rainfall-runoff process. Subbasin areas varied from 1.1 to 432.7 square miles, while times of concentration ranged from 0.37 to 6.52 hours. Soil type and land-use impacts on runoff were modeled using the SCS, Curve Number; subbasin curve numbers varied from 77 to 93.

The TR-20 model for Las Vegas wash was roughly calibrated using historical rainfall and runoff data gathered during the July 3, 1975, flood, which is the largest recorded flood event in the study area.

Peak discharges corresponding to the selected frequencies were computed at key locations in the watershed, including Las Vegas Wash at the Union Pacific Railroad and the Unnamed Tributary to Los Vegas Wash at the Union Pacific Railroad. Flows at these two points were routed downstream to their confluence above Las Vegas Boulevard. Below the confluence, peak discharges were determined by adding peak flows in Las Vegas Wash to concurrent flows in the Unnamed Tributary to Las Vegas Wash.

Channel overflows occurring at bridges, culverts, and other locations or reduced channel capacity were computed based on hydraulic rating curves developed using the HEC-2 Water-Surface Profiles computer program (Reference 22).

* Peak discharge-drainage area relationships for all of the flooding sources studied by detailed methods are shown in Table 3.

Table 3. Summary of Discharges

	<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
			<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
*	Alluvial Fan In Eastern Henderson	5.54	370	2,200	3,600	-- ¹
*	Alluvial Fan In Western Henderson	76	1,490	13,300	23,370	-- ¹
	Abbott Wash At Interstate 15	7.1	1,050	1,940	2,340	3,690
	Blue Diamond Fan At Apex	69.5	2,010	8,800	14,820	42,550
	Bridge Canyon Wash At Apex	7.3	650	2,680	4,430	12,240
17	Colorado River At Laughlin	169,300	-- ¹	-- ¹	40,000 ²	-- ¹
	Dripping Springs Wash At Apex	4.5	460	1,910	3,150	8,710
	Duck Creek At Robindale Road	136.5	-- ¹	-- ¹	11,500	-- ¹
	At Confluence with Duck Creek Tributary	119.5	-- ¹	-- ¹	11,000	-- ¹
	Above Interstate 15	71.5	-- ¹	-- ¹	9,700	-- ¹
	Duck Creek Tributary At Confluence with Duck Creek	46.2	-- ¹	-- ¹	6,300	-- ¹
	Above Interstate 15	44.2	-- ¹	-- ¹	5,700	-- ¹

¹Discharge not available²Established by the Colorado River Floodway Protection Act, Public Law 99-450

Table 3. Summary of Discharges (Cont'd)

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
Georgia Avenue Wash					
At Buchanan Boulevard	1.98	263	781	1,285	4,300
At Mendota Drive	0.95	177	459	727	2,000
At Cross Section E	0.45	68	189	310	1,000
Hemenway Wash					
At Cross Section C	2.86	290	635	815	1,380
At Cross Section E	1.06	80	195	260	420
Hiko Springs Wash					
At Apex	17.9	1,220	5,070	8,370	23,130
Las Vegas Creek					
At Las Vegas Boulevard	13	640	1,280	1,570	2,420
At Confluence with Las Vegas Wash	14	660	1,300	1,600	2,450
Las Vegas Wash					
At Carey Avenue ¹	836	3,050	8,750	11,800	21,400
At Charleston Boulevard	858	3,180	9,000	12,100	21,800
At Losce Road	568	3,960	7,300	8,820	17,000
Below Union Pacific Railroad	²	2,100	2,330	2,440	2,700
Below Interstate 15	²	2,100	2,330	2,370	3,150
Below Confluence with Middle Overflow Area	²	2,720	3,040	3,120	4,500
Below East Cheyenne Avenue	²	2,300	2,560	2,610	3,500
Below Confluence with Unnamed Tributary	²	3,940	7,580	9,220	17,200
Below Las Vegas Boulevard	²	3,940	6,400	6,660	9,300
Below Cutoff Channel	²	3,940	6,530	6,860	10,700
Below Carey Avenue	²	3,940	6,530	6,860	9,700
Below Lake Mead Boulevard	²	3,940	5,500	5,710	7,250
Middle Branch Blue Diamond Wash					
At Union Pacific Railroad	71.6	20	1,230	2,800	12,500
At Interstate 15	72.6	20	1,230	2,800	12,500

¹Located outside Corporate Limits²Flow affected by upstream overflows, diversions, or obstructions; drainage area does not apply

Table 3. Summary of Discharges (Cont'd)

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
Muddy River					
At Cooper Avenue	4,035	5,250	14,750	21,300	45,900
Downstream of Wells Siding	3,950	5,270	14,800	21,400	45,500
Upstream of Confluence with Meadow Valley Wash	1,360	3,620	10,900	16,000	34,400
North Branch Blue Diamond Wash					
At Union Pacific Railroad	71.6	30	1,280	2,900	12,700
At Interstate 15	72.6	30	1,280	2,900	12,700
Overton Wash					
At Upstream Limit of Detailed Study	21.7	2,170	4,510	5,680	8,200
Pulsifer Wash					
At Interstate 15	4.9	930	1,730	2,070	3,230
Southwest Unnamed Wash					
At Apex	3.9	260	1,070	1,770	4,890
Tropicana Wash - Central Branch					
At Flamingo Wash	20.1	-- ¹	-- ¹	5,300	-- ¹
Upstream of Airport Wash	12.1	-- ¹	-- ¹	3,320	-- ¹
Downstream of Koval Road	11.0	-- ¹	-- ¹	3,320	-- ¹
Interstate 15 to 600 feet downstream of Union Pacific Railroad	8.9	-- ¹	-- ¹	800	-- ¹
Just downstream of Union Pacific Railroad	8.1	-- ¹	-- ¹	710	-- ¹

