HASSAYAMPA RIVER

Town of Buckeye, Maricopa County, Arizona

CONDITIONAL LETTER OF MAP REVISION SUBMITTAL

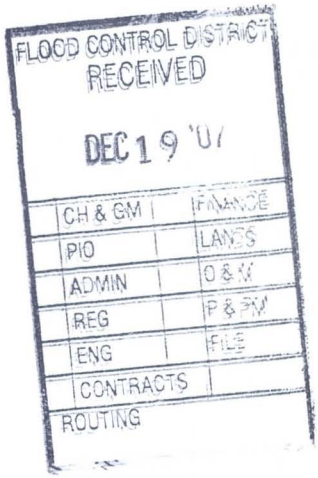
TECHNICAL DATA NOTEBOOK

December 2007

WP #052556.03 to 052559.03

Prepared for:
El Dorado Holdings, Inc.
426 North 44th Street
Suite 100
Phoenix, Arizona 85008

Submitted to:
Michael Baker, Jr. Inc.
National LOMC Manager
Ms. Sheila Norlin, CFM
3601 Eisenhower Avenue, Suite 600
Alexandria, Virginia 22301-6425
Phone: (703) 371-3054



And:
Flood Control District of Maricopa County
2801 West Durango
Phoenix, Arizona 85096
Phone: (602) 506-1501

And:
Town of Buckeye
100 North Apache
Buckeye, Arizona 85258
Phone: (623) 386-2487

Prepared by:
Wood, Patel & Associates, Inc.
2051 West Northern Avenue
Suite 100
Phoenix, Arizona 85021
Phone: (602) 335-8500
Fax: (602) 335-8580
Website: www.woodpatel.com

Engineer

Peer Reviewer

WOOD/PATEL

LETTER OF TRANSMITTAL

LAND DEVELOPMENT • WATER RESOURCES • WATER/WASTEWATER • TRANSPORTATION/TRAFFIC • STRUCTURES • SURVEYING • CONSTRUCTION MANAGEMENT

To: Ms. Cathy Regester, P.E.
Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009-6399

Phone: *(602) 506-4779*

Email: *lmt@mail.maricopa.gov*

Date: January 14, 2008

Project: **Douglas Ranch**

Project No.: WP# 052556.03 – WP# 052559.03

Re: **Hassayampa River**
Technical Data Notebook

✓ Delivery by Wood/Patel	☐ For Your Use	☐ Prints
☐ Courier	☐ As Requested	☐ Original Drawings
☐ Mail	✓ For Review and Comment	✓ Documents
☐ Federal Express	☐ For Action and/or Approval	✓ Reports
☐ Pick-up	☐ Other	☐ Other

Copies	Date	Description
1	01/14/08	Revised Technical Data Notebook (TDN) Sections:
		• Table 3
		• Appendix E
		• Work Maps (2-4)
		• Annotated FIRM (Exhibit D) and CD
1	1/10/08	Copy of Comments and Responses from Cathy Regester

FLOOD CONTROL DISTRICT
RECEIVED
JAN 14
CH & GM | FINANCE
PIO | LANDS
ADMIN | O & M
REG | P & PM
ENG | IT
CONTRACTS
ROUTING CWR

Remarks

Cathy,
Please replace the sections in your copy of the TDN dated 12/17/07 with the attached. We have also sent this information to Lynn Thomas directly for her to replace in her copy of the TDN.
Please let me know if you have any questions.

Thank you.

Copy To: Tom Hennessy, El Dorado Holdings, LLC
Mike Cronin, El Dorado Holdings, LLC
Project File

From: **Ashok C. Patel, P.E., R.L.S., CFM**

...05\052556.03\Project Support\Admin\FCDMC C Regester LOT 01-14-08.doc

Wood, Patel & Associates, Inc.
2051 West Northern Avenue, Suite 100 • Phoenix, AZ 85021 • (602) 335-8500 • Fax (602) 335-8580
www.woodpatel.com

WOOD/PATEL

1/14/2008
W/P Job No. 052556.03 to
052559.03

Hassayampa River Review Comments and Responses for Conditional Letter of Map Revision, Technical Data Notebook Dated: January 10, 2008

To: Cathy Regester, Engineering Division, FCDMC
Lynn Thomas, Regulatory Division, FCDMC

Subject: Douglas Ranch CLOMR

Submittal: Dated December 20, 2007
Comments: Dated January 10, 2008

The following are the review comments by Cathy Regester and Wood/Patel's responses for the subject CLOMR submittal: and have the following comments/questions for the design consultant:

1. (FCDMC 01/10/08): Per my previous review, comment #9, the ineffective flow areas were revised based on the guide banks rather than the bridge openings. However, the floodway limit at several of these cross sections has been located within the ineffective flow area. It would seem more reasonable to locate the floodway limit at the ineffective flow limit. Although relocation of the floodway limits should not result in a change in water surface elevation (WSEL), it will require a revision to the HEC-RAS model and work maps. The following cross sections were noted to have floodway limits within the ineffective flow areas: 24.01, 24.11, 24.20, 25.15, 25.24, 26.0, 26.1, 26.19, and 26.29.

   (W/P 01/14/08): Floodway stations have been moved too ineffective flow limits. Table 3, post-project condition output file, cross sections, work maps, annotated FIRM maps and CD have been revised.

2. (FCDMC 01/10/08): For information: The District has seen FEMA require, on other projects, that all negative surcharges in excess on -0.04 ft be eliminated from the HEC-RAS model even though these occur at sections beyond the impacts of the proposed project. There are still several cross sections in the HEC-RAS model where these negative surcharges occur. They appear to be the result of simply importing the data from HEC-2 to HEC-RAS. (Negative surcharges in excess of -0.04 ft have been eliminated within the new topographic study area.)

   (W/P 01/14/08): The negative surcharges have been limited to -0.04 ft within the model.

3. (FCDMC 01/10/08): For information: The channel reach lengths appear to have been based on the distance along the thalweg. FEMA could have comments requesting that the reach lengths be measured off of a hydraulic baseline. It appears that the resulting difference in water surface elevations, however, would be generally insignificant and would not impact the bridge areas.

   (W/P 01/14/08): We have decided to maintain the thalweg reach lengths as inherited from the effective FIS model.

Wood, Patel & Associates, Inc. ♦ 2051 West Northern, Suite 100 ♦ Phoenix, Arizona 85021
Phone: (602) 335-8500 ♦ Fax: (602) 335-8580
E-Mail: woodpatel@woodpatel.com

HASSAYAMPA RIVER

Town of Buckeye, Maricopa County, Arizona

CONDITIONAL LETTER OF MAP REVISION SUBMITTAL

TECHNICAL DATA NOTEBOOK

December 2007

WP #052556.03 to 052559.03

Prepared for:

El Dorado Holdings, Inc.
426 North 44th Street
Suite 100
Phoenix, Arizona 85008

Submitted to:

Michael Baker, Jr. Inc.
National LOMC Manager
Ms. Sheila Norlin, CFM
3601 Eisenhower Avenue, Suite 600
Alexandria, Virginia 22301-6425
Phone: (703) 371-3054

And:

Flood Control District of Maricopa County
2801 West Durango
Phoenix, Arizona 85096
Phone: (602) 506-1501

And:

Town of Buckeye
100 North Apache
Buckeye, Arizona 85258
Phone: (623) 386-2487

Prepared by:

Wood, Patel & Associates, Inc.
2051 West Northern Avenue
Suite 100
Phoenix, Arizona 85021
Phone: (602) 335-8500
Fax: (602) 335-8580
Website: www.woodpatel.com

Engineer

Peer Reviewer

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Project Location 1
1.2 Purpose of Study 1
1.3 Authority of Study 2
1.4 Methods of Analysis 2

2.0 FEMA FORMS 4
2.1 Study Documentation Abstract for FEMA Submittals 4
2.2 FEMA Forms 5
2.2.1 Form 1 – Overview and Concurrence Form 6
2.2.2 Form 2 – Riverine Hydrology and Hydraulics Form 7
2.2.3 Riverine Structures Form 11

3.0 SURVEY AND MAPPING INFORMATION 12
3.1 Field Survey Information 12
3.2 Mapping 12

4.0 HYDROLOGY 13
4.1 Hydrology 13

5.0 HYDRAULICS 14
5.1 Hydraulic Models 14
5.2 Parameter Estimation 14
5.2.1 Roughness Coefficients 14
5.2.2 Expansion and Contraction Coefficients 15
5.3 Cross Section Description 15
5.4 Guide Bank Description 15
5.5 Modeling Conditions 16
5.6 Floodway Modeling 16
5.7 Problems Encountered During the Study 16
5.8 Calibration 16
5.9 Final Results 16

6.0 EROSION AND SEDIMENT TRANSPORT 17
6.1 Erosion and Sediment Transport 17
6.2 Estimation of Toe-Down Depth 17

7.0 DRAFT FIS REPORT DATA 19
7.1 Summary of Discharges 19
7.2 Annotated Flood Insurance Rate Map 19
7.3 Flood Profiles 19

8.0 OPERATION AND MAINTENANCE PLAN 21
8.1 Operation and Maintenance Plan 21

9.0 REFERENCES 22

LIST OF FIGURES

Figure 1	Project Location Map
Figure 2	Draft FEMA Flood Profiles

LIST OF TABLES

Table 1	Summary of Effective FIS Floodway Table
Table 1A	Summary of Duplicate Effective Modeling Floodway Table
Table 1B	Summary of Corrected Effective Modeling Floodway Table
Table 2	Datum Adjusted Corrected Effective Model
Table 3	Summary of Post-Project Condition Modeling Floodway Table
Table 4	Guide Bank Total Design Scour Depths
Table 5	Summary of Discharges in FEMA Format

LIST OF APPENDICES

Appendix A	General Documentation and Correspondence
Appendix B	HEC-RAS Output Files for Duplicative Effective FIS Model
Appendix C	HEC-RAS Output Files for Corrected Effective FIS Model
Appendix D	HEC-RAS Output Files for Existing or Pre-Project Condition Model
Appendix E	HEC-RAS Output Files for Revised or Post-Project Condition Model
Appendix F	Supporting Hydraulic Calculations

LIST OF EXHIBITS

Exhibit A	Existing FEMA FIRM Panels
Exhibit B	Proposed Construction Plans
Exhibit C	Study Work Map
Exhibit D	Annotated FIRM Panels
Exhibit E	Floppy Disk with Hydraulic Models

1.0 INTRODUCTION

1.1 Project Location

The Hassayampa River lies along the eastern boundary of Douglas Ranch, a 35,250-acre Master Planned Community west of the Hassayampa River in northwestern Maricopa County. More specifically, the portion of the Hassayampa River for which this CLOMR has been prepared is located within Townships 3 and 4 North, Range 5 West; and Townships 3 and 4 North, Range 4 West, of the Gila and Salt River Baseline and Meridian. A location and vicinity map defining the project area is presented in Figure 1.

1.2 Purpose of Study

The study reach includes a portion of the Hassayampa River alignment from approximately Beardsley Road alignment (RM 27.33) to south of Peoria Avenue alignment (RM 20.80).

As part of the master plan for this community, four access roads are proposed from the existing Sun Valley Parkway on the east side of the Hassayampa River into the Douglas Ranch project site on the west side of the river. The proposed crossings are identified in Figure 1 as Hummingbird Springs Road, Bell Road, Greenway Road and Peoria Avenue. These crossings will include elevated approaches and bridges spanning a portion of the effective floodplain to meet all weather access requirements. According to FEMA floodplain management policy, these proposed modifications to the wash corridor require a Conditional Letter of Map Revision (CLOMR).

The Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) for the Hassayampa River, and various other streams. The Project is within several FIRM maps (Numbers 04013C1090J and 04013C1530J) and is located within both Zone "AE" and Zone "X". Zone "AE" and Zone "X" are defined by FEMA as follows:

Zone AE*: Base flood elevations determined.*

Zone X: *Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and protected by levees from 100-year flood.*

The location of the project relative to the FIRM panels is illustrated in Figure 3 – *Flood Insurance Rate Map*. The proposed bridge crossings of the Hassayampa River cross a defined FEMA floodplain and floodway (Zone AE).

The purpose of this submittal for a Conditional Letter of Map Revision (CLOMR) is to obtain design approval for the four proposed roadway and bridge crossings within the reach and along the alignments described above. This report will document the engineering analysis and MT-2 forms necessary to meet the FEMA requirements for a CLOMR. Once the CLOMR is issued the roadway and bridge design will be finalized and constructed. A set of as-built plans will be prepared and a TDN will be prepared and submitted for a Letter of Map Revision (LOMR).

1.3 Authority of Study

El Dorado Holdings, Inc. has contracted with Wood, Patel & Associates, Inc. (WOOD/PATEL) to complete the preparation of this CLOMR package. WOOD/PATEL's Project Manager for this project is Ashok C. Patel, P.E., R.L.S., CFM.

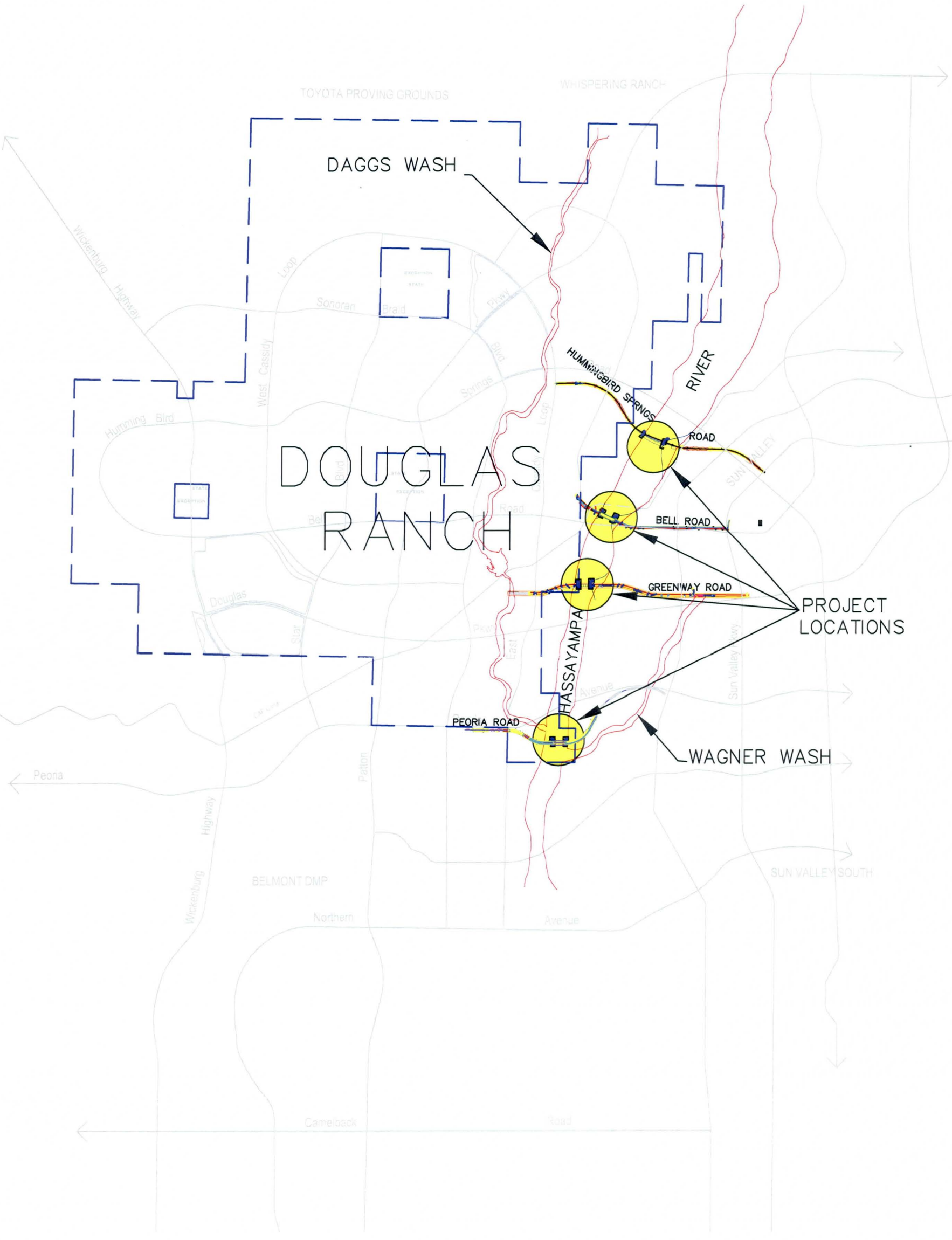
1.4 Methods of Analysis

The following methods of analysis are used for this project:

Hydrology – In 1995, the Federal Emergency Management Agency (FEMA) published a revised Flood Insurance Study (FIS) for Maricopa County, Arizona and Incorporated Areas that included the Salt River throughout Phoenix. The FIS includes The Hassayampa River, which flows southerly through northwestern Maricopa County. The 2005 FIS documents adopted all work previously performed in the 1995 FIS & 2001 FIS for the study areas. This TDN utilizes this FEMA accepted hydrology; therefore, there is no new hydrologic data required for this CLOMR

Hydraulics – The existing wash hydraulics (Effective FIS) were modeled utilizing the Corps of Engineers' HEC-2, version 4.6.2, May 1991, hydraulic modeling software. The proposed model conditions were modeled utilizing the Corps of Engineers' HEC-RAS, version 3.1.3, May 2005, hydraulic modeling software.

The HEC-2 model used as the base model for this study is the effective FIS model prepared by Cella Barr Associates, 1988. The flow rates and flow change locations will be taken directly from the HEC-2 effective FIS model. The base model was studied using sub-critical flow regime and was adopted by FEMA for the purpose of the regulatory FIRM. In order to match the base model and tie into the FIS floodplain and floodway at the upstream and downstream limits of the reach, this project reach was modeled using the same flow regime as the FIS model. The hydrologic and hydraulic modeling results for the Effective FIS are shown in Appendix A.



602-263-1100
1-800-STAKE-IT

4000 0 2000 4000
Horz 1" = 8000 ft.

N

DATE	REVISION	BY

PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
Figure 1: Vincinity Map

PROJECT TITLE
Douglas Ranch

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	G.H.A.	6/07		XX-XX-XX
	DRAWN BY G.H.A.	AS-BUILT	PROJECT 042316	SHEET NO. 1 OF 1

\2004\042316\Project Support\Hydro\Exhibits\Figures\Figure1_Vicinity.dwg

2.0 FEMA FORMS

2.1 Study Documentation Abstract for FEMA Submittals

Study Documentation Abstract for FEMA Submittals		Initial		Restudy		CLOMR	X			Other	
2.1.1	Date Study Accepted										
2.1.2	Study Contractor Contact(s) Address Phone Internal Reference Number	Wood, Patel & Associates, Inc. Ashok C. Patel, P.E., R.L.S., CFM 2051 Northern Avenue, Suite 100 Phoenix, AZ 85021 (602) 335-8500 Fax (602) 335-8580 WP# 0525565.03 – 052559.03									
2.1.3	FEMA Technical Review Contractor Contact(s) Address Phone Internal Reference Number	Michael Baker, Jr., Inc. Ms. Sheila Norlin, CFM 3601 Eisenhower Ave., Suite 600 Alexandria, Virginia 022304-6425 (703) 317-3054									
2.1.4	FEMA Regional Reviewer Phone	Michael Baker, Jr., Inc. (703) 960-8800									
2.1.5	State Technical Reviewer Phone	Arizona Department of Water Resources (602) 417-2445									
2.1.6	Local Technical Reviewer Phone	Town of Buckeye (623) 386-2487									
2.1.7	Reach Description	Hassayampa River between Beardsley Road alignment (RM 27.33) to south of Peoria Avenue alignment (RM 20.89)									
2.1.8	Topographic Map Information	Aerial Mapping Company, Flight Date March 22, 2006. 1-foot contour map at a scale of 1 inch = 100 feet.									
2.1.9	Unique Conditions and Problems	None									
2.1.10	Coordination of Peak Discharge	100-year accepted discharge for the study reach									

2.2 FEMA Forms

The basis of this CLOMR is better scientific data, including better quality mapping and hydraulic analysis, and physical changes of the watercourse; therefore, the appropriate FEMA forms utilized from the current FEMA MT-2 packet are as follows:

Form 1-Overview & Concurrence Form provides the basic information regarding the revision request and requires the signatures of the requester, community official, and engineer. This form is required for all revision requests.

Form 2-Riverine Hydrology & Hydraulics Form provides the basic information on the scope and methodology of hydrologic and/or hydraulic analyses that are prepared in support of the revision request. This form should be used for revision requests that involve new or revised hydrologic and/or hydraulic analyses of rivers, streams, ponds, or small lakes.

Form 3-Riverine Structures Form provides the basic information regarding hydraulic structures constructed in the stream channel or floodplain. This form should be used for revision requests that involve new or proposed channelization, bridges/culverts, dams, and/or levees/floodwalls.

2.2.1 Form 1 – Overview and Concurrence Form

The attached "Overview & Concurrence Form" is provided per FEMA requirements for submittals. The basis for this revision request is physical change, specifically, bridged crossings of the river corridor. Since this project is partially located within both the Town of Buckeye and unincorporated portions of Maricopa County, forms have been included for concurrence of each community.

It should be noted that the preparation of this CLOMR utilizes better scientific data than the regulatory FIRM including: one (1) foot contours tied to FEMA's ERM, more accurate spot elevations, detailed aerial photographic mapping and a better understanding of the current site conditions.

FEDERAL EMERGENCY MANAGEMENT AGENCY

OVERVIEW & CONCURRENCE FORM

O.M.B No. 3067-0148
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0148). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

A. REQUESTED RESPONSE FROM FEMA

This request is for a (check one):

☒ CLOMR: A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72).

☐ LOMR: A letter from FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway or flood elevations. (See Parts 60 & 65 of the NFIP Regulations.)

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301	City of Katy	TX	480301	0005D	02/08/83
480287	Harris County	TX	48201C	0220G	09/28/90
040037	Maricopa County, Unincorporated Areas	AZ	04013C	1090J	9/30/05
040037	Maricopa County, Unincorporated Areas	AZ	04013C	1530J	9/30/05

2. Flooding Source: Hassayampa River

3. Project Name/Identifier: Hassayampa River CLOMR

4. FEMA zone designations affected: AE, X (choices: A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

5. Basis for Request and Type of Revision:

a. The basis for this revision request is (check all that apply)

☒ Physical Change ☒ Improved Methodology/Data

☒ Regulatory Floodway Revision ☐ Other (Attach Description)

Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

b. The area of revision encompasses the following types of flooding and structures (check all that apply)

Types of Flooding:	☒ Riverine	☐ Coastal	☐ Shallow Flooding (e.g., Zones AO and AH)
	☐ Alluvial fan	☐ Lakes	☐ Other (Attach Description)
Structures:	☐ Channelization	☐ Levee/Floodwall	☒ Bridge/Culvert
	☐ Dam	☐ Fill	☐ Other, Attach Description

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☒ Yes Fee amount: $4000

☐ No, Attach Explanation

Please see the FEMA Web site at http://www.fema.gov/fhm/frm_fees.shtm **for Fee Amounts and Exemptions.**

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Tom Hennessey, P.E.	Company: El Dorado Holdings, Inc.	
Mailing Address: One Gateway Center 426 North 44th Street, Suite 100 Phoenix, AZ 85008	Daytime Telephone No.: 602-955-2424	Fax No.: 602-663-1671
	E-Mail Address: thennessy@eldoradoholdings.net	
Signature of Requester (required):		Date:

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title:		Telephone No.: 602-506-1501
Community Name: Flood Control District of Maricopa County	Community Official's Signature (required):	Date:

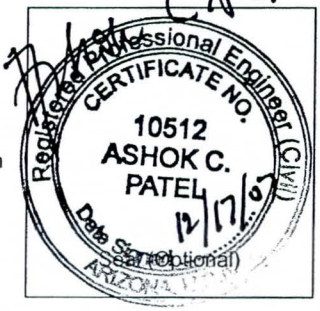
CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Ashok C.Patel, P.E., R.L.S., CFM	License No.: 10512	Expiration Date: 12/07
Company Name: Wood, Patel & Associates, Inc.	Telephone No.: 602-335-8500	Fax No.: 602-335-8580
Signature: Ashok C. Patel		Date: 12/17/07

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if ...
☒ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
☒ Riverine Structures Form (Form 3)	Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam
☐ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans



FEDERAL EMERGENCY MANAGEMENT AGENCY

OVERVIEW & CONCURRENCE FORM

O.M.B No. 3067-0148
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0148). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

A. REQUESTED RESPONSE FROM FEMA

This request is for a (check one):

☒ CLOMR: A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60, 65 & 72).

☐ LOMR: A letter from FEMA officially revising the current NFIP map to show the changes to floodplains, regulatory floodway or flood elevations. (See Parts 60 & 65 of the NFIP Regulations.)

B. OVERVIEW

1. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301	City of Katy	TX	480301	0005D	02/08/83
480287	Harris County	TX	48201C	0220G	09/28/90
010039	Town of Buckeye	AZ	04013C	1090J	9/30/05
039	Town of Buckeye	AZ	04013C	1530J	9/30/05

2. Flooding Source: Hassayampa River

3. Project Name/Identifier: Hassayampa River CLOMR

4. FEMA zone designations affected: AE, X (choices: A, AH, AO, A1-A30, A99, AE, AR, V, V1-V30, VE, B, C, D, X)

5. Basis for Request and Type of Revision:

a. The basis for this revision request is (check all that apply)

☒ Physical Change ☒ Improved Methodology/Data

☒ Regulatory Floodway Revision ☐ Other (Attach Description)

Note: A photograph and narrative description of the area of concern is not required, but is very helpful during review.

b. The area of revision encompasses the following types of flooding and structures (check all that apply)

Types of Flooding:	☒ Riverine	☐ Coastal	☐ Shallow Flooding (e.g., Zones AO and AH)
	☐ Alluvial fan	☐ Lakes	☐ Other (Attach Description)
Structures:	☐ Channelization	☐ Levee/Floodwall	☒ Bridge/Culvert
	☐ Dam	☐ Fill	☐ Other, Attach Description

C. REVIEW FEE

Has the review fee for the appropriate request category been included? ☒ Yes Fee amount: $4000

☐ No, Attach Explanation

Please see the FEMA Web site at http://www.fema.gov/fhm/frm_fees.shtm **for Fee Amounts and Exemptions.**

D. SIGNATURE

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Tom Hennessey, P.E.	Company: El Dorado Holdings, Inc.	
Mailing Address: One Gateway Center 426 North 44th Street, Suite 100 Phoenix, AZ 85008	Daytime Telephone No.: 602-955-2424	Fax No.: 602-663-1671
	E-Mail Address: thennessy@eldoradoholdings.net	
Signature of Requester (required):		Date: 6/22/07

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision (LOMR) or conditional LOMR request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a conditional LOMR, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination.

Community Official's Name and Title: Woodrow C. Scouten, P.E., Town Engineer		Telephone No.: 623-386-4691
Community Name: Town of Buckeye	Community Official's Signature (required):	Date:

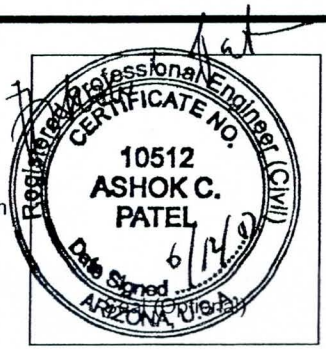
CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Ashok C.Patel, P.E., R.L.S., C.F.M.	License No.: 10512	Expiration Date: 12/07
Company Name: Wood, Patel & Associates, Inc.	Telephone No.: 602-335-8500	Fax No.: 602-335-8580
Signature:		Date: 6/12/07

Ensure the forms that are appropriate to your revision request are included in your submittal.

Form Name and (Number)	Required if ...
☒ Riverine Hydrology and Hydraulics Form (Form 2)	New or revised discharges or water-surface elevations
☒ Riverine Structures Form (Form 3)	Channel is modified, addition/revision of bridge/culverts, addition/revision of levee/floodwall, addition/revision of dam
☐ Coastal Analysis Form (Form 4)	New or revised coastal elevations
☐ Coastal Structures Form (Form 5)	Addition/revision of coastal structure
☐ Alluvial Fan Flooding Form (Form 6)	Flood control measures on alluvial fans



2.2.2 Form 2 – Riverine Hydrology and Hydraulics Form

The attached "Riverine Hydrology & Hydraulics Form" is provided per FEMA requirements for submittals. Responses to questions in the following sections require further explanation:

Models Submitted:

Duplicate Effective Model

The HEC-2 model used for this regulatory FIS was prepared by the Cella Barr Associates, 1988, as part of a Flood Insurance Re-Study for various streams in Maricopa County. The model was subsequently approved by FEMA. The Effective Model was performed in HEC-2. The published effective FIS Floodway Table for this project reach is included in Table 1. Please note that this table is based on NGVD 29 datum. This project falls within the Hassayampa River study reach model for River Mile (RM) 15.68 to RM 31.03. The model was run in HEC-2 to create a *Duplicate Effective Model* and compare the results with the Effective FIS Floodway Table. The *Duplicate Effective Model* file name is *HASSHEC2.DAT*.and the modeling results are shown in Table 1A, based on NGVD 29, and the output summary files are also shown in Appendix B.

Corrected Effective Model

The *Corrected Effective Model* was created in HEC-RAS by importing the HEC-2 input file (*HASSHEC2.DAT*) into HEC-RAS and running the model. The *Corrected Effective Model* name is *BASE.PRJ*. The *Corrected Effective Model* Floodway Table is included in Table 1B for comparison with Tables 1A and 1B. Please note that these tables are based on NGVD 29 datum. The output summary files are also shown in Appendix C.

Existing or Pre-Project Condition Model

The preparation of this CLOMR utilizes better scientific data than the regulatory FIRM. Specifically, the aerial mapping for the FIRM was based on 4 foot contour interval mapping flown in March 18, 1988. This model includes new 1 foot contour interval mapping flown in March 22, 2006 for the portion of the river adjacent to the Douglas Ranch Project site.

A new HEC-RAS model was created using the *Corrected Effective Model* as a base. New cross sections were prepared based on the new topography and inserted into this model replacing cross section 27.23 to cross section 20.98, inclusive, to create the *Existing or Pre-Project Condition Model*.

It should be noted that the new topographic mapping is based on the North American Vertical Datum of 1988 (NAVD 88). The datum difference between the effective FIS mapping (NGVD 29) and the new topographic mapping (NAVD 88) has been established for this project based on field surveys performed by the design team that included FEMA Elevation Reference Marks (ERM) 26 and 35 from the effective FIS as follows:

$$ERM\,26 : 2.15' + NGVD29_{ELEV} = NAVD88_{ELEV}$$

$$ERM\,35 : 1.76' + NGVD29_{ELEV} = NAVD88_{ELEV}$$

ERM 35 is located near cross section 20.51 and ERM 26 is located near cross section 28.66. Therefore, the effective cross sections upstream of new cross section 27.23 and downstream of new cross section 20.98 were adjusted by adding 2.15' (ERM 26) and 1.76' (ERM 35), respectively as shown in Table 2. The *Existing or Pre-Project Condition Model* name is *HASSYMODELEX.PRJ*. The modeling output summary files are shown in Appendix D.

Revised or Post-Project Condition Model

The *Post-Project Conditions Model* was developed by incorporating the four proposed bridge and roadway cross sections into the *Existing or Pre-Project Condition Model* geometric data. The model name *is HASSYMODELPROP1.PRJ* and the modeling results are shown in Appendix E.

A floodway run was made using the effective FIS encroachment stations with modifications in the vicinity of the proposed roadway crossings and bridges. The cross sections for the *Post-Project Condition Model* are located in Appendix E.

Starting Water Surface Elevations

The boundary conditions for the *Existing or Pre-Project Condition Model* and the *Revised or Post-Project Condition Mode* are taken from the effective Hassayampa River study reach model boundary conditions for River Mile (RM) 15.68 to RM 31.03 with the known water surface elevations adjusted for the datum differential as described above.

Results

The *Duplicated Effective Model (HASSHEC2.DAT)* and the *Corrected Effective Model (BASE.PRJ)* results are comparable to the Effective FIS Table as shown in Tables 1, 1A and 1B.

The computed 100-year water surface elevations from the *Corrected Effective Model* at the upstream tie in (RM 27.33) and downstream tie in (RM 20.80) are 1389.37 and 1241.59, respectively, as shown in Table 2 (1988 Datum). The computed water surface elevations from the *Revised or Post-Project Condition Model* at the upstream tie in (RM 27.33) and downstream tie in (RM 20.80) are 1389.27 and 1241.59 as shown in Appendix E. As shown, the water surface elevations at the upstream and downstream tie in locations match those from the effective FIS model very well.

The study reach for this project is 6.44 miles long. The computed floodplain water surface is plotted at the same scale as the profile of the effective model and is shown in Figure 2.

Special Considerations

Since the floodplain is very wide in relation to the proposed bridge opening, the proposed roadway approaches to the bridge will be designed to encroach into the river to reduce the need for long bridges. Therefore, guide banks will be designed at the bridge abutments to streamline the flow through the bridge

opening and to prevent erosion of the roadway approach embankments. See *Section 5 - Hydraulics* for further description and Appendix F for guide bank design parameters.

FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE HYDROLOGY & HYDRAULICS FORM

O.M.B No. 3067-0148
Expires September 30, 2005

PAPERWORK REDUCTION ACT

Public reporting burden for this form is estimated to average 3 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0148). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

Flooding Source:
Note: Fill out one form for each flooding source studied

A. HYDROLOGY

1. Reason for New Hydrologic Analysis (check all that apply)

☒ Not revised (skip to section 2) ☐ No existing analysis ☐ Improved data
☐ Alternative methodology ☐ Proposed Conditions (CLOMR) ☐ Changed physical condition of watershed

2. Comparison of Representative 1%-Annual-Chance Discharges

Location	Drainage Area (Sq. Mi.)	FIS (cfs)	Revised (cfs)

3. Methodology for New Hydrologic Analysis (check all that apply)

☐ Statistical Analysis of Gage Records ☐ Precipitation/Runoff Model [TR-20, HEC-1, HEC-HMS etc.]
☐ Regional Regression Equations ☐ Other (please attach description)

Please enclose all relevant models in digital format, maps, computations (including computation of parameters) and documentation to support the new analysis. The document, "Numerical Models Accepted by FEMA for NFIP Usage" lists the models accepted by FEMA. This document can be found at: http://www.fema.gov/fhm/en_modl.shtm.

4. Review/Approval of Analysis

If your community requires a regional, state, or federal agency to review the hydrologic analysis, please attach evidence of approval/review.

5. Impacts of Sediment Transport on Hydrology

Was sediment transport considered? ☐ Yes ☐ No If yes, then fill out Section F (Sediment Transport) of Form 3. If No, then attach your explanation for why sediment transport was not considered.

B. HYDRAULICS

1. Reach to be Revised

	Description	Cross Section	Water-Surface Elevations (ft.)	
			Effective	Proposed/Revised
Downstream Limit	River Mile 20.80	20.80	1241.59	1241.59
Upstream Limit	River Mile 27.33	27.33	1389.37	1389.27

2. Hydraulic Method Used

Hydraulic Analysis HEC-RAS [HEC-2 , HEC-RAS, Other (Attach description)]

B. HYDRAULICS (CONTINUED)

3. Pre-Submittal Review of Hydraulic Models

FEMA has developed two review programs, CHECK-2 and CHECK-RAS, to aid in the review of HEC-2 and HEC-RAS hydraulic models, respectively. These review programs verify that the hydraulic estimates and assumptions in the model data are in accordance with NFIP requirements, and that the data are comparable with the assumptions and limitations of HEC-2/HEC-RAS. CHECK-2 and CHECK-RAS identify areas of potential error or concern. These tools do not replace engineering judgment. CHECK-2 and CHECK-RAS can be downloaded from http://www.fema.gov/fhm/frm_soft.shtm. We recommend that you review your HEC-2 and HEC-RAS models with CHECK-2 and CHECK-RAS. If you disagree with a message, please attach an explanation of why the message is not valid in this case. Review of your submittal and resolution of valid modeling discrepancies will result in reduced review time.

HEC-2/HEC-RAS models reviewed with CHECK-2/CHECK-RAS? ☒ Yes ☐ No

4. Models Submitted

Duplicate Effective Model*	Natural File Name: HASSHEC2.DAT	Floodway File Name:
Corrected Effective Model*	Natural File Name: BASE.PRJ	Floodway File Name:
Existing or Pre-Project Conditions Model	Natural File Name: HASSYMODELEX.PRJ	Floodway File Name:
Revised or Post-Project Conditions Model	Natural File Name: HASSYMODELPROP1.PRJ	Floodway File Name:
Other - (attach description)	Natural File Name:	Floodway File Name:

*Not required for revisions to approximate 1%-annual-chance floodplains (Zone A) – for details, refer to the corresponding section of the instructions.

The document "Numerical Models Accepted by FEMA for NFIP Usage" lists the models accepted by FEMA. This document can be found at: http://www.fema.gov/fhm/en_modl.shtm.

C. MAPPING REQUIREMENTS

A **certified topographic map** must be submitted showing the following information (where applicable): the boundaries of the effective, existing, and proposed conditions 1%-annual-chance floodplain (for approximate Zone A revisions) or the boundaries of the 1%- and 0.2%-annual-chance floodplains and regulatory floodway (for detailed Zone AE, AO, and AH revisions); location and alignment of all cross sections with stationing control indicated; stream, road, and other alignments (e.g., dams, levees, etc.); current community easements and boundaries; boundaries of the requester's property; certification of a registered professional engineer registered in the subject State; location and description of reference marks; and the referenced vertical datum (NGVD, NAVD, etc.).

Note that the boundaries of the existing or proposed conditions floodplains and regulatory floodway to be shown on the revised FIRM and/or FBFM must tie-in with the effective floodplain and regulatory floodway boundaries. Please attach **a copy of the effective FIRM and/or FBFM,** annotated to show the boundaries of the revised 1%- and 0.2%-annual-chance floodplains and regulatory floodway that tie-in with the boundaries of the effective 1%- and 0.2%-annual-chance floodplain and regulatory floodway at the upstream and downstream limits of the area of revision.

D. COMMON REGULATORY REQUIREMENTS

1. For CLOMR requests, do Base Flood Elevations (BFEs) increase? ☒ Yes ☐ No

For CLOMR requests, if either of the following is true, please submit evidence of compliance with Section 65.12 of the NFIP regulations:

- The proposed project encroaches upon a regulatory floodway and would result in increases above 0.00 foot.
- The proposed project encroaches upon a SFHA with BFEs established and would result in increases above 1.00 foot.

2. Does the request involve the placement or proposed placement of fill? ☐ Yes ☒ No

If Yes, the community must be able to certify that the area to be removed from the special flood hazard area, to include any structures or proposed structures, meets all of the standards of the local floodplain ordinances, and is reasonably safe from flooding in accordance with the NFIP regulations set forth at 44 CFR 60.3(a)(3), 65.5(a)(4), and 65.6(a)(14). Please see the MT-2 instructions for more information.

3. For LOMR requests, is the regulatory floodway being revised? ☐ Yes ☐ No

If Yes, attach evidence of regulatory floodway revision notification. As per Paragraph 65.7(b)(1) of the NFIP Regulations, notification is required for requests involving revisions to the regulatory floodway. (Not required for revisions to approximate 1%-annual-chance floodplains [studied Zone A designation] unless a regulatory floodway is being added. Elements and examples of regulatory floodway revision notification can be found in the MT-2 Form 2 Instructions.)

4. For LOMR requests, does this request require property owner notification and acceptance of BFE increases? ☐ Yes ☐ No

If Yes, please attach proof of property owner notification and acceptance (if available). Elements of and examples of property owner notification can be found in the MT-2 Form 2 Instructions.

2.2.3 Riverine Structures Form

The attached "Riverine Structures Form" is provided per FEMA requirements for submittals.

Preliminary Plans depicting the bridge structures are included in Exhibit B.

The constraint for the *Post-Project Conditions Model* is to match the hydraulic conditions at the upstream and downstream limits of the project reaches.

The proposed bridged crossings of the Hassayampa River are located at Peoria Avenue (RM 21.32), Greenway Road (RM 23.88), Bell Road (RM 24.95) and Hummingbird Springs Road (RM 26.40) alignments.

Table 1 - Summary of Effective FIS Floodway Table

Effective FIS Floodway Table

FEMA, FIS, Revised September 30, 2005

(1929 Datum)

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
20.51	1,864	7,174	7.9	1,234.0	1,233.7	0.3
20.80	1,705	6,997	8.1	1,240.4	1,239.8	0.6
21.17	1,580	7,201	7.9	1,250.7	1,250.4	0.3
21.65	1,725	7,727	7.3	1,260.8	1,260.3	0.5
21.84	1,715	7,631	7.4	1,263.2	1,262.9	0.3
22.12	1,561	8,758	6.5	1,269.3	1,269.0	0.3
22.21	1,635	7,195	8.0	1,270.4	1,270.1	0.3
22.50	1,815	7,965	7.2	1,277.2	1,277.1	0.1
22.88	1,775	7,850	7.3	1,284.7	1,284.0	0.7
23.07	1,540	7,074	8.1	1,288.0	1,287.2	0.8
23.45	1,529	8,382	6.8	1,297.9	1,297.8	0.1
23.63	1,645	7,361	7.8	1,300.1	1,300.1	0.1
24.01	2,186	8,582	6.7	1,308.6	1,308.6	0.0
24.39	2,145	8,869	6.5	1,317.4	1,317.4	0.0
24.49	1,999	6,820	8.4	1,319.2	1,319.1	0.1
24.58	1,868	7,623	7.5	1,321.8	1,321.6	0.2
24.77	1,665	6,922	8.3	1,326.7	1,326.3	0.4
25.15	2,245	8,140	7.1	1,334.8	1,334.5	0.3
25.34	2,635	9,018	6.4	1,341.3	1,341.0	0.3
25.53	2,915	8,586	6.7	1,344.9	1,344.6	0.3
26.10	2,665	8,674	6.7	1,358.3	1,357.7	0.6
26.67	2,705	8,403	6.9	1,371.4	1,371.4	0.0
26.85	2,865	8,723	6.6	1,375.8	1,375.4	0.4
26.95	2,928	8,520	6.8	1,377.4	1,376.9	0.5
27.61	3,760	9,284	6.2	1,393.7	1,393.2	0.5
27.97	4,045	10,233	5.7	1,398.8	1,398.3	0.5

Table 1A - Summary of Duplicate Effective Modeling Floodway Table

Duplicate Effective FIS Model HEC-2

HEC-2 Filename: HASSHEC2.dat

(1929 Datum)

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
20.51	1,864	7,174	7.9	1,234.0	1,233.7	0.3
20.80	1,705	6,997	8.1	1,240.4	1,239.8	0.6
21.17	1,580	7,201	7.9	1,250.7	1,250.4	0.3
21.65	1,725	7,727	7.3	1,260.8	1,260.3	0.5
21.84	1,715	7,632	7.4	1,263.2	1,262.9	0.3
22.12	1,567	8,759	6.5	1,269.3	1,269.0	0.3
22.21	1,635	7,196	8.0	1,270.4	1,270.1	0.3
22.50	1,815	7,965	7.2	1,277.2	1,277.1	0.1
22.88	1,775	7,849	7.3	1,284.7	1,284.0	0.7
23.07	1,540	7,074	8.1	1,288.0	1,287.2	0.8
23.45	1,529	8,382	6.8	1,297.9	1,297.8	0.1
23.63	1,645	7,360	7.8	1,300.1	1,300.0	0.1
24.01	2,186	8,582	6.7	1,308.6	1,308.6	0.0
24.39	2,145	8,869	6.5	1,317.4	1,317.4	0.0
24.49	1,999	6,820	8.4	1,319.2	1,319.1	0.1
24.58	1,868	7,623	7.5	1,321.8	1,321.6	0.2
24.77	1,665	6,922	8.3	1,326.7	1,326.3	0.4
25.15	2,245	8,141	7.1	1,334.8	1,334.5	0.3
25.34	2,635	9,017	6.4	1,341.3	1,341.0	0.3
25.53	2,915	8,586	6.7	1,344.9	1,344.6	0.3
26.10	2,665	8,674	6.7	1,358.3	1,357.7	0.6
26.67	2,705	8,403	6.9	1,371.4	1,371.4	0.0
26.85	2,865	8,723	6.6	1,375.8	1,375.4	0.4
26.95	2,928	8,520	6.8	1,377.4	1,376.9	0.5
27.61	3,760	9,284	6.2	1,393.7	1,393.2	0.5
27.97	4,045	10,234	5.7	1,398.8	1,398.3	0.5

Table 1B - Summary of Corrected Effective Modeling Floodway Table

Corrected Effective FIS Model HEC-RAS

HEC-RAS Filename: Base.prj

(1929 Datum)

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
20.51	1,864	7,170	7.9	1,234.0	1,233.7	0.3
20.8	1,705	7,001	8.1	1,240.4	1,239.8	0.6
21.17	1,580	7,350	7.7	1,250.8	1,250.6	0.2
21.65	1,725	7,746	7.3	1,260.8	1,260.4	0.5
21.84	1,715	7,661	7.4	1,263.3	1,262.9	0.3
22.12	1,567	8,766	6.5	1,269.3	1,269.0	0.3
22.21	1,635	7,198	8.0	1,270.4	1,270.1	0.3
22.5	1,815	7,981	7.2	1,277.1	1,277.1	0.1
22.88	1,775	7,927	7.2	1,284.7	1,284.1	0.6
23.07	1,540	7,180	8.0	1,288.1	1,287.3	0.8
23.45	1,529	8,498	6.7	1,298.0	1,297.9	0.0
23.63	1,645	7,401	7.7	1,300.2	1,300.2	0.0
24.01	2,186	8,689	6.6	1,308.6	1,308.7	0.0
24.39	2,145	8,939	6.4	1,317.5	1,317.4	0.0
24.49	1,999	6,811	8.4	1,319.2	1,319.1	0.1
24.58	1,868	7,625	7.5	1,321.8	1,321.6	0.2
24.77	1,665	6,939	8.3	1,326.7	1,326.4	0.3
25.15	2,245	8,212	7.1	1,334.9	1,334.6	0.3
25.34	2,635	9,273	6.2	1,341.4	1,341.1	0.3
25.53	2,915	8,674	6.7	1,344.9	1,344.7	0.2
26.1	2,665	8,771	6.6	1,358.3	1,357.8	0.5
26.67	2,705	8,546	6.8	1,371.5	1,371.6	-0.1
26.85	2,865	8,875	6.5	1,375.9	1,375.5	0.4
26.95	2,928	8,990	6.4	1,377.5	1,377.1	0.4
27.61	3,760	9,569	6.1	1,393.7	1,393.3	0.5
27.97	4,045	10,393	5.6	1,398.8	1,398.4	0.4

Table 2 - Datum Adjusted Corrected Effective Model

Corrected Effective Model (Base.prj)			
Sub-Critical Flow River Sta	W.S. Elev (1929 Datum) (ft)	GR Data Adjustment (1929 to 1988) (ft)	W.S. Elev (1988 Datum) (ft)
15.68	1130.39	1.76	1132.15
15.78	1131.87	1.76	1133.63
15.87	1133.03	1.76	1134.79
15.97	1135.24	1.76	1137
16.06	1136.75	1.76	1138.51
16.16	1138.3	1.76	1140.06
16.25	1141.21	1.76	1142.97
16.35	1142.45	1.76	1144.21
16.44	1144.33	1.76	1146.09
16.53	1146.96	1.76	1148.72
16.63	1148.66	1.76	1150.42
16.72	1150.79	1.76	1152.55
16.82	1152.78	1.76	1154.54
16.91	1154.4	1.76	1156.16
17.01	1157.09	1.76	1158.85
17.1	1159.01	1.76	1160.77
17.2	1160.98	1.76	1162.74
17.29	1162.72	1.76	1164.48
17.39	1165.32	1.76	1167.08
17.48	1167.44	1.76	1169.2
17.58	1170	1.76	1171.76
17.67	1172.45	1.76	1174.21
17.77	1174.76	1.76	1176.52
17.86	1177.12	1.76	1178.88
17.95	1178.71	1.76	1180.47
18.05	1180.74	1.76	1182.5
18.14	1182.35	1.76	1184.11
18.24	1183.72	1.76	1185.48
18.33	1185.78	1.76	1187.54
18.43	1188.2	1.76	1189.96
18.52	1190.96	1.76	1192.72
18.62	1192.89	1.76	1194.65
18.71	1195.04	1.76	1196.8
18.81	1197.14	1.76	1198.9
18.9	1198.83	1.76	1200.59
19	1200.85	1.76	1202.61
19.09	1202.49	1.76	1204.25
19.19	1205.16	1.76	1206.92
19.28	1207.27	1.76	1209.03
19.38	1209.52	1.76	1211.28
19.47	1211.72	1.76	1213.48
19.56	1214.51	1.76	1216.27
19.66	1217.31	1.76	1219.07
19.75	1219.31	1.76	1221.07
19.85	1222.12	1.76	1223.88
19.94	1223.1	1.76	1224.86
20.14	1226.76	1.76	1228.52
20.32	1229.18	1.76	1230.94
20.42	1231.2	1.76	1232.96
20.51	1233.67	1.76	1235.43
20.61	1235.73	1.76	1237.49
20.7	1237.85	1.76	1239.61
20.8	1239.83	1.76	1241.59

Existing or Pre-Project Condition Model (HassyModelEx.prj)		
Sub-Critical Flow River Sta	W.S. Elev (1988 Datum) (ft)	WSEL Differential HassyModelEx-Base (ft)
15.68	1132.15	1.76
15.78	1133.63	1.76
15.87	1134.79	1.76
15.97	1137	1.76
16.06	1138.51	1.76
16.16	1140.06	1.76
16.25	1142.97	1.76
16.35	1144.21	1.76
16.44	1146.09	1.76
16.53	1148.72	1.76
16.63	1150.42	1.76
16.72	1152.55	1.76
16.82	1154.54	1.76
16.91	1156.16	1.76
17.01	1158.85	1.76
17.1	1160.77	1.76
17.2	1162.74	1.76
17.29	1164.48	1.76
17.39	1167.08	1.76
17.48	1169.2	1.76
17.58	1171.76	1.76
17.67	1174.21	1.76
17.77	1176.52	1.76
17.86	1178.88	1.76
17.95	1180.47	1.76
18.05	1182.5	1.76
18.14	1184.11	1.76
18.24	1185.48	1.76
18.33	1187.54	1.76
18.43	1189.96	1.76
18.52	1192.72	1.76
18.62	1194.65	1.76
18.71	1196.8	1.76
18.81	1198.9	1.76
18.9	1200.59	1.76
19	1202.61	1.76
19.09	1204.25	1.76
19.19	1206.92	1.76
19.28	1209.03	1.76
19.38	1211.28	1.76
19.47	1213.48	1.76
19.56	1216.27	1.76
19.66	1219.07	1.76
19.75	1221.07	1.76
19.85	1223.88	1.76
19.94	1224.86	1.76
20.14	1228.52	1.76
20.32	1230.94	1.76
20.42	1232.96	1.76
20.51	1235.43	1.76
20.61	1237.49	1.76
20.7	1239.61	1.76
20.8	1241.59	1.76

Table 2 - Datum Adjusted Corrected Effective Model

Corrected Effective Model (Base.prj)			
Sub-Critical Flow River Sta	W.S. Elev (1929 Datum) (ft)	GR Data Adjustment (1929 to 1988) (ft)	W.S. Elev (1988 Datum) (ft)
20.89	1242.71	1.76	1244.47
Cross Sections to be Replaced			
27.33	1387.22	2.15	1389.37
27.52	1391.14	2.15	1393.29
27.61	1393.25	2.15	1395.4
27.78	1396.02	2.15	1398.17
27.97	1398.39	2.15	1400.54
28.09	1401.35	2.15	1403.5
28.19	1403.67	2.15	1405.82
28.28	1406.67	2.15	1408.82
28.38	1409.43	2.15	1411.58
28.47	1412.06	2.15	1414.21
28.57	1415.12	2.15	1417.27
28.66	1417.84	2.15	1419.99
28.76	1420.59	2.15	1422.74
28.85	1423.41	2.15	1425.56
28.95	1425.69	2.15	1427.84
29.04	1427.84	2.15	1429.99
29.13	1430.82	2.15	1432.97
29.23	1433.14	2.15	1435.29
29.32	1435.99	2.15	1438.14
29.42	1438.32	2.15	1440.47
29.51	1440.96	2.15	1443.11
29.61	1443.97	2.15	1446.12
29.7	1446.7	2.15	1448.85
29.8	1449.72	2.15	1451.87
29.89	1452.58	2.15	1454.73
29.99	1455.3	2.15	1457.45
30.08	1457.93	2.15	1460.08
30.18	1460.77	2.15	1462.92
30.27	1463.7	2.15	1465.85
30.37	1466.77	2.15	1468.92
30.46	1469.32	2.15	1471.47
30.56	1471.74	2.15	1473.89
30.65	1474.49	2.15	1476.64
30.74	1477.23	2.15	1479.38
30.84	1479.83	2.15	1481.98
30.93	1481.93	2.15	1484.08
31.03	1484.6	2.15	1486.75

Existing or Pre-Project Condition Model (HassyModelEx.prj)		
Sub-Critical Flow River Sta	W.S. Elev (1988 Datum) (ft)	WSEL Differential HassyModelEx-Base (ft)
20.89	1244.47	1.76
New Topographic Cross Sections		
27.33	1389.27	2.05
27.52	1393.36	2.22
27.61	1395.37	2.12
27.78	1398.19	2.17
27.97	1400.54	2.15
28.09	1403.51	2.16
28.19	1405.82	2.15
28.28	1408.82	2.15
28.38	1411.58	2.15
28.47	1414.21	2.15
28.57	1417.27	2.15
28.66	1419.99	2.15
28.76	1422.74	2.15
28.85	1425.56	2.15
28.95	1427.84	2.15
29.04	1429.99	2.15
29.13	1432.97	2.15
29.23	1435.29	2.15
29.32	1438.14	2.15
29.42	1440.47	2.15
29.51	1443.11	2.15
29.61	1446.12	2.15
29.7	1448.85	2.15
29.8	1451.87	2.15
29.89	1454.73	2.15
29.99	1457.45	2.15
30.08	1460.08	2.15
30.18	1462.92	2.15
30.27	1465.85	2.15
30.37	1468.92	2.15
30.46	1471.47	2.15
30.56	1473.89	2.15
30.65	1476.64	2.15
30.74	1479.38	2.15
30.84	1481.98	2.15
30.93	1484.08	2.15
31.03	1486.75	2.15

Table 3 - Summary of Post-Project Condition Modeling Floodway Table

Post-Project Condition Model HEC-RAS

HEC-RAS Filename: HassyModelProp1.prj

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
15.68	1753	7792	7.2	1132.2	1132.2	0.1
15.78	1660	8105	6.9	1133.7	1133.6	0.1
15.87	1830	6929	8.1	1135.0	1134.8	0.2
15.97	1825	8181	6.8	1137.0	1137.0	0.0
16.06	2195	9238	6.1	1138.5	1138.5	0.0
16.16	2407	6704	8.4	1140.1	1140.1	0.1
16.25	2665	10646	5.3	1143.1	1143.0	0.1
16.35	2735	10088	5.6	1144.2	1144.2	0.0
16.44	2750	8040	7.0	1146.1	1146.1	0.0
16.53	2640	8616	6.5	1148.7	1148.7	0.0
16.63	2527	8351	6.7	1150.5	1150.4	0.1
16.72	2511	8558	6.5	1152.6	1152.6	0.0
16.82	2456	9650	5.8	1154.5	1154.5	0.0
16.91	2495	7264	7.7	1156.2	1156.2	0.1
17.01	2435	8364	6.7	1159.0	1158.9	0.2
17.1	2280	8275	6.8	1161.0	1160.8	0.2
17.2	2045	8251	6.8	1163.0	1162.7	0.3
17.29	1815	6704	8.4	1165.1	1164.5	0.7
17.39	1675	7387	7.6	1168.0	1167.1	0.9
17.48	1585	6817	8.2	1170.0	1169.2	0.8
17.58	1550	7551	7.4	1172.5	1171.8	0.7
17.67	1550	7304	7.7	1174.5	1174.2	0.3
17.77	1505	7338	7.6	1176.7	1176.5	0.2
17.86	1505	7814	7.2	1178.9	1178.9	0.0
17.95	1260	6005	9.3	1180.5	1180.5	0.1
18.05	1340	7279	7.7	1183.2	1182.5	0.7
18.14	1456	7898	7.1	1184.6	1184.1	0.5
18.24	1576	7460	7.5	1185.9	1185.5	0.5
18.33	1607	6557	8.5	1187.7	1187.5	0.1
18.43	1701	6428	8.7	1190.1	1190.0	0.1
18.52	2122	8261	6.8	1192.7	1192.7	0.0
18.62	2330	8324	6.7	1194.7	1194.7	0.0
18.71	2480	7825	7.2	1197.0	1196.8	0.2
18.81	2435	9539	5.9	1199.2	1198.9	0.3
18.9	2280	6978	8.1	1200.8	1200.6	0.2
19	2075	8662	6.5	1203.2	1202.6	0.6
19.09	1820	6601	8.6	1204.8	1204.3	0.5
19.19	1530	6810	8.3	1207.4	1206.9	0.5
19.28	1335	6465	8.8	1209.6	1209.0	0.6
19.38	1225	5961	9.5	1211.8	1211.3	0.6
19.47	1235	6540	8.7	1214.0	1213.5	0.5
19.56	1055	5294	10.7	1216.4	1216.3	0.1
19.66	1060	6876	8.2	1219.4	1219.1	0.3

Table 3 - Summary of Post-Project Condition Modeling Floodway Table

Post-Project Condition Model HEC-RAS

HEC-RAS Filename: HassyModelProp1.prj

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
19.75	1140	6349	8.9	1221.5	1221.1	0.4
19.85	1395	7309	7.7	1223.9	1223.9	0.0
19.94	1475	6532	8.7	1225.4	1224.9	0.5
20.14	1535	7361	7.7	1228.9	1228.5	0.4
20.32	1584	7838	7.2	1231.8	1230.9	0.8
20.42	1704	6581	8.6	1233.3	1233.0	0.3
20.51	1864	7170	7.9	1235.7	1235.4	0.3
20.61	1905	7300	7.8	1237.9	1237.5	0.4
20.7	1790	7162	7.9	1240.0	1239.6	0.4
20.8	1705	7001	8.1	1242.2	1241.6	0.6
20.89	1520	6399	8.9	1244.6	1244.5	0.2
20.98	1396	7393	7.7	1246.8	1246.7	0.1
21.08	1220	5797	9.8	1248.2	1248.0	0.2
21.17	1230	6457	8.8	1251.0	1250.9	0.1
21.3	945	5477	10.3	1252.8	1252.7	0.1
21.32 BR D	868	4417	12.8	1252.1	1252.1	0.0
21.32 BR U	880	6196	9.1	1255.1	1255.1	0.0
21.34	945	7116	8.0	1255.5	1255.5	0.0
21.36	1215	7950	7.1	1256.4	1256.4	0.0
21.46	1645	10146	5.6	1257.7	1257.7	0.0
21.55	1785	6757	8.4	1258.7	1258.6	0.1
21.65	1725	7100	8.0	1261.2	1260.7	0.5
21.74	1700	7964	7.1	1262.4	1261.9	0.5
21.84	1715	7931	7.1	1263.3	1263.0	0.3
21.93	1750	7116	8.0	1264.8	1264.6	0.3
22.03	1555	6516	8.8	1267.1	1267.0	0.1
22.12	1447	6089	9.4	1269.7	1269.3	0.4
22.21	1542	6832	8.4	1272.6	1272.3	0.3
22.31	1675	7528	7.6	1274.9	1274.7	0.2
22.4	1709	6707	8.5	1277.0	1276.9	0.1
22.5	1800	7601	7.5	1279.8	1279.7	0.1
22.59	1965	7945	7.2	1281.7	1281.5	0.2
22.69	1975	6992	8.2	1283.4	1283.2	0.2
22.78	1845	7381	7.8	1285.8	1285.4	0.4
22.88	1775	8272	6.9	1287.8	1287.0	0.8
22.97	1690	7980	7.2	1289.2	1288.4	0.8
23.07	1640	7938	7.2	1291.2	1290.5	0.8
23.16	1590	7622	7.5	1293.3	1292.8	0.4
23.26	1400	6843	8.4	1295.8	1295.5	0.3
23.35	1450	6705	8.5	1297.9	1297.8	0.1
23.45	1549	7805	7.3	1300.1	1300.0	0.1
23.54	1590	8355	6.9	1301.5	1301.4	0.1
23.63	1645	7624	7.5	1302.7	1302.6	0.1

Table 3 - Summary of Post-Project Condition Modeling Floodway Table

Post-Project Condition Model HEC-RAS

HEC-RAS Filename: HassyModelProp1.prj

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
23.73	1300	5286	10.8	1304.9	1304.6	0.3
23.82	928	5317	10.8	1308.6	1308.3	0.3
23.88 BR D	825	4388	13.0	1308.3	1308.3	0.0
23.88 BR U	835	5970	9.6	1310.7	1310.7	0.0
23.92	928	7209	7.9	1311.3	1311.3	0.0
24.01	1436	8330	6.9	1312.9	1312.9	0.0
24.11	1734	8895	6.4	1314.1	1314.0	0.1
24.2	2050	8632	6.6	1315.5	1315.4	0.0
24.3	2311	8256	6.9	1317.4	1317.4	0.0
24.39	2145	8578	6.7	1319.6	1319.6	0.0
24.49	1999	7129	8.0	1321.5	1321.3	0.2
24.58	1898	7512	7.6	1323.8	1323.8	0.1
24.68	1685	5956	9.6	1326.1	1326.1	0.0
24.77	1510	7135	8.0	1329.2	1328.8	0.5
24.87	1250	5701	10.0	1331.3	1331.2	0.2
24.9	1080	5611	10.2	1333.7	1333.2	0.4
24.95 BR D	907	4535	12.6	1333.7	1333.7	0.0
24.95 BR U	916	6131	9.3	1335.9	1335.9	0.0
25.02	1080	8008	7.2	1336.5	1336.5	0.0
25.06	1130	6785	8.4	1336.9	1337.0	0.0
25.15	1710	9178	6.3	1338.7	1338.6	0.1
25.24	2036	6570	8.8	1340.1	1340.0	0.1
25.34	2635	9144	6.3	1343.2	1342.8	0.4
25.43	2830	8783	6.6	1345.1	1344.9	0.3
25.53	2945	10348	5.6	1347.3	1347.0	0.3
25.62	2795	7452	7.8	1348.7	1348.5	0.2
25.72	2795	8015	7.2	1351.4	1350.9	0.6
25.81	2720	7624	7.6	1353.6	1353.3	0.3
25.91	2570	7794	7.4	1355.5	1355.0	0.5
26	2232	7222	8.0	1357.5	1357.1	0.4
26.1	2200	7828	7.4	1360.3	1359.8	0.5
26.19	2070	8195	7.1	1362.9	1362.4	0.5
26.29	1870	7643	7.6	1365.1	1364.7	0.4
26.38	1678	7840	7.4	1368.4	1368.3	0.1
26.40 BR D	1568	7197	8.0	1368.3	1368.2	0.1
26.40 BR U	1571	7471	7.7	1369.0	1369.0	0.0
26.48	1678	8561	6.8	1369.3	1369.3	0.0
26.57	1925	8597	6.7	1372.0	1371.9	0.0
26.67	2295	9352	6.2	1373.9	1373.6	0.3
26.76	2625	8523	6.8	1375.5	1375.0	0.5
26.85	2809	9365	6.2	1377.6	1377.0	0.6
26.95	3028	8651	6.7	1379.0	1378.5	0.5
27.04	2975	9418	6.1	1381.9	1381.3	0.6

Table 3 - Summary of Post-Project Condition Modeling Floodway Table

Post-Project Condition Model HEC-RAS

HEC-RAS Filename: HassyModelProp1.prj

River Sta.	Top Width (ft)	Flow Area (sq ft)	Vel Total (ft/s)	WSEL W/Floodway (ft)	WSEL W/O Floodway (ft)	Elevation Difference (ft)
27.14	3100	10560	5.5	1384.7	1384.1	0.6
27.23	3308	9332	6.2	1387.2	1386.9	0.4
27.33	3478	8471	6.8	1389.7	1389.3	0.4
27.52	3650	10813	5.4	1393.9	1393.4	0.6
27.61	3760	9506	6.1	1395.9	1395.4	0.5
27.78	3960	14062	4.1	1398.6	1398.2	0.4
27.97	4045	10386	5.6	1401.0	1400.5	0.4
28.09	4100	10667	5.5	1404.0	1403.5	0.5
28.19	4195	9859	5.9	1406.6	1405.8	0.8
28.28	4409	11251	5.2	1409.6	1408.8	0.7
28.38	4669	10707	5.5	1412.1	1411.6	0.5
28.47	4745	10258	5.7	1414.9	1414.2	0.7
28.57	4515	10549	5.5	1417.6	1417.3	0.3
28.66	4295	9387	6.2	1420.1	1420.0	0.1
28.76	3925	9572	6.1	1423.3	1422.7	0.5
28.85	3735	9768	6.0	1426.2	1425.6	0.7
28.95	3780	10597	5.5	1428.6	1427.8	0.7
29.04	4005	10061	5.8	1430.5	1430.0	0.5
29.13	4664	11608	5.0	1433.1	1433.0	0.1
29.23	5134	11063	5.3	1435.4	1435.3	0.1
29.32	5028	11733	5.0	1438.2	1438.1	0.1
29.42	4865	11694	5.0	1440.5	1440.5	0.0
29.51	4695	10416	5.6	1443.2	1443.1	0.0
29.61	4540	11344	5.2	1446.2	1446.1	0.1
29.7	4525	10260	5.7	1448.9	1448.9	0.1
29.8	4381	9835	5.9	1451.9	1451.9	0.0
29.89	4086	10316	5.7	1454.9	1454.7	0.1
29.99	3920	9038	6.5	1457.4	1457.5	0.0
30.08	3950	9771	6.0	1460.3	1460.1	0.2
30.18	4095	9402	6.2	1462.9	1462.9	0.0
30.27	4161	9778	6.0	1465.9	1465.9	0.1
30.37	4381	9879	5.9	1468.9	1468.9	0.0
30.46	4590	10825	5.4	1471.5	1471.5	0.0
30.56	4559	9963	5.9	1473.9	1473.9	0.0
30.65	4366	10345	5.7	1476.6	1476.6	0.0
30.74	4210	9378	6.2	1479.4	1479.4	0.0
30.84	4123	10430	5.6	1482.0	1482.0	0.0
30.93	3951	9086	6.4	1484.4	1484.1	0.3
31.03	3836	9431	6.3	1487.2	1486.8	0.5

FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE STRUCTURES FORM

O.M.B. No. 3067-0148
Expires September 30, 2005

PAPERWORK REDUCTION ACT

Public reporting burden for this form is estimated to average 7 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0148). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

Flooding Source: Hassayampa River
Note: Fill out one form for each flooding source studied

A. GENERAL

Complete the appropriate section(s) for each Structure listed below:

Channelization.....complete Section B
Bridge/Culvert.....complete Section C
Dam .....complete Section D
Levee/Floodwall .....complete Section E
Sediment Transport.....complete Section F (if required)

Description Of Structure

1. **Name of Structure: Peoria Avenue Bridge**

   Type (check one): ☐ Channelization ☒ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

   Location of Structure: Peoria Avenue at Hassayampa River

   Downstream Limit/Cross Section: 21.3

   Upstream Limit/Cross Section: 21.34

2. **Name of Structure: Greenway Road**

   Type (check one): ☐ Channelization ☒ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

   Location of Structure: Greenway Road and Hassayampa River

   Downstream Limit/Cross Section: 23.82

   Upstream Limit/Cross Section: 23.92

3. **Name of Structure: Bell Road**

   Type (check one) ☐ Channelization ☒ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

   Location of Structure: Bell Road and Hassayampa River

   Downstream Limit/Cross Section: 24.9

   Upstream Limit/Cross Section: 25.02

NOTE: For more structures, attach additional pages as needed.

FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE STRUCTURES FORM

O.M.B. No. 3067-0148
Expires September 30, 2005

PAPERWORK REDUCTION ACT

Public reporting burden for this form is estimated to average 7 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0148). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

Flooding Source: Hassayampa River
Note: Fill out one form for each flooding source studied

A. GENERAL

Complete the appropriate section(s) for each Structure listed below:

Channelization.....complete Section B
Bridge/Culvert.....complete Section C
Dam .....complete Section D
Levee/Floodwall .....complete Section E
Sediment Transport.....complete Section F (if required)

Description Of Structure

4. **Name of Structure: Hummingbird Springs Road Bridge**

Type (check one): ☐ Channelization ☒ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

Location of Structure: Hummingbird Springs Road at Hassayampa River

Downstream Limit/Cross Section: 26.38

Upstream Limit/Cross Section: 26.48

1. **Name of Structure:**

Type (check one): ☐ Channelization ☐ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

Location of Structure:

Downstream Limit/Cross Section:

Upstream Limit/Cross Section:

2. **Name of Structure:**

Type (check one) ☐ Channelization ☐ Bridge/Culvert ☐ Levee/Floodwall ☐ Dam

Location of Structure:

Downstream Limit/Cross Section:

Upstream Limit/Cross Section:

NOTE: For more structures, attach additional pages as needed.

B. CHANNELIZATION

Flooding Source:

Name of Structure:

1. Accessory Structures

   The channelization includes (check one):

   ☐ Levees [Attach Section E (Levee/Floodwall)]
   ☐ Superelevated sections
   ☐ Debris basin/detention basin
   ☐ Other (Describe):
   ☐ Drop structures
   ☐ Transitions in cross sectional geometry
   ☐ Energy dissipator

2. Drawing Checklist

   Attach the plans of the channelization certified by a registered professional engineer, as described in the instructions.

3. Hydraulic Considerations

   The channel was designed to carry (cfs) and/or the -year flood.

   The design elevation in the channel is based on (check one):

   ☐ Subcritical flow ☐ Critical flow ☐ Supercritical flow ☐ Energy grade line

   If there is the potential for a hydraulic jump at the following locations, check all that apply and attach an explanation of how the hydraulic jump is controlled without affecting the stability of the channel.

   ☐ Inlet to channel ☐ Outlet of channel ☐ At Drop Structures ☐ At Transitions
   ☐ Other locations (specify):

4. Sediment Transport Considerations

   Was sediment transport considered? ☐ Yes ☐ No If Yes, then fill out Section F (Sediment Transport).
   If No, then attach your explanation for why sediment transport was not considered.

C. BRIDGE/CULVERT

Flooding Source:

Name of Structure:

1. This revision reflects (check one):

   ☒ New bridge/culvert not modeled in the FIS
   ☐ Modified bridge/culvert previously modeled in the FIS
   ☐ New analysis of bridge/culvert previously modeled in the FIS

2. Hydraulic model used to analyze the structure (e.g., HEC-2 with special bridge routine, WSPRO, HY8):
   If different than hydraulic analysis for the flooding source, justify why the hydraulic analysis used for the flooding source could not analyze the structures. Attach justification.

3. Attach plans of the structures certified by a registered professional engineer. The plan detail and information should include the following (check the information that has been provided):

   ☒ Dimensions (height, width, span, radius, length)
   ☒ Shape (culverts only)
   ☒ Material
   ☒ Beveling or Rounding
   ☒ Wing Wall Angle
   ☐ Skew Angle
   ☒ Distances Between Cross Sections
   ☒ Erosion Protection
   ☒ Low Chord Elevations – Upstream and Downstream
   ☒ Top of Road Elevations – Upstream and Downstream
   ☒ Structure Invert Elevations – Upstream and Downstream
   ☒ Stream Invert Elevations – Upstream and Downstream
   ☒ Cross-Section Locations

4. Sediment Transport Considerations

   Was sediment transport considered? ☐ Yes ☒ No If yes, then fill out Section F (Sediment Transport).
   If No, then attach your explanation for why sediment transport was not considered.

D. DAM

Flooding Source:

Name of Structure:

1. This request is for (check one): ☐ Existing dam ☐ New dam ☐ Modification of existing dam
2. The dam was designed by (check one): ☐ Federal agency ☐ State agency ☐ Local government agency

   ☐ Private organization Name of the agency or organization:
3. Does the project involve revised hydrology? ☐ Yes ☐ No

   If Yes, complete the Riverine Hydrology & Hydraulics Form (Form 2).
4. Does the submittal include debris/sediment yield analysis? ☐ Yes ☐ No

   If yes, then fill out Section F (Sediment Transport).
   If No, then attach your explanation for why debris/sediment analysis was not considered.
5. Does the Base Flood Elevation behind the dam or downstream of the dam change?

   ☐ Yes ☐ No If Yes, complete the Riverine Hydrology & Hydraulics Form (Form 2) and complete the table below.

Stillwater Elevation Behind the Dam

FREQUENCY (% annual chance)	FIS	REVISED
10-year (10%)		
50-year (2%)		
100-year (1%)		
500-year (0.2%)		
Normal Pool Elevation		

6. Please attach a copy of the formal Operation and Maintenance Plan

E. LEVEE/FLOODWALL

1. System Elements

a. This Levee/Floodwall analysis is based on (check one):

☐ upgrading of an existing levee/floodwall system
☐ a newly constructed levee/floodwall system
☐ reanalysis of an existing levee/floodwall system

b. Levee elements and locations are (check one):

☐ earthen embankment, dike, berm, etc.	Station	to
☐ structural floodwall	Station	to
☐ Other (describe):	Station	to

c. Structural Type (check one):

☐ monolithic cast-in place reinforced concrete
☐ reinforced concrete masonry block
☐ sheet piling
☐ Other (describe):

d. Has this levee/floodwall system been certified by a Federal agency to provide protection from the base flood?

☐ Yes ☐ No

If Yes, by which agency?

e. Attach certified drawings containing the following information (indicate drawing sheet numbers):

1. Plan of the levee embankment and floodwall structures. Sheet Numbers:
2. A profile of the levee/floodwall system showing the Base Flood Elevation (BFE), levee and/or wall crest and foundation, and closure locations for the total levee system. Sheet Numbers:
3. A profile of the BFE, closure opening outlet and inlet invert elevations, type and size of opening, and kind of closure. Sheet Numbers:
4. A layout detail for the embankment protection measures. Sheet Numbers:
5. Location, layout, and size and shape of the levee embankment features, foundation treatment, floodwall structure, closure structures, and pump stations. Sheet Numbers:

2. Freeboard

a. The minimum freeboard provided above the BFE is:

Riverine

3.0 feet or more at the downstream end and throughout	☐ Yes	☐ No
3.5 feet or more at the upstream end	☐ Yes	☐ No
4.0 feet within 100 feet upstream of all structures and/or constrictions	☐ Yes	☐ No

Coastal

1.0 foot above the height of the one percent wave associated with the 1%-annual-chance stillwater surge elevation or maximum wave runup (whichever is greater).	☐ Yes	☐ No
2.0 feet above the 1%-annual-chance stillwater surge elevation	☐ Yes	☐ No

2. Freeboard (continued)

Please note, occasionally exceptions are made to the minimum freeboard requirement. If an exception is requested, attach documentation addressing Paragraph 65.10(b)(1)(ii) of the NFIP Regulations.

If No is answered to any of the above, please attach an explanation.

b. Is there an indication from historical records that ice-jamming can affect the BFE? ☐ Yes ☐ No

If Yes, provide ice-jam analysis profile and evidence that the minimum freeboard discussed above still exists.

3. Closures

a. Openings through the levee system (check one): ☐ exists ☐ does not exist

If opening exists, list all closures:

Channel Station	Left or Right Bank	Opening Type	Highest Elevation for Opening Invert	Type of Closure Device

(Extend table on an added sheet as needed and reference)

Note: Geotechnical and geologic data

In addition to the required detailed analysis reports, data obtained during field and laboratory investigations and used in the design analysis for the following system features should be submitted in a tabulated summary form. (Reference U.S. Army Corps of Engineers [USACE] EM-1110-2-1906 Form 2086.)

4. Embankment Protection

a. The maximum levee slope landside is:

b. The maximum levee slope floodside is:

c. The range of velocities along the levee during the base flood is: (min.) to (max.)

d. Embankment material is protected by (describe what kind):

e. Riprap Design Parameters (check one): ☐ Velocity ☐ Tractive stress
Attach references

Reach	Sideslope	Flow Depth	Velocity	Curve or Straight	Stone Riprap			Depth of Toedown
					D_{100}	D_{50}	Thickness	
Sta to								
Sta to								
Sta to								
Sta to								
Sta to								
Sta to								

(Extend table on an added sheet as needed and reference each entry)

E. LEVEE/FLOODWALL (CONTINUED)

4. Embankment Protection (continued)

f. Is a bedding/filter analysis and design attached? ☐ Yes ☐ No

g. Describe the analysis used for other kinds of protection used (include copies of the design analysis):

Attach engineering analysis to support construction plans.

5. Embankment And Foundation Stability

a. Identify locations and describe the basis for selection of critical location for analysis:

☐ Overall height: Sta. ; height ft.

☐ Limiting foundation soil strength:

Sta. , depth to

strength ϕ = degrees, c = psf

slope: SS = (h) to (v)

(Repeat as needed on an added sheet for additional locations)

b. Specify the embankment stability analysis methodology used (e.g., circular arc, sliding block, infinite slope, etc.):

c. Summary of stability analysis results:

Case	Loading Conditions	Critical Safety Factor	Criteria (Min.)
I	End of construction		1.3
II	Sudden drawdown		1.0
III	Critical flood stage		1.4
IV	Steady seepage at flood stage		1.4
VI	Earthquake (Case I)		1.0

(Reference: USACE EM-1110-2-1913 Table 6-1)

d. Was a seepage analysis for the embankment performed? ☐ Yes ☐ No

If Yes, describe methodology used:

e. Was a seepage analysis for the foundation performed? ☐ Yes ☐ No

f. Were uplift pressures at the embankment landside toe checked? ☐ Yes ☐ No

g. Were seepage exit gradients checked for piping potential? ☐ Yes ☐ No

h. The duration of the base flood hydrograph against the embankment is hours.

Attach engineering analysis to support construction plans.

E. LEVEE/FLOODWALL (CONTINUED)

6. Floodwall And Foundation Stability

a. Describe analysis submittal based on Code (check one):

☐ UBC (1988) or ☐ Other (specify):

b. Stability analysis submitted provides for:

☐ Overturning ☐ Sliding If not, explain:

c. Loading included in the analyses were:

☐ Lateral earth @ P_A = psf; P_p = psf

☐ Surcharge-Slope @ , ☐ surface psf

☐ Wind @ P_w = psf

☐ Seepage (Uplift); ☐ Earthquake @ P_{eq} = %g

☐ 1%-annual-chance significant wave height: ft.

☐ 1%-annual-chance significant wave period: sec.

d. Summary of Stability Analysis Results: Factors of Safety.

Itemize for each range in site layout dimension and loading condition limitation for each respective reach.

Loading Condition	Criteria (Min)		Sta	To	Sta	To
	Overturn	Sliding	Overturn	Sliding	Overturn	Sliding
Dead & Wind	1.5	1.5				
Dead & Soil	1.5	1.5				
Dead, Soil, Flood, & Impact	1.5	1.5				
Dead, Soil, & Seismic	1.3	1.3				

(Ref: FEMA 114 Sept 1986; USACE EM 1110-2-2502)

(Note: Extend table on an added sheet as needed and reference)

e. Foundation bearing strength for each soil type:

Bearing Pressure	Sustained Load (psf)	Short Term Load (psf)
Computed design maximum		
Maximum allowable		

f. Foundation scour protection ☐ is, ☐ is not provided. If provided, attach explanation and supporting documentation:

Attach engineering analysis to support construction plans.

7. Settlement

a. Has anticipated potential settlement been determined and incorporated into the specified construction elevations to maintain the established freeboard margin? ☐ Yes ☐ No

b. The computed range of settlement is ft. to ft.

c. Settlement of the levee crest is determined to be primarily from :

☐ Foundation consolidation
☐ Embankment compression
☐ Other (Describe):

d. Differential settlement of floodwalls ☐ has ☐ has not been accommodated in the structural design and construction.

Attach engineering analysis to support construction plans.

8. Interior Drainage

a. Specify size of each interior watershed:

Draining to pressure conduit: acres
Draining to ponding area: acres

b. Relationships Established

Ponding elevation vs. storage	☐ Yes	☐ No
Ponding elevation vs. gravity flow	☐ Yes	☐ No
Differential head vs. gravity flow	☐ Yes	☐ No

c. The river flow duration curve is enclosed: ☐ Yes ☐ No

d. Specify the discharge capacity of the head pressure conduit: cfs

e. Which flooding conditions were analyzed?

• Gravity flow (Interior Watershed)	☐ Yes	☐ No
• Common storm (River Watershed)	☐ Yes	☐ No
• Historical ponding probability	☐ Yes	☐ No
• Coastal wave overtopping	☐ Yes	☐ No

If No for any of the above, attach explanation.

f. Interior drainage has been analyzed based on joint probability of interior and exterior flooding and the capacities of pumping and outlet facilities to provide the established level of flood protection. ☐ Yes ☐ No

If No, attach explanation.

g. The rate of seepage through the levee system for the base flood is cfs

h. The length of levee system used to drive this seepage rate in item g: ft.

8. Interior Drainage (continued)

i. Will pumping plants be used for interior drainage? ☐ Yes ☐ No

If Yes, include the number of pumping plants:
For each pumping plant, list:

	Plant #1	Plant #2
The number of pumps		
The ponding storage capacity		
The maximum pumping rate		
The maximum pumping head		
The pumping starting elevation		
The pumping stopping elevation		
Is the discharge facility protected?		
Is there a flood warning plan?		
How much time is available between warning and flooding?		

Will the operation be automatic? ☐ Yes ☐ No

If the pumps are electric, are there backup power sources? ☐ Yes ☐ No

(Reference: USACE EM-1110-2-3101, 3102, 3103, 3104, and 3105)

Include a copy of supporting documentation of data and analysis. Provide a map showing the flooded area and maximum ponding elevations for all interior watersheds that result in flooding.

9. Other Design Criteria

a. The following items have been addressed as stated:

Liquefaction ☐ is ☐ is not a problem
Hydrocompaction ☐ is ☐ is not a problem
Heave differential movement due to soils of high shrink/swell ☐ is ☐ is not a problem

b. For each of these problems, state the basic facts and corrective action taken:

Attach supporting documentation

c. If the levee/floodwall is new or enlarged, will the structure adversely impact flood levels and/or flow velocities floodside of the structure?
☐ Yes ☐ No

Attach supporting documentation

d. Sediment Transport Considerations:

Was sediment transport considered? ☐ Yes ☐ No If Yes, then fill out Section F (Sediment Transport).
If No, then attach your explanation for why sediment transport was not considered.

E. LEVEE/FLOODWALL (CONTINUED)

10. Operational Plan And Criteria

    a. Are the planned/installed works in full compliance with Part 65.10 of the NFIP Regulations? ☐ Yes ☐ No

    b. Does the operation plan incorporate all the provisions for closure devices as required in Paragraph 65.10(c)(1) of the NFIP regulations? ☐ Yes ☐ No

    c. Does the operation plan incorporate all the provisions for interior drainage as required in Paragraph 65.10(c)(2) of the NFIP regulations? ☐ Yes ☐ No

    If the answer is No to any of the above, please attach supporting documentation.

11. Maintenance Plan

    a. Are the planned/installed works in full compliance with Part 65.10 of the NFIP Regulations? ☐ Yes ☐ No
    If No, please attach supporting documentation.

12. Operations and Maintenance Plan

    Please attach a copy of the formal Operations and Maintenance Plan for the levee/floodwall.

F. SEDIMENT TRANSPORT

Flooding Source:

Name of Structure:

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the Base Flood Elevation (BFE); and/or based on the stream morphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including scour and deposition) to affect the BFEs, then provide the following information along with the supporting documentation:

Sediment load associated with the base flood discharge: Volume acre-feet

Debris load associated with the base flood discharge: Volume acre-feet

Sediment transport rate (percent concentration by volume)

Method used to estimate sediment transport:

Most sediment transport formulas are intended for a range of hydraulic conditions and sediment sizes; attach a detailed explanation for using the selected method.

Method used to estimate scour and/or deposition:

Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport:
Please note that bulked flows are used to evaluate the performance of a structure during the base flood; however, FEMA does not map BFEs based on bulked flows.

If a sediment analysis has not been performed, an explanation as to why sediment transport (including scour and deposition) will not affect the BFEs or structures must be provided.

3.0 SURVEY AND MAPPING INFORMATION

3.1 Field Survey Information

Wood, Patel & Associates, Inc. provided field survey information and the elevation reference marks as shown on the work maps (see Exhibit C).

3.2 Mapping

Detailed mapping exceeding the FEMA 37 standards for Flood Insurance Study (FIS) mapping requirements was developed for this study area by Aerial Mapping Company. The flight date was March 22, 2006. The 1-foot contour map at a scale of 1 inch = 400 feet was produced as a work map and is shown on Exhibit C.

4.0 HYDROLOGY

4.1 Hydrology

As discussed above, no new hydrologic analysis was conducted for this study. The 100-year flows were applied based on the Effective FIS model for the Hassayampa River.

5.0 HYDRAULICS

5.1 Hydraulic Models

The HEC-2 model used for the regulatory FIS was prepared by Cella Barr Associates, 1988, as part of a Re-study for Various Streams in Maricopa County, Arizona for the Flood Control District of Maricopa County. The Effective Model is a HEC-2 model for the portion of Hassayampa River from River Mile 15.68 to River Mile 31.03. The Duplicate Effective Model name is *HASSHEC2.DAT*.

The Corrected Effective Model of the HEC-RAS hydraulic model is created by importing the HEC-2 model (*HASSHEC2.DAT*) into HEC-RAS and running the model. The Corrected Effective Model name is *BASE.PRJ*.

The Existing or Pre-Project Condition Model was created in HEC-RAS by incorporating cross sections prepared from new topographic mapping into the Corrected Effective Model for the reach from cross section 20.98 to 27.23, inclusive. Datum adjustments were made to the cross sections upstream and downstream of the new cross sections as described in Section 2.2.2. The Existing or Pre-Project Condition model name is *HASSYMODELEX.PRJ*.

The Post-Project Conditions Model was developed by incorporating the four proposed bridge and roadway cross sections, Peoria Avenue, Greenway Road, Bell Road and Hummingbird Springs Road, into the Existing or Pre-Project Condition Model. The Post-Project Condition model name is *HASSYMODELPROP1.PRJ*.

5.2 Parameter Estimation

5.2.1 Roughness Coefficients

Based on field observations and work performed for the effective FIS, the Manning's n-value varies from 0.03 to 0.04 within the channel with values as high as 1.0 in some of the over bank areas.

5.2.2 Expansion and Contraction Coefficients

There were no warranted changes to the values for expansion and contraction coefficients used in this wash study reach, which are left at 0.30 and 0.10, respectively, since the channel geometric changes are very gradual.

Due to upstream flow contraction and downstream flow expansion at the proposed bridge crossing locations, a portion of the conveyance area in these cross sections will be ineffective. To model this ineffective flow area, encroachments were incorporated in the effective cross sections based on a 1:1 contraction ratio upstream and a 2:1 expansion ratio downstream.

5.3 Cross Section Description

The study reach of the Hassayampa River, as shown on Exhibit C, was modeled by HEC-RAS, and the cross section plots are provided in Appendix E. The selected locations of the channel banks and assigned Manning's n-values are shown on the plots. The cross sections were selected based on the following criteria:

- They are representative of the local channel reach.
- They are oriented perpendicular to the direction of flow with the perspective of looking downstream.
- They do not include ineffective flow areas (unless located immediately upstream and downstream of a culvert crossing).
- They are large enough to contain the 100-year peak discharge.

The study work map for the Post-Project Conditions Model is located in Exhibit C.

5.4 Guide Bank Description

The floodplain is very wide in relation to the proposed bridge opening; therefore, guide banks will be designed and constructed to prevent erosion of the roadway approach embankments based on U.S. Department of Transportation, Hydraulic Engineering Circular No.23 (HEC 23).

The guide banks typically transfer scour away from the abutments by cutting off flow adjacent to the embankment and guiding it through the bridge openings. Based on the nomograph provided in HEC 23 to determine the length of guide banks, a maximum

length of 250' can be used for any calculated length of 250' or above. To be conservative, this project will use a maximum guide bank length of 300' at locations where the calculated length exceeds 250'. Supporting calculations for the guide bank designs are included in Appendix F.

5.5 Modeling Conditions

The Hassayampa River was modeled throughout the reach in the same way as it was modeled in the Effective FIS.

5.6 Floodway Modeling

A floodway run was made for the Post-Project Condition Model using encroachments in an attempt to achieve the 1-foot maximum allowable rise target. As shown in Table 3, the floodway run for the Post-Project Condition Model does not exceed the 1-foot maximum allowable rise.

5.7 Problems Encountered During the Study

No problems were encountered during the hydraulic modeling process.

5.8 Calibration

No calibration of hydraulic parameters was performed for this study reach.

5.9 Final Results

The HEC-RAS model output file and water surface profile for the Post-Project Condition are shown in Appendix E and Figure 2. The hydraulic modeling results show that the water-surface elevations from the Post-Project Condition match the water surface elevations of the Effective FIS Model at the tie-in locations, the 100-year base flows are contained and the floodway does not exceed the 1-foot maximum allowable rise.

6.0 EROSION AND SEDIMENT TRANSPORT

6.1 Erosion and Sediment Transport

It should be noted that the Hassayampa River watershed is in an uncontrolled natural condition without influence from major dam structures. The Existing Hassayampa floodplain is wide, very shallow and naturally dry, but occasionally becomes inundated by flash flooding. Soils throughout the watershed are primarily alluvial deposits composed of sand and gravel with some thin clay layers.

Based on the Lower Hassayampa Watercourse Master Plan (ref. 11), the long term aggradation /degradation within the study reach is minimal and is not anticipated to affect the base flood elevations.

6.2 Estimation of Scour Depth

Since the floodplain is very wide in relation to the proposed bridge openings, guide banks are designed to streamline the flow through the bridge openings and to prevent erosion of the roadway approach embankments. The guide banks are located immediately upstream and downstream of the bridge abutments. The purpose of this section is to summarize the scour depth estimates for the proposed guide banks at the four bridged crossing locations.

Several components were considered in determining the total scour estimate for the guide banks at the proposed bridge sites during the 100-year design flood event. These components included long-term degradation; general or contraction scour; low-flow incisement; bed-form scour; and local scour. The scour depth estimates for the Hassayampa River bridge guide banks were determined by applying a factor of safety to the calculated values and then adding all of the components.

Long-term HEC-6 sediment transport simulations performed by JE Fuller (ref. 12) have been used to determine the long-term scour component at the bridge locations.

Several alternate materials are being considered for the guide bank protection including cement stabilized alluvium (CSA), gabions, concrete and loose rip rap. The guide banks are designed for a 100-year flood event utilizing proposed condition floodway water surface elevations. The scour depth estimates for the guide bank protection are based on

FHWA HEC-20. The results of the design scour depth estimates are summarized in the Table 4 below:

Table 4 - Guide Bank Total Toe-Down Design Depths

Hummingbird Springs Road Bridge		
Flood Event	**Design East (Lt) Guide Bank Toe-Down (ft)**	**Design West (Rt) Guide Bank Toe-Down (ft)**
100-Year	25.0	23.6
Bell Road Bridge		
Flood Event	**Design East (Lt) Guide Bank Toe-Down (ft)**	**Design West (Rt) Guide Bank Toe-Down (ft)**
100-Year	26.6	23.9
Greenway Road Bridge		
Flood Event	**Design East (Lt) Guide Bank Toe-Down (ft)**	**Design West (Rt) Guide Bank Toe-Down (ft)**
100-Year	29.9	29.9
Peoria Avenue Bridge		
Flood Event	**Design East (Lt) Guide Bank Toe-Down (ft)**	**Design West (Rt) Guide Bank Toe-Down (ft)**
100-Year	31.8	32.3

7.0 DRAFT FIS REPORT DATA

7.1 Summary of Discharges

Table 5 provides a summary of discharges in FEMA format for the study area from Flood Insurance Study, Maricopa County Arizona and Unincorporated Areas, Volume 1 of 12, revised September 30, 2005.

Table 5 - SUMMARY OF DISCHARGES IN FEMA FORMAT

Flooding Source & Location	Discharge Area (Sq. Miles)	Peak Discharges (cfs)			
		10-YR	50-YR	100-YR	500-YR
At Granite Reef Aqueduct	930	_1	_1	57,854	_1
Just Above Confluence with Jackrabbit Wash	1,010	_1	_1	55,980	_1

_1 Not Computed

7.2 Annotated Flood Insurance Rate Map

The 100-year effective FIS flows are contained within the proposed study reach as documented in this report. Exhibit D contains the revisions to the effective FIRM panels 04013C1530J & 04013C1090J. Refer to Exhibit C for Post-Project Conditions Model Work Map.

7.3 Flood Profiles

Figure 2 contains the 100-year flow flood profiles for the Post-Project Conditions Model for the study reach of the Hassayampa River.

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

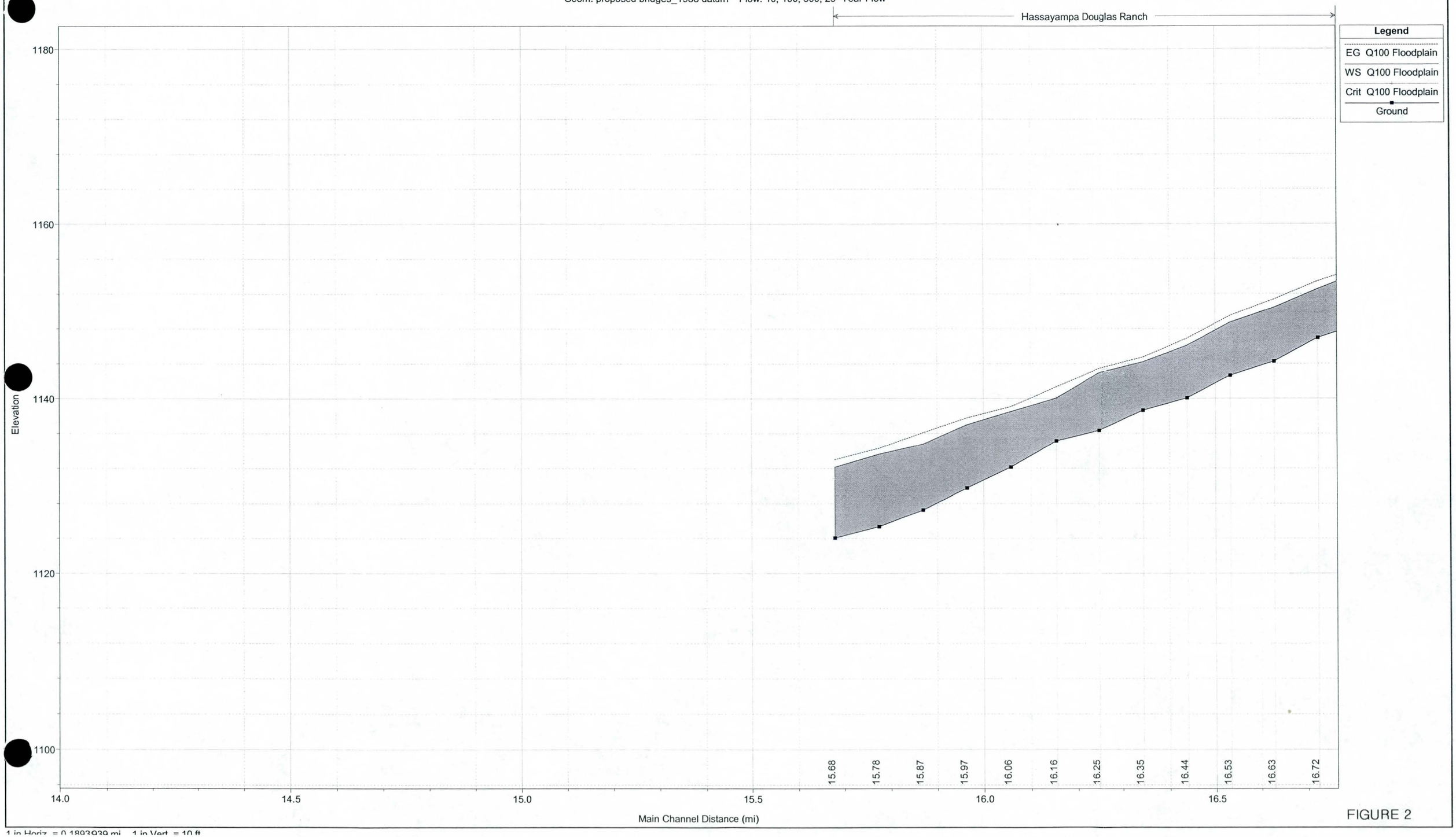


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

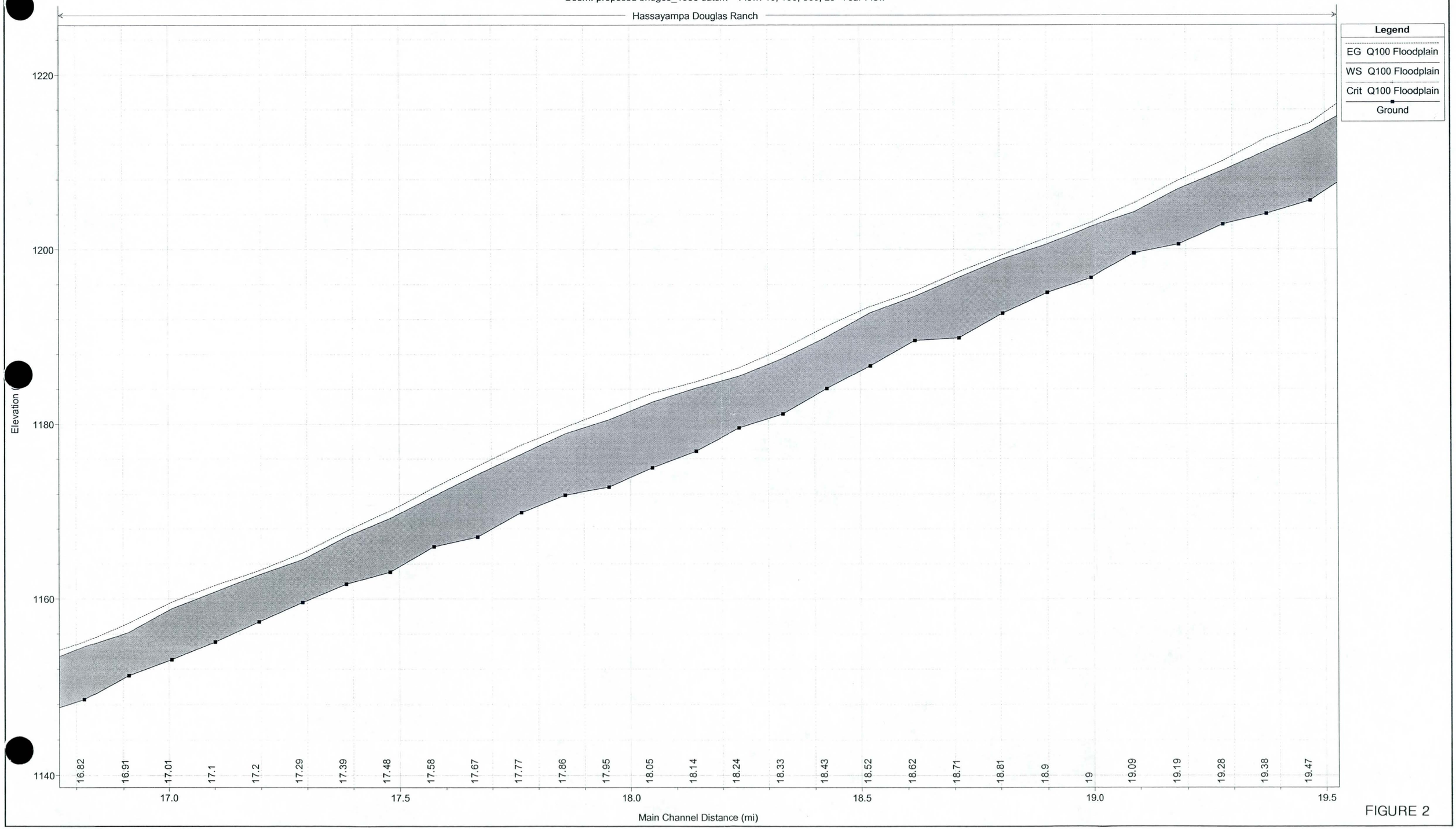
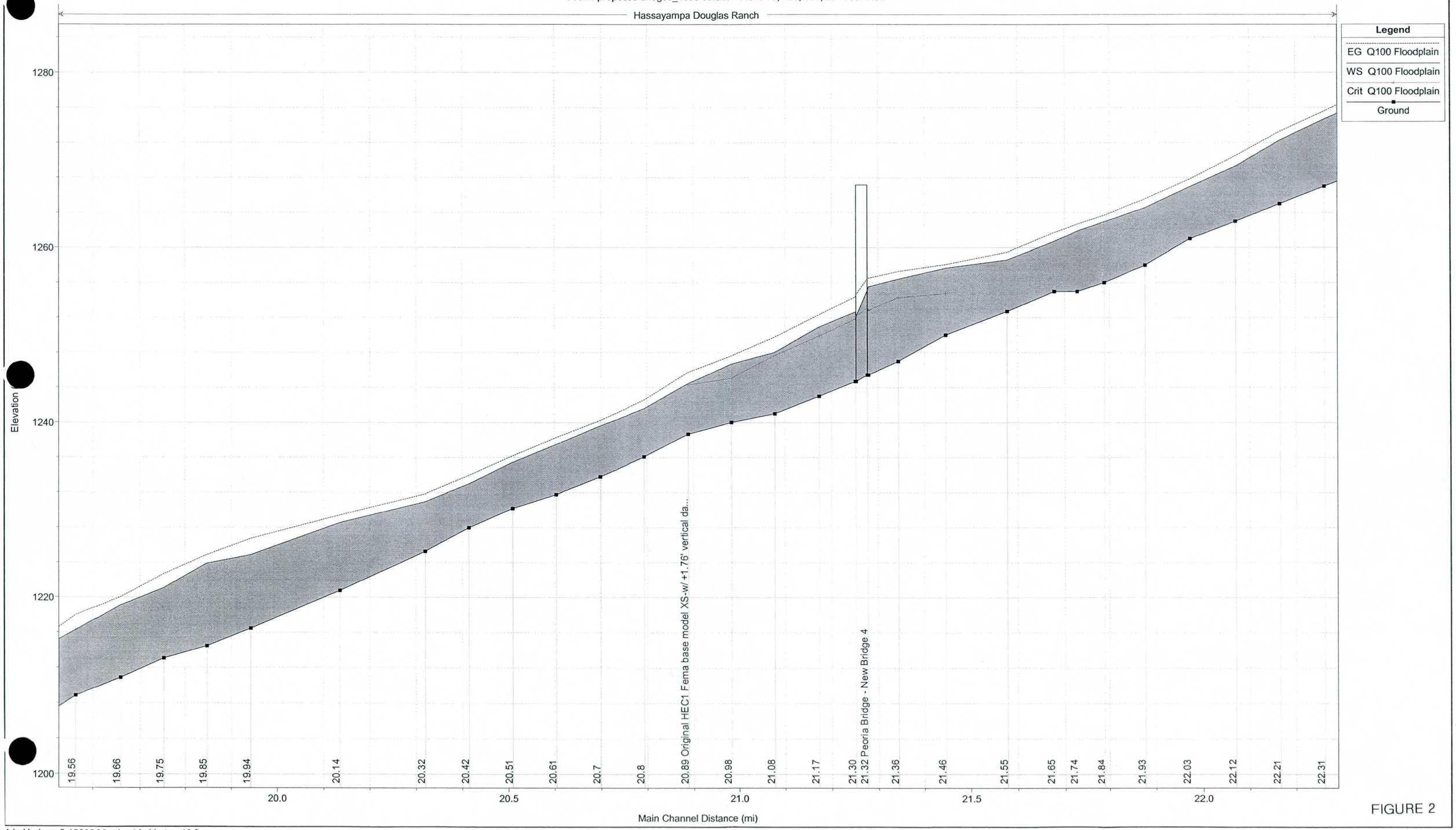


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow



1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

FIGURE 2

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

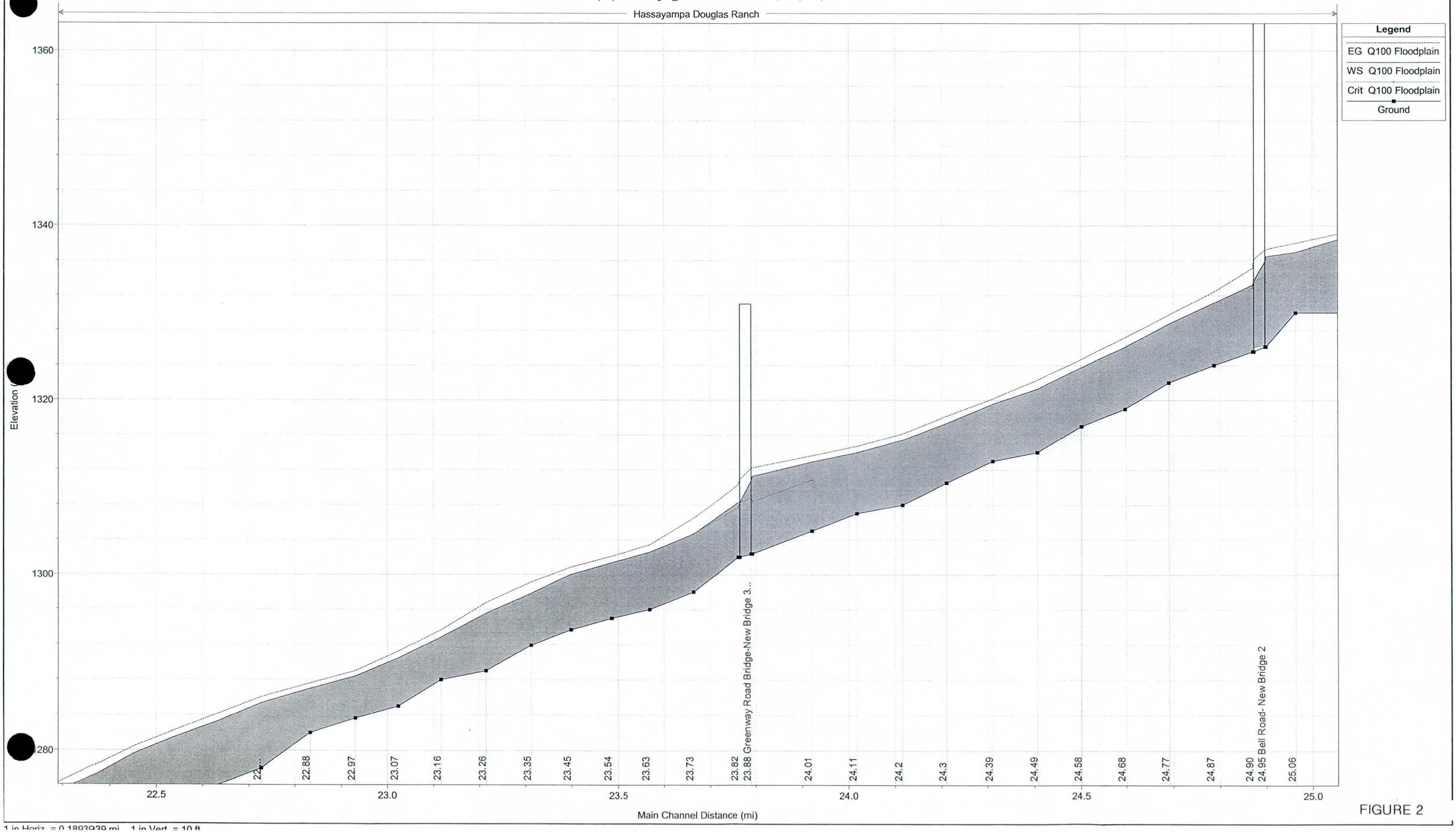


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

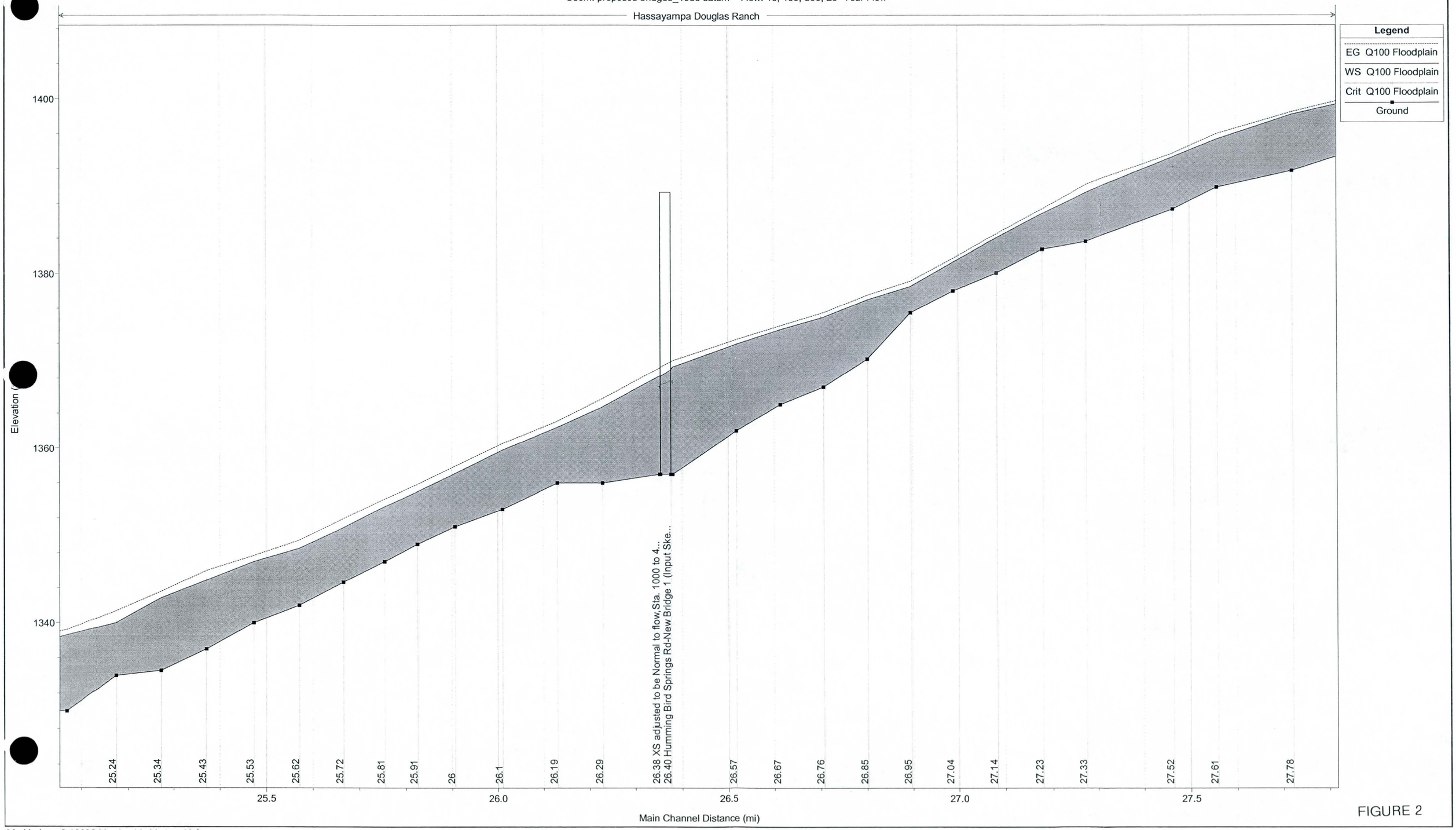


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

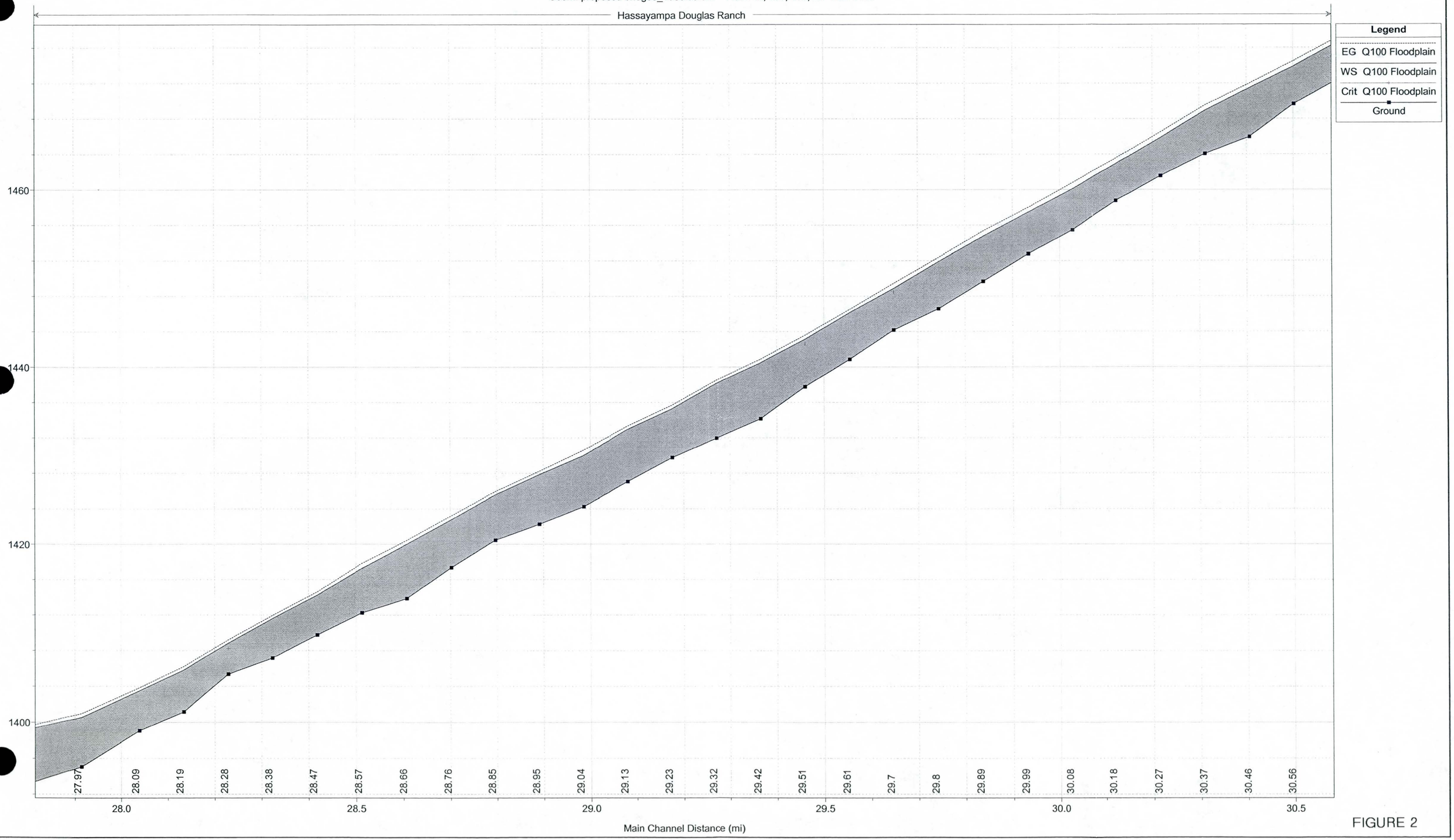


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

Proposed Condition Plan: proposed bridges_1988datum 12/14/2007

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

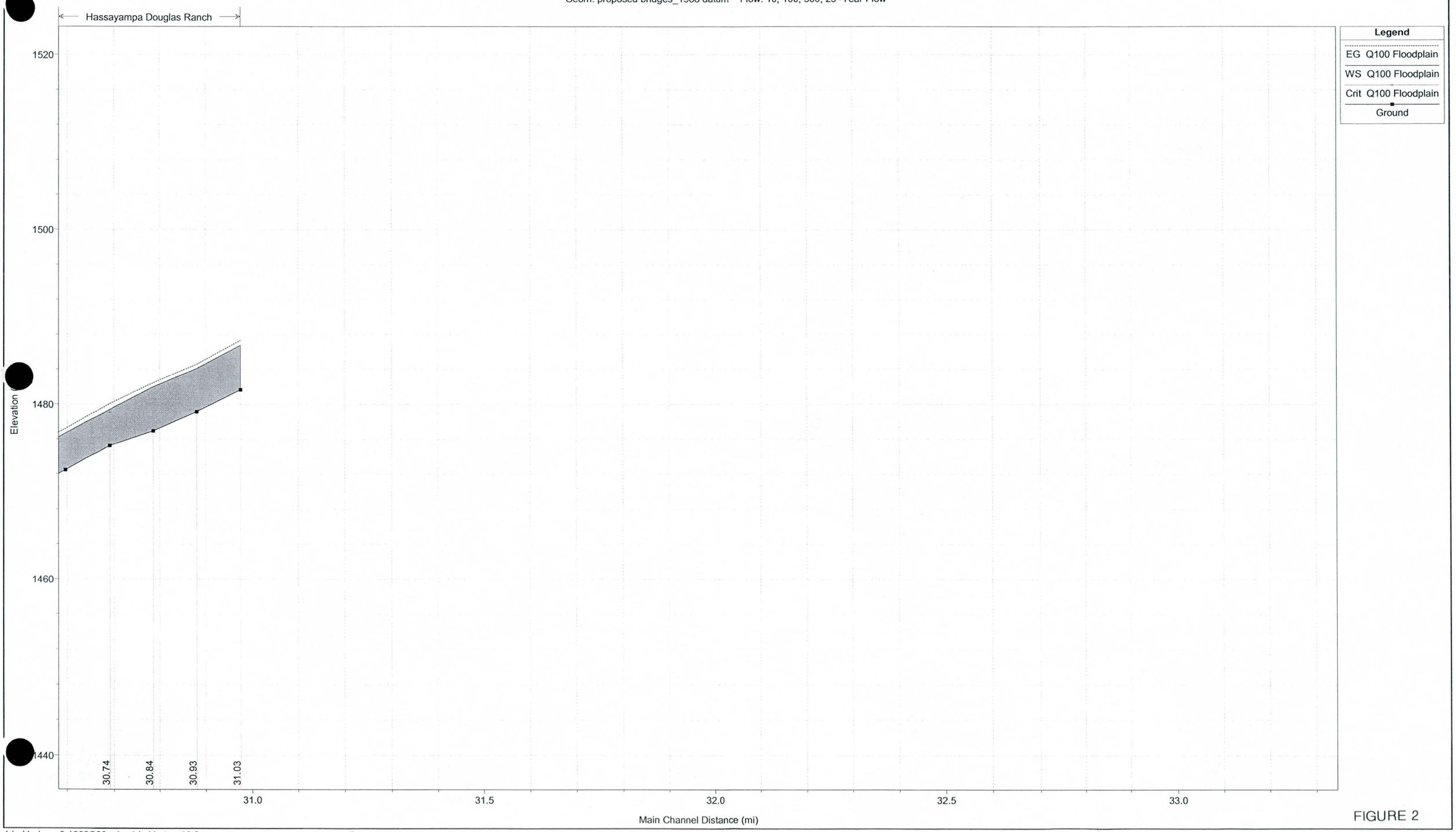


FIGURE 2

1 in Horiz. = 0.1893939 mi 1 in Vert. = 10 ft

8.0 OPERATION AND MAINTENANCE PLAN

8.1 Operation and Maintenance Plan

In conjunction with this Conditional Letter of Map Revision (CLOMR), the following operation and maintenance plan has been proposed for the subject project.

The proposed improvements are public facilities, and the Town of Buckeye and the Flood Control District of Maricopa County (FCDMC) are participating in the FEMA Flood Insurance Program. The Town of Buckeye and the FCDMC are responsible for ensuring that all necessary maintenance activities are accomplished for this reach of the Hassayampa River. Additional inspections will be performed during and after major storm events. Inspections of the improvements will be performed and documented on an annual basis. Maintenance activities for the improvements include, but are not limited to:

- Removal of debris and excessive sediment from under the bridges;
- Cleaning of storm drains, and culverts;
- Repair or replacement of damaged bank protection;
- Installation of additional erosion control measures as needed.

This information is intended to meet the requirements for technical review of the Conditional Letter of Map Revision (CLOMR).

9.0 REFERENCES

1. Cella Barr Associates., *Flood Insurance Re-Study for Various Streams in Maricopa County, Arizona – Hassayampa River*, 1988.

2. FEMA MT-2 packet (expires September 30, 2005-extended).

3. Flood Control District of Maricopa County, *Drainage Design Manual for Maricopa County, Arizona; Volume II - Hydraulics*, January 1996.

4. US Army Corps of Engineers, Hydrologic Engineering Center, Davis California, *HEC-RAS River Analysis System*, Version 3.1.3, May 2003.

5. U.S. Department of Transportation, Federal Highway Administration, Hydraulic Engineering Circular No.18, *Evaluating Scour at Bridges, Fourth Edition*, May 2001.

6. U.S. Department of Transportation, Federal Highway Administration, Hydraulic Engineering Circular No. 23, *Bridge Scour and Stream Instability Countermeasures* , March 2001

7. U.S. Department of Transportation, Federal Highway Administration, Hydraulic Engineering Circular No. 20, *Stream Stability at Highway Structures* ,February 1991

8. Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, Map Numbers 04013C1090J and 04013C1530J, September 30, 2005.

9. U.S. Geological Survey, *Roughness Coefficients for Stream Channels in Arizona,* prepared by Aldridge and Garrett, 1973.

10. U.S. Department of the Interior, Bureau of Reclamation, *Computing Degradation and Local Scour*, January 1984.

11. J.E. Fuller Hydrology and Geomorphology, Inc., *Lower Hassayampa Watercourse Master Plan*, 2006.

12. J.E. Fuller Hydrology and Geomorphology, Inc., *Douglas Ranch Bridges over the Hassayampa River*, October 2007.

APPENDIX A

General Documentation and Correspondence

Public Notice Announcement

AFFIDAVIT OF PUBLICATION

Arizona Business Gazette

The business resource

PO BOX 194
Phoenix, Arizona 85001-0194
(602) 271-7300

STATE OF ARIZONA
COUNTY OF MARICOPA } SS.

Ed Carlise, being first duly sworn, upon oath deposes and says: That she is the marketing/sales lead of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates indicated.

8/24/2007
8/31/2007
9/7/2007

Sworn to before me this
13th day of
June A.D. 2007

OFFICIAL SEAL
GLORIA SALDIVAR
NOTARY PUBLIC-ARIZONA
PINAL COUNTY
My Comm. Expires Dec. 2, 2007

Notary Public

ANNOUNCEMENT OF INTENT TO PERFORM FLOOD EVALUATION STUDY

The Town of Buckeye announced today that a detailed study is being initiated of the flood hazard areas of Hassayampa River in the Town of Buckeye, Maricopa County, Arizona. The study will be performed for the Hassayampa River's 6 mile reach immediately north of Peoria Avenue (alignment) based on more detailed topographic maps by Wood, Patel & Associates, Inc. The purpose of this study is to examine and re-evaluate the floodplain and floodway of Hassayampa River and to determine flood elevations for this area. Flood elevations will be used by the community to carry out the floodplain management objectives of the National Flood Insurance Program. They will also be used as the basis for determining the appropriate flood insurance premium rates for buildings for their contents.

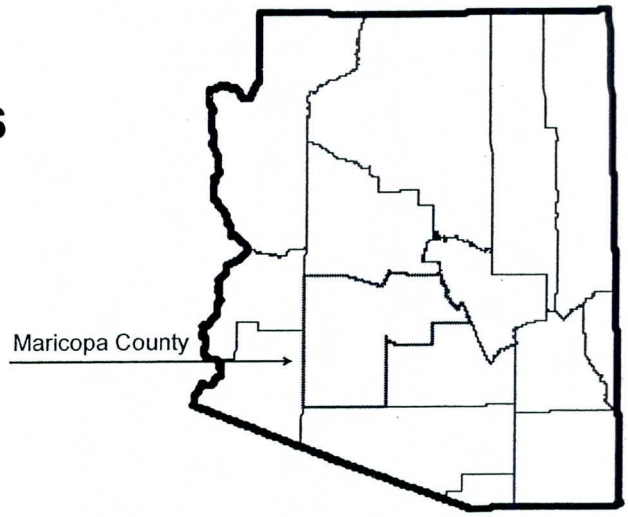
This announcement is intended to notify all interested person of the commencement of this study so that they may have an opportunity to bring any relevant facts and technical data concerning local flood hazards to the attention of the Town of Buckeye for consideration in the course of this study. Such information should be furnished to the Town of Buckeye, Wood Scottsen, P.E., 1546 Nort Litchfield Road, Suite 23 Goodyear, AZ 85338, Phon (623) 547-4661.

Published August 24, 31, September 7, 2006.

