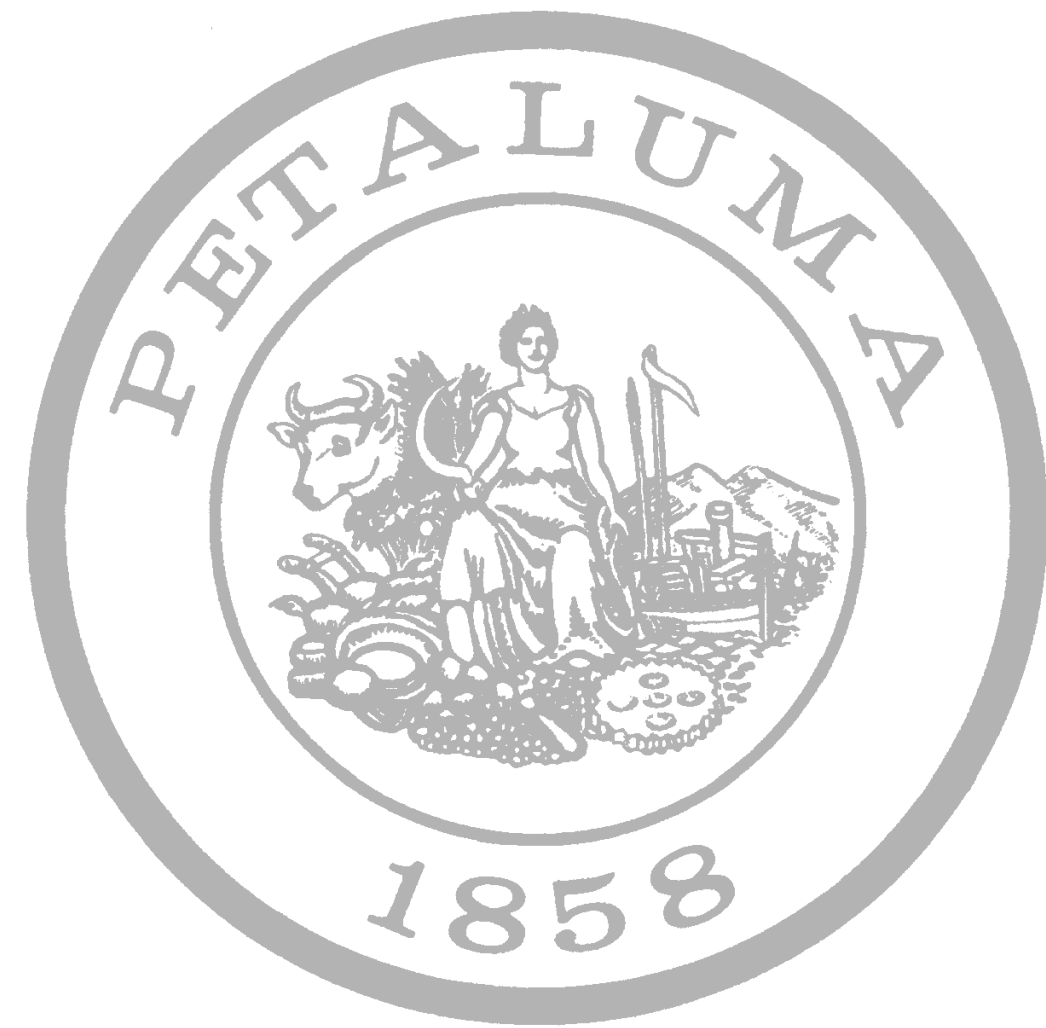


SECTION VI
PLANS

City of Petaluma, California

FIRST AND F STREET BRIDGE REPLACEMENT PROJECT C16101003



MAYOR
TERESA BARRETT

COUNCIL MEMBERS
D'LYNDA FISCHER
MIKE HEALY
DAVE KING
BRIAN BARNACLE
KEVIN MCDONNELL
DENNIS POCEKAY

CITY MANAGER
PEGGY FLYNN

PUBLIC WORKS AND UTILITIES DIRECTOR
JASON BEATTY, ASCE



LOCATION MAP
SCALE: N.T.S.

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C-4	AS-BUILT EXISTING BRIDGE PLANS
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ALL PROJECT PLANS HAVE BEEN PREPARED AND REVIEWED TO COMPLY WITH CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND/OR THE CALIFORNIA BUILDING STANDARDS CODE (CBCS).

THESE PROJECT PLANS CONTAIN ELEMENT(S) THAT ARE NOT "TECHNICALLY FEASIBLE" AND/OR CAN'T MEET THE APPLICABLE CBCS BECAUSE IT WOULD CREATE AN "UNREASONABLE BURDEN". PLEASE SEE THE WRITTEN ANALYSIS SUPPORTING THIS DETERMINATION FILED UNDER THE PROJECT FILE.

DESIGNED BY _____
SIGNATURE DATE _____

RECORD PLAN

I _____ HEREBY STATE THAT THESE RECORD PLAN CHANGES ARE COMPLETE FROM INFORMATION FURNISHED BY THE PROJECT CONTRACTOR, SOILS ENGINEER AND MY OFFICE. I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE THE THE WORK WAS DONE IN ACCORDANCE WITH THE FINAL APPROVED PLANS. THE ENGINEER AND THE CITY WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. FIELD VERIFICATION OF CRITICAL FACTS AND DATA SHOULD BE MADE IF THESE DOCUMENTS ARE TO BE USED AS A BASIS FOR FUTURE WORK. ENGINEER'S SIGNATURE _____ DATE: _____

	SIGNATURE	DATE
CITY ENGINEER		
OPERATIONS MANAGER		
FIRE MARSHAL		
PARKS		
PLANNING		
POLICE		

APPROVED BY: _____
DEPUTY DIRECTOR P.E.

DESIGNED BY: _____
CARL NELSON
P.E. C60769 EXP. 12/31/2022 DATE

DATE: OCTOBER 2021	DESIGNED BY: JPN/HH	DRAWN BY: CC	CHECKED BY: CN
PROJECT NO. 1900182			
CITY OF PETALUMA PUBLIC WORKS & UTILITIES 202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954 PH. 707-778-4546 FAX. 707-778-4508			
FIRST AND F STREET BRIDGE REPLACEMENT TITLE SHEET			
SHEET C-1			
C-1 OF C-14			

FIRST AND F STREET BRIDGE REPLACEMENT PROJECT PETALUMA, CALIFORNIA

GENERAL NOTES

1. Design Intent: These drawings represent the design intent of the Engineer. The Contractor is responsible for all items shown on these Plans and Specifications and shall be responsible for any deviations from these plans and associated risk and expense. The Contractor shall be responsible for having a copy of the approved plans and any addendums at the job site at all times and shall immediately notify the Engineer of any unforeseen circumstances or conditions that would alter these plans in order to receive approval for modifications to the intended design.

2. Composite Base Map Sheet: The proposed grading and improvements shown on these Drawings are superimposed on a base sheet. This base sheet is compiled from a topographic survey, and other data as made available to the Engineer, who shall not be held liable for changes, inaccuracies, omissions or other errors on these documents. The composite base sheet is provided as an aid only and the Contractor shall be responsible for reviewing these documents and incorporating/integrating all construction as required to accommodate the same.

3. Materials and Workmanship: All materials, workmanship, and construction shall conform to the latest edition of the City of Petaluma Construction Standards and Specifications, and the CALTRANS Standard Plans and Specifications unless otherwise noted. All material shall be furnished and installed by the Contractor unless otherwise noted.

4. Pre-construction Meeting: A pre-construction meeting shall be arranged by the Contractor at the job site prior to the commencement of work. The meeting shall be attended by the Owner (City of Petaluma), Contractor (including site foreman and key personnel), Engineer, and if possible representatives of any involved regulatory agencies. Prospective participants shall be notified of the meeting a minimum of three (3) working days prior to the meeting. The purpose of the meeting is to review the work plan and provide clarifications, review job requirements, and discuss conditions of any permits. Special attention will be paid to wetlands soil erosion and water quality protection requirements. Notice for the Contractor to proceed with work shall be provided at completion of the pre-construction meeting.

5. Completion Schedule: Contractor shall provide the City of Petaluma with a project construction completion schedule within 72-hours of award of contract and review this schedule and any changes at pre-construction meeting. All grading work within stream channels must be completed by October 15, 20XX, and all erosion control measures must be in-place by October 31, 20XX. Site improvements, including trail construction must be completed by November 30, 20XX. The City of Petaluma will enforce a \$500.00 per day liquidated damages assessment against the Contractor for late work.

6. Utilities: Contractor shall notify all public and private utility companies in the project area a minimum of three (3) working days prior to commencement of work, Contractor to verify the location of any existing utilities within the project area. It shall be the responsibility of the Contractor to identify, locate, and protect all underground utilities. Any underground utilities plotted on the plans are considered tentative and therefore, no warranty expressed or implied is made as to the completeness or correction of their location. The utility companies are thought to be members of the Underground Service Alert (U.S.A.) on-call program. The Contractor shall notify U.S.A. 72-hours in advance of performing excavation work at 1-800-227 2600, 7:00 am to 5:00 pm, Monday through Friday. Existing public utilities shall be kept in service at all times. Utilities that interfere with the work to be performed shall be protected as required by the City of Petaluma, PG&E, AT&T, and all affected agencies.

7. Damage and Protection of Industrial Avenue: Contractor shall be responsible for protecting existing facilities, First Street and F Street and improvements from damage resulting from Contractor's work, including all utilities, public and private. Contractor shall exercise care to avoid excessive damage to existing public property, including streets, parking areas, native trees, shrubs, wetlands, and other property improvements. Contractor is to provide a brief plan for protecting First Street and F Street paving during earthmoving activities. This may involve use of trench plates. If Contractor causes damages to such items, they shall be responsible for repair or replacement in like number, kind, condition and size. The cost of repairs and replacement of damaged property shall be at the Contractor's expense. Any such cost may be deducted by the City of Petaluma from monies due Contractor under this contract.

8. Job Site Conditions, Traffic Control and Contractor Responsibility: Contractor shall assume sole and complete responsibility for site conditions during the course of construction, including the safety of all persons and property, traffic control and lane closure of Industrial Avenue and all environmental protection elements and permit conditions. The Contractor shall defend, indemnify, and hold the City of Petaluma, all private property owners with titles and easements (Nelson et al.), Sonoma County Water Agency, and the project engineer (Questa Engineering Corporation) harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except from liability arising from the sole negligence of the City or Engineer. Contractor shall assume sole and complete responsibility for job site conditions during construction, including safety of persons and property. This requirement shall apply continuously and not be limited to normal working hours.

All work shall be in compliance with applicable Occupational Safety and Health Administration (O.S.H.A.) standards as set forth by the Federal Department of Labor and/or the State of California. The Contractor shall secure a trench permit from the California Division of Industrial Safety prior to excavation of any trench over five (5) feet deep.

All traffic control shall be in accordance with the latest edition of the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance of Work Zones. All signs shall be appropriately constructed with reflective material on a backing of metal or fabric (no wood or plastic allowed) and shall be maintained throughout construction to provide proper visibility, per Section 12 of the Special Provisions.

The Contractor shall maintain reasonable access to all driveways during construction.

9. Clarification, Change Orders, and Additional Work: Should any Contractor or Subcontractor find any deficiencies, errors, conflicts, or omissions in these Plans and Specifications, or should there be any doubt as to their meaning or intent, then the Contractor shall notify the City of Petaluma for a written clarification, addendum, etc. Should the Contractor fail to do so before submitting an invoice for additional work, the Contractor cannot claim additional compensation for work required to complete the project. The exception is emergency work as defined in the State Standards. The City of Petaluma or Engineer, acting on behalf of the City of Petaluma, may require plan revisions due to unforeseen circumstances and problems occurring during construction. The Contractor shall promptly notify jointly the City and Questa Engineering of any such work that is additional and submit a written cost-estimate for such work. "Extra Work" and written Change Orders will be executed upon the recommendation of the City.

10. Payments: Payment shall be based on completed Contractor's Bid Sheet and issued Change Orders. The Engineer shall verify field measurements and Contractor quantity estimates, where applicable, and unless otherwise noted.

11. Miscellaneous: Written dimensions always take precedence over scaled dimensions if there is a conflict. The Contractor shall jointly contact the City of Petaluma and Questa Engineering to obtain additional clarification. No deviation or substitution shall be allowed without obtaining written approval from the Engineer.

12. Telephone Numbers and Contacts:

Owner:
City of Petaluma
Department of Public Works and Utilities
Erica Ahmann Smithies, P.E.
Office: (707) 778-4546

Engineer and Consultant:
Questa Engineering Corporation
Contact: Jeff Peters & Carl Nelson, P.E.
Office: (510) 236-6114 (Jeff, x206), (Carl, x236)
Cell: (707) 484-6826

PERMITS AND CONDITIONS

1. Permits: The City of Petaluma shall be responsible for obtaining any necessary permits from the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, the Regional Water Quality Control Board, and other agencies as required by law. The Contractor shall be fully responsible for implementing the specifications, provisions, and procedures outlined in the permits. The Contractor shall become familiar with the permit requirements and conditions, shall keep copies of all approved plans and permits at the construction site at all times and is responsible for adherence to and conformance with all permit conditions as part of the overall work, including possible fines and mitigation for violations of stated permit conditions. No additional charges will be allowed for permit compliance work. Contractor shall be responsible for obtaining a permit for the State of California (Cal OSHA) for any excavation or trenching over 5 feet deep.

2. Final SWPPP & Erosion Control: Contractor is responsible for the preparation and implementation of a SWPPP, which will address site runoff, construction chemical fuel usages, and soil erosion and sediment control during construction activities, including final site stabilization and erosion control. SWPPP is to be based on ABAG information, project plans and permit conditions and, Construction Best Management Practices and subject to approval of the City of Petaluma and Engineer. Contractor's SWPPP can refer to these documents. Draft SWPP is included for reference.

3. Work in Stream Channels, Wetlands, and Water Management: All work involving use of heavy equipment must be completed from top of bank, and within the area of grading, unless specific point of creek channel access has been approved and is shown on the Plans, and then only in non-live water as defined by the California Department of Fish and Wildlife. The live stream must be protected from earthwork by use of silt fencing, hay bales, straw wattles, or similar devices. If stream diversion is absolutely required to perform work, the Contractor shall be responsible for the development of a Water Management Plan and review of Plan with the Engineer and all applicable agencies. **Note: Work in channel or stream diversion is not anticipated to be necessary.**

At or before the pre-construction meeting, or as soon as stream diversion needs become apparent, the Contractor shall submit written descriptions and shop drawings showing how the project site work areas will be dewatered, including by not limited to, bypassing low-flows around the work site to a point downstream of a silt trap (if deemed necessary), construction of such a silt trap and filtering system, necessary holding facilities, upstream or downstream cofferdams, pumps and/or pipe conveyance systems. In general, sand bag and geotextile filter fabric diversion structures are preferred. Contractor is responsible for removal and disposition of all water control structures. All stream diversion and water control work is assumed to be part of the mobilization and/or grading work requirements for payment purposes.

All heavy equipment must have a supply of sorbent pads available nearby for clean-up grease, oil, or fuel that drips or spills into the stream channel. Sorbent booms must be placed downstream from locations where machinery is expected to cross the stream channel. Used pads and booms are to be disposed of properly at Contractor's expense.

4. Archaeological Resources: If Archeological or Cultural Resources are identified during the work, then all work will halt in the affected area until a qualified professional is brought in to determine the significance of the resources, assess the situation and make appropriate recommendations. The City of Petaluma will be responsible for developing and implementing a plan for handling any such event. There will be no additional compensation for lost time due to Archaeological slow down or work stoppage.

GRADING NOTES

1. Demolition and Spoils Disposal: The Contractor is responsible for all demolition as shown on the Drawings. All demolition debris belongs to the Contractor. Spoils material, including concrete, wood, rock, and vegetation shall be stockpiled and disposed of recycled in accordance with the Plans and Specifications, unless otherwise noted. Transportation and disposal shall be in compliance with the County of Sonoma, U.S. Department of Transportation, and pertinent regulations for waste disposal.

There is known asbestos pipe. Disposal of asbestos concrete pipe is the Contractor's responsibility. The Contractor shall submit documentation regarding asbestos concrete pipe disposal.

2. Earthwork and Grading: All earthwork and grading shall be done in conformance with these Plans and Specifications and be completed under the direct supervision of the Engineer. Additionally, all clearing, grubbing, scarification and earthwork shall comply with the City of Petaluma, Sonoma County Water Agency and Uniform Building Code. Trees specified for removal on the plans shall have their stumps and root systems removed, where indicated. Following removal, the resulting earth cavity shall be cleaned of roots larger than two (2) inch diameter.

Contractor is to provide a smooth or uniform slope as shown on the Drawings, and uniform transition to adjacent natural grades. Clearing for earthwork and grading shall be narrowly confined to what is absolutely necessary to complete the work and within the Limits of Work. Additional, unauthorized grading outside the field-staked Limits of Work will not be compensated, and must be restored and repaired by Contractor. The Engineer must approve the final grade.

Engineer to review and assist in rough site staking and job layout, including footprint and alignment of trail. Contractor is responsible for grade staking and elevation checks.

3. Earthwork Quantities: Contractor is responsible for all earthwork, including grading, quantity estimates, and provision and placement of rock meeting size limits, as shown on Drawings. Earthwork quantities, including grading, imported rock, and haul quantity estimates provided by Engineer is for purposes of estimating permit fees and for bid comparison only. Contractor is responsible for pre-bid job site inspection and independent estimation of all quantities. The City of Petaluma and Engineer do not, expressly or otherwise by implication, extend any warranty to earthwork and rockwork calculations.

4. Excess Cut and Deficient Fill Quantities, Fill Import and Off-haul
The Engineer has provided estimates of cut and fill volumes on the grading plan drawings. Contractor is responsible for off-haul of any excess cut not used for fill as shown on drawings, and importation of fill to meet Grading Plan intent. The contractors is also responsible for SWPPP and maintain BMP's at the off-haul site until their project is completed.

5. Limits of Work, Access, Staging and Mobilization Areas: The Contractor is notified of tight working conditions around sensitive environmental features. The Limits of Work, point of ingress-egress, crossings of First Street, mobilization, staging and work areas will be flagged in the field by the Engineer. Mobilization Areas are shown on Sheet 6. All construction materials, any temporary storage of excess soil, demolition debris and rubble, and equipment maintenance and storage must occur within the staging and mobilization areas or approved disposal areas. Equipment maintenance and fueling must occur within the staging and mobilization areas.

ABBREVIATIONS

AB = AGGREGATE BASE
AC = ASPHALT CONCRETE
ACP = ASBESTOS CONCRETE PIPE
AD = ANGLE POINT
AD = AREA DRAIN
ADA = AMERICANS WITH DISABILITIES ACT
ASB = AGGREGATE SUBBASE
BC = BEGINNING OF CURVE
BLDG = BUILDING
BO = BOTTOM OF
BOL = BOLLARD
BOW = FG @ BOTTOM OF WALL
BRC = BACK OF ROLL CURB
BVC = BEGIN VERTICAL CURVE
C = CONCRETE OR CIVIL
C&G = CURB AND GUTTER
CB = CATCH BASIN
CI = CAST IRON PIPE
CIDH = CAST-IN-DRILLED-HOLES
CL = CENTER LINE OR CLASS
CLSM = CONTROLLED LOW-STRENGTH-MATERIAL
CMP = CORRUGATED METAL PIPE
CO = CLEANOUT
CONC = CONCRETE
CP = CONTROL POINT
CY = CUBIC YARDS
DI = DROP INLET
DIP = DUCTILE IRON PIPE
DL = DAYLIGHT
DW = DOMESTIC WATER
E = EAST
EJ = EXPANSION JOINT
EL = ELEVATION
EP = EDGE OF PAVEMENT
ESA = ENVIRONMENTALLY SENSITIVE AREA
EVA = EMERGENCY VEHICLE ACCESS
EVC = END VERTICAL CURVE
EW = EACH WAY
EX OR (E) = EXISTING
F = FENCE
FC = FACE OF CURVE
FG = FINISHED GRADE
FL = FLOW LINE
FT = FEET/FOOT
G = GROUND ELEVATION
GB = GRADE BREAK
GL = GUTTER LIP
GP = GATE POST

HCR = ACCESSIBLE RAMP
HP = HIGH POINT
LP = LOW POINT
MH = MAINTENANCE HOLE
MHHW = MEAN HIGHER HIGH WATER
MHW = MEAN HIGH WATER
MIN = MINIMUM
MLLW = MEAN LOWER LOW WATER
MLW = MEAN LOW WATER
MON = MONUMENT
MSL = MEAN SEA LEVEL
N = NORTH
(N) = NEW
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
OC = ON CENTER
OHE = OVERHEAD ELECTRIC
PAV = PAVEMENT
PCC = PORTLAND CEMENT CONCRETE
PP = POWER POLE
PRC = POINT OF REVERSE CURVATURE
PRO = PROTECTION
PT = PRESSURE-TREATED OR POINT
QF = QUARRY FINES
R = RADIUS
RC = RELATIVE COMPACTION
S = SIGN OR SOUTH
SD = STORM DRAIN
SDDI = STORM DRAIN DROP INLET
SF = SQUARE FEET
SIM = SIMILAR
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
STA = STATION
SW = SIDEWALK
SWL = SWALE
TB = TOP OF BERM
TC = TOP OF CURB
TEMP = TEMPORARY
TOE = TOE OF SLOPE
TOW = FG @ TOP OF WALL
TOC = TOP OF CONCRETE
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
USACE = UNITED STATES ARMY CORPS OF ENGINEERS
W = WEST
WM = WATER METER
WV = WATER VALVE

PRELIMINARY CONSTRUCTION QUANTITIES

EARTHWORK CUT: 27,00 CUBIC YARDS
EARTHWORK FILL: 1,300 CUBIC YARDS

BALANCE: 25,700 CY OFFHAUL

OFFHAUL OF SOIL TO GO TO COMMUNITY SPORTS FIELD LOCATED AT: 2430 EAST WASHINGTON ST., PETALUMA CA 94954

QUARRY FINES TRAIL: 3,000 LINEAR FEET

**BEFORE EXCAVATING
CALL U.S.A.
UNDERGROUND SERVICE ALERT
800-642-2444
TWO WORKING DAYS BEFORE ALL
PLANNED WORK OPERATIONS**