¹Discharge Not Available

Table 3. Summary of Discharges (Cont'd)

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
Tropicana Wash – Central Branch (Cont'd)					
Downstream of Tropicana Wash – North Branch	8.1	-- ¹	-- ¹	4,100	-- ¹
Upstream of Union Pacific Railroad Breakout upstream of Union Pacific Railroad	8.1	-- ¹	-- ¹	4,100	-- ¹
Downstream of Tropicana Wash – South Branch	8.1	-- ¹	-- ¹	3,295	-- ¹
Above confluence with Tropicana Wash – South Branch	5.5	-- ¹	-- ¹	3,300	-- ¹
At confluence with Tributary No. 1	1.7	-- ¹	-- ¹	1,000	-- ¹
At Jones Boulevard	1.1	-- ¹	-- ¹	640	-- ¹
	0.9	-- ¹	-- ¹	530	-- ¹
Tropicana Wash – North Branch					
At confluence with Tropicana Wash – Central Branch	2.6	-- ¹	-- ¹	1,450	-- ¹
At confluence with Tributary No. 1	1.8	-- ¹	-- ¹	1,250	-- ¹
At Jones Boulevard	1.6	-- ¹	-- ¹	1,200	-- ¹
At confluence with Tributary No. 2	1.1	-- ¹	-- ¹	850	-- ¹
Tropicana Wash – South Branch					
At confluence with Tropicana Wash – Central Branch	2.9	-- ¹	-- ¹	1,800	-- ¹
Above Jones Boulevard	2.4	-- ¹	-- ¹	1,500	-- ¹

¹Discharge Not Available

Table 3. Summary of Discharges (Cont'd)

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
Union Pacific Railroad Overflow					
At Las Vegas Wash	-- ¹	1,860	4,970	6,380	11,100
At Middle Tributary to Las Vegas Wash	-- ¹	1,240	4,260	5,300	8,600
Unnamed Fan (Just West of Blue Diamond Fan)					
At Apex	1.3	140	660	1,140	3,460
Unnamed Tributary to Las Vegas Wash					
At Lone Mountain Road	126	2,120	4,060	4,890	7,850
At Craig Road	-- ²	1,560	3,500	4,330	6,550
Below Intestate 15	177	3,000	5,720	6,870	9,100
Below Civic Center Drive	-- ²	3,000	5,720	5,970	7,100
Wash B					
At Cross Section A	0.41	140	255	315	460
Wash C					
At Cross Section A	1.04	120	265	335	490
At Cross Section C	0.81	90	195	250	390
At Cross Section D	0.60	70	150	195	300
Wash D					
At Cross Section D	1.38	205	400	490	740
West Branch Muddy River					
Downstream of Cooper Avenue	-- ³	100	2,450	9,000	20,900
Virgin River					
At Bunkerville Bridge	-- ¹	-- ¹	-- ¹	34,400	-- ¹

¹Discharge Not Available²Flow affected by upstream overflows, diversions, or obstructions; drainage area does not apply³Flow due to overflows from Muddy River

All elevations are referenced to the North American Vertical Datum of 1988 (NAVD). Elevation reference marks (ERMs) and the descriptions of the marks used in this study are shown on the maps. ERMs shown on the FIRM represent those used during the preparation of this and previous FISs. The elevations associated with each ERM were obtained and/or developed during FIS production to establish vertical control for determination of flood elevations and floodplain boundaries shown on the FIRM. Users should be aware that these ERM elevations may have changed since the publication of this FIS. To obtain up-to-date elevation information on National Geodetic Survey (NGS) ERMs shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov. Map users should seek verification of non-NGS ERM monument elevations when using these elevations for construction or floodplain management purposes.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS provides 100-year floodplain data, which may include a combination of the following: 10-, 50-, 100-, and 500-year flood elevations; delineations of the 100-year and 500-year floodplains; and 100-year floodway. This information is presented on the FIRM and in many components of the FIS, including Flood Profiles, Floodway Data tables and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS as well as additional information that may be available at the local community map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent annual chance (500-year) flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 100- and 500-year floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries for the unincorporated areas of Clark County and the City of Mesquite were interpolated using rectified photo-topographic maps at a scale of 1:4,800, with a contour interval of 4 feet (Reference 34).

For the Colorado River for the original study, floodplain boundaries were interpolated using topographic maps at a scale of 1:4,800, with a contour interval of 4 feet (Reference 23).

Between cross sections in the City of Boulder City, the boundaries were interpolated using topographic maps at a scale of 1:2,400, with a contour interval of 2 feet (Reference 26).

Between cross sections in the City of Las Vegas, the boundaries were interpolated using topographic maps at a scale of 1:2,400, with a contour interval of 5 feet. Shallow flooding areas were delineated using topographic maps (Reference 27).

Between cross sections in the City of North Las Vegas, the boundaries were interpolated using topographic maps at a scale of 1:2,400, with a contour interval of 2 feet (Reference 28).

*

Alluvial fan boundaries in the City of Henderson were delineated using topographic maps at a scale of 1:24,000 with a contour interval of 20 feet (Reference 36).

