

**Meeting of the Central Valley Flood Protection Board
March 29, 2019**

Permit Staff Report

**Tehama County Department of Public Works
Jellys Ferry Road Bridge Replacement, Tehama County**

1.0 – ITEM

Consider approval of Permit No. 19371. (Attachment A)

2.0 - APPLICANT

Tehama County Department of Public Works (County).

3.0 – PROJECT LOCATION

The project is located where Jellys Ferry Road crosses the Sacramento River, approximately 7 miles northeast of the intersection of Interstate 5 and Jellys Ferry Road. (Sacramento River, Tehama County) (Attachment B)

4.0 – PROJECT DESCRIPTION

The County is proposing to realign and raise Jellys Ferry Road to accommodate the construction of a new bridge over the main Sacramento River and to construct a second (new) bridge over the north overflow area. The County is also proposing to remove the existing Jellys Ferry Road Bridge over the Sacramento River once the new bridges are completed.

The Project consists of:

- The realignment of the Jellys Ferry Road bridge approaches in the north and south bound directions;
- Construction of a new bridge that will be approximately 1,264-feet long and 47-feet wide. The six-span cast-in-place, post-tensioned box girder bridge will cross over the main Sacramento River channel;

- Construction of a new bridge that will be approximately 682-feet long and 37-feet wide. The ten-span cast-in-place, prestressed concrete slab bridge will cross the low-lying area north of the Sacramento River; and
- Removal of the existing Jellys Ferry Road Bridge (No. 08C-0043).

(Attachment C)

5.0 – AUTHORITY OF THE BOARD

California Water Code § 8534, 8590 – 8610.5, and 8700 – 8710

California Code of Regulations, Title 23, Division 1 (Title 23):

- § 6, Need for a Permit
- § 13.3, Consent Calendar
- § 107, Permitted Uses in Designated Floodways
- § 112, Streams Regulated and Nonpermissible Work Periods
- § 121, Erosion Control
- § 128, Bridges

6.0 - PROJECT ANALYSIS

The existing Jellys Ferry Road Bridge is a 21-foot-wide, 940-foot-long bridge that was built in 1949. (Attachment B) The bridge is seismically and structurally deficient, and functionally obsolete. Additionally, the low-lying area north of the existing Jellys Ferry Road Bridge is frequently flooded, which results in closure of the road. The two new bridges will comply with the Local Bridge Seismic Retrofit Program and eliminate the frequent flooding of Jellys Ferry Road by realigning and raising a portion of the road.

The project components will consist of:

1. The proposed bridge over the main Sacramento River channel would be constructed on a new alignment that will be approximately 190-feet west (upstream) of the existing bridge. The overflow bridge will be constructed approximately 90-feet east of the existing Jellys Ferry Road. Additionally, Jellys Ferry Road between the main Sacramento River bridge and the overflow bridge will be raised above the 100-year water surface elevation by placing embankment fill 6 to 20-feet high (Attachment D).

2. The new bridge over the main Sacramento River will be approximately 1,264-feet long and 47-feet wide, six-span cast-in-place, post-tensioned box girder bridge.
3. The overflow bridge will be approximately 682-feet long and 37-feet wide over the low-lying area north of the Sacramento River comprised of ten-span cast-in-place, prestressed concrete slab bridge.
4. Temporary access into the Sacramento River for bridge pier and foundation construction will be established by means of constructed gravel pads and platforms/trestles. Two gravel pads with approximately 125-feet of top width will be placed in the river. The first one will extend from the south bank to pier 2 (approximately 120-feet in length), and the other will extend from the north bank to pier 3 (approximately 130-feet in length). Temporary work trestles would be built upstream and downstream of the new bridge to span between the gravel pads. The trestles will be supported on approximately 50 thick-walled, 12-inch driven steel H-piles, with an additional 30 piles for finger piers to access and remove the existing bridge piers.
5. Rock slope protection will be placed on the abutments of the bridge.
6. The existing Jellys Ferry Road bridge will be removed once construction of the new bridge is complete.

The proposed project meets all applicable Title 23 standards.

6.1 – Hydraulic Analysis

The U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center-River Analysis System (HEC-RAS) program version 4.1.0 was used to perform a one-dimensional hydraulic analysis to evaluate the hydraulic impacts associated with the proposed project. The Board's adopted flow for this reach of the Sacramento River DF is 140,000 cfs. This flow represents a 10-year flood event, which is considered to be inadequate for bridge design. Per Caltrans and the Federal Highway Administration requirements, at a minimum, a bridge must be designed for a 50-year flood event. Therefore, the analysis was performed using a flow of 183,000 cfs for the main Sacramento River channel and 11,500 cfs for the north overflow channel, these flows represent a 50-year flood event. The analysis shows that the WSEs in the main Sacramento River channel will be reduced by 0.4-feet for with project conditions while the north overflow channel raise by 0.2-feet (Attachment D). The decrease in water surface elevation in the main Sacramento River channel can be attributed to reduced number of bridge piers in the channel. The following table summarizes the results from the analysis.

	Sacramento River Channel		North Overflow Channel	
	Existing	Proposed	Existing	Proposed
Design Flow (cfs)	183,000		11,500	
Water Surface Elevation (ft)	349.4	349.0	351.1	351.3
Avg. Channel Velocity (fps)	9.3	9.3	2.3	2.0
Change in WSEs	- 0.4		+0.2	

Based on this analysis the proposed bridge over the Sacramento River will have a minimum soffit elevation of 352.0-feet and the north overflow bridge will have a soffit elevation of 353.3-feet. These elevations represent 3-feet and 2-feet clearance over the 50-year WSEs respectively. The analysis also included the potential for pier and abutment scour. The total potential scour elevations at piers and abutments are summarized in the following table:

Support Location	Total Scour (ft.)
Sacramento River Channel	
Piers 2 & 3	21.9
Piers 4, 5 & 6	16.2
Abutment 7	5.0
North Overflow Channel	
All Piers	7.7
Abutments	5.0

The construction of the new bridge is expected to last for at least one flood season, as such a hydraulic model was prepared to assess the flood risk associated with the temporary falsework. The results from the model indicate there will be a maximum rise of 0.20-feet at the bridge, which is considered to be acceptable.

6.2 – Geotechnical Analysis

There are no levees within the project area, therefore, a geotechnical analysis was not required.

7.0 – AGENCY COMMENTS AND ENDORSEMENTS

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

- There is no Local Maintaining Agency for the project area.
- Correspondence from the U.S Army Corps of Engineers (USACE) has been received for this application. The USACE Sacramento District Engineer has no comments or recommendations regarding flood control because the proposed work does not affect a federally constructed project.

8.0 – CEQA ANALYSIS

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

The Board, as a responsible agency under CEQA, has reviewed the Initial Study/ Mitigated Negative Declaration (IS/MND) (SCH No. 2007082085, November 2007), the Addendum to the 2007 IS/MND that was prepared in June 2014 (SCH No. 2007082085), and the Mitigation Monitoring and Reporting Program (MMRP) for the Jellys Ferry Road Bridge Replacement Project, prepared by the lead agency, the County. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board (Board) website at: <http://cvfvpb.ca.gov/event/march-2019-regular-business-meeting/> under a link for this agenda item. The documents are also available for review in hard copy at the Board and the County's offices.

The County determined that the Jellys Ferry Road Bridge Replacement Project, as described in the IS/MND, and the Addendum to the 2007 IS/MND, would not have a significant effect on the environment, and filed a Notice of Determination with the State Clearinghouse on June 30, 2014. The County incorporated mandatory mitigation measures into the project plans to avoid impacts, or to mitigate such impacts to a point where no significant adverse impacts will occur. These mitigation measures are included in the County's IS/MND, and the Addendum to the 2007 IS/MND, and address impacts to aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, and noise. The mitigation measures are further described in the County's adopted IS/MND.

