Meeting of the Central Valley Flood Protection Board
June 26, 2015

Staff Report

California State University, Chico
Gus Manolis Pedestrian Bridge Replacement, Butte County

1.0 – ITEM

Consider Central Valley Flood Protection Board (Board) approval to replace a pedestrian bridge that was irreparably damaged from a falling tree with a new single-span bridge across Big Chico Creek on the California State University, Chico campus (Attachment A) by draft Permit No. 19010 (Attachment B).

2.0 – APPLICANT

California State University, Chico (CSUC)

3.0 – PROJECT LOCATION

The project is located across Big Chico Creek on the CSUC campus in the City of Chico (approximate population 86,200 per the 2010 Census) in Butte County (Attachment A). The bridge is located approximately four miles downstream of the Big Chico Creek Gates diversion structure, which was constructed in the 1940's and adopted as part of the State Plan of Flood Control (SPFC) in 1965. Big Chico Creek is a federal project channel with a design capacity of 1,500 cubic feet per second (cfs) through the reach flowing through the CSUC campus.

4.0 – PROJECT DESCRIPTION

CSUC is proposing to replace the Gus Manolis pedestrian bridge, built in 1961, that was damaged September 25, 2014 when a large sycamore tree along the creek bank fell, knocking the bridge clear from its northern abutment. The Board's Chief Engineer authorized emergency removal of the damaged bridge on October 17, 2014.

The existing rock slope protection (RSP) on the channel left bank will remain, and any disturbed RSP will be replaced in-kind at a 2H: 1V (horizontal to vertical) slope.

5.0 – AUTHORITY OF THE BOARD

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

Title 23:

- § 6 – Need for a Permit
- § 108 – Existing Encroachments
- § 112 – Streams Regulated and Nonpermissible Work Periods
- § 116 – Borrow and Excavation Activities
- § 121 – Erosion Control
- § 128 – Bridges
- § 128 – Vegetation

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 (USACE) decision letter has not been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the permit language and incorporate it into the permit as Exhibit A.

- Department of Water Resources Sutter Maintenance Yard (DWR) conditionally endorsed this project on December 7, 2014 (Attachment C). Board staff has incorporated the intent of DWR's conditions into the draft permit.

7.0 – PROJECT ANALYSIS

7.1 – Project Construction Details

The existing bridge was removed due to public safety concerns and to prevent potential creek damage during storms. The remaining bridge abutments/supports will be removed and replaced as part of this proposed project.

The proposed bridge includes a 72-foot long, seven (7)-foot wide single-span steel truss with a concrete deck. It will be built on the same horizontal alignment as the previous

bridge, but it will be two (2) feet longer to allow both abutments to be offset further from the creek centerline (Attachment D).

The proposed bridge will be set at the elevation of the left bank, which is approximately six (6) inches higher than the right bank. This will require reconstruction of the existing elevated walkway to raise the walking surface to this higher elevation.

The abutment foundations will consist of two (2) 30-inch cast-in-drilled-hole (CIDH) concrete piles at a depth of approximately 35 feet below existing grade. A concrete beam will span the two piles and serve to support and connect the bridge.

Three trees have been identified to be removed to construct the new bridge (two were removed as part of the emergency bridge removal in 2014). Replacement trees (in-kind) will be planted in the ineffective flow areas on the channel right floodplain bench adjacent to the existing elevated walkway and away from the new bridge. Any disturbed RSP will be replaced in-kind.

7.2 – Hydraulic Summary

Hydraulic characteristics of the proposed Gus Manolis Bridge and the nearby Physical Science Bridge (Application No. 19011) are both described in the hydraulic summary (Attachment E). The two bridges are approximately 300 feet apart with no structures in between, and were analyzed by North Star Engineering using the HEC-RAS version 4.1.0 hydraulic model.

Discharge within Big Chico Creek is controlled by the Big Chico Creek Gates diversion structure approximately four miles upstream of the project site. The Big Chico Creek Gates limit the amount of discharge down Big Chico Creek (to the project site) as headwaters rise at the face of the gates and excess discharge spills north into Sycamore Channel. This results in a relatively consistent water surface elevation at the face of the gate, with only minor increases in peak discharge at flood flows.

The 200-year flood discharge, derived from the recent hydraulic analyses for the Central Valley Hydrology Study and Central Valley Flood Evaluation and Delineation, was estimated to be 1,640 cfs. The existing clearance is not available due to the emergency bridge removal prior to completion of the survey. The hydraulic model analyzed both the 200-year flow of 1,640 cfs and the project design flow of 1,500 cfs. The proposed soffit elevation is 197.70 feet. The resulting freeboard is 3.32 feet and 3.70 feet at the 200-year and project design flows, respectively. This is consistent and compliant with Title 23 standards and the adopted 2012 Central Valley Flood Protection Plan.

The cumulative scour for this project is approximately three (3) feet on the left bank and five (5) feet on the right bank. There is no anticipated need for mitigation at this time. Existing RSP on channel left bank will remain; channel right overbank will be re-vegetated with rolled erosion control fabric to support establishment and reduce the risk of erosion.

7.3 – Geotechnical Summary

Board staff has reviewed the geotechnical design information and has determined that the proposed project is expected to result in no adverse geotechnical impacts to the Big Chico Creek floodway. All fill, excavation, and temporary structures will be completed in compliance with Draft Permit No. 19010 and Title 23 standards.

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 and Mitigated Negative Declaration (IS/MND) (SCH No. 2014032059, June 2014), Addendum to the Adopted IS/MND (December 2014), and Mitigation Monitoring and Reporting Plan for the Bridge Replacement/Restoration Project, prepared by lead agency California State University, Chico. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at http://www.cvfpb.ca.gov/meetings/2015/06-26-2015.cfm under a link for this agenda item. These documents are available for review in hard copy at the Board and CSU Chico offices.

CSU Chico determined that the project would have no significant effect on the environment on June 8, 2014 and a Notice of Determination was filed on June 11, 2014 with the State Clearinghouse. Because of the tree damage sustained in September 2014, and the subsequent removal of the bridge, restoration is no longer possible. An Addendum was prepared pursuant to CEQA Guidelines Section 15164 to address the impacts of the proposed bridge replacement project.

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 proponent. The project proponent 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

proponent's IS/MND and address impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, noise, transportation and traffic. The description of the mitigation measures are further described in the adopted IS/MND.

9.0 – CALIFORNIA WATER CODE SECTION 8610.5 CONSIDERATIONS

- Evidence that the Board admits into its record from any party, federal, 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.

- The best available science related 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 the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

- Effects of the decision on the facilities of the State Plan of Flood Control (SPFC), and consistency of the proposed project with the Central Valley Flood Protection Plan (CVFPP) 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 and current Title 23 standards because the proposed project is expected to cause no increase in WSE, no substantial increase in channel velocities, and no adverse geotechnical impacts to the Big Chico Creek floodway or any SPFC facilities.

- 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.

10.0 – STAFF RECOMMENDATION

Staff recommends that the Board:

Adopt:

- the CEQA findings;

Approve:

- draft Encroachment Permit No. 19010 in substantially the form provided; and on condition of receipt of a favorable USACE 408 decision letter; 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 – Project Maps and Photos

B – Draft Permit No. 19010

Exhibit A: USACE 408 Decision Letter

C – Sutter Maintenance Yard Endorsement

D – Project Drawings

E – Hydraulic Summary Information

F – Emergency Bridge Removal Letter

Prepared By:	Ilene Wellman-Barbree, PE, Senior Engineer, Projects and Environmental Branch
Environmental Review:	Andrea Buckley, Senior Environmental Scientist (Specialist)
Staff Report Review:	Nancy Moricz, PE, Senior Engineer, Projects and Environmental Branch
	Eric Butler, PE, Supervising Engineer, Projects and Environmental Branch Chief
	Len Marino, PE, Chief Engineer
	Nicole Rinke, Deputy Attorney General
	Leslie Gallagher, Acting Executive Officer

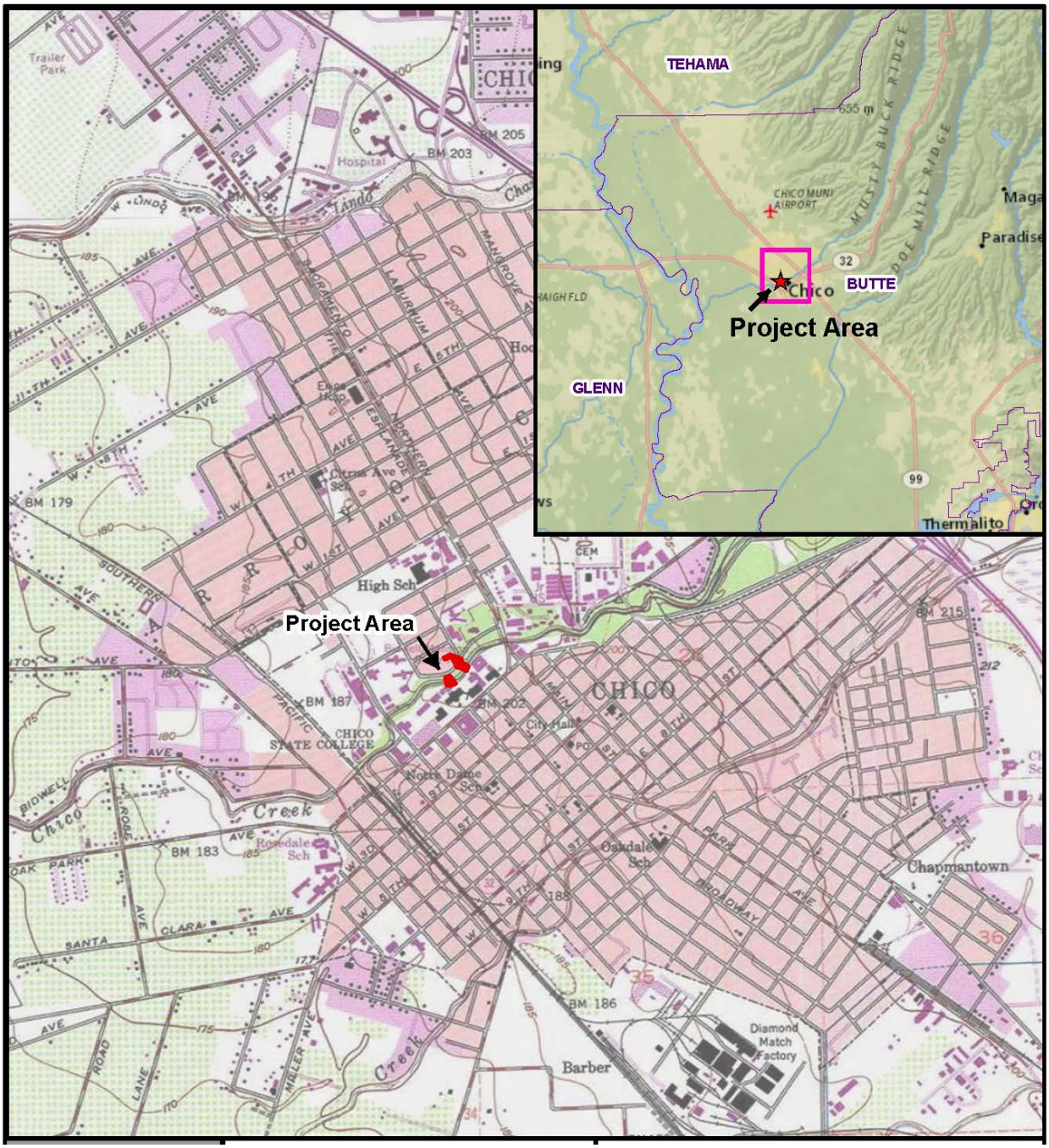

TEHAMA
BUTTE
GLENN
Chico
Project Area
Project Area
CHICO
High Sch
CHICO STATE COLLEGE
Chapmantown
Barber
Diamond Match Factory
Thermalito
Paradise
CHICO MUNI AIRPORT
Trailer Park
Hospital
Creek
BM 205
BM 203
BM 187
BM 183
BM 186
BM 179
BM 215
BM 202

PHOTO 1 -

CSU Chico: Gus Manolis Pedestrian Bridge crossing Big Chico Creek

- View of the remaining bridge structure standing on the south/.east bank looking north/north west.

17 OCT 2014

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY

THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 19010 BD

This Permit is issued to:

California State University, Chico
400 West First Street
Chico, California 95929

To replace the recently destroyed Gus Manolis pedestrian bridge with a 72-foot long, seven (7)-feet wide single-span steel truss, and concrete deck bridge along the same horizontal alignment as the prior bridge. The bridge will be supported by two (2) cast-in-hole-drilled piles at approximately 35-feet in depth below existing grade. Rock slope protection will be replaced in-kind for any disturbed areas, and three (3) trees that pose a threat to the bridge will be relocated away from the bridge and above the design water surface elevation.

The project is located at Big Chico Creek on the California State Univerity, Chico campus, and intersects Sol-Wil-Le-No Avenue (Section 27, T22N, R1E, MDB&M, Sutter Maintenance Yard, Big Chico Creek, Butte 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. 19010 BD

LIABILITY AND IMDEMNIFICATION

THIRTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board (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 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.

FOURTEEN: 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 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.

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

AGENCY CONDITIONS

SIXTEEN: The permittee shall comply with all conditions set forth in the letter from the U.S. Army Corps of Engineers District Engineer dated June XX, 2015, which is attached to this permit as Exhibit A and is incorporated by reference.

SEVENTEEN: The permittee agrees to incur all costs for compliance with local, State, and Federal permitting. If any conditions issued by other agencies conflict with any of the conditions of this permit, then the permittee shall resolve conflicts between any of the terms and conditions that agencies might impose under the laws and regulations it administers and enforces.

EIGHTEEN: If the permittee does not comply with the conditions of the permit and enforcement by the Board is required, the permittee shall be responsible for bearing all costs associated with the enforcement action, including reasonable attorney's fees. Permittee acknowledges that State law allows the imposition of fines in enforcement matters.

REAL ESTATE

NINETEEN: If the construction project extends onto land owned in fee and/or easement by the Sacramento and San Joaquin Drainage District acting by and through the Board, the permittee should secure an easement, license, or temporary entry permit from the Board prior to commencement of work. Contact Tom O'Neil at (916) 653-7654.

PRE-CONSTRUCTION

TWENTY: The permittee shall contact the Board by telephone at (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 20 working days prior to start of work may result in delay of the project.