Approximate flood boundaries in the City of Boulder City were determined with the use of the following information and data:

1. Shallow flood depth as determined
2. Flood Hazard Boundary Map for Boulder City
3. USGS Flood-Prone Area Map (Reference 37)
4. Historical flood data

*

Approximate flood boundaries in the City of Henderson were delineated using topographic maps at a scale of 1:24,000, with a contour interval of 20 feet and at a scale of 1:2,400, with a contour interval of 5 feet (References 36 and 27). Approximate flood boundaries in some portions of the study area were taken from the Flood Hazard Boundary Map (Reference 38).

Approximate 100-year flood boundaries in the City of Las Vegas were delineated using the previously cited topographic maps (Reference 27) and topographic maps at a scale of 1:24,000, with a contour interval of 20 feet (Reference 39).

For the streams studied by approximate methods in the City of North Las Vegas, the boundary of the 100-year flood was developed from normal depth calculations and topographic maps at a scale of 1:2,400, with a contour interval of 2 feet (Reference 28), and topographic maps at a scale of 1:24,000, with a contour interval of 20 feet (Reference 30).

Shallow flooding areas were delineated using normal depth calculations and topographic maps at a scale of 1:2,400, with a contour interval of 2 feet (Reference 28).

Approximate 100-year floodplain boundaries in some portions of the study area were taken directly from the Flood Hazard Boundary Map for the City of Mesquite (Reference 40).

Approximate floodplain boundaries on the Muddy River were delineated on USGS 7.5-Minute Series Topographic Maps (Reference 32).

The alluvial fan boundaries were also delineated using rectified photo-topographic maps at a scale of 1:4,800, with a contour interval of 4 feet (Reference 34).

The 100- and 500-year floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 100-year floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, and AO); and the 500-year floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 100- and 500-year floodplain boundaries are close together, only the 100-year floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

*

For the streams studied by approximate methods, only the 100-year floodplain boundary is shown on the FIRM.

For floodplain management applications, the map shows by tints, screens, and symbols, the 100- and 500-year floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

- * The current FIRM represents flooding information for the entire geographic areas of Clark County. Previously separate FIRMs were prepared for each identified flood prone incorporated community and the unincorporated areas of the country. Historical data relating to the maps prepared for each community are presented in Table 6.

7.0 OTHER STUDIES

A Flood Plain Information report for Lower Las Vegas Wash was prepared by the COE in 1967 (Reference 41). The limits of the report extended to the southern corporate limits of the City of North Las Vegas. Peak discharge values were calculated for Las Vegas Wash that did not correspond to values used by the COE for their Flood Plain Information report. However, these differences were resolved during earlier coordination meetings.

Boulder City completed a floodplain study (Reference 42) in 1975. Another study completed in Boulder City was the Hemenway Wash Inventory and Evaluation (Reference 43). Flood Boundaries were not drawn for that study; only peak discharges were computed.

- * Detailed FISs have previously been performed for the incorporated Cities of Las Vegas, North Las Vegas, Henderson, Boulder City, and Mesquite (References 44, 45, 46, 47, 48, respectively).

- * Detailed analyses of flooding along Colorado River matches exactly with the detailed analyses of flooding shown in the FIS for the City of Bullhead City, Arizona (Reference 49). FISs for Nye County, Nevada; Lincoln County, Nevada; Mohave County, Arizona; San Bernardino County, California; and Inyo County, California have been performed (References 50, 51, 52, 53 and 54, respectively). The information in those studies generally agrees with the information given in this study for Clark County.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting the Federal Emergency Management Agency, Region IX, Federal Insurance and Mitigation Administration, 1111 Broadway, Suite 1200, Oakland, California 94607-4052.

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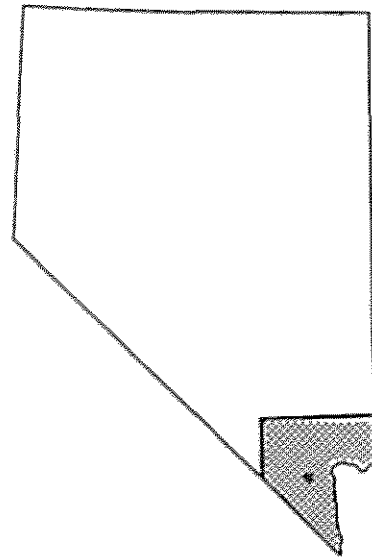
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FLOOD INSURANCE STUDY



**CITY OF
HENDERSON, NEVADA
CLARK COUNTY**



DECEMBER 15, 1981



Federal Emergency Management Agency

COMMUNITY NUMBER-320005

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FLOOD INSURANCE STUDY

1.0 INTRODUCTION

1.1 Purpose of Study

The purpose of this Flood Insurance Study is to investigate the existence and severity of flood hazards in the City of Henderson, Clark County, Nevada, and to aid in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Initial use of this information will be to convert Henderson to the regular program of flood insurance by the Federal Emergency Management Agency. Further use of the information will be made by local and regional planners in their efforts to promote sound land use and flood plain development.

1.2 Coordination

This Flood Insurance Study evolved from the Clark County Flood Insurance Study (Reference 1), which started in January 1975. In April 1976, it was divided into five principal areas, including the City of Henderson.

The initial coordination meeting for the study was held in June 1975. It was attended by representatives of the local communities, the county, and the study contractor.

The limits of detailed and approximate study in Henderson were determined by the Federal Emergency Management Agency, with community and study contractor consultation, at a meeting held in Las Vegas on January 8, 1976, and in subsequent meetings and communications.

