

**Meeting of the Central Valley Flood Protection Board
August 24, 2012
Draft Staff Report – Encroachment Permit
Three Rivers Levee Improvement Authority
Yuba River South Levee Repair between State Highway 70 and Shad Road
(From Levee Mile 1.90 to 1.83 or Station 5+00 to 9+00)**

1.0 – ITEM

Consider approval of Permit No. 18740

2.0 – APPLICANT

Three Rivers Levee Improvement Authority (TRLIA)

3.0 – LOCATION

The proposed levee repair reach (project site) is designated as Reclamation District 784, Levee Unit 1 and is located along the Yuba River south (left bank looking downstream) levee between State Route 70 and Shad Road (Levee Mile 1.90 to 1.83 or Project Station 5+00 to 9+00) (see Attachments A and B for Location and Site Maps).

4.0 – PROJECT DESCRIPTION

The proposed Yuba River South Levee repair work between Highway 70 and Shad Road consists of:

- 1) cutting down all trees at the toe of the levee from Station 5+00 to 9+00 and removing all stumps and tree roots greater than 1.5 inches from the levee slope and establish a 20-foot operations and maintenance (O&M) corridor;
- 2) removing existing fence from Station 5+00 to 9+00 and installing a minimum six-foot high new chain link fence with gates at the edge of the O&M corridor;
- 3) demolishing and removing an existing three-foot high non-engineered rock retaining wall;
- 4) relocating two power poles from the toe of the levee to just outside the 20-foot O&M corridor;

- 5) flattening the landside levee slope from 2h:1v to 3h:1v from Station 5+75 to 8+75 using approximately 2,100 cubic yards of imported material; and
- 6) installing a slotted PVC drain pipe in the landside toe of the levee slope (see Attachment D for Project Plan).

5.0 – PROJECT ANALYSIS

This reach of levee has gone through previous repair work. Two different encroachment permits were issued to TRLIA by the Board to conduct the previous repairs. Permit 17828 was issued in 2004 to construct a soil-cement-bentonite cutoff wall through the levee crown, and a revision of Permit 18095 was issued in 2009 for flattening the waterside slope to 3h:1v.

The 2010 periodic inspection conducted by the U.S. Army Corps of Engineers (USACE) identified erosion on the landside levee slope of this reach. The periodic inspection also identified encroachments at the landside levee toe including the trees within 15 feet of the landside levee toe and a fence. The periodic inspection considered the erosion to be a possible stability issue and flagged this item as a red item in the inspection report. Red items need to be corrected immediately, otherwise the levee system risks losing the Public Law 84-99 (PL 84-99) rehabilitation. In October 2011 the local maintaining agency Reclamation District (RD) 784 used sand bags and erosion resistant materials to rebuild the eroded levee slope. This was expected to serve as a temporary repair through the winter of 2011-2012. TRLIA has now proposed this project as a more permanent and extensive repair and rehabilitation measure.

Although USACE has determined that the removal of encroachments and trees, repair of the levee slope, and establishing an operations and maintenance corridor is considered maintenance and would not normally require an encroachment permit comment letter from the USACE, Board staff is recommending permitting this repair work for the following reasons:

- TRLIA's Executive Director requested the Board's Executive Officer to direct staff to utilize the Board's permitting process for this application, so that funding under the Department of Water Resources, Early Implementation Project (EIP) program can be considered. An approved Board permit is necessary in order for a project to be eligible for EIP funding.
- To flatten the landside levee slope from 2h:1v to 3h:1v, approximately 2,100 cubic yards of imported fill material will be required. This is a significant amount

of fill material to be constructed on the landside levee slope. It is the opinion of Board staff that approval by permit is needed so that fill material placement and associated repairs can be properly conditioned and inspected.

- RD 784 has conditionally endorsed the proposed repairs. The conditions provided by RD 784 can be easily incorporated by Exhibit into the Board's permit.

The following additional project analyses have been made during review of the submitted technical information.

5.1 – Authority of the Board

- Title 23, §6 - Need for a Permit, §120 - Levees, and §126 - Fences and Gates

5.2 – Hydraulic Analysis

No hydraulic report was required from the applicant because the rehabilitation work is on the landside of the existing levee and will not affect the flow characteristics of the Yuba River.