In accordance with CEQA Guidelines Section 15096(e), Board staff independently reviewed the County's IS/MND, and the Addendum to the 2007 IS/MND, and finds the environmental documents prepared by the lead agency adequately address hydrology impacts, including potential flood risk, within the Board's jurisdiction. The Board, as a

responsible agency, is responsible for mitigating and avoiding only the direct and indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve (CEQA Guidelines § 15096(g); Public Resources Code § 21002.1(d)). In accordance with CEQA Guidelines Section 15096(f) and (g), staff recommends the Board make responsible agency findings that approval of Permit No. 19371 would not have a significant adverse impact and no additional mitigation measures within the Board's jurisdiction are required.

The documents and other materials which constitute the record of the Central Valley Flood Board's proceedings in this matter are in the custody of the Executive Officer, Central Valley Flood Protection Board, 3310 El Camino Ave., Suite 170, Sacramento, California 95821.

9.0 – CA WATER CODE SECTION 8610.5 AND OTHER 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 relate to the scientific issues presented by the executive officer, legal counsel, the Department of Water Resources or other parties that raise credible scientific issues.

The accepted industry standards for hydrology and hydraulics for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on facilities of the State Plan of Flood Control (SPFC).

There are no SPFC facilities within the vicinity of the project site and changes in WSEs are localized and negligible to affect any SPFC facilities upstream or downstream. The project meets all applicable Title 23 standards.

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

The proposed bridge over the main Sacramento River channel will have increased flowage area, seismic resistance, load capacity, and it will accommodate the region's transportation needs. The north overflow bridge will prevent frequent road closure in the low-lying area of Jellys Ferry Road north of the Sacramento River Bridge. As such the replacement of the bridge improves public safety, and there are no expected adverse effects to the proposed project from reasonable projected future events.

10.0 – STAFF RECOMMENDATION

Adopt:

- CEQA finding: The Board, acting as a responsible agency under CEQA, has independently reviewed and considered the environmental documents prepared for the project. Approving Permit 19371 would not result in any significant adverse impacts related to flood risk and no additional mitigation measures within the Board's jurisdiction are required.

Approve:

- Encroachment Permit No. 19371 in substantially the form provided in Attachment A; and

Direct:

- The Executive Officer to take the necessary actions to execute the permit and file a Notice of Determination pursuant to CEQA with the State Clearinghouse.

11.0 – LIST OF ATTACHMENTS

- A. Draft Permit No. 19371
- B. Location Maps & Site Photos
- C. Project Plans
- D. Design Hydraulic Cross Sections

Reviewers:

Design Review:	Nate Kibret, Engineer, Permitting Section
Environmental Review:	Jennifer Stewart, Senior Environmental Scientist
Document Review:	Gary W. Lemon, P.E., Permitting Section Chief
	Kelly Soule, P.E., Operations Branch Chief
	Itzia Rivera, Environmental Services Section, Acting Chief
	Michael C. Wright, P.E., Acting Chief Engineer
Legal Review:	Jit Dua, Board Counsel

DRAFT

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

PERMIT NO. 19371 BD

This Permit is issued to:

Tehama County Department of Public Works
9380 San Benito Avenue
Gerber, California 96035

To realign Jellys Ferry Road and construct two new two-lane concrete bridges and remove the existing single lane steel Pratt Truss bridge. The first bridge will be approximately 1,264-feet long and 47-feet wide over the main Sacramento River channel and would be comprised of a six-span cast-in-place, post-tensioned box girder superstructure. The second bridge will be approximately 682-feet long and 37-feet wide over the low-lying area north of the Sacramento River and would be comprised of ten-span cast-in-place, prestressed concrete slab.

The project is located where Jellys Ferry Road crosses the Sacramento River approximately 7 miles northeast of the intersection of Interstate 5 and Jellys Ferry Road, at 40.31724°N 122.19013°W, Sacramento River, Tehama 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 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. 19371 BD

LIABILITY AND INDEMNIFICATION

THIRTEEN: The permittee shall defend, indemnify, and hold harmless the Central Valley Flood Protection Board (Board) and the State of California, including its agencies or departments thereof, including but not limited to, any and all boards, commissions, officers, agents, employees, and representatives (Indemnities), against any and all claims, liabilities, charges, losses, expenses, and costs including the State's attorneys' fees (Liabilities), that may arise from, or by reason of: (1) any action or inaction by the Indemnities in connection with the issuance or denial of any permit, lease, or other entitlement; (2) as a result of approvals or authorizations given by the Board to the permittee pursuant to, or as a result of, permittee's permit application; (3) provisions of the issued permit or lease, provisions of CEQA, an environmental document certified or adopted by the Board related to the permit application, or any other regulations, requirements, or programs by the State, except for any such Liabilities caused solely by the gross negligence or intentional acts or the State or its officers, agents, and employees.

FOURTEEN: Permittee shall reimburse the Board in full for all reasonable costs and attorneys' fees, including, but not limited to, those charged to it by the California Office of Attorney General, that the Board incurs in connection with the defense of any action brought against the Board challenging this permit or any other matter related to this permit or the work performed by the State in its issuance of this permit. In addition, the permittee shall reimburse the Board for any court costs and reasonable attorneys' fees that the Board/Indemnities may be required by a court to pay as a result of such

action. The permittee may participate in the defense of the action, but its participation shall not relieve it of its obligations under the conditions of this permit.

FIFTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Board, the Department of Water Resources, and their respective officers, agents, employees, successors and assigns, 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 Board and the Department of Water Resources expressly reserve the right to supplement or take over their defense, in their sole discretion.

SIXTEEN: The Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

AGENCY CONDITIONS

SEVENTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications dated 08/17/18 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 Board.

EIGHTEEN: Permittee shall pay to the Board, an inspection fee(s) to cover inspection cost(s), including staff and/or consultant time and expenses, for any inspections before, during, post-construction, and regularly thereafter as deemed necessary by the Board.

NINETEEN: In the event that bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Board, to prevent further erosion.

TWENTY: The permittee shall be responsible for the repair of any damages to the channel, banks, floodway, or other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-ONE: Correspondence was received from the Department of the Army (U.S. Army Corps of Engineers, Sacramento District) dated February 22, 2019, signifying that the District Engineer has no comments or recommendations regarding flood control because the proposed project does not affect a federally constructed project.

TWENTY-TWO: The permittee agrees to notify any new property/encroachment owner(s) that they are required to submit a permit Name Change request form to the Board upon completion of the sale. The new owner(s) will be required to comply with all permit conditions. Name Change forms are available at <http://cvfpb.ca.gov/>

TWENTY-THREE: The Board reserves the right to add additional, or modify existing, conditions when there is a change in ownership and/or maintenance responsibility of the work authorized under this permit.

PRE-CONSTRUCTION

TWENTY-FOUR: Upon receipt of a signed copy of the issued permit the permittee shall contact the Board by telephone at (916) 574-0609, and submit the enclosed postcard, to schedule a preconstruction conference with the inspector that is assigned to your project. Failure to do so at least 10 working days prior to start of work may result in a delay of the project.

CONSTRUCTION

TWENTY-FIVE: No construction work of any kind shall be done during the flood season from November 1 to April 15, without prior approval of the Board. Failure to submit a Time Variance Request to the Board at least 10 working days prior to November 1 may result in a delay of the project.

TWENTY-SIX: Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SEVEN: Bridge piers and bents shall be constructed parallel to the direction of flow.

TWENTY-EIGHT: To allow passage of debris during periods of high water, the minimum bridge soffit elevation shall be 352-feet over the Sacramento River and 353.3-feet over the north overflow area bridge, NAVD 88.

TWENTY-NINE: Piers, bents, and abutments being dismantled shall be removed to at least 1 foot below the natural ground line and at least 3 feet below the bottom of the low-water channel.

POST-CONSTRUCTION

THIRTY: The work area shall be restored to at least the condition that existed prior to commencement of work.

THIRTY-ONE: All debris generated by this project shall be properly disposed of outside the Sacramento River Designated Floodway.

THIRTY-TWO: Upon completion of the project, the permittee shall submit as-constructed drawings to the Board and to the Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

OPERATIONS AND MAINTENANCE

THIRTY-THREE: Trees, brush, sediment, and other debris shall be kept cleared from the bridge site

and disposed of outside the Sacramento River Designated Floodway to maintain the design flow capacity and flowage area.

THIRTY-FOUR: 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 Board, the Department of Water Resources, or any other agency responsible for maintenance and shall, at all times, allow officials from these agencies to access the Sacramento River Designated and any adjacent areas as necessary for flood control.