The U.S. Army Corps of Engineers, the U.S. Geological Survey, and the U.S. Bureau of Reclamation were asked to review the hydrologic analyses prepared for the area.

A final community coordination meeting was held on October 7, 1980, and was attended by representatives of the Federal Emergency Management Agency, the study contractor, and the city. Pertinent problems raised at the meeting have been resolved.

1.3 Authority and Acknowledgments

The source of authority for this Flood Insurance Study is the National Flood Insurance Act of 1968, as amended.

The hydrologic and hydraulic analyses for this study were performed by the U.S. Soil Conservation Service, for the Federal Emergency Management Agency, under Inter-Agency Agreement No. IAA-H-8-77, Project Order No. 1, Amendment 9. This work, which was completed in November 1978, covered all significant flooding sources affecting the City of Henderson.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated areas of the City of Henderson, Clark County, Nevada. The area of study is shown on the Vicinity Map (Figure 1).

The areas of Clark County located within the corporate limits of Henderson were not included in this study.

*

Within the City of Henderson only alluvial fan flooding was studied by detailed methods.

The areas and initial methods of study were agreed to jointly by the Federal Emergency Management Agency, the city, and study contractor representatives, in June 1975 at the initial community coordination study meeting. During the course of the study, the Federal Emergency Management Agency developed guidelines for alluvial fan flooding. Dames & Moore reevaluated the flooding situation in Henderson according to these guidelines. All hydrologic and hydraulic computations were based upon present conditions.

Those areas studied by detailed methods were chosen with consideration given to all proposed construction and forecasted development through 1983.

2.2 Community Description

The City of Henderson is located in central Clark County, in southeastern Nevada. It is near the center of a broad desert valley surrounded by mountains ranging from 2,000 to 10,000 feet above the valley. Las Vegas is approximately 10 miles north of Henderson.

The total land area within the city is approximately 64 square miles. According to U.S. Census Bureau figures, the population increased from 12,525 in 1960 to 16,395 in 1970 (Reference 2).

Approximately 25 percent of the city has been developed, with the remainder of land being vacant. Within the flood plains studied, development primarily consists of single-family residences, a few private businesses, and some heavy industry.

The City of Henderson is situated in the Las Vegas Valley drainage basin at the northern end of the McCullough Mountain range.

The Las Vegas basin is made up of three types of land forms: mountains, alluvial fans and valley lowlands. The rugged topography of the mountainous areas is characterized by sharp peaks and ridges, steep slopes and deep, steepside canyons.

Many large alluvial fans exist around the perimeter of the valley. All fans are dissected by gullies. These gullies exhibit a dendritic drainage pattern throughout the intermediate and lower parts of the watershed (Reference 3).

