

ADDENDUM II TO THE SMITH CANAL GATE PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

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Acronyms and Abbreviations

CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
Final EIR	Final Environmental Impact Report
FIRM	Flood Insurance Rate Map
fixed wall	fixed sheet pile wall
FY	fiscal year
Map Mod	Flood Map Modernization Program
Project	Smith Canal Gate Project
RD	Reclamation District
SJAFA	San Joaquin Area Flood Control Agency

Project Purpose and Background

The San Joaquin Area Flood Control Agency (SJAFCOA), in partnership with Reclamation Districts (RDs) 1614 and 828, is implementing the Project to build, operate, and maintain an in-water fixed sheet pile wall with a gate structure near the mouth of Smith Canal, in and adjacent to the city of Stockton, San Joaquin County, primarily within the boundaries of RD 828 and RD 1614. Smith Canal is a backwater slough of the Sacramento–San Joaquin River Delta, adjacent to the San Joaquin River across from Rough and Ready Island and the Port of Stockton.

In 2005, as part of the Federal Emergency Management Agency (FEMA) Flood Map Modernization Program (Map Mod), FEMA began requiring levee owners to submit documentation showing that their levees provided a 100-year level of flood protection. Conducted from fiscal year (FY) 2003 to FY 2008, Map Mod was FEMA's effort to update Flood Insurance Rate Maps (FIRMs) nationwide. As part of the National Flood Insurance Program, FEMA develops FIRMs to identify areas at risk of flooding and to determine flood insurance rates. RD 1614 and RD 828 both determined that levees along Smith Canal would not meet FEMA criteria.

Since 2009, when FEMA revoked the accreditation of the levees surrounding Smith Canal, the area surrounding Smith Canal has been mapped as a Special Flood Hazard Area. The accreditation was revoked primarily due to extensive encroachments that prevented access for maintenance and inspection, as Smith Canal levees were not able to meet the levee certification requirements of the Code of Federal Regulations, Title 44, Section 65.10, which include criteria for design, operation plans, maintenance plans, and certification by a registered civil engineer.

SJAFCOA, in partnership with Smith Canal levee owners RD 1614 (north bank levee) and RD 828 (south bank levee), led a process of evaluating options for restoring FEMA accreditation to the Smith Canal area. SJAFCOA evaluated several alternatives, determining in-place rehabilitation of the levees was economically infeasible and would have greater environmental impacts than the other alternatives considered. SJAFCOA concluded that the environmentally superior and most cost-effective alternative would be constructing a fixed sheet pile wall (fixed wall) and gate structure at the mouth of Smith Canal.

To address flood risk, SJAFCOA is proposing to construct the wall and gate structure to remove the area from the 100-year floodplain and meet FEMA's minimum acceptable level of performance of withstanding a 100-year flood, which is the regulatory standard specified by the National Flood Insurance Program. A 100-year flood is a flood event with a 1% chance of taking place in any given year. The proposed wall and gate and structure would be built to provide a minimum 200-year level of performance as required in the Central Valley Flood Protection Plan.

The California Environmental Quality Act (CEQA) requires public agencies to analyze and disclose impacts on the physical environment likely to be caused by a proposed project. SJAFCOA, as lead agency, certified a Final Environmental Impact Report (Final EIR) for the Smith Canal Gate Project on November 19, 2015, in compliance with CEQA, and the SJAFCOA board adopted the Final EIR's

Alternative 1 as the Smith Canal Project (Project). Subsequent to the certification of the Final EIR and the approval of Alternative 1 as the Project, additional design refinements were made to address specific project conditions and technical issues. An Addendum to the Final EIR was prepared pursuant to CEQA to describe the design refinements and the Addendum was approved by SJAFCA on November 16, 2017.

Purpose of Addendum

Since certification of the Final EIR and approval of the first CEQA Addendum, SJAFCA's engineering team has proposed additional design refinements to the Project. After careful consideration, SJAFCA has concluded the additional design refinements do not meet any of the criteria listed under Section 15162 of the CEQA Guidelines that require preparation of a subsequent EIR. This Addendum describes the additional design refinements as compared to the design features described in the Final EIR and first Addendum. This Addendum further discusses how the design refinements modify the impact analysis of Alternative 1 in the Final EIR and the first Addendum, and explains the basis for SJAFCA's conclusion that the design refinements do not meet any of the criteria listed under Section 15162 of the CEQA Guidelines that require preparation of a supplemental or subsequent EIR.

