County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

DATE: November 16, 2020

TO: Department of Public Works and Planning, Attn: Steven E. White, Director
Department of Public Works and Planning, Attn: Bernard Jimenez, Assistant Director
Department of Public Works and Planning, Attn: John R. Thompson, Assistant Director
Development Services and Capital Projects, Attn: William M. Kettler, Division Manager
Development Services and Capital Projects, Attn: Chris Motta, Principal Planner
Development Services and Capital Projects, Current Planning, Attn: David Randall, Senior Planner
Development Services and Capital Projects, Policy Planning, ALCC, Attn: Mohammad Khorsand, Senior Planner
Development Services and Capital Projects, Zoning & Permit Review, Attn: Daniel Gutierrez/James Anders
Development Services and Capital Projects, Site Plan Review, Attn: Hector Luna
Development Services and Capital Projects, Building & Safety/Plan Check, CASp, Attn: Dan Mather
Resources Division, Solid Waste, Attn: Amina Flores-Becker
Development Engineering, Attn: Laurie Kennedy, Grading/Mapping
Road Maintenance and Operations, Attn: John Thompson/Nadia Lopez/Martin Querin/Wendy Nakagawa
Design Division, Transportation Planning, Attn: Mohammad Alimi/Dale Siemer/Brian Spaunhurst/Gloria Hensley
Water and Natural Resources Division, Attn: Glenn Allen, Division Manager; Roy Jimenez
Department of Public Health, Environmental Health Division, Attn: Deep Sidhu/ Steven Rhodes
Agricultural Commissioner, Attn: Melissa Cregan
Sheriff's Office, Attn: Captain Mark Padilla, Captain Greg Gularte, Captain Ryan Hushaw, Lt. Brent Stalker, Lt. Ron Hayes, Lt. Robert Salazar, Lt. Kathy Curtice
County Counsel, Attn: Alison Samarin, Deputy County Counsel
U.S. Fish and Wildlife Service, San Joaquin Valley Division, Attn: Matthew Nelson, Biologist
U.S. Environmental Protection Agency, Environmental Applications, Attn: Zac Appleton
CA Regional Water Quality Control Board, Attn: Dale Harvey
CALTRANS, Attn: Dave Padilla
CA Department of Fish and Wildlife, Attn: Craig Bailey, Environmental Scientist & R4CEQA@wildlife.ca.gov
State Water Resources Control Board, Division of Drinking Water, Fresno District, Attn: Jose Robledo, Caitlin Juarez
CA Environmental Protection Agency, Department of Toxic Substance Control, Attn: Supervising Hazardous Substance Scientist
State Lands Commission, Attn: Kenneth Foster
CA Department of Water Resources, Attn: Kevin Faulkenberry

Dumna Wo Wah Tribal Government, Attn: Robert Ledger, Tribal Chairman/Eric Smith, Cultural Resources Manager/Chris Acree, Cultural Resources Analyst
Picayune Rancheria of the Chukchansi Indians, Attn: Heather Airey/Cultural Resources Director
Santa Rosa Rancheria Tachi Yokut Tribe, Attn: Ruben Barrios, Tribal Chairman/ Hector Franco, Director/Shana Powers, Cultural Specialist II
Table Mountain Rancheria, Attn: Robert Pennell, Cultural Resources Director/Kim Taylor, Cultural Resources Department/Sara Barnett, Cultural Resources Department
San Joaquin Valley Unified Air Pollution Control District (PIC-CEQA Division), Attn: PIC Supervisor
Sierra Resource Conservation District, Attn: Steve Haze, District Manager
Fresno County Fire Protection District, Attn: Jim McDougald, Division Chief

FROM: Thomas Kobayashi, Planner
Development Services and Capital Projects Division

SUBJECT: Initial Study Application No. 7929

APPLICANT: Fresno County Department of Public Works and Planning, Design Division

DUE DATE: December 1, 2020

The Department of Public Works and Planning, Development Services and Capital Projects Division is reviewing the subject application proposing to replace the Little Dry Creek Bridge with a new bridge consisting of two 12-foot wide lanes and two 4-foot wide shoulders within right-of-way located along Millerton Road, approximately 3.93 miles east of Auberry Road.

The Department is also reviewing for environmental effects, as mandated by the California Environmental Quality Act (CEQA) and for conformity with plans and policies of the County.

Based upon this review, a determination will be made regarding conditions to be imposed on the project, including necessary on-site and off-site improvements.

We must have your comments by **December 1, 2020.** Any comments received after this date may not be used.

NOTE - THIS WILL BE OUR ONLY REQUEST FOR WRITTEN COMMENTS. If you do not have comments, please provide a "NO COMMENT" response to our office by the above deadline (e-mail is also acceptable; see email address below).

Please address any correspondence or questions related to environmental and/or policy/design issues to me, Thomas Kobayashi, Planner, Development Services and Capital Projects Division, Fresno County Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno, CA 93721, or call (559) 600-4224, or email TKobayashi@FresnoCountyCA.gov.

TK
G:\4360Devs&Pln\PROJSEC\PROJDOCS\Environmental\Initial Studies - Environmental Assessments\7000-7999\IS 7929 Little Dry Creek Bridge Replacement\ROUTING\IS 7929 Routing Ltr.doc

Activity Code (Internal Review): 2335
Enclosures

Date Received: 8/28/20

IS 7929 (Application No.)

Fresno County Department of Public Works and Planning

MAILING ADDRESS:
Department of Public Works and Planning
Development Services Division
2220 Tulare St., 6th Floor
Fresno, Ca. 93721

LOCATION:
Southwest corner of Tulare & "M" Streets, Suite A
Street Level
Fresno Phone: (559) 600-4497
Toll Free: 1-800-742-1011 Ext. 0-4497

APPLICATION FOR:

- ☐ Pre-Application (Type) _____
- ☐ Amendment Application
- ☐ Amendment to Text
- ☐ Conditional Use Permit
- ☐ Variance (Class)/Minor Variance
- ☐ Site Plan Review/Occupancy Permit
- ☐ No Shoot/Dog Leash Law Boundary
- ☐ General Plan Amendment/Specific Plan/SP Amendment)
- ☐ Time Extension for _____
- ☐ Director Review and Approval for 2nd Residence
- ☐ Determination of Merger
- ☐ Agreements
- ☐ ALCC/RLCC
- ■ Other Environmental Review

DESCRIPTION OF PROPOSED USE OR REQUEST:

Little Dry Creek Bridge Replacement - 42C0270

CEQA DOCUMENTATION: ☐ *Initial Study* ■ *PER* ☐ *N/A*

PLEASE USE FILL-IN FORM OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements, and deeds as specified on the Pre-Application Review. **Attach Copy of Deed, including Legal Description.**

LOCATION OF PROPERTY: Bridge No. 42C0270 side of Millerton Road over Little Dry Creek, 3.93 miles east of Auberry Road
between _____ and _____
Street address: _____

APN: 138-070-66 Parcel size: N/A Section(s)-Twp/Rg: S 14 - T 11 S/R 22 E

ADDITIONAL APN(s): N/A

I, Christian Montoya Digitally signed by Christian Montoya Date: 2020.08.13 09:08:23 -07'00' (*signature*), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

County of Fresno	2220 Tulare Street, Suite 600	Fresno	93721	
Owner (Print or Type)	Address	City	Zip	Phone
Public Works and Planning, Design Division	2220 Tulare Street, Suite 600	Fresno	93721	
Applicant (Print or Type)	Address	City	Zip	Phone
Christian Montoya	2220 Tulare Street, Suite 600	Fresno	93721	x00522
Representative (Print or Type)	Address	City	Zip	Phone

CONTACT EMAIL: chmontoya@fresnocountyca.gov

OFFICE USE ONLY (*PRINT FORM ON GREEN PAPER*)

Application Type / No.: Fee: $
Application Type / No.: Fee: $
Application Type / No.: Fee: $
Application Type / No.: Fee: $
PER/Initial Study No.: IS7929 Fee: $ 1,212.00
Ag Department Review: Fee: $
Health Department Review: Fee: $ 338.00
Received By: Thomas K. Invoice No.: 133218 TOTAL: $ 1,550.00

UTILITIES AVAILABLE:

WATER: Yes ☐/ No☐
Agency: _____

SEWER: Yes ☐/ No☐
Agency: _____

STAFF DETERMINATION: This permit is sought under Ordinance Section: _____

Related Application(s): _____

Zone District: _____

Parcel Size: _____

Sect-Twp/Rg: ____ - T____ S /R____ E
APN # ___ - ___ - ____
APN # ___ - ___ - ____
APN # ___ - ___ - ____
APN # ___ - ___ - ____

RECEIVED
COUNTY OF FRESNO
AUG 2 8 2020
DEPARTMENT OF PUBLIC WORKS AND PLANNING
DEVELOPMENT SERVICES DIVISION

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

INITIAL STUDY APPLICATION

INSTRUCTIONS

Answer all questions completely. An incomplete form may delay processing of your application. Use additional paper if necessary and attach any supplemental information to this form. Attach an operational statement if appropriate. This application will be distributed to several agencies and persons to determine the potential environmental effects of your proposal. Please complete the form in a legible and reproducible manner (i.e., USE BLACK INK OR TYPE).

OFFICE USE ONLY
IS No. 7929
Project No(s).
Application Rec'd.:

GENERAL INFORMATION

1. ***Property Owner :*** County of Fresno ***Phone/Fax*** _____
   Mailing Address: 2220 Tulare Street, Suite 600
   Street ***City*** ***State/Zip***

2. ***Applicant :*** Public Works and Planning, Design Division ***Phone/Fax:*** _____
   Mailing Address: 2220 Tulare Street, Suite 600
   Street ***City*** ***State/Zip***

3. ***Representative:*** Christian Montoya ***Phone/Fax:*** x00522
   Mailing Address: 2220 Tulare Street, Suite 600
   Street ***City*** ***State/Zip***

4. ***Proposed Project:*** The purpose of this project is to remove the functionally obsolete bridge and replace it with a new bridge designed to current structural and geometric standards while minimizing adverse impacts to Little Dry Creek and the surrounding area.

5. ***Project Location:*** The proposed project is located 3.93 miles east of Auberry Road, on Millerton Road between Auberry Road to the west and State Route 168 to the east.

6. ***Project Address:*** N/A

7. ***Section/Township/Range:*** 14 / 11 / 22 8. ***Parcel Size:*** N/A

9. ***Assessor's Parcel No.*** 138-070-66

OVER.....

10. *Land Conservation Contract No. (If applicable):* N/A

11. *What other agencies will you need to get permits or authorization from:*

____	*LAFCo (annexation or extension of services)*	____	*SJVUAPCD (Air Pollution Control District)*
X	*CALTRANS*	____	*Reclamation Board*
____	*Division of Aeronautics*	____	*Department of Energy*
X	*Water Quality Control Board*	____	*Airport Land Use Commission*
____	*Other* ____		

12. *Will the project utilize Federal funds or require other Federal authorization subject to the provisions of the National Environmental Policy Act (NEPA) of 1969?* ☑ *Yes* ☐ *No*

If so, please provide a copy of all related grant and/or funding documents, related information and environmental review requirements.

13. *Existing Zone District*[1]*:* ____

14. *Existing General Plan Land Use Designation*[1]*:* Transportation

ENVIRONMENTAL INFORMATION

15. *Present land use:* Transportation
Describe existing physical improvements including buildings, water (wells) and sewage facilities, roads, and lighting. Include a site plan or map showing these improvements:

Describe the major vegetative cover: Grazing land

Any perennial or intermittent water courses? If so, show on map: Little Dry Creek

Is property in a flood-prone area? Describe:

The proposed project is located within a base floodplain designated as Zone A, however, there are no nearby properties located within the project limits or floodplain.

16. *Describe surrounding land uses (e.g., commercial, agricultural, residential, school, etc.):*

North: Agriculture

South: Agriculture

East: Agriculture

West: Agriculture

17. *What land use(s) in the area may be impacted by your Project?:* None

18. *What land use(s) in the area may impact your project?:* None

19. *Transportation:*

NOTE: The information below will be used in determining traffic impacts from this project. The data may also show the need for a Traffic Impact Study (TIS) for the project.

A. *Will additional driveways from the proposed project site be necessary to access public roads?*
☐ *Yes* ☑ *No*

B. *Daily traffic generation:*

I.	*Residential - Number of Units*	N/A
	Lot Size	N/A
	Single Family	N/A
	Apartments	N/A
II.	*Commercial - Number of Employees*	N/A
	Number of Salesmen	N/A
	Number of Delivery Trucks	N/A
	Total Square Footage of Building	N/A

III. *Describe and quantify other traffic generation activities:* None

20. *Describe any source(s) of noise from your project that may affect the surrounding area:*
Temporary construction noise

21. *Describe any source(s) of noise in the area that may affect your project:* None

22. *Describe the probable source(s) of air pollution from your project:*
Temporary construction dust

23. *Proposed source of water:*
( ) *private well*
( ) *community system[3]--name:*

OVER.....

24. *Anticipated volume of water to be used (gallons per day)[2]:* N/A

25. *Proposed method of liquid waste disposal:*
( ) septic system/individual
( ) community system[3]-name N/A

26. *Estimated volume of liquid waste (gallons per day)[2]:* N/A

27. *Anticipated type(s) of liquid waste:* N/A

28. *Anticipated type(s) of hazardous wastes[2]:* N/A

29. *Anticipated volume of hazardous wastes[2]:* N/A

30. *Proposed method of hazardous waste disposal[2]:* N/A

31. *Anticipated type(s) of solid waste:* N/A

32. *Anticipated amount of solid waste (tons or cubic yards per day):* N/A

33. *Anticipated amount of waste that will be recycled (tons or cubic yards per day):* N/A

34. *Proposed method of solid waste disposal:* N/A

35. *Fire protection district(s) serving this area:* Unknown

36. *Has a previous application been processed on this site? If so, list title and date:* Unknown

37. *Do you have any underground storage tanks (except septic tanks)? Yes* ☐ *No* ☑

38. *If yes, are they currently in use? Yes* ☐ *No* ☐

TO THE BEST OF MY KNOWLEDGE, THE FOREGOING INFORMATION IS TRUE.

Christian Montoya Digitally signed by Christian Montoya Date: 2020.08.13 09:08:38 -07'00' 8/13/20

SIGNATURE *DATE*

[1]Refer to Development Services and Capital Projects Conference Checklist
[2]For assistance, contact Environmental Health System, (559) 600-3357
[3]For County Service Areas or Waterworks Districts, contact the Resources Division, (559) 600-4259

(Revised 12/14/18)

NOTICE AND ACKNOWLEDGMENT

INDEMNIFICATION AND DEFENSE

The Board of Supervisors has adopted a policy that applicants should be made aware that they may be responsible for participating in the defense of the County in the event a lawsuit is filed resulting from the County's action on your project. You may be required to enter into an agreement to indemnify and defend the County if it appears likely that litigation could result from the County's action. The agreement would require that you deposit an appropriate security upon notice that a lawsuit has been filed. In the event that you fail to comply with the provisions of the agreement, the County may rescind its approval of the project.

STATE FISH AND WILDLIFE FEE

State law requires that specified fees (effective January 1, 2020: $3,343.25 for an EIR; $2,406.75 for a Mitigated/Negative Declaration) be paid to the California Department of Fish and Wildlife (CDFW) for projects which must be reviewed for potential adverse effect on wildlife resources. The County is required to collect the fees on behalf of CDFW. A $50.00 handling fee will also be charged, as provided for in the legislation, to defray a portion of the County's costs for collecting the fees.

The following projects are exempt from the fees:

1. *All projects statutorily exempt from the provisions of CEQA (California Environmental Quality Act).*

2. *All projects categorically exempt by regulations of the Secretary of Resources (State of California) from the requirement to prepare environmental documents.*

A fee exemption may be issued by CDFW for eligible projects determined by that agency to have "no effect on wildlife." That determination must be provided in advance from CDFW to the County at the request of the applicant. You may wish to call the local office of CDFW at (559) 222-3761 if you need more information.

Upon completion of the Initial Study you will be notified of the applicable fee. Payment of the fee will be required before your project will be forwarded to the project analyst for scheduling of any required hearings and final processing. The fee will be refunded if the project should be denied by the County.

Christian Montoya Digitally signed by Christian Montoya Date: 2020.08.13 09:08:59 -07'00' 8/13/20

Applicant's Signature *Date*

Project Description
Little Dry Creek Bridge Replacement – 42C0270
06/02/2020

Introduction

Fresno County (County) Department of Public Works and Planning proposes to replace a bridge on Little Dry Creek (42C0270) in the north central portion of Fresno County on Millerton Road between Auberry Road to the west and State Route 168 to the east. This stretch of Millerton Road is a local rural street with an average daily traffic (ADT) count of approximately 400. The projected future ADT (Year 2035) is approximately 850. Bicyclist and bike organizations also use this potion of Millerton Road as a bike route.

The project is funded primarily by the Federal-Aid Highway Bridge Program (HBP) administered by the Federal Highway Administration (FHWA) through Caltrans Local Assistance with matching State Bridge Toll Credit funds. The replacement bridge will meet current applicable County, American Association of State Highway and Transportation Officials (AASHTO), and Caltrans design criteria and/or standards.

Project Purpose and Need

The existing Little Dry Creek Bridge was last inspected by Caltrans in 2013 and determined to be functionally obsolete (FO) with a sufficiency rating of 69.6. The bridge is too narrow for a two-lane facility. The minimum bridge clear width required is 32 feet to meet both AASHTO and Fresno County requirements. Table 5.5 of AASHTO "A Policy of Geometric Design of Highways and Streets" requires two 11-foot lanes and two 5-foot shoulders for an ADT of 400 to 1500 and a design speed of 55mph. Because Millerton road is being used as a bike route, Fresno County's preference is to use two 12-foot lanes and two 4-foot shoulders which provides the overall minimum clear width requirement of 32 feet and meets AASHTO's requirements for an on-road bike facility (Reference Figure 4-13 of the AASHTO Guide for Development of Bicycle Facilities).

The HBP requires that the funds being used to rehabilitate an existing bridge must include the improvements needed to remove the FO flag. In order to remove the FO flag from the project bridge, it must be widened to a minimum clear width of 32 feet to meet AASHTO requirements (Reference Table 5.5 and Table 5.6 of the AASHTO: "A Policy on Geometric Design of Highways and Streets"). Chapter 11 of the Caltrans Local Assistance Procedures Manual, Section 11.2 "Statewide Design Standards for Local Assistance Projects," Page 11-15, Subsection "Bridge to Remain in Place," does not allow the widening of timber structures. Therefore, in order to remove the FO status of the project bridge, it must be replaced.

As a result, the purpose of this project is to remove the functionally obsolete bridge and replace it with a new bridge designed to current structural and geometric standards while minimizing adverse impacts to Little Dry Creek and the surrounding area.

Project Description
Little Dry Creek Bridge Replacement – 42C0270
06/02/2020

Project Description

Existing Bridge

The existing bridge was originally constructed in 1925 and rehabilitated in the early 1980's. It consists of a multi-span timber super structure supported by concrete abutments and pier walls founded on shallow spread footings. The deck is comprised of a corrugated steel deck with an asphalt concrete fill.

Replacement Bridge

The replacement structure will likely consist of a concrete slab (two span conventionally reinforced slab, single span cast-in-place post tensioned slab, or single span precast pre-stressed voided slab) with two 12-foot-wide travel lanes and two 4-foot-wide shoulders. The vertical limit of roadway construction generally will not exceed 6 feet in depth. The vertical limit of excavation is 13 feet at the abutments.

Utility Relocation

No utility relocation is anticipated for the project at this time.

Right-of-Way

Permanent right-of-way and temporary construction easements will most likely be required at the bridge site.

Biological Assessment

The County will consult with the California Department of Fish & Wildlife (CDFW) and the U. S. Department of Fish & Wildlife (USFW) to address the presence of California tiger salamander (CTS) near the project site.

Archaeological Excavation

An Archaeological Survey Report and Extended Phase I Excavation Report have been prepared to investigate project impacts on cultural resources. A Phase II Excavation is now needed to evaluate project impacts on a recorded cultural site located within the project's Area of Potential Effects (APE) and to determine if the site is eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources. The excavations will be conducted within CTS upland habitat and will require Section 7 Consultation with USFW and an Incidental Take Permit or a Letter of Concurrence from CDFW.

Currently, eight 3-by-15-foot trenches, two 3-by-40-foot trenches, one 3-by-50-foot trench, 10 Standard Excavation Units (SEUs), and eight auger units are proposed. The amount and/or the location of SEUs and trenches may change depending of field observations or time constraints. At a minimum, three 3-by-15-foot trenches, two 3-by-40-foot trenches, and six SEUs will be excavated. If all proposed excavations are completed within the time allotted, additional auger

units and/or SEUs will be excavated until the field director determines that sufficient data has been gathered for analysis and evaluation. Should human remains be identified during fieldwork, or an unanticipated amount of large features or artifacts are observed in the Area of Direct impact (ADI), excavation locations may change and/or fieldwork may be extended in order to fully record such resources to determine their contribution to the site.

Detour Route

The replacement bridge will be constructed on a new alignment just downstream of the existing road alignment (See Attachment C). Since closing Millerton Road to construct the bridge would create a detour length of upwards of 20 miles, the existing road and bridge will be used to route traffic around the bridge construction site. The new roadway approach work fits within the 400-foot fundable limits prescribed by the HBP for off system bridges.

Demolition and Construction Staging

The bridge will be demolished as part of this project. Demolition will be performed in accordance with the Caltrans Standard Specifications modified to meet environmental permit requirements. All concrete, timber, asphalt, and other debris resulting from the demolition of the existing bridge will be removed from the project site and disposed of by the contractor. Potential staging areas are identified in Attachment C.

Construction Activities

Construction of the bridge will consist of the following activities:

- Tree removal, grubbing and clearing, and possibly blasting rock outcroppings and subsurface rock to accommodate the new bridge structure
- Excavating for the new bridge foundation
- Constructing the replacement bridge and reconstruction of the roadway approaches, including excavating for and placing asphalt concrete on each approach
- Removal of the existing bridge

Table 1 provides a description of the type of equipment likely to be used during the construction of the proposed project.

Project Description
Little Dry Creek Bridge Replacement – 42C0270
06/02/2020

Table 1 Construction Equipment

Equipment	Construction Purpose
Crane with pile driver or drill rig	installation of the bridge foundation piles (driven or drilled)
backhoe	soil manipulation + drainage work
bobcat	fill distribution
bulldozer / loader	earthwork construction + clearing and grubbing
Crane	placement of false work or precast slabs
dump truck	fill material delivery
excavator	soil manipulation
front-end loader	dirt or gravel manipulation
grader	ground leveling
haul truck	earthwork construction + clearing and grubbing
roller / compactor	earthwork construction
truck with seed sprayer	placement of erosion control
water truck	earthwork construction + dust control

Construction Sequence/Schedule and Timing

Construction is currently scheduled to start in April or May 2023 and expected to take approximately 6 months to complete. The timing is dependent upon on the requirements of the regulatory permits; however, Little Dry Creek is typically dry in the summer months.

ATTACHMENT I

1. 138-07

SEC'S. 13, 14, 15, 22, 23 & 24, T. 11 S., R. 22 E., M.D.B. & M.

Tax Area
199-002
199-020

AP-109 (2) 160.00Ac.
AP-109 (66) 431.60Ac.
713-890-48
42C0270
C.P.M.W. 99-23
AP-332 (72) 37.89Ac.
AP-332 (76) 53.29Ac.
AP-332 (73) 45.25Ac.
MILLERTON
RS 49-40
(31) 10.00Ac.
(32) 10.00Ac.
(33) 10.00Ac.
(30) 10.00Ac.
(54) 20.08Ac.
(55) 20.02Ac.
PARCEL 15 (20.08)
PARCEL 16 (20.02)
PARCEL 3 (20.00) (42) 20.00Ac.
(48)
(43)
PM 33-38
PARCEL 14 (20.00) (68) 18.55Ac.
PARCEL 13 (20.00) (52) 20.00Ac.
PARCEL 12 (20.00) (51) 20.00Ac.
(67) 1.45Ac.
AP-109 (65) 8.40Ac.
PARCEL 10 (20.25) (71) 20.00Ac.
(69) 1.98Ac.
PARCEL 9 (21.72)
PARCEL 6 (40.66)
(45) 40.66Ac.
PARCEL 7 (21.08)
(46) 21.08Ac.
(47) PARCEL 8 20.14Ac (20.14)
(7) 160.00Ac. AP-144
GHSD (70) T 19.99 Ac
OAKVIEW DR
13673 MORGAN CANYON RD
MORGAN CANYON RD.
DRY CREEK LN.
RD.
(68)
(35)
(34)
(44)
(29)
AP-144 (17) 275.80Ac.
AP-144 (20) 360.00Ac.
AP-144 (15) 640.00Ac.
7.3 CH.
401.8'
788.4' (12.1 CH)
AP-6199 (18) 44.20Ac
R. 22 E
R 23 E

Parcel Map No. 4197 - Bk. 33, Pgs. 38, 39, & 40
Agricultural Preserve
Certificate of Parcel Map Waiver, No. 99-23 Doc. 216172, 9-15-05

(11) Record of Survey - Bk. 49, Pgs. 40-41

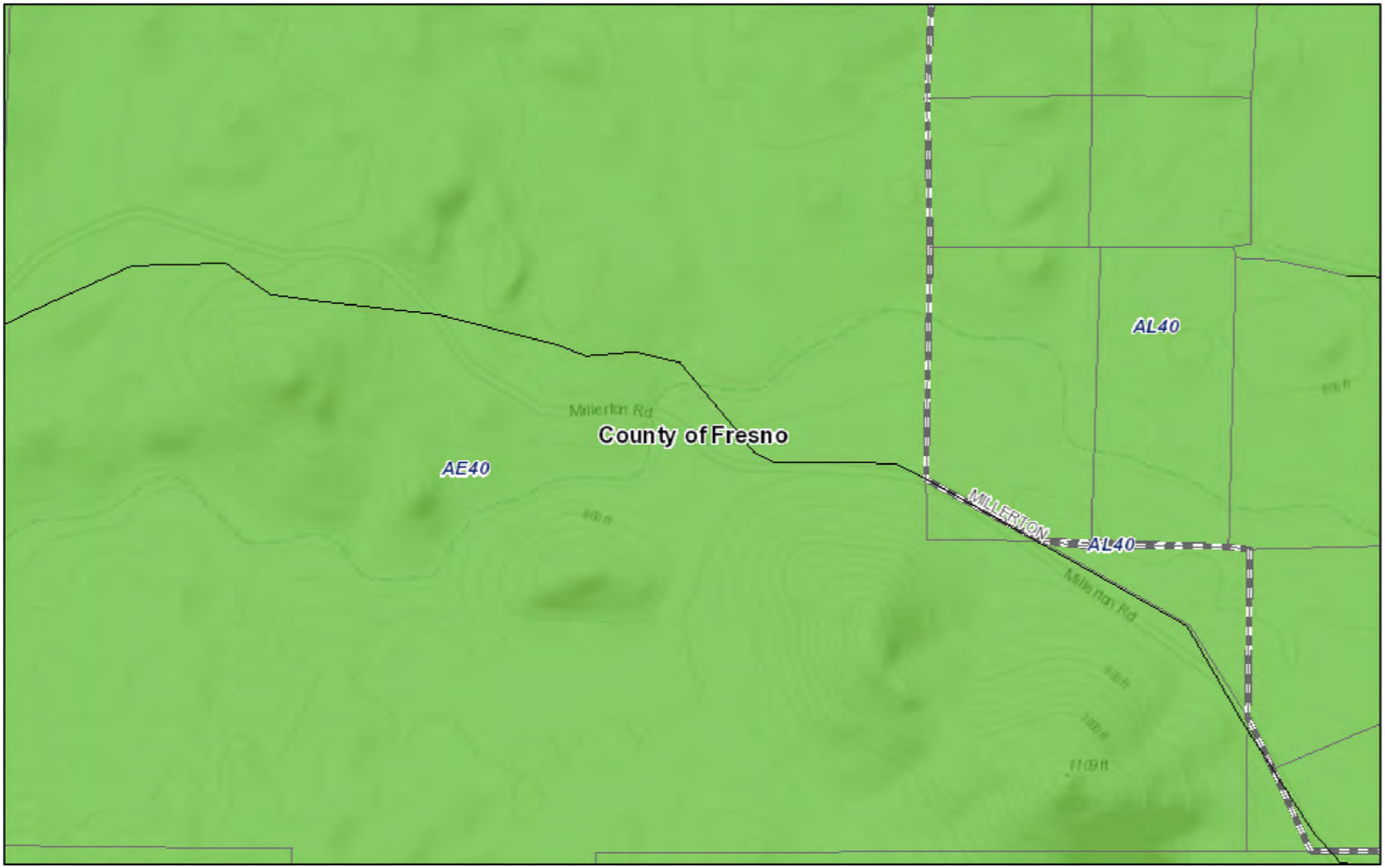
NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

1964

Assessor's Map Bk. 138 - F
County of Fresno, Calif

ATTACHMENT J

HBP - Little Dry Creek Bridge Replacement (42C0270)



6/3/2020, 2:59:34 PM

Zoning
A1
A2
AC
AE160
AE20
AE40
AE5
AL20
AL40
C1
C2
C3
C4
C6
CM
CP
CR
M1
M2
M3
O
P
PV
R1
R1A
R1AH

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Web AppBuilder for ArcGIS

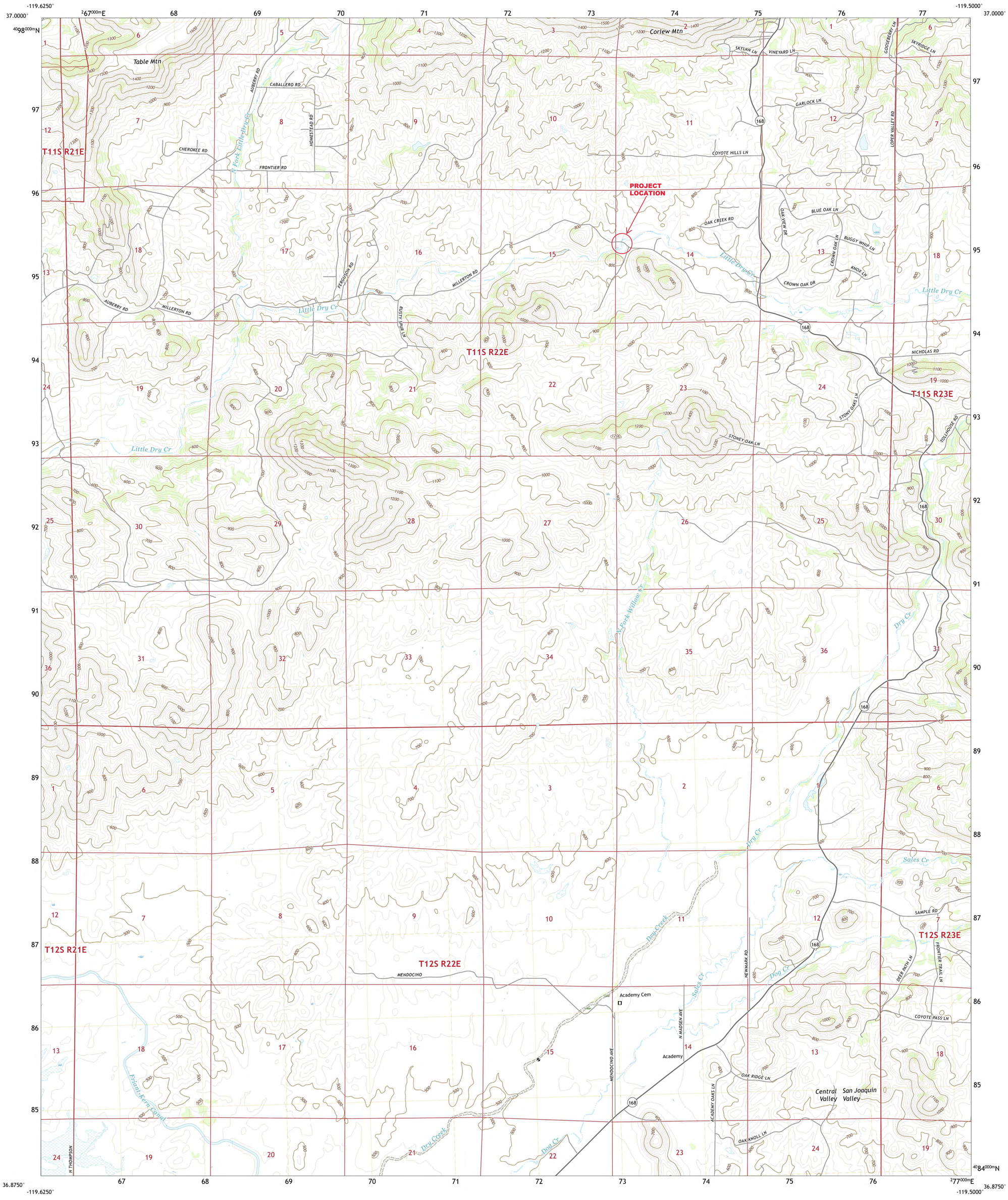
Fresno County Dept. PWP, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA |

ATTACHMENT B

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

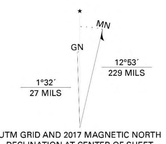
ACADEMY QUADRANGLE
CALIFORNIA - FRESNO COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 11S

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery	NAIP,	June 2016 - October 2016
Roads	U.S. Census Bureau,	2016
Names	GNIS,	1981 - 2016
Hydrography	National Hydrography Dataset,	2006
Contours	National Elevation Dataset,	2001 - 2008
Boundaries	Multiple sources; see metadata file	2016 - 2017
Public Land Survey System	BLM,	2018
Wetlands	FWS National Wetlands Inventory	1984 - 1986



UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
KA
Grid Zone Designation
11S

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES

1 Millerton Lake West
2 Millerton Lake East
3 Auberry
4 Friant
5 Humphreys Station
6 Clovis
7 Round Mountain
8 Piedra

ROAD CLASSIFICATION

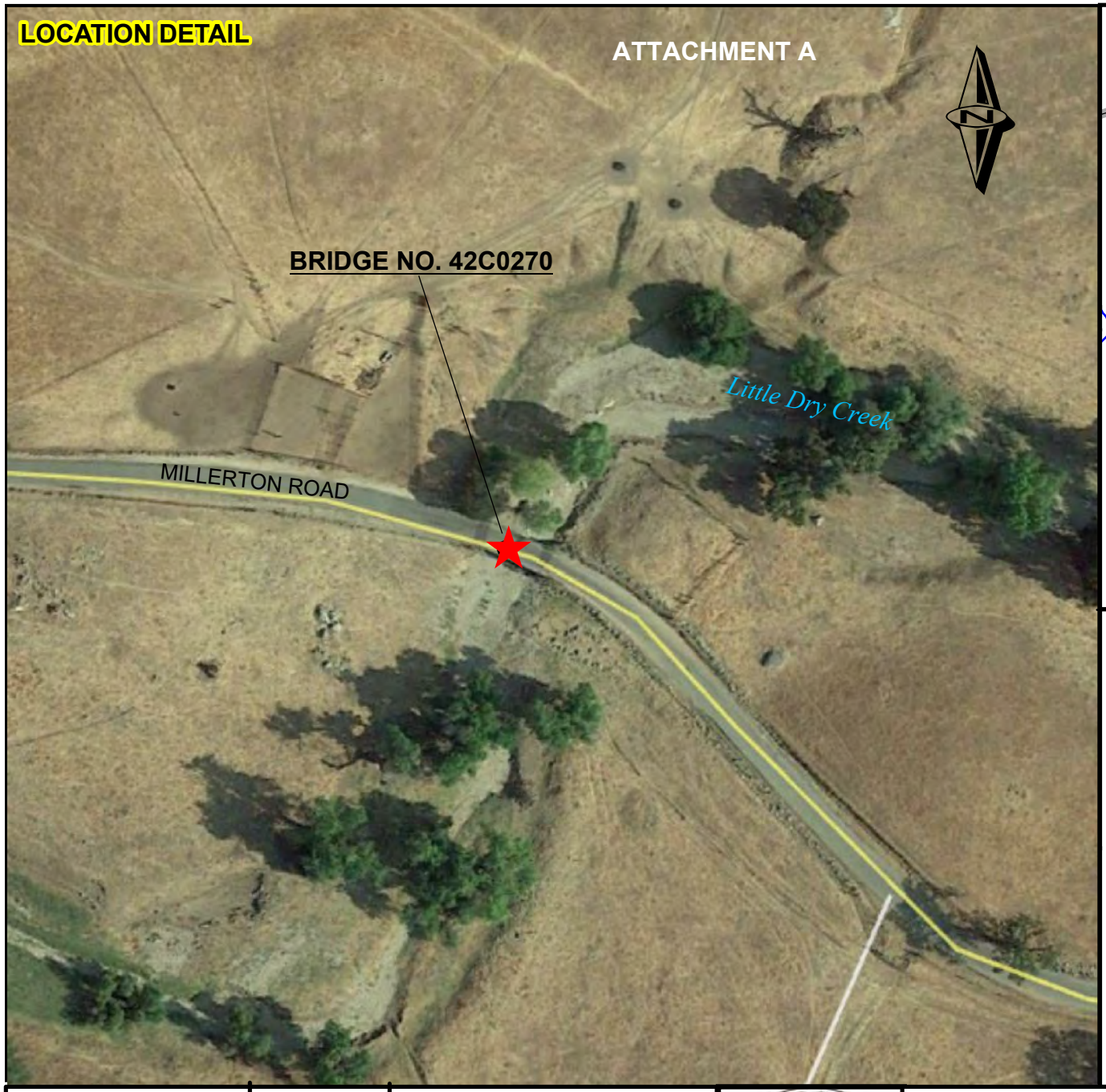
Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
State Route	

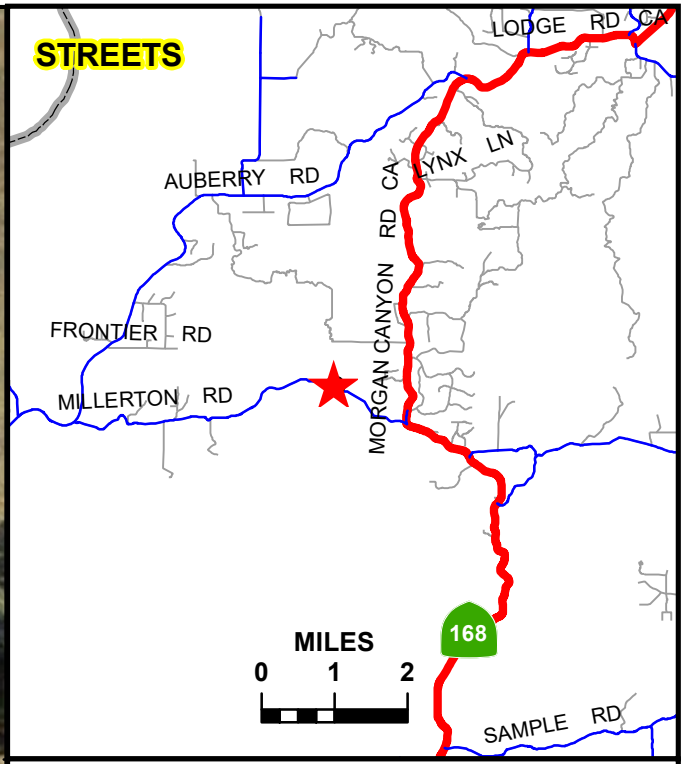
ACADEMY, CA
2018

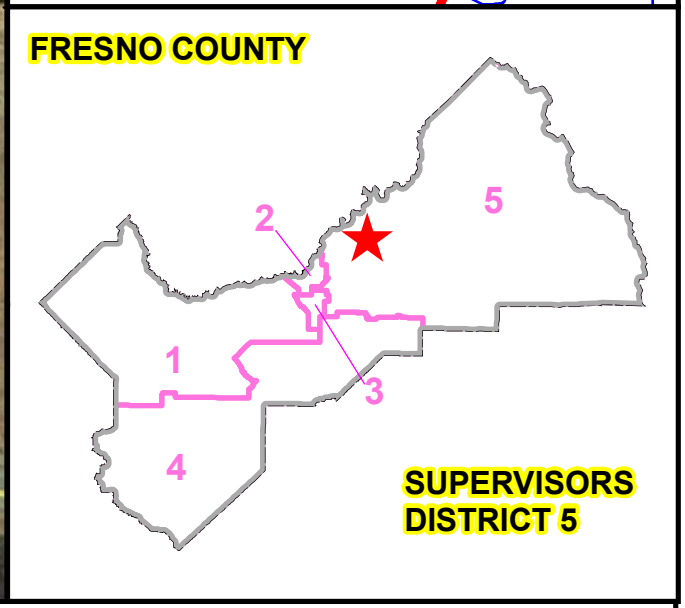
NSN. 7643016354834
NGA REF NO. USGSX24K83

LOCATION DETAIL

ATTACHMENT A







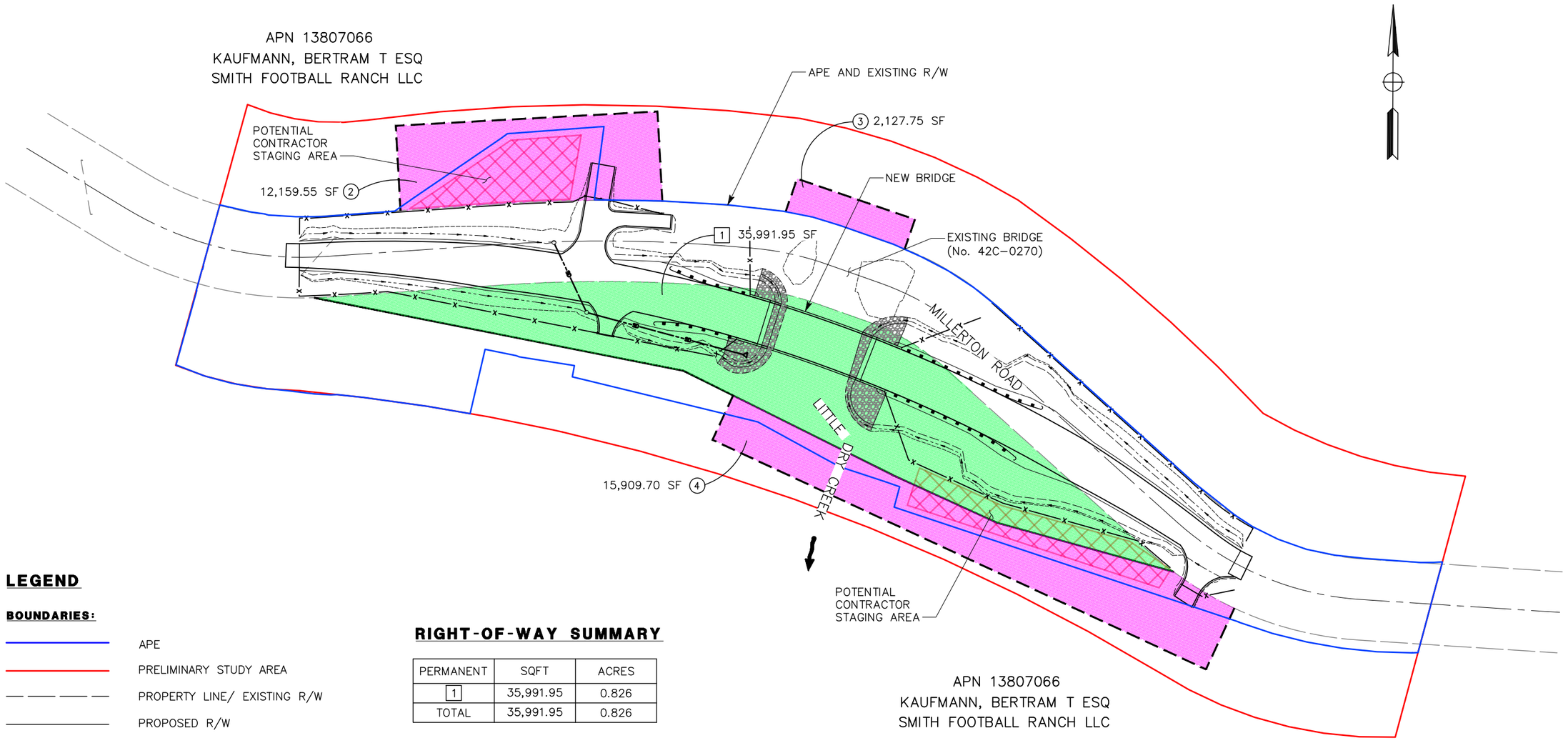
	DATE:	SCALE IN FEET
DESIGNED: D.N.	10/28/19	FEET 0 50 100
DRAWN: D.N.	10/28/19	
STATE BRIDGE NO. 42C0270		

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS & PLANNING

HIGHWAY BRIDGE PROGRAM
LITTLE DRY CREEK BRIDGE ON MILLERTON ROAD
BRLO-5942(287) - 42C0270

ATTACHMENT D



LEGEND

BOUNDARIES:

- APE
- PRELIMINARY STUDY AREA
- PROPERTY LINE/ EXISTING R/W
- PROPOSED R/W
- TEMPORARY CONSTRUCTION EASEMENT (TCE)

PERMANENT R/W:

- KAUFMANN/SMITH FOOTBALL RANCH LLC

TRMPORARY CONSTRUCTION EASEMENT:

- KAUFMANN/SMITH FOOTBALL RANCH LLC

RIGHT-OF-WAY SUMMARY

PERMANENT	SQFT	ACRES
[1]	35,991.95	0.826
TOTAL	35,991.95	0.826

EASEMENT SUMMARY

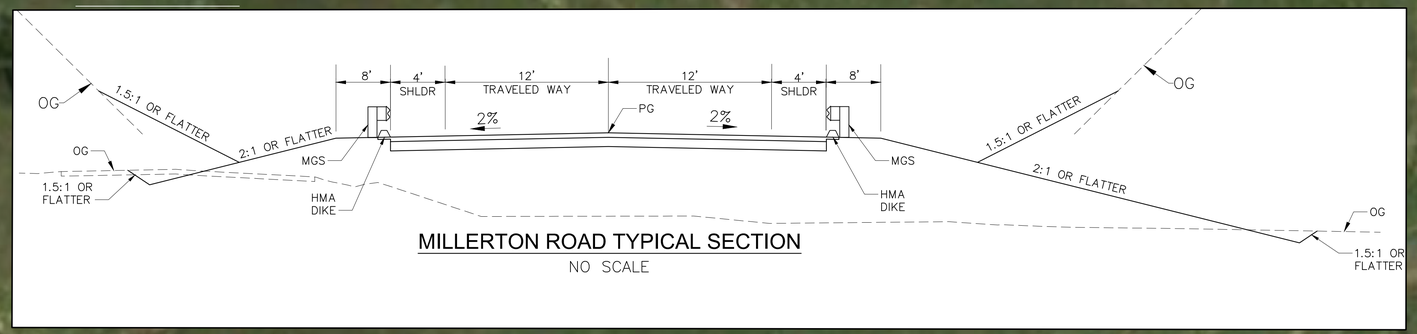
TEMPORARY	SQFT	ACRES
(2)	12,159.55	0.279
(3)	2,127.75	0.049
(4)	15,909.70	0.365
TOTAL	30,197.00	0.693

LITTLE DRY CREEK BRIDGE (No. 42C-0270) REPLACEMENT ON MILLERTON ROAD
RIGHT-OF-WAY MAP

drake haglan AND ASSOCIATES

DECEMBER 2019
SCALE 1"=40'
4 OF 4

42C-0270



MILLERTON ROAD TYPICAL SECTION

NO SCALE

-Construction Staging Area

-Limits of Work

Existing Roadway/Detour

Existing Bridge

Construction Staging Area

Construction Staging Area

Limits of work

Conform Limit

Conform Limit

Millerton Road

BB

EB

Proposed Roadway ℄

Proposed Bridge 42C-0270

Little Dry Creek

80 40 0 80 160 FEET

APPROXIMATE SCALE: 1" = 40'

ATTACHMENT C
HBP – Little Dry Creek Bridge Replacement (42C0270) on Millerton Road
Photos Taken – 06/19/2020

Figure 1 – View of roadway approach away from Bridge No. 42C0270 facing west.

Figure 2 – View of roadway approach towards Bridge No. 42C0270 facing west.

ATTACHMENT C
HBP – Little Dry Creek Bridge Replacement (42C0270) on Millerton Road
Photos Taken – 06/19/2020

Figure 3 – View of Bridge No. 42C0270 facing west.

Figure 4 – View of upstream Little Dry Creek from Bridge No. 42C0270.

ATTACHMENT C
HBP – Little Dry Creek Bridge Replacement (42C0270) on Millerton Road
Photos Taken – 06/19/2020

Figure 5 – View of downstream Little Dry Creek from Bridge No. 42C0270.

Figure 6 – View of Bridge No. 42C0270's substructure and superstructure.

ATTACHMENT C
HBP – Little Dry Creek Bridge Replacement (42C0270) on Millerton Road
Photos Taken – 06/19/2020

Figure 7 – View of Bridge No. 42C0270 facing west.

Figure 8 – View of roadway approach away from Bridge No. 42C0270 facing east.

ATTACHMENT H

U.S. Fish and Wildlife Service
National Wetlands Inventory

Bridge No. 42C0270

June 3, 2020

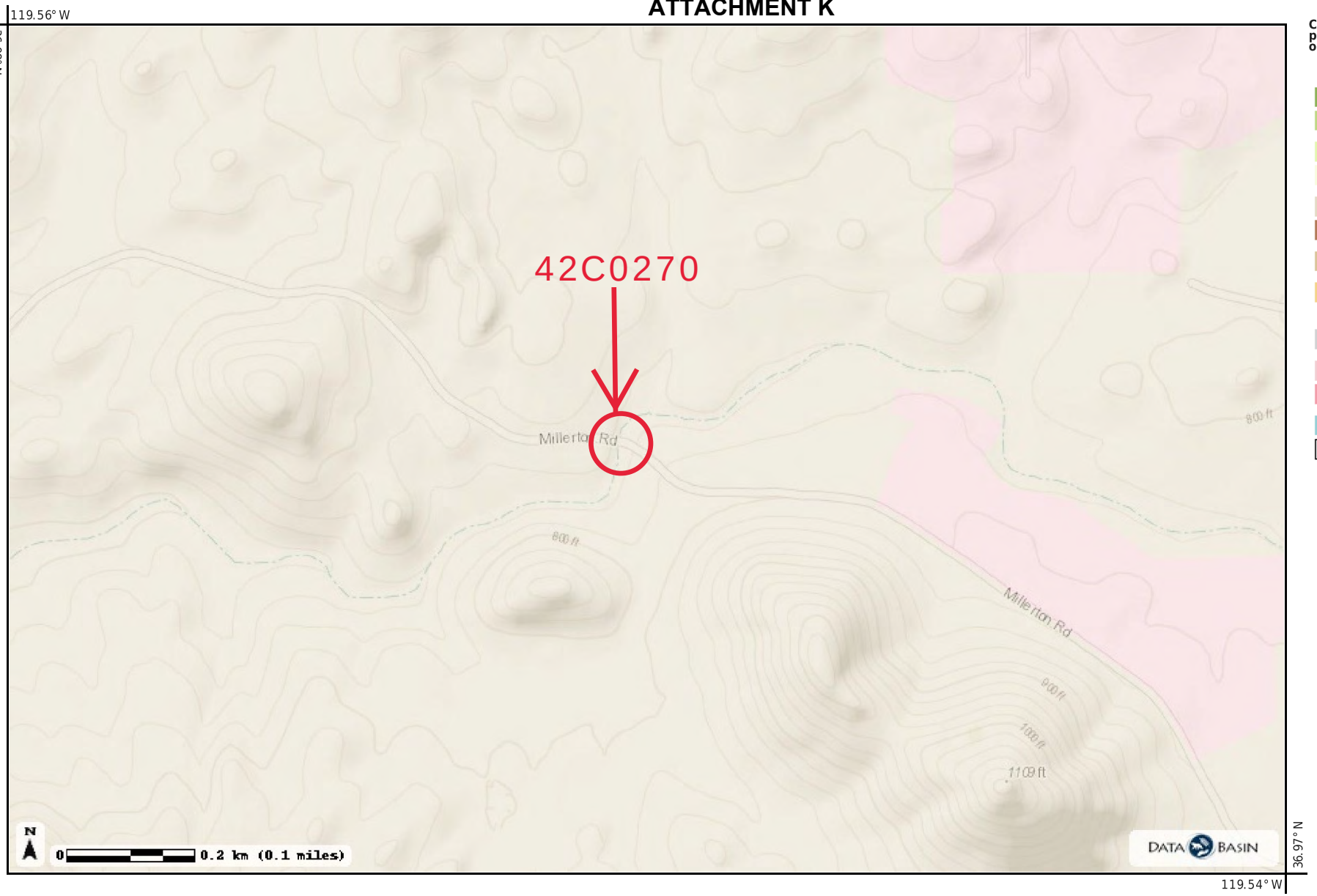
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

ATTACHMENT K



Legend

California - Farmland Mapping and Monitoring Program (FMMP),2016

Displaying: **polygon_ty**

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Grazing Land
- Confined Animal Agriculture
- NonAgricultural and Natural Vegetation
- Semi-Agricultural and Rural Commercial Land
- Vacant or Disturbed Land
- Rural Residential Land
- Urban and Built-Up Land
- Water
- Area Not Mapped

Map Details

ATTACHMENT K

Datasets

California - Farmland Mapping and Monitoring Program (FMMP),2016

https://databasin.org/datasets/6b4568bf2a8f40e3990fd1d621e4c350

Credits: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program

Layers:

- California - Farmland Mapping and Monitoring Program (FMMP),2016

National Flood Hazard Layer FIRMette

FEMA

Legend ATTACHMENT F

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

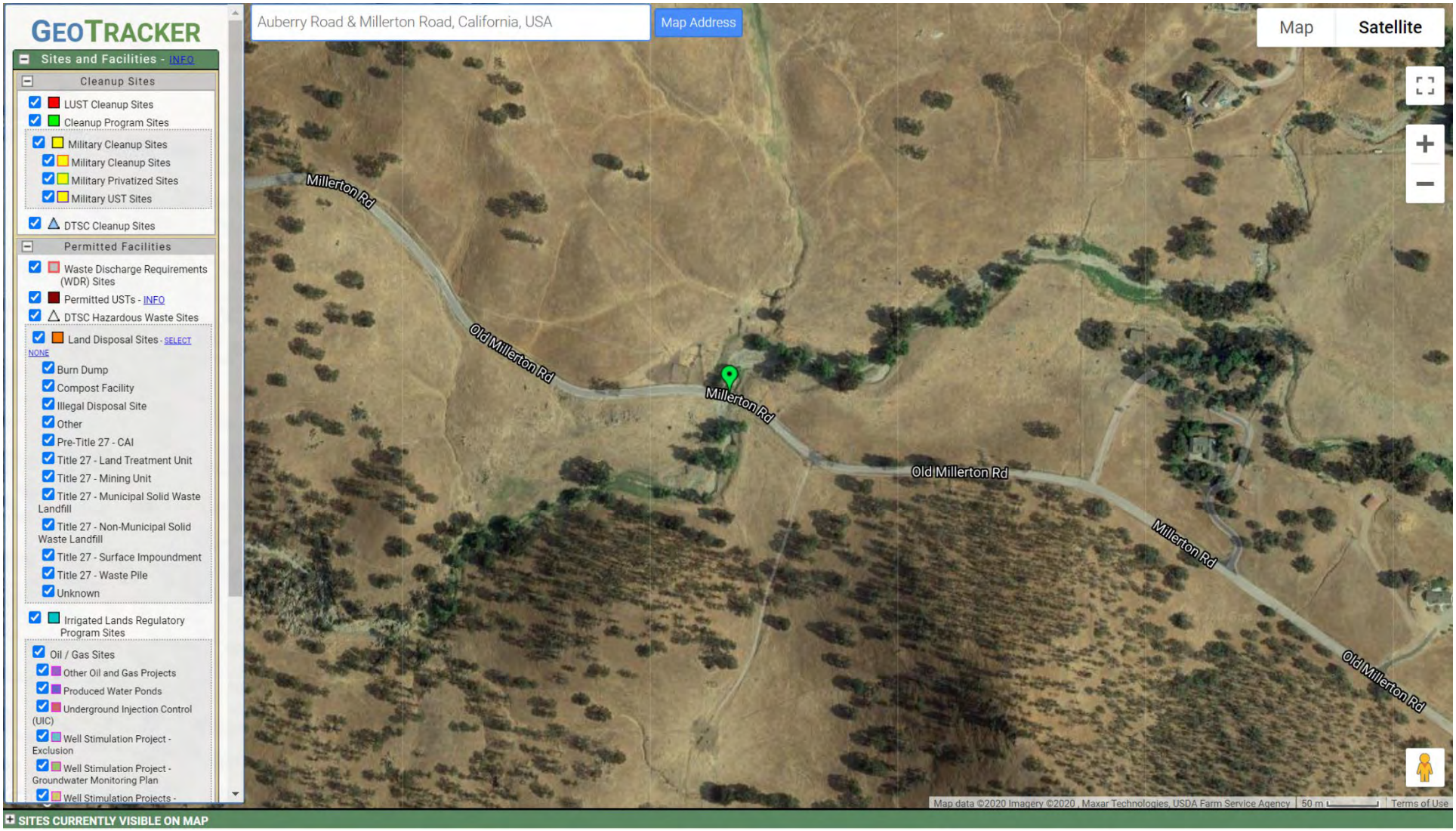
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/3/2020 at 5:47:46 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT E
HBP – Little Dry Creek Bridge No. 42C0270

GEOTRACKER
Retrieved 06/03/20



SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD PROJECT

FRESNO COUNTY, CALIFORNIA

06-FRESNO-0-CR

FEDERAL PROJECT NO. BRLO-5942 (210)

April 2015

SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD PROJECT

FRESNO COUNTY, CALIFORNIA

6-FRESNO-0-CR

FEDERAL PROJECT NO. BRLO-5942 (210)

Prepared for:
County of Fresno
2220 Tulare Street, 7th Floor
Fresno, California 93720

For Submittal to:
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

California Department of Fish and Wildlife
Central Region
1234 E. Shaw Avenue
Fresno, California 93710

April 2015

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE OF ASSESSMENT

This report presents an assessment of the status of the California tiger salamander (*Ambystoma californiense*) (CTS) and potential habitat for this species on the Little Dry Creek Bridges Replacement on Millerton Road Project (hereafter, project site) and vicinity. This assessment was prepared by Dayna Winchell, biologist with LSA Associates, Inc. (LSA) on behalf of the County of Fresno.

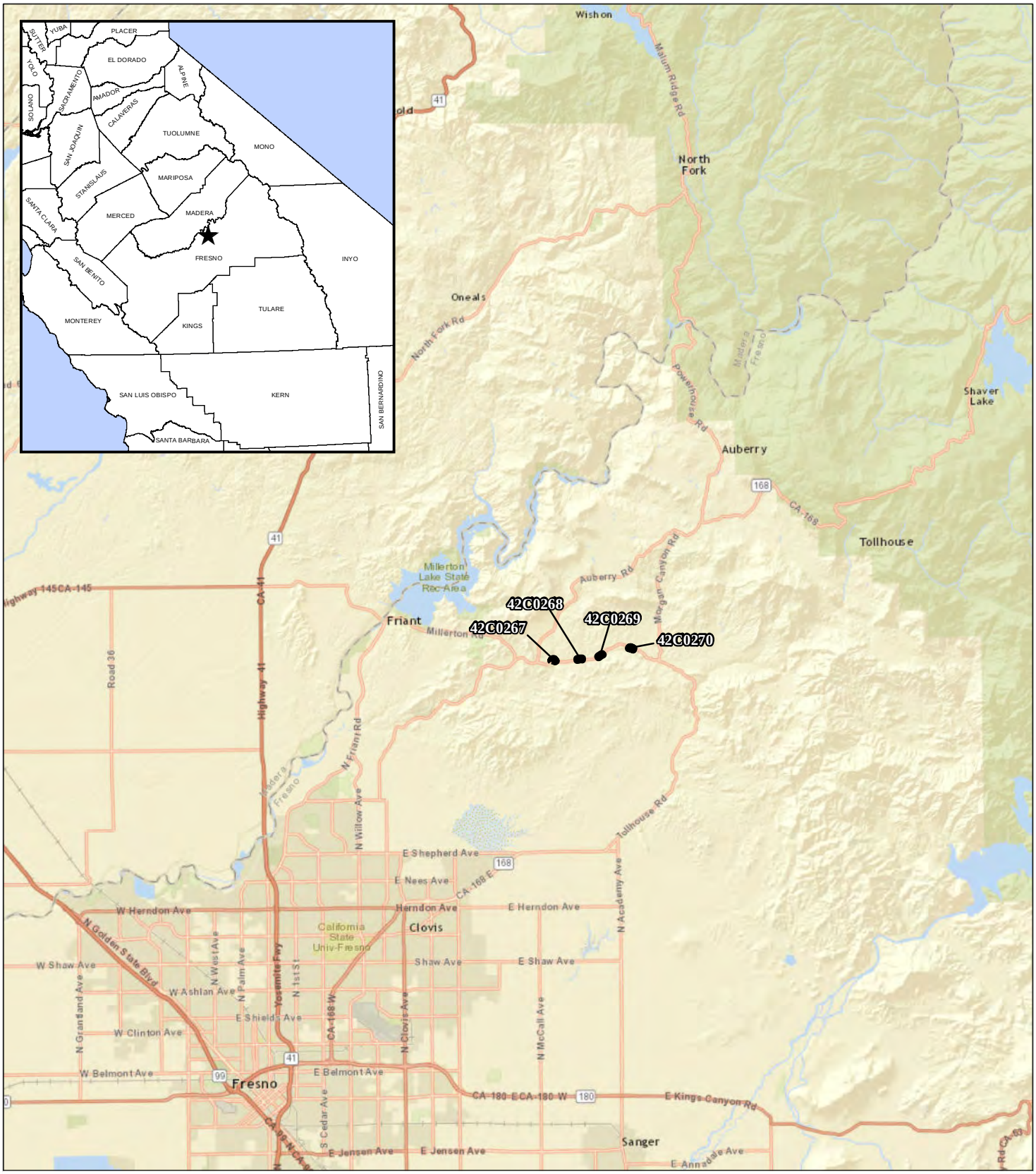
This assessment follows the protocols outlined in the U.S. Fish and Wildlife Service (USFWS) Interim Guidance on Conducting Site Assessments and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (October 2003). Accordingly, for CTS, this assessment describes the habitats within 1.24 miles (mi) of the site and documents the records within 3.1 mi of the project site. The assessment also evaluates the potential for CTS to occur on the project site.

1.2 ASSESSMENT AREA

The project site consists of four bridges (Bridge no. 42C0267, 42C0268, 42C0269, and 42C0270) on Millerton Road at Little Dry Creek and North Fork Little Dry Creek. The proposed project is located in northern Fresno County, approximately 18 mi northeast of the City of Fresno (Figures 1 and 2). Millerton Road is a narrow two-lane road and generally runs east to west with elevations on the present site ranging from 590 to 750 feet (ft) above mean sea level.

The project lies in a rural residential area among rolling hills. From the project site, Little Dry Creek flows southwest and drains into the San Joaquin River approximately 9 mi downstream. Numerous small to medium size ponds are located in the general vicinity. The habitat at the four bridges is comparable with similar species present. The dominant plant community in the assessment areas is oak woodland with interspersed areas of open grasslands. Dominant trees in the assessment area are blue oak (*Quercus douglasii*) and live oak (*Quercus wislizeni*) with interspersed black willow (*Salix goodingii*) and California sycamore (*Platanus recemosa*). Figure 3 shoes the project site on an aerial photo base.

For the purpose of this report, an assessment area for the project was established. The assessment area consists of an area around each bridge that would include the project footprint, existing roadways, cut/fill slopes, access and staging areas, and all lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis. The assessment area at each bridge ranges from 4.45 to 5.28 ac. The majority of the land in the assessment areas is privately owned and is similar to the project area in use and vegetative characteristics.



LEGEND

Bridge Locations

FIGURE 1

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Regional Location

0 2.5 5
MILES

SOURCE: ESRI World Street Map (2015)

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Caltrans

LEGEND

Assessment Area

FIGURE 2

0 2000 4000

FEET

SOURCE: USGS 7.5-Minute Quadrangle (Academy)

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Topographic Base

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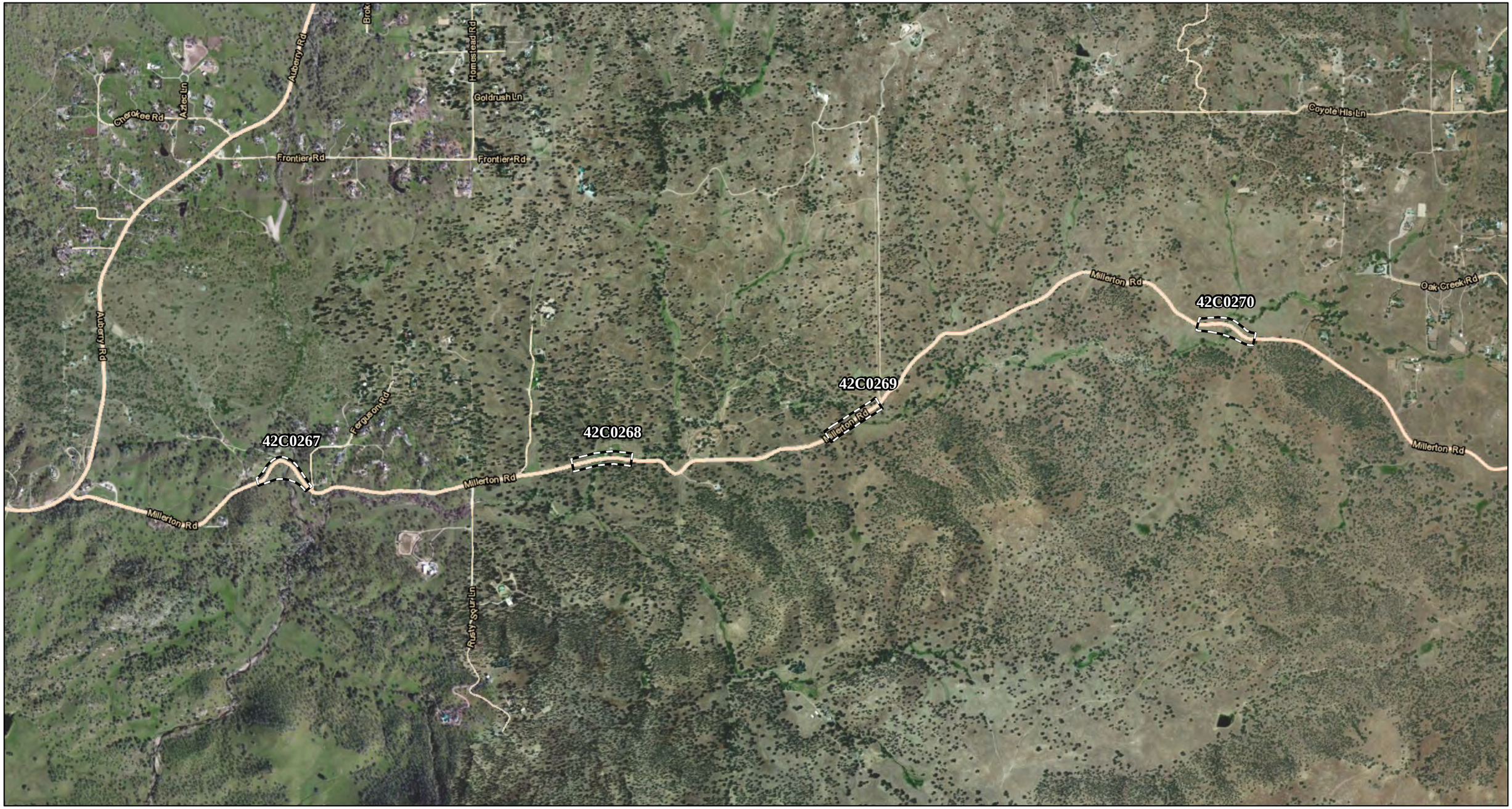

LEGEND

Assessment Area

0 750 1500
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 3

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Aerial Base

1.3 PROJECT DESCRIPTION

This project will replace four bridges on Millerton Road that cross Little Dry Creek in the north central portion of Fresno County (County) between Auberry Road to the west and State Route 168 to the east; Caltrans' bridge numbers 42C0267, 42C0268, 42C0269, and 42C0270. Millerton Road at this location is classified as two way rural street and has no posted speed limit. Each of the existing structures has been flagged as functionally obsolete due to their substandard width for a two lane facility. All four bridges were originally constructed in 1925 and consist of multi-span timber superstructures supported by concrete pier and abutment walls. The timber superstructures are in various states of deterioration. One structure (42C0267) is flagged as being structurally deficient due its advanced state of deterioration. All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 55 mph for a rural County street with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during the 100-year storm event.

The replacement structures will significantly improve on the existing conditions; roadway safety, structure condition, and bridge hydraulic capacity. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34'-10" wide which accommodates Fresno County's and American Association of State Highway and Transportation Officials (AASHTO) standard of two 12-ft lanes and two 4-ft shoulders. Each of the replacement bridges have been set on an alignment that can accommodate a higher design speed that is closer to the County's standard of 55 mph. The proposed design speed for each bridge is as follows:

Bridge Number	Design Speed
42C0267 – Alternative 1	25 mph
42C0267 – Alternative 2	35 mph
42C0268	45 mph
42C0269	45 mph
42C0270	45 mph

Two road alignment alternatives are being considered for the 42C0267 bridge. Construction costs, environmental impacts, and improved safety will be considered in selecting the most appropriate alignment. Only one alignment will be carried forward, however, once the alignment alternative analysis is complete. Bridges 42C0267 and 42C0270 will be placed on a new road alignment south of the existing road. Bridges 42C0268 and 42C0269 will be placed on the existing road alignment.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable) with the following span configurations and lengths:

Bridge Number	Number of Spans	Total Bridge Length
42C0267 – Alternative 1	1	60 feet
42C0267 – Alternative 2	1	60 feet
42C0268	2	82 feet
42C0269	1	60 feet
42C0270	2	82 feet

The bridge lengths and span configurations are being driven by the hydraulic capacity needed at each Little Dry Creek crossing. All four bridges can pass the Caltrans standard requirement of the 50-year storm event plus two feet of freeboard and the 100-year storm event.

Construction of all four bridges will require work with in the creek including the removal of the existing bridge, construction of the bridge pier (only applicable for bridges 42C0268 and 42C0269), construction of the abutment walls, construction and removal of temporary false work, installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location.

2.0 ASSESSMENT

LSA biologist Dayna Winchell visited the assessment area and its vicinity on March 25, 2015. Prior to the area visit, Ms. Winchell reviewed aerial photographs of the site to identify ponds, drainages, and other features that could potentially provide aquatic habitat for CTS. During the visit, Ms. Winchell surveyed the entire project site, and mapped all potentially suitable aquatic habitats for CTS. Most lands in the vicinity of the project are privately owned, and therefore, inaccessible. Therefore, potential habitat on private lands was mapped using an aerial photograph or through visual examination from existing public roads.

2.1 REGIONAL STATUS

This species occurs from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County. Fresno County is located within the Southern San Joaquin Geographic Region of the current range of the California tiger salamander (CDFG 2011*b*).

CTS occurs in grasslands and oak savannah communities from sea level to approximately 2,000 ft elevation in the Central Valley and Sierra Nevada foothills. In the Southern San Joaquin Geographic Region, CTS records are predominantly located in the grasslands on the valley floor, with only a few occurrences at higher elevations in oak savannah.

The elevation of the project site ranges from 590 to 750 ft elevation. The habitat around each bridge is composed of oak woodland interspersed with areas of grasslands. Most of the other occurrences in the Southern San Joaquin Geographic Region occur in areas of open grasslands. Of all CNDDB records in the Southern San Joaquin Geographic Region, only four records (#82, #322, #1013, and #1033) occur in woodlands similar to that of the project site. Two of these occurrences are old, dated 1980 and 1994; however, two occurrences (#1031 and #1033) are recent, dated 2008. All four of these occurrences are located within 8 miles of the BSA and are the located at the similar or higher elevation than the assessment area.

The majority of the occurrences in the region occur in areas of open grasslands at elevations similar or lower than the assessment area. Additionally, most of the occurrences are located west of the assessment area.

The project site is not located within designated critical habitat for CTS. The nearest critical habitat is Unit ssj_2, which is located on the Friant 7.5-minute USGS topographic quadrangle, approximately 1.5 mi west of the assessment area.

2.2 DOCUMENTED OCCURRENCES

There is one CNDDB record for CTS within 3.1 mi of the project site. This occurrence, dated 1994, is located approximately 2 mi west of the assessment area. Additional CTS occurrences are located further west of the project site. Figure 4 shows records for CTS in the vicinity of the project.

2.3 POTENTIAL HABITAT ON THE PROJECT SITE AND WITHIN A 1.24 MILE RADIUS

Potential aquatic and upland habitat for CTS at each bridge is discussed below and summarized in Table 1.

2.3.1 Aquatic Habitat

Little Dry Creek is a perennial creek; consequently, it does not provide suitable aquatic habitat for CTS. Although most of the creek was dry during the March 2015 site visit, there were areas of ponding near two of the bridges (42C0267 and 42C0268). However, due to low rainfall during the 2014/2015 rain season, the creek conditions are not standard. During a year of average rainfall, the flows would generally be too swift to provide suitable breeding habitat for CTS and the eggs would be swept downstream.

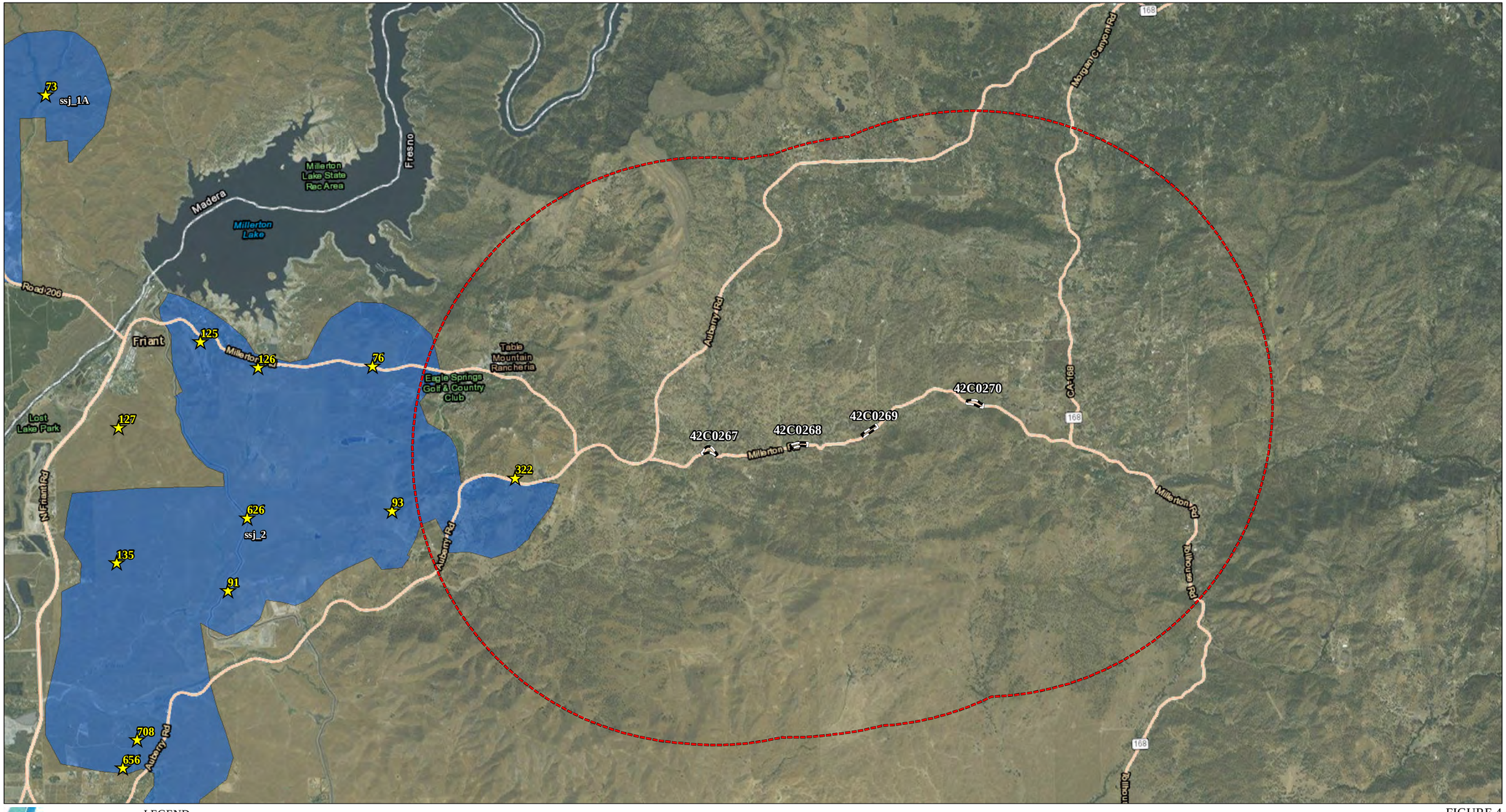
Numerous small to large size ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the assessment area. Some of these ponds are seasonal, while the larger ponds appear to hold water all year. There is one pond located approximately 0.4 mi north of bridge 42C0270. Otherwise all ponds are located at least 0.75 mi away from the bridges. LSA was unable to access most of the ponds; however, the ones that LSA could survey were dry during the site visit.

Although no suitable aquatic habitat is present in the assessment area, there are numerous ponds in the vicinity that may provide suitable aquatic habitat for CTS.

Potential aquatic habitat for CTS is shown in Figure 5.

2.3.2 Upland Habitat

Suitable upland habitat is present is the assessment area at all four bridges. Burrows were observed in the upland grasslands, along the road shoulders, in the rock slope protection around the bridges, and in the rocky outcrops in the vicinity.



LEGEND

- Assessment Area
- 3.1-Mile Radius
- Final Critical Habitat (2005)

CNDDB Records (January 2015)

- California Tiger Salamander

0 0.5 1
MILES

SOURCE: Basemap - Microsoft Aeral Imagery (2010-2011); Mapping - CNDDB (1/2015)

I:\CFF1101Q\GIS\assess_fig4-cnddb.mxd (4/23/2015)

FIGURE 4

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

CTS CNDDB Records
in the Vicinity of the Project Site

Table 1: Potential CTS Habitat at Each Bridge

Bridge Number	Upland Habitat Present	Suitable Aquatic Habitat Present
42C0267	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential aquatic habitat is located approximately 0.75 mi south of the project site.
42C0268	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential aquatic habitat is located approximately 0.85 mi southwest of the project site.
42C0269	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential habitat is located approximately 0.75 mi south of the project site.
42C0270	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential habitat is located approximately 0.40 mi north of the project site.

LEGEND

- Assessment Area
- 1.24-Mile Radius
- Ponds and Pooled Areas

0 1000 2000
FEET

SOURCE: Basemap - Microsoft Aeral Imagery (8/2010); Mapping - LSA Associates, Inc. (2015)

I:\CFF1101Q\GIS\assess_fig5-cts_hab.mxd (4/23/2015)

FIGURE 5

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential California Tiger Salamander
Aquatic Habitat Within 1.24 Miles of the Project Site

3.0 RESULTS

The findings of this report are that CTS have the potential to occur on the project site (i.e. at all four bridges) as well as in the vicinity of the project. The project site is located within the current range for the species and approximately 1.5 mi east of designated critical habitat. There is only one occurrence located within 3.1 mi of the assessment area; however, there are multiple occurrences within 5 mi of the project site. While the majority of occurrences in the region occur in areas of open grasslands; there are four occurrences in the region where CTS occurs in oak woodlands similar to the project site.

There is no suitable aquatic habitat for CTS in the assessment area. Little Dry Creek is a perennial creek that does not provide suitable aquatic habitat for CTS. During years of normal rainfall, the flow of the creek would be too swift to provide suitable aquatic habitat. There are numerous ponds within 1.24 mi that could provide potential aquatic habitat for CTS. Not all ponds were accessible to survey; the features that were accessible were dry during the March 2015 survey. However, the 2014/2015 rainfall was unusually low and, based on review of the aerial photos; these features have shown to hold water for a longer duration of the year.

Suitable upland habitat is present in the assessment area and the in vicinity of all four bridges. Suitable burrows were observed in the annual grasslands, road shoulders, and in rocky outcrops around the assessment area.

Based on these findings, CTS have the potential to occur on the project site as well as in the vicinity of the project.

4.0 REFERENCES

California Department of Fish and Game. 2015*a*. Rarefind 5 personal computer program. Sacramento, CA. Records search executed January 27, 2015. Sacramento, California.

———. 2011*b*. California Wildlife Habitat Relationships System – Range Maps. Records search executed July 21, 2011. Sacramento, California.

Google Earth. 2015. Image date 04/05/2014. Site accessed March 20, 2015.

Jennings, M. R., and M. P. Hayes. 1994. Amphibian and Reptile Species of Special Concern in California. Final report to the California Dept. of Fish and Game, Inland Fisheries Division, Rancho Cordova. Contract No. 8023.

———. 2003. *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander*. USFWS, California/Nevada Operations Office, Sacramento, CA, and California Department of Fish and Game, Office of the Director, Sacramento, CA.

———. 2004. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the California Tiger Salamander, Central Population; Proposed Rule. *Federal Register* 69: 78570-48649.

APPENDIX A

RESUME FOR DAYNA WINCHELL

DAYNA WINCHELL
BIOLOGIST

EXPERTISE

Wildlife and Sensitive Species Surveys

Biological Construction Monitoring and Auditing

Environmental Assessment

EDUCATION

University of Queensland, Australia. Masters of Science Degree in Conservation Biology, 2012.

California State University, San Marcos. B.S. in General Biology, 2009.

CERTIFICATIONS AND TRAINING

Certified in Basic and Advanced Wildlife Handling and First Aid Techniques

Trained in Northern California Bird Species and Identifying Techniques

Caltrans Training Courses:

- The NEPA/404 Memorandum of Understanding

PROFESSIONAL AFFILIATES

The Wildlife Society

Defenders of Wildlife

PROFESSIONAL RESPONSIBILITIES

Ms. Winchell is a general biologist at LSA with a variety of experience in the wildlife and environmental field. This experience includes conducting full ecological evaluations and assessment and animal behavior surveys. Additional experience includes coordinating special species trapping, surveying and relocation projects as well as studying long term human impacts on flora and fauna. Ms. Winchell is experienced in ensuring legislation compliance on the local, state and federal levels.

Ms. Winchell is skilled in conducting biological surveys and construction monitoring of projects including road and bridge construction, bridge replacement, and development projects. Construction monitoring experience includes listed species such as; Swainson's hawk, California red-legged frog, giant garter snake, burrowing owl, foothill yellow legged frog and California tiger salamander.

The following summarizes her work involving construction monitoring and surveying of special status species.

PROJECT EXPERIENCE

Potrero Hills California Tiger Salamander Relocation
Suisun City, Solano County, California
Ms. Winchell assisted in the trapping and relocation of California Tiger Salamanders. Duties included assisting in checking traps and determining the health and age of salamanders prior to relocation. Ms. Winchell also assisted with seining the stock ponds for CTS larvae.

Habitat Assessments for Bridge Construction at Old Hernandez Road, San Benito County, California
Ms. Winchell conducted a habitat assessment for bridge construction in San Benito County to determine the presence of listed species. The assessment included surveying for San Joaquin kit fox, California red-legged frog, and California tiger salamander. Assessment included identifying suitable habitat in the vicinity for the listed species.

San Juan Highway Bike Lane Project, San Juan Bautista
San Benito County, California
Ms. Winchell conducted a post construction habitat assessment to determine the success of the revegetation restoration effort in California red-legged frog and CTS habitat, along the San Juan Highway near San Juan Bautista.

State Route 88 – Jackson Valley Rehabilitation Project, Amador County, California
Ms. Winchell conducted construction monitoring for CTS at the State Route 88 Jackson Valley Rehabilitation Project. Construction included guard rail installation, grading of approaches, and grading and widening of the shoulders.

DAYNA WINCHELL
BIOLOGIST

PROFESSIONAL EXPERIENCE

Biologist, LSA Associates Inc., Rocklin and Pt. Richmond, CA. 2012-present.

Ecologist, James Warren & Associate Ecological Consultants, Brisbane, Australia. 2012.

Researcher, University of Queensland, Brisbane Australia. 2011-2012

Animal Behavior Researcher, San Diego Wild Animal Park, Escondido, CA. 2008-2009

Aquarist Assistant, Birch Aquarium, La Jolla, CA 2008-2009

Expedition Member, Global Vision International, Kenyan Coast, 2007.

North County Corridor New State Route 108 Stanislaus County, California
Ms. Winchell conducted an overall biological assessment for a new 18 miles roadway corridor that consists of four separate alignments in northern Stanislaus County. Surveys include wetland delineation, nesting bird survey, and habitat assessment for western burrowing owl. Ms. Winchell was also responsible for preparing the technical reports with the results of the surveys.

Panoche Bridge Replacement, San Benito County, California
Conducted a focused tree survey at the bridge replacement site on Panoche Road at Tres Pinos Creek. Also assessed suitable habitat of Tres Pinos Creek for CTS and California red-legged frog.

State Route 88 – Jackson Valley Rehabilitation Project, Amador County, California
Ms. Winchell conducted construction monitoring for CTS at the State Route 88 Jackson Valley Rehabilitation Project. Construction included guard rail installation, grading of approaches, and grading and widening of the shoulders.

State Route 65/Lincoln Bypass Project
Lincoln, Placer County, California
Conducted construction monitoring of construction project creating new State Highway and 17 bridges over land and water features. Monitoring tasks include: surveying for Swainson's hawks and other nesting birds, before and during the nesting season; mapping and monitoring all active nests within the alignment; and monitoring construction activities for compliance with project permits.

Western Placerville Interchange Project Placerville, El Dorado County, California
Conducted construction monitoring during vegetation removal for the Placerville Interchange Project near SR-50. Monitoring focused on the presence/absence of California red-legged frog and foothill yellow legged frog.

Cosumnes River Boulevard/I-5 Interchange Project
Sacramento, California
Conducted preconstruction and construction monitoring surveys for listed species, including giant garter snake, and nesting birds, including nesting Swainson's hawks and burrowing owls.

APPENDIX B

REPRESENTATIVE PHOTOS MILLERTON ROAD BRIDGES OVER DRY CREEK

Looking at bridge No. 267 from the east.

Looking at the bridge No. 267 from the south.

Looking downstream at bridge No. 268.

Looking upstream at bridge No. 268.

Caltrans

Little Dry Creek Bridges
Replacement on Millerton Road

Representative Photos (1)

SOURCE: LSA Associates, Inc. (2015).

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Looking at bridge No. 269 from the south.

Looking upstream of bridge No. 269.

Looking at bridge No. 270 from the south.

Looking upstream of bridge No. 270.

Caltrans

Little Dry Creek Bridges Replacement on Millerton Road

Representative Photos (2)

SOURCE: LSA Associates, Inc. (2015).

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Delineation of Waters of the U.S.

Millerton Road Bridge Replacements

Federal Project No. BRLO-5942 (210)

Fresno County

May 2017

Delineation of Waters of the U.S.

Millerton Road Bridge Replacements

Federal Project No. BRLO-5942 (210)

May 2017

Prepared for:

County of Fresno
Public Works and Planning
2220 Tulare Street, 6th Floor
Fresno, California 93721

In coordination with:

California Department of Transportation

Prepared by:

Bargas Environmental Consulting, LLC
3031 F Street, Suite 203
Sacramento, CA 95816

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1.0 INTRODUCTION

This report presents the results of the delineation of waters of the United States (U.S), as defined by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), conducted by Bargas Environmental Consulting, LLC (Bargas) for four proposed bridge replacements along Millerton Road, which crosses Little Dry Creek (proposed project). The County of Fresno in coordination with the California Department of Transportation (Caltrans), are proposing to replace Bridge #42C0267 (Assessor's Parcel Numbers (APN) 138-060- 017-000, 138-0961-041-000, 138-0961-042-000, 138-045-003-000; Bridge #42C0268 (APNs 138-061-002-000, 138-061-073-000; Bridge #42C0269 (APNs 138-061-075-000, 138-061-078-000; and Bridge #42C0270 (APN 138-070-066-000) located in Fresno County, California. The purpose of this assessment is to identify and delineate wetlands and other waters of the U.S. which occur within the proposed project study area (study area).

1.1 STUDY AREA LOCATIONS

There are four study areas located along Millerton Road within unincorporated Fresno County, California. Each study area consists of a 100-foot buffer surrounding each of the four bridge locations that occur along Millerton Road where Little Dry Creek and North Fork Little Dry Creek cross. For the purposes of this report, each study area will be designated by their corresponding bridge identification number. The approximate acreages by study area are as follows: Bridge #42C0267 totals 5.29 acres; Bridge #42C0268 totals 4.45 acres; Bridge #42C0269 totals 4.51 acres; and Bridge #42C0270 totals 3.06 acres. A site and vicinity map of the study area is shown in **Figure 1**. The study areas are generally situated on Township 11 South, Range 22 East, Section 16 of the Academy U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (quad), Mt. Diablo Meridian (USGS, 2012). The approximate center point of all the study areas is 36º58'13.65" North, 119º34'16.53" West (latitude 36.970458 degrees north and longitude -119.571257 degrees west). **Figure 2** shows an aerial overview of all four study areas.

To access the study areas from Sacramento, take CA-99 South for approximately 150 miles. Take the Cleveland Avenue exit and drive east for approximately two miles. Continue straight onto Tozer Street for approximately 0.1 miles. Turn onto CA-145 N/East Yosemite Avenue and travel approximately 15 miles. Continue straight along Road 145 for approximately three miles. Turn onto Road 206 and head south for 1.7 miles. Continue straight along North Fork Road for 0.6 miles. Turn onto Millerton Road and head northeast for approximately 5.7 miles. Turn onto Auberry Road and travel northeast for 0.9 miles. Turn onto Millerton Road and travel east for approximately
1.65 miles to Bridge #42C0267, then approximately 1 mile east to Bridge #42C0268, then approximately 0.82 miles east to Bridge #42C0269 and then approximately 1.35 miles east to Bridge #42C0270.

1.2 PROPOSED PROJECT DESCRIPTION

The proposed project is located in East Fresno County approximately 0.78 miles along Millerton Road east of the Auberry Road intersection and extends east until approximately 1.20 miles before Millerton Road intersects with Highway 168. The project proposes to replace the four existing bridges along Millerton Road, where Little Dry Creek crosses, with updated bridge infrastructure.

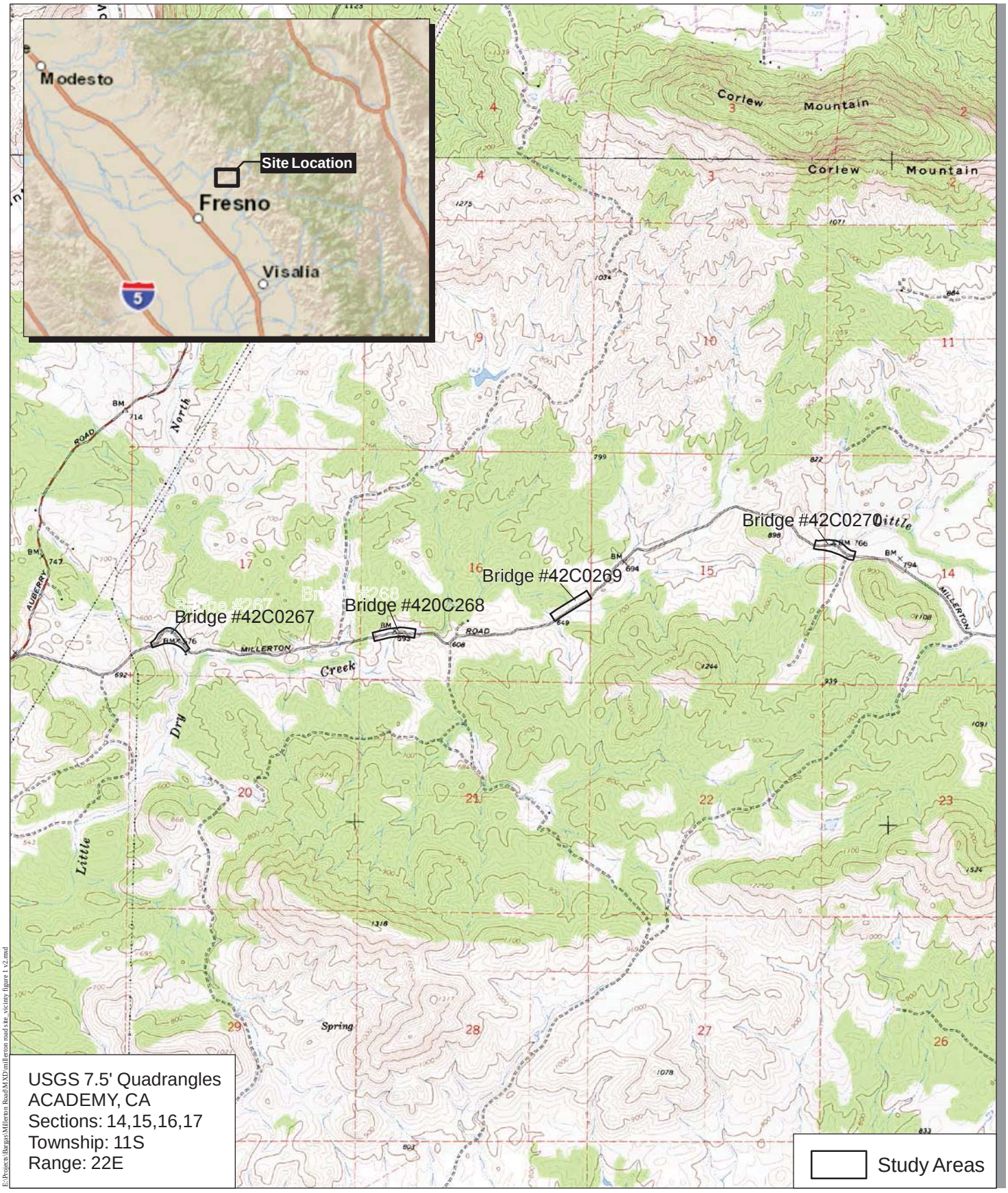

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Figure 1: Site & Vicinity Map

Source: USGS

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

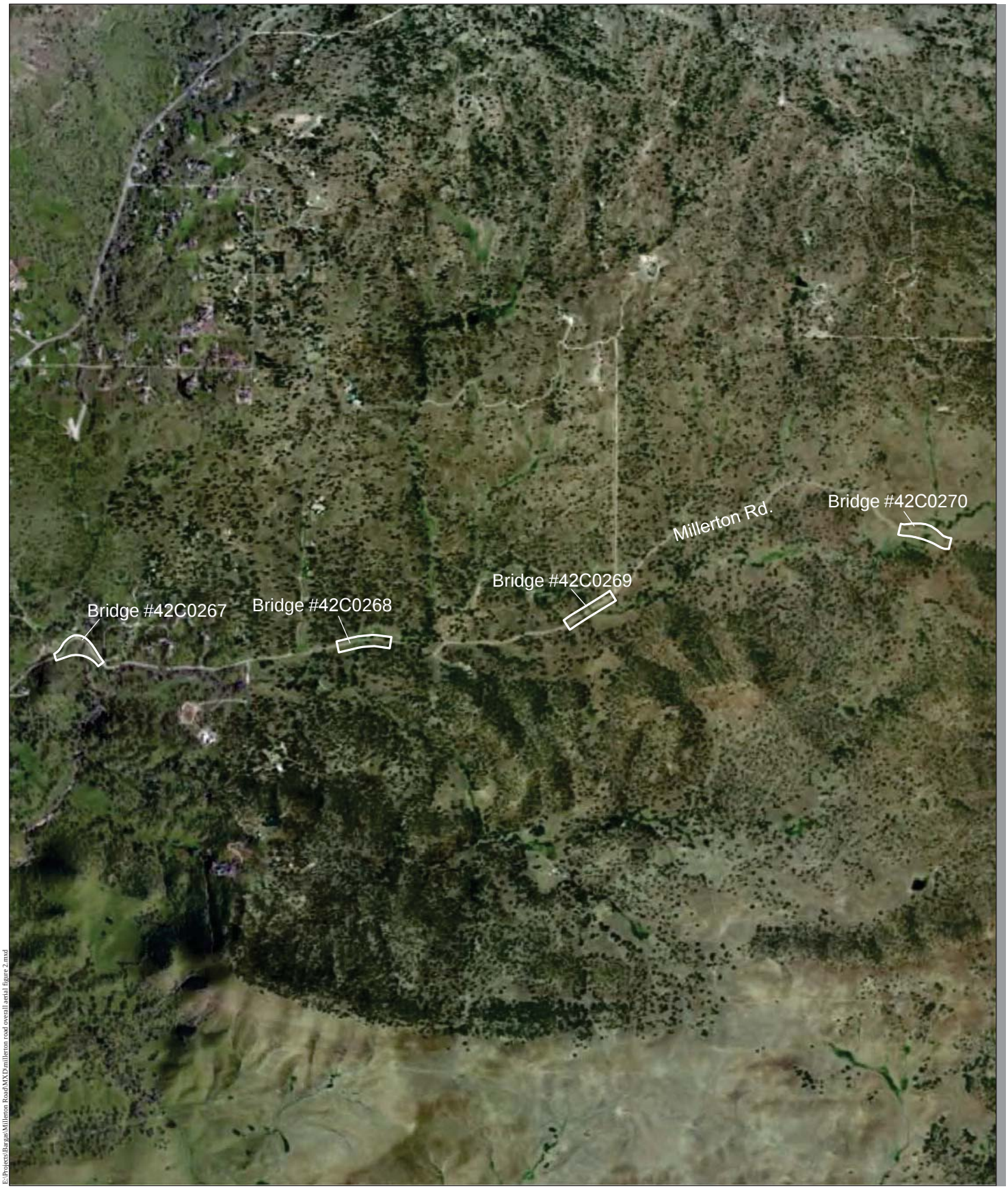

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Figure 2: Aerial Overview of all Study Areas

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

2.0 REGULATORY SETTING

This report has been prepared in accordance with the Regulatory Division of the Sacramento District, USACE minimum standards (2001) and the following manuals and guidance were used to delineate wetlands that are potentially subject to USACE jurisdiction under Section 404 of the CWA.

- *U.S. Army Corps of Engineers Wetlands Delineation Manual* (1987);
- *Interim Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2006);
- *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE, 2008a);
- *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et. al., 1979); and
- *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007).

2.1 U.S. ARMY CORPS OF ENGINEERS

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States pursuant to Section 404 of the Clean Water Act (CWA, 33 U.S.C. Section 1344). The USACE may require the issuance of a permit, or coverage under an existing permit, for all actions that have the potential to degrade or modify these jurisdictional features. The term "Waters of the United States" is defined in the USACE regulation 33 CFR Part 328.3(a) as:

- *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- *All interstate waters including interstate wetlands;*
- *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:*
    - *Which or could be used by interstate or foreign travelers for recreation or other purposes; or*
    - *From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
    - *Which are used or could be used for industrial purpose by industries in interstate commerce;*
- *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- *Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;*
- *The territorial seas;*
- *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section; and*
- *Waters of the United States do not include prior converted cropland.*

Wetlands are defined under 33 C.F.R. 328.3(b) as

> *"those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."*

The limits of USACE jurisdiction in non-tidal waters extends to the Ordinary High Water Mark (OHWM) which is defined under 33 CFR 328.3(e) as:

> *"…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*(USACE, 2008c).

Non-wetland features include:

> "*…upland and lowland areas that are neither deep water aquatic habitats, wetlands nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only a brief period of time during the growing season. If these features are vegetated they normally support species that are predominantly adapted to aerobic soil conditions*" (USACE, 1987).

2.2 RAPANOS VS. U.S. AND CARABELL VS. U.S.

In the Supreme Court cases of Rapanos vs. United States and Carabell vs. United States (herein referred to as Rapanos), the court attempted to clarify the extent of USACE jurisdiction under the CWA. The nine Supreme Court justices issued five separate opinions (one plurality opinion, two concurring opinions, and two dissenting opinions) with no single opinion commanding a majority of the Court. In light of the Rapanos decision, the USACE will assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary, indicate whether they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters. Analysis of potentially jurisdictional streams includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, and size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a traditional navigable waterway (TNW), the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

In accordance with the USACE guidance document (USACE 2008b), the USACE will generally not assert jurisdiction over the following features: swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands that generally do not carry a relatively permanent flow of water.

2.3 PORTER-COLOGNE WATER QUALITY CONTROL ACT

Under the State of California Porter-Cologne Water Quality Control Act, any discharge to wetlands or other waters of the state are regulated by the State Water Resources Control Board (SWRCB) in addition to the Regional Water Quality Control Board (RWQCB) which regulates regional-level activities.

Pursuant to Section 401(a)(1) of the federal Clean Water Act (CWA), water quality certification from the RWQCB is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. It is required that any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain certification from the state in which the discharge originates. As a result, fill proposed to be deposited in waters and wetlands, requires coordination with the appropriate RWQCB that administers Section 401 and provides certification. The RWQCB also plays a role in review of water quality and wetland issues, including avoidance and minimization of impacts. Section 401 certification is required prior to issuance of a Section 404 permit.

2.4 FRESNO COUNTY GENERAL PLAN

Under the Open Space and Conservation Element, of the Fresno County General Plan (2000), Section D, Wetlands and Riparian Areas, addresses goals and policies in regards to the conservation and protection of wetland communities and riparian areas. The following goals and policies that address these habitats are as follows:

Goal OS-D: To conserve the function and values of wetland communities and related riparian areas throughout Fresno County while allowing compatible uses where appropriate. Protection of these resource functions will positively affect aesthetics, water quality, floodplain management, ecological function, and recreation/tourism.

Policy OS-D.1: The County shall support the "no-net-loss" wetlands policies of the US Army Corps of Engineers, the US Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.

Policy OS-D.2: The County shall require new development to fully mitigate wetland loss for function and value in regulated wetlands to achieve "no-net-loss" through any combination of avoidance, minimization, or compensation. The County shall support mitigation banking programs that provide the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.

Policy OS-D.3: The County shall require development to be designed in such a manner that pollutants and siltation do not significantly degrade the area, value, or function of wetlands. The County shall require new developments to implement the use of Best Management Practices (BMPs) to aid in this effort.

Policy OS-D.4: The County shall require riparian protection zones around natural watercourses and shall recognize that these areas provide highly valuable wildlife habitat. Riparian protection zones shall include the bed and bank of both low- and high-flow channels and associated riparian vegetation, the band of riparian vegetation outside the high-flow channel, and buffers of 100 feet in width as measured from the top of the bank

of unvegetated channels and 50 feet in width as measured from the outer edge of the dripline of riparian vegetation.

Policy OS-D.5: The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.

Policy OS-D.6: The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for creating new riparian habitats within or near the project area. Adjacency to the project area shall be defined as being within the same watershed sub-basin as the project site. Compensation shall be at a ratio of three (3) acres of new habitat for every one (1) acre destroyed.

Policy OS-D.7: The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient storage, and wildlife habitats.

Policy OS-D.8: The County should consider the acquisition of wetland, meadows, and riparian habitat areas for parks limited to passive recreational activities as a method of wildlife conservation.

3.1 METHODOLOGY

Prior to conducting the field surveys the following informational sources were reviewed:

- The Academy quadrangle (quad) (USGS, 2012);
- Color aerial imagery of the study areas and their vicinity (Google Earth Pro, 2014);
- Soil survey maps and unit descriptions (NRCS, 2013);
- Hydric soil information for the Eastern Part of Fresno County (NRCS, 2015);
- U.S. Geological Society - National Hydrography Dataset for hydrological features within and surrounding the study area (NHD, 2014); and
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory - Wetlands Online Mapper (USFWS, 2014).

3.1 SURVEY DEFINITIONS AND PROTOCOL

In areas where wetland vegetation was dominant or presence of hydrological indicators were identified, a formal wetland delineation was conducted. Sample data points were selected and the habitat at each sampling point was evaluated for the three required parameters: hydrophytic vegetation, wetland hydrology, and hydric soils.

Hydrophytic vegetation is defined as vegetation that is adapted to, and occurs in, areas where soils are frequently or permanently saturated of sufficient duration to exert a controlling influence on the plant species present. In the arid west, the hydrophytic vegetation parameter is met when one of the following is true: (1) the dominant vegetation (more than 50 percent of the dominant plant species) is typically adapted to areas having wetland hydrology and hydric soil conditions; (2) the prevalent vegetation is typically adapted to areas having wetland hydrology and hydric soil conditions (as determined by a formula), or (3) morphological adaptations are observed to confirm that plant species are growing in inundated or saturated conditions.

Plants are assigned a Wetland Indicator Status (WIS) based on their frequency of occurrence in wetland habitats, following the 2014 Regional Wetland Plant List for the Arid West Region (Lichvar, R.W., et. al, 2014):

- UPL (Obligate Upland) = occur in wetlands in another region, but almost always occur in uplands in the region specified.
- FACU (Facultative Upland) = usually occur in non-wetlands (estimated probability 67-99%), but occasionally found in wetlands (estimated probability 1-33%).
- FAC (Facultative) = equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%).
- FACW (Facultative Wetland) = usually occur in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.
- OBL (Obligate Wetland) = occur almost always (estimated probability >99%) in wetlands under natural conditions.
- NI (No Indicator) = Information insufficient to determine wetland indicator status.

An asterisk (*) following a regional indicator identifies tentative assignments based on limited information from which to determine the indicator status. Species without a WIS are not included on the 2014 Regional Wetland Plant List for the Arid West Region (Lichvar, R.W., et. al, 2014).

Wetland hydrology refers to the saturation of the soil by flooding or a shallow water table for prolonged periods during the growing season, such that the character of the soil and vegetation are substantially different from areas that do not experience saturation in this manner. Geomorphic features associated with flooding (e.g., channels, shorelines) and sediment deposits are among the indicators of wetland hydrology. The identification of wetland hydrology follows the USACE 1987 delineation manual.

Hydric soils, which are indicative of wetlands, are defined as soils that are sufficiently ponded, flooded, or saturated throughout the growing season to produce anaerobic conditions which favor the growth of hydrophytic vegetation (USACE, 1987). Hydric soils are identifiable based on observable properties that result from prolonged saturated-anaerobic conditions. Non-wetland Waters of the U.S. (jurisdictional areas within the limits of ordinary high water but not supporting the abovementioned features, as well as those areas expected to be tidally influenced that do not support vegetation) were identified and delineated based on the presence of clear indicators of ponding or flowing water and defined bed and banks. Wetland boundaries and limits of other Waters of the U.S. were mapped electronically using a Trimble Geo XH sub-meter differential GPS unit.

3.2 DELINEATION SURVEY AND FIELD CONDITIONS

Bargas biologist, Charlotte Marks, conducted a delineation of the four study areas on March 24th and April 27th, 2015. At each study area, a designated 100-foot buffer area was surveyed by walking meandering transects in a general north to south direction while mapping habitats types, and documenting wetland features on an aerial image of the study area. Data points were obtained by excavating soil pits to a depth of approximately 18 inches or until an impermeable layer was reached. Plant nomenclature followed *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin, 2012). The *2014 Regional Wetland Plant List for the Arid West Region* (Lichvar, R.W., et. al, 2014) was used to determine the status of observed plants as wetland indicator species. A standard Munsell® Soil Color Chart was used to determine soil matrix and mottle colors (Kollmorgen, 2000).

3.3 MAPPING

Wetland boundaries and other waters of the U.S. within the study area were surveyed and mapped using a Trimble Geo XH, Global Positioning System (GPS) technology hand-held unit receiver. This mapping GPS unit is capable of real-time differential correction and sub-meter accuracy. The GPS unit data were downloaded and converted into Environmental Systems Research Institute (ESRI) shape file format. The geographic coordinate system used to reference the data was Universal Transverse Mercator (UTM–Zone 10), North American Datum (NAD83) in meters.

Each wetland feature or complex was assessed by setting up transects perpendicular to the suspect wetland/upland edges and by observing the mandatory wetland indicators at selected points along each transect as defined by the 1987 Manual (USACE, 1987) and the Regional Supplemental Manual (USACE, 2008a). Potential wetland boundaries were mapped at a level of accuracy of less than one meter. Soil pits were made to obtain soil data and their locations were documented with GPS. Wetland polygons were overlaid on a topographic base map and aerial photograph. The ESRI data and GIS software were used to calculate the acreage of each polygon. Mapping requirements as set forth by the USACE under the guidance of *Final Map and Drawing Standards for the South Pacific Division Regulatory Program* (2012) were followed.

3.4 DETERMINATION METHODS

This report has been prepared in accordance with the *Regulatory Division of the USACE Sacramento District, Minimum Standards* (2001) and the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (1987). *The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (2008a) and the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et.al., 1979) were used to delineate and classify wetlands that potentially are subject to jurisdiction under the USACE. Furthermore, the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (2007) was used to confirm that the delineation was prepared in accordance with the Rapanos decision guidance.

Data for each feature was collected using the *USACE Wetland Determination Data Form - Arid West (Version 2.0)* (2008a). Data forms were completed at representative locations to determine whether suspect features qualify as jurisdictional waters of the U.S. Wetlands were determined based on the presence of the three factors that define wetlands – the presence of dominant hydrophytic vegetation, presence of hydric soils; and wetland hydrology indicators.

3.4.1 Vegetation

Hydrophytic vegetation indicators include: prevalence of hydrophytic vegetation (majority of dominant plant species are obligate or facultative wetland plants) as listed in the *2014 Regional Wetland Plant List for the Arid West Region* (Lichvar, R.W., et. al, 2014) and morphological or physiological adaptations to saturated soil conditions. Plant species not listed in Lichvar, R.W., et. al. (2014) are considered upland species. The 50/20 rule states that for each stratum in the plant community, dominant species are the most abundant species that immediately exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprises 20 percent or more of the total cover in the stratum.

The dominance test was the hydrophytic indicator that was applied at each data point location. However, in the instance in which both hydric soil and hydrology indicators were present and vegetation failed the dominance test, a second verifiable test to evaluate presence of hydrophytic vegetation was conducted by calculating the Prevalence Index. The Prevalence Index is a weighted-average of wetland indicator status of all plant species within the sample plot of the feature. For each of the indicator status categories a numeric code is given and the weight that each species holds is by abundance or percent coverage of the sampling plot.

Table 1: Prevalence Index Worksheet

Total Percent Cover		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Source: USACE, 2008a.

In order to demonstrate dominant hydrophytic vegetation, the resulting Prevalence Index needs to be less than or equal to a value of 3.0, plus the presence of hydric soil and wetland hydrology indicators, unless the site is disturbed or problematic.

3.4.2 Soils

Hydric soil indicators include: organic soils (histosols); mineral soils saturated and rich in organics (histic epipedon); sulfidic odor; low dissolved oxygen concentration (aquic moisture regime) and reducing conditions; gleyed and/or low-chroma soils (chroma of 1 or chroma of 2 with bright mottles); soils listed on *National Hydric Soils* (NRCS, 2006); and iron and manganese concretions. Soil pits were excavated to approximately 18 inches unless hardpan or bedrock was reached and were examined for hydric soil indicators. Soil colors were determined using the Munsell® Soil Color Charts under moist conditions.

The NRCS has developed a new list of hydric soils criteria under the New NASIS Database Selection Criteria (Federal Register Doc. 2012-4733 Filed 2-28-12) (NRCS, 2014b). The National Technical Committee of Hydric Soils (NTCHS) has updated the criteria to select map units components for the hydric soils list. The updated criteria are as follows:

1. All Histels except Folistels and Histosols except Folists; or
2. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:
    a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    b. Show evidence that the soil meets the definition of a hydric soil;
3. Map unit components that are frequently ponded for long duration or very long duration during the growing season that:
    a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    b. Show evidence that the soil meets the definition of a hydric soil; or
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    b. Show evidence that the soils meet the definition of a hydric soil.

Hydric soil lists are a compilation of all map units with either a major or minor component that is at least in part hydric. This could include components that are soil series, components that are classified at categories higher than the series level in Soil Taxonomy, and miscellaneous land types. Since the list includes both major and minor (small) percentages for map units, in some cases most of the map unit may not be hydric. Also, some components may be phases of soil series that have a range of characteristics that both meet and do not meet hydric indicator requirements; therefore, only a portion of that component's concept (or range in characteristics) may in fact be hydric. The list is useful in identifying map units that may contain hydric soils.

NRCS Hydric Soils Lists are detailed, up-to-date hydric soil lists that are comprised of soil map unit components. A national hydric soils list is generated once per calendar year to satisfy legislated mandates. State lists are subsets of the national hydric soils list but are broken out by each state. Local lists have also been developed by NRCS that contain hydric soils for each county, parish, or soil survey area in the United States. The local area list for the Eastern Part of Fresno County was obtained to evaluate soil types within the study area (NRCS, 2013).

3.4.3 Hydrology

Primary wetland hydrology indicators include: visual observation of saturated soil or inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks, drift lines, and sediment deposits. Only one primary indicator is necessary to have wetland hydrology. Secondary indicators include: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard. A minimum of two secondary indicators is necessary to establish wetland hydrology.

3.5 OTHER WATERS OF THE U.S.

For identification of water bodies other than wetlands that are subject to federal jurisdiction, two principle field characteristics were evaluated: 1) the presence of a channel; and 2) the presence of an OHWM. As laid out by the USACE, physical characteristics that should be considered when making a determination for an OHWM include: natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; or change in plant community (USACE, 2005).

Other characteristics that were noted, where possible, include: description of the hydrologic feature type and length. USACE regulations (33 CFR Part 328) were consulted to make a determination of whether these water bodies constitute waters of the U.S.

4.0 ENVIRONMENTAL SETTING

Fresno County is characterized by a Mediterranean climate, with hot and dry temperatures in the summer and moderate temperatures with light precipitation in the winter. The average maximum temperature is 98.6 degrees and the average minimum temperature is 37.1 degrees (Fresno County, 2015). The average annual precipitation for Fresno County is 0.88 inches (Fresno County, 2015). The California Irrigation Management Information System (CIMIS) weather station climate data for the Fresno State – San Joaquin Valley – Station #80 obtained for the vicinity of the study area documented an average total annual precipitation of 7.8 inches of rain from March 2014 to February 2015 (CIMIS, 2015). Prior to the field survey on March 24, 2015, the last significant rain event that occurred in the City of Fresno was on December 12, 2014 and measured at 1.33 inches. A total of ten subsequent minor rain events occurred between December 15th until time of the survey, which measured between 0.01 inches and 0.46 inches of precipitation. Prior to the field survey on April 27, 2015, there were two rain events that occurred in the City of Fresno on April 7th and 25th measuring 0.56 and 0.69 inches (AccuWeather, 2015).

The California Floristic Province (CA-FP) is classified as the San Joaquin Valley sub region (SnJV) of the Great Central Valley region (GV) (Baldwin, 2012). Topography within the study areas consists of rolling hills with elevations ranging from 330 feet to 910 feet above mean sea level (amsl). Individual aerial imagery of each study area is included as **Figures 3a**, **3b**, **3c**, and **3d**.

4.1 LAND USE

Historical aerial imagery dating back to 1998, was evaluated for each bridge replacement location (Google Earth Pro, 2014). The study areas located at Bridge #42C0267, Bridge #42C0268 and Bridge #42C0269 are within undeveloped private land surrounding Millerton Road. The study area at Bridge #42C0270 is primarily undeveloped private land with semi- developed land characterized by cattle paddocks and grazing enclosures on the north side of Millerton road just west of Little Dry Creek. At the time of both field surveys, active grazing, including cattle and horses, within the study areas was observed.

4.2 SOIL TYPES

Mapped soil types within the study areas were determined using the NRCS Web Soil Survey, Custom Soil Resource Report (NRCS, 2013). A total number of three soil types occur within the study area and are identified in **Table 2** describing each soil type by series, map symbol, hydric characteristics, and estimated percentages. Soil survey maps for each study area are presented as **Figures 4a, 4b, 4c** and **4d**. Detailed descriptions of each soil type identified within the study areas is discussed below.

Table 2: Mapped Soil Types

Soil Series	Map Symbol	Hydric	Total Acres within all Study Areas	Total Percentage within all Study Areas
Grangeville sandy loam	Ga	Yes	1.78	0.10 %
Grangeville soils, channeled	Gp	Yes	2.20	0.13 %
Vista coarse sandy loam, shallow, 9 to 30 percent slopes	VgD	No	13.33	0.77 %
		Totals:	17.31	100%

Source: NRCS, 2013.

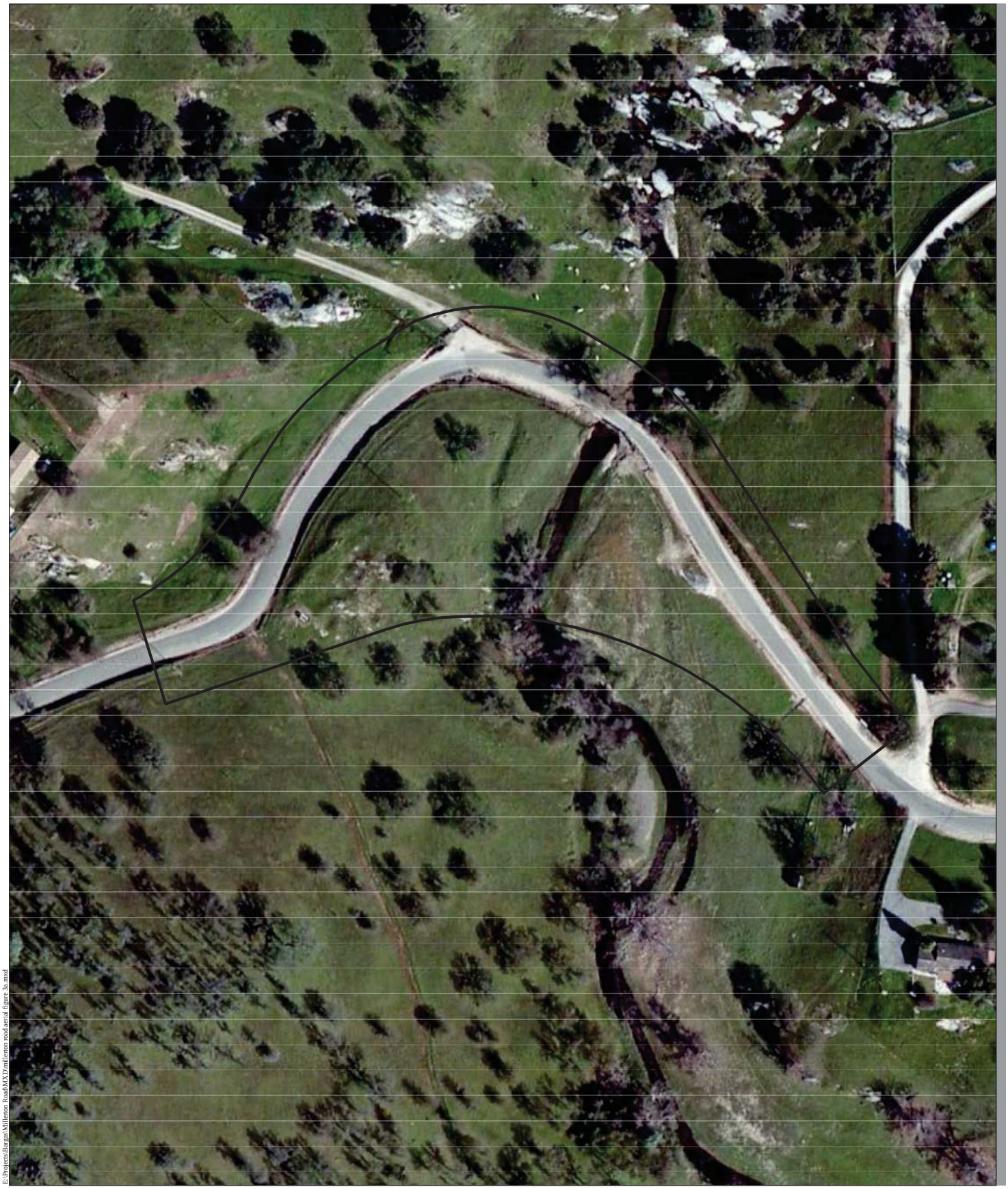

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Figure 3a: Aerial of the Study Area at Bridge #42C0267

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

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Figure 3b: Aerial of the Study Area at Bridge #42C0268

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

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Figure 3c: Aerial of the Study Area at Bridge #42C0269

Aerial Source: Google Earth, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

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Figure 3d: Aerial of the Study Area at Bridge #42C0270

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

Map Unit Symbol	Map Unit Name	Acres	Percentage
Gp	Grangeville soils, channeled	1.44	27.22%
VgD	Vista coarse sandy loam, shallow, 9 to 30 percent slopes	3.85	72.78%

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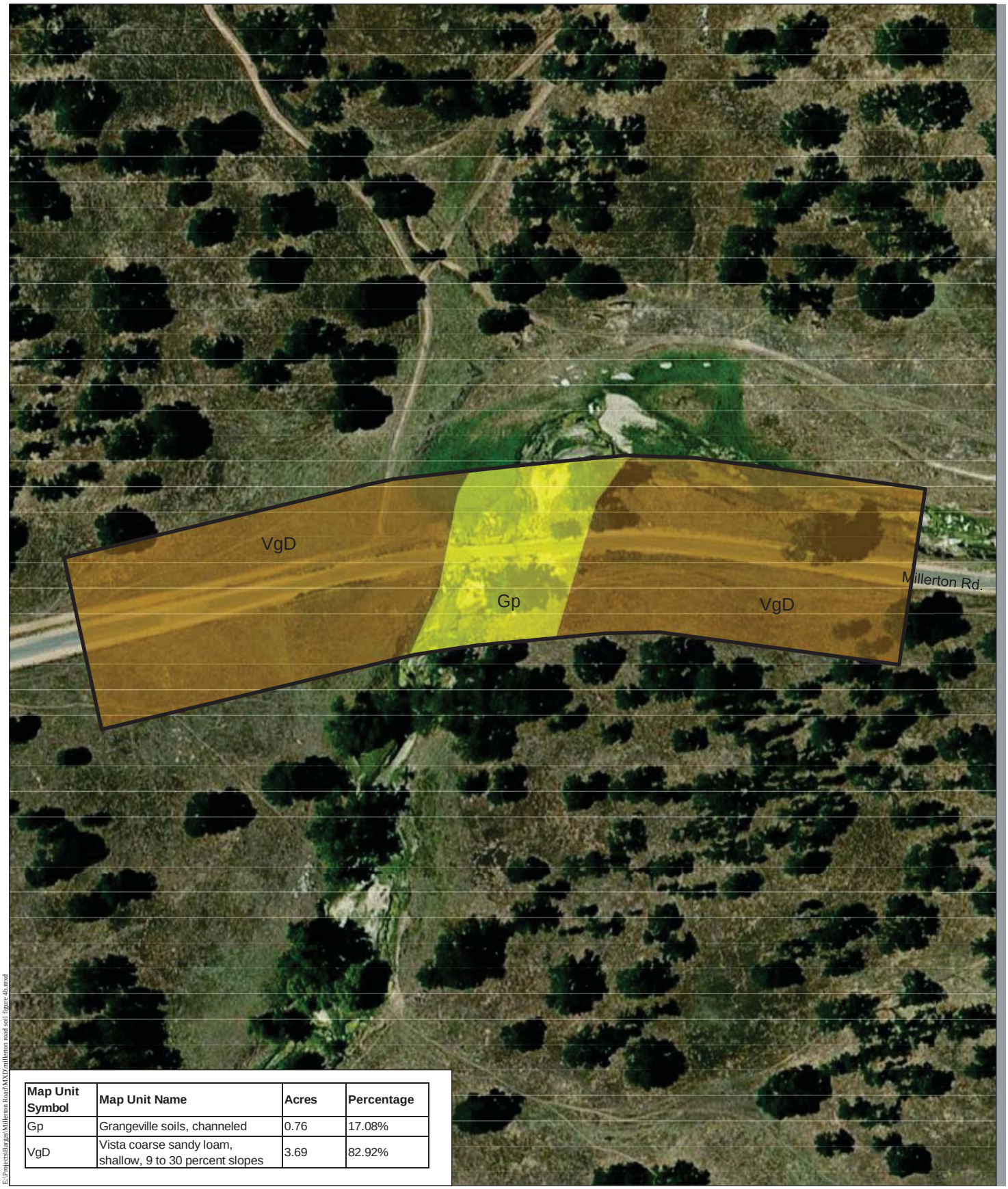
Figure 4a: Soil Survey Map of the Study Area at Bridge #42C0267

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.



Map Unit Symbol	Map Unit Name	Acres	Percentage
Gp	Grangeville soils, channeled	0.76	17.08%
VgD	Vista coarse sandy loam, shallow, 9 to 30 percent slopes	3.69	82.92%

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Figure 4b: Soil Survey Map of the Study Area at Bridge #42C0268

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

Map Unit Symbol	Map Unit Name	Acres	Percentage
Ga	Grangeville sandy loam	0.78	17.29%
VgD	Vista coarse sandy loam, shallow, 9 to 30 percent slopes	3.73	82.71%

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Figure 4c: Soil Survey Map of the Study Area at Bridge #42C0269

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

Map Unit Symbol	Map Unit Name	Acres	Percentage
Ga	Grangeville sandy loam	1.00	32.68%
VgD	Vista coarse sandy loam, shallow, 9 to 30 percent slopes	2.06	67.32%

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Figure 4d: Soil Survey Map of the Study Area at Bridge #42C0270

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

Grangeville sandy loam (Ga)
The Grangeville sandy loam soil is a moderately deep, somewhat poorly-drained soil that occurs on alluvial fans and flood plains. The parent material consists of recent alluvium derived from granite. Depth to the water table and to the restrictive layer are more than 80 inches. When saturated, runoff potential is very low. The elevation ranges associated with this soil type are from 160 to 500 feet. The typical soil profile consists of sandy loam from 0 to 8 inches and then sandy loam from 8 to 60 inches. This soil is classified as hydric (NRCS, 2013).

Grangeville, channeled (Gp)
The Grangeville channeled soil is a moderately deep, somewhat poorly-drained soil that occurs on alluvial fans, channels or flood plains. The parent material consists of recent alluvium derived from granite. Depth to the water table is 48 to 72 inches. Depth to the restrictive layer is more than 80 inches. When saturated, runoff potential is very low. The elevation ranges associated with this soil type are from 160 to 500 feet. The typical soil profile consists of sandy loam from 0 to 8 inches and then fine sandy loam from 8 to 60 inches. This soil is classified as hydric (NRCS, 2013).

Vista coarse sandy loam, shallow, 9 to 30 percent slopes (VgD)
The Vista coarse sandy loam, 9 to 30 percent slopes, soil is a well-drained soil that occurs on hills. The parent material consists of residuum weathered from granite. Depth to the restrictive layer of paralithic bedrock is 10 to 20 inches. Depth to the water table is more than 80 inches. When saturated, runoff potential is high. The elevation ranges associated with this soil type are from 500 to 2,000 feet. The typical soil profile consists of coarse sandy loam from 0 to 7 inches, coarse sandy loam for 7 to 15 inches, and bedrock from 15 to 60 inches. This soil is not classified as hydric (NRCS, 2013).

4.3 VEGETATIVE COMMUNITY TYPES
The study areas consist of five vegetative community types: annual grassland, California sycamore woodland, blue oak woodland, pasture and ruderal/disturbed. Characteristics of these habitat types and dominant vegetation observed is discussed below. A plant list for species identified within all the study areas and their corresponding wetland indicator status is included as **Attachment A**.

Annual Grassland
Annual grassland habitat is characterized primarily of a compilation of non-native grasses and forbs. Dominant vegetation observed within the study areas includes long-beaked filaree (*Erodium botrys*), small-flowered fiddleneck (*Amsinckia menziesii*), common popcornflower (*Plagiobothrys nothofulvus*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). This habitat occurs in large portions throughout all four study areas as upland habitat surrounding Little Dry Creek.

California Sycamore Woodland
California sycamore woodlands are dominated by trees along freshwater wetlands, areas that are permanently saturated, riparian corridors, depositional channels of intermittent streams, gullies, springs, seeps, stream and river banks, and terraces adjacent to floodplains. Surrounding upland topography is often rocky with sloping hills. The typical characteristics of the channel beds are open, cobble and rocky substrate. In general, these features are dependent upon direct precipitation for their main water supply and will contain flowing water for brief periods after a rain event. Dominant vegetation observed within the study areas includes California sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), and willows (*Salix* sp.). This habitat occurs along portions of Little Dry Creek within all four study areas.

Blue Oak Woodland

Blue oak woodland is mainly dominated by an overstory of scattered blue oak trees with few or interspersed shrubs, often occurring on rock outcrops, and an understory that usually consists of annual grassland habitat. Dominant vegetation observed within the study areas includes blue oak (*Quercus douglasii*) and an understory of annual grassland species. This habitat occurs throughout all four study areas, interspersed throughout the mild to moderately sloping terrain.

Pasture

Pasture land is often characterized by open fields that have been repeatedly disturbed by livestock and are mainly dominated by non-native grasses and forbs. Dominant vegetation observed within the study area includes long-beaked filaree, foxtail barley (*Hordeum murinum*), pineapple weed (*Matricaria discoidea*), and cheeseweed (*Malva parviflora)*. This habitat occurs within enclosure areas along the north side of Millerton Road within the study area at Bridge #42C0270.

Ruderal/Disturbed

This habitat consists of hardscape (e.g. paved roads and sidewalks), unpaved disturbed areas (e.g. dirt paths), buildings and infrastructure. This habitat occurs within the study areas as Millerton Road, the road shoulders, dirt paths, and entrance gates. Little to no vegetation was identified, due the developed or high-disturbance to the areas, however, the few species that were present includes long-beaked filaree and ripgut brome.

4.4 HYDROLOGY

The study area is situated within the USGS National Hydrologic Unit Code (HUC12 – 180400010101) and lies within the Middle San Joaquin - Lower Chowchilla Watershed (NHD, 2015; USEPA, 2015). The hydrologic regime onsite is predominately direct precipitation and off-site storm water run-off. Little Dry Creek and North Fork Little Dry Creek exhibit periods of inundation during winter and spring months. Little Dry Creek drains in a general north to southwest direction and ultimately terminates into the San Joaquin River, a TNW.

5.0 DELINEATION RESULTS

Potential jurisdictional wetland features were mapped within all four study areas. These mapped features include one intermittent riverine feature, two seasonal wetlands, one roadside drainage ditch and four ephemeral drainage swales. **Table 3** below provides a summary of the wetland features and the area of each feature, in acres, within the study areas. These acreages are considered preliminary and are subject to verification by the USACE.

Table 3: Summary of Wetland Features

Feature Name	Area (Acres*)
Wetland Features	
Seasonal Wetland (SW-1)	0.11
Seasonal Wetland (SW-2)	0.05
Intermittent Riverine at Bridge #42C0268	0.49
Total of Wetland Features	**0.65**
Non-Wetland Linear Features	
Intermittent Riverine at Bridge #42C0267	0.14
Intermittent Riverine at Bridge #42C0269	0.14
Intermittent Riverine at Bridge #42C0270	0.15
Roadside Drainage Ditch (RDD-1)	0.02
Ephemeral Drainage Swale (EDS-1)	0.01
Ephemeral Drainage Swale (EDS-2)	0.01
Ephemeral Drainage Swale (EDS-3)	0.01
Ephemeral Drainage Swale (EDS-4)	0.01
Total of Non-Wetland Linear Features	**0.49**
TOTAL:	**1.14**

Source: Data compiled by Bargas, 2015; ESRI, 2015. *Acreages are calculated estimations that are subject to modification pending formal verification by USACE.

Paired data points (DP) were taken in determining hydric indicators for each of the mapped features. Data points taken within upland habitats include: 2, 4, 6, 8, 11, 15, 12, 18, 19, 21, 23, 25, 27, 29, 33, 35, and 37. Data points taken within potential wetland features include: 1, 3, 5, 7, 9, 10, 13, 14, 16, 17, 20, 22, 24, 26, 28, 30, 31, 32, 34, and 36. A description of all the features delineated within the study areas are described below. A map of the locations of the site photographs within each study area are presented as **Figures 5a, 5b, 5c** and **5d**. Representative site photographs of each feature type within the study areas are shown as **Figures 6a, 6b, 6c, 6d, 6e,** and **6f**. **Figures 7a, 7b, 7c** and **7d** illustrate the mapped features by acreages within each study area. Wetland determination data forms for each data point are included as **Attachment B**.

INTERMITTENT RIVERINE

Intermittent riverine features consist of a well-defined channels that contain water for only part of a year, typically in winter and spring months, and is bound by upland habitat. An intermittent riverine feature may lack the characteristics commonly associated with conveyance of water. Little Dry Creek and North Fork Little Dry Creek are intermittent riverine linear features which ranges from mildly-sloped to severely-sloped defined banks with fine to coarse sandy, and sometimes rocky bed substrate.

Figure 5a: Locations of Site Photographs within the Study Area at Bridge #42C0267

Source: Google Earth Pro, 2014.

Figure 5b: Locations of Site Photographs within the Study Area at Bridge #42C0268

Source: Google Earth Pro, 2014.

Figure 5c: Locations of Site Photographs within the Study Area at Bridge #42C0269

Source: Google Earth Pro, 2014.

Figure 5d: Locations of Site Photographs within the Study Area at Bridge #42C0270

Source: Google Earth Pro, 2014.

Site Photograph 1: The north side of Millerton Road looking east along North Fork Little Dry Creek.

Site Photograph 2: The south side of Millerton Road looking northeast along the main channel of North Fork Little Dry Creek.

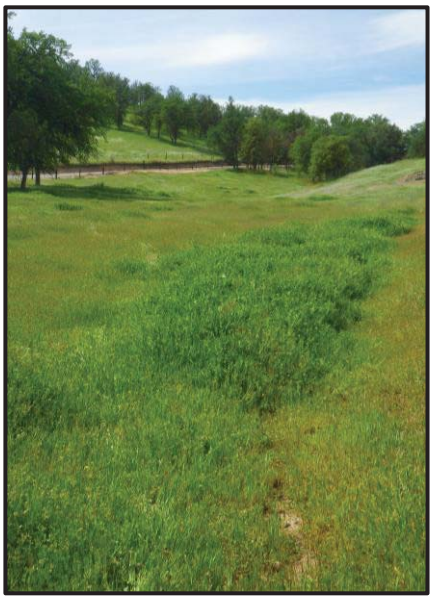
Site Photograph 3: The north side of Millerton Road looking northwest along RDD-1.

Site Photograph 4: The north side of Millerton Road looking southeast along RDD-1, where it connects through a culvert that runs under Millerton Road.

Figure 6a: Site Photographs of Potential Waters within the Study Area at Bridge #42C0267

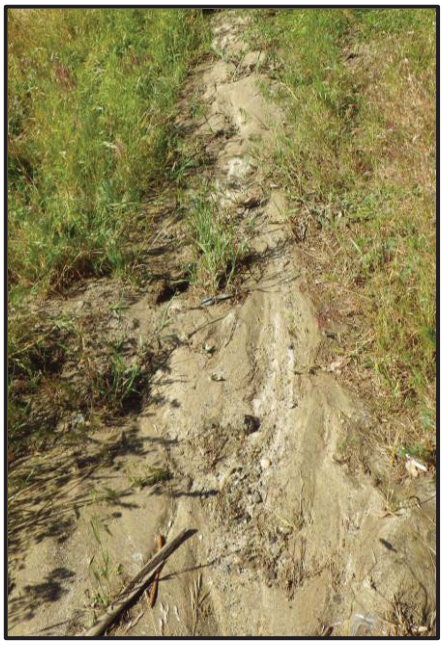
Source: Data compiled by Bargas, 2015.

Site Photograph 5: The south side of Millerton Road looking east along RDD-1.



Site Photograph 6: The north side of Millerton Road looking southwest along EDS-1.

Site Photograph 7: The south side of Millerton Road, looking southwest along EDS-2.



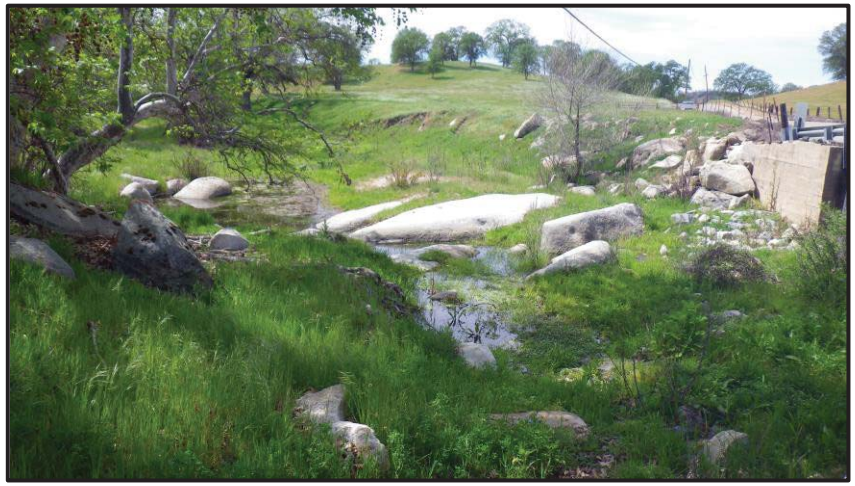
Site Photograph 8: Sediment deposits along EDS-2 after a recent rain event.

Figure 6b: Site Photographs within the Study Area at Bridge #42C0267

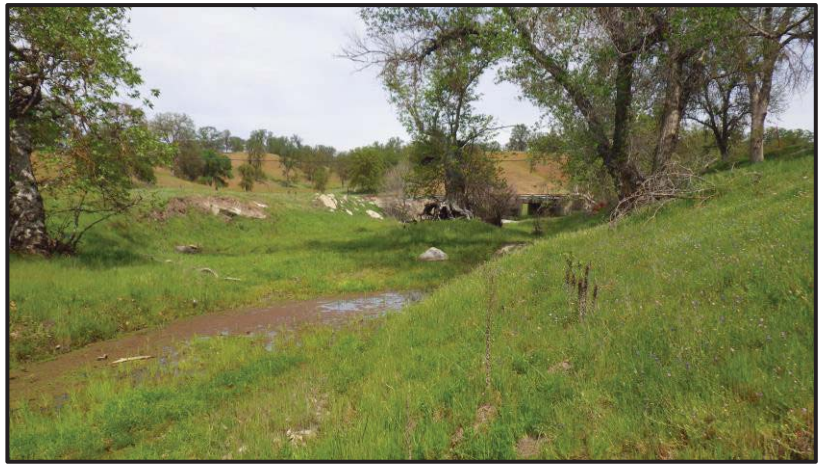
Source: Data compiled by Bargas, 2015.

Site Photograph 9: The north side of Millerton Road looking east along Little Dry Creek.

Site Photograph 10: The north side of Millerton Road looking west along Little Dry Creek.



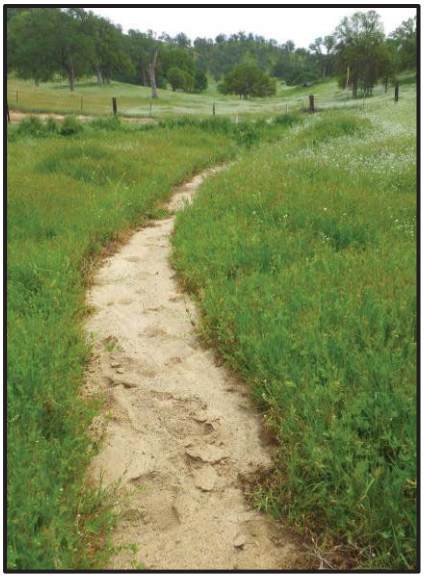
Site Photograph 11: The south side of Millerton Road looking west along Little Dry Creek.



Site Photograph 12: The south side of Millerton Road looking north along Little Dry Creek

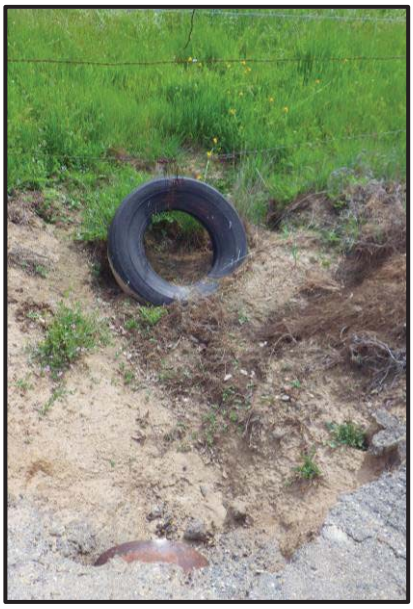
Figure 6c: Site Photographs of Potential Waters within the Study Area at Bridge #42C0268

Source: Data compiled by Bargas, 2015.



Site Photograph 13: The north side of Millerton Road looking south along EDS-3.

Site Photograph 14: Sediment deposits from a recent rain event, along EDS-3, on the north side of Millerton Road.



Site Photograph 15: The south side of Millerton Road looking south from the culvert, where EDS-3 terminates.

Site Photograph 16: The north side of Millerton Road, looking south at the culvert, that connects EDS-3.

Figure 6d: Site Photographs within the Study Area at Bridge #42C0269

Source: Data compiled by Bargas, 2015.

Site Photograph 17: The north side of Millerton Road looking east along Little Dry Creek.

Site Photograph 18: The south side of Millerton Road looking northeast along Little Dry Creek

Site Photograph 19: The north side of Millerton Road looking southeast along Little Dry Creek.

Site Photograph 20: The south side of Millerton Road looking east along Little Dry Creek.

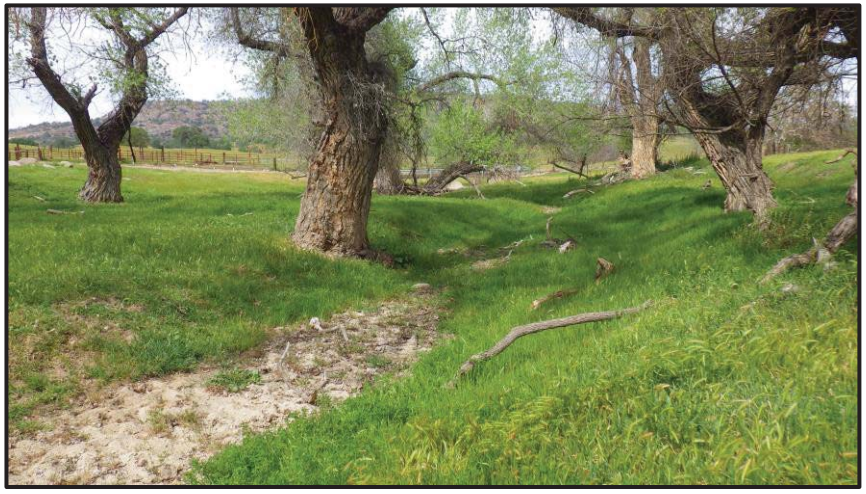
Figure 6e: Site Photographs of Potential Waters within the Study Area at Bridge #42C0269

Source: Data compiled by Bargas, 2015.

Site Photograph 21: On the south side of Millerton Road looking north along Little Dry Creek.

Site Photograph 22: On the north side of Millerton Road looking west along Little Dry Creek.

Site Photograph 23: On the south side of Millerton Road looking southwest along EDS-4.



Site Photograph 24: On the south side of Millerton Road looking north along Litle Dry Creek.

Figure 6f: Site Photographs of Potential Waters within the Study Area at Bridge #42C0270

Source: Data compiled by Bargas, 2015.

Waters of the U.S.	Area (acres)
Intermittent Riverine	0.14
Ephemeral Drainage Swale (EDS-1)	0.01
Ephemeral Drainage Swale (EDS-2)	0.01
Roadside Drainage Ditch (RDD-1-5)	0.02
Total	**0.18**

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Figure 7a: Potential Waters of the U.S. within the Study Area at Bridge #42C0267

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

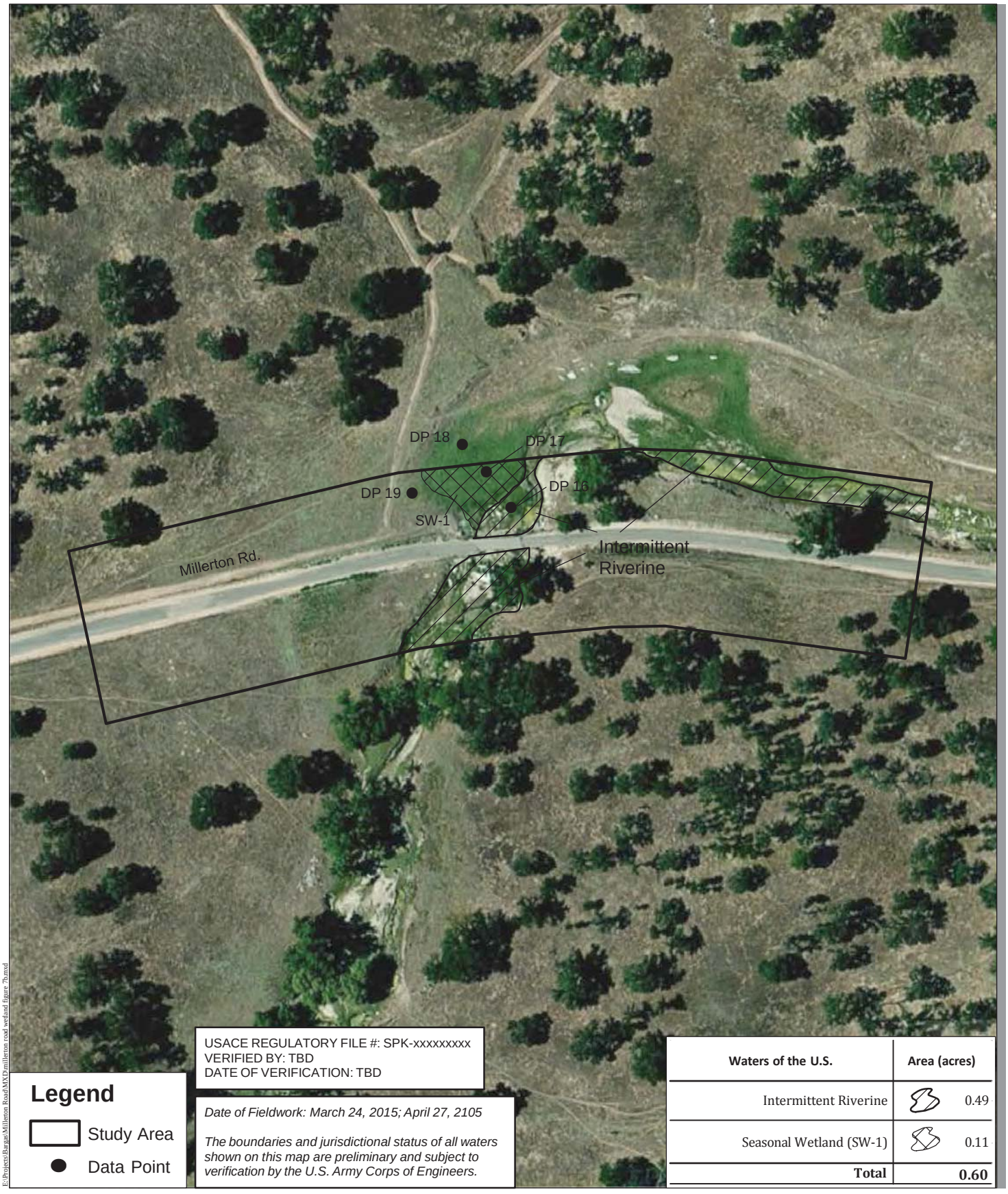

Figure 7b: Potential Waters of the U.S. within the Study Area at Bridge #42C0268

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

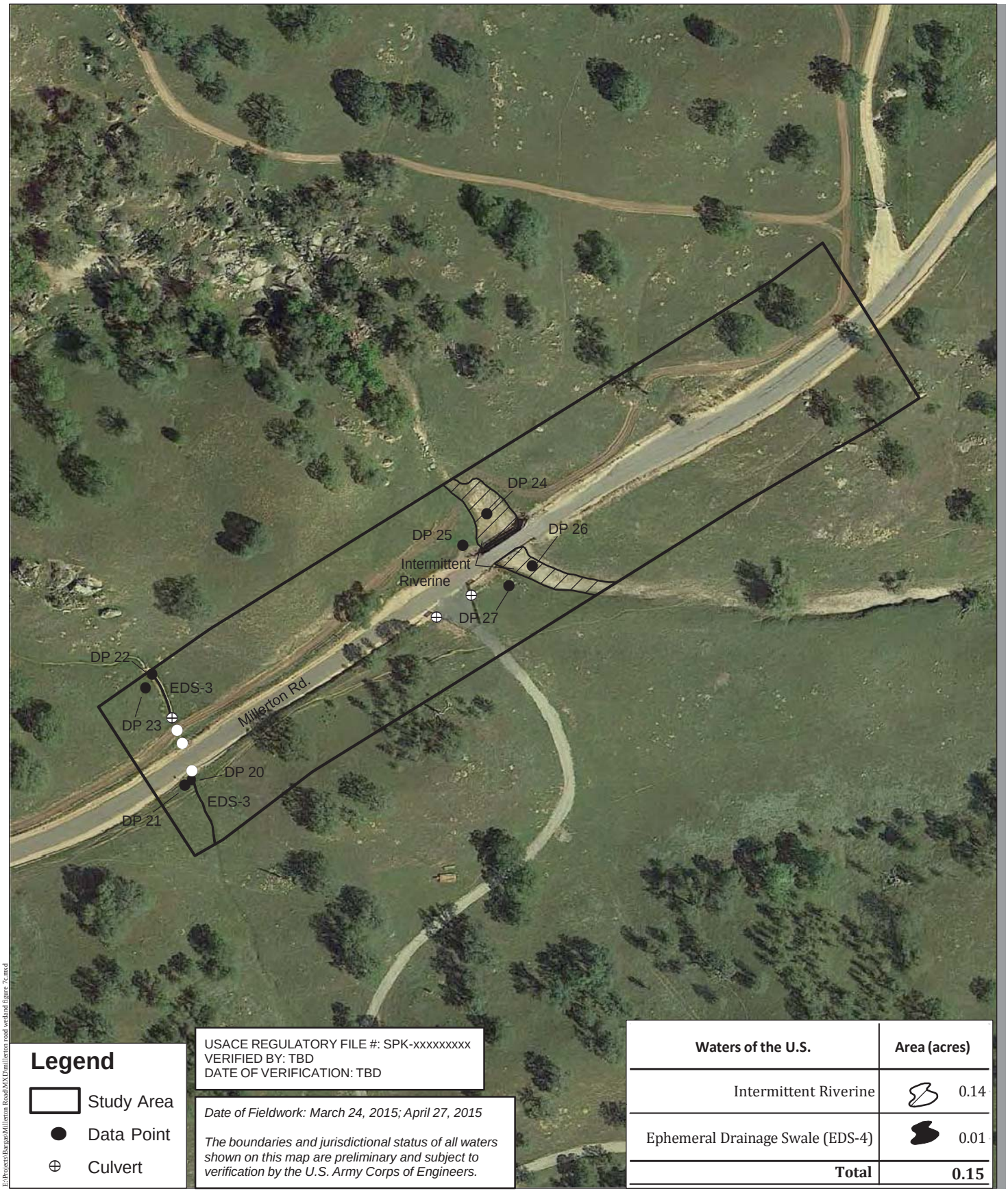

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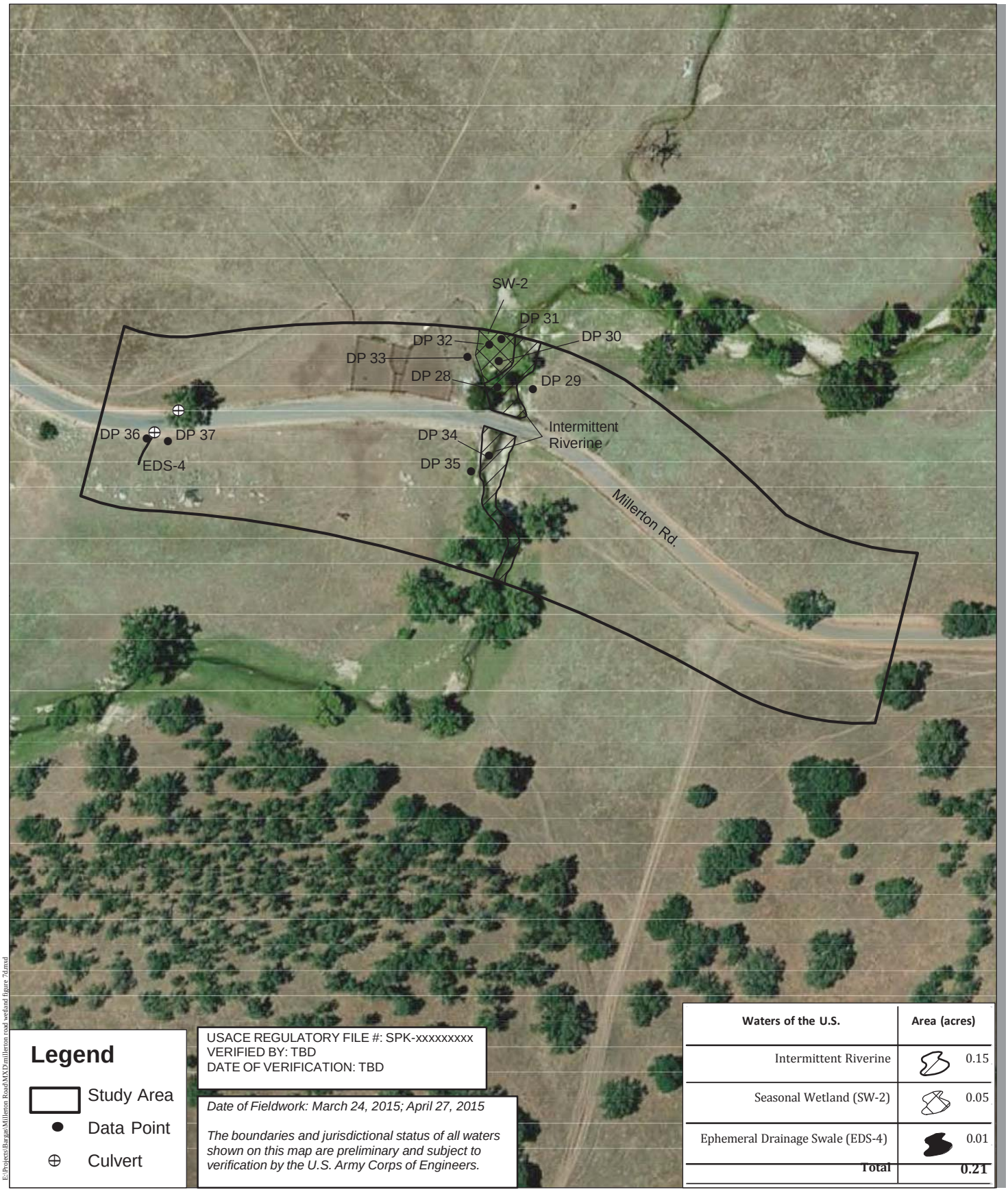
Figure 7c: Potential Waters of the U.S. within the Study Area at Bridge #42C0269

Aerial Source: Google Earth, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.



Legend

- Study Area
- Data Point
- Culvert

USACE REGULATORY FILE #: SPK-xxxxxxxxx
VERIFIED BY: TBD
DATE OF VERIFICATION: TBD

Date of Fieldwork: March 24, 2015; April 27, 2015

The boundaries and jurisdictional status of all waters shown on this map are preliminary and subject to verification by the U.S. Army Corps of Engineers.

Waters of the U.S.	Area (acres)
Intermittent Riverine	0.15
Seasonal Wetland (SW-2)	0.05
Ephemeral Drainage Swale (EDS-4)	0.01
Total	**0.21**

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Bargas Environmental Consulting
3031 F Street, Suite 203
Sacramento, CA 95816

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Figure 7d: Potential Waters of the U.S. within the Study Area at Bridge #42C0270

Aerial Source: ESRI, 2015

Millerton Road Bridge Replacements
Delineation of Waters of the U.S.

All portions of the intermittent riverine, Little Dry Creek, were characterized by distinct channel beds and defined banks. All areas mapped within the four study areas total approximately 0.92 acres. At each bridge location along Millerton Road, Little Dry Creek demonstrates variable topographical features, substrate and vegetation.

Intermittent Riverine at Bridge #42C0267

Where North Fork Little Dry Creek crosses Millerton Road at Bridge #42C0267, approximately 0.14 acres was mapped within the study area. This feature is bisected by Millerton Road and runs in a general north to southeast direction and is bound by undeveloped private property. At the time of both field surveys, no inundation was observed.

The northern portion of North Fork Little Dry Creek, surrounding relief consists of rolling hills with slopes that range from three to 30 percent. The feature demonstrates a gradual bank with a slope of approximately five percent and a defined channel bed approximately 15 feet wide and consists of fine and coarse sandy substrate. The southern portion of North Fork Little Dry Creek consists of a surrounding relief of rolling hills and hummocks that range in slope from three to 30 percent. The feature demonstrates a defined bank that is approximately one foot in height and a well- defined bed that is approximately 20 feet wide. The channel bed consists of fine sand, cobble and large rocky substrate. This feature is fed by direct precipitation and run-off from surrounding higher-graded relief and hardscape areas. Primary hydrological indicators for this feature include inundation on aerial imagery.

The majority of the channel lacks vegetation, however a few facultative upland and upland plant species, including long-beaked filaree, foxtail barley and soft chess, are interspersed throughout the channel bed of this feature. The banks of the feature are vegetated and lined with long-beaked filaree, soft chess, and ripgut brome. The soil type of this feature is considered hydric and at the time of the second field survey the soil was moist. While the soil profile indicates a low chroma, no redox concentrations were observed.

Intermittent Riverine at Bridge #42C0268

Where Little Dry Creek crosses Millerton Road at Bridge #42C0268, approximately 0.49 acres was mapped within the study area. This feature is bisected by Millerton Road and runs in a general northeast to southwest direction and is bound by undeveloped private property. At the time of both field surveys, inundation was observed.

The northern portion of Little Dry Creek is surrounded by relief that consists of steep slopes and scoured hillsides to the east and terrace relief to the west. The feature has a well-defined bank with the west bank height measuring approximately one foot and the east bank is deeply scoured measuring approximately 15 feet tall. The width of the channel varies with the widest portion measuring at approximately 50 feet and the narrowest portion measuring approximately 10 feet wide. The southern portion surrounding relief consists of rolling hills with 20 to 30 percent slopes. The east bank top height measures approximately five feet and the west bank height is approximately ten feet. The main channel width is approximately 25 feet and is lined with dense vegetation and interspersed rocks and boulders. As the feature meanders south under the tree canopy, just before reaching the study area boundary, the channel bed narrows and measures approximately 10 feet in width. This feature is fed by direct precipitation and run-off from surrounding higher-graded relief and hardscape areas. Primary hydrological indicators for this feature include inundation on aerial imagery, aquatic invertebrates and surface water present.

This feature consists of obligate and facultative wetland dominant vegetation which includes Lamp's rush (*Juncus effusus*), common toad rush (*Juncus bufonis*), nutsedge (*Cyperus* sp.), watercress (*Nasturtium officinale)*, duckweed (*Lemna minor*), creeping spikerush (*Eleocharis macrostachya*), rabbits foot grass (*Polypogon monspeliensis*), common monkeyflower (*Mimulus guttatus*), and pennyroyal (*Mentha pulegium*). The soil type of this feature is considered hydric. The soil profile demonstrated a low chroma with 5% redox concentrations resulting in a hydric soil indicator of Sandy Redox (S5).

Intermittent Riverine at Bridge #42C0269

Where Little Dry Creek crosses Millerton Road at Bridge #42C0269, approximately 0.14 acres was mapped within the study area. This feature is bisected by Millerton Road and runs in a general northwest to southwest direction and is bound by undeveloped private property. At the time of both field surveys, no inundation was observed.

The northern portion of Little Dry Creek surrounding relief consists of rolling hills with slopes that range from three to 30 percent. The feature demonstrates a gradual bank with a slope of approximately one percent and a defined channel bed approximately 45 feet wide and consists of fine and coarse sandy substrate. As the feature extends north, just before reaching the study area boundary, the channel bed narrows, measuring approximately 10 feet in width and the substrate includes rocks, boulders and sparse vegetation. The southern portion of Little Dry Creek consists of a surrounding relief of rolling hills that range in slope from three to 30 percent. The feature demonstrates a defined bank that is approximately two feet in height and a well-defined bed that is approximately 25 feet wide. The channel bed consists of coarse sandy substrate. This feature is fed by direct precipitation and run-off from surrounding higher-graded relief and hardscape areas. Primary hydrological indicators for this feature include inundation on aerial imagery.

The majority of the channel lacks vegetation, however, a few facultative upland and upland plant species, including soft chess, red brome, ripgut brome, and telegraph plant (*Heterotheca grandiflora*), are interspersed throughout the channel bed of this feature. The banks of the feature are vegetated and lined with soft chess, ripgut brome and long-beaked filaree. The soil type of this feature is considered hydric and at the time of the second field survey the soil was moist. While the soil profile indicates a low chroma, no redox concentrations were observed.

Intermittent Riverine at Bridge #42C0270

Where Little Dry Creek crosses Millerton Road at Bridge #42C0270, approximately 0.15 acres was mapped within the study area. This feature is bisected by Millerton Road and runs in a general north to southwest direction and is bound by pasture infrastructure and undeveloped property. At the time of both field surveys, no inundation was observed.

The northern portion of Little Dry Creek surrounding relief consists of rolling hills with five to 25 percent slopes. The east bank has a gradual slope of approximately five to ten percent and a west bank that is lined with large boulders and scoured hillsides. There is a well-defined channel with a bed that measures approximately 30 feet wide and consists of fine and coarse sandy substrate. The southern portion of Little Dry Creek consists of a surrounding relief of rolling hills with five to ten percent slopes. The feature demonstrates a defined bank that is approximately two feet in height and a well-defined bed that is approximately 35 feet wide and consists of fine to coarse sandy substrate, interspersed with cobble and rocks. As the channel begins to meander south under the tree canopy, the channel bed narrows to approximately 8 feet and the substrate consists of sand and interspersed vegetation. This feature is fed by direct precipitation and run-off from surrounding higher-graded relief and

hardscape areas. Primary hydrological indicators for this feature include inundation on aerial imagery.

The majority of the channel lacks vegetation, however a few facultative, facultative upland and upland plant species, including seaside barley, and soft chess are interspersed throughout the channel bed of this feature. The banks of the feature are vegetated and lined with soft chess, ripgut brome and long-beaked filaree. The soil type of this feature is considered hydric and at the time of the second field survey the soil was moist. While the soil profile indicates a low chroma, no redox concentrations were observed.

SEASONAL WETLAND

Seasonal wetlands are features that are seasonally inundated depressions capable of supporting hydrophytic vegetation and hydric soils. There are two seasonal wetland features, 0.16 acres that were mapped within the study areas at Bridges #42C0268 and #42C0270. The seasonal wetlands identified within the study areas consists of low depressional areas abutting Little Dry Creek and surrounded by higher graded relief consisting of rolling hills and scoured hillsides.

Seasonal Wetland 1 (SW-1)

A seasonal wetland feature, SW-1, approximately 0.11 acres was delineated within the study area at Bridge #42C0268. This feature occurs on the northern portion if the study area and is bound by Millerton Road to the south, Little Dry Creek immediately to the east, and undeveloped private property to the north and west. This feature measures approximately 90 feet east to west and 65 feet north to south. SW-1 is fed by direct precipitation, run-off from surrounding higher-graded relief and hardscape areas and overflow from Little Dry Creek during major rain events. At the time of both field surveys, no inundation was present; however, during the second field survey the soil was moist. Secondary hydrological indicators for this feature include saturation on aerial imagery and drainage patterns.

This feature consists of facultative wetland and facultative upland vegetation which includes bermuda grass (*Cynodon dactylon*), Lamp's rush, and rabbits foot grass. The soil type of this feature is considered hydric. The soil profile demonstrated a low chroma with 2% redox concentrations resulting in a hydric soil indicator of Sandy Redox (S5).

Seasonal Wetland 2 (SW-2)

A seasonal wetland feature, SW-2, approximately 0.05 acres, was delineated within the study area at Bridge #42C0270. This feature occurs along the northern portion of the study area and is bound by Little Dry Creek immediately to the east and south, and undeveloped private property to the north and west. This feature measures approximately 45 feet east and west and by 50 feet north and south. SW-2 is fed by direct precipitation, run-off from surrounding higher-graded relief and hardscape areas and overflow from Little Dry Creek during major rain events. At the time of both field surveys, no inundation was present; however, during the second field survey the soil was moist. Secondary hydrological indicators for this feature include saturation on aerial imagery and drainage patterns.

This feature consists of facultative wetland, facultative upland and upland vegetation which includes (seaside barley (*Hordeum marinum*) and bermuda grass. The soil type of this feature is considered hydric. The soil profile demonstrated a low chroma with 2% redox concentrations resulting in a hydric soil indicator of Sandy Redox (S5).

ROADSIDE DRAINAGE DITCH

Roadside drainage ditches are generally non-wetland linear features that may not meet the three-parameter criteria for hydric vegetation, soils and hydrology, yet there tends to be a channel with a defined bed and bank which may be unvegetated due to scouring effects of flowing water. A roadside drainage ditch is typically fed by storm water and run-off from surrounding areas and/or culverts that drain directly into the ditch. Depending upon the main source of water, these features may be subject to year-round or seasonal inundation.

Roadside Ditch (RD-1)

One roadside ditch, approximately 0.02 acres was delineated within the study area at Bridge #42C0267. This feature demonstrates a linear conveyance with varying depths and widths. It runs in a general northwest to southeast direction and is conveyed through a large culvert that runs under Millerton Road and terminates into North Fork Little Dry Creek. The southeastern portion of the feature is deeply channelized with a width of approximately three feet and a depth of approximately five feet. The length of this portion of the feature is approximately 150 feet. The northwestern portion of the feature is deeply incised with a width of approximately one to two feet and a depth of approximately three feet. The length of this feature within the study area is approximately 50 feet.

At the time of both field surveys, no inundation was observed; however, the time of the second field survey, the soil was moist. This feature is fed via direct precipitation, run-off from the surrounding hills and hardscape areas and overflow from North Fork Little Dry Creek. Primary hydrological indicators for this feature include deep scouring drainage patterns and sediment deposits.

The majority of the channel lacks vegetation, however a few facultative upland and upland plant species, including long-beaked filaree, foxtail barley, California goldfields (*Lasthenia californica*) ripgut brome, small-flowered fiddleneck, and tumbleweed (*Salsola tragus*), line the bank and are sparsely interspersed along the channel. The channel bed consists of coarse sandy substrate. The soil type is not considered hydric and while the soil profile indicates a low chroma, no redox concentrations were observed.

EPHEMERAL DRAINAGE SWALE

In general, ephemeral drainage swales are meandering non-wetland features with very shallow or no defined bed and bank that may not be vegetated due to scouring effects of channelized flowing water. An ephemeral drainage swale typically only contains water for brief periods out of the year and is fed by direct precipitation, run-off from adjacent sloping topography or fed directly by a channelized flow of water (e.g. a culvert). A total of four ephemeral drainage swales were observed within the study areas.

Ephemeral Drainage Swale (EDS-1)

An ephemeral drainage swale, approximately 0.01 acres, was delineated within the study area located at Bridge #42C0267. This feature demonstrates an approximate one-foot width bed with coarse sandy loamy substrate and densely- vegetated grasses and forbs. The feature has no defined bank. This feature drains from the south to north as a channelized flow along the trough of mild to moderately sloped hills. This feature meanders in and out of the western portion of the study area boundary and terminates at the base of the hill where it connects with the mapped feature, RDD-1.

This feature is fed by direct precipitation, run-off from the adjacent hillsides and a culvert located under Millerton Road approximately 700 feet southwest of the study area. EDS-1 receives infrequent and short duration water flows. At the time of both field surveys, no inundation was observed; however, the time of the second field survey, the soil was moist. Primary hydrological indicators for this feature include sediment deposits.

At the time of the first field survey, facultative, facultative upland and upland dominant vegetation species included long-beaked filaree, small-flowered fiddleneck, wild oat and soft chess. During the second field survey, facultative and facultative upland dominant vegetation species included foxtail barley, long-beaked filaree and soft chess. The bed consists of coarse sandy substrate. The soil type is not considered hydric and while the soil profile indicates a low chroma, no redox concentrations were observed.

Ephemeral Drainage Swale (EDS-2)

An ephemeral drainage swale, approximately 0.01 acres, was delineated within the study area located at Bridge #42C0267. This feature demonstrates an approximate one-foot width bed with fine and coarse sandy substrate and minimally interspersed grasses. The feature has no defined bank. This feature directly conveys run-off that discharges through a culvert that runs north to southwest under Millerton Road. The feature length is approximately 15 feet until it dissipates into open annual grassland habitat.

This feature is fed by direct precipitation and run-off from the adjacent hillsides and hardscape areas. This feature receives infrequent and short duration water flows via rain events. At the time of both field surveys, no inundation was observed; however, the time of the second field survey, the soil was moist. Primary hydrological indicators for this feature include sediment deposits.

Dominant facultative upland and upland dominant vegetation species included ripgut brome and soft chess. The bed consists of coarse sandy substrate. The soil type is not considered hydric and while the soil profile indicates a low chroma, no redox concentrations were observed.

Ephemeral Drainage Swale (EDS-3)

An ephemeral drainage swale, approximately 0.01 acres, was delineated within the study area located at Bridge #42C0269. This feature drains from the north side of Millerton Road along the trough of steeply sloped hills located to the north of the study area. The feature continues south and passes through one culvert that runs under a dirt road and then continues through a second culvert that runs under Millerton Road. The feature terminates on the south side of Millerton Road, where after a few feet it gradually slopes downhill into annual grassland habitat. This feature demonstrates an approximate one-foot width bed with fine and coarse sandy substrate and lacks vegetation. The feature has no defined bank.

This feature is fed by direct precipitation and run-off from the adjacent hillsides and hardscape areas. This feature receives infrequent and short duration water flows via rain events. At the time of both field surveys, no inundation was observed; however, the time of the second field survey, the soil was moist. Primary hydrological indicators for this feature include sediment deposits.

Dominant facultative, facultative upland and upland dominant vegetation species included soft chess, foxtail barley, ripgut brome, and turkey mullein (*Croton setigerus*). The bed consists of sandy loamy substrate. The soil type is not considered hydric. The soil profile demonstrated a low chroma with 2% redox concentrations resulting in a hydric soil indicator of Sandy Redox (S5).

Ephemeral Drainage Swale (EDS-4)

An ephemeral drainage swale, approximately 0.01 acres, was delineated within the study area located at Bridge #42C0270. This feature directly conveys water that runs north to southwest under Millerton Road. At the base of the culvert, this feature demonstrates an approximate two-foot width bed with fine and coarse sandy substrate. About a foot away from the culvert, the bed narrows to an approximate six inch width with fine and coarse sandy substrate and minimally interspersed vegetation. The feature has no defined bank. The feature is approximately 15 feet in length until it dissipates into annual grassland habitat and rock outcrops.

This feature is fed by direct precipitation and run-off from the adjacent hillsides and hardscape areas. This feature receives infrequent and short duration water flows via rain events. At the time of both field surveys, no inundation was observed; however, the time of the second field survey, the soil was moist. Primary hydrological indicators for this feature include sediment deposits.

No vegetation species were observed in the bed of the swale. The bed consists of sandy substrate. The soil type is not considered hydric. The soil type is not considered hydric and while the soil profile indicates a low chroma, no redox concentrations were observed.

6.0 CONCLUSION

A total of approximately **1.14 acres of potential waters of the U.S.** are mapped within the study areas. The mapped acreages represent calculated estimations of potentially jurisdictional features within the study areas and are subject to modification pending formal verification by USACE.

The linear non-wetland features, EDS-2, EDS-3 and EDS-4, do not carry relatively permanent water flows, are not tributary to any waters of the U.S. or demonstrate a significant nexus to downstream TNWs. The approximately 0.03 acres of these features are not likely to be subject to USACE jurisdiction. The features RDD-1 and EDS-1, do not carry relatively permanent water flows; however, they are tributary to the Intermittent Riverine feature, Little Dry Creek, which demonstrates a significant nexus to the San Joaquin River, a TNW. The features SW-1, SW-2 and Intermittent Riverine at Bridge #42C0268 are wetland features and are likely subject to USACE jurisdiction.

In conclusion, there are approximately 1.14 acres of mapped features within the study areas that are likely subject to USACE jurisdiction. In the occurrence that the USACE does not claim jurisdiction over EDS-2, EDS-3 and EDS-4, then approximately 1.11 acres are potentially jurisdictional features.

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ATTACHMENTS

ATTACHMENT A

PLANT SPECIES OBSERVED WITHIN THE STUDY AREAS

PLANT SPECIES OBSERVED WITHIN THE STUDY AREAS

Scientific Name	Common Name	Indicator Status
Acmispon americanus var. *americanus*	Spanish lotus	UPL
Aira caryophylla	Common silver haired grass	FACU
Amsinckia menziesii	Small-flowered fiddleneck	UPL
Artemesia douglasiana	Mugwort	FAC
Avena fatua	Wild oats	UPL
Azolla filiculoides	Mosquito fern	OBL
Bromus diandrus	Ripgut brome	UPL
Bromus hordeaceus	Soft chess	FACU
Bromus madritensis ssp. *rubens*	Red brome	UPL
Calandrinia ciliata	Red maids	FACU
Camissonia sierrae	Sierra suncups	UPL
Capsella bursa-pastoris	Shepherd's purse	FACU
Carduus pycnocephalus	Italian thistle	UPL
Carum carvi	Wild caraway	FACU
Castilleja exserta	Owls clover	UPL
Centaurea solstitialis	Yellow star-thistle	N/A
Cephalanthus occidentalis	Buttonwillow	OBL
Cerastium fontanum ssp. *vulgare*	Mouse-eared chickweed	FACU
Claytonia perfoliata	Miner's lettuce	FAC
Crassula connata	Sand pygmyweed	FAC
Croton setigerus	Turkey mullein	UPL
Cynodon dactylon	Bermuda grass	FACU
Cyperus sp.	Nutsedge	OBL/FACW/FAC/FACU
Dichelostemma capitatum	Blue dicks	FACU
Eleocharis macrostachya	Creeping spikerush	UPL
Erigeron canadensis	Horseweed	FACU
Erodium botrys	Long-beaked filaree	FACU

Erodium cicutarium	Red-stemmed filaree	UPL
Eschscholzia caespitosa	Foothill poppy	UPL
Festuca myuros	Rattail fescue	UPL
Geranium dissectum	Dissected geranium	UPL
Gilia tricolor	Bird's eye gilia	UPL
Heterotheca grandiflora	Telegraph plant	UPL
Hordeum murinum	Foxtail barley	FAC
Hordeum marinum	Seaside barley	FAC
Hypochaeris glabra	Smooth cat's ear	UPL
Juncus effusus	Lamp's rush	FACW
Juncus bufonis	Common toad rush	FACW
Lactuca serriola	Prickly lettuce	FACU
Lasthenia californica	California goldfields	FACU
Layia chrysanthamoides	Smooth tidy-tips	FACW
Lemna minor	Duckweed	OBL
Lepidium densiflorum	Common peppergrass	UPL
Logfia filaginoides	California cottonrose	UPL
Lolium multiflorum	Italian ryegrass	UPL
Lupinus bicolor	Miniature lupine	UPL
Malva parviflora	Cheeseweed	UPL
Matricaria discoidea	Pineapple weed	FACU
Medicago polymorpha	Burclover	FACU
Melilotus indicus	Annual yellow sweetclover	FACU
Mentha pulegium	Pennyroyal	OBL
Micropus californicus	Slender cottonweed	FACU
Mimulus guttatus	Seep monkeyflower	OBL
Nasturtium officinale	Watercress	OBL
Navarretia pubescens	Purple navarretia	UPL
Nicotiana glauca	Tree tobacco	FAC
Oxalis pes-caprae	Bermuda butercup	UPL

Oxalis micrantha	Dwarf woodsorrel	UPL
Persicaria hydropiperoides	Water pepper	OBL
Plagiobothrys nothofulvus	Common popcornflower	FAC
Platanus racemosa	California sycamore	FACW
Poa annua	Annual bluegrass	FACU
Polypogon monspeliensis	Rabbits foot grass	FACW
Populus fremontii	Fremont's cottonwood	UPL
Quercus douglasii	Blue oak	UPL
Raphanus sativas	Wild radish	UPL
Rumex crispus	Curly dock	FAC
Salix sp.	Willow	OBL/FACW/FACU
Salsola tragus	Tumbleweed	FACU
Senecio vulgaris	Common groundsel	FACU
Silybum marianum	Milk thistle	UPL
Sonchus oleraceus	Common sow thistle	UPL
Stellaria media	Common chickweed	FACU
Thysanocarpus curvipes	Fringe pod	UPL
Trifolium hirtum	Rose clover	UPL

ATTACHMENT B

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Reolacement City/County: Fresno County Sampling Date: 03/24/15

ApplicanUOwner: County of Fresno State: CA Sampling Point: DPI

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): t...e..r.r.a.'t'= ———————— Local reliei (concave, convex, none): slight downslope Slope (%): 0-1%

Subregion (LRR): C - Mediterranean Climate Lat: 36.969885° Long: -119.598844° Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (Gp) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ { ___ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ // No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No./__
Hydric Soil Present?	Yes ____	No./__
Wetland Hydrology Present?	Yes ____	No./__
Is the Sampled Area within a Wetland?	Yes ____	No./__

Remarks:

Approximately 100-foot length of slightly down-sloped area in between two hummocks

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sai;iling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Erodium botrys	55 %	DOM	FACU
2. Bromus hordeaceus	35 %		FACU
3. Medicago polymorpha	5 %		FACU
4. Avena fatua	5 %		uel
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ 8)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multii;ily by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	5	x 5 =	25
Column Totals:	100 (A)		405 (B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is s3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No./__

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)			[2] Loc	Texture	Remarks
0-18	10YR 3/2	7.5YR 4/6				see notes sandy loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (54)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3] 1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ___ No_/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired; check all that aQQll

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- _ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No :! Depth (inches):

Water Table Present? Yes ___ No :! Depth (inches):

Saturation Present? (includes capillarv frinoe) Yes_____No :! Depth (inches):

Wetland Hydrology Present? Yes _____ No_/__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 03/24/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP2

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): [illegible] Local relief (concave, convex, none): [illegible] Slope (%):

Subregion (LRR): C - Mediterranean Climate Lat: 36.969879° Long: -119.598789° Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (Gp) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes L No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ./ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No ./

Hydric Soil Present? Yes ____ No ./

Wetland Hydrology Present? Yes ____ No ./

Is the Sampled Area within a Wetland? Yes ____ No /

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size:)			
1. Bromus hordeaceus	50 %	DOM	FACU
2. Erodium botrys	Q		FACU
3. Bromus diandrus	10 %		UPL
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Wood Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.10

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./

SOIL

Sampling Point: _.....D..P."2---

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-18	lOYR *3L2*	..!QQ_		see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (84)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Solls[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima[Y Indicators (minimum of one reguired· check all that a1212l}

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonrlverine)
__ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda[Y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
_ Drainage Patterns (B1O)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No _:! Depth (inches):

Water Table Present? Yes_____No _:! Depth (inches):

Saturation Present? (includes caoillarv fringe) Yes_____No _:! Depth (inches):

Wetland Hydrology Present? Yes _____ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Small hummock relief

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 03/24/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP3

Investigator(s): Charlotte Marks Section, Township, Range: Township 11 South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): sloping hills Local relief (concave, convex, none): slightly concave Slope (%): 0 - 1

Subregion (LRR): C - Mediterranean Climate Lat: 36.970008° Long: -119.599676° %Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ { No ___ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ./ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No ./__

Hydric Soil Present? Yes ____ No ./__

Wetland Hydrology Present? Yes ____ No ./__

Is the Sampled Area within a Wetland? Yes ____ No ./__

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Erodium botrys	85%	DOM	FACU
2. Avena fatua	B		UPL
3. Amsinckia menziesii	5 %		UPL
4. Hordeum murinum	2 %		EAC
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAG: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAG species	2	x 3 =	6
FACU species	85	x 4 =	340
UPL species	13	x 5 =	65
Column Totals:	100 (A)		411 (B)

Prevalence Index = B/A = 4.11

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes __ No ./__

Tall and dense vegetation along the swale contour in comparison with the adjacent vegetation size and density

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Redox Features [2] Loc	Texture	Remarks
0-12	lOYR 3L3	..!QQ_		see notes	sand loam
12-18	Rock				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- — 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Rock

Depth (inches): 12 inches

Hydric Soil Present? Yes ___ No ./__

Remarks:

Large rock outcrops present on the surrounding hill slopes.

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that aQQl}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired)

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- ..:L Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CB)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No :! Depth (inches):

Water Table Present? Yes_____ No :! Depth (inches):

Saturation Present? (includes capillary fringe) Yes _____ No :! Depth (inches):

Wetland Hydrology Present? Yes _____ No./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Gently sloping hillside terrain; swale runs along the trough of the adjacent slopes

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement   City/County: Fresno County   Sampling Date: 03/24/15

ApplicanVOwner: County of Fresno   State: CA   Sampling Point: DP4

Investigator(s): Charlotte Marks   Section, Township, Range: Township 11 South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace   Local relief (concave, convex, none): slightly convex   Slope (%): 0-1%

Subregion (LRR): C - Mediterranean Climate   Lat: 36.969972°   Long: -119.599645°   Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD)   NWI classification: "'fl;q'l'l'..e;

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _;{ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed?   Are "Normal Circumstances" present? Yes __{__ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic?   (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ./__	Is the Sampled Area within a Wetland?	Yes ____ No ./__
Hydric Soil Present?	Yes ____ No ./__		
Wetland Hydrology Present?	Yes ____ No ./__		

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: ______)			
1. Bromus diandrus	60%	DOM	UPL
2. Erodium bot[Ys	3Q		FACU
3. Amsinckia menziesii	5 %		UPL
4. Lepidium densiflorum	3 %		ueL
5. Raphanus sativas	2 %		UPL
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ______ (A)

Total Number of Dominant Species Across All Strata: ______ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ______ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multipl b:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	30	x 4 = 120
UPL species	70	x 5 = 350
Column Totals:	100 (A)	470 (B)

Prevalence Index = B/A = 4.70

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is ::;3_0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No/__

Remarks:

SOIL

Sampling Point: D.P. 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-12	lOYR 3/3	JJ1Q_		see notes	sandy loam
12-18	Rock				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Linino, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- — 1 cm Muck (A9) (LRR C)
- — 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Rock

Depth (inches): 12 inches

Hydric Soil Present? Yes ____ No_/_

Remarks:

Large rock outcrops present on the surrounding hill sides.

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that ar;ir;il

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (81) (Nonriverine)
- __ Sediment Deposits (82) (Nonriverine)
- __ Drift Deposits (83) (Nonriverine)
- __ Surface Soil Cracks (86)
- __ Inundation Visible on Aerial Imagery (87)
- __ Water-Stained Leaves (89)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (813)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (83) (Riverine)
- _ Drainage Patterns (810)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No.....:[Depth (inches):

Water Table Present? Yes____No.....:[Depth (inches):

Saturation Present? (includes capillary frinoe) Yes____No.....:[Depth (inches):

Wetland Hydrology Present? Yes ____ No_/_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Gradually sloping hillsides

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point DPS

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): slightly concave | Slope (%): 0-1%

Subregion (LRR): C - Mediterranean Climate | Lat 36.970232° | Long: -119.599321° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) | NWI classification: none

Are climatic/hydrologic conditions on the site typical for this time of year? Yes / No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? | Are "Normal Circumstances" present? Yes / No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes /	No
Hydric Soil Present?	Yes	No /
Wetland Hydrology Present?	Yes	No /
Is the Sampled Area within a Wetland?	Yes	No /

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute %Cover	Dominant S12ecies?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size:)			
1. Hordeum murinum	75 %	DOM	FAC
2. Erodium bot(Ys	2Q		FACU
3. Bromus hordeaceus	5 %		FACU
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total Qover of:		Multi Qly by:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	75 x 3 =	225
FACU species	25 x 4 =	100
UPL species	0 x 5 =	0
Column Totals:	100 (A)	325 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

/ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes / No

SOIL

Sampling Point: __ ;D;-PS____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)		Loc[2]	Texture	Remarks
0-18	IO YR 3L3	.1QQ			see notes sand loam	

[1]Tvoe: C=Concentration, D=Deoletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Solls[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired; check all that a1212l}

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
_ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
..:L Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CB)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No_:{_ Depth (inches):

Water Table Present? Yes_____No _:{_ Depth (inches):

Saturation Present? {includes capillary fringe) Yes_____No _:{_ Depth (inches):

Wetland Hydrology Present? Yes _____ No./___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014} and U.S. Geological Society Aerial Imagery (2014}

Remarks:

Soil moist at time of assessment. Feature down slopes into adjacent drainage feature.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP6

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hill terrace | Local relief (concave, convex, none): [illegible] | Slope (%): 0 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970195° | Long: -119.599330° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) | NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes { No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? | Are "Normal Circumstances" present? Yes ____!/_ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No./_
Hydric Soil Present?	Yes _____	No./_
Wetland Hydrology Present?	Yes _____	No./_
Is the Sampled Area within a Wetland?	Yes _____	No./_

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: _____)			
1. Erodium botrys	85 %	DOM	FACU
2. Bromus hordeaceus	lQ 26		FACU
3. Festuca perennis	5 %		UPL
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Wood Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multipl :	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	5	x 5 =	255
Column Totals:	100 (A)		385 (8)

Prevalence Index = B/A = 3.85

Hydrophytlc Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is :S3.0 [1]

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytlc Vegetation Present? Yes _____ No/

Remarks:

SOIL

Sampling Point: DP6...

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth {inches}	Matrix Color {moist}	Redox Features Color {moist}	...IyruL	Loc[2]	Texture	Remarks
0-18	10 YR 3L3	!QQ			see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ./__

Remarks:

Rocks interspersed throughout soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

PrimaDl Indicators (minimum of one reguired· check all that aggly}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

SecondaDl Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No __{__ Depth (inches):

Water Table Present? Yes _____ No __{__ Depth (inches):

Saturation Present? (includes capillary fringe) Yes _____ No __{__ Depth (inches):

Wetland Hydrology Present? Yes _____ No ./____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014} and U.S. Geological Society Aerial Imagery (2014}

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Reolacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP7

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): rolling hills | Local relief (concave, convex, none): ..c::; e_n_c_a_v_e.. Slope (%):

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970296° | Long: -119.599210° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) | NWI classification: ..n_o_"n_e

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___{___No_____(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes __./ No_____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No./__	Is the Sampled Area within a Wetland? Yes _____ No./__
Hydric Soil Present?	Yes _____	No./__	
Wetland Hydrology Present?	Yes./__	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Indicator S12ecies? Status
1.		
2.		
3.		
4. _____		
	0%	= Total Cover

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (8)

Percent of Dominant Species That Are OBL, FACW, or FAG: _____ (A/B)

Sapling/Shrub Stratum (Plot size: _____)		
1. _____		
2. _____		
3. _____		
4. _____		
5. _____		
	0%	= Total Cover

Prevalence Index worksheet:

Total % Cover of: Multi(2l":f.b":f.:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0 FAG

species 0 x 3 = 0 FACU

species 70 x 4 = 280

UPL species 20 x 5 = 100

Column Totals: 90 (A) 380 (B)

Prevalence Index = B/A = 4.22

Herb Stratum (Plot size: _____)		
1. Bromus hordeaceus	45 %	DOM FACU
2. Bromus diandrus	15	DOM UPL
3. Erodium botrvs _____	15 %	DOM FACU
4. Medicago 12olymori2ha	10 %	EACU
5. Heterotheca grandiflora	5 %	UPL
6. _____		
7. _____		
8. _____		
	90 %	= Total Cover

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is :S3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

Wood":f. Vine Stratum (Plot size: _____)		
1. _____		
2. _____		
	0 %	= Total Cover

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

% Bare Ground in Herb Stratum 10 % % Cover of Biotic Crust 0 %

Hydrophytic Vegetation Present? Yes _____ No./__

Remarks:

SOIL

Sampling Point: DP7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	...IYQL	Loc[2]	Texture	Remarks
0-18	lOYR 3L2	.1QQ			see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertie (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: None

Depth (inches):

Hydric Soil Present? Yes _____ No ./_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired· check all that a1212l)l}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- ..:L Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- ..:L Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No _{__ Depth (inches):

Water Table Present? Yes_____ No _{__ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____ No _{__ Depth (inches):

Wetland Hydrology Present? Yes./__ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images {2014) and U.S. Geological Society Aerial Imagery {2014)

Remarks:

Defined bed and bank that drains through a culvert that runs under Millerton Road; Soil moist at time of survey; Sediment deposits from recent rain event.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DP8

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): .h'?ll'''t;e;=r'a;.ce--------- Local relief (concave, convex, none): conve x Slope (%):

Subregion (LRR}: C - Mediterranean Climate | Lat: 36.970247° | Long: -119.599218° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VqD) | NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes___{_____No___(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes____{_ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No./__	Is the Sampled Area within a Wetland? Yes _____ No./__
Hydric Soil Present?	Yes _____ No./__	
Wetland Hydrology Present?	Yes _____ No./__	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4. _____			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0%	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perrenis _____	70 %	DOM	UPL
2. Erodium bot[Ys _____	15		FACU
3. Medicago polymorpha _____	10 %		FACU
4. Bromus hordeaceus	5 %		EACU
5. _____			
6. _____			
7. _____			
8. _____			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____ _____			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A}

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multigly_ by_:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	70	x 5 =	350
Column Totals:	100 (A)		470 (B)

Prevalence Index = B/A = 4.70

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is S3.0

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet}

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No/__

SOIL

Sampling Point: D.P. 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-18	10 YR 3/3	!QQ		see notes sand	

[1]Tvoe: C=Concentration, D=Deoletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (AS) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (SS)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ___ No_/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired· check all that a1212ll

- _ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired)

- _ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (DS)

Field Observations:

Surface Water Present? Yes ___ No {__ Depth (inches):

Water Table Present? Yes ___ No __/__ Depth (inches):

Saturation Present? Yes No {__ Depth (inches): (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No_/___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Reolacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP9

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): slight downslope | Slope (%): 0 -1%

Subregion (LRR): C - Mediterranean Climate | Lat: 36.969941° | Long: -119.598823° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _L_ No__(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes __./ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No./__ Hydric Soil Present? Yes _____ No./__ Wetland Hydrology Present? Yes _____ No./__	Is the Sampled Area within a Wetland? Yes _____ No./__

Remarks:

Approximately 100-foot length of slightly down-sloped area in between two hummocks

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
Herb Stratum (Plot size: _____)			
1. Bromus hordeaceus	70 %	DOM	FACU
2. Erodium botQLs	2Q		FACU
3. Heterotheca grandiflora	5 %		UPL
4. Logfia filaginoides	5 %		UeL
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAG: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAG species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	SO
Column Totals:	100 (A)		410 (B)

Prevalence Index = B A = 4.10

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is: S3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ./__

Remarks:

SOIL

Sampling Point: DP9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Redox Features [2] Loc	Texture	Remarks
0-18	2.5 YR 3L3	!QQ		see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (84)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes _____ No_/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primae£ Indicators (minimum of one reguired; check all that a1212ll

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondae£ Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
__ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Crayfish Burrows (CB)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No { Depth (inches):

Water Table Present? Yes_____No { Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No { Depth (inches):

Wetland Hydrology Present? Yes _____ No_/__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DPIO

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): ...c;h.; a.:n:;n;.el_ -------- Local relief (concave, convex, none): slight downslope | Slope (%): 0 -1%

Subregion (LRR): C - Mediterranean Climate | Lat: 36.969837° | Long: -119.598540° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes !/ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? | Are "Normal Circumstances" present? Yes :f. No

Are Vegetation, Soil, or Hydrology naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ./
Hydric Soil Present?	Yes	No ./
Wetland Hydrology Present?	Yes ./	No
Is the Sampled Area within a Wetland?	Yes ./	No

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size:)			
1. Hordeum murinum	35 %	DOM	FAC
2. Bromus diandrus	2Q	DOM	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	55 %	= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 45 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	1	x 5 =	5
Column Totals:	2 (A)		9 (B)

Prevalence Index = B/A = 4.50

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0 [1]

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes __ No ./_

Bare ground substrate consists of coarse sand and large cobbles.

SOIL

Sampling Point: DP O –

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remark
0-5	10YR 3L2	J,QQ		see notes	sandy
5-18	Rocks				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5} (LRR C}
- ___ 1 cm Muck (A9} (LRR D}
- ___ Depleted Below Dark Surface (A11}
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1}
- ___ Sandy Gleyed Matrix (84)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3}
- ___ Redox Dark Surface (F6}
- ___ Depleted Dark Surface (F7}
- ___ Redox Depressions (F8}
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Solls[3]:

- — 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2}
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Rocks

Depth (inches}: 5 inches

Hydric Soll Present? Yes _ ___ No _/__

Remarks:

Large cobbles and rocks made up main bed substrate.

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that aQ12l

- __ Surface Water (A1}
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonrlverine)
- _ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6}
- ...L. Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1}
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6}
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired)

- __ Water Marks (B1) (Riverine}
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2}
- __ Crayfish Burrows (CB)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3}
- __ FAG-Neutral Test (D5}

Field Observations:

Surface Water Present? Yes_____ No __./ Depth (inches):

Water Table Present? Yes_____ No _.:!._ Depth (inches}:

Saturation Present? (includes capillary fringe) Yes_____ No _:[Depth (inches}:

Wetland Hydrology Present? Yes_/__ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections}, if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DPll

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): none | Slope (%): 0 -1%

Subregion (LRR): C - Mediterranean Climate | Lat: 36.969831° | Long: -119.598465° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP} | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes f No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./
Hydric Soil Present?	Yes ____	No /
Wetland Hydrology Present?	Yes ____	No ./
Is the Sampled Area within a Wetland?	Yes ____	No ./

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Erodium botrys	80 %	DOM	FACU
2. Bromus hordeaceus	15 'Mi		FACU
3. Hordeum murinum	5 %		FAC
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woodl£ Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (8)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multipll£ bl£:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	5 x 3 =	15
FACU species	95 x 4 =	380
UPL species	0 x 5 =	0
Column Totals:	100 (A)	395 (8)

Prevalence Index = *BIA*= 3.95

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is :S3.0 [1]

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./

SOIL

Sampling Point: DP

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/2				see notes sand	

[1]Tvoe: C=Concentration, D=Deoletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (84)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No ./__

Remarks:

Rocks within soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired; check all that al2l21Y)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired)

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No :! Depth (inches):

Water Table Present? Yes_____No :! Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No :! Depth (inches):

Wetland Hydrology Present? Yes ____ No ./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP12

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): slight downslope Slope {%): 0 -1%

Subregion (LRR): C - Mediterranean Climate Lat: 36.969138° Long: -119.597729° Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) NWI classification: .n;q;.ne

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes___{_____No___(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? Are "Normal Circumstances" present? Yes____{_ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ./__ Hydric Soil Present? Yes _____ No./__ Wetland Hydrology Present? Yes _____ No./__	Is the Sampled Area within a Wetland? Yes _____ No./__

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant S12ecies?	Indicator Status
1.			
2.			
3.			
4. _____			
	0%	= Total Cover	
Sa12ling/Shrub Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0%	= Total Cover	
Herb Stratum (Plot size:_____)			
1. Erodium botrys_____	70 %	DOM	FACU
2. Bromus hordeaceus_____	25 'Mi		FACU
3. Hordeum murinum _____	5 %_____		FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
	100 %	= Total Cover	
WoodY. Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multi12lY. bY.:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	5 x 3 =	15
FACU species	95 x 4 =	380
UPL species	0 x 5 =	0
Column Totals:	100 (A)	395 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50% [1]

__ Prevalence Index is s3.0

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet}

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No ./ __

SOIL

Sampling Point: _.....;D;..P....;-2--_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc2	Texture	Remarks
0-18	IO YR 3L2	_!QQ		see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
— 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_/_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima[Y Indicators (minimum of one reguired· check all that agl21

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonrlverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda[Y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine}
__ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Crayfish Burrows (CS)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No :!_ Depth (inches):

Water Table Present? Yes_____No :!_ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No :!_ Depth (inches):

Wetland Hydrology Present? Yes _____ No_/_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP13

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): ...t:s.;rr.a.:;c= ---------- Local relief (concave, convex, none): slight downslope Slope (%): 0 -1%

Subregion (LRR): C - Mediterranean Climate Lat: 36.969111° Long: -119.597688° Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow 9 to 30 percent slopes (VgD) NWI classification: ..n;o;n;e;

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes_:!_ No_____ (If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? Are "Normal Circumstances" present? Yes____:/_ No_____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ./__	Is the Sampled Area within a Wetland? Yes _____ No ./__
Hydric Soil Present?	Yes _____	No /__	
Wetland Hydrology Present?	Yes ./__	No _____	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4. _____			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	0%	= Total Cover	
Herb Stratum {Plot size: _____)			
1. Bromus hordeaceus	4 %		FACU
2. Bromus diandrus	1'Mi		UPL
3.			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
	5 %	= Total Cover	
Wood)! Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 95 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total 0ai Cover of:	Multipl)! b)!:	
OBL species 0	x 1 = 0	FACW
species 0	x 2 = 0	FAC
species 0	x 3 = 0	FACU
species 4	x 4 = 16	
UPL species 1	x 5 = 5	
Column Totals: 5 (A)	21 (B)	

Prevalence Index = BA = 4.20

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is s3.0[1]

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ./__

Remarks:

SOIL

Sampling Point: __D...P..13_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc2	Texture	Remarks
0-18	2.5 YR 3L2	_!QQ_		see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydrlc Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ___ No ./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired· check all that a1212ly)

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
.:L Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6}
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13}
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4}
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired)

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (82) (Riverine)
__ Drift Deposits (B3} (Riverine}
_:! Drainage Patterns (B10)
__ Dry-Season Water Table (C2}
_ Crayfish Burrows (CS}
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No__/__ Depth (inches):

Water Table Present? Yes _____ No__{__ Depth (inches):

Saturation Present? (includes capillary frinQe) Yes_____ No__{__ Depth (inches):

Wetland Hydrology Present? Yes_./____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014}

Remarks:

Scouring from base of culvert from Millerton Road; Soil moist at time of survey; Evidence of sediment deposits from recent rain event.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecVSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanVOwner: County of Fresno | State: CA | Sampling Point: DP14

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): channel | Local relief (concave, convex, none): [illegible] | Slope (%): Q_%_

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970074° | Long: -119.598381° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: [illegible]

Are climatic / hydrologic conditions on the site typical for this time of year? Yes____{ No_____(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes _{___No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No./__

Hydric Soil Present? Yes _____ No/__

Wetland Hydrology Present? Yes./__ No _____

Is the Sampled Area within a Wetland? Yes _____ No./__

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sa12ling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Erodium bot[Vs	5%	S	FACU
2. Bromus diandrus			UPL
3.			
4.			
5.			
6.			
7.			
8.			
	10 %	= Total Cover	
Wood Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 90 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (8)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total °b Cover of:	Multi12l t!:	
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	0 x 3 =	0
FACU species	5 x 4 =	20
UPL species	5 x 5 =	25
Column Totals:	10 (A)	45 (B)

Prevalence Index = B/A = 4.50

Hydrophytlc Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is S3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]1ndicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytlc Vegetation Present? Yes _____ No/__

Remarks:

Bare ground substrate consists of coarse sand.

SOIL

Sampling Point: __D...P.....4._____

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches}	Matrix Color (moist}	Redox Features Color (moist}	Loc[2]	Texture	Remarks
0-18	10 YR 3L2	J,QQ_____		see notes sandy	

[1]Type: C=Concentration, D=Deoletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (AS) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (SS)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (FS)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primaey: Indicators (minimum of one reguired· check all that a1212ll

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1} (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine}
__ Drift Deposits (B3} (Nonriverine}
__ Surface Soil Cracks (B6)
..:!..... Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4}
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondaey: Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine}
_ Drainage Patterns (B1O}
__ Dry-Season Water Table (C2)
__ Crayfish Burrows (CS)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (DS)

Field Observations:

Surface Water Present? Yes_____No _:!.. Depth (inches):

Water Table Present? Yes_____No _:!.. Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No____{_ Depth (inches):

Wetland Hydrology Present? Yes_/___ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP15

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): ..cnn.;v..ex;... | Slope (%): 3-5 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970138° | Long: -119.598424° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: ..n;c..n."e"

Are climatic / hydrologic conditions on the site typical for this time of year? Yes :{ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? | Are "Normal Circumstances" present? Yes {No

Are Vegetation, Soil, or Hydrology naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No ./	Is the Sampled Area within a Wetland? Yes No ./
Hydric Soil Present? Yes No ./	
Wetland Hydrology Present? Yes No ./	

Remarks:

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size:)			
1. Bromus diandrus	65 %	DOM	UPL
2. Erodium bot!'.)ls	25		FACU
3. Hordeum murinum	5 %		FAC
4. Festuca perennis	5 %		ueL
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Woodx Vine Stratum (Plot size:)			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (AIB)

Prevalence Index worksheet:

Total % Cover of:		Multiplix bx:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	25	x 4 =	100
UPL species	70	x 5 =	350
Column Totals:	100	(A)	465 (B)

Prevalence Index = B/A = 4.65

Hydrophytlc Vegetation Indicators:

__ Dominance Test is >50% [1]

__ Prevalence Index is S3.0

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytlc Vegetation Present? Yes No ./

SOIL

Sampling Point: _....;D..P,..-=.;;;;;.. _

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	---	Redox Features Color (moist)		Loc[2]	Texture	Remarks
0-12	2.5YR 3Ll	_!QQ_				see notes	sand
12-18	Granite rock	_!QQ_					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (FS)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Granite Rock

Depth (inches): 12 inches

Hydric Soll Present? Yes _____ No_./__

Remarks:

Granite rocks and cobble interspersed within soil profile

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that a1212ll

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonrlverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (813)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired)

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (83) (Riverine)
__ Drainage Patterns (B1O)
__ Dry-Season Water Table (C2)
__ Crayfish Burrows (CS)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No __./ Depth (inches):

Water Table Present? Yes_____No _{____Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No __{__ Depth (inches):

Wetland Hydrology Present? Yes ___ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecVSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanVOwner: County of Fresno | State: CA | Sampling Point: DP16

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): slightly concave | Slope (%):

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970281° | Long: -119.581253° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _{___ No_____(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes_____i_._ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ./__ No _____ Hydric Soil Present? Yes ./__ No _____ Wetland Hydrology Present? Yes ./__ No _____	Is the Sampled Area within a Wetland? Yes ./__ No _____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: _____)			
1. Polypogon monspeliensis	45 %	DOM	FACW
2. Juncus effusus	2Q 'Mi	DOM	FACW
3. Juncus bufonius	15 %		FACW
4. Lemna minor	10 %		QBL
5. Medicago polvmorpha	5 %		FACU
6. Melilotus indicus	5 %		FACU
7.			
8.			
	100 %	= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply_ by_:	
OBL species	10	x 1 =	10
FACW species	80	x 2 =	160
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	100 (A)		210 (B)

Prevalence Index = B/A = 2.10

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is :S3.0[1]

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ./__ No _____

SOIL

Sampling Point: --D''P''''''6'---

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches}	Matrix Color (moist}	Redox Features Color (moist}			Loc[2]	Texture	Remarks
0-6	2.5 YR 3L2	7.5 YR 3L4	5	C	PL	see notes	sand loam
6-18	2.5 YR 3L2	_!QQ_				see notes	sand loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (84)
- ...!_ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: none

Depth (inches): _____

Hydric Soil Present? Yes_./__ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima Indicators (minimum of one reguired· check all that ai;ii;il)l}

- ...:!_ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (81) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (86)
- ...!_ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- ...:!_ Aquatic Invertebrates (813)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (82) (Riverine)
- __ Drift Deposits (83) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _:{ No_____ Depth (inches): 0-16

Water Table Present? Yes_____ No __./ Depth (inches):

Saturation Present? (includes capillary fringe} Yes_____ No _:{ Depth (inches):

Wetland Hydrology Present? Yes_./__ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Water present at time of survey; Aquatic invertebrates observed.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP17

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): _____ | Slope (%):

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970391° | Long: -119.581350° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: _____

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _:{_____No___(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes_____:! No_____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ./__	No _____	Is the Sampled Area within a Wetland? Yes ./__ No _____
Hydric Soil Present?	Yes ./__	No _____	
Wetland Hydrology Present?	Yes ./__	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: _____)			
1. Cynodon dactylon	40 %	DOM	FACU
2. Juncus effusus	25	DOM	FACW
3. Polypogon monspeliensis	25 %	DOM	FACW
4. Medicago polymorpha	5 %		EACU
5. Carduus pycnocephalus	5 %		UPL
6.			
7.			
8.			
	100 %	= Total Cover	

Wood Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	45	x 4 =	180
UPL species	5	x 5 =	25
Column Totals:	100 (A)		305 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

[1] __ Prevalence Index is ≤3.0

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ./_ No _____

SOIL

Sampling Point: _...;D..;P..;7---_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	'.>&_	Redox Features Color (moist)	'.>&_	Loc[2]	Texture	Remarks
0-8	2.5 YR 3L2		7.5 YR *3L4*	2	C PL	see notes	sandy: loamy:
8-18	2.5 YR 3L2	.1QQ_				see notes	sandy: loamy:

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
_f_ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydrlc Soil Present? Yes ./ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired· check all that a1:21:2l':Ji'.l

_ Surface Water (A1)
__ High Water Table (A2}
__ Saturation (A3)
_ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
_ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
_ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired)

_ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
...:L Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CS)
...:L Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No _{____ Depth (inches):

Water Table Present? Yes_____ No _{____ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____ No _{____ Depth (inches):

Wetland Hydrology Present? Yes ./ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at the time of the survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DP18

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): slight concave | Slope (%): 0-1%

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970475° | Long: -119.581446° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: none

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes___{_____No___(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes_____{_ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No ./__ Hydric Soil Present? Yes _____ No./__ Wetland Hydrology Present? Yes ./__ No _____	Is the Sampled Area within a Wetland? Yes _____ No ./__

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Cynodon dactylon	50 %	DOM	FACU
2. Bromus hordeaceus	20 %		FACU
3. Medicago polymorpha	10 %		FACU
4. Hordeum murinum	5 %		EAC
5. Rumex crispus	5 %		FAC
6. Melilotus indicus	5 %		FACU
7. Juncus effusus	3 %		FACW
a. Erodium cicutarium	2 %		UPL
	100%	= Total Cover	
Wood)'. Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	10	x 3 =	30
FACU species	85	x 4 =	340
UPL species	2	x S =	10
Column Totals:	100 (A)		386 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes __ No/__

Remarks:

SOIL

Sampling Point: DP1.8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-18	10 YR 3L2	JillL.		see notes sandy loamy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ./__

Remarks:

Earthworms present in upper 3 inches of soil profile. Some pebbles throughout profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that a12121

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
_:! Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CS)
_:{ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No __./ Depth (inches):

Water Table Present? Yes_____ No____:{_ Depth (inches):

Saturation Present? Yes_____ No __{ Depth (inches):

Wetland Hydrology Present? Yes_./__ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at the time of the survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP19

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11 South Range 22 East. Section 16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): convex | Slope (%): 15 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970317° | Long: -119.581640° | Datum: NAD83

Soil Map Unit Name: Grangeville soils, channeled (GP) | NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes (No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? | Are "Normal Circumstances" present? Yes ____ (No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./ _
Hydric Soil Present?	Yes ____	No / _
Wetland Hydrology Present?	Yes ____	No / _
Is the Sampled Area within a Wetland?	Yes ____	No ./ _

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: ____)			
1. Hordeum murinum	45 %	DOM	FAC
2. Erodium cicutarium	25	DOM	UPL
3. Bromus hordeaceus	15 %		FACU
4. Medicago polmorpha	5%		FACU
5.			
6.			
7.			
8.			
	90 %	= Total Cover	

Wood Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAG: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multigl :	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAG species	45	x 3 =	135
FACU species	20	x 4 =	80
UPL species	25	x 5 =	125
Column Totals:	90 (A)		340 (B)

Prevalence Index = B A = 3.77

Hydrophytlc Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is :S3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytlc Vegetation Present? Yes ___ No / _

Remarks:

SOIL

Sampling Point: _....;D..P"'"-9---

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3L2	.1QQ_			see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: {Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (AS) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (SS)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (FB)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soll Present? Yes _____ No_./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired· check all that a12121

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
_ Water Marks {B1) {Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
_ Drift Deposits {B3) {Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor {C1)
__ Oxidized Rhizospheres along Living Roots {C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other {Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (83) {Riverine)
_ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CB)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard {D3)
__ FAG-Neutral Test {D5)

Field Observations:

Surface Water Present? Yes_____No __./ Depth (inches):

Water Table Present? Yes_____No __{__ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No _:/ Depth (inches):

Wetland Hydrology Present? Yes _____ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno State: CA Sampling Point: DP20

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): culvert Local relief (concave, convex, none): slight downslope Slope (%): 3-5 %

Subregion (LRR): C - Mediterranean Climate Lat: 36.971022° Long: -119.568671° Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow, 9 to 30 percent slopes (VgD) NWI classification: .n.o.n.e.

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes __L.__ No__(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? Are "Normal Circumstances" present? Yes _J___ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No./__ Hydric Soil Present? Yes./__ No _____ Wetland Hydrology Present? Yes./__ No _____	Is the Sampled Area within a Wetland? Yes _____ No./__
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Indicator S12ecies? Status
1.		
2.		
3.		
4.		
	0%	= Total Cover
Sa12ling/Shrub Stratum (Plot size: _____)		
1.		
2.		
3.		
4.		
5.		
	0%	= Total Cover
Herb Stratum (Plot size: _____)		
1. Bromus hordeaceus	35 %	DOM FACU
2. Hordeum murinum	3Q	DOM FAC
3. Bromus diandrus	15 %	UPL
4. Croton setigerus	10 %	UEL
5.		
6.		
7.		
8.		
	90 %	= Total Cover
Woody Vine Stratum (Plot size: _____)		
1.		
2.		
	0 %	= Total Cover

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % CQver of:	Multi12l b:
OBL species 0 x 1 =	0
FACW species 0 x 2 =	0
FAC species 30 x 3 =	90
FACU species 35 x 4 =	140
UPL species 25 x 5 =	125
Column Totals: 90 (A)	355 (B)

Prevalence Index = B A = 3.94

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is s3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No/__

Remarks:

SOIL

Sampling Point: DP20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth {inches}	Matrix Color (moist)	Redox Features Color (moist)			Loc[2]	Texture	Remarks
0-4	10YR 3/2	7.5 YR 3/2	2	C	PL	see notes	sand loam
4-18	10YR 3/2	10YR 4/6	2	C	PL	see notes	sand loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (FB)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertie (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (82) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (86)
- ___ Inundation Visible on Aerial Imagery (87)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (CB)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAG-Neutral Test (DS)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Feature drains through a culvert that runs under Millerton Road; Soil moist at time of survey; Sediment deposits from recent rain event.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP21

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): concave | Slope (%): 5-8 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.970998° | Long: -119.568702° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow, 9 to 30 percent slopes (VgD) | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? | Are "Normal Circumstances" present? Yes ___ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No ./
Hydric Soil Present?	Yes ___	No ./
Wetland Hydrology Present?	Yes ___	No ./
Is the Sampled Area within a Wetland?	Yes ___	No ./

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size: ___)			
1. Bromus hordeaceus	80 %	DOM	FACU
2. Erodium botrys	15		FACU
3. Hordeum murinum	5 %		FAC
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Wood Vine Stratum (Plot size: ___)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A)

Total Number of Dominant Species Across All Strata: ___ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ___ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	100 (A)		395 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No ./

SOIL

Sampling Point: DP21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Type[1]	Loc[2]	Texture	Remarks
0-2	10 YR 3[2	7.5 YR 3[2	C	PL	see notes	sand loam
2-18	lO YR 3[2	..!QQ			see notes	sandy loamy

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (84)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No _/_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired; check all that a1212ll

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonrlverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _:!.___ Depth (inches):

Water Table Present? Yes _____ No _:!.___ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ___ No _:!.__ Depth (inches):

Wetland Hydrology Present? Yes _____ No _/__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP22

Investigator{s): Charlotte Marks Section, Township, Range: Township 11South Range 22 East, Section 16

Landform {hillslope, terrace, etc.): terrace Local relief (concave, convex, none): slight downslope Slope (%): 0-1%

Subregion (LRR): C - Mediterranean Climate Lat: 36.971345° Long: -119.568833° Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow, 9 to 30 percent slopes (VgD) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ { ___ No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ___ :!. No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No ./ __	Is the Sampled Area within a Wetland? Yes ___ No ./ __
Hydric Soil Present?	Yes ___	No ./ __	
Wetland Hydrology Present?	Yes ./ __	No ___	

Remarks:

Vegetation is naturally problematic due to lack of presence.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum {Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 %	= Total Cover	
Wood)£ Vine Stratum (Plot size: ___)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0 %

Remarks:

Feature lacks vegetation.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A)

Total Number of Dominant Species Across All Strata: ___ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ___ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Mu/tip/3£ bl£:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	0 x 3 =	0
FACU species	0 x 4 =	0
UPL species	0 x 5 =	0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is s3.0 [1]

__ Morphological Adaptations [1] {Provide supporting data in Remarks or on a separate sheet)

....:!..... Problematic Hydrophytic Vegetation [1] (Explain)

[1] 1ndicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No ./ __

SOIL

Sampling Point: -""""D...P...22---

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	ryruL_	Loc[2]	Texture	Remarks
0-18	10 YR 3/2	.1QQ_			see notes sand;i£ loam;i£	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No _./_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!)£ Indicators (minimum of one reguired· check all that a12121

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- ..:L. Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!)I Indicators (2 or more reguired)

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (CB)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Fleld Observations:

Surface Water Present? Yes _____ No :/ Depth (inches):

Water Table Present? Yes _____ No :/ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____ No :! Depth (inches):

Wetland Hydrology Present? Yes_./_ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Drains through a culvert that runs under Millerton Road; Soil moist at time of survey; Sediment deposits from recent rain event.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DP23

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hillslope | Local relief (concave, convex, none): concave | Slope (%): 3-5 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.971302° | Long: -119.568859° | Datum: NAD83

Soil Map Unit Name: Vista coarse sandy loam, shallow, 9 to 30 percent slopes (VgD) | NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes L No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? | Are "Normal Circumstances" present? Yes f No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./	Is the Sampled Area within a Wetland? Yes ____ No ./
Hydric Soil Present?	Yes ____	No ./	
Wetland Hydrology Present?	Yes ____	No ./	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: ____)			
1. Bromus hordeaceus	85 %	DOM	FACU
2. Bromus diandrus	5		UPL
3. Trifolium hirtum	5 %		UPL
4. Erodium botrys	5 %		FACU
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Wood Vine Stratum (Plot size: ____)		
1.		
2.		
	0 %	= Total Cover

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.10

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is ≤3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./

Remarks:

SOIL

Sampling Point: -'"""D....P23;.___

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)		Loc[2]	Texture	Remarks
0-18	10 YR 3L3	_!QQ			see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (84)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima Indicators (minimum of one reguired· check all that aQQly}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (89)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda Indicators (2 or more reguired}

- __ Water Marks (81) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B1O)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (CB)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No :! Depth (inches):

Water Table Present? Yes _____ No :! Depth (inches):

Saturation Present? (includes capillary fringe) Yes __ __ No :! Depth (inches):

Wetland Hydrology Present? Yes _____ No./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP24

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): channel | Local relief (concave, convex, none): slightly concave | Slope (%): 1-2 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.971846° | Long: -119.567529° | Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) | NWI classification: none

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes __L__ No __ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? | Are "Normal Circumstances" present? Yes i' No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./__	Is the Sampled Area within a Wetland? Yes ____ No ./__
Hydric Soil Present?	Yes ____	No ./__	
Wetland Hydrology Present?	Yes ./__	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size: ____)			
1. Bromus hordeaceus	5 %	FACU	
2. Heterotheca grandiflora	5	UPL	
3. Bromus madritensis ssp. rubens	2 %	UPL	
4.			
5.			
6.			
7.			
8.			
	12%	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 88 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	7	x 5 =	35
Column Totals:	12	(A)	55 (B)

Prevalence Index = B/A = 4.58

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50% [1]

__ Prevalence Index is ≤3.0

__ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./__

SOIL

Sampling Point: DP24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)		Redox Features Color (moist)		Loc[2]	Texture	Remarks
0-18	10 YR 3L2	.1QQ				see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ____ No ./_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired· check all that ai;ii;il:tl

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- ..:L Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (813)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No :! Depth (inches):

Water Table Present? Yes ____ No :! Depth (inches):

Saturation Present? (includes capillary fringe} Yes No :! Depth (inches):

Wetland Hydrology Present? Yes./___ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP25

Investigator(s): Charlotte Marks Section, Township, Range: Township 11 South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 5-10 %

Subregion (LRR): C - Mediterranean Climate Lat: 36.971783° Long: -119.567624° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes No

Hydric Soil Present? Yes No

Wetland Hydrology Present? Yes No

Is the Sampled Area within a Wetland? Yes No

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size:)			
1. Bromus diandrus	75 %	DOM	UPL
2. Erodium botrys	15		FACU
3. Bromus hordeaceus	10 %		FACU
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	75	x 5 =	375
Column Totals:	100 (A)		475 (B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

SOIL

Sampling Point: DP25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3L3	7.5YR 3L2	C	PL	see notes	sandy loamy
5-18	10YR 3L3				see notes	sandy loamy

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required· check all that a12121

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (81) (Nonriverine)
- __ Sediment Deposits (82) (Nonriverine)
- _ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____ No _:{____ Depth (inches):

Water Table Present? Yes_____ No _:{____ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ___ No _:{____ Depth (inches):

Wetland Hydrology Present? Yes _____ No ./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP26

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11 South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): channel | Local relief (concave, convex, none): concave | Slope (%): 5-10 %

Subregion (LRR): C - Mediterranean Climate | Lat: 36.971691° | Long: -119.567350° | Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) | NWI classification: none

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _:L_ No__(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes :! No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No./__	Is the Sampled Area within a Wetland? Yes _____ No./__
Hydric Soil Present?	Yes _____	No/__	
Wetland Hydrology Present?	Yes./__	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4. _____		___ __ _____	
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1. _____		_____	_____
2. _____		_____	_____
3. _____		_____	_____
4. _____		_____	_____
5. _____		_____	_____
	0%	= Total Cover	

Herb Stratum (Plot size: _____)			
1. Bromus madritensis ssp. rubens	5 %		UPL
2. Bromus hordeaceus	2		FACU
3. Bromus diandrus	1%		UPL
4. _____		_____	_____
5. _____		_____	_____
6. _____		_____	_____
7. _____		_____	_____
8. _____		_____	_____
	8 %	= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1. _____		_____	_____
2. _____		_____	_____
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 92 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	6	x 5 =	30
Column Totals:	8 (A)		38 (B)

Prevalence Index = *B/A* = 4.75

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ./__

SOIL

Sampling Point: _.....D"'P"'26--_

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	....b'.ruL	Loc[2]	Texture	Remarks
0-18	10 YR 3L2				see notes sand	

[1]Tvoe: C=Concentration, D=Deoletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Linino, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No ./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primai:y Indicators (minimum of one reguired· check all that a1212l}

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
__ Sediment Deposits (B2) (Nonriverine)
_ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
...:!..... Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondai:y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
_ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No :! Depth (inches):

Water Table Present? Yes_____No :! Depth (inches):

Saturation Present? (includes caoillarv frinoe) Yes ___ No :[Depth (inches):

Wetland Hydrology Present? Yes ./___ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Reolacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DP27

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11 South Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): none | Slope (%):

Subregion (LRR): C - Mediterranean Climate | Lat: 36.971635° | Long: -119.567440° | Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) | NWI classification: none

__ Are climatic/hydrologic conditions on the site typical for this time of year? Yes / No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? | Are "Normal Circumstances" present? Yes !! No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No /	Is the Sampled Area within a Wetland? Yes _____ No /
Hydric Soil Present?	Yes _____	No /	
Wetland Hydrology Present?	Yes _____	No /	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: _____)			
1. Bromus madritensis ssp. rubens	35 %	DOM	UPL
2. Erodium botrys	30	DOM	FACU
3. Bromus diandrus	20 %		UPL
4. Festuca perennis	10 %		UPL
5. Bromus hordeaceus	5 %		FACU
6.			
7.			
8.			
	100 %	= Total Cover	

Wood Vine Stratum (Plot size: _____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total Cover of:		Multipl:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	35	x 4 =	140
UPL species	65	x S =	325
Column Totals:	100 (A)		465 (8)

Prevalence Index = B/A = 4.65

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ./_

Remarks:

SOIL

Sampling Point: D..,P.2..7.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth {inches}	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-18	10 YR 3L3	.1QQ_		see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired· check all that ai;ii;il)l}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- _ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No_____:!._ Depth (inches): _____

Water Table Present? Yes_____No_____{_ Depth (inches): _____

Saturation Present? {includes capillary frinQe) Yes_____No_:!._ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP28

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): ...c;h.; a''n''n'el ---------- Local relief (concave, convex, none): slightly concave Slope (%): 3-5 %

Subregion (LRR): C - Mediterranean Climate Lat: 36.975904° Long: -119.546917° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: .n'b''ne

Are climatic / hydrologic conditions on the site typical for this time of year? Yes :{ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes .// No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ./ No Hydric Soil Present? Yes No ./ Wetland Hydrology Present? Yes ./ No	Is the Sampled Area within a Wetland? Yes No ./
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix SQ.	5 %		
2.			
3.			
4.			
	5 %	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
Herb Stratum (Plot size:)			
1. Hordeum marinum	10 %		FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 %	= Total Cover	
Wood Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 95 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover Qf:		Multi(21 b:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	10 x 3 =	30
FACU species	0 x 4 =	0
UPL species	0 x 5 =	0
Column Totals:	10 (A)	30 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

.:L Prevalence Index is S3.0[1]

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ./ No

SOIL

Sampling Point: DP28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	ryruL_	Loc2	Texture	Remarks
0-18	2.5 YR 3L1	_!QQ_			see notes sandy:	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ___ No ./__

Remarks:

Tree roots (Salix sp.) interspersed throughout soil profile; Substrate consists of coarse sand (high permeability)

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired; check all that ai;ii;il

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (81) (Nonriverlne)
__ Sediment Deposits (82) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (86)
..:!_ Inundation Visible on Aerial Imagery (87)
__ Water-Stained Leaves (89)
__ Salt Crust (B11)
__ Biotic Crust (812)
__ Aquatic Invertebrates (813)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

__ Water Marks (81) (Riverine)
__ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (83) (Riverine)
_ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (C8)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _{___ Depth (inches):

Water Table Present? Yes _____ No _{___ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____ No __./ Depth (inches):

Wetland Hydrology Present? Yes_./__ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey (surface to 12 inches).