5.3 – Geotechnical Analysis

No geotechnical report was required from the applicant. The geotechnical aspect relevant to this repair and rehabilitation work is during the landside levee slope flattening. To flatten the landside levee slope, borrow materials will be required. Based on TRLIA's submitted specifications the borrow materials and the placement and compaction on the levee slope meet the specifications of Title 23.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

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

- A letter from the USACE (Attachment C, Exhibit A) was received on July 16, 2012 stating that the removal of encroachments and trees, repair of the levee slope, and establishing an operations and maintenance corridor is considered maintenance and does not require an encroachment permit comment letter from the USACE. For the reasons discussed in Section 5.0 above, Board staff

recommends that an approved encroachment permit is the best method to ensure proper completion of the project.

- RD 784 has endorsed this application with conditions which have been incorporated in the permit as Exhibit B.

7.0 –CEQA ANALYSIS

Board staff has prepared the following CEQA findings:

The Board, as a Responsible Agency under CEQA, has reviewed Initial Study, Mitigated Negative Declaration (IS/MND) and Mitigation Monitoring Plan (SCH No. 2004082014, August 2004) for the Yuba River Levee Repair Project, prepared by the lead agency, Three Rivers Levee Improvement Authority. These documents including project design and City resolutions may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvpfb.ca.gov/meetings/2012/08-24-2012.cfm> under a link for this agenda item. The documents are also available for review in hard copy at the Board and County offices.

The Three Rivers Levee Improvement Authority determined that the project would not have a significant effect on the environment and adopted Resolution 04-05 on August 24, 2004 and the Mitigation Monitoring Plan. An Addendum to the Adopted Mitigated Negative Declaration was prepared to include within the initial study, the work including the removal of the rock retaining wall, trees and fence; flatten the landside slope; relocating the power line at the toe of the levee; establish a 20 foot operations and maintenance corridor; and construct a chain link security fence at the edge of the corridor.

Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project applicant. The project applicant has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures are included in the project applicant's Mitigation Monitoring Plan and address impacts to air quality, biological resources, cultural resources, geology, hazardous materials, noise and transportation. The description of the mitigation measures are further described in the adopted Mitigation Monitoring Plan.

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 as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the facilities of the State Plan of Flood Control, and consistency of the proposed project with the Central Valley Flood Protection Plan as adopted by Board Resolution 2012-25 on June 29, 2012:

This project has no adverse effect on facilities of the State Plan of Flood Control and 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:

There are no foreseeable projected future events that would impact this project.

9.0 – STAFF RECOMMENDATION

Staff recommends that the Board adopt the CEQA findings, approve Permit No. 18740 (Attachment C), and direct the Executive Officer to take the necessary actions to execute the permit and to file a Notice of Determination with the State Clearinghouse.

