

**Meeting of the Central Valley Flood Protection Board
November 16, 2012**

Staff Report – Encroachment Permit

**San Joaquin River Conservancy
Sycamore Island- North Channel Crossing Replacement, Madera County**

1.0 – ITEM

Consider approval of Permit No. 18800 (Attachment B)

2.0 – APPLICANT

San Joaquin River Conservancy
5469 E. Olive Avenue
Fresno, CA 93727

3.0 – LOCATION

The project is located on the right bank of the San Joaquin River Designated Floodway. (San Joaquin River, Sycamore Island North Channel, Madera County, see Attachment A)

4.0 – DESCRIPTION

Applicant proposes to clear approximately 250 linear feet of vegetation from Sycamore Island North Channel, replace existing culvert with a steel multi-plate arch culvert with river cobble base, seeding and replanting minor vegetation including a sprinkler service.

5.0 – PROJECT ANALYSIS

The San Joaquin River Conservancy (SJRC) was created by State legislation to serve as a managing entity to promote and establish the San Joaquin River Parkway. The Parkway is expected to provide a combination of low-impact recreation uses, education and natural resource protection along the San Joaquin River. The Sycamore Island is a recreational area along the San Joaquin River that is owned by the State of California

and administered by SJRC. Through funding from the Wildlife Conservation Board, the Department of Water Resources has agreed to engineer and manage a contract for the proposed work.

The purpose of the proposed project is to provide safer recreational access for Parkway visitors, improve fish passage and protection of channel habitat and management access for State agencies and fire emergency response providers. The existing culvert is not sized adequately for the channel flows and as a result, water tends to backup causing erosion and the earthen culvert bridge is too narrow for vehicles to safely cross.

The corrugated metal pipe and earthen bridge will be replaced by an arch steel plate culvert crossing, and concrete footings will be added to bear the bridge load. The bridge will have an overall width of 26-feet and a length of 80-feet to provide vehicle and pedestrian crossing. Vegetation within 100-150 feet away from each side of the culvert will be removed so that adequate slopes can be created around the new culvert and bridge, including reseeding with native grass and plant mix post construction. Construction of the proposed project will take place when the channel has no water flows. Approximately 2,300 cubic yards of soil will be disturbed.

5.1 – Authority of the Board

- California Code of Regulations, Title 23- Waters, Division 1, Article 5, §107 – Permitted Uses in Designated Floodways; Article 3, §112 – Streams Regulated

5.2 – Hydraulic Analysis

A hydraulic analysis was performed using the hydraulic model Hec-Ras, a one dimensional model developed by the U.S. Army Corps of Engineers. The hydraulic model design criteria included considerations to allow for upstream juvenile and adult salmon passage and having flow in the channel when Friant Releases are as low as 110 cfs.

The two methods used to establish flows through the north channel when the main channel flows are 110 cfs are as follows: 1) increasing the water surface elevation at the north channel inlet by placing a hydraulic control just downstream in the main channel, and 2) to grade the high areas in the north channel. The most conservative situation is to assume a hydraulic control has been placed in the main channel which would cause more water to be diverted to the north channel. When flows in the channel reach 8,000 cfs, there are approximately 615 cfs flowing down the north channel (7.7% split). According to Dave Rosgen (Rosgen, 2009) no more than 10% of a river's flow should be diverted down a side channel. Therefore, for flows of 8,000 cfs and 110 cfs, no more

than 800 cfs and 11 cfs, respectively, would be diverted through the north channel. Based on this, it was determined that an 80-foot long, 26-feet wide, 9-feet 7-inches high structural steel plate arch culvert with an invert elevation of 249.42 and a soffit elevation of 263.00 feet would be adequate. The bottom of the culvert will be a river cobble that will gradually slope from the concrete footings to the invert. See Attachment C and Figure 1 below. The proposed culvert design met design requirements for juvenile and adult salmon passage including water velocity and depth.

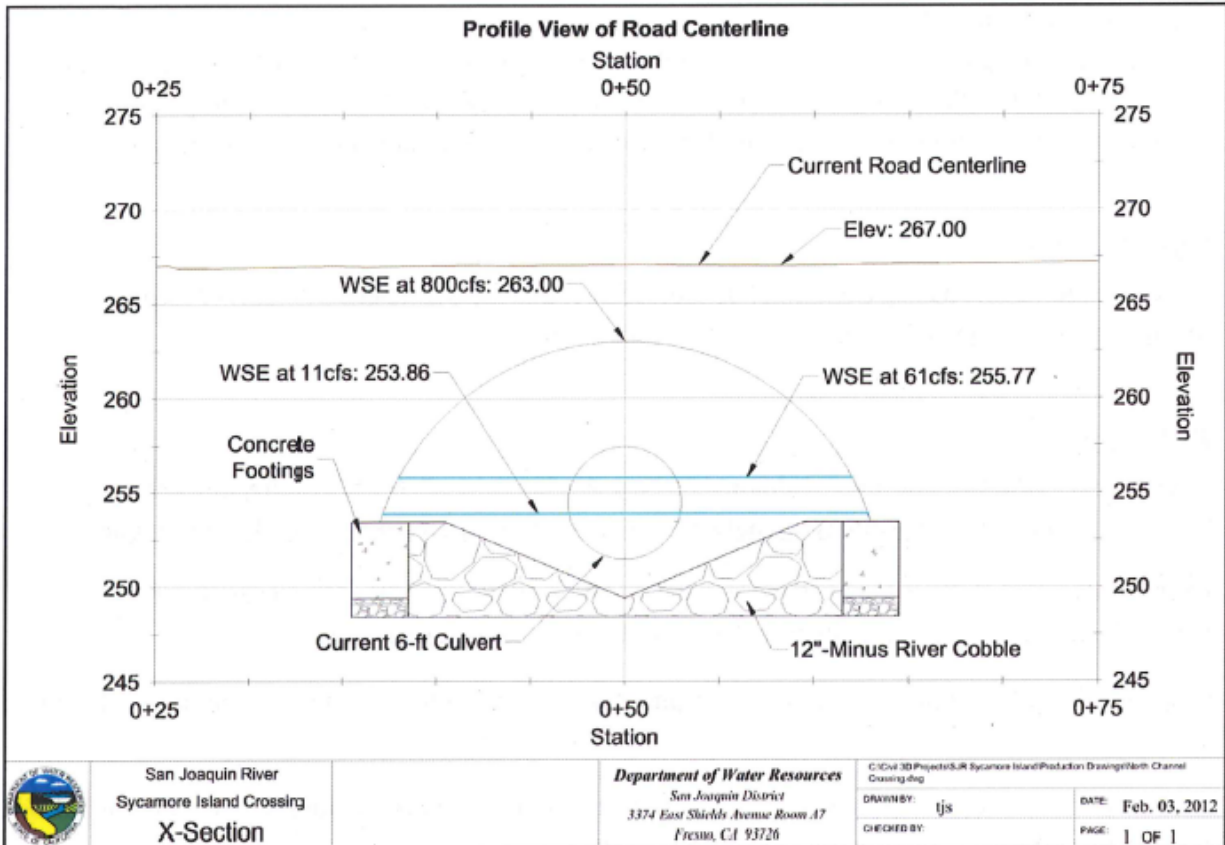


Figure 1 - Culvert Design (source: Hydraulic Analysis Report Figure 5 prepared by DWR)

The location of the proposed project falls within the Board’s adopted San Joaquin River Designated Floodway, which has a design flow of 18,000 to 20,000 cfs. The design of the proposed project was limited to flows no greater than 8,000 cfs. The proposed modifications to the existing deficient facilities will be an improvement to channel flows. Therefore, the Board’s designated floodway design flows will not be impaired by the proposed project.

5.3 – Geotechnical Analysis

The scope of project did not require a geotechnical analysis. Earthwork activities will be completed in accordance with condition in Permit No. 18800 (Attachment B) and Title 23, Section 123.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U.S. Army Corps of Engineers comment letter has been received for this application. The USACE District Engineer has no objection to the project as it does not affect any federally constructed projects. The letter is incorporated into the permit as Exhibit A.
- The San Joaquin River Conservancy serves as the Local Maintaining Agency at this proposed project site and they have endorsed the project with no conditions.

7.0 – CEQA ANALYSIS

Board staff has prepared the following California Environmental Quality Act (CEQA) determination:

The Board has determined that the project is categorically exempt from CEQA under a Class 2 Categorical Exemption (CEQA Guidelines Section 15302) covering replacement of existing facilities.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit are in compliance with Title 23 California Code of Regulations.

3. Effects of the decision on the entire State Plan of Flood Control:

The proposed culvert and appurtenances will have an insignificant effect on facilities of the State Plan of Flood Control and the project is consistent with the Central Valley Flood Protection Plan.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

Effects to the proposed project from reasonable projected future events will be negligible.

9.0 – STAFF RECOMMENDATION

Staff recommends that the Board find the project exempt from CEQA, approve the permit, and direct staff to file a Notice of Exemption with the State Clearinghouse.