DETAIL
SHEET NUMBER

DATE: OCTOBER 2021
DESIGNED BY: JPMH
DRAWN BY: CC
CHECKED BY: CN

PROJECT NO.
1900182



CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508



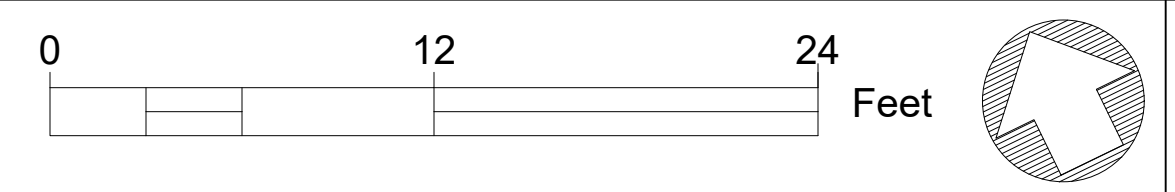
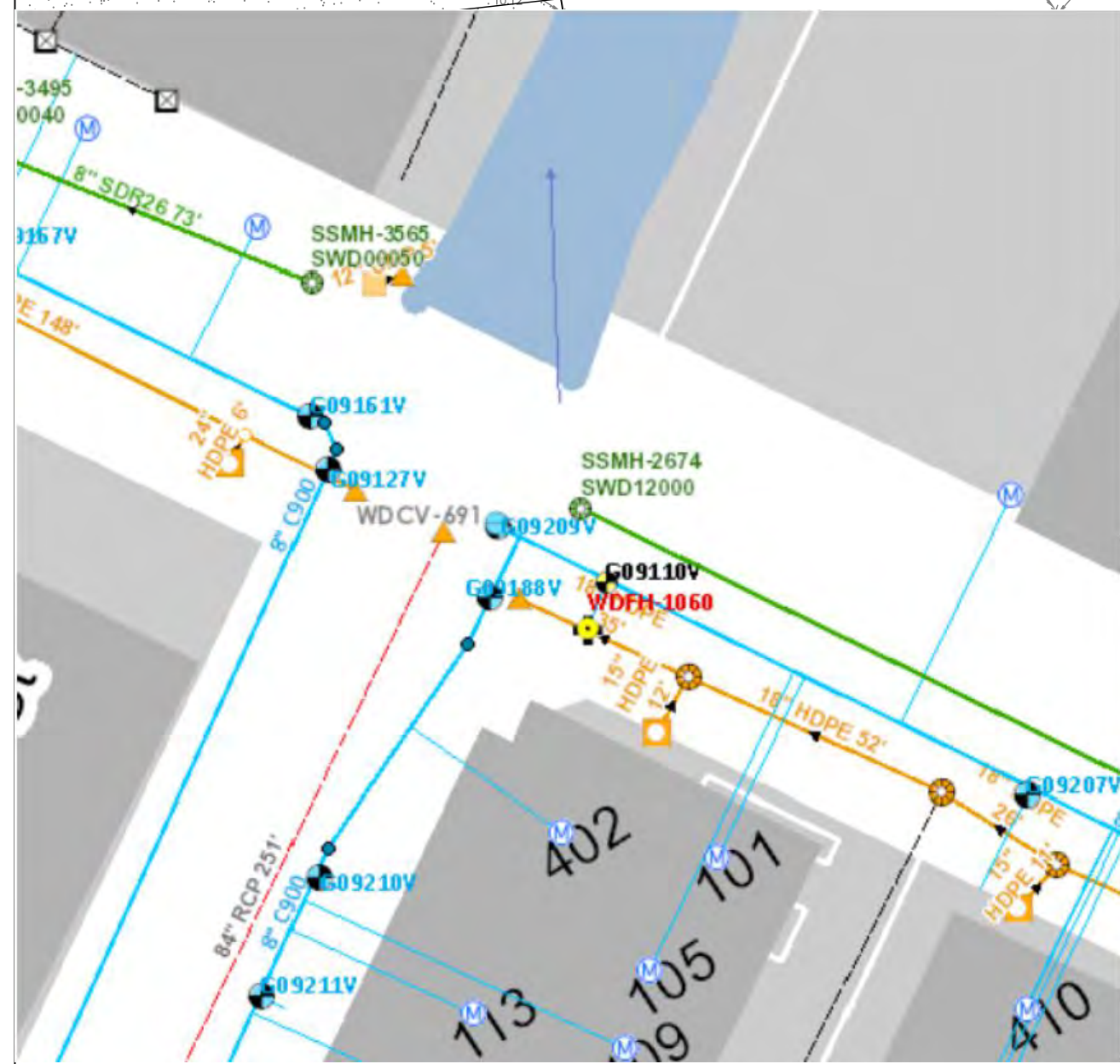
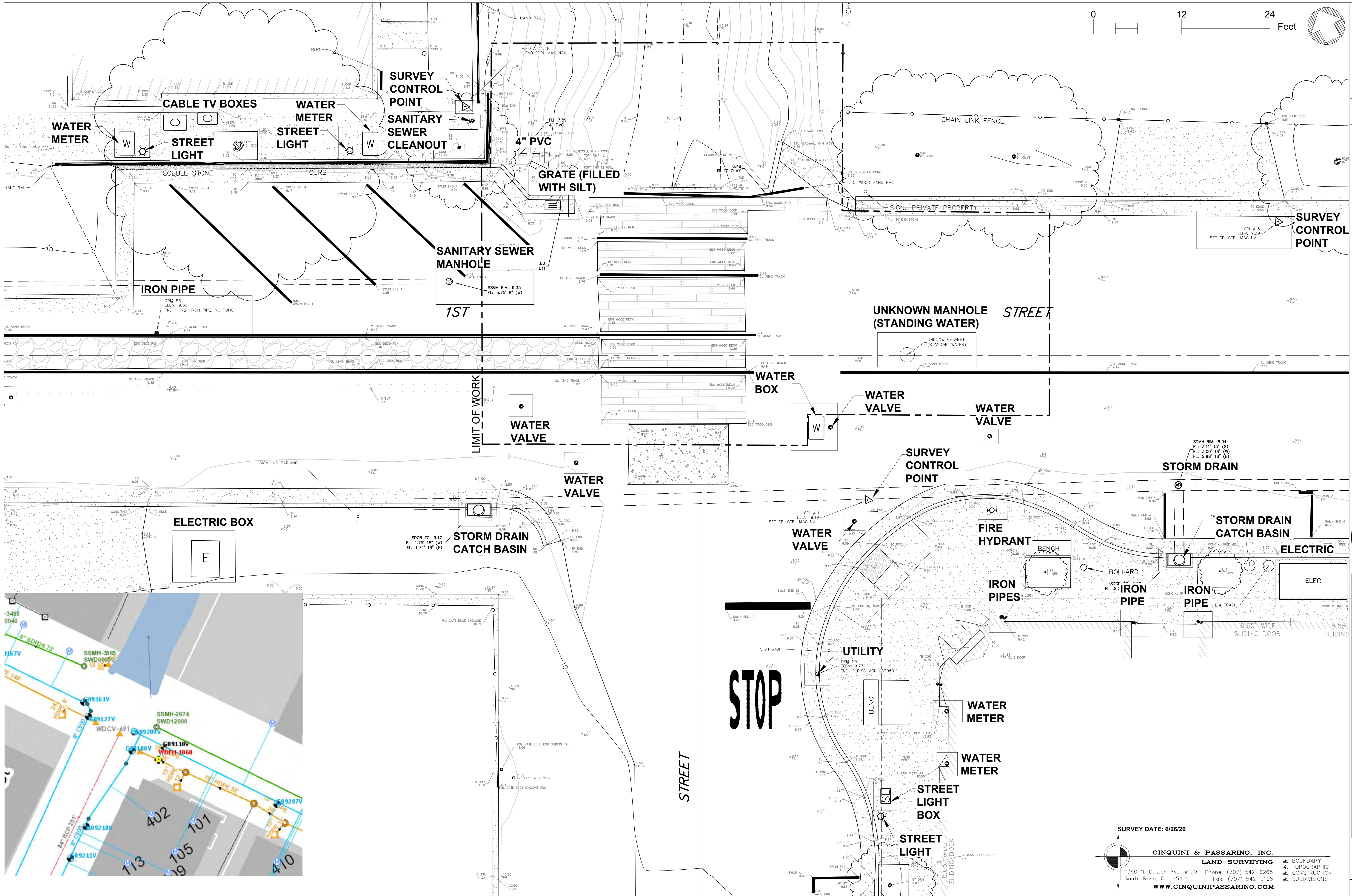
FIRST AND F STREET BRIDGE
REPLACEMENT

GENERAL NOTES

SHEET

C-2

C-2 OF C-14



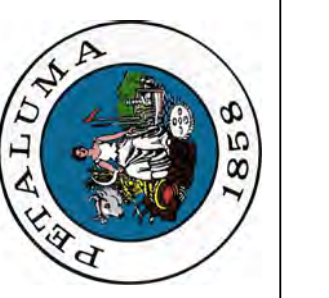
SURVEY DATE: 6/26/20
CINQUINI & PASSARINO, INC.
LAND SURVEYING
 1360 N. Dutton Ave. #150 Phone: (707) 542-6268
 Santa Rosa, Ca. 95401 Fax: (707) 542-2106
WWW.CINQUINIPASSARINO.COM

DATE: OCTOBER 2021
 DESIGNED BY: JPMH
 DRAWN BY: CC
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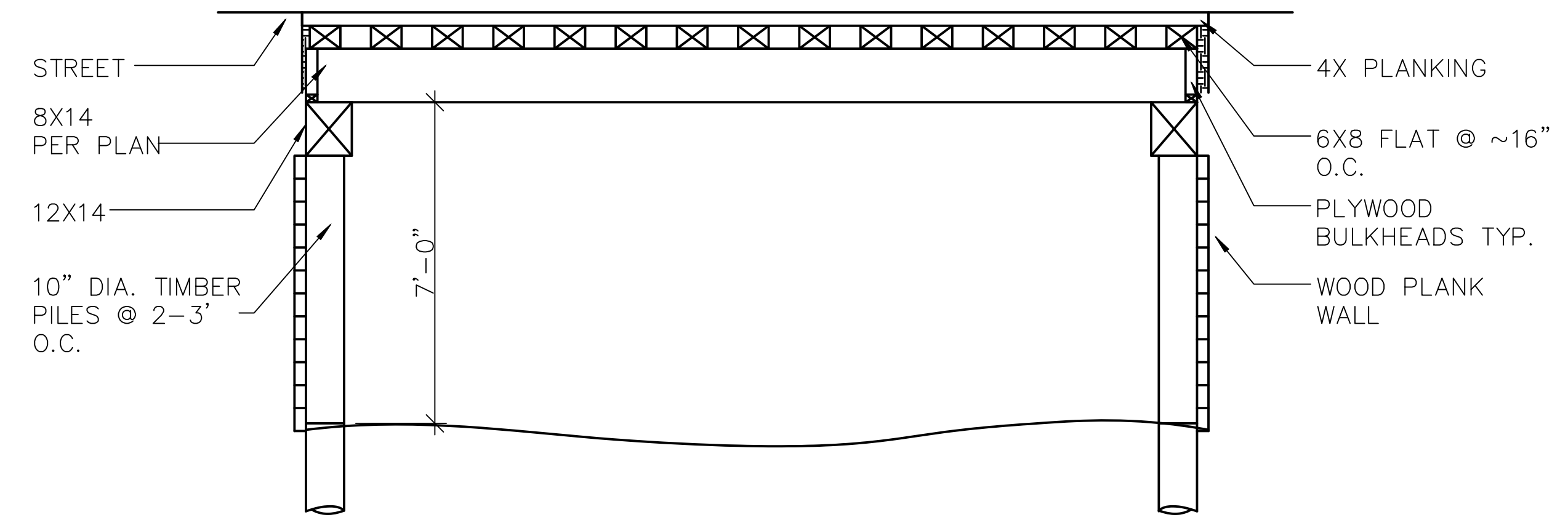
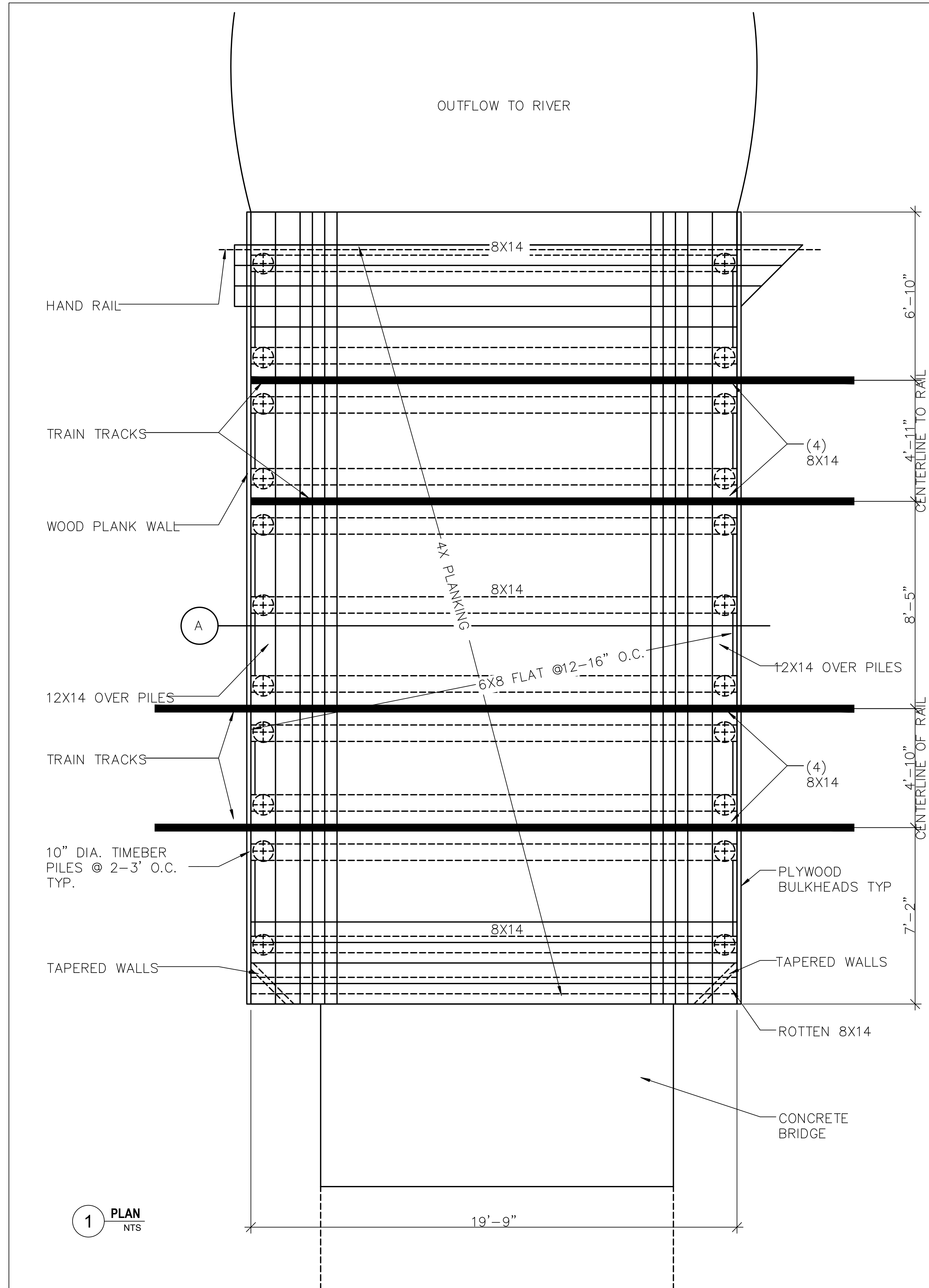




CITY OF PETALUMA
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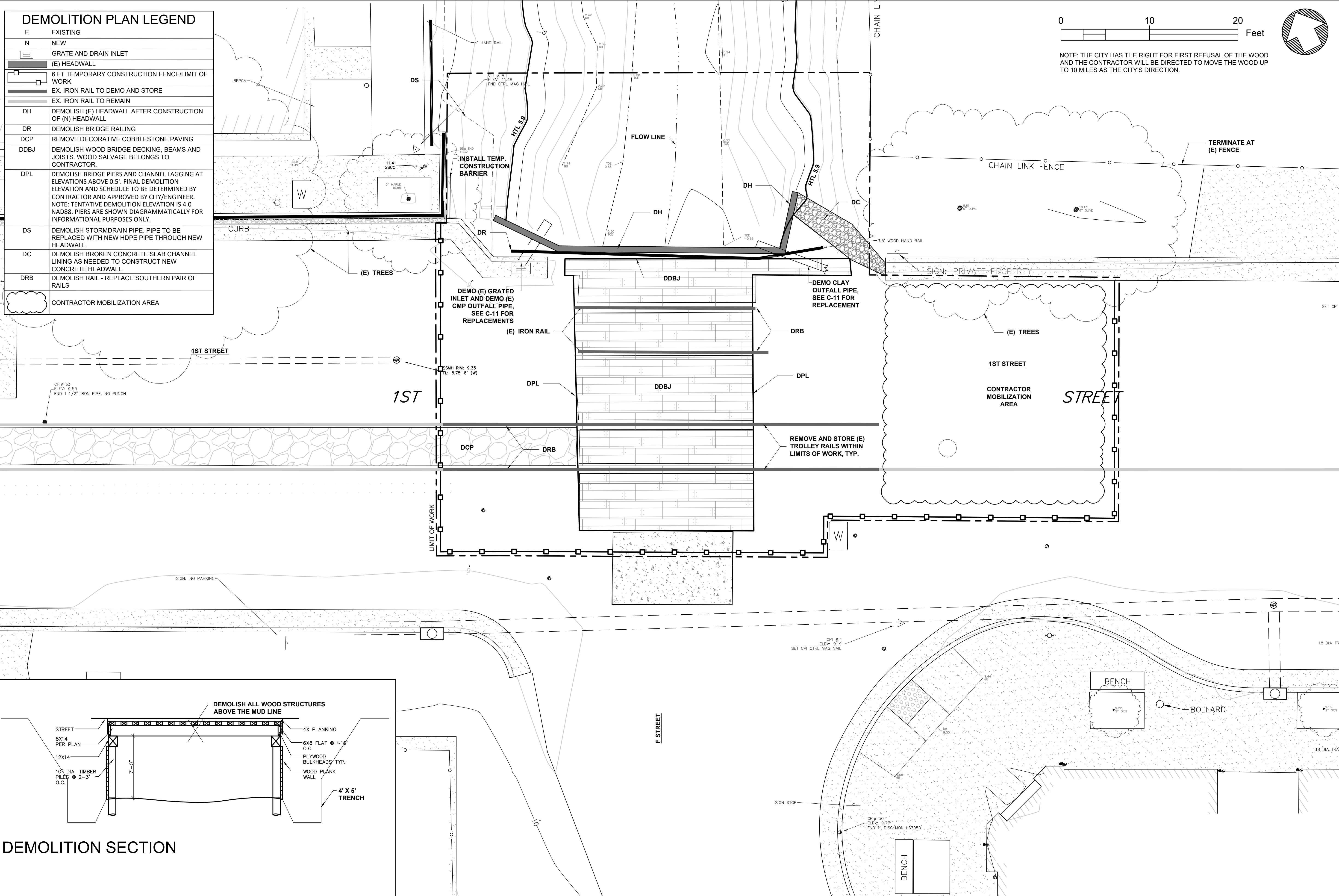
FIRST AND F STREET BRIDGE REPLACEMENT
TOPOGRAPHIC SURVEY AND UTILITIES

SHEET
C-3
 C-3 OF C-14



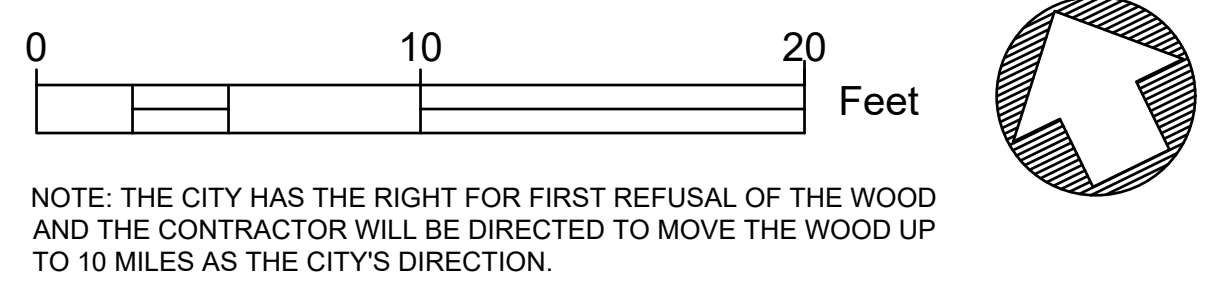
DATE: OCTOBER 2021	DESIGNED BY: JPMH	DRAWN BY: CC	CHECKED BY: CN
PROJECT NO. 1900182			
			
CITY OF PETALUMA PUBLIC WORKS & UTILITIES 202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954 PH. 707-778-4546 FAX. 707-778-4508			
			
FIRST AND F STREET BRIDGE REPLACEMENT AS-BUILT EXISTING BRIDGE			
SHEET			
C-4			
C-4 OF C-14			

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DEMOLITION PLAN LEGEND

E	EXISTING
N	NEW
[Symbol]	GRATE AND DRAIN INLET
[Symbol]	(E) HEADWALL
[Symbol]	6 FT TEMPORARY CONSTRUCTION FENCE/LIMIT OF WORK
[Symbol]	EX. IRON RAIL TO DEMO AND STORE
[Symbol]	EX. IRON RAIL TO REMAIN
DH	DEMOLISH (E) HEADWALL AFTER CONSTRUCTION OF (N) HEADWALL
DR	DEMOLISH BRIDGE RAILING
DCP	REMOVE DECORATIVE COBBLESTONE PAVING
DDBJ	DEMOLISH WOOD BRIDGE DECKING, BEAMS AND JOISTS. WOOD SALVAGE BELONGS TO CONTRACTOR.
DPL	DEMOLISH BRIDGE PIERS AND CHANNEL LAGGING AT ELEVATIONS ABOVE 0.5'. FINAL DEMOLITION ELEVATION AND SCHEDULE TO BE DETERMINED BY CONTRACTOR AND APPROVED BY CITY/ENGINEER. NOTE: TENTATIVE DEMOLITION ELEVATION IS 4.0 NAD88. PIERS ARE SHOWN DIAGRAMMATICALLY FOR INFORMATIONAL PURPOSES ONLY.
DS	DEMOLISH STORMDRAIN PIPE. PIPE TO BE REPLACED WITH NEW HDPE PIPE THROUGH NEW HEADWALL.
DC	DEMOLISH BROKEN CONCRETE SLAB CHANNEL LINING AS NEEDED TO CONSTRUCT NEW CONCRETE HEADWALL.
DRB	DEMOLISH RAIL - REPLACE SOUTHERN PAIR OF RAILS
[Symbol]	CONTRACTOR MOBILIZATION AREA

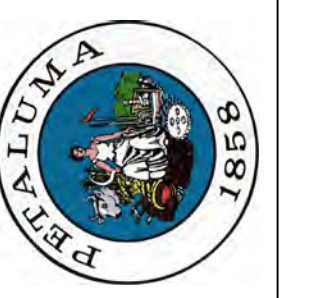


DATE: OCTOBER 2021
 DESIGNED BY: JPMH
 DRAWN BY: CC
 CHECKED BY: CN

PROJECT NO.
 1900182

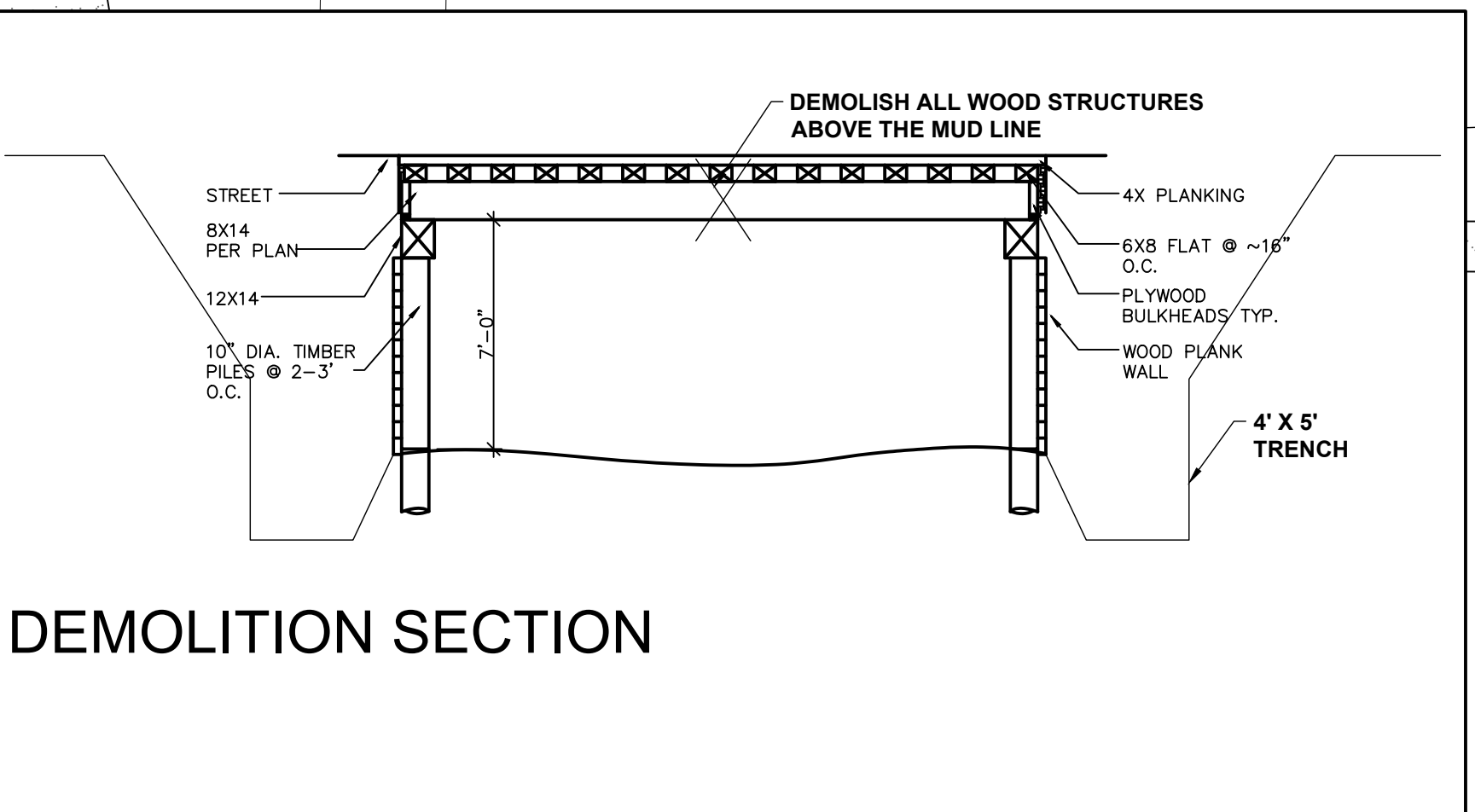


CITY OF PETALUMA
 PUBLIC WORKS & UTILITIES
 202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
 PH. 707-778-4546 FAX. 707-778-4508



FIRST AND F STREET BRIDGE REPLACEMENT
 DEMOLITION PLAN

SHEET
C-5
 C-5 OF C-14



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1 RESTORATION PLAN
 1" = 10'

RESTORATION PLANTING LEGEND			
SPECIES	SCIENTIFIC NAME	QUANTITY	SIZE
MULEFAT	<i>Baccharis salicifolia</i>	20	DEEPOT 40 (D-40)
MARSH BACCHARIS	<i>Baccharis glutinosa</i>	20	DEEPOT 40 (D-40)
GUM PLANT	<i>Grindelia stricta</i> var. <i>angustifolia</i>	20	DEEPOT 40 (D-40)

