

Bridge Design Details 3.1 October 2025

General Plan

The GENERAL PLAN sheet provides an overall description of the scope of work for a given structure. This sheet is subject to review and approval by others, so it is important to keep it neat and clear. It should be thoroughly checked prior to the Type Selection meeting and again before GENERAL PLAN distribution.

Plan

- 1. The PLAN view is placed on the lower-left side of the sheet.
- 2. The preferred scale is 1" = 20' (or 1" = 30' in some cases); avoid smaller scales as they result in a crowded sheet. For small structures it is acceptable to use 1" = 10'. For large structures, viaducts, or interchanges, use a GENERAL PLAN sheet with STRUCTURE PLAN sheet(s); for more information regarding Structure Plans refer to 3.4 Structure Plans.
- 3. There should be a layout or reference line for each structure. The line should preferably be one of the following:
 - a. District alignment line
 - b. Inside or outside edge of traveled way line
 - c. Centerline of roadway, bridge, or construction layout line
- 4. The bridge should be drawn such that stationing runs left to right. Structures in a group, such as interchanges and retaining walls, should all be oriented in the same direction for uniformity. Consider District or other existing structures when orienting new alignments and structures.
- 5. Show the traveled way, shoulders, and median widths of the approach roadways.
- 6. Show the top and toe of approach fill or cuts; designate both lines with (\(\gamma \cong \gamma \cong \gamma \)) line pattern.
- 7. Show perpendicular horizontal distances under the structure from the toe of slopes to all roadways and railroad alignments, including future alignments. Include distances to columns and abutments when adjacent to roadways or railroads.

| 8. | Show the name and direction of creek, stream, or river flows. Designate Ordinary High- |
|----|--|
| | Water Mark (OHWM) or typical water edges with (— —) line pattern. Large rivers |
| | and oceans may be designated with a double line pattern () or graduated |
| | line weight pattern (). |

| $^{\circ}$ | Show | N I = 141= | |
|------------|------------|------------|--------|
| ч | \sim now | NIORT | arrow. |



- 10. Show all alignment data including bearings, radii, and curve data. Verify the alignment geometry shown matches the district ROADWAY PLANS and FOUNDATION PLAN provided by the Bridge Design Preliminary Investigations Branch (PI).
- 11. Show the names and directions to nearest towns or cities. Towns or city names should match what is shown on the District Title Plan sheet and Bridge Site Submittal.
- 12. Show the centerline of all piers or bents. Designate with Line Code 7 (-----). Only label the supports if there is no ELEVATION view, otherwise do not label.
- 13. Show the skew angle at the center line of all supports.
- 14. Show all locations of Minimum Vertical Clearance within the traveled way using () symbol.
- 15. Identify the type and locations of deck drains, manholes, deck drainage, or future access to utilities from the deck.
- 16. Show the locations where painting of structure name, bridge number, year constructed, and support numbering as required; see 3.30 Structure Identification.
- 17. Show Beginning of Bridge (BB) and End of Bridge (EB) stations and elevations.
- 18. Show guard railing at ends of bridge (typically MGS on new structures), approach curbs, and sidewalks.
- 19. Show bank protection and slope paving.
- 20. Show structure mounted signs.
- 21. Show approach slabs.

Elevation

- 1. The ELEVATION view is a vertical projection from the lower side of the PLAN view.
- 2. Use the same scale as the PLAN view.
- 3. For widening projects between two structures, identify the location of the ELEVATION using letters on the PLAN view. When the opposite ELEVATION of a structure is materially different, both can be drawn on the GENERAL PLAN or on a STRUCTURE PLAN sheet(s). In these cases, identify both ELEVATIONS by different letters.
- 4. Use a DEVELOPED ELEVATION for curved structures. LONGITUDINAL SECTIONS may be used for culvert type structures. A MIRRORED ELEVATION shall be used for work to be done on the upper side of the PLAN view, such as retaining walls, widenings, or barrier rail replacements.
- 5. Show all supports. Use dashed Line Code 2 (----) for portion of structure below grade. Label names and numbers (abutments, bents, and piers).
- 6 Show the Datum line with elevation and stations



- 7. Show the original ground line at the bridge centerline, along the LONGITUDINAL SECTION, or as noted. The standard Line Code for showing the original ground line is Line Code 2 (-----); when two original ground lines are shown use Line Code 3 (----) for the second line.
- 8. Show the total length of bridge (BB to EB). For structures and retaining walls on horizontal curves or that have multiple layout lines shown, identify length as:

Example: 100'-6" MEASURED ALONG "A" LINE

- 9. Show all span lengths (BB or EB to centerline of piers or bents and between centerline of piers or bents).
- 10. For retaining walls, label the beginning, end, and top of wall, as well as the original and finished grade at the face of wall or layout line.
- 11. Show the dimension(s) of all Minimum Vertical Clearance locations, rounded down to nearest 1-inch.
- 12. Show all the locations where the painting of structure name, bridge number, year constructed, and support numbering are required; see 3.30 Structure Identification.
- 13. Show the controlling High-Water Elevation using ($\stackrel{\nabla}{=}$) symbol. Provide a reference note to the location of the "HYDROLOGIC SUMMARY TABLE" and reference the sheet in which it resides.
- 14. Show the bank protection or slope paving.
- 15. Show a portion of the retaining wall concrete surface texture and include a description in the notes.
- 16. Show all nearby structures and obstructions by referencing the structure name and bridge number of the adjoining structure.

Profile Grade

- 1. Place the PROFILE GRADE above the ELEVATION view.
- 2. Show the PROFILE GRADE with no scale; scale should be exaggerated both horizontally and vertically.
- 3. Do not show a PROFILE GRADE for widenings. Grades will conform to the existing structure.
- 4. Show slopes with direction arrow, elevations, stations, length of vertical curve, and rate of change (% / station) along the PROFILE GRADE.
- 5. Do not show the SUPERELEVATION DIAGRAM on the GENERAL PLAN sheet. If required, it is preferable to show this diagram on the DECK CONTOUR or INDEX TO PLANS sheet instead.



Typical Section

- 1. Place the TYPICAL SECTION in the upper right-hand portion of the sheet.
- 2. The preferred scale is from $\frac{1}{4}$ " = 1'-0" to 1" = 10'. Try not to exceed $\frac{2}{2}$ times the PLAN scale.
- 3. Take the section looking ahead on stationing. Identify with section letters and stationing limits if the section varies or the stationed layout lines are not continuous across the structure.
- 4. Show the section at a typical bent or pier for multi-span bridges. Do not show abutments. Use solid lines for portions of structures below grade.
- 5. Dimension the overall structure width, roadbed width, traveled way, shoulders, median, barriers, and sidewalks.
- 6. For retaining walls, show the original grade, finished grade, top of wall, and concrete texture.
- 7. Show the barrier, fence, and cable railing types.
- 8. Show the location of the PROFILE GRADE and layout line.
- Show the superstructure depth from the top of the deck to the bottom of the girder or soffit. For precast or steel girders, show the typical structure depth at the centerline of bearing at the support.
- 10. Indicate the type of structure (e.g., Composite Welded Steel Girder, Concrete Slab, PC/PS Concrete Girder (Wide Flange), CIP/PS Concrete Box Girder, Concrete Girder (T-Beam), Retaining Wall (Type 1), etc.).
- 11. Show the overlay thickness or deck seal. Add a note stating that the structure depth shown does not include the overlay thickness.
- 12. Show crown or maximum cross slope as well as the cross-slope direction relative to the location of the PROFILE GRADE for a new structure. Show percent slope in fractions (e.g., 1½ %, not 1.50%). For varying cross slopes, show the slope as "MAX SLOPE AND VARIES".
- 13. For widenings, show cross slope with "±" and add note: "MATCH EXISTING GRADE AND CROSS SLOPE." Identify the location and limits of closure pour(s).
- 14. Show and label all existing, proposed, and future utility openings.
- 15. Show the construction stages and identify the widths of stage construction and traffic during construction. For clarity, staging information can be placed on STAGE CONSTRUCTION sheet, leaving the TYPICAL SECTION on the GENERAL PLAN easier to read.
- 16. Show Temporary Barrier System and offset from the layout line. Temporary Railings details and cost are normally covered by the District; therefore, add a reference to the ROADWAY PLANS. For barrier transition projects, a summary table of locations is



allowed. At a minimum, a generic PLAN and TYPICAL SECTION detail shall be added to GENERAL PLAN, see Attachment 3A.A.19.

Miscellaneous

- 1. Avoid using more than one GENERAL PLAN for a project with a single new or widened structure; instead, use STRUCTURE PLAN or STAGE CONSTRUCTION sheet(s) to show additional information at a larger scale. Maintenance or other projects with more than one structure, such as a large corridor retrofit projects, approach slab replacements, joint seal rehabs, or deck overlay work may combine structure details into one plan set. A summary GENERAL PLAN may be created that shows the location of each structure and general work to be done followed by BRIDGE DETAILS and MISCELLANEOUS DETAIL sheets, see Attachment 3A.A.18. Quantity decal(s) for these types of multiple structure plan sets can be added near each PLAN view for each structure, rather than combined into one decal.
- 2. Show all dimensions in feet and inches. Do not use decimals of a foot or inch.
- 3. Run spell check and ensure only proper abbreviations are used.
- 4. Do not use Standard Plan "bubbles" () on the GENERAL PLAN sheet.
- 5. Show important notations such as line types, symbols indicating electroliers, deck drains, or points of minimum vertical clearance in a LEGEND.
- 6. Give the location of the GENERAL NOTES, INDEX TO PLANS, and PILE DATA TABLE, if not shown on the GENERAL PLAN. For the GENERAL NOTES format and content, use standard detailing cell.
- 7. Leave a clear 6" x 6" space to list the QUANTITIES submitted by Structure Office Engineer Cost Estimates Branch. If there is more than one structure in a single plan set, the individual quantity decals for each structure should be placed directly beneath the PLAN view on the GENERAL PLAN and labeled for clarity. If the QUANTITIES are not shown on the GENERAL PLAN sheet, note their location in plan set.
- 8. Avoid detailed descriptions of all the details shown on the GENERAL PLAN sheet. For retrofits, girder strengthening, joint seal replacement, approach slab, or other projects only reference the location of the work to be done. Place specific details on other sheets.
- 9. Place the completed "Traffic Notes" on the GENERAL PLAN, which identifies all the traffic handling and falsework opening requirements for the structure. This decal is added prior to the Type Selection and General Plan Distribution milestones, however, should be removed before the P&Q milestone; see Attachment 3A.A.1 and 3.5 Falsework Requirements.
- 10. Show existing bridges and other structures on the GENERAL PLAN; designate existing structures with Line Code 6 (- —) line style in the LEGEND. For existing bridges or structures to be replaced on the same alignment, only show the existing structure in PLAN VIEW; do not show in ELEVATION or TYPICAL SECTION.