FLOOD INSURANCE STUDY

MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS
VOLUME 1 OF 17

COMMUNITY NAME	COMMUNITY NUMBER
AVONDALE, CITY OF	040038
BUCKEYE, TOWN OF	040039
CAREFREE, TOWN OF	040126
CAVE CREEK, TOWN OF	040129
CHANDLER, CITY OF	040040
EL MIRAGE, CITY OF	040041
FOUNTAIN HILLS, TOWN OF	040135
GILA BEND, TOWN OF	040043
GILBERT, TOWN OF	040044
GLENDALE, CITY OF	040045
GOODYEAR, CITY OF	040046
GUADALUPE, TOWN OF	040111
LITCHFIELD PARK, CITY O	040128
MARICOPA COUNTY (UNINCORPORATED AREAS)	040037
MESA, CITY OF	040048
PARADISE VALLEY, TOWN OF	040049
PEORIA, CITY OF	040050
PHOENIX, CITY OF	040051
QUEEN CREEK, TOWN OF	040132
SCOTTSDALE, CITY O	045012
SURPRISE, CITY OF	040053
TEMPE, CITY OF	040054
TOLLESON, CITY OF	040055
WICKENBURG, TOWN OF	040056
YOUNGTOWN, TOWN OF	040057



REVISED
September 30, 2005

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
04013CV001A

333020

Table 3. Summary of Discharges (Continued)

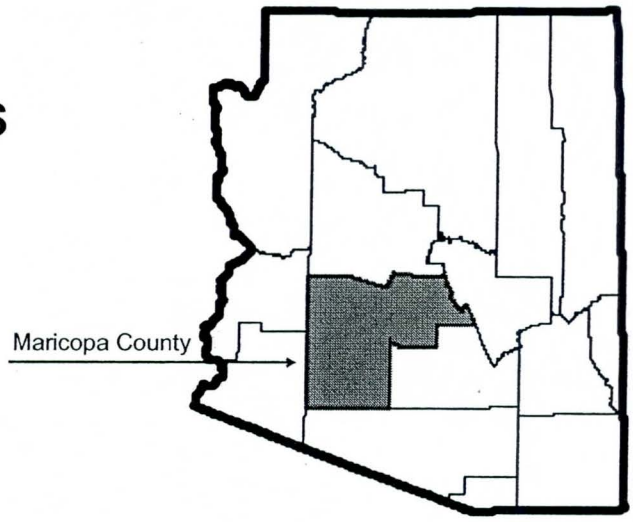
Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (cfs) 10-Year	50-Year	100-Year	500-Year
Andora Hills Wash					
Above confluence with Cave Creek	2.8	--[1]	--[1]	3,568	--[1]
Above School House Road	1.7	--[1]	--[1]	2,615	--[1]
Above Carefree Drive	0.9	--[1]	--[1]	2,070	--[1]
Below Scottsdale Road	0.6	420	640	720	980
Galloway Wash					
At Spur Cross Road	20.6	--[1]	--[1]	13,548	--[1]
At School House Road	14.7	--[1]	--[1]	10,763	--[1]
Approximately 800 feet downstream of Scopa Trail	6.1	--[1]	--[1]	4,412	--[1]
Approximately 1,000 feet upstream of Tranquil Trail	5.1	--[1]	--[1]	3,439	--[1]
Immediately downstream of confluence of Middle Branch and South Branch (formerly lower branch)	5.1	--[1]	--[1]	3,439	--[1]
Hassayampa River					
At confluence with the Gila River	1,504	--[1]	--[1]	72,966	--[1]
At Stream Gage Station 95170 (Arlington, Old U.S. Highway 80)	1,470	--[1]	--[1]	73,500	--[1]
At Interstate 10	1,450	--[1]	--[1]	75,164	--[1]
At confluence with Jackrabbit Wash	1,362	--[1]	--[1]	76,120	--[1]
Just above confluence with Jackrabbit Wash	1,010	--[1]	--[1]	55,980	--[1]
At Granite Reef Aqueduct	930	--[1]	--[1]	57,854	--[1]
At Stream Gage Station 95165 (Morristown)	774	--[1]	--[1]	61,600	--[1]
At Town of Wickenburg	711	--[1]	--[1]	71,000	--[1]

--[1] Not Computed

FLOOD INSURANCE STUDY

MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS
VOLUME 2 OF 17

COMMUNITY NAME	COMMUNITY NUMBER
AVONDALE, CITY OF	040038
BUCKEYE, TOWN OF	040039
CAREFREE, TOWN OF	040126
CAVE CREEK, TOWN OF	040129
CHANDLER, CITY OF	040040
EL MIRAGE, CITY OF	040041
FOUNTAIN HILLS, TOWN OF	040135
GILA BEND, TOWN OF	040043
GILBERT, TOWN OF	040044
GLENDALE, CITY OF	040045
GOODYEAR, CITY OF	040046
GUADALUPE, TOWN OF	040111
LITCHFIELD PARK, CITY OF	040128
MARICOPA COUNTY (UNINCORPORATED AREAS)	040037
MESA, CITY OF	040048
PARADISE VALLEY, TOWN OF	040049
PEORIA, CITY OF	040050
PHOENIX, CITY OF	040051
QUEEN CREEK, TOWN OF	040132
SCOTTSDALE, CITY OF	045012
SURPRISE, CITY OF	040053
TEMPE, CITY OF	040054
TOLLESON, CITY OF	040055
WICKENBURG, TOWN OF	040056
YOUNGTOWN, TOWN OF	040057



REVISED
September 30, 2005

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
04013CV002A

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Hassayampa River (Cont'd)								
BA	14.360	1,643	8,388	9.0	1,104.4	1,104.4	1,105.3	0.9
BB	14.550	1,590	8,229	9.2	1,108.5	1,108.5	1,108.9	0.4
BC	14.830	1,793	10,238	7.4	1,115.5	1,115.5	1,115.6	0.1
BD	15.110	1,941	10,364	7.3	1,121.0	1,121.0	1,121.1	0.1
BE	15.210	1,885	8,600	8.8	1,122.1	1,122.1	1,122.1	0.0
BF	15.400	1,850	9,920	7.7	1,126.8	1,126.8	1,126.9	0.1
BG	15.490	1,770	9,173	8.3	1,128.0	1,128.0	1,128.1	0.1
BH	15.590	1,730	10,333	5.4	1,129.8	1,129.8	1,129.8	0.0
BI	15.870	1,830	6,905	8.1	1,133.0	1,133.0	1,133.2	0.2
BJ	16.160	2,407	6,495	8.6	1,138.2	1,138.2	1,138.3	0.1
BK	16.250	2,665	10,567	5.3	1,141.1	1,141.1	1,141.2	0.1
BL	16.350	2,735	9,970	5.6	1,142.4	1,142.4	1,142.5	0.1
BM	16.530	2,640	8,484	6.6	1,146.9	1,146.9	1,146.9	0.0
BN	17.100	2,280	8,212	6.8	1,159.0	1,159.0	1,159.2	0.2
BO	17.290	1,815	6,644	8.4	1,162.7	1,162.7	1,163.4	0.7
BP	17.580	1,550	7,393	7.6	1,169.8	1,169.8	1,170.6	0.8
BQ	17.860	1,505	7,654	7.3	1,176.9	1,176.9	1,177.0	0.1
BR	18.240	1,576	7,437	7.5	1,183.7	1,183.7	1,184.2	0.5
BS	18.520	2,122	8,263	6.8	1,191.0	1,191.0	1,191.0	0.0
BT	19.090	1,820	6,572	8.6	1,202.4	1,202.4	1,203.0	0.6
BU	19.470	1,235	6,321	9.0	1,211.5	1,211.5	1,212.0	0.5
BV	19.850	1,395	7,263	7.8	1,221.9	1,221.9	1,222.1	0.2
BW	19.940	1,475	6,232	9.1	1,223.3	1,223.3	1,223.4	0.1
BX	20.510	1,864	7,174	7.9	1,233.7	1,233.7	1,234.0	0.3
BY	20.800	1,705	6,997	8.1	1,239.8	1,239.8	1,240.4	0.6
BZ	21.170	1,580	7,201	7.9	1,250.4	1,250.4	1,250.7	0.3

[1]Miles above confluence with Gila River

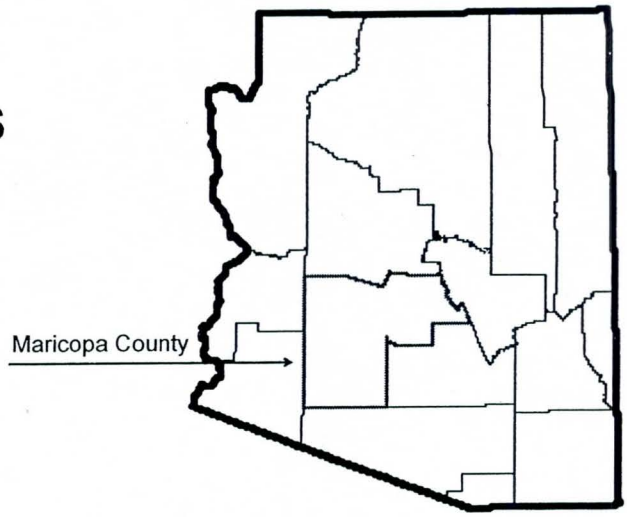
FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
					(FEET NGVD)			
Hassayampa River (Cont'd)								
CA	21.650	1,725	7,727	7.3	1,260.3	1,260.3	1,260.8	0.5
CB	21.840	1,715	7,631	7.4	1,262.9	1,262.9	1,263.2	0.3
CC	22.120	1,561	8,758	6.5	1,269.0	1,269.0	1,269.3	0.3
CD	22.210	1,635	7,195	8.0	1,270.1	1,270.1	1,270.4	0.3
CE	22.500	1,815	7,965	7.2	1,277.1	1,277.1	1,277.2	0.1
CF	22.880	1,775	7,850	7.3	1,284.0	1,284.0	1,284.7	0.7
CG	23.070	1,540	7,074	8.1	1,287.2	1,287.2	1,288.0	0.8
CH	23.450	1,529	8,382	6.8	1,297.8	1,297.8	1,297.9	0.1
CI	23.360	1,645	7,361	7.8	1,300.1	1,300.1	1,300.1	0.1
CJ	24.101	2,186	8,582	6.7	1,308.6	1,308.6	1,308.6	0.0
CK	24.390	2,145	8,869	6.5	1,317.4	1,317.4	1,317.4	0.0
CL	24.490	1,999	6,820	8.4	1,319.1	1,319.1	1,319.2	0.1
CM	24.580	1,868	7,623	7.5	1,321.6	1,321.6	1,321.8	0.2
CN	24.770	1,665	6,922	8.3	1,326.3	1,326.3	1,326.7	0.4
CO	25.150	2,245	8,140	7.1	1,334.5	1,334.5	1,334.8	0.3
CP	25.340	2,635	9,018	6.4	1,341.0	1,341.0	1,341.3	0.3
CQ	25.530	2,915	8,586	6.7	1,344.6	1,344.6	1,344.9	0.3
CR	26.100	2,665	8,674	6.7	1,357.7	1,357.7	1,358.3	0.6
CS	26.670	2,705	8,403	6.9	1,371.4	1,371.4	1,371.4	0.0
CT	26.850	2,865	8,723	6.6	1,371.4	1,375.4	1,375.8	0.4
CU	26.950	2,928	8,520	6.8	1,376.9	1,376.9	1,377.4	0.5
CV	27.610	3,760	9,284	6.2	1,393.2	1,393.2	1,393.7	0.5
CW	27.970	4,045	10,233	5.7	1,398.3	1,398.3	1,398.8	0.5
CX	28.570	4,515	10,566	5.5	1,415.1	1,415.1	1,415.5	0.4
CY	29.130	4,664	11,588	5.0	1,430.8	1,430.8	1,431.0	0.2
CZ	29.890	4,086	10,125	5.8	1,452.5	1,452.5	1,452.6	0.1

[1]Miles above confluence with Gila River

FLOOD INSURANCE STUDY

MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS
VOLUME 6 OF 17

COMMUNITY NAME	COMMUNITY NUMBER
AVONDALE, CITY OF	040038
BUCKEYE, TOWN OF	040039
CAREFREE, TOWN OF	040126
CAVE CREEK, TOWN OF	040129
CHANDLER, CITY OF	040040
EL MIRAGE, CITY OF	040041
FOUNTAIN HILLS, TOWN OF	040135
GILA BEND, TOWN OF	040043
GILBERT, TOWN OF	040044
GLENDALE, CITY OF	040045
GOODYEAR, CITY OF	040046
GUADALUPE, TOWN OF	040111
LITCHFIELD PARK, CITY O	040128
MARICOPA COUNTY (UNINCORPORATED AREAS)	040037
MESA, CITY OF	040048
PARADISE VALLEY, TOWN OF	040049
PEORIA, CITY OF	040050
PHOENIX, CITY OF	040051
QUEEN CREEK, TOWN OF	040132
SCOTTSDALE, CITY O	045012
SURPRISE, CITY OF	040053
TEMPE, CITY OF	040054
TOLLESON, CITY OF	040055
WICKENBURG, TOWN OF	040056
YOUNGTOWN, TOWN OF	040057

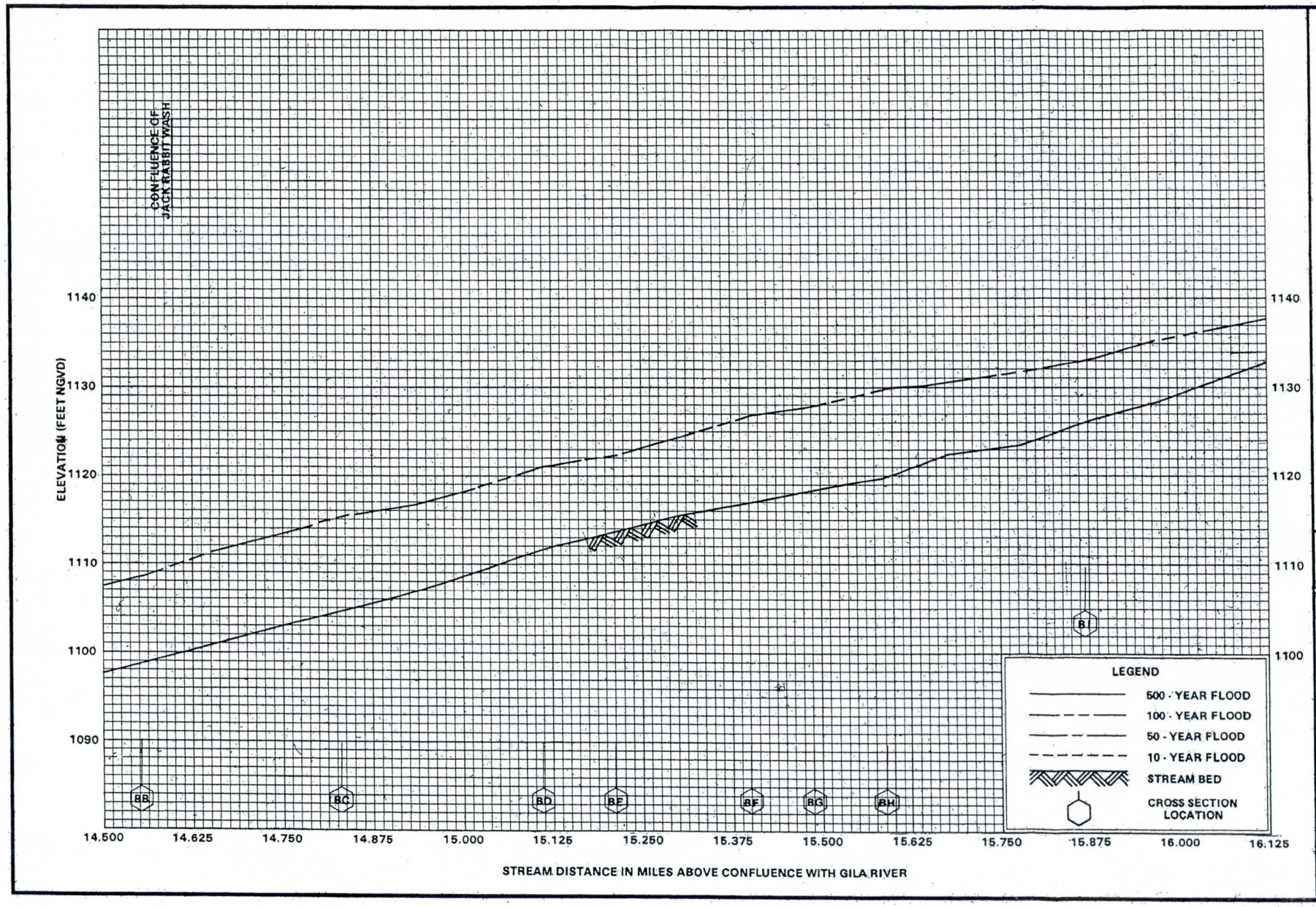


REVISED
September 30, 2005

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
04013CV006A

333020



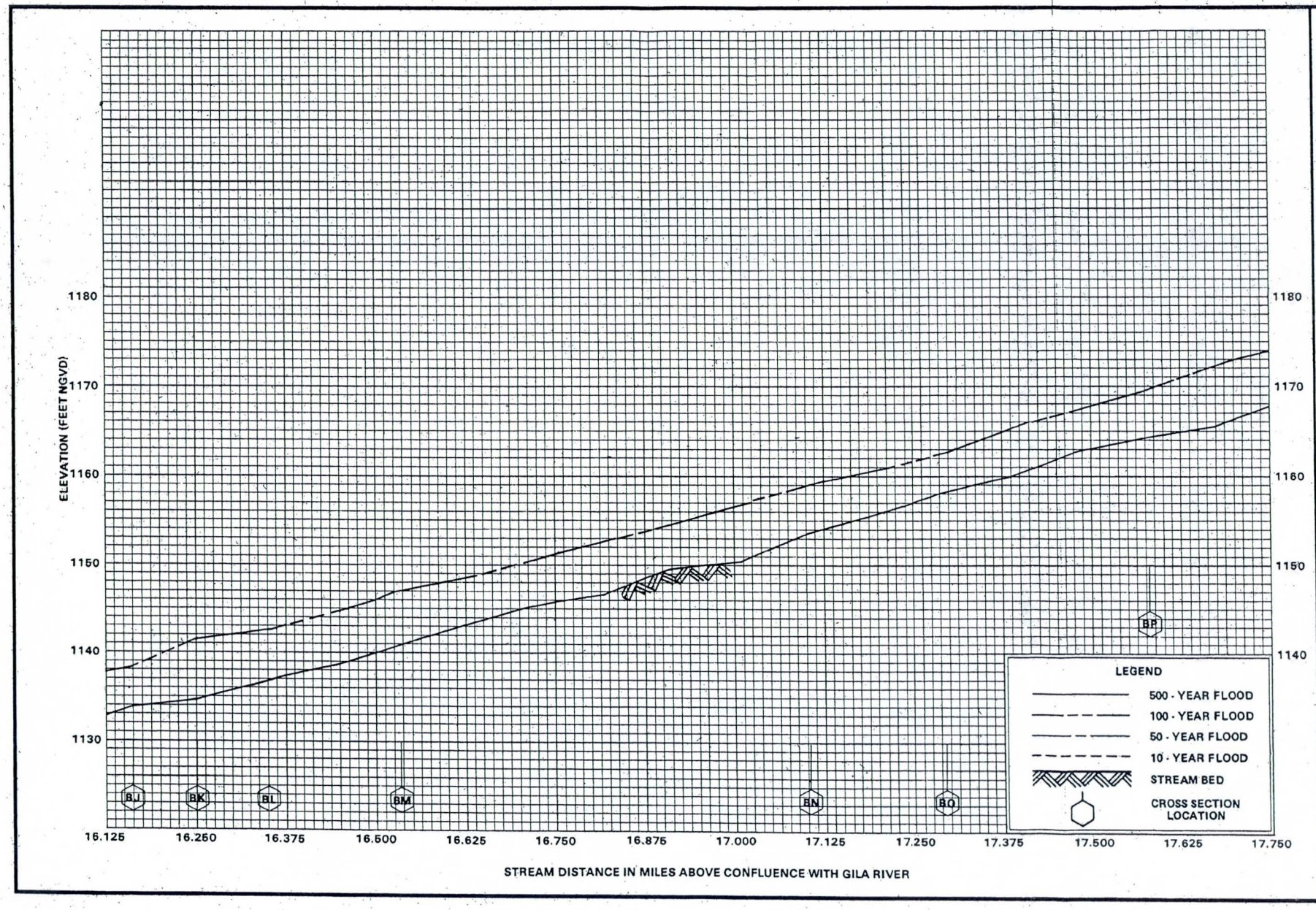
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

185P



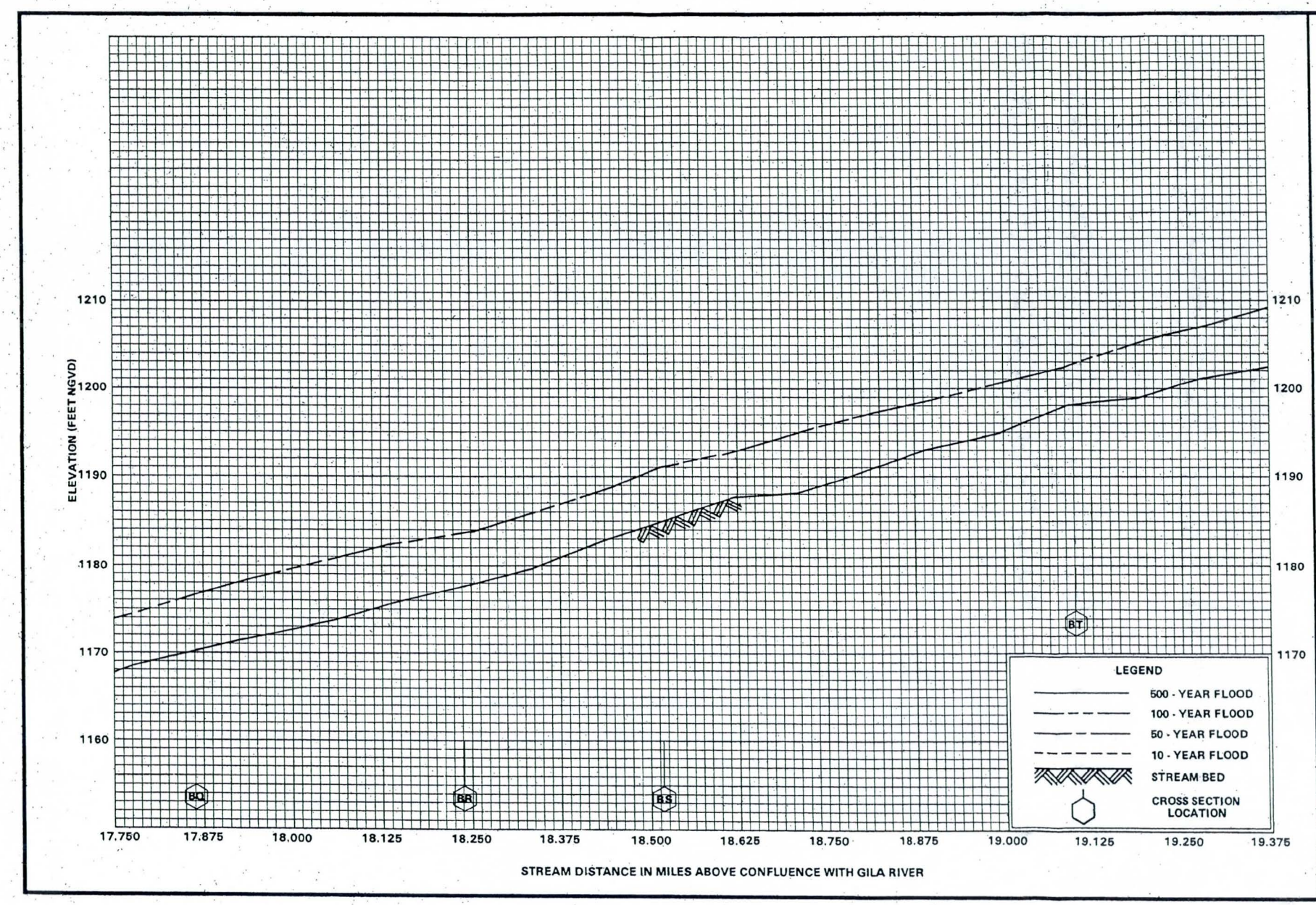
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

186P



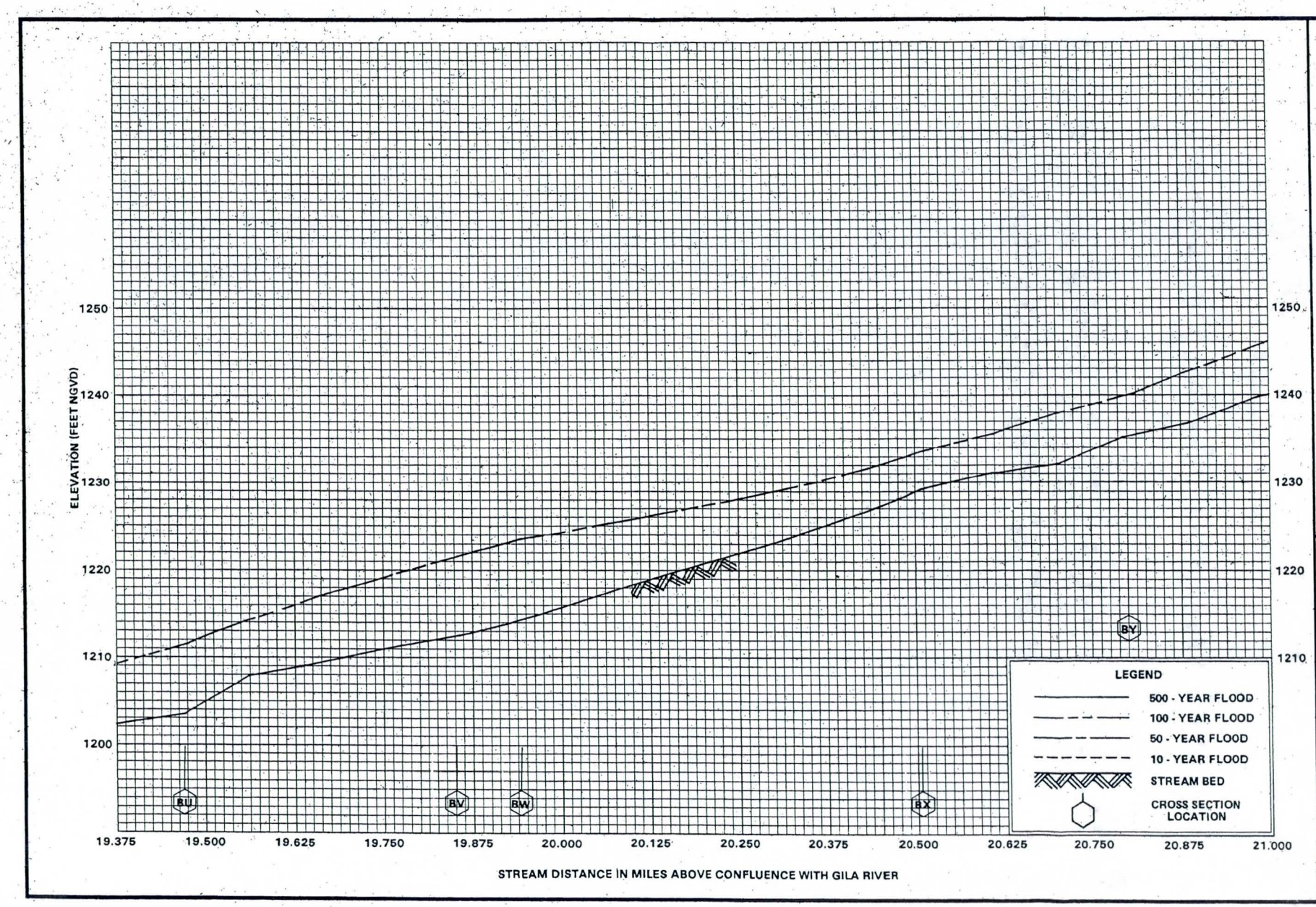
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

187P



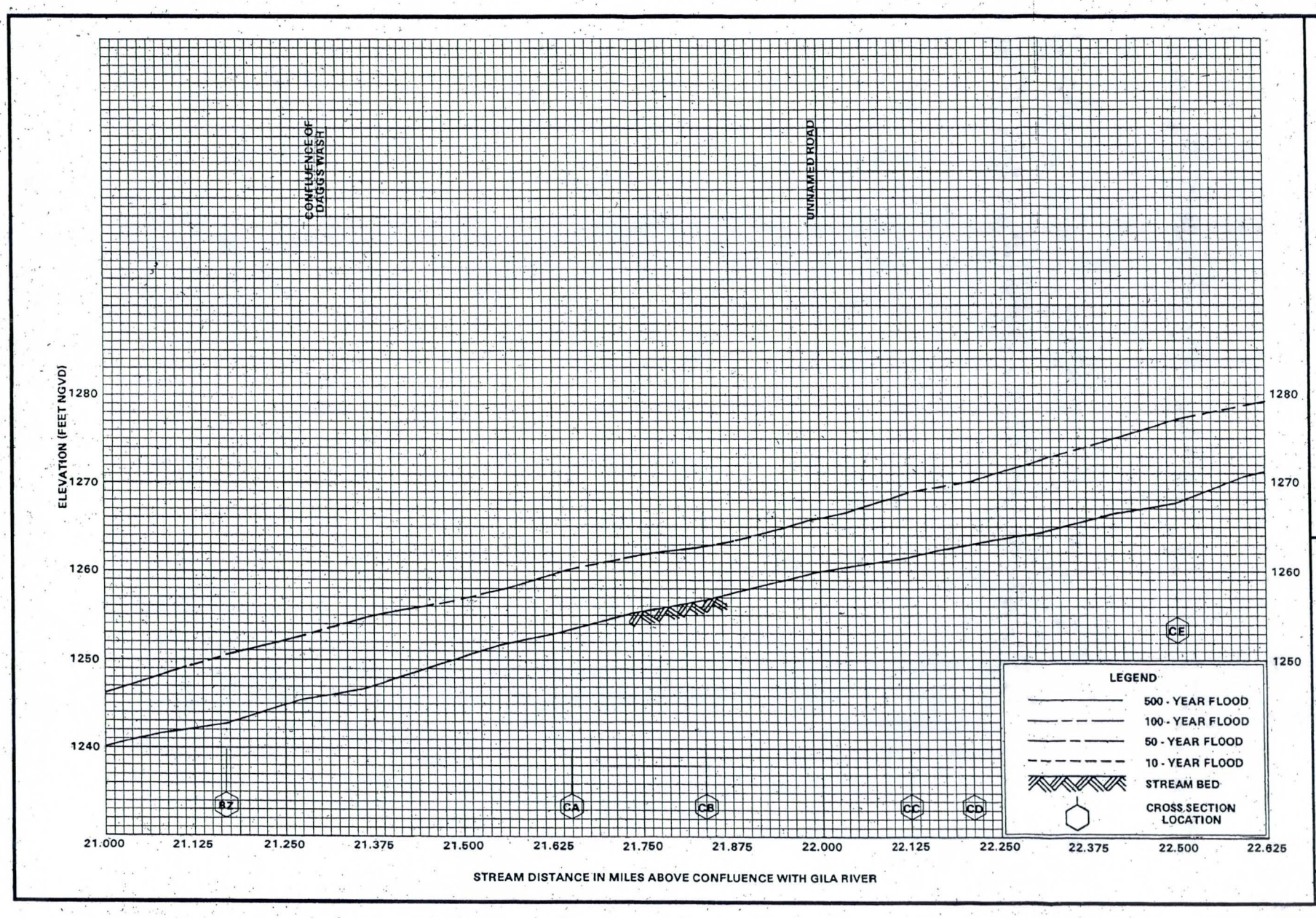
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

188P

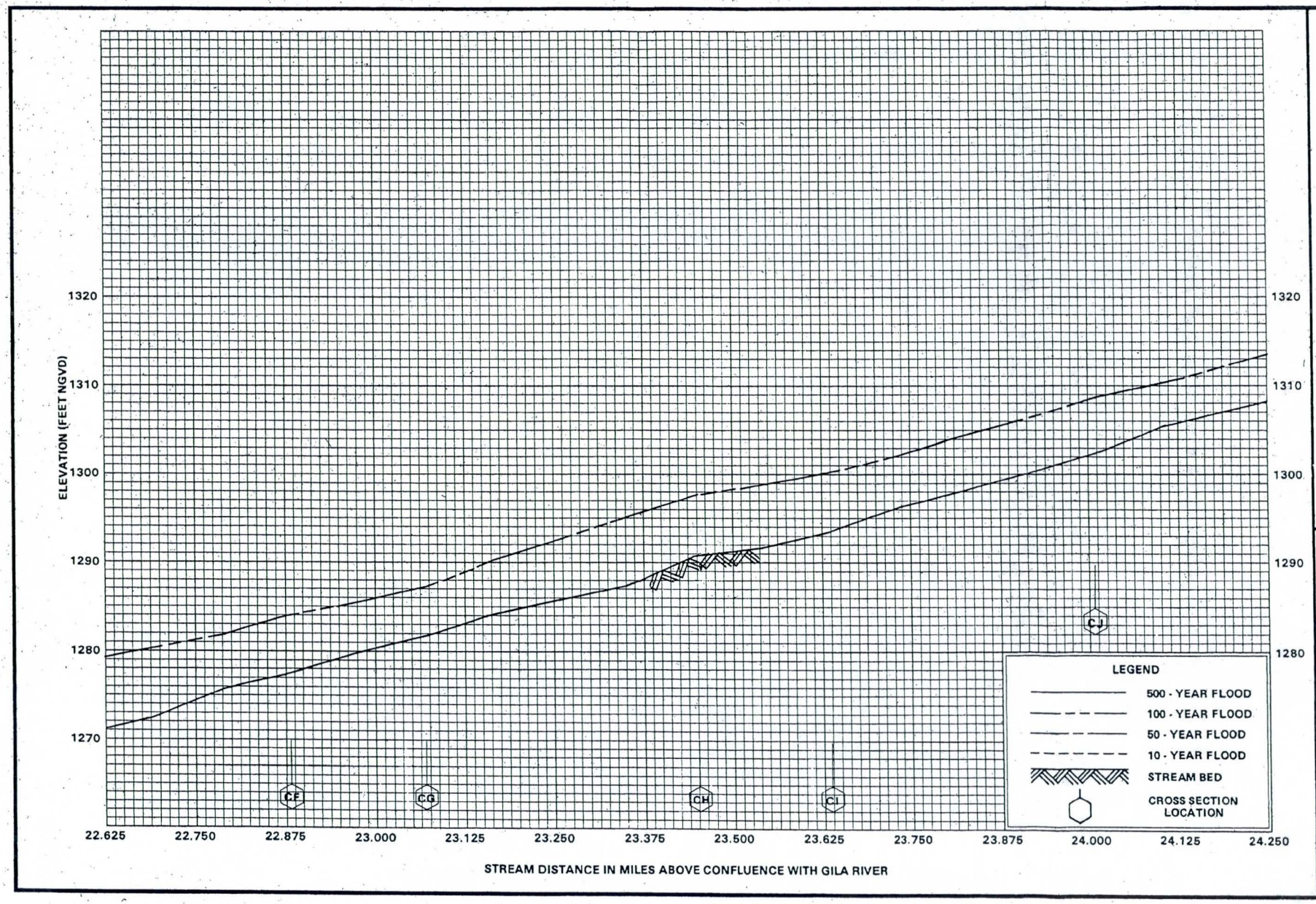


FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

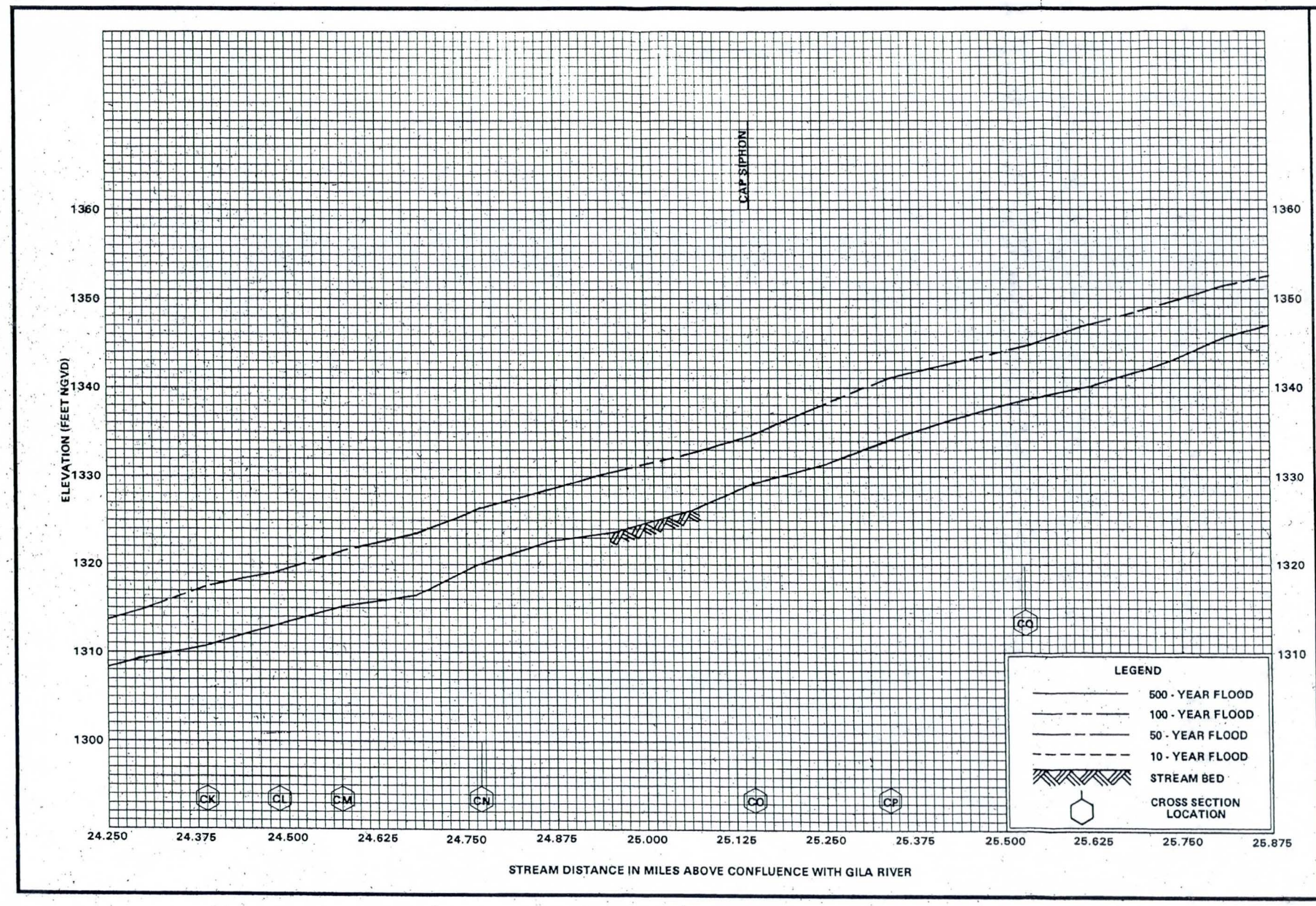


FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS



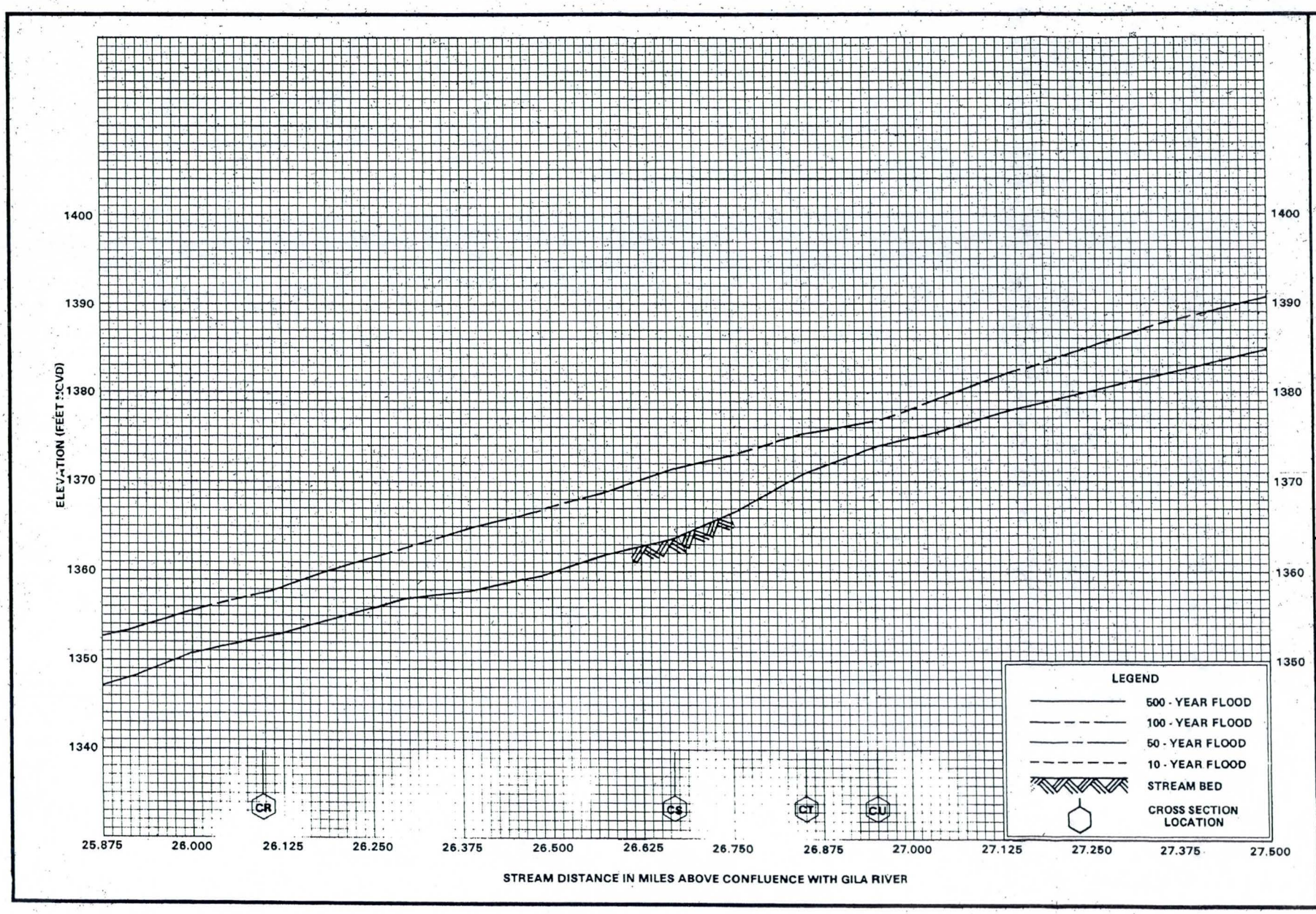
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

191P



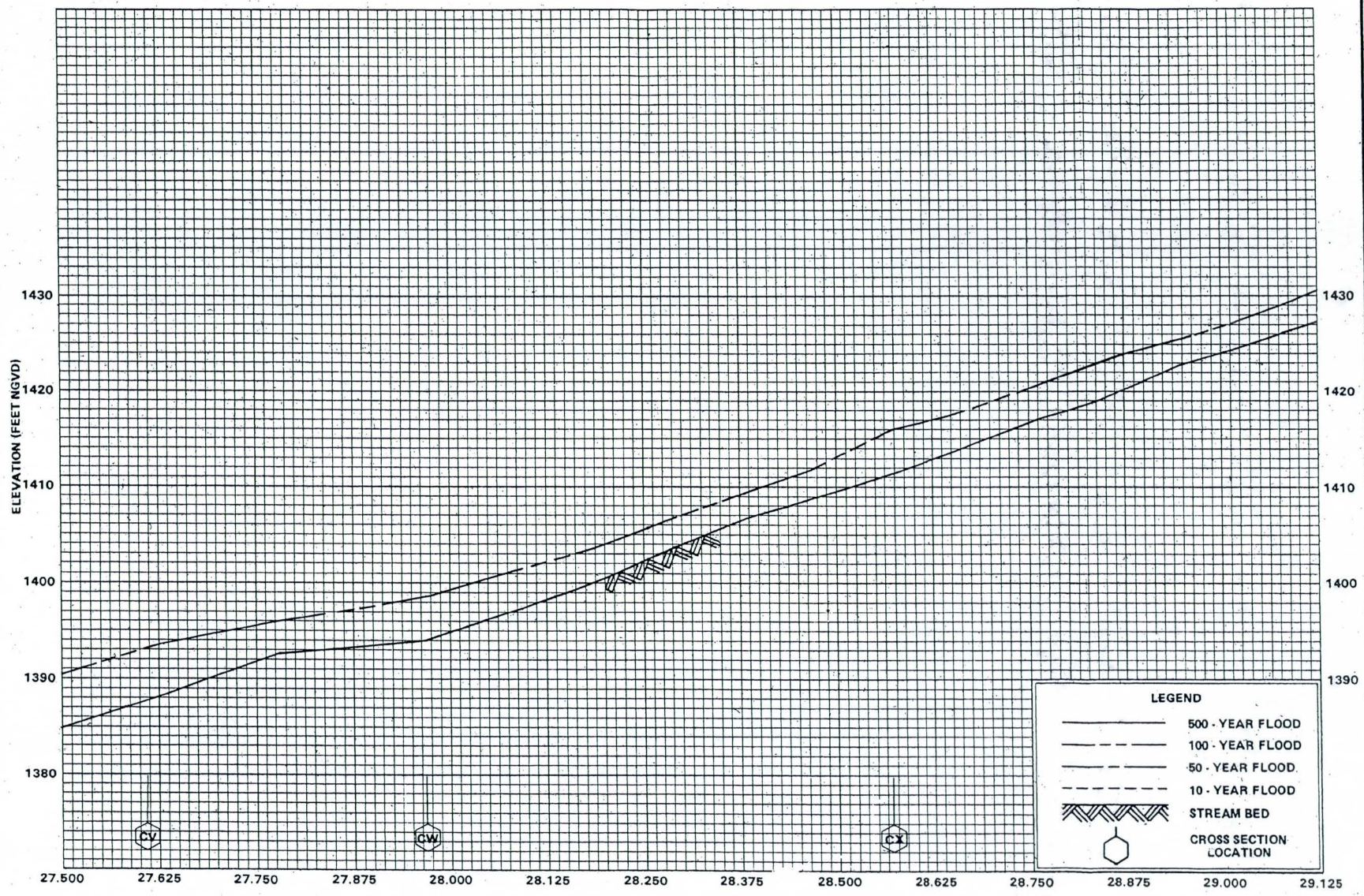
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

192P



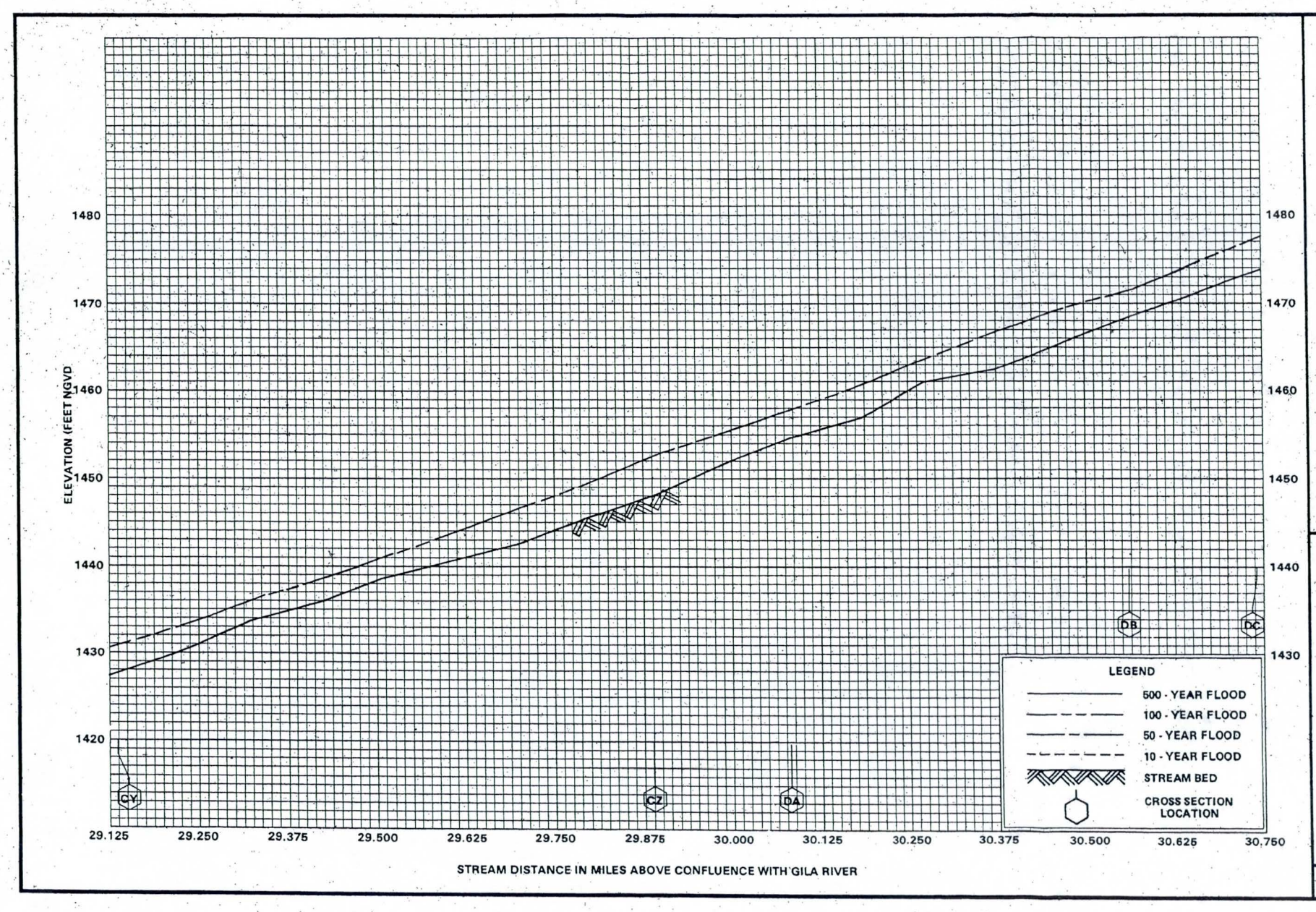
FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

193P



FLOOD PROFILES

HASSAYAMPA RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

194P

APPENDIX B

HEC-RAS Output Files for Duplicative Effective FIS Models

```
1*******************************************
  *  HEC-2 WATER SURFACE PROFILES           *
  *                                         *
  *  Version   4.6.2;  May 1991             *
  *                                         *
  *  RUN DATE    21MAR07    TIME   13:36:57  *
   *******************************************

*****************************************
*  U.S. ARMY CORPS OF ENGINEERS         *
*  HYDROLOGIC ENGINEERING CENTER        *
*  609 SECOND STREET, SUITE D           *
*  DAVIS, CALIFORNIA 95616-4687         *
*        (916) 756-1104                 *
*****************************************

                                    X     X  XXXXXXX   XXXXX             XXXXX
                                    X     X  X        X     X           X     X
                                    X     X  X        X                       X
                                    XXXXXXX  XXXX     X          XXXXX    XXXXX
                                    X     X  X        X                  X
                                    X     X  X        X     X            X
                                    X     X  XXXXXXX   XXXXX             XXXXXXX
1
    21MAR07      13:36:57                                                                PAGE    1


                                                                  THIS RUN EXECUTED 21MAR07    13:36:57
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************

T1 FEMA FLOOD INSURANCE RE-STUDY                CELLA BARR ASSOCIATES
T2 OF MARICOPA COUNTY, ARIZONA                  5062 N. 19TH AVENUE
T3 HASSAYAMPA RIVER JOB #04856-07-75            PHOENIX, ARIZONA 85015

J1   ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0         2         0         0         0         0         0         0   1130.39

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       0         0        -1         0         0         0         0         0

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     150       200

QT        2     55980     55980
NC     0.04      0.04      0.03        .1        .3
ET                         4.1    1695.0    3448.0
X1    15.68        68    2014.2    3121.0         0         0         0
GR   1160.6    1000.0    1161.3    1024.1    1148.8    1089.6    1130.9    1411.7    1127.2    1703.8
GR   1124.9    1802.6    1128.3    1907.3    1128.3    2014.2    1125.1    2048.6    1123.8    2123.7
GR   1124.2    2238.1    1125.7    2391.2    1126.0    2511.3    1128.4    2646.7    1125.7    2857.0
GR   1123.7    2872.4    1126.0    2902.6    1126.2    2976.9    1122.3    2988.1    1122.3    3023.1
GR   1123.4    3069.2    1123.5    3121.0    1126.6    3147.5    1123.5    3303.0    1130.4    3330.6
GR   1129.1    3380.2    1133.8    3633.8    1134.6    3963.3    1136.5    4466.1    1132.8    4531.9
GR   1134.8    4769.8    1136.3    4937.5    1139.1    5019.1    1137.5    5185.4    1140.6    5250.0
GR   1142.6    5459.5    1140.6    5566.0    1140.6    5684.5    1141.1    5779.2    1143.1    5799.7
GR   1140.6    5825.8    1143.1    5853.5    1145.8    6217.6    1146.6    6472.2    1144.8    6499.8
GR   1147.0    6540.3    1143.8    6598.9    1143.7    6610.2    1146.8    6629.6    1147.2    6689.0
GR   1143.7    6715.8    1144.2    6758.9    1148.1    6808.2    1148.9    7241.7    1147.1    7258.4
GR   1148.7    7285.2    1148.0    7478.8    1148.8    7685.1    1147.0    7706.8    1147.0    7729.3
GR   1148.8    7751.6    1149.7    8108.7    1150.4    8341.7    1165.1    8463.7    1164.6    8639.3
GR   1166.7    8730.0    1156.7    8795.2    1157.3    8843.2       0.0       0.0       0.0       0.0

ET                         4.1    1645.0    3365.0
X1    15.78        76    1820.0    2960.8     435.0     420.0     500.0
GR   1160.6    1000.0    1157.9    1051.5    1135.0    1131.0    1128.6    1413.0    1129.4    1637.1
GR   1129.3    1820.0    1125.6    1851.6    1125.6    1995.4    1126.7    2155.5    1127.0    2304.6
GR   1129.5    2494.9    1128.5    2635.6    1123.6    2638.1    1123.6    2651.2    1124.4    2679.7
GR   1125.2    2838.3    1125.2    2960.8    1127.9    3021.0    1127.2    3273.1    1132.0    3305.1
GR   1132.5    3443.6    1127.7    3503.2    1127.6    3548.9    1131.8    3560.8    1133.6    3750.9
GR   1135.1    3897.2    1146.5    3982.4    1139.9    4022.3    1139.4    4141.0    1151.2    4198.5
GR   1151.2    4249.3    1141.1    4334.6    1138.1    4483.8    1140.5    4523.1    1140.0    4729.6
GR   1138.7    4758.4    1141.7    4798.8    1142.0    5021.2    1141.5    5080.8    1138.3    5112.9
GR   1138.5    5134.0    1142.0    5156.8    1143.9    5363.1    1139.7    5402.0    1141.1    5503.3
```

1
[redacted]1MAR07 13:36:57 PAGE 2

GR	1143.8	5632.0	1142.2	5712.3	1142.3	5763.6	1143.9	5816.2	1142.5	5845.8
GR	1144.7	5880.7	1147.9	6129.2	1148.6	6380.9	1145.2	6515.0	1145.0	6551.2
GR	1148.9	6579.7	1148.3	6733.7	1144.0	6748.3	1144.0	6766.3	1148.6	6793.3
GR	1150.2	7169.7	1148.2	7199.5	1149.6	7251.1	1150.5	7534.0	1148.2	7595.0
GR	1150.5	7687.3	1151.6	8114.1	1154.5	8268.8	1156.7	8322.0	1154.8	8373.4
GR	1171.0	8477.8	1171.8	8534.2	1162.6	8610.1	1158.0	8689.3	1160.2	8740.8
GR	1165.2	8762.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NH	4	1.0	1550.0	.04	2195.9	.03	3305.9	.04	8990.0	
ET			4.1	1955.0	3785.0					
X1	15.87	64	2195.9	3305.9	430.0	500.0	500.0			
GR	1162.2	1000.0	1162.4	1034.6	1141.1	1123.3	1132.0	1550.0	1131.2	1674.7
GR	1132.0	1905.0	1131.8	2195.9	1126.2	2216.2	1126.3	2336.6	1128.1	2545.5
GR	1129.9	2738.7	1129.8	2874.3	1130.9	3114.8	1125.5	3160.9	1126.0	3208.5
GR	1127.2	3305.9	1130.4	3348.2	1130.8	3708.0	1133.0	3732.5	1133.0	4039.2
GR	1130.5	4052.1	1133.7	4069.5	1135.6	4138.3	1139.7	4229.5	1142.0	4333.9
GR	1147.2	4404.6	1148.7	4485.7	1148.4	4544.9	1154.8	4596.6	1154.7	4910.3
GR	1146.9	5054.7	1149.2	5175.1	1143.2	5280.2	1146.0	5616.0	1146.0	5778.2
GR	1142.5	5797.2	1145.7	5816.0	1145.7	5942.0	1142.3	5971.5	1147.1	6007.3
GR	1147.7	6309.5	1145.1	6343.0	1146.4	6508.2	1149.0	6547.7	1152.1	6974.3
GR	1149.8	6994.1	1150.9	7054.1	1153.0	7110.5	1153.0	7202.8	1147.7	7250.0
GR	1147.8	7281.7	1152.4	7305.0	1152.0	7463.3	1153.9	7622.3	1152.5	7983.7
GR	1152.8	8032.3	1154.3	8063.5	1155.7	8352.6	1156.9	8578.1	1169.2	8639.7
GR	1158.8	8688.2	1159.0	8738.2	1171.8	8950.0	1172.5	8990.0		
NC	.04	.04	.03							
ET			4.1	1460.0	3480.0					
X1	15.97	67	1965.1	3263.7	360.0	300.0	500.0			
GR	1166.0	1000.0	1136.0	1100.0	1134.0	1500.0	1132.0	1950.0	1128.0	1965.1
GR	1129.0	2204.0	1129.9	2456.0	1130.8	2621.5	1130.9	2702.0	1132.6	2741.8
GR	1132.4	2857.7	1131.0	2947.2	1130.9	3111.1	1128.5	3168.9	1128.1	3216.9
GR	1128.1	3263.7	1128.1	3305.8	1134.3	3384.4	1135.0	3721.0	1133.2	3748.7
GR	1135.3	3794.5	1137.3	4008.4	1143.2	4056.1	1140.7	4091.1	1152.5	4181.8
GR	1155.3	4226.1	1155.6	4446.9	1147.1	4531.9	1145.3	4588.3	1144.1	4815.7
GR	1152.7	4895.8	1153.0	4985.6	1151.2	5069.6	1145.7	5102.3	1147.2	5346.9
[redacted]	1148.1	5608.6	1145.0	5634.8	1148.1	5657.1	1148.1	5882.2	1145.6	5895.8
[redacted]	1145.7	5911.4	1151.2	5927.3	1150.4	6164.9	1148.7	6188.8	1150.1	6217.6
[redacted]	1148.9	6544.5	1152.0	6571.6	1154.2	6865.4	1151.2	6911.9	1151.1	7019.7
GR	1154.9	7063.3	1156.1	7419.9	1155.5	7760.7	1154.3	7787.0	1154.3	7801.5
GR	1156.2	7824.4	1160.4	8299.5	1175.0	8390.5	1174.1	8427.4	1163.9	8495.0
GR	1163.6	8535.5	1173.6	8602.5	1170.0	8659.9	1172.6	8686.1	1168.1	8712.0
GR	1175.9	8804.7	1176.0	8817.6						
ET			4.1	1365.0	3560.0					
X1	16.06	28	2485.1	3517.0	400.0	545.0	500.0			
GR	1169.7	1000.0	1165.8	1023.5	1135.6	1093.9	1133.0	1650.0	1129.9	1804.3
GR	1130.2	1849.5	1132.3	1880.3	1132.3	2128.4	1133.7	2369.9	1130.4	2485.1
GR	1131.1	2533.7	1133.0	2580.9	1132.3	2772.3	1133.5	3246.8	1131.0	3254.5
GR	1131.0	3269.6	1131.0	3373.0	1132.6	3517.0	1136.5	3531.8	1136.4	3603.6
GR	1132.7	3623.6	1136.9	3735.5	1139.0	4207.9	1141.4	4293.4	1146.0	4338.6
GR	1155.2	4409.8	1158.4	4543.4	1157.6	4602.8	0.0	0.0	0.0	0.0

1
21MAR07 13:36:57 PAGE 3

ET			4.1	1433.0	3840.0					
X1	16.16	33	3137.8	3653.8	360.0	505.0	505.0			
GR	1163.2	1000.0	1161.6	1019.5	1141.3	1077.1	1137.4	1525.2	1133.2	1566.6
GR	1133.3	1611.7	1134.8	1628.4	1134.9	1733.7	1136.4	1887.9	1135.8	2137.9
GR	1135.8	2401.9	1135.3	2725.5	1135.5	3137.8	1135.8	3304.9	1133.8	3329.6
GR	1133.8	3360.1	1133.4	3486.8	1134.6	3640.1	1138.1	3653.8	1137.6	3948.0
GR	1134.3	3964.4	1134.4	3979.3	1138.2	4140.6	1139.2	4443.0	1141.3	4600.0
GR	1144.3	4728.4	1151.4	4770.6	1148.9	4815.2	1154.0	4879.5	1158.5	4993.1
GR	1156.5	5057.5	1163.2	5138.3	1164.1	5252.4	0.0	0.0	0.0	0.0
ET			4.1	1190.0	3855.0					
X1	16.25	32	3072.3	3736.5	440.0	400.0	500.0			
GR	1172.0	1000.0	1166.8	1053.7	1141.4	1138.1	1136.4	1324.1	1136.4	1346.0
GR	1133.7	1352.9	1137.1	1475.4	1138.8	1634.5	1137.8	1858.8	1136.2	2232.0
GR	1137.8	2400.4	1136.0	2709.2	1137.1	2917.1	1140.8	2947.9	1139.0	3072.3
GR	1134.6	3091.9	1134.6	3105.5	1136.0	3135.2	1136.2	3301.6	1137.1	3532.5
GR	1137.2	3661.7	1135.3	3669.7	1135.4	3698.3	1141.0	3736.5	1139.6	3896.9
GR	1138.3	3976.4	1140.1	4024.2	1143.5	4502.9	1152.8	4631.3	1151.0	4695.0
[redacted]	1163.7	4842.3	1164.1	4856.1	0.0	0.0	0.0	0.0	0.0	0.0
[redacted]	4	1.0	1319.4	.04	3116.0	.03	4177.0	.04	5256.6	
ET			4.1	1510.0	4245.0					

```
 X1    16.35       35     3116.0     4177.0      410.0      585.0      500.0
 GR    1152.6   1000.0     1145.2     1283.2     1146.9     1319.4     1140.4     1510.6     1135.7     1693.7
 GR    1135.6   1711.9     1137.8     1727.8     1140.4     1865.5     1138.6     2043.7     1140.1     2087.4
 GR    1138.0   2363.7     1139.9     2550.2     1137.7     2749.2     1139.0     3066.2     1140.9     3116.0
 GR    1136.9   3133.3     1136.9     3153.5     1137.2     3195.2     1138.1     3281.0     1139.5     3811.6
 GR    1138.1   4165.2     1142.0     4177.0     1141.2     4306.5     1143.4     4449.9     1149.0     4506.1
 GR    1149.7   4594.9     1148.8     4699.9     1148.7     4808.7     1146.4     4869.0     1149.2     4904.8
 GR    1149.2   4952.9     1148.8     5036.1     1159.0     5130.0     1161.3     5173.8     1163.2     5256.6

 NC      .04      .04        .03
 ET                          4.1     1320.0     4070.0
 X1    16.44       33     2755.0     3915.4      490.0      450.0      500.0
 GR    1166.7   1000.0     1168.2     1022.5     1151.3     1121.3     1150.0     1257.1     1144.9     1317.1
 GR    1141.9   1333.6     1140.5     1515.1     1137.9     1527.0     1138.0     1562.5     1140.9     1589.3
 GR    1141.8   1663.6     1140.4     1705.5     1142.0     1798.4     1141.5     2099.7     1140.7     2485.1
 GR    1141.2   2740.3     1144.0     2755.0     1138.3     2774.9     1138.3     2791.5     1139.5     2828.8
 GR    1140.7   2880.1     1142.4     3432.4     1140.9     3915.4     1144.3     3941.9     1143.9     4194.0
 GR    1151.3   4246.6     1153.4     4469.9     1149.7     4652.2     1149.7     4714.3     1157.9     4838.0
 GR    1155.3   4914.8     1158.3     4989.9     1165.3     5104.6        0.0        0.0        0.0        0.0

 NH         5      1.0     1940.9        .04     3727.0        .03     4621.1        .04     5613.5        1.0
 NH    6157.2
 ET                          4.1     2240.0     4880.0
 X1    16.53       39     3727.0     4621.1      535.0      305.0      500.0
 GR    1162.8   1000.0     1161.6     1099.7     1159.8     1112.6     1158.2     1417.1     1151.8     1863.3
 GR    1149.7   1886.9     1149.6     1919.0     1151.8     1940.9     1148.7     2196.9     1143.3     2216.8
 GR    1143.0   2337.8     1141.1     2381.4     1141.1     2426.6     1143.3     2452.1     1144.1     2749.9
 GR    1142.2   2936.5     1143.6     2961.6     1144.2     3355.7     1142.7     3379.9     1142.7     3405.1
 GR    1145.7   3448.4     1146.4     3716.6     1140.9     3727.0     1140.9     3780.9     1141.4     3867.8
 GR    1143.3   3937.3     1143.8     4297.6     1142.0     4621.1     1145.8     4645.8     1146.0     5067.9
 GR    1146.6   5124.9     1146.5     5181.0     1149.7     5422.3     1151.7     5613.5     1154.1     5793.6
1
    21MAR07      13:36:57                                                                                PAGE     4


 GR    1156.7   5933.6     1162.3     6009.6     1169.9     6060.2     1172.5     6157.2        0.0        0.0

 NC      .04      .04        .03
 ET                          4.1     1248.0     3775.0
 [redacted]
    16.63       32     2781.1     3457.9      295.0      305.0      500.0
 [redacted]
    1172.1   1000.0     1173.4     1045.9     1156.2     1153.8     1144.6     1297.2     1141.7     1339.5
    1141.9   1378.6     1145.5     1414.8     1145.8     1619.0     1144.8     2063.7     1144.9     2255.1
 GR    1146.8   2294.7     1147.9     2762.9     1142.5     2781.1     1143.7     2889.5     1144.1     3025.9
 GR    1143.2   3111.8     1143.8     3249.5     1145.5     3264.4     1144.4     3451.9     1143.2     3457.9
 GR    1143.2   3495.9     1147.4     3544.0     1147.5     3984.1     1155.7     4080.7     1155.0     4261.5
 GR    1153.5   4376.2     1160.7     4486.0     1162.2     4648.2     1158.7     4714.3     1162.9     4812.0
 GR    1172.1   4879.8     1172.4     4892.1        0.0        0.0        0.0        0.0        0.0        0.0

 ET                          4.1     1469.0     3980.0
 X1    16.72       33     2905.8     3696.5      430.0      400.0      500.0
 GR    1176.6   1385.7     1146.7     1481.1     1146.7     1540.2     1143.7     1557.2     1144.3     1599.3
 GR    1146.9   1634.9     1148.4     1783.8     1146.7     2058.0     1148.0     2336.2     1146.6     2378.1
 GR    1148.6   2411.1     1150.6     2905.8     1146.2     2935.1     1147.0     3093.0     1146.2     3258.5
 GR    1145.6   3366.6     1146.0     3464.8     1145.2     3551.9     1145.3     3696.5     1147.9     3778.2
 GR    1147.4   3903.4     1149.9     3942.5     1150.4     4356.0     1152.0     4512.4     1154.3     4663.9
 GR    1156.7   4747.8     1163.9     4863.7     1164.2     4982.1     1166.4     5083.6     1169.4     5160.7
 GR    1166.8   5213.9     1172.2     5284.2     1173.0     5304.3        0.0        0.0        0.0        0.0

 ET                          4.1     1084.0     3540.0
 X1    16.82       36     2452.1     3506.5      495.0      485.0      500.0
 GR    1157.7   1000.0     1163.8     1057.3     1147.5     1095.6     1148.0     1140.1     1148.0     1169.0
 GR    1146.4   1185.5     1146.5     1220.9     1148.5     1247.8     1149.5     1445.5     1148.6     1696.6
 GR    1150.0   1795.3     1149.0     1988.1     1150.1     2064.2     1149.8     2452.1     1148.6     2681.8
 GR    1149.7   2821.6     1147.8     2833.2     1148.3     3111.4     1146.8     3198.1     1146.8     3274.3
 GR    1148.0   3358.7     1147.7     3506.5     1151.5     3521.1     1149.9     3619.5     1149.9     3710.3
 GR    1155.6   3953.6     1157.0     4272.4     1160.6     4428.4     1167.2     4485.9     1170.1     4610.9
 GR    1165.7   4666.4     1170.5     4735.0     1170.7     4787.8     1175.6     4839.8     1178.0     4952.4
 GR    1179.9   4983.1        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 ET                          4.1     1190.0     3685.0
 X1    16.91       31     2723.1     3576.3      510.0      495.0      500.0
 GR    1165.3   1000.0     1166.9     1038.1     1160.2     1080.7     1150.0     1226.6     1150.6     1246.9
 GR    1150.3   1271.8     1147.9     1291.8     1150.2     1329.2     1148.4     1358.3     1148.4     1378.5
 GR    1151.8   1457.5     1152.2     1802.8     1152.3     2163.8     1152.9     2533.5     1153.0     2723.1
 GR    1151.4   2750.9     1151.4     3037.3     1149.5     3386.1     1149.6     3478.5     1149.9     3576.3
 GR    1154.1   3607.3     1153.4     3754.4     1151.8     3879.4     1150.3     3950.8     1153.7     4013.7
 GR    1157.4   4325.0     1161.5     4675.9     1168.0     4737.4     1171.7     4847.0     1169.0     4905.1
 GR    1179.0   4976.4        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 [redacted]                  4.1     1200.0     3635.0
    17.01       30     2808.2     3534.6      385.0      535.0      500.0
 GR    1166.6   1000.0     1153.3     1057.1     1152.9     1147.7     1153.2     1182.1     1154.0     1250.7
```

```
 GR   1151.7     1301.0     1151.2     1426.4     1154.4     1449.3     1153.9     1704.6     1154.8     2012.8
 GR   1154.9     2372.8     1154.0     2808.2     1152.5     3208.6     1151.3     3451.2     1151.3     3486.0
 GR   1151.3     3515.8     1157.0     3534.6     1156.1     3920.6     1155.7     4323.9     1157.2     4517.4
 GR   1159.9     4539.1     1169.9     4599.9     1168.6     4672.7     1177.8     4789.2     1177.8     4844.9
 GR   1176.6     4907.5     1168.1     4946.2     1168.4     4987.6     1182.3     5050.6     1184.3     5093.1
1
     21MAR07      13:36:57                                                                          PAGE     5


 ET                              4.1     1505.0     3785.0
 X1     17.10          32     2928.7     3655.4      395.0      535.0      500.0
 GR   1161.0     1000.0     1158.0     1216.7     1155.9     1227.4     1156.5     1287.0     1153.6     1301.0
 GR   1152.8     1362.5     1155.2     1377.9     1156.5     1590.1     1155.6     1758.3     1152.9     1818.4
 GR   1153.1     1836.8     1155.9     1864.6     1155.5     2110.7     1156.4     2210.0     1156.8     2533.9
 GR   1156.4     2928.7     1154.4     2951.7     1154.8     3152.6     1155.3     3367.0     1155.0     3500.3
 GR   1153.4     3623.4     1153.3     3655.4     1153.3     3724.2     1157.1     3752.4     1158.1     3918.2
 GR   1158.5     4273.3     1159.2     4699.7     1167.8     4779.8     1167.8     4843.8     1171.8     4934.6
 GR   1175.2     5062.2     1180.8     5151.6

 NH         4        .04     2648.8        .03     3521.4        .04     4625.7        1.0     5655.5
 ET                              4.1     1575.0     3620.0
 X1     17.20          44     2648.8     3521.4      470.0      450.0      500.0
 GR   1167.8     1000.0     1183.6     1046.0     1193.8     1093.3     1153.8     1198.7     1156.4     1209.1
 GR   1157.1     1292.7     1154.8     1304.4     1157.1     1355.5     1157.2     1470.7     1157.8     1650.5
 GR   1157.1     1961.0     1154.3     1994.9     1156.7     2080.2     1157.9     2214.2     1157.4     2369.5
 GR   1158.8     2467.2     1159.0     2648.8     1156.4     2667.5     1156.4     2696.2     1157.4     2725.2
 GR   1157.4     2854.7     1157.4     3053.9     1157.8     3202.1     1155.6     3212.8     1155.6     3259.7
 GR   1155.7     3306.9     1156.3     3425.9     1156.9     3521.4     1155.9     3593.8     1157.6     3608.3
 GR   1158.5     3744.1     1159.3     4060.2     1159.2     4399.5     1159.9     4581.6     1162.9     4625.7
 GR   1161.3     4694.1     1163.2     4823.8     1164.8     5005.3     1165.3     5120.5     1168.3     5241.3
 GR   1173.2     5458.1     1176.1     5537.9     1194.6     5600.6     1199.2     5655.5

 NH         4        1.0     1399.2        .04     2802.0        .03     3593.6        .04     5052.3
 ET                              4.1     1980.0     3795.0
 X1     17.29          36     2802.0     3593.6      495.0      475.0      500.0
 GR   1200.0     1000.0     1199.0     1121.7     1188.4     1167.3     1169.3     1273.4     1161.6     1399.2
 GR   1156.6     1539.3     1161.1     1559.3     1159.4     1594.3     1156.2     1611.3     1160.2     1637.6
 GR   1159.7     1780.0     1160.2     2095.6     1159.9     2327.3     1156.9     2340.0     1160.2     2463.1
 GR   1160.6     2622.5     1161.5     2802.0     1157.8     2819.0     1157.8     2844.2     1158.7     2880.4
 GR   1159.6     3037.5     1159.7     3235.4     1159.8     3440.7     1158.1     3448.4     1158.1     3492.5
 GR   1158.4     3532.4     1159.2     3593.6     1159.2     3726.0     1161.3     3735.1     1160.6     4128.0
 GR   1161.4     4669.1     1171.8     4744.8     1179.3     4877.9     1184.9     5011.0     1182.0     5048.4
 GR   1185.7     5052.3        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NC       .04        .04        .03
 ET                              4.1     1625.0     3300.0
 X1     17.39          36     2354.0     3099.0      505.0      505.0      500.0
 GR   1191.1     1000.0     1190.1     1019.2     1163.6     1066.6     1161.6     1254.5     1162.4     1354.0
 GR   1159.0     1362.9     1162.0     1377.7     1162.2     1506.0     1163.5     1826.4     1160.6     1960.5
 GR   1161.6     2028.0     1159.9     2059.6     1159.9     2140.2     1161.9     2158.9     1162.6     2354.0
 GR   1160.6     2373.1     1161.4     2518.8     1161.0     2546.8     1162.7     2849.3     1161.8     2969.9
 GR   1160.3     2982.0     1159.9     3028.5     1160.6     3099.0     1162.3     3129.8     1163.0     3282.7
 GR   1161.7     3467.4     1163.4     3527.8     1163.2     3944.9     1163.6     4214.7     1175.9     4283.5
 GR   1176.4     4324.6     1174.1     4350.4     1176.8     4392.4     1171.3     4455.9     1186.8     4534.7
 GR   1190.1     4616.7        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH         4        .04     2542.4        .03     3023.4        .04     4267.7        1.0     4668.2
 ET                              4.1     1635.0     3220.0
1
     21MAR07      13:36:57                                                                          PAGE     6


 X1     17.48          25     2542.4     3023.4      440.0      490.0      500.0
 GR   1181.8     1000.0     1182.6     1020.2     1167.3     1082.1     1161.7     1493.7     1163.9     1506.1
 GR   1166.0     1677.4     1165.9     1893.1     1163.6     1990.1     1161.6     2262.0     1165.5     2283.1
 GR   1165.3     2542.4     1162.5     2566.6     1163.6     2604.0     1162.7     2949.1     1161.3     2973.7
 GR   1161.3     3023.4     1162.9     3052.8     1164.3     3195.3     1164.4     3329.5     1166.0     3352.2
 GR   1166.0     3800.2     1166.0     4267.7     1170.6     4564.2     1190.6     4658.3     1190.6     4668.2

 NH         4        .04     2647.4        .03     2897.0        .04     4575.4        1.0     4960.4
 ET                              4.1     1695.0     3245.0
 X1     17.58          31     2647.4     2897.0      460.0      470.0      500.0
 GR   1190.4     1000.0     1189.0     1015.1     1169.9     1094.8     1167.8     1409.8     1166.6     1654.2
 GR   1166.9     1803.7     1167.3     1963.5     1165.5     2015.9     1164.2     2193.8     1163.6     2282.4
 GR   1167.0     2303.3     1168.0     2425.7     1166.1     2647.4     1164.2     2683.0     1164.3     2720.2
 GR   1164.3     2779.4     1165.0     2897.0     1165.9     3072.5     1166.8     3161.0     1164.4     3181.5
 GR   1164.6     3221.1     1166.7     3243.8     1167.0     3426.9     1169.2     3458.0     1171.1     3722.8
 GR   1171.3     4293.6     1174.8     4575.4     1178.5     4670.0     1176.8     4749.4     1179.0     4854.3
 GR   1202.3     4960.4        0.0        0.0        0.0        0.0        0.0        0.0

 NC       .04        .04        .03
```

```
 ET                          4.1     1805.0     3355.0
 [redacted]  17.67          30      2791.3     3149.8      500.0      515.0      500.0
 [redacted]  1200.0      1000.0     1200.3     1018.8     1171.6     1125.8     1169.9     1870.2     1168.8     2064.5
 [redacted]  1166.9      2092.1     1166.4     2217.1     1169.4     2413.1     1168.0     2694.5     1168.8     2791.3
 GR    1165.3      2816.3     1166.0     2881.5     1166.7     2973.0     1167.1     3149.8     1170.1     3223.2
 GR    1167.4      3328.5     1170.1     3434.2     1170.7     3607.9     1172.3     3698.6     1175.4     3716.3
 GR    1177.1      3881.1     1174.1     3921.3     1175.9     4065.1     1176.8     4110.2     1178.6     4135.1
 GR    1179.7      4345.5     1177.7     4534.0     1177.8     4588.1     1189.7     4674.6     1203.2     4716.0

 ET                          4.1     2395.0     3963.0
 X1    17.77          33     3314.8     3504.5      490.0      500.0      500.0
 GR    1207.3      1000.0     1207.3     1022.1     1202.8     1081.3     1180.4     1358.7     1177.1     1635.5
 GR    1172.7      1812.8     1173.9     1836.7     1174.2     2015.1     1173.2     2269.8     1171.6     2533.5
 GR    1168.1      2564.0     1168.7     2605.2     1169.5     2766.9     1171.5     2989.9     1170.3     3314.8
 GR    1168.1      3366.4     1168.3     3421.2     1168.3     3504.5     1168.2     3579.4     1170.1     3609.2
 GR    1170.8      3937.7     1176.5     3975.6     1178.6     4357.1     1176.7     4380.4     1179.5     4486.5
 GR    1183.2      4822.5     1178.6     4846.1     1183.0     4909.5     1185.4     4935.1     1181.5     4969.9
 GR    1181.6      5003.1     1202.4     5076.1     1203.0     5095.8        0.0        0.0        0.0        0.0

 NH          5        1.0     2157.3         .04     4345.0         .03     4598.8         .04     5845.4        1.0
 NH    6797.3
 ET                          4.1     3480.0     4985.0
 X1    17.86          39     4345.0     4598.8      555.0      445.0      500.0
 GR    1195.6      1000.0     1190.4     1542.9     1184.3     2157.3     1174.3     3356.4     1173.4     3567.6
 GR    1171.3      3576.7     1171.4     3627.8     1171.5     3898.0     1173.0     4092.3     1172.5     4345.0
 GR    1170.1      4411.1     1170.4     4488.7     1170.2     4532.9     1170.2     4598.8     1170.3     4628.4
 GR    1172.1      4639.3     1173.0     4805.2     1171.1     4949.6     1174.6     5098.7     1178.9     5124.6
 GR    1183.2      5450.5     1182.5     5723.7     1184.9     5845.4     1205.3     5965.1     1201.9     6010.9
 GR    1206.2      6037.9     1202.9     6148.6     1187.6     6202.8     1187.7     6218.6     1206.7     6289.7
 GR    1212.2      6414.3     1211.0     6488.6     1193.1     6548.2     1204.3     6579.4     1188.9     6616.6
 GR    1189.3      6638.3     1194.1     6674.8     1192.2     6751.0     1198.8     6797.3        0.0        0.0
1
     21MAR07      13:36:57                                                                                  PAGE     7


 NH          4         .04     4214.7         .03     4467.6         .04     5188.3        1.0     6188.1
 ET                          4.1     3360.0     4620.0
 X1    17.95          36     4214.7     4467.6      460.0      500.0      500.0
 [redacted]  1208.5      1000.0     1210.0     1026.3     1203.0     1110.6     1200.8     1264.6     1192.9     1312.9
 [redacted]  1198.5      1349.8     1198.1     1379.3     1206.8     1422.5     1210.6     1542.6     1186.9     1649.0
 [redacted]  1184.8      1761.4     1181.8     2156.8     1176.9     2765.5     1175.3     3206.8     1175.6     3383.5
 GR    1173.7      3404.7     1174.5     3539.1     1174.6     3838.8     1174.5     4072.3     1172.6     4214.7
 GR    1172.6      4304.2     1171.6     4362.5     1171.0     4411.6     1172.7     4428.5     1174.5     4467.6
 GR    1175.2      4665.5     1181.3     4738.9     1183.4     5085.9     1179.0     5132.6     1183.5     5188.3
 GR    1186.2      5384.5     1184.3     5459.5     1187.2     5568.8     1188.7     5827.1     1192.9     6029.3
 GR    1194.3      6188.1        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH          4        1.0     1467.2         .04     3868.6         .03     4587.0         .04     5126.1
 ET                          4.1     3400.0     4740.0
 X1    18.05          28     3868.6     4587.0      480.0      550.0      500.0
 GR    1218.7      1000.0     1211.0     1039.0     1213.1     1074.8     1191.9     1253.0     1195.2     1304.1
 GR    1191.3      1355.5     1189.3     1467.2     1195.1     1522.8     1190.1     1608.3     1185.3     1645.5
 GR    1185.5      1851.5     1183.5     2120.2     1179.9     2526.1     1178.5     2929.9     1177.1     3357.7
 GR    1178.5      3509.4     1175.7     3526.0     1176.6     3678.1     1177.1     3851.5     1174.8     3868.6
 GR    1176.0      4025.7     1175.0     4308.1     1173.2     4546.1     1173.4     4587.0     1179.0     4639.0
 GR    1180.9      4953.0     1187.7     5033.9     1191.1     5126.1

 NH          5         .04     3078.1         .03     3683.1         .04     3849.5         .03     4175.1         .04
 NH    4389.5
 ET                          4.1     2820.0     4276.0
 X1    18.14          27     3078.1     4175.1      310.0      530.0      500.0
 GR    1215.6      1000.0     1216.3     1047.9     1188.2     1123.6     1187.2     1543.7     1181.4     1964.5
 GR    1179.7      2419.9     1178.4     2786.6     1179.1     2966.7     1176.9     3078.1     1176.9     3183.9
 GR    1177.3      3307.8     1176.8     3417.0     1178.2     3501.4     1177.1     3683.1     1179.5     3691.4
 GR    1178.5      3803.3     1176.2     3849.5     1175.7     3864.1     1176.2     3907.3     1176.5     4068.8
 GR    1175.1      4075.4     1175.5     4152.2     1178.0     4175.1     1178.3     4248.2     1186.2     4302.6
 GR    1196.6      4362.0     1196.5     4389.5        0.0        0.0        0.0        0.0        0.0        0.0

 NH          6        1.0     1700.0         .04     3533.1         .03     4292.0         .04     4599.6         .03
 NH    4816.6         .04     5098.8
 ET                          4.1     3410.0     4986.0
 X1    18.24          25     3533.1     4816.6      485.0      505.0      500.0
 GR    1227.5      1000.0     1212.1     1071.4     1198.1     1117.8     1192.0     1700.0     1190.7     1813.7
 GR    1186.0      2278.3     1183.2     2832.3     1180.8     3392.1     1180.8     3509.3     1178.3     3533.1
 GR    1178.8      3621.8     1179.7     3913.3     1177.9     4200.2     1180.1     4292.0     1180.2     4587.1
 GR    1177.8      4599.6     1177.8     4619.1     1178.7     4643.2     1177.9     4795.4     1179.8     4816.6
 GR    1180.8      4931.9     1183.2     4963.4     1184.5     5013.6     1203.4     5074.7     1203.4     5098.8

 [redacted]          5         .04     2906.0         .03     3764.9         .04     4127.2         .03     4369.2         .04
 [redacted]  4757.7
 ET                          4.1     2850.0     4457.0
```

```
 X1    18.33       29     2906.0     4369.2      535.0      500.0      500.0
 [redacted]  1229.2  1000.0  1229.2  1024.4  1211.7  1128.5  1194.4  1270.9  1191.8  1596.6
 [redacted]  1189.6  2008.5  1187.1  2475.9  1184.2  2691.9  1181.1  2747.5  1183.0  2898.8
 [redacted]  1179.8  2906.0  1179.8  2976.0  1181.1  2995.5  1181.6  3258.3  1182.1  3635.8
 GR  1180.8  3764.9  1183.4  3812.2  1183.6  4083.3  1182.0  4127.2  1179.4  4147.8
 GR  1179.4  4165.1  1180.4  4197.2  1180.8  4275.5  1179.8  4369.2  1182.7  4389.0
 GR  1186.6  4473.7  1188.6  4601.9  1199.0  4662.0  1205.7  4757.7     0.0     0.0
1
     21MAR07       13:36:57                                                    PAGE     8


 NH       5       .04     3147.9       .03     4030.3       .04     4469.5       .03     4750.7       .04
 NH  5264.8
 ET                         4.1     3070.0     4771.0
 X1    18.43       46     3147.9     4750.7      625.0      475.0      500.0
 GR  1208.9  1000.0  1209.4  1019.7  1207.1  1045.7  1207.3  1225.0  1203.1  1332.8
 GR  1202.2  1594.6  1200.1  1774.0  1198.3  1796.8  1199.7  1812.6  1199.2  1922.2
 GR  1197.4  1950.8  1196.4  2068.4  1196.9  2093.7  1194.5  2306.1  1193.1  2322.0
 GR  1192.8  2577.8  1189.0  2877.2  1187.1  2902.0  1186.3  3147.9  1184.3  3174.2
 GR  1183.9  3259.0  1184.7  3325.3  1184.1  3410.3  1183.7  3479.4  1184.5  3919.7
 GR  1185.2  3964.0  1183.9  4030.3  1187.2  4048.5  1187.6  4225.2  1183.5  4256.3
 GR  1184.1  4300.8  1185.7  4390.2  1184.7  4469.5  1182.7  4488.7  1182.7  4513.4
 GR  1183.5  4533.3  1183.2  4599.1  1182.5  4621.3  1182.3  4750.7  1193.7  4790.5
 GR  1196.6  4849.5  1189.9  4905.7  1191.5  4976.4  1201.9  5032.1  1202.9  5152.1
 GR  1215.0  5264.8     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0

 NH       5       .04     2817.4       .03     3721.9       .04     4394.8       .03     4762.0       .04
 NH  5151.1
 ET                         4.1     2745.0     4867.0
 X1    18.52       29     2817.4     4762.0      595.0      520.0      500.0
 GR  1209.0  1000.0  1206.7  1432.7  1200.2  1940.1  1188.3  2817.4  1186.4  2844.2
 GR  1187.1  3205.6  1186.4  3276.8  1187.8  3291.3  1187.4  3607.0  1187.2  3721.9
 GR  1188.7  3868.7  1187.1  3905.8  1187.8  3965.2  1185.5  3979.4  1185.7  4030.0
 GR  1188.3  4203.1  1187.5  4394.8  1184.9  4406.5  1184.9  4426.5  1185.9  4456.3
 GR  1186.1  4688.5  1185.5  4762.0  1187.6  4793.5  1187.6  4828.2  1185.5  4849.7
 GR  1205.7  4912.7  1206.8  5019.6  1206.0  5042.3  1217.4  5151.1     0.0     0.0

 NH       5       .04     2390.1       .03     3150.0       .04     4168.0       .03     4454.0       .04
 [redacted]  5441.5
 [redacted]                 4.1     2320.0     4650.0
 [redacted]    18.62       37     2390.1     4454.0      580.0      495.0      500.0
 GR  1235.0  1000.0  1203.4  1154.8  1203.6  1200.4  1191.3  2143.5  1189.2  2287.3
 GR  1189.2  2308.3  1191.8  2321.1  1191.8  2375.3  1188.3  2390.1  1189.2  2743.1
 GR  1188.0  2755.3  1188.9  2820.1  1188.9  2932.1  1189.9  2968.4  1190.0  3150.0
 GR  1190.3  3393.0  1188.4  3446.3  1190.2  3686.7  1190.3  3868.0  1189.4  3885.2
 GR  1189.5  4152.3  1188.0  4168.0  1188.0  4214.0  1187.8  4264.7  1188.6  4397.0
 GR  1188.0  4454.0  1190.4  4465.0  1190.4  4536.8  1187.2  4559.0  1187.2  4605.8
 GR  1190.1  4629.6  1191.0  4755.5  1188.8  4786.8  1190.2  4822.7  1196.4  5192.4
 GR  1200.2  5327.5  1213.3  5441.5

 NH       5       .04     2286.9       .03     2752.6       .04     4193.6       .03     4391.7       .04
 NH  6195.5
 ET                         4.1     2270.0     4750.0
 X1    18.71       43     2286.9     4391.7      625.0      470.0      500.0
 GR  1232.0  1000.0  1224.8  1106.4  1202.7  1191.4  1196.7  1215.6  1194.0  1528.7
 GR  1194.1  1856.3  1194.9  1873.9  1193.1  2050.7  1194.0  2265.4  1191.3  2286.9
 GR  1192.2  2569.3  1191.8  2752.6  1190.4  2762.9  1190.4  2815.0  1192.2  2846.4
 GR  1192.2  2944.4  1193.7  3010.8  1192.4  3308.0  1193.1  3639.6  1192.3  4048.6
 GR  1191.7  4193.6  1188.1  4197.6  1188.4  4216.4  1190.1  4264.8  1190.1  4375.4
 GR  1192.9  4391.7  1193.4  4599.3  1188.1  4636.5  1188.0  4676.2  1192.1  4722.8
 GR  1192.2  4887.9  1193.1  5082.2  1192.5  5100.0  1201.7  5457.9  1207.1  5502.2
 GR  1204.5  5563.8  1206.8  5697.7  1212.3  5851.9  1214.7  5917.7  1221.9  6001.6
 GR  1238.5  6124.1  1252.6  6191.3  1252.4  6195.5     0.0     0.0     0.0     0.0
1
     21MAR07       13:36:57                                                    PAGE     9


 NH       5       .04     2360.9       .03     3053.0       .04     3916.8       .03     4347.7       .04
 NH  6008.5
 ET                         4.1     2320.0     4755.0
 X1    18.81       43     2360.9     4347.7      460.0      475.0      500.0
 GR  1234.2  1000.0  1232.6  1035.7  1221.1  1078.9  1197.5  1187.4  1195.7  1428.9
 GR  1195.7  1882.1  1197.0  1909.9  1194.5  2316.0  1192.9  2360.9  1194.2  2576.1
 GR  1193.6  2779.3  1192.0  2799.9  1193.0  2901.5  1193.5  2940.4  1193.5  3053.0
 GR  1195.1  3086.3  1196.0  3290.6  1194.3  3329.9  1194.1  3905.2  1192.0  3916.8
 GR  1192.2  3989.3  1192.0  4265.4  1190.9  4284.7  1191.0  4310.7  1191.2  4336.0
 [redacted]  1193.4  4347.7  1193.8  4494.2  1194.4  4625.8  1189.6  4676.9  1192.6  4706.9
 [redacted]  1191.6  4737.1  1189.9  4752.2  1194.8  4799.1  1195.9  4943.7  1195.1  5062.9
 [redacted]  1204.0  5497.9  1213.1  5567.6  1211.5  5596.3  1205.8  5636.6  1209.5  5773.7
 GR  1214.5  5840.7  1222.9  5926.0  1244.7  6008.5     0.0     0.0     0.0     0.0
```

```
[redacted]     2      56604      56604
               5        .04     3019.8        .03     3807.5        .04     4221.0        .03     4829.4        .04
[redacted]  6472.1
 ET                              4.1       2940.0     5220.0
 X1    18.90          46       3019.8     4829.4      495.0       465.0       500.0
 GR    1243.2      1000.0      1246.6     1023.6     1234.7      1082.5      1224.2      1222.1      1226.1      1261.8
 GR    1218.4      1364.5      1222.2     1407.2     1214.9      1510.4      1206.3      1541.6      1201.6      1730.8
 GR    1197.6      1885.3      1197.1     2255.8     1198.0      2646.5      1196.6      3019.8      1195.2      3081.9
 GR    1196.4      3151.0      1196.1     3390.8     1196.4      3602.3      1195.7      3719.9      1194.3      3729.3
 GR    1194.6      3794.7      1197.5     3807.5     1198.0      4208.2      1195.0      4221.0      1195.5      4391.0
 GR    1194.9      4626.5      1194.5     4739.6     1193.3      4748.4      1193.3      4781.0      1193.3      4813.5
 GR    1196.6      4829.4      1196.5     4947.4     1191.3      4985.1      1195.9      5016.9      1194.8      5353.5
 GR    1193.6      5372.2      1193.6     5384.7     1195.6      5401.3      1197.9      5608.4      1205.0      5951.9
 GR    1207.8      6067.8      1213.0     6227.5     1217.6      6306.7      1224.7      6352.7      1224.2      6409.1
 GR    1240.0      6472.1         0.0        0.0        0.0         0.0         0.0         0.0         0.0         0.0

 NC      0.04        0.04        0.03
 ET                              4.1       2955.0     5030.0
 X1    19.00          35       3221.0     4452.9      375.0       400.0       500.0
 GR    1222.2      1000.0      1218.5     1157.4     1209.0      1400.0      1198.2      1700.0      1198.5      2533.6
 GR    1198.8      2981.6      1196.9     3221.0     1197.7      3421.7      1198.4      3684.9      1197.2      3737.9
 GR    1196.1      3754.5      1196.6     3862.2     1197.9      3956.8      1196.9      4177.0      1196.1      4356.5
 GR    1195.0      4398.4      1195.0     4429.8     1198.5      4452.9      1198.0      4593.1      1194.7      4614.2
 GR    1196.6      4683.7      1197.4     4856.4     1195.6      4965.2      1200.2      5014.3      1200.3      5181.8
 GR    1197.8      5326.4      1198.3     5461.6     1205.3      5693.7      1209.4      5937.1      1215.0      6129.9
 GR    1217.3      6169.4      1216.4     6266.7     1221.6      6410.5      1228.9      6508.8      1242.9      6587.1

 ET                              4.1       2900.0     4720.0
 X1    19.09          30       3150.0     3967.7      375.0       400.0       500.0
 GR    1243.0      1000.0      1232.1     1146.7     1219.9      1191.3      1203.5      1281.3      1200.3      1461.1
 GR    1202.0      1791.3      1201.1     2299.6     1200.2      3150.0      1199.5      3424.9      1197.8      3481.7
 GR    1197.8      3543.1      1198.6     3574.0     1198.1      3671.0      1197.8      3744.5      1198.1      3812.5
 GR    1198.0      3951.9      1201.7     3967.7     1200.3      4183.6      1197.6      4301.6      1199.2      4376.5
 GR    1199.7      4569.6      1197.6     4623.4     1202.4      4686.7      1201.2      5026.2      1198.7      5122.8
 GR    1202.1      5316.4      1208.6     5604.1     1212.7      5730.4      1230.2      5850.7      1232.4      5889.4
1
    21MAR07      13:36:57                                                                                  PAGE   10


[redacted]
                                4.1       2870.0     4400.0
 X1    19.19          28       3043.1     3628.4      465.0       445.0       500.0
 GR    1234.0      1000.0      1217.4     1053.1     1216.8      1105.8      1207.3      1507.9      1206.4      2105.0
 GR    1202.5      2697.8      1200.8     3036.9     1199.3      3043.1      1199.9      3104.3      1200.2      3293.9
 GR    1198.8      3299.2      1198.9     3356.6     1198.9      3409.3      1200.0      3423.0      1200.3      3613.4
 GR    1202.3      3628.4      1202.7     3916.3     1199.9      4088.5      1202.2      4129.2      1201.4      4259.1
 GR    1198.7      4277.0      1204.8     4312.5     1203.8      4551.0      1200.4      4808.2      1206.5      5193.2
 GR    1216.2      5266.9      1235.9     5334.3     1237.5      5379.6         0.0         0.0         0.0         0.0

 ET                              4.1       2705.0     4040.0
 X1    19.28          24       2831.4     3317.3      525.0       485.0       500.0
 GR    1232.2      1000.0      1228.7     1016.2     1229.6      1068.0      1213.7      1281.3      1211.7      1744.9
 GR    1206.9      2277.8      1203.1     2630.4     1203.1      2831.4      1201.1      2857.0      1201.1      3026.5
 GR    1201.9      3046.0      1201.4     3201.2     1203.0      3317.3      1204.2      3336.8      1203.8      3571.5
 GR    1202.8      3796.1      1203.2     3890.6     1202.6      3937.1      1206.9      3970.3      1205.6      4176.8
 GR    1204.1      4445.1      1205.0     4623.3     1207.7      4859.9      1232.7      4973.0         0.0         0.0

 ET                              4.1       2555.0     3780.0
 X1    19.38          28       2634.3     3151.1      520.0       490.0       500.0
 GR    1220.3      1000.0      1217.3     1205.4     1214.9      1501.7      1206.3      2515.9      1202.9      2522.5
 GR    1203.1      2534.7      1206.2     2545.1     1205.5      2614.5      1203.3      2634.3      1202.3      2692.5
 GR    1202.7      2758.3      1203.1     2813.3     1204.2      2846.1      1204.9      3151.1      1202.6      3178.7
 GR    1202.7      3196.8      1205.7     3213.2     1206.4      3358.9      1203.5      3521.0      1208.5      3584.1
 GR    1208.5      3786.6      1206.1     4043.0     1208.3      4286.4      1209.7      4453.8      1232.0      4550.0
 GR    1243.7      4604.1      1244.4     4635.4     1242.1      4643.5         0.0         0.0         0.0         0.0

 ET                              4.1       2950.0     4185.0
 X1    19.47          31       3142.0     3442.5      600.0       205.0       500.0
 GR    1247.7      1000.0      1230.6     1075.8     1223.3      1212.8      1217.5      1832.7      1215.2      2057.4
 GR    1213.0      2349.5      1212.2     2379.9     1211.8      2391.3      1212.9      2428.7      1210.4      2748.0
 GR    1209.2      3142.0      1203.8     3159.9     1203.9      3192.9      1204.0      3253.2      1205.1      3300.2
 GR    1206.0      3442.5      1205.9     3641.4     1203.8      3657.9      1204.0      3695.8      1207.3      3719.0
 GR    1208.3      3765.9      1205.3     3911.5     1208.1      3949.7      1209.2      4071.7      1208.0      4275.4
 GR    1206.4      4419.6      1209.2     4690.4     1210.2      4746.9      1216.8      4818.2      1222.0      4901.1
 GR    1242.4      5035.2         0.0        0.0        0.0         0.0         0.0         0.0         0.0         0.0

 ET                              4.1       3020.0     4075.0
[redacted]  19.56          42       3306.6     3605.0      325.0       580.0       500.0
[redacted]  1260.5      1000.0      1242.8     1057.3     1227.1      1130.3      1222.2      1559.0      1218.8      1980.1
[redacted]  1217.1      2069.3      1215.9     2414.2     1212.3      2849.1      1209.1      2863.7      1209.1      2876.8
 GR    1211.9      2895.9      1212.1     2994.3     1212.2      3131.9      1208.4      3144.9      1209.2      3227.7
```

```
 GR   1207.5     3262.1     1209.9     3306.6     1209.8     3357.1     1207.6     3365.9     1207.1     3392.9
 GR   1208.0     3449.9     1209.0     3534.1     1209.2     3605.0     1207.6     3615.1     1207.4     3641.4
 GR   1207.4     3664.1     1210.0     3713.8     1210.1     3808.0     1207.3     3819.9     1207.5     3846.2
 GR   1210.8     3871.2     1211.2     3929.8     1209.7     3962.1     1211.6     3996.1     1213.4     4118.8
 GR   1212.2     4211.0     1213.4     4371.3     1215.4     4401.8     1214.5     4444.8     1215.0     4501.1
 GR   1228.8     4548.4     1228.2     4680.9       0.0        0.0        0.0        0.0
1
     21MAR07       13:36:57                                                                        PAGE   11


 ET                              4.1     3245.0     4305.0
 X1     19.66          45     3871.8     4122.0      385.0      390.0      500.0
 GR   1253.6     1000.0     1261.1     1053.0     1249.3     1093.2     1230.3     1223.0     1230.9     1243.4
 GR   1234.4     1260.8     1229.3     1287.6     1226.8     1445.0     1224.2     1807.8     1221.0     2129.9
 GR   1218.3     2511.4     1215.6     2923.7     1212.2     3239.3     1210.3     3254.8     1212.5     3267.0
 GR   1212.6     3287.2     1209.2     3299.4     1209.9     3409.4     1212.0     3428.3     1210.8     3473.0
 GR   1212.4     3694.6     1211.8     3871.8     1209.5     3891.3     1209.7     3924.5     1209.8     3974.7
 GR   1209.1     4009.2     1209.6     4069.7     1210.1     4122.0     1209.7     4154.1     1212.9     4181.4
 GR   1214.1     4487.6     1217.5     4535.6     1230.6     4587.7     1230.5     4670.5     1218.4     4724.1
 GR   1218.9     4827.0     1229.6     4892.2     1239.3     4938.8     1242.9     5070.4     1249.5     5133.5
 GR   1247.8     5187.2     1259.3     5247.4     1241.2     5323.8     1259.3     5412.6     1265.6     5425.0

 ET                              4.1     3375.0     4515.0
 X1     19.75          31     4217.1     4450.0      720.0      500.0      500.0
 GR   1266.6     1000.0     1263.8     1095.4     1235.3     1175.3     1230.4     1533.4     1228.0     1726.1
 GR   1227.0     1735.1     1227.6     1762.9     1226.8     1787.4     1228.1     1810.7     1226.0     2103.1
 GR   1222.4     2505.2     1218.6     2949.1     1217.3     3268.3     1213.1     3283.4     1212.9     3295.5
 GR   1215.0     3308.3     1216.1     3475.2     1216.3     3581.4     1212.5     3608.8     1212.5     3633.6
 GR   1214.3     3658.5     1213.4     3788.2     1215.5     3931.0     1215.0     4171.3     1213.6     4217.1
 GR   1212.2     4305.6     1211.3     4358.9     1211.3     4450.0     1211.1     4496.4     1229.7     4540.8
 GR   1229.7     4573.1

 ET                              4.1     3570.0     4965.0
 X1     19.85          33     4657.3     4926.6      620.0      495.0      500.0
 GR   1242.2     1000.0     1234.1     1560.6     1231.7     1569.5     1234.9     1607.6     1233.2     1874.6
 GR   1231.4     1887.4     1232.8     1905.3     1226.1     2389.3     1222.7     2782.9     1218.3     3104.8
 GR   1217.0     3115.8     1220.4     3152.4     1220.0     3339.5     1217.8     3390.8     1219.5     3436.4
 GR   1219.1     3774.3     1218.9     4004.7     1215.3     4033.8     1216.6     4180.2     1218.0     4417.7
 GR   1215.8     4657.3     1214.6     4703.7     1213.6     4715.6     1213.6     4843.8     1212.7     4926.6
 GR   1212.7     4940.2     1219.2     4960.4     1220.7     5045.6     1233.0     5097.3     1232.1     5140.1
 GR   1225.5     5190.1     1247.6     5283.2     1245.9     5296.5       0.0        0.0        0.0        0.0

 ET                              4.1     3670.0     5145.0
 X1     19.94          29     4879.2     5116.9      310.0      495.0      500.0
 GR   1242.0     1000.0     1239.2     1176.1     1236.1     1203.4     1237.8     1433.9     1239.4     1549.7
 GR   1235.1     1572.9     1237.1     1621.9     1233.8     2010.0     1228.8     2409.0     1224.8     2802.5
 GR   1222.0     2962.9     1219.7     2978.0     1221.9     2993.4     1222.1     3114.5     1220.6     3150.7
 GR   1222.8     3344.3     1218.6     3547.1     1220.6     3574.2     1220.9     3882.4     1221.6     4326.2
 GR   1217.8     4362.6     1219.5     4702.5     1217.6     4879.2     1215.7     4891.3     1215.3     5021.9
 GR   1214.7     5091.7     1214.7     5116.9     1221.5     5174.8     1234.8     5288.3       0.0        0.0

 ET                              4.1     3820.0     5355.0
 X1     20.14          26     4707.3     5234.0      355.0      930.0     1020.0
 GR   1243.1     1000.0     1242.0     1325.3     1237.6     1337.8     1241.5     1391.0     1236.4     1770.9
 GR   1230.7     2383.3     1223.4     2962.8     1221.1     2973.2     1223.4     2994.1     1223.9     3195.3
 GR   1224.1     3552.1     1223.7     3861.0     1224.3     4236.8     1223.6     4519.8     1221.6     4676.0
 GR   1220.4     4707.3     1219.6     4801.3     1219.4     4876.9     1219.8     4980.1     1219.0     5133.0
 GR   1219.0     5234.0     1225.6     5254.8     1226.4     5391.2     1228.5     5492.7     1260.4     5613.2
 GR   1262.8     5659.3       0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0
1
     21MAR07       13:36:57                                                                        PAGE   12


 ET                              4.1     3120.0     4704.0
 X1     20.32          29     3345.8     4661.7      470.0      985.0      975.0
 GR   1254.5     1115.8     1235.5     1235.3     1234.8     1293.0     1229.9     1742.4     1226.4     2038.9
 GR   1224.5     2045.9     1227.2     2058.3     1226.6     2300.7     1228.2     2398.3     1227.1     2496.3
 GR   1228.4     2892.1     1227.6     3345.8     1224.6     3361.2     1224.5     3394.9     1226.2     3435.0
 GR   1224.5     3536.2     1224.0     3608.5     1223.9     3657.3     1225.3     3773.4     1223.9     4052.5
 GR   1226.1     4110.9     1226.0     4244.0     1224.0     4262.4     1223.6     4486.2     1223.5     4661.7
 GR   1230.5     4711.9     1232.0     4780.0     1232.0     4850.0     1232.0     4890.0

 ET                              4.1     2700.0     4404.0
 X1     20.42          24     2709.0     4372.4      510.0      495.0      500.0
 GR   1254.8     1000.0     1235.7     1097.6     1233.8     1134.7     1229.9     1723.6     1228.8     2151.0
 GR   1229.9     2554.6     1230.6     2709.0     1226.4     2725.1     1228.6     3007.8     1227.7     3216.1
 GR   1226.3     3232.4     1226.3     3253.0     1226.5     3354.6     1227.7     3361.2     1228.9     3642.9
 GR   1227.7     3951.1     1226.2     3960.5     1227.5     4089.0     1226.3     4260.1     1226.3     4372.4
 GR   1234.5     4425.4     1234.9     4558.6     1253.4     4700.0     1254.3     4825.2       0.0        0.0
```

```
 ET                          4.1     2590.0     4454.0
    20.51          39     2619.5     4281.3      485.0      495.0      500.0
 1275.5      1000.0     1243.5     1103.1     1236.8     1181.1     1231.2     1556.0     1231.3     1863.7
 1231.8      2182.0     1231.8     2619.5     1229.4     2638.1     1229.9     2690.8     1230.1     2902.1
 GR 1229.0   2907.0     1229.4     2997.6     1229.4     3060.1     1230.2     3126.8     1230.4     3411.4
 GR 1231.8   3716.6     1229.6     3742.3     1231.2     3810.6     1230.8     3902.4     1229.2     3912.4
 GR 1228.4   4117.4     1228.9     4263.7     1230.8     4281.3     1230.6     4405.4     1237.9     4517.9
 GR 1235.5   4538.9     1235.5     4580.9     1238.5     4610.7     1243.1     4731.8     1251.0     4833.5
 GR 1247.6   4874.9     1242.4     4893.8     1243.2     4929.0     1245.9     5035.0     1253.8     5086.3
 GR 1248.6   5139.7     1256.2     5211.8     1255.3     5298.7     1253.4     5299.6        0.0        0.0

 ET                          4.1     2575.0     4480.0
 X1   20.61          26     2577.0     4466.9      480.0      465.0      500.0
 GR 1247.0   1391.3     1238.5     1479.3     1232.9     1743.0     1233.1     2007.4     1234.8     2405.6
 GR 1233.4   2562.8     1232.0     2577.0     1232.4     2754.3     1232.4     2885.0     1231.2     2902.8
 GR 1231.2   2940.4     1231.2     2980.2     1233.0     2995.3     1233.6     3306.2     1232.9     3634.0
 GR 1230.0   4000.2     1232.6     4024.7     1232.2     4240.1     1230.8     4466.9     1233.2     4496.8
 GR 1235.3   4594.9     1246.6     4668.0     1246.5     4781.0     1247.5     4864.7     1258.1     4936.6
 GR 1262.7   5050.9        0.0        0.0

 NH       5      .04     2104.6      .03     3133.5      .04     3455.0      .03     3800.8      .04
 NH  4632.1
 ET                          4.1     2015.0     3805.0
 X1   20.70          23     2104.6     3800.8      515.0      450.0      500.0
 GR 1265.9   1000.0     1257.8     1096.1     1236.7     1150.8     1233.8     1616.9     1234.9     2104.6
 GR 1232.0   2173.6     1232.5     2208.8     1232.4     2242.7     1232.2     2286.8     1233.6     2299.7
 GR 1235.5   2650.9     1233.6     3133.5     1236.0     3164.2     1234.0     3455.0     1233.1     3661.7
 GR 1233.0   3800.8     1236.0     3823.2     1238.5     4125.8     1242.1     4302.2     1254.7     4376.5
 GR 1251.7   4419.7     1260.3     4500.8     1264.0     4632.1        0.0        0.0        0.0        0.0

 NH       6     1.0     1860.0      .04     2846.4      .03     3637.4      .04     4023.0      .03
 NH  4178.3      .04     5666.7
 ET                          4.1     2670.0     4375.0
1
    21MAR07      13:36:57                                                                    PAGE   13


 X1   20.80          35     2846.4     4178.3      505.0      410.0      500.0
 GR 1270.8   1000.0     1267.9     1063.1     1260.5     1111.1     1267.3     1213.0     1263.8     1275.7
 GR 1250.2   1358.6     1259.5     1418.8     1252.9     1482.7     1255.5     1515.0     1243.9     1587.4
 GR 1240.0   1860.0     1237.9     2064.5     1237.5     2692.7     1236.7     2846.4     1235.4     2858.2
 GR 1235.2   2893.7     1235.2     2951.6     1237.1     3223.1     1236.4     3453.2     1235.7     3637.4
 GR 1238.2   3700.9     1237.1     3873.3     1234.3     4023.0     1234.8     4178.3     1236.0     4195.6
 GR 1234.9   4293.4     1238.1     4306.4     1238.0     4546.8     1245.2     4952.9     1251.5     5272.6
 GR 1258.1   5311.2     1265.7     5442.2     1274.9     5557.0     1286.6     5631.4     1286.6     5666.7

 NC      .04      .04      .03
 ET                          4.1     1865.0     3490.0
 X1   20.89          28     2100.5     2971.7      500.0      510.0      500.0
 GR 1276.0   1000.0     1275.7     1081.5     1265.0     1138.0     1242.1     1239.1     1242.1     1850.4
 GR 1237.8   1879.5     1239.7     2100.5     1236.9     2116.7     1238.4     2280.8     1238.0     2390.6
 GR 1238.7   2410.7     1239.1     2619.6     1238.5     2971.7     1239.7     3004.6     1238.6     3106.3
 GR 1237.2   3125.3     1239.0     3156.9     1237.8     3334.8     1239.7     3400.6     1241.9     3712.9
 GR 1247.6   4145.6     1253.2     4585.5     1263.9     4679.5     1278.2     4777.1     1284.7     4871.0
 GR 1271.9   4910.3     1283.8     4957.4     1270.8     5028.0        0.0        0.0        0.0        0.0

 ET                          4.1     1985.0     3500.0
 X1   20.98          25     2176.9     2854.4      550.0      325.0      500.0
 GR 1296.7   1000.0     1285.1     1133.7     1251.0     1284.7     1247.7     1901.7     1243.6     1922.7
 GR 1241.7   2176.9     1239.7     2238.5     1239.7     2252.3     1239.7     2316.5     1239.7     2364.2
 GR 1241.5   2598.7     1240.3     2854.4     1242.5     2895.3     1240.6     3212.7     1239.0     3227.2
 GR 1241.7   3292.4     1240.6     3395.6     1239.0     3406.6     1241.8     3427.1     1245.9     3864.0
 GR 1252.7   4336.6     1258.8     4645.0     1271.3     4731.3     1284.9     4820.5     1287.4     4869.3

 NH       4     1.0     2040.8      .04     3153.9      .03     3596.2      .04     5701.4
 ET                          4.1     2810.0     4345.0
 X1   21.08          29     3153.9     3596.2      555.0      385.0      500.0
 GR 1284.0   1000.0     1268.4     1087.5     1267.2     1204.9     1265.3     1445.4     1262.4     1697.6
 GR 1260.3   1724.2     1258.4     1964.9     1258.3     2040.8     1253.8     2331.9     1250.5     2616.4
 GR 1245.2   2989.5     1243.5     2999.5     1241.7     3153.9     1242.7     3209.5     1243.4     3439.2
 GR 1243.5   3596.2     1244.5     3606.1     1243.8     4018.6     1241.7     4070.8     1241.7     4113.9
 GR 1244.7   4165.0     1244.5     4488.7     1242.1     4503.1     1245.0     4523.2     1250.1     4927.4
 GR 1256.3   5399.0     1261.4     5595.2     1276.8     5655.9     1279.2     5701.4        0.0        0.0

 NH       4     1.0     2539.6      .04     3684.2      .03     4096.1      .04     6159.3
 ET                          4.1     3230.0     4810.0
 X1   21.17          31     3684.2     4096.1      515.0      480.0      500.0
 GR 1277.8   1000.0     1276.8     1104.7     1275.3     1113.6     1272.5     1397.0     1273.0     1536.6
 GR 1269.9   1705.5     1270.3     1797.2     1267.3     2020.9     1263.8     2181.7     1260.7     2539.6
 GR 1254.9   2900.3     1249.6     3252.0     1245.4     3591.8     1245.0     3684.2     1242.7     3691.5
 GR 1242.9   3719.1     1245.1     3788.3     1245.4     4096.1     1246.4     4114.9     1244.9     4345.1
 GR 1245.7   4547.7     1247.4     4584.6     1248.6     4855.0     1248.1     5271.9     1250.4     5574.8
```

```
 GR   1256.0      5877.2      1276.9      5963.2      1279.8      5993.3      1265.4      6065.5      1274.4      6103.8
      1277.7      6159.3        0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0

          .04         .04         .03
 ET                              4.1      1655.0      3300.0
1
     21MAR07      13:36:57                                                                              PAGE   14


 X1    21.27          28      2289.1      2576.2       470.0       490.0       500.0
 GR   1304.9      1000.0      1285.8      1051.9      1287.1      1088.2      1250.6      1500.7      1249.1      1746.5
 GR   1247.4      1947.7      1247.3      2111.9      1247.4      2289.1      1245.3      2297.2      1245.8      2349.5
 GR   1245.8      2373.8      1247.0      2576.2      1248.1      2586.9      1247.9      2761.4      1249.9      2978.5
 GR   1248.7      3080.5      1250.8      3173.5      1251.7      3378.4      1251.1      3513.6      1252.8      3540.7
 GR   1253.8      3715.3      1252.7      3884.4      1253.8      3968.1      1273.1      4042.6      1255.4      4153.1
 GR   1256.2      4191.9      1274.8      4271.3      1278.5      4329.6        0.0         0.0         0.0         0.0

 ET                              4.1      1815.0      3550.0
 X1    21.36          33      2477.5      2868.6       430.0       450.0       500.0
 GR   1293.2      1000.0      1303.8      1054.6      1305.5      1131.6      1256.4      1358.3      1252.1      1474.9
 GR   1250.9      1488.1      1250.2      1663.1      1252.4      1984.2      1250.2      2054.2      1248.7      2089.1
 GR   1249.7      2227.1      1250.9      2387.6      1248.2      2477.5      1248.5      2595.6      1248.0      2704.1
 GR   1248.2      2761.3      1246.9      2787.8      1247.3      2820.2      1247.6      2868.6      1250.1      2895.2
 GR   1249.7      2919.4      1248.2      2929.4      1248.2      2967.6      1250.0      2992.9      1252.1      3333.1
 GR   1254.2      3643.9      1254.8      3735.7      1256.8      3893.2      1254.9      3913.2      1256.8      3945.2
 GR   1257.5      4109.8      1271.5      4177.1      1271.0      4188.0        0.0         0.0         0.0         0.0

 ET                              4.1      1875.0      3674.0
 X1    21.46          41      2105.3      2993.2       490.0       485.0       500.0
 GR   1305.4      1000.0      1271.7      1101.1      1278.9      1141.9      1253.9      1319.4      1252.5      1420.8
 GR   1250.5      1452.8      1250.5      1490.7      1252.9      1521.4      1252.8      1974.7      1251.7      2026.9
 GR   1252.4      2105.3      1252.1      2230.0      1251.3      2408.2      1250.6      2615.1      1250.3      2802.9
 GR   1250.3      2908.4      1249.4      2993.2      1249.4      3019.4      1252.7      3039.8      1254.1      3253.1
 GR   1251.3      3271.4      1254.5      3297.0      1255.1      3416.3      1253.9      3460.1      1251.4      3479.9
 GR   1255.0      3506.4      1258.7      4027.2      1257.2      4043.8      1257.4      4088.1      1260.6      4164.3
 GR   1263.1      4377.4      1264.6      4623.9      1265.0      4788.5      1263.6      4808.0      1265.9      4846.2
 GR   1266.7      5074.2      1270.4      5346.1      1292.8      5440.1      1278.6      5490.4      1284.3      5521.6
 GR   1298.7      5585.4        0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0

 ET                              4.1      2080.0      3865.0
      21.55          29      2280.2      3156.2       685.0       475.0       500.0
    1312.1      1000.0      1283.7      1105.0      1260.8      1269.5      1255.3      1518.2      1257.5      1540.1
 GR   1257.5      1558.3      1254.5      1573.6      1254.1      1695.4      1256.0      1821.0      1255.5      2042.9
 GR   1255.7      2280.2      1253.4      2355.1      1254.3      2573.8      1253.3      2785.0      1252.4      2796.1
 GR   1252.7      2907.5      1251.8      3077.8      1251.5      3109.7      1251.4      3144.9      1254.5      3156.2
 GR   1255.8      3255.6      1255.5      3365.2      1257.5      3488.7      1256.4      3718.3      1254.5      3740.0
 GR   1257.3      3782.5      1259.4      4214.0      1270.8      4284.6      1272.9      4340.6        0.0         0.0

 NH       4          .04      2059.8          .03      3104.5          .04      4080.4         1.0      5008.1
 ET                              4.1      2040.0      3765.0
 X1    21.65          38      2059.8      3104.5       390.0       370.0       500.0
 GR   1280.7      1000.0      1278.9      1024.3      1269.6      1069.2      1267.5      1156.3      1266.9      1212.6
 GR   1268.5      1234.4      1262.9      1308.8      1260.6      1411.1      1261.8      1418.9      1261.0      1514.2
 GR   1257.4      1551.4      1257.4      1834.1      1258.1      1887.5      1257.4      2059.8      1255.7      2075.4
 GR   1256.8      2173.6      1256.9      2398.1      1255.4      2523.1      1255.0      2732.8      1253.4      2841.8
 GR   1253.1      2893.2      1253.8      2955.1      1254.0      3104.5      1257.3      3132.4      1257.0      3315.9
 GR   1259.6      3469.9      1257.8      3628.5      1259.6      3925.0      1271.2      4080.4      1265.2      4192.4
 GR   1274.5      4340.9      1270.4      4418.8      1267.1      4438.0      1269.6      4491.0      1274.4      4562.1
 GR   1269.2      4613.8      1271.7      4926.3      1284.5      5008.1        0.0         0.0         0.0         0.0
1
     21MAR07      13:36:57                                                                              PAGE   15


 NH       4          .04      2146.4          .03      3547.1          .04      4003.3         1.0      4712.7
 ET                              4.1      2045.0      3745.0
 X1    21.74          39      2146.4      3547.1       250.0       275.0       500.0
 GR   1298.7      1000.0      1289.4      1067.7      1268.4      1170.5      1264.7      1204.4      1263.9      1289.7
 GR   1262.7      1502.2      1259.2      1531.8      1259.5      1853.8      1259.7      2053.5      1257.8      2146.4
 GR   1257.5      2317.5      1256.1      2358.2      1256.1      2458.5      1255.2      2544.0      1255.5      2684.7
 GR   1256.9      2731.5      1257.7      2834.5      1256.3      2863.5      1257.7      2908.1      1257.5      3012.6
 GR   1255.0      3034.3      1255.8      3145.3      1257.3      3256.1      1255.9      3300.4      1257.1      3515.1
 GR   1255.9      3547.1      1258.8      3575.3      1260.3      3779.7      1260.5      3952.8      1264.5      4003.3
 GR   1263.1      4044.1      1264.5      4172.5      1273.1      4238.7      1274.2      4296.1      1272.6      4361.0
 GR   1274.3      4503.0      1276.8      4627.4      1291.5      4712.5      1291.5      4712.7        0.0         0.0

 NH       6          1.0      1374.2          .04      2348.9          .03      3563.0          .04      3806.4          .03
 NH  4052.2          .04      4767.6
 ET                              4.1      2230.0      3945.0
      21.84          32      2348.9      3869.3       310.0       325.0       500.0
    1318.0      1000.0      1315.4      1041.3      1278.7      1151.3      1270.7      1374.2      1272.0      1412.3
 GR   1270.2      1484.4      1263.1      1653.0      1264.2      1744.2      1260.9      1768.4      1262.2      1892.0
```

```
 GR   1259.9     1950.2     1259.8     2348.9     1256.9     2355.8     1257.1     2418.1     1258.6     2511.5
 [redacted]
 GR   1258.6     2751.3     1259.6     2961.9     1258.9     3223.8     1256.8     3232.3     1256.8     3294.8
 GR   1256.9     3353.2     1259.1     3378.4     1258.6     3563.0     1258.5     3806.4     1261.2     3869.3
 GR   1260.9     4052.2     1263.3     4282.3     1280.0     4446.4     1269.7     4493.0     1271.7     4589.0
 GR   1294.7     4723.5     1296.9     4767.6       0.0        0.0        0.0        0.0        0.0        0.0

 NH         7        .04     1830.0        .03     1967.3        .04     2241.8        .03     3207.2        .04
 NH    3358.4        .03     3458.4        .04     4286.9
 ET                           4.1     1780.0     3530.0
 X1     21.93         29     1830.0     3458.4      425.0      485.0      500.0
 GR    1315.1     1000.0     1300.8     1098.7     1290.7     1134.0     1293.6     1223.3     1270.9     1320.5
 GR    1271.0     1367.9     1265.2     1435.2     1265.9     1580.4     1262.5     1618.3     1262.7     1726.3
 GR    1260.6     1830.0     1258.7     1837.1     1258.5     1875.6     1259.2     1912.3     1259.6     1967.3
 GR    1261.1     2241.8     1260.1     2591.6     1262.4     2827.9     1258.6     2896.8     1259.4     3207.2
 GR    1261.0     3234.0     1260.6     3358.4     1262.7     3458.4     1265.0     3757.5     1267.9     4021.5
 GR    1269.2     4128.8     1286.1     4192.9     1286.0     4233.4     1292.5     4286.9       0.0        0.0

 QT         2      57230      57230
 NH         6        .04     1257.6        .03     1443.8        .04     1791.2        .03     2792.5        .04
 NH    3369.9        1.0     3732.1
 ET                           4.1     1175.0     2820.0
 X1     22.03         23     1257.6     2792.5      500.0      535.0      500.0
 GR    1286.6     1000.0     1285.2     1029.0     1265.7     1159.6     1264.8     1257.6     1260.3     1269.1
 GR    1260.5     1284.8     1262.1     1327.8     1262.4     1443.8     1264.0     1777.4     1262.7     1791.2
 GR    1263.9     2009.9     1264.1     2229.8     1262.3     2284.0     1262.4     2484.8     1262.7     2792.5
 GR    1264.5     2814.5     1263.4     3043.3     1269.6     3369.9     1272.8     3529.3     1290.0     3592.9
 GR    1288.4     3662.4     1297.5     3730.9     1297.5     3732.1       0.0        0.0        0.0        0.0

 NH         5        .04     1191.0        .03     1394.7        .04     2006.8        .03     2708.3        .04
 NH    3394.0
 ET                           4.1     1143.0     2710.0
1
     21MAR07      13:36:57                                                                    PAGE   16


 X1     22.12         19     1191.0     2708.3      490.0      600.0      500.0
 GR    1289.1     1000.0     1282.0     1064.3     1278.4     1082.7     1261.4     1191.0     1262.0     1246.8
 GR    1261.3     1299.2     1261.3     1310.2     1261.3     1394.7     1262.5     1430.5     1264.7     1617.3
 GR    1265.0     1827.7     1264.6     2006.8     1263.4     2315.0     1263.3     2686.5     1265.9     2708.3
 [redacted]
 GR    1264.7     3057.8     1268.5     3310.1     1290.1     3370.4     1290.9     3394.0       0.0        0.0

 NH         5        .04     1314.1        .03     1588.1        .04     2145.9        .03     2911.2        .04
 NH    4019.2
 ET                           4.1     1305.0     2940.0
 X1     22.21         26     1314.1     2911.2      480.0      660.0      500.0
 GR    1313.0     1000.0     1313.0     1032.1     1285.0     1160.3     1281.6     1208.1     1265.0     1314.1
 GR    1264.5     1379.4     1264.7     1464.9     1263.1     1488.7     1263.1     1514.7     1263.1     1570.1
 GR    1264.7     1588.1     1265.0     1868.9     1266.6     1894.8     1267.4     2120.3     1265.5     2145.9
 GR    1267.1     2355.3     1266.8     2893.0     1268.8     2911.2     1267.8     3186.3     1266.3     3209.4
 GR    1268.0     3244.1     1271.0     3413.3     1277.5     3699.3     1281.9     3900.5     1302.3     3969.9
 GR    1306.6     4019.2       0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH         6        1.0     1276.8        .04     1593.8        .03     1681.9        .04     2292.7        .03
 NH    3113.2        .04     4133.4
 ET                           4.1     1475.0     3150.0
 X1     22.31         25     1593.8     3138.7      485.0      665.0      500.0
 GR    1311.1     1000.0     1306.1     1082.4     1280.0     1186.0     1274.3     1276.8     1267.1     1593.8
 GR    1264.5     1606.6     1264.2     1644.1     1264.5     1681.9     1267.0     1693.0     1267.6     1806.8
 GR    1267.8     1963.2     1269.2     2246.5     1267.3     2292.7     1268.7     2484.7     1269.6     2969.8
 GR    1269.6     3113.2     1271.3     3138.7     1270.8     3501.2     1272.6     3647.8     1280.1     3892.1
 GR    1302.4     3957.3     1302.6     3978.7     1296.2     4012.1     1307.7     4062.4     1308.5     4133.4

 NH         5        .04     1349.8        .03     1447.3        .04     2219.4        .03     2888.2        .04
 NH    3887.0
 ET                           4.1     1169.0     2995.0
 X1     22.40         22     1349.8     2888.2      500.0      560.0      500.0
 GR    1314.4     1000.0     1275.8     1153.8     1272.9     1204.4     1272.2     1304.2     1271.3     1341.8
 GR    1266.6     1349.8     1266.3     1387.6     1266.3     1423.3     1268.3     1447.3     1271.4     1688.0
 GR    1270.8     1843.6     1271.6     2196.4     1269.1     2219.4     1270.1     2368.3     1271.5     2629.1
 GR    1272.1     2888.2     1273.6     2943.0     1274.0     3268.4     1272.9     3405.4     1281.1     3685.7
 GR    1295.8     3780.9     1313.2     3887.0

 NH         5        .04     1418.5        .03     1490.7        .04     2380.2        .03     3197.8        .04
 NH    3954.3
 ET                           4.1     1415.0     3230.0
 X1     22.50         25     1418.5     3197.8      495.0      550.0      500.0
 GR    1305.6     1292.6     1275.4     1351.3     1272.6     1411.9     1267.7     1418.5     1267.7     1434.9
 GR    1267.7     1455.9     1270.8     1490.7     1271.7     1608.8     1273.5     1892.9     1273.2     2199.2
 GR    1273.7     2357.4     1271.7     2380.2     1272.1     2545.9     1273.8     2569.3     1273.9     2608.2
 [redacted]
 GR    1271.9     2625.1     1273.3     2958.1     1274.7     3197.8     1276.0     3553.4     1278.7     3597.5
 GR    1280.5     3708.2     1281.7     3815.0     1284.8     3856.1     1313.0     3942.0     1313.1     3954.3
```

```
 NH       7       .04     1550.1       .03     1892.7       .04     2283.8       .03     2588.6       .04
    2741.3       .03     3430.5       .04     3782.2
                           4.1     1425.0     3390.0
1
    21MAR07      13:36:57                                                                    PAGE   17

 X1    22.59        29     1550.1     3430.5      445.0      550.0      500.0
 GR  1325.6    1000.0     1325.3     1049.2     1304.1     1154.8     1275.4     1319.7     1270.6     1334.6
 GR  1272.9    1378.9     1273.0     1525.6     1271.3     1550.1     1271.4     1596.0     1270.5     1692.5
 GR  1271.6    1719.2     1272.9     1849.1     1271.8     1892.7     1275.5     1915.5     1276.1     2057.6
 GR  1275.8    2272.8     1273.9     2283.8     1274.9     2502.3     1277.5     2588.6     1277.6     2704.2
 GR  1275.0    2741.3     1276.9     3015.0     1276.5     3312.0     1276.8     3430.5     1278.7     3453.6
 GR  1281.5    3656.5     1283.6     3687.5     1304.5     3752.1     1305.6     3782.2        0.0        0.0

 NH       8       .04     1622.4       .03     1981.5       .04     2160.6       .03     2460.0       .04
 NH  2676.2       .03     3297.8       .04     3577.3       1.0     3878.6
 ET                         4.1     1375.0     3350.0
 X1    22.69        26     1622.4     3297.8      430.0      445.0      500.0
 GR  1303.8    1000.0     1304.0     1048.8     1274.0     1129.7     1272.7     1544.9     1274.6     1622.4
 GR  1272.5    1641.5     1272.4     1684.3     1272.4     1723.5     1275.0     1747.1     1275.0     1930.9
 GR  1273.9    1951.7     1273.9     1981.5     1278.4     2023.5     1278.5     2137.5     1276.6     2160.6
 GR  1276.9    2460.0     1278.7     2676.2     1278.8     2873.7     1278.0     3297.8     1280.3     3329.2
 GR  1278.8    3523.0     1282.0     3577.3     1284.3     3712.6     1305.4     3795.5     1305.2     3854.5
 GR  1309.0    3878.6        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       4       1.0     1478.4       .04     2270.1       .03     3629.5       .04     4137.8
 ET                         4.1     1880.0     3725.0
 X1    22.78        31     2270.1     3629.5      455.0      350.0      500.0
 GR  1331.3    1000.0     1331.3     1030.3     1301.1     1143.3     1281.8     1392.0     1281.5     1478.4
 GR  1277.3    1531.5     1277.5     1975.2     1274.3     1998.1     1273.9     2019.2     1275.6     2058.0
 GR  1277.8    2098.5     1277.4     2171.4     1279.0     2234.5     1275.1     2247.4     1275.1     2270.1
 GR  1275.6    2301.1     1276.2     2336.0     1276.9     2499.3     1278.3     2720.1     1279.7     2865.7
 GR  1280.4    3100.0     1281.4     3456.5     1280.4     3471.5     1279.8     3629.5     1281.7     3659.5
 GR  1280.4    3830.5     1283.2     3886.1     1283.6     3933.7     1295.3     4021.3     1308.5     4103.3
 GR  1307.8    4137.8        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       4       .04     2188.1       .03     3165.8       .04     3570.5       1.0     3929.7
 ET                         4.1     1500.0     3275.0
    22.88        29     2188.1     3165.8      330.0      200.0      500.0
 1310.2    1000.0     1284.0     1114.5     1280.7     1153.1     1279.2     1584.9     1276.7     1627.3
 1278.8    1675.8     1274.6     1698.0     1274.7     1718.0     1278.5     1743.0     1279.0     1813.1
 GR  1281.0    1862.0     1282.3     1978.2     1280.4     2166.3     1277.5     2188.1     1279.2     2313.2
 GR  1278.8    2404.7     1278.4     2493.5     1278.5     2577.0     1281.0     2629.3     1282.2     2884.2
 GR  1281.6    2996.4     1281.3     3165.8     1283.2     3200.5     1281.1     3384.5     1283.5     3570.5
 GR  1288.5    3798.4     1293.9     3849.0     1313.1     3893.1     1314.3     3929.7        0.0        0.0

 NC       .04       .04       .03
 ET                         4.1     1675.0     3365.0
 X1    22.97        28     2602.3     3283.4      355.0      300.0      500.0
 GR  1329.0    1000.0     1311.6     1157.7     1279.2     1251.4     1280.6     1646.5     1278.9     1901.2
 GR  1276.0    1917.5     1276.1     1937.2     1281.1     1964.3     1281.1     2082.8     1279.1     2139.8
 GR  1282.0    2252.3     1283.1     2587.2     1280.0     2602.3     1281.3     2715.7     1281.1     2811.4
 GR  1279.9    2828.9     1279.9     2872.0     1281.0     2921.5     1282.5     2946.0     1282.5     3113.2
 GR  1282.5    3264.6     1284.6     3283.4     1282.2     3491.3     1284.8     3562.9     1287.6     3616.2
 GR  1299.0    3671.6     1303.0     3757.6     1312.5     3813.5        0.0        0.0        0.0        0.0
1
    21MAR07      13:36:57                                                                    PAGE   18


 ET                         4.1     1935.0     3475.0
 X1    23.07        31     3014.1     3403.4      555.0      410.0      500.0
 GR  1332.8    1000.0     1333.2     1055.7     1288.1     1259.8     1285.6     1615.5     1282.5     1639.4
 GR  1282.5    1687.0     1284.1     1851.3     1283.2     2031.4     1282.0     2187.3     1279.0     2204.2
 GR  1280.6    2218.7     1279.0     2239.8     1279.7     2261.7     1283.7     2280.7     1285.0     2351.9
 GR  1283.2    2388.8     1283.8     2622.7     1284.3     2787.5     1285.1     3001.1     1283.0     3014.1
 GR  1283.0    3115.9     1282.9     3209.5     1281.8     3216.8     1281.8     3261.1     1282.3     3316.5
 GR  1283.6    3332.5     1284.1     3403.4     1286.8     3438.8     1285.0     3677.5     1303.8     3754.3
 GR  1304.5    3866.8        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 ET                         4.1     1765.0     3405.0
 X1    23.16        26     2913.2     3197.0      500.0      490.0      500.0
 GR  1296.0    1000.0     1294.0     1111.7     1292.0     1194.2     1291.0     1225.1     1286.4     1448.1
 GR  1287.1    1557.4     1286.0     1687.1     1285.4     1728.7     1286.2     1791.6     1285.5     1850.3
 GR  1285.5    1967.6     1281.4     1992.6     1285.5     2030.7     1285.4     2151.2     1286.2     2420.8
 GR  1288.1    2872.1     1285.3     2913.2     1285.5     3088.2     1284.4     3122.8     1284.2     3156.7
 GR  1284.2    3176.1     1284.2     3197.0     1289.4     3213.6     1287.4     3395.4     1308.6     3469.8
    1314.2    3584.9        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

       4       1.0     1500.9       .04     3351.7       .03     3750.7       .04     3870.6
 ET                         4.1     2310.0     3776.0
```

```
 X1    23.26       28     3351.7     3750.7      585.0      515.0      500.0
 GR    1328.5    1000.0   1327.6     1085.2     1302.2     1244.8     1297.2    1377.8    1295.7    1500.9
 GR    1292.6    1689.2   1292.6     1909.9     1292.1     2228.3     1288.5    2405.0    1285.7    2414.4
 GR    1288.2    2447.6   1287.0     2481.3     1285.5     2497.5     1285.5    2514.3    1287.4    2537.3
 GR    1289.5    2705.5   1288.4     2996.1     1289.7     3336.2     1287.8    3351.7    1288.5    3437.2
 GR    1287.1    3636.1   1286.0     3668.9     1286.0     3701.5     1286.0    3729.8    1287.3    3750.7
 GR    1301.3    3814.7   1312.7     3848.9     1312.7     3870.6       0.0       0.0       0.0       0.0

 NC      .04       .04      .03
 ET                         4.1     2180.0     3673.0
 X1    23.35       23     3199.1     3658.7      460.0      500.0      500.0
 GR    1358.2    1000.0   1345.9     1083.2     1341.1     1151.5     1302.5    1344.3    1311.4    1422.0
 GR    1294.8    1465.0   1294.1     1762.6     1295.0     2088.5     1291.3    2363.6    1290.0    2405.5
 GR    1288.6    2426.7   1288.5     2455.9     1291.2     2477.1     1291.1    2660.7    1292.9    2770.9
 GR    1292.2    3199.1   1289.9     3219.5     1290.1     3334.1     1289.6    3460.0    1288.5    3467.0
 GR    1287.4    3637.0   1287.4     3658.7     1305.9     3692.1

 ET                         4.1     1990.0     3519.0
 X1    23.45       23     2964.0     3310.3      375.0      400.0      500.0
 GR    1343.3    1000.0   1299.9     1137.2     1296.2     1267.1     1296.4    1830.4    1293.2    2132.4
 GR    1290.8    2140.9   1290.8     2161.6     1292.8     2180.3     1292.9    2398.4    1292.1    2418.1
 GR    1293.3    2464.7   1293.8     2749.8     1291.9     2964.0     1291.6    3113.0    1290.6    3206.4
 GR    1290.3    3225.9   1289.9     3290.9     1291.4     3310.3     1290.2    3503.4    1310.7    3547.5
 GR    1323.6    3686.5   1321.4     3739.6     1329.4     3776.1       0.0       0.0       0.0       0.0

 ET                         4.1     2180.0     3770.0
 X1    23.54       27     2949.6     3752.3      220.0      290.0      500.0
 GR    1376.2    1000.0   1377.1     1031.6     1339.2     1125.9     1303.4    1317.8    1299.1    1464.7
 GR    1297.6    1743.8   1297.4     2002.4     1298.0     2045.5     1294.0    2268.7    1293.9    2373.9
 GR    1291.3    2398.3   1291.3     2413.5     1294.8     2439.0     1293.4    2658.9    1296.2    2812.5
 GR    1295.3    2831.0   1293.7     2949.6     1292.1     2988.3     1291.8    3043.1    1291.8    3084.9
 GR    1293.2    3154.4   1293.5     3445.2     1292.5     3752.3     1298.3    3784.9    1299.8    3826.7
1
     21MAR07      13:36:57                                                                          PAGE   19


 GR    1331.3    4000.2   1331.1     4021.5       0.0        0.0        0.0       0.0

 NH       4       .04     2772.0       .03      3732.3        .04     3832.4       1.0      4793.6
 ET                         4.1     2130.0     3775.0
 X1    23.63       33     2772.0     3732.3      395.0      460.0      500.0
 GR    1373.8    1000.0   1365.0     1061.1     1332.2     1167.9     1306.0    1473.3    1301.8    1696.5
 GR    1298.3    2026.9   1295.8     2291.4     1293.4     2318.9     1293.4    2340.9    1296.0    2360.8
 GR    1296.4    2433.2   1295.3     2492.7     1297.8     2618.0     1297.9    2767.7    1293.4    2772.0
 GR    1293.4    2801.5   1294.6     2852.1     1295.2     3017.5     1295.4    3324.1    1294.9    3732.3
 GR    1297.7    3756.6   1296.4     3772.5     1298.7     3832.4     1304.0    3923.1    1302.1    4023.3
 GR    1303.5    4126.8   1309.7     4237.7     1311.1     4366.1     1314.5    4498.0    1318.7    4576.6
 GR    1329.8    4700.7   1357.5     4785.2     1356.3     4793.6       0.0       0.0       0.0       0.0

 NH       5       1.0     1688.8       .04      2927.2        .03      3945.8       .04      3999.9       1.0
 NH    4263.2
 ET                         4.1     2210.0     3991.0
 X1    23.73       33     2927.2     3945.8      505.0      500.0      500.0
 GR    1344.5    1000.0   1321.0     1103.6     1318.5     1257.2     1311.1    1545.3    1312.2    1565.0
 GR    1311.0    1648.4   1315.1     1688.8     1307.3     1739.3     1302.3    1949.9    1299.1    2184.9
 GR    1299.3    2240.4   1295.4     2271.3     1295.4     2300.1     1297.6    2318.0    1298.8    2429.7
 GR    1299.4    2722.3   1296.2     2745.7     1298.9     2913.8     1296.4    2927.2    1296.6    2981.8
 GR    1296.1    3013.6   1296.1     3045.7     1297.9     3060.6     1297.5    3309.4    1296.9    3524.4
 GR    1299.9    3557.1   1297.8     3765.8     1297.0     3945.8     1303.1    3999.9    1302.7    4095.5
 GR    1305.0    4150.2   1335.5     4236.4     1335.8     4263.2       0.0       0.0       0.0       0.0

 NH       4       .04     2289.0       .03      3035.1        .04     3316.1       1.0      3611.3
 ET                         4.1     1255.0     3255.0
 X1    23.82       32     2289.0     3035.1      465.0      485.0      500.0
 GR    1325.8    1000.0   1307.4     1084.2     1303.4     1181.6     1302.7    1440.2    1302.9    1490.5
 GR    1297.1    1536.3   1296.9     1551.1     1300.4     1567.5     1301.8    1670.7    1302.1    1855.6
 GR    1299.1    1870.3   1298.8     1916.6     1301.3     1936.5     1300.2    2003.9    1301.8    2131.2
 GR    1301.5    2269.8   1299.1     2289.0     1298.5     2358.8     1298.0    2439.4    1300.0    2482.2
 GR    1300.0    2621.6   1299.7     2776.9     1299.8     3035.1     1300.7    3261.0    1302.0    3316.1
 GR    1303.0    3348.0   1304.0     3380.4     1303.5     3400.2     1306.0    3428.0    1305.9    3486.5
 GR    1342.7    3588.8   1343.5     3611.3       0.0        0.0        0.0       0.0       0.0       0.0

 NC      .04       .04      .03
 ET                         4.1     1589.0     3709.0
 X1    23.92       34     2727.4     3313.8      415.0      460.0      500.0
 GR    1380.9    1000.0   1372.9     1073.3     1329.6     1210.5     1319.3    1312.1    1341.7    1397.4
 GR    1349.4    1453.6   1345.2     1498.4     1304.6     1592.7     1303.1    1648.3    1306.4    1851.4
 GR    1301.9    2023.8   1298.8     2044.8     1299.0     2052.7     1304.8    2073.0    1304.8    2162.1
 GR    1302.0    2181.2   1300.4     2248.7     1303.2     2284.2     1302.6    2356.7    1304.1    2702.9
 GR    1301.4    2727.4   1301.4     2887.9     1301.6     2976.9     1300.0    2990.5    1300.2    3038.5
 GR    1302.0    3108.2   1302.8     3313.8     1303.0     3600.0     1302.1    3691.4    1314.6    3741.0
 GR    1328.9    3841.6   1327.7     3985.5     1346.6     4026.4     1346.6    4032.8       0.0       0.0
```

```
                          4.1     1600.0     3786.0
    24.01        35     2746.0     3481.0      425.0      425.0      500.0
  1392.6    1000.0     1393.7     1033.9     1379.1     1137.9     1334.0     1327.5     1314.1     1421.7
GR 1306.8    1631.0     1306.7     1752.5     1300.7     1783.1     1300.8     1804.1     1304.5     1820.2
GR 1307.3    1893.4     1306.6     2001.7     1304.1     2018.2     1305.2     2071.6     1301.8     2187.3
GR 1305.2    2206.4     1305.7     2340.0     1305.9     2568.2     1305.3     2746.0     1303.6     2761.0
GR 1303.7    2981.1     1303.9     3177.2     1302.8     3275.2     1302.6     3356.9     1302.2     3421.9
1
    21MAR07      13:36:57                                                                        PAGE   20

GR 1302.4    3460.7     1304.8     3481.0     1305.4     3605.2     1303.4     3759.6     1308.7     3793.7
GR 1308.9    3857.7     1312.4     3915.0     1349.4     4049.4     1355.0     4187.8     1354.2     4194.3

ET                        4.1     1727.0     3954.0
X1   24.11        37     2820.4     3843.4      450.0      480.0      500.0
GR 1376.0    1000.0     1389.7     1088.1     1395.7     1223.7     1317.6     1457.2     1322.4     1497.9
GR 1317.1    1544.1     1312.2     1577.8     1309.8     1762.6     1306.0     1828.3     1303.1     1843.0
GR 1303.3    1852.6     1310.2     1877.1     1308.3     1948.4     1307.1     1975.7     1309.4     2118.0
GR 1307.8    2235.0     1304.8     2284.8     1304.8     2308.3     1307.6     2332.5     1307.6     2411.9
GR 1307.6    2655.3     1308.4     2767.5     1305.5     2820.4     1306.4     2954.6     1305.8     3044.3
GR 1304.9    3055.7     1305.4     3322.2     1306.5     3511.3     1305.5     3629.5     1305.0     3658.0
GR 1305.8    3734.2     1304.4     3787.9     1304.9     3843.4     1307.3     3853.5     1307.1     3946.0
GR 1356.8    4069.9     1359.4     4094.6        0.0        0.0        0.0        0.0        0.0        0.0

NH       5       .04     2555.9       .03     2884.2       .04     3281.5       .03     3778.7       .04
NH  5058.6
ET                        4.1     1520.0     3810.0
X1   24.20        43     2555.9     3778.7      430.0      505.0      500.0
GR 1393.8    1000.0     1395.2     1039.4     1336.0     1185.5     1312.7     1415.1     1309.9     1706.6
GR 1304.7    1716.6     1310.2     1771.4     1307.6     1824.4     1310.2     1855.0     1309.2     2160.6
GR 1305.7    2192.6     1306.3     2228.9     1310.4     2281.7     1310.6     2522.7     1308.6     2555.9
GR 1307.8    2742.7     1306.9     2760.6     1307.3     2869.5     1311.8     2884.2     1311.0     2956.6
GR 1308.0    3037.8     1309.7     3101.0     1308.3     3281.5     1308.1     3463.4     1306.4     3500.9
GR 1307.9    3545.5     1307.8     3668.9     1307.1     3683.6     1306.6     3719.3     1306.9     3766.0
GR 1310.4    3778.7     1311.1     3885.4     1313.1     3930.5     1314.5     4078.1     1318.7     4332.0
GR 1323.2    4355.3     1320.1     4434.8     1323.1     4463.9     1329.4     4675.5     1363.1     4828.9
GR 1337.6    4934.9     1337.8     4989.2     1356.1     5058.6        0.0        0.0        0.0        0.0

       5       .04     2449.2       .03     2735.8       .04     3688.2       .03     3909.6       .04
  4354.4
ET                        4.1     1710.0     4021.0
X1   24.30        37     2449.2     3909.6      460.0      500.0      500.0
GR 1396.6    1000.0     1398.2     1040.6     1381.5     1141.5     1318.5     1392.8     1317.1     1561.7
GR 1310.7    1779.9     1309.6     1825.5     1314.3     1846.7     1312.9     1930.3     1309.7     1957.6
GR 1309.9    1984.2     1312.9     2038.3     1313.8     2199.7     1312.7     2329.8     1310.1     2352.1
GR 1310.1    2383.5     1312.4     2404.8     1312.9     2449.2     1311.3     2464.8     1309.9     2577.2
GR 1308.7    2735.8     1312.9     2806.8     1313.1     2997.0     1312.7     3297.8     1311.8     3510.7
GR 1309.7    3688.2     1310.2     3779.5     1310.0     3823.5     1309.4     3869.0     1309.4     3909.6
GR 1311.7    3922.5     1314.1     4018.8     1340.4     4091.1     1355.4     4184.0     1357.6     4252.4
GR 1354.5    4284.7     1363.3     4354.4        0.0        0.0        0.0        0.0        0.0        0.0

NH       6       1.0     1758.4       .04     2405.3       .03     3051.5       .04     4154.1       .03
NH  4419.0       .04     4885.1
ET                        4.1     2320.0     4465.0
X1   24.39        36     2405.3     4419.0      420.0      510.0      500.0
GR 1363.3    1000.0     1358.2     1046.6     1340.8     1116.8     1324.8     1758.4     1314.8     2114.6
GR 1313.3    2207.1     1315.0     2246.1     1315.0     2387.4     1313.3     2405.3     1313.6     2541.6
GR 1312.6    2643.7     1312.5     2705.5     1313.5     2742.7     1312.2     3051.5     1315.0     3134.5
GR 1314.4    3373.0     1314.7     3673.2     1312.2     3694.3     1312.2     3727.0     1312.2     3772.7
GR 1314.2    3810.1     1312.6     3899.5     1312.5     4027.0     1313.2     4126.4     1311.5     4154.1
GR 1311.6    4220.0     1312.5     4282.1     1310.8     4365.1     1310.8     4387.5     1312.2     4419.0
GR 1317.3    4494.3     1317.3     4546.5     1315.2     4562.1     1319.2     4592.6     1361.6     4744.3
GR 1363.3    4885.1        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0
1
    21MAR07      13:36:57                                                                        PAGE   21


NH       5       .04     2118.7       .03     2434.3       .04     3375.0       .03     3962.8       .04
NH  4257.8
ET                        4.1     1975.0     3974.0
X1   24.49        34     2118.7     3962.8      405.0      505.0      500.0
GR 1386.8    1000.0     1386.9     1024.1     1357.7     1103.3     1319.2     1330.8     1318.1     1385.4
GR 1315.4    1466.3     1316.5     1508.8     1315.8     1552.0     1318.4     1615.3     1318.0     1933.8
GR 1318.5    2118.7     1314.5     2140.4     1315.3     2242.6     1314.7     2434.3     1316.7     2512.1
GR 1317.1    2734.2     1316.7     2969.3     1314.8     2976.7     1314.5     3038.7     1314.7     3102.7
  1316.6    3137.0     1316.2     3375.0     1316.6     3544.5     1313.7     3571.0     1315.0     3772.5
  1314.2    3812.9     1312.7     3836.2     1313.8     3885.2     1314.3     3919.9     1314.7     3962.8
  1345.0    4042.3     1347.7     4117.6     1363.6     4215.0     1365.2     4257.8        0.0        0.0
```

```
 NH        5       .04     2387.0       .03     3218.4       .04     3530.2       .03     4088.6       .04
 [redacted] 4401.7
                                4.1     2255.0     4123.0
 [redacted]  24.58          32     2387.0     4088.6      420.0      500.0      500.0
 GR    1386.0     1000.0     1383.5     1048.0     1342.3     1178.1     1321.2     1361.7     1318.5     1491.7
 GR    1320.4     1642.4     1320.8     1935.0     1320.1     2152.6     1318.0     2183.9     1317.5     2370.7
 GR    1316.6     2387.0     1317.1     2541.7     1317.4     2803.9     1319.8     2823.6     1319.2     3015.0
 GR    1316.5     3036.4     1317.3     3218.4     1319.9     3248.6     1319.4     3513.7     1315.8     3530.2
 GR    1316.6     3679.0     1317.9     3811.8     1316.9     4017.8     1315.2     4032.1     1315.3     4062.3
 GR    1316.2     4088.6     1322.4     4127.8     1325.8     4174.7     1345.4     4238.1     1344.3     4276.4
 GR    1366.7     4342.6     1371.6     4401.7        0.0        0.0        0.0        0.0        0.0        0.0

 NH        5       .04     2472.2       .03     3180.5       .04     3513.2       .03     3954.6       .04
 NH    4221.7
 ET                             4.1     2350.0     4035.0
 X1    24.68          31     2472.2     3954.6      465.0      510.0      500.0
 GR    1361.0     1000.0     1328.5     1118.6     1322.9     1319.7     1322.7     1585.9     1322.7     1912.2
 GR    1321.1     1933.1     1321.3     2189.4     1320.6     2472.2     1318.9     2500.2     1319.6     2649.5
 GR    1320.3     2824.3     1322.1     2848.9     1322.4     2917.6     1319.2     2939.7     1319.2     3055.1
 GR    1320.3     3180.5     1322.7     3204.6     1322.2     3295.0     1321.0     3513.2     1318.9     3534.1
 GR    1319.5     3644.7     1319.9     3750.4     1318.5     3846.6     1316.6     3911.8     1316.6     3954.6
 GR    1320.2     3966.4     1319.4     4013.6     1324.7     4040.9     1325.3     4135.1     1350.7     4211.6
 GR    1351.0     4221.7        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH        5       .04     2994.8       .03     3779.7       .04     4071.4       .03     4280.0       .04
 NH    4640.1
 ET                             4.1     2765.0     4430.0
 X1    24.77          33     2994.8     4280.0      480.0      485.0      500.0
 GR    1361.0     1000.0     1359.4     1051.0     1345.9     1134.3     1330.0     1616.0     1324.1     1902.0
 GR    1323.5     2030.0     1325.5     2188.5     1325.1     2361.5     1323.3     2381.9     1323.6     2562.6
 GR    1323.9     2816.2     1323.1     2958.9     1321.1     2994.8     1321.5     3172.3     1323.6     3277.8
 GR    1323.0     3345.8     1322.2     3388.9     1322.4     3551.3     1322.6     3652.9     1323.1     3748.1
 GR    1324.8     3779.7     1322.7     4018.2     1321.5     4071.4     1321.3     4120.4     1321.2     4200.2
 GR    1320.1     4235.4     1320.1     4280.0     1322.0     4308.7     1322.2     4382.4     1324.7     4418.0
 GR    1324.8     4501.7     1329.9     4535.0     1353.8     4640.1        0.0        0.0        0.0        0.0
1
    21MAR07      13:36:57                                                                          PAGE   22


 [redacted]        5       .04     2943.8       .03     3650.6       .04     3856.0       .03     4054.9       .04
 [redacted] 4734.6
 ET                             4.1     2400.0     4185.0
 X1    24.87          37     2943.8     4054.9      460.0      510.0      500.0
 GR    1389.4     1000.0     1344.1     1147.6     1344.6     1207.1     1325.8     1746.8     1327.6     1958.7
 GR    1325.5     1989.3     1325.7     2163.9     1325.7     2460.6     1322.9     2472.0     1323.2     2527.5
 GR    1323.6     2584.5     1325.1     2635.3     1325.2     2910.5     1323.5     2943.8     1324.1     3082.6
 GR    1325.5     3255.9     1325.7     3421.4     1325.0     3510.4     1324.8     3650.6     1323.6     3746.3
 GR    1323.6     3856.0     1322.9     3953.9     1322.7     3992.4     1323.4     4054.9     1325.7     4077.0
 GR    1324.5     4116.0     1322.5     4133.5     1326.9     4155.7     1326.9     4232.9     1327.5     4321.8
 GR    1353.8     4382.1     1351.7     4456.9     1336.7     4508.2     1347.5     4558.0     1353.6     4622.7
 GR    1351.0     4676.0     1368.4     4734.6        0.0        0.0        0.0        0.0

 NC      .04        .04        .03
 ET                             4.1     2015.0     4000.0
 X1    24.96          42     2899.0     3797.0      430.0      515.0      500.0
 GR    1409.7     1000.0     1374.5     1082.5     1344.7     1184.3     1330.6     1345.9     1330.6     1385.4
 GR    1330.9     1528.7     1328.2     1595.2     1328.2     1768.5     1328.0     1915.1     1328.2     2070.0
 GR    1325.2     2081.9     1325.3     2142.6     1325.4     2194.3     1327.5     2219.2     1328.3     2374.4
 GR    1327.6     2602.9     1327.5     2858.9     1327.5     2899.0     1326.1     2929.6     1326.9     3094.5
 GR    1326.9     3207.0     1326.0     3216.6     1326.8     3309.9     1327.0     3436.3     1326.4     3505.3
 GR    1326.2     3602.0     1325.0     3685.9     1324.1     3728.2     1323.7     3781.6     1327.2     3797.0
 GR    1327.6     3874.0     1326.6     3964.7     1329.3     4032.8     1329.5     4149.0     1333.0     4199.6
 GR    1378.0     4332.2     1378.0     4369.3     1370.1     4399.9     1370.0     4433.0     1356.4     4510.8
 GR    1359.9     4557.2     1376.6     4630.0        0.0        0.0        0.0        0.0        0.0        0.0

 ET                             4.1     1915.0     3995.0
 X1    25.06          37     3047.7     3738.4      400.0      410.0      500.0
 GR    1410.7     1000.0     1411.2     1022.2     1374.7     1102.8     1332.9     1353.4     1333.0     1395.0
 GR    1333.4     1473.7     1331.5     1555.5     1330.5     1566.6     1330.4     1610.8     1327.8     1630.2
 GR    1329.3     1725.5     1330.1     1907.8     1329.6     1990.6     1326.9     2002.4     1327.1     2027.7
 GR    1329.4     2042.8     1329.1     2055.8     1327.0     2070.6     1327.2     2203.8     1330.8     2228.9
 GR    1329.8     2473.6     1329.6     2782.2     1328.9     3047.7     1328.5     3395.6     1326.6     3404.5
 GR    1325.9     3417.7     1326.8     3457.7     1327.3     3507.4     1327.6     3628.8     1327.1     3738.4
 GR    1330.2     3787.6     1328.9     3928.8     1328.4     4058.3     1332.4     4175.0     1354.5     4253.3
 GR    1368.1     4335.9     1371.9     4388.7        0.0        0.0        0.0        0.0        0.0        0.0

 QT        2      57854      57854
                                4.1     2115.0     4360.0
 [redacted]  25.15          30     3539.2     4272.4      485.0      505.0      500.0
 [redacted] 1427.7     1000.0     1374.7     1191.5     1351.5     1332.8     1334.6     1746.8     1332.5     1768.1
 GR    1333.4     1923.8     1333.1     2053.8     1332.7     2278.8     1332.3     2462.0     1330.3     2522.0
```

```
 GR   1331.3     2642.9     1332.4     2662.2     1332.4     2942.3     1331.0     3278.3     1330.8     3539.2
      1330.1     3674.7     1329.2     3683.2     1329.1     3757.8     1329.6     3806.9     1330.3     4008.9
      1330.5     4272.4     1329.8     4362.5     1333.6     4406.8     1333.3     4507.5     1334.1     4653.2
      1337.1     4713.0     1335.5     4753.3     1343.6     4821.9     1368.4     4920.2     1381.3     4960.0

 ET                              4.1     1715.0     4165.0
 X1    25.24          40     3522.6     4014.6      530.0      495.0      500.0
 GR   1386.5     1000.0     1367.8     1091.2     1350.3     1176.7     1349.2     1224.3     1342.4     1356.2
 GR   1338.3     1469.6     1339.7     1493.2     1339.5     1529.0     1335.7     1554.9     1335.7     1612.4
 GR   1335.6     1850.1     1336.6     2104.1     1337.5     2273.8     1335.5     2497.7     1336.7     2627.7
 GR   1337.5     2663.0     1335.7     2731.0     1336.4     2798.3     1333.7     2945.5     1334.0     3083.3
1
    21MAR07      13:36:57                                                                          PAGE    23


 GR   1334.8     3098.7     1336.1     3362.0     1332.6     3380.1     1332.4     3516.2     1331.0     3522.6
 GR   1331.3     3556.9     1331.6     3616.9     1331.8     3689.6     1332.9     3811.1     1336.8     3826.0
 GR   1336.9     4014.6     1337.5     4183.8     1333.4     4362.5     1336.9     4415.1     1336.4     4517.3
 GR   1340.1     4709.7     1344.1     4773.7     1366.3     4887.9     1364.0     4921.7     1386.2     4972.0

 ET                              4.1     1285.0     3920.0
 X1    25.34          28     3138.6     3792.8      535.0      485.0      500.0
 GR   1348.9     1000.0     1343.6     1057.1     1344.1     1076.2     1339.7     1316.9     1338.8     1331.8
 GR   1340.1     1631.9     1340.6     2029.8     1338.3     2232.1     1337.1     2334.2     1335.3     2667.7
 GR   1337.7     2701.1     1338.3     2931.5     1338.1     3138.6     1337.1     3357.8     1334.1     3369.4
 GR   1334.1     3415.6     1334.1     3541.0     1336.0     3555.7     1335.3     3770.8     1338.3     3792.8
 GR   1335.9     4181.3     1338.3     4205.4     1338.3     4245.0     1337.9     4347.8     1342.4     4538.0
 GR   1351.7     4730.6     1351.9     4823.9     1373.4     4973.9        0.0        0.0        0.0        0.0

 ET                              4.1     1165.0     3995.0
 X1    25.43          34     3404.7     3631.0      440.0      535.0      500.0
 GR   1347.9     1000.0     1345.5     1065.9     1347.2     1088.0     1341.5     1112.4     1338.7     1164.7
 GR   1340.8     1265.1     1341.0     1497.7     1341.8     1887.1     1340.2     1904.3     1339.7     2117.4
 GR   1341.3     2135.4     1339.4     2407.9     1338.7     2448.1     1340.5     2481.7     1340.0     2853.0
 GR   1338.8     2870.2     1339.3     2949.2     1338.8     3395.4     1336.3     3404.7     1336.6     3472.1
 GR   1336.4     3631.0     1338.0     3702.0     1340.5     3862.9     1337.7     3944.8     1338.9     4172.4
 GR   1337.4     4197.9     1339.7     4221.2     1342.3     4393.6     1349.9     4724.1     1355.2     5018.7
 GR   1360.5     5339.9     1359.0     5351.9     1361.8     5407.4     1365.0     5605.7        0.0        0.0

 ET                              4.1     1200.0     4115.0
      25.53          43     3144.7     3807.6      460.0      490.0      500.0
      1373.4     1000.0     1361.4     1036.6     1359.1     1059.0     1343.6     1210.7     1343.2     1266.0
 GR   1342.5     1360.7     1344.1     1397.5     1343.7     1819.0     1342.2     1832.3     1342.8     1935.5
 GR   1343.6     1975.0     1342.5     2322.8     1340.6     2337.9     1340.6     2358.1     1342.0     2369.3
 GR   1342.1     2504.6     1342.8     2902.7     1341.2     2975.1     1342.6     3104.3     1341.6     3137.7
 GR   1340.1     3144.7     1340.9     3333.1     1340.3     3506.5     1338.7     3525.3     1339.9     3628.2
 GR   1338.7     3671.3     1337.6     3807.6     1340.8     3831.7     1341.8     4199.5     1339.9     4212.0
 GR   1339.9     4224.2     1342.3     4235.1     1341.8     4309.8     1340.3     4322.7     1342.0     4422.5
 GR   1345.8     4670.5     1352.5     5131.4     1354.3     5232.5     1363.4     5337.3     1362.5     5387.5
 GR   1364.6     5457.4     1359.0     5514.2     1365.7     5600.4        0.0        0.0        0.0        0.0

 ET                              4.1     1339.0     4140.0
 X1    25.62          49     2930.1     3956.7      415.0      490.0      500.0
 GR   1370.1     1000.0     1366.8     1057.2     1355.4     1099.0     1355.4     1163.7     1354.0     1230.5
 GR   1348.4     1276.2     1344.1     1473.1     1346.0     1670.8     1345.3     1781.9     1342.0     1830.4
 GR   1344.6     1872.7     1344.6     1944.5     1346.2     1971.8     1345.6     2235.4     1345.8     2353.5
 GR   1342.7     2367.2     1344.8     2394.9     1345.5     2662.4     1344.8     2912.2     1343.6     2930.1
 GR   1344.9     2994.1     1343.8     3179.8     1342.8     3210.6     1343.4     3425.5     1341.9     3600.6
 GR   1342.5     3722.3     1344.4     3750.8     1343.6     3846.7     1340.4     3862.0     1340.2     3905.3
 GR   1340.2     3956.7     1343.2     3970.5     1344.2     4267.2     1341.6     4282.1     1343.3     4297.2
 GR   1344.0     4436.5     1343.6     4514.2     1348.0     4836.9     1351.5     5178.5     1354.8     5371.1
 GR   1357.8     5403.3     1358.4     5448.5     1361.3     5556.8     1359.7     5591.2     1361.1     5675.0
 GR   1365.2     5707.1     1363.3     5738.8     1374.3     5949.1     1375.7     5956.0        0.0        0.0
1
    21MAR07      13:36:57                                                                          PAGE    24


 ET                              4.1     1305.0     4100.0
 X1    25.72          53     2944.6     4043.7      455.0      515.0      500.0
 GR   1370.3     1000.0     1366.6     1064.1     1371.5     1108.9     1363.7     1176.7     1355.2     1220.9
 GR   1354.1     1232.1     1348.7     1251.2     1349.0     1396.0     1349.0     1564.3     1347.5     1595.3
 GR   1348.0     1742.8     1345.3     1784.5     1345.8     1909.7     1348.1     1926.8     1347.8     2124.6
 GR   1348.4     2328.1     1349.0     2369.3     1349.0     2466.6     1345.7     2493.6     1347.5     2515.0
 GR   1348.0     2709.8     1346.4     2944.6     1346.0     3063.1     1346.1     3265.3     1344.9     3309.5
 GR   1346.4     3363.8     1344.8     3497.8     1345.3     3705.1     1344.1     3804.0     1344.2     3896.0
 GR   1343.4     3962.0     1342.7     4013.7     1345.8     4043.7     1344.7     4128.8     1346.5     4151.1
 GR   1346.5     4193.1     1343.2     4210.3     1345.7     4225.6     1346.4     4369.9     1344.7     4392.1
      1346.5     4541.9     1350.8     4859.8     1354.9     5119.8     1358.6     5241.2     1358.8     5371.1
      1365.6     5453.1     1361.1     5498.2     1362.5     5572.4     1368.3     5672.8     1363.3     5707.5
      1365.9     5728.4     1363.1     5752.0     1365.7     5879.1        0.0        0.0        0.0        0.0
```

```
 ET                          4.1     1190.0     4000.0
 X1     25.81          45  2759.4     3920.7      450.0      465.0      500.0
 GR   1381.4      1000.0  1383.1     1010.6     1372.4     1035.1     1352.2     1143.5     1349.7     1225.2
 GR   1350.0      1299.8  1350.6     1534.0     1349.6     1550.4     1350.1     1625.0     1348.3     1786.5
 GR   1350.9      1804.6  1350.8     2031.3     1350.6     2349.9     1349.7     2365.6     1350.1     2460.6
 GR   1350.6      2655.6  1348.3     2759.4     1348.5     2961.8     1346.9     3252.0     1348.3     3280.3
 GR   1347.5      3471.0  1347.2     3594.7     1346.2     3608.3     1345.7     3682.6     1345.8     3739.8
 GR   1346.2      3906.6  1344.1     3920.7     1344.1     3931.9     1347.2     3945.4     1348.0     4042.2
 GR   1346.9      4096.8  1348.0     4373.1     1348.3     4422.1     1349.2     4443.7     1350.9     4717.6
 GR   1351.8      4975.1  1353.8     5248.5     1378.5     5400.7     1379.2     5529.5     1376.3     5604.3
 GR   1378.3      5747.0  1373.1     5798.3     1374.7     5875.2     1384.1     5911.5     1382.2     5954.8

 ET                          4.1     1205.0     3990.0
 X1     25.91          52  2505.5     3739.3      350.0      370.0      500.0
 GR   1376.7      1000.0  1376.7     1026.0     1358.1     1094.8     1351.2     1227.0     1351.3     1285.7
 GR   1351.9      1299.7  1352.5     1446.0     1352.5     1583.2     1350.8     1608.5     1349.6     1696.3
 GR   1349.6      1720.5  1352.7     1737.2     1353.4     1884.3     1352.8     2082.2     1353.0     2275.3
 GR   1351.5      2302.3  1351.3     2505.5     1350.1     2791.2     1349.5     2933.9     1350.4     2966.7
 GR   1349.9      3183.4  1349.7     3315.5     1348.0     3335.3     1348.0     3429.8     1348.0     3718.3
 GR   1349.8      3739.3  1350.2     3847.2     1349.4     3926.0     1345.7     3937.6     1345.8     3948.0
 GR   1350.6      3969.3  1350.2     4082.2     1349.2     4219.2     1350.6     4406.0     1350.1     4447.7
 GR   1350.9      4462.2  1351.6     4556.1     1350.6     4571.3     1351.4     4599.3     1350.9     4622.3
 GR   1354.0      4771.0  1355.5     4988.0     1358.0     5123.5     1359.8     5218.0     1370.9     5336.3
 GR   1365.0      5420.1  1369.2     5453.2     1366.4     5481.8     1370.5     5538.2     1380.3     5610.8
 GR   1376.2      5663.2  1386.7     5912.2        0.0        0.0        0.0        0.0        0.0        0.0

 ET                          4.1     1192.0     3915.0
 X1     26.00          44  2172.8     3547.8      395.0      405.0      500.0
 GR   1372.7      1000.0  1372.7     1028.3     1367.1     1035.8     1365.3     1116.4     1372.4     1157.3
 GR   1355.0      1192.8  1354.3     1328.3     1354.8     1538.3     1351.8     1546.7     1352.5     1615.6
 GR   1352.9      1730.0  1355.0     1747.7     1355.2     1917.4     1355.1     2102.3     1353.8     2172.8
 GR   1353.4      2366.9  1352.9     2539.4     1352.3     2734.4     1353.6     2751.5     1352.2     2956.7
 GR   1350.8      2968.1  1351.1     3047.0     1350.5     3259.4     1351.3     3273.6     1350.4     3441.5
 GR   1349.1      3458.1  1349.1     3530.6     1352.6     3547.8     1352.9     3852.5     1351.0     4037.9
 GR   1347.4      4057.7  1350.6     4078.1     1351.6     4235.9     1353.4     4439.3     1355.3     4664.4
 GR   1357.8      4929.7  1361.8     5245.2     1364.3     5267.6     1363.1     5288.7     1364.1     5376.7
 GR   1363.9      5460.5  1366.4     5499.7     1378.9     5548.1     1379.6     5584.5        0.0        0.0
1
    21MAR07      13:36:57                                                                          PAGE   25

 ET                          4.1     1275.0     3940.0
 X1     26.10          38  2010.9     3344.5      450.0      460.0      500.0
 GR   1370.0      1000.0  1386.5     1068.3     1361.0     1151.9     1356.1     1249.6     1357.1     1351.6
 GR   1357.1      1518.2  1354.5     1536.2     1355.4     1684.0     1355.2     1775.8     1357.6     1797.2
 GR   1357.1      1950.5  1355.7     2010.9     1355.7     2341.6     1355.0     2614.7     1353.6     2752.6
 GR   1352.5      2763.2  1352.5     2799.4     1353.0     2876.3     1354.0     3041.2     1352.6     3236.7
 GR   1353.8      3251.2  1353.8     3344.5     1356.7     3369.8     1356.2     3512.3     1353.6     3567.0
 GR   1354.5      3667.0  1353.6     4053.1     1349.3     4073.2     1349.1     4088.1     1352.6     4108.2
 GR   1351.3      4134.6  1354.2     4176.0     1357.7     4519.4     1364.7     5115.8     1363.6     5148.4
 GR   1363.7      5183.9  1384.1     5400.8     1386.6     5508.4        0.0        0.0        0.0        0.0

 ET                          4.1     1125.0     3735.0
 X1     26.19          41  1751.8     2703.2      485.0      500.0      500.0
 GR   1365.3      1000.0  1369.0     1025.6     1360.4     1065.9     1359.6     1105.4     1359.2     1247.4
 GR   1359.3      1372.9  1356.9     1385.4     1356.7     1444.0     1358.2     1599.8     1358.7     1751.8
 GR   1358.4      2001.9  1356.9     2223.9     1355.8     2477.7     1354.5     2484.0     1355.5     2675.1
 GR   1355.2      2703.2  1355.2     2741.6     1356.3     2783.8     1357.5     3011.5     1356.9     3185.7
 GR   1355.2      3220.7  1357.7     3259.3     1356.4     3478.6     1357.2     3591.4     1355.5     3711.3
 GR   1351.3      3724.7  1355.5     3755.8     1355.3     3920.8     1352.5     3947.0     1355.7     3975.7
 GR   1358.4      4182.4  1360.6     4355.8     1364.6     4680.8     1367.9     4896.0     1372.2     5168.9
 GR   1373.3      5269.0  1371.9     5286.3     1374.1     5312.6     1374.4     5461.2     1375.8     5527.6
 GR   1384.3      5582.0     0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 ET                          4.1     1190.0     3725.0
 X1     26.29          41  1841.9     2590.2      485.0      575.0      500.0
 GR   1388.4      1000.0  1364.0     1091.7     1362.3     1182.6     1358.4     1341.5     1359.6     1362.3
 GR   1359.2      1492.6  1360.7     1588.6     1359.7     1841.9     1361.1     1893.3     1359.2     2156.0
 GR   1358.1      2365.9  1358.3     2481.5     1356.7     2500.0     1356.7     2557.3     1358.4     2590.2
 GR   1360.6      2738.5  1360.3     2868.1     1358.8     2960.2     1361.1     3008.8     1360.9     3264.9
 GR   1359.3      3537.4  1356.9     3715.1     1354.9     3726.3     1354.9     3736.2     1358.0     3751.6
 GR   1358.5      3825.1  1360.9     3993.8     1358.3     4121.2     1357.1     4138.8     1360.6     4184.0
 GR   1361.0      4426.7  1359.7     4493.3     1361.5     4547.0     1364.3     4742.6     1370.0     4832.9
 GR   1369.5      4935.2  1372.1     4977.6     1368.5     5035.7     1368.8     5083.1     1371.9     5154.0
 GR   1388.9      5341.0     0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       5         .04  1358.5         .03  2415.5         .04  2617.4         .03  2668.5         .04
    5610.8

 ET                          4.1     1265.0     3760.0
 X1     26.38          57  1761.0     2668.5      445.0      510.0      500.0
 GR   1371.0      1000.0  1380.0     1030.1     1371.7     1077.9     1368.3     1186.0     1365.9     1199.9
```

```
 GR   1366.6     1229.7     1363.4     1290.6     1361.1     1295.3     1361.2     1300.5     1361.8     1314.0
 GR   1361.9     1332.0     1360.6     1358.5     1361.6     1426.0     1362.2     1542.0     1361.8     1632.9
 GR   1362.2     1761.0     1361.6     1980.9     1360.1     2221.3     1360.5     2268.9     1359.7     2318.7
 GR   1359.3     2364.3     1362.2     2398.4     1360.4     2415.5     1361.0     2463.1     1360.6     2617.4
 GR   1357.6     2631.3     1358.0     2643.9     1357.7     2656.5     1359.7     2668.5     1361.9     2813.3
 GR   1362.9     2861.9     1363.1     3095.1     1361.4     3205.5     1362.4     3253.1     1362.1     3456.1
 GR   1359.4     3814.1     1356.1     3827.1     1362.9     3881.8     1361.2     4014.0     1362.5     4079.3
 GR   1362.4     4111.5     1360.6     4123.8     1362.7     4143.5     1364.3     4337.3     1364.0     4455.5
 GR   1364.4     4601.9     1364.5     4648.1     1362.5     4653.1     1363.0     4692.1     1363.6     4695.8
 GR   1366.2     4971.2     1368.8     5051.4     1373.6     5128.5     1375.7     5231.9     1376.2     5370.2
 GR   1378.4     5462.8     1406.4     5610.8       0.0        0.0        0.0        0.0        0.0        0.0
1
     21MAR07      13:36:57                                                                          PAGE   26


 NH       5        .04     1213.5        .03     2084.0        .04     2784.3        .03     2871.3        .04
 NH    5671.8
 ET                             4.1     1210.0     3700.0
 X1    26.48          51     1721.4     2871.3      400.0      475.0      500.0
 GR   1380.6     1000.0     1405.2     1048.7     1394.6     1070.1     1384.5     1128.0     1365.2     1149.7
 GR   1364.0     1172.5     1366.3     1182.0     1361.0     1213.5     1361.2     1245.4     1363.1     1343.9
 GR   1361.2     1347.1     1364.5     1384.6     1362.5     1396.4     1364.1     1721.4     1362.1     2036.9
 GR   1362.9     2071.4     1366.4     2084.0     1366.4     2218.5     1363.6     2253.3     1363.0     2784.3
 GR   1359.9     2796.1     1359.4     2808.9     1359.4     2816.8     1363.4     2823.6     1365.2     2871.3
 GR   1363.8     3051.7     1363.7     3321.3     1362.7     3727.8     1359.2     3744.1     1362.4     3763.3
 GR   1364.8     3877.0     1365.5     4107.6     1366.1     4286.9     1366.5     4488.9     1366.4     4609.5
 GR   1364.8     4617.9     1365.3     4650.7     1366.7     4660.2     1367.1     4774.5     1369.4     4865.4
 GR   1369.2     4968.8     1368.7     5013.0     1370.6     5176.5     1371.7     5219.3     1373.6     5251.8
 GR   1376.7     5311.3     1376.7     5428.7     1376.6     5534.7     1380.6     5598.5     1388.1     5664.5
 GR   1388.1     5671.8       0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       5        .04     1281.1        .03     1867.8        .04     2852.8        .03     2900.0        .04
 NH    5859.2
 ET                             4.1     1225.0     3815.0
 X1    26.57          42     1645.9     2900.0      480.0      480.0      500.0
 GR   1373.3     1000.0     1394.1     1043.8     1390.1     1056.9     1361.8     1281.1     1361.8     1447.0
 GR   1366.8     1488.6     1366.8     1645.9     1365.7     1847.9     1366.9     1867.8     1366.9     2025.7
 GR   1368.1     2098.9     1367.3     2199.7     1365.9     2242.4     1365.8     2495.2     1365.9     2832.9
 GR   1361.8     2842.0     1361.8     2852.8     1364.5     2900.0     1364.7     2984.4     1367.3     3009.6
 GR   1366.2     3257.6     1367.9     3345.4     1367.1     3453.3     1364.1     3486.1     1364.2     3519.7
 GR   1361.2     3537.6     1363.9     3549.5     1363.6     3651.9     1361.8     3660.8     1364.3     3671.1
 GR   1367.9     3877.1     1368.6     4100.4     1368.7     4509.4     1368.5     4875.6     1370.8     4948.8
 GR   1370.8     5014.3     1369.6     5038.8     1372.0     5336.4     1379.2     5434.6     1375.7     5595.5
 GR   1378.6     5777.7     1386.1     5859.2       0.0        0.0        0.0        0.0        0.0        0.0

 NH       5        .04     1229.5        .03     1935.0        .04     2754.3        .03     2863.3        .04
 NH    5978.5
 ET                             4.1     1210.0     3915.0
 X1    26.67          47     1644.3     2863.3      470.0      375.0      500.0
 GR   1375.0     1000.0     1390.2     1031.9     1389.6     1126.6     1367.2     1229.5     1367.8     1375.4
 GR   1366.3     1394.3     1366.4     1429.2     1367.8     1444.4     1369.2     1644.3     1368.0     1849.9
 GR   1369.5     1935.0     1369.4     2118.8     1369.2     2411.6     1368.7     2576.1     1367.6     2659.9
 GR   1368.4     2686.7     1367.3     2745.1     1363.9     2754.3     1369.4     2863.3     1368.3     3162.9
 GR   1364.6     3202.5     1368.3     3240.4     1366.9     3423.1     1369.2     3462.7     1368.1     3514.5
 GR   1365.9     3566.1     1364.0     3586.9     1367.2     3607.8     1368.5     3748.4     1368.5     3909.6
 GR   1366.9     3984.7     1364.8     4005.6     1369.2     4026.0     1370.8     4151.6     1370.1     4481.8
 GR   1370.3     4887.8     1371.2     5071.1     1373.1     5408.2     1377.3     5456.0     1381.3     5521.4
 GR   1380.3     5596.8     1376.4     5647.0     1374.9     5724.7     1376.5     5742.7     1376.8     5850.7
 GR   1387.3     5942.9     1388.0     5978.5       0.0        0.0        0.0        0.0        0.0        0.0

 NH       4        .04     1258.7        .03     2040.9        .04     2623.0        .04     6223.1
 ET                             4.1     1218.0     4040.0
 X1    26.76          41     1582.6     2775.0      465.0      235.0      500.0
 GR   1379.6     1000.0     1389.7     1029.5     1388.3     1041.7     1387.3     1183.4     1371.0     1222.8
 GR   1370.3     1258.7     1371.3     1582.6     1370.8     1952.7     1372.6     2040.9     1372.3     2334.7
 GR   1371.3     2593.8     1366.6     2602.6     1367.0     2623.0     1367.0     2649.5     1369.3     2681.5
 GR   1368.5     2717.1     1370.8     2775.0     1372.0     3007.6     1366.6     3059.4     1370.3     3113.1
 GR   1369.9     3275.4     1372.2     3339.4     1369.9     3492.3     1366.8     3503.6     1369.8     3530.1
1
     21MAR07      13:36:57                                                                          PAGE   27


 GR   1368.6     3614.7     1369.9     4055.9     1368.0     4104.0     1369.7     4224.4     1367.7     4254.3
 GR   1371.5     4289.0     1372.0     4562.3     1372.4     5041.8     1374.5     5396.7     1375.6     5550.1
 GR   1381.2     5630.9     1377.7     5926.9     1378.9     5967.0     1379.9     6097.5     1388.1     6173.0
 GR   1389.9     6223.1       0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       4        .04     1300.4        .03     2279.8        .04     2492.0        .04     6779.3
 ET                             4.1     1285.0     4150.0
 X1    26.85          50     1611.7     2654.8      485.0      300.0      500.0
 GR   1378.7     1000.0     1389.3     1035.5     1389.3     1055.7     1390.1     1221.2     1371.8     1300.4
```

```
 GR   1372.7     1611.7     1374.3     2033.3     1374.9     2279.8     1372.9     2492.0     1371.3     2552.2
      1371.0     2595.5     1372.0     2633.9     1374.1     2654.8     1373.8     2769.4     1371.5     2868.7
      1373.8     2923.7     1373.8     2981.3     1368.3     3021.1     1372.9     3087.3     1371.6     3326.7
      1373.5     3370.8     1372.7     3711.1     1370.0     3773.1     1371.5     3813.9     1368.2     3871.0
 GR   1371.6     3933.6     1373.0     4047.1     1371.5     4263.5     1373.4     4376.3     1371.8     4521.1
 GR   1373.1     4616.9     1375.0     4957.2     1376.3     5173.1     1377.1     5263.2     1378.4     5509.6
 GR   1379.3     5810.6     1380.8     5870.0     1385.7     5935.3     1386.7     6017.0     1385.3     6073.1
 GR   1385.1     6133.1     1382.2     6166.8     1382.0     6311.1     1383.6     6381.0     1388.0     6430.4
 GR   1386.4     6496.2     1389.5     6608.9     1387.6     6633.5     1393.0     6752.6     1394.1     6779.3

 NC       .04        .04        .03
 ET                             4.1     1207.0     4135.0
 X1     26.95         40     1752.3     2165.2      400.0      170.0      500.0
 GR   1418.4     1000.0     1415.4     1032.1     1386.4     1129.8     1372.7     1241.0     1374.3     1404.0
 GR   1375.9     1752.3     1375.3     2012.4     1373.5     2049.4     1373.7     2095.6     1374.1     2151.9
 GR   1376.7     2165.2     1376.2     2427.4     1375.6     2833.4     1374.5     2983.7     1369.9     3059.7
 GR   1374.2     3120.2     1372.7     3336.4     1374.3     3375.3     1373.3     3684.3     1372.9     3806.5
 GR   1373.2     4013.9     1368.9     4055.5     1373.6     4097.0     1373.0     4290.7     1373.8     4539.0
 GR   1375.6     4846.8     1377.8     5129.1     1377.8     5222.8     1379.2     5264.8     1379.3     5471.1
 GR   1382.0     5831.7     1381.3     5841.4     1382.5     5859.7     1386.3     5976.6     1386.2     6089.5
 GR   1385.7     6273.0     1383.5     6370.2     1384.9     6451.0     1394.1     6559.6     1395.2     6604.4

 ET                             4.1     1243.0     4250.0
 X1     27.04         49     1488.6     2128.3      515.0      445.0      500.0
 GR   1390.7     1000.0     1413.1     1051.6     1402.5     1075.3     1381.0     1151.9     1379.2     1255.0
 GR   1374.3     1314.8     1376.6     1338.8     1376.7     1382.6     1375.0     1433.5     1377.0     1488.6
 GR   1377.6     1938.6     1375.7     1954.5     1375.8     1999.9     1375.4     2045.7     1375.7     2096.9
 GR   1379.2     2128.3     1378.0     2472.9     1378.3     2862.3     1378.5     3059.4     1376.8     3227.6
 GR   1372.4     3275.3     1373.9     3295.6     1373.7     3332.2     1371.1     3348.2     1374.9     3377.8
 GR   1377.1     3618.2     1376.0     3921.4     1375.7     4289.5     1371.5     4338.5     1375.5     4361.5
 GR   1374.4     4445.9     1371.4     4472.8     1374.4     4493.1     1375.8     4794.7     1379.3     5163.0
 GR   1381.8     5357.3     1381.8     5405.7     1385.1     5682.2     1386.6     5875.4     1388.0     5892.8
 GR   1390.8     6158.4     1390.8     6297.7     1392.0     6438.1     1390.1     6764.1     1392.7     6798.0
 GR   1392.7     6835.1     1390.6     6902.3     1392.4     6962.1     1395.0     6999.2

 ET                             4.1     1210.0     4310.0
 X1     27.14         45     1607.4     2169.0      510.0      710.0      500.0
 GR   1392.9     1000.0     1408.2     1034.0     1394.1     1053.7     1383.8     1107.4     1381.8     1195.9
 GR   1378.5     1217.2     1380.8     1300.7     1379.7     1607.4     1378.5     1963.0     1377.6     1968.7
 GR   1377.7     2033.7     1378.1     2079.9     1378.3     2152.7     1381.1     2169.0     1381.2     2386.9
      1380.5     2579.3     1381.0     2953.4     1379.9     3237.5     1377.0     3480.5     1378.9     3507.6
      1378.9     3745.0     1376.4     3824.6     1377.5     4012.0     1380.2     4122.1     1379.9     4201.4
 GR   1377.2     4214.8     1378.3     4282.9     1380.2     4317.6     1379.4     4554.9     1380.3     4645.9
 GR   1379.5     4747.8     1376.8     4791.7     1378.5     4818.3     1375.0     4875.5     1378.5     4897.3
 GR   1380.6     5112.9     1386.7     5504.9     1392.4     5891.9     1398.9     6368.2     1400.3     6450.4
1
    21MAR07       13:36:57                                                                          PAGE    28

 GR   1398.5     6476.7     1400.8     6498.8     1402.4     6645.8     1405.1     6787.4     1405.1     6857.0

 ET                             4.1     1177.0     4485.0
 X1     27.23         38     1698.2     2246.5      500.0      635.0      500.0
 GR   1410.4     1000.0     1388.1     1107.4     1384.2     1191.4     1382.4     1277.4     1382.4     1504.5
 GR   1382.0     1698.2     1381.3     1957.2     1379.6     1970.0     1379.6     2019.6     1379.6     2071.4
 GR   1381.1     2088.9     1381.1     2227.0     1382.8     2246.5     1384.0     2443.8     1383.6     2855.2
 GR   1382.0     3254.3     1380.5     3289.0     1381.8     3323.7     1382.1     3634.5     1380.8     3919.2
 GR   1383.2     4014.3     1381.9     4104.7     1384.1     4205.9     1382.6     4480.9     1380.1     4501.8
 GR   1382.6     4524.5     1382.9     4782.8     1382.9     5053.4     1381.0     5203.1     1383.0     5306.1
 GR   1381.6     5350.4     1381.8     5388.6     1387.4     5694.0     1387.4     5741.0     1388.6     5783.4
 GR   1394.1     6147.3     1401.4     6543.4     1407.2     6854.1        0.0        0.0        0.0        0.0

 NH         5        .04     1431.7        .03     2036.3        .04     2190.0        .03     2456.5        .04
 NH    6835.0
 ET                             4.1     1312.0     4790.0
 X1     27.33         46     1714.7     2456.5      500.0      365.0      500.0
 GR   1393.4     1000.0     1411.0     1043.9     1406.5     1086.4     1392.7     1218.1     1388.5     1305.7
 GR   1385.1     1322.0     1384.5     1431.7     1384.7     1714.7     1382.4     1947.8     1381.5     1954.8
 GR   1381.5     2007.4     1381.5     2036.3     1382.4     2061.1     1384.8     2072.3     1384.9     2138.4
 GR   1382.9     2190.0     1383.7     2440.3     1386.5     2456.5     1386.6     2533.0     1385.2     2542.4
 GR   1386.2     2572.6     1386.6     3065.2     1385.1     3477.8     1384.0     3616.2     1385.9     3674.4
 GR   1385.5     3726.8     1385.5     3761.8     1384.3     3778.8     1386.6     3818.1     1385.6     4106.8
 GR   1383.4     4148.0     1386.3     4177.5     1385.9     4547.8     1385.1     4614.2     1382.2     4635.2
 GR   1384.4     4661.8     1383.8     4823.5     1385.4     4868.8     1385.6     5187.2     1384.5     5519.3
 GR   1384.3     5666.6     1385.0     5804.1     1387.8     6013.3     1394.0     6330.4     1400.5     6721.9
 GR   1402.4     6835.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH         5        .04     1147.0        .03     1856.4        .04     2513.9        .03     2941.1        .04
      6615.1
                                4.1     1485.0     5135.0
      27.52         38     1682.6     2941.1      935.0      460.0     1000.0
 GR   1400.5     1000.0     1415.9     1038.5     1419.6     1147.0     1413.1     1397.5     1388.0     1497.0
```

```
 GR   1386.9     1626.1     1386.1     1636.9     1386.1     1682.6     1385.7     1732.4     1385.2     1807.2
      1385.6     1848.8     1387.5     1856.4     1388.5     2029.2     1389.2     2232.4     1390.3     2485.8
      1388.2     2513.9     1388.2     2580.0     1388.2     2914.0     1390.6     2941.1     1391.0     3301.9
      1387.6     3563.8     1390.4     3604.7     1390.2     3901.7     1390.2     4055.9     1388.7     4349.7
 GR   1388.3     4633.1     1387.1     4875.8     1384.7     4886.2     1387.2     4901.5     1388.2     5192.8
 GR   1388.6     5560.7     1387.2     5881.6     1389.2     6176.0     1387.2     6203.4     1388.6     6219.0
 GR   1388.6     6284.4     1388.5     6355.8     1392.2     6615.1       0.0        0.0        0.0        0.0

 NH         5        .04     1478.8        .03     1712.3        .04     2527.6        .03     3165.3        .04
 NH    7000.0
 ET                             4.1     1530.0     5290.0
 X1     27.61          45     1612.5     2970.2      400.0      435.0      500.0
 GR   1396.0     1000.0     1415.1     1036.9     1415.7     1133.1     1394.6     1478.8     1388.0     1612.5
 GR   1387.7     1650.2     1387.7     1694.3     1388.8     1712.3     1390.3     1805.7     1391.2     1938.6
 GR   1389.2     2033.4     1391.0     2055.6     1391.2     2268.6     1391.2     2514.5     1389.5     2527.6
 GR   1391.1     2751.8     1389.8     2956.8     1391.7     2970.2     1392.0     3040.0     1390.8     3147.9
 GR   1392.2     3165.3     1392.3     3318.2     1389.5     3347.7     1392.6     3392.8     1393.0     3455.0
 GR   1391.3     3773.1     1392.8     3813.6     1392.4     4111.0     1391.7     4329.3     1391.7     4654.7
 GR   1389.9     4977.8     1387.9     4990.0     1390.2     5001.4     1388.5     5052.4     1391.3     5080.6
 GR   1391.0     5359.8     1390.8     5739.2     1390.6     6061.5     1392.3     6207.9     1391.2     6345.0
 GR   1392.0     6433.1     1391.4     6449.1     1392.9     6474.5     1393.2     6605.4     1396.0     7000.0
1
     21MAR07      13:36:57                                                                          PAGE   29


 NH         5        .04     1233.3        .03     1523.2        .04     2405.0        .03     2913.6        .05
 NH    7455.2
 ET                             4.1     1190.0     5150.0
 X1     27.78          45     1233.3     2913.6     1000.0      475.0      860.0
 GR   1445.6     1000.0     1390.6     1191.0     1391.1     1233.3     1389.6     1299.8     1391.7     1318.1
 GR   1390.8     1488.5     1391.9     1523.2     1391.2     1732.8     1390.5     1746.4     1390.6     1868.8
 GR   1392.7     1911.2     1391.6     1948.2     1392.6     2225.3     1393.4     2337.3     1393.4     2405.0
 GR   1392.0     2554.9     1393.2     2658.6     1392.3     2799.4     1391.8     2897.2     1393.4     2913.6
 GR   1393.3     3131.2     1392.0     3147.0     1391.8     3215.0     1394.1     3311.4     1392.7     3365.4
 GR   1392.3     3416.0     1394.4     3440.3     1394.8     3675.9     1391.2     3746.3     1394.2     3770.0
 GR   1394.3     3979.9     1393.8     4260.1     1393.8     4587.8     1393.3     4876.8     1392.5     5199.7
 GR   1392.1     5431.5     1394.1     5672.4     1393.4     5967.2     1393.8     6205.2     1395.7     6483.9
 GR   1398.4     6792.0     1401.7     7044.0     1405.8     7387.1     1410.1     7453.5     1410.1     7455.2

      [redacted]2     58418      58418
      [redacted]7        .04     1394.5        .03     1520.0        .04     1830.0        .03     2132.7        .04
      [redacted]2963.7   .03     3177.9        .04     7845.5
 ET                             4.1     1370.0     5415.0
 X1     27.97          48     1394.5     3177.9     1010.0      400.0     1020.0
 GR   1476.3     1000.0     1418.7     1175.6     1408.6     1280.0     1395.7     1349.2     1392.9     1354.2
 GR   1392.9     1373.6     1392.9     1394.5     1396.2     1405.7     1394.3     1443.5     1394.3     1470.0
 GR   1397.0     1520.0     1396.7     1738.8     1394.4     1745.4     1396.6     1830.0     1394.8     2094.5
 GR   1397.1     2132.7     1395.5     2416.0     1397.2     2625.6     1394.4     2773.6     1396.1     2904.6
 GR   1396.6     2963.7     1396.0     3177.9     1396.8     3294.6     1397.6     3526.8     1397.1     3725.4
 GR   1394.7     3773.2     1395.0     3860.1     1396.9     3876.8     1397.6     4076.0     1397.3     4202.9
 GR   1396.5     4302.9     1393.9     4321.4     1396.4     4353.5     1396.7     4574.6     1395.5     4879.6
 GR   1396.0     5288.8     1395.7     5672.5     1396.9     5917.6     1397.0     6269.9     1395.2     6548.8
 GR   1395.3     6623.8     1398.0     6686.3     1398.0     6917.3     1396.0     7053.5     1400.8     7092.3
 GR   1402.8     7302.1     1409.0     7630.9     1412.8     7845.5       0.0        0.0        0.0        0.0

 NH         7        .04     1276.4        .03     1569.5        .04     1794.6        .03     2300.0        .04
 NH    2999.6        .03     3326.9        .04     7427.3
 ET                             4.1     1220.0     5320.0
 X1     28.09          47     1276.4     3326.9      605.0      475.0      660.0
 GR   1417.1     1000.0     1408.6     1128.1     1402.7     1148.9     1398.5     1276.4     1397.8     1321.2
 GR   1397.4     1352.5     1398.9     1366.6     1399.0     1459.4     1399.0     1532.3     1396.9     1538.7
 GR   1396.9     1549.5     1399.8     1569.5     1399.8     1794.6     1398.4     2061.0     1400.1     2074.8
 GR   1400.1     2191.3     1398.7     2202.9     1398.1     2300.0     1399.9     2384.9     1400.1     2624.1
 GR   1400.0     2813.0     1398.1     2831.9     1399.9     2850.1     1399.0     2999.6     1399.7     3118.9
 GR   1398.3     3308.2     1399.7     3326.9     1400.2     3595.2     1399.2     3841.9     1397.3     3860.5
 GR   1397.3     3931.4     1399.7     3950.3     1399.7     4269.5     1398.9     4409.4     1396.9     4436.7
 GR   1396.9     4468.4     1399.0     4489.8     1399.2     4716.6     1398.7     5029.1     1399.0     5417.6
 GR   1398.7     5874.3     1399.0     6241.4     1398.7     6487.1     1400.0     7185.5     1407.6     7330.8
 GR   1413.1     7364.2     1414.9     7427.3

 NH         9        .04     1223.4        .03     1350.0        .04     1744.4        .03     1881.3        .04
 NH    2125.0        .03     2678.9        .04     3406.1        .03     3600.0        .04     7764.4
 ET                             4.1     1235.0     5430.0
 X1     28.19          55     1223.4     3600.0      650.0      430.0      500.0
 GR   1460.1     1000.0     1410.0     1149.1     1410.4     1168.0     1400.7     1223.4     1400.7     1295.5
 GR   1402.7     1312.6     1402.3     1350.0     1399.0     1440.5     1402.2     1463.8     1403.4     1744.4
 GR   1401.5     1793.1     1400.2     1805.5     1400.3     1830.7     1400.3     1860.0     1402.9     1881.3
      1403.2     2125.0     1401.2     2384.5     1402.9     2399.8     1403.2     2485.3     1400.7     2493.4

      [redacted]1MAR07      13:36:57                                                                          PAGE   30
```

