

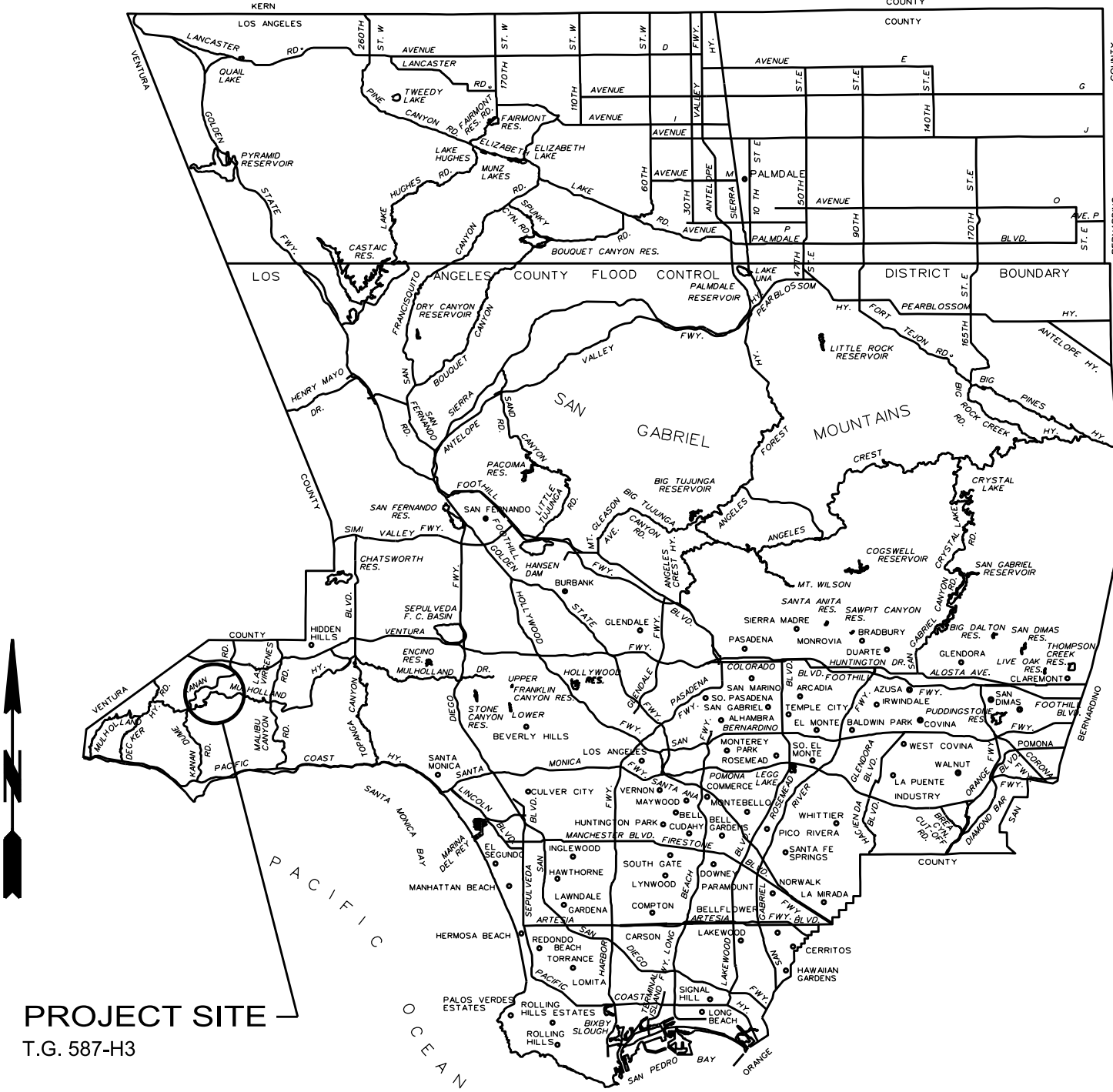
# LOS ANGELES COUNTY PUBLIC WORKS

## MULHOLLAND HIGHWAY