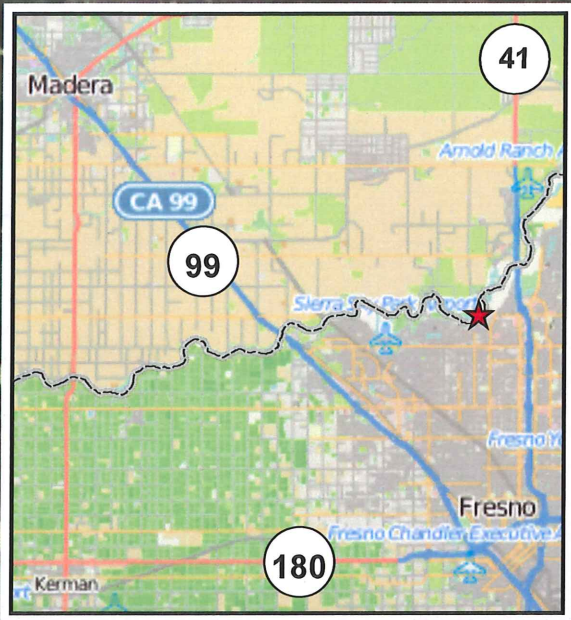
10.0 – LIST OF ATTACHMENTS

- A. Location Maps and Photos
- B. Draft Permit No. 18800
Exhibit A – USACE Comment letter dated September 25, 2012
- C. Design Plans and cross sections

Design Review:	Angeles Caliso
Environmental Review:	James Herota, Andrea Mauro
Document Review:	Mitra Emami, Len Marino

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ATTACHMENT A



North Channel inlet

North Channel

San Joaquin River



- Area of Potential Effect (Project Boundary) = 2.32 ac
- equipment storage area = 0.26 acres
- spoil area = 0.26 acres
- ▨ Channel Modification Boundary = 0.48 acres
- ▨ USFWS Wetland Inventory

San Joaquin River Parkway, Sycamore Island
North Channel Crossing
Project Location & Regional Map