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP29

Investigator(s): Charlotte Marks Section, Township, Range: Township 11 South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): ...h...il..ls.lo...Q.e- Local relief (concave, convex, none): .c. onve.x Slope (%): il

Subregion (LRR): C - Mediterranean Climate Lat: 36.975901° Long: -119.546779° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes :{ No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes :!. No

Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ./	Is the Sampled Area within a Wetland? Yes No /
Hydric Soil Present?	Yes	No /	
Wetland Hydrology Present?	Yes	No ./	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0%	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	
Herb Stratum (Plot size:)			
1. Bromus diandrus	65 %	DOM	UPL
2. Erodium cicutarium	lQ 'Ml		UPL
3. Hordeum murinum	5 %		FAC
4.			
5.			
6.			
7.			
8.			
	80 %	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 20 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	80 (A)		390 (B)

Prevalence Index = B/A = 4.87

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No /

SOIL

Sampling Point: D..P...2..9.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)		Loc[2]	Texture	Remarks
0-18	2 YR 3l2	_!QQ			see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydrlc Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (AS) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (S4)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes _____ No_./_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primal}'. Indicators (minimum of one reguired· check all that aQQl

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (B1) (Nonriverine)
_ Sediment Deposits (B2) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (B6)
__ Inundation Visible on Aerial Imagery (B7)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (B13)
__ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
_ Sediment Deposits (B2) (Riverine)
__ Drift Deposits (B3) (Riverine)
__ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
__ Crayfish Burrows (CB)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (DS)

Field Observations:

Surface Water Present? Yes _____ No _:! Depth (inches):

Water Table Present? Yes _____ No _:!__ Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____No __{__ Depth (inches):

Wetland Hydrology Present? Yes _____ No-/___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Brjdge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

Applicant/Owner: County of Fresno | State: CA | Sampling Point: DP30

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): bottom of hillslope | Local relief (concave, convex, none): slightly concave | Slope (%):

Subregion (LRR): C - Mediterranean Climate | Lat: 36.976008° | Long: -119.546910° | Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) | NWI classification: "ħ;α_ri'ë

___ Are climatic / hydrologic conditions on the site typical for this time of year? Yes ;{_____ No ___ (If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____ significantly disturbed? | Are "Normal Circumstances" present? Yes ./ No _____

Are Vegetation_____, Soil_____, or Hydrology_____ naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ./ No _____

Hydric Soil Present? Yes ./ No _____

Wetland Hydrology Present? Yes ./ No _____

Is the Sampled Area within a Wetland? Yes ./ No _____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute %Cover	Dominant Indicator S12ecies? Status
1.		
2.		
3.		
4. _____		
	0 %	= Total Cover
Sa12ling/Shrub Stratum (Plot size: _____)		
1. _____		
2. _____		
3. _____		
4. _____		
5.		
	0%	= Total Cover
Herb Stratum (Plot size: _____)		
1. Hordeum marinum	85 %	DOM FAC
2. Cynodon dactylon	lQ CZ6	FACU
3. Bromus hordeaceus	5 %	FACU 4.
_____		
5. _____		
6. _____		
7. _____		
8. _____		
	100 %	= Total Cover
Woody Vine Stratum (Plot size: _____)		
1. _____		
2. _____		
	0 %	= Total Cover

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

TQ15l!l % Cover of:		Multi(;!l3£ blt'.:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	85 x 3 =	255
FACU species	15 x 4 =	60
UPL species	0 x 5 =	0
Column Totals:	100 (A)	315 (B)

Prevalence Index = B A = 3.15

Hydrophytic Vegetation Indicators:

..:L Dominance Test is >50%

__ Prevalence Index is s3.0[1]

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]1ndicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ./ No _____

Remarks:

SOIL

Sampling Point: DP30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)			Loc[2]	Texture	Remark
0-12	2.5 YR 3L1	7.5 YR 3L2	2	C	PL	see notes	sand loam
12-18	2.5 YR 3L1					see notes	sand loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (AS) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (SS)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertie (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima!Y Indicators (minimum of one reguired· check all that a1212l}

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (87)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (83) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAG-Neutral Test (DS)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches):

Water Table Present? Yes ___ No ___ Depth (inches):

Saturation Present? (includes capillary frinoe) Yes ___ No ___ Depth (inches):

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno State: CA Sampling Point: DP31

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%):

Subregion (LRR): C - Mediterranean Climate Lat: 36.976061° Long: -119.546903° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes { No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes { No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No	Is the Sampled Area within a Wetland? Yes ✓ No
Hydric Soil Present? Yes ✓ No	
Wetland Hydrology Present? Yes ✓ No	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size:)			
1. Hordeum marinum	80 %	DOM	FAC
2. Bromus hordeaceus	20		FACU
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	100 (A)		320 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

[1] Prevalence Index is ≤3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

SOIL

Sampling Point: D...P..3.....

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)			Loc[2]	Texture	Remarks
0-5	2.5YR 3/1	10YR 5/6	2	C	PL	see notes	sandy loam
5-10	2.5YR 3/1	7.5YR 3/2	2	C	PL	see notes	sandy loam
10-18	2.5 YR 3/1	10YR 5/6	2	C	PL	see notes	sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (AS) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (84)
- _:!_ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertie (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes ./_ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima Indicators (minimum of one reguired· check all that am;;il)l)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9}
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks}

Seconda Indicators (2 or more reguired)

- __ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ..:L Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CB)
- ..:L Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- __ FAG-Neutral Test (DS}

Field Observations:

Surface Water Present? Yes_____ No _:!. Depth (inches):

Water Table Present? Yes_____ No _:!. Depth (inches):

Saturation Present? (includes capillary fringe) Yes_____ No __./ Depth (inches):

Wetland Hydrology Present? Yes ./_ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP32

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): [illegible] Local relief (concave, convex, none): [illegible] Slope (%): 0-1

Subregion (LRR): C - Mediterranean Climate Lat: 36.976041° Long: -119.546950° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☐
Hydric Soil Present?	Yes ☑	No ☐
Wetland Hydrology Present?	Yes ☑	No ☐
Is the Sampled Area within a Wetland?	Yes ☑	No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ☐)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	

Sapling/Shrub Stratum (Plot size: ☐)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: ☐)			
1. Hordeum marinum	95 %	DOM	FAC
2. Bromus hordeaceus	S		FACU
3.			
4.			
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Woody Vine Stratum (Plot size: ☐)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiplier:
OBL species	0 x 1 =	0
FACW species	0 x 2 =	0
FAC species	95 x 3 =	285
FACU species	5 x 4 =	20
UPL species	0 x 5 =	0
Column Totals:	100 (A)	305 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:

☑ Dominance Test is >50%[1]

☐ Prevalence Index is S3.0

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☑ No ☐

SOIL

Sampling Point: D...,P3...2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5 YR 3LI	7.5 YR 3L2	C	PL	see notes	sand loam
3-18	2.5 YR 3LI				see notes	sand loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertie (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that a1:21:2l}

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondaey Indicators (2 or more reguired}

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (CS)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAG-Neutral Test (05)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches):

Water Table Present? Yes ___ No ___ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches):

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Soil moist at time of survey.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP33

Investigator(s): Charlotte Marks Landform (hillslope, terrace, etc.): [illegible] Section, Township, Range: Township 11South, Range 22 East, Section 16

Local relief (concave, convex, none): [illegible] Slope (%):

Subregion (LRR): C - Mediterranean Climate Lat: 36.975999° Long: -119.547028° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: [illegible]

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _{ No __ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____{ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./__	Is the Sampled Area within a Wetland? Yes ____ No ./__
Hydric Soil Present?	Yes ____	No./__	
Wetland Hydrology Present?	Yes ____	No./__	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: ____)			
1. Bromus diandrus	35 %	DOM	UPL
2. Bromus hordeaceus	30 %	DOM	FACU
3. Hordeum murinum	30 %	DOM	FAC
4.			
5.			
6.			
7.			
8.			
	95 %	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0%	= Total Cover	

% Bare Ground in Herb Stratum 5 % % Cover of Biotic Crust 0%

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	35	x 5 =	175
Column Totals:	95 (A)		385 (B)

Prevalence Index = B/A = 4.05

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./__

SOIL

Sampling Point: D;..,P3:::;3:::;.....__

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Iyrul.	Loc[2]	Texture	Remarks
0-18	2.5 YR 3L2	_!QQ_			see notes sandY: loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (A4)
__ Stratified Layers (A5) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (84)
__ Sandy Redox (S5)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (FB)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: None
Depth (inches): _____

Hydric Soil Present? Yes _____ No_ ./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primaiy Indicators (minimum of one reguired; check all that a■

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
_ Water Marks (81) (Nonriverine)
__ Sediment Deposits (82) (Nonriverine)
__ Drift Deposits (83) (Nonriverine)
__ Surface Soil Cracks (86)
__ Inundation Visible on Aerial Imagery (87)
__ Water-Stained Leaves (89)
__ Salt Crust (B11)
__ Biotic Crust (B12)
__ Aquatic Invertebrates (813)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
_ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Secondaiy Indicators (2 or more reguired}

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (82) (Riverine)
__ Drift Deposits (B3) (Riverine)
_ Drainage Patterns (810)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CS)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No :! Depth (inches):
Water Table Present? Yes _____ No :! Depth (inches):
Saturation Present? (includes capillary fringe) Yes No :! Depth (inches):

Wetland Hydrology Present? Yes ___ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP34

Investigator(s): Charlotte Marks Section, Township, Range: Township 11 South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): channel Local relief (concave, convex, none): slight downslope Slope (%): 0-1 %

Subregion (LRR): C - Mediterranean Climate Lat: 36.975686° Long: -119.546949° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes f No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes { No

Are Vegetation L , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No /	Is the Sampled Area within a Wetland? Yes No /
Hydric Soil Present?	Yes	No /	
Wetland Hydrology Present?	Yes /	No	

Remarks:

Vegetation is naturally problematic due to lack of presence.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size:)			
1.			
2.			
4.			
5.			
6.			
7.			
8.			
	0 %	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 100 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is s3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

..../..... Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No /

Remarks:

Lacks vegetation.

SOIL

Sampling Point: _.....;D..;P.;;;4. _

Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of indicators.)

Depth (inches}	Matrix Color (moist}	Redox Features Color (moist}	Loc[2]	Texture	Remarks
0-18	lO YR *3L2*	_!QQ_		see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2}
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Solls[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydrlc Soll Present? Yes ____ No ./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima(Y Indicators (minimum of one reguired· check all that aQQl}

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (81) (Nonriverine)
- __ Sediment Deposits (82) (Nonriverine)
- __ Drift Deposits (83) (Nonriverine)
- __ Surface Soil Cracks (86)
- ...:!..... Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (89)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (813)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (82) (Riverine)
- __ Drift Deposits (83) (Riverine)
- _ Drainage Patterns (B1O)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (C8)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No ;{_ Depth (inches):

Water Table Present? Yes_____No ;{_ Depth (inches):

Saturation Present? (includes capillary fringe} Yes_____No ;{_ Depth (inches):

Wetland Hydrology Present? Yes./__ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Reolacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP35

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South, Range 22 East, Section 1

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 10%

Subregion (LRR): C - Mediterranean Climate Lat: 36.975643° Long: -119.547020° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes L No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ./ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ./	Is the Sampled Area within a Wetland? Yes ____ No ./
Hydric Soil Present?	Yes ____	No ./	
Wetland Hydrology Present?	Yes ____	No ./	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0%	= Total Cover	

Herb Stratum (Plot size: ____)			
1. Bromus diandrus	70 %	DOM	UPL
2. Erodium bottYS	ZQ 'Mi		FACU
3. Melilotus indicus	5 %		FACU
4. Festuca perennis	5 %		uel
5.			
6.			
7.			
8.			
	100 %	= Total Cover	

Woody: Vine Stratum (Plot size: ____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 0 % % Cover of Biotic Crust 0 %

Remarks:

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAG: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAG: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multi12ly: by::	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAG species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	75	x 5 =	375
Column Totals:	100	(A)	475 (B)

Prevalence Index = B/A = 4.75

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ./

SOIL

Sampling Point: DP-35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	Loc[2]	Texture	Remarks
0-18	2.5YR 3/2			see notes sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- __ 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes ____ No __/__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primaey Indicators (minimum of one reguired· check all that aggl

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1) (Nonriverine)
- __ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (83) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (89)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (813)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Seconda!Y Indicators (2 or more reguired}

- __ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (83) (Riverine)
- __ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes____ No __{__ Depth (inches):

Water Table Present? Yes____ No __:f.__ Depth (inches):

Saturation Present? (includes capillary frinQe) Yes____ No __{__ Depth (inches):

Wetland Hydrology Present? Yes ____ No __/__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

ProjecUSite: Millerton Road Bridge Replacement | City/County: Fresno County | Sampling Date: 04/27/15

ApplicanUOwner: County of Fresno | State: CA | Sampling Point: DP36

Investigator(s): Charlotte Marks | Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): b.a;se.;n.f;...c;;;;alv;e.;rt;... Local relief (concave, convex, none): slight downslope | Slope (%): 10 % Datum:

Subregion (LRR): C - Mediterranean Climate | Lat: 36.975738° | Long: -119.548285° | NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) | NWI classification: no;ne

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _:{ ;_ No____(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? | Are "Normal Circumstances" present? Yes {_____No _____

Are Vegetation _:{___, Soil_____, or Hydrology_____naturally problematic? | (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No./__

Hydric Soil Present? Yes _____ No./__

Wetland Hydrology Present? Yes./__ No _____

Is the Sampled Area within a Wetland? Yes _____ No./__

Remarks:

Vegetation is naturally problematic due to lack of presence.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Indicator S12ecies?	Status
1.			
2.			
3.			
4.			
	0 %	= Total Cover	
Sa12ling/Shrub Stratum (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
	0 %	= Total Cover	
Herb Stratum (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 %	= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1.			
2.			
	0 %	= Total Cover	

% Bare Ground in Herb Stratum 100 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multi12ly by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0	(A)	0 (8)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is S3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

...:!..... Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _ __ No ./__

Remarks:

No vegetation present within the feature.

SOIL

Sampling Point: D_P3.6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/2	10QQ				see notes sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5) (LRR C)
- __ 1 cm Muck (A9) (LRR D)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1)
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- __ 1 cm Muck (A9) (LRR C)
- — 2 cm Muck (A10) (LRR B)
- __ Reduced Vertie (F18)
- __ Red Parent Material (TF2)
- __ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: None

Depth (inches):

Hydric Soil Present? Yes _____ No_/_

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one reguired· check all that a1212l)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- _ Water Marks (B1) (Nonriverine)
- .:!.._ Sediment Deposits (B2) (Nonriverine)
- __ Drift Deposits (B3) (Nonriverine)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Water-Stained Leaves (B9)
- __ Salt Crust (B11)
- __ Biotic Crust (B12)
- __ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Thin Muck Surface (C7)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more reguired}

- _ Water Marks (B1) (Riverine)
- __ Sediment Deposits (B2) (Riverine)
- __ Drift Deposits (B3) (Riverine)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- _ Crayfish Burrows (CS)
- __ Saturation Visible on Aerial Imagery (C9)
- __ Shallow Aquitard (D3)
- __ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No _:! Depth (inches):

Water Table Present? Yes_____No _:! Depth (inches):

Saturation Present? (includes capillary frinQe) Yes_____No _:! Depth (inches):

Wetland Hydrology Present? Yes_/_ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

Feature drains through a culvert that runs under Millerton Road; Soil moist at time of survey; Sediment deposits from recent rain event.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Millerton Road Bridge Replacement City/County: Fresno County Sampling Date: 04/27/15

Applicant/Owner: County of Fresno State: CA Sampling Point: DP37

Investigator(s): Charlotte Marks Section, Township, Range: Township 11South, Range 22 East, Section 16

Landform (hillslope, terrace, etc.): "t'e.rr. a.ce" ---------- Local relief (concave, convex, none): slight convex Slope (%):

Subregion (LRR): C - Mediterranean Climate Lat: 36.975731° Long: -119.548197° Datum: NAD83

Soil Map Unit Name: Grangeville sandy loam (Ga) NWI classification: none

__ Are climatic / hydrologic conditions on the site typical for this time of year? Yes _:/_____ No___(If no, explain in Remarks.)

Are Vegetation_____, Soil_____, or Hydrology_____significantly disturbed? Are "Normal Circumstances" present? Yes____{__ No _____

Are Vegetation_____, Soil_____, or Hydrology_____naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No./__	Is the Sampled Area within a Wetland? Yes _____ No./__
Hydric Soil Present?	Yes _____	No/__	
Wetland Hydrology Present?	Yes _____	No/__	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Indicator S12ecies? Status
1.		
2.		
3.		
4.		
	0 %	= Total Cover
Sa12ling/Shrub Stratum (Plot size: _____)		
1.		
2.		
3.		
4.		
5.		
	0%	= Total Cover
Herb Stratum (Plot size: _____)		
1. Bromus hordeaceus	45 %	DOM FACU
2. Hordeum murinum	2Q 'Mi	DOM FAC
3. Erodium botrys	15 %	FACU
4. Bromus diandrus	10 %	ueL
5.		
6.		
7.		
8.		
	90 %	= Total Cover
Wood)!'. Vine Stratum (Plot size: _____)		
1.		
2.		
	0 %	= Total Cover

% Bare Ground in Herb Stratum 10 % % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multi12l:t b:i£:
OBL species 0 x 1 =	0
FACW species 0 x 2 =	0
FAC species 20 x 3 =	60
FACU species 60 x 4 =	240
UPL species 10 x 5 =	50
Column Totals: 90 (A)	350 (B)

Prevalence Index = BIA = 3.88

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%[1]

__ Prevalence Index is S3.0

_ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No/__

Remarks:

SOIL

Sampling Point: _....;D...P"37____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of Indicators.)

Depth (inches)	Matrix Color (moist)	Redox Features Color (moist)		YruL_	Loc[2]	Texture	Remarks
0-18	10 YR 3/2	-1QQ				see notes sand loam	

[1]Tvpe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore LininQ, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

__ Histosol (A1)
__ Histic Epipedon (A2)
__ Black Histic (A3)
__ Hydrogen Sulfide (M)
__ Stratified Layers (AS) (LRR C)
__ 1 cm Muck (A9) (LRR D)
__ Depleted Below Dark Surface (A11)
__ Thick Dark Surface (A12)
__ Sandy Mucky Mineral (S1)
__ Sandy Gleyed Matrix (84)
__ Sandy Redox (SS)
__ Stripped Matrix (S6)
__ Loamy Mucky Mineral (F1)
__ Loamy Gleyed Matrix (F2)
__ Depleted Matrix (F3)
__ Redox Dark Surface (F6)
__ Depleted Dark Surface (F7)
__ Redox Depressions (F8)
__ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

__ 1 cm Muck (A9) (LRR C)
__ 2 cm Muck (A10) (LRR B)
__ Reduced Vertie (F18)
__ Red Parent Material (TF2)
__ Other (Explain in Remarks)

[3]1ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: None

Depth (inches): _____

Hydrlc Soll Present? Yes _____ No_./__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Prima Indicators (minimum of one required· check all that a1212l)£)

__ Surface Water (A1)
__ High Water Table (A2)
__ Saturation (A3)
__ Water Marks (81) (Nonriverine)
__ Sediment Deposits (82) (Nonriverine)
__ Drift Deposits (B3) (Nonriverine)
__ Surface Soil Cracks (86)
__ Inundation Visible on Aerial Imagery (87)
__ Water-Stained Leaves (B9)
__ Salt Crust (B11)
__ Biotic Crust (812)
_ Aquatic Invertebrates (813)
_ Hydrogen Sulfide Odor (C1)
__ Oxidized Rhizospheres along Living Roots (C3)
__ Presence of Reduced Iron (C4)
__ Recent Iron Reduction in Tilled Soils (C6)
__ Thin Muck Surface (C7)
__ Other (Explain in Remarks)

Seconda Indicators (2 or more reguired)

__ Water Marks (B1) (Riverine)
__ Sediment Deposits (82) (Riverine)
__ Drift Deposits (83) (Riverine)
_ Drainage Patterns (B10)
__ Dry-Season Water Table (C2)
_ Crayfish Burrows (CB)
__ Saturation Visible on Aerial Imagery (C9)
__ Shallow Aquitard (D3)
__ FAG-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes_____No____:{_ Depth (inches): Water Table Present? Yes_____No _:!.._ Depth (inches):

Saturation Present? (includes capillarv frinQe) Yes_____No____:{_ Depth (inches):

Wetland Hydrology Present? Yes _____ No_./__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Google Earth aerial images (2014) and U.S. Geological Society Aerial Imagery (2014)

Remarks:

FARMLAND CONVERSION ASSESSMENT

LITTLE DRY CREEK REPLACEMENT ON MILLERTON ROAD

(BRIDGE NO. 42C0267, 42C0268, 42C0269, AND 42C0270)

FRESNO COUNTY, CALIFORNIA

FEDERAL AID NO. BRLO-5942(210)

LSA

May 2017

FARMLAND CONVERSION ASSESSMENT

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD

(BRIDGE NO. 42C0267, 42C0268, 42C0269, AND 42C0270)

FRESNO COUNTY, CALIFORNIA

FEDERAL AID NO. BRLO-5942(210)

Submitted to:

Prepared by:

LSA Associates, Inc.
4200 Rocklin Road, Suite 11B
Rocklin, California 95677
916.630.4600

Project No. CFF1501A

LSA

May 2017

TABLE OF CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

The California Department of Transportation (Caltrans), Fresno County (County) and the Federal Highway Administration (FHWA) propose to replace four bridges on Millerton Road over Little Dry Creek (42C0268, 42C0269, and 42C070) and North Fork Little Dry Creek (42C0267). The project is located approximately 12 mi northeast of the City of Clovis between Auberry Road to the west and State Route 168 to the east (Figures 1 – 3).

Millerton Road at this location is classified as two way rural road and has no posted speed limit. All four bridges were originally constructed in 1925 and consist of multi span timber superstructures supported by concrete pier and abutment walls. Each of the existing structures has been flagged as functionally obsolete due to their substandard width for a two lane facility. The timber superstructures are in various states of deterioration. One structure (42C-0267) is flagged as being structurally deficient due to its advanced state of structural decline. All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 45 mph for a rural County road with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during the 100-year storm event.

The replacement structures will significantly improve on the existing conditions; roadway safety, structural integrity, and bridge hydraulic capacity. The existing bridges will be removed to accommodate new two lane replacement structures measuring 34'-10" wide which accommodate Fresno County's and AASHTO's standard of two 12-foot lanes and two 4-foot shoulders. Each of the replacement bridges have been set on an alignment that can accommodate a higher design speed that is closer to or meets the County's standard of 45 mph.

The proposed Project is located in an area of northeastern Fresno County, upon farmland not classified as prime, or significant, and includes Williamson Act Contracted lands. In order to determine if the proposed Project would deplete important farmland or Williamson Act Contracted land, analysis and conclusions are presented below based on the Project boundary and its surrounding land uses.

1.1 PROJECT DESIGN AND CONSTRUCTION

Bridges 42C-0267, 42C-0269 and 42C-0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C-0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction. The temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek. Creek flows will be temporarily conveyed through the berm and construction site via pipe culverts.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable). The abutments and pier (as applicable) for Bridges 42C-0267, 42C-0268, and 42C-0270 will be founded on shallow spread footings embedded into

granite material. Due to the presence of a deep subterranean lens of decomposed granite, the abutments for Bridge 42C-0269 will be supported on cast-in-drilled-hole piles. The bridge lengths and span configurations are being driven by the hydraulic capacity needed at each Little Dry Creek crossing. All four bridges can pass the Caltrans standard requirement of the 50-year storm event plus two feet of freeboard and the 100-year storm event.

Construction of all four bridges will require work within the creek including the removal of the existing bridge, construction of the bridge pier and footings (only applicable for bridges 42C-0268 and 42C-0270), construction of the temporary creek crossing (only applicable for bridge 42C-0268), construction of the abutment walls and footings, construction and removal of temporary falsework, and installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location.

The project is expected to be constructed in the spring/summer of 2018. All four bridges will be built concurrently within an estimated 4-month construction period. The contractor will have separate crews; one for each bridge.

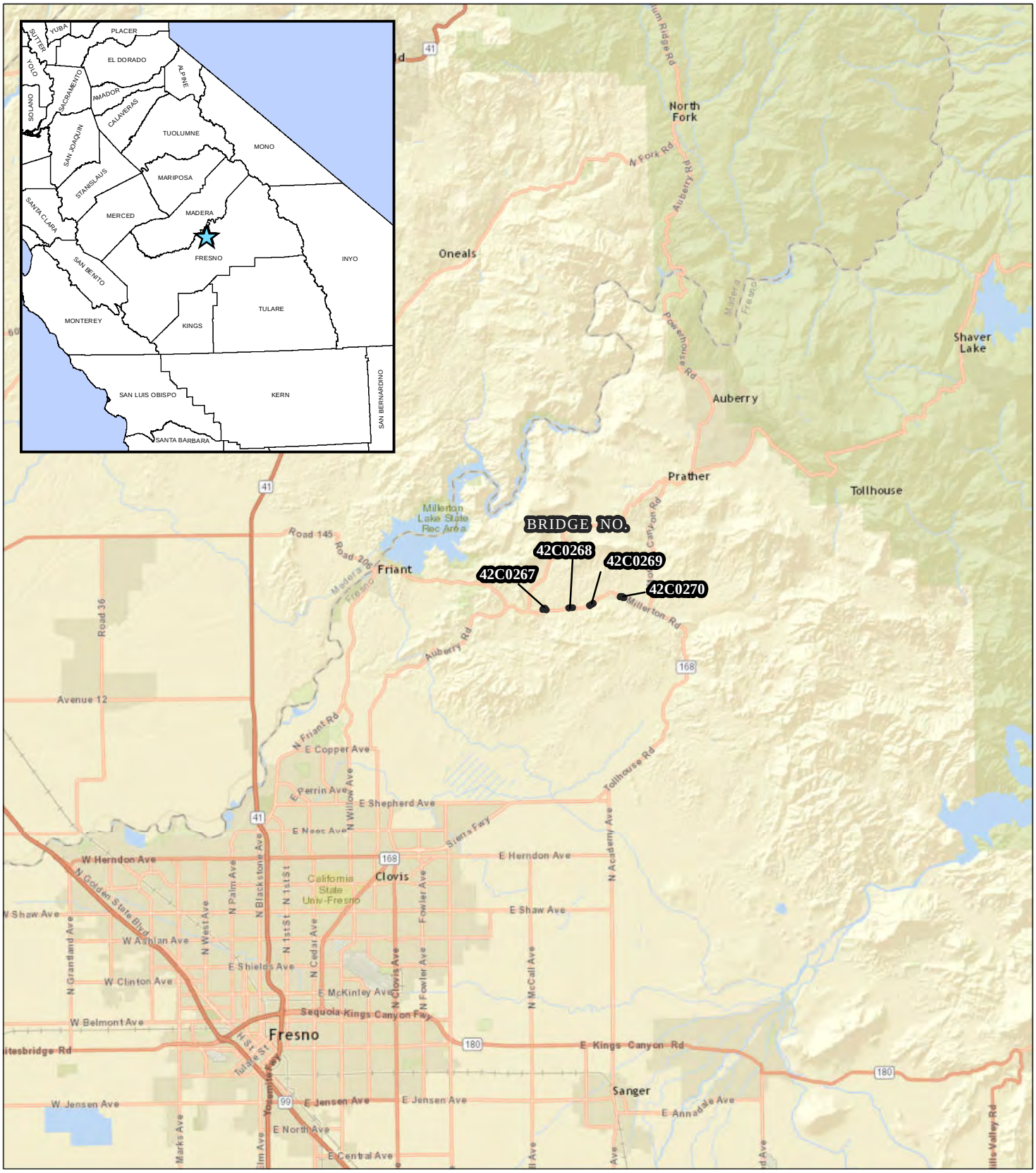
2.0 AFFECTED ENVIRONMENT

2.1 GENERAL SITE DESCRIPTION

The proposed Project is located on Millerton Road in the County of Fresno, California, about 3.5 miles southeast of Millerton Lake. The four bridge sites, all of which were constructed in 1925, cross over Little Dry Creek and North Fork Little Dry Creek. The land immediately surrounding the existing bridges is grazing farmland, with infrequent, rural residential homesteads throughout. The current bridges have substandard structural conditions and width that cannot safely accommodate the Fresno County rural county road standards with no posted speed limit standard of 45 mph.

2.1.1 Project Area

The proposed Project site is located in a rural area of Fresno County. Land uses surrounding the proposed Project include open space/agricultural and rural residential uses. The County of Fresno zones all parcels impacted by the Project as AE40 Agriculture Exclusive, with the exception of APN 138-061-42 which is zoned as AL40 Limited Agriculture. Millerton Road meanders in a, generally, east-west direction with four bridge crossings (the Project sites) throughout. Grazing Land is defined by the NRCS as "… land on which the existing vegetation is suited to the grazing of livestock." Figures 1 and 2 locate the Project site through both a regional and local lens, respectively.



LEGEND

Project Site

FIGURE 1

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE REGIONAL LOCATION

0 2.5 5
MILES

SOURCE: ESRI World Street Map (2015)

I:\CFF1101Q\GIS\Reports\Noise\figure1-reg_vic.mxd (8/22/2016)

LEGEND

- Project Site
- Little Dry Creek

Caltrans

N

0 512.5 1025
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 2

Little Dry Creek Bridges Replacement
on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE VICINITY

2.2 AREA FARMLAND

The following provides information on the designation of soils as Important Farmland on a federal (United States Department of Agriculture Natural Resource Conservation Service [NRCS]) and on a state (California Department of Conservation Farmland Mapping and Monitoring Program [FMMP]) level.

2.2.1 United States Department of Agriculture Natural Resource Conservation Service (NRCS)

The United States Department of Agriculture Natural Resource Conservation Service (NRCS) provides information on soils in the United States. The NRCS produces soil surveys for areas in the United States to determine soils that can be used in managing farms and ranches; in supporting The NRCS rates soils using the capability classification system to show in a general way, their suitability for most kinds of farming. This system is based on limitations of the soils, the risk of damage when they are used, and the way they respond to treatment. The classification does not apply to rice and other crops having special requirements. The soils are classified according to the degree and kind of permanent limitation, but without consideration of major and generally expensive land forming that would change the slope, depth, or other characteristics of the soils, and without consideration of possible but unlikely reclamation projects. In the capability systems, soils are grouped at three levels: 1.) The capability class; 2.) subclass; 3.) unit. Capability classes are defined as follows:

- **Class I** – Soils have few limitations that restrict their use;
- **Class II** – Soils have some limitations that reduce the choice of plants or require moderate conservation practices;
- **Class III** – Soils have severe limitations that reduce the choice of plants or require special conservation practices, or both;
- **Class IV** – Soils have very severe limitations that restrict the choice of plants or require very careful management, or both;
- **Class V** – Soils subject to little or no erosion but have other limitations, impracticable to remove, that limit their use largely to pasture, range, woodland, or wildlife food and cover;
- **Class VI** – Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife food and cover;
- **Class VII** – Soils have very severe limitations that make them unsuited for cultivation and that restrict their use largely to grazing, woodland, or wildlife; and,
- **Class VIII** – Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife, or water supply, or aesthetic purposes.

The capability subclasses are designated by adding a small letter e, w, s, or c, to the classification designation. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation; s shows that the soil is limited mainly because it is shallow, droughty, or stony; and, c shows that the chief limitation is climate that is too cold or too dry. Capability units are soil groups within the

subclasses and are used for making statements about management of soils. The units are defined as follows:

- *0* – A problem or limitation caused by sand and gravel in the substratum (not used in San Benito County);
- *1* – An erosion hazard, actual or potential;
- *2* – A problem or limitation of wetness caused by poor drainage or flooding;
- *3* – A problem or limitation caused by slow or very slow permeability of the subsoil or substratum;
- *4* – A problem or limitation caused by coarse soil texture or excessive gravel;
- *5* – A problem or limitation caused by a fine or moderately fine textured surface soil;
- *6* – A problem or limitation caused by salt or alkali;
- *7* – A problem or limitation caused by cobbles, stones, or rock outcrop (not used in San Benito County);
- *8* – A problem or limitation caused by shallow depth of soil over bedrock (not used in San Benito County); and,
- *9* – A problem or limitation caused by low fertility or by toxicity.

With these soil classifications, NRCS applies them to farmland in order to prioritize the preservation of quality farmland. The NRCS is concerned with the depletion of soils that can physically and economically sustain agricultural production. Soils that can sustain agricultural production are classified as Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance and are collectively known as Important Farmland. The following information provides definitions per NRCS standards of each of these farmland designations:

- **Prime Farmland.** Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.
- **Unique Farmland.** Unique Farmland is land other than Prime Farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruit, and vegetables.

- **Farmland of Statewide Importance.** This is land, in addition to prime and unique farmland that is of statewide importance for the production of food, feed, fiber, and oil seed crops. Criteria for defining and delineating this land are to be determined by the appropriate state agency or agencies. Generally, Farmlands of Statewide Importance include those that are nearly Prime Farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Soma may produce as high a yield as Prime Farmlands if conditions are favorable. In some states, Farmlands of Statewide Importance may include tracts of land that have been designated for agriculture by state law.
- **Farmland of Local Importance.** In some areas, there is concern for additional farmlands for the production of food, feed, fiber, forage, and oilseed crops, even though these lands are not identified as having national or statewide importance. Where appropriate, these lands are to be identified by the local agency or agencies concerned. In places, additional farmlands of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Based on Soil Classification ratings by the NRCS, as shown in Table 1, no land within the project area meets the definition of Important Farmland. This is because much of the soil in the Project site has issues with salt or alkalis and is shallow and rocky, as it is defined by its NRCS classifications.

Table 1: Soil of the Project Site

Map Symbol	Soil Name/Description	Land Capability Class and Subclass	
		Non-irrigated	Irrigated
Ga	Grangeville sandy loam	IVs	IIs
Gp	Grangeville soils, channeled	IVw	IIw
VdG	Vista coarse sandy loam, shallow, 9 to 30 percent slopes	VIe	VIe

2.2.2 California Department of Conservation Farmland Mapping and Monitoring Program (FMMP)

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) produce maps and statistical data used for analyzing impacts on California's Agricultural resources. The maps produced under the FMMP are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. FMMP's statistical and mapping information is contiguous with modern soil surveys developed by the U.S. Department of Agriculture (USDA). The FMMP uses the NRCS Prime Farmland list for each County and adds data on land use, cropping history, and irrigation history to designate and group agricultural land into Important Farmland categories. The California Department of Conservation FMMP designates land into the following categories: Prime Farmland; Farmland of Statewide Importance; Unique Farmland; Farmland of Local Importance; Grazing Land; Urban and Built-Up Land; Other Land; and, Water. Per the FMMP, the Project Site is comprised almost entirely of Grazing Land, with the exception of a

small sliver of Other Land at the Project site of Bridge No. 42C0267. As of 2014, the Farmland Mapping and Monitoring Program reports Fresno County as having 2,192,456 acres of land, of which 825,580 acres are comprised of grazing land (approx. 38 percent of agricultural land use)[1].

2.3 WILLIAMSON ACT

The Williamson Act, better known as the California Land Conservation Act, has been California's premier agricultural land protection program since its enactment in 1965. The Williamson Act preserves agricultural and open space lands through property tax incentives and voluntary restrictive use contracts. Private landowners voluntarily restrict their land to agricultural and compatible open-space uses under minimum 10-year rolling term contracts with local governments (local County or City). In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. In August of 1998, the Legislature enhanced the Williamson Act with the Farmland Security Zone (FSZ) provisions. The FSZ provisions offer landowners greater property tax reduction in return for a minimum rolling contract term of 20 years.

According to the Fresno County Assessor's Office, portions of the proposed Project site are enrolled in Williamson Act Contracts, including APNs: 138-031-02, 138-061-73, 138-070-76, 138-061-78, and 138-070-66.[2] Based on the amount of right-of-way required, these parcels might be impacted by Project implementation; therefore, a summary of Williamson Contract procedure for Fresno County is provided.

The County of Fresno has a Williamson Contract cancellation process[3] consistent with the California Department of Conservation Williamson Contract cancellation procedures. The California Department of Conservation summarizes contract cancellation, "…the immediate termination of a contract by a landowner, which requires payment of a cancellation fee and board of supervisors or city council approval based on rigorous findings."[4] The County of Fresno's procedure for Williamson Act Contract cancellation is explained in further detail:

> To end a contract, commonly a "notice of nonrenewal" is filed with Public Works and Planning of Fresno County to start the 9-year nonrenewal period. During the nonrenewal process, the annual tax assessment gradually increases. At the end of the 9-year nonrenewal period (19 years for land in a Farmland Security Zone), the contract is terminated. [None of the APNs impacted by the proposed Project are within Farmland Security Zones.]
>
> A taxpayer may request an immediate cancellation only in extreme and stringent situations, or where the public interest is no longer best served by continuing the contractual restrictions. The landowner may petition the Board of Supervisors or the appropriate City Council for Williamson Act Contract cancellation. A notice of nonrenewal must also be filed when the cancellation

[1] State of California, Department of Conservation, "Land Use Conversion Tables: Fresno County," (2012-2014). Accessed in August, 2016, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Fresno.aspx.
[2] County of Fresno, Office of the Assessor. Assessor's Map Bk. 138, pages 6-7, September 2009.
[3] County of Fresno, Office of the Assessor, "California Land Conservation Act or Williamson Act," (2016) website accessed in August, 2016, http://www.co.fresno.ca.us/DepartmentPage.aspx?id=57163.
[4] State of California, Department of Conservation, "The California Land Conservation Act 2014 Status Report," (March 2015). Electronic PDF accessed in August, 2016, http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2014%20LCA%20Status%20Report_March_2015.pdf.

request is made. There is a cancellation fee of 12.5% of the unrestricted, current fair market value of the property in the Williamson Act or 25% if in a Farmland Security Zone.

In addition to the landowner, County, and more specifically—the County Board of Supervisors and County Assessor, other parties involved in the cancellation process include the State of California Department of Conservation. The agency reviews the proposed cancellation and submits comments to the county/city with regard to the submitted findings as required by Government Code's §51282.

Required materials for cancellation to be submitted to the Department of Conservation by the County include[1]:

- A copy of the petition
- Justification of the findings approved by the county or city
- A copy of the contract
- A general description of the land subject to the proposed cancellation (text or map)
    - For partial cancellation, the full contracted area should be shown in addition to the portion being cancelled.
    - Please include the reason for cancellation of the contract.
- The deadline for submitting comments
    - Consistent with the Permit Streamlining Act, but no less than 30 days prior to scheduled action by the board or council.

[1] State of California, Department of Conservation, "Contract Cancellations," (2016) website accessed in August 2016, http://www.conservation.ca.gov/dlrp/lca/basic_contract_provisions/Pages/contract_cancellations.aspx#Back%20to%20Top.

3.0 ENVIRONMENTAL CONSEQUENCES

3.1 PROJECT IMPACT

The existing uses in the vicinity of the proposed Project include roadway infrastructure (Millerton Road and bridge crossings over Little Dry Creek and North Fork Little Dry Creek), rural residential uses, and agricultural uses (including grazing land). According to the State of California, Department of Conservation's Farmland Mapping and Monitoring Program (FMMP), there are 5.16 acres of Grazing Farmland within the boundary of the proposed Project site.

The parcels of land (5) surrounding the Project site (APNs 138-070-76, 138-061-73, 138-061-02, 138-061-78, and 138-070-66) are all under Williamson Act Contracts. The actual impact on Williamson Act land is associated with the proposed new right-of-way to be acquired and improvements that are to be constructed as part of the proposed Project.

3.2 IMPORTANT FARMLAND IMPACTS

Data from the California Department of Conservation FMMP was used to determine if Important Farmland exists in the Project area; and if so, the amount of Important Farmland temporarily and permanently impacted. The data used indicated that there is no Important Farmland within, or adjacent to, the Project boundary; rather, it indicated that the land was designated as Grazing Land. Because the Project does not include any Important Farmland, as determined by the FMMP, a Farmland Conversion Impact Rating Form AD-1006 was not prepared to identify potential impacts to Important Farmland with implementation of the proposed Project. In summary, no impacts to Important Farmland would occur with implementation of the Project.

3.3 WILLIAMSON ACT CONTRACTED LAND IMPACTS

The proposed Project is located in an area where Williamson Act Contracted land exists. The parcels of land surrounding the proposed Project site that are under Williamson Act Contract includes: APNs 138-061-02, 138-061-73, 138-070-76, 138-061-78, and 138-070-66. **Table 2** summarizes the amount of land that will be acquired from each parcel that is currently enrolled in a Williamson Act Contract and temporary/permanent impacts that would occur due to the loss of Williamson Act land. The amount of land being required is due to expansion of the existing right-of-way onto the specified parcels that are currently under Williamson Act contracts.

Table 2: Acreage Acquisition of Parcels with Williamson Act Contracts

Parcel APN	Williamson Act Contract Number	Total Parcel Size (acres)	Acres Required for right-of-way Acquisition	
			Acres[1]	Percent of Total Acres
138-061-73	AP-332	62.60	0.09	0.14
138-061-02	AP-162	493.79	0.08	0.02
138-061-78	AP-332	39.46	0.66	1.7
138-070-66	AP-109	431.60	0.63	0.15
138-070-76	AP-332	53.29	0.02	0.04
Total		**1,080.74**	**1.48**	**0.14**

Source: LSA (December 2016)
Note: [1] Acres are rounded to the nearest hundredth.

As shown in **Table 2,** implementation of the proposed Project would permanently convert 1.48 acres of Williamson Act Contracted land resulting in a loss to the existing Williamson Act inventory in Fresno County. The permanent conversion of the Williamson Act Contracted land is due to the acquisition of right-of-way expansion for the Project implementation. It should be noted that the remaining acres of these parcels would remain under Williamson Act Contract with implementation of the proposed Project as the applicant would only request conversion of the 1.48 acres of Williamson Act to implement the Project. **Figures 3A-3D** shows the Williamson Act land that would be permanently impacted due to Project implementation. To reduce impacts the following minimization measures are recommended to be implemented:

Minimization Measure 1: The Project applicant shall ensure that any land that is under Williamson Act Contract that would be temporarily impacted during construction be restored to pre-construction conditions once construction is completed. The applicant shall ensure this occurs through actions including but not limited to:

- Taking preconstruction photographs of the Williamson Act Land that will be temporarily impacted as to have a baseline condition of the area to ensure appropriate restoration occurs once construction of the Project is completed.
- Providing education to the construction crew hired regarding Williamson Act land and the need to restore temporarily impacted portions back to preconstruction conditions.
- Contacting the California Department of Conservation staff to indicate that 2.399 acres of Williamson Act land will be temporarily impacted during construction but will be restored to preconstruction conditions once construction is complete. If requested, the applicant shall allow a representative of the California Department of Conservation to do a field visit to the site prior to commencement of construction and at time of post construction to ensure restoration of temporary impacted areas is completed.

Implementation of such measures would ensure that the applicant restores Williamson Act Contracted land being temporarily impacted to preconstruction conditions once construction is completed.

Minimization Measure-2: The County (applicant) shall notify the California Department of Conservation of the intent to acquire right-of-way land in APNs 138-070-76, 138-061-73, 138-061-02, 138-061-78, and 138-070-66 (all of which are under Williamson Act Contracts). The notification shall follow the procedures set forth by the California Department of Conservation (CDC) for Public Acquisitions of Williamson Act Contracted Land as described at the CDC website located here: http://www.conservation.ca.gov/dlrp/lca/basic_contract_provisions/Pages/public_acquisitions.aspx.

Implementation of the minimization measure identified above would ensure that no adverse effects on Williamson Act Contracted land would occur with implementation of the proposed Project.

Caltrans

LEGEND

- Williamson Contracted APN
- Proposed Area of Williamson Act Contract Cancellation
- Project Site Permanent Impacts
- Little Dry Creek

0 75 150
FEET

FIGURE 3A

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942 (210)

SOURCE: State of California FMMP (2014); Fresno County parcel data (2014); LSA (08/2016)

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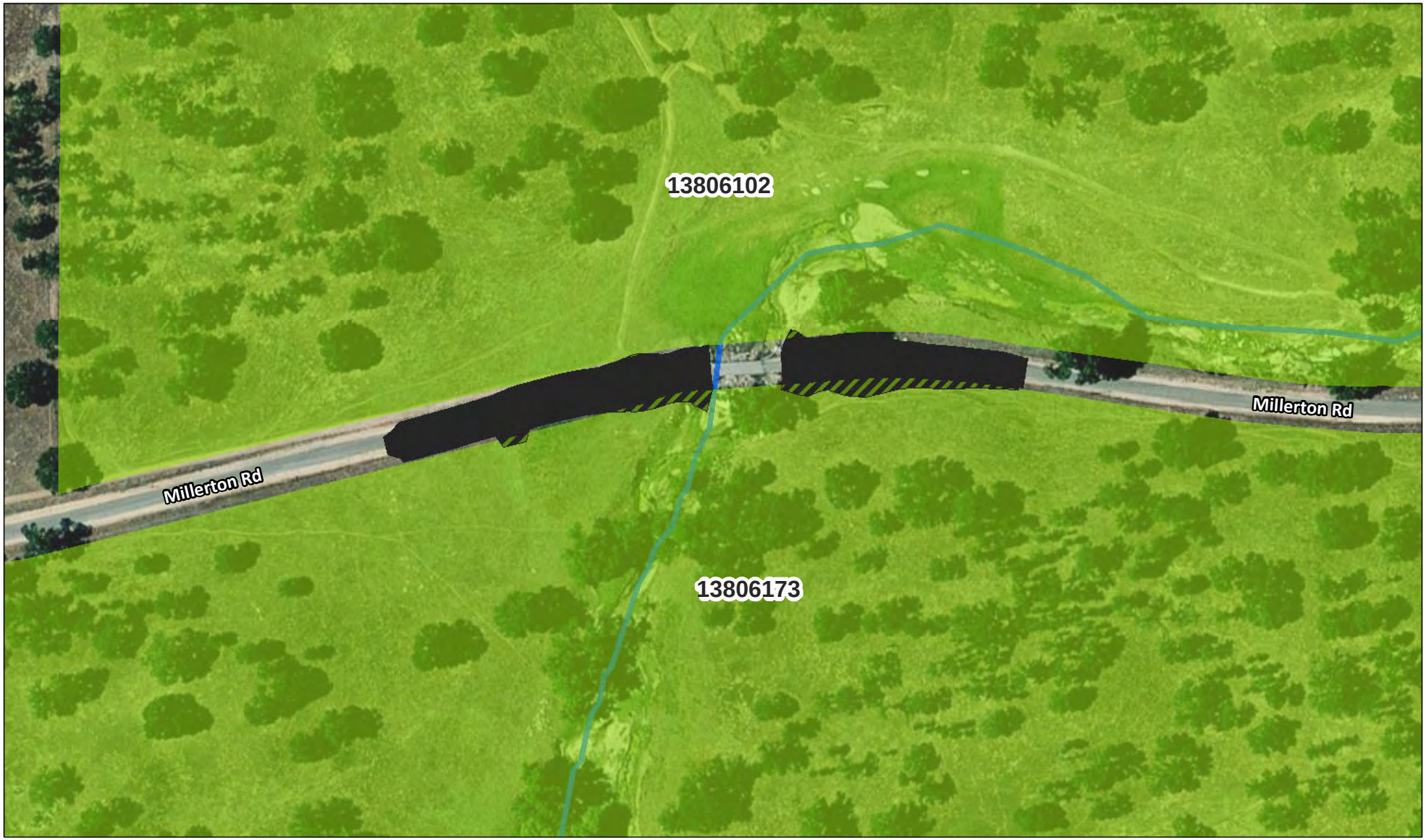
WILLIAMSON ACT CONTRACTED LAND IMPACTED BY BRIDGE NO. 42C0267



Caltrans

LEGEND

- Williamson Contracted APN
- Proposed Area of Williamson Act Contract Cancellation
- Project Site Permanent Impacts
- Little Dry Creek

0 75 150
FEET

FIGURE 3B

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942 (210)

SOURCE: State of California FMMP (2014); Fresno County parcel data (2014); LSA (08/2016)

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WILLIAMSON ACT CONTRACTED LAND IMPACTED BY BRIDGE NO. 42C0268

Caltrans

LEGEND

- Williamson Contracted APN
- Proposed Area of Williamson Act Contract Cancellation
- Project Site Permanent Impacts
- Little Dry Creek

0 75 150
FEET

FIGURE 3C

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942 (210)

SOURCE: State of California FMMP (2014); Fresno County parcel data (2014); LSA (08/2016)

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WILLIAMSON ACT CONTRACTED LAND IMPACTED BY BRIDGE NO. 42C0269

Caltrans

LEGEND

- Williamson Contracted APN
- Proposed Area of Williamson Act Contract Cancellation
- Project Site Permanent Impacts
- Little Dry Creek

0 75 150
FEET

FIGURE 3D

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942 (210)

SOURCE: State of California FMMP (2014); Fresno County parcel data (2014); LSA (08/2016)

WILLIAMSON ACT CONTRACTED LAND IMPACTED BY BRIDGE NO. 42C0270

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3.4 IMPACT SUMMARY

Implementation of the proposed Project does not result in the conversion of Important Farmland (Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance) as there is no Important Farmland designated within or adjacent to the Project site. The Project site is located on land designated as Grazing Land and Other Land by the FMMP and implementation of the Project would result in the temporary loss of 3.30 acres and permanent loss of 4.30 acres of Grazing Land from Fresno County and California's existing inventory. Avoidance, Minimization, and/or Mitigation measures are not recommended for Project implementation as there would be no impact to NRCS/FMMP designated Important Farmland. Furthermore, NRCS Form AD-1006 would not need to be completed and submitted to the NRCS as no Important Farmland would be impacted by Project implementation.

The proposed Project would be located in an area surrounded by land that is currently under Williamson Act Contracts. Implementation of the proposed Project would require the permanent acquisition of portions of the adjacent parcels that are under Williamson Act Contracts. Due to the right-of-way acquisition required for Project implementation, approximately 1.48 acres of land enrolled in Williamson Act Contracts would require contract termination to proceed with development. The remaining 1,079.26 acres of land on these five parcels would remain under Williamson Act Contracts.

4.0 REFERENCES

County of Fresno, Office of the Assessor. Assessor's Map Bk. 138, pages 6-7, September 2009.

County of Fresno, Office of the Assessor, "California Land Conservation Act or Williamson Act," (2016). Website accessed in August, 2016, http://www.co.fresno.ca.us/DepartmentPage.aspx?id=57163.

State of California, Department of Conservation, "Contract Cancellations," (2016) website accessed in August 2016, http://www.conservation.ca.gov/dlrp/lca/basic_contract_provisions/Pages/contract_cancellations.aspx#Back%20to%20Top.

State of California, Department of Conservation, "Land Use Conversion Tables: Fresno County," (2012-2014). Accessed in August, 2016, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Fresno.aspx.

State of California, Department of Conservation, "The California Land Conservation Act 2014 Status Report," (March 2015). Electronic PDF accessed in August, 2016, http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2014%20LCA%20Status%20Report_March_2015.pdf.

5.0 STUDY PARTICIPANTS

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Chris Graham, Environmental Planner
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Adanta

Initial Site Assessment

Millerton Road Over North Fork Little Dry Creek

Four Bridges

Fresno County, California

Prepared for

County of Fresno and

De Novo Planning Group

March 10, 2015

Adanta, Inc. Project A1272-1

Prepared for:

County of Fresno and
De Novo Planning Group

INITIAL SITE ASSESSMENT
Millerton Road Over North Fork Little Dry Creek
Four Bridges
Fresno County, California

Project: A1272-1
Date: March 10, 2015

Adanta, Inc.
Native American woman-owned
DOT-Certified SMBE / UDBE

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Adanta

Table of Contents

APPENDICES

EXECUTIVE SUMMARY

The overall Study Area is made up of four bridges on Millerton Road that cross over the North Fork of Little Dry Creek. This area of Millerton Road is east of Auberry Road and west of Morgan Canyon Road in north Fresno County.

Direct evidence of hazardous substances or petroleum products in the Study Areas under conditions that would be thought to significantly affect the feasibility or cost of the proposed projects was not observed nor obtained during the course of this Initial Site Assessment. The four bridges on Millerton Road were initially constructed in 1923. We are unaware that significant improvement has happened since that date. The bridge decks have a base of treated wood that were topped with corrugated metal and asphalt.

Conditions that indicate a potential for contamination that might possibly affect the project have been recognized and include the following:

- It is probable that existing weathered paint on the surface of the concrete embankments on both sides of each bridge contain lead, as well as chromium and zinc. Testing of the paint may be necessary prior to bridge demolition. The paint was white and observed to be very weathered.

- The California Air Resources Board and the San Joaquin Valley Air Pollution District have taken the position that all concrete contains asbestos. Concrete structures that are intended for demolition should be sampled for asbestos content. The bridge should be inspected for asbestos-containing materials (including shims, pads, and concrete). This study will require a Certified Asbestos Consultant.

- The bridges were constructed with treated wood beam supports. Caltrans and California Department of Toxic Substances Control (DTSC) require that treated wood is handled and disposed in a specific manner.

De Minimis Conditions

Biology

- Although not typically a part of an ISA, there were several endangered and threatened species noted in the PES within the Study Areas vicinities. If biological assessments are required to complete the projects, Adanta can assist in those studies.

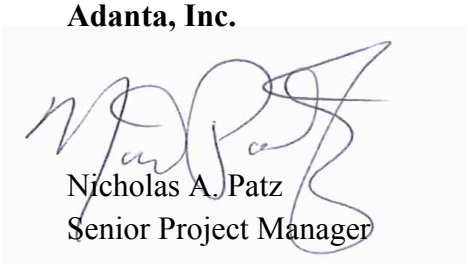
Aerially Deposited Lead (ADL)

- ADL may be found in the near surface soil on either side of Millerton Road because of the age of the roadway and the long-term exposure to the soil from vehicle emissions. It should be noted that each of the four bridges had an average daily traffic of only 600 vehicles in 2011. During the time when lead was in use as a gasoline additive, it is likely that fewer vehicles traveled in the Study Area, and significantly elevated concentrations of lead are not anticipated in the soil.

Refer to Appendix D of this report for Caltrans Standard Special Provisions (SSPs) when handling contaminants or meeting specialized hazardous waste regulatory or safety requirements.

Please call if you have any questions concerning this report. We appreciate the opportunity to be of service to you on this project.

Sincerely,
Adanta, Inc.



Nicholas A. Patz
Senior Project Manager

1.0 INTRODUCTION

At the request of De Novo Planning Group (De Novo), Adanta, Inc. (Adanta) conducted an Initial Site Assessment (ISA) for four bridges on Millerton Road Over North Fork of Little Dry Creek located in Fresno County, California (Study Area). Please refer to Figure 1 - Property Location Map.

The four bridges in this report are referred to as the following:

- **BRIDGE A #0267** – Located at Millerton Road over Little Dry Creek 0.81 miles east of Auberry Road (Bridge Number 42C0267)

- **BRIDGE B #0268** – Located at Millerton Road over Little Dry Creek 1.8 miles east of Auberry Road (Bridge Number 42C0268)

- **BRIDGE C #0269** – Located at Millerton Road over Little Dry Creek 2.6 miles east of Auberry Road (Bridge Number 42C0269)

- **BRIDGE D #0270** – Located at Millerton Road over Little Dry Creek 3.93 miles east of Auberry Road (Bridge Number 42C0270)

1.1 STUDY PURPOSE

The following report summarizes an environmental ISA conducted by Adanta for four bridges on Millerton Road over the North Fork of Little Dry Creek in northern Fresno County. It is our understanding that this ISA will be used as a preliminary document in preparation for the construction of new bridges.

This report was prepared in accordance with a request by De Novo to identify, based on readily available and assessable information and direct observation, the presence or likely presence of hazardous substances or petroleum products in the Study Area under conditions that could significantly affect the feasibility or cost of the proposed project. This study is intended for use in meeting the California Department of Transportation (Caltrans) requirements for preparation of the Project Report and Environmental Document. Additional limitations of this assessment are discussed in Section 5 of this report.

1.2 STUDY SCOPE

This ISA was conducted according to the guidelines of the Caltrans guidelines as explained in the Caltrans Standard Environmental Reference, Chapter 10, Hazardous Materials, Hazardous Waste, and Contamination. In addition, the ISA substantially meets the requirements of ASTM E1527-13 and the US EPA All Appropriate Inquiry rule, as a Phase I Environmental Site Assessment.

The research for this ISA included a Study Area and adjacent sites survey, interviews with informed persons, reviews of public records, an environmental database search report, review of previous reports (when obtained), and collection and review of current and historical ground level as well as current and historical aerial photographs.

This ISA study included the following tasks:

- A search of federal, state, and local regulatory agency databases for records of known or potential hazardous waste storage or release sites on or near the Study Area. Search distances varied for different databases, with a minimum search distance of 1⁄4-mile from the Study Area. Search distances are determined from guidelines under US EPA All Appropriate Inquiry (AAI) and ASTM E1527-13. This search was conducted by a third party and is summarized in this document.

- File reviews with California Regional Water Quality Control Board (CRWQCB), California Department of Toxic Substances Control (DTSC), and Fresno County Environmental Health Departments for sites identified in the various databases, if they are of the type that could impact the environmental integrity of the Study Area.

- A review of available literature (including information from the Adanta air photo and map library, and in the collection at Environmental Record Search) regarding regional or local physical setting, including topography, geology and hydrogeology.

- Online search for relevant current and historical information.

- Identify obvious past uses of the Study Area and adjoining sites, including review of reasonably available reports, historical maps, and aerial photography.

- Conduct Study Area reconnaissance, including a driving and walking survey of the area to make visual observations for evidence of current land uses, past uses, focusing on potential areas of environmental concern.

- Prepare a report presenting findings and professional opinions. A list of databases reviewed is included in Appendix C – Environmental Database Report and a list of references used in preparing this report is included in Section 3.5 Sources Of Data.

This report has been prepared under the supervision of an individual who meets the U.S. EPA's requirements for an Environmental Professional.

2.0 PROPERTY AND SURROUNDING AREA DESCRIPTIONS

To facilitate a working knowledge of the environmental conditions in each Study Area, it was necessary to research the proposed project and conduct a walking and driving reconnaissance of the Study Area and immediate surrounding area.

2.1 PROJECT DESCRIPTION

The proposed project would replace four bridges over Little Dry Creek on Millerton Road in northern Fresno County. Further investigation is needed to determine how the new bridges will be constructed and what methods of detour will be utilized at each location. Work in the Little Dry Creek channel is anticipated at each bridge location. The existing bridges have single-lanes, while Millerton Road is a two-lane road. Neither the bridges nor Millerton Road have paint striping to divide lanes or designate roadway shoulders. This proposed project will widen the bridges to accommodate two traffic lanes with bicycle facilities. There are no future plans, at this time, to widen or improve Millerton Road within the project limits.

It is anticipated that Millerton Road will remain open during construction. With the exception of the western most bridge (BRIDGE A #0267), the replacement bridges will most likely be constructed on the existing Millerton Road alignment. Since closing Millerton Road to construct any of the other three bridges would create a detour length of up to 20 miles, a temporary creek crossing will be constructed as part of the project to route traffic around the bridge construction sites. The temporary crossing will be constructed adjacent to existing bridges to limit the temporary construction footprint of the project.

The replacement structure for BRIDGE A #0267will be constructed downstream of the existing bridge allowing the existing bridge to remain in place and used by public traffic until construction of the replacement bridge is complete.

The replacement bridge for BRIDGE D #0270 could also potentially be placed on a realigned road just downstream of the existing bridge depending on if the associated new roadway approach work fits within the 400-foot fundable limits prescribed by the HBP for off system bridges. The feasibility of realigning Millerton Road at the BRIDGE D #0270 location will be determined as part of the project alternatives analysis effort.

2.2 STUDY AREA DESCRIPTION

Nick Patz of Adanta, conducted a walking survey of the Study Area on Wednesday March 2, 2015. Mr. Patz was not accompanied during the survey. The area surrounding the Study Area was observed from the approximate boundaries of the Study Area and during a drive-by survey of the surrounding area. On the day of the Study Area surveys the weather conditions were cool and partly cloudy. Weather conditions did not inhibit visual observation of Study Area conditions.

During the walking survey, the Study Area was observed for evidence of hazardous substances that may have an effect on the environmental quality of the Study Area and adjacent sites. Adanta observed each Study Area for evidence of lead-based paint, asbestos containing materials (ACM) aboveground and underground storage tanks, surface staining, hazardous materials containers, ponds, pits, and other indications of potential environmental concern. If conditions were observed that indicated potential environmental concerns, Adanta would have marked their relative locations on a map drawn in the field.

BRIDGE A #0267

Bridge A is located on Millerton Road approximately 0.81 miles east of Auberry Road. The bridge has concrete piers and embankments with treated wood support beams. Above the support beams is a layer of corrugated metal, which is topped by asphalt. The metal bridge railing is supported by metal channels attached to the treated wood support beams. Bridge A #0267 is a single-lane traffic structure that narrows from the two lanes of the existing Millerton Road. Adanta did not note paint striping or other painted surfaces on the bridge or Millerton Road during the Study Area Survey, except for very weathered white paint on the concrete embankments on either side of the Little Dry Creek channel. At the time of the Study Area Survey Little Dry Creek did not have water in its channel.

One side of the bridge was spanned with poultry wire from the base of the bridge to the surface of the channel in an apparent attempt to dissuade livestock from crossing under the bridge. Barbed-wire fencing has been placed on both sides of Millerton Road, ending at the bridge railing, in such a way that made it difficult to physically access the creek channel (refer to Photographs A1- A6, located in the Attachment – Study Area Photographs).

Obvious indications of environmental concern were not observed during the Property Survey.

BRIDGE B #0268

Bridge B is located on Millerton Road approximately 1.8 miles east of Auberry Road. The bridge has concrete piers with treated wood support beams. Above the support beams is a layer of corrugated metal topped by asphalt. The metal bridge railing is supported by metal channels that are attached to the treated wood support beams. The bridge is a single-lane traffic structure that narrows from the two lanes of Millerton Road. Adanta did not note paint striping or other painted surfaces on the bridge or Millerton Road during the Study Area Survey, except for very weathered white paint on the concrete embankments on either side of the Little Dry Creek channel. At the time of the Study Area Survey, Little Dry Creek was represented by a small stream of water in the channel under the bridge.

One side of the bridge was spanned with poultry wire, metal siding, and wooden pallets from the bottom of the bridge to the surface of Little Dry Creek channel in an apparent attempt to dissuade livestock from crossing under the bridge. Barbed-wire fencing has been placed adjacent to Millerton Road on both sides that terminates at the metal railing of the bridge. The fencing was placed in such a way that made it difficult to physically access the creek channel (refer to Photographs B1- B6, located in the Attachment – Study Area Photographs).

Obvious indications of environmental concern were not observed during the Property Survey.

BRIDGE C #0269

Bridge C is located on Millerton Road approximately 2.6 miles east of Auberry Road. The bridge has concrete piers with treated wood support beams. Above the wood support beams is a layer of corrugated metal topped by asphalt. The bridge railing is constructed of a horizontal metal beam supported by metal channels attached to the treated wood support beams. The bridge is a single-lane traffic structure that narrows from the two lanes of Millerton Road. Adanta did not note paint striping or other painted surfaces on the bridge or on Millerton Road during the Study Area Survey, except for very weathered white paint on the concrete embankments on either side of the Little Dry Creek channel. At the time of the Study Area Survey Little Dry Creek did not have water in its channel.

One side of the bridge, along the creek channel, was spanned with wooden fencing. The fencing was attached to the treated wood beams of the bridge with wire and terminated at the surface of the channel. It is believed that the fencing in the channel is an apparent attempt to dissuade livestock from crossing under the bridge. Barbed-wire fencing has been placed on both sides of Millerton Road, adjacent to the roadway and terminating at the bridge railing. The fencing was placed in such a way that made it difficult to access the creek channel (refer to Photographs C1-

C6, located in the Attachment – Study Area Photographs).

Obvious indications of environmental concern were not observed during the Property Survey.

BRIDGE D #0270

Bridge D is located on Millerton Road approximately 3.93 miles east of Auberry Road. The bridge has concrete piers with a decking of treated wood support beams. Above the support beams is a layer of corrugated metal topped by asphalt. The bridge railing is constructed with a horizontal metal beam that is supported by metal channels attached to the treated wood support beams. The bridge is a single-lane traffic structure that narrows from the two lanes of Millerton Road. Adanta did not note paint striping or other painted surfaces on the bridge or Millerton Road during the Study Area Survey, except for very weathered white paint on the concrete embankments on either side of the Little Dry Creek channel. At the time of the Study Area Survey Little Dry Creek did not have water in its channel.

One side of the bridge was spanned with poultry wire from the wood beams of the bridge to the surface of the channel in an apparent attempt to dissuade livestock from crossing under the bridge. Attached to the poultry wire were several used automotive tires. Barbed-wire fencing has been placed on both sides of Millerton Road adjacent to the roadway and terminating at the railing of the bridge. The fencing was placed in such a way that made it difficult to easily access the creek channel (refer to Photographs D1- D6, located in the Attachment – Study Area Photographs).

Obvious indications of environmental concern were not observed during the Property Survey.

2.3 SURROUNDING AREA DESCRIPTION

The sites surrounding each of the four bridges are very similar to one another. The four bridges are in a rural area of Fresno County. Very few residences were noted in the area. Residences were not observed in the near vicinity of the bridges. No commerce was noted along Millerton Road between Morgan Canyon road on the east and Auberry Road on the west. The area along Millerton Road is apparently used primarily for livestock grazing. However, at the time of the Study Area survey, livestock were not observed.

The area surrounding the four bridges did not have apparent environmental conditions that would impact the Study Areas. Hazardous chemicals, petroleum products, or indications of other similar adverse environmental conditions were not observed on adjacent sites.

3.0 RECORDS AND HISTORICAL REVIEW

Adanta compiled information concerning the current and historical environmental conditions at the Property by accessing and reviewing readily available records and conducting interviews with informed persons.

3.1 REGULATORY CONTACTS

As part of the ISA, Adanta contacted the following individuals and/or agencies:

- Adanta contacted the Fresno County Assessor's Office with a request to review files for the Study Area. The agency provided an assessor's parcel map of the Study Area and basic tax information.

- Adanta reviewed the State of California Regional Water Quality Control Board Geotracker online database to review files for the Property and adjacent sites. After review of the database information, the Study Area was not listed in the database and sites of environmental concern are not within distances that would be likely to have an impact on the environmental integrity of the Study Area. The database did not depict sites within five miles of the four bridges.

- Adanta reviewed the State of California Department of Toxic Substances Control Envirostor online database to review files for the Study Area and adjacent sites. After review of the database information, the Study Area was not listed in the database and sites of environmental concern are not within distances that would be likely to have an impact on the environmental integrity of the Study Area. The database did not depict sites within five miles of the four bridges.

- Adanta contacted the Fresno County Environmental Health Department with a request to review files for the Study Area. According to the agency, information for the Study Area was not found.

3.2 HISTORY OF PROPERTY USE

The following is our review of the history of the Study Area. Where possible it is the intention of this section to focus on area use by compiling and using the historical resources and using data gathered during the various activities of this assessment as referenced in Section 3.5, to assess area use.

Based upon information found in the National Bridge Inventory website (www.uglybridges.com) the four bridges were originally constructed in 1923. Adanta reviewed a 1919 topographic map that depicted a road trending through the Little Dry Creek valley, so it is likely that the current bridges replaced older bridges. However, information specifically relating to older bridges was not found during this study. In addition, review of the 1919 topographic map revealed that a rail line was in a portion of the valley. The rail line was no longer apparent in a topographic map dated 1947.

Subsequent historical information found during review of historical aerial photographs and historical topographic maps did not suggest that any commercial activity has occurred within the Study Areas. It is unlikely that activities thought to have an impact on the environmental integrity of the Study Areas have occurred since initial construction.

3.3 ENVIRONMENTAL DATABASE REPORT

Environmental Records Search, Inc. (ERS), was subcontracted to provide a database search called RecCheck. The database comprises a list of sites within designated distances of the Study Area that are listed by regulatory agencies. Most sites have limited descriptions of the reason for the regulatory listing. Environmental Records Search also provided a map of locations of these sites, which can be found in Appendix C - Environmental Database Report.

A single linear database was obtained for the four bridges from ERS. The search distances were obtained from about three miles of Millerton Road between Morgan Canyon Road and Auberry Road spanning from Bridge A through Bridge D. None of the four Study Areas were found in the listings of the environmental database report. Sites adjacent to the four Study Areas were not found in the environmental database report. In addition, sites in the near vicinity of the four Study Areas were not found in the environmental database report.

Adanta did not find information in the environmental database report that contaminated sites exist in the near vicinity of the Study Areas.

3.4 FILE REVIEWS AND REPORTS

Files reviewed at local regulatory agencies or found during online research if available, are summarized in Sections 3.1 and 3.2 and copies of available readily accessible documents can be found in Appendix B - Regulatory Data and Other Reports. Not all regulatory documents are readily available to be included in this ISA.

Fresno County conducted a Preliminary Environmental Study (PES) for the Study Areas that was provided to Adanta by De Novo. PES 210 provided a considerable amount of information concerning the Study Areas that did not include environmental concerns related hazardous materials for this ISA. Other environmental reports concerning hazardous material of the Study Area were not provided and were not found during this ISA.

3.5 SOURCES OF DATA

Adanta contacted regulatory agencies and other potentially knowledgeable persons and information sources concerning the Study Area where readily accessible. Copies of maps, permits, and other documents, if available, are in Appendix B - Regulatory Data and Other Reports.

The following are the information sources contacted by Adanta for this report:

Information Sources

- Fresno County Environmental Health Department
- Fresno County Assessor's Office
- State of California Regional Water Quality Control Board
- Environmental Records Search, RecCheck Environmental Database Report
- Regional Water Quality Control Board, Geotracker online database
- Department of Toxic Substances Control, Envirostor online database
- United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle: 1947, 1964, 1973, 1978 and 2012
- USGS 15-miniute Topographic Quadrangle Map, 1919
- USDA Natural Resources Conservation Service, Soil Survey of Eastern Fresno Area, California
- Sanborn Fire Insurance Maps were not produced within the Study Area
- Aerial Photographs and Satellite Images, dated 1940, 1946, 1998, 2003, 2005, 2009,

2010, 2013, 2014
- www.uglybridges.com National Bridge Inventory Data
- Preliminary Environmental Study (PES 210), by County of Fresno, November 7, 2014

4.0 PHYSICAL SETTING

Information sources were reviewed that would be thought to reveal the geographic situation of the Property that might suggest how surface and subsurface flows occur at the Property and in its general area. This information could help establish if the Study Area may have affected the environmental conditions of surrounding sites, or if surrounding sites may have affected the environmental condition of the Study Area.

4.1 SURFACE DESCRIPTION

Topography

The Study Area is comprised of four bridges on Millerton Road between Morgan Canyon Road and Auberry Road that are separated by a distance of approximately three miles. Each bridge overlays Little Dry Creek.

Millerton Road is a two-lane roadway that traverses a portion of the valley that has Little Dry Creek at its lowest point. Beginning on the east at Morgan Canyon Road, the valley has an elevation of 826 feet above mean sea level (AMSL). In the approximate location of Bridge A, which is 0.8 miles east of Auberry Road, the elevation is at 596 feet AMSL. Although Millerton Road and the valley that it is in meander, the general surface flow is from west to east. The peaks of the hills north and south of Millerton Road within about one mile of the road are approximately 1000 feet AMSL (USGS Academy, California 7.5 minute Quadrangle, Topographic Map).

Nearest Surface Water

Each of the bridges crosses Little Dry Creek. During the Study Area survey it was observed that the creek was dry in at BRIDGE A #0267, BRIDGE C #0269, and BRIDGE D #0270. The only location with observed water was BRIDGE B #0268. However, based on observation of vegetation it is likely that at all of the bridge locations Little Dry Creek has intermittent water.

4.2 SOIL AND GROUNDWATER

Soil Description

Based upon information found in the Fresno County Soil Survey produced by the US Department of Agriculture (USDA), soil in the Study Area can be generally described as belonging to the Auberry Series, which is described as the following: *In a typical profile, the surface layer is slightly acid, grayish-brown, and pale-brown coarse sandy loam about 12 inches thick. The subsoil is mainly compact, brown sandy clay loam that has blocky structure. The reaction is medium acid. Deeply weathered parent rock underlies the subsoil at a depth of about 42 inches.*

Groundwater Description

The nearest site on Geotracker is the Clovis Landfill, which is about five miles south of the intersection of Auberry Road and Millerton Road, and may not reflect groundwater conditions throughout the Study Area. However, data from monitoring wells at the landfill suggest that groundwater can typically be found between about 45 feet and 85 feet below ground surface.

Based upon local topography it is likely that the general flow of groundwater is east to west throughout the Study Area.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The data gathered during this assessment was compiled in order to draw conclusions concerning the current and former uses of the Study Area, with regard to potential environmental impairment caused by hazardous chemicals and petroleum products.

5.1 SUMMARY

The four bridges assessed during this ISA are found along the length of Millerton Road between Auberry Road and Morgan Canyon Road. This area has remained in rural pasture use since construction of the bridges in 1923.

A 1919 topographic map was reviewed that depicted the area as being rural with an established road in the Little Dry Creek valley and a rail line trending through a portion of that valley. Review of various other historical resources has revealed that there was no longer a rail line in the area from at least 1947 since that time the area has substantially remained the same since as it appeared during the Study Area surveys.

5.2 CONCLUSIONS AND RECOMMENDATIONS

Lead-Based Paint

There is no lane striping on the bridges or on Millerton Road. However, there is weathered paint on the concrete embankments on either side of each bridge.

Any work that disturbs the existing paint system may expose workers to health hazards and can produce debris containing heavy metal in amounts that exceed the thresholds established in Titles 8 and 22 of the California Code of Regulations and produce toxic fumes when disturbed or heated. All debris disturbed or produced while working on the structure must be contained. For bridges over water, the containment system must include a skimming boom consisting of a float with a skirt to collect floating debris.

Prior to starting work that disturbs the existing paint system, and when revisions to the compliance program are required, the contractor must submit a lead compliance plan under SSPs 14-11.07 and 14-11.08, "Lead Compliance Plan," of the Standard Specifications. The Contractor

must make necessary arrangements to test the debris as required by the disposal facility and as specified. Testing must include at a minimum:

1. Total Lead using US EPA Method 6010B
2. Soluble Lead using the California Waste Extraction Test (WET)
3. Soluble Lead using the Toxicity Characteristic Leaching Procedure (TCLP)

Asbestos

In addition, a Non-Standard Special Provision - Removal of Asbestos Containing Materials should be included to address removal of Asbestos Containing Materials (ACM) for the identified bridge (See NSSP 14-11.11 in Appendix C). ACM is defined in section 1529, "Asbestos," of the Construction Safety Orders, Title 8, of the California Code of Regulations. The U.S. EPA requires that the concrete has been thoroughly inspected as well as any other suspect material associated with a bridge, which will be subject to demolition or renovation operations. The structure potentially has ACM in the attached guard railing, and ACM may be present in the concrete or shims.

Treated Wood

The wood beams that are beneath the asphalt deck and the wood supports for the metal railing of the bridge are chemically treated wood, and must be handled as such. Caltrans has issued a memorandum on the subject: Treated Wood Waste-Alternative Management Standards, and has issued a standard special provision 14-11-09, which can be found in Appendix D.

Air Quality Compliance

A non-standard specification - Air Quality NESHAP Notification should be included for air quality compliance (See attached 5-1 Air Quality – NESHAP notification in Appendix C). In compliance with Standard Specifications Section 14-9.01, the Contractor must notify the appropriate agencies as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 61, Subpart M, and California health and Safety Code section 39658(b)(1). Notification must take place a minimum of 10 working days prior to starting demolition or renovation activities as defined in the NESHAP regulations.

Refer to Appendix D of this report for Caltrans Standard Special Provisions (SSPs) and recommended Non-Standard Special Provisions (NSSPs) when handling contaminants or meeting specialized hazardous waste regulatory or safety requirements.

Refer to Appendix D of this report for Caltrans Standard Special Provisions (SSPs) and recommended Non-Standard Special Provisions (NSSPs) when handling contaminants or meeting specialized hazardous waste regulatory or safety requirements.

DE MINIMIS CONDITIONS

Aerially Deposited Lead (ADL)

Environmental conditions noted on the Study Area that appear to be of minimal impact include the possibility that ADL would be in the near surface soil on either side of Millerton Road because of the age of the roadway and the long-term exposure of the soil from vehicle emissions. It should be noted that the four bridges had an average daily traffic of only 600 vehicles in 2011. During the time when lead was in use as a gasoline additive, it is likely that fewer vehicles traveled in the Study Area. It is unlikely, but possible, that high concentrations of ADL remain in the soil.

6.0 LIMITATIONS

This Initial Site Assessment was conducted according to industry standards and guidelines established under Chapter 10 of the Caltrans Standard Environmental Reference.

This assessment cannot fully eliminate the possibility that the Study Area has environmental impairments. Even with today's technology, no amount of assessment can certify that the Study Area is completely free of environmental concern. It is possible undocumented or concealed conditions of the Study Area could exist beyond what was found during this ISA. This report does not cover any Study Area conditions beyond the date the Study Area survey was conducted.

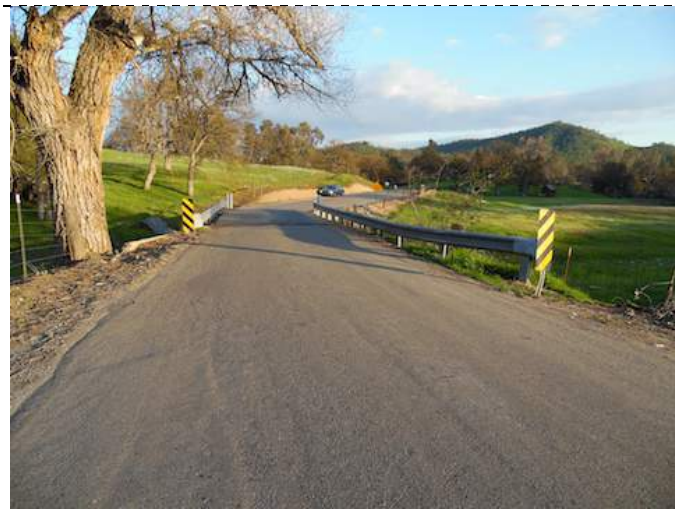
Physical setting information provided in this report is for drawing conclusions, by Adanta, within the context and timing of this report only. This information is preliminary and should not be used for any subsequent purposes.

Much of the information, upon which the conclusions and recommendations of this ISA are based, comes from data provided by others. Adanta is not responsible for the accuracy or completeness of this information. Inaccurate data, or information that was not found or made available to Adanta, may result in a modification of the stated conclusions and recommendations.

Any estimates of the scope of recommendations are based only on the information found during this assessment. Actual scope may vary upon refining data during proposal preparation, with changes in economic conditions, or as additional information becomes available.

This report is not a legal opinion and does not offer warranties or guarantees.

PHOTOGRAPHS



Photograph A1 – Looking east along Millerton Road.

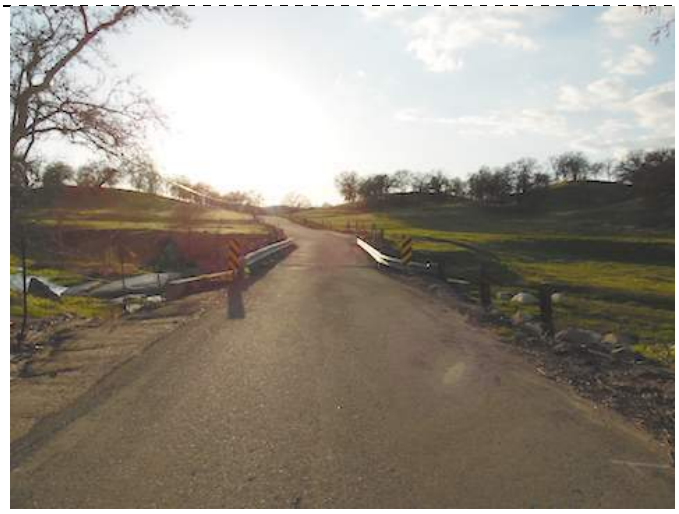
Photograph A2 - North side of bridge.

Photograph A3 - Looking south in channel bottom.

Photograph A4 – Timber substructure of bridge.

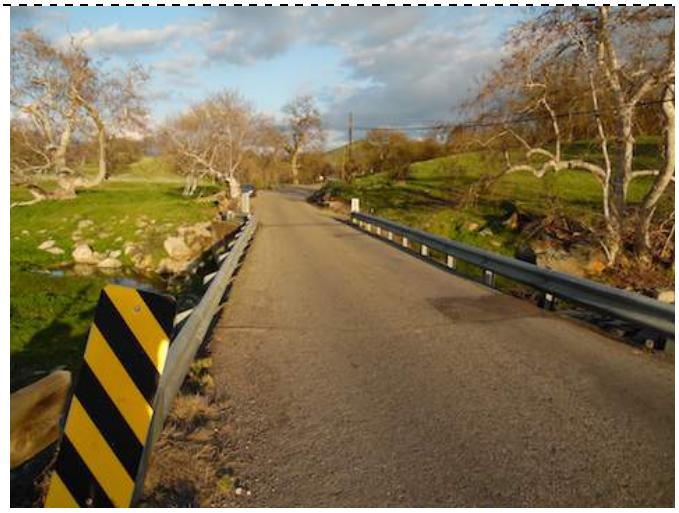
Photograph A5 – South side of bridge.

Photograph A6 - Looking south toward channel.



Photograph B1 - Looking west.

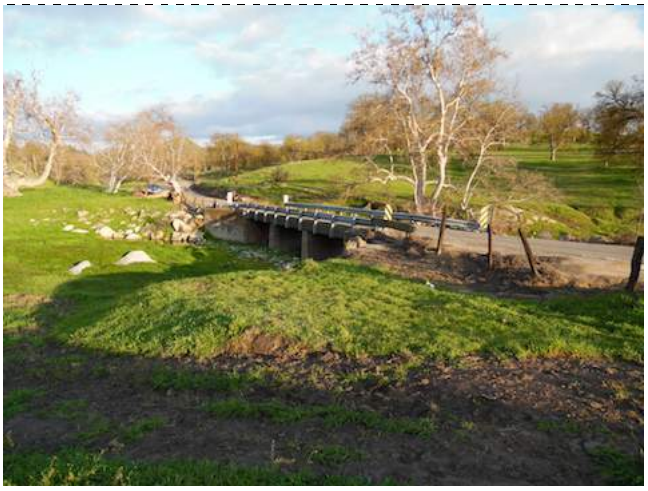
Photograph B2 - Little Dry Creek channel. This was the only water noted during the surveys of the four bridges.



Photograph B3 - Looking west.

Photograph B4 – Bridge from channel bottom.

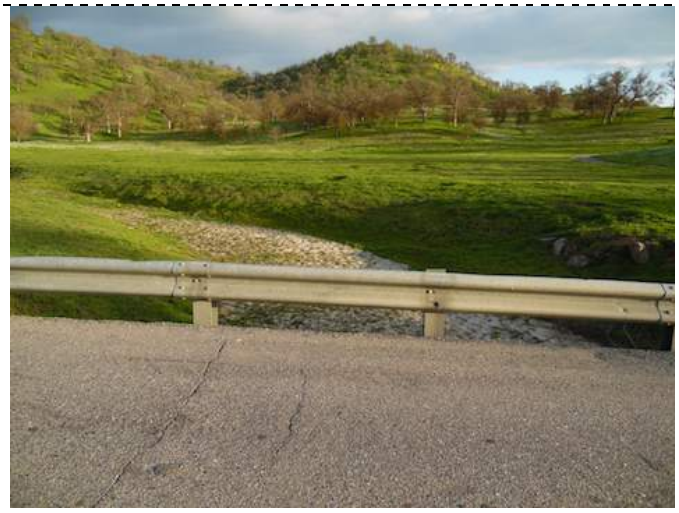
Photograph B5 – Timber undercarriage of bridge, and fencing blocking channel for livestock preservation.



Photograph B6 - Looking approximately south at bridge.

Photograph C1 - Looking west.

Photograph C2 - Southern railing of bridge.



Photograph C3 - Looking north.

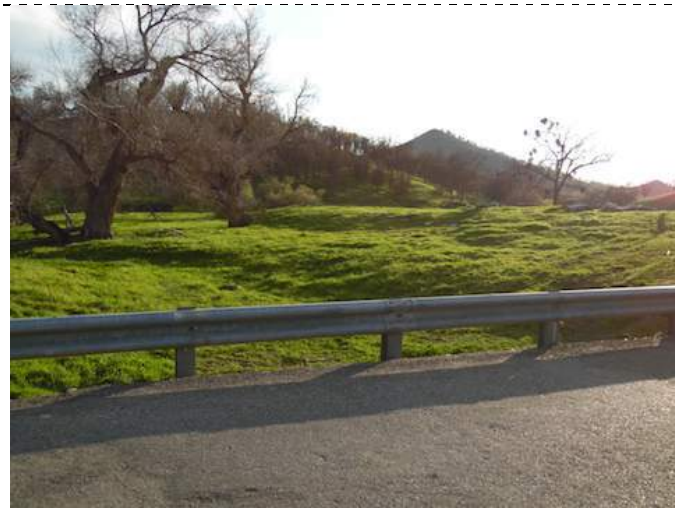
Photograph C4 –Fencing apparently constructed to detour livestock from crossing under bridge.

Photograph C5 – Wood beams proving bridge support.

Photograph C6 – Looking north from bridge.

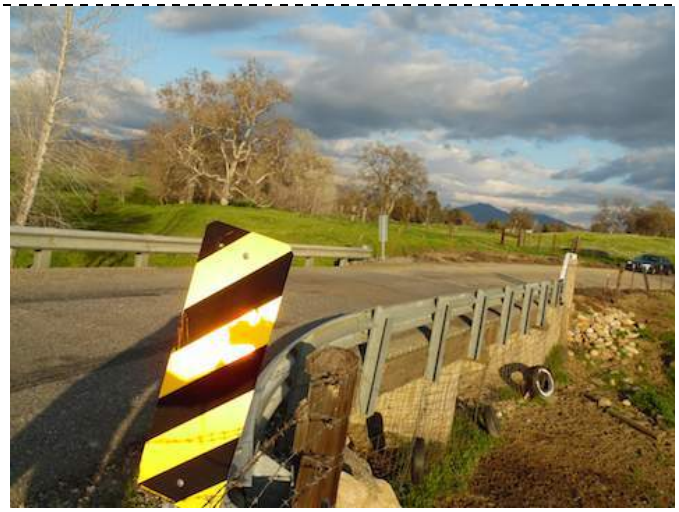
Photograph D1 - Looking approximately west.

Photograph D2 - Little Dry Creek channel on south side of bridge.



Photograph D3- Looking approximately north.

Photograph D4- Little Dry Creek Channel on north side of bridge.



Photograph D5 – South side of bridge with used tires attached to poultry fencing.

Photograph D6 – Looking approximately west.

FIGURES

Base: Google Earth

Adanta

Millerton Road over Little Dry Creek
Four Bridges
Fresno County, California

STUDY AREA LOCATION MAP

Project A1272-1 March 2015

FIGURE
1

Base: Google Earth

Adanta

Millerton Road Over Little Dry Creek
Fresno County, California

Project A1272-1 March 2015

STUDY AREA MAP
BRIDGE A #0267

FIGURE
2

Base: Google Earth

Adanta

Millerton Road Over Little Dry Creek
Fresno County, California

Project A1272-1 March 2015

STUDY AREA MAP
BRIDGE B #0268

FIGURE
3

Base: Google Earth

Adanta

Millerton Road Over Little Dry Creek
Fresno County, California

Project A1272-1 March 2015

STUDY AREA MAP
BRIDGE C #0269

FIGURE
4

Base: Google Earth

Adanta

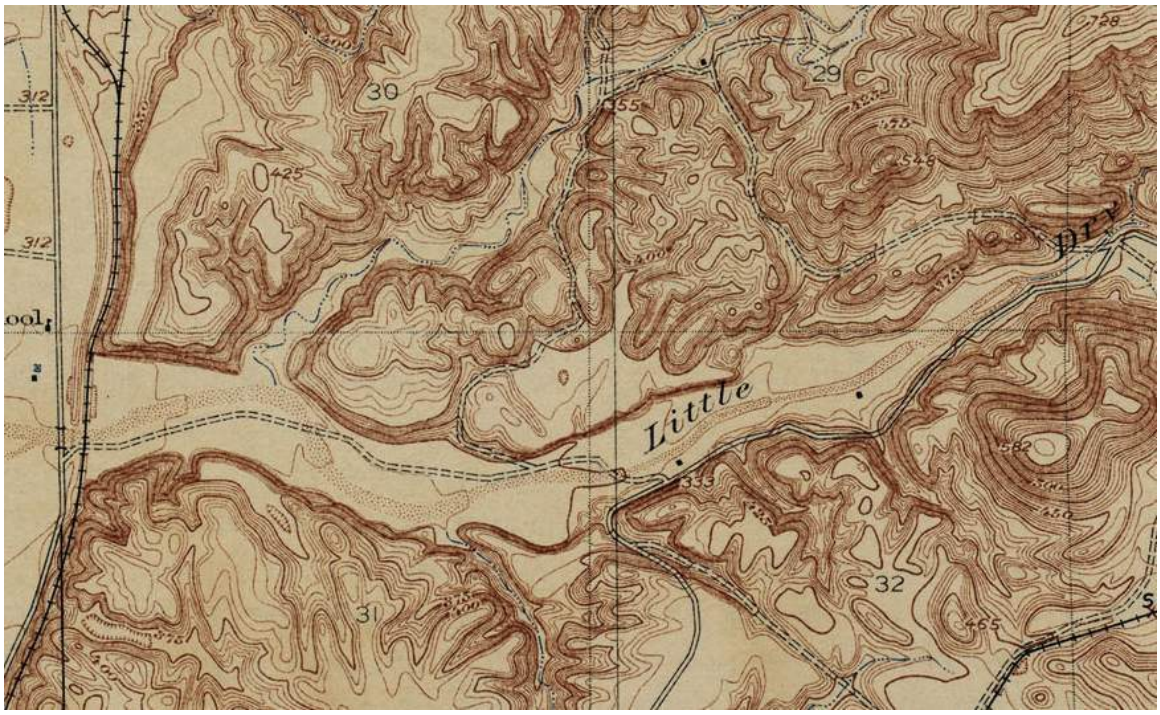
Millerton Road Over Little Dry Creek
Fresno County, California

Project A1272-1 March 2015

STUDY AREA MAP
BRIDGE D #0270

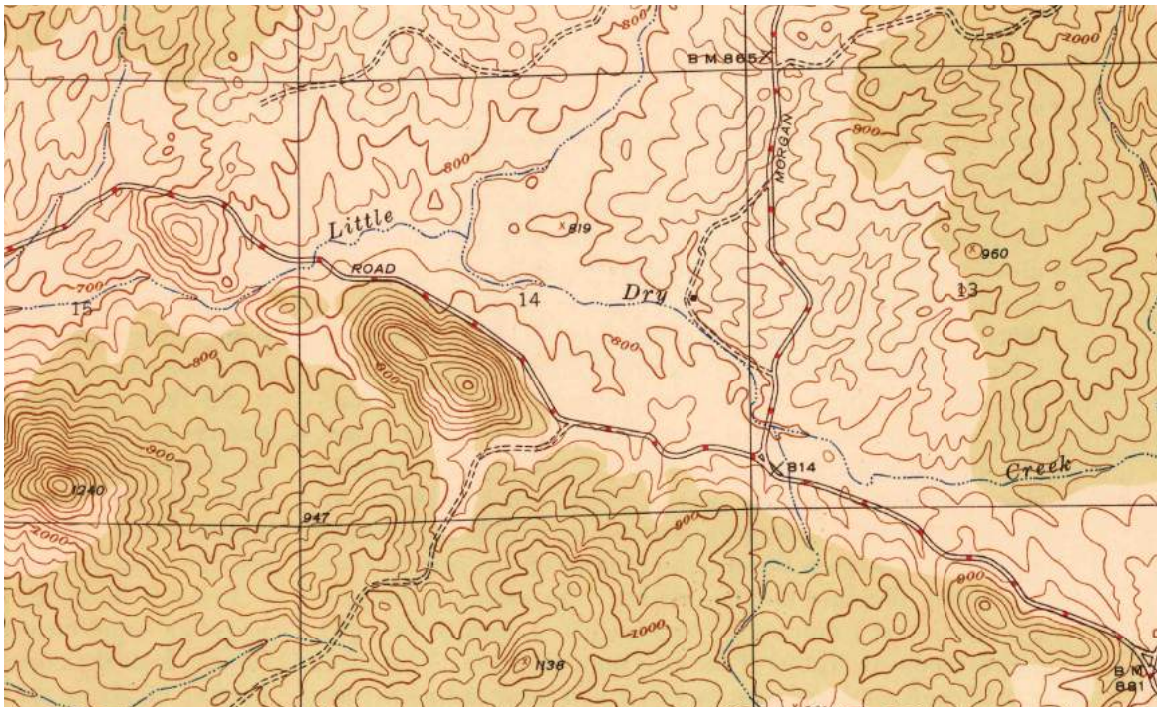
FIGURE
5

APPENDIX A
HISTORICAL DOCUMENTATION

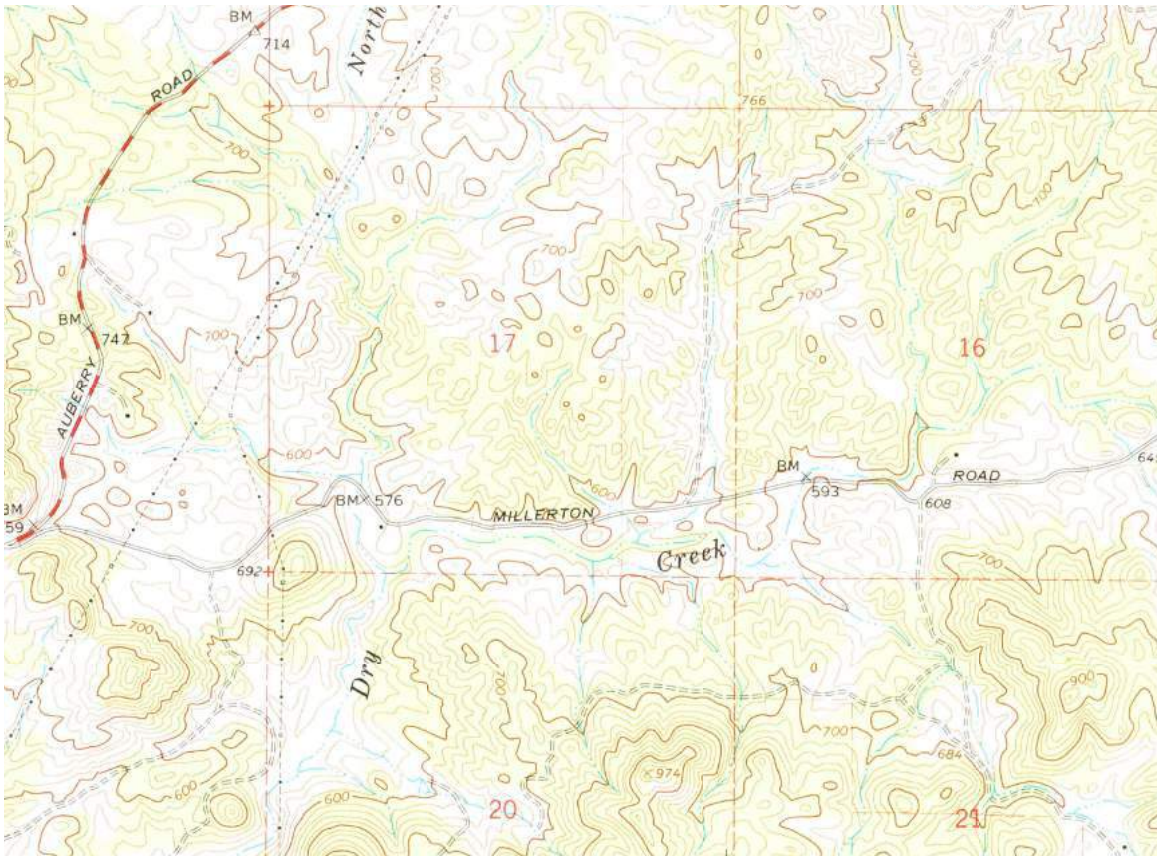


1919

1947 west



1947 east


BM
714
North
ROAD
766
700
BM
742
AUBERRY
17
16
BM
593
ROAD
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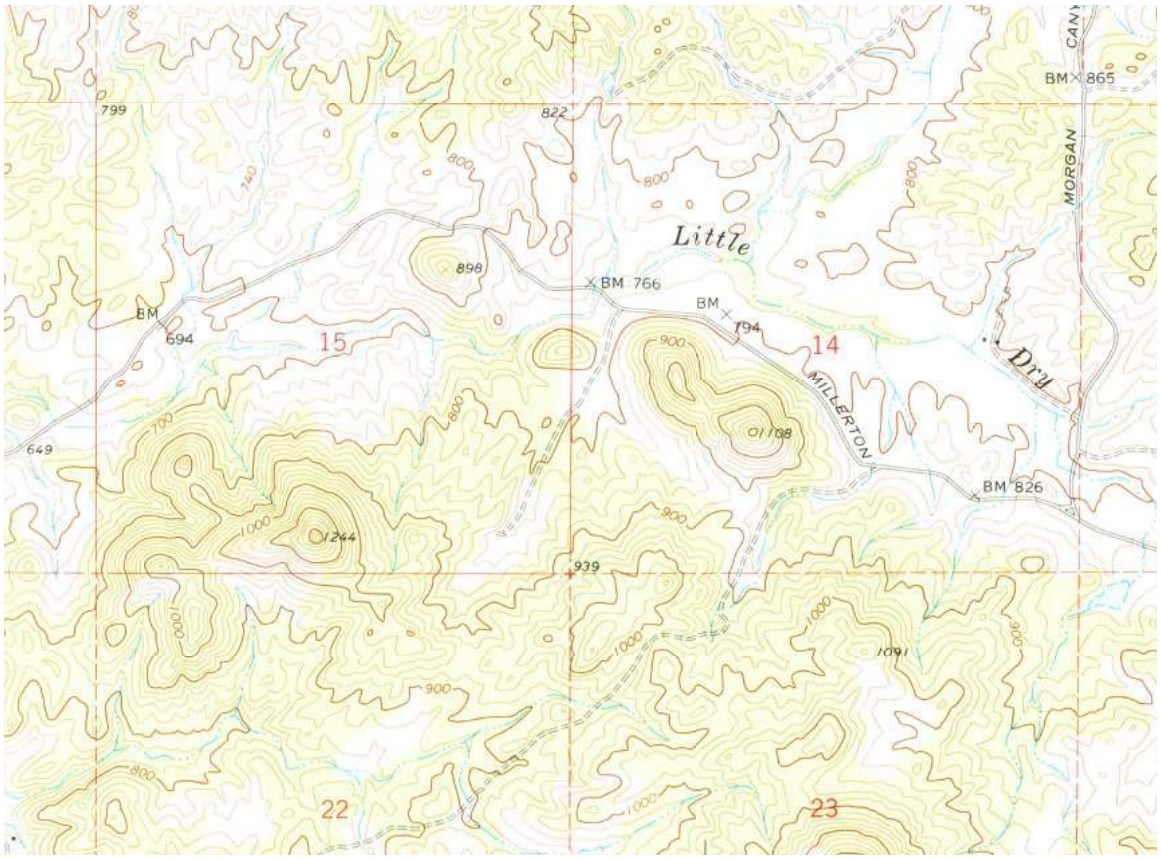
BM
576
MILLERTON
692
Creek
Dry
974
684
900
20
21

1964 west


BM 865
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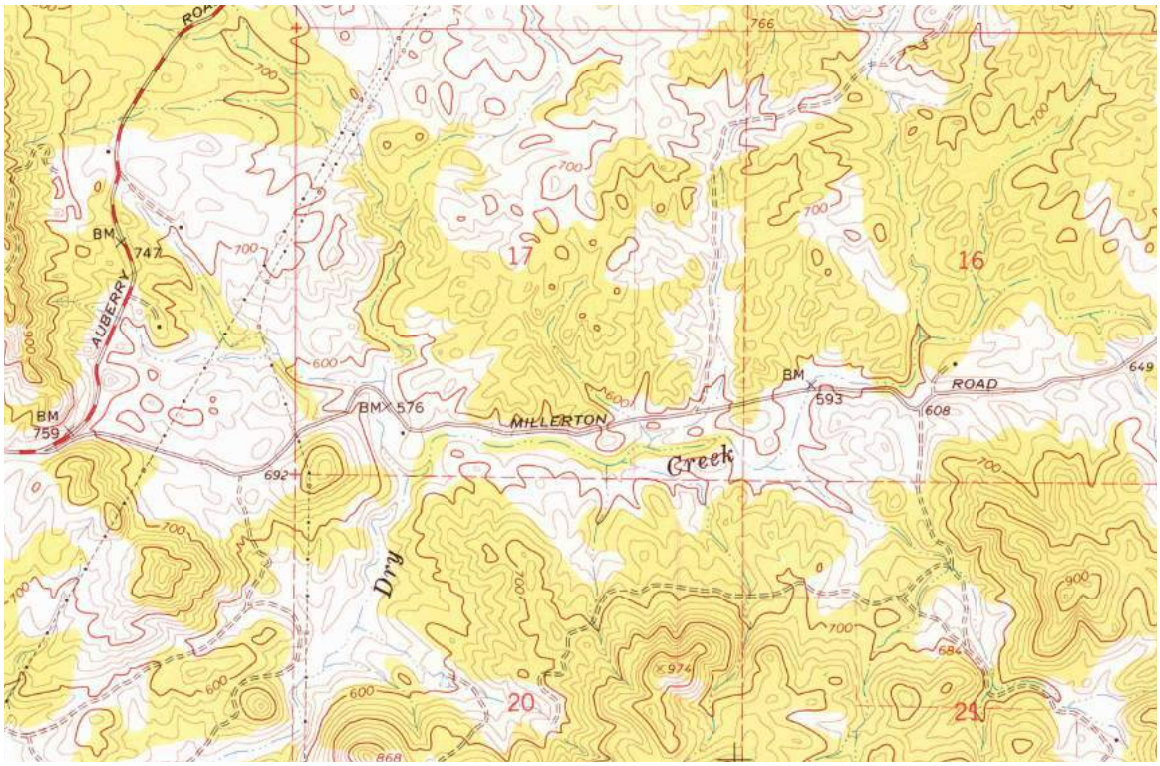
800
740
898
Little
BM 766
BM
694
15
BM
794
14
900
MORGAN
Dry
MILLERTON
700
649
1108
BM 826
1000
1244
939
1091
900
800
22
23

1964 east


AUBERRY
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BM
759
BM 576
MILLERTON
Creek
Dry
BM
593
ROAD
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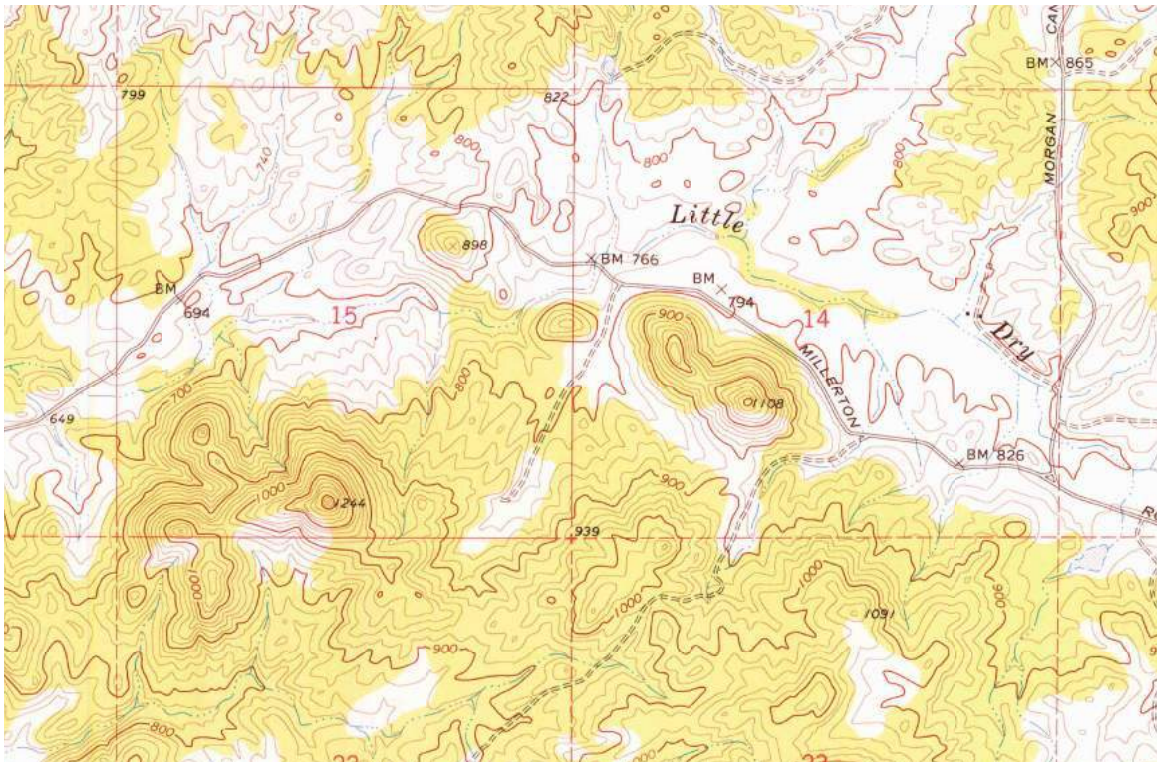
649
17
16
20
21
692
766
974
868

1973 west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MORGAN
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BM 766
BM
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MILLERTON
Dry
BM 826
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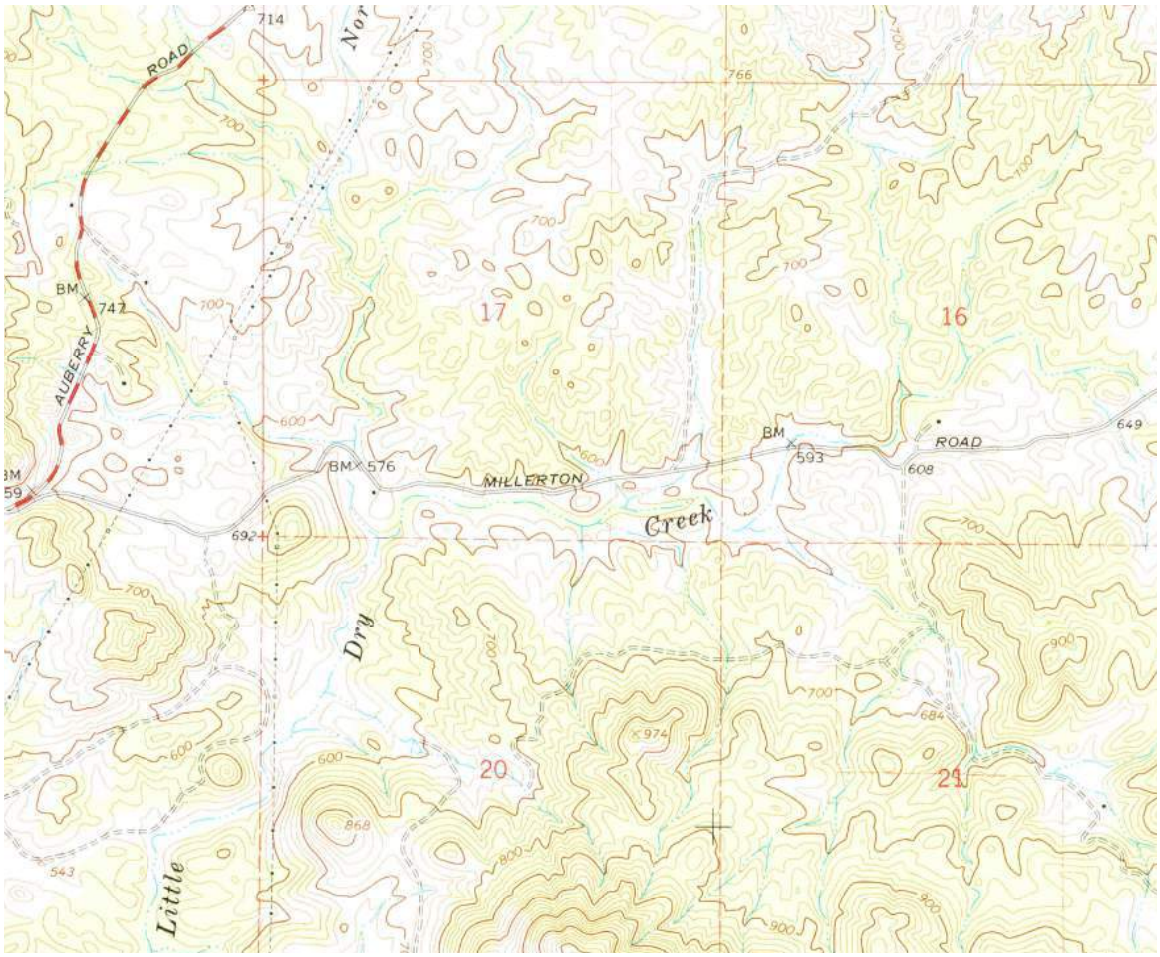
939
1091

1973 east


ROAD
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Dry
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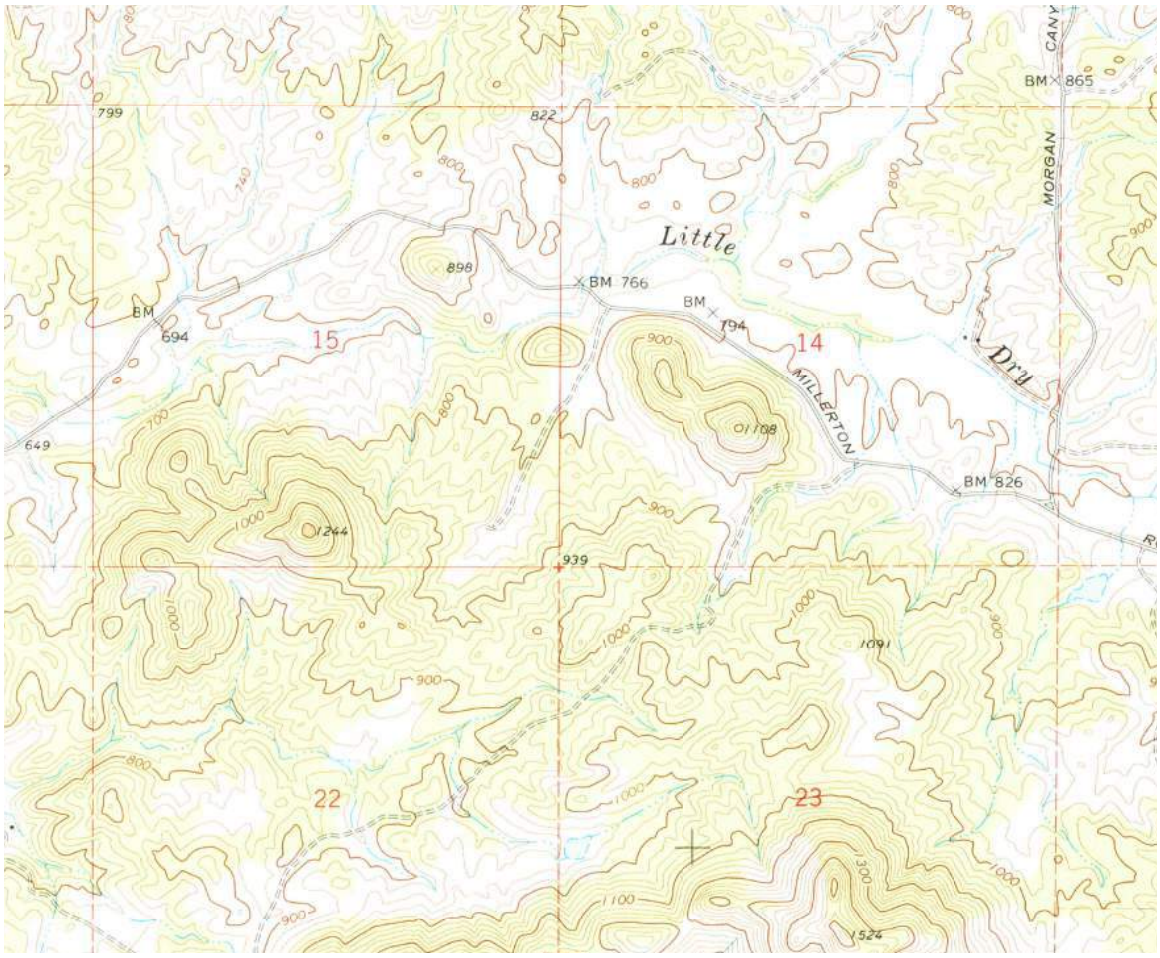
868
543
800
Little

1978 west



1978 east

BRIDGE A #0267

2014

2010 (A)

2005 (A)

2003 (A)

1998

BRIDGE B #0268

2014 (B)

2009 (B)

2005 (B)

2003 (B)

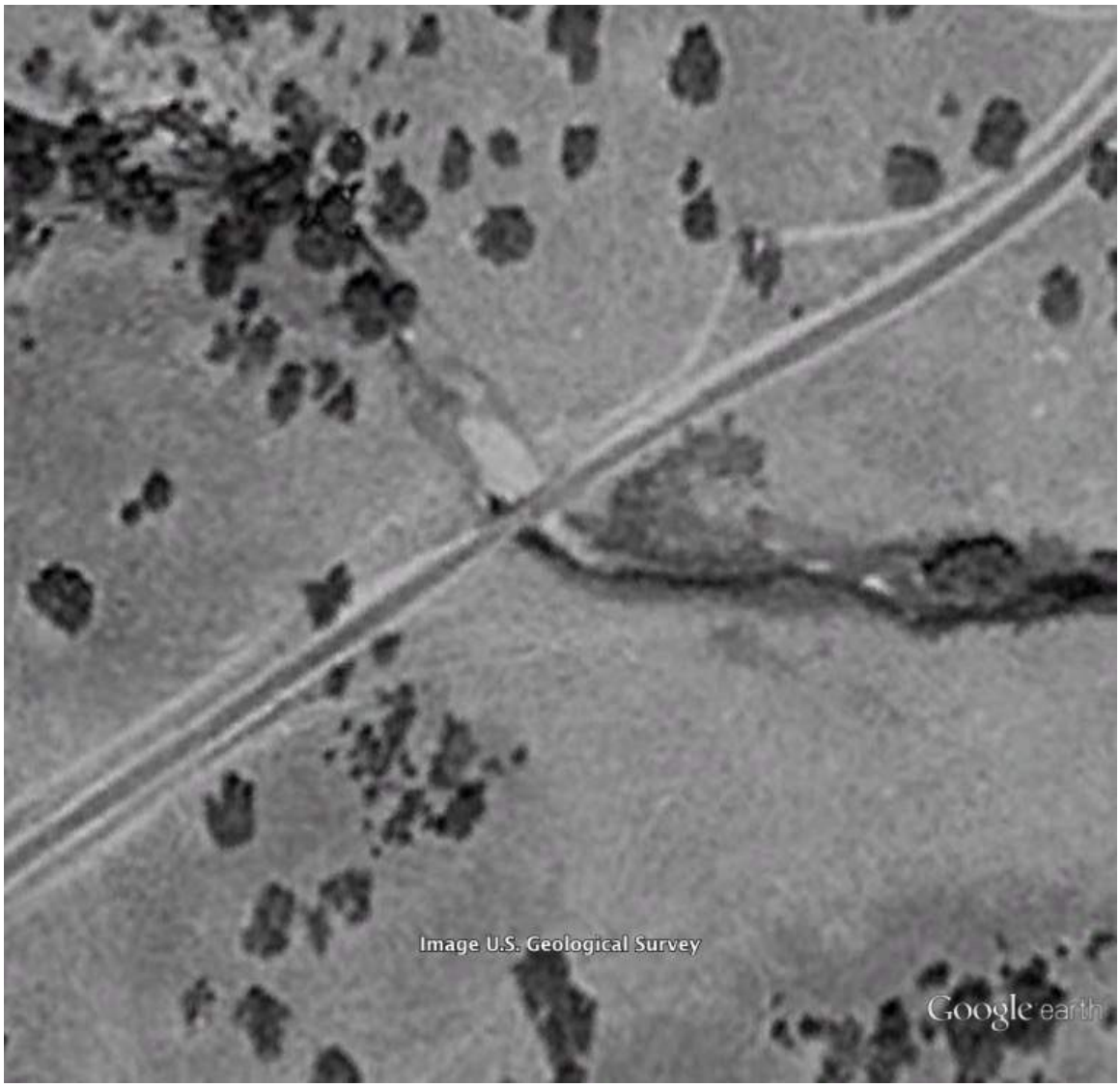
1998 (B)

BRIDGE C #0268

2014

2009 (C)

2005 (C)



1998 (C)

1946 (C)

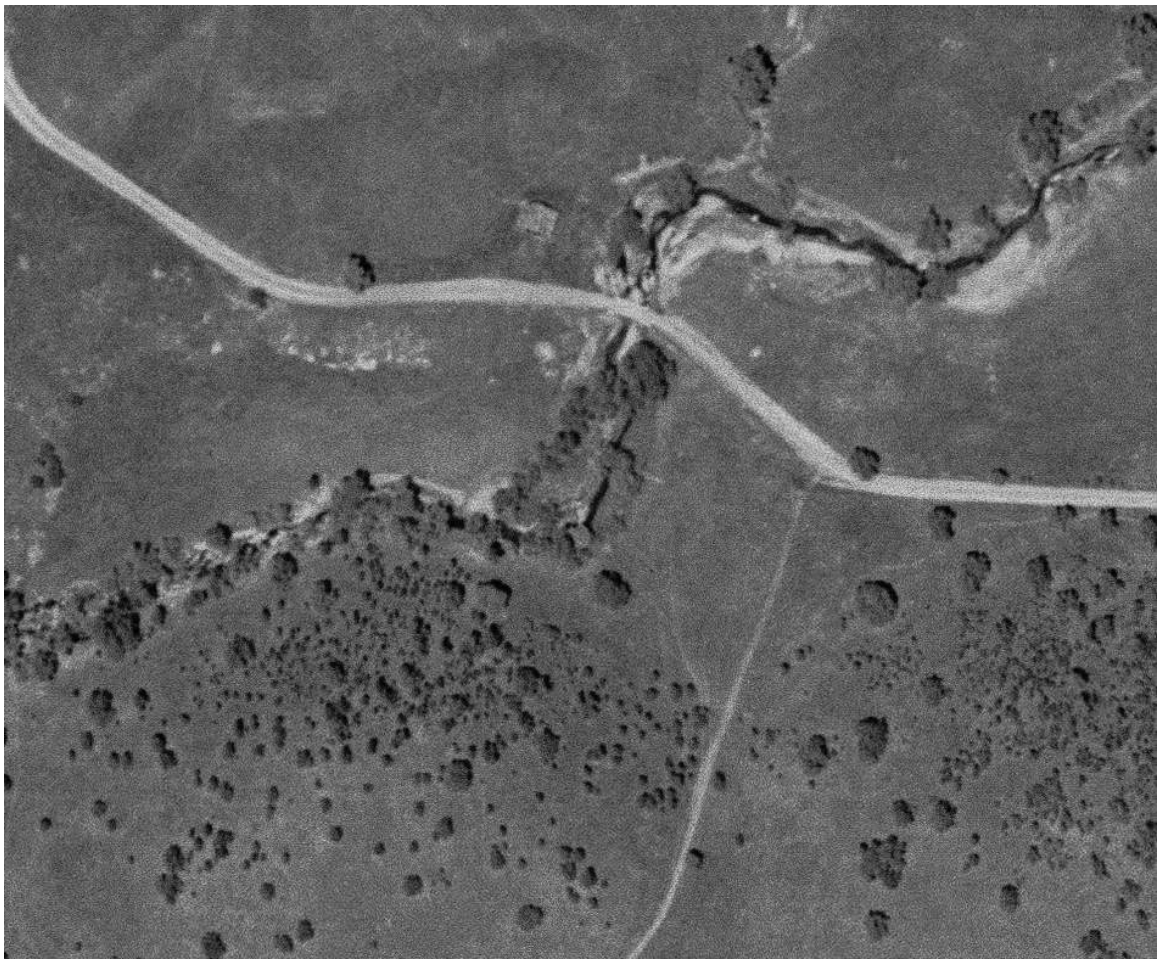
BRIDGE D #0270

2013

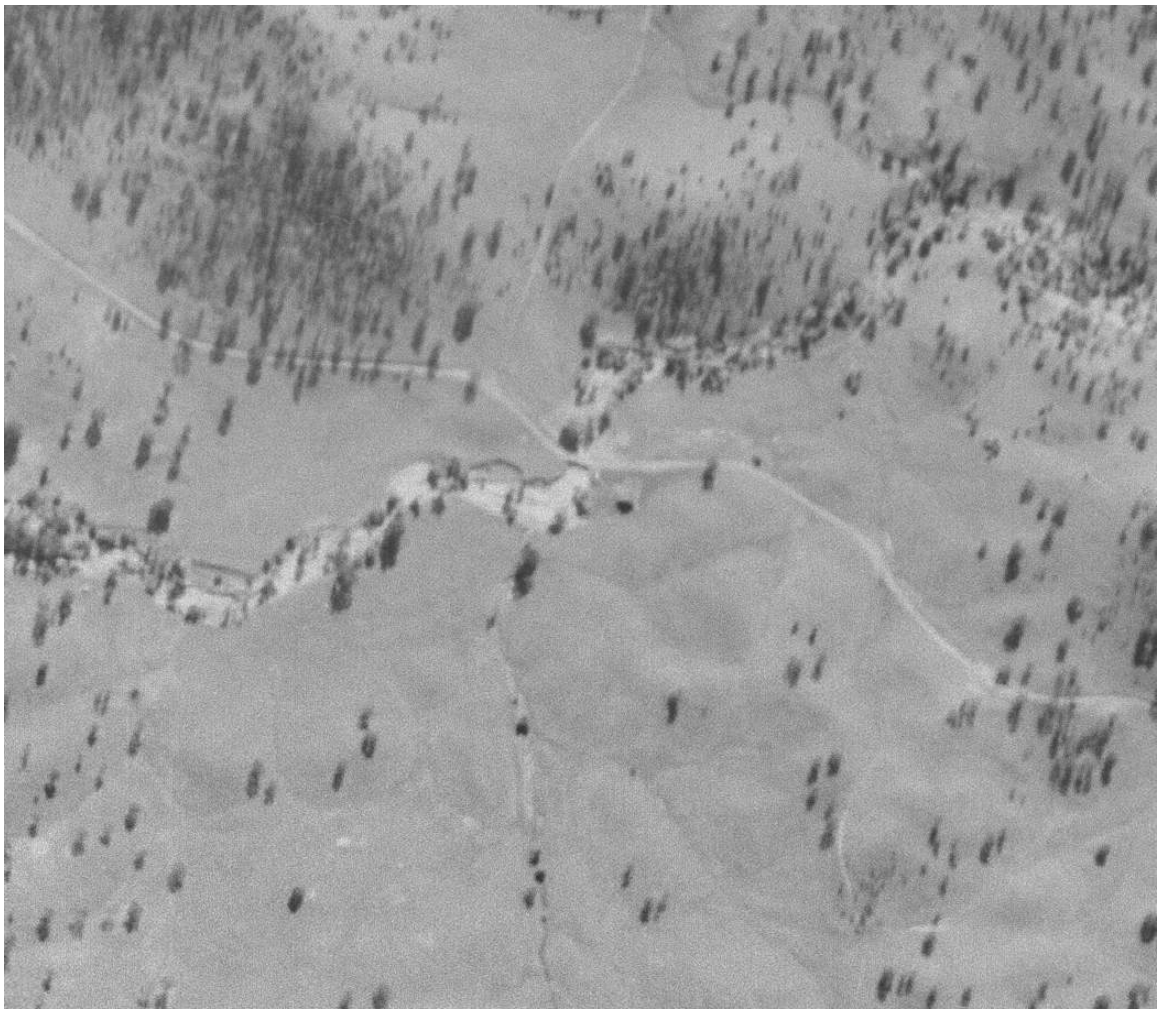
2009 (D)

2005 (D)

1998 (D)



1946 (D)



1940 (D)

APPENDIX B
REGULATORY DATA AND OTHER REPORTS

LETTER OF TRANSMITTAL

COUNTY OF FRESNO
Public Works and Planning
Design Division
2220 Tulare Street, 7th Floor
Fresno, CA 93721-2106

11/7/14 AR

DATE: ~~11/10/14~~ JOB:

RE: **NEPA Review**
BRLO-5942(210)

TO: Jim Perrault, DLAE
Attn: Tom Glaski

WE ARE SENDING: ☒ Attached ☐ Under Separate Cover, via:

THE FOLLOWING ITEMS:

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Specifications
☐ Copy of Letter ☐ Photos ☐ Clarification ☐ Samples
☐ Change Order ☐ Report(s) ☐ BOS Agenda Item

COPIES	DATE	NO.	DESCRIPTION
1			PES Form

REMARKS: PLEASE INITIATE NEPA REVIEW FOR BRLO-5942(210). THANK YOU

SIGNED:

Alexis Rutherford, Staff Analyst
559-600-4530
arutherford@co.fresno.ca.us

EXHIBIT 6-A PRELIMINARY ENVIRONMENTAL STUDY (PES)

Federal Project No.: BRLO-5942(210) *(Federal Program Prefix-Project No., Agreement No.)*
Final Design: 2020 *(Expected Start Date)*

To: Mr. James Perrault *(District Local Assistance Engineer)*
District 6 *(District)*
855 M Street, Suite 200, Fresno, CA 93721 *(Address)*
James.Perrault@dot.ca.gov

From: County of Fresno *(Local Agency)*
Ms. Erin Haagenson (559) 600-4528 *(Project Manager's Name and Telephone No.)*
2220 Tulare Street, Suite 600 *(Address)*
ehaagenson@co.fresno.ca.us *(Email Address)*

Is this Project "ON" the State Highway System? ☐ Yes ☒ No **IF YES, STOP HERE** and contact the District Local Assistance Engineer regarding the completion of other environmental documentation.

Federal State Transportation Improvement Program (FSTIP) http://www.dot.ca.gov/hq/transprog/fedpgm.htm: **2015** *(Currently Adopted Plan Date)* **(See Attachment A)** *(Page No.___ attach to this form)*

http://www.dot.ca.gov/hq/transprog/oftmp.htm

Programming for FSTIP:

Preliminary Engineering		Right of Way		Construction	
Prior	326,000	15/16	75,000	Beyond	1,690,000
Prior	326,000	15/16	45,000	Beyond	1,444,000
Prior	326,000	15/16	45,000	Beyond	1,458,000
Prior	$ 326,000	15/16	$ 30,000	Beyond	$ 1,484,000
(Fiscal Year)	*(Dollars)*	*(Fiscal Year)*	*(Dollars)*	*(Fiscal Year)*	*(Dollars)*

Project Description as Shown in RTP and FSTIP:
BRIDGE NO. 42C0267, Millerton Road, Over North Fork Little Dry Creek, .81 Miles East of Auberry Road. Replace structurally deficient single lane bridge with standard two lane bridge. Toll credits programmed for PE, R/W, & CON.

BRIDGE NO. 42C0268, MILLERTON ROAD, OVER LITTLE DRY CREEK, 1.8 MILE E OF AUBERRY ROAD. Replace single lane structurally deficient bridge with standard two lane bridge. Toll credits programmed for PE, R/W, & CON.

BRIDGE NO. 42C0269, MILLERTON ROAD OVER LITTLE DRY CREEK, 2.6 MILES EAST OF AUBERRY ROAD. Replace single lane bridge as two lane bridge. Toll credits programmed for PE, R/W, & CON.

BRIDGE NO. 42C0270, Millerton Road, Over Little Dry Creek, 3.93 Miles East of Auberry Rd. Replace two lane functionally obsolete bridge with standard two lane bridge. Toll credits programmed for PE, R/W, & CON.

Detailed Project Description: See project notes.

Preliminary Design Information:
Does the project involve any of the following? Please check the appropriate boxes and delineate on an attached map, plan, or layout including any additional pertinent information.

Yes	No		Yes	No		Yes	No	
☒	☐	Widen existing roadway	☒	☐	Ground disturbance	☒	☐	Easements
☐	☒	Increase number of through lanes	☒	☐	Road cut/fill	☒	☐	Equipment staging
☐	☒	New alignment	☒	☐	Excavation: anticipated maximum depth 25' max.	☒	☐	Temporary access road/detour
☐	☒	Capacity increasing—other (e.g., channelization)	☒	☐	Drainage/culverts	☒	☐	Utility relocation
☒	☐	Realignment	☐	☒	Flooding protection	☒	☐	Right of way acquisition (if yes, attach map with APN)
☐	☒	Ramp or street closure	☒	☐	Stream channel work	☐	☒	Disposal/borrow sites
☒	☐	Bridge work	☒	☐	Pile driving	☐	☒	Part of larger adjacent project
☒	☐	Vegetation removal						
☒	☐	Tree removal	☒	☐	Demolition	☐	☒	Railroad

Required Attachments:

☒ Regional map ☒ Project location map ☒ Project footprint map (existing/proposed right of way)
☐ Engineering drawings (existing and proposed cross sections), if available ☐ Borrow/disposal site location map, if applicable
(Note: all maps (except project location map and regional maps) should be consistent with the project description (minimum scale: 1" = 200').)

☒ Notes to support the conclusions of this checklist/project description continuation page (attached)

Examine the project for potential effects on the environment, direct or indirect and answer the following questions. The "construction area," as specified below, includes all areas of ground disturbance associated with the project, including staging and stockpiling areas and temporary access roads.

Each answer must be briefly documented on the "Notes" pages at the end of the PES Form.

A. Potential Environmental Effects	Yes	To Be Determined	No
General			
1. Will the project require future construction to fully utilize the design capabilities included in the proposed project?	☐	☐	☒
2. Will the project generate public controversy?	☐	☐	☒
Noise			
3. Is the project a Type I project as defined in 23 CFR 772.5(h); "construction on new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes"?	☐	☐	☒
4. Does the project have the potential for adverse construction-related noise impact (such as related to pile driving)?	☐	☒	☐
Air Quality			
5. Is the project in a NAAQS non-attainment or maintenance area?	☒	☐	☐
6. Is the project exempt from the requirement that a conformity determination be made? (If "Yes," state which conformity exemption in 40 CFR 93.126, Table 2 applies):Widening narrow pavements or reconstructing bridges (no additional travel lanes).	☒	☐	☐
7. Is the project exempt from regional conformity? (If "Yes," state which conformity exemption in 40 CFR 93.127, Table 3 applies): _____	☒	☐	☐
8. If project is not exempt from regional conformity, (If "No" on Question #7)			
Is project in a metropolitan non-attainment/maintenance area?	☐	☐	☐
Is project in an isolated rural non-attainment area?	☐	☐	☐
Is project in a CO, PM10 and/or PM2.5 non-attainment/maintenance area?	☐	☐	☐
Hazardous Materials/Hazardous Waste			
9. Is there potential for hazardous materials (including underground or aboveground tanks, etc.) or hazardous waste (including oil/water separators, waste oil, asbestos-containing material, lead-based paint, ADL, etc.) within or immediately adjacent to the construction area?	☒	☐	☐
Water Quality/Resources			
10. Does the project have the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area?	☒	☐	☐
11. Is the project within a designated sole-source aquifer?	☒	☐	☐
Coastal Zone			
12. Is the project within the State Coastal Zone, San Francisco Bay, or Suisun Marsh?	☐	☐	☒
Floodplain			
13. Is the construction area located within a regulatory floodway or within the base floodplain (100-year) elevation of a watercourse or lake?	☒	☐	☐
Wild and Scenic Rivers			
14. Is the project within or immediately adjacent to a Wild and Scenic River System?	☐	☐	☒

Biological Resources			
15. Is there a potential for federally listed threatened or endangered species, or their critical habitat or essential fish habitat to occur within or adjacent to the construction area?	☒	☐	☐
16. Does the project have the potential to directly or indirectly affect migratory birds, or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work, etc.)?	☒	☐	☐
17. Is there a potential for wetlands to occur within or adjacent to the construction area?	☒	☐	☐
18. Is there a potential for agricultural wetlands to occur within or adjacent to the construction area?	☐	☐	☒
19. Is there a potential for the introduction or spread of invasive plant species?	☐	☒	☐
Sections 4(f) and 6(f)			
20. Are there any historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4[f]) within or immediately adjacent to the construction area?	☐	☐	☒
21. Does the project have the potential to affect properties acquired or improved with Land and Water Conservation Fund Act (Section 6[f]) funds?	☐	☐	☒
Visual Resources			
22. Does the project have the potential to affect any visual or scenic resources?	☐	☒	☐
Relocation Impacts			
23. Will the project require the relocation of residential or business properties?	☐	☐	☒
Land Use, Community, and Farmland Impacts			
24. Will the project require any right of way, including partial or full takes? Consider construction easements and utility relocations.	☒	☐	☐
25. Is the project inconsistent with plans and goals adopted by the community?	☐	☐	☒
26. Does the project have the potential to divide or disrupt neighborhoods/communities?	☐	☐	☒
27. Does the project have the potential to disproportionately affect low-income and minority populations?	☐	☐	☒
28. Will the project require the relocation of public utilities?	☐	☒	☐
29. Will the project affect access to properties or roadways?	☐	☐	☒
30. Will the project involve changes in access control to the State Highway System (SHS)?	☐	☐	☒
31. Will the project involve the use of a temporary road, detour, or ramp closure?	☒	☐	☐
32. Will the project reduce available parking?	☐	☐	☒
33. Will the project construction encroach on state or federal lands?	☐	☐	☒
34. Will the project convert any farmland to a different use or impact any farmlands?	☐	☒	☐
Cultural Resources			
35. Is there National Register listed, or potentially eligible historic properties, or archaeological resources within or immediately adjacent to the construction area? *(Note: Caltrans PQS answers question #35)*	☐	☐	☐
36. Is the project adjacent to, or would it encroach on Tribal land?	☐	☐	☒

For Sections B, C, and D, check appropriate box to indicate required technical studies, coordination, permits, or approvals.

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☐ **Traffic**		
Check one:		
☐ Traffic Study	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☒ **Noise**		
Check as applicable:		

	☐ Traffic Related ☒ Construction Related ***Check one:***		
	☐ Noise Study Report	☐ Caltrans	☐ Approval
	☐ NADR	☐ Caltrans	☐ Approval
	☒ Technical Memorandum	☒ Caltrans	☒ Approval
	☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☒	**Air Quality** ***Check as applicable:*** ☒ Traffic Related ☒ Construction Related ***Check one:***		
	☐ Air Quality Report	☐ Caltrans	☐ Approval
	☐ Technical Memorandum	☐ Caltrans	☐ Approval
	☒ Discussion in ED Only	☐ Caltrans	☐ Approval
		☐ FHWA	☐ Conformity Finding (23 USC 327 CEs, EAs, EISs)
		☒ Caltrans	☒ Conformity Finding (23 USC 326 CEs)
		☐ Regional Agency	☐ PM10/PM2.5 Interagency Consultation
☒	**Hazardous Materials/ Hazardous Waste** ***Check as applicable:***		
	☒ Initial Site Assessment (Phase 1)	☒ Caltrans	☒ Approval
	☐ Preliminary Site Assessment (Phase 2)	☐ Caltrans	☐ Approval
	☐ Discussion in ED Only	☐ Caltrans	☐ Approval
		☐ Cal EPA DTSC	☐ Review Database
		☐ Local Agency	☐ Review Database
☒	**Water Quality/Resources** ***Check as applicable:***		
	☐ Water Quality Assess. Report	☐ Caltrans	☐ Approval
	☒ Technical Memorandum	☒ Caltrans	☒ Approval
	☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐	**Sole-Source Aquifer (Districts 5, 6 and 11)**	☐ EPA (S.F. Regional Office)	☐ Approval of Analysis in ED
☐	**Coastal Zone**	☐ CCC	☐ Coastal Zone Consistency Determination

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☒ **Floodplain**		
Check as applicable:		
☒ Location Hydraulic Study	☒ Caltrans	☒ Approval
☐ Floodplain Evaluation Report	☐ Caltrans	☐ Approval
☒ Summary Floodplain Encroachment Report	☒ Caltrans	☒ Approval
	☐ Caltrans	☐ Only Practicable Alternative Finding
	☐ FHWA	☐ Approves significant encroachments and concurs in Only Practicable Alternative Findings
☐ **Wild and Scenic Rivers**	☐ River Managing Agency	☐ Wild and Scenic Rivers Determination
☒ **Biological Resources**		
Check as applicable:		
☐ NES, Minimal Impact	☐ Caltrans	☐ Approval
☒ NES		
☒ BA	☒ Caltrans	☒ Approves for Consultation
	☒ USFWS ☐ NOAA Fisheries	☒ Section 7 Informal/Formal Consultation
☐ EFH Evaluation	☐ NOAA Fisheries	☐ MSA Consultation
☐ Bio-Acoustic Evaluation	☐ NOAA Fisheries	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☒ **Wetlands**		
Check as applicable:		
☒ WD and Assessment	☒ Caltrans	☒ Approval
	☒ ACOE	☒ Wetland Verification
	☐ NRCS	☐ Agricultural Wetland Verification
	☐ Caltrans	☐ Wetlands Only Practicable Alternative Finding
☒ **Invasive Plants**		
☒ Discussion in ED Only	☒ Caltrans	☒ Approval
☐ **Section 4(f)**		
Check as applicable:	☐ Caltrans	☐ Determine Temporary Occupancy
☐ De minimis	☐ Caltrans	☐ De minimis finding
☐ Programmatic 4(f) Evaluation Type: _____	☐ Caltrans	☐ Approval
☐ Individual 4(f) Evaluation	☐ Caltrans	☐ Approval
	☐ Agency with Jurisdiction ☐ SHPO ☐ DOI ☐ HUD ☐ USDA	

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☐ **Section 6(f)**		
	☐ Agency with Jurisdiction	
	☐ NPS	☐ Determines Consistency with Long-Term Management Plan
	☐ NPS	☐ Approves Conversion
☒ **Visual Resources**		
☒ Technical Memorandum	☒ Caltrans	☒ Approval
☐ Minor VIA	☐ Caltrans	☐ Approval
☐ Moderate VIA	☐ Caltrans	☐ Approval
☐ Advance/Complex VIA	☐ Caltrans	☐ Approval
☐ **Relocation Impacts**		
Check one:		
☐ Relocation Impact Memo	☐ Caltrans	☐ Approval
☐ Relocation Impact Study	☐ Caltrans	☐ Approval
☐ Relocation Impact Report	☐ Caltrans	☐ Approval
☐ **Land Use and Community Impacts**		
Check one:		
☐ CIA	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Construction/Encroachment on State Lands**		
Check as applicable:		
☐ SLC Jurisdiction	☐ SLC	☐ SLC Lease
☐ Caltrans Jurisdiction	☐ Caltrans	☐ Encroachment Permit
☐ SP Jurisdiction	☐ SP	☐ Encroachment Permit
☐ **Construction/Encroachment on Federal Lands**		
	☐ Federal Agency with Jurisdiction	☐ Encroachment Permit
☐ **Construction/Encroachment On Indian Trust Lands**	☐ Bureau of Indian Affairs	☐ Right of Way Permit
☒ **Farmlands**		
Check one:		
☐ CIA	☐ Caltrans	☐ Approval
☒ Technical Memorandum	☒ Caltrans	☒ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
Check as applicable:		
☒ Form AD 1006	☒ NRCS	☒ Approves Conversion
	☐ CDOC	☐ Approves Conversion
☐ Conversion to Non-Agri Use	☐ ACOE	

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/ Approvals
☒ **Cultural Resources** (PQS completes this section) ***Check as applicable:***	☐ Caltrans PQS	☐ Screened Undertaking
☒ APE Map	☒ Caltrans PQS and DLAE	☒ Approves APE Map
	☒ Local Preservation Groups and/or Native American Tribes	☒ Provides Comments Regarding Concerns with Project
☒ HPSR ☒ ASR ☐ HRER	☒ Caltrans	☒ Approves for Consultation
☐ Finding of Effect Report	☐ Caltrans	☐ Concurs on No Effect, No Adverse Effect with Standard Conditions
	☐ SHPO	☐ Letter of Concurrence on Eligibility, No Adverse Effect without Standard
☐ MOA	☐ Caltrans	☐ Approves MOA
	☐ SHPO	☐ Approves MOA
	☐ ACHP (if requested)	☐ Approves MOA
☒ **Permits** Copies of permits and a list of mitigation commitments are mandatory submittals following NEPA approval.	☒ ACOE	☒ Section 404 Nationwide Permit
	☐ ACOE	☐ Section 404 Individual Permit
	☐ Caltrans/ACOE/EPA ☐ USFWS ☐ NOAA Fisheries	☐ NEPA/404 Integration MOU
	☐ ACOE	☐ Rivers and Harbors Act Section 10 Permit
	☐ USCG	☐ USCG Bridge Permit
	☒ RWQCB	☒ Section 401 Water Quality Certification
	☒ CDFG	☒ Section 1602 Streambed Alteration Agreement
	☒ RWQCB	☒ NPDES Permit
	☐ CCC ☐ Local Agency	☐ Coastal Zone Permit
	☐ BCDC	☐ BCDC Permit

Notes: Additional studies may be required for other federal agencies.

ACHP = Advisory Council on Historic Preservation
ACOE = U.S. Army Corps of Engineers
ADL = Aerially Deposited Lead
APE = Area of Potential Effect
APN = Assessor Parcel Number
ASR = Archaeological Survey Report
BA = Biological Assessment
BCDC = Bay Conservation and Development Commission
BE = Biological Evaluation
BO = Biological Opinion
Cal EPA = California Environmental Protection Agency
CCC = California Coastal Commission
CDFG = California Department of Fish and Game
CDOC = California Department of Conservation
CE = Categorical Exclusion
CIA = Community Impact Assessment
CWA = Clean Water Act
DLAE = District Local Assistance Engineer
DOI = U.S. Department of Interior
DTSC = Department of Toxic Substances Control
EA = Environmental Assessment
ED = Environmental Document
EFH = Essential Fish Habitat
EIS = Environmental Impact Statement
EPA = U.S. Environmental Protection Agency
FEMA = Federal Emergency Management Agency
FHWA = Federal Highway Administration
FONSI = Finding of No Significant Impacted
FTIP = Federal Transportation Improvement Program
HPSR = Historic Property Survey Report
HRER = Historical Resources Evaluation Report
HUD = U.S. Housing and Urban Development
MOA = Memorandum of Agreement
MSA = Magnuson-Stevens Fishery Conservation and Management Act
NEPA = National Environmental Policy Act
NADR = Noise Abatement Decision Report
NES = Natural Environment Study
NHPA = National Historic Preservation Act
NOAA = National Oceanic and Atmospheric Administration
NMFS National Marine Fisheries Service
NPDES = National Pollutant Discharge Elimination System
NPS = National Park Service
NRCS = Natural Resources Conservation Service
PM10 = Particulate Matter 10 Microns in Diameter or Less
PM2.5 = Particulate Matter 2.5 Microns in Diameter or Less
PMP = Project Management Plan
PQS = Professionally Qualified Staff
ROD = Record of Decision
RTIP = Regional Transportation Improvement Program
RTP = Regional Transportation Plan
RWQCB = Regional Water Quality Control Board
SER = Standard Environmental Reference
SEP = Senior Environmental Planner
SHPO = State Historic Preservation Officer
SLC = State Lands Commission
SP = State Parks
TIP = Transportation Improvement Program
USCG = U.S. Coast Guard
USDA = U.S. Department of Agriculture
USFWS = U.S. Fish and Wildlife Service
WD = Wetland Delineation

E. Preliminary Environmental Document Classification (NEPA)

Based on the evaluation of the project, the environmental document to be developed should be:

Check one:

- ☐ Environmental Impact Statement (*Note: Engagement with participating agencies in accordance with 23 USC 139 required)*
  - ☐ Compliance with 23 USC 139 regarding Participating Agencies required
- ☐ Complex Environmental Assessment
- ☐ Routine Environmental Assessment
- ☐ Categorical Exclusion without required technical studies.
- ☒ Categorical Exclusion with required technical studies

(if Categorical Exclusion is selected, check one of the following):

- ☒ Section 23 USC 326
  - ☐ 23 CFR 771 activity (c)(_____)
  - ☒ 23 CFR 771 activity (d) (3)
  - ☐ Activity _____ listed in the Section 23 USC 326
- ☐ Section 23 USC 327

F. Public Availability and Public Hearing

Check as applicable:

- ☒ Not Required
- ☐ Notice of Availability of Environmental Document
- ☐ Public Meeting
- ☐ Notice of Opportunity for a Public Hearing
- ☐ Public Hearing Required

G. Signatures

Local Agency Staff and/or Consultant Signature

(Signature of Preparer)	11/10/14 (Date)	559-600-4530 (Telephone No.)

Alexis Rutherford
(Name)

Local Agency Project Engineer Signature

This document was prepared under my supervision, according to the *Local Assistance Procedures Manual,* Exhibit 6-B, "Instructions for Completing the Preliminary Environmental Study Form."

(Signature of Local Agency)	NOV - 7 - 2014 (Date)	600-4534 (Telephone No.)

Caltrans District Professionally Qualified Staff (PQS) Signature

☐ Project does not meet definition of an "undertaking"; no further review is necessary under Section 106 ("No" Section A, #35).

☐ Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA and based on the information provided in the PES Form, the project does not have the potential to affect historic properties ("No" Section A, #35).

☐ Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA, but the following additional procedures or information is needed to determine the potential for effect ("To Be Determined" Section A, #35):
☐ Records Search ☐ _____ ☐ _____ ☐ _____

☐ Project meets the definition of an "undertaking"; all properties in the project area are exempt from evaluation per Attachment 4 of the Section 106 PA ("No" Section A, #35).

☐ The proposed undertaking is considered to have the potential to affect historic properties; further studies for 106 compliance are indicated in Sections B, C, and D of this PES Form ("Yes" Section A, #35).

_____ _____ _____
(Signature of Professionally Qualified Staff) *(Date)* *(Telephone No.)*

The following signatures are required for all CEs, routine and complex EAs, and EISs:

Caltrans District Senior Environmental Planner (or Designee) and DLAE Signatures

I have reviewed this Preliminary Environmental Study (PES) Form and determined that the submittal is complete and sufficient. I concur with the studies to be performed and the recommended NEPA Class of Action.

_____ _____ _____
(Signature of Senior Environmental Planner or Designee) *(Date)* *(Telephone No.)*

_____
(Name)

_____ _____ _____
(Signature of District Local Assistance Engineer or Designee) *(Date)* *(Telephone No.)*

_____
(Name)

☐ HQ DEA Environmental Coordinator concurrence _____. Email concurrence attached.
(*date*)

Preliminary Environmental Investigation
Notes to Support the Conclusions of the PES Form
(May Also Include Continuation of Detailed Project Description)

Brief Explanation of How Project Complies, or Will Comply with Applicable Federal Mandate (Part A):

See Attachment B for the project description and Attachment C for the location map and project footprint drawings.

1. The proposed project would not require future construction to fully utilize the design capabilities. The single lane bridges will be widened to accommodate two lanes with bicycle facilities on the existing two lane roadway. There are no futures plans to widen or improve Millerton Road within the project limits.
2. The project should not generate public controversy. It is anticipated the road will remain open during the construction period, which will be approximately 6 months. Right of way needs are not expected to be substantial and will not extend beyond what is required to construct the project..
3. The proposed bridge replacement project is not a Type 1 project as defined in 23 CFR 772.5(h).
4. There are residences within an 1/8 of a mile of 0267, within ¼ mile of 0268, over an 1/8 of a mile from 0269, and over a quarter mile from 0270 (See Attachment D). The project would not increase capacity, so any noise impacts would be temporary, during construction. The project's scope of work includes structure demolition and pile driving. Although the noise receptors are not immediately adjacent to the project locations, the area surrounding the project is rural and quiet. For that reason, a noise technical memorandum will be prepared.
5. Fresno County is listed in the Table of Conformity Areas.
6. The proposed project type is listed in 40 CFR, Part 93, Section 93.126 Table 2.0 Exempt Projects as "Widening narrow pavements or reconstructing bridges (no additional travel lanes)."
7. According to the Transportation Air Quality Conformity Findings Checklist, the project is exempt from all project-level conformity requirements (40 CFR 93.126) and all air quality conformity requirements have been met.
8. See #7.
9. According to the Geotracker database, there are no sites or underground storage tanks in the vicinity of the project locations (See Attachment E). The County will test the bridge paint and traffic striping for lead and the bridge concrete for asbestos during preliminary engineering. If required, the County would include worker safety specification(s) in the construction contract.
10. The proposed project would replace four Little Dry Creek Bridges on Millerton Road. Further investigation is needed to determine the bridge type and method of detour at each location. Work in the channel is anticipated. The project would require a 1602 Streambed Alteration Agreement from DFW, Section 404 Nationwide Permit from the ACOE, a Section 401 Water Quality Certification and an NPDES Permit from the RWQCB.
11. The proposed project is within the Fresno Sole Source Aquifer. However, the project does not involve a well or sewage disposal and would not result in a threat of aquifer contamination or a hazard to public health. The project will be processed as a CE and is therefore exempt from a project-by-project review by the EPA.
12. The proposed project is not within the State Coastal Zone.

13. Bridge nos. 0267 and 0269 are located within Flood Zone X and bridge nos. 0268 and 0270 are located within Flood Zone A according to FEMA FIRM Map Nos. 06019C1055H Panel 1055 06019C1060H Panel 1060 (See Attachment F). A Location Hydraulic Study and a Summary Floodplain Encroachment Report will be prepared for the project.

14. The project is not within ¼ mile of a Wild and Scenic River System according the National Wild and Scenic Rivers website.

15. It is anticipated a Biological Assessment and Natural Environment Study will be prepared for the project. A California tiger salamander site assessment and specific plant survey may also be required. The U.S. Fish and Wildlife species list for the Academy Quad is provided as Attachment G.

16. A few trees and other vegetation will be removed. The project will most likely be constructed during the dry season, which coincides with the nesting season. Swallow and Migratory Bird Contract Provisions will be included in the construction specifications.

17. Jurisdictional waters occur within the project limits. The waters will be delineated.

18. Impacts to agricultural wetlands are not anticipated.

19. Any required hydroseeding would be conducted per Caltrans requirements.

20. The surrounding land is privately owned. The bridge inspection report identifies these bridges as Class 5, not eligible.

21. No.

22. Impacts to visual resources are expected to be negligible. A Questionnaire to Determine the Visual Impact Assessment Level was completed for each bridge (See Attachment H). A brief technical memorandum will be prepared.

23. The proposed project would not require relocation of a residence or business.

24. Further investigation is required; however acquisition is anticipated. Assessor Parcel Maps are shown in Attachment I.

25. The project is consistent with community plans and goals.

26. The project does not have the potential to divide or disrupt neighborhoods or communities.

27. The project would not disproportionately affect low-income or minority populations.

28. There are utility poles supporting overhead power and / or communication lines near bridges 0267 and 0268 and may require relocation depending on the design at each location. Further investigation is required.

29. It is anticipated the road will remain open during construction. With the exception of the western most bridge 0267, the replacement bridges will most likely be constructed on the existing road alignment. Since closing Millerton Road to construct any of these three bridges would create a detour length of upwards of 20 miles, a temporary creek crossing will be constructed as part of the project to route traffic around the bridge construction site. The temporary crossing will be constructed adjacent the existing bridge to limit the temporary construction footprint of the project.

    The replacement structure for Bridge No. 0267 will be constructed downstream of the existing bridge allowing the existing bridge to remain in place and used by public traffic until construction of the replacement bridge is complete.

    The replacement bridge for Bridge No, 0270 could also potentially be placed on a realigned road just downstream of the existing bridge dependent on if the associated new roadway approach work fits within the 400-foot fundable limits prescribed by the HBP for off system bridges. The feasibility of realigning Millerton Road at the Bridge No. 0270 location will be determined as part of the project alternatives analysis effort.

30. Access control to the State Highway System would not change.

31. See #29.

32. The project would not affect available parking.

33. The project would not encroach on state or federal lands.

34. Right of way acquisition is anticipated. The surrounding area is grassland/grazing land. An NRCS Form AD 1006 and a technical memorandum will be required.

35. The County, Caltrans Local Assistance, including the PQS, Drake Haglan and Associates and LSA and Associates visited the site on November 5, 2014. An ASR/HPSR will be prepared for the project. An Extended Phase 1 Report may be required. All potential built environment cultural resources within and adjacent to the project limits appear to be exempt. For that reason, an HRER is not required.

36. The project is not adjacent to and will not encroach on Tribal Land.

Distribution 1) Original - DLAE, 2) Local Agency Project Manager, 3) DLA Environmental Coordinator
4) Senior Environmental Planner (or designee), 5) District PQS

Updated: 05/15/08

Fresno Council of Governments
2015 Federal Transportation Improvement Program
Fresno County Region

Lead Agency: Fresno County

FRE130076 — ADOPTION: 14-00

CTIPS_ID:20300000854

Project Title:BRIDGE NO. 42C0267, Millerton Road, Over North Fork Little Dry Creek, .81 Miles East of Auberry Road
Project Description: BRIDGE NO. 42C0267, Millerton Road, Over North Fork Little Dry Creek, .81 Miles East of Auberry Road. Replace structurally deficient single lane bridge with standard two lane bridge. Toll credits programmed for PE, R/W, & CON.

Sys: Local | Rt: | TCM: No | Model #: | CI:N | Exempt Category: Safety - Non capacity widening or bridge reconstruction.

Cost Difference: $2,091,000 | Est Total Cost: $2,091,000 | Open to Traffic:

	Phase	PRIOR	14/15	15/16	16/17	17/18	18/19	BEYOND	TOTAL
Highway Bridge Program - State - Bridge - State (HBRR)	PE	$326,000							$326,000
	RW			$75,000					$75,000
	CON						$1,690,000		$1,690,000
	TOTAL	$326,000		$75,000			$1,690,000		$2,091,000
	TOTAL PE	$326,000	$0	$0	$0	$0	$0	$0	$326,000
	TOTAL RW	$0	$0	$75,000	$0	$0	$0	$0	$75,000
	TOTAL CON	$0	$0	$0	$0	$0	$1,690,000	$0	$1,690,000
	TOTAL TOTAL	$326,000		$75,000			$1,690,000		$2,091,000

Fresno Council of Governments
2015 Federal Transportation Improvement Program
Fresno County Region

Lead Agency: Fresno County

FRE130078 — AMENDMENT: 14-01

CTIPS_ID:20300000855

Project Title:Bridge No. 42C0268-Millerton Road Over Little Dry Creek, 1.8 Mile E of Auberry Road
Project Description: BRIDGE NO. 420268, MILLERTON ROAD, OVER LITTLE DRY CREEK, 1.8 MILE E OF AUBERRY ROAD.
Replace single lane structurally deficient bridge with stanard two lane bridge. Toll credits programmed for PE, R/W, & CON.

Sys: Local | Rt: | TCM: No | Model #: | CI:N | Exempt Category: Safety - Non capacity widening or bridge reconstruction.

Cost Difference: $1,815,000 | Est Total Cost: $1,815,000 | Open to Traffic:

	Phase	PRIOR	14/15	15/16	16/17	17/18	18/19	BEYOND	TOTAL
Highway Bridge Program - State - Bridge - State (HBRR)	PE	$326,000							$326,000
	RW			$45,000					$45,000
	CON						$1,444,000		$1,444,000
	TOTAL	$326,000		$45,000			$1,444,000		$1,815,000
	TOTAL PE	$326,000	$0	$0	$0	$0	$0	$0	$326,000
	TOTAL RW	$0	$0	$45,000	$0	$0	$0	$0	$45,000
	TOTAL CON	$0	$0	$0	$0	$0	$1,444,000	$0	$1,444,000
	TOTAL TOTAL	$326,000		$45,000			$1,444,000		$1,815,000

Fresno Council of Governments
2015 Federal Transportation Improvement Program
Fresno County Region

Lead Agency: Fresno County

FRE130079 — ADOPTION: 14-00

CTIPS_ID:20300000857

Project Title:Bridge No. 42C0269, Millerton Road Over Little Dry Creek, 2.6 Mi East of Auberry Road
Project Description: BRIDGE NO. 42C0269, MILLERTON ROAD OVER LITTLE DRY CREEK, 2.6 MILES EAST OF AUBERRY ROAD.
Replace single lane bridge as two lane bridge. Toll credits programmed for PE, R/W, & CON.

Sys: Local | Rt: | TCM: No | Model #: | CI:N | Exempt Category: Safety - Non capacity widening or bridge reconstruction.

Cost Difference: $1,829,000 | Est Total Cost: $1,829,000 | Open to Traffic:

	Phase	PRIOR	14/15	15/16	16/17	17/18	18/19	BEYOND	TOTAL
Highway Bridge Program - State - Bridge - State (HBRR)	PE	$326,000							$326,000
	RW			$45,000					$45,000
	CON						$1,458,000		$1,458,000
	TOTAL	$326,000		$45,000			$1,458,000		$1,829,000
	TOTAL PE	$326,000	$0	$0	$0	$0	$0	$0	$326,000
	TOTAL RW	$0	$0	$45,000	$0	$0	$0	$0	$45,000
	TOTAL CON	$0	$0	$0	$0	$0	$1,458,000	$0	$1,458,000
	TOTAL TOTAL	$326,000		$45,000			$1,458,000		$1,829,000

Fresno Council of Governments
2015 Federal Transportation Improvement Program
Fresno County Region

Lead Agency: Fresno County

LSTMP414 — AMENDMENT: 14-01

Project Title:FRE040501 - BRIDGE NO. 42C0270, Millerton Road, Over Little Dry Creek, 3.93 Miles East of Auberry Rd
Project Description: BRIDGE NO. 42C0270, Millerton Road, Over Little Dry Creek, 3.93 Miles East of Auberry Rd. Replace two lane functionally obsolete bridge with standard two lane bridge. Toll credits programmed for PE, R/W, & CON.

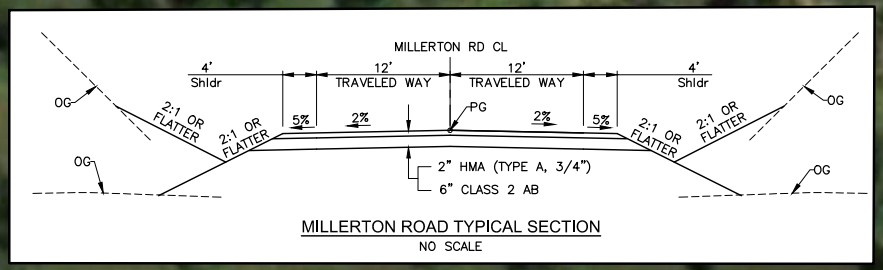
CALTRANS_FED_ID:5942 (210)

Sys: Local | Rt: | TCM: No | Model #: | CI:N | Exempt Category: Safety - Non capacity widening or bridge reconstruction.

Cost Difference: $1,840,000 | Est Total Cost: $1,840,000 | Open to Traffic:

	Phase	PRIOR	14/15	15/16	16/17	17/18	18/19	BEYOND	TOTAL
Highway Bridge Program - State - Bridge - State (HBRR)	PE	$326,000							$326,000
	RW			$30,000					$30,000
	CON						$1,484,000		$1,484,000
	TOTAL	$326,000		$30,000			$1,484,000		$1,840,000
	TOTAL PE	$326,000	$0	$0	$0	$0	$0	$0	$326,000
	TOTAL RW	$0	$0	$30,000	$0	$0	$0	$0	$30,000
	TOTAL CON	$0	$0	$0	$0	$0	$1,484,000	$0	$1,484,000
	TOTAL TOTAL	$326,000		$30,000			$1,484,000		$1,840,000

42C-0269

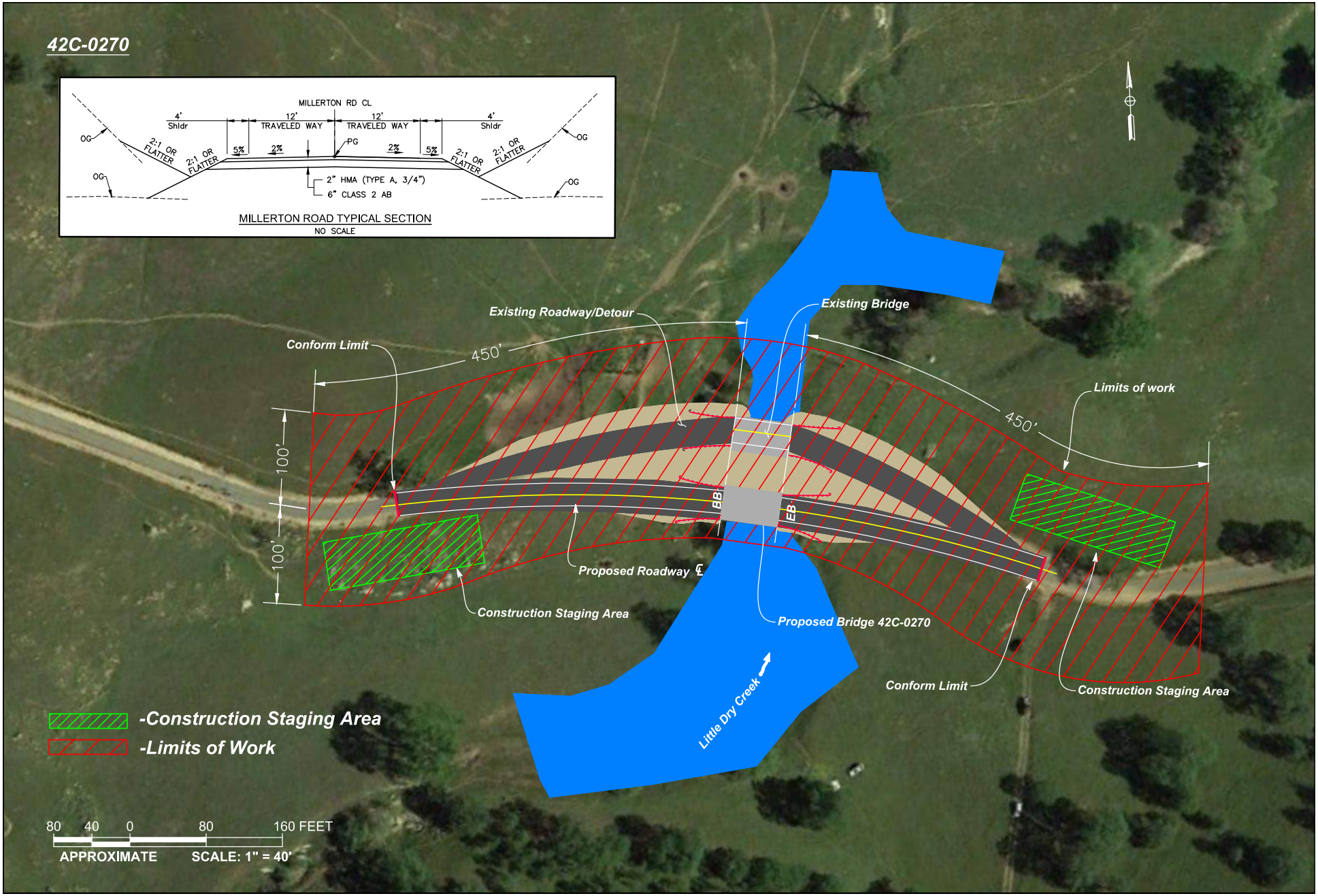


MILLERTON ROAD TYPICAL SECTION
NO SCALE

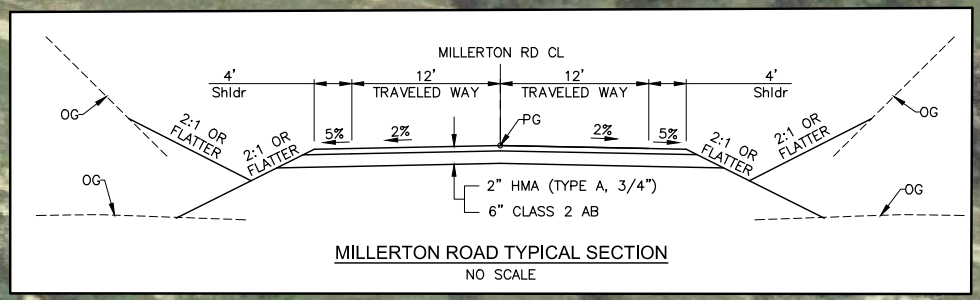
-Construction Staging Area
-Limits of Work

Temporary Detour
Temporary Bridge/Crossing
Limits of work
450'
450'
100'
100'
BB
EB
Proposed Roadway ℄
Proposed Bridge 42C-0269
Conform Limit
Conform Limit
Construction Staging Area
Little Dry Creek

80 40 0 80 160 FEET
APPROXIMATE SCALE: 1" = 40'


42C-0270
MILLERTON RD CL
4' Shldr
12' TRAVELED WAY
12' TRAVELED WAY
4' Shldr
OG
2:1 OR FLATTER
5%
2%
PG
2" HMA (TYPE A, 3/4")
6" CLASS 2 AB
MILLERTON ROAD TYPICAL SECTION
NO SCALE
Existing Roadway/Detour
Existing Bridge
Conform Limit
450'
Limits of work
100'
EB
Proposed Roadway ℄
Construction Staging Area
Proposed Bridge 42C-0270
Little Dry Creek
Conform Limit
Construction Staging Area
-Construction Staging Area
-Limits of Work
80 40 0 80 160 FEET
APPROXIMATE SCALE: 1" = 40'

42C-0267



MILLERTON ROAD TYPICAL SECTION
NO SCALE

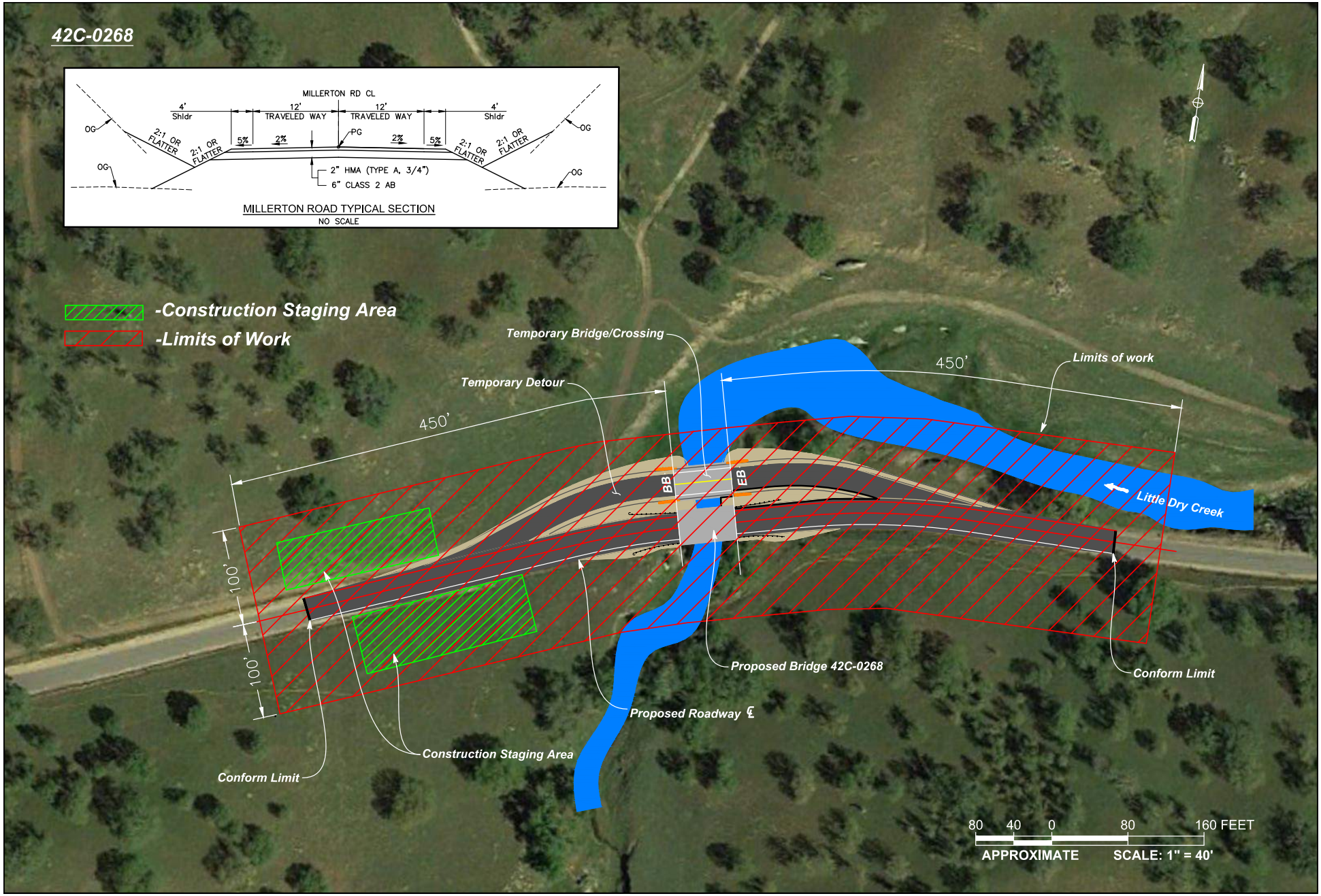
DESIGN SPEED LEGEND

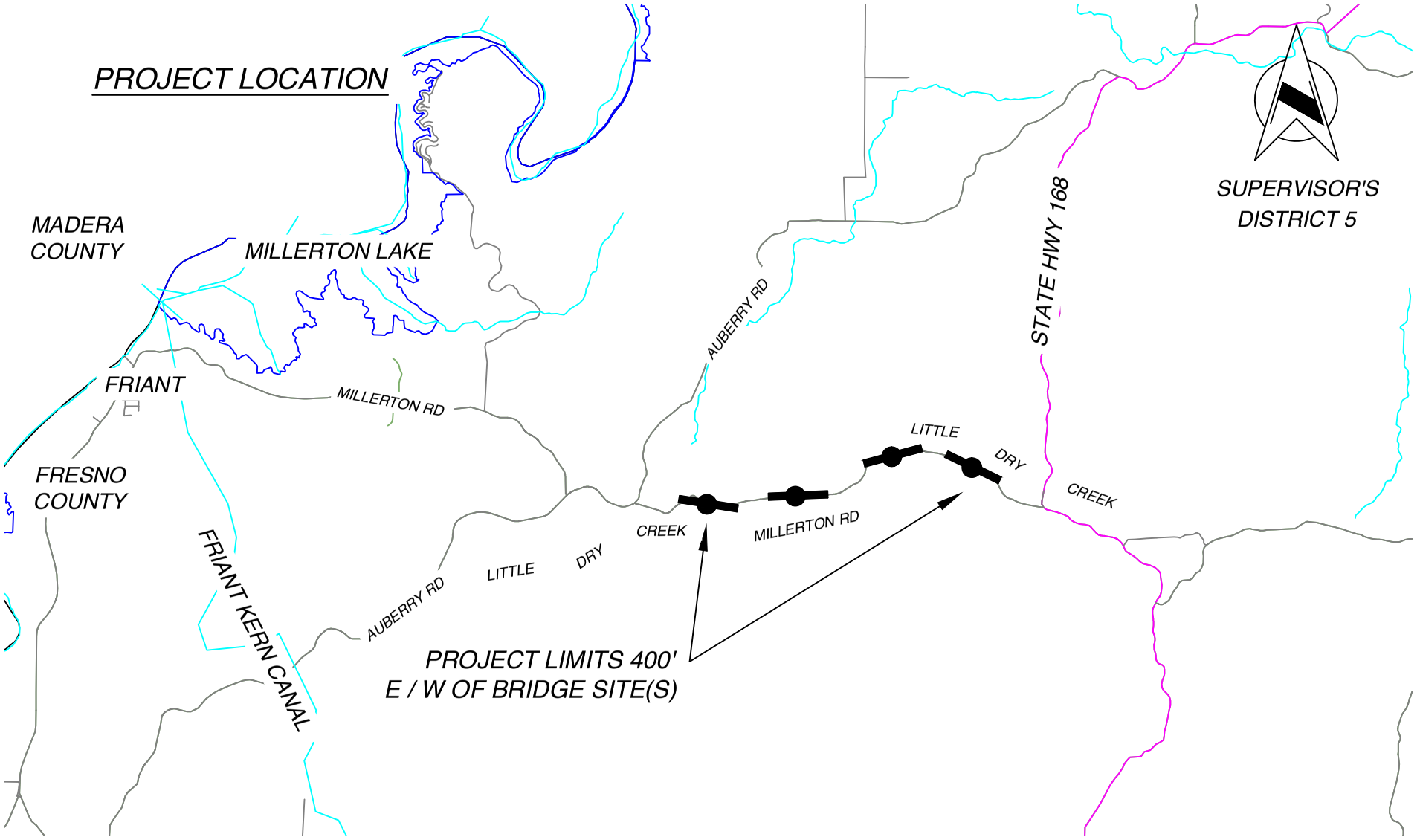
- 25 MPH, Crowned
- 35 MPH, Crowned
- 35 MPH, 2% Superelevation
- 30 MPH, Crowned
- 30 MPH, 2% Superelevation
- Contractor Staging Area
- Limits of Work

Limits of work
Existing Driveway
North Fork Little Dry Creek
Existing Bridge
Contractor Staging Area
Existing Roadway ℄
Proposed Bridge 42C-0267
Driveway Access
Millerton Road
Proposed Roadway ℄
Conform Limit
Roadway Survey Limits
Conform Limit
50'
124'
50'
50'
124'

80 40 0 80 160 FEET

APPROXIMATE SCALE: 1" = 40'


42C-0268
MILLERTON RD CL
4' Shldr
12' TRAVELED WAY
12' TRAVELED WAY
4' Shldr
OG
2:1 OR FLATTER
5%
2%
PG
2%
5%
2:1 OR FLATTER
OG
2" HMA (TYPE A, 3/4")
6" CLASS 2 AB
MILLERTON ROAD TYPICAL SECTION
NO SCALE
-Construction Staging Area
-Limits of Work
Temporary Bridge/Crossing
Temporary Detour
450'
450'
Limits of work
BB
EB
Little Dry Creek
100'
100'
Proposed Bridge 42C-0268
Conform Limit
Proposed Roadway ℄
Construction Staging Area
Conform Limit
80 40 0 80 160 FEET
APPROXIMATE
SCALE: 1" = 40'



		DATE		
DESIGNED	M.Y.S.	01/14	SCALE	NONE
DRAWN	J.M.	01/14		

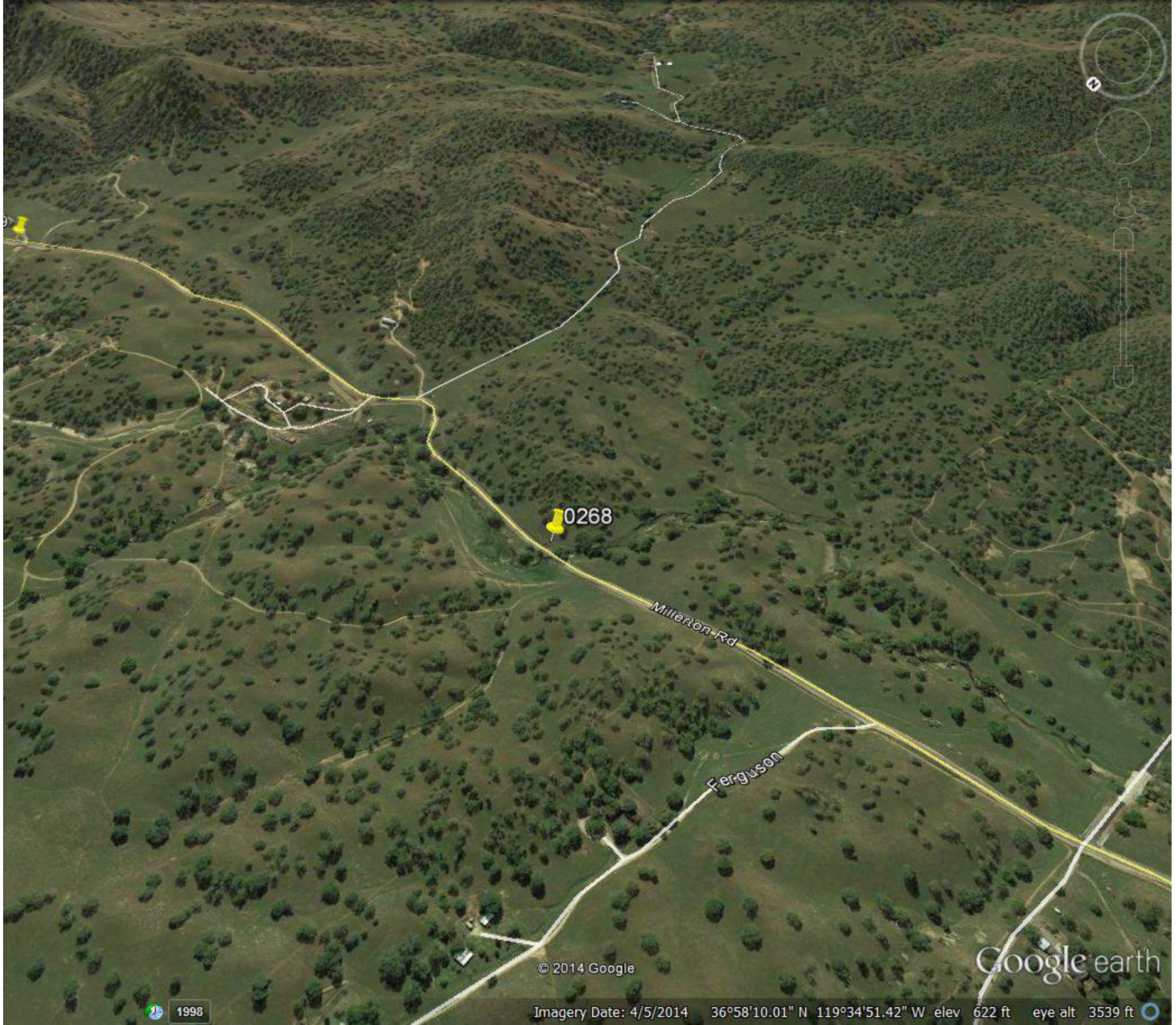
BRIDGE NO(S). 42C0267 / 11-037 , 42C0268 / 11-039 , 42C0269 / 11-035 , 42C0270 / 11-033

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LITTLE DRY CREEK BRIDGE REPLACEMENTS ON MILLERTON RD

FEDERAL PROJECT NO. BRLS-5942(210)


Ferguson Rd
0267
Millerton Rd
© 2014 Google
Google earth
1998
Imagery Date: 4/5/2014 36°58'09.67" N 119°35'54.10" W elev 573 ft eye alt 2080 ft


0268
Millerton Rd
Ferguson
© 2014 Google
Google earth
1998
Imagery Date: 4/5/2014 36°58'10.01" N 119°34'51.42" W elev 622 ft eye alt 3539 ft


0269
Millerton Rd
© 2014 Google
Google earth
1998
Imagery Date: 4/5/2014 36°58'16.44" N 119°33'59.53" W elev 656 ft eye alt 2656 ft


168
Millerton Rd
0270
© 2014 Google
Google earth
1998
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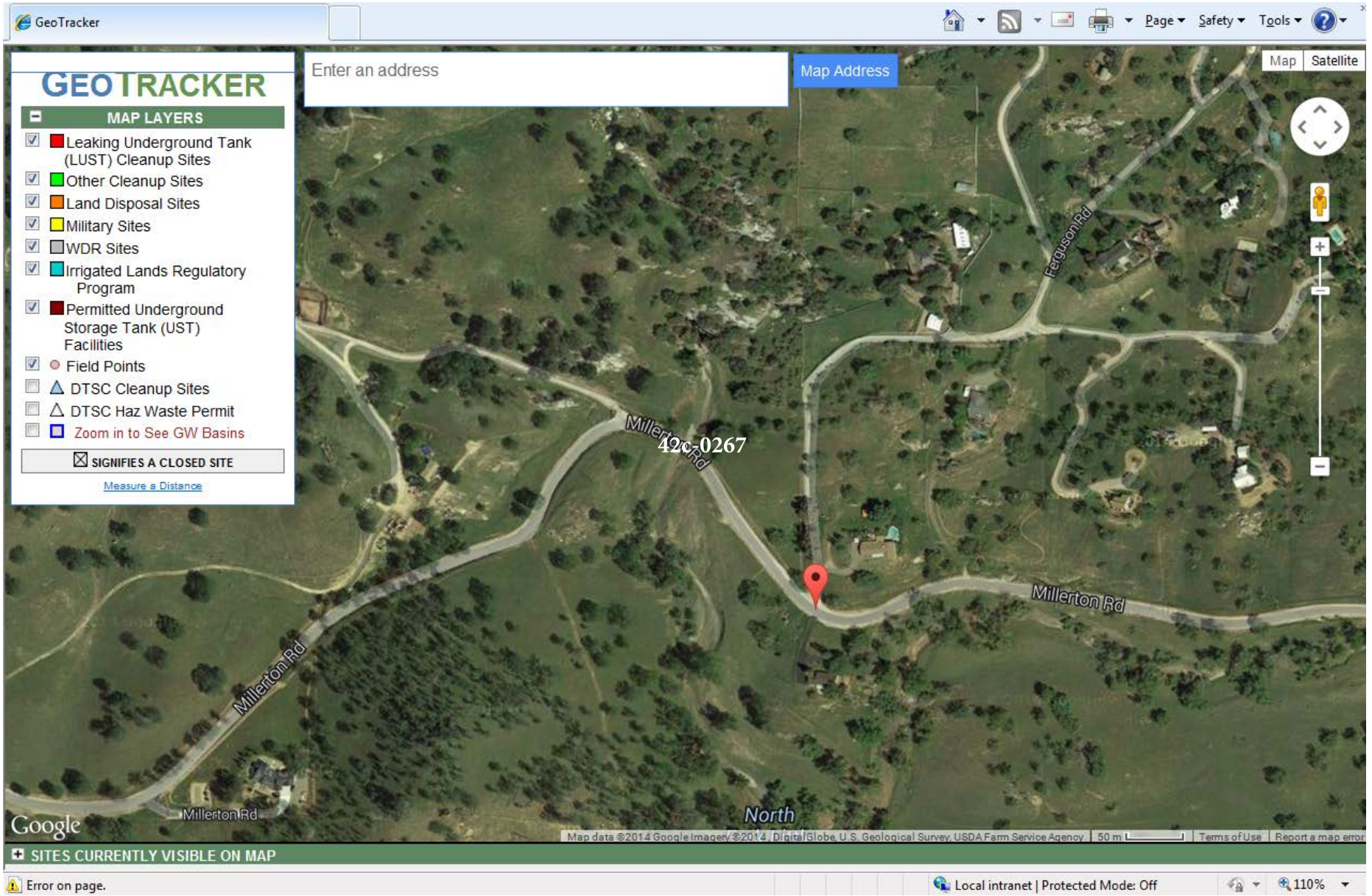
GeoTracker
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Safety
Tools
GEOTRACKER
MAP LAYERS
Leaking Underground Tank (LUST) Cleanup Sites
Other Cleanup Sites
Land Disposal Sites
Military Sites
WDR Sites
Irrigated Lands Regulatory Program
Permitted Underground Storage Tank (UST) Facilities
Field Points
DTSC Cleanup Sites
DTSC Haz Waste Permit
Zoom in to See GW Basins
SIGNIFIES A CLOSED SITE
Measure a Distance
Enter an address
Map Address
Map
Satellite
42c_0267
Millerton Rd
Ferguson Rd
Millerton Rd
Millerton Rd
Millerton Rd
North
Google
Map data ©2014 Google Imagery ©2014 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency
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Terms of Use
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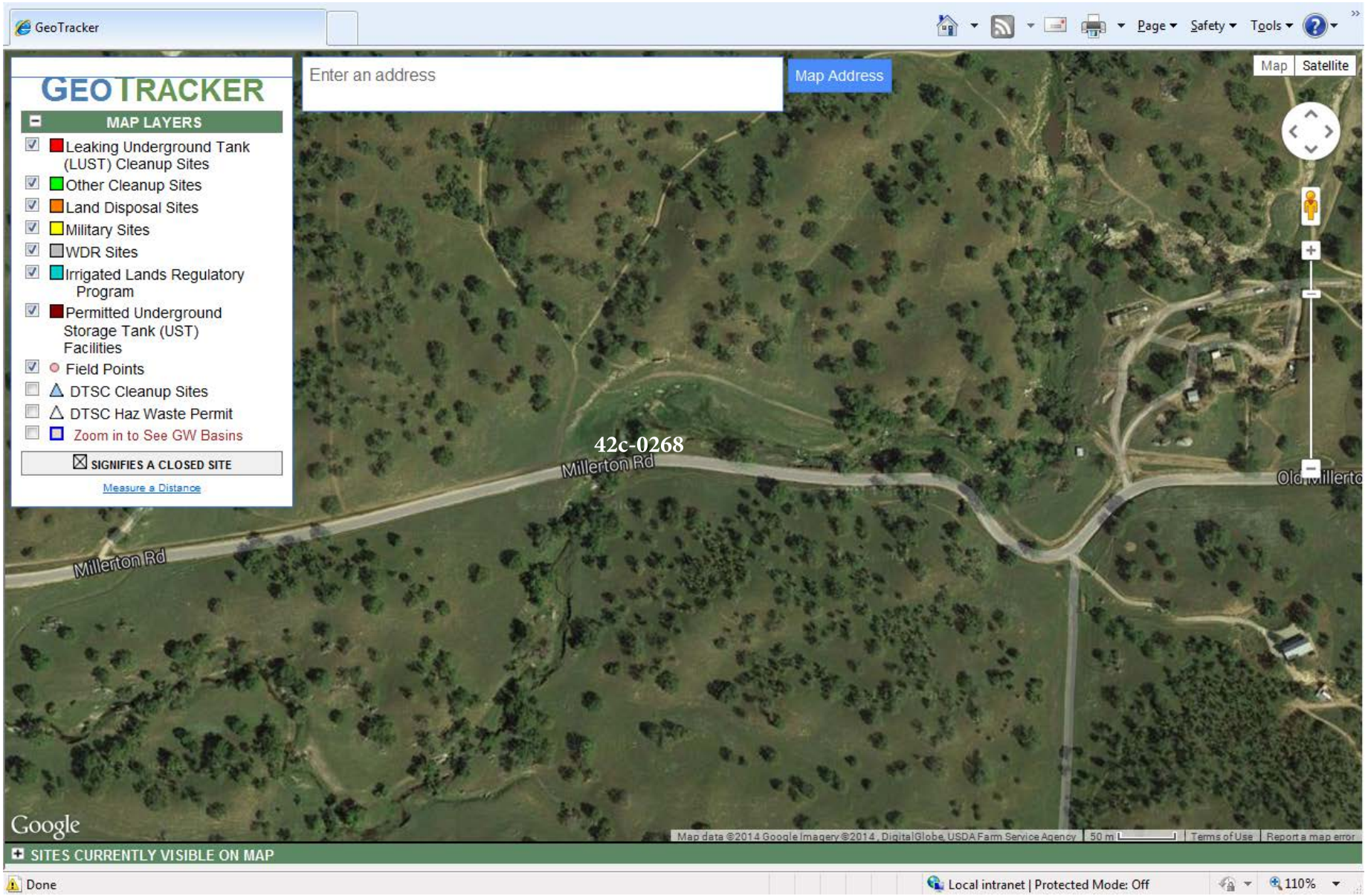
GeoTracker
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Safety
Tools
GEOTRACKER
MAP LAYERS
Leaking Underground Tank (LUST) Cleanup Sites
Other Cleanup Sites
Land Disposal Sites
Military Sites
WDR Sites
Irrigated Lands Regulatory Program
Permitted Underground Storage Tank (UST) Facilities
Field Points
DTSC Cleanup Sites
DTSC Haz Waste Permit
Zoom in to See GW Basins
SIGNIFIES A CLOSED SITE
Measure a Distance
Enter an address
Map Address
Map
Satellite
42c-0268
Millerton Rd
Millerton Rd
Old Millerto
Google
Map data ©2014 Google Imagery ©2014 , DigitalGlobe, USDA Farm Service Agency
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Terms of Use
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SITES CURRENTLY VISIBLE ON MAP
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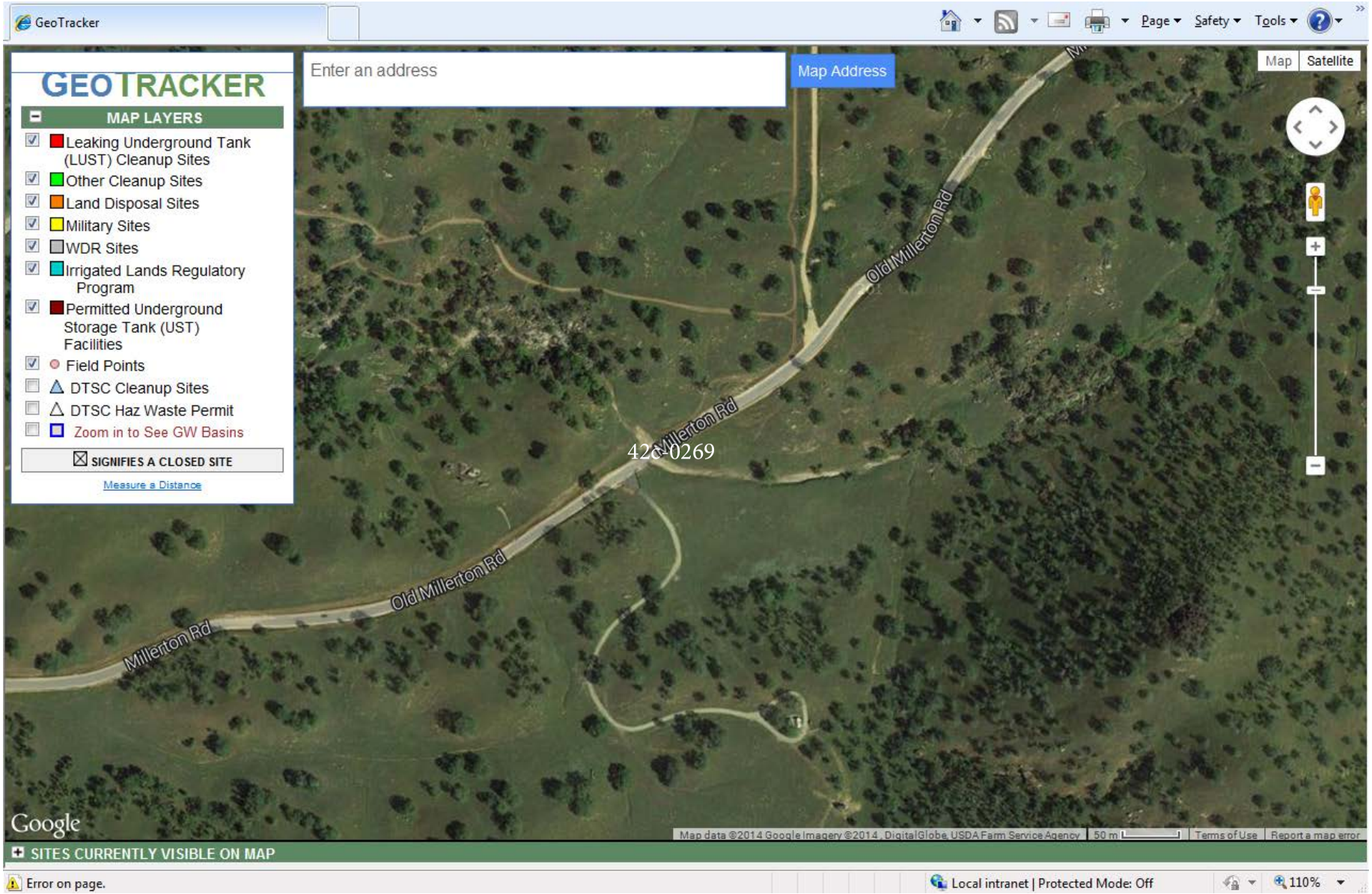
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MAP LAYERS
Leaking Underground Tank (LUST) Cleanup Sites
Other Cleanup Sites
Land Disposal Sites
Military Sites
WDR Sites
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Permitted Underground Storage Tank (UST) Facilities
Field Points
DTSC Cleanup Sites
DTSC Haz Waste Permit
Zoom in to See GW Basins
SIGNIFIES A CLOSED SITE
Measure a Distance
Enter an address
Map Address
Map
Satellite
Old Millerton Rd
Millerton Rd
Old Millerton Rd
Millerton Rd
426-0269
Google
Map data ©2014 Google Imagery ©2014 , DigitalGlobe, USDA Farm Service Agency
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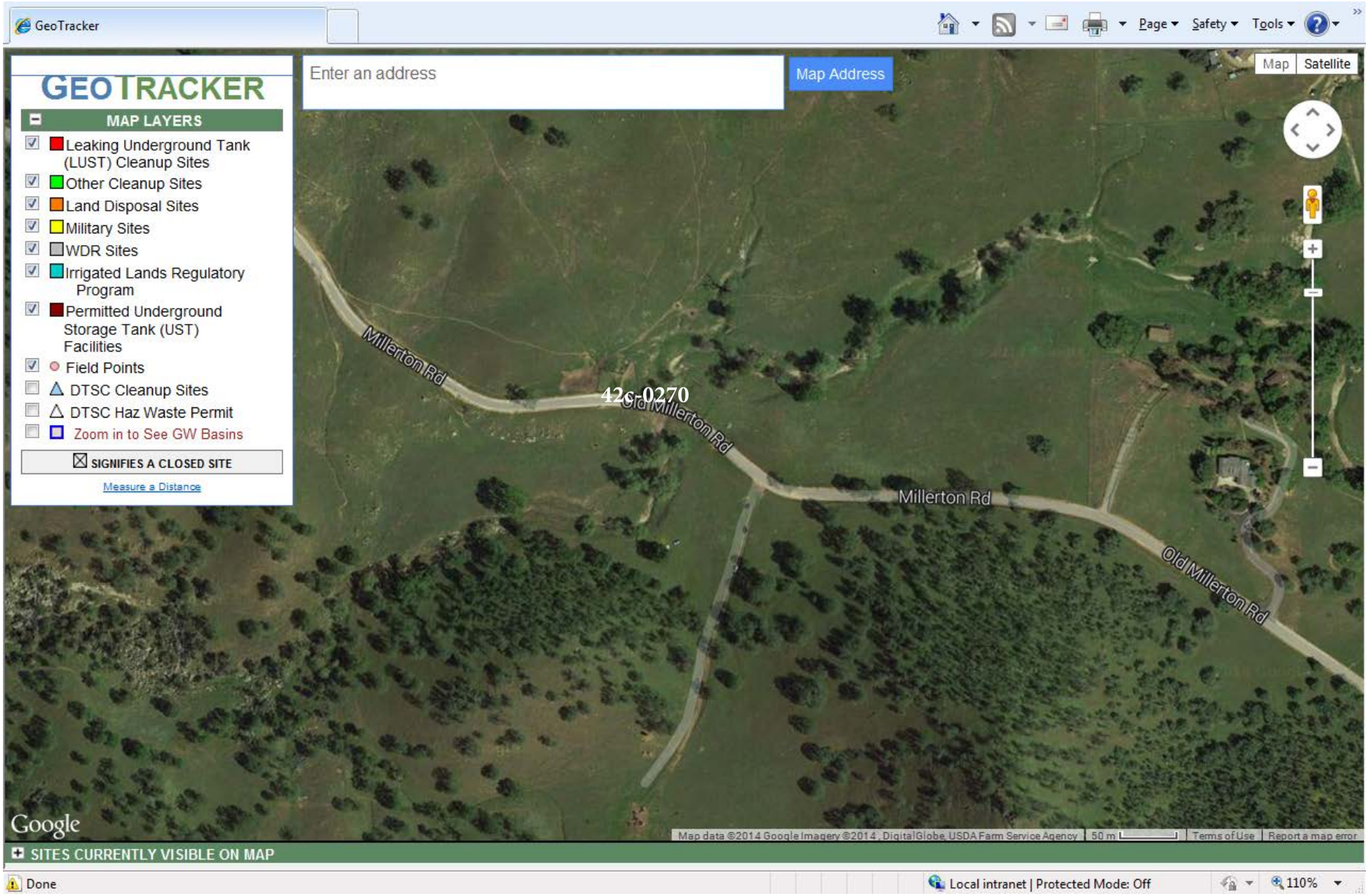
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MAP LAYERS
Leaking Underground Tank (LUST) Cleanup Sites
Other Cleanup Sites
Land Disposal Sites
Military Sites
WDR Sites
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Permitted Underground Storage Tank (UST) Facilities
Field Points
DTSC Cleanup Sites
DTSC Haz Waste Permit
Zoom in to See GW Basins
SIGNIFIES A CLOSED SITE
Measure a Distance
Enter an address
Map Address
Map
Satellite
Millerton Rd
42c-0270
Old Millerton Rd
Millerton Rd
Old Millerton Rd
Google
Map data ©2014 Google Imagery ©2014 , DigitalGlobe, USDA Farm Service Agency
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Terms of Use
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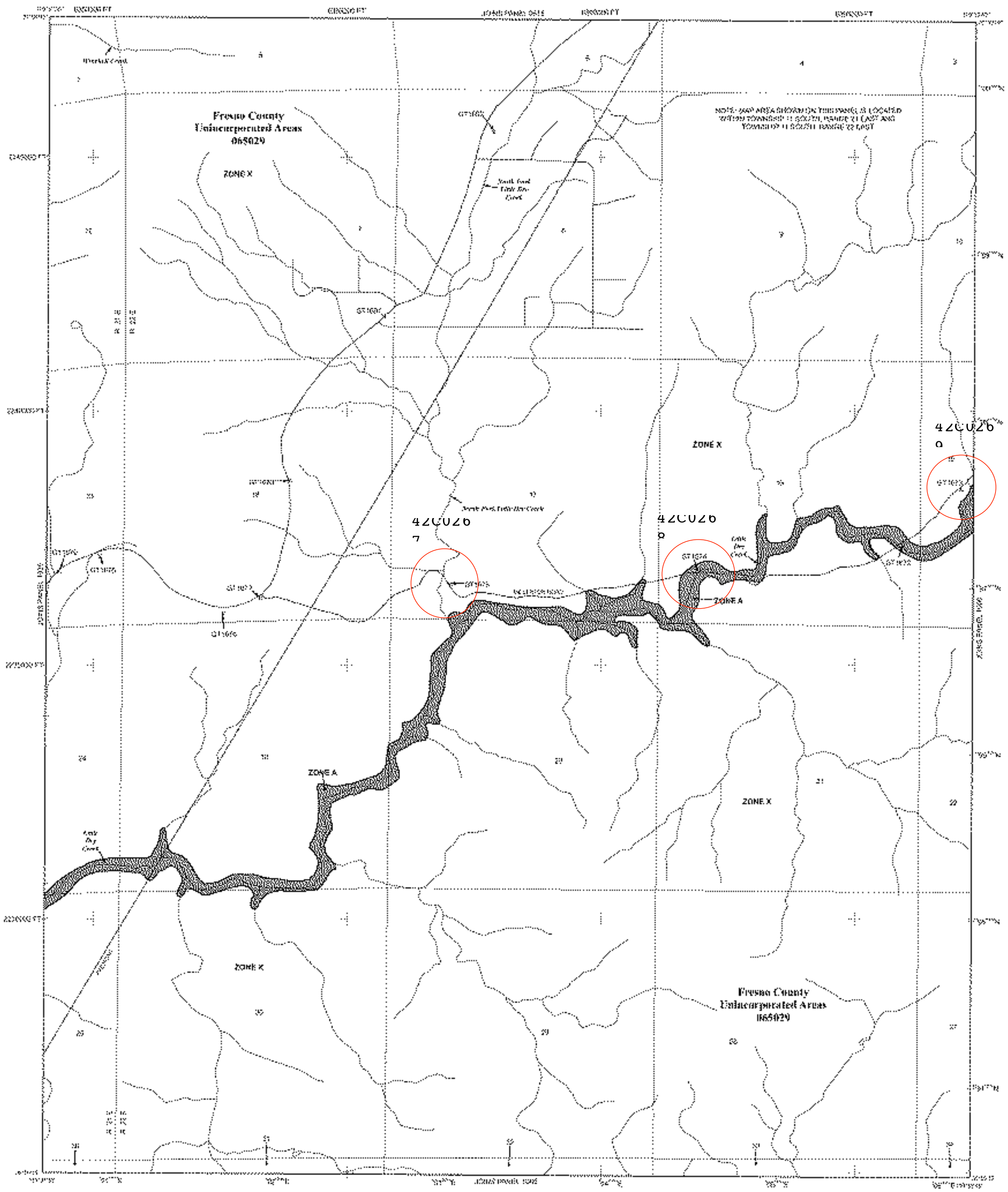
NOTES TO USERS

Attachment F



LEGEND

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1055

FIRM

FLOOD INSURANCE RATE MAP

FRESNO COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 1055 OF 3525

MAP NUMBER
06019C1055H

MAP REVISED
FEBRUARY 18, 2009

Federal Emergency Management Agency

Attachment F

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood insurance applicants are encouraged to obtain a more detailed FIS report and/or contact the FEMA Map Service Center, as noted below, for more information.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was California State Plane Zone III (FIPS 0403). The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by Fresno County Public Land Survey System information compiled from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photographs dated 1993 or later.

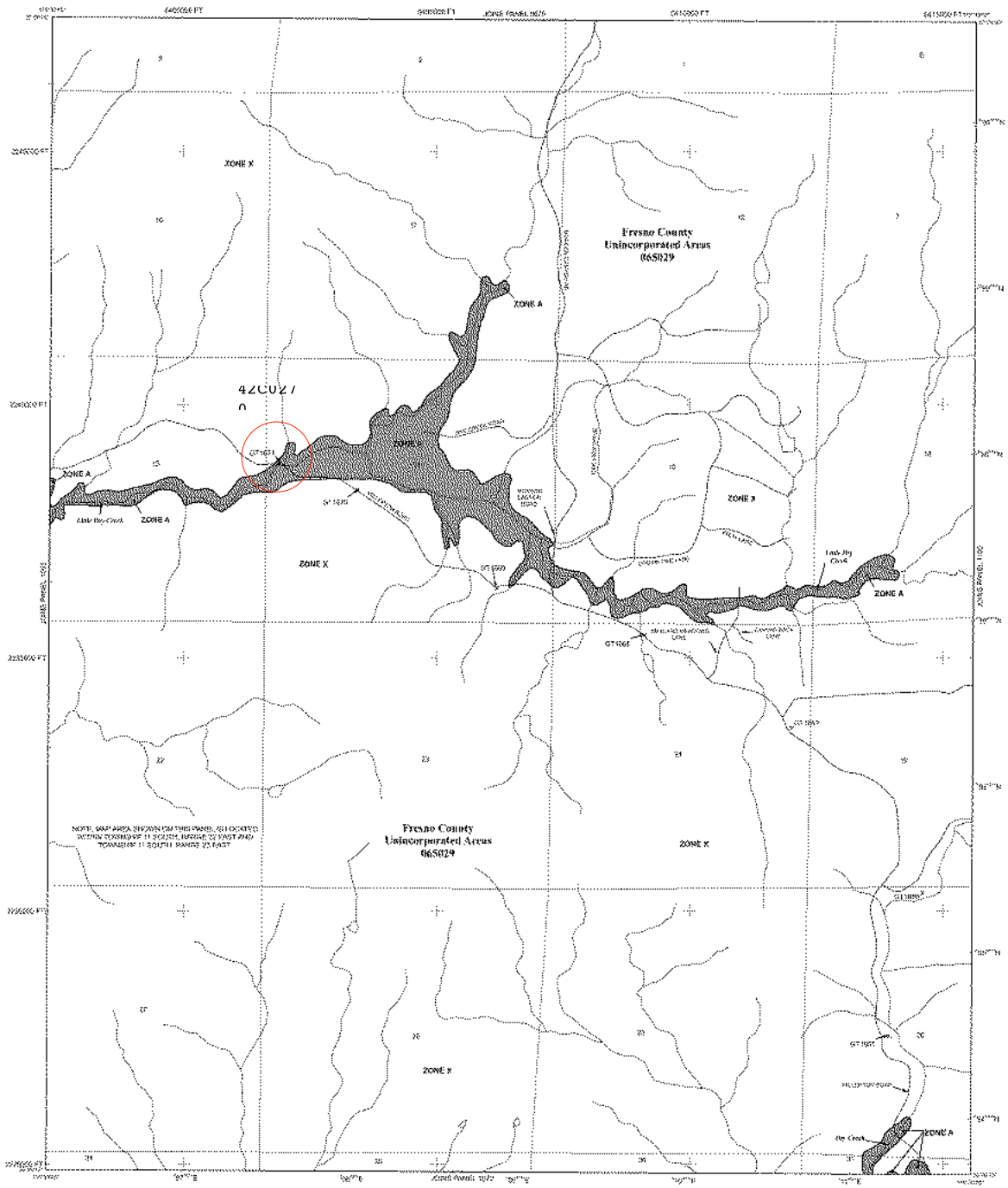
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a listing of Communities Participating in the National Flood Insurance Program (NFIP) table for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (base flood), also known as the 100-year flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.

ZONE AE — Base Flood Elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 — Area to be protected from the 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 97°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000000 mN — Universal Transverse Mercator grid values, zone 15
- 5000000 FT — State Plane coordinate system grid values, zone III (Transverse Mercator projection), Federal Customary Units
- 5000 m N — Bench mark (see explanation in Notes to Users section of this panel)
- • M1.5 — Map feature

MAP REPOSITORY
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
FEBRUARY 18, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
November 6, 2002 - to change corporate limits, to incorporate floodway revisions, and to update floodplain and floodway boundaries and flood elevations in the vicinity of Big Dry Creek, Little Dry Creek, and Mule Bay Creek

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

0 1000 2000 FEET
0 200 400 METERS

PANEL 1060G

FIRM
FLOOD INSURANCE RATE MAP

FRESNO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1060 OF 3525

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRESNO COUNTY	065029	1060	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06019C1060H

MAP REVISED
FEBRUARY 18, 2009

Federal Emergency Management Agency

Attachment G

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the ACADEMY (378A) U.S.G.S. 7 1/2 Minute Quad

Report Date: October 29, 2014

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Lepidurus packardi
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus
delta smelt (T)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)

Rana draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Attachment G

Mammals

Dipodomys nitratoides exilis
Fresno kangaroo rat (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)

Orcuttia inaequalis
Critical habitat, San Joaquin Valley Orcutt grass (X)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Questionnaire to Determine Visual Impact Assessment (VIA) Level

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Enter the project name and consider each of the ten questions below. Select the response that most closely applies to the proposed project and corresponding number on the right side of the table. Points are automatically computed at the bottom of the table and the total score should be matched to one of the five groups of scores at the end of the questionnaire that include recommended levels of VIA study and associated annotated outlines (i.e., minor, moderate, advanced/complex).

This scoring system should be used as a preliminary guide and should not be used as a substitute for objective analysis on the part of the preparer. Although the total score may recommend a certain level of VIA document, circumstances associated with any one of the ten question-areas may indicate the need to elevate the VIA to a greater level of detail. For projects done by others on the State Highway System, the District Landscape Architect should be consulted when scoping the VIA level and provide concurrence on the level of analysis used.

Calculate VIA Level Score

PROJECT NAME: Little Dry Creek Bridge Replacement on Millerton Road	
CHANGE TO VISUAL ENVIRONMENT	
1. Will the project result in a noticeable change in the physical characteristics of the existing environment? *Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.*	Low Level of Change (1 point)
2. Will the project complement or contrast with the visual character desired by the community? Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.	High Compatibility (1 point)
3. What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median	Low Concern (1 point)

planting removal) and construction impacts that are proposed? Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.	
4. Will the project require redesign or realignment to minimize adverse change or will mitigation, such as landscape or architectural treatment, likely be necessary? Consider the type of changes caused by the project, i.e., can undesirable views be screened or will desirable views be permanently obscured so a redesign should be considered?	Mitigation Likely (1 point)
5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character? Identify any projects (both Caltrans and local) in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.	Cumulative Impacts Unlikely to Occur (1 point)
VIEWER SENSITIVITY	
1. What is the potential that the project proposal will be controversial within the community, or opposed by any organized group? This can be researched initially by talking with Caltrans and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.	Low Potential (1 point)
2. How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project? Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other Caltrans staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.	Low Sensitivity (1 point)

3. To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards? Although the State is not always required to comply with local planning ordinances, these documents are critical in understanding the importance that communities place on aesthetic issues. The Caltrans Environmental Planning branch may have copies of the planning documents that pertain to the project. If not, this information can be obtained by contacting the local planning department. Also, many local and state planning documents can be found online at the California Land Use Planning Network.	High Compatibility (1 point)
4. Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)? Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitted, may be determined by talking with the project Environmental Planner and Project Engineer. Note: coordinate with the Caltrans representative responsible for obtaining the permit prior to communicating directly with any permitting agency.	Yes (3 points)
5. Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts? Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.	No (1 point)

Calculate Total

It is recommended that you print a copy of these calculations for the project file.

PROJECT SCORE: 12

Select An Outline Based Upon Project Score

The total score will indicate the recommended VIA level for the project. In addition to considering circumstances relating to any one of the ten questions-areas that would justify elevating the VIA level, also consider any other project factors that would have an effect on level selection.

SCORE 6-9

No noticeable visual changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file or Preliminary Environmental Study (PES).

SCORE 10-14

Negligible visual changes to the environment are proposed. A brief Memorandum (see sample) addressing visual issues providing a rationale why a technical study is not required.

SCORE 15-19

Noticeable visual changes to the environment are proposed. An abbreviated VIA is appropriate in this case. The assessment would briefly describe project features, impacts and any avoidance and minimization measures. Visual simulations would be optional. Go to the Directions for using and accessing the Minor VIA Annotated Outline.

SCORE 20-24

Noticeable visual changes to the environment are proposed. A fully developed VIA is appropriate. This technical study will likely receive public review. Go to the Directions for using and accessing the Moderate VIA Annotated Outline.

SCORE 25-30

Noticeable visual changes to the environment are proposed. A fully developed VIA is appropriate that includes photo simulations. It is appropriate to alert the Project Development Team to the potential for highly adverse impacts and to consider project alternatives to avoid those impacts. Go to the Directions for using and accessing the Advanced/Complex VIA Annotated Outline.