TWENTY-ONE: Thirty (30) calendar days prior to start of any demolition and/or construction activities within the floodway, the permittee shall submit to the Chief Engineer two sets of plans, specifications and supporting geotechnical and/ or hydraulic impact analyses, for any and all temporary, in channel cofferdam(s), gravel work pad(s), work trestle(s), scaffolding, piles, and/or other appurtenances that are to remain in the floodway during the flood season from November 1 through April 15. The Board shall acknowledge receipt of this submittal in writing within ten (10) working days of receipt, and shall work with the permittee to review and respond to the request as quickly as possible. Time is of the essence. The Board may request additional information as needed and will seek comment from the U.S. Army Corps of Engineers and / or local maintaining agency when necessary. The Board will provide written notification to the permittee if the review period is likely to exceed thirty (30) calendar days.

TWENTY-TWO: Prior to commencement of work, the permittee shall create a photo record, including associated descriptions, of the existing bridge site conditions. The photo record shall be certified (signed and stamped) by a licensed land surveyor or licensed civil engineer registered in the State of

California and submitted to the Board within thirty (30) calendar days of beginning the project.

TWENTY-THREE: The permittee shall provide construction supervision and inspection services acceptable to the Board.

CONSTRUCTION

TWENTY-FOUR: 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 Board.

TWENTY-FIVE: All addenda or other changes made to the submitted documents by the permittee after issuance of this permit shall be submitted to the Chief Engineer for review and approval prior to incorporation into the permitted project. The submittal shall include supplemental plans, specifications, and supporting geotechnical, hydrology and hydraulics, or other technical analyses. The Board shall acknowledge receipt of the addendum or change submittal in writing within ten (10) working days of receipt, and shall work with the permittee to review and respond to the request as quickly as possible. Time is of the essence. The Board may request additional information as needed and will seek comment from the U.S. Army Corps of Engineers and / or the local maintaining agency when necessary. The Board will provide written notification to the permittee if the review period is likely to exceed thirty (30) calendar days. Upon approval of the submitted documents the permit shall be revised, if needed, prior to construction related to the proposed changes.

TWENTY-SIX: 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, and shall be removed after completion of the project.

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: 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: Piers, bents, and abutments being dismantled shall be removed to at least one (1) foot below the natural ground.

THIRTY: Backfill material for excavations shall be placed in four (4) to six (6) inch layers and compacted to at least the density of the adjacent, firm, undisturbed material.

THIRTY-ONE: All fill materials shall be placed in four (4) to six (6) inch layers and compacted to a relative compaction of not less than 90 percent per ASTM D 1557-91 or 97 percent per ASTM D 698-91 above optimum moisture content. Fill material within two feet of the bridge shall be compacted by appropriate hand operated compaction equipment. Field density tests shall be taken by a certified soils laboratory to verify compaction of the fill placed.

THIRTY-TWO: Revetment shall be uniformly placed and properly transitioned into the bank, levee

slope, or adjacent revetment and in a manner which avoids segregation.

THIRTY-THREE: The revetment shall not contain any reinforcing steel, floatable, or objectionable material. Asphalt or other petroleum-based products may not be used as fill or erosion protection on the levee section or within the floodway.

THIRTY-FOUR: Temporary access ramps shall be removed from the floodway during flood season from November 1 through April 15, and after completion of the project.

THIRTY-FIVE: All debris generated by this project shall be disposed of outside the floodway.

POST-CONSTRUCTION

THIRTY-SIX: Except with respect to the activities expressly allowed under this permit, the work area shall be restored to the condition that existed prior to start of work.

THIRTY-SEVEN: Within 120 days of completion of the project, the permittee shall submit to the Board and DWR a mylar copy of as-built drawings, stamped and signed by a licensed civil engineer registered in the State of California, certifying the work was performed and inspected in accordance with the Board permit conditions and submitted drawings and specifications.

OPERATIONS AND MAINTENANCE

THIRTY-EIGHT: The permittee shall be responsible for repair of any damages to the channel, banks, and floodway due to construction, operation, or maintenance of the proposed project.

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

FORTY: All debris that may accumulate around the bridge supports and abutments within the floodway shall be completely removed from the floodway following each flood season.

FORTY-ONE: If the bridge is damaged to the extent that it may impair the project design channel capacity, it shall be repaired or removed prior to the next flood season.

FORTY-TWO: If the permitted encroachment(s) result in any adverse hydraulic impact or scouring the permittee shall provide appropriate mitigation acceptable to the Board.

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

FORTY-FOUR: The permitted encroachment(s) shall not interfere with the flood conveyance capacity of Big Chico Creek. If the permitted encroachment(s) are determined by any agency responsible for operation and 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 Board. If the permittee does not comply, the Board may modify or remove the encroachment(s) at the permittee's expense.

FORTY-FIVE: At the request of either the permittee or the Board, the permittee and the Board shall conduct joint inspections of the project site to assess the integrity and operation of the project, and to assess and respond to any adverse impacts on the floodway or adjacent properties.

PROJECT ABANDONMENT, CHANGE IN PLAN OF FLOOD CONTROL

FORTY-SIX: If the project, or any portion thereof, is to be abandoned in the future, the permittee shall abandon the project under direction of the Board, at the permittee's cost and expense.

FORTY-SEVEN: 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 implementation of the Central Valley Flood Protection Plan or other future flood control plan or project, or if damaged by any cause. If the permittee does not comply, the Board may perform this work at the permittee's expense.

END OF CONDITIONS

Attachment C- Sutter Maintenance Yard Endorsement

State of California | DEPARTMENT OF WATER RESOURCES
CENTRAL VALLEY FLOOD PROTECTION BOARD | California Natural Resources Agency

APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD
ENCROACHMENT PERMIT

Application No. _____
(For Office Use Only)

1. Description of proposed work being specific to include all items that will be covered under the issued permit.

The California State University, Chico (CSU Chico) proposes to replace the recently destroyed Gus Manolis Bridge (Selvester's Cafe Bridge, proposed project) that spans Big Chico Creek with a new pedestrian bridge. Emergency authorization from the CVFCB to remove the structure was provided in October and the collapsed structure and associated abutments were removed. See attached Project Description.

2. Project Location: Butte County, in Section Rancho Farwell Land Grant of 1844
Township: _____ (N) (S), Range: _____ (E) (W), M. D. B. & M.
Latitude: 39 43'51.86" N Longitude: 121 50'39.29"W
Stream : Big Chico Creek , Levee : _____ Designated Floodway: _____
APN: _____

3. Lynda Miracle, California State University, Chico (Name of Applicant / Land *Owner*) of 400 West First Street (Address)

Chico (City) | CA (State) | 95929 (Zip Code) | 530-898-6235 (Telephone Number)

lmiracle@csuchico.edu (E-mail)

4. Kamie Loeser, Senior Environmental Planner (Name of Applicant's Representative) of NorthStar Engineering (Company)

Chico (City) | CA (State) | 95926 (Zip Code) | 530-893-1600 x 213 (Telephone Number)

kloeser@northstareng.com (E-mail)

5. Endorsement of the proposed project from the Local Maintaining Agency (LMA):

We, the Trustees of DWR Sutter Maintenance Yard (Name of LMA) approve this plan, subject to the following conditions:

☐ Conditions listed on back of this form ☒ Conditions Attached ☐ No Conditions

Trustee 12/7/14 Date | Trustee Date

Trustee Date | Trustee Date

APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD
ENCROACHMENT PERMIT

6. Names and addresses of adjacent property owners sharing a common boundary with the land upon which the contents of this application apply. If additional space is required, list names and addresses on back of the application form or an attached sheet.

Name	Address	Zip Code
City of Chico	411 Main Street, Chico, CA	95928

7. Has an environmental determination been made of the proposed work under the California Environmental Quality Act of 1970? ☑ Yes ☐ No ☐ Pending

If yes or pending, give the name and address of the lead agency and State Clearinghouse Number:

California State University, Chico - Planning, Design & Construction
400 West First Street
Chico, CA 95929-0018
SCH No. #2014032059

8. When is the project scheduled for construction? Summer 2015

9. Please check exhibits accompanying this application.

A. ☑ Regional and vicinity maps showing the location of the proposed work.

B. ☑ Drawings showing plan view(s) of the proposed work to include map scale.

C. ☑ Drawings showing the cross section dimensions and elevations (vertical datum?) of levees, berms, stream banks, flood plain,

D. ☑ Drawings showing the profile elevations (vertical datum?) of levees, berms, flood plain, low flow, etc.

E. ☑ A minimum of four photographs depicting the project site.

Signature of Applicant 12/4/14 Date

Include any additional information:

CONDITIONS

Department of Water Resources
Sutter Maintenance Yard

Encroachments within the Floodway – CSUC Bridge Replacement

1. Permittee must maintain encroachment/s in good operating condition in perpetuity.

2. Repair and maintenance of the encroachment/s is the responsibility of the Permittee in perpetuity.

3. Encroachment/s must not interfere with Sutter Maintenance Yard's access to the creek, ability to perform maintenance, or conduct any emergency response operations.

4. Any changes made to the project as described in this encroachment application will be subject to review by the endorser, Sutter Maintenance Yard.

5. All conditions of CVFPB will be met by Permittee.

PHYSICAL SCIENCE BRIDGE, PHASE II

CALIFORNIA STATE UNIVERSITY, CHICO

CHICO, CALIFORNIA

CSU CHICO PROJECT NO. BRDG01

BID SET

12.08.2014

DLR GROUP PROJECT NUMBER: 75-14135-00

ABBREVIATIONS

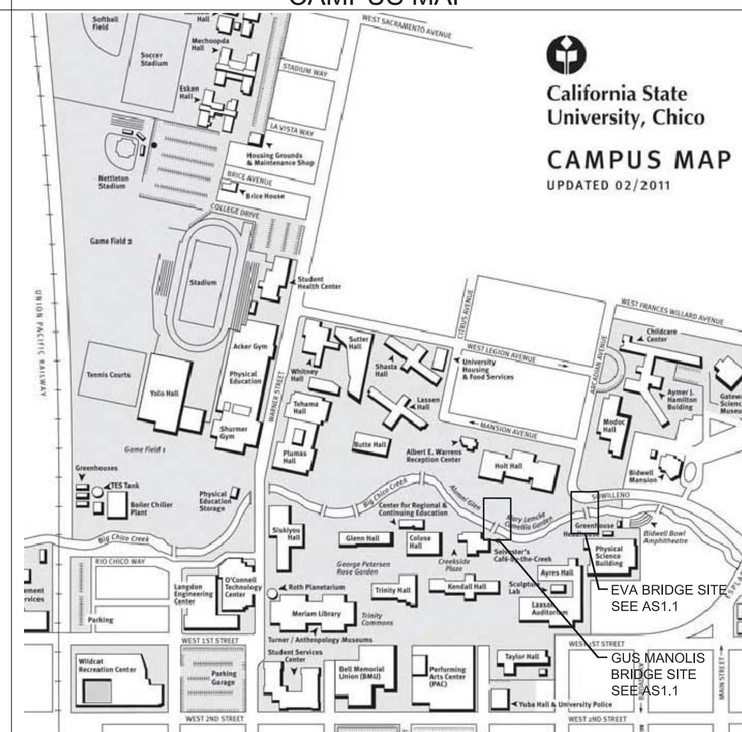
&	AND
@	AT
i.e.	THAT IS
#	NUMBER
%	PERCENT
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AWP	ACOUSTICAL WALL PANEL
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
CAB	CABINET
CBC	CALIFORNIA BUILDING CODE
C.C.R.	CALIFORNIA CODE OF REGULATIONS
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CPT	CARPET
CSWK	CASEWORK
CTR	CENTER
D	DEPTH
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
EL	ELEVATION
ELEC	ELECTRIC(AL)
EQ	EQUAL
EQUIP	EQUIPMENT
EXT	EXTERIOR
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FL	FLOOR
FLG	FLOORING
FT	FEET (FOOT)
FTG	FOOTING
FUT	FUTURE
FWC	FABRIC WALL COVERING
GA	GAUGE
GALV	GALVANIZED
GR	GRADE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H / HT	HEIGHT
HDWR	HARDWARE
HI.	HIGH
HM	HOLLOW METAL
HVAC	HEATING VENTILATING AND AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
IN	INCH
INT	INTERIOR
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY
LAM	LAMINATE(D)
LBS	POUNDS
LF	LINEAR FOOT (FEET)
MATL	MATERIAL
MAX	MAXIMUM
MBD	MARKER BOARD
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLWK	MILLWORK
MTG	MOUNTING
MTL	METAL
MUL	MULLION
MW	MARKER WALL
N/A	NOT APPLICABLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
O&M	OPERATION AND MAINTENANCE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OVHD	OVERHEAD
P	PAINT
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECTION
PSF	POUNDS PER SQUARE FOOT
PTN	PARTITION
RAD / R	RADIUS
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RF	RUBBER FLOOR
RM	ROOM
SC	SOLID CORE
SECT	SECTION
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
SS	SOLID SURFACE
STD	STANDARD
STL	STEEL
STOR	STORAGE
SUSP	SUSPENDED
SV	SHEET VINYL
T	TEMPERED
TBD	TACK BOARD
TEMP	TEMPERED -OR- TEMPORARY
TV	TELEVISION
TW	TACK WALL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VWC	VINYL WALLCOVERING
W	WIDE; WIDTH
W/	WITH
WC	WALL COVERING
WD	WOOD

APPLICABLE CODES

APPLICABLE CODES AND REGULATIONS:

TITLE 24 CCR, PART 1	2013 BUILDING ADMINISTRATIVE CODE
TITLE 24 CCR, PART 2	2013 CALIFORNIA BUILDING CODE, VOL. 1 AND 2
TITLE 24 CCR, PART 3	2013 CALIFORNIA ELECTRICAL CODE (CEC)
TITLE 24 CCR, PART 4	2013 CALIFORNIA MECHANICAL CODE (CMC)
TITLE 24 CCR, PART 5	2013 CALIFORNIA PLUMBING CODE (CPC)
TITLE 24 CCR, PART 12	2013 CALIFORNIA REFERENCED STANDARDS

CAMPUS MAP



SHEET INDEX

G.0	COVER SHEET
AS1.1	ARCHITECTURAL SITE PLAN (EVA BRIDGE)
AS1.2	SITE DETAILS
AS1.3	ELECTRICAL SITE PLAN (EVA BRIDGE)
AS1.4	ARCHITECTURAL SITE PLAN (GUS MANOLIS BRIDGE)
AS1.5	REVEGETATION PLANS (EVA & GUS MANOLIS BRIDGES)

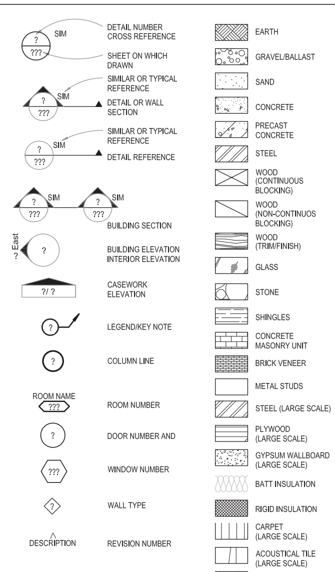
THE DRAWINGS BELOW AND ASSOCIATED SPECIFICATIONS AND/OR CALCULATIONS HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS BELOW HAVE BEEN COORDINATED WITH MY PLANS AND SPECIFICATIONS AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE (OR FOR WHICH I HAVE BEEN DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK).