★ Project Site



ATTACHMENT A

Numbered and Dated Pre-Project Color Photographs

PHOTO 1A
West side of culvert .
North Channel
October 2011
facing southwest



PHOTO 1B
West side of culvert .
North Channel
December 2011



ATTACHMENT A

PHOTO 2
West side of culvert
North Channel
January 2012

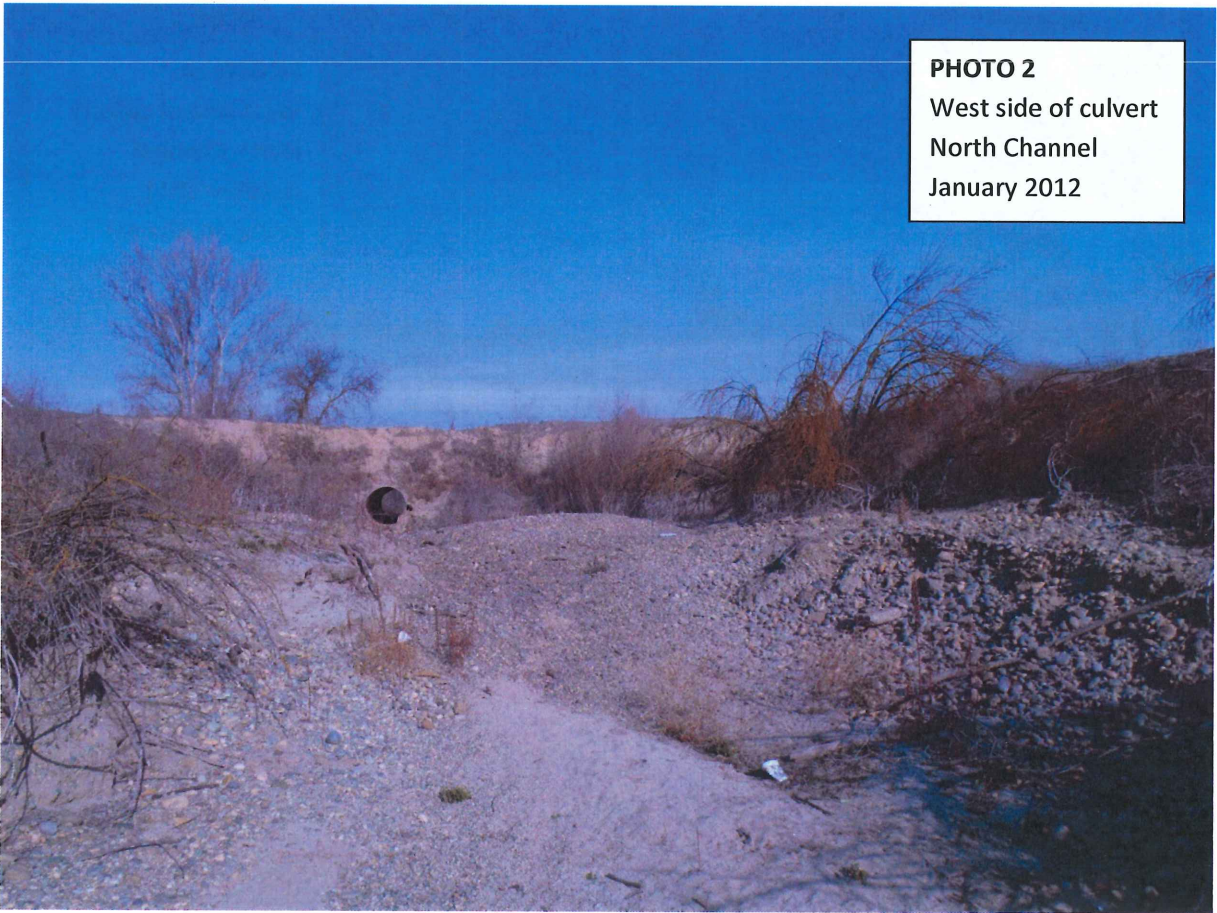


PHOTO 3A
East side of culvert .
North Channel
October 2011



ATTACHMENT A



PHOTO 3B
East side of culvert .
North Channel
January 2012

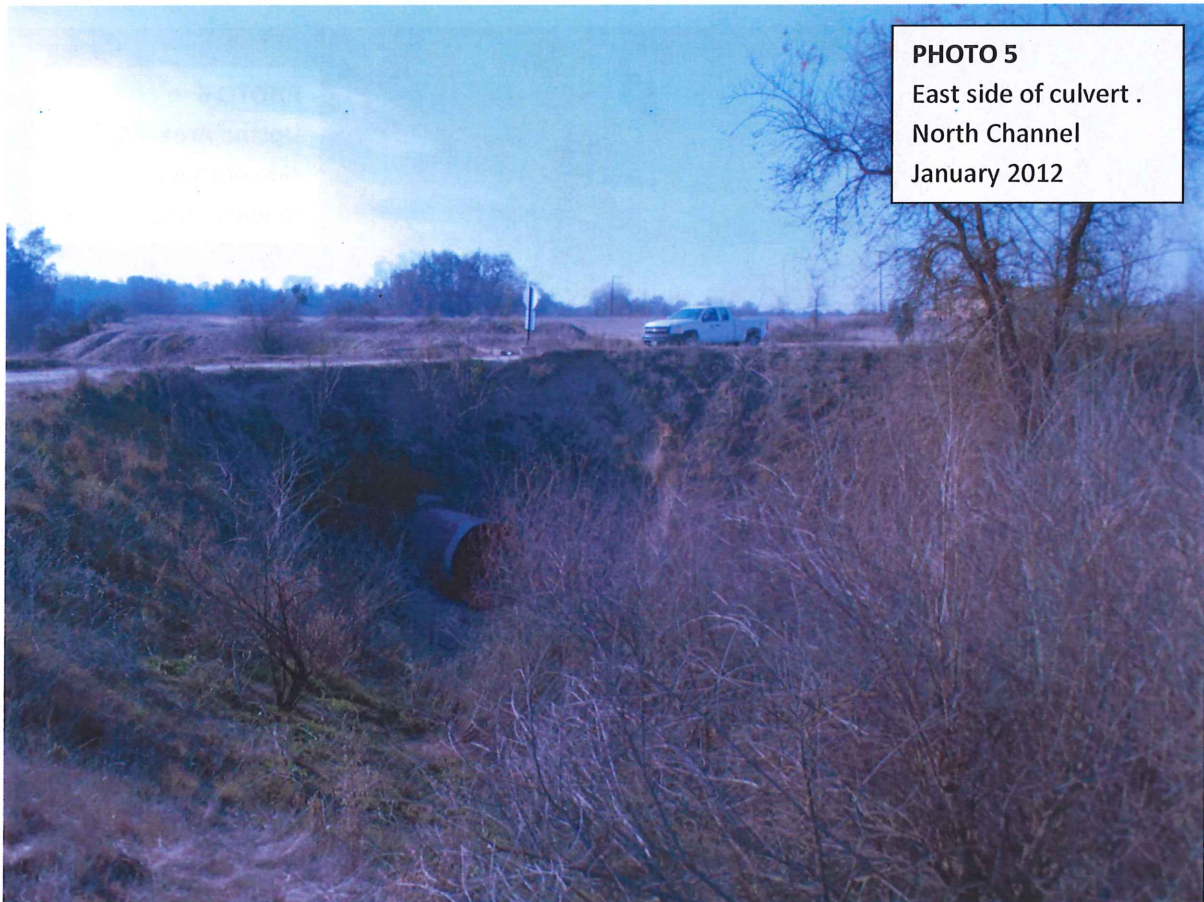


PHOTO 5
East side of culvert .
North Channel
January 2012

ATTACHMENT A

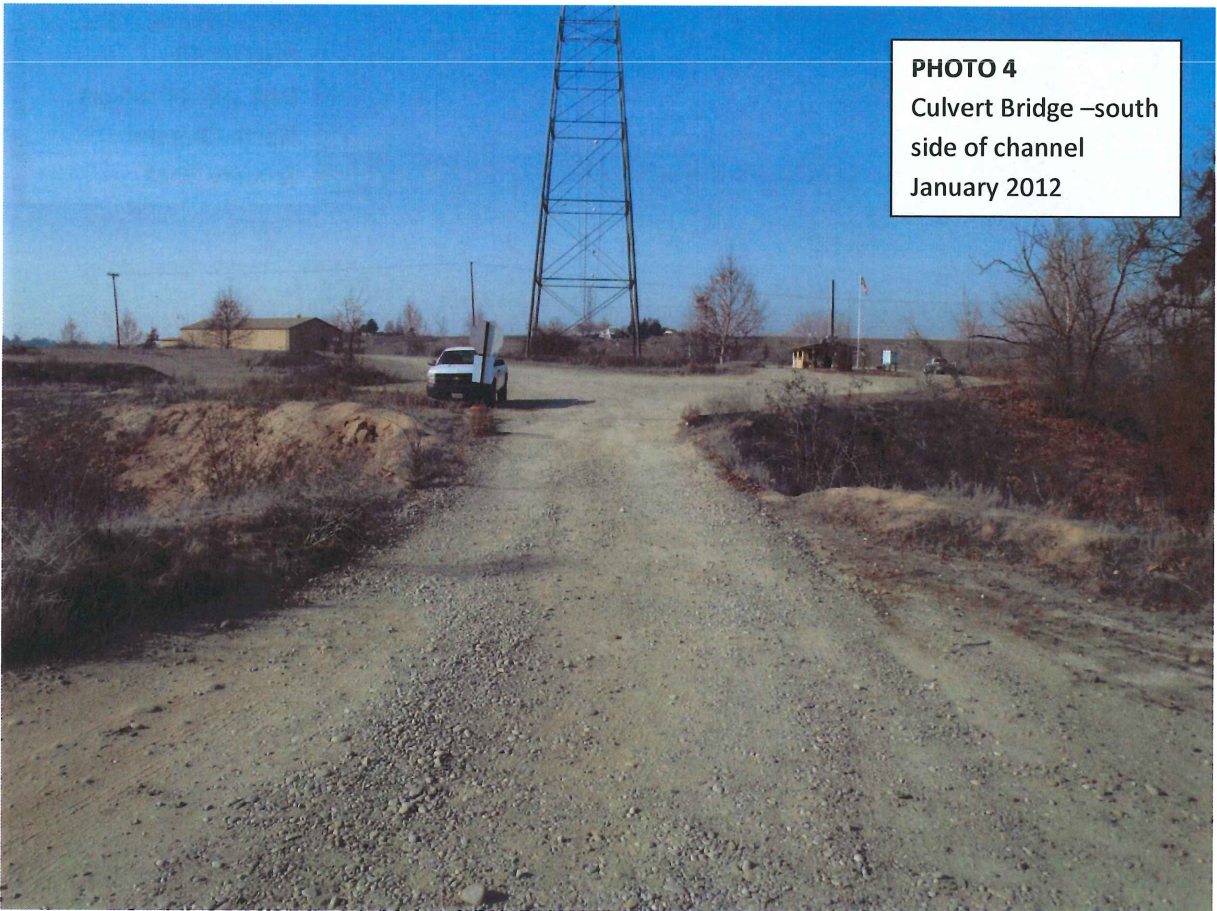


PHOTO 4
Culvert Bridge –south
side of channel
January 2012

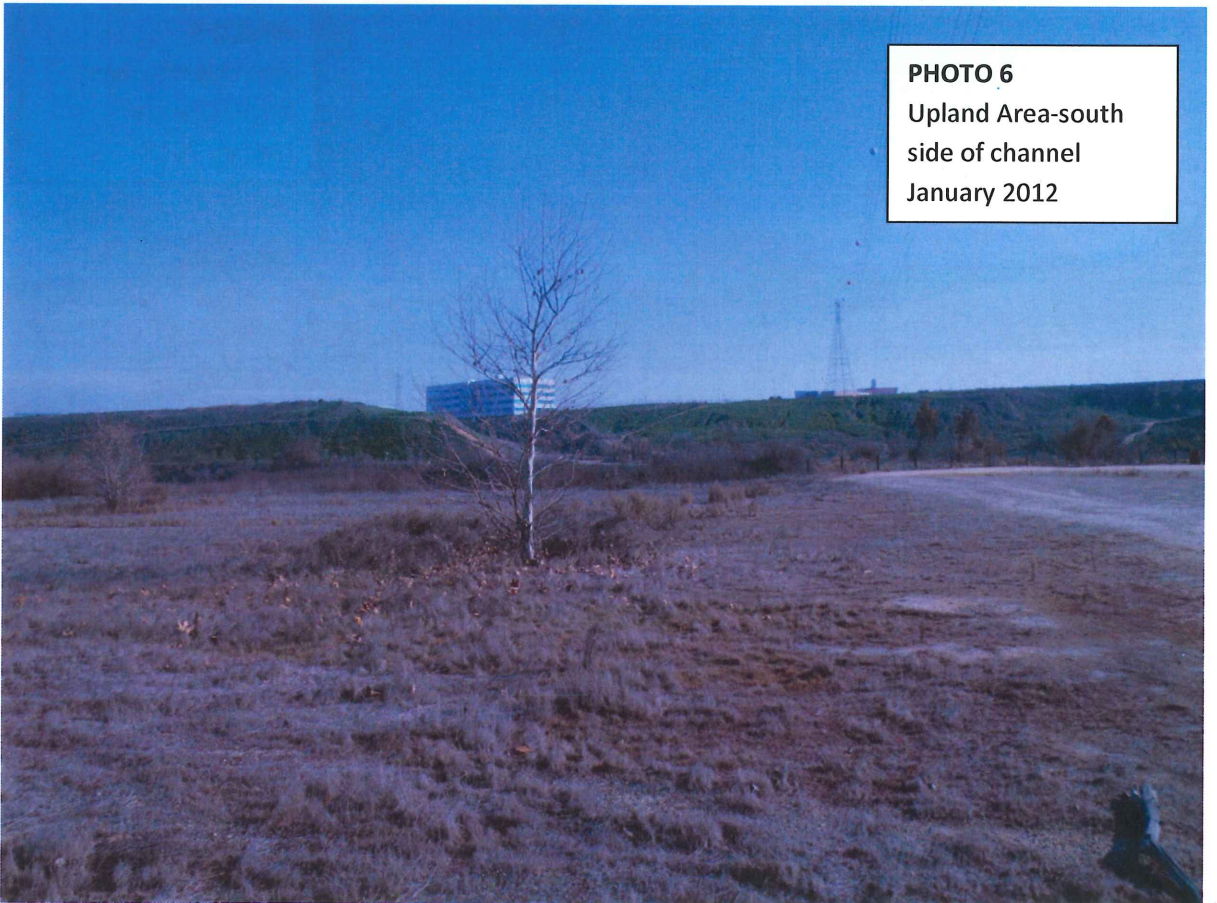


PHOTO 6
Upland Area-south
side of channel
January 2012

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ATTACHMENT B
DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18800 BD

This Permit is issued to:

San Joaquin River Conservancy
5469 E. Olive Avenue
Fresno, California 93727

To clear approximately 250 linear feet of vegetation from Sycamore Island North Channel, replace existing corrugated culvert with a steel multi-plate arch culvert spanning 26 feet wide and 80 feet long with a river cobble base for stabilization, seeding and replanting of minor vegetation including sprinkler service. The project is located on the right bank of the San Joaquin River approximately 2 miles downstream of Highway 41 in Madera County. (Section 30, T12S, R20E, MDB&M, San Joaquin River Conservancy, San Joaquin River, Madera County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

- ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.
- TWO:** Only work described in the subject application is authorized hereby.
- THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.
- FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.
- FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection

ATTACHMENT B

Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18800 BD

THIRTEEN: The permittee is advised to contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

FOURTEEN: Submitted drawings and specifications shall be stamped and signed by a registered engineer and a copy sent to the Central Valley Flood Protection Board prior to the commencement of work.

FIFTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

SIXTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

SEVENTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection

ATTACHMENT B

Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

EIGHTEEN: The Central Valley Flood Protection Board, Department of Water Resources, and San Joaquin County Flood Control and Water Conservation District shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

NINETEEN: No construction work of any kind shall be done during the flood season from November 1st to April 15th without prior approval of the Central Valley Flood Protection Board.

TWENTY: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

TWENTY-ONE: The permittee shall be responsible for the repair of any damages that may occur to the project levees and/or any other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-TWO: Backfill material for excavations shall be placed in 4- to 6-inch layers and compacted to at least the density of the adjacent, firm, undisturbed material.