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2. Will the project complement or contrast with the visual character desired by the community? Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.	High Compatibility (1 point)
3. What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median	Low Concern (1 point)

planting removal) and construction impacts that are proposed? Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.	
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VIEWER SENSITIVITY	
1. What is the potential that the project proposal will be controversial within the community, or opposed by any organized group? This can be researched initially by talking with Caltrans and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.	Low Potential (1 point)
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Calculate Total

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PROJECT SCORE: 12

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VIEWER SENSITIVITY	
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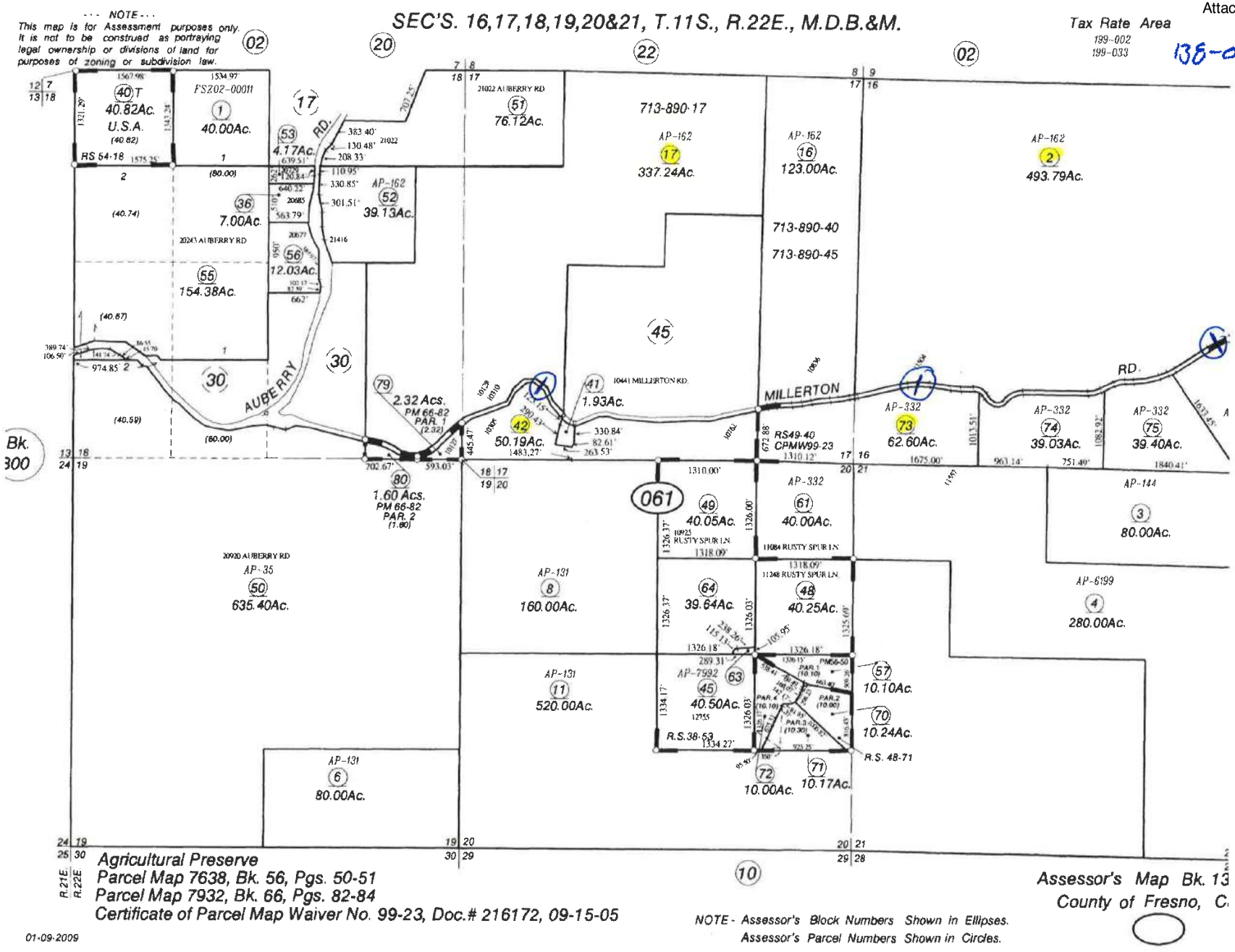
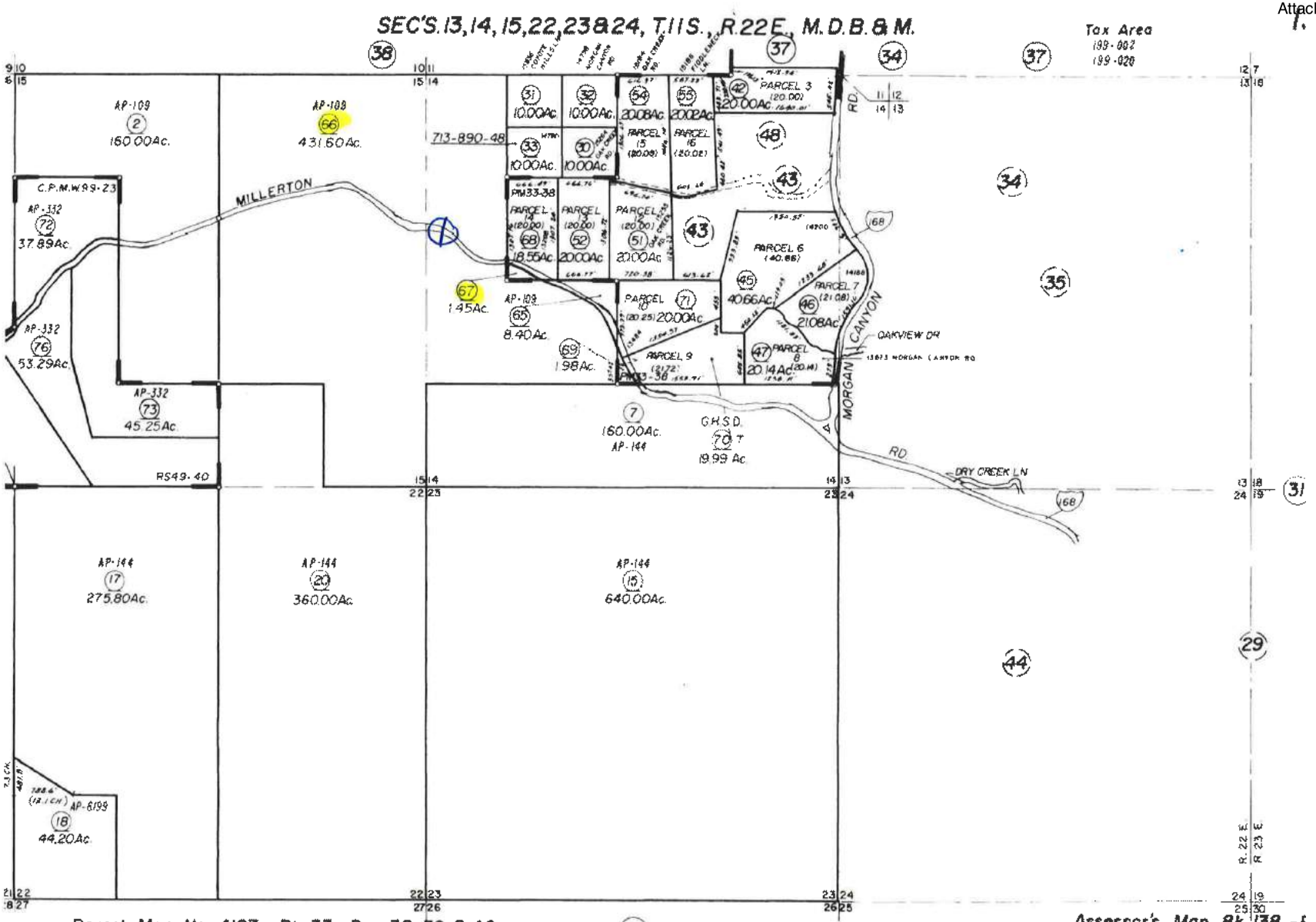
Attachment I



Attachment 1

T. 13S - 07



Parcel Map No. 4197 - Bk. 33, Pgs. 38, 39, & 40
Agricultural Preserve
Certificate of Parcel Map Waiver, No. 99-23 Doc. 216172, 9-15-05

(11) Record of Survey - Bk. 49, Pgs. 40-41

NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 138 - P
County of Fresno, Calif

1964

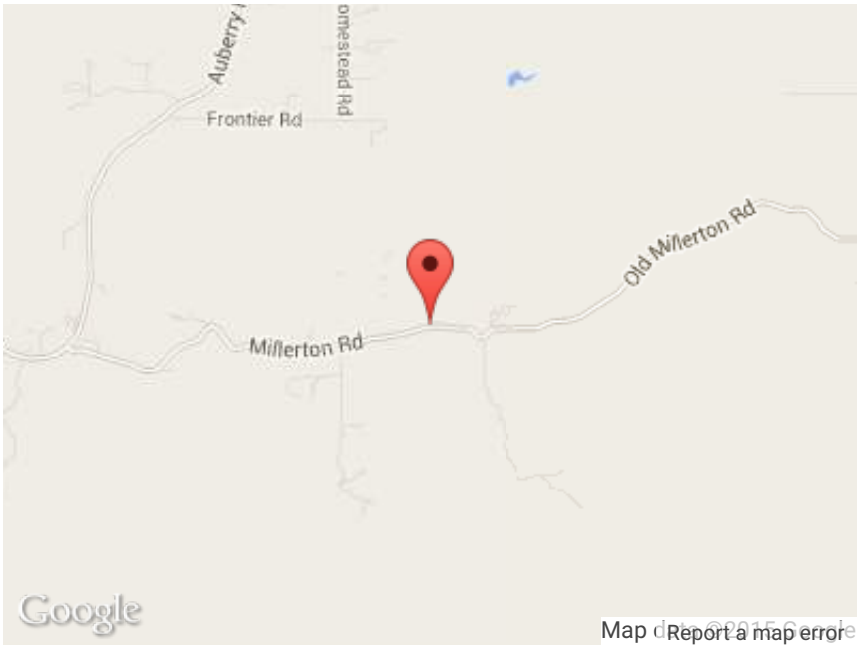
MILLERTON ROAD over LITTLE DRY CREEK

Fresno County, California
Enlarge map

Map

- Google Maps
- Yahoo! Maps
- Bing Maps
- MSR Maps
- OpenStreetMap

Coordinates:
+36.97028, -119.58139
36°58'13" N, 119°34'53" W



Source: National Bridge Inventory
Information not verified. Use at your own risk.

Facts

Name:	MILLERTON ROAD over LITTLE DRY CREEK
Structure number:	42C0268
Location:	1.8 MI E OF AUBERRY RD
Purpose:	Carries highway over waterway
Route classification:	Minor Collector (Rural) *[08]*
Length of largest span:	17.1 ft. *[5.2 m]*
Total length:	51.8 ft. *[15.8 m]*
Roadway width between curbs:	14.4 ft. *[4.4 m]*
Deck width edge-to-edge:	15.1 ft. *[4.6 m]*
Skew angle:	10°
Owner:	County Highway Agency *[02]*

Year built:	1925
Year reconstructed:	1982
Historic significance:	Bridge is not eligible for the National Register of Historic Places *[5]*
Number of main spans:	3
Main spans material:	Wood or timber *[7]*
Main spans design:	Stringer/Multi-beam or girder *[02]*
Deck type:	Corrugated Steel *[6]*

Latest Available Inspection: February 2013

Status:	Open, no restriction *[A]*
Average daily traffic:	600 *[as of 2011]*
Truck traffic:	8% of total traffic
Deck condition:	Fair *[5 out of 9]*
Superstructure condition:	Good *[7 out of 9]*
Substructure condition:	Good *[7 out of 9]*
Structural appraisal:	Equal to present minimum criteria *[6]*
Deck geometry appraisal:	Basically intolerable requiring high priority of replacement *[2]*
Water adequacy appraisal:	Equal to present minimum criteria *[6]*
Roadway alignment appraisal:	Equal to present minimum criteria *[6]*
Channel protection:	Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly. *[6]*
Scour condition:	Bridge with "unknown" foundation that has not been evaluated for scour. *[U]*
Operating rating:	42.8 tons *[38.9 metric tons]*
Inventory rating:	30.3 tons *[27.5 metric tons]*
Evaluation:	Functionally obsolete *[2]*
Sufficiency rating:	73.5
Recommended work:	Bridge rehabilitation because of general structure deterioration or inadequate strength. *[35]*
Estimated cost of work:	$120,000

Previous Inspections

Date	Suff. rating	Evaluation	Deck	Super.	Sub.	ADT
February 2013	73.5	Functionally obsolete	Fair	Good	Good	600
January 2011	76.9	Functionally obsolete	Satisfactory	Good	Satisfactory	500
January 2009	75.5	Functionally obsolete	Satisfactory	Good	Satisfactory	500
February 2007	74.4	Functionally obsolete	Good	Good	Satisfactory	500
January 2005	74.4	Functionally obsolete	Good	Good	Satisfactory	500
January 2003	74.4	Functionally obsolete	Good	Good	Satisfactory	500
January 2001	74.4	Functionally obsolete	Good	Good	Satisfactory	500
January 1999	62.1	Functionally obsolete	Fair	Good	Fair	500
October 1995	44.4	Not deficient	Fair	Fair	Poor	500
November 1993	46.0	Not deficient	Fair	Fair	Poor	400
April 1991	46.0	Not deficient	Fair	Fair	Poor	400

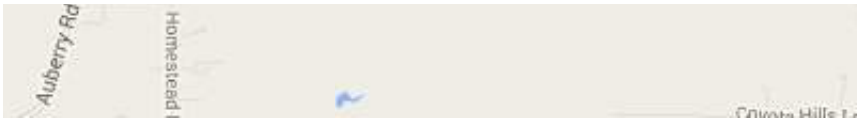
MILLERTON ROAD over LITTLE DRY CREEK

Fresno County, California
Enlarge map

Map

- Google Maps
- Yahoo! Maps
- Bing Maps
- MSR Maps
- OpenStreetMap

Coordinates:
+36.97167, -119.56750
36°58'18" N, 119°34'03" W



Source: National Bridge Inventory
Information not verified. Use at your own risk.

Facts

Name:	MILLERTON ROAD over LITTLE DRY CREEK
Structure number:	42C0269
Location:	2.6 MI E OF AUBERRY RD
Purpose:	Carries highway over waterway
Route classification:	Minor Collector (Rural) *[08]*
Length of largest span:	16.1 ft. *[4.9 m]*
Total length:	46.9 ft. *[14.3 m]*
Roadway width between curbs:	15.4 ft. *[4.7 m]*
Deck width edge-to-edge:	16.1 ft. *[4.9 m]*
Owner:	County Highway Agency *[02]*
Year built:	1925
Year reconstructed:	1983
Historic significance:	Bridge is not eligible for the National Register of Historic Places *[5]*
Number of main spans:	3
Main spans material:	Wood or timber *[7]*
Main spans design:	Stringer/Multi-beam or girder *[02]*
Deck type:	Corrugated Steel *[6]*
Wearing surface:	Bituminous *[6]*

Latest Available Inspection: February 2013

Status:	Open, no restriction *[A]*
Average daily traffic:	400 *[as of 2005]*
Truck traffic:	8% of total traffic
Deck condition:	Good *[7 out of 9]*
Superstructure condition:	Good *[7 out of 9]*
Substructure condition:	Fair *[5 out of 9]*
Structural appraisal:	Somewhat better than minimum adequacy to tolerate being left in place as is *[5]*
Deck geometry appraisal:	Basically intolerable requiring high priority of replacement *[2]*
Water adequacy appraisal:	Equal to present minimum criteria *[6]*
Roadway alignment appraisal:	Equal to present minimum criteria *[6]*
Channel protection:	Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift. *[7]*
Scour	Bridge with "unknown" foundation that has not been evaluated for scour. *[U]*

condition:	
Operating rating:	50.9 tons *[46.3 metric tons]*
Inventory rating:	36.3 tons *[33.0 metric tons]*
Evaluation:	Functionally obsolete *[2]*
Sufficiency rating:	71.1
Recommended work:	Bridge rehabilitation because of general structure deterioration or inadequate strength. *[35]*

Previous Inspections

Date	Suff. rating	Evaluation	Deck	Super.	Sub.	ADT
February 2013	71.1	Functionally obsolete	Good	Good	Fair	400
January 2011	81.9	Functionally obsolete	Good	Good	Satisfactory	600
January 2009	78.3	Functionally obsolete	Good	Good	Satisfactory	600
February 2007	79.0	Functionally obsolete	Good	Good	Satisfactory	600
January 2005	79.0	Functionally obsolete	Good	Good	Satisfactory	600
January 2003	79.0	Functionally obsolete	Good	Good	Satisfactory	600
January 2001	78.0	Functionally obsolete	Good	Good	Satisfactory	600
January 1999	78.0	Functionally obsolete	Satisfactory	Satisfactory	Satisfactory	600
October 1995	64.6	Not deficient	Satisfactory	Fair	Fair	400
November 1993	64.7	Not deficient	Satisfactory	Fair	Fair	400
April 1991	64.7	Not deficient	Satisfactory	Fair	Fair	400

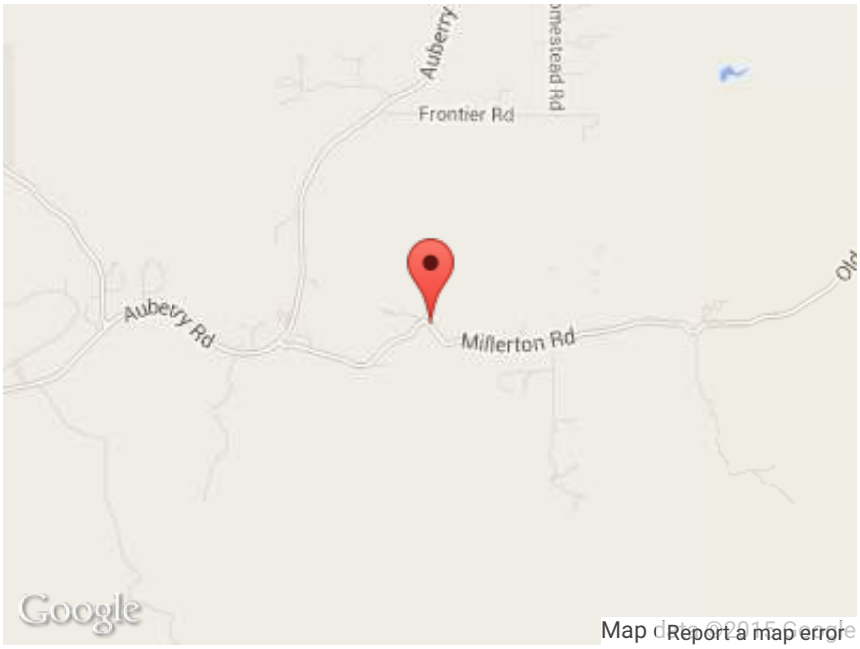
MILLERTON ROAD over NORTH FORK LITTLE DRY CR

Fresno County, California
Enlarge map

Map

- Google Maps
- Yahoo! Maps
- Bing Maps
- MSR Maps
- OpenStreetMap

Coordinates:
+36.97000, -119.59833
36°58'12" N, 119°35'54" W



Source: National Bridge Inventory
Information not verified. Use at your own risk.

Facts

Name:	MILLERTON ROAD over NORTH FORK LITTLE DRY CR
Structure number:	42C0267
Location:	.81 MI E OF AUBERRY RD
Purpose:	Carries highway over waterway
Route classification:	Minor Collector (Rural) *[08]*
Length of largest span:	15.1 ft. *[4.6 m]*
Total length:	30.8 ft. *[9.4 m]*
Roadway width between curbs:	15.4 ft. *[4.7 m]*
Deck width edge-to-edge:	15.7 ft. *[4.8 m]*

Owner:	County Highway Agency *[02]*
Year built:	1925
Historic significance:	Bridge is not eligible for the National Register of Historic Places *[5]*
Number of main spans:	2
Main spans material:	Wood or timber *[7]*
Main spans design:	Stringer/Multi-beam or girder *[02]*
Deck type:	Corrugated Steel *[6]*
Wearing surface:	Bituminous *[6]*

Latest Available Inspection: February 2013

Status:	Open, would be posted or closed except for temporary shoring *[D]*
Average daily traffic:	400 *[as of 2005]*
Truck traffic:	8% of total traffic
Deck condition:	Fair *[5 out of 9]*
Superstructure condition:	Satisfactory *[6 out of 9]*
Substructure condition:	Critical *[2 out of 9]*
Structural appraisal:	Basically intolerable requiring high priority of replacement *[2]*
Deck geometry appraisal:	Basically intolerable requiring high priority of replacement *[2]*
Water adequacy appraisal:	Equal to present minimum criteria *[6]*
Roadway alignment appraisal:	Meets minimum tolerable limits to be left in place as is *[4]*
Channel protection:	Bank protection is being eroded. River control devices and/or embankment have major damage. Trees and rush restrict the channel. *[5]*
Scour condition:	Bridge is scour critical; field review indicates that extensive scour has occurred at bridge foundations. *[2]*
Operating rating:	44.6 tons *[40.5 metric tons]*
Inventory rating:	31.7 tons *[28.8 metric tons]*
Evaluation:	Structurally deficient *[1]*
Sufficiency rating:	18.3
Recommended work:	Bridge rehabilitation because of general structure deterioration or inadequate strength. *[35]*

Previous Inspections

Date	Suff. rating	Evaluation	Deck	Super.	Sub.	ADT
February 2013	18.3	Structurally deficient	Fair	Satisfactory	Critical	400
January 2011	18.6	Structurally deficient	Good	Satisfactory	Critical	500
January 2009	78.7	Functionally obsolete	Good	Satisfactory	Satisfactory	500
February 2007	70.1	Functionally obsolete	Good	Satisfactory	Satisfactory	500
January 2005	70.1	Functionally obsolete	Good	Satisfactory	Satisfactory	500

January 2003	70.1	Functionally obsolete	Good	Satisfactory	Satisfactory	500
March 2001	70.1	Functionally obsolete	Good	Satisfactory	Satisfactory	500
January 2001	70.1	Functionally obsolete	Good	Satisfactory	Satisfactory	500
January 1999	57.8	Functionally obsolete	Fair	Satisfactory	Fair	500
October 1995	55.6	Not deficient	Fair	Fair	Fair	400
November 1993	55.5	Not deficient	Fair	Fair	Fair	400
April 1991	55.5	Not deficient	Fair	Fair	Fair	400

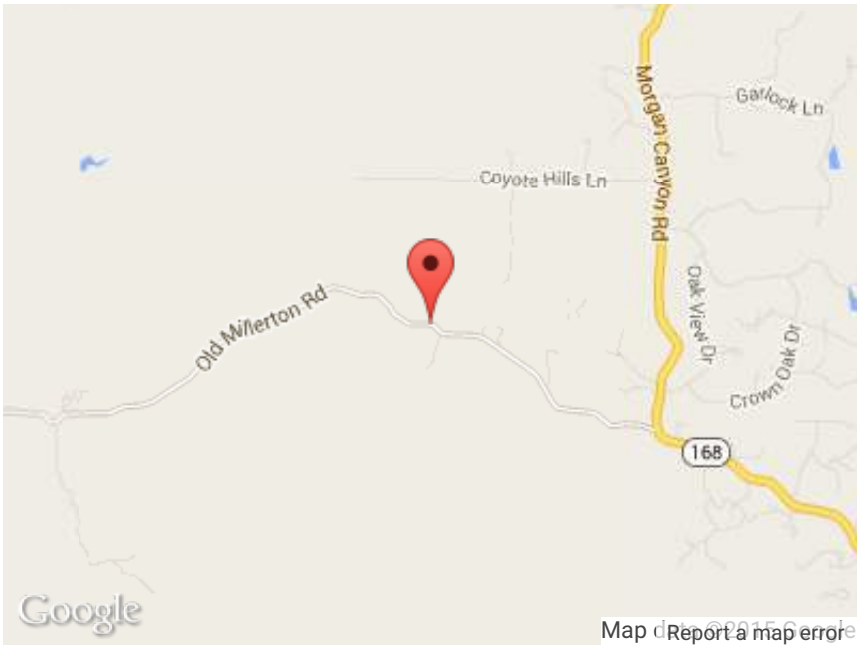
MILLERTON ROAD over LITTLE DRY CREEK

Fresno County, California
Enlarge map

Map

- Google Maps
- Yahoo! Maps
- Bing Maps
- MSR Maps
- OpenStreetMap

Coordinates:
+36.97583, -119.54694
36°58'33" N, 119°32'49" W



Source: National Bridge Inventory
Information not verified. Use at your own risk.

Facts

Name:	MILLERTON ROAD over LITTLE DRY CREEK
Structure number:	42C0270
Location:	3.93 MI E OF AUBERRY RD
Purpose:	Carries highway over waterway
Route classification:	Minor Collector (Rural) *[08]*
Length of largest span:	19.0 ft. *[5.8 m]*
Total length:	40.0 ft. *[12.2 m]*
Roadway width between curbs:	17.4 ft. *[5.3 m]*
Deck width edge-to-edge:	18.0 ft. *[5.5 m]*
Owner:	County Highway Agency *[02]*
Year built:	1925

Year reconstructed:	1983
Historic significance:	Bridge is not eligible for the National Register of Historic Places *[5]*
Number of main spans:	2
Main spans material:	Wood or timber *[7]*
Main spans design:	Stringer/Multi-beam or girder *[02]*
Deck type:	Corrugated Steel *[6]*
Wearing surface:	Bituminous *[6]*

Latest Available Inspection: February 2013

Status:	Open, no restriction *[A]*
Average daily traffic:	400 *[as of 2005]*
Truck traffic:	8% of total traffic
Deck condition:	Satisfactory *[6 out of 9]*
Superstructure condition:	Good *[7 out of 9]*
Substructure condition:	Satisfactory *[6 out of 9]*
Structural appraisal:	Equal to present minimum criteria *[6]*
Deck geometry appraisal:	Basically intolerable requiring high priority of replacement *[2]*
Water adequacy appraisal:	Equal to present minimum criteria *[6]*
Roadway alignment appraisal:	Equal to present minimum criteria *[6]*
Channel protection:	Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly. *[6]*
Scour condition:	Bridge with "unknown" foundation that has not been evaluated for scour. *[U]*
Operating rating:	38.2 tons *[34.7 metric tons]*
Inventory rating:	26.7 tons *[24.3 metric tons]*
Evaluation:	Functionally obsolete *[2]*
Sufficiency rating:	69.6
Recommended work:	Bridge rehabilitation because of general structure deterioration or inadequate strength. *[35]*
Estimated cost of work:	$112,000

Previous Inspections

Date	Suff. rating	Evaluation	Deck	Super.	Sub.	ADT
February 2013	69.6	Functionally obsolete	Satisfactory	Good	Satisfactory	400
January 2011	69.4	Functionally obsolete	Satisfactory	Good	Satisfactory	500
January 2009	67.5	Functionally obsolete	Satisfactory	Good	Satisfactory	500
February 2007	66.9	Functionally obsolete	Good	Good	Satisfactory	500
January 2005	66.9	Functionally obsolete	Good	Good	Satisfactory	500
January 2003	66.9	Functionally obsolete	Good	Good	Satisfactory	500
January 2001	46.0	Structurally deficient	Satisfactory	Poor	Satisfactory	500
January 1999	56.1	Structurally deficient	Satisfactory	Poor	Satisfactory	500
October 1995	67.6	Not deficient	Fair	Satisfactory	Fair	400
November 1993	67.6	Not deficient	Fair	Satisfactory	Fair	400
April 1991	69.4	Not deficient	Fair	Satisfactory	Fair	400

APPENDIX C
ENVIRONMENTAL DATABASE REPORT

ENVIRONMENTAL RECORD SEARCH

"The Intelligent Choice"

RecCheck Corridor Report Results

The Standard for ASTM/AAI Radius Searches
(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

REPORT RESULTS

Site Location:

Millerton Road
Clovis, CA
(N 36-58-21, W 119-34-16) NAD83

TABLE OF CONTENTS

EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	Millerton Road Clovis, CA
Client Project Name/Number:	Little Dry Creek Bridges A1272-1
Coordinates:	N 36-58-21, W 119-34-16 (NAD 83) 36.9725154249094, -119.571104625784
Date of Report	March 10, 2015
ERS Project Number:	2104651279
Subject Site Listed on the following lists:	Not Listed
Subject Site Listed as Map ID#:	N/A
USGS 7.5 Minute Quad Map:	Academy
Township, Section and Range:	Township: 11S Range: 22E Section: 16 Baseline: Mt. Diablo
Site Elevation: **(feet above mean sea level)**	Approximately 635 ft near the center of the area.
Flood Zone: **(FEMA Q3 Digital Data)**	Panel: 06019C1055H, Effective Date: 2/18/2009 Zone A - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
Fire Insurance Map Coverage:	No
Radon Information:	EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)
Search Radius Expansion Size: **(In Miles)**	0
Soil Type: **(USDA Soil Survey Geographic Database) (SSURGO)**	Grangeville sandy loam Map Unit Type: Consociation Hydric: No Drainage Class: Somewhat poorly drained General Information: Coarse-loamy, mixed, thermic Aquic Haploxerolls
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched

Occurrence Count:	0

SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
N/A						

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
Cal Military Active	1	0
Cal School Active	0.5	0
Cal State Response Active	1	0
Cal Superfund Active	1	0
Cal VCP Active	0.5	0
Cal-CorAct-Open-CA	0.5	0
CERCLIS-US	0.5	0
County-LUST-Open-CA	0.5	0
County-SLIC-Open-CA	0.5	0
LUST-Open-CA	0.5	0
NPL-US	1	0
SAA-Agreements-US	1	0
SLIC-CV-OPEN-CA	0.5	0
SLIC-Open-CA	0.5	0
SML-Open-CA	0.5	0
Tribal-LUST-Open-US	0.5	0
UST-Cleanup-CA	0.5	0

* For the purposes of this report, "high risk" occurrences are those that have known contamination and have not received a "case closed" or "no further action" status from the agency that maintains the records.

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	0.5	0	0	0	0	-	0
ERNS-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	1	0	0	0	0	0	0
Hist-AFS2-US	0.5	0	0	0	0	-	0
Hist-AFS-US	0.5	0	0	0	0	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.25	0	0	0	-	-	0
LIENS-US	0.5	0	0	0	0	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.5	0	0	0	0	-	0
PCB-US	0.25	0	0	0	-	-	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	0	0	-	-	0
RCRA-SQG-US	0.25	0	0	0	-	-	0
RCRA-TSD-US	0.5	0	0	0	0	-	0

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
SAA-Agreements-US	1	0	0	0	0	0	0
Tribal-Air-US	0.5	0	0	0	0	-	0
Tribal-BF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-US	0.5	0	0	0	0	-	0
Tribal-LUST-Open-US	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-US	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Abandoned-UST-CA	0.25	0	0	0	-	-	0
Air-CA	0.5	0	0	0	0	-	0
AIR-DIST-CA	0.5	0	0	0	0	-	0
Cal BZ-HazWaste-CA	0.5	0	0	0	0	-	0
Cal Eval-Hist	0.5	0	0	0	0	-	0
Cal Eval-Hist NFA	0.5	0	0	0	0	-	0
Cal Military Active	1	0	0	0	0	0	0
Cal Military NFA	0.5	0	0	0	0	-	0
Cal Military Other	1	0	0	0	0	0	0
Cal School Active	0.5	0	0	0	0	-	0
Cal School NFA	0.5	0	0	0	0	-	0
Cal School Other	0.5	0	0	0	0	-	0
Cal State Response Active	1	0	0	0	0	0	0
Cal State Response NFA	0.5	0	0	0	0	-	0
Cal State Response Other	0.5	0	0	0	0	-	0
Cal Superfund Active	1	0	0	0	0	0	0
Cal Superfund NFA	1	0	0	0	0	0	0
Cal Superfund Other	1	0	0	0	0	0	0
Cal VCP Active	0.5	0	0	0	0	-	0
Cal VCP NFA	0.5	0	0	0	0	-	0
Cal VCP Other	0.5	0	0	0	0	-	0
Cal-CorAct-Closed-CA	0.5	0	0	0	0	-	0
Cal-CorAct-Open-CA	0.5	0	0	0	0	-	0
CBF-CA	0.5	0	0	0	0	-	0
CHMIRS-CA	0.25	0	0	0	-	-	0
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	0	-	-	0
Comp-UST-CA	0.25	0	0	0	-	-	0
Controls-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	0	0	-	-	0
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0
County-LUST-Closed-CA	0.5	0	0	0	0	-	0
County-LUST-Open-CA	0.5	0	0	0	0	-	0
County-Others-CA	0.25	0	0	0	-	-	0
County-SLIC-Closed-CA	0.5	0	0	0	0	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES

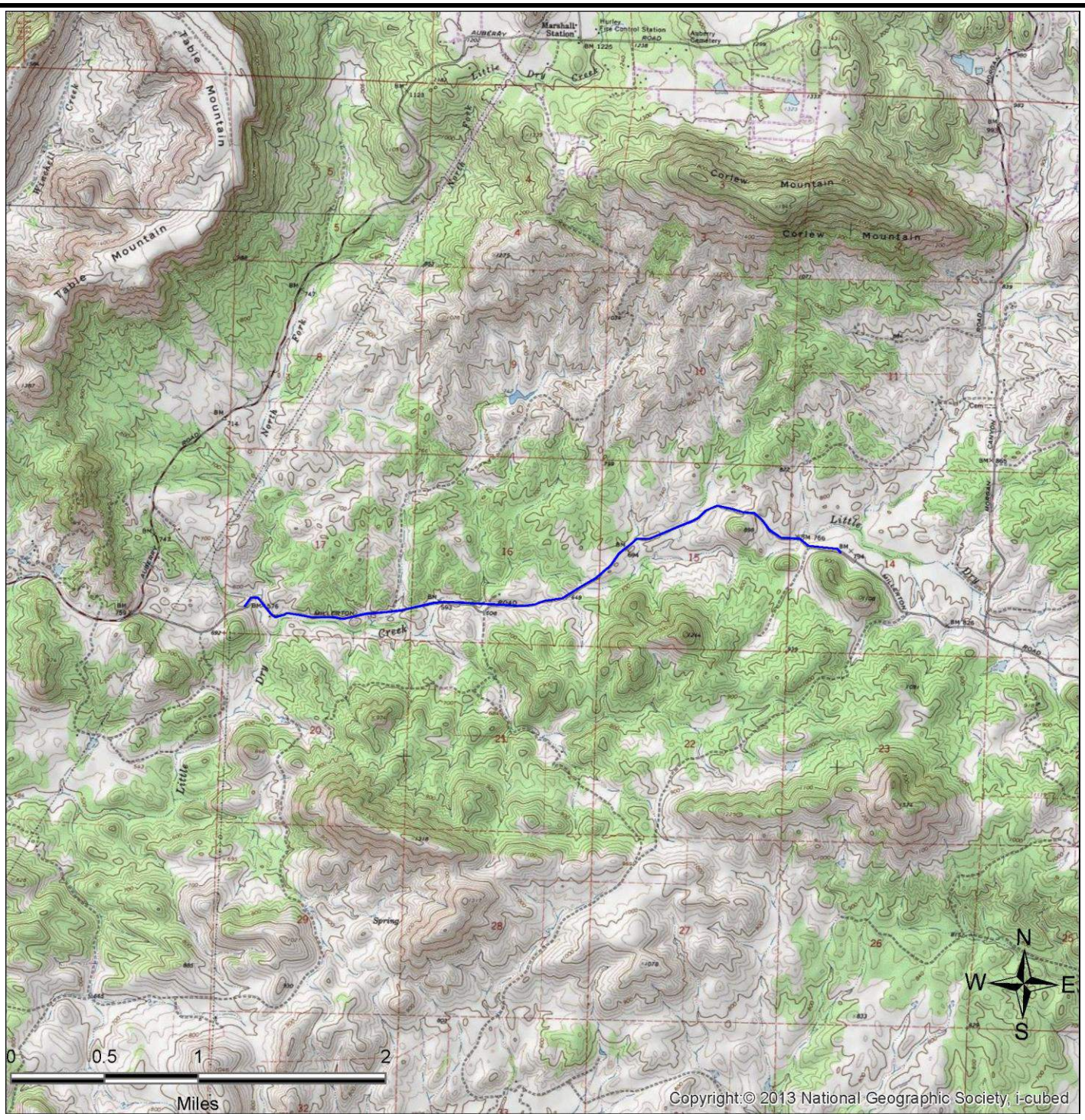
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
County-SWF-CA	0.5	0	0	0	0	-	0
County-UST-CA	0.25	0	0	0	-	-	0
CUPA-CA	0.25	0	0	0	-	-	0
ENF-CA	1	0	0	0	0	0	0
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	0	0	-	-	0
Hist-SWF-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	0	0	-	-	0
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.25	0	0	0	-	-	0
Land Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.5	0	0	0	0	-	0
LUST-Closed-CA	0.5	0	0	0	0	-	0
LUST-Open-CA	0.5	0	0	0	0	-	0
Manifest2-NY	0.25	0	0	0	-	-	0
Manifest2-RI	0.25	0	0	0	-	-	0
PR-MOA-CA	0.25	0	0	0	-	-	0
SLIC-Closed-CA	0.5	0	0	0	0	-	0
SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
SLIC-Open-CA	0.5	0	0	0	0	-	0
SML-Closed-CA	0.5	0	0	0	0	-	0
SML-Open-CA	0.5	0	0	0	0	-	0
SML-Other-CA	0.5	0	0	0	0	-	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0
UST-CA	0.25	0	0	0	-	-	0
UST-Cleanup-CA	0.5	0	0	0	0	-	0
UST-Closed-CA	0.25	0	0	0	-	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Not Searched							

PROPRIETARY HISTORIC DATABASES

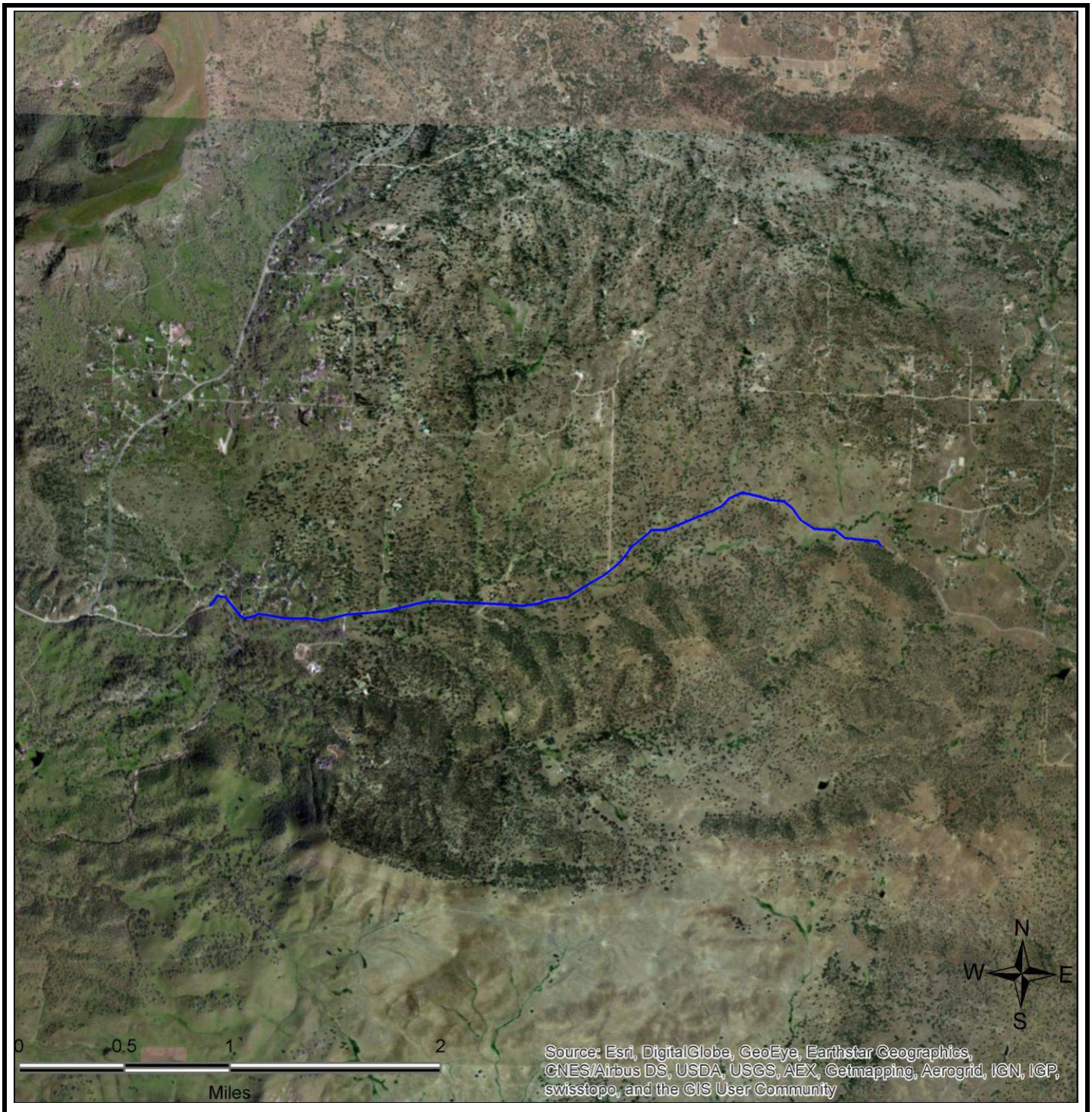
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Not Searched							



SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. Academy Quadrangle, 7.5 Minute Series

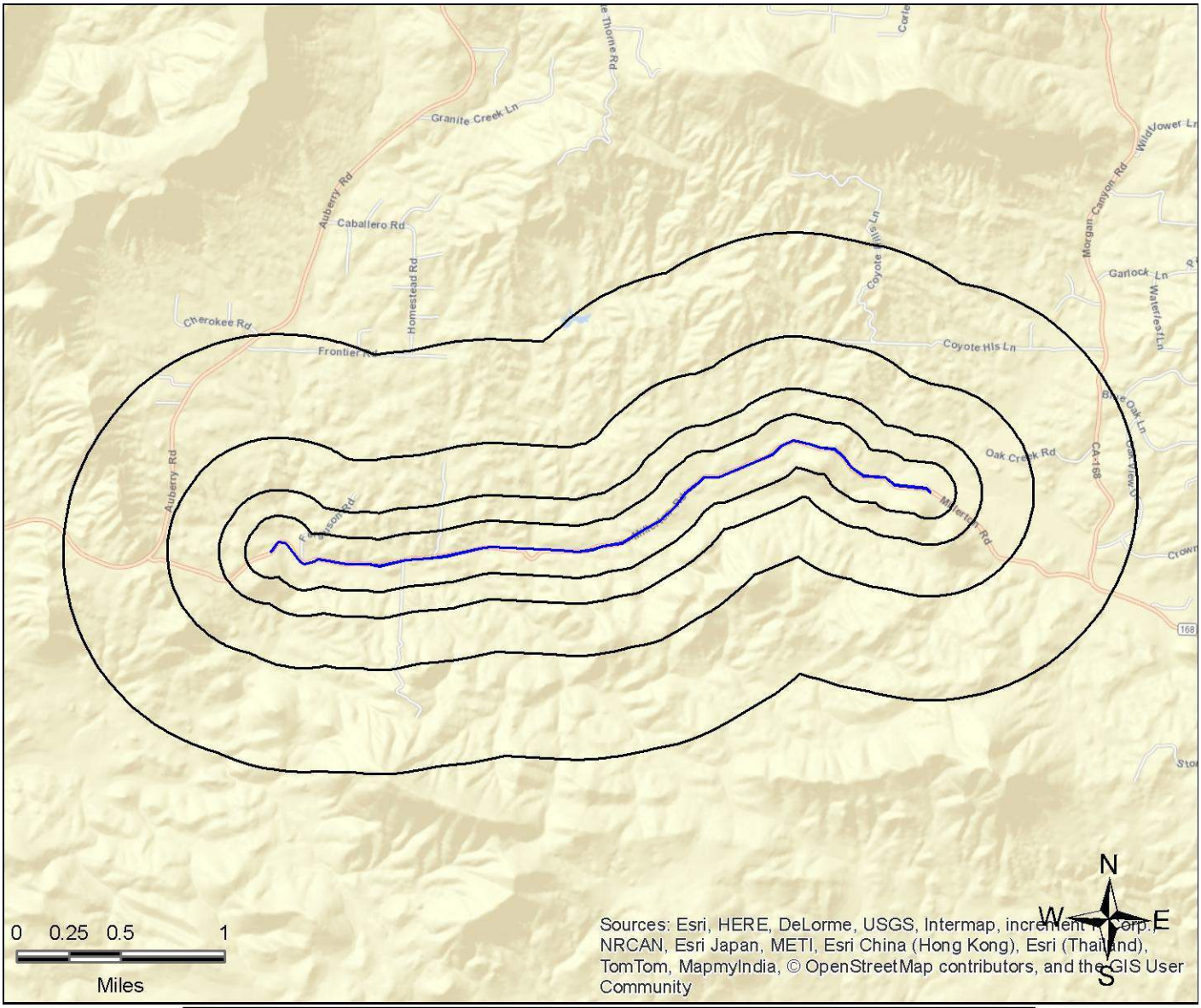
Adanta, Inc.	Millerton Road Clovis, CA	FIGURE: 1 JOB: A1272-1 DATE: 3/10/2015



SITE LOCATION MAP

Adanta, Inc.	Millerton Road Clovis, CA	FIGURE: 2 JOB: A1272-1 DATE: 3/10/2015

1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



Legend

Federal NPL	Federal RCRA non-CORRACTS TSD	Federal Emergency Release Reports	State/Tribal UST	ERS Supplemental Govt Sources
Federal Delisted NPL	Federal RCRA Generators	Emergency Release Reports	State/Tribal Brownfield	ERS Exclusive Historic Sources
Federal CERCLIS	Federal UST	State/Tribal NPL	State/Tribal Inst/Eng Controls	
Federal CERCLIS NFRAP	Federal Inst/Eng Controls	State/Tribal CERCLIS Equivalent	State/Tribal Landfill/Solid Waste	
Federal LUST	Federal Brownfield	State/Tribal LUST	State/Tribal RCRA Equivalent	
Federal RCRA CORRACTS	Federal ERNS	State/Tribal Voluntary Cleanup Sites	State/Tribal ASTM Other	

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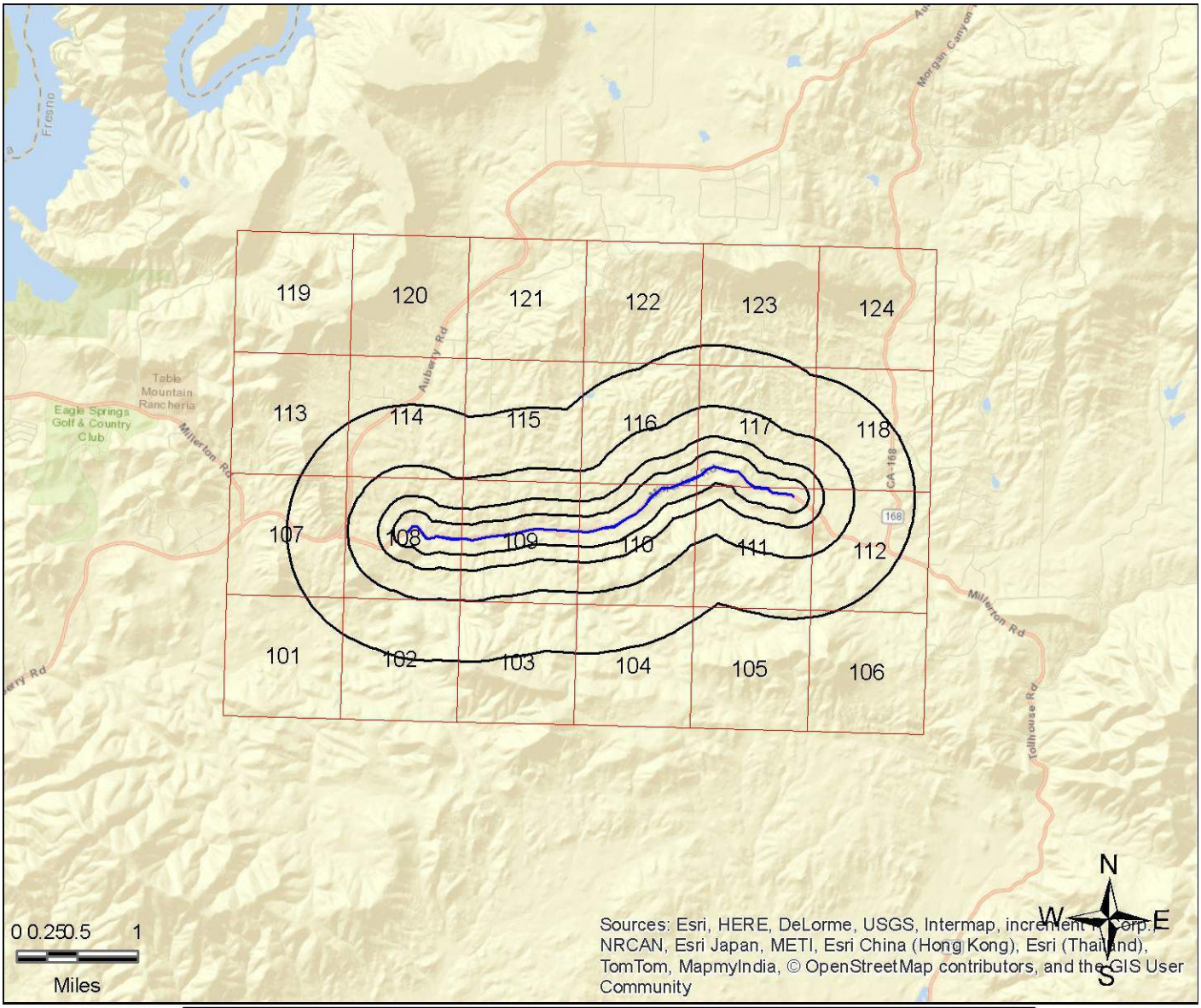
GRID LAYOUT MAP KEY



Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
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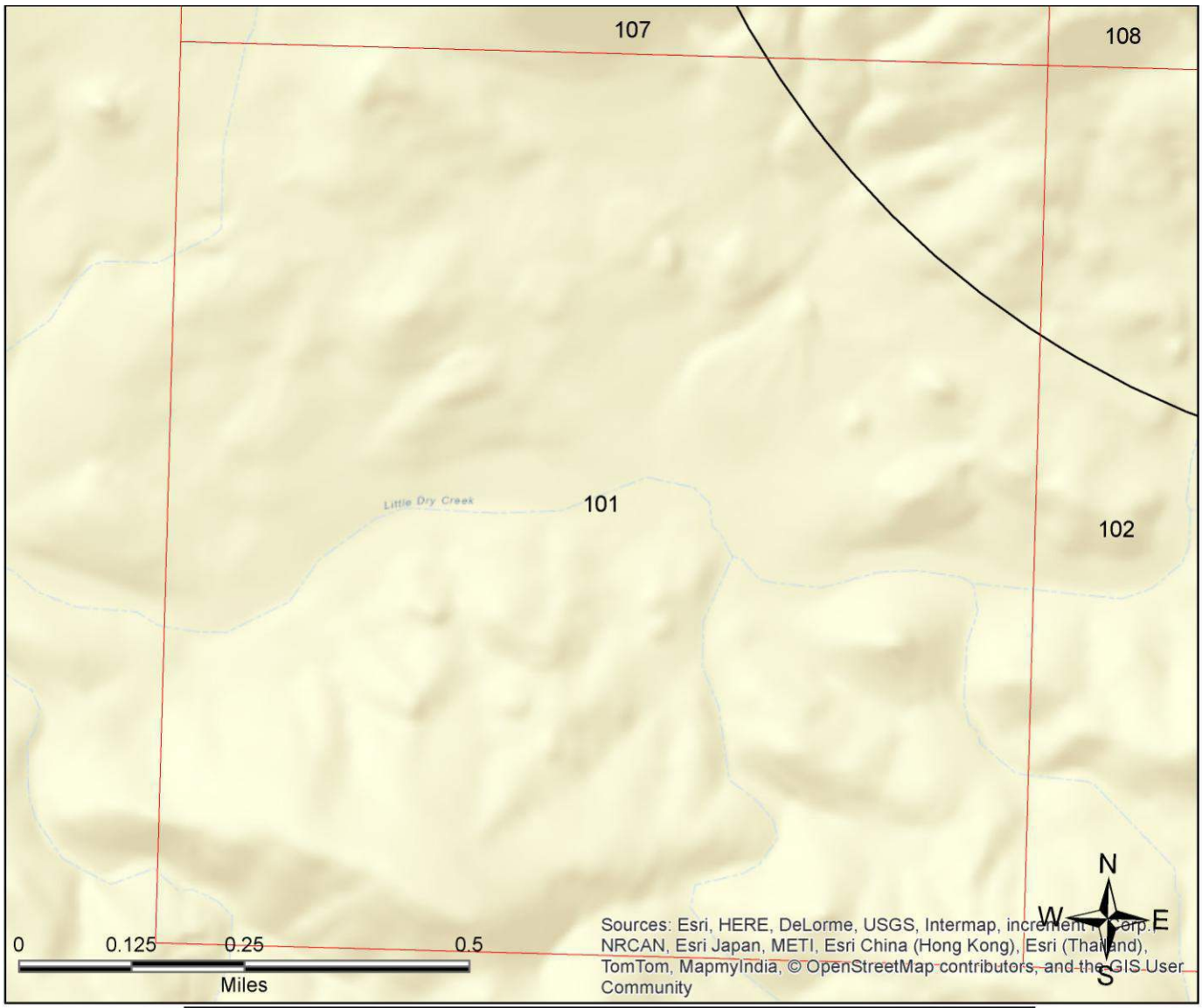
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
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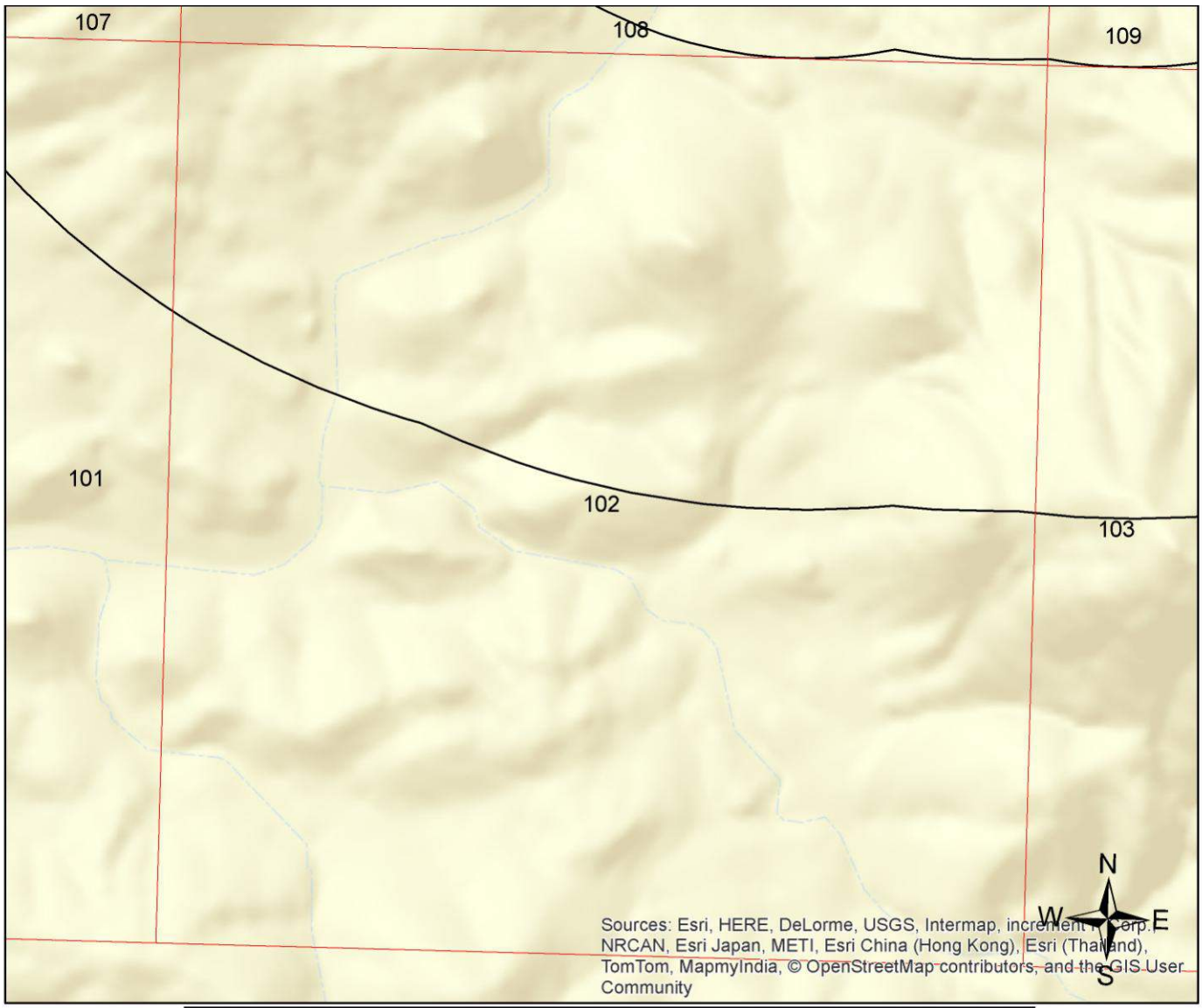
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
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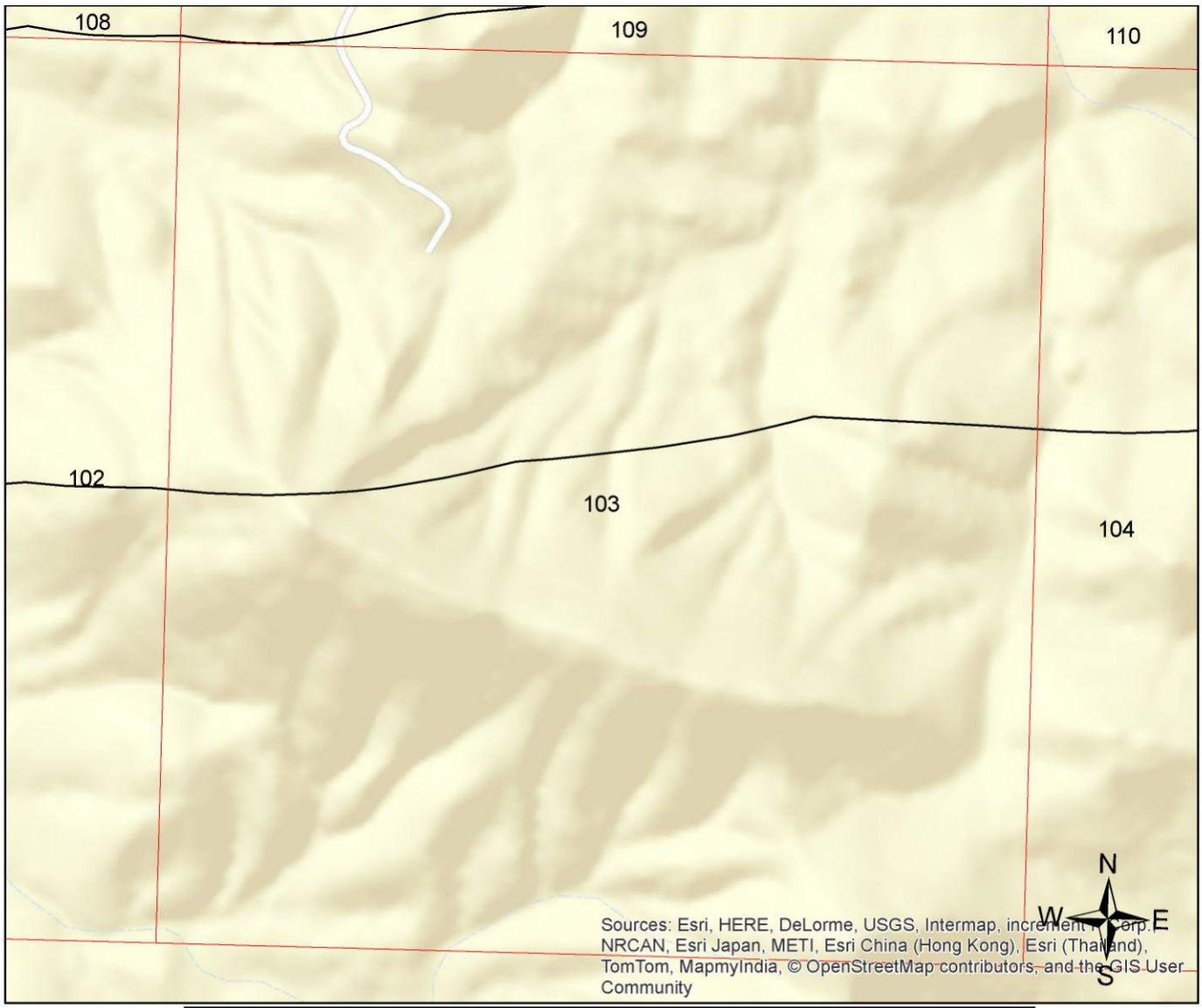

Legend

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- Federal CERCLIS
- Federal CERCLIS NFRAP
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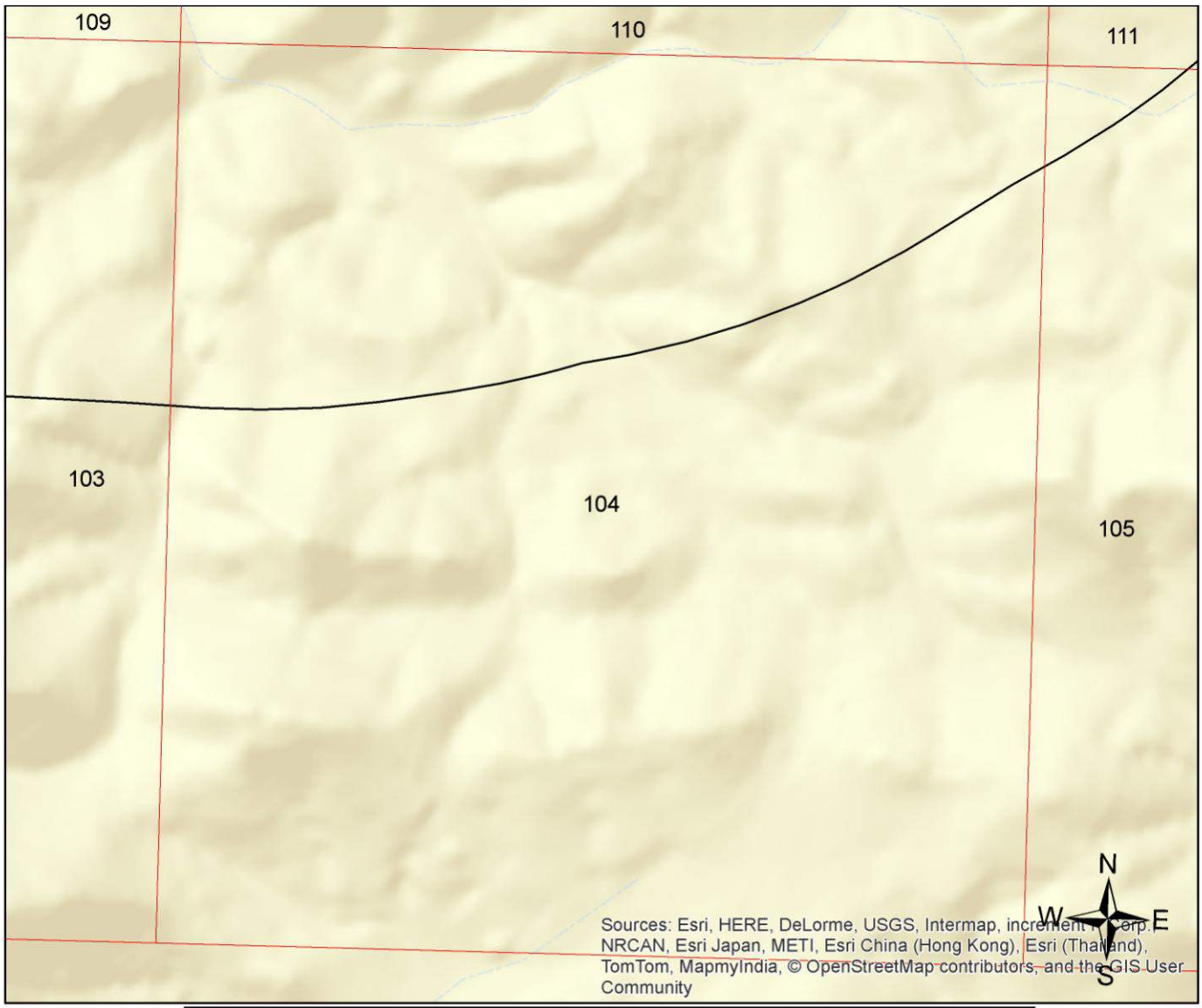

Legend

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- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
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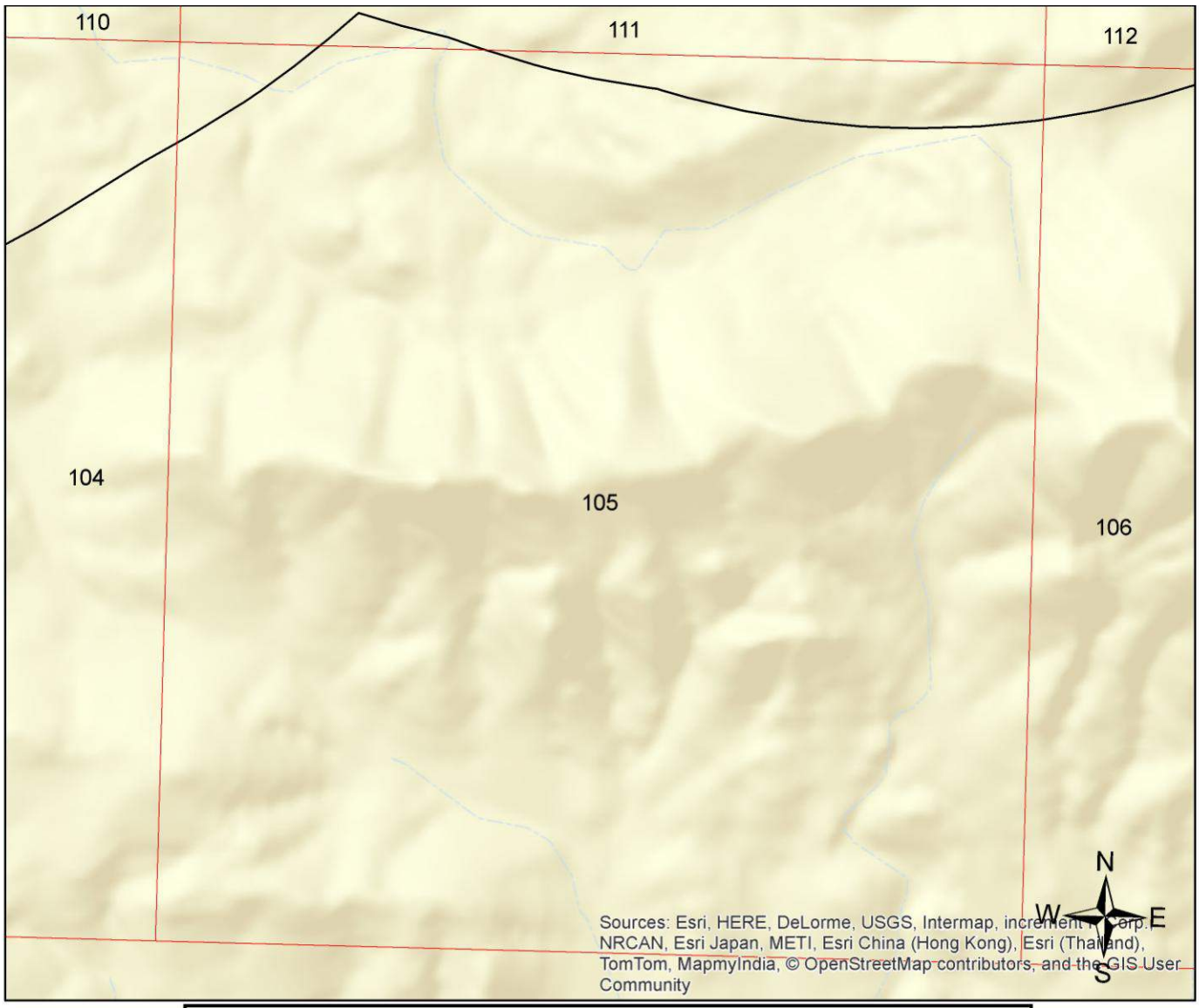

Legend

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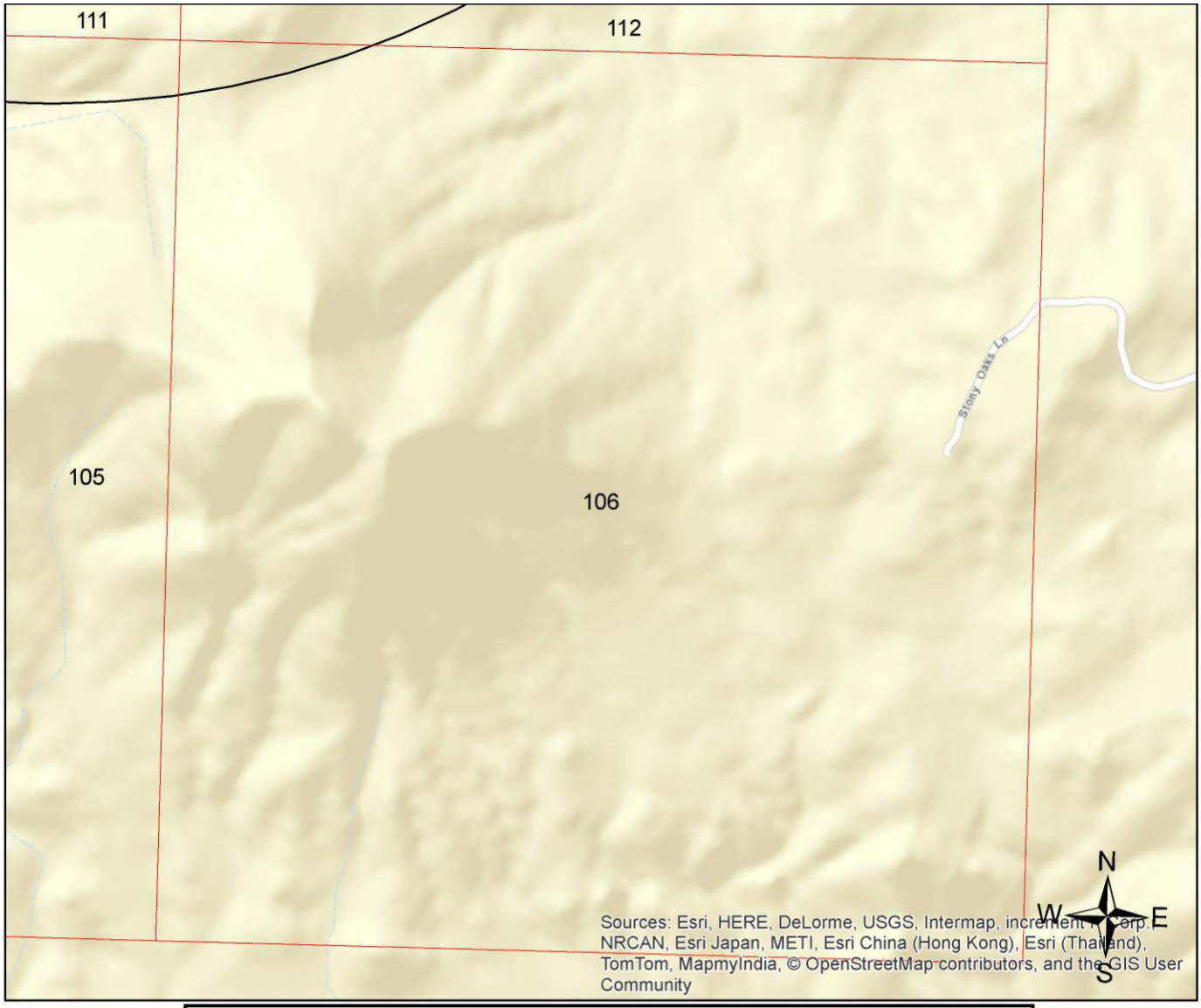

Legend

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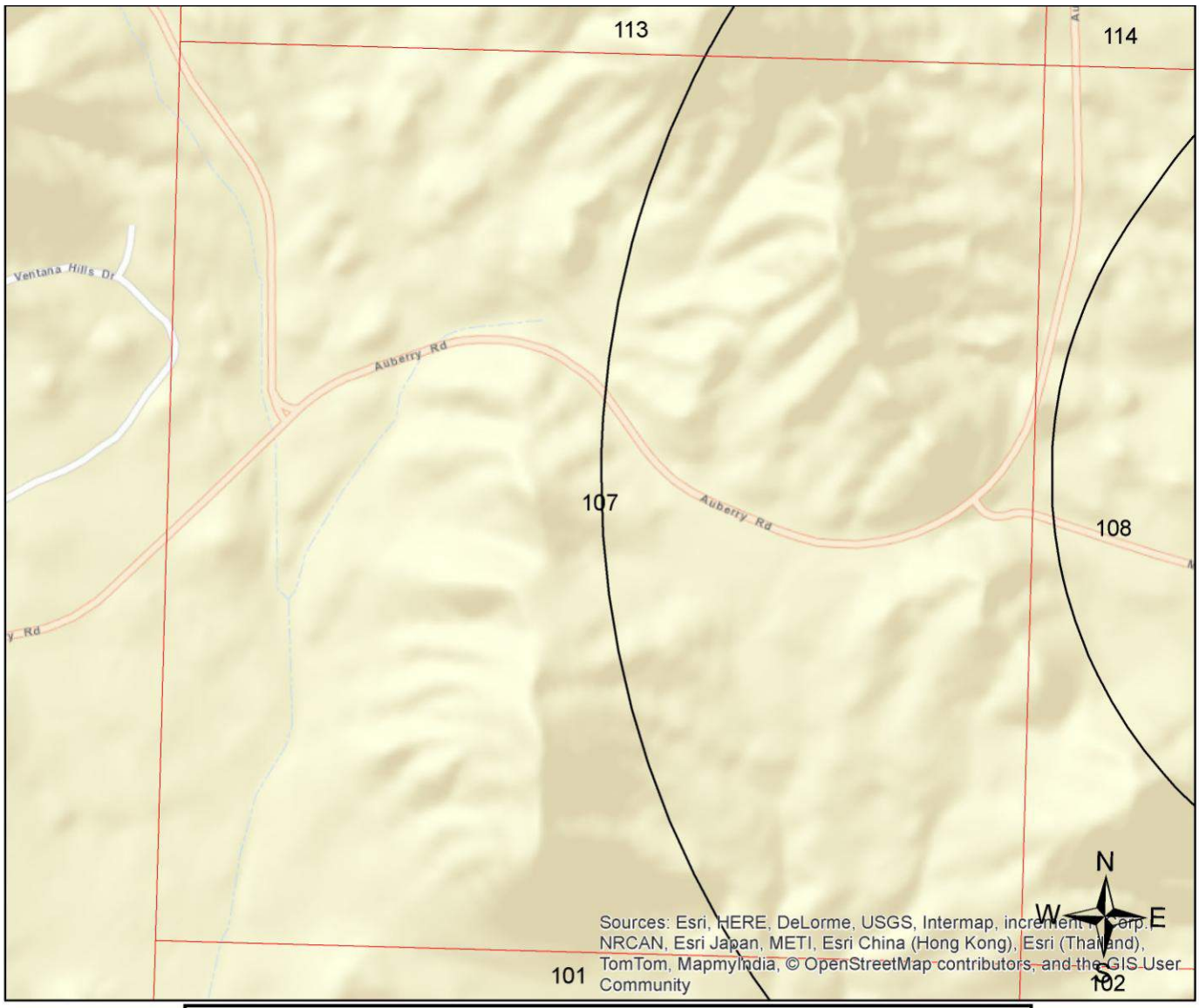

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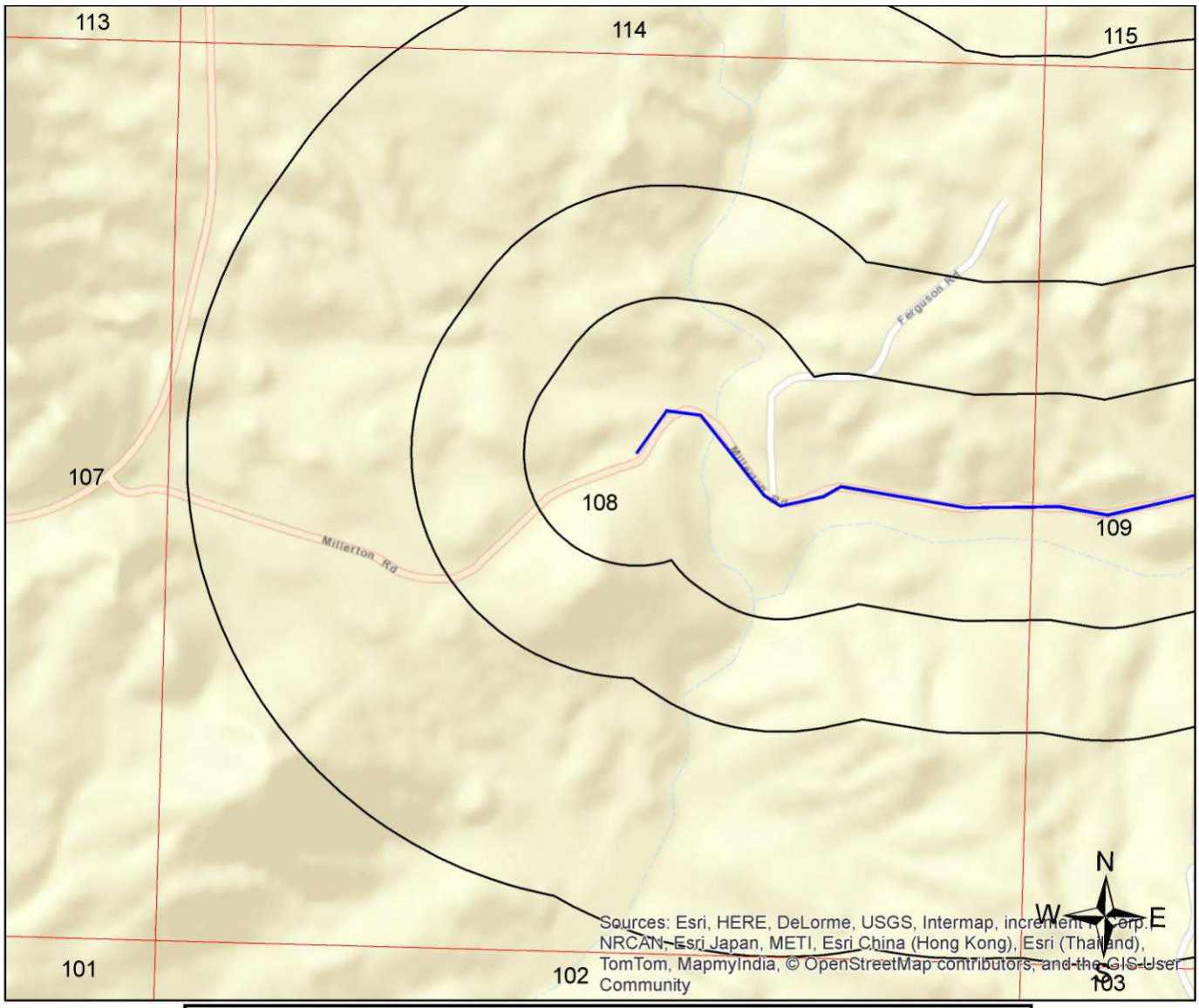

Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
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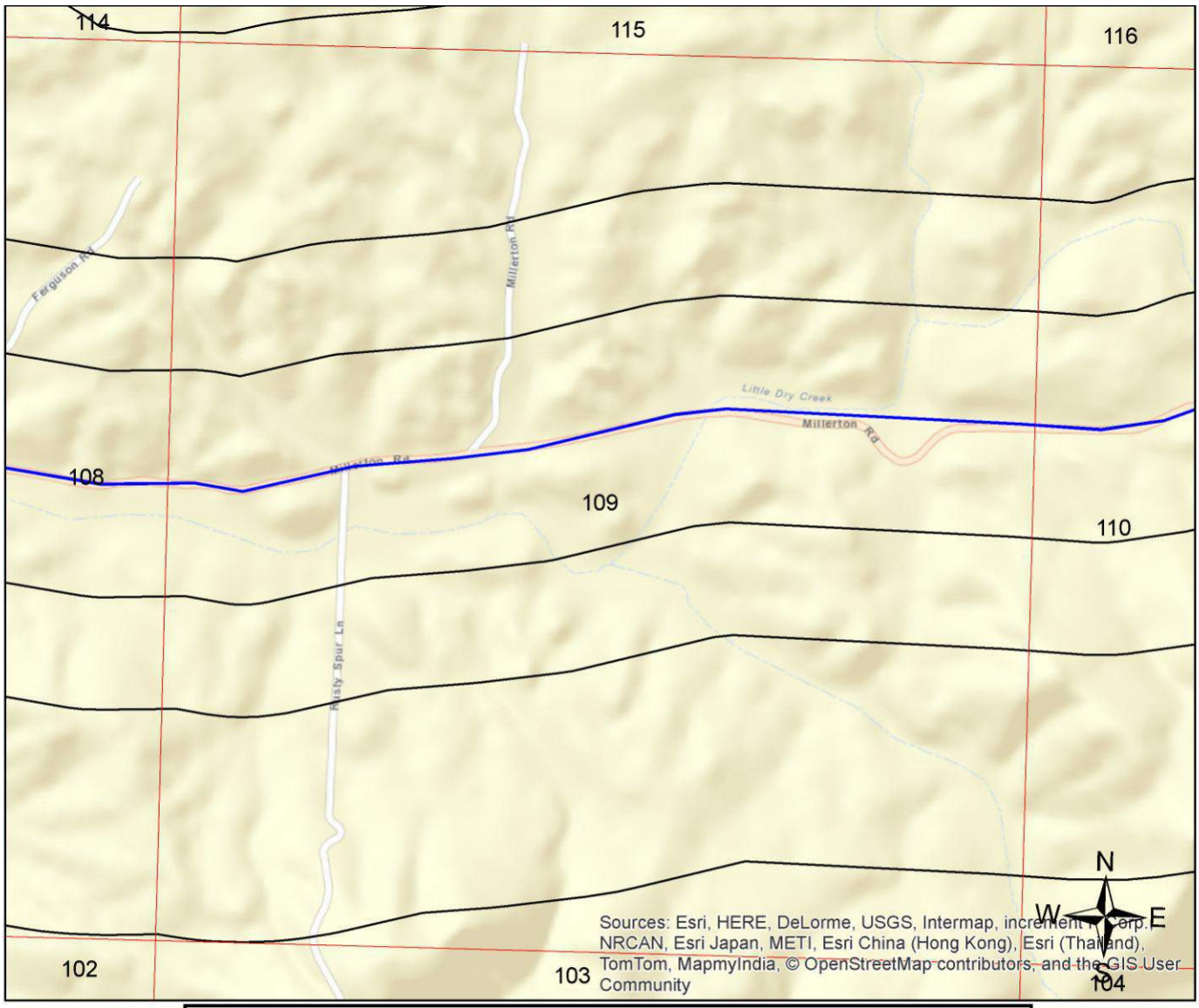

Legend

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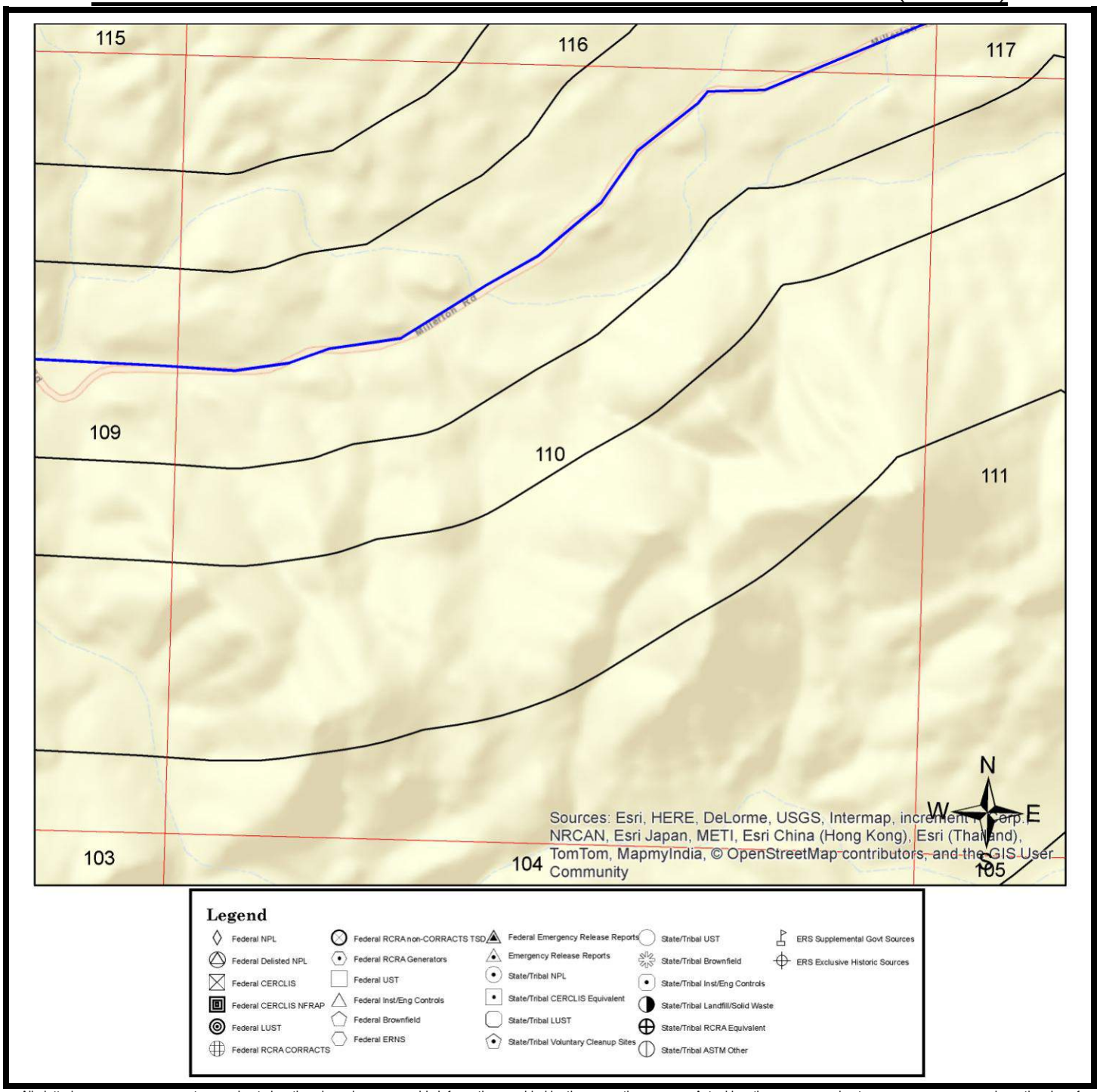

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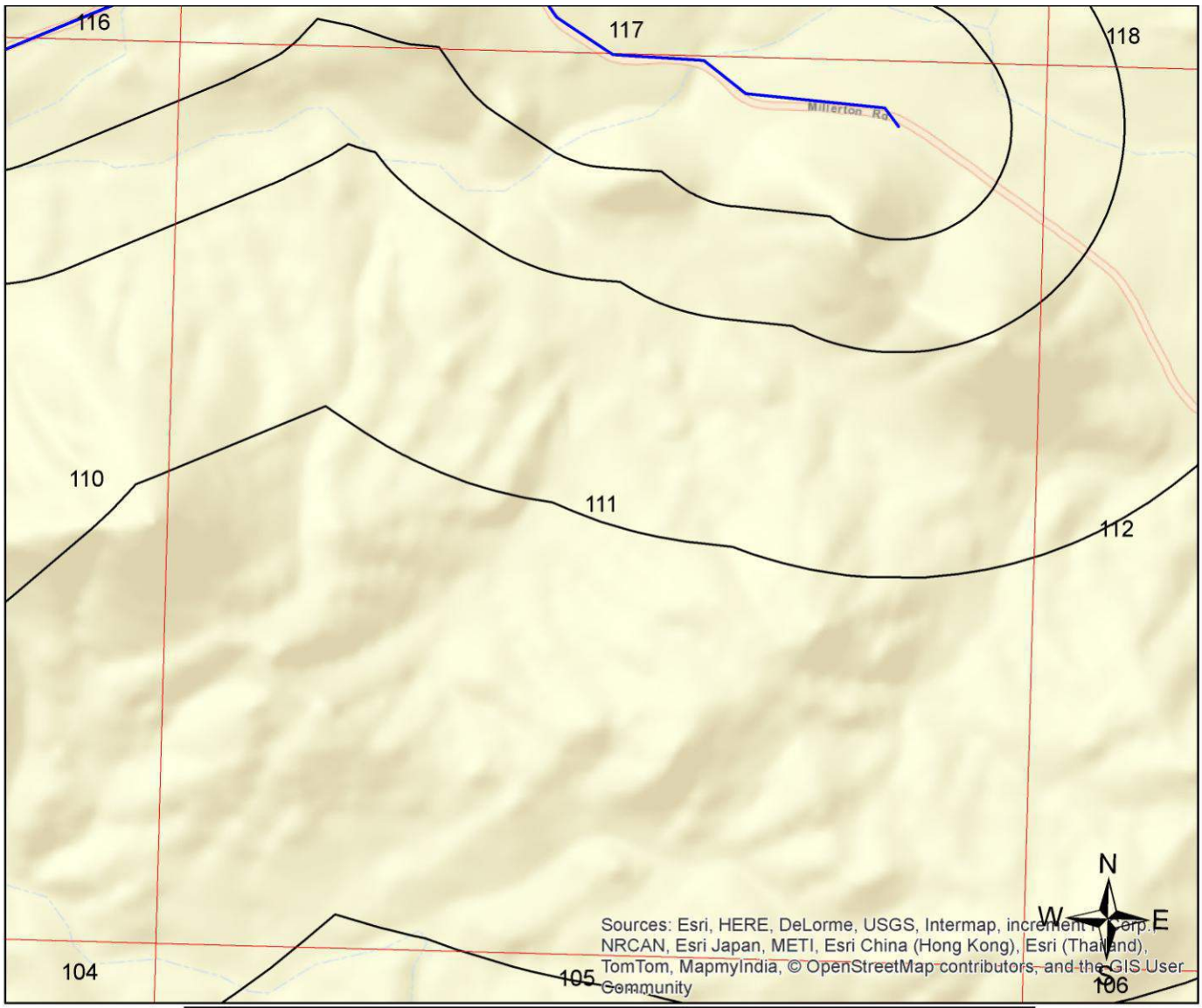

Legend

- Federal NPL
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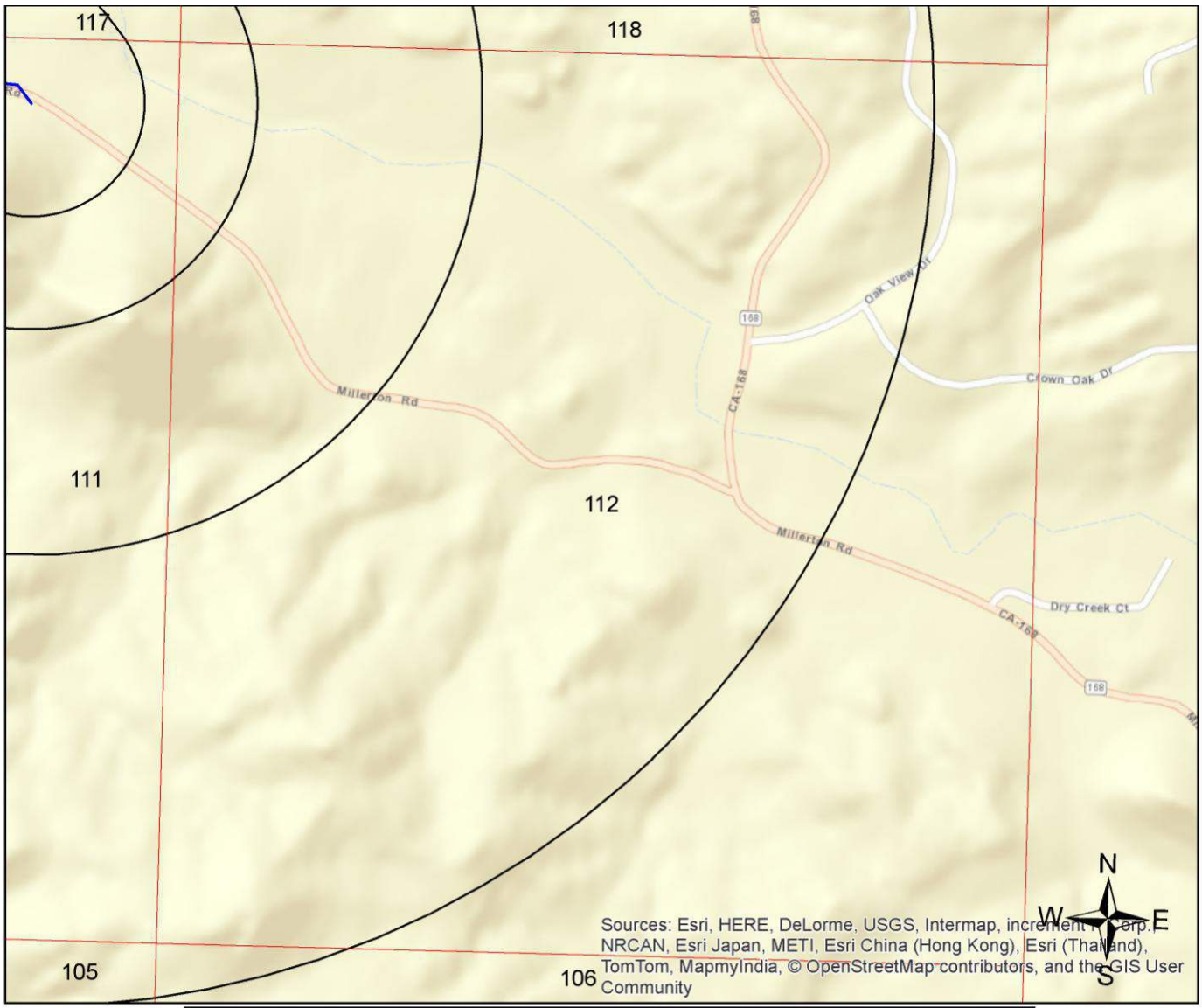

Legend

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- Federal Inst/Eng Controls
- Federal Brownfield
- Federal ERNS
- Federal Emergency Release Reports
- Emergency Release Reports
- State/Tribal NPL
- State/Tribal CERCLIS Equivalent
- State/Tribal LUST
- State/Tribal Voluntary Cleanup Sites
- State/Tribal UST
- State/Tribal Brownfield
- State/Tribal Inst/Eng Controls
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- State/Tribal ASTM Other
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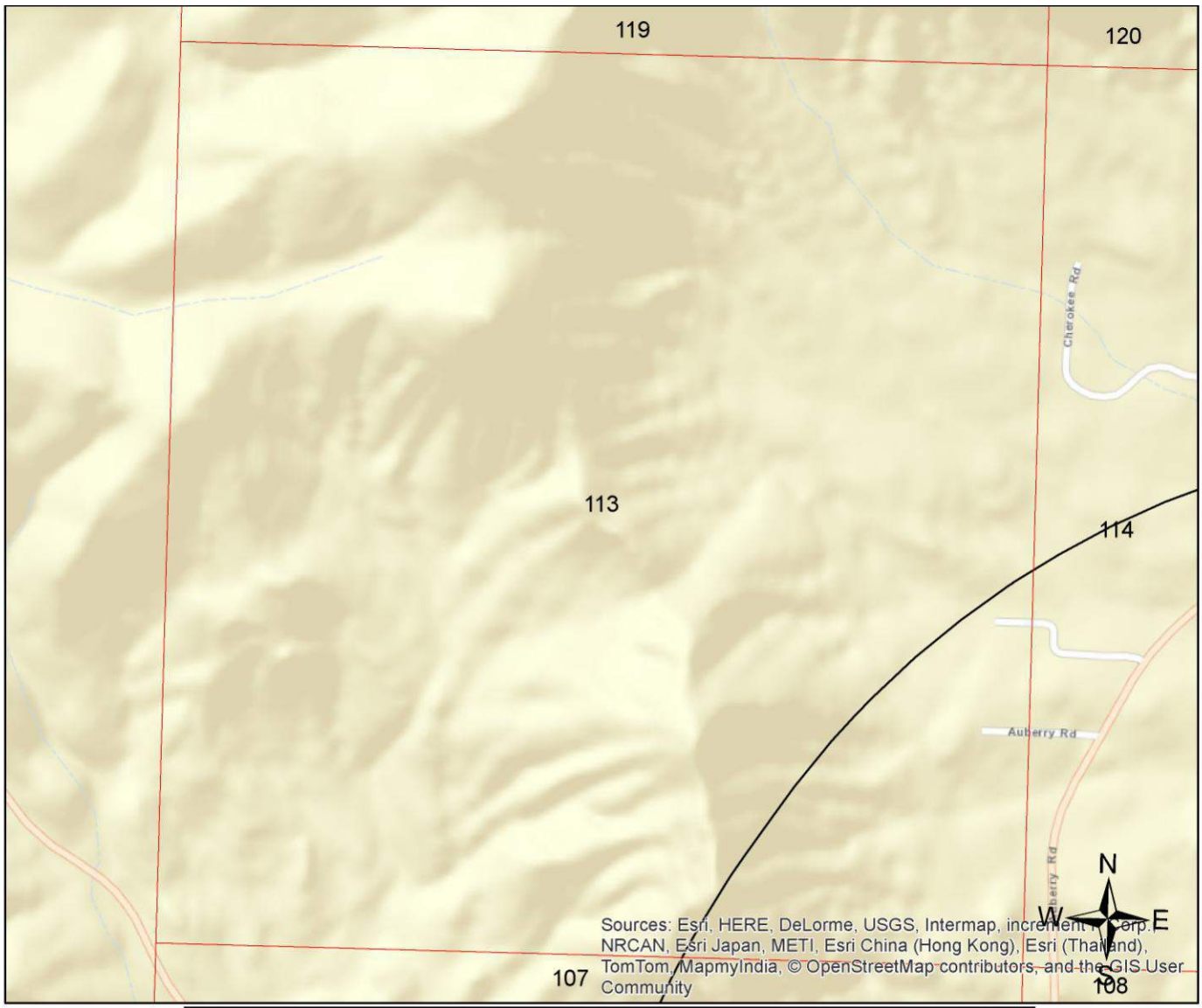
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
- Federal RCRA Generators
- Federal UST
- Federal Inst/Eng Controls
- Federal Brownfield
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- State/Tribal Voluntary Cleanup Sites
- State/Tribal UST
- State/Tribal Brownfield
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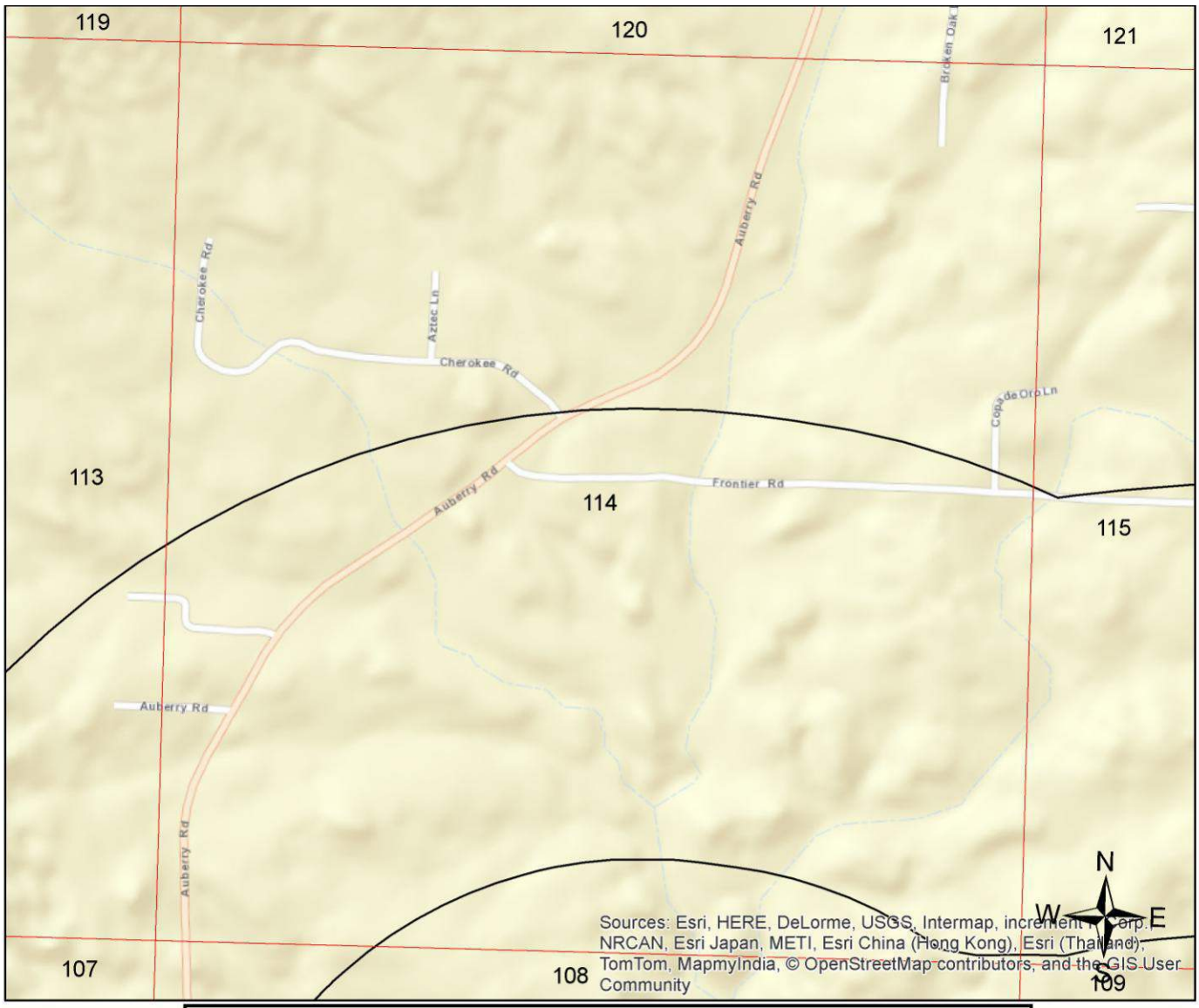

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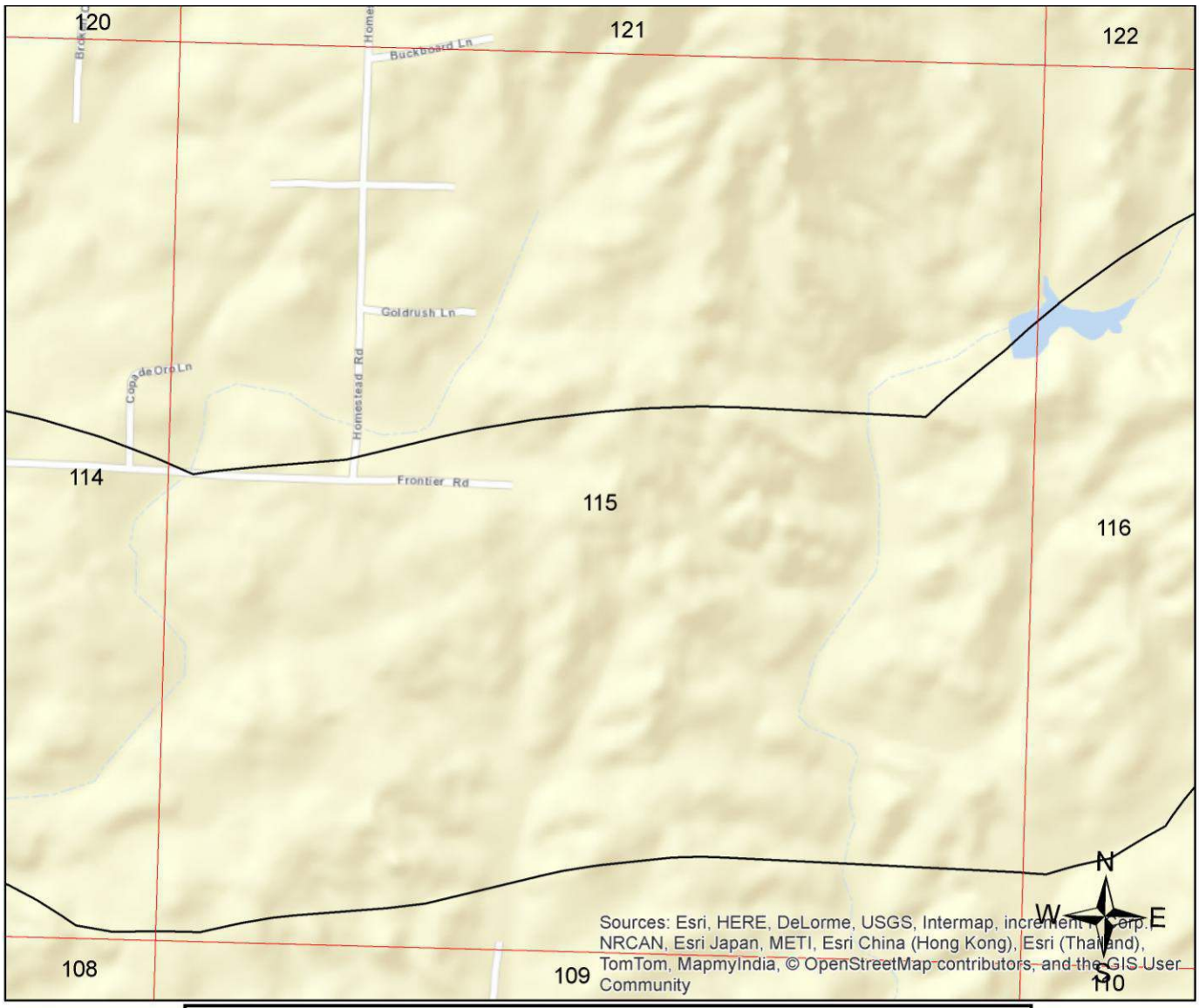

Legend

- Federal NPL
- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
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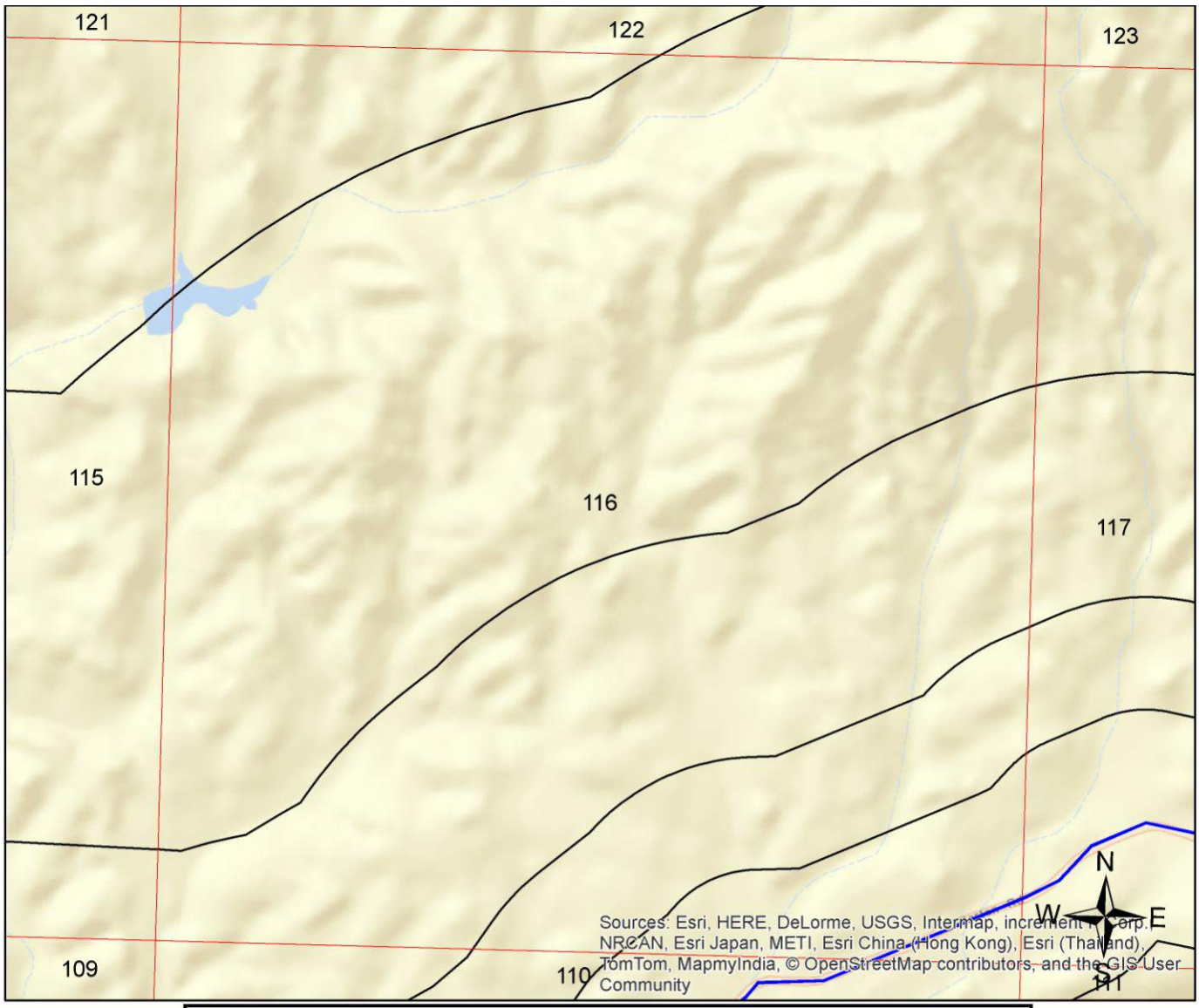

Legend

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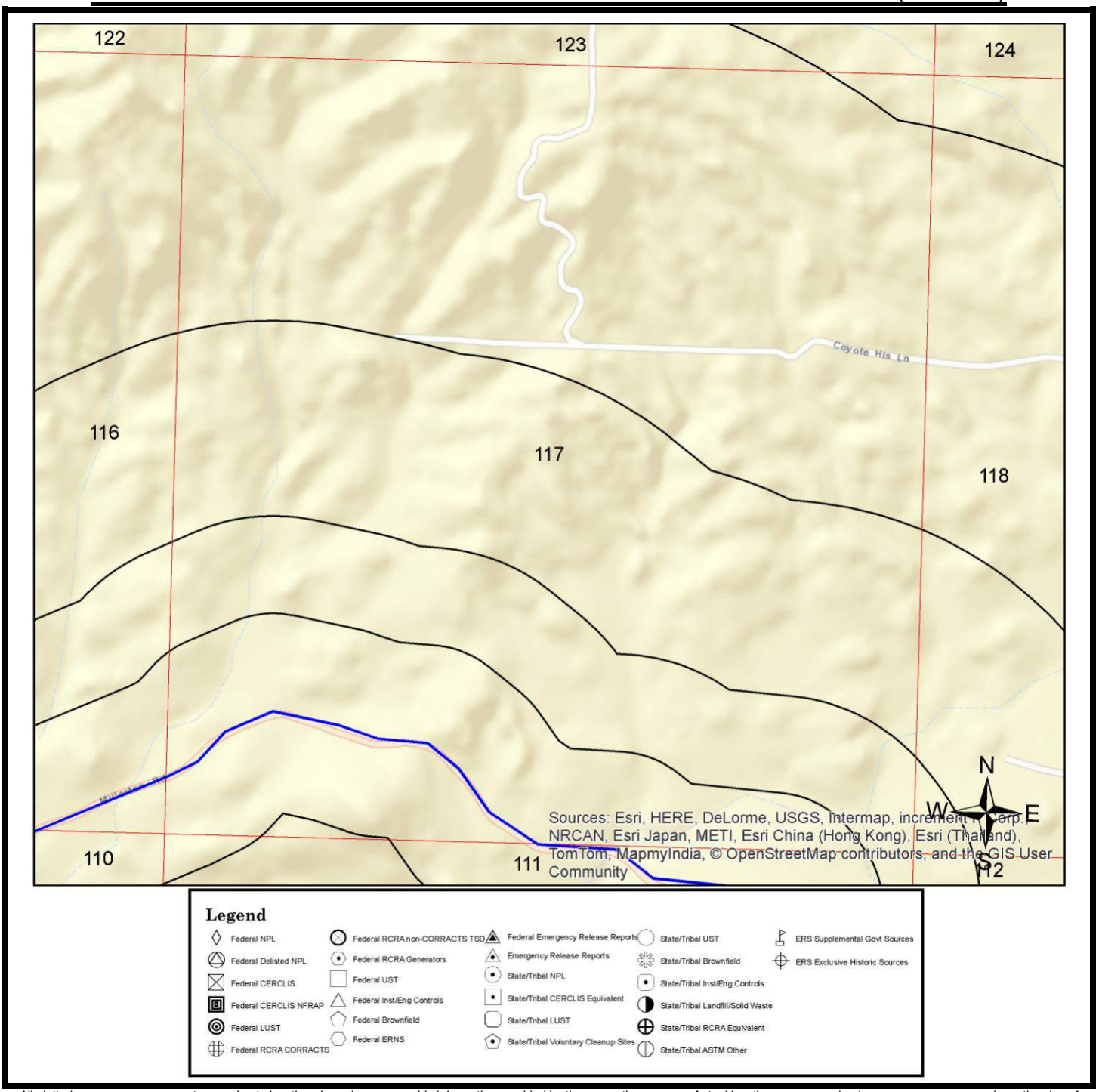

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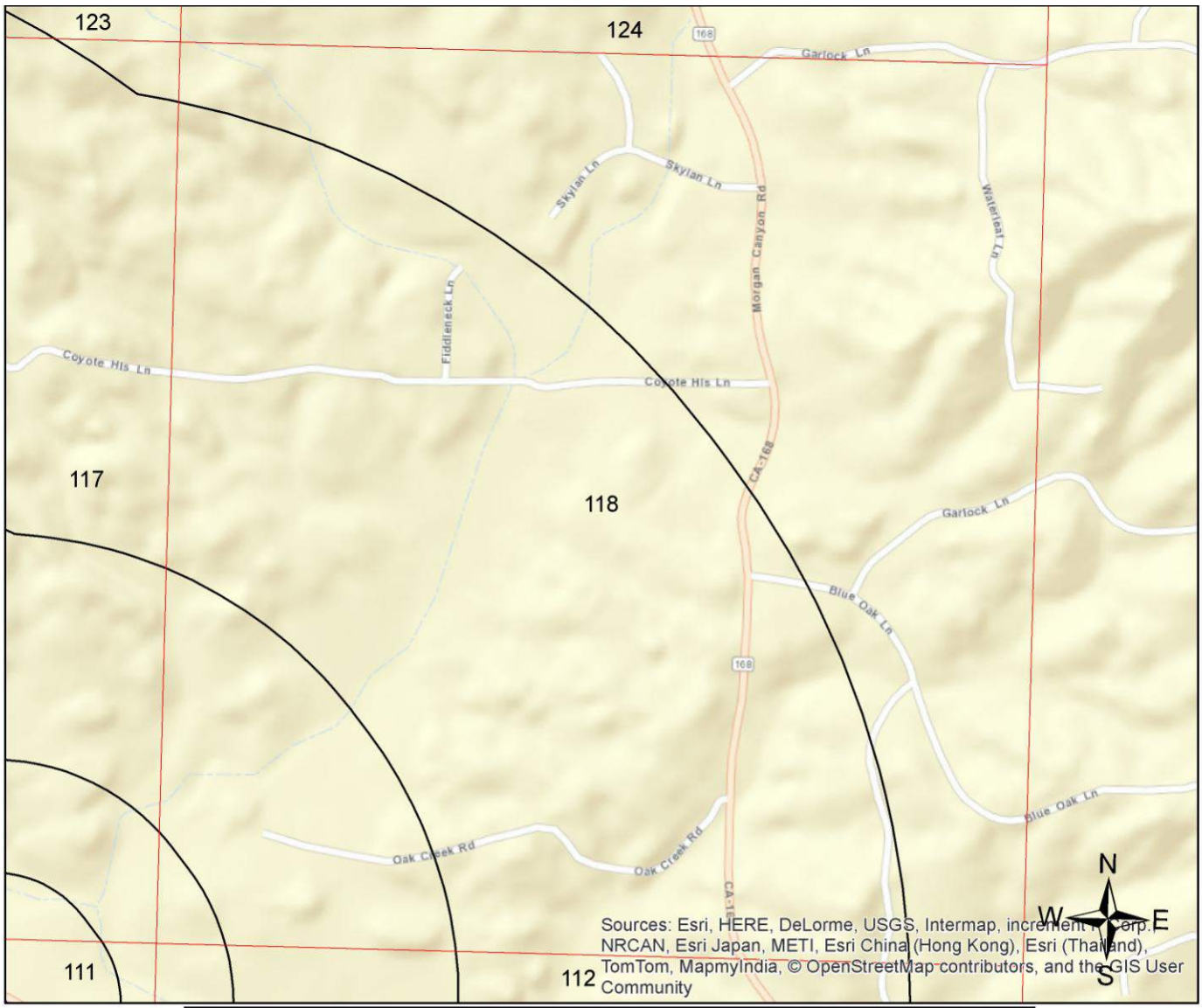

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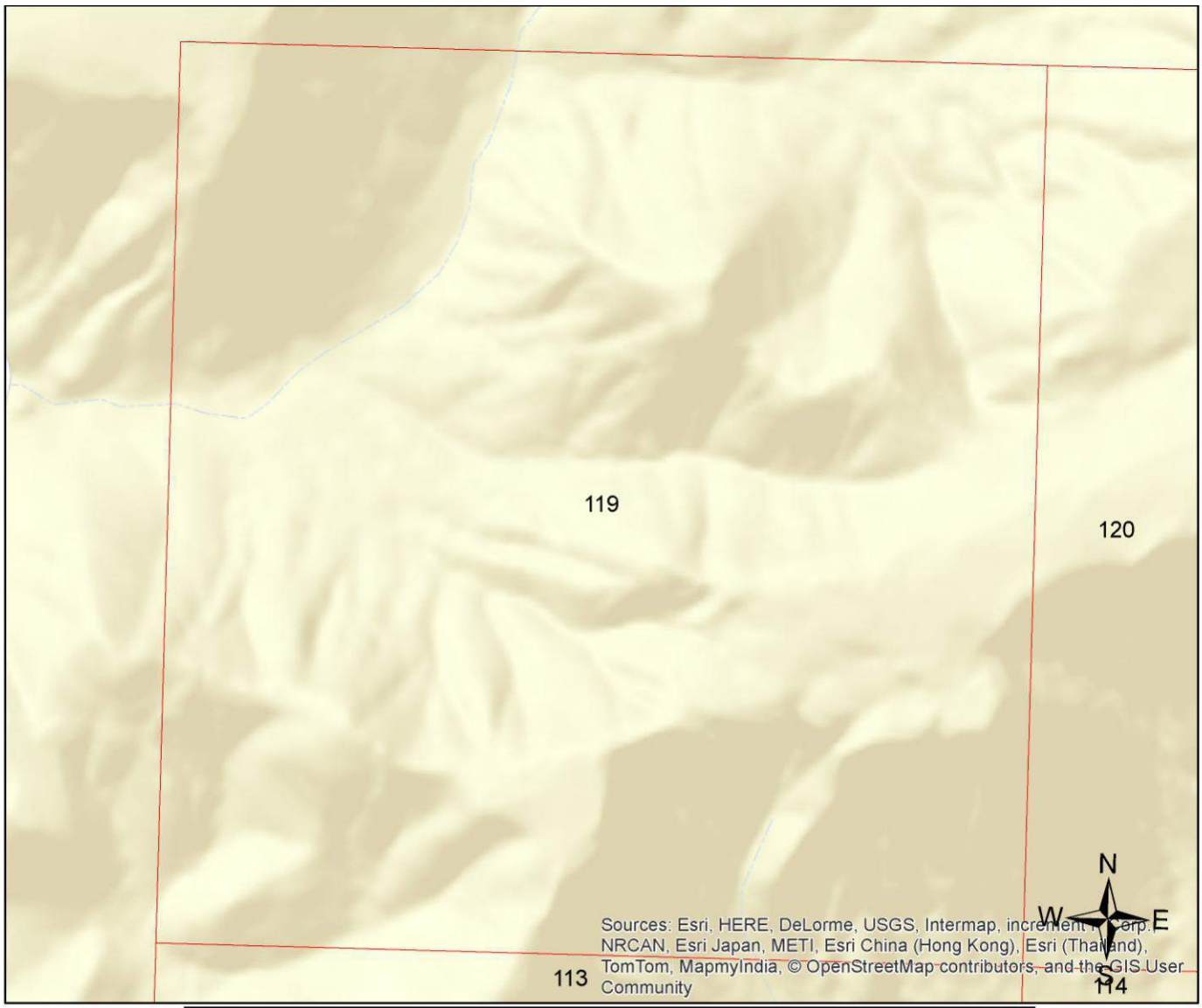

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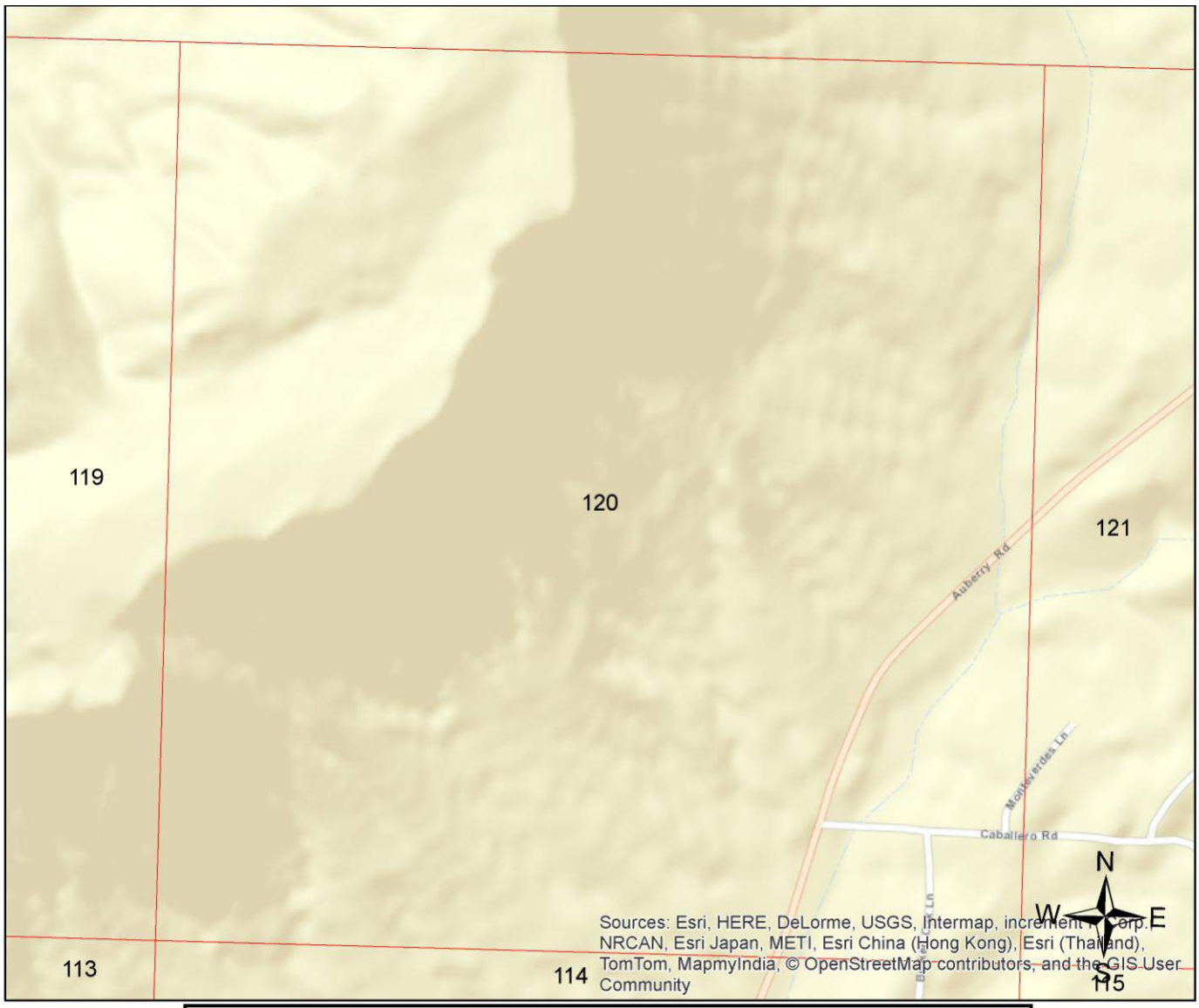

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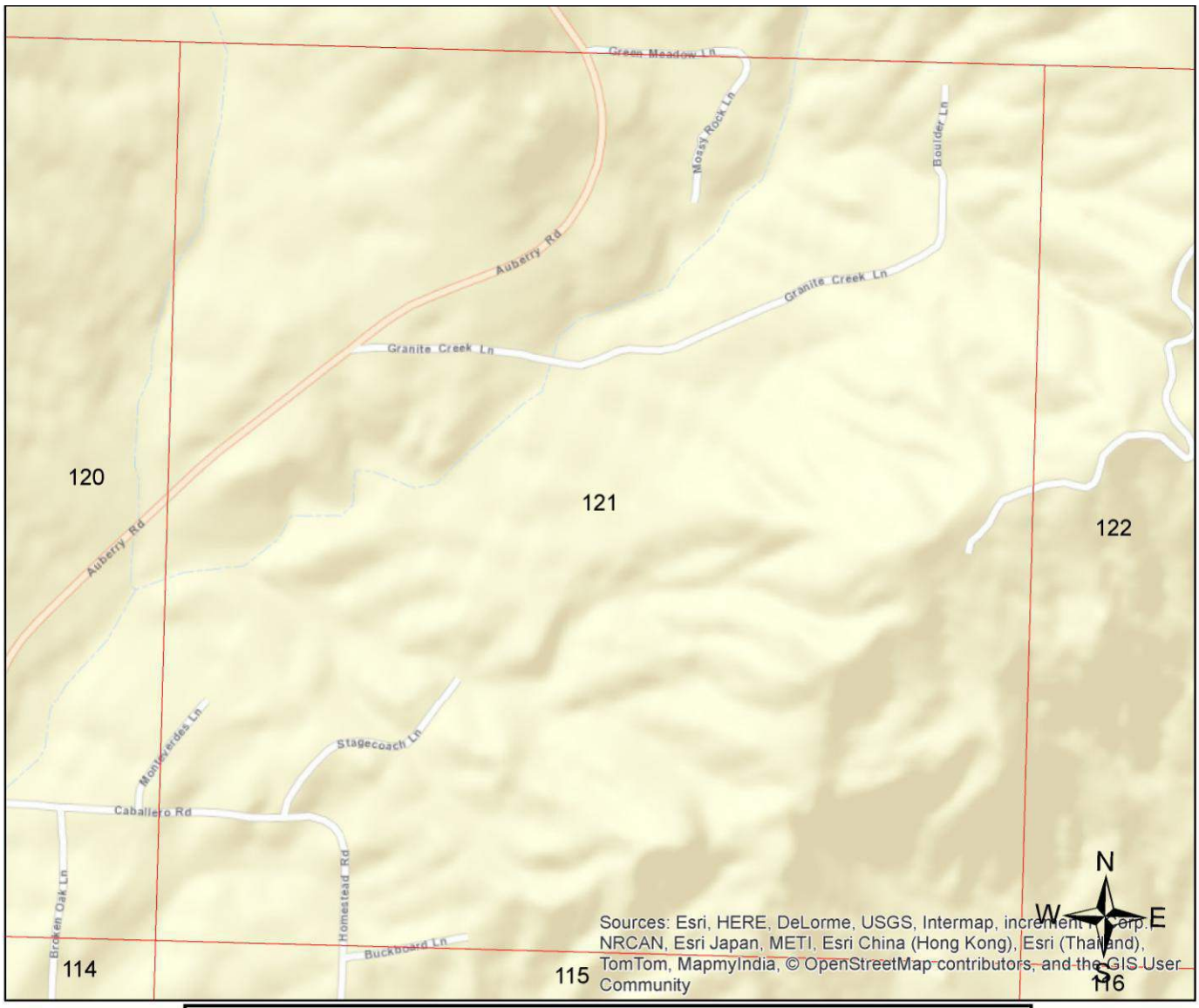

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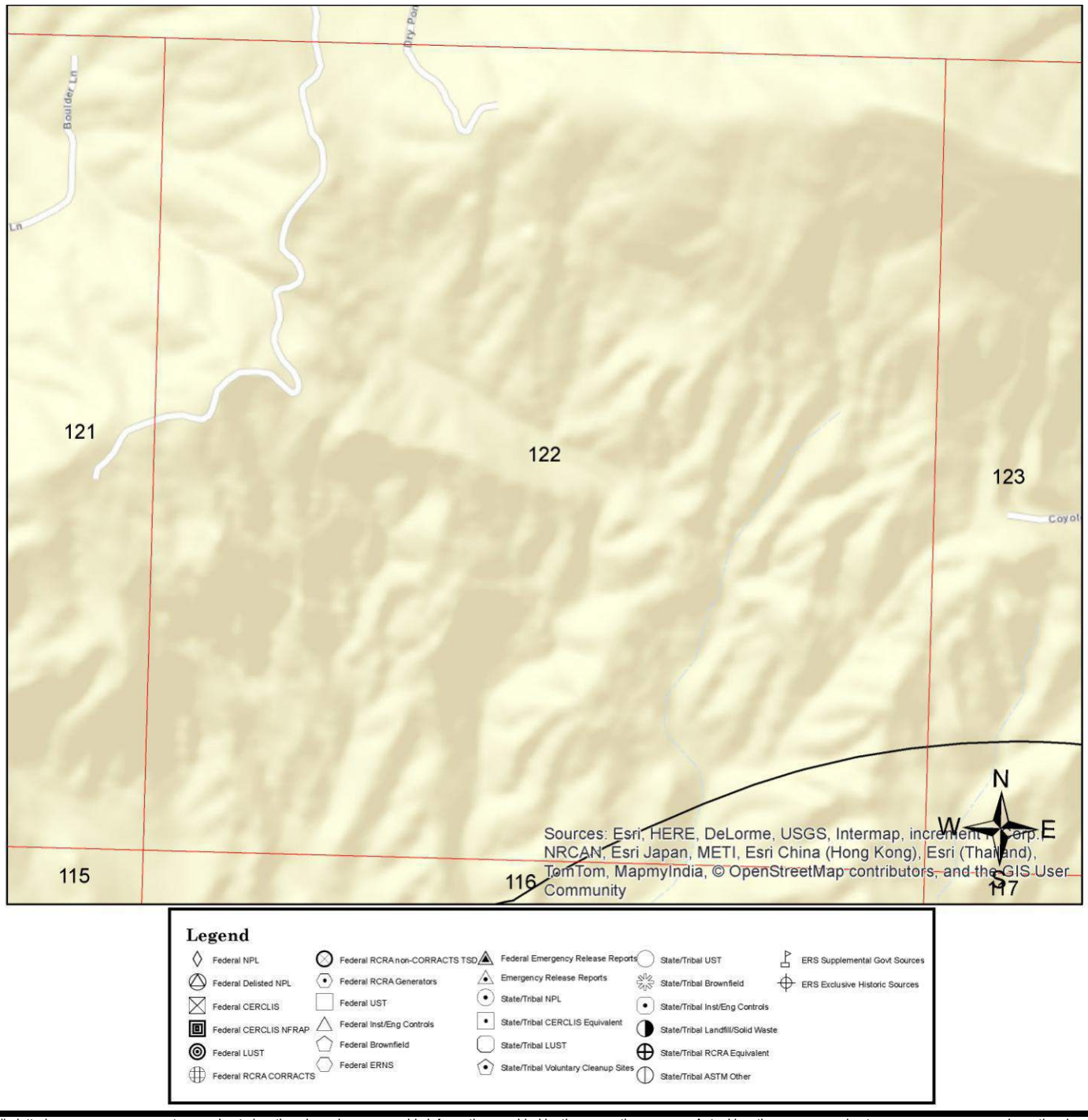

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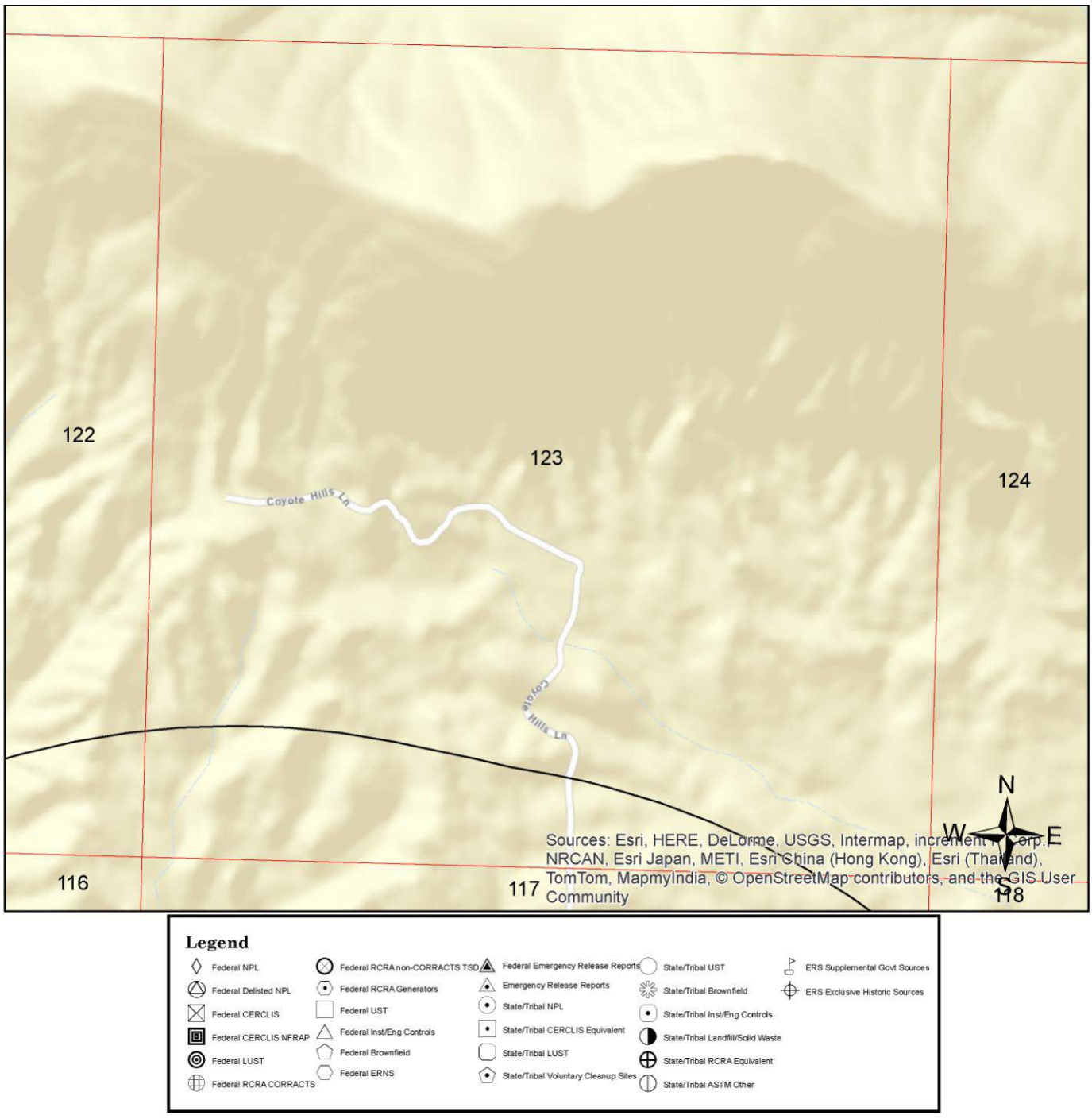

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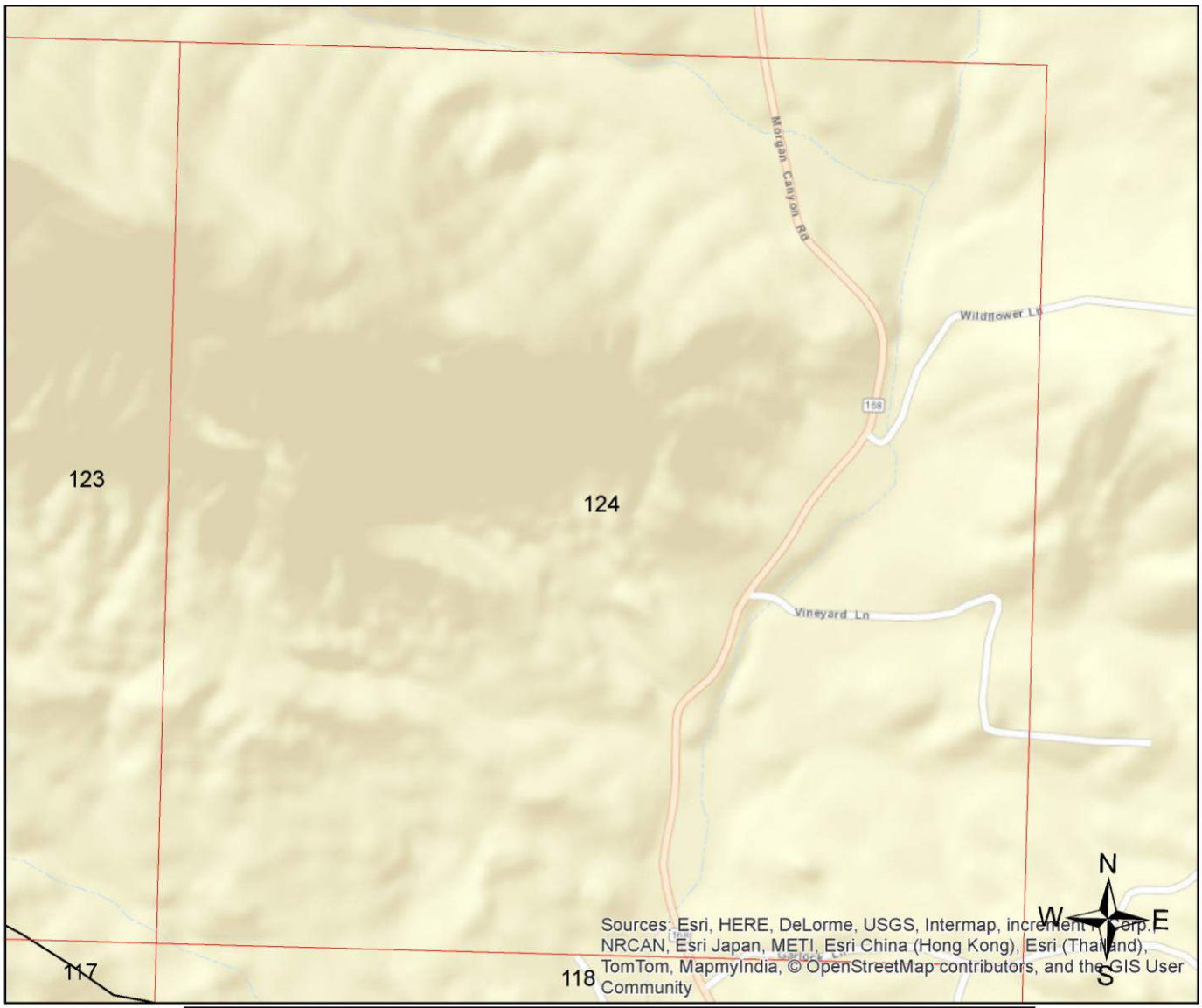

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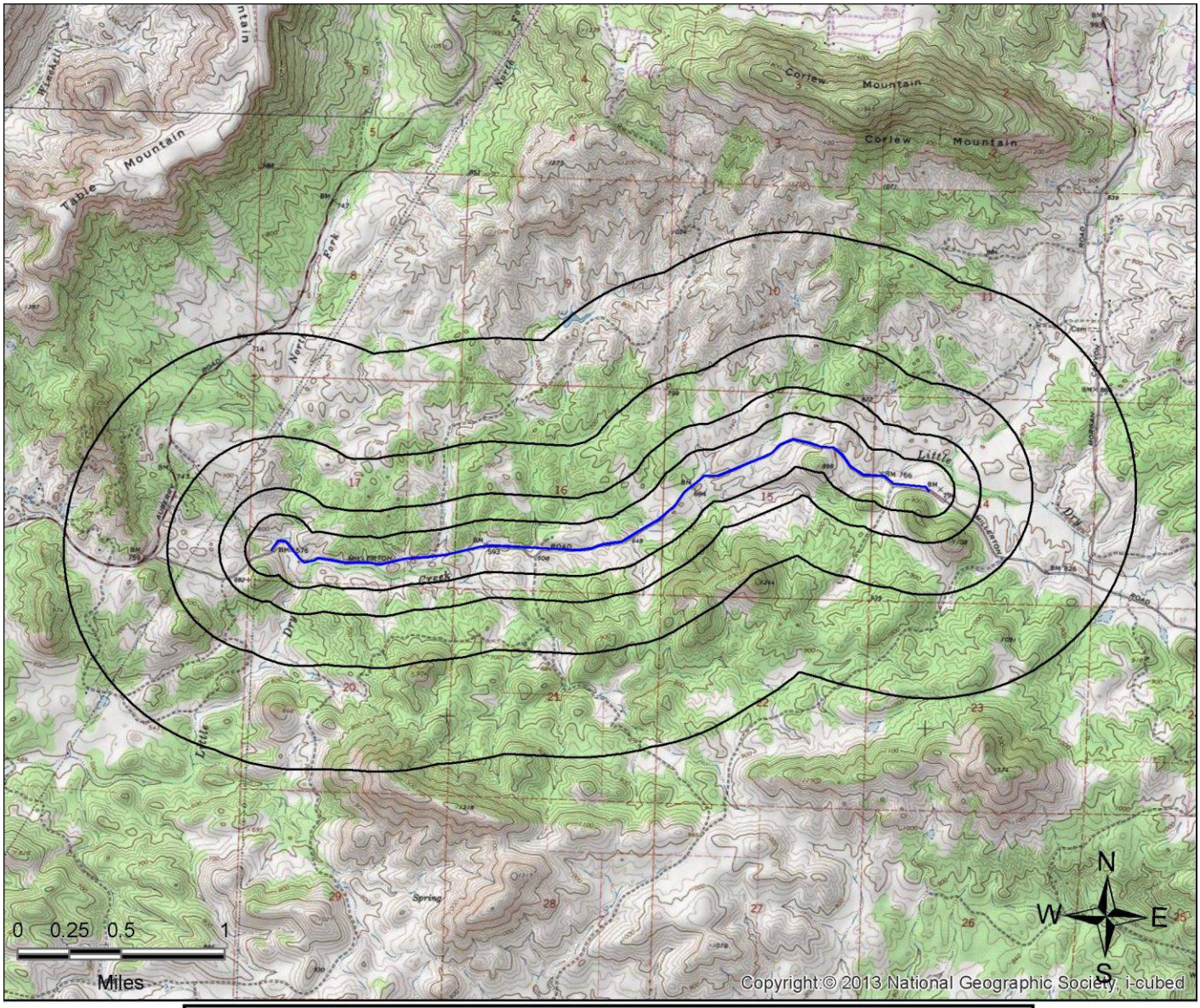
1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP3)



Legend

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- Federal Delisted NPL
- Federal CERCLIS
- Federal CERCLIS NFRAP
- Federal LUST
- Federal RCRA CORRACTS
- Federal RCRA non-CORRACTS TSD
- Federal RCRA Generators
- Federal UST
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- State/Tribal CERCLIS Equivalent
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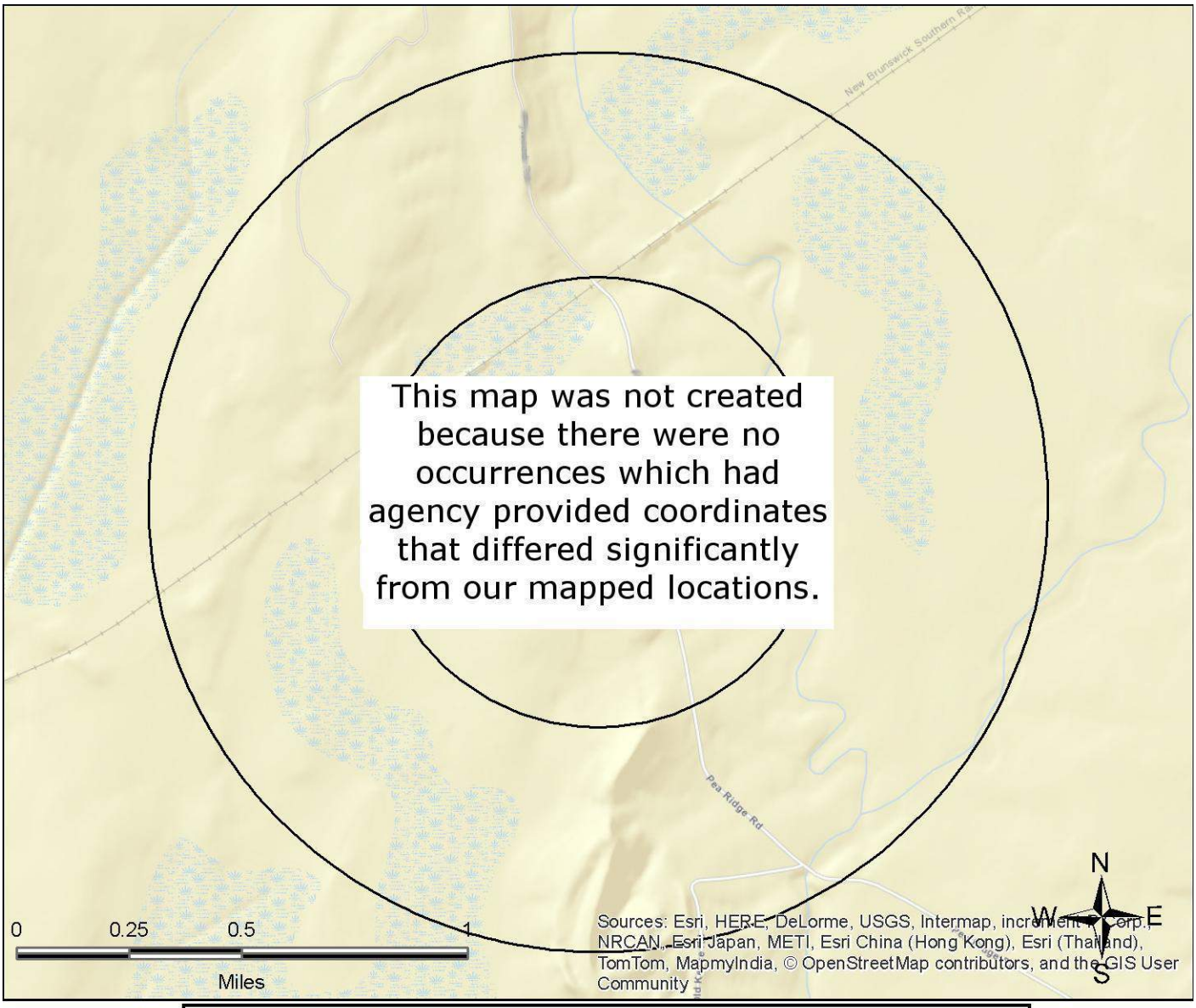
AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP4)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.

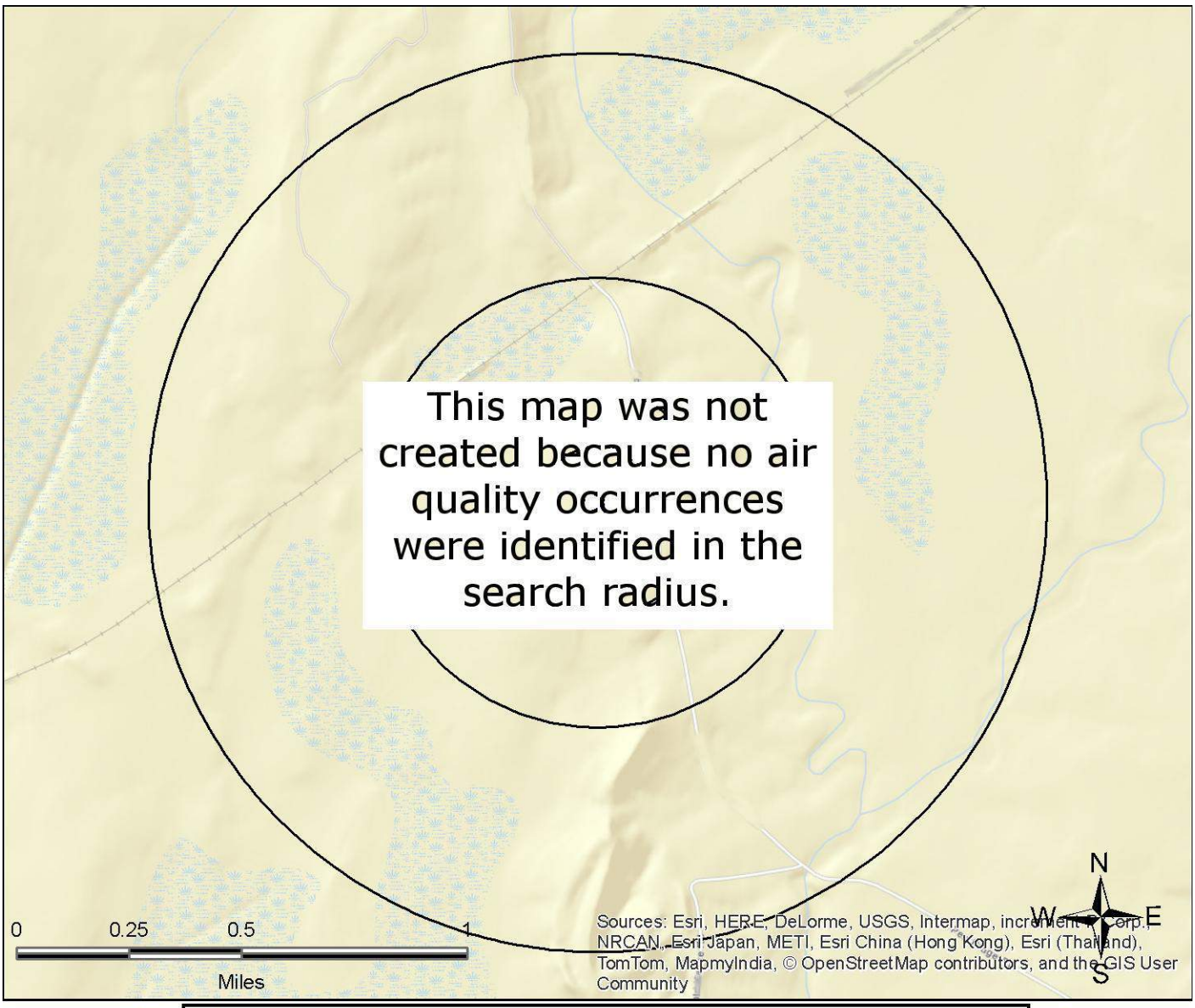


SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID/SITE NAME	DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
N/A	No occurrences were identified where the agency provided coordinates that differed significantly from our mapped locations.				

MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP5)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminates may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
N/A				
SITE NAME			**MAPS**	**ID**
ADDRESS			**CITY**	**ZIP**
DETAILS				
No listed sites were found.				

RECORDS SOURCES SEARCHED

Abandoned-UST-CA
Inventory of Abandoned Tank Sites
Category: State/Tribal UST
Description: This database contains an inventory of abandoned tank sites reported by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 10/10/2014
Date last checked: 10/10/2014
Distance searched: 0.25 miles
Sites:
None Found

Air-CA
Air Permits with Emissions
Category: State/Tribal ASTM Other
Description: This database contains permitted facilities that report to the ARB by the different Air Quality Districts.
Agency: California Air Resources Board
Phone Number: 9163222990
Date last updated: 10/14/2014
Date last checked: 10/8/2014
Distance searched: 0.5 miles
Sites:
None Found

AIR-DIST-CA
Air Pollution Control District
Category: State/Tribal ASTM Other
Description: This database contains air permitted facilities as reported by various Air Quality and Air Pollution Control Districts in California.
Antelope Valley AQMD: (661) 723-8070
Butte AQMD: (530) 332-9400
Mariposa County APCD: (209) 966-2220
North Coast Unified AQMD: (707) 443-3093
Placer APCD: (530) 745-2330
Sacramento AQMD: (916) 874-4800
San Diego County APCD: (858) 586-2600
Santa Barbara APCD: (805) 961-8800
South Coast AQMD: (909) 396-2000

Agency: Local District Agencies
Phone Number: 7146698096
Date last updated: 3/3/2015
Date last checked: 2/20/2015
Distance searched: 0.5 miles
Sites:
None Found

BF-US
A Listing of Brownfields Sites
Category: Federal Brownfield
Description: This database contains a listing of Brownfields sites listed under the "Cleanups in My Community" program maintained by EPA.
Agency: U.S. Environmental Protective Agency
Phone Number: 2025662777
Date last updated: 11/20/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:
None Found

Cal BZ-HazWaste-CA
Border Zone or Hazardous Waste Property
Category: State/Tribal ASTM Other
Description: This database Identifies properties that went through the Border Zone Property or Hazardous Waste Property process of evaluation as reported by California Department of Toxic and Substance Control. Potential Border Zone properties are located within 2,000 feet of a significant disposal of hazardous waste; Hazardous Waste Property facilities/sites have a significant disposal of hazardous waste.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal Eval-Hist
EnviroStor Database Evaluation History Listing
Category: State/Tribal Voluntary Cleanup Sites

Description: This database contains a listing of Historical Sites. Historical sites are Identified sites from an older database where no site type was identified. Most of these sites have a status of Referred or No Further Action. DTSC is working to clean up this data by identifying an appropriate site type for each Historic Site.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal Eval-Hist NFA
EnviroStor Database Evaluation History NFA Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of Historical sites from older database where no site type was identified. These particular sites have received No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal Military Active
EnviroStor Database Military Active Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing Military sites including open and closed bases and Former Used Defense Sites. Active sites are those with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal Military NFA
EnviroStor Database Military NFA Listing
Category: State/Tribal Voluntary Cleanup Sites

Description: This database contains a listing of Military sites including open and closed bases and Former Used Defense Sites. The confirmed or unconfirmed releases have been cleaned up and the case has received No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal Military Other
EnviroStor Database Military Other Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of Military sites including open and closed bases and Former Used Defense Sites.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal School Active
EnviroStor Database School Active Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal School NFA
EnviroStor Database School NFA Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. These particular cases have now received a No Further Action.

Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal School Other
EnviroStor Database School Other Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal State Response Active
EnviroStor Database Superfund Other Listing
Category: State/Tribal NPL
Description: This database contains a listing of State Response Active sites. These sites are confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high priority and high potential risk.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal State Response NFA
EnviroStor Database State Response NFA Listing
Category: State/Tribal NPL
Description: This database contains a listing of State Response Sites. These sites are confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These particular cases have now received No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400

Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal State Response Other
EnviroStor Database State Response Other Listing
Category: State/Tribal NPL
Description: This database contains a listing of State Response Sites. These sites are confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal Superfund Active
BEAP
Category: State/Tribal CERCLIS Equivalent
Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where the DTSC is actively involved, either in a lead or support capacity, in the investigation and/or remediation currently in progress.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal Superfund NFA
EnviroStor Database Superfund NFA Listing
Category: State/Tribal CERCLIS Equivalent
Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where the DTSC is actively involved, either in a lead or support capacity in the investigation and/or remediation currently in progress. These particular cases have now received No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015

Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal Superfund Other
EnviroStor Database Superfund Other Listing
Category: State/Tribal CERCLIS Equivalent
Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where DTSC is actively involved, either in a lead or support capacity in the investigation and/or remediation currently in progress.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 1 mile
Sites:
None Found

Cal VCP Active
EnviroStor Database VCP Active Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal VCP NFA
EnviroStor Database VCP NFA Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of sites where the confirmed or unconfirmed releases have been cleaned up and have been reported as receiving No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles

Sites:
None Found

Cal VCP Other
EnviroStor Database VCP Other Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: This database contains a listing of sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal-CorAct-Closed-CA
Corrective Action Sites
Category: State/Tribal ASTM Other
Description: This database contains Investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or state-only hazardous waste reported by the California Department of Toxic and Substance Control.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Cal-CorAct-Open-CA
Corrective Action Sites
Category: State/Tribal ASTM Other
Description: This database contains Investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or state-only hazardous waste reported by the California Department of Toxic and Substance Control.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:

None Found

CBF-CA
Considered Brownfield Sites
Category: State/Tribal ASTM Other
Description: This database contains facilities that are considered Brownfields reported by the State Waster Resource Controls Board.
Agency: State Waster Resource Controls Board
Phone Number: 9163237905
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

CERCLIS-Archived-US
CERCLIS sites that have been archived
Category: Federal CERCLIS NFRAP
Description: This database contains a listing of Archived CERCLIS sites. The Archive designation means that assessment at a site has been completed and EPA has determined no steps will be taken to designate the site as a priority by listing it on the National Priorities List (NPL). No further remedial action is planned for these sites under the Superfund Program.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/19/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:
None Found

CERCLIS-US
Comprehensive Environmental Response, Compensation, and Liability Information System
Category: Federal CERCLIS
Description: CERCLIS is the Comprehensive Environmental Response, Compensation, and Liability Information System. CERCLIS contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL. This database contains a listing of NPL Sites.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/19/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:

None Found

CHMIRS-CA
California Hazardous Material Incident Report System
Category: Emergency Release Reports
Description: This database contains California's Haz Mat spill notifications reported to the California Office of Emergency Service.
Agency: Governor's Office of Emergency Service
Phone Number: 9168458768
Date last updated: 1/26/2015
Date last checked: 1/26/2015
Distance searched: 0.25 miles
Sites:
None Found

City-AST-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by city agencies. The following is contact information for the respective cities:
Alameda, Union City: 510-567-6704
Alameda, Hayward City: 510 583-4924
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 1/23/2015
Date last checked: 1/15/2015
Distance searched: 0.25 miles
Sites:
None Found

City-CUPA-CA
Certified Unified Program Agency
Category: State/Tribal ASTM Other
Description: The records in this database come from city CUPA listings. The CUPA program provides oversight for the following statewide environmental programs: Hazardous Waste, Hazardous Materials Business Plan, California Release Prevention Program, UST, AST, Onsite Hazardous Waste Treatment. The following is contact information for the respective CUPA cities:
Alameda, Union City: (510) 675-5367
Alameda, San Leandro City: (510) 577-3401
Alameda, Hayward City: (510) 583-4924
Sonoma, Santa Rosa City: (707) 543-3537
Sonoma, Healdsburg City: (707) 431-3125
Sonoma, Petaluma City: (707) 778-4389

Sonoma, Sebastopol City: (707) 431-3125
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 2/2/2015
Date last checked: 1/30/2015
Distance searched: 0.25 miles
Sites:
None Found

City-Others-CA
Various City Files
Category: State/Tribal ASTM Other
Description: This database contains facilities reported by city agencies. Respective database/listing name is mentioned in the details section of the occurrence.
Santa Clara – San Jose City: 408-535-7694
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 1/15/2015
Date last checked: 1/15/2015
Distance searched: 0.25 miles
Sites:
None Found

City-UST-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by city agencies. The following is contact information for the respective cities:
Alameda, Union City: 510-567-6704
Alameda, Berkeley City: 510-567-6704
Alameda, Hayward City: 510 583-4924
Los Angeles, El Segundo City: 310-524-2242
Los Angeles, Long Beach City: 562-570-4285
Los Angeles, Torrance City: 310-618-2872
Sonoma, Santa Rosa City: 707-565-6571
Kern, Bakersfield City: 661-862-8748
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 1/15/2015
Date last checked: 1/15/2015
Distance searched: 0.25 miles
Sites:
None Found

Comp-UST-CA
Compliance UST
Category: State/Tribal UST
Description: This database contains previously abandoned UST sites that are now in compliance as reported by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 10/14/2014
Date last checked: 10/8/2014
Distance searched: 0.25 miles
Sites:
None Found

Controls-CA
Calsites with Deed Restrictions or other Controls
Category: State/Tribal Inst/Eng Controls
Description: A deed restricted site is a property where DTSC has placed limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site. The DTSC Site Mitigation and Brownfield's Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. Not all deed restrictions are available at this time.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Controls-RCRA-US
Federal RCRA with Controls
Category: Federal Inst/Eng Controls
Description: This database contains RCRA facilities that have Inst/Eng Controls placed on them as identified by the EPA.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/20/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:
None Found

Controls-US
Controls List
Category: Federal Inst/Eng Controls
Description: This database contains a listing of Voluntary Action Program Sites with Engineering Controls and/or Institutional Controls placed on them and were identified by the Environmental Protection Agency.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/19/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:
None Found

CORTESE-CA
Cortese Hazardous Waste & Substances Sites List
Category: State/Tribal ASTM Other
Description: The Hazardous Waste and Substances Sites (Cortese) List. These sites are active or backlogged on remediation and may also be listed on other CA databases. The specific database type was done to comply with the California Environmental Quality Act.
Agency: California Department of Toxic Substances Control
Phone Number: 8007286942
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.25 miles
Sites:
None Found

County-AST-CA
Aboveground Storage Tanks
Category: State/Tribal UST
Description: This database contains Aboveground Storage Tanks reported by county agencies in California. The following is contact information for the respective counties:
Amador: 209-223-6439
Contra Costa: 925-335-3200
Del Norte: 707-465-0426
Imperial: 760-352-0381
Lake: 707-263-1164
Mono: 760-924-1830
Napa: 707-253-4471
Orange: 714-433-6000
Placer: 530-745-2350
San Bernardino: 909-386-8400
San Joaquin: 209-468-3451

San Mateo: 650-372-6200
Sonoma: 707-565-1152
Sutter: 530-822-7400
Tuolumne: 209-533-5633
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 2/20/2015
Date last checked: 1/30/2015
Distance searched: 0.25 miles
Sites:
None Found

County-Hist-CA
Historic County Llistings
Category: State/Tribal ASTM Other
Description: This database contains historic databases reported by county agencies.
San Diego: 619-505-6921
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

County-LUST-CA
Leaking Underground Storage Tanks
Category: State/Tribal LUST
Description: This database contains leaking underground storage tanks reported by county agencies in California. Either the reporting agency has not provided the status or the case has been referred to the SWRCB. The following is contact information for the respective counties:
Ventura: 805-654-2815
Riverside: 951 955-8980
Sonoma: 707-565-6571
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 2/20/2015
Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

County-LUST-Closed-CA

Leaking Underground Storage Tanks, Closed Cases
Category: State/Tribal LUST
Description: This database contains leaking underground storage tanks reported by county agencies in California. The following is contact information for the respective counties:
Alameda: 510-567-6700
Humboldt: 707-268-2212
Napa: 707-253-4471
Riverside: 951 955-8980
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Sonoma: 707-565-6571
Orange: 714-433-6000
San Diego: 858-505-6818
San Joaquin: 209-468-3451
Solano: 707-784-3314
Stanislaus: 209-525-6700
Tulare: 559-624-7419
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 3/3/2015
Date last checked: 2/20/2015
Distance searched: 0.5 miles
Sites:
None Found

County-LUST-Open-CA
Leaking Underground Storage Tanks, Open Cases
Category: State/Tribal LUST
Description: This database contains leaking underground storage tanks reported by county agencies in California. The following is contact information for the respective counties:
Alameda: 510-567-6700
Humboldt: 707-268-2212
Napa: 707-253-4471
Riverside: 951 955-8980
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Sonoma: 707-565-6571
Orange: 714-433-6000
San Diego: 858-505-6818
San Joaquin: 209-468-3451
Solano: 707-784-3314
Stanislaus: 209-525-6700
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 3/3/2015

Date last checked: 2/20/2015
Distance searched: 0.5 miles
Sites:
None Found

County-Others-CA
Various County Files
Category: State/Tribal ASTM Other
Description: This database contains facilities reported by county agencies. Respective database/listing name is mentioned in the details section of the occurrence.
Sacramento: 916-875-8484
San Joaquin: 209-468-3420
Ventura: 805-654-2815
Solano: 707-784-6765
Napa: 707-253-4471
Alameda: 510-567-6700
Placer: 530-745-2350
Contra Costa: 925-313-6636
San Bernardino: 909-386-8401
Riverside: 951-358-7018
Orange: 714-433-6000
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 3/3/2015
Date last checked: 2/20/2015
Distance searched: 0.25 miles
Sites:
None Found

County-SLIC-Closed-CA
County SLIC Sites
Category: Emergency Release Reports
Description: This database contains SLIC sites reported by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6700
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/10/2014
Date last checked: 11/10/2014
Distance searched: 0.5 miles
Sites:
None Found

County-SLIC-Open-CA
County SLIC Sites
Category: Emergency Release Reports
Description: This database contains SLIC sites reported by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6700
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/10/2014
Date last checked: 11/10/2014
Distance searched: 0.5 miles
Sites:
None Found

County-SML-CA
County Site Mitigation Unit List
Category: State/Tribal ASTM Other
Description: This database contains sites listed by the Site Mitigation Unit program at various county agencies. The following is contact information for the respective counties:
Santa Barbara: 805-346-8359
Santa Cruz: 831-454-2761
Solano: 707-784-6765
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 2/19/2015
Date last checked: 2/19/2015
Distance searched: 0.5 miles
Sites:
None Found

County-SWF-CA
County Solid Waste Facilities
Category: State/Tribal Landfill/Solid Waste
Description: This database contains a listing of solid waste facilities reported by county agencies. The following is the contact information for the respective counties:
Alameda: 510-567-6790
Los Angeles: 888-253-2652
Napa: 707-253-4471
San Diego: 858-694-2801
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 1/23/2015
Date last checked: 1/15/2015
Distance searched: 0.5 miles

Sites:
None Found

County-UST-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by county agencies. The following is contact information for the respective counties:
Amador: 209-223-6439
Contra Costa: 925-335-3200
Del Norte: 707-465-0426
Humboldt: 707-268-2204
Imperial: 760-352-0381
Kern: 661-862-8748
Lake: 707-263-1164
Marin: 415-473-7085
Mendocino: 707-234-6625
Mono: 760-924-1830
Napa: 707-253-4471
Orange: 714-433-6000
Placer: 530-745-2350
Riverside: 951 955-8980
San Bernardino: 909-386-8400
San Joaquin: 209-468-3451
San Mateo: 650-372-6200
Solano: 707-784-6765
Sonoma: 707-565-6571
Sutter: 530-822-7400
Tuolumne: 209-533-5633
Ventura: 805-654-2815
Yolo: 530-666-8646
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 2/20/2015
Date last checked: 1/30/2015
Distance searched: 0.25 miles
Sites:
None Found

CUPA-CA
Certified Unified Program Agency
Category: State/Tribal ASTM Other

Description: The records in this database come from county CUPA listings. The CUPA program provides oversight for the following statewide environmental programs: Hazardous Waste, Hazardous Materials Business Plan, California Release Prevention Program, UST, AST, Onsite Hazardous Waste Treatment. The following is contact information for the respective CUPA counties:
Alpine: (530) 694-2235
Amador: 209-223-6439
Butte: (530) 538-7281
Colusa: (530) 458-0395
Del Norte: (707) 465-0426
El Dorado: (530) 621-5300
Fresno: (559) 600-3271
Humboldt: (707) 445-6215
Imperial: (760) 352-0381
Inyo: (760) 878-0238
King: (559) 584-1411
Lake: 707-263-1164
Madera: (559) 675-7823
Marin: 415-473-7085
Merced: (209) 381-1100
Mono: (760) 924-1830
Monterey: (831) 755-4511
Nevada: (530) 265-7134
San Bernardino: (909) 386-8401
San Diego: (858) 505-6880
San Luis Obispo: (805) 781-5544
Santa Clara: (408) 918-3400
Santa Cruz: (831) 454-2022
Shasta: (530) 225-5787
Sonoma: (707) 565-1152
Sutter: (530) 822-7400
Tuolumne: (209) 533-5633
Ventura: (805) 654-2823
Yuba: (530) 749-5450
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 2/20/2015
Date last checked: 1/30/2015
Distance searched: 0.25 miles
Sites:
None Found

Debris-US
Debris Sites
Category: Federal Solid Waste
Description: This database contains the Torres Martinez Reservation Illegal dump sites reported by the United States Environmental Protection Agency.

Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Delisted-NPL-US
Delisted NPL Sites
Category: Federal Delisted NPL
Description: This database contains a listing of Delisted NPL sites. These are facilities that have been removed from the NPL list. The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/19/2014
Date last checked: 11/19/2014
Distance searched: 0.5 miles
Sites:
None Found

ENF-CA
Enforcement Actions Data
Category: State/Tribal ASTM Other
Description: This database contains facilities that have been assigned an Enforcement Action by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/23/2014
Date last checked: 1/23/2014
Distance searched: 1 mile
Sites:
None Found

ERNS-US
Emergency Response Notification System
Category: Federal ERNS
Description: The primary function of the National Response Center is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database contains a listing of discharge locations.
Agency: National Response Center

Phone Number: 8004248802
Date last updated: 10/21/2014
Date last checked: 10/10/2014
Distance searched: 0.25 miles
Sites:
None Found

FTTS-ENF-US
FIFRA/TSCA Tracking System (FTTS) Enforcement Actions
Category: Federal ASTM Other
Description: The FIFRA/TSCA Tracking System (FTTS) is a regional system used to track compliance activities such as inspections, case review, enforcement actions taken, samples collected, and pesticide grants and cooperative agreement information. The compliance monitoring and enforcement activities are tracked from the time an inspector conducts (or schedules) an inspection until the time the case is closed or the enforcement action is settled. Specific legal citations include, but are not limited to: Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA).
Agency: United States Environmental Protection Agency
Phone Number: 2025642501
Date last updated: 7/10/2014
Date last checked: 7/2/2014
Distance searched: 1 mile
Sites:
None Found

HazWaste-CA
Hazardous Waste Sites
Category: State/Tribal ASTM Other
Description: This database contains a listing of Hazardous Waste Sites tracked by DTSC. The majority of the sites are no longer in operation.
Agency: California Department of Toxic Substance Control
Phone Number: 9163233400
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.25 miles
Sites:
None Found

Hist-AFS2-US
Air Facility System for Clean Air Act stationary sources
Category: Federal ASTM Other

Description: AFS contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).
Agency: Environmental Protection Agency
Phone Number: 2025645962
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-AFS-US
Air Facility System for Clean Air Act stationary sources
Category: Federal ASTM Other
Description: AFS contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).
Agency: Environmental Protection Agency
Phone Number: 2025645962
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-Controls-CA
Previous Restricted Use Sites
Category: State/Tribal Inst/Eng Controls
Description: This database contains a listing of previous (historical) restricted use sites where DTSC placed limits or requirements on future use of the property.
Agency: Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-Cort-CA
Hist Cortese list
Category: State/Tribal ASTM Other

Description: This database contains historical cortese llistings reported by the California State Water Resource Control Board.
Agency: California State Water Resource Control Board.
Phone Number: 8007286942
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Dumps-US
Dumps Inventory of 1985
Category: Federal Solid Waste
Description: This database contains Dumps as reported on the Inventory of Open Dumps from 1985. This report was published by the Office of Solid Waste, EPA.
Agency: Environmental Protection Agency
Phone Number: 2025660200
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

HIST-R4-CA
Historical sites
Category: State/Tribal ASTM Other
Description: This database contains a listing of Historical sites in Los Angeles Region reported by Los Angeles Regional Water Quality Control Board.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: 5/16/2014
Date last checked: 5/12/2014
Distance searched: 0.25 miles
Sites:
None Found

Hist-SWF-CA
Previous listed Solid Waste Facilities
Category: State/Tribal Landfill/Solid Waste
Description: This database contains a listing of previous listed active sites that may no longer be active as reported by the California Department of Toxic and Substance Control.
Agency: California Department of Toxic and Substance Control
Phone Number: 9163233400

Date last updated: 5/8/2014
Date last checked: 5/8/2014
Distance searched: 0.5 miles
Sites:
None Found

Hist-US-EC
Engineering Controls Sites List
Category: Federal Inst/Eng Controls
Description: This database contains a listing of Voluntary Action Program Sites with Engineering Controls placed on them and were identified by the Environmental Protection Agency.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-US-IC
Sites with Institutional Controls
Category: Federal Inst/Eng Controls
Description: This database contains a listing of Voluntary Action Program Sites with Institutional Controls placed on them and were identified by the Environmental Protection Agency.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-UST-CA
Historical Underground Storage Tanks
Category: State/Tribal UST
Description: The California State Water Resources Control Board maintained the Hazardous Substances Storage Container Information on file. This is a database that is considered historical by RWQCB as historical and no longer updated.
Agency: California State Water Resources Control Board
Phone Number: 9163415851
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles

Sites:
None Found

Hist-WIP-Active-CA
Well Investigation Program Case List, Active Sites
Category: State/Tribal ASTM Other
Description: The Los Angeles Regional Water Quality Control Board maintains a listing under the San Gabriel-San Fernando Valley Cleanup Programs (Case List). The Well Investigation Program tracks these sites. These records are active and also on the California SLIC database. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-WIP-Backlog-CA
Well Investigation Program Case List, Backlog Sites
Category: State/Tribal ASTM Other
Description: The Los Angeles Regional Water Quality Control Board maintains a listing under the San Gabriel-San Fernando Valley Cleanup Programs (Case List). The records on this database have not been currently assigned to a staff member and/or has very low priority in terms of contamination. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-WIP-Historical-CA
Well Investigation Program Case List, Historical Sites
Category: State/Tribal ASTM Other
Description: The Los Angeles Regional Water Quality Control Board maintains a listing under the San Gabriel-San Fernando Valley Cleanup Programs (Case List). The records in this database have received a No Further Action Letter. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A

Distance searched: 0.5 miles
Sites:
None Found

HMIS-US
Hazardous Materials Information System
Category: Federal Emergency Release Reports
Description: Data includes spills, releases, or other incidents involving hazardous materials in commerce during the course of transportation. All modes of transportation are included except pipeline and bulk marine transportation. Data represent a census of all incidents reportable to the U.S. Department of Transportation This database contains a listing of spills. (DOT). U.S. federal regulations require all spills meeting the following criteria to be reported, in writing, to DOT's Office of Hazardous Materials Safety.
Agency: US Department of Transportation Pipeline and Hazardous Materials Safety Administration
Phone Number: 2023664433
Date last updated: 11/24/2014
Date last checked: 11/21/2014
Distance searched: 0.25 miles
Sites:
None Found

HWIS-CA
Hazardous Waste Information Summary
Category: State/Tribal RCRA Equivalent
Description: The Hazardous Waste Summary Report (formerly the Tanner Report) is prepared from data extracted from the copies of hazardous waste manifests received each year by DTSC. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments. This database contains a listing of facilities extracted from the data.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.25 miles
Sites:
None Found

Land Disposal-CA
Land Disposal-Landfill
Category: State/Tribal Landfill/Solid Waste
Description: This database contains a listing of Land Disposal Sites managed by RWQCB. Cleanup status is included on data.
Agency: California Regional Water Quality Control Board
Phone Number: 9163415455
Date last updated: 1/23/2015

Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

Liens-CA
California Liens
Category: State/Tribal Inst/Eng Controls
Description: This database identifies sites that have liens reported by the California Department of Toxic and Substance Control.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

LIENS-US
Federal LIEN Sites
Category: Federal Inst/Eng Controls
Description: This database contains sites that have had Federal Liens filed on them as reported by the EPA.
Agency: U.S. Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/21/2014
Date last checked: 11/21/2014
Distance searched: 0.5 miles
Sites:
None Found

LUST-Closed-CA
Leaking Underground Storage Tanks, Closed Cases
Category: State/Tribal LUST
Description: The California State Water Resources Control Board's Underground Storage Tank Program keeps a list of all underground storage tanks which have been reported as having had a release. This subset of sites are those that have received closure and now have a status of Case Closed. This database contains a listing of these facilities.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles

Sites:
None Found

LUST-Open-CA
Leaking Underground Storage Tanks, Open Cases
Category: State/Tribal LUST
Description: The California State Water Resources Control Board's Underground Storage Tank Program keeps a list of all underground storage tanks which have been reported as having had a release. This subset of sites are those that have not yet been cleaned up and now have a status of Case Open.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

Manifest2-NY
Hazardous Waste Manifest
Category: State/Tribal RCRA Equivalent
Description: The New York Department of Environmental Conservation, Hazardous Waste Manifest System lists sites from all over the country, not just New York. To be thorough, ERS has searched the data subset that includes California sites for listings on or near the subject site that are listed in the New York Department of Environmental Conservation, Hazardous Waste Manifest System.
Agency: New York State Department of Environmental Conservation
Phone Number: 5184028730
Date last updated: 12/9/2014
Date last checked: 12/5/2014
Distance searched: 0.25 miles
Sites:
None Found

Manifest2-RI
Hazardous Waste Manifest
Category: State/Tribal RCRA Equivalent
Description: The Rhode Island Department of Environmental Management, Hazardous Waste Manifest System lists sites from all over the country, not just Rhode Island. To be thorough, ERS has searched the data subset that includes California sites for listings on or near the subject site that are listed in the Rhode Island Department of Environmental Management, Hazardous Waste Manifest System.
Agency: Rhode Island Department of Environmental Management
Phone Number: 4012222797
Date last updated: 12/16/2014
Date last checked: 12/16/2014

Distance searched: 0.25 miles
Sites:
None Found

NPL-US
National Priorities List
Category: Federal NPL
Description: The National Priorities List is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. This database contains a listing of NPL sites.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/21/2014
Date last checked: 11/21/2014
Distance searched: 1 mile
Sites:
None Found

PADS-US
PCB Registration Database System
Category: Federal ASTM Other
Description: This database contains a listing of generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.
Agency: Environmental Protection Agency
Phone Number: 2025660500
Date last updated: 8/19/2014
Date last checked: 11/21/2014
Distance searched: 0.5 miles
Sites:
None Found

PCB-US
PCB Transformers
Category: Federal ASTM Other
Description: PCB Transformer Registration Database. This database indicates the best known current status of registered PCB transformers
Agency: U.S Environmental Protection Agency
Phone Number: 7033088404
Date last updated: 11/26/2013
Date last checked: 11/18/2013
Distance searched: 0.25 miles
Sites:

None Found

PR-MOA-CA
Polanco Redevelopment
Category: State/Tribal ASTM Other
Description: This database contains the Polanco Redevelopment MOA sites reported by the Department of Toxic Substances Control.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553586
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.25 miles
Sites:
None Found

RCRA-CESQG-US
Resource Conservation and Recovery Act, Conditionally Exempt Small Quantity Generators
Category: Federal RCRA Generators
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Conditionally Exempt Small Quantity Generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/17/2014
Date last checked: 9/17/2014
Distance searched: 0.25 miles
Sites:
None Found

RCRA-COR-US
Resource Conservation and Recovery Act - Corrective Actions
Category: Federal RCRA CORRACTS
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner.
EPA estimates that between 50 and 70 percent of all TSDFs have some degree of environmental contamination requiring detailed investigation and perhaps cleanup. Under a program entitled Corrective Action, EPA has the statutory authority to require permitted and interim status TSDFs to clean up hazardous waste contamination. This database contains a listing of sites that have had corrective action.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/17/2014

Date last checked: 9/17/2014
Distance searched: 1 mile
Sites:
None Found

RCRA-LQG-US
Resource Conservation and Recovery Act, Large Quantity Generators
Category: Federal RCRA Generators
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Large Quantity Generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/17/2014
Date last checked: 9/17/2014
Distance searched: 0.25 miles
Sites:
None Found

RCRA-NON-US
Resource Conservation and Recovery Act
Category: Federal RCRA Generators
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of RCRA Non-Hazardous generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/17/2014
Date last checked: 9/17/2014
Distance searched: 0.25 miles
Sites:
None Found

RCRA-SQG-US
Resource Conservation and Recovery Act, Small Quantity Generators
Category: Federal RCRA Generators
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner. This database contains a listing of Small Quantity Generators.
Agency: United States Environmental Protection Agency

Phone Number: 8004249346
Date last updated: 11/17/2014
Date last checked: 9/17/2014
Distance searched: 0.25 miles
Sites:
None Found

RCRA-TSD-US
Resource Conservation and Recovery Act - Treatment, Storage, and Disposal sites
Category: Federal RCRA non-CORRACTS TSD
Description: The primary goals of RCRA are to: Protect human health and the environment from the potential hazards of waste disposal. Conserve energy and natural resources. Reduce the amount of waste generated. Ensure that wastes are managed in an environmentally sound manner.
This database contains a listing of Treatment, Storage and Disposal Facilities - Facilities that receive hazardous waste from generators or other facilities for treatment, storage or disposal of waste are known as TSDFs.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 11/17/2014
Date last checked: 9/17/2014
Distance searched: 0.5 miles
Sites:
None Found

SAA-Agreements-US
Sites with Superfund Alternative Approach Agreements
Category: Federal ASTM Other
Description: This database contains sites that have a Superfund Alternative agreement. The Superfund alternative (SA) approach uses the same investigation and cleanup process and standards that are used for sites listed on the NPL. The SA approach is an alternative to listing a site on the NPL; it is not an alternative to Superfund or the Superfund process.
Agency: Environmental Protection Agency
Phone Number: 2025645110
Date last updated: 12/24/2014
Date last checked: 12/24/2014
Distance searched: 1 mile
Sites:
None Found

SLIC-Closed-CA
The Spills, Leaks, Investigation & Cleanup, Closed Cases
Category: Emergency Release Reports

Description: The Spills, Leaks, Investigation & Cleanup (SLIC) Program deals with site investigation and corrective action involving sites not overseen by the Underground Tank Program and the Well Investigation Program. These particular sites have had all remediation completed and are now considered closed by the agency.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

SLIC-CV-CLOSED-CA
List of Spills and Leak Sites
Category: Emergency Release Reports
Description: This database contains a List of Spill and Leak Sites (SL) and Department of Defense (DOD) and Department of Energy (DOE) cleanup cases in the central portion of the Central Valley Region as reported by the Central Valley Regional Quality Board.
Agency: Central Valley Regional Quality Board
Phone Number: 9164644712
Date last updated: 1/26/2015
Date last checked: 1/26/2015
Distance searched: 0.5 miles
Sites:
None Found

SLIC-CV-OPEN-CA
List of Spills and Leak Sites
Category: Emergency Release Reports
Description: This database contains a List of Spill and Leak Sites (SL) and Department of Defense (DOD) and Department of Energy (DOE) cleanup cases in the central portion of the Central Valley Region as reported by the Central Valley Regional Quality Board.
Agency: Central Valley Regional Quality Board
Phone Number: 9164644712
Date last updated: 1/26/2015
Date last checked: 1/26/2015
Distance searched: 0.5 miles
Sites:
None Found

SLIC-Open-CA
The Spills, Leaks, Investigation & Cleanup, Open Cases
Category: Emergency Release Reports

Description: The Spills, Leaks, Investigation & Cleanup (SLIC) Program deals with site investigation and corrective action involving sites not overseen by the Underground Tank Program and the Well Investigation Program.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/22/2015
Date last checked: 1/22/2015
Distance searched: 0.5 miles
Sites:
None Found

SML-Closed-CA
Site Mitigation List
Category: State/Tribal ASTM Other
Description: This database contains sites listed by the Site Mitigation Unit program at the Los Angeles County Fire Department. SMU voluntary oversight and corrective action oversight programs are options in addition to DTSC and Regional Water Quality Control Board (RWQCB) oversight programs for residents and businesses of Los Angeles County seeking oversight in a cost effective and timely manner for cleanup of their contaminated properties.
Agency: Los Angeles County Fire Department
Phone Number: 3238904106
Date last updated: 10/13/2014
Date last checked: 1/26/2015
Distance searched: 0.5 miles
Sites:
None Found

SML-Open-CA
Site Mitigation List
Category: State/Tribal ASTM Other
Description: This database contains sites listed by the Site Mitigation Unit program at the Los Angeles County Fire Department. SMU voluntary oversight and corrective action oversight programs are options in addition to DTSC and Regional Water Quality Control Board (RWQCB) oversight programs for residents and businesses of Los Angeles County seeking oversight in a cost effective and timely manner for cleanup of their contaminated properties.
Agency: Los Angeles County Fire Department
Phone Number: 3238904106
Date last updated: 10/13/2014
Date last checked: 1/26/2015
Distance searched: 0.5 miles
Sites:
None Found

SML-Other-CA
Site Mitigation List
Category: State/Tribal ASTM Other
Description: This database contains sites listed by the Site Mitigation Unit program at the Los Angeles County Fire Department. SMU voluntary oversight and corrective action oversight programs are options in addition to DTSC and Regional Water Quality Control Board (RWQCB) oversight programs for residents and businesses of Los Angeles County seeking oversight in a cost effective and timely manner for cleanup of their contaminated properties.
Agency: Los Angeles County Fire Department
Phone Number: 3238904106
Date last updated: 10/13/2014
Date last checked: 1/26/2015
Distance searched: 0.5 miles
Sites:
None Found

SWIS-CA
Solid Waste Information System
Category: State/Tribal Landfill/Solid Waste
Description: The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. Includes basic information on each facility in the database such as site, enforcement agency, operator, land owner, throughput, capacity, acreage, permit date, waste types, activity type, regulatory status and operational status.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 9163416320
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

SWRCY-CA
Recycler Database
Category: State/Tribal ASTM Other
Description: A listing of all operational Recycling Centers identified by their Certification Number.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 9163233836
Date last updated: 1/23/2015
Date last checked: 1/23/2015
Distance searched: 0.5 miles
Sites:
None Found

Tribal-Air-US
Tribal Air Permitted Facilities
Category: Federal ASTM Other
Description: This database contains tribal locations that have been issued air permits as reported by the US Environmental Protection Agency. At this time the database includes region 2, 5, 7, 8, 9, 10.
Agency: United States Environmental Protection Agency
Phone Number: 3123532000
Date last updated: 1/21/2015
Date last checked: 1/21/2015
Distance searched: 0.5 miles
Sites:
None Found

Tribal-BF-US
Tribal Brownfields
Category: Federal Brownfield
Description: This database contains a listing of Brownfields on Native American Land identified by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 5/16/2014
Date last checked: 5/16/2014
Distance searched: 0.5 miles
Sites:
None Found

Tribal-LUST-Closed-US
Tribal Leaking Underground Storage Tanks
Category: Federal LUST
Description: This database contains a listing of Leaking Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 12/15/2014
Date last checked: 10/3/2014
Distance searched: 0.5 miles
Sites:
None Found

Tribal-LUST-Open-US
Tribal Leaking Underground Storage Tanks

Category: Federal LUST
Description: This database contains a listing of Leaking Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 12/15/2014
Date last checked: 10/3/2014
Distance searched: 0.5 miles
Sites:
None Found

Tribal-ODI-US
Tribal Open Dump Sites
Category: Federal Solid Waste
Description: This database contains a listing of Open Dump Sites on Native American Land identified by the Indian Health Service
Agency: Indian Health Service
Phone Number: 3014431046
Date last updated: 5/19/2014
Date last checked: 5/16/2014
Distance searched: 0.5 miles
Sites:
None Found

Tribal-UST-US
Tribal Underground Storage Tanks
Category: Federal UST
Description: This database contains a listing of Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 12/11/2014
Date last checked: 10/3/2014
Distance searched: 0.25 miles
Sites:
None Found

Tribal-VCP-US
Tribal VCP
Category: Federal Tribal VCP
Description: This database contains voluntary cleanup sites located in tribal land as reported by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency

Phone Number: 8004249346
Date last updated: 6/27/2014
Date last checked: 6/24/2014
Distance searched: 0.5 miles
Sites:
None Found

UST-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: This database maintains permitted Underground Storage Tanks in CA.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/21/2015
Date last checked: 1/21/2015
Distance searched: 0.25 miles
Sites:
None Found

UST-Cleanup-CA
UST Cleanup Fund Cases
Category: State/Tribal LUST
Description: This database contains leaking UST cases that have been recommended for closure under the State Water Board's authority to perform reviews of claims to
the UST Cleanup Fund that have been open for 5 or more years (5 Year
Review).
Agency: California State Water Resource Control Board
Phone Number: 9163415808
Date last updated: 11/6/2014
Date last checked: 10/30/2014
Distance searched: 0.5 miles
Sites:
None Found

UST-Closed-CA
Closure of Underground Storage Tank (UST) Cases
Category: State/Tribal UST
Description: This database contains UST tanks that have been closed as reported by the California State Water Resource Control Board.
Agency: California State Water Resource Control Board
Phone Number: 9163415808
Date last updated: 1/26/2015
Date last checked: 1/26/2015

Distance searched: 0.25 miles
Sites:
None Found

UST-Proposed-CA
UST Proposed for Closure
Category: State/Tribal UST
Description: This database contains UST's that are being considered for closure by the SWRCB or the Executive Director.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 1/26/2015
Date last checked: 1/26/2015
Distance searched: 0.25 miles
Sites:
None Found

UN-MAPPABLE OCCURRENCES

The following occurrences were not mapped primarily due to incomplete or inaccurate address information. All of the following occurrences were determined to share the same zip code as the area searched. General status information is given with each occurrence along with any address information entered by the agency responsible for the list.

ID	Facility Name	Address	Database	Status
No "un-mapped" sites requested.				

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APPENDIX D
CALTRANS STANDARD and NON-STANDARD SPECIAL PROVISIONS (SSPs & NSSPs)

L./

Replace "Reserved" in section 14-11.08 with:

14-11.08A General

Section 14-11.08 includes specifications relating to the disturbance of existing paint systems.

The existing paint system on bridge number _____ contains _____. Any work that disturbs the existing paint system exposes workers to health hazards and produces:

1. Debris containing heavy metal in amounts that exceed the thresholds established in 8 CA Code of Regs and 22 CA Code of Regs. This debris is a Department-generated hazardous waste.
2. Toxic fumes when heated.

Grime and detritus already on the bridge before the start of work may also contain lead. Consider this grime and detritus part of the existing paint system. The Department is the hazardous waste generator if the Engineer accepts waste-characterization test results demonstrating that the debris is a hazardous waste.

Contain all debris produced when the existing paint system is disturbed. If containment measures are inadequate to contain and collect debris produced when the existing paint system is disturbed, stop the work and do not perform additional work until:

1. Revised debris containment and collection plan has been authorized
2. Released material has been collected and contained

Handle, store, transport, and dispose of debris produced when the existing paint system is disturbed under applicable federal, state, and local hazardous waste laws.

14-11.08B Submittals

14-11.08B(1) General

Not Used

14-11.08B(2) Debris Containment and Collection Plan

Submit a debris containment and collection plan. The plan must:

1. Identify materials, equipment, and methods to be used when the existing paint system is disturbed
2. Include shop drawings of:
   2.1. Containment systems complying with section 59-2.03B(3)
   2.2. Components that provide ventilation, air movement, and visibility for worker safety
3. Include the name and location of the analytical laboratory that will perform the analyses
4. Identify the hazardous waste transporter that will haul the debris and provide documentation of
   4.1 Current DTSC registration
   4.2 Compliance with the CA Highway Patrol Biennial Inspection of Terminals Program
5. Include the name and location of the disposal facility that will accept the hazardous waste

Allow 20 days for review.

If required, submit a revised debris containment and collection plan.

14-11.08B(3) Lead Compliance Plan

Submit a lead compliance plan under section 7-1.02K(6)(j)(ii).

14-11.08B(4) Air Monitoring Reports

Air monitoring reports, including test results for samples taken after corrective action, must be prepared by the CIH and submitted:

1. Verbally within 48 hours after sampling
2. As an informational submittal within 5 days after sampling

Air monitoring reports must include:

1. Date and location of sample collection, sample number, contract number, bridge number, full name of the structure, and District-County-Route-Post mile
2. Name and address of the certified laboratory that performed the analyses
3. Chain of custody documentation
4. List of emission control measures in place when air samples were taken
5. Air sample results compared to the appropriate permissible exposure limit (PEL)
6. Corrective action recommended by the CIH to ensure exposure to airborne metals outside containment systems and work areas is within specified limits
7. Signature of the CIH who reviewed the data and made recommendations

Not Used

14-11.08B(5) Soil Sampling Results for Debris Containment Verification

Submit test results of soil analysis verifying debris containment, including results for soil samples taken after corrective action:

1. Verbally within 48 hours after sampling
2. Within 5 days after sampling

Soil sampling results must include:

1. Date and location of sample collection, sample number, contract number, bridge number, full name of the structure and District-County-Route-Post mile
2. Concentrations of heavy metals expressed in mg/kg and mg/L
3. Name and address of the certified laboratory that performed the analyses
4. Chain of custody documentation

Not Used

14-11.08B(6) Waste-Characterization Test Results

Submit waste-characterization test results for the debris and chain of custody documentation before:

1. Requesting the Engineer’s signature on the disposal facility's waste profile document
2. Requesting a generator's EPA Identification Number
3. Removing the debris from the site

14-11.08B(7) Request for U.S. Environmental Protection Agency Identification Number

Submit a request for the generator's EPA Identification Number when the Engineer accepts waste-characterization test results documenting that the debris is a hazardous waste.

14-11.08B(8) Disposal Documentation

Submit documentation from the receiving landfill or recycling facility confirming proper disposal within 5 business days of transporting debris from the project.

14-11.08C Safety and Health Provisions

14-11.08C(1) General

Comply with 8 CA Code of Regs, including § 1532.1.

14-11.08C(2) Protective Work Clothing and Washing Facilities

Supply clean protective work clothing for 5 Department personnel:

1. Whenever there is possible exposure to heavy metals or silica dust
2. During application of paint undercoats

Replace protective work clothing as needed.

Protective work clothing and washing facilities must be inspected and authorized for use by Department personnel before starting any activity with the potential for lead exposure.

Protective work clothing remains your property upon completion of the Contract.

14-11.08D Work Area Monitoring

14-11.08D(1) General

Monitor the ambient air and soil in and around the work area to verify the effectiveness of the containment system. Work area monitoring includes:

1. Collecting, analyzing, and reporting air and soil test results
2. Recommending corrective action when specified air or soil concentrations are exceeded

Collect air and soil samples at locations designated by the Engineer.

Not Used

14-11.08D(2) Air Monitoring

Air monitoring must be performed under the direction of a CIH.

Collect and analyze air samples to detect lead under the National Institute of Occupational Safety and Health (NIOSH) Method 7082 using a detection limit of at least 0.05 $\mu g/m^3$. Collect and analyze air samples to detect other metals under NIOSH Method 7300 using a detection limit of at least 1 percent of the appropriate PEL specified by Cal/OSHA. You may use alternative methods of sampling and analysis with equivalent detection limits.

Concentrations of airborne metals outside containment systems and work areas must not exceed any of the following:

1. Average of 1.5 $\mu g/m^3$ of air per day and 0.15 $\mu g/m^3$ per day on a rolling 90-day basis. Calculate average daily concentrations based on monitoring to date and projections based on monitoring trends for the next 90 days or to the end of work subject to the lead compliance plan if less than the specified averaging period.
2. 10 percent of the action level specified for lead by 8 CA Code of Regs §1532.1.
3. 10 percent of the appropriate PELs specified for other metals by Cal/OSHA.

Collect air samples daily during work activities that disturb the existing paint system. Air samples must be analyzed within 48 hours by a facility accredited by the Environmental Lead Laboratory Accreditation Program of the American Industrial Hygiene Association. If concentrations of airborne metals exceed allowable levels, modify the containment system or work activities to prevent further release of metals. If the CIH recommends corrective action, collect and analyze additional samples after implementing the corrective action unless directed otherwise.

Not Used

14-11.08D(3) Soil Sampling for Debris Containment

Collect ___ soil samples before starting work and collect ____ soil samples within 36 hours after cleaning existing steel. A soil sample consists of 5 plugs, each 3/4 inch in diameter and 1/2 inch deep, taken at each corner and center of a 1 sq yd area. Analyze soil samples for:

1. Total _____ by US EPA Method 6010B or US EPA Method 7000 Series
2. Soluble _____ by California Waste Extraction Test (CA WET)

The laboratory that analyzes the samples must be certified by CDPH's Environmental Laboratory Accreditation Program (ELAP) for all analyses to be performed.

Concentrations of heavy metals in the work area soil must not increase when the existing paint system is disturbed. If soil sampling shows an increase in the concentrations of heavy metals after completing the work:

1. Clean the affected area
2. Resample until soil sampling and testing shows concentrations of heavy metals less than or equal to the concentrations collected before the start of work

In areas without exposed soil, the concentrations of heavy metals in the work area must not increase when the existing paint system is disturbed. Any visible increase in the concentrations of heavy metals must be removed.

14-11.08E Debris Management

14-11.08E(1) Debris Storage

Debris produced when the existing paint system is disturbed must not be temporarily stored on the ground. Before the end of each work shift, remove accumulated debris from the containment system. Store the debris as a hazardous waste.

14-11.08E(2) Debris Waste Characterization

Perform waste characterization testing on the debris as required by the disposal facility including:

1. Total _____ by US EPA Method 6010B
2. Soluble _____ by California Waste Extraction Test (CA WET)
3. Soluble _____ by Toxicity Characteristic Leaching Procedure (TCLP)

From the first 220 gal of hazardous waste or portion thereof, if less than 220 gal of hazardous waste are produced, a minimum of 4 randomly selected samples must be taken and analyzed individually. Samples must not be composited. From each additional 880 gal of hazardous waste or portion thereof, if less than 880 gal are produced, a minimum of 1 additional random sample must be taken and analyzed.

Use chain of custody procedures consistent with chapter 9 of US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) while transporting samples from the job site to the analytical laboratory. The laboratory must be certified by the CDPH's Environmental Laboratory Accreditation Program (ELAP) for all analyses to be performed.

Before performing the analyses, the laboratory must homogenize each sample. The homogenization process must not include grinding of the samples. A sample aliquot must be:

1. Obtained in an amount large enough for all analyses to be performed
2. Homogenized a 2nd time
3. Used for the total and soluble analyses after the 2nd homogenization

14-11.08E(3) Debris Transport and Disposal

14-11.08E(3)(a) General

For bidding purposes, assume the debris is a hazardous waste.

14-11.08E(3)(b) Hazardous Waste Debris

After the Engineer accepts the waste-characterization test results, dispose of the debris:

1. Within __ days after accumulating 220 lb of debris
2. At an appropriately permitted Class I facility located in California

Make all arrangements with the operator of the disposal facility.

If less than 220 lb of hazardous waste is generated in total, dispose of it within __ days after the start of accumulation of the debris.

Use a hazardous waste manifest and a transporter using vehicles with current DTSC registration certificate when transporting hazardous waste. The Engineer provides the generator's EPA Identification Number and signs all manifests as the hazardous waste generator within 2 business days of accepting the waste-characterization test results and receiving your request for the generator's EPA Identification Number.

14-11.08E(3)(c) Nonhazardous Waste Debris

If waste characterization test results demonstrate that the debris is a nonhazardous waste and the Engineer accepts the results, dispose of the debris at an appropriately permitted CA Class II or CA Class III facility or recycle it. Make all arrangements with the operator of the disposal facility and comply with the facility's requirements.

You may dispose of nonhazardous debris at a facility equipped to recycle the debris if:

1. Copper slag abrasive blended by the supplier with a calcium silicate compound is used for blast cleaning.
2. You make all arrangements with the recycling facility's operator and perform any facility-required testing of the debris.

The Department does not adjust payment for disposal of nonhazardous debris at a recycling facility.

5-1.__ AIR QUALITY – NESHAP NOTIFICATION

In compliance with Standard Specifications Section 14-9.02, the Contractor must notify the following agencies as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 61, Subpart M, and California Health and Safety Code section 39658(b)(1). A copy of the notification form and attachments must be provided to the Engineer prior to submittal. Notification must take place a minimum of 10 working days prior to starting demolition or renovation activities as defined in the NESHAP regulations. Notification forms and other information are available from the California Air Resources Board web site at:

http://www.arb.ca.gov/enf/asbestos/asbestos.htm

The Contractor must mail the original notification form with any necessary attachments to:

U.S. EPA, Region IX
Asbestos NESHAP Notification (Air-5)
75 Hawthorne Street
San Francisco, CA 94105

The Contractor must mail a copy, or send a fax, of the notification form and any necessary attachments, to:

California Air Resources Board
Enforcement Division
Asbestos NESHAP Notification
P. O. Box 2815
Sacramento, CA 95812
Facsimile: (916) 445-7986

The Contractor must also notify other local permit agencies and utility companies prior to starting any demolition activities. A copy of the notification form and attachments must be provided to the Engineer a minimum of 30 days prior to the start of work.

If the Contractor does not receive direction from the Engineer within 20 days after submittal that changes to the notification are required, or written confirmation of receipt and approval by the US EPA and the CARB, then an extension of time commensurate with the delay in completion of the work thus caused will be granted and the Contractor will be relieved from any claim for liquidated damages, or engineering and inspection charges or other penalties for the period covered by that extension of time; provided that the Contractor notifies the Engineer in writing of the causes of delay within 15 days from the beginning of the delay. The Engineer will ascertain the facts and the extent of the delay, and the Engineer's findings thereof must be final and conclusive.

Full compensation for complying with requirements of this section, including the payment of any notification fees, will be included in the contract price paid for the items involved, and no additional compensation will be allowed therefor.

In compliance with Standard Specifications Section 14-9.02, the Contractor must notify the Air Pollution Control District (APCD) or Air Quality Management District (AQMD) identified below as required by the National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR Part 61, Subpart M, and California Health and Safety Code section 39658(b)(1). A copy of the notification form and attachments must be provided to the Engineer prior to submittal. Notification must take place a minimum of 10 working days prior to starting demolition or renovation activities as defined in the NESHAP regulations. Notification forms and other information are available from the air district at the address below.

Forms and information may also be obtained from the air district's web site at:

_____

The Contractor must mail or otherwise deliver the original notification form with any necessary attachments to:

_____

The Contractor must also notify other local permit agencies and utility companies prior to starting any demolition activities. A copy of the notification form and attachments must be provided to the Engineer a minimum of 30 days prior to the start of work.

If the Contractor does not receive direction from the Engineer within 20 days after submittal that changes to the notification are required, or written confirmation of receipt and approval by the local APCD or AQMD, then an extension of time commensurate with the delay in completion of the work thus caused will be granted and the Contractor will be relieved from any claim for liquidated damages, or engineering and inspection charges or other penalties for the period covered by that extension of time; provided that the Contractor notifies the Engineer in writing of the causes of delay within 15 days from the beginning of the delay. The Engineer will ascertain the facts and the extent of the delay, and the Engineer's findings thereof must be final and conclusive.

Full compensation for complying with requirements of this section, including the payment of any notification fees, will be included in the contract price paid for the items involved, and no additional compensation will be allowed therefor.

Replace section 14-11.11 with:

14-11.11 MANAGEMENT OF ASBESTOS-CONTAINING MATERIALS IN BRIDGES

14-11.11A General

14-11.11A(1) Summary

Section 14-11.11 includes specifications for _____ asbestos-containing material (ACM) in bridges.

The removal and disposal of materials containing asbestos must comply with:

1. Health and Safety Code, Div 20, Ch 6.5, "Hazardous Waste Control"
2. 8 CA Code of Regs, § 5208
3. 8 CA Code of Regs § 1529 and § 341
4. 22 CA Code of Regs, Div 4.5
5. 29 CFR 26
6. 40 CFR 61 Subpart M

A certified asbestos consultant must be registered under Labor Code § 6501.5 and certified under Bus & Prof Code § 7058.6.

An asbestos survey was performed for bridge no._____. A part of the asbestos survey report is included in the *Information Handout*. The complete report is available at the Department's Division of Construction office located at:

_____
_____
_____
_____

Asbestos-containing material is present at the locations and in the types and amounts shown in the following table:

Locations, Types, and Amounts of ACM

Bridge location	Type of asbestos	Amount of asbestos

Friable ACM generated as part of this project is Department-generated hazardous waste as specified in section 14-11.02F.

14-11.11A(2) Definitions.

asbestos: Any of several minerals that readily separate into long flexible fibers. Includes chrysotile, amosite, crocidolite, tremolite, anthrophyllite, actinolite and any of these minerals that has been chemically treated, altered, or both.

asbestos-containing material (ACM): Building material, including asbestos cement pipe, containing commercial asbestos in an amount greater than 1 percent by weight, area, or count under 40 CFR §61.145.

certified asbestos consultant: Asbestos consultant certified by Cal/OSHA under 8 CA Code of Regs § 341.15 and § 1529.

friable ACM: Material containing more than 1 percent asbestos as determined by Polarized Light Microscopy (PLM) that, when dry, can be crumbled, pulverized, or reduced to power by hand pressure as defined in 22 CCR §66261.24.

nonfriable ACM: Material containing more than 1 percent asbestos by area with asbestos fibers that:

1. Are tightly bound into the matrix of the material
2. Should not become an airborne hazard as long as the material remains intact and undamaged and is not sawed, sanded, drilled or otherwise abraded during removal

regulated asbestos-containing material (RACM) as defined under 40 CFR §61.145(b)**:** Material containing more than 1 percent of any of the following in excess of 260 linear ft., 160 sq. ft., or 35 cu. ft.:

1. Friable asbestos, as determined using polarized light microscopy (PLM), that can be crumbled, pulverized, or reduced to powder by hand pressure when dry
2. Category I nonfriable ACM that has become friable or will be subjected to sanding, grinding, cutting or abrading
3. Category II nonfriable ACM that may become or has become friable

14-11.11A(3) Submittals

Submit a work plan for asbestos surveying and sampling before starting bridge removal or renovation. The plan must be prepared and signed by a certified asbestos consultant and include:

1. ACM sampling procedures, complying with US EPA, SW-846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual, Physical/Chemical, Chapter 9, Section 9.1
2. Method for analyzing samples under 40 CFR 763 Subpart F, appendix A, Polarized Light Microscopy, Analytical Method 600/R-93-116
3. Name and address of the laboratory that will perform the asbestos analyses and a copy of the laboratory's CDPH Environmental Laboratory Accreditation Program (ELAP) certification
4. Procedures for handling and preserving samples

Submit a sampling and analysis report within 10 days of sampling ACM. The report must be prepared and signed by a certified asbestos consultant and include:

1. Sampling protocols
2. Photographs of the structures and of the locations where samples were taken
3 Classification of the ACM as friable or nonfriable
4. Quantification of ACM
5. Recommendations for the removal and disposal of confirmed ACM
6. Documentation of the chain of custody
7. Laboratory test data

Allow 15 days for review. Submit a revised sampling and analysis report within 5 days of receiving the Department's comments. Submit 2 copies of the final report.

Submit a copy of the NESHAP Notification of Demolition and Renovation form and attachments before submittal to the AQMD or APCD under 40 CFR §61.145(b).

Submit an asbestos compliance plan for preventing or minimizing workers' exposure to asbestos during demolition or renovation activities. Submit the plan at least 15 days before starting bridge demolition or renovation activities in areas containing or suspected to contain asbestos. The plan must be prepared by a CIH and include:

1. Identification of key personnel for the project
2. Scope of work and equipment to be used
3. Job hazard analysis for work assignments
4. Summary of risk assessment
5. Description of personal protective equipment
6. Delineation of work zones at the job site
7. Decontamination procedures

8. General safe work practices
9. Security measures
10. Emergency response plans
11. Worker training
12. Certification of completed safety training for personnel before starting work in areas containing or suspected to contain asbestos

Submit a work plan for the removal, storage, transportation, and disposal of ACM. The work plan must include:

1. Locations at the perimeters of abatement work areas where asbestos warning signs will be installed
2. Summary of methods and techniques for handling, packaging, labeling, storing, transporting, and disposing of waste materials
3. Instructions for wetting asbestos materials with sprayers
4. Description and locations of disposal bins to be used for temporary storage of ACM until removal from the job site
5. Name and address of the hazardous waste transporter registered with the DTSC that will transport the ACM to a DTSC permitted hazardous waste facility. The transporter must be registered to transport hazardous waste in California under the Health and Safety Code, Div 20, Ch 6.5 and 22 CA Code of Regs, Div 4.5.
6. Name and address of the disposal facility in California permitted for the disposal of ACM
7. Documentation of compliance with federal, state, and local requirements for asbestos work, transport, and disposal

Submit an asbestos removal report documenting your compliance with the asbestos removal work plan. Submit the report to the Engineer and the APCD or AQMD within 30 days after removing ACM from the job site.

Submit a copy of the hazardous waste manifest for each shipment of ACM.

Within 5 business days of transporting hazardous and nonhazardous ACM waste, submit documentation of proper disposal from the receiving disposal facility.

14-11.11A(4) Quality Control and Assurance

The laboratory that performs the asbestos analysis must be certified by the CDPH ELAP for all analyses to be performed.

Sampling and analysis must comply with US EPA's “Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance.”

Collect a minimum of 3 samples for each part of the bridge, such as the deck or railing, where ACM is suspected to be present. For pipes and other linear parts, collect enough samples to determine the suspected asbestos content of the material.

Collect samples of:

1. Exposed suspected ACM on the structure
2. Bridge concrete that will be disturbed during demolition or renovation. Identify the samples by:
    2.1. Concrete color
    2.2. Concrete texture
    2.3. Type of structure component to be impacted
3. Suspected ACM encapsulated in concrete when exposed during demolition

Transport ACM samples under chain of custody to the authorized laboratory within 24 hours of sampling. The laboratory must test the samples within 48 hours of receiving them.

14-11.11B Materials

Not Used

14-11.11C Construction

14-11.11C(1) General

Before starting work in areas containing or suspected to contain asbestos, provide safety training complying with 8 CA Code of Regs § 1529 to State personnel who may enter the work area.

Provide training, personal protective equipment, and medical surveillance as required by the asbestos compliance plan to __ State personnel.

Notify the APCD or AQMD of changes in work locations or conditions.

14-11.11C(2) Discovery of Unanticipated ACM

If you discover unanticipated during demolition or renovation, stop work in that area and notify the Engineer. Removal and disposal of ACM not identified in the ACM survey before demolition or renovation is change order work.

Notify the APCD or the AQMD of changes to removal or demolition plans, including discovery of ACM during demolition, within 2 days of the change.

14-11.11C(3) Removal of ACM

Remove ACM under 8 CA Code of Regs § 1529 and 341. Remove friable ACM using the wetting method. Remove and handle nonfriable ACM such that you prevent breakage.

You are not required to remove ACM encased in concrete or similar structural material before demolition, but the ACM must be adequately wetted whenever exposed during demolition. Prevent visible emissions from ACM removal activities.

Mark regulated work areas with the warning information, "Danger, Asbestos, Cancer and Lung Disease Hazard, Authorized Personnel Only."

14-11.11C(4) Packaging and Temporary Storage of ACM

Package and label removed ACM under 22 CA Code of Regs § 66262.30 et seq. Place the removed ACM in minimum 0.06-inch-thick, double-ply, plastic bags with clearly visible labels affixed to the bags. The labels must have legible lettering with the information, "Danger/ Contains Asbestos Fibers/ Avoid Creating Dust/ Cancer and Lung Disease Hazard."

Place removed ACM directly into a covered, lockable, roll-off or drop box that has the same caution label affixed on all sides.

14-11.11C(5) Transport and Disposal of ACM

Dispose of friable and nonfriable ACM at a California disposal facility operating under a DTSC permit. Notify the facility at least 5 days before delivery of ACM.

The Engineer provides the Department's EPA Identification Number for hazardous waste disposal.

The Engineer signs the hazardous waste manifests. Notify the Engineer 5 days before the manifests are to be signed.

All transporters of friable ACM must have current DTSC registration for transporting hazardous waste and must have a US EPA Identification Number. Vehicles used to transport the hazardous waste must carry a valid registration during transport.

Transport nonhazardous, nonfriable ACM to the disposal facility with a shipping document or waste shipment record.

Within 5 days of transporting hazardous and nonhazardous ACM waste, submit documentation of proper disposal from the receiving disposal facility.

14-11.11D Payment

Not Used

Replace section 14-11.09 with:

14-11.09 TREATED WOOD WASTE

14-11.09A General

14-11.09A(1) Summary

Section 14-11.09 includes specifications for handling, storing, transporting, and disposing of treated wood waste (TWW).

Wood removed from _____ is TWW. Manage TWW under 22 CA Code of Regs, Div. 4.5, Chp. 34.

14-11.09A(2) Submittals

For disposal of TWW, submit as an informational submittal a copy of each completed shipping record and weight receipt within 5 business days.

14-11.09B Materials

Not Used

14-11.09C Construction

14-11.09C(1) General

Not Used

14-11.09C(2) Training

Provide training to personnel who handle TWW or may come in contact with TWW. Training must include:

1. Applicable requirements of 8 CA Code of Regs
2. Procedures for identifying and segregating TWW
3. Safe handling practices
4. Requirements of 22 CA Code of Regs, Div. 4.5, Chp. 34
5. Proper disposal methods

Maintain records of personnel training for 3 years.

14-11.09C(3) Storage

Store TWW before disposal using the following methods:

1. Elevate on blocks above a foreseeable run-on elevation and protect from precipitation for no more than 90 days.
2. Place on a containment surface or pad protected from run-on and precipitation for no more than 180 days.
3. Place in water-resistant containers designed for shipping or solid waste collection for no more than 1 year.
4. Place in a storage building as defined in 22 CA Code of Regs, Div. 4.5, Chp. 34, § 67386.6(a)(2)(C).

Prevent unauthorized access to TWW using a secured enclosure such as a locked chain-link-fenced area or a lockable shipping container located within the job site.

Resize and segregate TWW at a location where debris from the operation including sawdust and chips can be contained. Collect and manage the debris as TWW.

Provide water-resistant labels that comply with 22 CA Code of Regs, Div. 4.5, Chp. 34, §67386.5, to clearly mark and identify TWW and accumulation areas. Labels must include:

1. Caltrans, District number, Construction, Construction Contract number
2. District office address
3. Engineer's name, address, and telephone number
4. Contractor's contact name, address and telephone number
5. Date placed in storage

14-11.09C(4) Transporting and Disposal

Before transporting TWW, obtain an agreement from the receiving facility that the TWW will be accepted. Protect shipments of TWW from loss and exposure to precipitation. For projects with 10,000 lb or more of TWW, request a generator's EPA Identification Number at least 5 business days before the 1st shipment. Each shipment must be accompanied by a shipping record such as a bill of lading or invoice that includes:

1. Caltrans with district number
2. Construction Contract number
3. District office address
4. Engineer's name, address, and telephone number
5. Contractor's contact name and telephone number
6. Receiving facility name and address
7. Waste description: Treated Wood Waste with preservative type if known or unknown/mixture
8. Project location
9. Estimated quantity of shipment by weight or volume
10. Date of transport
11. Date of receipt by the receiving TWW facility
12. Weight of shipment as measured by the receiving TWW facility
13. Generator's EPA Identification Number for projects with 10,000 lb or more of TWW

The shipping record must be at least a 4-part carbon or carbonless 8-1/2-by-11-inch form to allow retention of copies by the Engineer, transporter, and disposal facility.

Dispose of TWW at an approved TWW facility. A list of currently approved TWW facilities is available at:

http://www.dtsc.ca.gov/HazardousWaste/upload/lanfillapr11pdated1.pdf

Dispose of TWW within:

1. 90 days of generation if stored on blocks
2. 180 days of generation if stored on a containment surface or pad
3. 1 year of generation if stored in a water-resistant container or within 90 days after the container is full, whichever is shorter
4. 1 year of generation if storing in a storage building as defined in 22 CA Code of Regs, Div. 4.5, Chp. 34, § 67386.6(a)(2)(C)

14-11.09D Payment

Not Used

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: DISTRICT DIRECTORS

Date: November 2, 2007

From: RICHARD D. LAND
Chief Engineer

MICHAEL MILES
Deputy Director
Maintenance and Operations

Subject: Treated Wood Waste-Alternative Management Standards

On July 1, 2007 the Department of Toxic Substances Control (DTSC) adopted new regulations (Attachment 1) establishing alternative management standards for treated wood waste (TWW) to prevent releases of hazardous constituents, prevent scavenging, and prevent harmful exposure of people, aquatic life and animals. This memo summarizes the new alternative management standards. Responsibilities for affected Caltrans Divisions and the Districts are described in Attachment 2.

Treated wood means wood that has been treated with a chemical preservative to protect the wood from insects, microorganisms, fungi and other environmental conditions that can lead to wood decay. Some chemical preservatives commonly applied to protect wood under the Federal Insecticide, Fungicide, and Rodenticide ACT (FIFRA) are: creosote, pentachlorophenol, copper azole (CA-B), copper boron azole (CBA), chromated copper arsenate (CCA), ammoniacal copper zinc arsenate (ACZA), copper naphthenate, and alkaline copper quaternary (ACQ). Common coatings applied to wood such as paint, varnish and oil stain are not considered wood preservatives.

The new regulations allow more flexibility for TWW disposal. As TWW may now be handled as a solid waste, testing and sampling of TWW is not required. Instead of disposal in a Class 1 hazardous waste landfill, TWW may now be disposed in a composite-lined portion of a solid waste landfill unit that meets all requirements applicable to disposal of municipal solid waste in California and that is regulated by waste discharge requirements (WDRs) issued for discharges of designated waste or TWW. The current list of TWW landfills certified by the Regional Water Quality Control Board (RWQCB) is included in Attachment 3, and may be viewed at: www.dtsc.ca.gov/Hazardous Waste/upload/TWW_landfill_list.pdf.

Additional facilities may be in the certification process. You may want to contact other local landfills to see if they are accepting treated wood waste.

The new regulations:

- Prohibit burning, storage in contact with the ground, treatment, commingling with other waste prior to land disposal and scavenging.
- Prohibit recycling, with or without treatment, unless:
  - Reused on the job site,
  - Reuse is consistent with a FIFRA approved use of the preservative with which the TWW was treated,
  - Prior to reuse, the TWW is handled in compliance with all applicable alternative management standards of these regulations.
- Require labeling of each area designated for accumulation of TWW.
- Require record keeping for at least 3 years for each shipment of TWW to a disposal facility. DTSC is currently developing a TWW Tracking System (TWWS), scheduled to be on-line in Fall 2007, for tracking shipments of TWW. Caltrans staff will be informed when the system is available. For consistency in the TWW Tracking System, in the TWW Generator Name field use "Caltrans" followed by Dist. #, and division, maintenance station, or project name. Do not use "Department of Transportation" or some other variation. Also use "Caltrans" on any logs, invoices, shipping and receipt forms or hills of lading. Guidelines for preparation of a bill of lading is shown in Attachment 4.
- Require a one–time submittal to DTSC for those sites generating more than 10,000 pounds per calendar year of treated wood waste within 30 days after exceeding the 10,000-pound threshold. TWW weight estimates can be based on wood supplier's information, actual scale tickets or any other "reasonable" method of estimation. Whatever method or assumptions are used should be recorded in the generator records. Notification forms can be submitted via the DTSC website at: http://www.dtsc.ca.gov/HazardousWaste/TWW_Notification.cfm.
- Require training for those employees that may reasonably be expected to handle TWW. A record of training with the signature of the employee included shall be maintained for a period of 3 years and available for review. Training shall include:
  - All applicable requirements of the California Occupational Safety sand Health Act (OSHA) of 1973 (ch.1, part 1 commencing with section 6300 of the Labor Code), including all rules, regulations, and orders relating to hazardous waste,
  - Procedures for identifying and segregating TWW,
  - Safe handling practices,
  - Requirements of the Alternative Management Standards, and
  - Proper disposal methods.

For questions regarding TWW, please contact Ranny Eckstrom, Chief, Office of Hazardous Waste and Noise at (916) 653-1303. For technical information, contact Carlos Lopez, Engineering Geologist at (916) 653-3548.

Attachments:

1) DTSC Alternative Management Standards for Treated Wood Waste
2) District and Division Responsibilities for Treated Wood Waste Alternative Management Standards
3) RWQCB Certified List of Treated Wood Waste Landfills
4) Bill of Lading, Typical Information

ATTACHMENT 1

TEXT OF FINAL REGULATIONS

Alternative Management Standards for Treated Wood Waste – R-2005-04

§66261.9.5. Requirements for Treated Wood Waste

Treated wood waste as defined in section 67386.4 when managed as specified in chapter 34 is exempt from tha management raquirements of chapter 12 through 20.

NOTE: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Section 25150.7, Health and Safety Code.

Appandix XII of the California Code of Regulations title 22, division 4.5, chepter 11.