- RIPARIAN MITIGATION AREA NOTES**
- RANDOM PLANTING PATTERN. ENGINEER TO ASSIST WITH FIELD LAYOUT. APPROX. 2 FOOT SPACING OF BACCHARIS SP. WITH GUMPLANT INTERSPERSED
 - CLEAR AND GRUB THE SITE TO REMOVE WEEDS AND PREPARE AREA FOR PLANTING
 - VISIT THE SITE WEEKLY FOR A 3 MONTH POST PLANTING MAINTENANCE PERIOD TO IRRIGATE AND CONTROL WEEDS TO HELP WITH PLANT ESTABLISHMENT

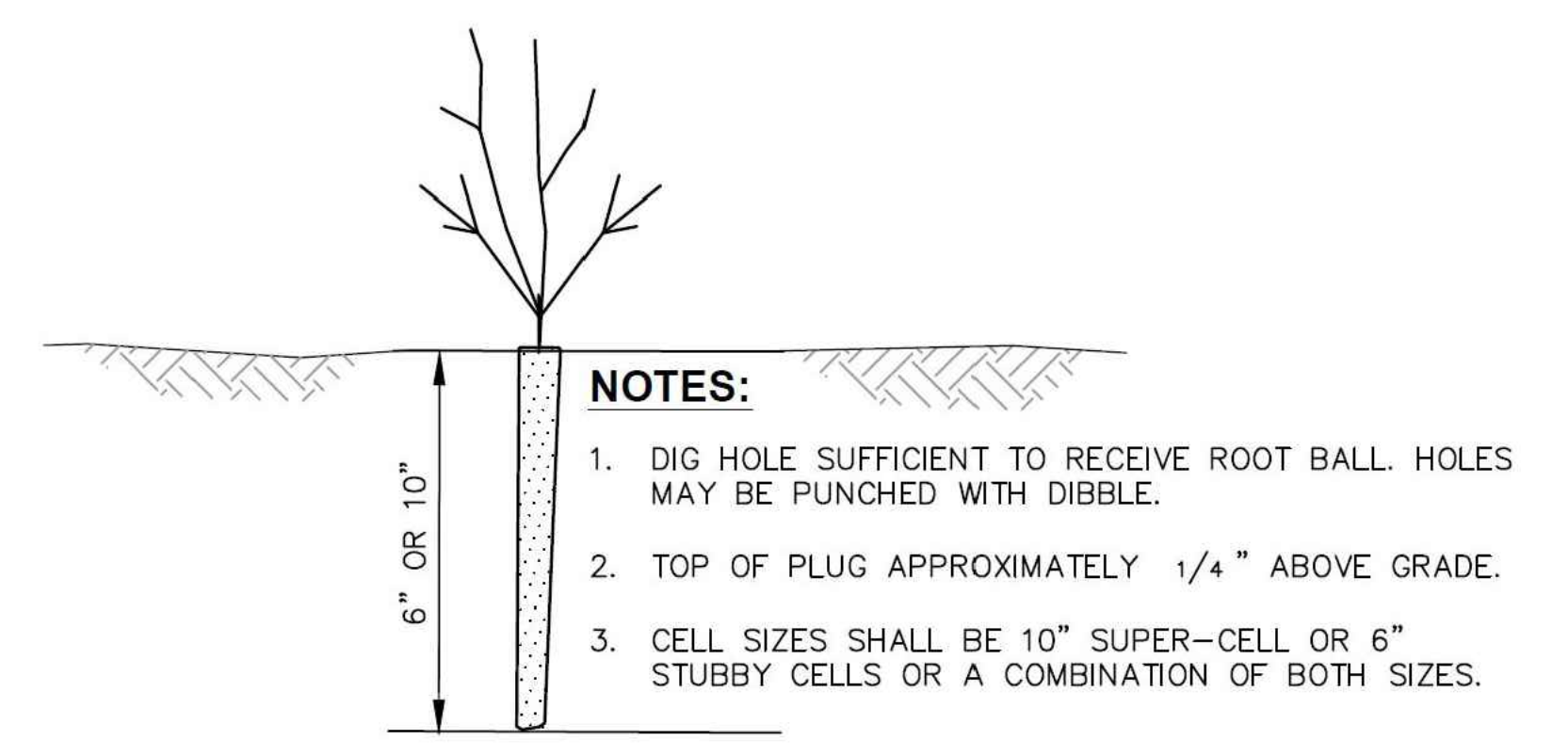
2 RESTORATION PLANTING LEGEND
 NTS

DISTURBED AREA SEED MIX*
 BROMUS CARINATUS, NATIVE CALIFORNIA BROME
 ELYMUS GLAUCUS, BLUE WILD RYE
 HORDEUM CALIFORNICUM, CALIFORNIA BARLEY
 FESTUCA IDAHOENSIS, IDAHO FESCUE
 STIPA PULCHRA, PURPLE NEEDLEGRASS
 POA SECUNDA, PINE BLUEGRASS

***SEED MIX AVAILABLE AS HABITAT SEED MIX FROM PACIFIC COAST SEED: PHONE (925) 373-4417**

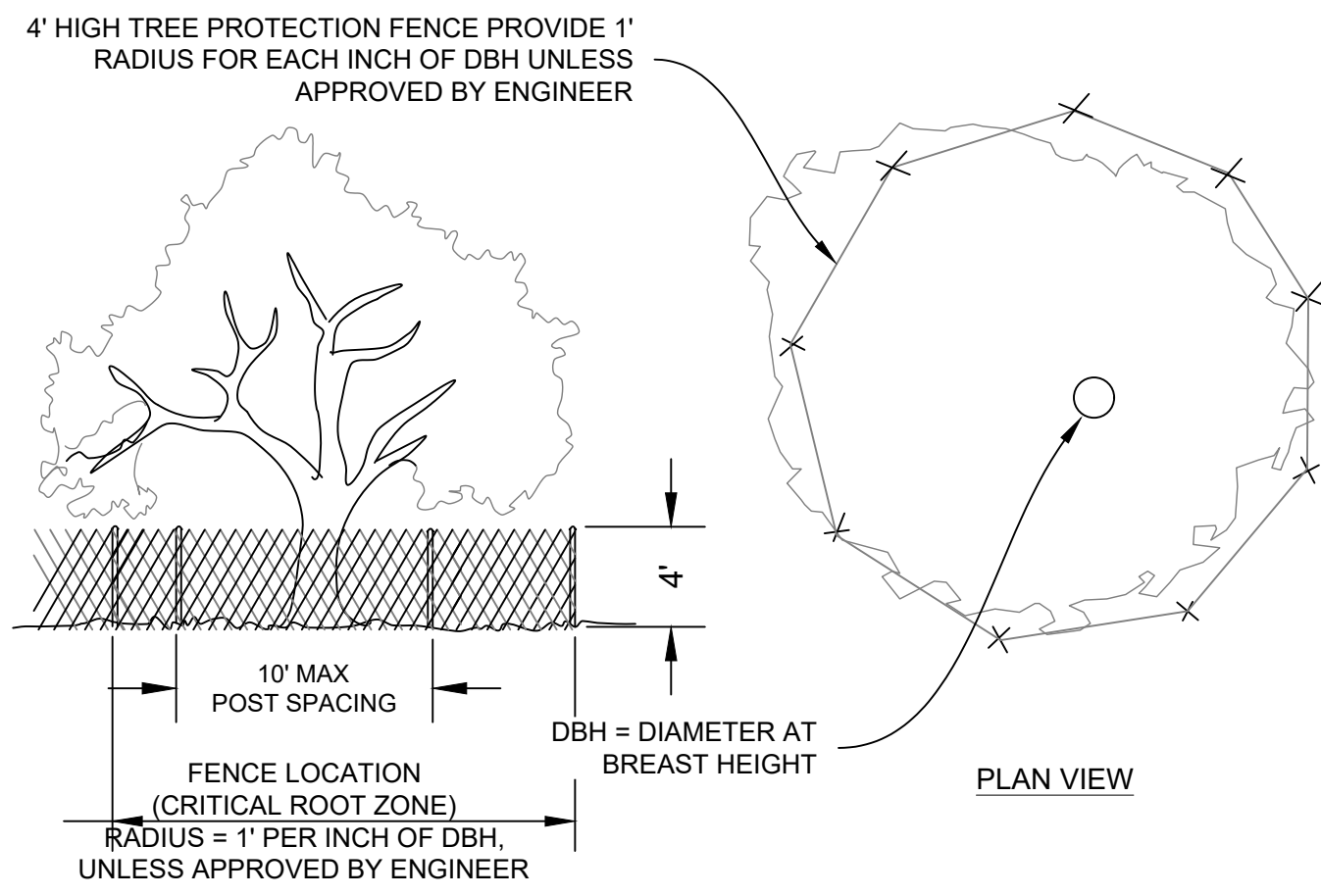
BROADCAST SEED ALL DISTURBED AREAS WITH 1 POUND PER 1,000 SQ. FT. (40 LBS/ACRE)
 COVER WITH CLEAN, WEED-FREE RICE STRAW MULCH SPREAD THINLY ON SURFACE TO 90% COVER OF AREA (1" THICKNESS), INSTALL EROSION CONTROL BLANKET ON TOP OF SEEDED AREAS PER MANUFACTURER'S INSTRUCTIONS.

3 RESTORATION SEEDING NOTES
 Scale = NTS

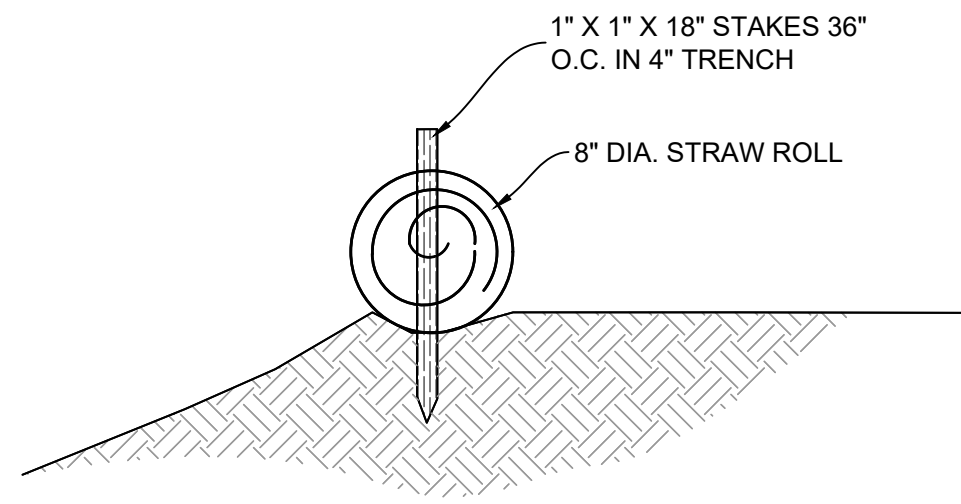


4 PLANTING CELL DETAIL
 NTS

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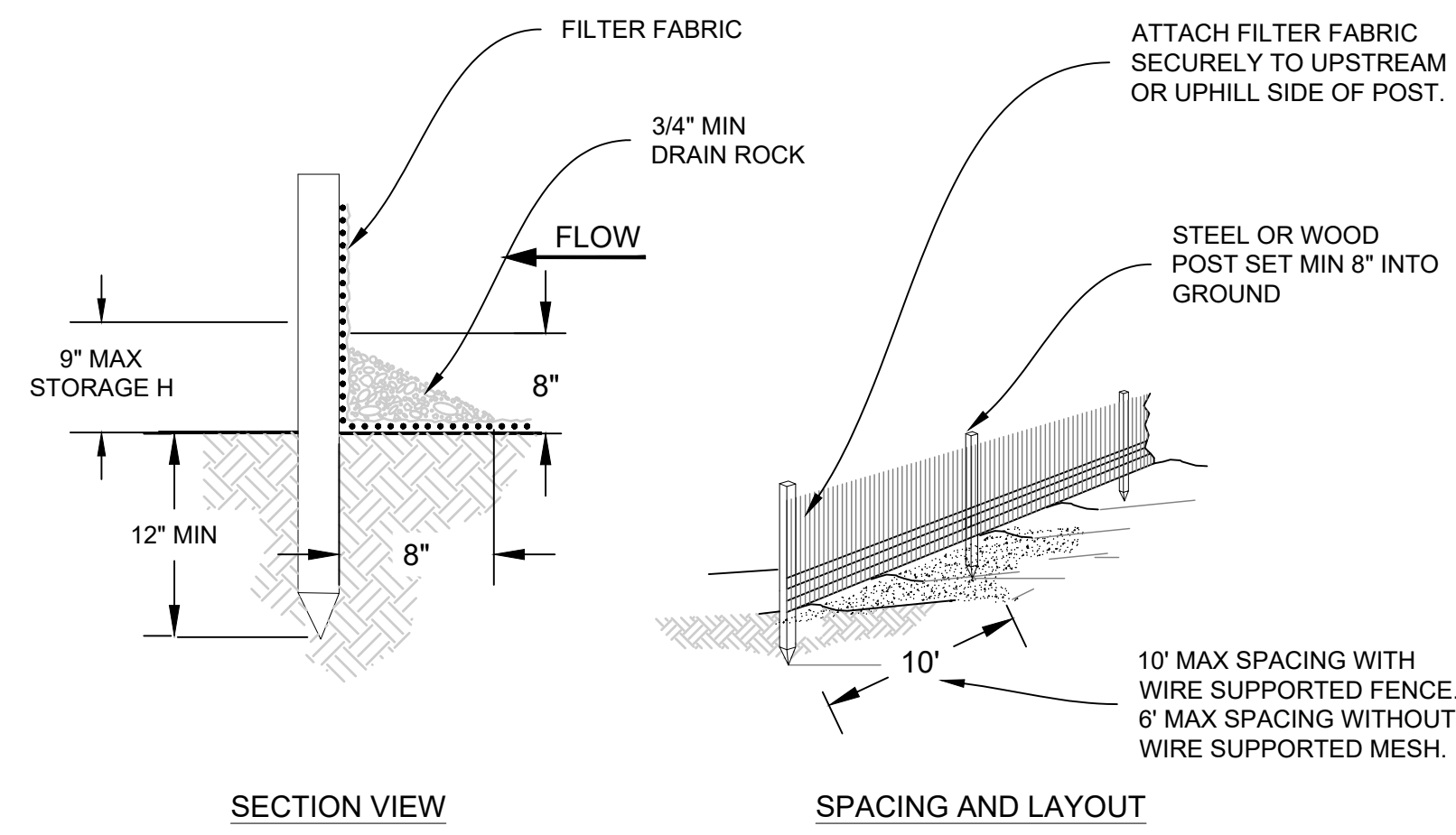


1 TREE PROTECTION FENCING
NTS

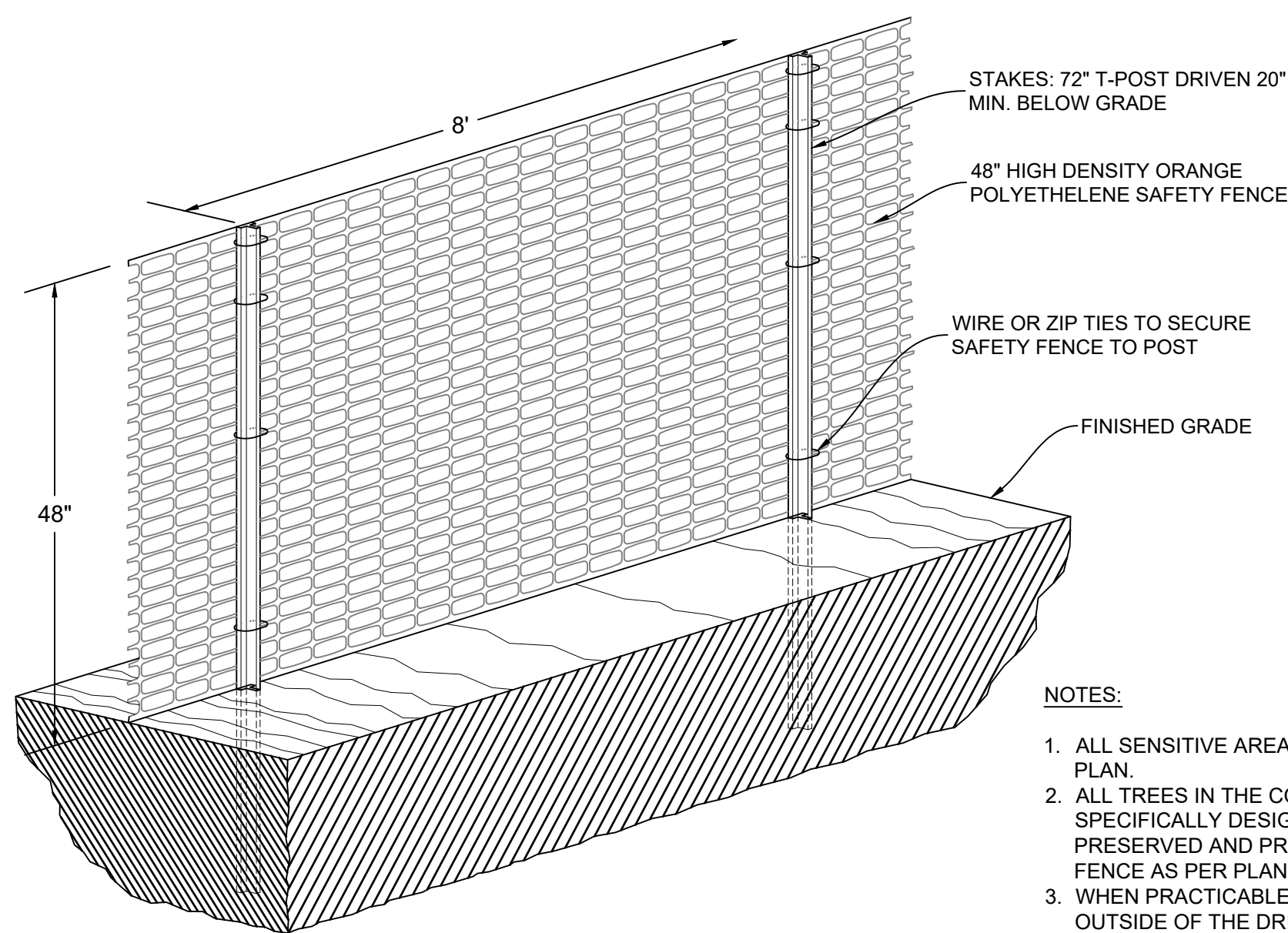


- NOTES:**
1. PLACE THE LOOSE EDGE OF THE FIBER ROLLS INTO A 4-INCH DEEP TRENCH AND SECURE WITH A SINGLE ROW OF STAPLES INSTALLED ON 12-INCH CENTERS
 2. POSITION THE FIBER ROLLS INTO THE TRENCH ADJACENT TO THE SIDEWALK/BACK OF CURB/BACK OF V-DITCH
 3. DRIVE WOODEN 18-INCH STAKES THROUGH THE ROLL ON APPROXIMATELY 3-FOOT CENTERS TO SECURE IN PLACE
 4. USE COCONUT ROLLS FOR PERMANENT PLACEMENT

2 FIBER ROLL INSTALLATION
NTS

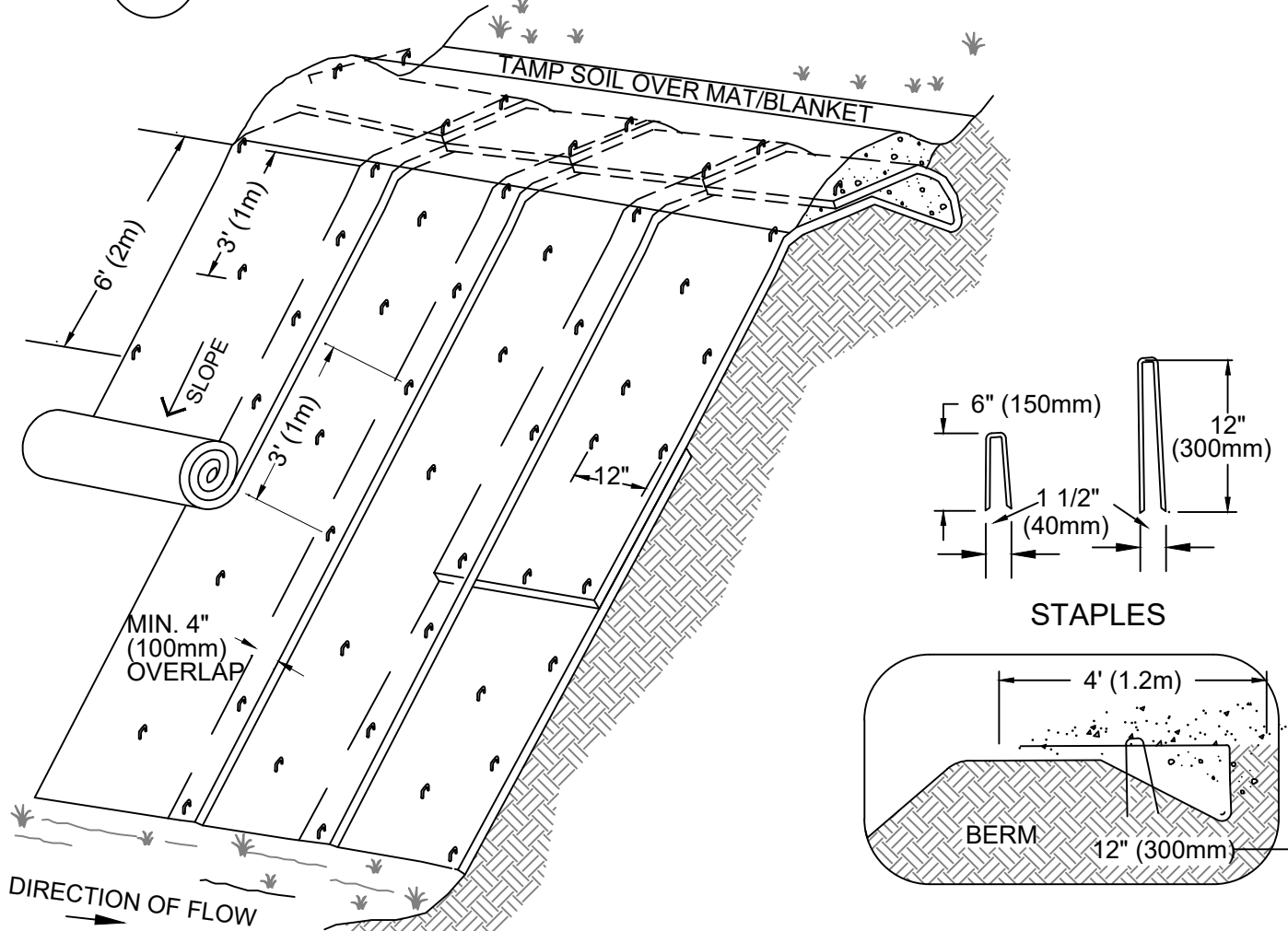


3 TEMPORARY SILT/ENVIRONMENTALLY SENSITIVE AREA FENCING AT LIMIT OF WORK
NTS



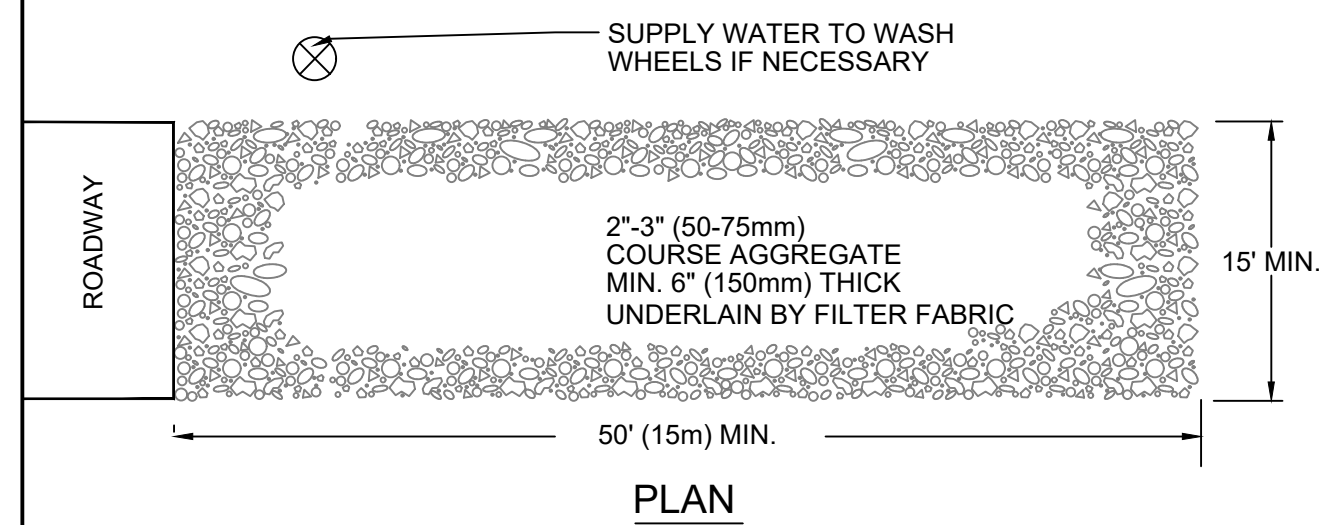
- NOTES:**
1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
 2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
 3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
 4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
 5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