THIRTY-FIVE: The permitted encroachment(s) shall not interfere with the 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) within 30-days of being notified in writing by the Board. In the event of an emergency a shorter timeframe may be required. If the permittee does not comply, the Board, or a designated agency or company authorized by the Board, may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-SIX: The method and schedule of removing the bridge shall be approved by the Board prior to start of work.

THIRTY-SEVEN: If the bridge is damaged to the extent that it may impair the channel or floodway capacity, it shall be repaired or removed prior to the next flood season.

THIRTY-EIGHT: If erosion occurs adjacent to the permitted encroachment(s), the permittee shall repair the eroded areas and place adequate revetment on the affected areas to prevent further erosion.

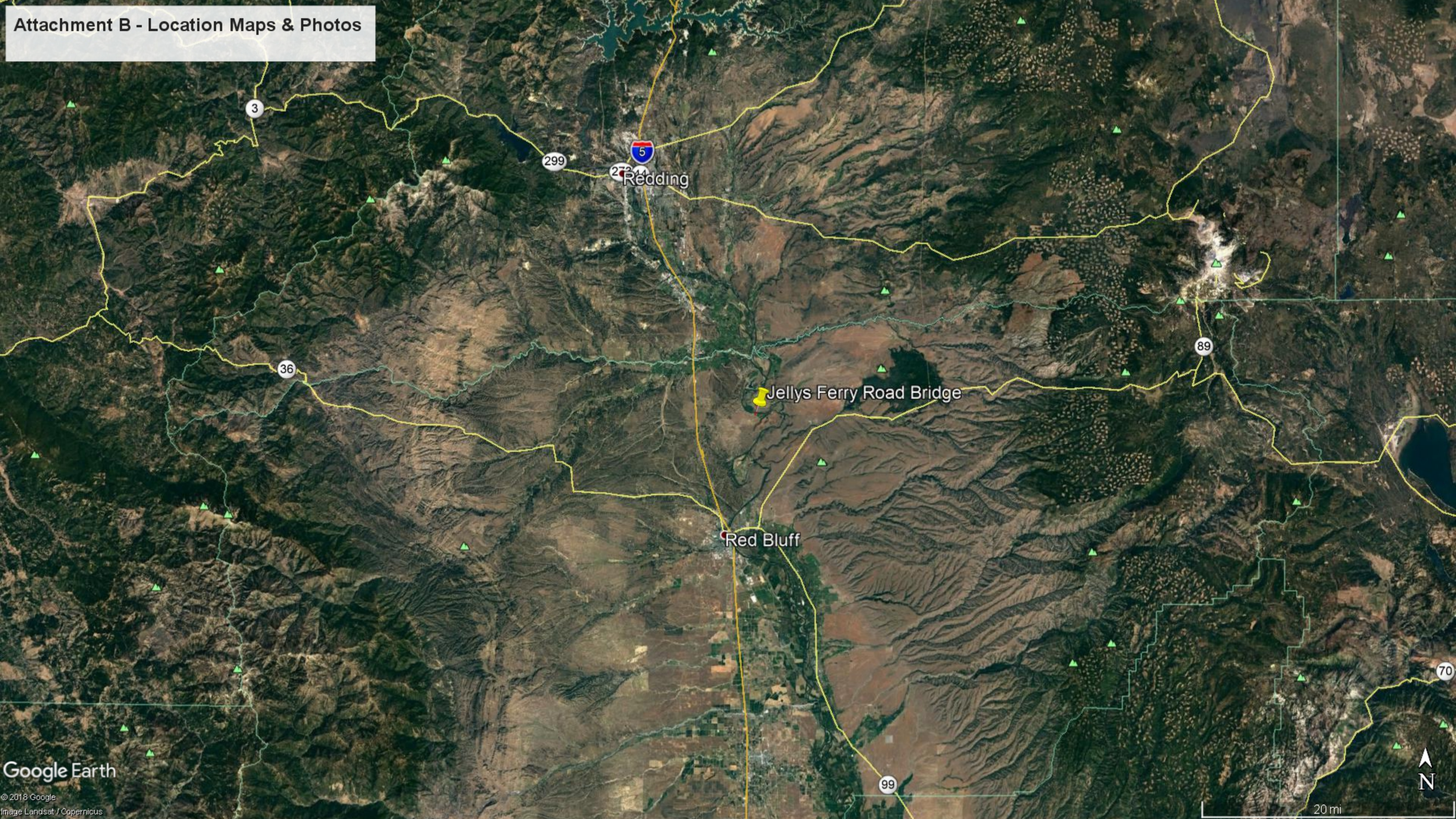
PROJECT ABANDONMENT / CHANGE IN PLAN OF FLOOD CONTROL

THIRTY-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 Board at the permittee's or successor's cost and expense.

FORTY: The abandoned or dismantled bridge shall be completely removed and disposed of outside the limits of the Sacramento River Designated Floodway.

FORTY-ONE: 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 in the discretion of the Board the removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if the project is not maintained or is damaged by any cause. The permittee shall remove the encroachment(s) within 30-days of being notified in writing by the Board. In the event of an emergency a shorter timeframe may be required. If the permittee does not comply the Board will remove the encroachment(s) at the permittee's expense.

END OF CONDITIONS





Jellys Ferry Road Bridge

Jellys Ferry Rd

36

N

1 mi



Sacramento River North Overflow Area at Jellys Ferry Road

Jellys Ferry Road Bridge



Jellys Ferry Road Bridge

Jellys Ferry Rd







Photo 1: Looking downstream (east) at Bridge 8C-0043, Jellys Ferry Road Bridge over Sacramento River



Photo 2: Looking downstream (southeast) at Bridge 8C-0043, Jellys Ferry Road over Sacramento River