Amended Appendix XII and insertad tha naw California Waste Code for Treated Wood Waste. California Waste code 614 has been insertad both in numerical and alphabatical order within the existing section.

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(b) List of California Hazardous Waste Coda arranged in numerical order:

***

614 Treated wood waste

***

(c) List of California Hazardous Waste Codes in arranged alphabatically within each numbered category in this subdivision:

***

614 Treated wood waste

***

NOTE: Authority cited: Sections 25150 and 58012, Health and Safety Code. Reference: Sections 25117.9, 25122.7, and 25150, Health and Safety Code.

Chapter 34. Alternative Management Standards for Treated Wood Waste

§ 67386.1 Scope

(a) This chapter provides an alternative set of management standards in lieu of the requirements for hezardous waste pursuant to articles 6, 6.5, and 9, chapter 6.5, division 20, Heelth and Sefety Code, and chepters 12, 13, 14, 15, 16, 18, and 20 of this division for a person managing treeted wood waste (TWW). All other chapters of this division, and section 66264.101, chapter 14, division 4.5, title 22, apply to persons managing TWW.
(b) Nothing in this chapter is a limitation on the power of this or any other governmental agency to adopt or enforce additionel requirements related to the menagement of TWW.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67388.2 Applicability

(a) The alternative management standards of this chapter apply only to wood waste that meets all of the following:
(1) is a hazardous waste pursuant to chapter 11 of this division;
(2) is a hazardous waste solely due to the presence of a preservative in or on the wood that is registered in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for use as a wood preservative; and
(3) is not subject to regulation as a hazardous waste under the federal Resource Conservation and Recovery Act (RCRA).
(b) The alternative management standards of this chapter do not apply to wood waste exempted from hazardous waste management standards pursuant to Health and Safety Code section 25143.1.5.
(c) The following wood wastes are not eligible for the alternative management stenderds of this chapter:
(1) wood weste that is hazardous due to the presence of coatings, peint, or other treatments that are not registered in accordance with FIFRA for use as a wood preservative; or
(2) wood waste when designated to be burned.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25143.1.5, 25150.7 and 25150.8, Health and Safety Code.

§ 67386.3 Prohibited Activities

(a) TWW managed in accordance with the alternative management standards of this chapter shall not be:
(1) burned;
(2) scavenged;

(3) commingled with other waste prior to disposal, if previously segregated;
(4) stored in contact with the ground;
(5) recycled, with or without treatment, except as provided for in subsection (c)
(6) treated except in compliance with section 67386.10; and
(7) disposed to land except in compliance with section 67386.11.

(b) Any label or mark that identifies the wood waste as TWW shall not be intentionally removed, obilterated, defaced, or destroyed prior to disposal in e landfill.

(c) TWW may be recycled only by reuse pursuant to conditions specified in (1) – (3) of this subsection. During reuse, the TWW is not subject to sections 67386.5 through 67386.11. TWW may only be reusod when all of the following apply:
(1) reuse is onsite;
(2) at the time of reuse, reuse is consistent with e FIFRA approved use of the preservative with which the TWW has been treated; and
(3) prior to reuse, the TWW is handled in compliance with all applicable menagement standards of this chapter.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67388.4 Definitions

The definitions set forth in section 66260.10 of this division shall apply unless otherwise defined. The following definitions shall apply to the terms used in this chapter:

"Agent" means a person hired by a generator for the removal, collection, or transportation of TWW.

"Class 1 hazardous waste landfill" meens a landfill as defined in section 66260.10, which is also authorized as part of a permitted facility as defined in section 66260.10.

"Composting Facility" means a facility that produces compost as defined in Public Resources Code, section 40116 and is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Gasification Facility" means a facility that utilizes a gasification process as defined in Public Resources Code, section 40117 and is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Limited Volume Transfer Operation" means an operation that receives less than 60 cubic yards, or 15 tons of solid waste per operating day for the purpose of storing the waste prior to transferring the waste to another solid waste operation or facility and which does not conduct processing activities, but may conduct limited salvaging activities and volume reduction by the operator and is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Resizing" means the minimal cutting, breaking, or sawing, but does not include planing, grinding, chipping, sanding, shredding, mulching, or other mechanical handling or any other treatment.

"Small Volume Construction and Demolition/Inert (CDI) Debris Processing Operation" means a site that receives less than 25 tons of any combination of construction and demolition debris and Type A inert debris per operating day for the purposes of storage, handling, transfer, or processing that is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Solid Waste Landfill" means a facility as defined in Public Resources Code, section 40195.1 that is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Transfer or Processing Station" means a facility as defined in Public Resources Code, section 40200 that is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Transformation Facility" means a facility that utilizes a transformation process as defined in Public Resources Code, section 40201 and is authorized to operate pursuant to division 30 of Public Resources Code (commencing with § 40000).

"Treated wood" means wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. § 136 and following).

"Treated Wood Waste" means a waste that meets the requirements of section 67386.2(a).

"TWW" means "Treated Wood Waste."

"TWW approved landfill" means either a class 1 hazerdous waste landfill, or a composite-lined portion of a solid waste landfill unit that meets all requirements applicable to disposal of municipal solid waste in California after October 9, 1993, and that is regulated by waste discharge requirements issued pursuant to division 7 (commencing with § 13000) of the Water Code for discharges of designated waste, as defined in section 13173 of the Water Code, or treated wood waste and that is in compliance with this chapter.

"TWW facility" means either:

(a) a solid waste landfill, as defined in this section, that is in compliance with this chapter; or

(b) a transfer or processing station, as defined in this section, that is in compliance with this chapter; or

(c) a gasification facility, as defined in this section, that is in compliance with this chapter; or
(d) a TWW approved landfill, as defined in this section, that is in compliance with this chapter; or
(e) a class 1 hazardous waste landfill; or
(f) Small Volume Construction and Demolition/Inert (CDI) Debris Processing Operation, as defined in this section, that is in compliance with this chapter; or
(g) Limited Volume Transfer Operation, as defined in this section, that is in compliance with this chapter.

TWW Facility shall not include composting facilities, or transformation facilities.

"TWW handler" means a person who generates, handles, collects, processes, accumulates, stores, transfers, transports, treats, recycles, or disposes of TWW.

"Unit" means a pile, stack, container, bundle, or other discernable aggregetion of TWW for purposes of this chapter.

"Wood waste" means all waste timber products and failed timber products including solid sawn lumber and engineered wood products, offcuts, shavings and sawdust that meet the definition of "waste" pursuant to Health and Safety Code section 25124. "Wood Waste" does not mean forest residues, green waste, or garden waste materiels such as branches, bushes and tree stumps.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code; Sections 40116, 40117, 40195.1, 40200, and 40201, Public Resources Code; and Section 13173 Water Code.

§ 67386.5 Labeling

(a) TWW generated, accumulated, stored, or transported within California shall be clearly marked and visible for inspection. The person maneging the TWW shall ensure that each unit and/or area designated for accumulation of TWW is labeled. The area designated for accumulation of TWW shall be clearly identified and used solely for the accumulation of TWW.
(b) In order to clearly identify the nature of the waste to the receiving party and/or any observer, the TWW shall be labeled or marked with the following:

"TREATED WOOD WASTE –Do not bum or scavenge.

TWW Handler Name and Address: _____

_____

Accumulation Date: _____".

(c) The TWW handler shall ensure that labels are meintained in compliance with the requirements of subsections (a) and (b) during transport.

(d) TWW accumulated for a period not to exceed thirty (30) days by a household at the site of generation in compliance with the requirements of section 67386.6 is exempt from the labeling requirements of this section.
(e) TWW generated by a household while being self-transported to an approved TWW facility is exempt from the labeling requirements of this section if the TWW is identified to the TWW facility as TWW.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67386.6 Accumulation

(a) TWW shall be maintained in a manner that prevents unauthorized access end minimizes release to the environment.

(1) Unauthorized access shall be prevented by means of visual control or a physical barrier when not under the direct control of the person responsible for the TWW.

(2) The TWW shall be accumulated in a manner thet is protected from run-on and run-off, and placed on a surface sufficiently impervious to prevent, to the extent practical, contact with and leaching to soil or water, which may be accomplished by one of the following:

(A) Block and Tarp:
The TWW may be accumulated when all the following requirements are met;

1. TWW is elevated to prevent contact with the soil and to protect from reasonably foreseeable run-on;
2. TWW is covered to protect from precipitation; and
3. TWW is accumulated no longer than 90 days from the date the TWW is generated or received from another handler.

(B) Containerize:
The TWW may be accumulated in containers no longer then one year from the date the TWW is generated or received from another handler. The containers shall be;

1. designed, constructed, mainteined, filled, its contents so limited, and closed, so that under conditions normally incidental to handling, there will be no identifiable release of TWW materials or its constituents to the environment; and
2. water-resistant if exposed to precipitation, run-on or run-off under reasonably foreseeeble conditions.
3. (reserved)

(C) Storage Building:
The TWW shall be accumulated no longer than one year from the date the TWW is generated or received from another handler in a structurally sound building with a water-resistant floor designed to prevent the movement of water into or out of the building.

(D) Containment Pad:

The TWW may be accumulated no longer than 180 days from the date the TWW is generated or received from another handler on a containment surface and all the following requiramants are met;

1. TWW does not contact soil;
2. TWW is protected from reasonably foreseeable run-on;
3. TWW is covered to protect from precipitation; and
4. TWW managed in accordance with this subsection may be accumulated uncovered if the containment surface is designed and operated to contain all precipitation and tha rasulting water is managed in accordance with all applicable laws and regulations.

(E) Other:
The TWW may ba accumulated no longer than 90 days from the date the TWW is ganaratad or received from another handler in any other manner in which the TWW handler can clearly demonstrate that the TWW is protacted from run-on and run-off, and placed on a surface sufficiently impervious to prevent, to the extent practical, contact with and laaching to soil or water.

(b) Except as provided in subsection (c), in no case shall TWW be accumulated for more than one year from the date of generation or the date raceived from another handler.

(c) A handler may accumulate TWW for longar than one year from the date the TWW is generated or received from another handler, if the accumulation is solely for the purpose of accumulation of quantities of TWW nacessary to facilitate disposal pursuant to saction 67386.11. However, the handler bears the burden of proving that the accumulation was solely for the purpose of accumulation of quantities of TWW nacessary to facilitate proper disposal.

(d) A person who accumulates TWW shall be abla to demonstrata the langth of time the TWW has been accumulated from the date it becomes a waste or is received.

(e) TWW ganerated incidental to the maintenance of a household and accumulatad by the resident of the household at the site of generation is exempt from the accumulation requirements of this section if all of the following requirements are met;

(1) TWW is not physically altered except as provided in section 67386.10; and
(2) TWW is accumulated no longer than thirty (30) days.

(f) TWW generated incidental to the operation of a business accumulated at the site of generation for a period not to exceed thirty (30) days is exempt from the accumulation requirements of this section if:

(1) TWW is not physically altered except as provided in section 67386.10; and
(2) the business accumulates no more than 1,000 pounds of TWW.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67386.7 Offsite Shipments

(a) Except as provided in subsection (c), a TWW handler is prohibited from sending or taking TWW to a place other than a TWW facility, or a TWW approved landfill.

(b) Prior to sending a shipment of TWW to another TWW handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.
(c) A TWW handler who initially collects TWW at a remote site may transport that TWW to a consolidetion site operated by the generator if all the following conditions are met;

(1) the TWW is transported by the generator, employees of the generator or by the generator's agent;

(2) a shipping document containing all of the following information accompanies the TWW while in transport;

(A) the quantity, by weight or volume, of TWW being transported;

(B) the location of the remote site where the TWW was initially collected;

(C) the date that the generetor first begen to accumulete the TWW at the remote site, the date that the shipment leaves the remote site, and the date that the shipment arrives at the consolidation site;

(D) the name, address, and telephone number of the generator, and, if different, the address and telephone number of the consolidation site to which the TWW is being transported; and

(E) the name of the individual or individuals who transport the TWW from the remote site to the consolidation site; and

(3) the TWW handler shall retein the shipping document described in subsection (c)(2) of this section for at least three years from the date the TWW leaves the TWW consolidation site.

(d) TWW shall be shipped and/or transported in a manner thet prevents unauthorized access; protects the TWW from precipitation; and prevents loss, dispersion, and leaching of TWW constituents.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67386.8 Tracking Shipments

(a) Shipments off-site. A TWW hendler shall keep a record of each shipment of TWW sent from the handler to TWW facilities. The record may take the form of a log, invoice, manifest, bill of lading, shipping document, or receipt from a TWW facility. The record for each shipment of TWW shall include the following information:

(1) name and address of the TWW facility to which the TWW was sent;

(2) weight of TWW, the estimeted weight of TWW, or the weight of the TWW as measured by the receiving TWW facility (An estimated weight may be used when a scale is unavailable or weighing is impractical. Assumptions required for weight estimates shall be recorded in the shipment records.); and

(3) date the shipment of TWW left the handler.

(b) Receipt of shipments. A TWW handler shall keep a record of each shipment of TWW received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of TWW received shall include the following information:

(1) name and address of the originating TWW generator from whom the TWW was sent;

(2) weight of TWW or the estimated weight of TWW (An estimated weight may be used when a scale is unavailable or weighing is impractical. Assumptions required for weight estimates shall be recorded in the shipment records.); and
(3) date of receipt of the shipment of TWW.

(c) Reporting receipt of shipments. A TWW facility or a TWW approved landfill that receives TWW shall submit, to the department, semi annual reports for the periods ending June 30 and December 31 of each year. Reports shall be required beginning December 31, 2007 and shall be submitted in an electronic format provided by the department within 30 days of the end of each reporting period. Each semi annual report shall include the following information:

(1) reporting facility information;
1. Facility name, location address, contact person's name, and telephone number; and
2. Identification Number.

(2) for all TWW shipments received, other than those reported under subsections (3), (4), and (5) the TWW facility shall report the following information;
1. generator's Identification Number, or, if the generator does not have an Identification Number, the name, address, contact person's name, mailing address, and telephone number of the generator;
2. dates of shipments; and
3. weight of TWW per shipment.

(3) TWW household information;
1. weight summary of all TWW quantities received that were generated by households.

(4) TWW load check information;
1. Weight summary of all TWW quantities discovered and separated from solid waste as part of an on-site load checking program.

(5) for shipments received from another TWW facility the following information shall be reported by the receiving TWW facility;
1. TWW facility's Identification Number or the name, address, contact person's name, mailing address, and telephone number of the TWW facility;
2. dates of shipments; end
3. weight of TWW per shipment.

(d) The department shall make all of the information in the semi annual reports submitted pursuant to this subdivision available to the public, through its usual means of disclosure, except the department shall not disclose the association between any specific TWW handlers and specific facilities. The list of TWW handlers served by a facility shall be deemed to be a trade secret and confidential business information for purposes of Health and Safety Code section 25173 and section 66260.2 of title 22 of the California Code of Regulations.

(e) Record retention.
(1) a TWW handler shall retain the records described in subsection (a) of this section for at least three years from the date the shipment left the handler; and
(2) a TWW facility shall retain the records described in subsection (b) of this section for at least three years from the date of receipt of a shipment.

(f) Households are exempt from the recordkeeping requiremants of this section when the TWW is generated incidental to that household.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7, 25150.8 and 25173, Health and Safety Code.

§ 67386.9 Notification

(a) In any calendar year that a TWW handler generates more than 10,000 pounds of TWW, the TWW handler shall obtain or maintain an Identification Number within 30 days of exceeding the weight threshold.
(b) In any calendar year that a TWW handler generates more than 10,000 pounds of TWW the handler shall send written notification to the Department within 30 days of exceeding the 10,000 pound limit.
(c) The notification shall include;

(1) TWW handler's name and mailing address;
(2) generator's Identification Number;
(3) nama and business telephone number of the person at tha TWW handler's site who should be contacted regarding TWW management activities;
(4) address or physical location of the TWW management ectivities;
(5) date the TWW handler exceeded the 10,000 pound limit; and
(6) a statement indicating that the handler is generating more than 10,000 pounds of TWW per calendar yaar.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67386.10 Treatment

(a) Treatment, as defined in Health and Safety Code section 25123.5, of treated wood waste managed in accordance with the alternative management standards of this chapter is prohibited except as provided in subsactions (b) and (c).

(b) Resizing is exempt from the permitting requirements of this division when resized to facilitate transport or reuse and the following requirements ere met;

(1) TWW shall be handled in a manner that prevents the uncontrolled release of hazardous constituants to the environment; and
(2) if size reduction of the TWW results in sawdust, particles, or other material smaller than one cubic inch, the material shall be captured and managed as TWW.

(c) Sorting and segregating are both exempt from the permitting requirements of this division. The TWW shall be handled in a manner that prevents the uncontrolled release of hazardous constituents to the environment.

(d) An employer resizing, sorting, or segregating TWW shall provide treining for all employees handling TWW and all employees that may reasonably be expected to

contact TWW. A record of the training shall be maintained for a peried of three years and available for review. The training shall include:

(1) all applicable requirements of the Califomia Occupational Safety and Heelth Act of 1973 (ch. 1, part 1, div. 5 (commencing with § 6300) of the Labor Code), including all rules, regulations, and orders relating to hazardous waste;
(2) procedures for identifying and segregating TWW;
(3) safe handling practices;
(4) requirements of the altemative management standards; and
(5) proper disposal methods.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

§ 67386.11 Disposal

(a) When disposed to land, TWW shall be disposed in either a Class I hazardous waste landfill, or in a composite-lined portion of a solid waste landfill unit that meets all requirements appliceble to disposal of municipal solid weste in Califomia after October 9, 1993, and that is reguleted by waste discherge requirements issued pursuant to division 7 (commencing with § 13000) of the Water Code for discharges of designated waste, as defined in section 13173 of the Water Code, or TWW.
(b) A solid waste landfill that accepts TWW shall:
(1) comply with the prohibitions in section 67386.3 for handling TWW;
(2) ensure that eny management of the TWW at the solid waste landfill prior to disposal complies with the applicable requirements of this chapter;
(3) monitor the composite-lined portion of e landfill unit at which TWW has been disposed. When a release is verified, cease discharge of TWW to that landfill unit until corrective action results in cessation of the release. The landfill shall notify the department that TWW Is no longer be discharged to that landfill unit and when corrective action results in cessation of the release; and
(4) handle TWW in e manner consistent with all applicable requirements of the California Occupational Safety and Health Act of 1973 (ch. 1, part 1, div. 5 (commencing with § 6300) of the Labor Code), including all rules, reguletions, and orders relating to hazardous waste.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Heallh and Safety Code; and Section 13173 Water Code.

§ 67386.12 Training

(a) An employer managing TWW shall provide training for all employees handling TWW and all employees that may reasonably be expectad to contact TWW. A record of the training shall be maintained for a period of three years and availeble for review. The training shall include:

(1) all applicable requirements of the California Occupational Safety and Health Act of 1973 (ch. 1, part 1, div. 5 (commencing with § 6300) of the Labor Code), including all rules, regulations, and orders relating to hazardous waste;
(2) procedures for identifying and segregating TWW;
(3) safe handling practices;
(4) requirements of the alternative management standards; and
(5) proper disposal methods.

Note: Authority cited: Sections 25150, 25150.7, and 58012, Health and Safety Code. Reference: Sections 25150.7 and 25150.8, Health and Safety Code.

ATTACHMENT 2

District and Division Responsibiiities
For
Treated Wood Waste Aiternative Management Standards
(Title 22, Sections 67386.1-12)

Divisions of Maintenance, Construction, Right of Way, Materials Engineering and Testing Services (METS):

- Notify District and Division staff and ensure Caltrans compliance with Department of Toxic Substances Control (DTSC) Alternative Management Standards, July 1, 2007.
- Develop and update policies and procedures where treated wood waste (TWW) impact Caltrans operations.
- Update Business Plans to incorporate DTSC Alternative Management Standards.
- Ensure Caltrans actions are consistent with DTSC Alternative Management Standards prohibiting burning, ground contact storage, unspecified recycling, treatment, land disposal and scavenging, (Section 67386.3).
- Ensure that each area designated for accumulation of TWW is labeled (Section 67386.5).
- Maintain records and documentation of TWW accumulation time (Section 67386.6).
- Ensure that TWW is shipped offsite to an approved disposal facility and that the receiving facility will accept TWW (Section 67386.7).
- Maintain records (3 years) of TWW shipments (Section 67386.8).
- Ensure that sites generating more than 10,000 pounds of TWW per calendar year from January 1st to December 31st, submit a one–time notification to DTSC. TWW weight estimates can be based on wood supplier's information, actual scale tickets, or any other "reasonable" method of estimation. Whatever method is used should be recorded in the generator records. Notification tonnage should match up with the records. The Notification Form shall be submitted, 30 days after exceeding the 10,000 pounds threshold facility, and shall include an EPA ID number (Section 67386.9).
- TWW notification forms can be submitted via the DTSC website at:

http://www.dtsc.ca.gov/HazardousWaste/TWW_Notification.cfm

- Ensure TWW is either disposed in a hazardous waste landfill or in an approved composite-lined solid-waste landfill (Section 67386.11).
- Ensure TWW training for employees. Maintain records of training for 3 years, for those employees expected to be in contact with TWW. Ensure that records are available for review by DTSC (Section 67386.12).
- Implement standard special provisions (SSPs) and non-standard special provisions (nSSPs) as appropriate *(This requirement applicable to Division of Construction only).*

Division of Administration, Office of Health and Safety

- Develop and provide training to Caltrans employees in the safe handling, disposal and legal management practices of TWW (Section 67386.12).

Division of Environmental Analysis

- Liaison with DTSC to interpret regulations.
- Coordinate implementation of the new Alternative Management Standards among impacted Divisions.
- Develop SSPs as needed.
- Approve nSSPs as appropriate.

ATTACHMENT 3

RWQCB Certified List of Treated Wood Waste Landfills

Facility Name	Facility's Site Address	City	Zip Code	Facility Contact Number	County
Altamont Landfill and Resource Recovery Faci	10840 Altamont Pass Road	Livermore	94551	(800)449-6349	Alameda
Rock Creek Solid Waste Facility	12021 Hunt Road	Milton	95230	(209) 754-6402	Calaveras
Keller Canyon Landfill	901 Bailey Road	Pittsburg	94565	(925)625-4711	Contra Costa
American Avenue Disposal Site	18950 W American Avenue	Kerman	93630	(559)846-6138	Fresno
Allied Imperial Landfill	104 East Robinson Road	Imperial	92251	760)355-0004	Imperial
Waste Management Inc. McKittrick Site	56533 Highway 58 West	McKittrick	93251	(661)762-7366	Kern
CWMI Kettleman Hills Facility	35251 Old Skyline Road	Kettleman City	93239	(559) 386-9711	Kings
Eastlake Sanitary Landfill	16015 Davis Ave	Clearlake	95422	(707)994-5888	Lake
Bradley Landfill West and West Extension	9227 Tujunga Avenue	Sun Valley (In	91352	(818) 767-6180	Los Angeles
Burbank Landfill (Stough Park)	1600 N. Bel Aire Dr.	Burbank	91504	(818) 238-3915 City	Los Angeles
Calabasas Sanitary Landfill	2800 S. Workman Mill Rd	Whittier	90601	(562)699-6028x6005	Los Angeles
Chiquita Canyon Landfill	29201 Henry Mayo Dr.	Valencia (In Santa Clarita)	91355	661-257-3655	Los Angeles
Puente Hills Landfill #6	13130 Crossroads Pkwy South	Industry	91746	(562) 699-7411, Gary Arm	Los Angeles
Savage Canyon Landfill	13919 East Penn Street	Whittier	90602	(562)907-7750	Los Angeles
Highway 59 Disposal Site	Hwy 59; 8 Mi N Merced	Merced	95348	(209) 385-7388	Merced
Crazy Horse Sanitary Landfill	350 Crazy Horse Canyon Road	Salinas	93907	(831)663-2796	Monterey
Johnson Canyon Sanitary Landfill	31400 Johnson Canyon Road	Gonzales	93926	(831)675-2165	Monterey
MRWMD Monterey Peninsula Landfill/Marina	14201 Del Monte Blvd	Marina	93933	(831) 384-5313	Monterey
Prima Deshecha Sanitary Landfill	32250 La Pata Avenue	San Juan Capistrano	92675	(714) 834-4000	Orange
Western Regional Landfill	3195 Athens Road Ap #17-060-02	Lincoln	95648	(918) 543-3960	Placer
Badlands Sanitary Landfill	31125 Ironwood Ave.	Moreno Valley	92553	(951) 486-3200	Riverside
Lamb Canyon Sanitary Landfill	16411 Lamb Canyon Rd.	Beaumont	92223	(951) 486-3200	Riverside

RWQCB Certified List of Treated Wood Waste Landfills

Facility Name	Facility's Site Address	City	Zip Code	Facility Contact Number	County
Fontana Refuse Disposal Site/Mid Valley Sanitary				(600)722-8004	San Bernadino
Mid-Valley Sanitary Landfill	2390 Alder Avenue	Rialto (Fontana)		(800)722-8004 x 2	San Bernadino
San Onofre Landfill	52 Area & Basilone Road	Camp Pendleto	92055	xx(760) 725-3868	San Diego
West Miramar Landfill	5180 Convoy Street	San Diego	92111	(858)492-6100	San Diego
Otay Landfill	1700 Maxwell Rd	Chula Vista	91911	(619) 449-4053	San Diego
Ramona Landfill	20630 Pamo Rd	Ramona	92065	(760)789-3410	San Diego
Sycamore Sanitary Landfill	8514 Mast Boulevard	San Diego	92071	(619)562-9426	San Diego
Forward Inc.	9999 S. Austin Road	Manteca	95336	(800) 204-4242	San Joaquin
Chicago Grade Landfill	2290 Homestead Road	Templeton	93465	(805) 466-2985	San Luis Obispo
Cold Canyon Landfill Solid Waste Disposal Sit	2268 Carpenter Canyon Road	San Luis Obispo	93401	(805) 549-8363	San Luis Obispo
Ox Mountain (Corinda Los Trancos) Landfill	2 Mi N-E Half Moon Bay Off Hwy 92	Half Moon Bay	94019	(619)421-3773	San Mateo
Guadalupe Rubbish Disposal Company	15999 Guadalupe Mines Road	San Jose	95120	(408) 268-1670	Santa Clara
Kirby Canyon Recycling and Disposal Facility	910 Coyote Creek Golf Drive	Morgan Hill	95038	408)779-2206	Santa Clara
Newby Island Landfill	1601 Dixon Landing Road	Milpitas(SJ)	95035	(408) 262-1401	Santa Clara
Buena Vista Drive Sanitary Landfill	1231 Bruena Vista Drive	Watsonville	95076	(831)454-2430	Santa Cruz
City of Watsonville Landfill	730 San Andreas Road	Watsonville	95076	(831)768-3131 City	Santa Cruz
Santa Cruz Class III Landfill	605 Dimeo Lane	Santa Cruz	95060	(831) 420-5160	Santa Cruz
Anderson Landfill	Approx. 1/4 mile NW of W Anderson Drive	Anderson	9600	(916) 378-6637	Shasta
West Central Landfill	14095 Clear Creek Road	Igo	96047	(530)396-2555	Shasta
B&J Drop Box/Hay Road Landfill	6426 Hay Road; 1/4 Mi W Hwy 113	Vacaville	95687	(707) 678-4718	Solano
Simi Valley Landfill & Recycling Center	2801 Madera Road	Simi Valley	93065	(605) 522-7023	Ventura
Toland Road Sanitary Landfill	3500 North Toland Road	Santa Paula	93060	(805) 658-4674	Ventura
Ostrom Road Landfill	5900 Ostrom Road	Wheatland	95692	(530)743-6321	Yuba

RWQCB Certified List of Treated Wood Waste Landfills

Facility Name	Facility's Site Address	City	Zip Code	Facility Contact Number	County
Buena Vista Landfill				(209) 223-6429	Amador
Union Mine Disposal Site				(530) 295-0429	El Dorado
City of Clovis Landfill				(559) 324-2614	Fresno
Metropolitan Bakersfield (Bena) Sanitary Landfill				(661) 862-8900	Kern
Shafter-Wasco Sanitary Landfill				(661) 862-8900	Kern
Lancaster Landfill and Recycling Center				(661) 223-3437	Los Angeles
Sunshine Canyon Sanitary Landfill County Extension				(818) 504-3017	Los Angeles
Fairmead Solid Waste Disposal Site				(559) 665-3099	Madera
Clover Flat Landfill				(707) 942-4473	Napa
Frank R. Bowerman Sanitary Landfill				(714) 834-4000	Orange
Olinda Alpha Sanitary Landfill				(714) 834-4000	Orange
El Sobrante Landfill				(909) 277-1740	Riverside
Sacramento County Landfill (Kiefer)				(916) 875-6789	Sacramento
San Timoteo Solid Waste Disposal Site				(909) 386-8735	San Bernadino
Fort Irwin Sanitary Landfill				(760) 380-3410	San Bernadino
Antelope Valley Landfill				(626) 430-5541	San Bernardino
Landers Disposal Site				(909) 386-8735	San Bernardino
Las Pulgas Landfill				(760) 725-3868	San Diego
Foothill Sanitary Landfill				(209) 468-3000	San Joaquin
North County Recycling Center and Sanitary LF				(209) 468-3000	San Joaquin
City of Paso Robles Landfill				(805) 237-3861	San Luis Obispo
Hillside Class III Disposal Site				(650) 755-6978	San Mateo
Santa Maria Landfill				(805) 925-0951	Santa Barbara
Pacheco Pass Sanitary Landfill				(408) 847-4142	Santa Clara
Potrero Hills Landfill				(707) 429-9600	Solano
Central Landfill				(707) 565-7940	Sonoma
Fink Road Landfill				(209) 837-4801	Stanislaus
Visalia Landfill				(559) 733-6291	Tulare
Woodville Disposal Site				(559) 733-6291	Tulare
Yolo County Central Landfill				(530) 666-8852	Yolo

ATTACHMENT 4: Bill of Lading Typical Information

STATE OF CALIFORNIA – GENERAL SERVICES PROCUREMENT DIVISION

TWW Alternative Management Standards

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - Not Negotiable

STD. 254 (REV. 6/2006)

NOTICE: *Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Hazardous Materials Articles."*

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth in the applicable motor carrier classification or tariff.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

FROM CONSIGNOR

Caltrans, Dist #, Division, MS or project name

Street address of facility or PM # or similar description

Site Contact Person

TO CONSIGNEE

BILL OF LADING NO

DATE

SHIPPER NO

IS THIS BILL OF LADING PART OF A MASTER BILL? ☐ NO ☐ YES ☐ NO OF DROPS

☐ TO BE PREPAID

BILL TO

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

☐ FREIGHT COLLECT

SIGNATURE OF CONSIGNOR

CARRIER NAME

CARRIER FEDERAL IDENTIFICATION NUMBER

NO. AND TYPE OF PACKAGES	TYPE OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS, AND EXCEPTIONS HAZARDOUS MATERIALS ARTICLES *For 24-hour emergency response, call:*	LINE ITEM CLASS NO.	CLASS	LINE ITEM WT. (Subj. to Correct)
	This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.			
Ex 1-20 c.y.	T.W.W.			
0	TOTAL NO. OF PIECES		TOTAL WEIGHT	0

SHIPPER'S SIGNATURE — DATE SHIPPED

DRIVER'S SIGNATURE — DATE SHIPPED

Natural Environment Study

Little Dry Creek Bridges Replacement Project on Millerton Road

Fresno County, California

Federal Project No. BRLO-5942 (210)

May 2017

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
Fresno County

Prepared By: _____ Date: 5/31/17

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Prepared By: _____ Date: 6-14-17

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Recommended
for Approval By: _____ Date: 6/15/17

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(559) 445-6314
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District 6

Approved By: _____ Date: 6/15/2017

Shane Gunn, Branch Chief:
(559) 445-6310
Environmental Analysis, Planning and Local Programs
District 6

Summary

The California Department of Transportation (Caltrans), Fresno County (County), and the Federal Highway Administration (FHWA) propose to replace four bridges on Millerton Road over Little Dry Creek (42C0268, 42C0269, and 42C0270) and North Fork Little Dry Creek (42C0267). The National Environmental Policy Act (NEPA) process is led by Caltrans for this proposed project. The project is located approximately 12 miles (mi) northeast of the City of Clovis in Fresno County.

The four bridges are considered to be functionally obsolete due to their substandard width. Bridge number 42C0267 is also considered structurally deficient due to its advanced deterioration. All four of the bridges are set on alignments that do not accommodate Fresno County's standard design speed of 45 mph.

As is standard with all roadway projects, the contractor will be required to install temporary Best Management Practices (BMPs) to control any runoff or erosion from the project site into the surrounding waterways. These temporary BMPs will be installed prior to any construction operations and will be in place for the duration of the contract. The removal of these BMPs will be the final operation, along with project site cleanup.

All equipment and materials will be stored at one of the temporary staging areas located within the project limits. Two staging areas are proposed for each bridge location. Construction access would be directly from the existing roadway via temporary access roadways.

The Biological Study Area (BSA), totaling 19.59 acres (ac), is located at four bridges on Millerton Road over Little Dry Creek. The majority of the BSA is privately owned and characterized by natural communities that are surrounded by rolling hills. The diversity of plant species and vegetative structure, along with the presence of water, provides nesting, shelter, and foraging habitat for a variety of wildlife species. Additionally, the existing bridges provide potential nesting habitat for birds.

Five natural communities occur within the BSA: blue oak woodland, California annual grasslands, California sycamore woodlands, rush/Bermuda grass meadow, and intermittent stream. Blue oak woodland and the California sycamore woodlands are considered natural communities of special concern. The proposed project will result in both permanent and temporary impacts to these communities.

No special status plant species are expected to occur in the BSA.

Special status wildlife species that may occur in the BSA include several bat species, American badger (*Taxidea taxus*), western burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), Pacific pond turtle (*Emys marmorata*), and

California tiger salamander (CTS) (*Ambystoma californiense*). The proposed project may affect, but is likely to adversely affect CTS, a State and federally threatened species.

The project will result in minor permanent and temporary impacts to non-wetland waters of the U.S. The project is likely to require an Army Corps of Engineers (ACOE) Nationwide Permit, a California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement, and a Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

The proposed project includes numerous avoidance and minimization measures for special status species and habitats to reduce the potential for adverse effects.

The project is expected to be constructed in the spring/summer of 2018. All four bridges will be built concurrently within an estimated 4-month construction period.

Table of Contents

Tables and Figures

Chapter 1 – Introduction

The California Department of Transportation (Caltrans), the County of Fresno (County), and the Federal Highway Administration (FHWA) propose to replace four bridges on Millerton Road over Little Dry Creek (42C0268, 42C0269, and 42C0270) and North Fork Little Dry Creek (42C0267). The project is located approximately 12 miles (mi) northeast of the City of Clovis between Auberry Road to the west and State Route 168 to the east (Figures 1-3).

1.1. Project History

1.1.1. PURPOSE AND NEED

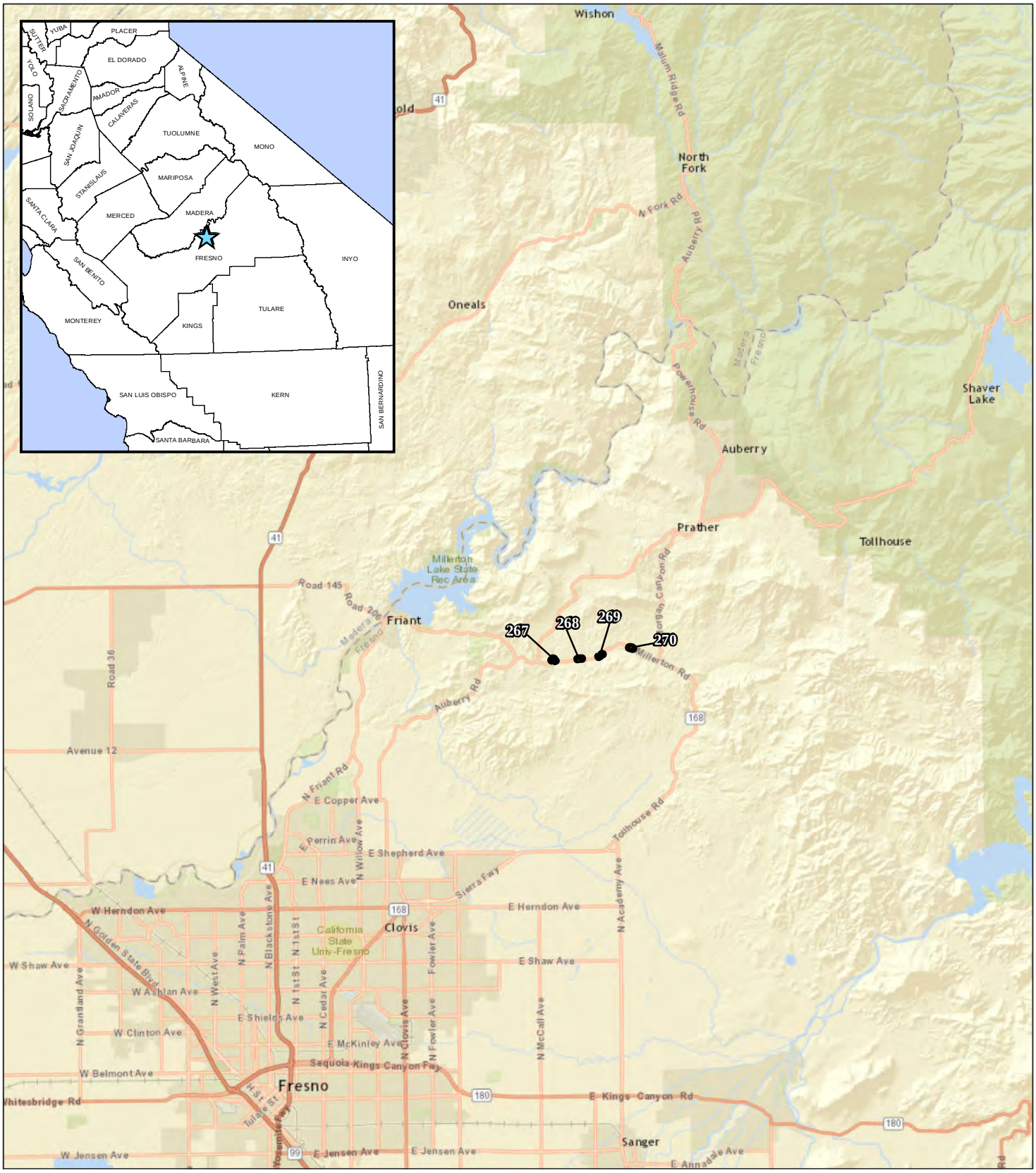
The purpose of this project is to replace bridges 42C0267, 42C0268, 42C0269, and 42C0270 with new structures that will significantly improve on the existing conditions; roadway safety, structural integrity, and bridge hydraulic capacity.

At this location, Millerton Road is classified as a two way rural road. All four of the existing bridges, which are proposed for replacement, are set on alignments that do not accommodate Fresno County's standard design speed of 45 miles per hour (mph) for a rural County road with no posted speed limit. Caltrans has determined that each of the existing bridge structures is functionally obsolete due to its substandard width for a two lane facility and that all four bridges are hydraulically inadequate and subject to overtopping during the 100-year storm event. Additionally, bridge 42C0267 is considered structurally deficient due to its advanced state of deterioration.

1.2. Project Description

All four bridges were originally constructed in 1925 and consist of multi span timber superstructures supported by concrete pier and abutment walls. The timber superstructures are in various states of deterioration. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34 feet (ft) 10 inches (in) wide which accommodates Fresno County's and American Association of State Highway and Transportation Officials standard of two 12-foot lanes and two 4-foot shoulders. Each of the replacement bridges have been set on an alignment that can accommodate a higher design speed that is closer to or meets the County's standard of 45 mph. The proposed design speed for each bridge is as follows:

Bridge Number	Design Speed
42C0267	25 mph
42C0268	45 mph
42C0269	45 mph
42C0270	45 mph



LEGEND

Bridge Locations

FIGURE 1

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Location

0 2.5 5
MILES

SOURCE: ESRI World Street Map (2016)

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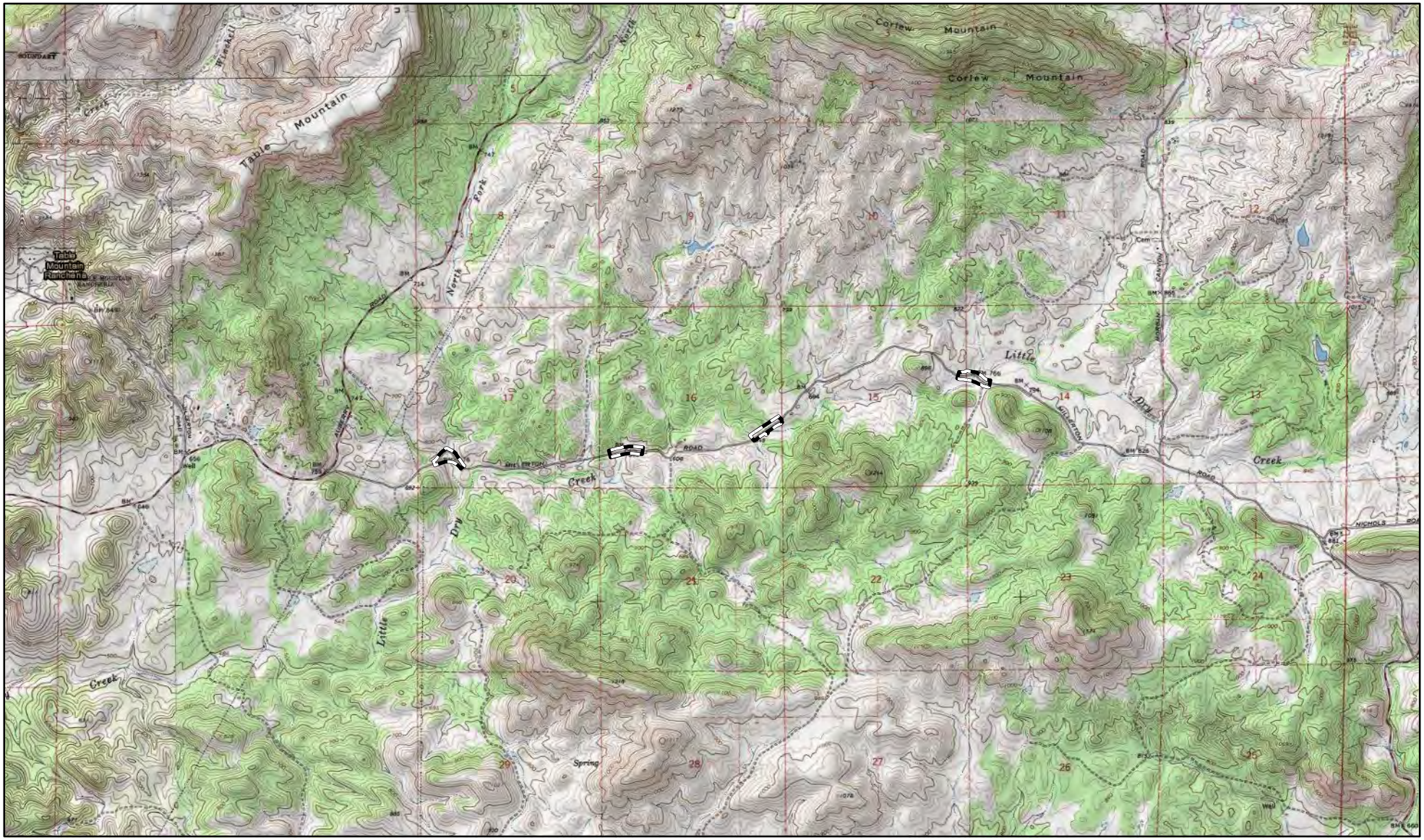

Caltrans

LEGEND

Biological Study Area - (19.59 ac)

FIGURE 2

N

0 2000 4000

FEET

SOURCE: USGS 7.5-Minute Quadrangle (Academy)

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Topographic Base

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LEGEND

Biological Study Area - (19.59 ac)

Little Dry Creek

0 600 1200
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 3

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Aerial Base

Bridges 42C-0267, 42C-0269 and 42C-0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C-0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction. The temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek.

In order to keep the creek channel dry at each bridge site during construction, if flows are present at the start of construction temporary earth berm coffer dams will be constructed across the creek bed at the upstream and downstream limits of work at each site. Creek flows will be temporarily conveyed through the berm and construction site via pipe culverts.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable). The abutments and pier (as applicable) for Bridges 42C0267, 42C0268, and 42C0270 will be founded on shallow spread footings embedded into granite material. Due to the presence of a deep subterranean lens of decomposed granite, the abutments for Bridge 42C0269 will be supported on cast-in-drilled-hole piles. The chosen span configuration and lengths for each bridge are as follows:

Bridge Number	Number of Spans	Total Bridge Length
42C0267	1	60 ft
42C0268	2	82 ft
42C0269	1	60 ft
42C0270	2	82 ft

The bridge lengths and span configurations are being driven by the hydraulic capacity needed at each Little Dry Creek crossing. All four bridges can pass the Caltrans standard requirement of the 50-year storm event plus 2 feet of freeboard and the 100-year storm event.

The vertical limit of excavation for roadway construction generally will not exceed 1 foot in depth except at the following locations.

Bridge Number	Depth (maximum)	Location (approximate)
42C0267	5 ft	Station 15+35
42C068	n/a	n/a
42C0269	8 ft	Station 112+50
42C0270	4 ft	Station 183+50

The vertical limit of excavation for bridge construction (i.e., for abutment and/or pier footings) is listed below for each bridge.

Bridge Number	Abutments (maximum)	Piers (maximum)
42C0267	35 ft	n/a
42C0268	35 ft	35 ft
42C0269	80 ft	n/a
42C0270	35 ft	35 ft

Construction of all four bridges will require work within the creek including the removal of the existing bridge, construction of the bridge pier and footings (only applicable for bridges 42C0268 and 42C0270), construction of the temporary creek crossing (only applicable for bridge 42C0268), construction of the abutment walls and footings, construction and removal of temporary falsework, and installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location.

The project is expected to be constructed in the spring/summer of 2018. All four bridges will be built concurrently within an estimated 4-month construction period. The contractor will have separate crews; one for each bridge.

Design plans are included in Appendix A.

Chapter 2 – Study Methods

2.1. Regulatory Requirements

2.1.1. SPECIAL STATUS SPECIES

Special status species include plants and animals that are: 1) listed as rare, threatened, or endangered by United States Fish and Wildlife Service (USFWS) or CDFW under State or federal endangered species acts; 2) on formal lists as candidates for listing as threatened or endangered; 3) on formal lists as species of concern; or 4) otherwise recognized at the State, federal, or local level as sensitive.

2.1.1.1. Federal and California Endangered Species Acts

Under the Federal Endangered Species Act (FESA), it is unlawful to "take any species listed as threatened or endangered." "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity is defined as "take" even if it is unintentional or accidental. Take provisions under FESA apply only to listed fish and wildlife species under the jurisdiction of the USFWS and/or the National Oceanic & Atmospheric Administration, National Marine Fisheries Service (NMFS). Consultation with USFWS or NMFS is required if a project "may affect" a listed species.

When a species is listed, the USFWS and/or the NMFS, in most cases, must officially designate specific areas as critical habitat for the species. Consultation with USFWS and/or the NMFS is required for projects that include a federal action or federal funding if the project may affect designated critical habitat.

Under the California Endangered Species Act (CESA), it is unlawful to "take" any species listed as rare, threatened, or endangered. Under CESA, "take" means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA take provisions apply to fish, wildlife, and plant species. Take may result whenever activities occur in areas that support a listed species. Consultation with CDFW is required if a project will result in "take" of a listed species.

2.1.1.2. Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), essential fish habitat (EFH) must be designated in every fishery management plan. EFH includes "…those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The MSA requires consultation with NMFS for projects that include a federal action or federal funding and may adversely modify EFH.

2.1.2. WATERS OF THE U.S. AND OTHER JURISDICTIONAL WATERS

2.1.2.1. Army Corps of Engineers

Under Section 404 of the federal Clean Water Act (CWA), the ACOE regulates the discharge of dredged or fill material into waters of the U.S. Waters of the U.S. are those waters that have a connection to interstate commerce, either direct via a tributary system or indirect through a nexus identified in the ACOE regulations. In non-tidal waters, the lateral limit of jurisdiction under Section 404 extends to the ordinary high water mark (OHWM) of a waterbody or, where adjacent wetlands are present, beyond the OHWM to the limit of the wetlands. The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). In tidal waters, the lateral limit of jurisdiction extends to the high tide line or, where adjacent wetlands are present, to the limit of the wetlands.

Wetlands

Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for a life in saturated soil conditions."

Nonwetland Waters

Nonwetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

2.1.2.2. Regional Water Quality Control Board

Under Section 401 of the CWA, the State Water Resources Control Board must certify all activities requiring a 404 permit. The RWQCB regulates these activities and issues water quality certifications for those activities requiring a 404 permit. In addition, the RWQCB has authority to regulate the discharge of "waste" into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (PCWQCA).

2.1.2.3. California Department of Fish and Wildlife

CDFW, through provisions of Section 1602 of the State Fish and Game Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be substantially adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an ephemeral or

intermittent flow of water. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, cottonwoods, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Riparian communities may not fall under ACOE jurisdiction unless they are below the OHWM or classified as wetlands.

2.1.2.4. Executive Order 11990: Protection of Wetlands

Executive Order (EO) 11990 mandates leadership on the part of federal agencies to reduce loss and degradation of wetlands and to preserve and enhance the beneficial values and functions of wetlands. Each federal agency "shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds that (1) there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use."

2.1.3. MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) prohibits actions that will result in "take" of migratory birds, their eggs, feathers, or nests. "Take" is defined in the MBTA as any means or any manner to hunt, pursue, wound, kill, possess, or transport, any migratory bird, nest, egg, or part thereof.

Migratory birds are also protected, as defined in the MBTA, under Section 3513 of the California Fish and Game Code.

2.1.4. CALIFORNIA FISH AND GAME CODE (BREEDING BIRDS)

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or other regulation.

2.1.5. EXECUTIVE ORDER 13112: INVASIVE SPECIES

Under EO 13112, an invasive species is defined as "an alien species (a species not native to a particular ecosystem) whose introduction does or is likely to cause economic and environmental harm or harm to human health." Invasive species are determined by the Invasive Species Council.

In addition to other mandates, EO 13112 mandates federal agencies whose actions may affect the status of invasive species to "not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species."

2.1.6 FRESNO COUNTY OAK WOODLANDS MANAGEMENT GUIDELINES (POLICY OS-F.11)

The Open Space and Conservation Element of the Fresno County General Plan states that any construction within oak woodlands shall develop an Oak Woodland Management Plan. This plan should provide guidance for, but is not limited to, the avoidance of tree root compaction in root zones, careful planning of roads, cuts, fills, and building foundations to avoid tree roots, tree replacement and revegetation of the disturbed landscape.

2.2. Studies Required

Prior to conducting any field studies, the limits of the BSA for each bridge were established, and range from 4.45 ac to 5.37 ac (see Figure 4). The BSA consists of the project footprint, existing roadways, access and staging areas, and lands beyond the footprint to the edge of the road right-of-way that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis of project impacts.

The studies required to fully document the environmental conditions of the BSA included vegetation mapping, a special status plant survey, jurisdictional waters delineation, a site assessment for CTS, and a tree survey.

2.2.1. LITERATURE REVIEW

A list of sensitive wildlife and plant species potentially occurring within the BSA and vicinity was compiled to evaluate potential impacts resulting from project construction. Sources used to compile the list include the California Natural Diversity Data Base (CNDDB 2017), the California Native Plant Society (CNPS) Online Inventory (2017), and the NMFS Google Earth Species list (NMFS 2017). Records were reviewed for the following United States Geological Survey 7.5-minute quadrangles (quads): Millerton Lake East, Millerton Lake West, Auberry, Humphreys Station, Academy, Friant, Clovis, Round Mountain, and Piedra. The USFWS Information for Planning and Conservation (IPaC) Trust Inventory (2017) list was generated using the individual bridge BSAs.

For the NMFS Species list, only three of the nine quads were identified within the range of anadromous fish species (Academy, Friant, and Millerton Lake West). The NMFS species list is an intersection of FESA Listed Species, Critical Habitat, EFH and Marine

Caltrans

LEGEND

Biological Study Area - (5.37 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 4A

Bridge No. 42C0267

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Biological Study Area

Caltrans

LEGEND

Biological Study Area - (4.45 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 4B
Bridge No. 42C0268

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Biological Study Area

Caltrans

LEGEND

Biological Study Area - (4.63 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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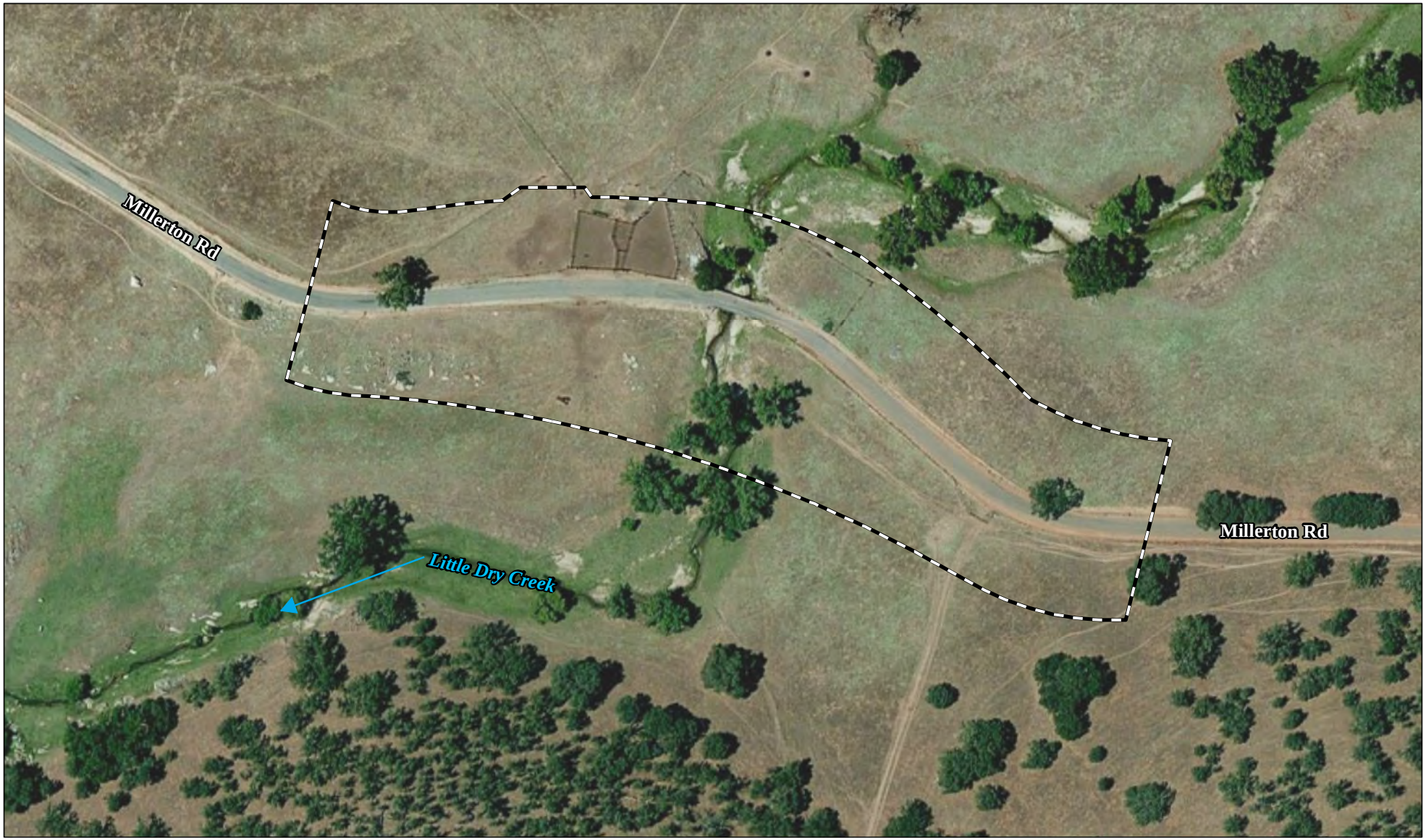
FIGURE 4C
Bridge No. 42C0269

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Biological Study Area



Caltrans

LEGEND

Biological Study Area - (5.14 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

I:\Cff1501A\GIS\Reports\NES\Nes_fig4D-bsa.mxd (1/3/2017)

FIGURE 4D

Bridge No. 42C0270

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Biological Study Area

Mammal Protection Act Species Data within California. It should be noted that identified features may be present throughout the entire quad or just a portion.

All lists are included in Appendix B.

The special status species lists obtained from the CNDDB, CNPS, USFWS, and NMFS were reviewed to determine which species could potentially occur within the vicinity of the BSA. The cumulative list (Table 4, Section 3.2) includes numerous species representing a variety of habitat types. The list includes each species' protection status, habitat information, status in the BSA, and supporting comments as necessary.

Absent from Table 4 are three invertebrate species that have no special status but appear on the lists. Since these species have no special status and there is little to no information available about them, they are not included in the table. The excluded species include; marbled harvestman (*Calicina macula*), Table Mountain harvestman (*Calicina mesaensis*), and the Piedra harvestman (*Calicina piedra*).

The determination of whether a species could potentially occur within the BSA was based on the availability of suitable habitat within and adjacent to the BSA, as well as known occurrences of the species in or adjacent to the BSA according to the CNDDB. Species requiring specific habitat not present in the vicinity of the project were eliminated as potentially occurring and are not discussed further. Those species that could potentially occur in the BSA based on habitat suitability or known occurrences in or within the vicinity of the BSA are discussed in Sections 4.2 and 4.3.

2.2.2. FIELD SURVEYS

The studies required to fully document the environmental conditions in the BSA included a general biological survey, vegetation mapping, jurisdictional delineation, a habitat assessment for CTS, and a tree inventory.

2.2.2.1. General Biological Survey/Vegetation Mapping

LSA biologists Mike Trueblood and Dayna Winchell conducted a general biological survey of the BSA on May 28 and 29, 2015. The BSA was surveyed on foot and the naturally occurring vegetation in the BSA was classified according to A Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evans 2008), as appropriate. Managed or developed areas were classified according to their dominant plant species. The names of the plant species are consistent with The Jepson Manual: Vascular Plants of California (Baldwin, B. G., et. al., editors 2012).

During this survey, the BSA was also surveyed for potential habitat to support special status plants.

2.2.2.2. Potential Jurisdictional Waters Determination and Delineation

Potential waters of the U.S. in the BSA were delineated in accordance with the 1987 ACOE Wetland Delineation Manual (1987 Manual), the September 2008 Regional Supplement - Arid West Region, and the ACOE Regulatory Guidance Letter 08-02 regarding Preliminary Jurisdictional Delineations (June 2008).

Bargas Environmental Consulting conducted a preliminary jurisdictional delineation on March 24 and April 27, 2015. Data was collected for soils, hydrology, and vegetation where necessary to determine the extent of potential waters of the U.S.

2.2.2.3. Californa Tiger Salamander Habitat Assessment

LSA biologist Dayna Winchell conducted a field survey for the CTS habitat assessment on March 25, 2015. A habitat assessment report was prepared in accordance with the Interim Guidance on Site Assessments and Field Surveys for Determining Presence of a Negative Finding of the California Tiger Salamander, dated October 2003. The assessment is included in Appendix C.

2.2.2.4 Tree Survey

LSA biologists Mike Trueblood and Dayna Winchell conducted a tree survey on May 28 and 29, 2015. Data was collected on species, diameter at breast height (DBH), and associated vegetation. The results of the tree survey are included in Appendix E.

2.3. Personnel and Survey Dates

Table 1 provides the date and personnel for the field surveys performed in the BSA.

Table 1: Survey Dates and Personnel

Date	Personnel	Task
March 24, 2015 April 27, 2015	Bargas Environmental Consulting	Preliminary jurisdictional delineation
March 25, 2015	Dayna Winchell	CTS habitat assessment
May 28 and 29, 2015	Dayna Winchell and Mike Trueblood	General biological survey, special status plant survey, tree survey

2.4. Agency Coordination and Professional Contacts

CDFW and USFWS were consulted prior to implementation of cultural resources testing at bridges 42C0267, 42C0269, and 42C0270. However, no coordination has been undertaken with either agency specific to replacement of the bridges.

2.5. Limitations That May Influence Results

No problems or limitations were encountered during the research, field work, or document preparation that influenced the results presented herein. However, it should be noted that extreme drought conditions in recent years may have affected the blooming periods of flowering plants in the region.

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Chapter 3 – Results: Environmental Setting

3.1. Description of the Existing Physical and Biological Conditions

3.1.1. BIOLOGICAL STUDY AREA

The BSA, totaling 19.59 ac, is located along Millerton Road where bridges cross Little Dry Creek (42C0268, 42C0269, and 42C0270) and North Fork Little Dry Creek (42C0267). The project is located in northern Fresno County, approximately 12 mi northeast of the City of Clovis. The project is located in the Academy quadrangle, in Township 11 South, Range 22 East, Sections 14, 15, 16, and 17.

3.1.2. PHYSICAL CONDITIONS

The overall project area is located among rolling hills on the western side of the Sierra Nevada Mountains, southeast of Millerton Lake. The BSA ranges in elevation from 590 to 750 ft above mean sea level. The project area is located on Millerton Road, which extends east to west, in a rural residential setting with the majority of the land privately owned. Millerton Road connects to SR 168 in the east and Auberry Road in the west. This road is a narrow one-lane asphalt road that expands to two-lanes and crosses over the four bridges that are being proposed for replacement. The use and vegetative characteristics of the surrounding area appear to be similar to the individual bridge BSAs, which range in size from 4.45 to 5.37 ac.

Little Dry Creek meanders throughout the project area. Little Dry Creek is an ephemeral to intermittent creek which flows generally southwest, eventually draining into the San Joaquin River approximately 9 mi downstream. It flows south under bridges 42C0268 and 42C0270 and west under bridge 42C0269. North Fork Little Dry Creek, a tributary to Little Dry Creek, flows south under bridge 42C0267.

The undeveloped areas within the BSA consist of Little Dry Creek and North Fork Little Dry Creek, California sycamore woodlands, California annual grasslands, rush/Bermuda grass meadows, and blue oak woodlands. The developed areas consist of Millerton Road, the existing bridges, and private driveways.

Representative photos of the BSA are included in Appendix F.

3.1.3. BIOLOGICAL CONDITIONS IN THE BIOLOGICAL STUDY AREA

3.1.3.1. Natural Communities

As noted above, vegetation communities were classified based on the descriptions in Sawyer, Keeler-Wolf, and Evans (2008), as applicable. There are five natural communities in the BSA: California annual grasslands, blue oak woodland, California

sycamore woodlands, rush/Bermuda grass meadow, and intermittent stream. These natural communities comprise 16.71 ac total in the BSA. Table 2 summarizes the acreage per individual bridge BSA. Natural Communities and Land Uses are shown in Figure 5.

Table 2: Natural Communities and Other Land Use in the BSA (acres)

Community/Land Use	Bridge 42C0267	Bridge 42C0268	Bridge 42C0269	Bridge 42C0270	Total
Natural Communities					
Blue Oak Woodland	*0.29*	*0.17*	*0.53*	*0.00*	*0.99*
California Annual Grassland	*3.88*	*3.09*	*3.26*	*4.21*	*14.44*
California Sycamore Woodlands	*0.10*	*0.00*	*0.00*	*0.11*	*0.21*
Intermittent Stream	*0.14*	*0.41*	*0.14*	*0.19*	*0.88*
Rush/Bermuda Grassland	*0.00*	*0.19*	*0.00*	*0.00*	*0.19*
Subtotal Natural Communities	***4.41***	***3.86***	***3.93***	***4.51***	***16.71***
Developed	0.96	0.59	0.70	0.63	2.88
Total	**5.37**	**4.45**	**4.63**	**5.14**	**19.59**

Blue Oak Woodland

The blue oak woodland community, totaling 0.99 ac, occurs in small areas within the BSA but is the primary plant community in the regional vicinity. Blue oak woodlands is found within all the BSAs except at bridge 42C0270. This community is dominated by blue oak (*Quercus douglasii*) with an understory of ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*) and wild oat (*Avena fatua*).

California Annual Grassland

The California annual grasslands, totaling 14.44 ac, is the dominate plant community in all four BSAs. This community includes brome grasses, wild oats, foxtail barley (*Hordeum murinum*), milk thistle (*Silybum marianum*), and doveweed (*Croton setigerus*).

Caltrans

LEGEND

Biological Study Area - (5.37 ac)

Natural Communities / Land Uses - (5.37 ac)

- Blue Oak Woodland - (0.29 ac)
- California Annual Grasslands - (3.88 ac)
- California Sycamore Woodlands - (0.10 ac)
- Intermittent Stream - (0.14 ac)
- Rush/Bermuda Grasslands - (0.00 ac)
- Developed - (0.96 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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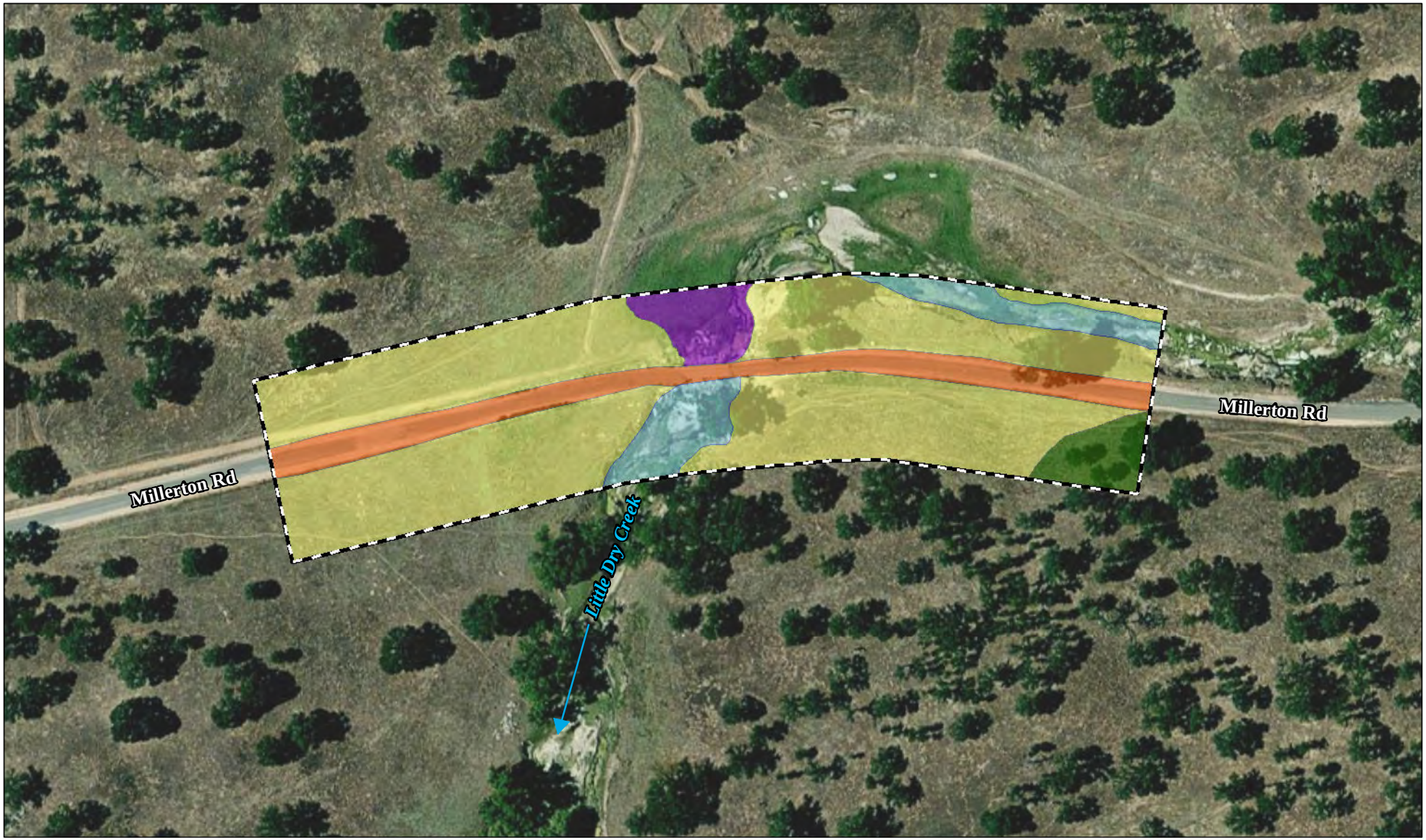
FIGURE 5A

Bridge No. 42C0267

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Natural Communities / Land Uses



LEGEND

- Biological Study Area - (4.45 ac)

Natural Communities / Land Uses - (4.45 ac)

- Blue Oak Woodland - (0.17 ac)
- California Annual Grasslands - (3.09 ac)
- California Sycamore Woodlands - (0.00 ac)
- Intermittent Stream - (0.41 ac)
- Rush/Bermuda Grasslands - (0.19 ac)
- Developed - (0.59 ac)

Caltrans

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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FIGURE 5B
Bridge No. 42C0268

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Natural Communities / Land Uses

Caltrans

LEGEND

Biological Study Area - (4.63 ac)

Natural Communities / Land Uses - (4.63 ac)

Blue Oak Woodland - (0.53 ac)

California Annual Grasslands - (3.26 ac)

California Sycamore Woodlands - (0.00 ac)

Intermittent Stream - (0.14 ac)

Rush/Bermuda Grasslands - (0.00 ac)

Developed - (0.70 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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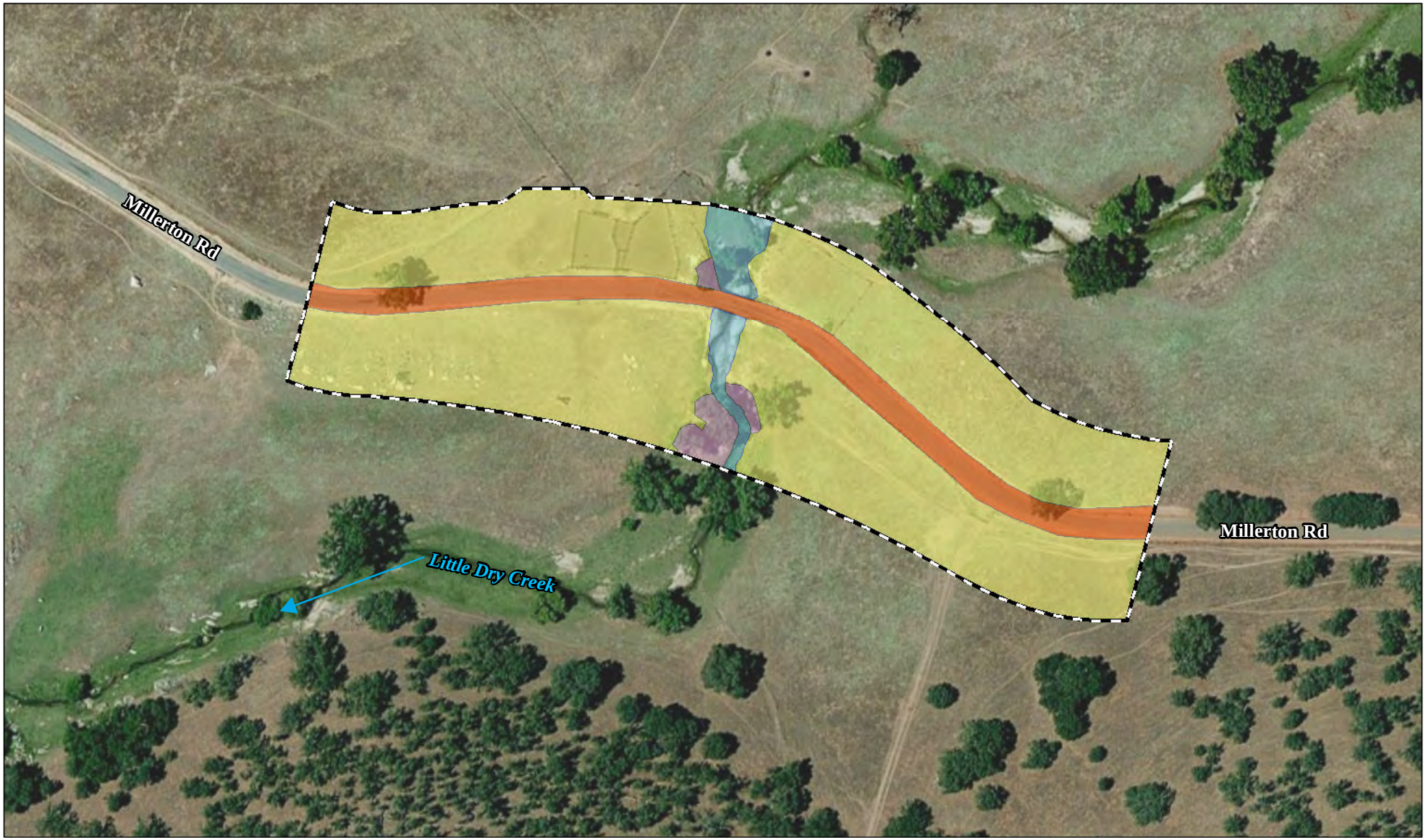
FIGURE 5C
Bridge No. 42C0269

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Natural Communities / Land Uses



Caltrans

LEGEND

Biological Study Area - (5.14 ac)

Natural Communities / Land Uses - (5.14 ac)

Blue Oak Woodland - (0.00 ac)

California Annual Grasslands - (4.21 ac)

California Sycamore Woodlands - (0.11 ac)

Intermittent Stream - (0.19 ac)

Rush/Bermuda Grasslands - (0.00 ac)

Developed - (0.63 ac)

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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FIGURE 5D
Bridge No. 42C0270

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Natural Communities / Land Uses

California Sycamore Woodlands

The California sycamore woodlands community, totaling 0.21 ac, occurs at two of the bridges, 42C0267 and 42C0270. This community is found mainly along the southern reach of Little Dry Creek and North Fork Little Dry Creek flowing through the BSA. The community is dominated by California Sycamore (*Platanus racemosa*), interspersed with black willow (*Salix gooddingii*) and an understory dominated by California annual grassland species.

Rush/Bermuda Grass Meadow

The rush/Bermuda grass meadows, totaling 0.19 ac, is only located at bridge 42C0268. This community is found on the north side of Millerton Road above the intermittent stream. The community is dominated by Bermuda grass (*Cynodon dactylon*), common rush (*Juncus effuses*), and annual rabbitsfoot grass (*Polypogon monspeliensis*).

Intermittent Stream

The intermittent stream, totaling 0.88 ac, consists of the bed and banks of Little Dry Creek and North Fork Little Dry Creek, exclusive of the California sycamore woodlands community. These drainages convey intermittent to ephemeral flows, and are largely unvegetated.

3.1.3.2. Other Vegetation Communities

Developed

The developed areas, totaling 2.88 ac, include Millerton Road, the existing bridges, private driveways, and roadside ditches.

3.1.3.3. Description of Common Animal Species

The sections below discuss animal species observed and/or likely to occur within the BSA.

Mammals

Mammals observed during the field surveys of the BSA include the California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*). Other mammals likely to occur in the BSA include: coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and opossum (*Didelphis virginiana*).

Birds

Bird species observed during the field surveys include the American crow (*Corvus brachyrhynchos*), western scrub jay (*Aphelocoma californica*), black Phoebe (*Sayornis nigricans*), killdeer (*Charadrius vociferous*), European starling (*Sturnus vulgaris*), wood duck (*Aix sponsa*), white crowned sparrow (*Zonotrichia leucophrys*), mourning dove (*Zenaida macroura*) and red-tailed hawk (*Buteo jamaicensis*). These species were visually observed or detected through vocalizations.

Other birds likely to occur in the BSA include: rock pigeon (*Columba livia*), American robin (*Turdus migratorius*), wild turkey (*Meleagris gallopavo*), and northern mockingbird (*Mimus polyglottos*).

Amphibians and Reptiles

One amphibian species, Western toad (*Anazyrus boreas*), was observed at bridge 42C0268 within the BSA. There were no other amphibian species observed during the field surveys. Other amphibians likely to occur in the BSA include: chorus frog (*Hyla regilla*), bull frog (*Rana catesbeiana*).

One reptile species, western fence lizard (*Sceloporus occidentalis*), was observed in the BSA. Other reptiles likely to occur in the BSA include: western terrestrial garter snake (*Thamnophis elegan elegans*), western rattlesnake (*Crotalus oreganus*) and common gopher snake (*Pituophis catenifer*).

3.1.3.6. Invasive Species

Many non-native species have been part of the California landscape for the past 150 years, and the BSA supports a number of noxious weed species including: oats, barley, and rye (*Lolium* spp.). These species, at most are moderately invasive because they are primarily annual or biennial. No seriously invasive species, such as yellow star thistle [*Centaurea solstitialis*] or giant reed [*Arundo donax*]) were observed in the BSA.

3.1.3.4. Migration Corridors

Wildlife movement corridors are linear habitats that function to connect two or more areas of significant wildlife habitat. These corridors may function on a local level as links between small habitat patches (e.g., streams in urban settings) or may provide critical connections between regionally significant habitats (e.g., deer movement corridors). Wildlife corridors typically include vegetation and topography that facilitate the movements of wild animals from one area of suitable habitat to another in order to fulfill foraging, breeding, and territorial needs. These corridors often provide cover and protection from predators that may be lacking in surrounding habitats. Wildlife corridors generally include riparian zones and similar linear expanses of contiguous habitat.

There is no evidence that Little Dry Creek or North Fork Little Dry Creek are significant migration routes. These features likely serve as a movement corridor for terrestrial wildlife through the BSA between the eastern Sierra Nevada Mountains and the rolling hills and valley to the west.

3.1.3.5. Aquatic Resources

Aquatic resources in the BSA consist of Little Dry Creek, North Fork Little Dry Creek, and roadside drainages or ditches. The creeks originate in the foothills east of the BSA and generally flow southwest until their confluence in the San Joaquin River, approximately 9 mi downstream.

Bargas Environmental Consulting conducted a preliminary jurisdictional delineation on March 24 and April 27, 2015. Figure 6 shows the potential jurisdictional waters in the BSA; which are also summarized in Table 3.

Table 3: Potential Jurisdictional Waters in the BSA (acres)

Features	Bridge 42C0267	Bridge 42C0268	Bridge 42C0269	Bridge 42C0270	Total Area
Waters of the U.S.					
Wetlands	0.000	0.113	0.000	0.046	0.159
Non-Wetland Waters	0.162	0.489	0.142	0.147	0.940
Total Waters of the U.S.	**0.162**	**0.602**	**0.142**	**0.193**	**1.099**
Total CDFW 1602 Waters	**0.162**	**0.602**	**0.142**	**0.193**	**1.099**

3.2. Regional Species and Habitats of Concern

Table 4 provides a list of special status species that could potentially occur in the region, and therefore in the BSA; this list was compiled as described in Section 2.2.1.

A review was conducted of the specific habitats required by each species listed in Table 4, and the specific habitats and habitat conditions present in the BSA. Based on this evaluation, it was determined whether the species listed in Table 4 had potential to occur in the BSA. Special status species that were observed, or determined to potentially occur in the BSA based on availability of suitable habitat or other factors such as plucking posts, scat, nests, dens, etc., are discussed more fully in Sections 4.2 and 4.3 of this report. Special status species determined unlikely to occur in the BSA based on these same factors are documented accordingly in the table and not discussed further in this report.

Caltrans

LEGEND

- Biological Study Area - (5.37 ac)
- Data Point
- Culvert

Potential Waters of the U.S. - (0.162 ac)

- Wetlands - (0.00 ac)
- Non-Wetland Waters - (0.162 ac)

N

0 75 150

FEET

SOURCE: Basemap - Microsoft Aerial Imagery (8/2010); Mapping - Bargas Environmental Consulting (6/2015)

I:\Cff1501A\GIS\Reports\NES\Nes_fig6A-wetland.mxd (1/3/2017)

FIGURE 6A

Bridge No. 42C0267

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential Jurisdictional Waters

Caltrans

LEGEND

Biological Study Area - (4.45 ac)

Data Point

Culvert

Potential Waters of the U.S. - (0.602 ac)

Wetlands - (0.113 ac)

Non-Wetland Waters - (0.489 ac)

N

0 75 150

FEET

SOURCE: Basemap - Microsoft Aerial Imagery (8/2010); Mapping - Bargas Environmental Consulting (6/2015)

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FIGURE 6B

Bridge No. 42C0268

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential Jurisdictional Waters

Caltrans

LEGEND

Biological Study Area - (4.63 ac)

Data Point

Culvert

Potential Waters of the U.S. - (0.142 ac)

Wetlands - (0.00 ac)

Non-Wetland Waters - (0.142 ac)

N

0 75 150

FEET

SOURCE: Basemap - Microsoft Aerial Imagery (8/2010); Mapping - Bargas Environmental Consulting (6/2015)

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FIGURE 6C

Bridge No. 42C0269

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential Jurisdictional Waters

LEGEND

- Biological Study Area - (5.14 ac)
- Data Point
- Culvert

Potential Waters of the U.S. - (0.193 ac)

- Wetlands - (0.046 ac)
- Non-Wetland Waters - (0.147 ac)

0 75 150
FEET

SOURCE: Basemap - Microsoft Aerial Imagery (8/2010); Mapping - Bargas Environmental Consulting (6/2015)

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FIGURE 6D
Bridge No. 42C0270

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential Jurisdictional Waters

Three invertebrates, marbled harvestman (*Calicina macula*), Table Mountain harvestman (*Calicina mesanesis*), and Piedra harvestman (*Calicina piedra*) appear on the lists but have no listed special status. Because little to no information is available for these species, and they have no protection status, they are not included in Table 4.

Table 4: Special Status Species Potentially Occurring in the Millerton Road Bridge Biological Study Area

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Mammals					
Antrozous pallidus	Pallid bat	CSC	Found in a variety of habitats, including grassland, chaparral, woodland and forest. Most common in open, dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, hollow trees and buildings.	HP	Suitable foraging habitat is present in the BSA; the annual grasslands provides suitable foraging habitat, although there is no rocky area present for roosting within the BSA. See discussion in Section 4.3.1.
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE	Endemic to alkali sink shrubland, seasonally flooded wetlands, and uncultivated, native grasslands of Fresno County.	A	Suitable habitat is not present in the BSA; there is no alkali sink shrubland within the BSA.
Euderma maculatum	Spotted bat	CSC	Found mostly in the foothills, mountains and desert regions of southern California with areas containing prominent rock features. Prefers to roost in rock crevices but occasionally found in caves and buildings. The elevation range extends from sea level to 3,000 ft.	HP	Suitable foraging habitat is present in the BSA; the annual grasslands provides suitable foraging habitat, although there is no rock crevice present for roosting in the BSA. See discussion in Section 4.3.1.
Eumops perotis californicus	Greater western mastiff bat	CSC	Found in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	HP	Suitable foraging habitat is present in the BSA; the annual grasslands provides suitable foraging habitat, although there is no cliff faces, high buildings, or tunnels for roosting present in the BSA. See discussion in Section 4.3.1.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Taxidea taxis	American badger	CSC	Occurs throughout California and the United States. Primary habitat requirements seem to be sufficient food and friable soils in relatively open uncultivated ground in woodlands and deserts.	HP	Suitable habitat is present in the BSA; the annual grasslands provides suitable habitat within the BSA. Additionally, this species was observed during field surveys within the BSA. See discussion in Section 4.3.2.
Vulpes macrotis mutica	San Joaquin kit fox	FE; ST	Annual grasslands or grassy open stages with scattered vegetation; need loose-textured soils for burrowing, and a suitable prey base.	A	Suitable habitat is not present in the BSA; the BSA and adjacent land is dominated by oak woodlands. This species prefers open grasslands with scattered vegetation which is not present within the BSA.
Vulpes vulpes necator	Sierra Nevada red fox	FC; ST	Range is limited to conifer forests and rugged alpine landscape of the Sierra Nevada and Cascade ranges between 4,000 and 12,000 feet elevation.	A	Suitable habitat is not present in the BSA; there is no rugged alpine landscape or conifer forest present within the BSA.
Birds					
Agelius tricolor	Tricolored blackbird (nesting colony)	SC	Nests in freshwater marshes with tules or cattails, or in other dense vegetation such as thistle, blackberry thickets, etc. in close proximity to open water. Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots within a mile or two of nesting area.	A	Suitable habitat is not present in the BSA; there is no marsh or tules present within the BSA.
Aquila chrysaetos	Golden eagle	FP	Lives in open and semi-open areas with native vegetation. Nests on cliffs and steep escarpments in grasslands, chaparral, shrubland and forests. Forages in open grassland and shrubland; generally avoids agriculture land.	A	Suitable habitat is not present in the BSA; there is no cliff or steep escarpments for nesting present within the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Athene cunicularia	Burrowing owl	CSC	Burrow sites in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, California ground squirrel.	HP	Suitable habitat is present in the BSA; the annual grasslands and mammal burrows provides suitable nesting habitat within the BSA. See discussion in Section 4.3.3.
Buteo swainsoni	Swainson's hawk	ST	Breeds in stands with few trees in juniper-sage flats, riparian areas, and oak savannahs. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	A	Suitable habitat is not present in the BSA; blue oak woodlands is the dominant plant community in the region and is not suitable habitat for this species, which occurs in open habitats.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FT; SE	Found in dense woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.	A	Suitable habitat is not present in the BSA; there is no dense thicket or low vegetation present within the BSA to provide nesting habitat.
Falco mexicanus	Prairie falcon	SWL	Found in habitats ranging from annual grasslands to alpine meadows, primarily associated with perennial grasslands, savannahs, agricultural fields and desert scrub. Not found in upper elevations of Sierra Nevada. Nests in a scrape on a sheltered ledge of a cliff overlooking open areas. Sometimes nests in an old raven or eagle stick nest on a cliff, bluff or rock outcrop.	A	Suitable habitat is not present in the BSA; there is no cliff, bluff or rock outcrops present in the BSA for this species to nest.
Phalacrocorax auritus	Double-crested cormorant	SWL	Habitat includes lakes and ponds across North America. They tend to form breeding colonies in clusters of trees in or near water. Their diet consists primarily of fish.	A	Suitable habitat is not present in the BSA; there is no lake or ponds present in the BSA.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Vireo bellii pusillus	Least Bell's vireo	FE; SE	Dense, low shrubby vegetation in brushy fields, second growth forest, scrub oak and coastal chaparral.	A	Suitable habitat is not present in the BSA; there is no dense shrubby vegetation present within the BSA to provide nesting habitat.
Reptiles					
Emys marmorata	Pacific pond turtle	CSC	Occurs in permanent or nearly permanent water sources, ponds, marshes, rivers, streams and irrigation ditches with emergent vegetation and basking sites. This species lays eggs in upland habitat consisting of sandy banks or grassy, open fields.	HP	Suitable habitat is present in the BSA; Little Dry Creek and the California annual grasslands provides suitable habitat within the BSA. See discussion in Section 4.3.4.
Gambelia sila	Blunt-Nosed leopard lizard	FE	Semiarid grasslands, alkali flats and washes. Prefers flat area with open space for running.	A	Suitable habitat is not present in the BSA; while the annual grasslands could provide potentially suitable habitat for this species, the BSA is outside the known range.
Phrynosoma blainvillii	Coast horned lizard	CSC	Historically found in California along the Pacific coast from Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area and inland as far north as Shasta Reservoir. Habitat includes open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Frequently found near ant hills. Chiefly found below 2000 ft in elevation.	A	Suitable habitat is not present in the BSA; there is no open area of sandy soil and low vegetation present within the BSA to support this species.
Thamnophis gigas	Giant garter snake	FT	Primarily associated with streams and sloughs, less with slow-moving creeks and absent from larger rivers. One of the most aquatic of garter snakes; usually in areas of freshwater marsh and low-gradient streams with emergent vegetation, also drainage canals, irrigation ditches, ponds, and small lakes.	A	Suitable habitat is not present in the BSA; there is no emergent vegetation or perennially inundated aquatic habitat present within the BSA to support this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Amphibians					
Ambystoma californiense	California tiger salamander	FT; ST	Most commonly found in annual grassland habitat, but also occurs in grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. Requires vernal pools or other seasonal water bodies for breeding. Needs underground refuges, especially ground squirrel burrows.	HP	Suitable upland habitat is present in the BSA; there are burrows present in the annual grasslands that provides suitable upland habitat for this species. No suitable aquatic habitat is present in the BSA. See discussion in Section 4.3.5.
Rana boylii	Foothill yellow-legged frog	CSC	Partially-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying, and at least 15 weeks of running water to attain metamorphosis.	A	Suitable habitat is not present in the BSA; Little Dry Creek and North Fork Little Dry Creek is an intermittent water source and does not provide suitable habitat within the BSA for this highly aquatic species.
Spea hammondii	Western spadefoot toad	CSC	Occurs primarily in grassland habitats but also found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to provide breeding and egg-laying habitat.
Rana draytonii	California red-legged frog	FT; CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	A	Suitable habitat is not present in the BSA; Little Dry Creek is an intermittent water source and is not sufficient to support this species. Additionally, Barry and Fellers (2013) conducted surveys to determine the current range in the Sierra Nevada Mountains for CRLF and the BSA is south of Madera County (outside of the current known range.)

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Fish					
Hypomesus transpacificus	Delta smelt	FT; ST	With the exception of spawning season, delta smelt generally inhabits the freshwater-saltwater mixing zone of an estuary. Spawning occurs in river channels upstream from the mixing zone in the Sacramento-San Joaquin delta. Seasonally in Suisun bay, Carquinez strait, and San Pablo bay.	A	Suitable habitat is not present in the BSA; Little Dry Creek is not within the Sacramento-San Joaquin delta or within Suisun bay, Carquinez strait or San Pablo bay.
Oncorhynchus mykiss irideus	Central Valley steelhead, DPS	FT	Populations occur and spawn in the Sacramento and San Joaquin rivers and their tributaries.	A	Suitable habitat is not present in the BSA; the Sacramento and San Joaquin Rivers are located outside of the BSA.
Oncorhynchus tshawytscha	Central Valley Chinook Salmon	EFH	Population occurs and spans in the Sacramento and San Joaquin rivers and their tributaries. Primarily found in the Butte, Big Chico, Deer and Mill Creeks. Adult numbers depend on pool depth, pool volume, amount of cover, and proximity to gravel.	A	Suitable habitat is not present in the BSA; the BSA is outside the range of the essential fish habitat for this species.
Invertebrates					
Bombus crotchii	Crotch bumble bee	CA SA	Habitat includes open grassland and scrub habitats. Nesting occurs underground. Host plants include *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia*, and *Salvia*.	A	Suitable habitat is not present in the BSA; the annual grasslands within the BSA does not contain the host plants necessary for this species life cycle.
Branchinecta conservatio	Conservancy fairy shrimp	FE	Endemic to California and is known to occur in several disjunct populations ranging from Tehama to Ventura counties. The conservancy fairy shrimp occurs in vernal pools found on several different landforms, geologic formations and soil types. They have been observed in vernal pools ranging in size from 323 to 3,834,675 square ft. Observations suggest this species is often found in pools that are relatively large and turbid.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Branchinecta lynchi	Vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains. Typically associated with small, shallow vernal pools with relatively short periods of inundation. Found in larger pools in southern extent of range.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.
Branchinecta mesovallensis	Midvalley fairy shrimp	CA SA	Endemic to Central Valley grassland vernal pools. Known occurrences include Sacramento, Solano, San Joaquin, Contra Costa, Merced, Madera and Fresno Counties.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.
Calasellus longus	An Isopod	CA SA	Currently only found in Shaver lake, California.	A	Suitable habitat is not present in the BSA; Shaver lake is not within the BSA.
Chrysis tularensis	Tulare cuckoo wasp	CA SA	Occurs in hot, dry, and open grasslands or shrublands where nectar sources and adequate populations of larval host (other bees) are present. Known to occur in Amador, Fresno, Monterey and Tulare counties. Nesting period is estimated to be April to June, but little ecological information is known about this species.	A	Potential suitable habitat is present in the BSA; the annual grasslands within the BSA could provide suitable habitat. Although, the proposed project is not expected to result in the "take" of bees. Because little ecological information is known about this species, it is not discussed further.
Efferia antiochi	Antioch efferian robberfly	CA SA	Known only from Antioch, and Scout Island in the San Joaquin River.	A	Suitable habitat is not present in the BSA; the BSA is located outside of this species range, which is from Antioch and Scout Island in the San Joaquin River.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Lepidurus packardi	Vernal pool tadpole shrimp	FE	Found in a variety of natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. Within the Sacramento Valley.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.
Linderiella occidentalis	California linderiella	CA SA	Occurs in seasonal pools (e.g., vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions. Tolerant of wide temperature range and pool size.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.
Lytta moesta	Moestan blister beetle	CA SA	Occurs in central California, associated with grassland habitats and vernal pools. Larvae are parasitic on solitary bees.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA to support this species.
Lytta molesta	Molestan blister beetle	CA SA	Found in grasslands and dried vernal pools from Kern to Yolo county. Adjacent upland habitat with ground-dwelling bees should be considered necessary habitat due to bees acting as sole host for reproduction. Associated plants include Cows clover (*Trifolium wormskioldii*) and invasive red-stemmed filaree (*Erodium cicutarium*).	A	Suitable habitat is not present in the BSA; there is no vernal pool or host plant present within the BSA to support this species.
Metapogon hurdi	Hurd's metapogon robberfly	CA SA	Known from Contra Costa, Fresno, and Sacramento Counties. Habitat includes the San Joaquin Delta and the Sacramento Delta.	A	Suitable habitat is not present in the BSA; the BSA is outside of the known range for this species, which is within the San Joaquin or Sacramento Delta.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Oravelia pege	Dry Creek cliff strider bug	CA SA	Occurs near springs and spring rocks. Its preferred habitat is a rock crevice near the base of a sheer cliff that is kept moist by small seeps and under rocks, leaves and debris along an intermittent stream below a cliff. Only known to occur in Dry Creek located in Fresno county.	A	Suitable habitat is not present in the BSA; the BSA is not within the Dry Creek with springs and spring rocks, where this species is known to occur.
Plants					
Allium abramsii	Abrams' onion	List 1B.2	Granitic sand, uncommon. (2,900 – 10,000 ft.). Blooms May – July.	A	Suitable habitat is not present in the BSA; there is no granitic sand present within the BSA to support this species.
Bryum chryseum	Brassy byrum	List 4.3	Moss found in chaparral, cismontane woodland and grasslands (165 – 1,960 ft.).	A	Potentially suitable habitat is present in the BSA; the blue oak woodlands and annual grasslands provides suitable habitat, however, this species was not observed during the special status plant survey or subsequent surveys.
Calyptridium pulchellum	Mariposa pussypaws	FT; List 1B.1	Decomposed granite or metamorphic rocks (1,300 – 3,900 ft.). Blooms April – August.	A	Suitable habitat is not present in the BSA; there is no decomposed granite or metamorphic rock present within the BSA. Additionally, the BSA is outside the elevational range for this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Carpenteria californica	Tree-anemone	ST; List 1B.2	Streambanks, chaparral, oak woodland; usually granitic (1,115 – 4,400 ft.). Blooms May – July.	A	Potentially suitable habitat is present in the BSA; Little Deer Creek stream banks and the blue oak woodlands provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Castilleja campestris var. succulent	Succulent owl's –clover	FT; SE; List 1B.2	Vernal pools and swales within grasslands (80 – 2,460 ft) Blooms April – May.	A	Suitable habitat is not present in the BSA; there is no vernal pool or swale present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Caulanthus californicus	California jewelflower	FE; SE; List 1B.1	Flats, slopes in non-alkaline grassland; sandy (230 – 3,280 ft.). Blooms February – May.	A	Potentially suitable habitat is present in the BSA; the annual grasslands provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Claytonia parviflora ssp. grandiflora	Streambank spring beauty	List 4.2	Vernally moist, often disturbed sites, rocky (800 – 3,900 ft.). Blooms February – May.	A	Suitable habitat is not present in the BSA; there is no vernally moist or disturbed site present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Convolvulus simulans	Small-flowered morning-glory	List 4.2	Seeps in clay substrates, serpentine, grassland (98 – 2,300 ft.). Blooms March – July.	A	Suitable habitat is not present in the BSA; there is no clay or serpentine soil within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Cordylanthus rigidus ssp. brevibracteatus	Short-bracted bird's-beak	List 4.3	Granitic openings in lower and upper montane coniferous forests and pinyon/juniper woodlands (2,000 – 8,500 ft.). Blooms July – October.	A	Suitable habitat is not present in the BSA; there is no coniferous forest present within the BSA.
Delphinium hansenii ssp. ewanianum	Ewan's larkspur	List 4.2	Oak woodland or grassland (200 – 1,960 ft.). Blooms March – May.	A	Potentially suitable habitat is present in the BSA; blue oak woodlands and annual grasslands provides suitable habitat within the BSA, however, this species was not observed during the special status plant survey during the blooming period.
Downingia pusilla	Dwarf downingia	List 2B.2	Vernal pools, freshwater wetlands, valley grasslands and riparian areas (0 – 1,082 ft). Blooms March – May.	A	Potentially suitable habitat is present in the BSA; California Sycamore and annual grasslands provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Eriastrum tracyi	Tracy's eriastrum	SR; List 3.2	Open areas in shale or alluvium, open woodland (1,300 – 5, 250 ft.). Blooms May – July.	A	Suitable habitat is not present in the BSA; there is no shale or alluvium present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Eryngium spinosepalum	Spiny-sepaled button-celery	List 1B.2	Vernal pools, swales, roadside ditches (260 – 2,000 ft.). Blooms April – June.	A	Potentially suitable habitat is present in the BSA; roadside ditches could provide suitable habitat, however, this species was not observed during site visits.
Erythranthe acutidens	Kings River monkeyflower	List 3	Near hillside streams in partial shade (525 – 3,900 ft.). Blooms April – June.	A	Potentially suitable habitat is present in the BSA; Little Deer Creek and California sycamore woodlands habitat provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Erythranthe gracilipes	Slender-stalked monkeyflower	List 1B.2	Disturbed or burned areas in decomposed granite (1,600 – 4,200 ft.). Blooms April – June.	A	Suitable habitat is not present in the BSA; there is no disturbed or burned area present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Erythranthe inconspicua	Small-flowered monkeyflower	List 4.3	Near hillside streams or seeps, mesic (890 – 2,500 ft.). Blooms April – June.	A	Potentially suitable habitat is present in the BSA; Little Deer Creek provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Erythranthe sierra	Sierra Nevada monkeyflower	List 4.2	Usually granitic, sandy; sometimes gravelly, vernally wet depressions (600 – 7,500 ft.). Blooms March – July.	A	Suitable habitat is not present in the BSA; there is no vernally wet depression present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Gratiola heterosepala	Boggs Lake hedge-hyssop	SE; List 1B.2	Shallow water, margins of vernal pools, clay (0-7,790 ft.). Blooms April – August.	A	Suitable habitat is not present in the BSA; there is no vernal pool or shallow waters present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Imperata brevifolia	California satintail	List 2B.1	Wet spring, meadows, streambanks, and floodplains (0 – 3,280 ft.). Blooms September – May.	A	Potentially suitable habitat is present in the BSA; Little Deer Creek stream banks provide suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Jensia yosemitana	Yosemite tarplant	List 3.2	Meadows and sandy sites (3,900 – 7,540 ft.). Blooms May – June.	A	Suitable habitat is not present in the BSA; the BSA is located well below the elevational range for this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Lagophylla dichotoma	Forked hare-leaf	List 1B.1	Grassland and open woodlands, cismontane woodlands, sometimes clay (65 – 3,150 ft). Blooms April – July.	A	Potentially suitable habitat is present in the BSA; annual grasslands provides suitable habitat, however, this species was not observed during the special status plant survey during the special status plant survey during the blooming period.
Leptosiphon serrulatus	Madera leptosiphon	List 1B.2	Woodland and chaparral openings (980 – 4,260 ft.). Blooms April – May.	A	Potentially suitable habitat is present in the BSA; the blue oak woodlands provides suitable habitat, however, this species was not observed during the special status plant survey during the special status plant survey during the blooming period.
Lupinus citrinus var. citrinus	Orange lupine	List 1B.2	Granitic soils, open yellow-pine forest (1,900 – 5,600 ft.). Blooms April – July.	A	Suitable habitat is not present in the BSA; there is no granitic soil present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Navarretia nigelliformis ssp. nigelliformis	Adobe navarretia	List 4.2	Vernal pools, clay depressions; often in serpentinite (30 – 3.280 ft.). Blooms April – June.	A	Suitable habitat is not present in the BSA; there is no vernal pool or clay depression present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	FT; SE; List 1B.1	Vernal pools, acidic soils with clay to sandy loam texture (32 – 2,477 ft). Blooms April – September.	A	No Effect. Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Plagiobothrys torreyi var. perplexans	Chaparral popcornflower	List 4.3	Burned areas, gravelly soils (3,500 – 9,000 ft.). Blooms April – September.	A	Suitable habitat is not present in the BSA; there is no burned area present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Plagiobothrys vinosula	Wine colored tufa moss	List 4.2	Granitic rock or soils along seeps and streams (98 – 5,700 ft.).	A	Suitable habitat is not present in the BSA; there is no granitic rock present within the BSA to support this species.
Pseudodahia bahiifolia	Hartweg's golden sunburst	FE; SE; List 1B.1	Clay soils, often acidic (50 – 490 ft.). Blooms March – April.	A	No Effect. Suitable habitat is not present in the BSA; there is no clay soil present within the BSA to support this species.
Pseudo bahia piersonii	San Joaquin adobe sunburst	FT; SE; List 1B.1	Adobe clay (300 – 2,600 ft.). Blooms March – April.	A	No Effect. Suitable habitat is not present in the BSA; there is no adobe clay present within the BSA to support this species.

Scientific Name	Common Name	Status	Habitat Requirements	Habitat Present/Absent	Rationale
Sagittaria sanfordii	Sanford's arrowhead	List 1B.2	Ponds, ditches, marshes and swamps (0 – 2,132 ft). Blooms May – October.	A	Potentially suitable habitat is present in the BSA; roadside ditches could provide suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Sidalcea keckii	Keck's checkerbloom	FE; List 1B.1	Grassy slopes; serpentinite (245 – 2,130 ft.). Blooms April – May.	A	Potentially suitable habitat is present in the BSA; annual grasslands provides suitable habitat, however, this species was not observed during the special status plant survey during the blooming period.
Tropidocarpum capparideum	Caper-fruited tropidocarpom	List 1B.1	Alkaline soils, low hills and valleys (0 – 1,300 ft.). Blooms March – April.	A	Potentially suitable habitat is present in the BSA; annual grasslands provides suitable habitat, however, this species was not observed during the any survey of the surveys completed in the BSA.
Tructoria greenei	Greene's tructoria	FE; SR; List 1B.1	Vernal pools in valley and foothill grasslands (98 – 3510 ft). Blooms May – July.	A	Suitable habitat is not present in the BSA; there is no vernal pool present within the BSA. Additionally, this species was not observed during the special status plant survey during the blooming period.
Viburnum ellipticum	Oval-leaved vibumum	List 2B.3	Chaparral, yellow-pine forest (985 – 4,600 ft). Blooms June – August.	A	Suitable habitat is not present in the BSA; there is no chaparral or yellow-pine forest present within the BSA.

Status Codes

Federal

FE: Federally listed; Endangered
FT: Federally listed, Threatened
FPE: Federally Proposed for Listing as Endangered
FPT: Federally Proposed for Listing as Threatened
FC: Federal Candidate
FD: Federally Delisted
NMFS SC: National Marine Fisheries Service Species of Concern

State

ST: State listed; Threatened
SE: State listed; Endangered
SFP: State Fully Protected
SC: State Candidate
SWL: State Watch List
SR: State Rare
CSC: California Species of Special Concern

California Native Plant Society designations:

List 1A: Plants presumed extirpated in California, either rare or extinct elsewhere
List 1B: Plants rare, threatened, or endangered in California and elsewhere
List 2A: Plants presumed extirpated in California but common elsewhere
List 2B: Plants rare, threatened or endangered in California but common elsewhere
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list
0.1: Plants seriously threatened in California
0.2: Plants fairly threatened in California
0.3: Plants not very threatened in California

Habitat Presence:

HP: Habitat is, or may be present
SP: Species is present
A: No habitat present and no further work needed
CH: Project footprint is located within a designated critical habitat unit.
EFH: Essential Fish Habitat

CA SA: Special Animal: General term that refers to taxa that the CNDDB is interested in tracking regardless of legal or protection status: Includes the following categories in addition to those listed above:

- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines.
- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring.
- Populations in California that may be on the periphery of a taxon's range, but are threatened with extirpation in California.
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools, etc.)
- Taxa designated as a special status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO).

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Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

4.1. Natural Communities of Special Concern

The BSA includes two natural communities of special concern: blue oak woodland and California sycamore woodland. Oak woodlands and riparian communities are considered sensitive under CEQA and are regulated by CDFW pursuant to Section 1602 of the State Fish and Game Code, as described in Section 2.1.2.3. Riparian communities may also be regulated by the ACOE or RWQCB if the community is determined to be waters of the U.S., as described in Sections 2.1.2.1 and 2.1.2.2. Potential permitting requirements for impacts to these communities are discussed in Section 5.4.

4.1.1. BLUE OAK WOODLAND

4.1.1.1. Survey Results

As described in Section 3.1.3.1, blue oak woodland occurs at three of the four bridges (42C0267, 42C0268, and 42C0269) and is the primary plant community in the regional vicinity.

4.1.1.2. Project Impacts

Work will occur within the blue oak woodland community due to the proposed project. Eight blue oak trees are planned for removal. Seven are located at bridge 42C0269 and one is located at bridge 42C0270. Permanent impacts to the understory of the blue oak woodland community, totaling 0.006 ac, and temporary impacts, totaling 0.097 ac, will occur due to the proposed project (Table 5).

Table 5: Permanent and Temporary Impacts to Natural Communities in the BSA (acres)

Community/ Land Use	Bridge 42C0267		Bridge 42C0268		Bridge 42C0269		Bridge 42C0270		Total	
	Temporary	Permanent	*Temporary*	Permanent	*Temporary*	Permanent	*Temporary*	Permanent	*Temporary*	Permanent
Natural Communities										
Blue Oak Woodland	0.008	0.000	0.000	0.000	0.089	0.006	0.000	0.000	0.097	0.006
California Annual	0.544	0.707	0.563	0.378	0.739	0.870	0.606	0.751	2.452	2.706
California Sycamore Woodlands	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.004	0.022	0.004
Intermittent Stream	0.064	0.004	0.581	0.232	0.053	0.011	0.661	0.002	1.359	0.249
Rush/Bermuda Grassland	0.000	0.000	0.085	0.005	0.000	0.000	0.000	0.000	0.085	0.005
Subtotal Natural	***0.616***	***0.711***	***1.196***	***0.615***	***0.881***	***0.887***	***1.289***	***0.757***	***4.015***	***3.015***

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4.1.1.3 Avoidance and Minimization Efforts

1. Construction activities in the blue oak woodland shall be minimized to the maximum extent possible. Prior to the start of construction, an Oak woodlands Management plan will be prepared in accordance with the Fresno County Oak Woodland Management Guidelines (Policy OS-F.11) to reduce impact to this community from the proposed project.

2. Brightly colored environmentally sensitive area (ESA) fencing shall be placed along the limits of work to protect the adjacent blue oak community. Fencing shall be maintained in good condition for the duration of construction activities (Figure 7).

4. Measures consistent with the current Caltrans' Construction Site BMP Manual (including the Storm Water Pollution Prevention Plan [SWPPP] and Water Pollution Control Program [WPCP] Manuals) shall be implemented to minimize effects to the blue oak woodlands community resulting from erosion, siltation, etc. during construction.

5. A WPCP will be prepared in accordance with typical provisions associated with a Regional General Permit for Construction Activities (on file with the Central Valley RWQCB). The WPCP will contain a Spill Response Plan with instructions and procedures for reporting spills, the use and location of spill containment equipment, and the use and location of spill collection materials.

6. All upland areas temporarily impacted during project construction will be restored to preconstruction contours (if necessary) and revegetated with native species as specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

Table 6: Native Species Mix

Scientific Name	Common Name	Rate (Lbs./Acre)	Minimum Percent Germination
Artemisia douglasiana	Mugwort	2.0	50
Bromus carinatus	California brome	5.0	85
Elymus trachycaulus	Slender wheatgrass	2.0	60
Elymus X triticum	Regreen	10.0	80
Eschscholzia californica	California poppy	2.0	70
Hordeum brachyantherum	California barley	2.0	80
Lupinus bicolor	Bicolored lupine	4.0	80

Caltrans

LEGEND

Biological Study Area - (5.37 ac)

Project Design

ESA Fencing

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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FIGURE 7A

Bridge No. 42C0267

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

ESA Fencing

Caltrans

LEGEND

- Biological Study Area - (4.45 ac)
- Project Design
- ESA Fencing

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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FIGURE 7B

Bridge No. 42C0268

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

ESA Fencing

Caltrans

LEGEND

- Biological Study Area - (4.63 ac)
- Project Design
- ESA Fencing

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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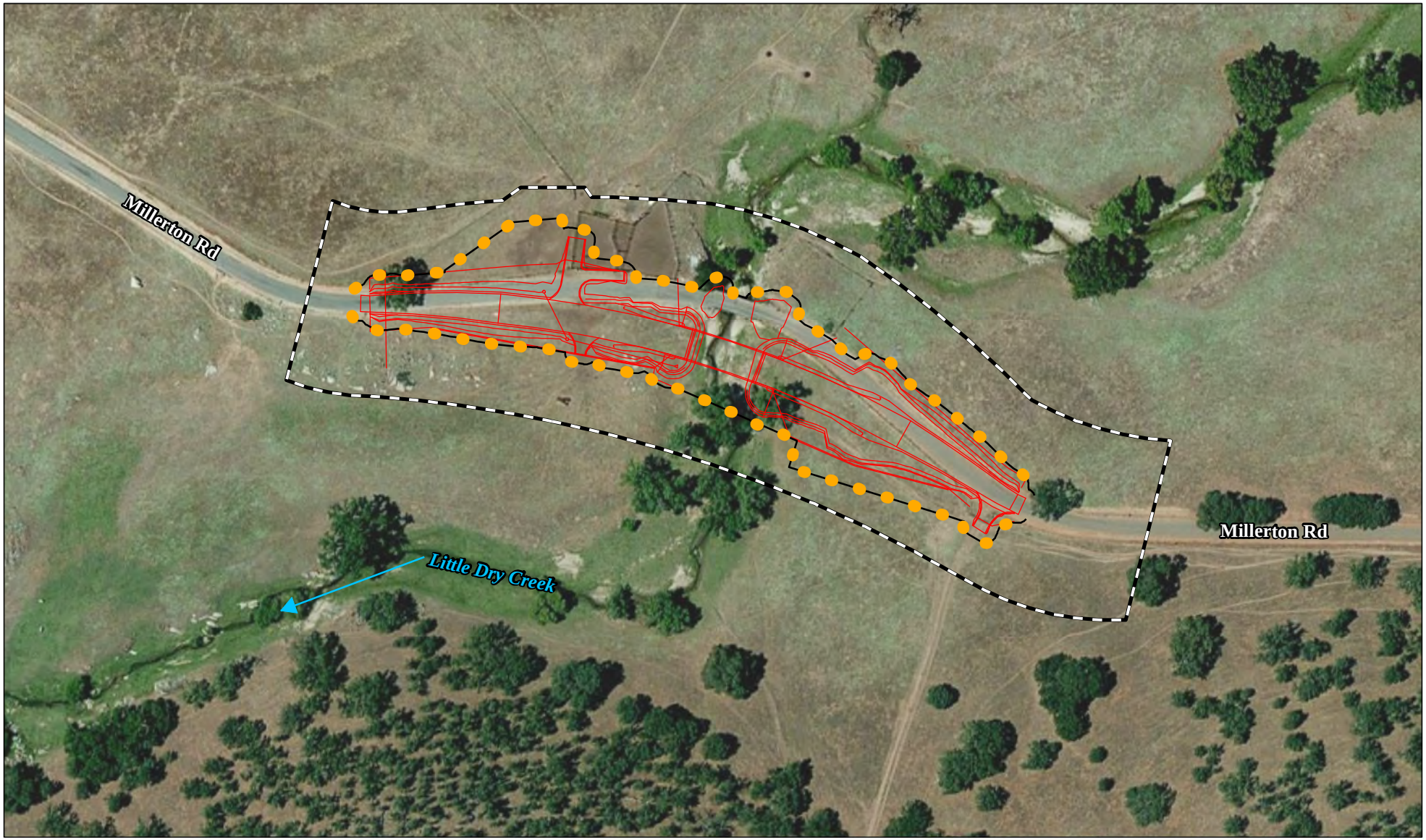
FIGURE 7C

Bridge No. 42C0269

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

ESA Fencing



Caltrans

LEGEND

Biological Study Area - (5.14 ac)

Project Design

ESA Fencing

N

0 75 150

FEET

SOURCE: Microsoft Aerial Imagery (8/2010); Mapping - LSA (10/2016)

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FIGURE 7D

Bridge No. 42C0270

Little Dry Creek Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

ESA Fencing

4.1.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures in Section 4.1.1.3.

4.1.1.5. Cumulative Impacts

Impacts to blue oak woodland in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact, with implementation of avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative effects for blue oak woodland.

4.1.2. CALIFORNIA SYCAMORE WOODLANDS

4.1.2.1. Survey Results

As described in Section 3.1.3.1, the California sycamore woodlands community is found along the reaches of Little Dry Creek and North Fork Little Dry Creek flowing through the BSA and occurs at two of the bridges, 42C0267 and 42C0270.

4.1.2.2. Project Impacts

Work will occur within the California sycamore woodlands community. Four sycamore trees and two cottonwood trees (*Populus* spp.) are planned for removal. Three sycamores are located at bridge 42C0268, and one is located at bridge 42C0270. One cottonwood planned for removal is located at bridge 42C0267 and the other is located at bridge 42C0270. Permanent impacts, totaling 0.004 ac, and temporary impacts, totaling 0.022 ac, will occur to the understory of the California sycamore woodlands community.

4.1.2.3. Avoidance and Minimization Efforts

The avoidance and minimization efforts to limit the impacts to the California sycamore woodlands by the proposed project are equivalent to measures 2 through 6 stated in Section 4.1.1.3. Additionally, construction activities in the California sycamore woodlands community shall be minimized to the extent possible.

4.1.2.4. Compensatory Mitigation

Compensatory mitigation to offset permanent impacts to the California sycamore woodlands community shall be accomplished using one of the following methods; or by a combination of methods:

- Preservation, creation, and/or restoration of the impacted resources at a minimum ratio of 3:1. This work would occur within the project impact area and/or nearby areas within the same watershed.

- Purchase of credits as an approved mitigation bank at a minimum 1:1 mitigation ratio.

4.1.2.5. Cumulative Impacts

Impacts to the California sycamore woodlands community in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact, with implementation of avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative effects for the California sycamore woodlands community.

4.2. Special Status Plant Species

After evaluation of the special status plant species potentially occurring in the BSA, as shown in Table 4, no special status plant species are expected to occur in the BSA; therefore, no impacts are expected to occur to special status plants.

4.3. Special Status Animal Species Occurrences

After evaluation of the special status wildlife species potentially occurring in the BSA, as shown in Table 4, the following wildlife species were determined to have a reasonable likelihood of occurring in the BSA and may be affected by the project.

4.3.1. Bats

There are three species of bats that could occur in the BSA, pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), and greater western mastiff bat (*Eumops perotis californicus*); all of which are State species of concern. None of these species have any formal federal status.

Bats are nocturnal and are found in a variety of habitats. Many species forage over water; some also hunt over shrubs or meadows, within trees, and along forest edges. Some species have separate roosts for day, night, maternal, and hibernation use, whereas some species may use the same roost for more than one purpose. Bats roost in a variety of crevices, cavities, and protected sites; roosting sites may include bridges, buildings, cliff crevices, caves, mines, and trees. Multiple species often roost together.

The pallid bat is a locally common species of low elevations, and is a yearlong resident through most of its range. It uses a wide variety of habitats from sea level up through mixed conifer forests, but is most common in open, dry habitats with rocky areas for roosting. This bat forages among trees and shrubs and over open ground, and often takes prey on the ground. Its diet is a variety of insects and spiders, including large, hard-shelled prey, which is often carried to a perch or night roost for consumption. Caves, crevices, and sometimes hollow trees and buildings are used for day roosts. Roosts must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and open buildings. Pallid bats are social, and most roost in groups of 20 or more. Maternity colonies form in early April, and may have 10 to 100 individuals. Males may roost separately or in the nursery colony.

The spotted bat is a species that is generally found in arid deserts, grasslands, and mixed conifer forests. This species ranges from sea level to approximately 10,000 ft. Spotted bats are a generally solitary species and generally roosts in cliff faces and rock crevices. Foraging occurs over open water, open grasslands and along washes. Spotted bats feed primarily on moths.

The western mastiff bat is a large species that is uncommon in the Coastal ranges. It roosts predominantly in crevices and vertical cliffs. The species feeds predominantly on insects, with moths accounting for 80% of their diet. This species is an aerial predator, soaring at great lengths all night in order to forage over wide areas. Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban.

4.3.1.1. Survey Results

There is one CNDDB occurrence for the pallid bat in the search area. This record, dated 1979, is located approximately 11 mi northwest of the BSA.

There is one CNDDB occurrence for the spotted bat in the area. This record, dated 1970, is located approximately 6 mi west of the BSA.

There is five CNDDB occurrence s for the greater western mastiff bat in the search area. The closest record, dated 1994, is located approximately 2.5 mi north of the BSA.

None of the bridges showed signs of bat use (e.g., urine staining, guano) and no suitable roosting habitat was identified in the BSA; however, foraging habitat is present in the annual grassland habitat at all four bridge locations.

4.3.1.2 Project Impacts

The project will result in permanent and temporary impacts to foraging habitat for bats. Permanent impacts to the annual grasslands, totaling 2.706 ac, will occur as a result of

bridge construction and realignment of the new bridge approaches. Temporary impacts to the annual grasslands, totaling 2.452 ac, will occur as a result of staging areas, access, and detours.

4.3.1.3. Avoidance and Minimization Efforts

The following avoidance and minimization measures are proposed to reduce any potential impacts to foraging bats:

1. Work activities shall be limited to daylight hours to minimize potential effects to foraging bats.

2. Following completion of the new bridge, all fill slopes, temporary impact and/or otherwise disturbed areas shall be revegetated with the seed mix specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.1.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures included in Section 4.3.1.3.

4.3.1.5. Cumulative Impacts

Impacts to bats in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact relative to the quantity of annual grassland occurring in the region, and with implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for bats.

4.3.2. AMERICAN BADGER

The American badger is a state species of concern; it has no federal status. This species inhabits open areas such as grasslands, prairies, farmland, and edges of woodlands. American badgers rely on dens for sleep, protection, and natal denning. While they can dig their own burrows, badgers tend to enlarge burrows that are created by California ground squirrels or other burrowing species. This species feeds on pocket gophers (*Geomyidae* sp.), ground squirrels, moles (*Marmota* sp.), prairie dogs (*Cynomys* sp.), and other small mammals. Occasionally badgers will prey on birds, lizards, and amphibians.

4.3.2.1. Survey Results

There are two CNDDB occurrences for American badgers in the 9 quad search area. The closest record, dated 1987, is located approximately 12 mi northwest of the BSA. At this location, the badger was seen denning in a homeowner's backyard.

The annual grasslands provide suitable foraging habitat for this species but the burrows found within the BSA do not provide suitable denning habitat for badgers. During the March 2015 site visit, two badgers were observed walking down the creek bed just south of the BSA, at bridge number 42C0269.

4.3.2.2. Project Impacts

The project will result in permanent and temporary impacts to foraging habitat for the American badger. Permanent impacts to the annual grasslands, totaling 2.706 ac, will occur as a result of bridge construction and realignment of the new bridge approaches. Temporary impacts to the annual grasslands, totaling 2.452 ac, will occur as a result of staging areas, access, and detours.

4.3.2.3. Avoidance and Minimization Efforts

The following avoidance and minimization measures will minimize any potential impacts to American badger:

1. At least 30 days prior to the start of construction activities that would affect the annual grasslands, a preconstruction survey for American badger will be conducted by a qualified biologist to determine whether this species is present in the BSA.

2. If suitable badger burrows are identified in the BSA and it is determined the burrows will not be affected by construction activities, the burrows will be protected with ESA fencing for the duration of construction.

3. If suitable badger burrows are identified in the BSA and it is determined the burrows could be affected by construction activities, the County will coordinate with CDFW to determine the appropriate course of action.

4. All construction will be conducted during daylight hours.

5. Following construction, any fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.2.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of the measures included in Section 4.3.2.3.

4.3.2.5. Cumulative Impacts

Impacts to the American badger in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact relative to the quantity of California annual grasslands occurring in the region, and with implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for the American badger.

4.3.3. WESTERN BURROWING OWL

The western burrowing owl is a California species of concern; it has no federal status. Burrowing owls occur in warmer valleys, open, dry grasslands, deserts, and scrublands associated with agriculture and urban areas that support populations of California ground squirrels. Burrowing owls nest below ground, using abandoned burrows of other species (most commonly ground squirrel). Feeding on insects and small mammals, they will forage in areas with relatively short vegetation including, cropland, pastures and fallow fields.

4.3.3.1. Survey Results

There are three CNDDB records for this species in the 9 quad search area. The closest record is 12 mi to the south southeast of the BSA. The record is dated 2006 and includes 6 burrow sites with 16 adult owls.

The California annual grasslands in the BSA provides suitable foraging habitat for burrowing owls. While suitable burrows were observed at all four bridge locations, no burrowing owls were observed at any of the bridges. One burrow at bridge 42C0270 had white wash near the burrow entrance, possibly indicating recent use by burrowing owls.

4.3.3.2. Project Impacts

The project will result in permanent and temporary impacts to the burrowing owl habitat. Permanent impacts to the annual grasslands, totaling 2.706 ac, will occur as a result of bridge construction and realignment of the new bridge approaches. Temporary impacts to the annual grasslands, totaling 2.452 ac, will occur as a result of staging areas, access, and detours.

4.3.3.3. Avoidance and Minimization Efforts

The following avoidance and minimization measures will minimize any potential impacts to western burrowing owls:

1. Preconstruction surveys for western burrowing owl shall be conducted by a qualified biologist in accordance with CDFW's 2012 Staff Report on Borrowing Owl Mitigation.

2. If burrowing owls are identified during the preconstruction survey, passive exclusion shall be implemented per CDFW's 2012 Staff Report on Burrowing Owl Mitigation (including avoidance of occupied borrows during the breeding season from 1 February to 31 August).

3. Following construction, any fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.3.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of avoidance and minimization efforts listed in Section 4.3.3.3.

4.3.3.5. Cumulative Impacts

Impacts to the western burrowing owl in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact relative to the quantity of annual grasslands occurring in the region, and with implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for burrowing owl.

4.3.4. PACIFIC POND TURTLE

The Pacific pond turtle (*Emys marmorata*) is a State species of concern; it has no federal status. The Pacific pond turtle ranges from western Washington State south to northwestern Baja California. Two subspecies occur in California: the north Pacific pond turtle (*E.m. marmorata*); and the south Pacific pond turtle (*E.m. pallida*). The BSA is within the range of intergradation between the two subspecies. The pond turtle is a highly aquatic species, found in ponds, marshes, rivers, streams, and irrigation ditches that typically have rocky or muddy bottoms and are vegetated with aquatic vegetation. Eggs are laid at upland sites, away from the water, from April through August.

4.3.4.1. Survey Results

There are 12 CNDDB occurrences in the 9 quad search area. One occurrence is located within the BSA at bridge number 42C0269. The exact date and number of specimens for this occurrence is unknown, but the record was last updated in 1996. Although there was no water in Little Dry Creek during the site visit due to the drought; under normal conditions Little Dry Creek provides suitable habitat for this species.

4.3.4.2. Project Impacts

The project will result in permanent and temporary impacts to the Pacific pond turtle. Permanent impacts to the intermittent stream, totaling 0.249 ac, and annual grasslands, totaling 2.706 ac, will occur as a result of bridge construction. Temporary impacts to the intermittent stream, totaling 1.359 ac, and annual grasslands, totaling 2.452 ac, will occur as a result of dewatering, bridge construction, and access.

4.3.4.3. Avoidance and Minimization Efforts

1. Prior to the start of construction activities that would affect Little Dry Creek or North Fork Little Dry Creek, the reach of the creek within the BSA shall be surveyed by a qualified biologist for the presence of Pacific pond turtles. If Pacific pond turtles are observed in the BSA, they shall be relocated outside of the work area by a qualified biologist.

2. Following construction, any fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

3. Measures consistent with the current Caltrans' Construction Site BMP Manual (including the SWPPP and WPCP Manuals) shall be implemented to minimize effects to Pacific pond turtle suitable habitat resulting from erosion, siltation, etc. during construction.

4.3.4.4. Compensatory Mitigation

No compensatory mitigation is proposed with implementation of avoidance and minimization efforts listed in Section 4.3.4.3.

4.3.4.5. Cumulative Impacts

Impacts to Pacific pond turtle in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact relative to the quantity of

intermittent stream and annual grasslands occurring in the region, and with implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for Pacific pond turtle.

4.3.5. CALIFORNIA TIGER SALAMANDER

The CTS (*Ambystoma californiense*) is both State and federally listed as a threatened species. Critical habitat has been designated for CTS in various locations in California, but the BSA is not located within designated critical habitat. The closest CTS critical habitat is Unit ssj_2, which is located in the Friant quad, approximately 1.5 mi west of the BSA.

CTS are large, terrestrial salamanders and are most commonly found in annual grassland habitat. They may also occur in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. They range from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County.

CTS are typically associated with vernal pools or similar habitats consisting of seasonal pools or ponds (including man-made ponds, etc., that dry out in summer) surrounded by grasslands. Adult CTS spend most of their lives underground in small mammal burrows, which are a required habitat element. CTS are relatively poor burrowers and require refuges provided by ground squirrels and other burrowing mammals. CTS estivate in burrows during the dry months. After the onset of winter rains, adult salamanders move to larger, longer lasting vernal pools and other seasonal pools to breed. Breeding season is November through February; timing is dependent on rainfall. The larval stage of CTS usually lasts 3 to 6 months. Following metamorphosis, juveniles emigrate at night from drying breeding sites up to one mile to refuge sites.

4.3.5.1. Survey results

CTS is well documented in the region, with 44 CNDDB occurrences in the 9 quad search area. The closest record, dated 1994, is located approximately 2 mi west of the BSA and included two vernal pools with 800 tadpoles present.

A CTS habitat assessment was prepared in March 2015 (Appendix C) and concluded that CTS are potentially present in the BSA and vicinity. The result is based on species range, species records, presence of suitable upland habitat in the BSA (i.e., annual grassland), and presence of potentially suitable aquatic habitat within 0.4 mile of the BSA. However, CTS is not expected to breed in the BSA due to lack of suitable aquatic habitat.

4.3.5.2. Project Impacts

The project could directly affect CTS if they are present in the work area when construction begins. The project will also result in permanent and temporary impacts to suitable upland habitat for CTS. Permanent impacts to the annual grasslands, totaling 2.706 ac, will occur as a result of bridge construction and realignment of the new bridge approaches. Temporary impacts to the annual grasslands, totaling 2.453 ac, will occur as a result of staging areas, access, and detours.

4.3.5.3. Avoidance and Minimization Efforts

The following measures are proposed to minimize effects to any CTS potentially occurring in the BSA or vicinity:

1. ESA fencing shall be installed along the edge of the work limits, including staging areas. ESA fencing shall consist of orange construction fencing (or equivalent) and shall be maintained in good condition until construction is complete. In addition, silt fencing will be installed along the bottom of the ESA fencing to prevent CTS from entering the work area during construction.

2. A biological monitor shall be present during initial ground disturbing activities. Approval of biologist shall be coordinated through Caltrans and not directly with USFWS.

3. Between November 1 and May 31 (CTS migration season), no construction activities shall occur in CTS upland habitat within 0.5 mile of CTS aquatic habitat within 24 hours following a substantial rain event (i.e., at least 0.25 inches). Prior to resuming construction, any active work areas within CTS upland habitat within 0.5 mile of CTS aquatic habitat shall be visually surveyed by the approved biological monitor prior to the start of construction to avoid affecting salamanders that may have emerged from their burrows and relocated in the BSA (e.g., under equipment).

4. If CTS are found within the area surveyed, the USFWS and CDFW shall be contacted. Caltrans, as the federal lead agency, will notify the USFWS. The County will be responsible for notifying CDFW.

5. Following construction, any fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in Table 6. Invasive exotic plants will be controlled to the maximum extent practicable.

4.3.5.4. Compensatory Mitigation

Sufficient CTS upland habitat mitigation credits shall be purchased from a USFWS and CDFW-approved bank to offset impacts to CTS upland habitat at a minimum 1:1 ratio.

4.3.5.5. Cumulative Impacts

Impacts to CTS in the general vicinity of the project likely will occur through habitat loss during public works projects similar in scope to the subject project. Other projects in the region with similar impacts will also be required to minimize and/or mitigate those impacts. Considering the small area of impact relative to the quantity of annual grasslands occurring in the region, and with implementation of the avoidance and minimization measures detailed above, the project will not substantially contribute to cumulative impacts for CTS.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

5.1. Federal Endangered Species Act Consultation Summary

The proposed project may affect, and is likely to adversely affect CTS, a species listed as threatened under FESA (Table 7). Caltrans will initiate informal consultation with USFWS for this species pursuant to Section 7 of FESA. It is anticipated that USFWS will concur with the above determination and, with incorporation of the proposed avoidance and minimization efforts, will determine the project will not jeopardize the continued existence of this species.

Table 7: Federally Listed Species Determinations

Scientific Name	Common Name	Status	Habitat Present/Absent	Determination	Consultation
Mammals					
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE	A	No effect	Not required
Vulpes macrotis mutica	San Joaquin kit fox	FE	A	No effect	Not required
Vulpes vulpes necator	Sierra Nevada red fox	FC	A	No effect	Not required
Birds					
Aquila chrysaetos	Golden eagle	FP	A	No effect	Not required
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	FT	A	No effect	Not required
Vireo bellii pusillus	Least Bell's vireo	FE	A	No effect	Not required
Reptiles					
Gambelia silus	Blunt-nosed leopard lizard	FE	A	No effect	Not required
Thamnophis gigas	Giant garter snake	FT	A	No effect	Not required
Amphibians					
Ambystoma californiense	California tiger salamander	FT	HP	May effect; is likely to adversely effect	Formal
Rana draytonii	California red-legged frog	FT	A	No effect	Not required
Fish					
Hypomesus transpacificus	Delta smelt	FT	A	No effect	Not required
Oncorhynchus mykiss irideus	Central Valley steelhead	FT	A	No effect	Not required

Scientific Name	Common Name	Status	Habitat Present/Absent	Determination	Consultation
Invertebrates					
Branchinecta conservatio	Conservancy fairy shrimp	FE	A	No effect	Not required
Branchinecta lynchi	Vernal pool fairy shrimp	FT	A	No effect	Not required
Desmocerus californicus dimorphus	Valley elderberry longhorn beetle	FT	A	No effect	Not required
Lepidurus packardi	Vernal pool tadpole shrimp	FE	A	No effect	Not required
Plants					
Calyptridium pulchellum	Mariposa pussypaws	FT	A	No effect	Not required
Castilleja campestris var. *succulent*	Succulent owl's-clover	FT	A	No effect	Not required
Caulanthus californicus	California jewelflower	FE	A	No effect	Not required
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	FT	A	No effect	Not required
Pseudodahia bahiifolia	Hartweg's golden sunburst	FE	A	No effect	Not required
Pseudo bahia piersonii	San Joaquin adobe sunburst	FT	A	No effect	Not required
Sidalcea keckii	Keck's checkerbloom	FE	A	No effect	Not required
Tructoria greenei	Greene's tructoria	FE	A	No effect	Not required

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

There are no aquatic resources within the BSA that are designated as EFH.

5.3. California Endangered Species Act Consultation Summary

The project may result in take of CTS, a species listed as threatened under CESA. Consequently, an incidental take permit pursuant to Section 2081 of the California Fish and Game Code will likely be required

5.4. Wetlands and Other Waters Coordination Summary

The project will impact wetlands and non-wetland waters subject to regulation by the ACOE, RWQCB, and CDFW, as summarized in Table 8 below.

Table 8: Impacts to Waters of the U.S. and CDFW 1602 Waters (acres)

Type	Permanent	Temporary
Wetlands	0.001	0.023
Non-wetland Waters	0.060	0.304
Total	**0.013**	**0.327**
CDFW 1602 Waters[1]	0.013	0.327

5.4.1. ARMY CORPS OF ENGINEERS

Waters of the U.S. within the BSAs, totaling 1.099 acres, are limited to the reach of Little Dry Creek, North Fork Little Dry Creek and a few roadside drainages (Figure 6). A total of 0.159 ac of wetlands are located within the BSAs (Figure 6).

The proposed project will result in both permanent and temporary impacts to non-wetland waters of the U.S. Permanent impacts, totaling 0.013 ac, will occur as a result of placement of the bridge piers and bridge realignment. Temporary impacts, totaling 0.327 ac, will occur as a result of temporary access during construction and temporary detours.

Waters of the U.S. in the BSAs that will be affected by the project are regulated by the ACOE under Section 404 of the CWA. It is expected the proposed discharge into the waters of the U.S. during project construction can be authorized by the ACOE using Nationwide Permit (NWP) 14 – Linear Transportation Projects. In accordance with the conditions of NWP 14, a Preconstruction Notification must be submitted to the ACOE for verification that the proposed discharges comply with the conditions of the subject NWPs.

5.4.2. REGIONAL WATER QUALITY CONTROL BOARD

Discharges into waters of the U.S. under Section 404 of the CWA also require a Water Quality Certification from the RWQCB, pursuant to Section 401 of the CWA. For purposes of this project, the limits of waters of the State in the BSA and project Impacts to waters of the State will be the same as for waters of the U.S., as discussed in Section 5.4.1. The RWQCB may opt to waive the water quality certification and instead issue waste discharge requirements for waters of the State pursuant to their authority under the PCWQCA.

[1] CDFW 1602 Waters include all waters of the U.S. and associated riparian areas.

5.4.3. CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

CDFW jurisdictional waters in the BSA, totaling 1.099 ac, include the live channel of Little Dry Creek, North Fork Little Dry Creek and associated riparian vegetation. Impacts to these resources will require a Lake and Streambed Alteration Agreement from CDFW, under Sections 1600-1616 of the State Fish and Game Code.

The project will result in permanent impacts to 0.013 ac and temporary impacts to 0.327 ac of waters within CDFW jurisdiction, as a result of project construction and staging.

5.5. Executive Order 11990 – Protection of Wetlands

The project will result in minor permanent and temporary impacts to wetlands. The project has been designed to avoid wetlands, where feasible. The measures in stated below will help minimize impacts to wetlands during and after construction. Based upon the above considerations, it is determined there is no practicable alternative to the proposed construction in wetland and that the proposed action includes all practicable measures to minimize harm to wetlands, which may result from such use. The project will adhere to the following avoidance and minimization measures for the protection of wetlands:

1. Work in all aquatic resources shall also be minimized to the extent possible.

2. Brightly colored ESA fencing shall be placed along the limits of work to protect the adjacent wetlands. Fencing shall be maintained in good condition for the duration of construction activities.

3. Staging areas, access routes, and construction areas shall be located outside of wetland areas to the maximum extent practicable.

4. Measures consistent with the current Caltrans' Construction Site Best BMP Manual (including the SWPPP and WPCP Manuals) shall be implemented to minimize effects to wetlands resulting from erosion, siltation, etc. during construction.

5. A WPCP will be prepared in accordance with typical provisions associated with a Regional General Permit for Construction Activities (on file with the Central Valley RWQCB). The WPCP will contain a Spill Response Plan with instructions and procedures for reporting spills, the use and location of spill containment equipment, and the use and location of spill collection materials.

5.6. Invasive Species

To avoid the introduction of invasive species into the BSA during project construction, contract specifications shall include, at a minimum, the following measures:

1. All earthmoving equipment to be used during project construction shall be thoroughly cleaned before arriving on the project site.

2. All seeding equipment (i.e., hydroseed trucks) shall be thoroughly rinsed at least three times prior to beginning seeding work.

3. To avoid spreading any non-native invasive species already existing on-site, to off-site areas, all equipment shall be thoroughly cleaned before leaving the site.

5.7 Migratory Bird Treaty Act and California Fish and Game Code (Breeding Birds)

Disturbance of migratory birds during their nesting season (February 1 to August 31) could result in "take" which is prohibited under the MBTA and Section 3513 of the California Fish and Game Code. Fish and Game Code (Section 3503) also prohibits take or destruction of bird nests or eggs.

The following seasonal work restrictions will be implemented during construction to minimize the potential for take of nesting birds:

1. If work must begin during the nesting season (February 1 to August 31), a qualified biologist shall survey all suitable nesting habitat in the BSA for presence of nesting birds. This survey shall occur no more than 10 days prior to the start of construction. If no nesting activity is observed, work may proceed as planned. If an active nest is discovered, a qualified biologist shall evaluate the potential for the proposed project to disturb nesting activities. The evaluation criteria shall include, but are not limited to, the location/orientation of the nest in the nest tree, the distance of the nest from the BSA, and line of sight between the nest and the BSA.

2. CDFW shall be contacted to review the evaluation and determine if the project can proceed without adversely affecting nesting activities.

3. If work is allowed to proceed, a qualified biologist shall be on-site daily during construction activities to monitor nesting activity. The biologist shall have the authority to stop work if it is determined the project is adversely affecting nesting activities.

4. If work must begin during the nesting season (February 1 to August 31) and swallow mud nests or remains of mud nests are observed on any of the bridges, exclusion

nesting and/or other exclusion structures shall be installed on the underside of the existing bridge(s) to prevent nesting. Exclusion structures shall be installed prior to the start of nesting season (February 1 to August 31), and shall be left in place and maintained until the existing bridge is removed, or September 1, whichever is earlier. Mud nests or remains of mud nests shall be removed prior to installation of exclusion structures. Alternatively, high pressure hoses, extension poles, or similar methods shall be utilized to remove mud nests or remains of mud nests prior to the start of the nesting season (February 15 to September 1). In addition, regular monitoring shall be required to remove new mud nests before they are large enough to support egg-laying.

5.8. Impacts to Oak Woodlands

The project will result in minor permanent and temporary impacts to oak woodlands and California sycamore woodlands. The proposed project will comply with the requirements of the Open Space and Conservation Element of the Fresno County General Plan (OS-F.11) for oak woodlands management. Additionally, measures in Section 4.1.1.3 will help minimize impacts to blue oak woodlands, and the measures in Section 4.1.2.3 will help minimize impacts to California sycamore woodlands during and after construction.

Chapter 6 – References

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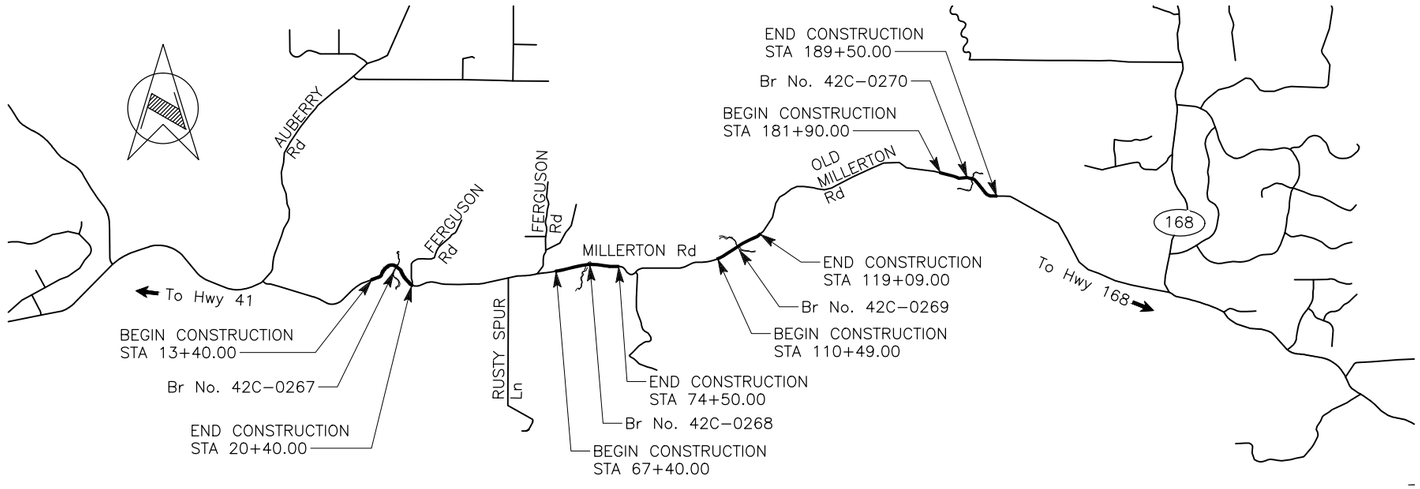
Appendix A – Design Plans

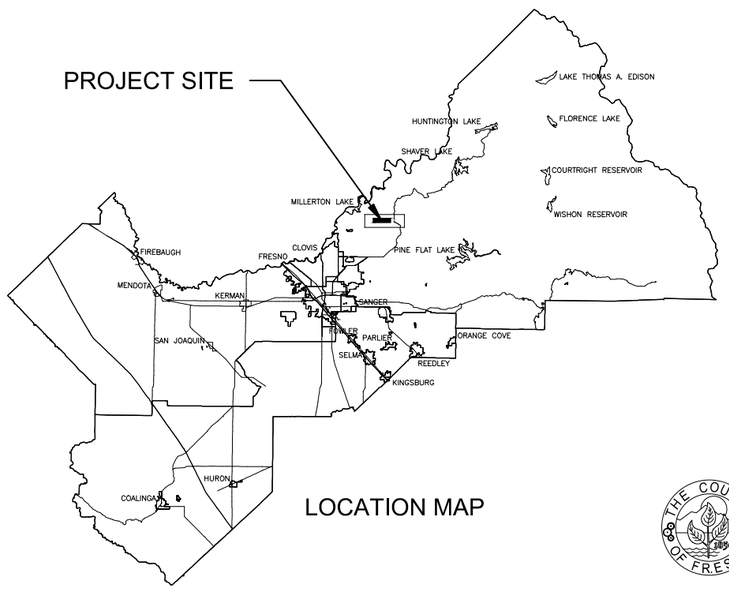
PLANS FOR CONSTRUCTION

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD

BRIDGE No. 42C-0267, 42C-0268, 42C-0269, AND 42C-0270
FEDERAL PROJECT No. BRLO 5942(210)

TO BE SUPPLEMENTED BY THE STATE STANDARD PLANS AND SPECIFICATIONS DATED 2015





DEPARTMENT OF PUBLIC WORKS AND PLANNING

INDEX OF SHEETS

SHEET No.	DRAWING	DESCRIPTION
1	T-1	TITLE SHEET
2-6	X-1 TO X-5	TYPICAL CROSS SECTIONS
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11-18	L-1 TO L-8	LAYOUTS
19-22	P-1 TO P-4	PROFILES
23-39	C-1 TO C-17	CONSTRUCTION DETAILS
40-64	WPC-1 TO WPC-25	TEMPORARY WATER POLLUTION CONTROL PLANS
65-72	EC-1 TO EC-8	EROSION CONTROL PLANS
73-80	D-1 TO D-8	DRAINAGE PLANS
81-84	DP-1 TO DP-4	DRAINAGE PROFILES
85	DD-1	DRAINAGE DETAIL
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87-106	SC-1 TO SC-20	STAGE CONSTRUCTION AND TRAFFIC HANDLING PLANS
107-109	DE-1 TO DE-3	DETOUR PLANS
110-117	PD-1 TO PD-8	PAVEMENT DELINEATION AND SIGN PLANS
STRUCTURE PLANS		
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129-142	S-1 TO S-14	BRIDGE NO. 42C-0268
143-154	S-1 TO S-12	BRIDGE NO. 42C-0269
155-168	S-1 TO S-14	BRIDGE NO. 42C-0270

Adopted by the County of Fresno Board of Supervisors

_____, 20__

Deborah A. Poochigian	Chairman	5th	District
Buddy Mendes	Vice Chairman	4th	District
Brian Pacheco		1st	District
Andreas Borgeas		2nd	District
Henry Perea		3rd	District

APPROVED _____

Steven E. White, Director
Department of Public Works and Planning

_____ SUPERVISING ENGINEER

_____ DATE

CONTRACTOR'S LICENSING REQUIREMENT					
CLASS A, GENERAL ENGINEERING					
C-12, EARTHWORK AND PAVING					
Drawing No.	Road No.	Bridge No.	Fiscal Yr.	Sheet No.	Total
		42C-0267 42C-0268 42C-0269 42C-0270		1	168

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. DIMENSIONS OF THE STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. FOR EXACT LOCATIONS OF PAVEMENT TRANSITIONS, DITCHES, HMA DIKES, FENCE AND MGS, SEE LAYOUTS.
3. SUBGRADE TO BE THE SAME AS TYPICAL SURFACE SLOPE UNLESS OTHERWISE NOTED.
4. AT LOCATIONS WHERE CHOKER (EP TO HP) IS LESS THAN 4', EXTEND AB TO SLOPE.

MILLERTON ROAD DESIGN DESIGNATION

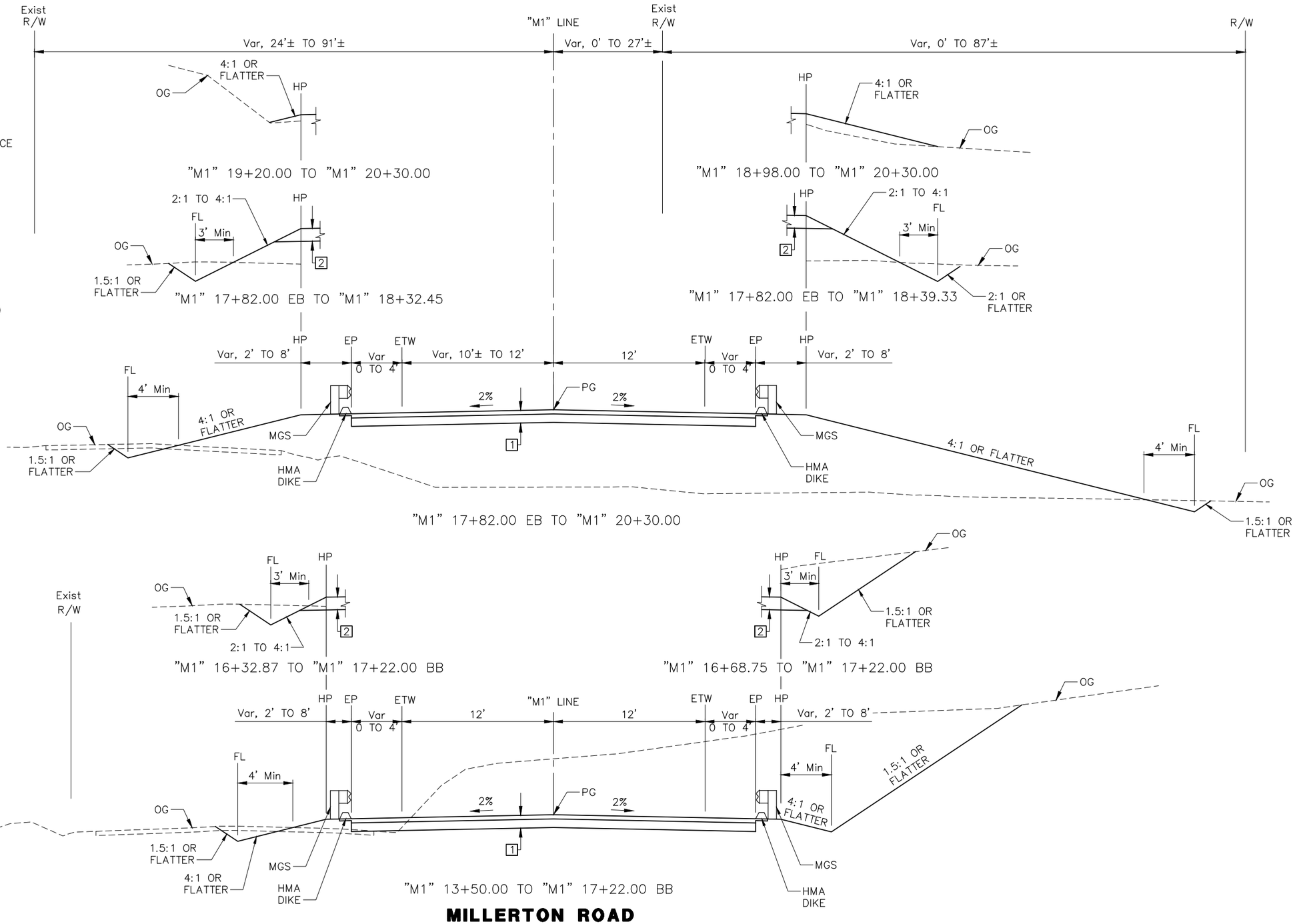
BRIDGE 42C-0267

ROAD CLASSIFICATION	MINOR COLLECTOR (RURAL)
ADT	400 (2005)
ADT	855 (2035)
DESIGN SPEED	25 MPH
R-VALUE	50
TI	7.0
TRUCKS	8%

STRUCTURAL SECTIONS:

[1] 0.33' HMA (TYPE B)
0.50' CLASS 2 AGGREGATE BASE

[2] 0.83' CLASS 2 AGGREGATE BASE



MILLERTON ROAD

	DATE	RECORD DRAWING	DATE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: NO SCALE

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA, No. 55267, Exp. 09-30-2016, STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. — BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL CROSS SECTIONS

DRAWING NO. X-1 — SHEET NO. 2 — TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

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4. AT LOCATIONS WHERE CHOKER (EP TO HP) IS LESS THAN 4', EXTEND AB TO SLOPE.

MILLERTON ROAD DESIGN DESIGNATION

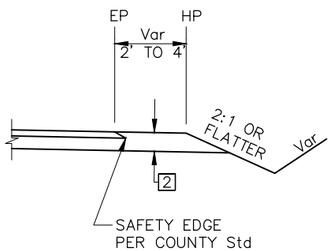
BRIDGE 42C-0268

ROAD CLASSIFICATION	MINOR COLLECTOR (RURAL)
ADT	600 (2011)
ADT	855 (2035)
DESIGN SPEED	45 MPH
R-VALUE	50
TI	7.0
TRUCKS	8%

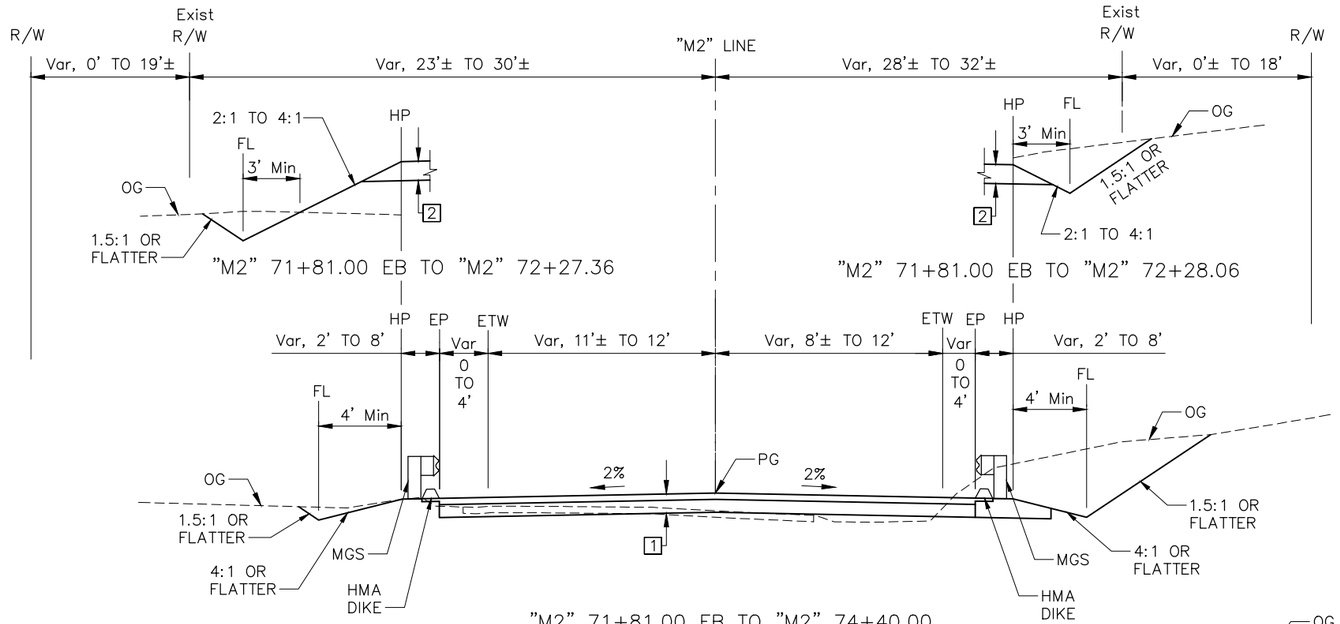
STRUCTURAL SECTIONS:

[1] — 0.33' HMA (TYPE B)
0.50' CLASS 2 AGGREGATE BASE

[2] — 0.83' CLASS 2 AGGREGATE BASE



SEE NOTE 4.



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

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DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. — BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL CROSS SECTIONS

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NOTES:

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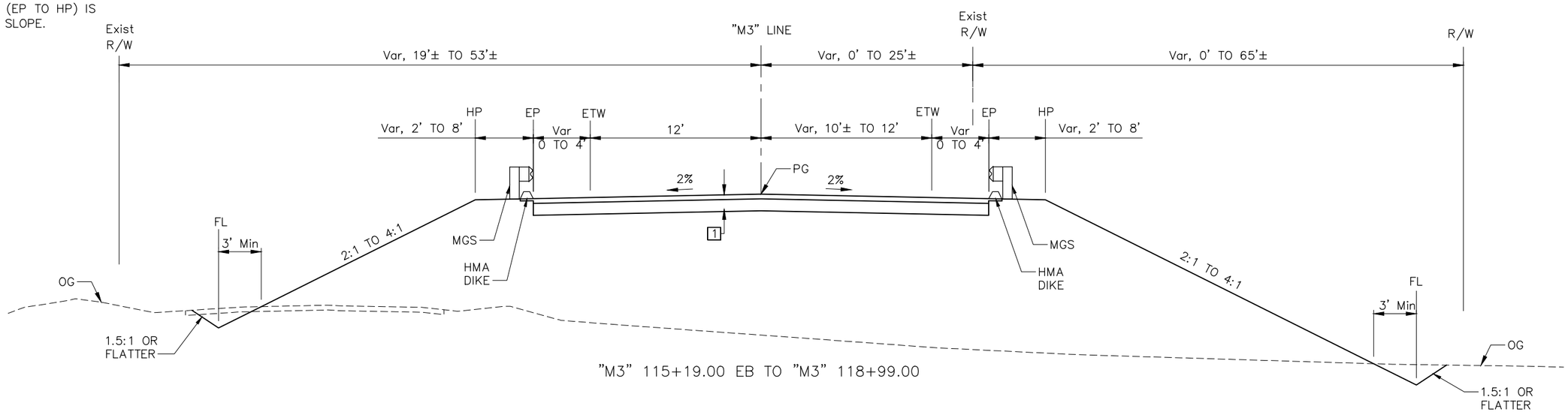
3. SUBGRADE TO BE THE SAME AS TYPICAL SURFACE SLOPE UNLESS OTHERWISE NOTED.
4. AT LOCATIONS WHERE CHOKER (EP TO HP) IS LESS THAN 4', EXTEND AB TO SLOPE.



"M3" 115+19.00 EB TO "M3" 118+99.00

STRUCTURAL SECTIONS:

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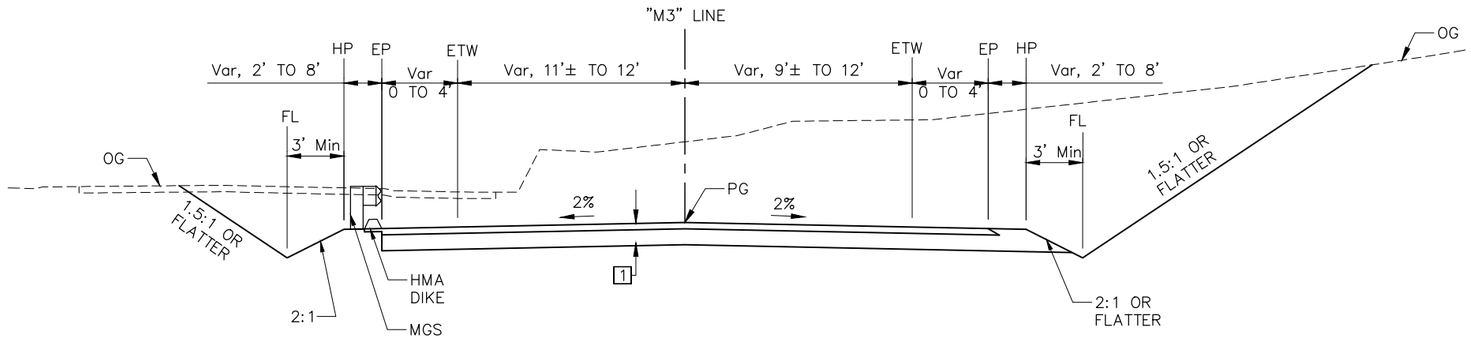
0.50' CLASS 2 AGGREGATE BASE

[2] 0.83' CLASS 2 AGGREGATE BASE



"M3" 110+59.00 TO "M3" 114+59.00 BB

MILLERTON ROAD DESIGN DESIGNATION

BRIDGE 42C-0269

ROAD CLASSIFICATION	MINOR COLLECTOR (RURAL)
ADT	400 (2005)
ADT	855 (2035)
DESIGN SPEED	45 MPH
R-VALUE	50
TI	7.0
TRUCKS	8%

MILLERTON ROAD

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL CROSS SECTIONS

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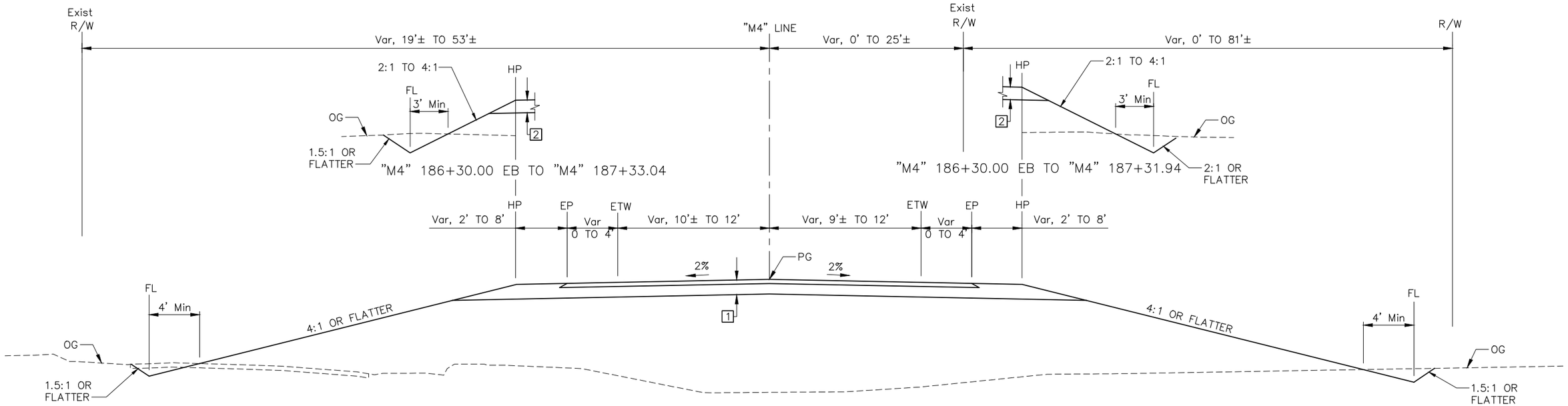

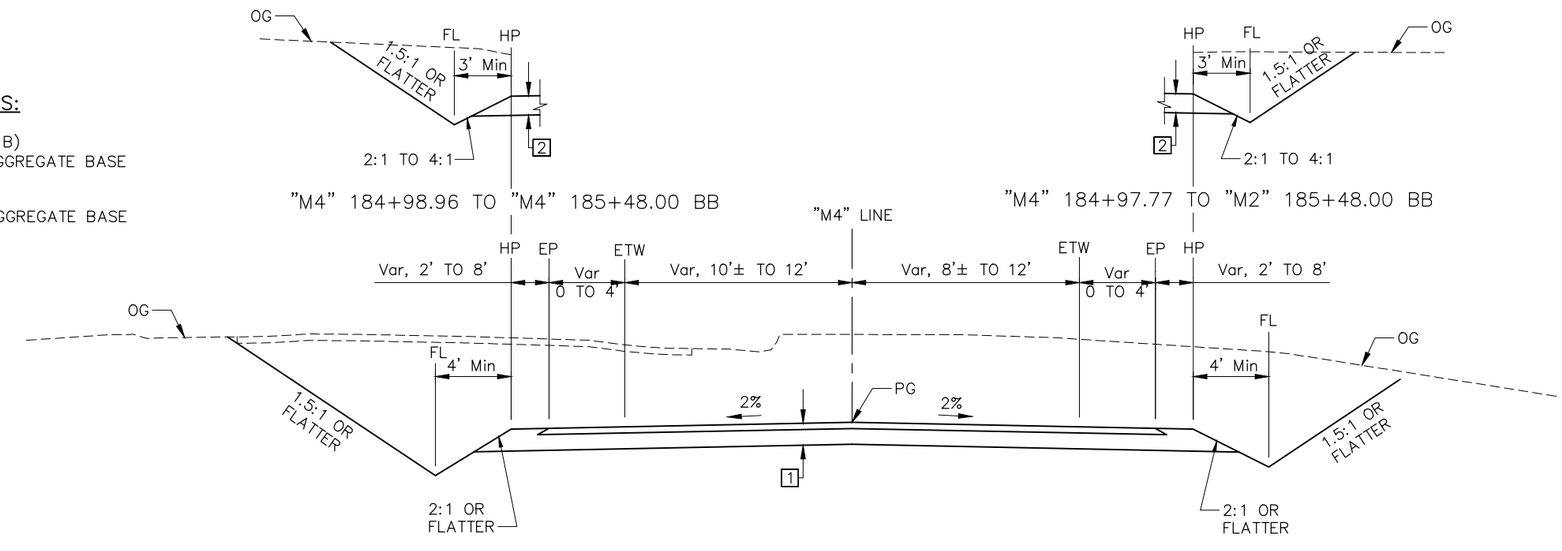

STRUCTURAL SECTIONS:

1 — 0.33' HMA (TYPE B)
0.50' CLASS 2 AGGREGATE BASE

2 — 0.83' CLASS 2 AGGREGATE BASE

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MILLERTON ROAD DESIGN DESIGNATION

BRIDGE 42C-0270

ROAD CLASSIFICATION	MINOR COLLECTOR (RURAL)
ADT	400 (2005)
ADT	855 (2035)
DESIGN SPEED	45 MPH
R-VALUE	50
TI	7.0
TRUCKS	8%

MILLERTON ROAD

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

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REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270
ROAD NO. — BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL CROSS SECTIONS

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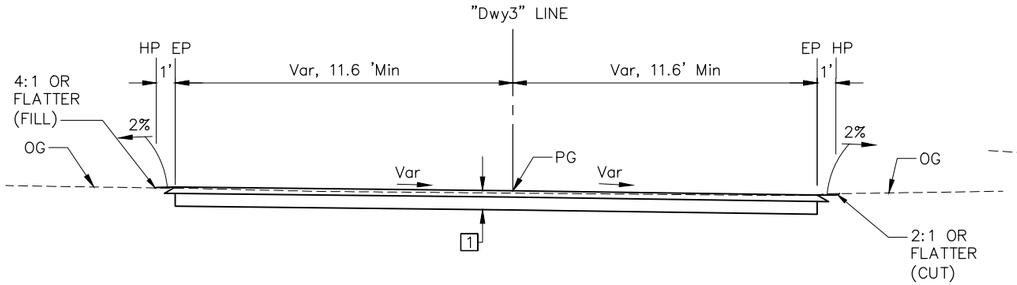

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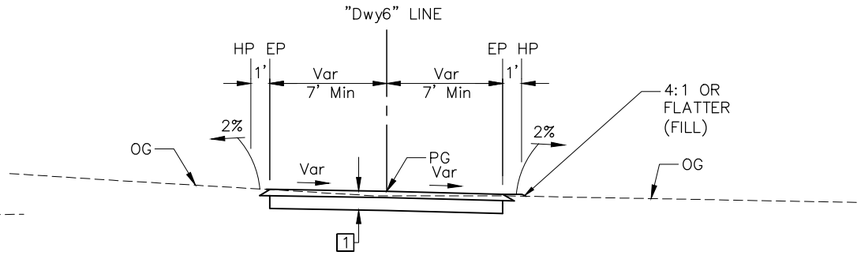
DRIVEWAY 3



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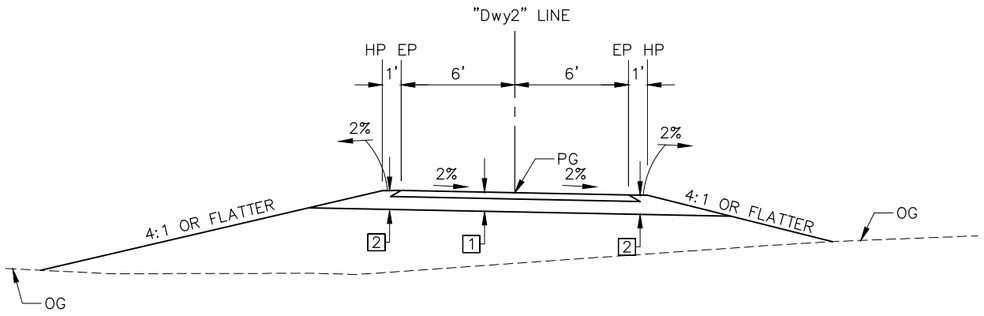
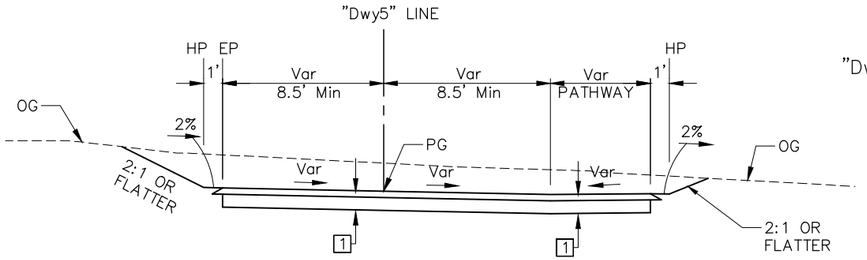
DRIVEWAY 6



"Dwy2" 1+15.00 TO "Dwy2" 1+84.00

DRIVEWAY 2



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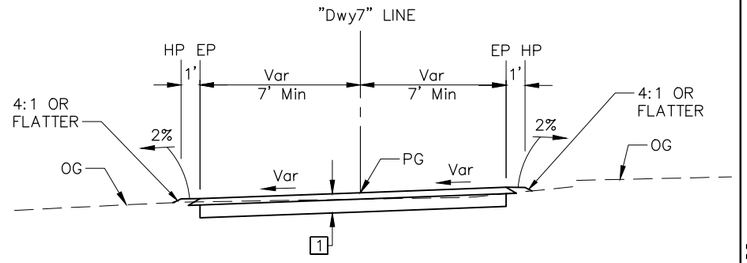
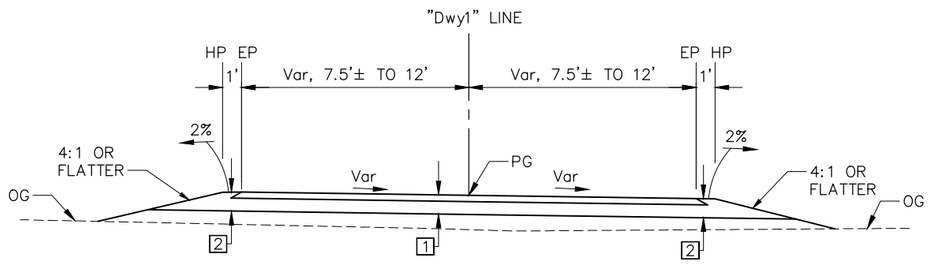


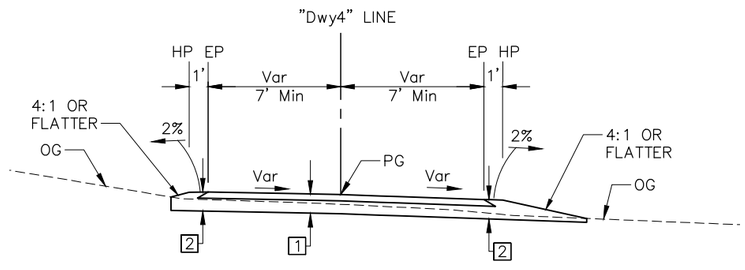
"Dwy7" 1+06.00 TO "Dwy7" 1+40.17

DRIVEWAY 7



"Dwy1" 1+16.00 TO "Dwy1" 1+97.63±

DRIVEWAY 1



"Dwy4" 1+10.00 TO "Dwy4" 1+64.00

DRIVEWAY 4

STRUCTURAL SECTIONS:

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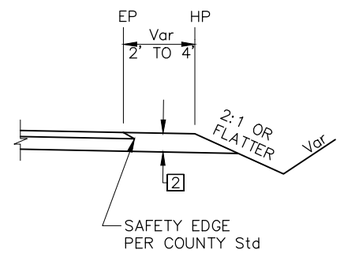


SEE NOTE 4.

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267, 42C-0268, 42C-0269, 42C-0279

ROAD NO. — BRIDGE NO. 42C-0267, 42C-0268, 42C-0269, 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL CROSS SECTIONS

DRAWING NO. X-5 — SHEET NO. 6 — TOTAL 159

NOTE:

FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.

BASIS OF BEARINGS:

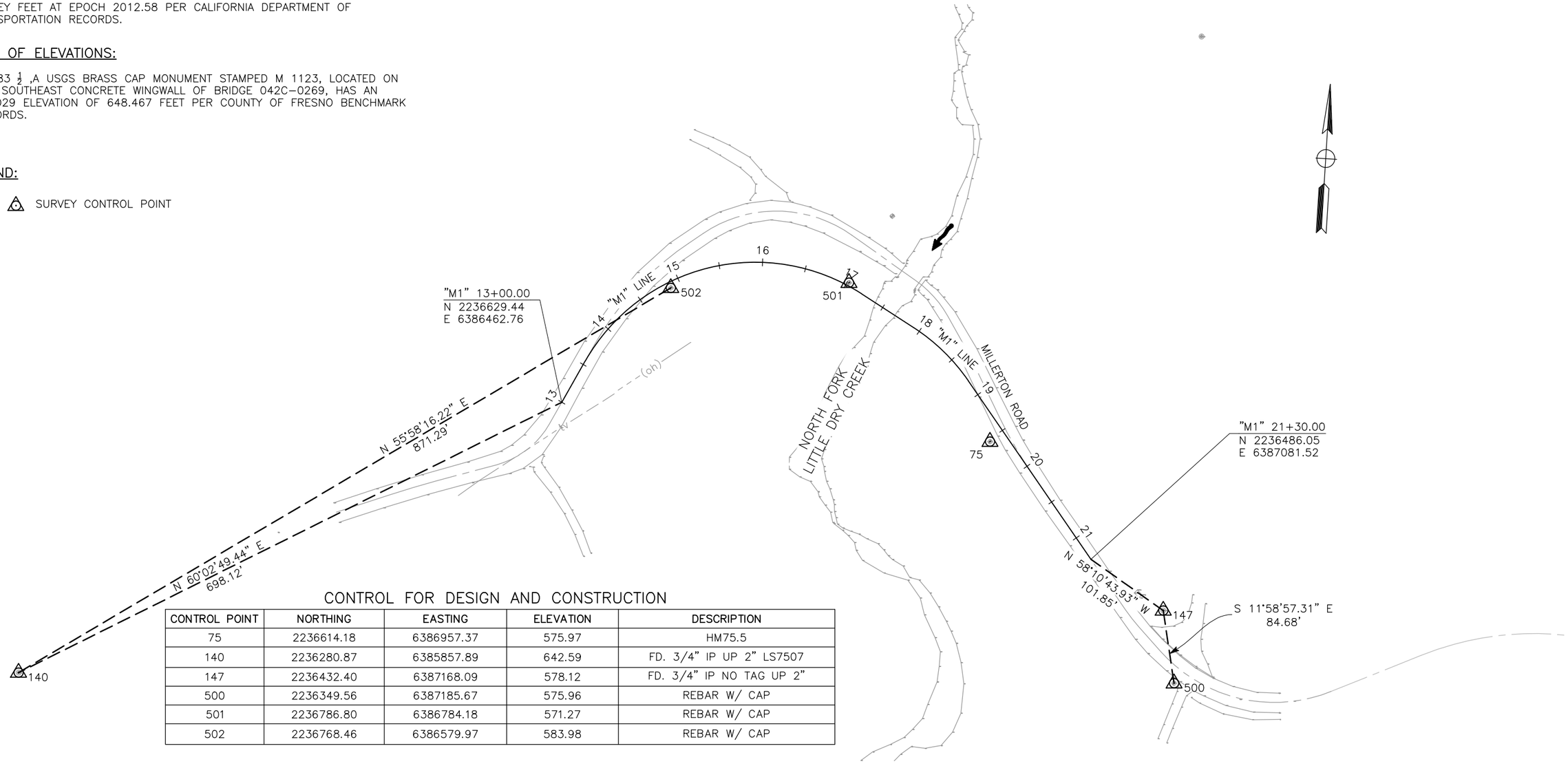
THE COORDINATE SYSTEM FOR THIS PROJECT IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 4, AND IS TIED TO CENTRAL VALLEY SPATIAL REFERENCE NETWORK STATIONS "DOND" AND "RBRU". STATION "DOND" HAS CCS83 ZONE 4 COORDINATES OF N2344103.568, E6360832.768 AND STATION "RBRU" HAS CCS83 ZONE 4 COORDINATES N2160518.260, E6318928.687 US SURVEY FEET AT EPOCH 2012.58 PER CALIFORNIA DEPARTMENT OF TRANSPORTATION RECORDS.

BASIS OF ELEVATIONS:

HM 83 $\frac{1}{2}$,A USGS BRASS CAP MONUMENT STAMPED M 1123, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, HAS AN NGVD29 ELEVATION OF 648.467 FEET PER COUNTY OF FRESNO BENCHMARK RECORDS.

LEGEND:

△ SURVEY CONTROL POINT



CONTROL FOR DESIGN AND CONSTRUCTION

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
75	2236614.18	6386957.37	575.97	HM75.5
140	2236280.87	6385857.89	642.59	FD. 3/4" IP UP 2" LS7507
147	2236432.40	6387168.09	578.12	FD. 3/4" IP NO TAG UP 2"
500	2236349.56	6387185.67	575.96	REBAR W/ CAP
501	2236786.80	6386784.18	571.27	REBAR W/ CAP
502	2236768.46	6386579.97	583.98	REBAR W/ CAP

APPROVED FOR PROJECT CONTROL INFORMATION ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROJECT CONTROL

DRAWING NO. PC-1 SHEET NO. 7 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTE:

FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.

BASIS OF BEARINGS:

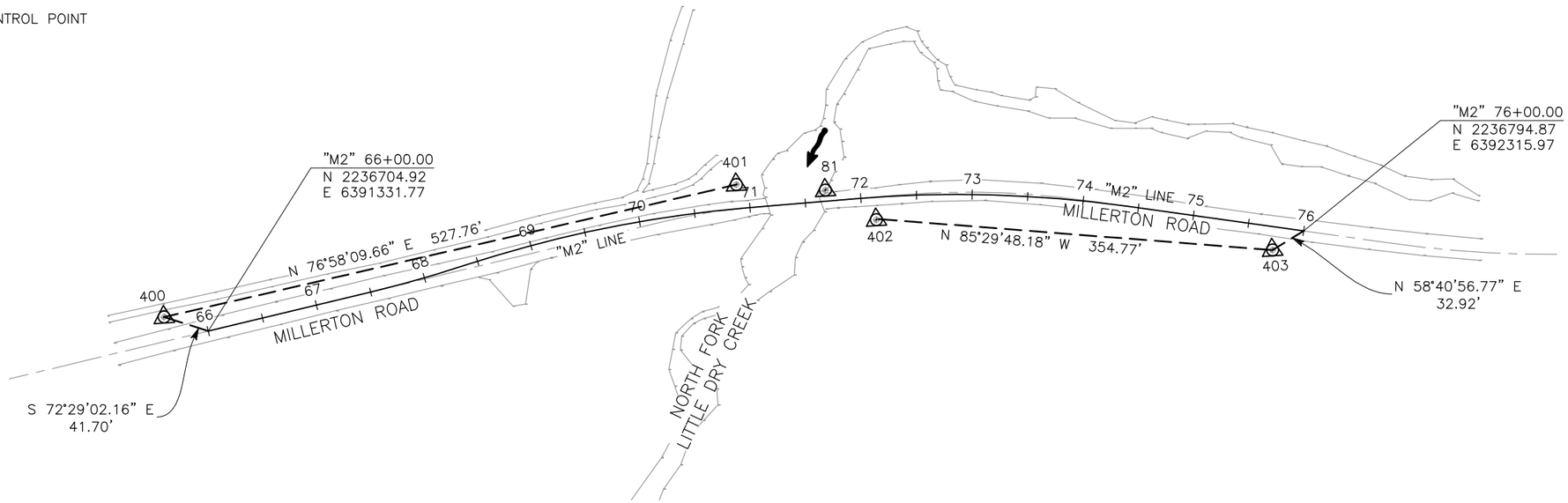
THE COORDINATE SYSTEM FOR THIS PROJECT IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 4, AND IS TIED TO CENTRAL VALLEY SPATIAL REFERENCE NETWORK STATIONS "DOND" AND "RBRU". STATION "DOND" HAS CCS83 ZONE 4 COORDINATES OF N2344103.568, E6360832.768 AND STATION "RBRU" HAS CCS83 ZONE 4 COORDINATES N2160518.260, E6318928.687 US SURVEY FEET AT EPOCH 2012.58 PER CALIFORNIA DEPARTMENT OF TRANSPORTATION RECORDS.

BASIS OF ELEVATIONS:

HM 83 $\frac{1}{2}$,A USGS BRASS CAP MONUMENT STAMPED M 1123, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, HAS AN NGVD29 ELEVATION OF 648.467 FEET PER COUNTY OF FRESNO BENCHMARK RECORDS.

LEGEND:

△ SURVEY CONTROL POINT



CONTROL FOR DESIGN AND CONSTRUCTION

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
81	2236831.51	6391886.13	592.51	HM81.5
400	2236717.48	6391292.00	605.45	REBAR W/ CAP
401	2236836.47	6391806.18	591.27	REBAR W/ CAP
402	2236804.87	6391931.97	592.83	REBAR W/ CAP
403	2236777.76	6392287.84	601.24	REBAR W/ CAP

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PROJECT CONTROL INFORMATION ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROJECT CONTROL

DRAWING NO. PC-2 SHEET NO. 8 TOTAL 159

NOTE:

FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.

BASIS OF BEARINGS:

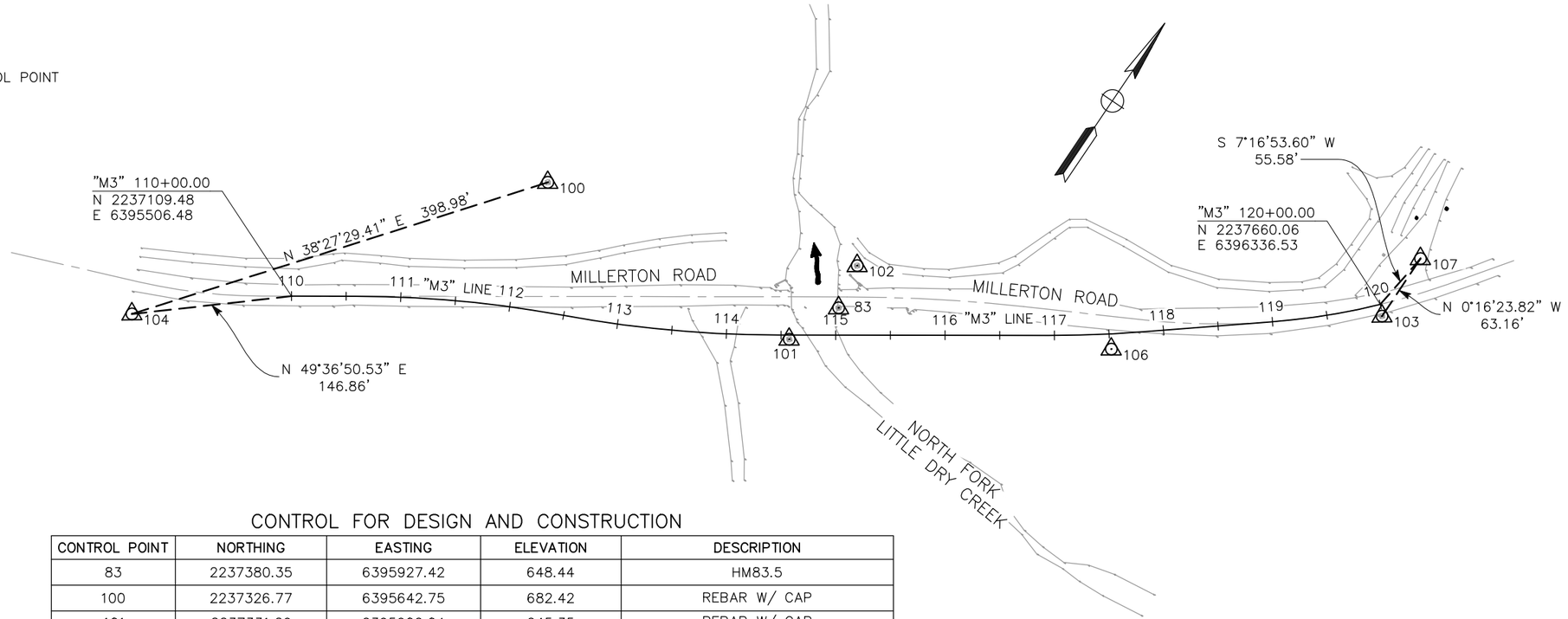
THE COORDINATE SYSTEM FOR THIS PROJECT IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 4, AND IS TIED TO CENTRAL VALLEY SPATIAL REFERENCE NETWORK STATIONS "DOND" AND "RBRU". STATION "DOND" HAS CCS83 ZONE 4 COORDINATES OF N2344103.568, E6360832.768 AND STATION "RBRU" HAS CCS83 ZONE 4 COORDINATES N2160518.260, E6318928.687 US SURVEY FEET AT EPOCH 2012.58 PER CALIFORNIA DEPARTMENT OF TRANSPORTATION RECORDS.

BASIS OF ELEVATIONS:

HM 83 $\frac{1}{2}$,A USGS BRASS CAP MONUMENT STAMPED M 1123, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, HAS AN NGVD29 ELEVATION OF 648.467 FEET PER COUNTY OF FRESNO BENCHMARK RECORDS.

LEGEND:

△ SURVEY CONTROL POINT



CONTROL FOR DESIGN AND CONSTRUCTION

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
83	2237380.35	6395927.42	648.44	HM83.5
100	2237326.77	6395642.75	682.42	REBAR W/ CAP
101	2237331.29	6395906.04	645.35	REBAR W/ CAP
102	2237421.83	6395919.95	644.60	REBAR W/ CAP
103	2237652.03	6396343.88	680.05	REBAR W/ CAP
104	2237014.33	6395394.61	658.98	FD. 3/4" IP LS5943 UP 6"
106	2237488.53	6396155.36	660.03	FD. 3/4" IP LS6945 UP 6"
107	2237715.19	6396343.58	681.62	FD. 3/4" IP LS6945 DN 4"

APPROVED FOR PROJECT CONTROL INFORMATION ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROJECT CONTROL

DRAWING NO. PC-3 SHEET NO. 9 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTE:

FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.

BASIS OF BEARINGS:

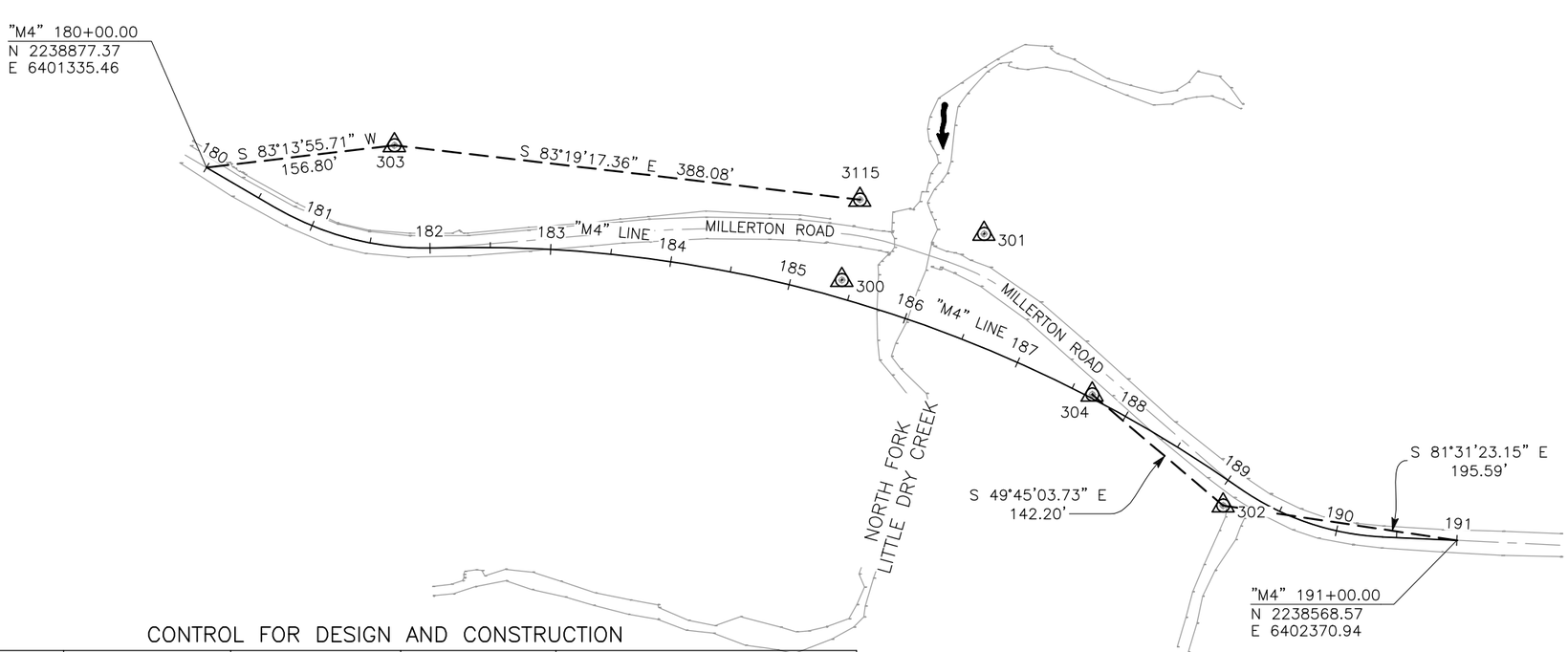
THE COORDINATE SYSTEM FOR THIS PROJECT IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 4, AND IS TIED TO CENTRAL VALLEY SPATIAL REFERENCE NETWORK STATIONS "DOND" AND "RBRU". STATION "DOND" HAS CCS83 ZONE 4 COORDINATES OF N2344103.568, E6360832.768 AND STATION "RBRU" HAS CCS83 ZONE 4 COORDINATES N2160518.260, E6318928.687 US SURVEY FEET AT EPOCH 2012.58 PER CALIFORNIA DEPARTMENT OF TRANSPORTATION RECORDS.

BASIS OF ELEVATIONS:

HM 83 $\frac{1}{2}$,A USGS BRASS CAP MONUMENT STAMPED M 1123, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, HAS AN NGVD29 ELEVATION OF 648.467 FEET PER COUNTY OF FRESNO BENCHMARK RECORDS.

LEGEND:

△ SURVEY CONTROL POINT



CONTROL FOR DESIGN AND CONSTRUCTION

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
300	2238784.18	6401861.59	761.14	REBAR W/ CAP
301	2238822.36	6401979.34	763.24	REBAR W/ CAP
302	2238597.40	6402177.49	775.96	REBAR W/ CAP
303	2238895.77	6401491.12	781.86	REBAR W/ CAP
304	2238689.95	6402068.95	767.25	REBAR W/ CAP
3115	2238850.64	6401876.56	765.57	HM75.5

APPROVED FOR PROJECT CONTROL INFORMATION ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROJECT CONTROL

DRAWING NO. PC-4 SHEET NO. 10 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

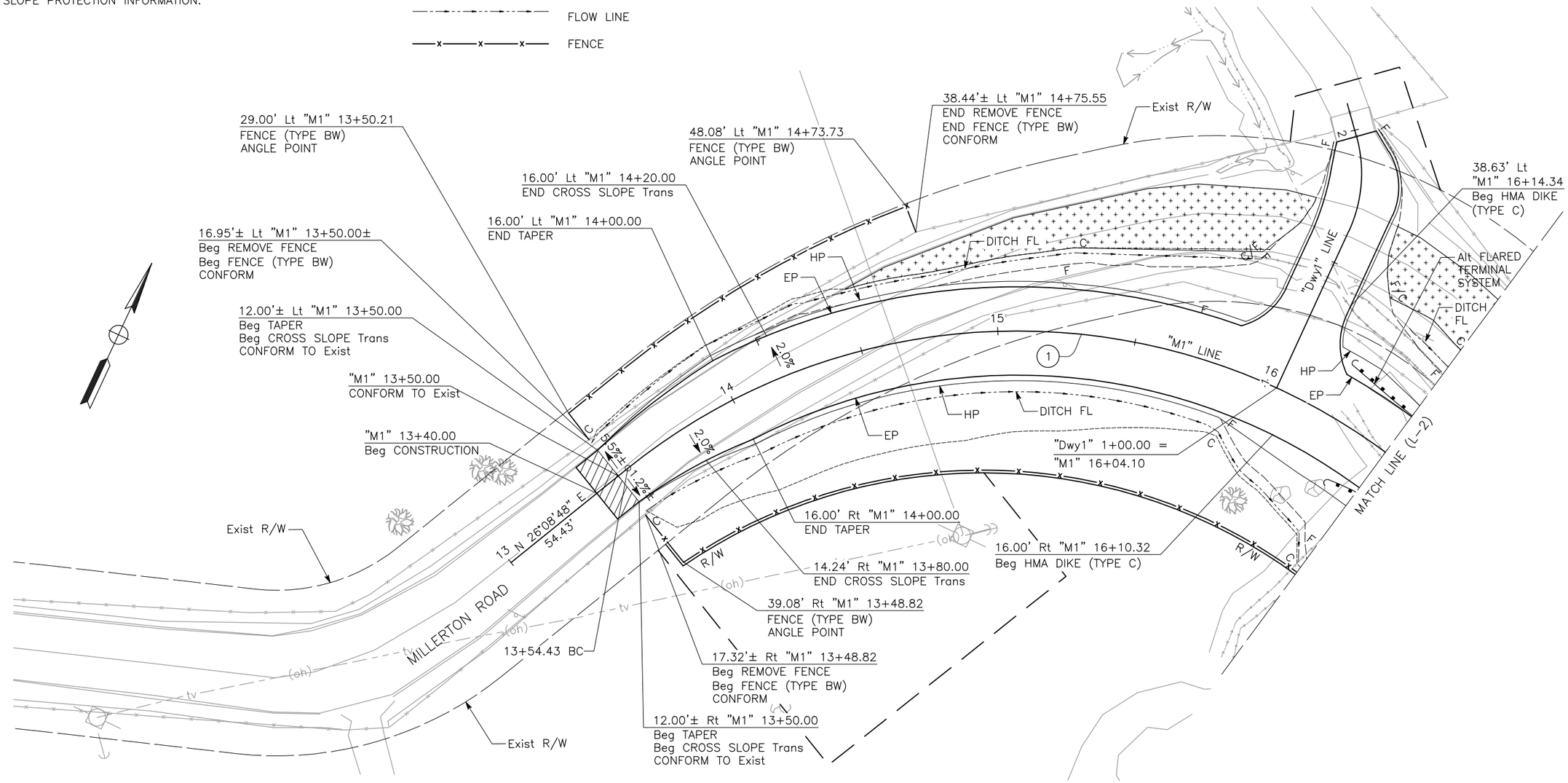
NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. UTILITIES SHOWN ARE APPROXIMATE.
3. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. SEE CONSTRUCTION DETAILS FOR DRIVEWAY AND ROCK SLOPE PROTECTION INFORMATION.

LEGEND:

- C ---------- CUT
- F ---------- FILL
- RIGHT-OF-WAY (R/W)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- PROPERTY LINE (P/L) AND EXISTING R/W
- FLOW LINE
- FENCE
- HMA PAVEMENT TRANSITION
- ROCK SLOPE PROTECTION (RSP)
- OBLITERATE SURFACING

CURVE DATA				
No.	R	Δ	T	L
(1)	225'	93°21'09"	238.57'	366.59'



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-1 SHEET NO. 11 TOTAL 159

CURVE DATA				
No.	R	Δ	T	L
(1)	225'	93°21'09"	238.57'	366.59'
(2)	225'	22°31'41"	44.81'	88.47'

37.91'± Lt "M1" 17+30.19
END REMOVE FENCE

64.45'± Lt "M1" 17+04.27
END FENCE (TYPE BW)
CONFORM

17.42' Lt "M1" 17+04.52
Beg FENCE (TYPE BW)

16.00' Lt "M1" 17+04.52
END HMA DIKE (TYPE F)
Trans RAILING
(TYPE WB-31)

16.00' Lt "M1" 16+79.52
END MGS
END HMA DIKE (TYPE C)
Beg HMA DIKE (TYPE F)

16.00' Lt "M1" 16+57.80
Beg MGS

Exist R/W
DITCH FL

MATCH LINE (L-1)

HP

17+21.02 EC

S 60°30'02" E
71.42'

"M1" 17+22.00 BB

16.00' Rt "M1" 17+04.47
END HMA DIKE (TYPE F)

17.42' Rt "M1" 17+04.46
END FENCE (TYPE BW)

Trans RAILING
(TYPE WB-31)

16.00' Rt "M1" 16+79.47
END HMA DIKE (TYPE C)
Beg HMA DIKE (TYPE F)

Alt FLARED
TERMINAL SYSTEM

53.99' Rt "M1" 16+56.00
FENCE (TYPE BW)
ANGLE POINT

NORTH FORK DRY CREEK

15.95' Rt "M1" 18+03.60
Beg HMA DIKE (TYPE F)

17.37' Rt "M1" 18+03.60
Beg FENCE (TYPE BW)

30.32'± Lt "M1" 17+87.50
Beg REMOVE FENCE

51.37'± Lt "M1" 18+04.12
END FENCE (TYPE BW)
CONFORM

17.42' Lt "M1" 18+00.15
Beg FENCE (TYPE BW)

16.00' Lt "M1" 18+00.15
Beg HMA DIKE (TYPE F)

Exist BRIDGE
(No. 42C-0267)

Trans RAILING
(TYPE WB-31)

15.99' Lt "M1" 18+25.15
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)

Alt FLARED
TERMINAL SYSTEM

16.00' Lt "M1" 18+81.76
END HMA DIKE (TYPE C)

Exist R/W
DITCH FL

NEW BRIDGE

17+92.44 BC

"M1" LINE

"M1" 17+82.00 EB

MILLERTON ROAD

S 37°58'21" E
249.09'

18+80.91 EC

"Dwy2" 2+00.00 =
"M1" 19+15.73

16.00' Lt "M1" 19+80.00
Beg TAPER

13.60' Lt "M1" 20+00.00
Beg CROSS SLOPE Trans

10.00'± Lt "M1" 20+30.00
END TAPER
END CROSS SLOPE Trans
CONFORM

"M1" 20+30.00±
CONFORM TO Exist

"M1" 20+40.00
END CONSTRUCTION

Exist R/W

Alt FLARED
TERMINAL
SYSTEM

EP

2.0%

3.2%±

6.0%±

"Dwy2" LINE

16.00 Rt
"M1" Rt 19+80.00
Beg TAPER
Beg CROSS SLOPE Trans

15.96' Rt "M1" 18+96.50
END HMA DIKE (TYPE C)

53.97' Rt "M1" 19+22.73
Beg FENCE (TYPE BW)

14' WIRE MESH GATE

53.97' Rt "M1" 19+08.73
END FENCE (TYPE BW)

16.00' Rt "M1" 18+28.60
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)

49.36' Rt "M1" 18+29.25
FENCE (TYPE BW)
ANGLE POINT

12.00'± Rt "M1" 20+30.00
END TAPER
END CROSS SLOPE Trans
CONFORM TO Exist

15.30± Rt "M1" 20+30.00
END REMOVE FENCE
END FENCE (TYPE BW)
CONFORM

29.89' Rt "M1" 20+30.00
FENCE (TYPE BW)
ANGLE POINT

Exist R/W

19
20
21

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-2 SHEET NO. 12 TOTAL 159

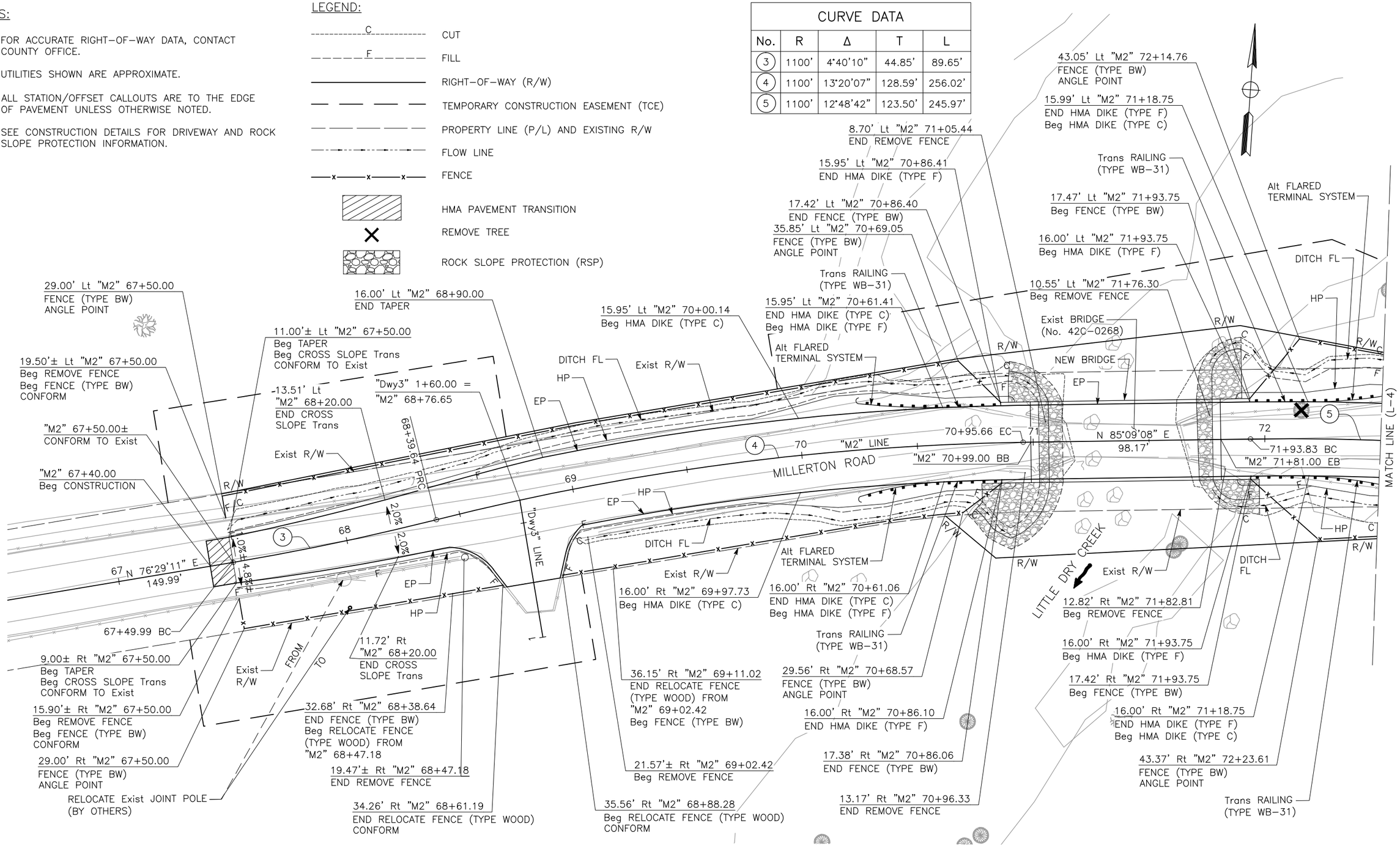
NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. UTILITIES SHOWN ARE APPROXIMATE.
3. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. SEE CONSTRUCTION DETAILS FOR DRIVEWAY AND ROCK SLOPE PROTECTION INFORMATION.

LEGEND:

- C ---------- CUT
- F ---------- FILL
- RIGHT-OF-WAY (R/W)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- PROPERTY LINE (P/L) AND EXISTING R/W
- FLOW LINE
- FENCE
- HMA PAVEMENT TRANSITION
- REMOVE TREE
- ROCK SLOPE PROTECTION (RSP)

CURVE DATA				
No.	R	Δ	T	L
3	1100'	4°40'10"	44.85'	89.65'
4	1100'	13°20'07"	128.59'	256.02'
5	1100'	12°48'42"	123.50'	245.97'



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

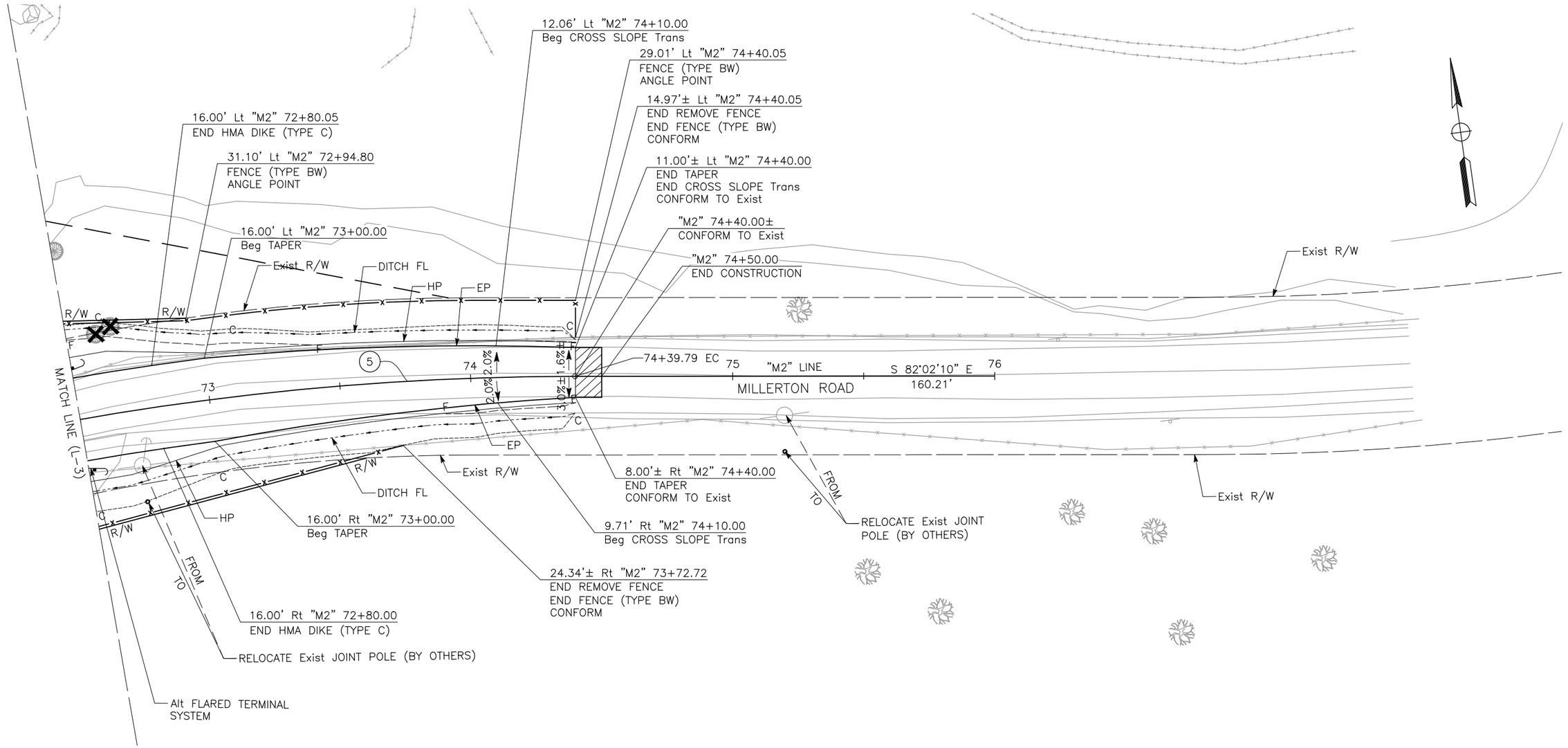
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-3 SHEET NO. 13 TOTAL 159

CURVE DATA				
No.	R	Δ	T	L
(5)	1100'	12°48'42"	123.50'	245.97'



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-4 SHEET NO. 14 TOTAL 159

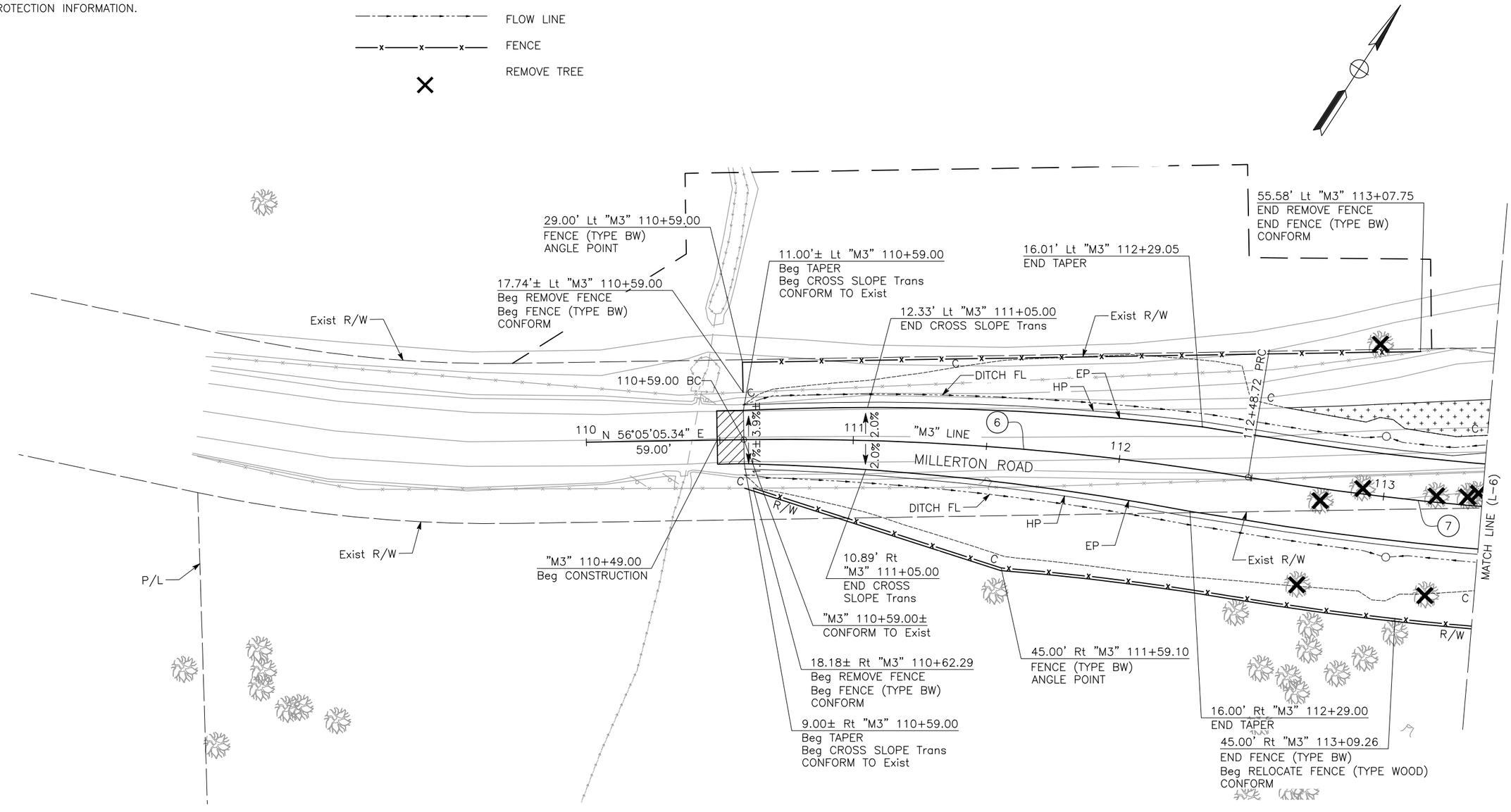
NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. UTILITIES SHOWN ARE APPROXIMATE.
3. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. SEE CONSTRUCTION DETAILS FOR DRIVEWAY AND ROCK SLOPE PROTECTION INFORMATION.

LEGEND:

- C ---------- CUT
- F ---------- FILL
- RIGHT-OF-WAY (R/W)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- PROPERTY LINE (P/L) AND EXISTING R/W
- FLOW LINE
- FENCE
- REMOVE TREE
- HMA PAVEMENT TRANSITION
- ROCK SLOPE PROTECTION (RSP)
- OBLITERATE SURFACING

CURVE DATA				
No.	R	Δ	T	L
(6)	1050'	10°21'09"	95.12'	189.72'
(7)	1100'	10°21'09"	99.65'	198.75'



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-5 SHEET NO. 15 TOTAL 159

CURVE DATA				
No.	R	Δ	T	L
(8)	1100'	4°31'44"	43.50'	86.95'
(9)	625'	9°15'32"	50.61'	101.00'

15.88' Lt "M3" 113+44.77
Beg HMA DIKE (TYPE C)

14.90'± Lt "M3" 113+55.74
END REMOVE FENCE
Beg RELOCATE FENCE
(TYPE WOOD)

15.89' Lt "M3" 114+08.33
END HMA DIKE (TYPE C)
Beg HMA DIKE (TYPE F)

52.05'± Lt "M3" 114+01.87±
Beg FENCE (TYPE BW)
CONFORM

Trans RAILING (TYPE WB-31)

22.68'± Lt "M3" 114+24.90
END RELOCATE FENCE (TYPE WOOD)
Beg REMOVE FENCE

17.42' Lt "M3" 114+33.33
END FENCE (TYPE BW)

16.00' Lt "M3" 114+33.33
END HMA DIKE (TYPE F)

Alt FLARED TERMINAL SYSTEM

22.66'± Lt "M3" 114+44.73
END REMOVE FENCE

Exist BRIDGE (No. 42C-0269)

NEW BRIDGE

24.42' Lt "M3" 115+06.20
Beg REMOVE FENCE

17.42' Lt "M3" 115+33.77
Beg FENCE (TYPE BW)

16.00' Lt "M3" 115+33.77
Beg HMA DIKE (TYPE F)

47.32± Lt "M3" 115+49.15
END FENCE (TYPE BW)
CONFORM

Trans RAILING (TYPE WB-31)

16.00' Lt "M3" 115+58.77
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)
Beg MGS

46.91'± Lt "M3" 116+13.02
Beg REMOVE FENCE
Beg FENCE (TYPE BW)
CONFORM

56.62' Lt "M3" 116+60.46
FENCE (TYPE BW)
ANGLE POINT

16.00' Lt "M3" 117+17.14
END MGS

16.00' Lt "M3" 117+29.00
END TAPER

Alt FLARED TERMINAL SYSTEM

15.39' Lt "M3" 117+81.47
END HMA DIKE (TYPE C)

15.38' Lt "M3" 117+81.66
BEGIN TAPER

38.38'± Lt "M3" 117+93.65
END REMOVE FENCE
END FENCE (TYPE BW)
CONFORM

14.00'± Lt "M3" 118+99.00
END TAPER
END CROSS SLOPE Trans
CONFORM TO Exist

"M3" 118+99.00
CONFORM TO Exist

"M3" 119+09.00
END CONSTRUCTION

118+99.00 BC

14.57' Lt "M3" 118+54.39
Beg CROSS SLOPE Trans

Exist R/W

DITCH FL

HP

EP

MATCH LINE (L-5)

"Dwy4" 1+80.00 = "M3" 114+02.89

"Dwy4" LINE

"M3" 114+59.00 BB

114+47.47 EC

116+94.71 BC

117+81.66 EC

N 56°05'05.34" E 247.24'

"M3" LINE

"M3"115+19.00 EB

N 51°33'22.09" E 117.34'

MILLERTON ROAD

LITTLE DRY CREEK

3.9%±

2.4%±

2.0%

2.0%

16.00' Rt "M3" 116+94.71
END MGS

10.00'± Rt "M3" 118+99.00
END TAPER
END CROSS SLOPE Trans
CONFORM TO Exist

11.54' Rt "M3" 118+55.45
Beg CROSS SLOPE Trans

25.04' Rt "M3" 118+27.17
FENCE (TYPE BW)
ANGLE POINT

12.86'± Rt "M3" 118+99.00
END REMOVE FENCE
END FENCE (TYPE BW)
CONFORM

14.62' Rt "M3" 117+68.14
END HMA DIKE (TYPE C)

28.56' Rt "M3" 118+98.98
FENCE (TYPE BW)
ANGLE POINT

42.14' Rt "M3" 117+35.92
FENCE (TYPE BW)
ANGLE POINT

16.00' Rt "M3" 117+29.00
Beg TAPER

R/W

PL

20.00' Rt "M3" 114+49.23
END FENCE (TYPE BW)

Alt CRASH CUSHION

45.00' Rt "M3" 113+95.74
END RELOCATE FENCE
(TYPE WOOD)

45.00' Rt "M3" 114+24.31
END RELOCATE FENCE (TYPE WOOD)
Beg FENCE (TYPE BW)

45.00' Rt "M3" 114+11.69
Beg RELOCATE FENCE (TYPE WOOD)

RELOCATE GATE (METAL)

TO FROM

55.54' Rt "M3" 115+86.70
FENCE (TYPE BW)
ANGLE POINT

16.00' Rt "M3" 115+44.94
Beg HMA DIKE (TYPE F)

17.42' Rt "M3" 115+44.94
Beg FENCE (TYPE BW)

Trans RAILING (TYPE WB-31)

16.20' Rt "M3" 115+69.94
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)
Beg MGS

Alt FLARED TERMINAL SYSTEM

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-6 SHEET NO. 16 TOTAL 159

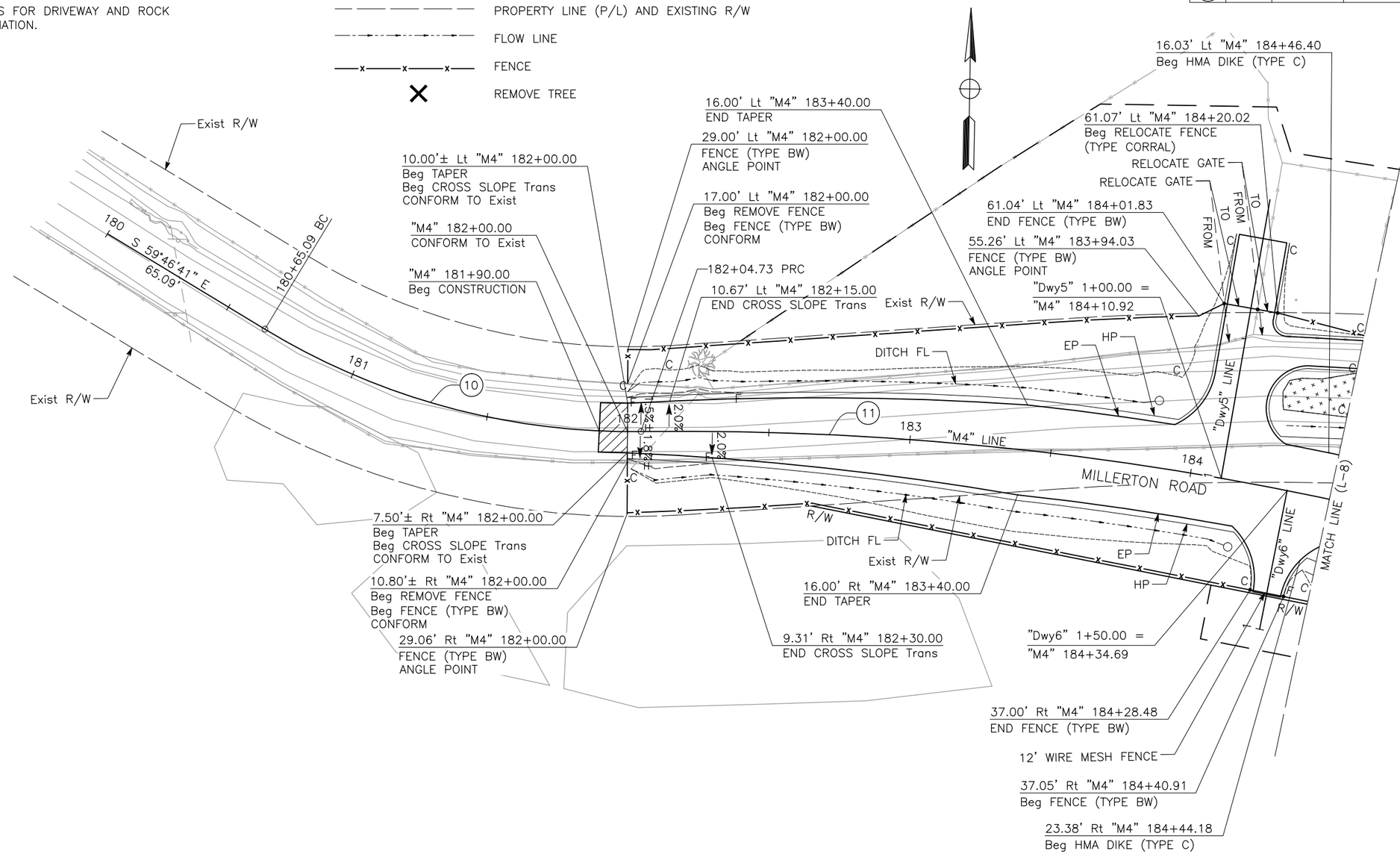
NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. UTILITIES SHOWN ARE APPROXIMATE.
3. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. SEE CONSTRUCTION DETAILS FOR DRIVEWAY AND ROCK SLOPE PROTECTION INFORMATION.