	1401.2	2678.9	1402.5	2687.0	1403.2	3091.0	1401.1	3139.7	1401.1	3171.9
	1402.7	3327.6	1402.8	3406.1	1400.7	3600.0	1401.0	3775.2	1402.7	3797.8
	1401.7	3907.3	1403.4	3929.4	1402.6	4115.6	1400.5	4133.2	1400.6	4216.7
GR	1403.0	4254.2	1402.2	4436.3	1401.9	4838.5	1400.4	4851.1	1400.4	4872.8
GR	1402.0	4894.3	1402.7	5071.4	1401.3	5525.4	1401.1	5907.7	1401.4	6343.2
GR	1399.8	6626.6	1398.1	6659.4	1397.7	6733.5	1402.9	7242.8	1404.5	7331.8
GR	1405.0	7469.2	1407.9	7619.0	1412.6	7669.1	1437.1	7728.8	1437.1	7764.4
NH	9	.04	1130.2	.03	1309.7	.04	1891.1	.03	1970.0	.04
NH	2324.4	.03	2800.0	.04	3842.6	.03	3986.2	.04	7313.6	
ET			4.1	1126.0	5535.0					
X1	28.28	56	1130.2	3986.2	565.0	515.0	500.0			
GR	1425.0	1000.0	1416.9	1103.4	1404.6	1130.2	1406.0	1309.7	1404.3	1352.5
GR	1405.7	1413.2	1403.2	1631.3	1404.9	1845.5	1403.3	1853.9	1403.3	1891.1
GR	1403.3	1929.4	1405.2	1970.0	1405.4	2199.2	1403.9	2211.4	1406.1	2227.0
GR	1405.5	2310.0	1404.1	2324.4	1405.7	2432.1	1404.5	2680.4	1403.4	2800.0
GR	1405.5	2842.8	1406.2	3303.9	1403.5	3324.0	1405.0	3474.4	1405.6	3828.4
GR	1404.0	3842.6	1403.9	3986.2	1405.2	4026.1	1404.0	4059.5	1404.0	4117.8
GR	1405.7	4179.9	1405.7	4235.0	1403.9	4257.5	1404.8	4348.3	1405.2	4368.7
GR	1404.1	4388.9	1404.1	4520.9	1405.9	4550.9	1405.3	4880.5	1402.5	4894.1
GR	1402.5	4919.0	1404.8	4933.7	1403.6	5104.7	1405.0	5350.8	1404.8	5729.2
GR	1404.1	6085.0	1405.7	6113.8	1404.5	6210.1	1405.0	6338.9	1404.6	6555.9
GR	1406.3	6661.8	1401.9	6781.7	1403.2	7067.4	1404.1	7224.2	1414.7	7253.5
GR	1414.7	7313.6								
NH	9	.04	1145.0	.03	1477.7	.04	2082.8	.03	2233.9	.04
NH	2477.8	.03	2924.7	.04	4204.2	.03	4330.0	.04	6925.0	
ET			4.1	1076.0	5745.0					
X1	28.38	55	1145.0	4330.0	640.0	550.0	500.0			
GR	1427.2	1000.0	1406.4	1088.1	1405.0	1145.0	1407.9	1287.3	1405.5	1302.0
GR	1406.4	1358.0	1405.7	1461.6	1408.6	1477.7	1408.1	1670.0	1408.0	1925.7
GR	1408.4	2077.2	1405.6	2082.8	1405.8	2127.6	1406.6	2162.3	1406.8	2222.0
GR	1408.5	2233.9	1408.7	2477.8	1406.9	2903.4	1408.5	2924.7	1408.4	3223.7
GR	1407.6	3234.9	1408.5	3313.4	1407.1	3568.7	1408.2	3781.0	1408.5	3806.4
GR	1408.4	4155.6	1406.4	4204.2	1406.4	4330.0	1408.8	4406.0	1408.7	4526.5
GR	1406.6	4573.0	1407.8	4813.2	1405.4	4826.8	1405.5	4844.8	1408.2	4863.8
GR	1408.5	5049.3	1407.5	5207.8	1405.4	5227.6	1407.3	5246.9	1406.6	5359.5
GR	1407.3	5842.5	1405.0	5853.6	1408.0	5876.1	1406.0	6207.8	1405.0	6245.0
GR	1408.5	6414.2	1406.3	6466.5	1404.0	6497.7	1404.0	6772.5	1406.4	6784.4
	1404.0	6804.8	1404.0	6844.3	1409.6	6872.5	1409.7	6891.1	1416.5	6925.0
NH	9	.04	1549.5	.03	1867.4	.04	2671.5	.03	2745.1	.04
NH	2925.1	.03	3198.1	.04	4585.8	.03	5037.8	.04	7993.9	
ET			4.1	1335.0	6080.0					
X1	28.47	57	1549.5	5037.8	505.0	525.0	500.0			
GR	1477.0	1000.0	1440.8	1121.4	1443.1	1132.9	1434.0	1214.3	1415.9	1281.7
GR	1410.7	1351.6	1410.6	1479.1	1407.7	1494.2	1407.6	1549.5	1411.1	1592.5
GR	1409.9	1646.4	1408.5	1788.7	1407.7	1826.1	1408.0	1848.8	1410.8	1867.4
GR	1410.3	2145.2	1411.0	2528.0	1409.9	2671.5	1408.8	2699.3	1408.8	2721.2
GR	1411.7	2745.1	1411.5	2914.1	1409.5	2925.1	1410.7	2961.1	1409.4	3186.0
GR	1411.5	3198.1	1411.2	3426.6	1409.3	3439.6	1409.3	3456.3	1411.5	3475.8
GR	1411.2	3811.9	1409.9	4061.1	1409.9	4139.1	1411.4	4178.0	1411.5	4570.2
GR	1409.6	4585.8	1409.7	4660.6	1411.3	4691.1	1410.7	4798.9	1408.8	5019.8
GR	1411.6	5037.8	1411.5	5123.1	1410.8	5495.7	1410.8	5882.4	1410.0	6080.1

1

GR	1407.8	6091.8	1409.8	6132.1	1409.6	6467.5	1409.4	6660.4	1411.6	6776.9
GR	1407.1	7032.9	1407.2	7216.6	1407.5	7380.8	1407.6	7589.1	1417.6	7699.4
GR	1420.8	7835.4	1423.5	7993.9						
NH	9	.04	1273.9	.03	1743.4	.04	2438.8	.03	2705.0	.04
NH	2862.0	.03	3084.3	.04	4445.0	.03	4974.5	.04	6815.8	
ET			4.1	1180.0	5695.0					
X1	28.57	51	1273.9	4974.5	465.0	630.0	500.0			
GR	1433.3	1000.0	1430.0	1061.4	1418.7	1089.4	1411.4	1273.9	1410.9	1335.0
GR	1412.4	1352.0	1412.4	1519.8	1411.4	1547.2	1411.8	1669.2	1410.1	1680.7
GR	1410.1	1726.3	1412.2	1743.4	1411.8	1889.9	1413.6	2122.6	1412.4	2201.9
GR	1414.3	2426.3	1411.3	2438.8	1411.7	2493.4	1412.7	2513.3	1412.4	2705.0
GR	1413.2	2851.9	1412.2	2862.0	1412.1	3072.2	1413.8	3084.3	1414.5	3268.3
GR	1412.3	3343.3	1414.1	3364.2	1413.7	3561.1	1414.1	3888.3	1412.7	3908.6
GR	1412.9	3970.9	1411.7	4002.1	1412.9	4056.0	1413.8	4207.8	1413.8	4439.4
GR	1412.7	4445.0	1412.9	4667.8	1412.2	4955.1	1415.0	4974.5	1414.5	5224.9
GR	1414.3	5475.9	1412.9	5490.0	1414.3	5578.9	1413.4	5867.1	1410.8	5892.7
GR	1412.8	5910.9	1412.8	6101.8	1414.5	6377.1	1415.4	6701.3	1433.6	6736.4
GR	1437.7	6815.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	9	.04	1480.6	.03	2010.0	.04	2649.3	.03	2880.0	.04
	3180.0	.03	3563.0	.04	4764.6	.03	5196.8	.04	7797.4	
ET			4.1	1445.0	5740.0					

```
 X1    28.66       58     1480.6     5196.8      470.0      290.0      500.0
 GR    1437.5    1000.0   1427.6     1142.7     1417.8     1206.6     1416.3     1431.2     1414.4     1480.6
 GR    1414.5    1635.5   1415.3     1673.4     1414.9     1800.8     1413.6     1848.0     1412.9     1938.5
 GR    1411.7    1966.6   1414.5     2010.0     1414.8     2252.5     1417.3     2365.4     1417.1     2620.2
 GR    1413.9    2624.0   1414.1     2649.3     1414.2     2680.0     1416.2     2707.1     1415.0     2880.0
 GR    1417.6    3180.0   1414.6     3359.0     1416.0     3424.3     1415.5     3550.9     1417.4     3563.0
 GR    1415.2    3584.1   1415.3     3621.5     1416.5     3647.1     1416.7     4072.6     1416.4     4422.1
 GR    1415.2    4442.8   1415.2     4489.6     1416.4     4526.8     1416.0     4681.8     1417.5     4711.9
 GR    1417.5    4764.6   1416.2     4780.1     1415.8     4986.4     1413.9     5196.8     1417.1     5217.8
 GR    1416.9    5301.9   1415.3     5642.3     1413.4     5663.9     1415.2     5704.7     1415.7     5895.3
 GR    1414.1    5917.3   1415.8     5946.1     1414.4     6144.8     1411.9     6167.3     1414.6     6187.4
 GR    1415.7    6370.5   1416.9     6745.8     1421.5     7017.2     1424.8     7271.8     1422.0     7319.8
 GR    1423.8    7503.3   1427.6     7763.5     1429.7     7797.4        0.0        0.0        0.0        0.0

 NH       8        .04    1755.5         .04     2924.3         .03     3000.0         .04     3355.9         .03
 NH  3840.0        .04    4899.7         .03     5432.9         .04     7663.4
 ET                          4.1     1690.0     5615.0
 X1    28.76       50     1755.5     5432.9      520.0      395.0      500.0
 GR    1441.4    1000.0   1437.1     1147.0     1422.3     1237.3     1419.5     1495.7     1417.9     1737.8
 GR    1416.4    1755.5   1416.2     1824.8     1416.2     1908.9     1417.6     1926.0     1416.5     2092.6
 GR    1415.2    2108.0   1415.2     2162.5     1416.4     2179.4     1416.5     2251.6     1419.2     2275.8
 GR    1419.6    2513.3   1419.3     2687.6     1419.2     2916.7     1417.1     2924.3     1417.1     2943.5
 GR    1417.8    3000.0   1419.0     3142.5     1419.4     3355.9     1418.3     3451.2     1417.6     3502.9
 GR    1419.1    3695.4   1419.9     3840.0     1417.7     3976.9     1419.0     4035.9     1420.0     4362.5
 GR    1420.0    4605.9   1420.0     4854.3     1417.5     4879.5     1419.0     4899.7     1418.5     5166.1
 GR    1417.5    5432.9   1419.2     5455.6     1418.9     5601.5     1417.6     5683.5     1415.5     5701.9
 GR    1417.8    5729.8   1418.5     5996.5     1417.6     6187.6     1415.0     6239.5     1418.9     6326.3
 GR    1418.7    6623.5   1419.1     6846.0     1424.4     7171.8     1426.8     7409.5     1433.4     7663.4
1
     21MAR07     13:36:57                                                                              PAGE   32


 NH       8        .04    1932.9         .04     3177.2         .03     3320.4         .04     3480.0         .03
 NH  3800.0        .04    4928.3         .03     5471.0         .04     7932.4
 ET                          4.1     1775.0     5510.0
 X1    28.85       53     1932.9     5471.0      540.0      400.0      500.0
 GR    1441.8    1000.0   1423.4     1351.9     1422.2     1447.3     1421.9     1528.5     1420.1     1855.5
 GR    1418.4    1883.0   1418.3     1932.9     1418.3     2001.1     1419.7     2180.0     1419.7     2327.5
 GR    1419.7    2461.9   1421.7     2498.4     1421.7     2571.2     1423.2     2724.5     1423.2     2815.4
 GR    1421.6    2897.3   1421.7     3036.5     1421.5     3168.8     1419.4     3177.2     1419.4     3219.7
 GR    1421.4    3275.0   1421.4     3320.4     1422.7     3480.0     1420.9     3604.1     1419.4     3640.6
 GR    1421.5    3671.1   1421.7     3800.0     1422.3     4115.6     1423.0     4213.8     1422.9     4296.1
 GR    1421.1    4325.6   1423.0     4515.7     1423.0     4895.6     1420.4     4928.3     1421.7     5080.2
 GR    1421.1    5471.0   1422.0     5490.7     1421.3     5536.2     1420.6     5748.2     1419.2     5770.9
 GR    1421.5    5819.0   1421.0     6167.8     1419.5     6419.0     1417.4     6453.1     1419.4     6523.1
 GR    1421.2    6831.5   1427.0     7165.6     1430.3     7428.5     1431.1     7489.9     1437.8     7675.8
 GR    1442.5    7877.6   1442.0     7930.8     1442.1     7932.4        0.0        0.0        0.0        0.0

 NH       7        .04    1995.8         .03     2066.8         .04     3401.1         .03     3891.1         .04
 NH  4804.9        .03    5405.8         .04     7845.3
 ET                          4.1     1690.0     5470.0
 X1    28.95       51     1995.8     5405.8      450.0      465.0      500.0
 GR    1442.6    1000.0   1424.8     1340.7     1422.4     1416.4     1422.4     1728.6     1420.6     1879.4
 GR    1422.8    1897.5   1422.8     1927.1     1420.1     1949.2     1420.1     1995.8     1420.2     2033.3
 GR    1421.8    2066.8   1423.1     2303.0     1424.8     2376.9     1420.6     2398.4     1421.9     2432.2
 GR    1422.7    2628.1   1423.4     2728.7     1425.5     2822.3     1425.4     2982.4     1423.4     3044.5
 GR    1425.2    3211.4   1423.5     3246.8     1424.4     3379.0     1422.9     3401.1     1423.3     3467.7
 GR    1423.3    3636.7   1424.6     3643.8     1423.5     3891.1     1425.4     3917.7     1424.4     4169.2
 GR    1425.2    4234.1   1424.5     4316.0     1425.0     4472.9     1425.2     4566.5     1423.3     4603.9
 GR    1425.2    4804.9   1423.1     4862.8     1423.6     5034.5     1423.4     5405.8     1424.1     5437.9
 GR    1423.4    5632.9   1422.0     5649.4     1423.6     5682.0     1424.1     5989.6     1423.2     6111.3
 GR    1422.1    6448.3   1422.2     6549.0     1425.0     6796.2     1429.0     7111.5     1437.2     7463.5
 GR    1444.8    7845.3      0.0        0.0        0.0        0.0        0.0        0.0        0.0        0.0

 NH       7        .04    2211.6         .03     2307.0         .04     3711.5         .03     4100.2         .04
 NH  4788.8        .03    5339.6         .04     7733.3
 ET                          4.1     1565.0     5570.0
 X1    29.04       49     2211.6     5339.6      380.0      485.0      500.0
 GR    1439.7    1000.0   1423.4     1355.7     1424.0     1429.6     1423.5     1756.5     1421.0     1768.4
 GR    1421.0    1799.7   1423.3     1823.2     1423.2     1973.1     1423.1     2184.1     1422.2     2211.6
 GR    1422.1    2245.4   1422.1     2284.0     1425.0     2307.0     1427.0     2520.0     1422.2     2546.4
 GR    1424.9    2569.6   1425.4     2884.7     1427.8     3227.7     1426.4     3258.6     1427.1     3444.9
 GR    1427.0    3711.5   1425.1     3732.0     1424.9     3782.3     1425.2     3844.5     1426.7     3857.6
 GR    1426.2    4100.2   1427.8     4129.5     1426.7     4190.1     1427.0     4253.5     1427.0     4448.9
 GR    1427.3    4766.7   1427.5     4788.8     1427.5     4840.7     1426.4     5052.3     1425.6     5316.8
 GR    1426.6    5339.6   1427.1     5472.9     1426.8     5698.0     1427.3     5999.0     1426.7     6314.6
 GR    1426.0    6509.8   1424.5     6519.1     1425.9     6585.3     1424.4     6593.6     1426.3     6614.8
 GR    1429.5    6894.6   1434.0     7181.0     1437.9     7479.4     1443.0     7733.3        0.0        0.0

 NH       7        .04    2586.5         .03     2704.7         .04     4244.9         .03     4680.0         .04
 NH  5160.1        .03    5920.6         .04     7813.8
```

```
 ET                          4.1     1266.0     5930.0
 [redacted]1MAR07     13:36:57                                                PAGE   33

 X1    29.13        56    2586.5     5920.6      680.0      450.0      500.0
 GR  1451.0    1000.0    1438.8     1123.9     1439.7     1153.1     1426.9    1316.0    1428.6    1359.3
 GR  1427.3    1654.9    1425.8     1738.6     1429.5     1808.7     1427.8    2023.8    1427.7    2353.8
 GR  1426.5    2396.2    1427.7     2435.4     1426.6     2553.3     1424.9    2586.5    1424.9    2704.7
 GR  1427.3    2726.8    1426.8     2957.5     1427.8     3045.8     1425.6    3100.9    1426.7    3119.0
 GR  1426.6    3190.1    1426.0     3227.5     1428.2     3271.9     1430.5    3477.6    1430.5    3667.0
 GR  1430.5    3784.5    1430.5     3820.7     1429.7     3853.4     1430.0    4108.9    1428.6    4133.5
 GR  1429.9    4224.6    1427.7     4244.9     1427.6     4286.4     1427.6    4352.4    1428.9    4368.8
 GR  1429.3    4680.0    1430.5     4821.3     1430.4     4936.6     1430.4    5042.3    1429.9    5066.4
 GR  1430.7    5100.8    1430.6     5145.0     1429.4     5160.1     1428.5    5376.1    1428.0    5626.7
 GR  1427.8    5898.9    1430.6     5920.6     1430.4     6078.1     1429.4    6397.8    1429.0    6709.9
 GR  1428.4    6803.7    1429.3     6985.8     1430.4     7171.5     1434.6    7427.5    1438.7    7692.3
 GR  1441.4    7813.8       0.0        0.0        0.0        0.0        0.0       0.0       0.0       0.0

 NH       5       .04    2888.9        .04     4892.1        .04     5457.7       .03    6320.0        .04
 NH  8039.5
 ET                          4.1     1191.0     6325.0
 X1    29.23        61    2888.9     6320.0      425.0      425.0      500.0
 GR  1461.0    1000.0    1452.7     1079.9     1434.4     1123.0     1430.1    1327.7    1430.1    1391.4
 GR  1432.3    1412.9    1429.9     1609.3     1432.0     1698.0     1432.1    1947.6    1431.0    1990.5
 GR  1432.2    2178.5    1430.6     2352.1     1432.1     2441.8     1430.8    2681.3    1429.1    2708.8
 GR  1429.2    2872.4    1427.6     2888.9     1427.6     3022.0     1427.7    3101.8    1427.8    3190.9
 GR  1430.1    3230.0    1429.5     3352.2     1430.8     3455.1     1430.9    3587.3    1429.7    3864.6
 GR  1430.9    3905.4    1428.6     3980.0     1428.6     4004.2     1432.5    4077.9    1432.8    4486.2
 GR  1432.2    4519.2    1432.5     4638.8     1431.7     4671.4     1432.6    4868.5    1430.8    4892.1
 GR  1430.5    4992.2    1430.3     5029.6     1430.3     5104.5     1432.2    5129.9    1432.8    5340.0
 GR  1432.1    5457.7    1432.3     5746.5     1430.3     6164.5     1429.0    6180.5    1430.3    6233.4
 GR  1432.8    6320.0    1432.8     6417.8     1431.7     6444.0     1432.7    6473.5    1431.3    6788.0
 GR  1430.6    6984.4    1429.2     6993.8     1430.6     7005.2     1430.9    7093.0    1434.1    7320.4
 GR  1437.0    7525.0    1439.9     7581.2     1435.6     7703.5     1437.5    7932.7    1444.9    8017.0
 GR  1444.1    8039.5

 NH       4       .04    2948.9        .04     5280.0        .03     6200.0       .04    7976.3
 ET                          4.1     1252.0     6280.0
 X1    29.32        70    2948.9     6200.0      425.0      525.0      500.0
 [redacted]  1460.5    1000.0    1445.1     1208.3     1437.1     1232.6     1432.0    1300.9    1433.0    1322.0
 [redacted]  1432.1    1359.9    1433.1     1380.7     1432.4     1409.7     1432.4    1486.8    1433.8    1504.9
 [redacted]  1433.5    1620.0    1434.7     1719.1     1434.6     1833.6     1435.4    1951.9    1435.5    2242.4
 GR  1434.1    2543.6    1431.3     2577.5     1432.1     2597.5     1431.7    2904.0    1429.8    2948.9
 GR  1429.9    3073.6    1430.7     3260.2     1431.8     3300.0     1431.4    3354.5    1430.6    3436.2
 GR  1433.2    3552.5    1433.7     3679.5     1433.2     3778.6     1434.1    3811.4    1432.3    3860.0
 GR  1434.3    3902.6    1434.3     3954.2     1432.4     3988.4     1432.3    4071.8    1434.2    4162.2
 GR  1433.4    4276.1    1431.1     4308.5     1431.1     4329.5     1435.1    4359.4    1434.8    4524.1
 GR  1435.5    4544.3    1435.5     4797.3     1435.2     4824.7     1435.2    4880.3    1435.5    4916.5
 GR  1435.2    4951.3    1435.3     5095.4     1432.5     5109.3     1434.4    5132.3    1435.3    5280.0
 GR  1434.3    5339.9    1433.6     5347.8     1433.6     5369.5     1435.1    5464.0    1435.2    5643.6
 GR  1434.3    5890.7    1433.1     6116.3     1435.5     6200.0     1435.5    6444.0    1434.6    6479.2
 GR  1435.5    6516.3    1435.3     6694.4     1433.7     6840.5     1432.3    6849.3    1434.3    6866.5
 GR  1434.5    7071.0    1435.9     7407.0     1441.9     7833.8     1462.6    7944.0    1462.4    7976.3
1
    21MAR07     13:36:57                                                      PAGE   34


 NH       5       .04    2957.7        .03     3305.7        .04     5396.9       .03    6084.2        .04
 NH  7344.2
 ET                          4.1     1245.0     6110.0
 X1    29.42        71    2957.7     6084.2      470.0      835.0      500.0
 GR  1451.3    1000.0    1436.8     1270.9     1434.3     1286.3     1436.8    1346.3    1436.6    1512.5
 GR  1436.9    1669.2    1435.9     1772.3     1435.2     1781.3     1435.2    1806.5    1438.0    1837.2
 GR  1437.9    1951.2    1438.0     2119.2     1436.8     2307.0     1433.6    2351.0    1435.2    2376.2
 GR  1434.1    2452.9    1435.7     2478.7     1433.7     2660.4     1434.8    2715.4    1433.3    2762.4
 GR  1432.8    2809.3    1433.4     2827.7     1433.7     2907.9     1431.5    2916.6    1433.5    2957.7
 GR  1433.5    3129.1    1432.7     3305.7     1435.6     3323.3     1434.2    3463.8    1433.1    3493.3
 GR  1434.1    3574.8    1432.0     3623.9     1435.5     3682.9     1436.1    4002.4    1433.6    4035.1
 GR  1438.0    4091.7    1435.2     4139.4     1436.4     4367.7     1435.5    4431.3    1433.7    4454.5
 GR  1437.1    4494.8    1436.9     4648.6     1438.0     4690.2     1438.0    4846.1    1438.0    4875.3
 GR  1437.8    4940.1    1436.4     4971.9     1436.3     5009.7     1434.2    5024.8    1437.7    5051.2
 GR  1437.3    5196.9    1437.9     5396.9     1435.8     5418.1     1435.9    5464.9    1435.9    5518.2
 GR  1436.9    5553.8    1436.2     5864.4     1436.8     5900.8     1436.7    6084.2    1438.0    6102.7
 GR  1437.3    6226.8    1438.0     6256.9     1438.0     6327.4     1436.4    6408.8    1437.4    6442.2
 GR  1438.5    6660.5    1440.8     6806.4     1443.0     6985.0     1444.3    7127.0    1446.4    7290.6
 GR  1447.3    7344.2       0.0        0.0        0.0        0.0        0.0       0.0       0.0       0.0

 [redacted]       4       .04    3150.0        .04     5193.0        .03     6068.7       .04    7146.5
 [redacted]                  4.1     1375.0     6070.0
 X1    29.51        58    3150.0     6068.7      520.0      310.0      500.0
```

```
 GR   1450.5     1000.0     1439.5     1279.7     1438.5     1338.3     1438.2     1375.7     1439.5     1619.4
 GR   1437.6     1638.1     1437.7     1662.9     1439.1     1689.4     1438.4     1708.6     1438.4     1746.8
 GR   1440.1     1763.7     1439.0     1992.8     1440.4     2024.0     1440.4     2151.3     1437.4     2179.9
 GR   1438.7     2207.7     1438.7     2424.6     1438.3     2731.5     1436.2     2764.3     1436.4     2796.4
 GR   1437.4     2817.3     1436.9     2882.8     1437.1     3136.1     1435.6     3150.0     1436.3     3176.4
 GR   1435.8     3444.5     1438.7     3467.3     1438.7     3718.4     1437.9     3965.7     1440.1     4421.2
 GR   1440.5     4454.7     1438.7     4486.6     1440.0     4669.0     1439.2     4757.0     1438.9     4777.0
 GR   1440.5     4882.7     1440.5     4993.5     1440.6     5114.2     1439.8     5154.2     1440.3     5193.0
 GR   1438.7     5208.9     1439.6     5322.0     1439.5     5519.5     1438.7     5526.7     1438.7     5548.4
 GR   1439.5     5594.6     1438.8     5745.5     1439.9     5979.5     1439.9     6068.7     1440.5     6094.3
 GR   1440.0     6252.7     1439.8     6443.6     1440.8     6605.3     1440.1     6615.8     1441.3     6633.9
 GR   1442.4     6734.1     1446.8     7038.5     1449.2     7146.5       0.0        0.0        0.0        0.0

 NH       4        .04     3199.9        .04     4881.9        .03     6100.0        .04     8024.2
 ET                          4.1     1620.0     6160.0
 X1   29.61          55     3199.9     6100.0      525.0      200.0      500.0
 GR   1453.0     1000.0     1440.0     1387.5     1441.5     1421.1     1441.9     1461.6     1443.3     1674.7
 GR   1442.4     1868.3     1439.9     1882.2     1440.1     1935.0     1442.0     1956.6     1442.1     2144.1
 GR   1442.0     2294.8     1440.1     2431.3     1442.9     2461.1     1441.2     2662.6     1442.2     2721.3
 GR   1440.8     2792.4     1441.9     2926.0     1437.8     3015.0     1438.5     3044.1     1441.0     3116.1
 GR   1439.0     3199.9     1438.9     3352.7     1440.0     3578.2     1439.7     3656.2     1438.7     3662.3
 GR   1438.8     3719.6     1441.2     3736.2     1440.1     3822.0     1441.3     3857.4     1442.4     4276.5
 GR   1441.4     4443.9     1442.3     4626.9     1443.4     4857.9     1443.1     4881.9     1443.3     5064.7
 GR   1442.4     5095.7     1442.7     5237.1     1442.5     5470.4     1441.7     5608.3     1440.6     5629.9
 GR   1440.7     5653.1     1442.1     5664.3     1441.4     5792.9     1442.3     6100.0     1443.6     6173.3
 GR   1443.5     6353.4     1442.0     6529.8     1442.7     6759.7     1446.2     6952.8     1446.2     7059.8
 GR   1451.0     7305.4     1452.1     7586.8     1454.0     7723.0     1457.1     7894.1     1459.2     8024.2
1
    21MAR07      13:36:57                                                                          PAGE   35


 NH       5        .04     4210.0        .03     4690.0        .04     5880.3        .03     7195.0        .04
 NH  7310.0
 ET                          4.1     2670.0     7195.0
 X1   29.70          51     4210.0     6641.1      655.0      440.0      500.0
 GR   1470.5     1000.0     1464.0     1204.9     1457.3     1457.4     1445.9     1883.6     1446.4     2179.9
 GR   1446.5     2302.4     1446.5     2373.1     1445.9     2542.1     1445.7     2652.3     1445.5     2685.8
 GR   1445.3     2723.2     1444.9     2746.2     1442.6     2763.8     1442.7     2793.3     1445.3     2833.3
 GR   1444.7     3018.3     1446.1     3065.2     1444.7     3125.8     1445.6     3189.9     1444.5     3250.2
 GR   1445.9     3269.9     1444.6     3418.8     1445.9     3441.7     1445.0     3770.3     1443.0     3880.6
 GR   1445.0     3919.5     1444.1     4005.7     1445.5     4077.7     1442.5     4133.7     1442.5     4210.0
 GR   1443.1     4515.7     1442.0     4526.2     1442.0     4610.6     1443.2     4690.0     1442.7     4859.1
 GR   1442.0     5197.4     1446.2     5249.0     1445.7     5433.2     1446.4     5760.0     1445.9     5776.2
 GR   1445.7     5880.3     1445.9     6033.5     1445.0     6235.8     1445.4     6526.5     1442.9     6539.1
 GR   1442.4     6575.3     1443.7     6641.1     1444.5     6857.2     1444.4     7070.7     1446.6     7195.0
 GR   1449.2     7310.0

 NH       5        .04     4300.7        .03     4540.0        .04     5865.1        .03     7145.0        .04
 NH  8187.7
 ET                          4.1     2730.0     7111.0
 X1   29.80          67     4300.7     6805.9      570.0      475.0      500.0
 GR   1473.1     1000.0     1458.9     1289.9     1450.6     1567.2     1448.2     1979.7     1447.4     2328.4
 GR   1449.5     2391.5     1447.8     2623.4     1448.4     2664.3     1446.6     2686.5     1448.2     2777.1
 GR   1445.0     2798.0     1445.0     2820.5     1447.5     2878.8     1445.5     2911.5     1448.5     2933.4
 GR   1448.1     3005.3     1446.6     3027.7     1448.2     3065.0     1448.5     3379.3     1447.7     3394.1
 GR   1447.7     3421.7     1449.4     3444.4     1448.3     3767.9     1448.2     3975.2     1446.5     4011.6
 GR   1446.4     4173.6     1447.8     4211.2     1447.8     4290.2     1445.4     4300.7     1446.2     4380.3
 GR   1445.3     4393.2     1445.3     4486.1     1446.1     4540.0     1445.8     4621.5     1446.7     4724.0
 GR   1447.2     4862.5     1445.9     4908.6     1447.1     5026.1     1446.3     5167.7     1444.5     5186.5
 GR   1444.4     5227.7     1446.5     5255.9     1447.5     5463.5     1449.1     5497.3     1449.5     5735.5
 GR   1447.9     5770.0     1448.5     5865.1     1447.6     6312.2     1448.6     6354.2     1448.2     6462.6
 GR   1445.6     6476.9     1445.5     6505.6     1446.9     6572.8     1446.5     6711.7     1446.8     6805.9
 GR   1448.0     6826.8     1447.4     7056.6     1451.1     7145.0     1450.9     7221.8     1450.3     7326.8
 GR   1451.0     7642.8     1450.3     7732.9     1453.3     7943.7     1451.7     7964.8     1453.6     8051.3
 GR   1474.6     8169.1     1474.6     8187.7       0.0        0.0        0.0        0.0        0.0        0.0

 NH       5        .04     4351.6        .03     4560.0        .04     5860.0        .03     6898.8        .04
 NH  7901.7
 ET                          4.1     2805.0     6891.0
 X1   29.89          53     4351.6     6607.4      500.0      850.0      500.0
 GR   1471.1     1000.0     1455.4     1335.9     1456.0     1380.0     1452.0     1750.8     1452.2     2570.3
 GR   1451.0     2829.2     1448.3     2875.7     1448.2     2907.4     1450.5     3009.0     1448.9     3037.9
 GR   1449.0     3083.8     1450.6     3108.9     1451.5     3308.8     1450.6     3430.5     1449.6     3465.6
 GR   1451.9     3513.3     1451.3     3884.3     1450.6     4214.4     1448.7     4336.7     1447.5     4351.6
 GR   1447.9     4492.2     1449.6     4560.0     1450.7     4645.0     1449.4     4670.5     1448.6     4750.1
 GR   1449.4     4911.8     1449.6     5220.7     1451.5     5572.5     1451.9     5768.9     1450.4     5860.0
 GR   1450.7     6034.6     1450.8     6267.0     1448.9     6294.1     1448.8     6338.5     1448.0     6362.9
 GR   1449.2     6407.4     1449.6     6607.4     1449.2     6668.9     1449.3     6875.8     1453.5     6897.0
 GR   1454.4     6898.8     1453.8     6991.7     1453.6     7148.0     1455.4     7332.2     1461.0     7377.1
 GR   1461.8     7423.1     1461.0     7472.3     1462.4     7507.0     1460.9     7530.9     1464.3     7609.0
 GR   1463.2     7692.1     1467.8     7780.0     1477.4     7901.7       0.0        0.0        0.0        0.0
```

1
21MAR07 13:36:57 PAGE 36

NH	5	.04	4358.8	.03	4877.3	.04	5990.0	.03	6840.0	.04
NH	7402.2									
ET			4.1	2880.0	6800.0					
X1	29.99	69	4358.8	6662.7	500.0	415.0	500.0			
GR	1469.8	1000.0	1463.3	1204.8	1461.4	1325.7	1461.4	1355.2	1461.2	1471.8
GR	1458.0	1600.4	1457.3	1688.7	1456.5	1874.8	1454.2	2106.9	1453.3	2308.5
GR	1453.5	2541.0	1453.1	2787.8	1453.7	3007.9	1453.6	3091.1	1451.1	3177.2
GR	1451.1	3204.2	1452.7	3233.7	1452.8	3265.6	1451.3	3285.3	1451.3	3297.3
GR	1452.7	3315.0	1454.7	3403.9	1452.9	3504.4	1452.9	3541.8	1454.4	3583.5
GR	1454.4	3752.1	1455.0	3776.4	1455.0	4007.5	1453.0	4146.4	1450.6	4167.5
GR	1450.8	4202.8	1453.3	4237.3	1452.7	4322.1	1451.3	4358.8	1450.8	4437.8
GR	1450.6	4534.0	1451.7	4558.2	1451.5	4706.4	1452.2	4848.8	1453.7	4877.3
GR	1453.7	4983.1	1451.2	5023.8	1451.7	5148.7	1452.2	5303.1	1453.8	5507.6
GR	1454.3	5715.7	1453.3	5752.1	1455.1	5797.0	1454.7	5925.8	1453.0	5990.0
GR	1453.3	6096.3	1453.4	6269.3	1451.7	6300.3	1452.6	6324.4	1451.7	6340.4
GR	1451.2	6360.9	1452.4	6418.8	1452.6	6662.7	1451.3	6676.4	1451.3	6762.8
GR	1453.3	6791.5	1454.8	6840.0	1455.1	7070.1	1454.6	7142.9	1455.2	7199.7
GR	1459.7	7238.5	1461.9	7328.7	1465.7	7391.8	1465.9	7402.2	0.0	0.0
NH	5	.04	3957.9	.03	4711.3	.04	5674.0	.03	6596.5	.04
NH	6596.5									
ET			4.1	2580.0	6530.0					
X1	30.08	47	3957.9	6287.2	500.0	500.0	500.0			
GR	1471.2	1000.0	1467.5	1195.4	1462.4	1485.6	1456.4	2141.0	1456.1	2364.7
GR	1457.1	2560.8	1455.9	2687.4	1454.6	2696.0	1456.0	2713.1	1456.5	2788.0
GR	1454.0	2853.3	1457.3	3015.1	1455.1	3062.9	1455.1	3130.1	1456.8	3165.5
GR	1457.6	3307.4	1456.3	3400.3	1457.8	3591.7	1456.2	3771.9	1456.8	3951.3
GR	1453.3	3957.9	1454.8	4061.6	1453.9	4196.9	1456.1	4224.2	1456.6	4345.3
GR	1454.3	4526.4	1454.1	4711.3	1456.9	4748.8	1456.9	4782.7	1455.2	4818.3
GR	1455.5	4954.3	1455.0	5067.6	1457.5	5520.9	1455.5	5604.3	1456.4	5641.8
GR	1455.0	5674.0	1455.0	5803.9	1455.9	5933.6	1454.3	6081.7	1454.8	6125.7
GR	1454.6	6172.4	1454.6	6214.8	1455.7	6238.1	1454.3	6287.2	1454.3	6519.8
GR	1466.1	6555.9	1468.7	6596.5						
NH	7	.04	3900.9	.03	4616.3	.04	5507.3	.03	6385.0	.04
[redacted]	6564.3	.03	6622.5	.04	6938.1					
			4.1	2490.0	6585.0					
X1	30.18	47	3900.9	6268.8	485.0	490.0	500.0			
GR	1476.6	1000.0	1473.4	1151.8	1468.9	1436.4	1462.0	1888.8	1459.4	2197.9
GR	1459.8	2329.3	1458.7	2340.9	1459.6	2354.7	1460.6	2540.0	1459.8	2682.1
GR	1455.4	2739.1	1459.2	2850.1	1459.6	3064.7	1458.3	3086.8	1458.1	3196.9
GR	1459.8	3218.6	1458.9	3316.6	1460.4	3346.6	1458.3	3512.3	1459.5	3885.5
GR	1456.6	3900.9	1456.6	4030.5	1458.0	4128.0	1458.2	4318.8	1457.6	4578.7
GR	1459.2	4616.3	1459.8	4854.7	1458.7	5033.9	1459.9	5267.8	1458.0	5318.0
GR	1458.0	5389.6	1459.6	5465.1	1457.3	5507.3	1458.0	5814.3	1457.4	6131.9
GR	1456.9	6152.4	1456.9	6212.5	1456.9	6268.8	1456.8	6344.4	1458.5	6385.0
GR	1458.6	6459.3	1457.3	6502.2	1457.3	6564.3	1466.9	6622.5	1467.0	6690.3
GR	1468.5	6865.5	1480.1	6938.1	0.0	0.0	0.0	0.0	0.0	0.0

1
21MAR07 13:36:57 PAGE 37

NH	7	.04	3820.0	.03	3986.7	.04	5226.6	.03	6037.1	.04
NH	6260.0	.03	6379.0	.04	6620.9					
ET			4.1	2176.0	6337.0					
X1	30.27	68	3820.0	6037.1	505.0	505.0	500.0			
GR	1478.4	1000.0	1475.2	1139.2	1472.2	1301.9	1468.2	1658.6	1464.0	1958.9
GR	1463.9	2116.6	1465.0	2163.1	1460.2	2207.5	1461.2	2228.4	1458.9	2253.3
GR	1459.5	2271.6	1458.1	2295.1	1460.8	2321.4	1461.2	2460.7	1462.3	2651.3
GR	1462.7	2824.8	1460.5	2843.7	1461.6	2876.9	1462.9	2983.9	1461.0	3011.2
GR	1461.5	3082.4	1463.1	3108.3	1463.1	3186.4	1461.5	3251.6	1462.2	3311.2
GR	1460.8	3335.2	1462.1	3367.7	1459.6	3417.0	1461.9	3461.5	1462.9	3760.8
GR	1459.6	3777.6	1459.8	3820.0	1459.8	3956.3	1462.6	3986.7	1461.7	4090.6
GR	1462.4	4192.3	1459.5	4247.2	1460.9	4282.3	1459.5	4328.0	1463.3	4453.5
GR	1463.3	4713.2	1459.4	4750.0	1460.7	4802.4	1462.3	5008.0	1461.7	5102.9
GR	1460.4	5116.2	1460.6	5226.6	1461.8	5306.5	1460.7	5335.3	1462.0	5376.2
GR	1460.9	5495.2	1460.8	5642.7	1459.7	5649.5	1460.0	5721.0	1460.3	5812.8
GR	1460.3	5888.4	1460.3	5934.6	1459.8	6037.1	1461.7	6065.9	1461.7	6162.1
GR	1460.4	6260.0	1460.2	6320.9	1472.6	6379.0	1470.1	6405.4	1477.5	6488.7
GR	1475.2	6516.2	1484.0	6576.0	1485.1	6620.9	0.0	0.0	0.0	0.0
NH	7	.04	3849.5	.03	4086.9	.04	5119.3	.03	6030.0	.04
[redacted]	6275.0	.03	6368.2	.04	6641.6					
			4.1	1988.0	6373.0					
	30.37	63	3849.5	6030.0	520.0	510.0	500.0			
GR	1481.8	1000.0	1480.1	1091.5	1478.0	1345.7	1468.7	1801.6	1466.5	2015.4

```
 GR   1466.4     2139.6     1464.5     2157.1     1465.7     2173.8     1466.1     2234.7     1461.5     2280.6
      1461.3     2302.6     1464.6     2336.4     1465.3     2469.9     1465.7     2641.6     1464.0     2681.0
      1464.1     2738.2     1462.7     2760.2     1464.0     2790.4     1465.3     2938.6     1464.1     2951.0
      1464.0     3118.0     1465.7     3144.9     1464.7     3223.6     1465.6     3245.3     1465.5     3463.3
 GR   1464.1     3495.7     1465.3     3621.3     1465.6     3832.0     1463.3     3849.5     1463.1     3940.5
 GR   1462.7     3950.3     1462.7     4065.2     1465.6     4086.9     1465.0     4244.3     1465.6     4367.9
 GR   1464.7     4392.5     1465.7     4416.9     1465.7     4506.5     1461.9     4532.6     1461.9     4542.4
 GR   1463.6     4558.2     1464.5     4725.6     1464.9     5102.3     1463.6     5119.3     1464.7     5250.8
 GR   1464.7     5363.3     1463.9     5549.2     1463.3     5638.2     1462.7     5835.0     1462.3     5843.5
 GR   1462.3     5909.6     1462.2     5978.4     1463.5     6030.0     1463.6     6072.6     1465.3     6117.6
 GR   1464.7     6201.8     1463.3     6275.0     1463.3     6303.2     1465.0     6368.2     1481.7     6419.6
 GR   1488.2     6510.9     1485.0     6563.1     1488.6     6641.6       0.0        0.0        0.0        0.0

 NH       7        .04     4319.8        .03     4671.9        .04     5588.5        .03     6560.0        .04
 NH  6831.9        .03     6967.1        .04     7743.3
 ET                           4.1     2375.0     6965.0
 X1    30.46         63     4319.8     6607.2      410.0      520.0      500.0
 GR   1493.1     1000.0     1491.0     1159.5     1485.6     1400.5     1478.9     1762.1     1473.3     2096.9
 GR   1467.7     2482.3     1466.6     2489.9     1468.0     2503.3     1468.1     2779.6     1464.9     2804.0
 GR   1465.0     2831.9     1467.2     2850.4     1467.8     2930.6     1464.5     2960.6     1464.5     2986.2
 GR   1467.1     3015.4     1466.3     3292.0     1468.1     3322.2     1468.1     3464.2     1466.6     3482.3
 GR   1466.7     3594.0     1467.6     3672.3     1467.5     3776.9     1468.6     3798.6     1468.5     3878.3
 GR   1465.3     3904.5     1467.8     3934.5     1467.8     3994.2     1466.4     4017.6     1467.7     4058.8
 GR   1468.3     4299.3     1466.1     4319.8     1465.8     4507.4     1465.1     4595.7     1465.1     4642.5
 GR   1465.1     4662.7     1468.4     4671.9     1468.9     4995.3     1465.4     5040.3     1466.8     5076.8
 GR   1466.3     5120.4     1463.8     5142.3     1466.5     5167.0     1467.7     5588.5     1466.7     5714.7
 GR   1467.8     5737.1     1467.8     5990.3     1465.5     6013.8     1465.8     6216.6     1465.5     6431.9
 GR   1465.2     6560.0     1466.7     6607.2     1465.9     6677.9     1465.9     6783.5     1467.2     6831.9
 GR   1465.2     6862.2     1466.2     6925.0     1467.6     6967.1     1468.9     7096.6     1472.6     7153.8
1
     21MAR07      13:36:57                                                                          PAGE    38

 GR   1476.4     7379.1     1481.5     7696.9     1495.4     7743.3       0.0        0.0        0.0        0.0

 NH       7        .04     4169.0        .03     4668.1        .04     5450.6        .03     6441.4        .04
 NH  6720.0        .03     6813.6        .04     6970.5
 ET                           4.1     2246.0     6805.0
 X1    30.56         57     4209.6     6398.1      420.0      510.0      500.0
 GR   1495.9     1000.0     1489.1     1334.7     1480.0     1778.1     1470.5     2314.7     1468.8     2324.8
      1470.9     2345.9     1470.2     2646.5     1466.8     2738.7     1466.8     2773.4     1469.6     2796.5
      1467.8     2839.2     1469.4     2874.5     1469.6     2924.6     1466.8     2946.5     1469.4     2983.0
 GR   1469.0     3185.2     1471.3     3228.3     1471.2     3494.0     1468.8     3587.1     1471.0     3762.7
 GR   1470.9     3871.4     1469.1     3888.9     1470.4     3915.4     1468.9     3949.5     1470.2     3981.2
 GR   1471.5     4169.0     1468.2     4209.6     1468.9     4374.8     1468.2     4387.8     1468.7     4510.9
 GR   1468.2     4598.4     1467.7     4647.6     1471.3     4668.1     1471.3     4761.7     1469.6     4795.7
 GR   1470.1     4907.7     1469.9     5005.9     1467.5     5028.9     1470.1     5103.3     1470.8     5450.6
 GR   1469.5     5596.3     1470.8     5803.7     1468.5     5825.1     1468.7     5993.0     1467.5     6105.3
 GR   1468.7     6148.4     1468.4     6247.9     1468.2     6318.5     1468.3     6398.1     1469.8     6441.4
 GR   1469.9     6533.8     1467.1     6564.6     1467.3     6720.0     1468.3     6778.5     1471.4     6813.6
 GR   1472.0     6889.6     1495.1     6970.5       0.0        0.0        0.0        0.0

 NH       7        .04     4130.8        .03     4625.9        .04     5290.8        .03     6215.0        .04
 NH  6625.5        .03     6723.5        .04     6871.4
 ET                           4.1     2360.0     6726.0
 X1    30.65         48     4130.8     6215.0      410.0      530.0      500.0
 GR   1493.5     1000.0     1483.5     1475.9     1474.7     1934.7     1474.3     2050.8     1473.5     2473.1
 GR   1472.2     2574.5     1469.5     2600.6     1472.4     2680.0     1470.6     2797.5     1471.8     3012.0
 GR   1469.6     3061.3     1469.6     3088.9     1472.9     3119.0     1473.6     3555.8     1471.0     3589.2
 GR   1472.4     3750.2     1473.8     3868.7     1471.4     3883.8     1473.0     3927.0     1473.6     4130.8
 GR   1471.3     4153.3     1471.2     4405.5     1471.3     4625.9     1473.6     4640.4     1472.1     4827.7
 GR   1470.3     4864.2     1472.1     4922.5     1471.8     4996.8     1473.6     5290.8     1472.4     5437.4
 GR   1471.7     5617.5     1471.3     5741.1     1472.1     5790.8     1470.8     5906.7     1471.5     6008.8
 GR   1470.9     6164.5     1472.6     6215.0     1473.1     6413.1     1472.2     6496.4     1470.5     6523.4
 GR   1470.4     6574.4     1470.0     6625.5     1470.0     6655.8     1473.3     6683.8     1474.1     6723.5
 GR   1478.6     6759.6     1481.5     6796.8     1493.0     6871.4

 NH       7        .04     4339.6        .03     4933.9        .04     5464.1        .03     6465.2        .04
 NH  6974.0        .03     6987.6        .04     7172.0
 ET                           4.1     2785.0     6995.0
 X1    30.74         54     4339.6     6548.0      410.0      520.0      500.0
 GR   1497.2     1000.0     1489.6     1395.8     1482.2     1838.4     1477.0     2404.7     1476.5     2773.4
 GR   1476.1     3137.5     1475.8     3606.1     1474.1     3653.3     1475.9     3771.1     1475.0     3813.9
 GR   1474.7     4016.8     1475.9     4048.9     1476.0     4088.5     1475.1     4106.3     1475.1     4136.6
 GR   1475.9     4158.8     1475.8     4303.0     1473.7     4339.6     1473.5     4498.4     1474.7     4563.2
 GR   1474.3     4689.5     1473.8     4933.9     1475.5     4951.0     1475.7     5047.3     1475.2     5088.0
 GR   1473.1     5119.6     1476.0     5441.9     1475.2     5464.1     1476.1     5560.0     1475.2     5598.8
 GR   1476.1     5644.5     1475.0     5893.4     1474.6     6025.3     1474.2     6105.3     1475.2     6191.7
      1473.4     6277.2     1474.7     6370.0     1473.5     6398.1     1473.5     6413.9     1475.5     6465.2
      1475.6     6548.0     1474.0     6580.3     1475.2     6615.0     1475.8     6682.7     1473.8     6707.5
      1473.2     6861.7     1473.2     6939.3     1473.0     6974.0     1473.1     6987.6     1496.9     7035.2
 GR   1506.3     7083.0     1506.1     7102.3     1481.8     7169.3     1483.7     7172.0       0.0        0.0
```

1
21MAR07 13:36:57 PAGE 39

NH	9	.04	4286.0	.03	4780.0	.04	4995.5	.03	5073.0	.04
NH	5569.3	.03	6645.4	.04	7024.0	.03	7144.1	.04	7684.9	
ET			4.1	3020.0	7143.0					
X1	30.84	47	4286.0	6686.3	325.0	535.0	500.0			
GR	1496.4	1000.0	1493.0	1148.6	1493.6	1204.8	1478.2	2151.3	1478.5	2704.6
GR	1479.2	3230.1	1478.3	3738.8	1475.7	3811.5	1476.2	3884.5	1475.1	3919.6
GR	1476.8	3966.3	1476.4	4286.0	1474.8	4292.3	1475.1	4472.8	1476.2	4502.5
GR	1476.0	4764.4	1478.1	4780.0	1478.1	4820.2	1475.6	4842.4	1478.5	4899.6
GR	1477.1	4995.5	1476.0	5009.2	1476.2	5059.8	1477.5	5073.0	1478.1	5365.6
GR	1476.1	5405.5	1478.4	5554.2	1477.4	5569.3	1477.6	5784.7	1476.9	5794.3
GR	1477.1	5823.0	1478.3	5855.7	1477.4	6179.3	1477.2	6516.4	1476.6	6523.2
GR	1476.6	6542.6	1477.1	6645.4	1479.0	6686.3	1477.9	6833.1	1476.2	6904.1
GR	1476.9	6969.4	1476.0	7024.0	1476.9	7115.1	1479.9	7144.1	1485.3	7428.3
GR	1490.7	7649.9	1512.9	7684.9	0.0	0.0	0.0	0.0	0.0	0.0
NH	11	.04	4310.0	.03	4960.0	.04	5350.0	.03	5459.3	.04
NH	5860.0	.03	6263.0	.04	6750.0	.03	7070.0	.04	7198.9	.03
NH	7340.0	.04	7516.9							
ET			4.1	3480.0	7431.0					
X1	30.93	39	4310.0	7070.0	325.0	530.0	500.0			
GR	1501.9	1000.0	1495.6	1262.5	1496.2	1290.2	1484.1	2042.1	1484.8	2388.1
GR	1478.1	2456.1	1479.0	2645.6	1479.4	3119.7	1480.8	3641.8	1481.1	3946.0
GR	1479.2	4121.1	1479.6	4310.0	1478.1	4453.1	1478.1	4495.1	1479.5	4519.7
GR	1478.5	4681.0	1477.0	4738.2	1478.5	4960.0	1478.3	5085.7	1480.8	5105.4
GR	1479.2	5350.0	1480.8	5459.3	1478.8	5483.9	1478.8	5568.8	1480.8	5584.0
GR	1481.5	5860.0	1479.5	5982.5	1480.3	6263.0	1479.5	6272.6	1480.6	6297.0
GR	1480.8	6403.8	1481.0	6750.0	1480.1	6938.9	1479.3	6949.6	1480.2	7070.0
GR	1480.4	7198.9	1479.0	7340.0	1479.0	7423.6	1513.8	7516.9		
NH	11	.04	4270.7	.03	4856.8	.04	5520.4	.03	5605.0	.04
NH	5863.8	.03	6181.2	.04	6721.4	.03	7032.4	.04	7256.3	.03
NH	7404.5	.04	7566.3							
QT	2	59030	59030							
ET			4.1	3555.0	7391.0					
X1	31.03	42	4270.7	7004.3	335.0	525.0	500.0			
GR	1505.9	1000.0	1493.5	1284.0	1487.0	1684.6	1484.0	1880.0	1483.2	3024.3
GR	1483.9	3040.6	1481.4	3087.5	1482.2	3542.0	1482.2	3944.7	1482.2	4270.7
GR	1480.1	4283.2	1481.8	4433.5	1480.6	4689.1	1480.6	4840.5	1483.1	4856.8
GR	1483.6	4943.9	1479.5	4987.3	1479.9	5020.4	1483.2	5038.5	1483.2	5506.7
GR	1481.2	5520.4	1481.2	5605.0	1484.0	5863.8	1483.4	6032.5	1481.9	6058.4
GR	1483.3	6140.0	1483.2	6181.2	1484.3	6216.8	1483.9	6535.6	1482.5	6547.5
GR	1484.1	6721.4	1483.3	6853.7	1482.9	6870.7	1483.0	6902.8	1483.5	7004.3
GR	1483.5	7032.4	1482.2	7256.3	1482.3	7371.9	1486.1	7404.5	1486.1	7432.8
GR	1534.0	7552.9	1534.0	7566.3	0.0	0.0	0.0	0.0	0.0	0.0

1
21MAR07 13:36:57 PAGE 40

THIS RUN EXECUTED 21MAR07 13:36:57

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

YAMPA RIVER JOB #04856-0

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
15.680	.00	.00	.00	1122.30	55980.00	1130.39	.00	1131.23	30.53	7.92	8043.39	10130.65
15.680	.00	.00	.00	1122.30	55980.00	1130.46	.00	1131.33	30.17	7.94	7791.86	10192.30
15.780	500.00	.00	.00	1123.60	55980.00	1131.84	.00	1132.52	22.83	7.18	9160.51	11715.21
15.780	500.00	.00	.00	1123.60	55980.00	1131.86	.00	1132.69	26.26	7.72	7988.59	10924.71
15.870	500.00	.00	.00	1125.50	55980.00	1133.03	.00	1134.23	45.70	9.33	7146.46	8280.63
15.870	500.00	.00	.00	1125.50	55980.00	1133.24	.00	1134.42	41.47	9.15	6905.59	8693.35

	15.970	500.00	.00	.00	1128.00	55980.00	1135.11	.00	1135.89	26.20	7.44	8509.88 10937.23
	15.970	500.00	.00	.00	1128.00	55980.00	1135.21	.00	1135.97	24.68	7.32	8468.12 11267.60
	16.060	500.00	.00	.00	1129.90	55980.00	1136.63	.00	1137.19	27.76	6.89	9749.27 10625.14
	16.060	500.00	.00	.00	1129.90	55980.00	1136.63	.00	1137.26	29.54	7.11	9054.60 10300.42
*	16.160	505.00	.00	.00	1133.20	55980.00	1138.21	1138.21	1139.49	96.30	11.58	6786.58 5704.41
*	16.160	505.00	.00	.00	1133.20	55980.00	1138.28	1138.28	1139.66	98.24	11.84	6492.30 5647.86
*	16.250	500.00	.00	.00	1133.70	55980.00	1141.14	.00	1141.63	25.57	6.92	10670.95 11069.57
*	16.250	500.00	.00	.00	1133.70	55980.00	1141.26	.00	1141.74	24.03	6.82	10568.68 11420.70
	16.350	500.00	.00	.00	1135.60	55980.00	1142.38	.00	1142.91	31.41	6.72	9987.89 9988.85
	16.350	500.00	.00	.00	1135.60	55980.00	1142.44	.00	1142.96	30.26	6.66	9970.81 10175.74
	16.440	500.00	.00	.00	1137.90	55980.00	1144.31	.00	1145.10	61.03	7.90	8012.53 7165.61
	16.440	500.00	.00	.00	1137.90	55980.00	1144.31	.00	1145.10	60.87	7.90	7984.37 7175.15
	16.530	500.00	.00	.00	1140.90	55980.00	1146.91	.00	1147.66	41.18	8.12	8808.77 8723.08
	16.530	500.00	.00	.00	1140.90	55980.00	1146.92	.00	1147.70	42.50	8.26	8484.50 8587.34
	16.630	500.00	.00	.00	1141.70	55980.00	1148.55	.00	1149.45	46.00	9.27	8186.27 8253.71
	16.630	500.00	.00	.00	1141.70	55980.00	1148.60	.00	1149.51	45.07	9.24	8075.47 8338.37

1

21MAR07 13:36:57 PAGE 108

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	16.720	500.00	.00	.00	1143.70	55980.00	1150.65	.00	1151.51	42.31	8.82	8348.20	8605.97
	16.720	500.00	.00	.00	1143.70	55980.00	1150.67	.00	1151.54	41.99	8.81	8216.29	8639.00
	16.820	500.00	.00	.00	1146.40	55980.00	1152.65	.00	1153.22	27.70	7.01	9971.72	10636.80
	16.820	500.00	.00	.00	1146.40	55980.00	1152.67	.00	1153.29	29.24	7.22	9434.84	10352.38
*	16.910	500.00	.00	.00	1147.90	55980.00	1154.38	.00	1155.37	63.25	9.48	7733.94	7039.13
*	16.910	500.00	.00	.00	1147.90	55980.00	1154.46	.00	1155.57	66.79	9.87	7202.07	6849.56
	17.010	500.00	.00	.00	1151.20	55980.00	1156.97	.00	1157.76	44.49	8.75	8937.65	8392.89
	17.010	500.00	.00	.00	1151.20	55980.00	1157.15	.00	1158.04	45.48	9.09	8117.53	8300.94
	17.100	500.00	.00	.00	1152.80	55980.00	1158.99	.00	1159.66	39.04	8.12	9344.24	8959.70
	17.100	500.00	.00	.00	1152.80	55980.00	1159.21	.00	1160.06	43.09	8.82	8213.01	8528.28
	17.200	500.00	.00	.00	1153.80	55980.00	1160.84	.00	1161.34	30.93	6.86	10653.81	10066.03
	17.200	500.00	.00	.00	1153.80	55980.00	1161.24	.00	1162.04	38.47	8.16	8176.50	9025.64
	17.290	500.00	.00	.00	1156.20	55980.00	1162.69	.00	1163.44	56.84	8.55	8803.96	7424.91
	17.290	500.00	.00	.00	1156.20	55980.00	1163.35	.00	1164.59	63.44	10.14	6644.56	7028.10
	17.390	500.00	.00	.00	1159.00	55980.00	1165.28	.00	1165.91	42.73	7.93	9521.09	8563.61
	17.390	500.00	.00	.00	1159.00	55980.00	1166.18	.00	1167.18	42.05	9.06	7331.66	8633.22
	17.480	500.00	.00	.00	1161.30	55980.00	1167.38	.00	1168.21	52.36	9.69	8715.58	7736.62
	17.480	500.00	.00	.00	1161.30	55980.00	1168.21	.00	1169.44	50.61	10.67	6742.61	7868.96
	17.580	500.00	.00	.00	1163.60	55980.00	1169.82	.00	1170.78	54.64	11.05	7829.76	7573.48
	17.580	500.00	.00	.00	1163.60	55980.00	1170.64	.00	1171.66	41.94	10.66	7392.63	8643.84
	17.670	500.00	.00	.00	1165.30	55980.00	1172.29	.00	1173.26	44.43	10.59	8265.83	8398.58
	17.670	500.00	.00	.00	1165.30	55980.00	1172.68	.00	1173.82	42.53	10.81	7210.64	8583.73
	17.770	500.00	.00	.00	1168.10	55980.00	1174.58	.00	1175.61	50.25	11.67	7560.75	7896.69
	17.770	500.00	.00	.00	1168.10	55980.00	1174.92	.00	1175.93	42.19	11.10	7470.78	8618.29
	17.860	500.00	.00	.00	1170.10	55980.00	1176.91	.00	1177.68	32.23	9.69	8746.02	9861.20
	17.860	500.00	.00	.00	1170.10	55980.00	1176.98	.00	1177.95	36.79	10.42	7654.21	9228.92
	17.950	500.00	.00	.00	1171.00	55980.00	1178.56	.00	1179.65	48.56	11.68	7730.15	8033.63
	17.950	500.00	.00	.00	1171.00	55980.00	1178.74	.00	1180.42	62.47	13.50	5982.98	7082.77
	18.050	500.00	.00	.00	1173.20	55980.00	1180.65	.00	1181.60	32.43	9.06	8343.84	9830.61
*	18.050	500.00	.00	.00	1173.20	55980.00	1181.39	.00	1182.46	27.58	9.06	7270.90	10659.80
	18.140	500.00	.00	.00	1175.10	55980.00	1182.22	.00	1182.95	26.64	7.53	9020.19	10846.76
	18.140	500.00	.00	.00	1175.10	55980.00	1182.85	.00	1183.69	23.92	7.68	7863.67	11446.70
	18.240	500.00	.00	.00	1177.80	55980.00	1183.66	.00	1184.63	40.05	8.33	7651.82	8845.98
	18.240	500.00	.00	.00	1177.80	55980.00	1184.16	.00	1185.09	31.80	7.93	7437.25	9927.72

1

21MAR07 13:36:57 PAGE 109

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	18.330	500.00	.00	.00	1179.40	55980.00	1185.74	.00	1186.80	45.36	8.51	6963.57	8311.67
	18.330	500.00	.00	.00	1179.40	55980.00	1185.90	.00	1187.06	46.13	8.77	6540.90	8242.45
	18.430	500.00	.00	.00	1182.30	55980.00	1188.17	.00	1189.43	57.00	9.11	6393.66	7414.67
	18.430	500.00	.00	.00	1182.30	55980.00	1188.32	.00	1189.53	51.87	8.88	6411.41	7772.69
	18.520	500.00	.00	.00	1184.90	55980.00	1190.97	.00	1191.69	34.86	6.89	8374.72	9481.78
	18.520	500.00	.00	.00	1184.90	55980.00	1190.97	.00	1191.69	35.11	6.91	8263.11	9448.04
	18.620	500.00	.00	.00	1187.20	55980.00	1192.88	.00	1193.44	34.47	6.27	9553.91	9534.35
	18.620	500.00	.00	.00	1187.20	55980.00	1192.88	.00	1193.59	41.07	6.84	8314.33	8735.37
	18.710	500.00	.00	.00	1188.00	55980.00	1194.99	.00	1195.64	56.05	6.76	9014.18	7477.16
	18.710	500.00	.00	.00	1188.00	55980.00	1195.23	.00	1196.04	58.64	7.23	7743.72	7310.27
*	18.810	500.00	.00	.00	1189.60	55980.00	1197.09	.00	1197.57	28.56	5.97	10755.78	10474.36
*	18.810	500.00	.00	.00	1189.60	55980.00	1197.42	.00	1197.97	26.97	6.09	9482.54	10779.15
	18.900	500.00	.00	.00	1191.30	56604.00	1198.77	.00	1199.49	51.30	7.46	8978.44	7902.69
*	18.900	500.00	.00	.00	1191.30	56604.00	1199.00	.00	1200.06	62.07	8.55	6953.98	7184.59
	19.000	500.00	.00	.00	1194.70	56604.00	1200.81	.00	1201.28	30.47	6.49	11235.47	10253.79
*	19.000	500.00	.00	.00	1194.70	56604.00	1201.43	.00	1202.14	31.61	7.32	8616.58	10067.45
*	19.090	500.00	.00	.00	1197.60	56604.00	1202.42	1202.41	1203.44	71.37	9.97	8286.84	6700.14
	19.090	500.00	.00	.00	1197.60	56604.00	1203.02	.00	1204.34	63.48	10.40	6571.93	7104.47
	19.190	500.00	.00	.00	1198.70	56604.00	1205.08	.00	1206.02	42.21	9.71	8587.63	8712.72
	19.190	500.00	.00	.00	1198.70	56604.00	1205.57	.00	1206.92	45.51	10.71	6733.06	8390.99
	19.280	500.00	.00	.00	1201.10	56604.00	1207.17	.00	1208.23	45.05	10.44	8143.02	8432.93
	19.280	500.00	.00	.00	1201.10	56604.00	1207.77	.00	1209.25	46.58	11.36	6408.63	8293.85
	19.380	500.00	.00	.00	1202.30	56604.00	1209.40	.00	1210.77	53.67	11.37	7054.76	7726.59
	19.380	500.00	.00	.00	1202.30	56604.00	1210.03	.00	1211.71	49.81	11.76	5906.93	8020.40
	19.470	500.00	.00	.00	1203.80	56604.00	1211.47	.00	1212.51	39.42	10.84	8001.05	9015.59
	19.470	500.00	.00	.00	1203.80	56604.00	1212.02	.00	1213.56	45.35	12.27	6321.72	8405.09
*	19.560	500.00	.00	.00	1207.10	56604.00	1214.15	1214.15	1215.93	77.74	13.69	5851.70	6419.76
	19.560	500.00	.00	.00	1207.10	56604.00	1214.56	.00	1216.60	71.92	13.82	5241.52	6674.38
*	19.660	500.00	.00	.00	1209.10	56604.00	1217.07	.00	1218.01	31.07	10.47	8172.65	10154.91
*	19.660	500.00	.00	.00	1209.10	56604.00	1217.48	.00	1218.75	34.21	11.38	6737.80	9677.77
	19.750	500.00	.00	.00	1211.10	56604.00	1219.08	.00	1220.67	53.66	13.36	6464.55	7727.54
	19.750	500.00	.00	.00	1211.10	56604.00	1219.65	.00	1221.23	45.04	12.90	6290.14	8433.97
	19.850	500.00	.00	.00	1212.70	56604.00	1221.92	.00	1222.92	29.28	10.86	8750.90	10460.88
	19.850	500.00	.00	.00	1212.70	56604.00	1222.11	.00	1223.41	32.98	11.71	7263.41	9856.49

1

21MAR07 13:36:57 PAGE 110

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	19.940	500.00	.00	.00	1214.70	56604.00	1223.33	1223.33	1224.71	42.23	12.88	7825.04	8710.13
*	19.940	500.00	.00	.00	1214.70	56604.00	1223.40	1223.40	1225.37	53.05	14.52	6233.67	7771.63
	20.140	1020.00	.00	.00	1219.00	56604.00	1226.30	.00	1227.44	32.91	10.22	8552.16	9866.89
	20.140	1020.00	.00	.00	1219.00	56604.00	1227.10	.00	1228.40	28.83	10.30	7324.55	10542.47
	20.320	975.00	.00	.00	1223.50	56604.00	1229.34	.00	1230.13	29.53	7.65	9063.71	10417.09
	20.320	975.00	.00	.00	1223.50	56604.00	1229.98	.00	1230.85	24.85	7.62	7782.62	11355.04
	20.420	500.00	.00	.00	1226.20	56604.00	1231.14	.00	1232.13	53.04	8.40	7738.61	7772.49
	20.420	500.00	.00	.00	1226.20	56604.00	1231.49	.00	1232.65	49.85	8.66	6578.75	8017.27
	20.510	500.00	.00	.00	1228.40	56604.00	1233.69	.00	1234.41	39.08	7.40	9034.02	9054.44
	20.510	500.00	.00	.00	1228.40	56604.00	1233.97	.00	1234.97	42.82	8.14	7173.85	8649.96
	20.610	500.00	.00	.00	1230.00	56604.00	1235.72	.00	1236.49	44.31	7.45	8577.33	8503.79
	20.610	500.00	.00	.00	1230.00	56604.00	1236.14	.00	1237.07	41.33	7.78	7294.17	8804.30
	20.700	500.00	.00	.00	1232.00	56604.00	1237.85	.00	1238.46	34.68	6.79	9414.48	9612.00
	20.700	500.00	.00	.00	1232.00	56604.00	1238.21	.00	1239.20	43.18	8.04	7151.65	8614.26

20.800	500.00	.00	.00	1234.30	56604.00	1239.80	.00	1240.76	58.33	8.61	7804.97	7411.48
20.800	500.00	.00	.00	1234.30	56604.00	1240.41	.00	1241.46	47.33	8.53	6996.94	8227.65
20.890	500.00	.00	.00	1236.90	56604.00	1242.62	.00	1243.75	58.98	9.75	7118.47	7370.74
20.890	500.00	.00	.00	1236.90	56604.00	1242.84	.00	1244.00	52.87	9.56	6778.08	7784.56
20.980	500.00	.00	.00	1239.00	56604.00	1245.19	.00	1246.53	61.14	10.77	6683.50	7239.32
20.980	500.00	.00	.00	1239.00	56604.00	1245.24	.00	1246.69	62.53	10.96	6246.49	7158.29
21.080	500.00	.00	.00	1241.70	56604.00	1248.05	.00	1249.08	49.38	10.14	7464.27	8054.72
21.080	500.00	.00	.00	1241.70	56604.00	1248.16	.00	1249.45	55.90	10.94	6592.11	7570.91
21.170	500.00	.00	.00	1242.70	56604.00	1250.40	.00	1251.41	45.19	10.43	7979.88	8420.63
21.170	500.00	.00	.00	1242.70	56604.00	1250.73	.00	1251.87	42.78	10.55	7200.79	8653.85
21.270	500.00	.00	.00	1245.30	56604.00	1252.52	.00	1253.61	44.04	11.24	7756.62	8529.71
21.270	500.00	.00	.00	1245.30	56604.00	1252.80	.00	1253.88	39.37	10.94	7591.63	9021.75
21.360	500.00	.00	.00	1246.90	56604.00	1254.49	.00	1255.32	30.89	9.56	8886.05	10184.43
21.360	500.00	.00	.00	1246.90	56604.00	1254.56	.00	1255.69	37.94	10.67	7565.70	9190.10
21.460	500.00	.00	.00	1249.40	56604.00	1256.07	.00	1256.87	31.39	8.20	8714.02	10103.05
21.460	500.00	.00	.00	1249.40	56604.00	1256.43	.00	1257.50	34.79	9.03	7426.36	9596.84
21.550	500.00	.00	.00	1251.40	56604.00	1257.90	.00	1259.19	54.17	10.20	7230.33	7691.05
21.550	500.00	.00	.00	1251.40	56604.00	1258.27	.00	1259.84	54.66	10.77	6299.24	7656.43
21.650	500.00	.00	.00	1253.10	56604.00	1260.30	.00	1261.21	33.62	8.40	8414.56	9762.35
21.650	500.00	.00	.00	1253.10	56604.00	1260.81	.00	1261.78	29.39	8.39	7727.37	10440.95

1

21MAR07 13:36:57 PAGE 111

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	21.740	500.00	.00	.00	1255.00	56604.00	1261.78	.00	1262.41	20.31	6.74	9710.83	12559.87
	21.740	500.00	.00	.00	1255.00	56604.00	1262.23	.00	1262.89	17.73	6.66	8959.51	13443.46
	21.840	500.00	.00	.00	1256.80	56604.00	1262.92	.00	1263.67	33.58	7.33	8640.69	9767.72
	21.840	500.00	.00	.00	1256.80	56604.00	1263.23	.00	1264.11	33.16	7.63	7631.74	9829.69
	21.930	500.00	.00	.00	1258.50	56604.00	1264.59	.00	1265.47	38.13	7.67	7794.27	9166.49
	21.930	500.00	.00	.00	1258.50	56604.00	1264.91	.00	1265.73	31.75	7.33	7864.85	10045.99
	22.030	500.00	.00	.00	1260.30	57230.00	1266.76	.00	1267.87	57.37	8.77	7032.13	7555.62
*	22.030	500.00	.00	.00	1260.30	57230.00	1266.76	.00	1268.16	68.26	9.56	6086.58	6927.08
*	22.120	500.00	.00	.00	1261.30	57230.00	1268.95	.00	1269.50	19.16	6.17	10131.76	13073.43
*	22.120	500.00	.00	.00	1261.30	57230.00	1269.27	.00	1269.94	20.34	6.59	8758.81	12690.11
*	22.210	500.00	.00	.00	1263.10	57230.00	1270.11	.00	1271.10	47.03	8.17	7450.58	8345.53
	22.210	500.00	.00	.00	1263.10	57230.00	1270.44	.00	1271.43	40.97	8.00	7195.84	8941.54
	22.310	500.00	.00	.00	1264.20	57230.00	1272.53	.00	1273.47	46.55	8.06	7758.62	8388.50
	22.310	500.00	.00	.00	1264.20	57230.00	1272.61	.00	1273.64	47.16	8.21	7086.04	8333.62
	22.400	500.00	.00	.00	1266.30	57230.00	1274.84	.00	1275.80	45.79	8.07	7708.91	8457.16
	22.400	500.00	.00	.00	1266.30	57230.00	1274.95	.00	1275.92	44.07	8.04	7394.03	8621.36
	22.500	500.00	.00	.00	1267.70	57230.00	1277.07	.00	1277.80	34.26	6.98	8614.14	9777.08
	22.500	500.00	.00	.00	1267.70	57230.00	1277.12	.00	1277.93	36.20	7.23	7965.31	9512.39
	22.590	500.00	.00	.00	1270.50	57230.00	1278.70	.00	1279.50	33.63	7.21	7976.87	9869.01
	22.590	500.00	.00	.00	1270.50	57230.00	1279.06	.00	1279.88	42.31	7.18	7887.01	8798.70
	22.690	500.00	.00	.00	1272.40	57230.00	1280.30	.00	1280.94	26.67	6.15	9028.35	11082.37
	22.690	500.00	.00	.00	1272.40	57230.00	1280.81	.00	1281.58	29.16	6.84	8187.46	10598.49
*	22.780	500.00	.00	.00	1273.90	57230.00	1281.91	.00	1282.80	55.61	7.28	7675.99	7674.24
	22.780	500.00	.00	.00	1273.90	57230.00	1282.48	.00	1283.58	55.27	8.22	6849.57	7698.00
	22.880	500.00	.00	.00	1274.60	57230.00	1283.99	.00	1284.72	39.93	7.47	8667.34	9057.26
	22.880	500.00	.00	.00	1274.60	57230.00	1284.65	.00	1285.50	35.48	7.85	7849.29	9607.86
	22.970	500.00	.00	.00	1276.00	57230.00	1285.52	.00	1286.06	26.77	6.32	9937.45	11060.39
	22.970	500.00	.00	.00	1276.00	57230.00	1286.17	.00	1286.97	32.84	7.77	8137.59	9985.98
	23.070	500.00	.00	.00	1279.00	57230.00	1287.23	.00	1288.24	58.86	10.17	7560.90	7459.87
	23.070	500.00	.00	.00	1279.00	57230.00	1288.04	.00	1289.15	47.86	10.26	7074.50	8272.58

	23.160	500.00	.00	.00	1281.40	57230.00	1290.08	.00	1291.06	54.06	10.70	7783.85	7783.67
	23.160	500.00	.00	.00	1281.40	57230.00	1290.53	.00	1291.72	54.32	11.35	7020.35	7765.28
	23.260	500.00	.00	.00	1285.50	57230.00	1292.88	.00	1294.13	53.68	11.23	6997.98	7811.48
	23.260	500.00	.00	.00	1285.50	57230.00	1293.25	.00	1294.39	42.85	10.48	7174.11	8742.49

1

21MAR07 13:36:57 PAGE 112

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	23.350	500.00	.00	.00	1287.40	57230.00	1295.23	1295.22	1296.83	54.33	12.22	6785.17	7764.01
	23.350	500.00	.00	.00	1287.40	57230.00	1295.20	.00	1296.95	57.59	12.53	6198.71	7541.26
*	23.450	500.00	.00	.00	1289.90	57230.00	1297.78	.00	1298.50	25.88	8.91	9469.73	11249.22
*	23.450	500.00	.00	.00	1289.90	57230.00	1297.87	.00	1298.72	27.43	9.26	8382.01	10927.58
	23.540	500.00	.00	.00	1291.30	57230.00	1298.69	.00	1299.48	26.27	8.15	8849.00	11165.61
	23.540	500.00	.00	.00	1291.30	57230.00	1298.88	.00	1299.70	24.63	8.06	8412.08	11532.02
	23.630	500.00	.00	.00	1293.40	57230.00	1300.01	.00	1301.02	37.98	8.89	7685.69	9286.27
	23.630	500.00	.00	.00	1293.40	57230.00	1300.12	.00	1301.18	37.10	8.92	7360.14	9395.35
	23.730	500.00	.00	.00	1295.40	57230.00	1302.07	.00	1303.01	41.15	8.58	7781.23	8921.18
	23.730	500.00	.00	.00	1295.40	57230.00	1302.16	.00	1303.13	40.56	8.63	7529.95	8986.13
	23.820	500.00	.00	.00	1296.90	57230.00	1304.18	.00	1305.27	50.36	9.80	7533.72	8064.29
	23.820	500.00	.00	.00	1296.90	57230.00	1304.24	.00	1305.37	50.01	9.85	7315.97	8093.13
	23.920	500.00	.00	.00	1298.80	57230.00	1306.54	.00	1307.57	47.77	9.92	7759.25	8280.29
	23.920	500.00	.00	.00	1298.80	57230.00	1306.61	.00	1307.61	45.25	9.74	7898.85	8507.51
	24.010	500.00	.00	.00	1300.70	57230.00	1308.60	.00	1309.44	33.38	8.62	8621.98	9906.06
	24.010	500.00	.00	.00	1300.70	57230.00	1308.59	.00	1309.43	33.68	8.64	8582.30	9861.21
	24.110	500.00	.00	.00	1303.10	57230.00	1310.27	.00	1311.26	40.37	8.82	7889.11	9007.83
	24.110	500.00	.00	.00	1303.10	57230.00	1310.27	.00	1311.26	40.37	8.82	7888.83	9007.39
	24.200	500.00	.00	.00	1304.70	57230.00	1312.43	.00	1313.29	43.46	8.17	8172.70	8681.31
	24.200	500.00	.00	.00	1304.70	57230.00	1312.43	.00	1313.31	44.29	8.24	7987.88	8599.23
	24.300	500.00	.00	.00	1308.70	57230.00	1314.89	.00	1315.91	64.31	8.66	7300.50	7136.22
	24.300	500.00	.00	.00	1308.70	57230.00	1314.91	.00	1315.93	63.38	8.62	7264.80	7188.53
*	24.390	500.00	.00	.00	1310.80	57230.00	1317.40	.00	1317.98	28.92	6.26	9613.43	10641.69
*	24.390	500.00	.00	.00	1310.80	57230.00	1317.44	.00	1318.09	31.41	6.55	8868.93	10211.14
*	24.490	500.00	.00	.00	1312.70	57230.00	1319.11	.00	1320.10	60.31	8.23	7484.76	7369.62
	24.490	500.00	.00	.00	1312.70	57230.00	1319.25	.00	1320.37	61.76	8.52	6819.96	7282.22
	24.580	500.00	.00	.00	1315.20	57230.00	1321.60	.00	1322.36	35.69	7.41	8663.81	9579.39
	24.580	500.00	.00	.00	1315.20	57230.00	1321.81	.00	1322.70	36.16	7.69	7623.07	9516.72
	24.680	500.00	.00	.00	1316.60	57230.00	1323.57	.00	1324.66	56.90	8.97	7404.29	7587.02
	24.680	500.00	.00	.00	1316.60	57230.00	1323.78	.00	1325.13	60.47	9.53	6216.26	7359.61
	24.770	500.00	.00	.00	1320.10	57230.00	1326.33	.00	1327.16	44.24	8.12	8440.50	8604.20
	24.770	500.00	.00	.00	1320.10	57230.00	1326.68	.00	1327.79	46.64	8.79	6921.82	8379.94
	24.870	500.00	.00	.00	1322.50	57230.00	1328.50	.00	1329.21	38.85	7.62	9008.53	9182.26
	24.870	500.00	.00	.00	1322.50	57230.00	1328.99	.00	1329.83	35.83	7.87	7971.63	9560.98