4 CONSTRUCTION BARRIER FENCE
NTS



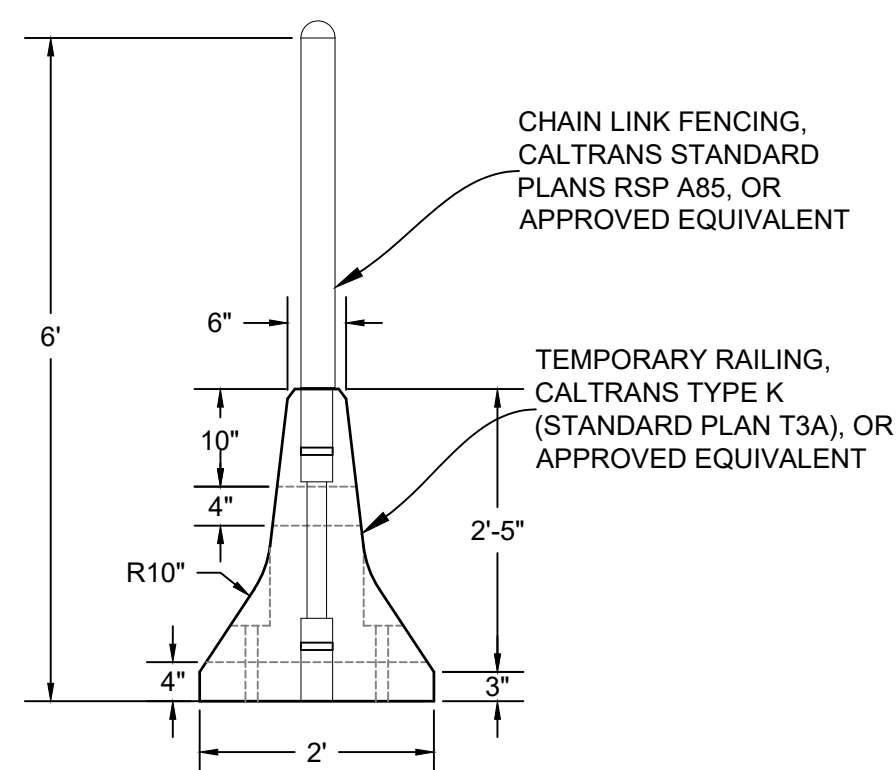
- NOTES:**
1. EROSION CONTROL BLANKETS/MATS SHALL BE BIODEGRADABLE (SEE SPECS)
 2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS AND GRASS.
 3. MATS/ BLANKETS SHALL HAVE GOOD SOIL CONTACT.
 4. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
 5. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
 6. MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
 7. SEEDING PER DISTURBED AREA SEED MIX/HABITAT SEED MIX, SEE SHEET C-7
 8. INSTALL PERMANENT FIBER ROLLS ON CONTOUR AT 10' SPACING. SEE DETAIL C-7 FOR SLOPES GREATER THAN 10% AND GREATER THAN 10' IN LENGTH

6 EROSION CONTROL FABRIC
NTS



- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

5 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
NTS



- TEMPORARY SECURITY FENCE NOTES**
1. MATERIAL TO BE CHAIN LINK, OR APPROVED EQUIVALENT;
 2. HEIGHT OF SECURITY FENCE TO BE 6' MINIMUM
 3. CALTRANS STANDARD PLAN RSP A85, OR APPROVED EQUIVALENT

7 TEMPORARY SECURITY BARRIER
NTS

8 TEMPORARY SECURITY FENCE
NTS

EROSION CONTROL NOTES

1. GRADING, EROSION CONTROL PRACTICES, AND SEDIMENT CONTROL PRACTICES SHALL MEET THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK AND SHALL BE ADEQUATE TO PREVENT TRANSPORTATION OF SEDIMENT FROM THE SITE TO ANY OFFSITE AREA TO THE SATISFACTION OF THE ENGINEER.
2. CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED.
3. SUFFICIENT EROSION AND SEDIMENT CONTROL SUPPLIES SHALL BE AVAILABLE ON SITE DURING THE RAINY SEASON (OCTOBER THROUGH APRIL) TO PROTECT AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS. CONTRACTORS SHALL BE PREPARED YEAR-ROUND TO DEPLOY EROSION AND SEDIMENT TREATMENT CONTROL PRACTICES.
4. SOIL DISTURBANCE WORK SHALL BE CONDUCTED DURING DRY WEATHER.
5. THE CONTRACTOR SHALL PROVIDE A SWPPP PRIOR TO THE COMMENCEMENT OF WORK.
6. THE CONTRACTOR SHALL PROVIDE ADEQUATE MATERIALS MANAGEMENT, INCLUDING COVERING, SECURING, AND SEGREGATING POTENTIALLY TOXIC MATERIALS (ASPHALT, HERBICIDES, PESTICIDES, FERTILIZER, GREASE, OILS, FUEL, PAINTS, STAINS, SOLVENTS, WOOD PRESERVATIVES, ETC.), AND PROVIDING SECONDARY CONTAINMENT FOR HAZARDOUS MATERIALS.
7. THE CONTRACTOR SHALL PROVIDE TRAINING AND EQUIPMENT TO CONTAIN SPILLS OF OIL AND OTHER HAZARDOUS MATERIALS.
8. PAVING OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT PROPERLY DISPOSES OF WASTES AND IN WHICH MEASURES TO CONTROL RUN ON AND PREVENT RUNOFF FROM AREAS BEING PAVED ARE IMPLEMENTED.
9. SANITARY FACILITIES OF SUFFICIENT NUMBER AND SIZE TO ACCOMMODATE CONSTRUCTION CREWS SHALL BE LOCATED AWAY FROM STORM DRAIN INLETS AND DRAINAGE FACILITIES, AND ANCHORED TO PREVENT BEING BLOWN OVER OR TIPPED BY VANDALS. THE FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER AND EMPTIED AT REGULAR INTERVALS BY A LICENSED SANITARY WASTE HAULER.
10. SOIL STABILIZATION SHALL BE COMPLETED WITHIN FIVE DAYS OF CLEARING OR INACTIVITY IN CONSTRUCTION.
11. PROJECTS SHALL BE DESIGNED TO AVOID DISTURBING LAND IN SENSITIVE AREAS AND TO PRESERVE EXISTING VEGETATION WHEREVER POSSIBLE.
12. MAJOR GRADING OPERATIONS SHALL BE SCHEDULED DURING DRY MONTHS WHEN PRACTICAL, AND SHALL ALLOW ADEQUATE TIME BEFORE RAINFALL BEGINS TO STABILIZE THE SOIL WITH EROSION CONTROL MATERIALS.
13. SEEDING AND MULCHING SHALL BE DONE AS SOON AS GRADING IS COMPLETE.
14. IF SEEDING OR ANOTHER VEGETATIVE EROSION CONTROL METHOD IS USED, THE VEGETATIVE COVER SHALL BECOME ESTABLISHED WITHIN A TIME-FRAME APPROVED BY THE ENGINEER, OR THE ENGINEER MAY REQUIRE THE SITE TO BE RE-SEEDED OR A NON-VEGETATIVE OPTION EMPLOYED.
15. SPECIAL TECHNIQUES THAT MEET THE DESIGN CRITERIA OUTLINED IN THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK ON STEEP SLOPES OR IN DRAINAGE WAYS SHALL BE USED TO ENSURE STABILIZATION.
16. SOIL STOCKPILES MUST BE STABILIZED AND/OR SECURELY COVERED AT THE END OF EACH WORKDAY.
17. IN AREAS WHERE PERMANENT RE-SEEDING AND PLANTING IS NOT ESTABLISHED AT THE CLOSE OF THE CONSTRUCTION SEASON, ADDITIONAL CONTROL MEASURES SHALL BE USED, SUCH AS A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION, TO ENSURE SOIL STABILIZATION AT THE SITE.
18. WHERE RUNOFF NEEDS TO BE DIVERTED FROM ONE AREA AND CONVEYED TO ANOTHER, EARTH DIKES, DRAINAGE SWALES, SLOPE DRAINS OR OTHER SUITABLE PRACTICE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK.
19. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE.
20. TECHNIQUES THAT DELIVER UPLAND RUNOFF PAST DISTURBED SLOPES SHALL BE EMPLOYED WHEN DETERMINED NECESSARY BY THE PROJECT ENGINEER.
21. LINEAR SEDIMENT BARRIERS SHALL BE PLACED BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, DOWN-SLOPE OF EXPOSED SOIL AREAS, AROUND SOIL STOCKPILES, AND AT OTHER APPROPRIATE LOCATIONS ALONG THE SITE PERIMETER.
22. STREET SWEEPING SHALL BE CONDUCTED ON AN AS NEEDED BASIS TO REMOVE SEDIMENT FROM STREETS AND ROADWAYS AND TO PREVENT THE SEDIMENT FROM ENTERING STORM DRAINS OR RECEIVING WATERS.
23. EVERY STORM DRAIN INLET WITH THE POTENTIAL TO RECEIVE SEDIMENT-LADEN RUNOFF SHALL BE PROTECTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK. INLET PROTECTION SHALL BE INSPECTED AND MAINTAINED FREQUENTLY.
24. SEDIMENT BASINS OR SEDIMENT TRAPS SHALL BE INSTALLED ON PROJECTS WHERE SEDIMENT-LADEN WATER MAY ENTER THE DRAINAGE SYSTEM OR WATERCOURSES AND IN ASSOCIATION WITH DIKES, TEMPORARY CHANNELS, AND PIPES USED TO CONVEY RUNOFF FROM DISTURBED AREAS.
25. OTHER MEASURES, SUCH AS TRACK-OUT PREVENTION DEVICES, OR AS REQUIRED BY THE ENGINEER IN ORDER TO ENSURE THAT SEDIMENT IS NOT TRACKED ONTO PUBLIC STREETS BY CONSTRUCTION VEHICLES OR WASHED INTO STORM DRAINS.

DATE: OCTOBER 2021
DESIGNED BY: JPMH
DRAWN BY: CC
CHECKED BY: CN

PROJECT NO.
1900182

QUESTA ENGINEERING CORP.
12345
12345

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954
PH. 707-778-4546 FAX. 707-778-4508

FIRST AND F STREET BRIDGE REPLACEMENT
SITE PROTECTION & EROSION CONTROL

SHEET
C-8
C-8 OF C-14

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STORM WATER POLLUTION PREVENTION GUIDELINES - MINIMIZING CONSTRUCTION SITE IMPACTS

CONSTRUCTION ACTIVITIES CAN SIGNIFICANTLY IMPACT WATER QUALITY AND ECOLOGIC PROCESSES. EROSION AND TRANSPORT OF DIRT, DEBRIS, CHEMICALS, AND OTHER CONSTRUCTION WASTE CAN ENTER MUNICIPAL DRAIN SYSTEMS, LOCAL CREEKS, AND REGIONAL WATERWAYS AND CAUSE SEVERE DAMAGE TO NATURAL SYSTEMS AND HUMAN INFRASTRUCTURE. MINIMIZE ENVIRONMENTAL IMPACTS BY FOLLOWING THE BMPS OUTLINED IN THE PROJECT. FAILURE TO COMPLY WITH THE BMPS INCLUDED IN THE PROJECT SPECIFICATIONS AND LOCAL, STATE, AND FEDERAL LAWS GOVERNING CONSTRUCTION SITE IMPACT MANAGEMENT AND WATER QUALITY COULD RESULT IN LEGAL VULNERABILITY AND FINES EXCEEDING \$10,000 PER DAY. TO AVOID SUCH INSTANCES, PLAN AHEAD, IMPLEMENT THE SPECIFIC BMPS OUTLINED FOR THIS PROJECT, AND FOLLOW THE GUIDELINES OUTLINED BELOW. MORE INFORMATION ON CONSTRUCTION SITE BMPS AND SWPPPS CAN BE FOUND AT: http://www.dot.ca.gov/hq/construc/stormwater/documents/October2016_SWPPP_Manual.pdf

NON-HAZARDOUS MATERIAL STORAGE

1. STORE ALL SAND, DIRT, AND OTHER ERODIBLE MATERIAL AT LEAST 10 FEET FROM CATCH BASINS AND WHEN FORECASTS CALL FOR RAIN, COVER WITH A TARP, AND SECURE EDGES WITH SANDBAGS, BRICKS, OR OTHER HEAVY OBJECTS.
2. KEEP A CLEAN JOBSITE BY SWEEPING UP PAVED OR OTHER IMPERMEABLE SURFACES DAILY, ESPECIALLY WHEN RAIN IS FORECASTED. DO NOT ADVERTENTLY OR INADVERTENTLY TRANSPORT SEDIMENT OFFSITE, INTO STORM DRAINS, OR ROADWAYS USING WATER, BLOWERS, OR OTHER MECHANICAL DEVICES. DISPOSE ALL NON-HAZARDOUS WASTES INTO THE APPROPRIATE DUMPSTER UNITS.
3. RECYCLE AT LEAST THE MINIMUM REQUIRED AMOUNT OF DEMOLITION MATERIAL INCLUDING CONCRETE, ASPHALT, BASE AGGREGATE, WOOD, ETC. AS OUTLINED IN PROJECT SPECIFICATIONS. PROMOTE RECYCLING OF DAILY CONSUMPTIVE MATERIALS SUCH AS PAPER AND DRINK CANS BY PROVIDING RECYCLE BINS ONSITE.
4. BE SURE DUMPSTERS AND STORAGE CONTAINERS ADEQUATELY MEET ONSITE DEMAND. CHECK FOR ANY LEAKS, CRACKS, OR MATERIAL OVERFLOW ON A REGULAR BASIS. ORDER EXTRA DUMPSTERS AS NECESSARY AND REPAIR ALL LEAKS AND CRACKS IMMEDIATELY.

HAZARDOUS MATERIALS MANAGEMENT AND STORAGE

1. ALL HAZARDOUS MATERIALS AND WASTE MUST BE LABELED (E.G., DIESEL, GASOLINE, ANTIFREEZE, SOLVENTS, THINNERS, PESTICIDES, FERTILIZERS) IN CONFORMITY TO ALL LOCAL, STATE, AND FEDERAL REGULATIONS. FOR GENERAL INFORMATION ON HAZARDOUS WASTE LABELING VISIT: [HTTP://WWW.EPA.GOV/EPASW/OSW/HAZWASTE.HTM](http://www.epa.gov/epaoswer/osw/hazwaste.htm)
2. FOR A COMPLETE LIST OF EPA DEFINED HAZARDOUS WASTES VISIT: [HTTP://WWW.EPA.GOV/EPASW/HAZWASTE/LISTING-REF.PDF](http://www.epa.gov/epaoswer/hazwaste/listing-ref.pdf)
3. STORE ALL HAZARDOUS MATERIALS AND WASTES IN APPROVED SECONDARY CONTAINERS PROTECTED FROM THE ELEMENTS (WIND, RAIN, WATER, DIRECT SUNLIGHT). CONSIDER LIMITING THE AVAILABILITY OF HAZARDOUS WASTES BY LOCKING THEM IN SECURED CABINETS/AREAS.
4. FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN STORING, TRANSPORTING, APPLYING, AND DISPOSING OF UNUSED HAZARDOUS WASTES. IN GENERAL, OUTDOOR APPLICATION OR USE OF MATERIALS LABELED AS HAZARDOUS WASTES SHOULD BE AVOIDED WHEN FORECASTS CALL FOR RAIN OR HEAVY FOG.

SPILL PREPARATION AND CONTROL

1. PREPARE FOR SPILLS BY STOCKING AN ADEQUATE SUPPLY OF RAGS, ABSORBENTS, SPILL POWDERS, AND SAFETY EQUIPMENT (GLOVES, EYEGLASSES, ETC). FOLLOW ALL HAZARDOUS WASTE STORAGE AND USE RECOMMENDATIONS OUTLINED ABOVE AND CONSULT PROJECT ENGINEERS REGARDING SPILL PREPARATION PLANS THAN MAY BE REQUIRED.
2. COMMUNICATE WITH ALL CONSTRUCTION SITE WORKERS THE IMPORTANCE OF DETECTING AND REPORTING LEAKS TO JOBSITE MANAGERS.
3. CONTAIN ALL SPILLS OR LEAKS UPON DETECTION.
4. PREVENT ALL LEAKS AND SPILLS FROM ENTERING GUTTERS, MUNICIPAL STORM DRAINS, AND ADJACENT CREEKS/WATERWAYS.
5. REPORT ALL HAZARDOUS MATERIAL SPILLS TO THE LOCAL GOVERNMENT ENTITIES OVERSEEING CONSTRUCTION. IN ADDITION, ANY SPILL OF HAZARDOUS MATERIALS, INCLUDING OIL, PAINT, GASOLINE, AND DIESEL, THAT REACH STATE WATERS MUST BE REPORTED TO THE OFFICE OF SPILL PREVENTION AND RESPONSE. THEY CAN BE REACHED THROUGH THE DEPARTMENT OF FISH AND GAME'S TOLL FREE LINE: CALTIP 1-888-DFG-CALTIP

VEHICLE MAINTENANCE AND CLEANING

1. INSPECT ALL ON-SITE VEHICLES FOR OIL, FUEL, ANTIFREEZE, OR GENERAL FLUID LEAKS. IF LEAKS ARE DETECTED USE APPROPRIATELY SIZED CATCH BASINS TO CAPTURE FLUIDS AND MAKE NECESSARY REPAIRS IMMEDIATELY IN AN APPROVED STAGING AREA.
2. CONDUCT ALL REFUELING AND MAINTENANCE WORK ON VEHICLES WITHIN DESIGNATED STAGING AREA. USE APPROPRIATELY SIZED DRIP PANS TO CAPTURE ALL FLUIDS, AND PREVENT SOIL AND WATER CONTAMINATION. DO NOT ALLOW FLUIDS TO REACH STORM GUTTERS, RUN-OFF IMPERVIOUS SURFACES, OR ENTER WATER BODIES AT THE SITE (SEE SPILL PREPARATION AND CONTROL, ABOVE).
3. IF VEHICLE CLEANING IS REQUIRED, DO NOT ALLOW WASH WATER TO LEAVE THE STAGING AREA. THIS MAY REQUIRE CONSTRUCTION OF BERMS AND TARPS THAT PROHIBIT RUN-OFF TO GUTTERS, STREETS, STORM DRAINS, OR CREEKS.
4. DO NOT CLEAN VEHICLES WITH DEGREASERS, SOLVENTS, OR STEAM EQUIPMENT.

EROSION CONTROL AND SOIL CONTAMINATION

1. STORE, TRANSPORT, AND TRANSFER ALL EXCAVATED SOIL, SAND, AND MATERIAL IN CONFORMITY WITH THE TECHNICAL SPECIFICATIONS. IN ADDITION, AVOID STORING EXCAVATED MATERIAL WHERE IT CAN EASILY ERODE OR BE TRANSPORTED TO STREAMS, ROADWAYS, AND DRAIN SYSTEMS
2. CLEARING, EXCEPT THAT NECESSARY TO ESTABLISH SEDIMENT CONTROL DEVICES, SHALL NOT BEGIN UNTIL ALL SEDIMENT CONTROL DEVICES HAVE BEEN INSTALLED AND HAVE BEEN STABILIZED.
3. MAJOR GRADING OPERATIONS SHALL BE SCHEDULED DURING DRY MONTHS, AND SHALL ALLOW ADEQUATE TIME BEFORE RAINFALL BEGINS TO STABILIZE THE SOIL WITH EROSION CONTROL MATERIALS.
- 4.
5. EXAMINE AND FOLLOW THE SPECIFIC EROSION CONTROL PLAN TO MINIMIZE TRANSPORT OF DEBRIS AND SILT OFF THE CONSTRUCTION SITE. THIS MAY INCLUDE INSERTING FIBER ROLLS, SILT FENCING, WATTLES, SEEDING AND OTHER APPROVED BMPS.
6. VEGETATION REDUCES RAINFALL IMPACT AND PROVIDES COHESIVE PROPERTIES TO SOIL. THEREFORE, DURING SITE CLEARING AND GRUBING MINIMIZE THE REMOVAL OF NATURAL VEGETATION INCLUDING FORBS, GRASSES, SHRUBS, GROUND COVERINGS, AND TREES.
7. SLOPES DISTURBED DURING CONSTRUCTION ACTIVITIES WILL REQUIRE SOME FORM OF TEMPORARY AND PERMANENT STABILIZATION. CONSULT THE PROJECT EROSION CONTROL PLANS AND SPECIFICATIONS REGARDING THE SPECIFIC REQUIREMENTS. PROJECT BMPS INCLUDE INSTALLATION OF EROSION CONTROL FABRIC, HYDRO-SEEDING, DRILL-SEEDING, OR DIRECT PLANTING SEEDING AND MULCHING SHALL BE DONE AS SOON AS GRADING IS COMPLETE.
8. SOIL STABILIZATION SHALL BE COMPLETED WITHIN FIVE DAYS OF CLEARING OR INACTIVITY IN CONSTRUCTION
9. SOIL STOCKPILES MUST BE STABILIZED AND/OR SECURELY COVERED AT THE END OF EACH WORKDAY.
10. IN AREAS WHERE PERMANENT RE-SEEDING AND PLANTING IS NOT ESTABLISHED AT THE CLOSE OF THE CONSTRUCTION SEASON, ADDITIONAL CONTROL MEASURES SHALL BE USED, SUCH AS A HEAVY MULCH LAYER OR ANOTHER METHOD THAT DOES NOT REQUIRE GERMINATION, TO ENSURE SOIL STABILIZATION AT THE SITE.
11. WHERE RUNOFF NEEDS TO BE DIVERTED FROM ONE AREA AND CONVEYED TO ANOTHER, EARTH DIKES, DRAINAGE SWALES, SLOPE DRAINS OR OTHER SUITABLE PRACTICE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK.
12. LINEAR SEDIMENT BARRIERS SHALL BE PLACED BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, DOWN-SLOPE OF EXPOSED SOIL AREAS, AROUND SOIL STOCKPILES, AND AT OTHER APPROPRIATE LOCATIONS ALONG THE SITE PERIMETER.
13. STREET SWEEPING SHALL BE CONDUCTED ON AN AS NEEDED BASIS TO REMOVE SEDIMENT FROM STREETS AND ROADWAYS AND TO PREVENT THE SEDIMENT FROM ENTERING STORM DRAINS OR RECEIVING WATERS.
14. EVERY STORM DRAIN INLET WITH THE POTENTIAL TO RECEIVE SEDIMENT-LADEN RUNOFF SHALL BE PROTECTED IN ACCORDANCE WITH THE DESIGN CRITERIA SET FORTH IN THE MOST RECENT VERSION OF THE CALIFORNIA STORMWATER QUALITY ASSOCIATION BEST MANAGEMENT PRACTICE HANDBOOK. INLET PROTECTION SHALL BE INSPECTED AND MAINTAINED FREQUENTLY.
15. SEDIMENT BASINS OR SEDIMENT TRAPS SHALL BE INSTALLED ON PROJECTS WHERE SEDIMENT-LADEN WATER MAY ENTER THE DRAINAGE SYSTEM OR WATERCOURSES AND IN ASSOCIATION WITH DIKES, TEMPORARY CHANNELS, AND PIPES USED TO CONVEY RUNOFF FROM DISTURBED AREAS.
16. OTHER MEASURES, SUCH AS TRACK-OUT PREVENTION DEVICES, OR AS REQUIRED BY THE DISTRICT INSPECTOR IN ORDER TO ENSURE THAT SEDIMENT IS NOT TRACKED ONTO PUBLIC STREETS BY CONSTRUCTION VEHICLES OR WASHED INTO STORM DRAINS.
17. DURING EXCAVATION WORK, LOOK FOR UNDERGROUND STORAGE TANKS, ABANDONED PIPES, OR BURIED DEBRIS THAT WERE NOT IN THE PROJECT PLANS OR JOBSITE BACKGROUND INVESTIGATION. IF FOUND, IMMEDIATELY CONTACT THE PROJECT ENGINEER.
18. IF CONTAMINATED SOIL IS FOUND, IMMEDIATELY CONTACT SITE ENGINEERS AND LOCAL GOVERNMENT ENTITIES OVERSEEING CONSTRUCTION. SPECIAL EXCAVATION, TRANSPORT, AND TREATMENT OF CONTAMINATED SOILS MAY BE REQUIRED.
19. SUFFICIENT EROSION AND SEDIMENT CONTROL SUPPLIES SHALL BE AVAILABLE ON SITE DURING THE RAINY SEASON (OCTOBER THROUGH APRIL) TO PROTECT AREAS SUSCEPTIBLE TO EROSION DURING RAIN EVENTS. CONTRACTORS SHALL BE PREPARED YEAR-ROUND TO DEPLOY EROSION AND SEDIMENT TREATMENT CONTROL PRACTICES.

WATER USE

1. WATER IS A PRECIOUS RESOURCE. RECYCLE AND RE-USE ON-SITE WATER RESOURCES FOR DUST CONTROL, IRRIGATION, AND OTHER USES WHEN POSSIBLE.
2. CONTACT THE LOCAL MUNICIPALITY OR AGENCY RESPONSIBLE FOR DRAINAGE IF STORM GUTTERS, SEWER SYSTEMS, OR WATER BODIES WILL RECEIVE ANY JOBSITE RUN-OFF.
3. WATER CONTAINING HIGH AMOUNTS OF SEDIMENT AND OTHER CONTAMINANTS MAY REQUIRE CONSTRUCTION OF SEDIMENT BASINS, TREATMENT FACILITIES, OR SPECIAL TRANSPORT THAT ARE OUTLINED IN THE PROJECT DRAWINGS AND SPECIFICATIONS.
4. TO REDUCE THE IMPACT OF CONTAMINATED SURFACE WATERS ON LOCAL/REGIONAL GROUNDWATER QUALITY, CONSULT WITH LOCAL OFFICIALS AND PROJECT ENGINEERS REGARDING THE PROPER TESTING, TREATMENT, AND DISPOSAL OF CONTAMINATED WATERS.