RICHARD PRICE, AIA ____________ DATE ____________

1 (EVA)	EXISTING TOPOGRAPHY - TITLE SHEET (EVA BRIDGE)
2 (EVA)	EXISTING TOPOGRAPHY (EVA BRIDGE)
3 (EVA)	EXISTING TOPOGRAPHY - UTILITY LOCATIONS (EVA BRIDGE)
1 (GM)	EXISTING TOPOGRAPHY (GUS MANOLIS BRIDGE)
C1	CIVIL LAYOUT & DEMOLITION PLAN (EVA BRIDGE)
C2	CIVIL GRADING & UNDERGROUND PLAN (EVA BRIDGE)
C3	CIVIL LAYOUT & DEMOLITION PLAN (GUS MANOLIS BRIDGE)
C4	CIVIL GRADING (GUS MANOLIS BRIDGE)
C5	CIVIL BRIDGE CROSS SECTIONS (EVA & GUS MANOLIS BRIDGES)
S1.0	ABUTMENT PLANS - NOTES, FOUNDATION PLAN & ELEVATION (EVA BRIDGE)
S2.0	ABUTMENT PLANS - SECTIONS & DETAILS (EVA BRIDGE)
S3.0	ABUTMENT PLANS - FOUNDATION & DEMO PLANS (GUS MANOLIS BRIDGE)
S4.0	ABUTMENT PLANS - SECTIONS & ELEVATIONS (GUS MANOLIS BRIDGE)
S5.0	ABUTMENT PLANS - SECTIONS (GUS MANOLIS BRIDGE)
S6.0	ABUTMENT PLANS - FOUNDATION, DEMO PLAN & ELEVATION (GUS MANOLIS BRIDGE)
S7.0	ABUTMENT PLANS - SECTIONS (GUS MANOLIS BRIDGE)
MP0.1	MECHANICAL LEGEND, SCHEDULES & NOTES
MP0.2	MECHANICAL DETAILS
MP0.3	MECHANICAL DETAILS
MP0.4	MECHANICAL DETAILS
MP1.1	MECHANICAL SITE PLAN
MP1.2	ENLARGED MECHANICAL SITE PLAN
MP1.3	MECHANICAL SITE PROFILE
T001	BRIDGE - TITLE PAGE (EVA BRIDGE)
T002	BRIDGE - GENERAL NOTES (EVA BRIDGE)
T003	BRIDGE - BEARING REACTION & ANCHOR BOLT LAYOUT (EVA BRIDGE)
S101	BRIDGE - ELEVATION & PLAN VIEW (EVA BRIDGE)
S102	BRIDGE - CROSS SECTION (EVA BRIDGE)
S103	BRIDGE - BEARING ELEVATIONS (EVA BRIDGE)
S104	BRIDGE - BEARING DETAILS (EVA BRIDGE)
D101.1	BRIDGE - INSTALLATION GUIDE (EVA BRIDGE)
T201	BRIDGE - TITLE PAGE (EVA BRIDGE)
T202	BRIDGE - GENERAL NOTES (EVA BRIDGE)
T203	BRIDGE - BEARING REACTION & ANCHOR BOLT LAYOUT (EVA BRIDGE)
S201	BRIDGE - ELEVATION & PLAN VIEW (GUS MANOLIS BRIDGE)
S202	BRIDGE - CROSS SECTION (GUS MANOLIS BRIDGE)
S203	BRIDGE - BEARING ELEVATIONS (GUS MANOLIS BRIDGE)
S204	BRIDGE - BEARING DETAILS (GUS MANOLIS BRIDGE)
D101.2	BRIDGE - INSTALLATION GUIDE (GUS MANOLIS BRIDGE)

SYMBOLS/LEGEND



PROJECT INFORMATION

DEFERRED SUBMITTALS

NONE

DELEGATED DESIGN

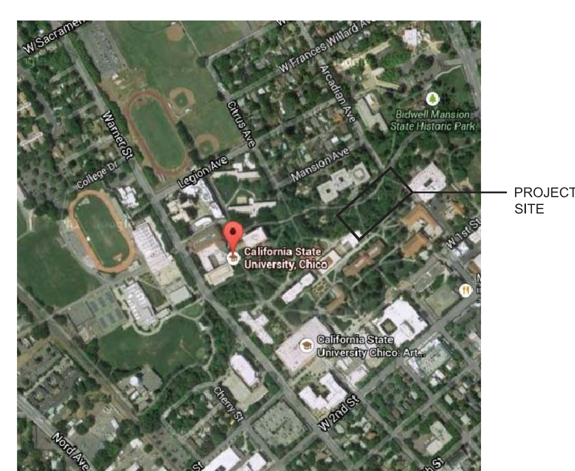
STEEL BRIDGE STRUCTURE

PROJECT SUMMARY

1. REPLACE THE EXISTING FOOT BRIDGE OVER BIG CHICO CREEK NEAR THE PHYSICAL SCIENCE BUILDING WITH A WIDER STEEL AND CONCRETE BRIDGE TO ACCOMMODATE BOTH PEDESTRIAN AND EMERGENCY VEHICLE ACCESS (EVA) AT THE NORTHEAST END OF CAMPUS. WORK SHALL INCLUDE NEW LIGHTING, SIGNAGE, THE CONTINUATION OF EXISTING UTILITES ACROSS THE CREEK, AS WELL AS MODIFICATION OF ADJACENT FLATWORK AT EACH END AS NEEDED TO PROVIDE AN ADA-COMPLIANT PATH OF TRAVEL. WORK IS PHASE II OF THE RECENTLY COMPLETED SOUTHSIDE IMPROVEMENTS PHASE I PROJECT.

2. REPLACE THE RECENTLY DAMAGED GUS MANOLIS PEDESTRIAN FOOT BRIDGE (INCLUDING DAMAGED NORTH AND SOUTH CONCRETE ABUTMENTS AND APPROACHES) OVER BIG CHICO CREEK NEAR SELVESTER'S CAFÉ WITH A REPLACEMENT STEEL AND CONCRETE BRIDGE FOR PEDESTRIAN-ONLY ACCESS. WORK SHALL ALSO INCLUDE MODIFICATIONS TO AN EXISTING RAMP/STAIR SYSTEM ON THE NORTH SIDE OF THE CREEK TO PROVIDE AN ADA-COMPLIANT PATH OF TRAVEL.

VICINITY MAP



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COVER SHEET
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

G.0
75-14135-00
2014-12-08

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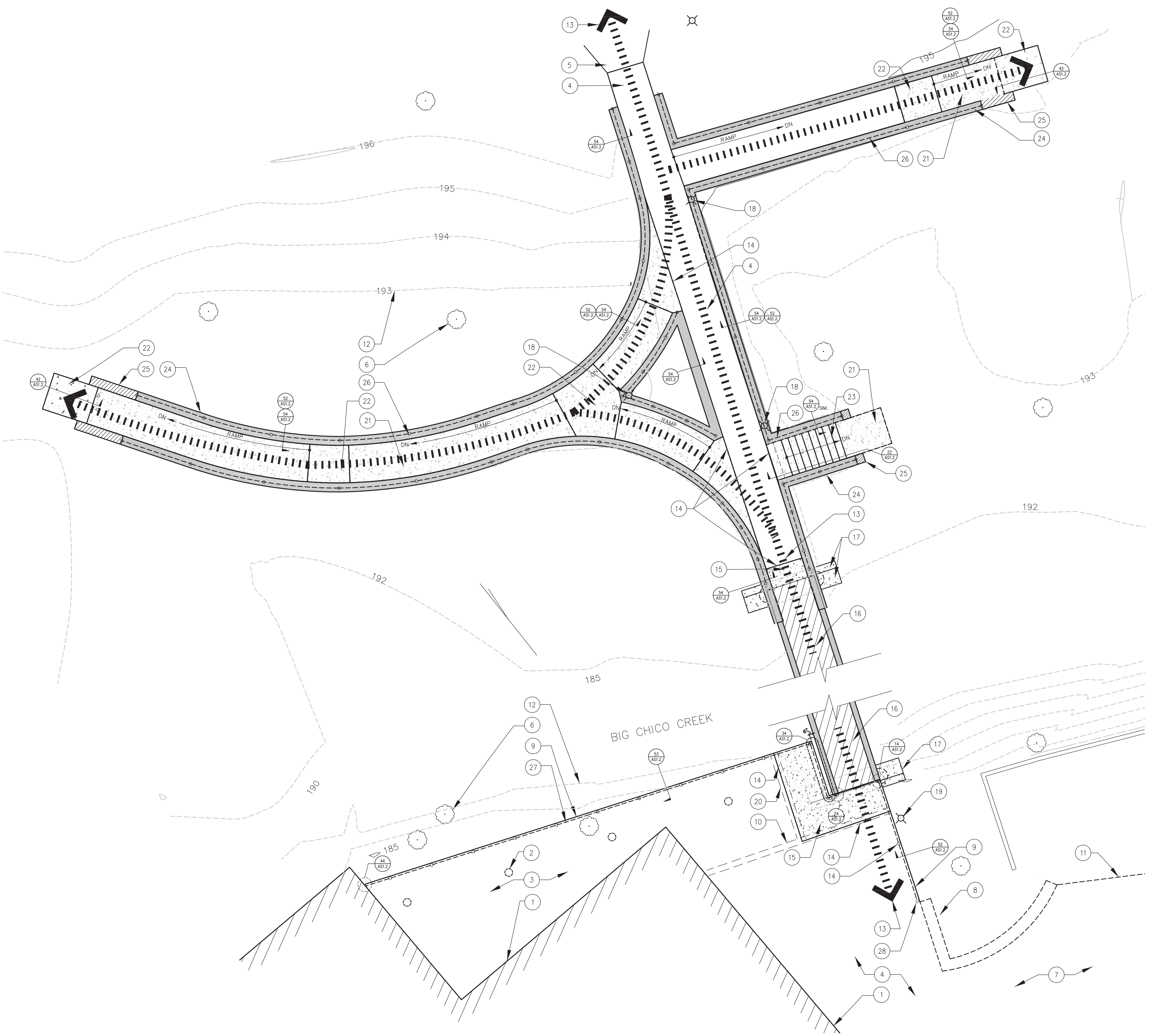
ATTACHMENT D- Project Drawings



SITE PLAN (GUS MANOLIS)

NORTH SCALE: 1" = 5'-0"

LEGEND NOTES

1. EXISTING BUILDING FOOTPRINT (TYP.).
2. EXISTING COLUMN BELOW (TYP.).
3. EXISTING CANTILEVERED CONCRETE DECK (TYP.).
4. EXISTING CONCRETE WALK (TYP.).
5. EXISTING ASPHALT PAVING (TYP.).
6. EXISTING TREE (TYP.).
7. EXISTING DSA–APPROVED CONCRETE WALK PER PHASE 1 PROJECT – SOUTHSIDE IMPROVEMENTS (SEE DSA APPLICATION NUMBER 02–113528).
8. EXISTING CONCRETE SEAT WALL PER PHASE 1 PROJECT – SOUTHSIDE IMPROVEMENTS (DSA APPLICATION NUMBER 02–113528).
9. EDGE OF EXISTING CANTILEVERED CONCRETE DECK.
10. OUTLINE OF EXISTING RETAINING WALL BELOW.
11. OUTLINE OF EXISTING HARDSCAPE.
12. GRADING CONTOURS (TYP.). SEE CIVIL DRAWINGS AND EXISTING TOPOGRAPHIC PLAN.
13. ACCESSIBLE PATH OF TRAVEL (TYP.). SEE ACCESSIBILITY NOTES ON SHEET AS1.1.
14. PROVIDE FLUSH TRANSITION TO EXISTING WALK SURFACE.
15. CONCRETE WALK/APPROACH. SEE CIVIL DRAWINGS.
16. BRIDGE. SEE BRIDGE DRAWINGS.
17. CONCRETE FOOTING AND ABUTMENT. SEE STRUCTURAL DRAWINGS.
18. REPLACE EXISTING POLE–MOUNTED LIGHT FIXTURE. SEE SHEET AS1.3.
19. POLE–MOUNTED LIGHT FIXTURE. SEE SHEET AS1.3.
20. OUTLINE OF RETAINING WALL BELOW. SEE STRUCTURAL DRAWINGS.
21. MODIFY AND EXTEND CONCRETE RAMP FOR ADA–COMPLIANCE (TYP.). SEE CIVIL DRAWINGS.
22. MODIFY AND EXTEND CONCRETE LANDING FOR ADA–COMPLIANCE. SEE CIVIL DRAWINGS.
23. MODIFY AND EXTEND CONCRETE STAIR FOR ADA–COMPLIANCE. SEE CIVIL DRAWINGS.
24. CONCRETE CURB ABOVE EXISTING AT EACH SIDE (TYP.).
25. CONCRETE CURB EXTENSION AT EACH SIDE (TYP.).
26. 3'–6" HIGH ORNAMENTAL STEEL GUARDRAIL TO REPLACE EXISTING AT ALL RAMP, LANDING, WALK, AND STAIR CONDITIONS. ALSO PROVIDE PAINTED STANDARD STEEL HANDRAIL ON EACH SIDE OF ALL RAMP, LANDING, AND STAIR CONDITIONS.
27. 3'–6" HIGH ORNAMENTAL STEEL GUARDRAIL TO REPLACE EXISTING AT EDGE OF EXISTING CONCRETE DECK.
28. TERMINATE GUARDRAIL AT CORNER OF EXISTING SEAT WALL.