- 11. When removing an entire structure, do not hatch existing bridge removal limits on the GENERAL PLAN sheet. Large areas of cross hatching make details difficult to read. Hatching is acceptable when portions of a structure are being removed, or removal is done in stages; in this case identify limits and area(s) to be removed within LEGEND as "Bridge Removal (Portion)". A separate GENERAL PLAN (removal) is only required when existing bridge removal details cannot be determined from other plan sheets.
- 12. For widening or retrofit projects, show the dependent dimensions and standard verification note to Contractor; see 1.1.14 General Detailing.
- 13. For maintenance jobs which are referring to approach slab work on GENERAL PLAN, the abutment type needs to be identified in ELEVATION or in a note. This allows the correct detail to be used from the approach slab standard plans and correct items to be included in the work. Identification of abutment type in plan sets that show abutment details (e.g., bridge replacements or abutment retrofits), do not need to label abutment type on GENERAL PLAN because the details are provided.



BVC 14+39.96 Elev 4849.63 +3.22% 550' VC +2.43% R/C = 0.1427% / StaPROFILE GRADE PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. NO SCALE 352'-0" 131'-0" 140'-0" modified from its original version PG ** -FG -2% ROADWAY PLANS Abut Approx OG FG,Typ SEE ROADWAY PLANS @ R+ EOD CIP/PS CONCRETE BOX GIRDER *** For "HYDROLOGIC / HYDRAULIC SUMMARY, PIER 3 see "FOUNDATION PLAN" sheet PIER 2 DATUM Flev = 4770.00 ELEVATION INDEX TO PLANS -Approx OG 1" = 30' reflect current detailing standards, this sheet may have been NOTES: GENERAL PLAN STANDARD PLAN SHEET No. DECK CONTOURS 1 Paint "HAMILTON BRANCH BRIDGE BRIDGE No. 09-0079" Year Constructed FOUNDATION PLAN ABUTMENT 1 LAYOUT ABUTMENT 4 LAYOUT 2 Paint Pier Number ABUTMENT DETAILS PIER DETAILS No. 1 LEGEND: TYPICAL SECTION PIER DETAILS No. 2 TYPICAL SECTION Structure depth shown does not include thickness of overlay GIRDER LAYOUT GIRDER REINFORCEMENT
STRIP JOINT SEAL ASSEMBLY (MAXIMUM MOVEMENT RANGE = 4") Profile grade elevation is at top of 1" polyester concrete overlay LOG OF TEST BORINGS No. 1 OF 6 LOG OF TEST BORINGS No. 2 OF 6 Existing Structure LOG OF TEST BORINGS No. 3 OF 6 LOG OF TEST BORINGS No. 4 OF 6 LOG OF TEST BORINGS No. 5 OF 6 TRAFFIC NOTES LOG OF TEST BORINGS No. 6 OF 6 VEHICULAR TRAFFIC: CHICULAR TRAFFIC:

New alignment. No traffic at the site.

X Traffic will be detoured away from the site.

Traffic will be carried on the structure.

Stage construction_will_will not be required.

Traffic will pass under the structure on (Name of 5t or Hwy) BB 15+09.00 Elev 4851.34 ② Typ 11/2:1 CUT FB 18+61.00 A. No falsework allowed over traffic. TO CANYON DAM _Falsework opening(s) required: Temp Vertical Width of Clearance Traffic Opening TO WESTWOOD Bound
Bound
Two-Way 1 11/2:1 Exist BRIDGE No. 09-0065 TO BE REMOVED TOP OF FILL 2:1 MGS, Typ SEE ROADWAY TOE OF FILL PLAN TOP OF CUT NOTE: For "GENERAL NOTES" and "PILE DATA TABLE", see "DECK CONTOURS" sheet. HAMILTON BRANCH BRIDGE (REPLACE) Engineer 1 VISION OF ENGINEERING SERVICE: Bridge design Engineer Engineer 2 09-0079 **CALIFORNIA** Detailer 1 Engineer POST MILE BRANCH X **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO X.X RUCTURES DESIGN GENERAL PLAN SHEE' IT: XXXX OJECT NUMBER & PHASE: 0212000011 COUNTY/ROUTE/ZONE: XXX/XXX/X CONTRACT No.: 02-4E6404 DISREGARD PRINTS BEARING EARLIER REVISION DATES .

Figure 3A.A.1 General Plan Detailing Example 1

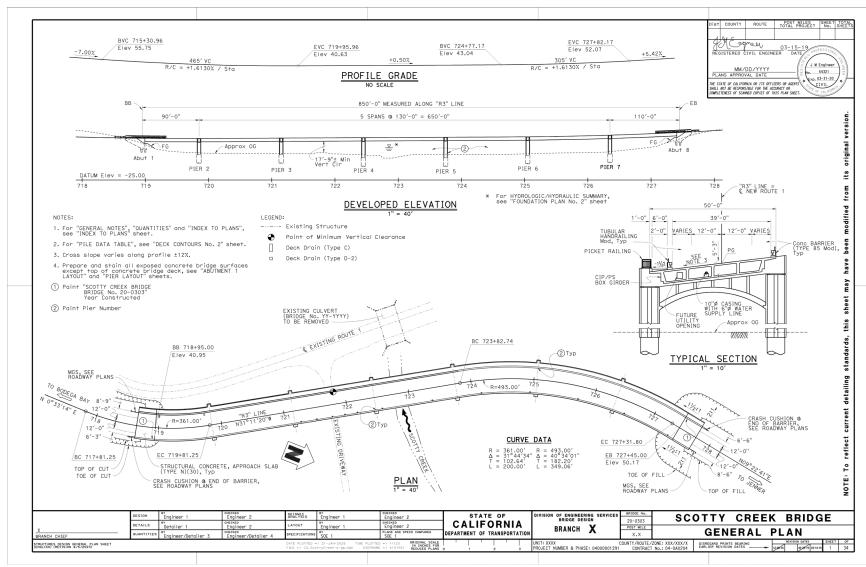


BVC 14+39.96 Elev 4849.63 +3.22% PREGISTERED CIVIL ENGINEER DATE 550' VC +2.43% R/C = 0.1427% / StaJ N Enginee MM/DD/YYYY No. 54321 PROFILE GRADE PLANS APPROVAL DATE Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SMALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. NO SCALE "CL1" LINE = -352'-0" 131'-0" 140'-0" modified from its original versio PG ** -2% ROADWAY PLANS Abut Approx OG FG,Typ SEE ROADWAY PLANS @ R+ EOD CIP/PS CONCRETE BOX GIRDER *** For "HYDROLOGIC / HYDRAULIC SUMMARY, PIER 3 see "FOUNDATION PLAN" sheet PIER 2 DATUM Flev = 4770.00 ELEVATION -Approx OG 1" = 30' QUANTITIES LEAD COMPLIANCE PLAN
WORK AREA MONITORING (BRIDGE)
PREPARE CONCRETE BRIDGE DECK SURFACE
FURNISH POLYESTER CONCRETE OVERLAY
PLACE POLYESTER CONCRETE OVERLAY
BRIDGE REMOVAL sheet may have been LUMP LUMP 14,100 1,056 14,100 LUMP 869 488 346 644 LUMP 300 1,431 42 42 232,913 NOTES: SUM SUM SQFT CF SQFT SUM CY CY CY LF 1 Paint "HAMILTON BRANCH BRIDGE BRIDGE No. 09-0079" Year Constructed 2 STRUCTURE EXCAVATION (BRIDGE) STRUCTURE EXCAVATION (ROCK) (TYPE D)
STRUCTURE BACKFILL (BRIDGE)
36" CAST-IN-DRILLED-HOLE CONCRETE PILING LEGEND: STRUCTURE BACKFILL IDNIONAL STRUCTURE BACKFILL IDNIONAL STRUCTURE NO FILE STRUCTURAL CONCRETE PILING PRESTRESSING CAST-IN-PLACE CONCRETE LIMP SUM STRUCTURAL CONCRETE, BRIDGE FOOTING 300 CY STRUCTURAL CONCRETE, BRIDGE 1, 431 CY JOINT SCAL ASSEMBLY (MR 2½") 42 LF JOINT SCAL ASSEMBLY (MR 3½") 42 LF BAR REINFORCING STEEL (BRIDGE) 232,913 LB BAR REINFORCING STEEL (BRIDGE) (BRIDGE) 164,342 LB STAIN GALVANIZED SURFACES LEW CONTROL STRUCTURE STRUCTUR TYPICAL SECTION Structure depth shown does not include thickness of overlay Profile grade elevation is at top of 1" polyester concrete overlay INDEX TO PLANS standards, this ---- Existing Structure GENERAL PLAN DECK CONTOURS FOUNDATION PLAN ABUTMENT 1 LAYOUT ABUTMENT 4 LAYOUT BB 15+09.00 Elev 4851.34 ② Typ CUT 11/2:1 🖔 PIER DETAILS No. FB 18+61.00 PIER DETAILS No. 2 TYPICAL SECTION GIRDER LAYOUT GIRDER REINFORCEMENT reflect current STRIP JOINT SEAL ASSEMBLY (MAXIMUM MOVEMENT RANGE = 4") TO CANYON DAM LOG OF TEST BORINGS No. 1 OF 6 LOG OF TEST BORINGS No. 2 OF 6 TO WESTWOOD LOG OF TEST BORINGS No. 3 OF 6 LOG OF TEST BORINGS No. 4 OF 6 1 11/2:1 LOG OF TEST BORINGS No. 5 OF 6 LOG OF TEST BORINGS No. 6 OF 6 Exist BRIDGE No. 09-0065 TO BE REMOVED TOP OF FILL 2:1 MGS, Typ SEE ROADWAY TOE OF FILL STANDARD PLAN SHEET No. TOP OF CUT PLAN NOTE: For "GENERAL NOTES" and "PILE DATA TABLE", see "DECK CONTOURS" sheet. Engineer 1 VISION OF ENGINEERING SERVICE: Bridge design HAMILTON BRANCH BRIDGE (REPLACE) Engineer Engineer 2 09-0079 **CALIFORNIA** BRANCH X Engineer POST MILE **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO x.x RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES _