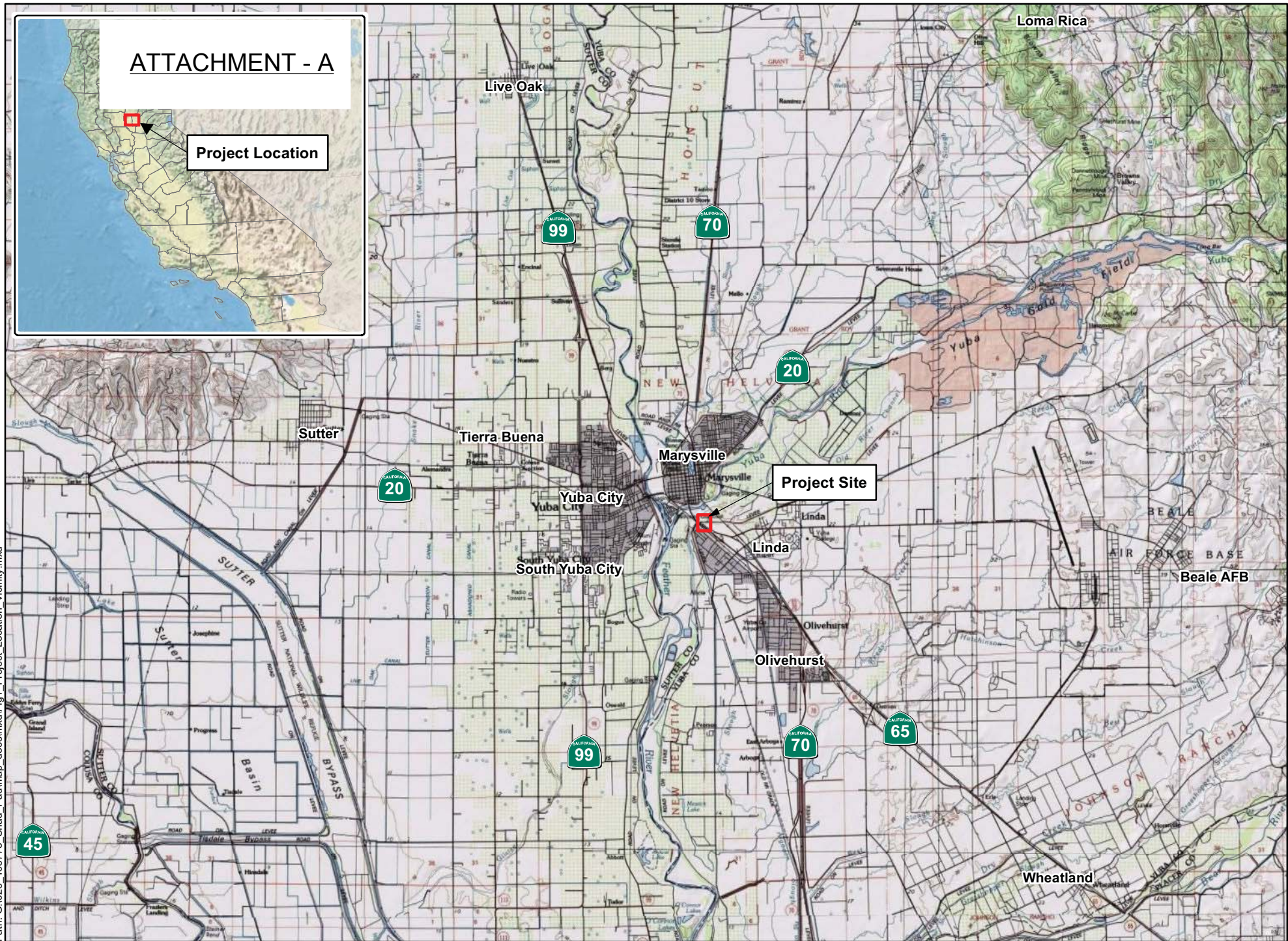
10.0 – LIST OF ATTACHMENTS

- A. Location Map
- B. Project Site Map
- C. Draft Permit No. 18740 and Exhibits
- D. Project Plan

Reviewed by:
Environmental Review:
Document Review:

Deb Biswas, PhD, PE
James Herota, Environmental Scientist
David R. Williams, PE – Senior Engineer
Eric R. Butler, PE – Supervising Engineer
Len Marino, PE – Principal Engineer

Path: G:\028 168778 Shad Pad\map docs\mxd\Fig1 Project Location Vicinity.mxd



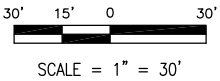


PLAN

CONTROL LINE						
NUMBER	LINE/CURVE START STA	LINE/CURVE END STA	PI STA	LENGTH	RADIUS	LINE/CHORD DIRECTION
L-1	3+05.25	5+76.61	3+05.25	271.37'	NA	S88°13'56"E
C-1	5+76.61	6+14.09	5+95.35	37.47'	1000.00'	S89°18'21"E
L-2	6+14.09	9+17.83	6+14.09	303.74'	NA	N89°37'14"E
C-2	9+17.83	9+39.20	9+28.51	21.37'	1000.00'	N89°00'30"E
L-3	9+39.20	10+40.53	9+39.20	101.33'	NA	N88°23'46"E

O&M LINE						
NUMBER	LINE START STA	LINE END STA	PI STA	LENGTH	LINE/CHORD DIRECTION	
L-4	0+00.00	1+08.45	0+00	108.45'	S88°57'00"E	
L-5	1+08.45	1+45.93	1+08.45	37.47'	S64°58'25"E	
L-6	1+45.93	1+59.01	1+45.93	13.09'	N79°03'39"E	
L-7	1+59.01	2+60.88	1+59.01	101.87'	N89°11'53"E	
L-8	2+60.88	3+25.49	2+60.88	64.61'	N88°15'29"E	