Pursuant to Section 15164 of the State CEQA Guidelines (Cal. Code Regs. tit. 14, § 15164), an addendum to a previously certified environmental impact report (EIR) is appropriate when: (1) minor technical changes or additions are necessary to make the previous EIR adequate, or (2) none of the conditions requiring a subsequent EIR under Section 15162 of the CEQA Guidelines are present. An addendum does not need to be circulated for public review but must be considered in agency decision-making.

As directed in California Public Resources Code § 21166(a), once a Final EIR has been certified, a lead agency may not prepare a subsequent or supplemental environmental impact report unless "[s]ubstantial changes are proposed in the project which will require major revisions of the environmental impact report."

Section 15162 of the CEQA Guidelines (Cal. Code Regs. tit. 14, § 15162) provides as follows:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

Organization of Addendum

Chapter 1 provides an overview of the project, describes the CEQA process to date, and identifies the need to prepare an addendum. Chapter 2 describes the minor modifications to the Project analyzed in this Addendum. Chapter 3 discusses the environmental effects of these modifications and explains the basis for SJAFCA's conclusion that none of the changes in the impact analysis meets the Section 15162 criteria requiring preparation of a subsequent or supplemental EIR.

Introduction

Since certification of the Final EIR and approval of the first Addendum, SJAFCA's engineering team has identified additional refinements to the Project design components. This chapter describes the changes in comparison to the Project as it was described and analyzed in the Final EIR and the first Addendum, and adopted by the lead agency.

Design Refinements

A description of each change is summarized below.

Cellular Sheet Pile Wall Design

The previous design for the fixed wall, as described in the first Addendum, included a dual sheet pile wall constructed of notched z-piles that would run straight across the mouth of Atherton Cove and Smith Canal from Dad's Point to the Stockton Golf and Country Club. However, subsequent review determined that a cellular sheet pile wall would provide greater seismic stability and protection against liquefaction. Instead of z-piles, the fixed wall would instead be constructed using interlocking flat-web steel sheet piles that are approximately 20 inches wide and would be driven in a curved cellular design. The cellular design is shown on Sheets C-102 and C-103 in Appendix A. The sheet pile walls would be constructed to be approximately 29 feet wide at the connection between cells and 34 feet wide at the widest part of each cell, with lines of interlocking sheet piles connecting the two walls. Sheet pile installation methodology would be similar to the original design described in the Final EIR, with the sheet piles being driven into the riverbed using a vibratory hammer. The top elevation of the fixed wall would remain at 15.0 feet (North American Vertical Datum of 1988), as described in the first Addendum.

Tidal Culvert Removal

The Project design described in the first Addendum included five 48-inch tidal culverts installed through the fixed wall. Under the design refinements in this Addendum, the tidal culverts would be removed from the Project, as it was determined that they are not compatible with the change to the cellular sheet pile design, would reduce the seismic stability of the fixed wall, and would not produce any discernable improvements to the residence time on the Atherton Cove/Smith Canal side of the fixed wall, as stated in the modeling results included in the Final EIR (Moffat & Nichol 2015: 81-82).

Introduction

This chapter describes any new or incrementally more severe effects on environmental resources that may result from proposed design refinements to the Project in relation to the analysis conducted in the Final EIR. The conclusions in this Addendum are based on information contained in the Final EIR, including the environmental setting, methods, significance criteria, and impact analysis, as well as information contained in the first Addendum.

Unaffected Resources

The Final EIR and the first Addendum analyzed and disclosed the Project's likely effects on environmental resources. For the resources listed below, the proposed design refinements addressed in this Addendum do not result in any new or incrementally more severe effects beyond those already described in the Final EIR and the first Addendum. Therefore, these resources are not discussed further in this document.

- Flood Risk, Hydrology, and Geomorphology Mineral Resources
- Transportation and Navigation
- Air Quality
- Greenhouse Gases and Climate Change
- Noise
- Wildlife
- Visual
- Recreation
- Utilities and Public Services
- Public Health and Environmental Hazards
- Cultural Resources
- Geology and Soils
- Agricultural Resources and Land Use
- Environmental Justice and Socioeconomics
- Growth-Inducing and Cumulative Impacts

Affected Resources

The following discussion contains a description of potential changes to previously disclosed impacts from the Final EIR and the first Addendum, as well as a description of any new impacts that may result from the design refinements, where applicable. For revised impact discussions, the original significance finding from the Final EIR and/or the first Addendum is provided in the impact title, and a revised significance finding is provided at the end of each revised impact discussion.