ARCHITECTURAL SITE PLAN (GUS MANOLIS)
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

AS1.4
75-14135-00
2014-11-07

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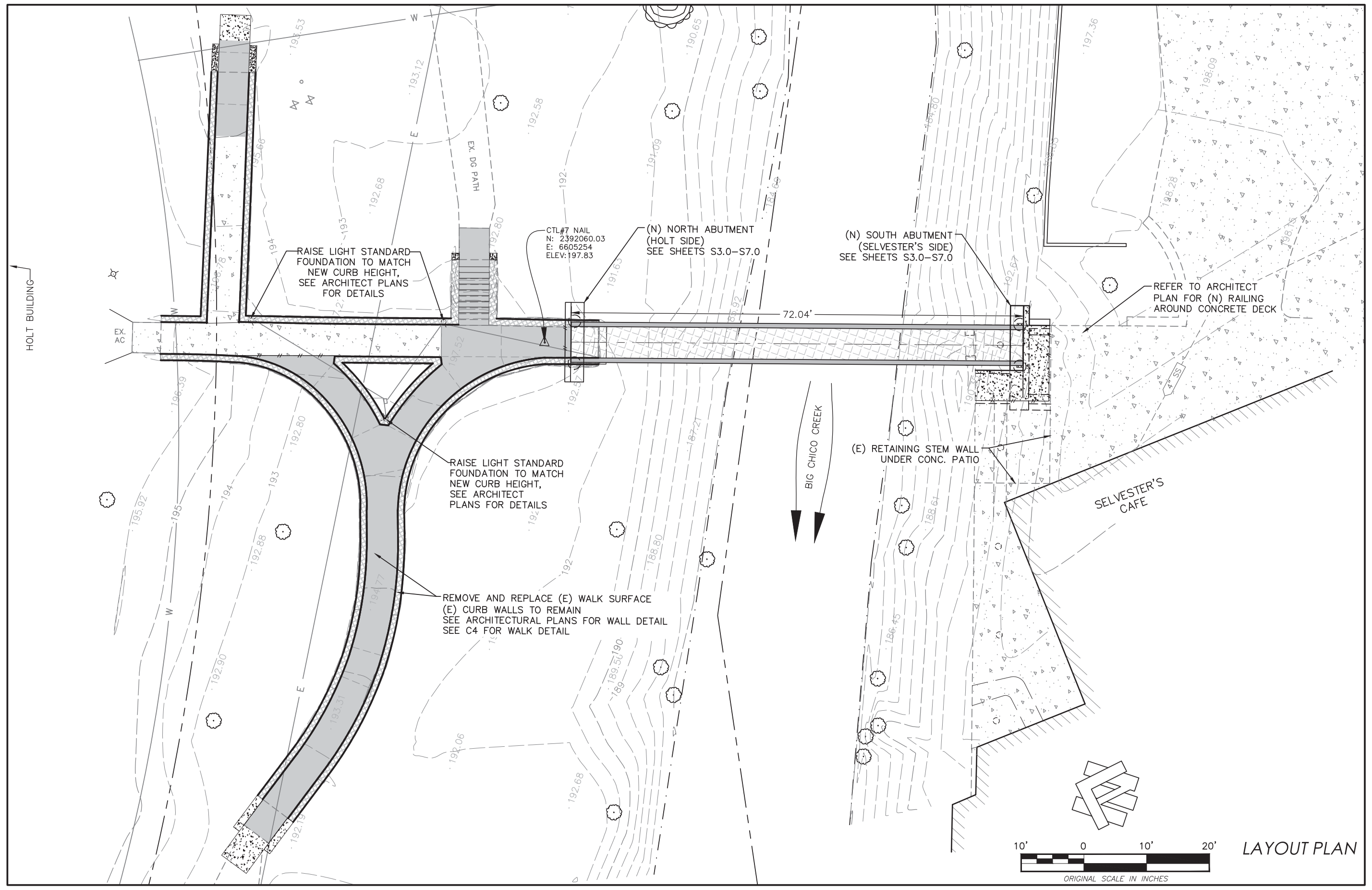
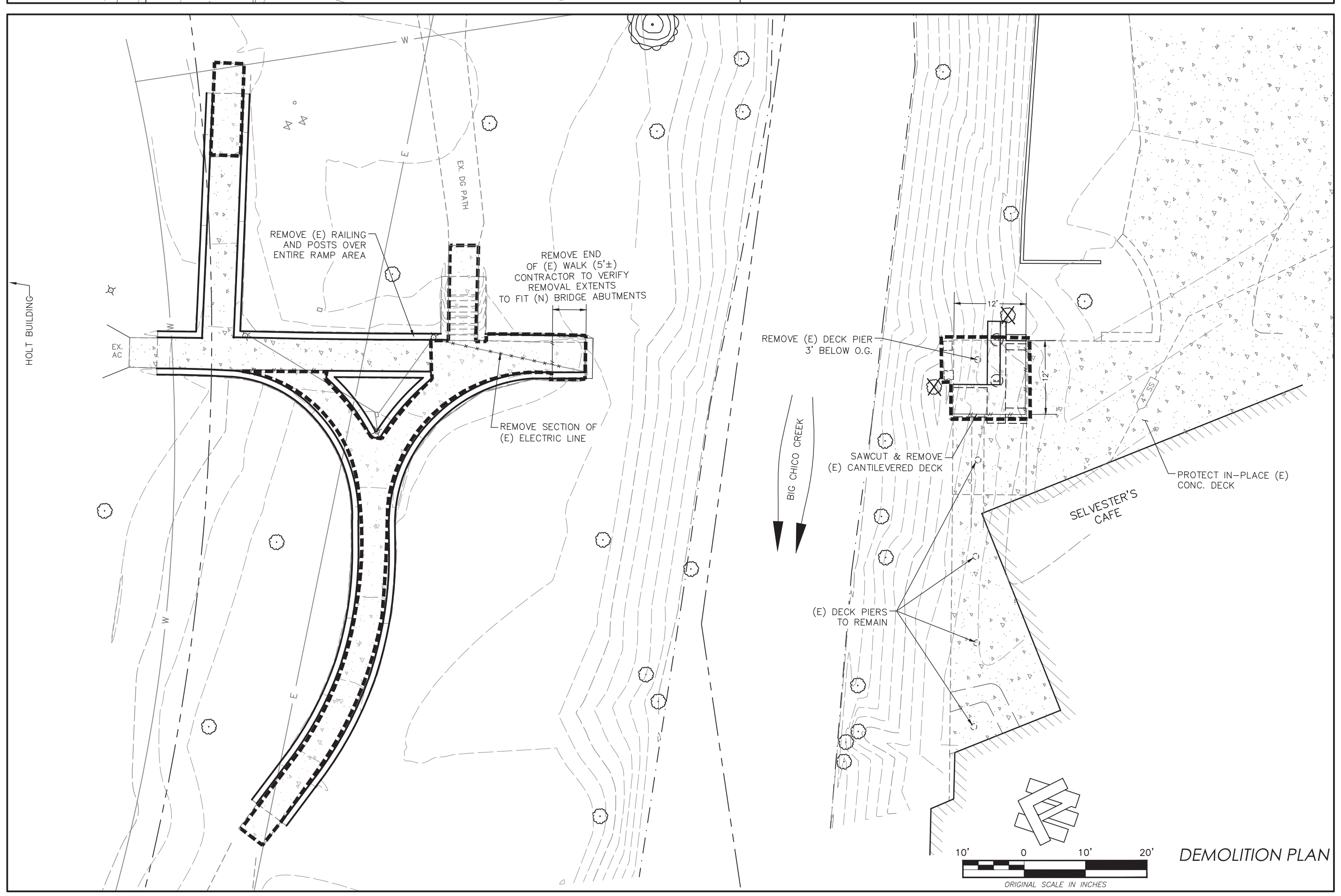
ATTACHMENT D- Project Drawings





LEGEND

- 6" SS — EXISTING SEWER LINE & SIZE
- E — EXISTING ELECTRIC LINE
- W — EXISTING WATER LINE
- 195 — EXISTING MAJOR CONTOUR
- 194 — EXISTING MINOR CONTOUR
- EXISTING HARDSCAPE IMPROVEMENTS
- LIMITS OF GENERAL DEMOLITION WORK
- EXISTING CONCRETE SURFACE
- EXISTING ASPHALT SURFACE
- EXISTING BUILDING
- PROPOSED SAWCUT LINE
- PROPOSED GRADE BREAK
- EXISTING CONCRETE AREAS TO BE REMOVED AND REPLACED
- PROPOSED CONCRETE
- PROPOSED CONCRETE CURB OVERPOUR SEE ARCHITECTURAL PLANS FOR DETAILS
- EXISTING LIGHT
- EXISTING TREE (TO BE PRESERVED)
- EXISTING TREE (TO BE REMOVED)
- EXISTING SURVEY CONTROL POINT

CONSTRUCTION LAYOUT NOTE:
CONSTRUCTION STAKING FOR NEW CONSTRUCTION TO BE PERFORMED BY A LICENSED CIVIL ENGINEER OR LICENSED LAND SURVEYOR. THE ELECTRONIC AUTO CAD FILE SHOWING LAYOUT & GRADES WILL BE MADE AVAILABLE TO THE WINNING BIDDER TO AID IN THE SETUP OF CONSTRUCTION STAKING.

LAYOUT OF BRIDGE FOUNDATION SHALL BE COMPLETED USING ACTUAL BRIDGE PLANS FROM MANUFACTURER AND FIELD RE-CHECKED FOR ACCURACY PRIOR TO PLACING ANY CONCRETE. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE CONSTRUCTED FITTINGS WILL MATCH DELIVERED BRIDGE.

DEMOLITION NOTES:
1. CALL USA PRIOR TO THE START OF ANY CONSTRUCTION OR DEMOLITION. COORDINATE MARKING OF CAMPUS OWNED UTILITIES WITH UNIVERSITY STAFF.

2. REMOVED ASPHALT AND AGGREGATE BASE MAY BE REUSED FOR SITE FILL UNDER PROPOSED HARDSCAPE IMPROVEMENTS ONLY, ASPHALT SHALL BE GROUND TO MEET THE MINIMUM SIZE REQUIREMENTS.

3. EXISTING BRIDGE FOOTINGS & ABUTMENTS SHALL BE REMOVED TO A DEPTH OF AT LEAST 3' BELOW FINISHED GRADE AND FURTHER AS NEEDED TO AVOID CONFLICTS WITH PROPOSED SITE OR UTILITY FEATURES.

4. SITE SURVEY AND COMPILATION OF EXISTING AS-BUILTS IS NOT SUFFICIENT TO LOCATE EXISTING UNDERGROUND UTILITY LINES WITH ANY CONFIDENCE. CONTRACTOR TO BE AWARE THAT UNDERGROUND LINES MAY EXIST ANYWHERE ON THE SITE AND SHALL USE EXTREME CAUTION DURING ALL EXCAVATION AND EARTHWORK.

5. CONTRACTOR TO REVIEW CONSTRUCTION DRAWINGS AND SAVE ANY FACILITIES SHOWN AS REMAINING. COORDINATE THE EXACT LIMITS OF REMOVAL WITH CONSTRUCTION CONTRACTOR TO ENSURE GOOD CONTINUATION OF FACILITIES TO BE MATCHED.

6. UNDERGROUND DEMOLITION IS SHOWN IN GENERALLY ONLY, ACTUAL WORK PER EACH DISCIPLES INDIVIDUAL PLANS. WORK MAY EXTEND OUTSIDE OF DEMOLITION LIMITS SHOWN. CONTRACTOR TO REPAIR ALL DAMAGED SURFACES IN KIND.

7. ALL CONCRETE, STEEL, DELETERIOUS MATERIAL, ASPHALT, PLANTER WALLS, AND OTHER HARDSCAPE IMPROVEMENTS WITHIN DEMOLITION LIMITS SHALL BE COMPLETELY REMOVED UNLESS NOTED TO REMAIN.

8. TREES REMOVED WITHIN THE CREEK CHANNEL SHALL CONSIST OF REMOVING THE ABOVE GROUND PORTION ONLY. NO EXCAVATION OF ROOTS OR STUMP GRINDING TO BE ALLOWED. TREES OUTSIDE OF CHANNEL SHALL BE COMPLETELY REMOVED INCLUDING STUMPS & ROOTS.

CIVIL PLAN ABBREVIATIONS

AGGREGATE BASE ROCK	AB
ASPHALT CONCRETE	AC
AMERICAN DISABILITIES ACT	ADA
ATT TELEPHONE LINE	ATT
BUILDING	BLDG
BACK OF WALL	BOW
CENTER LINE	CL
CONCRETE	CONC
CONTROL	CTL
CAL WATER	CW
DRAIN INLET	DI
ELECTRIC	E
ELEVATION	ELEV
EXISTING	EX
FLOW LINE	FL
GRADE BREAK	GB
GAS	G
STEAM	HW
IRRIGATION CONTROL VALVE	IVC
INVERT	INV
IRRIGATION	IRR
ON CENTER	O.C.
POINT OF CONNECTION	POC
RADIUS	R
STORM DRAIN	SD
STORM DRAIN CLEAN OUT	SDCO
STANDARD	STD
SEWER	S
SIDEWALK	SW
TOP OF WALL	TOW
TOP BACK OF CURB	TBC
WATER	W

SOILS REPORT

CONSTRUCTION SHALL CONFORM TO THE SOILS REPORT PREPARED BY MATRISCOPE ENGINEERING LABORATORIES, INC DATED SEPTEMBER 5, 2014. THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY IF SOILS DIFFERING IN CHARACTER OR STRUCTURE FROM THE REPORT ARE FOUND TO BE PRESENT ON THE SITE.

SURVEY NOTES

ALL SURVEYING FOR THIS PROJECT WAS PROVIDED BY CSUC AND COMPLETED BY ROBERTSON ERICKSON CIVIL ENGINEERS & SURVEYORS. THE REPORTED BASIS OF BEARINGS FOR THIS PROJECT IS BETWEEN FOUND MONUMNETS ON SHEET 2 OF 39-MAPS-52-55. THE BEARING OF SAID LINE BEING N24°39'26"W.

VERTICAL AND HORIZONTAL CONTROL IS BASED ON A MAP FOR CSUC BY RINGEL AND ASSOCIATES, DATED MARCH 22, 1988.

ELEVATIONS ARE BASED ON CSUC VERTICAL CONTROL POINT #V9A, A BRASS DISK AT THE INTERSECTION OF LEGION & CITRUS STREETS. ELEVATION = 192.27' USC & GS DATUM. TO CONVERT TO CITY OF CHICO DATUM SUBTRACT 0.53'. TO CONVERT TO NAVD88 ADD 2.33'.