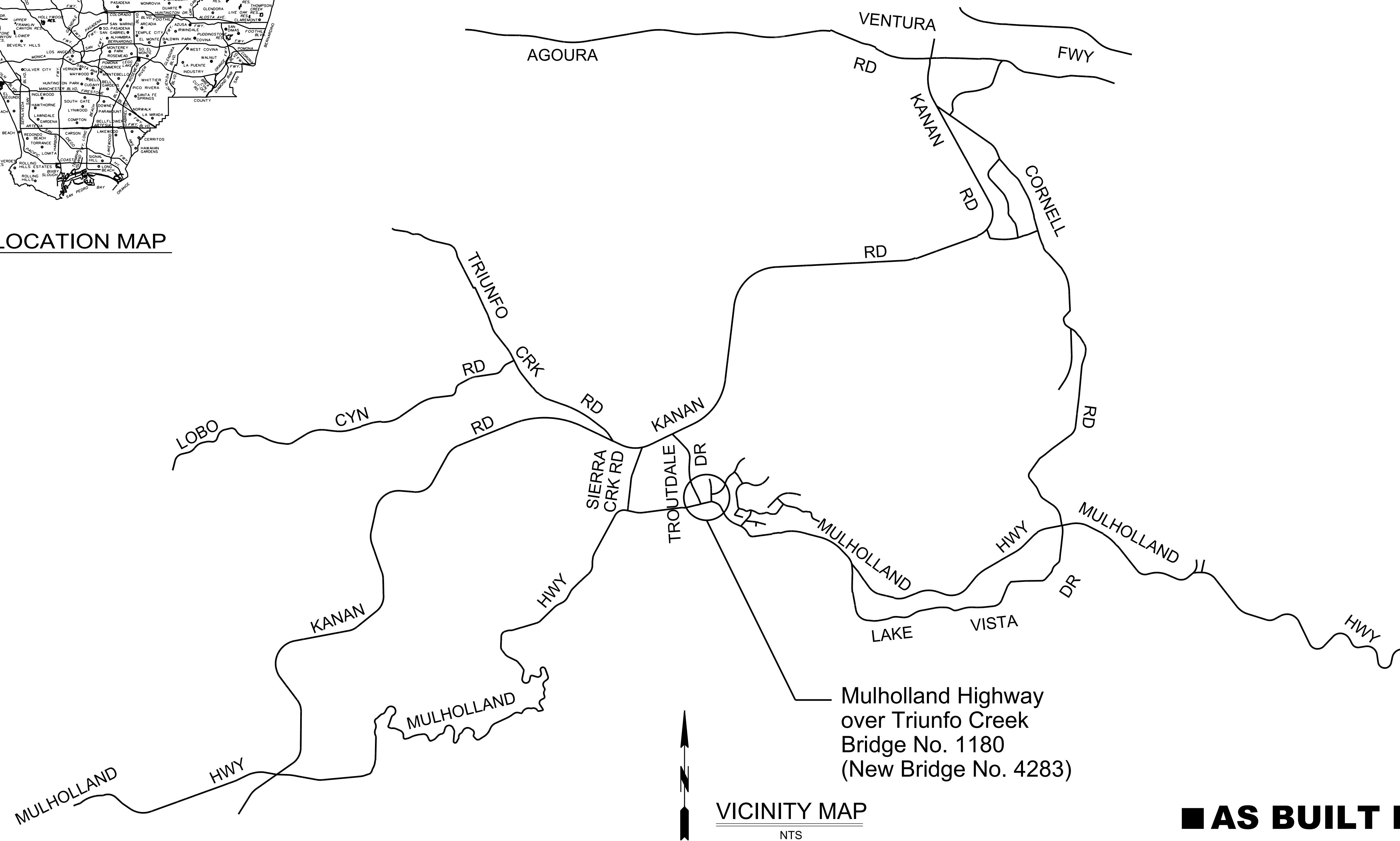
OVER  
 TRIUNFO CREEK BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378