Water Quality and Groundwater Resources

Revised Impacts

Impact WQ-1: Violation of Water Quality Standards for Turbidity as a Result of Construction Activities (less than significant with mitigation)

Impact WQ-1 for Alternative 1 in the Final EIR stated that there is some risk that construction activities, such as in-water excavation, could cause turbidity levels to exceed the thresholds specified in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. Construction of the cellular sheet pile wall would have construction methodology and vibratory hammer usage similar to that of the previously proposed fixed wall and would therefore not increase turbidity levels when compared to the Project as described in the Final EIR and the first Addendum. The implementation of Mitigation Measures WQ-MM-1a: Prepare and Implement a Turbidity Monitoring Program, WQ-MM-1b: Implement Construction Best Management Practices, and WQ-MM-1c: Prepare and Implement a Stormwater Pollution Prevention Plan, would still reduce this impact to a less-than-significant level.

Impact WQ-3: Accumulation of Contaminants, Organic Material, and Nutrients Resulting from a Reduction in Water Circulation in Atherton Cove and Smith Canal (less than significant)

The design refinements described in this Addendum would include removal of the tidal culverts from project design, because the technical analysis concluded that they would not improve residence time. Modeling results included in the Final EIR showed that the tidal culverts provided no discernable improvement to residence time when compared to constructing the Project without the tidal culverts, and provided only a slight decrease in velocity through the gate structure (Moffat & Nichol 2015:81-82). Furthermore, modeling results showed that construction of a fixed wall without tidal culverts would result in residence times that are similar to existing conditions. As the tidal culverts proposed in the Final EIR and the first Addendum provide no discernable benefit to tidal circulation, the indirect result of accumulation of contaminants from street runoff and the buildup of organic material and nutrients would not change with their removal. As removal of the tidal culverts from the design would not decrease overall water circulation in Smith Canal and Atherton Cove when compared to existing conditions, this impact would remain less than significant with the design refinements.

New Impacts

None.

Vegetation and Wetlands

Revised Impacts

Impact VEG-4: Loss of Tidal Perennial Drainage (less than significant with mitigation)

Impact VEG-4 in the Final EIR stated that construction of the Project would result in the loss of up to 0.54 acre of tidal perennial drainage as a result of placing structures in waters of the United States. Under the first Addendum the design refinements involved placement of additional fill in waters of the U.S. (e.g., riprap), which would increase the acreage of impact on tidal perennial drainage to approximately 0.65 acre. The cellular sheet pile wall design under this Addendum would require a larger footprint for installation than the previously proposed dual sheet pile wall as described in the first Addendum, and would result in the permanent loss of up to 0.82 acre of tidal perennial drainage. However, while the larger footprint of the cellular sheet pile wall would directly increase impacts on tidal perennial drainage, implementation of Mitigation Measures VEG-MM-1c: Install Exclusion Fencing around Sensitive Resource Areas; VEG-MM-1d: Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel; VEG-MM-1e: Retain a Biological Monitor; and VEG-MM-4: Compensate for Loss of Tidal perennial Drainage would still reduce the impact to a less-than-significant level.

New Impacts

None.

Fish and Aquatic Resources

Revised Impacts

Impact AQU-1: Temporary Disturbance of Fish and Degradation of Aquatic Habitat during Construction Activities (less than significant with mitigation)

In the Final EIR and first Addendum, Impact AQU-1 stated that construction activities under the Project would result in temporary water quality effects, such as increases in turbidity and suspended sediment associated with in-water and ground-disturbing activities, which may cause injury to fish by disrupting normal behaviors and potentially increasing the susceptibility of some individuals to predation. However, as described above under Impact WQ-1, construction of the cellular sheet pile wall would use construction methodology similar to that of the previously proposed fixed wall and would have a similar duration for vibratory pile driving, and would therefore not increase turbidity levels when compared to the Project as described in the Final EIR and the first Addendum. Implementation of Mitigation Measure AQU-MM-1: Limit In-Water Construction Activity to Periods of the Year That Minimize Impacts on Fish and Fish Habitat would still reduce this impact to a less-than-significant level.

New Impacts

None.