COORDINATES ARE BASED ON CSUC HORIZONTAL CONTROL POINT H-9, A BRASS DISK AT THE SW CORNER OF LEGION & CITRUS STREETS.
CALIFORNIA ZONE 2 NAD 83
N- 2,392,553.912
E- 6,604,564.782

CIVIL LAYOUT & DEMOLITION PLAN - GUS MANOLIS BRIDGE
PHYSICAL SCIENCE BRIDGE , PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

C3

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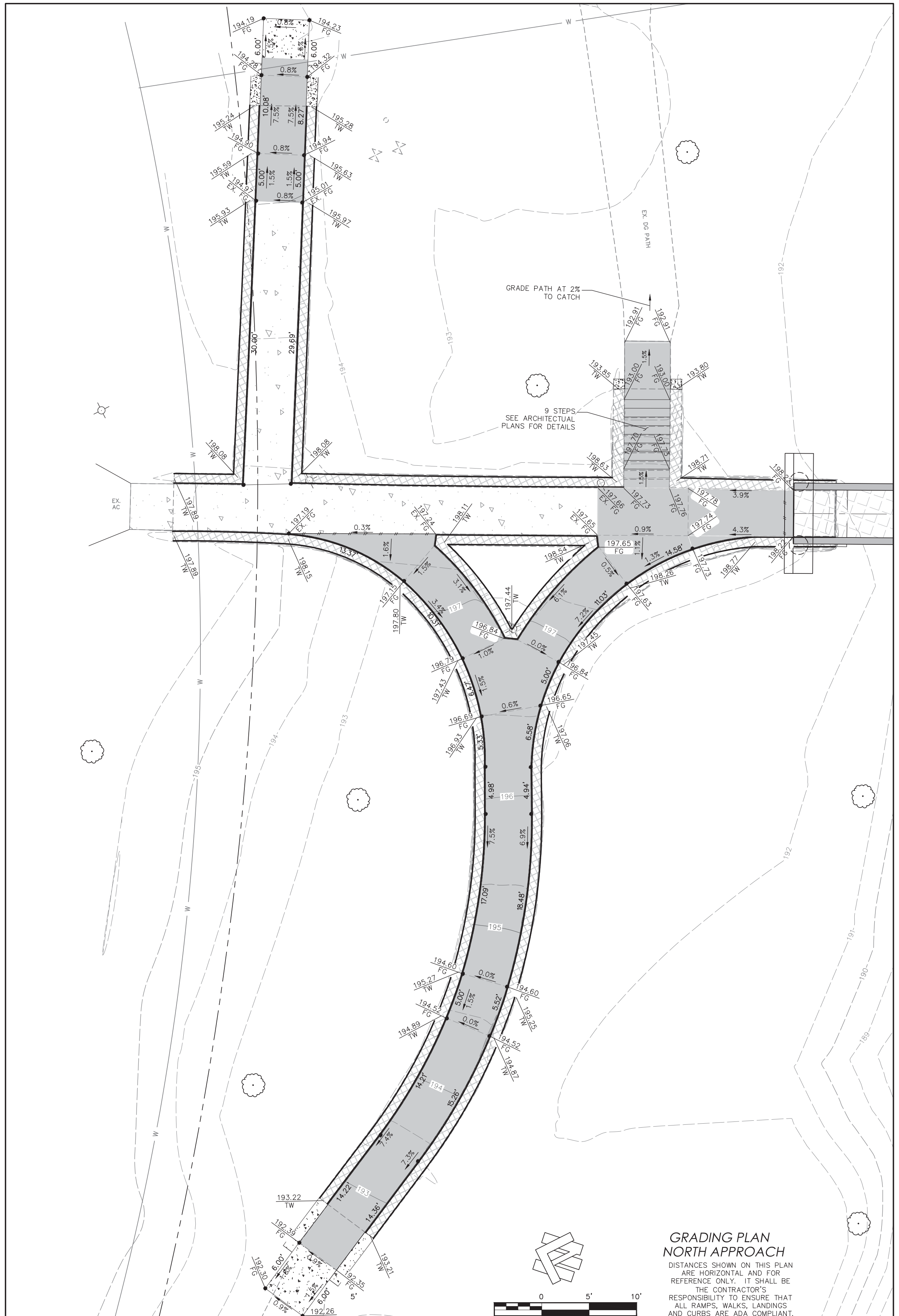


GRADING PLAN NORTH APPROACH

DISTANCES SHOWN ON THIS PLAN ARE HORIZONTAL AND FOR REFERENCE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL RAMPS, WALKS, LANDINGS AND CURBS ARE ADA COMPLIANT.

ORIGINAL SCALE IN INCHES

LEGEND

6" SS	EXISTING SEWER LINE & SIZE
	EXISTING ELECTRIC LINE
	EXISTING CAL WATER MAIN
195	EXISTING MAJOR CONTOUR
194	EXISTING MINOR CONTOUR
195	PROPOSED MAJOR CONTOUR
194	PROPOSED MINOR CONTOUR
	EXISTING HARDSCAPE IMPROVEMENTS
	LIMITS OF GENERAL DEMOLITION WORK
	EXISTING CONCRETE SURFACE
	EXISTING ASPHALT SURFACE
	EXISTING BUILDING
	PROPOSED SAWCUT LINE
	PROPOSED GRADE BREAK
	EXISTING CONCRETE AREAS TO BE RECONSTRUCTED
	PROPOSED CONCRETE SIDEWALKS
	PROPOSED CONCRETE CURB OVERPOUR
	EXISTING LIGHT
	EXISTING TREE (TO BE PRESERVED)
	EXISTING SURVEY CONTROL POINT

CIVIL PLAN ABBREVIATIONS

AGGREGATE BASE ROCK	AB
ASPHALT CONCRETE	AC
AMERICAN DISABILITIES ACT	ADA
ATT TELEPHONE LINE	ATT
BUILDING	BLDG
BACK OF WALL	BOW
CENTER LINE	CL
CONCRETE	CONC
CONTROL	CTL
CAL WATER	CW
DRAIN INLET	DI
ELECTRIC	E
ELEVATION	ELEV
EXISTING	EX
FLOW LINE	FL
GRADE BREAK	GB
GAS	G
STEAM	HW
IRRIGATION CONTROL VALVE	IVC
INVERT	INV
IRRIGATION	IRR
ON CENTER	O.C.
POINT OF CONNECTION	POC
RADIUS	R
STORM DRAIN	SD
STORM DRAIN CLEAN OUT	SDCO
STANDARD	STD
SEWER	S
SIDEWALK	SW
TOP OF WALL	TOW
TOP BACK OF CURB	TBC
WATER	W

UTILITY NOTES:

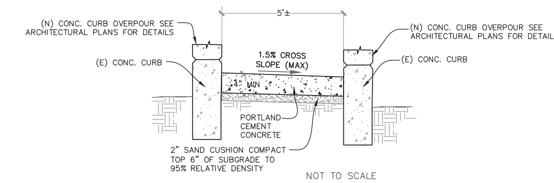
1. SITE SURVEY AND COMPILATION OF EXISTING AS-BUILTS IS NOT SUFFICIENT TO LOCATE EXISTING UNDERGROUND UTILITY LINES WITH ANY CONFIDENCE. CONTRACTOR TO BE AWARE THAT UNDERGROUND LINES MAY EXIST ANYWHERE ON THE SITE AND SHALL USE EXTREME CAUTION DURING ALL EXCAVATION AND EARTHWORK.

2. DO NOT USE VIBRATING SHEEPSFOOT ROLLER FOR COMPACTION ABOVE OR NEXT TO EXISTING UTILITY LINES. THIS APPLIES TO THE ENTIRE PROJECT AREA AS ACTUAL LOCATION OF BURIED UTILITIES IS UNKNOWN. ROLLER COMPACTION IS ACCEPTABLE. SEE SPECS FOR SPECIFIC TRENCH COMPACTION REQUIREMENTS.

GRADING NOTES:

1. CONTRACTOR TO CONSTRUCT GRADING CONFORMS IN ADJACENT LANDSCAPE & DIRT AREAS TO ALL NEW SIDEWALKS AND ASPHALT SURFACES. SLOPE TO BE 5:1 MAXIMUM. IN AREAS OF CONFORM CONTRACTOR IS TO REPLACE EXISTING SURFACE, I.E. SOD IN AREAS OF LAWN, BARK MULCH IN PLANTING & NATIVE AREAS ALONG CREEK, DECOMPOSED GRANITE IN AREAS OF D.G. PATH CONFORM.

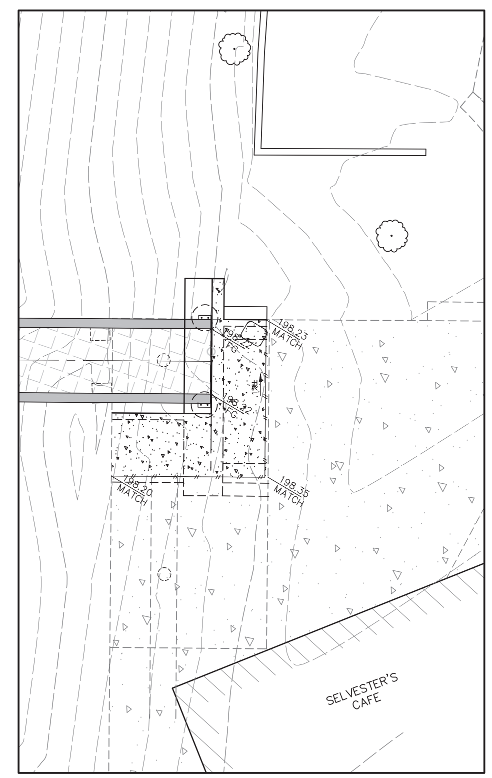
2. CONTRACTOR SHALL PROVIDE AND IMPLEMENT EROSION AND WATER POLLUTION CONTROL PLANS NEEDED TO ENSURE CONSTRUCTION CONFORMS TO ALL NATIONAL, STATE, AND LOCAL REQUIREMENTS.



NOT TO SCALE

NOTE:
- THE DISTANCE BETWEEN SCORE LINES SHALL NOT EXCEED 4'-0" IN THE LONGITUDINAL DIRECTION OR 4'-9" IN THE TRANSVERSE DIRECTION
- INSTALL ¼" EXPANSION JOINTS ON 48" CENTERS
- BROOM FINISH IN THE TRANSVERSE DIRECTION
- SIDEWALK SHALL SLOPE AT A MAXIMUM SLOPE OF 2% AWAY FROM THE BUILDING.

WALK DETAIL



GRADING PLAN SOUTH APPROACH

ORIGINAL SCALE IN INCHES

CIVIL GRADING PLAN - GUS MANOLIS BRIDGE
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

C4

75-14135-00

2014-12-08

FILE 4-CSUC
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL. #:02-____
AC ____ FLS ____ SS ____
DATE ____

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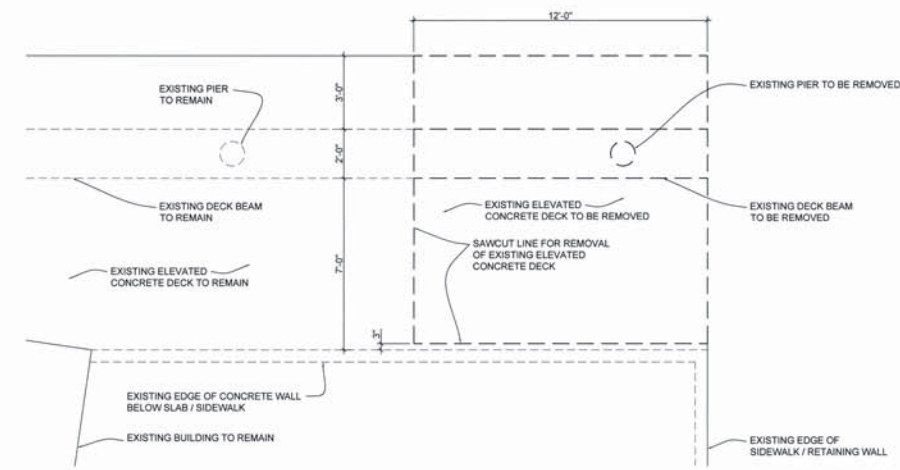
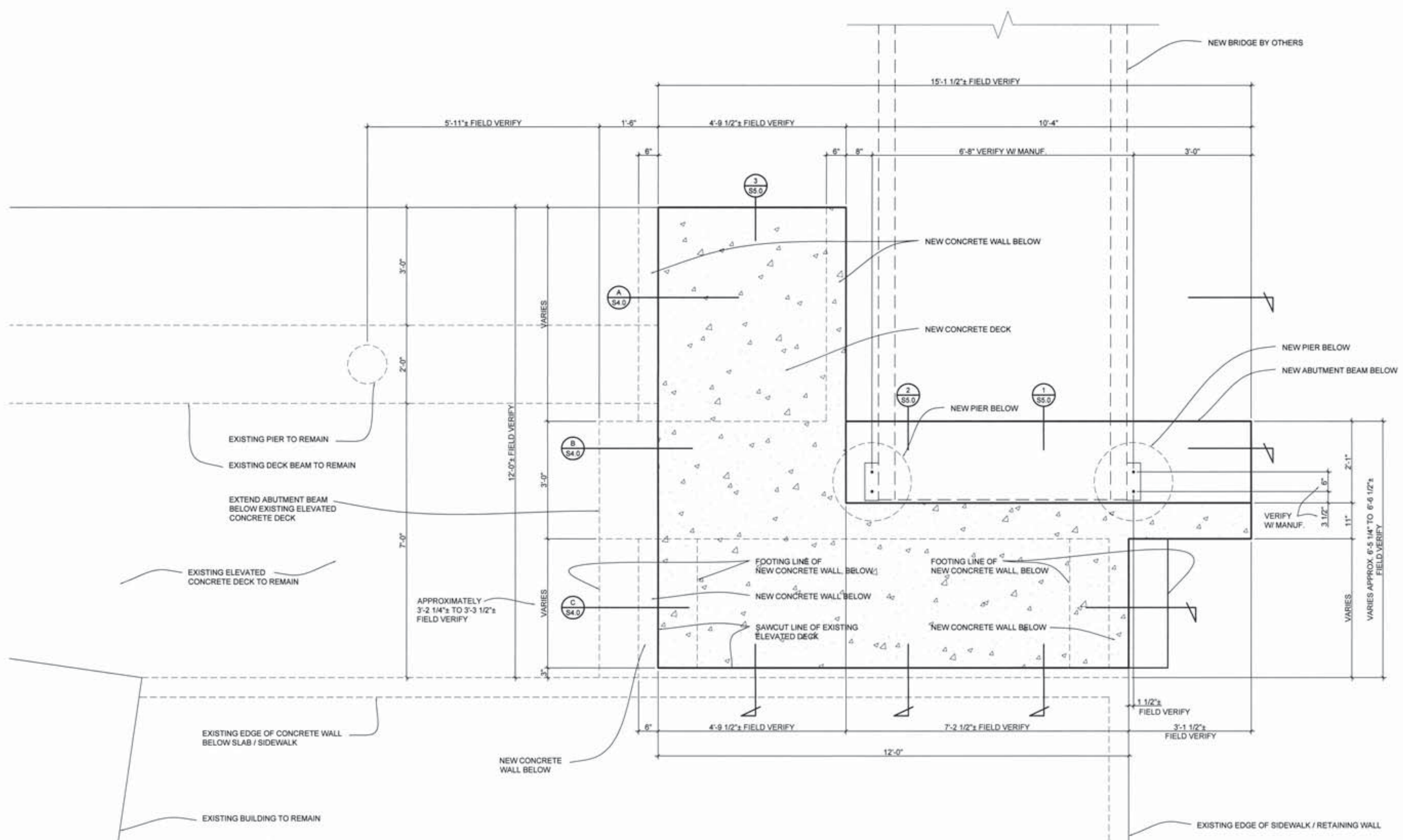
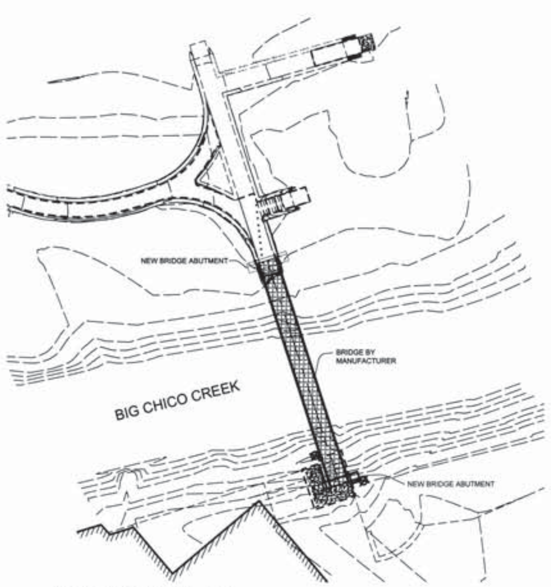