LEGEND:

- C ---------- CUT
- F ---------- FILL
- RIGHT-OF-WAY (R/W)
- TEMPORARY CONSTRUCTION EASEMENT (TCE)
- PROPERTY LINE (P/L) AND EXISTING R/W
- FLOW LINE
- FENCE
- REMOVE TREE
- HMA PAVEMENT TRANSITION
- ROCK SLOPE PROTECTION (RSP)
- OBLITERATE SURFACING

CURVE DATA				
No.	R	Δ	T	L
(10)	250'	32°00'10"	71.69'	139.64'
(11)	1100'	36°48'32"	366.02'	706.68'



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

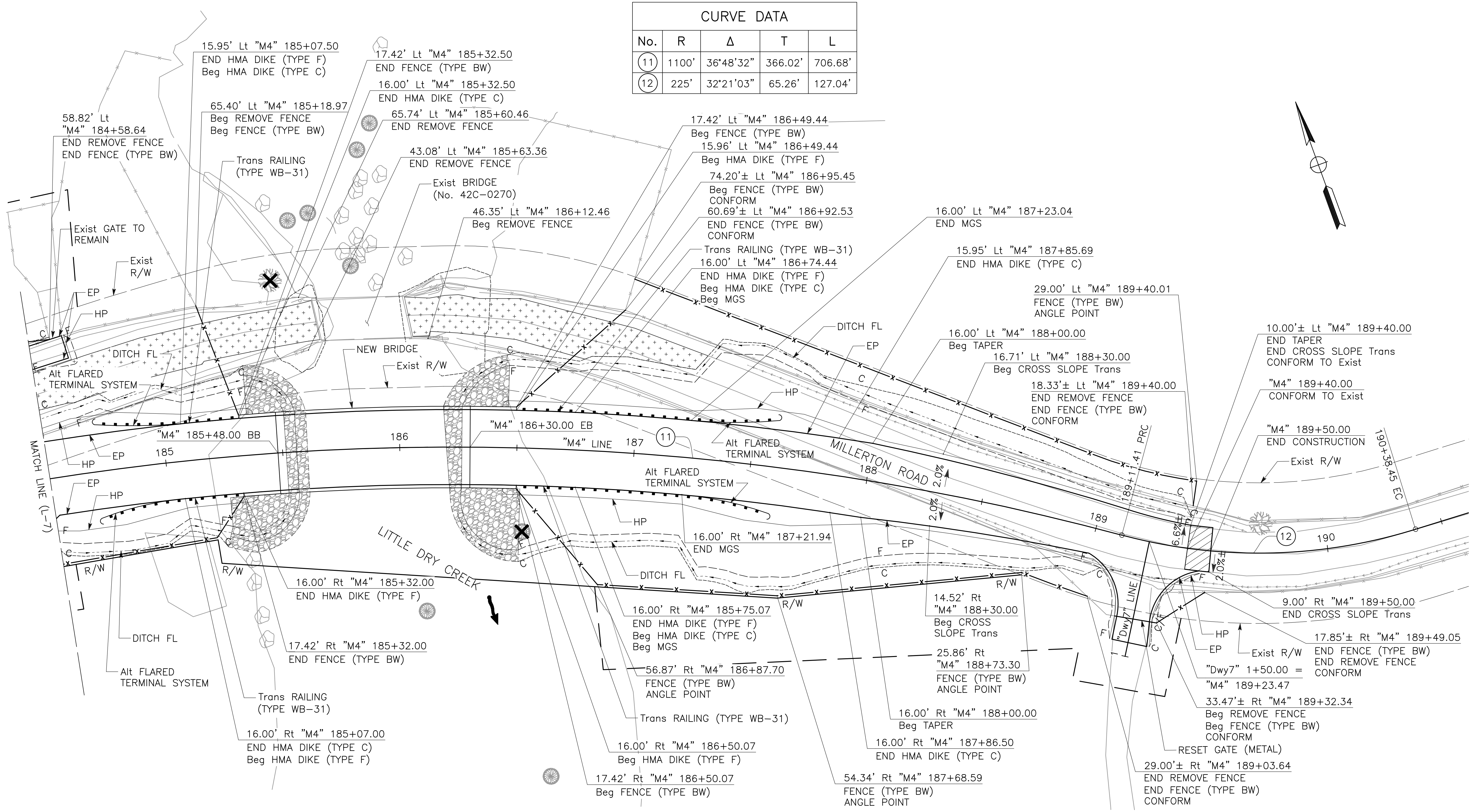
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

DRAWING NO. L-7 SHEET NO. 17 TOTAL 159

CURVE DATA				
No.	R	Δ	T	L
(11)	1100'	36°48'32"	366.02'	706.68'
(12)	225'	32°21'03"	65.26'	127.04'



15.95' Lt "M4" 185+07.50
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)
17.42' Lt "M4" 185+32.50
END FENCE (TYPE BW)
16.00' Lt "M4" 185+32.50
END HMA DIKE (TYPE C)
65.40' Lt "M4" 185+18.97
Beg REMOVE FENCE
Beg FENCE (TYPE BW)
65.74' Lt "M4" 185+60.46
END REMOVE FENCE
58.82' Lt
"M4" 184+58.64
END REMOVE FENCE
END FENCE (TYPE BW)
Trans RAILING
(TYPE WB-31)
43.08' Lt "M4" 185+63.36
END REMOVE FENCE
Exist BRIDGE
(No. 42C-0270)
46.35' Lt "M4" 186+12.46
Beg REMOVE FENCE
Exist GATE TO
REMAIN
Exist
R/W
EP
HP
DITCH FL
Alt FLARED
TERMINAL SYSTEM
NEW BRIDGE
Exist R/W
"M4" 185+48.00 BB
"M4" 186+30.00 EB
"M4" LINE
MATCH LINE (L-7)
185
186
187
188
189
190
17.42' Lt "M4" 186+49.44
Beg FENCE (TYPE BW)
15.96' Lt "M4" 186+49.44
Beg HMA DIKE (TYPE F)
74.20'± Lt "M4" 186+95.45
Beg FENCE (TYPE BW)
CONFORM
60.69'± Lt "M4" 186+92.53
END FENCE (TYPE BW)
CONFORM
Trans RAILING (TYPE WB-31)
16.00' Lt "M4" 186+74.44
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)
Beg MGS
16.00' Lt "M4" 187+23.04
END MGS
15.95' Lt "M4" 187+85.69
END HMA DIKE (TYPE C)
29.00' Lt "M4" 189+40.01
FENCE (TYPE BW)
ANGLE POINT
DITCH FL
16.00' Lt "M4" 188+00.00
Beg TAPER
16.71' Lt "M4" 188+30.00
Beg CROSS SLOPE Trans
18.33'± Lt "M4" 189+40.00
END REMOVE FENCE
END FENCE (TYPE BW)
CONFORM
10.00'± Lt "M4" 189+40.00
END TAPER
END CROSS SLOPE Trans
CONFORM TO Exist
"M4" 189+40.00
CONFORM TO Exist
"M4" 189+50.00
END CONSTRUCTION
Exist R/W
190+38.45 EC
189+11.41 PRC
MILLERTON ROAD
2.0%
6.6%
LITTLE DRY CREEK
16.00' Rt "M4" 187+21.94
END MGS
16.00' Rt "M4" 185+32.00
END HMA DIKE (TYPE F)
16.00' Rt "M4" 185+75.07
END HMA DIKE (TYPE F)
Beg HMA DIKE (TYPE C)
Beg MGS
17.42' Rt "M4" 185+32.00
END FENCE (TYPE BW)
56.87' Rt "M4" 186+87.70
FENCE (TYPE BW)
ANGLE POINT
Trans RAILING (TYPE WB-31)
16.00' Rt "M4" 185+07.00
END HMA DIKE (TYPE C)
Beg HMA DIKE (TYPE F)
16.00' Rt "M4" 186+50.07
Beg HMA DIKE (TYPE F)
17.42' Rt "M4" 186+50.07
Beg FENCE (TYPE BW)
14.52' Rt
"M4" 188+30.00
Beg CROSS
SLOPE Trans
25.86' Rt
"M4" 188+73.30
FENCE (TYPE BW)
ANGLE POINT
16.00' Rt "M4" 188+00.00
Beg TAPER
16.00' Rt "M4" 187+86.50
END HMA DIKE (TYPE C)
54.34' Rt "M4" 187+68.59
FENCE (TYPE BW)
ANGLE POINT
"Dwy7" LINE
9.00' Rt "M4" 189+50.00
END CROSS SLOPE Trans
17.85'± Rt "M4" 189+49.05
END FENCE (TYPE BW)
END REMOVE FENCE
CONFORM
"Dwy7" 1+50.00 =
"M4" 189+23.47
33.47'± Rt "M4" 189+32.34
Beg REMOVE FENCE
Beg FENCE (TYPE BW)
CONFORM
RESET GATE (METAL)
29.00'± Rt "M4" 189+03.64
END REMOVE FENCE
END FENCE (TYPE BW)
CONFORM
R/W

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH 9/23/2016
SUPERVISING ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER F. JOSE SILVA No. 55267 Exp. 09-30-2016 STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

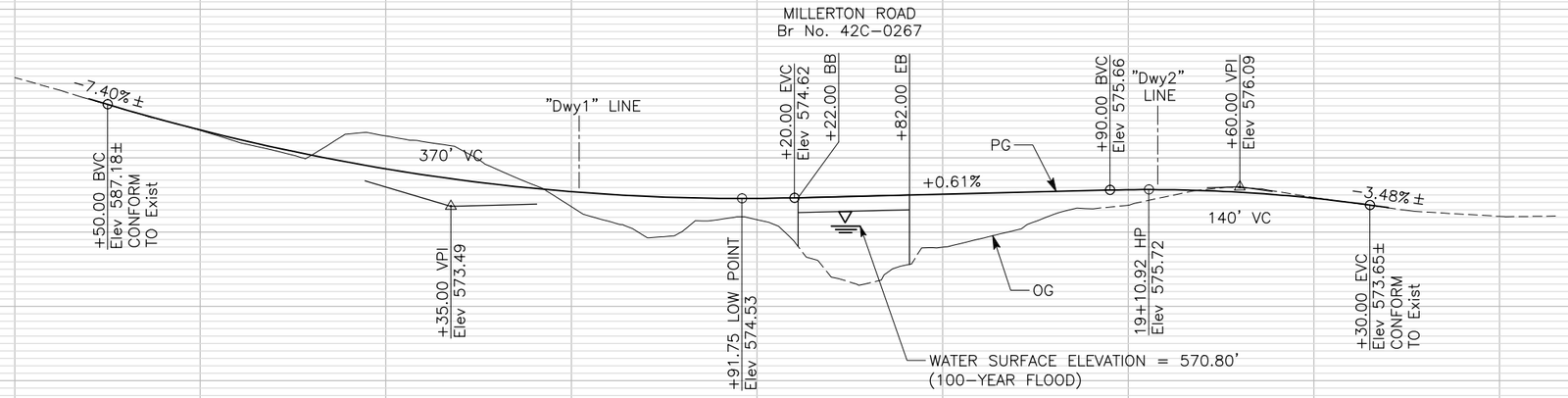
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

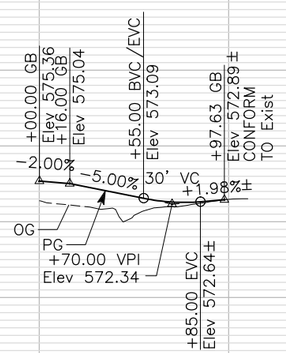
DEPARTMENT OF PUBLIC WORKS AND PLANNING

LAYOUT

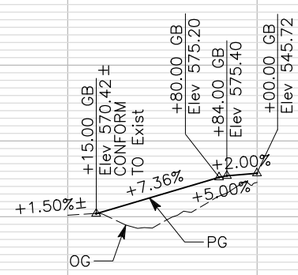
DRAWING NO. L-8 SHEET NO. 18 TOTAL 159



"M1" LINE
SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy1" LINE
SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy2" LINE
SCALE: Horiz 1"=40'
Vert 1"=10'

MILLERTON ROAD

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

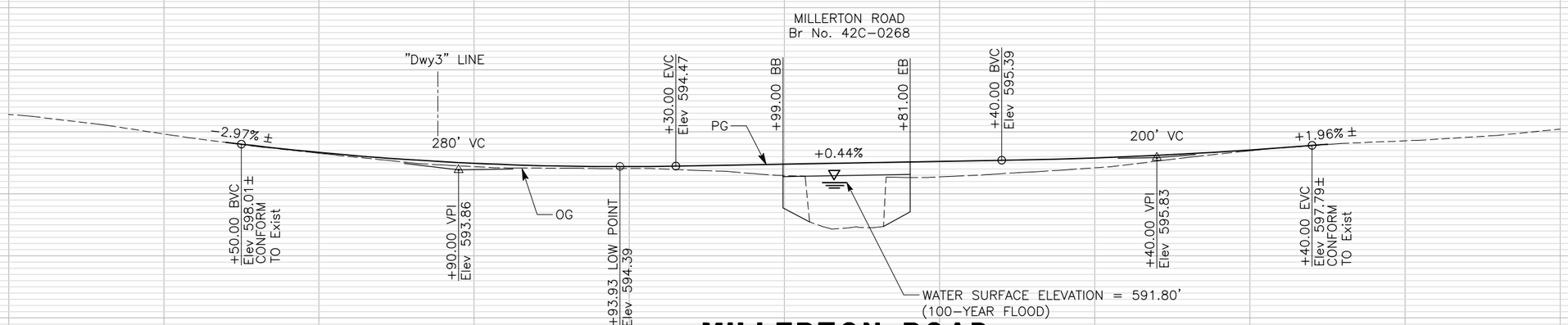
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROFILE

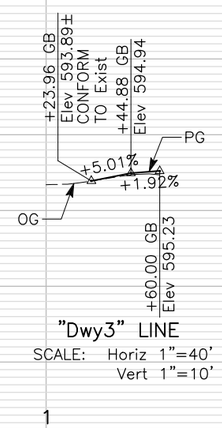
DRAWING NO. P-1 SHEET NO. 19 TOTAL 159



MILLERTON ROAD

"M2" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy3" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

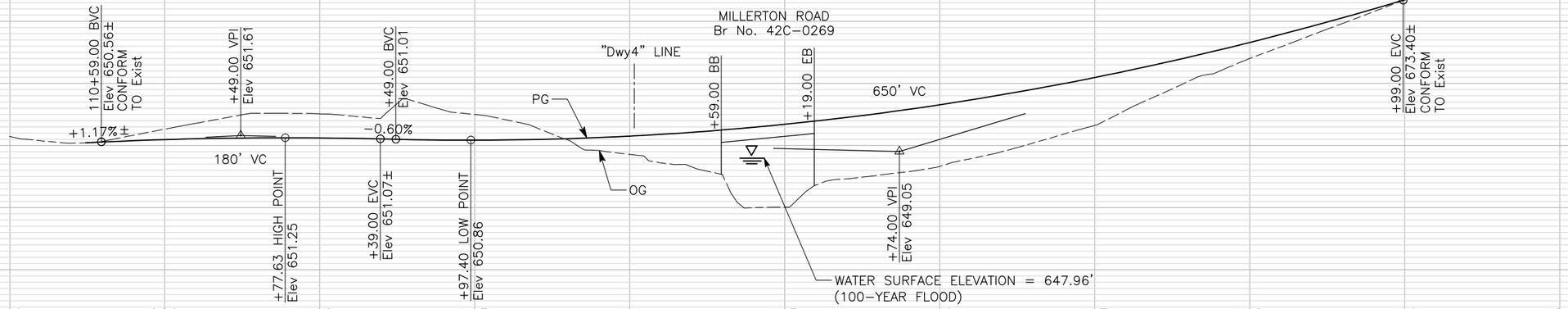
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROFILE

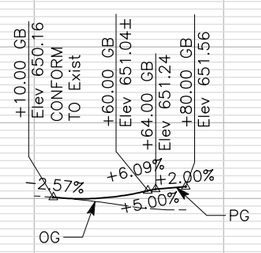
DRAWING NO. P-2 SHEET NO. 20 TOTAL 159



MILLERTON ROAD

"M3" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy4" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

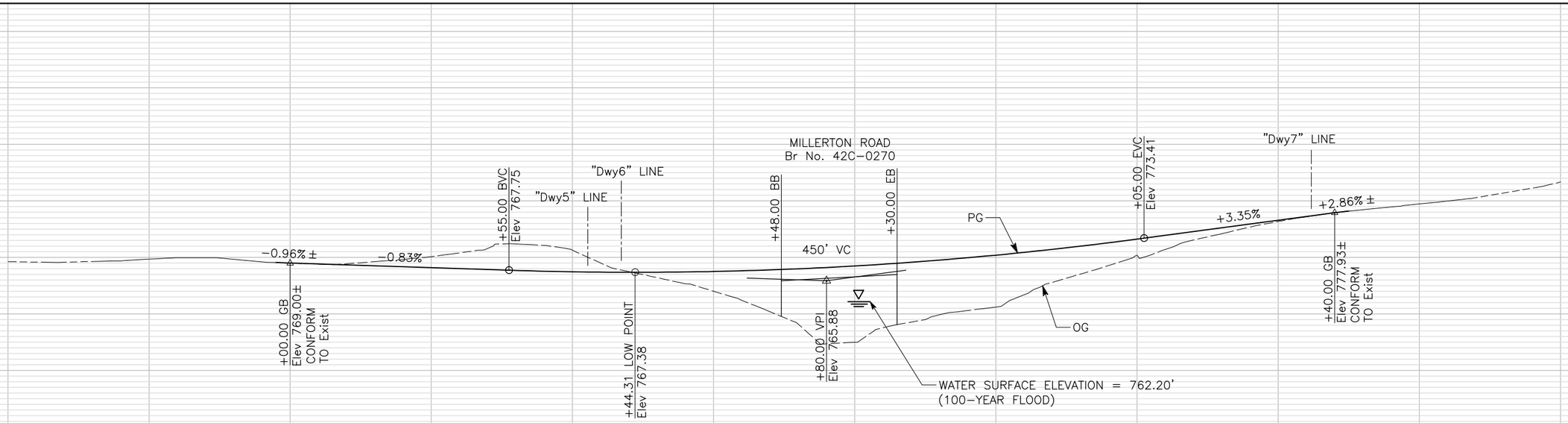
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PROFILE

DRAWING NO. P-3 SHEET NO. 21 TOTAL 159

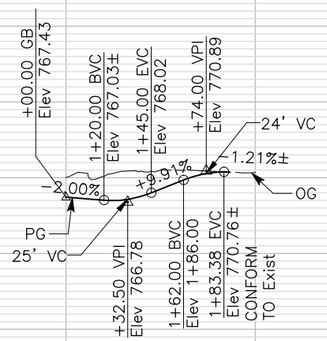
60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



MILLERTON ROAD

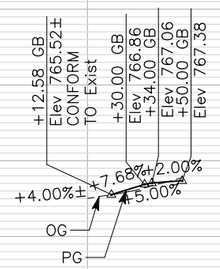
"M4" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'



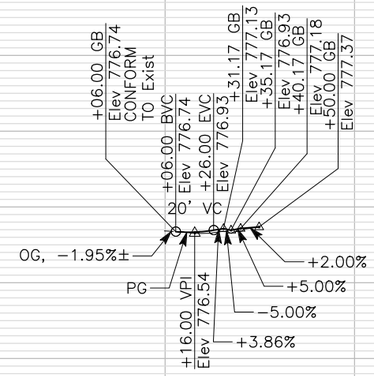
"Dwy5" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy6" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'



"Dwy7" LINE

SCALE: Horiz 1"=40'
Vert 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE		PROJECT	DEPARTMENT OF PUBLIC WORKS AND PLANNING
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN	MICHAEL PUGH, SUPERVISING ENGINEER, 9/23/2016 DATE	LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD, BRIDGE No. 42C-0270	PROFILE
DRAWN: S. MORALES	09/23/16					ROAD NO.	BRIDGE NO. 42C-0270
CHECKED: J. SILVA	09/23/16					DRAWING NO. P-4	SHEET NO. 22 TOTAL 159

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

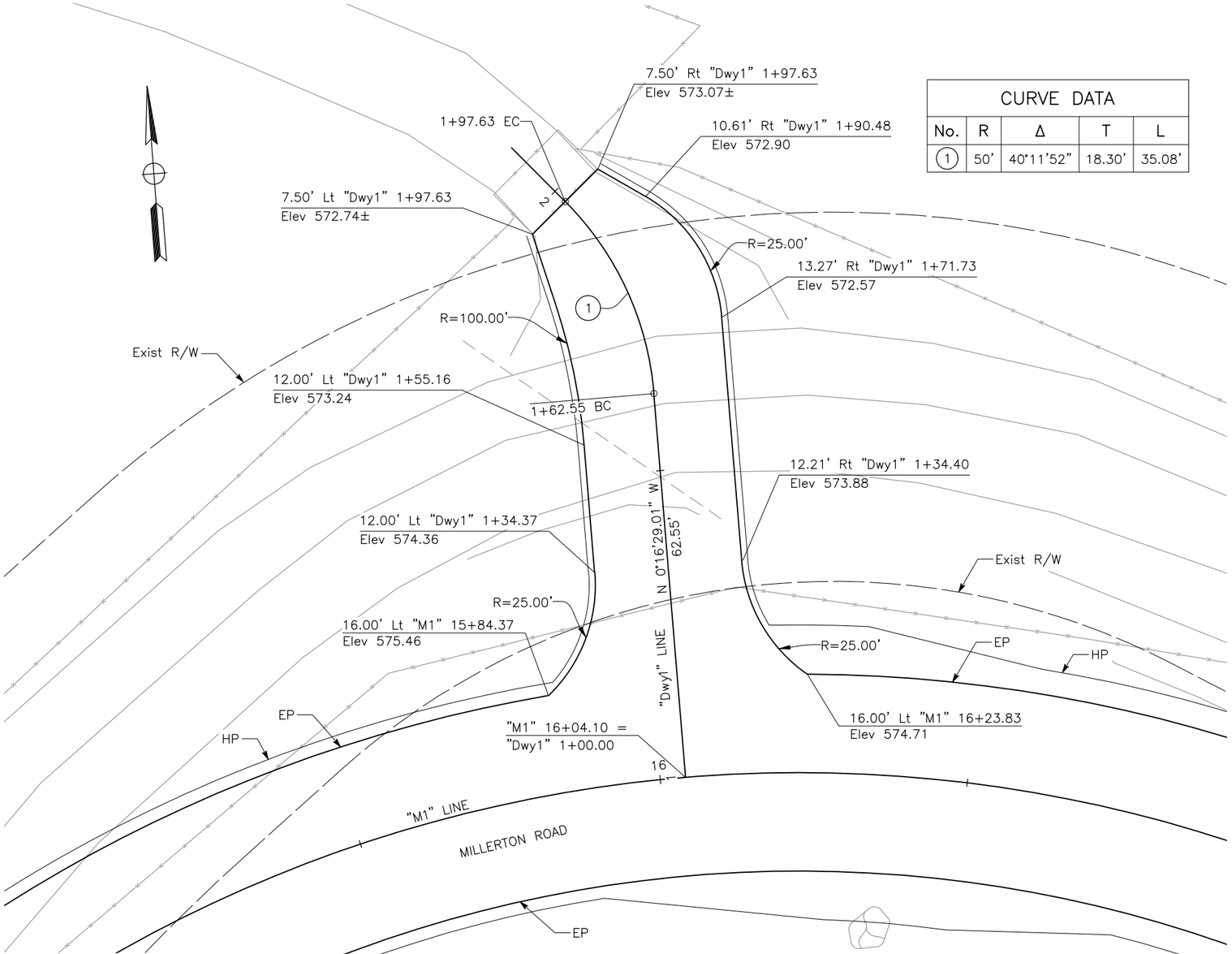
THE COUNTY OF FRESNO — 1856

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

NOTES:

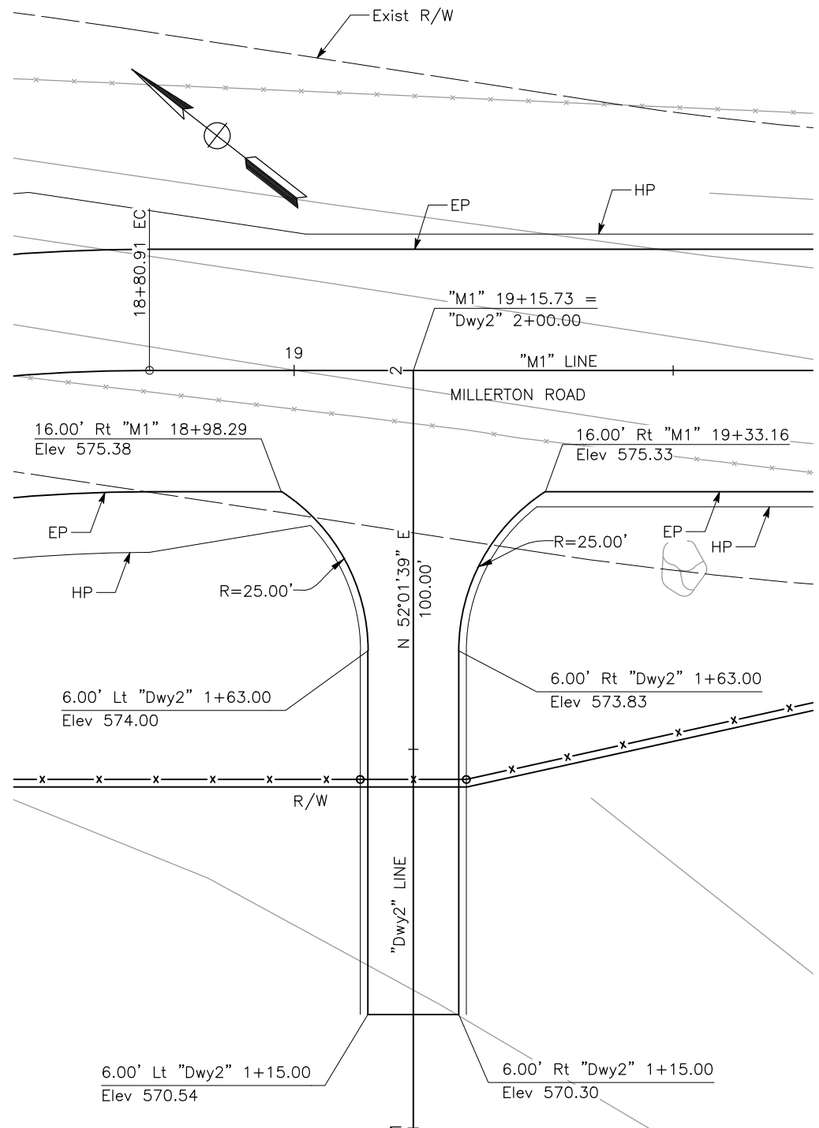
1. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE DATA				
No.	R	Δ	T	L
(1)	50'	40°11'52"	18.30'	35.08'



DRIVEWAY No. 1 DETAIL

SCALE: 1"=10'



DRIVEWAY No. 2 DETAIL

SCALE: 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

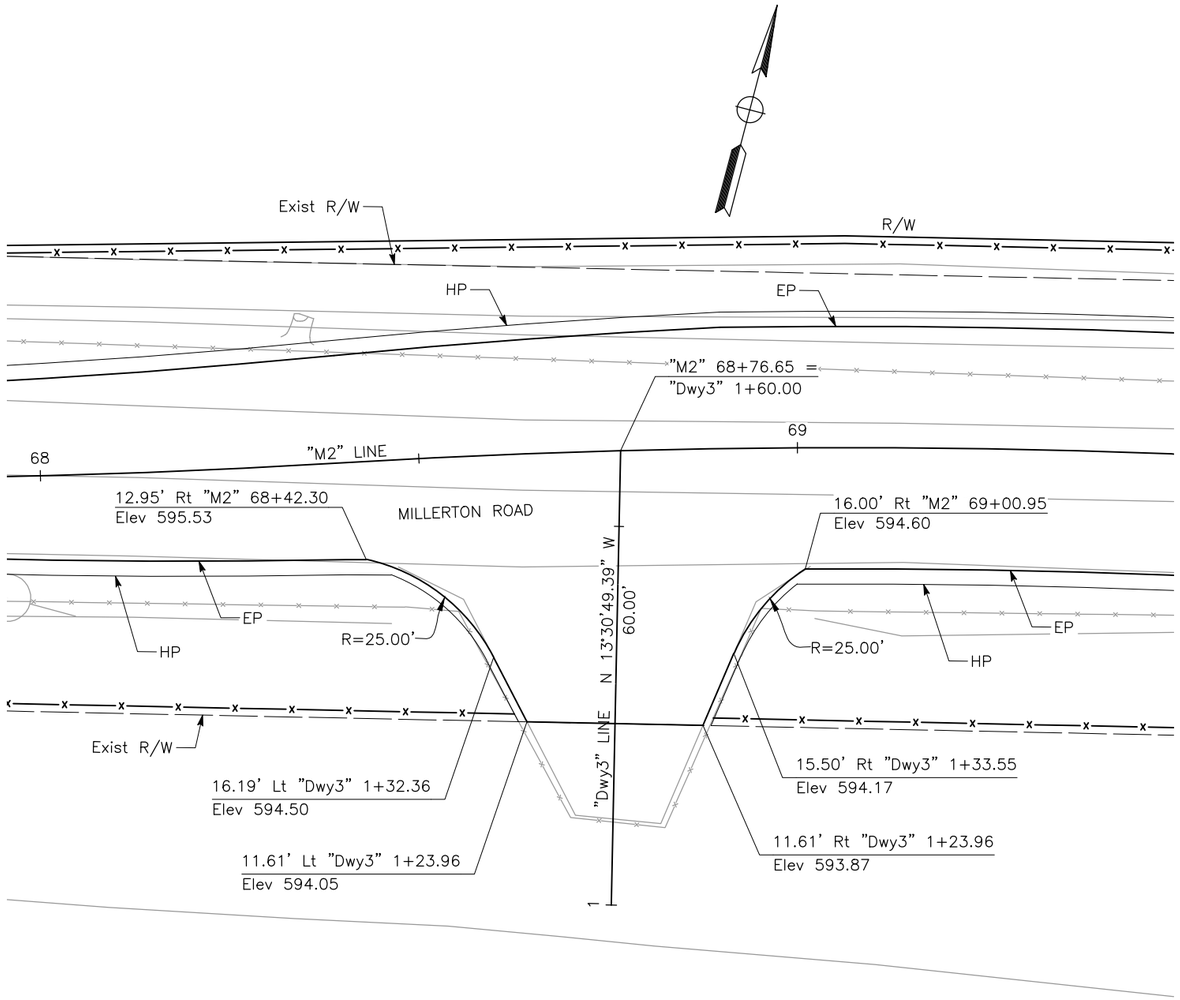
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-1 SHEET NO. 23 TOTAL 159

NOTES:

1. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



DRIVEWAY No. 3 DETAIL

SCALE: 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

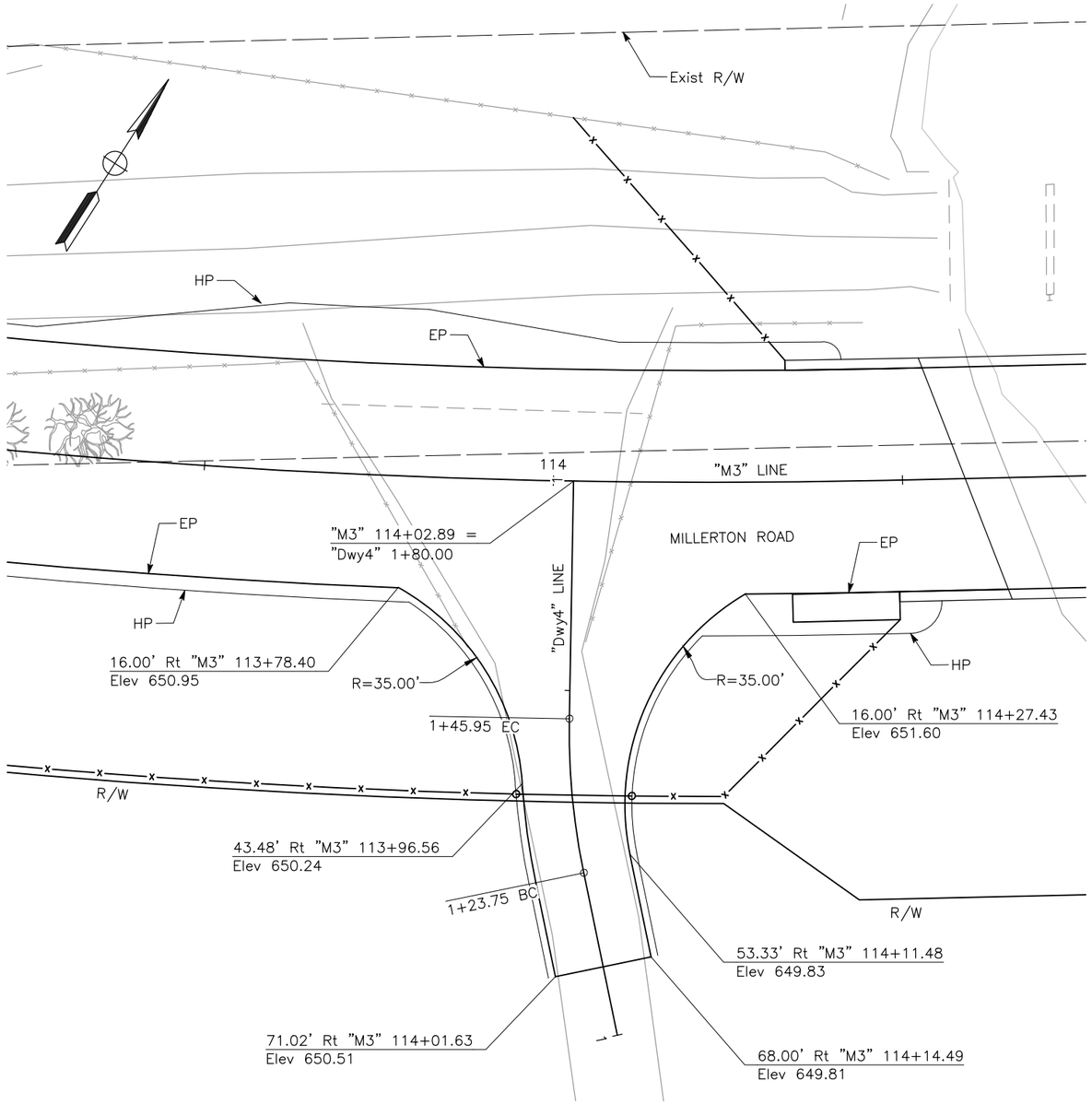
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-2 SHEET NO. 24 TOTAL 159

NOTES:

1. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



DRIVEWAY No. 4 DETAIL

SCALE: 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

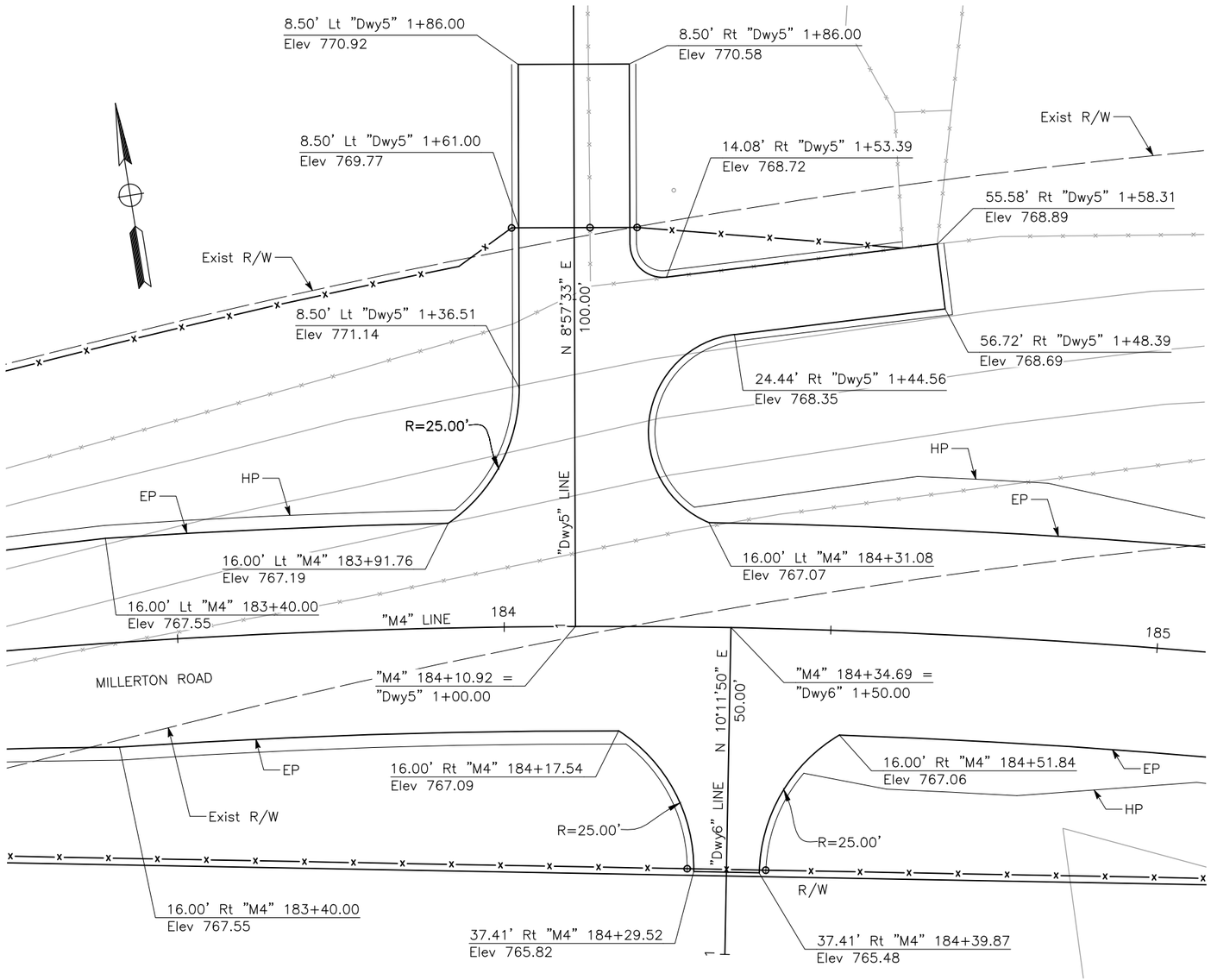
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-3 SHEET NO. 25 TOTAL 159

NOTES:

1. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

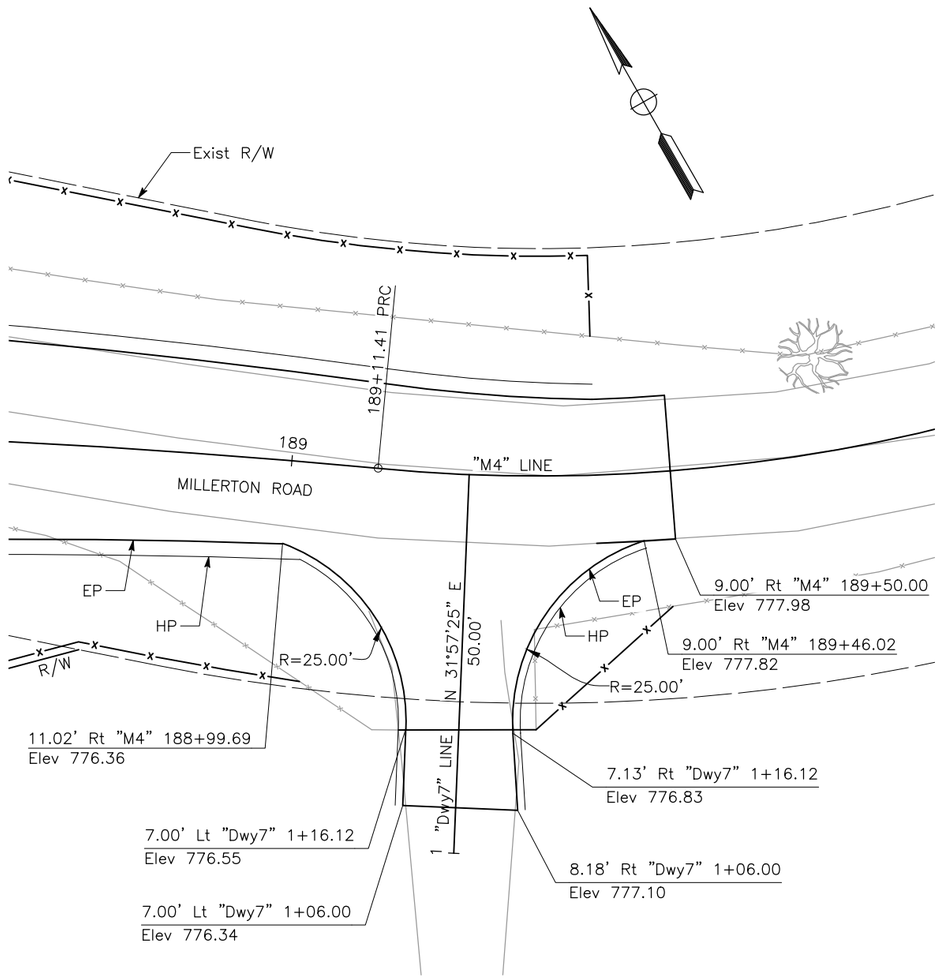


DRIVEWAY No. 5 DETAIL

SCALE: 1"=10'

DRIVEWAY No. 6 DETAIL

SCALE: 1"=10'



DRIVEWAY No. 7 DETAIL

SCALE: 1"=10'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	SCALE AS SHOWN
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-4 SHEET NO. 26 TOTAL 159

NOTES:

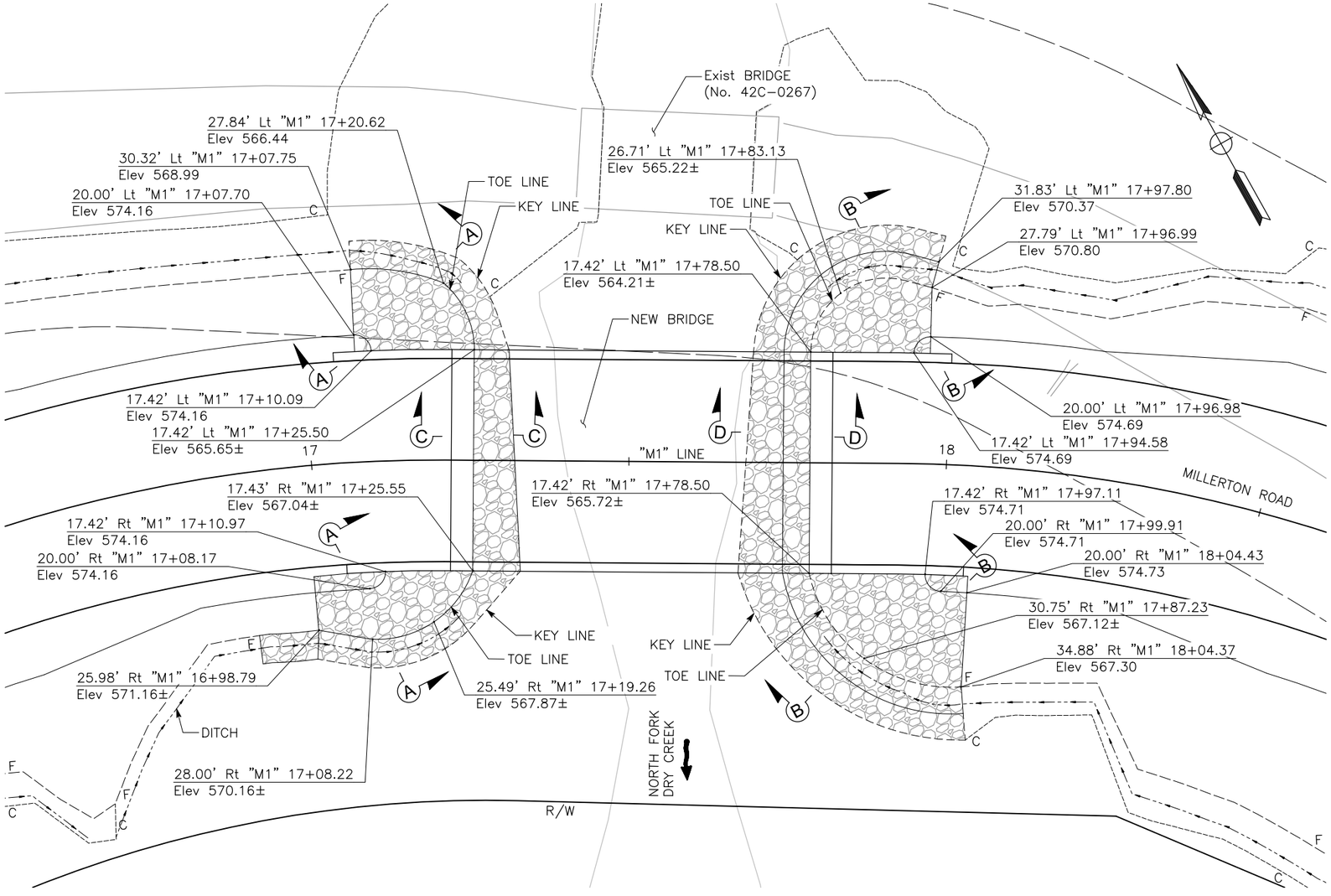
1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF ROCK SLOPE PROTECTION UNLESS OTHERWISE NOTED.

LEGEND:

ROCK SLOPE PROTECTION (300LB, CLASS IV, METHOD B)

C CUT

F FILL



ROCK SLOPE PROTECTION

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 10' 20'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-5 SHEET NO. 27 TOTAL 159

NOTES:

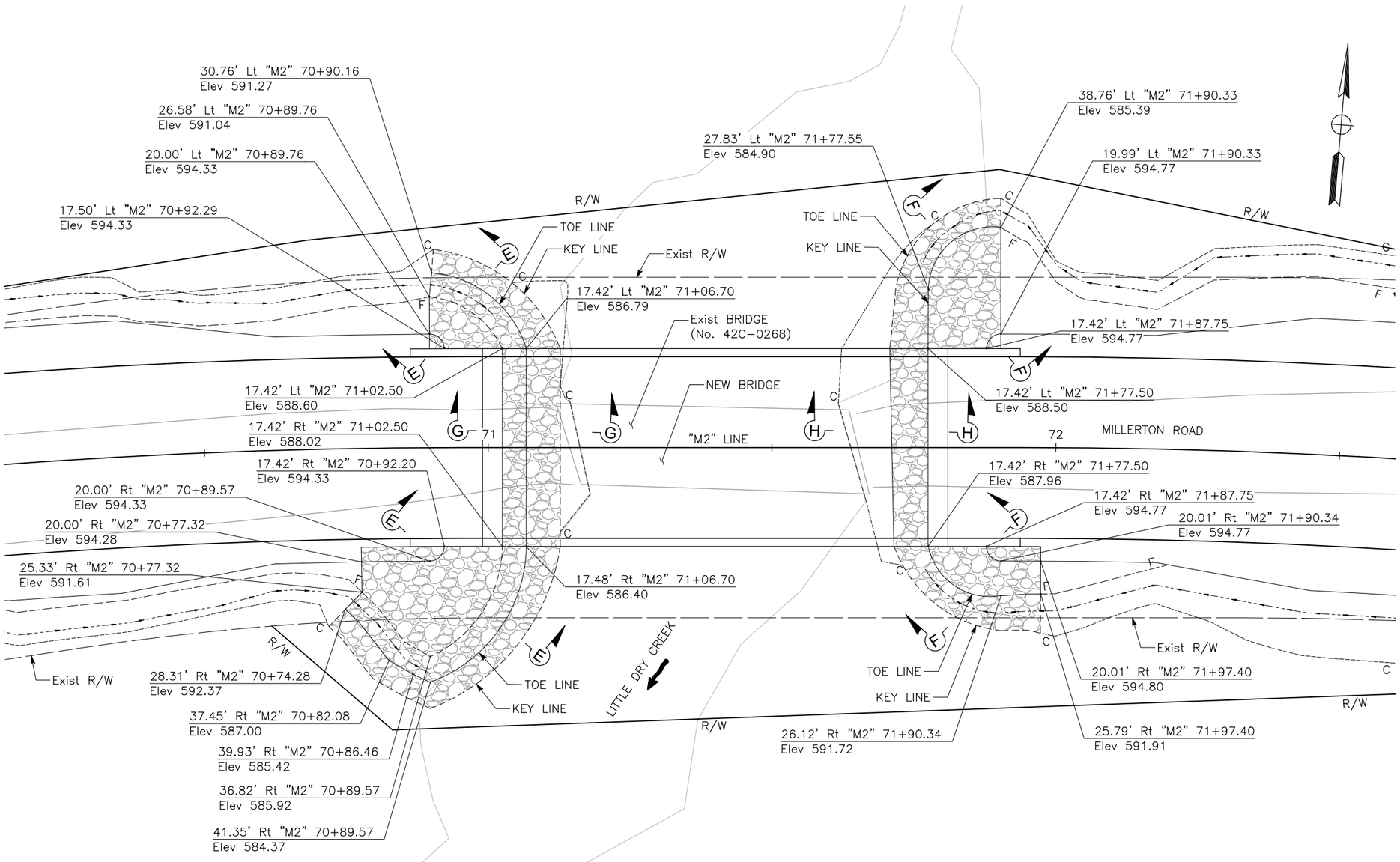
1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF ROCK SLOPE PROTECTION UNLESS OTHERWISE NOTED.

LEGEND:

ROCK SLOPE PROTECTION (300LB, CLASS IV, METHOD B)

C CUT

F FILL



ROCK SLOPE PROTECTION

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 10' 20'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA, No. 55267, Exp. 09-30-2016, STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

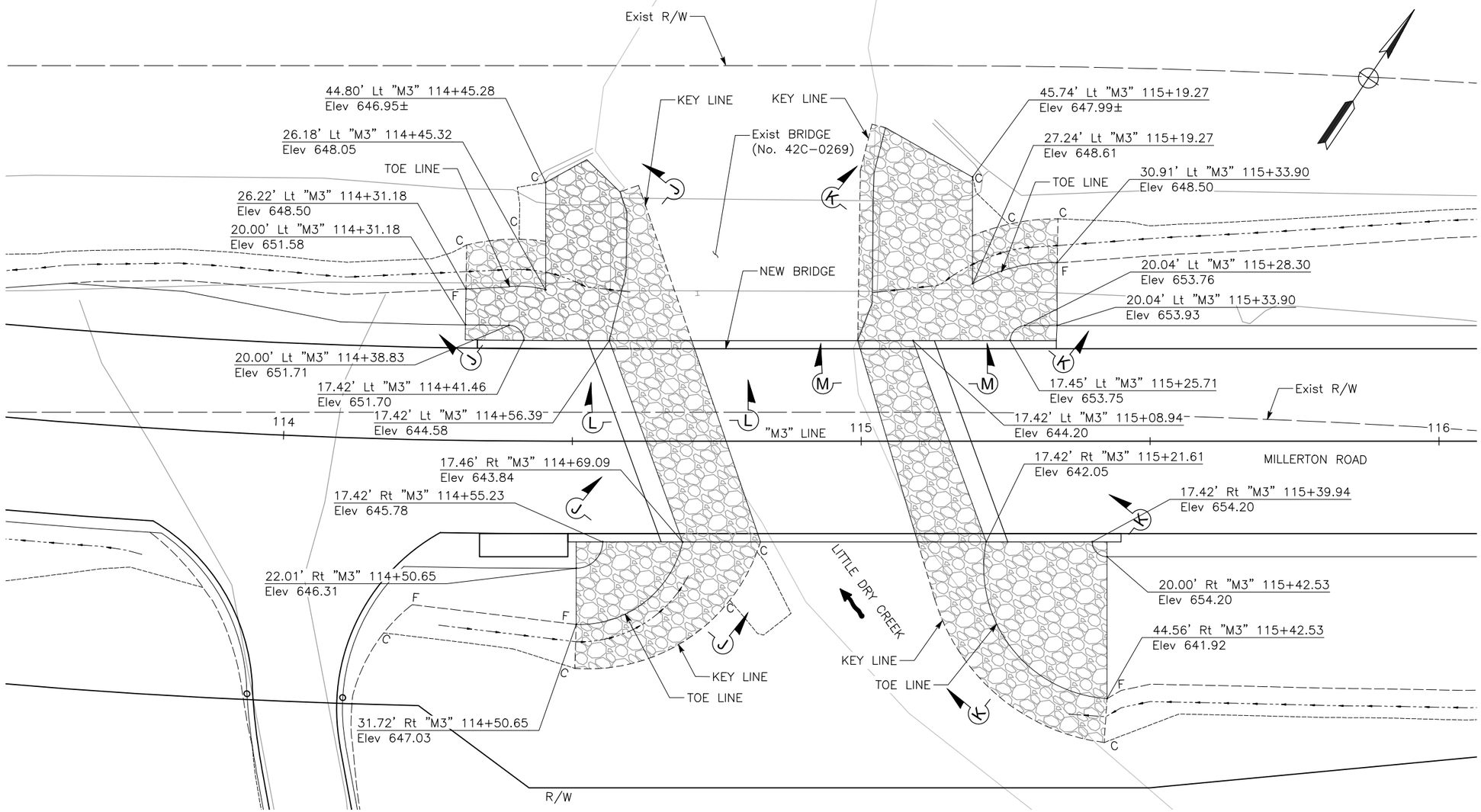
DRAWING NO. C-6 SHEET NO. 28 TOTAL 159

NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF ROCK SLOPE PROTECTION UNLESS OTHERWISE NOTED.

LEGEND:

- ROCK SLOPE PROTECTION (2000LB, CLASS VIII, METHOD B)
- C — CUT
- F — FILL



ROCK SLOPE PROTECTION

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 10' 20'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-7 SHEET NO. 29 TOTAL 159

NOTES:

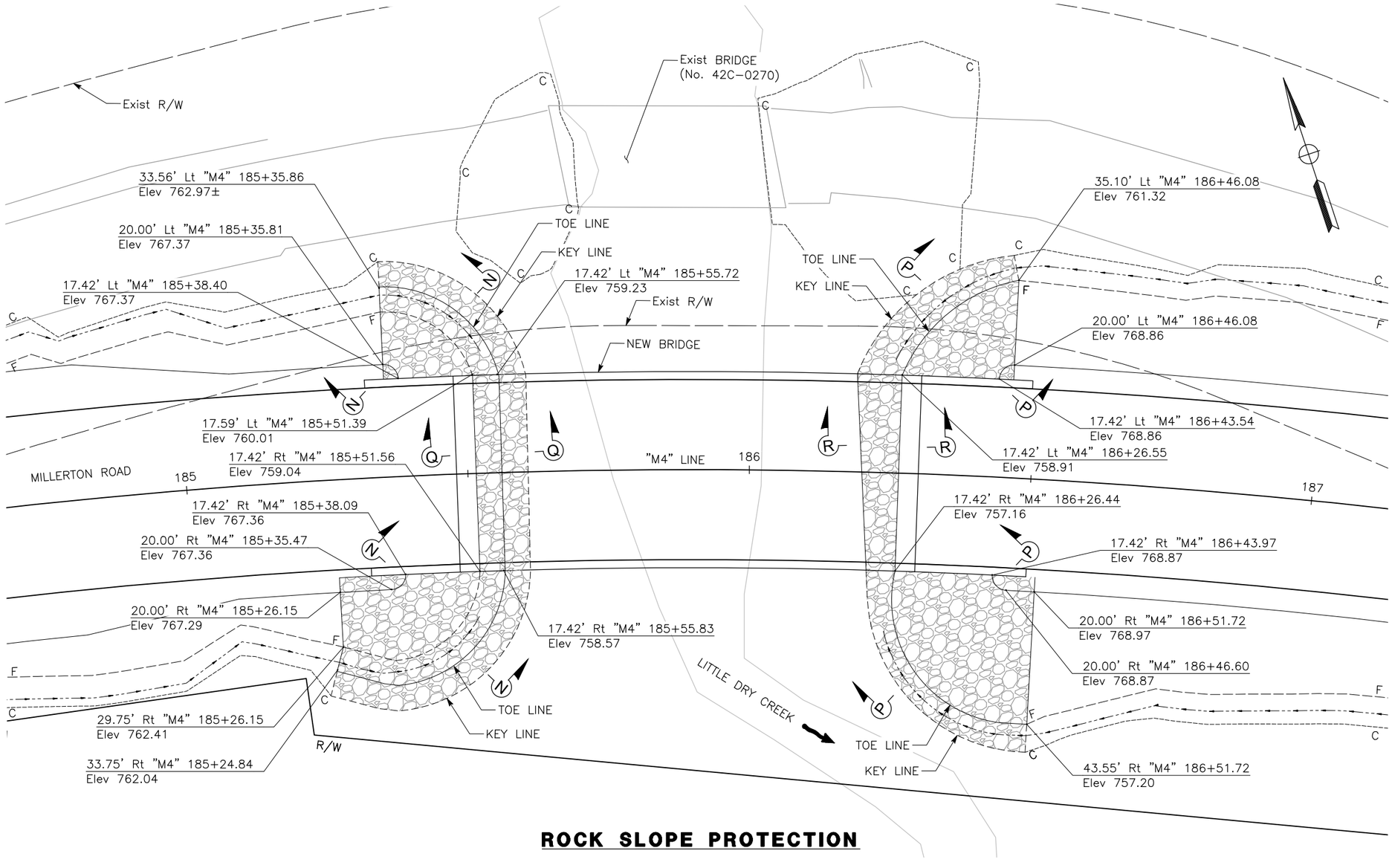
1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF ROCK SLOPE PROTECTION UNLESS OTHERWISE NOTED.

LEGEND:

ROCK SLOPE PROTECTION (300LB, CLASS IV, METHOD B)

C CUT

F FILL



ROCK SLOPE PROTECTION

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 10′ 20′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

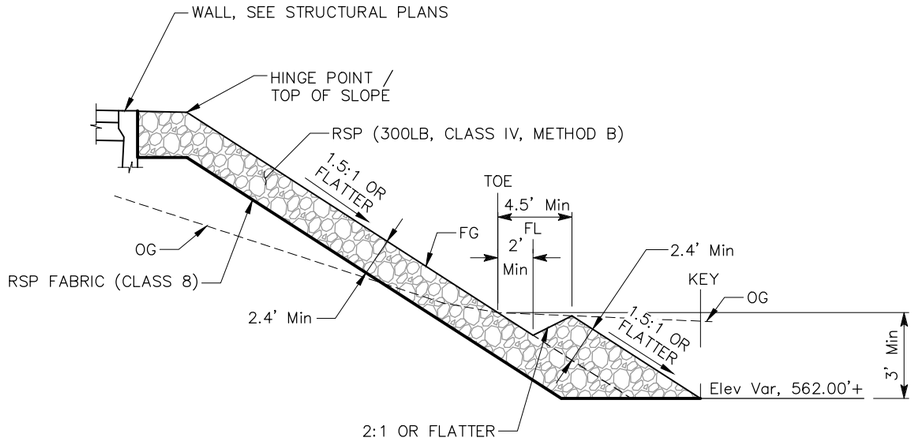
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

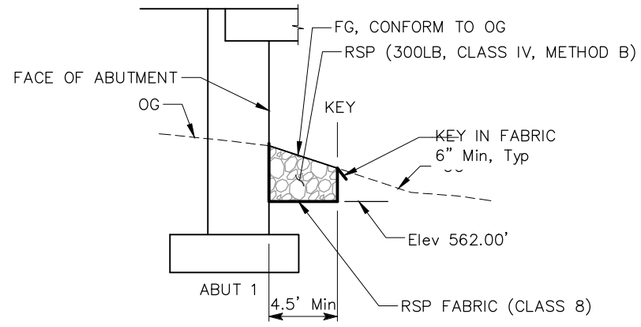
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

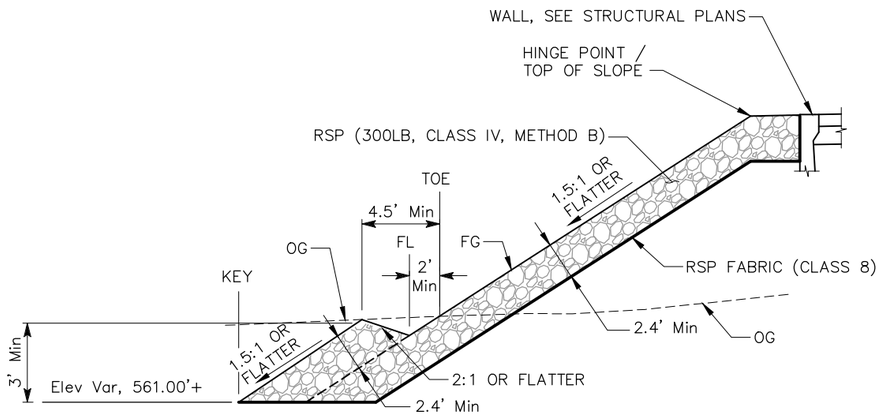
DRAWING NO. C-8 SHEET NO. 30 TOTAL 159



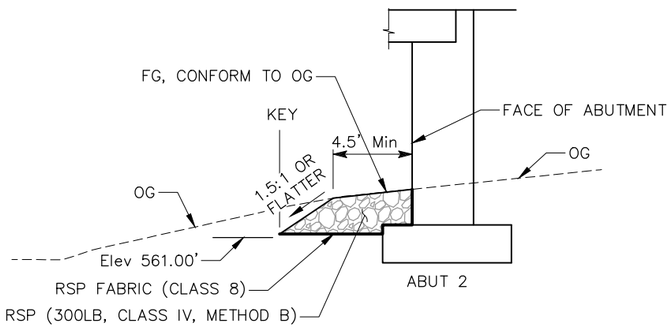
SECTION A - A



SECTION C - C



SECTION B - B



SECTION D - D

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

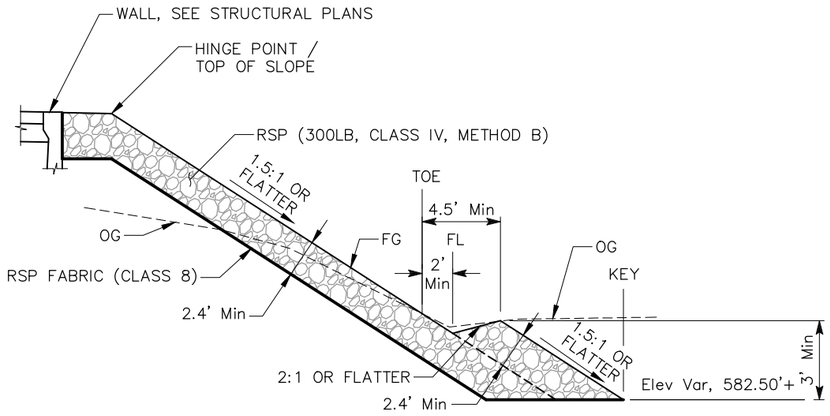
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

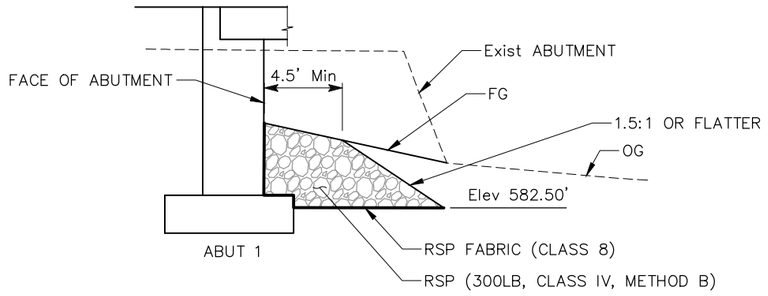
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

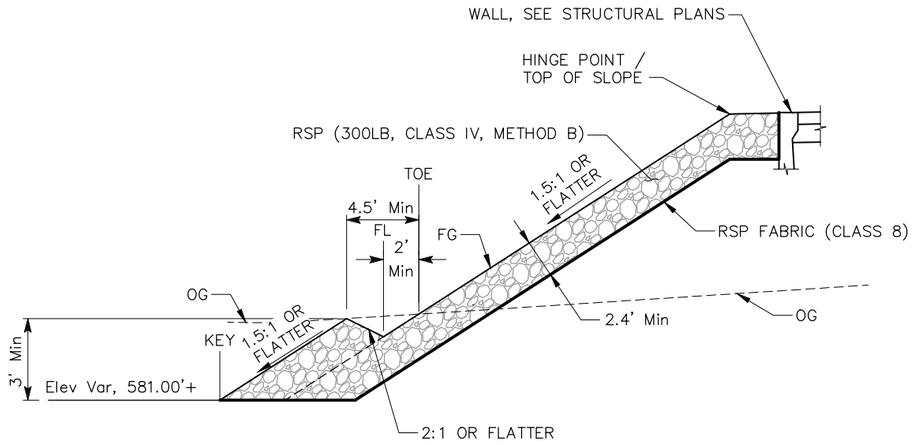
DRAWING NO. C-9 SHEET NO. 31 TOTAL 159



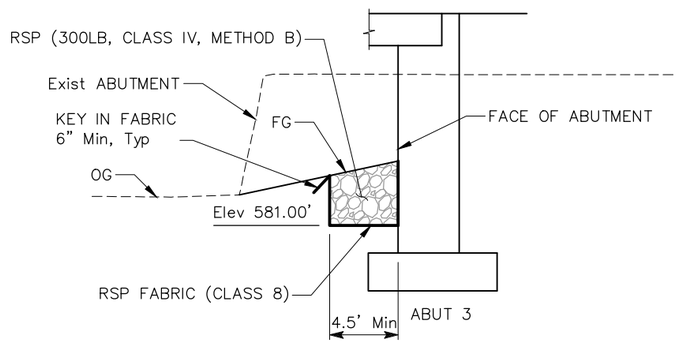
SECTION E - E



SECTION G - G



SECTION F - F



SECTION H - H

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

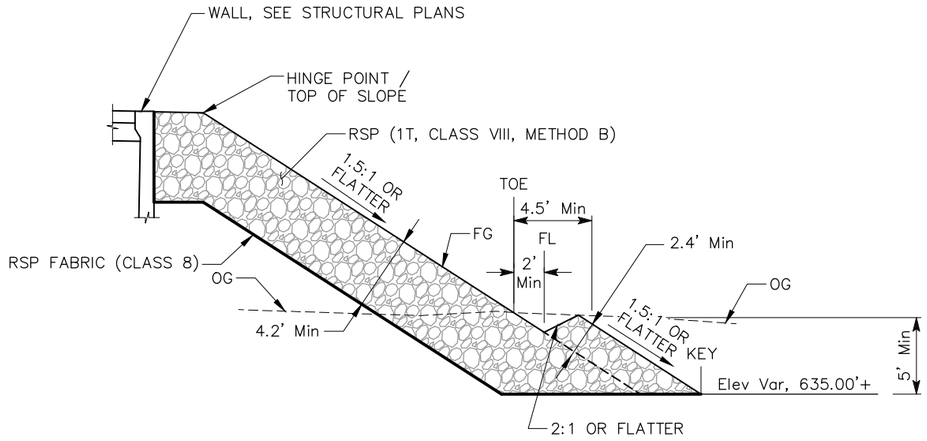
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

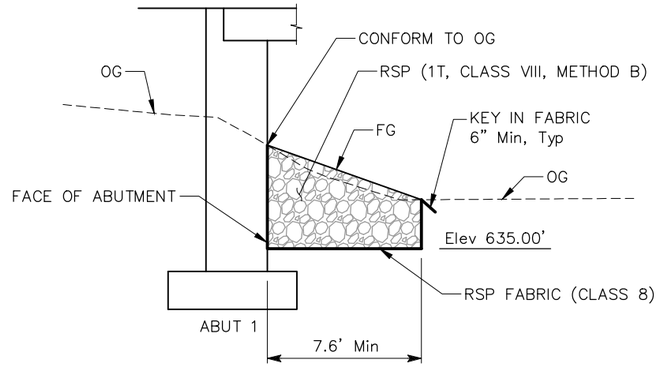
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

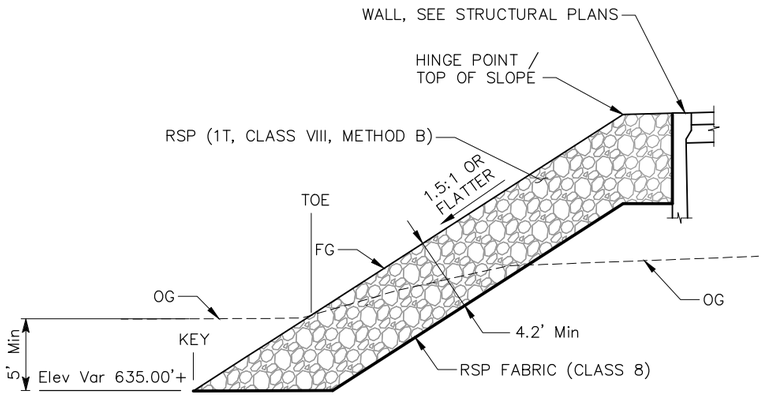
DRAWING NO. C-10 SHEET NO. 32 TOTAL 159



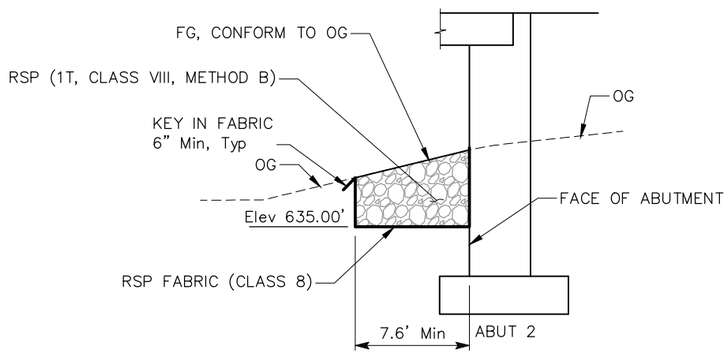
SECTION J - J



SECTION L - L



SECTION K - K



SECTION M - M

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

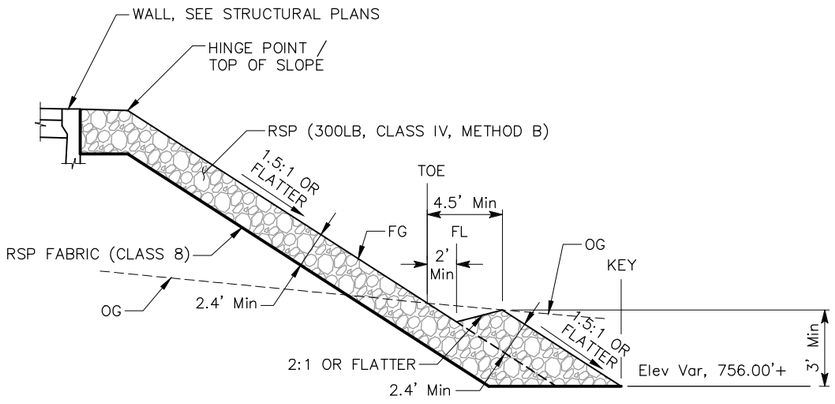
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

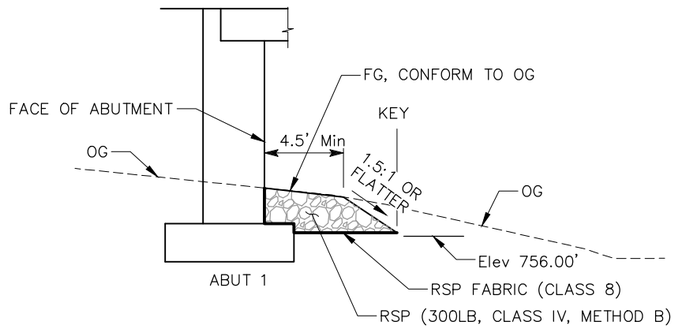
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

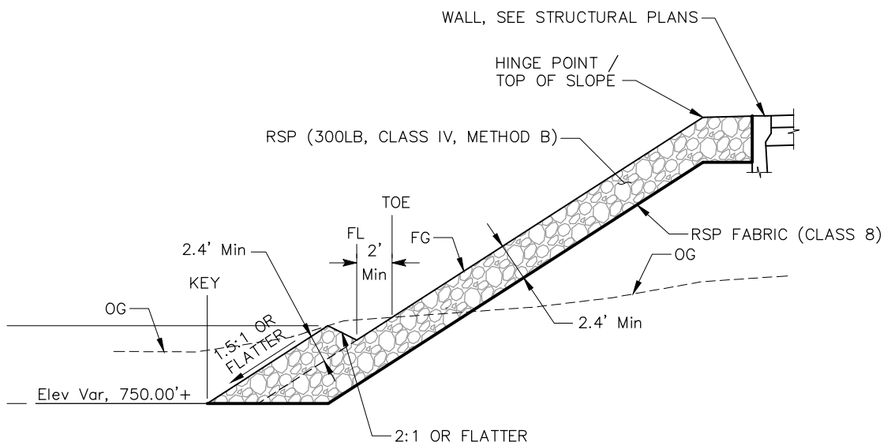
DRAWING NO. C-11 SHEET NO. 33 TOTAL 159



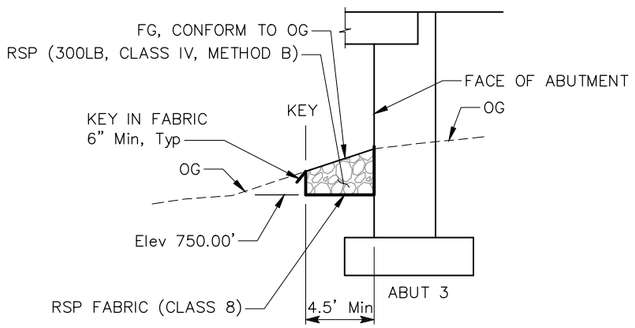
SECTION N - N



SECTION Q - Q



SECTION P - P



SECTION R - R

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

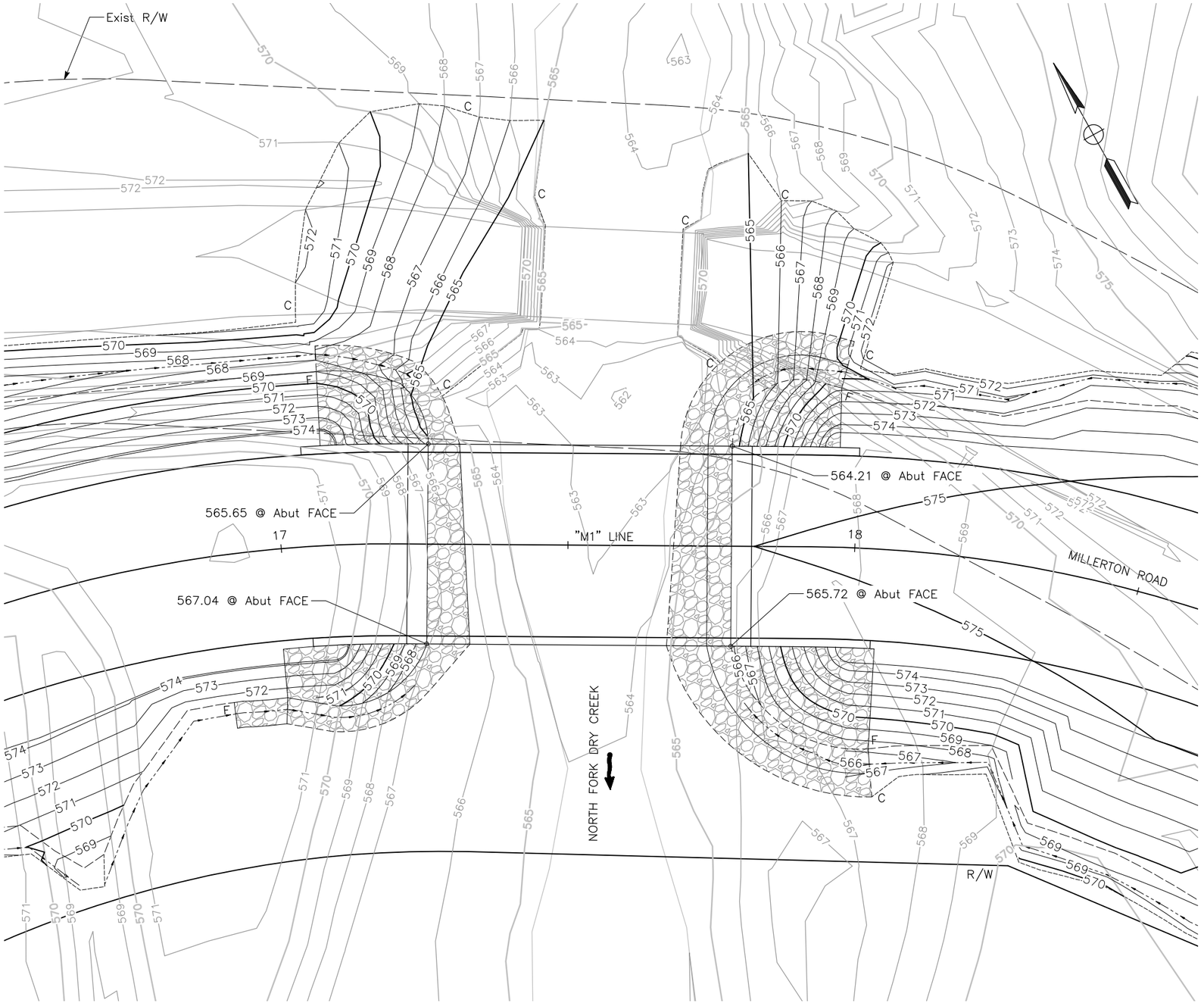
DRAWING NO. C-12 SHEET NO. 34 TOTAL 159

NOTES:

1. CONTOURS SHOWN AT 1' INTERVALS.
2. SEE BRIDGE PLANS FOR BRIDGE DECK CONTOUR DETAILS.

LEGEND:

ROCK SLOPE PROTECTION
(300LB, CLASS IV, METHOD B)



APPROVED FOR CONTOUR GRADING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 10' 20'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-13 SHEET NO. 35 TOTAL 159

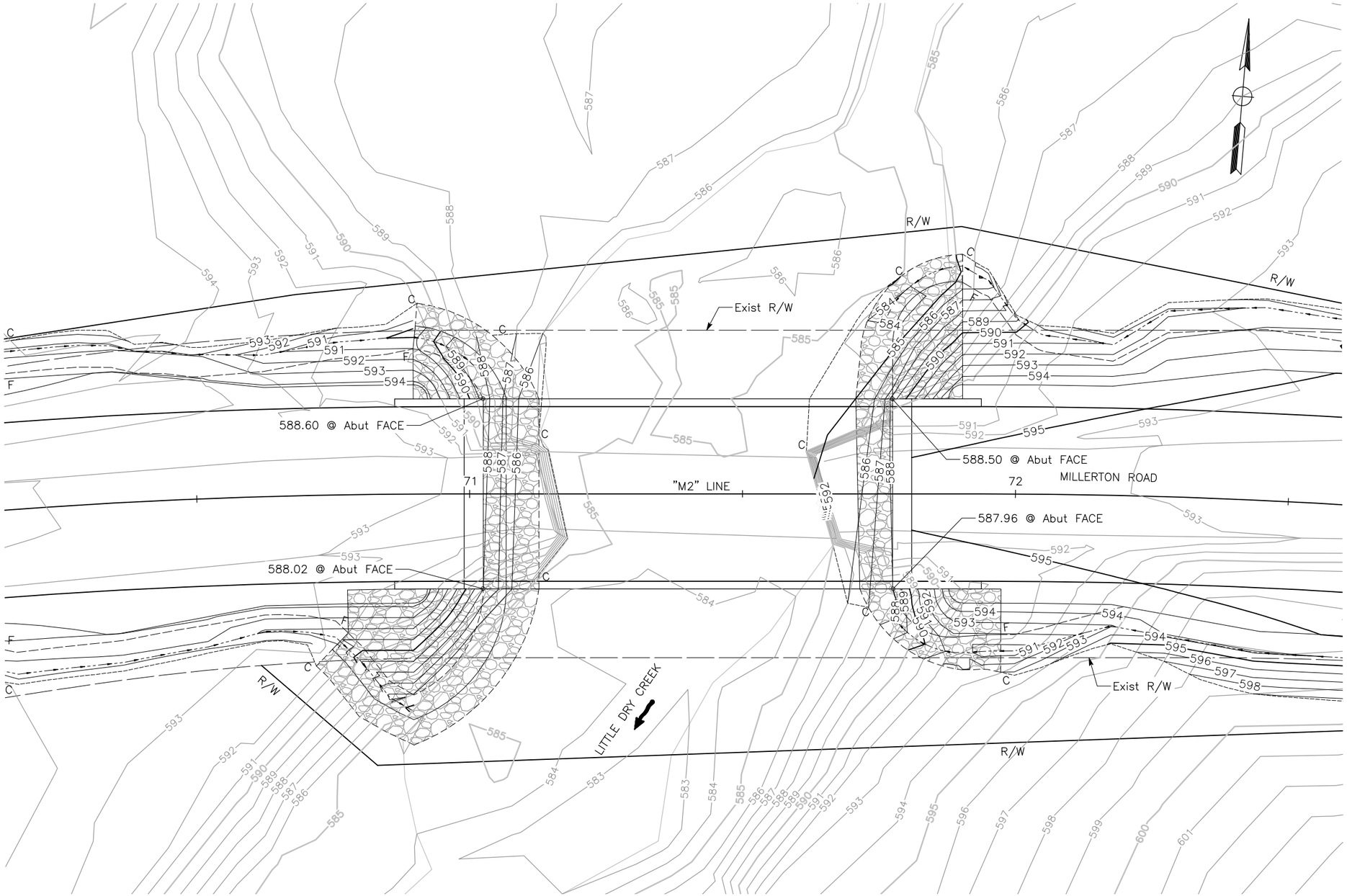
60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN AT 1' INTERVALS.
2. SEE BRIDGE PLANS FOR BRIDGE DECK CONTOUR DETAILS.

LEGEND:

ROCK SLOPE PROTECTION (300LB, CLASS IV, METHOD B)



APPROVED FOR CONTOUR GRADING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 10' 20'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-14 SHEET NO. 36 TOTAL 159

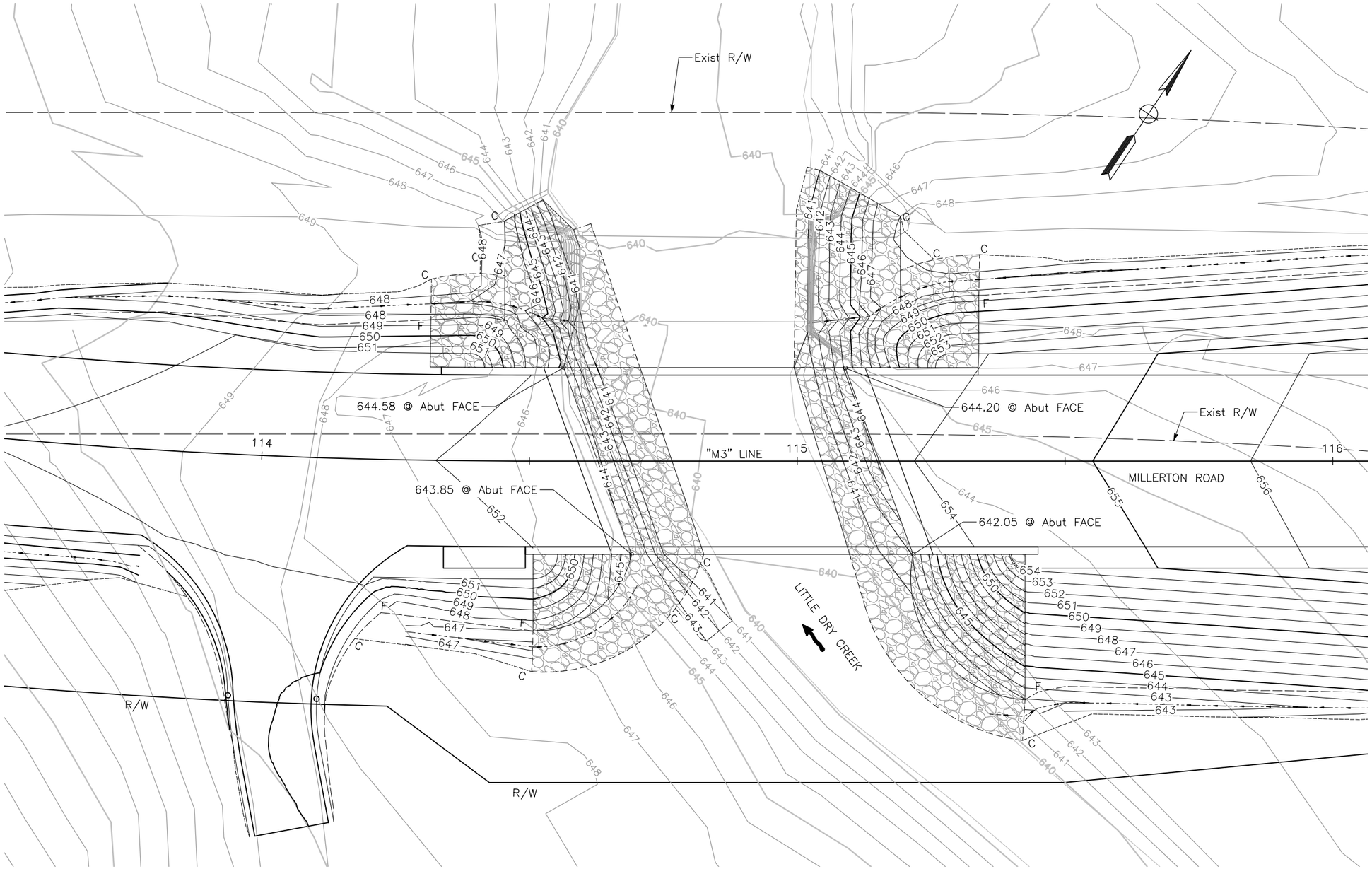
60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN AT 1' INTERVALS.
2. SEE BRIDGE PLANS FOR BRIDGE DECK CONTOUR DETAILS.

LEGEND:

ROCK SLOPE PROTECTION (2000LB, CLASS VIII, METHOD B)



APPROVED FOR CONTOUR GRADING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 10' 20'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-15 SHEET NO. 37 TOTAL 159

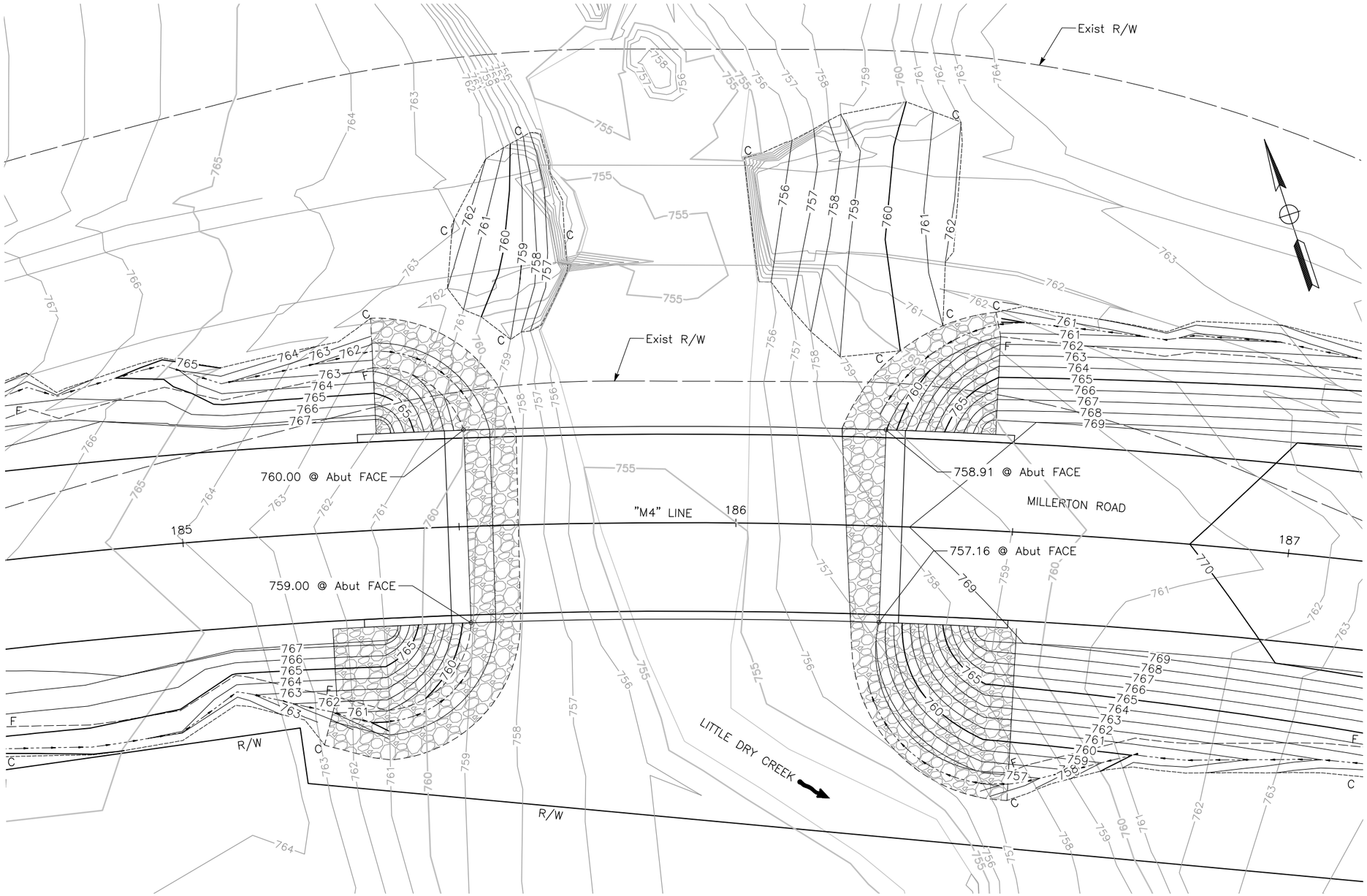
60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. CONTOURS SHOWN AT 1' INTERVALS.
2. SEE BRIDGE PLANS FOR BRIDGE DECK CONTOUR DETAILS.

LEGEND:

ROCK SLOPE PROTECTION (300LB, CLASS IV, METHOD B)



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR CONTOUR GRADING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 10' 20'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

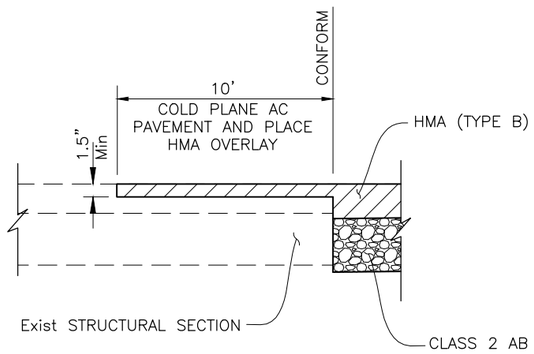
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-16 SHEET NO. 38 TOTAL 159



HMA PAVEMENT TRANSITION DETAIL

NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267, 42C-0268, 42C-0269, 42C-0270

ROAD NO. BRIDGE NO.

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION DETAILS

DRAWING NO. C-17 SHEET NO. 39 TOTAL 159

LEGEND:

- STRUCTURE WORK
- ROADWAY WORK
- BRIDGE REMOVAL
- ROADWAY WORK TO BE COMPLETED PRIOR TO NEXT STAGE
- STAGING AREA
- NS–3: PAVING AND GRINDING OPERATIONS
- SDR — NS–15: STRUCTURE DEMOLITION/REMOVAL OVER OR ADJACENT TO WATER

TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)

TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1) FROM PREVIOUS STAGE

SC–4: TEMPORARY CHECK DAM (TYPE 2)

SC–4: TEMPORARY CHECK DAM (TYPE 2) FROM PREVIOUS STAGE

SC–1: TEMPORARY SILT FENCE

SC–10: TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)

WM–8: TEMPORARY CONCRETE WASHOUT

NS–8: VEHICLE AND EQUIPMENT CLEANING

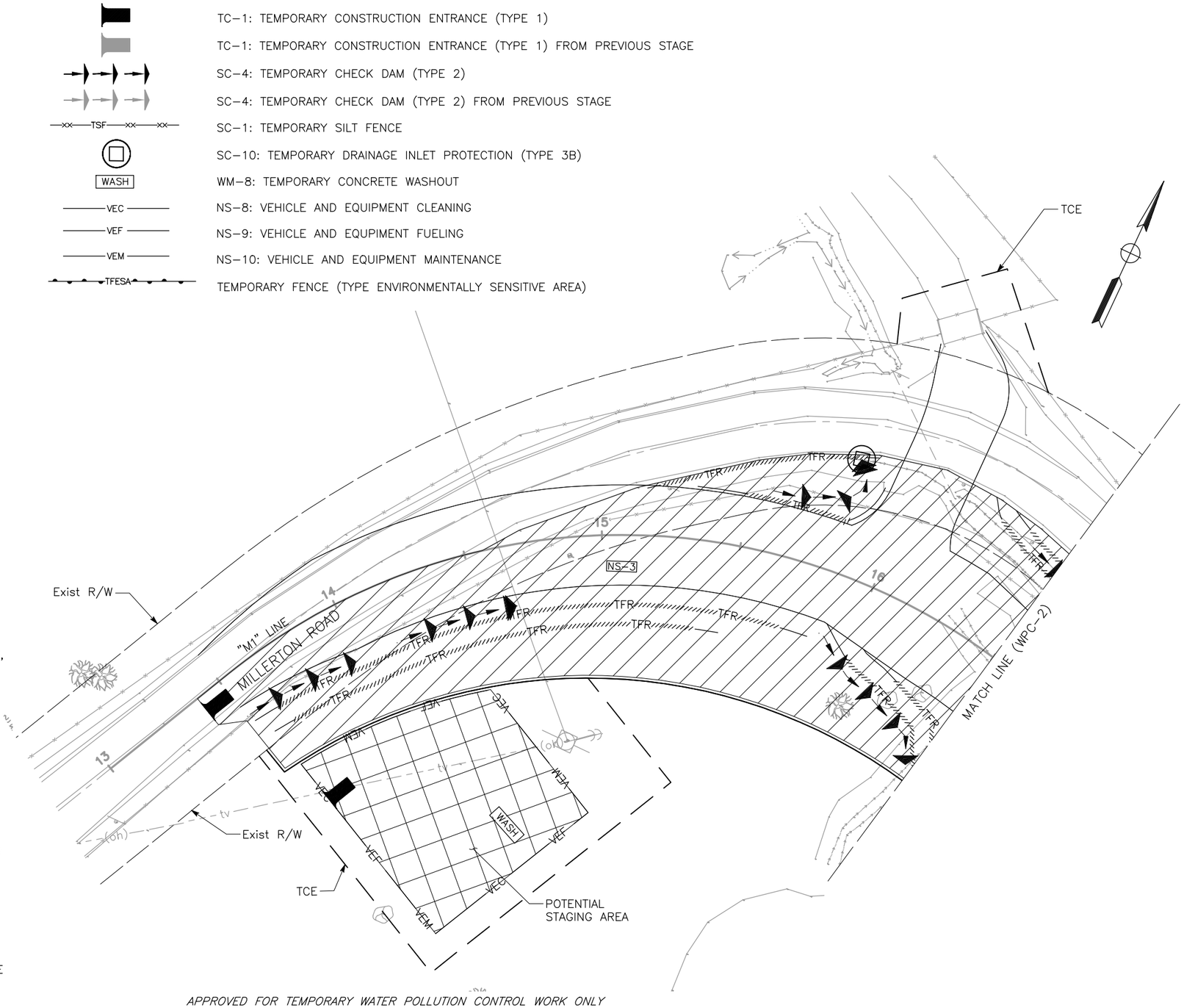
NS–9: VEHICLE AND EQUPIMENT FUELING

NS–10: VEHICLE AND EQUIPMENT MAINTENANCE

TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

WATER POLLUTION CONTROL NOTES

1. THE INFORMATION ON THESE PLANS IN INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO INSTALL WATER POLLUTION CONTROL DEVICES AT GENERAL LOCATIONS THROUGHOUT THE SITE. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE NARRATIVE SECTION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
2. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THESE DRAWINGS.
3. INSTALL PERMANENT EROSION CONTROL AS AREAS ARE DETERMINED TO BE SUBSTANTIALLY COMPLETE. SEE EROSION CONTROL PLANS FOR DETAILS.
4. SEE LAYOUTS FOR LOCATION AND LIMITS ON CONSTRUCTION.
5. CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE/EXIT. CONSTRUCT ADDITIONAL ENTRANCES/EXITS AS NEEDED. LIMIT CONSTRUCTION ACTIVITY TO AND FROM THE PROJECT TO THESE STABILIZED CONSTRUCTION ENTRANCES/EXITS.
6. DESIGNATE A STAGING AREA AT THE PROJECT SITE TO BE APPROVED BY THE ENGINEER. BMPS SELECTED FOR THE CONSTRUCTION SITE WILL ALSO BE IMPLEMENTED IN THE STAGING AREA. SPECIAL ATTENTION TO THE FOLLOWING BMPS WILL BE TAKEN AT THE STAGING AREA: TC–1, WE–1, NS–8, NS–9, NS–10, WM–1, WM–2, WM–3, WM–4, WM–5, WM–6, WM–8, AND WM–9. VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE ARE PROHIBITED WITHIN CONSTRUCTION AREA.
7. LOCATE ANY STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ALL STOCKPILES MUST BE BERMED. ADDITIONALLY, COVER STOCKPILES AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. SPRAY STOCKPILES THAT ARE DESTABILIZED DURING CONSTRUCTION ACTIVITIES WITH WATER AS NEEDED FOR DUST CONTROL.
8. CONSTRUCT OR PLACE AN ABOVE GRADE OR MOBILE CONRETE WASHOUT AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON–SITE. LOCATE THE WASHOUT A MINIMUM 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. UTILIZE ADDITIONAL WASHOUTS AS NEEDED.
9. UTILIZE A LICENSED SERVICE TO DELIVER AND MAINTAIN PORTABLE RESTROOMS TO THE PROJECT AREA IF NEEDED. LOCATE THE RESTROOMS AWAY FROM DRAINAGE FACILITIES ON LEVEL HARD–PACKED OR PAVED SURFACES.
10. INSTALL TEMPORARY FENCE (TYPE ESA) AS DIRECTED BY COUNTY'S CONSULTING ARCHAEOLOGIST AND ENGINEER. ADJUST TEMPORARY FENCE (TYPE ESA) FOR CHANNEL GRADING. CONTRACTOR SHALL NOTIFY COUNTY 48 HOURS PRIOR TO ESA FENCE INSTALLATION.



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

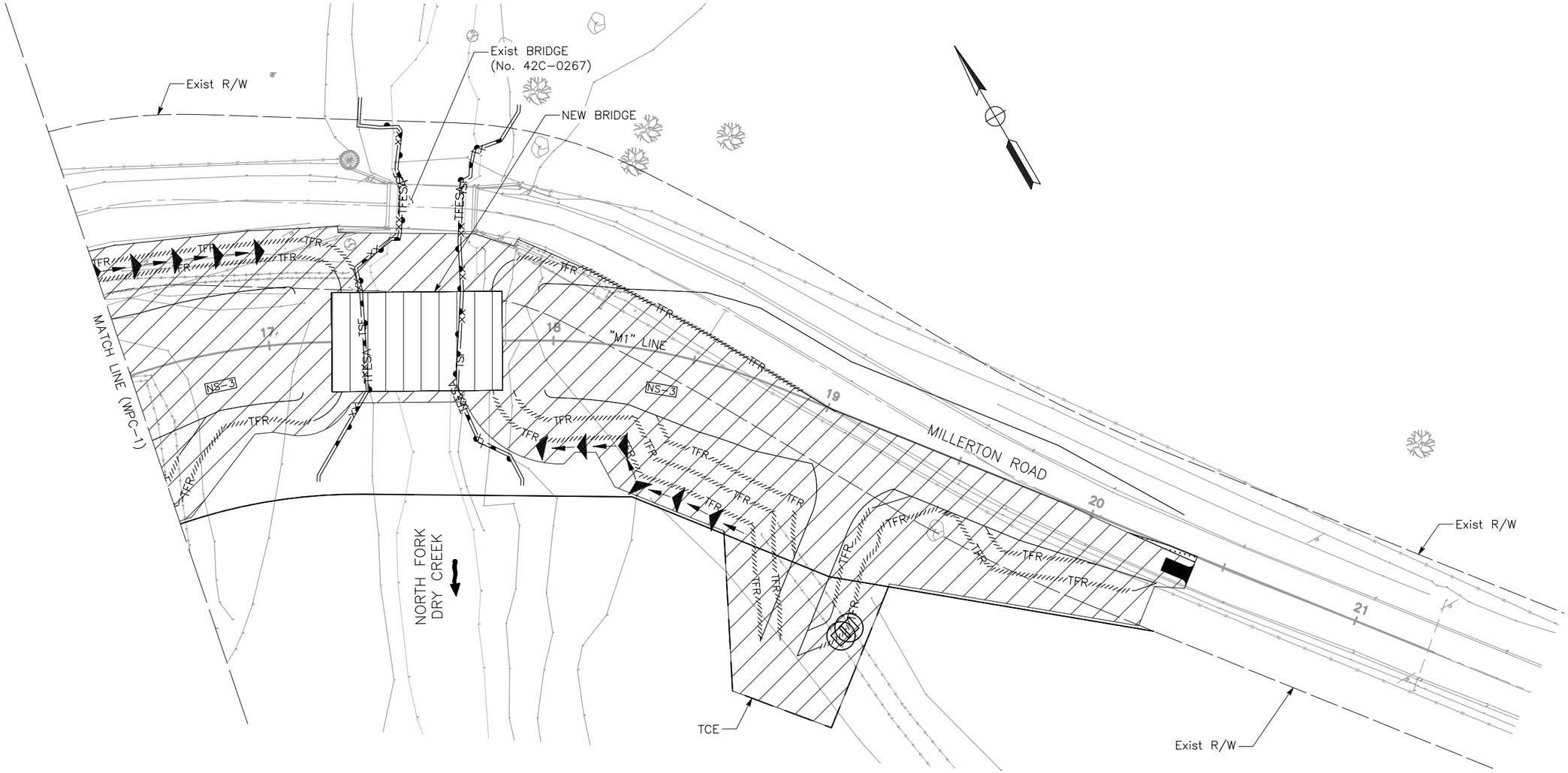
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-1 SHEET NO. 40 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

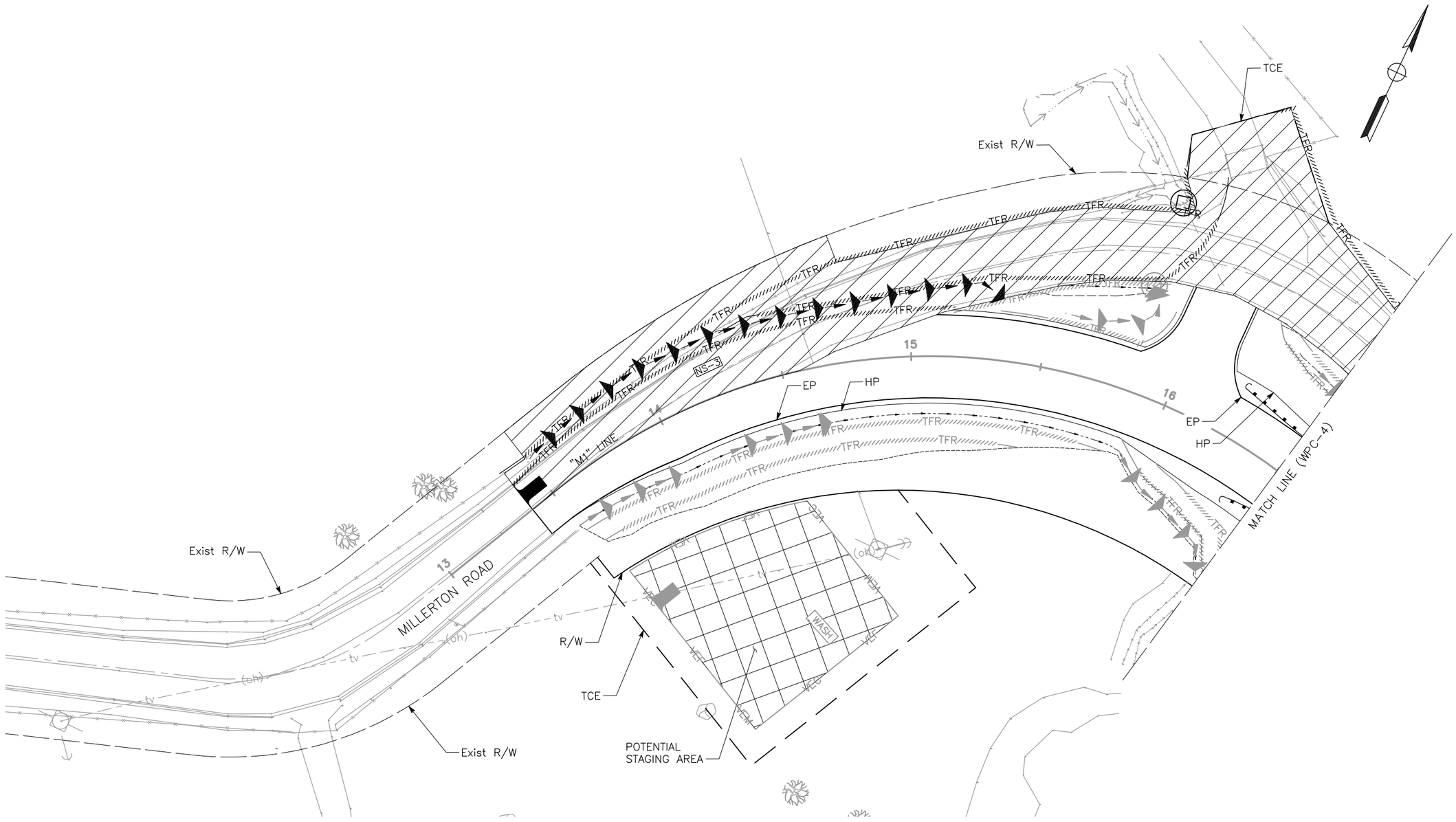
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-2 SHEET NO. 41 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

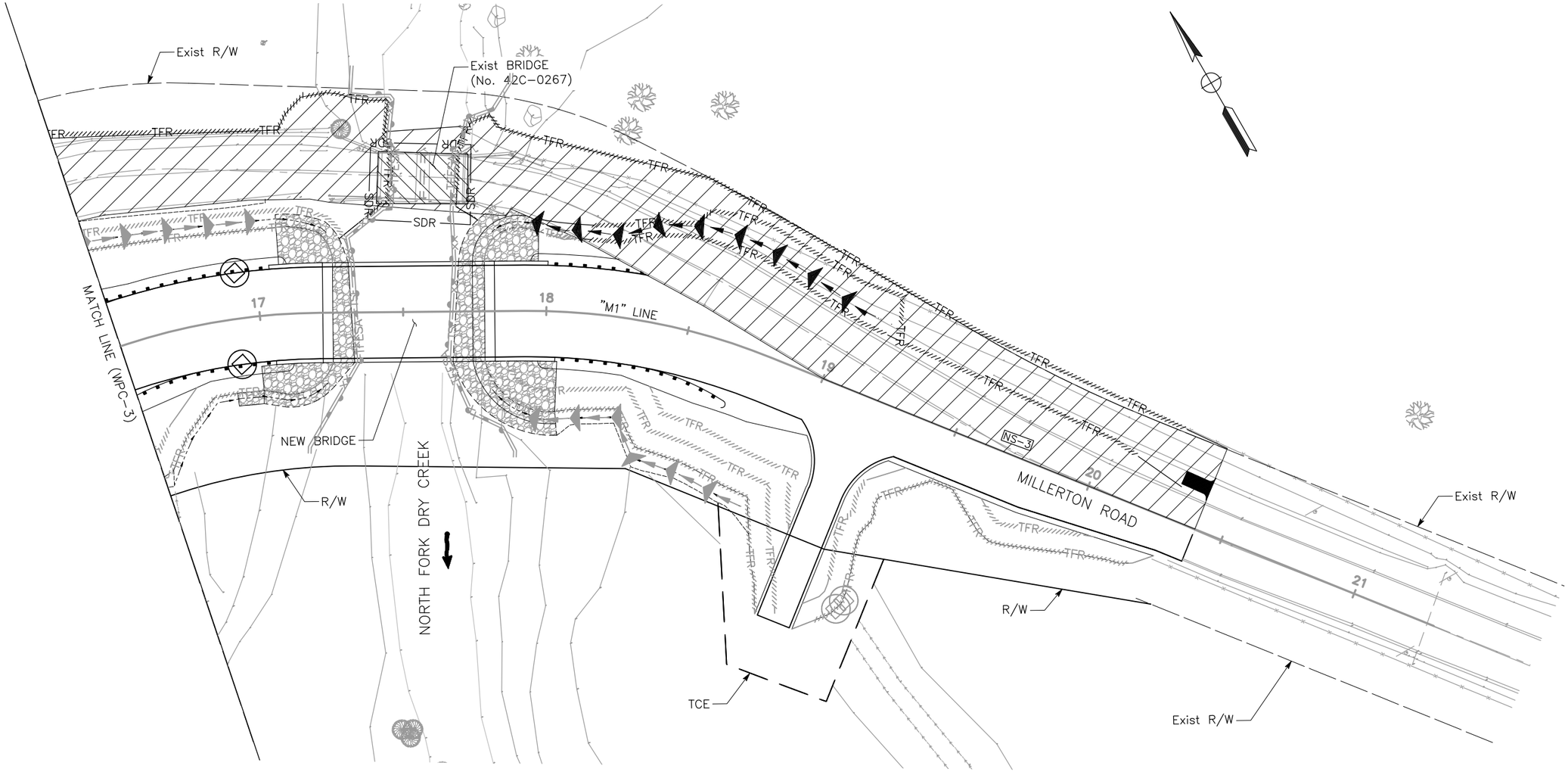
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-3 SHEET NO. 42 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

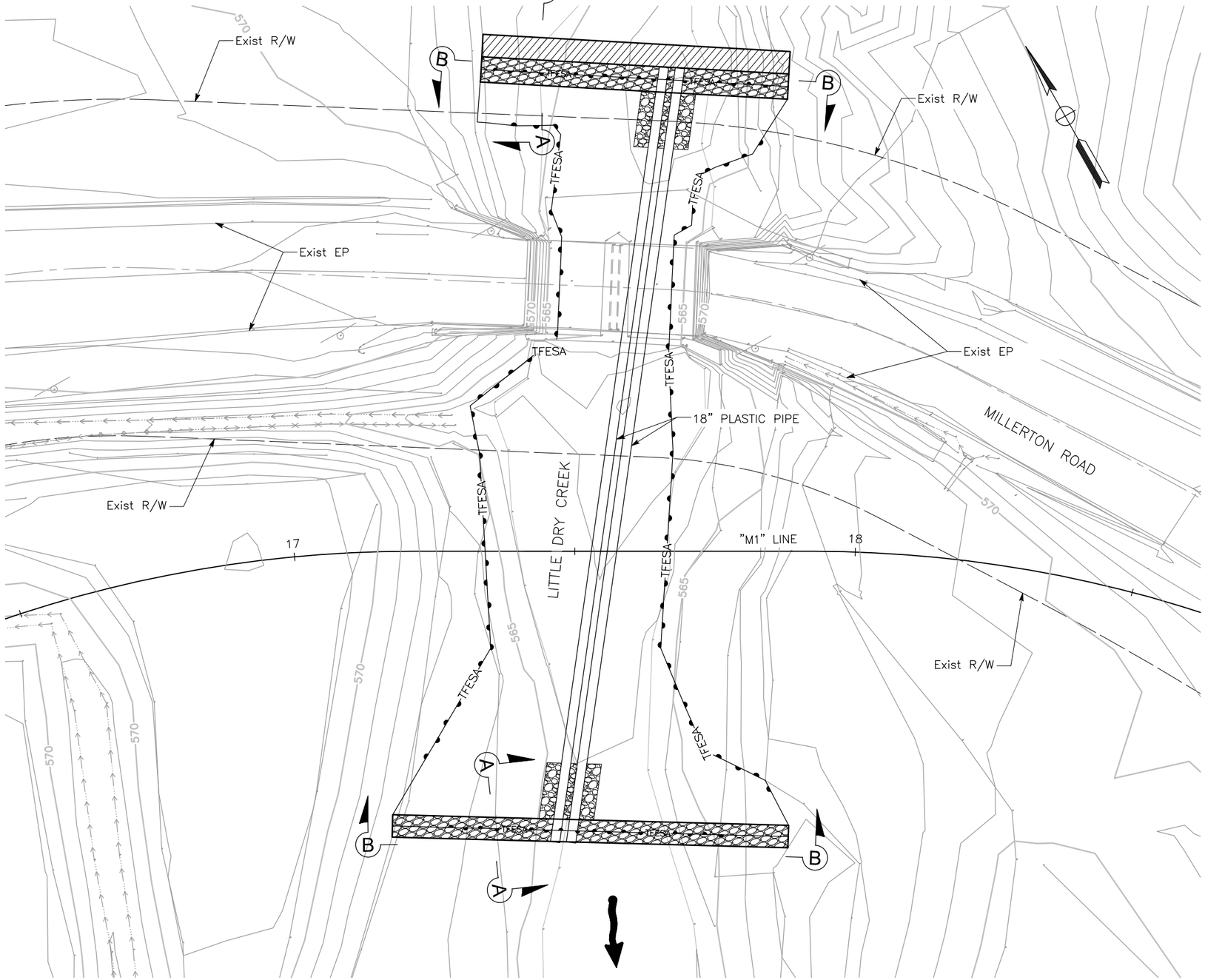
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-4 SHEET NO. 43 TOTAL 159



LEGEND

- COFFERDAM
- GRAVEL BEDDING
- FILTER MATERIAL WITH FILTER FABRIC UNDERNEATH
- TFESA — TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

NOTES:

1. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE TO INSTALL TEMPORARY CREEK DIVERSION DEVICES. PREPARE A CREEK DIVERSION PLAN INCLUDING THE CONSTRUCTION SEQUENCE, EQUIPMENT, MEANS AND METHODS REQUIRED FOR ERECTION AND REMOVAL OF THE DIVERSION SYSTEM. A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA MUST PREPARE THE CREEK DIVERSION PLAN AND SUBMIT FOR ACCEPTANCE BY THE ENGINEER AND REGULATORY AGENCIES.
2. THE INTENT OF THE DIVERSION PLAN IS TO DIVERT MINIMAL FLOWS DURING THE DRY WORK SEASON. THE SCHEMATIC PLAN IS NOT DESIGNED FOR STORM WATER FLOWS EXPECTED IN THE WET SEASON. YPOU ARE RESPONSIBLE FOR ANY DIVERSION CONTINGENCIES IN THE EVENT OF A STORM.
3. SEE SHEET WPC–25 FOR SECTIONS A–A AND B–B.
4. VERIFY PEAK FLOWS IN RANCHERIA CREEK TO ENSURE PIPE SIZES SHOWN ON THIS PLAN IS ADEQUATE.
5. GRAVEL BEDDING SHALL CONSIST OF 1–INCH TO 4–INCHES IN DIAMETER, WASHED AND ROUNDED RIVER ROCK, AND SHALL MEET THE CALTRANS GRAVEL CLEANLINESS SPECIFICATION #85.

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY STREAM DIVERSION WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	10′ 20′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TEMPORARY CREEK DIVERSION
TEMPORARY WATER POLLUTION CONTROL PLAN

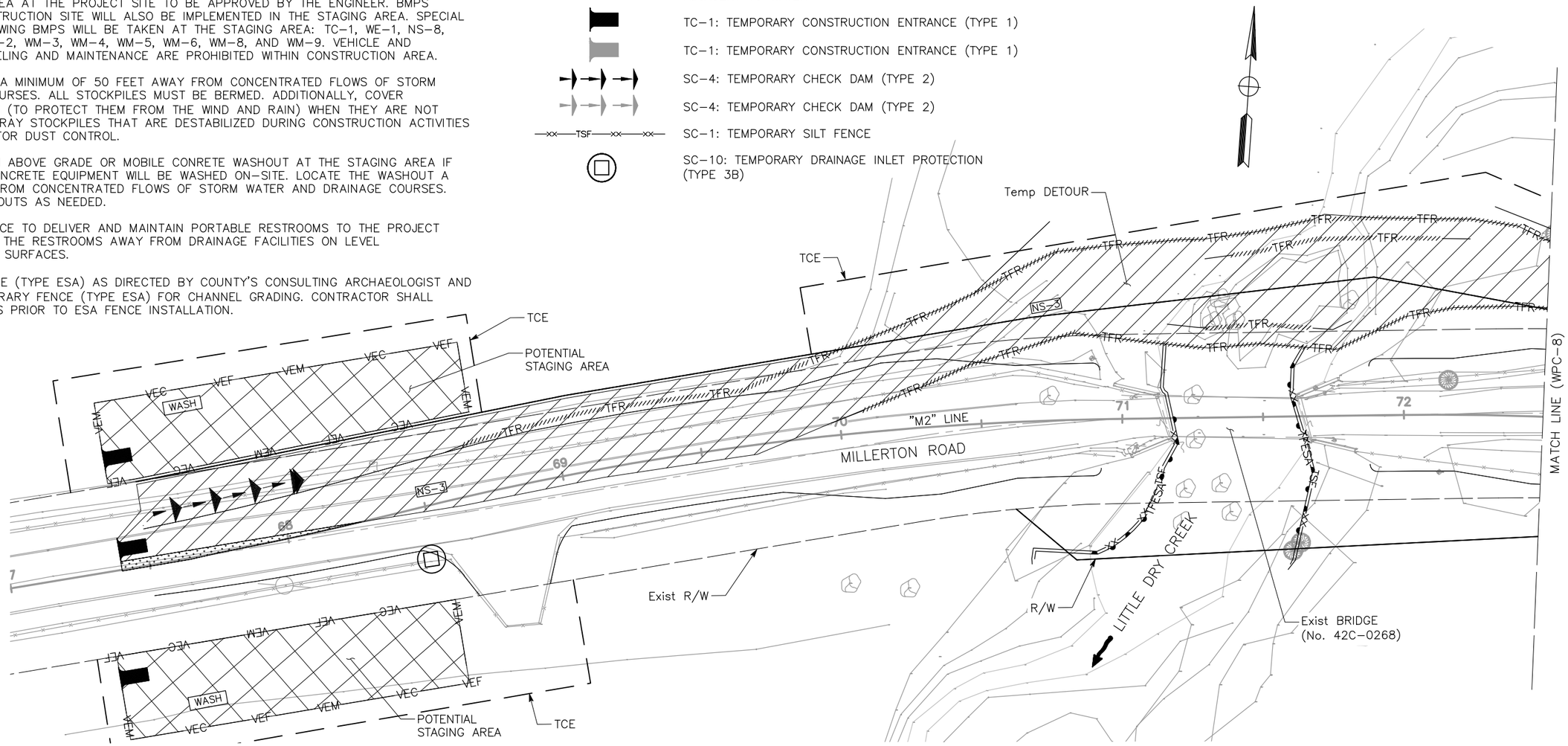
DRAWING NO. WPC-5 SHEET NO. 44 TOTAL 159

WATER POLLUTION CONTROL NOTES:

1. THE INFORMATION ON THESE PLANS IN INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO INSTALL WATER POLLUTION CONTROL DEVICES AT GENERAL LOCATIONS THROUGHOUT THE SITE. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE NARRATIVE SECTION OF THE WATER POLLUTION CONTROL PROGRAM (WPCP).
2. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THESE DRAWINGS.
3. INSTALL PERMANENT EROSION CONTROL AS AREAS ARE DETERMINED TO BE SUBSTANTIALLY COMPLETE. SEE EROSION CONTROL PLANS FOR DETAILS.
4. SEE LAYOUTS FOR LOCATION AND LIMITS ON CONSTRUCTION.
5. CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE/EXIT. CONSTRUCT ADDITIONAL ENTRANCES/EXITS AS NEEDED. LIMIT CONSTRUCTION ACTIVITY TO AND FROM THE PROJECT TO THESE STABILIZED CONSTRUCTION ENTRANCES/EXITS.
6. DESIGNATE A STAGING AREA AT THE PROJECT SITE TO BE APPROVED BY THE ENGINEER. BMPS SELECTED FOR THE CONSTRUCTION SITE WILL ALSO BE IMPLEMENTED IN THE STAGING AREA. SPECIAL ATTENTION TO THE FOLLOWING BMPS WILL BE TAKEN AT THE STAGING AREA: TC–1, WE–1, NS–8, NS–9, NS–10, WM–1, WM–2, WM–3, WM–4, WM–5, WM–6, WM–8, AND WM–9. VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE ARE PROHIBITED WITHIN CONSTRUCTION AREA.
7. LOCATE ANY STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ALL STOCKPILES MUST BE BERMED. ADDITIONALLY, COVER STOCKPILES AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. SPRAY STOCKPILES THAT ARE DESTABILIZED DURING CONSTRUCTION ACTIVITIES WITH WATER AS NEEDED FOR DUST CONTROL.
8. CONSTRUCT OR PLACE AN ABOVE GRADE OR MOBILE CONRETE WASHOUT AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON–SITE. LOCATE THE WASHOUT A MINIMUM 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. UTILIZE ADDITIONAL WASHOUTS AS NEEDED.
9. UTILIZE A LICENSED SERVICE TO DELIVER AND MAINTAIN PORTABLE RESTROOMS TO THE PROJECT AREA IF NEEDED. LOCATE THE RESTROOMS AWAY FROM DRAINAGE FACILITIES ON LEVEL HARD–PACKED OR PAVED SURFACES.
10. INSTALL TEMPORARY FENCE (TYPE ESA) AS DIRECTED BY COUNTY'S CONSULTING ARCHAEOLOGIST AND ENGINEER. ADJUST TEMPORARY FENCE (TYPE ESA) FOR CHANNEL GRADING. CONTRACTOR SHALL NOTIFY COUNTY 48 HOURS PRIOR TO ESA FENCE INSTALLATION.

LEGEND:

- STRUCTURE WORK
- ROADWAY WORK
- BRIDGE REMOVAL
- ROADWAY WORK TO BE COMPLETED PRIOR TO NEXT STAGE
- POTENTIAL STAGING AREA
- NS–3: PAVING AND GRINDING OPERATIONS
- NS–15: STRUCTURE DEMOLITION/REMOVAL OVER OR ADJACENT TO WATER
- TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)
- TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)
- SC–4: TEMPORARY CHECK DAM (TYPE 2)
- SC–4: TEMPORARY CHECK DAM (TYPE 2)
- SC–1: TEMPORARY SILT FENCE
- SC–10: TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)
- WM–8: TEMPORARY CONCRETE WASHOUT
- NS–8: VEHICLE AND EQUIPMENT CLEANING
- NS–9: VEHICLE AND EQUPIMENT FUELING
- NS–10: VEHICLE AND EQUIPMENT MAINTENANCE
- TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)



APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

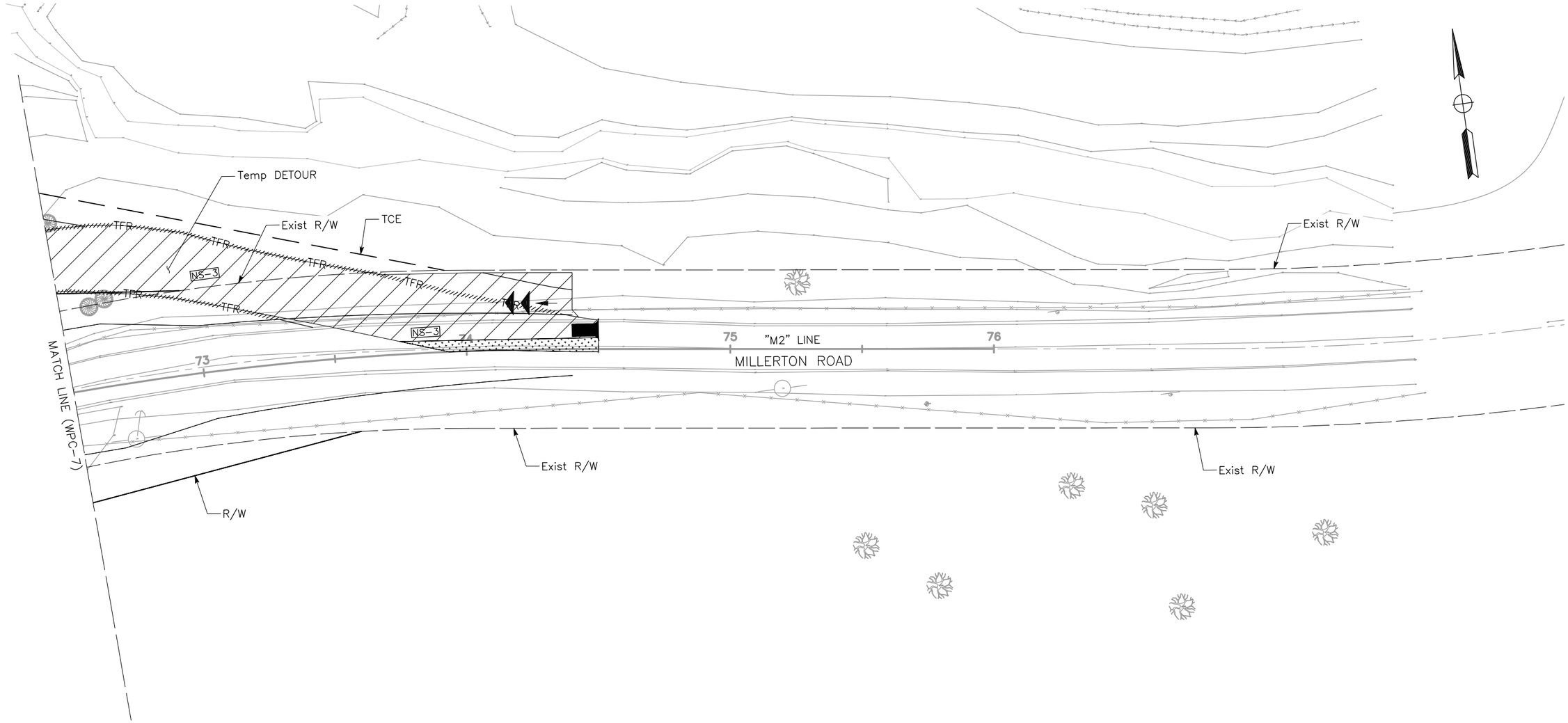
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-6 SHEET NO. 45 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

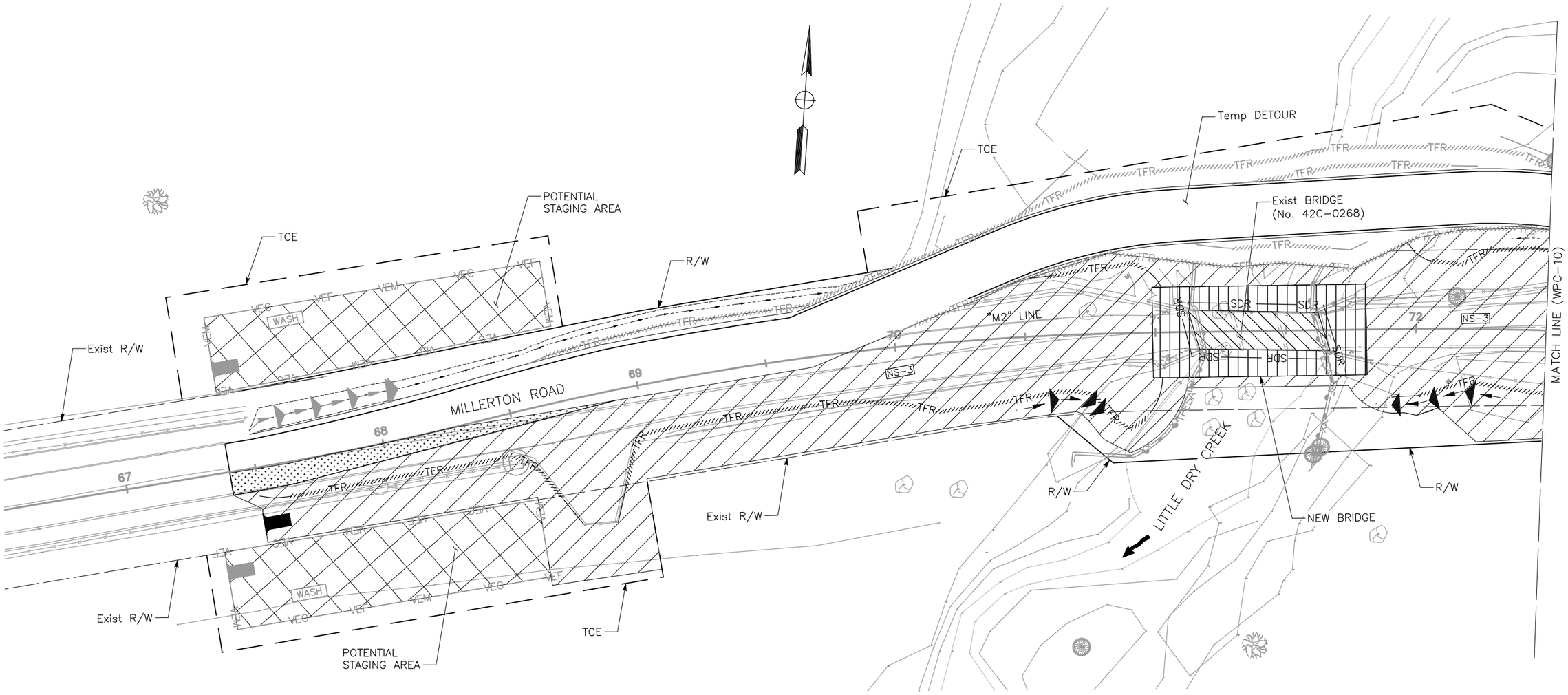
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-7 SHEET NO. 46 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

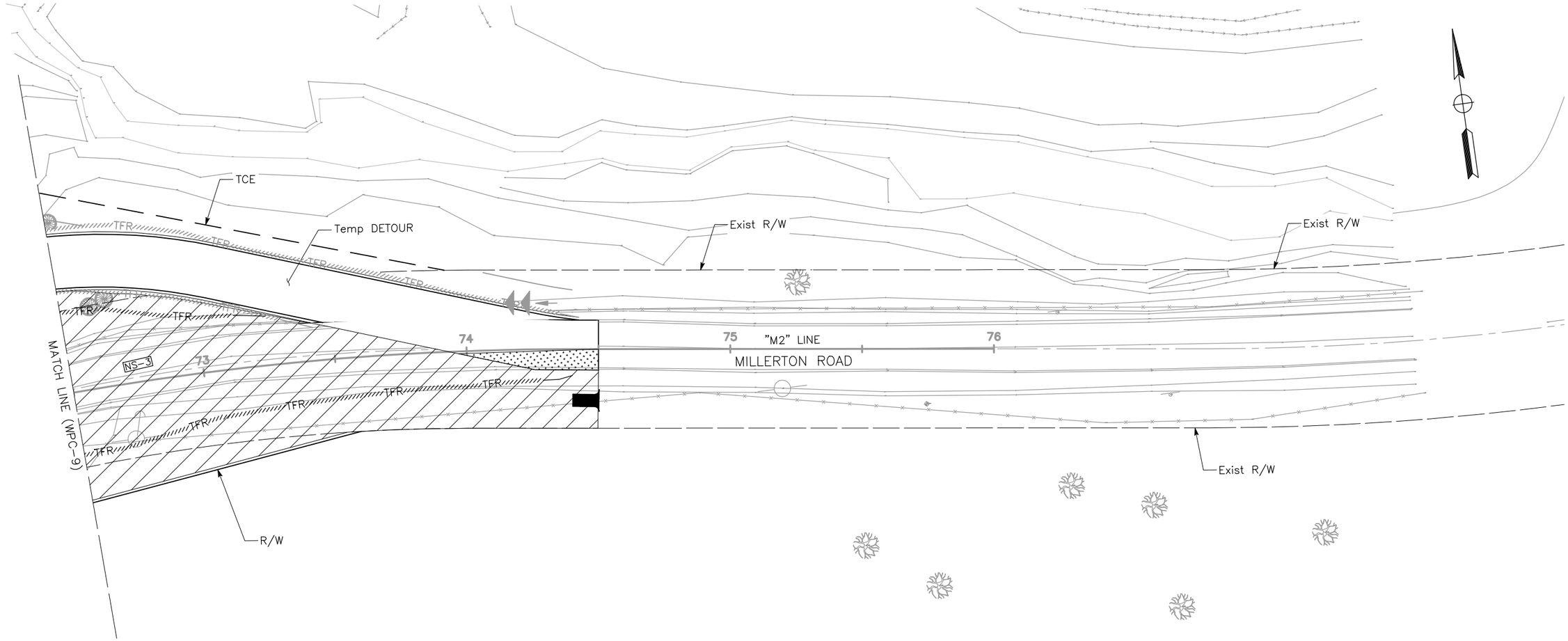
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-8 SHEET NO. 47 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

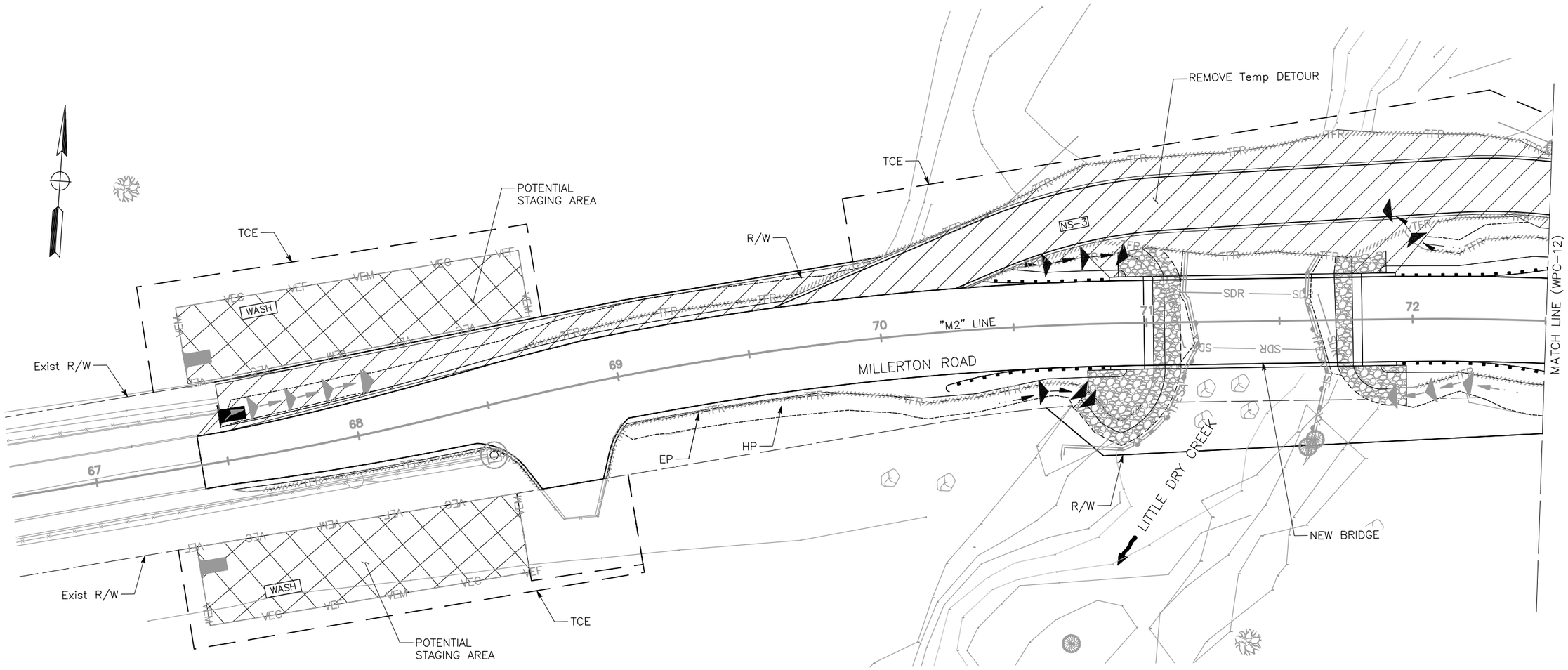
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-9 SHEET NO. 48 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20' 40'

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

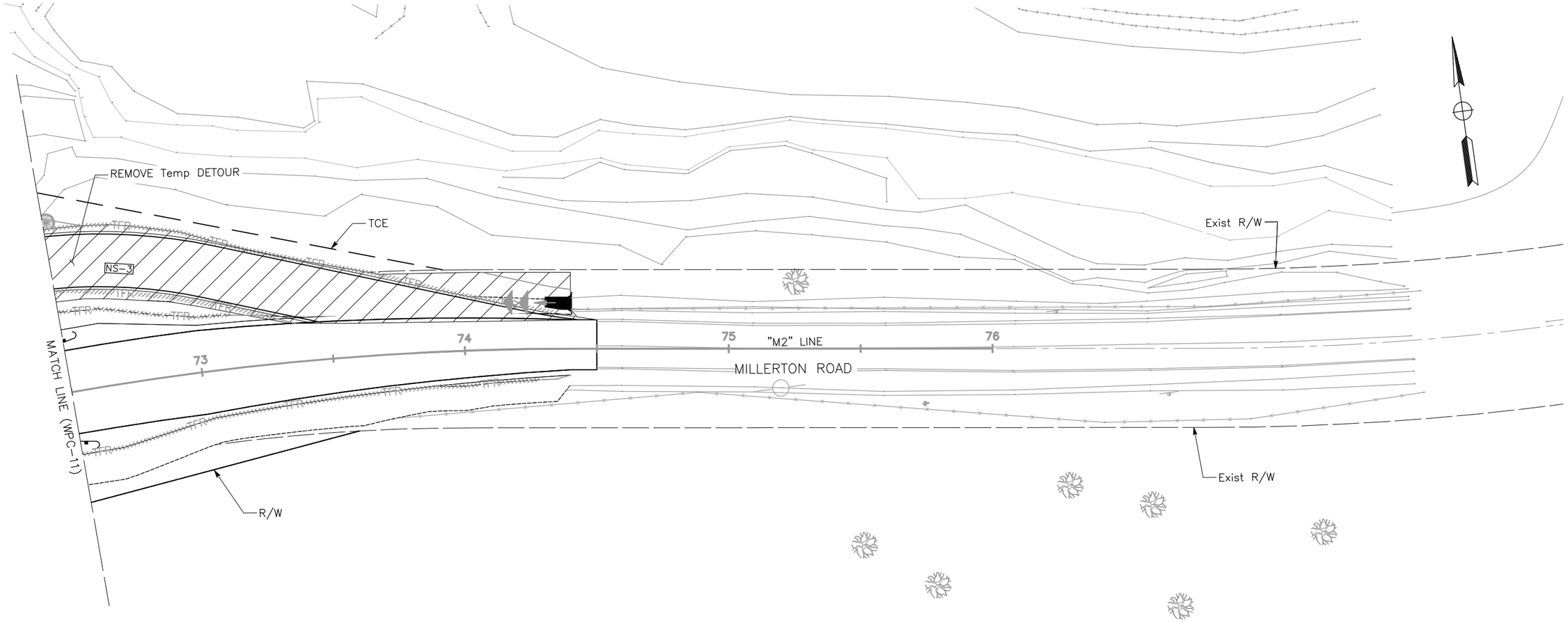
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-10 SHEET NO. 49 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

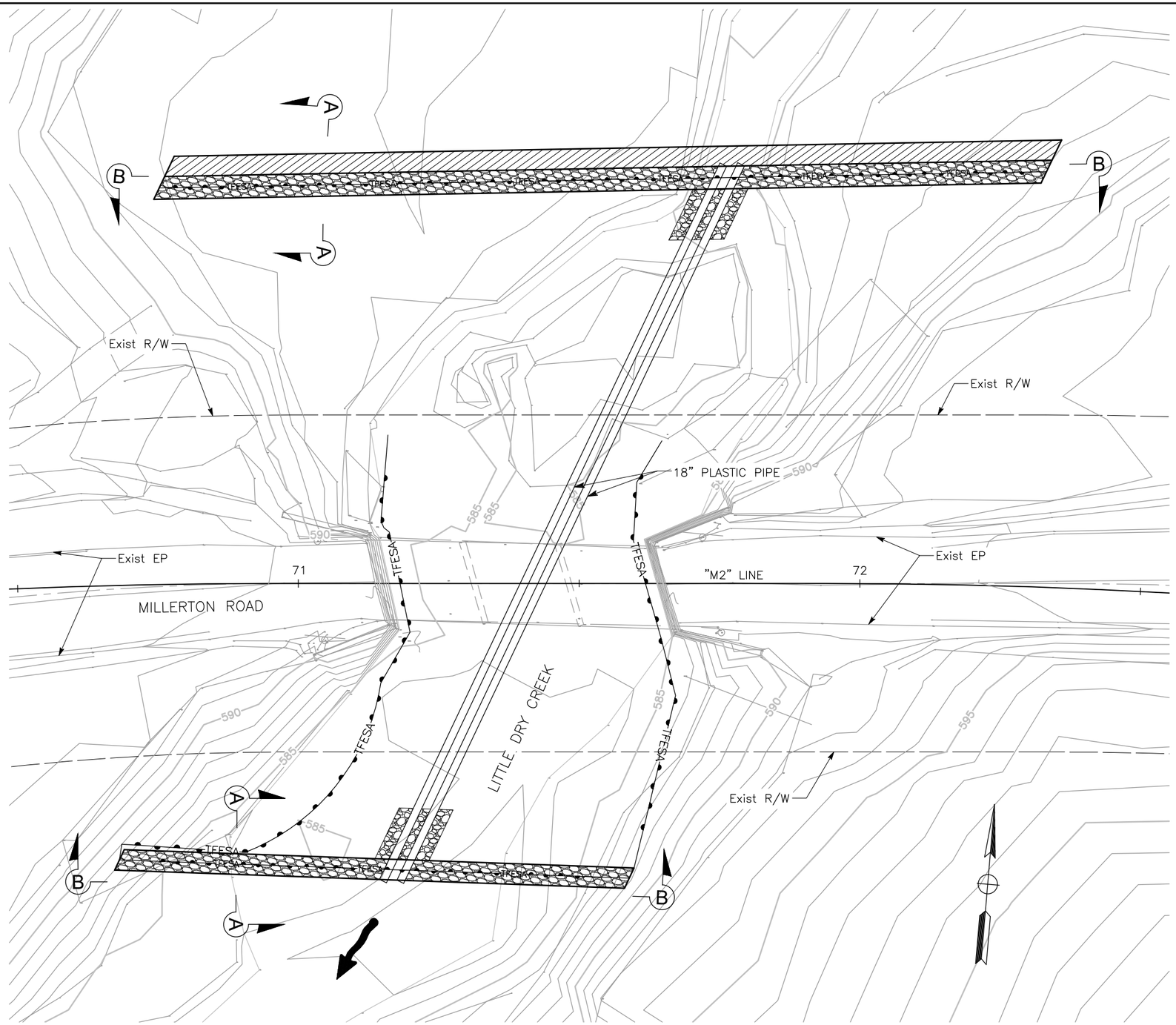
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-11 SHEET NO. 50 TOTAL 159



LEGEND

- COFFERDAM
- GRAVEL BEDDING
- FILTER MATERIAL WITH FILTER FABRIC UNDERNEATH
- TFESA — TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

NOTES:

1. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE TO INSTALL TEMPORARY CREEK DIVERSION DEVICES. PREPARE A CREEK DIVERSION PLAN INCLUDING THE CONSTRUCTION SEQUENCE, EQUIPMENT, MEANS AND METHODS REQUIRED FOR ERECTION AND REMOVAL OF THE DIVERSION SYSTEM. A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA MUST PREPARE THE CREEK DIVERSION PLAN AND SUBMIT FOR ACCEPTANCE BY THE ENGINEER AND REGULATORY AGENCIES.
2. THE INTENT OF THE DIVERSION PLAN IS TO DIVERT MINIMAL FLOWS DURING THE DRY WORK SEASON. THE SCHEMATIC PLAN IS NOT DESIGNED FOR STORM WATER FLOWS EXPECTED IN THE WET SEASON. YPOU ARE RESPONSIBLE FOR ANY DIVERSION CONTINGENCIES IN THE EVENT OF A STORM.
3. SEE SHEET WPC–25 FOR SECTIONS A–A AND B–B.
4. VERIFY PEAK FLOWS IN RANCHERIA CREEK TO ENSURE PIPE SIZES SHOWN ON THIS PLAN IS ADEQUATE.
5. GRAVEL BEDDING SHALL CONSIST OF 1–INCH TO 4–INCHES IN DIAMETER, WASHED AND ROUNDED RIVER ROCK, AND SHALL MEET THE CALTRANS GRAVEL CLEANLINESS SPECIFICATION #85.

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY STREAM DIVERSION WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	10′ 20′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TEMPORARY CREEK DIVERSION
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-12 SHEET NO. 51 TOTAL 159

LEGEND:

STRUCTURE WORK

ROADWAY WORK

BRIDGE REMOVAL

ROADWAY WORK TO BE COMPLETED PRIOR TO NEXT STAGE

POTENTIAL STAGING AREA

NS-3: PAVING AND GRINDING OPERATIONS

SDR — NS-15: STRUCTURE DEMOLITION/REMOVAL OVER OR ADJACENT TO WATER

TC-1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)

TC-1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1) FROM PREVIOUS STAGE

SC-4: TEMPORARY CHECK DAM (TYPE 2)

SC-4: TEMPORARY CHECK DAM (TYPE 2) FROM PREVIOUS STAGE

SC-1: TEMPORARY SILT FENCE

SC-10: TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)

WM-8: TEMPORARY CONCRETE WASHOUT

NS-8: VEHICLE AND EQUIPMENT CLEANING

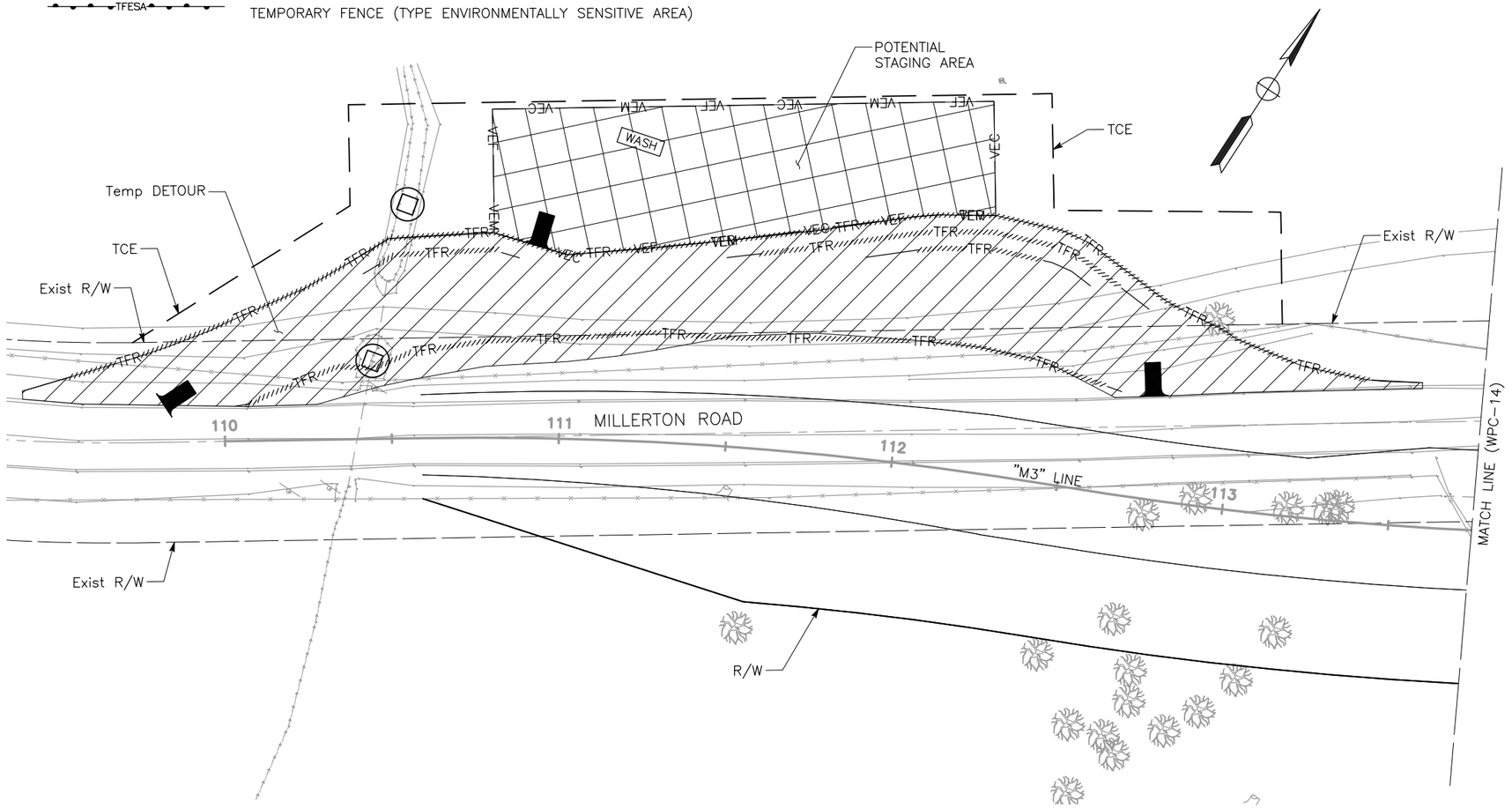
NS-9: VEHICLE AND EQUPIMENT FUELING

NS-10: VEHICLE AND EQUIPMENT MAINTENANCE

TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

WATER POLLUTION CONTROL NOTES

1. THE INFORMATION ON THESE PLANS IN INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO INSTALL WATER POLLUTION CONTROL DEVICES AT GENERAL LOCATIONS THROUGHOUT THE SITE. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE NARRATIVE SECTION OF THE WATER POLLUTION CONTROL PROGRAM (WPCP).
2. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THESE DRAWINGS.
3. INSTALL PERMANENT EROSION CONTROL AS AREAS ARE DETERMINED TO BE SUBSTANTIALLY COMPLETE. SEE EROSION CONTROL PLANS FOR DETAILS.
4. SEE LAYOUTS FOR LOCATION AND LIMITS ON CONSTRUCTION.
5. CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE/EXIT. CONSTRUCT ADDITIONAL ENTRANCES/EXITS AS NEEDED. LIMIT CONSTRUCTION ACTIVITY TO AND FROM THE PROJECT TO THESE STABILIZED CONSTRUCTION ENTRANCES/EXITS.
6. DESIGNATE A STAGING AREA AT THE PROJECT SITE TO BE APPROVED BY THE ENGINEER. BMPS SELECTED FOR THE CONSTRUCTION SITE WILL ALSO BE IMPLEMENTED IN THE STAGING AREA. SPECIAL ATTENTION TO THE FOLLOWING BMPS WILL BE TAKEN AT THE STAGING AREA: TC-1, WE-1, NS-8, NS-9, NS-10, WM-1, WM-2, WM-3, WM-4, WM-5, WM-6, WM-8, AND WM-9. VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE ARE PROHIBITED WITHIN CONSTRUCTION AREA.
7. LOCATE ANY STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ALL STOCKPILES MUST BE BERMED. ADDITIONALLY, COVER STOCKPILES AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. SPRAY STOCKPILES THAT ARE DESTABILIZED DURING CONSTRUCTION ACTIVITIES WITH WATER AS NEEDED FOR DUST CONTROL.
8. CONSTRUCT OR PLACE AN ABOVE GRADE OR MOBILE CONRETE WASHOUT AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON-SITE. LOCATE THE WASHOUT A MINIMUM 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. UTILIZE ADDITIONAL WASHOUTS AS NEEDED.
9. UTILIZE A LICENSED SERVICE TO DELIVER AND MAINTAIN PORTABLE RESTROOMS TO THE PROJECT AREA IF NEEDED. LOCATE THE RESTROOMS AWAY FROM DRAINAGE FACILITIES ON LEVEL HARD-PACKED OR PAVED SURFACES.
10. INSTALL TEMPORARY FENCE (TYPE ESA) AS DIRECTED BY COUNTY'S CONSULTING ARCHAEOLOGIST AND ENGINEER. ADJUST TEMPORARY FENCE (TYPE ESA) FOR CHANNEL GRADING. CONTRACTOR SHALL NOTIFY COUNTY 48 HOURS PRIOR TO ESA FENCE INSTALLATION.



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

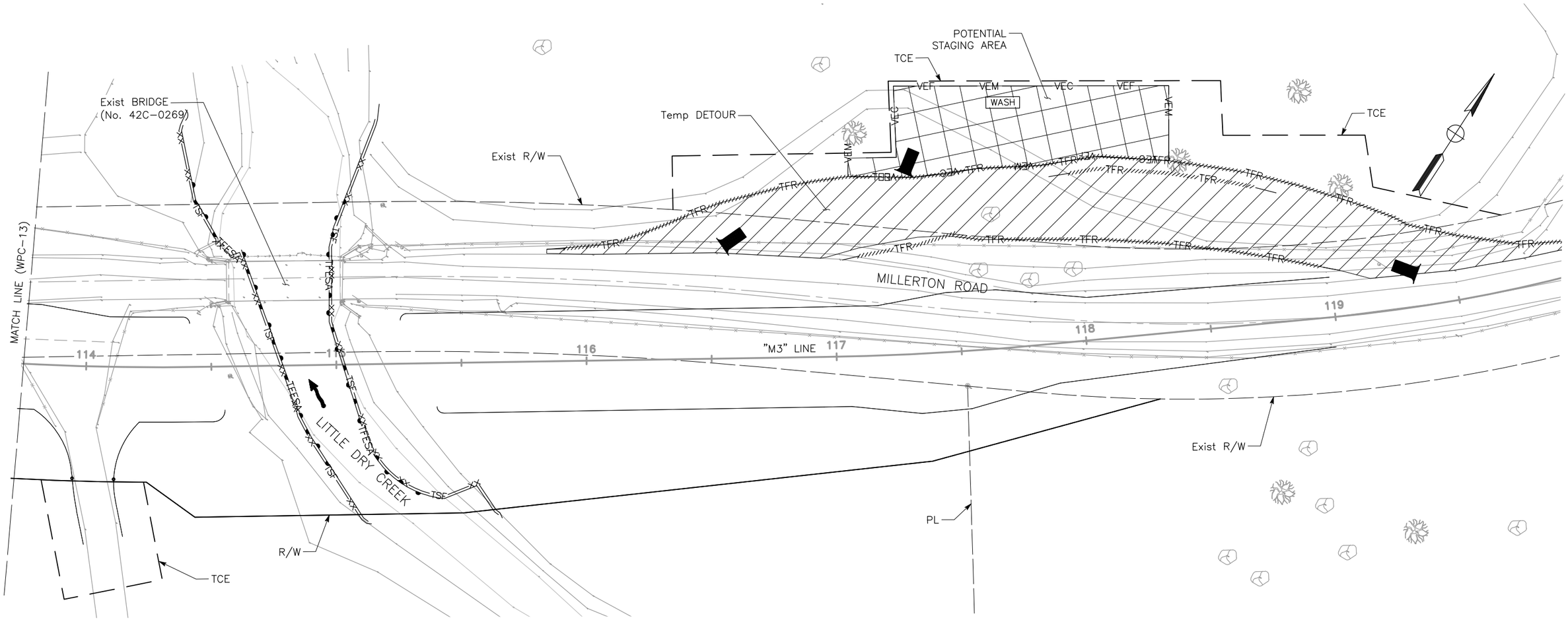
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-13 SHEET NO. 52 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

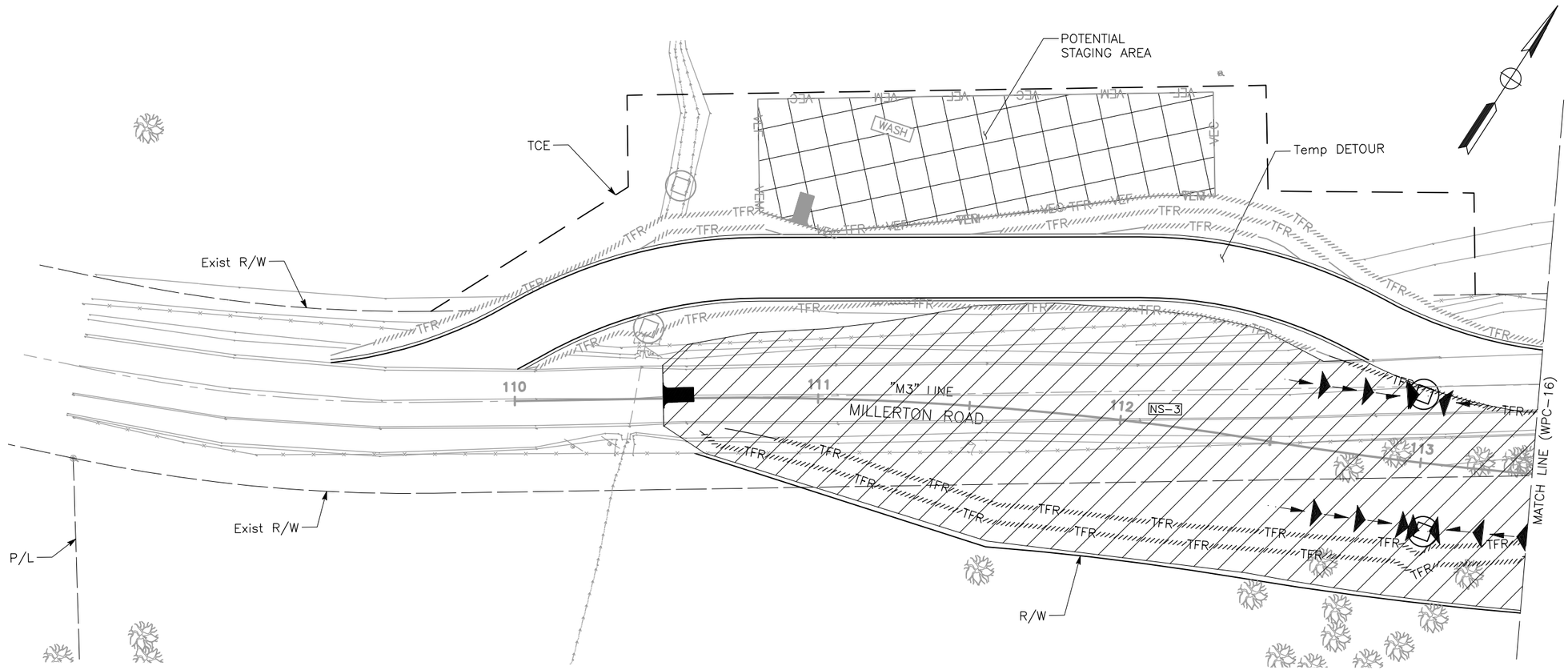
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-14 SHEET NO. 53 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

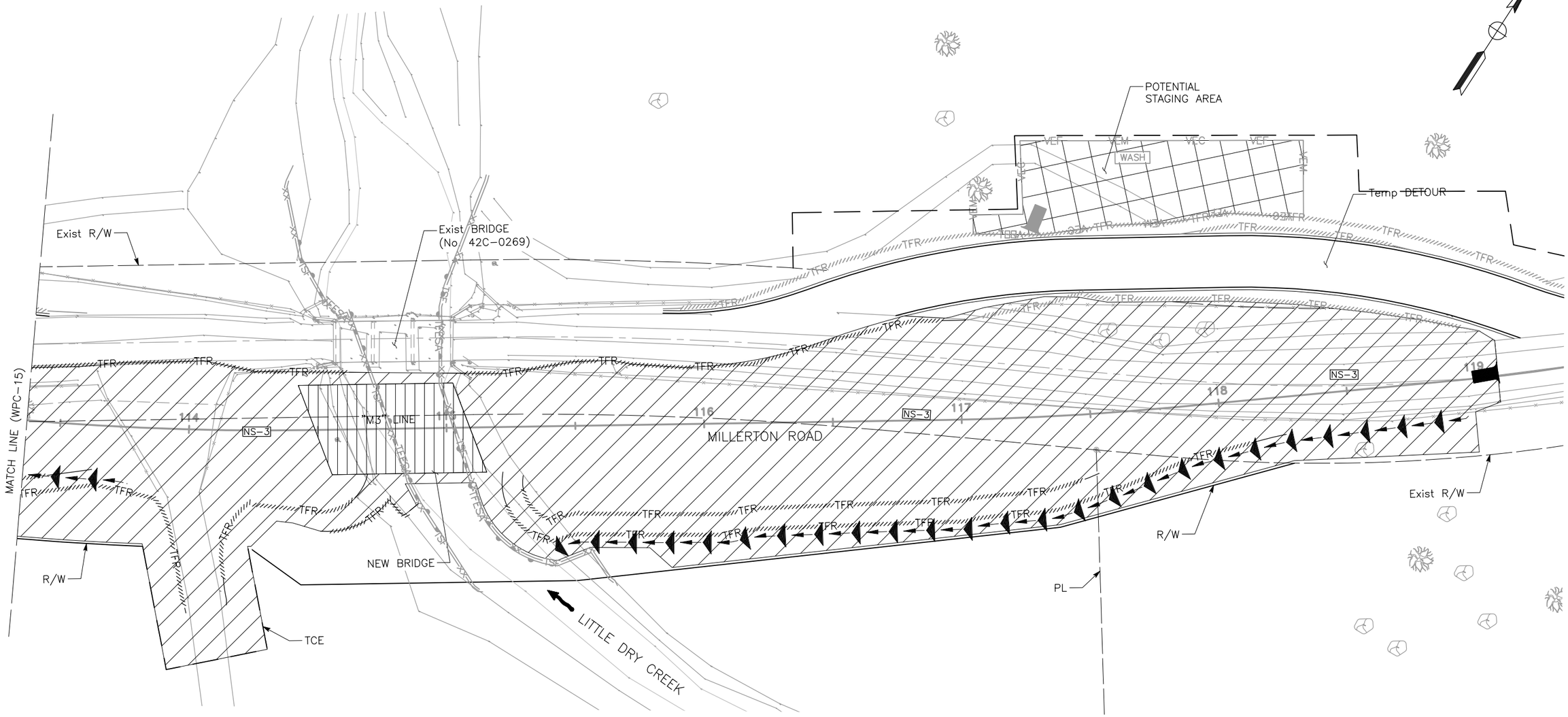
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-15 SHEET NO. 54 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

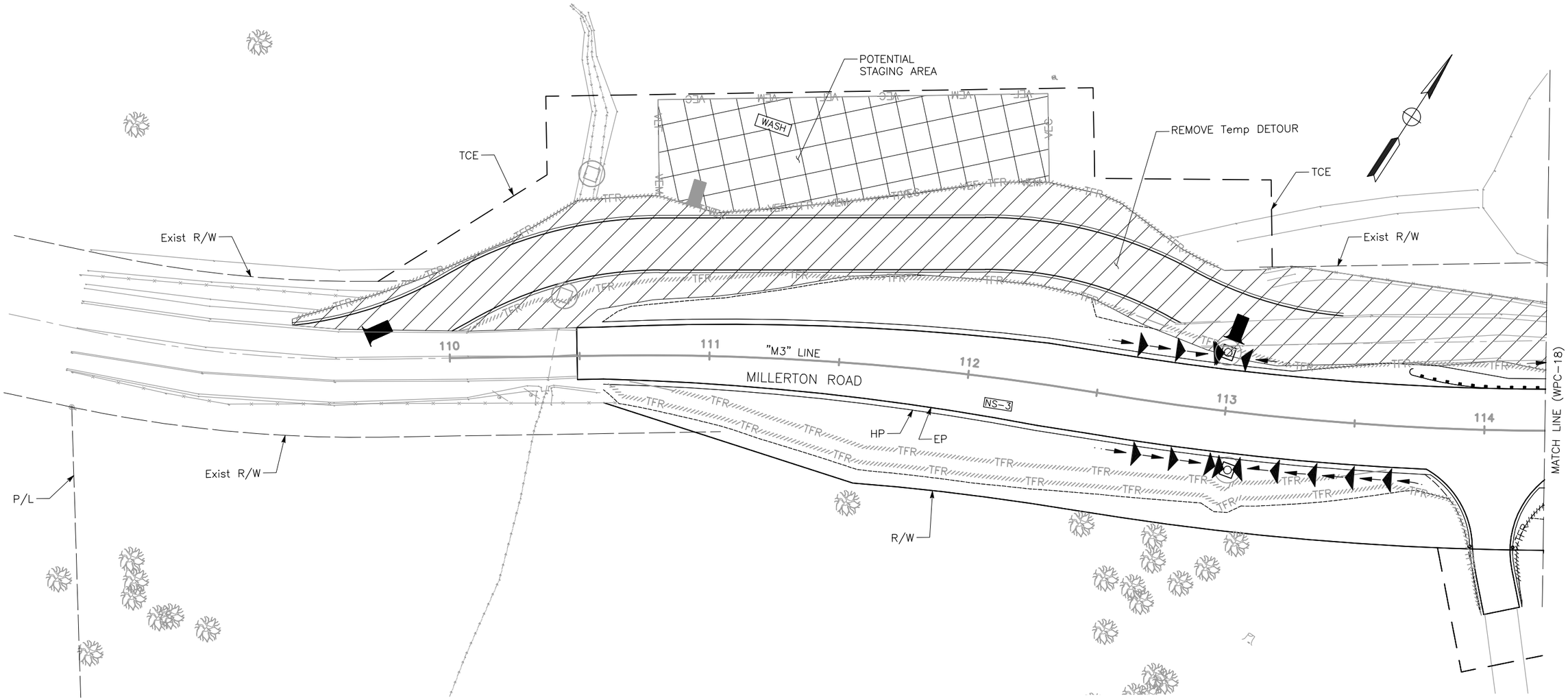
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-16 SHEET NO. 55 TOTAL 159



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APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
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DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

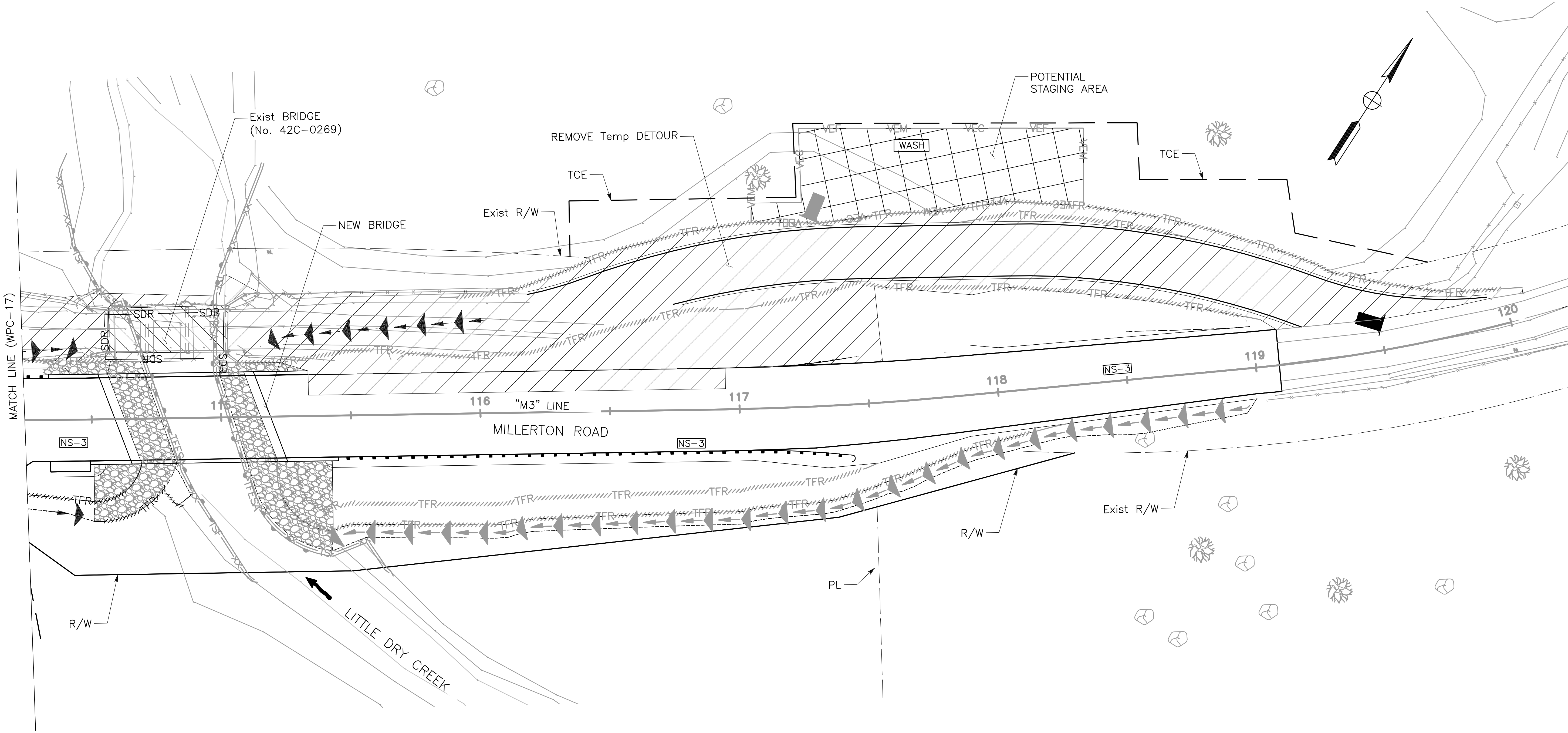
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-17 SHEET NO. 56 TOTAL 159



APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
		RESIDENT ENGINEER	DATE
DESIGNED: C. SALILICAN	09/23/16		
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER
9/23/2016 — DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO.
BRIDGE NO. 42C-0269

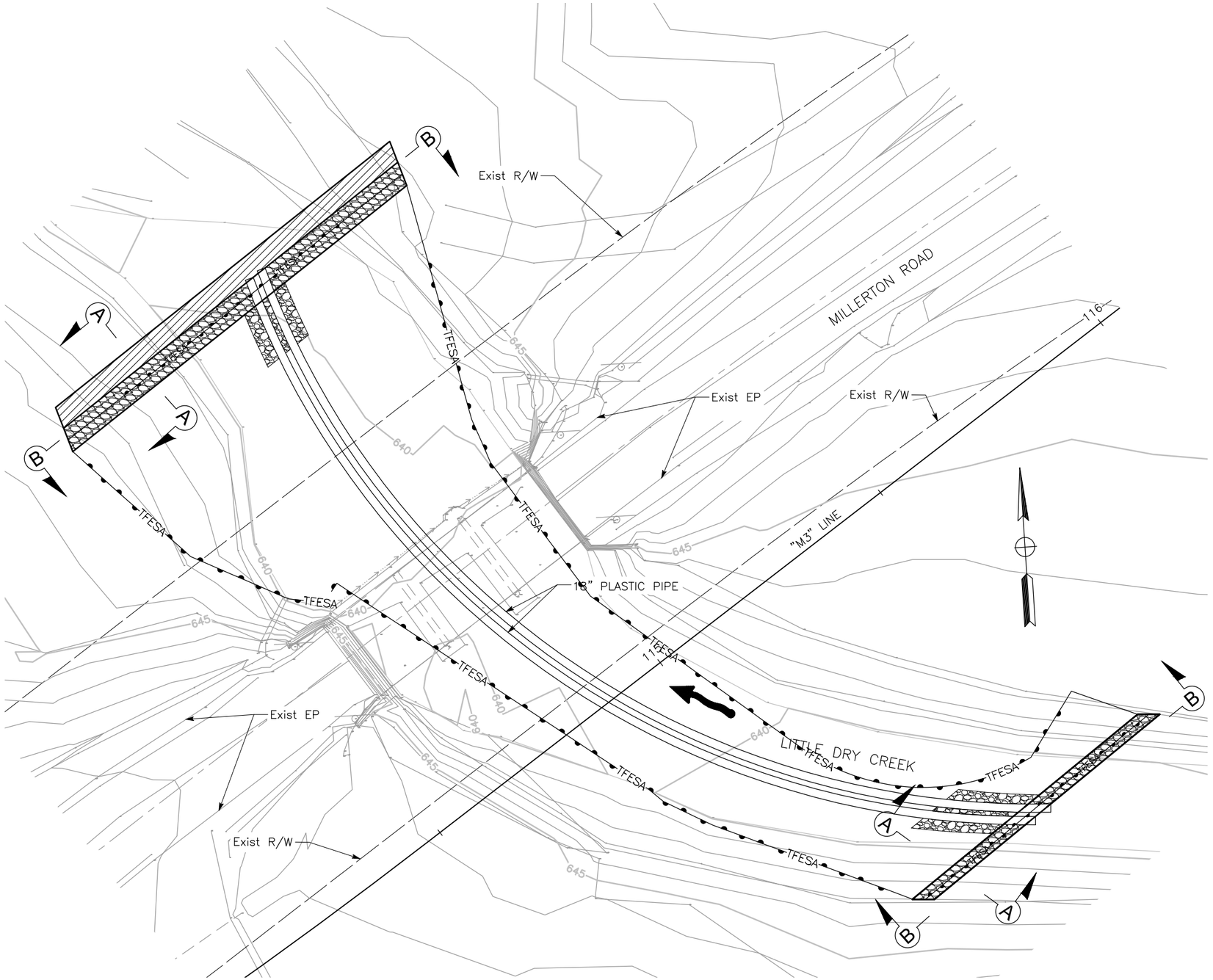
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-18 SHEET NO. 57 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



LEGEND

- COFFERDAM
- GRAVEL BEDDING
- FILTER MATERIAL WITH FILTER FABRIC UNDERNEATH
- TFESA — TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

NOTES:

1. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE TO INSTALL TEMPORARY CREEK DIVERSION DEVICES. PREPARE A CREEK DIVERSION PLAN INCLUDING THE CONSTRUCTION SEQUENCE, EQUIPMENT, MEANS AND METHODS REQUIRED FOR ERECTION AND REMOVAL OF THE DIVERSION SYSTEM. A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA MUST PREPARE THE CREEK DIVERSION PLAN AND SUBMIT FOR ACCEPTANCE BY THE ENGINEER AND REGULATORY AGENCIES.
2. THE INTENT OF THE DIVERSION PLAN IS TO DIVERT MINIMAL FLOWS DURING THE DRY WORK SEASON. THE SCHEMATIC PLAN IS NOT DESIGNED FOR STORM WATER FLOWS EXPECTED IN THE WET SEASON. YPOU ARE RESPONSIBLE FOR ANY DIVERSION CONTINGENCIES IN THE EVENT OF A STORM.
3. SEE SHEET WPC–25 FOR SECTIONS A–A AND B–B.
4. VERIFY PEAK FLOWS IN RANCHERIA CREEK TO ENSURE PIPE SIZES SHOWN ON THIS PLAN IS ADEQUATE.
5. GRAVEL BEDDING SHALL CONSIST OF 1–INCH TO 4–INCHES IN DIAMETER, WASHED AND ROUNDED RIVER ROCK, AND SHALL MEET THE CALTRANS GRAVEL CLEANLINESS SPECIFICATION #85.

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY STREAM DIVERSION WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	10′ 20′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TEMPORARY CREEK DIVERSION
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-19 SHEET NO. 58 TOTAL 159

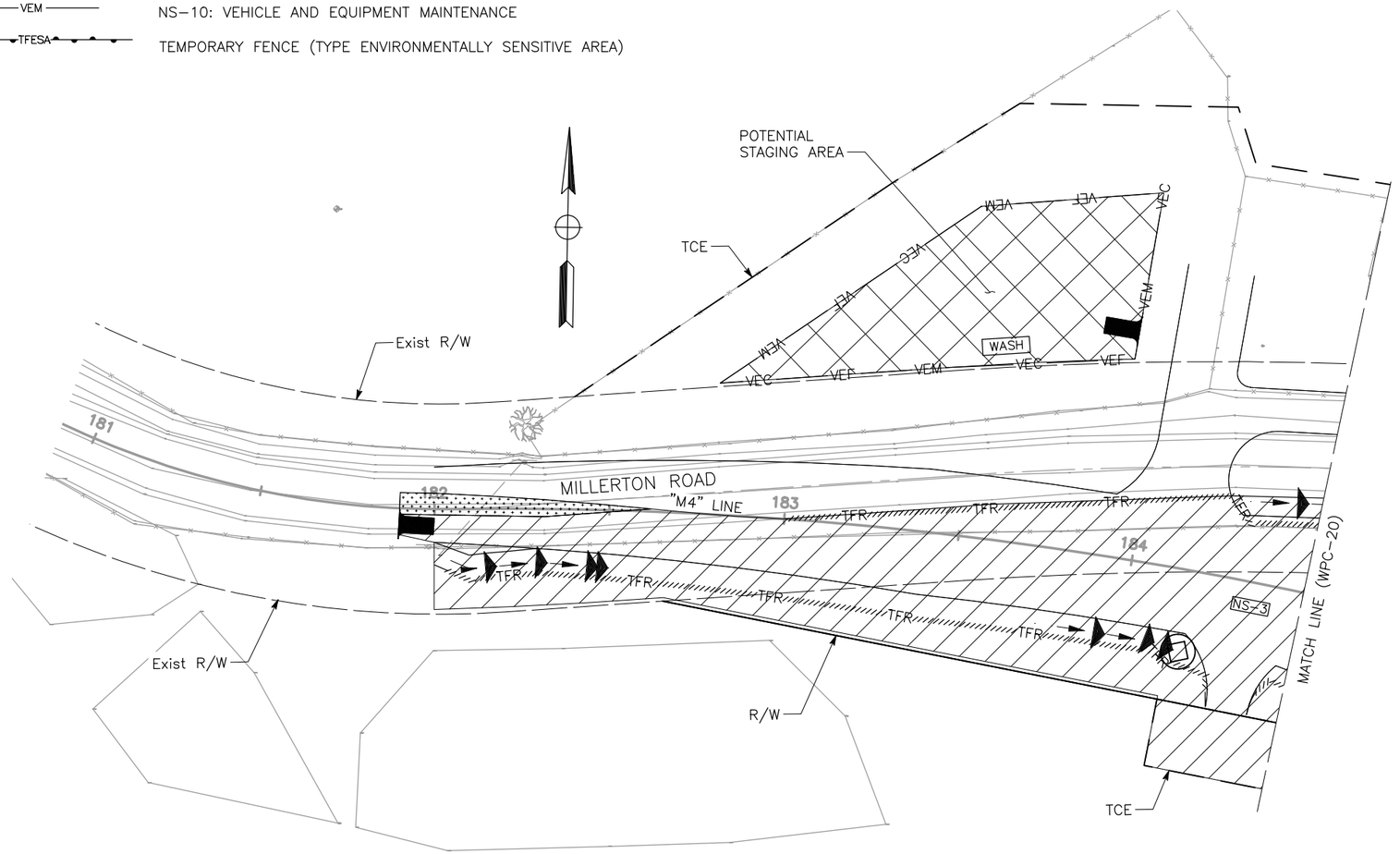
LEGEND:

- STRUCTURE WORK
- ROADWAY WORK
- BRIDGE REMOVAL
- ROADWAY WORK TO BE COMPLETED PRIOR TO NEXT STAGE
- POTENTIAL STAGING AREA
- NS–3: PAVING AND GRINDING OPERATIONS
- SDR — NS–15: STRUCTURE DEMOLITION/REMOVAL OVER OR ADJACENT TO WATER

- TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1)
- TC–1: TEMPORARY CONSTRUCTION ENTRANCE (TYPE 1) FROM PREVIOUS STAGE
- SC–4: TEMPORARY CHECK DAM (TYPE 2)
- SC–4: TEMPORARY CHECK DAM (TYPE 2) FROM PREVIOUS STAGE
- SC–1: TEMPORARY SILT FENCE (TSF)
- SC–10: TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)
- WM–8: TEMPORARY CONCRETE WASHOUT (WASH)
- NS–8: VEHICLE AND EQUIPMENT CLEANING (VEC)
- NS–9: VEHICLE AND EQUPIMENT FUELING (VEF)
- NS–10: VEHICLE AND EQUIPMENT MAINTENANCE (VEM)
- TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA) (TFESA)

WATER POLLUTION CONTROL NOTES

1. THE INFORMATION ON THESE PLANS IN INTENDED TO BE USED AS A GUIDELINE FOR THE CONTRACTOR AND SUBCONTRACTORS TO INSTALL WATER POLLUTION CONTROL DEVICES AT GENERAL LOCATIONS THROUGHOUT THE SITE. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE NARRATIVE SECTION OF THE WATER POLLUTION CONTROL PROGRAM (WPCP).
2. FIELD CONDITIONS MAY NECESSITATE MODIFICATIONS TO THESE DRAWINGS.
3. INSTALL PERMANENT EROSION CONTROL AS AREAS ARE DETERMINED TO BE SUBSTANTIALLY COMPLETE. SEE EROSION CONTROL PLANS FOR DETAILS.
4. SEE LAYOUTS FOR LOCATION AND LIMITS ON CONSTRUCTION.
5. CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE/EXIT. CONSTRUCT ADDITIONAL ENTRANCES/EXITS AS NEEDED. LIMIT CONSTRUCTION ACTIVITY TO AND FROM THE PROJECT TO THESE STABILIZED CONSTRUCTION ENTRANCES/EXITS.
6. DESIGNATE A STAGING AREA AT THE PROJECT SITE TO BE APPROVED BY THE ENGINEER. BMPS SELECTED FOR THE CONSTRUCTION SITE WILL ALSO BE IMPLEMENTED IN THE STAGING AREA. SPECIAL ATTENTION TO THE FOLLOWING BMPS WILL BE TAKEN AT THE STAGING AREA: TC–1, WE–1, NS–8, NS–9, NS–10, WM–1, WM–2, WM–3, WM–4, WM–5, WM–6, WM–8, AND WM–9. VEHICLE AND EQUIPMENT CLEANING, FUELING AND MAINTENANCE ARE PROHIBITED WITHIN CONSTRUCTION AREA.
7. LOCATE ANY STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. ALL STOCKPILES MUST BE BERMED. ADDITIONALLY, COVER STOCKPILES AT ALL TIMES (TO PROTECT THEM FROM THE WIND AND RAIN) WHEN THEY ARE NOT ACTIVELY BEING USED. SPRAY STOCKPILES THAT ARE DESTABILIZED DURING CONSTRUCTION ACTIVITIES WITH WATER AS NEEDED FOR DUST CONTROL.
8. CONSTRUCT OR PLACE AN ABOVE GRADE OR MOBILE CONRETE WASHOUT AT THE STAGING AREA IF CONCRETE TRUCKS OR CONCRETE EQUIPMENT WILL BE WASHED ON–SITE. LOCATE THE WASHOUT A MINIMUM 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORM WATER AND DRAINAGE COURSES. UTILIZE ADDITIONAL WASHOUTS AS NEEDED.
9. UTILIZE A LICENSED SERVICE TO DELIVER AND MAINTAIN PORTABLE RESTROOMS TO THE PROJECT AREA IF NEEDED. LOCATE THE RESTROOMS AWAY FROM DRAINAGE FACILITIES ON LEVEL HARD–PACKED OR PAVED SURFACES.
10. INSTALL TEMPORARY FENCE (TYPE ESA) AS DIRECTED BY COUNTY'S CONSULTING ARCHAEOLOGIST AND ENGINEER. ADJUST TEMPORARY FENCE (TYPE ESA) FOR CHANNEL GRADING. CONTRACTOR SHALL NOTIFY COUNTY 48 HOURS PRIOR TO ESA FENCE INSTALLATION.



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

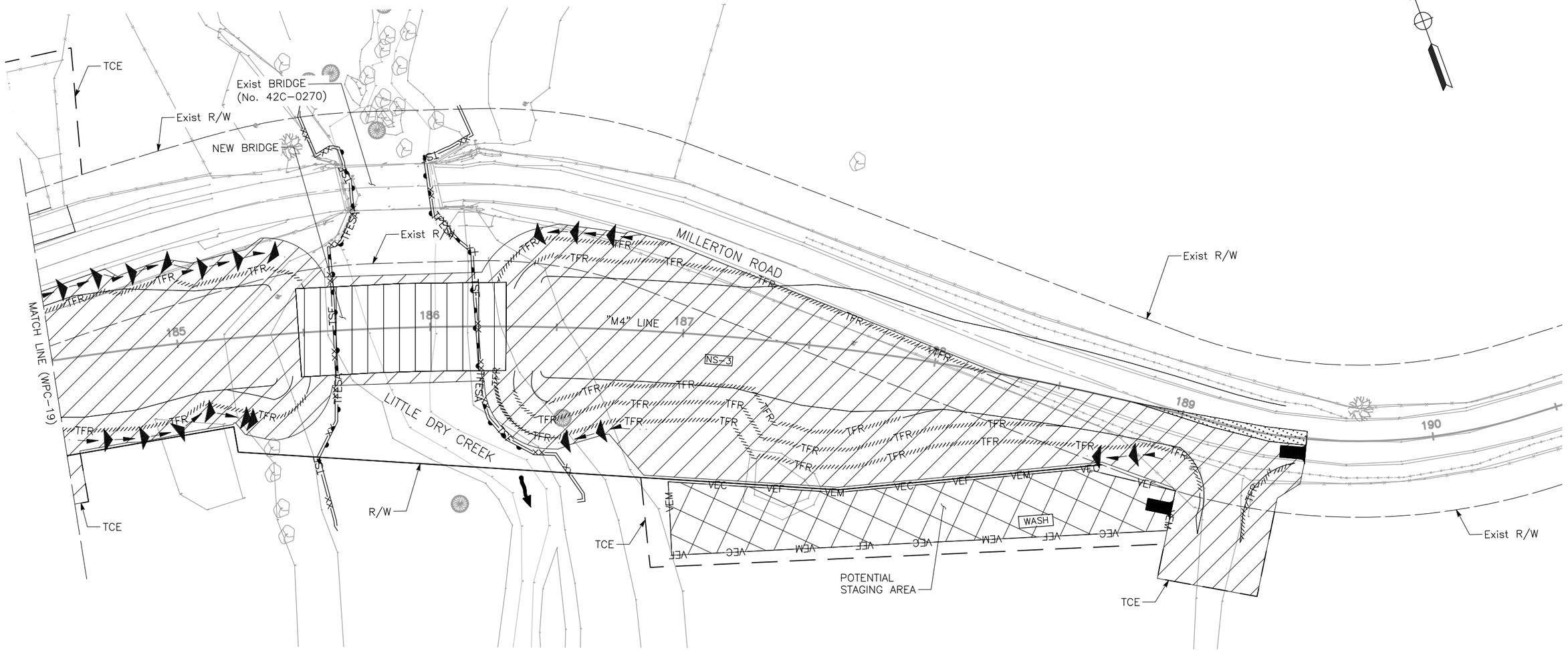
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-20 SHEET NO. 59 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTIONC CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

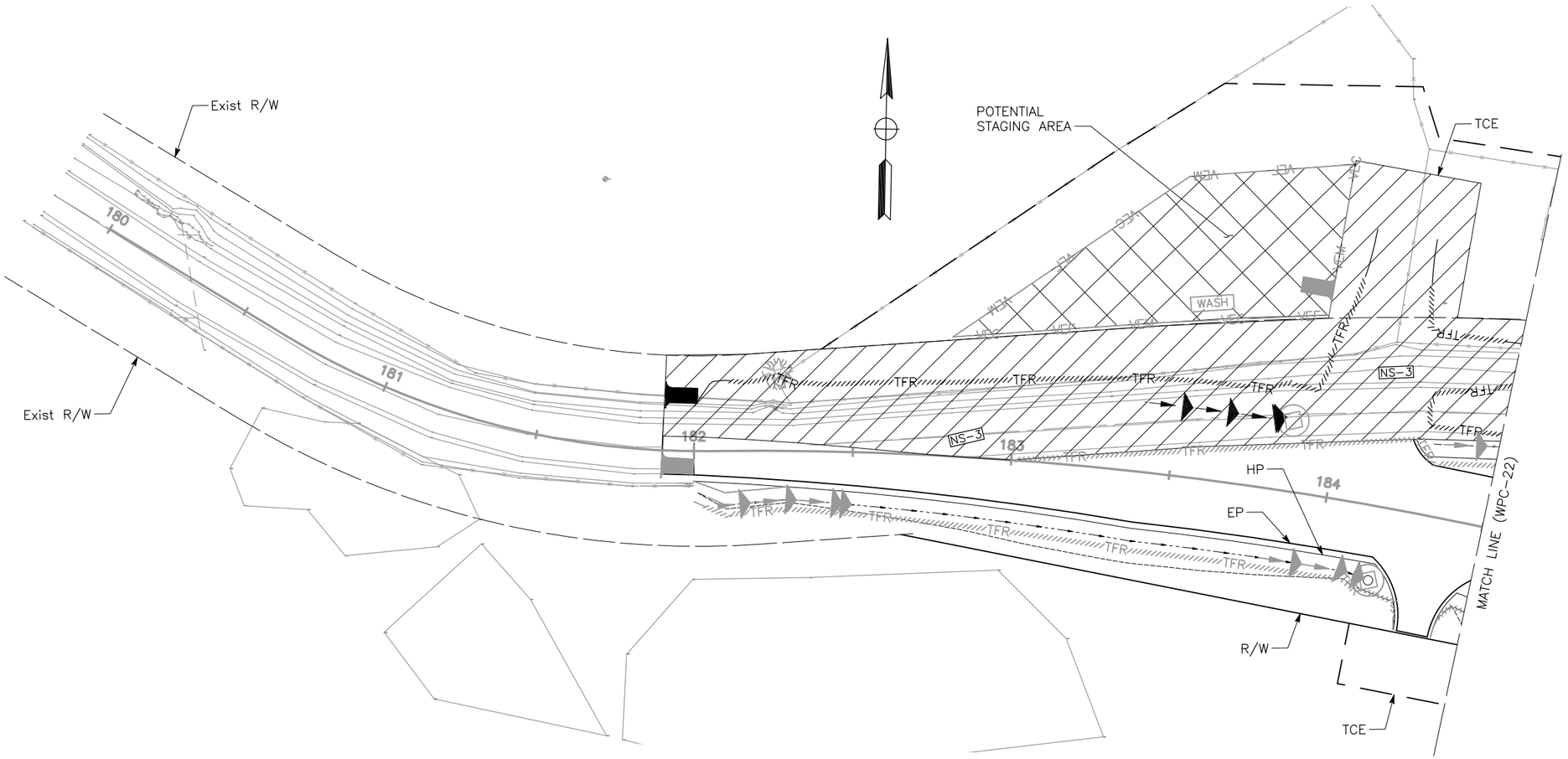
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-21 SHEET NO. 60 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

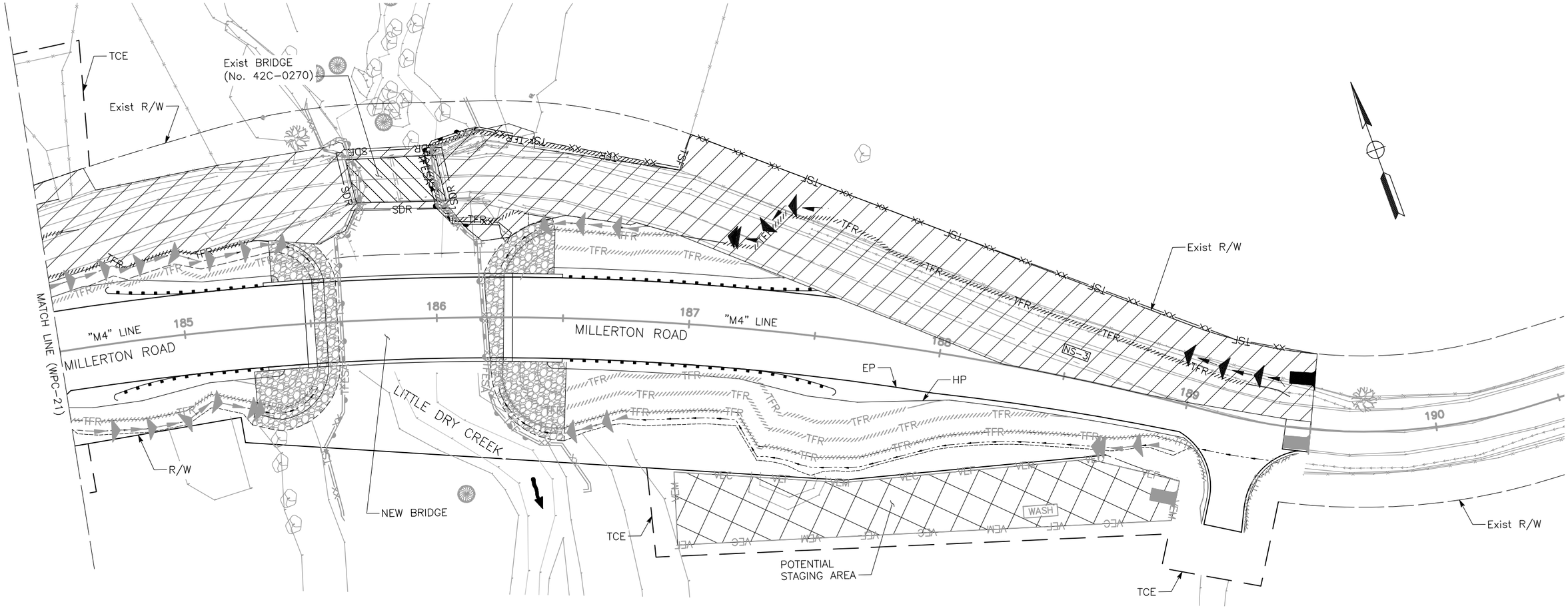
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-22 SHEET NO. 61 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY WATER POLLUTION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

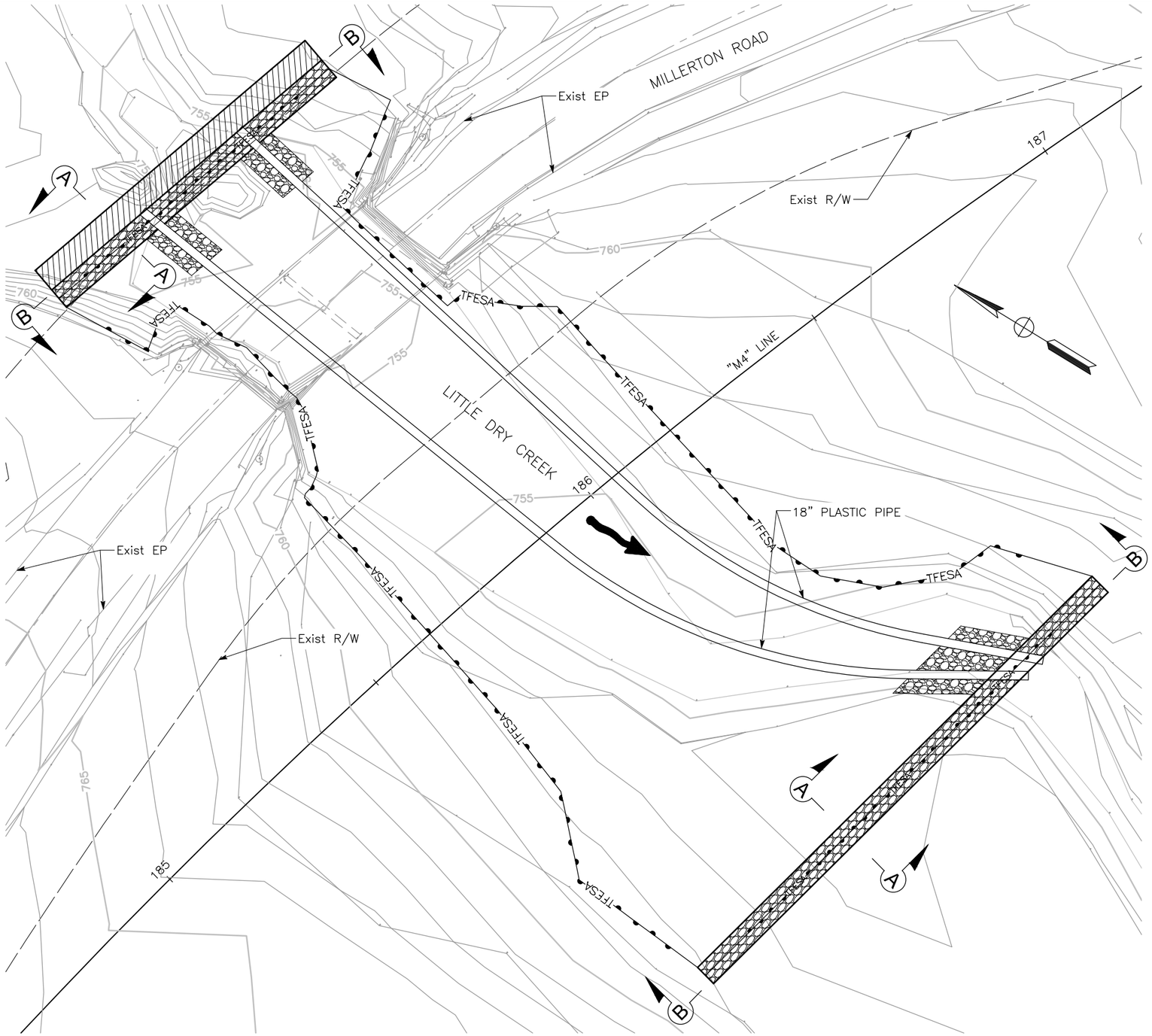
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 2
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-23 SHEET NO. 62 TOTAL 159



LEGEND

- COFFERDAM
- GRAVEL BEDDING
- FILTER MATERIAL WITH FILTER FABRIC UNDERNEATH
- TFESA — TEMPORARY FENCE (TYPE ENVIRONMENTALLY SENSITIVE AREA)

NOTES:

1. THE INFORMATION ON THIS PLAN IS INTENDED TO BE USED AS A GUIDELINE TO INSTALL TEMPORARY CREEK DIVERSION DEVICES. PREPARE A CREEK DIVERSION PLAN INCLUDING THE CONSTRUCTION SEQUENCE, EQUIPMENT, MEANS AND METHODS REQUIRED FOR ERECTION AND REMOVAL OF THE DIVERSION SYSTEM. A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA MUST PREPARE THE CREEK DIVERSION PLAN AND SUBMIT FOR ACCEPTANCE BY THE ENGINEER AND REGULATORY AGENCIES.
2. THE INTENT OF THE DIVERSION PLAN IS TO DIVERT MINIMAL FLOWS DURING THE DRY WORK SEASON. THE SCHEMATIC PLAN IS NOT DESIGNED FOR STORM WATER FLOWS EXPECTED IN THE WET SEASON. YPOU ARE RESPONSIBLE FOR ANY DIVERSION CONTINGENCIES IN THE EVENT OF A STORM.
3. SEE SHEET WPC–25 FOR SECTIONS A–A AND B–B.
4. VERIFY PEAK FLOWS IN RANCHERIA CREEK TO ENSURE PIPE SIZES SHOWN ON THIS PLAN IS ADEQUATE.
5. GRAVEL BEDDING SHALL CONSIST OF 1–INCH TO 4–INCHES IN DIAMETER, WASHED AND ROUNDED RIVER ROCK, AND SHALL MEET THE CALTRANS GRAVEL CLEANLINESS SPECIFICATION #85.

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY STREAM DIVERSION WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	10′ 20′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

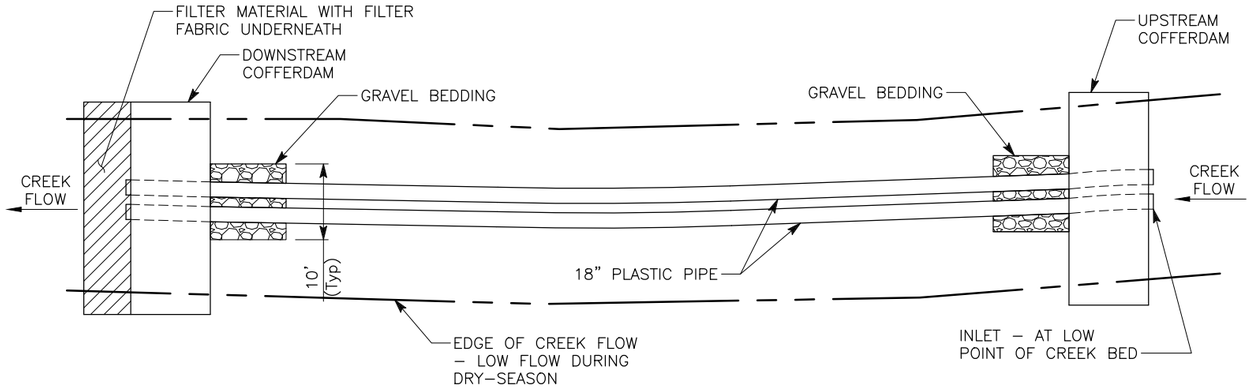
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

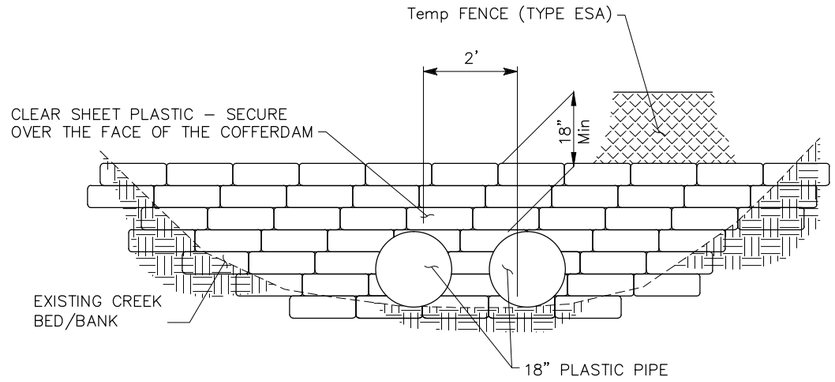
TEMPORARY CREEK DIVERSION
TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-24 SHEET NO. 63 TOTAL 159



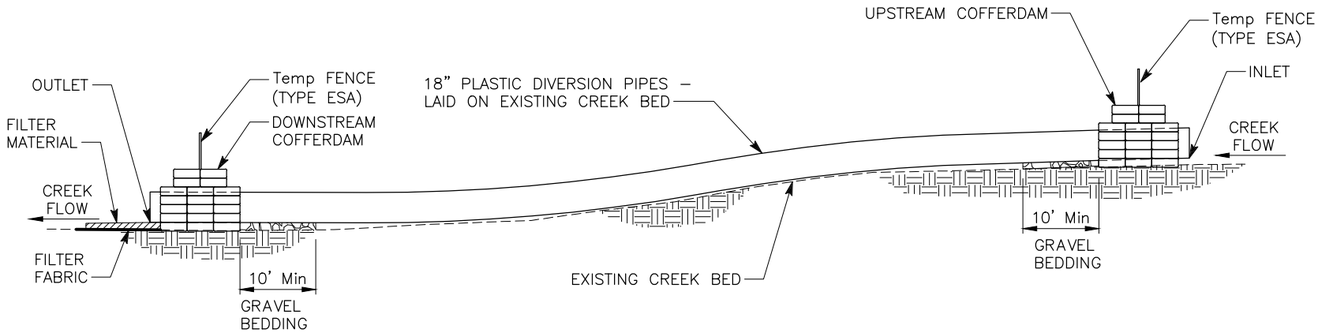
PIPE AND COFFERDAM SCHEMATIC PLAN

NO SCALE



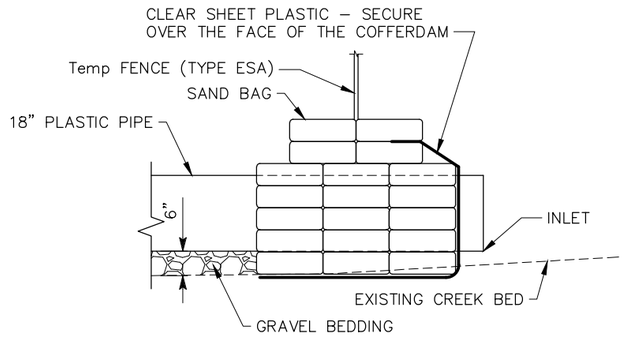
SECTION B - B COFFERDAM DETAIL

NO SCALE



PIPE AND COFFERDAM SCHEMATIC ELEVATION

NO SCALE



SECTION A - A COFFERDAM DETAIL

NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR TEMPORARY STREAM DIVERSION WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

BRIDGE No. 42C-0267, 42C-0268, 42C-0269, 42C-0270

ROAD NO. — BRIDGE NO. 42C-0267 42C-0268 42C-0269 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

TEMPORARY CREEK DIVERSION DETAILS

TEMPORARY WATER POLLUTION CONTROL PLAN

DRAWING NO. WPC-25 SHEET NO. 64 TOTAL 159

NOTES:

1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. DEPLOY LINEAR SEDIMENT CONTROLS (FIBER ROLLS) ON DISTURBED SLOPES. APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE AND AT THE GRADE BREAKS OF THE SLOPE. ADDITIONALLY, USE LINEAR SEDIMENT CONTROLS AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA. PLACE FIBER ROLLS 5 FEET ABOVE THE TOE OF SLOPE AND 6.5 FEET BELOW GRADING CONFORM.
3. ROCK SLOPE PROTECTION SHOWN ON EROSION CONTROL PLANS IS FOR REFERENCE ONLY.

LEGEND:

SS–4: EROSION CONTROL (HYDROSEED)

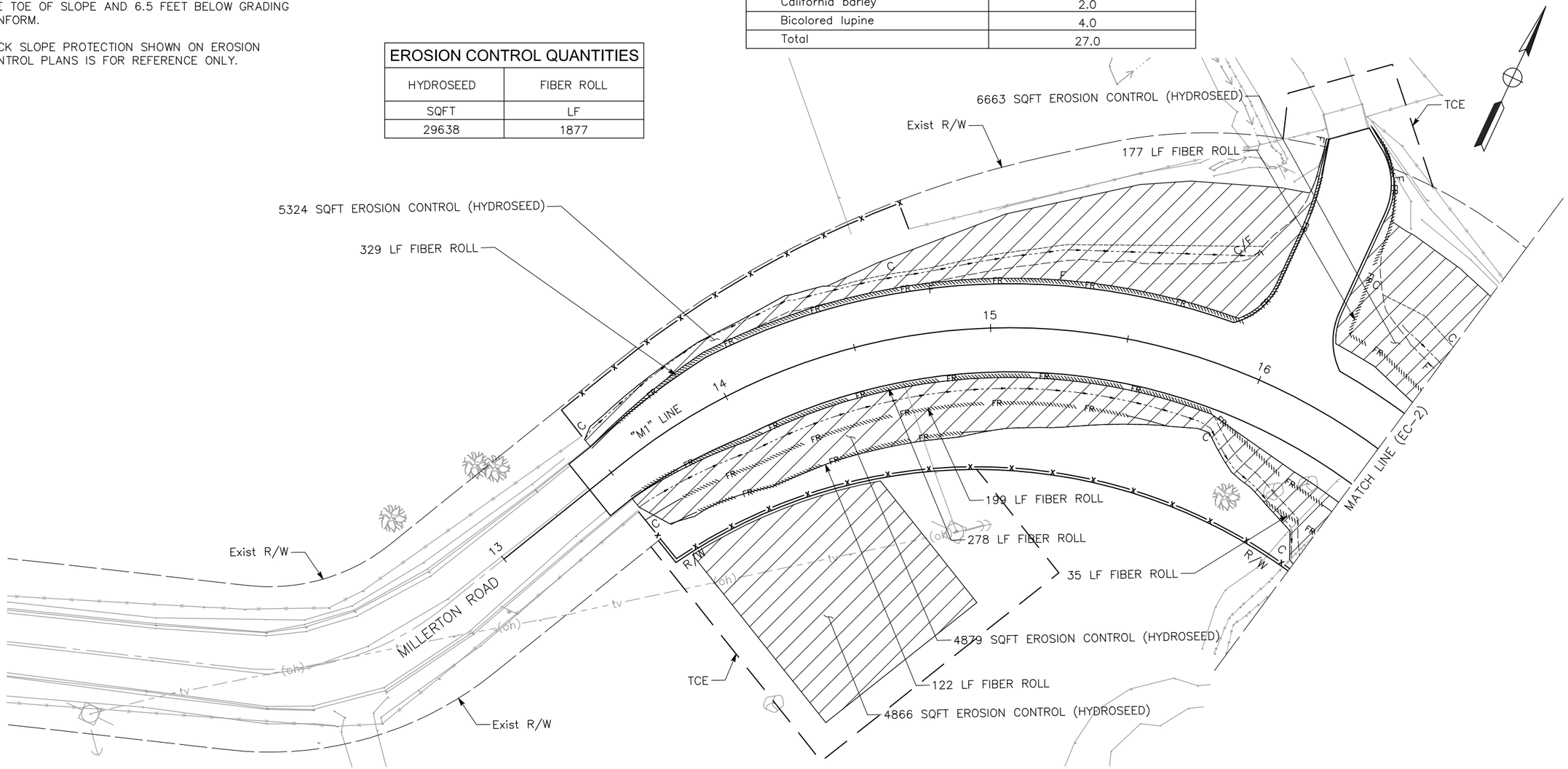
SC–5: FIBER ROLLS

ROCK SLOPE PROTECTION (RSP)

EROSION CONTROL SEED MIX	
COMMON NAME	PURE LIVE SEED (Lbs/Ac)
Mugwort	2.0
California brome	5.0
Slender wheatgrass	2.0
Regreen	10.0
California poppy	2.0
California barley	2.0
Bicolored lupine	4.0
Total	27.0

FIBER ROLL PLACEMENT INTERVALS	
SLOPE	SPACING
4:1 OR FLATTER	20'
2:1 TO 4:1	15'
2:1 OR STEEPER	10'

EROSION CONTROL QUANTITIES	
HYDROSEED	FIBER ROLL
SQFT	LF
29638	1877



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

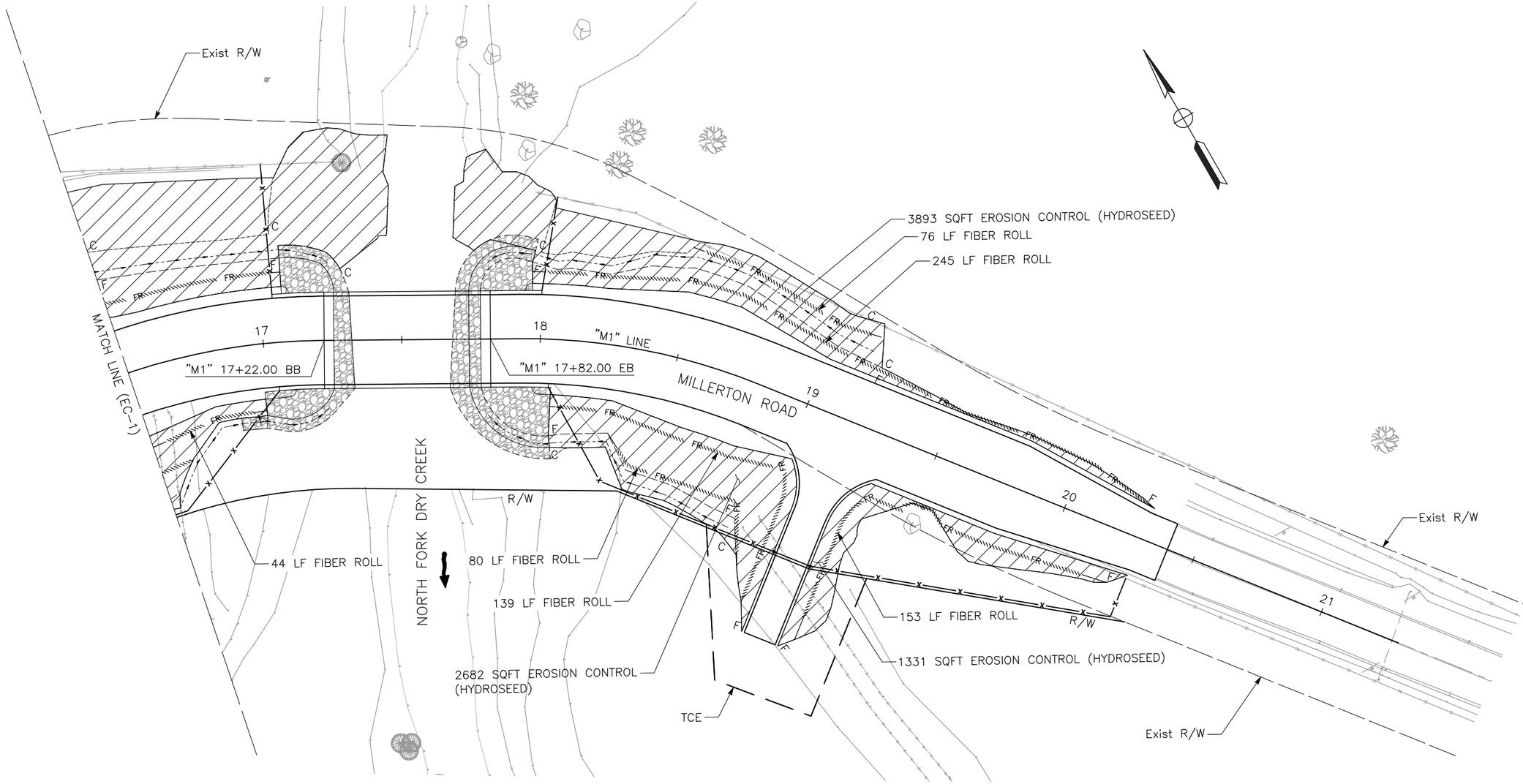
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-1 SHEET NO. 65 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-2 SHEET NO. 66 TOTAL 159

NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. DEPLOY LINEAR SEDIMENT CONTROLS (FIBER ROLLS) ON DISTURBED SLOPES. APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE AND AT THE GRADE BREAKS OF THE SLOPE. ADDITIONALLY, USE LINEAR SEDIMENT CONTROLS AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA. PLACE FIBER ROLLS 5 FEET ABOVE THE TOE OF SLOPE AND 6.5 FEET BELOW GRADING CONFORM.
3. ROCK SLOPE PROTECTION SHOWN ON EROSION CONTROL PLANS IS FOR REFERENCE ONLY.