Figure 3A.A.2 General Plan Detailing Example 2



Figure 3A.A.3 General Plan Detailing Example 3





EVC Sta 15+26.91 Elev 3138.91 PREGISTERED CIVIL ENGINEER DATE +1.50%_ MM/DD/YYYY
PLANS APPROVAL DATE PROFILE GRADE Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. 234'-3" MEASURED ALONG "A2" LINE "A2" LINE = © HILT ROAD 117'-11/2" 117'-11/2" 1 NS AND FS 5'-7¾"± 8'-0" 12'-0" 12'-0" 8'-0" 1'-9" PG ** -2% -2% Abut Approx OG J------BENT 2 DATUM Elev = 3090.00 **ELEVATION** 1" = 20' N POT 20+10.34 "A2" LINE TOE OF FILL TOE OF FILLmay Approx OG--ALTERNATIVE CRASH CUSHION, SEE ROADWAY PLANS TOP OF FILL UU. 1 121 1 1 this 1 BB 18+93.22 Elev 3144.39 12'-0" TYPICAL SECTION N 80°35′47" E MGS, Typ SEE ROADWAY PLANS -12'-0" 1/8" = 1'-0" For "GENERAL NOTES", "INDEX TO PLANS" and "PILE DATA TABLE", see "INDEX TO PLANS" sheet. "A1" LINE = @ Exist BRIDGE For "QUANTITIES", see "DECK CONTOURS" sheet. Paint "HILT ROAD OC BRIDGE No. 02-0202' Year Constructed 11/2:1 11/2:1 19+78.35 "A2" LINE = 36+19.98 "S1" LINE 10 Existing Structure 3'-0"± Point of Minimum Vertical Clearance NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. PLAN 1" = 20' Structure depth shown does not include thickness of overlay Profile grade elevation is at top of ¾" polyester concrete overlay SEISMIC ANALYSIS Engineer 2 VISION OF ENGINEERING SERVICES Bridge design Engineer Engineer 1 STATE OF HILT ROAD OVERCROSSING (REPLACE) 02-0202 CALIFORNIA BRANCH X POST MILE **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO x.x RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES ___

Figure 3A.A.4 General Plan Detailing Example 4



-0.96% REGISTERED CIVIL ENGINEER DATE 530' VC +4.46% R/C = -0.1023% / Sta EVC 49+89.50 Elev 91.33 BVC 44+59.50 Elev 82.06 J N Enginee No. 54321 PROFILE GRADE MM/DD/YYYY
PLANS APPROVAL DATE Exp. 03-31-20 CIVIL NO SCALE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SMALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. 402'-6" 111'-3" 165'-0" 126'-3' -"X" LINE 59'-6" SEE NOTE 1 CHAIN LINK RAILING (TYPE 7 Mod), Typ-12'-0" FR TRACK CONCRETE BARRIER (TYPE 842 Mod), Typ. +2% -2% its 27 8888 Abut 4 , and -- 55, 91/4" Brg COMPOSITE WELDED STEEL GIRDER BENT 3 ①② Typ Abut 1 DATUM Elev = 5.00 45 46 48 49 **ELEVATION** BB 45+24.83 Elev 84.80 47+19.61 "X" LINE = 211+58.66 © Rte 888 45+69.73 "X" LINE = 14+60.35 € RAMP 1 25° 6'27" E MGS, Typ see ROADWAY PLANS may MGS, Typ see ROADWAY PLANS-11/2:1 11/2:1 -② Typ Approx OG _10'-0" reflect current detailing standards, this TO SMALLVILLE 1 12'-0" \Leftrightarrow N 89°42'53" E TO BIGVILLE 12'-0" -(1) TYPICAL SECTION 11/2:1 STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N) (30), Typ ② Тур Chain Link Railing on both sides of structure (approximate length = 113'-8"). Paint "ROUTE 888 OH BRIDGE No. XX-XXXX" CURVE DATA RR R/W R = 1312.33' Δ = 04°21'58" T = 50.02' L = 100.00' MEXT CITY Year Constructed 2 Paint Bent Number LEGEND: Point of Minimum Vertical Clearance 2 PLAN 1" = 30' Deck Drain (Type D-2) NOTE: For "GENERAL NOTES", "PILE DATA TABLE", "INDEX TO PLANS" and "QUANTITIES", see "INDEX TO PLANS" sheet. Engineer 2 Engineer 2 STATE OF CALIFORNIA Engineer 1 VISION OF ENGINEERING SERVICES Bridge design **ROUTE 888 OVERHEAD** XX-XXXX Engineer 1 BRANCH X Detailer 1 POST MILE **GENERAL PLAN** x.x RUCTURES DESIGN GENERAL PLAN SHEE' DISREGARD PRINTS BEARING EARLIER REVISION DATES _

Figure 3A.A.5 General Plan Detailing Example 5



+0.500% NOTES: REGISTERED CIVIL ENGINEER DATE 1) Paint "FLAG CANYON CREEK BRIDGE PROFILE GRADE PI 541+00.00 Elev 465.50 BRIDGE No. 12-0204" NO SCALE Year Constructed MM/DD/YYYY
PLANS APPROVAL DATE No. 54321 LEGEND: 94'-3" MEASURED ALONG "B1" LINE Exp. 03-31-20 CIVIL Existing Structure THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SMALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. Temporary Detour Bridge - € ROUTE 70 = "B1" LINE * = 8'-0" 12'-0" modified from its original Approx OG @ RIGHT EDGE OF DECK ACCESS PATH, SEE ROADWAY PLANS * For "HYDROLOGIC / HYDRAULIC SUMMARY, see "FOUNDATION PLAN" sheet DATUM Elev = 430.00 10" Brg **ELEVATION** PC/PS Conc FUTURE UTILITY OPENING TEMPORARY DETOUR BRIDGE,
SEE "TEMPORARY FLAG CANYON
CREEK BRIDGE" PLANS

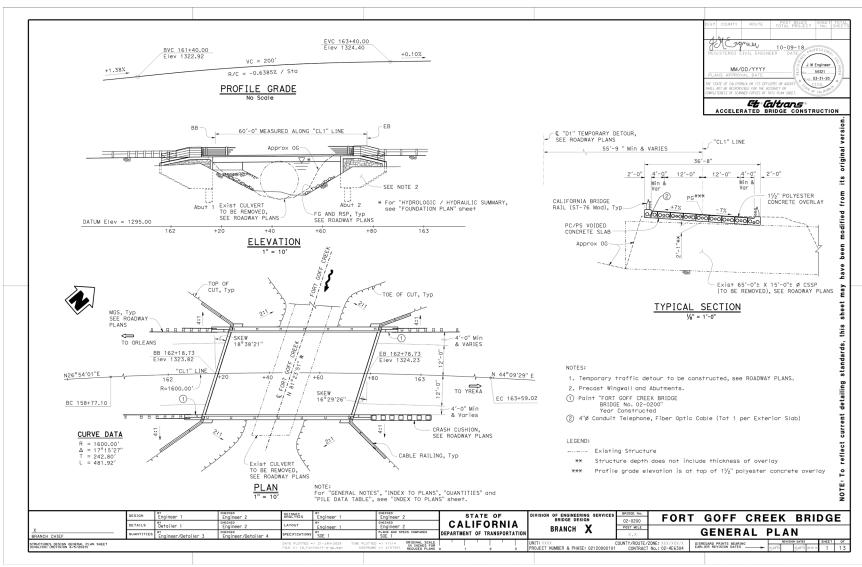
BC 7+85.05 "D1" LINE "I" GIRDER EC 6+05.75 "D1" LINE TYPICAL SECTION € DETOUR = "D1" LINE N 40°28'30" E TOE OF FILL TOE OF FILL 2:1 TOP OF FILL-11/2:1 -TOP OF FILL reflect current detailing standards, this 8 8 8 8 8 8 8 8 INDEX TO PLANS 1 TITLE TITLE

GENERAL PLAN
DECK CONTOURS
FOUNDATION PLAN
ABUTMENT LAYOUT
ABUTMENT DETAILS
TYPICAL SECTION
PECAST PRESTRESSED I GIRDER
CONCRETE BARRIER TYPE 842 DETAILS No. 1
CONCRETE BARRIER TYPE 842 DETAILS No. 2
LOG OF TEST BORINGS 1 OF 4
LOG OF TEST BORINGS 2 OF 4
LOG OF TEST BORINGS 3 OF 4
LOG OF TEST BORINGS 3 OF 4
LOG OF TEST BORINGS 3 OF 4 TO OROVILLE EB 537+30.25 Elev 463.65 BB 536+36.00 Elev 463.18 TO QUINCY 11/2:1 TOP OF FILL TOP OF FILL -STANDARD PLAN SHEET No. TOE OF FILL TOE OF FILL ACCESS PATH, SEE ROADWAY PLANS <u>PLAN</u> NOTE: SEE RUADWAT PLANS
FOR "GENERAL NOTES", "QUANTITIES" and "PILE DATA TABLE", see "DECK CONTOURS" sheet. нескео Engineer 2 Engineer OF ENGINEERING SERVICES FLAG CANYON CREEK BRIDGE (REPLACE) 12-0204 **CALIFORNIA** BRANCH X **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO x.x RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES _

Figure 3A.A.6 General Plan Detailing Example 6



Figure 3A.A.7 General Plan Detailing Example 7



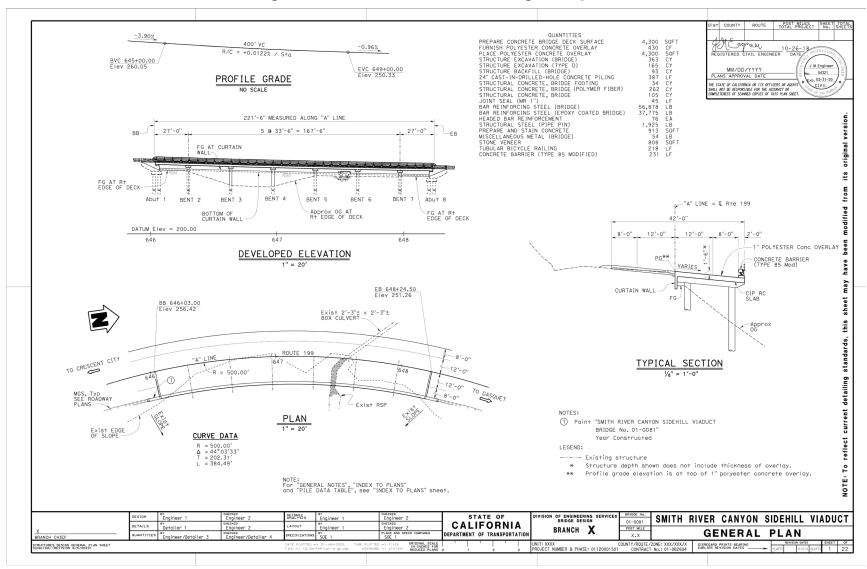


SEB 145'-10"± Paving notch extension required at abutments. REGISTERED CIVIL ENGINEER DATE 2. For "GENERAL NOTES", see "TYPICAL SECTION" sheet. 3. For "PILE DATA TABLE", see "FOUNDATION PLAN" sheet. 4. Widened portion shall match existing bridge cross slope. No. 54321 PLANS APPROVAL DATE 5. Existing AC to be removed. Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SMALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. Abut 1 FG, SEE ROADWAY PLANS LEGEND: DATUM Elev = 50.00 Existing Structure Limits of Bridge Removal (Portion) ELEVATION A-A Point of Minimum Vertical Clearance "A1" LINE = C Rte 80 53'-0"± its 21'-0"± 21'-0"± $10'-0"\pm$ 4 @ $12'-0"\pm$ = $48'-0"\pm$ __14'-0"± __14'-0"± $4 @ 12'-0"\pm = 48'-0"\pm$ TOE OF FILL, TVD 46'-0"± Const Const TRAFFIC OPENING modified _10'-0"± 46'-0"± Const Const TRAFFIC OPENING 10'-0"± SLOPE PAVING, TYP Conc BARRIER (TYPE 60MA) TEMPORARY BARRIER SYSTEM, 5'-0"± ∑5′-0"± TOP OF FILL, SEE ROADWAY PLANS -11/2%± SEE NOTE 4 SEE NOTE 4 -11/2%± been TO DAVIS BRIDGE MOUNTED SIGN, SEE ROADWAY PLANS CLOSURE - CLOSURE STRUCTURAL APPROACH BRIDGE MOUNTED SIGN, -CIP/PS BOX 12'-0"± 48'-0"± TYPE R(30), Typ-SEE ROADWAY PLANS PENDANT LUMINAIRES, SEE ROADWAY PLANS may -SEE NOTE 1, Typ TYPICAL SECTION STRUCTURAL CONCRET enakenakenakenakenamphakenakenakenakenaken (TYPE N)(30), Typ N 89°20'53"+ F 14,290 SOFT
LUMP SUM
124 CY
267 CY
24 CY
1,739 LF
LUMP SUM
37 CY
590 CY
234 CY
151 CY
151 CF
108,980 LB
108,980 LB
206 LF 677 678 INDEX TO PLANS REMOVE ASPHALT CONCRETE SURFACING BRIDGE REMOVAL (PORTION), LOCATION D STRUCTURE EXCAVATION (BRIDGE) TITLE \$ STRUCTURE BACKFILL (BRIDGE)
AGGREGATE BASE (APPROACH SLAB) (A) GENERAL PLAN FOUNDATION PLAN ABUTMENT LAYOUT AGGREGATE BASE (APPROACH SLAB)
16" CAST-IN-ORILLED-HOLE CONCRETE PILING
PRESTRESSING CAST-IN-PLACE CONCRETE
STRUCTURAL CONCRETE, BRIDGE FOOTING
STRUCTURAL CONCRETE, BRIDGE
STRUCTURAL CONCRETE, BRIDGE
STRUCTURAL CONCRETE, BRIDGE
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R) detailing BB 677+56.36± BAGR TO BE ABUTMENT DETAILS No. \Rightarrow 678+29.26± "A1" LINE ABUTMENT DETAILS No. 2 TO ROSEVILLE TYPICAL SECTION GIRDER LAYOUT MGS, Typ SEE ROADWAY PLANS PAVING NOTCH EXTENSION JOINT SEAL (MR 1") BAR REINFORCING STEEL (BRIDGE) LOG OF TEST BORINGS 1 OF 5 SLOPE PAVING (CONCRETE) CONCRETE BARRIER (TYPE 60MA) 11/2:1 LOG OF TEST BORINGS 3 OF 5 TOP OF FILL, LOG OF TEST BORINGS 5 OF 5 TOE OF FILL, STANDARD PLAN SHEET No. $\frac{PLAN}{1'' = 20'}$ NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. Engineer 2 Engineer 1 VISION OF ENGINEERING SERVICES
BRIDGE DESIGN WINTERS STREET UC (WIDEN) Engineer 24-0205 **CALIFORNIA** Detailer 1 Engineer 1 POST MILE BRANCH X **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES .

Figure 3A.A.8 General Plan Detailing Example 8



Figure 3A.A.9 General Plan Detailing Example 9





PEGISTERED CIVIL ENGINEER DATE R/C = -0.6240% / StaBVC 35+50.00 Elev 589.20 EVC 44+50.00 Elev 585.52 PROFILE GRADE MM/DD/YYYY
PLANS APPROVAL DATE Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. 1276'-6" MEASURED ALONG "SE" LINE € HINGE 1-L HINGE 2 FRAME 1 = 444'-9'FRAME 3 = 429'-3'153'-0" 153'-0' 136'-0' 117′-9" its original version FG, SLOPE PAVING, Typ SEE ROADWAY PLANS 12FS -(1)(2) NS 1'-9" -(1)2) NS 10'-0" 12'-0" 12'-0" -(1)(2) NS 12FS CONCRETE BARRIER (TYPE 842), Abut 10 23'-1" Min Vert CIr COLUMN ISOLATION BENT 2 CASING –57′-7" Min Vert CIr ±10% Max & VARIES BENT 9 BENT 7 BENT 3 BENT 4 BENT 5 BENT 6 - COLUMN ISOLATION CASING DATUM Elev = 450.00 CIP/PS BOX GIRDER-DEVELOPED ELEVATION 2"Ø CONDUIT BRIDGE LIGHTING, SEE ROADWAY PLANS BEGIN 62+00 "EN" LINE 39+79.71 "SE" LINE = 81+75.25 "EN" LINE 42+56.39 "SE" LINE = 63+55.51 "EN" LINE 44+12.53 "SE" LINE = 642+22.41 "WB" LINE 42+87.87 "SE" LINE 643+37.52 "EB" LINE N L HINGE 2 € HINGE 1— Approx OG 33+79.55 "SE" LINE = 72+43.89 "EN" LINE 2 Typ TYPICAL SECTION 40+39.81 "SE" LINE = 43+44.68 "N" LINE TOE OF FILL, Typ-BC 635+89.33 "SE" LINE NOTES: BB 33+27.25 Elev 583.85 BC 34+11.61 For "INDEX TO PLANS", "PILE DATA TABLE" and "QUANTITIES", see " INDEX TO PLANS" sheet. For "GENERAL NOTES", see "DECK CONTOURS No. 1" sheet. DRAINAGE INLET, SEE ROADWAY PLANS (1) Paint "SR125/SR11 CONNECTOR BRIDGE No. 57-1253F" Year Constructed STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)(30), Typ (2) Paint Bent Number CURVE DATA Point of Minimum Vertical Clearance PLAN 1" = 60' EC 48+29.83 "SE" LINE Electrolier and Pedestal, see ROADWAY PLANS R = 850.00' $\Delta = 95°35'51'$ T = 937.38' L = 1418.22'END "WB" LINE NOTE: Not all curve information shown, see ROADWAY PLANS. Engineer 2 STATE OF CALIFORNIA VISION OF ENGINEERING SERVICE Bridge design Engineer 1 Engineer S125-E011/SR11 CONNECTOR SEPARATION 57-1253F BRANCH X **GENERAL PLAN** DEPARTMENT OF TRANSPORTATIO x.x RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES ___