DEMO PLAN OF PEDESTRIAN BRIDGE ABUTMENT
AT SOUTH SIDE (SELVESTERS CAFE)
3/8" = 1'-0"



PLAN VIEW OF PEDESTRIAN BRIDGE ABUTMENT
AT SOUTH SIDE (SELVESTERS CAFE)
3/4" = 1'-0"



LOCATION PLAN
N.T.S.

GUS MANOLIS PLANS - FOUNDATION PLAN AND DEMO PLAN
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

S3.0
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2014-12-08

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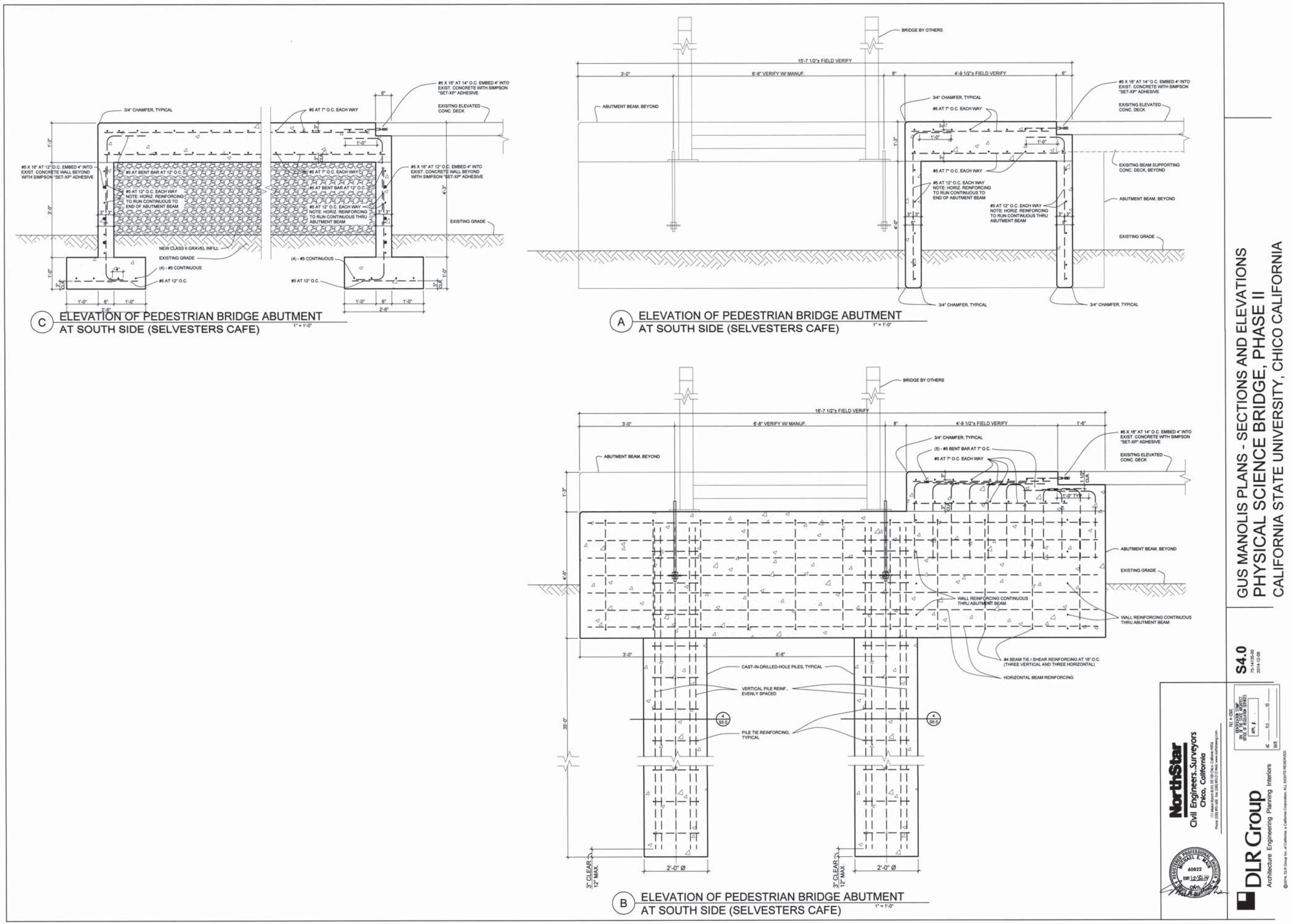
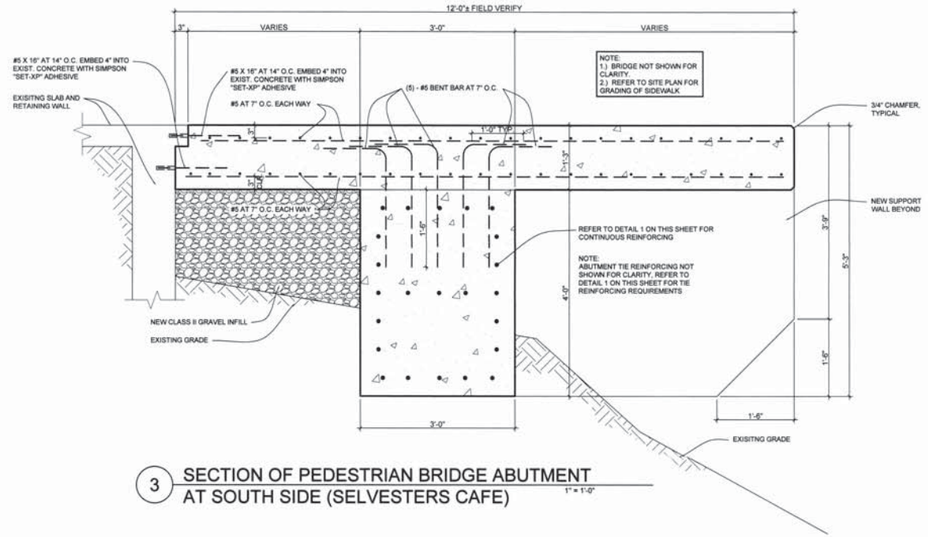
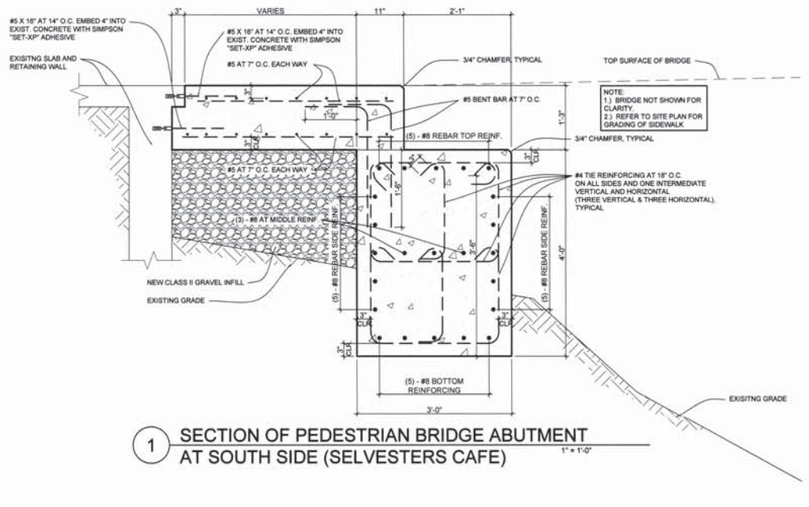


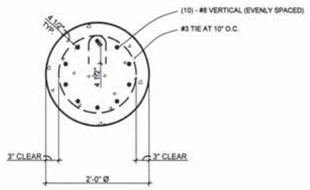
C ELEVATION OF PEDESTRIAN BRIDGE ABUTMENT
AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"
A ELEVATION OF PEDESTRIAN BRIDGE ABUTMENT
AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"
B ELEVATION OF PEDESTRIAN BRIDGE ABUTMENT
AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"
BRIDGE BY OTHERS
ABUTMENT BEAM, BEYOND
EXISTING GRADE
3/4" CHAMFER, TYPICAL
CAST-IN-DRILLED-HOLE PILES, TYPICAL
VERTICAL PILE REINF., EVENLY SPACED
PILE TIE REINFORCING, TYPICAL
WALL REINFORCING CONTINUOUS THRU ABUTMENT BEAM
HORIZONTAL BEAM REINFORCING
2'-0" Ø
3" CLEAR 12" MAX.
GUS MANOLIS PLANS - SECTIONS AND ELEVATIONS
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA
S4.0
75-14135-00
2014-12-08
NorthStar
Civil Engineers..Surveyors
Chico, California
DLR Group
Architecture Engineering Planning Interiors



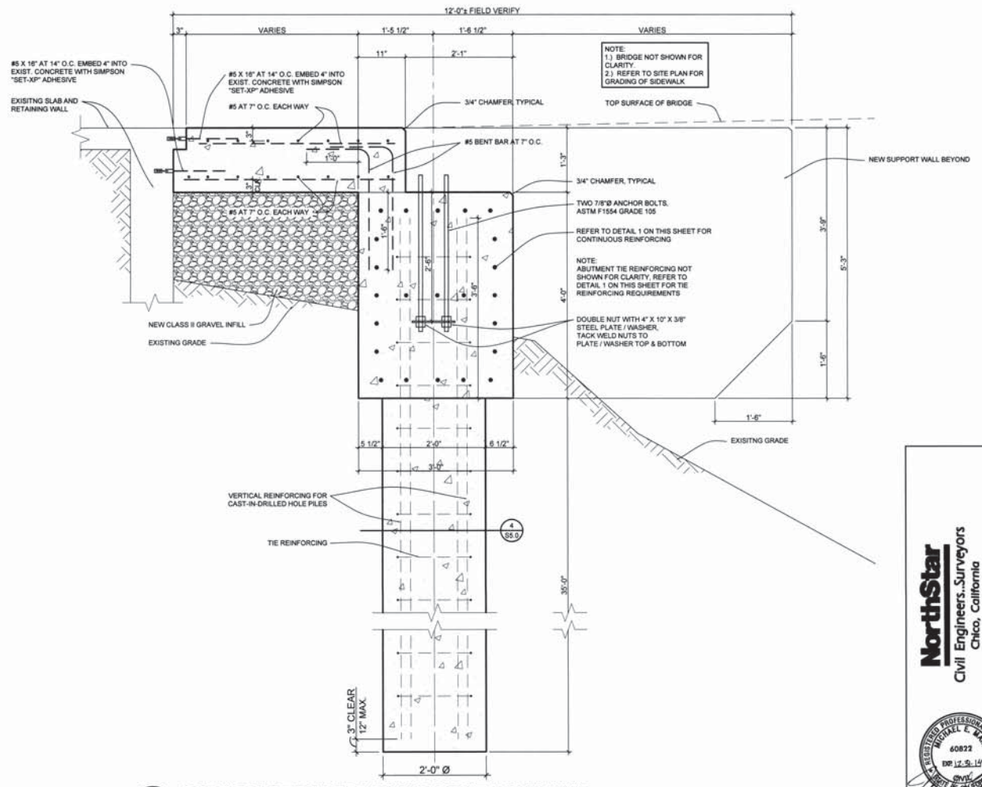
3 SECTION OF PEDESTRIAN BRIDGE ABUTMENT AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"



1 SECTION OF PEDESTRIAN BRIDGE ABUTMENT AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"



4 SECTION THRU CIDH PILE
1" = 1'-0"



2 SECTION OF PEDESTRIAN BRIDGE ABUTMENT AT SOUTH SIDE (SELVESTERS CAFE)
1" = 1'-0"

GUS MANOLIS PLANS - SECTIONS
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