TWENTY-THREE: All debris generated by this project shall be disposed of outside the San Joaquin River Designated Floodway.

TWENTY-FOUR: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

TWENTY-FIVE: After each period of high water, trees, brush, sediment, and other debris shall be kept cleared from the fish passage weirs and disposed of outside the floodway to maintain the capacity and flowage area of the San Joaquin River Designated Floodway.

TWENTY-SIX: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources, or any other agency responsible for maintenance.

TWENTY-SEVEN: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

TWENTY-EIGHT: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration,

ATTACHMENT B

relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

TWENTY-NINE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

THIRTY: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated September 25, 2012, which is attached to this permit as Exhibit A and is incorporated by reference.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

EXHIBIT A

Flood Protection and Navigation Section (18800)

SEP 25 2012

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

We have reviewed a permit application by San Joaquin River Conservancy (application number 18800). This project includes clearing approximately 250 linear feet of vegetation from Sycamore Island North Channel, replacing an existing culvert with a steel multi-plate arch culvert with river cobble base, and seeding and planting minor vegetation including sprinkler service. The project is located on the right bank of the San Joaquin River approximately 2 miles downstream of Highway 41, at 36.8529°N 119.8147°W NAD83, Madera County, California.

The District Engineer has no comments or recommendations regarding flood control because the proposed work does not affect a federally constructed project.

A file (201200598) has been opened because a Section 404 permit may be required. Please advise the applicant to contact the U.S Army Corps of Engineers, Sacramento District, Regulatory Division, 1325 J Street, Room 1350, Sacramento, California 95814, telephone (916) 557-5250.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,

A handwritten signature in black ink, appearing to read "Meegan G. Nagy".

Meegan G. Nagy, P.E.
Chief, Flood Protection and Navigation Section

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ATTACHMENT C

STATE OF CALIFORNIA
 THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
 DIVISION OF ENGINEERING



SAN JOAQUIN RIVER PARKWAY
 SYCAMORE ISLAND
NORTH CHANNEL CROSSING REPLACEMENT
 SPECIFICATION NO. XX-XX

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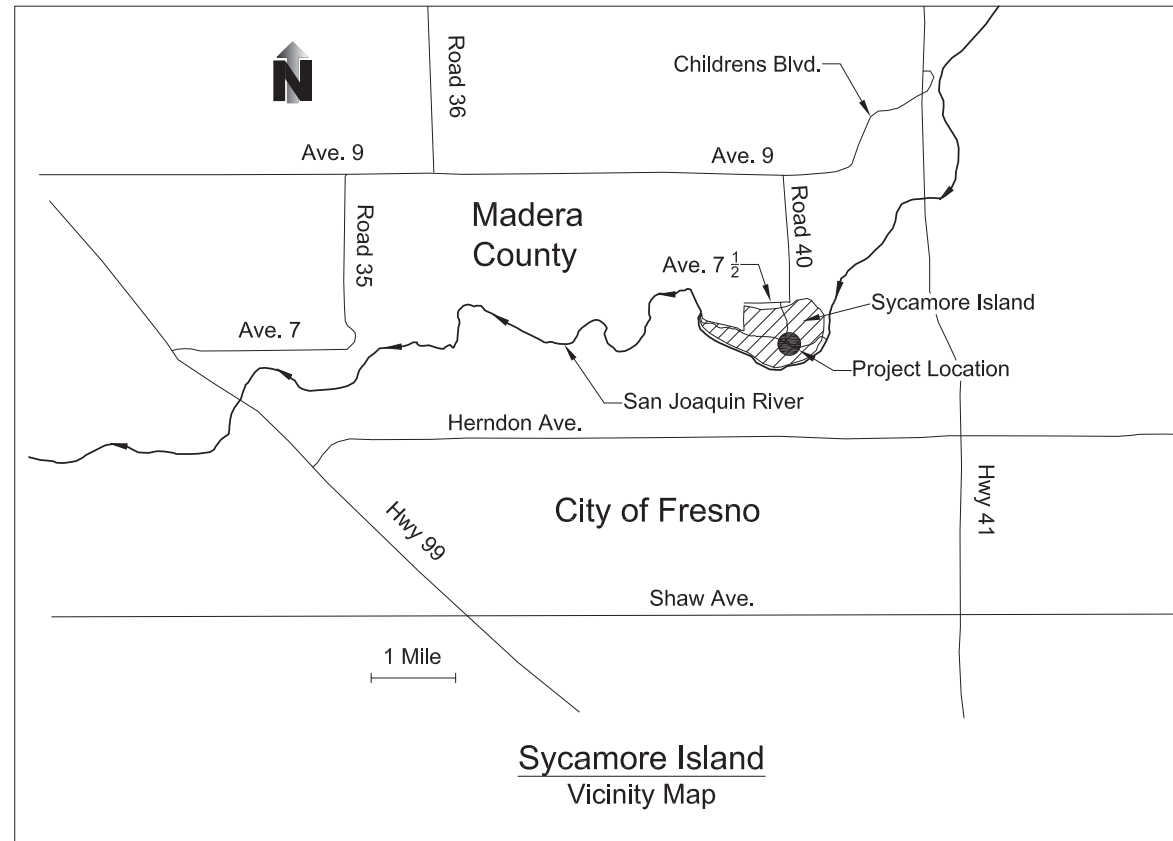
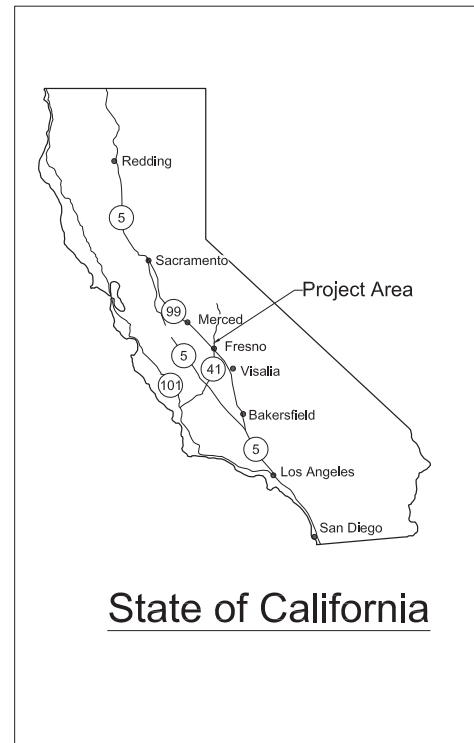
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INDEX TO SHEETS		
SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G1-1	LOCATION MAP AND LIST OF DRAWINGS
2	G2-1	EXISTING CONDITIONS
3	C1-1	NEW CULVERT PLAN AND PROFILE
4	C2-1	CROSS SECTIONS
5	C3-1	FOOTING DETAILS
6	C3-2	COBBLE & GEOTEXTILE DETAILS
7	C3-3	REVEGETATION PLAN & DETAILS
8	C3-4	GUARD RAILING DETAILS
9	C4-1	TABLES & GENERAL NOTES