LEGEND:

SS-4: EROSION CONTROL (HYDROSEED)

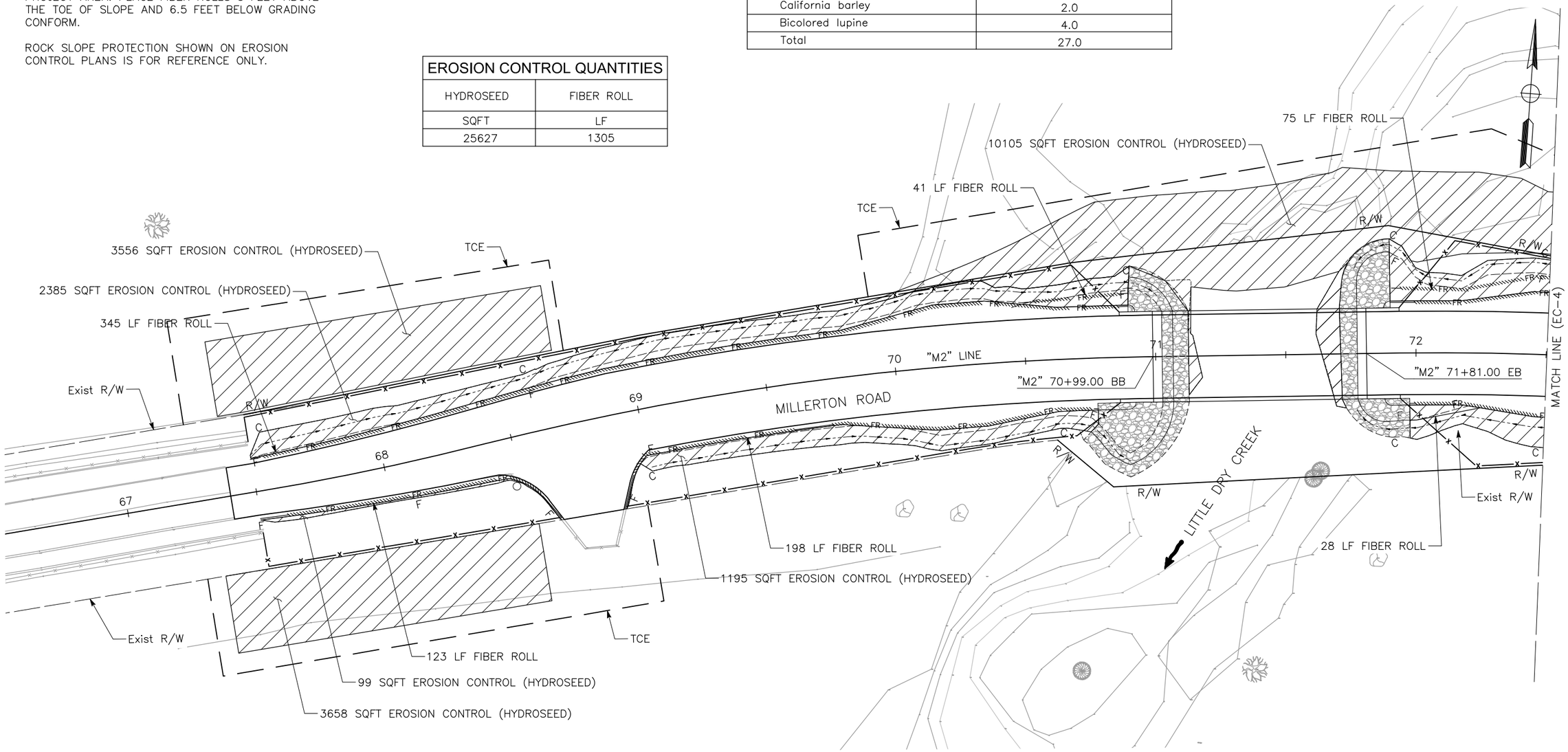
SC-5: FIBER ROLLS

ROCK SLOPE PROTECTION (RSP)

EROSION CONTROL SEED MIX	
COMMON NAME	PURE LIVE SEED (Lbs/Ac)
Mugwort	2.0
California brome	5.0
Slender wheatgrass	2.0
Regreen	10.0
California poppy	2.0
California barley	2.0
Bicolored lupine	4.0
Total	27.0

FIBER ROLL PLACEMENT INTERVALS	
SLOPE	SPACING
4:1 OR FLATTER	20'
2:1 TO 4:1	15'
2:1 OR STEEPER	10'

EROSION CONTROL QUANTITIES	
HYDROSEED	FIBER ROLL
SQFT	LF
25627	1305



APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

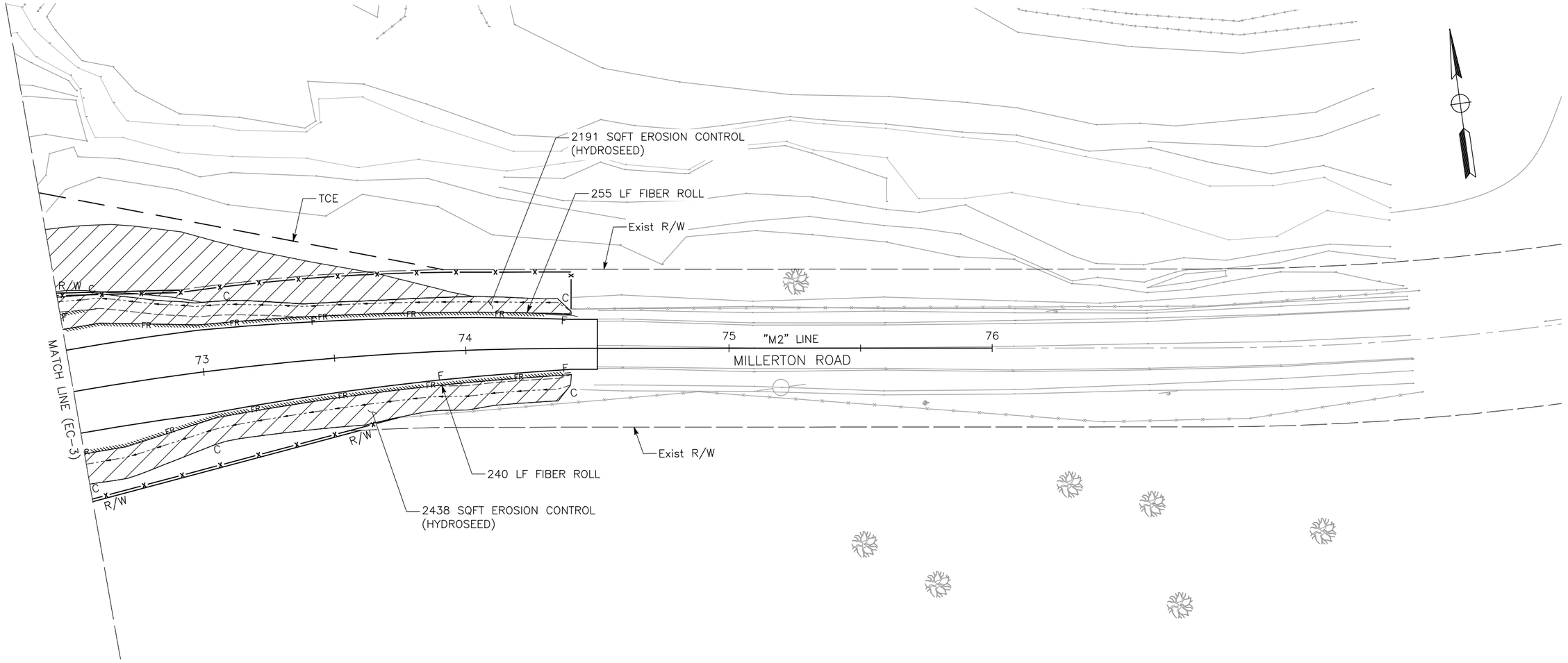
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-3 SHEET NO. 67 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-4 SHEET NO. 68 TOTAL 159

NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. DEPLOY LINEAR SEDIMENT CONTROLS (FIBER ROLLS) ON DISTURBED SLOPES. APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE AND AT THE GRADE BREAKS OF THE SLOPE. ADDITIONALLY, USE LINEAR SEDIMENT CONTROLS AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA. PLACE FIBER ROLLS 5 FEET ABOVE THE TOE OF SLOPE AND 6.5 FEET BELOW GRADING CONFORM.
3. ROCK SLOPE PROTECTION SHOWN ON EROSION CONTROL PLANS IS FOR REFERENCE ONLY.

LEGEND:

SS-4: EROSION CONTROL (HYDROSEED)

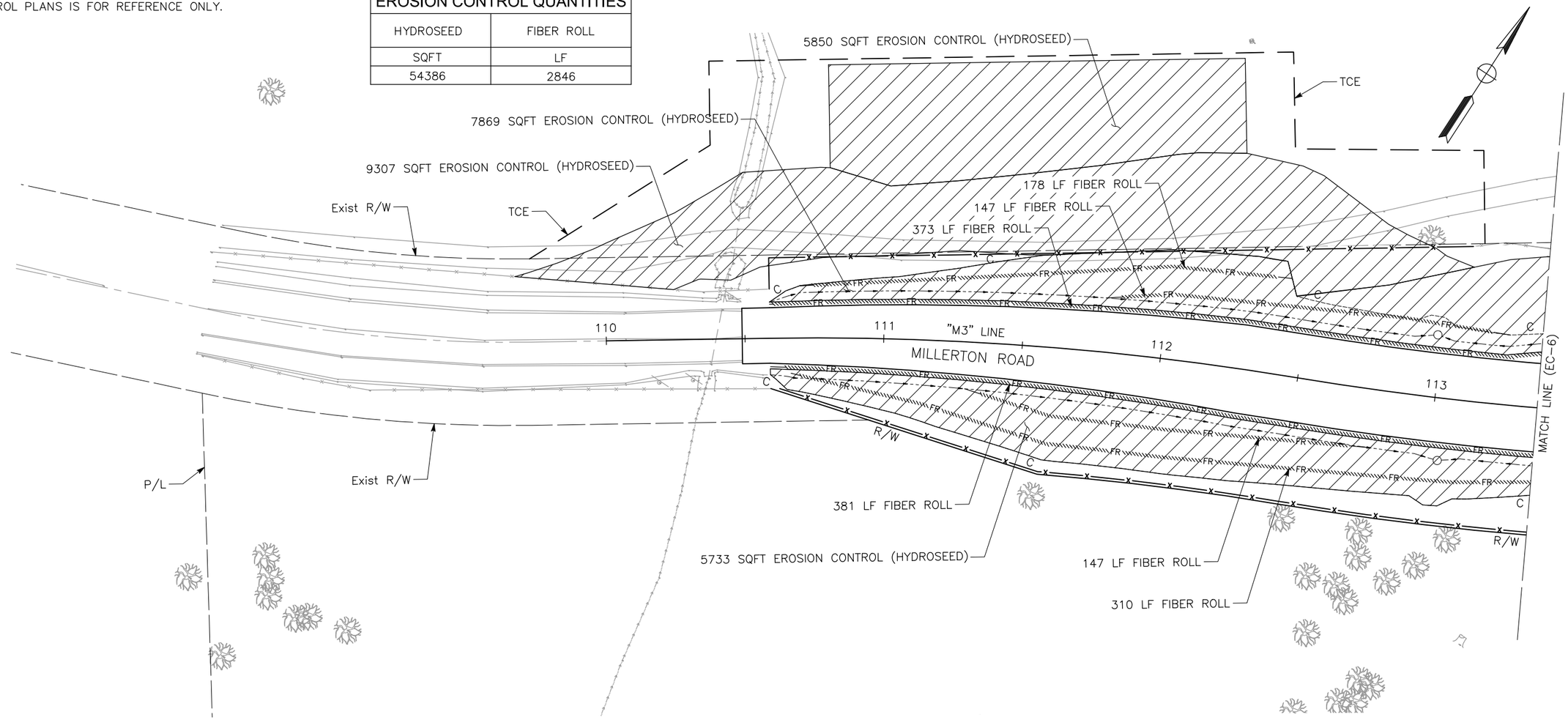
SC-5: FIBER ROLLS

ROCK SLOPE PROTECTION (RSP)

EROSION CONTROL SEED MIX	
COMMON NAME	PURE LIVE SEED (Lbs/Ac)
Mugwort	2.0
California brome	5.0
Slender wheatgrass	2.0
Regreen	10.0
California poppy	2.0
California barley	2.0
Bicolored lupine	4.0
Total	27.0

FIBER ROLL PLACEMENT INTERVALS	
SLOPE	SPACING
4:1 OR FLATTER	20'
2:1 TO 4:1	15'
2:1 OR STEEPER	10'

EROSION CONTROL QUANTITIES	
HYDROSEED	FIBER ROLL
SQFT	LF
54386	2846



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

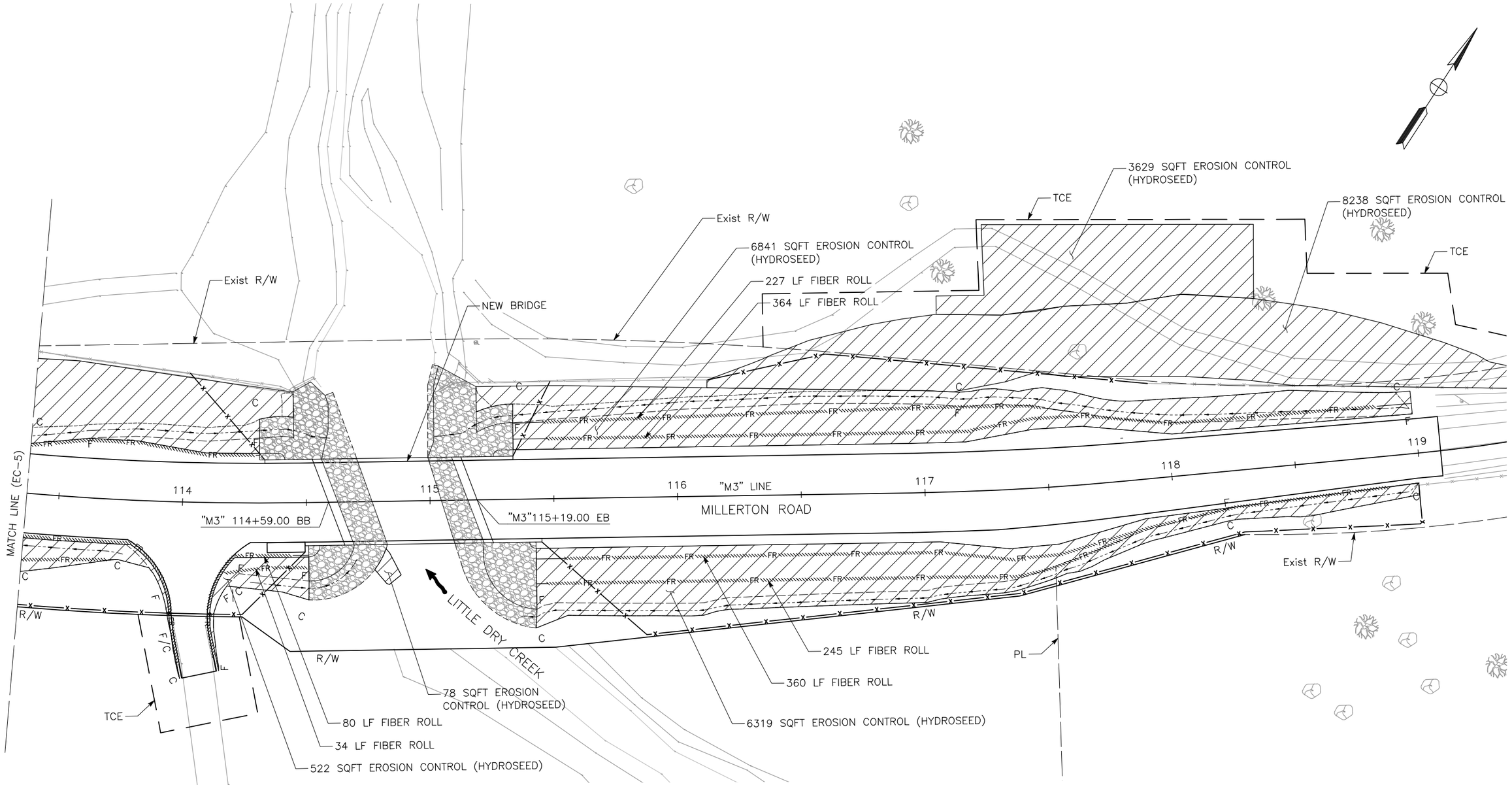
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-5 SHEET NO. 69 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-6 SHEET NO. 70 TOTAL 159

NOTES:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. DEPLOY LINEAR SEDIMENT CONTROLS (FIBER ROLLS) ON DISTURBED SLOPES. APPLY LINEAR SEDIMENT CONTROLS ALONG THE TOE OF THE SLOPE AND AT THE GRADE BREAKS OF THE SLOPE. ADDITIONALLY, USE LINEAR SEDIMENT CONTROLS AS A PERIMETER CONTROL TO CONTAIN SEDIMENT WITHIN THE PROJECT AREA. PLACE FIBER ROLLS 5 FEET ABOVE THE TOE OF SLOPE AND 6.5 FEET BELOW GRADING CONFORM.
3. ROCK SLOPE PROTECTION SHOWN ON EROSION CONTROL PLANS IS FOR REFERENCE ONLY.

LEGEND:

SS-4: EROSION CONTROL (HYDROSEED)

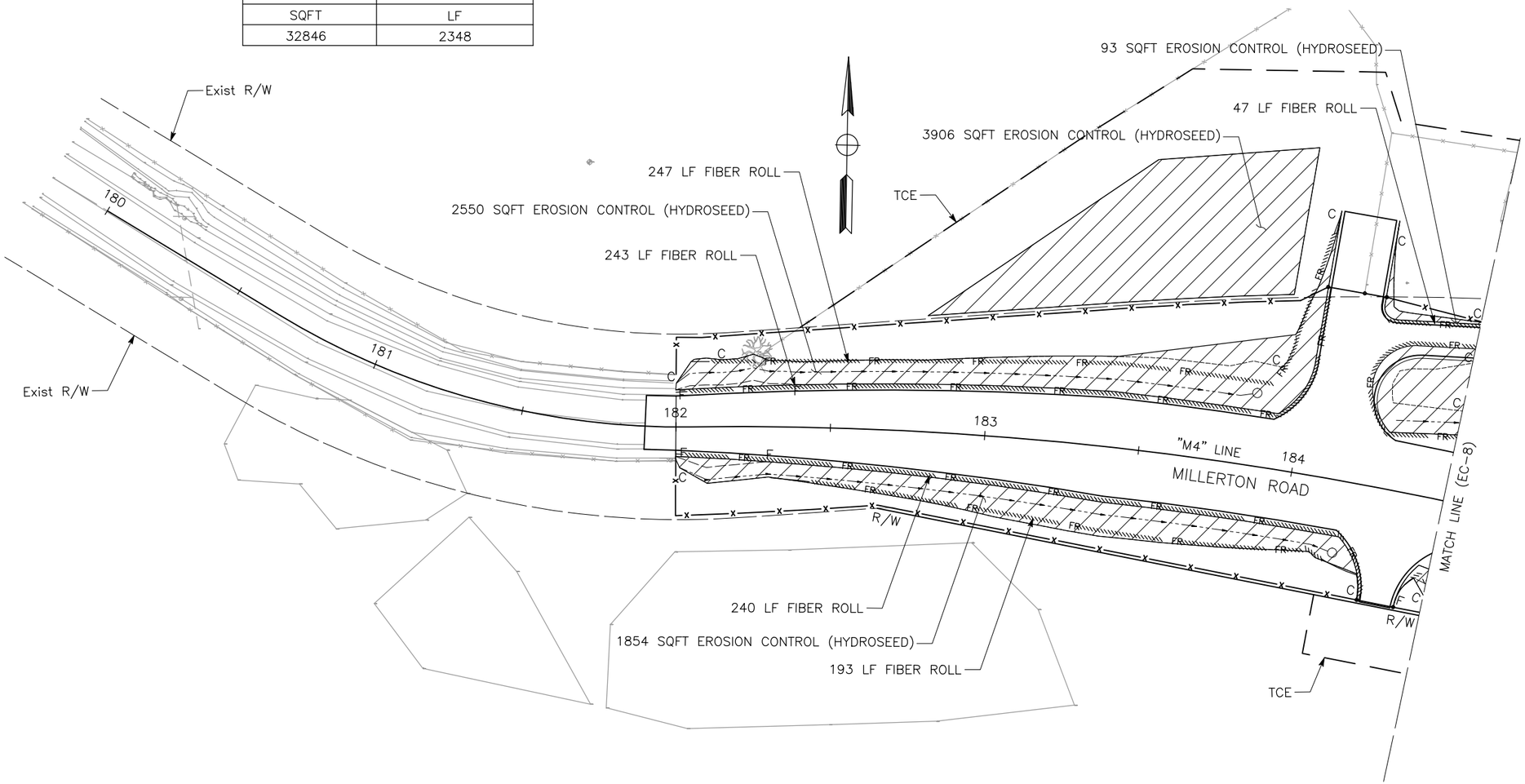
SC-5: FIBER ROLLS

ROCK SLOPE PROTECTION (RSP)

EROSION CONTROL SEED MIX	
COMMON NAME	PURE LIVE SEED (Lbs/Ac)
Mugwort	2.0
California brome	5.0
Slender wheatgrass	2.0
Regreen	10.0
California poppy	2.0
California barley	2.0
Bicolored lupine	4.0
Total	27.0

FIBER ROLL PLACEMENT INTERVALS	
SLOPE	SPACING
4:1 OR FLATTER	20'
2:1 TO 4:1	15'
2:1 OR STEEPER	10'

EROSION CONTROL QUANTITIES	
HYDROSEED	FIBER ROLL
SQFT	LF
32846	2348



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

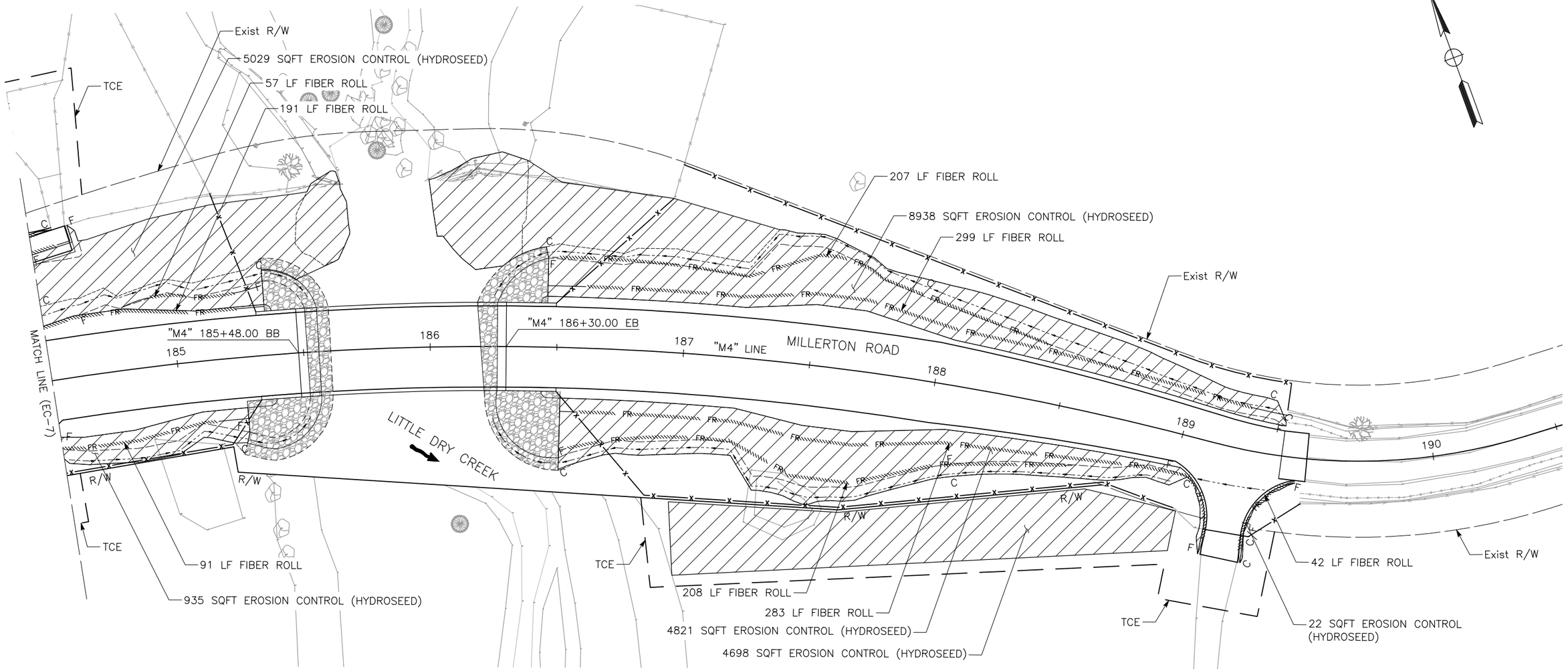
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-7 SHEET NO. 71 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR EROSION CONTROL WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. — BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

EROSION CONTROL PLAN

DRAWING NO. EC-8 — SHEET NO. 72 — TOTAL 159

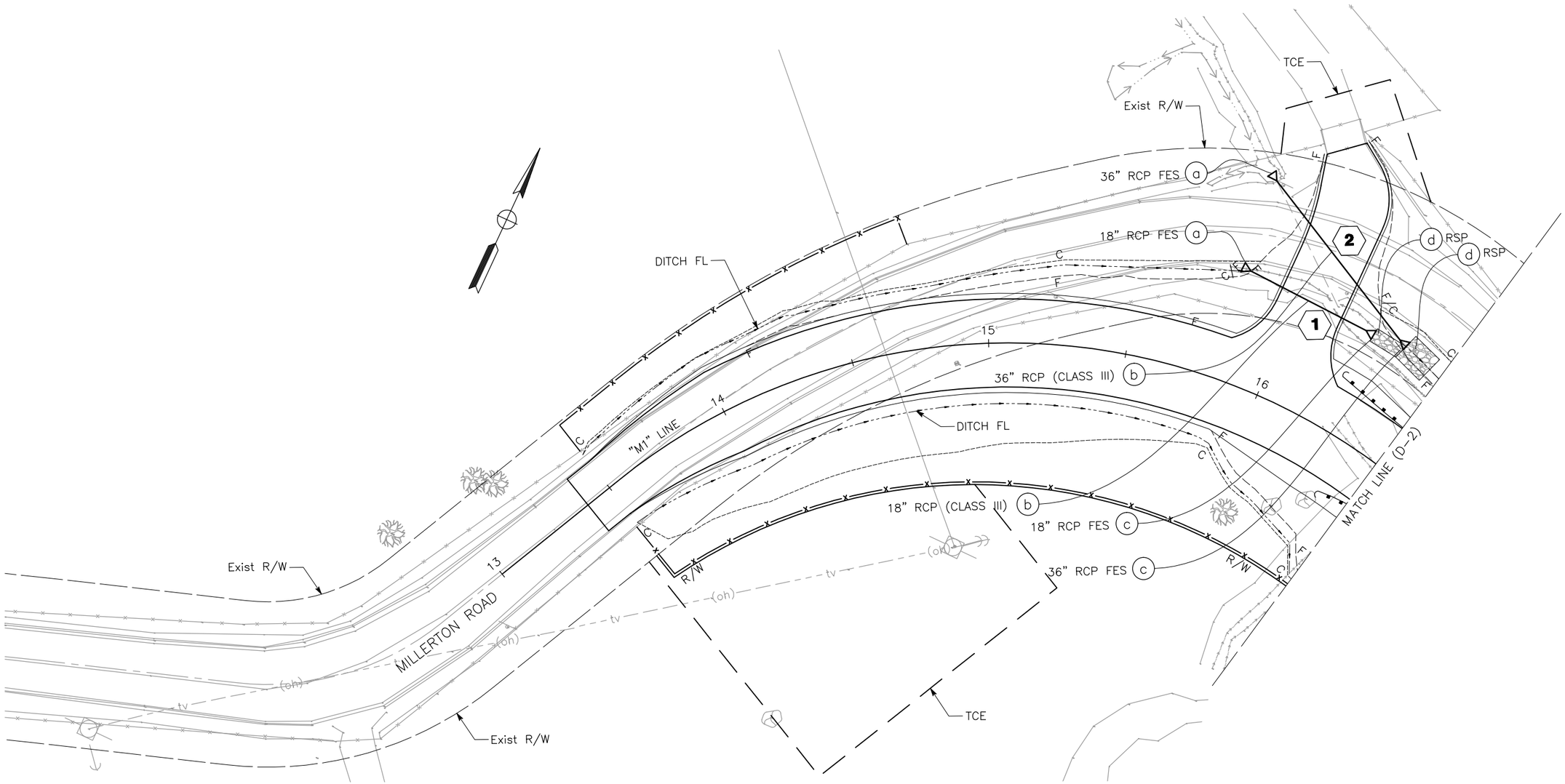
NOTE:

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT COUNTY OFFICE.
2. PLACE FENCE POSTS TO AVOID DRAINAGE PIPE.

LEGEND:

(X) DRAINAGE SYSTEM No.

(x) DRAINAGE UNIT



APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

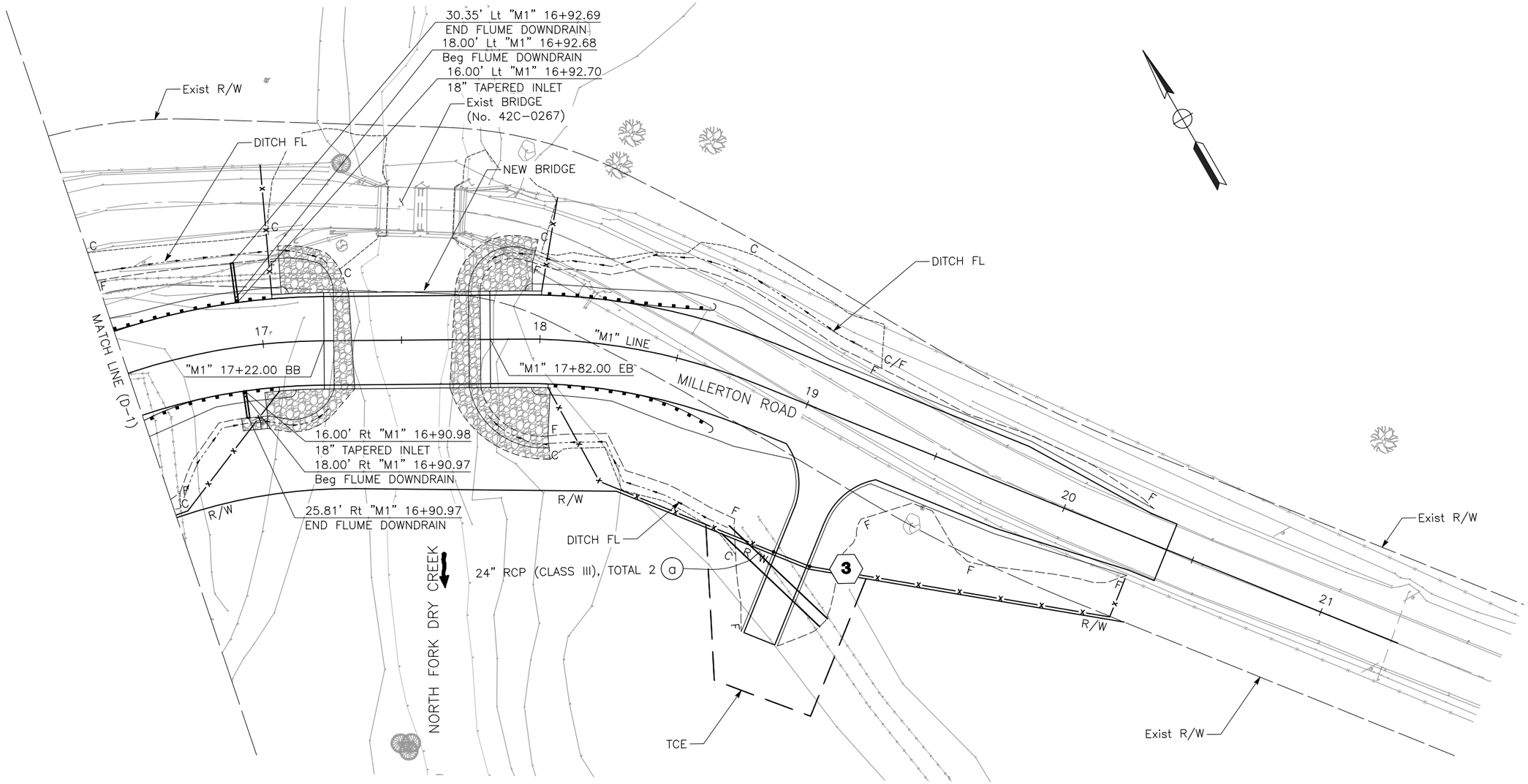
THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-1 SHEET NO. 73 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: A. CASTLE-KEANE	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-2 SHEET NO. 74 TOTAL 159

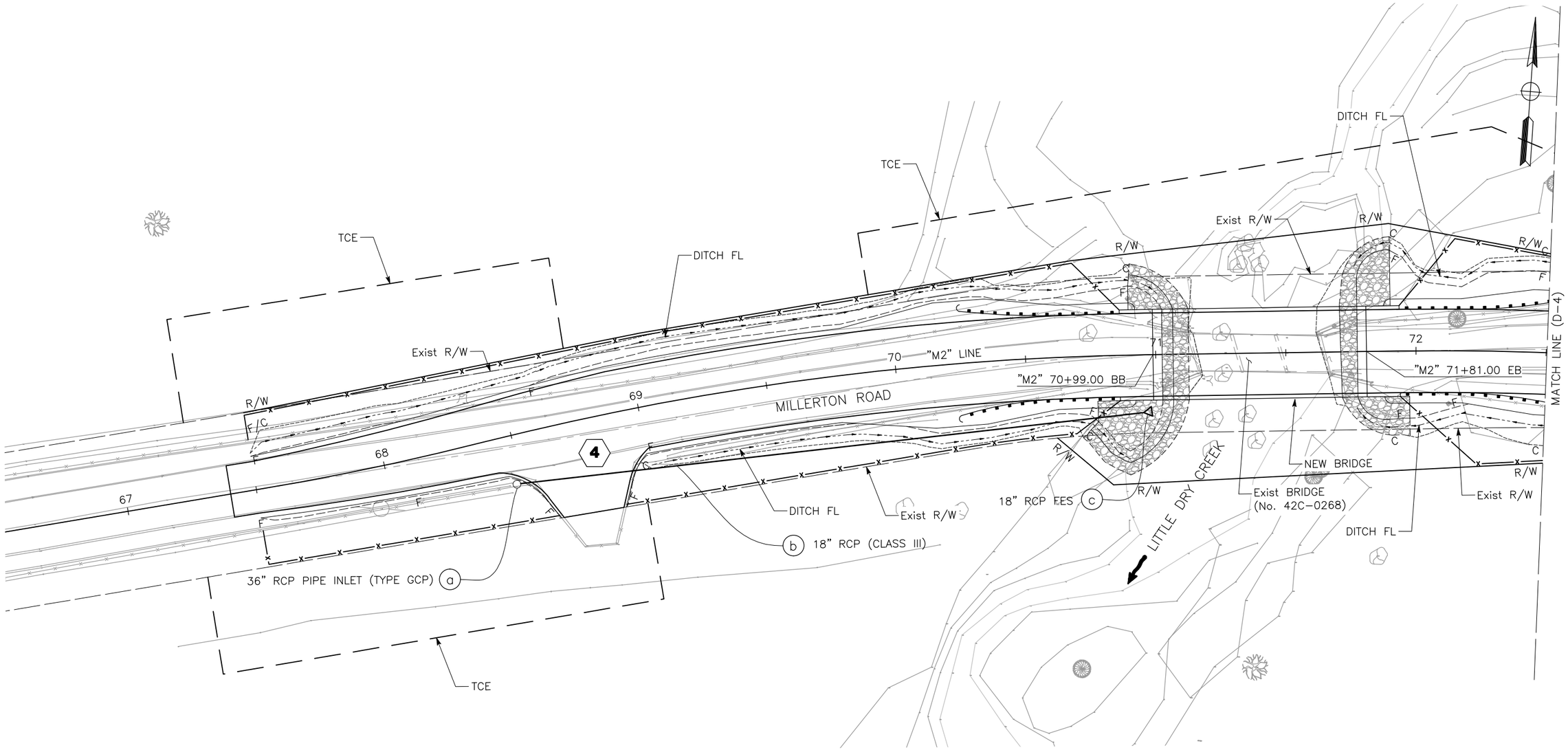
NOTE:

1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. PLACE FENCE POST TO AVOID DRAINAGE PIPE.

LEGEND:

(X) DRAINAGE SYSTEM No.

(x) DRAINAGE UNIT



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

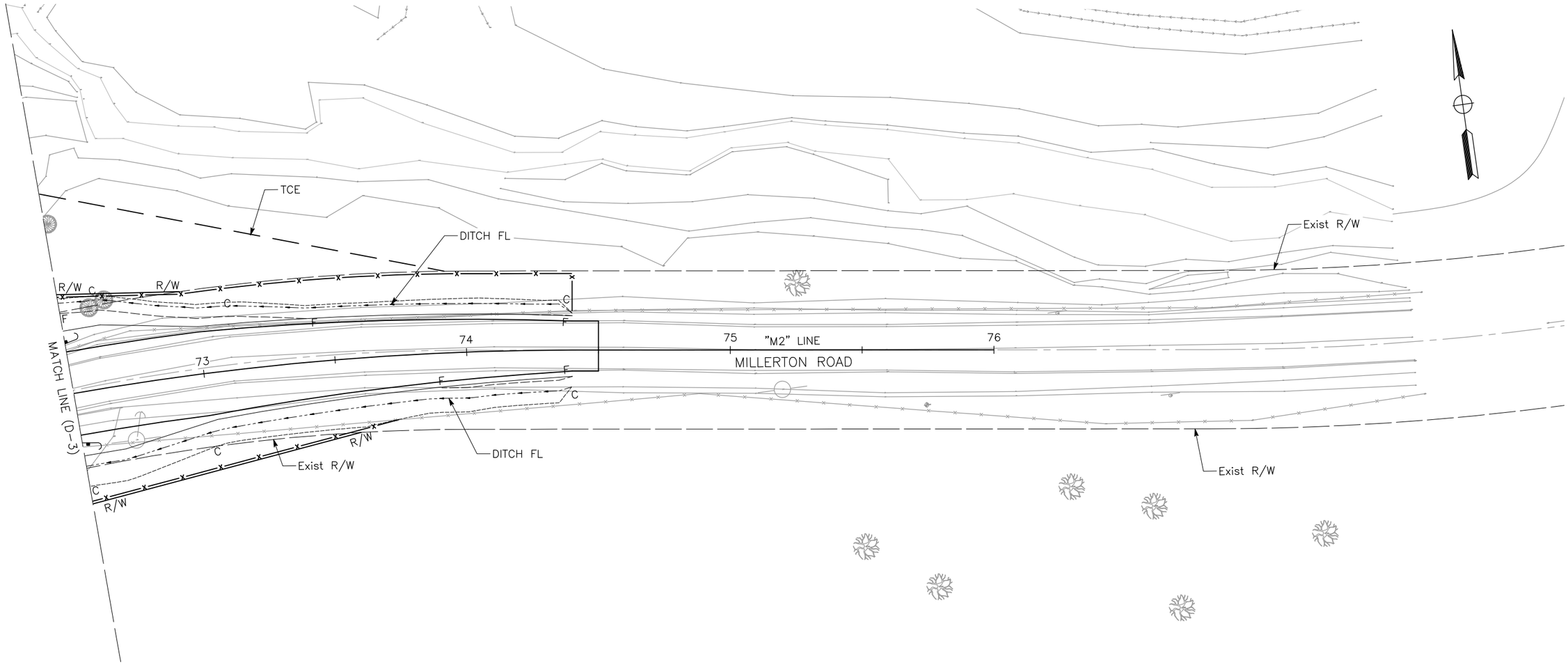
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-3 SHEET NO. 75 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-4 SHEET NO. 76 TOTAL 159

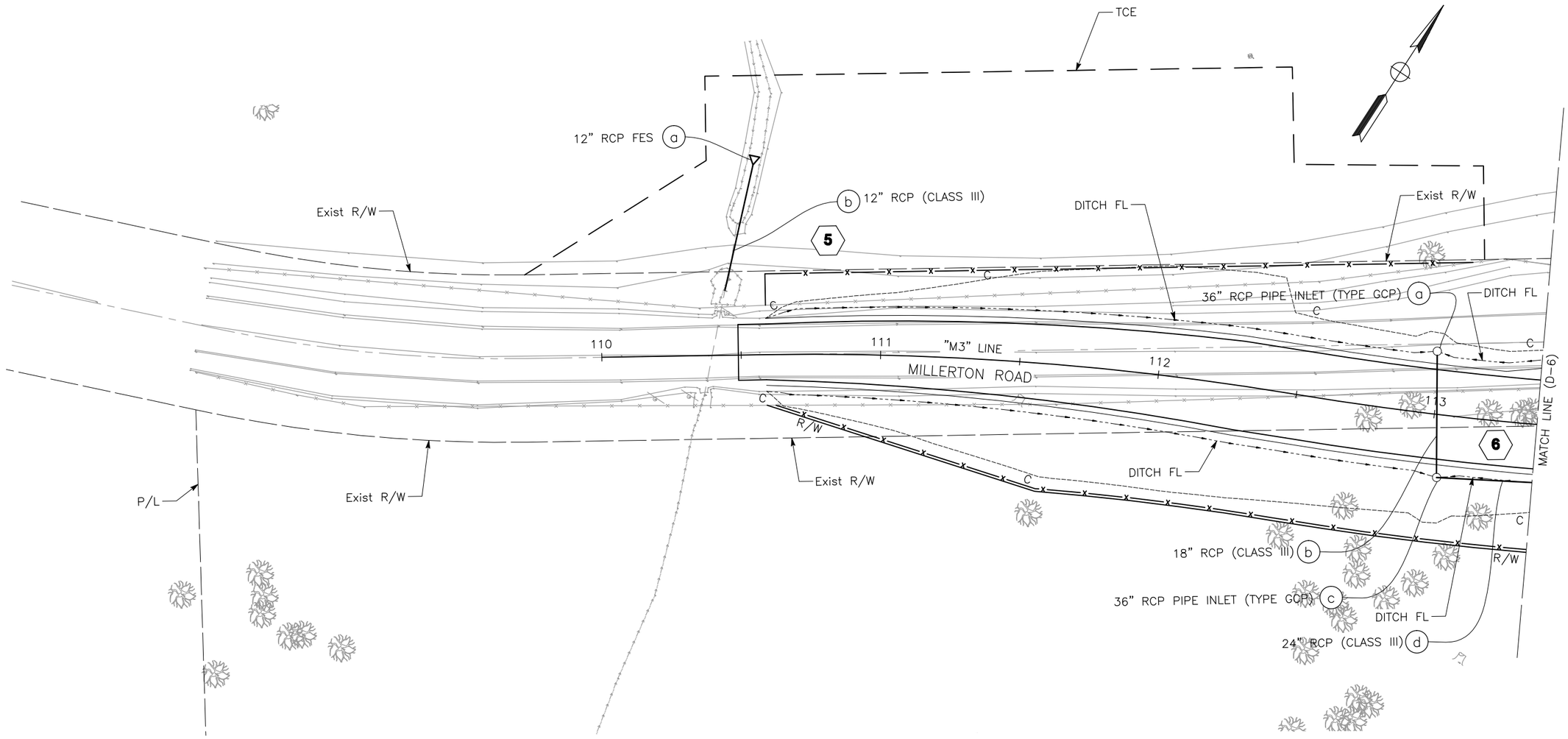
NOTE:

1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. PLACE FENCE POST TO AVOID DRAINAGE PIPE.

LEGEND:

(X) DRAINAGE SYSTEM No.

(x) DRAINAGE UNIT



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: A. CASTLE-KEANE	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

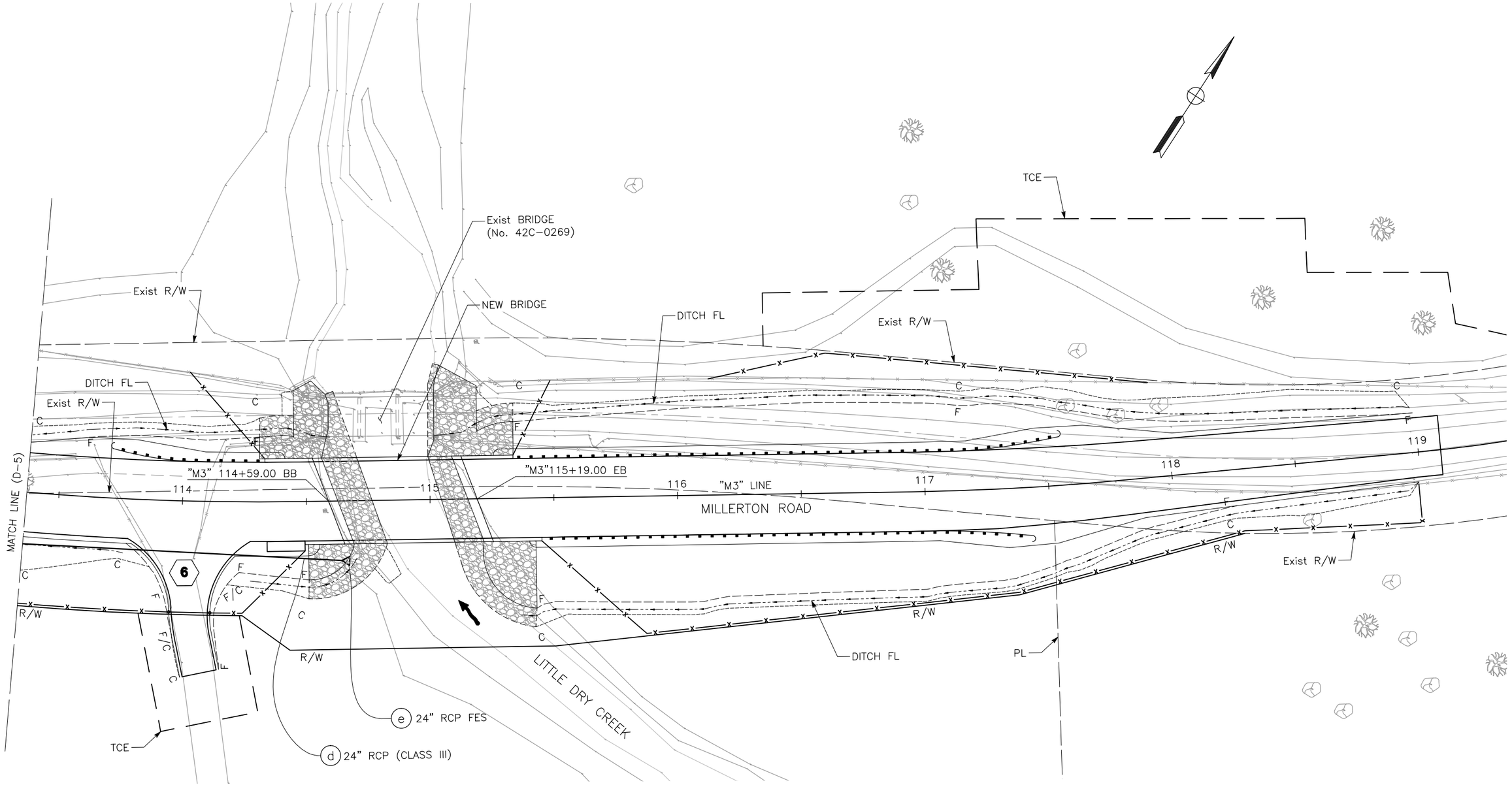
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-5 SHEET NO. 77 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: A. CASTLE-KEANE	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-6 SHEET NO. 78 TOTAL 159

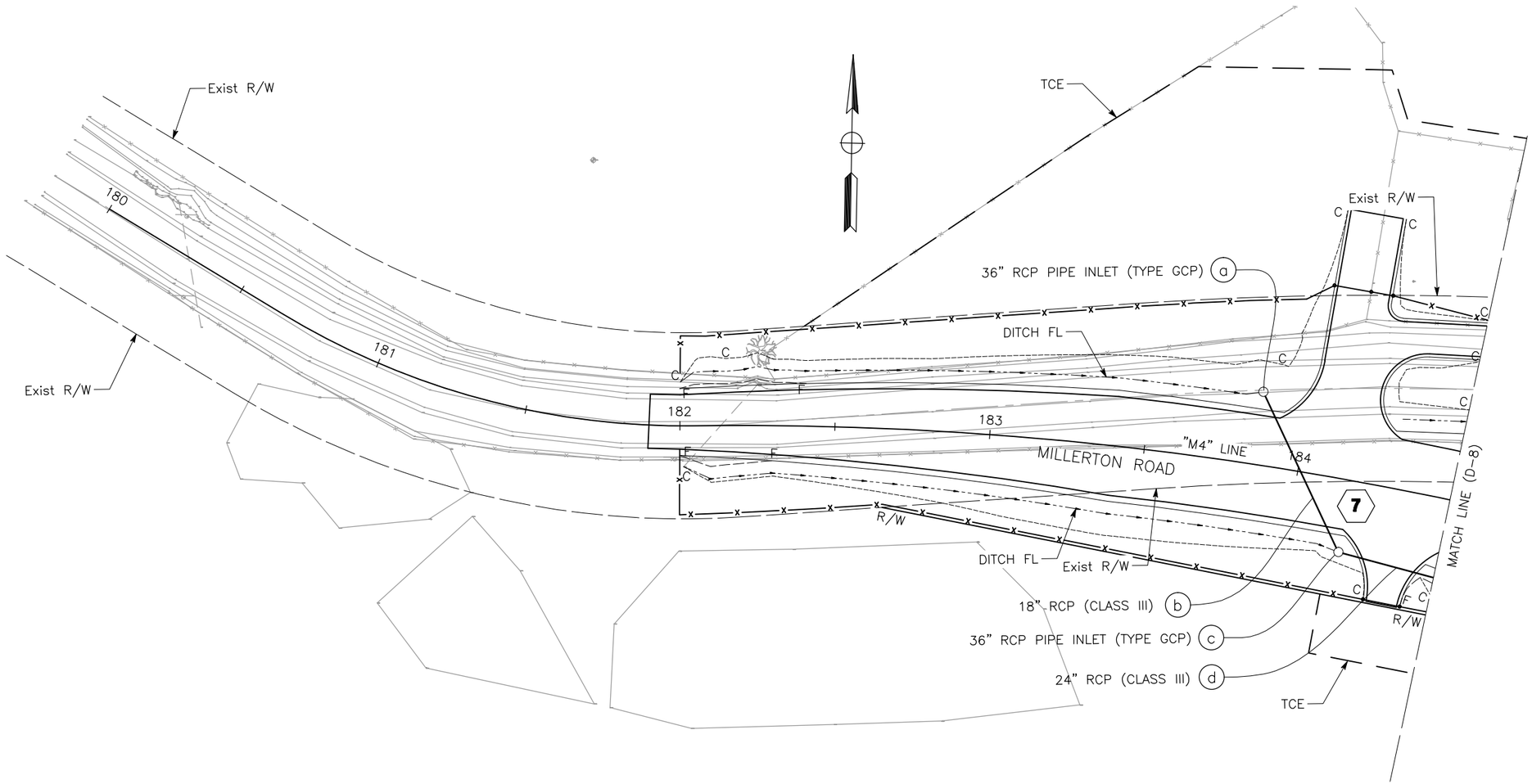
NOTE:

1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT COUNTY OFFICE.
2. PLACE FENCE POST TO AVOID DRAINAGE PIPE.

LEGEND:

(X) DRAINAGE SYSTEM No.

(X) DRAINAGE UNIT



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

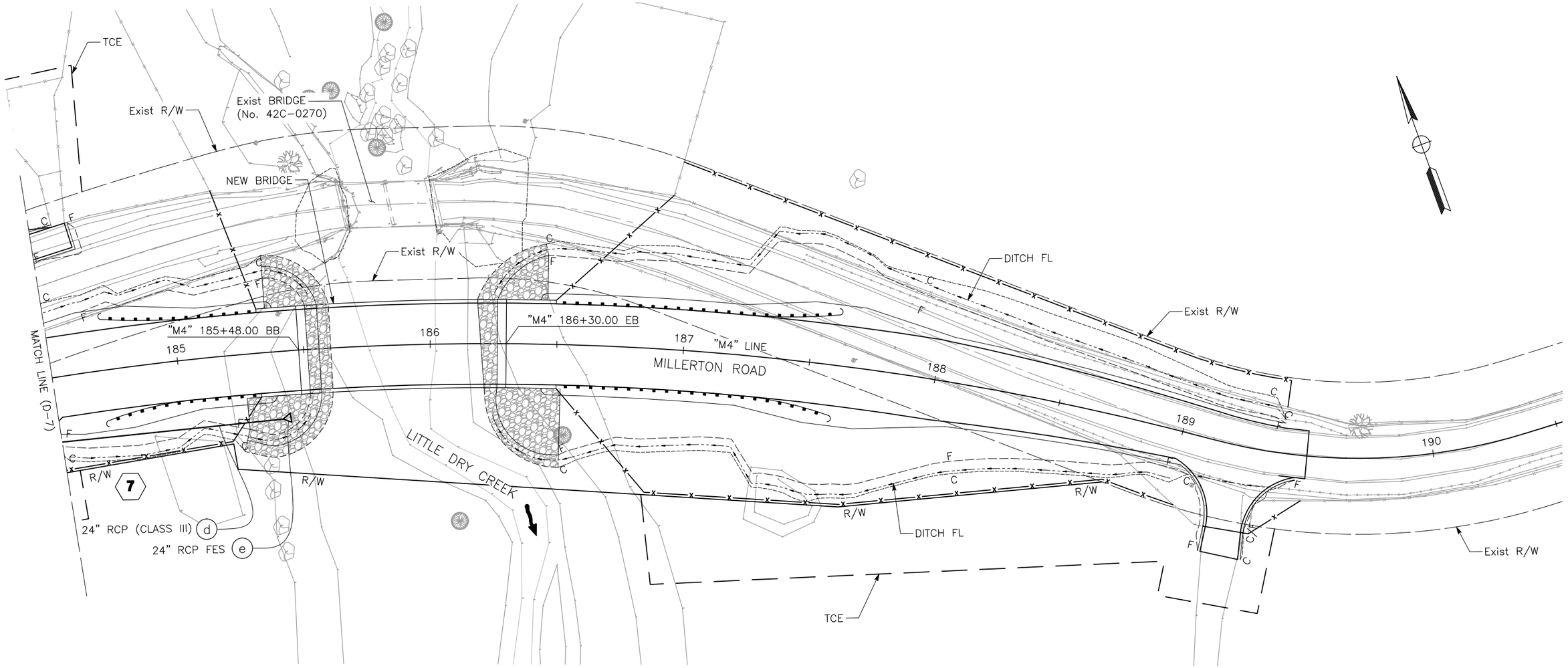
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

DRAWING NO. D-7 SHEET NO. 79 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR DRAINAGE WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: A. CASTLE-KEANE	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

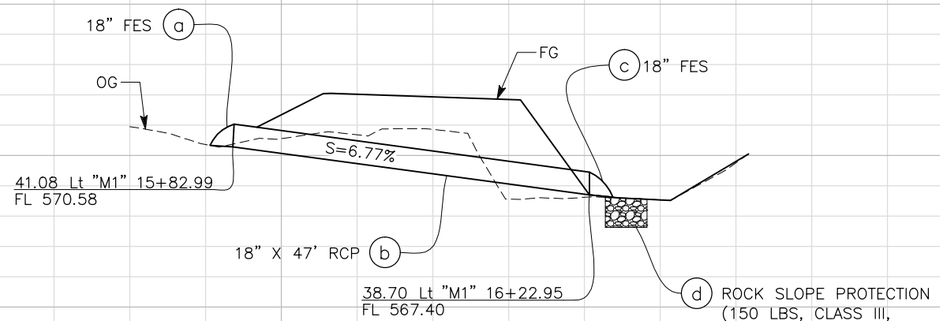
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

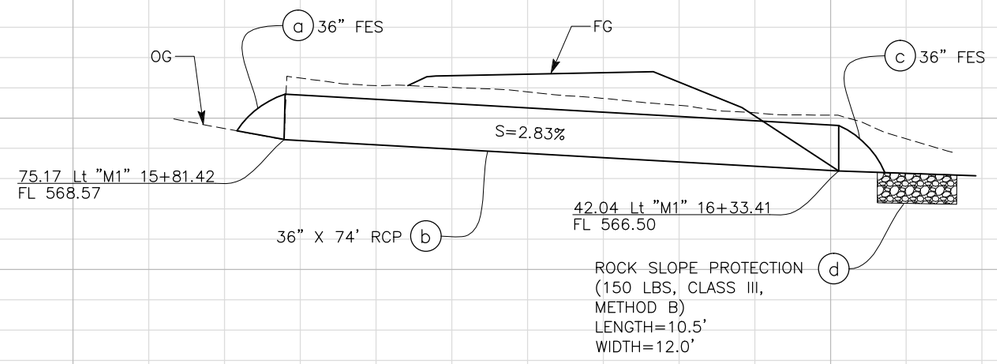
DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PLAN

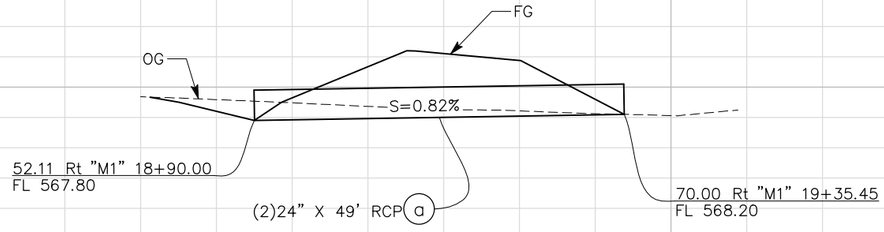
DRAWING NO. D-8 SHEET NO. 80 TOTAL 159



DRAINAGE SYSTEM No. 1



DRAINAGE SYSTEM No. 2



DRAINAGE SYSTEM No. 3

SCALE: Horiz 1"=10'
Vert 1"=5'

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

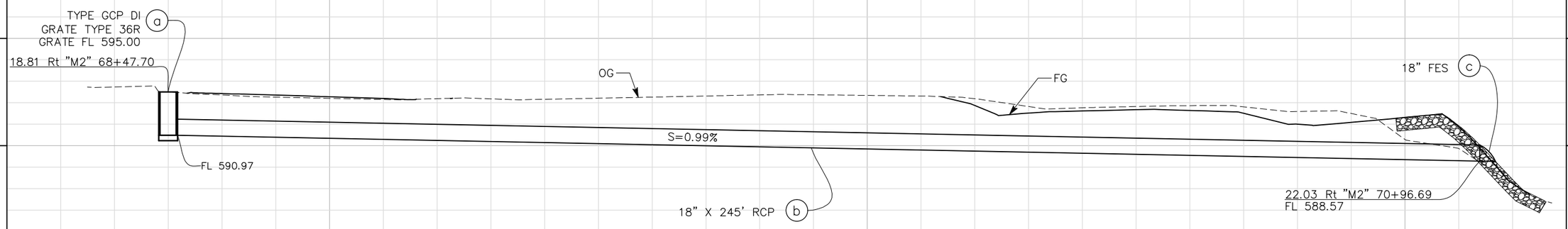
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PROFILE

DRAWING NO. DP-1 SHEET NO. 81 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



DRAINAGE SYSTEM No. 4

SCALE: Horiz 1"=10'
Vert 1"=5'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

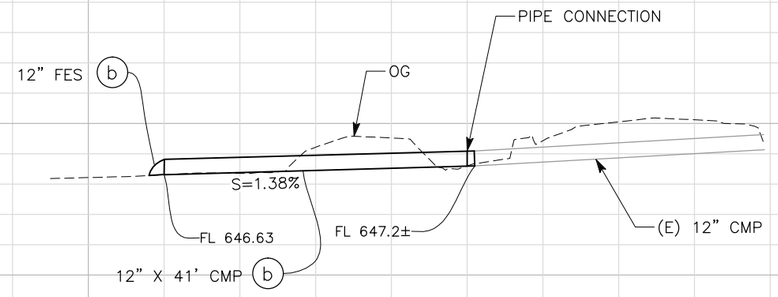
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

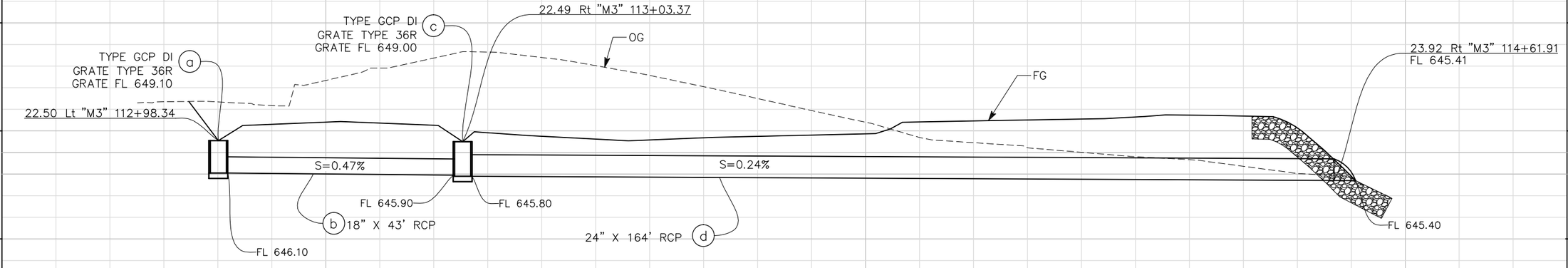
DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PROFILE

DRAWING NO. DP-2 SHEET NO. 82 TOTAL 159



DRAINAGE SYSTEM No. 5



DRAINAGE SYSTEM No. 6

SCALE: Horiz 1"=10'
Vert 1"=5'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

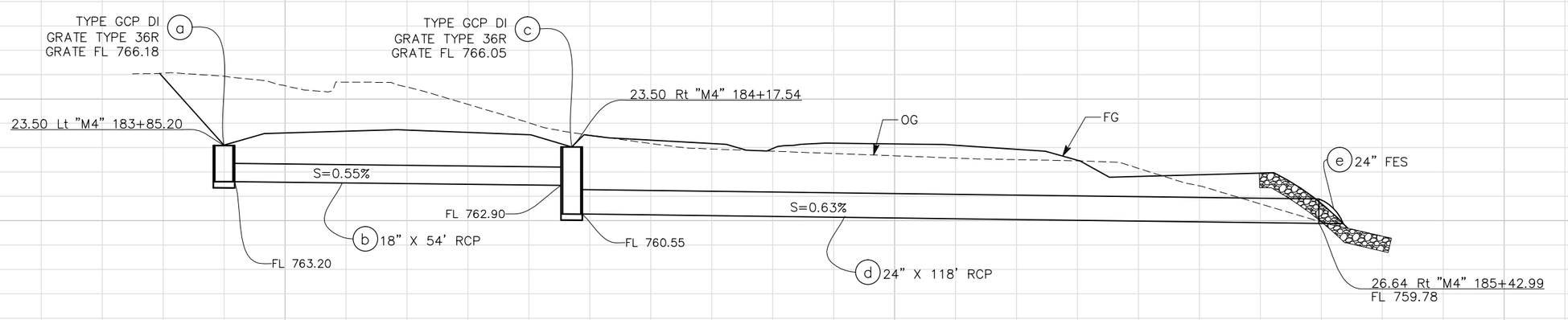
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE PROFILE

DRAWING NO. DP-3 SHEET NO. 83 TOTAL 159



DRAINAGE SYSTEM No. 7

SCALE: Horiz 1"=10'
Vert 1"=5'

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	
DRAWN: A. CASTLE-KEANE	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

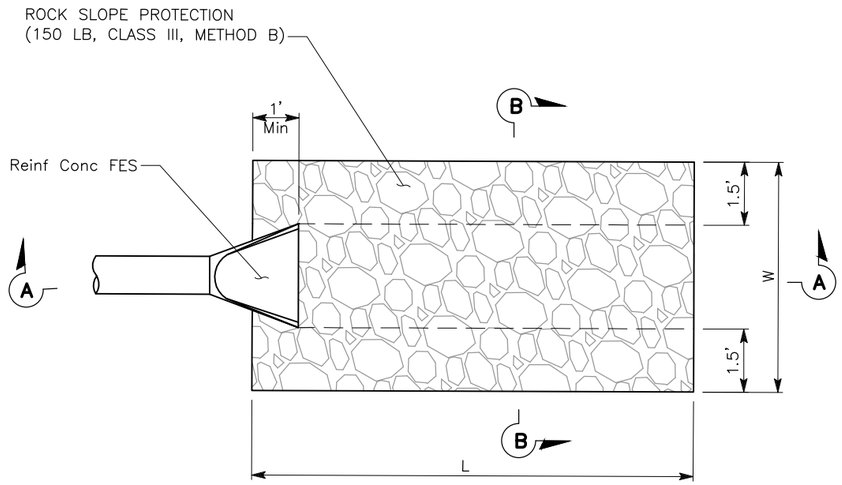
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

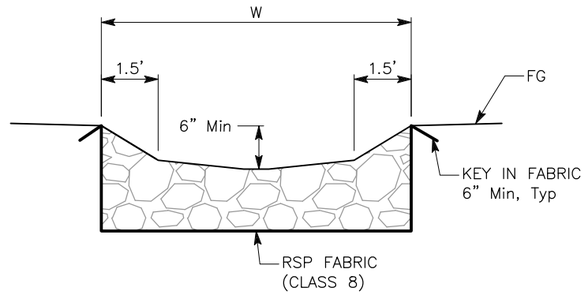
DRAINAGE PROFILE

DRAWING NO. DP-4 SHEET NO. 84 TOTAL 159



OUTLET ROCK SLOPE PROTECTION

NO SCALE

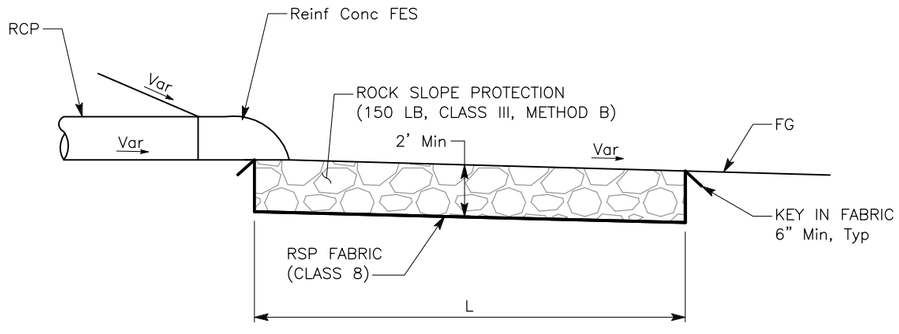


SECTION B - B

NO SCALE

RSP SUMMARY TABLE

DRAINAGE SYSTEM No.	DRAINAGE ITEM No.	L	W
1	d	5.5'	6'
2	d	10.5'	12'



SECTION A - A

NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267, 42C-0268, 42C-0269, 42C-0270

ROAD NO. BRIDGE NO.

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DRAINAGE DETAILS

DRAWING NO. DD-1 SHEET NO. 85 TOTAL 159

NOTES:

1. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.
2. ALL CONSTRUCTION AREA SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE 2012 CALIFORNIA MUTCD AND THE 2010 CALTRANS STANDARD PLANS.
3. SIGN No. B, F, AND G SHALL BE EQUIPPED WITH FLASHING BEACONS.

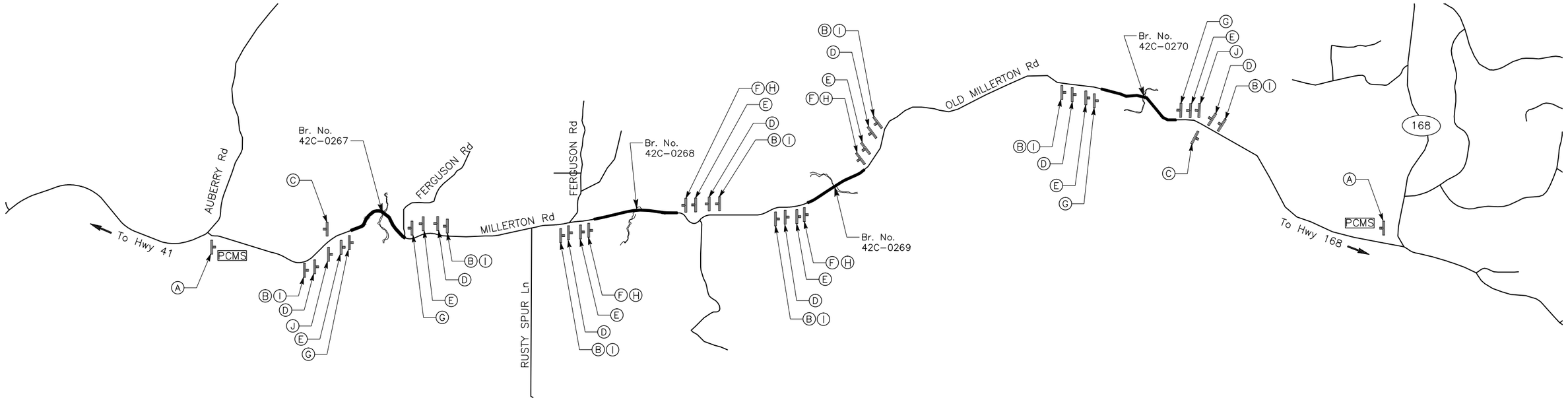
LEGEND:

CONSTRUCTION AREA SIGN

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	No. OF SIGNS	SIGN MESSAGE
(A)	G20-1	48" x 48"	2	ROAD WORK NEXT 5.2 MILES
(B)	W20-1	30" x 30"	8	ROAD WORK AHEAD
(C)	G20-2	48" x 24"	2	END ROAD WORK
(D)	W3-5a	36" x 36"	8	25 MPH SPEED ZONE AHEAD
(E)	W3-5	36" x 36"	8	SPEED LIMIT 25 MPH
(F)	W20-2	48" x 48"	4	DETOUR AHEAD
(G)	W3-4	36" x 36"	4	BE PREPARED TO STOP
(H)	C29(CA)	20" x 7"	4	200 FT
(I)	C29(CA)	20" x 7"	8	1000 FT
(J)	C47B(CA)	60" x 90"	2	CONSTRUCTION SIGN FUNDING IDENTIFICATION



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	NO SCALE
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267, 42C-0268, 42C-0269, 42C-0270

ROAD NO. BRIDGE NO. 42C-0267 42C-0268 42C-0269 42C-0270

THE COUNTY OF FRESNO 1856

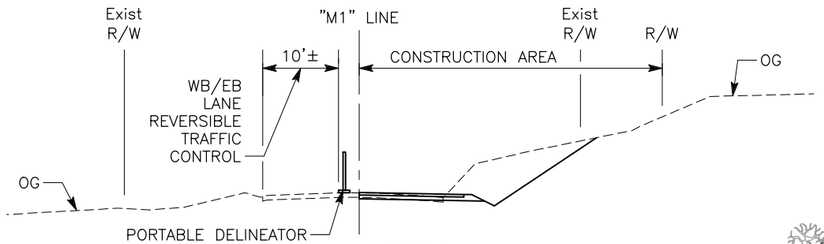
DEPARTMENT OF PUBLIC WORKS AND PLANNING

CONSTRUCTION AREA SIGNS

DRAWING NO. CS-1 SHEET NO. 86 TOTAL 159

LEGEND:

- – STRUCTURE WORK
- – ROADWAY WORK
- – BRIDGE REMOVAL
- – ROADWAY WORK TO BE COMPLETED PRIOR TO NEXT STAGE
- – POTENTIAL STAGING AREA
- – TYPE III BARRICADE (WITH WARNING LIGHTS)
- – PORTABLE DELINEATOR (15' O.C.)
- – TEMPORARY CRASH CUSHION
- – TEMPORARY RAILING (TYPE K)
- – DIRECTION OF TRAVEL
- – TEMPORARY SIGN – SINGLE POST
- STOP – "STOP" PAVEMENT MARKING



SECTION A – A
NO SCALE

NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.

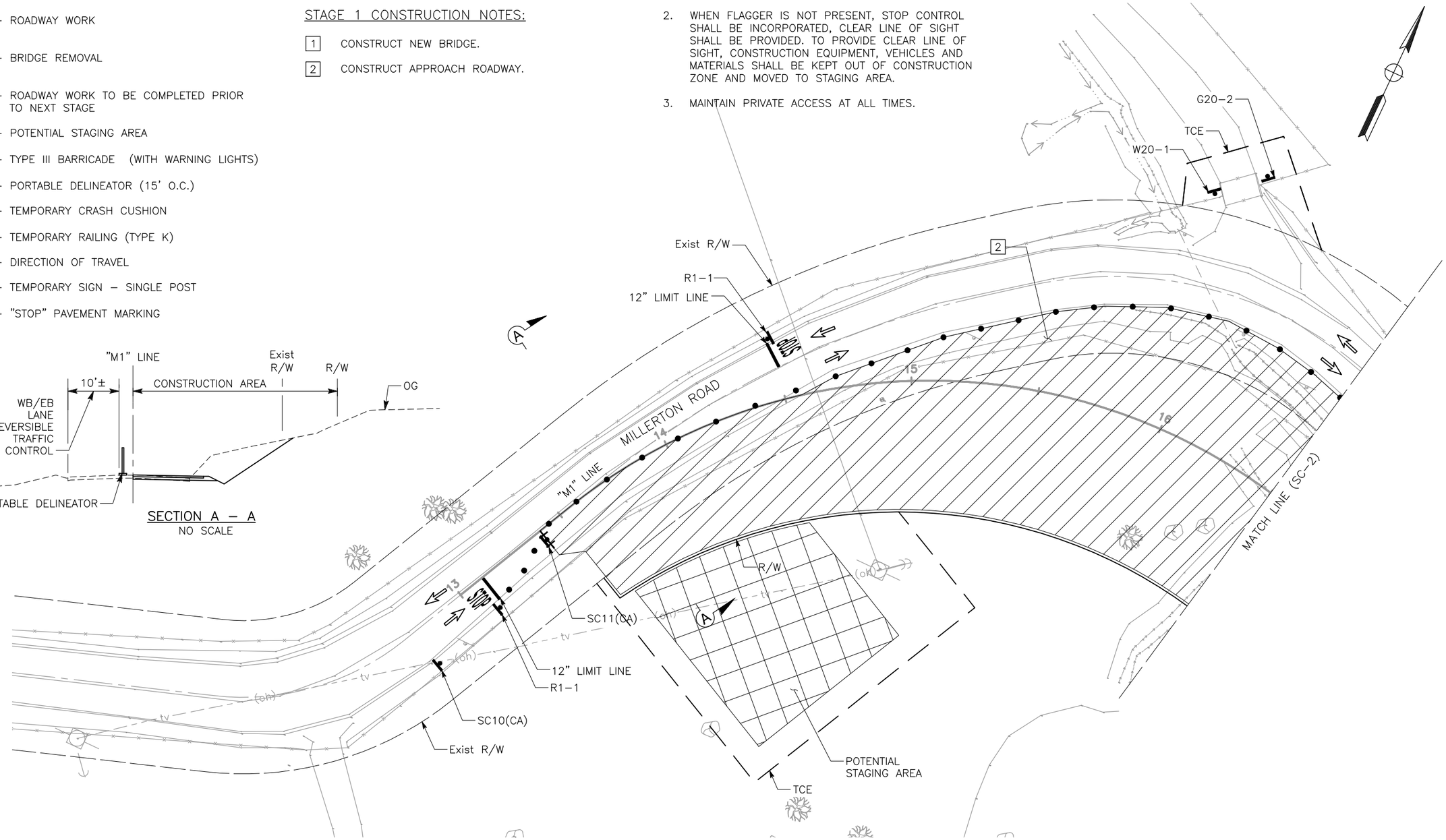
STAGE 1 CONSTRUCTION NOTES:

[1] CONSTRUCT NEW BRIDGE.

[2] CONSTRUCT APPROACH ROADWAY.

STAGE 1 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED. TO PROVIDE CLEAR LINE OF SIGHT, CONSTRUCTION EQUIPMENT, VEHICLES AND MATERIALS SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.



APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

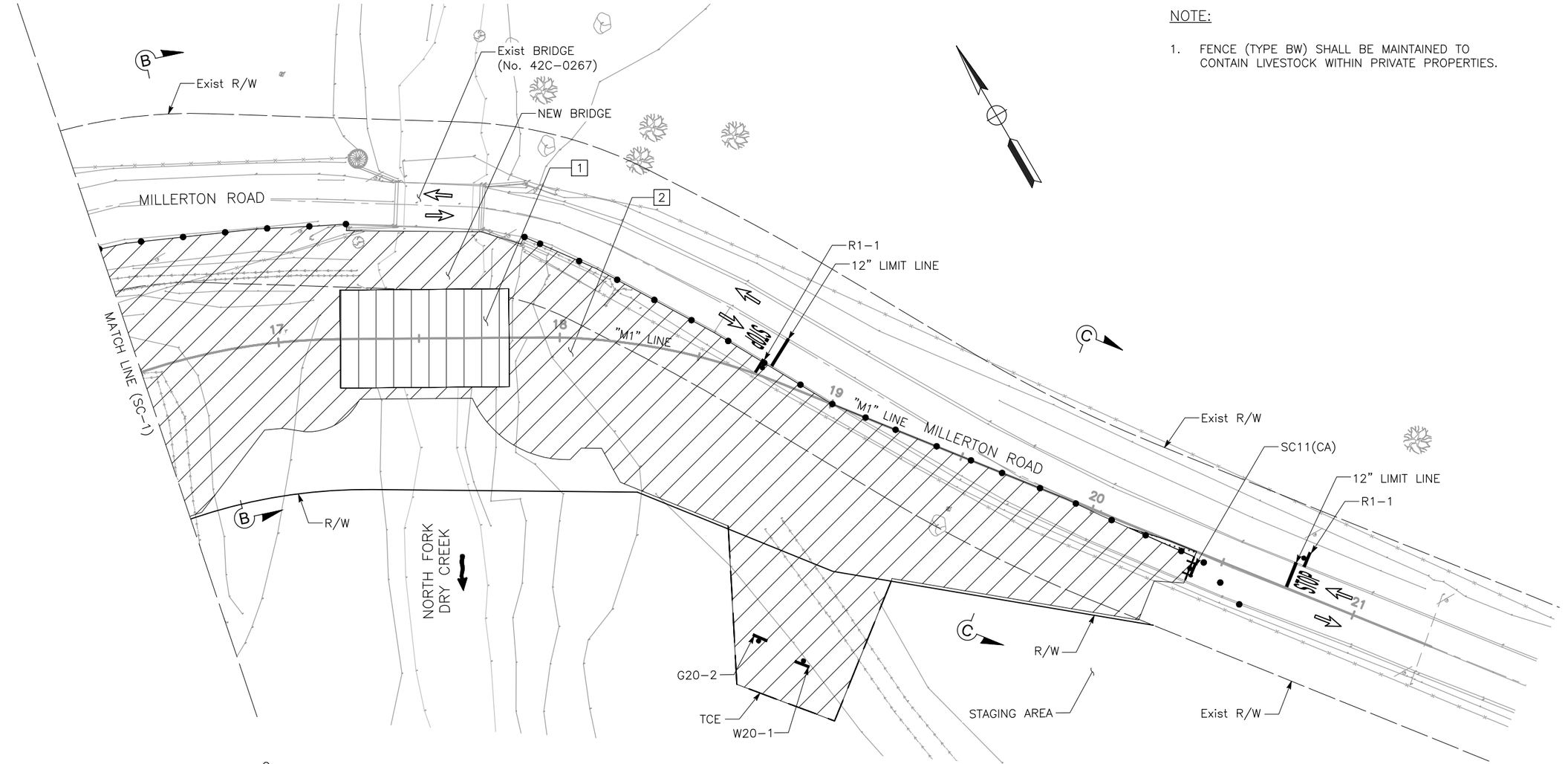
STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

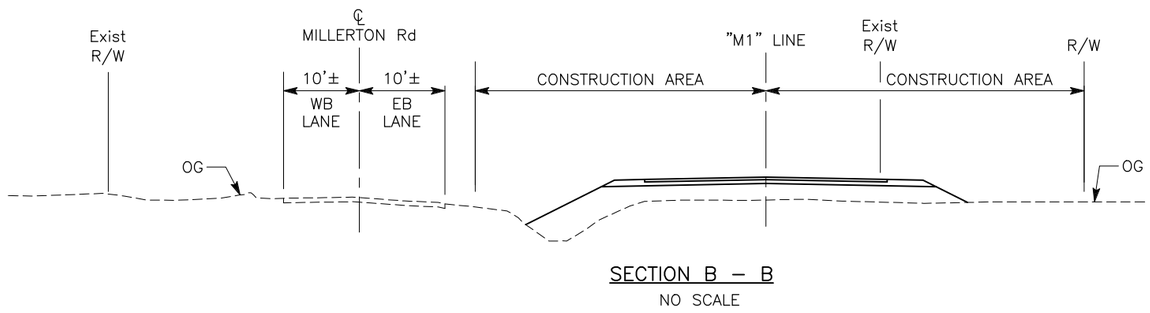
DRAWING NO. SC-1 SHEET NO. 87 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

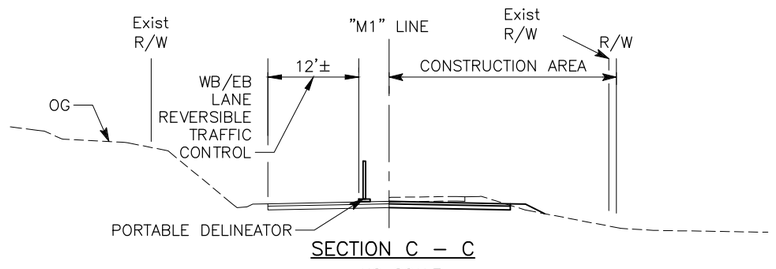
NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.





SECTION B – B
NO SCALE



SECTION C – C
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA, No. 55267, Exp. 09-30-2016, STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-2 SHEET NO. 88 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.

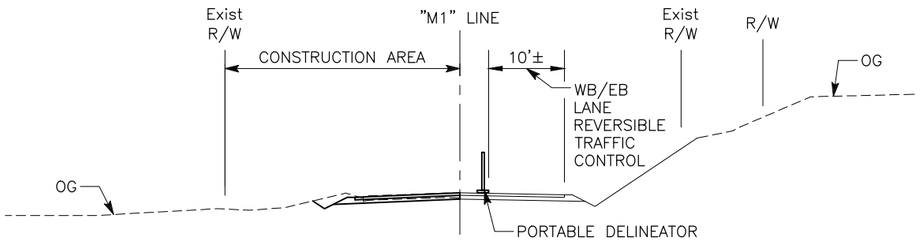
STAGE 2 CONSTRUCTION NOTES:

1 REMOVE EXISITNG BRIDGE.

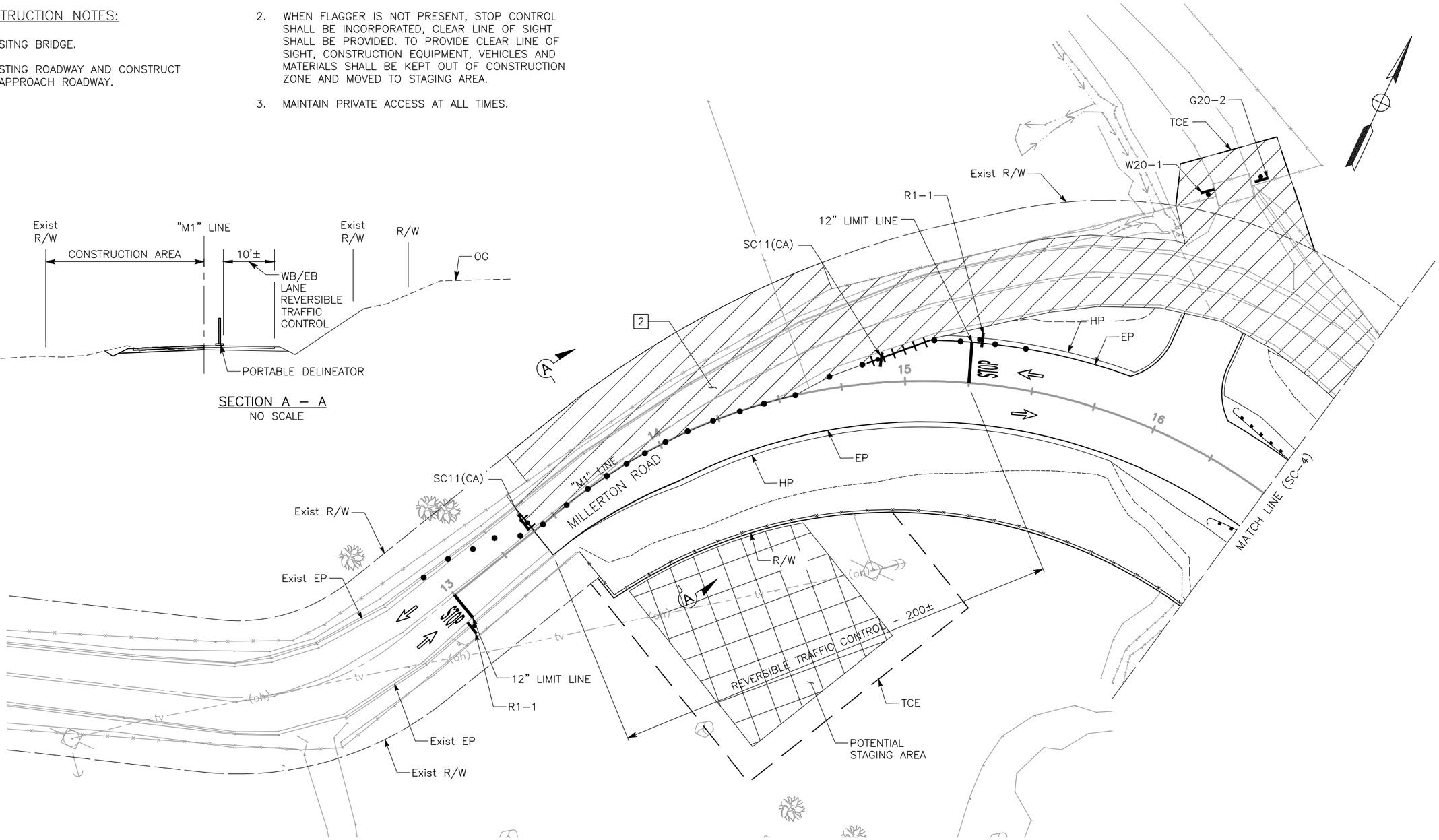
2 REMOVE EXISTING ROADWAY AND CONSTRUCT REMAINIING APPROACH ROADWAY.

STAGE 1 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED. TO PROVIDE CLEAR LINE OF SIGHT, CONSTRUCTION EQUIPMENT, VEHICLES AND MATERIALS SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.



SECTION A – A
NO SCALE



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA, No. 55267, Exp. 09-30-2016, STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

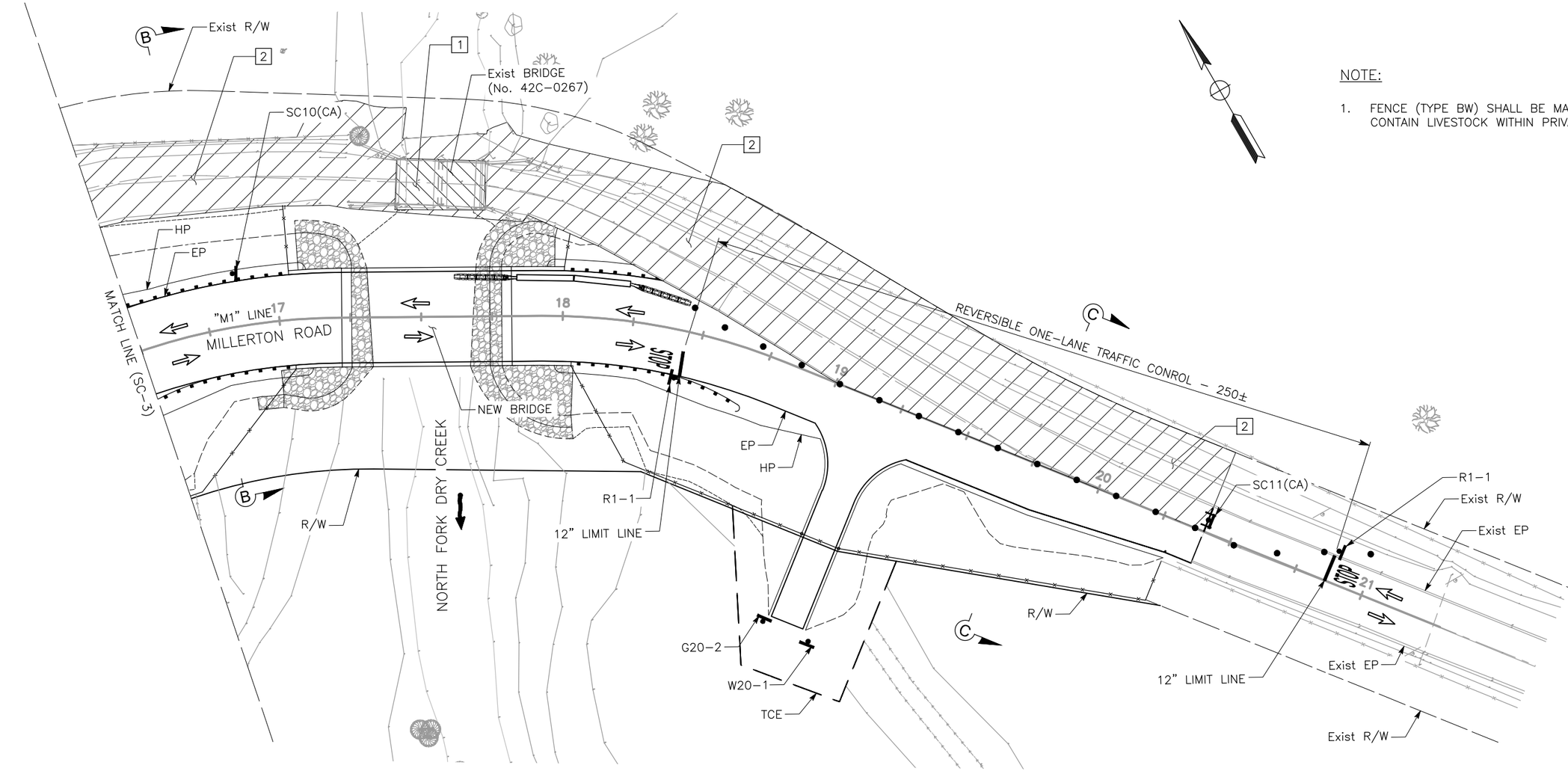
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

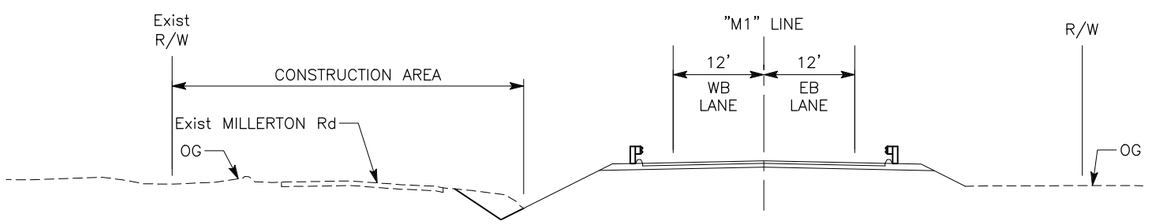
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-3 SHEET NO. 89 TOTAL 159

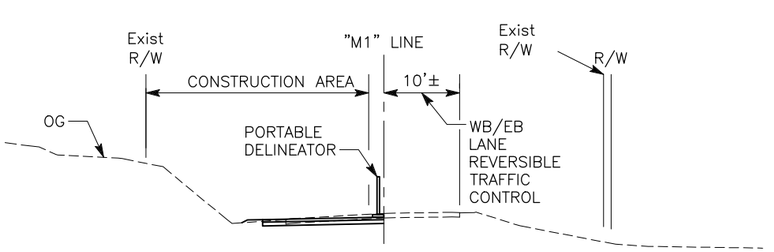


NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.



SECTION B – B
NO SCALE



SECTION C – C
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-4 SHEET NO. 90 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.

STAGE 1 CONSTRUCTION NOTES:

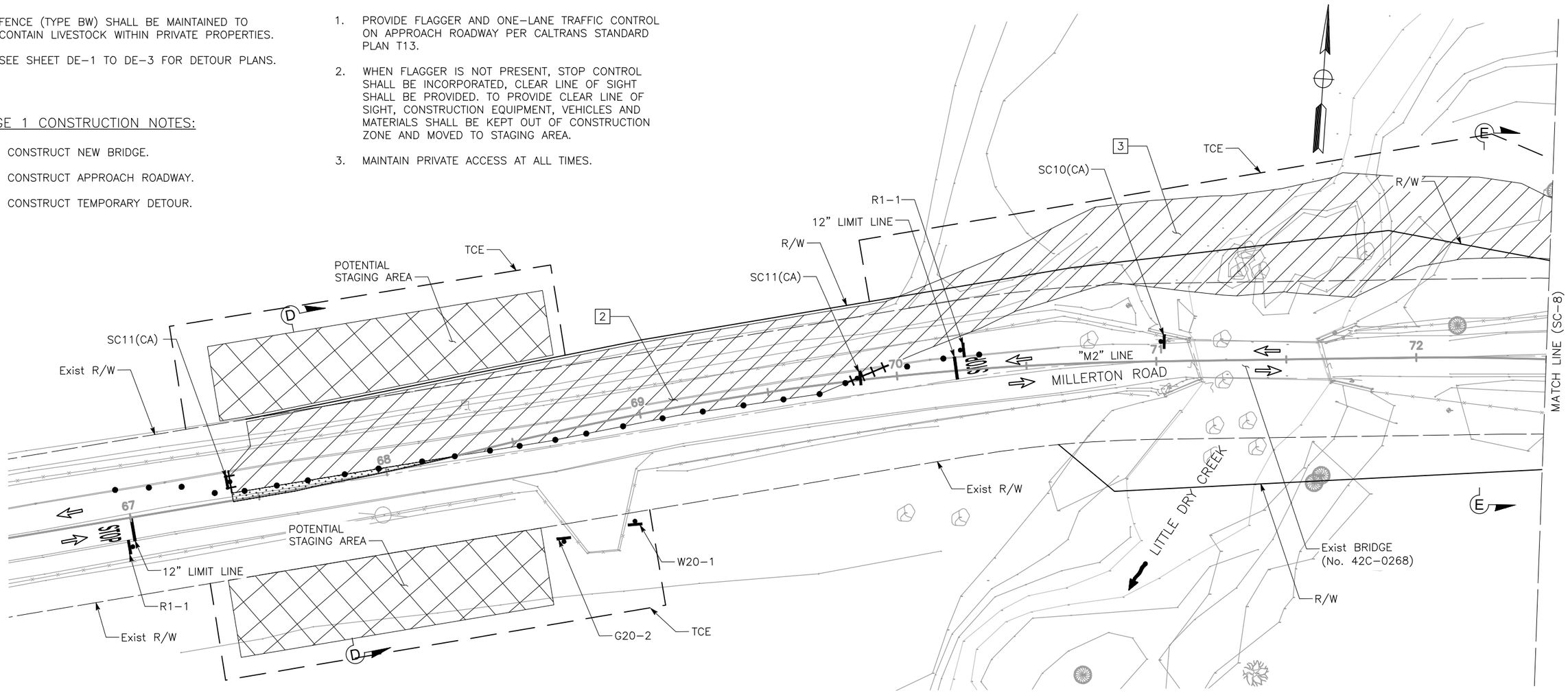
[1] CONSTRUCT NEW BRIDGE.

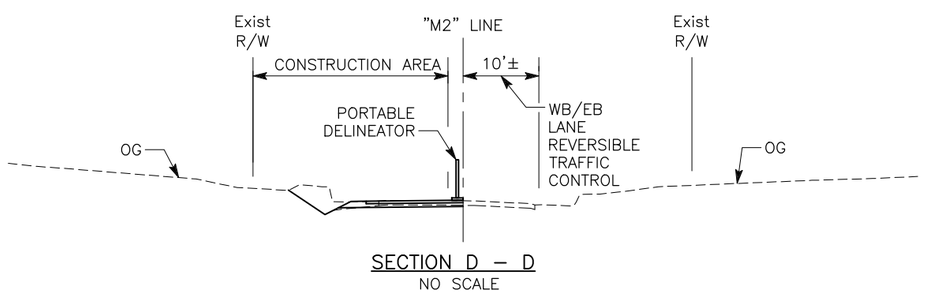
[2] CONSTRUCT APPROACH ROADWAY.

[3] CONSTRUCT TEMPORARY DETOUR.

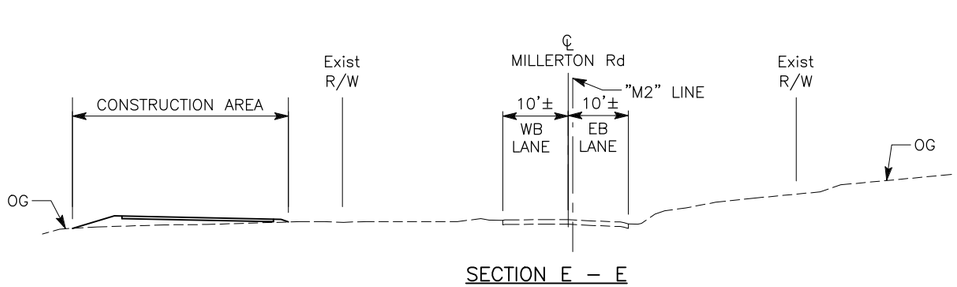
STAGE 1 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED. TO PROVIDE CLEAR LINE OF SIGHT, CONSTRUCTION EQUIPMENT, VEHICLES AND MATERIALS SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION D – D
NO SCALE



SECTION E – E
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

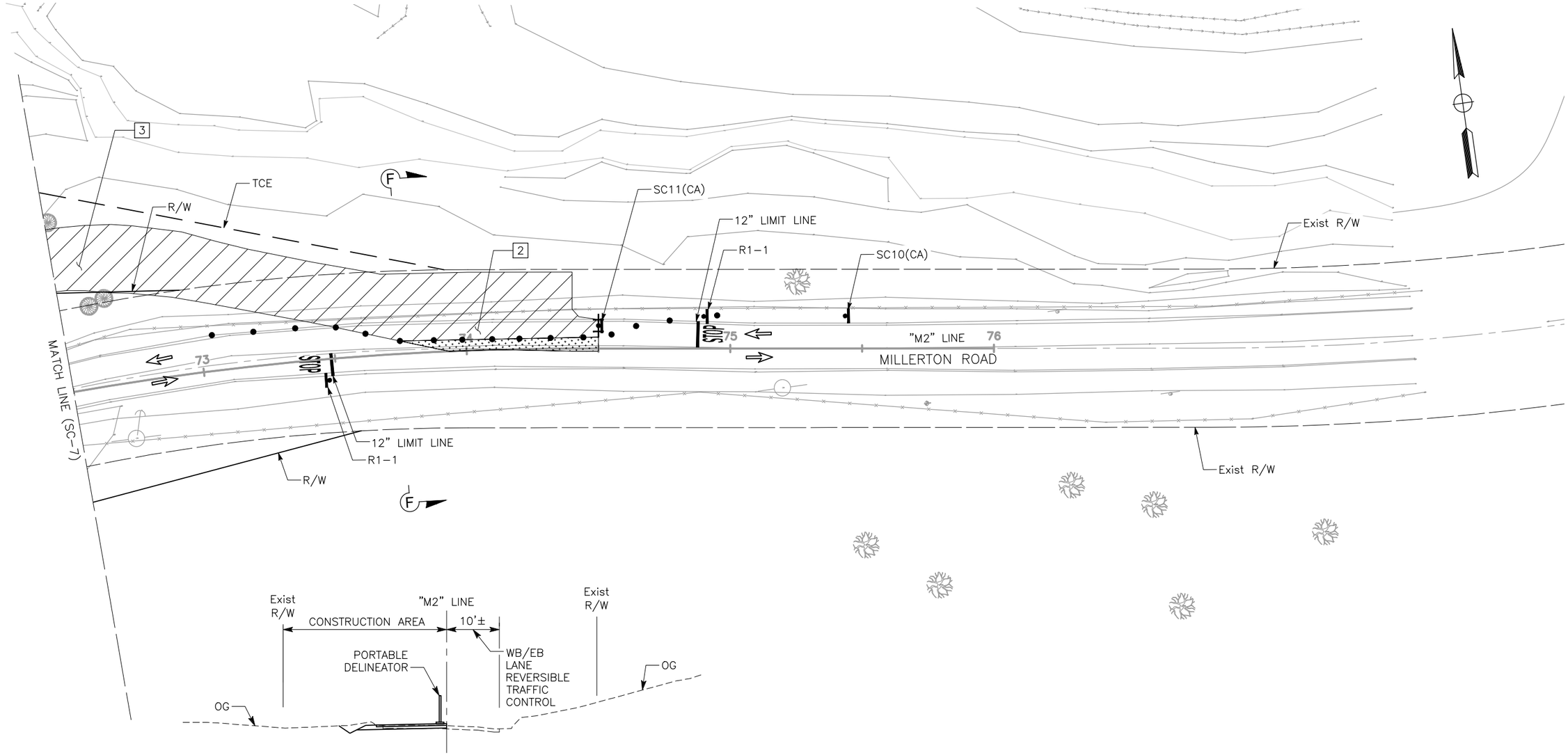
STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-5 SHEET NO. 91 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.



SECTION F – F
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-6 SHEET NO. 92 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.

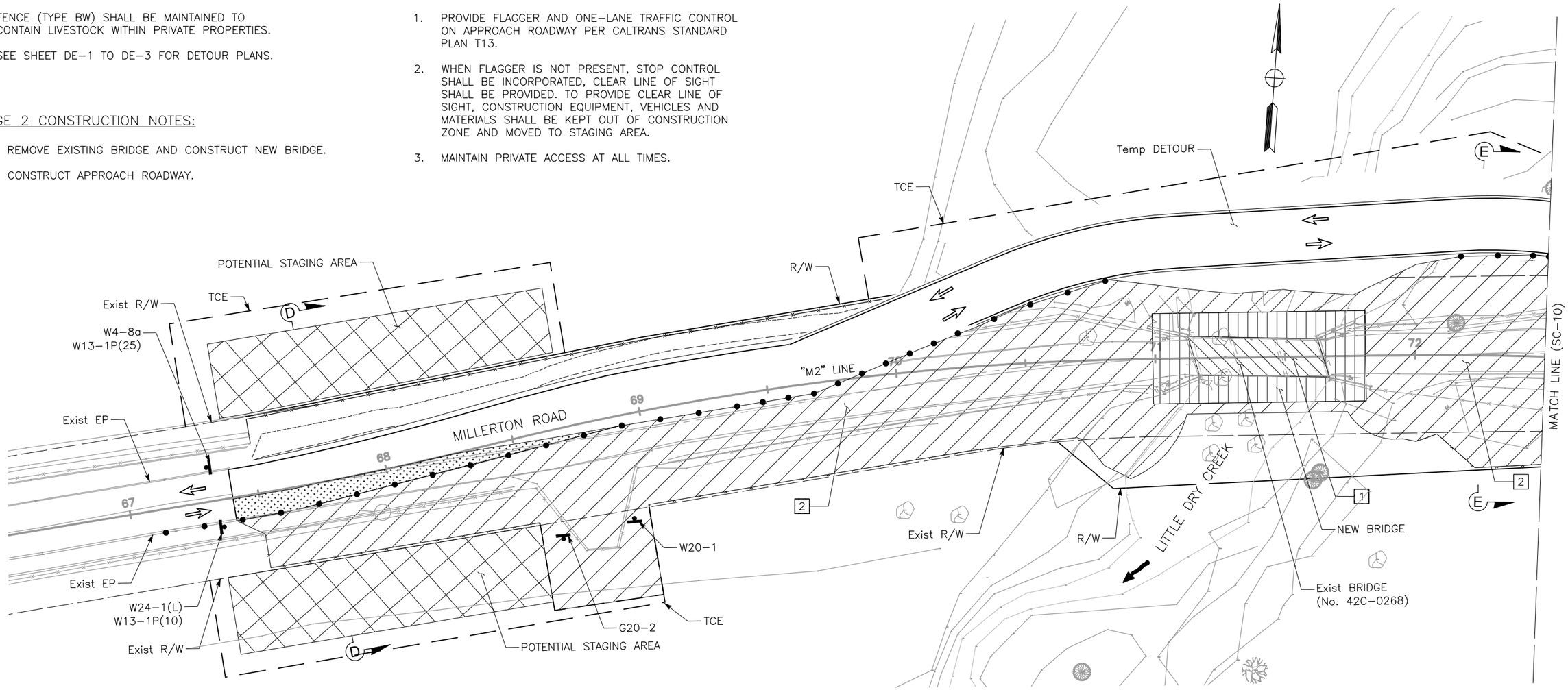
STAGE 2 CONSTRUCTION NOTES:

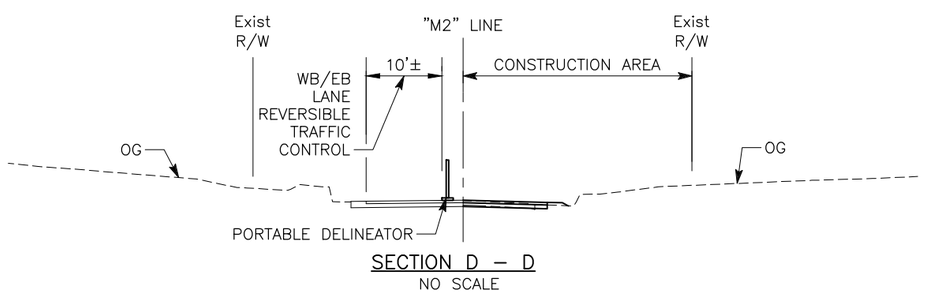
[1] REMOVE EXISTING BRIDGE AND CONSTRUCT NEW BRIDGE.

[2] CONSTRUCT APPROACH ROADWAY.

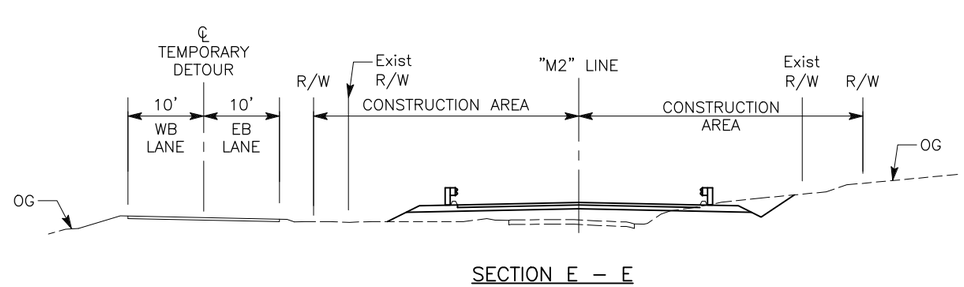
STAGE 1 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED. TO PROVIDE CLEAR LINE OF SIGHT, CONSTRUCTION EQUIPMENT, VEHICLES AND MATERIALS SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION D – D
NO SCALE



SECTION E – E
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20′ 40′
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

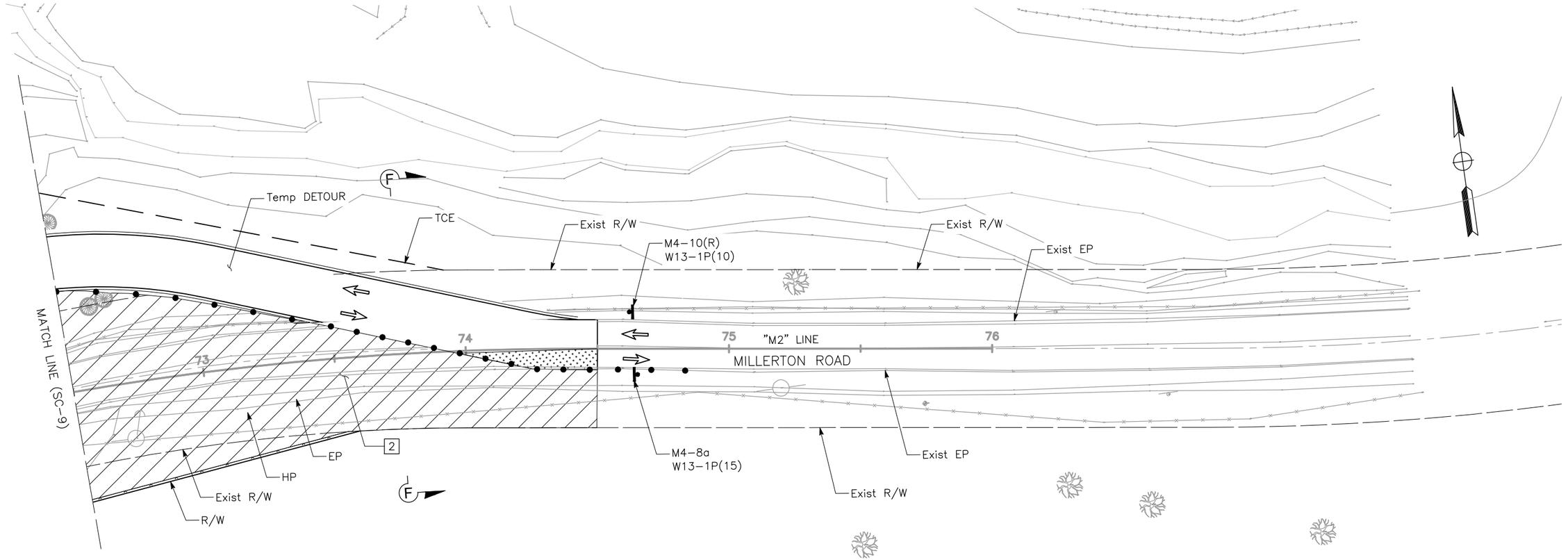
DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

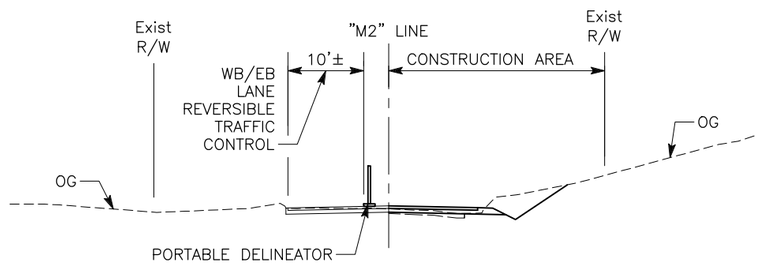
DRAWING NO. SC-7 SHEET NO. 93 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.





SECTION F – F
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-8 SHEET NO. 94 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.

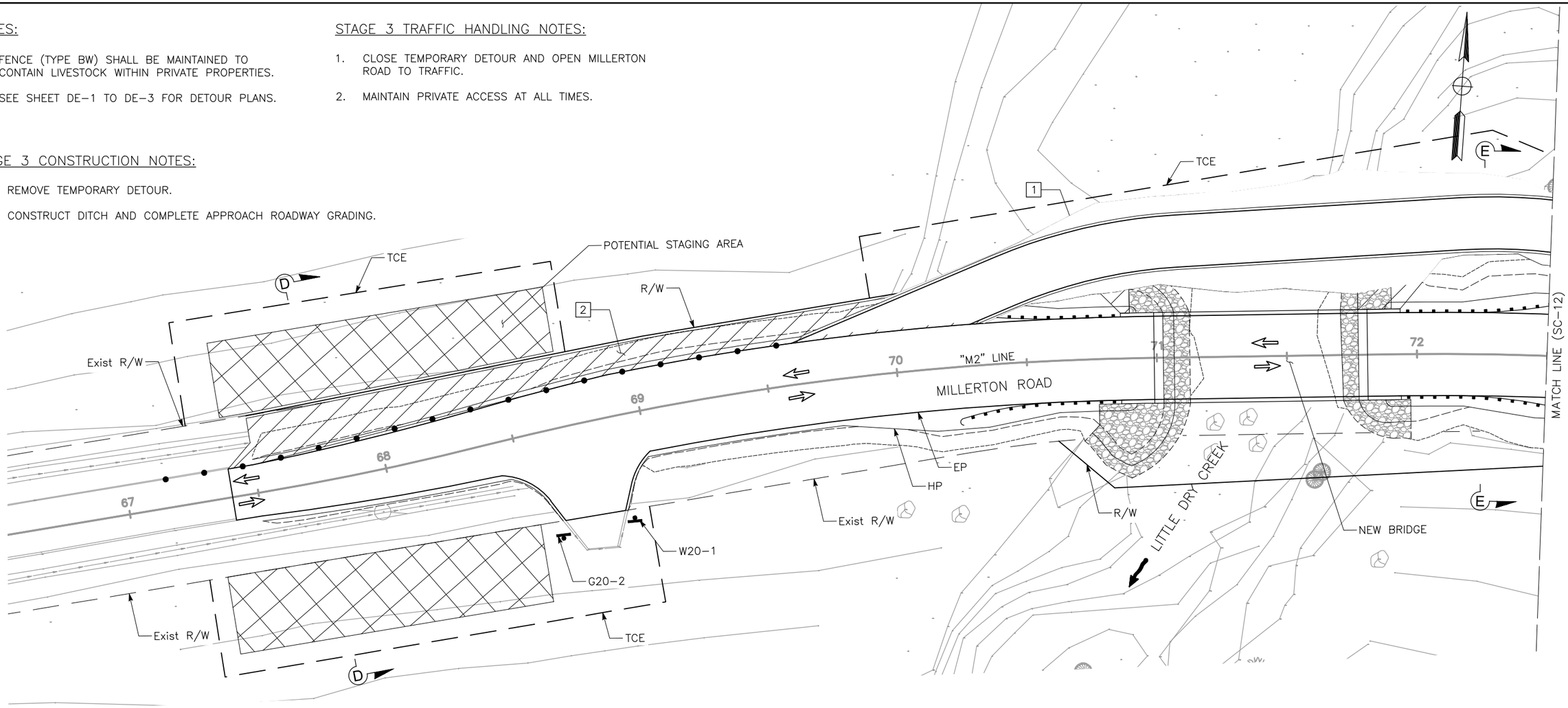
STAGE 3 TRAFFIC HANDLING NOTES:

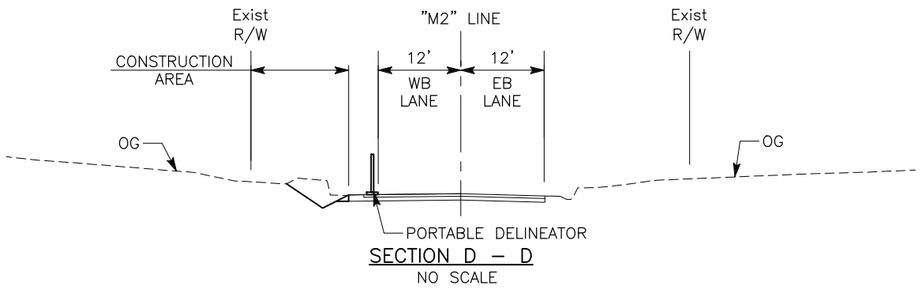
1. CLOSE TEMPORARY DETOUR AND OPEN MILLERTON ROAD TO TRAFFIC.
2. MAINTAIN PRIVATE ACCESS AT ALL TIMES.

STAGE 3 CONSTRUCTION NOTES:

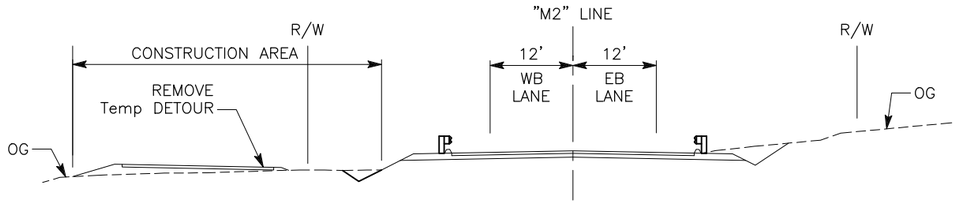
[1] REMOVE TEMPORARY DETOUR.

[2] CONSTRUCT DITCH AND COMPLETE APPROACH ROADWAY GRADING.





SECTION D – D
NO SCALE



SECTION E – E
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA, No. 55267, Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

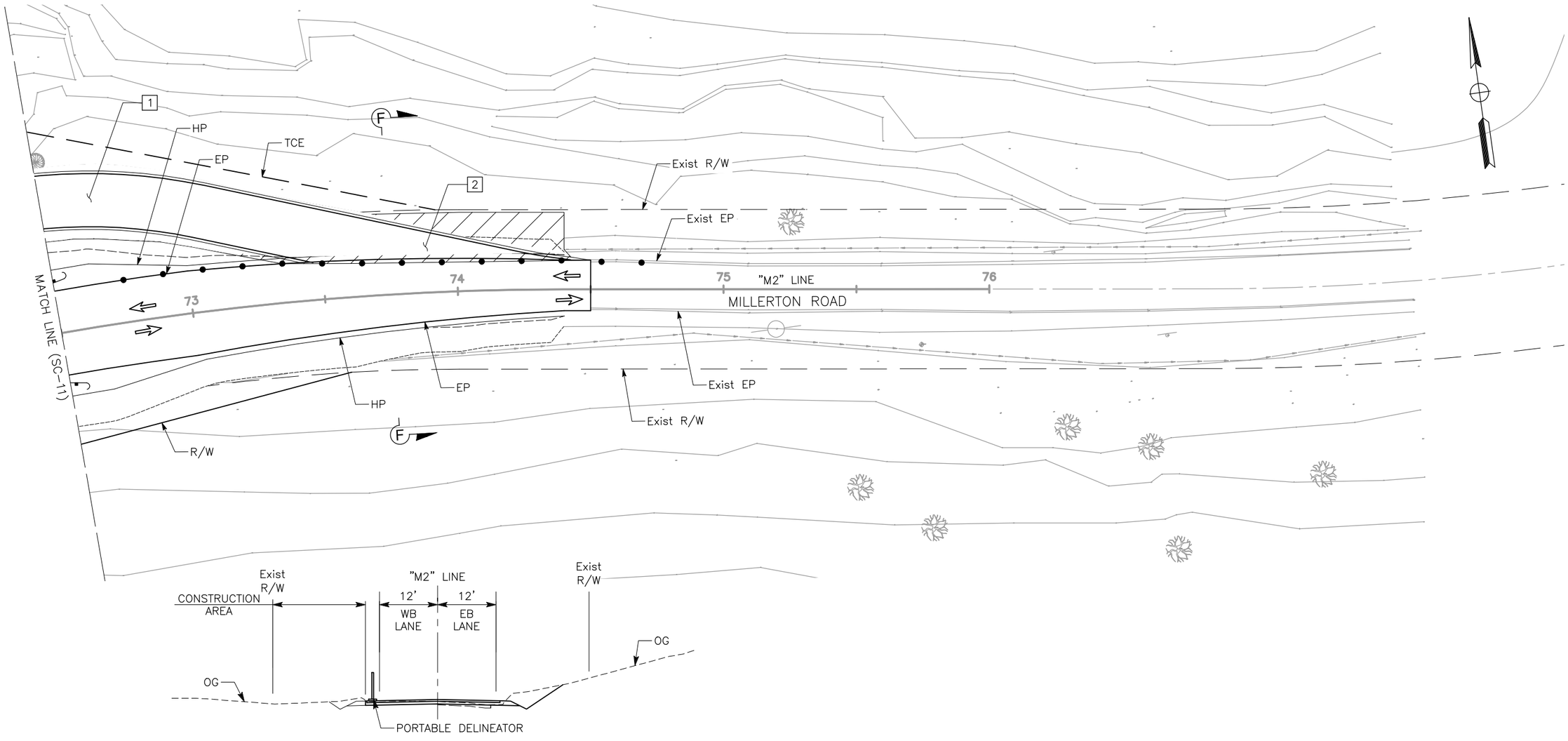
ROAD NO. — BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-9 — SHEET NO. 95 — TOTAL 159



SECTION F – F
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-10 SHEET NO. 96 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

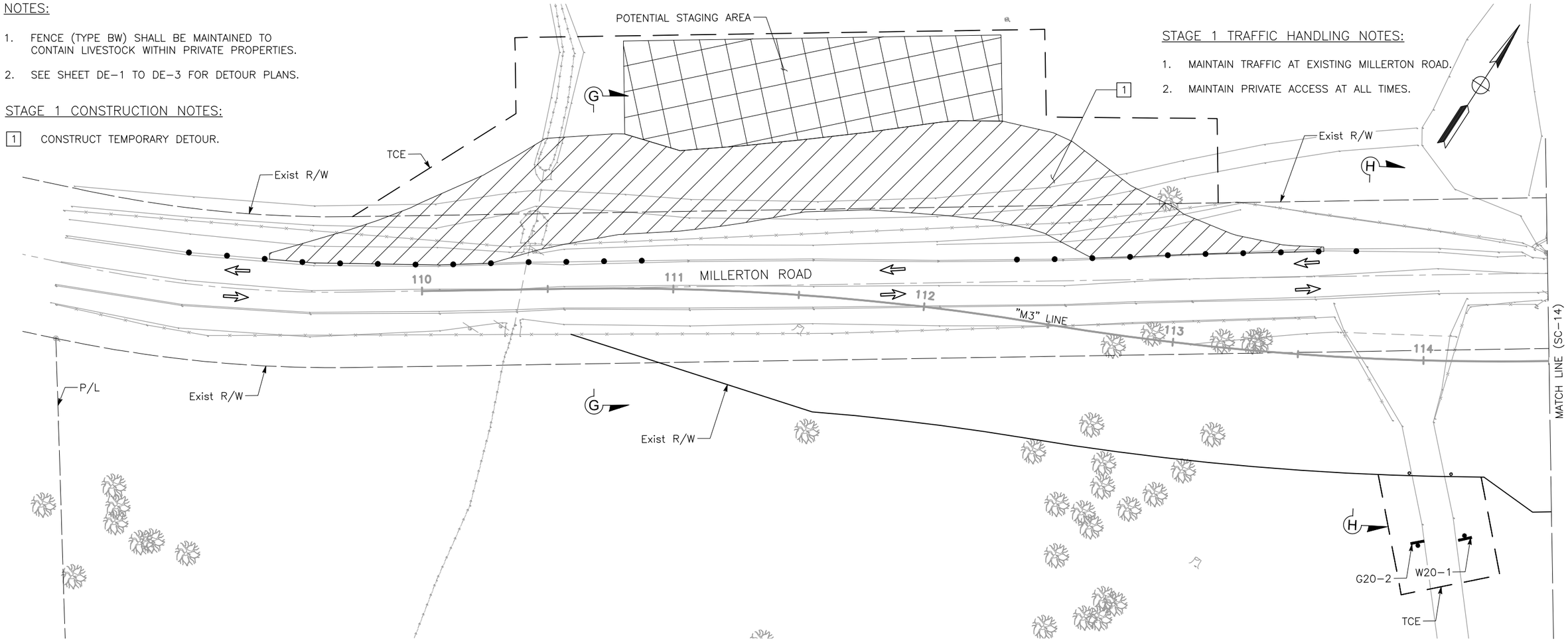
1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE-1 TO DE-3 FOR DETOUR PLANS.

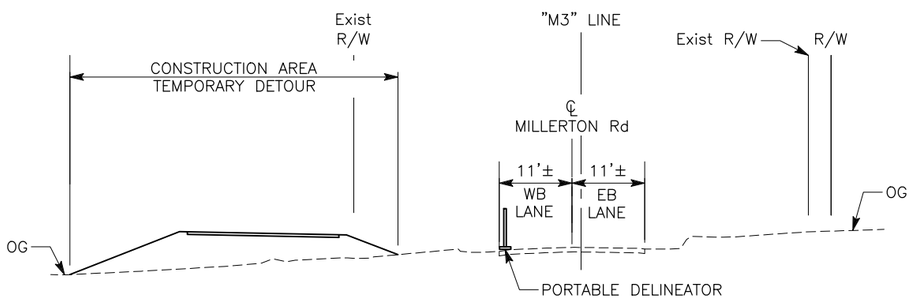
STAGE 1 CONSTRUCTION NOTES:

[1] CONSTRUCT TEMPORARY DETOUR.

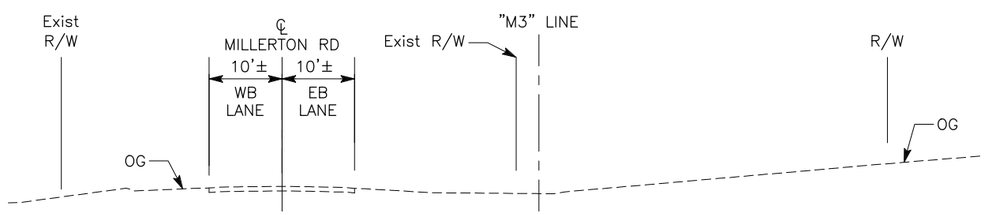
STAGE 1 TRAFFIC HANDLING NOTES:

1. MAINTAIN TRAFFIC AT EXISTING MILLERTON ROAD.
2. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION G – G
NO SCALE



SECTION H – H
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. — BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

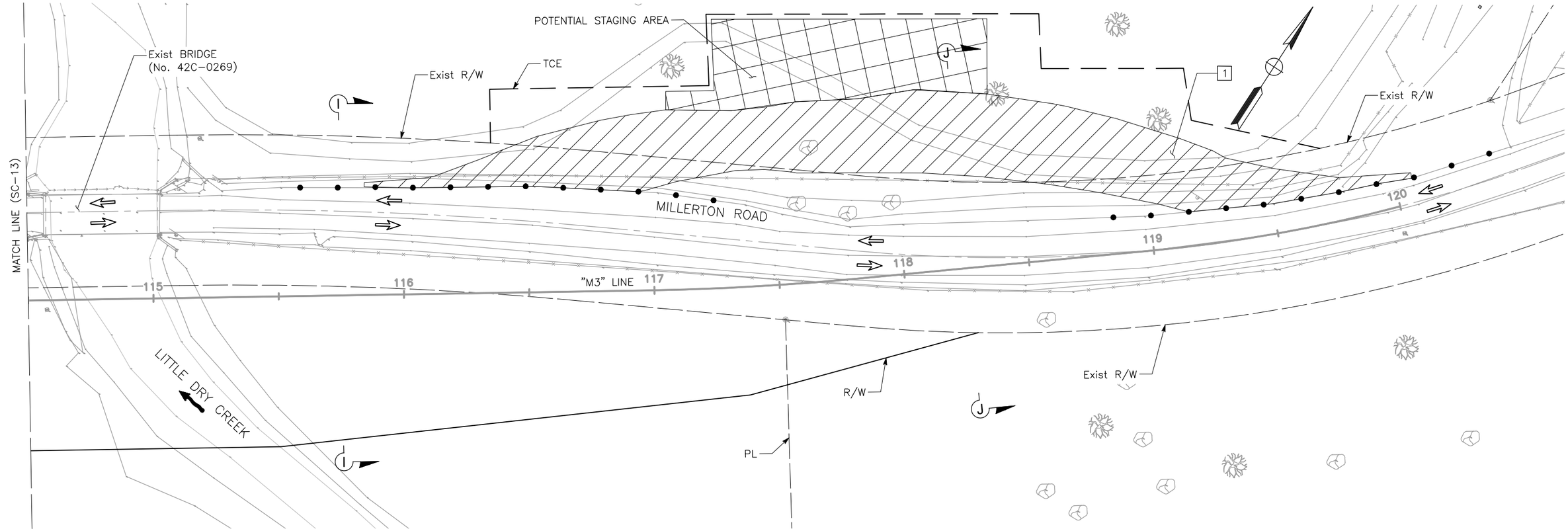
DEPARTMENT OF PUBLIC WORKS AND PLANNING

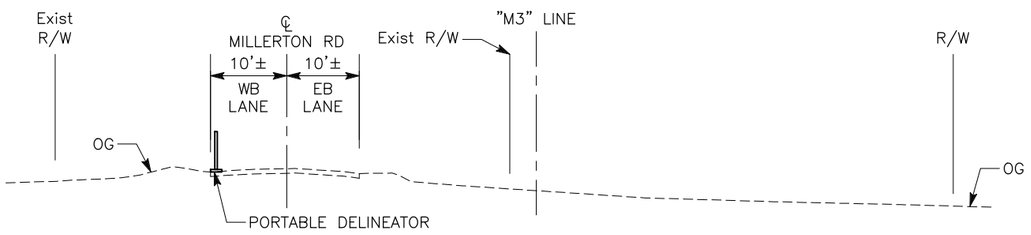
STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-11 SHEET NO. 97 TOTAL 159

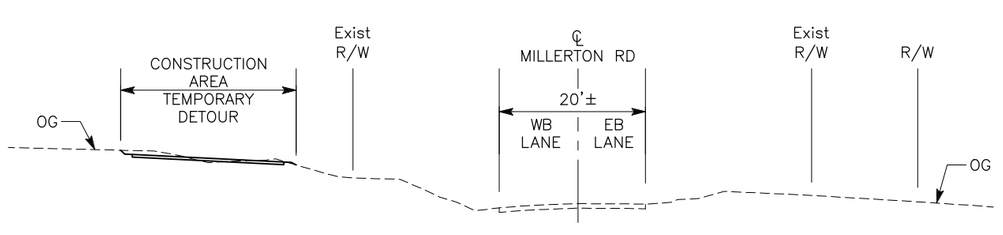
NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.





SECTION I – I
NO SCALE



SECTION J – J
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-12 SHEET NO. 98 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.

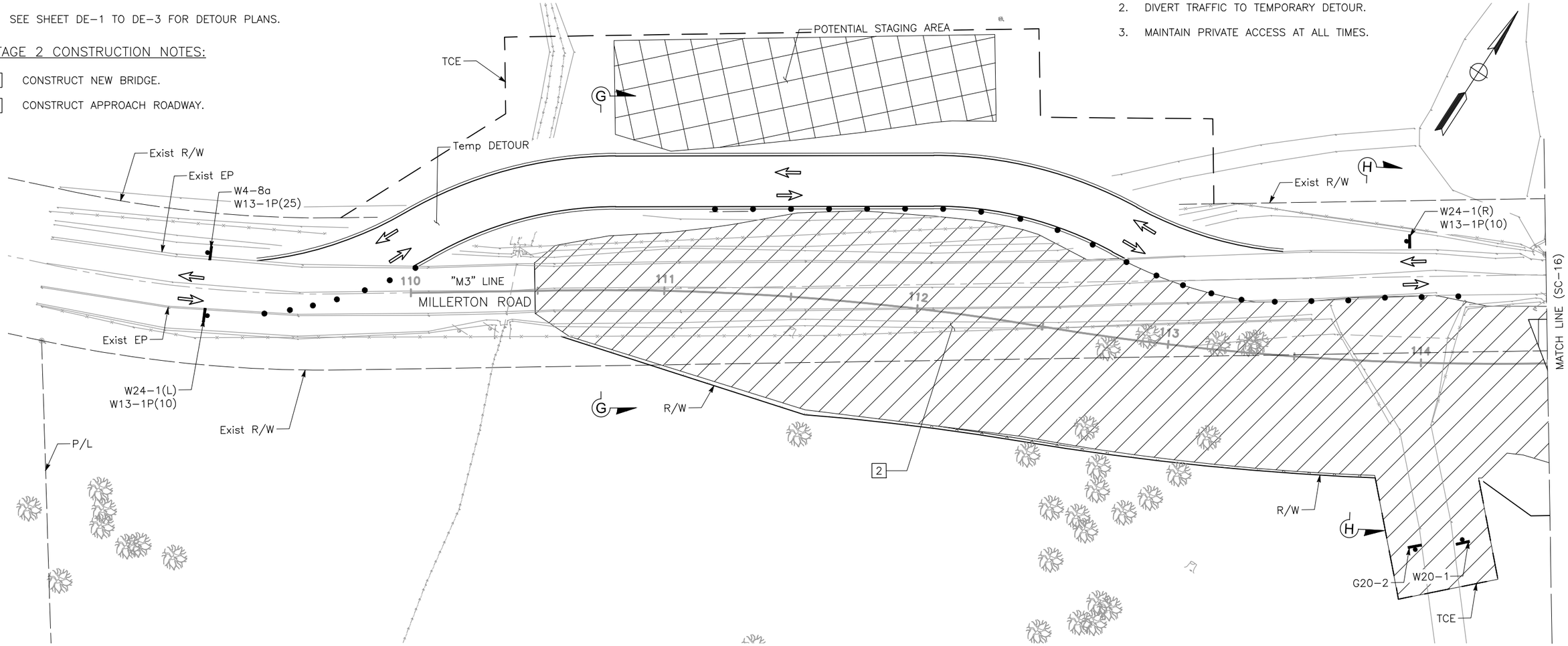
STAGE 2 CONSTRUCTION NOTES:

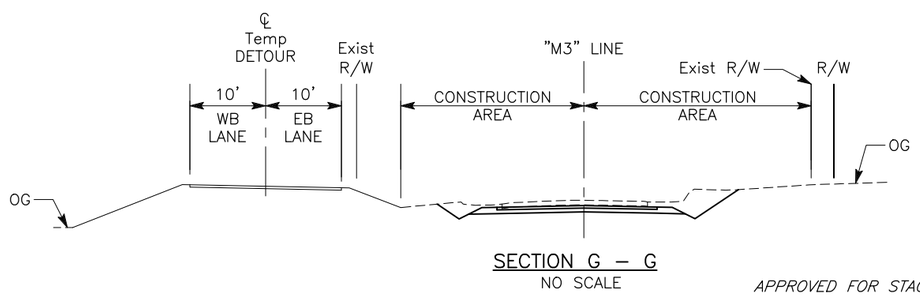
[1] CONSTRUCT NEW BRIDGE.

[2] CONSTRUCT APPROACH ROADWAY.

STAGE 1 TRAFFIC HANDLING NOTES:

1. MAINTAIN TRAFFIC AT EXISTING BRIDGE.
2. DIVERT TRAFFIC TO TEMPORARY DETOUR.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION G – G
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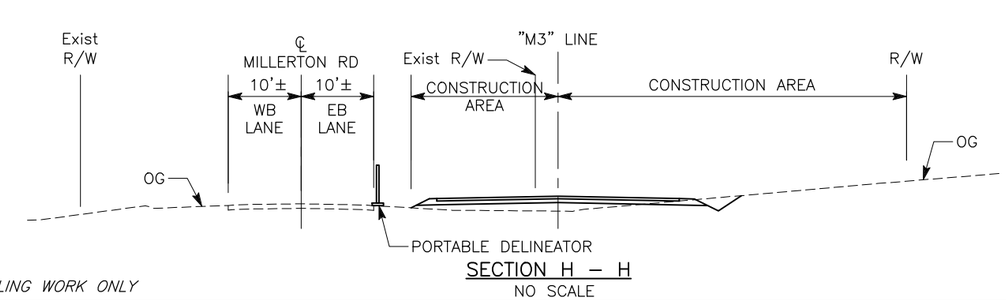


SECTION H – H
NO SCALE

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

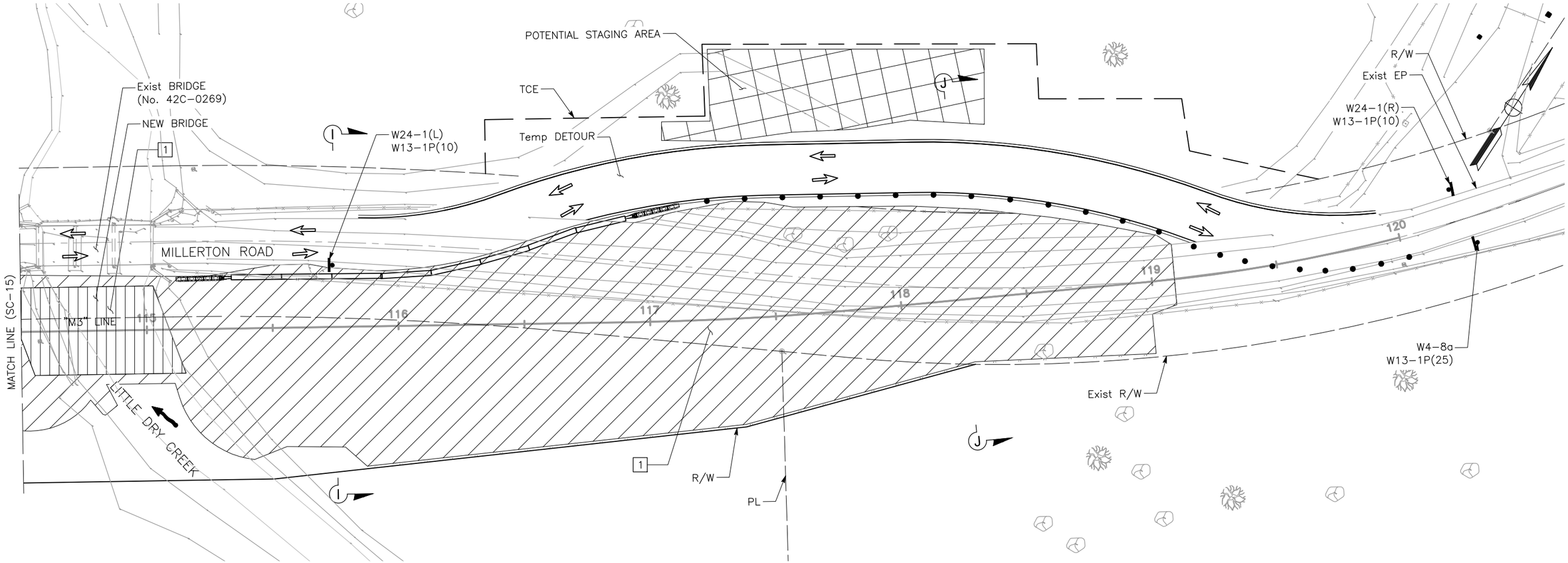
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

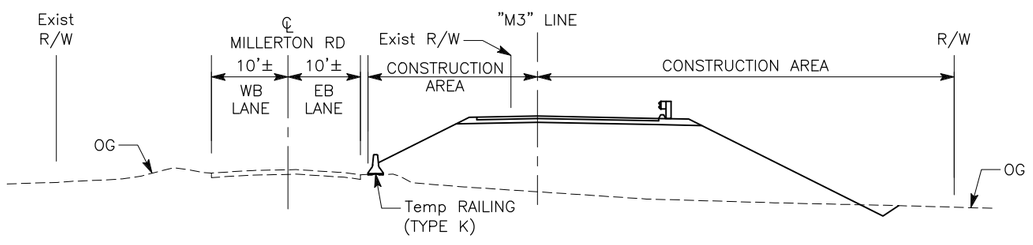
DRAWING NO. SC-13 SHEET NO. 99 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

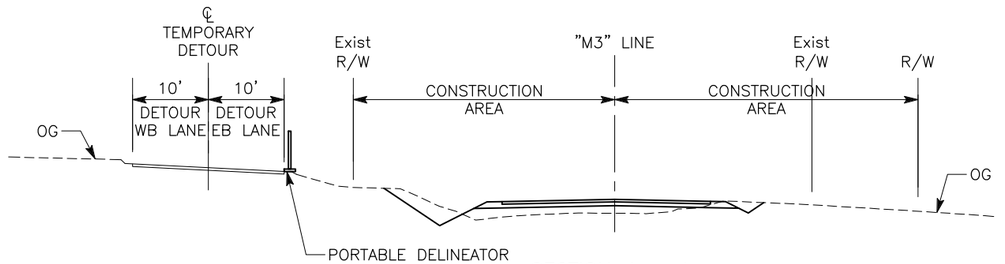
NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE–1 TO DE–3 FOR DETOUR PLANS.





SECTION I – I
NO SCALE



SECTION J – J
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-14 SHEET NO. 100 TOTAL 159

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTIANED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.
2. SEE SHEET DE-1 TO DE-3 FOR DETOUR PLANS.

STAGE 3 CONSTRUCTION NOTES:

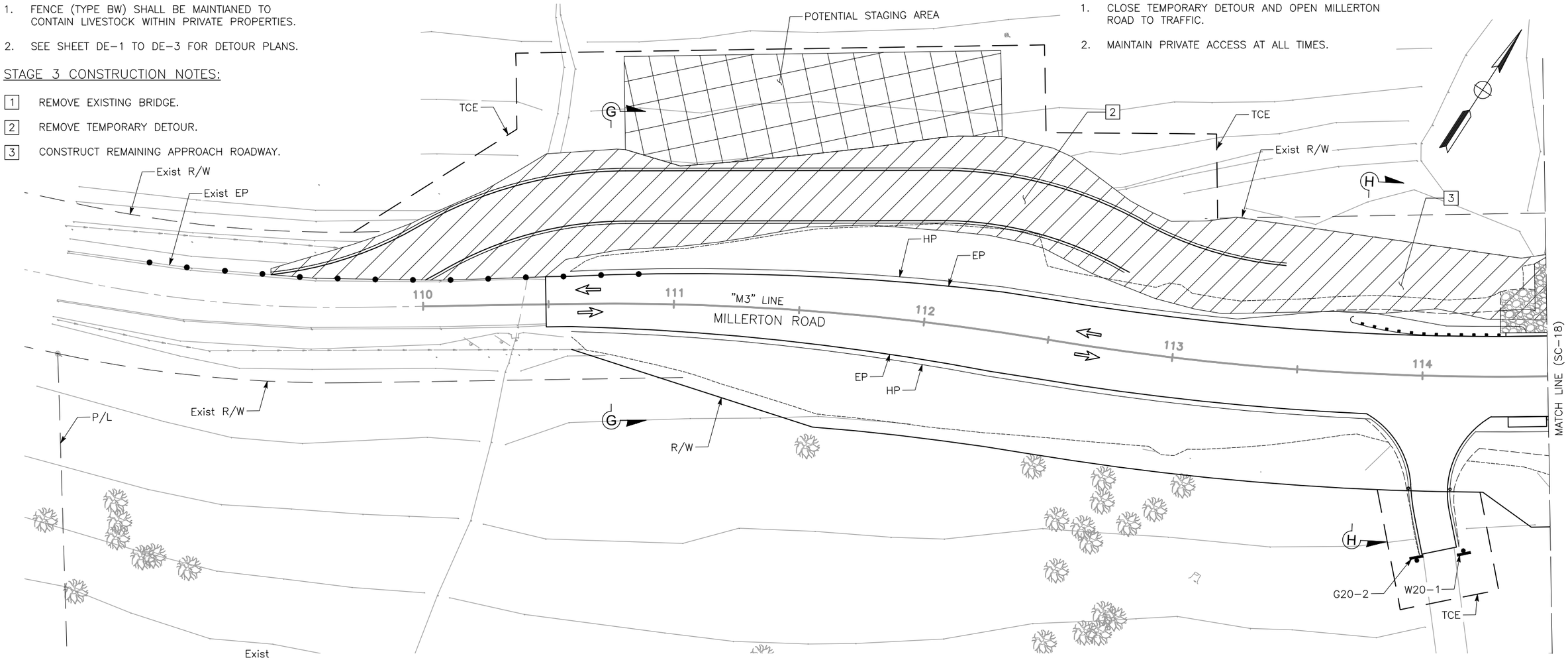
1 REMOVE EXISTING BRIDGE.

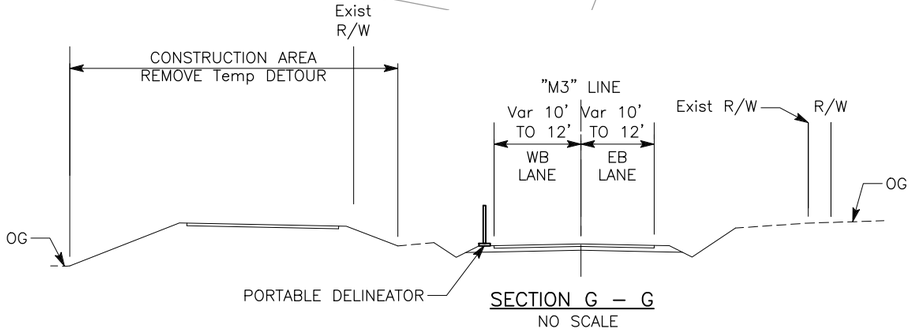
2 REMOVE TEMPORARY DETOUR.

3 CONSTRUCT REMAINING APPROACH ROADWAY.

STAGE 3 TRAFFIC HANDLING NOTES:

1. CLOSE TEMPORARY DETOUR AND OPEN MILLERTON ROAD TO TRAFFIC.
2. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION G – G
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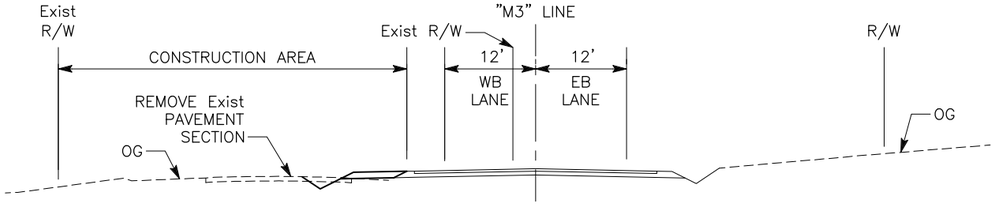


SECTION H – H
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

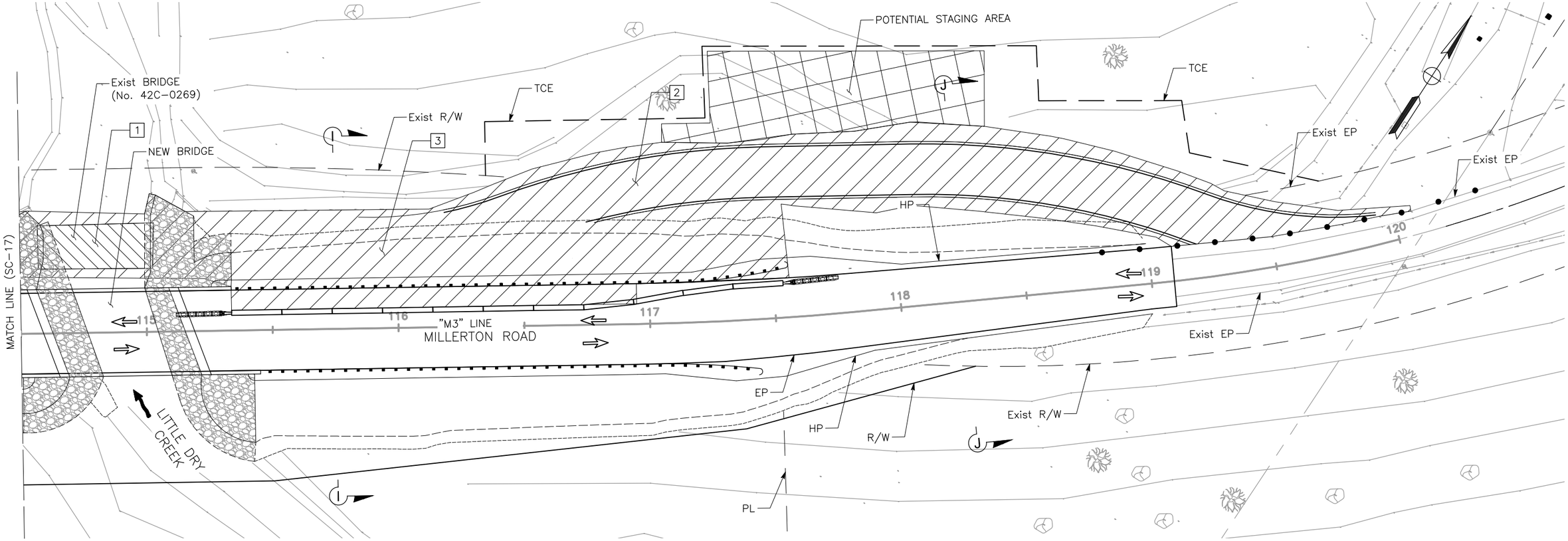
ROAD NO. BRIDGE NO. 42C-0269

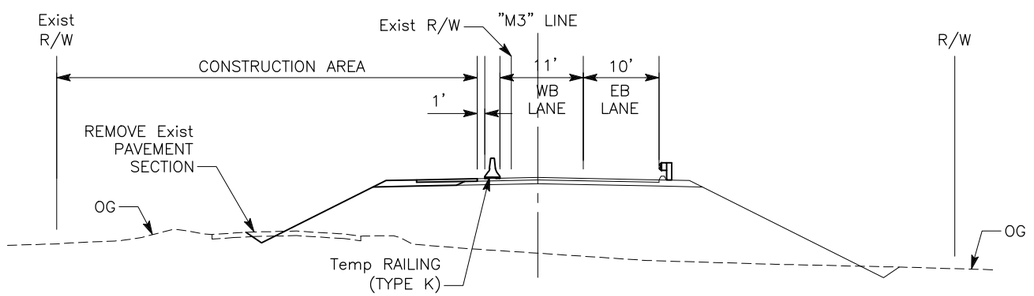
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

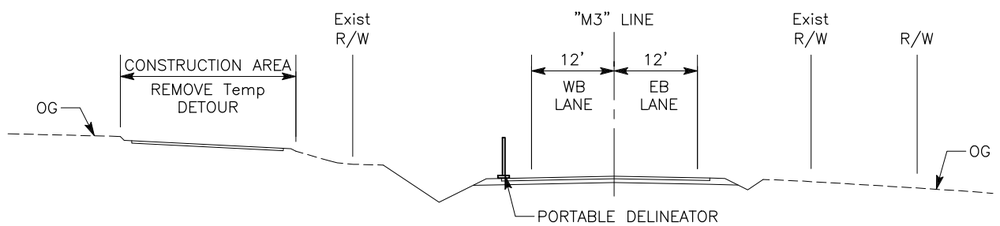
STAGE 3
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-15 SHEET NO. 101 TOTAL 159





SECTION I – I
NO SCALE



SECTION J – J
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION. SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 3
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-16 SHEET NO. 102 TOTAL 159

NOTES:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.

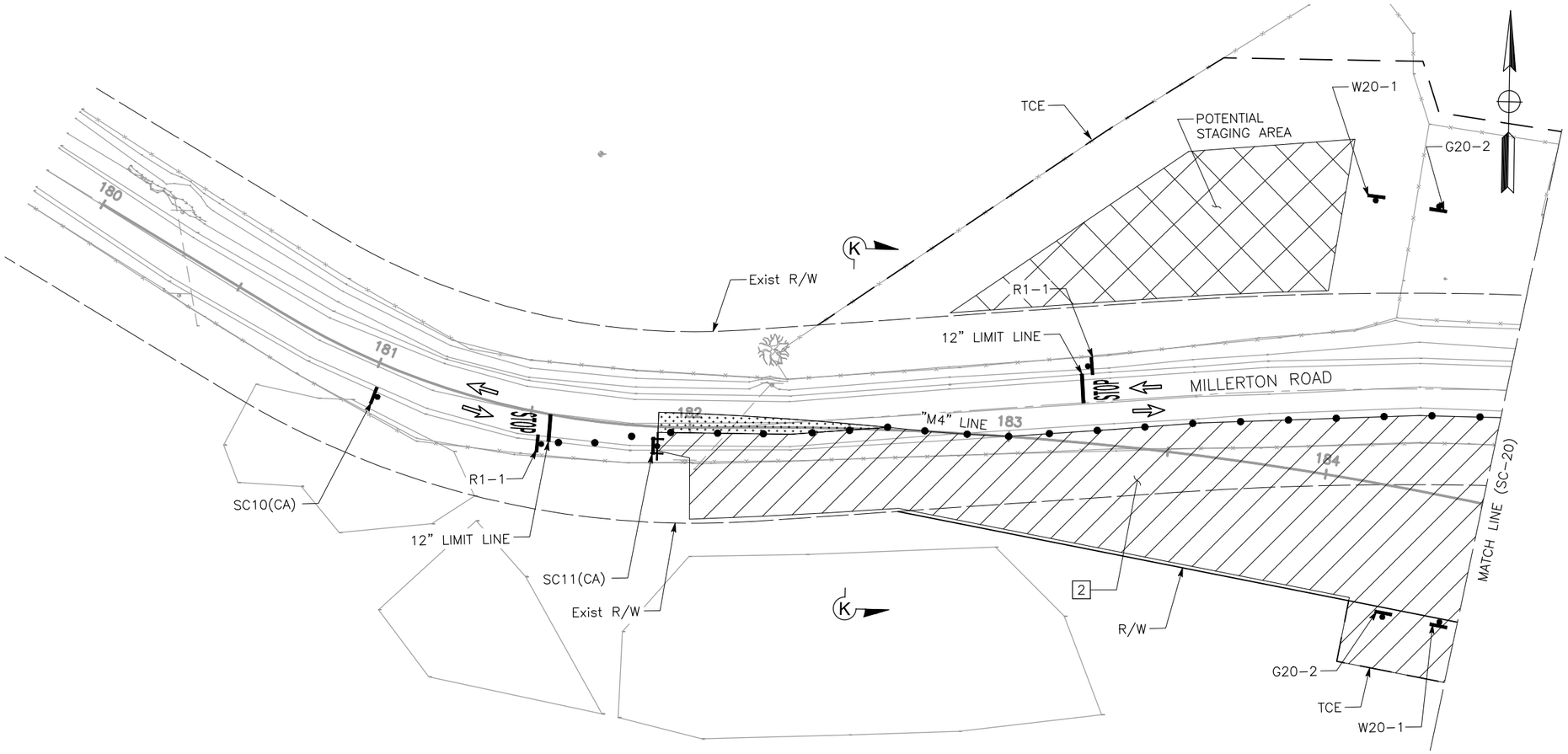
STAGE 1 CONSTRUCTION NOTES:

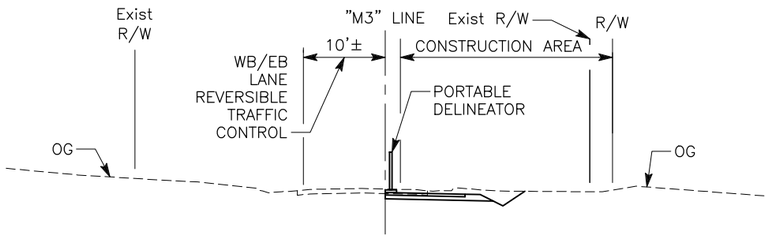
[1] CONSTRUCT NEW BRIDGE.

[2] CONSTRUCT APPROACH ROADWAY.

STAGE 1 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED. TO PROVIDE CLEAR LINE OF SIGHT, CONSTRUCTION EQUIPMENT, VEHICLES AND MATERIALS SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION K – K
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

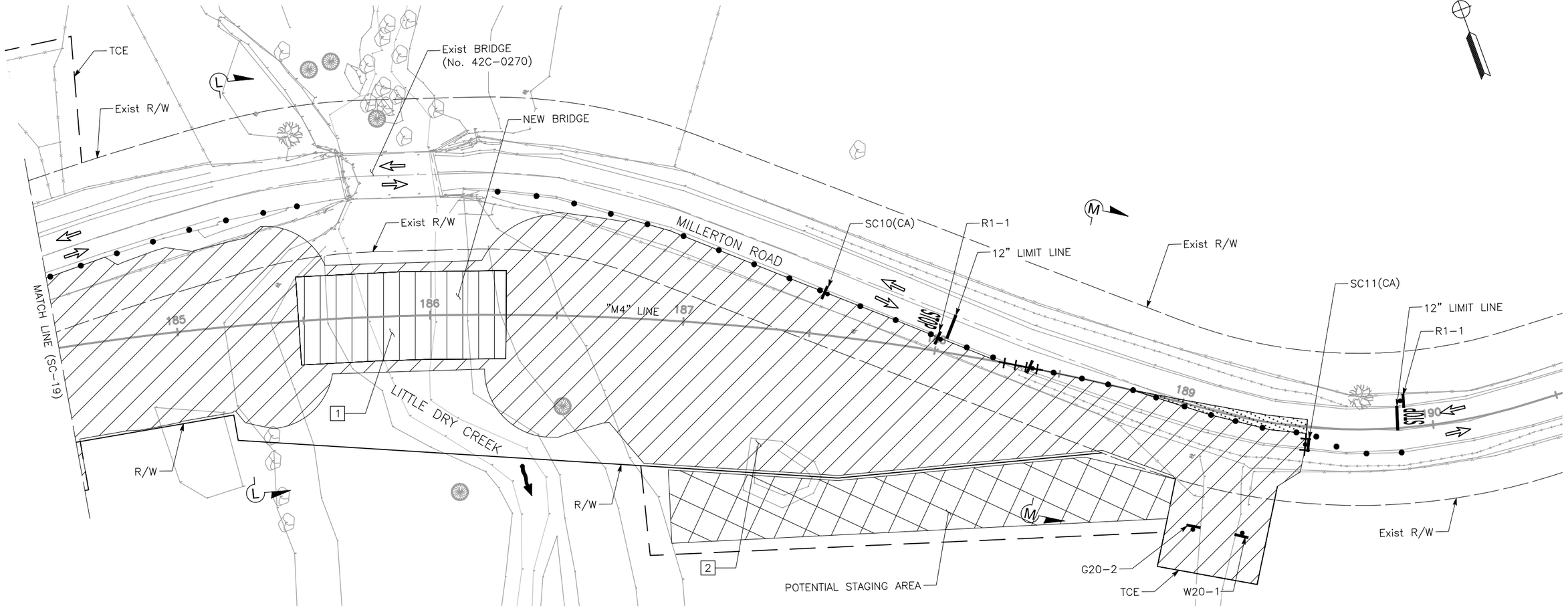
DEPARTMENT OF PUBLIC WORKS AND PLANNING

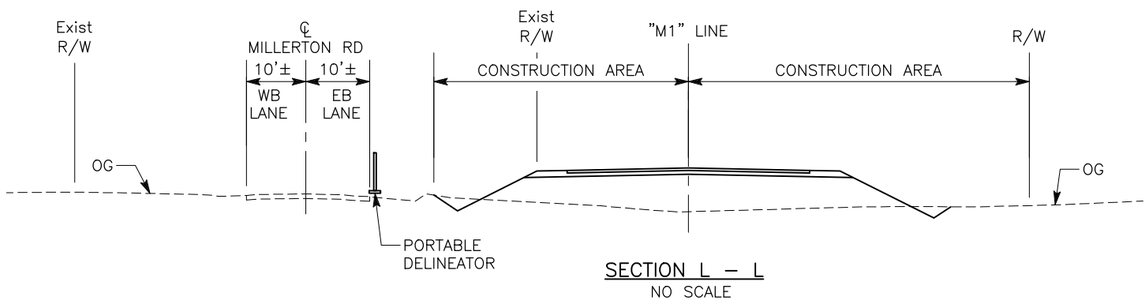
STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-17 SHEET NO. 103 TOTAL 159

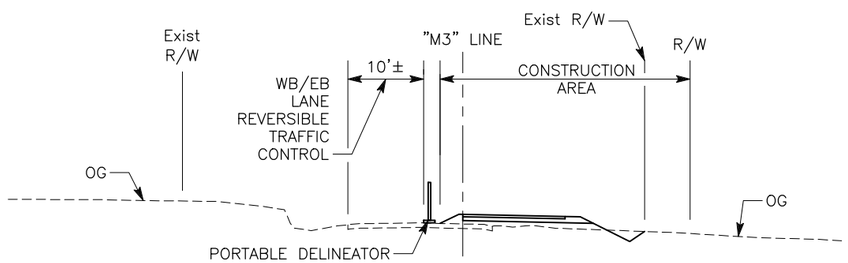
NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.





SECTION L – L
NO SCALE



SECTION M – M
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

STAGE 1
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-18 SHEET NO. 104 TOTAL 159

NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.

STAGE 3 CONSTRUCTION NOTES:

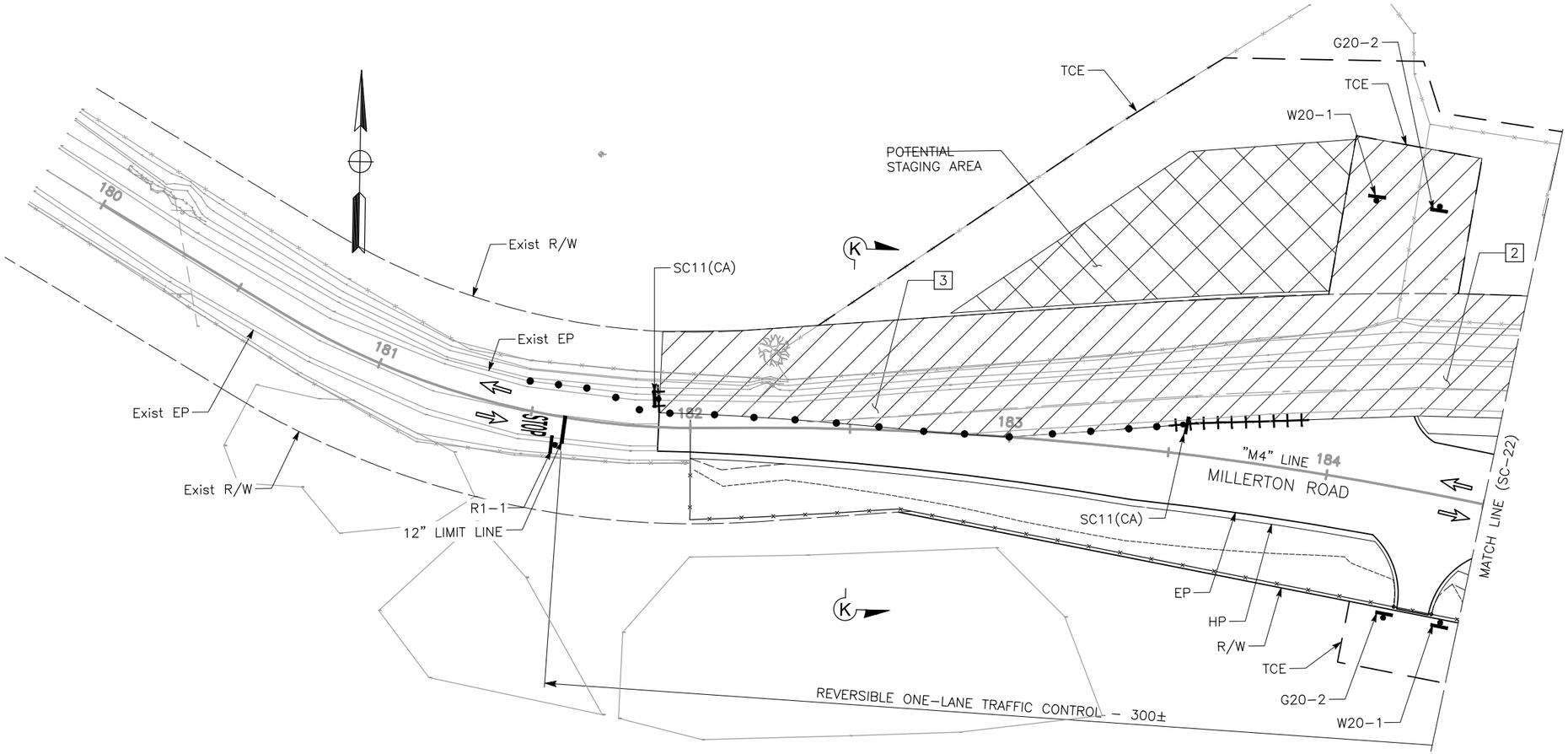
[1] CONSTRUCT NEW BRIDGE.

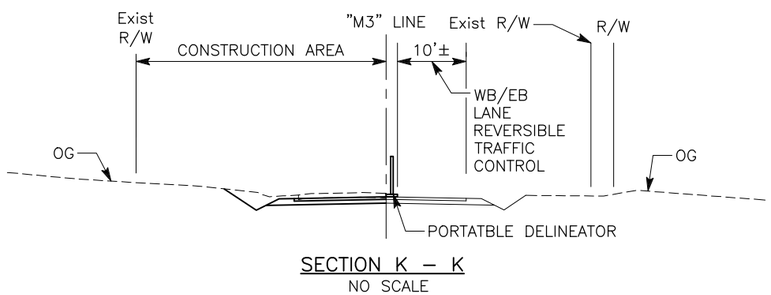
[2] REMOVE EXISTING ROADWAY APPROACH.

[3] CONSTRUCT APPROACH ROADWAY.

STAGE 3 TRAFFIC HANDLING NOTES:

1. PROVIDE FLAGGER AND ONE–LANE TRAFFIC CONTROL ON APPROACH ROADWAY PER CALTRANS STANDARD PLAN T13.
2. WHEN FLAGGER IS NOT PRESENT, STOP CONTROL SHALL BE INCORPORATED, CLEAR LINE OF SIGHT SHALL BE PROVIDED, CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE KEPT OUT OF CONSTRUCTION ZONE AND MOVED TO STAGING AREA.
3. MAINTAIN PRIVATE ACCESS AT ALL TIMES.





SECTION K – K
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND WORK HANDLING WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: T. PROM	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

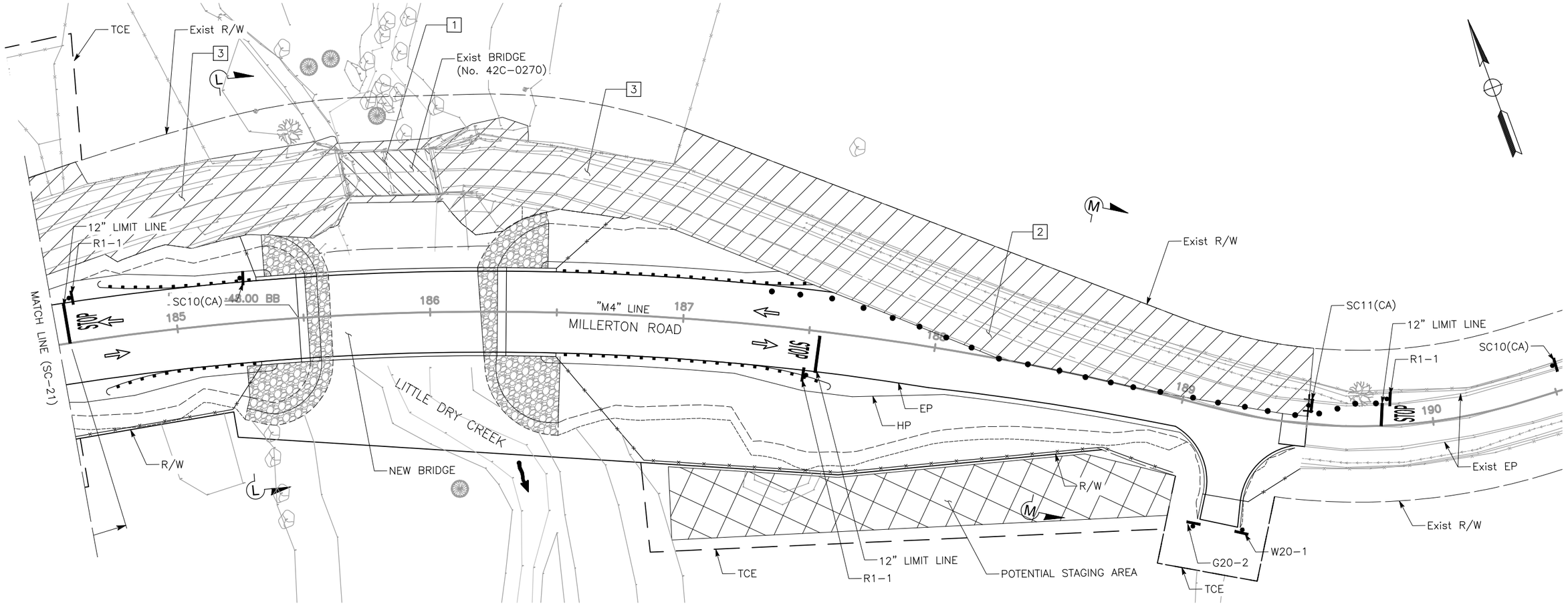
DEPARTMENT OF PUBLIC WORKS AND PLANNING

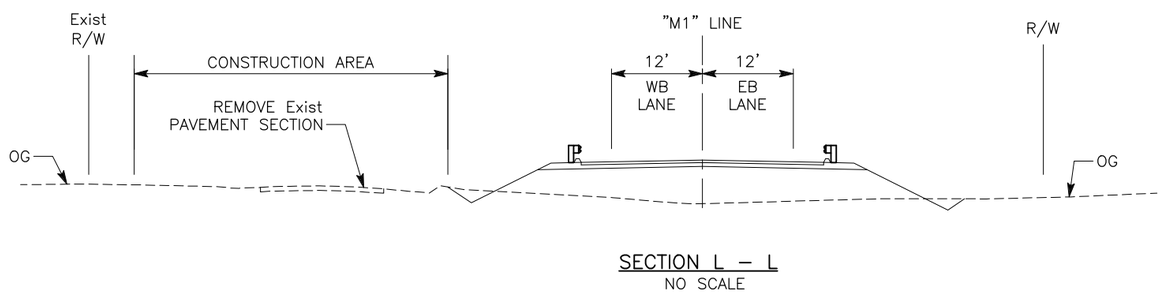
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-19 SHEET NO. 105 TOTAL 159

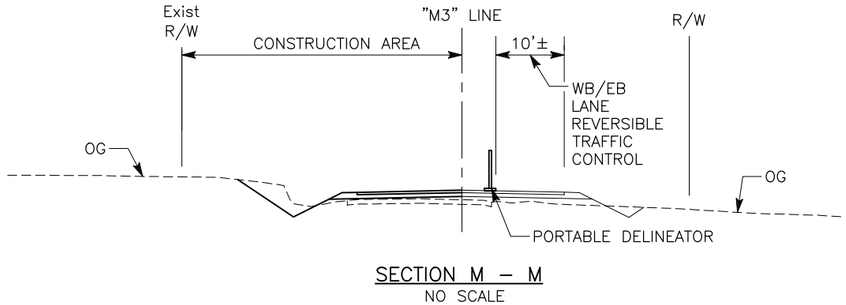
NOTE:

1. FENCE (TYPE BW) SHALL BE MAINTAINED TO CONTAIN LIVESTOCK WITHIN PRIVATE PROPERTIES.





SECTION L – L
NO SCALE



SECTION M – M
NO SCALE

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: T. PROM	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STAGE 2
STAGE CONSTRUCTION AND TRAFFIC HANDLING PLAN

DRAWING NO. SC-20 SHEET NO. 106 TOTAL 159

LEGEND

RIGHT-OF-WAY / PROPERTY LINE

CUT

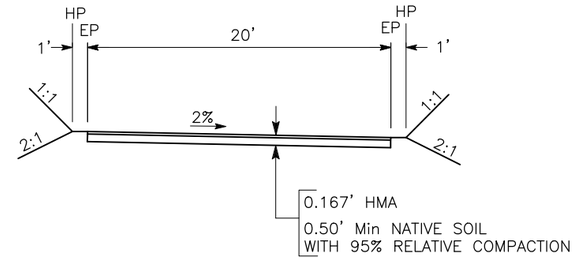
FILL

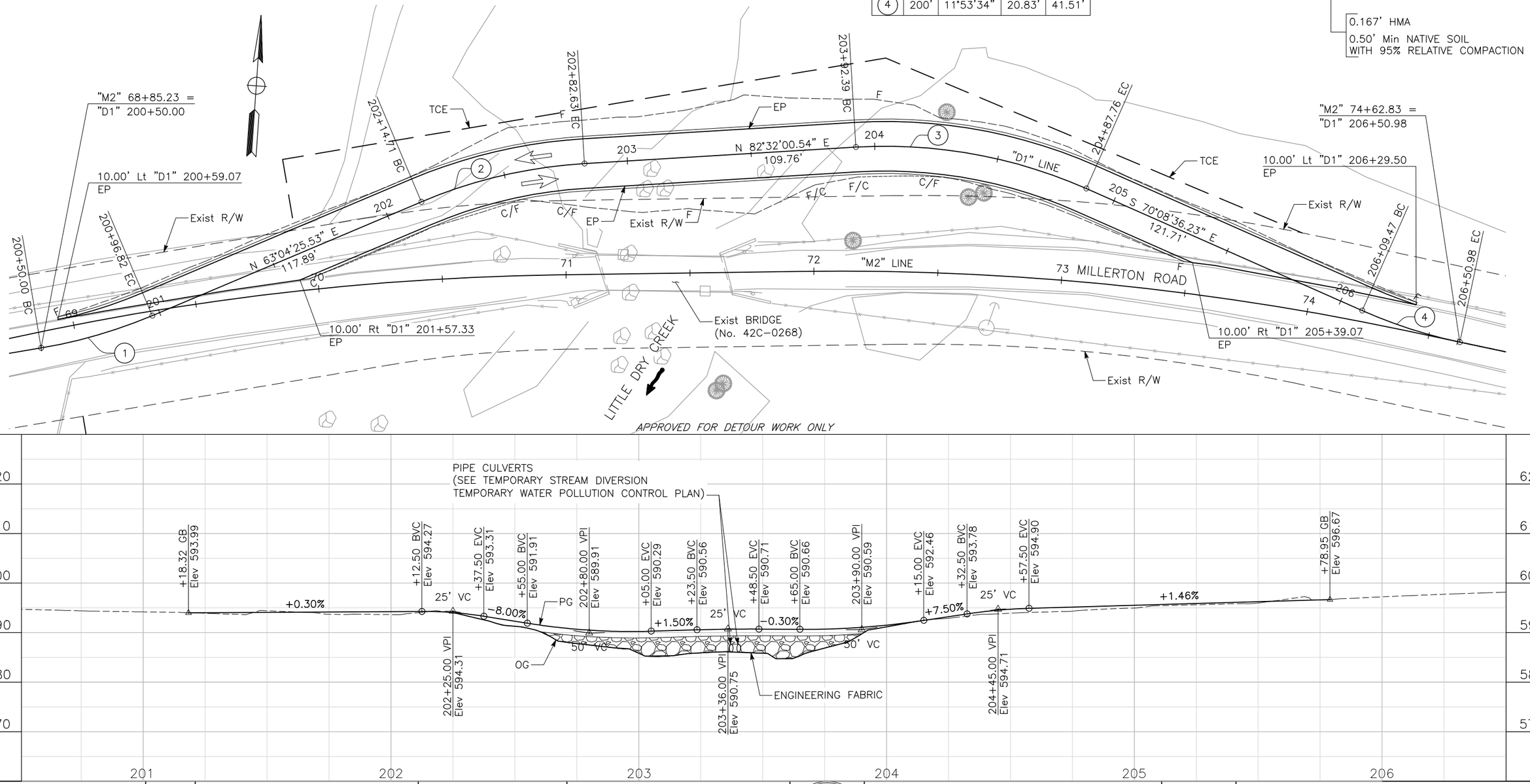
DIRECTION OF TRAFFIC

NOTES

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT RIGHT-OF-WAY ENGINEERING AT THE COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE DATA				
No.	R	Δ	T	L
1	200'	13°24'45"	23.52'	46.82'
2	200'	19°27'35"	34.29'	67.92'
3	200'	27°19'23"	48.61'	95.37'
4	200'	11°53'34"	20.83'	41.51'





	DATE
DESIGNED: C. SALILICAN	09/23/16
DRAWN: S. MORALES	09/23/16
CHECKED: J. SILVA	09/23/16

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

RECORD DRAWING

RESIDENT ENGINEER	DATE

SCALE

PLAN 0 40' 80' HZ

PROFILE 0 10' 20' VT

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DETOUR PLAN

DRAWING NO. DE-1 SHEET NO. 107 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

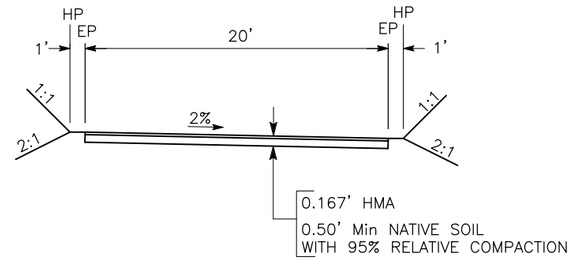
LEGEND

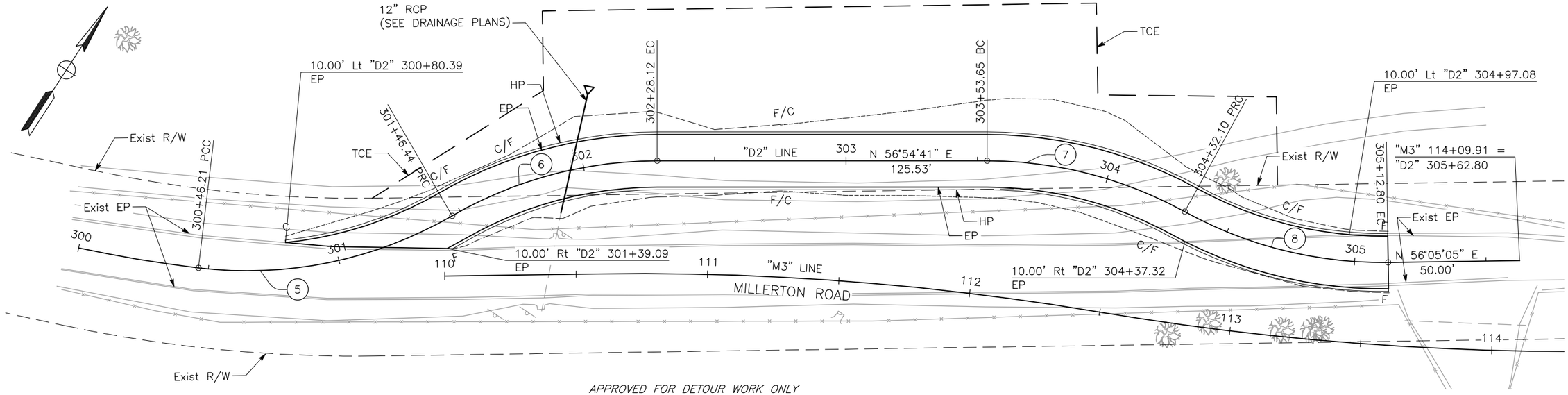
- RIGHT-OF-WAY / PROPERTY LINE
- CUT
- FILL
- DIRECTION OF TRAFFIC

NOTES

1. FOR ACCURATE RIGHT-OF-WAY DATA, CONTACT RIGHT-OF-WAY ENGINEERING AT THE COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE DATA				
No.	R	Δ	T	L
(5)	156'	36°48'48"	51.91'	100.23'
(6)	156'	30°00'00"	41.80'	81.68'
(7)	156'	28°48'41"	40.07'	78.45'
(8)	156'	29°38'17"	41.27'	80.70'





	DATE	RECORD DRAWING	
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE
PLAN 0 40' 80' HZ
PROFILE 0 10' 20' VT

MICHAEL PUGH
SUPERVISING ENGINEER
9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DETOUR PLAN

DRAWING NO. DE-2 SHEET NO. 108 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

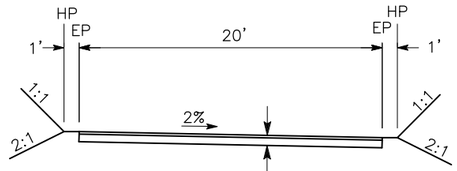
LEGEND

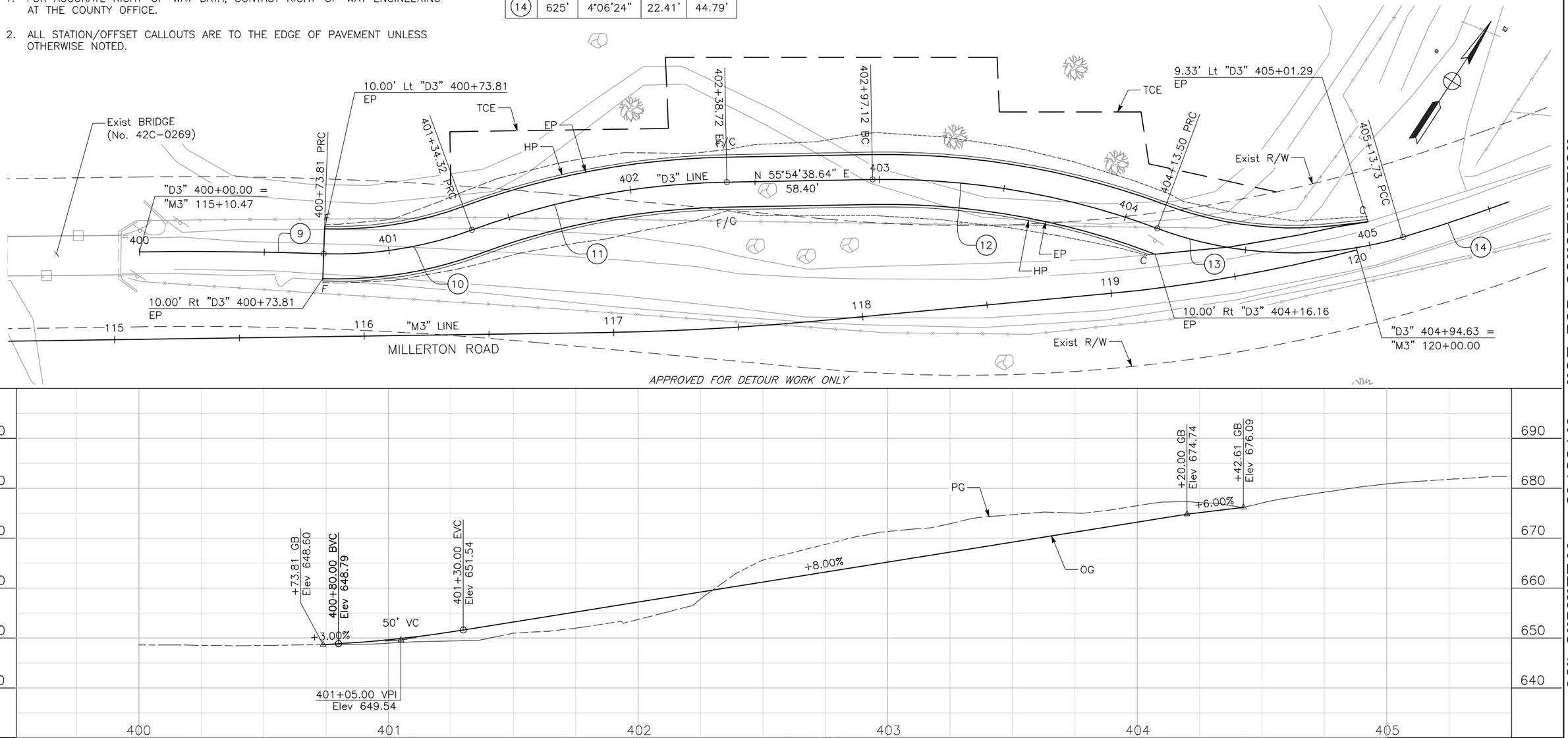
- RIGHT–OF–WAY / PROPERTY LINE
- CUT
- FILL
- DIRECTION OF TRAFFIC

NOTES

1. FOR ACCURATE RIGHT–OF–WAY DATA, CONTACT RIGHT–OF–WAY ENGINEERING AT THE COUNTY OFFICE.
2. ALL STATION/OFFSET CALLOUTS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CURVE DATA				
No.	R	Δ	T	L
9	1500'	2°49'10"	36.91'	73.81'
10	156'	22°13'34"	30.64'	60.52'
11	311'	19°13'57"	52.69'	104.39'
12	311'	21°26'28"	58.88'	116.38'
13	156'	36°48'46"	51.91'	100.23'
14	625'	4°06'24"	22.41'	44.79'





	DATE	RECORD DRAWING		SCALE
DESIGNED: C. SALILICAN	09/23/16	RESIDENT ENGINEER	DATE	PLAN 0 40' 80' HZ
DRAWN: S. MORALES	09/23/16			0 10' 20' VT PROFILE
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DETOUR PLAN

DRAWING NO. DE-3 SHEET NO. 109 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

NEW ROADSIDE SIGNS						
SIGN CODE	SIGN MESSAGE	PANEL SIZE	NO OF POSTS AND SIZE (N)	QUANTITIES	FURNISH SINGLE SHEET ALUMINUM (0.063"–UNFRAMED) SQFT	REMARKS
W1–1(R)	RIGHT TURN WARNING	36" x 36"	1 – 2"ø STEEL PIPE, GALVANIZED	1	9	
W1–2(R)	RIGHT CURVE WARNING	36" x 36"	1 – 2"ø STEEL PIPE, GALVANIZED	1	9	
W1–2(L)	LEFT CURVE WARNING	36" x 36"	1 – 2"ø STEEL PIPE, GALVANIZED	1	9	
W13–5	15 MPH CURVE SPEED	36" x 48"	1 – 2"ø STEEL PIPE, GALVANIZED	2	24	

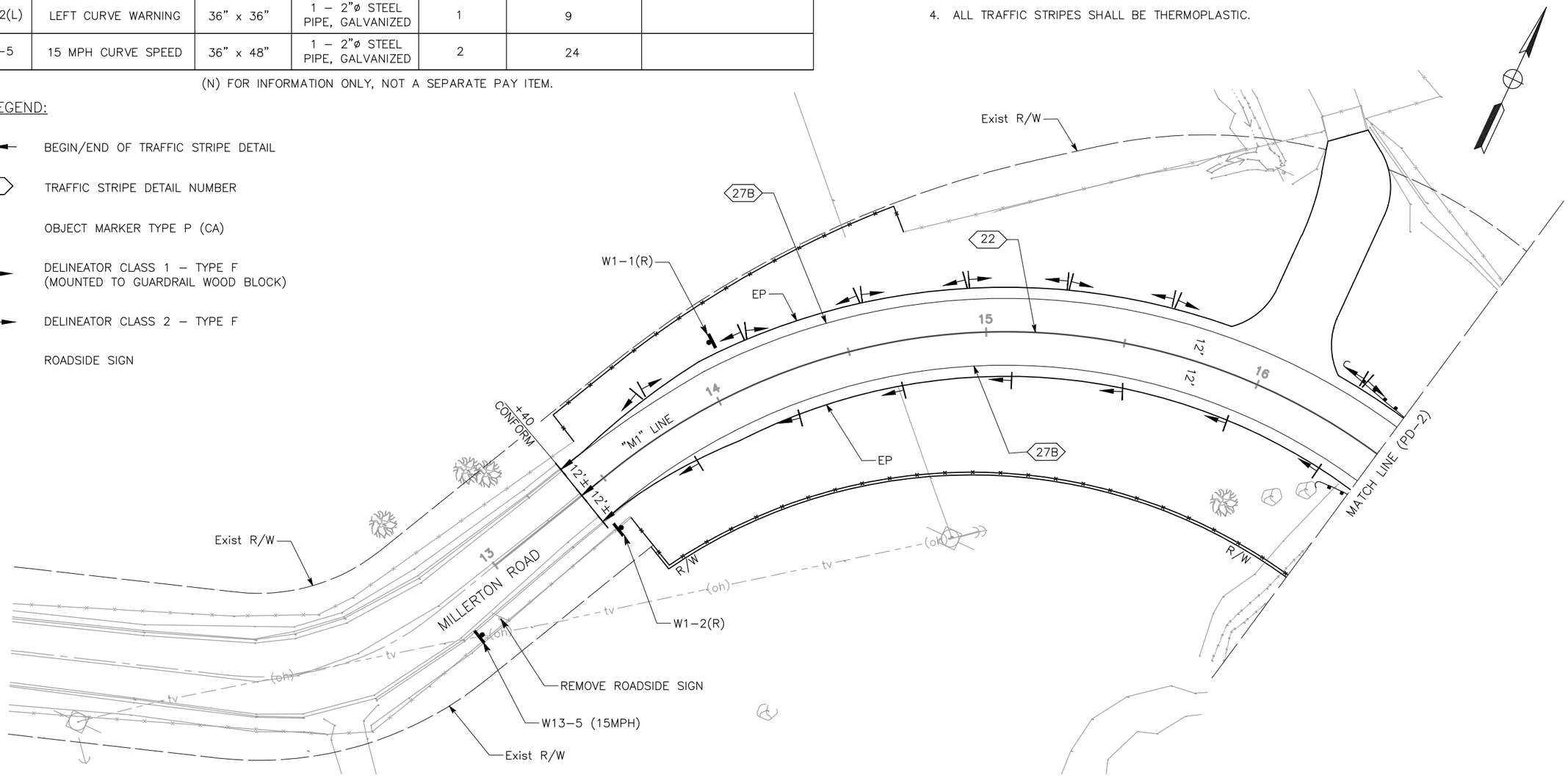
(N) FOR INFORMATION ONLY, NOT A SEPARATE PAY ITEM.

NOTES:

1. FOR ALL PAVEMENT STRIPING DETAILS, REFER TO CALTRANS STANDARD PLANS DATED 2015.
2. FOR ROADSIDE SIGN DETAILS, REFER TO 2014 VERSION OF THE CALIFORNIA MUTCD.
3. FOR ACCURATE RIGHT–OF–WAY DATA, SEE COUNTY OFFICE.
4. ALL TRAFFIC STRIPES SHALL BE THERMOPLASTIC.

LEGEND:

- BEGIN/END OF TRAFFIC STRIPE DETAIL
- # TRAFFIC STRIPE DETAIL NUMBER
- OBJECT MARKER TYPE P (CA)
- DELINEATOR CLASS 1 – TYPE F (MOUNTED TO GUARDRAIL WOOD BLOCK)
- DELINEATOR CLASS 2 – TYPE F
- ROADSIDE SIGN



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

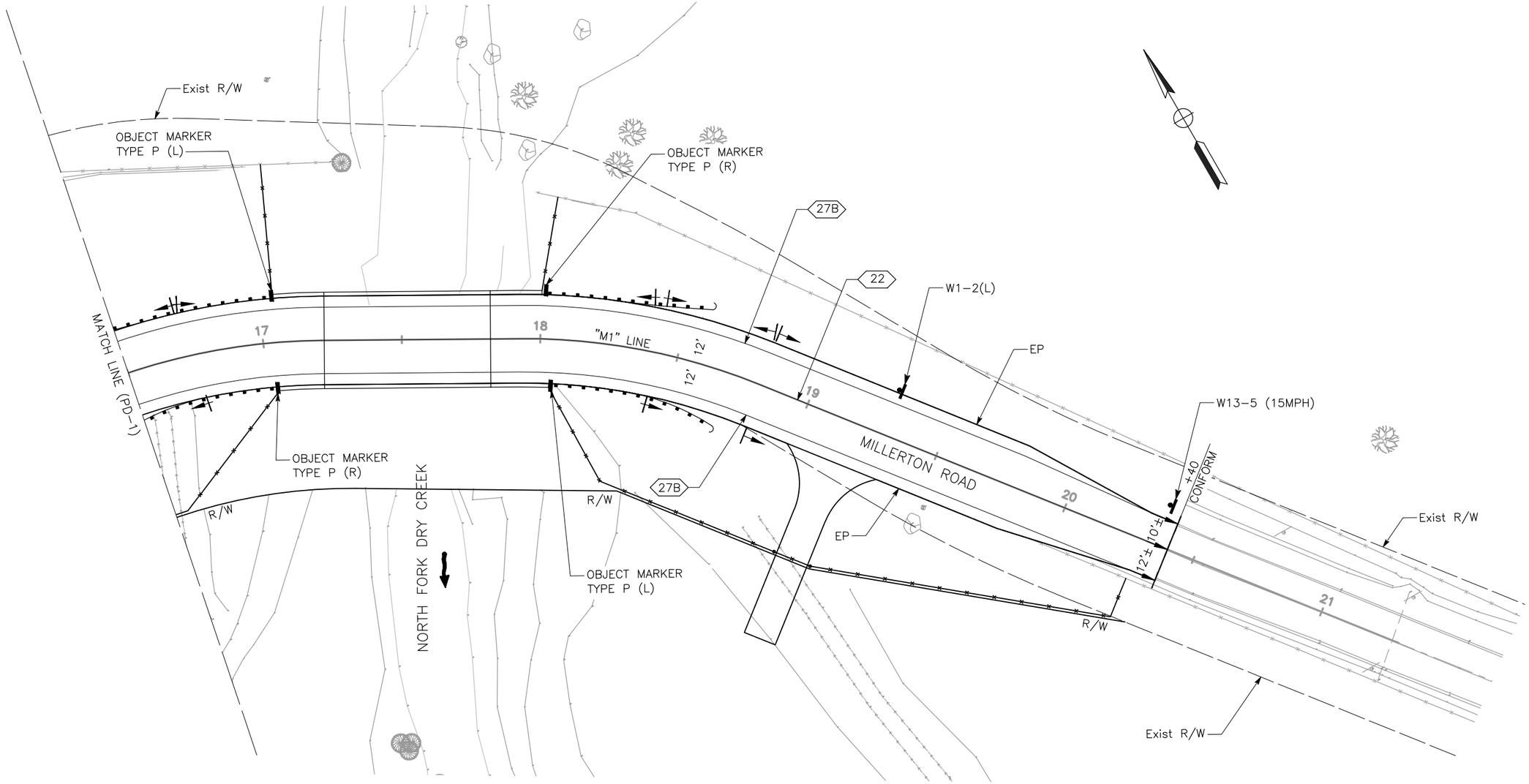
ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

DRAWING NO. PD-1 SHEET NO. 110 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20' 40'

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
F. JOSE SILVA
No. 55267
Exp. 09-30-2016
STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0267

ROAD NO. BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

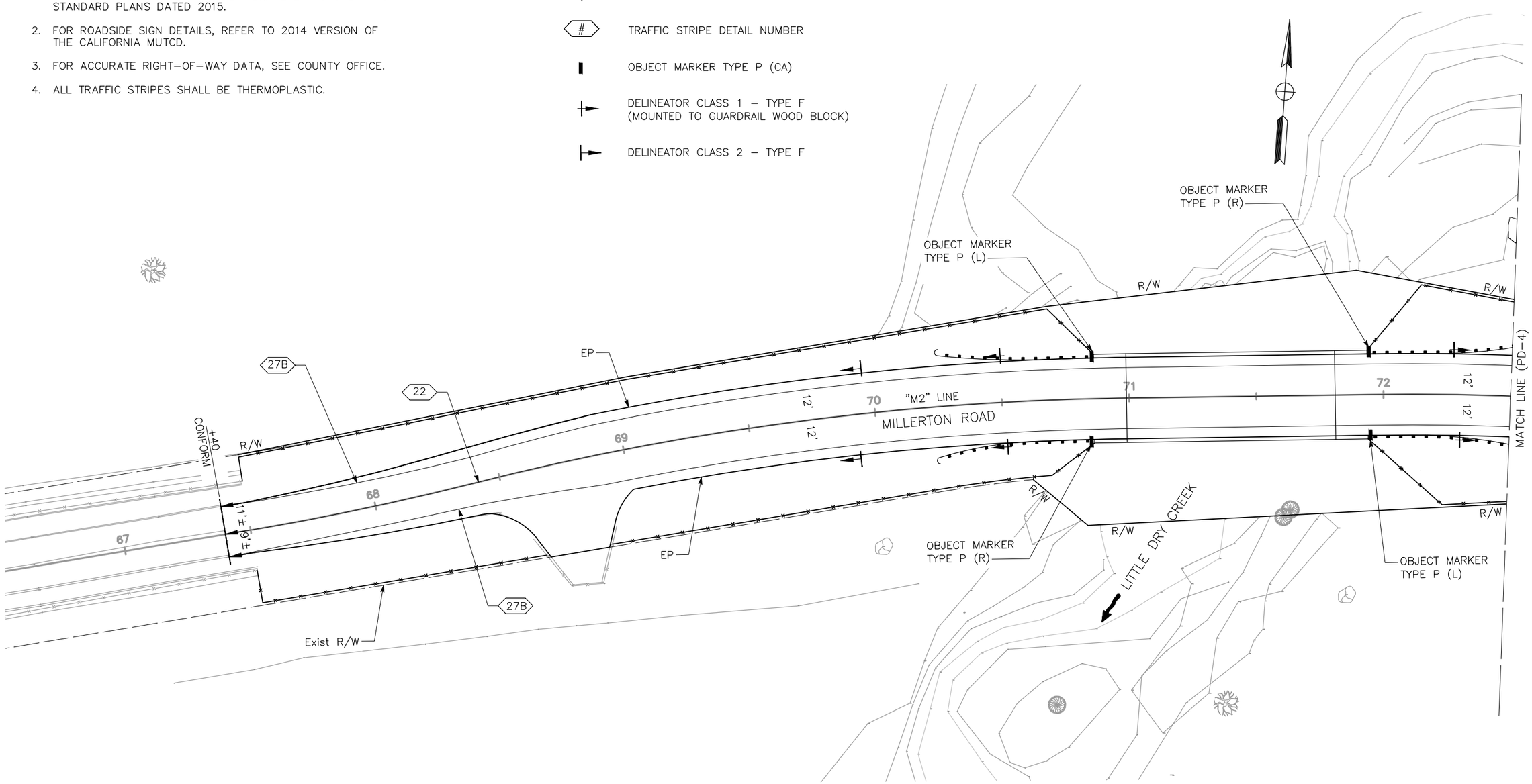
DRAWING NO. PD-2 SHEET NO. 111 TOTAL 159

NOTES:

1. FOR ALL PAVEMENT STRIPING DETAILS, REFER TO CALTRANS STANDARD PLANS DATED 2015.
2. FOR ROADSIDE SIGN DETAILS, REFER TO 2014 VERSION OF THE CALIFORNIA MUTCD.
3. FOR ACCURATE RIGHT-OF-WAY DATA, SEE COUNTY OFFICE.
4. ALL TRAFFIC STRIPES SHALL BE THERMOPLASTIC.

LEGEND

- BEGIN/END OF TRAFFIC STRIPE DETAIL
- (#) TRAFFIC STRIPE DETAIL NUMBER
- OBJECT MARKER TYPE P (CA)
- DELINEATOR CLASS 1 – TYPE F (MOUNTED TO GUARDRAIL WOOD BLOCK)
- DELINEATOR CLASS 2 – TYPE F



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20′ 40′

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

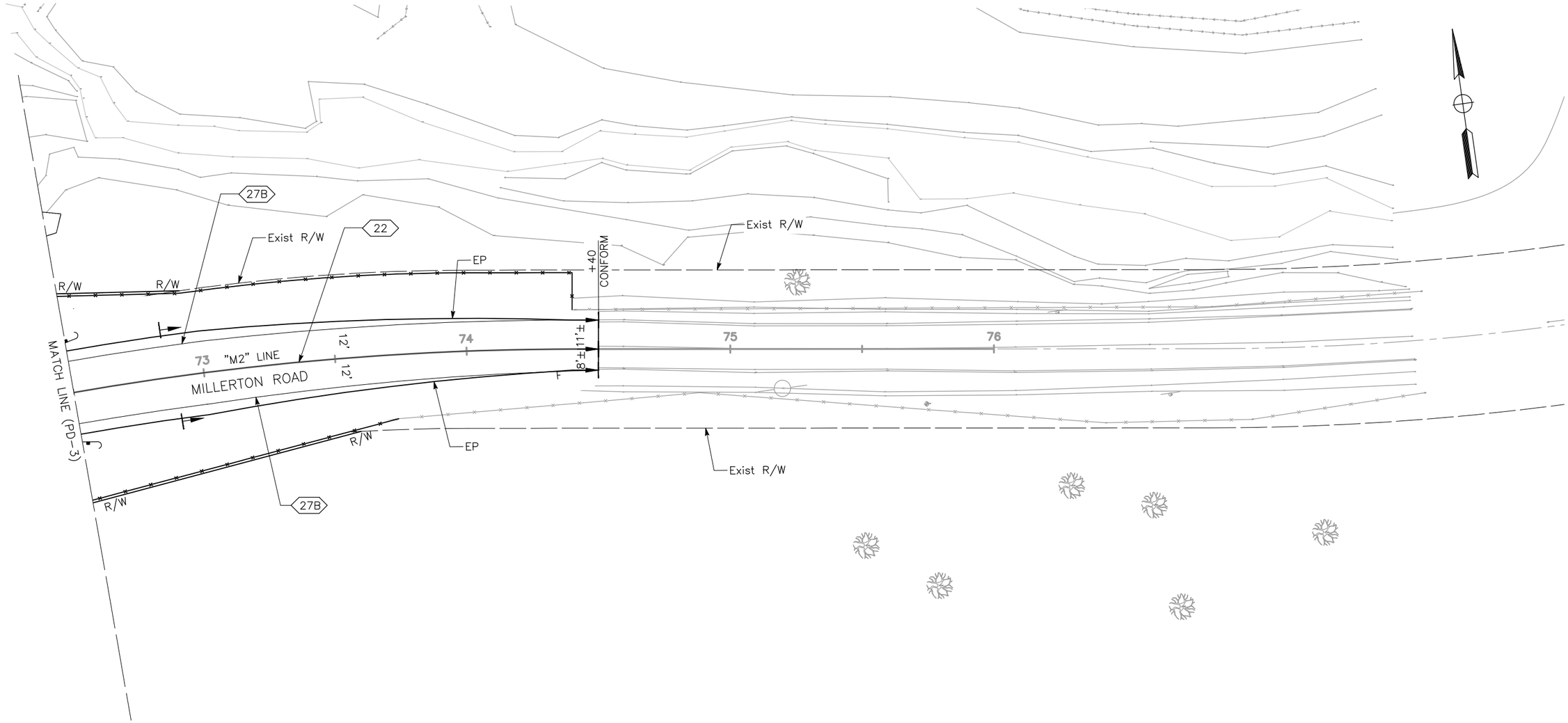
ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

DRAWING NO. PD-3 SHEET NO. 112 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER

9/23/2016 — DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0268

ROAD NO. BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

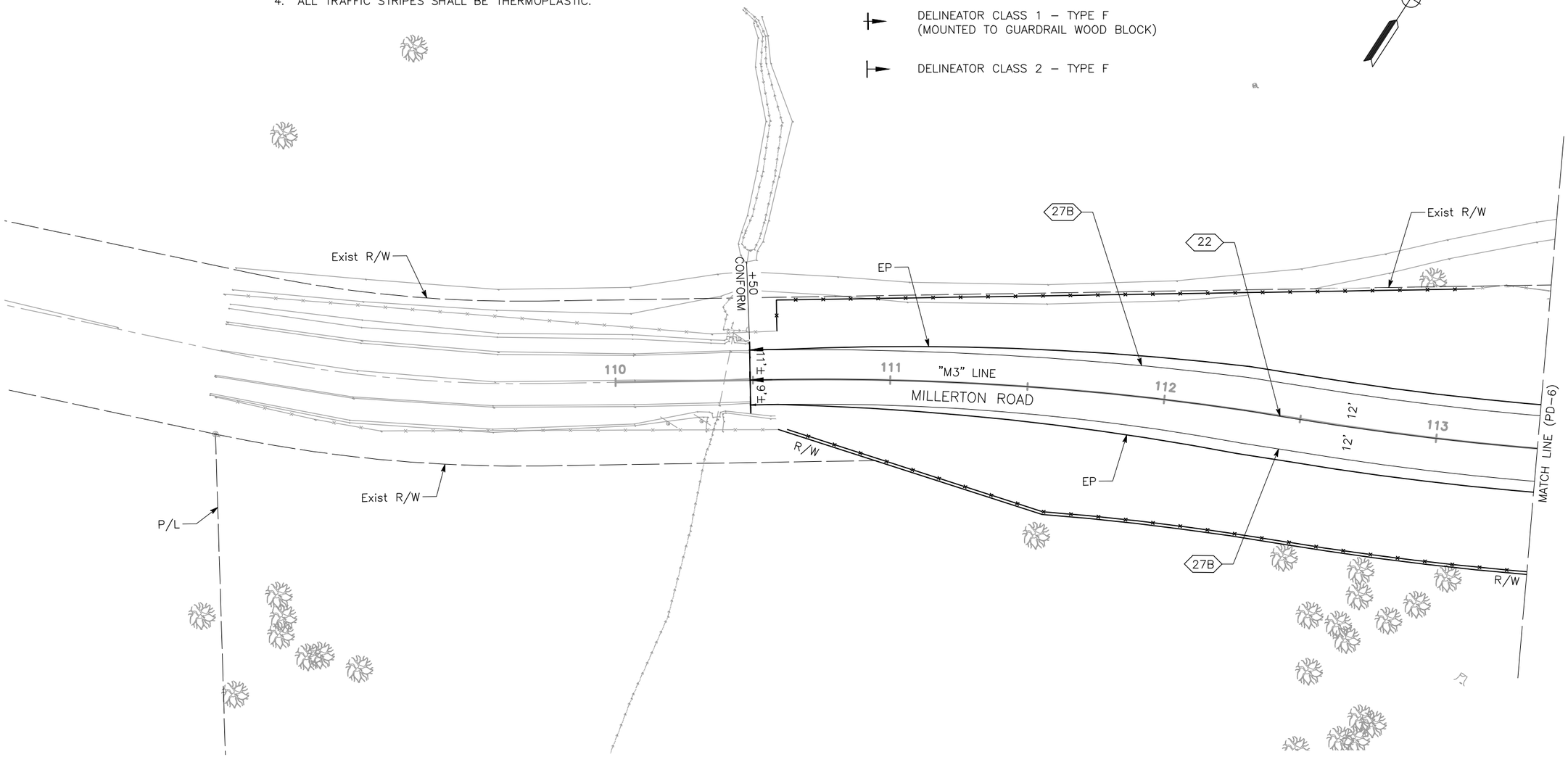
DRAWING NO. PD-4 SHEET NO. 113 TOTAL 159

NOTES:

1. FOR ALL PAVEMENT STRIPING DETAILS, REFER TO CALTRANS STANDARD PLANS DATED 2015.
2. FOR ROADSIDE SIGN DETAILS, REFER TO 2014 VERSION OF THE CALIFORNIA MUTCD.
3. FOR ACCURATE RIGHT-OF-WAY DATA, SEE COUNTY OFFICE.
4. ALL TRAFFIC STRIPES SHALL BE THERMOPLASTIC.

LEGEND

- BEGIN/END OF TRAFFIC STRIPE DETAIL
- (#) TRAFFIC STRIPE DETAIL NUMBER
- OBJECT MARKER TYPE P (CA)
- DELINEATOR CLASS 1 – TYPE F (MOUNTED TO GUARDRAIL WOOD BLOCK)
- DELINEATOR CLASS 2 – TYPE F



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: 0 20' 40'

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

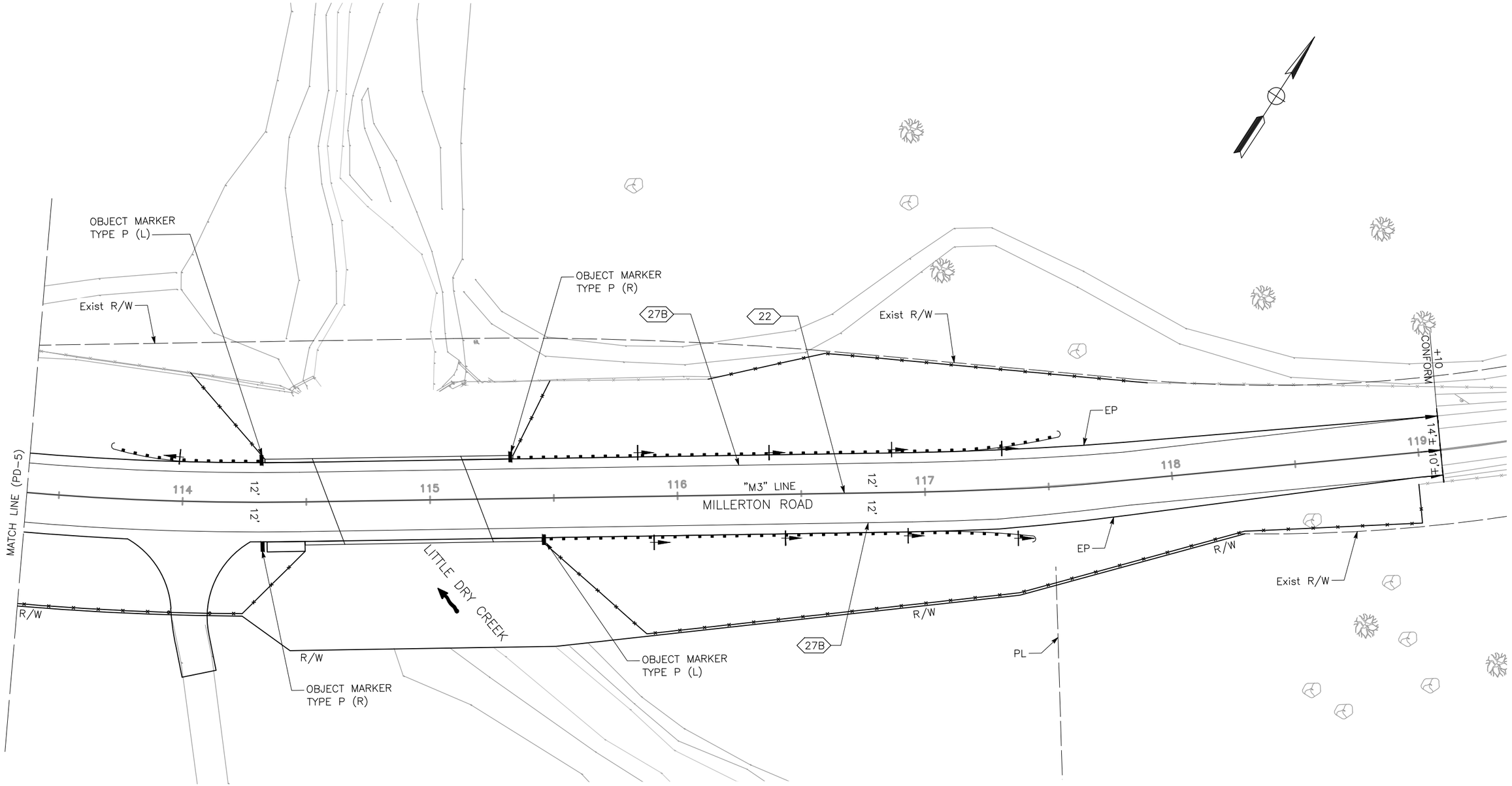
ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

DRAWING NO. PD-5 SHEET NO. 114 TOTAL 159



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING	
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE
DRAWN: S. MORALES	09/23/16		
CHECKED: J. SILVA	09/23/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

0 20' 40'

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0269

ROAD NO. BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

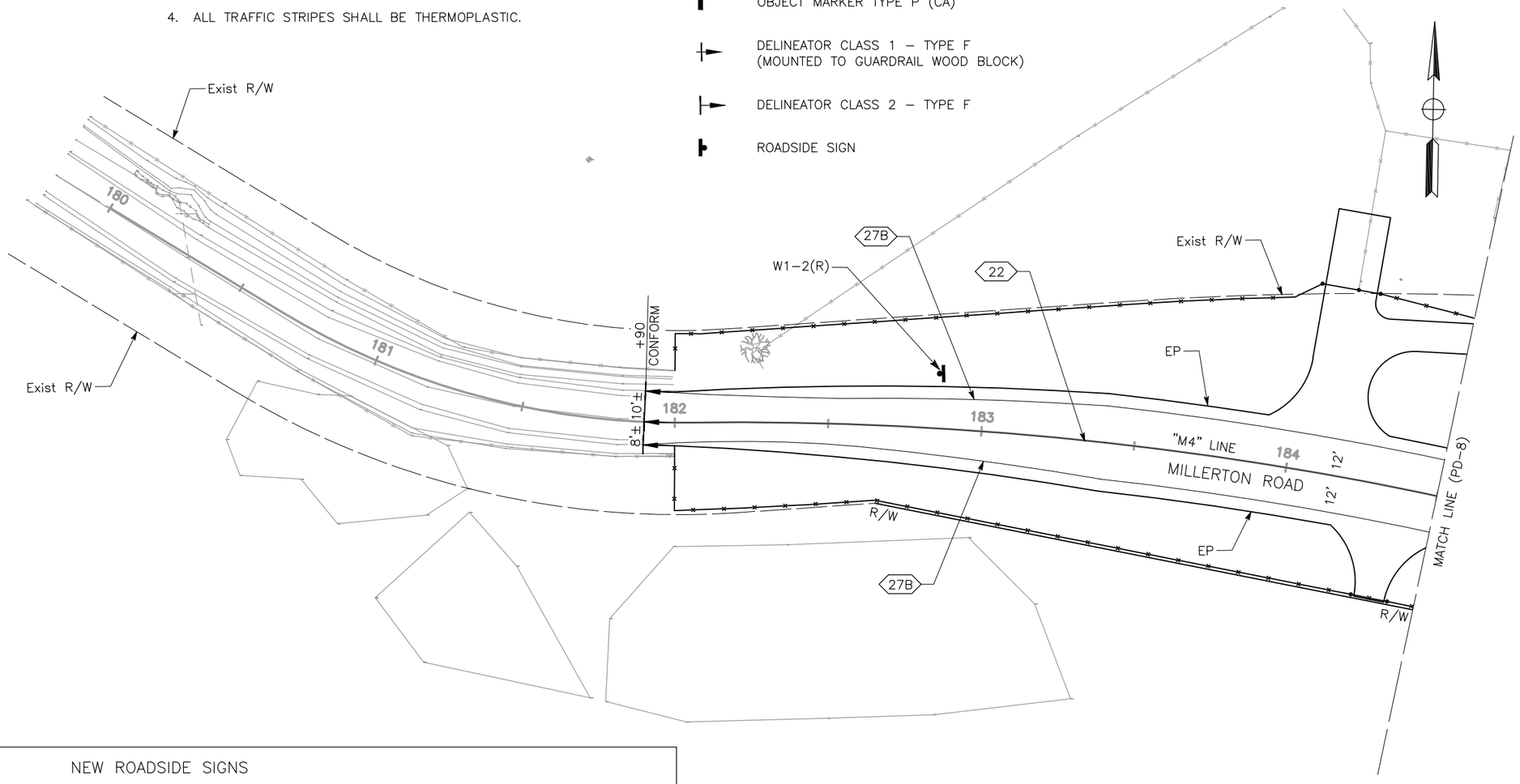
DRAWING NO. PD-6 SHEET NO. 115 TOTAL 159

NOTES:

1. FOR ALL PAVEMENT STRIPING DETAILS, REFER TO CALTRANS STANDARD PLANS DATED 2015.
2. FOR ROADSIDE SIGN DETAILS, REFER TO 2014 VERSION OF THE CALIFORNIA MUTCD.
3. FOR ACCURATE RIGHT-OF-WAY DATA, SEE COUNTY OFFICE.
4. ALL TRAFFIC STRIPES SHALL BE THERMOPLASTIC.

LEGEND

- BEGIN/END OF TRAFFIC STRIPE DETAIL
- (#) TRAFFIC STRIPE DETAIL NUMBER
- OBJECT MARKER TYPE P (CA)
- DELINEATOR CLASS 1 – TYPE F (MOUNTED TO GUARDRAIL WOOD BLOCK)
- DELINEATOR CLASS 2 – TYPE F
- ROADSIDE SIGN



NEW ROADSIDE SIGNS

SIGN CODE	SIGN MESSAGE	PANEL SIZE	NO OF POSTS AND SIZE*	QUANTITIES	FURNISH SINGLE SHEET ALUMINUM (0.063"-UNFRAMED) SQFT	REMARKS
W1-1(L)	LEFT TURN WARNING	36" x 36"	1 – 2"ø STEEL PIPE, GALVANIZED	1	9	
W1-2(R)	RIGHT CURVE WARNING	36" x 36"	1 – 2"ø STEEL PIPE, GALVANIZED	1	9	

* FOR INFORMATION ONLY, NOT A SEPARATE PAY ITEM.

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

ROAD NO. BRIDGE NO. 42C-0270

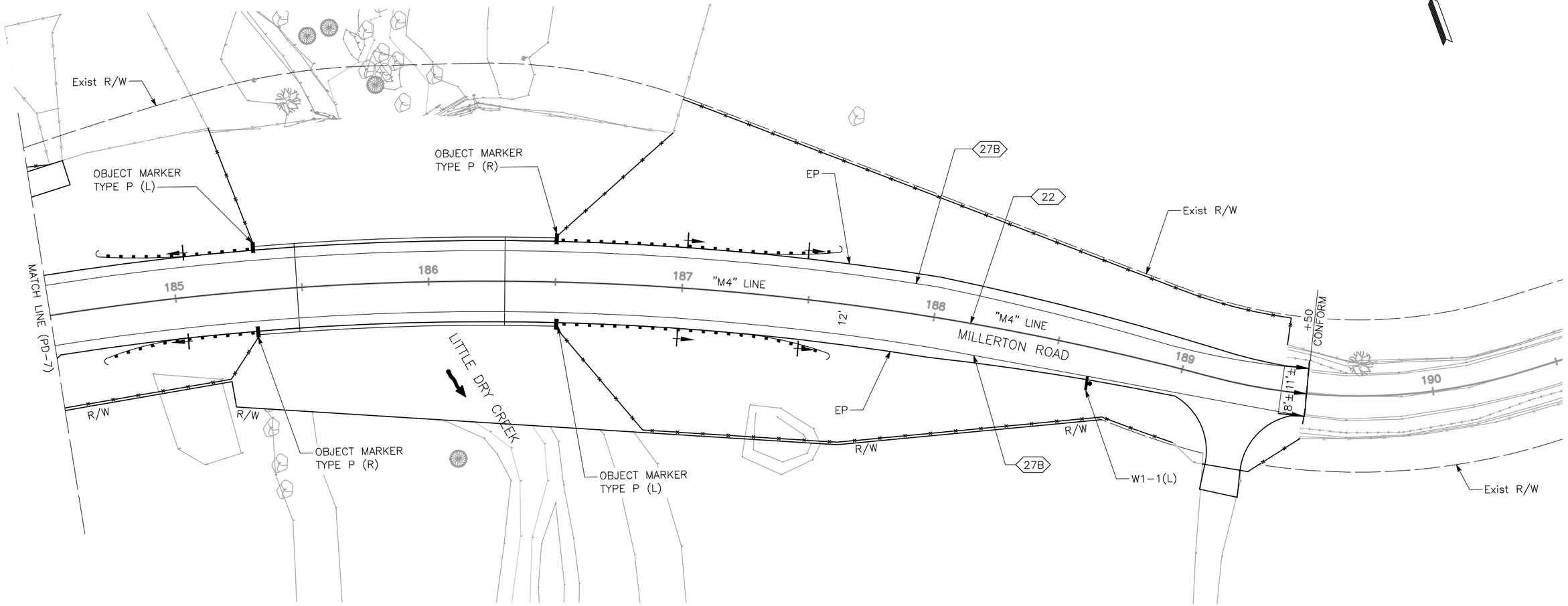
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PAVEMENT DELINEATION AND SIGN PLAN

DRAWING NO. PD-7 SHEET NO. 116 TOTAL 159

60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION



60% SUBMITTAL - 09/23/16 - NOT FOR CONSTRUCTION

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

	DATE	RECORD DRAWING		SCALE
DESIGNED: K. LI	09/23/16	RESIDENT ENGINEER	DATE	0 20' 40'
DRAWN: S. MORALES	09/23/16			
CHECKED: J. SILVA	09/23/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — F. JOSE SILVA — No. 55267 — Exp. 09-30-2016 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE
REPLACEMENT ON MILLERTON ROAD
BRIDGE No. 42C-0270

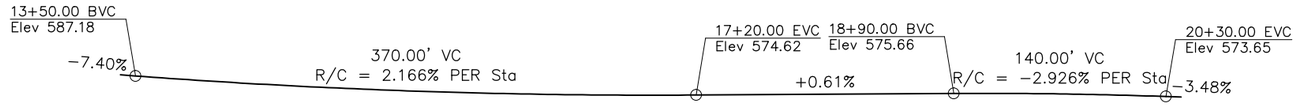
ROAD NO. BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

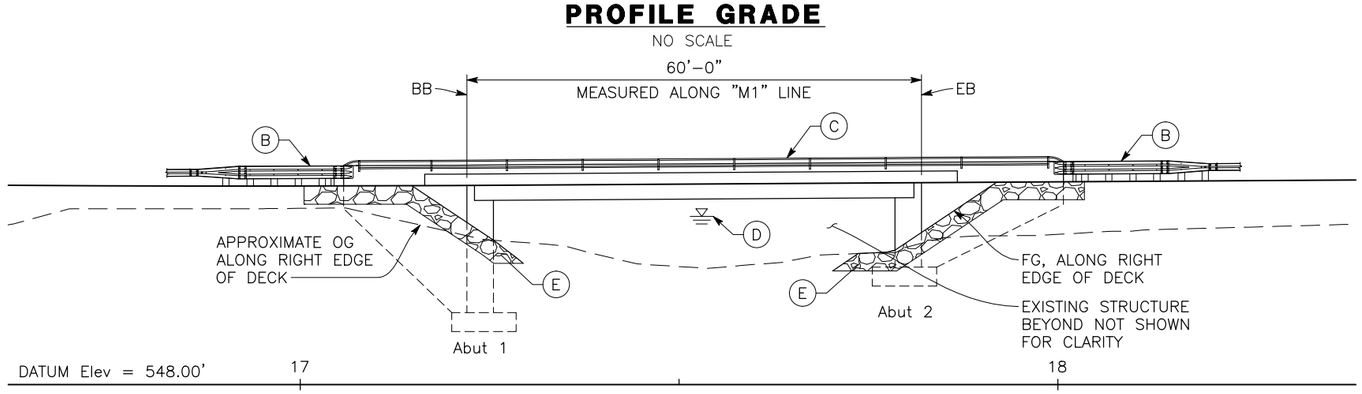
PAVEMENT DELINEATION AND SIGN PLAN

DRAWING NO. PD-8 SHEET NO. 117 TOTAL 159



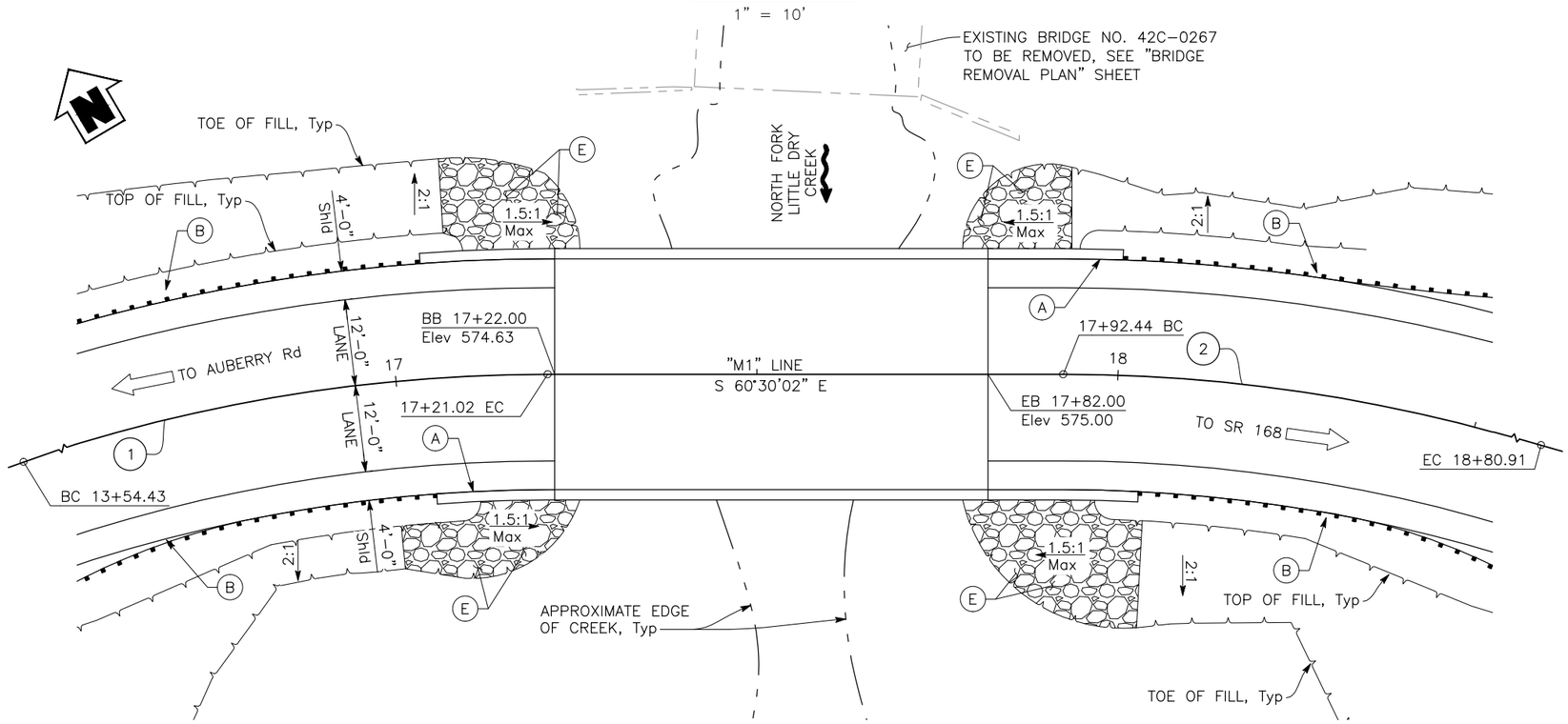
PROFILE GRADE

NO SCALE



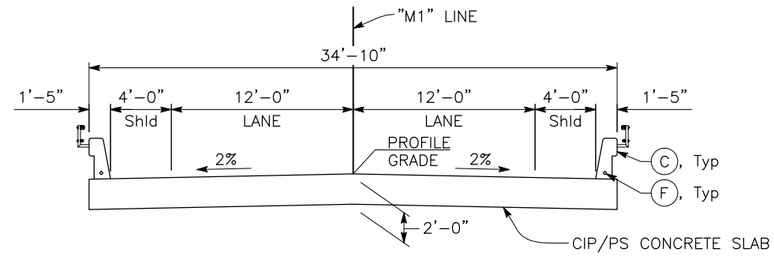
ELEVATION

1" = 10'



PLAN

1" = 10'



TYPICAL SECTION

1" = 5'

LEGEND:

Indicates Existing Structure to be Removed

Indicates New Structure

NOTES:

(A) Paint Bridge Number 42C−0267, year completed and "North Fork Little Dry Creek Br."