1

21MAR07 13:36:57 PAGE 113

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	24.960	500.00	.00	.00	1323.70	57230.00	1330.43	.00	1331.34	48.69	8.96	8260.57	8201.59
	24.960	500.00	.00	.00	1323.70	57230.00	1330.79	.00	1331.75	43.07	8.91	7773.50	8720.70
	25.060	500.00	.00	.00	1325.90	57230.00	1332.55	.00	1333.24	36.03	8.22	9364.18	9534.45
	25.060	500.00	.00	.00	1325.90	57230.00	1332.78	.00	1333.67	40.18	8.96	8202.70	9029.02
	25.150	500.00	.00	.00	1329.10	57854.00	1334.49	.00	1335.49	53.58	9.75	8263.48	7903.53
	25.150	500.00	.00	.00	1329.10	57854.00	1334.82	.00	1335.79	44.73	9.35	8140.65	8650.78
	25.240	500.00	.00	.00	1331.00	57854.00	1337.85	1337.85	1339.09	86.74	11.60	7305.91	6211.89
	25.240	500.00	.00	.00	1331.00	57854.00	1338.11	1338.11	1339.49	83.23	11.85	6832.02	6341.60
*	25.340	500.00	.00	.00	1334.10	57854.00	1341.00	.00	1341.66	31.51	8.21	10002.71	10305.83

*	25.340	500.00	.00	.00	1334.10	57854.00	1341.32	.00	1342.14	33.64	8.84	9017.32	9975.19
	25.430	500.00	.00	.00	1336.30	57854.00	1342.66	.00	1343.43	41.18	10.70	9871.62	9015.69
	25.430	500.00	.00	.00	1336.30	57854.00	1343.04	.00	1343.86	38.81	10.81	9558.78	9287.19
	25.530	500.00	.00	.00	1337.60	57854.00	1344.63	.00	1345.57	45.39	9.61	9042.65	8587.56
	25.530	500.00	.00	.00	1337.60	57854.00	1344.89	.00	1345.92	44.39	9.83	8586.20	8683.64
	25.620	500.00	.00	.00	1340.20	57854.00	1346.99	.00	1347.79	47.02	8.48	9163.44	8436.76
	25.620	500.00	.00	.00	1340.20	57854.00	1347.18	.00	1348.21	52.39	9.25	8088.23	7993.24
	25.720	500.00	.00	.00	1342.70	57854.00	1349.23	.00	1350.08	44.74	8.43	8871.18	8649.55
	25.720	500.00	.00	.00	1342.70	57854.00	1349.59	.00	1350.64	46.77	9.10	7971.81	8459.26
	25.810	500.00	.00	.00	1344.10	57854.00	1351.37	.00	1352.21	43.09	8.26	8953.42	8813.25
	25.810	500.00	.00	.00	1344.10	57854.00	1351.80	.00	1352.85	43.21	8.85	8106.95	8801.55
	25.910	500.00	.00	.00	1345.70	57854.00	1353.37	.00	1354.08	38.98	7.65	9417.74	9265.99
	25.910	500.00	.00	.00	1345.70	57854.00	1353.88	.00	1354.71	35.97	7.97	8712.80	9646.44
	26.000	500.00	.00	.00	1347.40	57854.00	1355.36	.00	1356.12	49.26	7.79	8758.78	8242.88
	26.000	500.00	.00	.00	1347.40	57854.00	1355.80	.00	1356.81	52.43	8.72	7760.19	7990.09
	26.100	500.00	.00	.00	1349.10	57854.00	1357.73	.00	1358.43	45.97	7.45	9020.45	8533.05
	26.100	500.00	.00	.00	1349.10	57854.00	1358.30	.00	1359.08	40.55	7.78	8674.29	9085.65
	26.190	500.00	.00	.00	1351.30	57854.00	1360.07	.00	1360.67	43.71	7.03	9553.21	8750.79
	26.190	500.00	.00	.00	1351.30	57854.00	1360.50	.00	1361.25	46.65	7.91	8691.76	8470.57
	26.290	500.00	.00	.00	1354.90	57854.00	1362.52	.00	1363.16	48.64	8.00	9614.95	8295.17
	26.290	500.00	.00	.00	1354.90	57854.00	1362.99	.00	1363.82	49.96	8.80	8491.24	8185.02
	26.380	500.00	.00	.00	1356.10	57854.00	1364.71	.00	1365.29	37.96	7.21	9953.30	9390.04
	26.380	500.00	.00	.00	1356.10	57854.00	1365.19	.00	1365.85	34.20	7.38	9257.34	9892.54
	26.480	500.00	.00	.00	1359.20	57854.00	1366.64	.00	1367.30	47.21	6.37	9307.97	8419.76
	26.480	500.00	.00	.00	1359.20	57854.00	1366.95	.00	1367.70	44.56	6.57	8645.15	8666.98

1

21MAR07 13:36:57 PAGE 114

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	26.570	500.00	.00	.00	1361.20	57854.00	1368.84	.00	1369.81	52.21	5.80	8406.90	8007.10
	26.570	500.00	.00	.00	1361.20	57854.00	1369.03	.00	1369.93	44.82	5.61	8516.72	8641.34
	26.670	500.00	.00	.00	1363.90	57854.00	1371.42	.00	1371.97	44.18	5.73	10048.22	8704.27
	26.670	500.00	.00	.00	1363.90	57854.00	1371.40	.00	1372.18	56.26	6.44	8402.95	7713.04
	26.760	500.00	.00	.00	1366.60	57854.00	1373.18	.00	1373.80	63.19	5.89	9198.97	7277.79
	26.760	500.00	.00	.00	1366.60	57854.00	1373.59	.00	1374.33	61.73	6.37	8373.47	7363.34
	26.850	500.00	.00	.00	1368.20	57854.00	1375.41	.00	1376.02	58.94	5.29	9393.33	7535.69
	26.850	500.00	.00	.00	1368.20	57854.00	1375.83	.00	1376.55	54.33	5.76	8723.29	7848.89
	26.950	500.00	.00	.00	1368.90	57854.00	1376.87	.00	1377.47	61.70	5.85	9308.12	7365.48
	26.950	500.00	.00	.00	1368.90	57854.00	1377.35	.00	1378.08	61.45	6.81	8520.33	7380.24
	27.040	500.00	.00	.00	1371.10	57854.00	1379.35	.00	1379.84	43.57	5.91	10322.50	8764.57
	27.040	500.00	.00	.00	1371.10	57854.00	1380.00	.00	1380.64	49.75	7.39	9087.62	8202.63
	27.140	500.00	.00	.00	1375.00	57854.00	1382.14	.00	1382.64	41.68	7.26	10656.81	8960.88
	27.140	500.00	.00	.00	1375.00	57854.00	1382.76	.00	1383.31	35.80	7.51	10175.36	9669.46
	27.230	500.00	.00	.00	1379.60	57854.00	1384.82	.00	1385.44	53.39	8.73	10328.42	7917.44
	27.230	500.00	.00	.00	1379.60	57854.00	1385.15	.00	1385.95	56.83	9.53	9020.41	7674.57
	27.330	500.00	.00	.00	1381.50	57854.00	1387.15	.00	1387.95	61.35	9.15	9497.24	7386.41
	27.330	500.00	.00	.00	1381.50	57854.00	1387.59	.00	1388.53	57.68	9.50	8596.82	7617.35
	27.520	1000.00	.00	.00	1384.70	57854.00	1390.99	.00	1391.43	37.79	5.98	11592.62	9411.66
	27.520	1000.00	.00	.00	1384.70	57854.00	1391.61	.00	1392.18	37.01	6.52	10213.86	9510.21
	27.610	500.00	.00	.00	1387.70	57854.00	1393.16	.00	1393.77	68.10	7.34	9881.39	7010.82
	27.610	500.00	.00	.00	1387.70	57854.00	1393.65	.00	1394.34	57.56	7.42	9284.48	7625.46
*	27.780	860.00	.00	.00	1389.60	57854.00	1395.97	.00	1396.26	21.64	5.09	15588.02	12438.02
	27.780	860.00	.00	.00	1389.60	57854.00	1396.39	.00	1396.73	20.60	5.30	13932.80	12747.81
	27.970	1020.00	.00	.00	1392.90	58418.00	1398.32	.00	1398.76	59.81	5.75	11375.92	7553.91
*	27.970	1020.00	.00	.00	1392.90	58418.00	1398.78	.00	1399.30	56.00	6.24	10233.64	7806.52

28.090	660.00	.00	.00	1396.90	58418.00	1401.32	.00	1401.65	46.74	5.06	12673.07	8544.62
28.090	660.00	.00	.00	1396.90	58418.00	1401.84	.00	1402.32	49.39	5.97	10531.97	8312.65
28.190	500.00	.00	.00	1397.70	58418.00	1403.59	.00	1403.99	56.71	4.56	11563.69	7757.65
28.190	500.00	.00	.00	1397.70	58418.00	1404.49	.00	1405.03	67.43	5.93	9973.80	7114.27
28.280	500.00	.00	.00	1401.90	58418.00	1406.59	.00	1406.98	60.57	4.82	11648.40	7506.27
28.280	500.00	.00	.00	1401.90	58418.00	1407.40	.00	1407.82	45.67	5.27	11278.55	8644.23
28.380	500.00	.00	.00	1404.00	58418.00	1409.35	.00	1409.74	45.00	4.55	11757.52	8708.33
28.380	500.00	.00	.00	1404.00	58418.00	1409.91	.00	1410.39	53.14	5.66	10575.06	8014.05

1
21MAR07 13:36:57 PAGE 115

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
28.470	500.00	.00	.00	1407.10	58418.00	1411.92	.00	1412.37	57.48	4.62	11015.57	7705.49
28.470	500.00	.00	.00	1407.10	58418.00	1412.76	.00	1413.29	61.41	5.99	10177.62	7454.45
28.570	500.00	.00	.00	1410.10	58418.00	1415.09	.00	1415.64	61.66	6.23	10113.47	7439.40
28.570	500.00	.00	.00	1410.10	58418.00	1415.46	.00	1415.96	44.95	5.79	10551.00	8713.21
28.660	500.00	.00	.00	1411.70	58418.00	1417.80	.00	1418.23	51.28	5.56	11156.22	8158.06
28.660	500.00	.00	.00	1411.70	58418.00	1417.96	.00	1418.58	63.69	6.43	9337.52	7320.07
28.760	500.00	.00	.00	1415.00	58418.00	1420.55	.00	1421.02	68.73	5.52	10667.33	7046.30
28.760	500.00	.00	.00	1415.00	58418.00	1421.13	.00	1421.71	63.25	6.15	9559.34	7345.29
28.850	500.00	.00	.00	1417.40	58418.00	1423.36	.00	1423.75	49.36	4.73	11741.15	8314.73
28.850	500.00	.00	.00	1417.40	58418.00	1424.06	.00	1424.62	53.66	5.87	9770.64	7974.81
28.950	500.00	.00	.00	1420.10	58418.00	1425.65	.00	1426.04	46.21	4.71	11851.51	8593.86
28.950	500.00	.00	.00	1420.10	58418.00	1426.43	.00	1426.92	40.55	5.33	10566.86	9173.29
29.040	500.00	.00	.00	1421.00	58418.00	1427.81	.00	1428.44	57.87	4.88	10186.05	7679.51
29.040	500.00	.00	.00	1421.00	58418.00	1428.35	.00	1428.96	46.18	5.00	10043.70	8596.28
29.130	500.00	.00	.00	1424.90	58418.00	1430.79	.00	1431.16	38.60	4.95	12410.81	9402.25
29.130	500.00	.00	.00	1424.90	58418.00	1430.96	.00	1431.35	37.48	5.04	11587.71	9542.34
29.230	500.00	.00	.00	1427.60	58418.00	1433.09	.00	1433.49	65.63	5.21	11509.53	7211.20
29.230	500.00	.00	.00	1427.60	58418.00	1433.22	.00	1433.66	64.95	5.40	10905.30	7248.40
29.320	500.00	.00	.00	1429.80	58418.00	1435.90	.00	1436.30	52.64	4.93	11873.26	8051.52
29.320	500.00	.00	.00	1429.80	58418.00	1435.99	.00	1436.41	51.79	5.02	11289.61	8117.74
29.420	500.00	.00	.00	1431.50	58418.00	1438.21	.00	1438.63	41.36	5.24	11342.12	9083.70
29.420	500.00	.00	.00	1431.50	58418.00	1438.23	.00	1438.66	40.85	5.23	11178.56	9139.72
29.510	500.00	.00	.00	1435.60	58418.00	1440.88	.00	1441.39	73.48	5.31	10463.90	6814.83
29.510	500.00	.00	.00	1435.60	58418.00	1440.91	.00	1441.45	75.77	5.45	9981.29	6711.04
29.610	500.00	.00	.00	1437.80	58418.00	1443.94	.00	1444.31	46.97	4.99	12068.68	8524.04
29.610	500.00	.00	.00	1437.80	58418.00	1444.06	.00	1444.48	47.44	5.18	11254.43	8481.73
29.700	500.00	.00	.00	1442.00	58418.00	1446.64	.00	1447.20	58.16	6.46	10104.28	7660.28
29.700	500.00	.00	.00	1442.00	58418.00	1446.71	.00	1447.26	54.04	6.32	10055.48	7946.68
29.800	500.00	.00	.00	1444.40	58418.00	1449.66	.00	1450.13	55.04	6.03	10920.70	7874.56
29.800	500.00	.00	.00	1444.40	58418.00	1449.68	.00	1450.27	63.02	6.50	9696.86	7358.53
29.890	500.00	.00	.00	1447.50	58418.00	1452.52	.00	1453.10	55.49	6.32	10139.66	7842.35
29.890	500.00	.00	.00	1447.50	58418.00	1452.65	.00	1453.21	48.74	6.10	10124.78	8367.59
29.990	500.00	.00	.00	1450.60	58418.00	1455.21	.00	1455.75	52.49	6.39	10313.20	8063.31
29.990	500.00	.00	.00	1450.60	58418.00	1455.24	.00	1455.97	62.97	7.03	8830.91	7361.71

1
21MAR07 13:36:57 PAGE 116

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
30.080	500.00	.00	.00	1453.30	58418.00	1457.90	.00	1458.60	59.85	6.79	9494.00	7551.20
30.080	500.00	.00	.00	1453.30	58418.00	1458.12	.00	1458.77	49.81	6.51	9590.67	8277.10
30.180	500.00	.00	.00	1455.40	58418.00	1460.74	.00	1461.35	51.35	6.68	9861.29	8152.06
30.180	500.00	.00	.00	1455.40	58418.00	1460.71	.00	1461.37	55.14	6.89	9342.73	7867.23

30.270	500.00	.00	.00	1458.10	58418.00	1463.64	.00	1464.28	66.46	6.86	9308.38	7165.76
30.270	500.00	.00	.00	1458.10	58418.00	1463.70	.00	1464.30	61.97	6.71	9527.29	7420.67
30.370	500.00	.00	.00	1461.30	58418.00	1466.73	.00	1467.32	54.52	6.75	9858.16	7911.58
30.370	500.00	.00	.00	1461.30	58418.00	1466.70	.00	1467.31	56.89	6.84	9714.87	7744.80
30.460	500.00	.00	.00	1463.80	58418.00	1469.26	.00	1469.77	47.57	6.19	10630.92	8470.15
30.460	500.00	.00	.00	1463.80	58418.00	1469.28	.00	1469.79	47.12	6.19	10573.76	8510.59
30.560	500.00	.00	.00	1466.80	58418.00	1471.68	.00	1472.29	56.59	6.58	9676.04	7765.44
30.560	500.00	.00	.00	1466.80	58418.00	1471.68	.00	1472.29	56.19	6.57	9689.98	7793.11
30.650	500.00	.00	.00	1469.50	58418.00	1474.39	.00	1474.93	53.53	6.46	10091.41	7984.24
30.650	500.00	.00	.00	1469.50	58418.00	1474.38	.00	1474.94	54.12	6.49	9952.34	7941.21
30.740	500.00	.00	.00	1473.00	58418.00	1477.16	.00	1477.84	66.71	7.08	9331.11	7152.16
30.740	500.00	.00	.00	1473.00	58418.00	1477.17	.00	1477.86	66.43	7.08	9211.75	7167.71
30.840	500.00	.00	.00	1474.80	58418.00	1479.78	.00	1480.24	39.67	5.95	11262.34	9274.71
30.840	500.00	.00	.00	1474.80	58418.00	1479.82	.00	1480.35	42.29	6.20	10239.24	8982.70
30.930	500.00	.00	.00	1477.00	58418.00	1481.87	.00	1482.38	56.47	6.18	10401.45	7773.72
30.930	500.00	.00	.00	1477.00	58418.00	1482.16	.00	1482.86	64.95	7.05	8886.34	7248.58
31.030	500.00	.00	.00	1479.50	59030.00	1484.57	.00	1485.14	67.38	6.65	10104.25	7191.26
31.030	500.00	.00	.00	1479.50	59030.00	1485.07	.00	1485.68	53.87	6.52	9500.75	8042.42

1

21MAR07 13:36:57 PAGE 117

YAMPA RIVER JOB #04856-0

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	15.680	55980.00	1130.39	.00	.00	.00	1997.42	.00
	15.680	55980.00	1130.46	.07	.00	.07	1753.00	.00
	15.780	55980.00	1131.84	.00	1.45	.00	2146.44	500.00
	15.780	55980.00	1131.86	.02	1.40	.02	1659.16	500.00
	15.870	55980.00	1133.03	.00	1.19	.00	2564.06	500.00
	15.870	55980.00	1133.24	.21	1.38	.21	1830.00	500.00
	15.970	55980.00	1135.11	.00	2.08	.00	2513.06	500.00
	15.970	55980.00	1135.21	.10	1.97	.10	2020.00	500.00
	16.060	55980.00	1136.63	.00	1.52	.00	2636.70	500.00
	16.060	55980.00	1136.63	.01	1.43	.01	2195.00	500.00
*	16.160	55980.00	1138.21	.00	1.58	.00	2710.52	505.00
*	16.160	55980.00	1138.28	.07	1.64	.07	2407.00	505.00
*	16.250	55980.00	1141.14	.00	2.93	.00	3022.79	500.00
*	16.250	55980.00	1141.26	.12	2.98	.12	2665.00	500.00
	16.350	55980.00	1142.38	.00	1.25	.00	2931.65	500.00
	16.350	55980.00	1142.44	.05	1.18	.05	2735.00	500.00
	16.440	55980.00	1144.31	.00	1.92	.00	2876.54	500.00
	16.440	55980.00	1144.31	.00	1.87	.00	2749.66	500.00
	16.530	55980.00	1146.91	.00	2.60	.00	3008.63	500.00
	16.530	55980.00	1146.92	.01	2.61	.01	2640.00	500.00
	16.630	55980.00	1148.55	.00	1.64	.00	2748.04	500.00
	16.630	55980.00	1148.60	.05	1.68	.05	2527.00	500.00
	16.720	55980.00	1150.65	.00	2.10	.00	2911.30	500.00
	16.720	55980.00	1150.67	.02	2.07	.02	2511.00	500.00
	16.820	55980.00	1152.65	.00	2.00	.00	2744.16	500.00
	16.820	55980.00	1152.67	.02	2.00	.02	2456.00	500.00
*	16.910	55980.00	1154.38	.00	1.73	.00	2907.12	500.00
	16.910	55980.00	1154.46	.08	1.79	.08	2495.00	500.00
	17.010	55980.00	1156.97	.00	2.59	.00	3428.92	500.00
	17.010	55980.00	1157.15	.18	2.69	.18	2435.00	500.00

	17.100	55980.00	1158.99	.00	2.02	.00	3423.53	500.00
	17.100	55980.00	1159.21	.22	2.06	.22	2280.00	500.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	17.200	55980.00	1160.84	.00	1.85	.00	3415.27	500.00
	17.200	55980.00	1161.24	.40	2.04	.40	2045.00	500.00
	17.290	55980.00	1162.69	.00	1.85	.00	3297.14	500.00
	17.290	55980.00	1163.35	.66	2.11	.66	1815.00	500.00
	17.390	55980.00	1165.28	.00	2.59	.00	3160.50	500.00
	17.390	55980.00	1166.18	.90	2.83	.90	1675.00	500.00
	17.480	55980.00	1167.38	.00	2.10	.00	3274.55	500.00
	17.480	55980.00	1168.21	.83	2.02	.83	1585.00	500.00
	17.580	55980.00	1169.82	.00	2.45	.00	2438.94	500.00
	17.580	55980.00	1170.64	.81	2.43	.81	1550.00	500.00
	17.670	55980.00	1172.29	.00	2.47	.00	2574.67	500.00
	17.670	55980.00	1172.68	.39	2.04	.39	1550.00	500.00
	17.770	55980.00	1174.58	.00	2.29	.00	2225.46	500.00
	17.770	55980.00	1174.92	.34	2.25	.34	1568.00	500.00
	17.860	55980.00	1176.91	.00	2.33	.00	2069.53	500.00
	17.860	55980.00	1176.98	.07	2.06	.07	1505.00	500.00
	17.950	55980.00	1178.56	.00	1.65	.00	2147.53	500.00
	17.950	55980.00	1178.74	.18	1.76	.18	1260.00	500.00
	18.050	55980.00	1180.65	.00	2.09	.00	2469.84	500.00
*	18.050	55980.00	1181.39	.74	2.65	.74	1340.00	500.00
	18.140	55980.00	1182.22	.00	1.57	.00	2370.50	500.00
	18.140	55980.00	1182.85	.63	1.46	.63	1456.00	500.00
	18.240	55980.00	1183.66	.00	1.44	.00	2240.67	500.00
	18.240	55980.00	1184.16	.50	1.31	.50	1576.00	500.00
	18.330	55980.00	1185.74	.00	2.08	.00	1878.24	500.00
	18.330	55980.00	1185.90	.15	1.73	.15	1607.00	500.00
	18.430	55980.00	1188.17	.00	2.43	.00	1883.17	500.00
	18.430	55980.00	1188.32	.15	2.42	.15	1701.00	500.00
	18.520	55980.00	1190.97	.00	2.80	.00	2246.11	500.00
	18.520	55980.00	1190.97	.00	2.65	.00	2121.75	500.00
	18.620	55980.00	1192.88	.00	1.91	.00	2959.85	500.00
	18.620	55980.00	1192.88	.00	1.91	.00	2330.00	500.00
	18.710	55980.00	1194.99	.00	2.11	.00	3782.91	500.00
	18.710	55980.00	1195.23	.24	2.35	.24	2480.00	500.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	18.810	55980.00	1197.09	.00	2.10	.00	3917.80	500.00
*	18.810	55980.00	1197.42	.33	2.19	.33	2435.00	500.00
	18.900	56604.00	1198.77	.00	1.68	.00	3810.22	500.00
*	18.900	56604.00	1199.00	.24	1.58	.24	2280.00	500.00
	19.000	56604.00	1200.81	.00	2.05	.00	3917.46	500.00
*	19.000	56604.00	1201.43	.61	2.42	.61	2075.00	500.00
*	19.090	56604.00	1202.42	.00	1.60	.00	3988.40	500.00
	19.090	56604.00	1203.02	.60	1.59	.60	1820.00	500.00
	19.190	56604.00	1205.08	.00	2.66	.00	2796.19	500.00
	19.190	56604.00	1205.57	.49	2.56	.49	1530.00	500.00

	19.280	56604.00	1207.17	.00	2.09	.00	2566.51	500.00
	19.280	56604.00	1207.77	.60	2.20	.60	1335.00	500.00
	19.380	56604.00	1209.40	.00	2.23	.00	2268.05	500.00
	19.380	56604.00	1210.03	.62	2.26	.62	1225.00	500.00
	19.470	56604.00	1211.47	.00	2.07	.00	2149.15	500.00
	19.470	56604.00	1212.02	.55	1.99	.55	1235.00	500.00
*	19.560	56604.00	1214.15	.00	2.68	.00	1756.88	500.00
	19.560	56604.00	1214.56	.41	2.54	.41	1055.00	500.00
*	19.660	56604.00	1217.07	.00	2.92	.00	1830.37	500.00
*	19.660	56604.00	1217.48	.40	2.92	.40	1060.00	500.00
	19.750	56604.00	1219.08	.00	2.01	.00	1622.27	500.00
	19.750	56604.00	1219.65	.58	2.18	.58	1140.00	500.00
	19.850	56604.00	1221.92	.00	2.84	.00	2210.55	500.00
	19.850	56604.00	1222.11	.19	2.45	.19	1395.00	500.00
*	19.940	56604.00	1223.33	.00	1.42	.00	2303.99	500.00
*	19.940	56604.00	1223.40	.07	1.30	.07	1475.00	500.00
	20.140	56604.00	1226.30	.00	2.97	.00	2642.33	1020.00
	20.140	56604.00	1227.10	.80	3.70	.80	1535.00	1020.00
	20.320	56604.00	1229.34	.00	3.04	.00	2914.20	975.00
	20.320	56604.00	1229.98	.64	2.87	.64	1584.00	975.00
	20.420	56604.00	1231.14	.00	1.81	.00	2868.26	500.00
	20.420	56604.00	1231.49	.34	1.51	.34	1704.00	500.00
	20.510	56604.00	1233.69	.00	2.54	.00	3062.92	500.00
	20.510	56604.00	1233.97	.28	2.48	.28	1864.00	500.00

1

21MAR07 13:36:57 PAGE 120

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
20.610	56604.00	1235.72	.00	2.03	.00	2986.94	500.00
20.610	56604.00	1236.14	.42	2.17	.42	1905.00	500.00
20.700	56604.00	1237.85	.00	2.13	.00	2898.83	500.00
20.700	56604.00	1238.21	.37	2.08	.37	1790.00	500.00
20.800	56604.00	1239.80	.00	1.96	.00	2769.06	500.00
20.800	56604.00	1240.41	.60	2.19	.60	1705.00	500.00
20.890	56604.00	1242.62	.00	2.82	.00	2530.54	500.00
20.890	56604.00	1242.84	.22	2.43	.22	1625.00	500.00
20.980	56604.00	1245.19	.00	2.57	.00	1873.82	500.00
20.980	56604.00	1245.24	.05	2.40	.05	1515.00	500.00
21.080	56604.00	1248.05	.00	2.86	.00	1977.02	500.00
21.080	56604.00	1248.16	.12	2.93	.12	1535.00	500.00
21.170	56604.00	1250.40	.00	2.35	.00	2375.98	500.00
21.170	56604.00	1250.73	.33	2.56	.33	1580.00	500.00
21.270	56604.00	1252.52	.00	2.13	.00	2057.20	500.00
21.270	56604.00	1252.80	.28	2.07	.28	1645.00	500.00
21.360	56604.00	1254.49	.00	1.96	.00	2277.49	500.00
21.360	56604.00	1254.56	.08	1.76	.08	1735.00	500.00
21.460	56604.00	1256.07	.00	1.58	.00	2353.05	500.00
21.460	56604.00	1256.43	.36	1.87	.36	1799.00	500.00
21.550	56604.00	1257.90	.00	1.83	.00	2505.52	500.00
21.550	56604.00	1258.27	.37	1.84	.37	1785.00	500.00
21.650	56604.00	1260.30	.00	2.40	.00	2412.97	500.00
21.650	56604.00	1260.81	.51	2.54	.51	1725.00	500.00
21.740	56604.00	1261.78	.00	1.48	.00	2458.93	500.00
21.740	56604.00	1262.23	.45	1.42	.45	1700.00	500.00
21.840	56604.00	1262.92	.00	1.14	.00	2492.21	500.00

	21.840	56604.00	1263.23	.32	1.01	.32	1715.00	500.00
	21.930	56604.00	1264.59	.00	1.67	.00	2109.66	500.00
	21.930	56604.00	1264.91	.32	1.68	.32	1750.00	500.00
	22.030	57230.00	1266.76	.00	2.16	.00	2067.57	500.00
*	22.030	57230.00	1266.76	.00	1.84	.00	1645.00	500.00
*	22.120	57230.00	1268.95	.00	2.20	.00	2168.48	500.00
*	22.120	57230.00	1269.27	.31	2.51	.31	1567.00	500.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	22.210	57230.00	1270.11	.00	1.15	.00	2081.53	500.00
	22.210	57230.00	1270.44	.33	1.18	.33	1635.00	500.00
	22.310	57230.00	1272.53	.00	2.42	.00	2287.44	500.00
	22.310	57230.00	1272.61	.08	2.17	.08	1675.00	500.00
	22.400	57230.00	1274.84	.00	2.31	.00	2300.87	500.00
	22.400	57230.00	1274.95	.11	2.34	.11	1826.00	500.00
	22.500	57230.00	1277.07	.00	2.23	.00	2222.77	500.00
	22.500	57230.00	1277.12	.06	2.17	.06	1815.00	500.00
	22.590	57230.00	1278.70	.00	1.63	.00	2152.81	500.00
	22.590	57230.00	1279.06	.36	1.93	.36	1965.00	500.00
	22.690	57230.00	1280.30	.00	1.60	.00	2435.23	500.00
	22.690	57230.00	1280.81	.51	1.75	.51	1975.00	500.00
*	22.780	57230.00	1281.91	.00	1.61	.00	2469.86	500.00
	22.780	57230.00	1282.48	.57	1.67	.57	1845.00	500.00
	22.880	57230.00	1283.99	.00	2.09	.00	2478.42	500.00
	22.880	57230.00	1284.65	.66	2.17	.66	1775.00	500.00
	22.970	57230.00	1285.52	.00	1.53	.00	2343.57	500.00
	22.970	57230.00	1286.17	.65	1.52	.65	1690.00	500.00
*	23.070	57230.00	1287.23	.00	1.71	.00	2303.71	500.00
	23.070	57230.00	1288.04	.80	1.86	.80	1540.00	500.00
	23.160	57230.00	1290.08	.00	2.85	.00	2135.19	500.00
	23.160	57230.00	1290.53	.45	2.49	.45	1640.00	500.00
	23.260	57230.00	1292.88	.00	2.80	.00	2104.15	500.00
	23.260	57230.00	1293.25	.37	2.72	.37	1466.00	500.00
	23.350	57230.00	1295.23	.00	2.35	.00	2208.97	500.00
	23.350	57230.00	1295.20	-.04	1.95	-.04	1492.78	500.00
*	23.450	57230.00	1297.78	.00	2.54	.00	2308.02	500.00
*	23.450	57230.00	1297.87	.09	2.68	.09	1529.00	500.00
	23.540	57230.00	1298.69	.00	.91	.00	2255.24	500.00
	23.540	57230.00	1298.88	.19	1.01	.19	1590.00	500.00
	23.630	57230.00	1300.01	.00	1.32	.00	1989.03	500.00
	23.630	57230.00	1300.12	.12	1.24	.12	1645.00	500.00
	23.730	57230.00	1302.07	.00	2.07	.00	2024.22	500.00
	23.730	57230.00	1302.16	.08	2.03	.08	1781.00	500.00

1

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	23.820	57230.00	1304.18	.00	2.11	.00	2245.21	500.00
	23.820	57230.00	1304.24	.06	2.09	.06	2000.00	500.00
	23.920	57230.00	1306.54	.00	2.36	.00	2120.83	500.00
	23.920	57230.00	1306.61	.07	2.37	.07	2120.00	500.00
	24.010	57230.00	1308.60	.00	2.06	.00	2213.82	500.00
	24.010	57230.00	1308.59	-.01	1.98	-.01	2186.00	500.00

	24.110	57230.00	1310.27	.00	1.67	.00	2227.70	500.00
	24.110	57230.00	1310.27	.00	1.68	.00	2226.91	500.00
	24.200	57230.00	1312.43	.00	2.16	.00	2472.58	500.00
	24.200	57230.00	1312.43	-.01	2.15	-.01	2290.00	500.00
	24.300	57230.00	1314.89	.00	2.45	.00	2383.90	500.00
	24.300	57230.00	1314.91	.02	2.48	.02	2311.00	500.00
*	24.390	57230.00	1317.40	.00	2.52	.00	2557.09	500.00
*	24.390	57230.00	1317.44	.03	2.53	.03	2145.00	500.00
*	24.490	57230.00	1319.11	.00	1.70	.00	2639.16	500.00
	24.490	57230.00	1319.25	.14	1.81	.14	1999.00	500.00
	24.580	57230.00	1321.60	.00	2.49	.00	2764.45	500.00
	24.580	57230.00	1321.81	.21	2.56	.21	1868.00	500.00
	24.680	57230.00	1323.57	.00	1.97	.00	2739.47	500.00
	24.680	57230.00	1323.78	.21	1.97	.21	1685.00	500.00
	24.770	57230.00	1326.33	.00	2.76	.00	2717.28	500.00
	24.770	57230.00	1326.68	.35	2.90	.35	1665.00	500.00
	24.870	57230.00	1328.50	.00	2.17	.00	2654.80	500.00
	24.870	57230.00	1328.99	.49	2.31	.49	1785.00	500.00
	24.960	57230.00	1330.43	.00	1.93	.00	2622.06	500.00
	24.960	57230.00	1330.79	.36	1.80	.36	1985.00	500.00
	25.060	57230.00	1332.55	.00	2.12	.00	2665.29	500.00
	25.060	57230.00	1332.78	.23	1.99	.23	2080.00	500.00
	25.150	57854.00	1334.49	.00	1.94	.00	2913.08	500.00
	25.150	57854.00	1334.82	.33	2.04	.33	2245.00	500.00
*	25.240	57854.00	1337.85	.00	3.36	.00	3052.47	500.00
*	25.240	57854.00	1338.11	.26	3.29	.26	2450.00	500.00
	25.340	57854.00	1341.00	.00	3.15	.00	3232.87	500.00
	25.340	57854.00	1341.32	.32	3.21	.32	2635.00	500.00

1

21MAR07 13:36:57 PAGE 123

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
25.430	57854.00	1342.66	.00	1.66	.00	3301.94	500.00
25.430	57854.00	1343.04	.38	1.72	.38	2830.00	500.00
25.530	57854.00	1344.63	.00	1.97	.00	3393.83	500.00
25.530	57854.00	1344.89	.26	1.85	.26	2915.00	500.00
25.620	57854.00	1346.99	.00	2.35	.00	3420.81	500.00
25.620	57854.00	1347.18	.19	2.29	.19	2801.00	500.00
25.720	57854.00	1349.23	.00	2.24	.00	3494.89	500.00
25.720	57854.00	1349.59	.36	2.41	.36	2795.00	500.00
25.810	57854.00	1351.37	.00	2.14	.00	3682.10	500.00
25.810	57854.00	1351.80	.43	2.21	.43	2810.00	500.00
25.910	57854.00	1353.37	.00	2.00	.00	3541.51	500.00
25.910	57854.00	1353.88	.50	2.07	.50	2785.00	500.00
26.000	57854.00	1355.36	.00	1.99	.00	3478.83	500.00
26.000	57854.00	1355.80	.44	1.92	.44	2723.00	500.00
26.100	57854.00	1357.73	.00	2.36	.00	3304.08	500.00
26.100	57854.00	1358.30	.57	2.50	.57	2665.00	500.00
26.190	57854.00	1360.07	.00	2.34	.00	3231.90	500.00
26.190	57854.00	1360.50	.43	2.20	.43	2610.00	500.00
26.290	57854.00	1362.52	.00	2.46	.00	3447.99	500.00
26.290	57854.00	1362.99	.47	2.49	.47	2535.00	500.00
26.380	57854.00	1364.71	.00	2.19	.00	3547.60	500.00
26.380	57854.00	1365.19	.48	2.20	.48	2495.00	500.00

26.480	57854.00	1366.64	.00	1.93	.00	3511.68	500.00
26.480	57854.00	1366.95	.31	1.76	.31	2490.00	500.00
26.570	57854.00	1368.84	.00	2.20	.00	3661.00	500.00
26.570	57854.00	1369.03	.19	2.08	.19	2590.00	500.00
26.670	57854.00	1371.42	.00	2.58	.00	3899.50	500.00
26.670	57854.00	1371.40	-.01	2.37	-.01	2704.77	500.00
26.760	57854.00	1373.18	.00	1.77	.00	3956.58	500.00
26.760	57854.00	1373.59	.40	2.18	.40	2822.00	500.00
26.850	57854.00	1375.41	.00	2.22	.00	3739.79	500.00
26.850	57854.00	1375.83	.43	2.25	.43	2865.00	500.00
26.950	57854.00	1376.87	.00	1.46	.00	3803.19	500.00
26.950	57854.00	1377.35	.49	1.52	.49	2928.00	500.00

1

21MAR07 13:36:57 PAGE 124

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
27.040	57854.00	1379.35	.00	2.49	.00	3920.60	500.00
27.040	57854.00	1380.00	.65	2.64	.65	3007.00	500.00
27.140	57854.00	1382.14	.00	2.79	.00	4031.27	500.00
27.140	57854.00	1382.76	.62	2.76	.62	3100.00	500.00
27.230	57854.00	1384.82	.00	2.68	.00	4375.37	500.00
27.230	57854.00	1385.15	.33	2.39	.33	3308.00	500.00
27.330	57854.00	1387.15	.00	2.34	.00	4653.33	500.00
27.330	57854.00	1387.59	.43	2.44	.43	3478.00	500.00
27.520	57854.00	1390.99	.00	3.84	.00	5042.68	1000.00
27.520	57854.00	1391.61	.61	4.02	.61	3650.00	1000.00
27.610	57854.00	1393.16	.00	2.16	.00	5080.18	500.00
27.610	57854.00	1393.65	.50	2.05	.50	3760.00	500.00
* 27.780	57854.00	1395.97	.00	2.81	.00	5342.53	860.00
* 27.780	57854.00	1396.39	.42	2.74	.42	3960.00	860.00
* 27.970	58418.00	1398.32	.00	2.35	.00	5737.15	1020.00
* 27.970	58418.00	1398.78	.46	2.39	.46	4045.00	1020.00
28.090	58418.00	1401.32	.00	2.99	.00	6019.79	660.00
28.090	58418.00	1401.84	.52	3.06	.52	4100.00	660.00
28.190	58418.00	1403.59	.00	2.28	.00	6075.07	500.00
28.190	58418.00	1404.49	.90	2.66	.90	4195.00	500.00
28.280	58418.00	1406.59	.00	3.00	.00	6105.22	500.00
28.280	58418.00	1407.40	.81	2.91	.81	4409.00	500.00
28.380	58418.00	1409.35	.00	2.76	.00	5795.70	500.00
28.380	58418.00	1409.91	.56	2.51	.56	4669.00	500.00
28.470	58418.00	1411.92	.00	2.56	.00	6301.54	500.00
28.470	58418.00	1412.76	.84	2.85	.84	4745.00	500.00
28.570	58418.00	1415.09	.00	3.17	.00	5407.23	500.00
28.570	58418.00	1415.46	.37	2.70	.37	4515.00	500.00
28.660	58418.00	1417.80	.00	2.71	.00	5592.39	500.00
28.660	58418.00	1417.96	.16	2.50	.16	4295.00	500.00
28.760	58418.00	1420.55	.00	2.76	.00	5537.20	500.00
28.760	58418.00	1421.13	.58	3.17	.58	3925.00	500.00
28.850	58418.00	1423.36	.00	2.81	.00	5600.84	500.00
28.850	58418.00	1424.06	.70	2.93	.70	3735.00	500.00

1

21MAR07 13:36:57 PAGE 125

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
28.950	58418.00	1425.65	.00	2.29	.00	5523.47	500.00

28.950	58418.00	1426.43	.78	2.37	.78	3780.00	500.00
29.040	58418.00	1427.81	.00	2.16	.00	5487.20	500.00
29.040	58418.00	1428.35	.54	1.92	.54	4005.00	500.00
29.130	58418.00	1430.79	.00	2.99	.00	5929.40	500.00
29.130	58418.00	1430.96	.16	2.61	.16	4664.00	500.00
29.230	58418.00	1433.09	.00	2.29	.00	6063.22	500.00
29.230	58418.00	1433.22	.13	2.26	.13	5134.00	500.00
29.320	58418.00	1435.90	.00	2.81	.00	6158.35	500.00
29.320	58418.00	1435.99	.09	2.77	.09	5028.00	500.00
29.420	58418.00	1438.21	.00	2.31	.00	5358.43	500.00
29.420	58418.00	1438.23	.02	2.24	.02	4865.00	500.00
29.510	58418.00	1440.88	.00	2.67	.00	5382.70	500.00
29.510	58418.00	1440.91	.03	2.68	.03	4695.00	500.00
29.610	58418.00	1443.94	.00	3.06	.00	5558.04	500.00
29.610	58418.00	1444.06	.12	3.15	.12	4540.00	500.00
29.700	58418.00	1446.64	.00	2.70	.00	5340.72	500.00
29.700	58418.00	1446.71	.07	2.65	.07	4525.00	500.00
29.800	58418.00	1449.66	.00	3.02	.00	5381.08	500.00
29.800	58418.00	1449.68	.03	2.97	.03	4381.00	500.00
29.890	58418.00	1452.52	.00	2.86	.00	5189.05	500.00
29.890	58418.00	1452.65	.13	2.97	.13	4086.00	500.00
29.990	58418.00	1455.21	.00	2.69	.00	5194.83	500.00
29.990	58418.00	1455.24	.03	2.59	.03	3920.00	500.00
30.080	58418.00	1457.90	.00	2.69	.00	4553.46	500.00
30.080	58418.00	1458.12	.21	2.88	.21	3950.00	500.00
30.180	58418.00	1460.74	.00	2.84	.00	4547.11	500.00
30.180	58418.00	1460.71	-.03	2.60	-.03	4095.00	500.00
30.270	58418.00	1463.64	.00	2.90	.00	4161.38	500.00
30.270	58418.00	1463.70	.05	2.99	.05	4161.00	500.00
30.370	58418.00	1466.73	.00	3.09	.00	4380.63	500.00
30.370	58418.00	1466.70	-.03	3.00	-.03	4376.92	500.00
30.460	58418.00	1469.26	.00	2.53	.00	4727.72	500.00
30.460	58418.00	1469.28	.02	2.58	.02	4590.00	500.00

1

21MAR07 13:36:57 PAGE 126

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
30.560	58418.00	1471.68	.00	2.42	.00	4600.56	500.00
30.560	58418.00	1471.68	.00	2.40	.00	4557.11	500.00
30.650	58418.00	1474.39	.00	2.70	.00	4701.44	500.00
30.650	58418.00	1474.38	-.01	2.70	-.01	4365.80	500.00
30.740	58418.00	1477.16	.00	2.77	.00	4608.60	500.00
30.740	58418.00	1477.17	.01	2.79	.01	4210.00	500.00
30.840	58418.00	1479.78	.00	2.62	.00	5088.63	500.00
30.840	58418.00	1479.82	.04	2.65	.04	4123.00	500.00
30.930	58418.00	1481.87	.00	2.09	.00	5013.37	500.00
30.930	58418.00	1482.16	.29	2.33	.29	3951.00	500.00
31.030	59030.00	1484.57	.00	2.71	.00	5548.71	500.00
31.030	59030.00	1485.07	.50	2.92	.50	3836.00	500.00

1

21MAR07 13:36:57 PAGE 127

MARY OF ERRORS AND SPECIAL NOTES

```
 [redacted]TION SECNO=     16.160  PROFILE=  1  CRITICAL DEPTH ASSUMED
 [redacted]ION SECNO=      16.160  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 [redacted]TION SECNO=     16.160  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      16.160  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=      16.250  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      16.250  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      16.910  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      16.910  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      18.050  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      18.810  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      18.810  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      18.900  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      19.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      19.090  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=      19.560  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      19.560  PROFILE=  1  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=      19.660  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      19.660  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=      19.940  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      19.940  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      19.940  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      19.940  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=      22.030  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      22.120  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      22.120  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      22.210  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 [redacted]ING SECNO=      22.780  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      23.070  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      23.450  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      23.450  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      24.390  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      24.390  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      24.490  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
    21MAR07      13:36:57                                                                PAGE  128


 CAUTION SECNO=      25.240  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      25.240  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      25.240  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      25.240  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=      25.340  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      25.340  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      27.780  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      27.780  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      27.970  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      27.970  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

1
    21MAR07      13:36:57                                                                PAGE  129


 FLOODWAY DATA,    YAMPA RIVER JOB #04856-0
 [redacted]FILE NO.  2

 [redacted]          ------- FLOODWAY -------       WATER SURFACE ELEVATION
   STATION     WIDTH     SECTION     MEAN       WITH     WITHOUT  DIFFERENCE
```

		AREA	VELOCITY	FLOODWAY	FLOODWAY	
15.680	1753.	7792.	7.2	1130.5	1130.4	.1
15.780	1659.	7989.	7.0	1131.8	1131.8	.0
15.870	1830.	6906.	8.1	1133.2	1133.0	.2
15.970	2020.	8468.	6.6	1135.2	1135.1	.1
16.060	2195.	9055.	6.2	1136.6	1136.6	.0
16.160	2407.	6492.	8.6	1138.3	1138.2	.1
16.250	2665.	10569.	5.3	1141.2	1141.1	.1
16.350	2735.	9971.	5.6	1142.5	1142.4	.1
16.440	2750.	7984.	7.0	1144.3	1144.3	.0
16.530	2640.	8485.	6.6	1146.9	1146.9	.0
16.630	2527.	8075.	6.9	1148.5	1148.5	.0
16.720	2511.	8216.	6.8	1150.7	1150.7	.0
16.820	2456.	9435.	5.9	1152.7	1152.7	.0
16.910	2495.	7202.	7.8	1154.5	1154.4	.1
17.010	2435.	8118.	6.9	1157.2	1157.0	.2
17.100	2280.	8213.	6.8	1159.2	1159.0	.2
17.200	2045.	8177.	6.8	1161.2	1160.8	.4
17.290	1815.	6645.	8.4	1163.4	1162.7	.7
17.390	1675.	7332.	7.6	1166.2	1165.3	.9
17.480	1585.	6743.	8.3	1168.2	1167.4	.8
17.580	1550.	7393.	7.6	1170.6	1169.8	.8
17.670	1550.	7211.	7.8	1172.7	1172.3	.4
17.770	1568.	7471.	7.5	1174.9	1174.6	.3
17.860	1505.	7654.	7.3	1177.0	1176.9	.1
17.950	1260.	5983.	9.4	1178.8	1178.6	.2
18.050	1340.	7271.	7.7	1181.3	1180.6	.7
18.140	1456.	7864.	7.1	1182.8	1182.2	.6
18.240	1576.	7437.	7.5	1184.2	1183.7	.5
18.330	1607.	6541.	8.6	1185.9	1185.7	.2
18.430	1701.	6411.	8.7	1188.3	1188.2	.1
18.520	2122.	8263.	6.8	1191.0	1191.0	.0
18.620	2330.	8314.	6.7	1192.9	1192.9	.0
18.710	2480.	7744.	7.2	1195.2	1195.0	.2
18.810	2435.	9483.	5.9	1197.4	1197.1	.3
18.900	2280.	6954.	8.1	1199.0	1198.8	.2
19.000	2075.	8617.	6.6	1201.4	1200.8	.6
19.090	1820.	6572.	8.6	1203.0	1202.4	.6
19.190	1530.	6733.	8.4	1205.6	1205.1	.5
19.280	1335.	6409.	8.8	1207.8	1207.2	.6
19.380	1225.	5907.	9.6	1210.0	1209.4	.6
19.470	1235.	6322.	9.0	1212.0	1211.5	.5
19.560	1055.	5242.	10.8	1214.5	1214.1	.4

1

FLOODWAY DATA, YAMPA RIVER JOB #04856-0
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
19.660	1060.	6738.	8.4	1217.5	1217.1	.4
19.750	1140.	6290.	9.0	1219.7	1219.1	.6
19.850	1395.	7263.	7.8	1222.1	1221.9	.2
19.940	1475.	6234.	9.1	1223.4	1223.3	.1
20.140	1535.	7325.	7.7	1227.1	1226.3	.8
20.320	1584.	7783.	7.3	1229.9	1229.3	.6
20.420	1704.	6579.	8.6	1231.4	1231.1	.3
20.510	1864.	7174.	7.9	1234.0	1233.7	.3
20.610	1905.	7294.	7.8	1236.1	1235.7	.4
20.700	1790.	7152.	7.9	1238.2	1237.8	.4
20.800	1705.	6997.	8.1	1240.4	1239.8	.6
20.890	1625.	6778.	8.4	1242.8	1242.6	.2
20.980	1515.	6246.	9.1	1245.2	1245.2	.0
21.080	1535.	6592.	8.6	1248.1	1248.0	.1
21.170	1580.	7201.	7.9	1250.7	1250.4	.3
21.270	1645.	7592.	7.5	1252.8	1252.5	.3
21.360	1735.	7566.	7.5	1254.6	1254.5	.1
21.460	1799.	7426.	7.6	1256.5	1256.1	.4
21.550	1785.	6299.	9.0	1258.3	1257.9	.4
21.650	1725.	7727.	7.3	1260.8	1260.3	.5
21.740	1700.	8960.	6.3	1262.2	1261.8	.4
21.840	1715.	7632.	7.4	1263.2	1262.9	.3
21.930	1750.	7865.	7.2	1264.9	1264.6	.3

22.030	1645.	6087.	9.4	1266.8	1266.8	.0
22.120	1567.	8759.	6.5	1269.3	1269.0	.3
22.210	1635.	7196.	8.0	1270.4	1270.1	.3
22.310	1675.	7086.	8.1	1272.6	1272.5	.1
22.400	1826.	7394.	7.7	1274.9	1274.8	.1
22.500	1815.	7965.	7.2	1277.2	1277.1	.1
22.590	1965.	7887.	7.3	1279.1	1278.7	.4
22.690	1975.	8187.	7.0	1280.8	1280.3	.5
22.780	1845.	6850.	8.4	1282.5	1281.9	.6
22.880	1775.	7849.	7.3	1284.7	1284.0	.7
22.970	1690.	8138.	7.0	1286.2	1285.5	.7
23.070	1540.	7074.	8.1	1288.0	1287.2	.8
23.160	1640.	7020.	8.2	1290.5	1290.1	.4
23.260	1466.	7174.	8.0	1293.3	1292.9	.4
23.350	1493.	6199.	9.2	1295.2	1295.2	.0
23.450	1529.	8382.	6.8	1297.9	1297.8	.1
23.540	1590.	8412.	6.8	1298.9	1298.7	.2
23.630	1645.	7360.	7.8	1300.1	1300.0	.1
23.730	1781.	7530.	7.6	1302.2	1302.1	.1

1

FLOODWAY DATA, YAMPA RIVER JOB #04856-0
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
23.820	2000.	7316.	7.8	1304.3	1304.2	.1
23.920	2120.	7899.	7.2	1306.6	1306.5	.1
24.010	2186.	8582.	6.7	1308.6	1308.6	.0
24.110	2227.	7889.	7.3	1310.3	1310.3	.0
24.200	2290.	7988.	7.2	1312.4	1312.4	.0
24.300	2311.	7265.	7.9	1314.9	1314.9	.0
24.390	2145.	8869.	6.5	1317.4	1317.4	.0
24.490	1999.	6820.	8.4	1319.2	1319.1	.1
24.580	1868.	7623.	7.5	1321.8	1321.6	.2
24.680	1685.	6216.	9.2	1323.8	1323.6	.2
24.770	1665.	6922.	8.3	1326.7	1326.3	.4
24.870	1785.	7972.	7.2	1329.0	1328.5	.5
24.960	1985.	7773.	7.4	1330.8	1330.4	.4
25.060	2080.	8203.	7.0	1332.8	1332.6	.2
25.150	2245.	8141.	7.1	1334.8	1334.5	.3
25.240	2450.	6832.	8.5	1338.2	1337.9	.3
25.340	2635.	9017.	6.4	1341.3	1341.0	.3
25.430	2830.	9559.	6.1	1343.1	1342.7	.4
25.530	2915.	8586.	6.7	1344.9	1344.6	.3
25.620	2801.	8088.	7.2	1347.2	1347.0	.2
25.720	2795.	7972.	7.3	1349.6	1349.2	.4
25.810	2810.	8107.	7.1	1351.8	1351.4	.4
25.910	2785.	8713.	6.6	1353.9	1353.4	.5
26.000	2723.	7760.	7.5	1355.8	1355.4	.4
26.100	2665.	8674.	6.7	1358.3	1357.7	.6
26.190	2610.	8692.	6.7	1360.5	1360.1	.4
26.290	2535.	8491.	6.8	1363.0	1362.5	.5
26.380	2495.	9257.	6.2	1365.2	1364.7	.5
26.480	2490.	8645.	6.7	1366.9	1366.6	.3
26.570	2590.	8517.	6.8	1369.0	1368.8	.2
26.670	2705.	8403.	6.9	1371.4	1371.4	.0
26.760	2822.	8373.	6.9	1373.6	1373.2	.4
26.850	2865.	8723.	6.6	1375.8	1375.4	.4
26.950	2928.	8520.	6.8	1377.4	1376.9	.5
27.040	3007.	9088.	6.4	1380.0	1379.4	.6
27.140	3100.	10175.	5.7	1382.7	1382.1	.6
27.230	3308.	9020.	6.4	1385.1	1384.8	.3
27.330	3478.	8597.	6.7	1387.6	1387.2	.4
27.520	3650.	10214.	5.7	1391.6	1391.0	.6
27.610	3760.	9284.	6.2	1393.7	1393.2	.5
27.780	3960.	13933.	4.2	1396.4	1396.0	.4
27.970	4045.	10234.	5.7	1398.8	1398.3	.5

1

FLOODWAY DATA, YAMPA RIVER JOB #04856-0

PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
28.090	4100.	10532.	5.5	1401.8	1401.3	.5
28.190	4195.	9974.	5.9	1404.5	1403.6	.9
28.280	4409.	11279.	5.2	1407.4	1406.6	.8
28.380	4669.	10575.	5.5	1410.0	1409.4	.6
28.470	4745.	10178.	5.7	1412.7	1411.9	.8
28.570	4515.	10551.	5.5	1415.5	1415.1	.4
28.660	4295.	9338.	6.3	1418.0	1417.8	.2
28.760	3925.	9559.	6.1	1421.2	1420.6	.6
28.850	3735.	9771.	6.0	1424.1	1423.4	.7
28.950	3780.	10567.	5.5	1426.5	1425.7	.8
29.040	4005.	10044.	5.8	1428.3	1427.8	.5
29.130	4664.	11588.	5.0	1431.0	1430.8	.2
29.230	5134.	10905.	5.4	1433.2	1433.1	.1
29.320	5028.	11290.	5.2	1436.0	1435.9	.1
29.420	4865.	11179.	5.2	1438.2	1438.2	.0
29.510	4695.	9981.	5.9	1440.9	1440.9	.0
29.610	4540.	11254.	5.2	1444.0	1443.9	.1
29.700	4525.	10055.	5.8	1446.7	1446.6	.1
29.800	4381.	9697.	6.0	1449.7	1449.7	.0
29.890	4086.	10125.	5.8	1452.6	1452.5	.1
29.990	3920.	8831.	6.6	1455.2	1455.2	.0
30.080	3950.	9591.	6.1	1458.1	1457.9	.2
30.180	4095.	9343.	6.3	1460.7	1460.7	.0
30.270	4161.	9527.	6.1	1463.7	1463.6	.1
30.370	4377.	9715.	6.0	1466.7	1466.7	.0
30.460	4590.	10574.	5.5	1469.3	1469.3	.0
30.560	4557.	9690.	6.0	1471.7	1471.7	.0
30.650	4366.	9952.	5.9	1474.4	1474.4	.0
30.740	4210.	9212.	6.3	1477.2	1477.2	.0
30.840	4123.	10239.	5.7	1479.8	1479.8	.0
30.930	3951.	8886.	6.6	1482.2	1481.9	.3
31.030	3836.	9501.	6.2	1485.1	1484.6	.5

APPENDIX C

HEC-RAS Output Files for Corrected Effective FIS Model

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	15.68	PF 1	55980	1122.3	1130.39	1129.15	1131.25	0.003128	8.01	8043.39	1997.42	0.64
Reach-1	15.68	PF 2	55980	1122.3	1130.46	1129.15	1131.36	0.003181	8.16	7791.86	1753	0.64
Reach-1	15.78	PF 1	55980	1123.6	1131.87		1132.55	0.002259	7.17	9232.92	2152.12	0.55
Reach-1	15.78	PF 2	55980	1123.6	1131.93		1132.74	0.002519	7.63	8104.86	1659.63	0.58
Reach-1	15.87	PF 1	55980	1125.5	1133.03		1134.32	0.004871	9.62	7138.64	2563.9	0.79
Reach-1	15.87	PF 2	55980	1125.5	1133.25		1134.45	0.004179	9.2	6929.05	1830	0.73
Reach-1	15.97	PF 1	55980	1128	1135.24		1136.03	0.002579	7.5	8822.64	2540.51	0.58
Reach-1	15.97	PF 2	55980	1128	1135.24		1136.02	0.002499	7.39	8535.19	2020	0.57
Reach-1	16.06	PF 1	55980	1130.4	1136.75		1137.3	0.002642	6.85	10086.5	2640.4	0.57
Reach-1	16.06	PF 2	55980	1130.4	1136.69		1137.31	0.002898	7.11	9180.81	2195	0.6
Reach-1	16.16	PF 1	55980	1133.4	1138.3	1138.3	1139.57	0.00944	11.65	7027.09	2747.3	1.06
Reach-1	16.16	PF 2	55980	1133.4	1138.36	1138.36	1139.7	0.009362	11.74	6704.44	2407	1.06
Reach-1	16.25	PF 1	55980	1134.6	1141.21		1141.7	0.002566	7	10889.12	3035.61	0.57
Reach-1	16.25	PF 2	55980	1134.6	1141.29		1141.78	0.002465	6.94	10646.11	2665	0.56
Reach-1	16.35	PF 1	55980	1136.9	1142.45		1142.97	0.003048	6.69	10175.25	2937.69	0.6
Reach-1	16.35	PF 2	55980	1136.9	1142.48		1143	0.002962	6.64	10088.33	2735	0.59
Reach-1	16.44	PF 1	55980	1138.3	1144.33		1145.12	0.006113	7.95	8085.57	2876.86	0.82
Reach-1	16.44	PF 2	55980	1138.3	1144.33		1145.12	0.006135	7.96	8039.75	2749.77	0.82
Reach-1	16.53	PF 1	55980	1140.9	1146.96		1147.72	0.004259	8.32	8948.78	3012.31	0.72
Reach-1	16.53	PF 2	55980	1140.9	1146.97		1147.77	0.00437	8.45	8616.31	2640	0.73
Reach-1	16.63	PF 1	55980	1142.5	1148.66		1149.59	0.00467	9.49	8490.68	2750.72	0.77
Reach-1	16.63	PF 2	55980	1142.5	1148.7		1149.63	0.00457	9.44	8350.63	2527	0.76
Reach-1	16.72	PF 1	55980	1145.2	1150.79		1151.67	0.004261	9.03	8767.52	2925.8	0.74
Reach-1	16.72	PF 2	55980	1145.2	1150.8		1151.66	0.004108	8.89	8558.37	2511	0.72
Reach-1	16.82	PF 1	55980	1146.8	1152.78		1153.32	0.002543	6.84	10325.17	2749.96	0.57
Reach-1	16.82	PF 2	55980	1146.8	1152.75		1153.36	0.00278	7.13	9649.5	2456	0.59
Reach-1	16.91	PF 1	55980	1149.5	1154.4		1155.45	0.006847	9.89	7779.73	2908.67	0.9
Reach-1	16.91	PF 2	55980	1149.5	1154.48		1155.64	0.007027	10.16	7263.6	2495	0.92
Reach-1	17.01	PF 1	55980	1151.3	1157.09		1157.84	0.004109	8.57	9383.84	3462.56	0.72
Reach-1	17.01	PF 2	55980	1151.3	1157.24		1158.11	0.004328	9	8363.94	2435	0.74
Reach-1	17.1	PF 1	55980	1153.3	1159.01		1159.75	0.004339	8.59	9430.12	3440.58	0.73
Reach-1	17.1	PF 2	55980	1153.3	1159.23		1160.09	0.004351	8.9	8274.52	2280	0.74
Reach-1	17.2	PF 1	55980	1155.6	1160.98		1161.45	0.002847	6.73	11129.25	3417.69	0.59
Reach-1	17.2	PF 2	55980	1155.6	1161.28		1162.07	0.003836	8.19	8250.9	2045	0.69
Reach-1	17.29	PF 1	55980	1157.8	1162.72		1163.47	0.005749	8.65	8906.2	3297.87	0.82
Reach-1	17.29	PF 2	55980	1157.8	1163.38		1164.62	0.006336	10.19	6704.17	1815	0.88
Reach-1	17.39	PF 1	55980	1159.9	1165.32		1165.95	0.004245	7.96	9654.58	3160.82	0.71
Reach-1	17.39	PF 2	55980	1159.9	1166.21		1167.21	0.004203	9.1	7386.87	1675	0.73
Reach-1	17.48	PF 1	55980	1161.3	1167.44		1168.3	0.005495	10.02	8922.77	3278.88	0.83
Reach-1	17.48	PF 2	55980	1161.3	1168.25		1169.51	0.005205	10.89	6817.3	1585	0.83
Reach-1	17.58	PF 1	55980	1164.2	1170		1170.94	0.005517	11.35	8264.64	2475.31	0.86
Reach-1	17.58	PF 2	55980	1164.2	1170.74		1171.74	0.004096	10.65	7550.81	1550	0.76
Reach-1	17.67	PF 1	55980	1165.3	1172.45		1173.41	0.004381	10.71	8682.8	2576.82	0.78
Reach-1	17.67	PF 2	55980	1165.3	1172.73		1173.86	0.004186	10.8	7303.55	1550	0.76
Reach-1	17.77	PF 1	55980	1168.1	1174.76		1175.81	0.005242	12.15	7971.49	2234.11	0.86
Reach-1	17.77	PF 2	55980	1168.1	1174.96		1175.97	0.004286	11.23	7530.5	1568	0.78
Reach-1	17.86	PF 1	55980	1170.1	1177.12		1177.86	0.003088	9.69	9185.62	2096.11	0.66
Reach-1	17.86	PF 2	55980	1170.1	1177.03		1177.99	0.003623	10.4	7730.09	1505	0.72
Reach-1	17.95	PF 1	55980	1171	1178.71		1179.78	0.004778	11.77	8039.84	2167.09	0.82

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	17.95	PF 2	55980	1171	1178.76		1180.44	0.006203	13.48	6009.59	1260	0.94
Reach-1	18.05	PF 1	55980	1173.2	1180.74		1181.73	0.003278	9.21	8565.34	2494.65	0.67
Reach-1	18.05	PF 2	55980	1173.2	1181.4		1182.48	0.002792	9.12	7278.1	1340	0.63
Reach-1	18.14	PF 1	55980	1175.1	1182.35		1183.06	0.002526	7.44	9309.57	2380.18	0.57
Reach-1	18.14	PF 2	55980	1175.1	1182.88		1183.72	0.002368	7.66	7897.97	1456	0.56
Reach-1	18.24	PF 1	55980	1177.8	1183.72		1184.69	0.003947	8.33	7769.21	2253.03	0.69
Reach-1	18.24	PF 2	55980	1177.8	1184.18		1185.1	0.003175	7.94	7459.57	1576	0.62
Reach-1	18.33	PF 1	55980	1179.4	1185.78		1186.84	0.004546	8.56	7023.92	1881.33	0.75
Reach-1	18.33	PF 2	55980	1179.4	1185.91		1187.08	0.004603	8.77	6556.79	1607	0.75
Reach-1	18.43	PF 1	55980	1182.3	1188.2		1189.44	0.005584	9.05	6440.34	1883.58	0.82
Reach-1	18.43	PF 2	55980	1182.3	1188.33		1189.53	0.005147	8.85	6428.03	1701	0.79
Reach-1	18.52	PF 1	55980	1184.9	1190.96		1191.68	0.003514	6.91	8357.18	2245.51	0.61
Reach-1	18.52	PF 2	55980	1184.9	1190.96		1191.69	0.00352	6.92	8260.52	2121.74	0.61
Reach-1	18.62	PF 1	55980	1187.8	1192.89		1193.47	0.003534	6.36	9596.92	2961.83	0.59
Reach-1	18.62	PF 2	55980	1187.8	1192.89		1193.6	0.00414	6.88	8324.01	2330	0.64
Reach-1	18.71	PF 1	55980	1188.1	1195.04		1195.68	0.00558	6.82	9219.9	3791.33	0.71
Reach-1	18.71	PF 2	55980	1188.1	1195.26		1196.06	0.005914	7.3	7825.16	2480	0.73
Reach-1	18.81	PF 1	55980	1190.9	1197.14		1197.62	0.002889	6.05	10942.98	3926.53	0.57
Reach-1	18.81	PF 2	55980	1190.9	1197.44		1197.99	0.002679	6.09	9539.32	2435	0.55
Reach-1	18.9	PF 1	56604	1193.3	1198.83		1199.52	0.004992	7.43	9194.4	3815.15	0.78
Reach-1	18.9	PF 2	56604	1193.3	1199.02		1200.08	0.006219	8.58	6978.48	2280	0.87
Reach-1	19	PF 1	56604	1195	1200.85		1201.32	0.003129	6.62	11385.67	3919.8	0.61
Reach-1	19	PF 2	56604	1195	1201.44		1202.15	0.003159	7.34	8661.67	2075	0.63
Reach-1	19.09	PF 1	56604	1197.8	1202.49		1203.52	0.00716	10.12	8584.1	3995.88	0.92
Reach-1	19.09	PF 2	56604	1197.8	1203.03		1204.38	0.006486	10.54	6601.03	1820	0.9
Reach-1	19.19	PF 1	56604	1198.8	1205.16		1206.12	0.004241	9.84	8830.78	2814.84	0.75
Reach-1	19.19	PF 2	56604	1198.8	1205.62		1206.97	0.004527	10.75	6810.39	1530	0.79
Reach-1	19.28	PF 1	56604	1201.1	1207.27		1208.35	0.004578	10.64	8382.29	2584.97	0.79
Reach-1	19.28	PF 2	56604	1201.1	1207.81		1209.3	0.004657	11.41	6465.18	1335	0.81
Reach-1	19.38	PF 1	56604	1202.3	1209.52		1210.97	0.005542	11.72	7332.83	2296.99	0.87
Reach-1	19.38	PF 2	56604	1202.3	1210.07		1211.81	0.005152	12.01	5960.91	1225	0.85
Reach-1	19.47	PF 1	56604	1203.8	1211.72		1212.67	0.003525	10.51	8534.14	2183.25	0.71
Reach-1	19.47	PF 2	56604	1203.8	1212.2		1213.67	0.00427	12.11	6540.32	1235	0.79
Reach-1	19.56	PF 1	56604	1207.1	1214.51	1214.51	1216.2	0.007277	13.81	6494.29	1807.38	1
Reach-1	19.56	PF 2	56604	1207.1	1214.61	1214.4	1216.7	0.00751	14.2	5294.19	1055	1.02
Reach-1	19.66	PF 1	56604	1209.1	1217.31		1218.25	0.003143	10.76	8624.03	1871.06	0.69
Reach-1	19.66	PF 2	56604	1209.1	1217.61		1218.85	0.003273	11.26	6876.39	1060	0.7
Reach-1	19.75	PF 1	56604	1211.3	1219.31		1220.9	0.005327	13.6	6838.98	1649.56	0.89
Reach-1	19.75	PF 2	56604	1211.3	1219.7		1221.28	0.004499	12.95	6349.01	1140	0.82
Reach-1	19.85	PF 1	56604	1212.7	1222.12		1223.11	0.00286	10.91	9192.28	2225.95	0.66
Reach-1	19.85	PF 2	56604	1212.7	1222.15		1223.48	0.003392	11.91	7309.39	1395	0.72
Reach-1	19.94	PF 1	56604	1214.7	1223.1		1224.95	0.00571	14.68	7291.88	2288.71	0.93
Reach-1	19.94	PF 2	56604	1214.7	1223.6	1223.6	1225.48	0.004958	14.27	6531.67	1475	0.87
Reach-1	20.14	PF 1	56604	1219	1226.76		1227.65	0.002416	9.14	9785.59	2712.9	0.6
Reach-1	20.14	PF 2	56604	1219	1227.13		1228.43	0.002894	10.34	7361.09	1535	0.66
Reach-1	20.32	PF 1	56604	1223.5	1229.18		1230.08	0.003436	8.07	8589.67	2899.21	0.66
Reach-1	20.32	PF 2	56604	1223.5	1230.01		1230.87	0.002431	7.57	7837.53	1584	0.57
Reach-1	20.42	PF 1	56604	1226.2	1231.2		1232.17	0.005055	8.29	7906.59	2877.47	0.77
Reach-1	20.42	PF 2	56604	1226.2	1231.49		1232.65	0.004981	8.66	6580.63	1704	0.77

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	20.51	PF 1	56604	1228.4	1233.67		1234.41	0.003967	7.44	9015.32	3062.42	0.68
Reach-1	20.51	PF 2	56604	1228.4	1233.97		1234.97	0.004302	8.16	7170.21	1864	0.72
Reach-1	20.61	PF 1	56604	1230	1235.73		1236.5	0.004424	7.47	8620.36	2987.71	0.71
Reach-1	20.61	PF 2	56604	1230	1236.14		1237.08	0.004122	7.78	7300.46	1905	0.7
Reach-1	20.7	PF 1	56604	1232	1237.85		1238.47	0.003484	6.81	9433.6	2899.65	0.63
Reach-1	20.7	PF 2	56604	1232	1238.21		1239.2	0.004298	8.03	7161.92	1790	0.7
Reach-1	20.8	PF 1	56604	1234.3	1239.83		1240.8	0.00596	8.74	7869.57	2772.65	0.81
Reach-1	20.8	PF 2	56604	1234.3	1240.41		1241.47	0.004778	8.58	7000.69	1705	0.73
Reach-1	20.89	PF 1	56604	1236.9	1242.71		1243.93	0.006219	10.16	7352.65	2537.97	0.87
Reach-1	20.89	PF 2	56604	1236.9	1242.85		1244.01	0.005266	9.56	6803.07	1625	0.81
Reach-1	20.98	PF 1	56604	1239.7	1245.35		1246.63	0.005663	10.6	6986.2	1891.77	0.85
Reach-1	20.98	PF 2	56604	1239.7	1245.25		1246.7	0.006248	10.98	6263.88	1515	0.89
Reach-1	21.08	PF 1	56604	1241.7	1248.1		1249.17	0.005331	10.59	7550.57	1983.54	0.83
Reach-1	21.08	PF 2	56604	1241.7	1248.19		1249.51	0.005807	11.2	6638.58	1535	0.87
Reach-1	21.17	PF 1	56604	1242.7	1250.58		1251.59	0.004481	10.61	8403.78	2397.36	0.78
Reach-1	21.17	PF 2	56604	1242.7	1250.82		1251.95	0.004193	10.55	7349.88	1580	0.76
Reach-1	21.27	PF 1	56604	1245.3	1252.68		1253.74	0.004282	11.27	8088.21	2061.59	0.78
Reach-1	21.27	PF 2	56604	1245.3	1252.86		1253.94	0.00393	10.99	7680.99	1645	0.75
Reach-1	21.36	PF 1	56604	1246.9	1254.59		1255.45	0.003142	9.75	9130.06	2296.71	0.67
Reach-1	21.36	PF 2	56604	1246.9	1254.62		1255.77	0.003852	10.82	7677.1	1735	0.74
Reach-1	21.46	PF 1	56604	1249.4	1256.19		1256.98	0.003016	8.16	8999.18	2370.9	0.63
Reach-1	21.46	PF 2	56604	1249.4	1256.5		1257.58	0.003456	9.08	7557.68	1799	0.68
Reach-1	21.55	PF 1	56604	1251.4	1257.95		1259.26	0.0054	10.25	7357.28	2518.19	0.83
Reach-1	21.55	PF 2	56604	1251.4	1258.33		1259.89	0.005306	10.7	6407.54	1785	0.83
Reach-1	21.65	PF 1	56604	1253.1	1260.36		1261.25	0.003272	8.35	8550.39	2414.3	0.65
Reach-1	21.65	PF 2	56604	1253.1	1260.83		1261.81	0.002949	8.41	7746.12	1725	0.63
Reach-1	21.74	PF 1	56604	1255	1261.81		1262.44	0.002009	6.73	9776.57	2459.5	0.52
Reach-1	21.74	PF 2	56604	1255	1262.25		1262.91	0.001763	6.65	8982.34	1700	0.49
Reach-1	21.84	PF 1	56604	1256.8	1262.94		1263.69	0.003347	7.34	8682.38	2493.93	0.62
Reach-1	21.84	PF 2	56604	1256.8	1263.25		1264.12	0.003276	7.6	7660.84	1715	0.62
Reach-1	21.93	PF 1	56604	1258.5	1264.61		1265.48	0.00379	7.66	7819	2111.31	0.65
Reach-1	21.93	PF 2	56604	1258.5	1264.91		1265.73	0.003177	7.33	7863.78	1750	0.6
Reach-1	22.03	PF 1	57230	1260.3	1266.76		1267.88	0.005763	8.79	7036.43	2067.7	0.79
Reach-1	22.03	PF 2	57230	1260.3	1266.76		1268.16	0.006826	9.56	6087.99	1645	0.86
Reach-1	22.12	PF 1	57230	1261.3	1268.96		1269.51	0.001915	6.18	10153.2	2168.57	0.47
Reach-1	22.12	PF 2	57230	1261.3	1269.27		1269.94	0.002029	6.58	8765.7	1567	0.49
Reach-1	22.21	PF 1	57230	1263.1	1270.11		1271.11	0.004716	8.19	7458.72	2081.77	0.71
Reach-1	22.21	PF 2	57230	1263.1	1270.44		1271.43	0.004094	8	7197.83	1635	0.67
Reach-1	22.31	PF 1	57230	1264.2	1272.54	1271.8	1273.48	0.00463	8.05	7778.73	2288.54	0.69
Reach-1	22.31	PF 2	57230	1264.2	1272.61	1271.68	1273.64	0.004714	8.21	7087.26	1675	0.7
Reach-1	22.4	PF 1	57230	1266.3	1274.84		1275.8	0.004587	8.08	7726.32	2301.26	0.69
Reach-1	22.4	PF 2	57230	1266.3	1274.95		1275.93	0.004436	8.07	7393.81	1826	0.68
Reach-1	22.5	PF 1	57230	1267.7	1277.07		1277.8	0.00342	6.98	8627.98	2222.89	0.59
Reach-1	22.5	PF 2	57230	1267.7	1277.13		1277.94	0.003598	7.21	7980.6	1815	0.6
Reach-1	22.59	PF 1	57230	1270.5	1278.71		1279.51	0.003373	7.23	7997.9	2153.42	0.68
Reach-1	22.59	PF 2	57230	1270.5	1278.86		1279.77	0.003632	7.67	7508.02	1965	0.71
Reach-1	22.69	PF 1	57230	1272.4	1280.31		1280.95	0.002661	6.15	9057.2	2435.91	0.6
Reach-1	22.69	PF 2	57230	1272.4	1280.62		1281.47	0.003337	7.15	7814.26	1975	0.67

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	22.78	PF 1	57230	1275.1	1281.93		1282.81	0.005613	7.35	7728.76	2470.56	0.78
Reach-1	22.78	PF 2	57230	1275.1	1282.51		1283.59	0.005498	8.24	6903.4	1845	0.79
Reach-1	22.88	PF 1	57230	1277.5	1284.05		1284.77	0.004071	7.62	8810.22	2481.35	0.69
Reach-1	22.88	PF 2	57230	1277.5	1284.69		1285.55	0.003639	8	7926.64	1775	0.67
Reach-1	22.97	PF 1	57230	1279.9	1285.6		1286.12	0.002667	6.4	10124.62	2345.32	0.57
Reach-1	22.97	PF 2	57230	1279.9	1286.26		1287.03	0.003264	7.83	8273.13	1690	0.64
Reach-1	23.07	PF 1	57230	1281.8	1287.33		1288.34	0.006168	10.56	7787.99	2318.09	0.88
Reach-1	23.07	PF 2	57230	1281.8	1288.11		1289.21	0.004788	10.35	7179.59	1540	0.8
Reach-1	23.16	PF 1	57230	1284.2	1290.22		1291.15	0.005141	10.63	8077.04	2142.32	0.82
Reach-1	23.16	PF 2	57230	1284.2	1290.59		1291.77	0.005389	11.39	7117.85	1640	0.85
Reach-1	23.26	PF 1	57230	1286	1293		1294.39	0.006185	12.23	7246.55	2111.85	0.91
Reach-1	23.26	PF 2	57230	1286	1293.28		1294.42	0.00428	10.51	7219.21	1466	0.77
Reach-1	23.35	PF 1	57230	1287.4	1295.55		1297.05	0.004816	11.9	7489.45	2210.37	0.83
Reach-1	23.35	PF 2	57230	1287.4	1295.22		1297.01	0.005877	12.69	6229.69	1492.82	0.9
Reach-1	23.45	PF 1	57230	1289.9	1297.92		1298.66	0.002641	9.12	9784.22	2313.09	0.62
Reach-1	23.45	PF 2	57230	1289.9	1297.95		1298.78	0.002658	9.18	8498.11	1529	0.62
Reach-1	23.54	PF 1	57230	1291.8	1298.85		1299.67	0.002641	8.32	9212.94	2289.5	0.6
Reach-1	23.54	PF 2	57230	1291.8	1298.92		1299.73	0.002426	8.04	8473.22	1590	0.58
Reach-1	23.63	PF 1	57230	1293.4	1300.17		1301.15	0.003529	8.75	8017.19	2007.53	0.68
Reach-1	23.63	PF 2	57230	1293.4	1300.15		1301.21	0.003721	8.96	7400.51	1645	0.7
Reach-1	23.73	PF 1	57230	1296.1	1302.12		1303.07	0.004163	8.69	7877.94	2028.15	0.72
Reach-1	23.73	PF 2	57230	1296.1	1302.19		1303.16	0.004032	8.64	7588.22	1781	0.71
Reach-1	23.82	PF 1	57230	1298	1304.25		1305.37	0.005094	9.95	7685.09	2247.6	0.81
Reach-1	23.82	PF 2	57230	1298	1304.27		1305.44	0.005137	10.03	7380.19	2000	0.81
Reach-1	23.92	PF 1	57230	1300	1306.64		1307.66	0.004636	9.9	7966.65	2121.45	0.78
Reach-1	23.92	PF 2	57230	1300	1306.7		1307.68	0.004405	9.73	8096.57	2120	0.76
Reach-1	24.01	PF 1	57230	1302.2	1308.66		1309.51	0.003389	8.74	8743.38	2215.75	0.67
Reach-1	24.01	PF 2	57230	1302.2	1308.64		1309.5	0.003417	8.76	8688.77	2186	0.67
Reach-1	24.11	PF 1	57230	1304.4	1310.34		1311.33	0.00398	8.85	8042.95	2233.18	0.71
Reach-1	24.11	PF 2	57230	1304.4	1310.34		1311.33	0.003996	8.86	8028.29	2227	0.72
Reach-1	24.2	PF 1	57230	1306.4	1312.49		1313.37	0.004396	8.28	8319.01	2480.06	0.72
Reach-1	24.2	PF 2	57230	1306.4	1312.48		1313.37	0.004426	8.3	8118.71	2290	0.72
Reach-1	24.3	PF 1	57230	1308.7	1314.96		1315.97	0.006301	8.66	7474.62	2386.59	0.81
Reach-1	24.3	PF 2	57230	1308.7	1314.97		1315.98	0.0063	8.66	7398.52	2311	0.81
Reach-1	24.39	PF 1	57230	1310.8	1317.44		1318.02	0.002855	6.25	9700.55	2558.57	0.54
Reach-1	24.39	PF 2	57230	1310.8	1317.47		1318.11	0.003065	6.5	8939.11	2145	0.56
Reach-1	24.49	PF 1	57230	1312.7	1319.12		1320.13	0.006099	8.29	7519.56	2639.85	0.78
Reach-1	24.49	PF 2	57230	1312.7	1319.24		1320.37	0.006201	8.53	6811.43	1999	0.79
Reach-1	24.58	PF 1	57230	1315.2	1321.64		1322.42	0.003581	7.47	8777.55	2765.07	0.66
Reach-1	24.58	PF 2	57230	1315.2	1321.81		1322.7	0.003614	7.69	7625.35	1868	0.67
Reach-1	24.68	PF 1	57230	1316.6	1323.61		1324.72	0.005689	9.02	7520.03	2741.2	0.84
Reach-1	24.68	PF 2	57230	1316.6	1323.78		1325.14	0.006074	9.55	6213.38	1685	0.87
Reach-1	24.77	PF 1	57230	1320.1	1326.38		1327.21	0.004387	8.15	8589.84	2720.3	0.72
Reach-1	24.77	PF 2	57230	1320.1	1326.69		1327.8	0.004668	8.8	6939.09	1665	0.75
Reach-1	24.87	PF 1	57230	1322.7	1328.55		1329.26	0.003931	7.72	9133.33	2656.26	0.67
Reach-1	24.87	PF 2	57230	1322.7	1329		1329.84	0.003596	7.9	8000.4	1785	0.65
Reach-1	24.96	PF 1	57230	1323.7	1330.49		1331.4	0.004834	9.01	8412.67	2624.33	0.77
Reach-1	24.96	PF 2	57230	1323.7	1330.81		1331.78	0.004323	8.95	7815.91	1985	0.74
Reach-1	25.06	PF 1	57230	1325.9	1332.61		1333.31	0.003614	8.31	9524.34	2668.09	0.68

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	25.06	PF 2	57230	1325.9	1332.82		1333.7	0.004025	9.02	8288.78	2080	0.72
Reach-1	25.15	PF 1	57854	1329.1	1334.56		1335.58	0.005444	9.93	8451.65	2915.02	0.83
Reach-1	25.15	PF 2	57854	1329.1	1334.85		1335.82	0.00446	9.38	8211.91	2245	0.76
Reach-1	25.24	PF 1	57854	1331	1338.05	1338.05	1339.21	0.008034	11.53	7911.08	3064.11	0.99
Reach-1	25.24	PF 2	57854	1331	1338.26	1338.26	1339.61	0.008102	11.96	7189.41	2450	1
Reach-1	25.34	PF 1	57854	1334.1	1341.09		1341.8	0.003357	8.57	10282.87	3241.26	0.66
Reach-1	25.34	PF 2	57854	1334.1	1341.42		1342.28	0.003487	9.1	9272.72	2635	0.68
Reach-1	25.43	PF 1	57854	1336.3	1342.82		1343.54	0.003875	10.56	10399.84	3309.58	0.74
Reach-1	25.43	PF 2	57854	1336.3	1343.2		1343.96	0.00356	10.52	10014.45	2830	0.72
Reach-1	25.53	PF 1	57854	1337.6	1344.69		1345.65	0.004577	9.72	9246.2	3398.33	0.77
Reach-1	25.53	PF 2	57854	1337.6	1344.92		1345.97	0.004504	9.94	8674.1	2915	0.77
Reach-1	25.62	PF 1	57854	1340.2	1347.06		1347.85	0.004525	8.42	9427.29	3429.99	0.74
Reach-1	25.62	PF 2	57854	1340.2	1347.24		1348.25	0.005072	9.19	8247.23	2801	0.79
Reach-1	25.72	PF 1	57854	1342.7	1349.27		1350.17	0.004729	8.71	8981.72	3497.34	0.76
Reach-1	25.72	PF 2	57854	1342.7	1349.61		1350.71	0.004827	9.28	8041.07	2795	0.78
Reach-1	25.81	PF 1	57854	1344.1	1351.51		1352.34	0.004159	8.3	9465.72	3726.19	0.71
Reach-1	25.81	PF 2	57854	1344.1	1351.89		1352.89	0.004092	8.72	8337.12	2810	0.72
Reach-1	25.91	PF 1	57854	1348	1353.46		1354.17	0.003861	7.72	9717.28	3561.27	0.68
Reach-1	25.91	PF 2	57854	1348	1353.88		1354.75	0.003774	8.16	8708.05	2785	0.69
Reach-1	26	PF 1	57854	1349.1	1355.45		1356.22	0.00495	7.95	9068.79	3488.45	0.75
Reach-1	26	PF 2	57854	1349.1	1355.86		1356.88	0.005104	8.7	7936.36	2723	0.78
Reach-1	26.1	PF 1	57854	1352.5	1357.84		1358.53	0.004552	7.58	9397.44	3316.05	0.72
Reach-1	26.1	PF 2	57854	1352.5	1358.33		1359.12	0.00408	7.85	8771.24	2665	0.7
Reach-1	26.19	PF 1	57854	1354.5	1360.17		1360.76	0.004346	7.16	9875.37	3244.66	0.7
Reach-1	26.19	PF 2	57854	1354.5	1360.54		1361.29	0.004602	7.92	8812.52	2610	0.73
Reach-1	26.29	PF 1	57854	1356.7	1362.61		1363.24	0.004877	8.14	9906.23	3458.39	0.75
Reach-1	26.29	PF 2	57854	1356.7	1363.02		1363.85	0.005032	8.88	8569.85	2535	0.78
Reach-1	26.38	PF 1	57854	1357.6	1364.81		1365.41	0.003921	7.45	10312.51	3560.23	0.66
Reach-1	26.38	PF 2	57854	1357.6	1365.23		1365.89	0.003402	7.4	9349.32	2495	0.62
Reach-1	26.48	PF 1	57854	1359.4	1366.77		1367.41	0.004642	6.48	9772.93	3531.62	0.64
Reach-1	26.48	PF 2	57854	1359.4	1366.98		1367.72	0.004404	6.56	8715.98	2490	0.63
Reach-1	26.57	PF 1	57854	1361.8	1369.08		1369.93	0.005468	6.26	9299.2	3670.67	0.65
Reach-1	26.57	PF 2	57854	1361.8	1369.15		1369.93	0.004613	5.83	8817.39	2590	0.6
Reach-1	26.67	PF 1	57854	1363.9	1371.6		1372.12	0.004258	5.84	10766.73	3932.9	0.6
Reach-1	26.67	PF 2	57854	1363.9	1371.45		1372.2	0.005546	6.46	8545.59	2705	0.68
Reach-1	26.76	PF 1	57854	1366.6	1373.38		1373.91	0.006058	6.03	9964.78	3989.62	0.72
Reach-1	26.76	PF 2	57854	1366.6	1373.63		1374.35	0.006166	6.42	8500.94	2822	0.73
Reach-1	26.85	PF 1	57854	1371	1375.53		1376.1	0.005731	5.43	9871.32	3761.51	0.68
Reach-1	26.85	PF 2	57854	1371	1375.89		1376.58	0.005468	5.86	8875.08	2865	0.68
Reach-1	26.95	PF 1	57854	1373.5	1377.08		1377.59	0.006223	6.29	10080.19	3830.79	0.78
Reach-1	26.95	PF 2	57854	1373.5	1377.52		1378.17	0.006267	7.19	8990.34	2928	0.8
Reach-1	27.04	PF 1	57854	1375.4	1379.56		1379.99	0.004431	6.3	11162.15	3949.41	0.68
Reach-1	27.04	PF 2	57854	1375.4	1380.15		1380.75	0.004982	7.63	9527.74	3007	0.75
Reach-1	27.14	PF 1	57854	1377.6	1382.31		1382.78	0.004107	7.43	11333.99	4049.46	0.69
Reach-1	27.14	PF 2	57854	1377.6	1382.87		1383.41	0.003607	7.68	10526.53	3100	0.66
Reach-1	27.23	PF 1	57854	1379.6	1384.91		1385.51	0.005208	8.75	10695.09	4381.74	0.79
Reach-1	27.23	PF 2	57854	1379.6	1385.23		1386.02	0.005536	9.53	9297.83	3308	0.82
Reach-1	27.33	PF 1	57854	1381.5	1387.22		1388.03	0.006201	9.29	9772.88	4658.04	0.83
Reach-1	27.33	PF 2	57854	1381.5	1387.63		1388.59	0.005793	9.58	8745.84	3478	0.82

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	27.52	PF 1	57854	1385.2	1391.14	1390.23	1391.56	0.003703	6.05	12291.17	5055.91	0.63
Reach-1	27.52	PF 2	57854	1385.2	1391.72		1392.28	0.003675	6.6	10598.83	3650	0.63
Reach-1	27.61	PF 1	57854	1387.7	1393.25		1393.84	0.006628	7.37	10346.76	5106.58	0.77
Reach-1	27.61	PF 2	57854	1387.7	1393.73		1394.4	0.005562	7.39	9568.59	3760	0.72
Reach-1	27.78	PF 1	57854	1389.6	1396.02		1396.31	0.002138	5.1	15866	5348.65	0.45
Reach-1	27.78	PF 2	57854	1389.6	1396.42		1396.76	0.002051	5.31	14037.21	3960	0.44
Reach-1	27.97	PF 1	58418	1392.9	1398.39		1398.81	0.005973	5.85	11760.43	5738.05	0.67
Reach-1	27.97	PF 2	58418	1392.9	1398.82		1399.33	0.005596	6.29	10393.14	4045	0.67
Reach-1	28.09	PF 1	58418	1396.9	1401.35	1400.65	1401.68	0.004603	5.07	12889.14	6021.56	0.63
Reach-1	28.09	PF 2	58418	1396.9	1401.87		1402.35	0.004892	5.99	10663.6	4100	0.66
Reach-1	28.19	PF 1	58418	1399	1403.67		1404.04	0.005877	4.76	11981.35	6079.29	0.68
Reach-1	28.19	PF 2	58418	1399	1404.47		1405.02	0.006571	6.32	9860.12	4195	0.74
Reach-1	28.28	PF 1	58418	1403.2	1406.67	1406.06	1407.03	0.005812	4.84	12135.82	6105.62	0.65
Reach-1	28.28	PF 2	58418	1403.2	1407.4		1407.82	0.004712	5.35	11249.49	4409	0.6
Reach-1	28.38	PF 1	58418	1405	1409.43		1409.79	0.004686	4.72	12160.1	5796.34	0.65
Reach-1	28.38	PF 2	58418	1405	1409.95		1410.41	0.005265	5.67	10707.29	4669	0.68
Reach-1	28.47	PF 1	58418	1407.6	1412.06		1412.43	0.005714	4.79	11879.65	6304.89	0.69
Reach-1	28.47	PF 2	58418	1407.6	1412.78		1413.3	0.006116	6	10257.55	4745	0.71
Reach-1	28.57	PF 1	58418	1410.1	1415.12		1415.68	0.00612	6.26	10299.84	5420.5	0.74
Reach-1	28.57	PF 2	58418	1410.1	1415.46		1415.97	0.004519	5.81	10549.35	4515	0.64
Reach-1	28.66	PF 1	58418	1411.7	1417.84		1418.27	0.005092	5.58	11356.28	5594.73	0.68
Reach-1	28.66	PF 2	58418	1411.7	1417.97		1418.59	0.006347	6.43	9386.81	4295	0.76
Reach-1	28.76	PF 1	58418	1415.2	1420.59		1421.05	0.006828	5.56	10872.24	5542.89	0.71
Reach-1	28.76	PF 2	58418	1415.2	1421.13		1421.71	0.006304	6.15	9572.76	3925	0.69
Reach-1	28.85	PF 1	58418	1418.3	1423.41		1423.78	0.004951	4.8	12012.05	5606.97	0.62
Reach-1	28.85	PF 2	58418	1418.3	1424.06		1424.62	0.005396	5.88	9768.36	3735	0.65
Reach-1	28.95	PF 1	58418	1420.1	1425.69		1426.07	0.004586	4.74	12062.62	5527.22	0.61
Reach-1	28.95	PF 2	58418	1420.1	1426.44		1426.92	0.004043	5.33	10597.32	3780	0.58
Reach-1	29.04	PF 1	58418	1422.1	1427.84		1428.46	0.005751	4.91	10383.05	5491.12	0.7
Reach-1	29.04	PF 2	58418	1422.1	1428.35		1428.96	0.004629	5.01	10061.3	4005	0.62
Reach-1	29.13	PF 1	58418	1424.9	1430.82		1431.18	0.003901	4.99	12519.39	5930.75	0.61
Reach-1	29.13	PF 2	58418	1424.9	1430.96		1431.36	0.003793	5.07	11607.64	4664	0.6
Reach-1	29.23	PF 1	58418	1427.6	1433.14		1433.53	0.00655	5.28	11790.91	6068.72	0.65
Reach-1	29.23	PF 2	58418	1427.6	1433.25		1433.69	0.006523	5.46	11062.61	5134	0.65
Reach-1	29.32	PF 1	58418	1429.8	1435.99		1436.36	0.005305	5.08	12437.42	6166.09	0.59
Reach-1	29.32	PF 2	58418	1429.8	1436.08		1436.47	0.005213	5.16	11733.98	5028	0.59
Reach-1	29.42	PF 1	58418	1432	1438.32		1438.72	0.004182	5.38	11927.52	5382.1	0.61
Reach-1	29.42	PF 2	58418	1432	1438.34		1438.74	0.004149	5.39	11693.45	4865	0.61
Reach-1	29.51	PF 1	58418	1435.6	1440.96	1440.43	1441.42	0.007024	5.35	10927.28	5386.19	0.66
Reach-1	29.51	PF 2	58418	1435.6	1441	1440.42	1441.49	0.007179	5.47	10416.29	4695	0.67
Reach-1	29.61	PF 1	58418	1438.7	1443.97		1444.34	0.00488	5.12	12220.01	5560.36	0.59
Reach-1	29.61	PF 2	58418	1438.7	1444.08		1444.5	0.004925	5.31	11344.77	4540	0.59
Reach-1	29.7	PF 1	58418	1442	1446.7	1446.31	1447.27	0.005865	6.57	10450.64	5346.01	0.74
Reach-1	29.7	PF 2	58418	1442	1446.76	1446.31	1447.3	0.005332	6.33	10259.3	4525	0.71
Reach-1	29.8	PF 1	58418	1444.4	1449.72		1450.19	0.005418	6.07	11249.5	5393.03	0.67
Reach-1	29.8	PF 2	58418	1444.4	1449.72		1450.31	0.006395	6.6	9836.44	4381	0.73
Reach-1	29.89	PF 1	58418	1447.5	1452.58		1453.18	0.005698	6.49	10462.27	5195.13	0.7
Reach-1	29.89	PF 2	58418	1447.5	1452.7		1453.25	0.00483	6.13	10315.81	4086	0.65

Profile Output Table - Standard Table 1
HEC-RAS Plan: Base HEC2 River: RIVER-1 Reach: Reach-1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	29.99	PF 1	58418	1450.6	1455.3		1455.83	0.005074	6.41	10799.42	5205.08	0.7
Reach-1	29.99	PF 2	58418	1450.6	1455.29		1456.03	0.006411	7.17	9038.59	3920	0.79
Reach-1	30.08	PF 1	58418	1453.3	1457.93		1458.62	0.005966	6.83	9621.33	4556.6	0.75
Reach-1	30.08	PF 2	58418	1453.3	1458.16		1458.8	0.004837	6.47	9770.52	3950	0.68
Reach-1	30.18	PF 1	58418	1456.6	1460.77		1461.39	0.00521	6.77	9994.56	4550.77	0.74
Reach-1	30.18	PF 2	58418	1456.6	1460.73		1461.4	0.005649	6.99	9402.22	4095	0.77
Reach-1	30.27	PF 1	58418	1459.4	1463.7		1464.33	0.006581	6.91	9535.47	4162.14	0.77
Reach-1	30.27	PF 2	58418	1459.4	1463.76		1464.35	0.006081	6.73	9778.22	4161	0.74
Reach-1	30.37	PF 1	58418	1461.9	1466.77		1467.37	0.005508	6.84	10036.85	4384.72	0.74
Reach-1	30.37	PF 2	58418	1461.9	1466.74		1467.36	0.005778	6.95	9878.43	4380.56	0.75
Reach-1	30.46	PF 1	58418	1463.8	1469.32		1469.82	0.004681	6.21	10879.77	4732.16	0.68
Reach-1	30.46	PF 2	58418	1463.8	1469.34		1469.84	0.004623	6.2	10825.34	4590	0.68
Reach-1	30.56	PF 1	58418	1467.5	1471.74		1472.35	0.005766	6.74	9970.13	4612.25	0.77
Reach-1	30.56	PF 2	58418	1467.5	1471.74		1472.35	0.005745	6.73	9962.65	4559	0.77
Reach-1	30.65	PF 1	58418	1470.3	1474.49		1475.03	0.005371	6.63	10575.06	4732.03	0.72
Reach-1	30.65	PF 2	58418	1470.3	1474.48		1475.02	0.005327	6.58	10345.13	4366	0.72
Reach-1	30.74	PF 1	58418	1473.1	1477.23	1476.91	1477.9	0.006411	7.06	9640.77	4616.04	0.78
Reach-1	30.74	PF 2	58418	1473.1	1477.21	1476.9	1477.89	0.006513	7.08	9377.24	4210	0.79
Reach-1	30.84	PF 1	58418	1474.8	1479.83		1480.3	0.004079	6.09	11509.03	5092.08	0.65
Reach-1	30.84	PF 2	58418	1474.8	1479.87		1480.4	0.004336	6.33	10429.49	4123	0.67
Reach-1	30.93	PF 1	58418	1477	1481.93		1482.42	0.005335	6.1	10744.19	5014.25	0.73
Reach-1	30.93	PF 2	58418	1477	1482.21		1482.89	0.006165	6.94	9086.5	3951	0.79
Reach-1	31.03	PF 1	59030	1479.5	1484.6		1485.17	0.006962	6.79	10260.07	5550.78	0.86
Reach-1	31.03	PF 2	59030	1479.5	1485.06		1485.67	0.005515	6.57	9431.45	3836	0.75

APPENDIX D

HEC-RAS Output Files for Existing or Pre-Project Conditions Model

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	15.68	Floodplain	55980	1124.06	1132.15	1130.91	1133.01	0.003128	8.01	8043.39	1997.42	0.64
Douglas R	15.68	Floodway	55980	1124.06	1132.22	1130.91	1133.12	0.003181	8.16	7791.86	1753	0.64
Douglas R	15.78	Floodplain	55980	1125.36	1133.63		1134.31	0.002259	7.17	9232.92	2152.12	0.55
Douglas R	15.78	Floodway	55980	1125.36	1133.69		1134.5	0.002519	7.63	8104.86	1659.63	0.58
Douglas R	15.87	Floodplain	55980	1127.26	1134.79		1136.08	0.004871	9.62	7138.64	2563.9	0.79
Douglas R	15.87	Floodway	55980	1127.26	1135.01		1136.21	0.004179	9.2	6929.05	1830	0.73
Douglas R	15.97	Floodplain	55980	1129.76	1137		1137.79	0.002579	7.5	8822.64	2540.51	0.58
Douglas R	15.97	Floodway	55980	1129.76	1137		1137.78	0.002499	7.39	8535.19	2020	0.57
Douglas R	16.06	Floodplain	55980	1132.16	1138.51		1139.06	0.002642	6.85	10086.5	2640.4	0.57
Douglas R	16.06	Floodway	55980	1132.16	1138.45		1139.07	0.002898	7.11	9180.81	2195	0.6
Douglas R	16.16	Floodplain	55980	1135.16	1140.06	1140.06	1141.33	0.00944	11.65	7027.09	2747.3	1.06
Douglas R	16.16	Floodway	55980	1135.16	1140.12	1140.12	1141.46	0.009362	11.74	6704.44	2407	1.06
Douglas R	16.25	Floodplain	55980	1136.36	1142.97		1143.46	0.002566	7	10889.12	3035.61	0.57
Douglas R	16.25	Floodway	55980	1136.36	1143.05		1143.54	0.002465	6.94	10646.11	2665	0.56
Douglas R	16.35	Floodplain	55980	1138.66	1144.21		1144.73	0.003048	6.69	10175.25	2937.69	0.6
Douglas R	16.35	Floodway	55980	1138.66	1144.24		1144.76	0.002962	6.64	10088.33	2735	0.59
Douglas R	16.44	Floodplain	55980	1140.06	1146.09		1146.88	0.006113	7.95	8085.57	2876.86	0.82
Douglas R	16.44	Floodway	55980	1140.06	1146.09		1146.88	0.006135	7.96	8039.75	2749.77	0.82
Douglas R	16.53	Floodplain	55980	1142.66	1148.72		1149.48	0.004259	8.32	8948.78	3012.31	0.72
Douglas R	16.53	Floodway	55980	1142.66	1148.73		1149.53	0.00437	8.45	8616.31	2640	0.73
Douglas R	16.63	Floodplain	55980	1144.26	1150.42		1151.35	0.00467	9.49	8490.68	2750.72	0.77
Douglas R	16.63	Floodway	55980	1144.26	1150.46		1151.39	0.00457	9.44	8350.63	2527	0.76
Douglas R	16.72	Floodplain	55980	1146.96	1152.55		1153.43	0.004261	9.03	8767.52	2925.8	0.74
Douglas R	16.72	Floodway	55980	1146.96	1152.56		1153.42	0.004108	8.89	8558.37	2511	0.72
Douglas R	16.82	Floodplain	55980	1148.56	1154.54		1155.08	0.002543	6.84	10325.17	2749.96	0.57
Douglas R	16.82	Floodway	55980	1148.56	1154.51		1155.12	0.00278	7.13	9649.5	2456	0.59
Douglas R	16.91	Floodplain	55980	1151.26	1156.16		1157.21	0.006847	9.89	7779.73	2908.67	0.9
Douglas R	16.91	Floodway	55980	1151.26	1156.24		1157.4	0.007027	10.16	7263.6	2495	0.92
Douglas R	17.01	Floodplain	55980	1153.06	1158.85		1159.6	0.004109	8.57	9383.84	3462.56	0.72
Douglas R	17.01	Floodway	55980	1153.06	1159		1159.87	0.004328	9	8363.94	2435	0.74
Douglas R	17.1	Floodplain	55980	1155.06	1160.77		1161.51	0.004339	8.59	9430.12	3440.58	0.73
Douglas R	17.1	Floodway	55980	1155.06	1160.99		1161.85	0.004351	8.9	8274.52	2280	0.74
Douglas R	17.2	Floodplain	55980	1157.36	1162.74		1163.21	0.002847	6.73	11129.25	3417.69	0.59
Douglas R	17.2	Floodway	55980	1157.36	1163.04		1163.83	0.003836	8.19	8250.9	2045	0.69
Douglas R	17.29	Floodplain	55980	1159.56	1164.48		1165.23	0.005749	8.65	8906.2	3297.87	0.82
Douglas R	17.29	Floodway	55980	1159.56	1165.14		1166.38	0.006336	10.19	6704.17	1815	0.88
Douglas R	17.39	Floodplain	55980	1161.66	1167.08		1167.71	0.004245	7.96	9654.58	3160.82	0.71
Douglas R	17.39	Floodway	55980	1161.66	1167.97		1168.97	0.004203	9.1	7386.87	1675	0.73
Douglas R	17.48	Floodplain	55980	1163.06	1169.2		1170.06	0.005495	10.02	8922.77	3278.88	0.83
Douglas R	17.48	Floodway	55980	1163.06	1170.01		1171.27	0.005205	10.89	6817.3	1585	0.83
Douglas R	17.58	Floodplain	55980	1165.96	1171.76		1172.7	0.005517	11.35	8264.64	2475.31	0.86
Douglas R	17.58	Floodway	55980	1165.96	1172.5		1173.5	0.004096	10.65	7550.81	1550	0.76
Douglas R	17.67	Floodplain	55980	1167.06	1174.21		1175.17	0.004381	10.71	8682.8	2576.82	0.78
Douglas R	17.67	Floodway	55980	1167.06	1174.49		1175.62	0.004186	10.8	7303.55	1550	0.76
Douglas R	17.77	Floodplain	55980	1169.86	1176.52		1177.57	0.005242	12.15	7971.49	2234.11	0.86
Douglas R	17.77	Floodway	55980	1169.86	1176.72		1177.73	0.004286	11.23	7530.5	1568	0.78
Douglas R	17.86	Floodplain	55980	1171.86	1178.88		1179.62	0.003088	9.69	9185.62	2096.11	0.66
Douglas R	17.86	Floodway	55980	1171.86	1178.79		1179.75	0.003623	10.4	7730.09	1505	0.72
Douglas R	17.95	Floodplain	55980	1172.76	1180.47		1181.54	0.004778	11.77	8039.84	2167.09	0.82
Douglas R	17.95	Floodway	55980	1172.76	1180.52		1182.2	0.006203	13.48	6009.59	1260	0.94

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	18.05	Floodplain	55980	1174.96	1182.5		1183.49	0.003278	9.21	8565.34	2494.65	0.67
Douglas R	18.05	Floodway	55980	1174.96	1183.16		1184.24	0.002792	9.12	7278.1	1340	0.63
Douglas R	18.14	Floodplain	55980	1176.86	1184.11		1184.82	0.002526	7.44	9309.57	2380.18	0.57
Douglas R	18.14	Floodway	55980	1176.86	1184.64		1185.48	0.002368	7.66	7897.97	1456	0.56
Douglas R	18.24	Floodplain	55980	1179.56	1185.48		1186.45	0.003947	8.33	7769.21	2253.03	0.69
Douglas R	18.24	Floodway	55980	1179.56	1185.94		1186.86	0.003175	7.94	7459.57	1576	0.62
Douglas R	18.33	Floodplain	55980	1181.16	1187.54		1188.6	0.004546	8.56	7023.92	1881.33	0.75
Douglas R	18.33	Floodway	55980	1181.16	1187.67		1188.84	0.004603	8.77	6556.79	1607	0.75
Douglas R	18.43	Floodplain	55980	1184.06	1189.96		1191.2	0.005584	9.05	6440.34	1883.58	0.82
Douglas R	18.43	Floodway	55980	1184.06	1190.09		1191.29	0.005147	8.85	6428.03	1701	0.79
Douglas R	18.52	Floodplain	55980	1186.66	1192.72		1193.44	0.003514	6.91	8357.18	2245.51	0.61
Douglas R	18.52	Floodway	55980	1186.66	1192.72		1193.45	0.00352	6.92	8260.52	2121.74	0.61
Douglas R	18.62	Floodplain	55980	1189.56	1194.65		1195.23	0.003534	6.36	9596.92	2961.83	0.59
Douglas R	18.62	Floodway	55980	1189.56	1194.65		1195.36	0.00414	6.88	8324.01	2330	0.64
Douglas R	18.71	Floodplain	55980	1189.86	1196.8		1197.44	0.00558	6.82	9219.9	3791.33	0.71
Douglas R	18.71	Floodway	55980	1189.86	1197.02		1197.82	0.005914	7.3	7825.16	2480	0.73
Douglas R	18.81	Floodplain	55980	1192.66	1198.9		1199.38	0.002889	6.05	10942.98	3926.53	0.57
Douglas R	18.81	Floodway	55980	1192.66	1199.2		1199.75	0.002679	6.09	9539.32	2435	0.55
Douglas R	18.9	Floodplain	56604	1195.06	1200.59		1201.28	0.004992	7.43	9194.4	3815.15	0.78
Douglas R	18.9	Floodway	56604	1195.06	1200.78		1201.84	0.006219	8.58	6978.48	2280	0.87
Douglas R	19	Floodplain	56604	1196.76	1202.61		1203.08	0.003129	6.62	11385.67	3919.8	0.61
Douglas R	19	Floodway	56604	1196.76	1203.2		1203.91	0.003159	7.34	8661.67	2075	0.63
Douglas R	19.09	Floodplain	56604	1199.56	1204.25		1205.28	0.00716	10.12	8584.1	3995.88	0.92
Douglas R	19.09	Floodway	56604	1199.56	1204.79		1206.14	0.006486	10.54	6601.03	1820	0.9
Douglas R	19.19	Floodplain	56604	1200.56	1206.92		1207.88	0.004241	9.84	8830.78	2814.84	0.75
Douglas R	19.19	Floodway	56604	1200.56	1207.38		1208.73	0.004527	10.75	6810.39	1530	0.79
Douglas R	19.28	Floodplain	56604	1202.86	1209.03		1210.11	0.004578	10.64	8382.29	2584.97	0.79
Douglas R	19.28	Floodway	56604	1202.86	1209.57		1211.06	0.004657	11.41	6465.18	1335	0.81
Douglas R	19.38	Floodplain	56604	1204.06	1211.28		1212.73	0.005542	11.72	7332.83	2296.99	0.87
Douglas R	19.38	Floodway	56604	1204.06	1211.83		1213.57	0.005152	12.01	5960.91	1225	0.85
Douglas R	19.47	Floodplain	56604	1205.56	1213.48		1214.43	0.003525	10.51	8534.14	2183.25	0.71
Douglas R	19.47	Floodway	56604	1205.56	1213.96		1215.43	0.00427	12.11	6540.32	1235	0.79
Douglas R	19.56	Floodplain	56604	1208.86	1216.27	1216.27	1217.96	0.007277	13.81	6494.29	1807.38	1
Douglas R	19.56	Floodway	56604	1208.86	1216.37	1216.16	1218.46	0.00751	14.2	5294.19	1055	1.02
Douglas R	19.66	Floodplain	56604	1210.86	1219.07		1220.01	0.003143	10.76	8624.03	1871.06	0.69
Douglas R	19.66	Floodway	56604	1210.86	1219.37		1220.61	0.003273	11.26	6876.39	1060	0.7
Douglas R	19.75	Floodplain	56604	1213.06	1221.07		1222.66	0.005327	13.6	6838.98	1649.56	0.89
Douglas R	19.75	Floodway	56604	1213.06	1221.46		1223.04	0.004499	12.95	6349.01	1140	0.82
Douglas R	19.85	Floodplain	56604	1214.46	1223.88		1224.87	0.00286	10.91	9192.28	2225.95	0.66
Douglas R	19.85	Floodway	56604	1214.46	1223.91		1225.24	0.003392	11.91	7309.39	1395	0.72
Douglas R	19.94	Floodplain	56604	1216.46	1224.86		1226.71	0.00571	14.68	7291.88	2288.71	0.93
Douglas R	19.94	Floodway	56604	1216.46	1225.36	1225.36	1227.24	0.004958	14.27	6531.67	1475	0.87
Douglas R	20.14	Floodplain	56604	1220.76	1228.52		1229.41	0.002416	9.14	9785.59	2712.9	0.6
Douglas R	20.14	Floodway	56604	1220.76	1228.89		1230.19	0.002894	10.34	7361.09	1535	0.66
Douglas R	20.32	Floodplain	56604	1225.26	1230.94		1231.84	0.003436	8.07	8589.67	2899.21	0.66
Douglas R	20.32	Floodway	56604	1225.26	1231.77		1232.63	0.002431	7.57	7837.53	1584	0.57
Douglas R	20.42	Floodplain	56604	1227.96	1232.96		1233.93	0.005055	8.29	7906.59	2877.47	0.77
Douglas R	20.42	Floodway	56604	1227.96	1233.25		1234.41	0.004981	8.66	6580.63	1704	0.77
Douglas R	20.51	Floodplain	56604	1230.16	1235.43		1236.17	0.003967	7.44	9015.32	3062.42	0.68

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	20.51	Floodway	56604	1230.16	1235.73		1236.73	0.004302	8.16	7170.21	1864	0.72
Douglas R	20.61	Floodplain	56604	1231.76	1237.49		1238.26	0.004424	7.47	8620.36	2987.71	0.71
Douglas R	20.61	Floodway	56604	1231.76	1237.9		1238.84	0.004122	7.78	7300.46	1905	0.7
Douglas R	20.7	Floodplain	56604	1233.76	1239.61		1240.23	0.003484	6.81	9433.6	2899.65	0.63
Douglas R	20.7	Floodway	56604	1233.76	1239.97		1240.96	0.004298	8.03	7161.92	1790	0.7
Douglas R	20.8	Floodplain	56604	1236.06	1241.59		1242.56	0.00596	8.74	7869.57	2772.65	0.81
Douglas R	20.8	Floodway	56604	1236.06	1242.17		1243.23	0.004778	8.58	7000.69	1705	0.73
Douglas R	20.89	Floodplain	56604	1238.66	1244.47		1245.69	0.006219	10.16	7352.65	2537.97	0.87
Douglas R	20.89	Floodway	56604	1238.66	1244.61		1245.77	0.005266	9.56	6803.07	1625	0.81
Douglas R	20.98	Floodplain	56604	1240	1246.65		1247.26	0.00211	7.27	9767.16	2046.28	0.54
Douglas R	20.98	Floodway	56604	1240	1246.6		1247.41	0.00251	7.88	8190.93	1515	0.58
Douglas R	21.08	Floodplain	56604	1241	1247.73		1248.78	0.004749	10.16	7633.72	1937.02	0.79
Douglas R	21.08	Floodway	56604	1241	1247.86		1249.17	0.005129	10.74	6679.72	1498	0.82
Douglas R	21.17	Floodplain	56604	1243	1250.03		1251.19	0.004778	10.44	7715.64	2221.63	0.8
Douglas R	21.17	Floodway	56604	1243	1250.3		1251.64	0.004728	10.74	6695.42	1472	0.8
Douglas R	21.27	Floodplain	56604	1245	1252.45		1253.83	0.005804	12.54	7464.1	2254.27	0.9
Douglas R	21.27	Floodway	56604	1245	1252.68		1254.02	0.005006	11.94	6955.77	1580	0.84
Douglas R	21.36	Floodplain	56604	1247	1254.79		1255.63	0.003171	9.41	9080.84	2278.22	0.67
Douglas R	21.36	Floodway	56604	1247	1254.78		1255.83	0.003688	10.13	7811.78	1735	0.72
Douglas R	21.46	Floodplain	56604	1250	1256.37		1256.97	0.002067	6.91	10263.34	2501.71	0.53
Douglas R	21.46	Floodway	56604	1250	1256.6		1257.32	0.002208	7.33	8823.85	1799	0.55
Douglas R	21.55	Floodplain	56604	1252.7	1258.21		1259.31	0.005806	9.21	7386.17	2437.07	0.83
Douglas R	21.55	Floodway	56604	1252.7	1258.46		1259.82	0.00608	9.83	6410.74	1785	0.86
Douglas R	21.65	Floodplain	56604	1255	1260.87		1261.78	0.004077	8.32	8176.16	2460.66	0.71
Douglas R	21.65	Floodway	56604	1255	1261.28		1262.33	0.003882	8.7	7274.61	1725	0.7
Douglas R	21.74	Floodplain	56604	1255	1261.91		1262.69	0.002995	7.35	8655.57	2474.27	0.61
Douglas R	21.74	Floodway	56604	1255	1262.38		1263.18	0.002627	7.3	7986.8	1700	0.58
Douglas R	21.84	Floodplain	56604	1256	1262.95		1263.69	0.003112	7.04	8669.12	2515.29	0.6
Douglas R	21.84	Floodway	56604	1256	1263.3		1264.08	0.002922	7.13	7938.29	1715	0.58
Douglas R	21.93	Floodplain	56604	1258	1264.55		1265.54	0.004824	8.12	7319.86	2269.68	0.73
Douglas R	21.93	Floodway	56604	1258	1264.79		1265.79	0.004351	8.02	7117.01	1750	0.7
Douglas R	22.03	Floodplain	57230	1261	1266.96		1267.83	0.004099	7.83	7951.42	2114.72	0.68
Douglas R	22.03	Floodway	57230	1261	1267.05		1268.26	0.005128	8.86	6515.34	1555	0.76
Douglas R	22.12	Floodplain	57230	1263	1269.29		1270.5	0.006067	9.08	6807.43	2093.18	0.82
Douglas R	22.12	Floodway	57230	1263	1269.72		1271.1	0.005802	9.42	6089.16	1447	0.81
Douglas R	22.21	Floodplain	57230	1265	1272.27		1273.26	0.004694	8.2	7451.56	2069.32	0.71
Douglas R	22.21	Floodway	57230	1265	1272.6		1273.69	0.004491	8.39	6831.52	1542	0.7
Douglas R	22.31	Floodplain	57230	1267	1274.69		1275.58	0.004234	7.82	8044.1	2313.22	0.66
Douglas R	22.31	Floodway	57230	1267	1274.92		1275.84	0.003904	7.76	7527.7	1675	0.64
Douglas R	22.4	Floodplain	57230	1269	1276.92		1278.06	0.005225	8.85	7185.63	2210.12	0.75
Douglas R	22.4	Floodway	57230	1269	1277.03		1278.23	0.005282	8.94	6707.29	1709	0.75
Douglas R	22.5	Floodplain	57230	1271	1279.68		1280.48	0.004339	7.24	8152.25	2227.42	0.64
Douglas R	22.5	Floodway	57230	1271	1279.79		1280.68	0.00442	7.47	7601.39	1800	0.64
Douglas R	22.59	Floodplain	57230	1274	1281.52		1282.26	0.003446	7	8382.67	2276.41	0.64
Douglas R	22.59	Floodway	57230	1274	1281.67		1282.48	0.003468	7.23	7944.75	1965	0.64
Douglas R	22.69	Floodplain	57230	1276	1283.21		1284.06	0.004238	7.35	7871.66	2459.52	0.73
Douglas R	22.69	Floodway	57230	1276	1283.42		1284.46	0.00494	8.2	6991.66	1975	0.79
Douglas R	22.78	Floodplain	57230	1278	1285.36		1286.03	0.003787	6.88	8911.97	2529.6	0.66
Douglas R	22.78	Floodway	57230	1278	1285.8		1286.76	0.004299	7.95	7380.97	1845	0.72

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	22.88	Floodplain	57230	1282	1287		1287.6	0.003317	6.75	9500.07	2532.43	0.62
Douglas R	22.88	Floodway	57230	1282	1287.78		1288.56	0.003196	7.54	8271.53	1775	0.63
Douglas R	22.97	Floodplain	57230	1283.64	1288.4		1289.01	0.003467	6.85	9388.61	2370.26	0.64
Douglas R	22.97	Floodway	57230	1283.64	1289.24		1290.08	0.003664	8.09	7980.21	1690	0.68
Douglas R	23.07	Floodplain	57230	1285	1290.45		1291.22	0.004704	9.35	8661.87	2332.5	0.77
Douglas R	23.07	Floodway	57230	1285	1291.22		1292.11	0.003909	9.45	7937.6	1640	0.72
Douglas R	23.16	Floodplain	57230	1288	1292.82		1293.64	0.004887	9.88	8308.98	2113.02	0.79
Douglas R	23.16	Floodway	57230	1288	1293.26		1294.18	0.004329	9.85	7776.27	1640	0.76
Douglas R	23.26	Floodplain	57230	1289	1295.54		1296.76	0.005073	10.61	7557.04	2124.87	0.82
Douglas R	23.26	Floodway	57230	1289	1295.68		1296.8	0.004185	9.8	7193.24	1503	0.75
Douglas R	23.35	Floodplain	57230	1291.9	1297.81		1299.1	0.0043	10.27	7573.49	2189.65	0.76
Douglas R	23.35	Floodway	57230	1291.9	1297.67		1299.04	0.004572	10.42	6689.46	1493	0.78
Douglas R	23.45	Floodplain	57230	1293.69	1300.04		1300.86	0.003854	9.4	8853.61	2299.71	0.72
Douglas R	23.45	Floodway	57230	1293.69	1299.93		1300.93	0.004225	9.7	7459.29	1529	0.75
Douglas R	23.54	Floodplain	57230	1295	1301.39		1302.12	0.002784	8	9409.6	2310.83	0.61
Douglas R	23.54	Floodway	57230	1295	1301.45		1302.25	0.002799	8.04	8299.16	1590	0.61
Douglas R	23.63	Floodplain	57230	1296	1302.61		1303.42	0.003228	7.97	8447.69	2143.63	0.64
Douglas R	23.63	Floodway	57230	1296	1302.67		1303.61	0.00345	8.31	7606.55	1645	0.66
Douglas R	23.73	Floodplain	57230	1298	1304.53		1305.67	0.005999	9.51	7078.96	2028.61	0.85
Douglas R	23.73	Floodway	57230	1298	1304.68		1305.83	0.005521	9.33	6929.51	1781	0.82
Douglas R	23.82	Floodplain	57230	1300.84	1307.19		1308.06	0.004078	8.8	8455.02	2220.78	0.71
Douglas R	23.82	Floodway	57230	1300.84	1307.21		1308.1	0.004004	8.75	8164.37	2000	0.7
Douglas R	23.92	Floodplain	57230	1303	1309.06		1309.96	0.004532	9.31	8170.69	2120.24	0.76
Douglas R	23.92	Floodway	57230	1303	1309.07		1310	0.004627	9.42	8046.21	2076	0.77
Douglas R	24.01	Floodplain	57230	1305	1311.02		1311.9	0.004501	8.95	8322.86	2292.43	0.75
Douglas R	24.01	Floodway	57230	1305	1311.06		1311.95	0.004447	8.95	8197.64	2186	0.75
Douglas R	24.11	Floodplain	57230	1307	1313.09		1313.9	0.003669	8.26	8694.49	2340.86	0.68
Douglas R	24.11	Floodway	57230	1307	1313.11		1313.93	0.003634	8.25	8572.9	2227	0.68
Douglas R	24.2	Floodplain	57230	1308	1315.05		1315.86	0.004043	8.01	8635.22	2510.52	0.68
Douglas R	24.2	Floodway	57230	1308	1315.06		1315.9	0.004089	8.06	8344.58	2290	0.69
Douglas R	24.3	Floodplain	57230	1310.5	1317.28		1318.14	0.005237	7.97	8104.01	2437.94	0.72
Douglas R	24.3	Floodway	57230	1310.5	1317.3		1318.15	0.005115	7.89	8035.57	2311	0.71
Douglas R	24.39	Floodplain	57230	1313	1319.58		1320.16	0.002971	6.32	9561.15	2545.12	0.56
Douglas R	24.39	Floodway	57230	1313	1319.6		1320.29	0.003341	6.72	8627.88	2145	0.59
Douglas R	24.49	Floodplain	57230	1314	1321.29		1322.17	0.005172	7.75	8010.38	2650.09	0.72
Douglas R	24.49	Floodway	57230	1314	1321.47		1322.49	0.005361	8.12	7121.81	1999	0.74
Douglas R	24.58	Floodplain	57230	1317	1323.6		1324.51	0.004352	7.99	8110.72	2738.5	0.73
Douglas R	24.58	Floodway	57230	1317	1323.83		1324.76	0.003884	7.82	7515.73	1898	0.69
Douglas R	24.68	Floodplain	57230	1319	1326.01		1326.96	0.005392	8.28	7991.72	2787.21	0.79
Douglas R	24.68	Floodway	57230	1319	1326.09	1325.88	1327.56	0.0073	9.76	5954.32	1685	0.92
Douglas R	24.77	Floodplain	57230	1322	1328.55		1329.3	0.004228	7.59	8886	2696.36	0.66
Douglas R	24.77	Floodway	57230	1322	1329.2		1330.09	0.003696	7.78	7669.66	1665	0.63
Douglas R	24.87	Floodplain	57230	1324	1330.75		1331.7	0.005265	8.87	8140.38	2667.9	0.78
Douglas R	24.87	Floodway	57230	1324	1331.13		1332.03	0.004015	8.18	7719.78	1785	0.69
Douglas R	24.96	Floodplain	57230	1326	1333.03		1333.83	0.003517	8.34	9169.39	2720.17	0.67
Douglas R	24.96	Floodway	57230	1326	1333.06		1334.04	0.003986	8.92	7902.08	1985	0.72
Douglas R	25.06	Floodplain	57230	1330	1334.71		1335.71	0.005709	9.16	7920.2	2619.54	0.82
Douglas R	25.06	Floodway	57230	1330	1334.9		1336.02	0.005636	9.4	7244.07	2080	0.83
Douglas R	25.15	Floodplain	57854	1330	1337.22		1338.06	0.003487	9.19	9630.98	2916.22	0.69
Douglas R	25.15	Floodway	57854	1330	1337.44		1338.39	0.003516	9.46	8692.52	2245	0.69

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	25.24	Floodplain	57854	1334	1339.84	1339.84	1341.09	0.007446	11.64	7695.39	2846	0.97
Douglas R	25.24	Floodway	57854	1334	1339.98	1339.98	1341.46	0.007896	12.23	6879.1	2258.5	1
Douglas R	25.34	Floodplain	57854	1334.57	1342.67		1343.46	0.002973	8.72	9739.75	2964	0.64
Douglas R	25.34	Floodway	57854	1334.57	1343.02		1344.12	0.003445	9.77	8723.01	2635	0.69
Douglas R	25.43	Floodplain	57854	1337	1344.83	1344.83	1345.98	0.004758	12.56	9297.55	3296.7	0.83
Douglas R	25.43	Floodway	57854	1337	1344.86		1346.43	0.005984	14.12	8038.51	2830	0.94
Douglas R	25.53	Floodplain	57854	1340	1347.02		1347.71	0.002504	7.85	10935.3	3504.02	0.58
Douglas R	25.53	Floodway	57854	1340	1347.51		1348.16	0.002048	7.5	10909.5	2945	0.53
Douglas R	25.62	Floodplain	57854	1342	1348.53		1349.46	0.004771	8.54	8776.4	3438.33	0.76
Douglas R	25.62	Floodway	57854	1342	1348.7	1348.7	1349.99	0.006235	9.81	7377.86	2795	0.86
Douglas R	25.72	Floodplain	57854	1344.64	1350.88		1351.92	0.005057	9.11	8383.77	3330.28	0.79
Douglas R	25.72	Floodway	57854	1344.76	1351.46		1352.58	0.004504	9.24	8067.61	2795	0.75
Douglas R	25.81	Floodplain	57854	1347	1353.3		1354.17	0.004511	8.42	9342.82	3969.18	0.74
Douglas R	25.81	Floodway	57854	1347	1353.62		1354.76	0.00479	9.13	7805.32	2810	0.77
Douglas R	25.91	Floodplain	57854	1349	1355.03		1355.83	0.00448	7.96	9079	3605.51	0.73
Douglas R	25.91	Floodway	57854	1349	1355.45		1356.46	0.004394	8.47	8043.74	2785	0.73
Douglas R	26	Floodplain	57854	1351	1357.1		1357.85	0.005128	7.77	8883.39	3236.55	0.76
Douglas R	26	Floodway	57854	1351	1357.5		1358.47	0.005073	8.36	7791.45	2558.04	0.77
Douglas R	26.1	Floodplain	57854	1353	1359.67		1360.37	0.004604	7.57	9143.55	3195.13	0.73
Douglas R	26.1	Floodway	57854	1353	1360.12		1360.98	0.004455	8.1	8399.96	2665	0.73
Douglas R	26.19	Floodplain	57854	1356	1362.29		1362.9	0.004368	7.28	9738.78	3296.81	0.7
Douglas R	26.19	Floodway	57854	1356	1362.77		1363.51	0.00425	7.87	8971.8	2655	0.71
Douglas R	26.29	Floodplain	57854	1358.44	1364.6		1365.19	0.004058	7.52	10252.18	3470.63	0.69
Douglas R	26.29	Floodway	57854	1358.44	1364.99		1365.74	0.004088	8.08	8995.08	2605	0.7
Douglas R	26.38	Floodplain	57854	1361	1366.69		1367.25	0.004766	7.05	10095.45	3572.71	0.67
Douglas R	26.38	Floodway	57854	1361	1367.06		1367.71	0.004286	7.14	9050.72	2555	0.65
Douglas R	26.48	Floodplain	57854	1363	1368.81		1369.3	0.004037	6.15	10683.23	3599.81	0.58
Douglas R	26.48	Floodway	57854	1363	1369.04		1369.62	0.003823	6.24	9515.33	2585	0.57
Douglas R	26.57	Floodplain	57854	1363	1370.96		1371.51	0.00525	6.35	10098.54	3732.58	0.63
Douglas R	26.57	Floodway	57854	1363	1371.07		1371.72	0.004953	6.3	9014.02	2650	0.62
Douglas R	26.67	Floodplain	57854	1365	1373.14		1373.64	0.004343	6.29	10775.82	4022.3	0.63
Douglas R	26.67	Floodway	57854	1365	1373.2		1373.84	0.004557	6.52	9115.17	2735	0.65
Douglas R	26.76	Floodplain	57854	1367	1374.91		1375.45	0.00579	5.76	10075.61	3979.3	0.69
Douglas R	26.76	Floodway	57854	1367	1375.13		1375.9	0.006492	6.42	8387.51	2822	0.73
Douglas R	26.85	Floodplain	57854	1370.2	1377.03		1377.55	0.005322	5.87	10123.46	3752.47	0.69
Douglas R	26.85	Floodway	57854	1370.2	1377.51		1378.13	0.004933	6.25	9171.38	2832.25	0.68
Douglas R	26.95	Floodplain	57854	1375.5	1378.51		1379.13	0.0082	5.37	9278.7	3895.44	0.82
Douglas R	26.95	Floodway	57854	1375.5	1379.04		1379.8	0.008163	6.7	8293.34	2928	0.87
Douglas R	27.04	Floodplain	57854	1378	1381.31		1381.74	0.004312	6.02	11180.95	3921.13	0.67
Douglas R	27.04	Floodway	57854	1378	1381.97		1382.55	0.004636	7.28	9705.41	2975.48	0.72
Douglas R	27.14	Floodplain	57854	1380.05	1384.07		1384.52	0.004107	7.16	11438.42	4092.22	0.68
Douglas R	27.14	Floodway	57854	1380.05	1384.66		1385.19	0.003734	7.59	10458.24	3100	0.67
Douglas R	27.23	Floodplain	57854	1382.75	1386.85		1387.37	0.005544	7.89	10748.53	4388.71	0.79
Douglas R	27.23	Floodway	57854	1382.75	1387.24		1387.93	0.005821	8.74	9367.99	3308	0.82
Douglas R	27.33	Floodplain	57854	1383.65	1389.27		1390.18	0.007123	9.79	9310.49	4650.14	0.89
Douglas R	27.33	Floodway	57854	1383.65	1389.69		1390.74	0.006391	9.94	8452.51	3478	0.85
Douglas R	27.52	Floodplain	57854	1387.35	1393.36	1392.41	1393.75	0.003391	5.86	12652.45	5061.2	0.6
Douglas R	27.52	Floodway	57854	1387.35	1393.93		1394.47	0.003444	6.45	10827.45	3650	0.61
Douglas R	27.61	Floodplain	57854	1389.85	1395.37		1395.98	0.00694	7.5	10188.68	5101.58	0.79

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	27.61	Floodway	57854	1389.85	1395.86		1396.54	0.005709	7.46	9487.46	3760	0.72
Douglas R	27.78	Floodplain	57854	1391.75	1398.19		1398.47	0.002108	5.08	15942.66	5350.33	0.44
Douglas R	27.78	Floodway	57854	1391.75	1398.58		1398.92	0.002037	5.3	14069.34	3960	0.44
Douglas R	27.97	Floodplain	58418	1395.05	1400.54		1400.95	0.006017	5.87	11733.19	5737.98	0.67
Douglas R	27.97	Floodway	58418	1395.05	1400.97		1401.48	0.005611	6.3	10384.31	4045	0.67
Douglas R	28.09	Floodplain	58418	1399.05	1403.51		1403.83	0.004586	5.07	12903.92	6021.68	0.63
Douglas R	28.09	Floodway	58418	1399.05	1404.02		1404.5	0.004885	5.99	10668.18	4100	0.66
Douglas R	28.19	Floodplain	58418	1401.15	1405.82		1406.19	0.005888	4.76	11974.77	6079.22	0.69
Douglas R	28.19	Floodway	58418	1401.15	1406.62		1407.17	0.006575	6.32	9858.12	4195	0.74
Douglas R	28.28	Floodplain	58418	1405.35	1408.82	1408.24	1409.18	0.005805	4.84	12140.41	6105.62	0.65
Douglas R	28.28	Floodway	58418	1405.35	1409.55		1409.97	0.004711	5.35	11250.63	4409	0.6
Douglas R	28.38	Floodplain	58418	1407.15	1411.58		1411.94	0.004688	4.72	12158.05	5796.34	0.65
Douglas R	28.38	Floodway	58418	1407.15	1412.1		1412.56	0.005266	5.67	10706.77	4669	0.68
Douglas R	28.47	Floodplain	58418	1409.75	1414.21		1414.58	0.005712	4.79	11880.62	6304.9	0.69
Douglas R	28.47	Floodway	58418	1409.75	1414.93		1415.45	0.006114	6	10258.31	4745	0.71
Douglas R	28.57	Floodplain	58418	1412.25	1417.27		1417.83	0.00612	6.26	10299.36	5420.46	0.74
Douglas R	28.57	Floodway	58418	1412.25	1417.61		1418.12	0.00452	5.81	10548.94	4515	0.64
Douglas R	28.66	Floodplain	58418	1413.85	1419.99		1420.42	0.005092	5.58	11356.43	5594.73	0.68
Douglas R	28.66	Floodway	58418	1413.85	1420.12		1420.74	0.006346	6.43	9386.92	4295	0.76
Douglas R	28.76	Floodplain	58418	1417.35	1422.74		1423.2	0.006826	5.56	10872.98	5542.91	0.71
Douglas R	28.76	Floodway	58418	1417.35	1423.28		1423.86	0.006305	6.15	9572.33	3925	0.69
Douglas R	28.85	Floodplain	58418	1420.45	1425.56		1425.93	0.004952	4.8	12011.43	5606.96	0.62
Douglas R	28.85	Floodway	58418	1420.45	1426.21		1426.77	0.005396	5.88	9768.41	3735	0.65
Douglas R	28.95	Floodplain	58418	1422.25	1427.84		1428.22	0.004585	4.74	12063.37	5527.23	0.61
Douglas R	28.95	Floodway	58418	1422.25	1428.59		1429.07	0.004043	5.33	10597.38	3780	0.58
Douglas R	29.04	Floodplain	58418	1424.25	1429.99		1430.61	0.005751	4.91	10383.19	5491.12	0.7
Douglas R	29.04	Floodway	58418	1424.25	1430.5		1431.11	0.004629	5.01	10060.88	4005	0.62
Douglas R	29.13	Floodplain	58418	1427.05	1432.97		1433.33	0.003901	4.99	12518.85	5930.74	0.61
Douglas R	29.13	Floodway	58418	1427.05	1433.11		1433.51	0.003793	5.07	11607.8	4664	0.6
Douglas R	29.23	Floodplain	58418	1429.75	1435.29		1435.68	0.006549	5.28	11791.16	6068.72	0.65
Douglas R	29.23	Floodway	58418	1429.75	1435.4		1435.84	0.006523	5.46	11062.81	5134	0.65
Douglas R	29.32	Floodplain	58418	1431.95	1438.14		1438.51	0.005304	5.08	12438.33	6166.1	0.59
Douglas R	29.32	Floodway	58418	1431.95	1438.23		1438.62	0.005215	5.16	11732.88	5028	0.59
Douglas R	29.42	Floodplain	58418	1434.15	1440.47		1440.87	0.004182	5.38	11927.63	5382.11	0.61
Douglas R	29.42	Floodway	58418	1434.15	1440.49		1440.89	0.004148	5.39	11694.14	4865	0.61
Douglas R	29.51	Floodplain	58418	1437.75	1443.11	1442.58	1443.57	0.007025	5.35	10926.75	5386.19	0.66
Douglas R	29.51	Floodway	58418	1437.75	1443.15	1442.57	1443.64	0.00718	5.47	10415.8	4695	0.67
Douglas R	29.61	Floodplain	58418	1440.85	1446.12		1446.49	0.004879	5.12	12220.82	5560.37	0.59
Douglas R	29.61	Floodway	58418	1440.85	1446.23		1446.65	0.004925	5.31	11344.35	4540	0.59
Douglas R	29.7	Floodplain	58418	1444.15	1448.85	1448.46	1449.42	0.005867	6.57	10449.35	5345.99	0.74
Douglas R	29.7	Floodway	58418	1444.15	1448.91	1448.46	1449.45	0.005331	6.33	10259.87	4525	0.71
Douglas R	29.8	Floodplain	58418	1446.55	1451.87		1452.34	0.005417	6.07	11250.27	5393.05	0.67
Douglas R	29.8	Floodway	58418	1446.55	1451.87		1452.46	0.006397	6.6	9835.46	4381	0.73
Douglas R	29.89	Floodplain	58418	1449.65	1454.73		1455.33	0.005701	6.49	10460.45	5195.09	0.7
Douglas R	29.89	Floodway	58418	1449.65	1454.85		1455.4	0.004829	6.13	10316.39	4086	0.65
Douglas R	29.99	Floodplain	58418	1452.75	1457.45		1457.98	0.005072	6.4	10800.22	5205.09	0.7
Douglas R	29.99	Floodway	58418	1452.75	1457.43		1458.18	0.006412	7.17	9037.75	3920	0.79
Douglas R	30.08	Floodplain	58418	1455.45	1460.08		1460.77	0.005966	6.83	9620.94	4556.58	0.75
Douglas R	30.08	Floodway	58418	1455.45	1460.31		1460.95	0.004836	6.47	9771.18	3950	0.68