REV.	DATE	DESCRIPTION	SUB.	APP'D



THINK SAFETY - ACT SAFELY

APPROVED BY: _____ DATE: _____
 CHIEF, DIVISION OF ENGINEERING
 REG. C.E. NO. 37148

SPEC. No.	
DRAWING No.	G1-1
REV.	SHEET No.
	1

A

B

C

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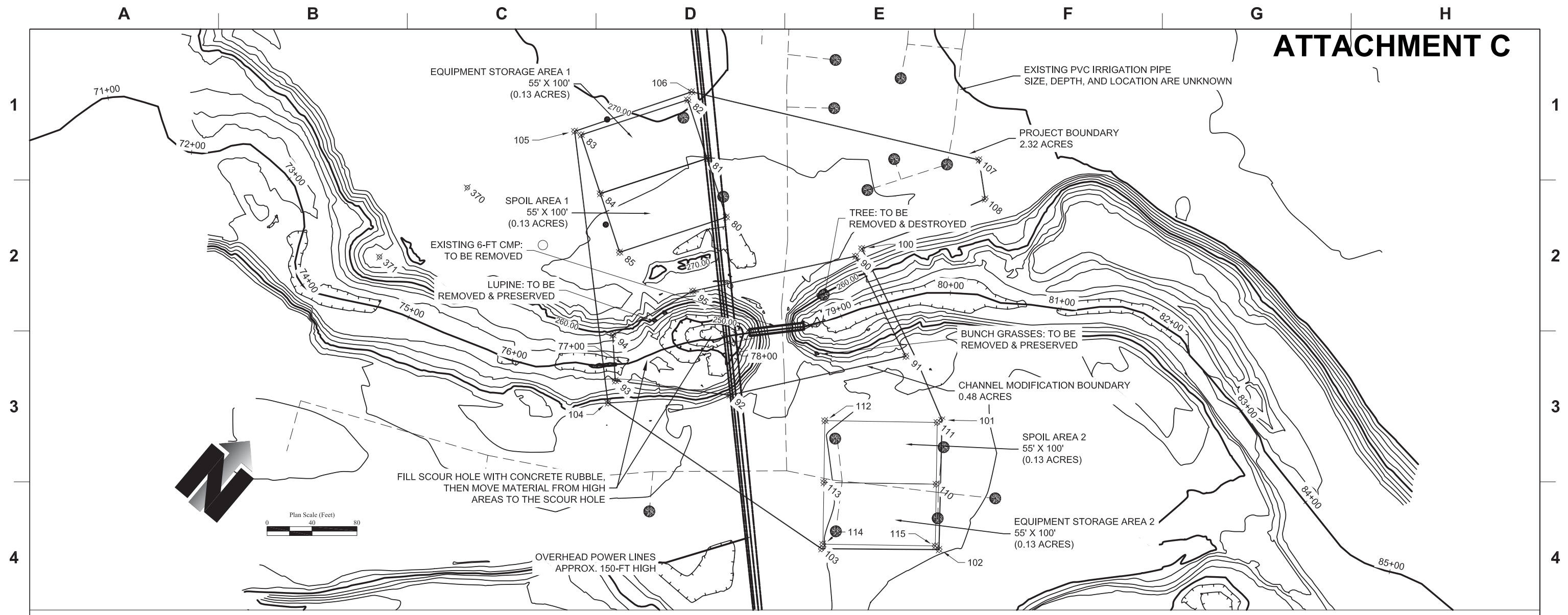
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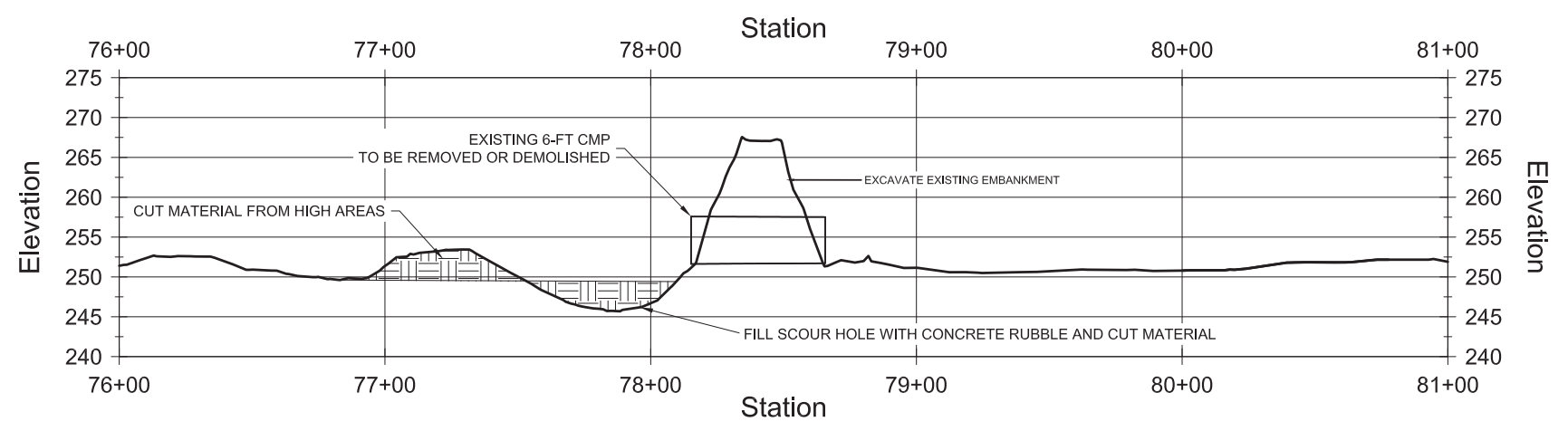
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ATTACHMENT C



Profile View of North Channel Thalweg

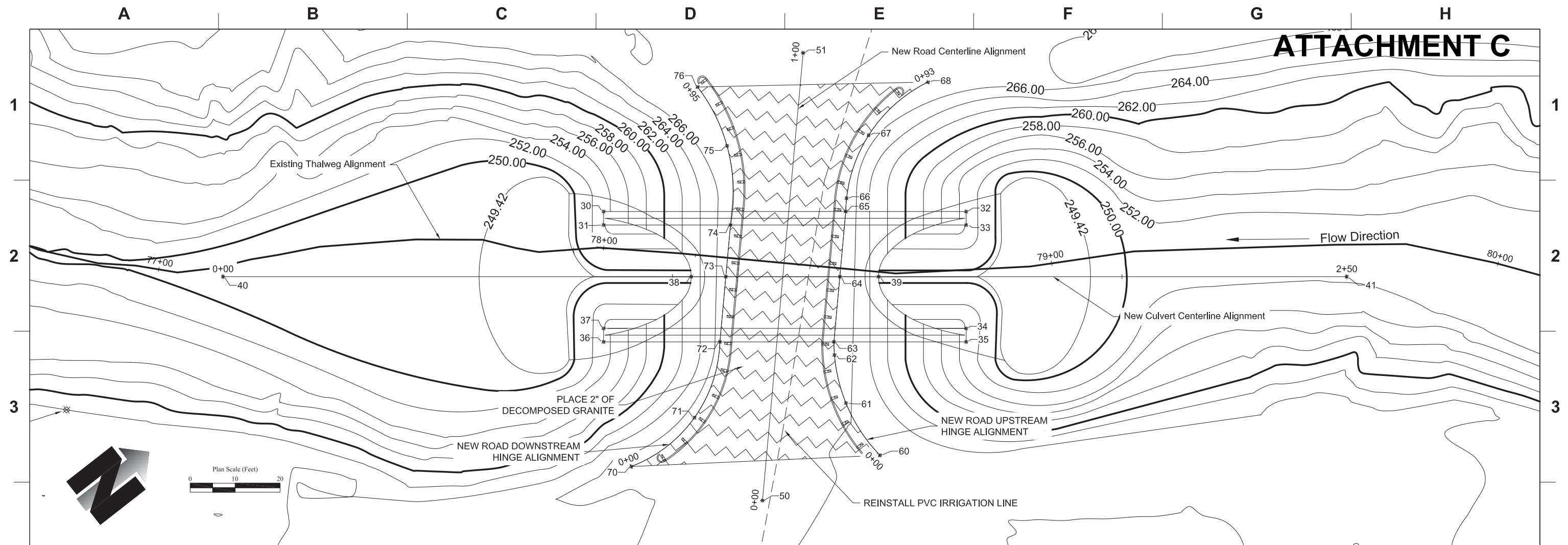


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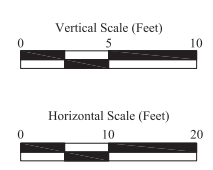
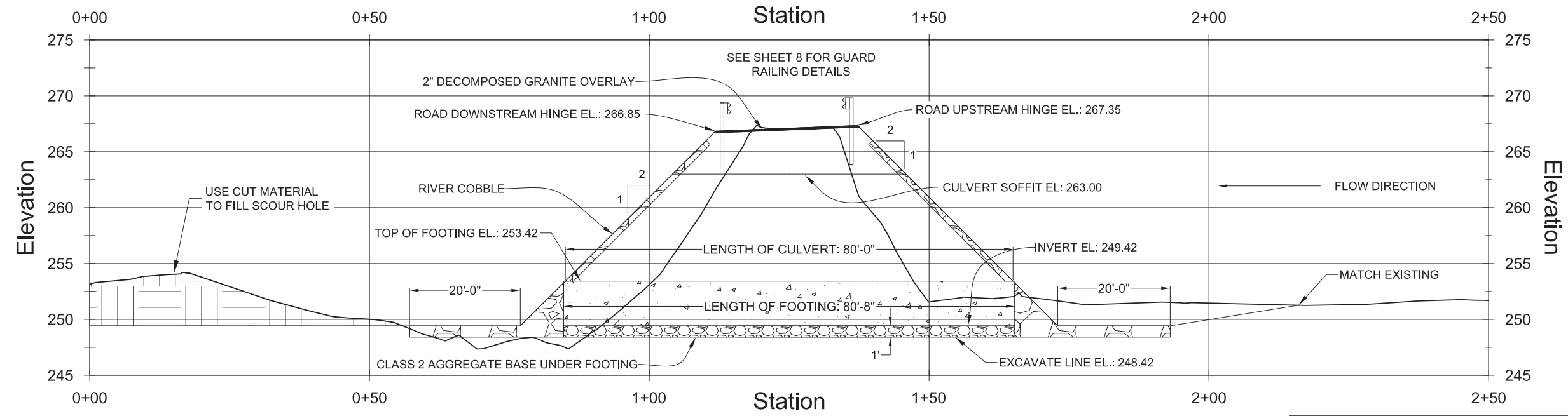
DESIGNED: T. Snyder REG. C.E. No. 76907	CHECKED: Staff REG. C.E. No. XXXXXXX	APPROVAL RECOMMENDED: DATE: CHIEF, STRUCTURES SECTION, REG. C.E. No. 36354		STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING
DRAWN: T. Snyder REG. C.E. No. 76907	REVIEWED: Staff REG. C.E. No. XXXXXXX	APPROVAL RECOMMENDED: DATE: CHIEF, CONSTRUCTION OFFICE		
SUBMITTED: K. Faulkenberry REG. C.E. No. 49932	APPROVED:	DATE: CHIEF, CIVIL ENGR. BRANCH, REG. C.E. No. 34327		
REV.	DATE	DESCRIPTION		