(B) Midwest Guardrail System (see "Roadway Plans")

(C) Concrete Barrier Type 732 with Tubular Bicycle Railing (Mod)

(D) 100 yr. WS Elevation = 570.80'. For hydrologic data, see "Foundation Plan" sheet

(E) For Rock Slope Protection and Grading Details, see "Roadway Plans"

(F) 2" Conduit for future utilities

(G) For Index to Plans, Standard Plans, General Notes, and Concrete Strength and Type Limits, see "Deck Contours" sheet

(H) For Spread Footing Data Table, Hydrologic Summary Table, and Scour Data Table, see "Foundation Plan" sheet

CURVE DATA

No.	R	Δ	T	L
1	225.00'	93°21'09"	238.57'	366.59'
2	225.00'	22°31'41"	44.81'	88.47'

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: STACEY ALLIGUIE	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0267

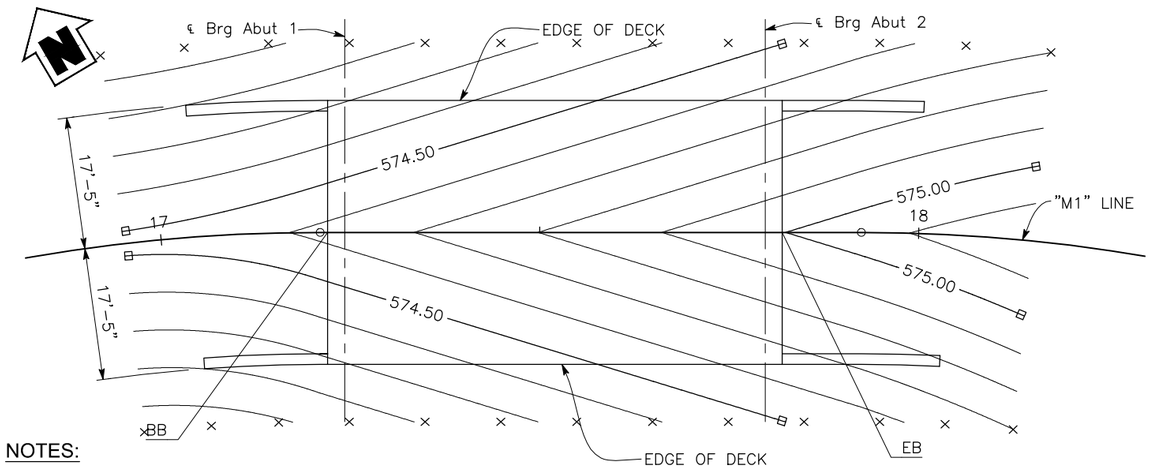
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

GENERAL PLAN

DRAWING NO. S-1 SHEET NO. 118 TOTAL 168

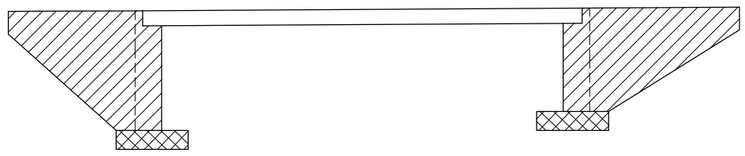


NOTES:

1. Contours do not include camber.
2. Contour interval is 0.10'.
3. □ Indicates whole foot contours.
4. × Indicates 10' increments along station line.

DECK CONTOURS

1" = 10'



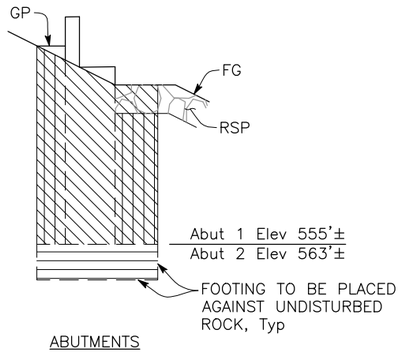
CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

Structural Concrete, Bridge (Polymer Fiber) (f'c = 5000 psi @ 28 Days)

Structural Concrete, Bridge (f'c = 5000 psi @ 28 Days)

Structural Concrete, Bridge Footing (f'c = 5000 psi @ 28 Days)



ABUTMENTS

Structure Excavation, (Rock)

Structure Excavation, (Bridge)

Structure Backfill, (Bridge)

NOTE:
For details not shown, see A62C –

LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL

NO SCALE

INDEX TO PLANS

CALTRANS STANDARD PLANS DATED 2015

A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND-LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND-LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND-LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND-LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND-LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND-SOIL (SHEET 1 OF 2)
A10G	LEGEND-SOIL (SHEET 2 OF 2)
A10H	LEGEND-ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11-55	CONCRETE BARRIER TYPE 732

STANDARD PLAN SHEET NO.

DETAIL NO.

LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition and the Caltrans Amendments, preface dated January 2014.

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.7 April 2013.

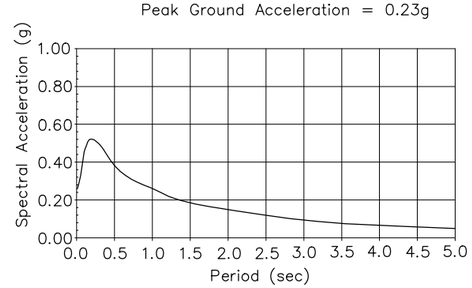
DEAD LOAD: Includes 35 psf for future wearing surface and 100 plf for future utilities.

LIVE LOADING: HL93, Low Boy, and permit design load.

SEISMIC LOADING: Soil profile: Vs30 = 350 m/s

Moment Magnitude: 6.5

Peak Ground Acceleration = 0.23g



REINFORCED CONCRETE: fy = 60 ksi
f'c = See "CONCRETE STRENGTH AND TYPE LIMITS"
n = 8

PRESTRESSED CONCRETE: See "PRESTRESSING NOTES" on "TYPICAL SECTION" sheet.

QUANTITIES		
BRIDGE REMOVAL	LS	1
STRUCTURE EXCAVATION (BRIDGE)	CY	246
STRUCTURE EXCAVATION (ROCK)	CY	15
STRUCTURE BACKFILL (BRIDGE)	CY	128
PRESTRESSING CAST-IN-PLACE CONCRETE	LS	1
STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	57
STRUCTURAL CONCRETE, BRIDGE	CY	155
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	150
JOINT SEAL (MR=½")	LF	68
BAR REINFORCING STEEL (BRIDGE)	LB	50,000
TUBULAR BICYCLE RAILING (MOD)	LF	195
CONCRETE BARRIER TYPE 732	LF	195

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	
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CHECKED: STACEY ALLIGUIE	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT No. C77667 Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0267

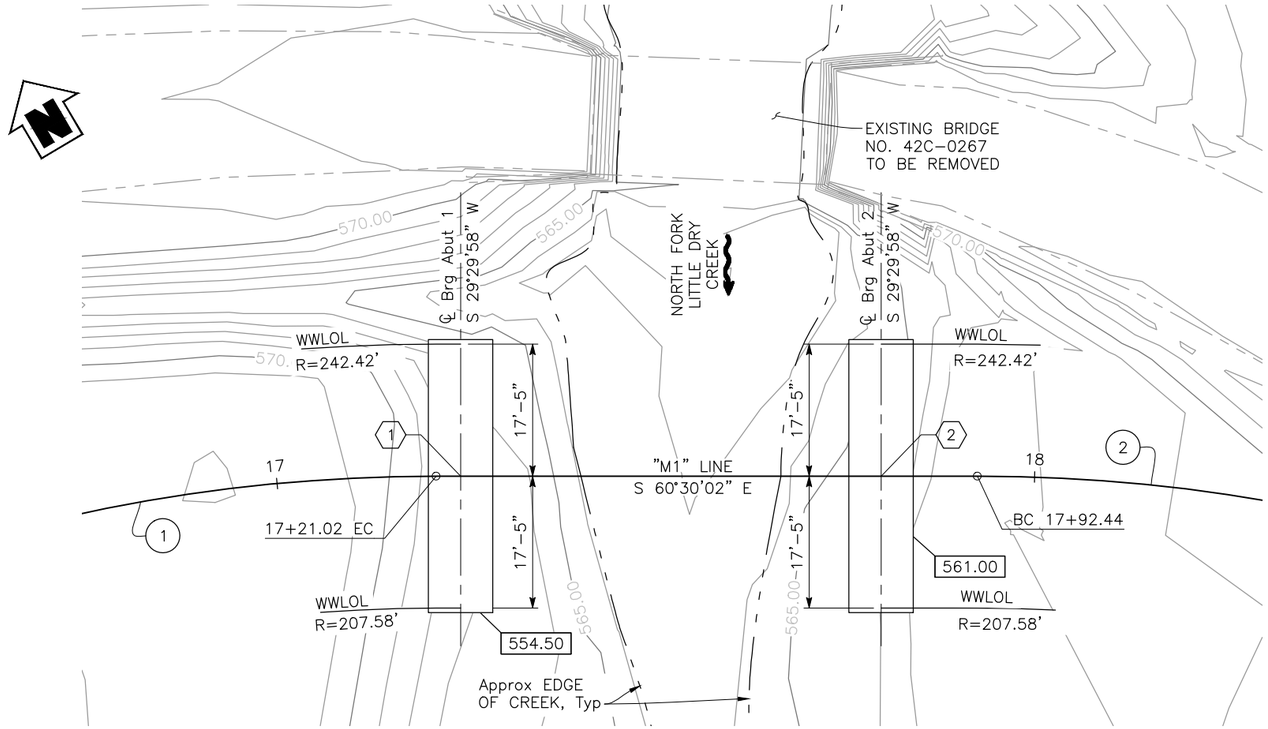
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DECK CONTOURS

DRAWING NO. S-2 SHEET NO. 119 TOTAL 168



PLAN
1" = 10'

LEGEND:

- Indicates Bottom of Footing Elevation
- Indicates Existing Structure to be Removed
- Indicates New Structure

BENCH MARK:

See "Roadway Plans"

NOTES:

1. Bottom of footing elevation must penetrate a minimum of 6" into intact rock at the elevations shown. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

CURVE DATA

No.	R	Δ	T	L
(1)	225.00'	93°21'09"	238.57'	366.59'
(2)	225.00'	22°31'41"	44.81'	88.47'

	Northing	Easting
(1) ℄ Brg Abut 1 Sta 17+24.25	2236773.3849	6386802.3241
(2) ℄ Brg Abut 2 Sta 17+79.75	2236746.4693	6386850.6386

HYDROLOGIC SUMMARY TABLE

Drainage Area = 14.4 Square Miles		
Frequency (Years)	Design Flood	Base Flood
	50	100
Discharge (Cubic Feet per Second)	2315	2800
Water Surface Elevation, Ft Immediately Upstream of Bridge	570.2	570.8

SPREAD FOOTING DATA TABLE

Support Location	Service Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction Factored Gross Nominal Bearing Resistance $\phi_b = 0.50$	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 1.00$ (ksf)
Abutment 1	14	14	N/A
Abutment 2	20	20	N/A

SCOUR DATA

Support Number	Long Term (Degradation, Contraction and Local) Scour Elevation[1] (Ft)
Abutment 1	555.0
Abutment 2	563.0

1. Total scour is limited by depth of bedrock

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CHECKED: STACEY ALLIGUIE	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0267

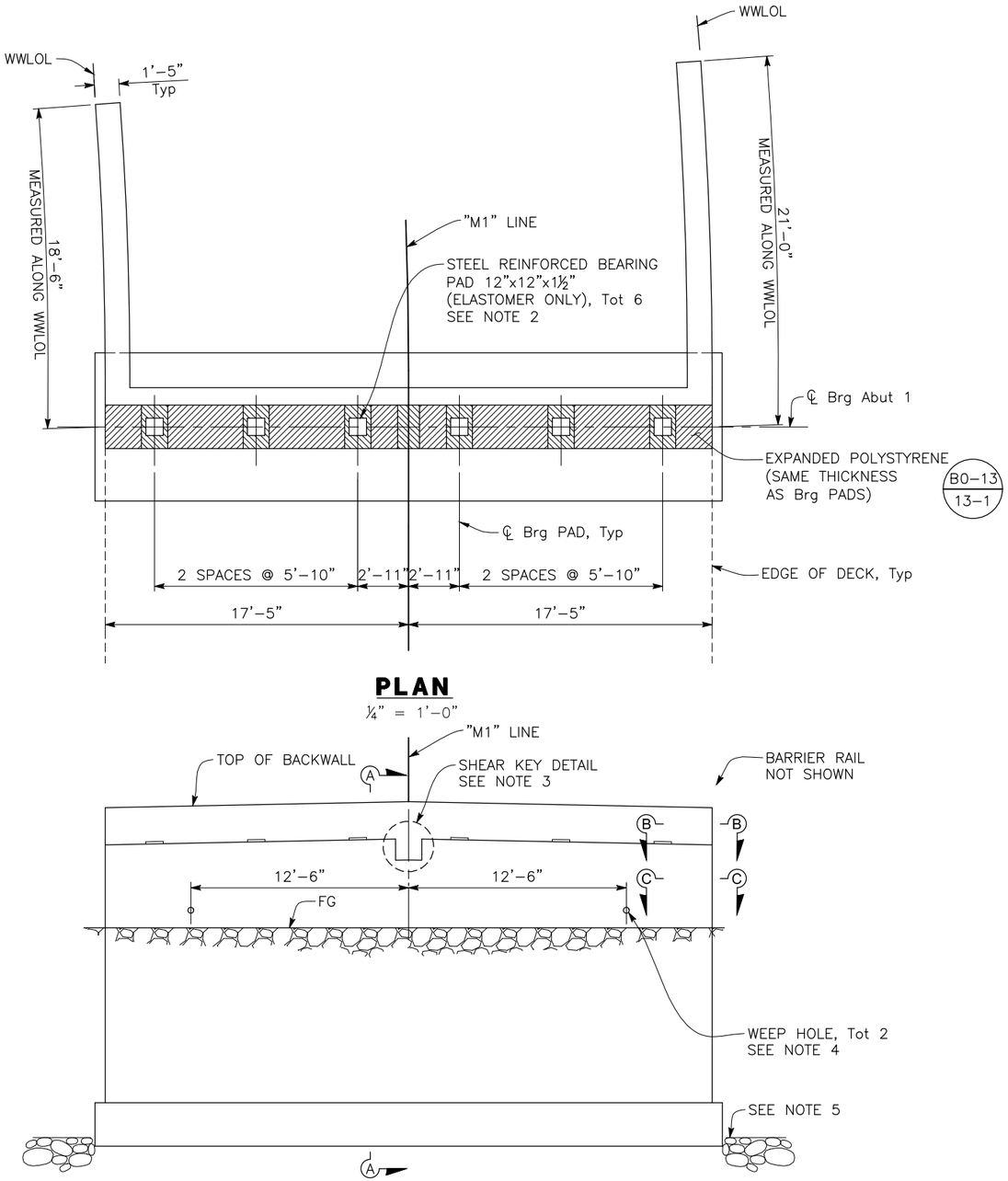
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

FOUNDATION PLAN

DRAWING NO. S-3 SHEET NO. 120 TOTAL 168

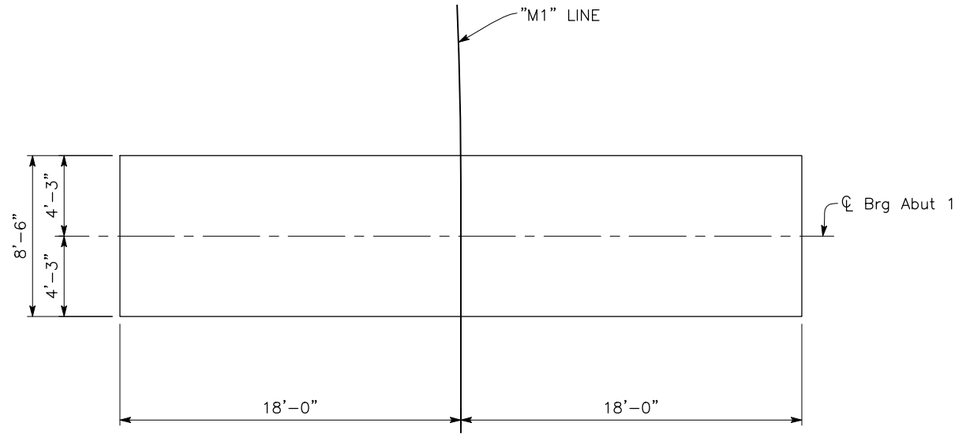


PLAN

¼" = 1'–0"

ELEVATION

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Bottom of footing elevation must penetrate a minimum of 6" into intact rock at the elevations shown. Footing elevations may be adjusted as directed by the Engineer.

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

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PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0267

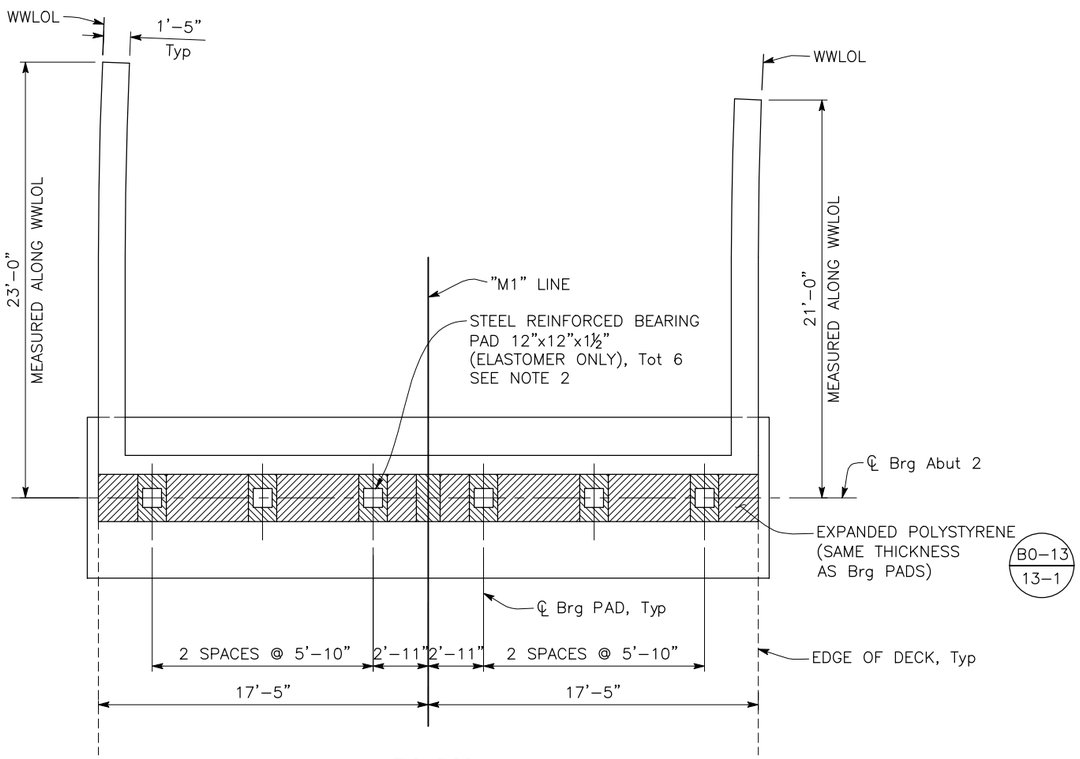
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

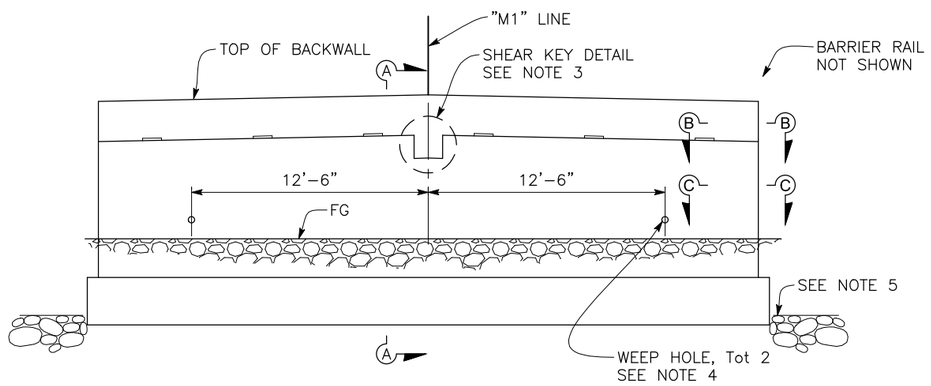
ABUTMENT 1 LAYOUT

DRAWING NO. S-4 SHEET NO. 121 TOTAL 168



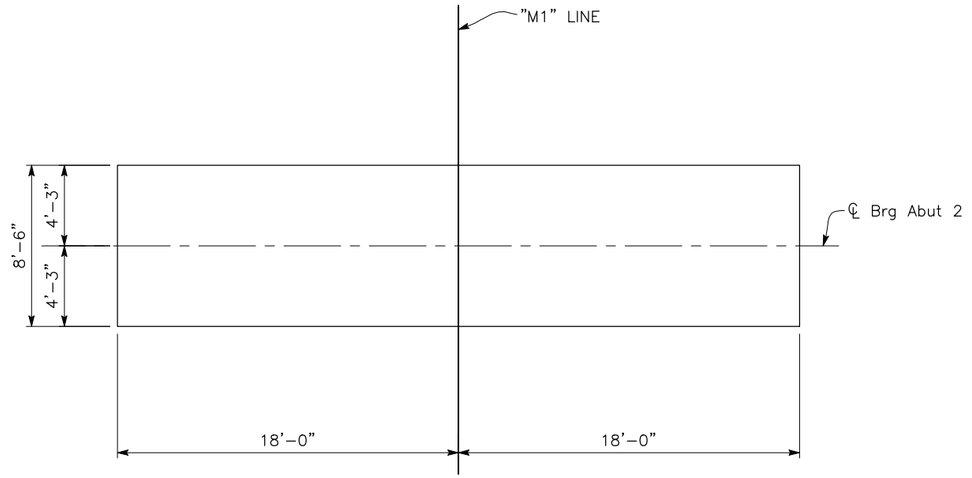
PLAN

¼" = 1'–0"



ELEVATION

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Bottom of footing elevation must penetrate a minimum of 6" into intact rock at the elevations shown. Footing elevations may be adjusted as directed by the Engineer.

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0267

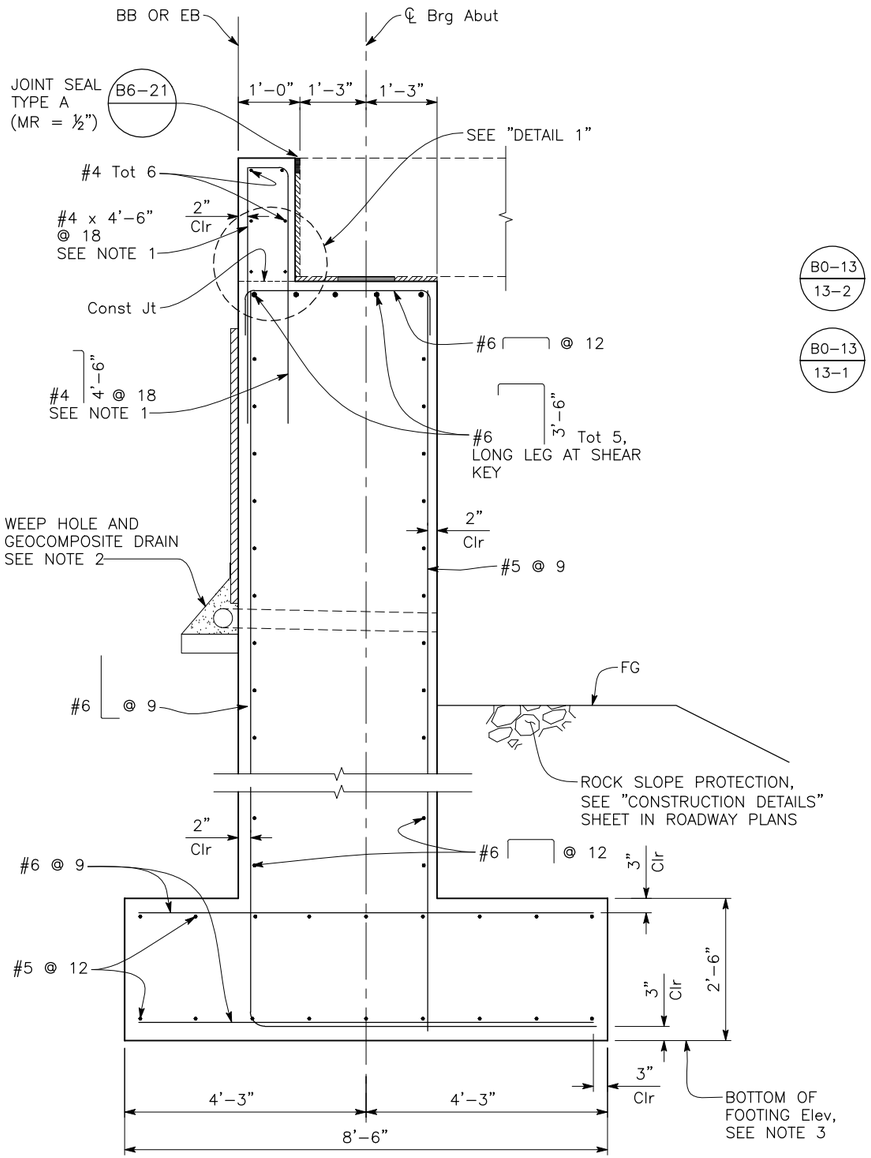
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

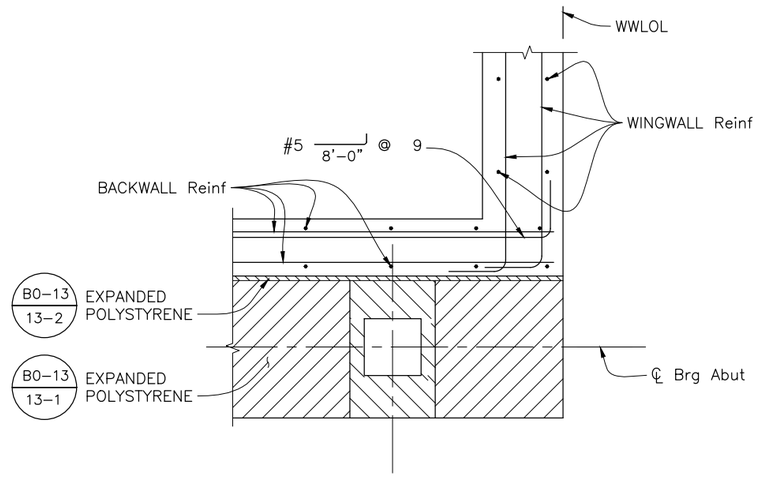
ABUTMENT 2 LAYOUT

DRAWING NO. S-5 SHEET NO. 122 TOTAL 168



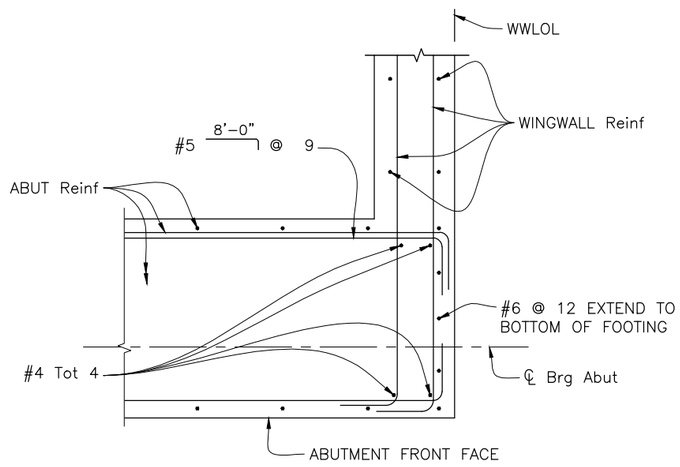
SECTION A-A

¾" = 1'-0"



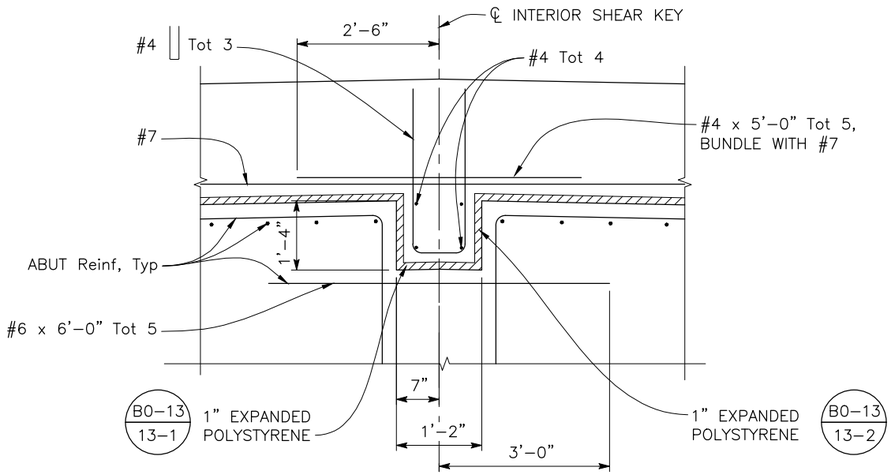
SECTION B-B

¾" = 1'-0"



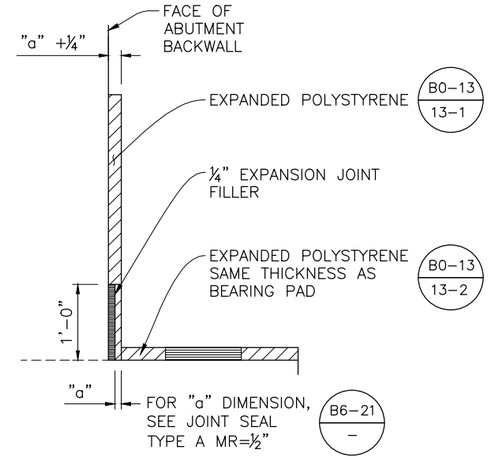
SECTION C-C

¾" = 1'-0"



SHEAR KEY DETAIL

¾" = 1'-0"



DETAIL 1

1" = 1'-0"

NOTES:

1. Reinforcement can be adjusted as directed by Engineer to miss prestress anchorage.
2. For "Weephole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. Bottom of footing elevation must penetrate a minimum of 6" into intact rock at the elevations shown. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0267

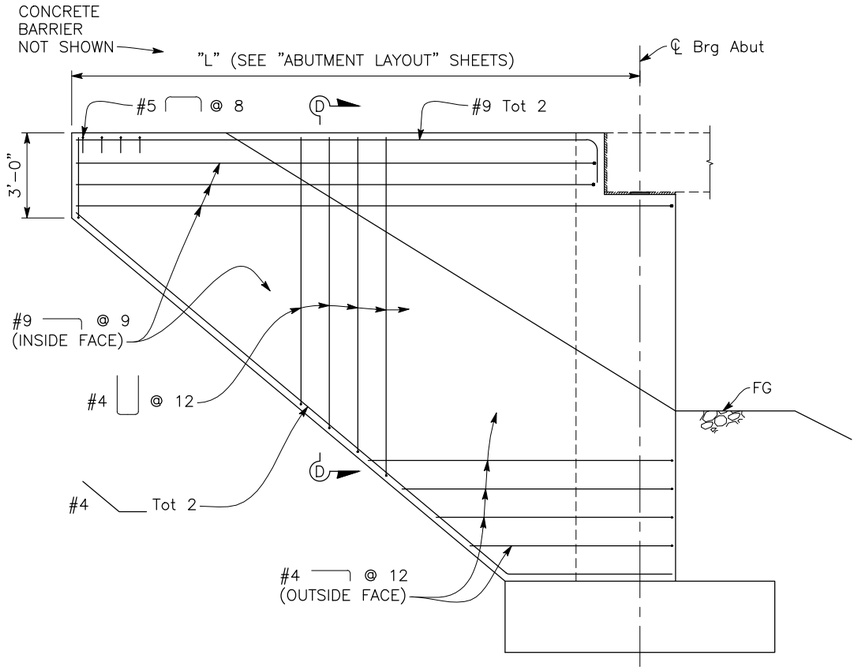
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

ABUTMENT DETAILS NO. 1

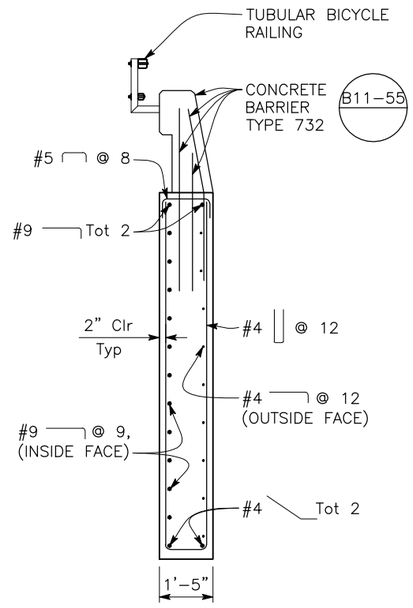
DRAWING NO. S-6 SHEET NO. 123 TOTAL 168



(ABUTMENT 1 WINGWALL ELEVATION SHOWN, ABUTMENT 2 WINGWALL ELEVATIONS SIMILAR)

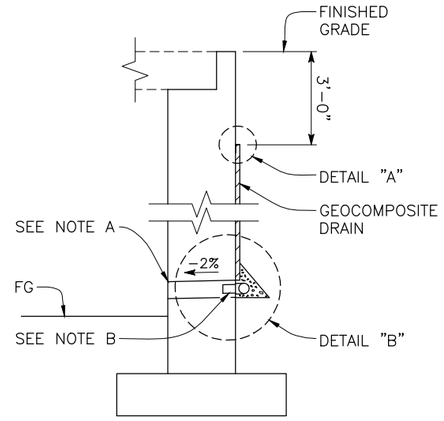
WINGWALL ELEVATION

⅜" = 1'-0"

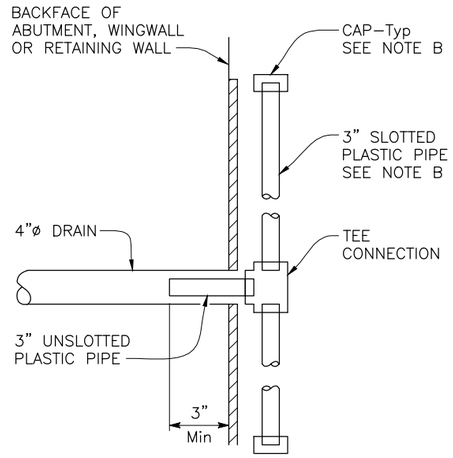


SECTION D-D

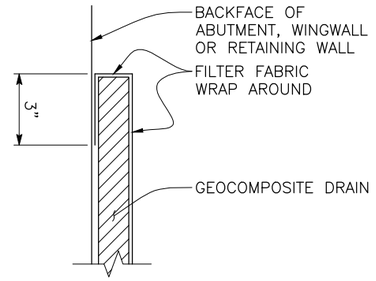
½" = 1'-0"



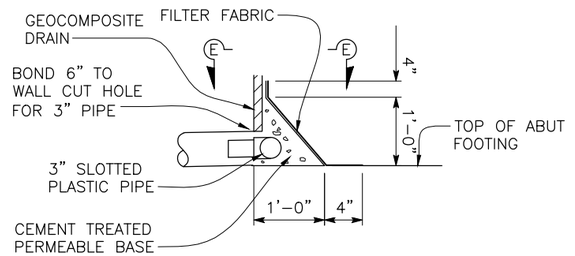
WALL SECTION



SECTION E-E

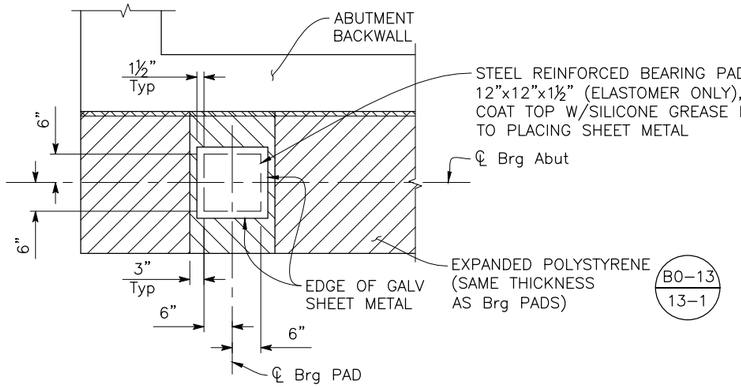


DETAIL "A"

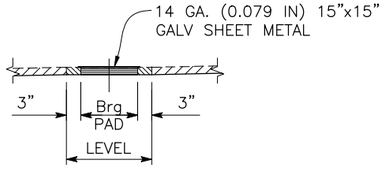


DETAIL "B"

ALTERNATIVE TO BRIDGE DETAIL B0-3 / 3-1



PLAN



ELEVATION

BEARING PAD DETAIL

¾" = 1'-0"

WEEP HOLE AND GEOCOMPOSITE DRAIN DETAILS

NO SCALE

NOTES:

A. 4"ø Drains at Intermediate Sag Points and at 25'-0" Max Center to Center. Exposed Wall Drains shall be located 3"±above Finished Grade.

B. Geocomposite Drain, Cement Treated Permeable Base, Drainage Pad, and 3"ø Slotted Plastic Pipe continuous behind Wall. Cap ends of pipe. Provide "Tee" connectiion at each 4" drain.

C. Provide 1'-0" x 4" Drainage Pad when Pipe is not supported by Footing.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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CHECKED: STACEY ALLIGUIE	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0267

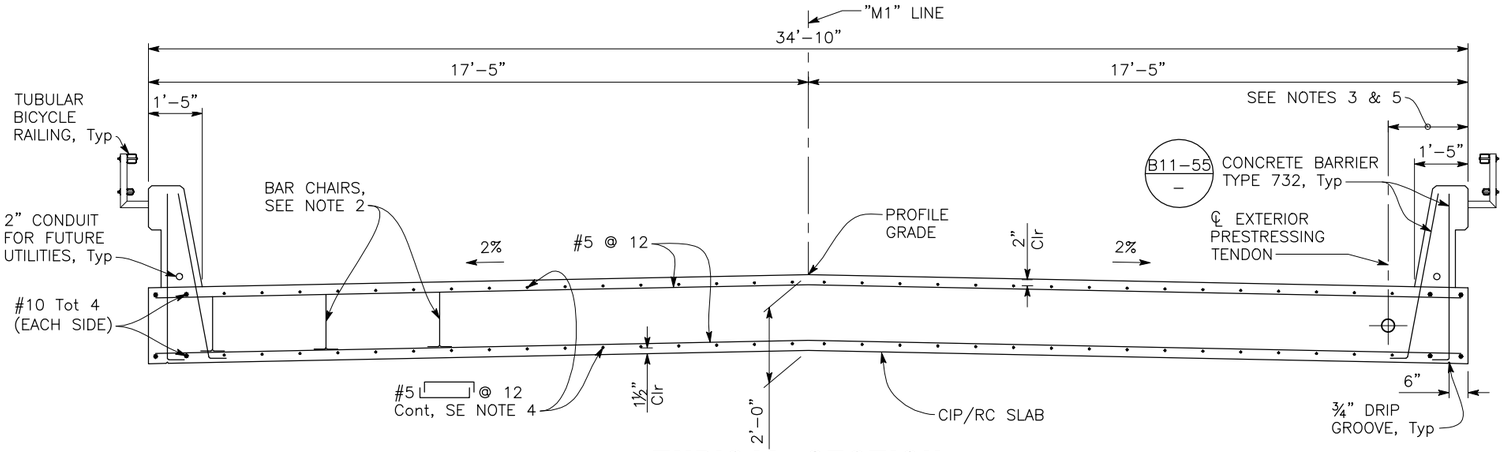
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

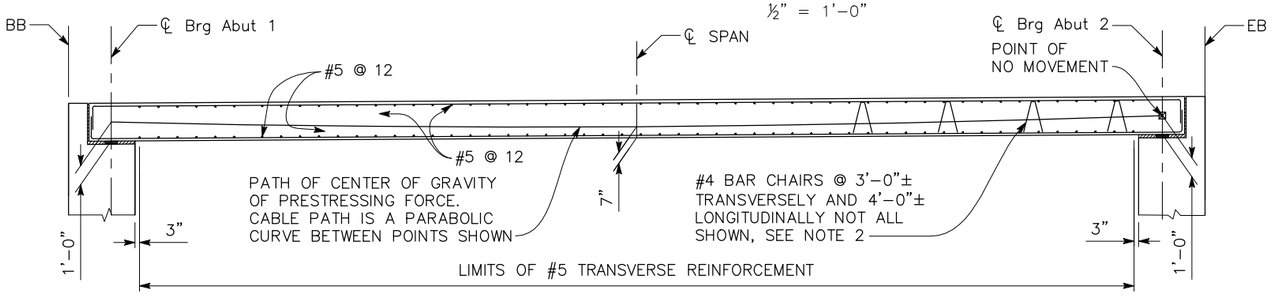
ABUTMENT DETAILS NO. 2

DRAWING NO. S-7 SHEET NO. 124 TOTAL 168



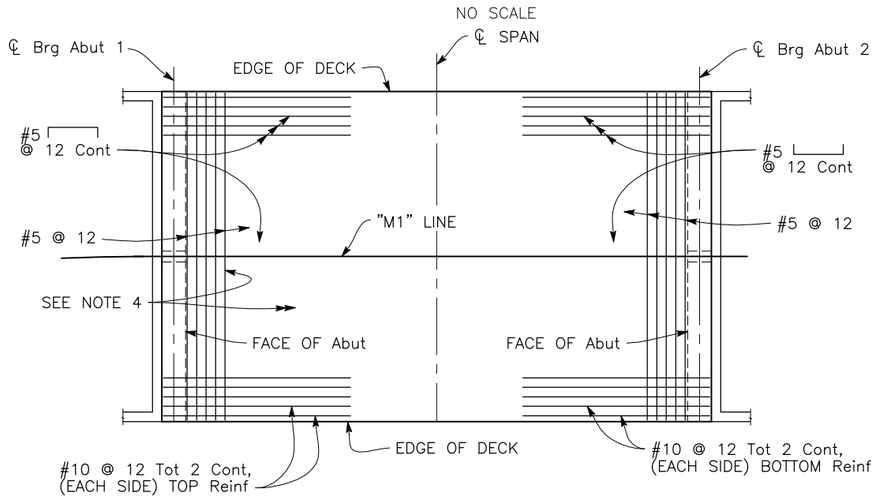
TYPICAL SECTION

½" = 1'-0"



LONGITUDINAL SECTION

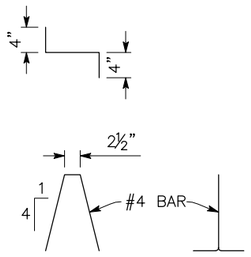
NO SCALE



TOP REINFORCEMENT BOTTOM REINFORCEMENT

DECK PLAN

⅛" = 1'-0"

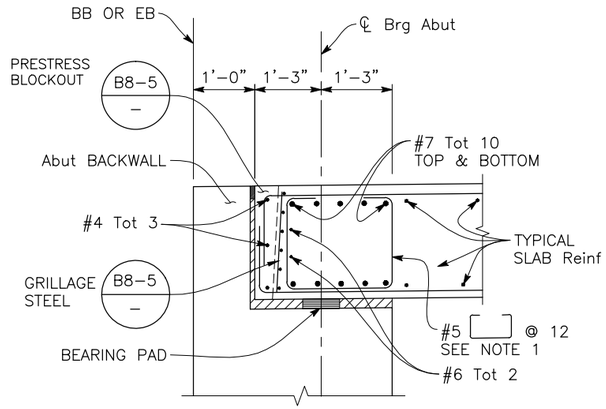


BAR CHAIR DETAIL

1" = 1'-0"

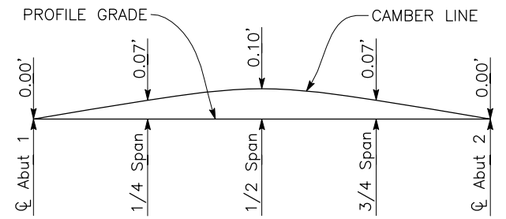
NOTES:

1. Stirrups can be adjusted to clear prestress anchorage.
2. Bar chairs may be used to secure prestress ducts. Spacing will need to be adjusted to coincide with duct locations.
3. The distance between the edge of deck and the ℄ of the nearest post tensioning cut shall be 2'-0" or two times the anchor plate width, whichever is greater..
4. Continuous reinforcement must be service spliced.
5. Contractor to determine edge distance to avoid conflict with Wingwalls.



SECTION A-A

¾" = 1'-0"



NOTE:
Camber Diagram does not include allowances for falsework settlement

CAMBER DIAGRAM

NO SCALE

PRESTRESSING NOTES

270 ksi Low Relaxation Strand:

P_{jack} = 10,350 kips
Anchor set = 3/8"

Design is based on μ=0.15 and k=0.0002/ft

Prestress force (Pjack) shall be uniformly distributed across the slab.

Concrete f'c = 5,000 psi @ 28 days
f'ci = 3,500 psi

Contractor shall submit elongation calculations based on initial stress at

☒ = 0.981 x Jacking stress

One end stressing shall be performed from either Abut 1 or Abut 2

For additional notes and details, see B8-5

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: STACEY ALLIGUIE	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0267

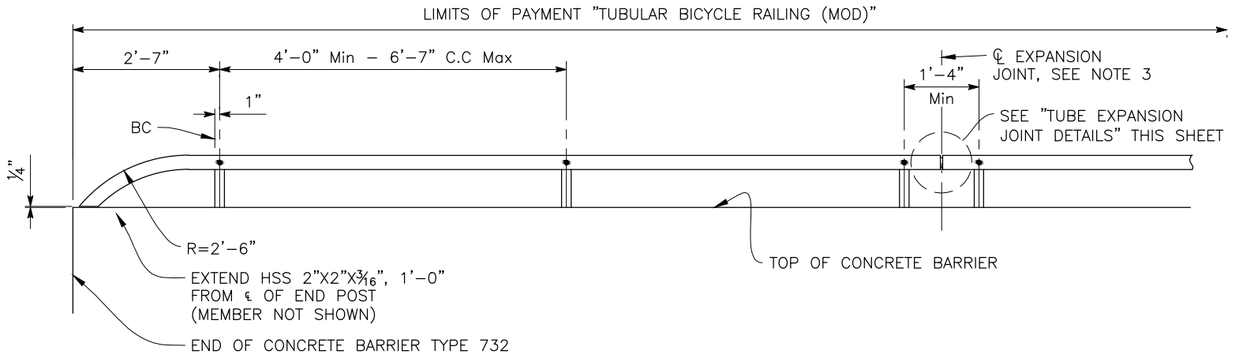
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

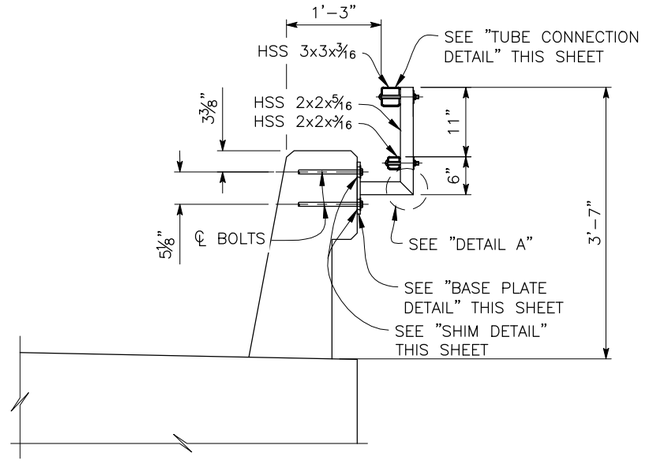
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL SECTION

DRAWING NO. S-8 SHEET NO. 125 TOTAL 168

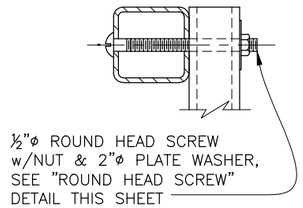


ELEVATION
3/4" = 1'-0"

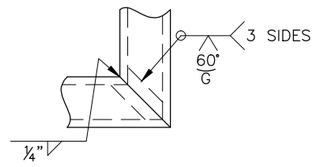


TYPE 732
1" = 1'-0"

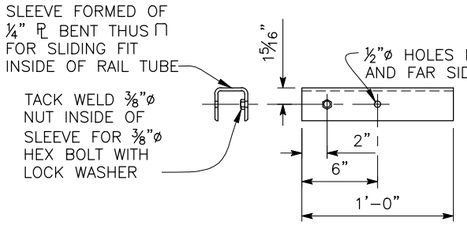
B11-55



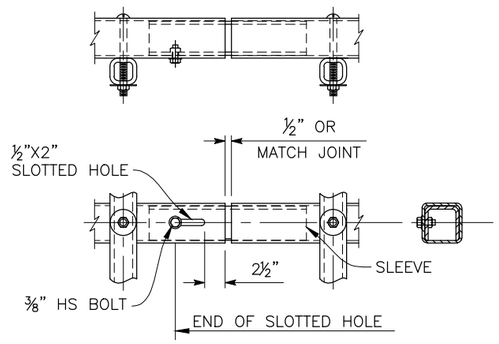
TUBE CONNECTION DETAIL
NO SCALE



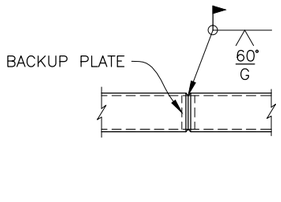
DETAIL A
NO SCALE



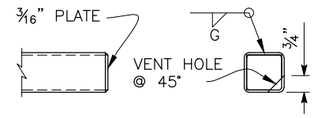
SLEEVE DETAIL
NO SCALE



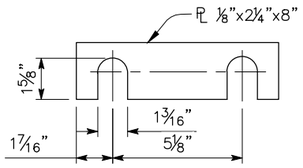
TUBE EXPANSION DETAIL
NO SCALE



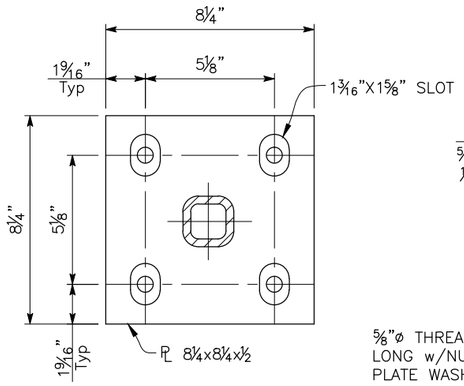
WELDED SPLICE DETAIL
NO SCALE



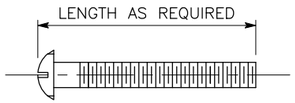
RAIL CAP DETAIL
NO SCALE



SHIM DETAIL
NO SCALE



BASE PLATE DETAIL
NO SCALE



ROUND HEAD SCREW DETAIL
NO SCALE

NOTES:

1. Posts shall be normal to railing.
2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950'-0"
3. Tube expansion joints shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints or other rail discontinuities as noted.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: STACEY ALLIGUIE	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT, No. C77667, Exp. 06-30-2017, STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0267

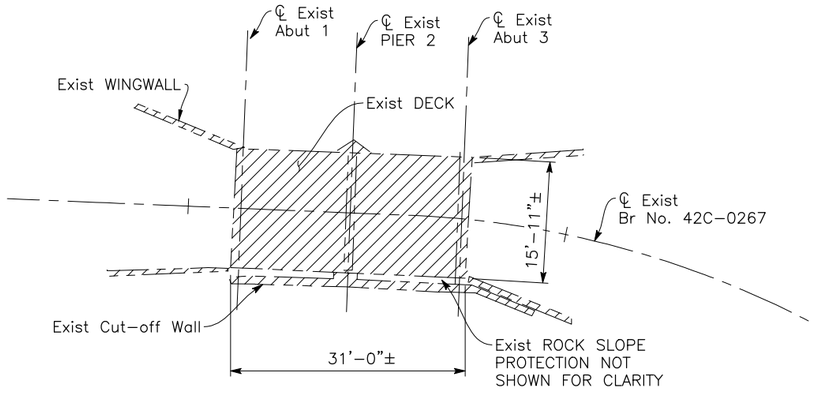
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

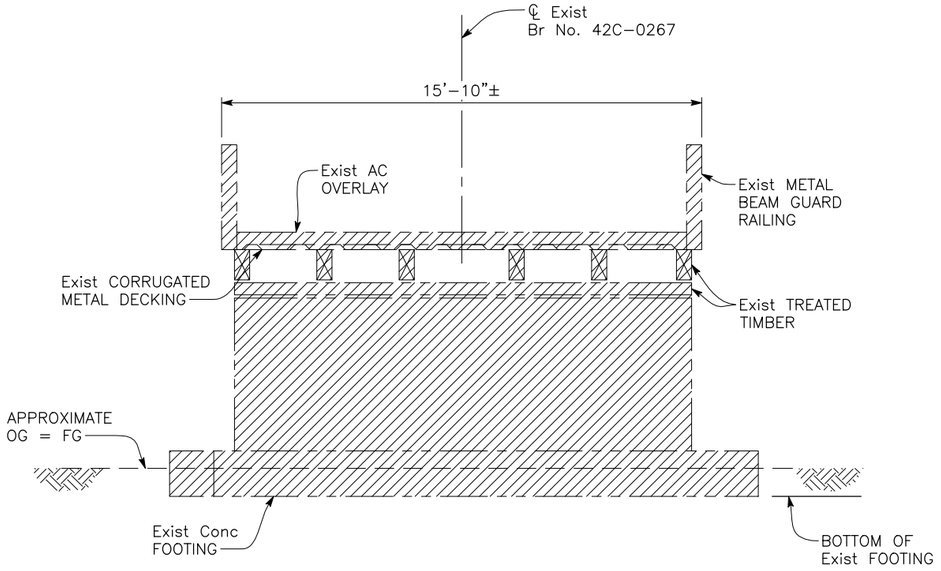
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TUBULAR BICYCLE RAILING

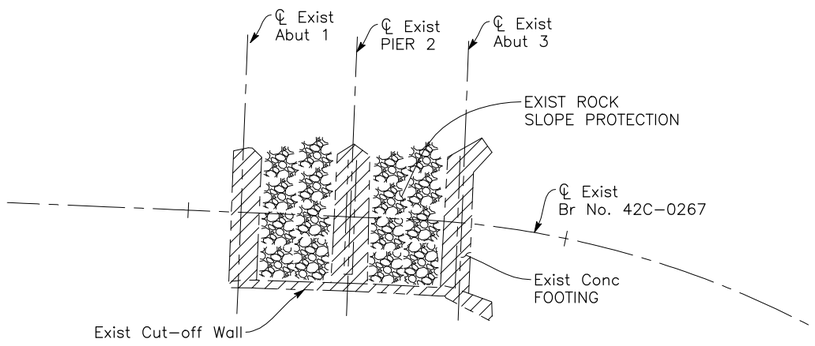
DRAWING NO. S-9 SHEET NO. 126 TOTAL 168



PLAN
1" = 10'



EXISTING ABUTMENTS AND PIERS
NO SCALE



FOOTING PLAN
1" = 10'

LEGEND:

Indicates Existing Structure

Indicates Bridge Removal

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ALAN HYDE	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.				

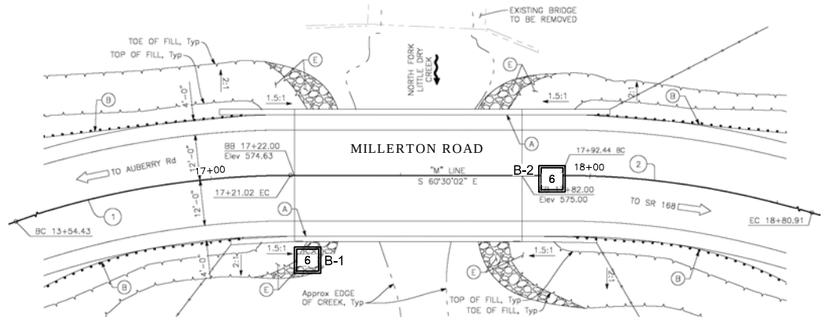
MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp 06-30-2017 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0267
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
BRIDGE REMOVAL PLAN
DRAWING NO. S-10 SHEET NO. 127 TOTAL 168

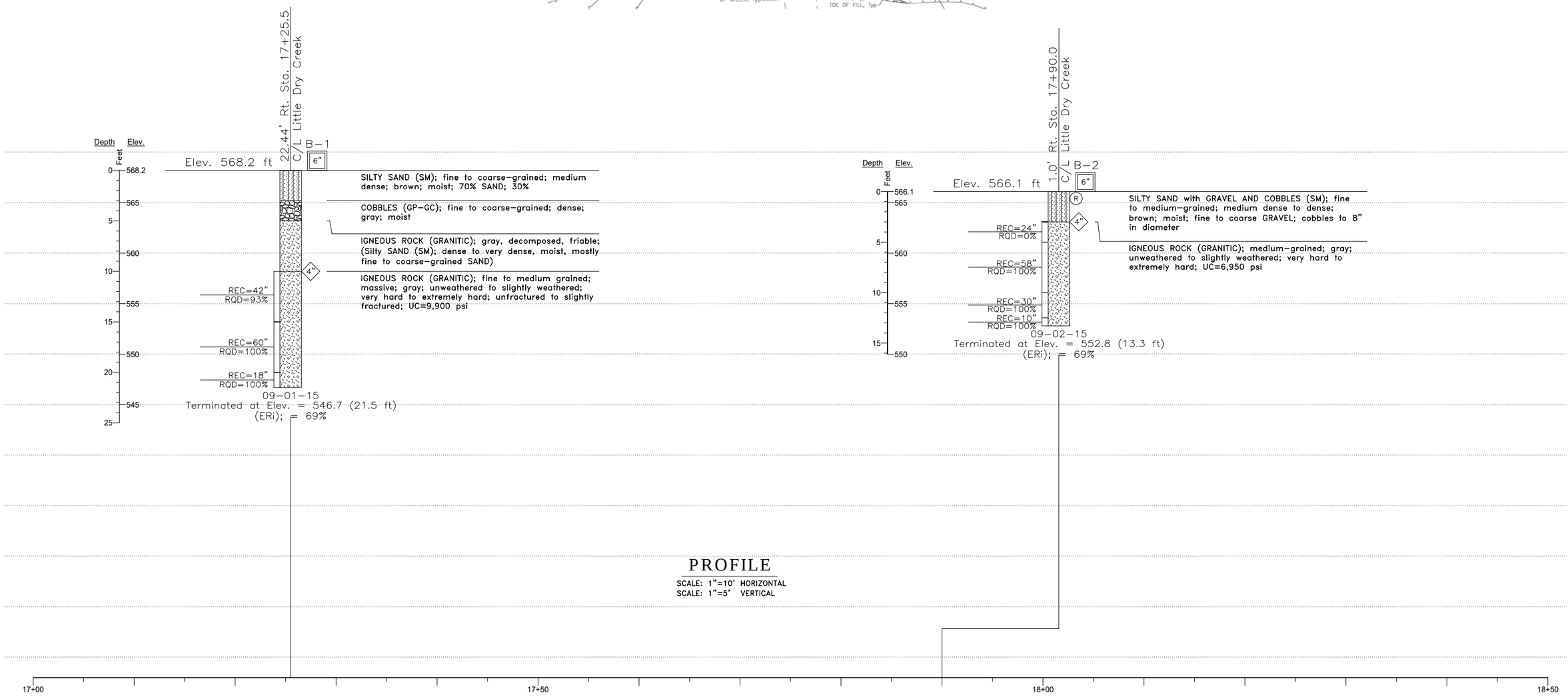


PLAN

SCALE: 1"=20'

NOTES:

1. 1.5–INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) SPLIT BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.5 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
2. 2.5–INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.5 INCHES AND AN OD OF 3.0 INCHES.
3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
4. ELEVATION BASED ON TBM, SET BY DRAKE HAGLAN AND ASSOCIATES, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, ELEVATION 648.467.



PROFILE

SCALE: 1"=10' HORIZONTAL
SCALE: 1"=5' VERTICAL

MILLERTON ROAD

60% SUBMITTAL – 09/02/16 – NOT FOR CONSTRUCTION

		DATE	RECORD DRAWING		DATE
FIELD INVESTIGATION:	M. OWENS	09/02/15	RESIDENT ENGINEER		
DRAWN:	D. FAHRNEY	09/07/16			
CHECKED:	N. POPENOE	09/07/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

PLAN 0 20' 40' HZ

PROFILE 0 5' 10' VT

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
David L. Pearson
No. 674
Exp. 12/31/15 GEOTECHNICAL
STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

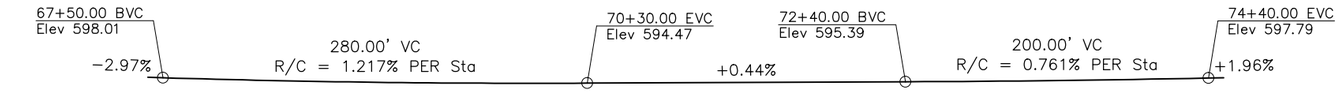
ROAD NO. 42C-0267 BRIDGE NO. 42C-0267

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

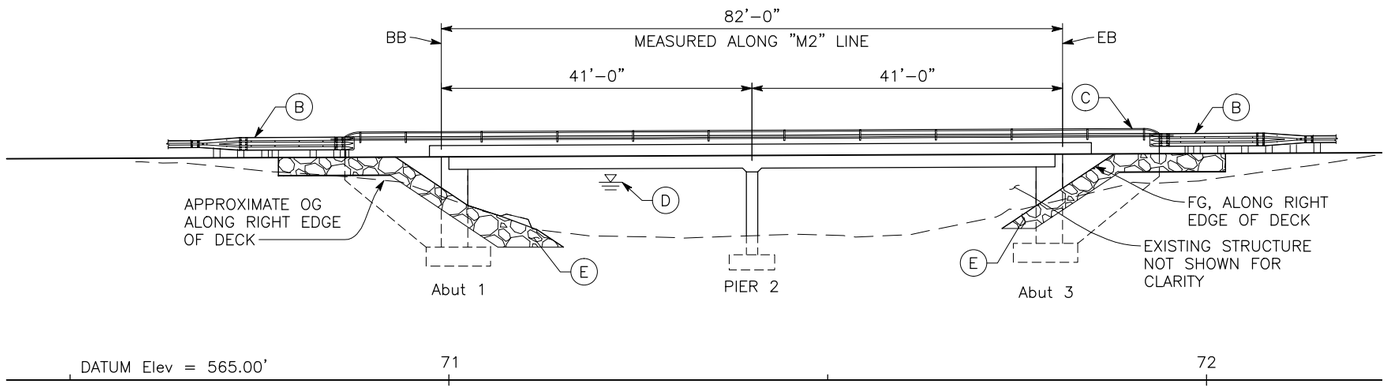
LOG OF TEST BORINGS

DRAWING NO. S-11 SHEET NO. 128 TOTAL 168



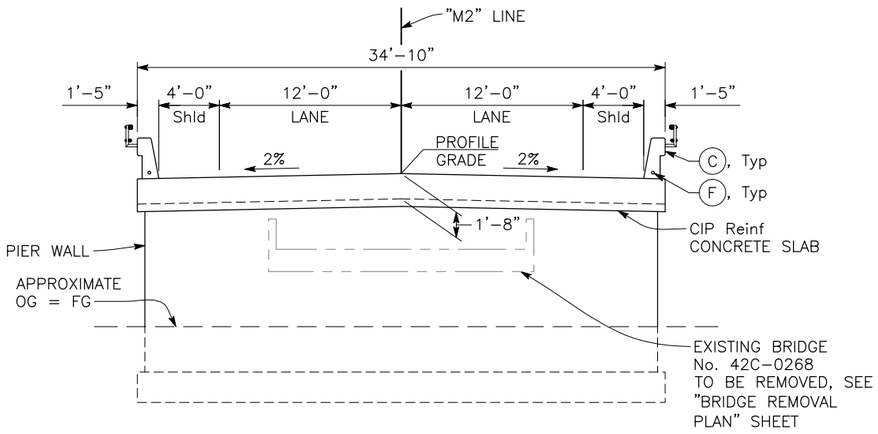
PROFILE GRADE

NO SCALE



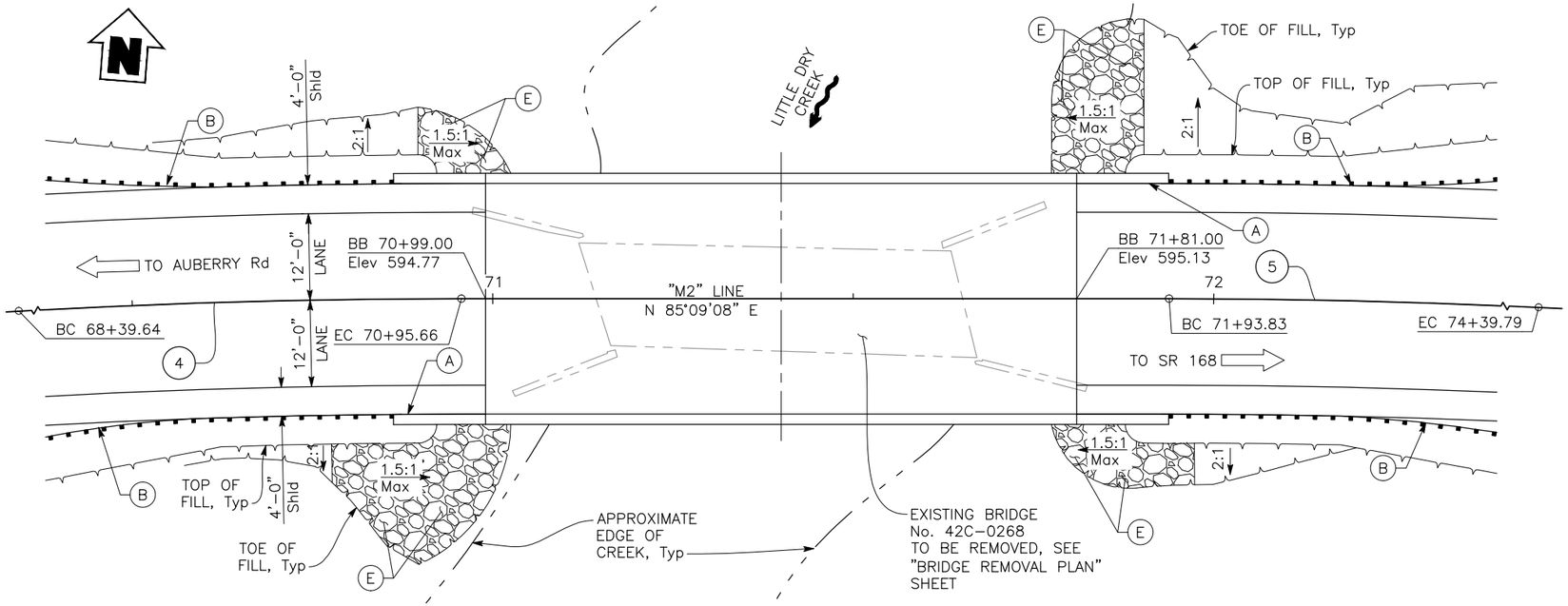
ELEVATION

1" = 10'



TYPICAL SECTION

1" = 5'



PLAN

1" = 10'

LEGEND:

- Indicates Existing Structure to be Removed
- Indicates New Structure

NOTES:

(A) Paint Bridge Number 42C−0268, year completed and "Little Dry Creek Br."

(B) Midwest Guardrail System (see "Roadway Plans")

(C) Concrete Barrier Type 732 with Tubular Bicycle Railing (Mod)

(D) 100 yr. WS Elevation = 591.8'. For hydrologic data, see "Foundation Plan" sheet

(E) For Rock Slope Protection and Grading Details, see "Roadway Plans"

(F) 2" Conduit for future utilities

(G) For Index to Plans, Standard Plans, General Notes, and Concrete Strength and Type Limits, see "Deck Contours" sheet

(H) For Spread Footing Data Table, Hydrologic Summary Table, and Scour Data Table, see "Foundation Plan" sheet

CURVE DATA

No.	R	Δ	T	L
(4)	1100.00'	13°20'07"	128.59'	256.02'
(5)	1100.00'	12°48'42"	123.50'	245.97'

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

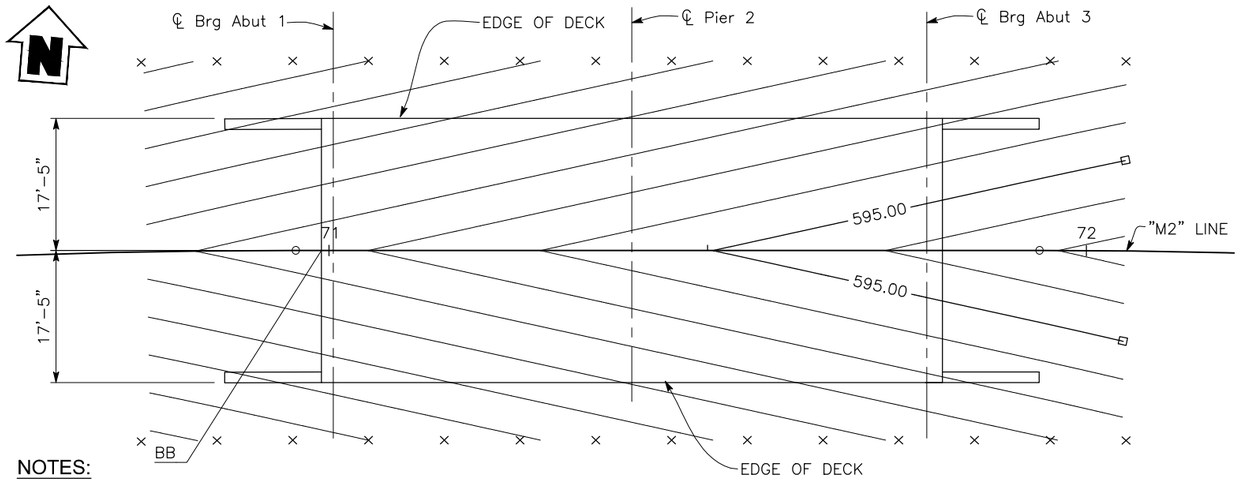
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

GENERAL PLAN

DRAWING NO. S-1 SHEET NO. 129 TOTAL 168

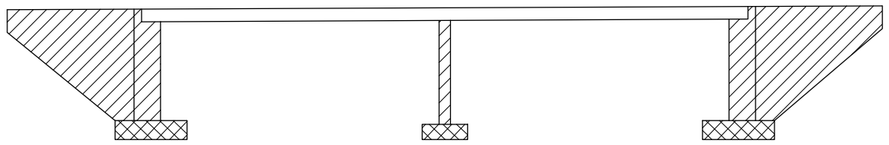


NOTES:

1. Contours do not include camber.
2. Contour interval is 0.10'.
3. □ Indicates whole foot contours.
4. × Indicates 10' increments along station line.

DECK CONTOURS

1" = 10'



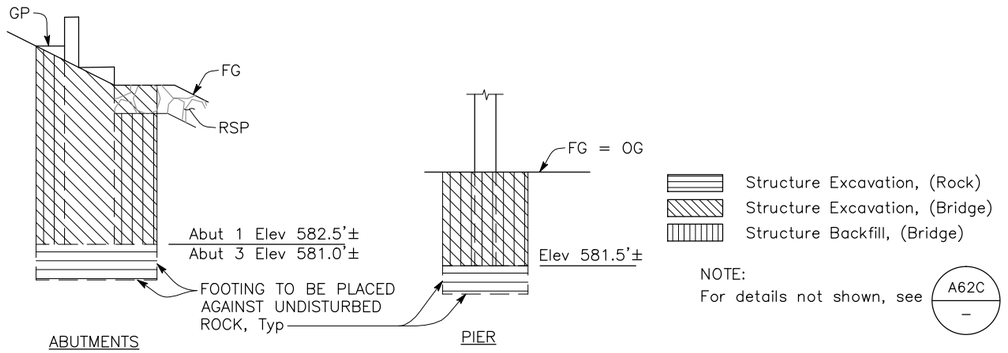
CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

Structural Concrete, Bridge (Polymer Fiber) (f'c = 5000 psi @ 28 Days)

Structural Concrete, Bridge (f'c = 5000 psi @ 28 Days)

Structural Concrete, Bridge Footing (f'c = 5000 psi @ 28 Days)



LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL

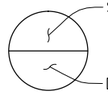
NO SCALE

INDEX TO PLANS

SHEET NO.	TITLE
S–1	GENERAL PLAN
S–2	DECK CONTOURS
S–3	FOUNDATION PLAN
S–4	ABUTMENT 1 LAYOUT
S–5	ABUTMENT 3 LAYOUT
S–6	ABUTMENT DETAILS NO. 1
S–7	ABUTMENT DETAILS NO. 2
S–8	PIER LAYOUT
S–9	PIER DETAILS
S–10	TYPICAL SECTION
S–11	SLAB REINFORCEMENT
S–12	TUBULAR BICYCLE RAILING
S–13	BRIDGE REMOVAL PLAN
S–14	LOG OF TEST BORINGS

CALTRANS STANDARD PLANS DATED 2015

A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND–LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND–LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND–LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND–LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND–LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND–SOIL (SHEET 1 OF 2)
A10G	LEGEND–SOIL (SHEET 2 OF 2)
A10H	LEGEND–ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B0–1	BRIDGE DETAILS
B0–3	BRIDGE DETAILS
B0–13	BRIDGE DETAILS
B6–21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11–55	CONCRETE BARRIER TYPE 732



LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition and the Caltrans Amendments, preface dated January 2014.

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.7 April 2013.

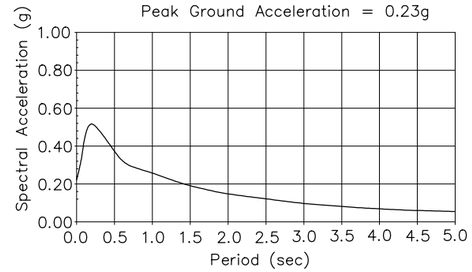
DEAD LOAD: Includes 35 psf for future wearing surface and 100 plf for future utilities.

LIVE LOADING: HL93, Low Boy, and permit design load.

SEISMIC LOADING: Soil profile: V_{s30} 350 m/s

Moment Magnitude: 6.5

Peak Ground Acceleration = 0.23g



REINFORCED CONCRETE:
fy = 60 ksi
f'c = See "CONCRETE STRENGTH AND TYPE LIMITS"
n = 8

QUANTITIES		
TEMPORARY DETOUR	LS	
BRIDGE REMOVAL	LS	
STRUCTURE EXCAVATION (BRIDGE)	CY	
STRUCTURE EXCAVATION (ROCK)	CY	
STRUCTURE BACKFILL (BRIDGE)	CY	
STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	
STRUCTURAL CONCRETE, BRIDGE	CY	
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	
JOINT SEAL (TYPE A)	LF	
BAR REINFORCING STEEL (BRIDGE)	LB	
BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	LB	
TUBULAR BICYCLE RAILING (MOD)	LF	
CONCRETE BARRIER TYPE 732	LF	

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

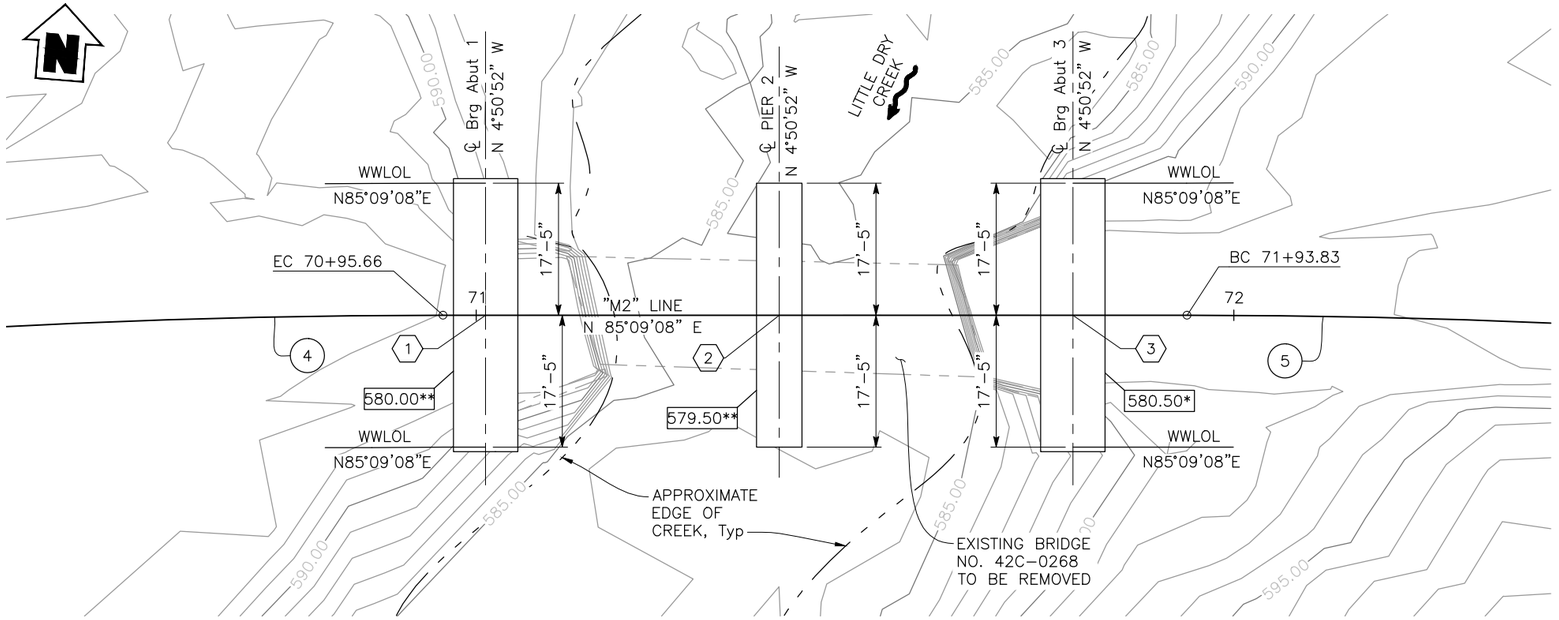
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DECK CONTOURS

DRAWING NO. S-2 SHEET NO. 130 TOTAL 168



PLAN
1" = 10'

LEGEND:

- Indicates Bottom of Footing Elevation
- Indicates Existing Structure to be Removed
- Indicates New Structure

BENCH MARK:

See "Roadway Plans"

NOTES:

* Bottom of footing must penetrate a minimum of 6 inches into intact rock at elevations shown. Footing elevations may be adjusted as directed by the Engineer.

** Top of footing must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

CURVE DATA

No.	R	Δ	T	L
④	1100.00'	13°20'07"	128.59'	256.02'
⑤	1100.00'	12°48'42"	123.50'	245.97'

	Northing	Easting
① ℄ Brg Abut 1 Sta 71+01.25	2236815.9164	6391819.6958
② ℄ Pier 2 Sta 71+40.00	2236819.1912	6391858.3072
③ ℄ Brg Abut 3 Sta 71+78.75	2236822.0964	6391897.7907

HYDROLOGIC SUMMARY TABLE

Drainage Area = 26.0 Square Miles

Frequency (Years)	Design Flood	Base Flood
	50	100
Discharge (Cubic Feet per Second)	3665	4475
Water Surface Elevation, Ft Immediately Upstream of Bridge	591.1	591.8

SPREAD FOOTING DATA TABLE[1]

Support Location	Service Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction Factored Gross Nominal Bearing Resistance $\phi_b = 0.50$	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 1.00$ (ksf)
Abutment 1	14.00	20.00	N/A
Pier 2	14.00	20.00	40.0
Abutment 3	14.00	20.00	N/A

SCOUR DATA

Support Number	Long Term (Degradation, Contraction and Local) Scour Elevation (Ft)
Abutment 1	582.5
Pier 2	581.5
Abutment 3	581.0

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ALAN HYDE	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0268

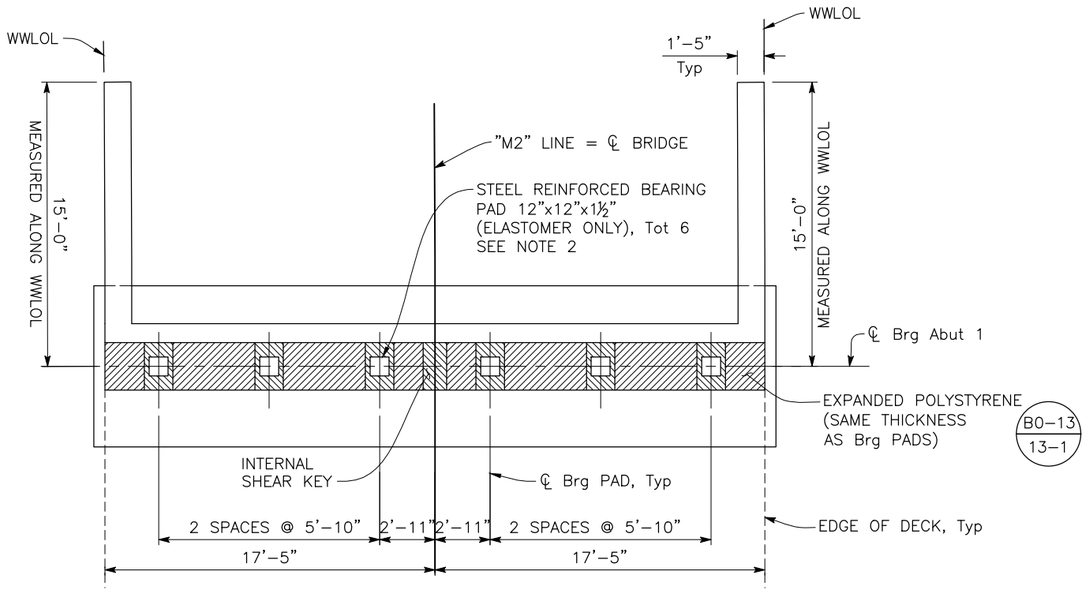
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

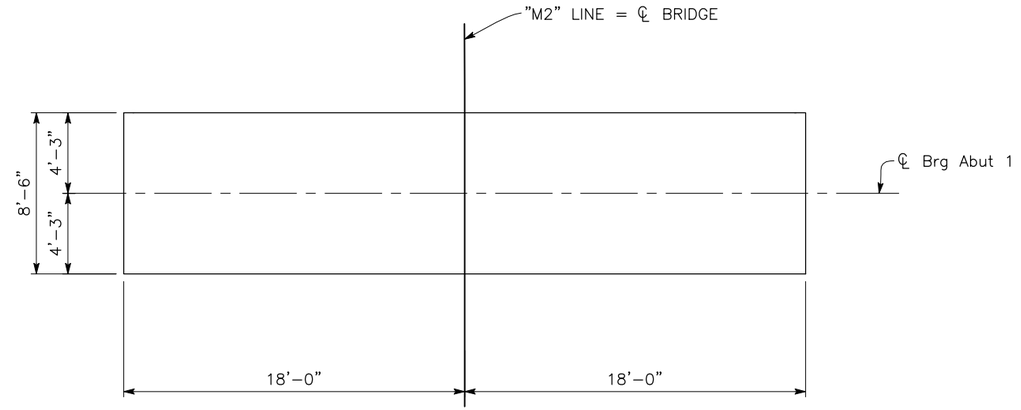
FOUNDATION PLAN

DRAWING NO. S-3 SHEET NO. 131 TOTAL 168



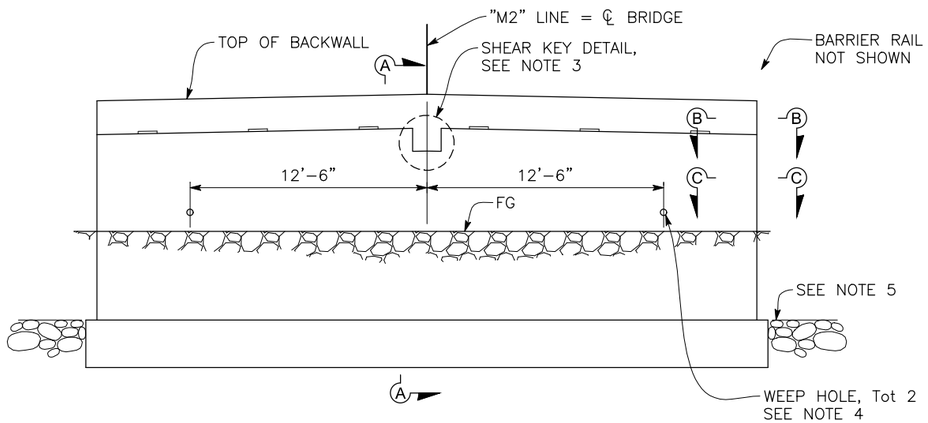
PLAN

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"



ELEVATION

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Top of footing must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

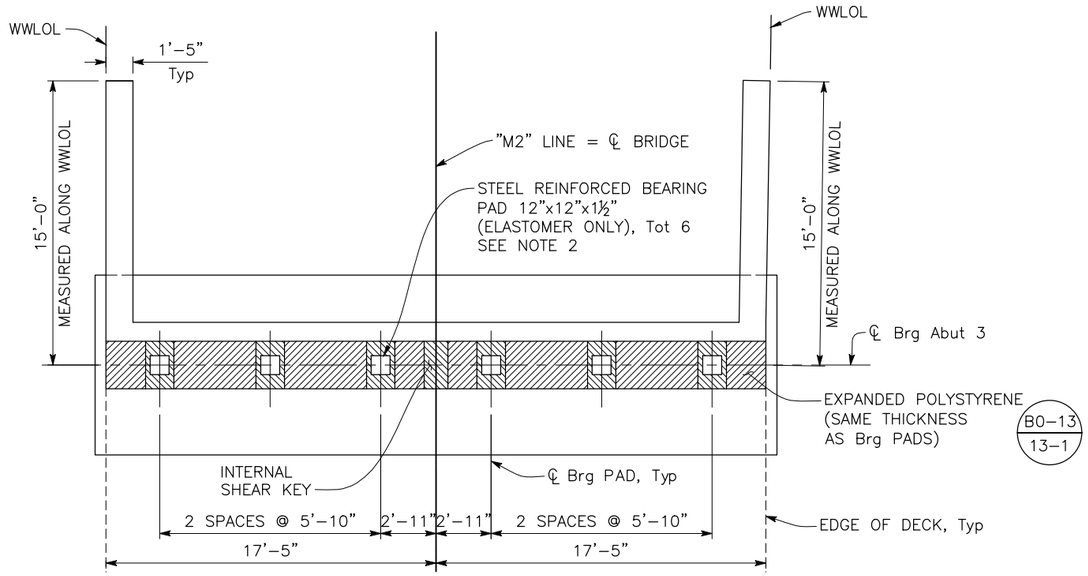
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

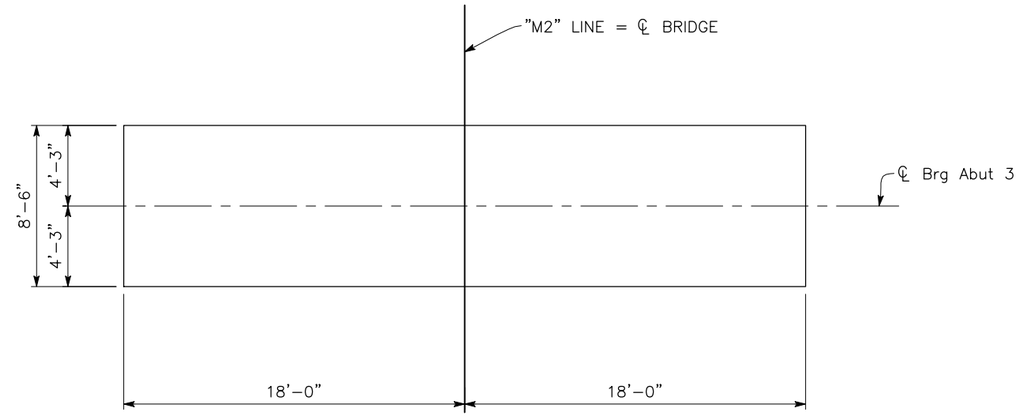
ABUTMENT 1 LAYOUT

DRAWING NO. S-4 SHEET NO. 132 TOTAL 168



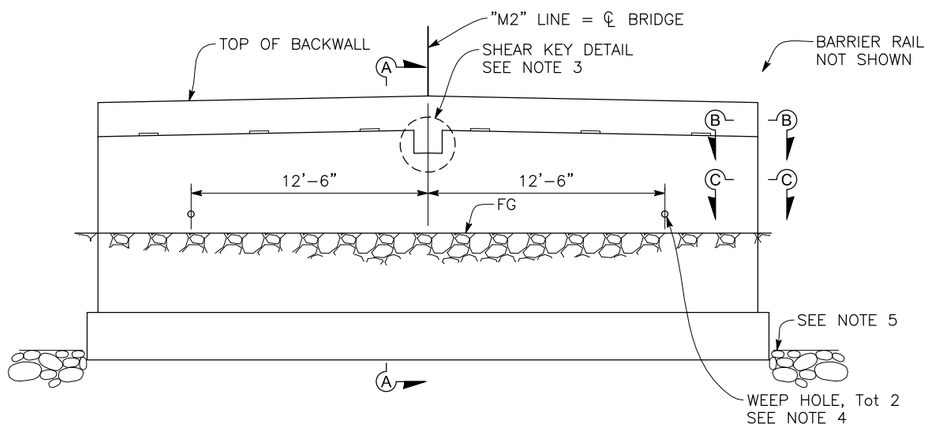
PLAN

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"



ELEVATION

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Bottom of footing must penetrate a minimum of 6 inches into intact rock. Footing elevations may be adjusted as directed by the Engineer.

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	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

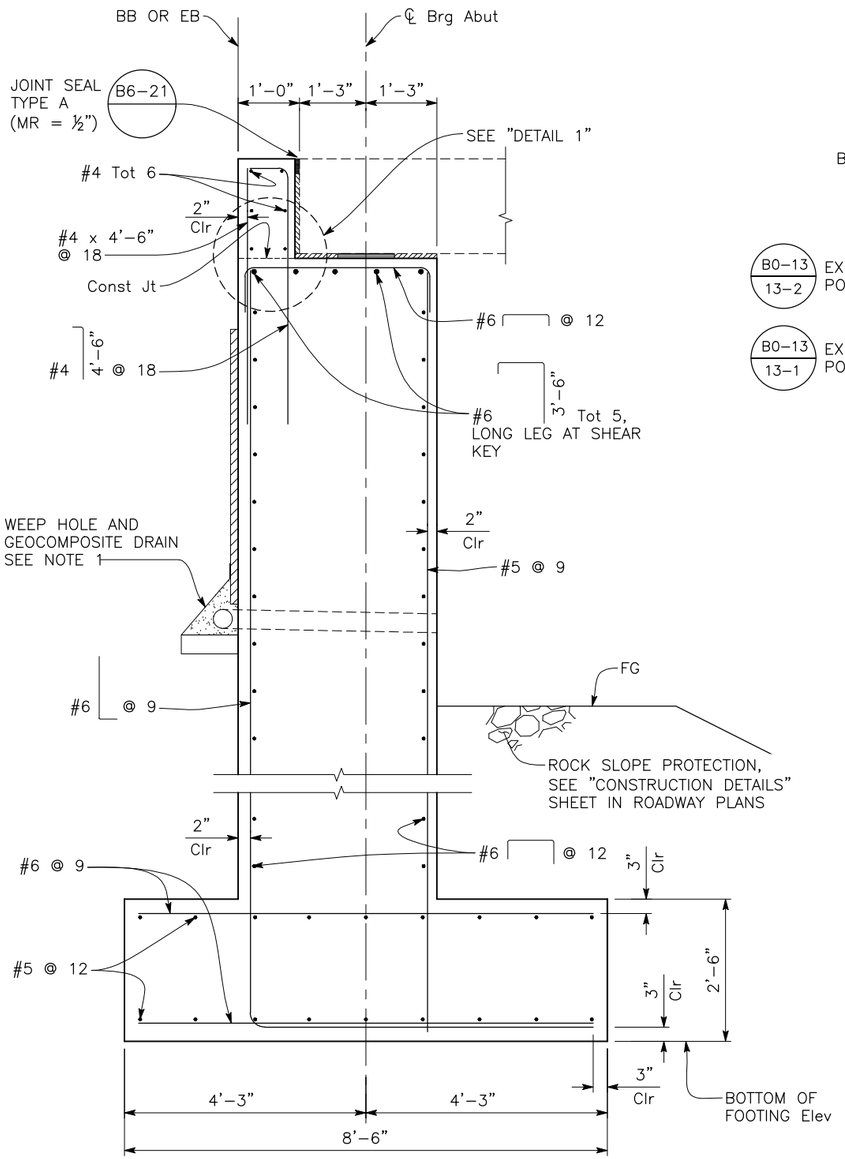
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

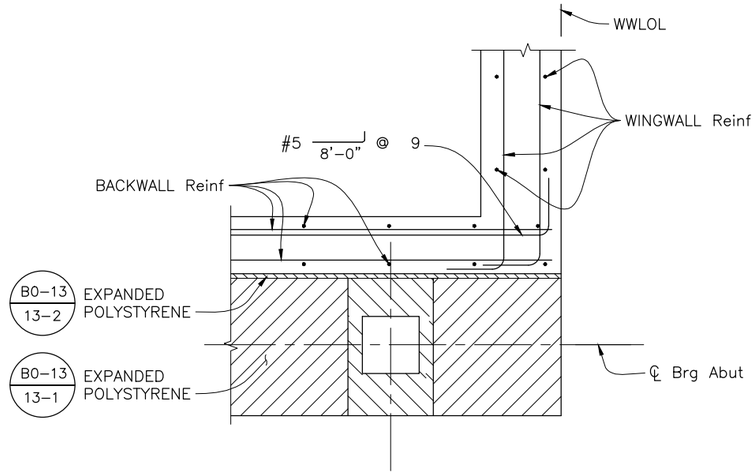
ABUTMENT 3 LAYOUT

DRAWING NO. S-5 SHEET NO. 133 TOTAL 168



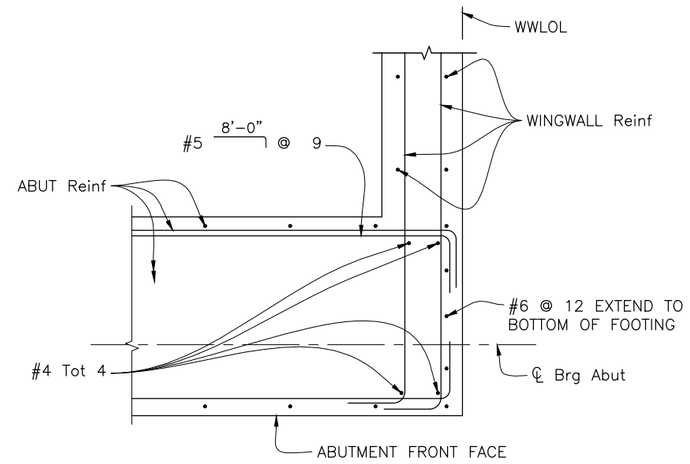
SECTION A-A

¾" = 1'–0"



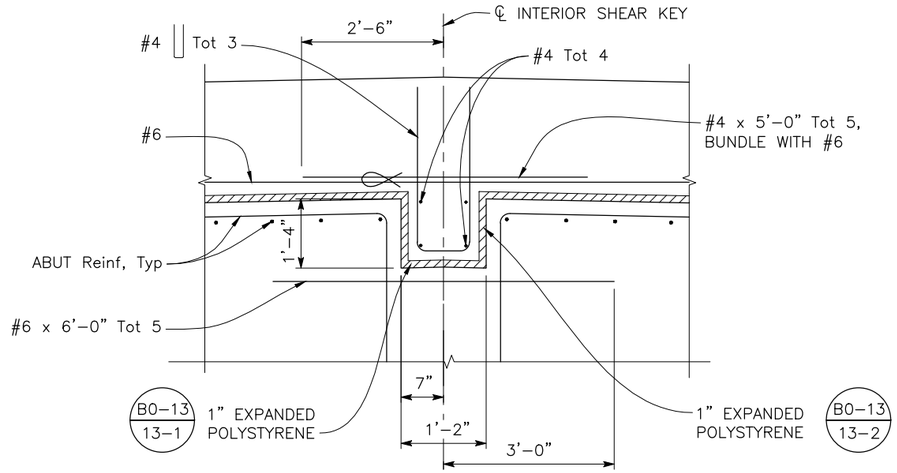
SECTION B-B

¾" = 1'–0"



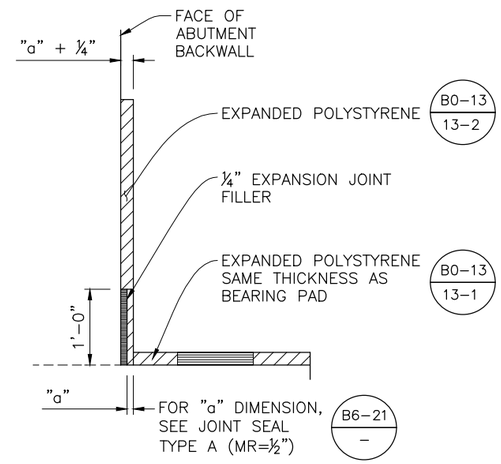
SECTION C-C

¾" = 1'–0"



SHEAR KEY DETAIL

¾" = 1'–0"



DETAIL 1

1" = 1'–0"

LEGEND:

Denotes bundled bar

NOTES:

1. For "Weephole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

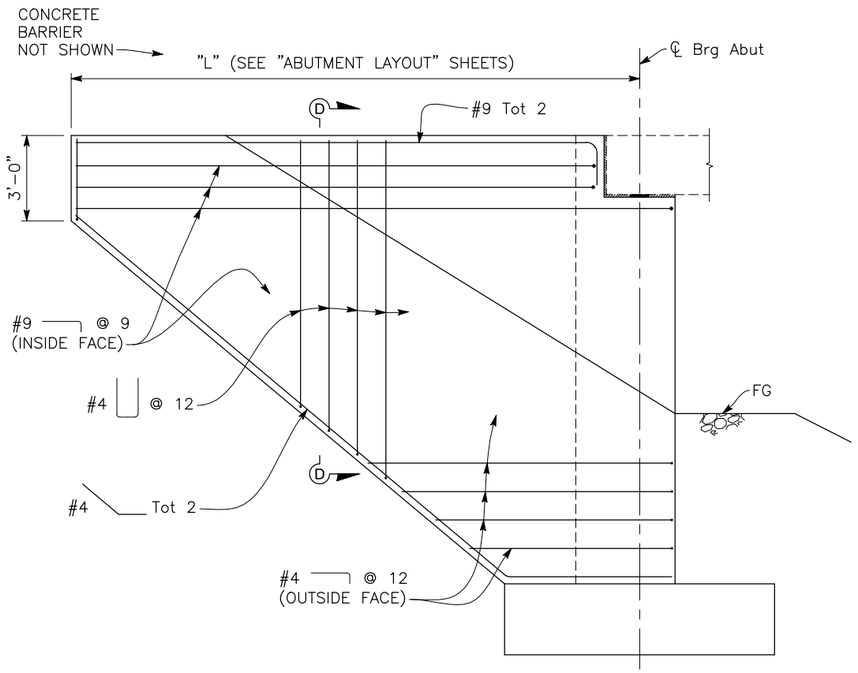
BRIDGE NO. 42C-0268

ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

DEPARTMENT OF PUBLIC WORKS AND PLANNING

ABUTMENT DETAILS NO. 1

DRAWING NO. S-6 SHEET NO. 134 TOTAL 168

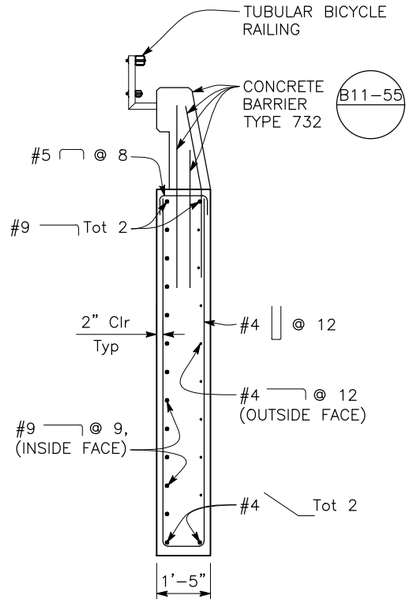


NOT ALL REINFORCEMENT SHOWN

(ABUTMENT 1 WINGWALL ELEVATION SHOWN, ABUTMENT 3 WINGWALL ELEVATIONS SIMILAR)

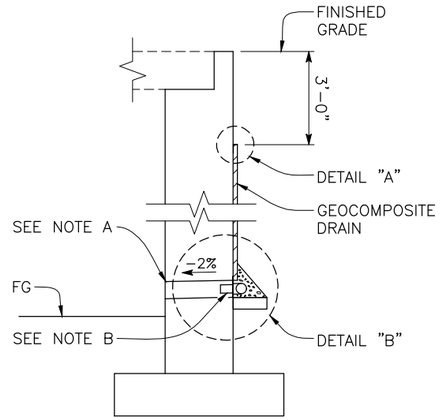
WINGWALL ELEVATION

⅜" = 1'-0"

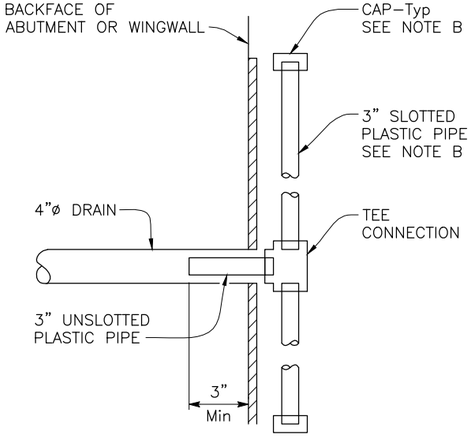


SECTION D-D

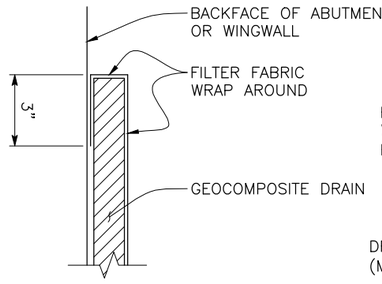
½" = 1'-0"



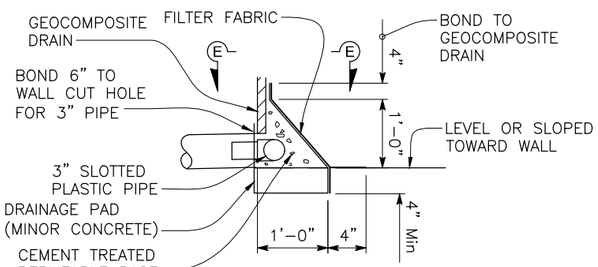
WALL SECTION



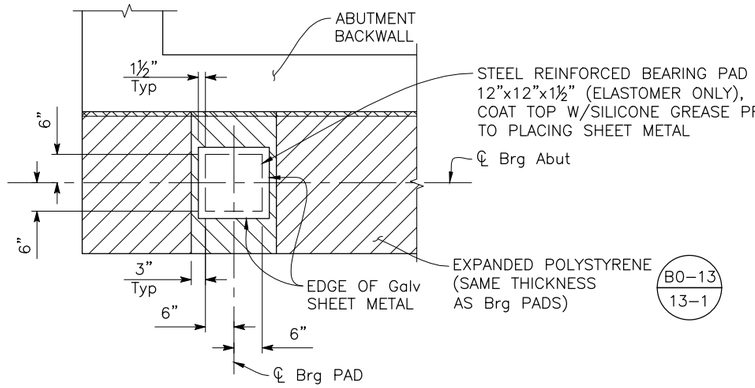
SECTION E-E



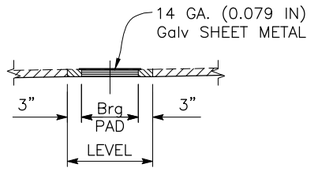
DETAIL "A"



DETAIL "B"



PLAN



ELEVATION

BEARING PAD DETAIL

¾" = 1'-0"

ALTERNATIVE TO BRIDGE DETAIL B0-3 / 3-1

WEEP HOLE AND GEOCOMPOSITE DRAIN DETAILS

NO SCALE

NOTES:

A. 4"ø Drains at Intermediate Sag Points and at 25'-0" Max Center to Center. Exposed Wall Drains shall be located 3"±above Finished Grade.

B. Geocomposite Drain, Cement Treated Permeable Base, Drainage Pad, and 3"ø Slotted Plastic Pipe continuous behind Wall. Cap ends of pipe. Provide "Tee" connectiion at each 4"ø drain.

C. Provide 1'-0" x 4" Drainage Pad when Pipe is not supported by Footing.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

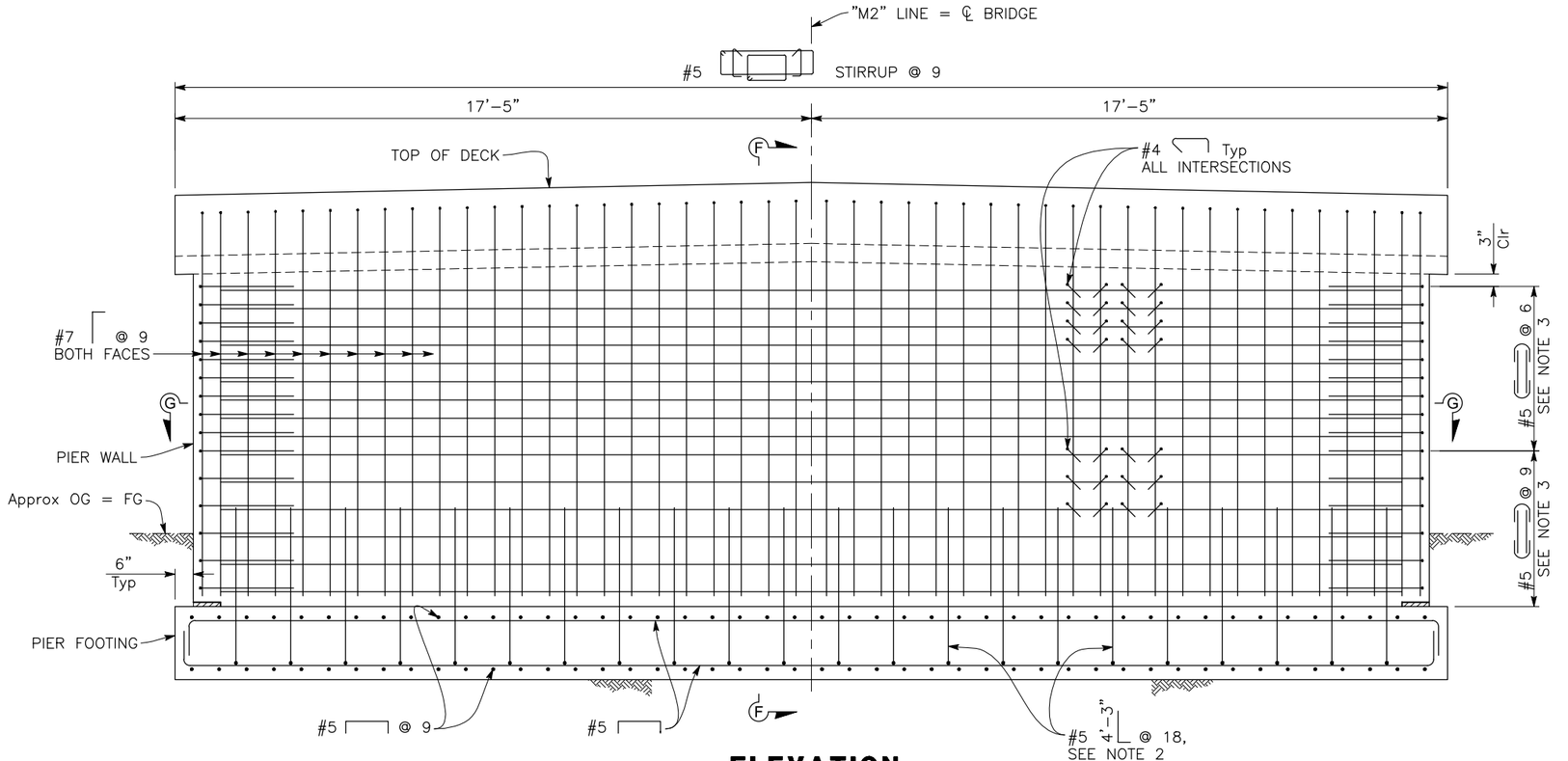
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

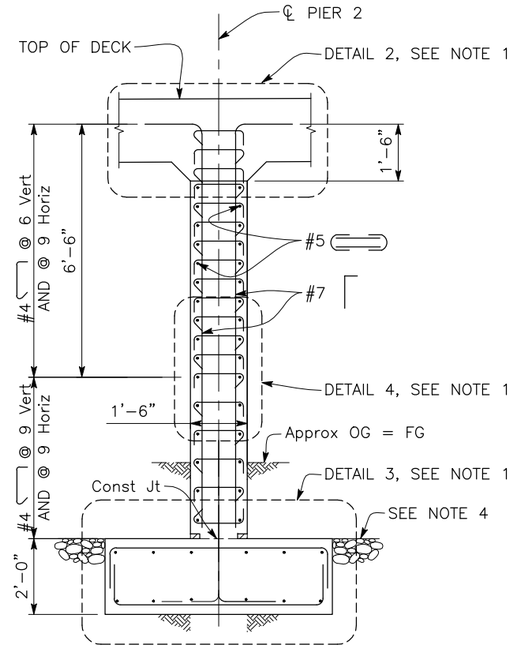
ABUTMENT DETAILS NO. 2

DRAWING NO. S-7 SHEET NO. 135 TOTAL 168



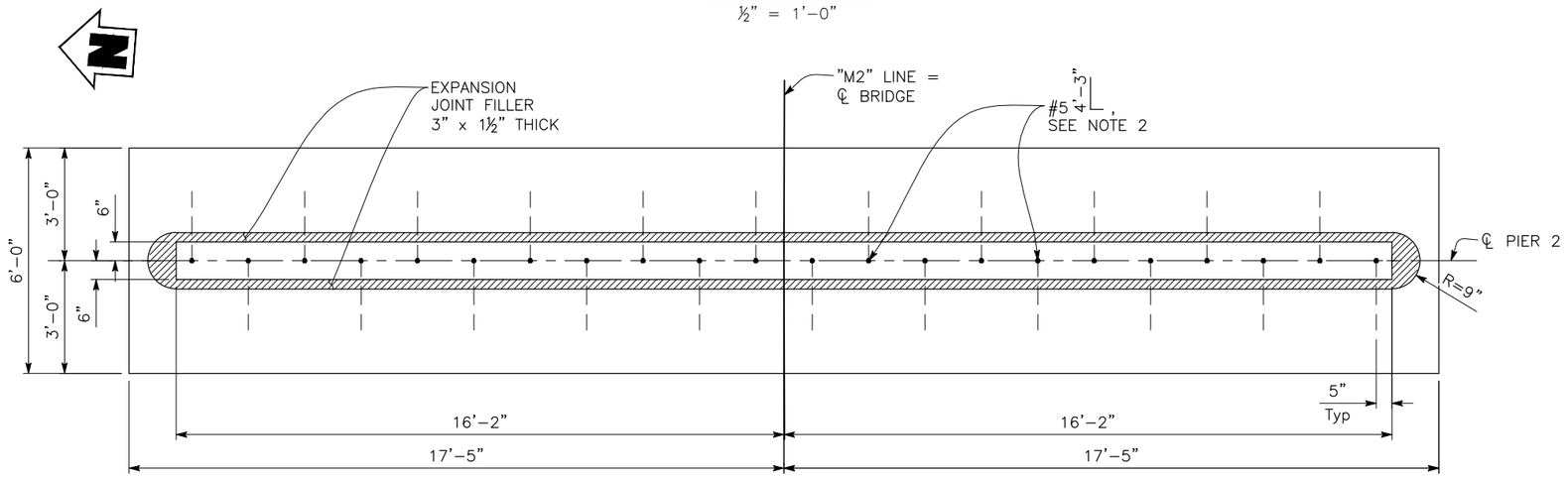
ELEVATION

½" = 1'-0"



SECTION F-F

½" = 1'-0"



FOOTING PLAN

½" = 1'-0"

NOTES:

1. For "SECTION G-G" and "DETAILS 2, 3 & 4", see "PIER DETAILS" sheet.
2. Pre-fabricated epoxy-coated reinforcement. Alternate direction of hook.
3. Vertical spacing of bundles to match that of #4 cross ties.
4. Top of footing must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

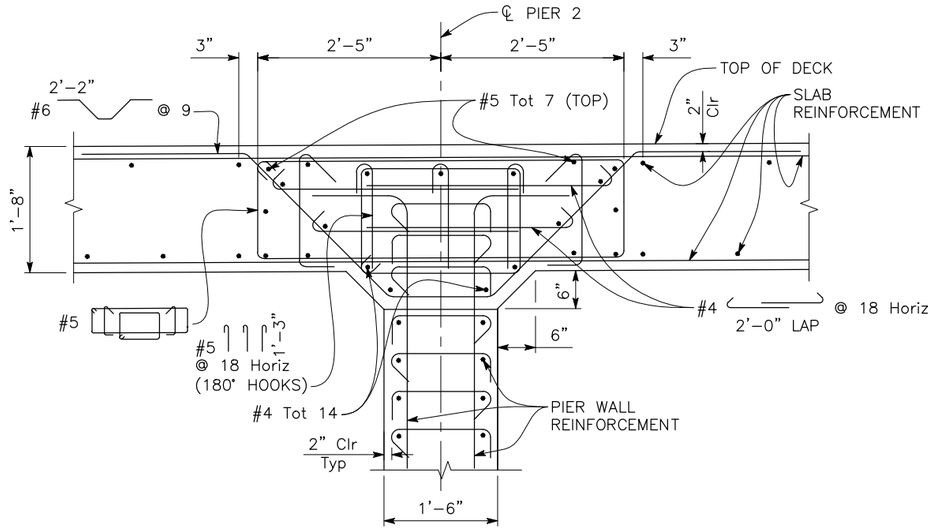
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

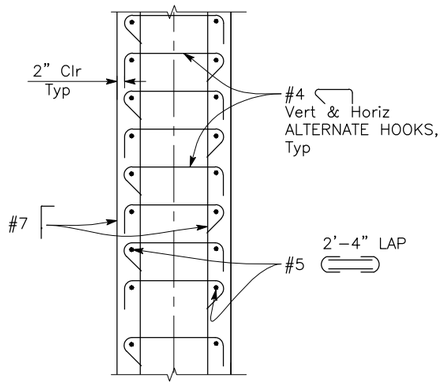
PIER LAYOUT

DRAWING NO. S-8 SHEET NO. 136 TOTAL 168



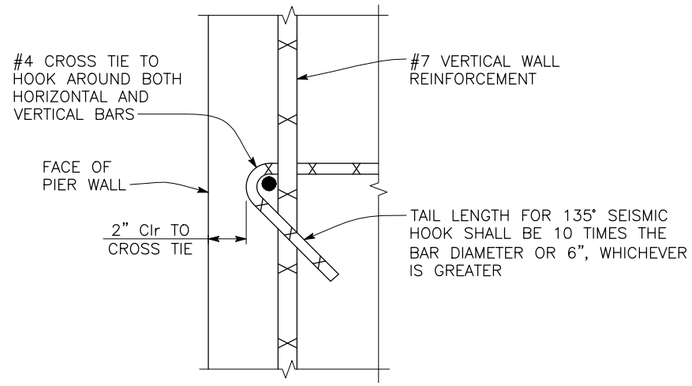
DETAIL 2

1" = 1'–0"



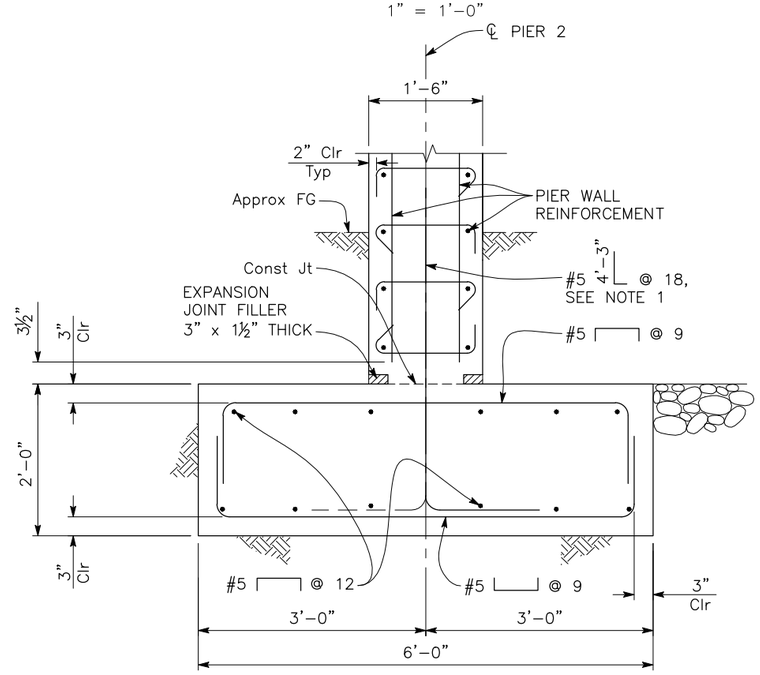
DETAIL 4

¾" = 1'–0"



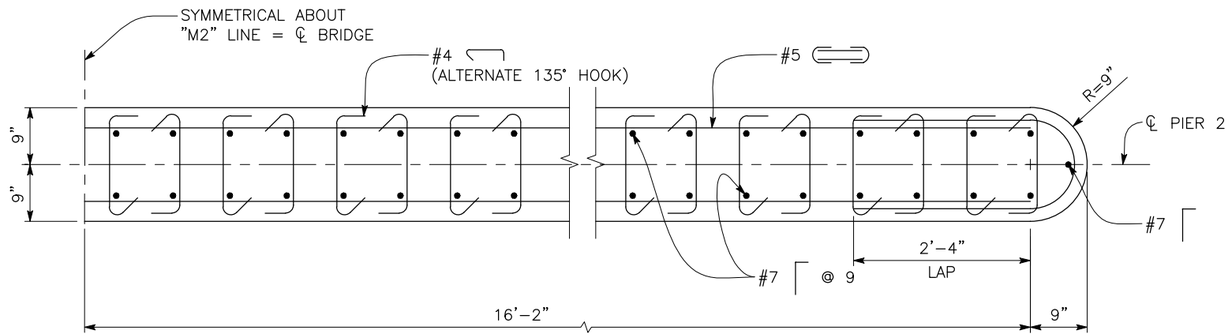
CROSS TIE DETAIL

3" = 1'–0"



DETAIL 3

1" = 1'–0"



PART SECTION G-G

1" = 1'–0"

NOTES:

1. Pre–fabricated epoxy–coated reinforcement. Alternate direction of hook.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE	SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER		AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

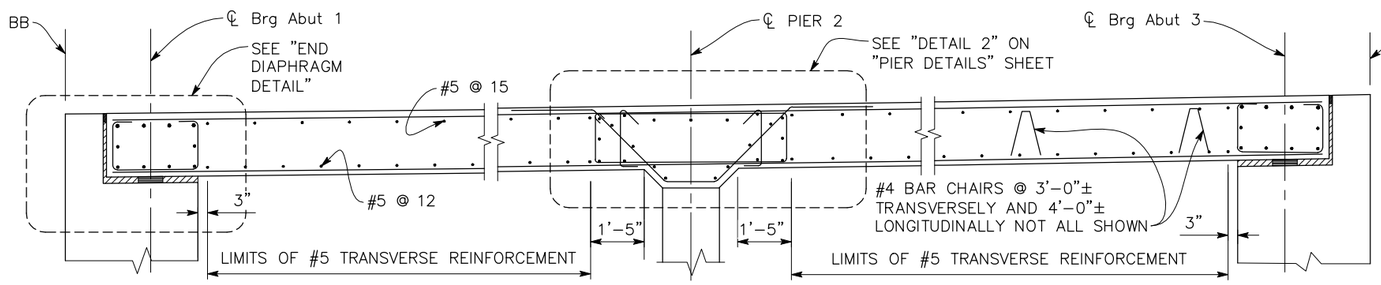
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PIER DETAILS

DRAWING NO. S-11 SHEET NO. 137 TOTAL 168

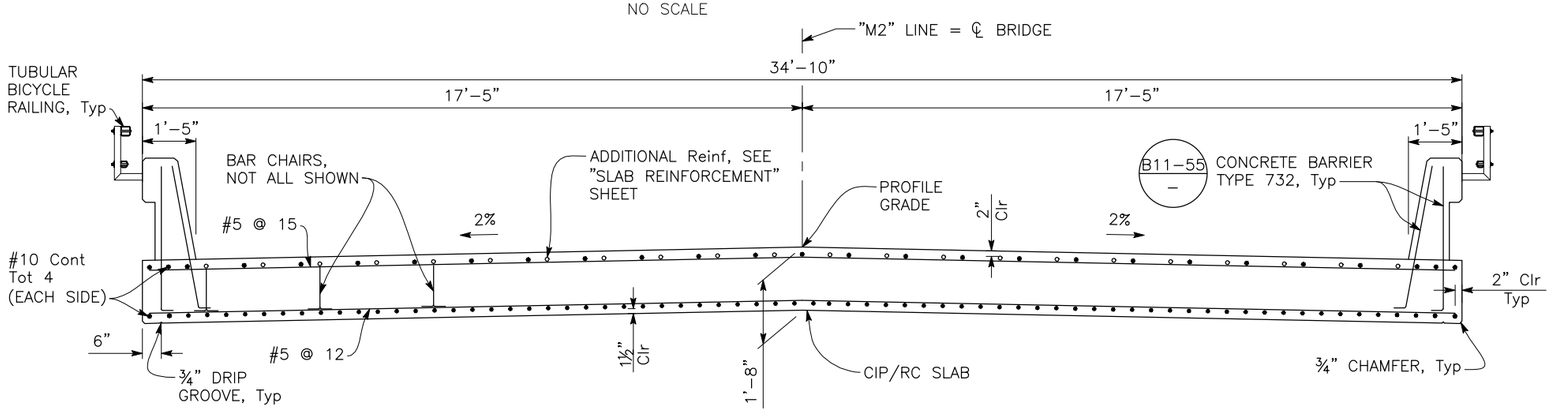


LONGITUDINAL SECTION

NO SCALE

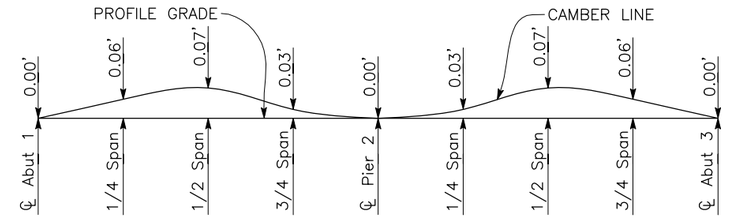
BAR SPLICE LENGTH (INCHES)								
BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
ALL BARS EXCEPT TOP BARS IN SPANS OVER 23'	23	28	34	39	45	68	76	85
TOP BARS IN SPANS OVER 23'	23	28	34	53	60	77	97	120

NOTE:
Splices in top Main Bars to be located near center of span.
Splices in bottom Main Bars to be located near Pier.



TYPICAL SECTION

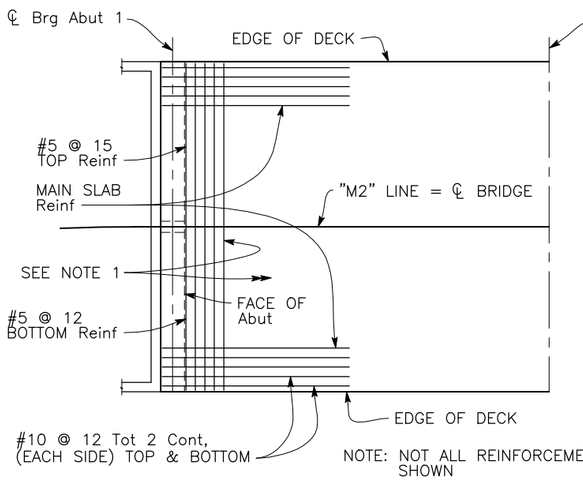
½" = 1'-0"



NOTE:
Camber Diagram does not include allowances for falsework settlement

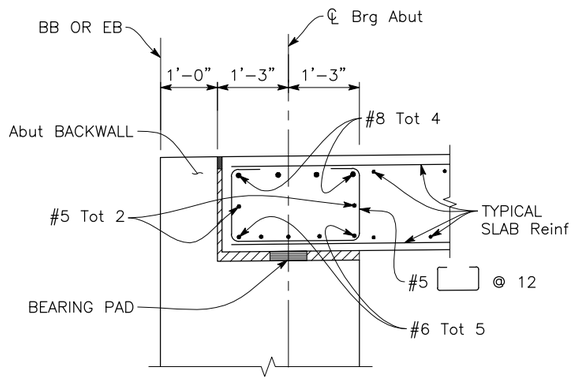
CAMBER DIAGRAM

NO SCALE



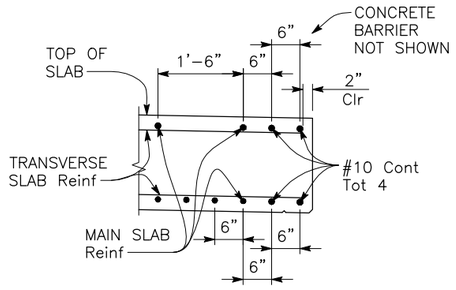
PART DECK PLAN

⅛" = 1'-0"



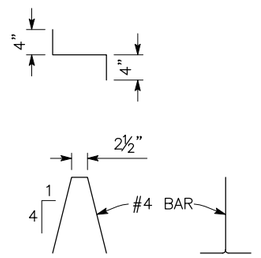
END DIAPHRAGM DETAIL

½" = 1'-0"



END OF SLAB DETAIL

½" = 1'-0"



BAR CHAIR DETAIL

1" = 1'-0"

NOTES:

1. Transverse Reinforcement place parallel to Abutments and space along "M2" Line.
2. Hooked edge bars must be fully developed at both the start and end. Minimum development should be 3'-0" on the straight portions of the bars.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0268

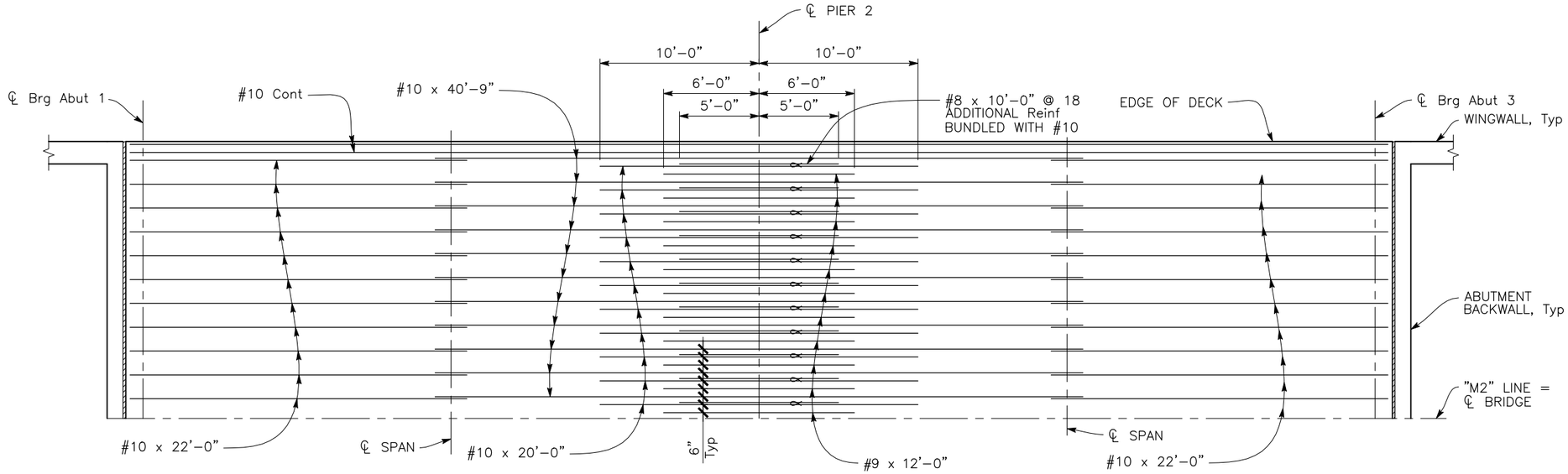
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

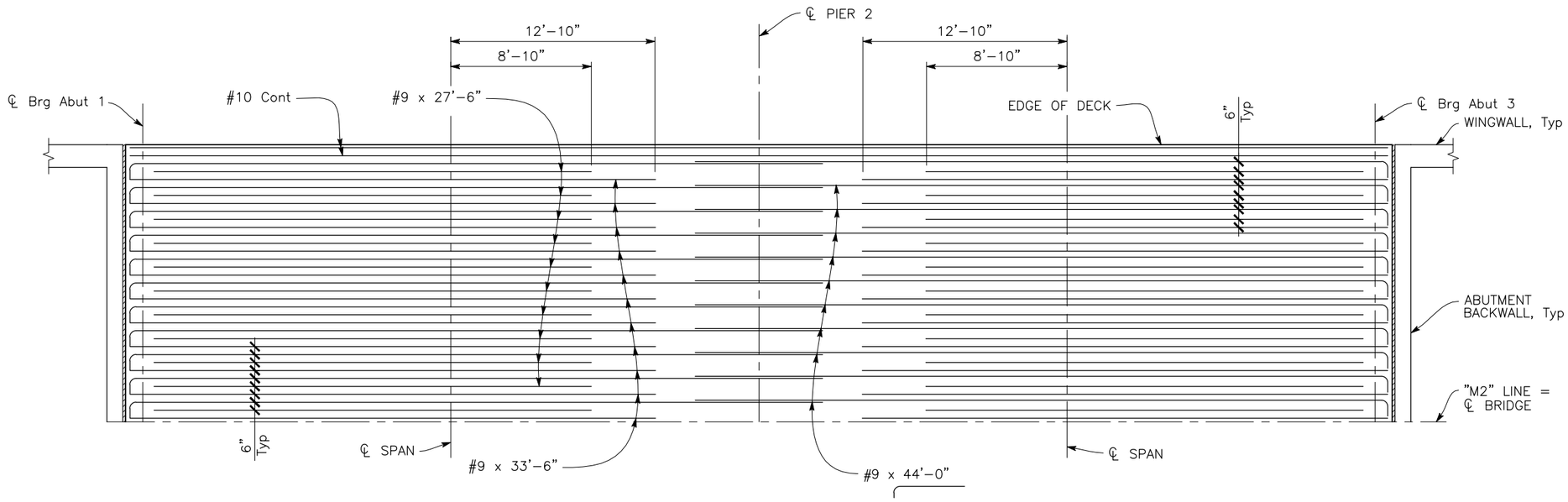
TYPICAL SECTION

DRAWING NO. S-10 SHEET NO. 138 TOTAL 168



TOP REINFORCEMENT

¼" = 1'–0"



BOTTOM REINFORCEMENT

¼" = 1'–0"

LEGEND:

Denotes bundled bar

NOTES:

1. Reinforcement symmetrical about ℄ of Bridge.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

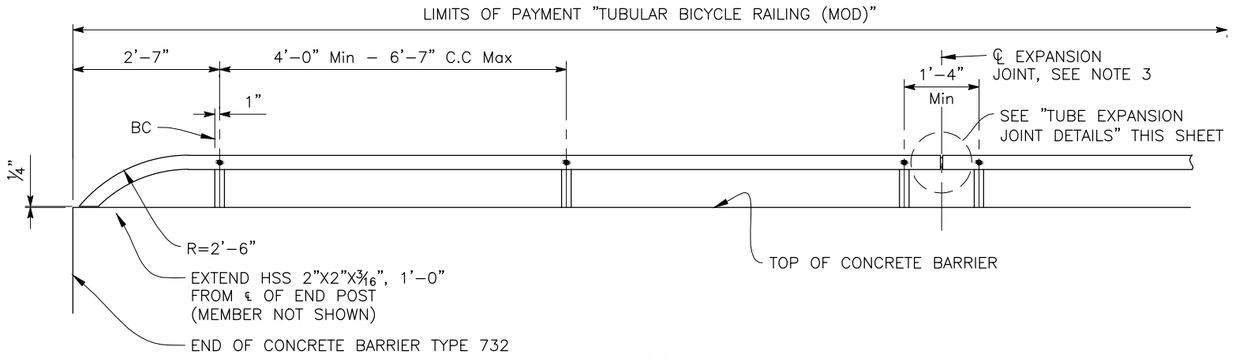
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

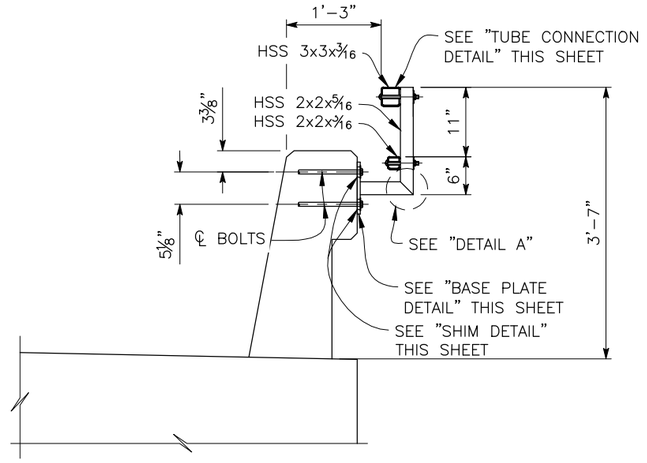
DEPARTMENT OF PUBLIC WORKS AND PLANNING

SLAB REINFORCEMENT

DRAWING NO. S-11 SHEET NO. 139 TOTAL 168

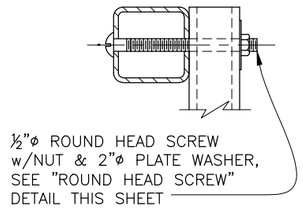


ELEVATION
3/4" = 1'-0"

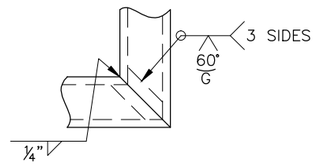


TYPE 732
1" = 1'-0"

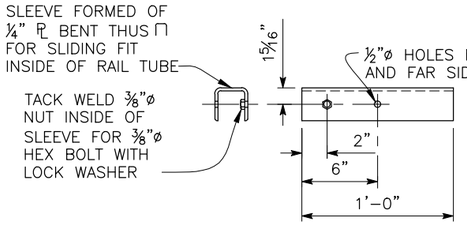
B11-55



TUBE CONNECTION DETAIL
NO SCALE



DETAIL A
NO SCALE



SLEEVE DETAIL
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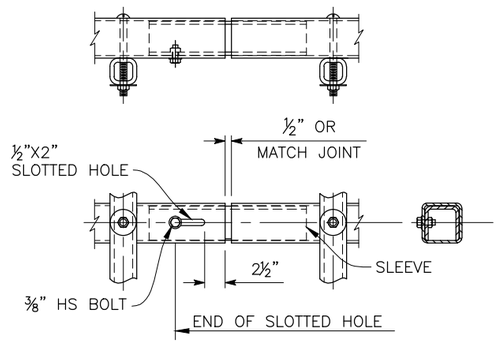
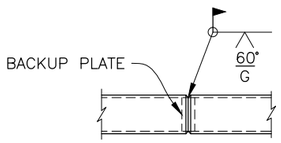
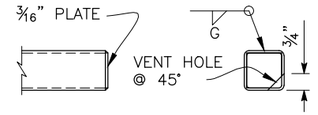


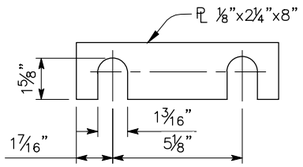
TUBE EXPANSION DETAIL
NO SCALE



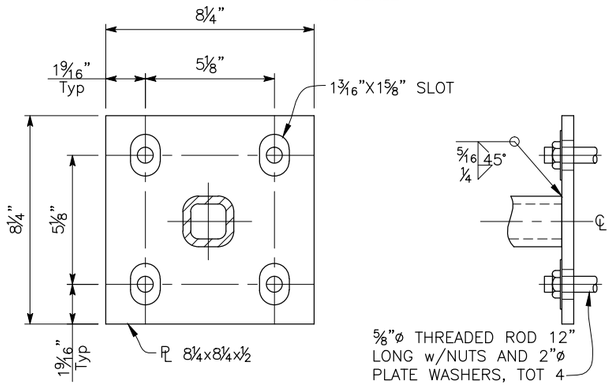
WELDED SPLICE DETAIL
NO SCALE



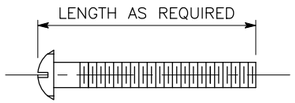
RAIL CAP DETAIL
NO SCALE



SHIM DETAIL
NO SCALE



BASE PLATE DETAIL
NO SCALE



ROUND HEAD SCREW DETAIL
NO SCALE

NOTES:

1. Posts shall be normal to railing.
2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12".
3. Tube expansion joints shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints or other rail discontinuities as noted.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0268

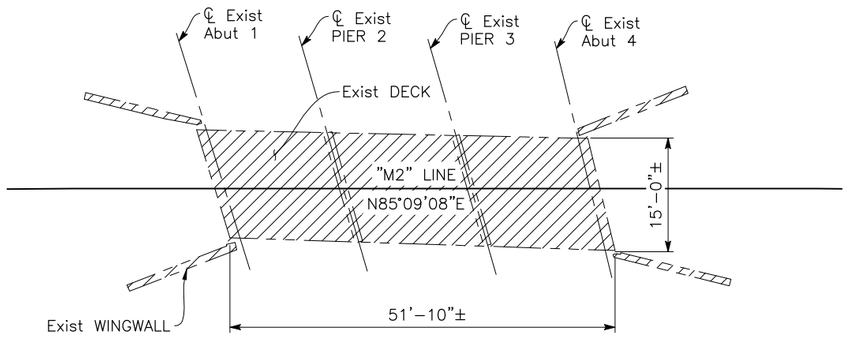
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

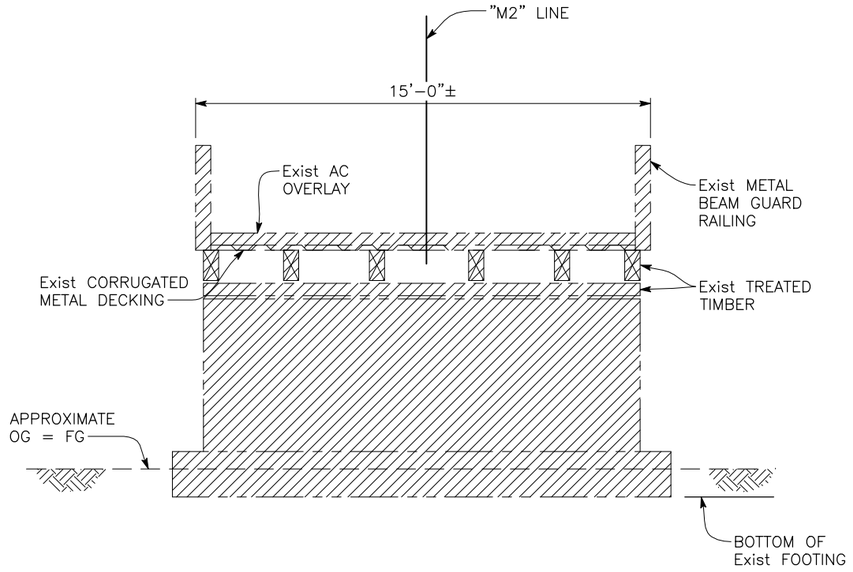
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TUBULAR BICYCLE RAILING

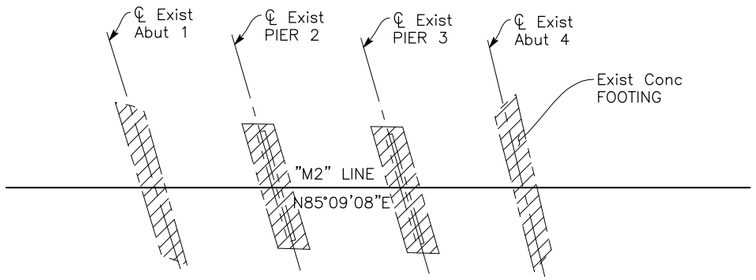
DRAWING NO. S-12 SHEET NO. 140 TOTAL 168



PLAN
1" = 10'



EXISTING ABUTMENTS AND PIERS
NO SCALE



FOOTING PLAN
1" = 10'

LEGEND:

Indicates Existing Structure

Indicates Bridge Removal

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0268

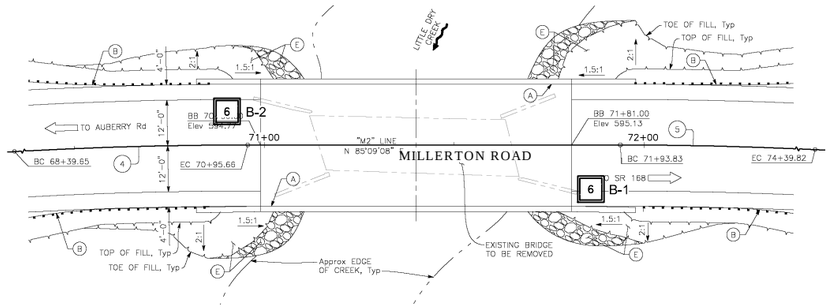
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

BRIDGE REMOVAL PLAN

DRAWING NO. S-13 SHEET NO. 141 TOTAL 168

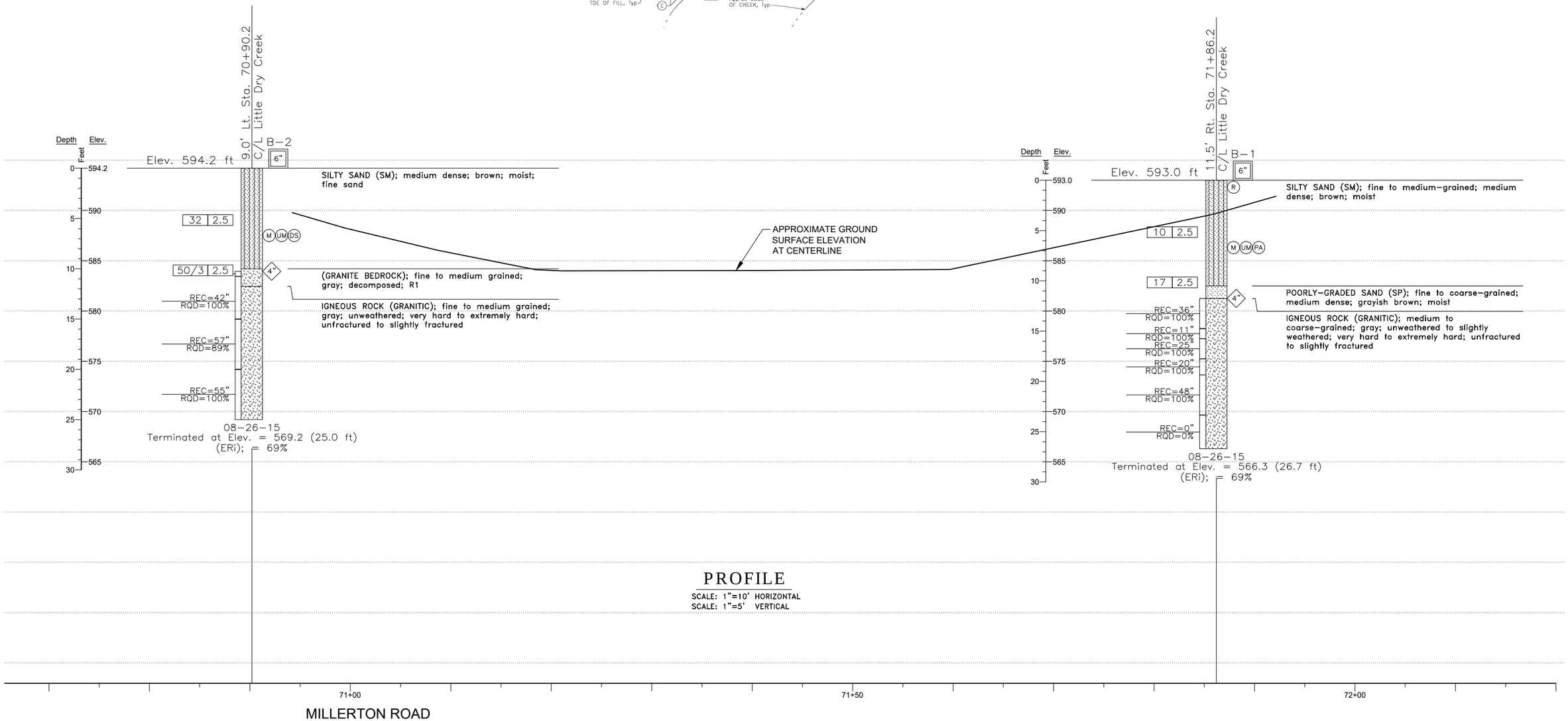


PLAN

SCALE: 1"=20'

NOTES:

1. 1.5–INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) SPLIT BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.5 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
2. 2.5–INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.5 INCHES AND AN OD OF 3.0 INCHES.
3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
4. ELEVATION BASED ON TBM, SET BY DRAKE HAGLAN AND ASSOCIATES, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, ELEVATION 648.467.



PROFILE

SCALE: 1"=10' HORIZONTAL
SCALE: 1"=5' VERTICAL

60% SUBMITTAL – 09/02/16 – NOT FOR CONSTRUCTION

		DATE	RECORD DRAWING	
FIELD INVESTIGATION:	M. OWENS	08/26/15	RESIDENT ENGINEER	DATE
DRAWN:	D. FAHRNEY	09/07/16		
CHECKED:	N. POPENOE	09/07/16		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

PLAN 0 20' 40' HZ

PROFILE 0 5' 10' VT

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — David L. Pearson — No. 674 — Exp. 12/31/15 GEOTECHNICAL — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

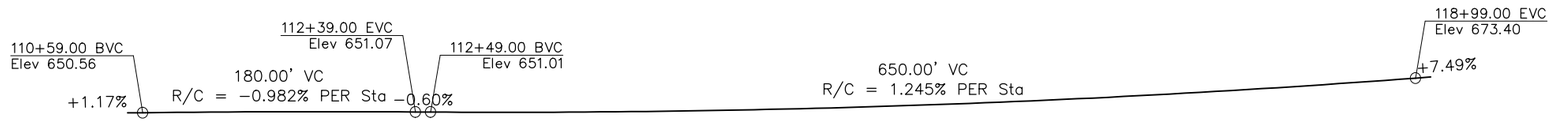
ROAD NO. 42C-0268 BRIDGE NO. 42C-0268

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

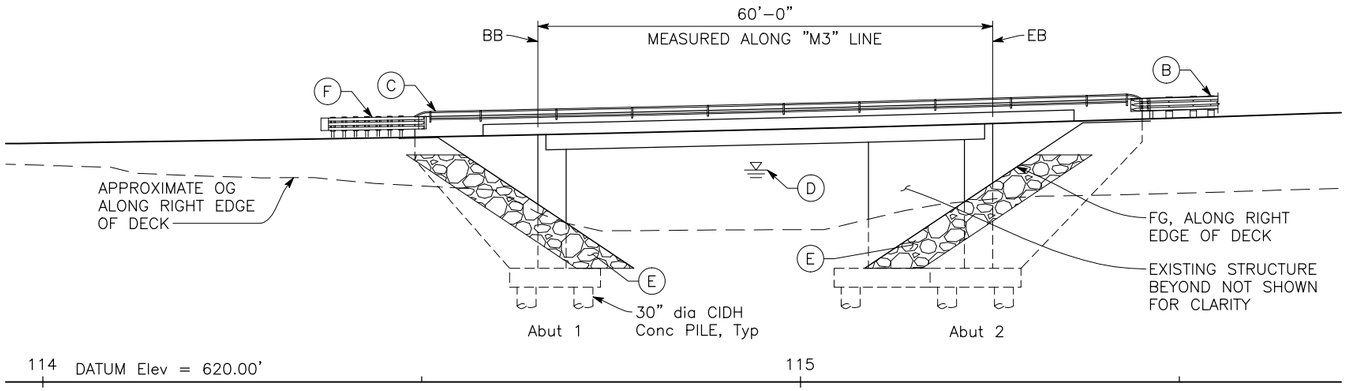
LOG OF TEST BORINGS

DRAWING NO. S-14 SHEET NO. 142 TOTAL 168



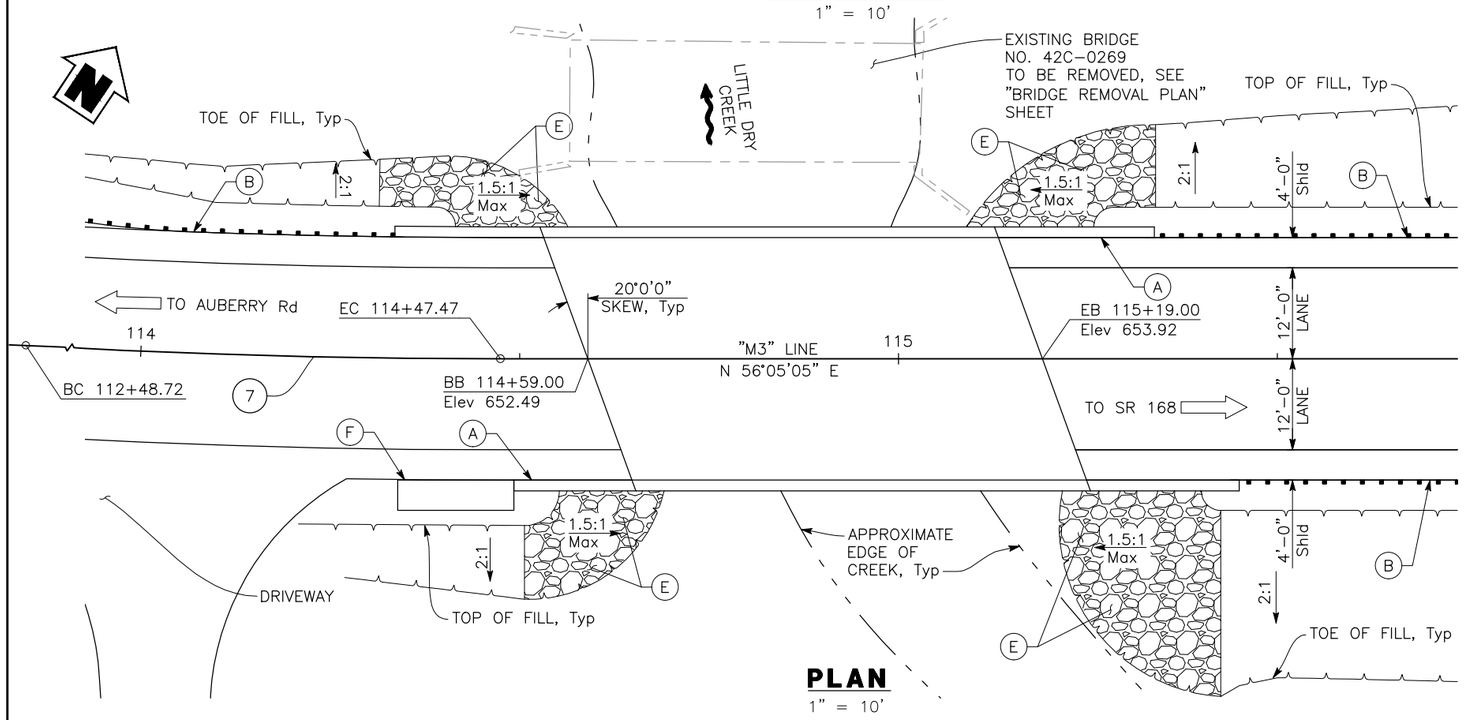
PROFILE GRADE

NO SCALE



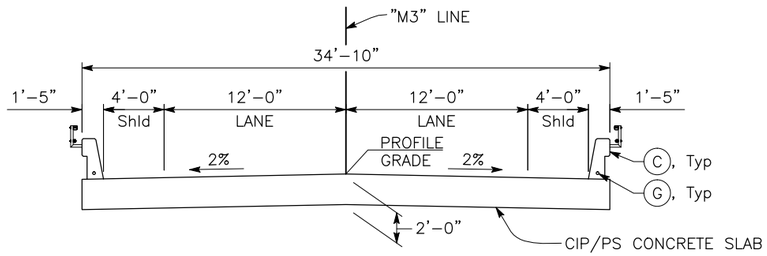
ELEVATION

1" = 10'



PLAN

1" = 10'



TYPICAL SECTION

1" = 5'

LEGEND:

Indicates Existing Structure to be Removed

Indicates New Structure

NOTES:

(A) Paint Bridge Number 42C−0269, year completed and "Little Dry Creek Br."

(B) Midwest Guardrail System (see "Roadway Plans")

(C) Concrete Barrier Type 732 with Tubular Bicycle Railing (Mod)

(D) 100 yr. WS Elevation = 647.96'. For hydrologic data, see "Foundation Plan" sheet

(E) For Rock Slope Protection and Grading Details, see "Roadway Plans"

(F) Crash Cushion, see "Construction Details" on "Roadway Plans"

(G) 2" Conduit for Future Utilities

(H) For Index to Plans, Standard Plans, General Notes, and Concrete Strength and Type Limits, see "Deck Contours" sheet

(I) For Spread Footing Data Table, Hydrologic Summary Table, and Scour Data Table, see "Foundation Plan" sheet

CURVE DATA

No.	R	Δ	T	L
(7)	1100.00'	10°21'09"	99.65'	198.75'

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

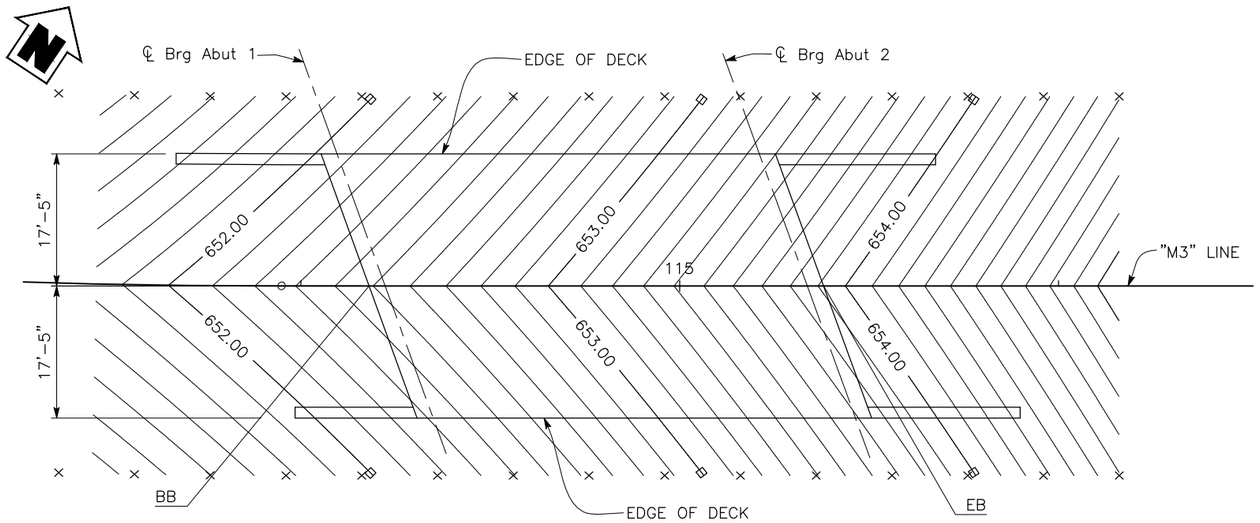
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

GENERAL PLAN

DRAWING NO. S-1 SHEET NO. 143 TOTAL 168

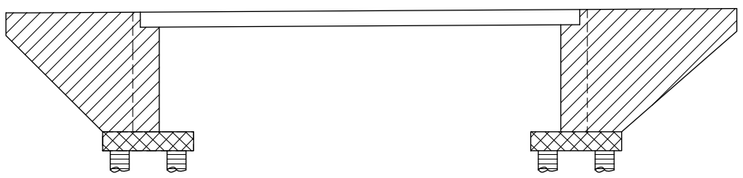


DECK CONTOURS

1" = 10'

NOTES:

1. Contours do not include camber.
2. Contour interval is 0.10'.
3. □ Indicates whole foot contours.
4. × Indicates 10' increments along station line.



CONCRETE STRENGTH AND TYPE LIMITS

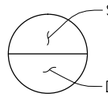
NO SCALE

- Structural Concrete, Bridge (Polymer Fiber) (f'c = 5 ksi @ 28 Days)
- Structural Concrete, Bridge (f'c = 5 ksi @ 28 Days)
- Structural Concrete, Bridge Footing (f'c = 5 ksi @ 28 Days)
- Cast-in-Drilled-Hole Concrete Pile (f'c = 4 ksi)

INDEX TO PLANS

CALTRANS STANDARD PLANS DATED 2015

A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND-LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND-LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND-LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND-LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND-LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND-SOIL (SHEET 1 OF 2)
A10G	LEGEND-SOIL (SHEET 2 OF 2)
A10H	LEGEND-ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11-55	CONCRETE BARRIER TYPE 732



LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition and the Caltrans Amendments, preface dated January 2014

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.7 April 2013.

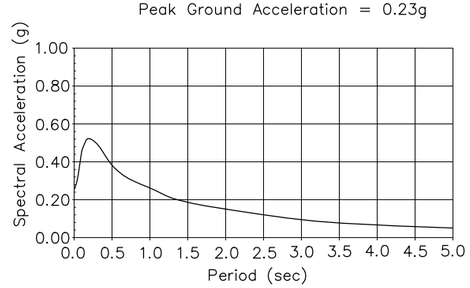
DEAD LOAD: Includes 35 psf for future wearing surface and 100 plf for future utilities.

LIVE LOADING: HL93, Low Boy, and permit design load.

SEISMIC LOADING: Soil profile: Vs30 = 350 m/s

Moment Magnitude: 6.5

Peak Ground Acceleration = 0.23g



REINFORCED CONCRETE: fy = 60 ksi
f'c = See "CONCRETE STRENGTH AND TYPE LIMITS"
n = 8

PRESTRESSED CONCRETE: See "PRESTRESSING NOTES" on "TYPICAL SECTION" sheet.

QUANTITIES		
BRIDGE REMOVAL	LS	1
STRUCTURE EXCAVATION (BRIDGE)	CY	507
STRUCTURE BACKFILL (BRIDGE)	CY	301
30" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	425
PRESTRESSING CAST-IN-PLACE CONCRETE	LS	1
STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	85
STRUCTURAL CONCRETE, BRIDGE	CY	210
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	149
JOINT SEAL (MR=½")	LF	71
BAR REINFORCING STEEL (BRIDGE)	LB	87,000
TUBULAR BICYCLE RAILING (MOD)	LF	191
CONCRETE BARRIER TYPE 732	LF	191

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

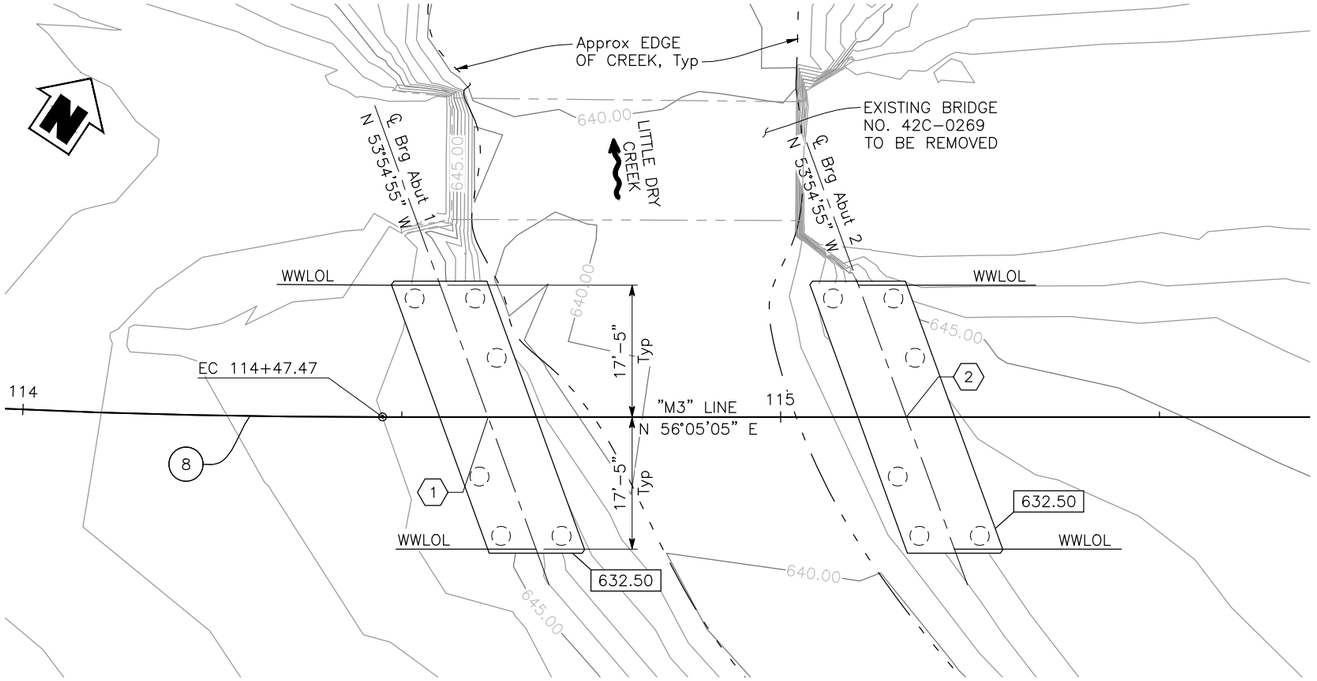
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DECK CONTOURS

DRAWING NO. S-2 SHEET NO. 144 TOTAL 168



PLAN
1" = 10'

LEGEND:

- Indicates Bottom of Footing Elevation
- Indicates Existing Structure to be Removed
- Indicates New Structure
- Indicates 30" Dia CIDH Concrete Pile (not all piles shown)

BENCH MARK:

See "Roadway Plans"

HYDROLOGIC SUMMARY TABLE

Drainage Area = 23.5 Square Miles		
Frequency (Years)	Design Flood	Base Flood
	50	100
Discharge (Cubic Feet per Second)	3395	4143
Water Surface Elevation, Ft Immediately Upstream of Bridge	647.22	647.96

CURVE DATA

No.	R	Δ	T	L
(7)	1100.00'	10°21'09"	99.65'	198.75'

	Northing	Easting
(1) ℄ Brg Abut 1 Sta 114+61.39	2237334.5157	6395906.9767
(2) ℄ Brg Abut 2 Sta 115+16.61	2237367.8366	6395952.9933

PILE DATA TABLE

LOCATION	PILE TYPE	NOMINAL RESISTANCE		DESIGN TIP ELEVATION (ft)	SPECIFIED TIP ELEVATION (ft)
		COMPRESSION (kips)	TENSION (kips)		
Abut 1	30" CIDH	430	0	612(a–I), 614(a–II), 619(c), 614(d)	612
Abut 2	30" CIDH	450	0	611(a–I), 613(a–II), 619(c), 615(d)	611

NOTE:
1. Design tip elevations for Abutments are controlled by: (a) Compression (Service Limit State), (a–I) Compression (Strength Limit State), (c) Tolerable Settlement, (d) Lateral load.
2. The specified tip elevation shall not be raised above the design tip elevations for compression, tension, lateral load, and tolerable settlement.

SCOUR DATA

Support Number	Long Term (Degradation and Contraction) Scour Elevation (Ft)	Short Term (Local) Scour Depth (Ft)
Abutment 1	636	8
Abutment 2	636	8

60% SUBMITTAL - NOT FOR CONSTRUCTION

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CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0269

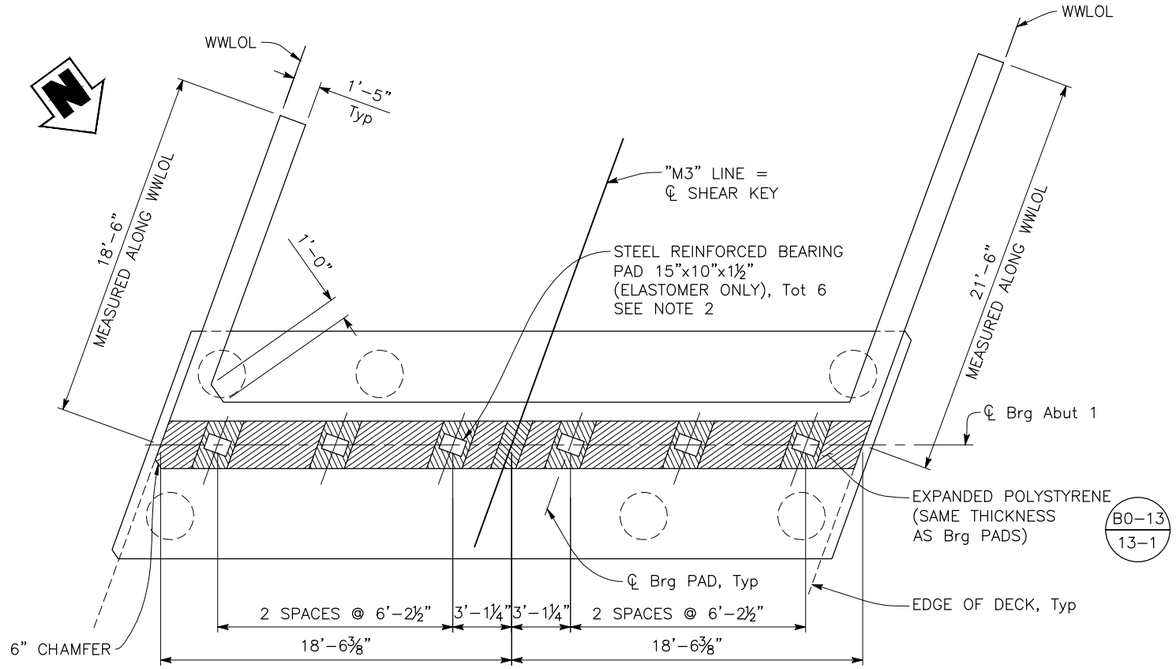
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

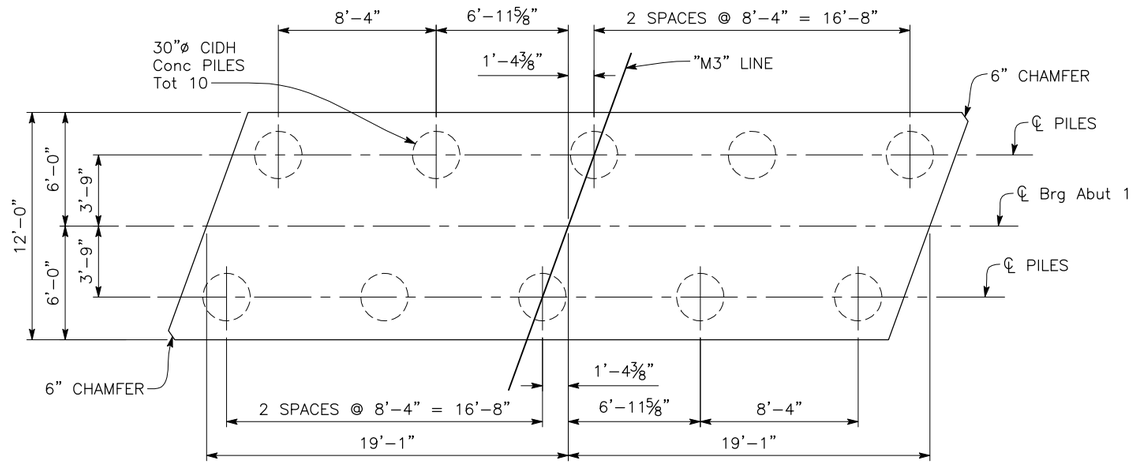
FOUNDATION PLAN

DRAWING NO. S-3 SHEET NO. 145 TOTAL 168



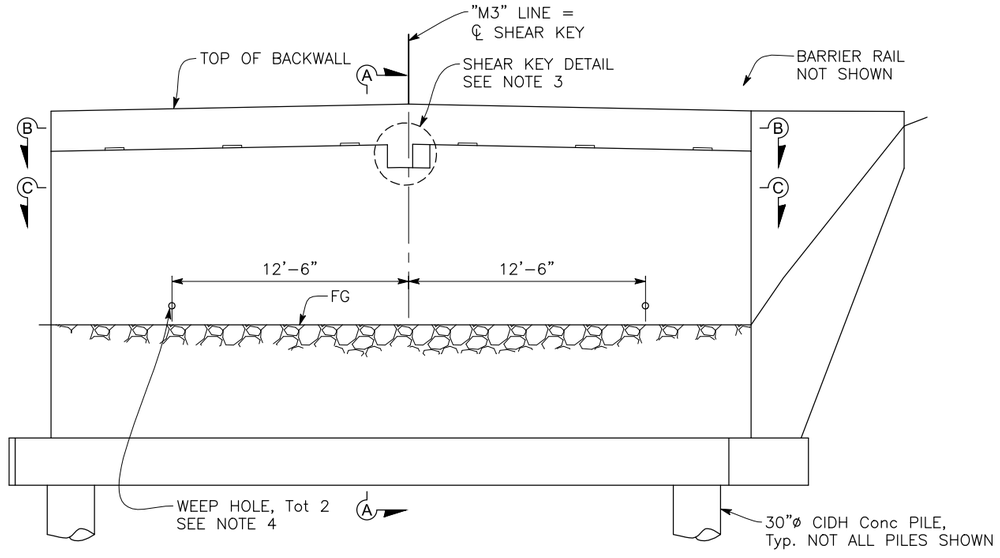
PLAN

¼" = 1'-0"



FOOTING PLAN

¼" = 1'-0"



ELEVATION

¼" = 1'-0"

NOTES:

1. For "SECTION A-A", "SECTION B-B" and "SECTION C-C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 2" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 3" sheet.

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

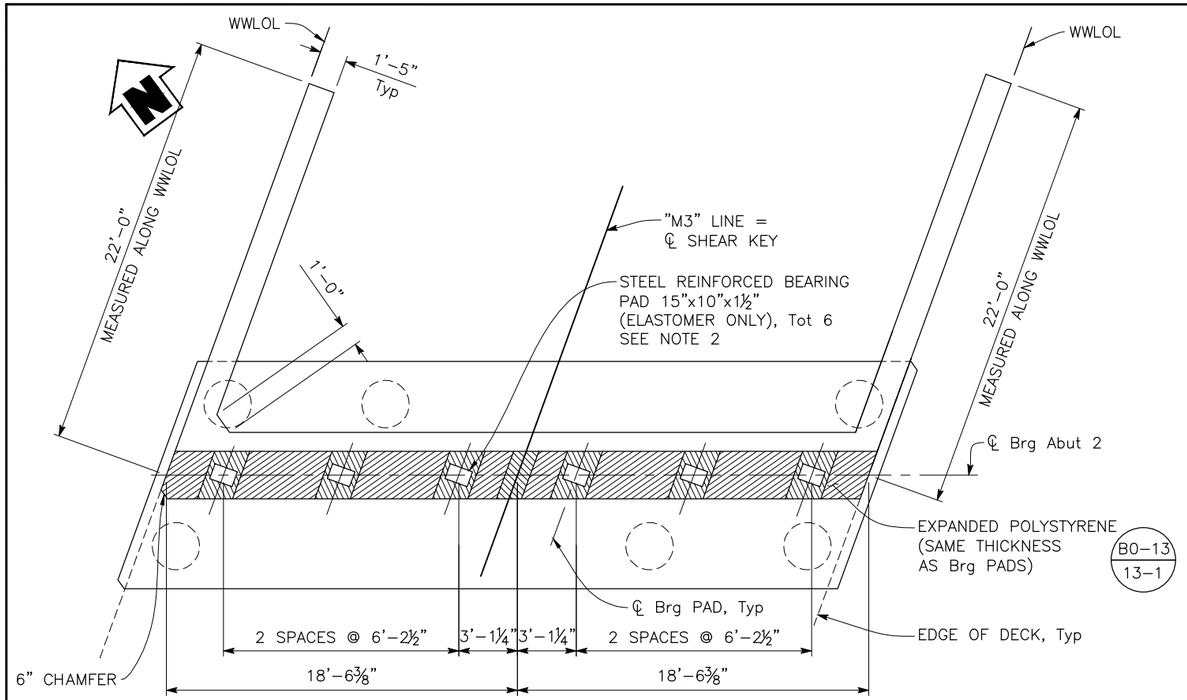
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

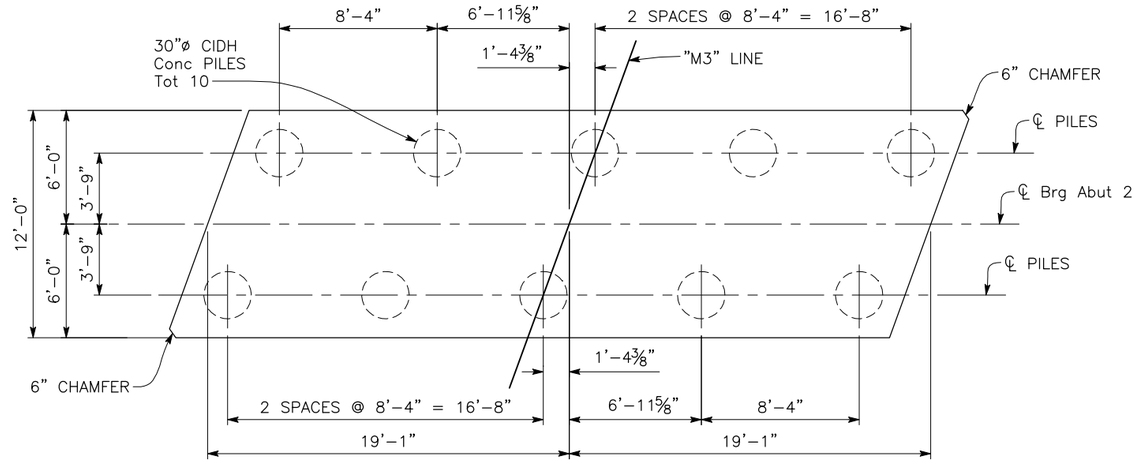
ABUTMENT 1 LAYOUT

DRAWING NO. S-4 SHEET NO. 146 TOTAL 168



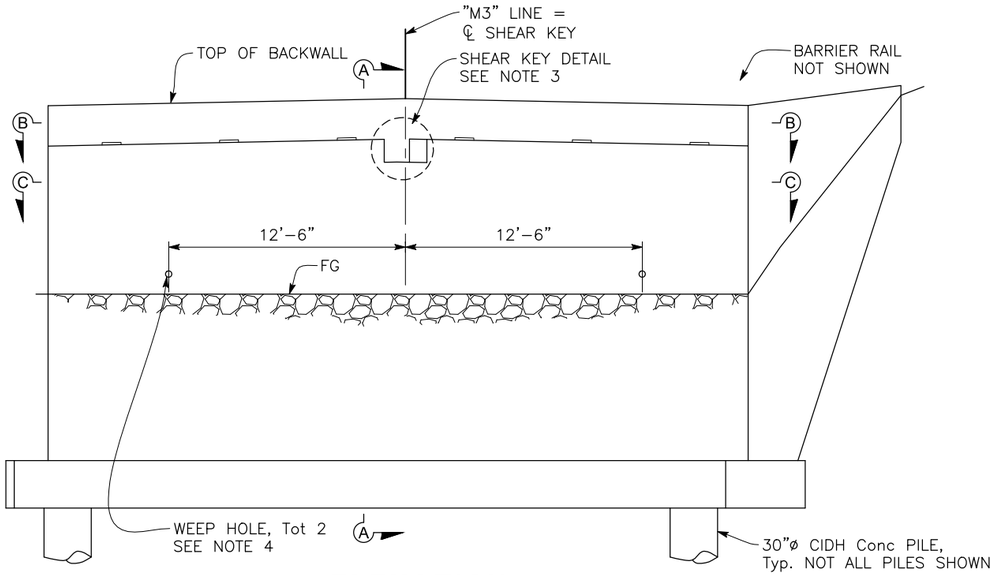
PLAN

¼" = 1'-0"



FOOTING PLAN

¼" = 1'-0"



ELEVATION

¼" = 1'-0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 2" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 3" sheet.

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CHECKED: MIKE PUGH	9/23/2016		

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SCALE: AS SHOWN

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

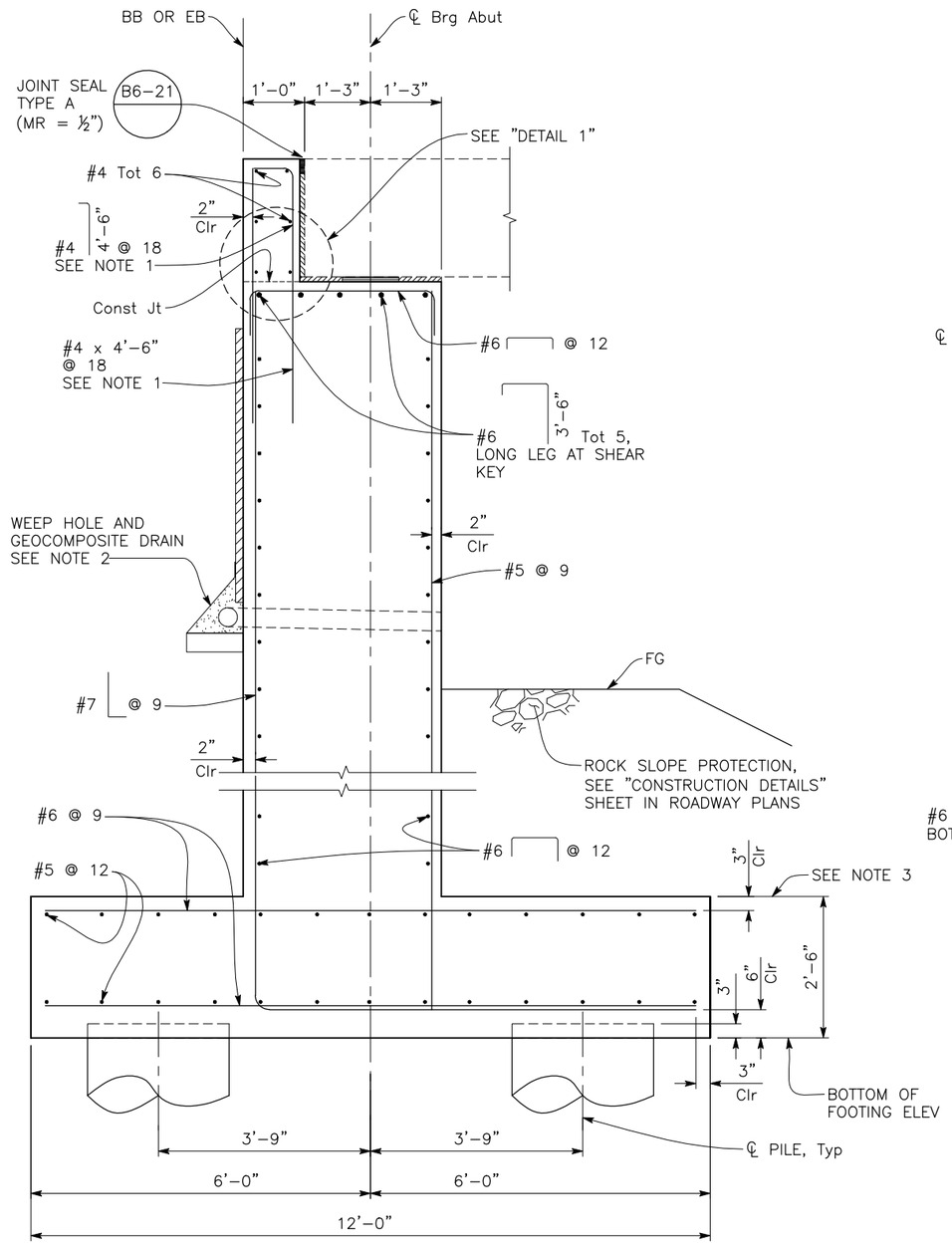
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

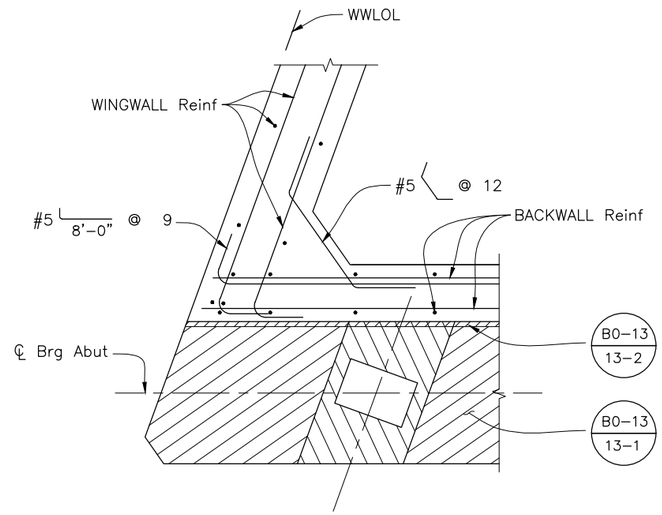
ABUTMENT 2 LAYOUT

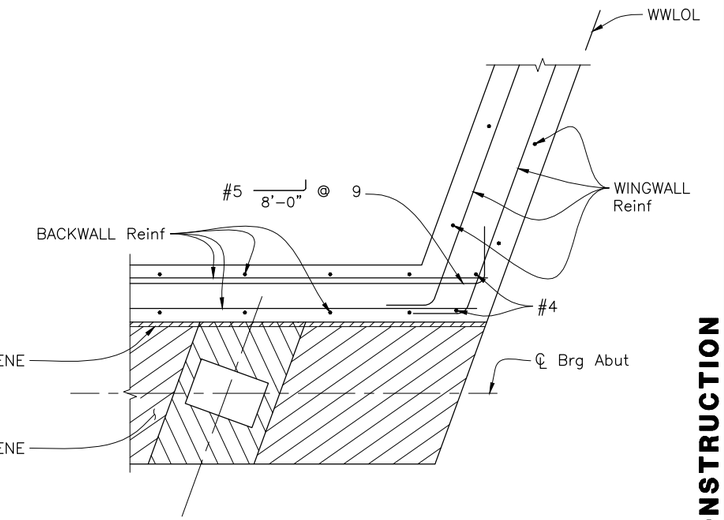
DRAWING NO. S-5 SHEET NO. 147 TOTAL 168



SECTION A-A

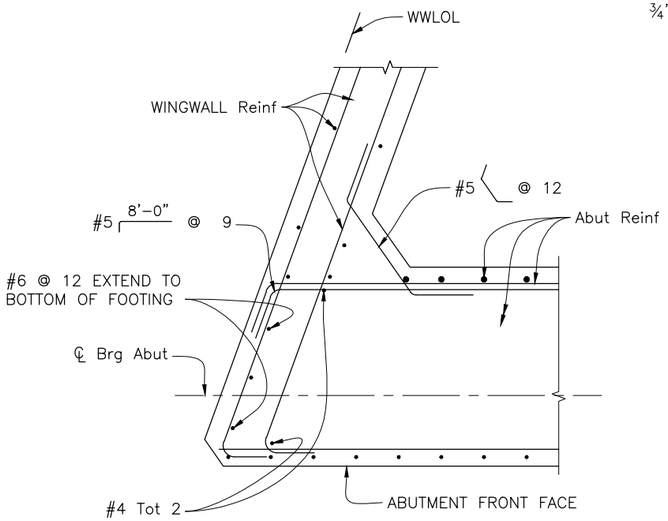
¾" = 1'-0"

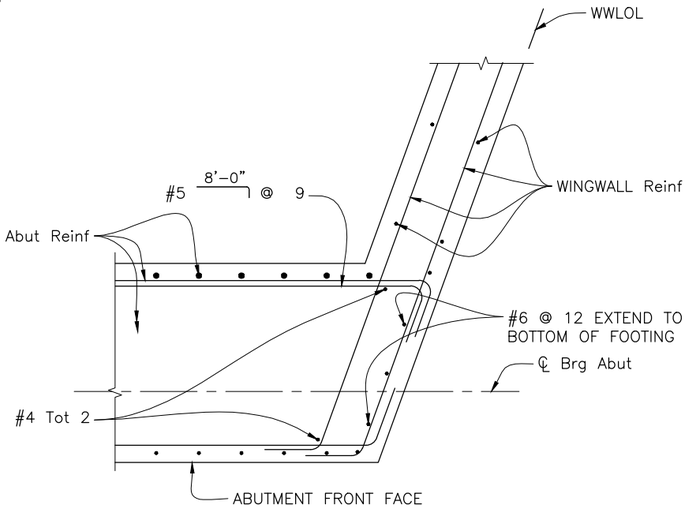




SECTION B-B

¾" = 1'-0"





SECTION C-C

¾" = 1'-0"

NOTES:

1. Reinforcement can be adjusted as directed by Engineer to miss prestress anchorage.
2. For "Weephole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 3" sheet.
3. Abutment reinforcement placed normal to and spaced along ℄ Brg Abut.

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CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

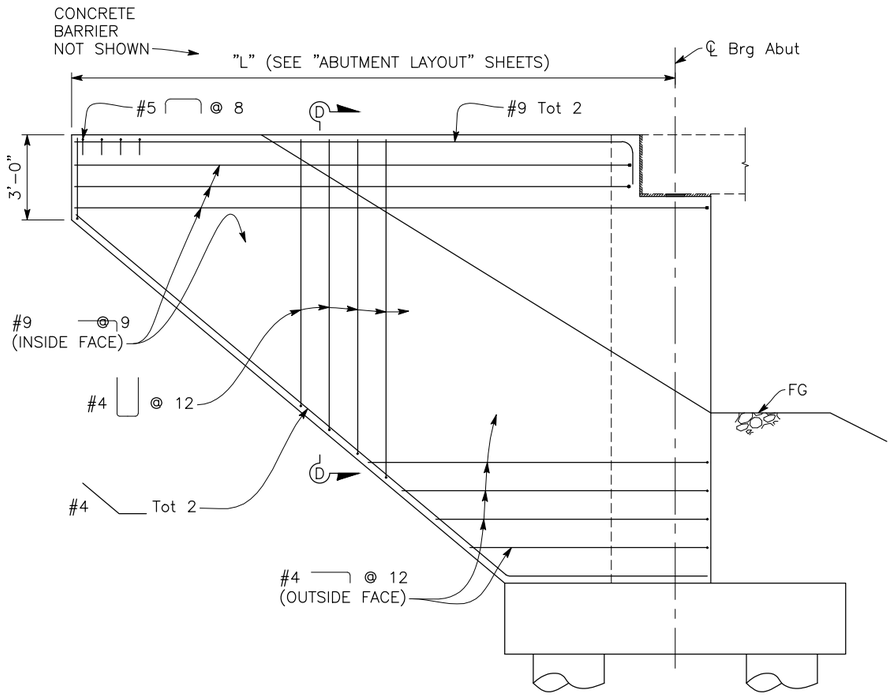
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

ABUTMENT DETAILS NO. 1

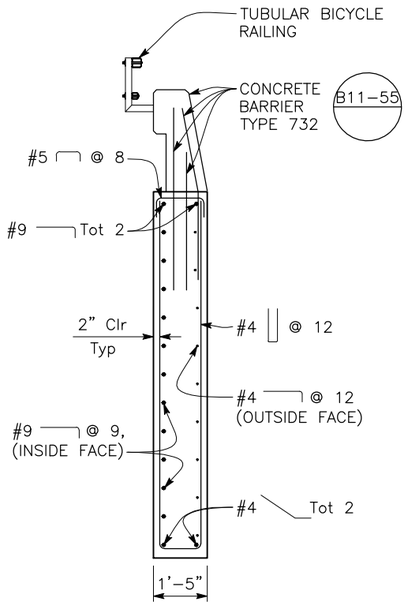
DRAWING NO. S-6 SHEET NO. 148 TOTAL 168



(ABUTMENT 1 WINGWALL ELEVATION SHOWN, ABUTMENT 2 WINGWALL ELEVATIONS SIMILAR)

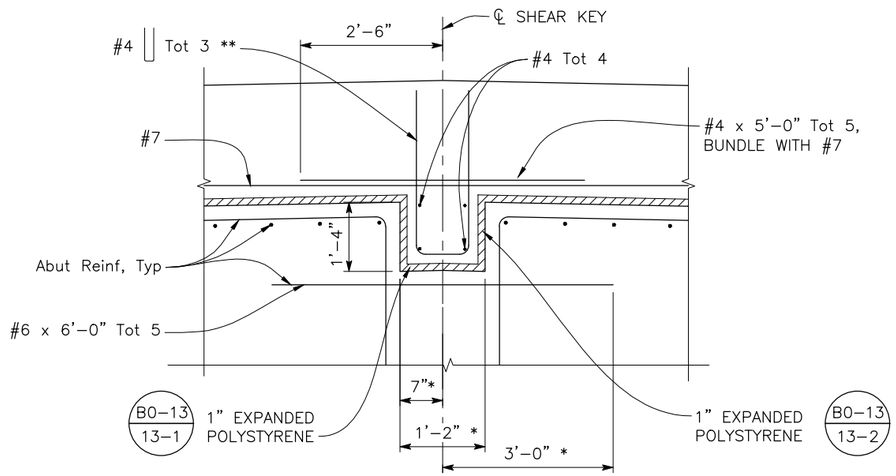
WINGWALL ELEVATION

⅜" = 1'-0"



SECTION D-D

½" = 1'-0"

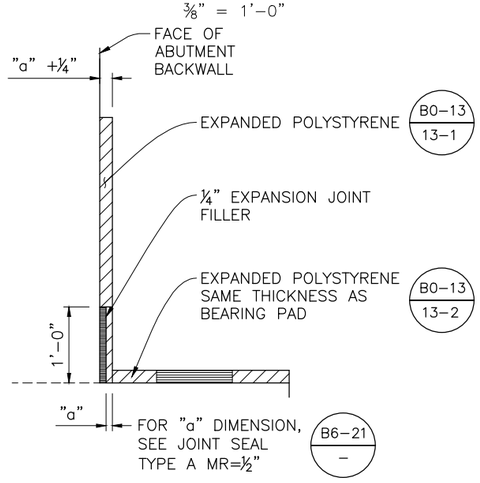


* MEASURED ALONG ℄ Abut Brg

** PLACE PARALLEL TO ℄ Abut Brg

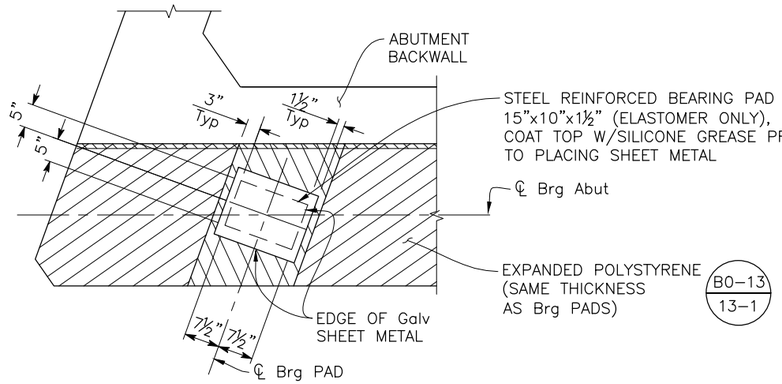
SHEAR KEY DETAIL

¾" = 1'-0"

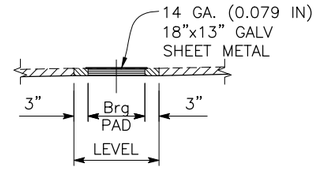


DETAIL 1

1" = 1'-0"



PLAN



ELEVATION

BEARING PAD DETAIL

¾" = 1'-0"

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PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

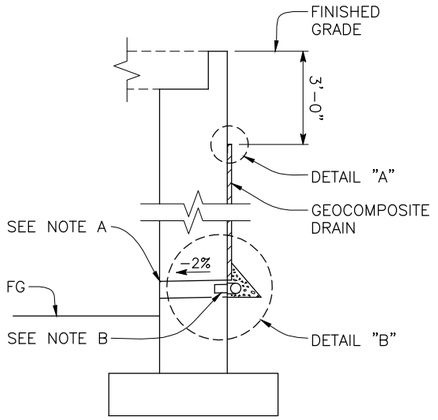
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO

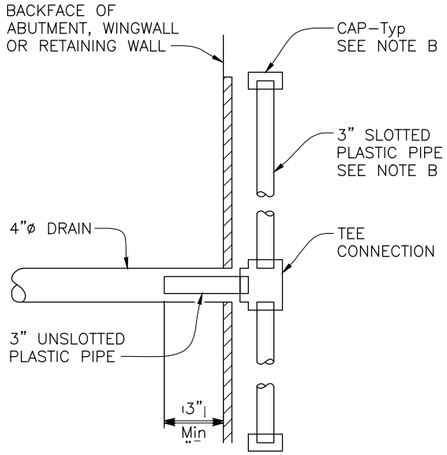
DEPARTMENT OF PUBLIC WORKS AND PLANNING

ABUTMENT DETAILS NO. 2

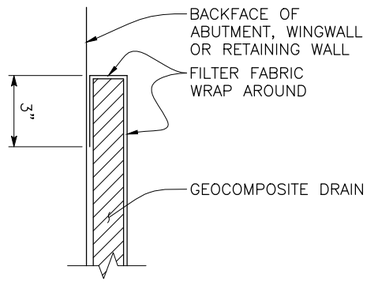
DRAWING NO. S-7 SHEET NO. 149 TOTAL 168



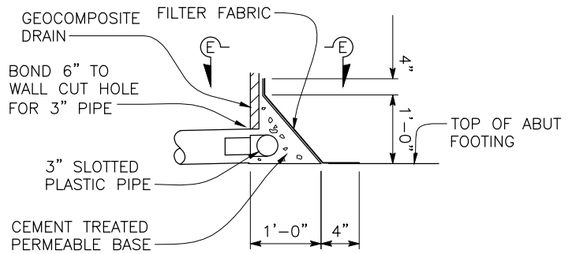
WALL SECTION



SECTION E-E



DETAIL "A"



DETAIL "B"

ALTERNATIVE TO BRIDGE DETAIL B0–3 / 3–1

WEEP HOLE AND GEOCOMPOSITE DRAIN

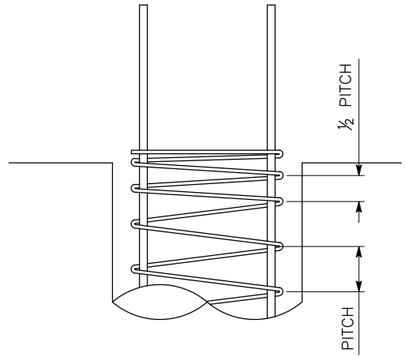
NO SCALE

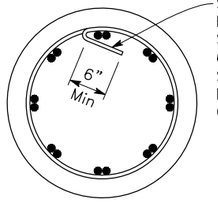
NOTES:

A. 4"ø Drains at Intermediate Sag Points and at 25'–0" Max Center to Center. Exposed Wall Drains shall be located 3"±above Finished Grade.

B. Geocomposite Drain, Cement Treated Permeable Base, Drainage Pad, and 3"ø Slotted Plastic Pipe continuous behind Wall. Cap ends of pipe. Provide "Tee" connectiion at each 4" drain.

C. Provide 1'–0" x 4" Drainage Pad when Pipe is not supported by Footing.

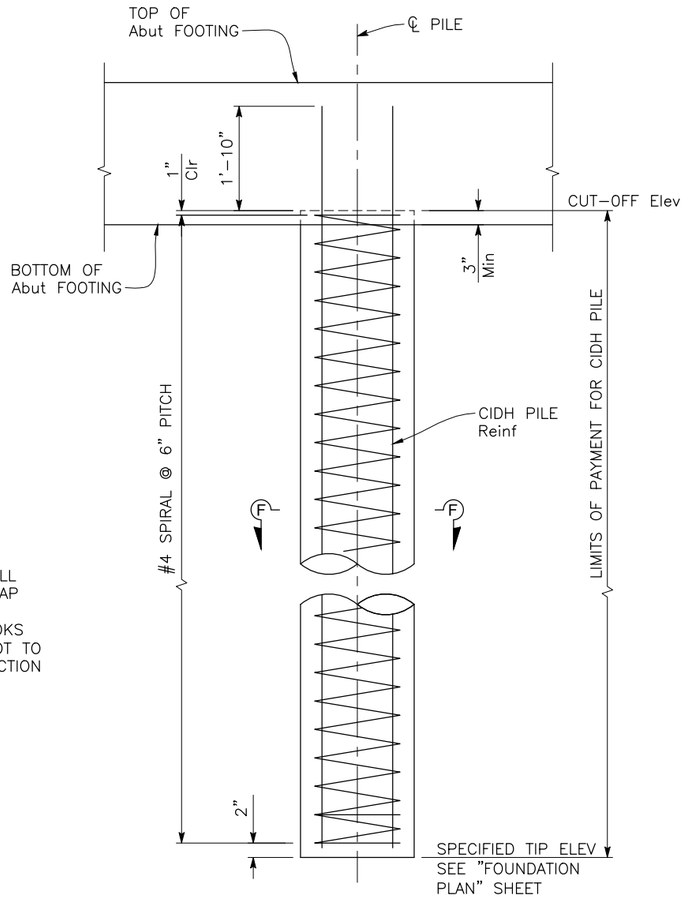




SPIRAL TERMINATIONS SHALL HAVE 80 BAR DIAMETER LAP SPLICE IN ADDITION TO A 6" LONG 135° HOOK. HOOKS SHALL LINE UP SO AS NOT TO INTERFERE WITH CONSTRUCTION OPERATIONS

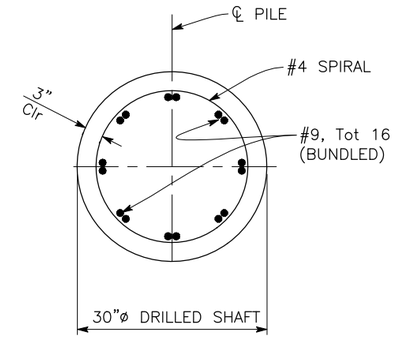
SPIRAL TERMINATION DETAIL

1" = 1'–0"



30" ø CIDH - ELEVATION

¾" = 1'–0"



SECTION F-F

1" = 1'–0"

60% SUBMITTAL - NOT FOR CONSTRUCTION

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CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0269

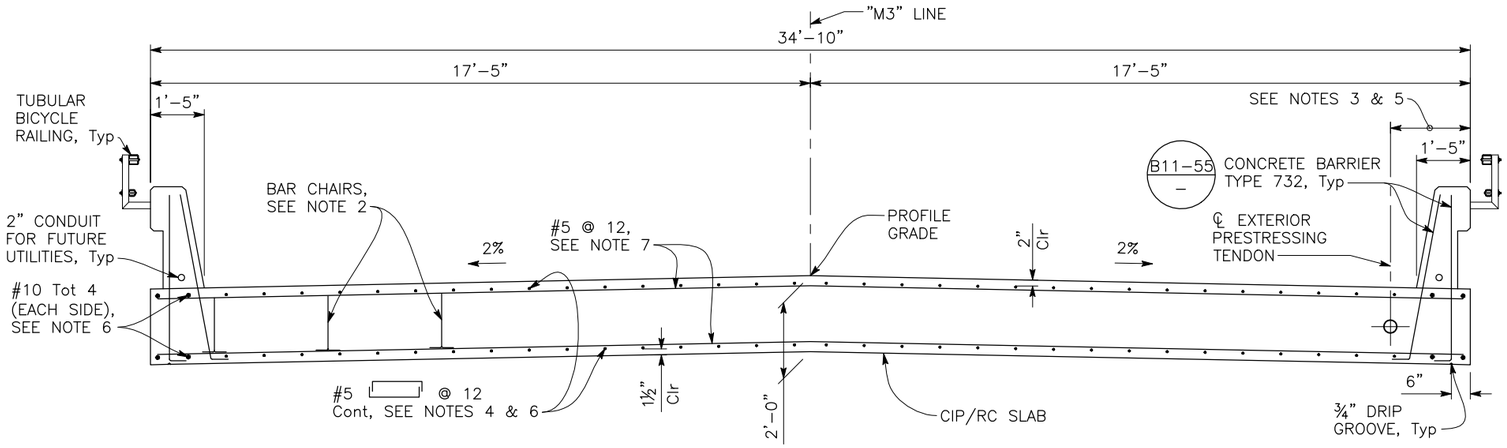
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

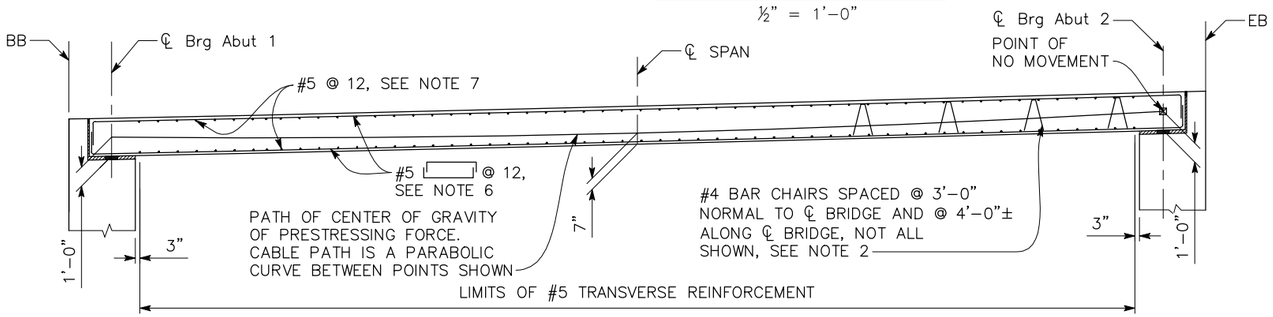
ABUTMENT DETAILS NO. 3

DRAWING NO. S-8 SHEET NO. 150 TOTAL 168



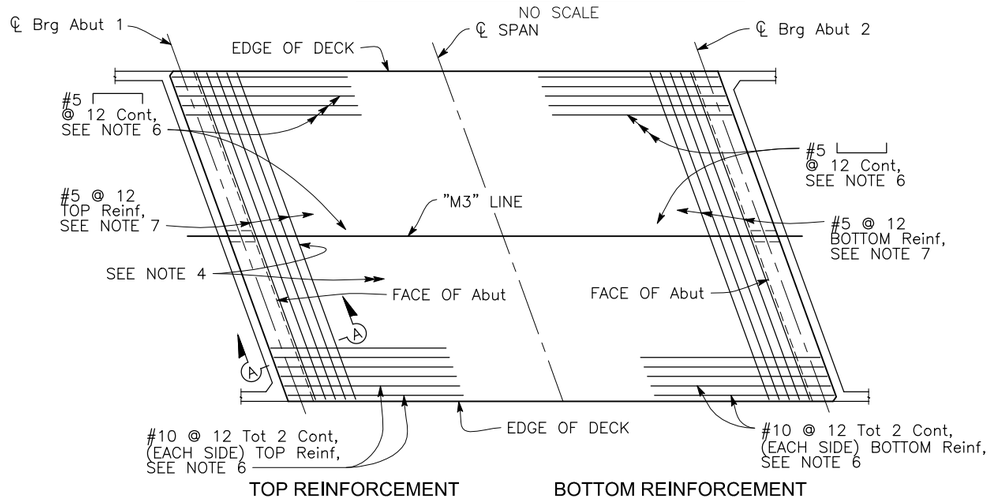
TYPICAL SECTION

½" = 1'-0"



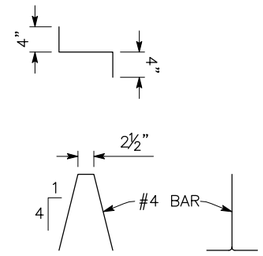
LONGITUDINAL SECTION

NO SCALE



DECK PLAN

⅛" = 1'-0"

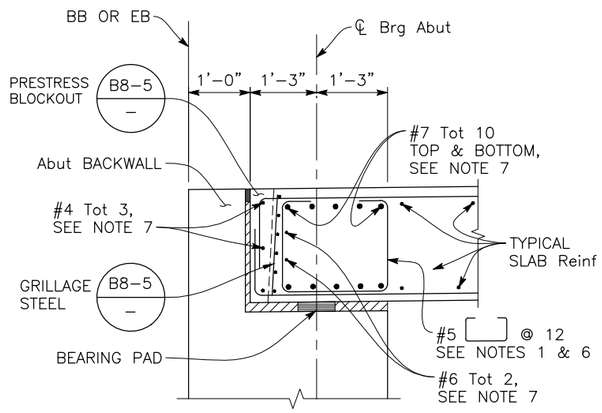


BAR CHAIR DETAIL

1" = 1'-0"

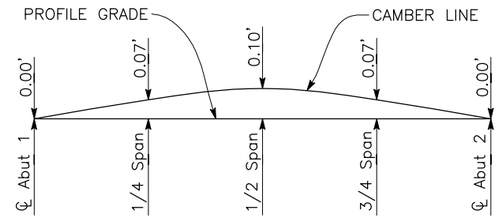
NOTES:

1. Stirrups can be adjusted to clear prestress anchorage.
2. Bar chairs may be used to secure prestress ducts. Spacing will need to be adjusted to coincide with duct locations.
3. The distance between the edge of deck and the ℄ of the nearest post tensioning cut shall be 2'-0" or two times the anchor plate width, whichever is greater..
4. Continuous reinforcement must be service spliced.
5. Contractor to determine edge distance to avoid conflict with Wingwalls.
6. Space normal to and place parallel to ℄ Bridge.
7. Space along ℄ Bridge and place parallel to ℄ Brg Abut.



SECTION A-A

¾" = 1'-0"



NOTE:
Camber Diagram does not include allowances for falsework settlement

CAMBER DIAGRAM

NO SCALE

PRESTRESSING NOTES

270 ksi Low Relaxation Strand:

P_{jack} = 10,240 kips
Anchor set = 3/8"

Design is based on μ=0.15 and k=0.0002/ft

Prestress force (Pjack) shall be uniformly distributed across the slab.