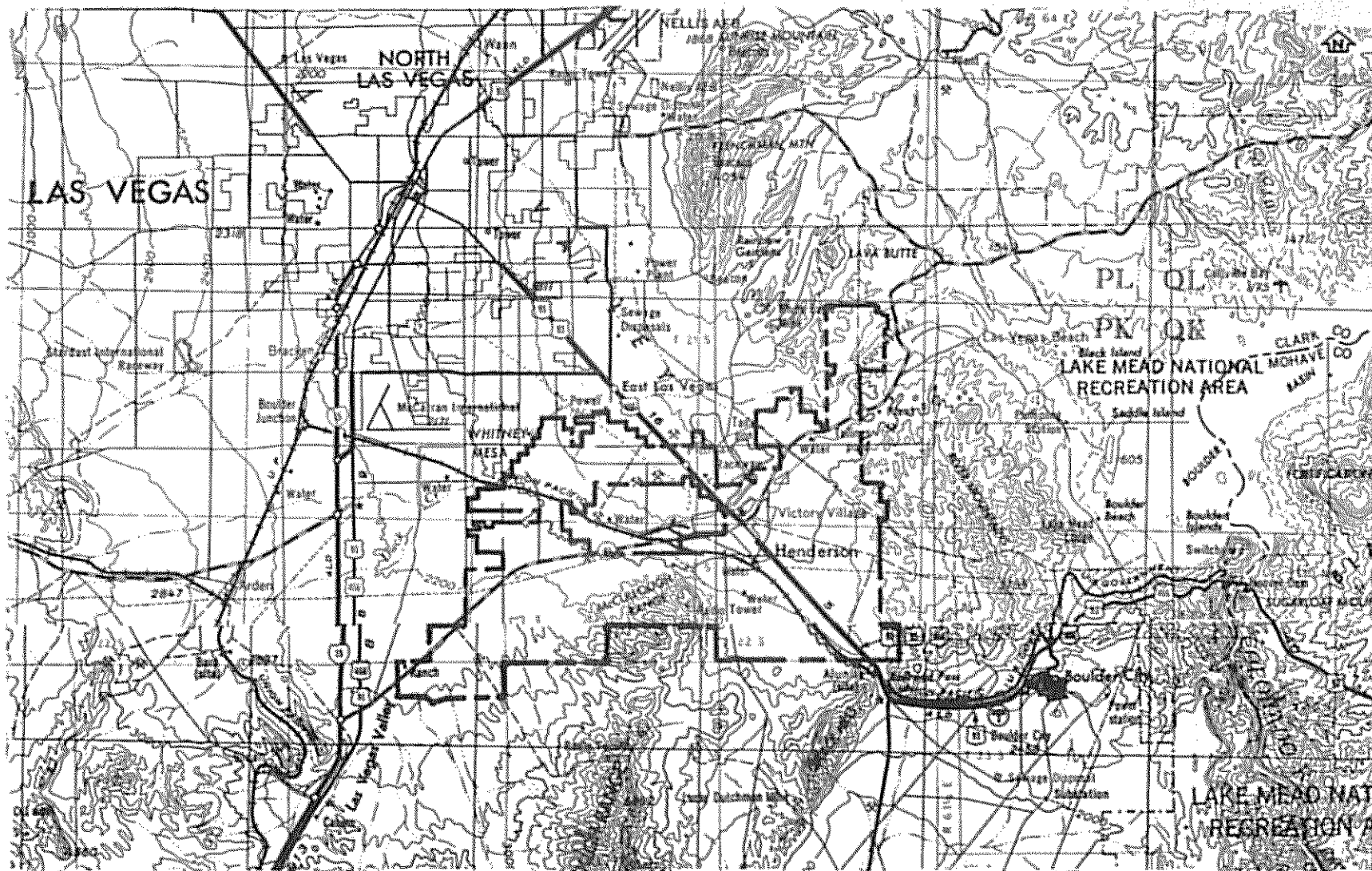


FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF HENDERSON, NV
(CLARK CO.)

APPROXIMATE SCALE



VICINITY MAP

The climate for the area is classified as arid, which is characterized by warm summers and winters. The average annual precipitation is 3.76 inches.

The four seasons are well defined. Summers are typically hot and dry with maximum temperatures often over 100°F. The nights are generally cooler, due to the nearby mountains and their descending cool air. During almost every summer, there is a period of approximately 2 weeks when warm, moist, tropical air moves into the valley with resultant frequent thunderstorms and associated flash flooding. Winters are usually mild and pleasant, with daytime temperatures averaging near 60°F. The fall and spring seasons are ideal, with few days inappropriate for outdoor activities (Reference 4).

Typical soils types include the Delnorte-Nickel family, the Bodlard-Bracken-McCarran association, and the Nickel-Arizo-Delnorte family. The Bodlard-Bracken-McCarran association consists of a gravelly fine sandy loam and fine sandy loam, with slopes of 0 to 8 percent. The two other soil types are gravelly loams to very gravelly sandy loams formed on alluvial fans from mixed rock sources, with slopes of 2 to 15 percent.

Native vegetation consists primarily of shrubs and grasses. Several trees, shrubs, and grass species can be adapted to the area if irrigation practices are used.

2.3 Principal Flood Problems

The past history of flooding sources within the city indicates that flooding may occur during any season of the year. The majority of major floods have occurred during February, March, April, and May and are usually the result of thunderstorms.

There have been a number of major floods in Henderson. In September 1952, a storm blackened Henderson; power poles were downed and rains were torrential. In June 1954, homes on the north side of Henderson were ravaged by high waters. Several homeowners were forced to knock out walls to allow mud and water to pass through. In July 1974, severe flooding forced Henderson Police to close Sunset Road due to flooding (Reference 5). Conclusions drawn from limited data are that these three floods were smaller than the 10-year recurrence interval flood. The July 1974 flood was the most recent as well as the most severe flood of record.

A flood occurred in Henderson on July 24, 1955, resulting from an intense storm centered over Henderson. The greatest amount of rainfall observed was 1.75 inches approximately 8 miles southeast of the city along U.S. Highway 95. Rainfall measurements in other parts of Henderson ranged from 0.6 to 1.5 inches. Floodwater swept down on Henderson, swamping hundreds of homes and stopping traffic.

Residents tried to slow down the rising tide by throwing up wooden barricades. Water as high as four feet deep flooded homes, leaving deposits of silt throughout the tract (Reference 5).

The recurrence interval for this flood is estimated to be 25 years.

The flow characteristics of several stream sources have been altered by joining several upstream channels and routing them through a large common highway culvert. This will tend to flatten the peak flows by lengthening the distance the stream must flow and increasing channel storage. However, this may tend to increase peaks immediately adjacent to large culverts.

2.4 Flood Protection Measures

There are no flood detention structures within the study area. The City of Henderson has altered low flow characteristics through numerous channel relocations, enlargements, and linings. These modifications have no appreciable effect on the large flows associated with infrequent storms. One notable exception to this is the Henderson Lateral which is located adjacent to Pueblo Boulevard. This lateral collects additional runoff from adjacent areas and directs it towards the Las Vegas Wash. This lateral protects downstream areas from more frequent floods, but is expected to be overtopped by the 100-year event. In addition to a slight flooding hazard presented by overtopping in the event of failure (breaching) of the downstream embankment on the lateral, there could be significant damage to areas immediately downstream adjacent to the breach.

The City of Henderson does not have a flood plain ordinance at this time. A grading ordinance that controls changes in drainage patterns is in force.

3.0 ENGINEERING METHODS

For the flooding sources studied in detail in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude which are expected to be equalled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance premium rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equalled or exceeded during any year. Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example,

the risk of having a flood which equals or exceeds the 100-year flood (1 percent chance of annual occurrence) in any 50-year period is approximately 40 percent (4 in 10), and, for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported here reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail affecting the community.

Estimates of flood discharges for the alluvial fan analysis were based on published U.S. Geological Survey data (Reference 6).

Peak discharge-drainage area relationships for the alluvial fans in Henderson are shown in Table 1.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the flooding sources studied in the community were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each of these flooding sources.

Statistical analyses were used to compute flood depths and velocities for those areas which are subject to alluvial fan flooding. Channel systems on alluvial fans are unstable, and flow may occur on separate parts of an alluvial fan during sequent flood events. The depths of flooding on alluvial fans presented in this report were computed according to the guidelines issued by the Federal Emergency Management Agency (Reference 7).