Profile Output Table - Standard Table 1
HEC-RAS Nat_1988topo River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	30.18	Floodplain	58418	1458.75	1462.92		1463.54	0.00521	6.77	9994.69	4550.77	0.74
Douglas R	30.18	Floodway	58418	1458.75	1462.88		1463.55	0.005649	6.99	9402.35	4095	0.77
Douglas R	30.27	Floodplain	58418	1461.55	1465.85		1466.48	0.006582	6.91	9535.13	4162.14	0.77
Douglas R	30.27	Floodway	58418	1461.55	1465.91		1466.5	0.006081	6.73	9777.88	4161	0.74
Douglas R	30.37	Floodplain	58418	1464.05	1468.92		1469.52	0.005509	6.84	10036.42	4384.71	0.74
Douglas R	30.37	Floodway	58418	1464.05	1468.89		1469.51	0.005778	6.95	9878.54	4380.56	0.75
Douglas R	30.46	Floodplain	58418	1465.95	1471.47		1471.97	0.004681	6.21	10879.92	4732.16	0.68
Douglas R	30.46	Floodway	58418	1465.95	1471.49		1471.99	0.004624	6.2	10824.92	4590	0.68
Douglas R	30.56	Floodplain	58418	1469.65	1473.89		1474.5	0.005767	6.74	9969.71	4612.23	0.77
Douglas R	30.56	Floodway	58418	1469.65	1473.89		1474.5	0.005744	6.73	9963.36	4559	0.77
Douglas R	30.65	Floodplain	58418	1472.45	1476.64		1477.18	0.00537	6.63	10575.78	4732.08	0.72
Douglas R	30.65	Floodway	58418	1472.45	1476.63		1477.17	0.005328	6.58	10344.71	4366	0.72
Douglas R	30.74	Floodplain	58418	1475.25	1479.38	1479.06	1480.05	0.006412	7.06	9640.31	4616.03	0.78
Douglas R	30.74	Floodway	58418	1475.25	1479.36	1479.05	1480.04	0.006512	7.08	9377.85	4210	0.79
Douglas R	30.84	Floodplain	58418	1476.95	1481.98		1482.45	0.004079	6.09	11509.74	5092.09	0.65
Douglas R	30.84	Floodway	58418	1476.95	1482.02		1482.55	0.004336	6.33	10429.58	4123	0.67
Douglas R	30.93	Floodplain	58418	1479.15	1484.08		1484.57	0.005336	6.1	10743.74	5014.25	0.73
Douglas R	30.93	Floodway	58418	1479.15	1484.36		1485.04	0.006165	6.94	9086.17	3951	0.79
Douglas R	31.03	Floodplain	59030	1481.65	1486.75		1487.32	0.006958	6.79	10262.17	5550.81	0.86
Douglas R	31.03	Floodway	59030	1481.65	1487.21		1487.82	0.005516	6.57	9431.05	3836	0.75

APPENDIX E

HEC-RAS Output Files for Revised or Post-Project Conditions Model

Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	15.68	Floodplain	55980	1124.06	1132.15	1130.91	1133.01	0.003128	8.01	8043.39	1997.42	0.64
Douglas R	15.68	Floodway	55980	1124.06	1132.22	1130.91	1133.12	0.003181	8.16	7791.86	1753	0.64
Douglas R	15.78	Floodplain	55980	1125.36	1133.63		1134.31	0.002259	7.17	9232.92	2152.12	0.55
Douglas R	15.78	Floodway	55980	1125.36	1133.69		1134.5	0.002519	7.63	8104.86	1659.63	0.58
Douglas R	15.87	Floodplain	55980	1127.26	1134.79		1136.08	0.004871	9.62	7138.64	2563.9	0.79
Douglas R	15.87	Floodway	55980	1127.26	1135.01		1136.21	0.004179	9.2	6929.05	1830	0.73
Douglas R	15.97	Floodplain	55980	1129.76	1137		1137.79	0.002579	7.5	8822.64	2540.51	0.58
Douglas R	15.97	Floodway	55980	1129.76	1136.99		1137.79	0.002547	7.45	8180.71	1825	0.58
Douglas R	16.06	Floodplain	55980	1132.16	1138.51		1139.06	0.002642	6.85	10086.5	2640.4	0.57
Douglas R	16.06	Floodway	55980	1132.16	1138.48		1139.09	0.002839	7.06	9238.41	2195	0.59
Douglas R	16.16	Floodplain	55980	1135.16	1140.06	1140.06	1141.33	0.00944	11.65	7027.09	2747.3	1.06
Douglas R	16.16	Floodway	55980	1135.16	1140.12	1140.12	1141.46	0.009362	11.74	6704.44	2407	1.06
Douglas R	16.25	Floodplain	55980	1136.36	1142.97		1143.46	0.002566	7	10889.12	3035.61	0.57
Douglas R	16.25	Floodway	55980	1136.36	1143.05		1143.54	0.002465	6.94	10646.11	2665	0.56
Douglas R	16.35	Floodplain	55980	1138.66	1144.21		1144.73	0.003048	6.69	10175.25	2937.69	0.6
Douglas R	16.35	Floodway	55980	1138.66	1144.24		1144.76	0.002962	6.64	10088.33	2735	0.59
Douglas R	16.44	Floodplain	55980	1140.06	1146.09		1146.88	0.006113	7.95	8085.57	2876.86	0.82
Douglas R	16.44	Floodway	55980	1140.06	1146.09		1146.88	0.006135	7.96	8039.75	2749.77	0.82
Douglas R	16.53	Floodplain	55980	1142.66	1148.72		1149.48	0.004259	8.32	8948.78	3012.31	0.72
Douglas R	16.53	Floodway	55980	1142.66	1148.73		1149.53	0.00437	8.45	8616.31	2640	0.73
Douglas R	16.63	Floodplain	55980	1144.26	1150.42		1151.35	0.00467	9.49	8490.68	2750.72	0.77
Douglas R	16.63	Floodway	55980	1144.26	1150.46		1151.39	0.00457	9.44	8350.63	2527	0.76
Douglas R	16.72	Floodplain	55980	1146.96	1152.55		1153.43	0.004261	9.03	8767.52	2925.8	0.74
Douglas R	16.72	Floodway	55980	1146.96	1152.56		1153.42	0.004108	8.89	8558.37	2511	0.72
Douglas R	16.82	Floodplain	55980	1148.56	1154.54		1155.08	0.002543	6.84	10325.17	2749.96	0.57
Douglas R	16.82	Floodway	55980	1148.56	1154.51		1155.12	0.00278	7.13	9649.5	2456	0.59
Douglas R	16.91	Floodplain	55980	1151.26	1156.16		1157.21	0.006847	9.89	7779.73	2908.67	0.9
Douglas R	16.91	Floodway	55980	1151.26	1156.24		1157.4	0.007027	10.16	7263.6	2495	0.92
Douglas R	17.01	Floodplain	55980	1153.06	1158.85		1159.6	0.004109	8.57	9383.84	3462.56	0.72
Douglas R	17.01	Floodway	55980	1153.06	1159		1159.87	0.004328	9	8363.94	2435	0.74
Douglas R	17.1	Floodplain	55980	1155.06	1160.77		1161.51	0.004339	8.59	9430.12	3440.58	0.73
Douglas R	17.1	Floodway	55980	1155.06	1160.99		1161.85	0.004351	8.9	8274.52	2280	0.74
Douglas R	17.2	Floodplain	55980	1157.36	1162.74		1163.21	0.002847	6.73	11129.25	3417.69	0.59
Douglas R	17.2	Floodway	55980	1157.36	1163.04		1163.83	0.003836	8.19	8250.9	2045	0.69
Douglas R	17.29	Floodplain	55980	1159.56	1164.48		1165.23	0.005749	8.65	8906.2	3297.87	0.82
Douglas R	17.29	Floodway	55980	1159.56	1165.14		1166.38	0.006336	10.19	6704.17	1815	0.88
Douglas R	17.39	Floodplain	55980	1161.66	1167.08		1167.71	0.004245	7.96	9654.58	3160.82	0.71
Douglas R	17.39	Floodway	55980	1161.66	1167.97		1168.97	0.004203	9.1	7386.87	1675	0.73
Douglas R	17.48	Floodplain	55980	1163.06	1169.2		1170.06	0.005495	10.02	8922.77	3278.88	0.83
Douglas R	17.48	Floodway	55980	1163.06	1170.01		1171.27	0.005205	10.89	6817.3	1585	0.83
Douglas R	17.58	Floodplain	55980	1165.96	1171.76		1172.7	0.005517	11.35	8264.64	2475.31	0.86
Douglas R	17.58	Floodway	55980	1165.96	1172.5		1173.5	0.004096	10.65	7550.81	1550	0.76
Douglas R	17.67	Floodplain	55980	1167.06	1174.21		1175.17	0.004381	10.71	8682.8	2576.82	0.78
Douglas R	17.67	Floodway	55980	1167.06	1174.49		1175.62	0.004186	10.8	7303.55	1550	0.76
Douglas R	17.77	Floodplain	55980	1169.86	1176.52		1177.57	0.005242	12.15	7971.49	2234.11	0.86
Douglas R	17.77	Floodway	55980	1169.86	1176.7		1177.76	0.004436	11.4	7337.65	1505	0.79
Douglas R	17.86	Floodplain	55980	1171.86	1178.88		1179.62	0.003088	9.69	9185.62	2096.11	0.66
Douglas R	17.86	Floodway	55980	1171.86	1178.85		1179.78	0.003499	10.27	7813.68	1505	0.71
Douglas R	17.95	Floodplain	55980	1172.76	1180.47		1181.54	0.004778	11.77	8039.84	2167.09	0.82
Douglas R	17.95	Floodway	55980	1172.76	1180.52		1182.2	0.006217	13.49	6005.44	1260	0.94

Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	18.05	Floodplain	55980	1174.96	1182.5		1183.49	0.003278	9.21	8565.34	2494.65	0.67
Douglas R	18.05	Floodway	55980	1174.96	1183.16		1184.24	0.00279	9.12	7279.41	1340	0.63
Douglas R	18.14	Floodplain	55980	1176.86	1184.11		1184.82	0.002526	7.44	9309.57	2380.18	0.57
Douglas R	18.14	Floodway	55980	1176.86	1184.64		1185.48	0.002368	7.66	7898.15	1456	0.56
Douglas R	18.24	Floodplain	55980	1179.56	1185.48		1186.45	0.003947	8.33	7769.21	2253.03	0.69
Douglas R	18.24	Floodway	55980	1179.56	1185.94		1186.86	0.003175	7.94	7459.57	1576	0.62
Douglas R	18.33	Floodplain	55980	1181.16	1187.54		1188.6	0.004546	8.56	7023.92	1881.33	0.75
Douglas R	18.33	Floodway	55980	1181.16	1187.67		1188.84	0.004603	8.77	6556.79	1607	0.75
Douglas R	18.43	Floodplain	55980	1184.06	1189.96		1191.2	0.005584	9.05	6440.34	1883.58	0.82
Douglas R	18.43	Floodway	55980	1184.06	1190.09		1191.29	0.005147	8.85	6428.03	1701	0.79
Douglas R	18.52	Floodplain	55980	1186.66	1192.72		1193.44	0.003514	6.91	8357.18	2245.51	0.61
Douglas R	18.52	Floodway	55980	1186.66	1192.72		1193.45	0.00352	6.92	8260.52	2121.74	0.61
Douglas R	18.62	Floodplain	55980	1189.56	1194.65		1195.23	0.003534	6.36	9596.92	2961.83	0.59
Douglas R	18.62	Floodway	55980	1189.56	1194.65		1195.36	0.00414	6.88	8324.01	2330	0.64
Douglas R	18.71	Floodplain	55980	1189.86	1196.8		1197.44	0.00558	6.82	9219.9	3791.33	0.71
Douglas R	18.71	Floodway	55980	1189.86	1197.02		1197.82	0.005914	7.3	7825.16	2480	0.73
Douglas R	18.81	Floodplain	55980	1192.66	1198.9		1199.38	0.002889	6.05	10942.98	3926.53	0.57
Douglas R	18.81	Floodway	55980	1192.66	1199.2		1199.75	0.002679	6.09	9539.32	2435	0.55
Douglas R	18.9	Floodplain	56604	1195.06	1200.59		1201.28	0.004992	7.43	9194.4	3815.15	0.78
Douglas R	18.9	Floodway	56604	1195.06	1200.78		1201.84	0.006219	8.58	6978.48	2280	0.87
Douglas R	19	Floodplain	56604	1196.76	1202.61		1203.08	0.003129	6.62	11385.67	3919.8	0.61
Douglas R	19	Floodway	56604	1196.76	1203.2		1203.91	0.003159	7.34	8661.67	2075	0.63
Douglas R	19.09	Floodplain	56604	1199.56	1204.25		1205.28	0.00716	10.12	8584.1	3995.88	0.92
Douglas R	19.09	Floodway	56604	1199.56	1204.79		1206.14	0.006486	10.54	6601.03	1820	0.9
Douglas R	19.19	Floodplain	56604	1200.56	1206.92		1207.88	0.004241	9.84	8830.78	2814.84	0.75
Douglas R	19.19	Floodway	56604	1200.56	1207.38		1208.73	0.004527	10.75	6810.39	1530	0.79
Douglas R	19.28	Floodplain	56604	1202.86	1209.03		1210.11	0.004578	10.64	8382.29	2584.97	0.79
Douglas R	19.28	Floodway	56604	1202.86	1209.57		1211.06	0.004657	11.41	6465.18	1335	0.81
Douglas R	19.38	Floodplain	56604	1204.06	1211.28		1212.73	0.005542	11.72	7332.83	2296.99	0.87
Douglas R	19.38	Floodway	56604	1204.06	1211.83		1213.57	0.005152	12.01	5960.91	1225	0.85
Douglas R	19.47	Floodplain	56604	1205.56	1213.48		1214.43	0.003525	10.51	8534.14	2183.25	0.71
Douglas R	19.47	Floodway	56604	1205.56	1213.96		1215.43	0.00427	12.11	6540.32	1235	0.79
Douglas R	19.56	Floodplain	56604	1208.86	1216.27	1216.27	1217.96	0.007277	13.81	6494.29	1807.38	1
Douglas R	19.56	Floodway	56604	1208.86	1216.37	1216.16	1218.46	0.00751	14.2	5294.19	1055	1.02
Douglas R	19.66	Floodplain	56604	1210.86	1219.07		1220.01	0.003143	10.76	8624.03	1871.06	0.69
Douglas R	19.66	Floodway	56604	1210.86	1219.37		1220.61	0.003273	11.26	6876.39	1060	0.7
Douglas R	19.75	Floodplain	56604	1213.06	1221.07		1222.66	0.005327	13.6	6838.98	1649.56	0.89
Douglas R	19.75	Floodway	56604	1213.06	1221.46		1223.04	0.004499	12.95	6349.01	1140	0.82
Douglas R	19.85	Floodplain	56604	1214.46	1223.88		1224.87	0.00286	10.91	9192.28	2225.95	0.66
Douglas R	19.85	Floodway	56604	1214.46	1223.91		1225.24	0.003392	11.91	7309.39	1395	0.72
Douglas R	19.94	Floodplain	56604	1216.46	1224.86		1226.71	0.00571	14.68	7291.88	2288.71	0.93
Douglas R	19.94	Floodway	56604	1216.46	1225.36	1225.36	1227.24	0.004958	14.27	6531.67	1475	0.87
Douglas R	20.14	Floodplain	56604	1220.76	1228.52		1229.41	0.002416	9.14	9785.59	2712.9	0.6
Douglas R	20.14	Floodway	56604	1220.76	1228.89		1230.19	0.002894	10.34	7361.09	1535	0.66
Douglas R	20.32	Floodplain	56604	1225.26	1230.94		1231.84	0.003436	8.07	8589.67	2899.21	0.66
Douglas R	20.32	Floodway	56604	1225.26	1231.77		1232.63	0.002431	7.57	7837.53	1584	0.57
Douglas R	20.42	Floodplain	56604	1227.96	1232.96		1233.93	0.005055	8.29	7906.59	2877.47	0.77
Douglas R	20.42	Floodway	56604	1227.96	1233.25		1234.41	0.004981	8.66	6580.63	1704	0.77
Douglas R	20.51	Floodplain	56604	1230.16	1235.43		1236.17	0.003967	7.44	9015.32	3062.42	0.68

Profile Output Table - Standard Table 1
HEC-RAS Plan: new | River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	20.51	Floodway	56604	1230.16	1235.73		1236.73	0.004302	8.16	7170.21	1864	0.72
Douglas R	20.61	Floodplain	56604	1231.76	1237.49		1238.26	0.004424	7.47	8620.36	2987.71	0.71
Douglas R	20.61	Floodway	56604	1231.76	1237.9		1238.84	0.004122	7.78	7300.46	1905	0.7
Douglas R	20.7	Floodplain	56604	1233.76	1239.61		1240.23	0.003484	6.81	9433.6	2899.65	0.63
Douglas R	20.7	Floodway	56604	1233.76	1239.97		1240.96	0.004298	8.03	7161.92	1790	0.7
Douglas R	20.8	Floodplain	56604	1236.06	1241.59		1242.56	0.00596	8.74	7869.57	2772.65	0.81
Douglas R	20.8	Floodway	56604	1236.06	1242.17		1243.23	0.004778	8.58	7000.69	1705	0.73
Douglas R	20.89	Floodplain	56604	1238.66	1244.45	1244.28	1245.73	0.006313	10.2	6967.09	2536.15	0.88
Douglas R	20.89	Floodway	56604	1238.66	1244.63	1244.03	1245.94	0.005793	10.05	6398.99	1520	0.85
Douglas R	20.98	Floodplain	56604	1240	1246.68	1245.05	1247.61	0.002791	8.39	7692.43	2049.74	0.62
Douglas R	20.98	Floodway	56604	1240	1246.8	1245.24	1247.81	0.002914	8.69	7392.76	1395.89	0.63
Douglas R	21.08	Floodplain	56604	1241	1248.01	1247.64	1249.76	0.006305	12.12	5794.05	1967.17	0.92
Douglas R	21.08	Floodway	56604	1241	1248.21	1247.82	1249.96	0.005949	12.07	5797.09	1220	0.9
Douglas R	21.17	Floodplain	56604	1243	1250.92	1249.87	1252.31	0.004065	10.68	6631.49	2399.9	0.75
Douglas R	21.17	Floodway	56604	1243	1251.03	1250.2	1252.45	0.004091	10.78	6457.17	1230	0.75
Douglas R	21.3	Floodplain	56604	1244.7	1252.65	1251.82	1254.39	0.00557	10.59	5343.3	2564.74	0.79
Douglas R	21.3	Floodway	56604	1244.7	1252.79	1251.82	1254.45	0.005198	10.34	5476.54	945	0.76
Douglas R	21.32		Bridge									
Douglas R	21.34	Floodplain	56604	1245.43	1255.53	1252.83	1256.51	0.002376	7.96	7115.33	2755.09	0.51
Douglas R	21.34	Floodway	56604	1245.43	1255.53	1252.83	1256.51	0.002414	7.95	7115.79	945	0.51
Douglas R	21.36	Floodplain	56604	1247	1256.42	1254.29	1257.28	0.002002	8.74	8280.16	2542.38	0.55
Douglas R	21.36	Floodway	56604	1247	1256.37	1254.32	1257.31	0.002164	9.05	7949.88	1215	0.57
Douglas R	21.46	Floodplain	56604	1250	1257.66	1254.75	1258.07	0.001102	5.76	11729.13	2606.98	0.4
Douglas R	21.46	Floodway	56604	1250	1257.68	1254.78	1258.18	0.001249	6.14	10145.95	1645	0.42
Douglas R	21.55	Floodplain	56604	1252.7	1258.6		1259.46	0.004026	8.19	8361.38	2498.77	0.7
Douglas R	21.55	Floodway	56604	1252.7	1258.66		1259.87	0.005144	9.33	6756.54	1785	0.8
Douglas R	21.65	Floodplain	56604	1255	1260.71		1261.71	0.004676	8.69	7822.4	2454.81	0.76
Douglas R	21.65	Floodway	56604	1255	1261.18		1262.29	0.004194	8.91	7100.26	1725	0.73
Douglas R	21.74	Floodplain	56604	1255	1261.91		1262.69	0.003009	7.36	8641.08	2473.9	0.61
Douglas R	21.74	Floodway	56604	1255	1262.36		1263.17	0.002652	7.32	7964.18	1700	0.58
Douglas R	21.84	Floodplain	56604	1256	1262.95		1263.69	0.003114	7.05	8667.89	2515.26	0.6
Douglas R	21.84	Floodway	56604	1256	1263.29		1264.08	0.002931	7.14	7930.97	1715	0.58
Douglas R	21.93	Floodplain	56604	1258	1264.55		1265.54	0.004824	8.12	7319.86	2269.68	0.73
Douglas R	21.93	Floodway	56604	1258	1264.79		1265.79	0.004353	8.02	7116.37	1750	0.7
Douglas R	22.03	Floodplain	57230	1261	1266.96		1267.83	0.004099	7.83	7951.42	2114.72	0.68
Douglas R	22.03	Floodway	57230	1261	1267.05		1268.26	0.005127	8.86	6515.53	1555	0.76
Douglas R	22.12	Floodplain	57230	1263	1269.29		1270.5	0.006067	9.08	6807.43	2093.18	0.82
Douglas R	22.12	Floodway	57230	1263	1269.72		1271.1	0.005802	9.42	6088.98	1447	0.81
Douglas R	22.21	Floodplain	57230	1265	1272.27		1273.26	0.004694	8.2	7451.56	2069.32	0.71
Douglas R	22.21	Floodway	57230	1265	1272.6		1273.69	0.004491	8.39	6831.71	1542	0.7
Douglas R	22.31	Floodplain	57230	1267	1274.69		1275.58	0.004234	7.82	8044.1	2313.22	0.66
Douglas R	22.31	Floodway	57230	1267	1274.92		1275.84	0.003904	7.76	7527.7	1675	0.64
Douglas R	22.4	Floodplain	57230	1269	1276.92		1278.05	0.005209	8.84	7223.29	2263.11	0.75
Douglas R	22.4	Floodway	57230	1269	1277.03		1278.23	0.005282	8.94	6707.29	1709	0.75
Douglas R	22.5	Floodplain	57230	1271	1279.67		1280.48	0.00436	7.25	8139.75	2227.31	0.64
Douglas R	22.5	Floodway	57230	1271	1279.79		1280.68	0.00442	7.47	7601.39	1800	0.64
Douglas R	22.59	Floodplain	57230	1274	1281.52		1282.26	0.003444	6.99	8384.61	2276.46	0.64
Douglas R	22.59	Floodway	57230	1274	1281.67		1282.48	0.003468	7.23	7944.75	1965	0.64
Douglas R	22.69	Floodplain	57230	1276	1283.21		1284.06	0.004238	7.35	7871.66	2459.52	0.73

Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	22.69	Floodway	57230	1276	1283.42		1284.46	0.00494	8.2	6991.66	1975	0.79
Douglas R	22.78	Floodplain	57230	1278	1285.36		1286.03	0.003787	6.88	8911.97	2529.6	0.66
Douglas R	22.78	Floodway	57230	1278	1285.8		1286.76	0.004299	7.95	7380.97	1845	0.72
Douglas R	22.88	Floodplain	57230	1282	1287		1287.6	0.003317	6.75	9500.07	2532.43	0.62
Douglas R	22.88	Floodway	57230	1282	1287.78		1288.56	0.003196	7.54	8271.53	1775	0.63
Douglas R	22.97	Floodplain	57230	1283.64	1288.4		1289.01	0.003467	6.85	9388.61	2370.26	0.64
Douglas R	22.97	Floodway	57230	1283.64	1289.24		1290.08	0.003664	8.09	7980.21	1690	0.68
Douglas R	23.07	Floodplain	57230	1285	1290.45		1291.22	0.004704	9.35	8661.87	2332.38	0.77
Douglas R	23.07	Floodway	57230	1285	1291.22		1292.11	0.003909	9.45	7937.6	1640	0.72
Douglas R	23.16	Floodplain	57230	1288	1292.82		1293.64	0.004887	9.88	8308.98	2113.02	0.79
Douglas R	23.16	Floodway	57230	1288	1293.26		1294.21	0.004444	9.99	7621.85	1590	0.77
Douglas R	23.26	Floodplain	57230	1289	1295.54		1296.76	0.005073	10.61	7557.04	2124.87	0.82
Douglas R	23.26	Floodway	57230	1289	1295.81		1297.04	0.004603	10.4	6842.82	1400	0.78
Douglas R	23.35	Floodplain	57230	1291.9	1297.81		1299.1	0.0043	10.27	7573.49	2189.65	0.76
Douglas R	23.35	Floodway	57230	1291.9	1297.94		1299.31	0.004422	10.54	6705.29	1450	0.77
Douglas R	23.45	Floodplain	57230	1293.69	1300.02		1300.86	0.003845	9.37	8619.84	2299.16	0.72
Douglas R	23.45	Floodway	57230	1293.69	1300.14		1301.06	0.003695	9.31	7805.41	1549	0.7
Douglas R	23.54	Floodplain	57230	1295	1301.37		1302.1	0.002739	7.91	9039.12	2309.14	0.6
Douglas R	23.54	Floodway	57230	1295	1301.49		1302.28	0.002737	7.98	8355.45	1590	0.6
Douglas R	23.63	Floodplain	57230	1296	1302.57		1303.4	0.003247	7.96	8268.71	2139.26	0.64
Douglas R	23.63	Floodway	57230	1296	1302.68		1303.62	0.003424	8.29	7624.22	1645	0.66
Douglas R	23.73	Floodplain	57230	1298	1304.64	1304.64	1306.47	0.008657	11.59	5492.88	2034.63	1.02
Douglas R	23.73	Floodway	57230	1298	1304.93	1304.93	1306.92	0.008576	12.15	5285.51	1300	1.03
Douglas R	23.82	Floodplain	57230	1302	1308.31	1307.74	1310.3	0.005858	11.34	5047.24	2090.97	0.86
Douglas R	23.82	Floodway	57230	1302	1308.6	1307.79	1310.4	0.005007	10.76	5316.81	927.63	0.79
Douglas R	23.88		Bridge									
Douglas R	23.92	Floodplain	57230	1302.38	1311.26	1308.41	1312.24	0.00201	7.94	7209	2105.26	0.5
Douglas R	23.92	Floodway	57230	1302.38	1311.26	1308.4	1312.24	0.002026	7.94	7209.32	927.64	0.5
Douglas R	24.01	Floodplain	57230	1305	1312.93	1310.84	1313.62	0.002033	7.17	8816.71	2390.08	0.5
Douglas R	24.01	Floodway	57230	1305	1312.9	1310.89	1313.66	0.002172	7.39	8329.74	1436	0.52
Douglas R	24.11	Floodplain	57230	1307	1313.99		1314.7	0.002319	7.41	8961	2365.16	0.56
Douglas R	24.11	Floodway	57230	1307	1314.06		1314.77	0.002292	7.42	8894.86	1734	0.56
Douglas R	24.2	Floodplain	57230	1308	1315.41		1316.13	0.003442	7.4	8843.66	2545.65	0.61
Douglas R	24.2	Floodway	57230	1308	1315.46		1316.2	0.003456	7.46	8632.46	2050	0.61
Douglas R	24.3	Floodplain	57230	1310.5	1317.35		1318.17	0.004869	7.76	8255.03	2443.16	0.7
Douglas R	24.3	Floodway	57230	1310.5	1317.39		1318.2	0.004702	7.67	8256.18	2311	0.68
Douglas R	24.39	Floodplain	57230	1313	1319.56		1320.15	0.003031	6.36	9497.8	2542.64	0.56
Douglas R	24.39	Floodway	57230	1313	1319.57		1320.27	0.003404	6.76	8577.61	2145	0.59
Douglas R	24.49	Floodplain	57230	1314	1321.29		1322.3	0.005685	8.13	7338.74	2650.19	0.75
Douglas R	24.49	Floodway	57230	1314	1321.47		1322.49	0.005344	8.11	7129.38	1999	0.74
Douglas R	24.58	Floodplain	57230	1317	1323.76		1324.7	0.004111	7.96	7705.66	2748.39	0.71
Douglas R	24.58	Floodway	57230	1317	1323.83		1324.75	0.003889	7.82	7512.48	1898	0.69
Douglas R	24.68	Floodplain	57230	1319	1326.09		1327.19	0.005734	8.65	7028.9	2789.83	0.81
Douglas R	24.68	Floodway	57230	1319	1326.09	1325.9	1327.56	0.007295	9.75	5955.56	1685	0.92
Douglas R	24.77	Floodplain	57230	1322	1328.75		1329.77	0.004841	8.37	7279.05	2707.81	0.71
Douglas R	24.77	Floodway	57230	1322	1329.21		1330.22	0.004069	8.17	7135.34	1510	0.66
Douglas R	24.87	Floodplain	57230	1324	1331.15		1332.41	0.005366	9.49	6542.94	2681.06	0.79
Douglas R	24.87	Floodway	57230	1324	1331.3		1332.9	0.006105	10.34	5700.64	1250	0.85
Douglas R	24.9	Floodplain	57230	1325.56	1333.24	1332.9	1335.15	0.006236	11.09	5159.05	2557.16	0.89

Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Douglas R	24.9	Floodway	57230	1325.56	1333.65	1332.9	1335.27	0.004769	10.2	5611.12	1080	0.79
Douglas R	24.95		Bridge									
Douglas R	25.02	Floodplain	57230	1326.13	1336.49	1333.51	1337.28	0.001438	7.14	8011.72	2917.3	0.46
Douglas R	25.02	Floodway	57230	1326.13	1336.48	1333.51	1337.28	0.001462	7.15	8007.5	1080	0.46
Douglas R	25.06	Floodplain	57230	1330	1336.96		1337.98	0.002492	8.23	7156.4	2869.83	0.59
Douglas R	25.06	Floodway	57230	1330	1336.91		1338.04	0.002736	8.58	6785.37	1130	0.61
Douglas R	25.15	Floodplain	57854	1330	1338.61		1339.2	0.001881	6.86	10075.69	2997.58	0.48
Douglas R	25.15	Floodway	57854	1330	1338.68		1339.37	0.002037	7.18	9178	1710	0.5
Douglas R	25.24	Floodplain	57854	1334	1339.98	1339.98	1341.34	0.007414	11.86	7255.77	2859.63	0.97
Douglas R	25.24	Floodway	57854	1334	1340.09	1340.09	1341.68	0.00795	12.47	6570.25	2035.59	1.01
Douglas R	25.34	Floodplain	57854	1334.57	1342.83		1343.55	0.002627	8.35	10226.58	3073.57	0.6
Douglas R	25.34	Floodway	57854	1334.57	1343.18		1344.17	0.003035	9.33	9144.05	2635	0.65
Douglas R	25.43	Floodplain	57854	1337	1344.86	1344.86	1345.98	0.004626	12.41	9393.35	3298.14	0.82
Douglas R	25.43	Floodway	57854	1337	1345.13	1345.13	1346.37	0.004678	12.79	8782.63	2830	0.83
Douglas R	25.53	Floodplain	57854	1340	1347		1347.7	0.002544	7.89	10870.72	3502.23	0.59
Douglas R	25.53	Floodway	57854	1340	1347.32		1348.05	0.002374	7.9	10347.96	2945	0.57
Douglas R	25.62	Floodplain	57854	1342	1348.53		1349.46	0.004756	8.53	8786.48	3438.69	0.76
Douglas R	25.62	Floodway	57854	1342	1348.73		1349.99	0.006064	9.72	7452.24	2795	0.85
Douglas R	25.72	Floodplain	57854	1344.64	1350.88		1351.92	0.005047	9.1	8390.68	3333.1	0.79
Douglas R	25.72	Floodway	57854	1344.76	1351.44		1352.58	0.004585	9.3	8014.72	2795	0.76
Douglas R	25.81	Floodplain	57854	1347	1353.3		1354.17	0.004517	8.43	9337.97	3969.1	0.74
Douglas R	25.81	Floodway	57854	1347	1353.62		1354.8	0.004899	9.24	7624.15	2720	0.78
Douglas R	25.91	Floodplain	57854	1349	1355.03		1355.83	0.004475	7.96	9080.93	3605.6	0.73
Douglas R	25.91	Floodway	57854	1349	1355.49		1356.53	0.00442	8.55	7794.06	2570	0.74
Douglas R	26	Floodplain	57854	1351	1357.09		1357.92	0.005466	8.02	8323.33	3235.96	0.78
Douglas R	26	Floodway	57854	1351	1357.54		1358.61	0.005383	8.67	7222.25	2231.65	0.8
Douglas R	26.1	Floodplain	57854	1353	1359.77		1360.53	0.00457	7.69	8646.17	3239.08	0.73
Douglas R	26.1	Floodway	57854	1353	1360.27		1361.2	0.004359	8.22	7828.3	2200	0.73
Douglas R	26.19	Floodplain	57854	1356	1362.4		1363.08	0.004423	7.49	8949.77	3300.67	0.71
Douglas R	26.19	Floodway	57854	1356	1362.89		1363.71	0.004245	8.03	8195.48	2070	0.71
Douglas R	26.29	Floodplain	57854	1356	1364.72		1365.67	0.005256	6.04	7714.36	3487.3	0.58
Douglas R	26.29	Floodway	57854	1356	1365.09		1366.05	0.004607	6.02	7643.03	1870	0.55
Douglas R	26.38	Floodplain	57854	1357	1368.28	1367.05	1369.17	0.004407	7.56	7651.53	3827.34	0.62
Douglas R	26.38	Floodway	57854	1357	1368.39	1367.05	1369.24	0.004107	7.38	7839.75	1677.78	0.6
Douglas R	26.4		Bridge									
Douglas R	26.48	Floodplain	57854	1357	1369.31	1367.55	1370.03	0.00327	6.8	8507.27	3889.26	0.53
Douglas R	26.48	Floodway	57854	1357	1369.34	1367.55	1370.05	0.003233	6.76	8561.34	1677.78	0.53
Douglas R	26.57	Floodplain	57854	1362	1371.93		1372.45	0.003371	6.09	10405.83	3889.33	0.5
Douglas R	26.57	Floodway	57854	1362	1371.97		1372.69	0.004225	6.89	8596.72	1925	0.56
Douglas R	26.67	Floodplain	57854	1365	1373.59		1374.03	0.003406	6.02	11347.17	4100.72	0.57
Douglas R	26.67	Floodway	57854	1365	1373.93		1374.53	0.003581	6.49	9352.1	2295	0.58
Douglas R	26.76	Floodplain	57854	1367	1375.01		1375.52	0.005151	5.57	10498.79	4025.31	0.65
Douglas R	26.76	Floodway	57854	1367	1375.47		1376.2	0.00581	6.53	8523.47	2625	0.69
Douglas R	26.85	Floodplain	57854	1370.2	1377.01		1377.53	0.005493	5.92	10019.58	3745.65	0.7
Douglas R	26.85	Floodway	57854	1370.2	1377.6		1378.2	0.004547	6.11	9365.07	2808.58	0.65
Douglas R	26.95	Floodplain	57854	1375.5	1378.52		1379.13	0.008159	5.37	9295.82	3898.11	0.82
Douglas R	26.95	Floodway	57854	1375.5	1379.01		1379.72	0.007422	6.33	8650.87	3028	0.83
Douglas R	27.04	Floodplain	57854	1378	1381.31		1381.74	0.004321	6.03	11173.77	3920.85	0.67
Douglas R	27.04	Floodway	57854	1378	1381.87		1382.49	0.005122	7.5	9417.8	2974.55	0.75

Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Douglas R	27.14	Floodplain	57854	1380.05	1384.08		1384.52	0.004104	7.16	11440.91	4092.26	0.68
Douglas R	27.14	Floodway	57854	1380.05	1384.69		1385.22	0.003618	7.51	10559.66	3100	0.66
Douglas R	27.23	Floodplain	57854	1382.75	1386.85		1387.37	0.005544	7.89	10748.53	4388.71	0.79
Douglas R	27.23	Floodway	57854	1382.75	1387.23		1387.92	0.005893	8.77	9332.45	3308	0.83
Douglas R	27.33	Floodplain	57854	1383.65	1389.27		1390.18	0.007123	9.79	9310.49	4650.14	0.89
Douglas R	27.33	Floodway	57854	1383.65	1389.7		1390.74	0.006352	9.91	8470.77	3478	0.85
Douglas R	27.52	Floodplain	57854	1387.35	1393.36	1392.27	1393.75	0.003391	5.86	12652.45	5061.2	0.6
Douglas R	27.52	Floodway	57854	1387.35	1393.92		1394.46	0.003458	6.46	10813.19	3650	0.61
Douglas R	27.61	Floodplain	57854	1389.85	1395.37		1395.98	0.00694	7.5	10188.68	5101.58	0.79
Douglas R	27.61	Floodway	57854	1389.85	1395.86		1396.54	0.005675	7.44	9506.28	3760	0.72
Douglas R	27.78	Floodplain	57854	1391.75	1398.19		1398.47	0.002108	5.08	15942.66	5350.33	0.44
Douglas R	27.78	Floodway	57854	1391.75	1398.58		1398.91	0.00204	5.3	14062.09	3960	0.44
Douglas R	27.97	Floodplain	58418	1395.05	1400.54		1400.95	0.006017	5.87	11733.19	5737.98	0.67
Douglas R	27.97	Floodway	58418	1395.05	1400.97		1401.48	0.005608	6.3	10386.29	4045	0.67
Douglas R	28.09	Floodplain	58418	1399.05	1403.51		1403.83	0.004586	5.07	12903.92	6021.68	0.63
Douglas R	28.09	Floodway	58418	1399.05	1404.02		1404.5	0.004886	5.99	10667.18	4100	0.66
Douglas R	28.19	Floodplain	58418	1401.15	1405.82		1406.19	0.005888	4.76	11974.77	6079.22	0.69
Douglas R	28.19	Floodway	58418	1401.15	1406.62		1407.17	0.006574	6.32	9858.64	4195	0.74
Douglas R	28.28	Floodplain	58418	1405.35	1408.82	1408.24	1409.18	0.005805	4.84	12140.41	6105.62	0.65
Douglas R	28.28	Floodway	58418	1405.35	1409.55		1409.97	0.004711	5.35	11250.63	4409	0.6
Douglas R	28.38	Floodplain	58418	1407.15	1411.58		1411.94	0.004688	4.72	12158.05	5796.34	0.65
Douglas R	28.38	Floodway	58418	1407.15	1412.1		1412.56	0.005266	5.67	10706.77	4669	0.68
Douglas R	28.47	Floodplain	58418	1409.75	1414.21		1414.58	0.005712	4.79	11880.62	6304.9	0.69
Douglas R	28.47	Floodway	58418	1409.75	1414.93		1415.45	0.006114	6	10258.31	4745	0.71
Douglas R	28.57	Floodplain	58418	1412.25	1417.27		1417.83	0.00612	6.26	10299.36	5420.46	0.74
Douglas R	28.57	Floodway	58418	1412.25	1417.61		1418.12	0.00452	5.81	10548.94	4515	0.64
Douglas R	28.66	Floodplain	58418	1413.85	1419.99		1420.42	0.005092	5.58	11356.43	5594.73	0.68
Douglas R	28.66	Floodway	58418	1413.85	1420.12		1420.74	0.006346	6.43	9386.92	4295	0.76
Douglas R	28.76	Floodplain	58418	1417.35	1422.74		1423.2	0.006826	5.56	10872.98	5542.91	0.71
Douglas R	28.76	Floodway	58418	1417.35	1423.28		1423.86	0.006305	6.15	9572.33	3925	0.69
Douglas R	28.85	Floodplain	58418	1420.45	1425.56		1425.93	0.004952	4.8	12011.43	5606.96	0.62
Douglas R	28.85	Floodway	58418	1420.45	1426.21		1426.77	0.005396	5.88	9768.41	3735	0.65
Douglas R	28.95	Floodplain	58418	1422.25	1427.84		1428.22	0.004585	4.74	12063.37	5527.23	0.61
Douglas R	28.95	Floodway	58418	1422.25	1428.59		1429.07	0.004043	5.33	10597.38	3780	0.58
Douglas R	29.04	Floodplain	58418	1424.25	1429.99		1430.61	0.005751	4.91	10383.19	5491.12	0.7
Douglas R	29.04	Floodway	58418	1424.25	1430.5		1431.11	0.004629	5.01	10060.88	4005	0.62
Douglas R	29.13	Floodplain	58418	1427.05	1432.97		1433.33	0.003901	4.99	12518.85	5930.74	0.61
Douglas R	29.13	Floodway	58418	1427.05	1433.11		1433.51	0.003793	5.07	11607.8	4664	0.6
Douglas R	29.23	Floodplain	58418	1429.75	1435.29		1435.68	0.006549	5.28	11791.16	6068.72	0.65
Douglas R	29.23	Floodway	58418	1429.75	1435.4		1435.84	0.006523	5.46	11062.81	5134	0.65
Douglas R	29.32	Floodplain	58418	1431.95	1438.14		1438.51	0.005304	5.08	12438.33	6166.1	0.59
Douglas R	29.32	Floodway	58418	1431.95	1438.23		1438.62	0.005215	5.16	11732.88	5028	0.59
Douglas R	29.42	Floodplain	58418	1434.15	1440.47		1440.87	0.004182	5.38	11927.63	5382.11	0.61
Douglas R	29.42	Floodway	58418	1434.15	1440.49		1440.89	0.004148	5.39	11694.14	4865	0.61
Douglas R	29.51	Floodplain	58418	1437.75	1443.11	1442.58	1443.57	0.007025	5.35	10926.75	5386.19	0.66
Douglas R	29.51	Floodway	58418	1437.75	1443.15	1442.57	1443.64	0.00718	5.47	10415.8	4695	0.67
Douglas R	29.61	Floodplain	58418	1440.85	1446.12		1446.49	0.004879	5.12	12220.82	5560.37	0.59
Douglas R	29.61	Floodway	58418	1440.85	1446.23		1446.65	0.004925	5.31	11344.35	4540	0.59
Douglas R	29.7	Floodplain	58418	1444.15	1448.85	1448.46	1449.42	0.005867	6.57	10449.35	5345.99	0.74

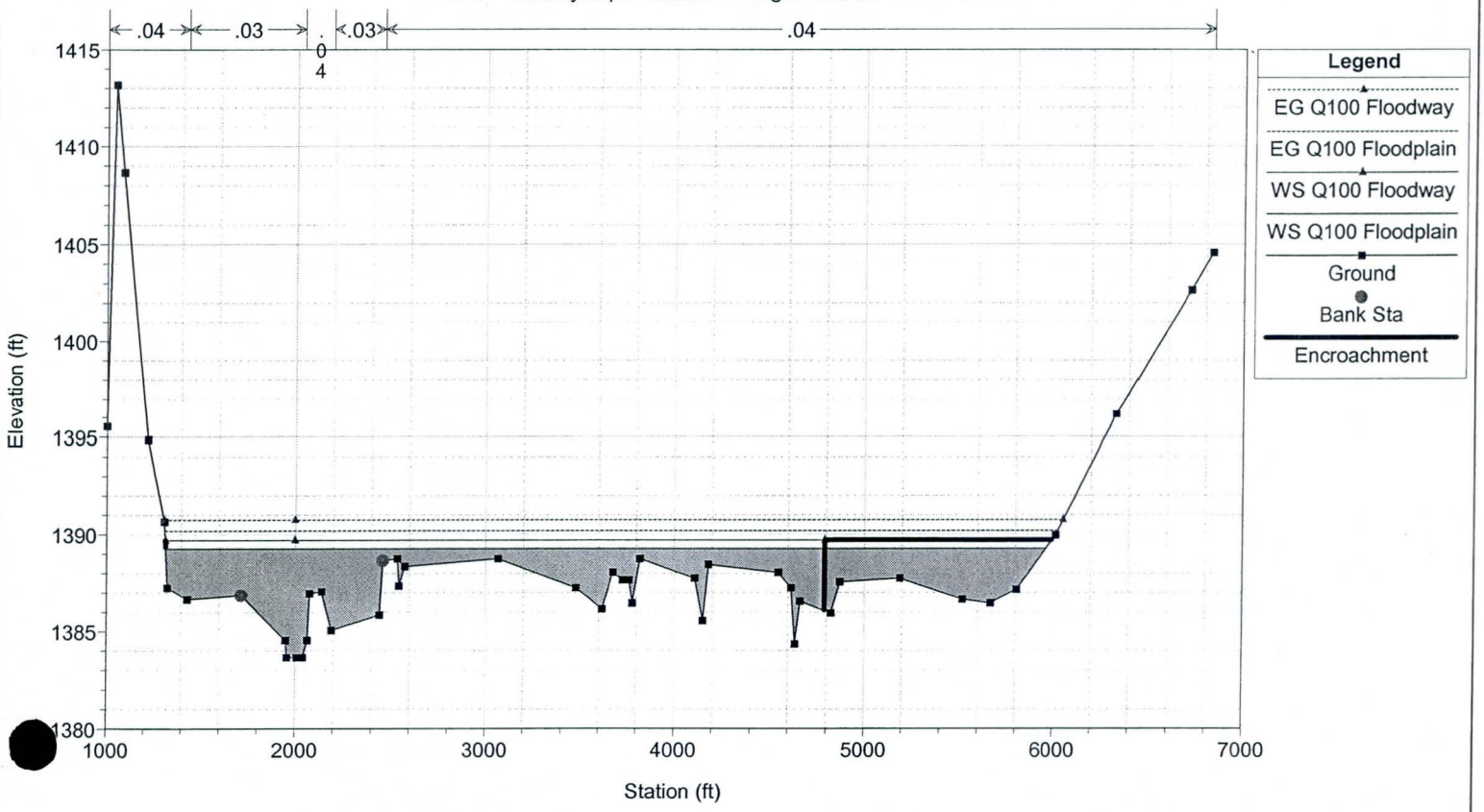
Profile Output Table - Standard Table 1
HEC-RAS Plan: new I River: Hassayampa Reach: Douglas Ranch

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Douglas R	29.7	Floodway	58418	1444.15	1448.91	1448.45	1449.45	0.005331	6.33	10259.87	4525	0.71
Douglas R	29.8	Floodplain	58418	1446.55	1451.87		1452.34	0.005417	6.07	11250.27	5393.05	0.67
Douglas R	29.8	Floodway	58418	1446.55	1451.87		1452.46	0.006397	6.6	9835.46	4381	0.73
Douglas R	29.89	Floodplain	58418	1449.65	1454.73		1455.33	0.005701	6.49	10460.45	5195.09	0.7
Douglas R	29.89	Floodway	58418	1449.65	1454.85		1455.4	0.004829	6.13	10316.39	4086	0.65
Douglas R	29.99	Floodplain	58418	1452.75	1457.45		1457.98	0.005072	6.4	10800.22	5205.09	0.7
Douglas R	29.99	Floodway	58418	1452.75	1457.43		1458.18	0.006412	7.17	9037.75	3920	0.79
Douglas R	30.08	Floodplain	58418	1455.45	1460.08		1460.77	0.005966	6.83	9620.94	4556.58	0.75
Douglas R	30.08	Floodway	58418	1455.45	1460.31		1460.95	0.004836	6.47	9771.18	3950	0.68
Douglas R	30.18	Floodplain	58418	1458.75	1462.92		1463.54	0.00521	6.77	9994.69	4550.77	0.74
Douglas R	30.18	Floodway	58418	1458.75	1462.88		1463.55	0.005649	6.99	9402.35	4095	0.77
Douglas R	30.27	Floodplain	58418	1461.55	1465.85		1466.48	0.006582	6.91	9535.13	4162.14	0.77
Douglas R	30.27	Floodway	58418	1461.55	1465.91		1466.5	0.006081	6.73	9777.88	4161	0.74
Douglas R	30.37	Floodplain	58418	1464.05	1468.92		1469.52	0.005509	6.84	10036.42	4384.71	0.74
Douglas R	30.37	Floodway	58418	1464.05	1468.89		1469.51	0.005778	6.95	9878.54	4380.56	0.75
Douglas R	30.46	Floodplain	58418	1465.95	1471.47		1471.97	0.004681	6.21	10879.92	4732.16	0.68
Douglas R	30.46	Floodway	58418	1465.95	1471.49		1471.99	0.004624	6.2	10824.92	4590	0.68
Douglas R	30.56	Floodplain	58418	1469.65	1473.89		1474.5	0.005767	6.74	9969.71	4612.23	0.77
Douglas R	30.56	Floodway	58418	1469.65	1473.89		1474.5	0.005744	6.73	9963.36	4559	0.77
Douglas R	30.65	Floodplain	58418	1472.45	1476.64		1477.18	0.00537	6.63	10575.78	4732.08	0.72
Douglas R	30.65	Floodway	58418	1472.45	1476.63		1477.17	0.005328	6.58	10344.71	4366	0.72
Douglas R	30.74	Floodplain	58418	1475.25	1479.38	1479.06	1480.05	0.006412	7.06	9640.31	4616.03	0.78
Douglas R	30.74	Floodway	58418	1475.25	1479.36	1479.05	1480.04	0.006512	7.08	9377.85	4210	0.79
Douglas R	30.84	Floodplain	58418	1476.95	1481.98		1482.45	0.004079	6.09	11509.74	5092.09	0.65
Douglas R	30.84	Floodway	58418	1476.95	1482.02		1482.55	0.004336	6.33	10429.58	4123	0.67
Douglas R	30.93	Floodplain	58418	1479.15	1484.08		1484.57	0.005336	6.1	10743.74	5014.25	0.73
Douglas R	30.93	Floodway	58418	1479.15	1484.36		1485.04	0.006165	6.94	9086.17	3951	0.79
Douglas R	31.03	Floodplain	59030	1481.65	1486.75		1487.32	0.006958	6.79	10262.17	5550.81	0.86
Douglas R	31.03	Floodway	59030	1481.65	1487.21		1487.82	0.005516	6.57	9431.05	3836	0.75

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

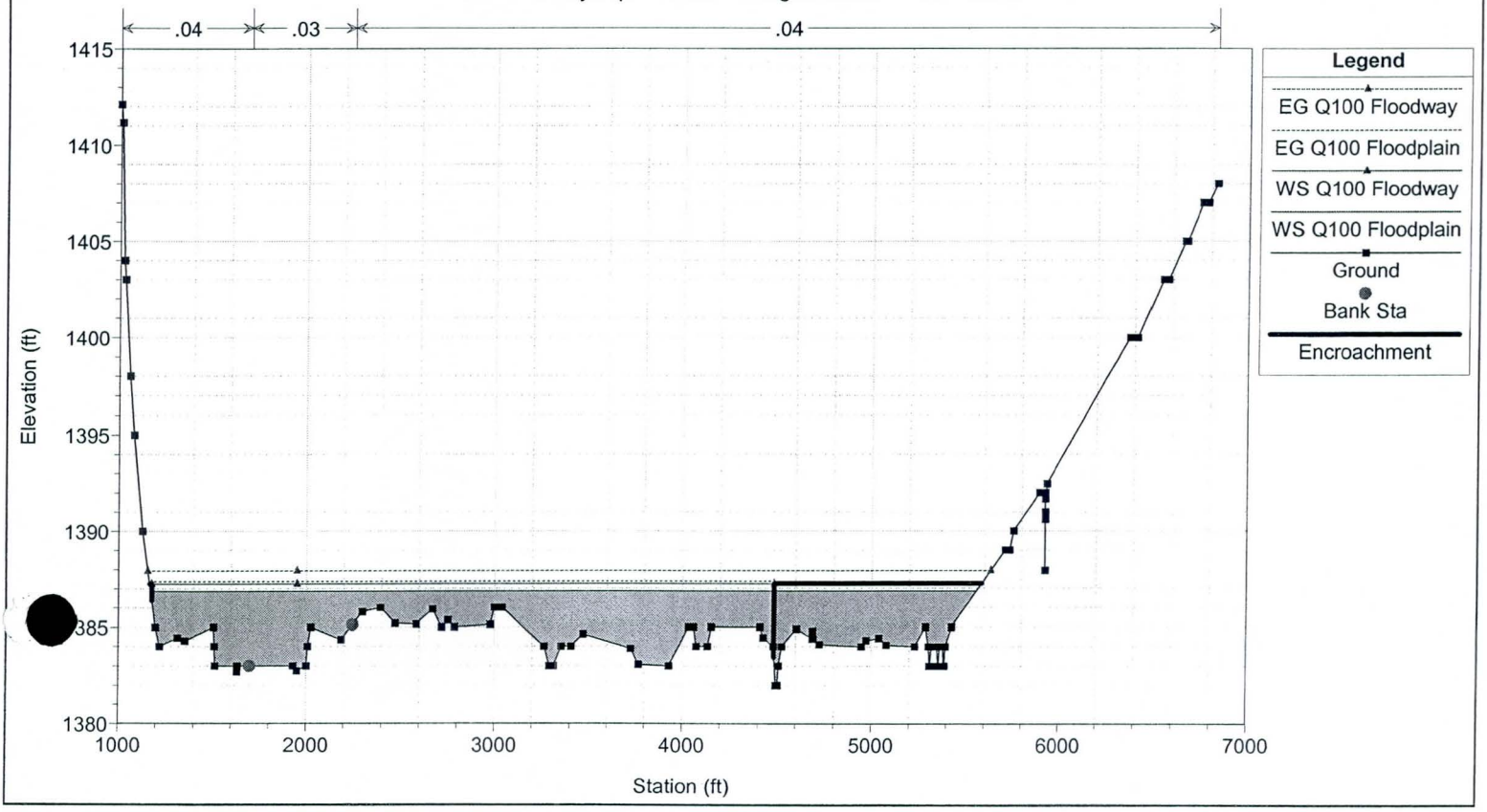
River = Hassayampa Reach = Douglas Ranch RS = 27.33



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

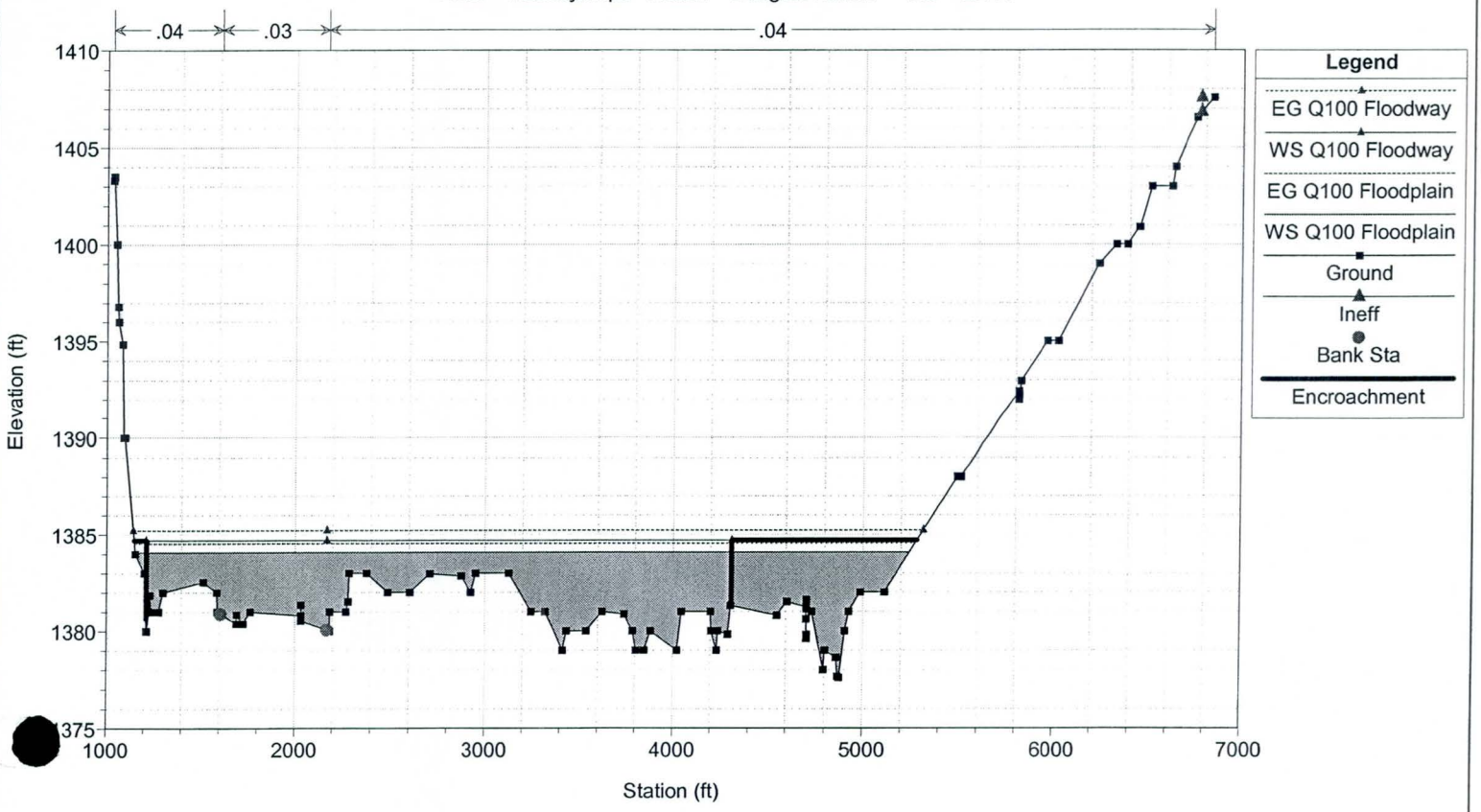
River = Hassayampa Reach = Douglas Ranch RS = 27.23



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

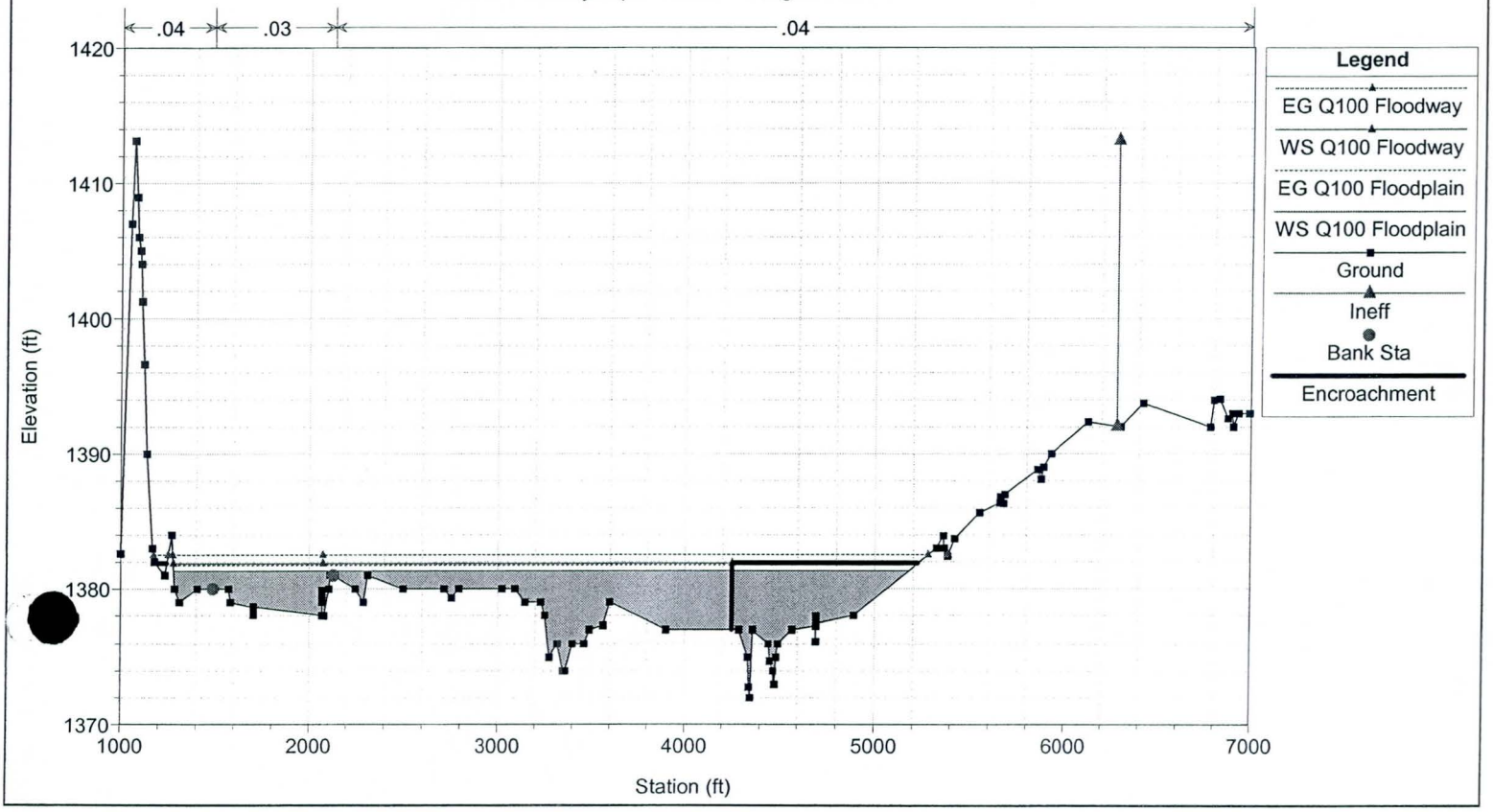
River = Hassayampa Reach = Douglas Ranch RS = 27.14



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

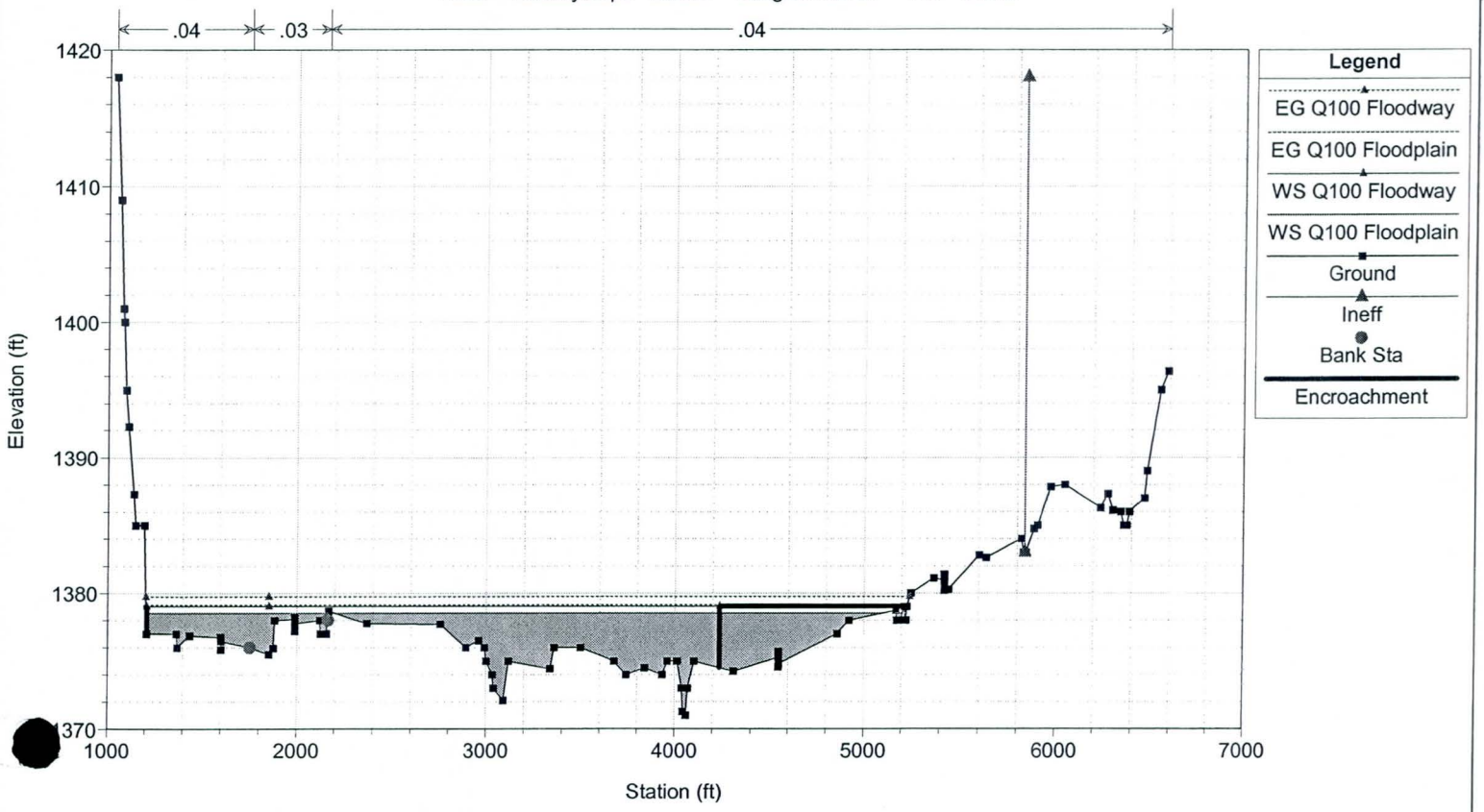
River = Hassayampa Reach = Douglas Ranch RS = 27.04



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

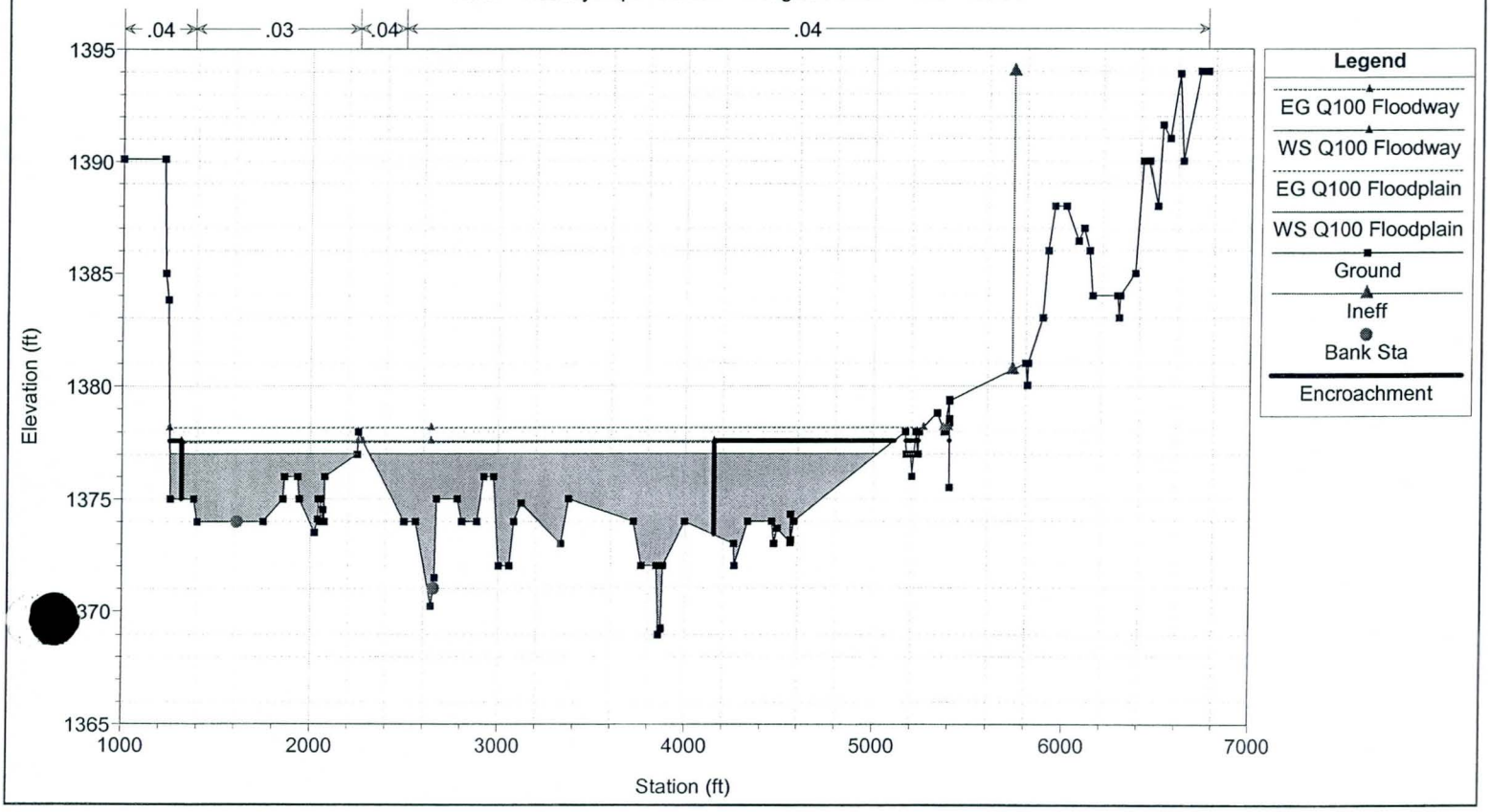
River = Hassayampa Reach = Douglas Ranch RS = 26.95



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

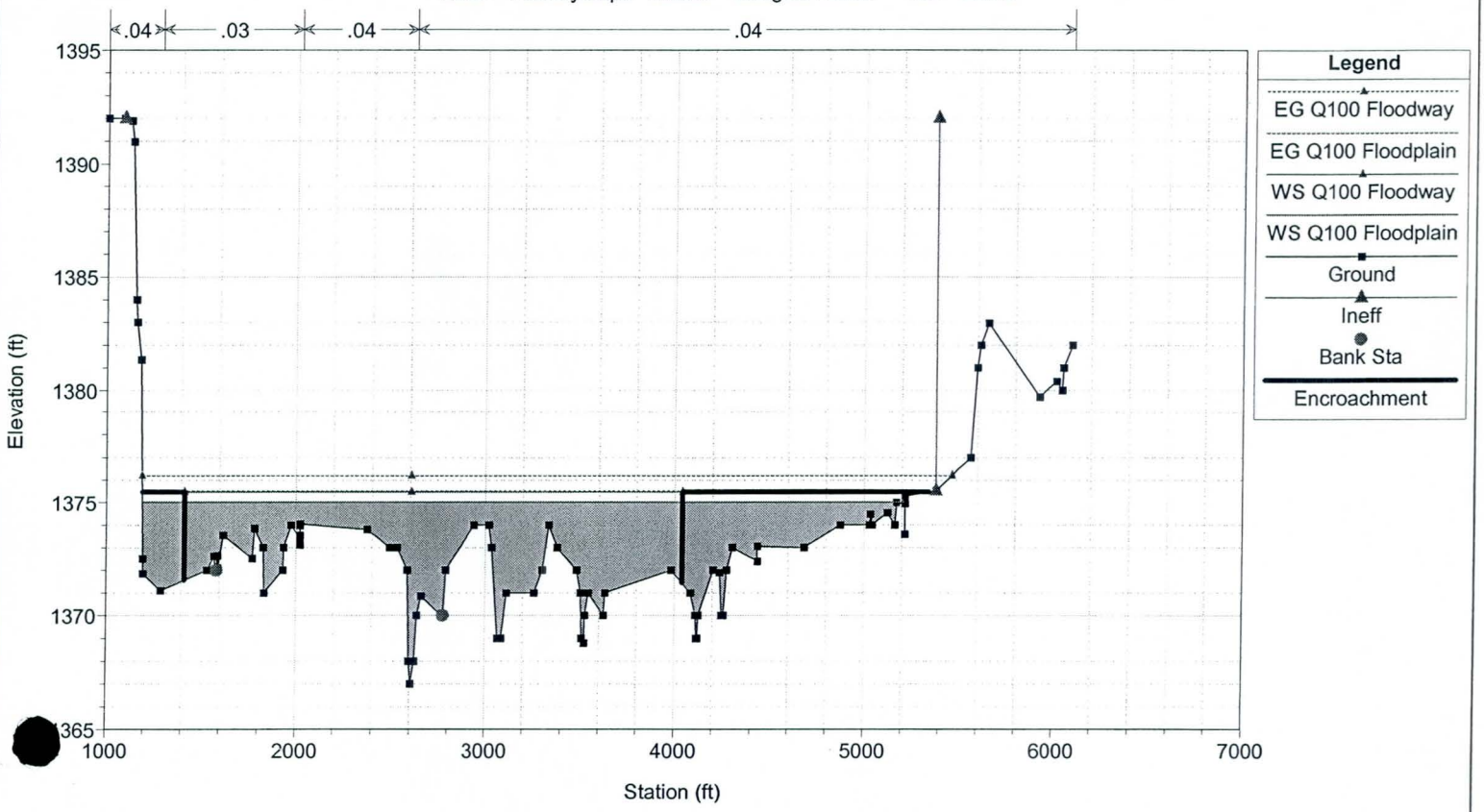
River = Hassayampa Reach = Douglas Ranch RS = 26.85



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

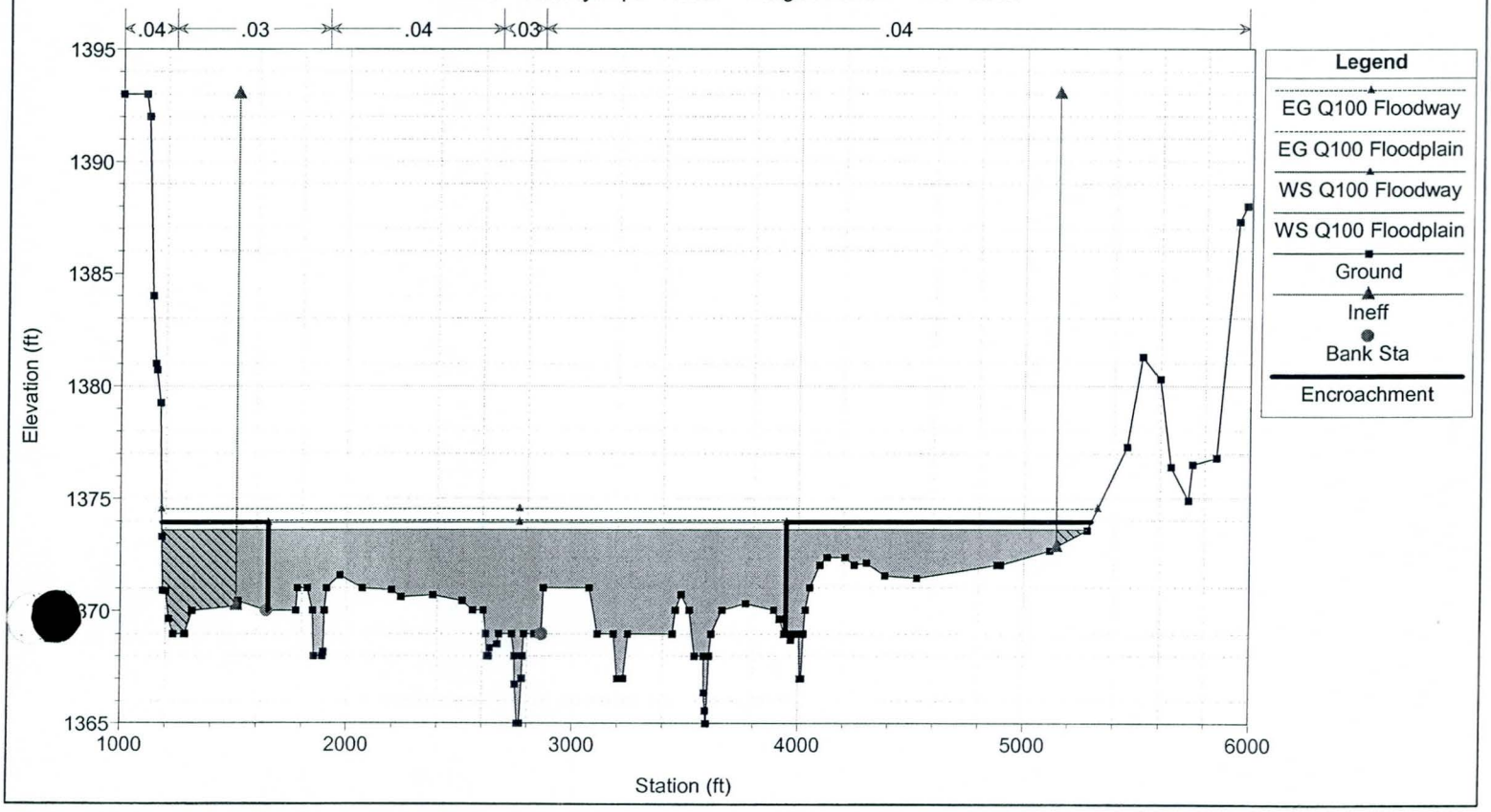
River = Hassayampa Reach = Douglas Ranch RS = 26.76



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

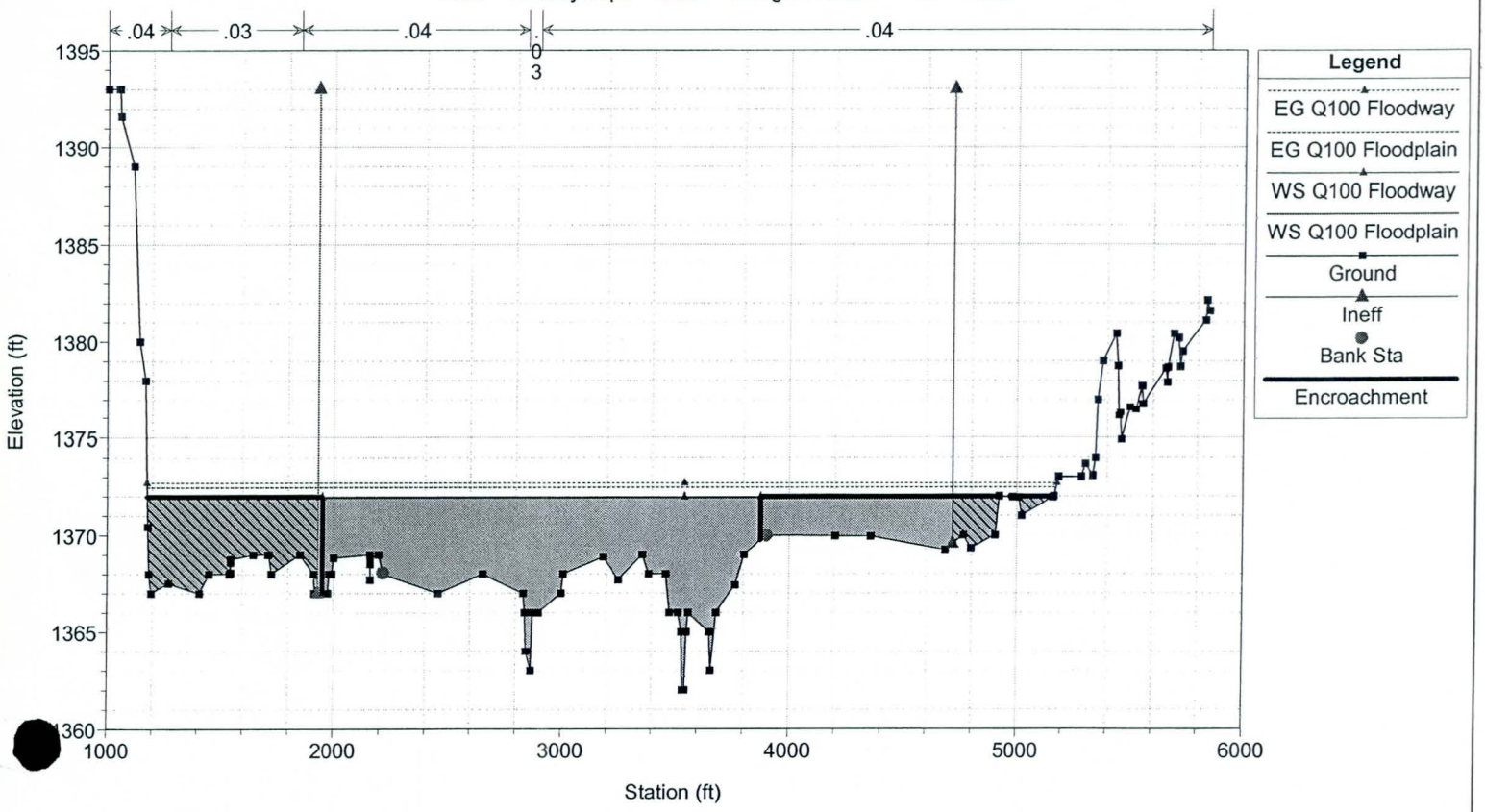
River = Hassayampa Reach = Douglas Ranch RS = 26.67



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

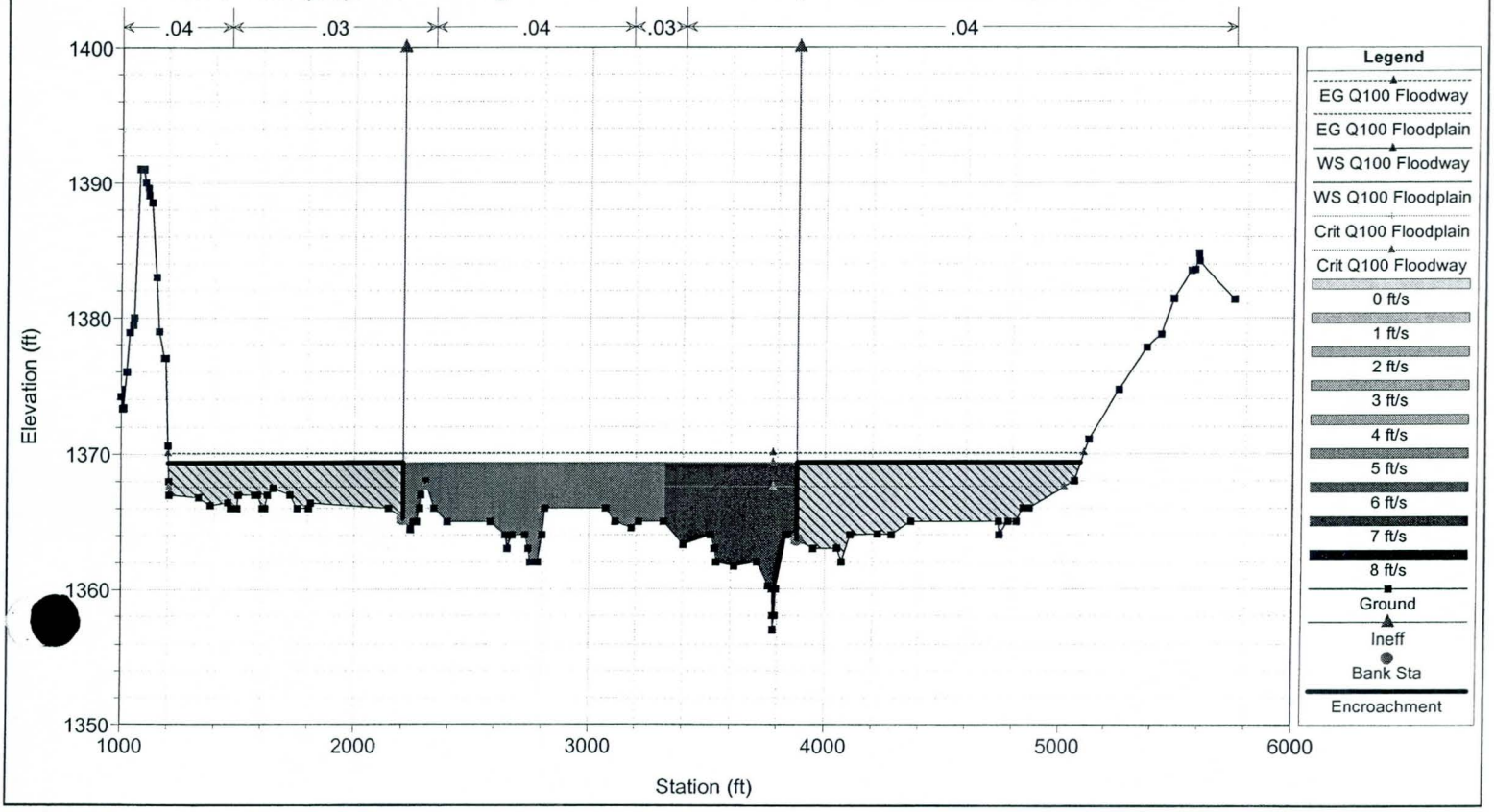
River = Hassayampa Reach = Douglas Ranch RS = 26.57

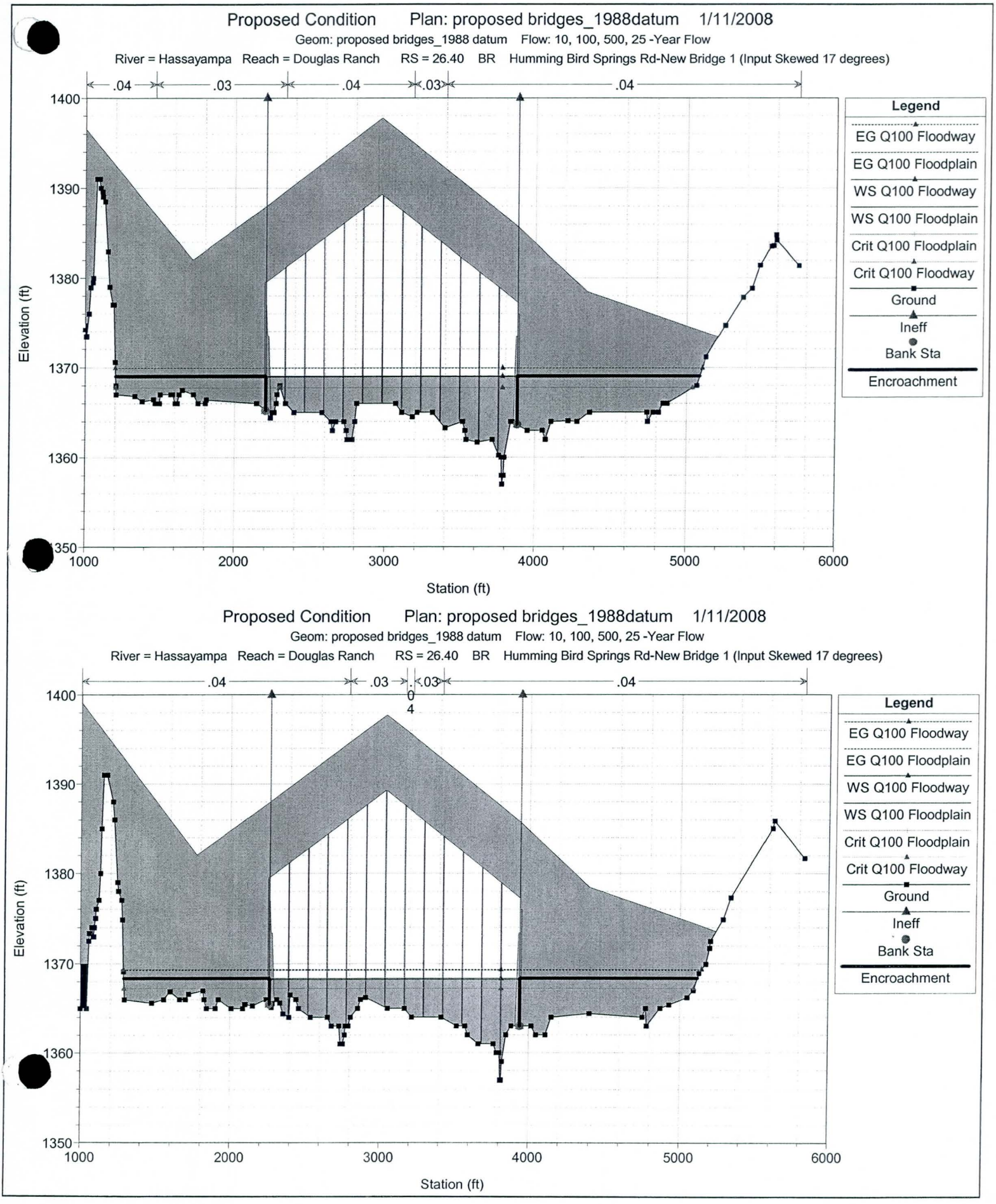


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

River = Hassayampa Reach = Douglas Ranch RS = 26.48 XS adjusted to be Normal to flow,Sta. 1000 to 4361.89 has a 17 d

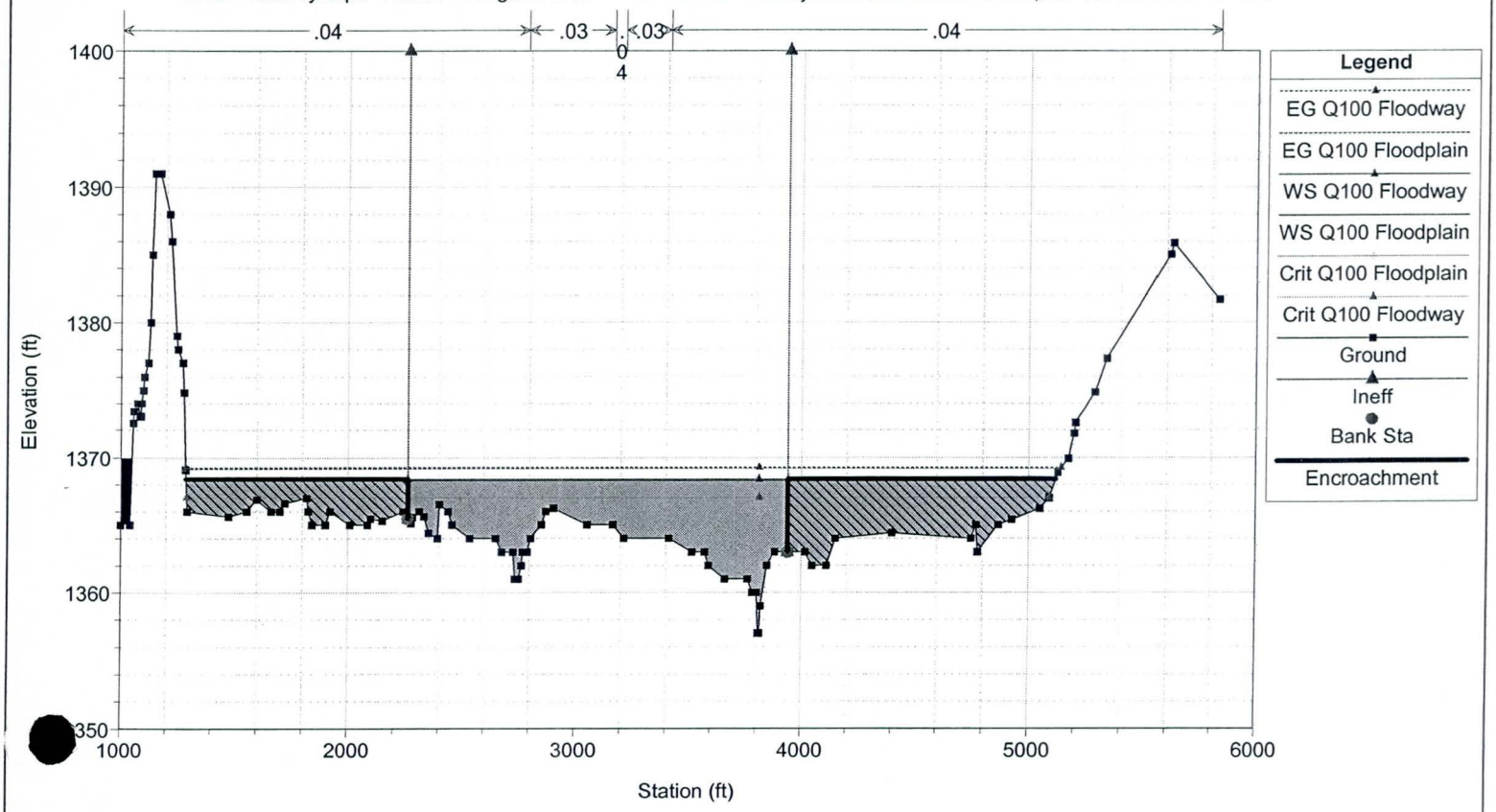



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 26.40 BR Humming Bird Springs Rd-New Bridge 1 (Input Skewed 17 degrees)
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1400
1390
1380
1370
1360
1350
1000
2000
3000
4000
5000
6000
Station (ft)
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 26.40 BR Humming Bird Springs Rd-New Bridge 1 (Input Skewed 17 degrees)
.04
.03
.03
.04
0
4
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1400
1390
1380
1370
1360
1350
1000
2000
3000
4000
5000
6000
Station (ft)

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

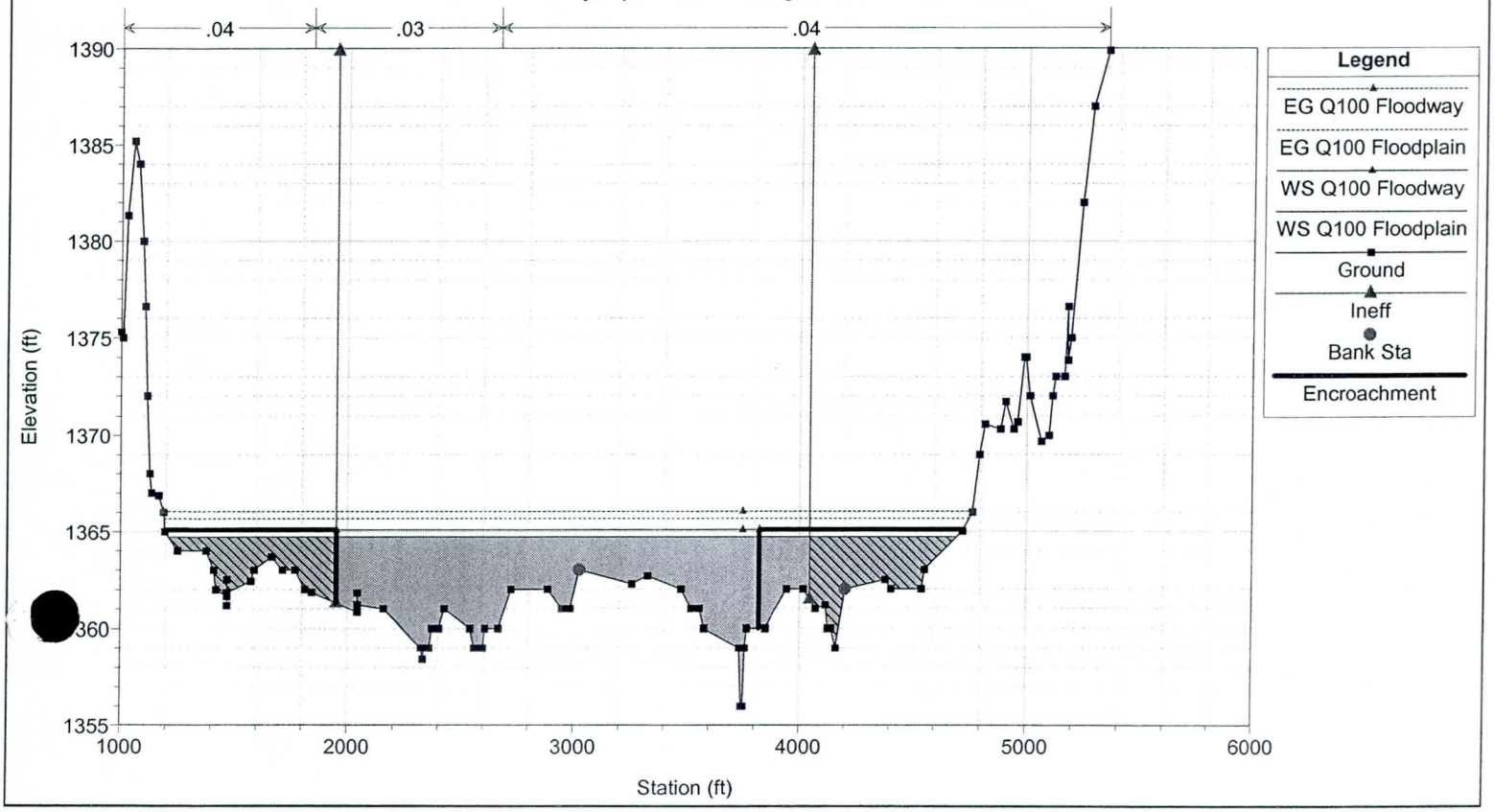
River = Hassayampa Reach = Douglas Ranch RS = 26.38 XS adjusted to be Normal to flow,Sta. 1000 to 4440.19 has a 17 d



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

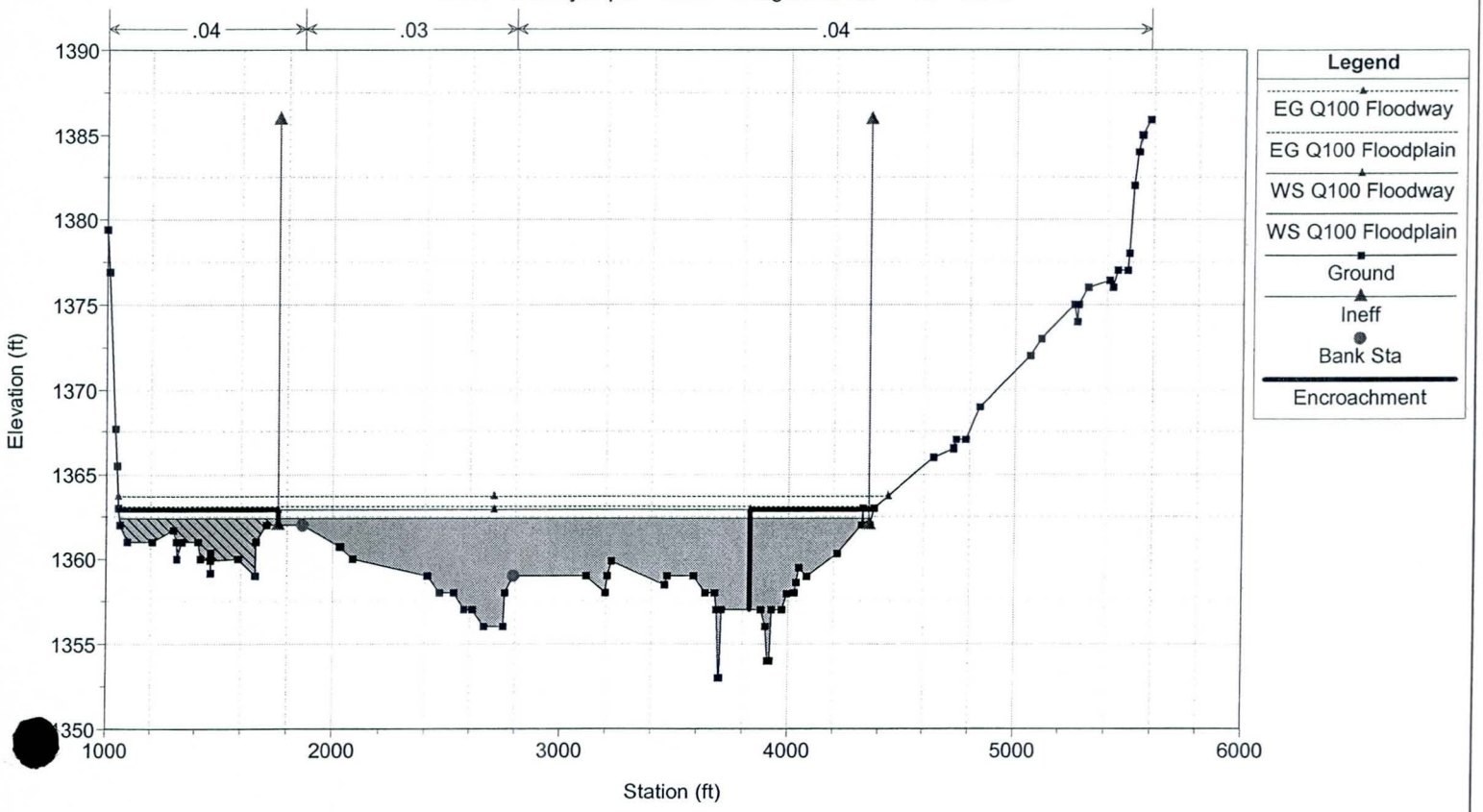
River = Hassayampa Reach = Douglas Ranch RS = 26.29



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

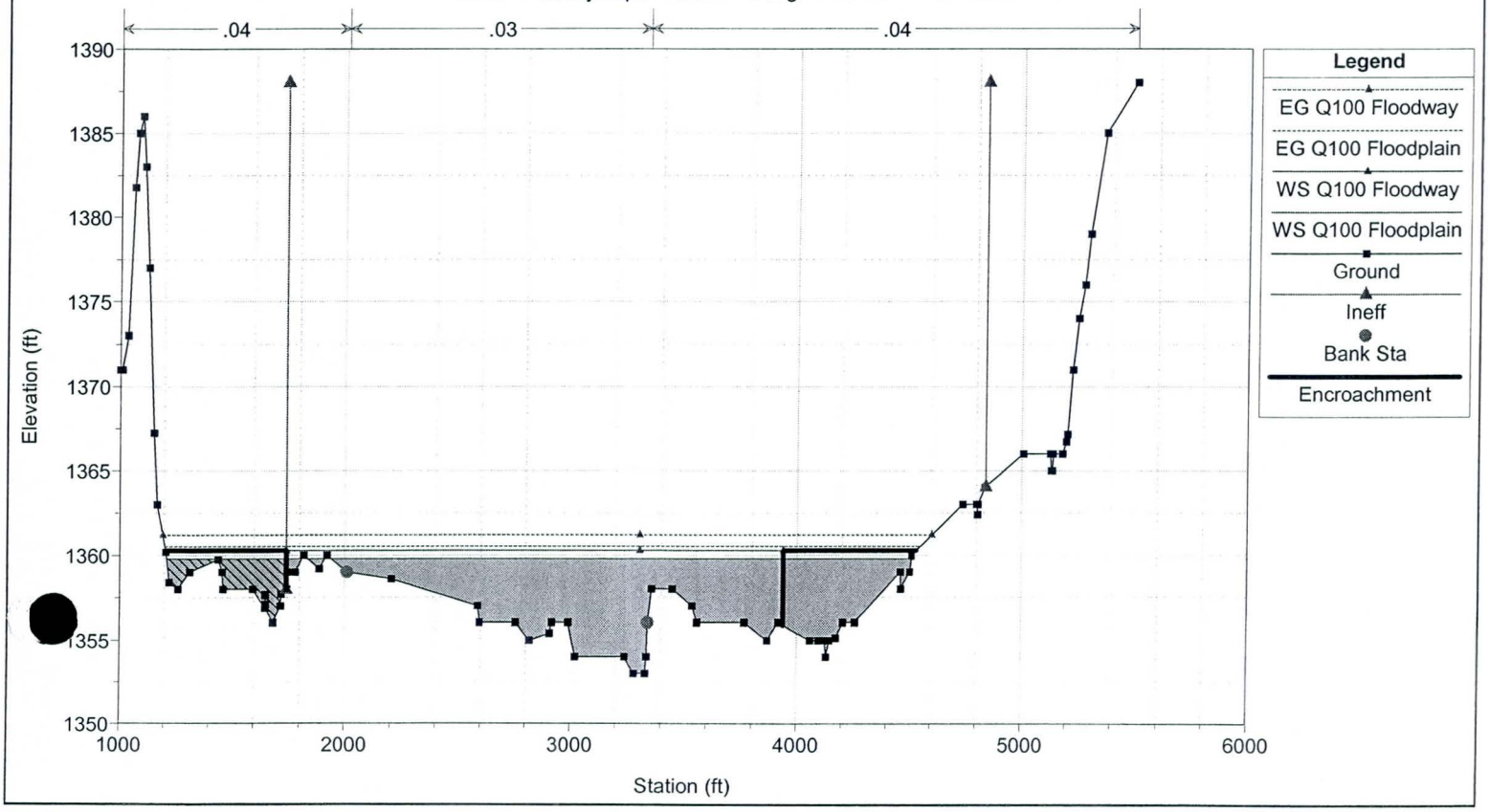
River = Hassayampa Reach = Douglas Ranch RS = 26.19



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

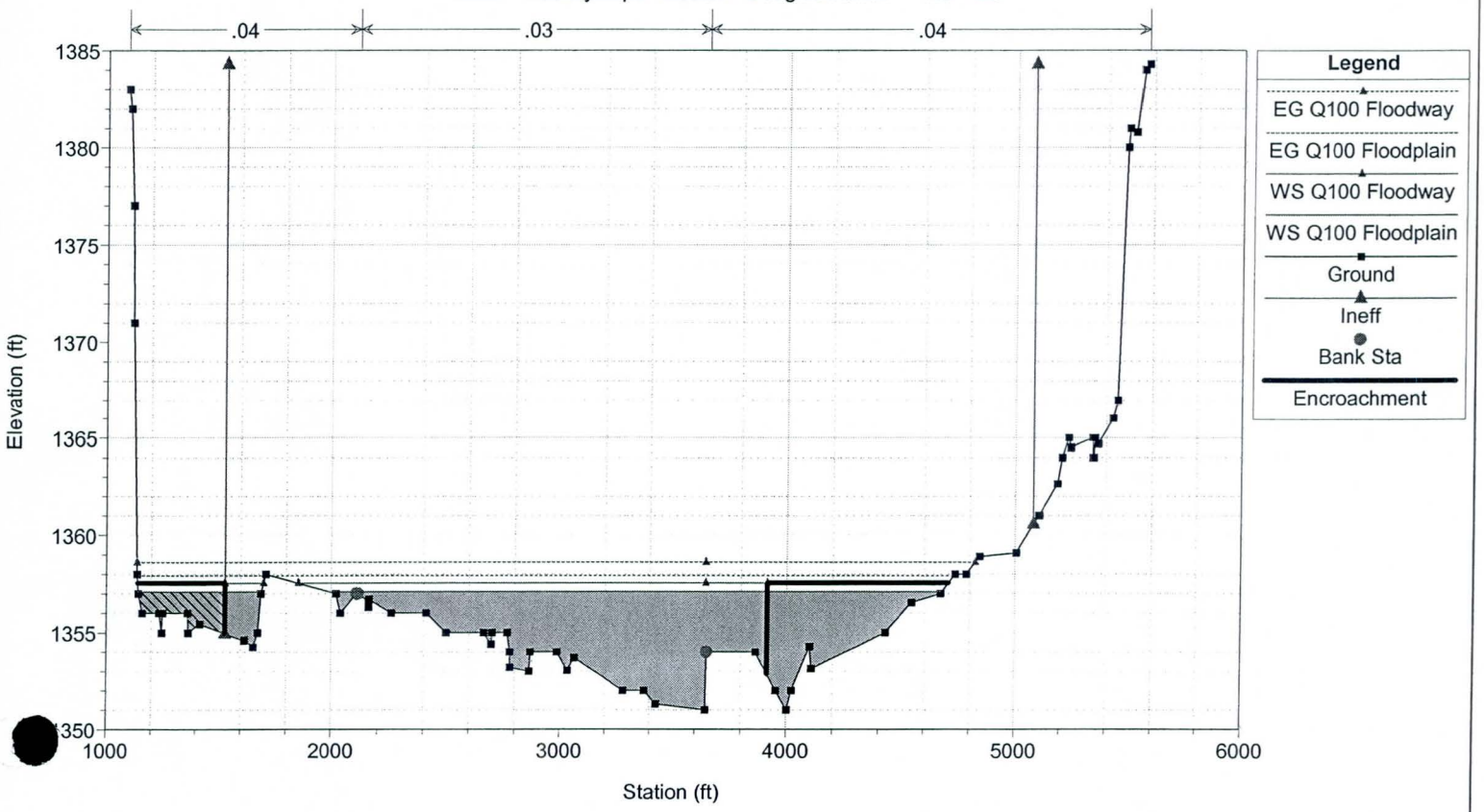
River = Hassayampa Reach = Douglas Ranch RS = 26.1



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

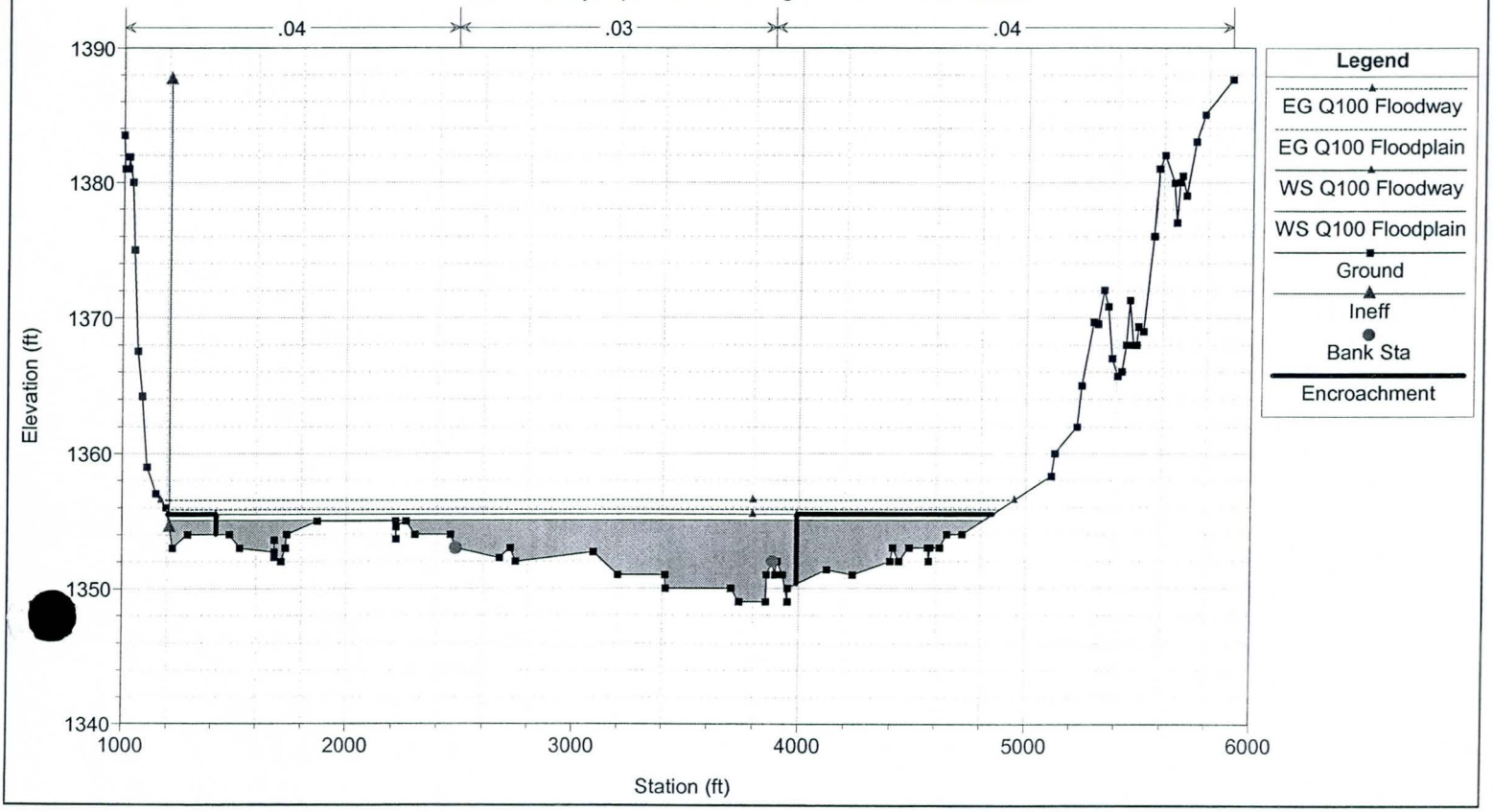
River = Hassayampa Reach = Douglas Ranch RS = 26

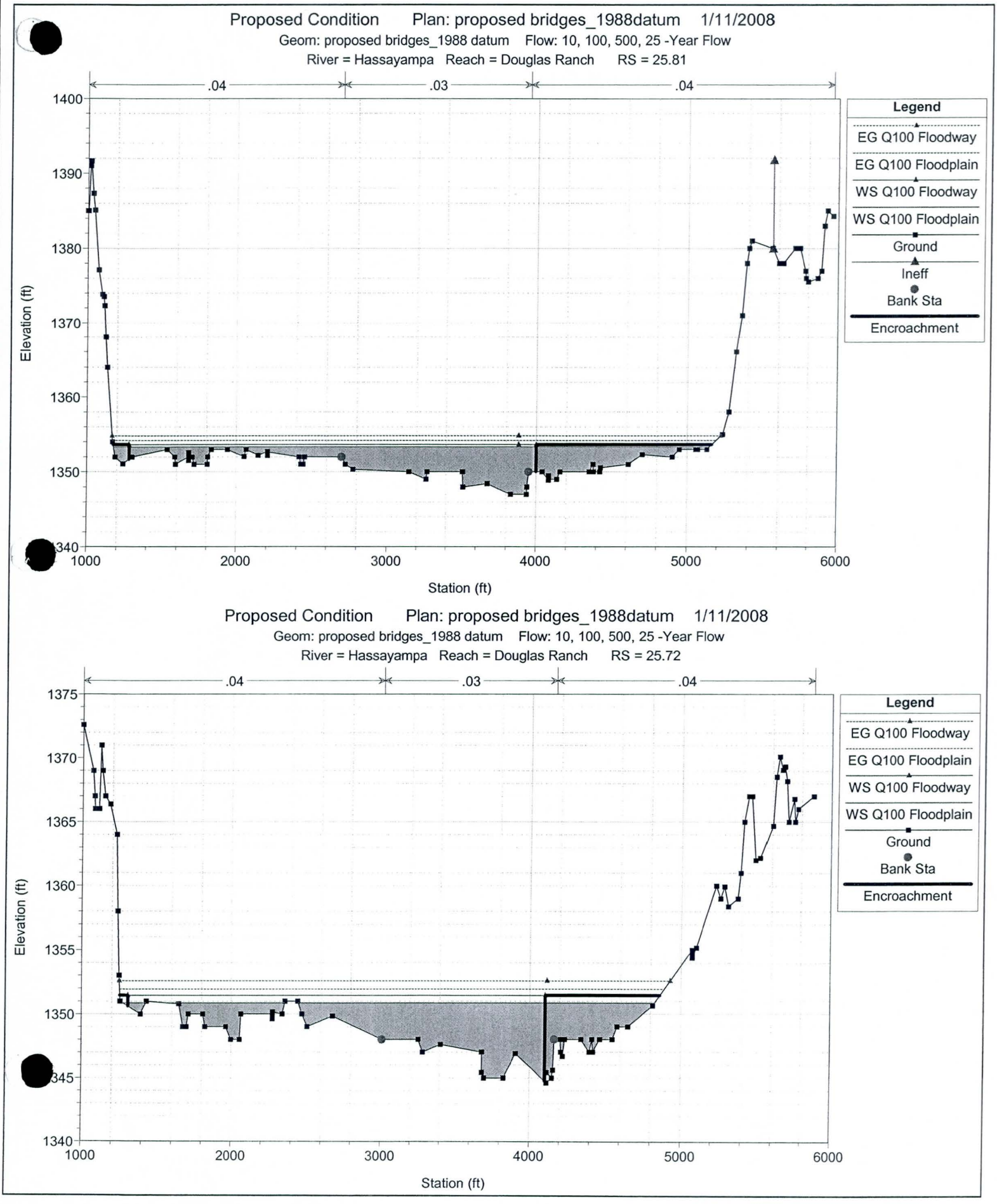


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

River = Hassayampa Reach = Douglas Ranch RS = 25.91

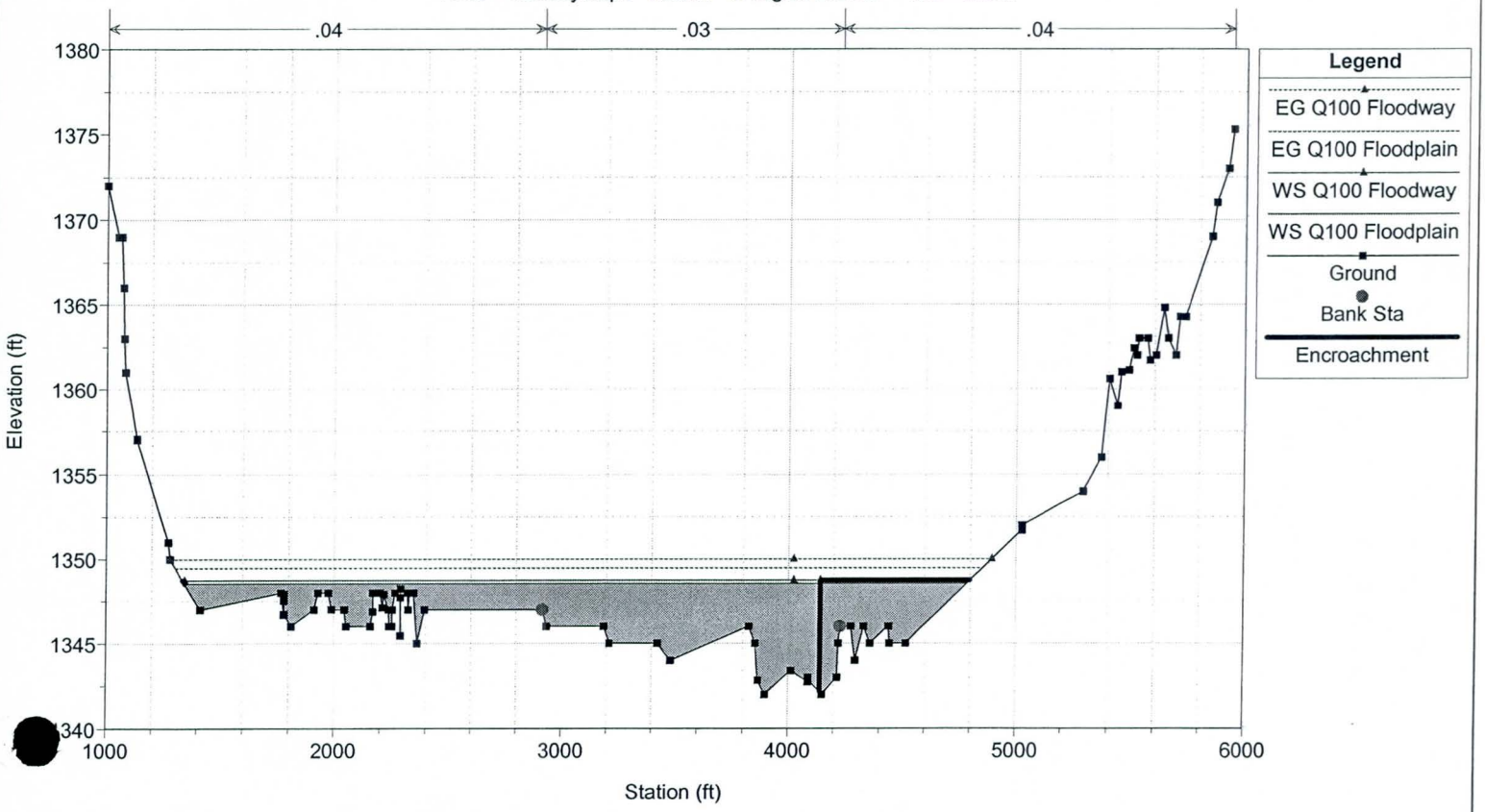



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 25.81
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1400
1390
1380
1370
1360
1350
1340
1000
2000
3000
4000
5000
6000
Station (ft)
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 25.72
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1375
1370
1365
1360
1355
1350
1345
1340
1000
2000
3000
4000
5000
6000
Station (ft)

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

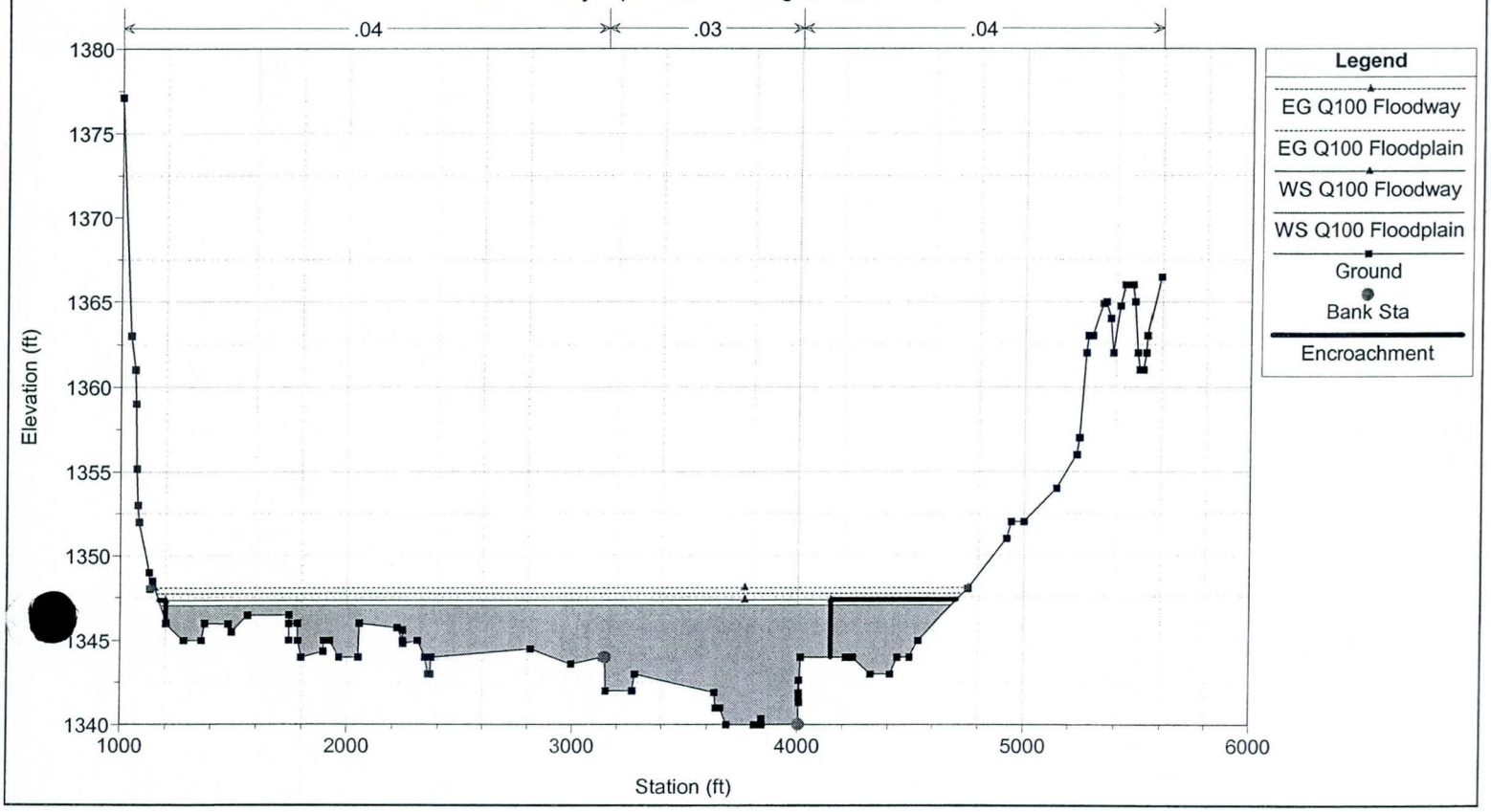
River = Hassayampa Reach = Douglas Ranch RS = 25.62



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

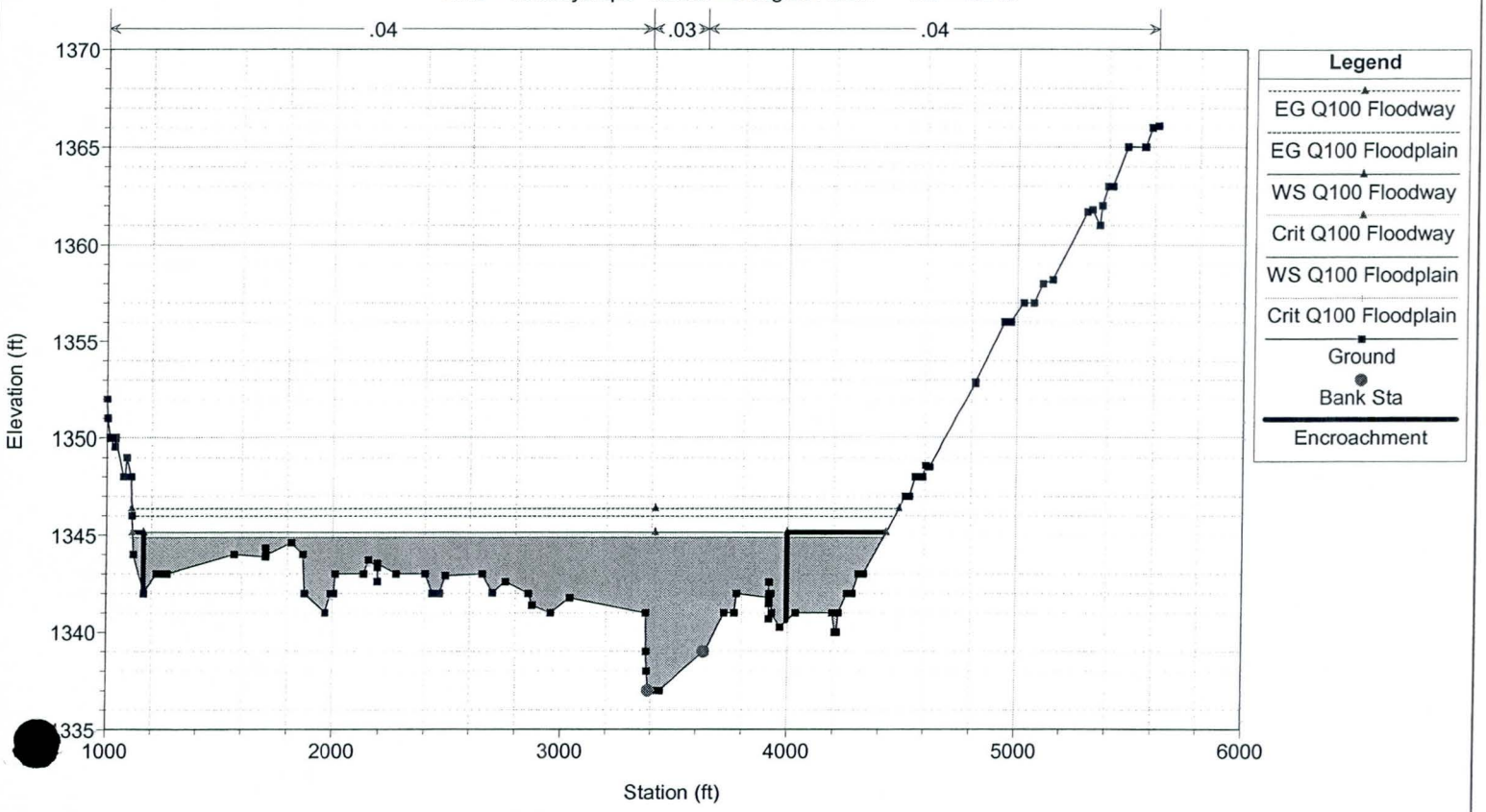
River = Hassayampa Reach = Douglas Ranch RS = 25.53



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

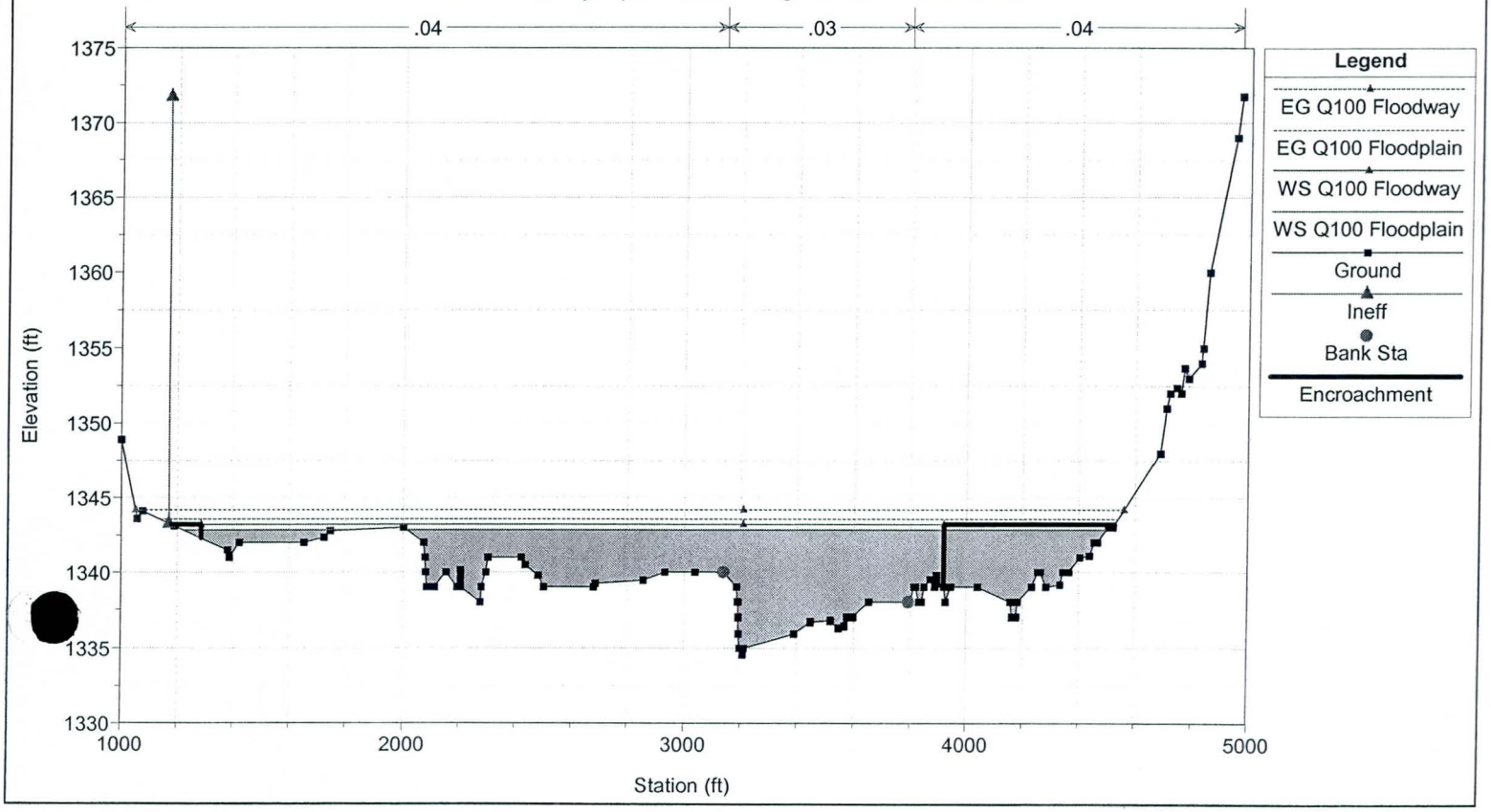
River = Hassayampa Reach = Douglas Ranch RS = 25.43



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

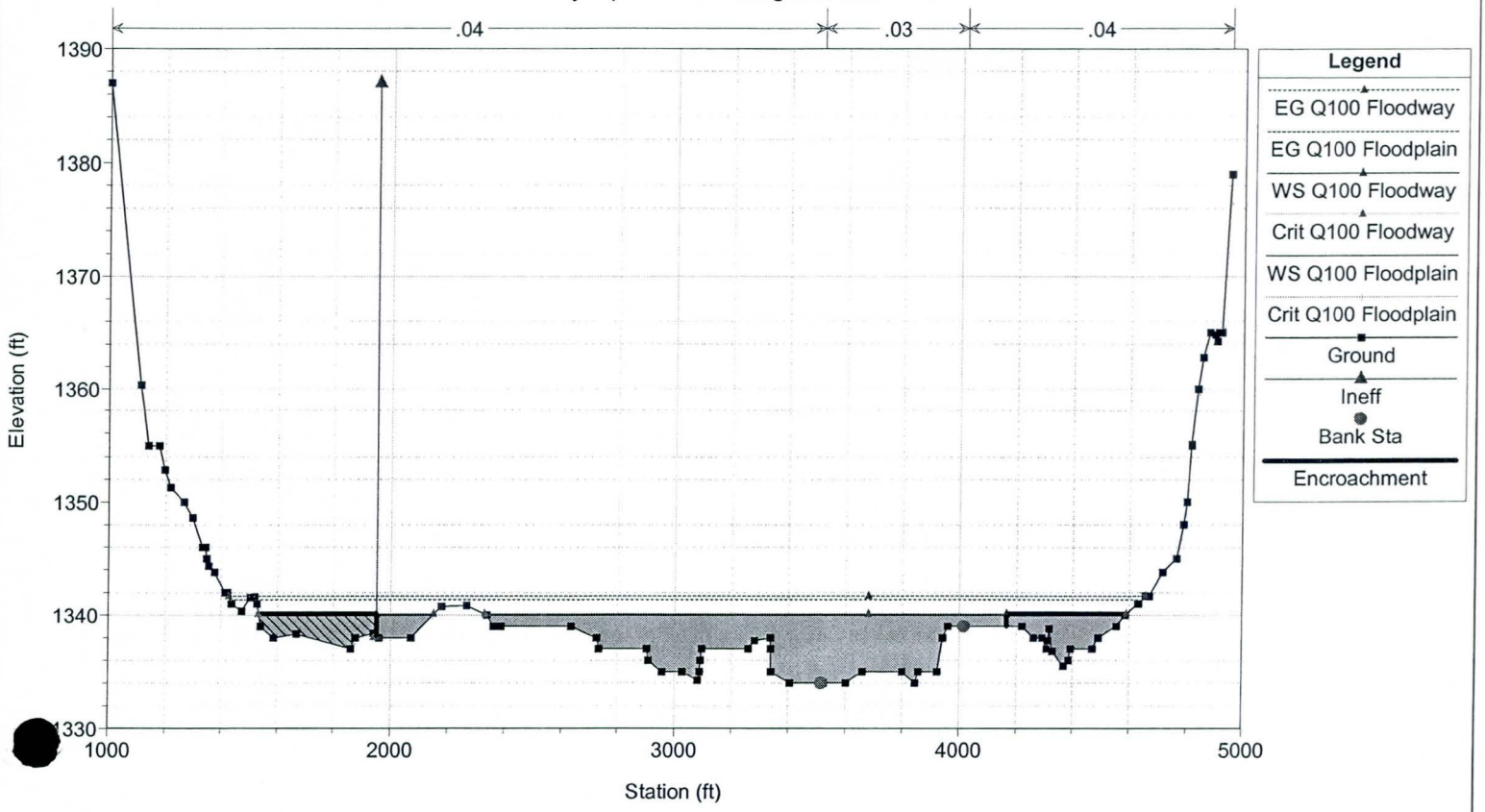
River = Hassayampa Reach = Douglas Ranch RS = 25.34