Figure 3A.A.10 General Plan Detailing Example 10



Figure 3A.A.11 General Plan Detailing Example 11

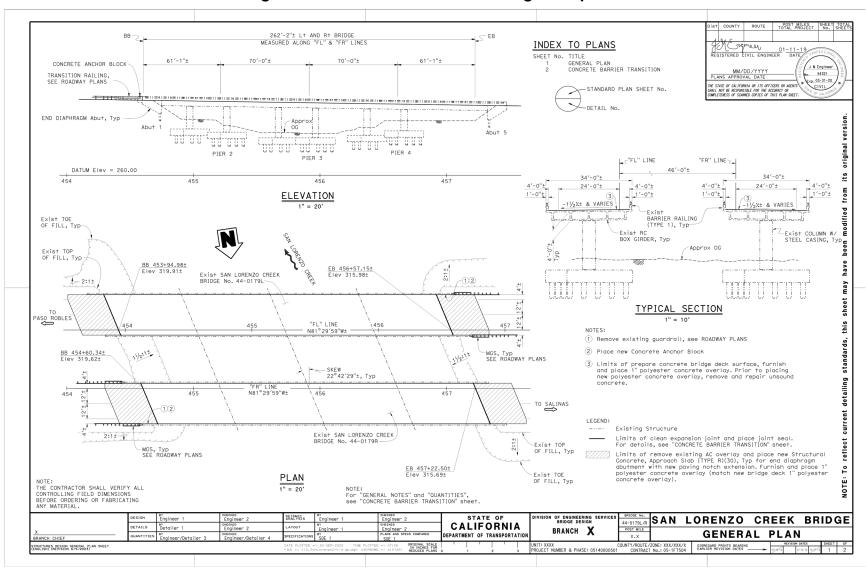




Figure 3A.A.12 General Plan Detailing Example 12

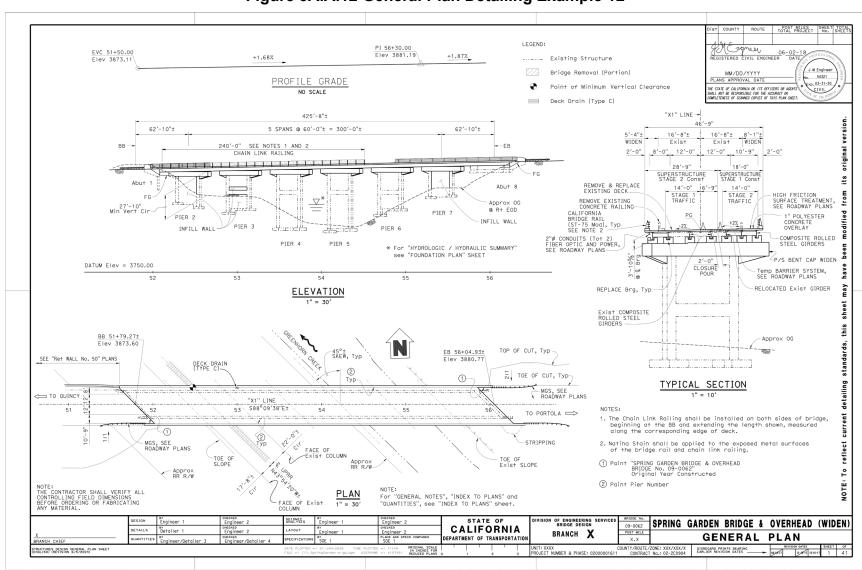
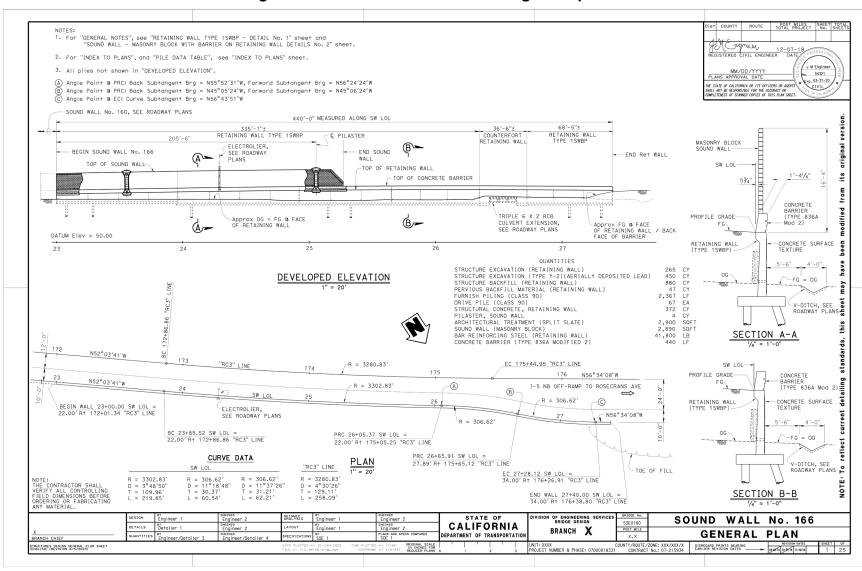




Figure 3A.A.13 General Plan Detailing Example 13





211'-4% MEASURED ALONG RWLOL EXISTING DEL PASO ROAD OC BRIDGE No. 24-0195 REGISTERED CIVIL ENGINEER DATE € DEL PASO ROAD OC TRANSITION BLOCK 12+08.36 Elev 24.87 J M Engine Approx OG @ BACK OF WALL Approx OG @ BACK OF WALL No. 54321 PLANS APPROVAL DATE Exp. 03-31-20 END WALL Elev 24.50 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. BEGIN WALL Elev 24.50 RETURN WALL-EXISTING DEL PASO ROAD OC BRIDGE No. 24-0195 RETURN WALL BOTTOM OF WALL Elev 18.30 WALL JOINTS 67'-2" RETAINING WALL (TYPE 1 Mod) TIEBACK WALL RETAINING WALL (TYPE 1 Mod) "C1" LINE DATUM Elev = 0.00 VARIES DEVELOPED ELEVATION 1'-5" TOP OF WALL QUANTITIES CONCRETE SURFACE REMOVE CONCRETE
STRUCTURE EXCAVATION (RETAINING WALL)
STRUCTURE EXCAVATION (TIEBACK WALL)
STRUCTURE BACKFILL (RETAINING WALL)
STRUCTURE BACKFILL (TIEBACK WALL) BACK OF WALL-→ Tieback Locations © TIEBACK, SINGULORE BACKFILL (TIEBACK WALL)
TIEBACK ANCHOR
STRUCTURAL CONCRETE, RETAINING WALL
ARCHITECTURAL TREATMENT
BAR REINFORCING STEEL (RETAINING WALL) ...-- Existing Structure BAR REINFORCING STEEL (RETA SHOTCRETE SLOPE PAVING (CONCRETE) MINOR CONCRETE (GUTTER) CABLE RAILING CONCRETE BARRIER (TYPE 60D) Exist Utility CURVE DATA BOTTOM OF WALL R = 477.89' Δ = 09°09'01" T = 38.24' L = 76.32' may 1040 OC € TIEBACKS EXISTING -TIEBACK WALL NOTE: EC END WALL 12+11.36 RWLOL = NEW SLOPE PAVING _ from 10+45.08 to 11+41.19 RWI OL. BEGIN WALL 10+00.00 RWLOL = 111.24' L+ 240+17.00 "C1" LINE this 105.15' L+ 238+05.97 "C1" LINE BACK OF CONCRETE BACK OF BACK OF CONCRETE = 477.89 VARIES RETURN WALL CABLE --RAILING TOP OF WALL CONCRETE SURFACE RWLOL detailing FACE OF BARRIER = ES 105.15' L+ 239+41.01 "C1" LINE RETURN WALL 12+08.36 RWLOL CONCRETE BARRIER (TYPE 60D) EXISTING SLOPE PAVING Approx OG -EXISTING TOE OF EMBANKMENT Ret WALL (TYPE 1 Mod) EOD-- FOD EXISTING DEL PASO ROAD OC BRIDGE No. 24-0195 RETAINING WALL (TYPE 1 Mod) SB ROUTE 5 TO SACRAMENTO "C1" LINE ů N23°23′58"W 239 NOTE: 1 NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. PLAN TYPICAL SECTION NOTE: For "GENERAL NOTES" and "INDEX TO PLANS", see "INDEX TO PLANS" sheet. Engineer 2 Engineer 2 Engineer 1 VISION OF ENGINEERING SERVICE: Bridge design DEL PASO ROAD OC RETAINING WALL 24E0013 CALIFORNIA Detailer 1 BRANCH X **GENERAL PLAN**

DEPARTMENT OF TRANSPORTATIO

X.X

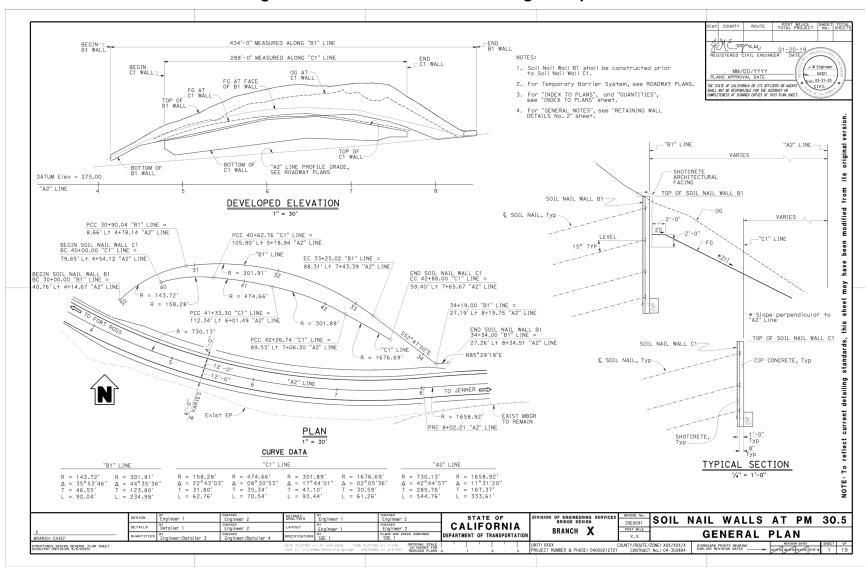
DISREGARD PRINTS BEARING EARLIER REVISION DATES _

Figure 3A.A.14 General Plan Detailing Example 14

RUCTURES DESIGN GENERAL PLAN SHEE



Figure 3A.A.15 General Plan Detailing Example 15





177'-3" MEASURED ALONG RWLOL END WALL Elev 1073.16 REGISTERED CIVIL ENGINEER DATE BEGIN WALL TOP OF CONCRETE BARRIER SLAB Elev 1065.24 No. 54321 PLANS APPROVAL DATE Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SMALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. APPROXIMATE OG @ APPROXIMATE FG -"C" LINE - RWLOL 12′-0"_ 8'-0" 2'-0" Conc BARRIER (TYPE 85 Mod) 3" AC, SEE ROADWAY PLANS @ FACE OF WALL DATUM Elev = 1020.00 TREATED TIMBER LAGGING INDEX TO PLANS DEVELOPED ELEVATION SHEET No. TITLE GENERAL PLAN -STANDARD PLAN SHEET No. CONCRETE FACING STRUCTURE PLAN No. 1 STRUCTURE PLAN No. 2 FOUNDATION PLAN DETAIL NO Approx OG NOTE: For "GENERAL NOTES" and "QUANTITIES", see "INDEX TO PLANS" sheet. DETAILS No. 1 CURVE DATA DETAILS No. 2 DETAILS No. 3 RWLOL CONCRETE BARRIER (TYPE 85 Mod) No. 1 CONCRETE BARRIER (TYPE 85 Mod) No. 2 R = 300.00' Δ = 30°12'35" L = 158.18' R = 278.25' Δ = 20°29'04" L = 99.48' T = 50.28' FUTURE BICYCLE RAILING DETAILS L = 158.18T = 80.97'LOG OF TEST BORINGS 1 OF 3 LOG OF TEST BORINGS 2 OF 3 LOG OF TEST BORINGS 3 OF 3 STEEL SOLIDER TO CRESCENT CITY EC 512+31.64 "C" LINE 512 DRILLED HOLE FILLED WITH CONCRETE -R=300.00' BC 510+73.46 "C" LINE R = 278.25'-EC 10+99.48 RWLOL = 21.75' R+ 512+31.64 "C" LINE TYPICAL SECTION RWI OI BEGIN WALL BC 10+00.00 RWLOL = 21.75' R+ 511+24.38 "C" LINE EDGE OF BERM PLAN END WALL 11+77.25 RWLOL = 21.75' Rt 513+09.41 "C" LINE MGS, SEE ROADWAY PLANS NOTE: For "GENERAL NOTES", see "FOUNDATION PLAN" sheet. Engineer 1 STATE OF VISION OF ENGINEERING SERVICE: Bridge design MONKEY CREEK RETAINING WALL Engineer 2 XX-XXXX **CALIFORNIA** BRANCH X POST MILE **GENERAL PLAN** X.X RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES _

Figure 3A.A.16 General Plan Detailing Example 16



Figure 3A.A.17 General Plan Detailing Example 17

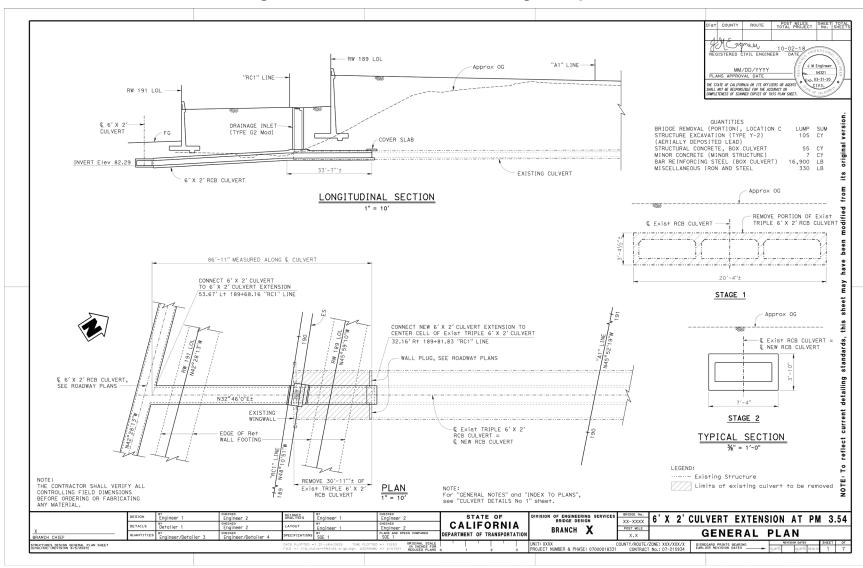




Figure 3A.A.18 General Plan Detailing Example 18

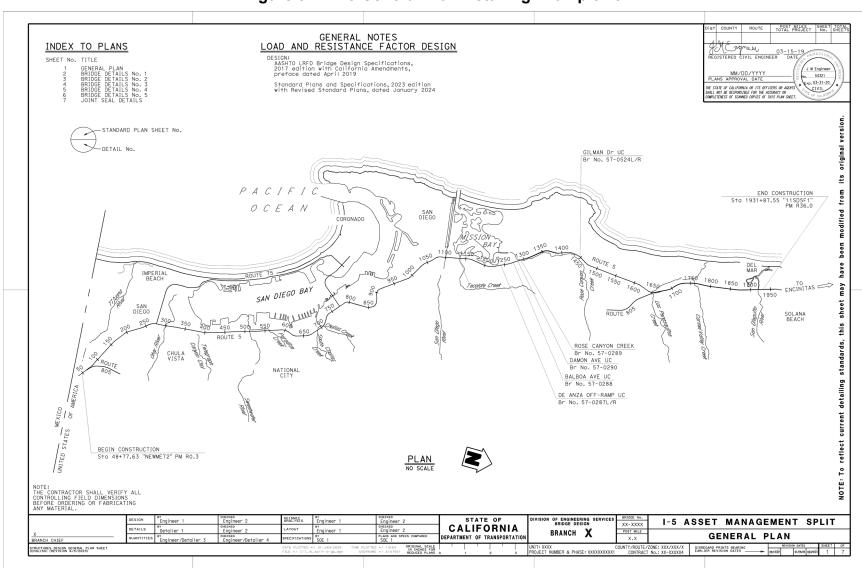
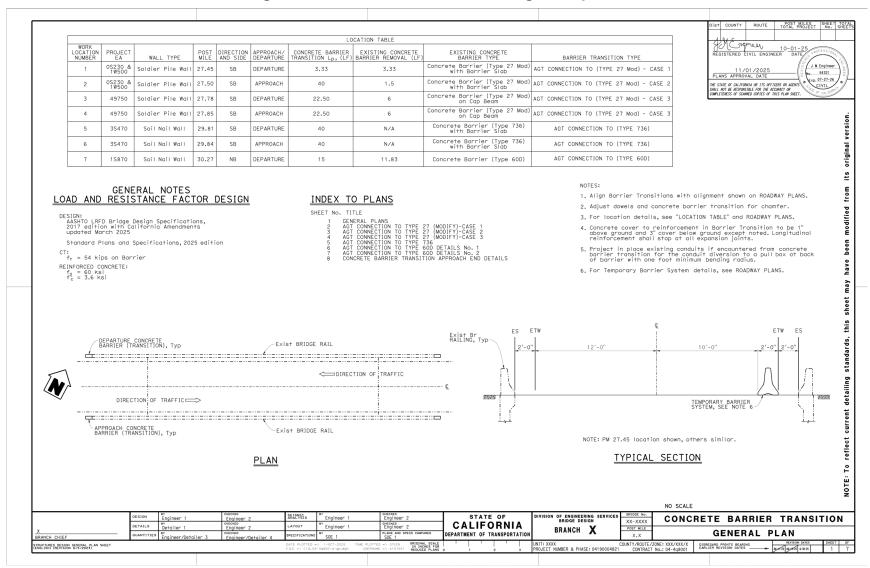




Figure 3A.A.19 General Plan Detailing Example 19





Bridge Design Details 3.2 June 2025

Milestone Notations & Borders

As a project progresses, complete plan sets are distributed for review. Before distribution, milestone notation stamps are added to the GENERAL PLAN to indicate the stage of the project as it goes through the course of its design.

Milestone notations stamps are included on the following distributions:

- GENERAL PLAN
- UNCHECKED DETAILS
- CHECKED DETAILS
- DRAFT STRUCTURE PLANS, SPECIFICATIONS & ESTIMATES (dSPS&E)
- EXPEDITE

A milestone notation stamp is not placed on the plans at the FINAL STRUCTURE PLANS, SPECIFICATIONS & ESTIMATES (SPS&E) milestone.

Border Information

Include "BRIDGE", "UNDERPASS", "OVERCROSSING", etc. in the structure title. Do not use abbreviations in sheet titles unless absolutely necessary. If abbreviations are used, only use standard abbreviations.

When a separate Structure Plan set is prepared for two or more bridges having the same bridge number, the name for each should be stated. The bridge number identification provided by Structure Maintenance & Investigations (SM&I) will also indicate the location of each bridge.

Example:

BROADWAY UNDERCROSSING – LEFT BRIDGE (BRIDGE No. XX-XXXXL) BROADWAY UNDERCROSSING – RIGHT BRIDGE (BRIDGE No. XX-XXXXR)

For further border information and guidance, see 1.3 Titles and Borders.



Bridge Design Details 3.3 June 2025

Index to Plans

See 1.1.15 General Detailing for typical order of sheets.

If the INDEX TO PLANS is not located on the GENERAL PLAN, add a note on the GENERAL PLAN indicating their location. The INDEX TO PLANS may be placed on one of the following sheets:

- GENERAL PLAN: The preferred location for INDEX TO PLANS is the lower right corner of the GENERAL PLAN sheet, otherwise, create an INDEX TO PLAN sheet.
- INDEX TO PLANS: If there is not adequate space on the GENERAL PLAN sheet, a sheet called INDEX TO PLANS may be inserted. If the INDEX TO PLANS sheet is used, this sheet is to immediately follow the GENERAL PLAN sheet.
- DECK CONTOURS: If there is not adequate space on the GENERAL PLAN sheet and an INDEX TO PLANS sheet is not used, then the INDEX TO PLANS may be placed on the DECK CONTOURS sheet.

In some circumstances, other functional units may require sheets to be placed within a set of Structure Plans (e.g., Electrical Plans, Mechanical Plans, etc.). These details include hardware and other details that are attached to a structure. In most cases, these types of plans are designed and detailed by another unit and stamped by a separate licensed Engineer. Such plans should be listed after the Structure Plans, see Attachment 3A.B.1.

Standard Plans List

See 1.5 Use of Standard Plans, for additional details referring to use of Standard Plans.

STANDARD PLANS are pre-engineered, commonly used, details that are used in conjunction with the Standard Specifications and Project Plans. STANDARD PLANS are not inserted or duplicated in the project plans, instead they are called out where details are to be used. When detail modifications are required to a referenced STANDARD PLAN, only the modified details should be shown in the Structure Plans. A reference to the STANDARD PLAN used should be included for additional details not shown. No standard plan bubbles shall be shown on GENERAL PLANS.

Historically, a Standard Plans List was included in Structure Plans. Current practice is to not include the list in the Structure Plans, instead BD-0354 Structure Standard Plan Transmittal is filled out and sent to Structure Office Engineer (SOE) at P&Q and EXPEDITE milestones. This step ensures that SOE includes all the relevant Standard Plans in the Special Provisions for the project when transmitted to District Office Engineer.



Always show the STANDARD PLANS call-out legend:

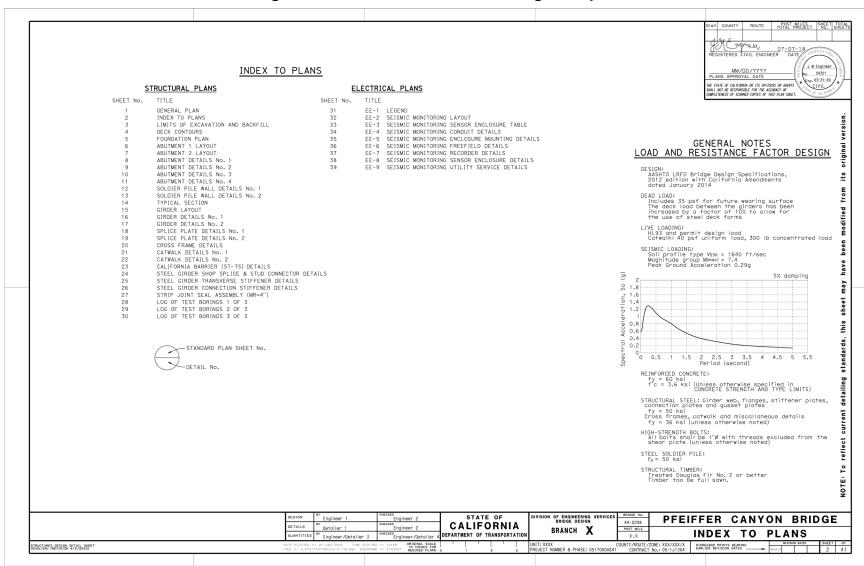


Figure 3.3.1 Standard Plans List Call-out Legend

All current and revised Caltrans STANDARD PLANS are available on the Caltrans DES-OE Internet website in several electronic formats. Care should be taken to ensure that all REVISED STANDARD PLANS associated with a project are included in a set of plans. This includes those listed in the notes of any referenced STANDARD PLAN.