The hydraulic analyses for this study were based on unobstructed flow. The flooding depths are, thus, considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

All elevations are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). Elevation reference marks used in the study are shown on the maps.

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

The National Flood Insurance Program encourages State and local governments to adopt sound flood plain management programs. Therefore, each Flood Insurance Study includes a flood boundary map designed to assist communities in developing sound flood plain management measures.

Table 1. Summary of Discharges

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharges (Cubic Feet per Second)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
Alluvial Fan In Eastern Henderson	5.54	370	2,200	3,600	--- ¹
Alluvial Fan In Western Henderson	76	1,490	13,300	23,370	--- ¹

¹Discharge Not Available

4.1 Flood Boundaries

In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by the Federal Emergency Management Agency as the base flood for purposes of flood plain management measures.

Alluvial fan boundaries were delineated using topographic maps at a scale of 1:24,000 with a contour interval of 20 feet (Reference 8).

Approximate flood boundaries were delineated using topographic maps at a scale of 1:24,000 with a contour interval of 20 feet and at a scale of 1:2,400 with a contour interval of 5 feet (References 8 and 9).

Approximate flood boundaries in some portions of the study area were taken from the Flood Hazard Boundary Map (Reference 10).

Flood boundaries are indicated on the Flood Insurance Rate Map (Exhibit 1). On this map, the 100-year flood boundary corresponds to the boundary of the areas of special flood hazards (Zones A and A0). Small areas within the flood boundaries may lie above the flood elevations and, therefore, not be subject to flooding; owing to limitations of the map scale, such areas are not shown.

4.2 Floodways

The floodway is the channel of a stream, plus any adjacent flood plain areas, that must be kept free of encroachment in order that the 100-year flood be carried without substantial increases in flood heights.

The concept of a floodway does not apply to shallow flooding on alluvial fans; therefore, no floodway was determined for this study.

5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, the Federal Emergency Management Agency has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors (FHF's), and flood insurance zone designations for each flooding source studied in detail affecting the City of Henderson.

5.1 Reach Determinations

Reaches are defined as lengths of watercourses having relatively the same flood hazard, based on the average weighted difference in water-surface elevations between the 10- and 100-year floods.

This difference does not have a variation greater than that indicated in the following table for more than 20 percent of the reach:

<u>Average Difference Between 10- and 100-Year Floods</u>	<u>Variation</u>
Less than 2 feet	0.5 foot
2 to 7 feet	1.0 foot
7.1 to 12 feet	2.0 feet
More than 12 feet	3.0 feet

Reach determinations do not apply to shallow alluvial fan flooding; therefore, no reaches have been determined for the flooding sources in the City of Henderson. Applicable flood insurance zone data are shown in Table 2.

5.2 Flood Hazard Factors

The FHF is the Federal Emergency Management Agency device used to correlate flood information with insurance rate tables. Correlations between property damage from floods and their FHF are used to set actuarial insurance premium rate tables based on FHF's from 005 to 200.

The FHF for a reach is the average weighted difference between the 10- and 100-year flood water-surface elevations expressed to the nearest one-half foot, and shown as a three-digit code. For example, if the difference between water-surface elevations of the 10- and 100-year floods is 0.7 foot, the FHF is 005; if the difference is 1.4 feet, the FHF is 015; if the difference is 5.0 feet, the FHF is 050. When the difference between the 10- and 100-year water-surface elevations is greater than 10.0 feet, accuracy for the FHF is to the nearest foot.

Flood Hazard Factors are based on standard reach determinations and, therefore, do not apply to the flooding in the City of Henderson.

5.3 Flood Insurance Zones

The entire incorporated area of Henderson was divided into zones, each having a specific flood potential or hazard. Each zone was assigned one of the following flood insurance zone designations:

- Zone A: Special Flood Hazard Areas inundated by the 100-year flood, determined by approximate methods; no base flood elevations shown or FHF's determined.
- Zone A0: Special Flood Hazard Areas inundated by types of 100-year shallow flooding where depths are between 1.0 and 3.0

FLOODING SOURCE	PANEL ¹	ELEVATION DIFFERENCE ² BETWEEN 1% (100-YEAR) FLOOD AND			FLOOD HAZARD FACTOR	ZONE	BASE FLOOD ELEVATION ³ (FEET NGVD)
		10% (10-YEAR)	2% (50-YEAR)	0.2% (500-YEAR)			
Shallow Flooding	0010,0015 0020	Alluvial Fan Flooding				A0	Varies ⁴

¹Flood Insurance Rate Map Panel

²Weighted Average

³Rounded to Nearest Foot

⁴Depth and Velocity Values

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF HENDERSON, NV
(CLARK CO.)

FLOOD INSURANCE ZONE DATA

SHALLOW FLOODING

feet; depths are shown, or areas of 100-year alluvial fan flooding, depths and velocities shown, but no Flood Hazard Factors are determined.

Zone B:

Areas between the Special Flood Hazard Areas and the limits of the 500-year flood, including areas of the 500-year flood plain that are protected from the 100-year flood by dike, levee, or other water control structure; also areas subject to certain types of 100-year shallow flooding where depths are less than 1.0 foot; and areas subject to 100-year flooding from sources with drainage areas less than 1 square mile. Zone B is not subdivided.

Zone C:

Areas of minimal flooding.