CUTTING WOOD, ASPHALT, OR CONCRETE MATERIALS

1. CONTAIN AND PROPERLY DISPOSE ALL SAWDUST FROM CUTTING OPERATIONS AT THE JOBSITE. DO NOT ALLOW SAWDUST AND WOOD DEBRIS, ESPECIALLY TREATED LUMBER PRODUCTS, TO ENTER STORM DRAINS OR ENTER ADJACENT WATER BODIES.
2. PRIOR TO FORECASTED RAINFALL EVENTS, CLEAN UP AND DISPOSE OF ALL WOOD WASTE SOURCES.
3. WHEN SAW CUTTING ASPHALT OR CONCRETE MATERIALS BLOCK ALL STORM GUTTERS AND DRAINS TO PROHIBIT SLURRY FROM CONTAMINATING AND CLOGGING INFRASTRUCTURE. IMMEDIATELY REMOVE ANY AND ALL SLURRY WASTE THAT REACHES STORM DRAINS/GUTTERS
4. INSTALLATION OF FILTER FABRICS, SEDIMENT BASINS, STRAW BALES, OR SPECIAL FILTER EQUIPMENT MAY BE REQUIRED. CONSULT THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS.
5. CONTAIN, CLEAN UP, AND PROPERLY DISPOSE ALL CUTTING WASTE AND SLURRIES UPON MOVING LOCATIONS AND COMMENCING DAILY OPERATIONS.

ASPHALTIC PAVING

1. ASPHALTIC PAVING DURING WET WEATHER IS NOT PERMITTED DUE TO APPLICATION GUIDELINES AND ENVIRONMENTAL CONCERNS.
2. COVER ALL DRAINS AND MANHOLES WHEN PAVING OR APPLYING SEAL COATS, TACK COATS, SLURRY SEALS, AND FOG SEALS.
3. ASPHALTIC PAVING MACHINES CAN LEAK WHEN NOT IN USE. PLACE DRIP PANS AND OTHER ABSORBENT MATERIALS IN APPROPRIATE LOCATIONS TO MINIMIZE LEAKS AND SPILLS WHEN ASPHALTIC PAVING EQUIPMENT IS BEING STORED OR NOT IN USE.
4. ALL SAND USED DURING PAVING, SLURRY SEALING, AND COATING SHOULD BE REMOVED FROM THE JOB SITE AND DISPOSED OF AS TRASH. DO NOT ALLOW EXCESS MATERIALS TO ENTER STORM DRAINS OR LOCAL WATER BODIES.

CONCRETE AND CEMENTITIOUS MATERIALS

1. STORE AND CONTAIN ALL CONCRETE AND CEMENTITIOUS PRODUCTS IN DRY AREAS AND AWAY FROM ANY WATER SOURCES.
2. IF TRUCK AND EQUIPMENT CLEANUP OCCURS ON-SITE, DESIGNATE A BASIN/AREA FOR WASHING. ALLOW WATER TO SEEP INTO A VISQUEEN LINED BASIN AND WAIT UNTIL CONCRETE HARDENS. REMOVE AND DISPOSE ALL HARDENED CONCRETE IN THE APPROPRIATE SOLID WASTE UNIT.
3. DO NOT ALLOW TRUCK AND MIXING EQUIPMENT WASH WATER TO ENTER STORM DRAINS, GUTTERS, OR ADJACENT WATER BODIES.
4. FOR PROJECTS INVOLVING WORK "OVER WATER" OR WITHIN 25 FEET OF A TIDAL SLOUGH OR STREAM COURSE, USE FAST CURING, HIGH STRENGTH CONCRETE AS APPROVED BY ENGINEER. TIME REMOVAL OF FORM BOARDS WHEN THERE IS NO RAIN FORECAST WITHIN 48 HOURS AND/OR DURING A PERIOD OF EXTENDED LOW TIDE. APPLY ENGINEER-APPROVED, QUICK DRYING CONCRETE WATERPROOFING SEALANT IMMEDIATELY AFTER REMOVAL OF ALL FORM BOARDS.

PAINTING

1. RINSING OF PAINT BRUSHES, PANS, SPRAYERS AND ANY ASSOCIATED EQUIPMENT INTO STORM DRAINS, STREETS, OR WATER BODIES IS NOT PERMITTED.
2. PRIOR TO CLEANING WATER BASED PAINTING EQUIPMENT, ROLL, BRUSH, OR SPRAY ANY EXCESS PAINT ONTO A DISCARDABLE SURFACE (WOOD, PAPER, ETC.) WHEN A SINK IS UNAVAILABLE DILUTE WASTE PAINT WITH WATER AND POUR ONTO SOIL WHILE AGITATING WITH A SHOVEL OR RAKE.
3. PRIOR TO CLEANING OIL BASED PAINTING EQUIPMENT WITH A THINNER, ROLL, BRUSH, OR SPRAY ANY EXCESS PAINT ONTO A DISCARDABLE SURFACE. FILTER AND RE-USE PAINT THINNERS FOR FUTURE USE AND DISPOSE UNUSABLE THINNER AS HAZARDOUS WASTE.

GENERAL

1. SANITARY FACILITIES OF SUFFICIENT NUMBER AND SIZE TO ACCOMMODATE CONSTRUCTION CREWS SHALL BE LOCATED AWAY FROM STORM DRAIN INLETS AND DRAINAGE FACILITIES, AND ANCHORED TO PREVENT BEING BLOWN OVER OR TIPPED BY VANDALS. THE FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER AND EMPTIED AT REGULAR INTERVALS BY A LICENSED SANITARY WASTE HAULER.
2. TECHNIQUES SHALL BE EMPLOYED TO PREVENT THE BLOWING OF DUST OR SEDIMENT FROM THE SITE SUCH AS WATERING ACCESS ROADS AND COMPACTION AND SEEDING OF FILL AREAS.

DATE: OCTOBER 2021
DESIGNED BY: JPMH
DRAWN BY: CC
CHECKED BY: CN

PROJECT NO.
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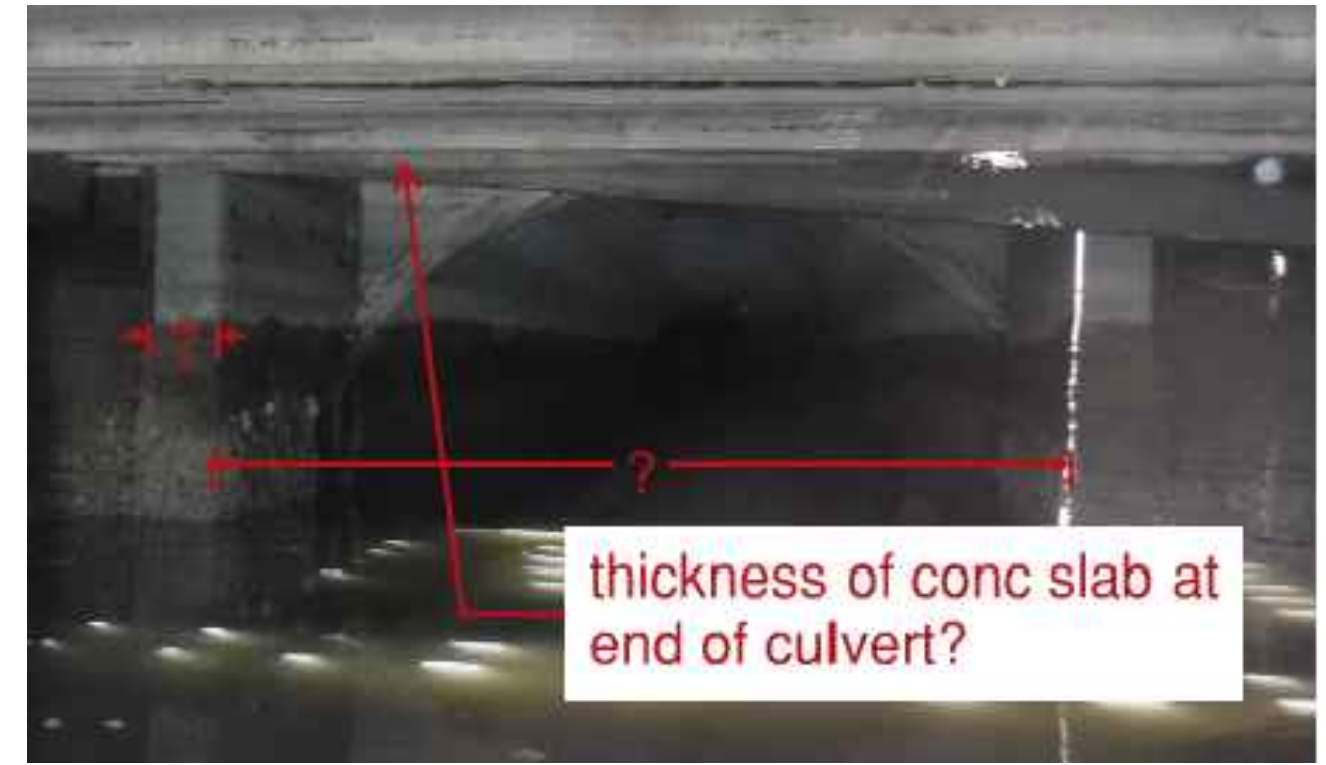
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FIRST AND F STREET BRIDGE REPLACEMENT
STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

SHEET
C-9
C-9 OF C-14

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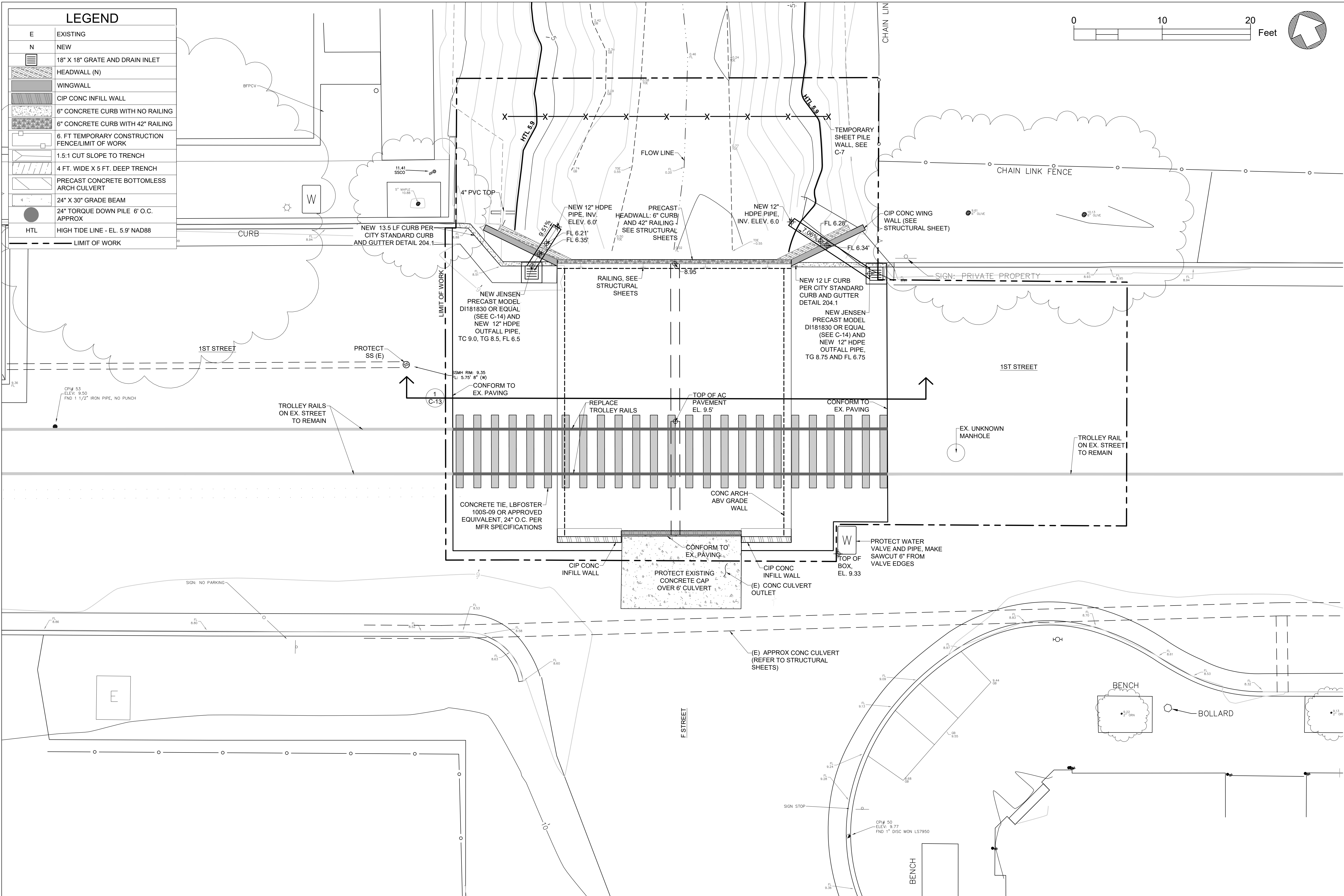
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**FIRST AND F STREET BRIDGE
REPLACEMENT
EXISTING CONDITIONS AND PHOTOS**

SHEET
C-10
C-10 OF C-14



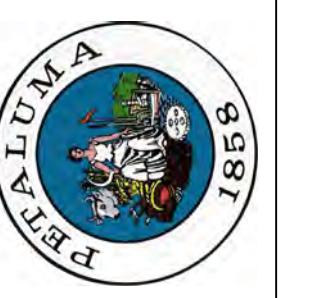
LEGEND	
E	EXISTING
N	NEW
	18" X 18" GRATE AND DRAIN INLET
	HEADWALL (N)
	WINGWALL
	CIP CONC INFILL WALL
	6" CONCRETE CURB WITH NO RAILING
	6" CONCRETE CURB WITH 42" RAILING
	6 FT TEMPORARY CONSTRUCTION FENCE/LIMIT OF WORK
	1.5:1 CUT SLOPE TO TRENCH
	4 FT. WIDE X 5 FT. DEEP TRENCH
	PRECAST CONCRETE BOTTOMLESS ARCH CULVERT
	24" X 30" GRADE BEAM
	24" TORQUE DOWN PILE 6" O.C. APPROX
HTL	HIGH TIDE LINE - EL. 5.9' NAD88
	LIMIT OF WORK

DATE: OCTOBER 2021
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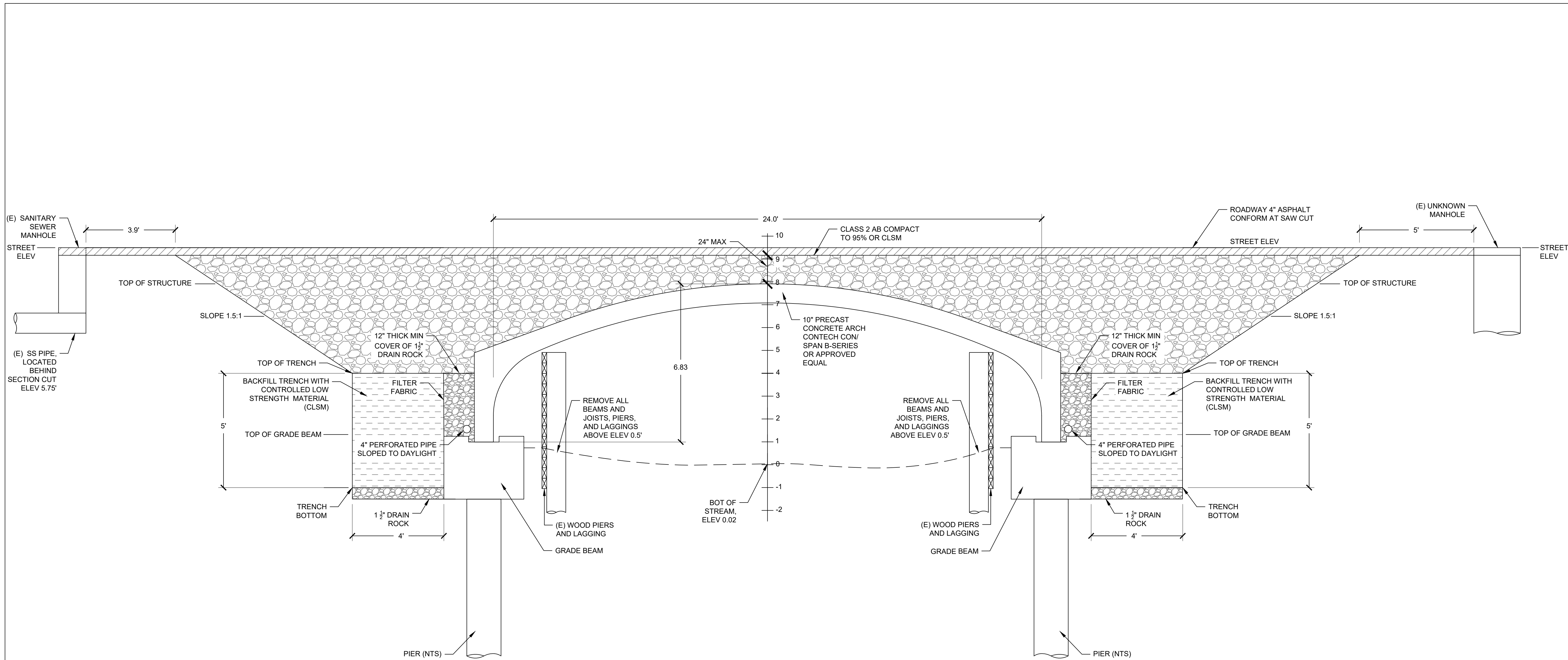
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FIRST AND F STREET BRIDGE REPLACEMENT
 STREET PLAN

SHEET
C-12
 C-12 OF C-14

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1 TYPICAL SECTION
NTS

BRIDGE ELEVATION TABLE	
LOCATION	EL. (FT)
TIP OF PILE (MIN.)	-56.43
TOP OF PILE	-1.26
BASE OF GRADE BEAM	-1.51
TOP OF GRADE BEAM	1.24
TOP OF CULVERT AT CENTER	7.91
TOP OF PAVED STREET	9.50

ALL ELEVATIONS NAD 88

WATER LEVELS TABLE	
LOCATION	EL. (FT)
HIGH TIDE LINE (HTL)	5.90
GROUNDWATER	+/- 1.5
MEAN HIGHER HIGH WATER (MHHW)	5.78
MEAN TIDE LEVEL	3.28
MEAN LOWER LOW WATER (MLLW)	0.31
2 YEAR FLOW	6.94
50 YEAR FLOOD FLOW	8.76
100 YEAR FLOOD FLOW	9.44
100 YEAR STILLWATER TIDE	9.20

ALL ELEVATIONS NAD 88

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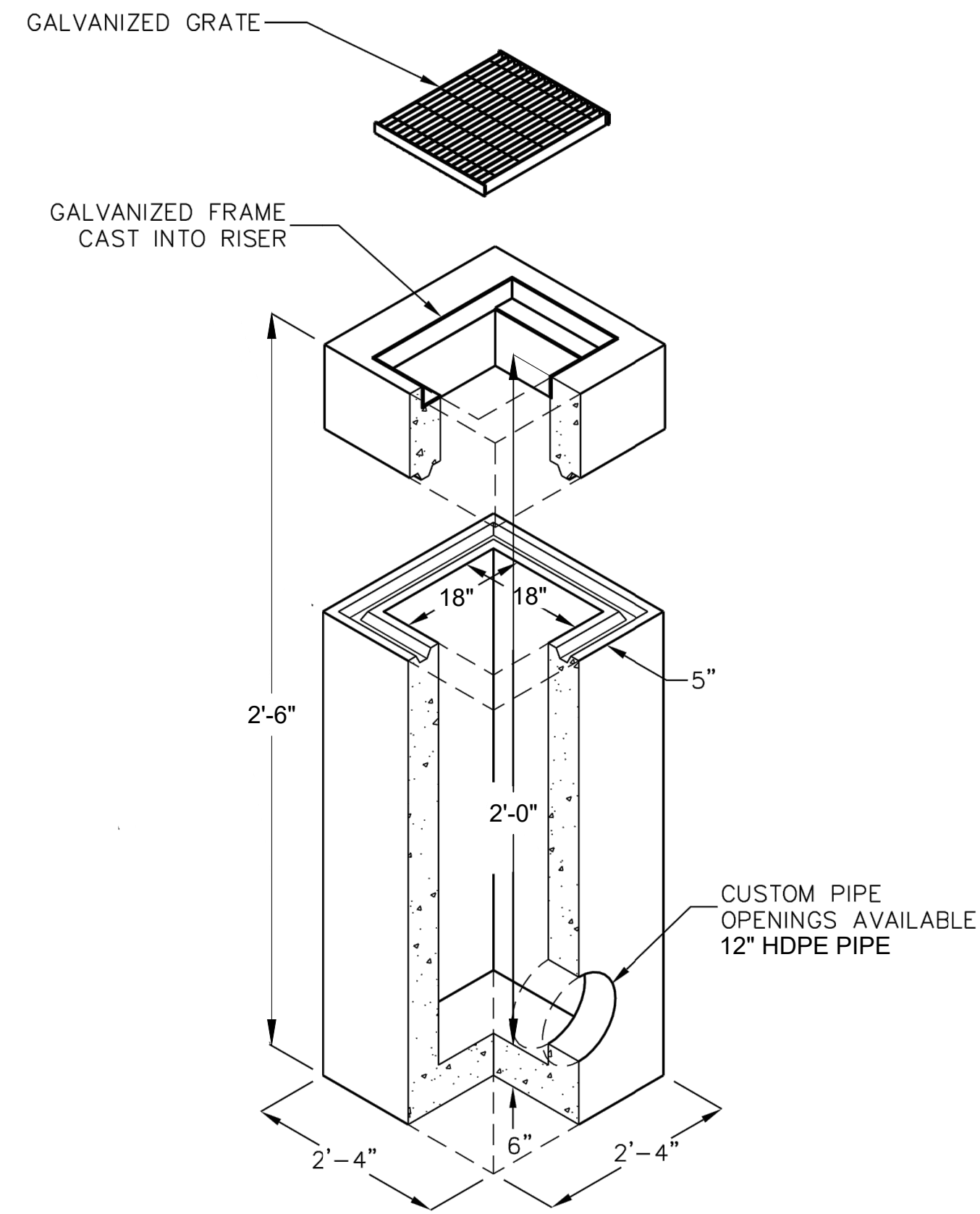
FIRST AND F STREET BRIDGE
REPLACEMENT
BRIDGE SECTION

SHEET

C-13

C-13 OF C-14

DROP INLET
18"x18" I.D.
(NOMINAL DIMENSIONS)
 WITH FRAME AND GRATE

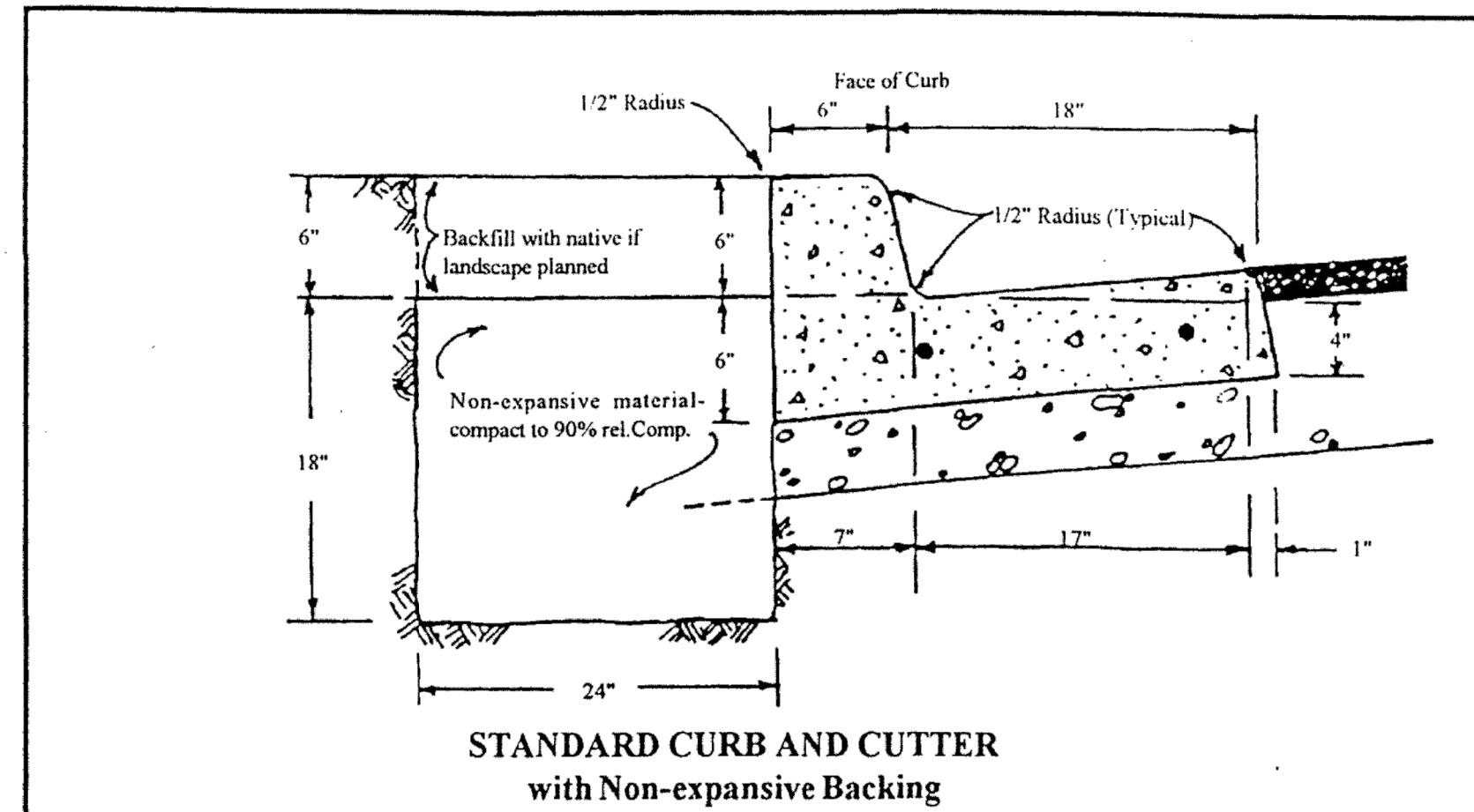


NOTES
 1. ALL ELEVATIONS AND DIMENSIONS TO BE CONFIRMED BY CONTRACTOR
 FOR COMPLETE DESIGN AND PRODUCT INFORMATION
 CONTACT JENSEN PRECAST.