LIMIT OF CONSTRUCTION					
NUMBER	LINE START STA	LINE END STA	PI STA	LENGTH	LINE/CHORD DIRECTION
L-9	0+00.00	1+22.22	0+00	122.22'	S85°26'38"E
L-10	1+22.22	2+46.34	1+22.22	124.12'	S87°00'48"E
L-11	2+46.34	3+00.55	2+46.34	54.21'	S61°12'38"E
L-12	3+00.55	3+92.04	3+00.55	91.49'	S72°42'57"E
L-13	3+92.04	4+14.83	3+92.04	22.79'	S58°22'42"E
L-14	4+14.83	4+31.70	4+14.83	16.87'	N0°00'00"E
L-15	4+31.70	4+99.63	4+31.70	67.93'	N60°42'02"W
L-16	4+99.63	5+77.57	4+99.63	77.94'	N26°59'44"E
L-17	5+77.57	6+27.09	5+77.57	49.52'	N0°00'00"E
L-18	6+27.09	10+80.20	6+27.09	453.11'	S89°53'32"W
L-19	10+80.20	11+96.18	10+80.20	115.98'	S41°32'06"E



90% DESIGN



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	B. JOHNSON
DESIGNED BY	D. JABBOUR
DRAWN BY	H. SUAREZ
CHECKED BY	B. JOHNSON
TECHNICAL LEAD	D. JABBOUR
PROJECT NUMBER	201064-91273



Three Rivers Levee Improvement Authority
LEVEE LANDSIDE IMPROVEMENT
STA 5+80 TO 9+00 (PLM 0.38 TO 0.44)
Yuba River South Levee

SURVEY CONTROL AND LEVEE STATIONING

FILENAME	00G-005.dwg
SCALE	1" = 50'

SHEET
G-005

ATTACHMENT - C

DRAFT

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

PERMIT NO. 18740 BD

This Permit is issued to:

Three Rivers Levee Improvement Authority
1114 Yuba Street
Suite 218
Marysville, California 95901

The proposed project consists of: 1) cutting down all trees at the toe of the levee from Station 5+00 to 9+00, removing all stumps and tree roots greater than 1.5 inches from the levee slope, and establishing a 20-foot operations and maintenance (O&M) corridor; 2) removing an existing fence from Station 5+00 to 9+00 and installing a minimum 6-foot high chain link fence with gates at the edge of the O&M corridor; 3) demolishing and removing an existing 3-foot high non-engineered rock retaining wall; 4) relocating two power poles from the toe of the levee to just outside the 20-foot O&M Corridor; 5) flattening landside slope to 3h:1v from station 5+75 to 8+75; and 6) installing a slotted PVC drain pipe in the landside toe of the levee slope. The project is located on the south (left bank) levee of the Yuba River between State Route 70 and Shad Road. (Section 24, T15N, R3E, MDB&M, Reclamation District 784, Yuba River, Yuba 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.

ATTACHMENT - C

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. 18740 BD

THIRTEEN: 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.

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

FIFTEEN: 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.

SIXTEEN: The permittee shall contact the Department of Water Resources, Inspection Branch by telephone at (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. The permittee shall also contact the Central Valley Flood Protection Board's Construction Supervisor at (916) 574-2646 for quality assurance inspection. Failure to do so at least ten (10) working days prior to start of work may result in delay of the project.

SEVENTEEN: The Central Valley Flood Protection Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight,

ATTACHMENT - C

operation, maintenance, inspection, or emergency repair.

EIGHTEEN: 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, 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.

NINETEEN: The permittee should 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.

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

TWENTY-ONE: 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.

TWENTY-TWO: 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 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.

TWENTY-THREE: The mitigation measures approved by the CEQA lead agency and the permittee are found in its Mitigation Monitoring and Reporting Plan adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

TWENTY-FOUR: 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.

TWENTY-FIVE: Upon completion of the project, the permittee shall submit a final completion letter and as-built drawings to the Central Valley Flood Protection Board, 3310 El Camino Avenue, Suite 151, Sacramento, California 95821 and Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite 256, Sacramento, California 95821.