Photo 7: Looking north at North Overflow over Jellys Ferry Road



Photo 8: Looking east (downstream) at North Overflow from Jellys Ferry Road

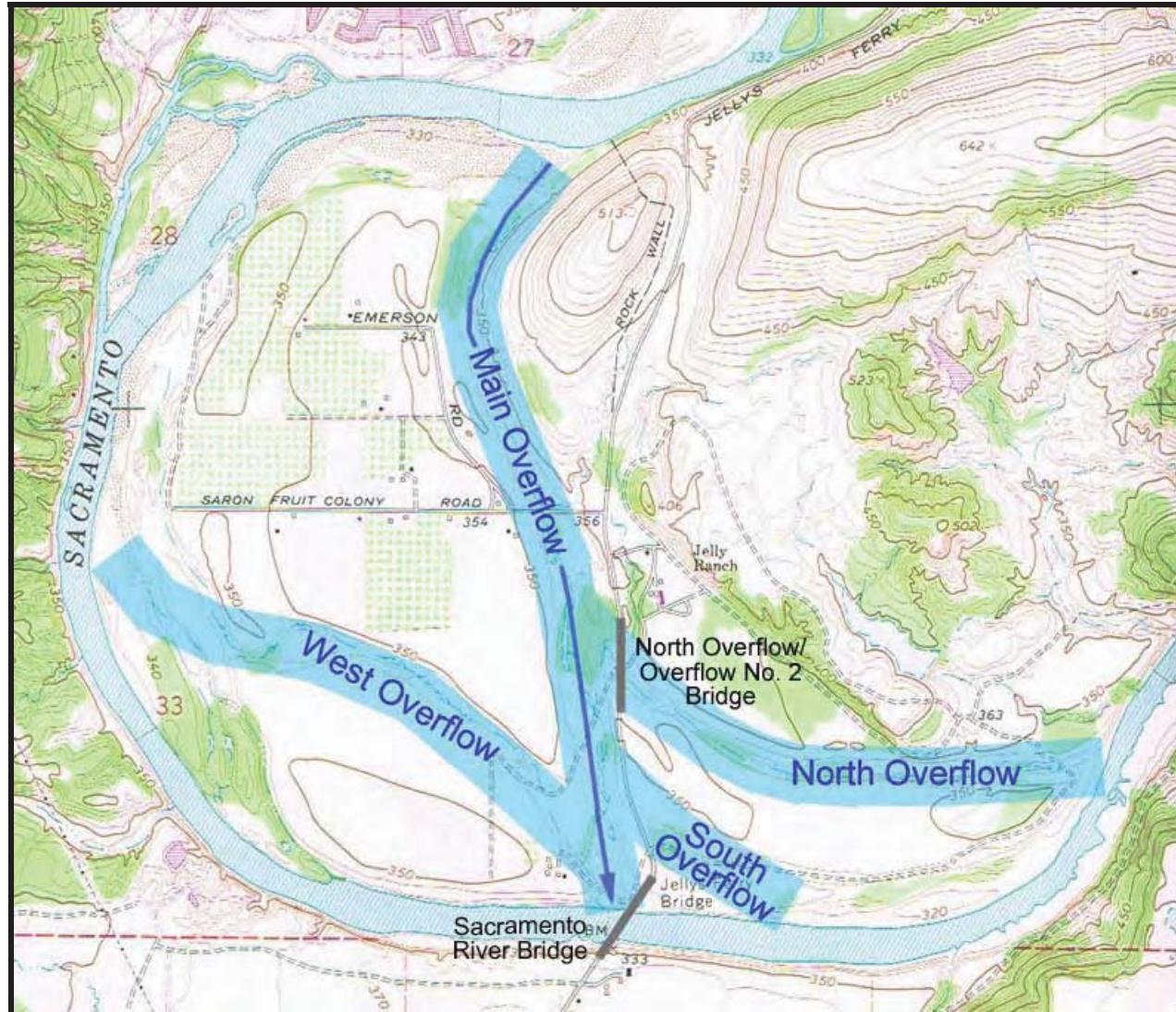
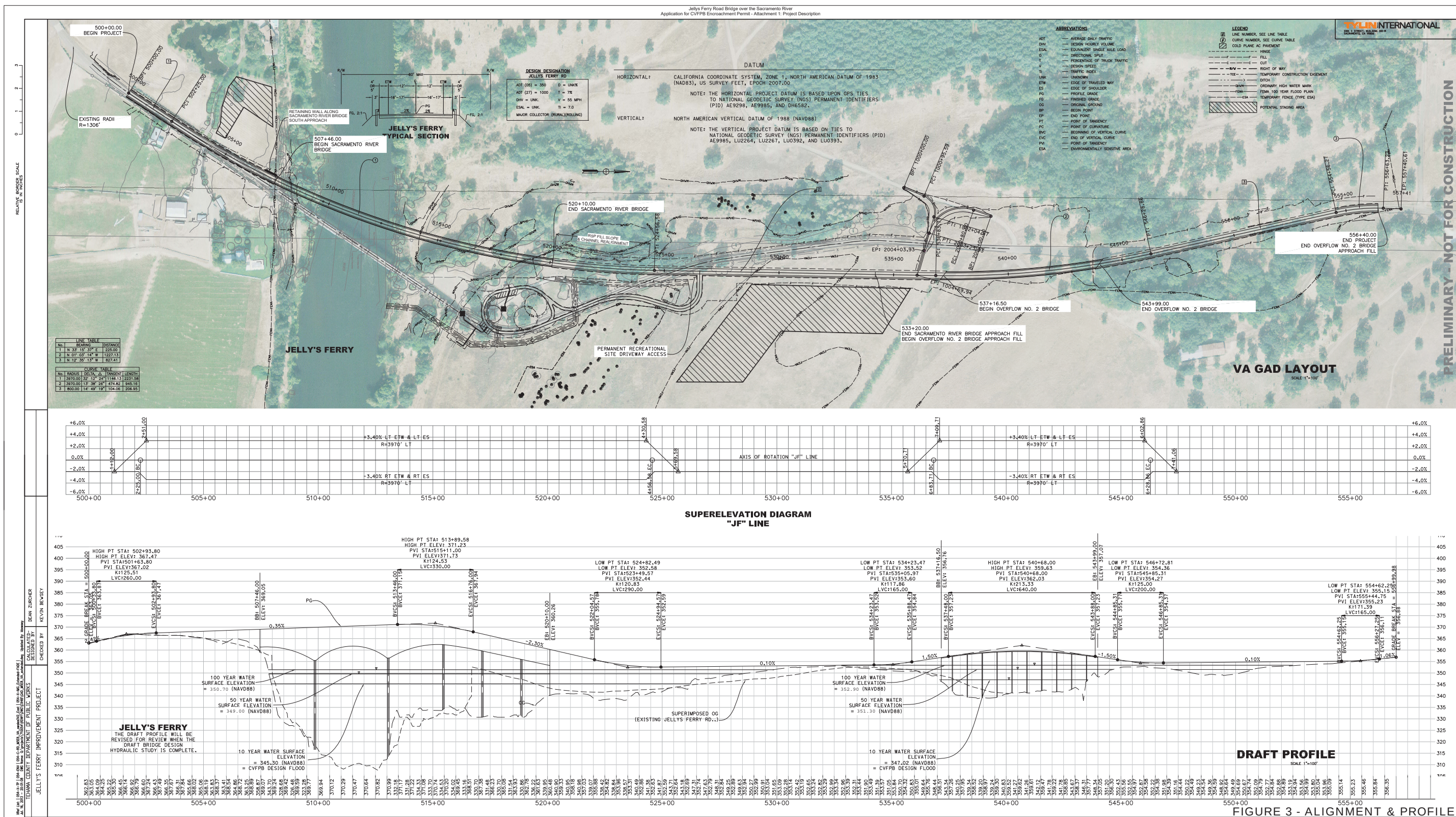


Figure 1: Sacramento River and Overflow Channels



Jellys Ferry Road Bridge over the Sacramento River
Application for CVFPB Encroachment Permit - Attachment 1: Project Description

Attachment C - Project Plans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	TEH	CR		110	168

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	
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REGISTERED PROFESSIONAL ENGINEER

Michael Wolohan

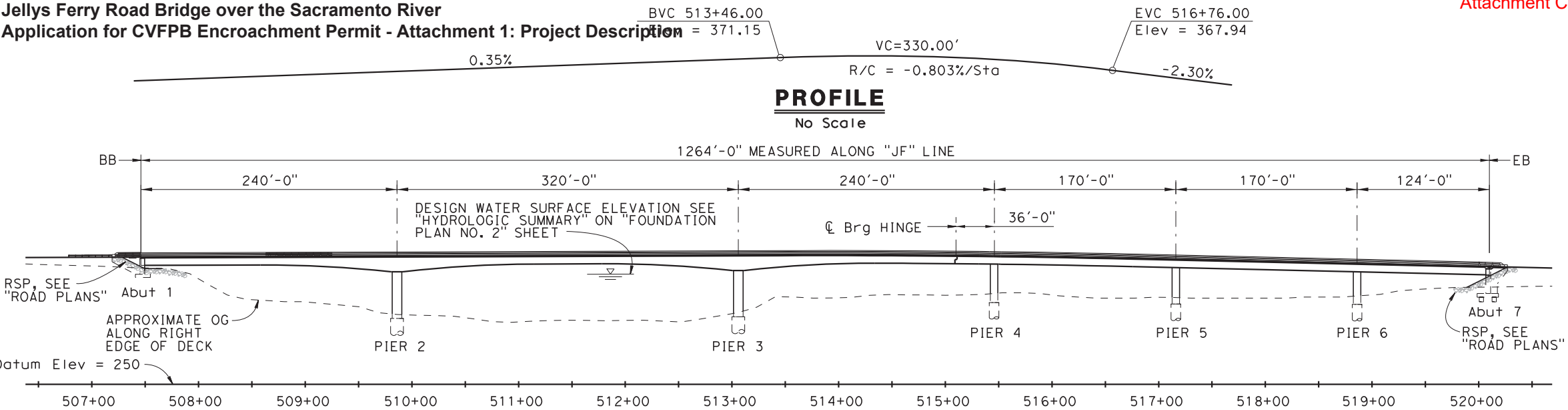
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Exp. 6/30/17