2/1/08
 D18x18_1818FG_FF_A.dwg
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 and/or dimensions without notice. Please contact Jensen Precast whenever
 necessary for confirmation or advice on product design.



1 **DROP INLET**
 NTS



STANDARD CURB AND CUTTER
 with Non-expansive Backing

NOTE:

1. Curb and gutter with non-expansive backing or with curb anchor are optional or as directed by the Engineer.
2. Placement of Curb Anchor shall conform to STANDARD DETAIL 203 and DETAIL SPECIFICATION 41, Section 202.8.
3. If non-expansive material is to be used, the Engineer may require testing by an accredited soils lab prior to placement. Sand or pea gravel will not be allowed.
4. Contractor to modify to meet site conditions.

CITY OF PETALUMA Department of Engineering 22 Bassett Street - Petaluma, California 94954 Tel: 707-778-4504 Fax: 707-778-4417 Approved by: <i>Thomas S. Hartz</i> Thomas S. Hartz R.C.I. Inc.	Standard Details STANDARD CURB & GUTTER	Drawn By: Butch Smith Scale: N.T.S. Date: February 9th 1998 (Rev.) File Number: Std Det SSD0000 204.1	
	204.1		

2 **STANDARD CURB & GUTTER**
 NTS

DATE: OCTOBER 2021
 DESIGNED BY: XXX
 DRAWN BY: CEC
 CHECKED BY: XXX

PROJECT NO.
 1900182



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**FIRST AND F STREET BRIDGE
 REPLACEMENT
 DETAILS**

SHEET
C-14
 C-14 OF C-14

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ABBREVIATIONS

AB	ANCHOR BOLT	GALV	GALVANIZED	PTDF	PRESSURE TREATED
ABV	ABOVE	GB	GRADE BEAM		DOUGLAS FIR
AC	AIR CONDITIONING	GLB	GLUE LAMINATED BEAM	PT	POINT
ADJ	ADJACENT	GR	GRADE	R	RADIUS
ADDL	ADDITIONAL	HD	HOLD DOWN	RBS	REDUCED BEAM SECTION
ALT	ALTERNATE	HDG	HOT-DIP GALVANIZED	RFTR	RAFTER
ALUM	ALUMINUM	HDR	HEADER	REF	REFERENCE
ARCH	ARCHITECT	HGR	HANGER	REINF	REINFORCING
@	AT	HK	HOOK	REQD	REQUIRED
BLDG	BUILDING	HORIZ	HORIZONTAL	RET	RETAINING
BLK/BLKG	BLOCK/BLOCKING	HS	HIGH STRENGTH	REV	REVISION
BLW	BELOW	HSB	HIGH STRENGTH BOLT	RF	ROOF
BM	BEAM	HSFB	HIGH STRENGTH FRICTION BOLT	RWD	REDWOOD
BN	BOUNDARY NAIL	HSG	HIGH STRENGTH GROUT	S	AMERICAN STANDARD BEAM
BOT	BOTTOM	HSH	HORIZONTAL SLOTTED HOLE	SAD	SEE ARCHITECTURAL DRAWINGS
BRG	BEARING	HSS	HOLLOW STRUCTURAL SECTION	SB	SOLID BLOCK
BTWN	BETWEEN	HT	HEIGHT	SC	SLIP CRITICAL
BU	BUILT-UP	ID	INSIDE DIAMETER	SCBF	SPECIAL CONCENTRIC BRACED FRAME
BYND	BEYOND	IJ	I SHAPED WOOD BUILT UP TRUSS	SCD	SEE CIVIL DRAWINGS SCHEDULE
C	AMERICAN STANDARD CHANNEL	INT	INTERIOR	SED	SEE ELECTRICAL DRAWINGS RECORD
CANT	CANTILEVER	JST	JOIST	SEOR	STRUCTURAL ENGINEER OF RECORD
CB	CARRIAGE BOLT	JT	JOINT	SFRS	SEISMIC FORCE RESISTING SYSTEM
CFS	COLD FORMED STEEL	KP	KING POST	SHTG	SHEATHING
CIP	CAST IN PLACE	L	STEEL ANGLE	SIM	SIMILAR
CGL	CERTIFIED GLUED LUMBER	Lb or #	POUND(S)	SKYLT	SKYLIGHT
CJ	CONTROL JOINT	LGMF	LIGHT GAGE METAL FRAMING	SLD	SEE LANDSCAPE DRAWINGS
CL	CENTERLINE	LGMFC	LIGHT GAGE METAL FRAMING CONTRACTOR	SMF	SPECIAL MOMENT FRAME
CJP	COMPLETE JOINT PENETRATION	LL	LIVE LOAD	SMS	SHEET METAL SCREW
CLG	CEILING	LLH	LONG LEG HORIZONTAL	SMD	SEE MECHANICAL DRAWINGS
CLR	CLEAR	LLV	LONG LEG VERTICAL	SOG	SLAB ON GRADE
COL	COLUMN	LOC	LOCATION	SPCG	SPACING
COLL	COLLECTOR	LS	LAG SCREW	SPD	SEE PLUMBING DRAWINGS
CONC	CONCRETE	LSL	LAMINATED STRAND LUMBER	SPEC	SPECIFICATION
CONN	CONNECTION	LVL	LAMINATED VENEER LUMBER	SQ	SQUARE
CONT	CONTINUOUS	MAX	MAXIMUM	SS	SELECT STRUCTURAL or STAINLESS STEEL
COORD	COORDINATE/COORDINATION	MB	MACHINE BOLT	STGR	STAGGERED
CMU	CONCRETE MASONRY UNIT	MBM	METAL BUILDING MANUFACTURER	STD	STANDARD
CSK	COUNTERSINK	MC	MISCELLANEOUS CHANNEL	STIFF	STIFFENER
CW	CUT WASHER	MECH	MECHANICAL	STL	STEEL
DBA	DEFORMED BAR ANCHOR	MEZZ	MEZZANINE	STRUCT	STRUCTURAL
DBL	DOUBLE	MF	MOMENT FRAME	SW	SHEAR WALL
DCW	DEMAND CRITICAL WELD	MFR	MANUFACTURER	SYM	SYMMETRICAL
DF	DOUGLAS FIR	MIN	MINIMUM	T&B	TOP AND BOTTOM
DIA or Ø	DIAMETER	MISC	MISCELLANEOUS	T&G	TONGUE AND GROOVE
DIAG	DIAGONAL	MIW	MALLEABLE IRON WASHER	THK	THICK
DIM	DIMENSION	MTL	METAL	THRD	THREADED
DJ	DOWEL JOINT	(N)	NEW	THRU	THROUGH
DL	DEAD LOAD	NIC	NOT IN CONTRACT	TL	TOTAL LOAD
DN	DOWN	NO or #	NUMBER	TN	TOE NAIL
DO	DITTO	NS	NEAR SIDE	TOC	TOP OF CONCRETE
DWG	DRAWING	NSG	NON-SHRINK GROUT	TOF	TOP OF FRAMING
DWL	DOWEL	NTS	NOT TO SCALE	TOM	TOP OF MASONRY
EA	EACH	O/	OVER	TOP	TOP OF PLYWOOD
EE	EACH END	oc	ON CENTER	TOS	TOP OF STEEL
EF	EACH FACE	od	OUTSIDE DIAMETER	TOT	TOTAL
ELEC	ELECTRICAL	OH	OPPOSITE HAND	TU	TILT UP
ELEV	ELEVATOR/ELEVATION	OPNG	OPENING	TYP	TYPICAL
EMBED	EMBEDMENT	OPP	OPPOSITE	UNO	UNLESS NOTED OTHERWISE
EQ	EQUAL	OVS	OVERSIZED	VERT	VERTICAL
EQUIP	EQUIPMENT	OW	OTHERWISE	VIF	VERIFY IN FIELD
ES	EACH SIDE	OWT	OPEN WEB TRUSS	VSH	VERTICAL SLOTTED HOLE
EW	EACH WAY	PL	PLATE or PROPERTY LINE	W	WIDE FLANGE STEEL BEAM
EXIST or (E)	EXISTING	PA	POST ABOVE	W/	WITH
EXP	EXPANSION	PDP	POWDER DRIVEN PINS	W/O	WITHOUT
EXT	EXTERIOR	PEN	PANEL EDGE NAIL	WD	WOOD
FDN	FOUNDATION	PERP	PERPENDICULAR	WHS	WELDED HEADED STUD
FIN	FINISH	PES	PANEL EDGE SCREWS	WLD	WELDED
FG	FINISH GRADE	PJP	PARTIAL JOINT PENETRATION	WP	WORK POINT/WATERPROOF
FLI	FERRULE LOOP INSERT	PLF	POUNDS PER LINEAR FOOT	WS	WOOD SCREW
FLR	FLOOR	PNL	PANEL	WT	WEIGHT
FN	FACE NAIL	PSF	POUNDS PER SQUARE FOOT	WTS	WELDED THREADED STUD
FOC	FACE OF CONCRETE	PSI	POUNDS PER SQUARE INCH	WWR	WELDED WIRE REINFORCEMENT
FOM	FACE OF MASONRY	PSL	PARALLEL STRAND LUMBER		
FOS	FACE OF STUD	PTB	PANEL TIE BAR		
FRMG	FRAMING				
FS	FAR SIDE				
FTG	FOOTING				
GA	GAGE or GAUGE				

A DESIGN CRITERIA

DESIGN CRITERIA: 2019 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7TH EDITION

TRAFFIC LOADING: HL 93, PEDESTRIAN TRAFFIC 100 PSF (UNIFORM LOAD), TROLLY LOAD: 94,000 LBS, 4 AXLES@ 23,500 LBS. SEE PRECAST LOADING 1/S0.2

WIND DATA: ULTIMATE WIND SPEED (3 SEC GUST) IN MPH: 110
WIND EXPOSURE: C
INTERNAL WIND PRESSURE COEFFICIENT (GCPI) = ±0.18
COMPONENTS AND CLADDING DESIGN PRESSURES FOR SYSTEMS DESIGNED BY OTHERS SHALL COMPLY WITH THE "ASCE 7" DESIGN STANDARD

EARTHQUAKE DATA: SEISMIC IMPORTANCE FACTOR, I_e: 1.0
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 1.5; S₁ = 0.60
SITE CLASS: E
SPECTRAL RESPONSE COEFFICIENTS: S_{DS} = 1.114; S_{D1} = 1.304
SEISMIC DESIGN CATEGORY: E
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

SCOPE: REPLACEMENT OF AN EXISTING TIMBER BRIDGE AND TIMBER WING WALLS WITH A PRECAST ARCH BRIDGE AND CAST IN PLACE WING WALLS ON DEEP FOUNDATIONS

SHEET INDEX	
S0.1	GENERAL NOTES
S0.2	GENERAL NOTES CONT
S0.3	GENERAL NOTES CONT
S0.4	GENERAL NOTES CONT
S1.1	TYPICAL CONCRETE DETAILS
S1.2	TYPICAL CONCRETE DETAILS
S1.3	TYPICAL CONCRETE DETAILS
S1.4	TYPICAL CONCRETE DETAILS
S2.1	FOUNDATION PLAN NOTES
S2.2	FOUNDATION PLAN
S2.3	STREET PLAN
S3.1	SECTION
S3.2	SECTION
S3.3	SECTION
S3.4	SECTION
S4.1	FOUNDATION DETAILS
S4.2	FOUNDATION DETAILS
S4.3	FOUNDATION DETAILS
S4.4	FOUNDATION DETAILS
S5.1	STEEL RAIL DETAILS

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DESIGNED BY: MUR/C/SB
DRAWN BY:
CHECKED BY: CEM/KGZ

PROJECT NO.

Kevin J. Jasso
PROFESSIONAL ENGINEER
STRUCTURAL
STATE OF CALIFORNIA
07/30/2021

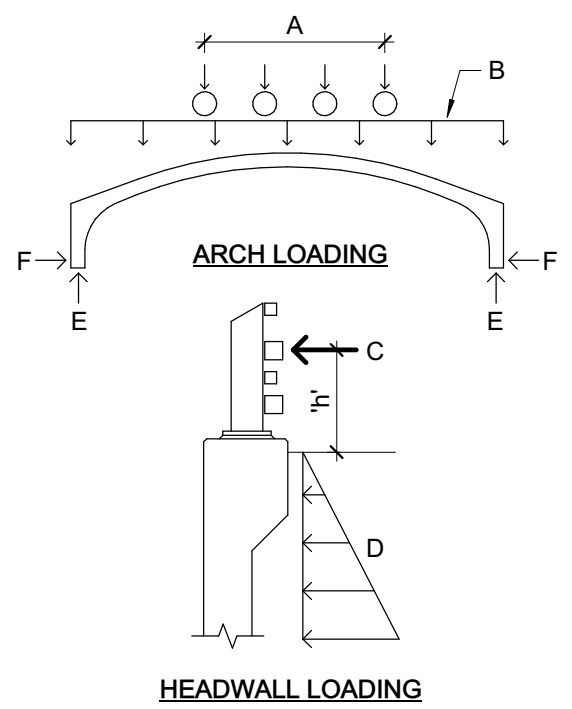
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1ST AND F STREET BRIDGE REPLACEMENT
CITY OF PETALUMA

SHEET
S0.1
OF 11

B GENERAL NOTES

1. REFER TO SHEETS S1.1, S1.2 AND S1.3 FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
2. DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. SEE CIVIL DRAWINGS (SCD) FOR ALL ACTUAL DIMENSIONS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE CIVIL AND STRUCTURAL ENGINEER SO CLARIFICATION CAN BE MADE PRIOR TO COMMENCING WORK.
3. STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
4. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
5. REFER TO CIVIL DRAWINGS FOR SIDEWALK SLABS AND DIMENSIONS.
6. COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. USE DETAILS ON SHEETS S1.1 THROUGH S1.3. AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
7. SHORING AND BRACING DESIGN, MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL ENGAGE A LICENSED CIVIL OR STRUCTURAL ENGINEER TO PROVIDE SHORING.
8. SPECIAL INSPECTIONS ARE REQUIRED PER D/S0.3 AND THE TESTING AND INSPECTION FORM.
9. VEHICULAR TRAFFIC, HEAVY EQUIPMENT AND MATERIAL STAGING SHALL NOT BE ALLOWED ADJACENT TO ANY RETAINING/BASEMENT WALL, NEW OR EXISTING WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT MEASURED FROM THE BOTTOM OF FOOTING OR 5'-0" WHICHEVER IS GREATER, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR NOTED OTHERWISE. WITHIN THIS ZONE, ONLY HAND-OPERATED EQUIPMENT ("WHACKERS", VIBRATORY PLATES, OR PNEUMATIC COMPACTORS) SHALL BE USED TO COMPACT THE BACKFILL SOILS.
10. STRUCTURAL OBSERVATION PER CBC SECTION 1704.6 IS REQUIRED. NOTIFY ZFA FOR GENERAL REVIEW OF:
 - MINIMUM GRADE BEAM, PIERS AND REINFORCING STEEL.
 - RETAINING WALLS AND REINFORCING.
 NOTIFY ZFA FOR REVIEW PRIOR TO COVERING ABOVE LISTED WORK. PROVIDE 2
11. SCOPE OF WORK INVOLVES EXCAVATION BELOW THE WATER LINE ADJACENT TO A TIDAL WATERWAY. CONTRACTOR IS RESPONSIBLE FOR DEWATERING WHERE REQUIRED AND SHOULD COORDINATE WORK TIMES WITH THE TIDES. SEE CIVIL DRAWINGS FOR MORE INFORMATION.
12. SUBMIT ENGINEERING FOR DEFERRED APPROVAL ITEMS TO ARCHITECT/ENGINEER FOR REVIEW AND SUBMITTAL TO THE BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION. DEFERRED APPROVAL ITEMS SHALL BE DESIGNED AND DETAILED BY MANUFACTURER TO ACCOMMODATE HORIZONTAL AND VERTICAL MOVEMENTS AS NOTED IN STRUCTURAL DRAWINGS. GENERAL CONTRACTOR SHALL REVIEW AND APPROVE DIMENSIONS AND DETAILS SHOWN ON THE SHOP DRAWINGS PRIOR TO SUBMITTAL. MANUFACTURER TO PROVIDE DRAWINGS AND CALCULATIONS DESIGNED IN ACCORDANCE WITH THE CBC AND SPECIFICATIONS, PREPARED AND SIGNED BY A CALIFORNIA LICENSED CIVIL OR STRUCTURAL ENGINEER FOR THE FOLLOWING ITEMS, UNLESS NOTED OTHERWISE:
 - A. PRECAST ARCH
 - B. PRECAST HEADWALL. INCLUDE CONNECTION TO PRECAST ARCH.



- A. AASHTO HL-93 OR TROLLEY LOADING (23.5k PER AXLE, (4) AXLES, @ 5'-0"oc, MOVING LOAD + 200plf PER RAIL)
- B. SELF WEIGHT + WEIGHT OF SOIL COVER (120 PCF) + 35 PSF FOR FUTURE AC WAERING SURFACE
- C. LOADING AND 'h' PER AASHTO TL-2
- D. RETAINED SOILS PER GEOTECHNICAL REPORT (DRAINED)
- E. MAX ALLOWABLE VERTICAL REACTION = 19.0 KLF
- F. MAX ALLOWABLE THRUST = 10.0 KLF

1 PRECAST LOADING

NOT TO SCALE

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 1ST AND F STREET BRIDGE REPLACEMENT CITY OF PETALUMA
 SHEET S0.2
 OF 11

D

SPECIAL INSPECTION BY OWNERS TESTING AGENCY

SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY IN ACCORDANCE WITH CBC CHAPTER 17 AND THE STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY CBC SECTIONS 1704.2.3 AND 1704.3 FOR BUILDING STRUCTURAL ELEMENTS SUMMARIZED AS FOLLOWS:

1. **STRUCTURAL STEEL CONSTRUCTION** PER CBC SECTIONS 1705.2, 1705.12.1, 1705.13.1, AND TABLE 1705.2.3 INCLUDING MATERIAL IDENTIFICATION, SHOP AND FIELD WELDING, AND INSTALLATION OF HIGH-STRENGTH BOLTS.
2. **CONCRETE CONSTRUCTION** PER CBC SECTIONS 1705.3, AND TABLE 1705.3 INCLUDING FORMWORK, REINFORCING STEEL, CAST-IN-PLACE BOLTS, MIX DESIGNS, CONCRETE SAMPLES, AND PLACEMENT FOR ALL CONCRETE. REINFORCING DOWELS FROM FOOTINGS TO RETAINING WALLS SHALL BE INSPECTED PRIOR TO PLACEMENT OF FOOTING CONCRETE AND WALL GROUT OR CONCRETE. CONTINUOUS OR ISOLATED SPREAD FOOTINGS WITH DESIGN STRENGTH NO GREATER THAN 2500 PSI, NON-STRUCTURAL SLABS ON GRADE, AND EXTERIOR FLATWORK DO NOT REQUIRE SPECIAL INSPECTION PER CBC SECTION 1705.3.
3. **SOILS** PER CBC SECTION 1705.6, TABLE 1705.6, AND THE APPROVED SOILS REPORT INCLUDING SUBGRADE PREPARATION, FOUNDATION BEARING MATERIALS AND DEPTH OF EXCAVATIONS, AND VERIFICATION, PLACEMENT AND TESTING OF CONTROLLED FILL.
4. **TORQUE-DOWN FOUNDATIONS** PER CBC SECTION 1705.8, TABLE 1705.8 AND THE APPROVED SOILS REPORT INCLUDING DRILLING OPERATIONS, PIER SIZE AND EMBEDMENT, END BEARING STRATA CAPACITY, AND PLACEMENT OF REINFORCEMENT AND CONCRETE. ADDITIONAL INSPECTIONS FOR CONCRETE ARE REQUIRED PER CBC SECTION 1705.3, AND AS NOTED ABOVE.
5. **SPECIAL CASES** PER CBC SECTION 1705.1.1 AND PRODUCT ICC REPORTS FOR ALL STRUCTURAL MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE CBC OR REFERENCED STANDARDS INCLUDING POST-INSTALLED ANCHOR BOLTS IN CONCRETE AND CMU, AND PRE-MANUFACTURED SHEAR PANELS AND BRACED FRAMES.

C

FOUNDATION NOTES

1. ALLOWABLE (ASD) FOUNDATION DESIGN CRITERIA:

 DRILLED DISPLACEMENT (STEEL TORQUE-DOWN PILES):
 SKIN FRICTION: 350 PSF FOR DEAD+LIVE (1/3 INCREASE FOR SEISMIC) 22 FT FROM THE(E) ROAD BED
 PASSIVE PRESSURE: 350 PCF BELOW A DEPTH OF 22 FT FROM THE (E) ROAD BED ON 2 PIER DIAMETERS
2. ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT NOTED BELOW, AND CHAPTER 18 OF THE CBC. ALL FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED, NATIVE SOILS OR ENGINEERED FILL AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ENGINEERED FILL TO BE COMPACTED PER GEOTECHNICAL REPORT. INCREASE FILL AND OR FOOTING DEPTH AS REQUIRED BY GEOTECHNICAL ENGINEER. ALL FOOTING EXCAVATIONS SHALL BE AS NEAT AS PRACTICABLE. MAXIMUM OVER EXCAVATION IN WIDTH SHALL BE LESS THAN 12 INCHES OR 25% OF FOOTING WIDTH, WHICH EVER IS LESS. 6 INCHES MAXIMUM PER SIDE. LARGER OVER-EXCAVATIONS IN WIDTH SHALL BE FILLED WITH ADDITIONAL REINFORCED CONCRETE AS DIRECTED BY THE ENGINEER, OR FORMWORK SHALL BE PROVIDED. OVER-EXCAVATIONS IN DEPTH MAY BE FILLED WITH LEAN CONCRETE OR COMPACTED APPROVED BACKFILL. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCING OR CONCRETE. GEOTECHNICAL REPORT BY:

 RGH CONSULTANTS
 REPORT NO. 2553.10.PW.1
 DATED: DEC 13, 2019 (REVISED DEC 23, 2019)
3. DRILLING FOR STEEL PIERS REQUIRES OBSERVATION AND APPROVAL OF GEOTECHNICAL ENGINEER. ALL PIERS SHALL BE POURED IN ONE CONTINUOUS POUR WITH STEEL IN PLACE. THE TOP 15'-0" MIN OF ALL PIERS SHALL BE VIBRATED WHILE POURING CONCRETE.
4. DO NOT UNDERCUT EXISTING FOUNDATIONS. NOTIFY ENGINEER FOR REVIEW AND POSSIBLE REVISIONS, IF EXISTING FOUNDATION CONDITIONS ARE NOT AS SHOWN.
5. TOP OF FOOTING ELEVATIONS TO BE DETERMINED BY THE CONTRACTOR BASED ON INFORMATION FROM THE CIVIL DRAWINGS, GEOTECHNICAL REPORT, LANDSCAPE, ETC.