Concrete f'c = 5,000 psi @ 28 days
f'ci = 3,500 psi

Contractor shall submit elongation calculations based on initial stress at

☒ = 0.980 x Jacking stress

One end stressing shall be performed from either Abut 1 or Abut 2

For additional notes and details, see B8-5

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp. 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0269

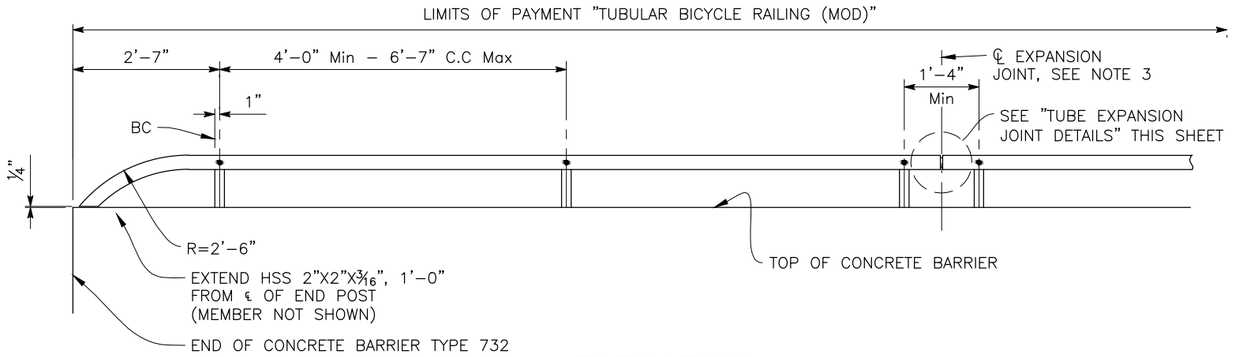
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

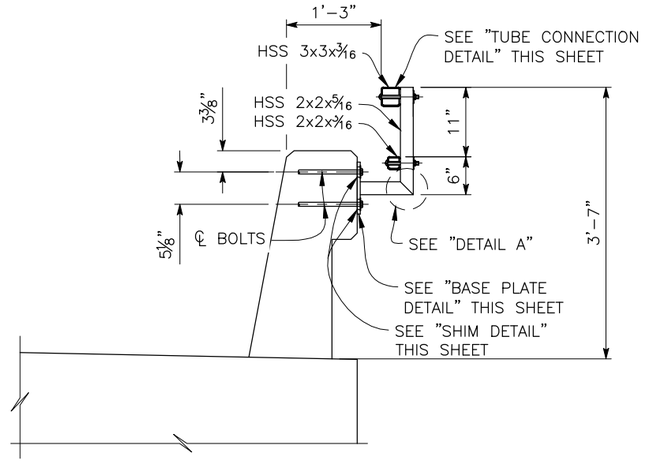
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TYPICAL SECTION

DRAWING NO. S-9 SHEET NO. 151 TOTAL 168

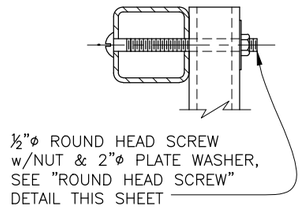


ELEVATION
3/4" = 1'-0"

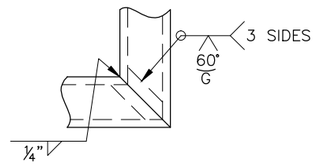


TYPE 732
1" = 1'-0"

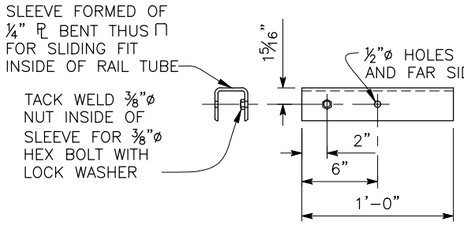
B11-55



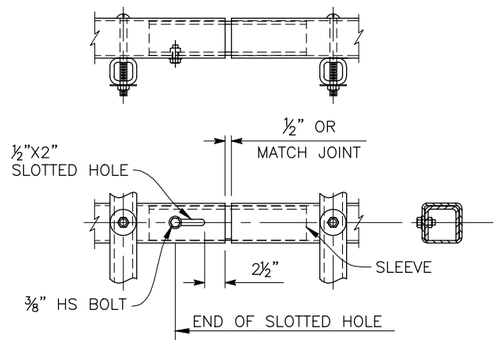
TUBE CONNECTION DETAIL
NO SCALE



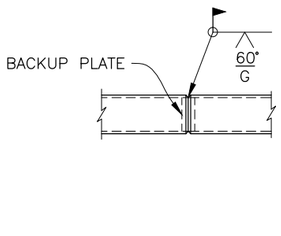
DETAIL A
NO SCALE



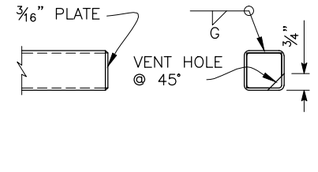
SLEEVE DETAIL
NO SCALE



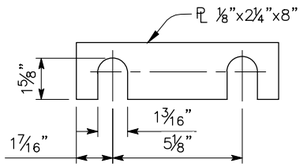
TUBE EXPANSION DETAIL
NO SCALE



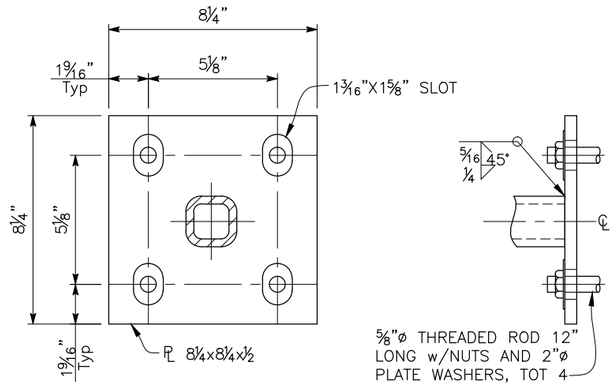
WELDED SPLICE DETAIL
NO SCALE



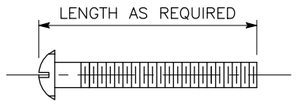
RAIL CAP DETAIL
NO SCALE



SHIM DETAIL
NO SCALE



BASE PLATE DETAIL
NO SCALE



ROUND HEAD SCREW DETAIL
NO SCALE

NOTES:

1. Posts shall be normal to railing.
2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950'-0".
3. Tube expansion joints shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints or other rail discontinuities as noted.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: JENNIFER GRANT	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT, No. C77667, Exp. 06-30-2017, STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0269

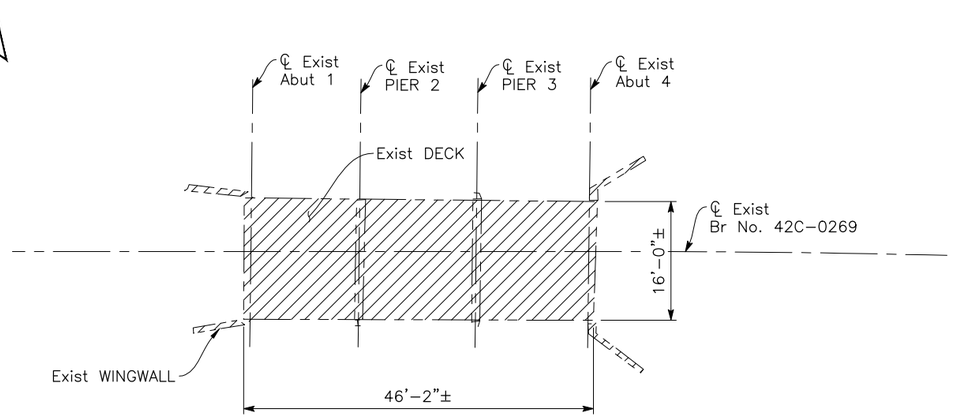
ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

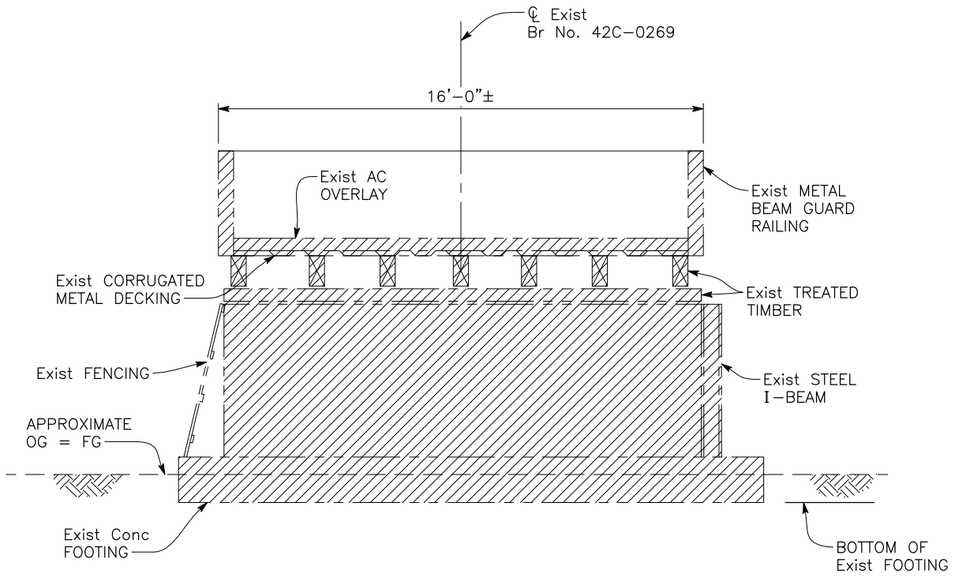
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TUBULAR BICYCLE RAILING

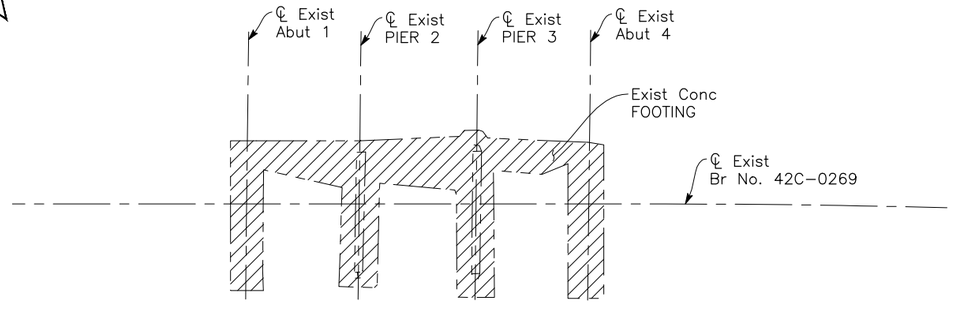
DRAWING NO. S-10 SHEET NO. 152 TOTAL 168



PLAN
1" = 10'



EXISTING ABUTMENTS AND PIERS
NO SCALE



FOOTING PLAN
1" = 10'

LEGEND:

Indicates Existing Structure

Indicates Bridge Removal

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — J. GRANT — No. C77667 — Exp 06-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0269

ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

THE COUNTY OF FRESNO 1856

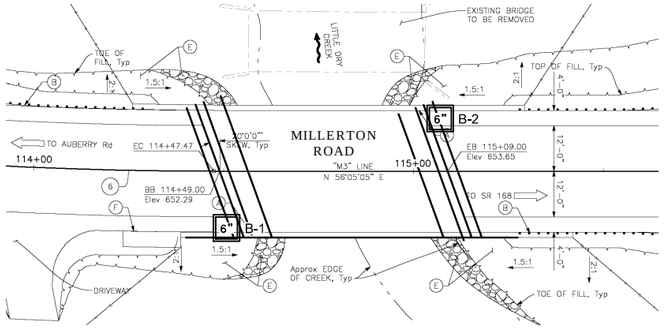
DEPARTMENT OF PUBLIC WORKS AND PLANNING

BRIDGE REMOVAL PLAN

DRAWING NO. S-11 SHEET NO. 153 TOTAL 168

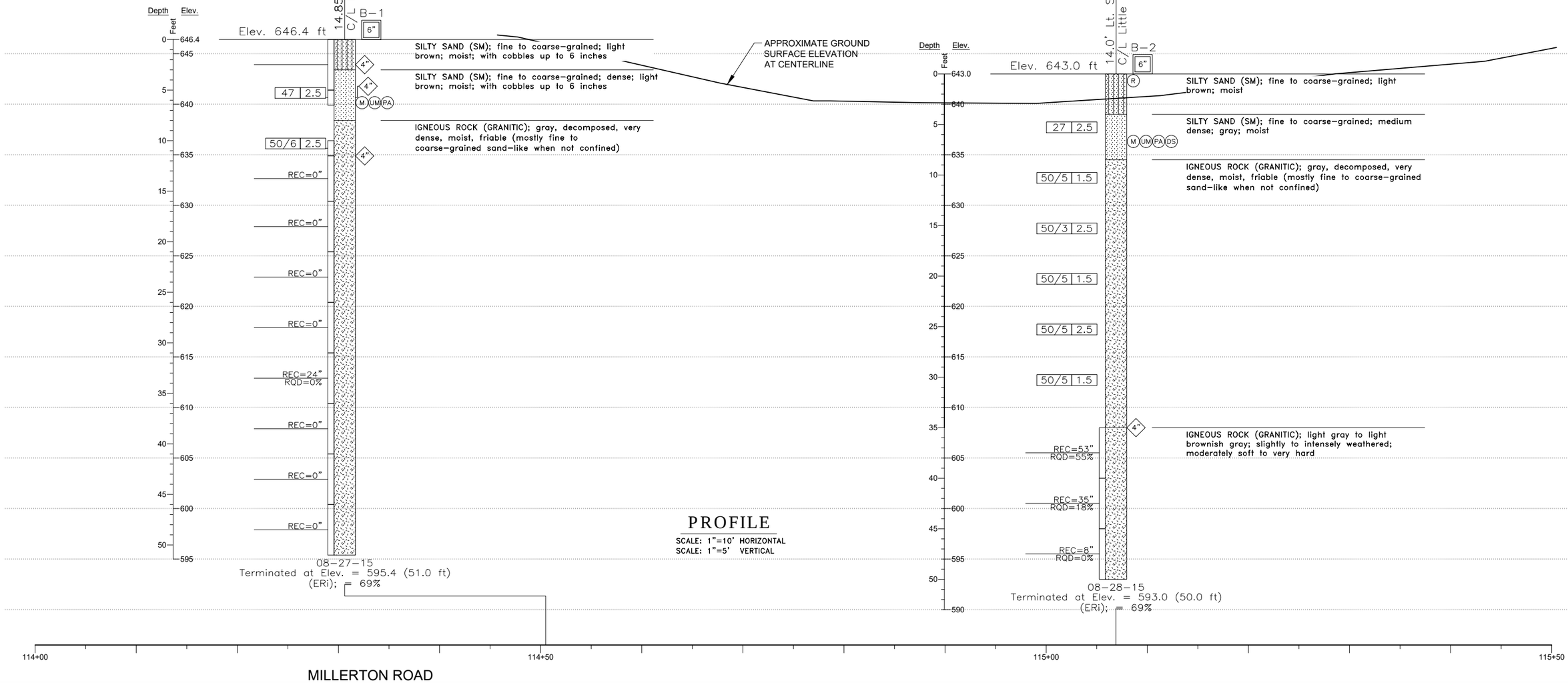
NOTES:

1. 1.5–INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) SPLIT BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.5 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
2. 2.5–INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.5 INCHES AND AN OD OF 3.0 INCHES.
3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
4. ELEVATION BASED ON TBM, SET BY DRAKE HAGLAN AND ASSOCIATES, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, ELEVATION 648.467.



PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=10' HORIZONTAL
SCALE: 1"=5' VERTICAL

MILLERTON ROAD

		DATE	RECORD DRAWING		DATE
FIELD INVESTIGATION:	M. OWENS	08/28/15	RESIDENT ENGINEER		
DRAWN:	D. FAHRNEY	09/07/16			
CHECKED:	N. POPENOE	09/07/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

PLAN 0 20' 40' HZ

PROFILE 0 5' 10' VT

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 — DATE

REGISTERED PROFESSIONAL ENGINEER — David L. Pearson — No. 674 — Exp. 12/31/15 GEOTECHNICAL — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

ROAD NO. 42C-0269 BRIDGE NO. 42C-0269

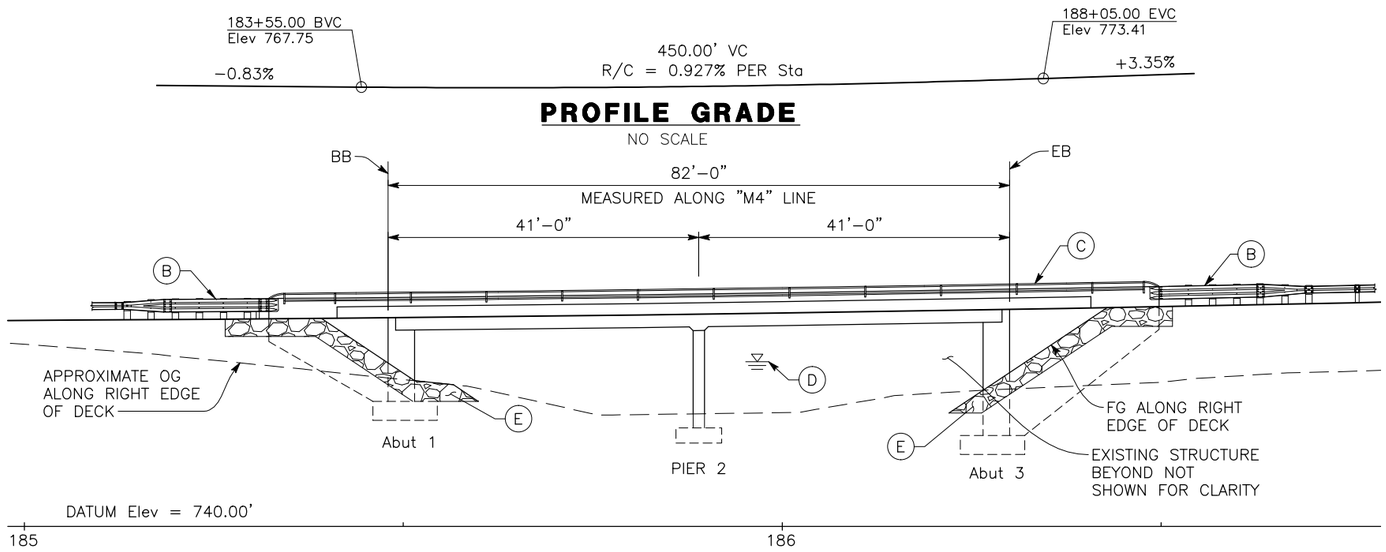
THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LOG OF TEST BORINGS

DRAWING NO. S-12 SHEET NO. 154 TOTAL 168

60% SUBMITTAL – 09/02/16 – NOT FOR CONSTRUCTION

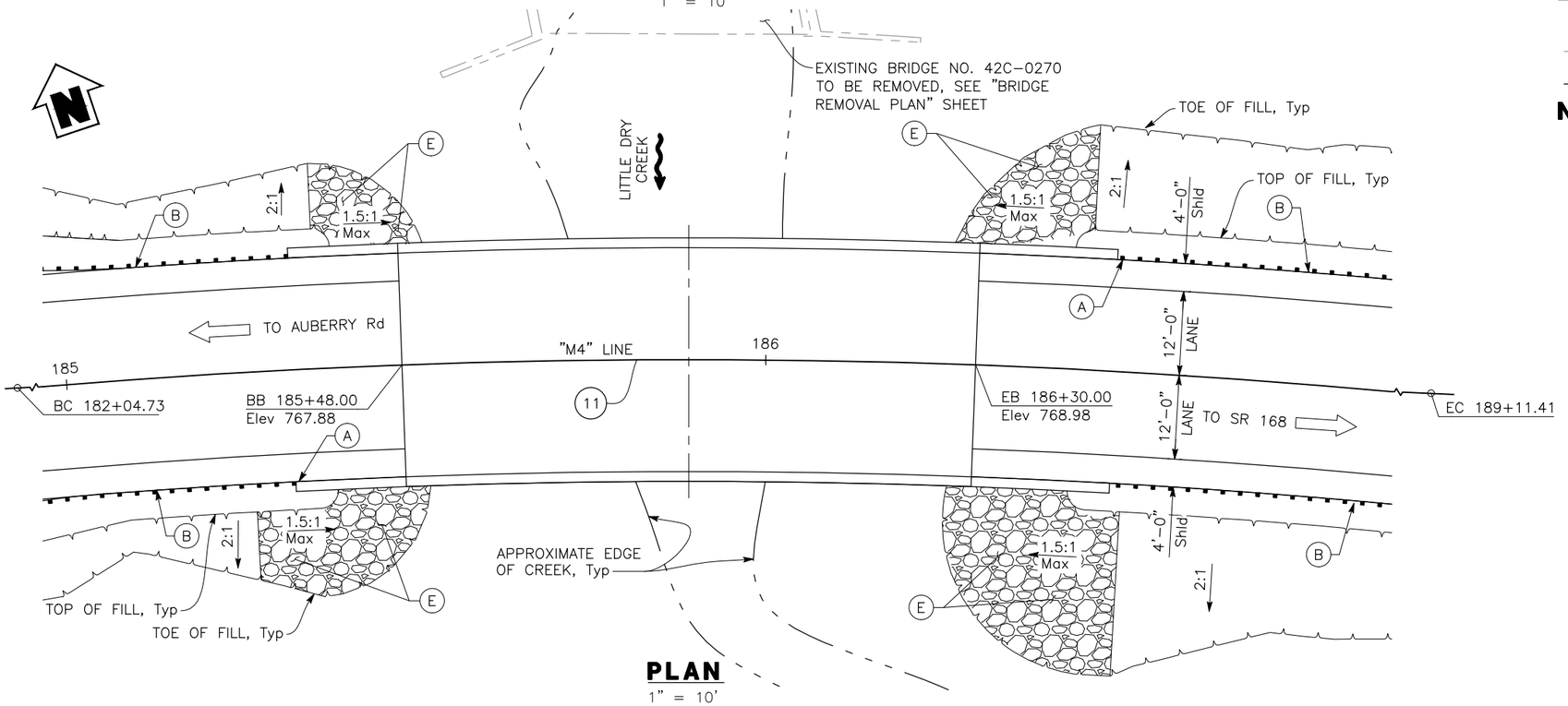


PROFILE GRADE

NO SCALE

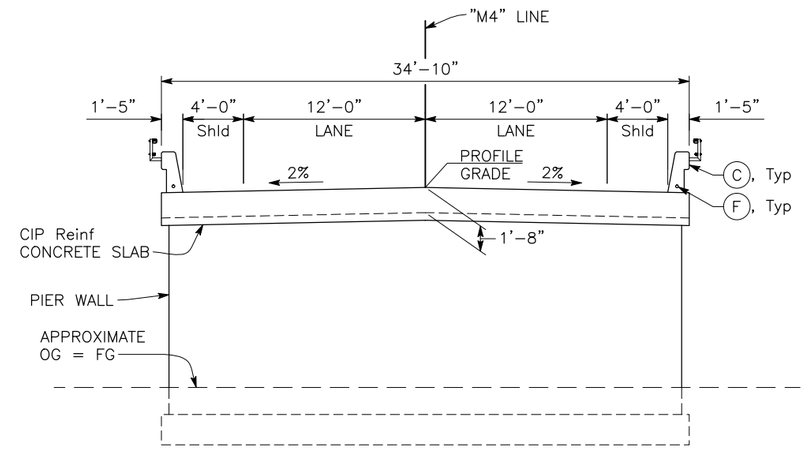
ELEVATION

1" = 10'



PLAN

1" = 10'



TYPICAL SECTION

1" = 5'

LEGEND:

Indicates Existing Structure to be Removed

Indicates New Structure

NOTES:

(A) Paint Bridge Number 42C−0270, year completed and "Little Dry Creek Br."

(B) Midwest Guardrail System (see "Roadway Plans")

(C) Concrete Barrier Type 732 with Tubular Bicycle Railing (Mod)

(D) 100 yr. WS Elevation = 762.2'. For hydrologic data, see "Foundation Plan" sheet

(E) For Rock Slope Protection and Grading Details, see "Roadway Plans"

(F) 2" Conduit for future utilities

(G) For Index to Plans, Standard Plans, General Notes, and Concrete Strength and Type Limits, see "Deck Contours" sheet

(H) For Spread Footing Data Table, Hydrologic Summary Table, and Scour Data Table, see "Foundation Plan" sheet

CURVE DATA

No.	R	Δ	T	L
(11)	1100.00'	36°48'32"	366.02'	706.68'

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

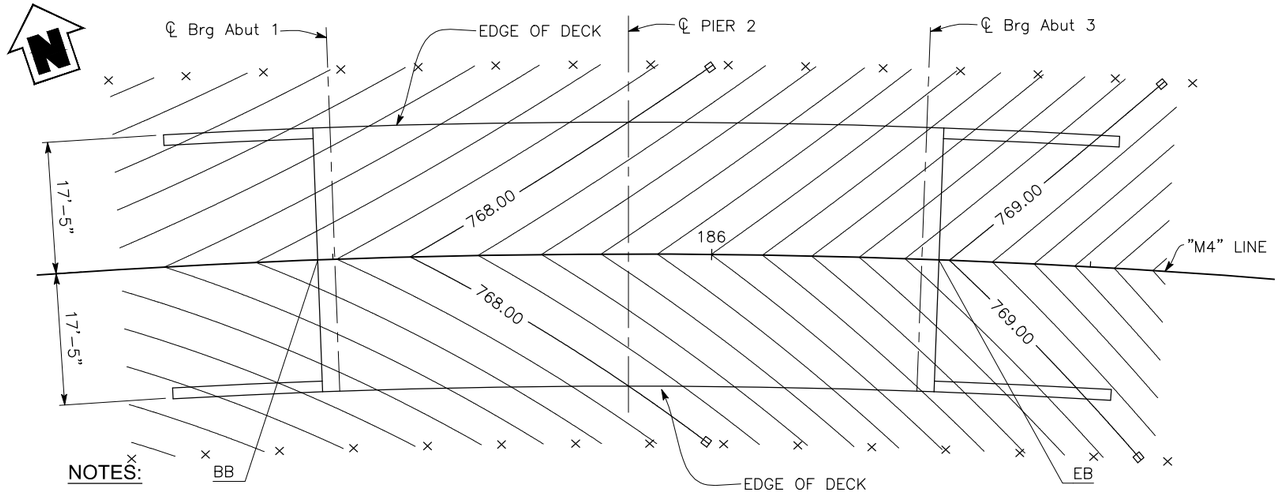
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

GENERAL PLAN

DRAWING NO. S-1 SHEET NO. 155 TOTAL 168

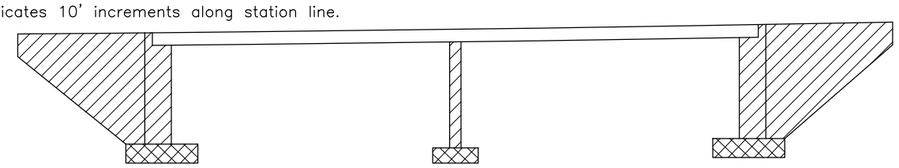


NOTES:

1. Contours do not include camber.
2. Contour interval is 0.10'.
3. □ Indicates whole foot contours.
4. × Indicates 10' increments along station line.

DECK CONTOURS

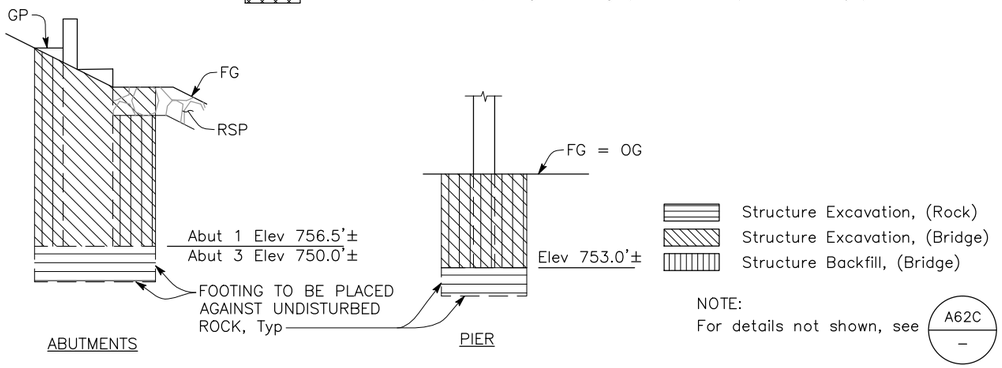
1" = 10'



CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

- Structural Concrete, Bridge (Polymer Fiber) (f'c = 5000 psi @ 28 Days)
- Structural Concrete, Bridge (f'c = 5000 psi @ 28 Days)
- Structural Concrete, Bridge Footing (f'c = 5000 psi @ 28 Days)



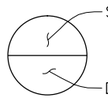
LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL

NO SCALE

INDEX TO PLANS

CALTRANS STANDARD PLANS DATED 2015

A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND–LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND–LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND–LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND–LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND–LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND–SOIL (SHEET 1 OF 2)
A10G	LEGEND–SOIL (SHEET 2 OF 2)
A10H	LEGEND–ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
B0–1	BRIDGE DETAILS
B0–3	BRIDGE DETAILS
B0–13	BRIDGE DETAILS
B6–21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11–55	CONCRETE BARRIER TYPE 732



LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition and the Caltrans Amendments, preface dated January 2014.

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC), Version 1.7 April 2013.

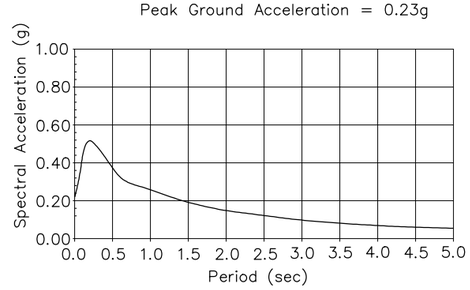
DEAD LOAD: Includes 35 psf for future wearing surface and 100 plf for future utilities.

LIVE LOADING: HL93, Low Boy, and permit design load.

SEISMIC LOADING: Soil profile: Vs30 = 350 m/s

Moment Magnitude: 6.5

Peak Ground Acceleration = 0.23g



REINFORCED CONCRETE: fy = 60 ksi
f'c = See "CONCRETE STRENGTH AND TYPE LIMITS"
n = 8

QUANTITIES		
TEMPORARY DETOUR	LS	
BRIDGE REMOVAL	LS	
STRUCTURE EXCAVATION (BRIDGE)	CY	
STRUCTURE EXCAVATION (ROCK)	CY	
STRUCTURE BACKFILL (BRIDGE)	CY	
STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	
STRUCTURAL CONCRETE, BRIDGE	CY	
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	
JOINT SEAL (TYPE A)	LF	
BAR REINFORCING STEEL (BRIDGE)	LB	
BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	LB	
TUBULAR BICYCLE RAILING (MOD)	LF	
CONCRETE BARRIER TYPE 732	LF	

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

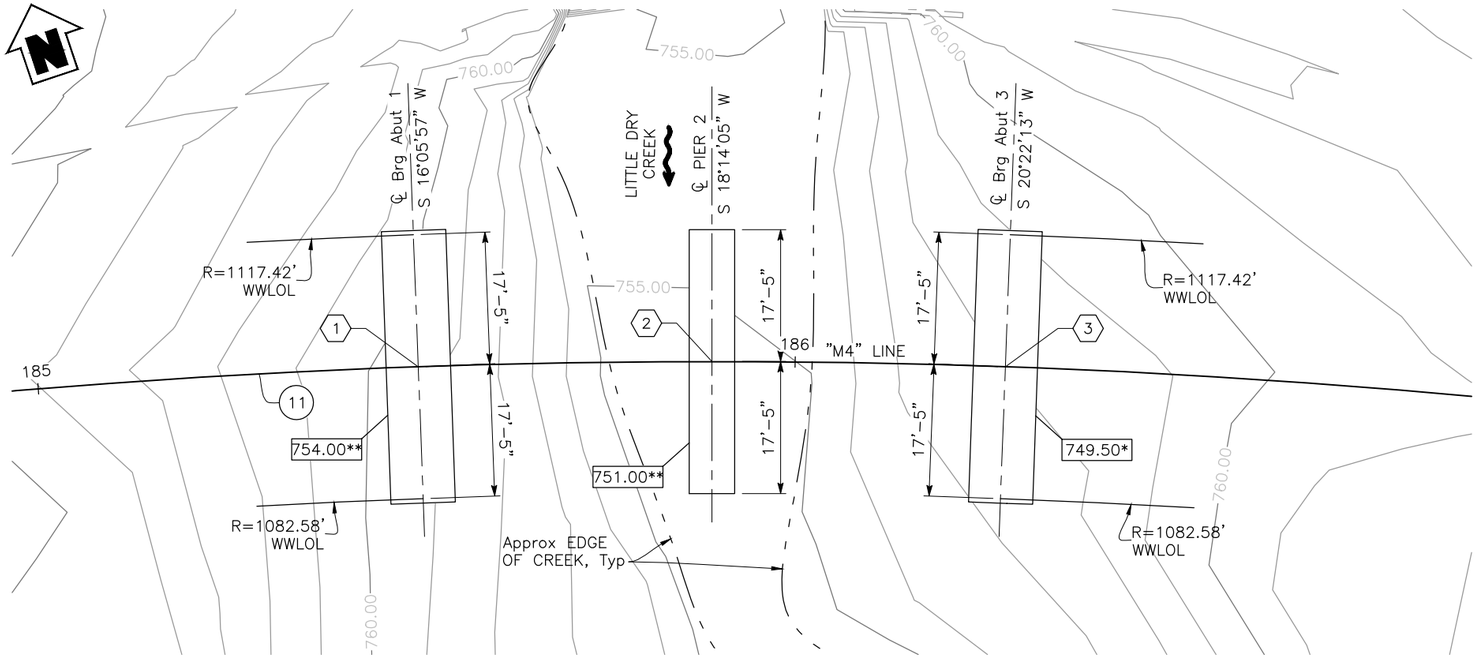
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

DECK CONTOURS

DRAWING NO. S-2 SHEET NO. 156 TOTAL 168



PLAN
1" = 10'

LEGEND:

Indicates Bottom of Footing Elevation

Indicates New Structure

BENCH MARK:

See "Roadway Plans"

NOTES:

* Bottom of footing must a minimum of 6 inches into intact rock at elevations shown. Footing elevations may be adjusted as directed by the Engineer.

** Top of footing must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

CURVE DATA

No.	R	Δ	T	L
(11)	1100.00'	36°48'32"	366.02'	706.68'

	Northing	Easting
(1) ℄ Brg Abut 1 Sta 185+50.25	2238767.6916	6401866.3362
(2) ℄ Pier 2 Sta 185+89.00	2238756.7078	6401903.1839
(3) ℄ Brg Abut 3 Sta 186+27.75	2238743.9542	6401942.2995

HYDROLOGIC SUMMARY TABLE

Drainage Area = 21.6 Square Miles

Frequency (Years)	Design Flood	Base Flood
	50	100
Discharge (Cubic Feet per Second)	3197	3902
Water Surface Elevation, Ft Immediately Upstream of Bridge	761.6	762.2

SPREAD FOOTING DATA TABLE[1]

Support Location	Service Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction Factored Gross Nominal Bearing Resistance $\phi_b = 0.50$	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 1.00$ (ksf)
Abutment 1	14.0	20.0	N/A
Pier 2	14.0	20.0	40.0
Abutment 3	14.0	20.0	N/A

SCOUR DATA

Support Number	Long Term (Degradation, Contraction and Local) Scour Elevation (Ft)
Abutment 1	756.5
Pier 2	753.0
Abutment 3	750.0

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0270

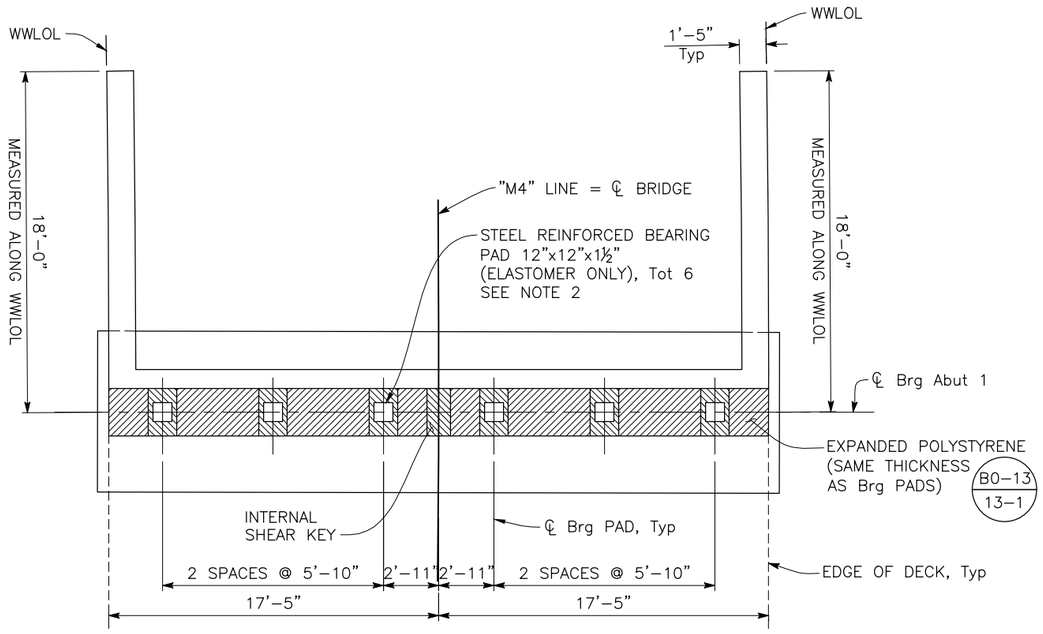
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

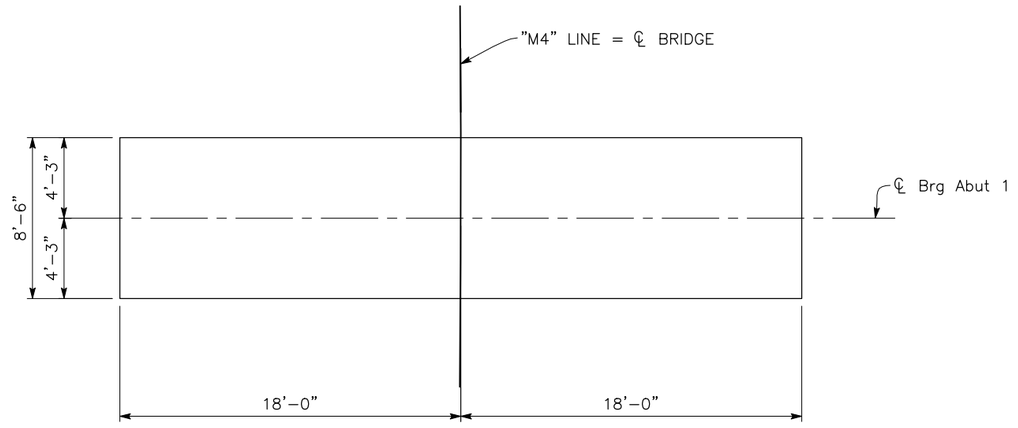
FOUNDATION PLAN

DRAWING NO. S-3 SHEET NO. 157 TOTAL 168



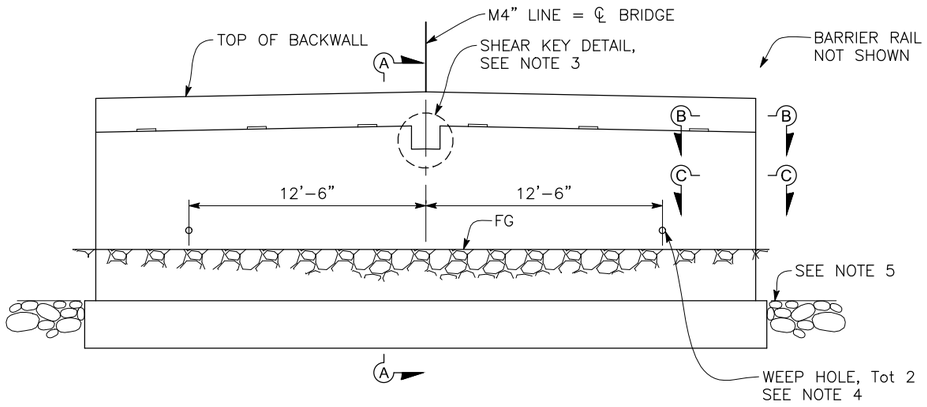
PLAN

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"



ELEVATION

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Top of footing must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			
FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.				

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

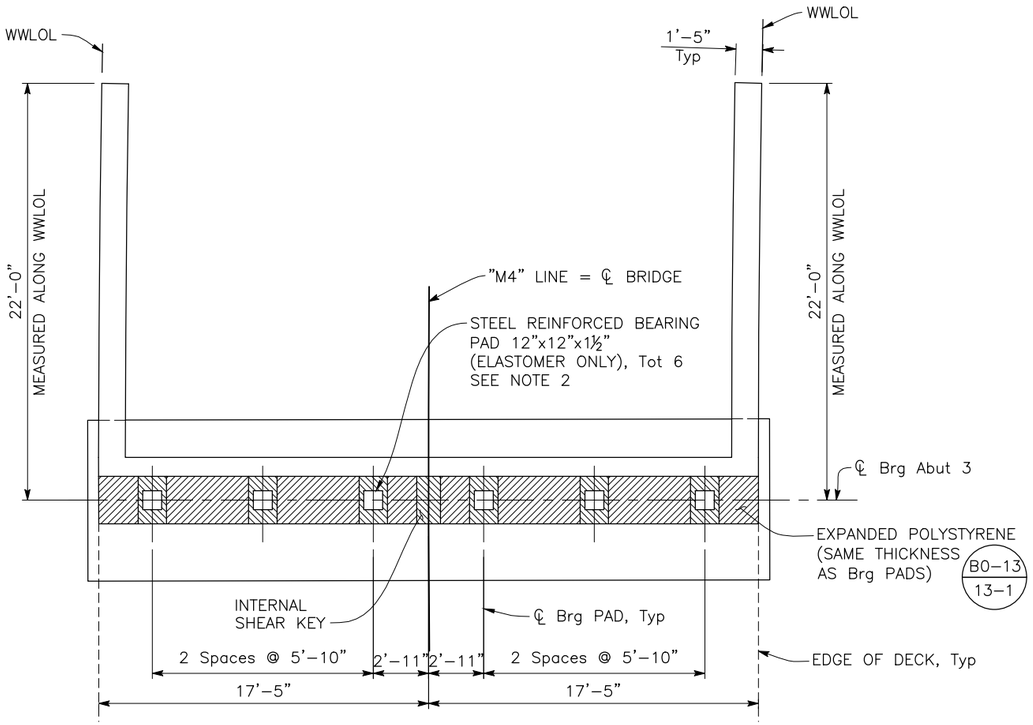
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

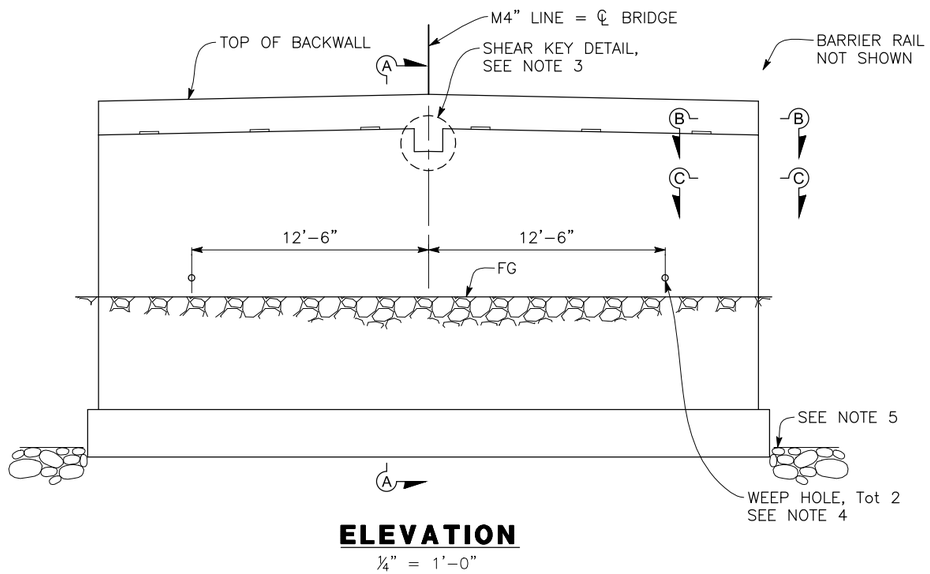
ABUTMENT 1 LAYOUT

DRAWING NO. S-4 SHEET NO. 158 TOTAL 168



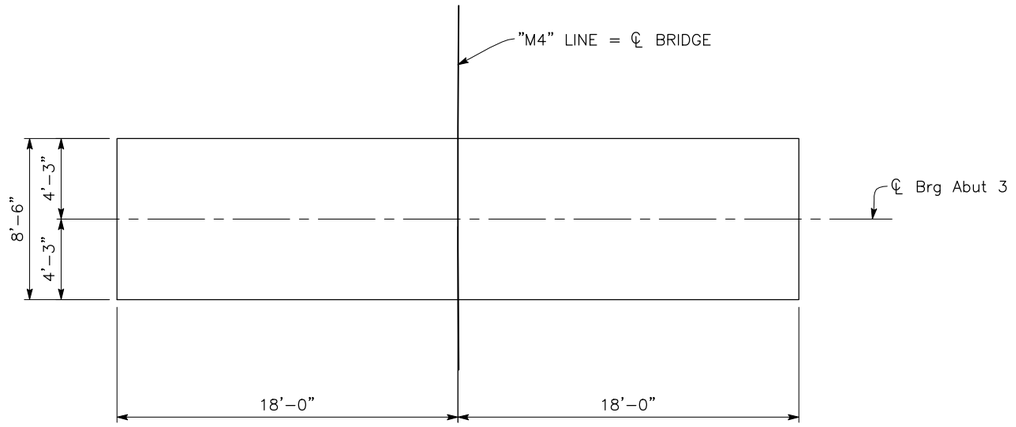
PLAN

¼" = 1'–0"



ELEVATION

¼" = 1'–0"



FOOTING PLAN

¼" = 1'–0"

NOTES:

1. For "SECTION A–A", "SECTION B–B" and "SECTION C–C", see "ABUTMENT DETAILS NO. 1" sheet.
2. For "Bearing Pad Detail", see "ABUTMENT DETAILS NO. 2" sheet.
3. For "Shear Key Detail", see "ABUTMENT DETAILS NO. 1" sheet.
4. For "Weep Hole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.
5. Bottom of footing must penetrate a minimum of 6 inches into intact rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

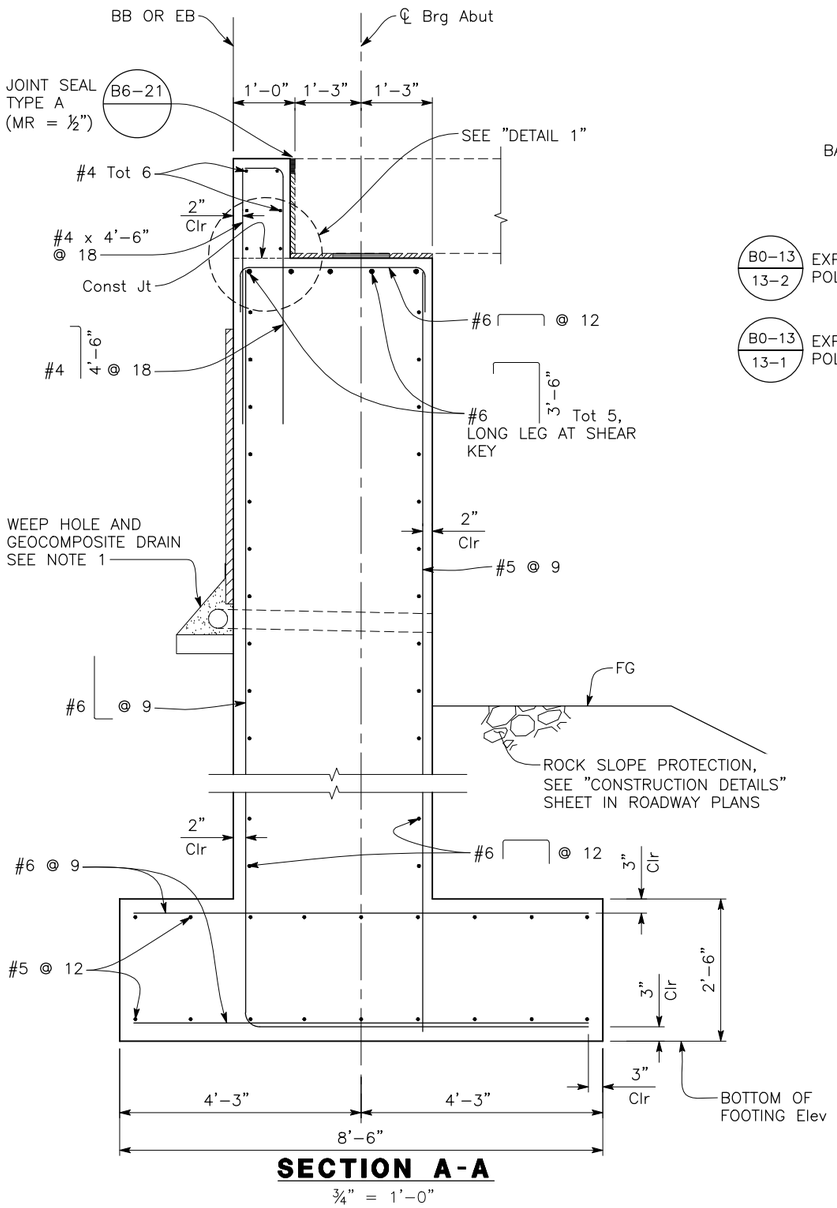
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

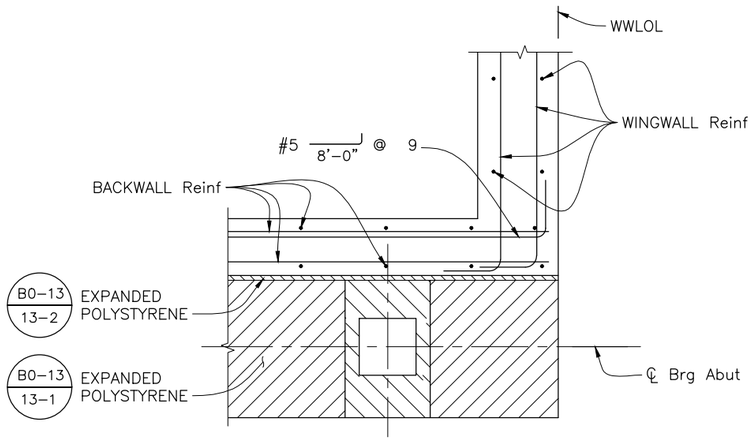
ABUTMENT 3 LAYOUT

DRAWING NO. S-5 SHEET NO. 159 TOTAL 168



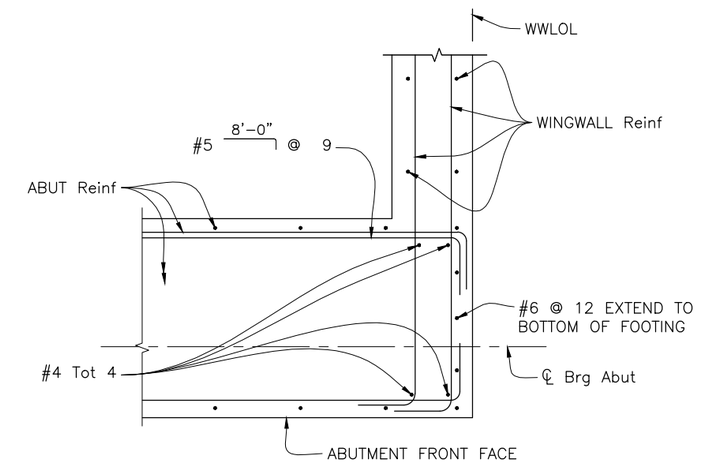
SECTION A-A

¾" = 1'–0"



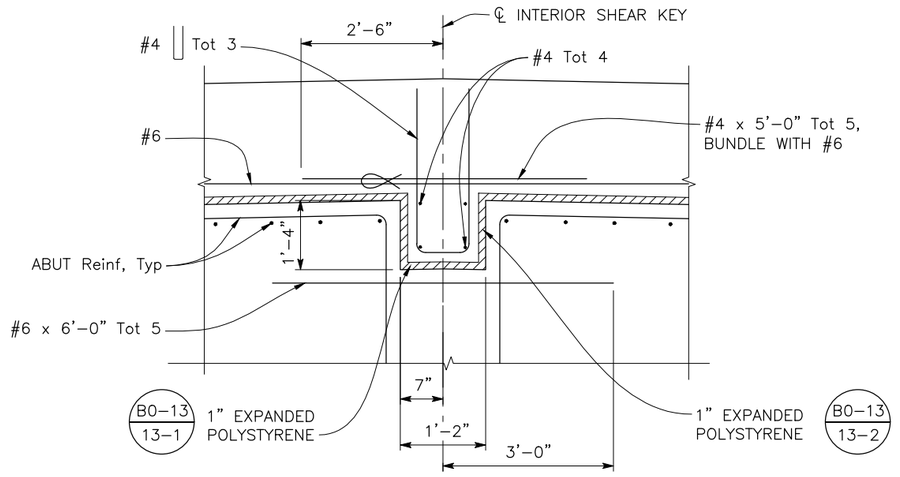
SECTION B-B

¾" = 1'–0"



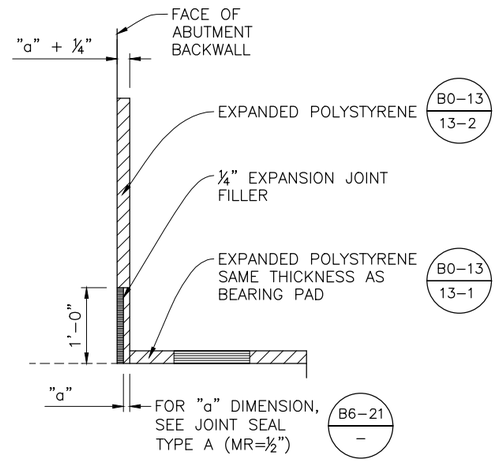
SECTION C-C

¾" = 1'–0"



SHEAR KEY DETAIL

¾" = 1'–0"



DETAIL 1

1" = 1'–0"

LEGEND:

Denotes bundled bar

NOTES:

1. For "Weephole and Geocomposite Drain Detail", see "ABUTMENT DETAILS NO. 2" sheet.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING	DATE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	
DRAWN: ED CISNEROS	9/23/2016		
CHECKED: MIKE PUGH	9/23/2016		

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE: AS SHOWN

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

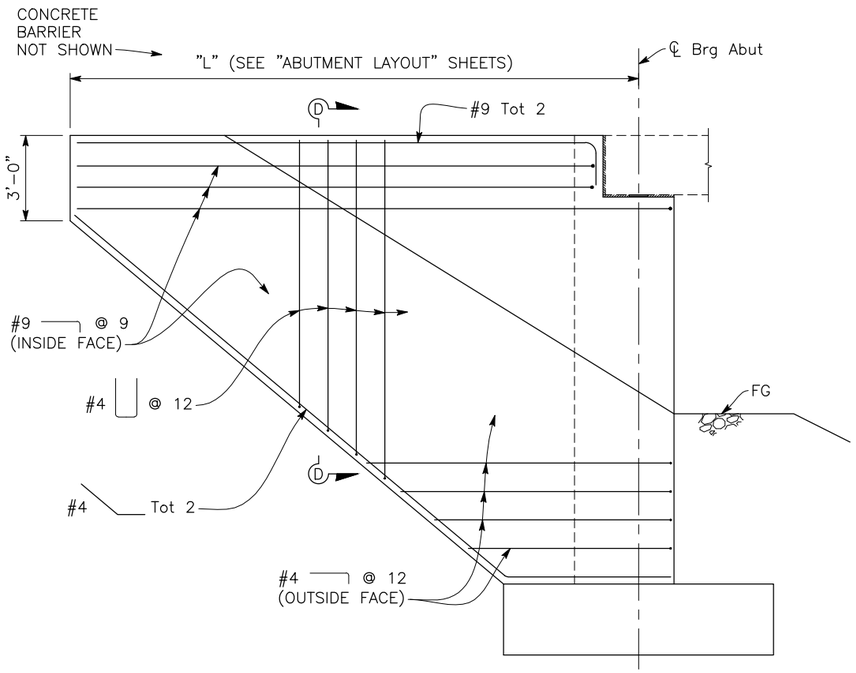
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

ABUTMENT DETAILS NO. 1

DRAWING NO. S-6 SHEET NO. 160 TOTAL 168

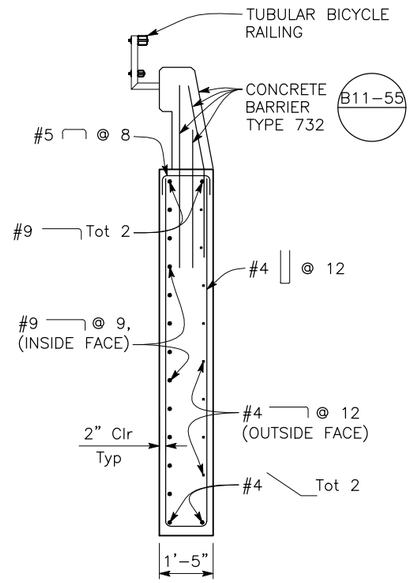


NOT ALL REINFORCEMENT SHOWN

(ABUTMENT 1 WINGWALL ELEVATION SHOWN, ABUTMENT 3 WINGWALL ELEVATIONS SIMILAR)

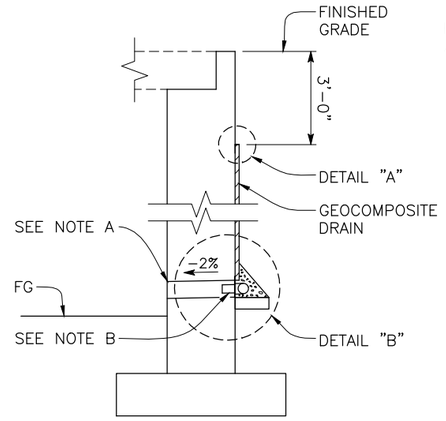
WINGWALL ELEVATION

⅜" = 1'-0"

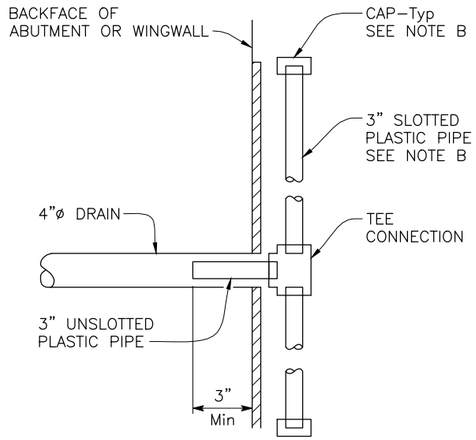


SECTION D-D

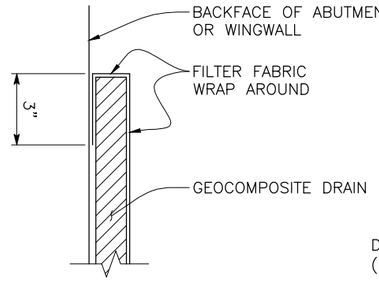
½" = 1'-0"



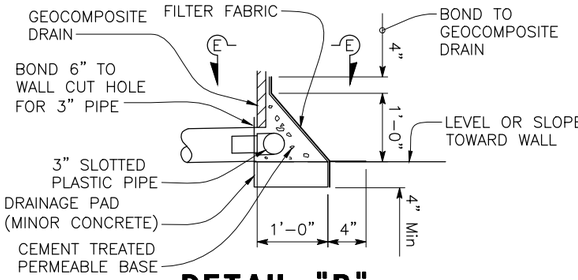
WALL SECTION



SECTION E-E



DETAIL "A"

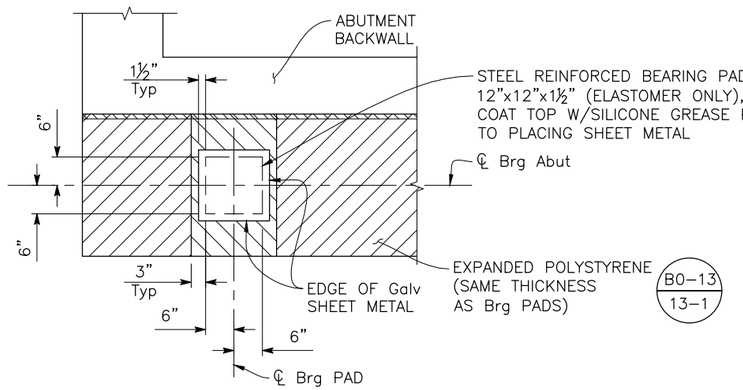


DETAIL "B"

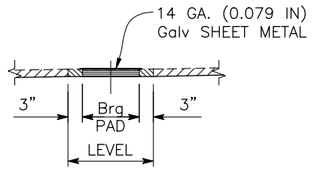
ALTERNATIVE TO BRIDGE DETAIL B0-3 / 3-1

WEEP HOLE AND GEOCOMPOSITE DRAIN DETAILS

NO SCALE



PLAN



ELEVATION

BEARING PAD DETAIL

¾" = 1'-0"

NOTES:

A. 4"ø Drains at Intermediate Sag Points and at 25'-0" Max Center to Center. Exposed Wall Drains shall be located 3"±above Finished Grade.

B. Geocomposite Drain, Cement Treated Permeable Base, Drainage Pad, and 3"ø Slotted Plastic Pipe continuous behind Wall. Cap ends of pipe. Provide "Tee" connectiion at each 4"ø drain.

C. Provide 1'-0" x 4" Drainage Pad when Pipe is not supported by Footing.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

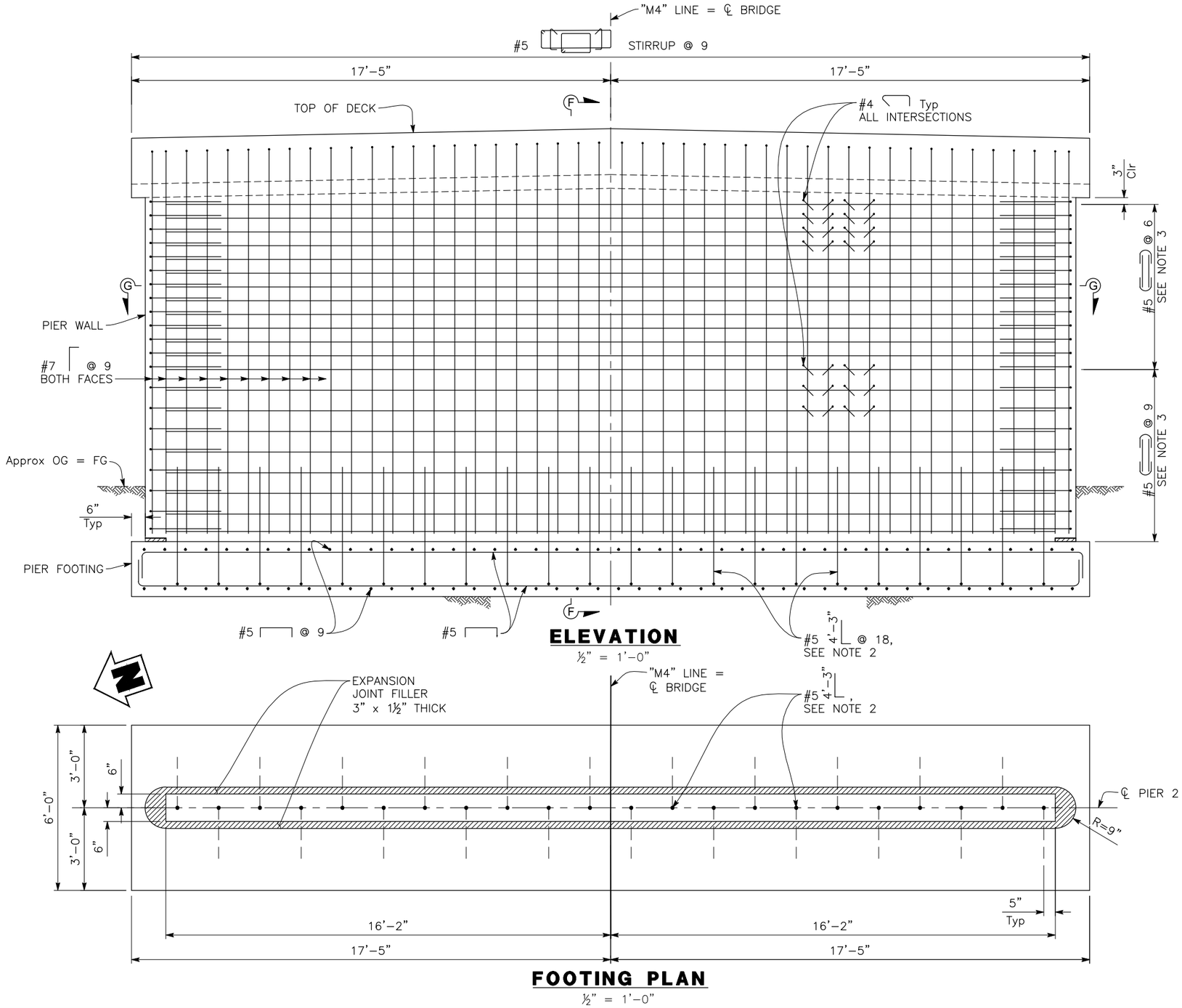
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

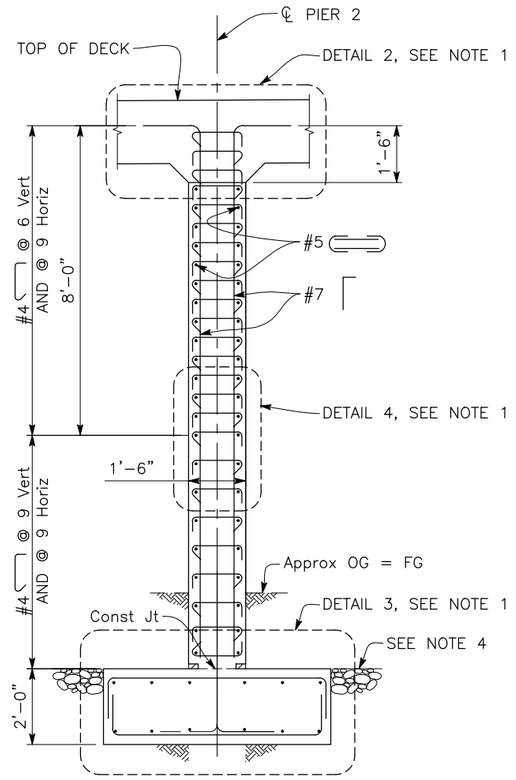
ABUTMENT DETAILS NO. 2

DRAWING NO. S-7 SHEET NO. 161 TOTAL 168



ELEVATION

½" = 1'–0"



SECTION F-F

½" = 1'–0"

FOOTING PLAN

½" = 1'–0"

NOTES:

1. For "SECTION G–G" and "DETAILS 2, 3 & 4", see "PIER DETAILS" sheet.
2. Pre–fabricated epoxy–coated reinforcement. Alternate direction of hook.
3. Vertical spacing of bundles to match that of #4 cross ties.
4. Top of footing elevation must be equal to or lower than undisturbed rock. Footing elevations may be adjusted as directed by the Engineer.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

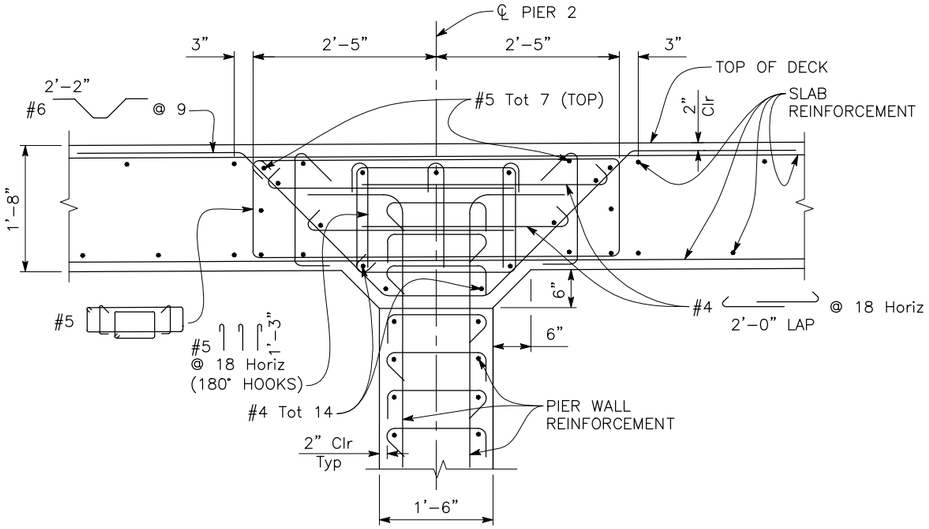
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

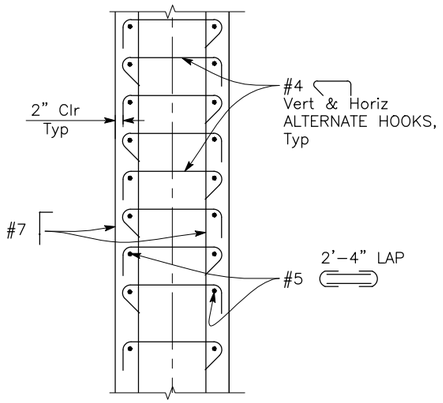
PIER LAYOUT

DRAWING NO. S-8 SHEET NO. 162 TOTAL 168



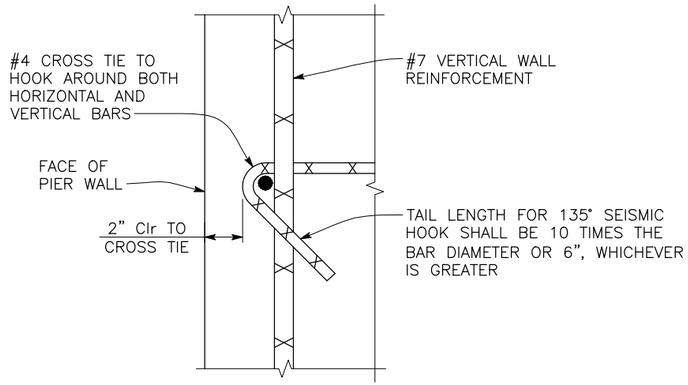
DETAIL 2

1" = 1'–0"



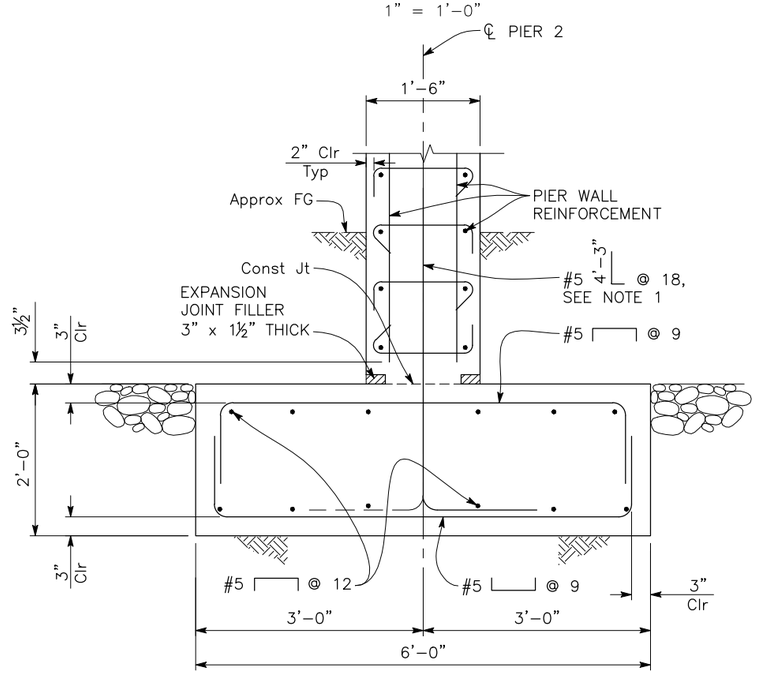
DETAIL 4

¾" = 1'–0"



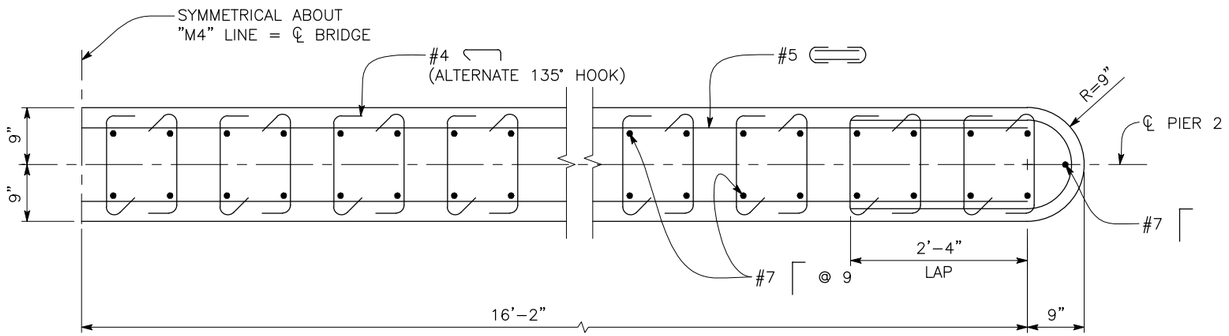
CROSS TIE DETAIL

3" = 1'–0"



DETAIL 3

1" = 1'–0"



PART SECTION G-G

1" = 1'–0"

NOTES:

1. Pre–fabricated epoxy–coated reinforcement. Alternate direction of hook.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

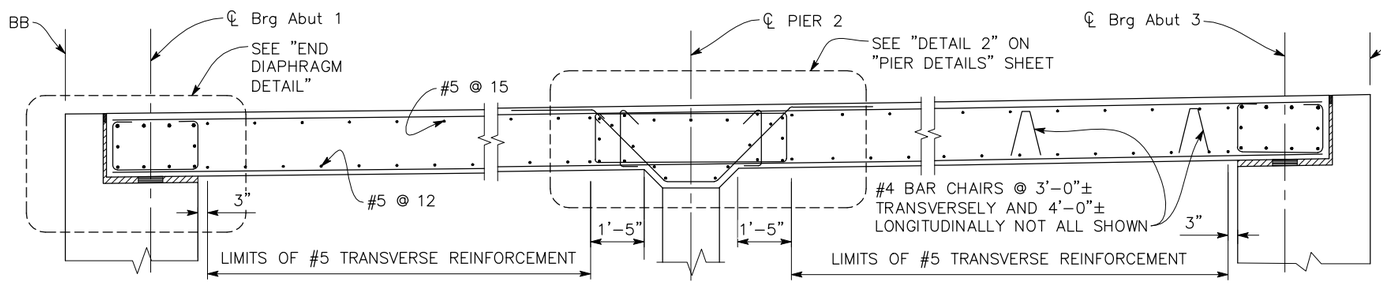
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

PIER DETAILS

DRAWING NO. S-9 SHEET NO. 163 TOTAL 168

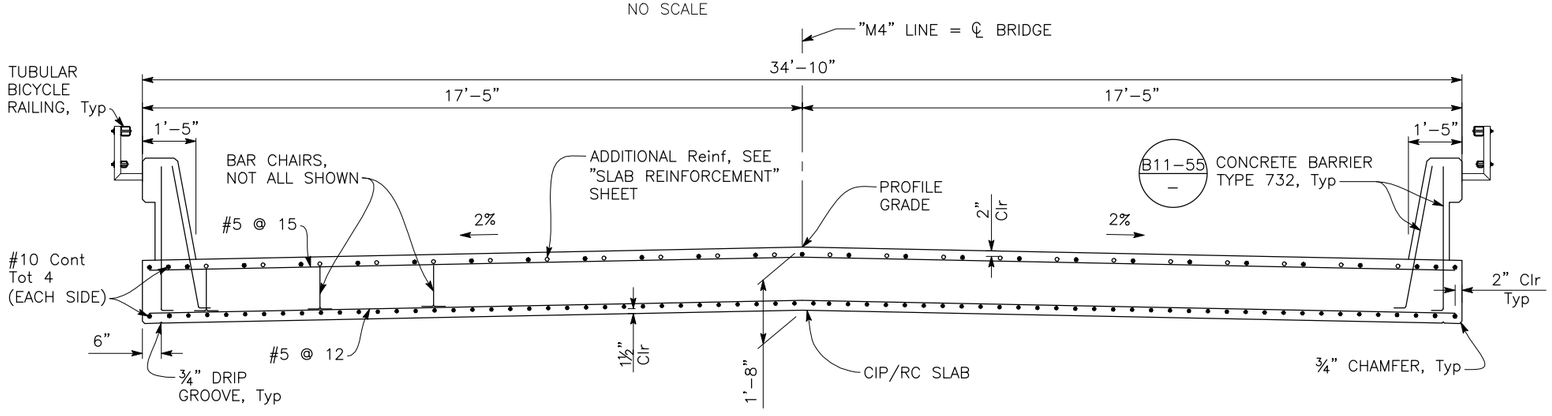


LONGITUDINAL SECTION

NO SCALE

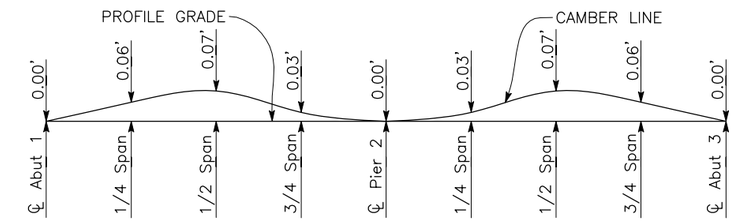
BAR SPLICE LENGTH (INCHES)								
BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
ALL BARS EXCEPT TOP BARS IN SPANS OVER 23'	23	28	34	39	45	68	76	85
TOP BARS IN SPANS OVER 23'	23	28	34	53	60	77	97	120

NOTE:
Splices in top Main Bars to be located near center of span.
Splices in bottom Main Bars to be located near Pier.



TYPICAL SECTION

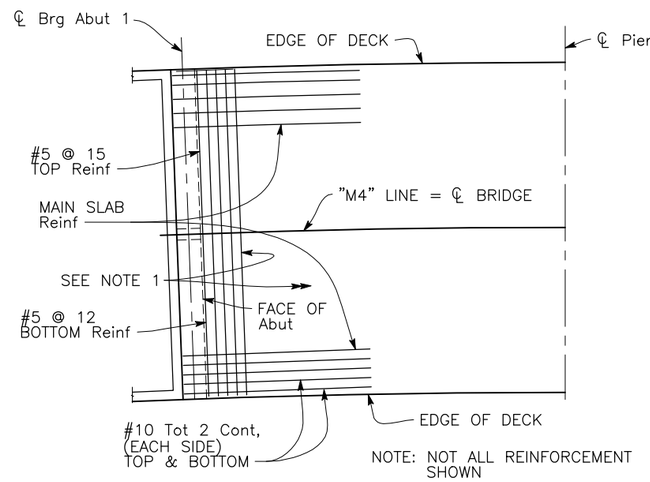
½" = 1'-0"



NOTE:
Camber Diagram does not include allowances for falsework settlement

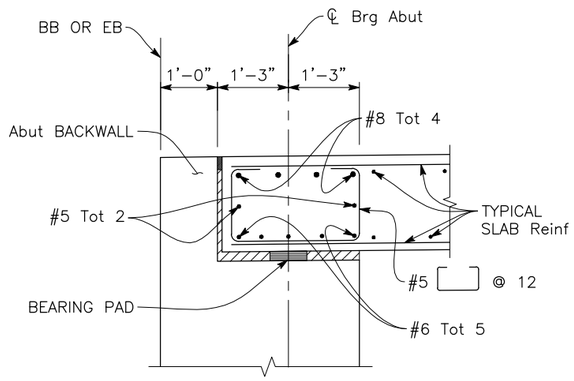
CAMBER DIAGRAM

NO SCALE



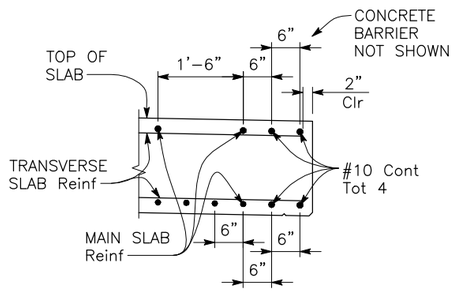
PART DECK PLAN

⅛" = 1'-0"



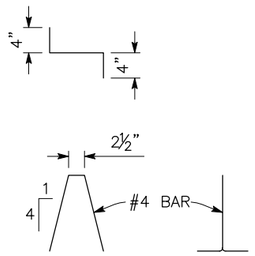
END DIAPHRAGM DETAIL

½" = 1'-0"



END OF SLAB DETAIL

½" = 1'-0"



BAR CHAIR DETAIL

1" = 1'-0"

NOTES:

1. Transverse Reinforcement place radially and space along "M4" Line.
2. Hooked edge bars must be fully developed at both the start and end. Minimum development should be 3'-0" on the straight portions of the bars.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0270

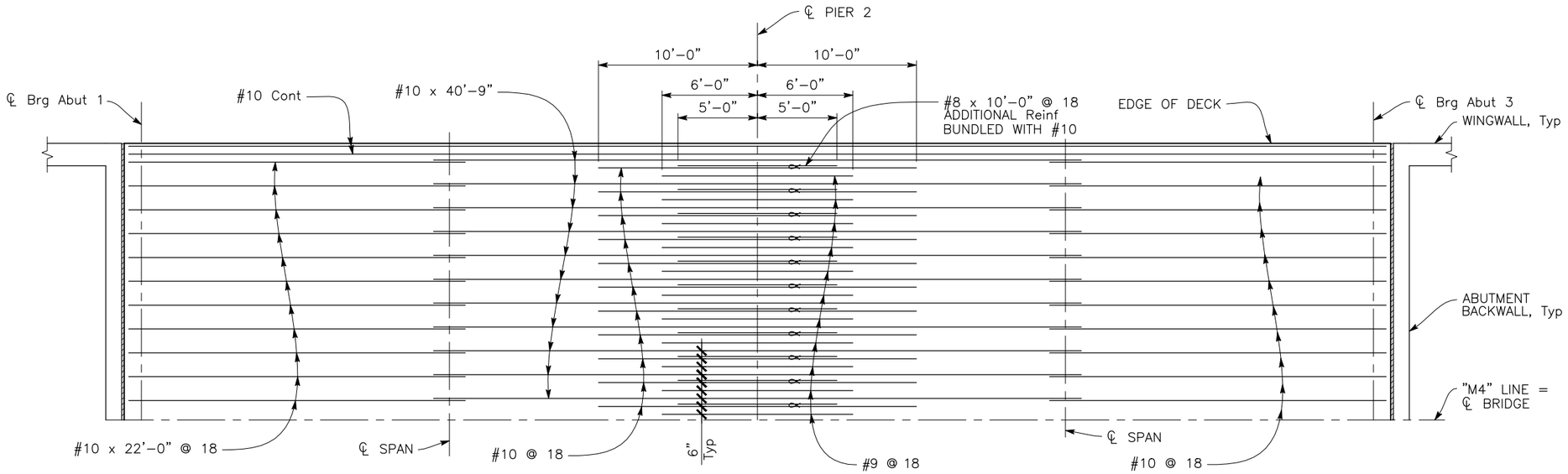
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING

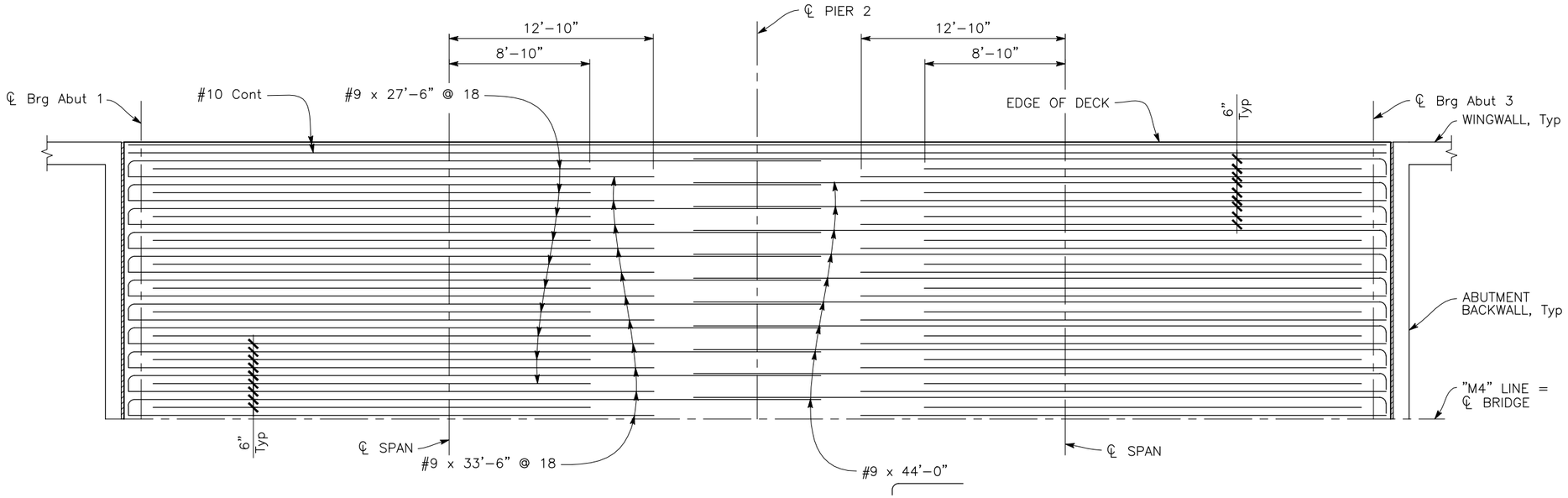
TYPICAL SECTION

DRAWING NO. S-10 SHEET NO. 164 TOTAL 168



TOP REINFORCEMENT

¼" = 1'–0"



BOTTOM REINFORCEMENT

¼" = 1'–0"

LEGEND:

Denotes bundled bar

NOTES:

1. Reinforcement symmetrical about ℄ of Bridge.

60% SUBMITTAL - NOT FOR CONSTRUCTION

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MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

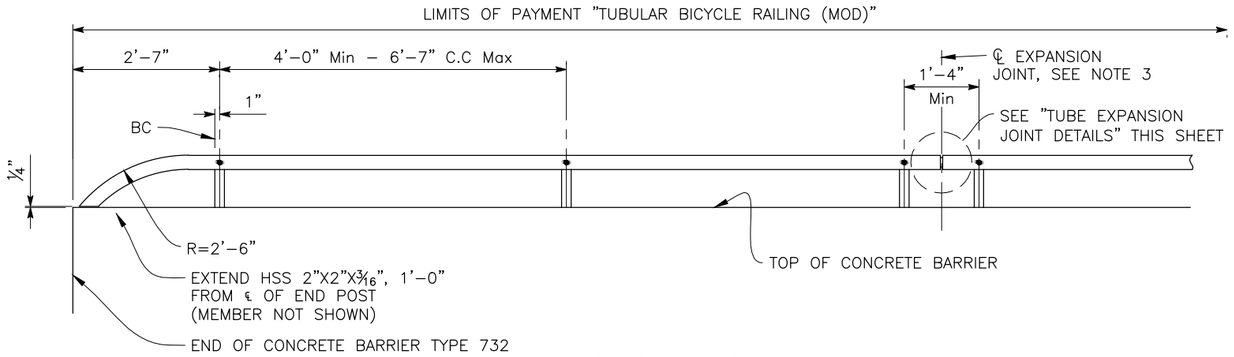
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

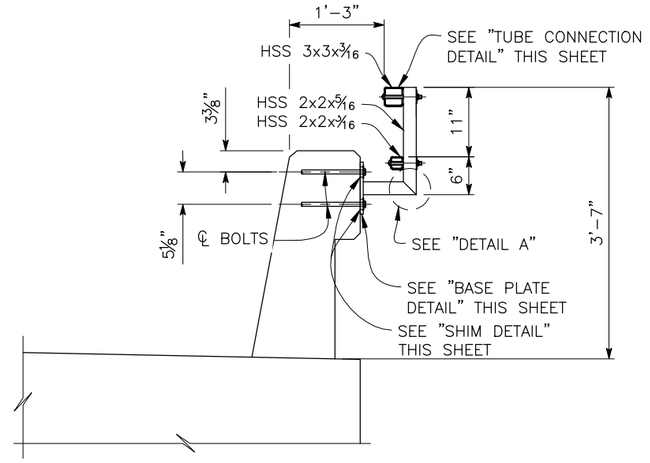
DEPARTMENT OF PUBLIC WORKS AND PLANNING

SLAB REINFORCEMENT

DRAWING NO. S-11 SHEET NO. 165 TOTAL 168

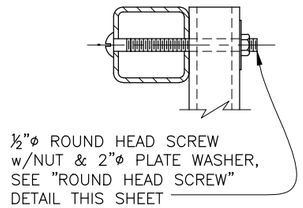


ELEVATION
3/4" = 1'-0"

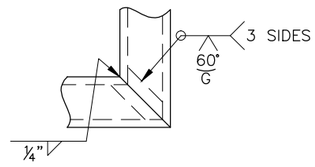


TYPE 732
1" = 1'-0"

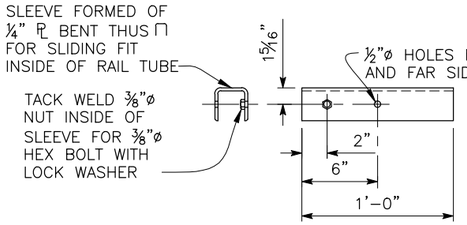
B11-55



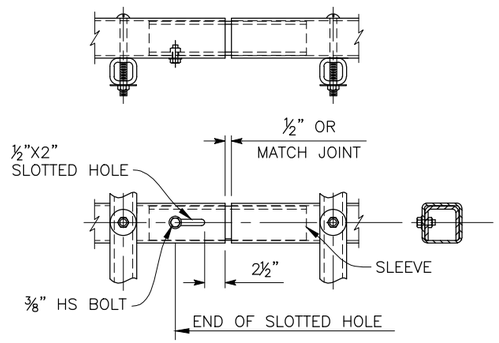
TUBE CONNECTION DETAIL
NO SCALE



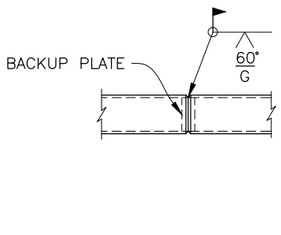
DETAIL A
NO SCALE



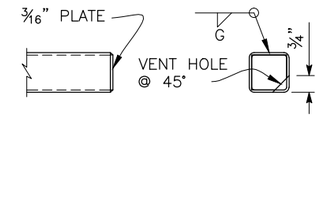
SLEEVE DETAIL
NO SCALE



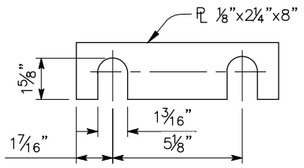
TUBE EXPANSION DETAIL
NO SCALE



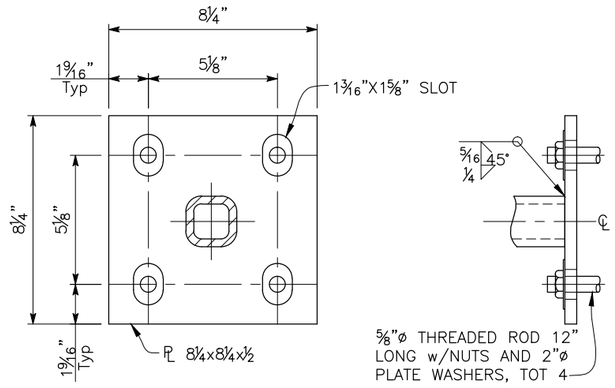
WELDED SPLICE DETAIL
NO SCALE



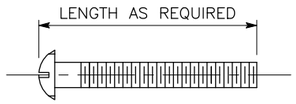
RAIL CAP DETAIL
NO SCALE



SHIM DETAIL
NO SCALE



BASE PLATE DETAIL
NO SCALE



ROUND HEAD SCREW DETAIL
NO SCALE

NOTES:

1. Posts shall be normal to railing.
2. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 12".
3. Tube expansion joints shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
4. Top rail tube shall be continuous over not less than two posts except a short post spacing is permitted near deck or wall joints or other rail discontinuities as noted.

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

MICHAEL PUGH, SUPERVISING ENGINEER — 9/23/2016, DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT

LITTLE DRY CREEK BRIDGE REPLACEMENT

BRIDGE NO. 42C-0270

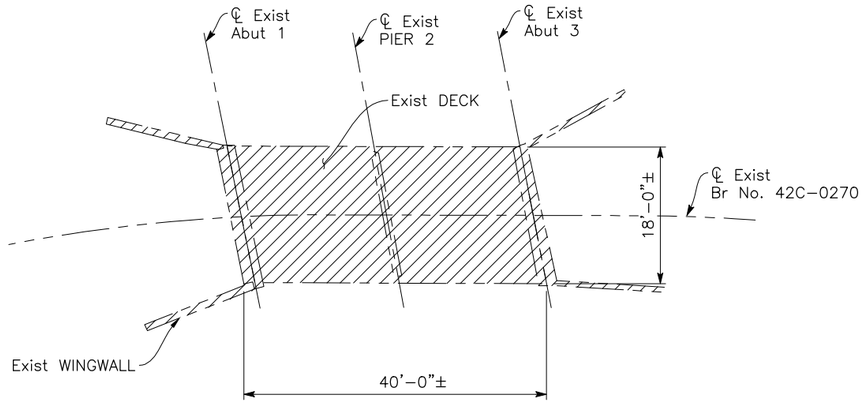
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

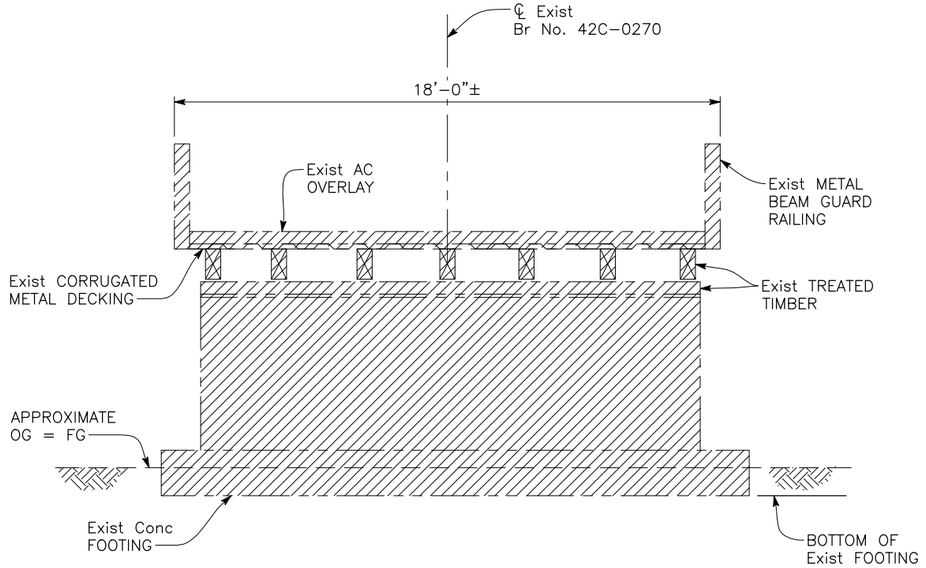
DEPARTMENT OF PUBLIC WORKS AND PLANNING

TUBULAR BICYCLE RAILING

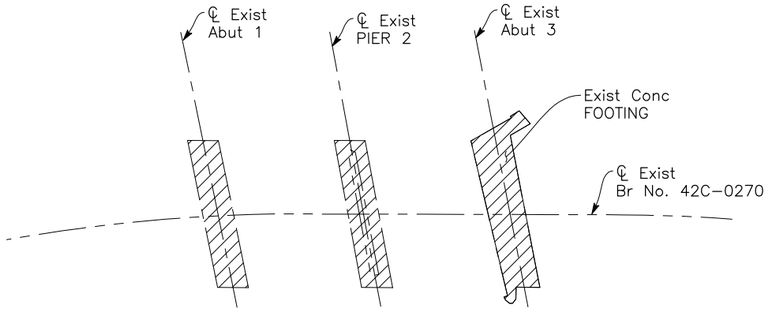
DRAWING NO. S-12 SHEET NO. 166 TOTAL 168



PLAN
1" = 10'



EXISTING ABUTMENTS AND PIERS
NO SCALE



FOOTING PLAN
1" = 10'

LEGEND:

Indicates Existing Structure

Indicates Bridge Removal

60% SUBMITTAL - NOT FOR CONSTRUCTION

	DATE	RECORD DRAWING		SCALE
DESIGNED: REBECCA BAUTISTA	9/23/2016	RESIDENT ENGINEER	DATE	AS SHOWN
DRAWN: ED CISNEROS	9/23/2016			
CHECKED: MIKE PUGH	9/23/2016			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

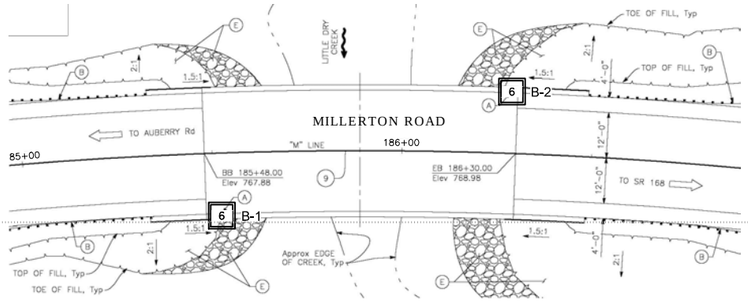
MICHAEL PUGH — SUPERVISING ENGINEER — 9/23/2016 DATE

REGISTERED PROFESSIONAL ENGINEER — R. BAUTISTA — No. 81312 — Exp. 09-30-2017 — STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT
BRIDGE NO. 42C-0270
ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO 1856

DEPARTMENT OF PUBLIC WORKS AND PLANNING
BRIDGE REMOVAL PLAN
DRAWING NO. S-13 SHEET NO. 167 TOTAL 168

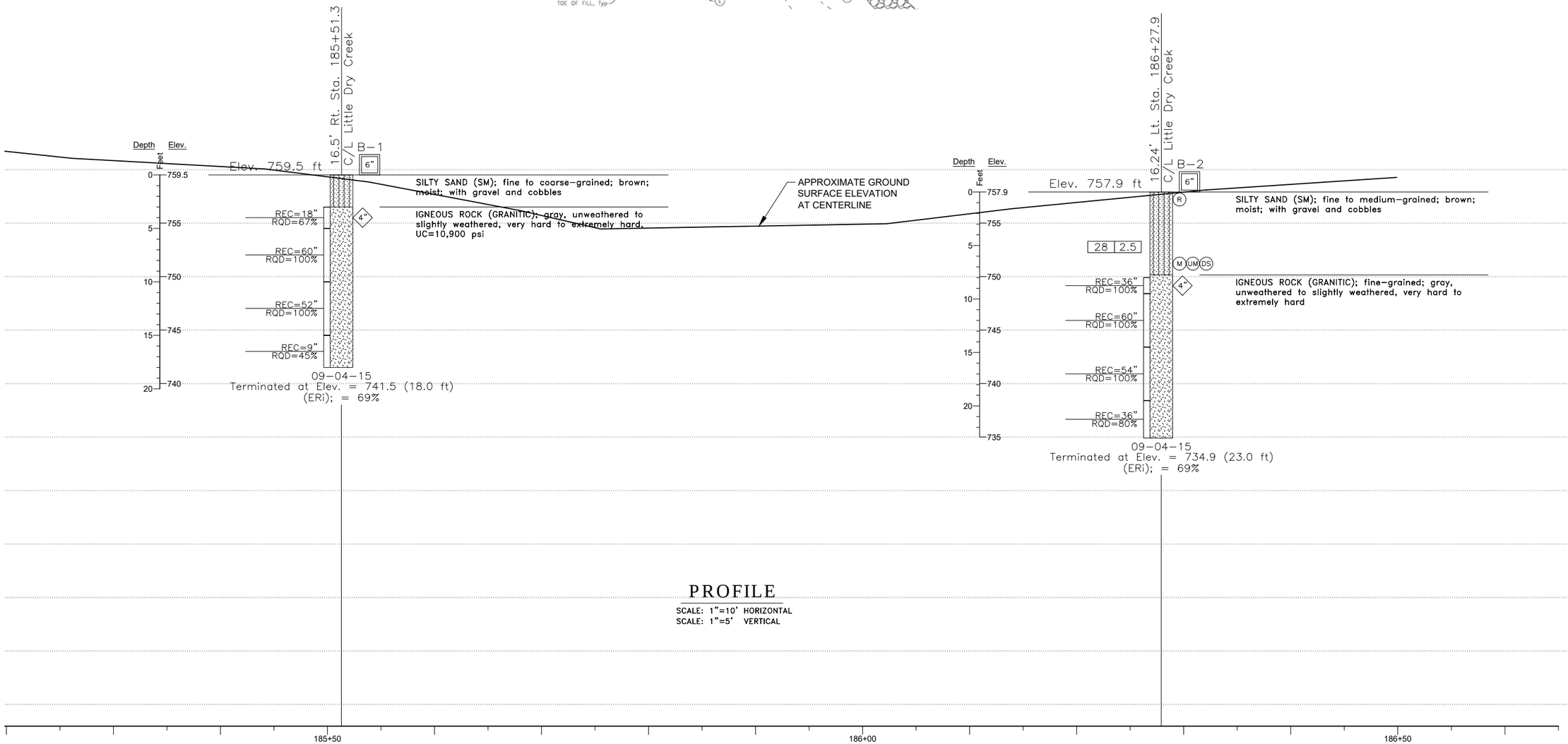


PLAN

SCALE: 1"=20'

NOTES:

1. 1.5–INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) SPLIT BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.5 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
2. 2.5–INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.5 INCHES AND AN OD OF 3.0 INCHES.
3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
4. ELEVATION BASED ON TBM, SET BY DRAKE HAGLAN AND ASSOCIATES, LOCATED ON THE SOUTHEAST CONCRETE WINGWALL OF BRIDGE 042C–0269, ELEVATION 648.467.



PROFILE

SCALE: 1"=10' HORIZONTAL
SCALE: 1"=5' VERTICAL

MILLERTON ROAD

60% SUBMITTAL – 09/02/16 – NOT FOR CONSTRUCTION

		DATE	RECORD DRAWING		DATE
FIELD INVESTIGATION:	M. OWENS	09/04/15	RESIDENT ENGINEER		
DRAWN:	D. FAHRNEY	09/07/16			
CHECKED:	N. POPENOE	09/07/16			

FOR RIGHT OF WAY DATA AND ACCURATE ACCESS DETERMINATION, SEE DOCUMENTS IN THE DEPARTMENT OF PUBLIC WORKS AND PLANNING.

SCALE

PLAN 0 20' 40' HZ

PROFILE 0 5' 10' VT

MICHAEL PUGH
SUPERVISING ENGINEER

9/23/2016
DATE

REGISTERED PROFESSIONAL ENGINEER
David L. Pearson
No. 674
Exp. 12/31/15
GEOTECHNICAL
STATE OF CALIFORNIA

PROJECT
LITTLE DRY CREEK BRIDGE REPLACEMENT ON MILLERTON ROAD

ROAD NO. 42C-0270 BRIDGE NO. 42C-0270

THE COUNTY OF FRESNO

DEPARTMENT OF PUBLIC WORKS AND PLANNING

LOG OF TEST BORINGS

DRAWING NO. S-14 SHEET NO. 168 TOTAL 168

Appendix B –USFWS, CNDDB, CNPS, and NMFS Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: May 12, 2017
Consultation Code: 08ESMF00-2017-SLI-2046
Event Code: 08ESMF00-2017-E-05241
Project Name: Little Dry Creek Bridges Replacement Project on Millerton Road

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-2046

Event Code: 08ESMF00-2017-E-05241

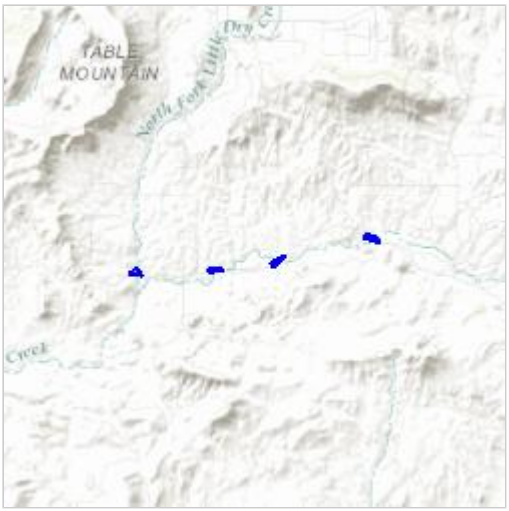
Project Name: Little Dry Creek Bridges Replacement Project on Millerton Road

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: CFF1501A

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/36.97003311081795N119.58131023028966W



Counties: Fresno, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Fresno Kangaroo Rat *(Dipodomys nitratoides exilis)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox *(Vulpes macrotis mutica)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *(Gambelia silus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake *(Thamnophis gigas)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *(Rana draytonii)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *(Ambystoma californiense)* Population: U.S.A. (Central CA DPS) There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *(Hypomesus transpacificus)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *(Branchinecta conservatio)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *(Lepidurus packardi)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

There are no critical habitats within your project area.

Quad Name **Academy**
Quad Number **36119-H5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Auberry (3711914) OR Academy (3611985) OR Clovis (3611976) OR Friant (3611986) OR Humphreys Station (3611984) OR Millerton Lake East (3711915) OR Millerton Lake West (3711916) OR Piedra (3611974) OR Round Mountain (3611975))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Allium abramsii Abrams' onion	PMLIL02360	None	None	G3	S3	1B.2
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calasellus longus An isopod	ICMAL34020	None	None	G1	S1	
Calicina macula marbled harvestman	ILARAU8060	None	None	G1	S1	
Calicina mesaensis Table Mountain harvestman	ILARAU8070	None	None	G1	S1	
Calicina piedra Piedra harvestman	ILARAU8080	None	None	G1	S1	
Calyptridium pulchellum Mariposa pussypaws	PDPOR09060	Threatened	None	G1	S1	1B.1
Carpenteria californica tree-anemone	PDHDR04010	None	Threatened	G1?	S1?	1B.2
Castilleja campestris var. succulenta succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Caulanthus californicus California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chrysis tularensis Tulare cuckoo wasp	IIHYM72010	None	None	G1G2	S1S2	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Cryptantha hooveri Hoover's cryptantha	PDBOR0A190	None	None	GH	SH	1A
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Efferia antiochi Antioch efferian robberfly	IIDIP07010	None	None	G1G2	S1S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eriastrum tracyi Tracy's eriastrum	PDPLM030C0	None	Rare	G3Q	S3	3.2
Eryngium spinosepalum spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
Erythranthe gracilipes slender-stalked monkeyflower	PDSCR1B1C0	None	None	G2	S2	1B.2
Euderma maculatum spotted bat	AMACC07010	None	None	G4	S3	SSC
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Great Valley Mixed Riparian Forest Great Valley Mixed Riparian Forest	CTT61420CA	None	None	G2	S2.2	
Imperata brevifolia California satintail	PMPOA3D020	None	None	G4	S3	2B.1
Lagophylla dichotoma forked hare-leaf	PDAST5J070	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Leptosiphon serrulatus Madera leptosiphon	PDPLM09130	None	None	G3	S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lupinus citrinus var. citrinus orange lupine	PDFAB2B103	None	None	G2T2	S2	1B.2
Lytta moesta moestan blister beetle	IICOL4C020	None	None	G2	S2	
Lytta molesta molestan blister beetle	IICOL4C030	None	None	G2	S2	
Metapogon hurdi Hurd's metapogon robberfly	IIDIP08010	None	None	G1G3	S1S3	
Northern Basalt Flow Vernal Pool Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	G3	S2.2	
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Oravelia pege Dry Creek cliff strider bug	IIHEM14010	None	None	G1	S1	
Orcuttia inaequalis San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Pseudobahia bahiifolia Hartweg's golden sunburst	PDAST7P010	Endangered	Endangered	G2	S2	1B.1
Pseudobahia peirsonii San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
Rana boylii foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Sidalcea keckii Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Sycamore Alluvial Woodland Sycamore Alluvial Woodland	CTT62100CA	None	None	G1	S1.1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Tuctoria greenei Greene's tuctoria	PMPOA6N010	Endangered	Rare	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	
Vulpes vulpes necator Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 64

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

32 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3711916, 3711915, 3711914, 3611986, 3611985, 3611984, 3611976 3611975 and 3611974;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium abramsii	Abram's onion	Alliaceae	perennial bulbiferous herb	May-Jul	1B.2	S3	G3
Bryum chryseum	brassy bryum	Bryaceae	moss		4.3	S3	G5
Calyptridium pulchellum	Mariposa pussypaws	Montiaceae	annual herb	Apr-Aug	1B.1	S1	G1
Carpenteria californica	tree-anemone	Hydrangeaceae	perennial evergreen shrub	(Apr)May-Jul	1B.2	S1?	G1?
Castilleja campestris var. succulenta	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	1B.2	S2S3	G4? T2T3
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	4.2	S4	G4
Cordylanthus rigidus ssp. brevibracteatus	short-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug(Oct)	4.3	S4	G5T4
Delphinium hansenii ssp. ewanianum	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	4.2	S3	G4T3
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Eriastrum tracyi	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2	S3	G3Q
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.2	S2	G2
Erythranthe acutidens	Kings River monkeyflower	Phrymaceae	annual herb	Apr-Jul	3	S2?	G2?Q
Erythranthe gracilipes	slender-stalked monkeyflower	Phrymaceae	annual herb	Apr-Jun	1B.2	S2	G2
Erythranthe inconspicua	small-flowered monkeyflower	Phrymaceae	annual herb	May-Jun	4.3	S4	G4
Erythranthe sierrae	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	4.2	S2	G2
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
Jensia yosemitana	Yosemite tarplant	Asteraceae	annual herb	(Apr)May-Jul	3.2	S3	G3
Lagophylla dichotoma	forked hare-leaf	Asteraceae	annual herb	Apr-May	1B.1	S2	G2

Leptosiphon serrulatus	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	1B.2	S3	G3
Lupinus citrinus var. citrinus	orange lupine	Fabaceae	annual herb	Apr-Jul	1B.2	S2	G2T2
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	4.2	S3	G4T3
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	1B.1	S1	G1
Plagiobothrys torreyi var. perplexans	chaparral popcornflower	Boraginaceae	annual herb	Apr-Sep	4.3	S3?	G4T3?
Plagiobryoides vinosula	wine-colored tufa moss	Bryaceae	moss		4.2	S2	G3G4
Pseudobahia bahiifolia	Hartweg's golden sunburst	Asteraceae	annual herb	Mar-Apr	1B.1	S2	G2
Pseudobahia peirsonii	San Joaquin adobe sunburst	Asteraceae	annual herb	Feb-Apr	1B.1	S1	G1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	1B.1	S2	G2
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 12 May 2017].

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Contributors
The Calflora Database
The California Lichen Society

Quad Name **Friant**
Quad Number **36119-H6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

Quad Name **Millerton Lake West**
Quad Number **37119-A6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

NMFS list was run on 12/08/2016

Appendix C – California Tiger Salamander Habitat Assessment

SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD PROJECT

FRESNO COUNTY, CALIFORNIA

06-FRESNO-0-CR

FEDERAL PROJECT NO. BRLO-5942 (210)

April 2015

SITE ASSESSMENT FOR CALIFORNIA TIGER SALAMANDER

LITTLE DRY CREEK BRIDGES REPLACEMENT ON MILLERTON ROAD PROJECT

FRESNO COUNTY, CALIFORNIA

6-FRESNO-0-CR

FEDERAL PROJECT NO. BRLO-5942 (210)

Prepared for:
County of Fresno
2220 Tulare Street, 7th Floor
Fresno, California 93720

For Submittal to:
U.S. Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

California Department of Fish and Wildlife
Central Region
1234 E. Shaw Avenue
Fresno, California 93710

April 2015

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FIGURES

APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE OF ASSESSMENT

This report presents an assessment of the status of the California tiger salamander (*Ambystoma californiense*) (CTS) and potential habitat for this species on the Little Dry Creek Bridges Replacement on Millerton Road Project (hereafter, project site) and vicinity. This assessment was prepared by Dayna Winchell, biologist with LSA Associates, Inc. (LSA) on behalf of the County of Fresno.

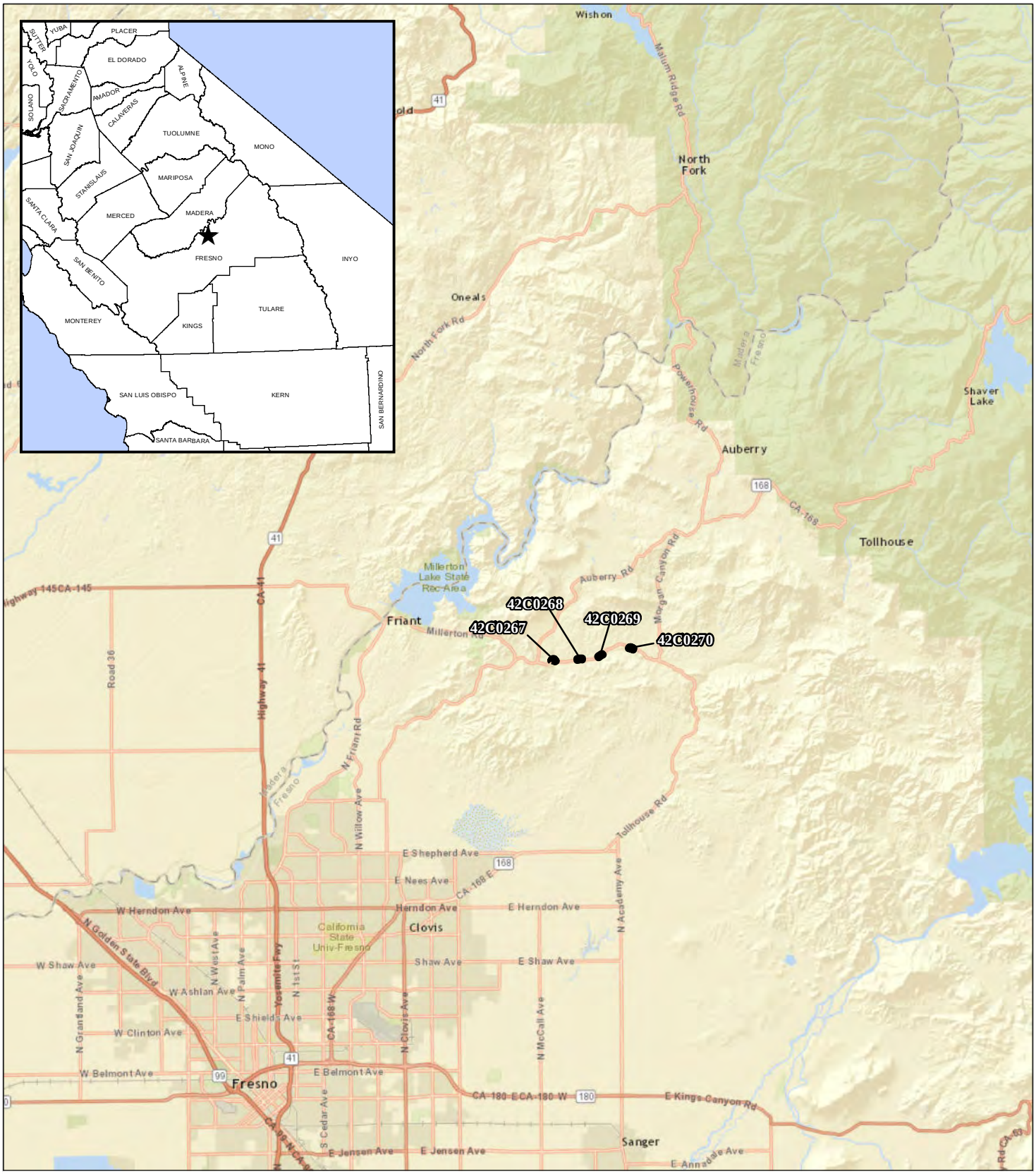
This assessment follows the protocols outlined in the U.S. Fish and Wildlife Service (USFWS) Interim Guidance on Conducting Site Assessments and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (October 2003). Accordingly, for CTS, this assessment describes the habitats within 1.24 miles (mi) of the site and documents the records within 3.1 mi of the project site. The assessment also evaluates the potential for CTS to occur on the project site.

1.2 ASSESSMENT AREA

The project site consists of four bridges (Bridge no. 42C0267, 42C0268, 42C0269, and 42C0270) on Millerton Road at Little Dry Creek and North Fork Little Dry Creek. The proposed project is located in northern Fresno County, approximately 18 mi northeast of the City of Fresno (Figures 1 and 2). Millerton Road is a narrow two-lane road and generally runs east to west with elevations on the present site ranging from 590 to 750 feet (ft) above mean sea level.

The project lies in a rural residential area among rolling hills. From the project site, Little Dry Creek flows southwest and drains into the San Joaquin River approximately 9 mi downstream. Numerous small to medium size ponds are located in the general vicinity. The habitat at the four bridges is comparable with similar species present. The dominant plant community in the assessment areas is oak woodland with interspersed areas of open grasslands. Dominant trees in the assessment area are blue oak (*Quercus douglasii*) and live oak (*Quercus wislizeni*) with interspersed black willow (*Salix goodingii*) and California sycamore (*Platanus recemosa*). Figure 3 shoes the project site on an aerial photo base.

For the purpose of this report, an assessment area for the project was established. The assessment area consists of an area around each bridge that would include the project footprint, existing roadways, cut/fill slopes, access and staging areas, and all lands beyond the footprint that could potentially be affected by project construction and/or were determined necessary to inventory in order to perform an adequate analysis. The assessment area at each bridge ranges from 4.45 to 5.28 ac. The majority of the land in the assessment areas is privately owned and is similar to the project area in use and vegetative characteristics.



LEGEND

Bridge Locations

FIGURE 1

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Regional Location

0 2.5 5
MILES

SOURCE: ESRI World Street Map (2015)

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Caltrans

LEGEND

Assessment Area

FIGURE 2

0 2000 4000

FEET

SOURCE: USGS 7.5-Minute Quadrangle (Academy)

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Topographic Base

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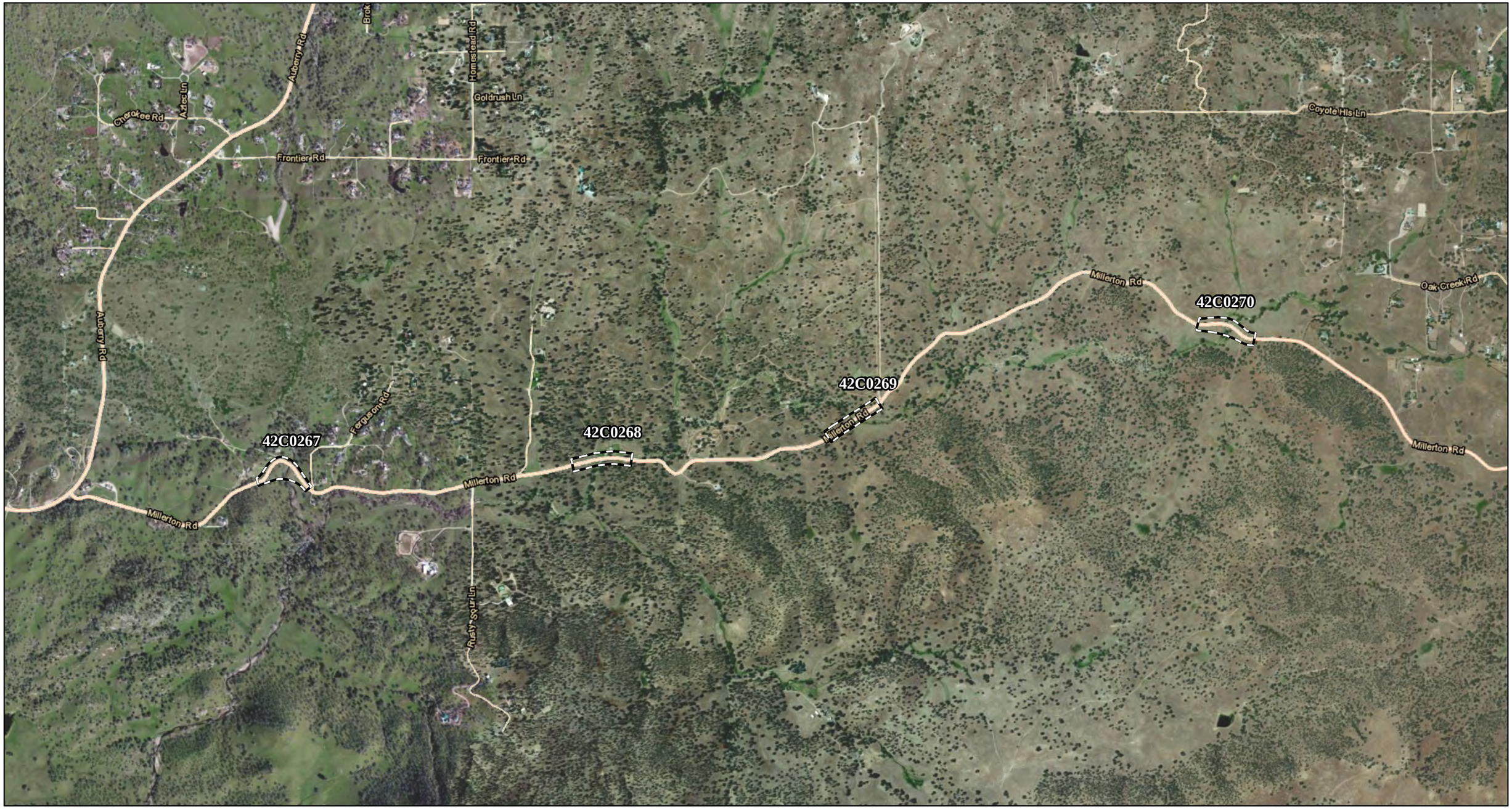

LEGEND

Assessment Area

0 750 1500
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 3

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Project Vicinity on Aerial Base

1.3 PROJECT DESCRIPTION

This project will replace four bridges on Millerton Road that cross Little Dry Creek in the north central portion of Fresno County (County) between Auberry Road to the west and State Route 168 to the east; Caltrans' bridge numbers 42C0267, 42C0268, 42C0269, and 42C0270. Millerton Road at this location is classified as two way rural street and has no posted speed limit. Each of the existing structures has been flagged as functionally obsolete due to their substandard width for a two lane facility. All four bridges were originally constructed in 1925 and consist of multi-span timber superstructures supported by concrete pier and abutment walls. The timber superstructures are in various states of deterioration. One structure (42C0267) is flagged as being structurally deficient due its advanced state of deterioration. All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 55 mph for a rural County street with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during the 100-year storm event.

The replacement structures will significantly improve on the existing conditions; roadway safety, structure condition, and bridge hydraulic capacity. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34'-10" wide which accommodates Fresno County's and American Association of State Highway and Transportation Officials (AASHTO) standard of two 12-ft lanes and two 4-ft shoulders. Each of the replacement bridges have been set on an alignment that can accommodate a higher design speed that is closer to the County's standard of 55 mph. The proposed design speed for each bridge is as follows:

Bridge Number	Design Speed
42C0267 – Alternative 1	25 mph
42C0267 – Alternative 2	35 mph
42C0268	45 mph
42C0269	45 mph
42C0270	45 mph

Two road alignment alternatives are being considered for the 42C0267 bridge. Construction costs, environmental impacts, and improved safety will be considered in selecting the most appropriate alignment. Only one alignment will be carried forward, however, once the alignment alternative analysis is complete. Bridges 42C0267 and 42C0270 will be placed on a new road alignment south of the existing road. Bridges 42C0268 and 42C0269 will be placed on the existing road alignment.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable) with the following span configurations and lengths:

Bridge Number	Number of Spans	Total Bridge Length
42C0267 – Alternative 1	1	60 feet
42C0267 – Alternative 2	1	60 feet
42C0268	2	82 feet
42C0269	1	60 feet
42C0270	2	82 feet

The bridge lengths and span configurations are being driven by the hydraulic capacity needed at each Little Dry Creek crossing. All four bridges can pass the Caltrans standard requirement of the 50-year storm event plus two feet of freeboard and the 100-year storm event.

Construction of all four bridges will require work with in the creek including the removal of the existing bridge, construction of the bridge pier (only applicable for bridges 42C0268 and 42C0269), construction of the abutment walls, construction and removal of temporary false work, installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location.

2.0 ASSESSMENT

LSA biologist Dayna Winchell visited the assessment area and its vicinity on March 25, 2015. Prior to the area visit, Ms. Winchell reviewed aerial photographs of the site to identify ponds, drainages, and other features that could potentially provide aquatic habitat for CTS. During the visit, Ms. Winchell surveyed the entire project site, and mapped all potentially suitable aquatic habitats for CTS. Most lands in the vicinity of the project are privately owned, and therefore, inaccessible. Therefore, potential habitat on private lands was mapped using an aerial photograph or through visual examination from existing public roads.

2.1 REGIONAL STATUS

This species occurs from Sonoma, Colusa, and Yolo Counties south through the Central Valley to Tulare County, and through the Coast Range into Santa Barbara County. An isolated population also occurs in Butte County. Fresno County is located within the Southern San Joaquin Geographic Region of the current range of the California tiger salamander (CDFG 2011*b*).

CTS occurs in grasslands and oak savannah communities from sea level to approximately 2,000 ft elevation in the Central Valley and Sierra Nevada foothills. In the Southern San Joaquin Geographic Region, CTS records are predominantly located in the grasslands on the valley floor, with only a few occurrences at higher elevations in oak savannah.

The elevation of the project site ranges from 590 to 750 ft elevation. The habitat around each bridge is composed of oak woodland interspersed with areas of grasslands. Most of the other occurrences in the Southern San Joaquin Geographic Region occur in areas of open grasslands. Of all CNDDB records in the Southern San Joaquin Geographic Region, only four records (#82, #322, #1013, and #1033) occur in woodlands similar to that of the project site. Two of these occurrences are old, dated 1980 and 1994; however, two occurrences (#1031 and #1033) are recent, dated 2008. All four of these occurrences are located within 8 miles of the BSA and are the located at the similar or higher elevation than the assessment area.

The majority of the occurrences in the region occur in areas of open grasslands at elevations similar or lower than the assessment area. Additionally, most of the occurrences are located west of the assessment area.

The project site is not located within designated critical habitat for CTS. The nearest critical habitat is Unit ssj_2, which is located on the Friant 7.5-minute USGS topographic quadrangle, approximately 1.5 mi west of the assessment area.

2.2 DOCUMENTED OCCURRENCES

There is one CNDDB record for CTS within 3.1 mi of the project site. This occurrence, dated 1994, is located approximately 2 mi west of the assessment area. Additional CTS occurrences are located further west of the project site. Figure 4 shows records for CTS in the vicinity of the project.

2.3 POTENTIAL HABITAT ON THE PROJECT SITE AND WITHIN A 1.24 MILE RADIUS

Potential aquatic and upland habitat for CTS at each bridge is discussed below and summarized in Table 1.

2.3.1 Aquatic Habitat

Little Dry Creek is a perennial creek; consequently, it does not provide suitable aquatic habitat for CTS. Although most of the creek was dry during the March 2015 site visit, there were areas of ponding near two of the bridges (42C0267 and 42C0268). However, due to low rainfall during the 2014/2015 rain season, the creek conditions are not standard. During a year of average rainfall, the flows would generally be too swift to provide suitable breeding habitat for CTS and the eggs would be swept downstream.

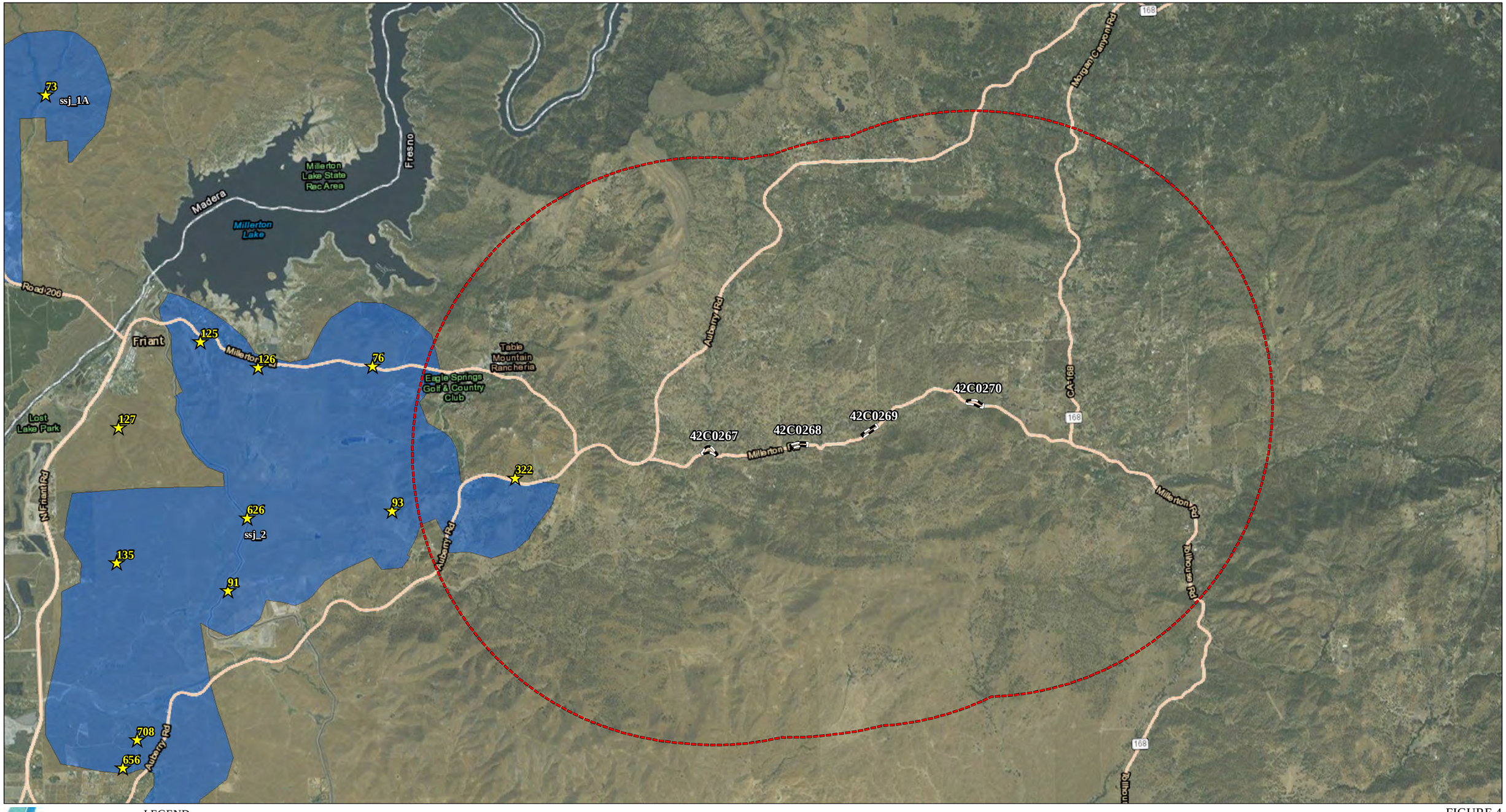
Numerous small to large size ponds, which provide potential aquatic habitat for CTS, occur within 1.24 mi of the assessment area. Some of these ponds are seasonal, while the larger ponds appear to hold water all year. There is one pond located approximately 0.4 mi north of bridge 42C0270. Otherwise all ponds are located at least 0.75 mi away from the bridges. LSA was unable to access most of the ponds; however, the ones that LSA could survey were dry during the site visit.

Although no suitable aquatic habitat is present in the assessment area, there are numerous ponds in the vicinity that may provide suitable aquatic habitat for CTS.

Potential aquatic habitat for CTS is shown in Figure 5.

2.3.2 Upland Habitat

Suitable upland habitat is present is the assessment area at all four bridges. Burrows were observed in the upland grasslands, along the road shoulders, in the rock slope protection around the bridges, and in the rocky outcrops in the vicinity.



LEGEND

- Assessment Area
- 3.1-Mile Radius
- Final Critical Habitat (2005)

CNDDB Records (January 2015)

- California Tiger Salamander

0 0.5 1
MILES

SOURCE: Basemap - Microsoft Aeral Imagery (2010-2011); Mapping - CNDDB (1/2015)

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FIGURE 4

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

CTS CNDDB Records
in the Vicinity of the Project Site

Table 1: Potential CTS Habitat at Each Bridge

Bridge Number	Upland Habitat Present	Suitable Aquatic Habitat Present
42C0267	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential aquatic habitat is located approximately 0.75 mi south of the project site.
42C0268	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential aquatic habitat is located approximately 0.85 mi southwest of the project site.
42C0269	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential habitat is located approximately 0.75 mi south of the project site.
42C0270	Suitable burrows observed in and around the assessment area.	No suitable aquatic habitat present in the project site. The closest potential habitat is located approximately 0.40 mi north of the project site.

LEGEND

- Assessment Area
- 1.24-Mile Radius
- Ponds and Pooled Areas

0 1000 2000
FEET

SOURCE: Basemap - Microsoft Aeral Imagery (8/2010); Mapping - LSA Associates, Inc. (2015)

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FIGURE 5

Little Dry Creek Bridges Replacement on Millerton Road
Bridge No. 42C0267, 42C0268, 42C0269, and 42C0270
Federal Project No. BRLO-5942(210)
Fresno County, California

Potential California Tiger Salamander
Aquatic Habitat Within 1.24 Miles of the Project Site

3.0 RESULTS

The findings of this report are that CTS have the potential to occur on the project site (i.e. at all four bridges) as well as in the vicinity of the project. The project site is located within the current range for the species and approximately 1.5 mi east of designated critical habitat. There is only one occurrence located within 3.1 mi of the assessment area; however, there are multiple occurrences within 5 mi of the project site. While the majority of occurrences in the region occur in areas of open grasslands; there are four occurrences in the region where CTS occurs in oak woodlands similar to the project site.

There is no suitable aquatic habitat for CTS in the assessment area. Little Dry Creek is a perennial creek that does not provide suitable aquatic habitat for CTS. During years of normal rainfall, the flow of the creek would be too swift to provide suitable aquatic habitat. There are numerous ponds within 1.24 mi that could provide potential aquatic habitat for CTS. Not all ponds were accessible to survey; the features that were accessible were dry during the March 2015 survey. However, the 2014/2015 rainfall was unusually low and, based on review of the aerial photos; these features have shown to hold water for a longer duration of the year.

Suitable upland habitat is present in the assessment area and the in vicinity of all four bridges. Suitable burrows were observed in the annual grasslands, road shoulders, and in rocky outcrops around the assessment area.

Based on these findings, CTS have the potential to occur on the project site as well as in the vicinity of the project.

4.0 REFERENCES

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APPENDIX A

RESUME FOR DAYNA WINCHELL

DAYNA WINCHELL
BIOLOGIST

EXPERTISE

Wildlife and Sensitive Species Surveys

Biological Construction Monitoring and Auditing

Environmental Assessment

EDUCATION

University of Queensland, Australia. Masters of Science Degree in Conservation Biology, 2012.

California State University, San Marcos. B.S. in General Biology, 2009.

CERTIFICATIONS AND TRAINING

Certified in Basic and Advanced Wildlife Handling and First Aid Techniques

Trained in Northern California Bird Species and Identifying Techniques

Caltrans Training Courses:

- The NEPA/404 Memorandum of Understanding

PROFESSIONAL AFFILIATES

The Wildlife Society

Defenders of Wildlife

PROFESSIONAL RESPONSIBILITIES

Ms. Winchell is a general biologist at LSA with a variety of experience in the wildlife and environmental field. This experience includes conducting full ecological evaluations and assessment and animal behavior surveys. Additional experience includes coordinating special species trapping, surveying and relocation projects as well as studying long term human impacts on flora and fauna. Ms. Winchell is experienced in ensuring legislation compliance on the local, state and federal levels.

Ms. Winchell is skilled in conducting biological surveys and construction monitoring of projects including road and bridge construction, bridge replacement, and development projects. Construction monitoring experience includes listed species such as; Swainson's hawk, California red-legged frog, giant garter snake, burrowing owl, foothill yellow legged frog and California tiger salamander.

The following summarizes her work involving construction monitoring and surveying of special status species.

PROJECT EXPERIENCE

Potrero Hills California Tiger Salamander Relocation
Suisun City, Solano County, California
Ms. Winchell assisted in the trapping and relocation of California Tiger Salamanders. Duties included assisting in checking traps and determining the health and age of salamanders prior to relocation. Ms. Winchell also assisted with seining the stock ponds for CTS larvae.

Habitat Assessments for Bridge Construction at Old Hernandez Road, San Benito County, California
Ms. Winchell conducted a habitat assessment for bridge construction in San Benito County to determine the presence of listed species. The assessment included surveying for San Joaquin kit fox, California red-legged frog, and California tiger salamander. Assessment included identifying suitable habitat in the vicinity for the listed species.

San Juan Highway Bike Lane Project, San Juan Bautista
San Benito County, California
Ms. Winchell conducted a post construction habitat assessment to determine the success of the revegetation restoration effort in California red-legged frog and CTS habitat, along the San Juan Highway near San Juan Bautista.

State Route 88 – Jackson Valley Rehabilitation Project, Amador County, California
Ms. Winchell conducted construction monitoring for CTS at the State Route 88 Jackson Valley Rehabilitation Project. Construction included guard rail installation, grading of approaches, and grading and widening of the shoulders.

DAYNA WINCHELL
BIOLOGIST

PROFESSIONAL EXPERIENCE

Biologist, LSA Associates Inc., Rocklin and Pt. Richmond, CA. 2012-present.

Ecologist, James Warren & Associate Ecological Consultants, Brisbane, Australia. 2012.

Researcher, University of Queensland, Brisbane Australia. 2011-2012

Animal Behavior Researcher, San Diego Wild Animal Park, Escondido, CA. 2008-2009

Aquarist Assistant, Birch Aquarium, La Jolla, CA 2008-2009

Expedition Member, Global Vision International, Kenyan Coast, 2007.

North County Corridor New State Route 108 Stanislaus County, California
Ms. Winchell conducted an overall biological assessment for a new 18 miles roadway corridor that consists of four separate alignments in northern Stanislaus County. Surveys include wetland delineation, nesting bird survey, and habitat assessment for western burrowing owl. Ms. Winchell was also responsible for preparing the technical reports with the results of the surveys.

Panoche Bridge Replacement, San Benito County, California
Conducted a focused tree survey at the bridge replacement site on Panoche Road at Tres Pinos Creek. Also assessed suitable habitat of Tres Pinos Creek for CTS and California red-legged frog.

State Route 88 – Jackson Valley Rehabilitation Project, Amador County, California
Ms. Winchell conducted construction monitoring for CTS at the State Route 88 Jackson Valley Rehabilitation Project. Construction included guard rail installation, grading of approaches, and grading and widening of the shoulders.

State Route 65/Lincoln Bypass Project
Lincoln, Placer County, California
Conducted construction monitoring of construction project creating new State Highway and 17 bridges over land and water features. Monitoring tasks include: surveying for Swainson's hawks and other nesting birds, before and during the nesting season; mapping and monitoring all active nests within the alignment; and monitoring construction activities for compliance with project permits.

Western Placerville Interchange Project Placerville, El Dorado County, California
Conducted construction monitoring during vegetation removal for the Placerville Interchange Project near SR-50. Monitoring focused on the presence/absence of California red-legged frog and foothill yellow legged frog.

Cosumnes River Boulevard/I-5 Interchange Project
Sacramento, California
Conducted preconstruction and construction monitoring surveys for listed species, including giant garter snake, and nesting birds, including nesting Swainson's hawks and burrowing owls.

APPENDIX B

REPRESENTATIVE PHOTOS MILLERTON ROAD BRIDGES OVER DRY CREEK

Looking at bridge No. 267 from the east.

Looking at the bridge No. 267 from the south.

Looking downstream at bridge No. 268.

Looking upstream at bridge No. 268.

Caltrans

Little Dry Creek Bridges
Replacement on Millerton Road

Representative Photos (1)

SOURCE: LSA Associates, Inc. (2015).

I:\CFF1101Q\AI\CTS Habitat Assessment\Appendix B Rep Photo (1).ai (4/2/15)

Looking at bridge No. 269 from the south.

Looking upstream of bridge No. 269.

Looking at bridge No. 270 from the south.

Looking upstream of bridge No. 270.

Caltrans

Little Dry Creek Bridges Replacement on Millerton Road

Representative Photos (2)

SOURCE: LSA Associates, Inc. (2015).

I:\CFF1101Q\AI\CTS Habitat Assessment\Appendix B Rep Photo (2).ai (4/2/15)

Appendix E – Tree Survey

Little Dry Creek Bridges Replacement Project on Millerton Road

Number	Tree Species	DBH (inches)	Height/Canopy	Associated Vegetation
1	*Quercus douglasii*	37	20/15	*Croton setigerus, Bromus diandrus*
2	*Platanus racemosa*	31	25/20	*Bromus diandrus, Hordium murinum, Bromus hordeaceus*
3	*Salix lasiolepis*	4.5	12/8	*Silybum marianum, Bromus diandrus, Avena fatua*
4	*Populus sp.*	8	12/10	*Silybum marianum, Bromus diandrus, Avena fatua*
5	*Populus sp.*	11	20/10	*Silybum marianum, Bromus diandrus, Avena fatua*
6	*Populus sp.*	12	25/12	*Baccharis salicifolia, Bromus diandrus, Avena fatua*
7	*Salix lasiolepis*	7	10/8	*Baccharis salicifolia, Bromus diandrus, Avena fatua*
8	*Populus sp.*	4/5	15/6	*Baccharis salicifolia, Bromus diandrus, Avena fatua*
9	*Quercus douglasii*	16	18/19	*Avena fatua*
10	*Quercus douglasii*	31	25/15	*Bromus diandrus, Hordium murinum*
11	*Populus sp.*	57/27	30/65	*Avena fatua, Bromus diandrus*
12	*Populus sp.*	54	30/20	*Silybum marianum, Bromus diandrus, Avena fatua*
13	*Populus sp.*	70	35/30	*Silybum marianum, Bromus diandrus, Avena fatua*
14	*Quercus douglasii*	28	35/25	*Silybum marianum, Bromus diandrus, Avena fatua*
15	*Quercus douglasii*	21.5	20/25	*Bromus diandrus, Hordium murinum*
16	*Quercus douglasii*	27	20/12	*Bromus diandus, Hordium murinum*

Number	Tree Species	DBH (inches)	Height/Canopy	Associated Vegetation
17	*Quercus douglasii*	18	25/35	*Bromus diandrus, Hordium murinum, Bromus hordeaceus*
18	*Quercus douglasii*	24	20/25	*Bromus diandrus, Hordium murinum, Bromus hordeaceus*
19	*Quercus douglasii*	10	12/12	*Bromus diandrus, Hordium murinum, Bromus hordeaceus*
20	*Quercus douglasii*	21	25/20	*Bromus diandrus, dirt*
21	*Quercus douglasii*	21.5	20/15	*Hordium murinum, Bromus diandrus, Avena fatua*
22	*Quercus douglasii*	24.5	20/20	*Hordium murinum, Bromus diandrus, Avena fatua*
23	*Quercus douglasii*	21	30/25	*Hordium murinum, Bromus diandrus, Avena fatua*
24	*Quercus douglasii*	7	15/10	*Hordium murinum, Bromus diandrus, Avena fatua*
25	*Quercus douglasii*	14	18/18	*Hordium murinum, Bromus diandrus, Avena fatua*
26	*Quercus douglasii*	7	15/10	*Hordium murinum, Bromus diandrus, Avena fatua*
27	*Quercus douglasii*	11	15/10	*Hordium murinum, Bromus diandrus, Avena fatua*
28	*Quercus douglasii*	6.5	10/5	*Hordium murinum, Bromus diandrus, Avena fatua*
29	*Quercus douglasii*	6	12/5	*Hordium murinum, Bromus diandrus, Avena fatua*
30	*Quercus douglasii*	10.5	20/12	*Hordium murinum, Bromus diandrus, Avena fatua*
31	*Quercus douglasii*	22	25/30	*Hordium murinum, Bromus diandrus, Avena fatua*
32	*Juglans nigra*	14	30/25	*Bromus hordeaceus, Bromus diandrus*
33	*Quercus douglasii*	26	30/35	*Silybum marianum, Bromus diandrus, Avena fatua*

Number	Tree Species	DBH (inches)	Height/Canopy	Associated Vegetation
34	*Salix gooddingii*	11	15/35	*Silybum marianum, Bromus diandrus, Avena fatua*
35	*Salix gooddingii*	12	18/12	*Bromus hordeaceus, Bromus diandrus*
36	*Salix gooddingii*	12	15/20	*Bromus hordeaceus, Bromus diandrus*
37	*Salix gooddingii*	15/14.5	20/35	*Silybum marianum, Bromus diandrus, Bromus hordeaceus*
38	*Quercus douglasii*	25	30/35	*Silybum marianum, Bromus diandrus, Bromus hordeaceus*
39	*Quercus douglasii*	39	35/25	*Bromus diandrus*
40	*Quercus douglasii*	21.5	20/25	*Bromus diandrus*
41	*Quercus douglasii*	12	25/12	*Bromus diandrus*
42	*Quercus douglasii*	14	20/20	*Hordium murinum, Bromus diandrus*
43	*Quercus douglasii*	11.5	18/15	*Hordium murinum, Bromus diandrus*
44	*Quercus douglasii*	21.5	25/20	*Hordium murinum, Bromus diandrus*
45	*Populus sp.*	46	40/30	*Hordium murinum, Bromus diandrus*
46	*Quercus douglasii*	9	15/8	*Hordium murinum, Bromus diandrus*
47	*Quercus douglasii*	15	30/15	*Hordium murinum, Bromus diandrus, Avena fatua*
48	*Quercus douglasii*	16.5	25/12	*Hordium murinum, Bromus diandrus, Avena fatua*
49	*Quercus douglasii*	20	25/20	*Dead vegetation*
50	*Quercus douglasii*	22.5	25/35	*Bromus diandrus*

Number	Tree Species	DBH (inches)	Height/Canopy	Associated Vegetation
51	*Quercus douglasii*	27	25/35	*Bromus diandrus*
52	*Quercus douglasii*	26	25/25	*Avena fatua, Bromus diandrus*
53	*Platanus racemosa*	35	15/12	*Avena fatua, Bromus diandrus*
54	*Platanus racemosa*	56/31	35/25	*Avena fatua, Bromus diandrus*
55	*Platanus racemosa*	10	18/8	*Avena fatua, Bromus diandrus*
56	*Platanus racemosa*	11	18/10	*Avena fatua, Bromus diandrus*
57	*Quercus sp.*	49	40/35	*Avena fatua, Bromus diandrus*
58	*Quercus douglasii*	32	35/20	*Avena fatua, Bromus diandrus, Anthriscus caucalis*
59	*Quercus douglasii*	14	20/12	*Avena fatua, Bromus diandrus, Anthriscus caucalis*
60	*Quercus douglasii*	19	18/12	*Avena fatua, Bromus diandrus, Anthriscus caucalis*
61	*Platanus racemosa*	6.5/25	50/25	*Avena fatua, Bromus diandrus, Anthriscus caucalis*
62	*Platanus racemosa*	7	15/20	*Silybum marianum, Bromus diandrus, Anthriscus caucalis*
63	*Platanus racemosa*	19	35/20	*Silybum marianum, Bromus diandrus, Anthriscus caucalis*
64	*Platanus racemosa*	11	20/030	*Silybum marianum, Bromus diandrus, Anthriscus caucalis*
65	*Salix lasiolepis*	4	15/8	None
66	*Platanus racemosa*	35	40/20	*Avena fatua, Artemisia douglasiana*

Appendix F – Representative Photos

Millerton Road looking east at existing bridge.

Millerton Road looking west at existing bridge.

North Fork Little Dry Creek looking north at existing bridge.

North Fork Little Dry Creek upstream of existing bridge.

Caltrans

APPENDIX F

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/25/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0267

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Existing bridge over Little Dry Creek looking northeast.

Little Dry Creek looking downstream from existing bridge.

Little Dry Creek looking upstream (east) adjacent to Millerton Road east bridge approach.

View of existing bridge and Little Dry Creek looking downstream.

Caltrans

APPENDIX F

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/25/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0268

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Little Dry Creek looking north from Millerton Road.

Millerton Road Bridge over Little Dry Creek looking north.

Millerton Road looking west over Little Dry Creek.

Millerton Road over Little Dry Creek looking east.

Caltrans

APPENDIX F

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/25/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0269

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Little Dry Creek looking downstream (south) and the Millerton Road crossing.

Little Dry Creek looking upstream (north) at the Millerton Road crossing.

Millerton Road Bridge east approach looking west.

Millerton Road Bridge west approach looking east.

Caltrans

APPENDIX F

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/25/16/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0270

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Little Dry Creek Bridge Replacements On Millerton Road

Technical Noise Memorandum

(Bridge NO. 42C0267, 42C0268, 42C0269, and 42C0270)

Fresno County, California

Federal Aid No. BRLO-5942(210)

December 2016

Caltrans

Little Dry Creek Bridge Replacements On Millerton Road

Technical Noise Memorandum

(Bridge NO. 43C0267, 42C0268, 42C0269, and 42C0270).

Fresno County, California

Federal Aid No. BRLO-5942(210)

December 2016

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District 6
Environmental Analysis, Planning and Local Programs

Introduction

The County of Fresno is proposing to remove four functionally obsolete bridges along Millerton Road and replace them with four new bridges. The County acquired funding through the Highway Bridge Program (HBP); therefore, the California Department of Transportation (Caltrans) will act as the National Environmental Policy Act (NEPA) lead agency, on behalf of the Federal Highway Administration (FHWA), as federal funds are involved.

Project Description

The Little Dry Creek Bridges Replacement on Millerton Road Project (referred to in this document as the proposed "Project") is located in an unincorporated portion of Fresno County, approximately 3.5 miles southeast of Millerton Lake and 12 miles northeast from the Town of Clovis, between Auberry Road to the west and State Route 168 to the east. Specifically, the Project site is located on Millerton Road at the crossing of Little Dry Creek (Bridge Nos. 42C0068, 42C0069, and 42C0070) and North Fork Little Dry Creek (Bridge No. 42C0067), near the intersection of Auberry Road and Millerton Road. Bridge No. 42C0267, the only bridge replacement proximate to residential units, has a latitude of 36° 58' 10.7688" N and longitude of 119° 35' 55.7052" W. **Figure 1 – Project Site Regional Location** and **Figure 2 – Project Site Vicinity** (both attached at the end of this document) show the location of the proposed Project site on a regional and local scale.

Millerton Road at these four bridge locations is classified as a two way rural road and has no posted speed limit. Each of the existing bridges has been determined as functionally obsolete due to their substandard width for a two-lane facility. Bridge 42C0267 is also considered structurally deficient due to its advanced state of deterioration. All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 45 mph for a rural County street with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during a 100-year storm event.

The replacement bridges will significantly improve on the existing conditions, roadway safety, structure condition, and bridge hydraulic capacity. The existing bridges will be removed to accommodate a new two-lane replacement bridge measuring 34 feet and 10 inches wide, which accommodates Fresno County's and the AASHTO's standard of two 12-feet wide lanes and two 4-feet wide shoulders. Each of the replacement bridges has been set

on an alignment that can accommodate a higher design speed that is closer to the County's standard of 45 mph.

Bridges 42C0267, 42C0269 and 42C0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction. The temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek. Creek flows will be temporarily conveyed through the berm and construction site via pipe culverts.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable). The abutments and pier (as applicable) for Bridges 42C0267, 42C0268, and 42C0270 will be founded on shallow spread footings embedded into granite material. Due to the presence of a deep subterranean lens of decomposed granite, the abutments for Bridge 42C0269 will be supported on cast-in-drilled-hole piles. The bridge lengths and span configurations are being driven by the hydraulic capacity needed at each Little Dry Creek crossing. All four bridges can pass the Caltrans standard requirement of the 50-year storm event plus two feet of freeboard and the 100-year storm event.

Construction of all four bridges will require work within the creek including the removal of the existing bridge, construction of the bridge pier and footings (only applicable for bridges 42C0268 and 42C0270), construction of the temporary creek crossing (only applicable for bridge 42C0268), construction of the abutment walls and footings, construction and removal of temporary falsework, and installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location.

The project is expected to be constructed in the spring/summer of 2018. All four bridges will be built concurrently within an estimated 4-month construction period. The contractor will have separate crews; one for each bridge. Construction equipment that will be used include heavy equipment (i.e., backhoe/loader, crane, excavator, etc.), pneumatic tools (i.e., jackhammers, mounted impact hammers, etc.) and hand power tools.

Federal Regulations

23 CFR 772

23 Code of Federal Regulations (CFR) 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type 1, Type 2, or Type 3 projects. The Federal Highway Administration (FHWA) defines a Type 1 project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway that substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. A Type 2 project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type 3 project is a project that does not meet the classifications of a Type 1 or Type 2 project. Type 3 projects do not require a noise analysis. The Little Dry Creek Bridge Replacements on Millerton Road Project is a Type 3 project, as defined by CFR §23.772.7 and the FHWA; therefore, noise analysis is not required.

State Regulations

Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Caltrans Traffic Noise Analysis Protocol specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or federal-aid highway projects. The policies, procedures, and practices in the Protocol are the same as those specified in 23 CFR 772.

Local Regulations

Fresno County Noise Standards

Fresno County states in the Municipal Code of Ordinances §8.040.060(c) that construction noise is exempt from any local noise ordinance, “Noise sources associated with construction, provided such activities do not take place before six am or after nine pm on any day except Saturday or Sunday, or before seven am or after five pm on Saturday or Sunday, shall be exempted from [noise control] provisions.” In general, construction activities are restricted to only occur from 6:00 AM to 9:00 PM on weekdays and 7:00 AM to 5:00 PM on weekends.

Sensitive Receptors

The term "receptor" is defined in this assessment as a single dwelling unit or the equivalent of a single dwelling unit. The Project site is located in a rural portion of Fresno County with parcels occupied by single-family residential ranch style units. Three of the bridges associated with the proposed Project are not located near sensitive receptors. Bridge No. 42C0267 is located in an area near three sensitive receptors. **Figure 3 – Project Site and Design** focuses on Bridge No. 42C0267, the Bridge located near the sensitive receptors. The three sensitive receptors located near the proposed Project that have been studied in this memo are shown in **Figure 4 – Sensitive Receptor Locations** (attached at the end of this document).

Bridge No. 42C0267 has three sensitive receptors within 500 feet of the Project boundary. Sensitive Receptor 1 (SR-1) is a single-family residential unit located on parcel APN 138-061-17 approximately 300 feet from the closest extent of the construction area. Sensitive Receptor 2 (SR-2) is also a single-family residential unit located on parcel APN 138-061-41 approximately 355 feet from the construction area extent. And finally, Sensitive Receptor 3 (SR-3), also a single-family residential unit, is located on parcel APN 138-450-03 approximately 285 feet from the closest point of the proposed Project's limits of construction.

Bridges 42C0268, 42C0269, and 42C0270 have no sensitive receptors within 500 feet of the Project boundary. Therefore, none of these bridges require further analysis; the remainder of this document will focus on Bridge No. 42C0267.

Traffic Noise Impact Assessment

According to 23 CFR 772, a Type 1 Project is one that involves:

1. The construction of a highway on a new location or
2. The physical alteration of an existing highway where there is either:
    a. Substantial horizontal alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition, or
    b. Substantial vertical alteration. A project that removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by

altering either the vertical alignment of the highway or the topography between the traffic noise source the receptor; or,

3. Addition of through-traffic lanes; or,
4. Addition of auxiliary lane; or,
5. Addition or relocation of interchange lanes or ramps to a quadrant to complete an existing partial interchange;
6. Restriping existing pavement to make a new through traffic lane; or
7. Addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

The proposed Project would not halve the distance between the traffic noise source and the closest receptor; thus, it would not constitute a substantial horizontal alternation. The proposed Project would not remove shielding or substantially alter the vertical alignment of the highway; thus, it would not constitute a substantial vertical alteration.

In addition, the improvements associated with the proposed Project would not increase the number of through-traffic lanes on Millerton Road or other local, nearby roadways. Although travel lanes will widen to span a total width of 34 feet and ten inches, the number of travel lanes will maintain at two. The other categories stated above under the definition of a Type 1 Project would not be applicable to this project. Not applicable to the proposed Project, a Type 2 project is characterized by a noise barrier retrofit project involving no changes to highway capacity or alignment.

Per the Protocol, a Type 3 project is one that does not meet the classifications of a Type 1 or Type 2 project. Since the proposed Project is not considered a Type 1 or Type 2 project, it meets the criteria for a Type 3 project. A Type 3 project does not require a noise analysis to be completed. Since the proposed Project is a Type 3 project, a noise analysis is not required and has not been conducted as part of this analysis.

Construction Noise Impact Assessment

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Two types of short-term noise impacts would occur during Project construction: 1) construction commutes and transportation of crew, equipment and materials; and, 2) short-term noise impact due to construction equipment usage.

The first type—construction crew commutes and the transport of construction equipment and materials to the Project site—would incrementally raise noise levels on roads leading to the site. The pieces of equipment required for construction of the proposed Project will be moved on site, will remain for the duration of construction, and will not add to the daily traffic volume in the Project vicinity. There is a potential for a high single-event noise exposure at a maximum level of 55 A-weighted decibels (dBA) maximum instantaneous noise level (L_{max}) from trucks passing at 50 feet. However, the projected construction traffic will be minimal when compared to existing traffic volumes on Millerton Road, and its associated long-term noise level change will not be perceptible. Short-term construction-related worker commutes and equipment transport noise impacts would result in a short-term nominal increase of the ambient noise level in the Project area compared to existing conditions.

The second type—short-term noise impact from construction equipment usage—is related to noise generated during construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated, as well as the noise levels within the Project area, as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work. **Table A: Typical Construction Equipment Noise Levels** lists typical construction equipment L_{max} noise levels suggested for assessing construction noise impact, based on a distance of 50 feet between the assessed equipment and a noise receptor.

Table A: Typical Construction Equipment Noise Levels

Type of Equipment	Spec. 721.560[1] L_{max} at 50 feet	Actual Measured[2] L_{max} at 50 feet
Backhoe/Loader	80.0	78.0
Excavator	85.0	81.0
Grader	85.0	85.0[3]
Dump Truck	84.0	76.0
Mulcher (Wood Chipper)[5]	N/A	75.0
Crane	85.0	81.0
Boom Truck[4]	N/A	88.0
Cement Truck	85.0	79.0
Pile Driver	95.0	101
Forklift[5]	N/A	69.0
Air Compressor	80.0	78.0
Smooth Wheeled Roller	85.0	80.0
Vibrating Roller	85.0	80.0
Asphalt Paver	85.0	77.0
Striping Truck[4]	N/A	88.0
Cutting Torch	73.0	74.0
Concrete Saw	90.0	90.0
Chipping Gun	85.0	85.0
Jackhammer	85.0	89.0

Source: U.S. Department of Transportation, Federal Highway Administration FHWA-HEP-05-054; DOT-VNTSC-FHWA-05-01, FHWA Roadway Construction Noise Model User's Guide Final Report, Table 1, pg. 3, January 2006.
Notes: Noise levels reported in this table are rounded to the nearest whole number.
Lmax = maximum instantaneous sound level
N/A = not applicable
[1] Maximum noise levels were developed based on the Control Specific. 721.560 monitoring from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
[2] The maximum noise level was developed based on the average noise level measured for each piece of equipment during the CA/T program in Boston, Massachusetts.
[3] Since the maximum noise level based on the average noise level measured for this piece of equipment was not available, the maximum noise level developed based on Spec. 721.560 was used.
[4] Information obtained from Federal Transit Authority (FTA) Transit Noise and Vibration Guidance Handbook (Chapter 12).
[5] Berger, Elliot H.; Neitzel, Rick; and Kladden, Cynthia A. June 12, 2013. Noise Navigator Sound Level Database. 3M Personal Safety Division. Regarding the Mulcher (Wood Chipper): This measurement was taken at 1 meter (3.28084 feet) from the construction equipment which resulted in a noise level of 99 dB(A) Lmax. Based on this information this noise level would equate to 75.3 dB(A) Lmax at a measurement distance of 50 feet from the Mulcher (Wood Chipper). Regarding the Forklift: This measurement was taken by the operator of the forklift at "operator's ear" resulting in a noise level of 93 dB(A) Lmax. Based on this information this noise level would equate to 68.6 dB(A) Lmax at a measurement distance of 50 feet from the forklift (rounded to 69.0 dB(A) Lmax).

As discussed above, the proposed Project would be constructed in a single phase over a period of 4 months. Construction on all four bridges of the Project will occur simultaneously; however, only Bridge No. 42C0267 will be assessed for construction noise impacts, because it is the only bridge out of the four with sensitive receptors**.** Customarily, only noise levels from two or three of the loudest pieces of equipment operating simultaneously are analyzed

for construction noise impact assessments. The singular construction phase would require operation of the following construction equipment:

- One asphalt paver (85.0 dBA L_{max}); one jackhammer (89.0 dBA L_{max}); one forklift (69.0 dBA L_{max}); one backhoe/loader (80.0 dBA L_{max}); one grader (85.0 dBA L_{max}); one excavator (85.0 dBA L_{max}); one crane (85.0 dBA L_{max}); one boom truck (88.0 dBA L_{max}); one auger drill (85.0 dBA L_{max}); one bulldozer (85.0 dBA L_{max}); one concrete mix truck (85.0 dBA L_{max}); one flatbed truck (84.0 dBA L_{max}); one mounted impact hammer (90.0 dBA L_{max}); one scraper (85.0 dBA L_{max}); one smooth wheeled roller, sheep's foot roller (85.0 dBA L_{max}); one concrete bid-well (85.0dBA L_{max}); and one generator (82.0 dBA L_{max}). Other various hand powered tools operate with less than 5 horsepower units, below the typical threshold for noise impact analysis. The jackhammer, mounted impact hammer and grader are the loudest pieces of construction equipment that would potentially be operating simultaneously during construction; therefore, this equipment was used in the construction noise impact analysis presented below.

Portions of the proposed Project site where construction would occur are located on the parcels that are occupied by three sensitive receptors. Fresno County does not have a noise ordinance that indicates that construction noise levels should be modeled at the parcel line of the nearest sensitive receptors; therefore, the modeling conducted for the three nearest sensitive receptors included estimated noise levels modeled at the exterior of the sensitive receptors' side closest to the proposed Project site.

Measuring from the closest extent of the construction area relative to a given sensitive receptor, construction activities during each phase have the potential to occur within 300 feet of SR-1, 355 feet of SR-2, and 285 feet of SR-3. Construction activity would potentially occur at these distances for a short period of time, and most of the construction activities would occur towards the middle of the Project site, resulting in lower than maximum noise level impact to sensitive receptors during construction. Therefore the estimated noise levels at the three sensitive receptors represent a conservative estimate, as most of the construction activity would occur towards the center of the Project site and not along the Project boundary extent. **Table B: Estimated Noise Levels at Nearest Sensitive Receptors** shows the loudest construction equipment modeled, the estimated noise level measured at 50 feet with simultaneous operation of the modeled construction equipment, and the estimated noise level at SR-1, SR-2 and SR-3 with simultaneous operation of the modeled construction equipment

at a distance from the nearest extent of the project boundary for each sensitive receptor—300, 355 and 285 feet, respectively.

Table B: Estimated Noise Levels at Nearest Sensitive Receptors

Construction Equipment Modeled	Noise Level at 50 Feet (dB(A) L_{max})	Estimated Noise Level at SR-1 (300 Feet) (dB(A) L_{max})	Estimated Noise Level at SR-2 (355 Feet) (dB(A) L_{max})	Estimated Noise Level at SR-3 (285 Feet) (dB(A) L_{max})
jackhammer (1), mounted impact hammer (1), grader (1)	88	77.7	76.2	78.1

Source: LSA (2016)

Table B shows that the three sensitive receptors (portrayed in worst-case-scenario) could potentially be exposed to construction noise levels ranging from 76.2 to 78.1 dB(A) L_{max} during the 4-month construction period. Such noise levels would occur on a temporary basis and would more than likely be lower than the modeled results as most of the construction activities would occur closer to the center of the Project site (further away from the sensitive receptors) rather than at the modeled distance, the nearest extent of the boundary relative to the sensitive receptor.

To minimize the construction noise impact on sensitive receptors, compliance with the construction hours specified in the California Department of Transportation (Caltrans) Standard Specification Section 14-8.02, "Noise Control" would be required. Caltrans Standard Specifications 14-8.02 states that the noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., shall not exceed 86 dB(A) at a distance of 50 feet. In addition, the Contractor shall equip all internal combustion engines with the manufacturer-recommended muffler and shall not operate any internal combustion engine on the job site without the appropriate muffler.

Construction noise would be short-term and intermittent. The following measures would further minimize temporary noise impacts from construction on the three sensitive receptors in the Project site vicinity:

- The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.

- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.
- Construction activities associated with the proposed Project shall be limited to the hours of 6:00 AM to 9:00 PM on weekdays and 7:00 AM to 5:00 PM on weekends.

Attachments: Figure 1: Project Site Regional Location Map

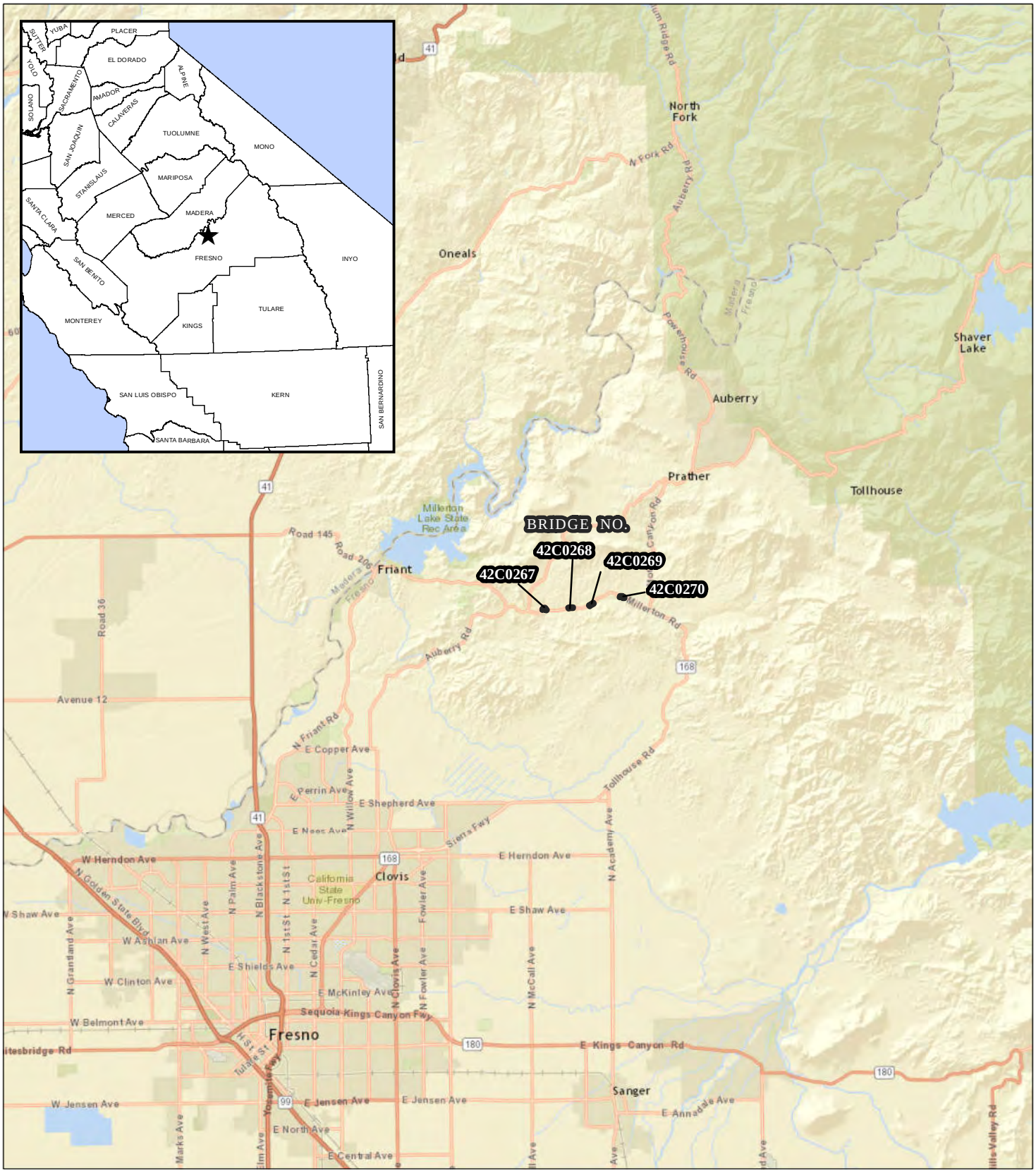
Figure 2: Project Site Vicinity Map

Figure 3: Project Site and Design for Bridge No. 42C0267

Figure 4: Sensitive Receptor Locations Map

ATTACHMENTS

FIGURES 1-4



LEGEND

Project Site

FIGURE 1

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE REGIONAL LOCATION

Caltrans

N

0 2.5 5

MILES

SOURCE: ESRI World Street Map (2015)

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LEGEND

- Project Site
- Little Dry Creek

Caltrans

N

0 512.5 1025
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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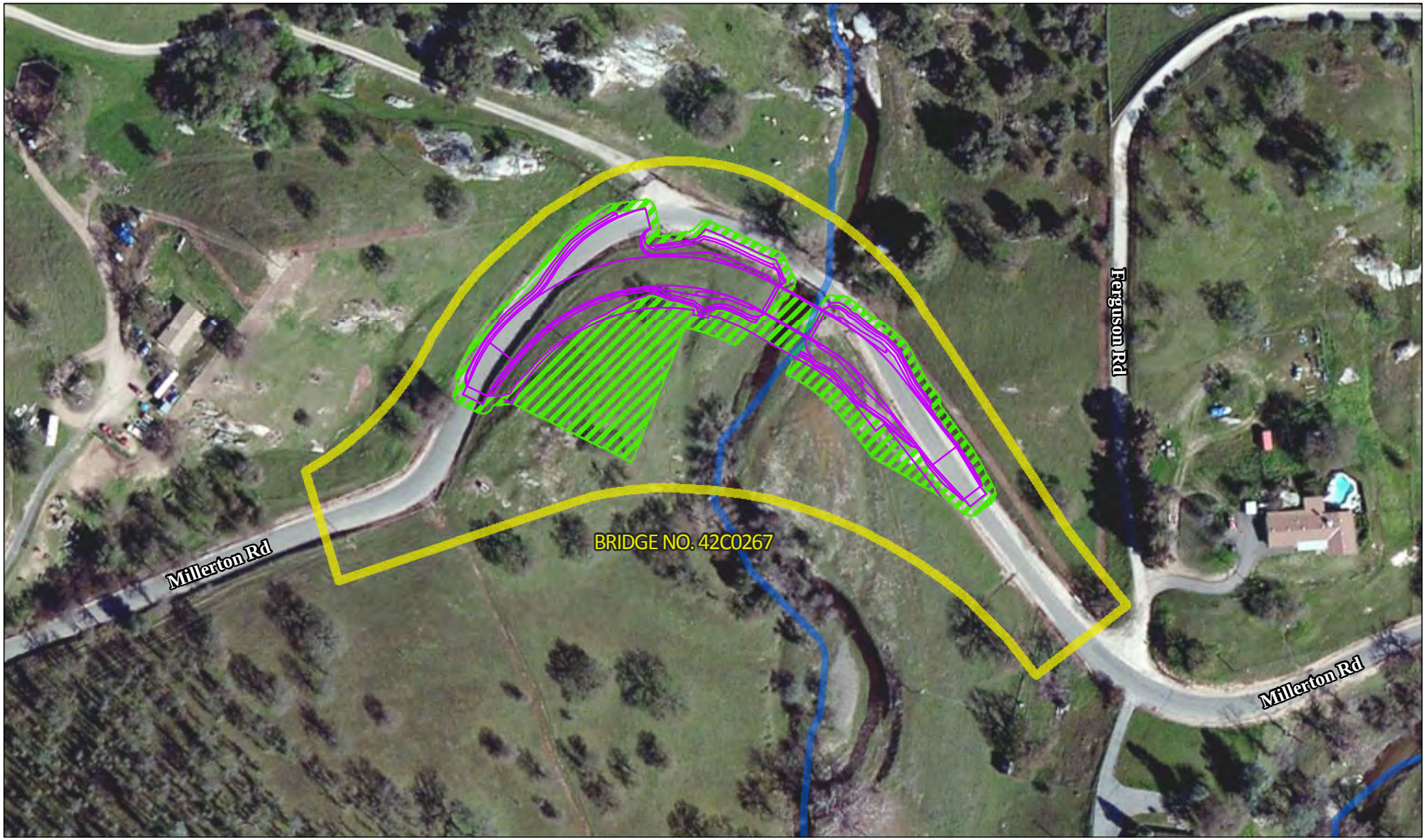
FIGURE 2

Little Dry Creek Bridges Replacement
on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE VICINITY



Caltrans

LEGEND

- Project Site
- Project Design
- Contractor Staging Area
- Little Dry Creek

N

0 75 150

FEET

SOURCE: DigitalGlobe (3/29/2011)

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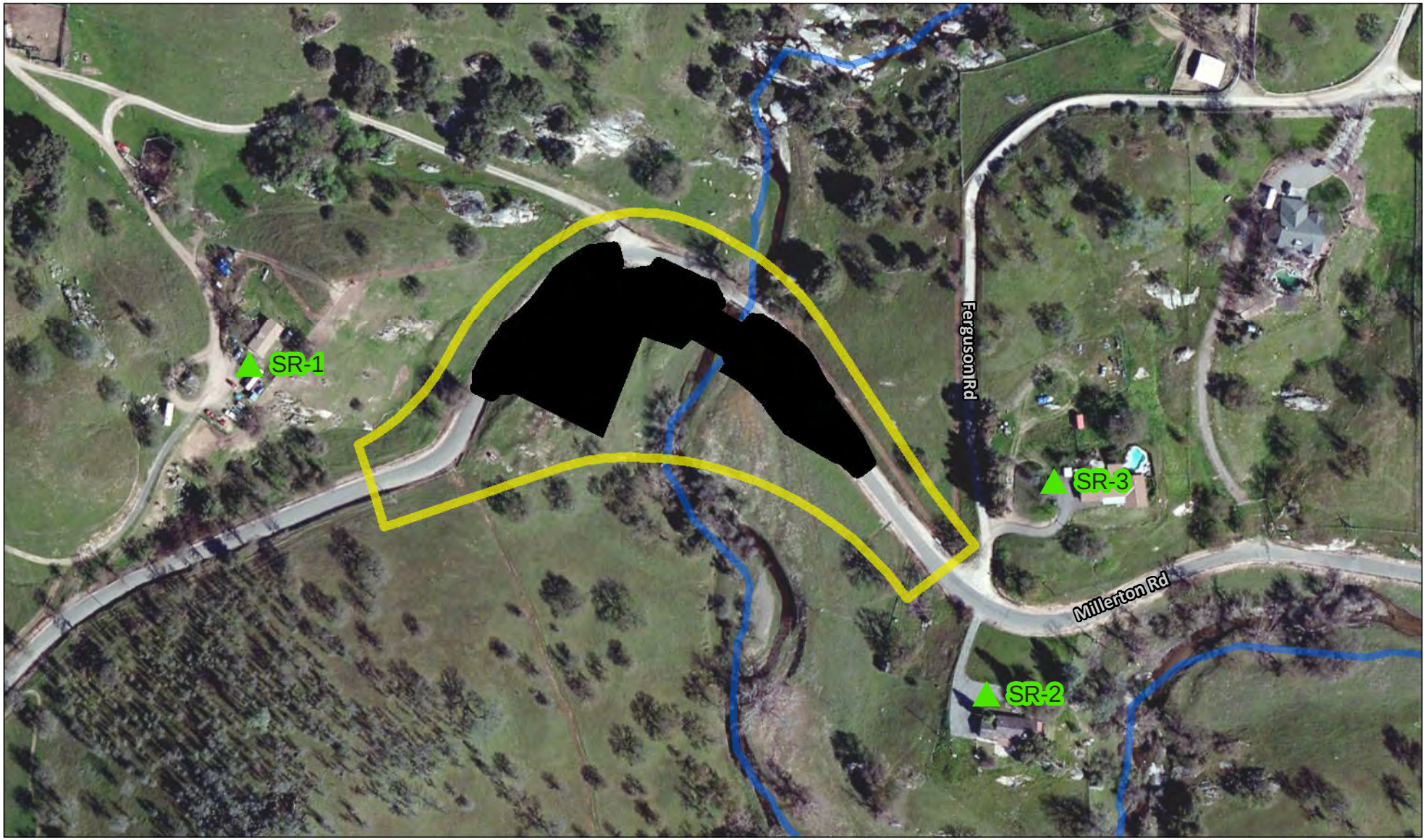
FIGURE 3

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE AND DESIGN OF BRIDGE NO. 42C0267



Caltrans

N

0 100 200
FEET

LEGEND

Project Site

Construction Area

Sensitive Receptor (SR) Locations

SR-1 APN 138-061-17

SR-2 APN 138-061-41

SR-3 APN 138-450-03

SOURCE: Esri World Imagery (08/2016), Fresno County Parcel Data (08/2016)

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FIGURE 4

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942 (210)

SENSITIVE RECEPTOR LOCATIONS

LSA ASSOCIATES, INC.
4200 ROCKLIN ROAD, SUITE 11B
ROCKLIN, CALIFORNIA 95677
916.630.4600 TEL
916.630.4603 FAX
BERKELEY
CARLSBAD
FRESNO
IRVINE
PALM SPRINGS
PT. RICHMOND
RIVERSIDE
SAN LUIS OBISPO

M E M O R A N D U M

DATE: December 15, 2016

TO: Shane Gunn, Branch Chief
Caltrans District 6
2015 E. Shields Avenue, Suite 100
Fresno, California 93726

FROM: Edward Heming, AICP
Senior Environmental Planner
LSA Associates, Inc.

SUBJECT: Visual Impact Assessment Memo with Attachments- Millerton Road Bridges over Little Dry Creek (42C0268, 42C0269, and 42C0270) and North Fork Little Dry Creek (42C0267) Replacement Project (Federal Project No. BRLO-5942(210))

The purpose of this Visual Impact Assessment Memorandum (VIA Memo) is to document potential visual impacts caused by implementation of the Millerton Road Bridges over Little Dry Creek and North Fork Little Dry Creek Replacement Project (herein referred to as the "Project"). Visual impacts are demonstrated by identifying visual resources in the Project area, measuring the amount of change that would occur as a result of the Project, and predicting how the affected public would respond to or perceive those changes. The Visual Impact Assessment Guide checklist was used to determine the level of detail required for this VIA. After conducting a site visit and completing the VIA Guide checklist, it was determined that the proposed Project would not result in substantial visual impacts and a brief VIA Memo would be sufficient.

Project Description: The proposed Project is located in a rural portion of Fresno County approximately 12 miles northeast of the City of Clovis between Auberry Road to the west and State Route 168 to the east. **Figures 1** and **2** show the location of the Study area on a regional and local basis, respectively. The Project includes replacement of four bridges, three of which cross over Little Dry Creek (42C0268, 42C0269, and 42C0270) and one which crosses over North Fork Little Dry Creek (42C0267).

All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 45 mph for a rural County road with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during the 100-year storm event.

The proposed Project would significantly improve existing conditions; roadway safety, structure condition, and bridge hydraulic capacity. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34 feet-10 inches wide which accommodates Fresno County's and American Association of State Highway and Transportation Officials standard of two 12-foot lanes and two 4-foot shoulders. Each of the replacement bridges has been

set on an alignment that can accommodate a higher design speed that is closer to the County's standard of 45 mph.

Bridges 42C0267, 42C0269 and 42C0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable). The abutments and pier (as applicable) for Bridges 42C-0267, 42C-0268, and 42C-0270 will be founded on shallow spread footings embedded into granite material. Due to the presence of a deep subterranean lens of decomposed granite, the abutments for Bridge 42C-0269 will be supported on cast-in-drilled-hole piles. Construction of all four bridges will require work within the creek including the removal of the existing bridge, construction of the bridge pier and footings (only applicable for bridges 42C0268 and 42C0269), construction of the temporary creek crossing (only applicable for bridge 42C0268), construction of the abutment walls and footings, construction and removal of temporary false work, and installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location. For bridge 42C0268, the temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek. Creek flows will be temporarily conveyed through the berm and construction site via pipe culverts.

Visual Setting: The Project bridges are located in a rural residential area among rolling hills with numerous ephemeral drainages that generally flow south and west towards the Little Dry Creek. Individual settings for each bridge are described below:

Bridge 42C0267: North Fork Little Dry Creek flows south through the Project site. From there, North Fork Little Dry Creek flows into Little Dry Creek and eventually to the San Joaquin River, approximately nine miles to the west. The Project site consists of hilly terrain bisected by North Fork Little Dry Creek and is at an elevation of 575 feet. Vegetation occurs within and surrounding the Project site in natural communities. Four natural vegetative communities are present within and surrounding the Project site: blue oak woodland, California annual grassland, California sycamore riparian, and intermittent stream. Parcels to the north and south of the Project site are bisected by North Fork Little Dry Creek and occupied by areas of natural communities similar as to what is described above. Parcels to the east and west of the Project site are occupied by ranch style single-family residential units and areas of natural communities as described above.

Bridge 42C0268: Little Dry Creek flows west and south through the Project site. From there, Little Dry Creek eventually flows to the San Joaquin River, approximately 10 miles to the west of the Project site. The Project site consists of hilly terrain bisected Little Dry Creek and is at an elevation of 600 feet. Vegetation occurs within and surrounding the Project site in natural communities. Four natural vegetative communities are present within and surrounding the Project site: blue oak woodland, California annual grassland, rush/Bermuda grassland, and intermittent stream. Parcels to the north, east, south, and west of the Project site are occupied by areas of natural communities as described above.

Bridge 42C0269: Little Dry Creek flows west through the Project site. From there, Little Dry Creek flows eventually to the San Joaquin River, approximately 11 miles to the west. The Project site consists of hilly terrain bisected by Little Dry Creek and is at an elevation of 650 feet. Vegetation occurs within and surrounding the Project site in natural communities. Three natural vegetative communities are present within and surrounding the Project site: blue oak woodland, California annual grassland, and intermittent stream. Parcels to the north, east, south, and west of the Project site are occupied by areas of natural communities as described above.

Bridge 42C0270: Little Dry Creek flows south through the Project site. From there, Little Dry Creek eventually flows to the San Joaquin River, approximately 12 miles to the east. The Project site consists of hilly terrain bisected by Little Dry Creek and is at an elevation of 750 feet. Vegetation occurs within and surrounding the Project site in natural communities. Three natural vegetative communities are present within and surrounding the Project site: California annual grassland, California sycamore riparian, and intermittent stream. Parcels to the north, south, and west of the Project site are occupied by areas of natural communities as described above. Parcels to the east of the Project site are occupied by ranch style single-family residential areas and areas of natural communities as described above.

Assessment Method: To determine the potential effects of the proposed Project on the visual environment, a site visit and photographic reconnaissance were conducted. The site visit and representative photographs are used to establish the scenic character and quality of the Project area. **Figures 3a-3d** show the visual characteristics of the Project site and adjacent land in representative photographs.

Visual Resource Change: Review of the design plans for the proposed Project indicates that implementation would not result in substantial adverse impacts to the visual character and quality of the surrounding area. The proposed Project would remove the existing deficient bridges over Little Dry Creek and North Fork Little Dry Creek on Millerton Road and replace them on an improved roadway alignment to improve safety and meet current American Association of State and Highway Transportation Officials' standards. During construction of the proposed Project activities such as clearing and grubbing would temporarily change the visual quality and character of the site in that vegetation would be removed to allow for the construction of the new bridges and realignment of Millerton Road.

In order to remove the old bridges and build the new bridges, construction activities would have to occur within North Fork Little Dry Creek and Little Dry Creek. The Project site would be dewatered and these creeks would be temporarily diverted into pipes for controlled enclosed conveyance of water through the construction area. Based on such construction activities occurring, it is anticipated that the visual character may be temporarily degraded during the construction period.

Sensitive Receptors for Bridge 42C0267 include the people residing in the nearby residential units and drivers travelling along Millerton. Receptors for the other three bridges are only drivers travelling along Millerton road as no residential units are nearby. However, these visual changes would be temporary (over a 4-month period) and are considered to be minor. Once the proposed Project is operational, residents adjacent to Bridge 42C0267 and motorists travelling along Millerton Road through the area may notice a visual change compared to existing conditions;

however, these changes would be minor and would not degrade the visual quality of the Project area.

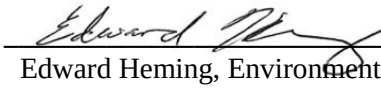
Avoidance/Minimization/Mitigation Measures: Implementation of the proposed Project has the potential to slightly affect the visual quality and character of the surrounding landscape. This is mainly due to the amount of vegetation that would be removed from the Project site in order to construct the new bridges and realign Millerton Road. The following measures are recommended to be implemented to offset the changes in visual quality and character of the site:

- Following completion of the new bridges, all fill slopes, temporary impact and/or otherwise disturbed areas shall be restored to preconstruction contours (if necessary) and revegetated with the native seed mix specified in **Table A** below.

Table A: Native Species Mix

Scientific Name	Common Name	Rate (Lbs./Acre)	Minimum Percent Germination
Artemisia douglasiana	Mugwort	2.0	50
Bromus carinatus carinatus	California brome	5.0	85
Elymus trachycaulus	Slender wheatgrass	2.0	60
Elymus X triticum	Regreen	10.0	80
Eschscholzia californica	California poppy	2.0	70
Hordeum brachyantherum	California barley	2.0	80
Lupinus bicolor	Bicolored lupine	4.0	80

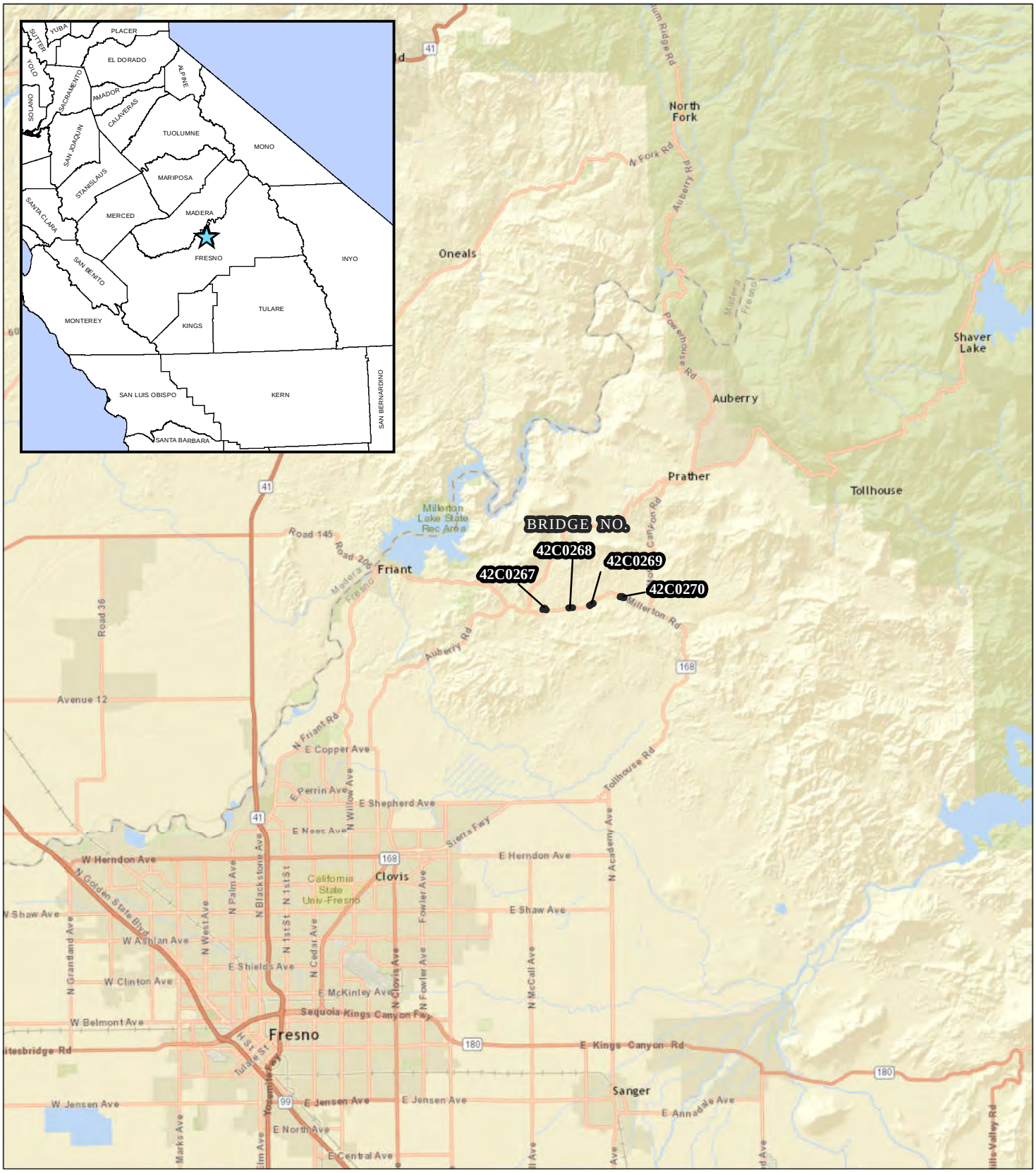
The proposed Project would not adversely affect a visual resource, the visual setting or visual characteristics of the area as defined by the National Environmental Policy Act (NEPA) statutes or guidelines, or by Caltrans policy with implementation of the above suggested measures.

Prepared By:  **Date**: 12/15/16
Edward Heming, Environmental Planner, AICP
LSA Associates, Inc.

Reviewed By:  **Date**: 12/15/16
Marcia Vallier, ASLA, APA, LEED AP, PLA#3293
Vallier Design Associates, Inc.

ATTACHMENT A

FIGURES



LEGEND

Project Site

FIGURE 1

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE REGIONAL LOCATION

0 2.5 5
MILES

SOURCE: ESRI World Street Map (2015)

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LEGEND

- Project Site
- Little Dry Creek

Caltrans

N

0 512.5 1025
FEET

SOURCE: Microsoft Aerial Imagery (8/2010)

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FIGURE 2

Little Dry Creek Bridges Replacement
on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

PROJECT SITE VICINITY

Bridge No. 42C0267 facing east along Millerton Road towards North Fork Little Dry Creek.

Bridge No. 42C0267 facing north across Millerton Road, looking upstream along North Fork Little Dry Creek.

Bridge No. 42C0267 facing south from North Fork Little Dry Creek, looking downstream.

Bridge No. 42C0267 facing west along Millerton Road, looking across at the southern abutments of the bridge.

Caltrans

FIGURE 3A

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/15/16/16).

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REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0267

Bridge No. 42C0268 facing east, just north of Millerton Road, looking upstream at Little Dry Creek.

Bridge No. 42C0268 facing north from south of Millerton Road; Little Dry Creek in the upper right hand portion of the picture.

Bridge No. 42C0268 facing south from Millerton Road, looking downstream at Little Dry Creek.

Bridge No. 42C0268 facing west from Millerton Road; Little Dry Creek running downstream in the foreground of the picture.

Caltrans

FIGURE 3B

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/15/16/16).

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REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0268

Bridge No. 42C0269 facing east from the turnout immediately before the bridge and looking east along Millerton Road.

Bridge No. 42C0269 facing north from just south of Millerton Road, looking upstream towards the piers of the bridge.

Bridge No. 42C0269 facing south from Millerton Road, looking just west of Little Dry Creek.

Bridge No. 42C0269 facing west along Millerton Road, at the mouth of Bridge No. 42C0269.

Caltrans

FIGURE 3C

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/15/16/16).

I:\CFF1101Q\Indd\Photos (08/15/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0269

Bridge No. 42C0270 facing east along Millerton Road. Bridge No. 42C0270 and Little Dry Creek are visible in the distance.

Bridge No. 42C0270 facing north from the Millerton Road approach to Bridge No. 42C0270; Little Dry Creek is just to the right of the large oak tree in the foreground.

Bridge No. 42C0270 facing south from Millerton Road towards Little Dry Creek and several large oak trees.

Bridge No. 42C0270 facing west from Millerton Road towards Bridge No. 42C0270, which is visible in the distance (near the large oak tree to the right of Millerton Road).

Caltrans

FIGURE 3D

Little Dry Creek Bridges
Replacement on Millerton Road Project
Fresno County, California
Federal Project No. BRLO-5942(210)

SOURCE: LSA (08/15/16/16).

I:\CFF1101Q\Indd\Photos (08/15/16).

REPRESENTATIVE PHOTOS OF BRIDGE NO. 42C0270

Little Dry Creek Bridge Replacements on Millerton Road

Water Quality Report

Little Dry Creek (42C0267, 42C0268, 42C0269, and 42C0270)

Fresno County, California

Federal Project No. BRLO-5942(210)

May 2017

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Shane Gunn, Environmental Planner, California Department of Transportation, 855 M Street, Suite 200, Fresno, CA 93726; (559) 445-6310 Voice, or use the California Relay Service TTY number, (800) 735-2929 or 711.

Water Quality Report

Little Dry Creek Bridge Replacements on Millerton Road

Fresno County, California

Federal Project No. BRLO-5942(210)

May 2017

Fresno County Public Works Department
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and
STATE OF CALIFORNIA
Department of Transportation

Prepared By: _____ Date: 2-2-17
Kat Hughes, Assistant Environmental Planner
(916) 630-4600
LSA

Prepared For: Alexis Rutherford Date: 5-12-17
Alexis Rutherford
(559) 600-4530
Fresno County Public Works and Planning Design Division

Recommended
for Concurrence By: _____ Date: 5/31/17
Pedram Mafi, Transportation Engineer/Environmental Specialist
(559) 445-6470
District 6

Concurred By: _____ Date: 5/31/17
Shane Gunn, Branch Chief
(559) 445-6310
District 6
Environmental Analysis, Planning and Local Programs

Table of Contents

List of Figures

Chapter 1. Introduction

Fresno County (County), with Federal Highway Administration funding, and in conjunction with the California Department of Transportation (Caltrans), proposes to replace the Millerton Road Bridges over Little Dry Creek (42C0268, 42C0269, and 42C0270) and North Fork Little Dry Creek (42C0267) in Fresno County.

1.1. Purpose and Need of the Proposed Action

1.1.1. Project Location

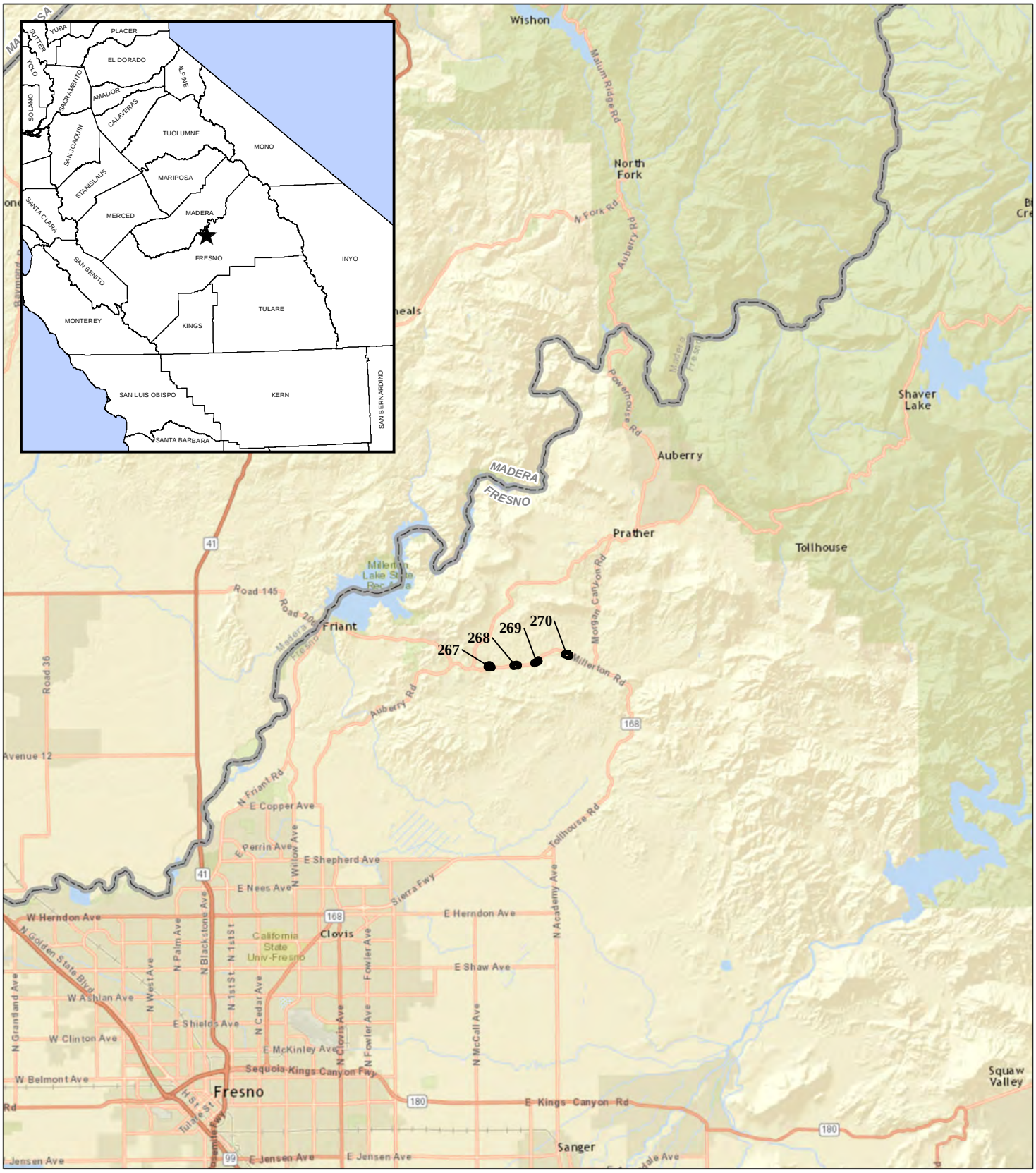
The proposed project is located in a rural portion of Fresno County approximately 12 miles northeast of the City of Clovis between Auberry Road to the west and State Route 168 to the east. Figures 1 and 2 show the location of the Study Area on a regional and local basis, respectively.

1.1.2. Project Description

The project includes replacement of four bridges, three of which cross over Little Dry Creek (42C0268, 42C0269, and 42C0270) and one which crosses over North Fork Little Dry Creek (42C0267).

All four of the existing bridges are set on alignments that do not accommodate Fresno County's standard design speed of 45 mph for a rural County road with no posted speed limit. All four bridges are also hydraulically inadequate and subject to overtopping during the 100-year storm event.

The proposed project would significantly improve existing conditions; roadway safety, structure condition, and bridge hydraulic capacity. Each of the existing structures has been flagged as functionally obsolete due to their substandard width for a two lane facility. The timber superstructures are in various states of deterioration. One structure (42C-0267) is flagged as being structurally deficient due its advanced state of structural decline. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34 feet-10 inches wide which accommodates Fresno County's and American Association of State Highway and Transportation Officials standard of two 12-foot lanes and two 4-foot shoulders. Each of the replacement bridges has been set on an alignment that can accommodate a higher design speed that is closer to the County's standard of 45 mph.



LEGEND

Project Areas

FIGURE 1

Little Dry Creek Bridges
Replacement on Millerton Road
Project, Fresno County, California
Federal Project No. BRLO-5942(210)

Study Vicinity Map

0 2.5 5
Miles

SOURCE: ESRI Basemap (2016)

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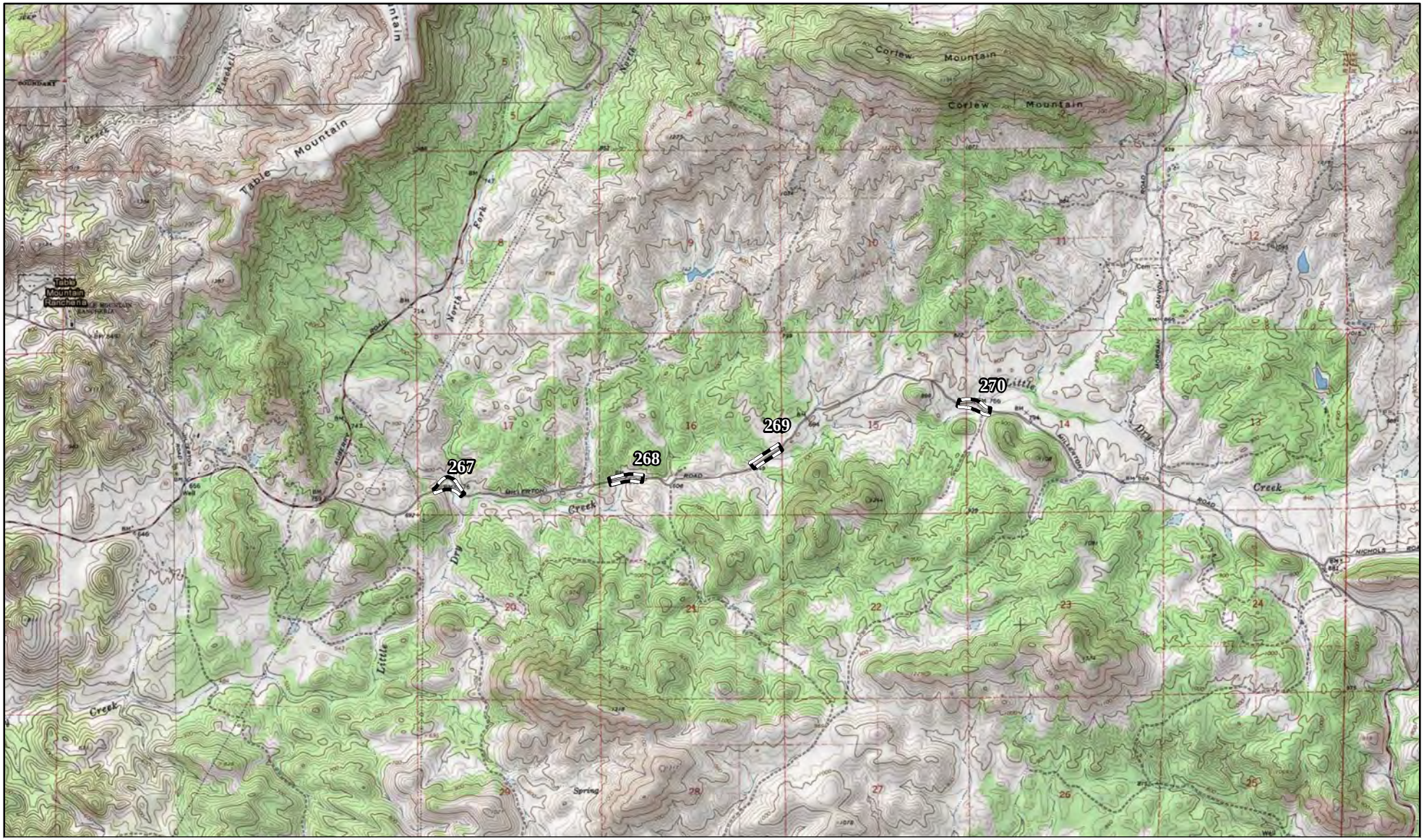

LEGEND

Study Area

0 2000 4000

FEET

SOURCE: USGS 7.5-Minute Quadrangle (Academy)

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FIGURE 2

Little Dry Creek Bridges Replacement on Millerton Road Project, Fresno County, California Federal Project No. BRLO-5942(210)

Study Location

Bridges 42C0267, 42C0269 and 42C0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction.

Each of the existing bridges will be replaced with a cast-in-place concrete slab supported on concrete abutment walls and a concrete pier (as applicable). The abutments and pier (as applicable) for Bridges 42C-0267, 42C-0268, and 42C-0270 will be founded on shallow spread footings embedded into granite material. Due to the presence of a deep subterranean lens of decomposed granite, the abutments for Bridge 42C-0269 will be supported on cast-in-drilled-hole piles. Construction of all four bridges will require work within the creek including the removal of the existing bridge, construction of the bridge pier and footings (only applicable for bridges 42C0268 and 42C0269), construction of the temporary creek crossing (only applicable for bridge 42C0268), construction and removal of temporary earth berm coffer dams and pipe culverts, construction of the abutment walls and footings, construction and removal of temporary false work, and installation of rock slope protection. Road approach fill will also be placed within the floodplain of Little Dry Creek at each bridge location. For bridge 42C0268, the temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek.

In order to keep the creek channel dry at each bridge site during construction, if flows are present at the start of construction temporary earth berm coffer dams will be constructed across the creek bed at the upstream and downstream limits of work at each site. Creek flows will be temporarily conveyed through the berms and construction sites via pipe culverts.

Chapter 2. Regulatory Setting

Water resource protection in Fresno County is governed by a complex network of federal, state regulations, enforced by the State and under the supervision of the U.S. Environmental Protection Agency (USEPA). Both federal and State laws have been created to protect surface water and groundwater quality for use as domestic, agricultural, and industrial supply, for recreation, and for freshwater fish and aquatic invertebrate habitat. Water quality protection regulations relevant to this Project are summarized below, including local protective guidance from Fresno County.

2.1. Federal Laws and Requirements

2.1.1. Clean Water Act

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source unlawful unless the discharge is in compliance with a NPDES permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S., to obtain certification from the State that the discharge will comply with other provisions of the act. (Most frequently required in tandem with a Section 404 permit request. See below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and Municipal Separate Storm Sewer Systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

USACE issues two types of 404 permits: Standard and General permits. For General permits there are two types: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are also two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (EPA) Section 404 (b)(1) Guidelines (U.S. EPA CFR 40 Part 230), and whether permit approval is in the public interest. The 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have less effects on waters of the U.S., and not have any other significant adverse environmental consequences. Per Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures have been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

2.2. State Laws and Requirements

2.2.1. Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a "Report of Waste Discharge"

for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the State. It predates the CWA and regulates discharges to waters of the State. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined and this definition is broader than the CWA definition of "pollutant". Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-source point controls (NPDES permits or Waste Discharge Requirements), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

2.2.2. State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB adjudicates water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM

- **Municipal Separate Storm Sewer Systems (MS4)**

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water dischargers, including MS4s. The U.S. EPA defines an MS4 as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water." The SWRCB has identified the Department as an owner/operator of an MS4 pursuant to federal regulations. The Department's MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department's MS4 Permit, currently under revision, contains three basic requirements:

1. The Department must comply with the requirements of the CGP (see below);
2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs) to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

- **Construction General Permit**
  Construction General Permit (Order No. 2009-009-DWQ, as amended by 2010-0014-DWG), adopted on November 16, 2010, became effective on February 14, 2011. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. For all projects subject to the CGP, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.
  By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the CGP. Construction activity that results in soil disturbances of less than one acre is subject to this CGP if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the CGP.
  The CGP separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and pre- and post-construction aquatic biological assessments during specified seasonal windows.
- **Section 401 Permitting**
  Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with State water quality standards. The most common federal permit triggering 401 Certification is a CWA Section 404 permit, issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project

2.3. Regional and Local Requirements

2.3.1. Fresno County General Plan

The Fresno County General Plan is a comprehensive, long-term policy framework that includes guidance for addressing water quality impacts to both ground and surface water. The following relevant policies would apply to the Little Dry Creek Bridge Replacements on Millerton Road Project:

- **Policy OS-A.25:** The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season unless adequately mitigated to avoid sedimentation of creeks and damage to riparian habitat.

- **Policy OS-A.26:** The County shall ocntinue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff.

Chapter 3. General Setting

The quality of water in an area depends upon several factors, including land use, topography, geology, soils, surface and groundwater hydrology, and climate. Following is a brief description of these general characteristics in the project area and surroundings.

3.1. Land Use

The County of Fresno adopted the current General Plan in 2000. The County's General Plan provides a land use blueprint for long-term growth with a planning horizon of 15 to 25 years. Land uses in the project area primarily consist of Exclusive Agricultural (AE 40). Bridge 42C0267 contains both Exclusive Agricultural (AE 40) and Limited Agricultural (AL 40).

3.1.1. Topography/Geology/Soils

Fresno County consists of three distinct geological regions: the western area soils, the eastern area soils, and the Sierra and Sequoia National Forests. The western and eastern area soils comprise the areas of the county subject to the majority of agricultural production and urbanization (United States Department of Agriculture Soil Conservation Service 1971, Natural Resource Conservation Service 2016). The project area is located in the "Eastern Area Soils" portion of the County.

The "Eastern Area Soils" is close to the geographic center of California and occupies part of the San Joaquin Valley and the western slope of the Sierra Nevada. The Eastern Area Soils area is bounded on the west by the Fresno Slough; on the east by the western boundaries of the Sierra and Sequoia National Forests; on the north by the San Joaquin River (Madera County line); and on the south by Kings and Tulare Counties.

The "Eastern Area Soils" area consists of three main physiographic sections:

- Soils of the Valley Basin;
- Soils of the Eastside Valley Alluvial Plains; and
- Soils of the Uplands of the Sierra Nevada foothills.

The project area is located in the Eastside Valley Alluvial Plains region. Soils within the project area are categorized as well-drained soils of low alluvial terraces.

According to the Natural Resources Conservation Service (NRCS) Soil Survey of Fresno County (2016), the project site contains three different types of soil, including: Vista coarse sandy loam , 15 to 30 percent slopes (VgD); Grangeville sandy loam, saline-alkali (Ga); Hanford sandy loam, benches (Hd); and, Water (W).

According to the Soil Survey of Fresno County (United States Department of Agriculture Soil Conservation Service 1971), Vista coarse sandy loam, 15 to 30 percent slopes soils are moderately steep and are 20 to 40 inches deep over weathered rock. The available water holding capacity is 3.5 to 5 inches, and runoff is medium to rapid. All soils in this association formed in material from old granitic alluvium.

Grangeville soils are moderately coarse, and formed in recent granitic alluvium. These soils have moderately rapid permeability and lack a subsoil.

Hanford sandy loam, benches are sandy loam throughout the profile, occupying beveled alluvial benches and sloping small fans. Runoff is medium.

Soils within the project area are suited to citrus, vineyards, alfalfa, cotton, truck crops, some orchard crops, and livestock grazing.

3.1.2. Climate

Fresno County is subject to a Mediterranean climate. Low elevations are hot and dry during the summer with moderate temperatures and relatively light precipitation in the winter.

Average January temperatures are a maximum of 54.1°F and a minimum of 37.4°F. Average July temperatures are a maximum of 98.6°F and a minimum of 65.1°F. The region has an average of 109.0 days with highs of 90°F (32°C) or higher and an average of 17.0 days with lows of 32°F (0°C) or lower. The record high temperature of 115°F was on July 8, 1905. The record low temperature of 17°F occurred on January 6, 1913.

Average annual rainfall is 20.06 inches, falling on an average of 32.87 days annually. The summer months are usually very dry except for occasional thunderstorms. The wettest year was 1983 with 21.6 inches of rain and the driest year was 2013 with 3.01 inches of rain. Snow is very rare in the County.

3.1.3. Water Resources

This section addresses the surface water and groundwater present in the project vicinity, and discusses surface and groundwater quality from both regional and project-level perspectives.

Surface Water. The project area is in the Tulare Lake Basin (Kings Subbasin). The San Joaquin and Kings Rivers are the two principal rivers within or bordering the subbasin. The San Joaquin River is located approximately 7.7 miles west of the west-most bridge in the project area.

The portion of the San Joaquin River nearest to the project area is currently on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments and, therefore, does not currently meet state water quality standards. Chlorpyrifos (insecticide) and an unknown toxicity are known pollutants exceeding current standards for the river (Central Valley Regional Water Quality Control Board 2016).

Wetlands. Wetlands are highly productive natural habitats used for foraging and nesting by many types of wildlife. These areas are given a high priority for protection by the government resource and regulatory agencies.

Surface water resources located throughout Fresno County include a variety of wetlands. Typically, they are found at the margins of ponds, lakes, and streams, in low-lying areas that collect precipitation, and in areas where groundwater intercepts the ground surface.

Wetlands may be seasonal or perennial. Additionally, many constructed ponds (stockponds, etc.) are located throughout the county that may be classified as wetlands.

Groundwater. The project site is located within the Kings Subbasin (subbasin of the Tulare Lake groundwater basin). The Kings Subbasin is bounded on the north by the San Joaquin River. The northwest corner of the subbasin is formed by the intersection of the east line of the Farmers Water District with the San Joaquin River. The west boundary of the Kings Subbasin is the eastern boundary of the Delta-Mendota and Westside Subbasins. The southern boundary runs easterly along the northern boundary of the Empire West Side Irrigation District, the southern fork of the Kings River, the southern boundary of Laguna Irrigation District, the northern boundary of the Kings County Water District, the southern boundaries of Consolidated and Alta Irrigation Districts, and the western boundary of Stone Corral Irrigation District. The

eastern boundary of the subbasin is the alluvium-granitic rock interface of the Sierra Nevada foothills.

Groundwater is predominantly of bicarbonate type, with major cations of calcium, magnesium, and sodium. Sodium appears higher in the western portion of the subbasin where some chloride waters are also found (Page and LeBlanc 1969).

3.1.4. Water Quality

Water quality is generally defined in terms of salinity and concentrations of harmful trace elements. In Fresno County, most water sources have excellent quality and are available for most uses after conventional treatment. Many communities are able to pump and use groundwater, although groundwater in certain areas contain contaminants from both natural and introduced sources and is unsuitable for irrigation and municipal and industrial uses. Bacterial counts (coliform bacteria) and parasite cyst loads of surface water sources are an emerging concern, and regulations for managing and monitoring these contaminants have been promulgated.

The California Surface Water Ambient Monitoring Program (SWAMP) was created and is being implemented in order to realize the State Legislature's Assembly Bill 982, which calls for a coordinated project to monitor water quality across the state. The State Water Board and the nine Regional Water Quality Control Boards (RWQCB) work together with scientists at the Universities of California, the California State Universities, California Department of Fish and Wildlife, and other State agencies to develop and implement SWAMP. According to SWAMPs mission and goals, monitoring efforts are prioritized. As of writing, most monitoring efforts have been focused on major rivers and irrigated lands.

Little Dry Creek and North Fork Little Dry Creek are under the jurisdiction of Region 5 Central Valley RWQCB. Both Little Dry Creek and North Fork Little Dry Creek are ephemeral waterways which are not in close proximity to major rivers. Monitoring has been limited for these waterways and data is currently unavailable.

Chapter 4. Findings

All four Millerton Road bridges over Little Dry Creek and North Fork Little Dry Creek are hydraulically inadequate and subject to overtopping during the 100-year storm event. The purpose of the proposed project is to replace these bridges with a wider, longer, and potentially higher structures that meet current design and loading standards.

Potential water quality effects from project-related construction activities can be minimized and reduced through implementation of Best Management Practices (BMP) and compliance with existing regulatory requirements. Based on this analysis and the implementation of mitigation measures and BMPs specified below, the proposed Project would not significantly impact water quality within the project vicinity.

Construction activities associated with the proposed project would have the potential of impacting the water quality of the ephemeral creeks. The potential impacts to water quality can be attributed to suspended solids being introduced into surface waters from grading activities or movement of construction equipment. Minimization measures for construction and long-term impacts would focus on the control of sediment and suspended solids from entering waterways. Commonly used construction activity BMPs would be required to minimize any potential impacts to the maximum extent practicable.

4.1. Short-Term (Temporary) Water Quality Impacts

Development of the proposed project would include the replacement of four existing bridges over Little Dry Creek and North Fork Little Dry Creek along Millerton Road. The existing bridges will be removed to accommodate a new two lane replacement structure measuring 34-10 inches wide which accommodates Fresno County's and American Associtation of State Highway and Transportation Officials standard of two 12-foot lanes and two 4-foot shoulders. Each of the replacement bridges have been set on an alignment that can accommodate a higher design speed that is closer to or meets the County's standard of 45 mph. Each replacment bridge will also be set on a slightly higher vertical profile than the existing bridge to meet hydraulic requirements.

Bridges 42C-0267, 42C-0269 and 42C-0270 will be placed on a new road alignment south of the existing road thereby eliminating the need for a temporary creek crossing throughout the duration of construction. Bridge 42C-0268 will remain on the existing road alignment, and will require a temporary creek crossing to convey traffic during construction. The temporary creek crossing will be comprised of a temporary compacted fill berm placed across the full width of the creek. Creek flows will be temporarily conveyed through the berm and construction site via pipe culverts. In addition, to ensure each project site is dry throughout the duration of project construction, temporary earth berm coffer dams will also be placed at the upstream and downstream limits of work at each bridge site. Temporary pipe culverts will be placed between the temporary coffer dams to convey any creek flows present during the construction period through each bridge site.The proposed project will also require the reconstruction of roadway approaches along Millerton Road at each bridge site.

Stormwater runoff (during construction activities) from the proposed project may transport pollutants to Little Dry Creek and North Fork Little Dry Creek if BMPs are not properly implemented. Generally, as the Disturbed Soil Areas increase, the potential for temporary water quality impacts also increases. Implementation of Mitigation Measures WQ-1 through WQ-4 would reduce short-term water quality impacts associated with construction of the proposed Project. Short-term impacts would not be substantial.

4.2. Long-Term (Permanent) Water Quality Impacts

After project completion, the potential for adverse long-term impacts to water quality would be reduced.

Long-term water quality impacts are usually due to changes in stormwater drainage. The proposed project bridges would be developed similar to the original bridges and the stormwater drainage pattern of the area would remain the same. Water runoff and water quality issues would not occur in Little Dry Creek or North Fork Little Dry Creek with implementation of the proposed project. The area of the new bridges would be slightly larger than the original bridges, thereby increasing the amount of impervious surfaces in the project area. However, the nominal increase in impervious surfaces in the project area would not result in a measureable increase in water runoff or increase water quality issues for the Little Dry Creek or North Fork Little Dry Creek. Implementation of Mitigation Measures WQ-2 and WQ-4 would include the use of Design Pollution Prevention and Treatment Control BMPs and sedimentation

control measures to reduce stormwater drainage and water quality issues during operation of the proposed project.

With implementation of these mitigation measures, long-term water quality impacts associated with the proposed project would not be substantial.

4.2.1. Mitigation Measures

WQ-1 Preparation and implementation of construction site temporary BMPs would comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System Permit and any subsequent permit as they relate to construction activities for the proposed project. These BMPs would include submission of a Notice of Intention to the Central Valley RWQCB at least 30 days before the start of construction and submission of a Notice of Termination to the RWQCB upon completion of construction and stabilization of the project site. The temporary BMPs would be installed prior to any construction operations and would be in place for the duration of the contract. The removal of these BMPs would be the final operation, along with the project site cleanup.

WQ-2 Follow Design Pollution Prevention and Treatment Control BMPs for the proposed project in accordance with the procedures outlined in the Stormwater Quality Handbooks, Project Planning and Design Guide. Compliance with Design Pollution Prevention and Treatment Control BMPs would include coordination with the RWQCB with respect to feasibility, maintenance, and monitoring of Treatment Control BMPs as set forth in Caltrans' Statewide Stormwater Management Plan. A Water Pollution Control Program will need to be prepared by a Qualified Stormwater Pollution Prevention Plan Practioner.

WQ-3 All refueling, maintenance, and staging of equipment and vehicles would occur at least 18.3 meter (60 feet) from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat. Regular monitoring would ensure contamination of habitat does not occur during such operations. The Contractor will also be required to comply to the provisions specified in Section 13, "Water Pollution Control," and Section 14-11, "Hazardous Waste and Contamination," of the California State Standard Specifications, regarding

spill prevention and control measures. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

WQ-4 To control sedimentation during and after project implementation, the County would implement BMPs outlined in any authorizations or permits, issued under the authorities of the CWA that it receives for the project. If best management practices are ineffective, the County would attempt to remedy the situation immediately, in consultation with the regulatory and resource agencies.

With the implementation of the above mitigation measures, impacts to water quality would not be substantial.

4.2.2. Beneficial Uses Impacts

Under the guidance of the Porter-Cologne Water Quality Control Act, the Central Valley RWQCB has established water quality objectives for surface and ground water in the region (Central Valley RWQCB 2015). These water quality objectives are listed in Basin Plans designated for respective regions. Water quality objectives consist of both narrative and numerical goals and are established to preserve existing and potential future designated beneficial uses of regional water bodies. The water quality objectives must comply with the State Anti-Degradation Policy (State Board Resolution No. 668-16).

The beneficial uses and abbreviations listed below are the standard designations used in all California basin plans (Central Valley RWQCB 2015). However, in the Tulare Basin, Fish Spawning and Freshwater Habitat differ from the standard definitions in that they present basin-specific conditions. Fish Spawning, therefore, only applies to certain cold-water streams, and Freshwater Habitat includes sensitive fish propagation stages.

- Municipal and Domestic Supply (MUN) - Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

- Agricultural Supply (AGR) - Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

- Industrial Service Supply (IND) - Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

- Industrial Process Supply (PRO) - Uses of water for industrial activities that depend primarily on water quality.

- Hydropower Generation - Uses of water for hydropower generation.

- Water Contact Recreation - Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

- Non-Contact Water Recreation (REC-2) - Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

- Warm Freshwater Habitat (WARM) - Uses of water that support warm water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates. WARM includes support for reproduction and early development of warm water fish.

- Cold Freshwater Habitat - Uses of water that support cold water ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

- Wildlife Habitat (WILD) - Uses of water that support terrestrial or wetland ecosystems, including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

- Rare, Threatened, or Endangered Species (RARE) - Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of

plant or animal species established under state or federal law as rare, threatened or endangered.

- Spawning, Reproduction, and/or Early Development (SPWN) - Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish. SPWN shall be limited to cold water fisheries.

- Migration of Aquatic Organisms - Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.

- Ground Water Recharge - Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

- Freshwater Replenishment - Uses of water for natural or artificial maintenance of surface water quantity or quality.

- Aquaculture - Uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

- Preservation of Biological Habitats of Special Significance (BIOL) - Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance, where the preservation or enhancement of natural resources requires special protection.

- Navigation - Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

Both Little Dry Creek and North Fork Little Dry Creek are ephemeral streams. They do not meet the minimum flow to be considered to have beneficial MUN, AGR, IND, or PRO uses. Beneficial use impacts are most likely within the following categories: REC-2, WILD, RARE, and BIOL.

Though aesthetic enjoyment (REC-2) of Little Dry Creek and North Fork Little Dry Creek could be interrupted during construction; however, impacts to aesthetic enjoyment are considered only if in conjunction with other REC-2 activities. The

public does not have access to the surrounding areas, and therefore REC-2 activities are not possible and no impacts to REC-2 uses would take place.

Construction of the project would also have the potential to impact WILD, RARE, and BIOL beneficial uses, particularly as habitat for the California tiger salamander, a State and Federally Threatened species, is considered present within the project area. However, adherence to BMPs and the Avoidance and Minimization Measures outlined in the Natural Environment Study and Biological Assessment would reduce impacts during construction and operation of the project.

The project would therefore protect existing and future beneficial uses of Little Dry Creek and North Fork Little Dry Creek.

Chapter 5. Permits Required

Section 404 Compliance: The Project is anticipated to be eliligible for a Nationwide Permit (NWP) 14 Linear Transportation Projects. A Pre-construction Notification is required only for projects over 0.1 acres under NWP 14.

Section 401 Compliance: The Project requires a Section 401 Water Quality certification to be issued by the Regional Water Quality Control Board.

Section 1600 Compliance: The Project requires a Section 1600 Streambed Alteration Agreement to be issued by the California Department of Fish and Wildlife.

NPDES General Construction Permit: The Project would require a National Pollution Discharge Elimination System (NPDES) General Construction Permit for Discharges of storm water associated with construction activities. A Storm Water Pollution Prevention Plan (SWPPP) would also be developed and implemented as part of the Construction General Permit.

Chapter 6. References

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