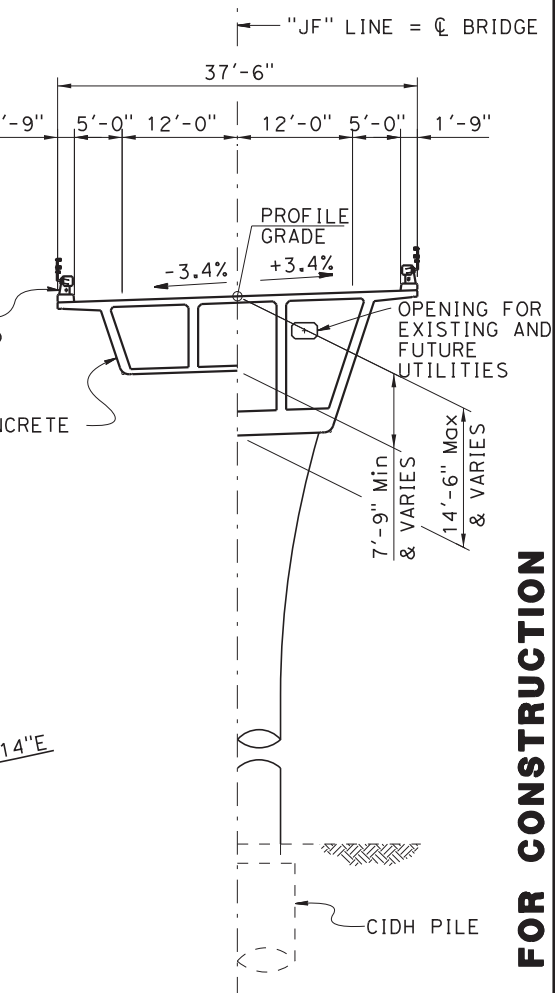
CIVIL

STATE OF CALIFORNIA

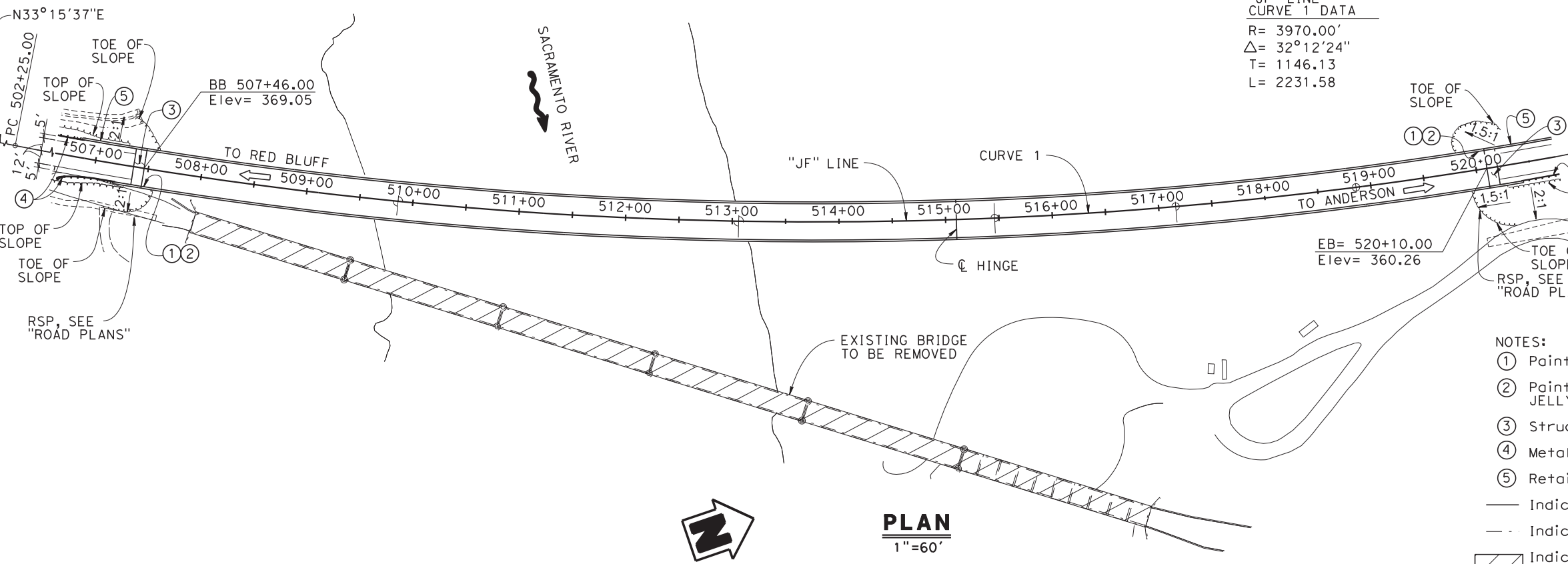
TYLIN INTERNATIONAL
1601 Response Road, Suite 260
SACRAMENTO, CA 95815



DEVELOPED ELEVATION
1"=60'



TYPICAL SECTION
1"=10'



PLAN
1"=60'

- NOTES:
- ① Paint "BRIDGE NO. 08C-0374"
 - ② Paint "SACRAMENTO RIVER BRIDGE AT JELLYS FERRY ROAD"
 - ③ Structure Approach Type N(30S) (MOD)
 - ④ Metal Beam Guard Rail see "Road Plans"
 - ⑤ Retaining Wall
 - Indicates new Structure
 - - - Indicates Existing Structure
 - ▨ Indicates Bridge Removal (Br. No. 08C-043)

DESIGN OVERSIGHT		DESIGN	BY M. Wolohan	CHECKED B. Hansen	LOAD & RESISTANCE FACTOR DESIGN		LIVE LOADING: HL93 W/"LOW-BY" AND PERMIT DESIGN VEHICLE		PREPARED FOR TEHAMA COUNTY PUBLIC WORKS DEPARTMENT		Michael Wolohan PROJECT ENGINEER		BRIDGE NO. 08C-0374	SACRAMENTO RIVER BRIDGE AT JELLYS FERRY ROAD																																																																																
SIGN OFF DATE		DETAILS	BY H. Hidalgo	CHECKED M. Wolohan	LAYOUT		BY M. Wolohan		CHECKED B. Hansen				POST MILES	FIGURE 4 - GENERAL PLAN																																																																																
		QUANTITIES	BY M. Philipps	CHECKED H. Hidalgo	SPECIFICATIONS		BY M. Wolohan		PLANS AND SPECS COMPARED X																																																																																					
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 03/14/12)															ORIGINAL SCALE IN INCHES FOR REDUCED PLANS										0 1 2 3										UNIT: X PROJECT NUMBER & PHASE: X										CONTRACT NO.: X										DISREGARD PRINTS BEARING EARLIER REVISION DATES										REVISION DATES										SHEET										OF									
																									FILE => T:\Sacramento\Legacy\Prj_File\710054 - Jellys Ferry Bridge\500_Engineering\520_Structures\521_CADD\054JF.dgn\054JF-gp01.dgn										x																														1										35																			

90% SUBMITTAL, NOT FOR CONSTRUCTION

Jellys Ferry Road Bridge over the Sacramento River
Application for CVFPB Encroachment Permit - Attachment 1: Project Description