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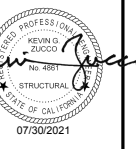
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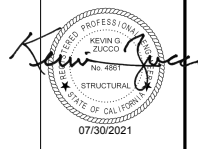
E

EXISTING CONSTRUCTION NOTES

1. ORIGINAL CONSTRUCTION DRAWINGS WERE NOT AVAILABLE FOR REVIEW AT THE TIME THESE DOCUMENTS WERE PREPARED. EXISTING BUILDING CONDITIONS SHOWN ARE ASSUMED BASED ON INFORMATION PROVIDED BY OTHERS AND ASSUMPTIONS BASED ON PROBABLE CONSTRUCTION METHODS. ACTUAL FIELD CONDITIONS MAY VARY.
2. ALL WORK NOT INDICATED AS EXISTING (E) SHALL BE ASSUMED TO BE NEW (N).
3. ANY REMOVAL, CUTTING, DRILLING, ETC OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE. SMALL TOOLS SHALL BE USED IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE STRUCTURE. IF STRUCTURAL MEMBERS OR MECHANICAL, ELECTRICAL, OR ARCHITECTURAL ELEMENTS NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED AND PRIOR APPROVAL SHALL BE OBTAINED BEFORE REMOVAL OF THE MEMBERS.
4. DO NOT OVER CUT EXISTING WOOD, CONCRETE, MASONRY OR OTHER WORK TO REMAIN. CUTS SHALL BE MADE NEATLY TO A CORNER, THEN ALTERNATE MEANS SHALL BE USED TO REMOVE REMAINING MATERIAL. CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF OVER CUT MATERIAL AS DIRECTED BY THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR THE CORRECT DISPOSAL OF ALL MATERIAL REMOVED.
5. EXISTING DAMAGED STRUCTURAL MEMBERS WHICH ARE UNCOVERED SHALL BE REPORTED TO THE ENGINEER FOR REVIEW AND REPAIR.
6. EXISTING CONCRETE SURFACE ABUTTING NEW CONCRETE SHALL BE ROUGHENED TO 1/4" AMPLITUDE AND THOROUGHLY CLEANED OF DUST, LOOSE AGGREGATE, LAITANCE, ETC.
7. REMODELING REQUIRES ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS WHICH MAY NOT BE VERIFIABLE WITHOUT DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE STRUCTURE. THIS ANALYSIS DOES NOT MAKE ANY GUARANTEE TO THE ADEQUACY OF THE STRUCTURAL DESIGN OF THE EXISTING BUILDING NOT SPECIFICALLY ADDRESSED IN THE STRUCTURAL CALCULATIONS. ZFA SHALL NOT BE RESPONSIBLE FOR UNSATISFACTORY PERFORMANCE OF EXISTING PORTIONS OF THE STRUCTURE NOT SPECIFICALLY ADDRESSED IN THE CONSTRUCTION DOCUMENTS.
8. DIFFERENTIAL SETTLEMENT BETWEEN NEW AND EXISTING CONSTRUCTION AT REMODEL OR ADDITION FOUNDATION INTERFACES CAN BE EXPECTED. ZFA SHALL NOT BE RESPONSIBLE FOR UNSATISFACTORY PERFORMANCE RESULTING FROM THESE CONDITIONS.

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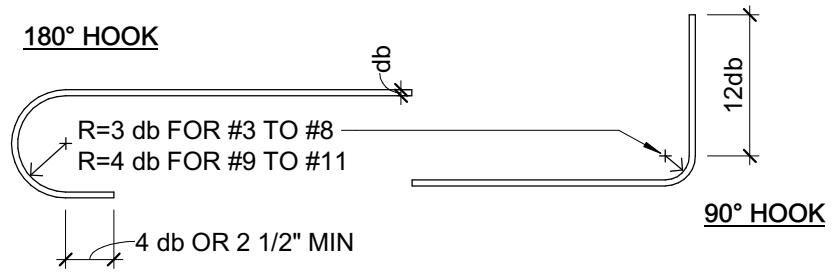
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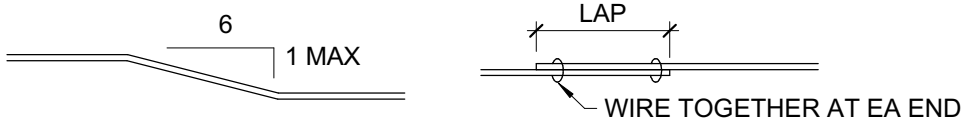
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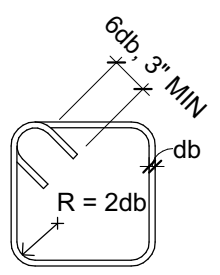


STANDARD HOOKS & BENDS

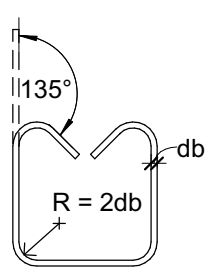


COL BAR & STRUCT OFFSET

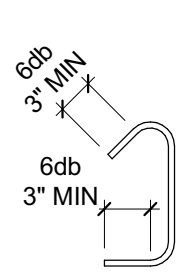
SPLICE



135° STIRRUP TIES #3, #4, #5



STIRRUP #3, #4, #5



CROSSTIE #3, #4, #5

**MINIMUM BAR LAPS FOR REINFORCING STEEL
CONCRETE STRENGTH: 5000 PSI OR GREATER
(STAGGER SPLICES)**

SIZE	LAP LENGTH	SIZE	LAP LENGTH
#3	13"	#6	26"
#4	18"	#7	43"
#5	26"	#8	54"

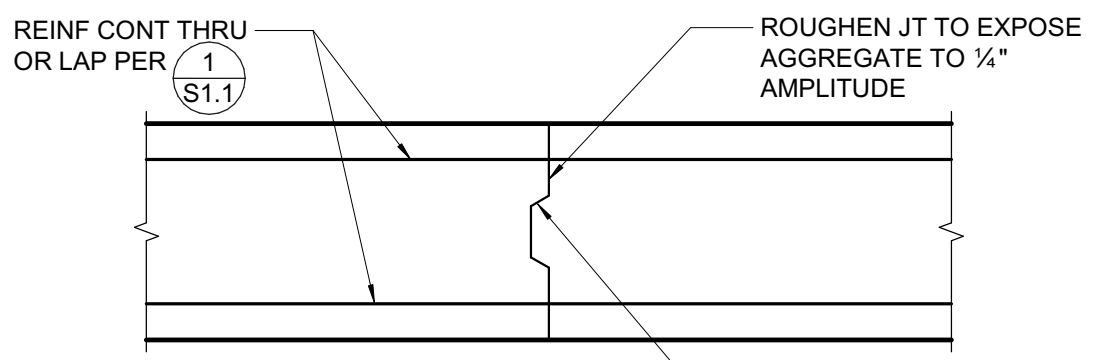
(CLASS B TOP BAR)
BAR SPCG SHALL NOT BE LESS THAN 4x BAR DIA OR 4".
* WHERE COVER NOT LESS THAN 1 1/2", #5 LAP LENGTH = 22"

CONC COVER FOR REINF STL ----- 'CLR'

CAST AGAINST EARTH OR GR	-----	3"
EXPOSED TO EARTH (FORMED) OR WEATHER		
#5 & SMALLER	-----	1 1/2"
#6 & LARGER	-----	2"
NOT EXPOSED TO EARTH OR WEATHER		
#5 & SMALLER	-----	1"
#6 & LARGER, & ALL BM STIRRUPS, COL TIES & SPIRALS	-----	1 1/2"

ALL REINF BARS SHALL EXTEND AS FAR AS POSSIBLE &
END IN A STD 90° OR 180° HK UNLESS DETAILED OTHERWISE

1 TYPICAL REINFORCING DETAILS (f_c = 2500psi MIN)
3/4" = 1'-0"



NOTE:
LOCATION OF JOINTS TO BE SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE

2 FOOTING CONSTRUCTION JOINT
3/4" = 1'-0"

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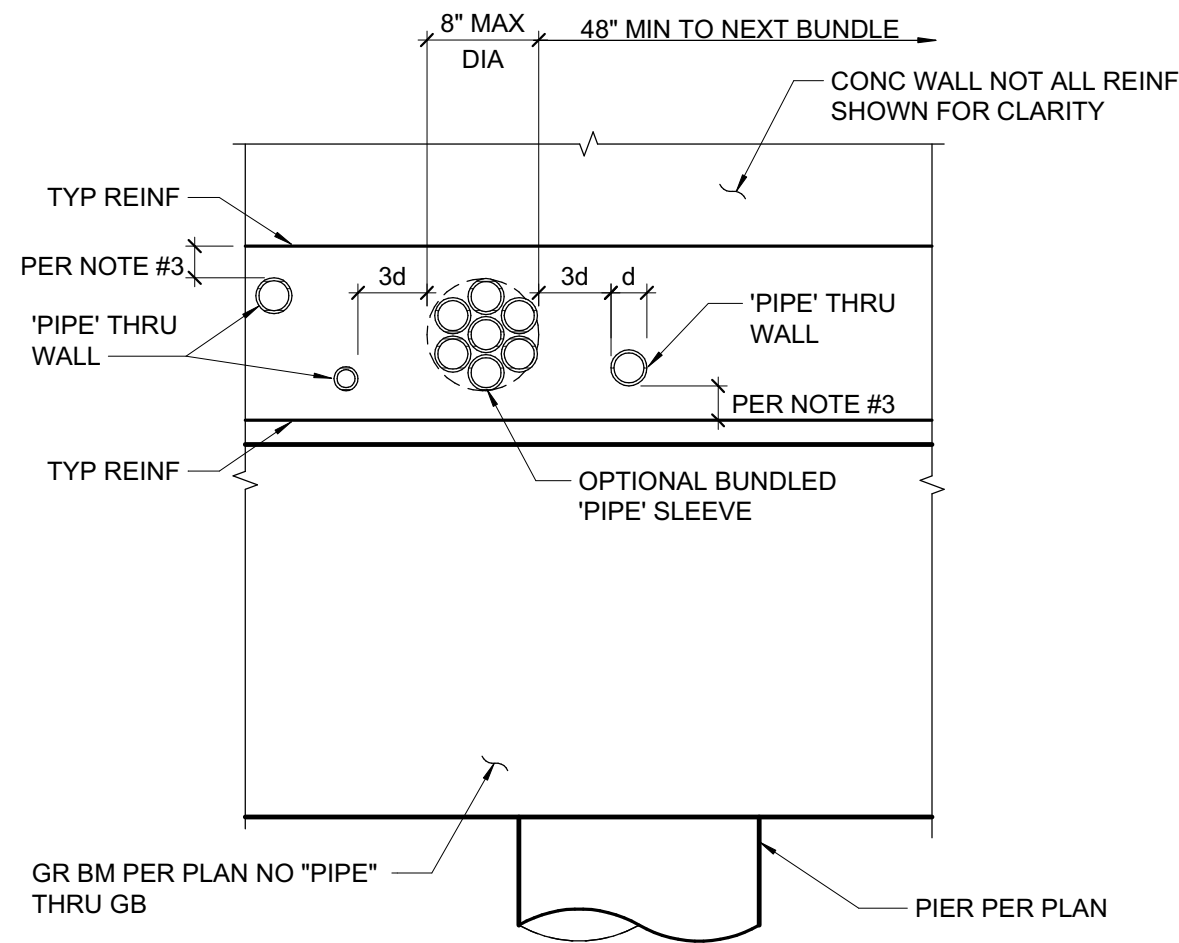
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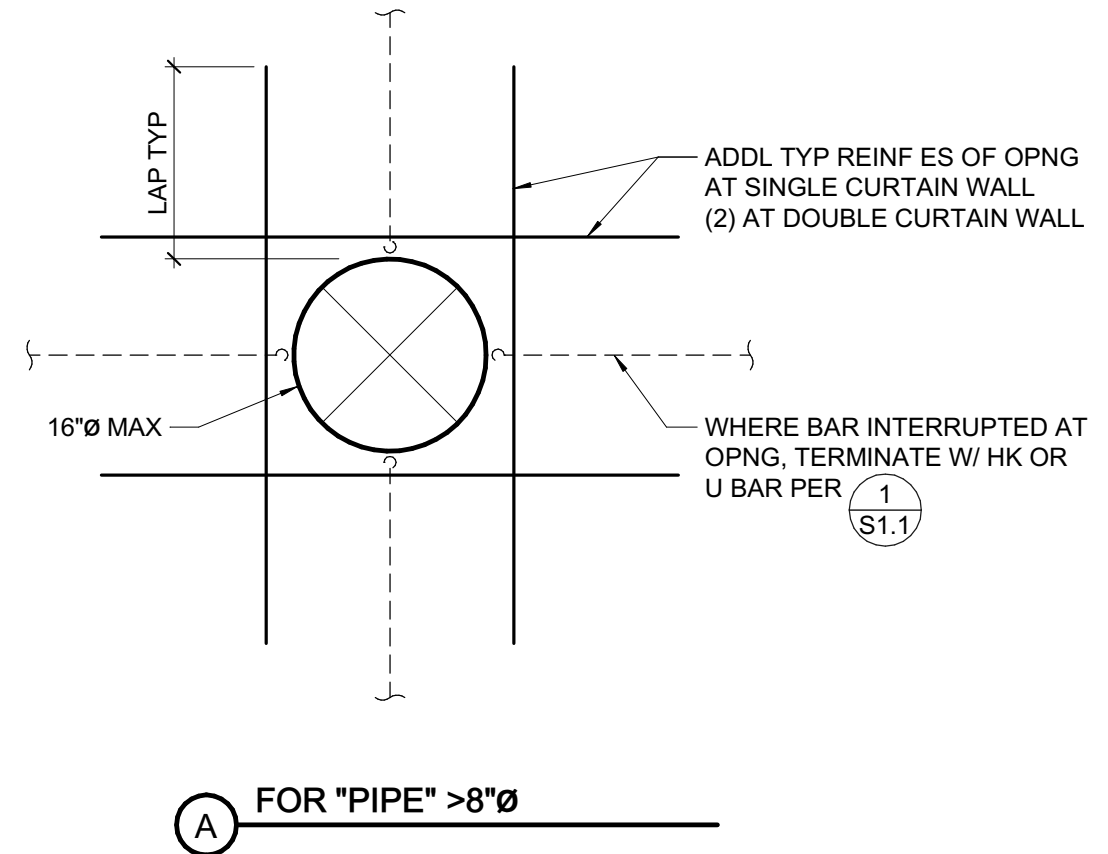
1 PIPES THRU CONCRETE WALL

3/4" = 1'-0"



NOTES:

- 'PIPE' = ANY PENETRATION THRU CONCRETE WALL.
- ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS: PROVIDE 1" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE, UNO. SEAL SLEEVE ENDS W/ MASTIC OR PLASTIC BITUMINOUS CEMENT.
- WRAPPED AND SLEEVED PIPES SHALL HAVE 1 1/2" MIN CLEAR TO REINF STEEL. MINIMUM CONCRETE COVER AT PIPES TO BE 3".
- CLEARANCE BETWEEN 'PIPES' TO BE 3d MIN TYP W/ A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN.
- NO 'PIPE' TO RUN PARALLEL IN WALL.



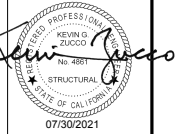
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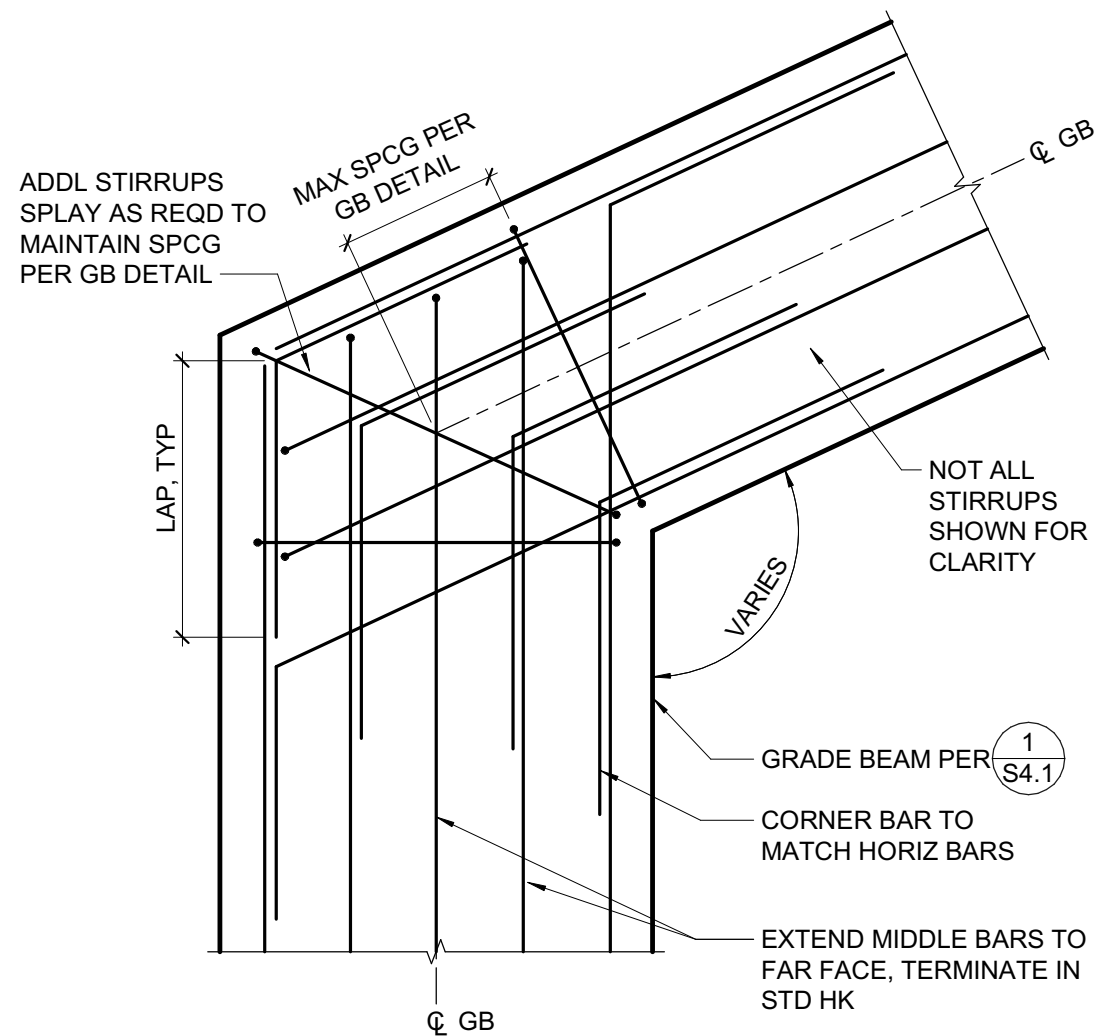
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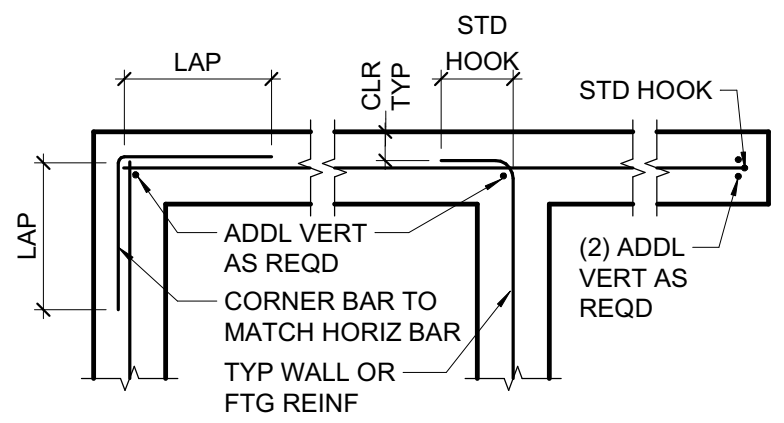
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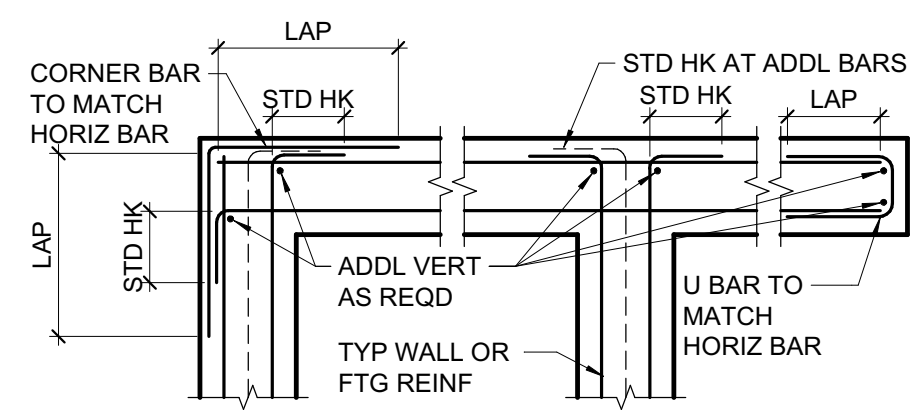
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2 FOOTING INTERSECTION
3/4" = 1'-0"



PLAN VIEW - SINGLE LAYER



PLAN VIEW - 2 OR MORE LAYERS

1 TYPICAL WALL CORNER, INTERSECTION AND END REINFORCING
3/4" = 1'-0"

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PROFESSIONAL ENGINEER
STRUCTURAL
STATE OF CALIFORNIA
NO. 4881
07/30/2021

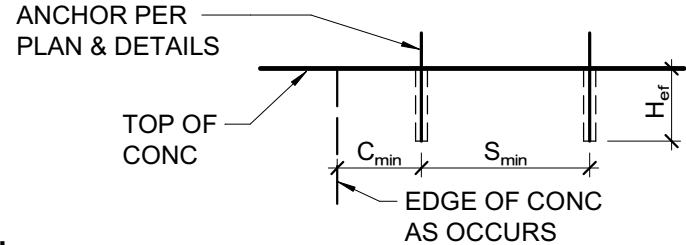
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ADHESIVE ANCHOR IN 2500 PSI MIN CONCRETE							
ADHESIVE TYPE	ANCHOR		PILOT HOLE	MIN EMBED UNO H_{ef}	MIN EDGE DISTANCE C_{min}	MIN SPCG S_{min}	MIN CONC DEPTH H_{min}
	THRD ROD	REBAR					
SIMPSON SET-XP (ICC-ESR 2508)	3/8"Ø	#3	1/2"Ø	3"	1 3/4"	3"	$H_{ef} + 2 1/2"$
	1/2"Ø	#4	5/8"Ø	4"	1 3/4"	3"	$H_{ef} + 3 1/8"$
	5/8"Ø	#5	3/4"Ø	5"	1 3/4"	3"	$H_{ef} + 3 3/4"$
	3/4"Ø	#6	7/8"Ø	6"	1 3/4"	3"	$H_{ef} + 4 3/8"$
HILTI HIT-HY 200R (ICC-ESR 3187)	3/8"Ø	N/A	7/16"Ø	3"	1 3/4"	1 7/8"	$H_{ef} + 1 1/4"$
	N/A	#3	1/2"Ø	3"	1 3/4"	1 7/8"	
	1/2"Ø	N/A	9/16"Ø	4"	1 3/4"	2 1/2"	
	N/A	#4	5/8"Ø	4"	1 3/4"	2 1/2"	$H_{ef} + 1 1/2"$
	5/8"Ø	#5	3/4"Ø	5"	1 3/4"	3 1/8"	
	3/4"Ø	#6	7/8"Ø	6"	1 3/4"	3 3/4"	



NOTES:

1. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING, AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
4. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION.

1 ADHESIVE ANCHOR IN CONCRETE
3/4" = 1'-0"

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



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FOUNDATION PLAN NOTES:

1. REFER TO SHEETS S0.1, S1.1, S1.2, S1.3, S1.4 AND S4.1 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAILS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. COORDINATE ALL DIMENSIONS WITH CIVIL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
3. SEE DETAILS OR CURB PLAN FOR CURB LOCATIONS. COORDINATE WITH CIVIL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

PIPES THROUGH WALLS SHALL BE PER 1/S1.2

PIPES THROUGH GRADE BEAMS ARE NOT ALLOWED.

PLAN LEGEND		
SYMBOL	REFERENCE DETAIL	DESCRIPTION
		INDICATES CONCRETE WALL.
		INDICATES PIER AND GRADE BEAM.
		INDICATES BATTERED PIER AND BATTER DIRECTION.
		INDICATES EXISTING FOUNDATION.
		INDICATES ELEVATION.