Conclusions

Implementation of the design refinements would not result in a substantial increase in the severity of previously identified significant effects. While the changes to the fixed wall design would result in an increased footprint, the change in impacts to fish and to waters of the United States would still be mitigated to a less-than-significant level with the implementation of mitigation measures previously described in the Final EIR. The impact to water quality as a result of the removal of the tidal culverts would not be discernable, as they did not previously provide a substantial benefit to residence time in Atherton Cove and Smith Canal. Therefore, the proposed cellular sheet pile wall design and removal of the tidal culverts are not substantial changes in the project which would require major revisions of the previous EIR, and no subsequent or supplemental environmental impact report should be prepared per CEQA Guidelines § 15162 and California Public Resources Code § 21166.

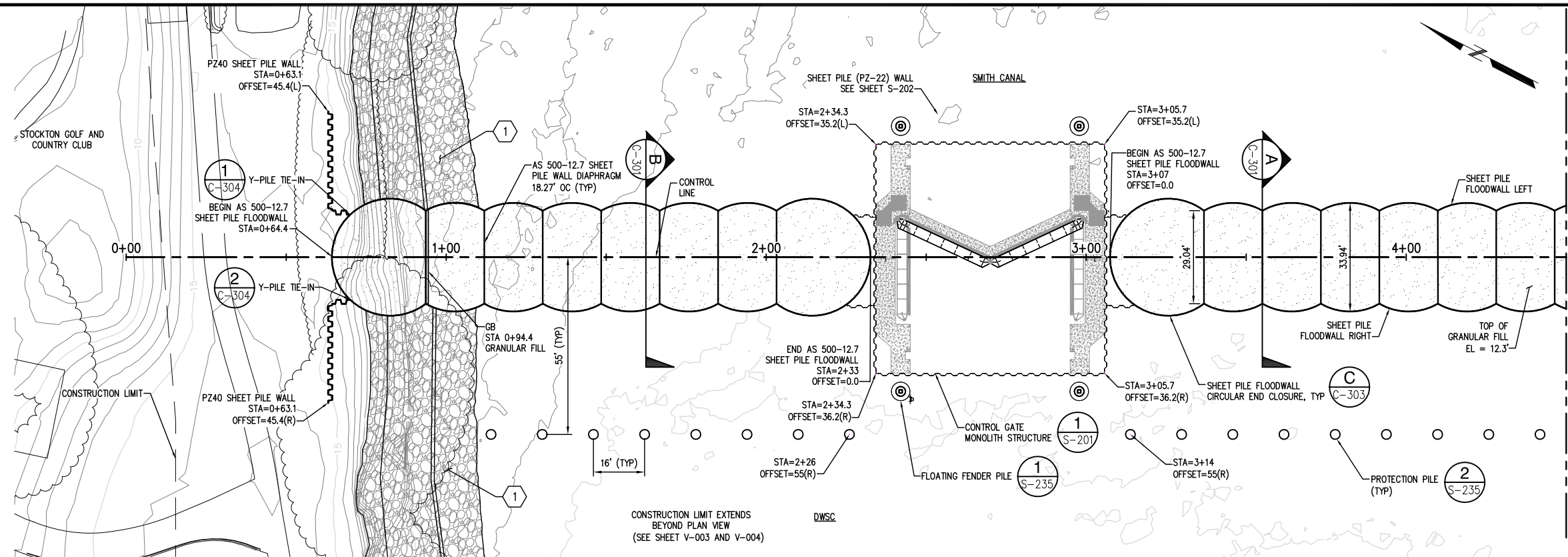
Chapter 4

References

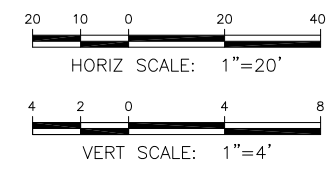
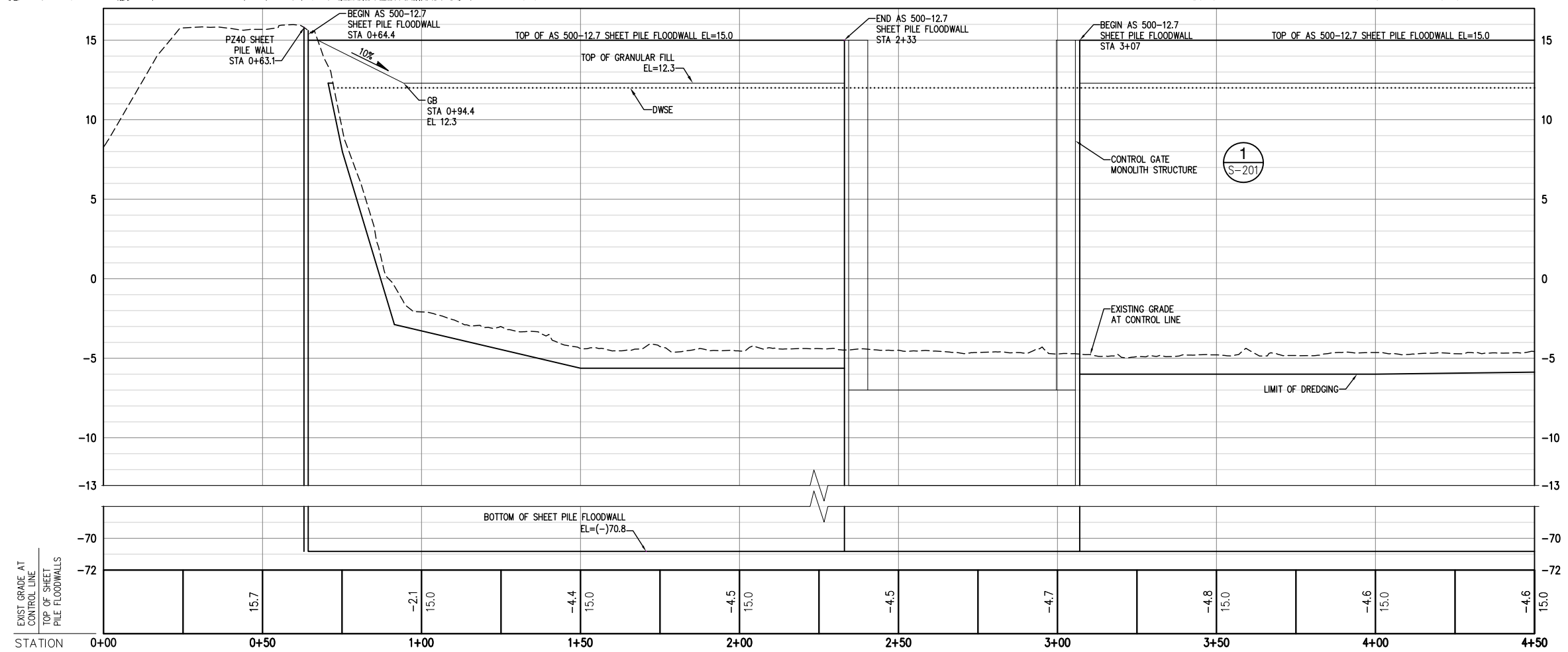
Moffatt & Nichol. 2015. Smith canal gate hydrodynamic modeling alignment and gate width evaluation. February. Walnut Creek, CA. Prepared for Peterson Brustad, Inc. Folsom, Ca.