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

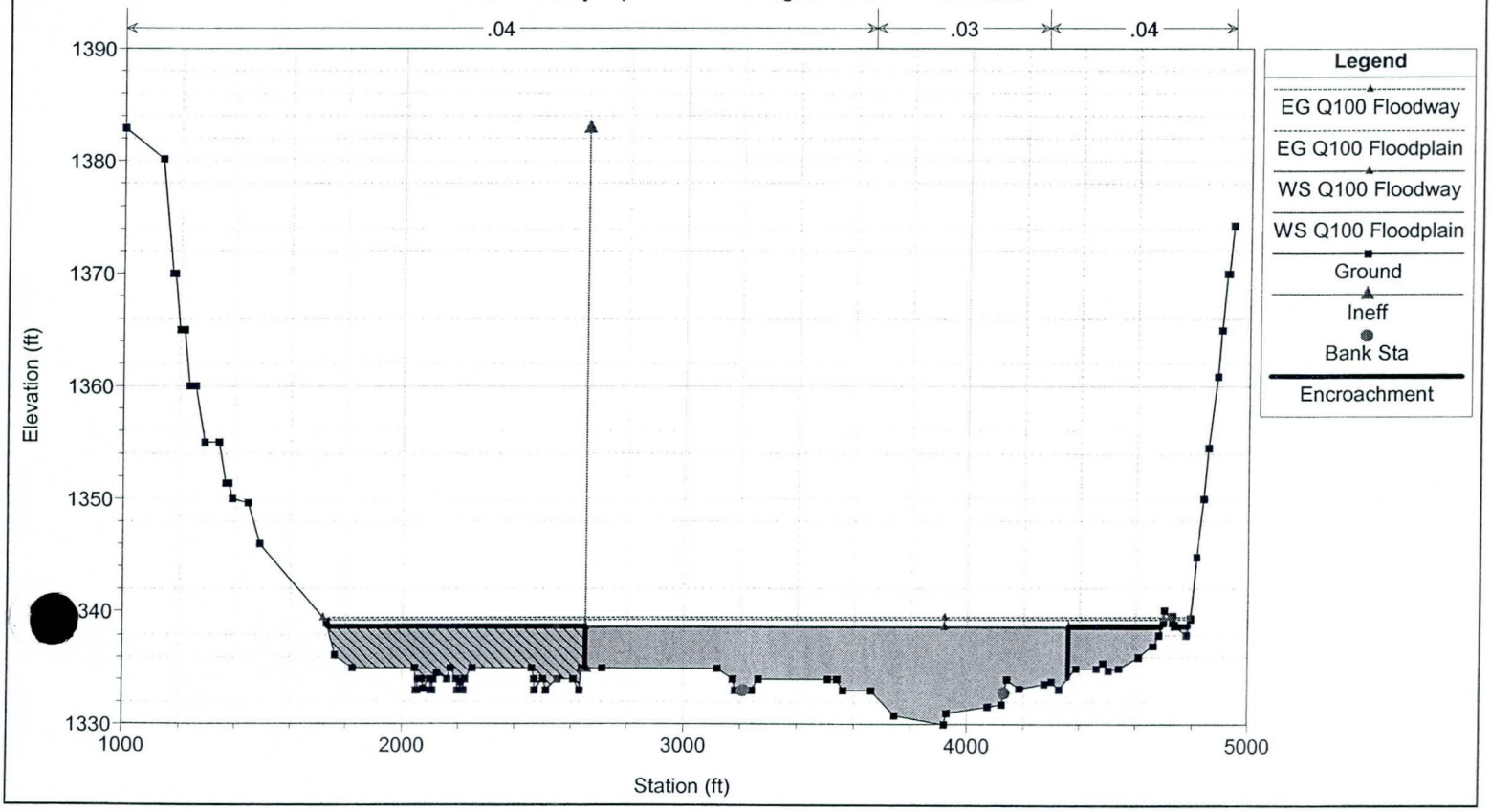
River = Hassayampa Reach = Douglas Ranch RS = 25.24



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

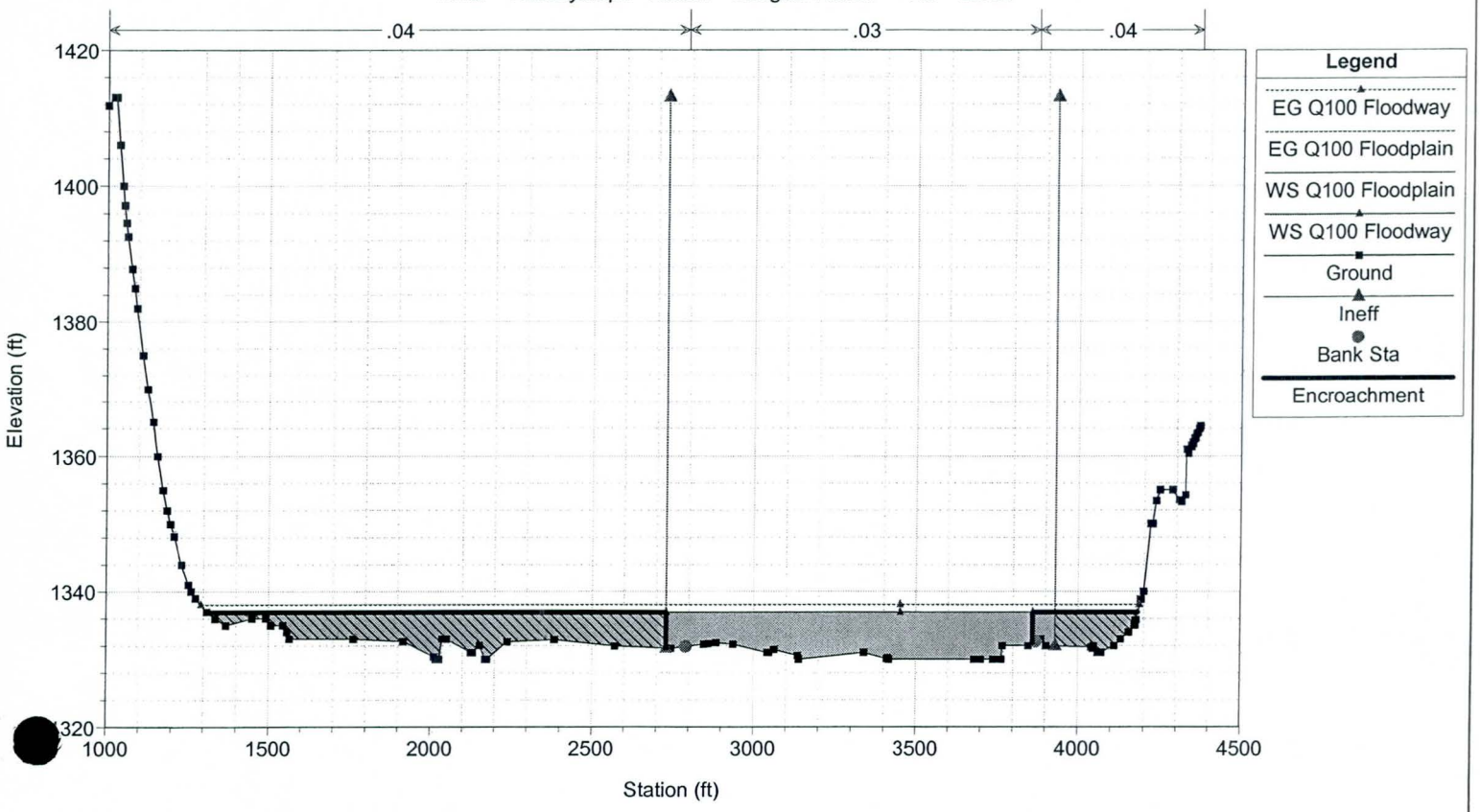
River = Hassayampa Reach = Douglas Ranch RS = 25.15



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

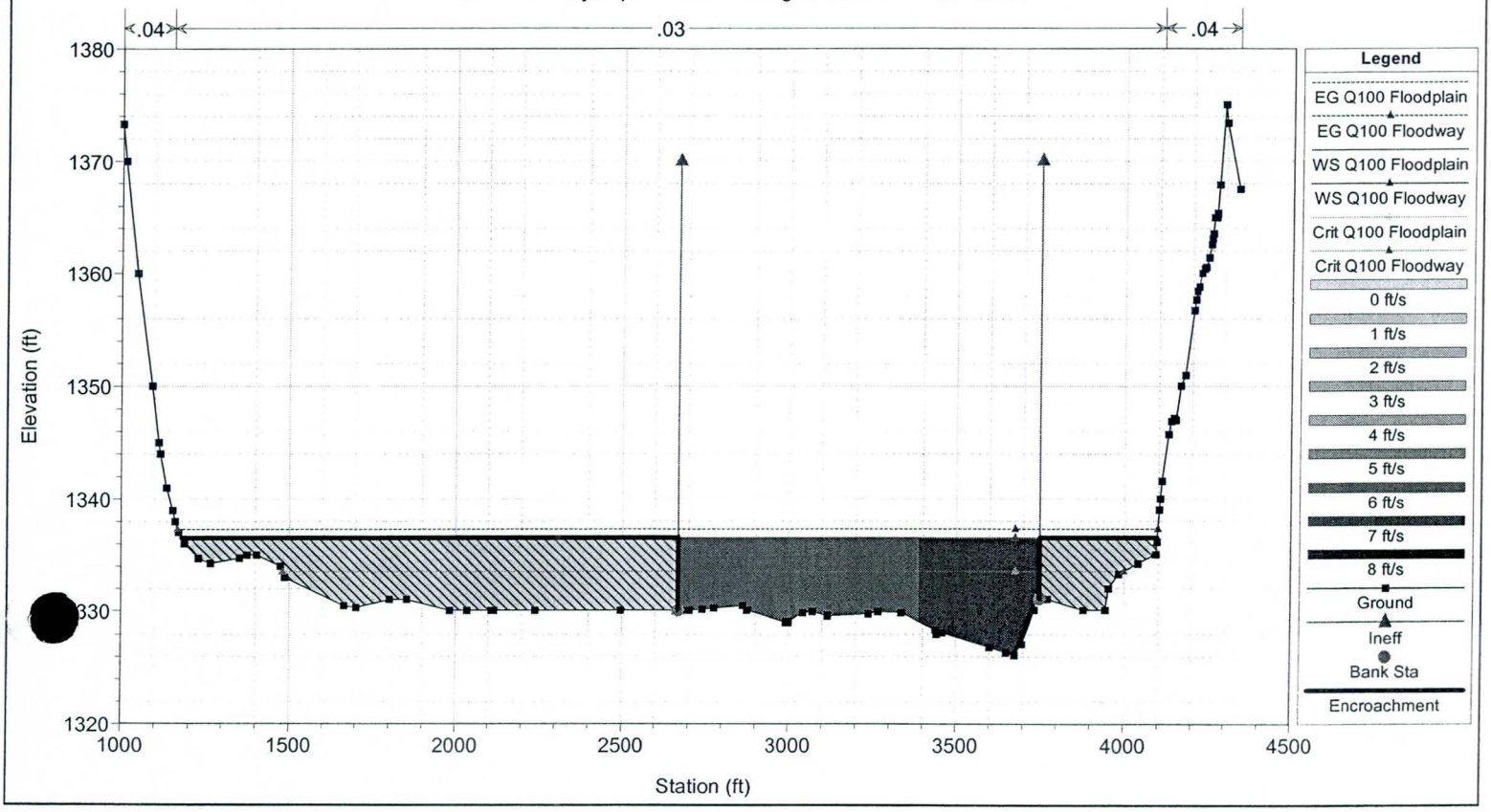
River = Hassayampa Reach = Douglas Ranch RS = 25.06



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

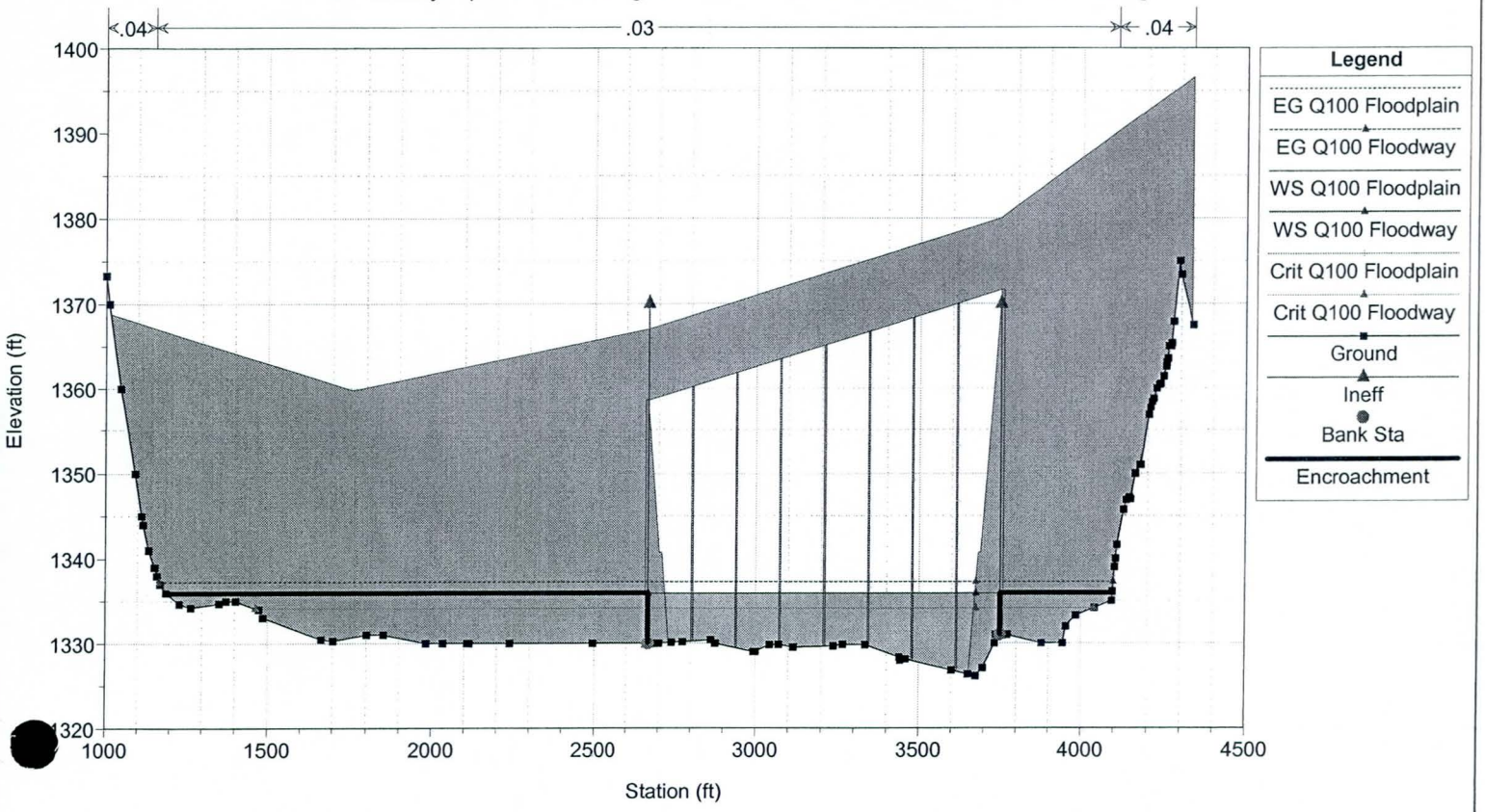
River = Hassayampa Reach = Douglas Ranch RS = 25.02



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

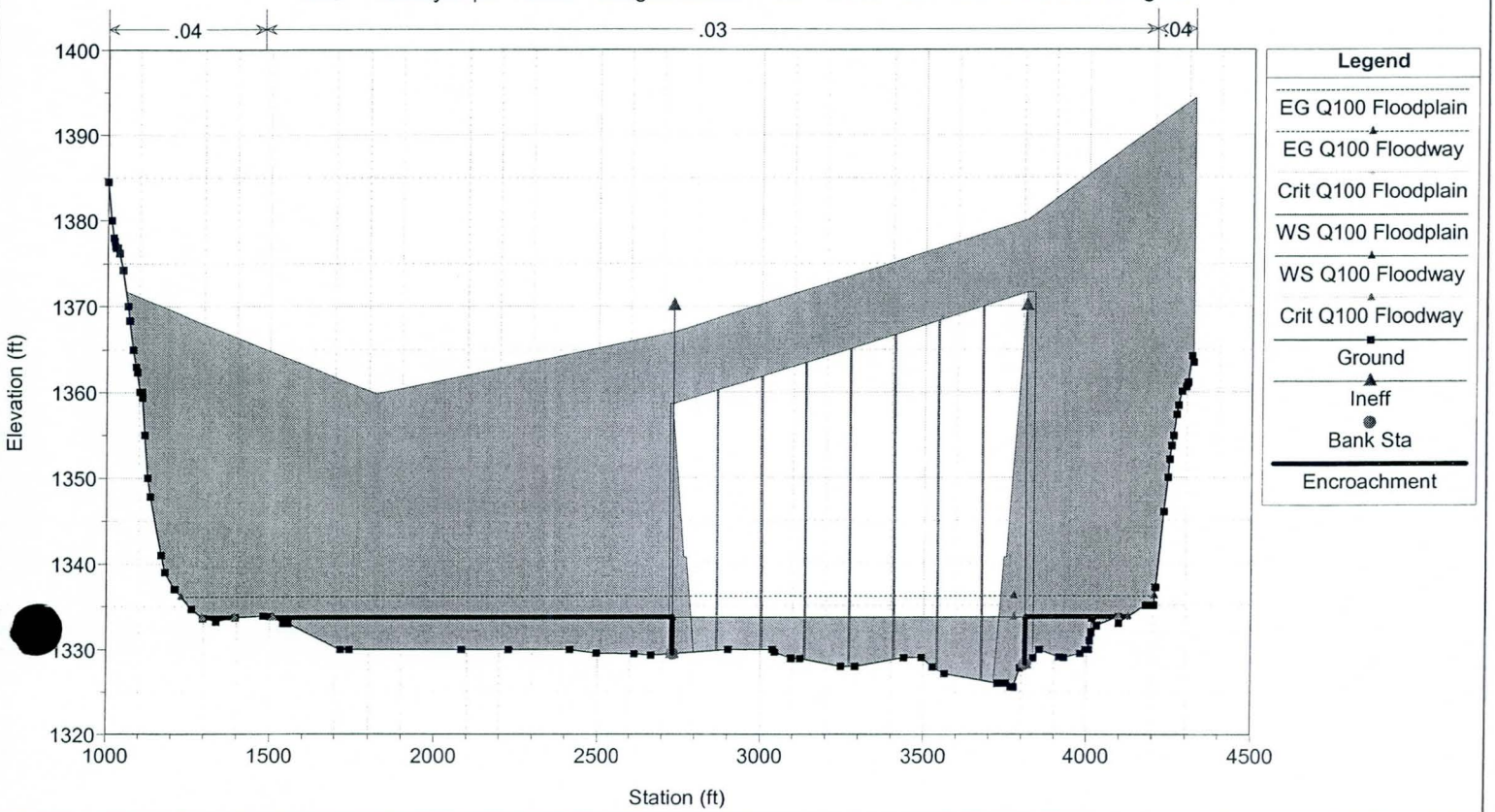
River = Hassayampa Reach = Douglas Ranch RS = 24.95 BR Bell Road- New Bridge 2



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

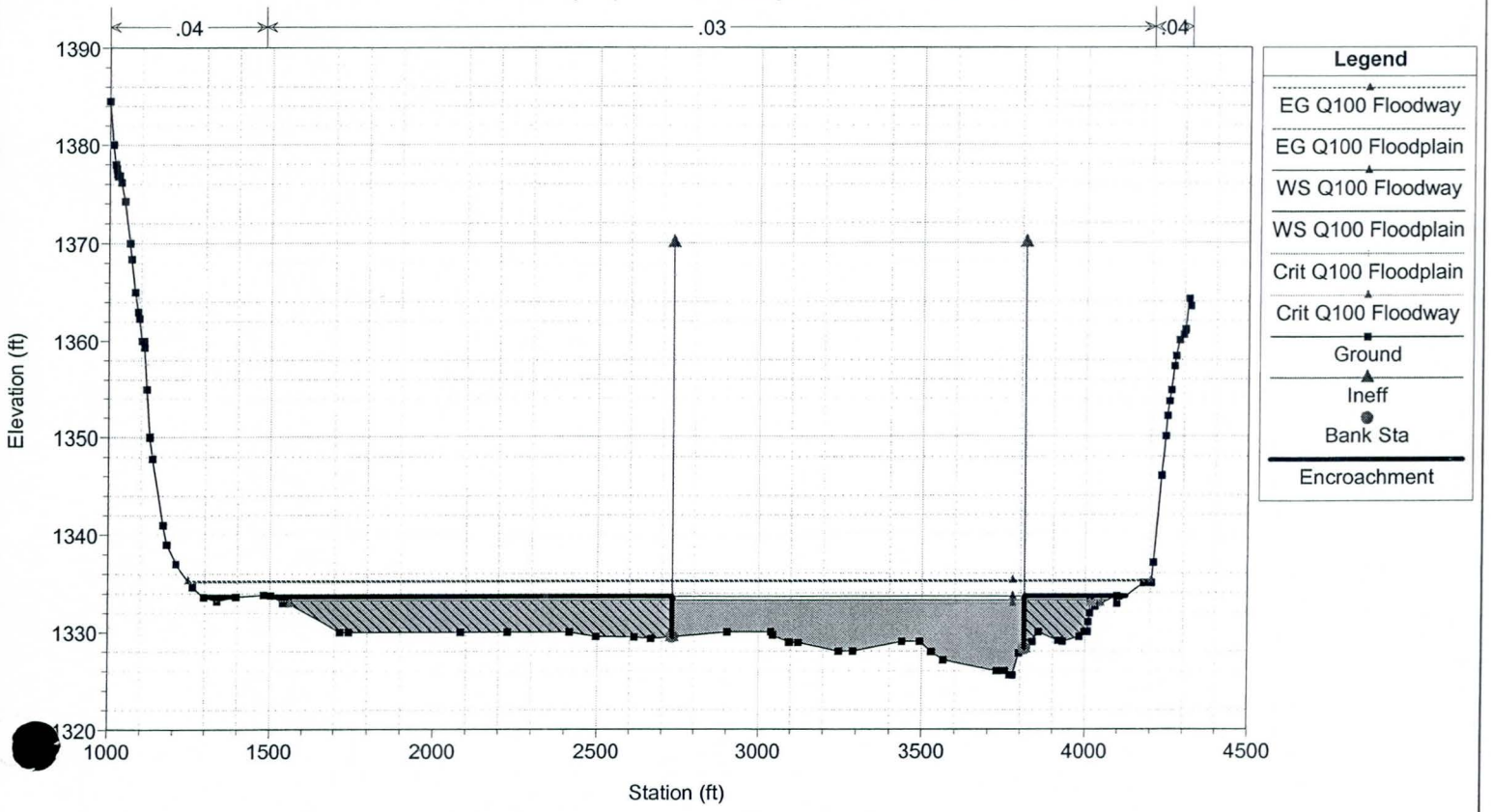
River = Hassayampa Reach = Douglas Ranch RS = 24.95 BR Bell Road- New Bridge 2



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

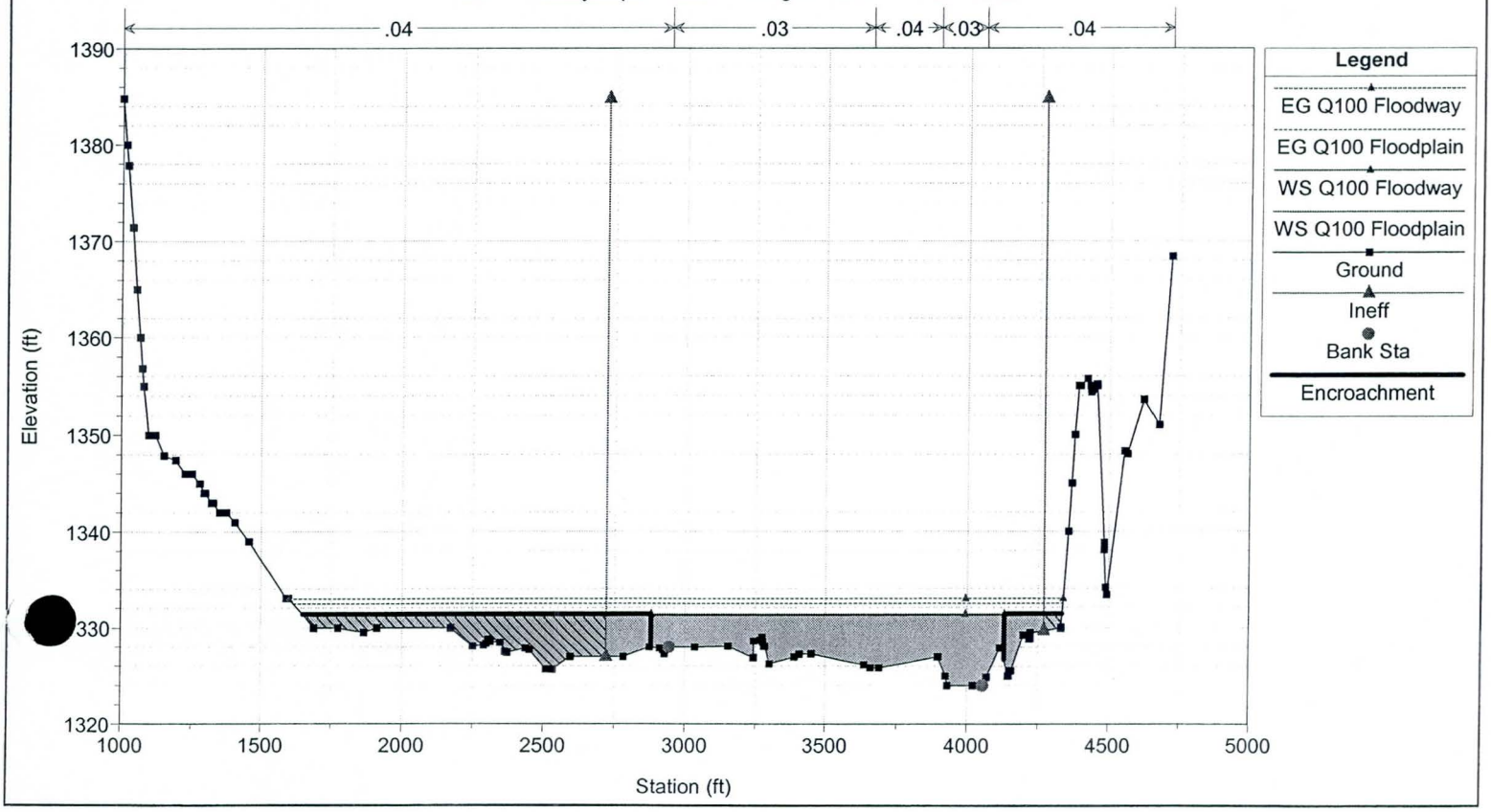
River = Hassayampa Reach = Douglas Ranch RS = 24.90

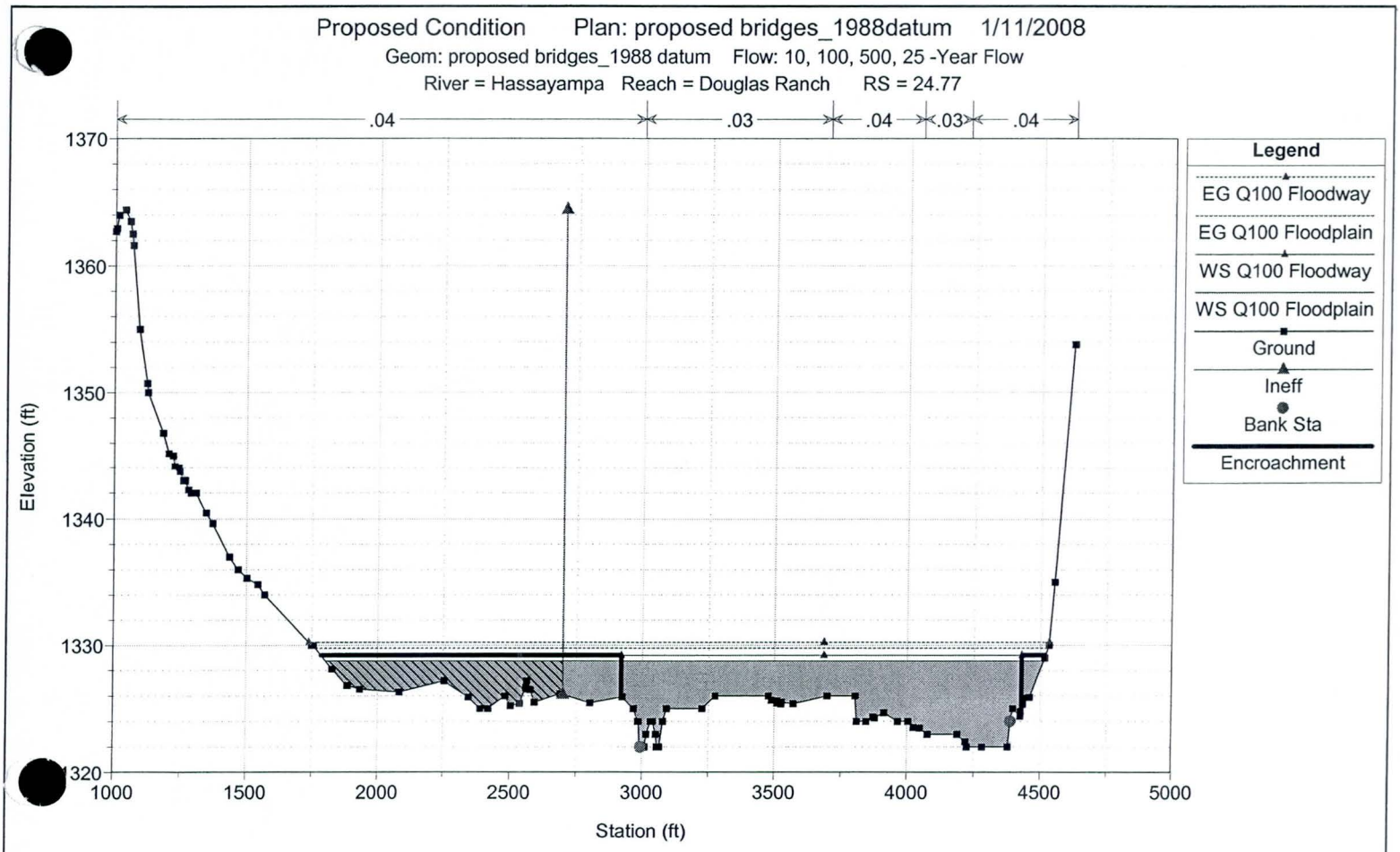


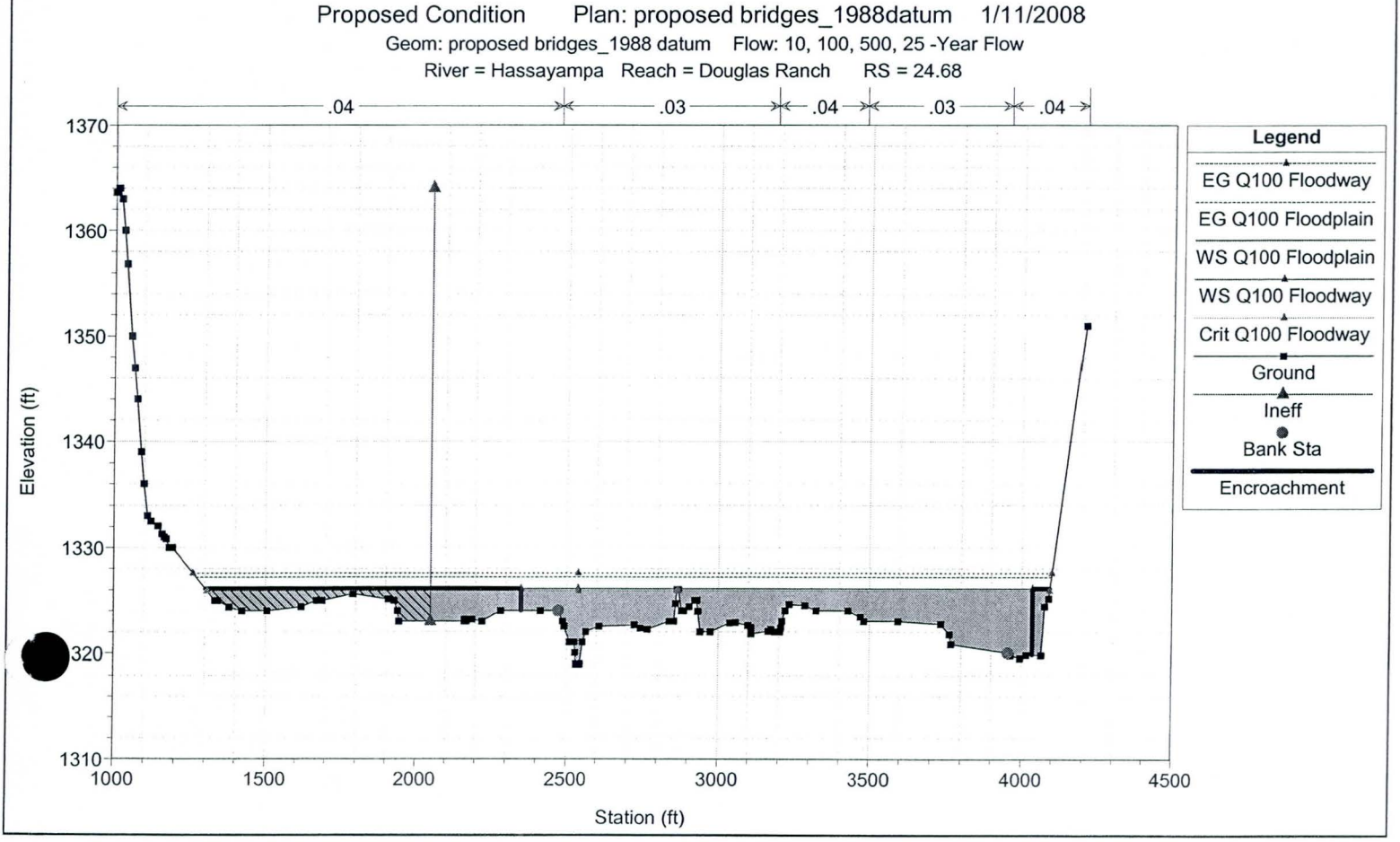
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

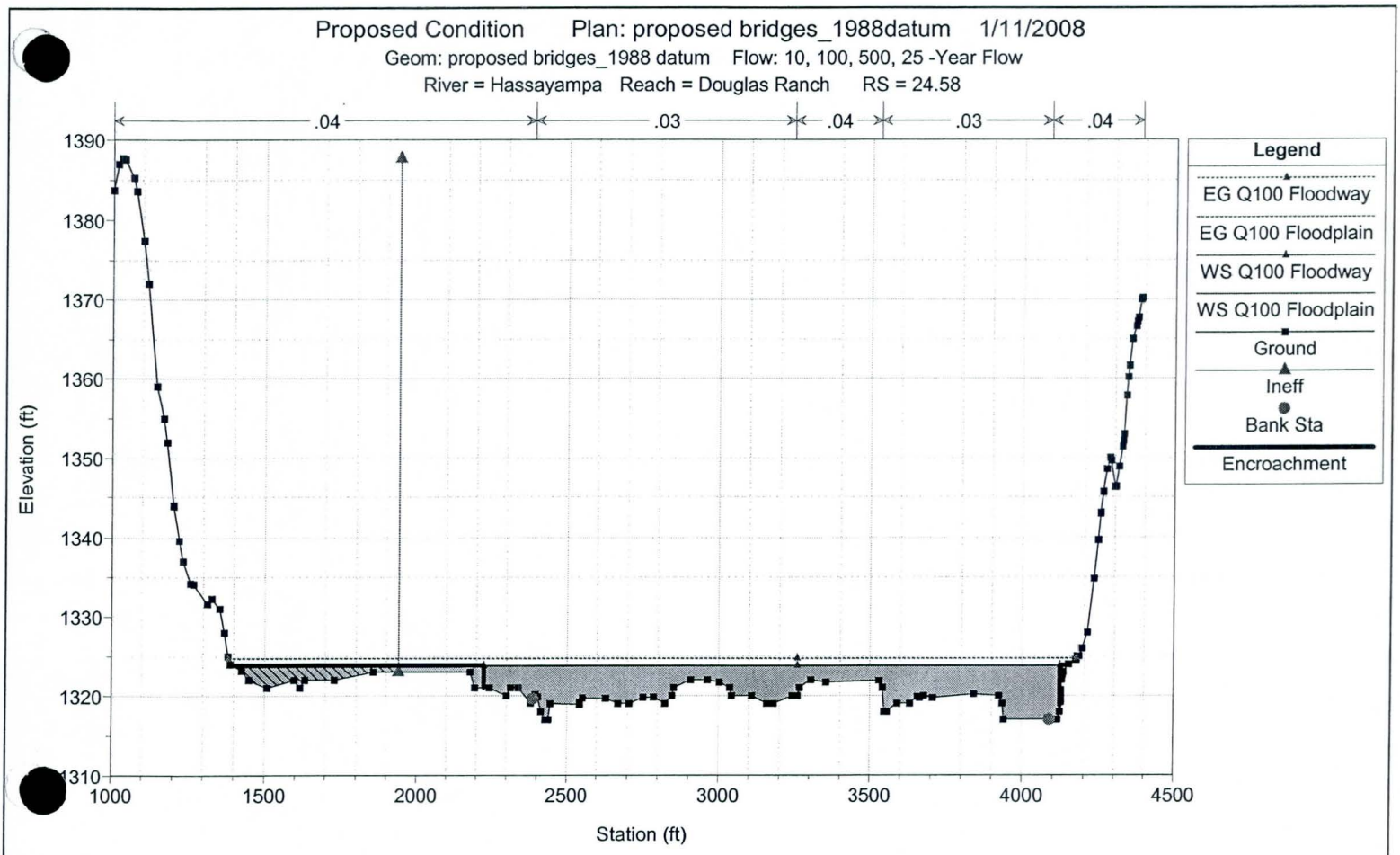
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

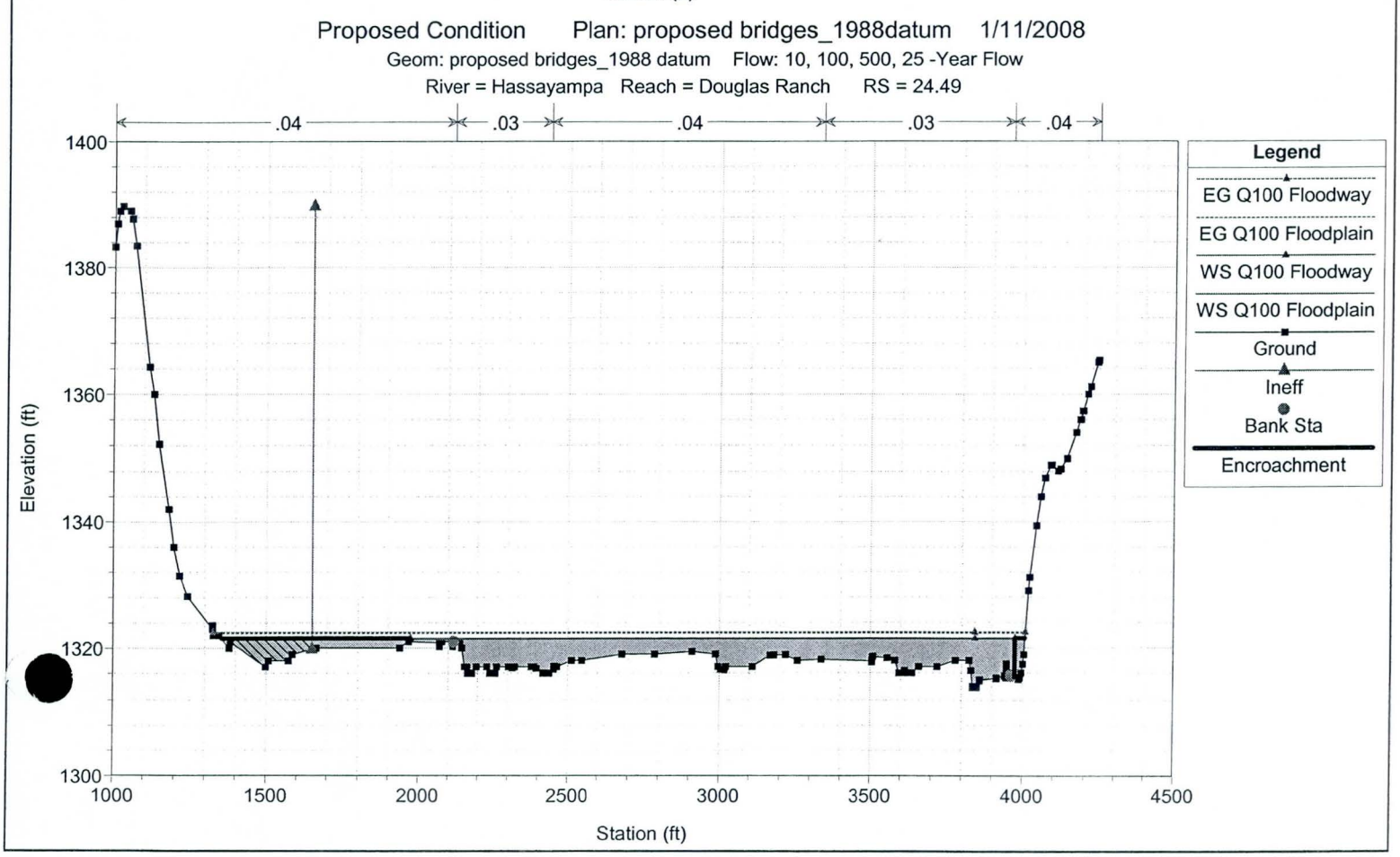
River = Hassayampa Reach = Douglas Ranch RS = 24.87

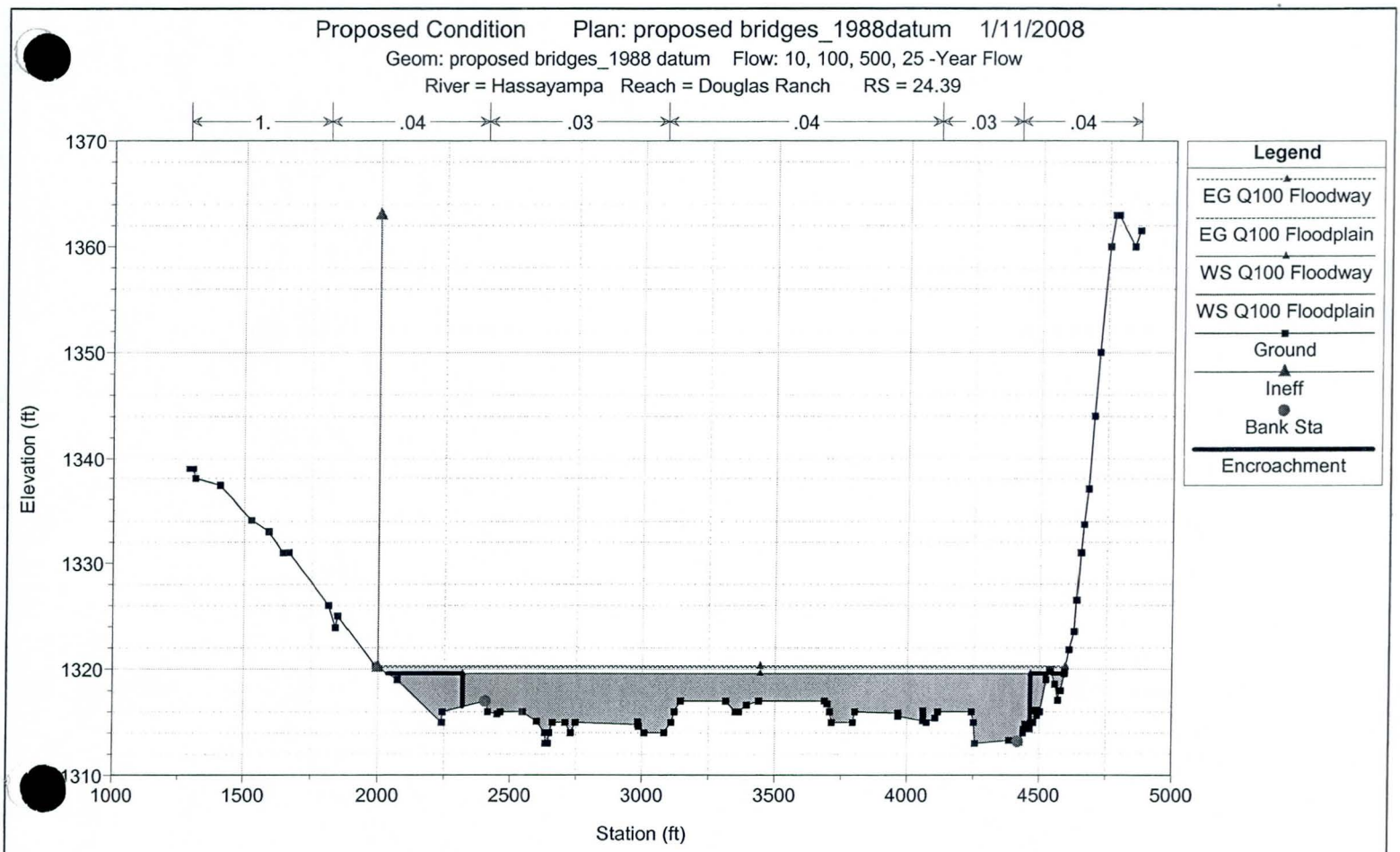


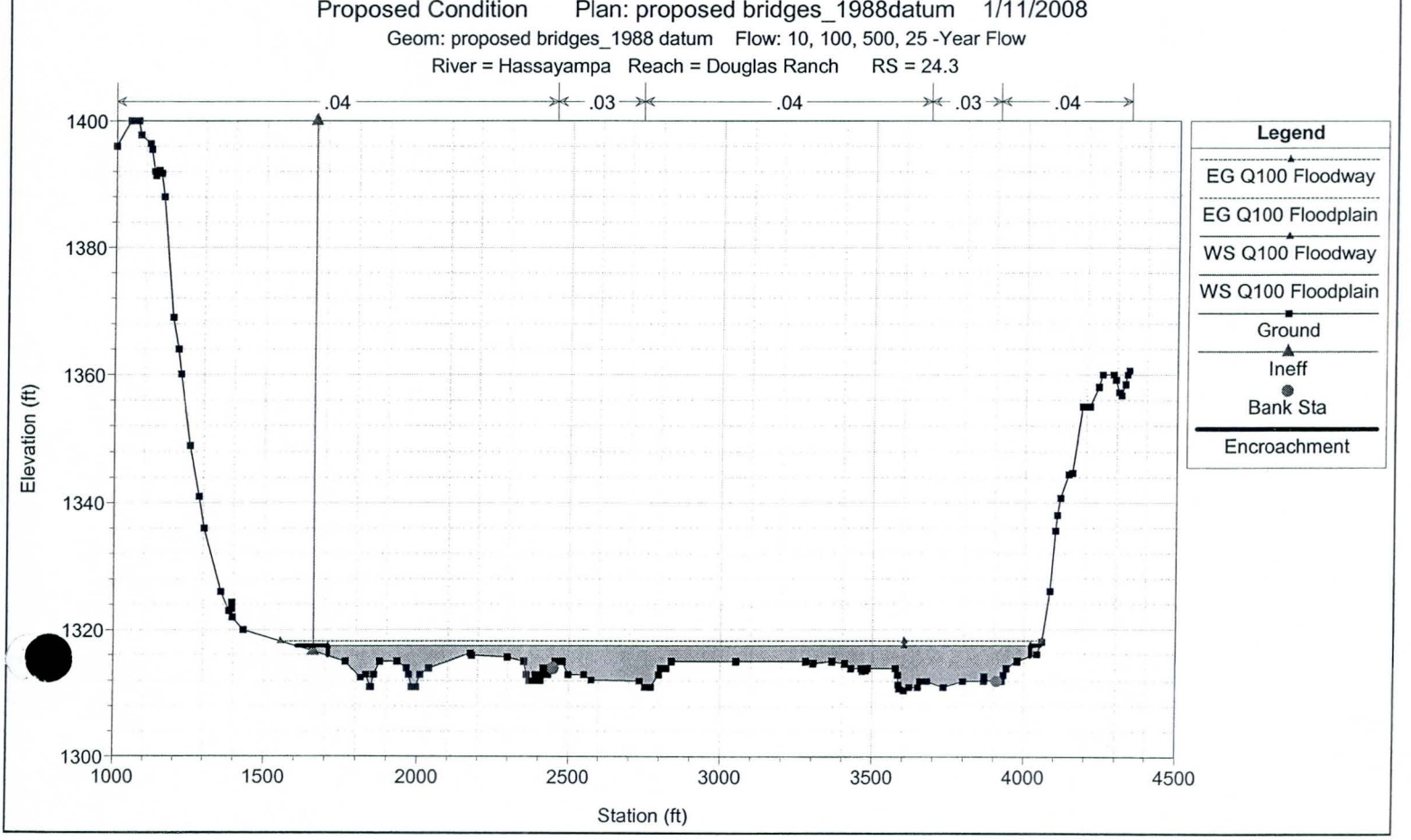

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.77
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1370
1360
1350
1340
1330
1320
1000
1500
2000
2500
3000
3500
4000
4500
5000
Station (ft)

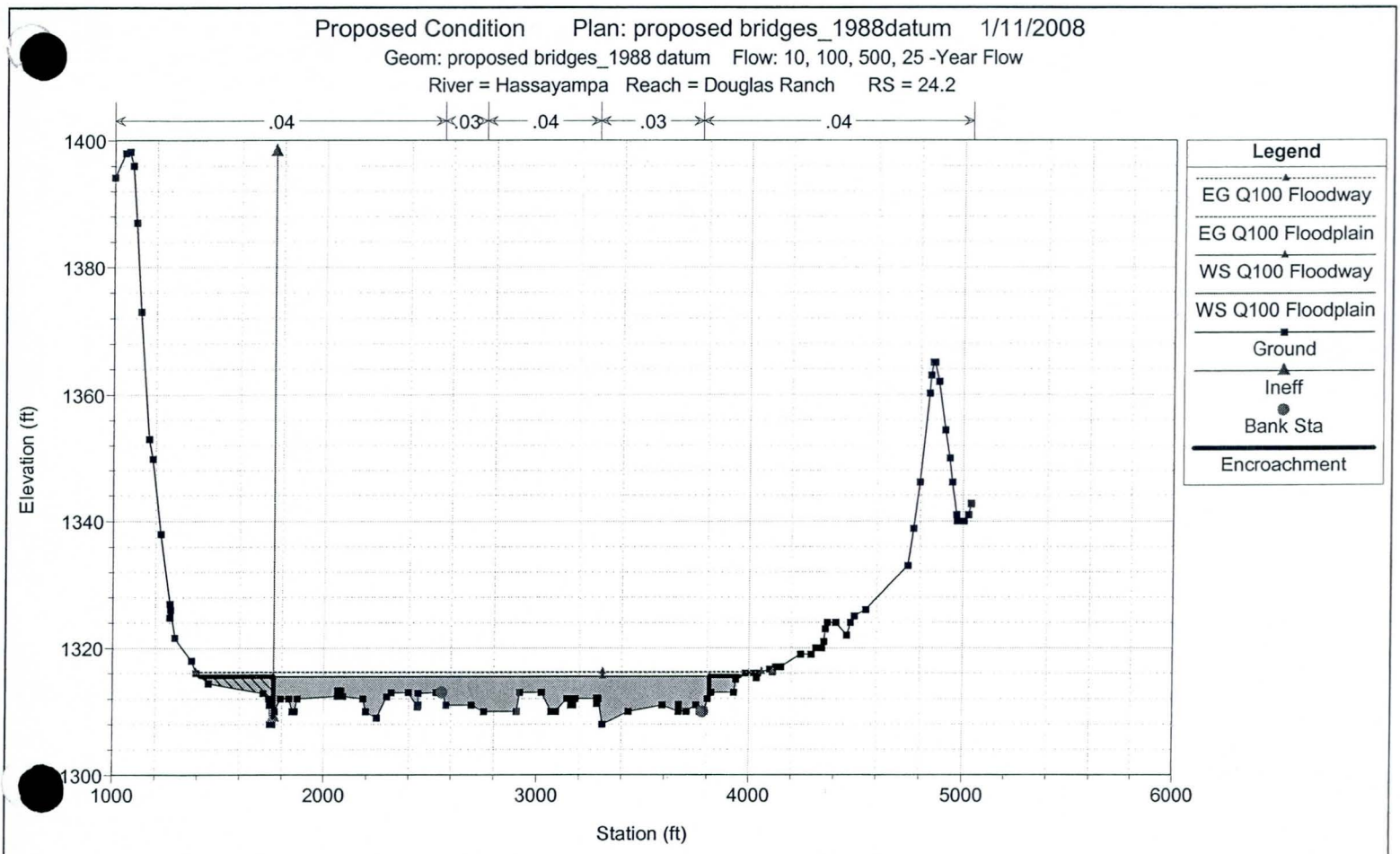

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.68
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodplain
WS Q100 Floodway
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1370
1360
1350
1340
1330
1320
1310
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

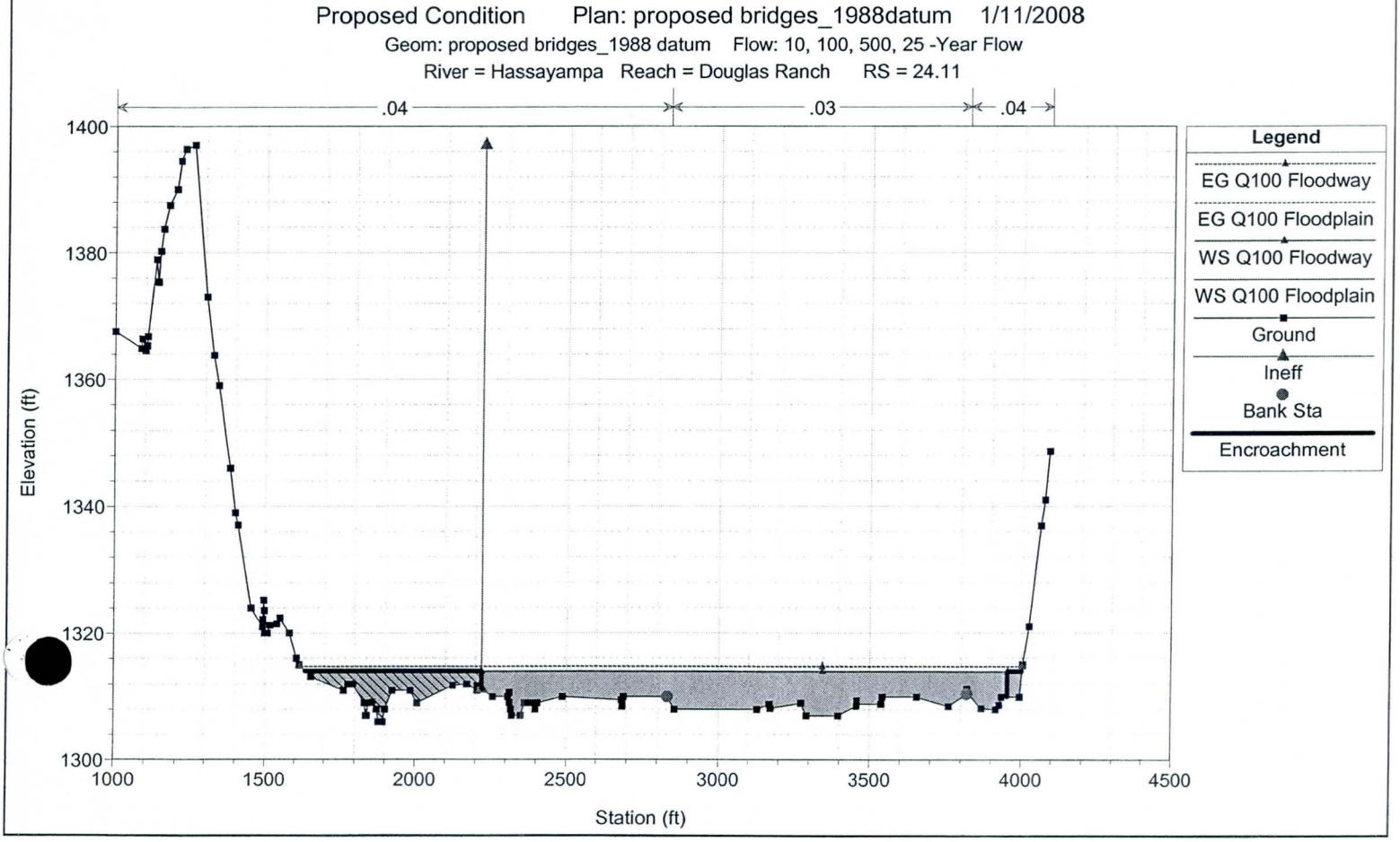

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.58
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1390
1380
1370
1360
1350
1340
1330
1320
1310
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

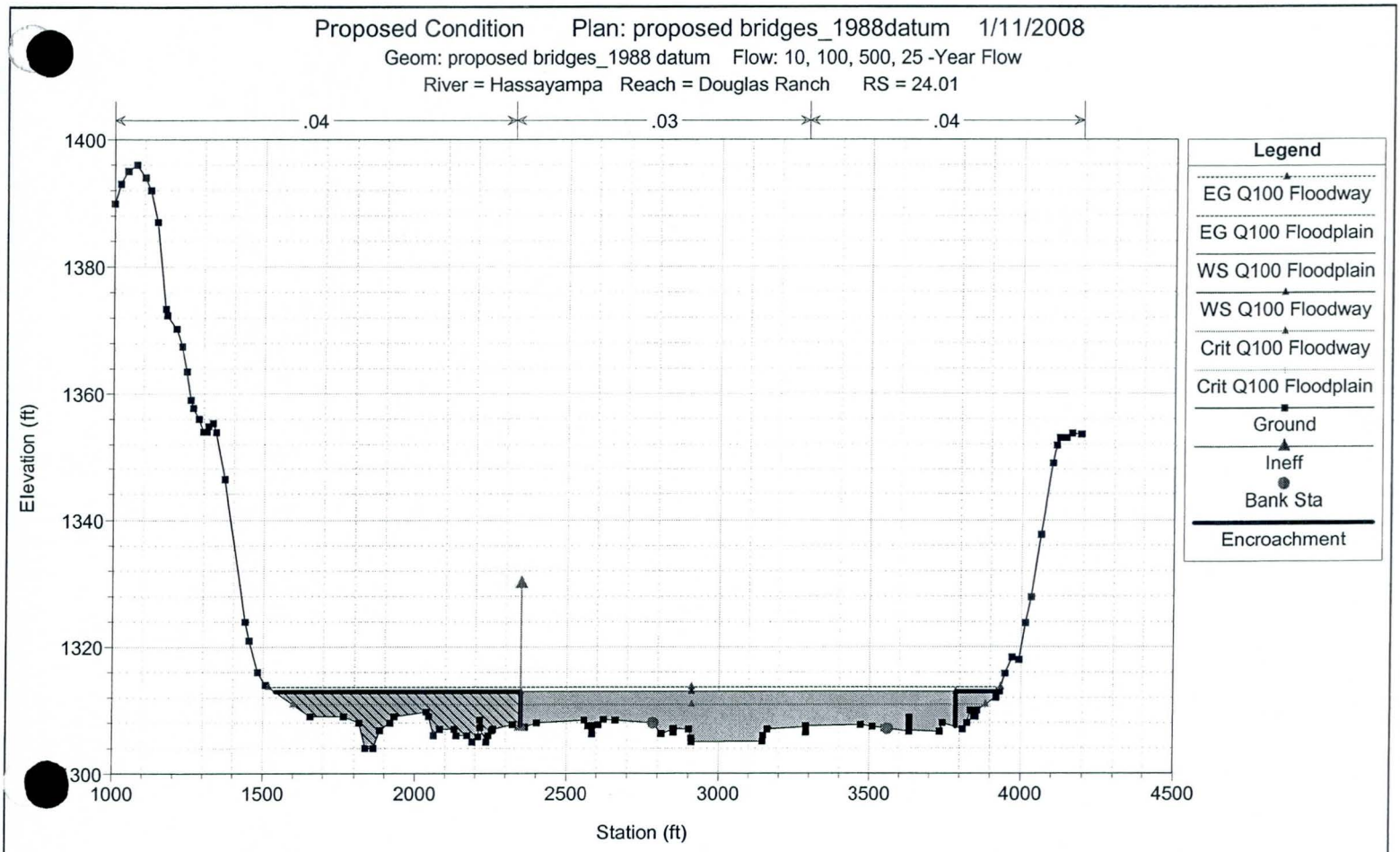

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.49
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1400
1380
1360
1340
1320
1300
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

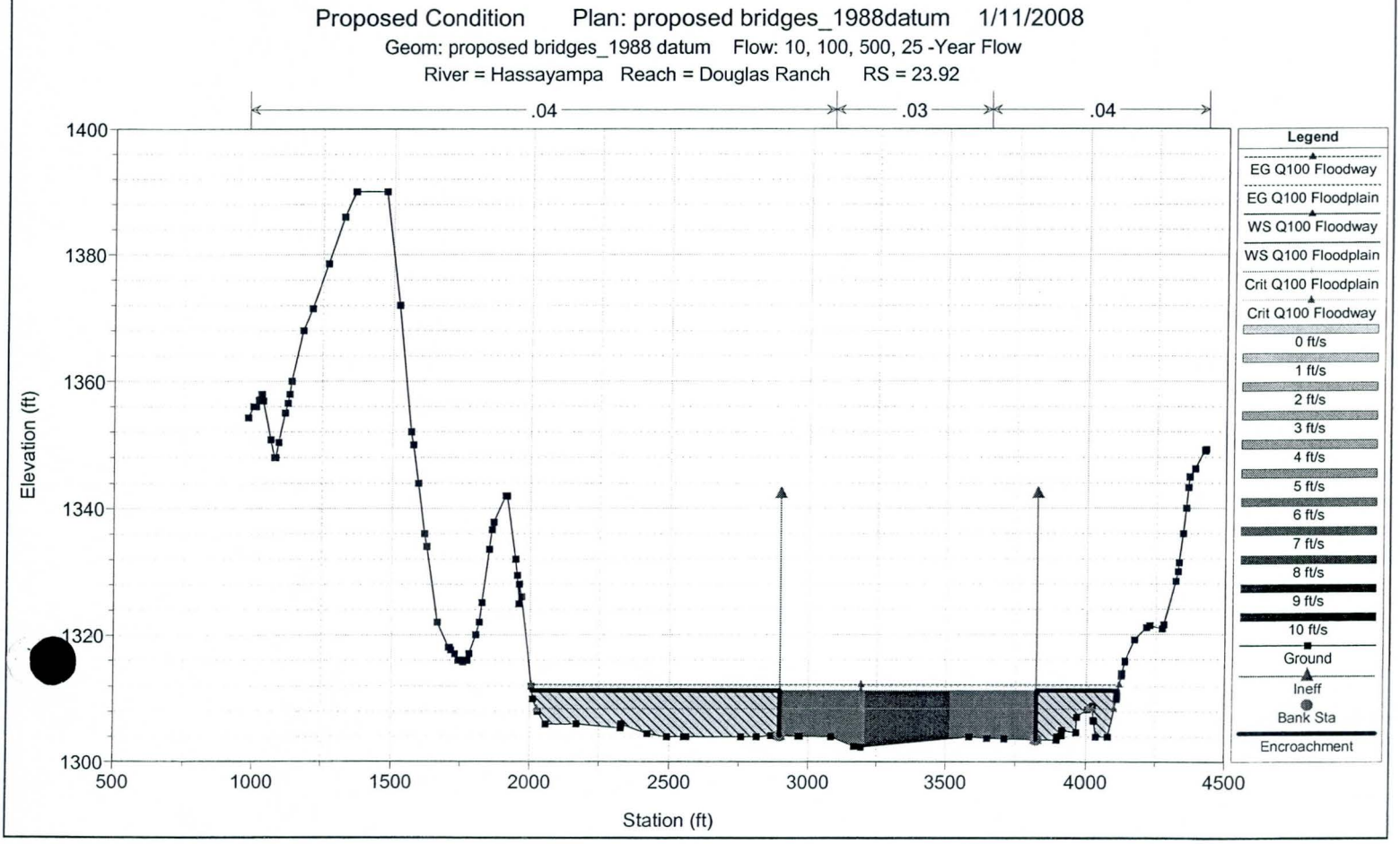

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.39
1. .04 .03 .04 .03 .04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

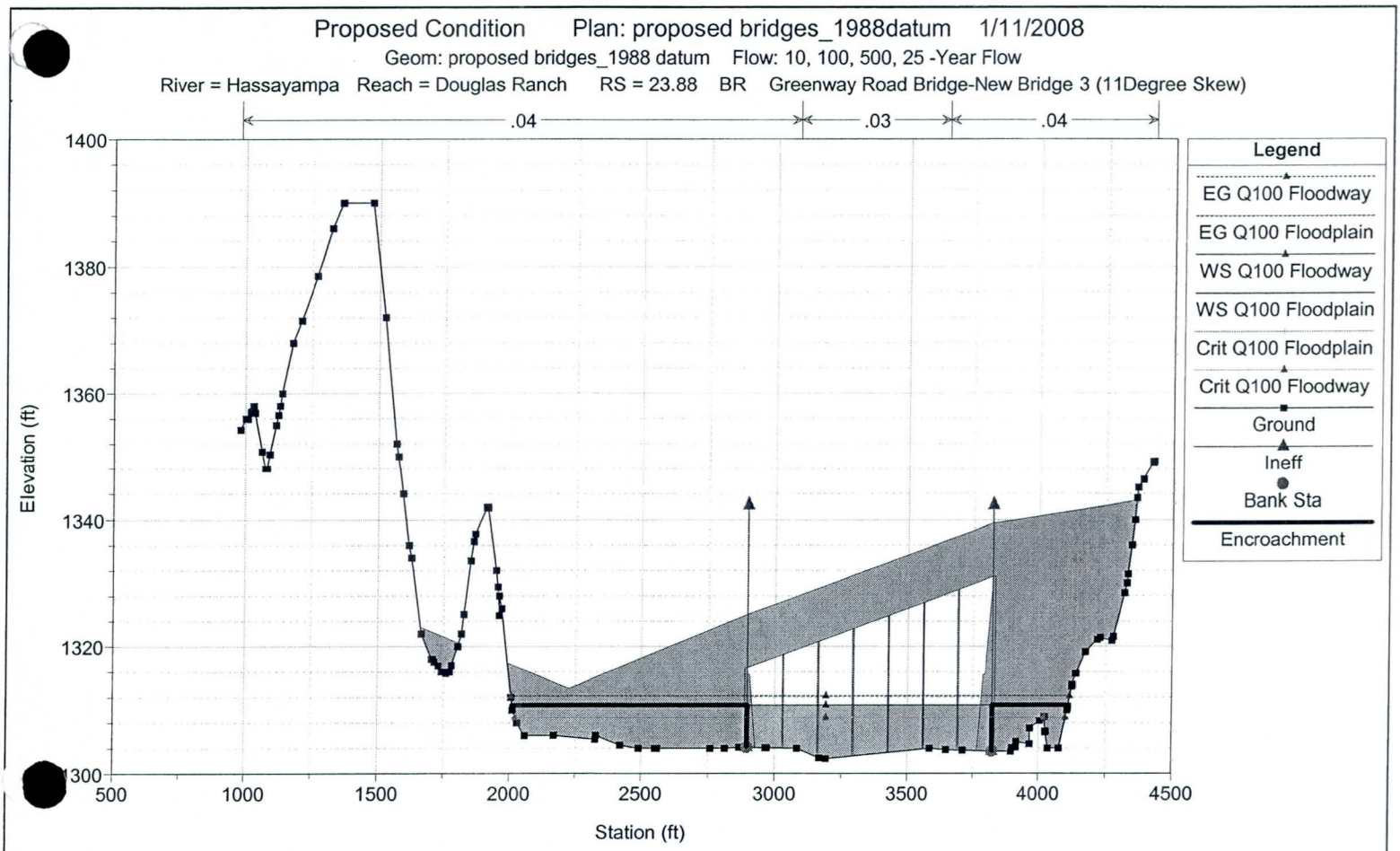

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.3
.04 .03 .04 .03 .04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

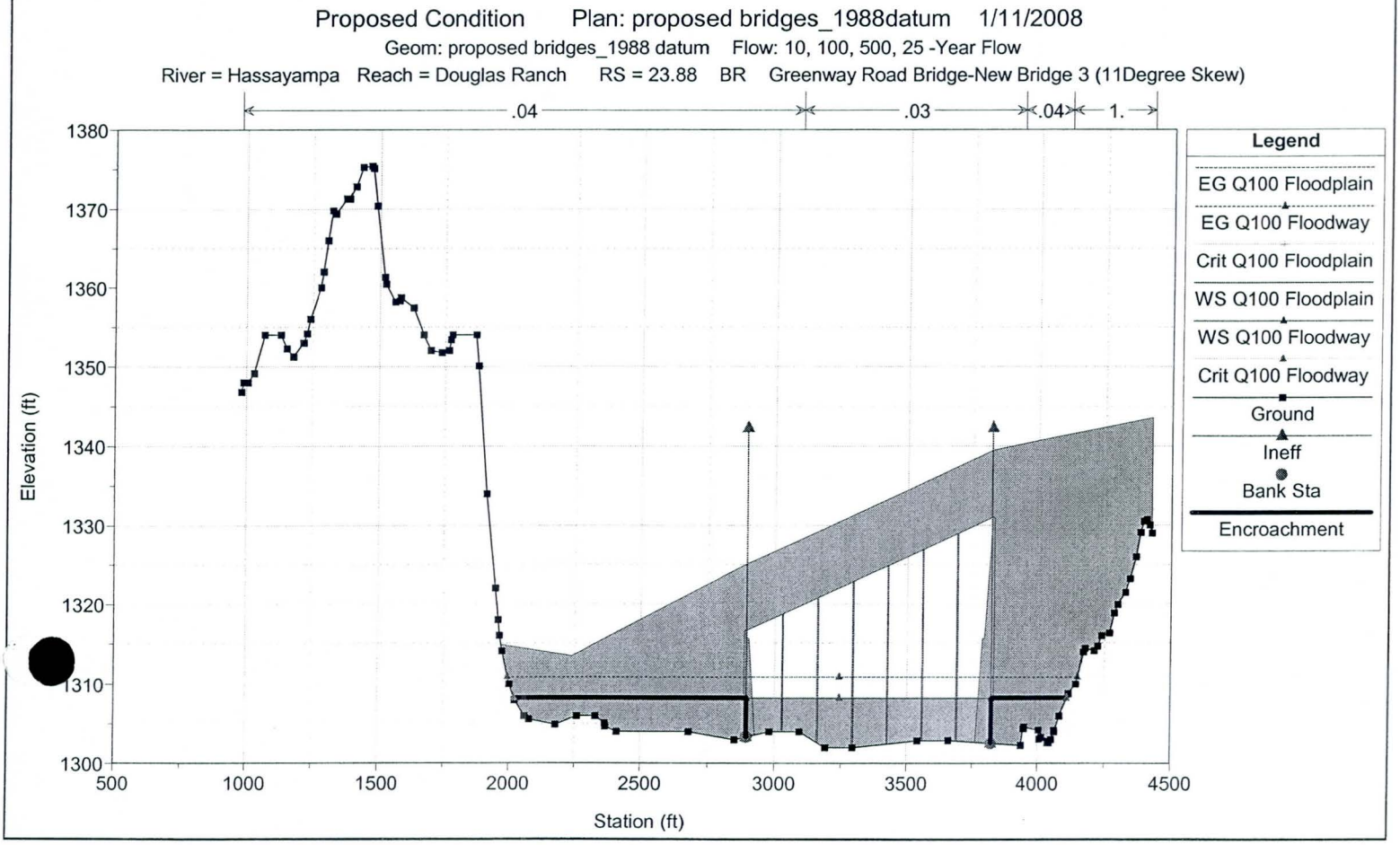

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.2
.04
.03
.04
.03
.04
Elevation (ft)
1400
1380
1360
1340
1320
1300
1000
2000
3000
4000
5000
6000
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

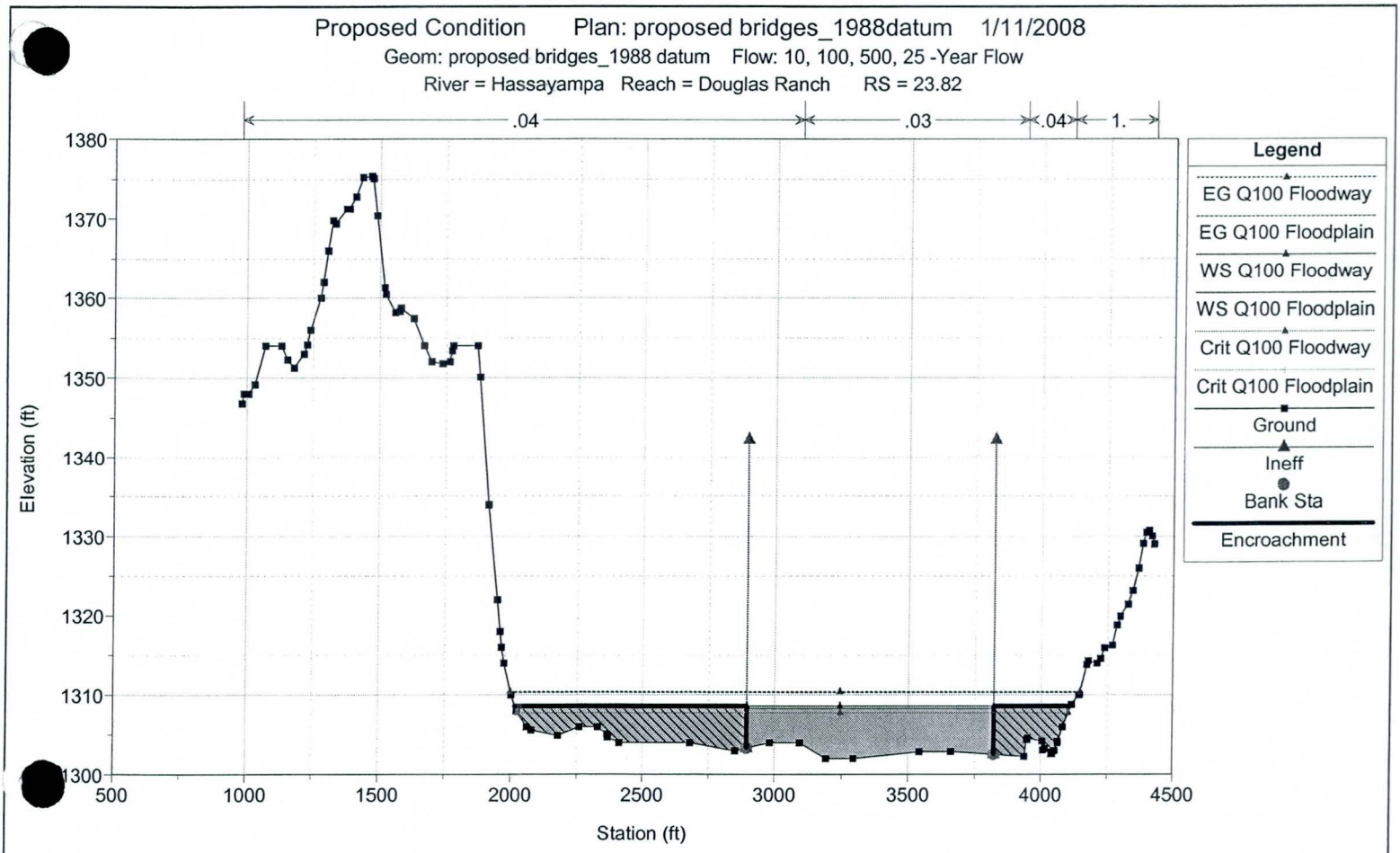

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.11
.04
.03
.04
Elevation (ft)
1400
1380
1360
1340
1320
1300
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

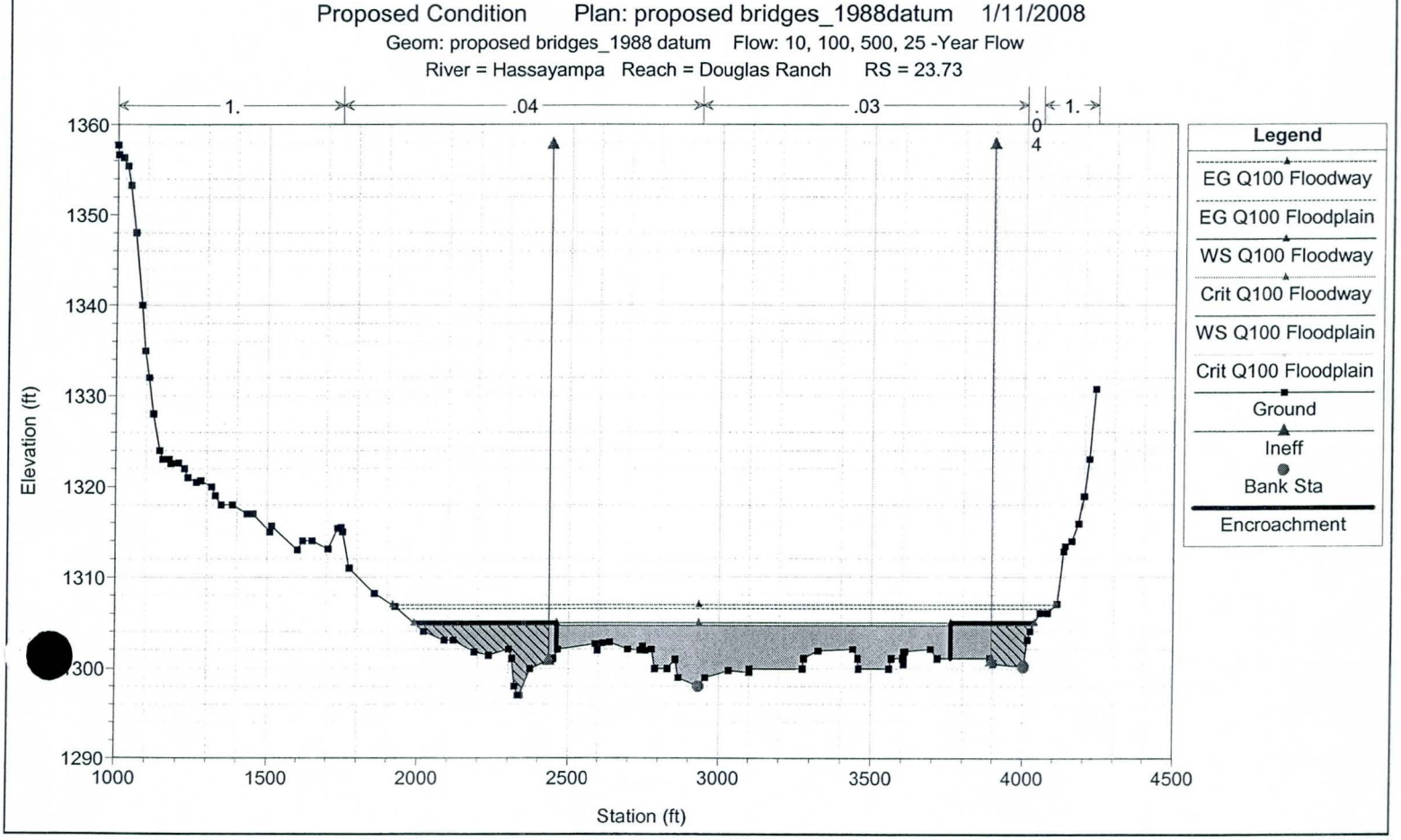

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 24.01
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodplain
WS Q100 Floodway
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.92
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
9 ft/s
10 ft/s
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.88 BR Greenway Road Bridge-New Bridge 3 (11Degree Skew)
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1400
1380
1360
1340
1320
1300
500
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.88 BR Greenway Road Bridge-New Bridge 3 (11Degree Skew)
.04
.03
.04
1.
Legend
EG Q100 Floodplain
EG Q100 Floodway
Crit Q100 Floodplain
WS Q100 Floodplain
WS Q100 Floodway
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment
Elevation (ft)
1380
1370
1360
1350
1340
1330
1320
1310
1300
500
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

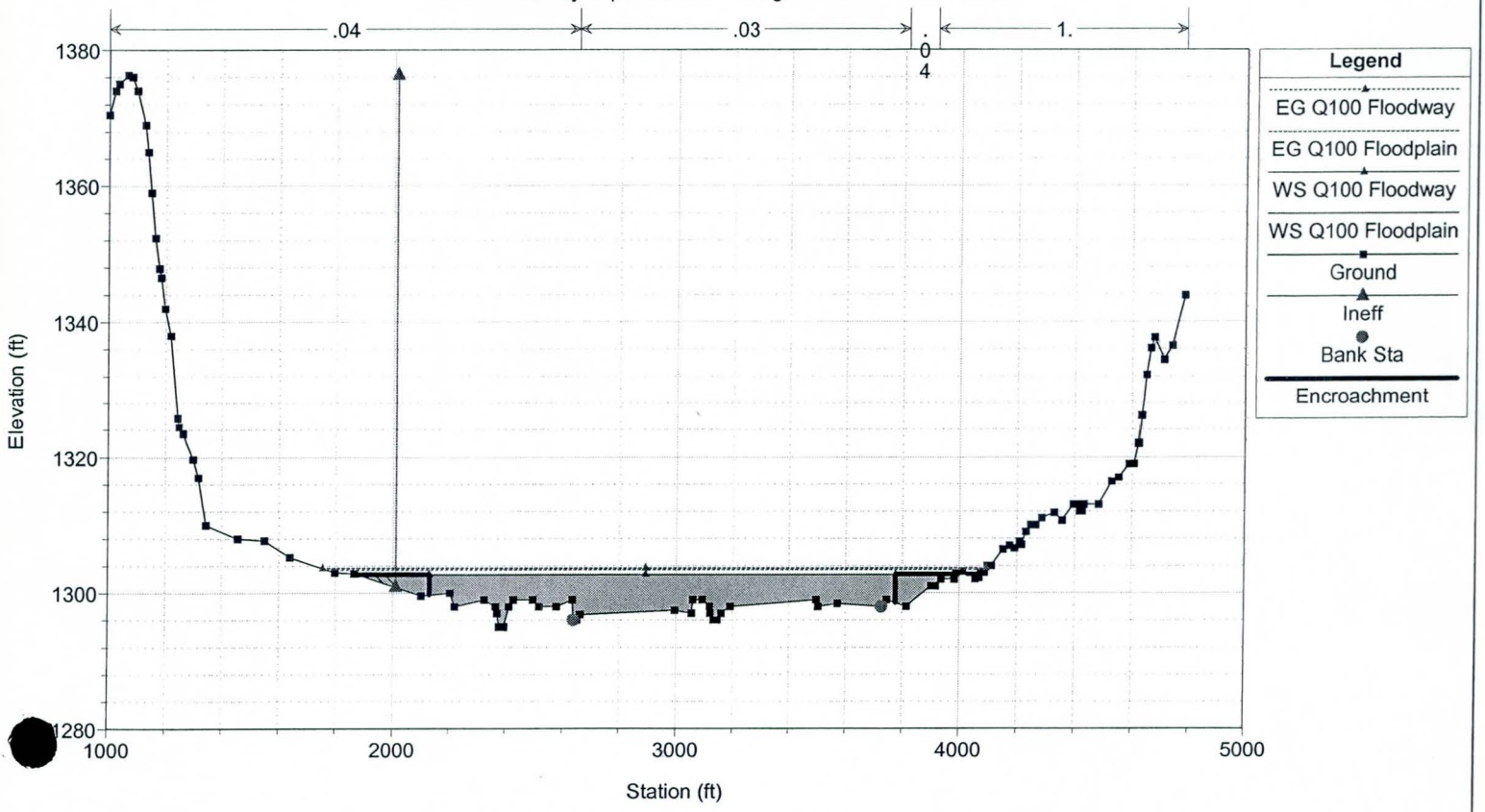

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.82
.04
.03
.04
1.
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.73
1.
.04
.03
1.
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
Crit Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

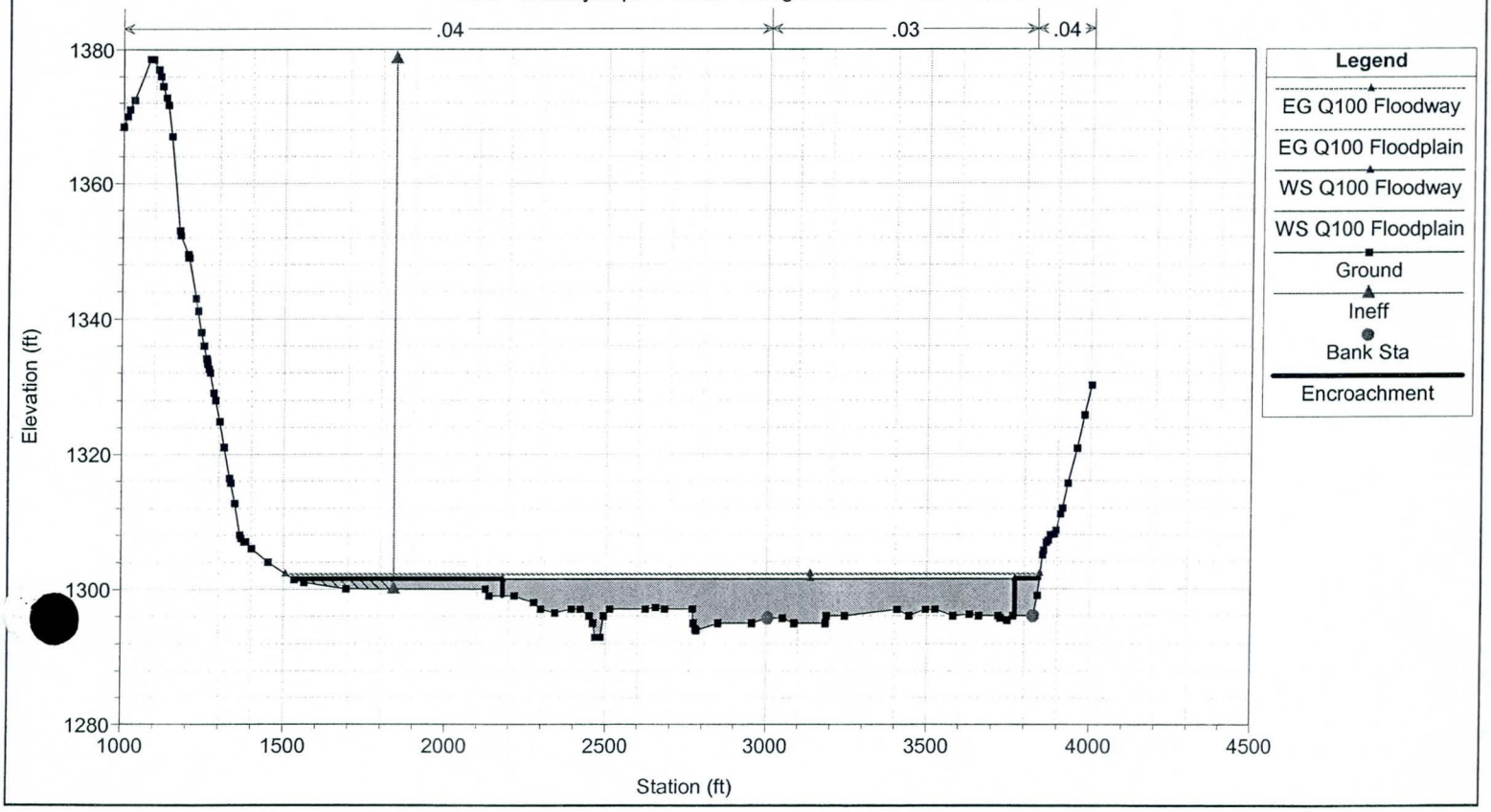
River = Hassayampa Reach = Douglas Ranch RS = 23.63



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

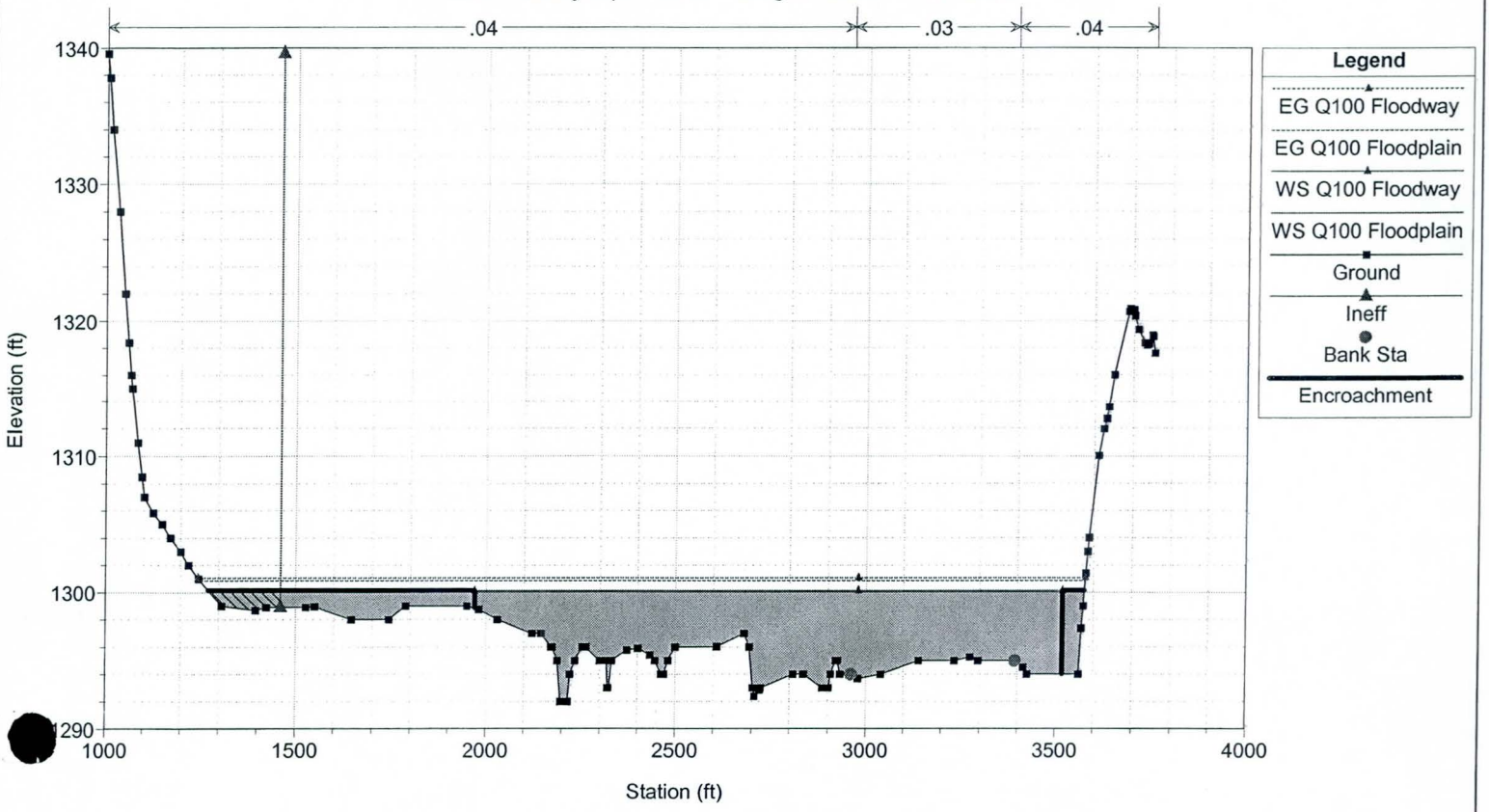
River = Hassayampa Reach = Douglas Ranch RS = 23.54



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

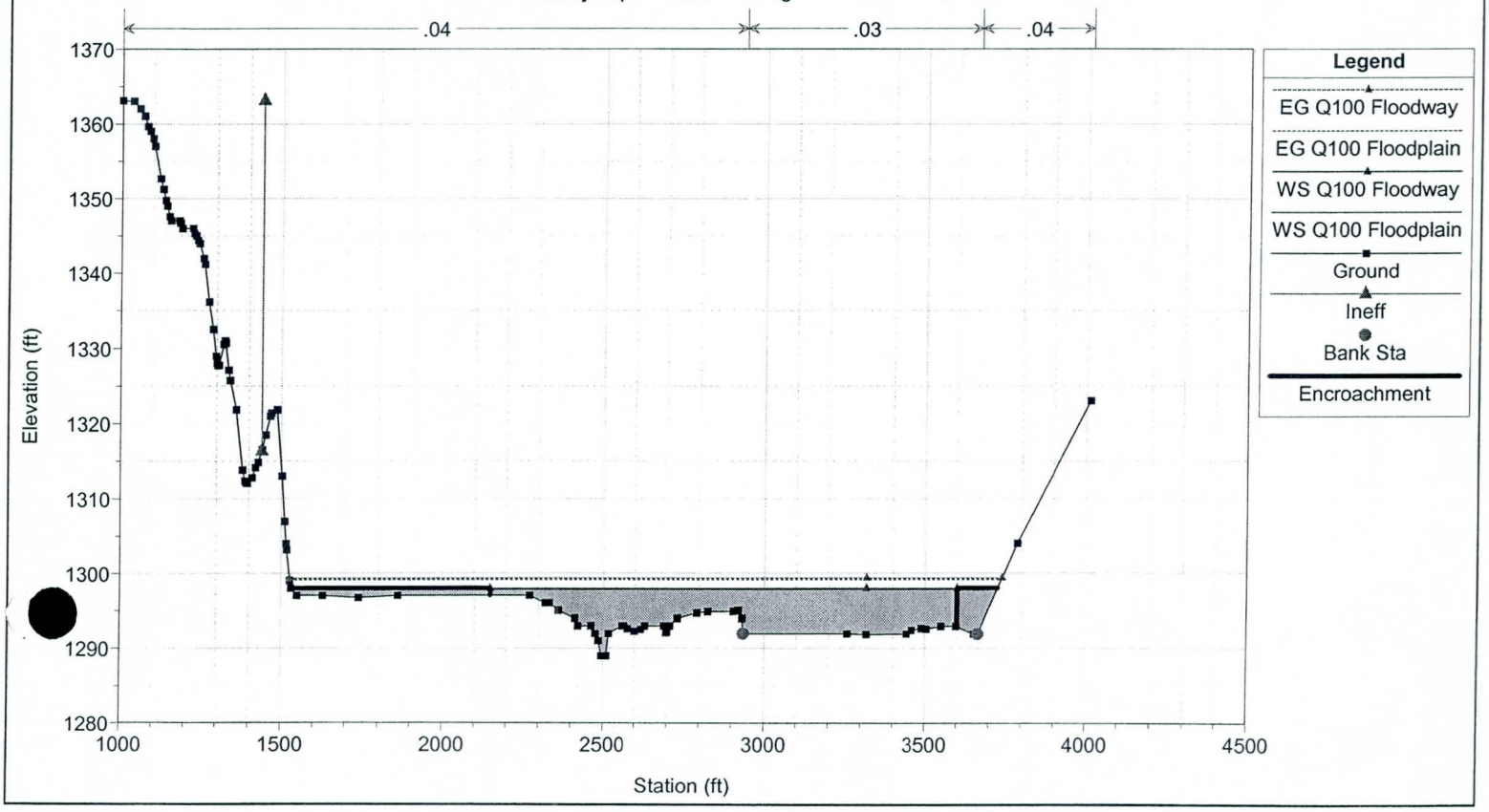
River = Hassayampa Reach = Douglas Ranch RS = 23.45



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

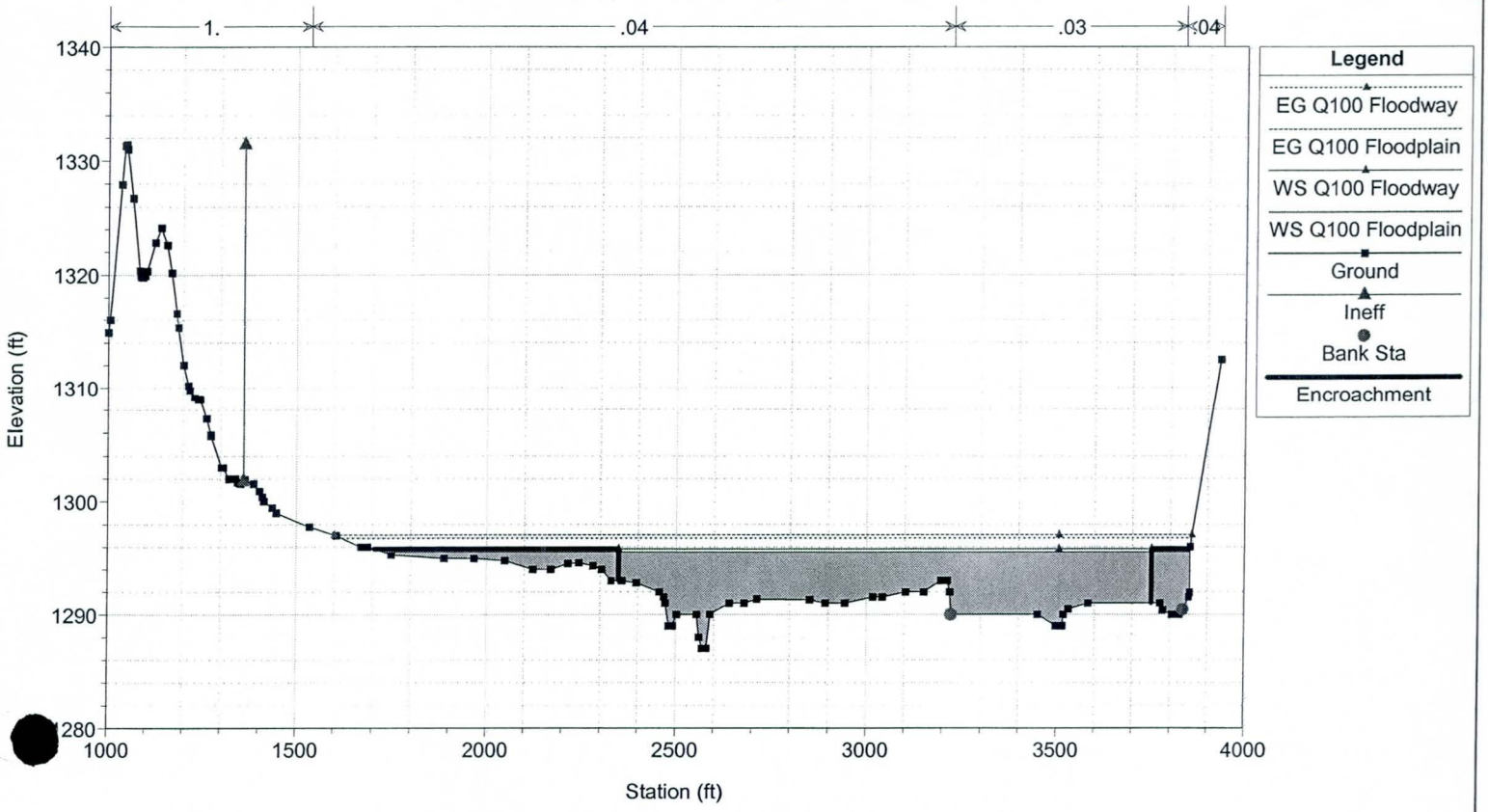
River = Hassayampa Reach = Douglas Ranch RS = 23.35



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

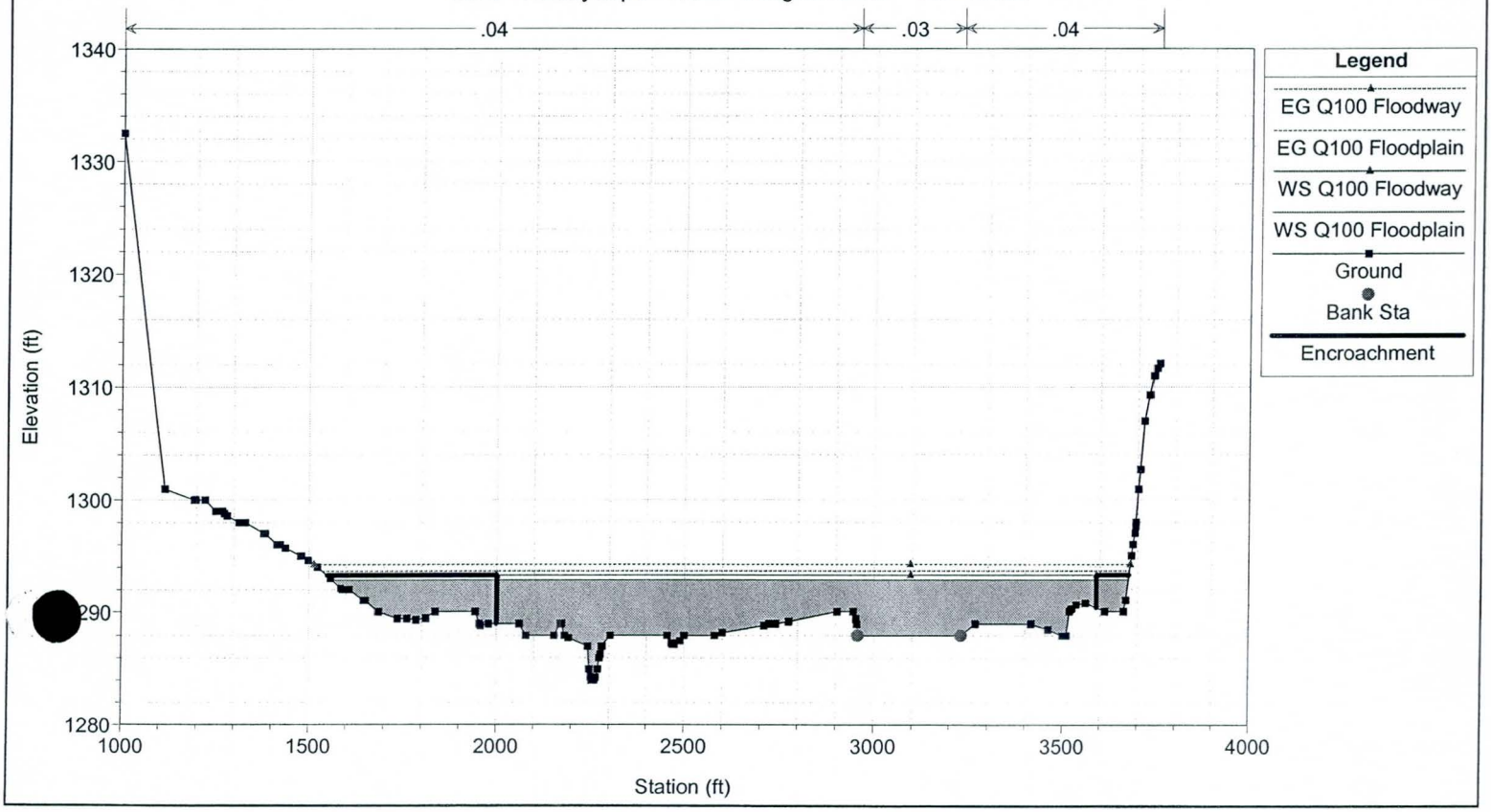
River = Hassayampa Reach = Douglas Ranch RS = 23.26

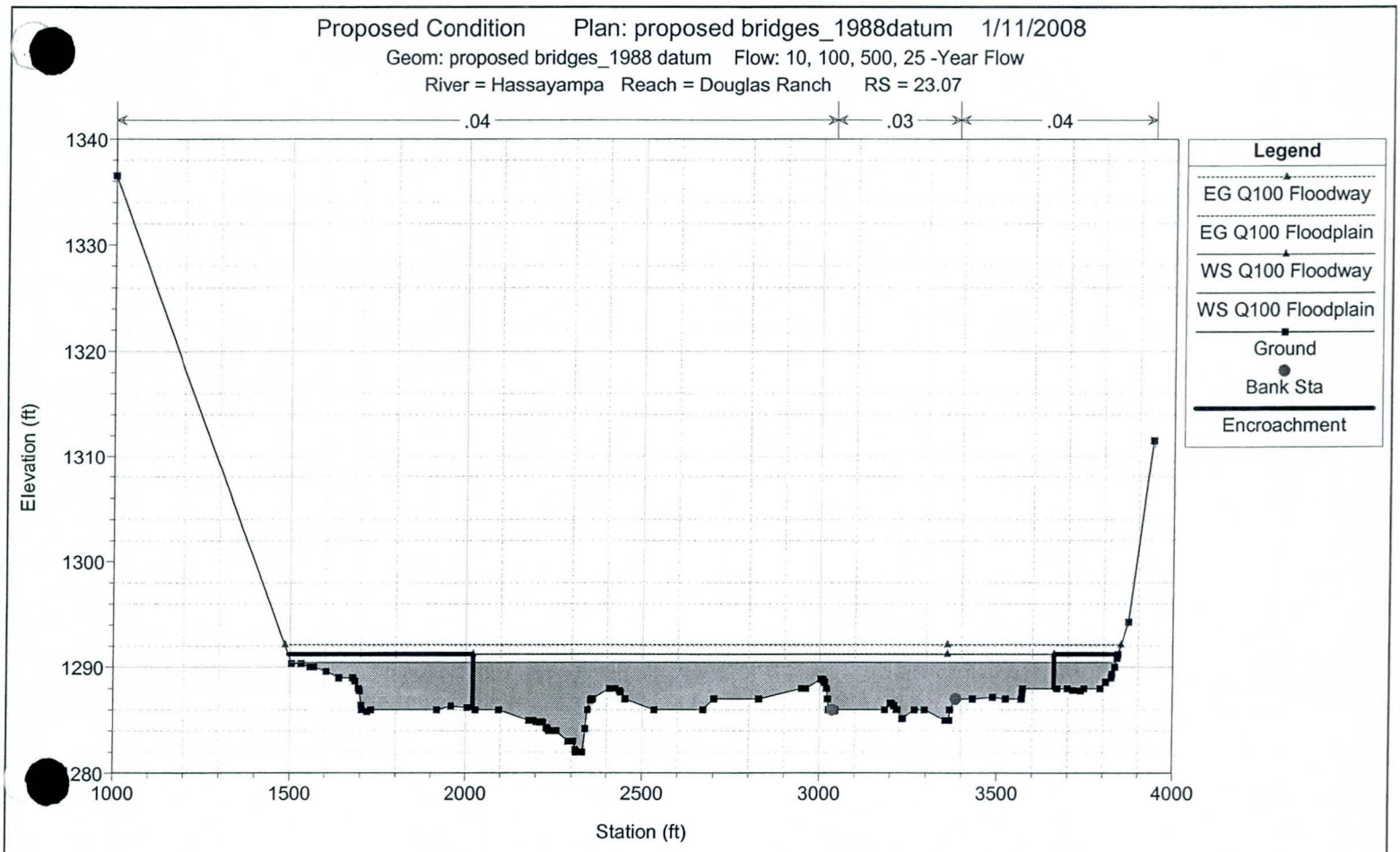


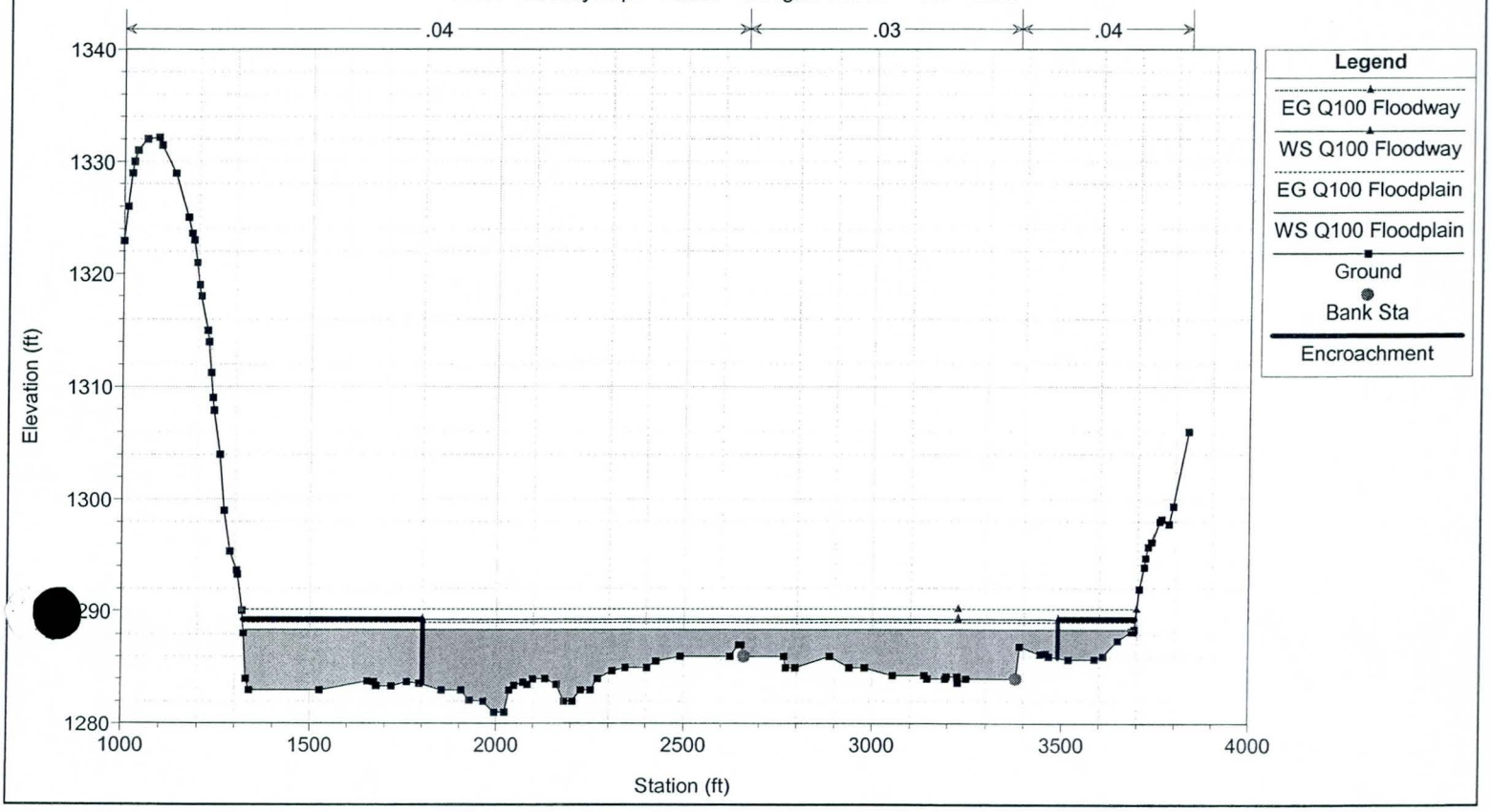
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

River = Hassayampa Reach = Douglas Ranch RS = 23.16



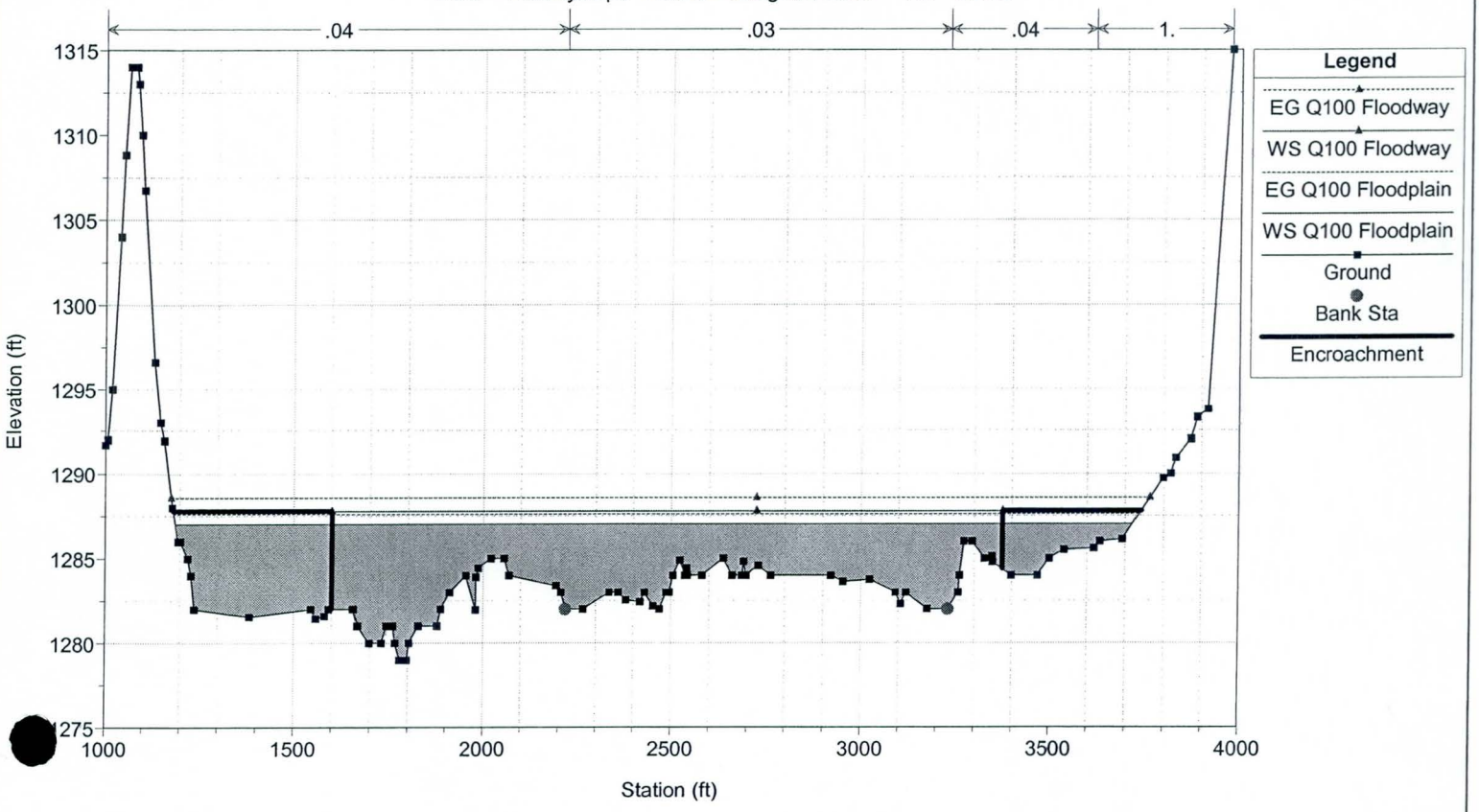

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 23.07
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1340
1330
1320
1310
1300
1290
1280
1000
1500
2000
2500
3000
3500
4000
Station (ft)


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.97
.04
.03
.04
Legend
EG Q100 Floodway
WS Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1340
1330
1320
1310
1300
1280
1000
1500
2000
2500
3000
3500
4000
Station (ft)

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

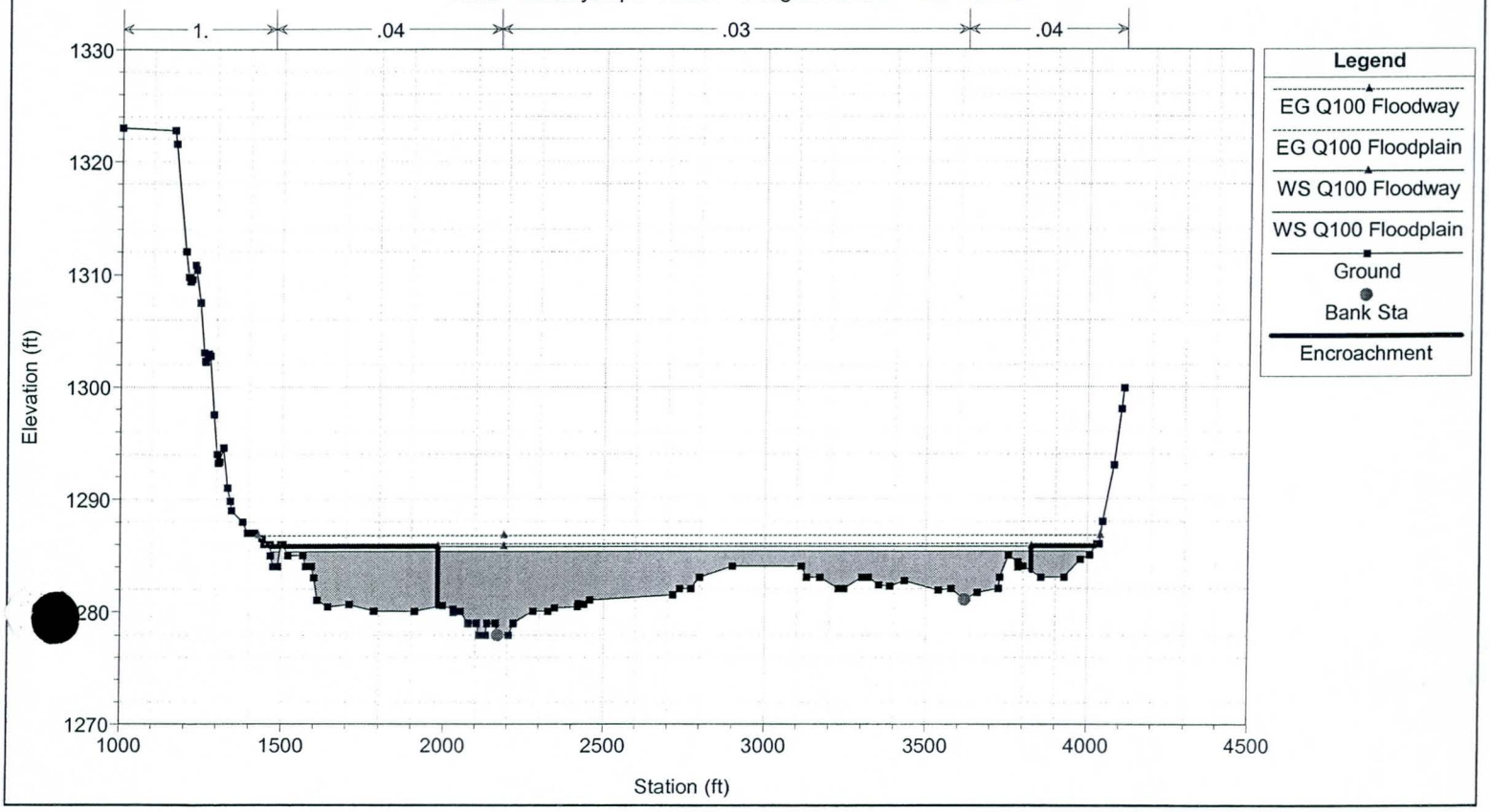
River = Hassayampa Reach = Douglas Ranch RS = 22.88



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

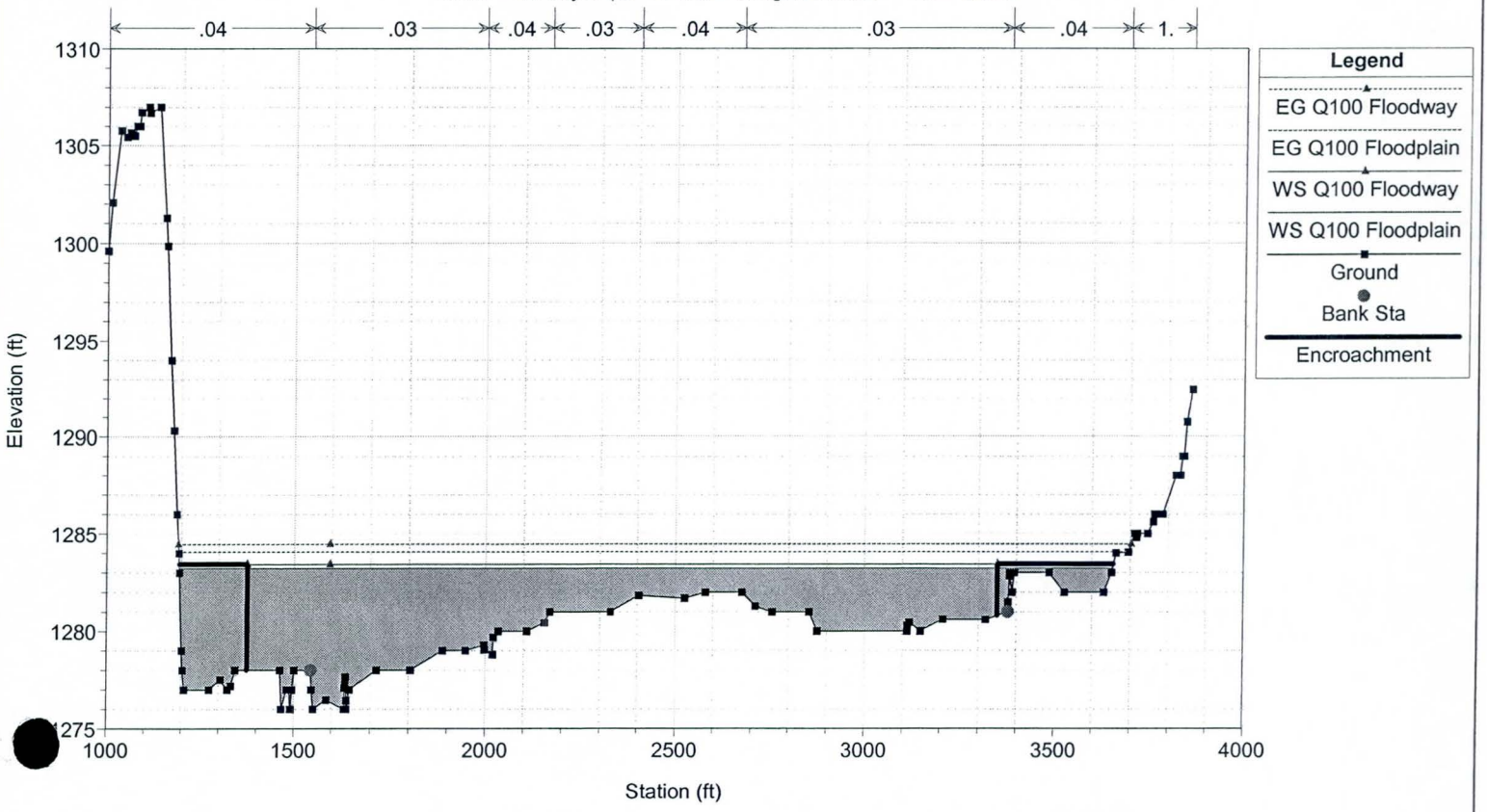
River = Hassayampa Reach = Douglas Ranch RS = 22.78



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

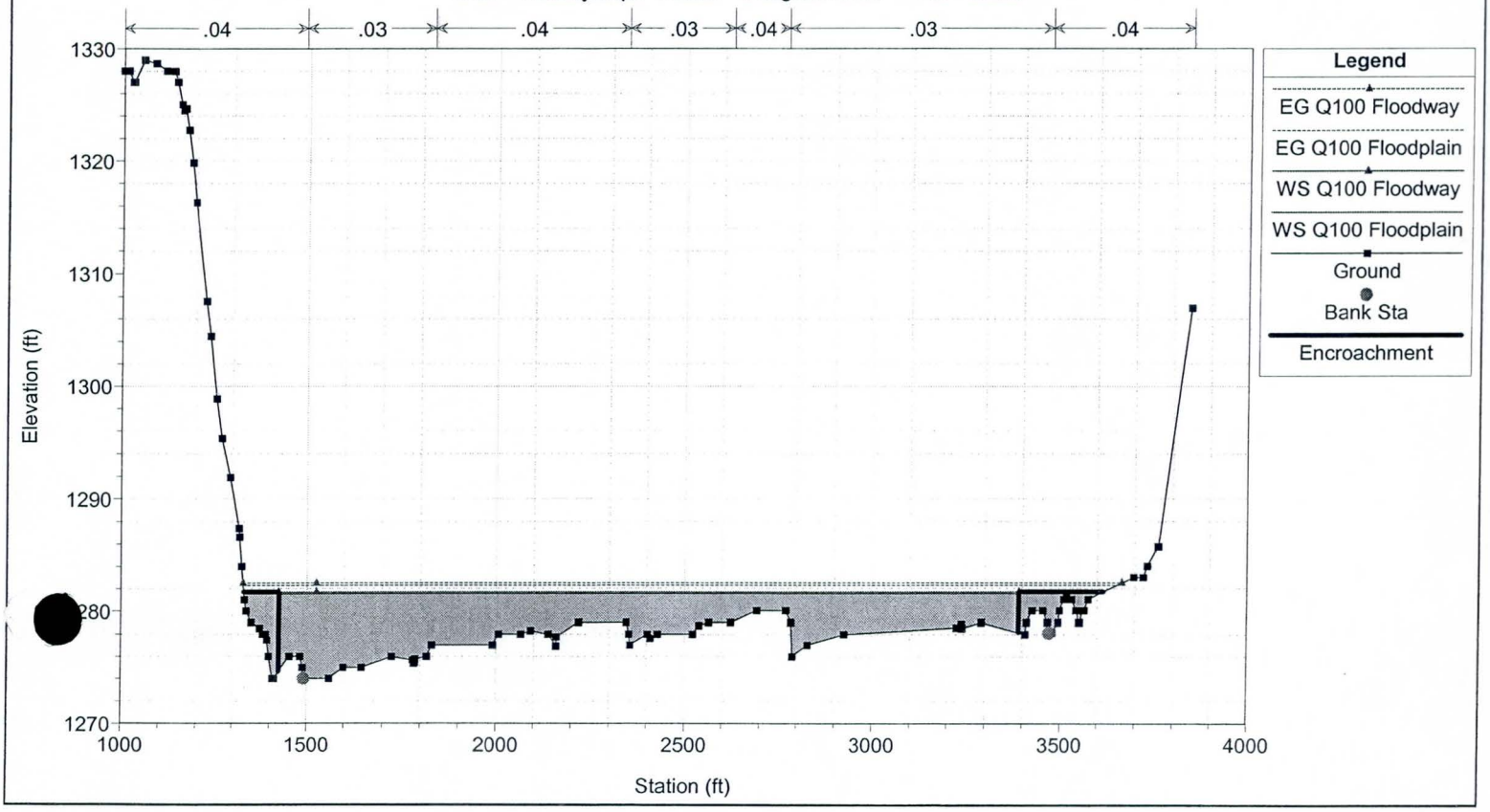
River = Hassayampa Reach = Douglas Ranch RS = 22.69

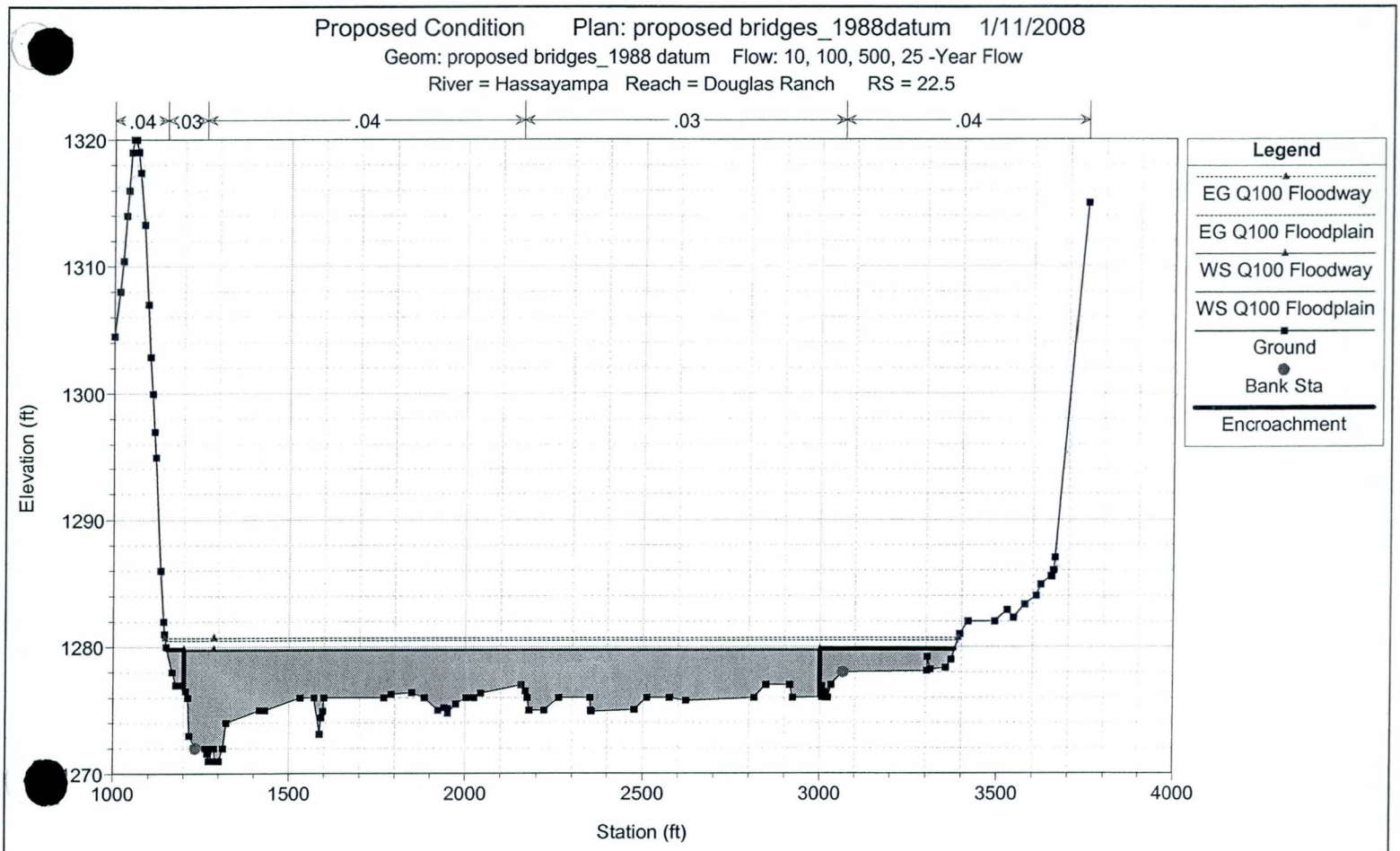


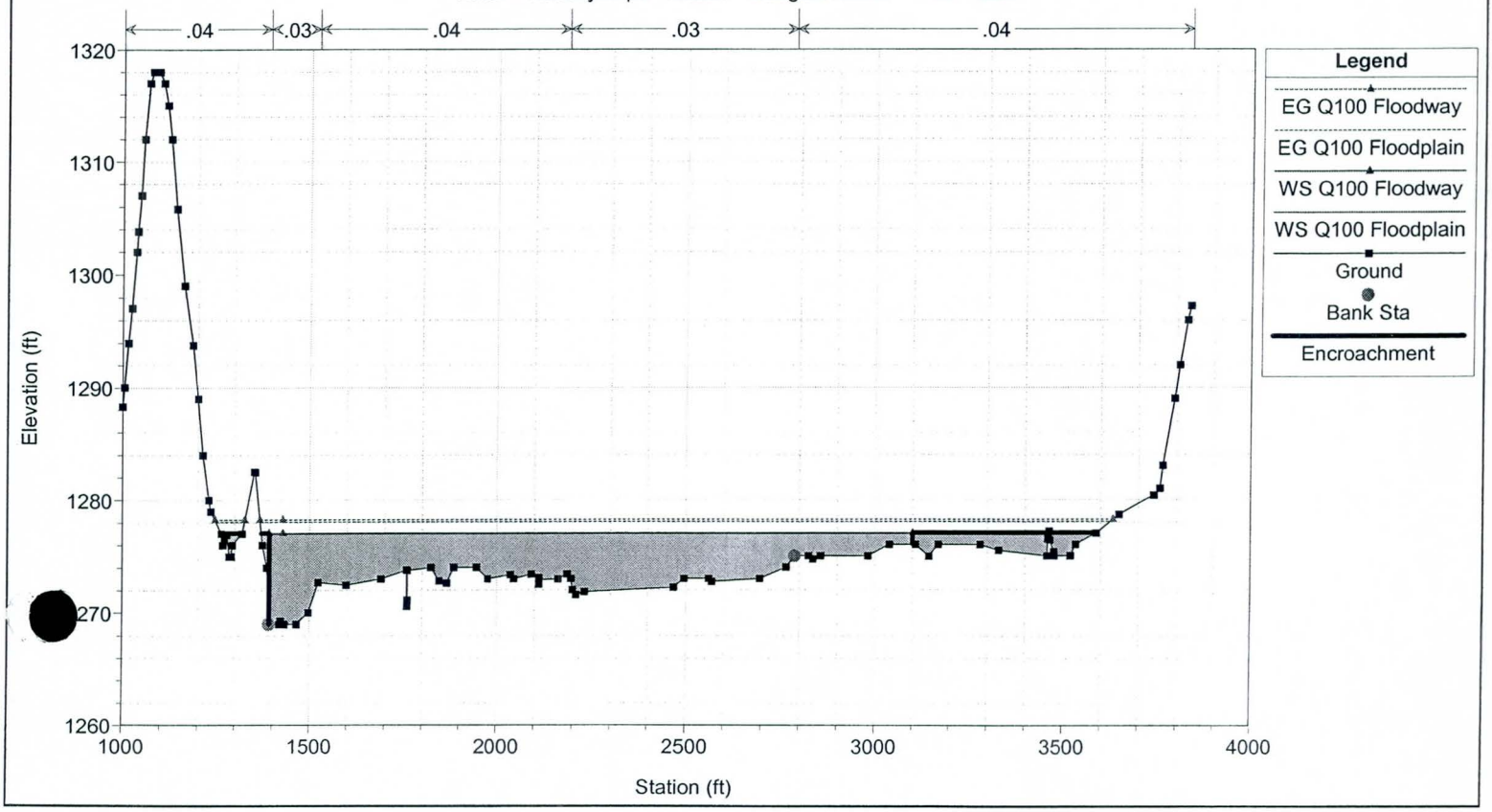
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