Attachment C - Project Plans

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
02	TEH	CR		145	168

REGISTERED CIVIL ENGINEER

DATE

MARK PHILIPPS

No. 75683

Exp. 6/30/16

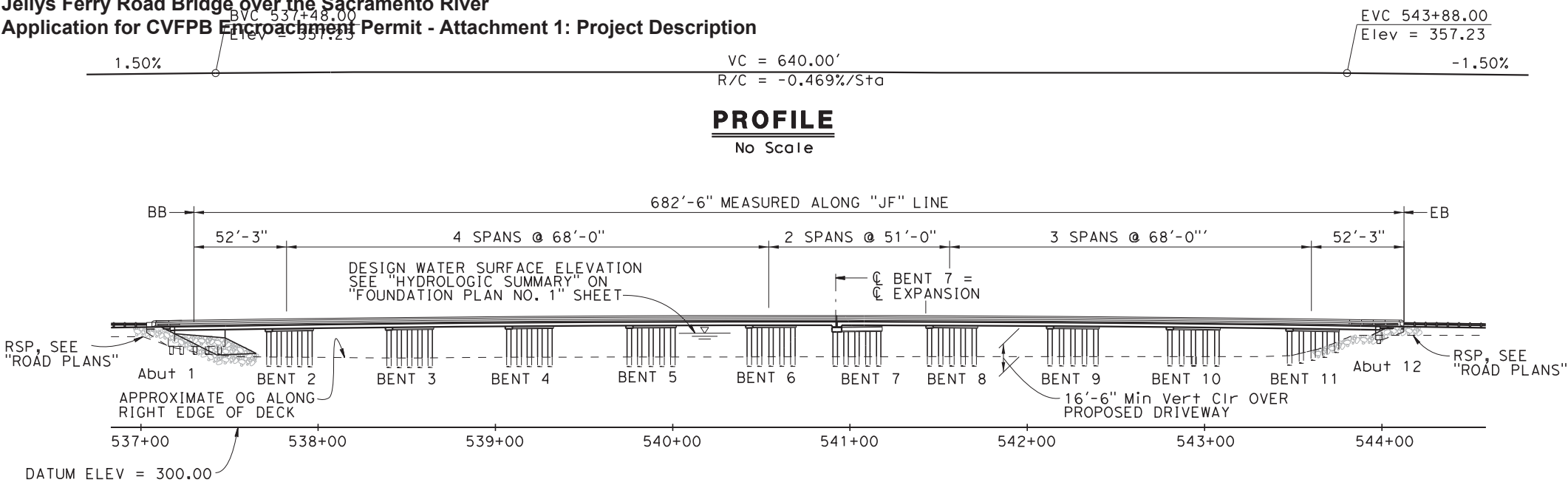
CIVIL

STATE OF CALIFORNIA

PLANS APPROVAL DATE

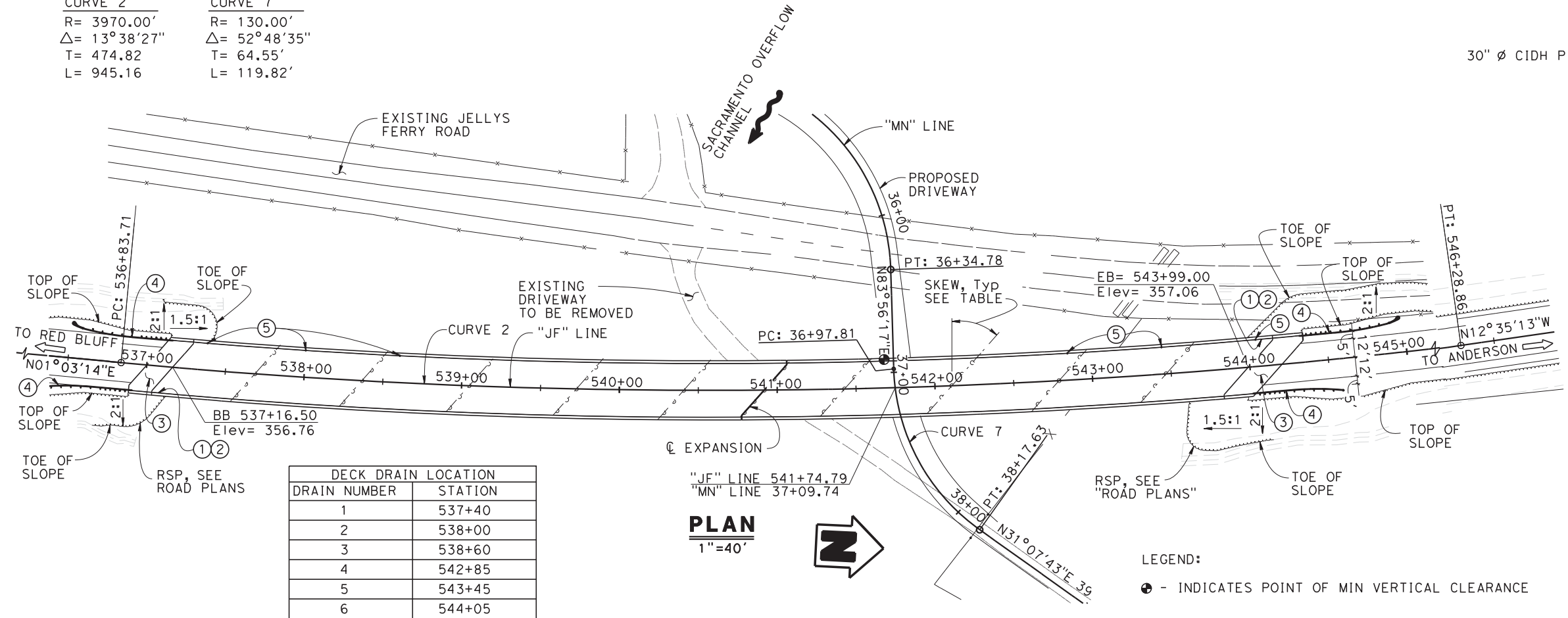
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SACRAMENTO, CA 95815



ELEVATION
1"=40'

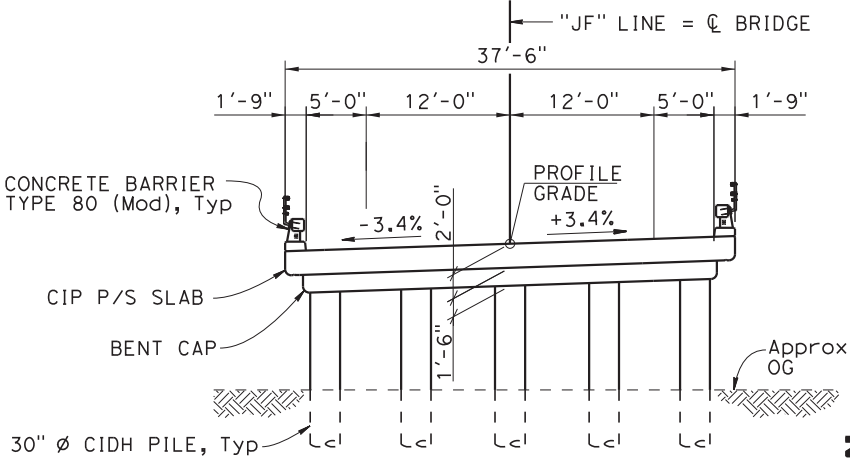
CURVE DATA	
"JF" LINE CURVE 2	"MN" LINE CURVE 7
R= 3970.00'	R= 130.00'
Δ= 13°38'27"	Δ= 52°48'35"
T= 474.82	T= 64.55'
L= 945.16	L= 119.82'



DECK DRAIN LOCATION	
DRAIN NUMBER	STATION
1	537+40
2	538+00
3	538+60
4	542+85
5	543+45
6	544+05

PLAN
1"=40'

LEGEND:
● - INDICATES POINT OF MIN VERTICAL CLEARANCE



TYPICAL SECTION
1/8"=1'-0"

SKEW TABLE	
LOCATION	SKEW
BB	36°38'03"
BENT 2	37°23'18"
BENT 3	38°22'11"
BENT 4	39°21'04"
BENT 5	40°19'57"
BENT 6	41°18'50"
BENT 7	42°03'00"
BENT 8	42°47'09"
BENT 9	43°46'02"
BENT 10	44°44'55"
BENT 11	45°43'48"
EB	46°29'03"

- NOTES:
- ① Point "BRIDGE NO. 08C-0378"
 - ② Point "SACRAMENTO OVERFLOW BRIDGE AT JELLYS FERRY ROAD"
 - ③ Structure Approach Type N(30S) (MOD)
 - ④ Metal Beam Guard Rail see "ROAD PLANS"
 - ⑤ Deck Drain Type "B"

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 03/14/12)	DESIGN	BY M. Philipps	CHECKED M. Wolohan	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BY" AND PERMIT DESIGN VEHICLE	PREPARED FOR TEHAMA COUNTY PUBLIC WORKS DEPARTMENT	Michael Wolohan PROJECT ENGINEER	BRIDGE NO. 08C-0378	SACRAMENTO OVERFLOW BRIDGE AT JELLYS FERRY ROAD			
	DETAILS	BY H. Hidalgo	CHECKED B. Hansen	LAYOUT	BY B. Hansen			CHECKED M. Wolohan		POST MILES		
	QUANTITIES	BY M. Philipps	CHECKED H. Hidalgo	SPECIFICATIONS	BY M. Wolohan			PLANS AND SPECS COMPARED X				
	SIGN OFF DATE											
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						0 1 2 3	UNIT: PROJECT NUMBER & PHASE: X	CONTRACT NO.: X	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1	OF 24