Appendix A

Design Drawings

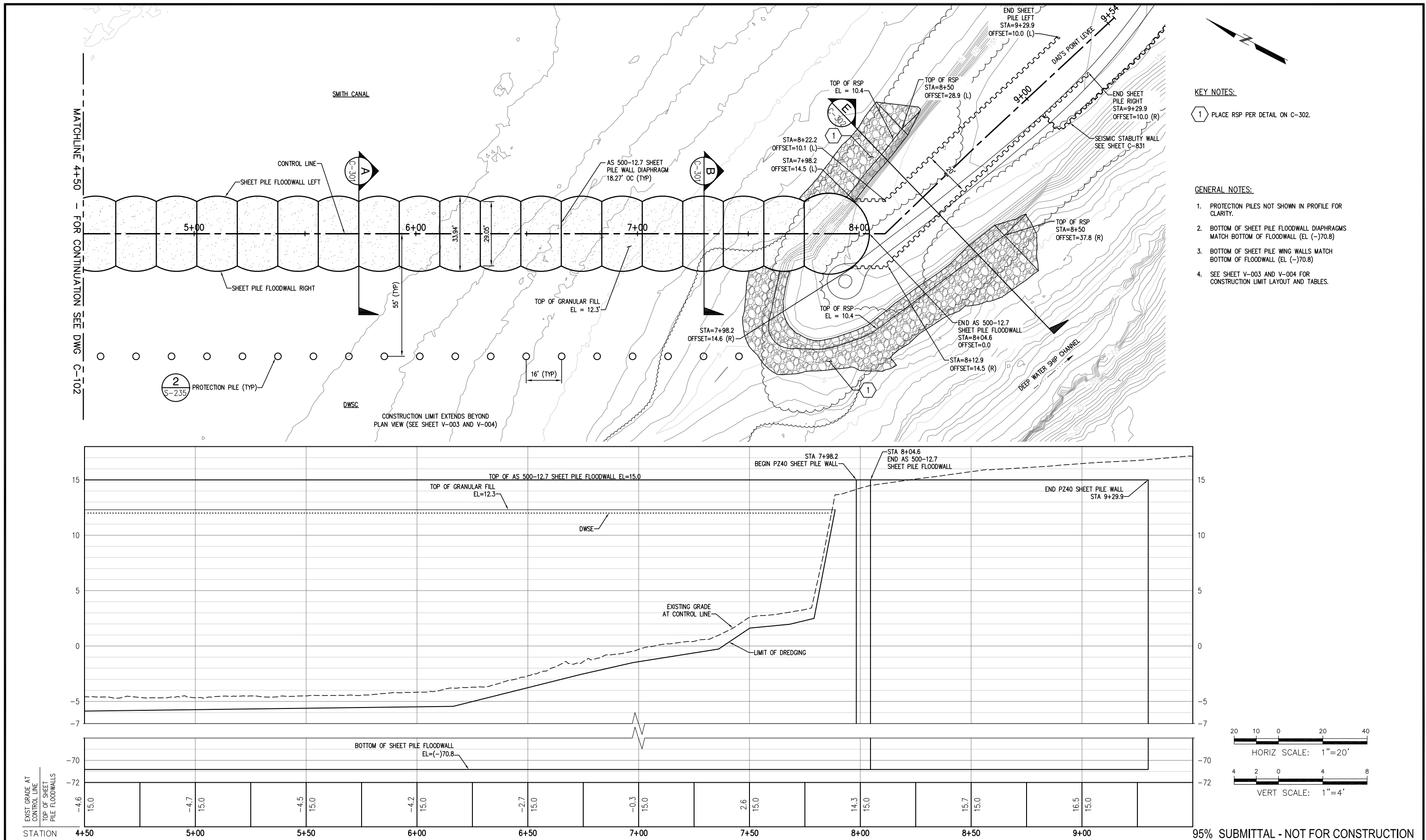


- KEY NOTES:**
- 1 SEE SHEET C-201 FOR SCOUR PROTECTION AND ARMORING PLAN.
- GENERAL NOTES:**
1. PROTECTION PILES NOT SHOWN IN PROFILE FOR CLARITY.
 2. BOTTOM OF SHEET PILE FLOODWALL DIAPHRAGMS MATCH BOTTOM OF FLOODWALL (EL. (-)70.8).
 3. BOTTOM OF SHEET PILE WING WALLS MATCH BOTTOM OF FLOODWALL (EL. (-)70.8).
 4. SEE SHEET V-003 AND V-004 FOR CONSTRUCTION LIMIT LAYOUT AND TABLES.



95% SUBMITTAL - NOT FOR CONSTRUCTION

SCALE: AS NOTED DATE: JANUARY 2018				WARNING 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.		DESIGNED: JN DRAWN: AJ CHECKED: DJ		JASON NETTLETON, PE PROJECT ENGINEER 73184 R.C.E. NO. 12/31/18 EXP. DATE		PRELIMINARY						SAN JOAQUIN AREA FLOOD CONTROL AGENCY SMITH CANAL GATE PROJECT		SHEET C-102	
																		FLOODWALL PLAN AND PROFILE STA 0+00 TO 4+50	



KEY NOTES:

1 PLACE RSP PER DETAIL ON C-302.

GENERAL NOTES:

1. PROTECTION PILES NOT SHOWN IN PROFILE FOR CLARITY.
2. BOTTOM OF SHEET PILE FLOODWALL DIAPHRAGMS MATCH BOTTOM OF FLOODWALL (EL. (-)70.8)
3. BOTTOM OF SHEET PILE WING WALLS MATCH BOTTOM OF FLOODWALL (EL. (-)70.8)
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