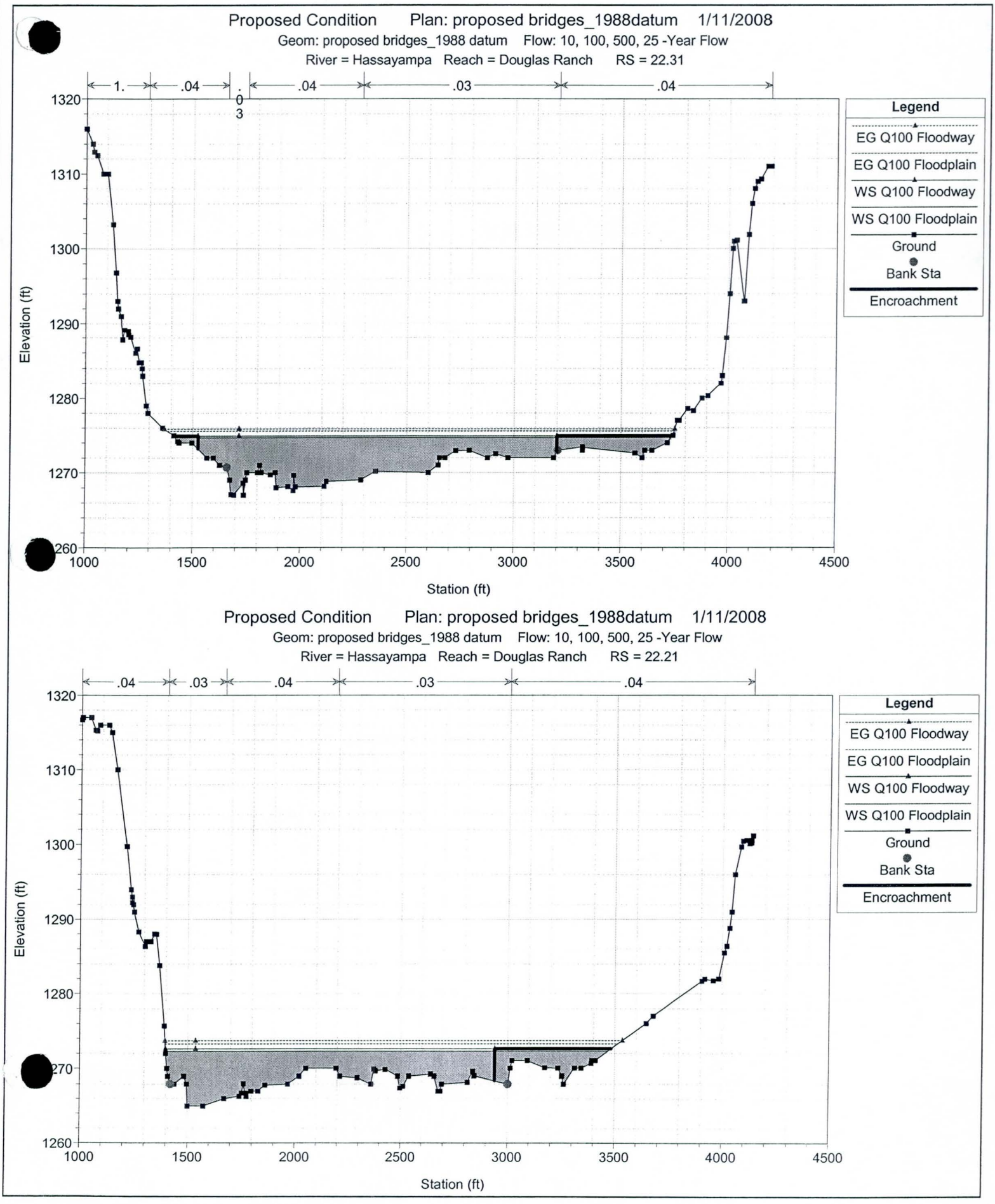
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

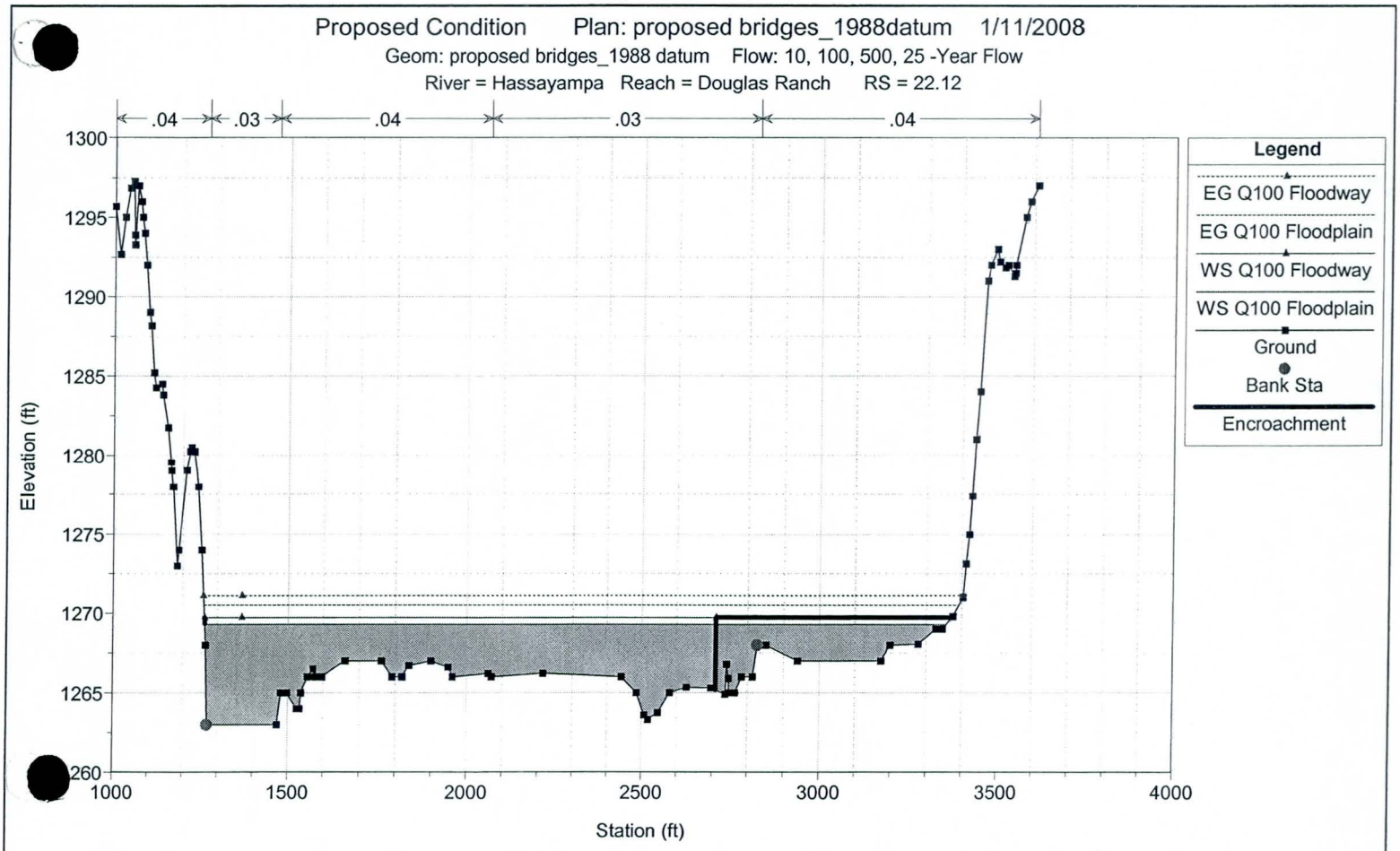
River = Hassayampa Reach = Douglas Ranch RS = 22.59

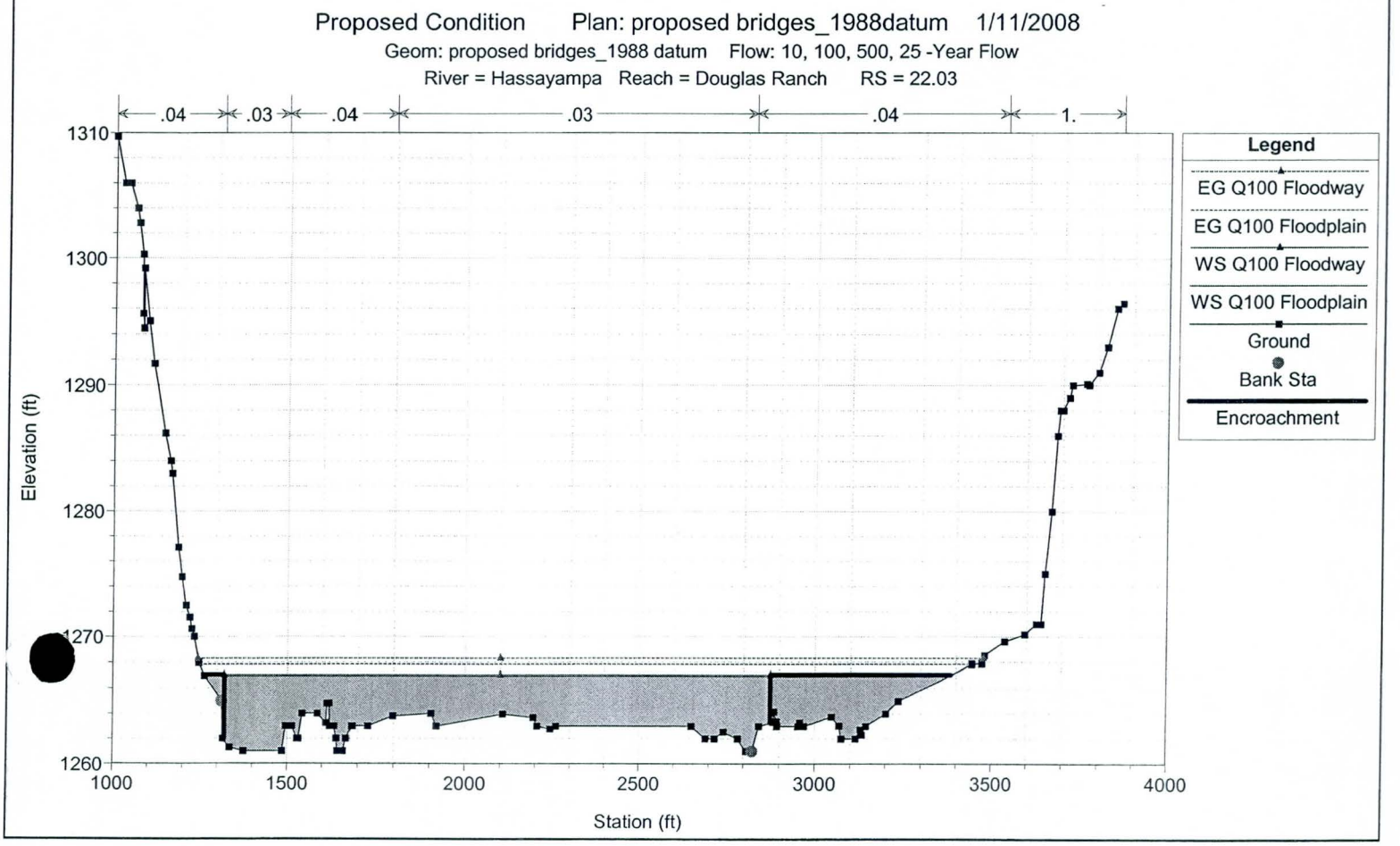


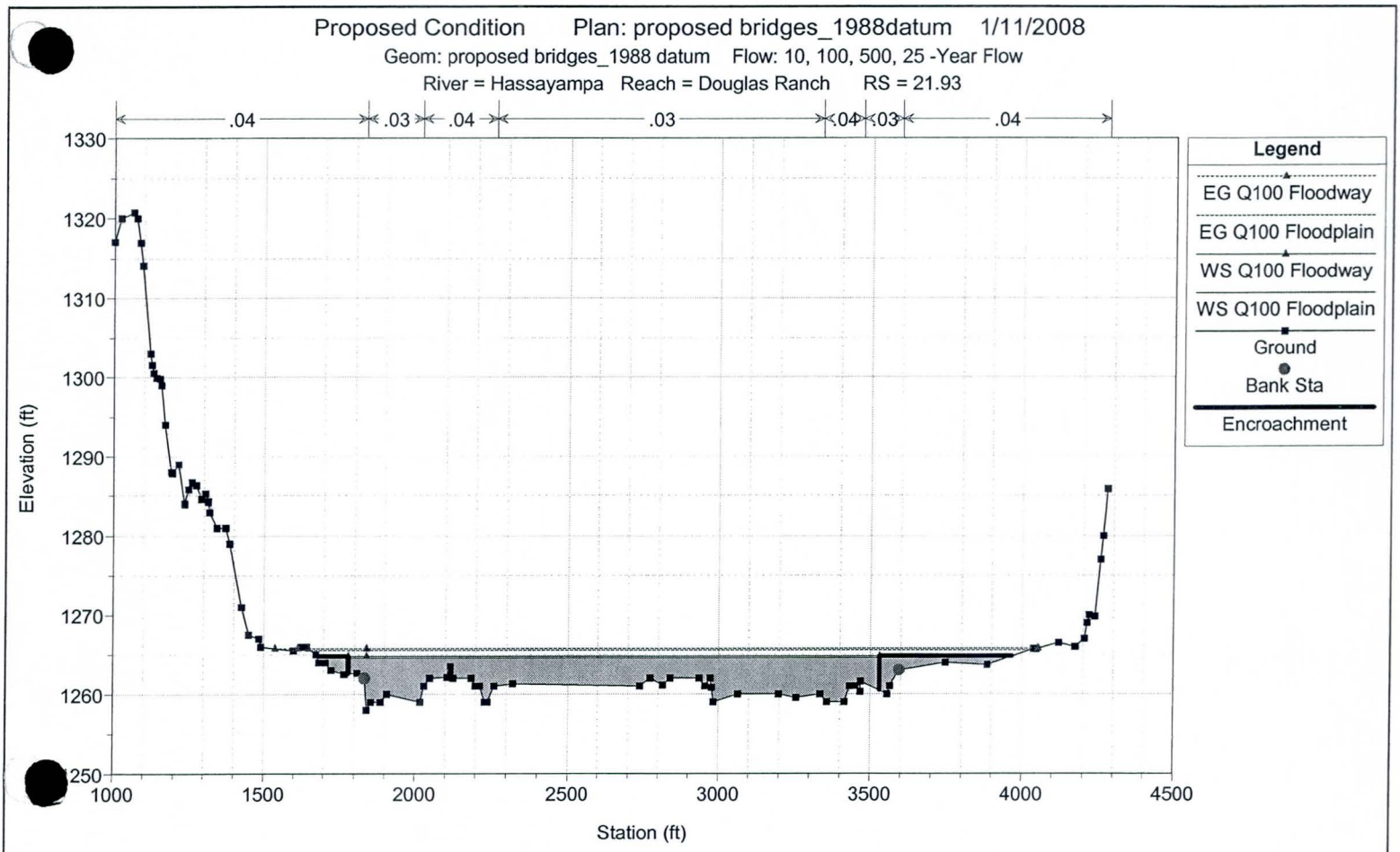

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.5
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1320
1310
1300
1290
1280
1270
1000
1500
2000
2500
3000
3500
4000
Station (ft)

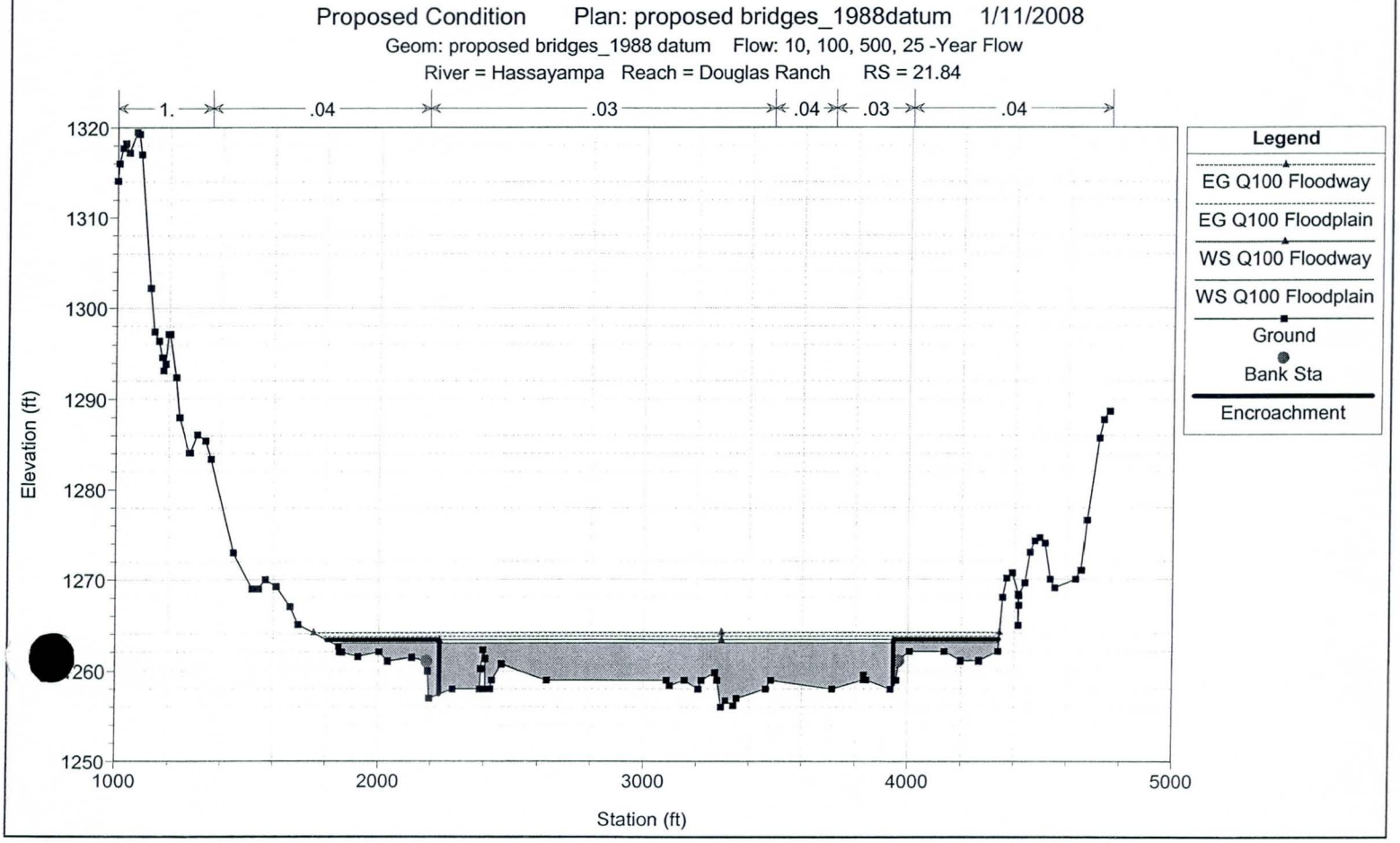

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.4
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1320
1310
1300
1290
1280
1270
1260
1000
1500
2000
2500
3000
3500
4000
Station (ft)

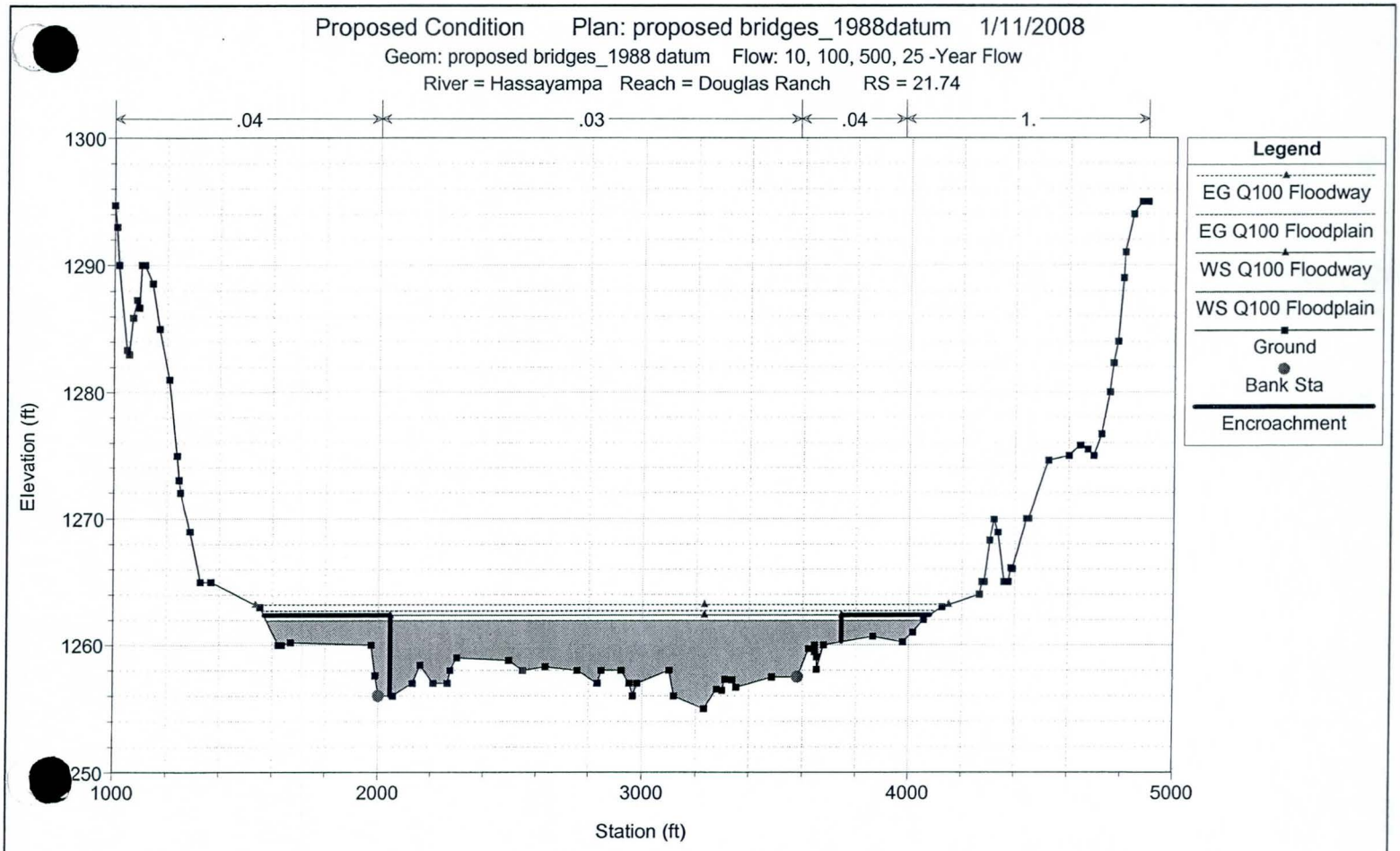

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.31
1.
.04
.
0
3
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1320
1310
1300
1290
1280
1270
260
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.21
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1320
1310
1300
1290
1280
270
1260
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

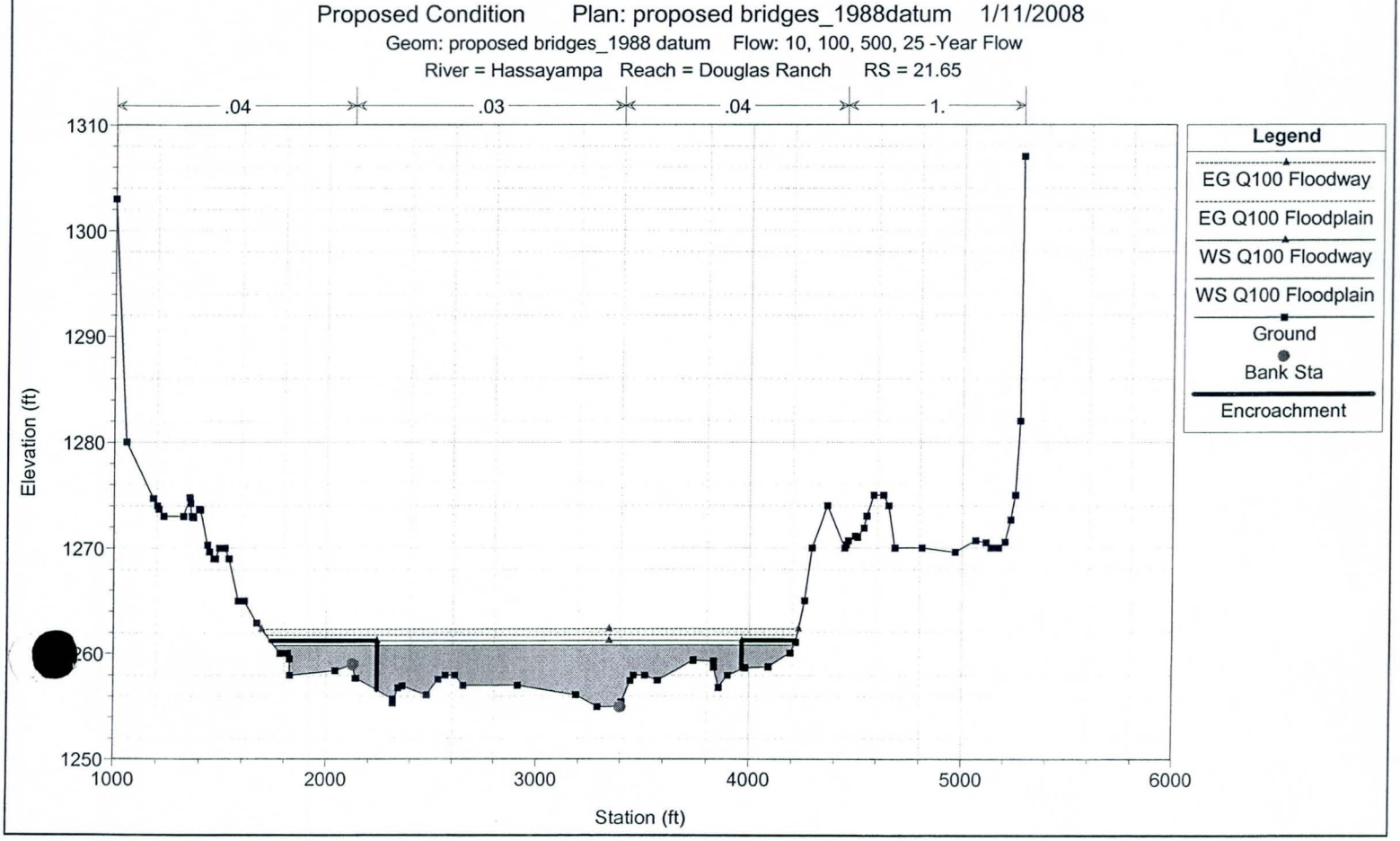

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.12
.04
.03
.04
.03
.04
1300
1295
1290
1285
1280
1275
1270
1265
1260
Elevation (ft)
1000
1500
2000
2500
3000
3500
4000
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment

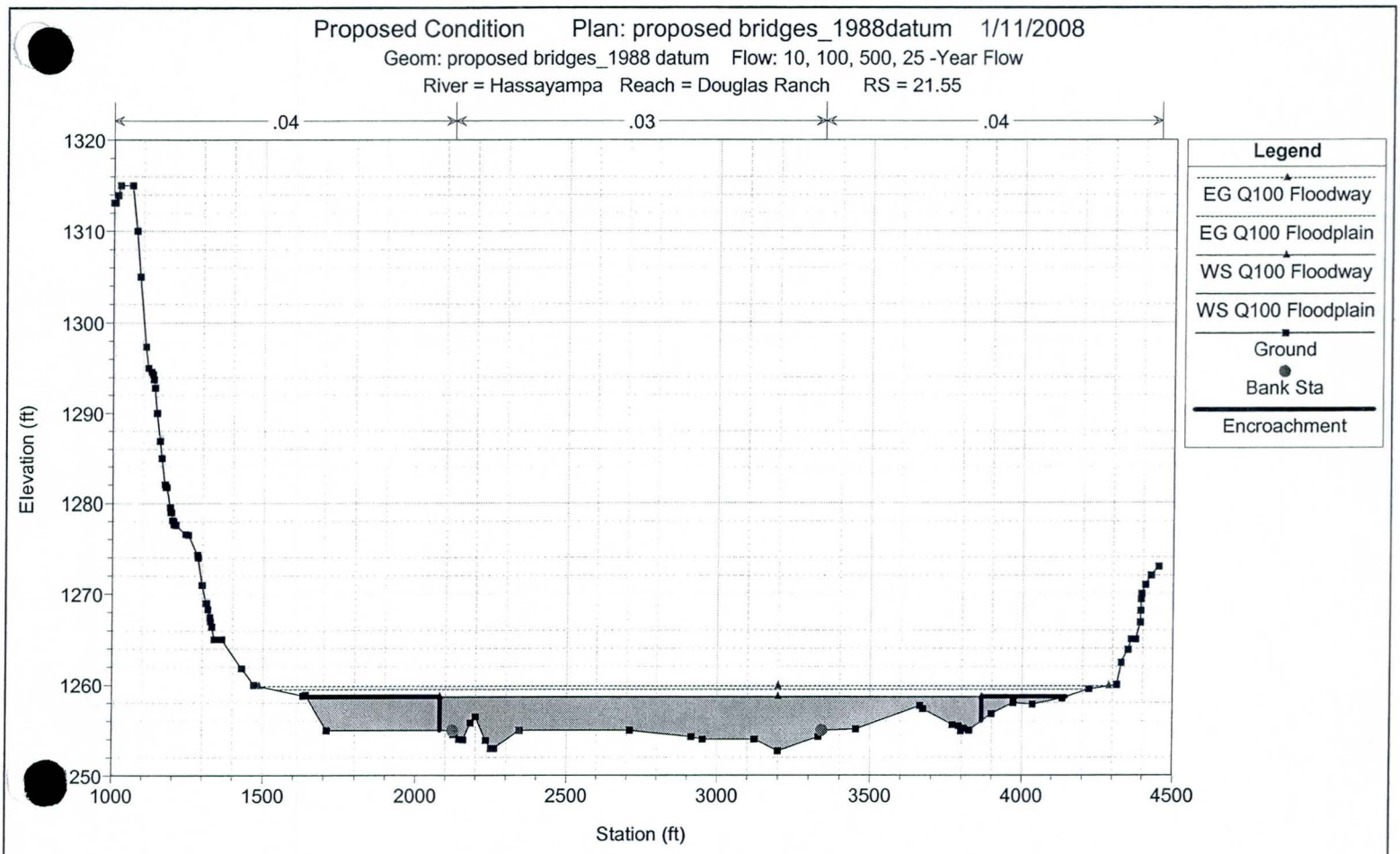

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 22.03
.04
.03
.04
.03
.04
1.
1310
1300
1290
1280
1270
1260
Elevation (ft)
1000
1500
2000
2500
3000
3500
4000
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment

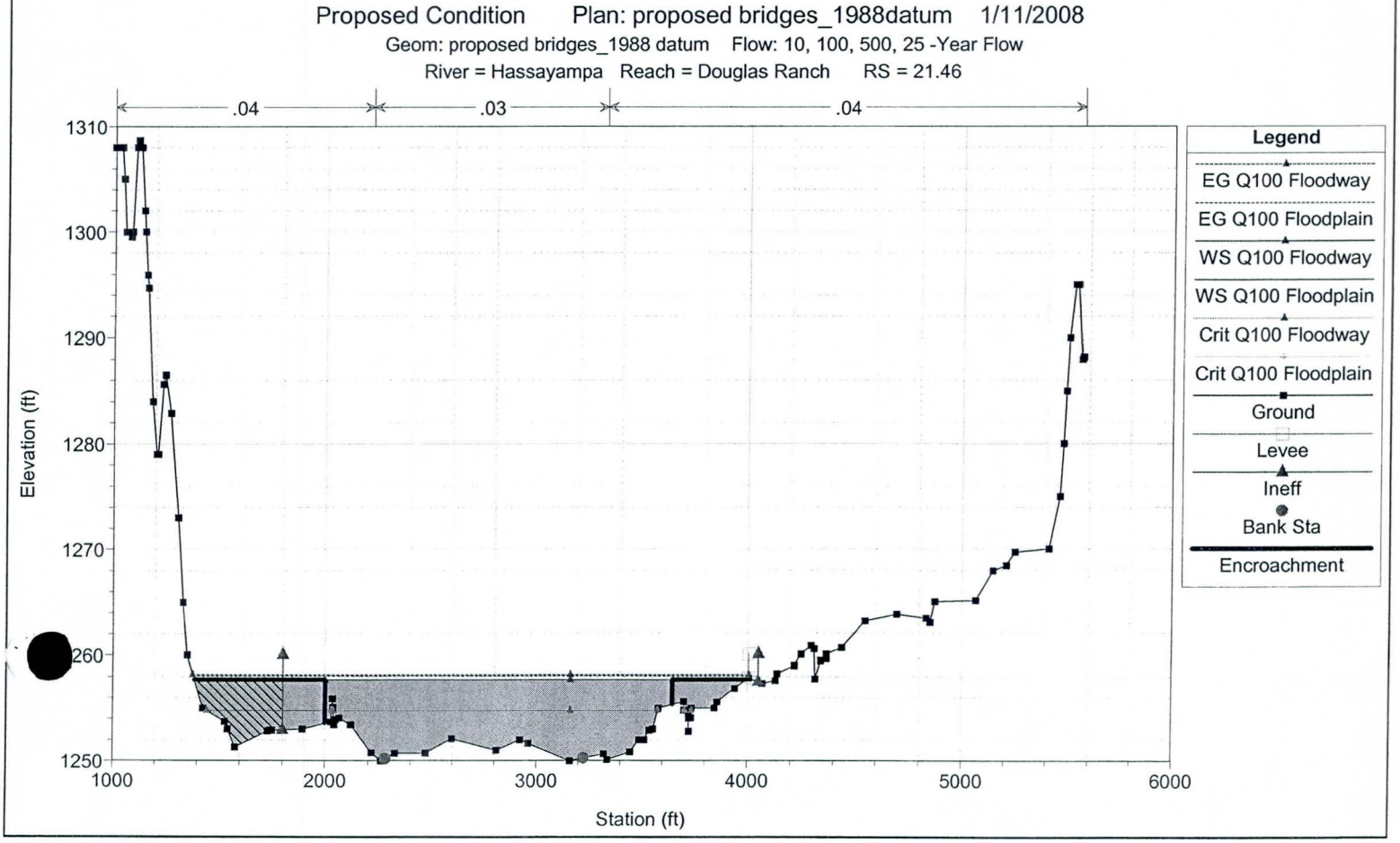

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.93
.04
.03
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1330
1320
1310
1300
1290
1280
1270
1260
1250
1000
1500
2000
2500
3000
3500
4000
4500
Station (ft)

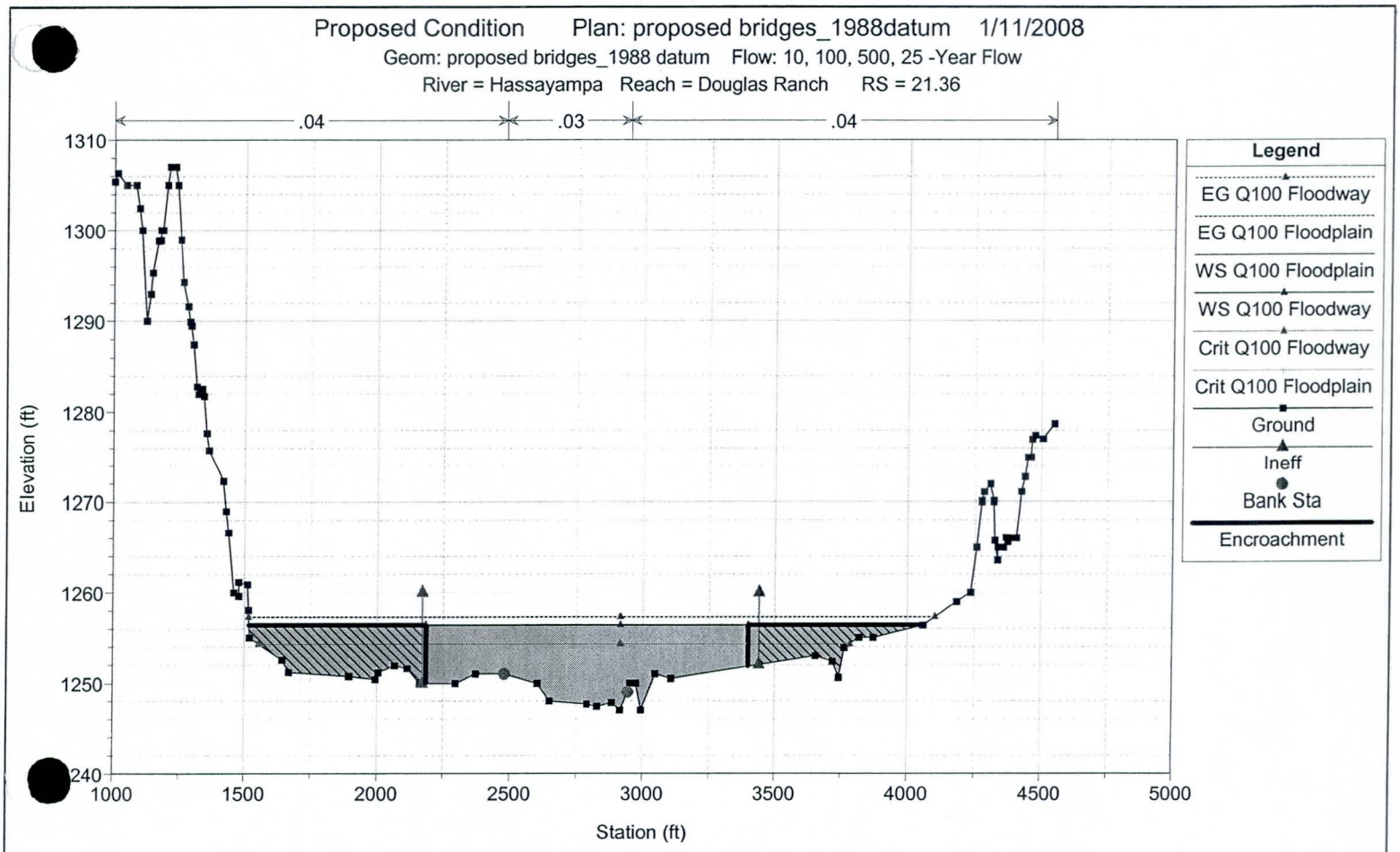

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.84
1.
.04
.03
.04
.03
.04
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1320
1310
1300
1290
1280
1270
1260
1250
1000
2000
3000
4000
5000
Station (ft)

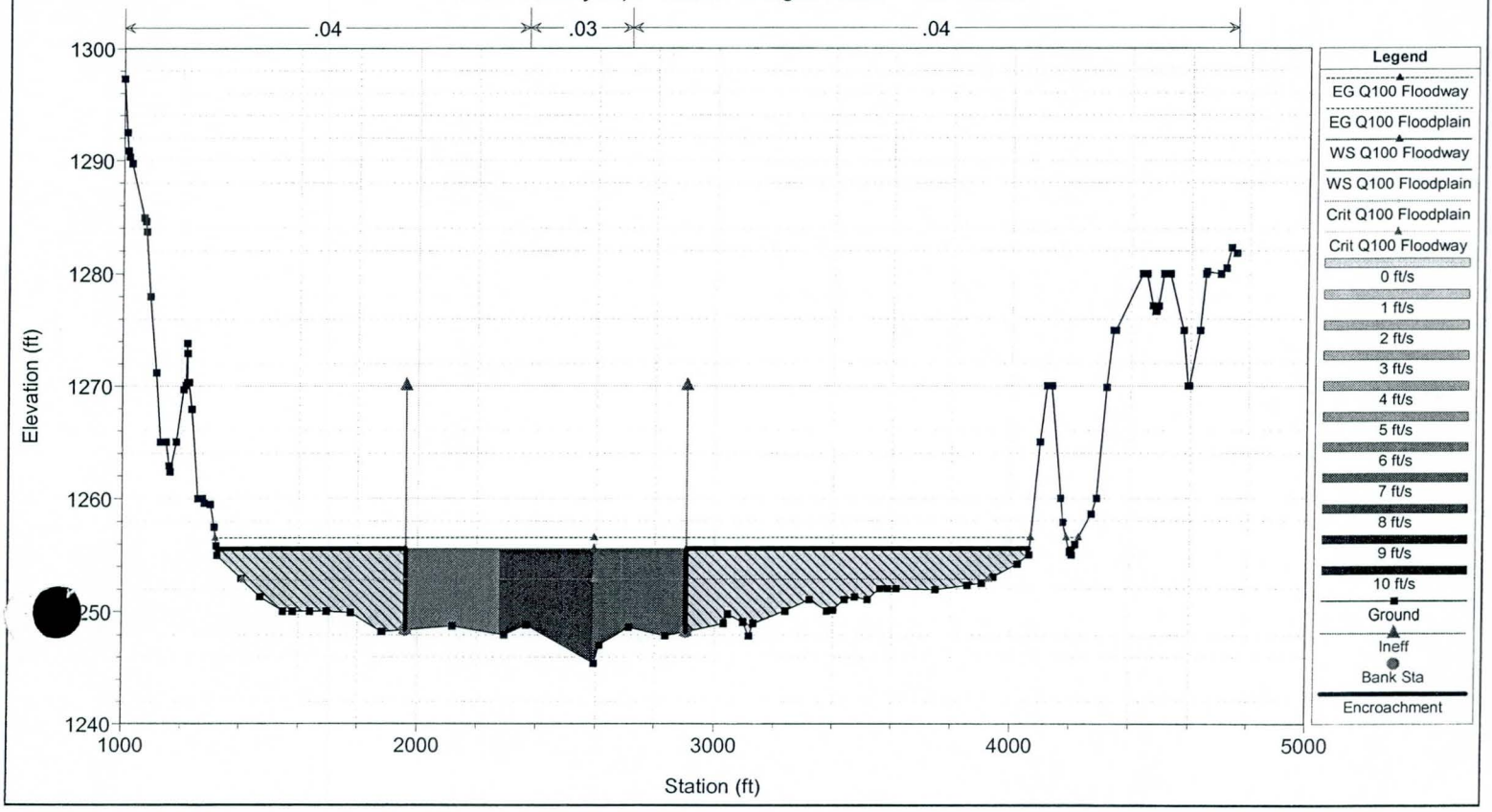

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.74
.04
.03
.04
1.
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1300
1290
1280
1270
1260
1250
1000
2000
3000
4000
5000
Station (ft)


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.65
.04
.03
.04
1.
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment
Elevation (ft)
1310
1300
1290
1280
1270
1250
1000
2000
3000
4000
5000
6000
Station (ft)


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.55
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Ground
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.46
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Levee
Ineff
Bank Sta
Encroachment

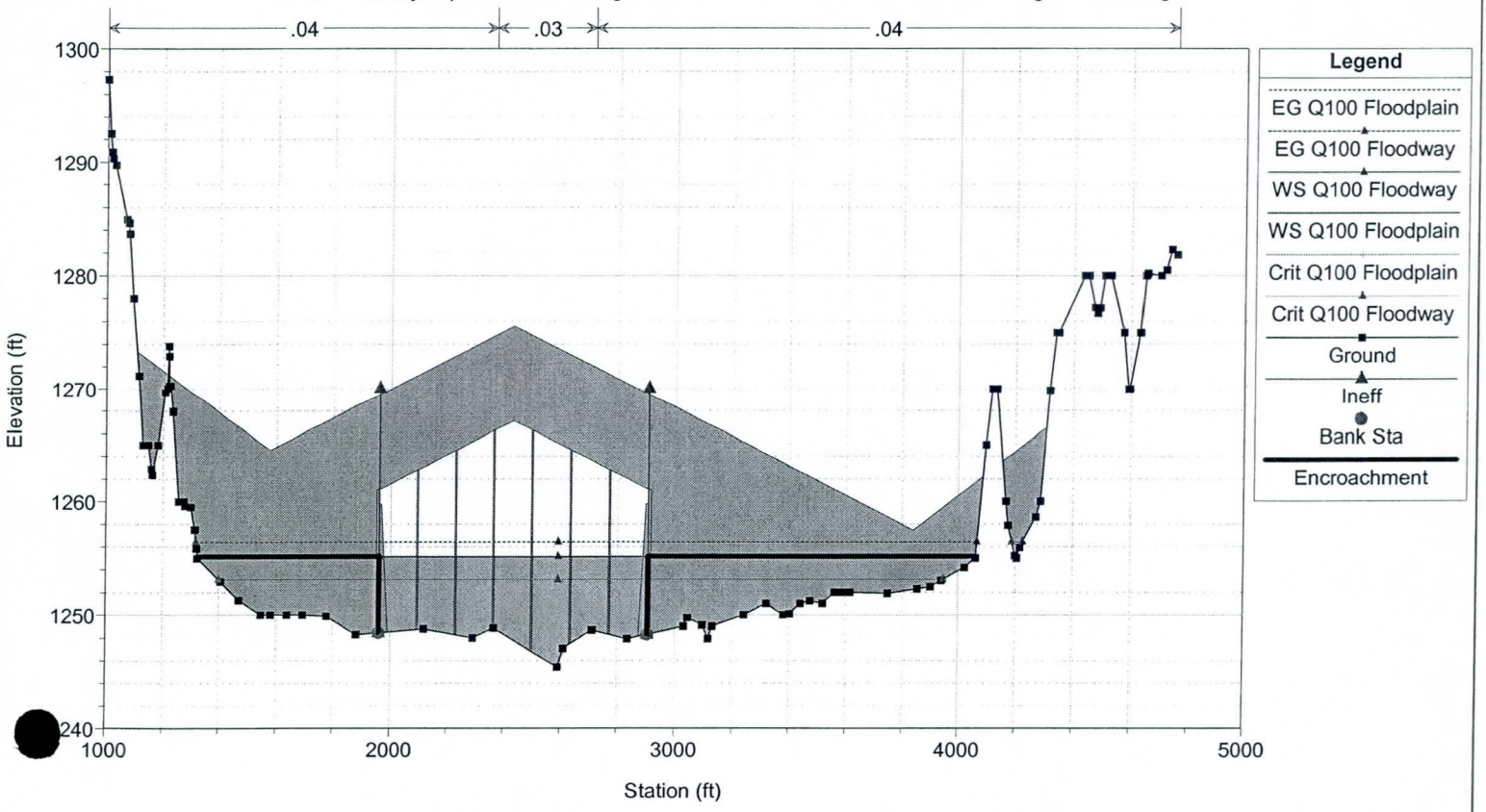

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.36
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodplain
WS Q100 Floodway
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.34
.04
.03
.04
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
6 ft/s
7 ft/s
8 ft/s
9 ft/s
10 ft/s
Ground
Ineff
Bank Sta
Encroachment

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

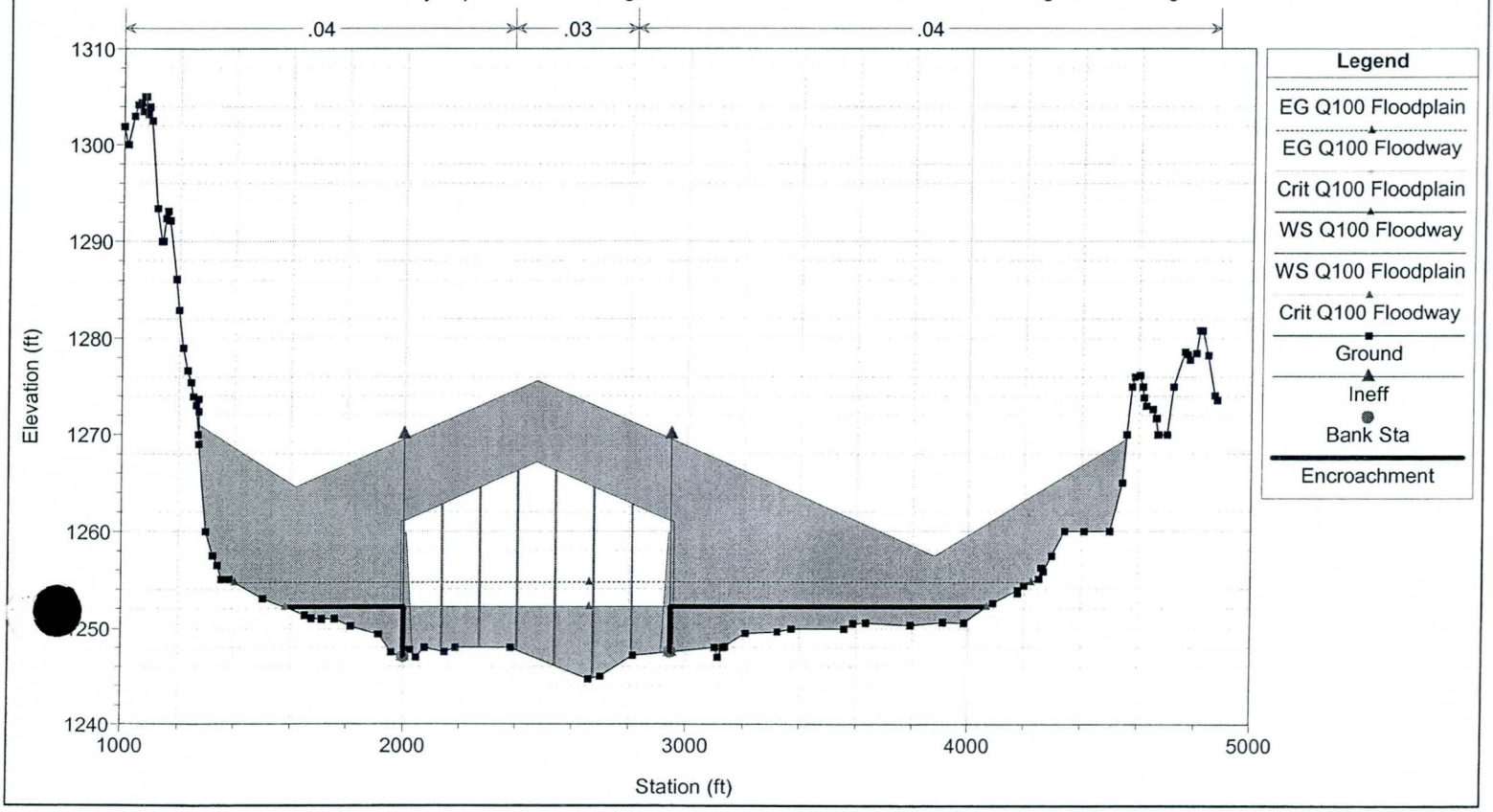
River = Hassayampa Reach = Douglas Ranch RS = 21.32 BR Peoria Bridge - New Bridge 4

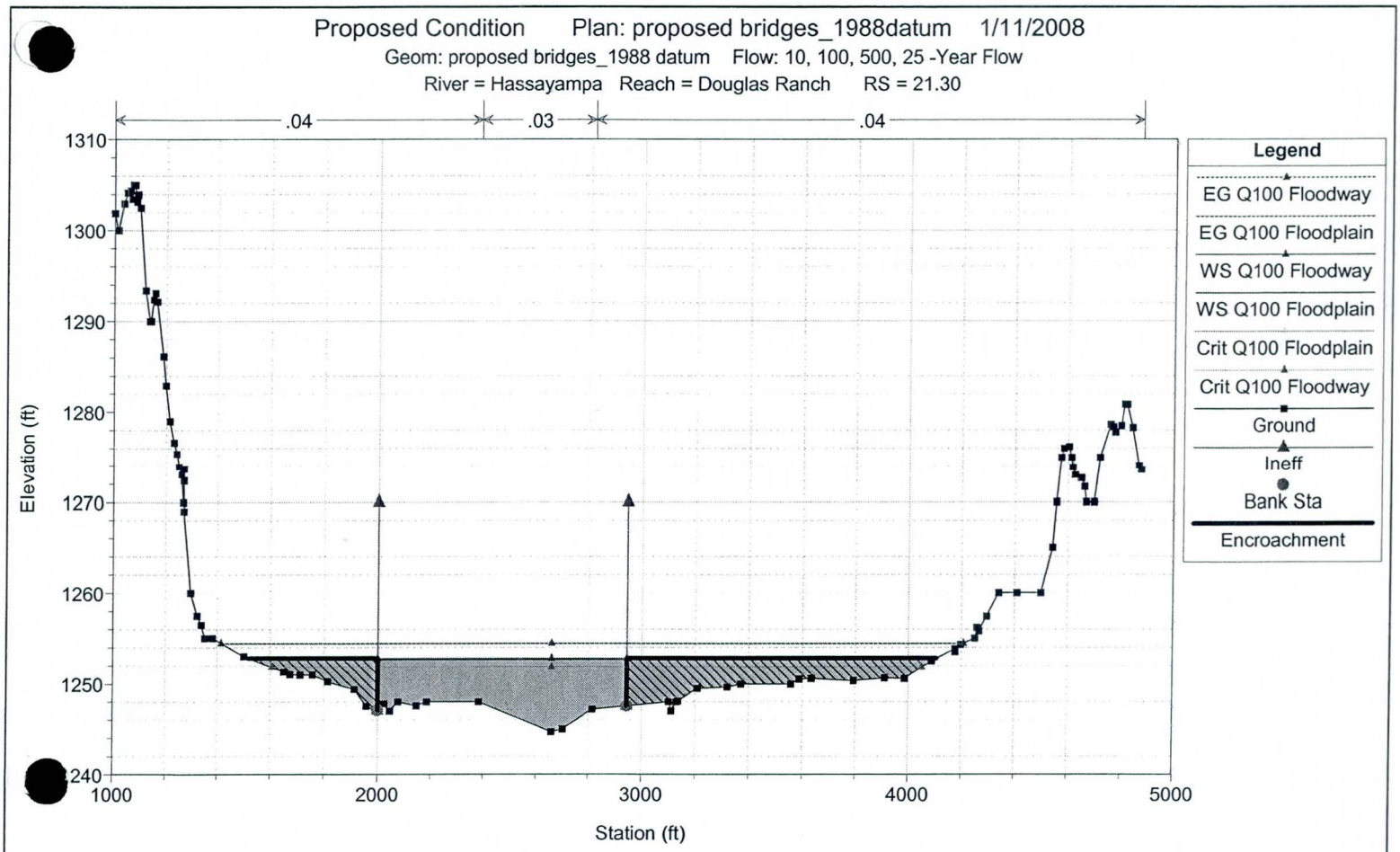


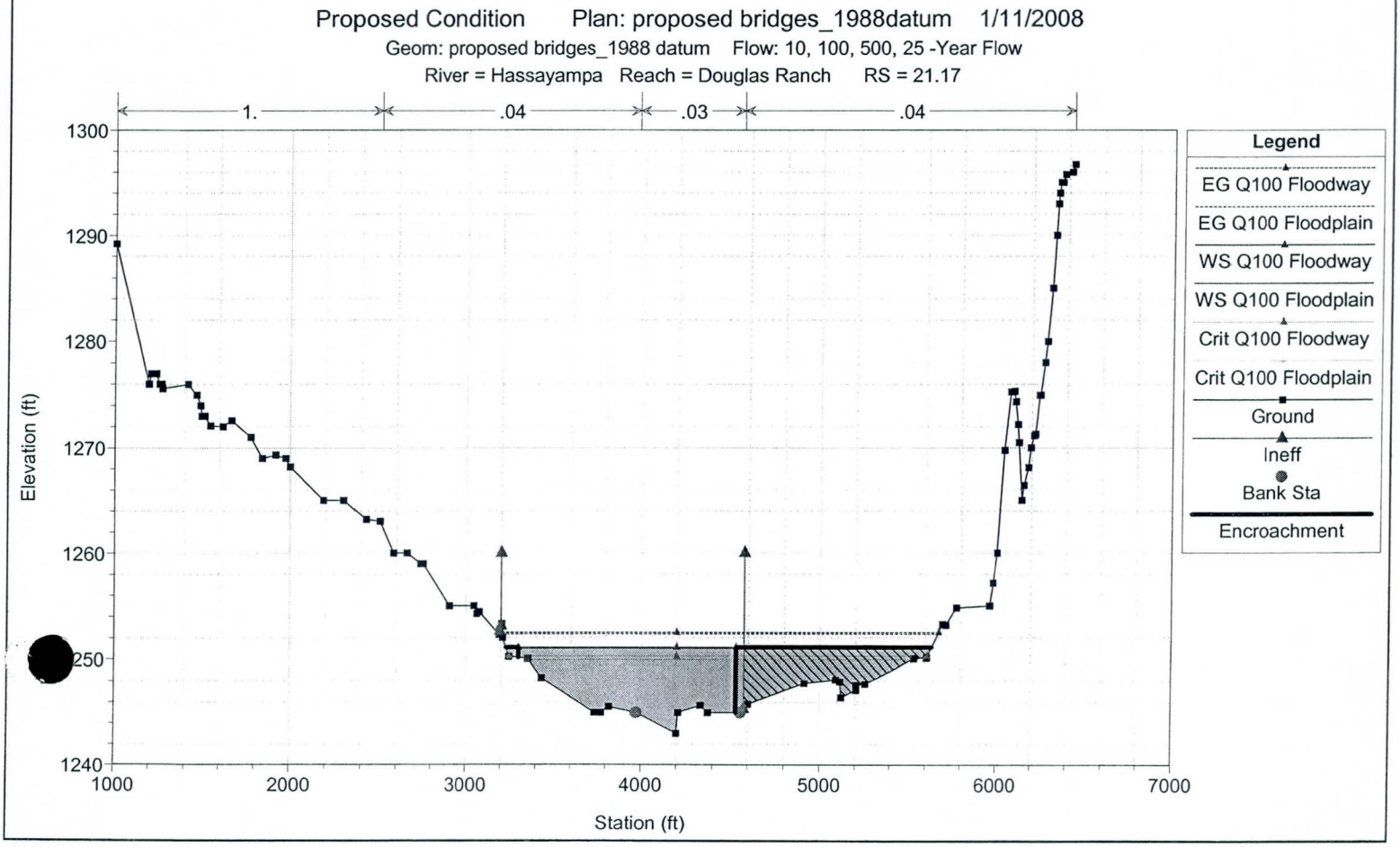
Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

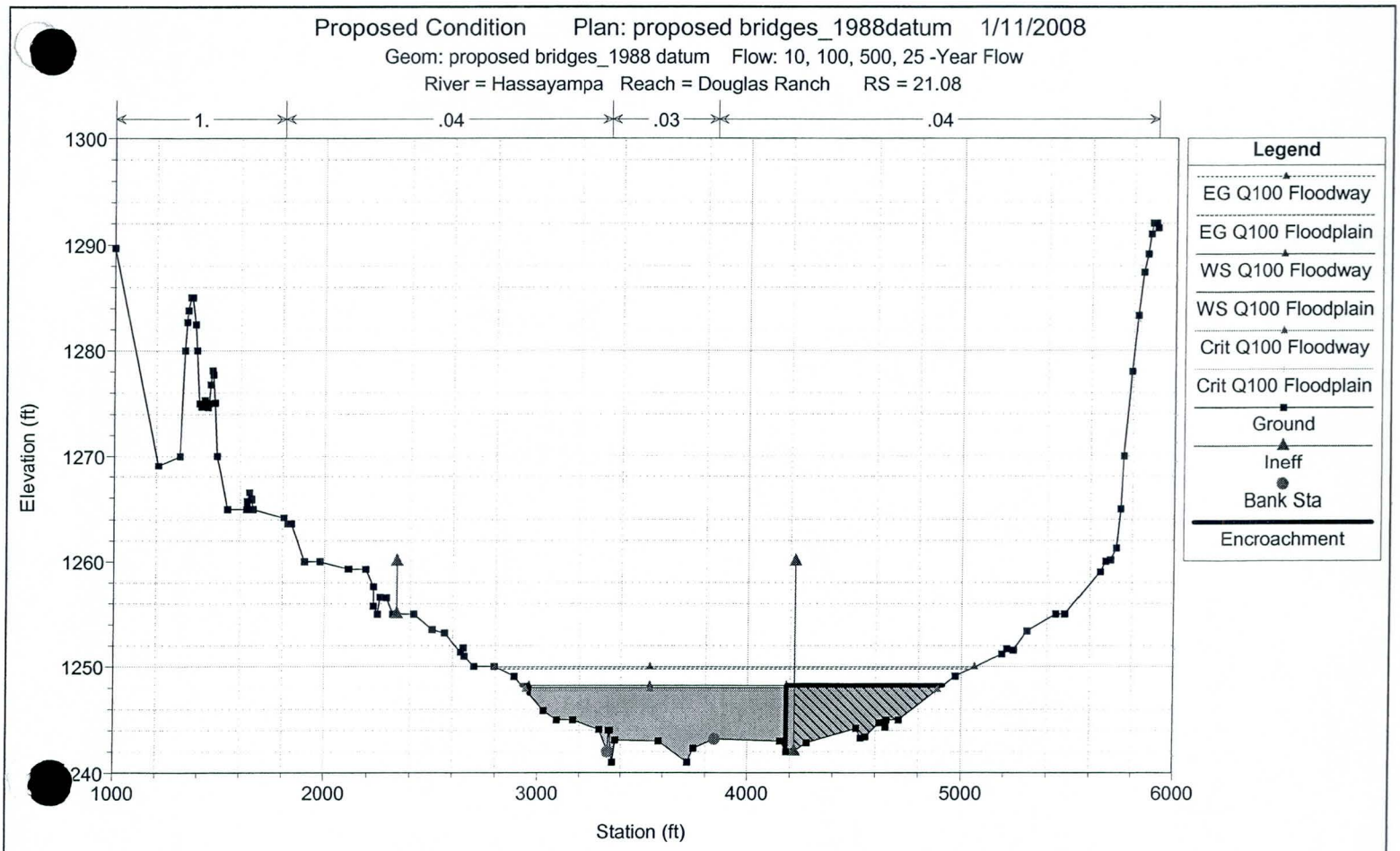
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

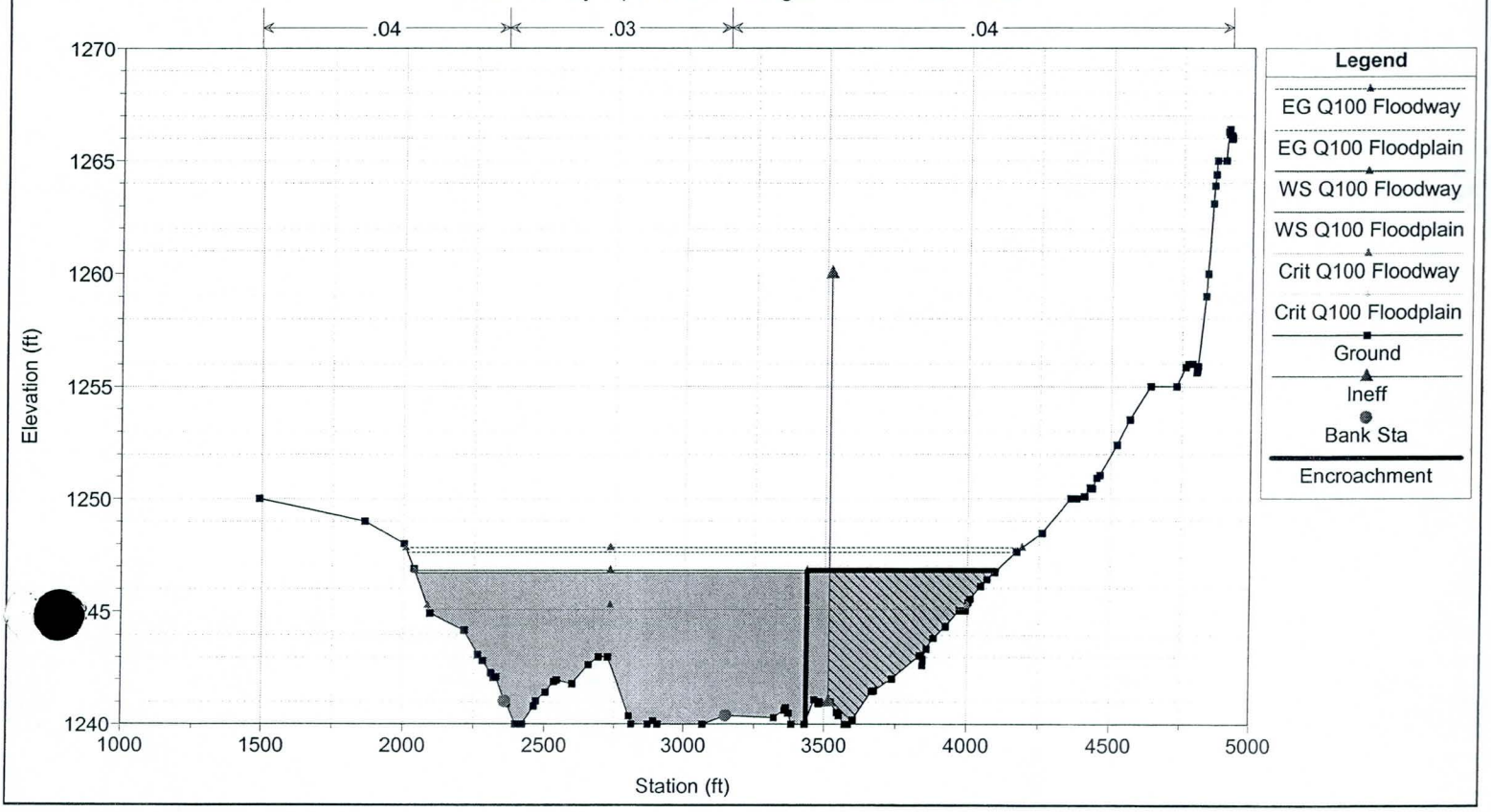
River = Hassayampa Reach = Douglas Ranch RS = 21.32 BR Peoria Bridge - New Bridge 4




Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.30
.04
.03
.04
Elevation (ft)
1310
1300
1290
1280
1270
1260
1250
1240
1000
2000
3000
4000
5000
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodplain
Crit Q100 Floodway
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.17
1.
.04
.03
.04
Elevation (ft)
1300
1290
1280
1270
1260
1250
1240
1000
2000
3000
4000
5000
6000
7000
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

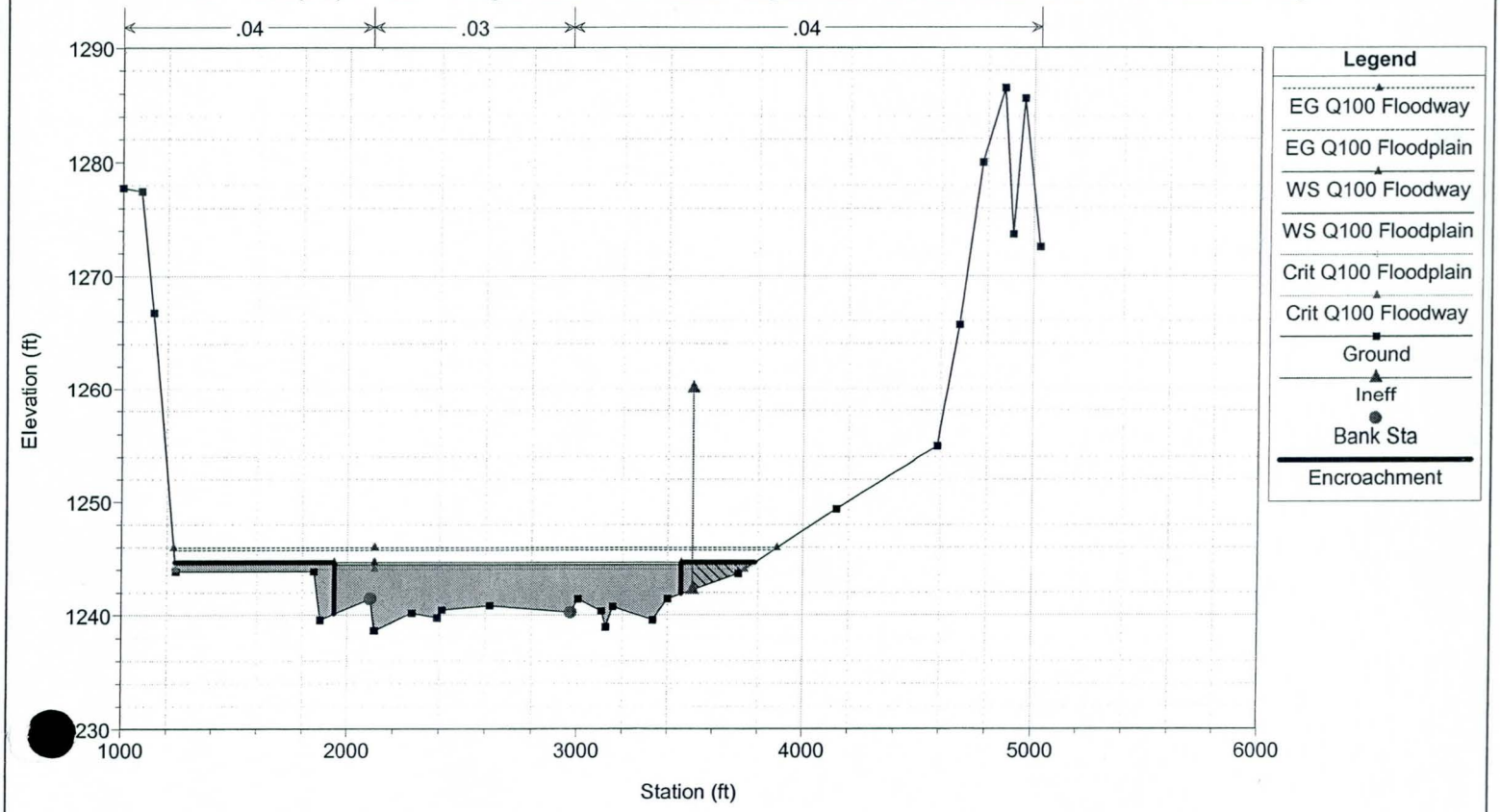

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 21.08
1.
.04
.03
.04
1300
1290
1280
1270
1260
1250
1240
1000
2000
3000
4000
5000
6000
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment


Proposed Condition Plan: proposed bridges_1988datum 1/11/2008
Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow
River = Hassayampa Reach = Douglas Ranch RS = 20.98
.04
.03
.04
1270
1265
1260
1255
1250
1240
1000
1500
2000
2500
3000
3500
4000
4500
5000
Elevation (ft)
Station (ft)
Legend
EG Q100 Floodway
EG Q100 Floodplain
WS Q100 Floodway
WS Q100 Floodplain
Crit Q100 Floodway
Crit Q100 Floodplain
Ground
Ineff
Bank Sta
Encroachment

Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

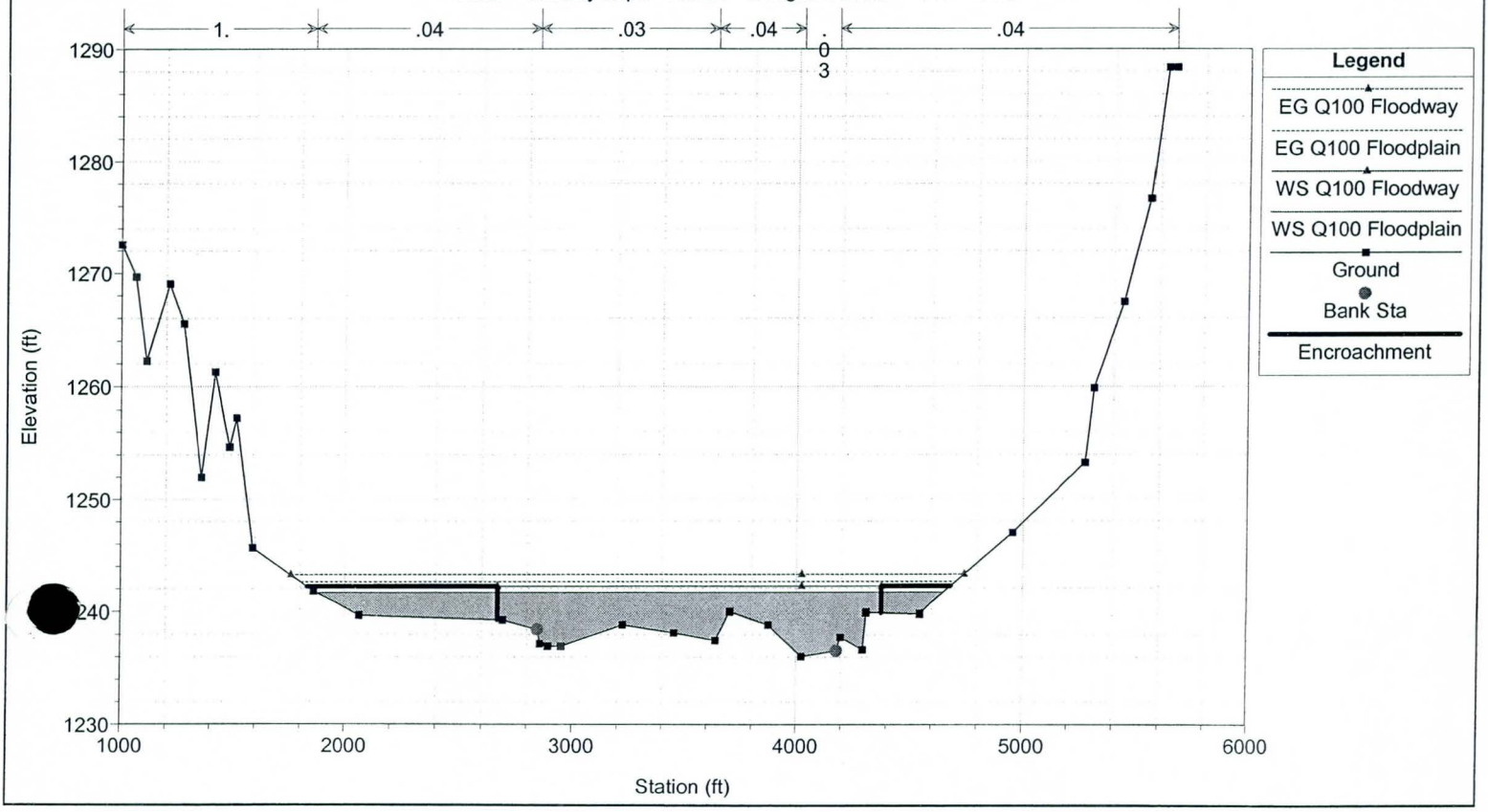
River = Hassayampa Reach = Douglas Ranch RS = 20.89 Original HEC1 Fema base model XS-w/ +1.76' vertical datum adjust



Proposed Condition Plan: proposed bridges_1988datum 1/11/2008

Geom: proposed bridges_1988 datum Flow: 10, 100, 500, 25 -Year Flow

River = Hassayampa Reach = Douglas Ranch RS = 20.8



APPENDIX F

Supporting Hydraulic Calculations

Guide Banks Design
Peoria Ave. Bridge

Reference: FHWA, March 2001, HEC #23, Bridge Scour and Stream Instability Countermeasures, Second Edition, Pg DG10.3 - DG 10.15

Variables:

Q =	Total discharge of the stream (cfs);
Qfl =	Left abutment obstructed discharge (cfs);
Qfr =	Right abutment obstructed discharge (cfs);
Qal =	Discharge in 100 ft of stream adjacent to the left abutment (cfs);
Qar =	Discharge in 100 ft of stream adjacent to the right abutment (cfs);
b =	Length of the bridge opening (ft);
Vn2 =	Average velocity through the bridge opening (ft/s);
Lsl =	Projected length of guide bank for left abutment (ft);
Lsr =	Projected length of guide bank for right abutment (ft);
Dh =	Bridge opening hydraulic depth (ft);
Dhl =	Left overbank hydraulic depth (ft);
Dhr =	Right overbank hydraulic depth (ft);
Yl =	Offset of the left guide bank (ft);
Yr =	Offset of the right guide bank (ft).

Project Name: Douglas Ranch

Project Location: Peoria Ave. Bridge (945' Width through bridge)

Input data:

Q =	56604 cfs	b	895 ft
Dh =	5.2 ft	Vn2 =	12.9 ft/s
Qfl =	9979 cfs	Qfr =	11162 cfs
Dhl =	4.7 ft	Dhr =	3.9 ft
Qal =	4511 cfs	Qar =	5120 cfs
Qfl/Qa =	2.21	Qfr/Qa =	2.18
Lsl =	**250 ft**	**Lsr =**	**250 ft**
Yl =	**100 ft**	**Yr =**	**100 ft**

Data based on mixed flow regime for more conservative guide bank lengths (higher velocities thru bridge)
Ls is from Figure 10.3, pg DG10.7 of the reference. b= Width at 1/2 flow depth.

Guide Banks Design
Greenway Road

Reference: FHWA, March 2001, HEC #23, Bridge Scour and Stream Instability Countermeasures, Second Edition, Pg DG10.3 - DG 10.15

Variables:

Q =	Total discharge of the stream (cfs);
Qfl =	Left abutment obstructed discharge (cfs);
Qfr =	Right abutment obstructed discharge (cfs);
Qal =	Discharge in 100 ft of stream adjacent to the left abutment (cfs);
Qar =	Discharge in 100 ft of stream adjacent to the right abutment (cfs);
b =	Length of the bridge opening (ft);
Vn2 =	Average velocity through the bridge opening (ft/s);
Lsl =	Projected length of guide bank for left abutment (ft);
Lsr =	Projected length of guide bank for right abutment (ft);
Dh =	Bridge opening hydraulic depth (ft);
Dhl =	Left overbank hydraulic depth (ft);
Dhr =	Right overbank hydraulic depth (ft);
Yl =	Offset of the left guide bank (ft);
Yr =	Offset of the right guide bank (ft).

Project Name: Douglas Ranch

Project Location: Greenway Road (945' Width through bridge)

Input data:

Q =	57230 cfs	b	854 ft
Dh =	5.4 ft	Vn2 =	13.2 ft/s
Qfl =	19060 cfs	Qfr =	8057 cfs
Dhl =	5.0 ft	Dhr =	4.7 ft
Qal =	4333 cfs	Qar =	4884 cfs
Qfl/Qa =	4.40	Qfr/Qa =	1.65
Lsl =	**300 ft**	**Lsr =**	**250 ft**
Yl =	**120 ft**	**Yr =**	**100 ft**

Data based on mixed flow regime for more conservative guide bank lengths (higher velocities thru bridge)
Ls is from Figure 10.3, pg DG10.7 of the reference. b= Width at 1/2 flow depth.
(a) - Since Ls1 exceeds 250', use 300' to be conservative.

Guide Banks Design
Bell Road Bridge

Reference: FHWA, March 2001, HEC #23, Bridge Scour and Stream Instability Countermeasures, Second Edition, Pg DG10.3 - DG 10.15

Variables:

Q =	Total discharge of the stream (cfs);
Qfl =	Left abutment obstructed discharge (cfs);
Qfr =	Right abutment obstructed discharge (cfs);
Qal =	Discharge in 100 ft of stream adjacent to the left abutment (cfs);
Qar =	Discharge in 100 ft of stream adjacent to the right abutment (cfs);
b =	Length of the bridge opening (ft);
Vn2 =	Average velocity through the bridge opening (ft/s);
Lsl =	Projected length of guide bank for left abutment (ft);
Lsr =	Projected length of guide bank for right abutment (ft);
Dh =	Bridge opening hydraulic depth (ft);
Dhl =	Left overbank hydraulic depth (ft);
Dhr =	Right overbank hydraulic depth (ft);
Yl =	Offset of the left guide bank (ft);
Yr =	Offset of the right guide bank (ft).

Project Name: Douglas Ranch

Project Location: Bell Road Bridge (945' Width through bridge)

Input data:

Q =	57230 cfs	b=	935 ft
Dh =	5.1 ft	Vn2 =	12.8 ft/s
Qfl =	11632 cfs	Qfr =	8652 cfs
Dhl =	3.4 ft	Dhr =	3.3 ft
Qal =	4062 cfs	Qar =	6880 cfs
Qfl/Qa =	2.86	Qfr/Qa =	1.26
Lsl =	**300 ft (a)**	**Lsr =**	**215 ft**
Yl =	**120 ft**	**Yr =**	**86 ft**

Data based on mixed flow regime for more conservative guide bank lengths (higher velocities thru bridge)
Ls is from Figure 10.3, pg DG10.7 of the reference. b= Width at 1/2 flow depth.
(a) - Since Ls1 exceeds 250', use 300' to be conservative.

Guide Banks Design
Hummingbird Springs Rd.

Reference: FHWA, March 2001, HEC #23, Bridge Scour and Stream Instability Countermeasures, Second Edition, Pg DG10.3 - DG 10.15

Variables:

Q =	Total discharge of the stream (cfs);
Qfl =	Left abutment obstructed discharge (cfs);
Qfr =	Right abutment obstructed discharge (cfs);
Qal =	Discharge in 100 ft of stream adjacent to the left abutment (cfs);
Qar =	Discharge in 100 ft of stream adjacent to the right abutment (cfs);
b =	Length of the bridge opening (ft);
Vn2 =	Average velocity through the bridge opening (ft/s);
Lsl =	Projected length of guide bank for left abutment (ft);
Lsr =	Projected length of guide bank for right abutment (ft);
Dh =	Bridge opening hydraulic depth (ft);
Dhl =	Left overbank hydraulic depth (ft);
Dhr =	Right overbank hydraulic depth (ft);
Yl =	Offset of the left guide bank (ft);
Yr =	Offset of the right guide bank (ft).

Project Name: Douglas Ranch **Project Location:** Hummingbird Springs Rd. (1755' Width through bridge)

Input data:

Q =	57854	cfs	b	1621	ft
Dh =	4.5	ft	Vn2 =	8.3	ft/s
Qfl =	17454	cfs	Qfr =	5061	cfs
Dhl =	3.4	ft	Dhr =	1.7	ft
Qal =	2271.0	cfs	Qar =	5499.0	cfs
Qfl/Qa =	7.69		Qfr/Qa =	0.92	
Lsl =	**300**	**ft**	**Lsr =**	**90**	**ft**
Yl =	**120**	**ft**	**Yr =**	**36**	**ft**

Data based on mixed flow regime for more conservative guide bank lengths (higher velocities thru bridge)
Ls is from Figure 10.3, pg DG10.7 of the reference. b= Width at 1/2 flow depth.
(a) - Since Ls1 exceeds 250', use 300' to be conservative.

EXHIBIT A

Existing FEMA FIRM Panel

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0° National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was *Arizona State Plane Zone 3176 (central Arizona)*. The **horizontal datum** was *NAD83, GRS80 spheroid*. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the *National Geodetic Vertical Datum of 1929*. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(310) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Maricopa County. Orthophoto images were produced at a scale of 1:6000 using HARN for control. Aerial photography is dated December 2000 to December 2002.

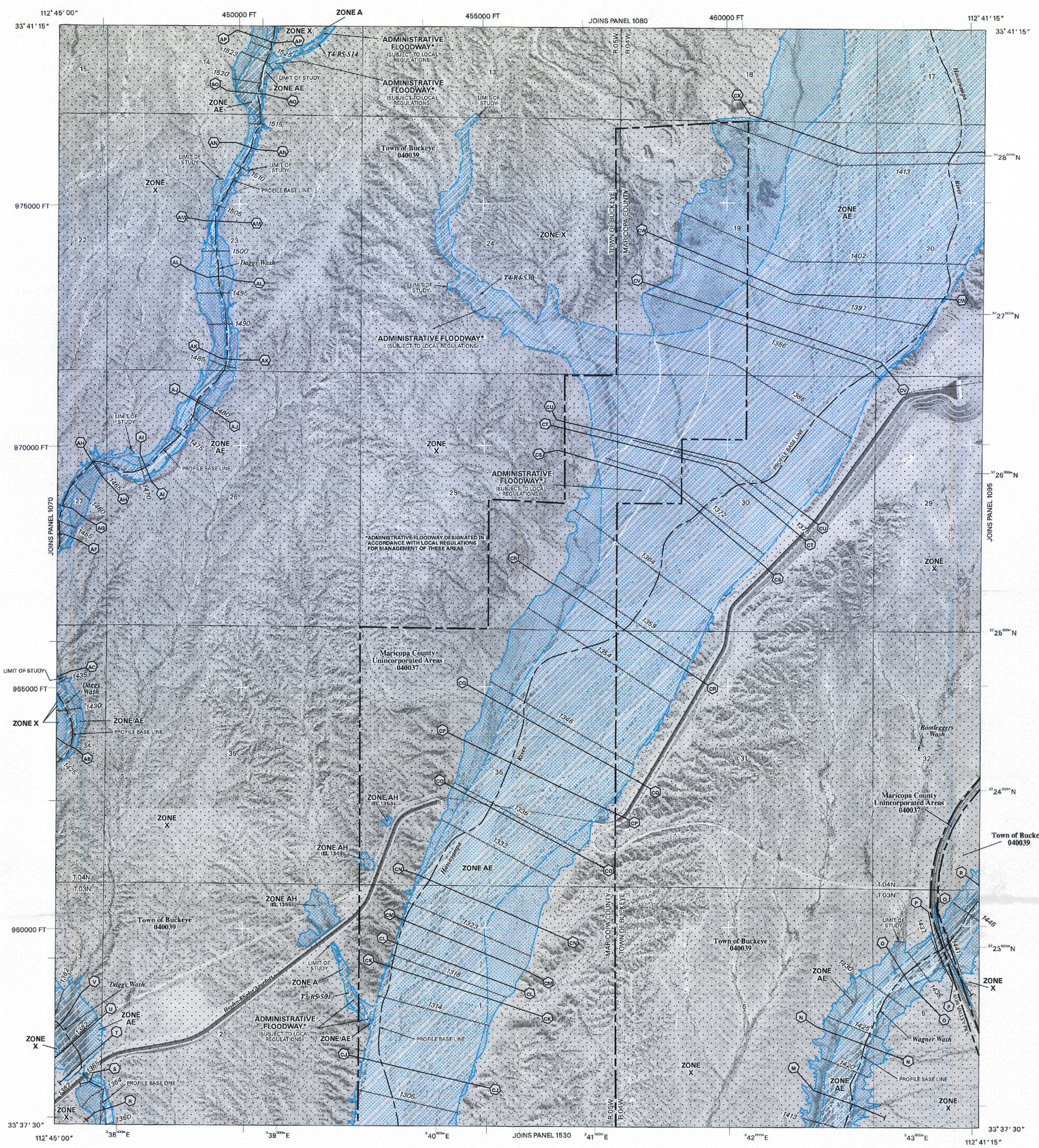
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMAMAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

- A — A — Cross section line
- 2 — 2 — Transect line

112° 07' 08", 33° 25' 41" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere.

4°76 000mE — 1000-meter Universal Transverse Mercator grid tick values zone 12

875000 FT — 5000-foot grid tick values: Arizona State Plane coordinate system, central zone (FIPSZONE 3176) NAD83 (Transverse Mercator)

DV2313 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 — River Mile

MAP REPOSITORY

Refer to Repositories Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

April 15, 1988

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

September 4, 1991, December 3, 1993, September 30, 1995, July 19, 2001

September 30, 2005 - to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change zone designations, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to incorporate previously issued Letters of Map Amendment.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP

PANEL 1090J

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1090 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUCKEYE, TOWN OF	040039	1090	J
MARICOPA COUNTY	040037	1090	J

FLOOD INSURANCE RATE MAP
1 OF 2

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
04013C1090J
MAP REVISED
SEPTEMBER 30, 2005

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

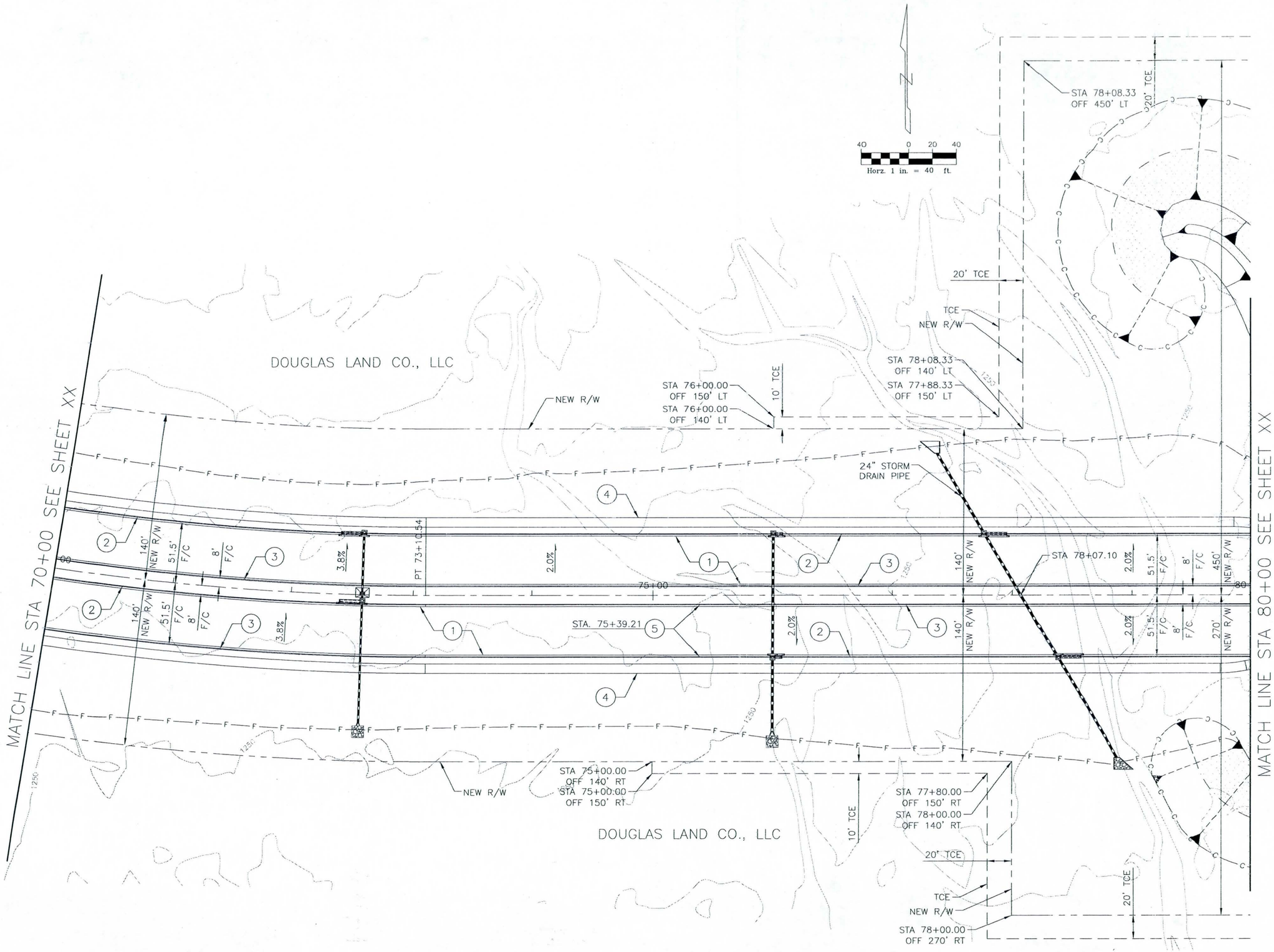
EXHIBIT A

N:\2004\04231\6\Project Support\Hydro\Exhibits\Figures\ Figure3a_FIRmap.dwg

EXHIBIT B

Proposed Construction Plans

Peoria Avenue Bridge



REMOVAL NOTES

DESCRIPTION	UNIT	QUAN

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX
5	5' TRANSITION FROM 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER TO 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	EA	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

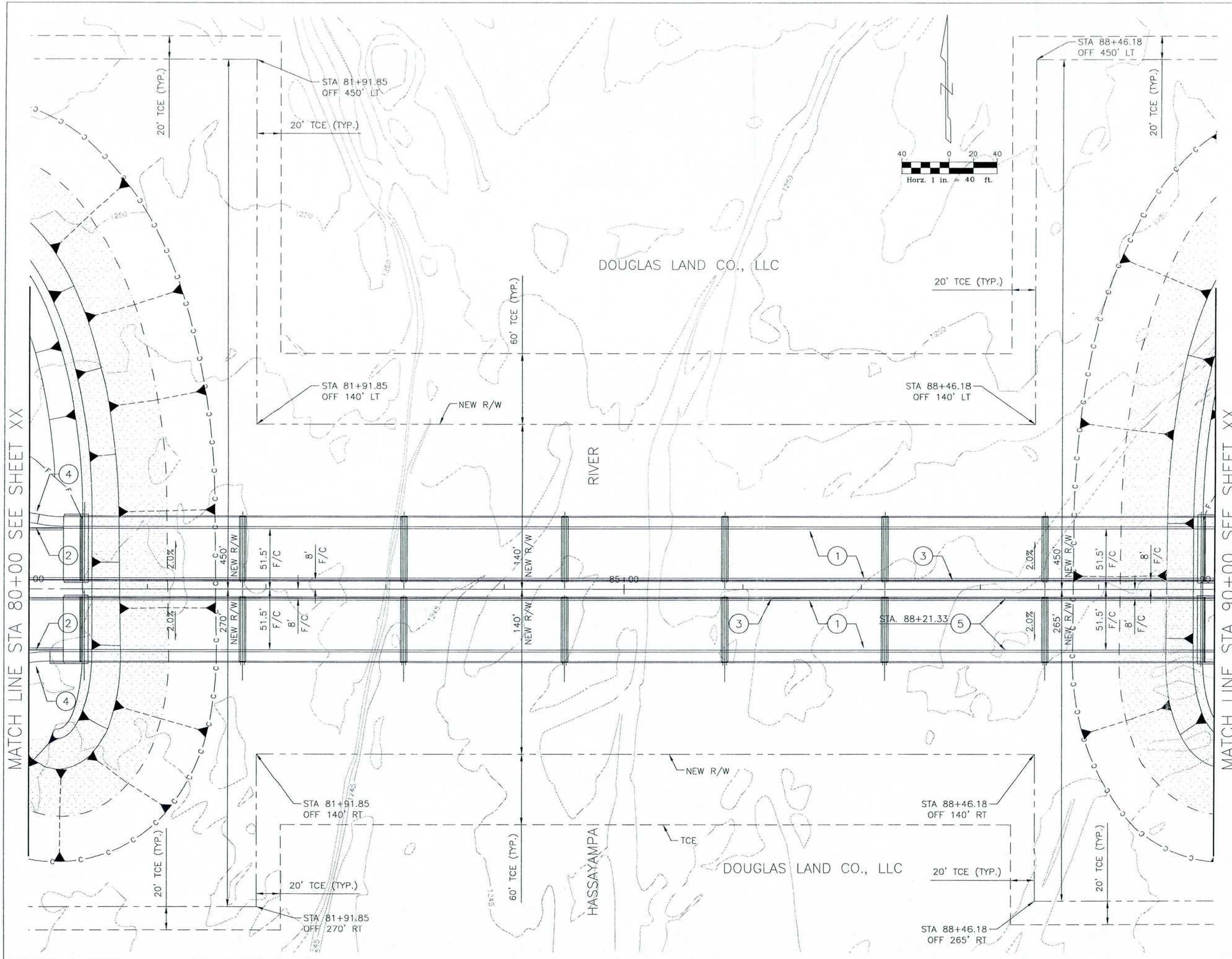
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PLAN
PEORIA/CACTUS STA 70+00 TO STA 80+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	CAB	MAY-07		XX-XX-XX
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	OF

N:\2005\052556\Dwg\Imp\052556PP07.dwg Kriddle Jun 13, 2007 - 12:36pm



N:\2005\052556\Dwg\lmp\052556PP08.dwg Kriddle Jun 13, 2007 - 9:00am

REMOVAL NOTES

DESCRIPTION	UNIT	QUAN

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX
5	5' TRANSITION FROM 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER TO 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	EA	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

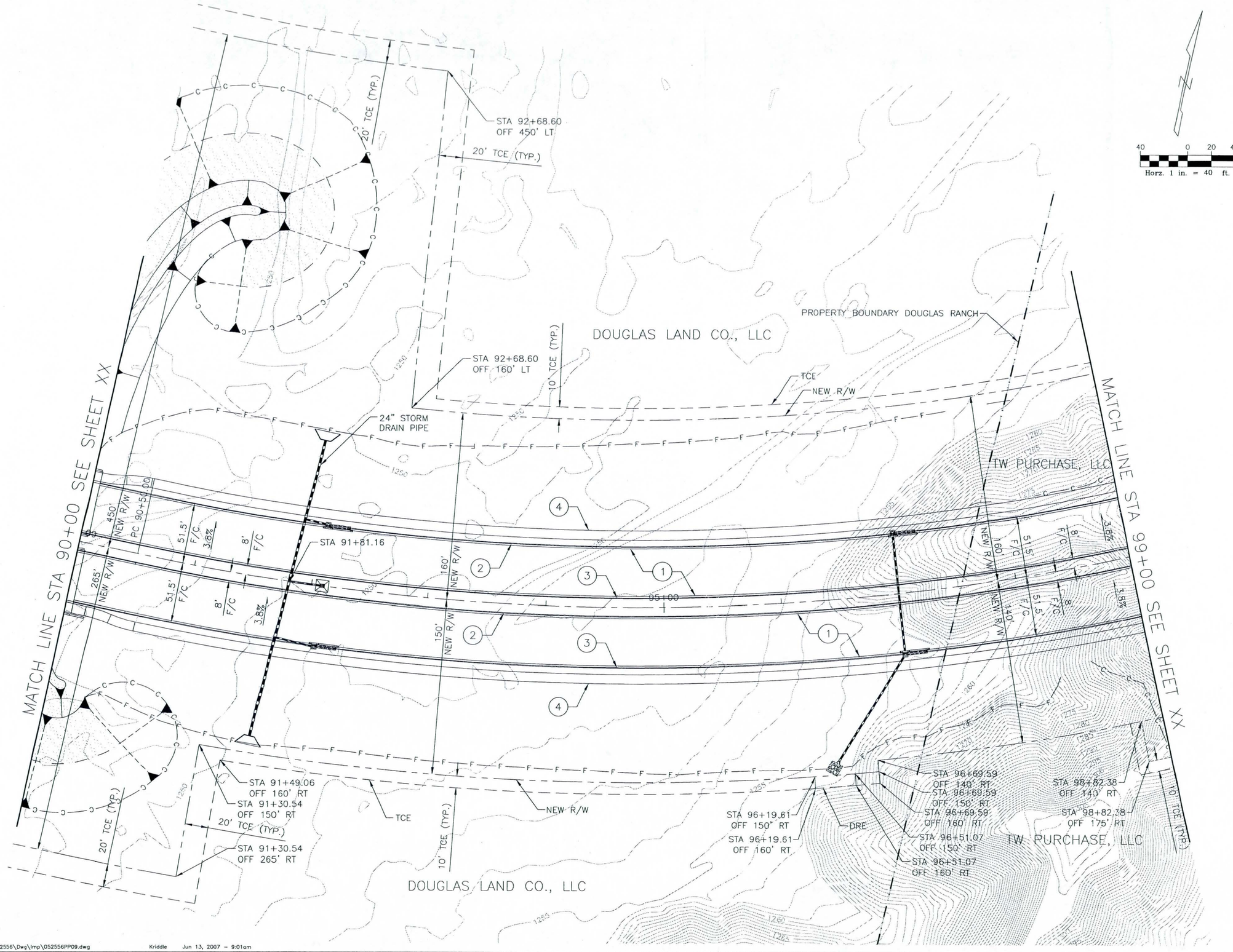
30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PLAN
PEORIA/CACTUS STA 80+00 TO STA 90+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	CAB	MAY-07		XX XX-XXX
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	OF



40 0 20 40
Horz. 1 in. = 40 ft.

REMOVAL NOTES

DESCRIPTION	UNIT	QUAN

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

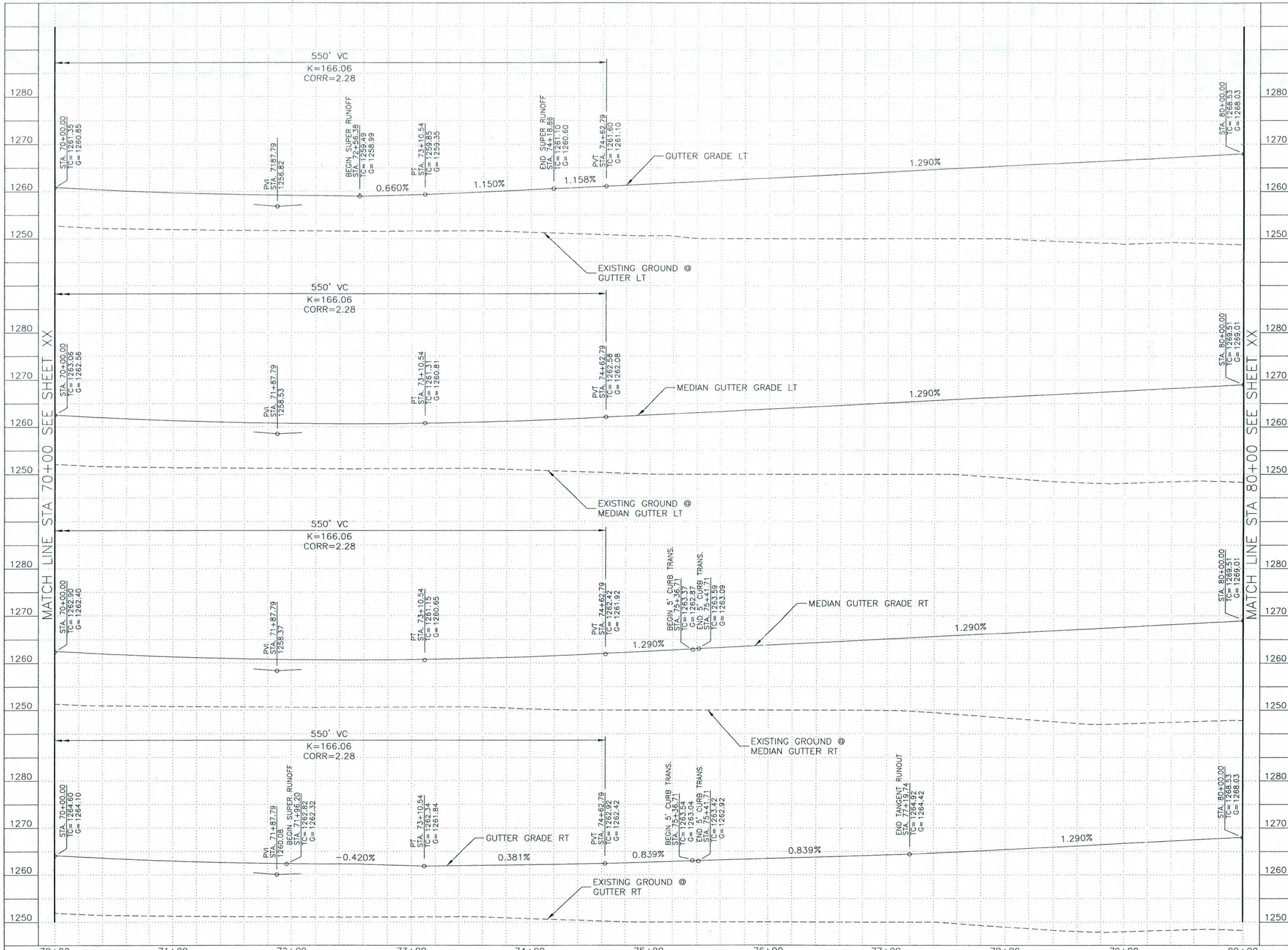
SHEET TITLE
ROADWAY PLAN
PEORIA/CACTUS STA 90+00 TO STA 99+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	CAB	MAY-07		I
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	OF

XX XX-XXX

N:\2005\052556\Dwg\Imp\052556PP09.dwg Kriddle Jun 13, 2007 - 9:01am



N:\2005\052556\Dwg\Imp\052556PR07.dwg Kriddle Jun 13, 2007 - 12:37pm

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

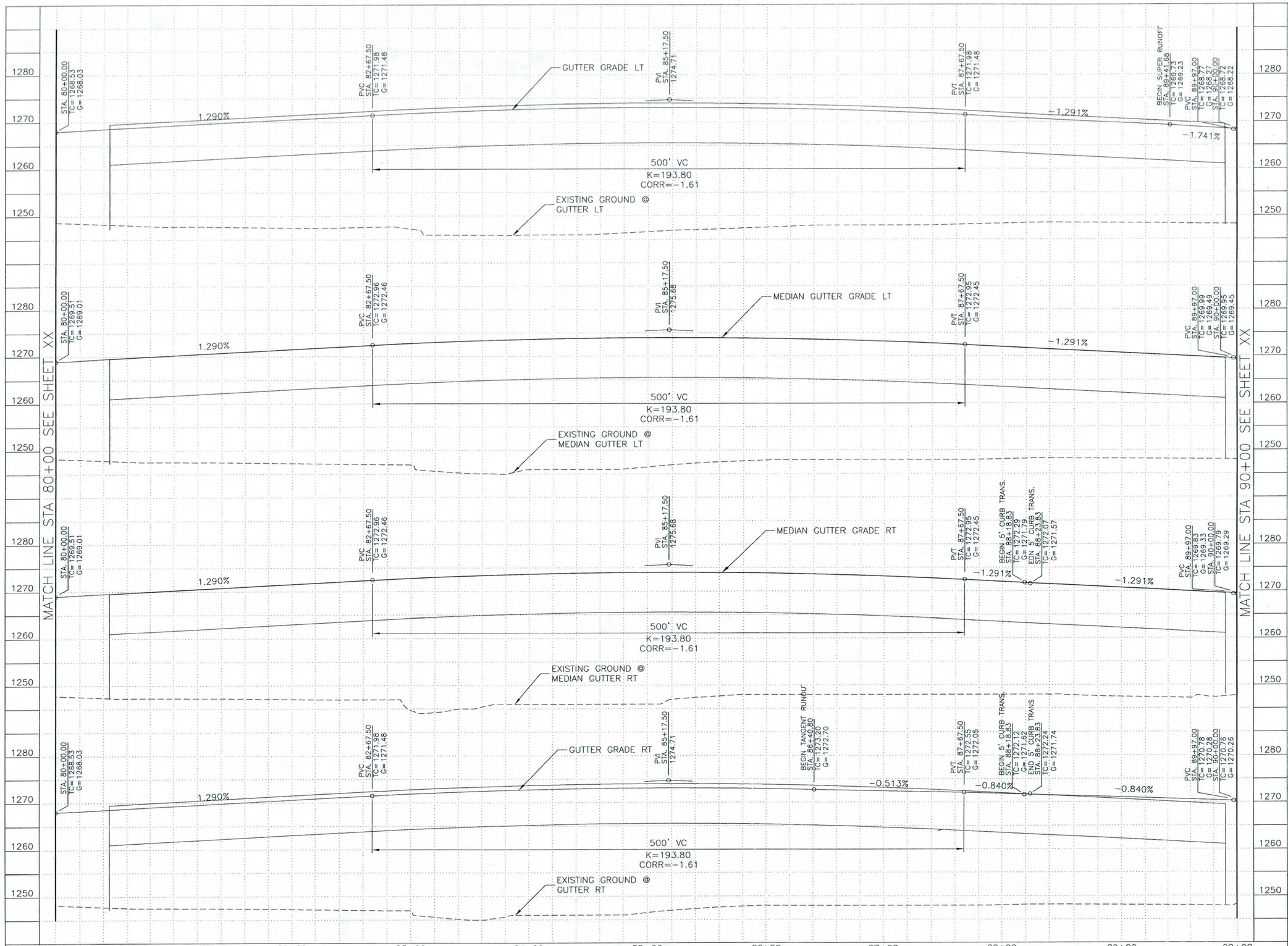
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE
PEORIA/CACTUS ROAD STA 70+00 TO STA 80+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	CAB	MAY-07		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	OF

XX XX-XXX



N:\2005\052556\Dwg\Imp\052556PR08.dwg Kriddle Jun 13, 2007 - 9:02am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

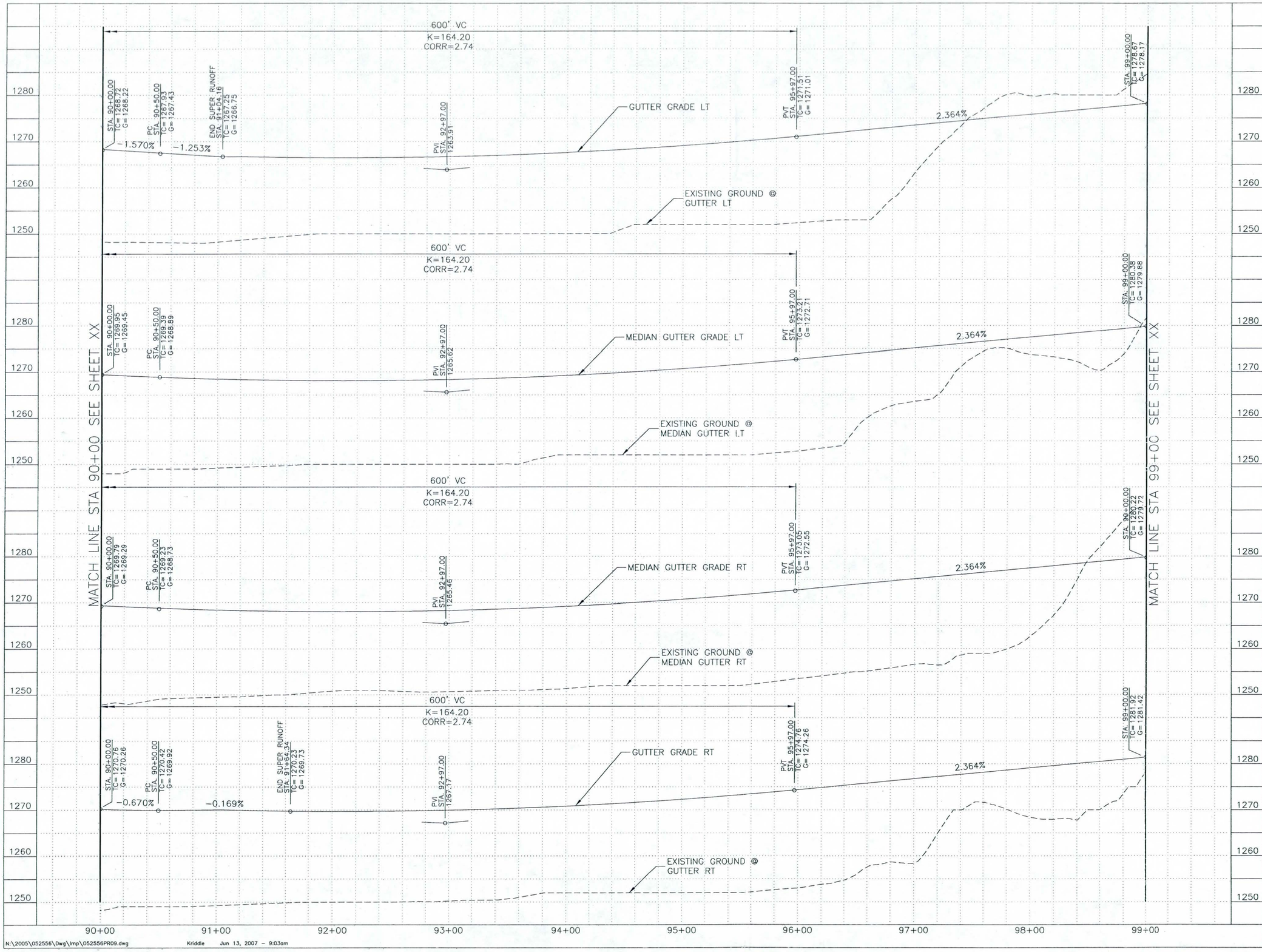
30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE
PEORIA/CACTUS ROAD STA 80+00 TO STA 90+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	CAB	MAY-07		XX-XXX-XX
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	0f



N:\2005\052556\Dwg\lmp\052556PR09.dwg Kriddle Jun 13, 2007 - 9:03am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

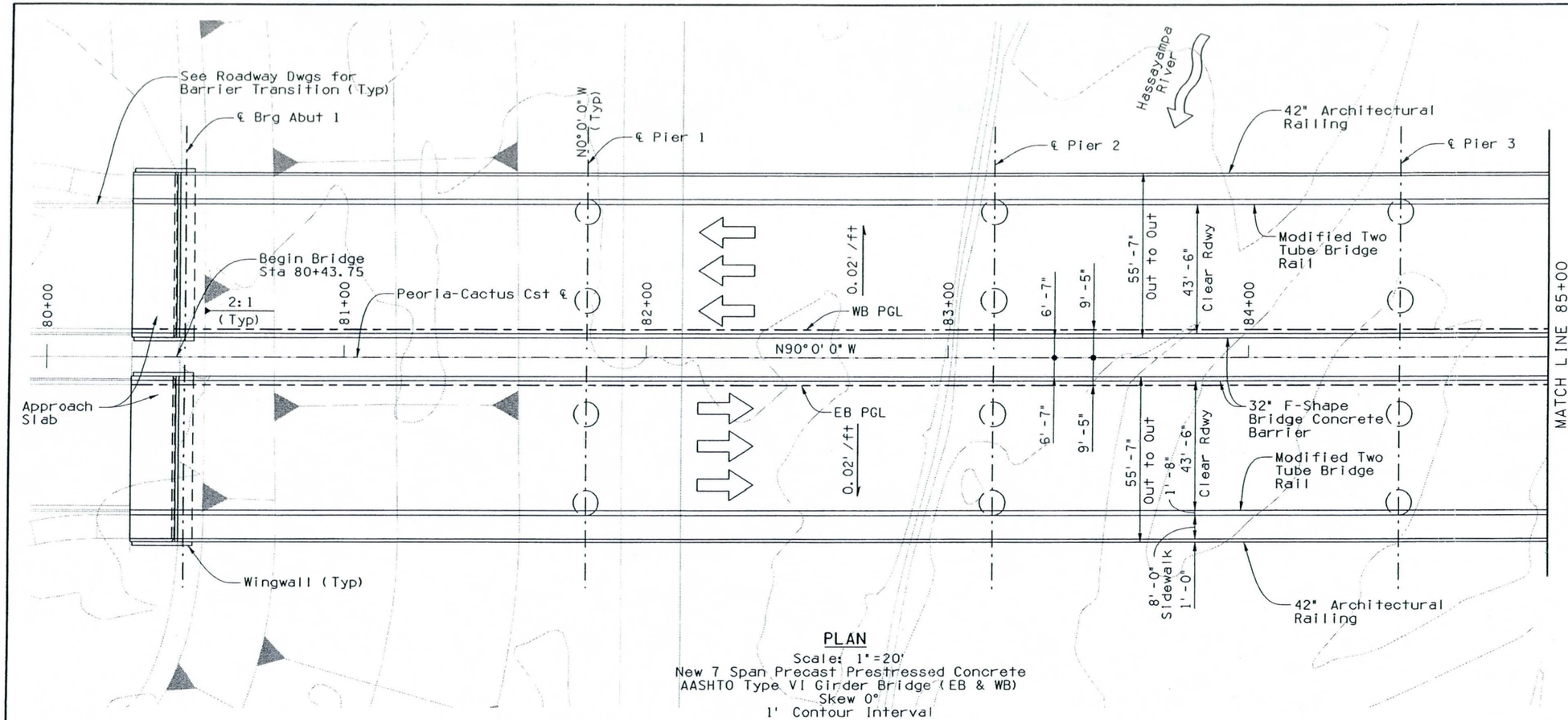
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE
PEORIA/CACTUS ROAD STA 90+00 TO STA 99+00

PROJECT TITLE
DOUGLAS RANCH

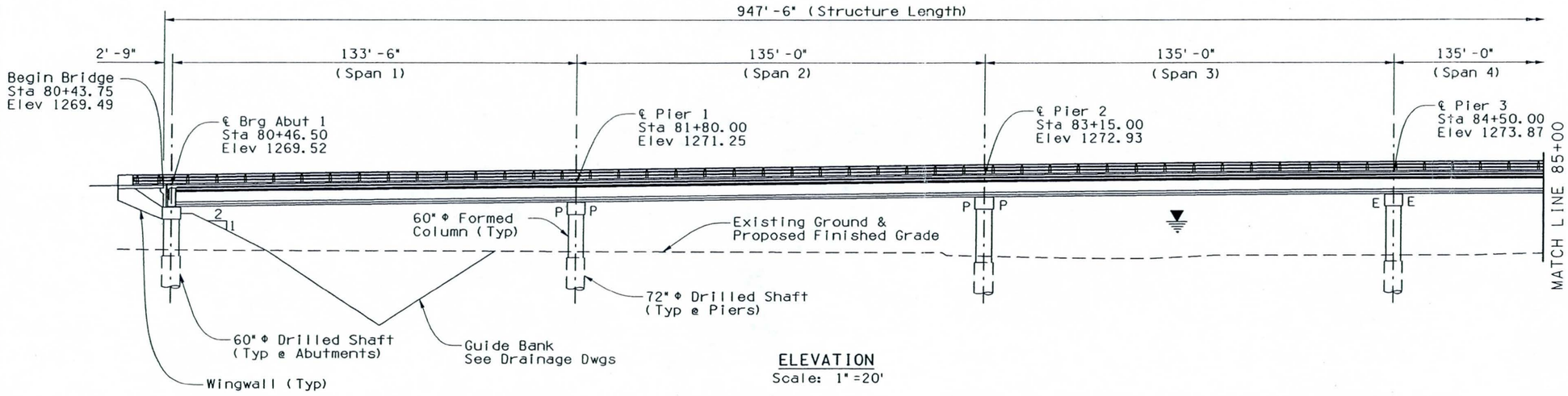
SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	CAB	MAY-07		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	CAB		052556	OF

XX-XX-XXX



PLAN

Scale: 1"=20'
New 7 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION

Scale: 1"=20'

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
S-1.01	GENERAL PLAN AND ELEVATION 1
S-1.02	GENERAL PLAN AND ELEVATION 2
S-1.03	GENERAL NOTES AND TYPICAL SECTION

Note:

1. Stationing and Dimensions are Along Peoria-Cactus Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

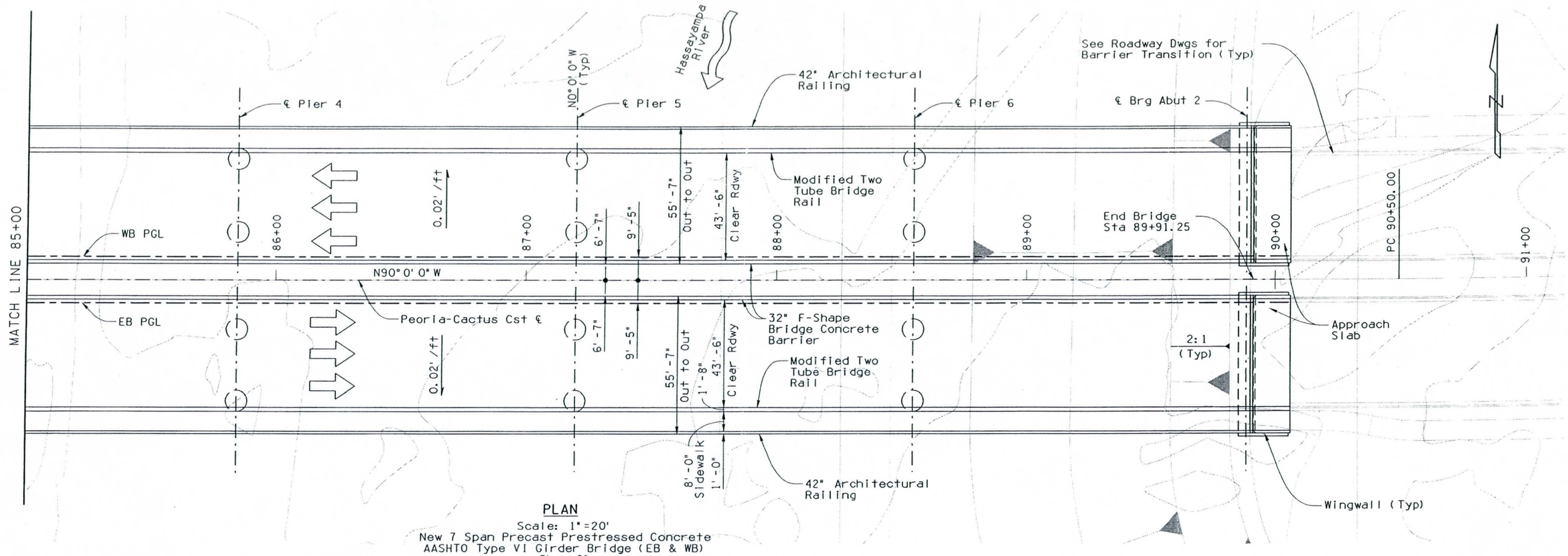
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: PEORIA–CACTUS OVER HASSAYAMPA GENERAL PLAN AND ELEVATION 1

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		S-1.01
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			01

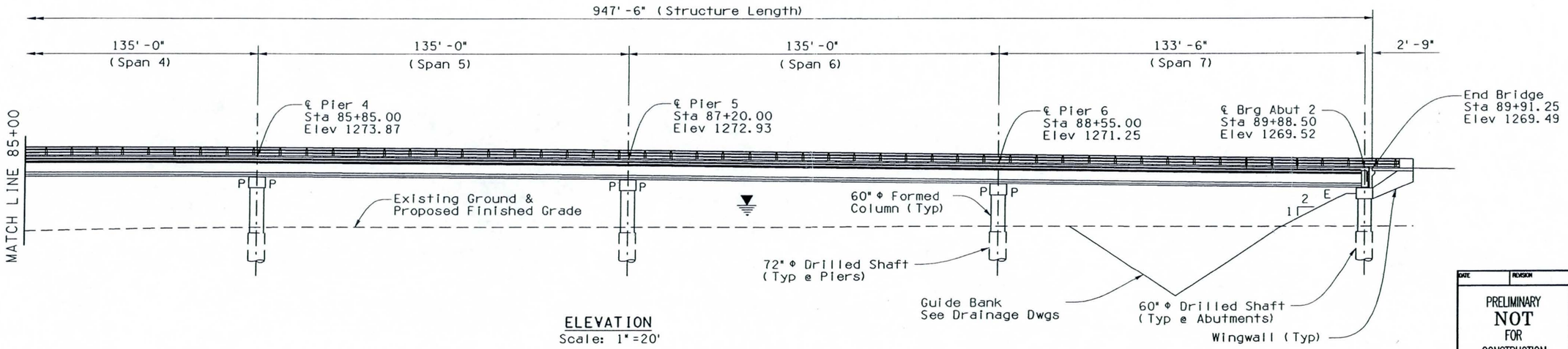
N:\2004\042316\dwg\Imp\Structures\Peoria-Cactus Road\042316-S-01.dgn



PLAN

Scale: 1"=20'

New 7 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION

Scale: 1"=20'

Hydraulic Data:

Q50 = Q100 =
HW50 = HW100 =

Note:

1. Stationing and Dimensions are Along Peoria-Cactus Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

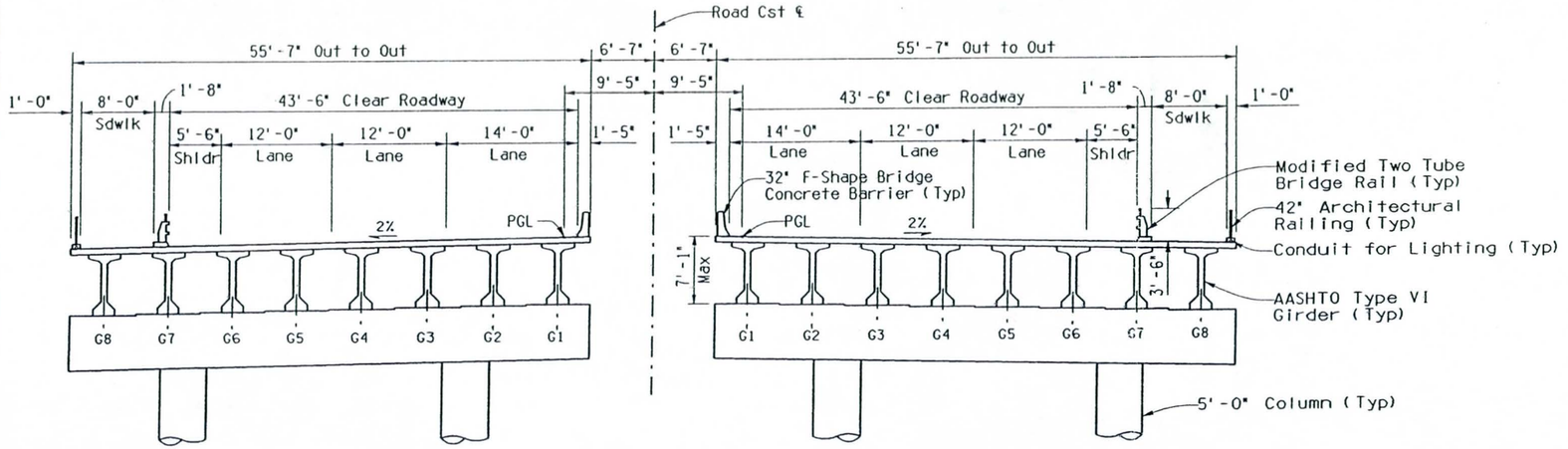
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: PEORIA-CACTUS OVER HASSAYAMPA GENERAL PLAN AND ELEVATION 2

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		S-1.02
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			of

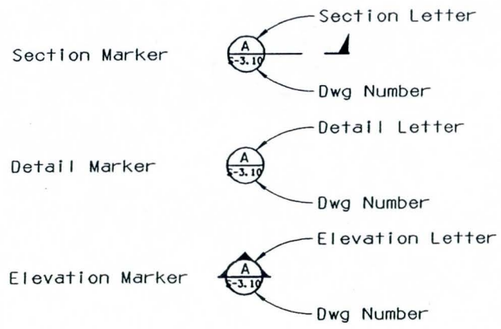
N:\2004\042316\dwg\Tmp\Structures\Peoria-Cactus Road\042316-S-02.dgn



Typical Section

Scale: 1/8"=1'

LEGEND



GENERAL NOTES

Design Specifications

AASHTO LRFD Bridge Design Specifications, Customary US units, Fourth Edition, 2007.

Construction Specifications

Maricopa Association of Governments (MAG) Uniform Standard Specifications for Public Works Construction (2001) and as supplemented by:

1. MCDOT English Supplement to MAG Specifications (July 1, 2004).
2. The Project Special Provisions.

Design Loadings

Live Load, HL-93

Dead Load includes allowances of 25 psf for future wearing surface and 15 psf for permanent metal deck forms including additional concrete.

The Superstructure is designed as a composite section with the top ½" of slab thickness removed from the Design Section Properties to account for grinding, grooving & wearing.

Seismic Performance Zone 1 (Acceleration Coefficient of 0.04).

Concrete Stresses

Deck and Diaphragms (Pin Pier)	f'c = 4500 psi - Class AA
Diaphragms (Exp, Abut, Intermed)	f'c = 4000 psi - Class AA
Curb	f'c = 4000 psi - Class AA
Abutments, Piers, Columns	f'c = 3500 psi - Class A
Drilled Shafts	f'c = 3500 psi - Class A
Girders	f'c = Varies - See Girder Shts.
All other concrete	f'c = 3000 psi - Class A

Reinforcing steel shall conform to ASTM A615 except where ASTM A706 is specified for weldability. All reinforcing steel shall be furnished as Grade 60.

Prestressing steel shall conform to ASTM A416 Grade 270 Low Relaxation 7-wire strand.

All bends and hooks shall meet the requirements of AASHTO LRFD Section 5.10.2. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover, unless noted otherwise.

Chamfer all exposed corners ¾" unless noted otherwise.

Bridge Barriers shall not be cast by the slip-form method.
All welding shall conform to the requirements of the American Welding Society Bridge Welding Code D1.5-2002, unless noted otherwise.

All structural steel shall conform to ASTM A36, unless noted otherwise.

Dimensions

Dimensions shall not be scaled from drawings.

DATE	REVISION	BY
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING		

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: TYPICAL SECTION AND GENERAL NOTES

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			6F

C:\Documents and Settings\keastrum\Desktop\242316-S-09ANWWKNG.dgn

Greenway Road Bridge

CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	TANGENT	CHORD
C5	20°42'54"	4050.50'	1464.44'	740.30'	1456.47'
C6	20°42'54"	4007.00'	1448.71'	732.35'	1440.83'
C7	20°42'54"	3993.00'	1443.65'	729.79'	1435.80'
C8	20°42'54"	3949.50'	1427.92'	721.84'	1420.16'

STA 62+98.00
OFF 440' LT

20' TCE

TCE
NEW R/W

STA 66+70.00
OFF 440' LT

40 0 20 40
Horz. 1 in. = 40 ft.