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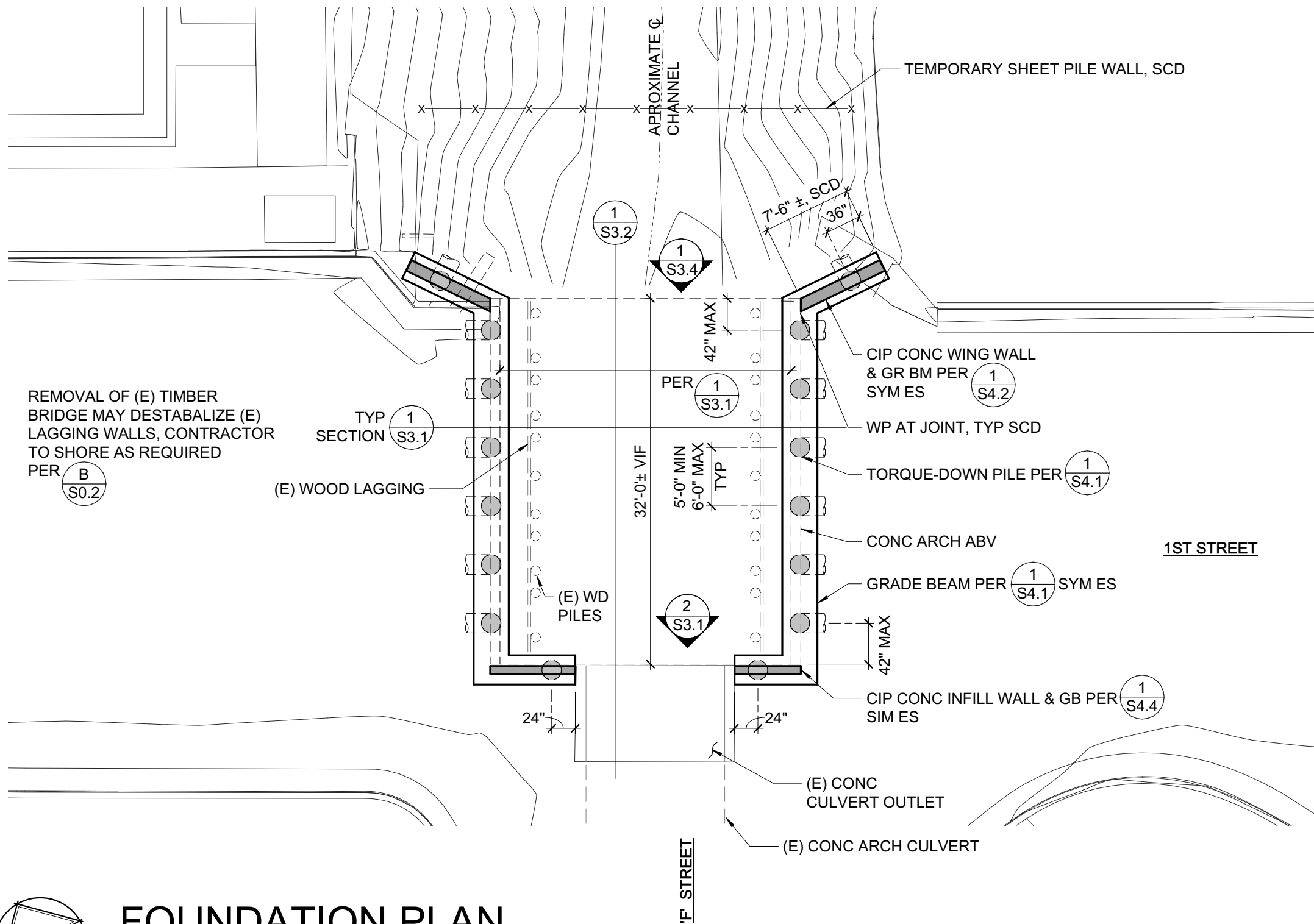
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FOUNDATION PLAN

1" = 10'-0"



REMOVAL OF (E) TIMBER BRIDGE MAY DESTABILIZE (E) LAGGING WALLS, CONTRACTOR TO SHORE AS REQUIRED PER **(B) S0.2**

TYP SECTION **(1) S3.1**

APPROXIMATE CHANNEL

TEMPORARY SHEET PILE WALL, SCD

CIP CONC WING WALL & GR BM PER **(1) S4.2**

WP AT JOINT, TYP SCD

TORQUE-DOWN PILE PER **(1) S4.1**

CONC ARCH ABV

GRADE BEAM PER **(1) S4.1** SYM ES

CIP CONC INFILL WALL & GB PER **(1) S4.4**

(E) CONC CULVERT OUTLET

(E) CONC ARCH CULVERT

1ST STREET

F STREET

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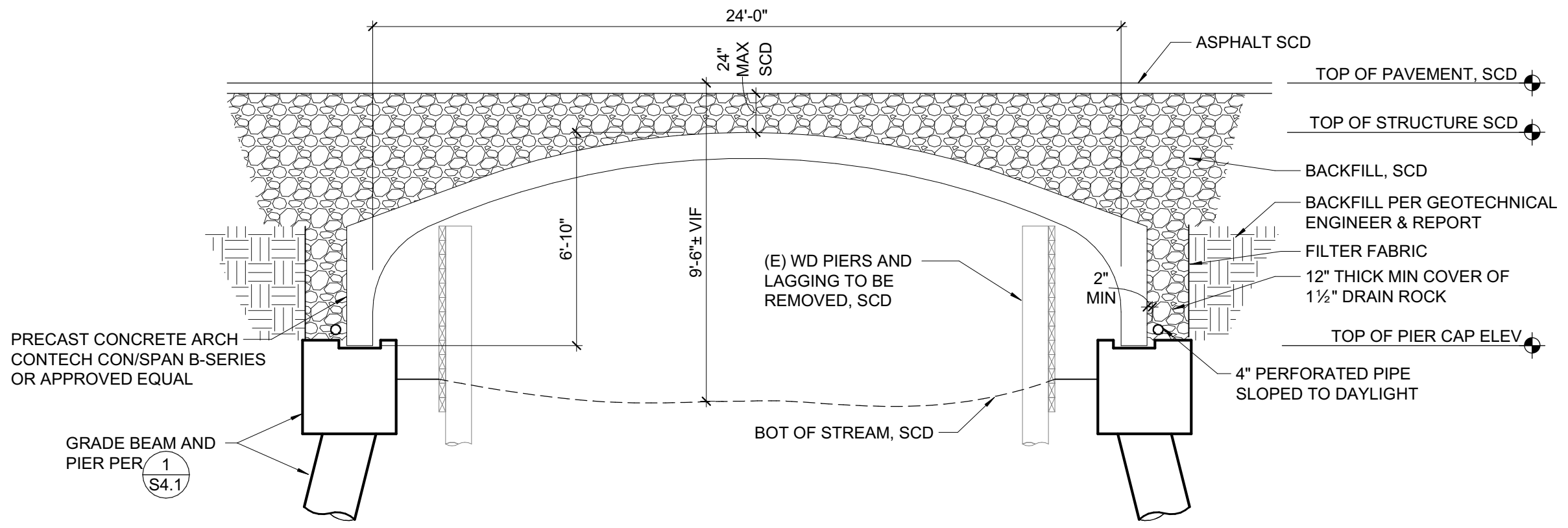
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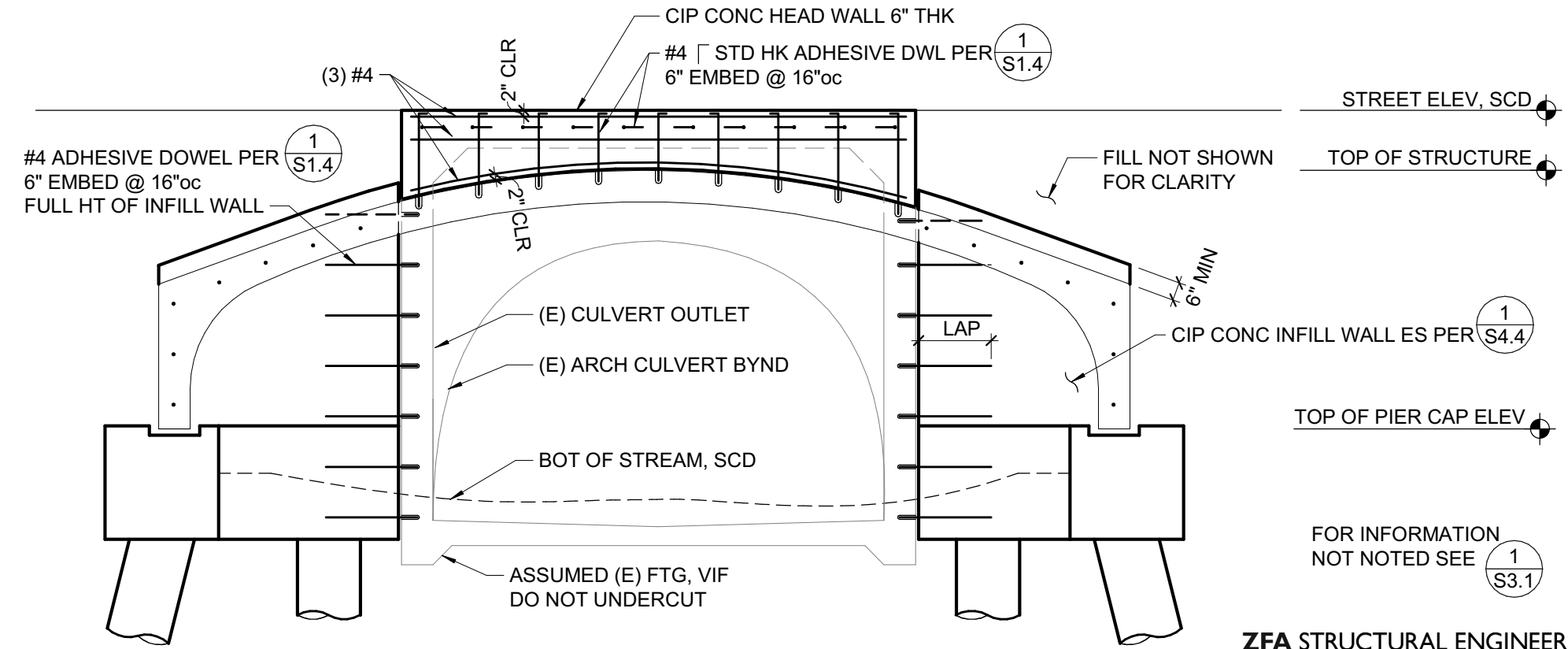
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1 SECTION AT BRIDGE
1/4" = 1'-0"



2 SECTION AT (E) CULVERT
1/4" = 1'-0"

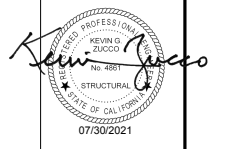
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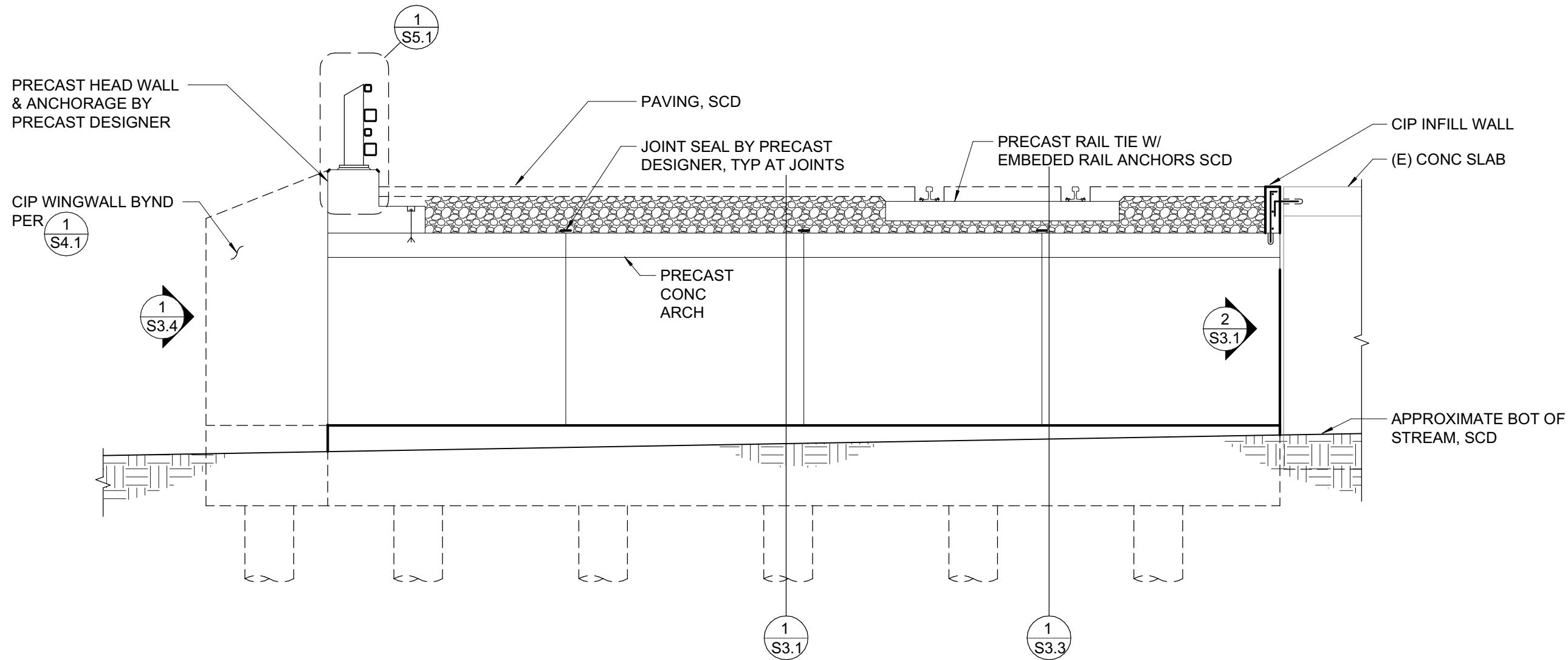
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1ST AND F STREET BRIDGE
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CITY OF PETALUMA

SHEET
S3.1

OF 11

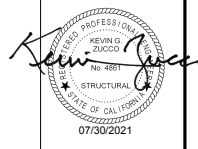
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1 LONGITUDINAL SECTION
1/4" = 1'-0"

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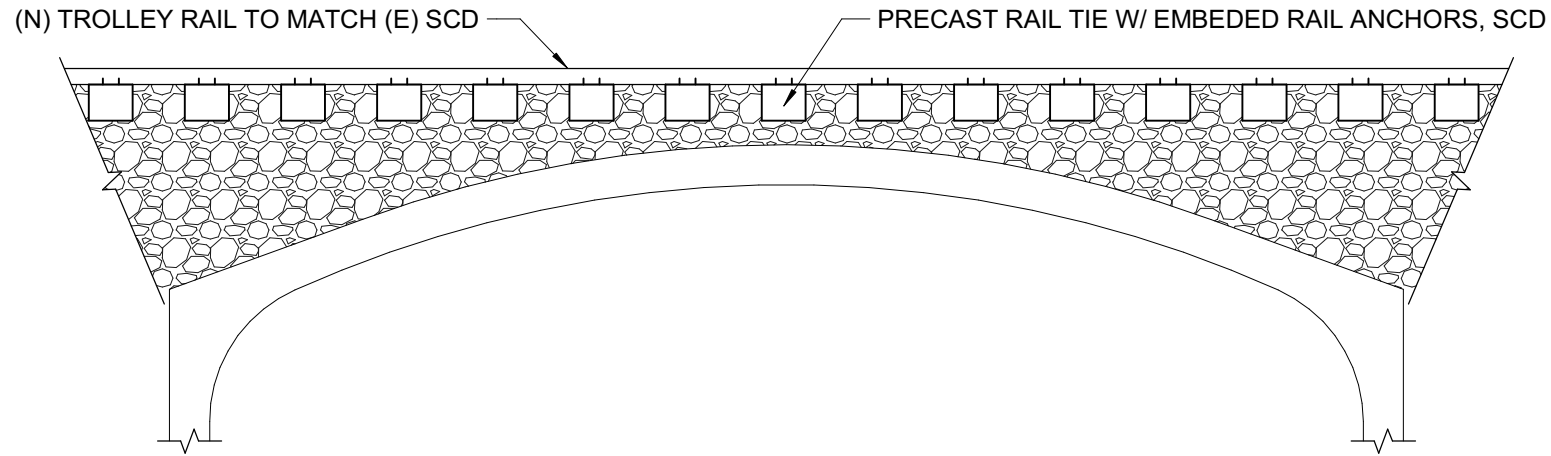
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1 SECTION AT TROLLEY RAILS
1/4" = 1'-0"

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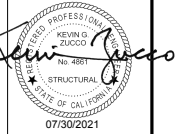
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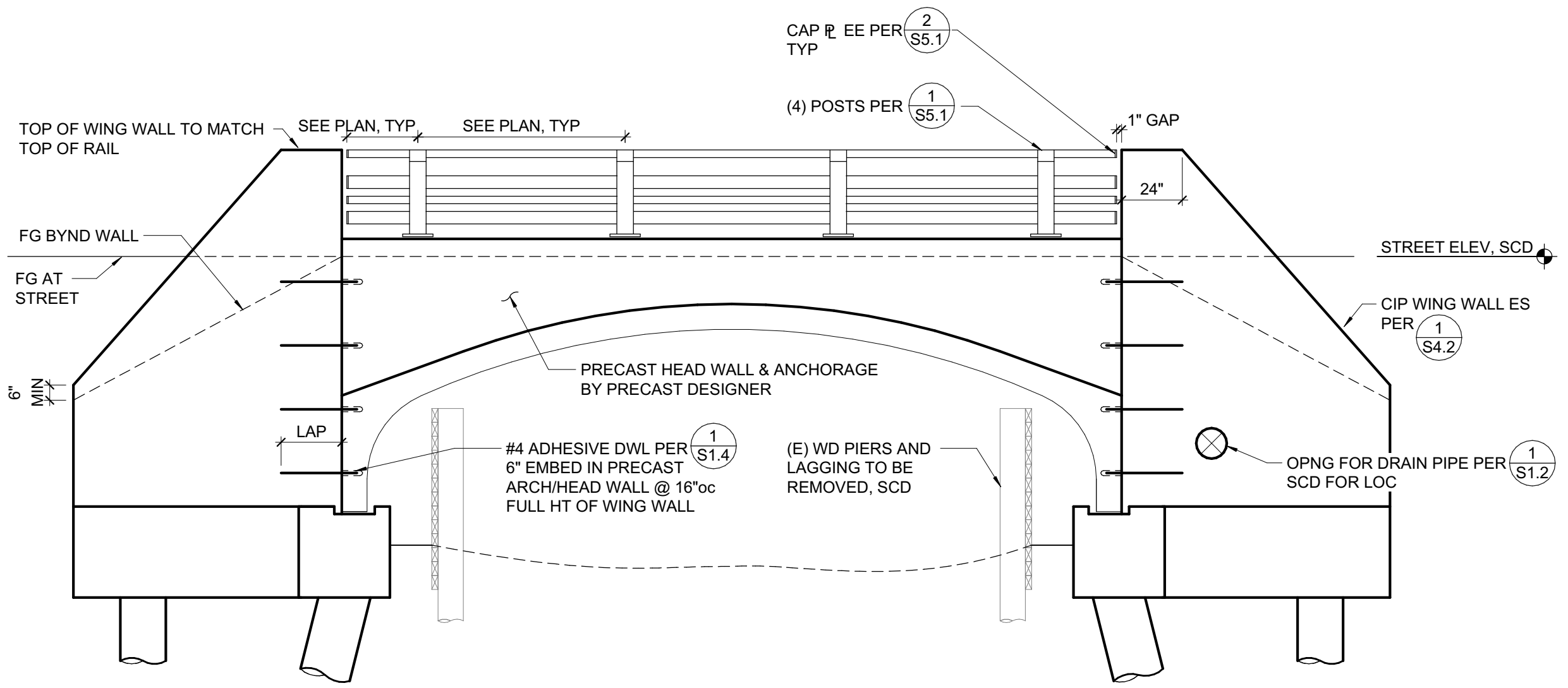
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SHEET

S3.3

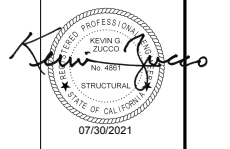
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1 SECTION AT END WALL
1/4" = 1'-0"

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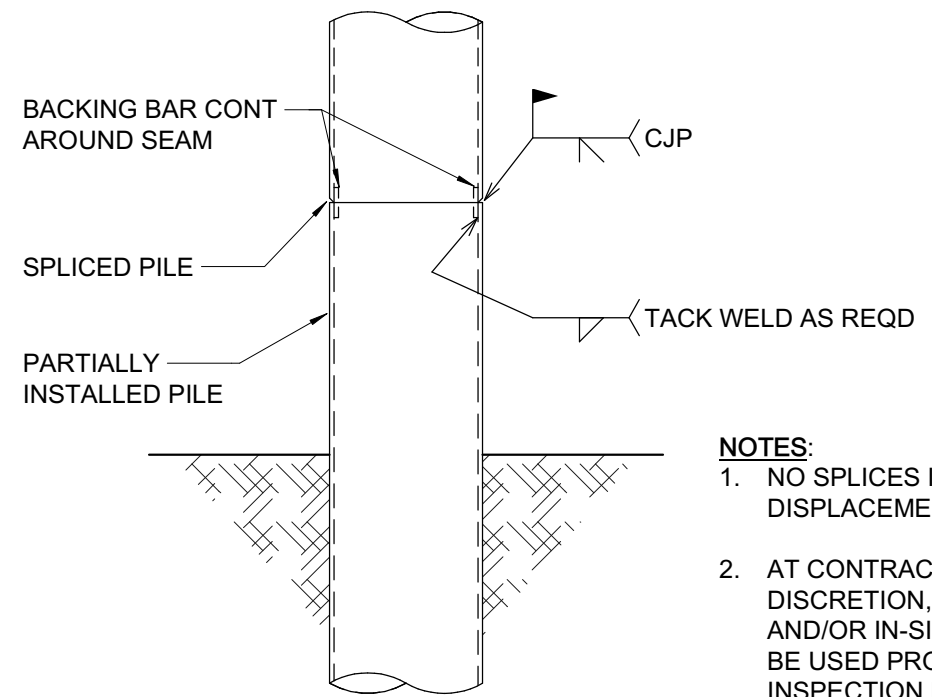
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- NOTES:**
1. NO SPLICES IN TOP 10'-0" OF DISPLACEMENT PILE.
 2. AT CONTRACTORS DISCRETION, OFF-SITE AND/OR IN-SITU SPLICE MAY BE USED PROVIDED ALL INSPECTION REQUIREMENTS ARE SATISFIED.

1 DRILLED DISPLACEMENT PILE SPLICE
3/4" = 1'-0"

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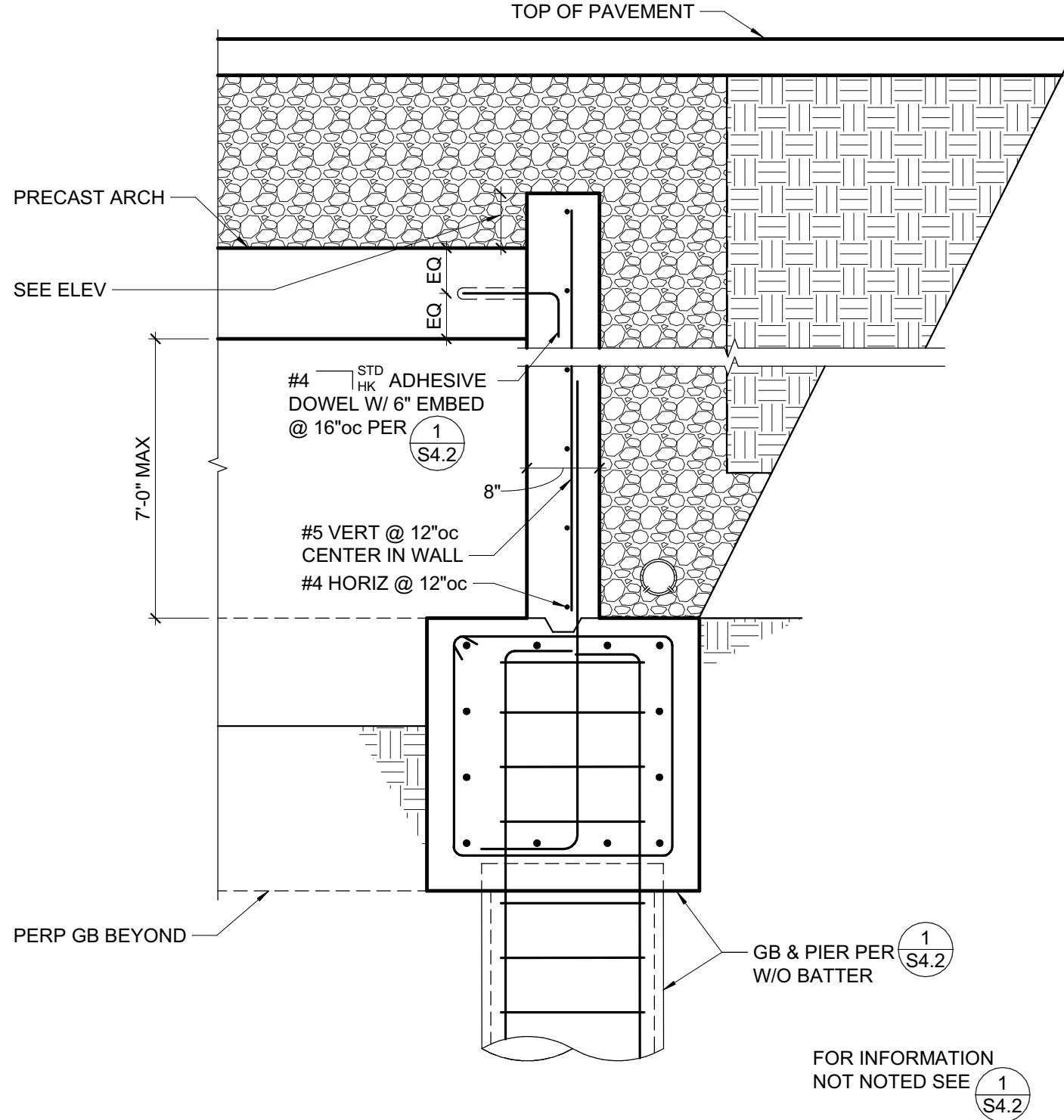


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 CITY OF PETALUMA

SHEET
 S4.3
 OF 11

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1 INFILL WALL ON PIERS
3/4" = 1'-0"

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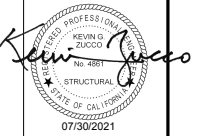
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