FILE => T:\Sacramento\Legacy\Prj_File\710054 - Jellys Ferry Bridge\500_Engineering\520_Structures\521_CADD\0540F.dgn\0540F-a-gp01.dgn

90% SUBMITTAL, NOT FOR CONSTRUCTION

Jellys Ferry Road Bridge over the Sacramento River
Application for CVFPB Encroachment Permit - Attachment 1: Project Description

Attachment C - Project Plans

DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST No	SHEET TOTAL SHEETS
02	TEH	CR			

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

T. Y. Lin International or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

TYLININTERNATIONAL
3301 C STREET, BUILDING 100-M
SACRAMENTO, CA 95816

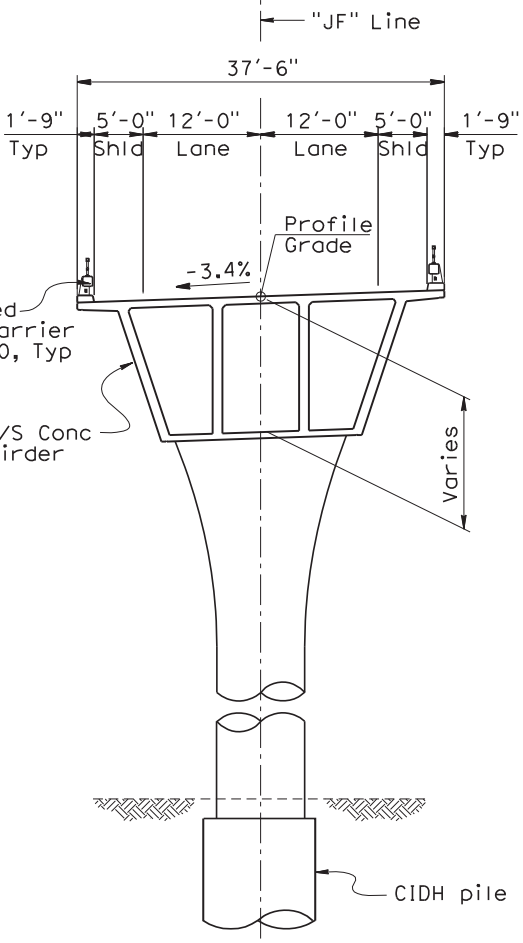
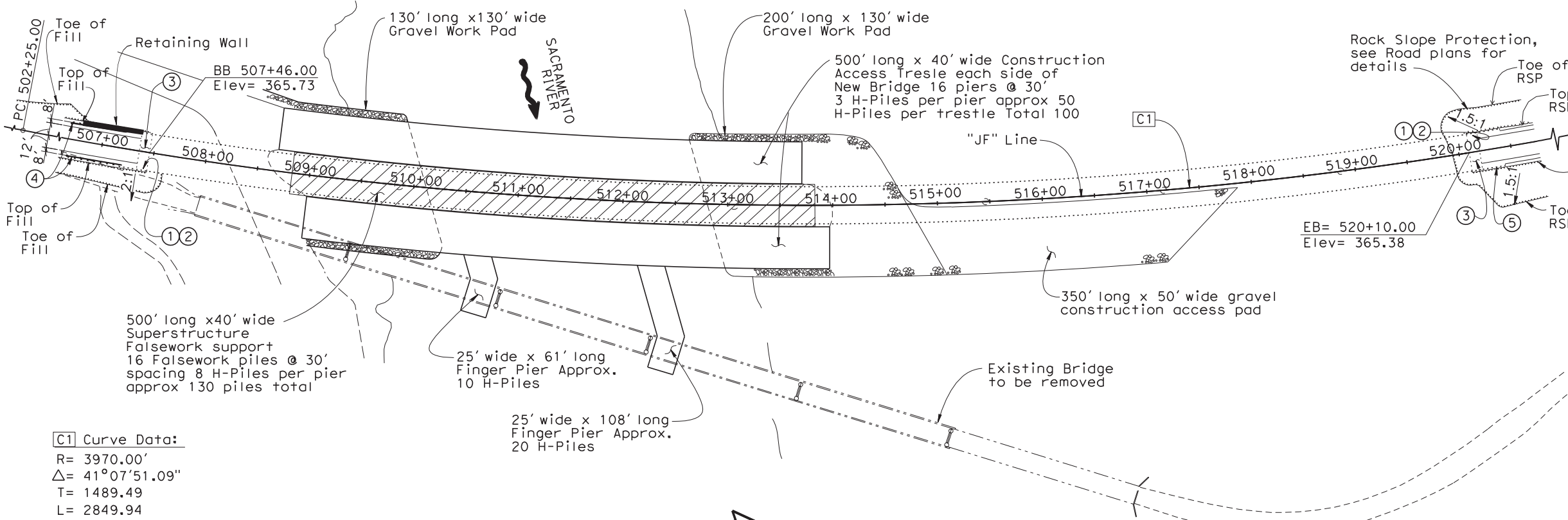
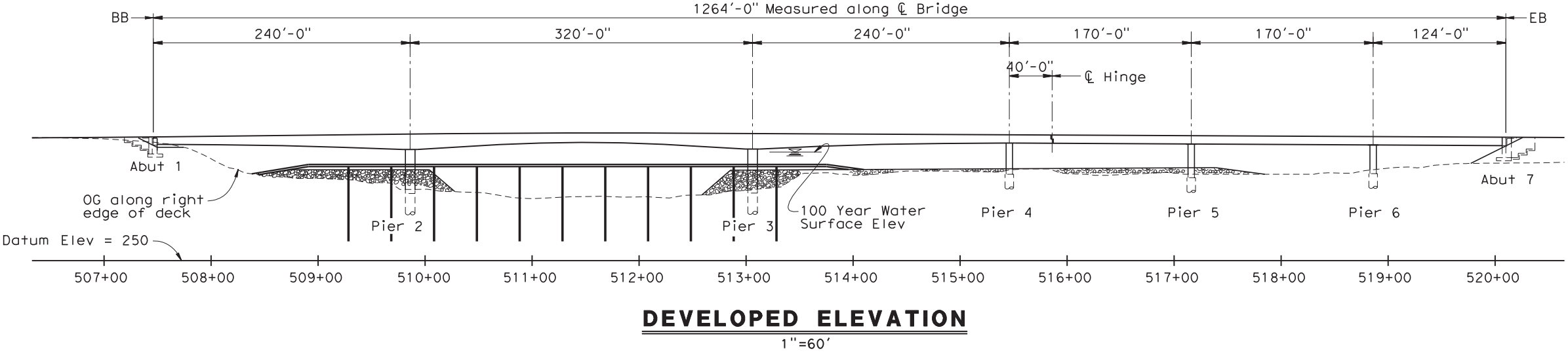
REGISTERED PROFESSIONAL ENGINEER

No.

Exp.