TWENTY-SIX: 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,

ATTACHMENT - C

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-SEVEN: No material stockpiles, temporary buildings, or equipment shall remain in the floodway during the flood season from November 1 to April 15.

TWENTY-EIGHT: All cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-NINE: Fill material shall be placed only within the area indicated on the approved plans.

THIRTY: All fill material shall be imported impervious material with 20 percent or more passing the No. 200 sieve, a plasticity index of 8 or more, and a liquid limit of less than 50 and free of lumps or stones exceeding 3 inches in greatest dimension, vegetative matter, or other unsatisfactory material. Fill material shall be compacted in 4- to 6-inch layers to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

THIRTY-ONE: The proposed fence or gate shall not be constructed of cable or chain.

THIRTY-TWO: The fence shall be an approved breakaway type or removed during flood season.

THIRTY-THREE: No plantings, fence slats, or other materials that will restrict maximum visibility through the fence shall be placed on or adjacent to the fence.

THIRTY-FOUR: The fence parallel with the levee shall be located at least 20 feet from the levee toe.

THIRTY-FIVE: The letter from the Department of the Army (U.S. Army Corps of Engineers) dated July 16, 2012 is attached to this permit as Exhibit A in reference to this project.

THIRTY-SIX: The permittee shall comply with all conditions set forth in the undated letter from the Reclamation District 784, which is attached to this permit as Exhibit B and is incorporated by reference.



REPLY TO
ATTENTION OF

EXHIBIT - A

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

Flood Protection and Navigation Section (18740)

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

JUL 16 2012

Dear Mr. Punia:

We have reviewed a permit application by Three Rivers Levee Improvement Authority (application number 18740). This project includes removing a rock retaining wall, trees and fence; flattening the landside slope; relocating the power line at the toe of the levee; establishing a 20 foot operations and maintenance corridor; and constructing a chain link security fence at the edge of the operations and maintenance corridor. The project is located south of Marysville on the left bank levee of the Yuba River between Highway 70 and Shad Road, at 39.1298°N 121.5845°W NAD83, Yuba County, California.

The removal of encroachments and trees, repair of the levee slope, and establishing an operations and maintenance corridor is considered maintenance and does not require an encroachment permit recommendation letter from the U.S. Army Corps of Engineers. As stated in 33 CFR 208.10, "The Superintendent shall provide at all times such maintenance as may be required to insure serviceability of the structures in time of flood" and "... be certain that: (i) No unusual settlement, sloughing, or material loss of grade or levee cross section has taken place; (ii) No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section;".

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, California 95821.

Sincerely,

A handwritten signature in black ink, reading "Randy P. Olsen", is positioned below the word "Sincerely,".