Figure 3A.B.1 Index to Plans Detailing Example





Bridge Design Details 3.4 June 2025

Structure Plans

Do NOT use more than one GENERAL PLAN.

Large structures, viaducts, retaining walls, and interchanges too long to fit on a single GENERAL PLAN, shall be drawn using STRUCTURE PLAN sheet(s). In this case, the entire structure, bridge, or retaining wall should be shown on one GENERAL PLAN using a small scale (e.g., 1" = 200'). The alignment and other details that are typically shown on the GENERAL PLAN will instead be provided on STRUCTURE PLAN sheet(s) using a 1" = 20' scale. Use as many STRUCTURE PLAN sheet(s) as necessary at this scale.

STRUCTURE PLAN sheet(s) should use a structure detailing border and immediately follow the GENERAL PLAN or INDEX TO PLANS sheet. Refer to Attachments 3A.C.1 and 3A.C.2.

Retaining Walls

STRUCTURE PLAN sheet(s) are typically included in retaining wall plans to show additional information, such as footing layouts, design heights, and other details not shown on the GENERAL PLAN. PLAN views for Soldier Pile Walls and standard retaining walls on spread footings are not required. On STRUCTURE PLAN sheet(s), both the ELEVATION and PLAN views should be included at equal scales; the preferred scale for both is 1" = 10'.

Show standard plan bubble for Structure Excavation and Backfill Limits or a reference note (e.g., NOTE: For excavation and backfill limits, see Standard Plan A62B.)

Refer to Attachments 3A.C.3 through Attachment 3A.C.7 for examples of typical retaining wall STRUCTURE PLAN sheet(s):

- Attachment 3A.C.3 Modified Standard Retaining Walls (Types 1, 5, 6 or 7)
- Attachment 3A.C.4 Modified Standard Retaining Walls (Types 1SW, 5SW or 7SW)
- Attachment 3A.C.5 Soldier Pile, Tangent Pile or Secant Pile Walls
- Attachment 3A.C.6 Soil Nail Walls
- Attachment 3A.C.7 Ground Anchor Walls



REGISTERED CIVIL ENGINEER DATE ----- Existing Structure BVC 221+70.00 Elev 69.07 BVC 246+05.00 Elev 64.72 No. 54321 +1.00%_ 2000' VC PLANS APPROVAL DATE 850' VC R/C = -0.1000% / StaTHE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. CIVIL R/C = -0.271% / Sta "BL" LINE = © Exist Rte 99— PROFILE GRADE NO SCALE 8'-0"± 8'-6"± 5'-0" 1'-9"±_ 1'-9" PG--3% -1½%± -1½%± FUTURE UTILITY OPENING 3148'-0" MEASURED ALONG "BR" LINE PC/PS CONCRETE GIRDER (BULB TEE Mod) 685'-6' 840'-0" FRAME 3 PIER PIER Abut 17 15 16 PIER PIER 10 PIER 13 PIER 14 PIER PIER PIER PIER PIER PIER DATUM Elev = -200.00 יטו טו יטוריי לערטרגולי "טיטיטיט" may 215 220 245 TYPICAL SECTION * For "HYDROLOGIC / HYDRAULIC SUMMARY", SEE "FOUNDATION PLAN No. 1" sheet **ELEVATION** QUANTITIES URFACING 248+19.10 TO SACRAMENTO \bigcirc "BL" LINE BB 216+04.73 N39°20′02"W N39° 13′18"W 215 TO YUBA CITY 215+81.35 212+98.51 \Longrightarrow PLAN 1" = 200' NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. NOTE: For "GENERAL NOTES", "INDEX TO PLANS", and "PILE DATA TABLE", see "INDEX TO PLANS" sheet. Engineer VISION OF ENGINEERING SERVICE: Bridge design FEATHER RIVER BRIDGE Engineer 1 18-0026R CALIFORNIA BRANCH X Detailer 1 POST MILE **GENERAL PLAN** DEPARTMENT OF TRANSPORTATION x.x RUCTURES DESIGN GENERAL PLAN SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES .

Figure 3A.C.1 Structure Plan Detailing Example 1



REGISTERED CIVIL ENGINEER DATE MM/DD/YYYY
PLANS APPROVAL DATE Exp. 03-31-20 CIVIL THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET. 3148'-0" MEASURED ALONG "BR" LINE 152'-6" 13 SPANS @ 210'-0" = 2730'-0" BB→ **©**Тур Approx OG 12'-2" Min Vert CIr its RSP, SEE ROADWAY PLANS from TOTAL SCOUR Elev = -11.00 modified * For "HYDROLOGIC / HYDRAULIC SUMMARY", SEE "FOUNDATION PLAN No. 1" sheet PIER 2 PIER 3 PIER 4 PIER 5 DATUM Flev = -50.00 222 223 peen **ELEVATION** 1 Paint "FEATHER RIVER BRIDGE BRIDGE No. 18-0026R" have TOP OF LEVEE Year Constructed 2 Paint Pier Number REMOVE Exist MBGR, SEE ROADWAY PLANS LOCATION & ASPHALTIC PLUG JOINT SEAL NEAR BB EXISTING BRIDGE may LEGEND: Point of Minimum Vertical Clearance RSP, SEE ROADWAY PLANS Limits of "REMOVE ASPHALT CONCRETE SURFACING & PLACE HOT MIX ASPHALT", see "ASPHALT CONCRETE SURFACING REPLACEMENT" sheet this BB Exist Bridge 635+08.50± "BL" Line N39°07′31"W reflect current detailing ___ BB 216+04.73 Elev 63.42 "BR" Line N39°16′30"W 224 217 Отур-1 Conc BARRIER (TYPE 836), SEE ROADWAY PLANS © DECK DRAIN "BR" LINE 218+27.23, SEE "DECK DRAIN DETAILS" SHEET © DECK DRAIN "BR" LINE 222+47.23, SEE "DECK DRAIN DETAILS" SHEET TOE OF SLOPE ACCESS ROAD PLAN STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ) (10) 215+81.35 "BR" LINE FOR DRAIN PIPE TERMINATION, SEE "ABUTMENT 1 DRAIN PIPE TERMINATION DETAILS" ON "DECK DRAIN DETAILS No. 2" SHEET NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL FOR THE EXISTING BRIDGE. VISION OF ENGINEERING SERVICES Bridge design FEATHER RIVER BRIDGE Engineer 1 Engineer 2 18-0026R CALIFORNIA BRANCH X POST MILE STRUCTURE PLAN No. 1 DEPARTMENT OF TRANSPORTATIO RUCTURES DESIGN DETAIL SHEE DISREGARD PRINTS BEARING EARLIER REVISION DATES

Figure 3A.C.2 Structure Plan Detailing Example 2



Figure 3A.C.3 Modified Standard Retaining Walls (Types 1, 5, 6 or 7) Detailing Example

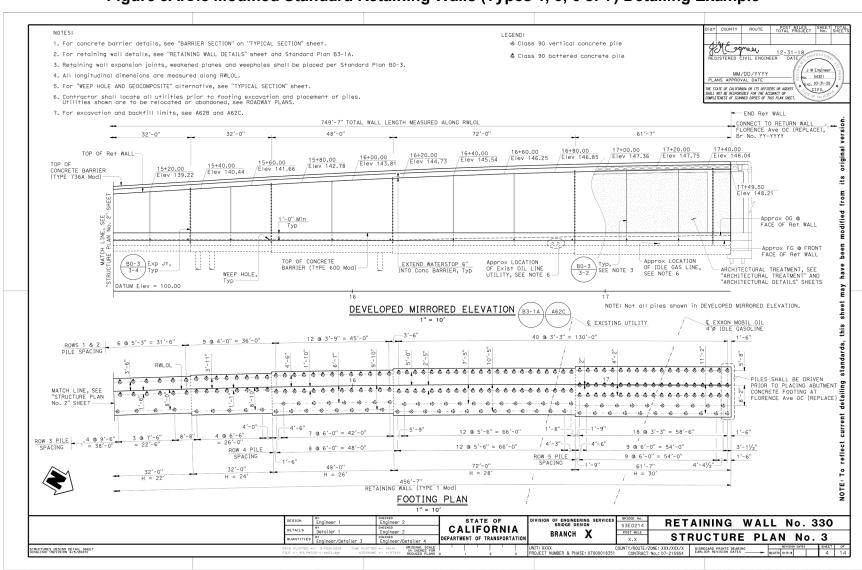




Figure 3A.C.4 Modified Standard Retaining Walls (Types 1SW, 5SW or 7SW) Detailing Example