Alluvial-fan flood hazard areas are shown on the Flood Insurance Rate Map (published separately) as A0 zones, with average depths and velocities of flow given. In these areas, depths of the 100-year flood may exceed 3 feet. Development on alluvial fans is subject to a more severe flood hazard than would normally be encountered in an A0 zone due to high velocities and unpredictability of the location of the stream channel across the width of the fan.

The flood elevation differences, flood insurance zones, and base flood elevations for each flooding source studied in detail in the community are summarized in Table 2.

5.4 Flood Insurance Rate Map Description

The Flood Insurance Rate Map for Henderson is, for insurance purposes, the principal result of the Flood Insurance Study. This map contains the official delineation of flood insurance zones and base flood elevation lines. Base flood elevation lines show the locations of the expected whole-foot water-surface elevations of the base (100-year) flood. This map is developed in accordance with the latest flood insurance map preparation guidelines published by the Federal Emergency Management Agency.

6.0 OTHER STUDIES

A Flood Hazard Boundary Map for Henderson was published in January 1977 (Reference 10); this study represents a more detailed analysis and, therefore, supersedes that map.

This study is authoritative for the purposes of the National Flood Insurance Program; data presented herein either supersede or are compatible with all previous determinations.

7.0 LOCATION OF DATA

Survey, hydrologic, hydraulic, and other pertinent data used in this study can be obtained by contacting the Natural and Technological Hazards Division, Federal Emergency Management Agency, 211 Main Street, Room 220, San Francisco, California 94105.

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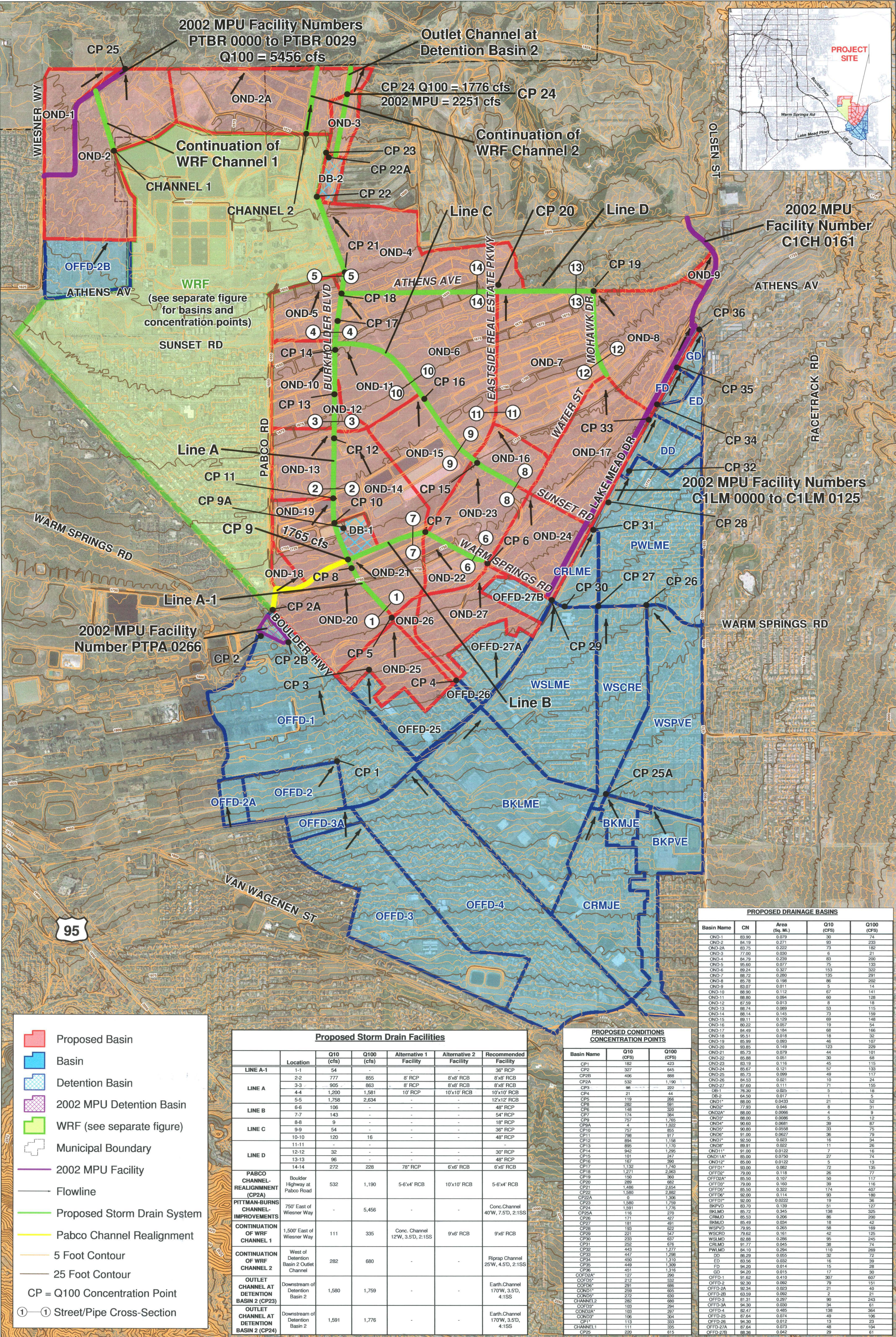
Appendix E: Figures