CIVIL

STATE OF CALIFORNIA



- Legend:
- ① Paint "Bridge No. 8C-043"
 - ② Paint "Jelly's Ferry Road Bridge"
 - ③ Structure Approach Type E010
 - ④ Metal Beam Guard Rail see "Road Plans"
- Indicates new Structure
- Indicates Existing Structure to be removed

	DESIGN	BY M. Wolohan	CHECKED	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: TRUCK	HL93 w/ "LOW BOY" PERMIT DESIGN VEHICLE	PREPARED FOR TEHAMA COUNTY PUBLIC WORKS DEPARTMENT	Michael Wolohan PROJECT ENGINEER	BRIDGE NO. 08C-0374	SACRAMENTO RIVER BRIDGE AT JELLYS FERRY RD.			
DESIGN OVERSIGHT	DETAILS	BY H. Hidalgo	CHECKED	LAYOUT	BY M. Wolohan	CHECKED			POST MILES				
SIGN OFF DATE	QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY	PLANS AND SPECS COMPARED							
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV. 2/25/05)							ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU EA	DISREGARD PRINTS BEARING EARLIER REVISION DATES →	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF	
							0 1 2 3						X

PRELIMINARY SUBMITTAL NOT FOR CONSTRUCTION

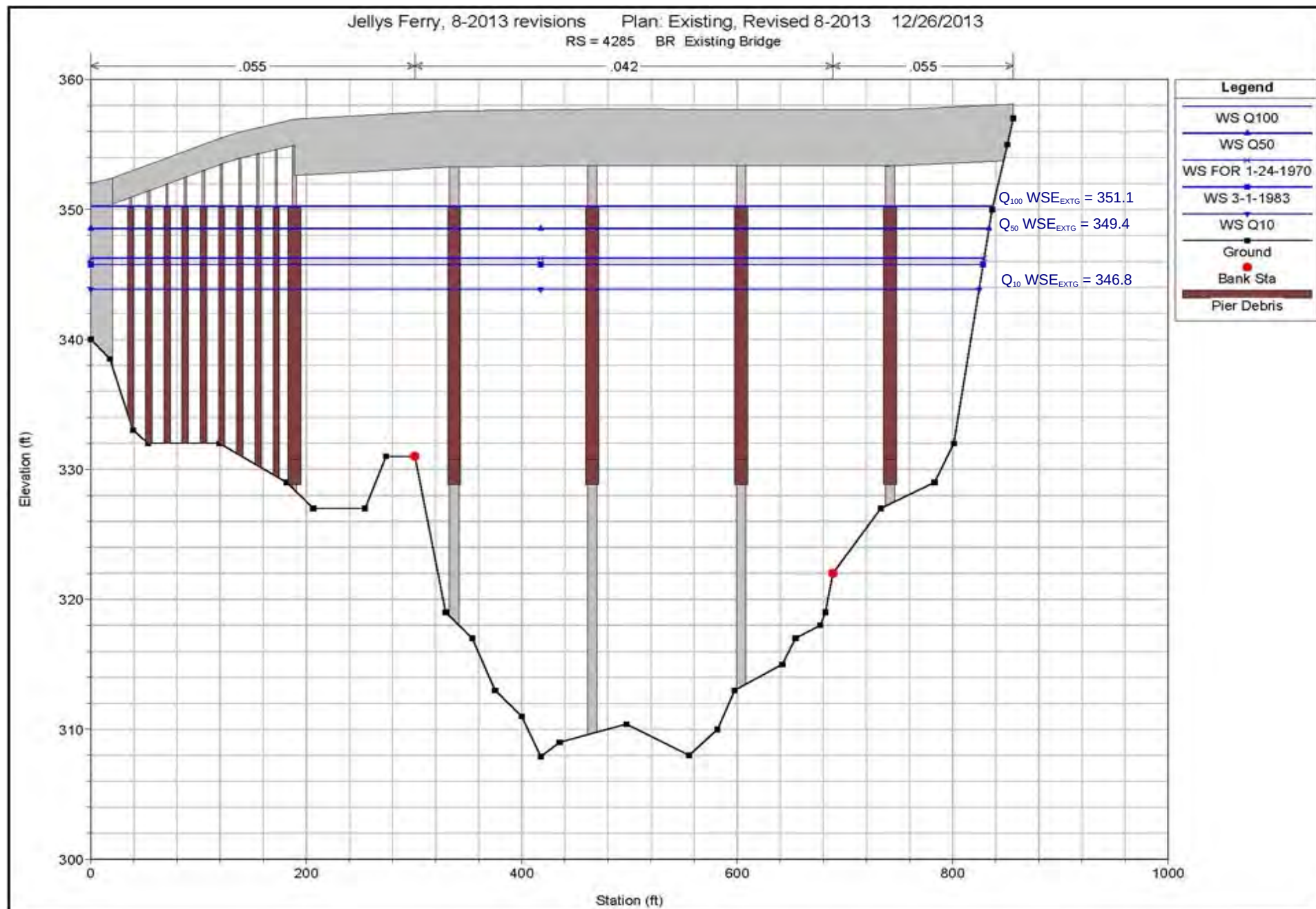


Figure 9: Existing Sacramento River Bridge as Represented in Backwater Model

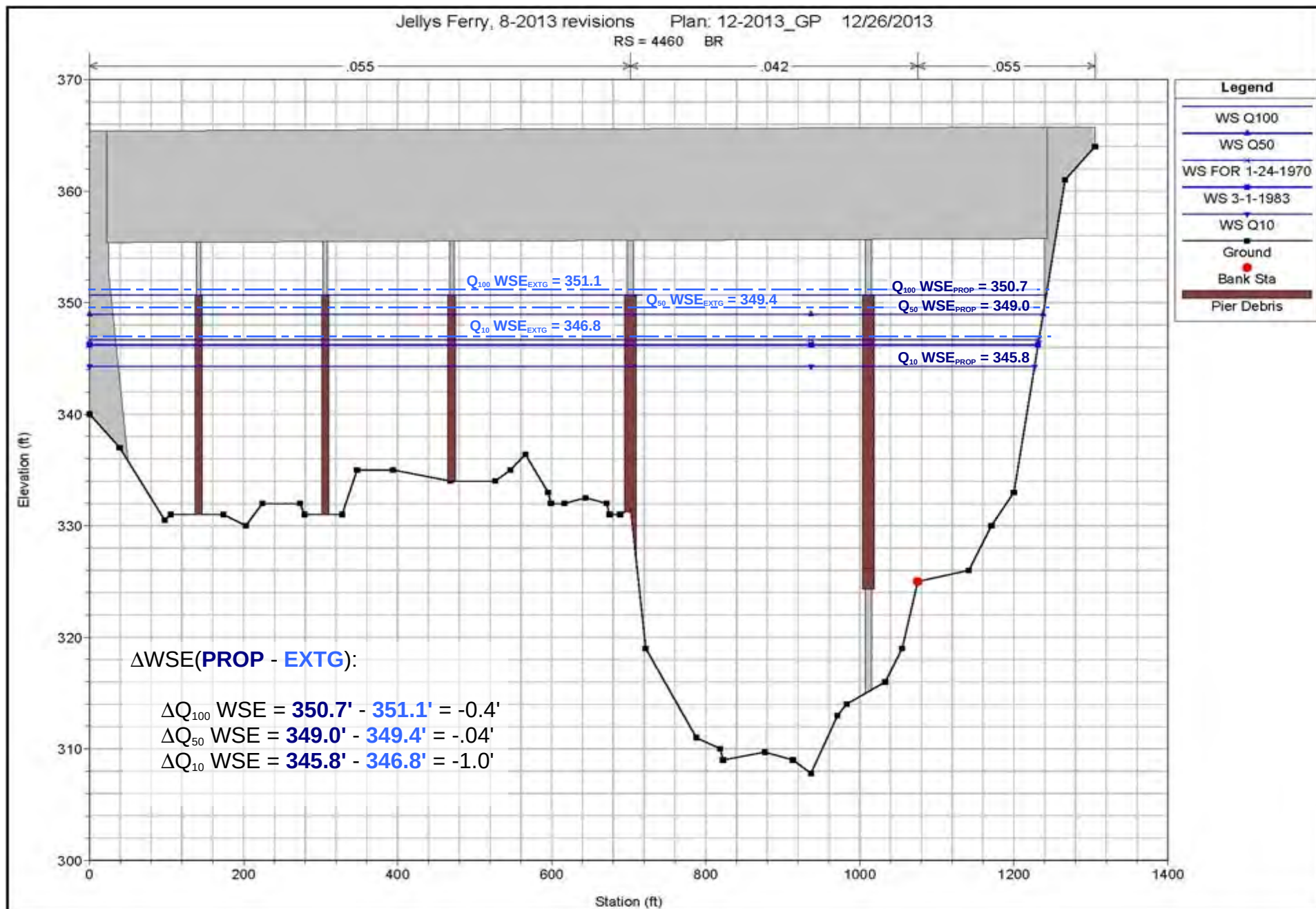


Figure 10: Preferred Sacramento River Bridge as Represented in Backwater Model