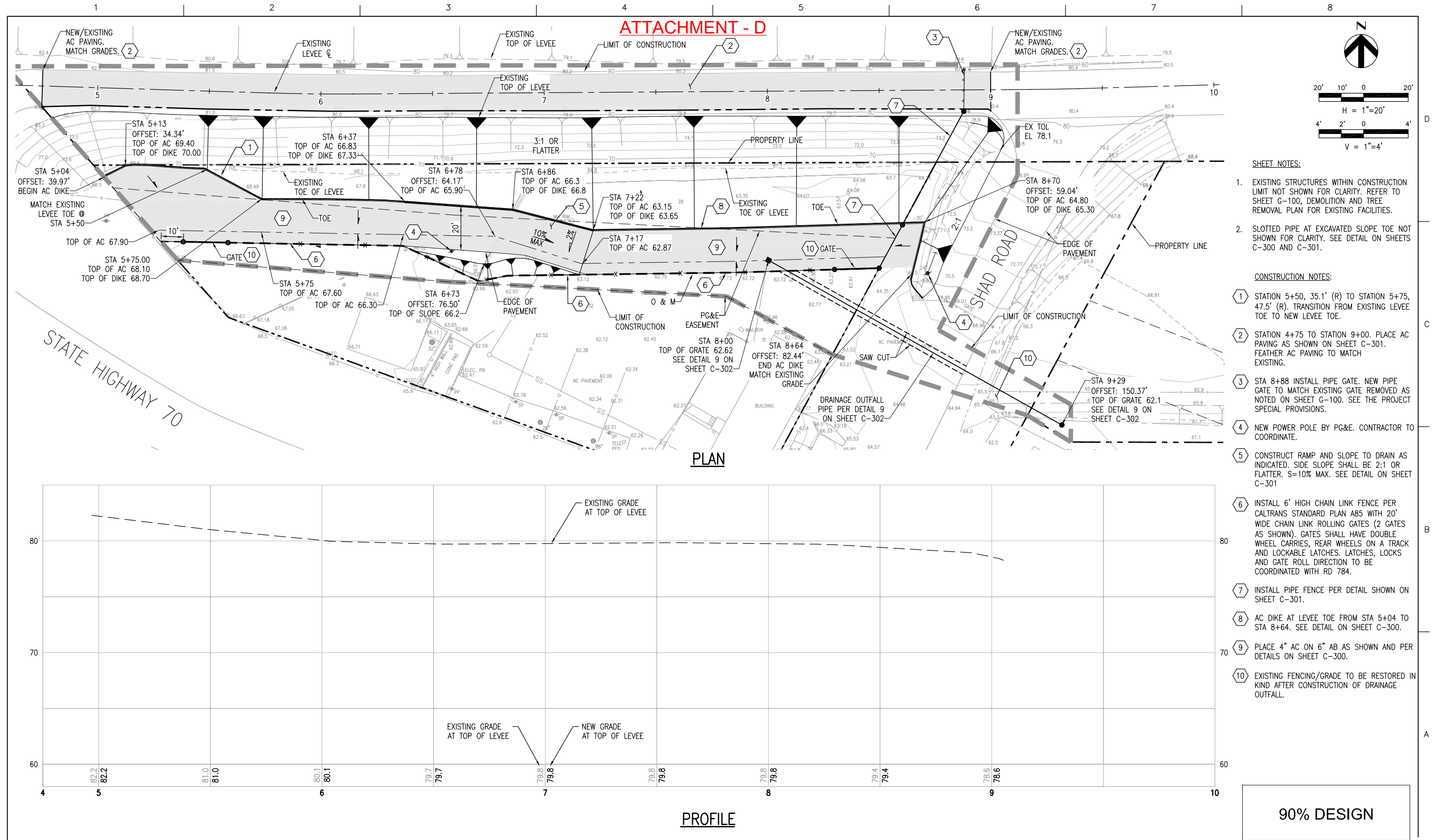
Randy P. Olsen
Chief, Operations and Readiness Branch

EXHIBIT - B

Reclamation District No. 784 has the following conditions to be included on the Central Valley Flood Protection Board Encroachment Permit for repairs to the Yuba River south Levee from SR 65/70 to Shad Pad Road. The conditions are as follows:

- All improvements shall meet or exceed Central Valley Flood Protection Board Title 23, Department of Water Resources, FEMA, and U.S Army Corps of Engineers Standards and requirements current and any future modifications of the standards.
- The facilities shall be setback a minimum of twenty (20) feet from levee toe to allow construction of operation and maintenance road.
- All work endorsed by this permit shall be in accordance with the submitted drawings and specifications. No further work, other than approved by this permit, shall be done in the area without prior endorsement of Reclamation District No. 784.
- A set of As-Built Mylar plans and specifications shall be provided to Reclamation District No. 784 upon completion of the work.
- A copy of the final Central Valley Flood Protection Board Permit shall be provided to Reclamation District No. 784 prior to any work.
- Reclamation District No. 784 shall be notified five (5) working days prior to any construction activities.

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HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	B. JOHNSON
DESIGNED BY	D. JABBOUR
DRAWN BY	H. SUAREZ
CHECKED BY	B. JOHNSON
TECHNICAL LEAD	D. JABBOUR
PROJECT NUMBER	201064-91273



Three Rivers Levee Improvement Authority
LEVEE LANDSIDE IMPROVEMENT
STA 5+80 TO 9+00 (PLM 0.38 TO 0.44)
Yuba River South Levee

PLAN AND PROFILE
STATION 5+00 TO 9+00

FILENAME	00C-101.dwg
SCALE	AS SHOWN

SHEET
C-101