SOUTH CENTRAL REGION SAN JOAQUIN RIVER PARKWAY SYCAMORE ISLAND - NORTH CHANNEL CROSSING IMPROVEMENT Existing Conditions		SPEC. No.
DRAWING No.	G2-1	
REV.	SHEET No.	2

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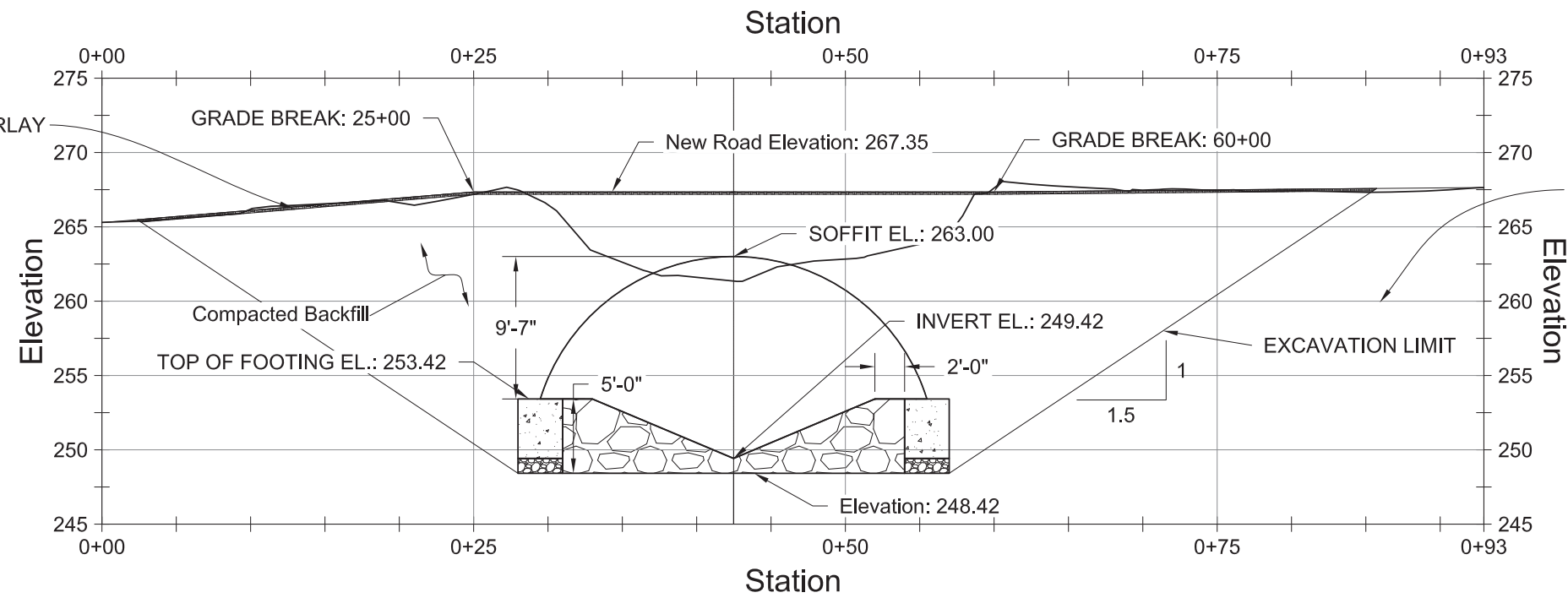
Profile View of New Culvert



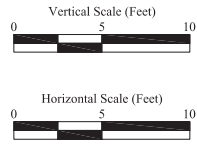
THINK SAFETY - ACT SAFELY

DESIGNED: T. Snyder REG. C.E. No. 76907		CHECKED: Staff		APPROVAL RECOMMENDED: DATE:			STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING	SOUTH CENTRAL REGION SAN JOAQUIN RIVER PARKWAY SYCAMORE ISLAND - NORTH CHANNEL CROSSING IMPROVEMENT New Culvert Plan & Profile	SPEC. No.
DRAWN: T. Snyder REG. C.E. No. 76907		REVIEWED: Staff		APPROVAL RECOMMENDED: DATE:					DRAWING No. C1-1
SUBMITTED: K. Faulkenberry REG. C.E. No. 49932				APPROVED: DATE:					REV. SHEET No. 3
				CHIEF, CIVIL ENGR. BRANCH, REG. C.E. No. 34327					

Cross Section View of Upstream Road Crest

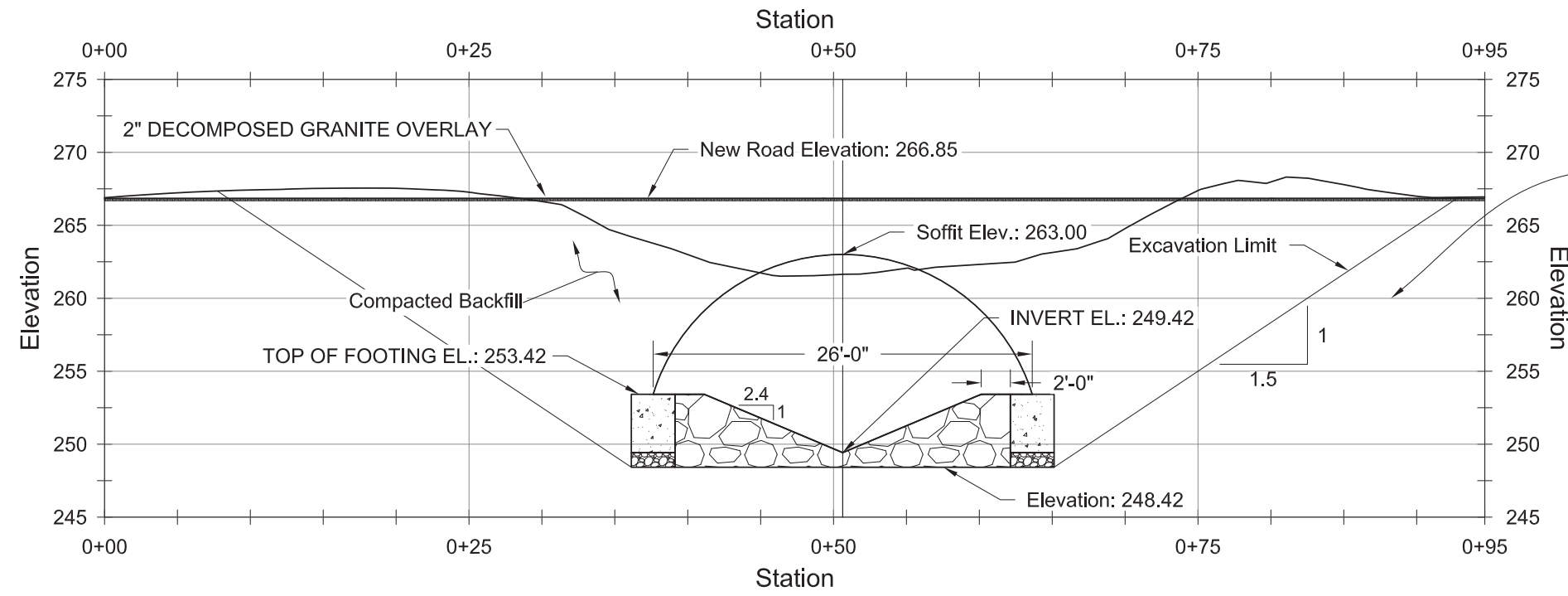


2" DECOMPOSED GRANITE OVERLAY

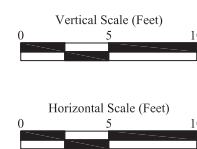


Ordinary High Water Mark:
Elevation 260.00ft

Cross Section View of Downstream Road Crest



2" DECOMPOSED GRANITE OVERLAY

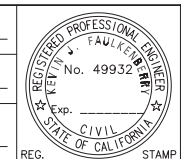


Ordinary High Water Mark:
Elevation 260.00ft

THINK SAFETY - ACT SAFELY

DESIGNED: T. Snyder REG. C.E. No. 76907	CHECKED: Staff REG. C.E. No. XXXXXX	APPROVAL RECOMMENDED: DATE:
DRAWN: T. Snyder REG. C.E. No. 76907	REVIEWED: Staff REG. C.E. No. XXXXXX	APPROVAL RECOMMENDED: DATE:
SUBMITTED: K. Faulkenberry REG. C.E. No. 49932	APPROVED:	DATE:

APPROVAL RECOMMENDED: DATE:	CHIEF, STRUCTURES SECTION, REG. C.E. No. 36354
APPROVAL RECOMMENDED: DATE:	CHIEF CONSTRUCTION OFFICE
APPROVED: DATE:	CHIEF, CIVIL ENGR. BRANCH, REG. C.E. No. 34327