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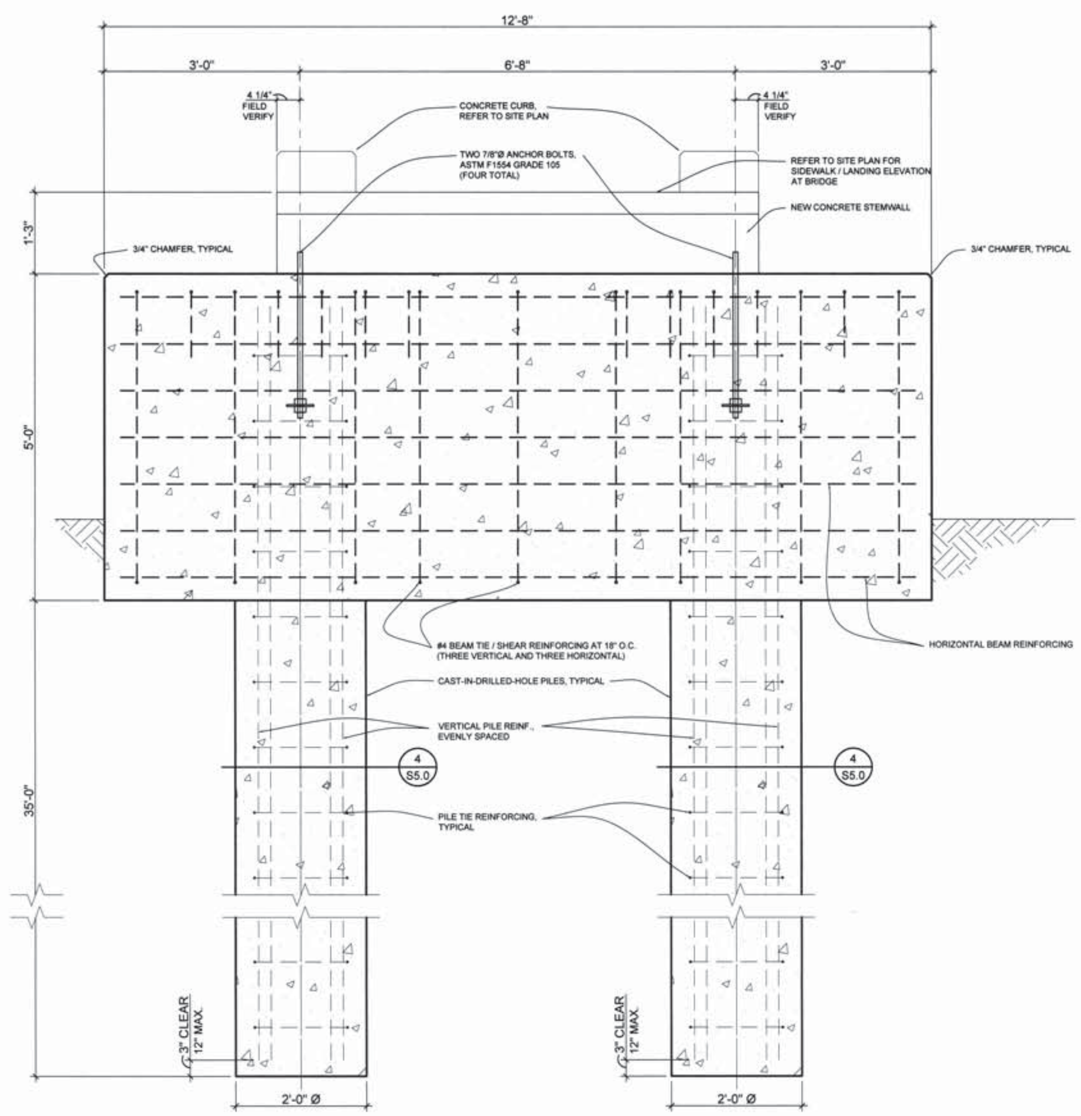
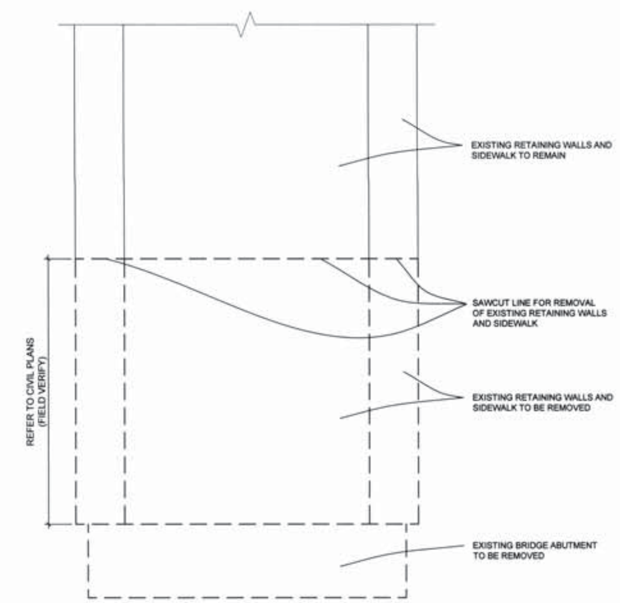
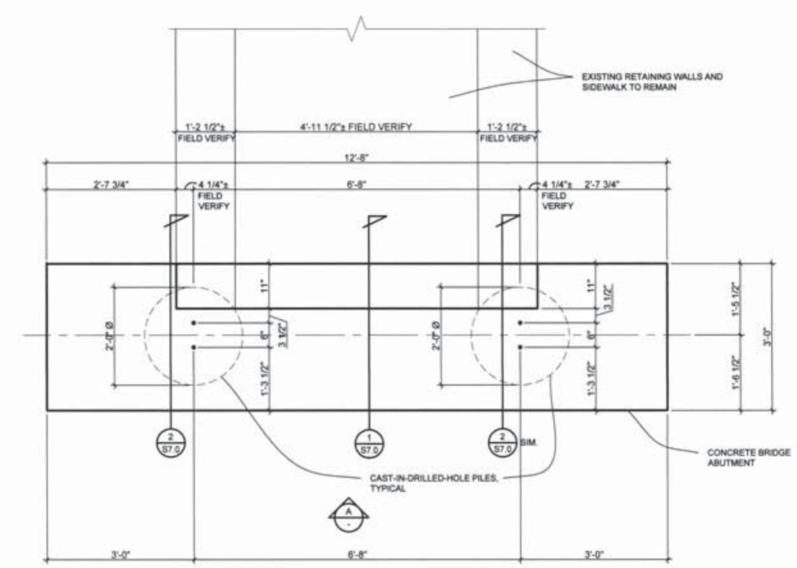


A ELEVATION OF PEDESTRIAN BRIDGE ABUTMENT
AT NORTH SIDE (HOLT HALL) 1" = 1'-0"



DEMO PLAN OF PEDESTRIAN BRIDGE ABUTMENT
AT NORTH SIDE (HOLT HALL) 3/4" = 1'-0"



PLAN VIEW OF PEDESTRIAN BRIDGE ABUTMENT
AT NORTH SIDE (HOLT HALL) 3/4" = 1'-0"

GUS MANOLIS PLANS - FOUNDATION, DEMO PLAN, AND ELEVATION
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

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2014-12-08

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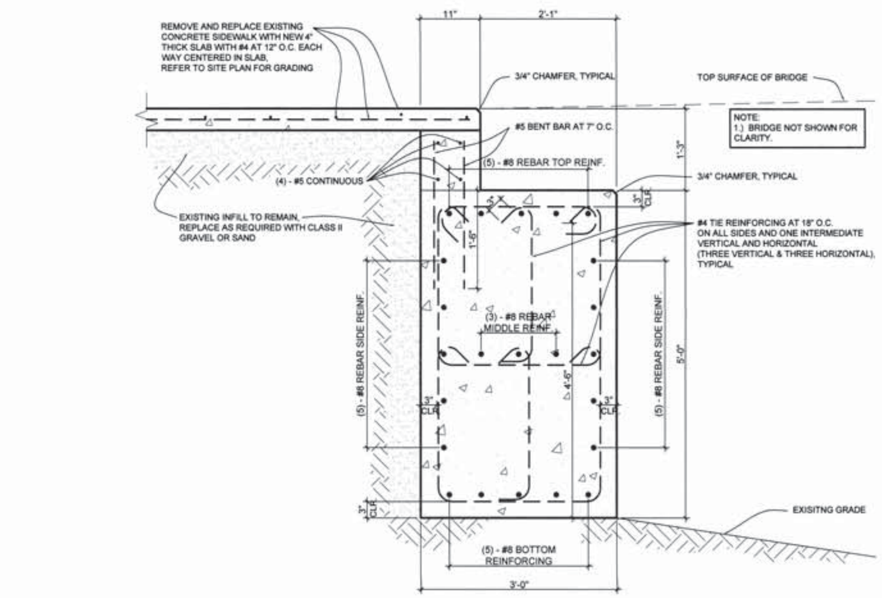
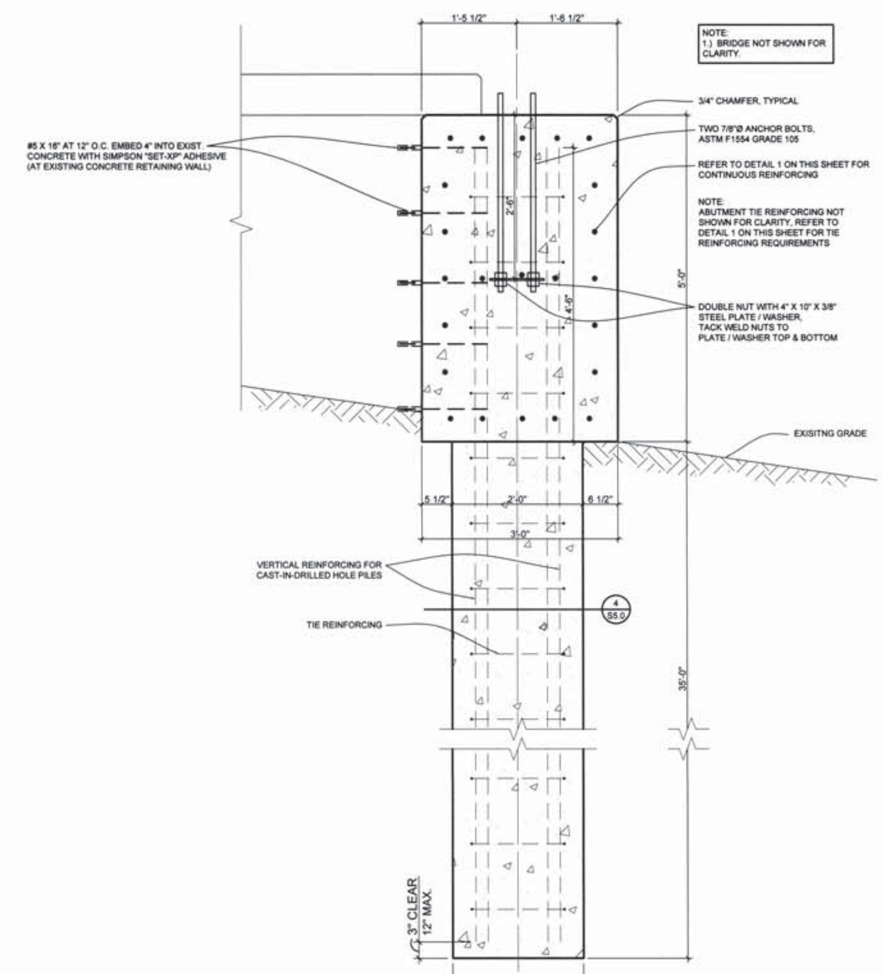


1 SECTION OF PEDESTRIAN BRIDGE ABUTMENT AT NORTH SIDE (HOLT HALL)
1" = 1'-0"



2 SECTION OF PEDESTRIAN BRIDGE ABUTMENT AT NORTH SIDE (HOLT HALL)
1" = 1'-0"

GUS MANOLIS PLANS - SECTIONS
PHYSICAL SCIENCE BRIDGE, PHASE II
CALIFORNIA STATE UNIVERSITY, CHICO CALIFORNIA

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2014-12-08

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Chico, California

DLR Group
Architecture Engineering Planning Interiors

KEY FINDINGS

PHYSICAL SCIENCES BRIDGE

Proposed Bridge Description :	99 feet long, 22.75 feet wide, pre-manufactured Single Span, Steel Truss, with Cambered (arched) 9" thick concrete deck with 16" tall floor beams
Proposed Bottom Soffit Elevation =	200.70 (deck high-point of chamber); **197.90** (lowest bridge member)
Proposed Floodplain Water Surface Elev. =	194.70
Proposed WSE/Soffit Clearance =	**3.2 feet**
Existing Bottom Soffit Elevation =	197.3
Existing Floodplain Water Surface Elev. =	194.68
Existing WSE/Soffit Clearance =	2.62 feet

GUS MANOLIS BRIDGE

Proposed Bridge Description :	72 feet long, 6.5 feet wide, pre-manufactured Single Span Steel Truss, with Cambered (arched), 5" thick concrete deck with 5" floor beams
Proposed Bottom Soffit Elevation =	199.01 (center deck; high-point of chamber); **197.70** (lowest bridge member near)
Proposed Floodplain Water Surface Elev. =	194.38
Proposed WSE/Soffit Clearance =	**3.32 feet**
Existing Floodplain Water Surface Elev. =	194.39
Existing WSE/Soffit Clearance =	Unknown; existing bridge collapsed and removed in Fall, 2014.

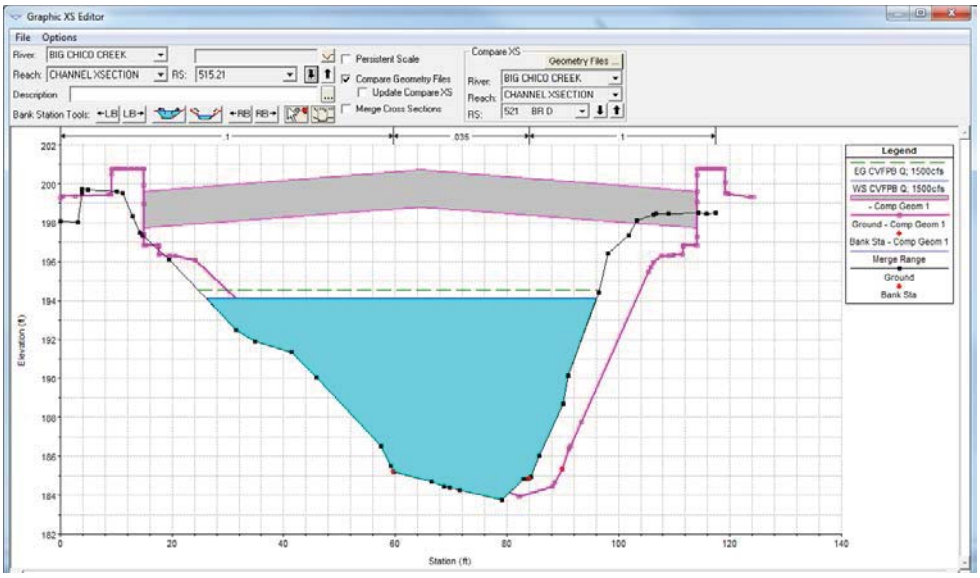

Figure 5: Comparison of Existing/Proposed condition cross section for Physical Sciences; taken from HEC-RAS geometry editor.