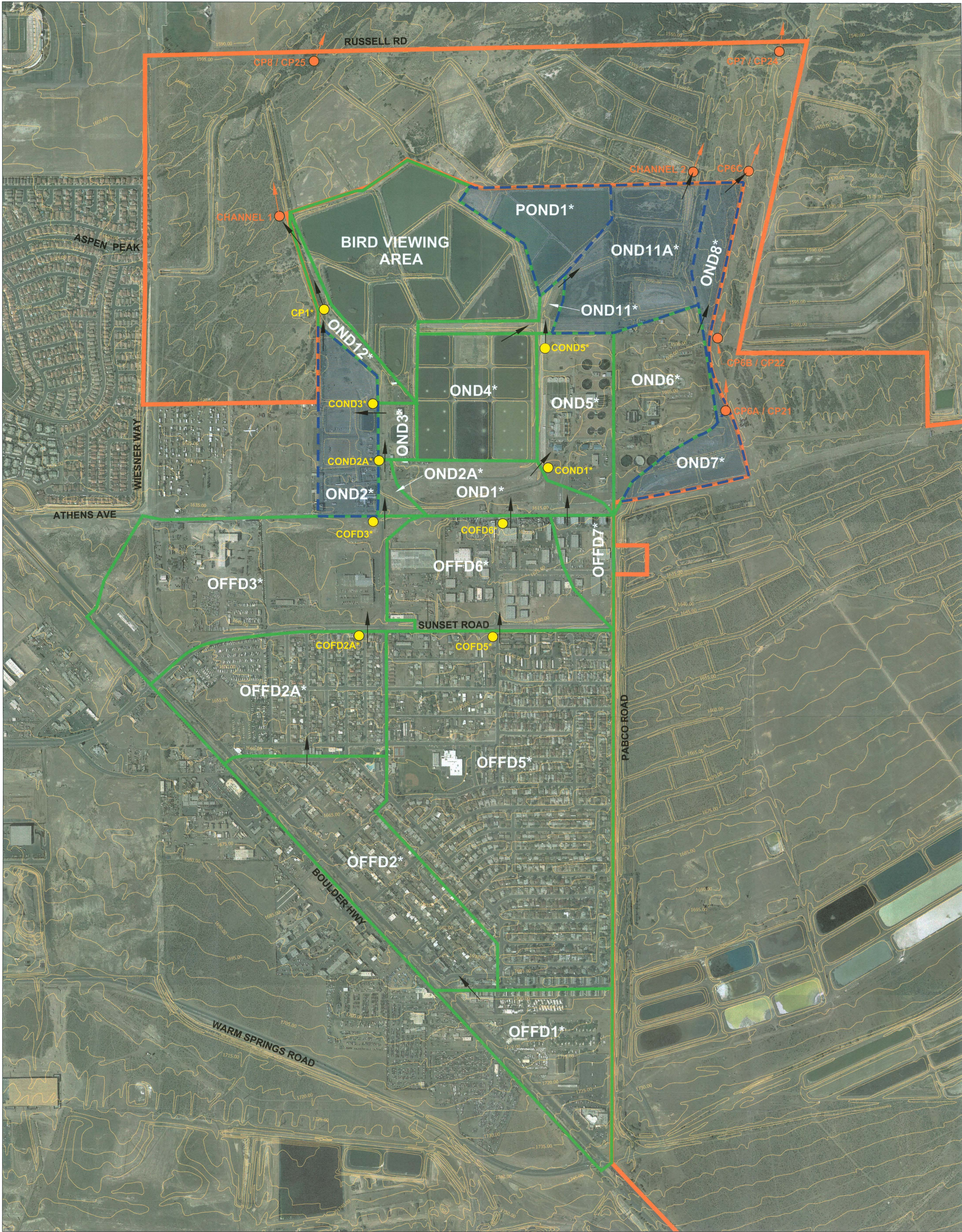
Existing Conditions Drainage Map

Proposed Conditions Drainage Map

WRF Basin Map

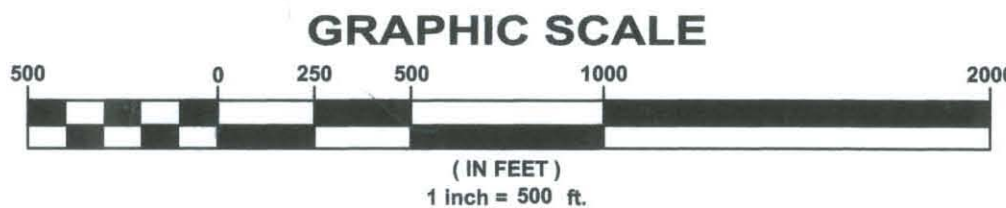
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LEGEND

- PROPOSED DEVELOPMENT
- WASTEWATER RECLAMATION FACILITY (WRF) BASIN
- REVISED WRF BASIN
- OND-1* WRF BASIN NAME
- COFD9* WRF FLOW COMBINATION POINT
- FLOW DIRECTION
- EASTSIDE EXISTING / PROPOSED FLOW COMBINATION POINT
- FLOW DIRECTION



51-1693 JANUARY 2006

WRF BASIN MAP

ADDENDUM #2 TO THE CONCEPTUAL DRAINAGE STUDY
FOR THE EASTSIDE PROPERTIES (ESR 2200)



2270 Corporate Circle
Suite 100
Henderson, Nevada 89074-6382
Telephone: 702/263-7275
Fax: 702/263-7200

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NOTE 1: BASINS ARE MODIFIED FROM THE
CONCEPTUAL DRAINAGE STUDY FOR THE
CITY OF HENDERSON WRF PHASE 1B
EXPANSION. SEE APPENDIX C-1 OF
ORIGINAL STUDY FOR REFERENCE MATERIAL.