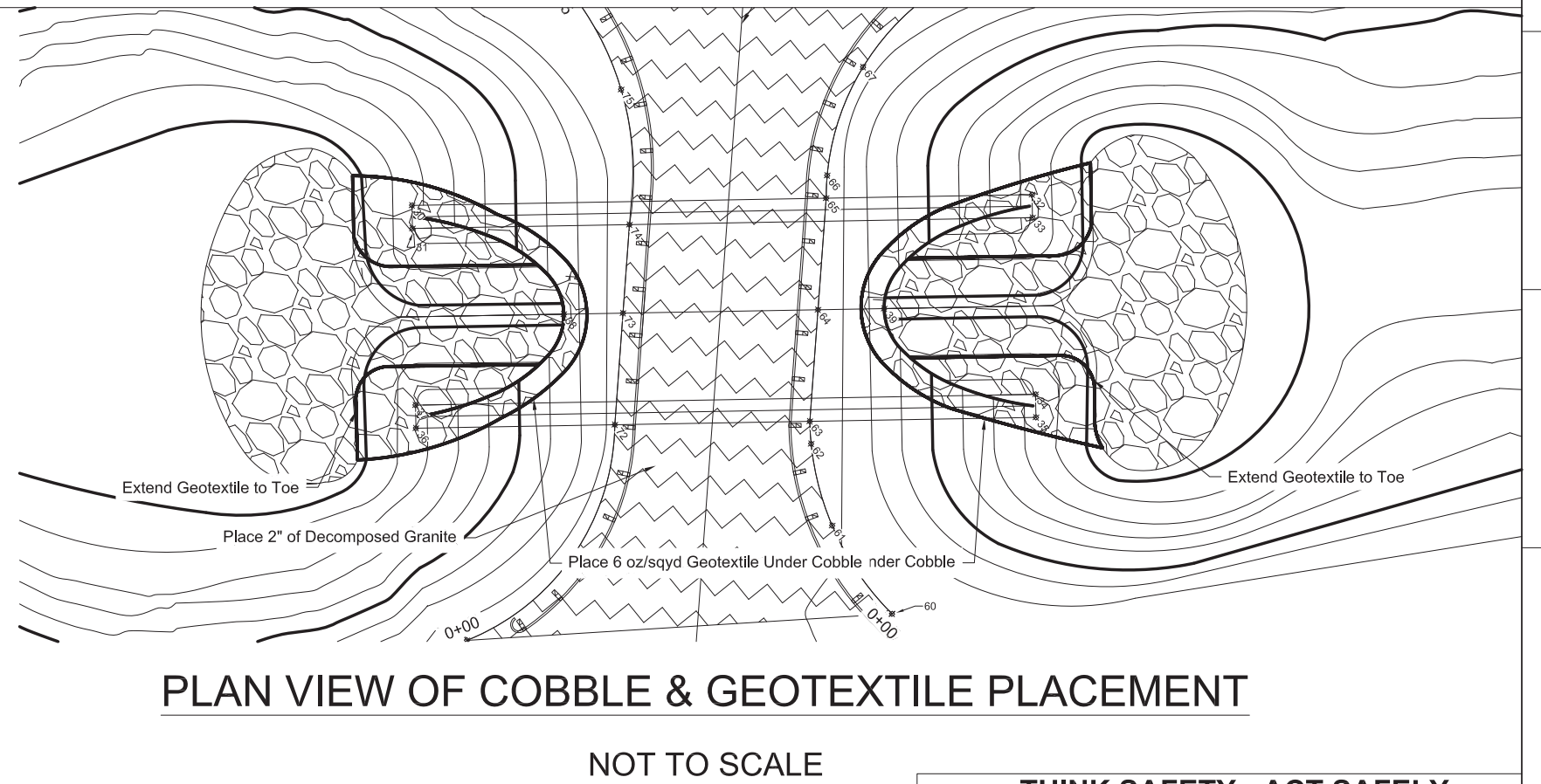
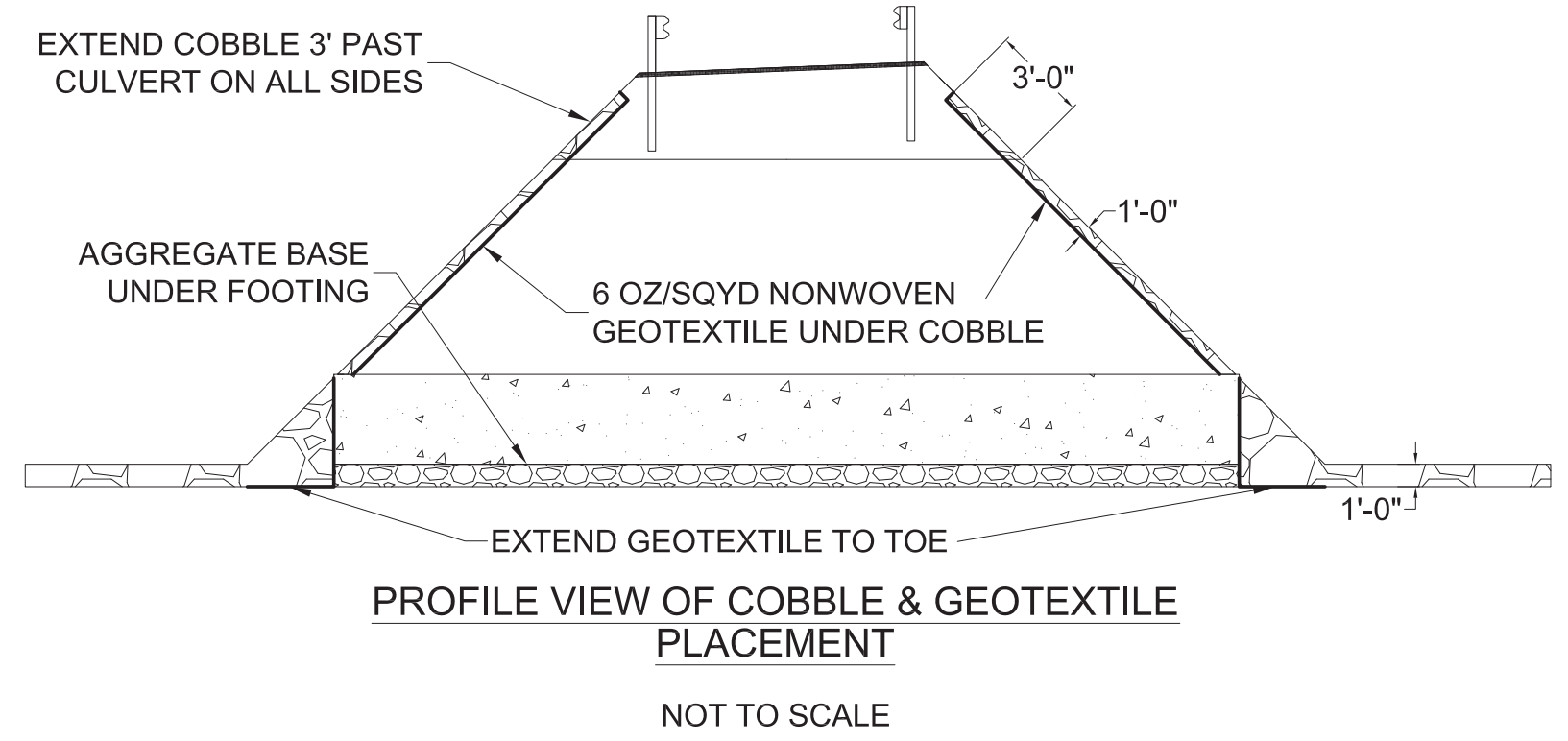
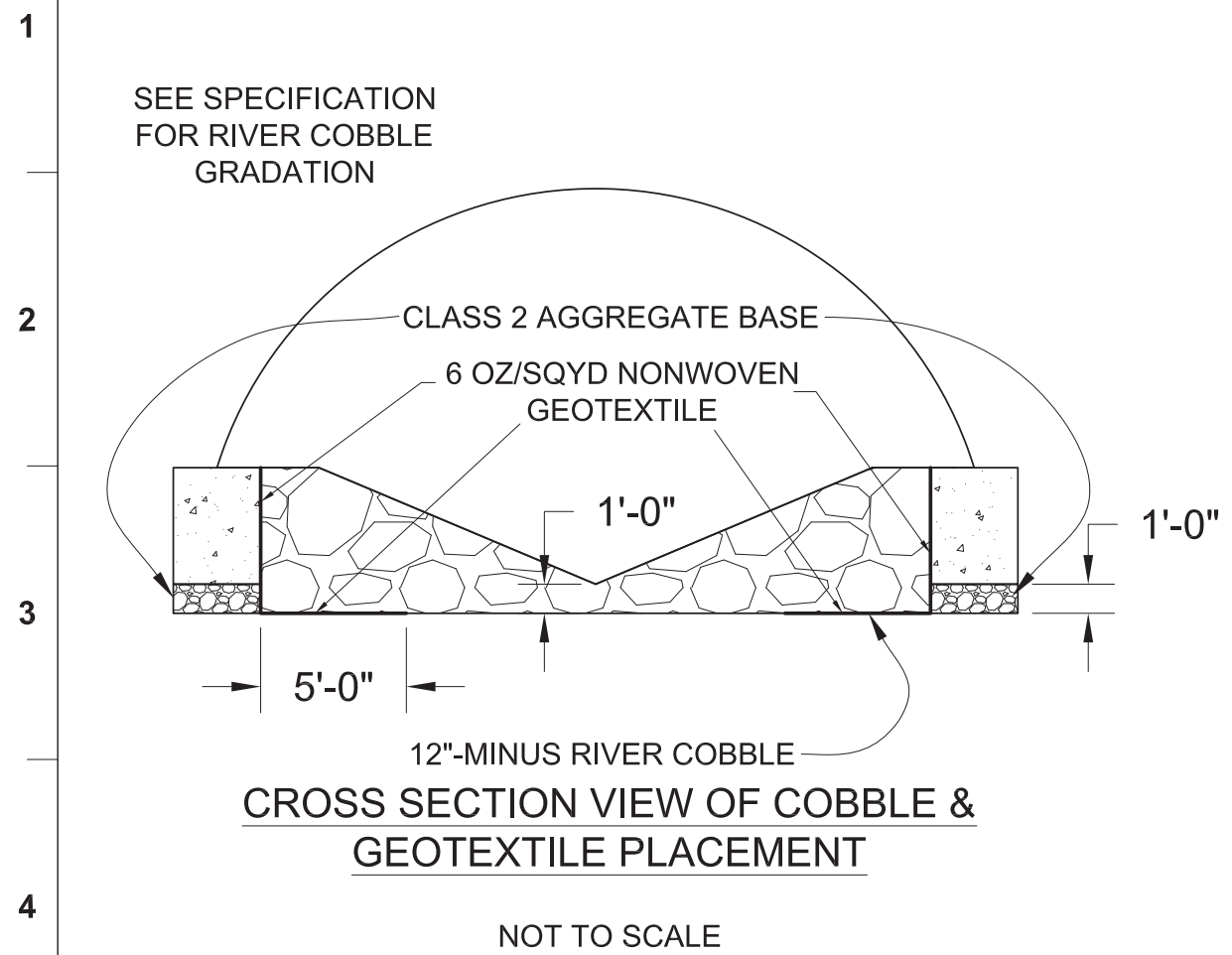


STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF ENGINEERING

SOUTH CENTRAL REGION
SAN JOAQUIN RIVER PARKWAY
SYCAMORE ISLAND - NORTH CHANNEL
CROSSING IMPROVEMENT
Cross Sections

SPEC. No.	
DRAWING No.	C2-1
REV. SHEET No.	4

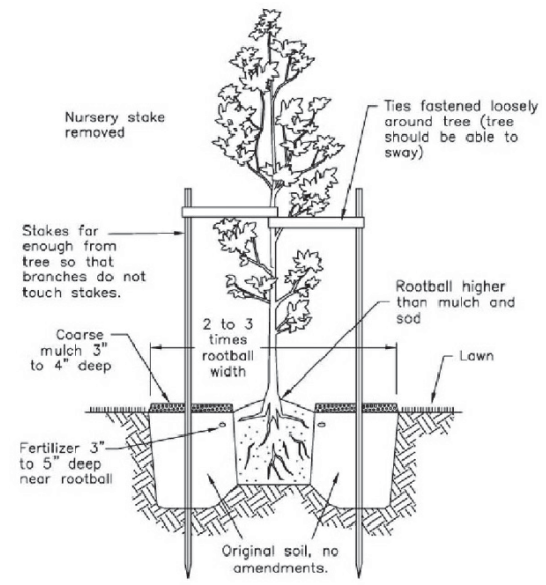
ATTACHMENT C



DESIGNED: T. Snyder REG. C.E. No. 76907	CHECKED: Staff REG. C.E. No. XXXXXX	APPROVAL RECOMMENDED: DATE:		STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING	THINK SAFETY - ACT SAFELY SOUTH CENTRAL REGION SAN JOAQUIN RIVER PARKWAY SYCAMORE ISLAND - NORTH CHANNEL CROSSING IMPROVEMENT COBBLE & GEOTEXTILE DETAILS	SPEC. No.
DRAWN: T. Snyder REG. C.E. No. 76907	REVIEWED: Staff REG. C.E. No. XXXXXX	APPROVAL RECOMMENDED: DATE:				DRAWING No. C3-2
SUBMITTED: K. Faulkenberry REG. C.E. No. 49932	APPROVED: DATE:	CHIEF, CIVIL ENGR. BRANCH, REG. C.E. No. 34327				REV. SHEET No. 6

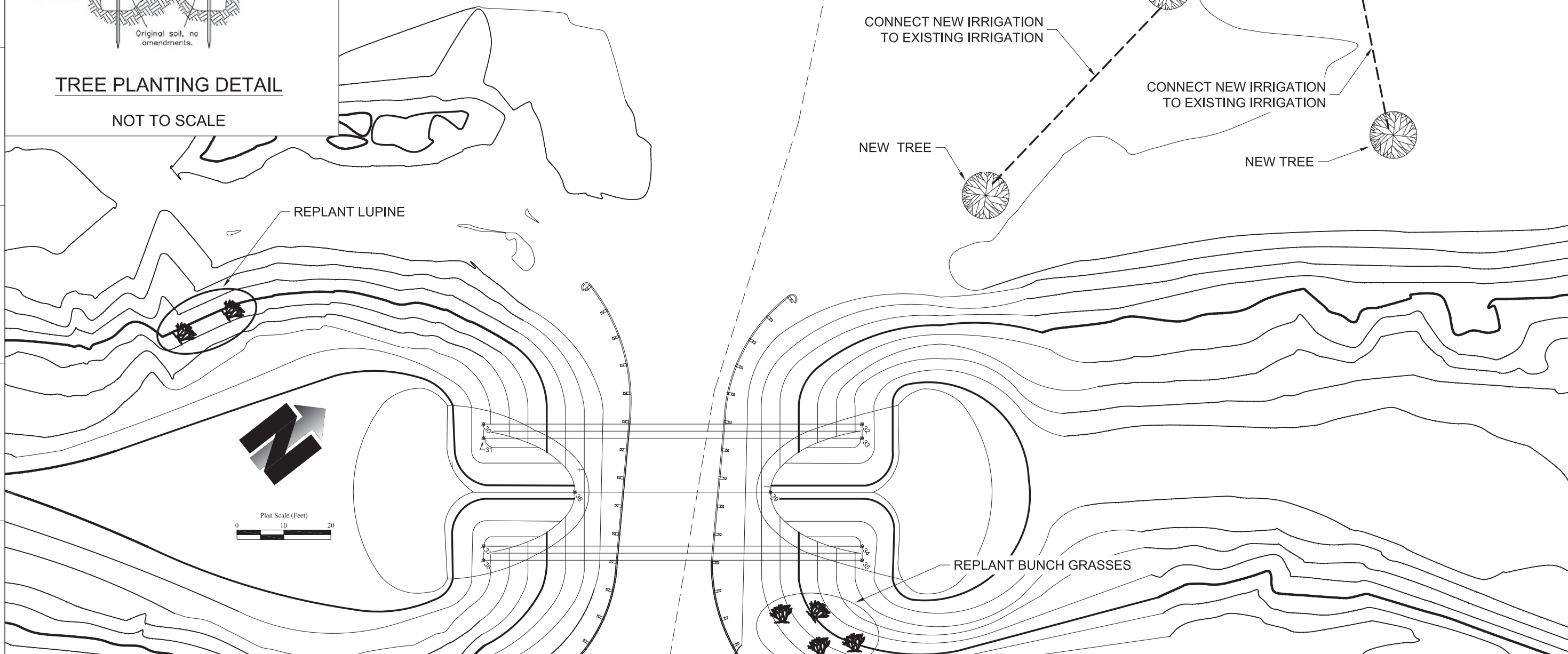
A B C D E F G H

EXISTING IRRIGATION SIZES, DEPTHS, AND LOCATIONS ARE UNKNOWN.



TREE PLANTING DETAIL

NOT TO SCALE



DESIGNED: T. Snyder REG. C.E. No. 76907		CHECKED: Staff REG. C.E. No. XXXXXXX		APPROVAL RECOMMENDED: DATE: CHIEF, STRUCTURES SECTION, REG. C.E. No. 36354		STATE OF CALIFORNIA CALIFORNIA NATURAL RESOURCES AGENCY		SOUTH CENTRAL REGION SAN JOAQUIN RIVER PARKWAY		SPEC. No.	
DRAWN: T. Snyder REG. C.E. No. 76907		REVIEWED: Staff REG. C.E. No. XXXXXXX		APPROVAL RECOMMENDED: DATE: CHIEF CONSTRUCTION OFFICE		DEPARTMENT OF WATER RESOURCES		SYCAMORE ISLAND - NORTH CHANNEL CROSSING IMPROVEMENT		DRAWING No. C3-3	
SUBMITTED: K. Faulkenberry REG. C.E. No. 49932		APPROVED: DATE: CHIEF, CIVIL ENGR. BRANCH, REG. C.E. NO. 34327		REG. CIVIL ENGINEER K. FAULKENBERRY No. 49932 Exp. _____ CIVIL STATE OF CALIFORNIA		DIVISION OF ENGINEERING		REVEGETATION PLAN & DETAILS		REV. SHEET No. 7	

THINK SAFETY - ACT SAFELY