4.2.1.2 Gus Manolis Bridge

As mention elsewhere in this report, the Gus Manolis replacement structure will replace the previous structure with a similar pedestrian structure at the same alignment but with longer span with abutments proposed to be offset compared to the previous foundation. The alignment of the replacement structure (following the existing touchdown locations) is slightly skewed to normal direction of channel flow by approximately 7-8˚. Cross sections are oriented perpendicular to the flow direction and the skew of the structure was accounted for in bridge cross-section and to sections adjacent to the bridge. No skew was recorded in the model as this information is correctly represented in the geometry cross-sections. Figure 6 illustrate the direct geometric cross-sectional differences of the existing and proposed conditions. Note the lines with cyan color are the proposed features.

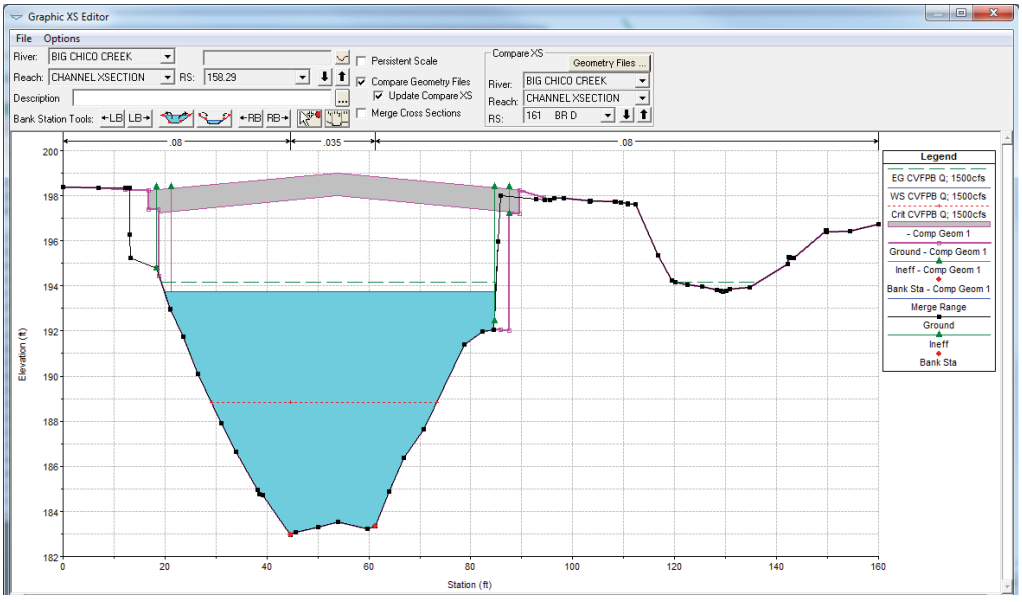

Figure 6: Comparison of Existing/Proposed condition downstream Gus Manolis Bridge cross-section; taken from HEC-RAS geometry editor

HEC-RAS Plan: Proposed River: BIG CHICO CREEK Reach: CHANNEL XSECTION

Reach	River Sta	Profile	E.G. Elev	W.S. Elev	Crit W.S.	Frctn Loss	C & E Loss	Top Width	Q Left	Q Channel	Q Right	Vel Chnl	Vel Total	Vel Left	Vel Right	Hydr Depth	Froude # Chl
			(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(cfs)	(cfs)	(ft/s)	(ft/s)	(ft/s)	(ft/s)	(ft)	
CHANNEL XSECTION	569.44	1500cfs; 100-yr	194.74	194.33		0.03	0.00	70.16	95.75	1314.37	89.88	5.50	3.65	1.00	1.18	5.86	0.31
CHANNEL XSECTION	569.44	1640cfs; 200-yr	195.16	194.71		0.03	0.00	72.53	113.31	1424.65	102.04	5.73	3.74	1.06	1.23	6.04	0.32
CHANNEL XSECTION	539.28	1500cfs; 100-yr	194.71	194.28	189.54	0.01	0.02	66.91	127.16	1292.72	80.12	5.66	3.69	1.15	1.20	6.07	0.32
CHANNEL XSECTION	539.28	1640cfs; 200-yr	195.13	194.66	189.82	0.01	0.02	68.92	147.37	1402.05	90.58	5.90	3.80	1.21	1.25	6.27	0.33
CHANNEL XSECTION	521 BR U	1500cfs; 100-yr	194.69	194.32	189.23	0.02	0.01	69.06	133.85	1308.37	57.79	5.21	3.49	1.08	1.05	6.23	0.29
CHANNEL XSECTION	521 BR U	1640cfs; 200-yr	195.10	194.70	189.51	0.02	0.01	71.13	154.49	1419.75	65.76	5.44	3.59	1.13	1.09	6.43	0.30
CHANNEL XSECTION	521 BR D	1500cfs; 100-yr	194.67	194.24	189.53	0.01	0.00	72.42	141.89	1270.96	87.15	5.65	3.56	1.13	1.23	5.81	0.32
CHANNEL XSECTION	521 BR D	1640cfs; 200-yr	195.08	194.62	189.83	0.01	0.00	74.44	165.87	1375.97	98.15	5.89	3.65	1.19	1.28	6.03	0.33
CHANNEL XSECTION	500.55	1500cfs; 100-yr	194.66	194.21		0.03	0.02	70.34	135.35	1301.15	63.51	5.76	3.79	1.20	1.11	5.63	0.32
CHANNEL XSECTION	500.55	1640cfs; 200-yr	195.07	194.59		0.03	0.02	72.62	159.07	1407.56	73.37	5.99	3.88	1.27	1.17	5.82	0.33
CHANNEL XSECTION	463.07	1500cfs; 100-yr	194.60	194.23		0.03	0.01	71.84	80.67	1353.73	65.59	5.16	3.53	0.89	0.91	5.92	0.29
CHANNEL XSECTION	463.07	1640cfs; 200-yr	195.01	194.61		0.03	0.01	74.25	96.52	1469.10	74.38	5.38	3.62	0.95	0.95	6.10	0.30
CHANNEL XSECTION	210.88	1500cfs; 100-yr	194.35	194.02		0.02	0.01	123.00	133.63	1121.21	245.16	5.30	3.04	1.54	1.25	4.51	0.29
CHANNEL XSECTION	210.88	1640cfs; 200-yr	194.76	194.42		0.02	0.01	129.84	146.45	1186.35	307.20	5.40	3.05	1.56	1.37	4.89	0.29
~~CHANNEL XSECTION~~	~~178.19~~	~~1500cfs; 100-yr~~	~~194.32~~	~~194.02~~	~~188.75~~	~~0.01~~	~~0.00~~	~~121.32~~	~~158.74~~	~~1097.14~~	~~244.12~~	~~5.10~~	~~3.09~~	~~1.52~~	~~1.48~~	~~5.75~~	~~0.28~~
CHANNEL XSECTION	178.19	1640cfs; 200-yr	194.73	194.41	189.04	0.01	0.00	122.43	179.19	1171.17	289.64	5.24	3.16	1.60	1.58	6.15	0.28
CHANNEL XSECTION	161 BR U	1500cfs; 100-yr	194.31	194.00	188.73	0.00	0.00	68.14	274.82	1016.61	208.57	5.33	3.23	1.86	1.67	6.89	0.29
CHANNEL XSECTION	161 BR U	1640cfs; 200-yr	194.72	194.38	189.05	0.00	0.00	68.14	306.43	1094.14	239.44	5.54	3.35	1.95	1.77	7.28	0.29
CHANNEL XSECTION	161 BR D	1500cfs; 100-yr	194.31	194.00	188.60	0.00	0.00	68.01	239.87	1056.21	203.93	5.16	3.28	1.88	1.64	7.30	0.28
CHANNEL XSECTION	161 BR D	1640cfs; 200-yr	194.71	194.38	188.88	0.00	0.00	68.59	266.45	1140.09	233.46	5.37	3.41	1.98	1.74	7.68	0.28
CHANNEL XSECTION	153.93	1500cfs; 100-yr	194.30	194.00		0.01	0.00	70.98	214.07	1093.96	191.97	5.06	3.31	1.79	1.63	7.23	0.27
CHANNEL XSECTION	153.93	1640cfs; 200-yr	194.71	194.38		0.01	0.00	71.89	238.12	1179.24	222.64	5.27	3.44	1.89	1.75	7.62	0.28
CHANNEL XSECTION	145.46	1500cfs; 100-yr	194.30	193.99		0.01	0.00	98.13	198.26	1070.12	231.62	5.16	3.28	1.78	1.67	6.90	0.28
CHANNEL XSECTION	145.46	1640cfs; 200-yr	194.70	194.38		0.01	0.00	104.53	220.80	1151.09	268.11	5.36	3.40	1.87	1.79	7.29	0.29

Attachment E- Hydraulic Summary Information

California State University, Chico
Chico, California 95929-0018
Planning, Design & Construction
530-898-6235
Fax: 530-898-4513
www.csuchico.edu/pdc

October 10, 2014 (Rev. 10/16/2014)

Nancy C. Moricz, P.E.
Senior Engineer Specialist, Water Resources
Department of Water Resources, Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, CA 95821

SUBJECT: Emergency Bridge Removal - Request for Authorization to Remove Bridge

Dear Ms. Moricz:

This letter is requesting the emergency removal of the recently destroyed Gus Manolis Pedestrian Bridge for public safety and welfare purposes as well as to ensure that the bridge does not obstruct potential creek flows or damage the streambed and bank during a future rain event.

The emergency removal project is located on the California State University, Chico (CSU Chico) Campus, in Chico, California. The Gus Manolis Pedestrian Bridge is located in the central portion of the main campus and provided pedestrian access across Big Chico Creek (Attachment 1, Location Map).

On Thursday, September 25, 2014 a large sycamore along the bank of Big Chico Creek fell and destroyed the bridge after a storm event (Attachment 2 – Photo 1). The bridge was knocked clear from the northern abutment (Attachment 2 – Photo 2), although the southern pier footings remain attached to the bridge, the bridge is no longer connected to the patio overhang adjacent to Selvester's Café, (Attachment 2 – Photo 3). The northern portion of the bridge currently rests on the stream bank, the sycamore has been removed.

Subsequent to this emergency removal request, the CSU Chico, Planning, Design & Construction Department will submit a formal encroachment permit application within 90 days. The formal encroachment permit will document the removal of the bridge and may also include a request for the replacement and/or abandonment of the Gus Manolis Bridge. The encroachment permit application will summarize the actual bridge removal process based upon the proposed Work Plan.

A cross-section of the streambed is provided in Attachment 2 – Photo 4.

Removal Work Plan Summary (pertinent to CVFPB)
A summary of work plan for the removal of the bridge is provided below.

1. **Prep bridge for pick**
   A. Bridge will be rigged on the southern end and lifted slightly, enough to take the weight off of the two concrete piers that are currently holding the bridge up at a 35 degree angle. (Attachment 3 – Step 1 of attached graphic)
   B. We will then place a plywood barrier between the concrete piers and the creek to keep any concrete debris from entering the waterway as we demo the piers. (See Attachment 3 – Step 1 of attached graphic) We will then dispose of all concrete in a concrete waste dumpster we will have placed at Taylor Hall.
   C. After the concrete piers are demoed and cleaned up we will lower the bridge down to a more level position. (Attachment 3 – Step 2 of attached graphic)
   D. Bridge will be cut at the point where the tree fell on the north side of bridge. (Attachment 3 – Step 2 of attached graphic)
   E. Bridge will be cut with either a quickie saw with a carbide blade, or a cutting torch. Both will generate sparks. Otto will have multiple fire extinguishers onsite, with a tarp and fire blankets placed directly under hot work to prevent sparks from getting either into the water or the underlying brush.
   F. Will have a water watcher to look for changes in water clarity.
2. **Pick Bridge**
   A. Bridge will be rigged by Dura Crane certified riggers.
   B. Bridge will be lifted from its position in the creek bed and flown up and over the trees nearby and swung in a counterclockwise motion over Selvester's and onto a big rig truck and trailer to be taken offsite.
   C. Will have a water watcher to look for changes in water clarity.
3. **Remove remaining portion of bridge footings**
   A. Otto will take pictures before, during and after the concrete footings are exposed and removed.
   B. Plywood barriers will be placed down the bank from the footings to keep from any dirt or concrete debris from falling into, or coming into contact in any way with the stream during excavation of existing footings. (Attachment 3 – Step 3 of attached graphic)
   C. Once the barriers are erected Otto employees will begin to hand dig around the concrete base. Spoils will be placed up hill and in front of the barriers to prevent run off. If we find that the footings are into the local water table we will bring in a Vactron system to suck out the dirt and debris from around the footing in order to expose and remove them. The Vactron would be my preferred method of removal, because all spoils will be contained in the suction tank to be disposed of at the proper location, thus keeping all spoils away from the creek bed.
   D. Otto will expose the footings three feet below the natural ground line, at that point the footings will be chipped or broken off. Larger pieces of concrete will be lifted out by driving a wedge anchor into the piece to be removed. D-rings, as a sort of

attachment system, will be connected to prior mentioned wedge anchors and the footings will be lifted out of the creek side with a large Gradeall style forklift.

E. After concrete footings are removed Otto will fill in the hole left by removing the footings with erosion control clean washed cobble. (Attachment 3 – Step 4 of attached graphic)
F. Will have a water watcher to look for changes in water clarity.

See Attachment 3 for full work plan and graphics.

See Attachment 4 for Site Specific Lead Work Plan

CCR Title 23 Standards

All proposed work for the removal of the bridge will be done in compliance with the California Code of Regulations Title 23 Standards. In addition, as-built plans for the removal of the bridge structure will be included in the subsequent Central Valley Flood Protection Board Encroachment Permit application for either the permanent abandonment or replacement of the structure.

Hold Harmless Agreement

The Trustees for the California State University, Chico agree to protect, defend, indemnify and hold the Central Valley Flood Protection Board and its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees, or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with removal of existing metal bridge on the property of the California State University, Chico.

Agreement is in effect from October 10, 2014 through November 15, 2014.

Thank you in advance for your assistance.

Sincerely,

for Jennie Mack

Lynda H. Miracle
Assistant Vice President

By signing and dating below, I, Chief Engineer for CVFPB, approve this Authorization.

Signature: Melissa Comanne for Len Marino Date: 10/17/14

Attachments

cc: Project File