N

STATE TRUST LAND

HASSAYAMPA RIVER

DOUGLAS LAND CO., LLC

10' TCE

TCE
NEW R/W

STA 62+98.00
OFF 230' LT

20' TCE

TCE

INVERT ELEVATION= 1303.50
SKEW ANGLE= 0°

440'
NEW R/W

MATCH LINE STA 60+00 SEE SHEET XX

MATCH LINE STA 70+00 SEE SHEET XX

230'
NEW R/W

PGL WB

BEGIN BRIDGE
STA. 64+96.50

STA 66+70.00
OFF 85' LT

NEW R/W

60' TCE

8'

3.0%

2.0%

PT 61+04.14

57.5'

STA. 62+85.67

STA. 62+85.67

STA. 63+69.96

65+00

7' F/C

50.5' F/C

85'

NEW R/W

PGL EB

DOUGLAS LAND
CO., LLC

TOWN OF BUCKEYE

MARICOPA COUNTY
UNINCORPIRATED AREA

235'
NEW R/W

STA 66+70.00
OFF 85' RT

NEW R/W

TCE

20' TCE

STATE TRUST LAND

STA 61+04.14
OFF 235' RT

STA 61+07.32
OFF 255' RT

NEW R/W

TCE

20' TCE

STA 66+70.00
OFF 235' RT

REMOVAL NOTES

DESCRIPTION	UNIT	QUAN

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX
5	5' TRANSITION FROM 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER TO 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	EA	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

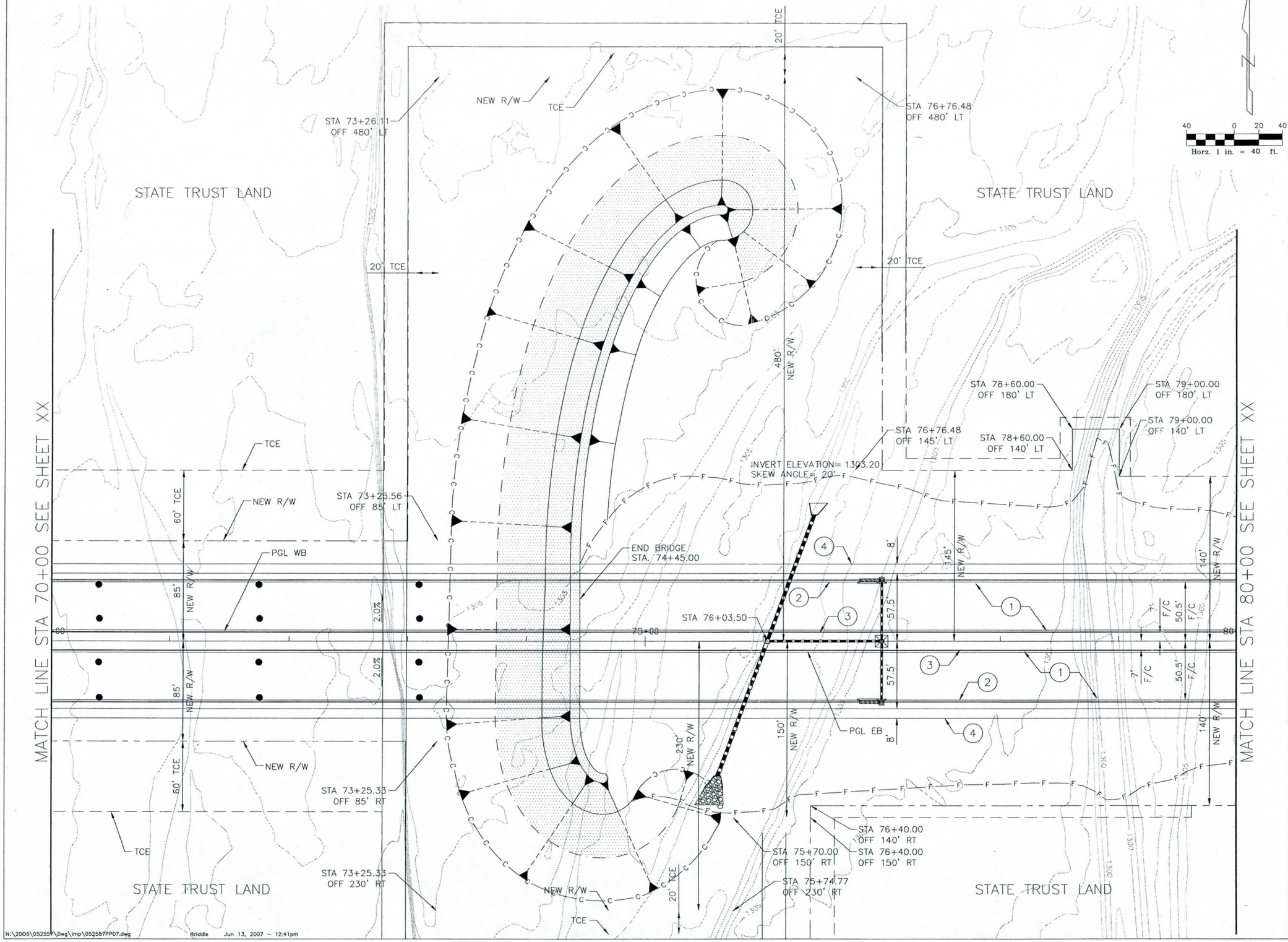
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PLAN
GREENWAY ROAD STA 60+00 TO STA 70+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	XXX	AUG-06		XX XX-XXX
	DRAWN BY TE	AS-BUILT	PROJECT 052557	SHEET NO. OF

N:\2005\052557\Dwg\Imp\052557PP06.dwg Kriddle Jun 13, 2007 - 7:46am



REMOVAL NOTES

DESCRIPTION	UNIT	QUAN

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PLAN
GREENWAY ROAD STA 70+00 TO STA 80+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	XXX	AUG-06		XX-XXX
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	TE		052557	0F

250' VC
K=205.88
CORR=-0.38

STA. 60+00.00
TC= 1346.80
G= 1346.30
BEGIN 5' CURB TRANS.
STA. 60+15.82
TC= 1346.73
G= 1346.23

0.950%

PVC
STA. 60+75.00
TC= 1345.15
G= 1345.65

PT
STA. 61+04.14
TC= 1345.86
G= 1345.36

PVI
STA. 62+00.00
1344.45

BEGIN 5' CURB TRANS.
STA. 62+82.17
TC= 1343.13
G= 1342.63
END 5' CURB TRANS.
STA. 63+17.77
TC= 1342.55
G= 1342.05

-1.903%

PVT
STA. 63+25.00
TC= 1342.43
G= 1341.83

-1.973%

END TRANGENT RUNOUT
STA. 64+85.20
TC= 1339.57
G= 1339.07

1.523%

BEGIN BRIDGE
STA. 65+00.00
TC= 1339.04
G= 1338.54

GUTTER GRADE LT

-1.524%

STA. 70+00.00

SEE BRIDGE PLANS

250' VC
K=205.88
CORR=-0.38

STA. 60+00.00
TC= 1345.42
G= 1344.92

PVC
STA. 60+75.00
TC= 1345.05
G= 1344.55

PT
STA. 61+04.14
TC= 1344.88
G= 1344.38

PVI
STA. 62+00.00
1343.92

BEGIN 5' CURB TRANS.
STA. 62+82.17
TC= 1343.13
G= 1342.63
END 5' CURB TRANS.
STA. 63+17.77
TC= 1343.22
G= 1342.72

PVT
STA. 63+25.00
TC= 1342.68
G= 1342.18

24" SD PIPE
INV=1302.8

-0.500%

1.427%

1.800%

-1.526%

BEGIN BRIDGE
STA. 65+00.00
TC= 1340.01
G= 1339.51

MEDIAN GUTTER GRADE LT

-1.522%

EXISTING GROUND @
GUTTER LT

STA. 70+00.00

SEE BRIDGE PLANS

250' VC
K=205.88
CORR=-0.38

STA. 60+00.00
TC= 1345.58
G= 1345.08

PVC
STA. 60+75.00
TC= 1345.21
G= 1344.71

PT
STA. 61+04.14
TC= 1345.04
G= 1344.54

PVI
STA. 62+00.00
1344.08

PVT
STA. 63+25.00
TC= 1342.68
G= 1342.18

-0.500%

-1.526%

BEGIN BRIDGE
STA. 65+00.00
TC= 1340.01
G= 1339.51

MEDIAN GUTTER GRADE RT

-1.522%

EXISTING GROUND @
MEDIAN GUTTER LT

STA. 70+00.00

SEE BRIDGE PLANS

250' VC
K=205.88
CORR=-0.38

STA. 60+00.00
TC= 1344.20
G= 1343.70

PVC/BEGIN
SUPER RUNOFF
STA. 60+75.00
TC= 1343.83
G= 1343.33

PT
STA. 61+04.14
TC= 1343.80
G= 1343.30

END SUPER RUN
STA. 61+46.51
TC= 1343.62
G= 1343.12

PVI
STA. 62+00.00
1343.11

PVT
STA. 63+25.00
TC= 1341.70
G= 1341.20

0.500%

-0.299%

-1.195%

-1.520%

BEGIN BRIDGE
STA. 65+00.00
TC= 1339.04
G= 1338.54

GUTTER GRADE RT

-1.524%

EXISTING GROUND @
MEDIAN GUTTER RT

STA. 70+00.00

SEE BRIDGE PLANS

24" SD PIPE
INV=1302.2

EXISTING GROUND @
GUTTER RT

MATCH LINE STA 60+00 SEE SHEET XX

MATCH LINE STA 70+00 SEE SHEET XX

60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00

1360 1350 1340 1330 1320 1310

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

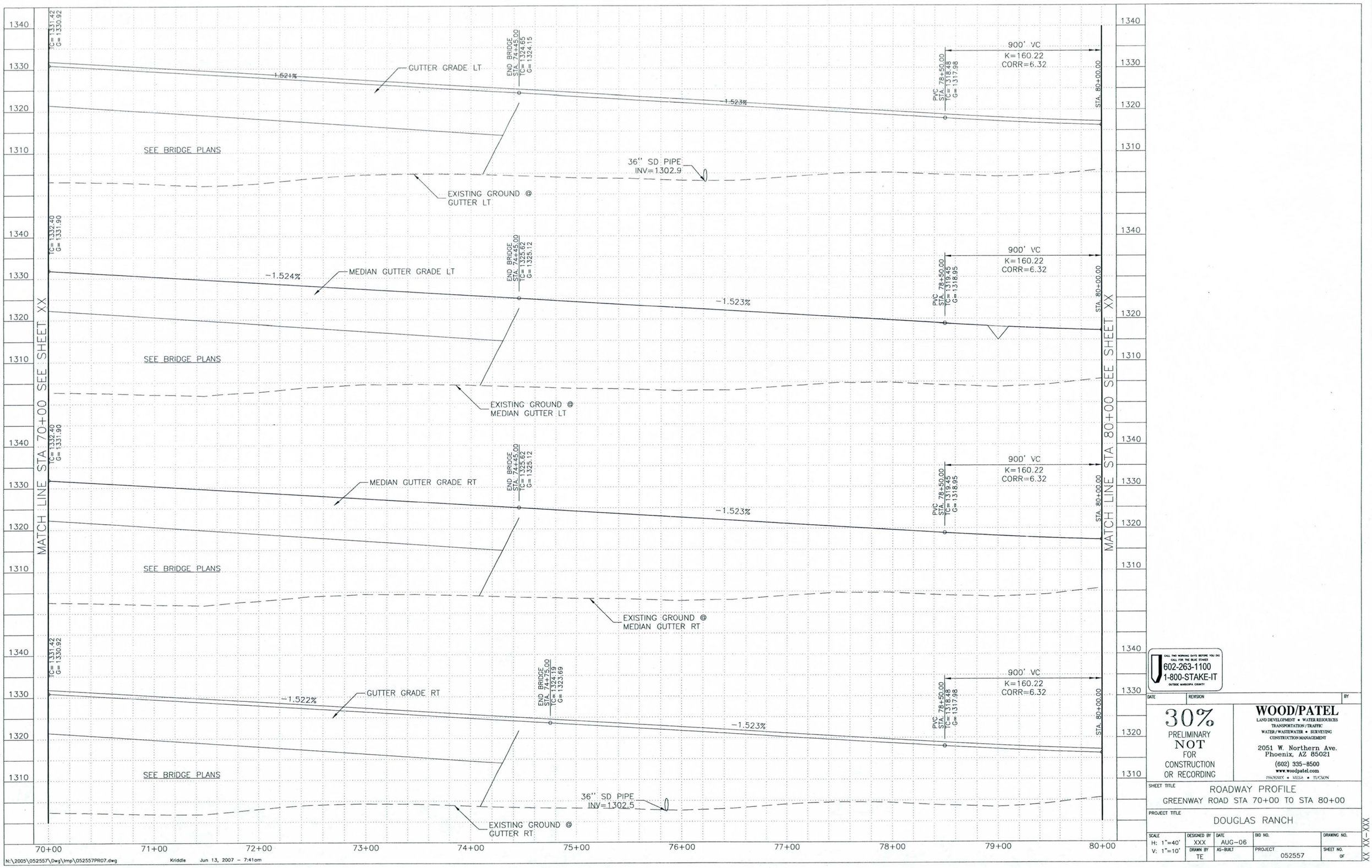
SHEET TITLE
ROADWAY PROFILE
GREENWAY ROAD STA 60+00 TO STA 70+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	XXX	AUG-06		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	TE		052557	of

XX XX-XXX

N:\2005\052557\Dwg\Imp\052557PR06.dwg Kriddle Jun 13, 2007 - 7:40am



N:\2005\052557\Dwg\Imp\052557PR07.dwg Kriddle Jun 13, 2007 - 7:41am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

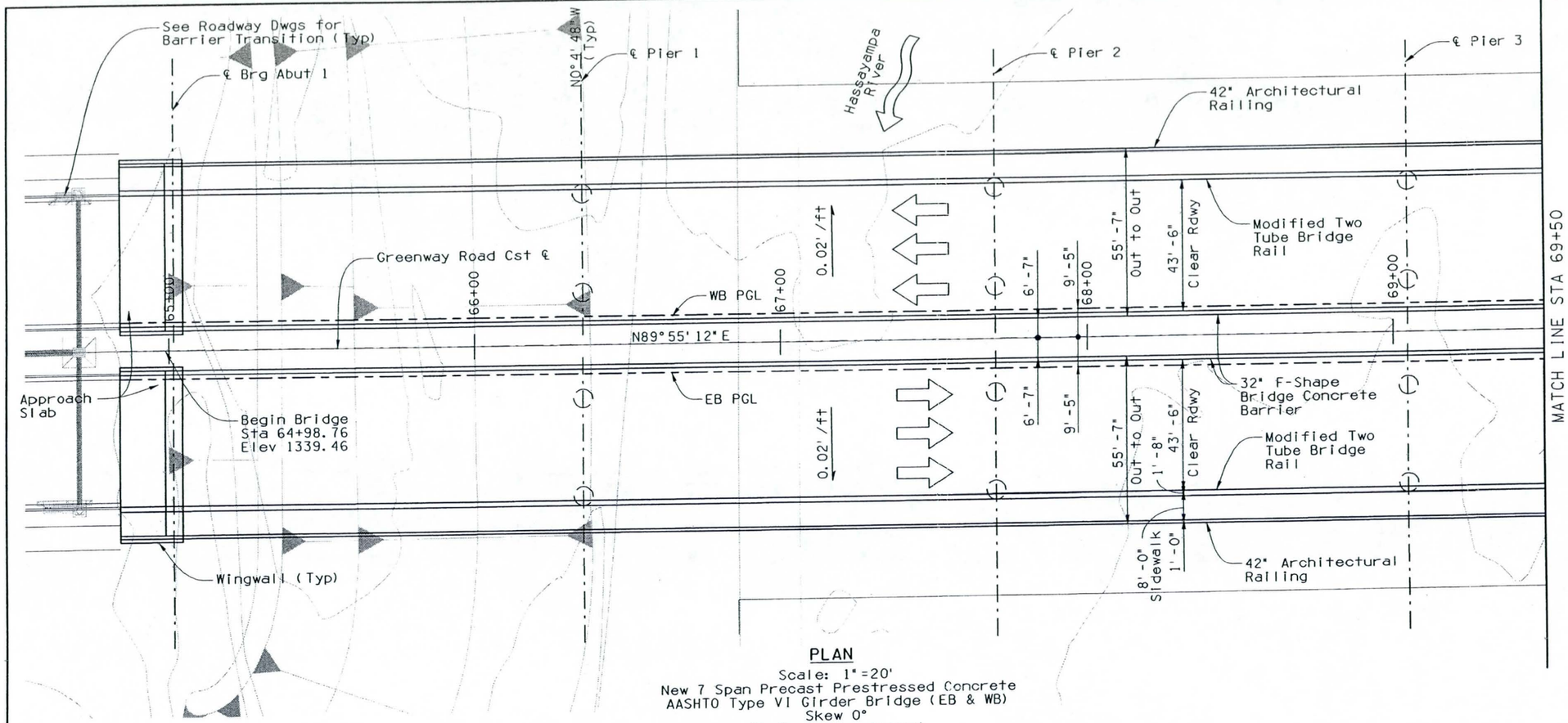
30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

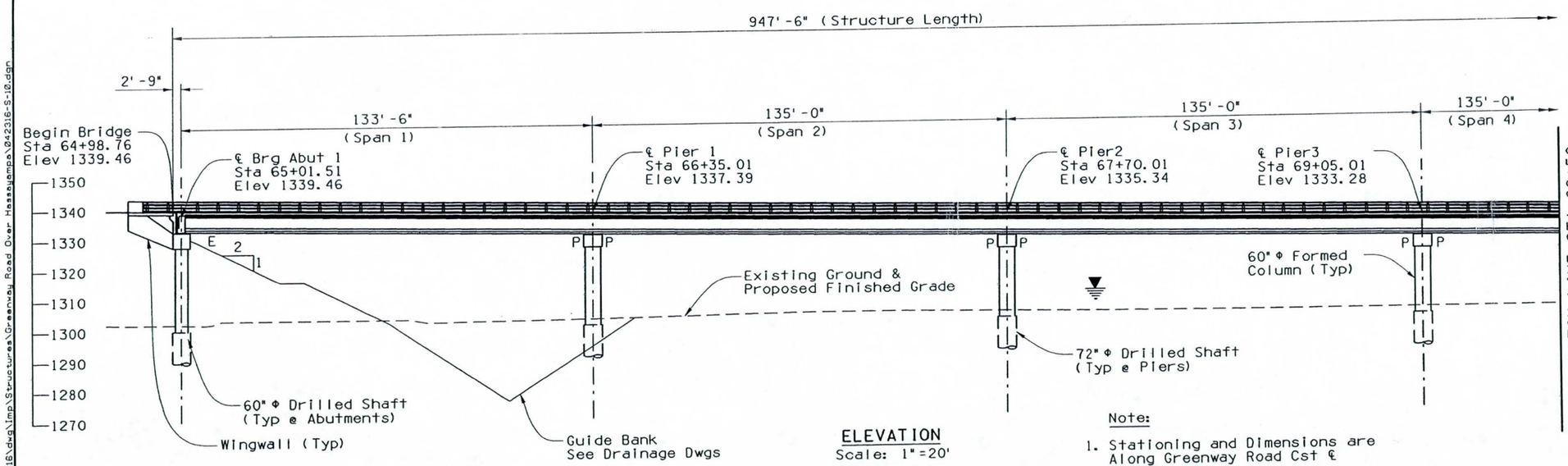
SHEET TITLE
ROADWAY PROFILE
GREENWAY ROAD STA 70+00 TO STA 80+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	XXX	AUG-06		XX-XXX
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	TE		052557	OF XX



PLAN
Scale: 1"=20'
New 7 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION
Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Greenway Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
S-1.01	GENERAL PLAN AND ELEVATION 1
S-1.02	GENERAL PLAN AND ELEVATION 2
S-1.03	GENERAL NOTES AND TYPICAL SECTION

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

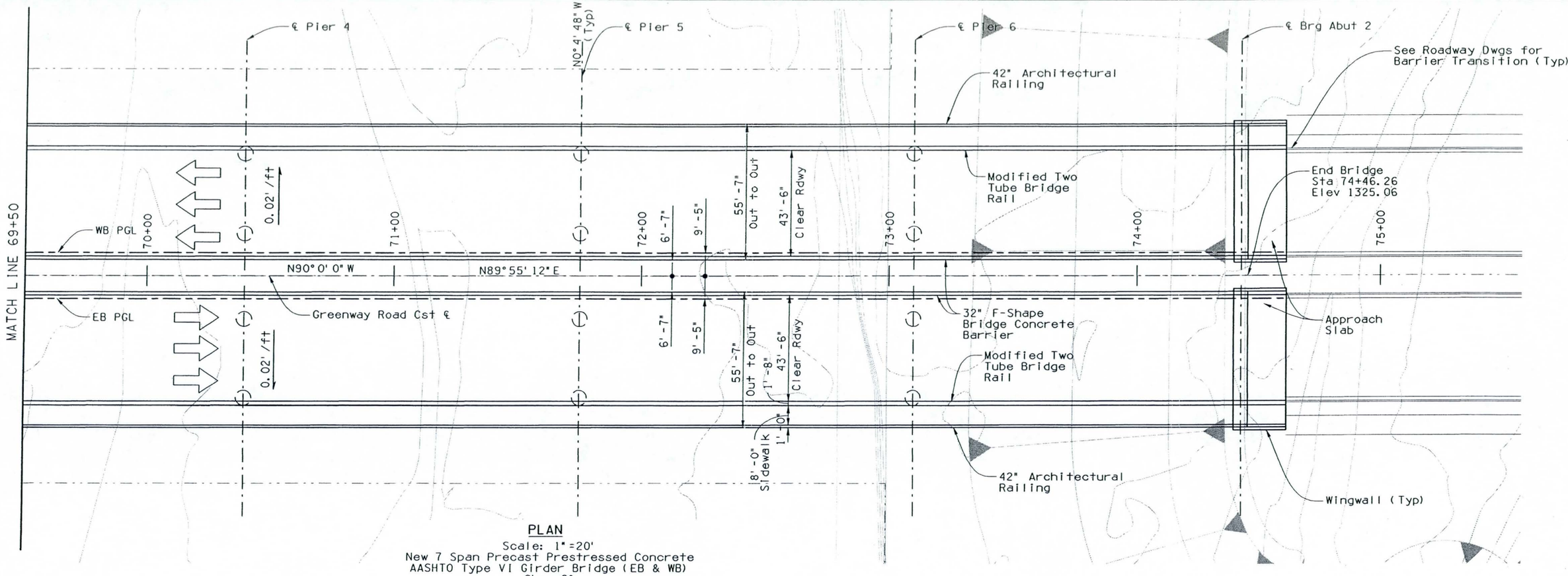
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: GREENWAY RD OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 1

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		S-1.01
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

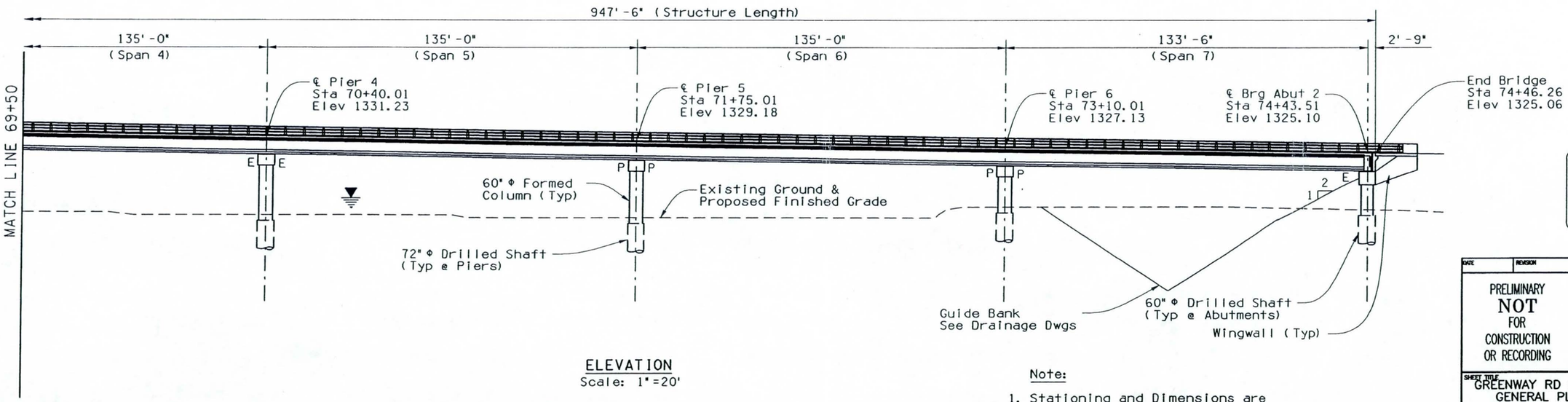
N:\2004\042316\dwg\Imp\Structures\Greenway Road Over Hassayampa\042316-S-10.dgn



PLAN

Scale: 1"=20'

New 7 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Greenway Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

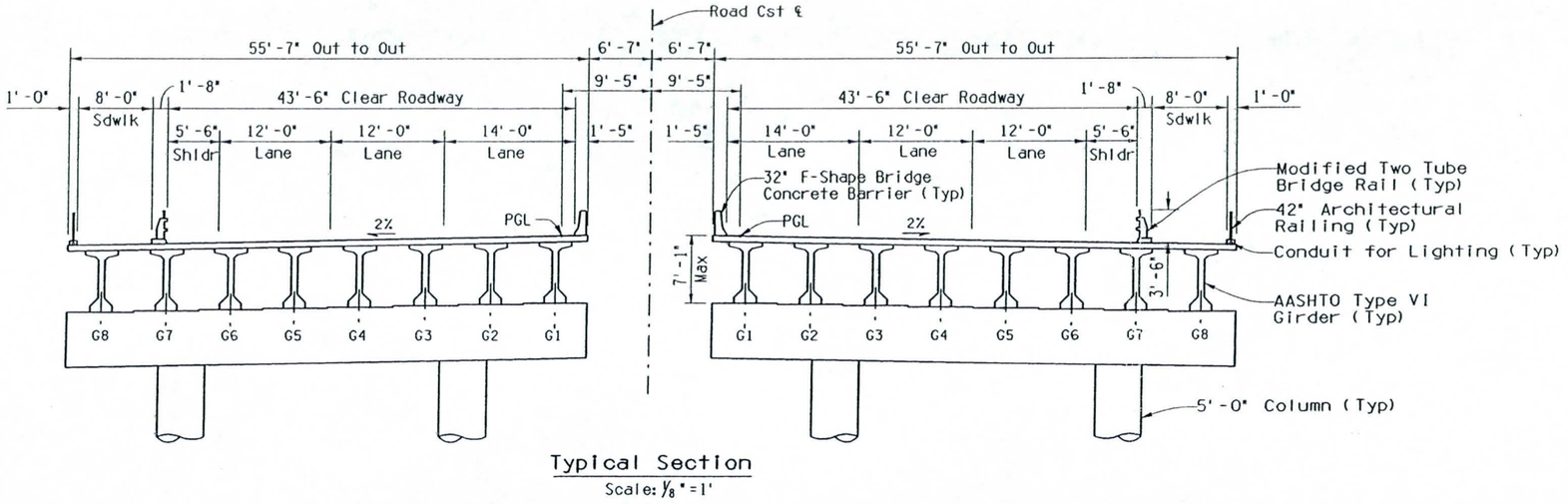
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: GREENWAY RD OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 2

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		S-1.02
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

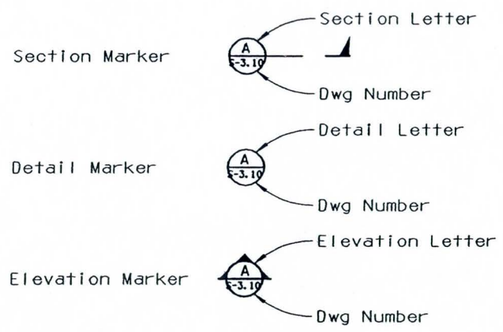
N:\2004\042316\dwg\Imp\Structures\Greenway Road Over Hassayampa\042316-S-11.dgn



Typical Section

Scale: 1/8" = 1'

LEGEND



GENERAL NOTES

Design Specifications

AASHTO LRFD Bridge Design Specifications, Customary US units, Fourth Edition, 2007.

Construction Specifications

Maricopa Association of Governments (MAG) Uniform Standard Specifications for Public Works Construction (2001) and as supplemented by:

1. MCDOT English Supplement to MAG Specifications (July 1, 2004).
2. The Project Special Provisions.

Design Loadings

Live Load, HL-93

Dead Load includes allowances of 25 psf for future wearing surface and 15 psf for permanent metal deck forms including additional concrete.

The Superstructure is designed as a composite section with the top ½" of slab thickness removed from the Design Section Properties to account for grinding, grooving & wearing.

Seismic Performance Zone 1 (Acceleration Coefficient of 0.04).

Concrete Stresses

Deck and Diaphragms (Pin Pier)	f'c = 4500 psi - Class AA
Diaphragms (Exp, Abut, Intermed)	f'c = 4000 psi - Class AA
Curb	f'c = 4000 psi - Class AA
Abutments, Piers, Columns	f'c = 3500 psi - Class A
Drilled Shafts	f'c = 3500 psi - Class A
Girders	f'c = Varies - See Girder Shts.
All other concrete	f'c = 3000 psi - Class A

Reinforcing steel shall conform to ASTM A615 except where ASTM A706 is specified for weldability. All reinforcing steel shall be furnished as Grade 60.

Prestressing steel shall conform to ASTM A416 Grade 270 Low Relaxation 7-wire strand.

All bends and hooks shall meet the requirements of AASHTO LRFD Section 5.10.2. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover, unless noted otherwise.

Chamfer all exposed corners ¾" unless noted otherwise.

Bridge Barriers shall not be cast by the slip-form method.
All welding shall conform to the requirements of the American Welding Society Bridge Welding Code D1.5-2002, unless noted otherwise.

All structural steel shall conform to ASTM A36, unless noted otherwise.

Dimensions

Dimensions shall not be scaled from drawings.

DATE	REVISION	BY

PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

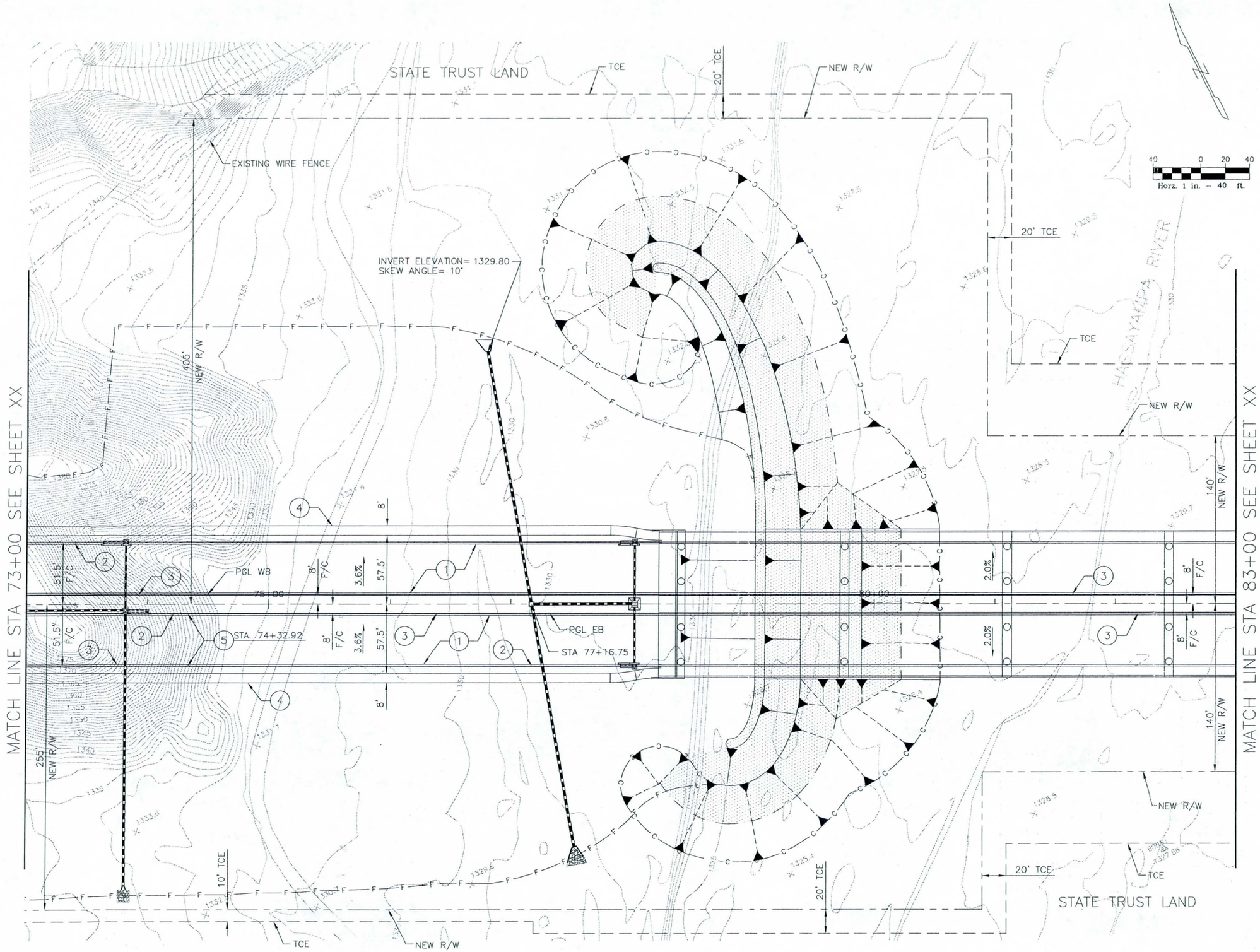
SHEET TITLE
TYPICAL SECTION AND GENERAL NOTES

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

C:\Documents and Settings\wwestrum\Desktop\242316-S-09ANWWKNG.dgn

Bell Road Bridge



REMOVAL NOTES

DESCRIPTION	QUAN	UNIT

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" R.A.C (XX" MIX) OVER XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX
5	5' TRANSITION FROM 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER TO 6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	EA	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

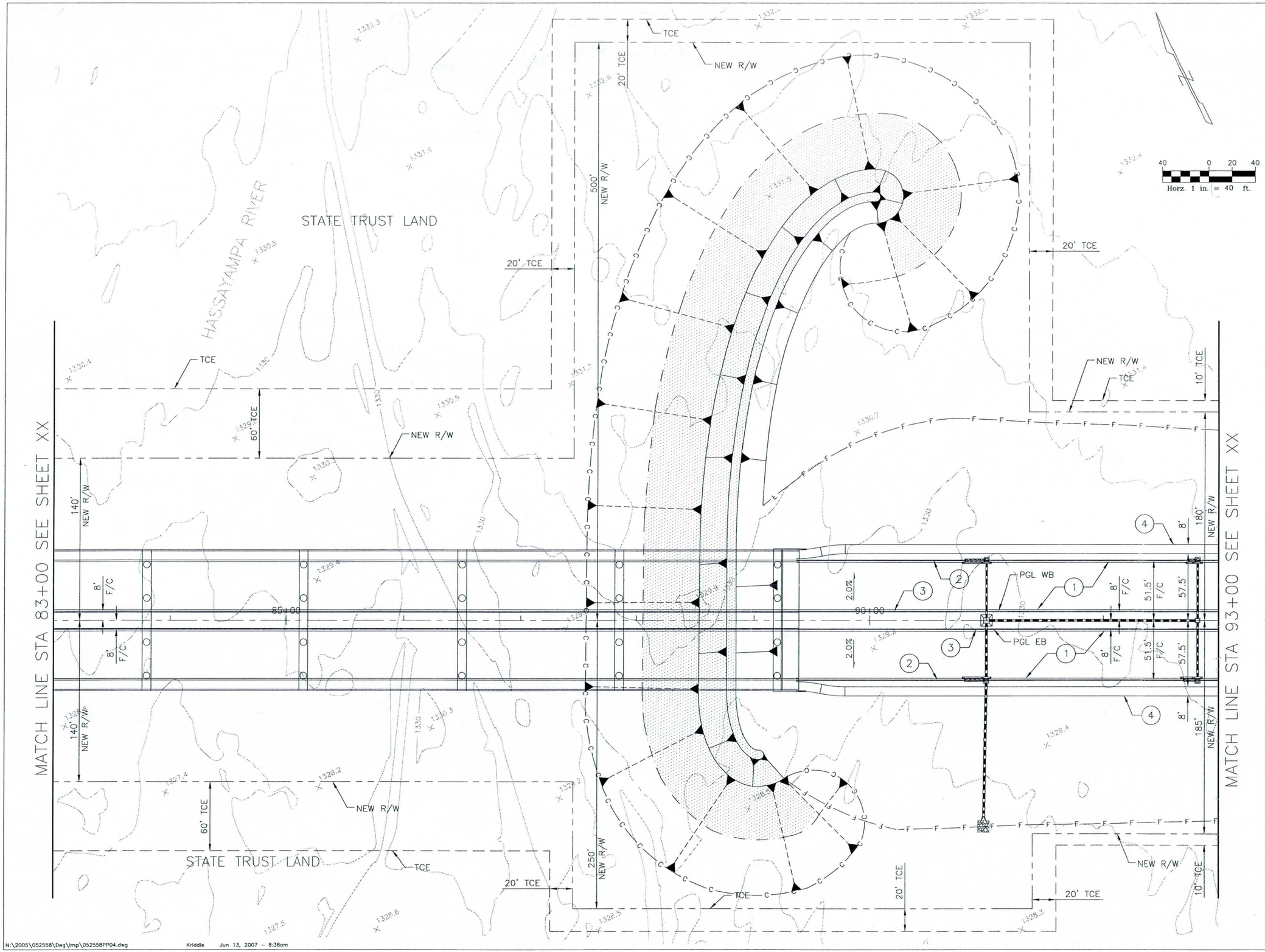
SHEET TITLE
ROADWAY PLAN
BELL ROAD STA 73+00 TO STA 83+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	RPD	AUG-06		
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	OF

XX XX-XXX

N:\2005\052558\Dwg\Imp\052558PP03.dwg Kriddle Jun 13, 2007 - 8:26am



REMOVAL NOTES

DESCRIPTION	QUAN	UNIT

CONSTRUCTION NOTES

	DESCRIPTION	UNIT	QUAN
1	INSTALL XX" R.A.C (XX" MIX) OVER XX" A.C. (XX" MIX) OVER XX" A.B.C	SY	XXXX
2	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A"	LF	XXXX
3	6" VERTICAL CURB & GUTTER PER MAG DET 220 TYPE "A" W/DEPRESSED LIP OF GUTTER	LF	XXXX
4	8' CONCRETE SIDEWALK PER MAG DET 230	SF	XXXX

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

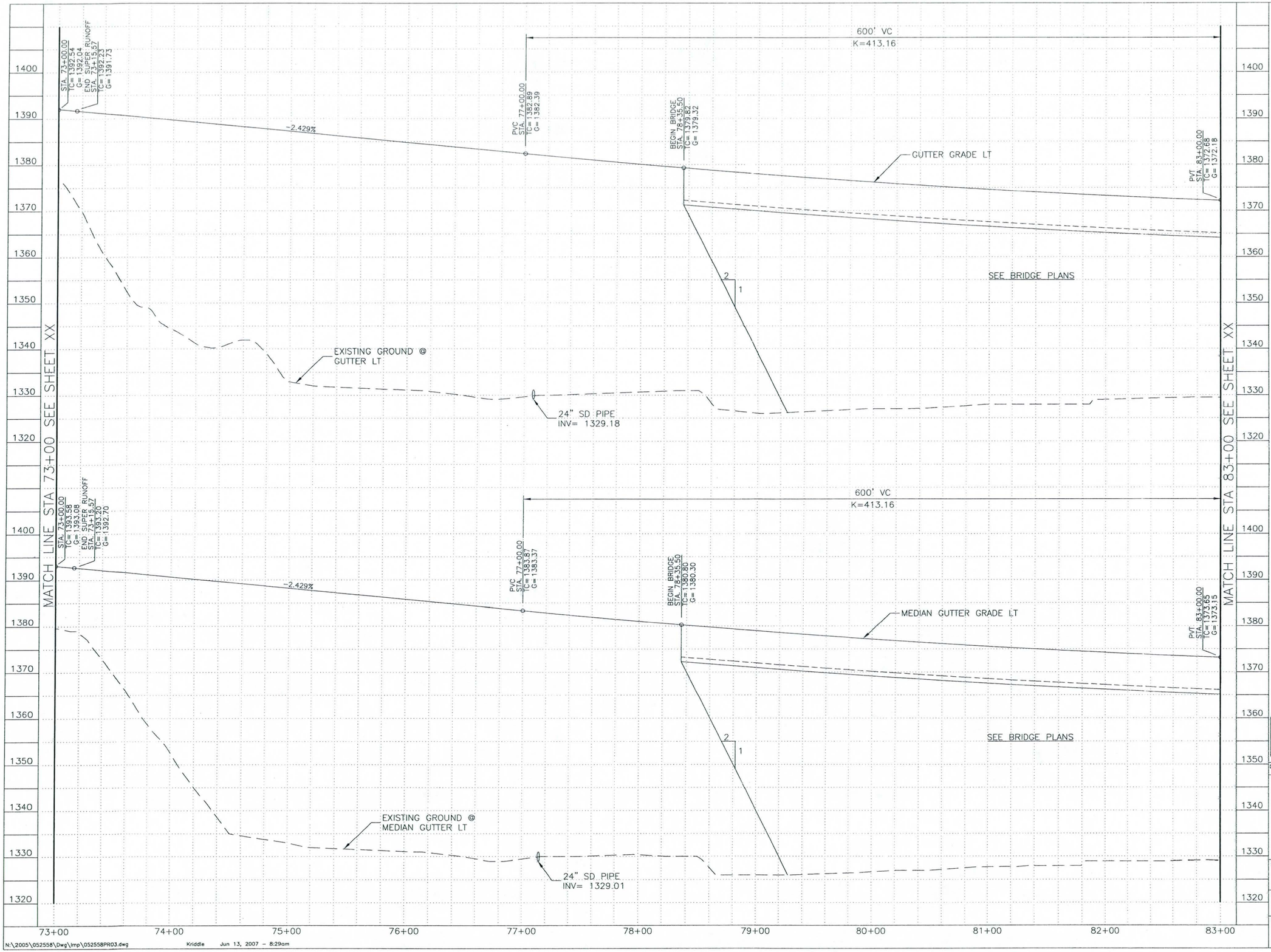
SHEET TITLE
ROADWAY PLAN
BELL ROAD STA 83+00 TO STA 93+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
1"=40'	RPD	AUG-06		1
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	OF

XX XX-XXX

N:\2005\052558\Dwg\lmp\052558PP04.dwg Kriddle Jun 13, 2007 - 8:38am



N:\2005\052558\Dwg\lmp\052558PR03.dwg Kriddle Jun 13, 2007 - 8:29am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

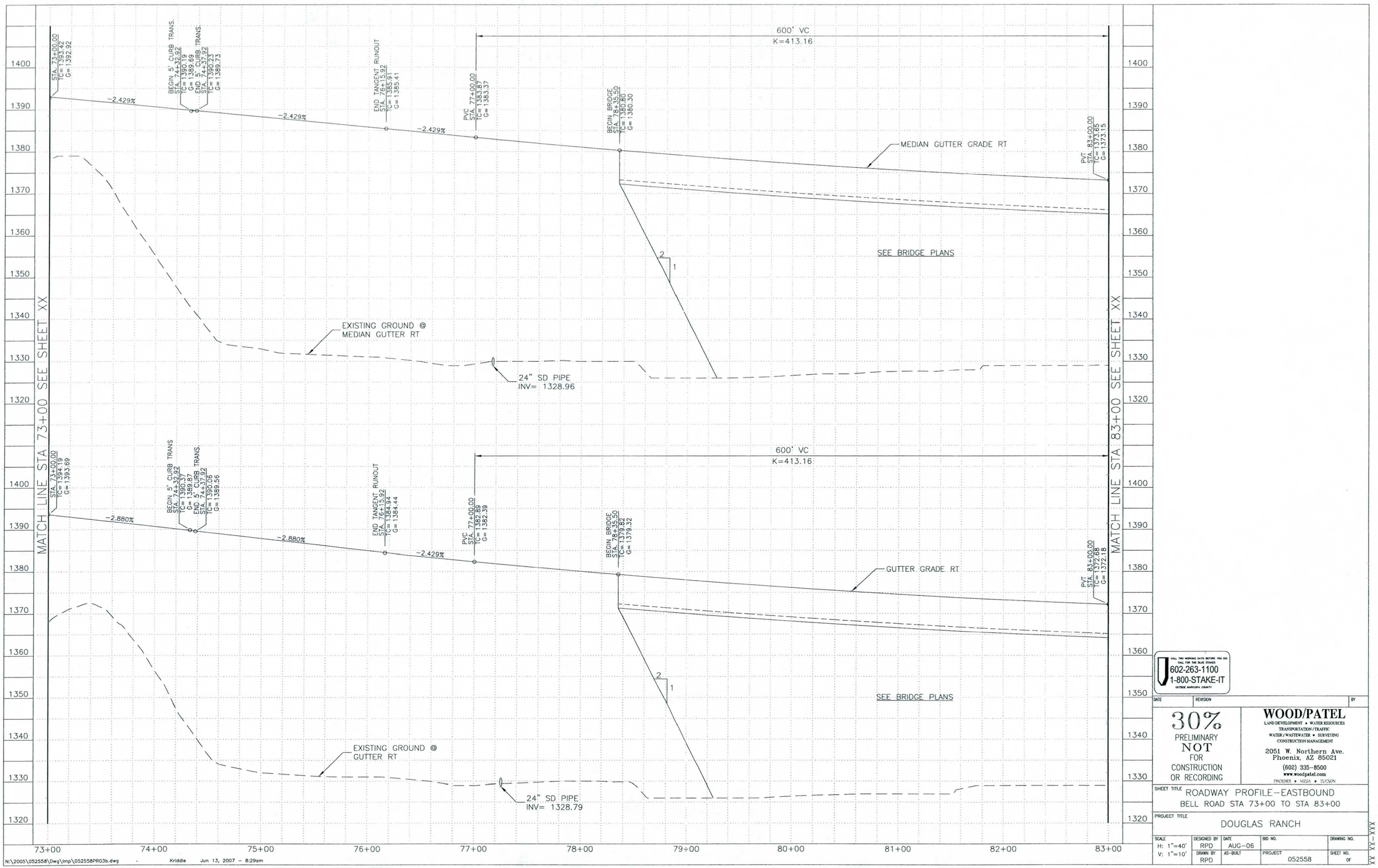
30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE–WESTBOUND
BELL ROAD STA 73+00 TO STA 83+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	RPD	AUG-06		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	OF



N:\2005\052558\Dwg\lmp\052558PR03b.dwg Kriddle Jun 13, 2007 – 8:29am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

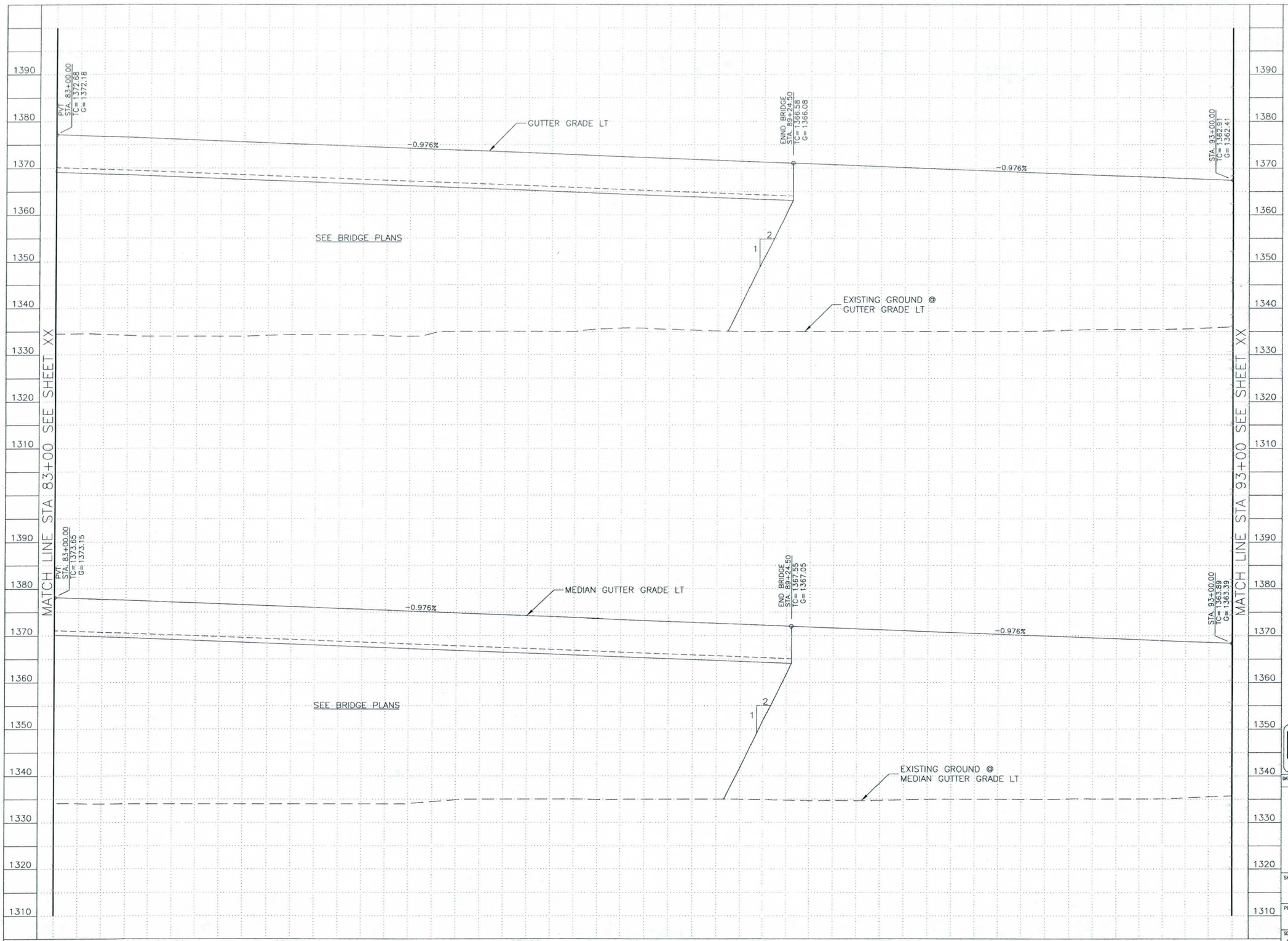
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE–EASTBOUND
BELL ROAD STA 73+00 TO STA 83+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	RPD	AUG–06		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	OF

XX_XX–XXX



N:\2005\052558\Dwg\imp\052558PR04.dwg Kriddle Jun 13, 2007 - 8:30am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

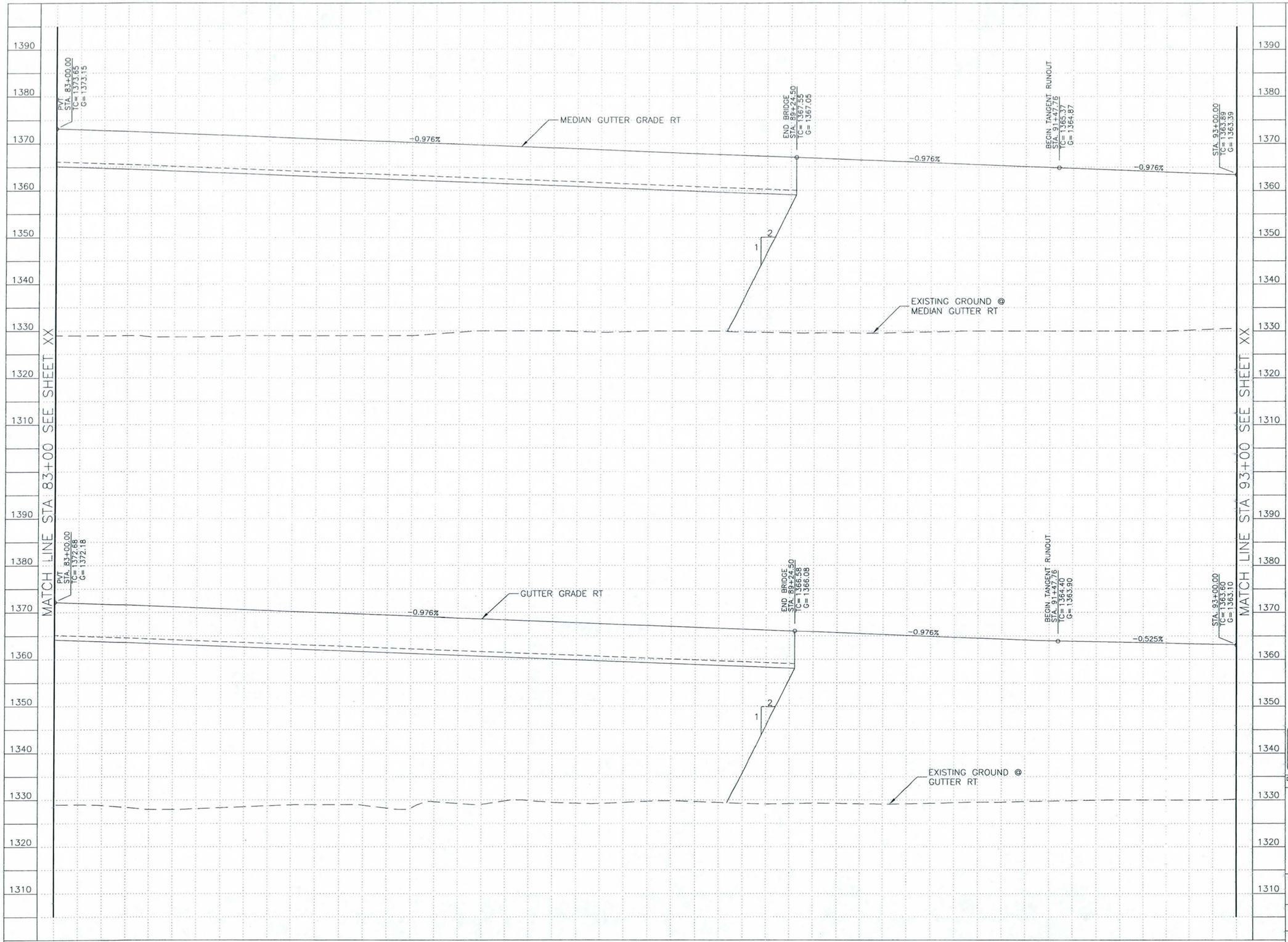
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE–WESTBOUND
BELL ROAD STA 83+00 TO STA 93+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	RPD	AUG-06		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	0F

XX-XXX
XX



N:\2005\052558\Dwg\lmp\052558PR04b.dwg Kriddle Jun 13, 2007 - 8:30am

CALL TWO WORKING DAYS BEFORE YOU DIG
CALL FOR THE BLUE STAKES
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

30%
PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

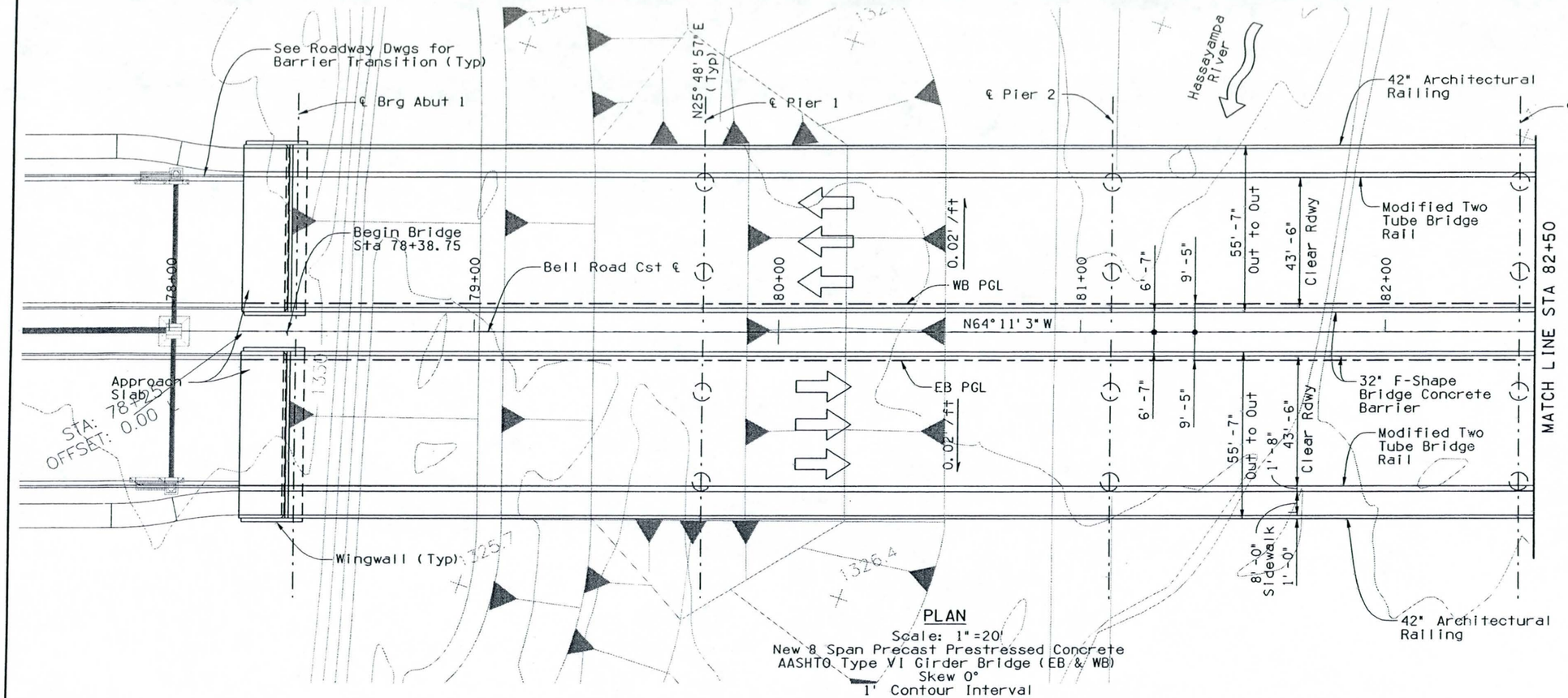
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON

SHEET TITLE
ROADWAY PROFILE-EASTBOUND
BELL ROAD STA 83+00 TO STA 93+00

PROJECT TITLE
DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
H: 1"=40'	RPD	AUG-06		
V: 1"=10'	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	RPD		052558	OF

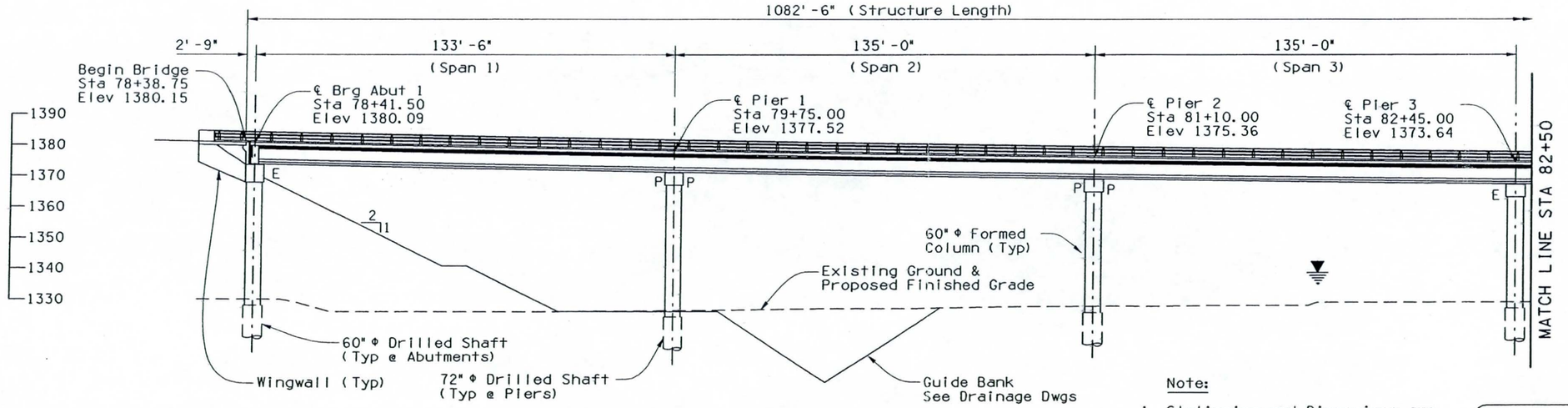
XX XX-XXX



PLAN
Scale: 1"=20'
New 8 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
S-2.01	GENERAL PLAN AND ELEVATION 1
S-2.02	GENERAL PLAN AND ELEVATION 2
S-2.03	GENERAL PLAN AND ELEVATION 3
S-2.04	GENERAL NOTES AND TYPICAL SECTION



ELEVATION
Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Bell Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

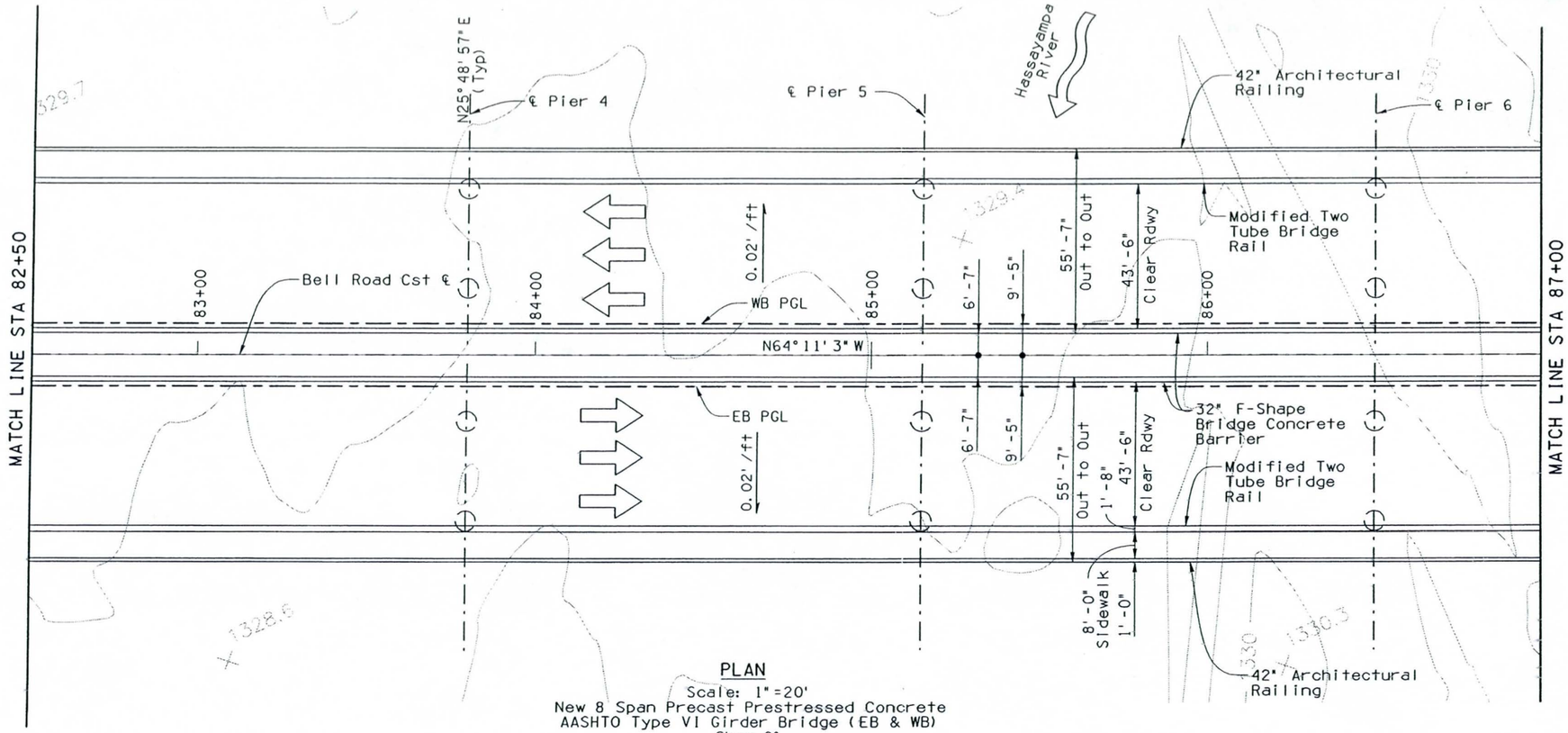
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: BELL RD OVER HASSAYAMPA GENERAL PLAN AND ELEVATION 1

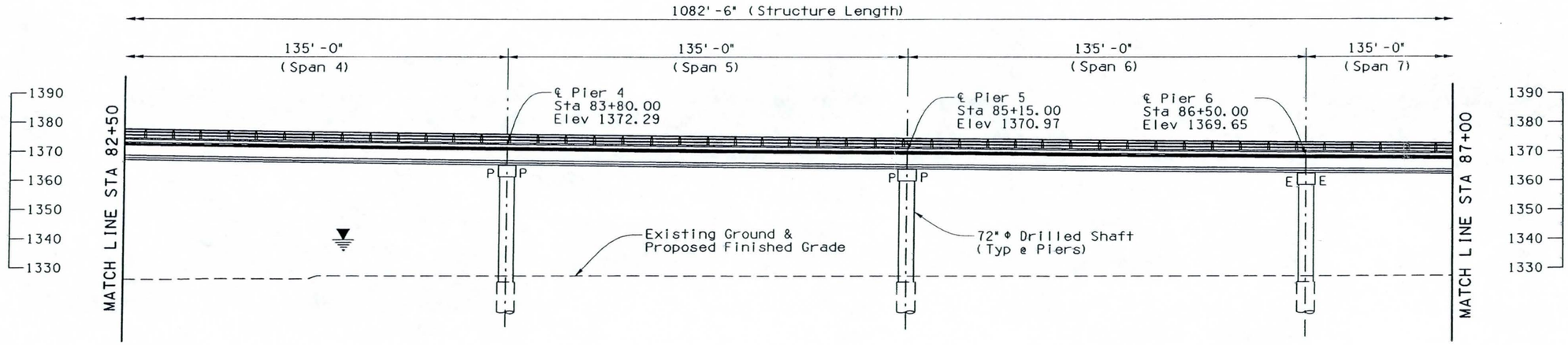
PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	MAY-07		S-2.01
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

N:\2004\042316\dwg\Imp\Structures\Bell Road Over Hassayampa\042316-S-26.dgn



PLAN
Scale: 1" = 20'
New 8 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION
Scale: 1" = 20'

Note:

1. Stationing and Dimensions are Along Bell Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

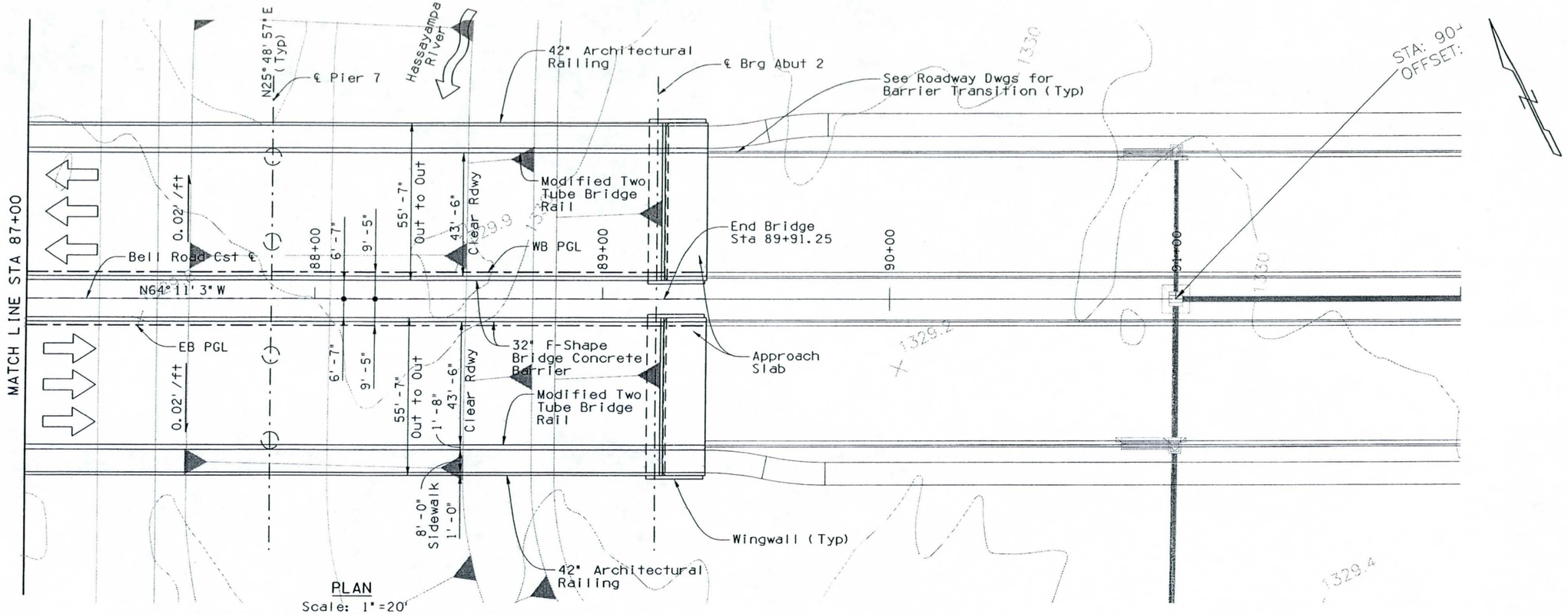
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE
BELL RD OVER HASSAYAMPA
GENERAL PLAN AND ELEVATION 2

PROJECT TITLE
DOUGLAS RANCH

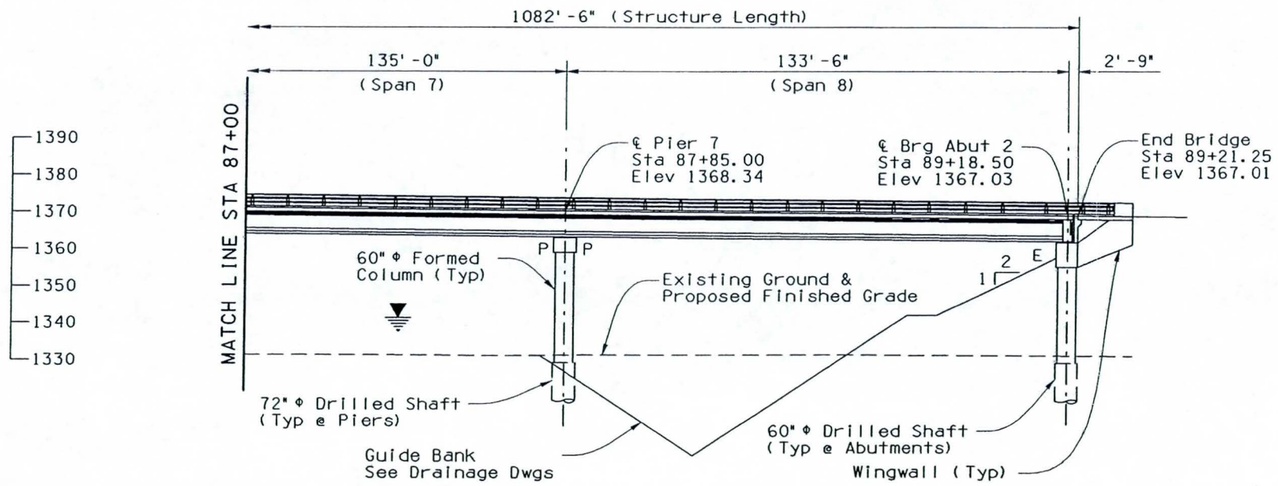
SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	MAY-07		S-2.02
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

N:\2004\042316\dwg\Imp\Structures\Bell Road Over Hassayampa\042316-S-07.dgn



PLAN
Scale: 1"=20'

New 8 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 0°
1' Contour Interval



ELEVATION
Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Bell Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

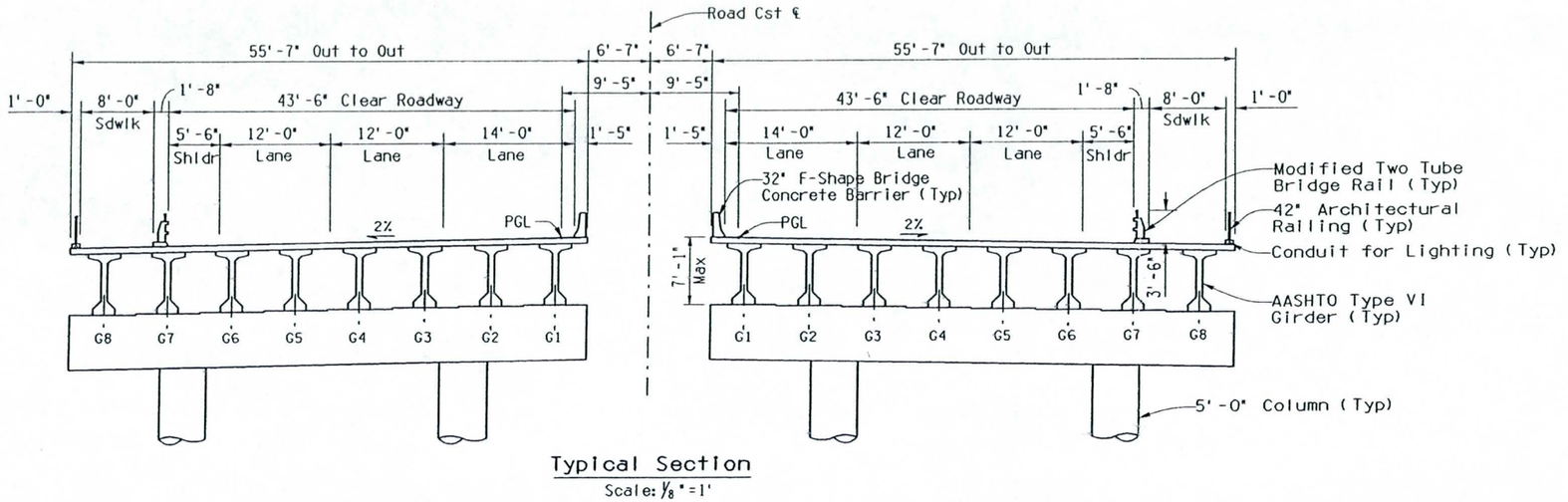
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

SHEET TITLE: BELL RD OVER HASSAYAMPA GENERAL PLAN AND ELEVATION 3

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	MAY-07		S-2.03
	DRAWN BY: DBB	AS-BUILT	PROJECT	SHEET NO. OF

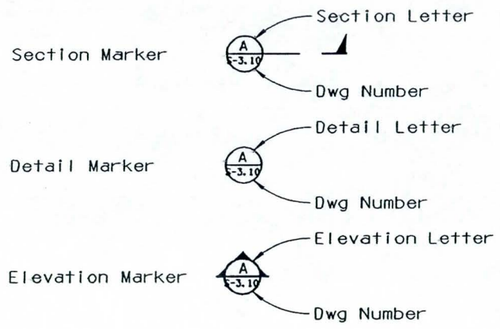
N:\2004\042316\dwg\Imp\Structures\Bell Road Over Hassayampa\042316-S-08.dgn



Typical Section

Scale: 1/8" = 1'

LEGEND



GENERAL NOTES

Design Specifications

AASHTO LRFD Bridge Design Specifications, Customary US units, Fourth Edition, 2007.

Construction Specifications

Maricopa Association of Governments (MAG) Uniform Standard Specifications for Public Works Construction (2001) and as supplemented by:

1. MCDOT English Supplement to MAG Specifications (July 1, 2004).
2. The Project Special Provisions.

Design Loadings

Live Load, HL-93

Dead Load includes allowances of 25 psf for future wearing surface and 15 psf for permanent metal deck forms including additional concrete.

The Superstructure is designed as a composite section with the top ½" of slab thickness removed from the Design Section Properties to account for grinding, grooving & wearing.

Seismic Performance Zone I (Acceleration Coefficient of 0.04).

Concrete Stresses

Deck and Diaphragms (Pin Pier)	f'c = 4500 psi - Class AA
Diaphragms (Exp, Abut, Intermed)	f'c = 4000 psi - Class AA
Curb	f'c = 4000 psi - Class AA
Abutments, Piers, Columns	f'c = 3500 psi - Class A
Drilled Shafts	f'c = 3500 psi - Class A
Girders	f'c = Varies - See Girder Shts.
All other concrete	f'c = 3000 psi - Class A

Reinforcing steel shall conform to ASTM A615 except where ASTM A706 is specified for weldability. All reinforcing steel shall be furnished as Grade 60.

Prestressing steel shall conform to ASTM A416 Grade 270 Low Relaxation 7-wire strand.

All bends and hooks shall meet the requirements of AASHTO LRFD Section 5.10.2. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover, unless noted otherwise.

Chamfer all exposed corners ¾" unless noted otherwise.

Bridge Barriers shall not be cast by the slip-form method.
All welding shall conform to the requirements of the American Welding Society Bridge Welding Code D1.5-2002, unless noted otherwise.

All structural steel shall conform to ASTM A36, unless noted otherwise.

Dimensions

Dimensions shall not be scaled from drawings.

DATE	REVISION	BY
PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING		

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • TUCSON • GOODYEAR

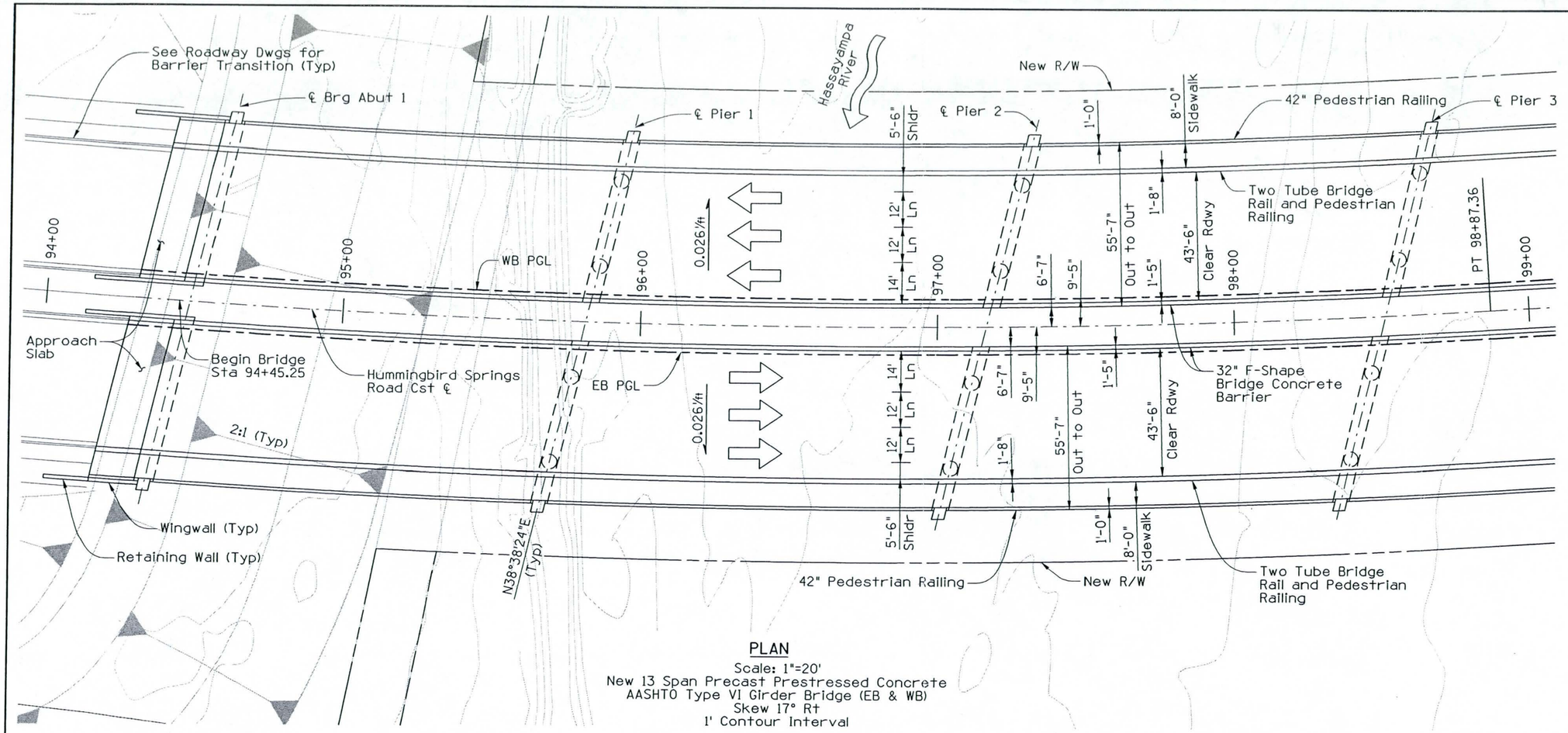
SHEET TITLE: TYPICAL SECTION AND GENERAL NOTES

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	JUN-07		
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB			OF

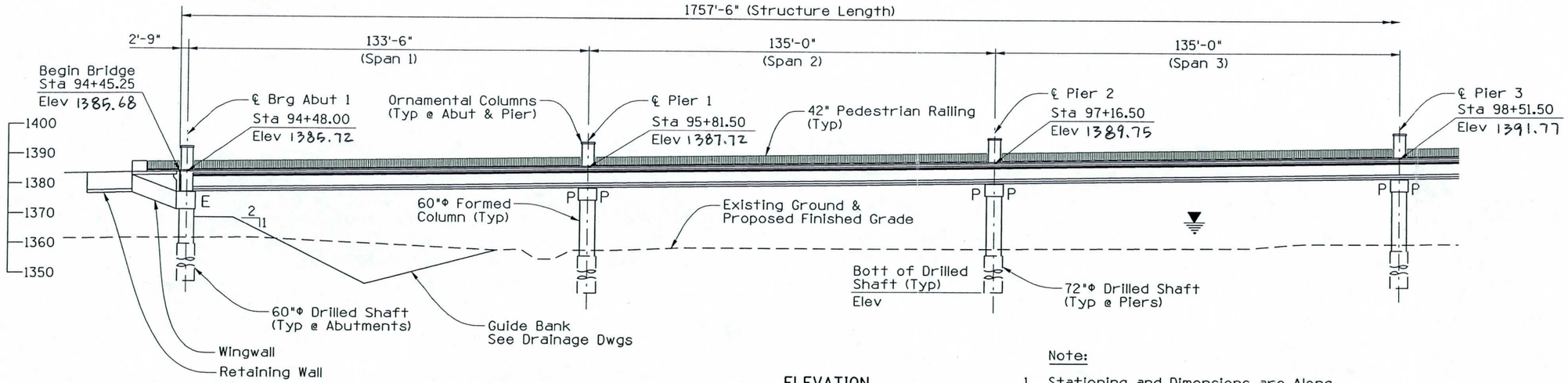
C:\Documents and Settings\wwestrum\Desktop\042316-S-09aNWWKNG.dgn

Hummingbird Springs Road Bridge



PLAN

Scale: 1"=20'
New 13 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 17° Rt
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Hummingbird Springs Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

STRUCTURE NO. _____

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
S-3.02	GENERAL PLAN AND ELEVATION 1
S-3.03	GENERAL PLAN AND ELEVATION 2
S-3.04	GENERAL PLAN AND ELEVATION 3
S-3.05	GENERAL PLAN AND ELEVATION 4
S-3.06	GENERAL PLAN AND ELEVATION 5

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

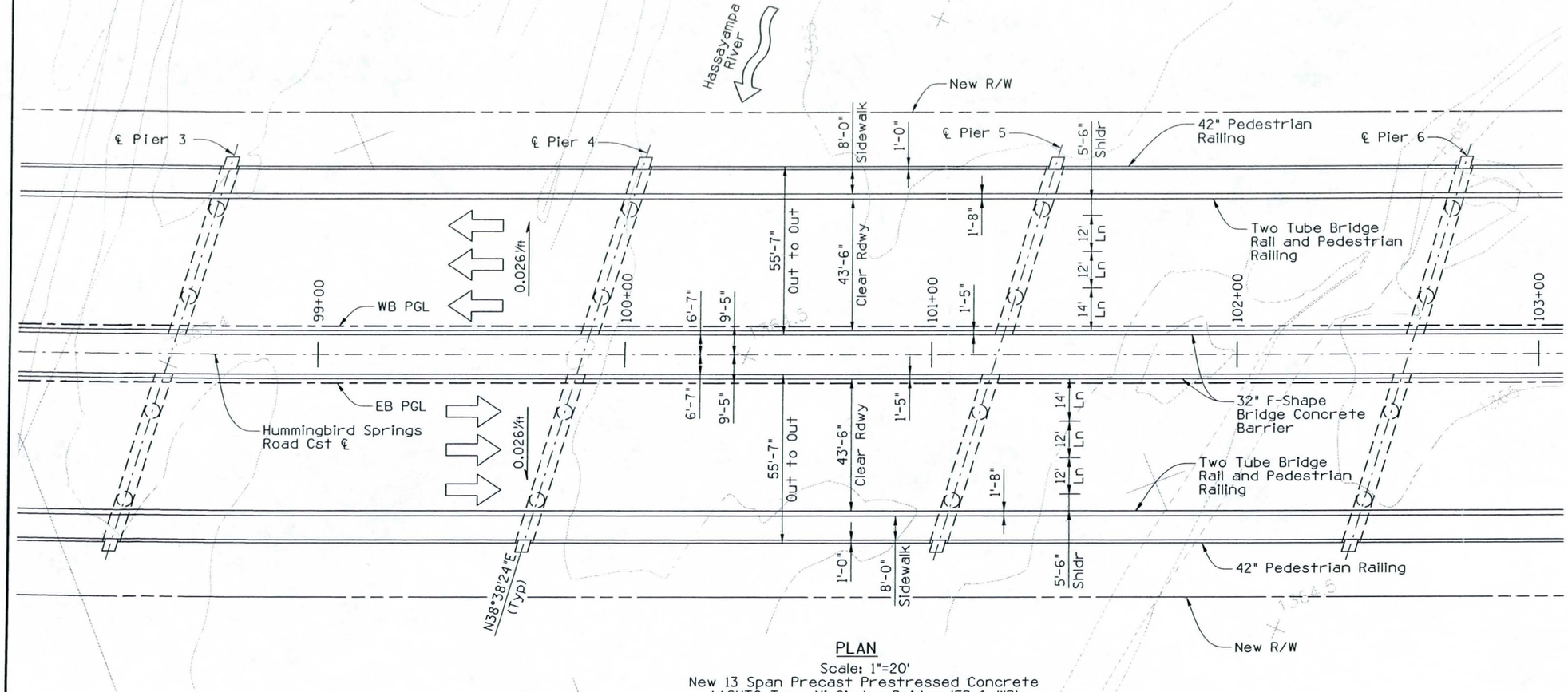
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • GOODYEAR • TUCSON

SHEET TITLE: HUMMINGBIRD SPRINGS ROAD BRIDGE OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 1

PROJECT TITLE: DOUGLAS RANCH

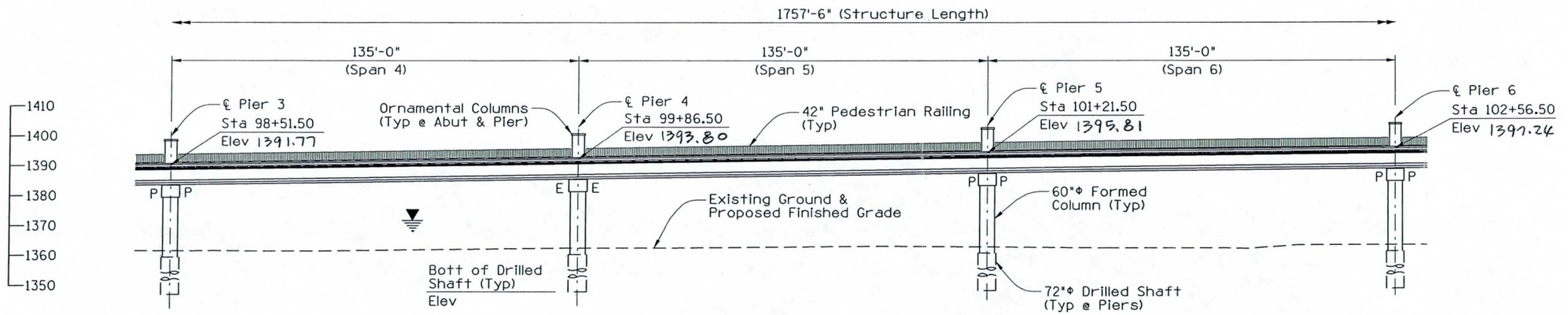
SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	DEC-07		S-3.02
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB/GAA			OF X

N:\2004\042316\dwg\Imp\Structures\Hummingbird Springs Road Over Hassayampa\042316-S-3.02.dgn



PLAN

Scale: 1"=20'
New 13 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 17° Rt
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Hummingbird Springs Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

STRUCTURE NO. _____

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

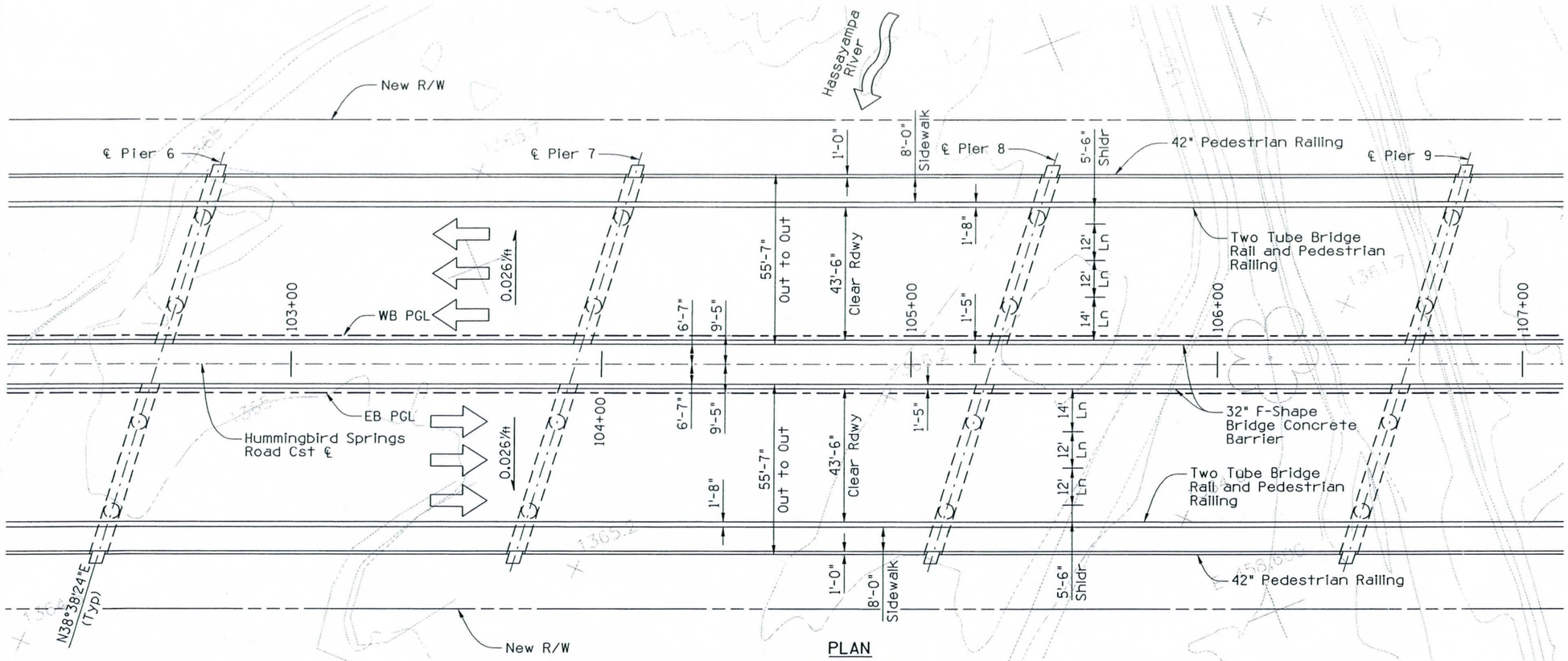
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • GOODYEAR • TUCSON

SHEET TITLE: HUMMINGBIRD SPRINGS ROAD BRIDGE OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 2

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	DEC-07		S-3.03
	DRAWN BY: DBB/GAA	AS-BUILT	PROJECT	SHEET NO. of X

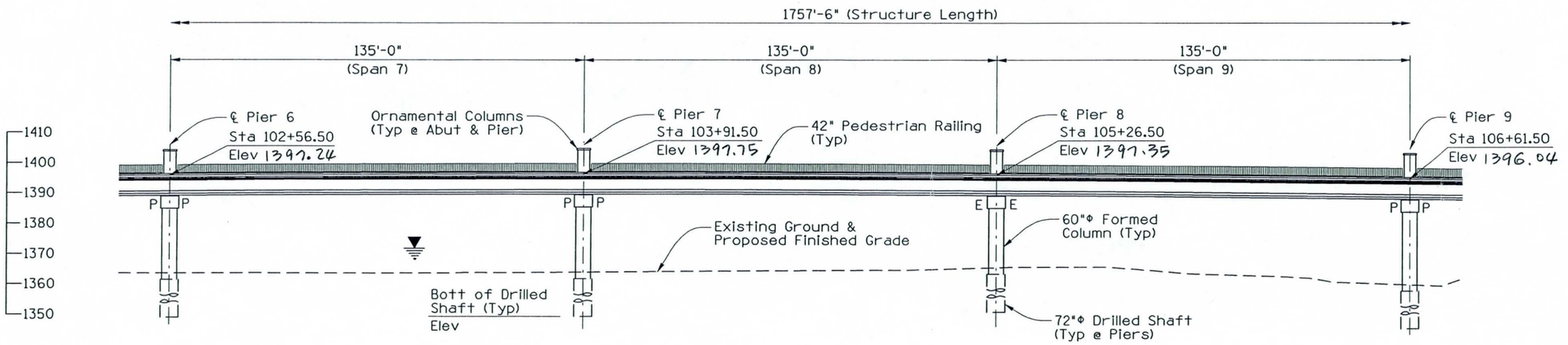
N:\2004\042316\dwg\Imp\Structures\Hummingbird Springs Road Over Hassayampa\042316-S-3.03.dgn



PLAN

Scale: 1"=20'

New 13 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 17° Rt
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Hummingbird Springs Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

STRUCTURE NO. _____

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY
NOT
FOR
CONSTRUCTION
OR RECORDING

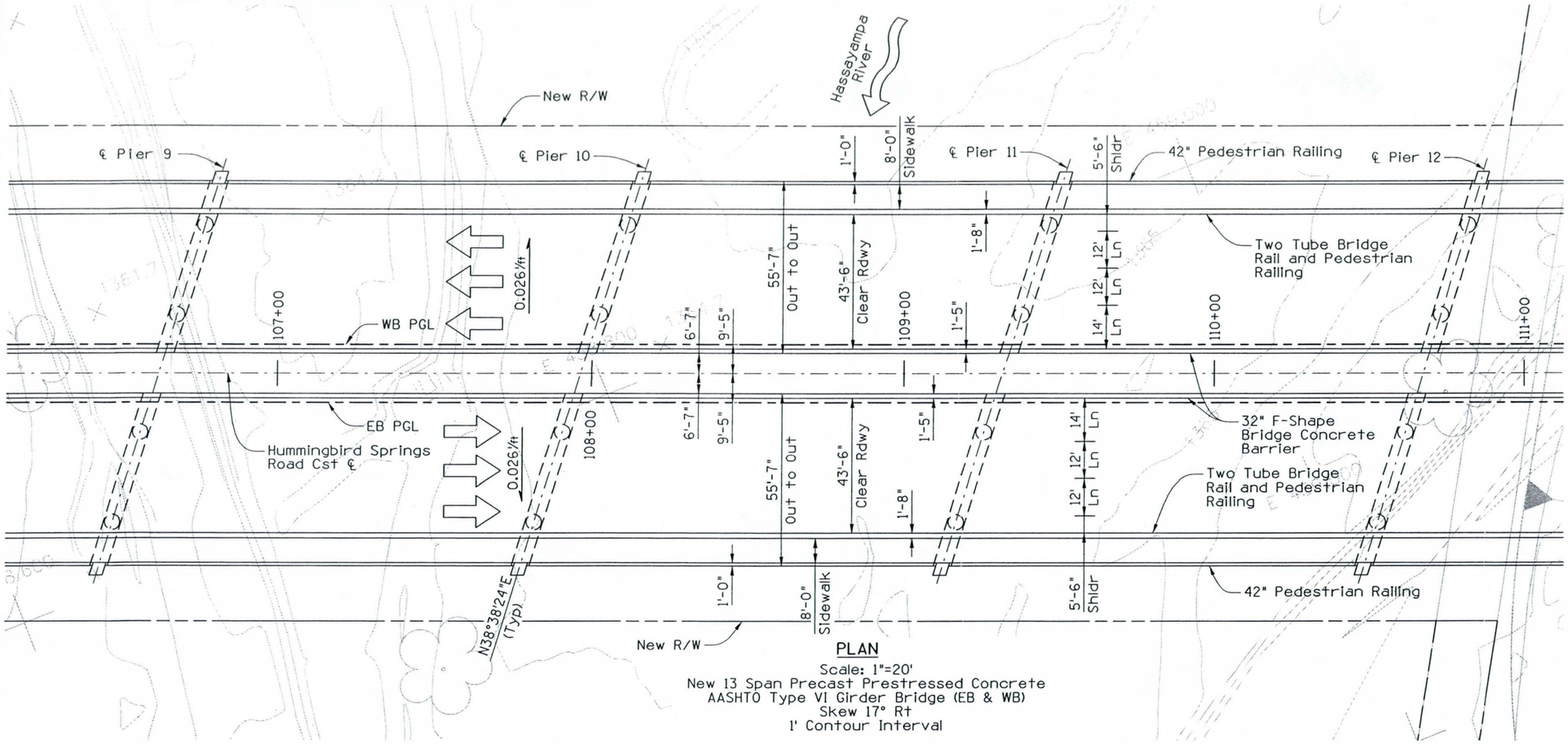
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • GOODYEAR • TUCSON

SHEET TITLE: HUMMINGBIRD SPRINGS ROAD BRIDGE OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 3

PROJECT TITLE: DOUGLAS RANCH

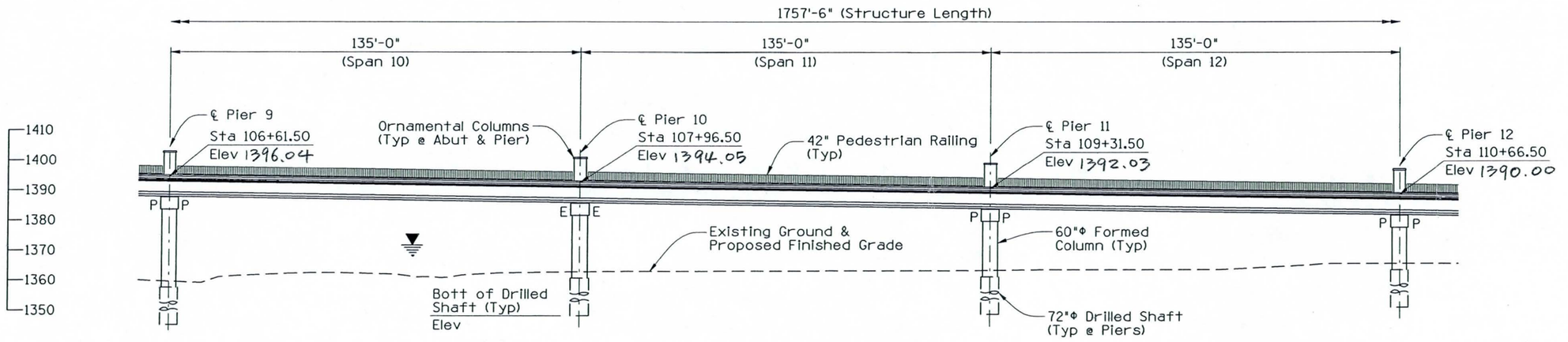
SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	DEC-07		S-3.04
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB/CAA			OF X

N:\2004\042316\dwg\Imp\Structures\Hummingbird Springs Road Over Hassayampa\042316-S-3.04.dgn



PLAN

Scale: 1"=20'
New 13 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 17° Rt
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Hummingbird Springs Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

STRUCTURE NO. _____

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

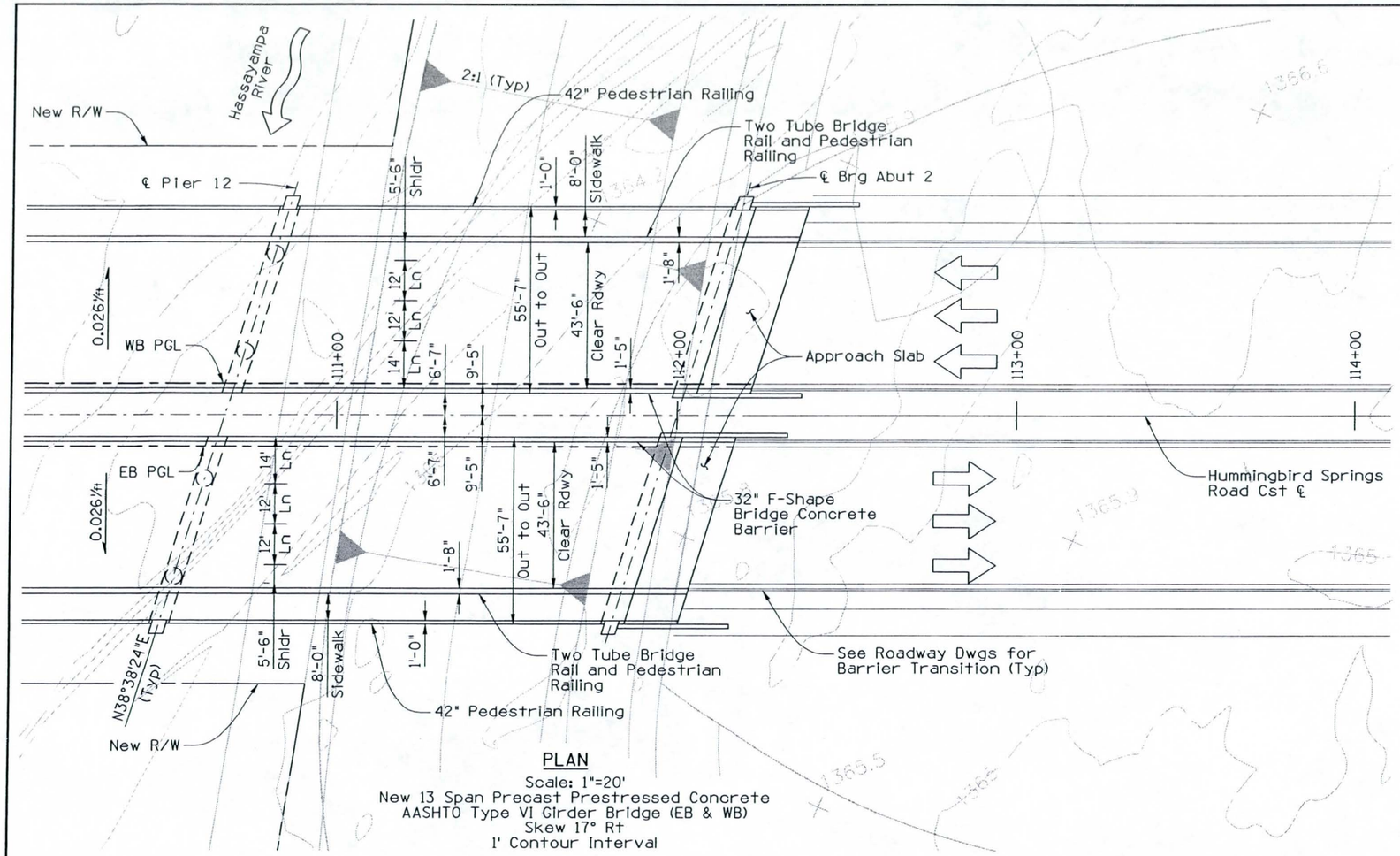
WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • GOODYEAR • TUCSON

SHEET TITLE: HUMMINGBIRD SPRINGS ROAD BRIDGE OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 4

PROJECT TITLE: DOUGLAS RANCH

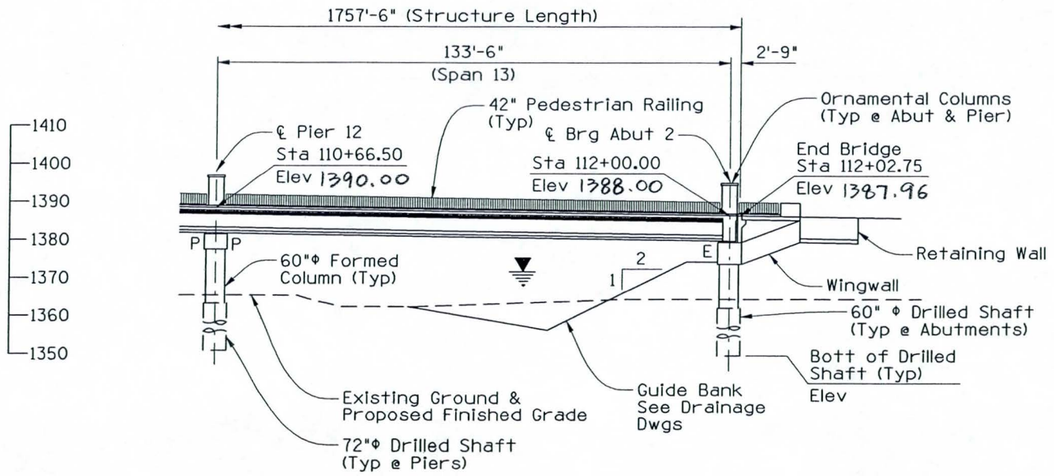
SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	DEC-07		S-3.05
	DRAWN BY	AS-BUILT	PROJECT	SHEET NO.
	DBB/GAA			OF X

N:\2004\042316\dwg\Imp\Structures\Hummingbird Springs Road Over Hassayampa\042316-S-3.05.dgn



PLAN

Scale: 1"=20'
New 13 Span Precast Prestressed Concrete
AASHTO Type VI Girder Bridge (EB & WB)
Skew 17° Rt
1' Contour Interval



ELEVATION

Scale: 1"=20'

Note:

1. Stationing and Dimensions are Along Hummingbird Springs Road Cst ℄
2. Elevation on PGL Offset Normal to Cst ℄

STRUCTURE NO. _____

CALL TWO WORKING DAYS BEFORE YOU DIG
602-263-1100
1-800-STAKE-IT
OUTSIDE MARICOPA COUNTY

DATE	REVISION	BY

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
STRUCTURES • TRANSPORTATION/TRAFFIC
WATER/WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
2051 W. Northern Ave.
Phoenix, AZ 85021
(602) 335-8500
www.woodpatel.com
PHOENIX • MESA • GOODYEAR • TUCSON

SHEET TITLE: HUMMINGBIRD SPRINGS ROAD BRIDGE OVER HASSAYAMPA RIVER GENERAL PLAN AND ELEVATION 5

PROJECT TITLE: DOUGLAS RANCH

SCALE	DESIGNED BY	DATE	BID NO.	DRAWING NO.
	SEO	DEC-07		S-3.06
	DRAWN BY DBB/GAA	AS-BUILT	PROJECT	SHEET NO. of X

N:\2004\042316\dwg\Imp\Structures\Hummingbird Springs Road Over Hassayampa\042316-S-3.06.dgn

EXHIBIT C

Study Work Map

MATCH SHEET 2

14

13

24

23

ZONE AE

HASSAYAMPA RIVER

1265

1260

1255

1250

LIMIT OF DETAILED STUDY
MATCH EXISTING FIS

LIMIT OF DETAILED STUDY
MATCH EXISTING FIS

TOWN OF BUCKEYE
MARICOPA COUNTY (UNINCORPORATED)

PEORIA ROAD

15 14
22 23

14 13
23 24

FP=1269.3
FW=1269.7
22.12
Q100=57230 cfs

FP=1267.0
FW=1267.1
22.03
Q100=57230 cfs

FP=1264.6
FW=1264.8
21.93
Q100=56604 cfs

FP=1263.0
FW=1263.3
21.84
Q100=56604 cfs

FP=1261.9
FW=1262.4
21.74
Q100=56604 cfs

FP=1260.7
FW=1261.2
21.65
Q100=56604 cfs

FP=1258.6
FW=1258.7
21.55
Q100=56604 cfs

FP=1257.7
FW=1257.7
21.46
Q100=56604 cfs

FP=1256.4
FW=1256.4
21.36
Q100=56604 cfs

FP=1255.5
FW=1255.5
21.34
Q100=56604 cfs

FP=1252.7
FW=1252.8
21.30
Q100=56604 cfs

FP=1250.9
FW=1251.0
21.17
Q100=56604 cfs

FP=1248.0
FW=1248.2
21.08
Q100=56604 cfs

FP=1246.7
FW=1246.8
20.98
Q100=56604 cfs

FP=1244.5
FW=1244.6
20.89
Q100=56604 cfs

FP=1241.6
FW=1242.2
20.80
Q100=56604 cfs

FP=1239.6
FW=1240.0
20.70
Q100=56604 cfs

ERM
35

LEGEND

100-YR EFFECTIVE FLOODPLAIN BOUNDARY
100-YR EFFECTIVE FLOODWAY BOUNDARY
100-YR PRE-PROJECT FLOODPLAIN BOUNDARY
100-YR PRE-PROJECT FLOODWAY BOUNDARY
100-YR POST PROJECT FLOODPLAIN BOUNDARY
100-YR POST PROJECT FLOODWAY BOUNDARY

POST-PROJECT CROSS SECTION — 26.53
PRE-PROJECT CROSS SECTION — 20.89

100 YEAR PEAK DISCHARGE =57,854 CUBIC FEET PER SECOND — Q100=57854 cfs
FLOODPLAIN WATER SURFACE ELEVATION — FP=1371.0
FLOODWAY WATER SURFACE ELEVATION — FW=1371.6
ZONE DESIGNATIONS — ZONE AE
CORPORATE LIMITS — Corporate Limits
SECTION BOUNDARY — 12 | 7 / 13 | 18
ELEVATION REFERENCE MARK
HYDRAULIC BASE LINE
BASE FLOOD ELEVATION — BFE=1250

NOTES

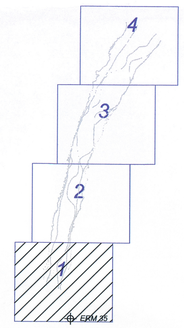
NOTE: ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.

ELEVATION REFERENCE MARKS

GEODETIC DENSIFICATION CADASTRAL SURVEY (GDACS) CONTROL STATIONS

ERM 35 1269.09
BRASS CAP STAMPED U.S. GENERAL LAND OFFICE, 1915. CORNER OF SECTIONS 23, 24, 25 & 26, T.3 N., R.5.W.

SHEET INDEX MAP



400' 0' 400' 800'
SCALE: 1"= 400' FEET
CONTOUR INTERVAL = 1 FOOT

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HASSAYAMPA RIVER

TOWN OF BUCKEYE
FLOODPLAIN DELINEATION

Registered Professional Engineer (Civil)
CERTIFICATE NO.
10512
ASHOK C. PATEL
Date Signed
ARIZONA, U.S.A.

WOOD/PATEL
LAND DEVELOPMENT ★ WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER ★ SURVEYING
CONSTRUCTION MANAGEMENT
(602) 335-8500
PHOENIX ★ MESA ★ TUCSON

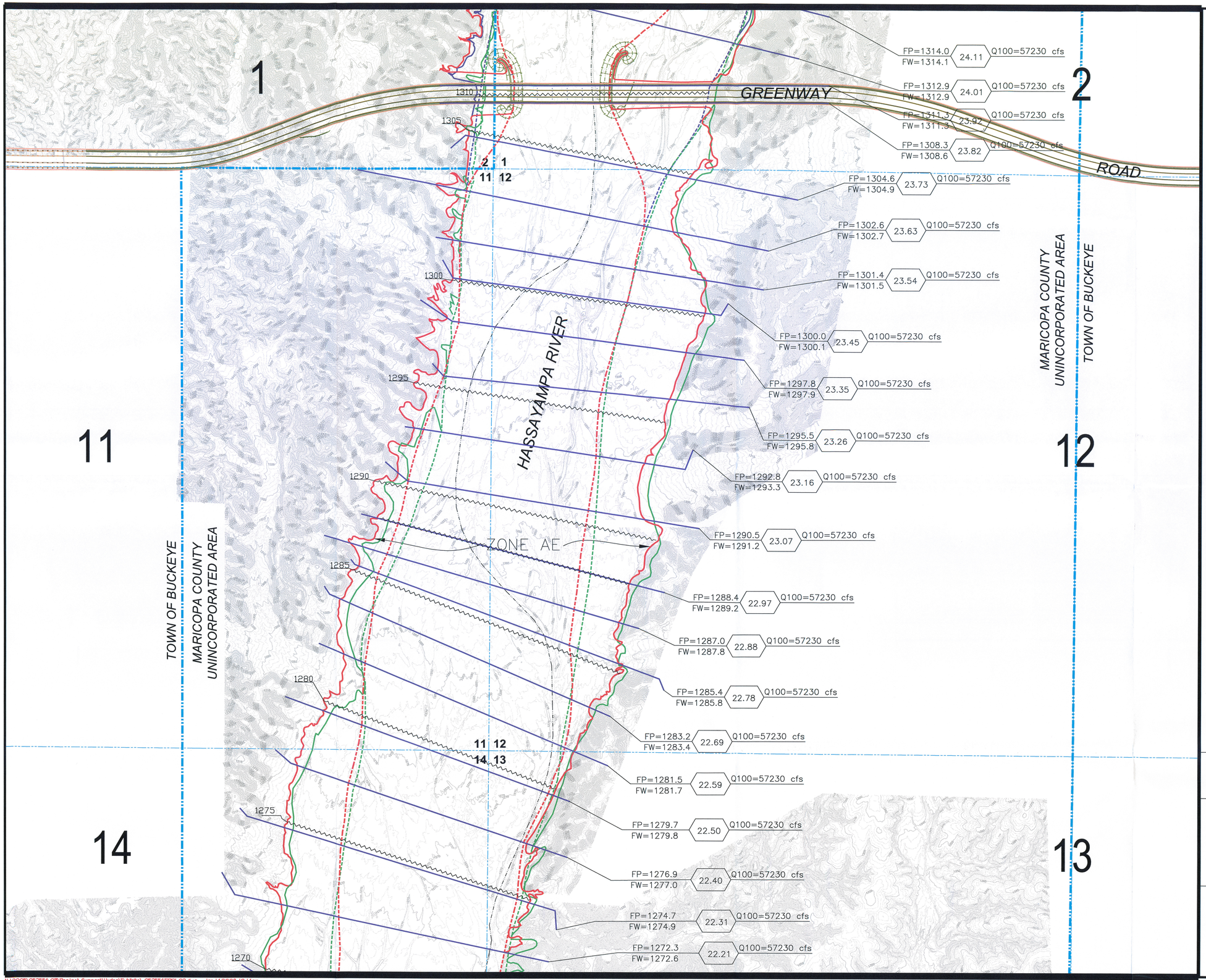
WP#052556.03

SHEET 1 OF 4

N:\2005\052556.03\Project Support\Hydro\Exhibits\ 052556FPDL01.dwg - Dec 18,2007 1:34pm

EXHIBIT C-STUDY WORK MAP

MATCH SHEET 3



LEGEND

- 100-YR EFFECTIVE FLOODPLAIN BOUNDARY
- 100-YR EFFECTIVE FLOODWAY BOUNDARY
- 100-YR PRE-PROJECT FLOODPLAIN BOUNDARY
- 100-YR PRE-PROJECT FLOODWAY BOUNDARY
- 100-YR POST PROJECT FLOODPLAIN BOUNDARY
- 100-YR POST PROJECT FLOODWAY BOUNDARY
- POST-PROJECT CROSS SECTION — 26.53
- PRE-PROJECT CROSS SECTION — 20.89
- 100 YEAR PEAK DISCHARGE =57,854 CUBIC FEET PER SECOND — Q100=57854 cfs
- FLOODPLAIN WATER SURFACE ELEVATION — FP=1371.0
- FLOODWAY WATER SURFACE ELEVATION — FW=1371.6
- ZONE DESIGNATIONS — ZONE AE
- CORPORATE LIMITS — Corporate Limits
- SECTION BOUNDARY — 12 | 7 / 13 | 18
- ELEVATION REFERENCE MARK
- HYDRAULIC BASE LINE
- BASE FLOOD ELEVATION — BFE=1250

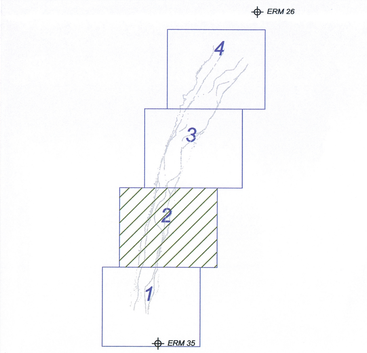
NOTES

NOTE: ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.

ELEVATION REFERENCE MARKS

GEODETIC DENSIFICATION CADASTRAL SURVEY (GDACS) CONTROL STATIONS

SHEET INDEX MAP



400' 0' 400' 800'

SCALE: 1"= 400' FEET
CONTOUR INTERVAL = 1 FOOT

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HASSAYAMPA RIVER

TOWN OF BUCKEYE
FLOODPLAIN DELINEATION

Registered Professional Engineer (Civil) Certificate No. 10512 ASHOK C. PATEL Date Signed ARIZONA, U.S.A.

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
(602) 335-8500
PHOENIX • MESA • TUCSON

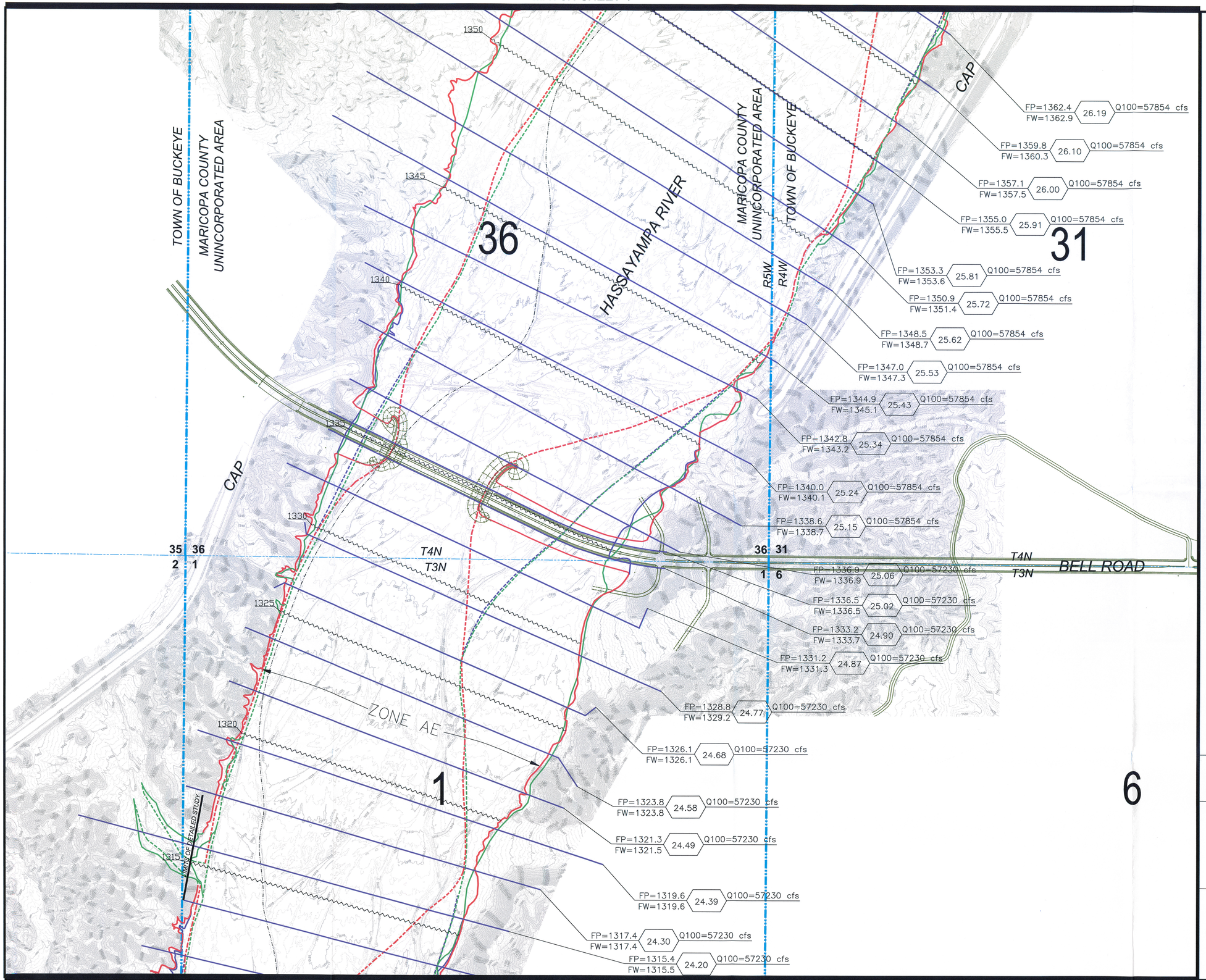
WP#052556.03 SHEET 2 OF 4

N:\2005\052556.03\Project Support\Hydro\Exhibits\ 052556FPDL02.dwg - Jan 14,2008 10:14am

MATCH SHEET 1

EXHIBIT C-STUDY WORK MAP

MATCH SHEET 4



LEGEND

- 100-YR EFFECTIVE FLOODPLAIN BOUNDARY
- 100-YR EFFECTIVE FLOODWAY BOUNDARY
- 100-YR PRE-PROJECT FLOODPLAIN BOUNDARY
- 100-YR PRE-PROJECT FLOODWAY BOUNDARY
- 100-YR POST PROJECT FLOODPLAIN BOUNDARY
- 100-YR POST PROJECT FLOODWAY BOUNDARY
- POST-PROJECT CROSS SECTION — 26.53
- PRE-PROJECT CROSS SECTION — 20.89
- 100 YEAR PEAK DISCHARGE =57,854 CUBIC FEET PER SECOND — Q100=57854 cfs
- FLOODPLAIN WATER SURFACE ELEVATION — FP=1371.0
- FLOODWAY WATER SURFACE ELEVATION — FW=1371.6
- ZONE DESIGNATIONS — ZONE AE
- CORPORATE LIMITS — Corporate Limits
- SECTION BOUNDARY — 12 | 7 / 13 | 18
- ELEVATION REFERENCE MARK
- HYDRAULIC BASE LINE
- BASE FLOOD ELEVATION — BFE=1250

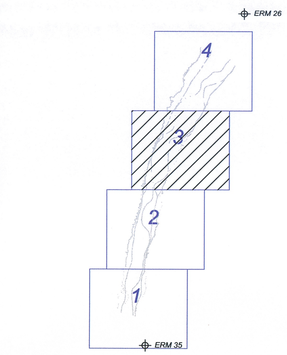
NOTES

NOTE: ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.

ELEVATION REFERENCE MARKS

GEODETIC DENSIFICATION CADASTRAL SURVEY (GDACS) CONTROL STATIONS

SHEET INDEX MAP



400' 0' 400' 800'

SCALE: 1"= 400' FEET
CONTOUR INTERVAL = 1 FOOT

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HASSAYAMPA RIVER

TOWN OF BUCKEYE
FLOODPLAIN DELINEATION

Registered Professional Engineer, State of Arizona
CERTIFICATE NO. 10512
ASHOK C. PATEL
Date Signed

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
(602) 335-8500
PHOENIX • MESA • TUCSON

WP#052556.03 SHEET 3 OF 4

N:\2005\052556.03\Project Support\Hydro\Exhibits\052556FPDL03.dwg - Jan 14,2008 11:22am

MATCH SHEET 2

EXHIBIT C-STUDY WORK MAP

24

19

25

30

TOWN OF BUCKEYE

MARICOPA COUNTY UNINCORPORATED AREA

RW5

RW4

ADMINISTRATIVE FLOODWAY

LIMIT OF DETAILED STUDY

MATCH EXISTING FIS

HUMMINGBIRD SPRINGS ROAD

ZONE AE

HASSAYAMPA RIVER

CAP

24 19
25 30

19 20
30 29

25 30
36 31

1385
1380
1375
1370
1365
1360
1355

FP=1395.4 FW=1395.9 27.61 Q100=57854 cfs

FP=1393.4 FW=1393.9 27.52 Q100=57854 cfs

FP=1389.3 FW=1389.7 27.33 Q100=57854 cfs

FP=1386.9 FW=1387.2 27.23 Q100=57854 cfs

FP=1384.1 FW=1384.7 27.14 Q100=57854 cfs

FP=1381.3 FW=1381.9 27.04 Q100=57854 cfs

FP=1378.5 FW=1379.0 26.95 Q100=57854 cfs

FP=1377.0 FW=1377.6 26.85 Q100=57854 cfs

FP=1375.0 FW=1375.5 26.76 Q100=57854 cfs

FP=1373.6 FW=1373.9 26.67 Q100=57854 cfs

FP=1371.9 FW=1372.0 26.57 Q100=57854 cfs

FP=1369.3 FW=1369.3 26.48 Q100=57854 cfs

FP=1368.3 FW=1368.4 26.38 Q100=57854 cfs

FP=1364.7 FW=1365.1 26.29 Q100=57854 cfs

N:\2005\052556.03\Project Support\Hydro\Exhibits\ 052556FPDL04.dwg - Jan 14,2008 11:24am

MATCH SHEET 3

LEGEND

100-YR EFFECTIVE FLOODPLAIN BOUNDARY
100-YR EFFECTIVE FLOODWAY BOUNDARY
100-YR PRE-PROJECT FLOODPLAIN BOUNDARY
100-YR PRE-PROJECT FLOODWAY BOUNDARY
100-YR POST PROJECT FLOODPLAIN BOUNDARY
100-YR POST PROJECT FLOODWAY BOUNDARY

POST-PROJECT CROSS SECTION 26.53

PRE-PROJECT CROSS SECTION 20.89

100 YEAR PEAK DISCHARGE =57,854 CUBIC FEET PER SECOND Q100=57854 cfs

FLOODPLAIN WATER SURFACE ELEVATION FP=1371.0

FLOODWAY WATER SURFACE ELEVATION FW=1371.6

ZONE DESIGNATIONS ZONE AE

CORPORATE LIMITS Corporate Limits

SECTION BOUNDARY 12 | 7 / 13 | 18

ELEVATION REFERENCE MARK

HYDRAULIC BASE LINE

BASE FLOOD ELEVATION BFE=1250

NOTES

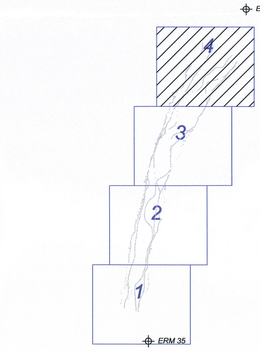
NOTE: ALL ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988.

ELEVATION REFERENCE MARKS

GEODETIC DENSIFICATION CADASTRAL SURVEY (GDACS)
CONTROL STATIONS

ERM 26 1420.32
BRASS CAP STAMPED U.S. DEPT. OF INTERIOR, BUREAU OF LAND MANAGEMENT CADASTRAL SURVEY, 1986. CORNER OF SECTIONS 17,18,19 AND 20, T.4.N., R.4W.

SHEET INDEX MAP



400' 0' 400' 800'
SCALE: 1"= 400' FEET
CONTOUR INTERVAL = 1 FOOT

PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING

HASSAYAMPA RIVER

TOWN OF BUCKEYE
FLOODPLAIN DELINEATION

Registered Professional Engineer (Civil)
CERTIFICATE NO.
10512
ASHOK C. PATEL
Date Signed 1/14/08
ARIZONA, U.S.A.

WOOD/PATEL
LAND DEVELOPMENT • WATER RESOURCES
TRANSPORTATION / TRAFFIC
WATER / WASTEWATER • SURVEYING
CONSTRUCTION MANAGEMENT
(602) 335-8500
PHOENIX • MESA • TUCSON

WP#052556.03

EXHIBIT C-STUDY WORK MAP

EXHIBIT D

Annotated FIRM Panels

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. **The community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection used** in the preparation of this map was *Arizona State Plane Zone 3176 (central Arizona)*. The **horizontal datum** was *NAD83, GRS80 spheroid*. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the *National Geodetic Vertical Datum of 1929*. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at *http://www.ngs.noaa.gov* or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at *http://www.ngs.noaa.gov*.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Maricopa County. Orthophoto images were produced at a scale of 1:8000 using HARN for control. Aerial photography is dated December 2000 to December 2002.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains author-native hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

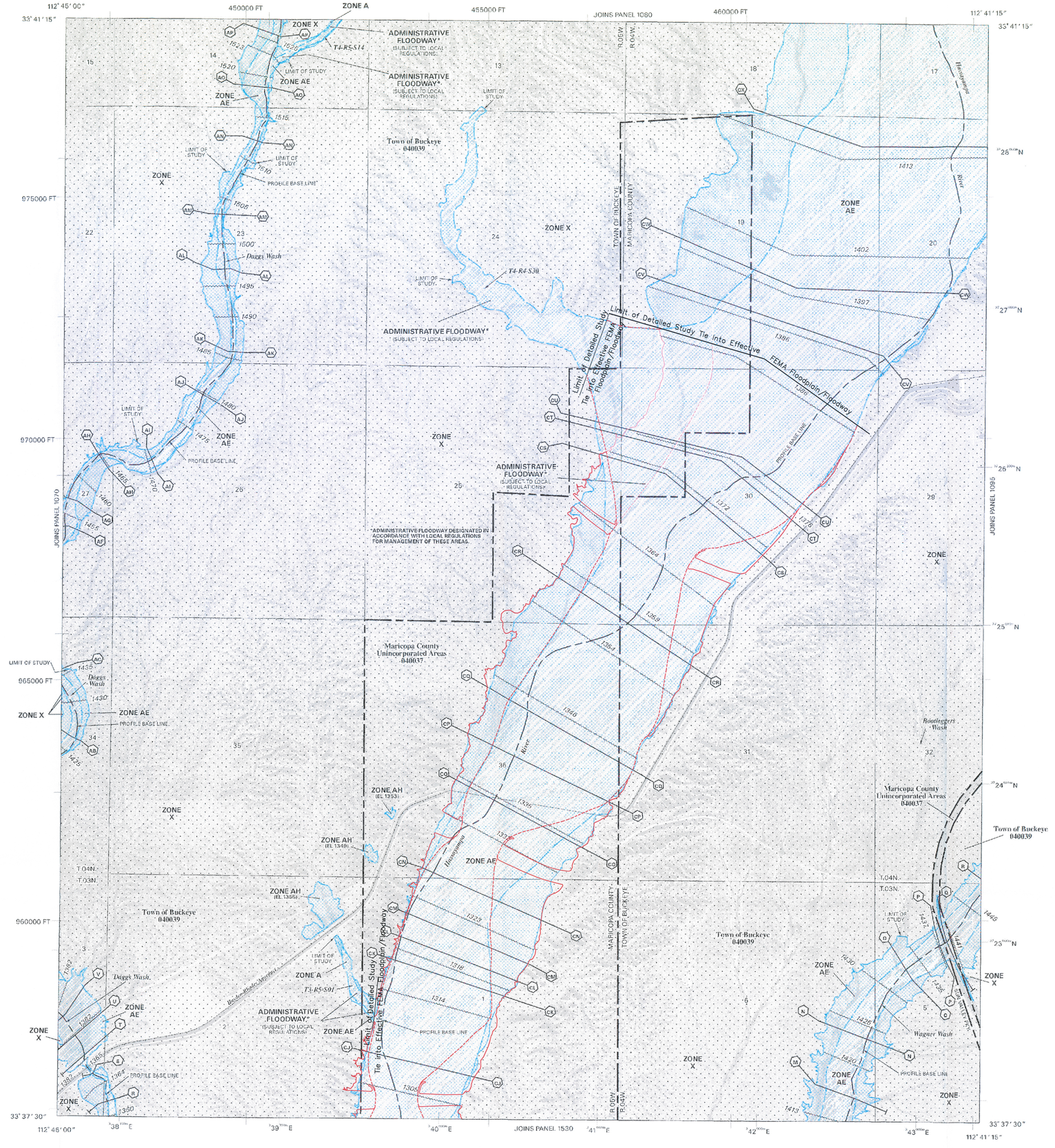
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with the FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at *http://www.msc.fema.gov*.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMAMAP** (1-877-336-2627) or visit the FEMA website at *http://www.fema.gov*.

LEGEND FOR ANNOTATION

- POST PROJECT 100-YR FLOODPLAIN BOUNDARY
- POST PROJECT 100-YR FLOODWAY BOUNDARY
- EFFECTIVE 100-YR FEMA FLOODPLAIN BOUNDARY
- EFFECTIVE 100-YR FEMA FLOODWAY BOUNDARY



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A — No Base Flood Elevations determined.
- ZONE AE — Base Flood Elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 967) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

- (A) — (A) — Cross section line
- (2) — (2) — Transect line

112° 07' 08", 33° 25' 41" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1000-meter Universal Transverse Mercator grid ticks values zone 12

5000-foot grid ticks values: Arizona State Plane coordinate system, central zone (FIPSZONE 3176), NAD83 (transverse, Mercator)

BENCH MARK — Bench mark (see explanation in Notes to Users section of this FIRM panel)

RM — River Mile

MAP REPOSITORY
Refer to Repositories Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 16, 1958

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 4, 1991, December 3, 1993, September 30, 1995, July 19, 2001

September 30, 2005 - to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to change zone designations, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to incorporate previously issued Letters of Map Amendment.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1090J

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1090 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUCKEYE, TOWN OF	040039	1090	J
MARICOPA COUNTY	040037	1090	J

EXHIBIT D
ANNOTATED FIRM PANEL 1 OF 2

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
04013C1090J
MAP REVISED
SEPTEMBER 30, 2005

Federal Emergency Management Agency

N:\2004\042316\Project Support\Hydro\Exhibits\Figures\ ExhibitD1_Annotated_FIRmap.dwg

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFE shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was *Arizona State Plane Zone 3176 (central Arizona)*. **The horizontal datum** was *NAD83, GRS80 spheroid*. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the *National Geodetic Vertical Datum of 1929*. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at: http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(310) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Maricopa County. Orthophoto images were produced at a scale of 1:6000 using HARN for control. Aerial photography is dated December 2000 to December 2002.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

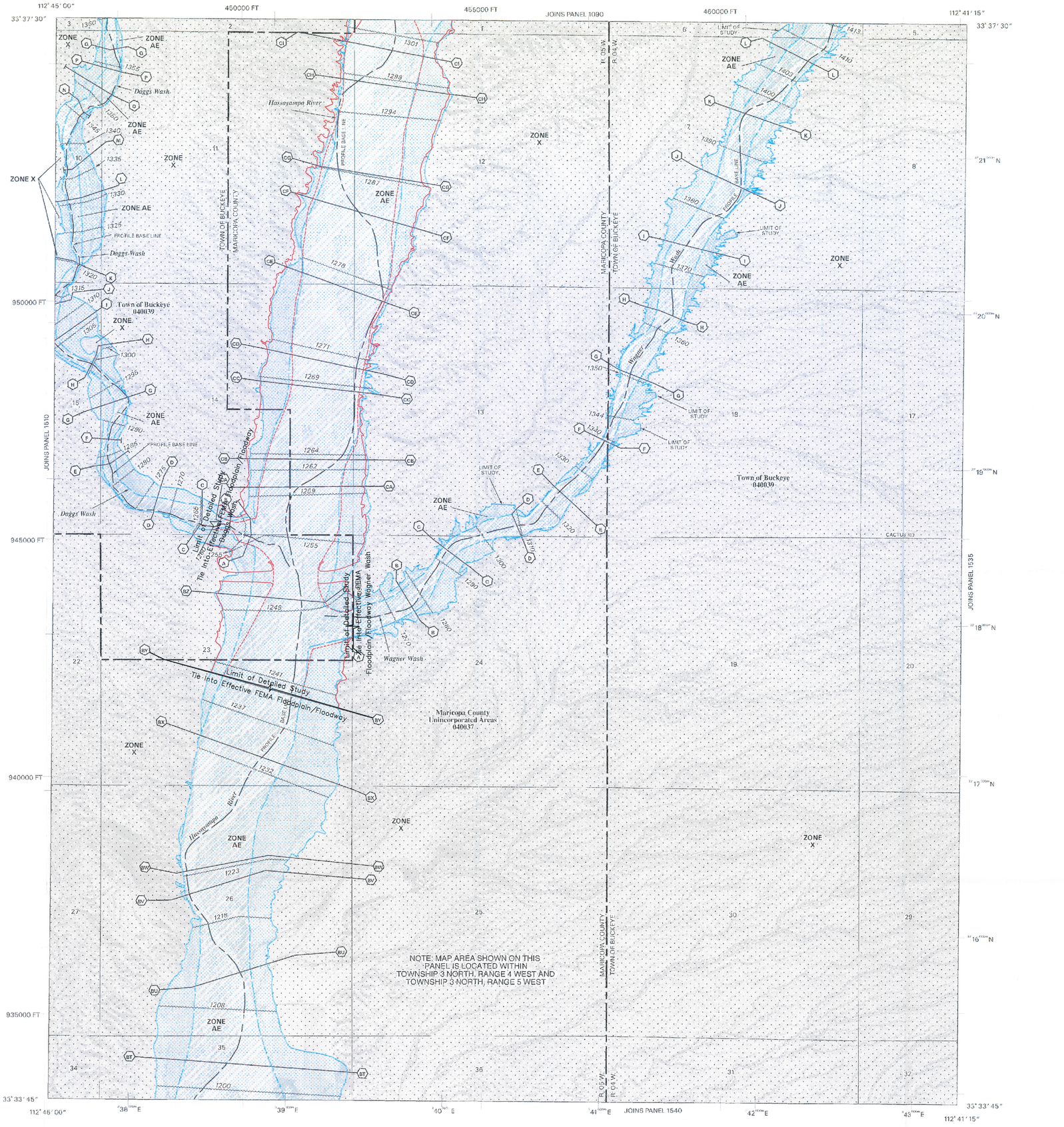
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMAMAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

LEGEND FOR ANNOTATION

- POST PROJECT 100-YR FLOODPLAIN BOUNDARY
- POST PROJECT 100-YR FLOODWAY BOUNDARY
- EFFECTIVE 100-YR FEMA FLOODPLAIN BOUNDARY
- EFFECTIVE 100-YR FEMA FLOODWAY BOUNDARY



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 3 NORTH, RANGE 4 WEST AND TOWNSHIP 3 NORTH, RANGE 5 WEST

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A — No Base Flood Elevations determined.
- ZONE AE — Base Flood Elevations determined.
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are generally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

- A — A — Cross section line
- 2 — 2 — Transect line

112° 07' 08", 33° 25' 41" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4° 76 000 m E — 1000-meter Universal Transverse Mercator grid tick values, zone 12

875000 FT — 5000-foot grid tick values: Arizona State Plane coordinate system, central zone (FIPSZONE 3173), NAD83 (Transverse Mercator)

BM5513 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

• M1.5 — River Mile

MAP REPOSITORY

Refer to Repositories Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

April 19, 1989

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

September 4, 1991, December 3, 1993, September 30, 1996, July 19, 2001

September 30, 2005 - to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to change zone designations, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to incorporate previously issued Letters of Map Amendments.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

NFIP

PANEL 1530J

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA

AND INCORPORATED AREAS

PANEL 1530 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BUCKEYE, TOWN OF	040039	1530	J
MARICOPA COUNTY	040037	1530	J

EXHIBIT D

ANNOTATED FIRM PANEL 2 OF 2

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
04013C1530J
MAP REVISED
SEPTEMBER 30, 2005

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

N:\2004\042316\Project Support\Hydro\Exhibits\Figures\ ExhibitD2_Annotated_FIRmap-KR.dwg

EXHIBIT E

Floppy Disk with Hydraulic Models