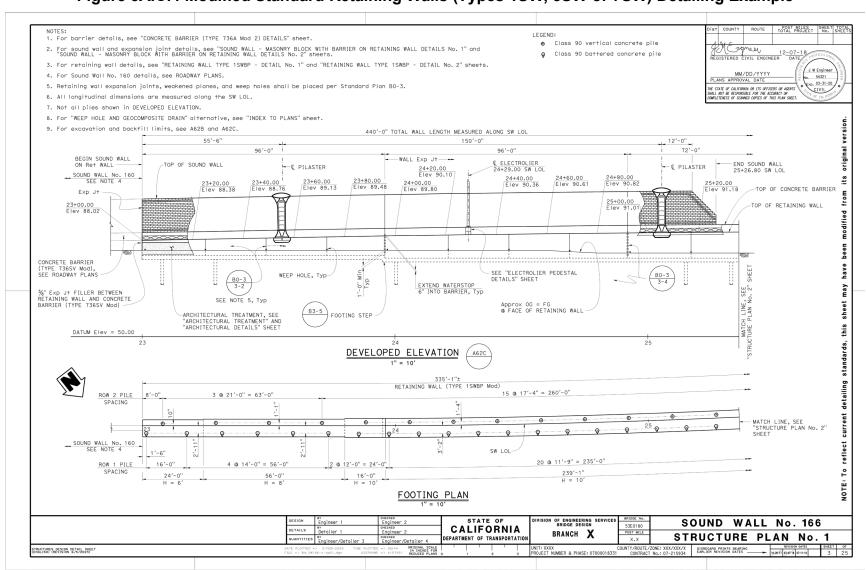




Figure 3A.C.5 Soldier Pile, Tangent Pile or Secant Walls Detailing Example

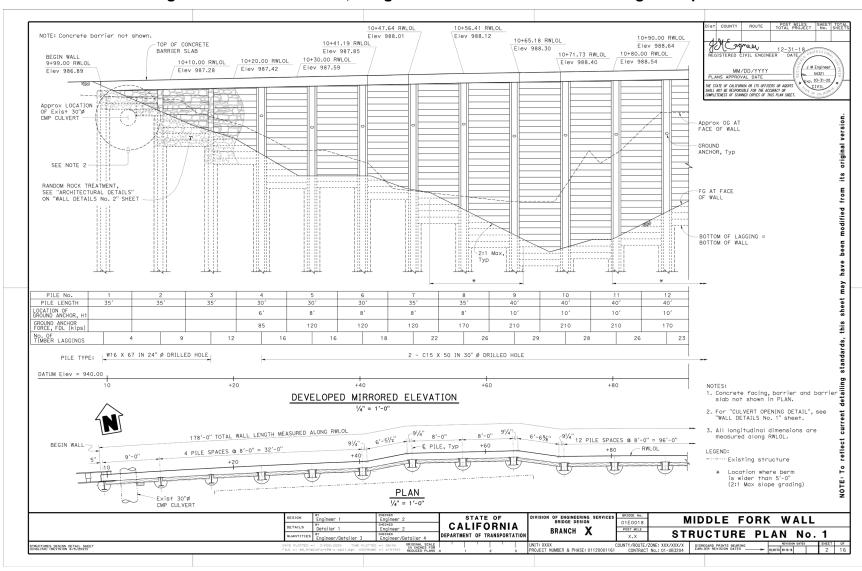




Figure 3A.C.6 Soil Nail Wall Detailing Example

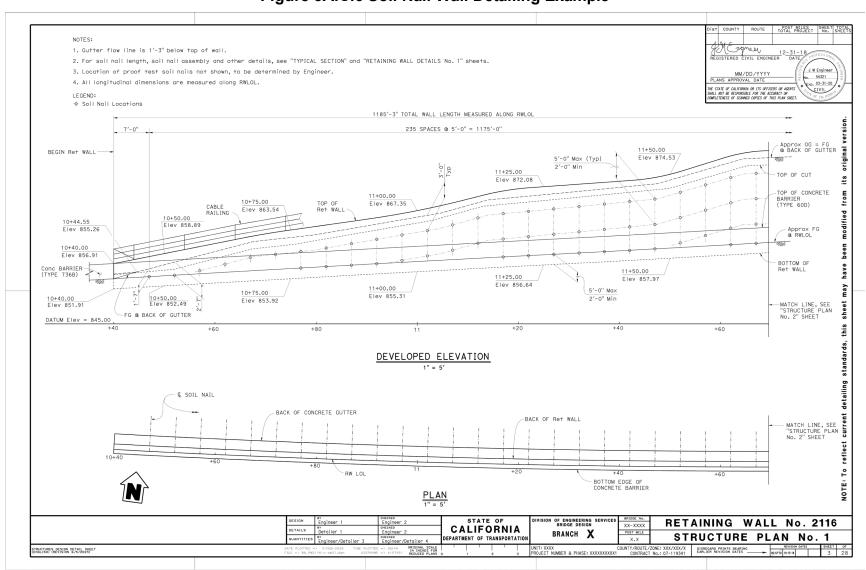
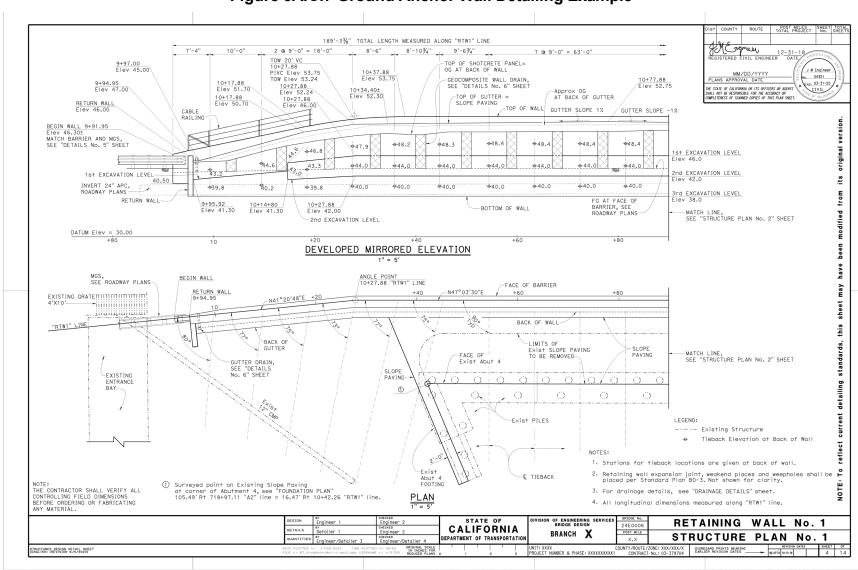




Figure 3A.C.7 Ground Anchor Wall Detailing Example





Bridge Design Details 3.5 June 2025

Falsework Requirements

To ensure that traffic handling is given proper consideration in the early design and planning stages, it is necessary to identify traffic handling and falsework assumptions as early as possible.

This information is described by placing the falsework requirements and traffic notes decal (shown below) on the GENERAL PLAN sheet before Type Selection and GENERAL PLAN Distribution milestone. Remove the decal before the UNCHECKED DETAILS milestone. Put an "X" next to all applicable blanks and remove the "-" from all others.

TRAFFIC NOTES

| VEHICULAR TRAFFIC: 1 New alignment. No traffic at the site. 2 Traffic will be detoured away from the site. 3 Traffic will be carried on the structure. Stage constructionwillwill not be required. 4 Traffic will pass under the structure on (Name of St or Hwy) | | | | | |
|---|------------------|------------|---------------------------|--|--|
| ANo falsework allowed over traffic. | | | | | |
| | Vertic | al | Width of affic Opening | | |
| Bound | - - c lane | - - | | | |
| PEDESTRIAN TRAFFIC: Falsework opening required on:(Name of St) | | | | | |
| | Height - | _ (Nullie | Width | | |
| RAILROAD TRAFFIC: Falsework opening required over: (Name of RR) | | | | | |
| Vertical Clearance | Horiz | Clear - | Width | | |
| | | | | | |

Figure 3.5.1 Falsework Requirements and Traffic Notes Decal

For more information regarding falsework openings, see *Highway Design Manual* and *Bridge Design Aids*: 10-3 Clearance at Structures.

If traffic requirements are not clearly indicated in the Bridge Site Submittal, the Structure Project Engineer should contact the District Project Engineer to obtain clarification on assumptions before Type Selection.



Bridge Design Details 3.30 June 2025

Structure Identification

Prior to Type Selection, the Bridge Design Branch requests a bridge identification number from the Structures Maintenance and Investigations (SM&I) unit. This number will be used on all Structure Plans, reports, and other identifying information.

The structure name, bridge number, and year constructed shall be painted on all new structures and widenings. This bridge identification information should be in a place visible to traffic from the roadway at both the upper and lower levels of traffic. At the upper level, it shall be painted on the bridge barrier near the paving notch to the right of approaching traffic on both ends of the structure. At the lower level, if required, it shall be painted on a column or wingwall to the right of approaching traffic.

Bridge supports shall be numbered to follow the direction of increasing stations along a route; stationing direction and other information is typically provided by the District.

Exceptions:

- For structures with no columns adjacent to the roadway, the bridge name, number and year constructed shall be painted on the abutment wingwall or on a column in the center of the roadway to the left of traffic.
- On "long" structures over 300 feet long or consisting of five or more spans, each bent, or pier, shall be identified for maintenance personnel, both underneath and on the barrier along the bridge at each support. The support identification numbers should be the same as those used in the contract plans.

Examples: BENT 2R, PIER 15L, etc.

- It is very common for structures to have a roadway "Mile Post" sign located at the bridge, retaining wall or culvert. These details are typically shown in the Roadway Plans and may include the bridge name, number, and post mile.
- For structures with long adjacent retaining walls or approaches where metal beam bridge railings extend well beyond the structure, the structure identification shall be painted on the barrier's concrete end block. If the retaining wall is long enough, the Roadway Plans may also indicate a roadway "Mile Post" sign near the paving notch of the bridge or structure that also includes the structure identification information.



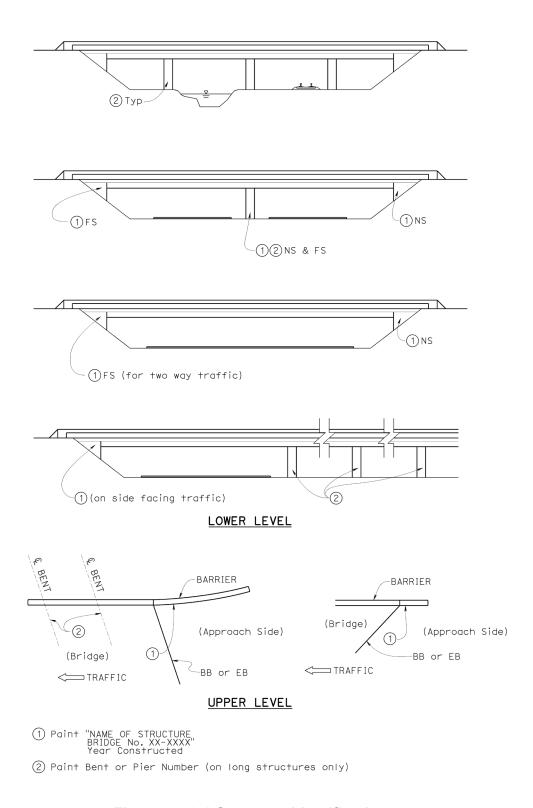


Figure 3.30.1 Structure Identification