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**LOCATION MAP**



**VICINITY MAP**  
NTS

**AS BUILT DRAWINGS**

DATE	10/10/19
REVIEWED BY	<i>[Signature]</i>
CADD PROJECT FILE NAME	RDC0016378-STRUCTURES.dgn
CHECKER	K. Ho
DESIGNER	J. Lu
DRAWER	D. Rojas

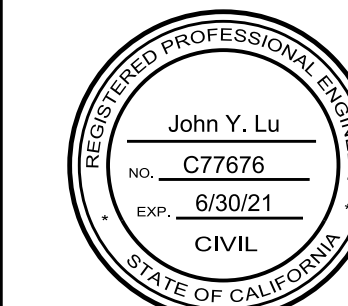
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



Know what's below.  
Call before you dig.

APPROVED MARK PASTRELLA DIRECTOR OF PUBLIC WORKS	
BY <i>[Signature]</i>	10/21/2019
DEPUTY DIRECTOR	DATE
RECOMMENDED	
BY <i>[Signature]</i>	10/21/2019
ASSISTANT DEPUTY DIRECTOR, DESIGN	DATE
SUBMITTED	
BY <i>[Signature]</i>	10/10/19
DESIGN AND STRUCTURES TEAM 1	DATE

DATE	BY	MK	DESCRIPTION
REVISIONS			

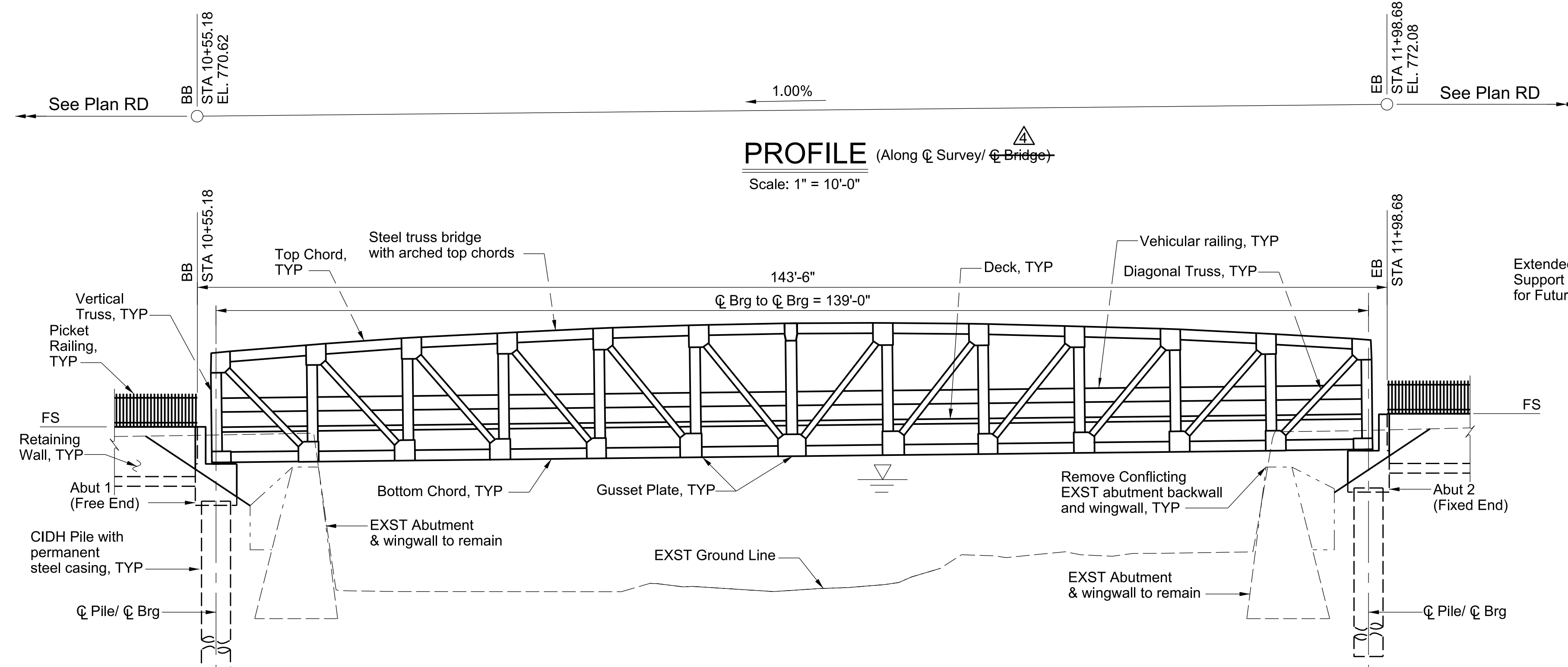


*[Signature]* 10/9/19  
PROJECT ENGINEER

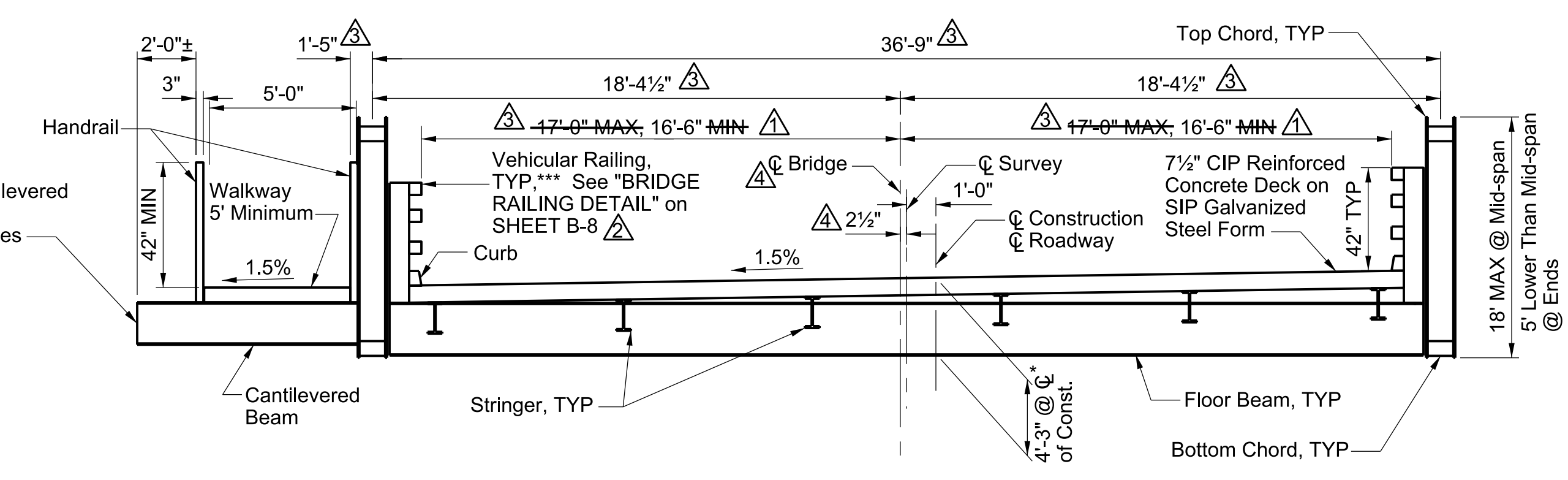
PRIME CONTRACTOR LICENSE REQUIRED: CLASS A

LOS ANGELES COUNTY PUBLIC WORKS

**TITLE SHEET**  
 MULHOLLAND HIGHWAY  
 OVER  
 TRIUNFO CREEK  
 BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378



**PROFILE** (Along  $\bar{C}$  Survey/ $\bar{C}$  Bridge)  
Scale: 1" = 10'-0"



**TYPICAL SECTION**  
Scale: 1/4" = 1'-0"

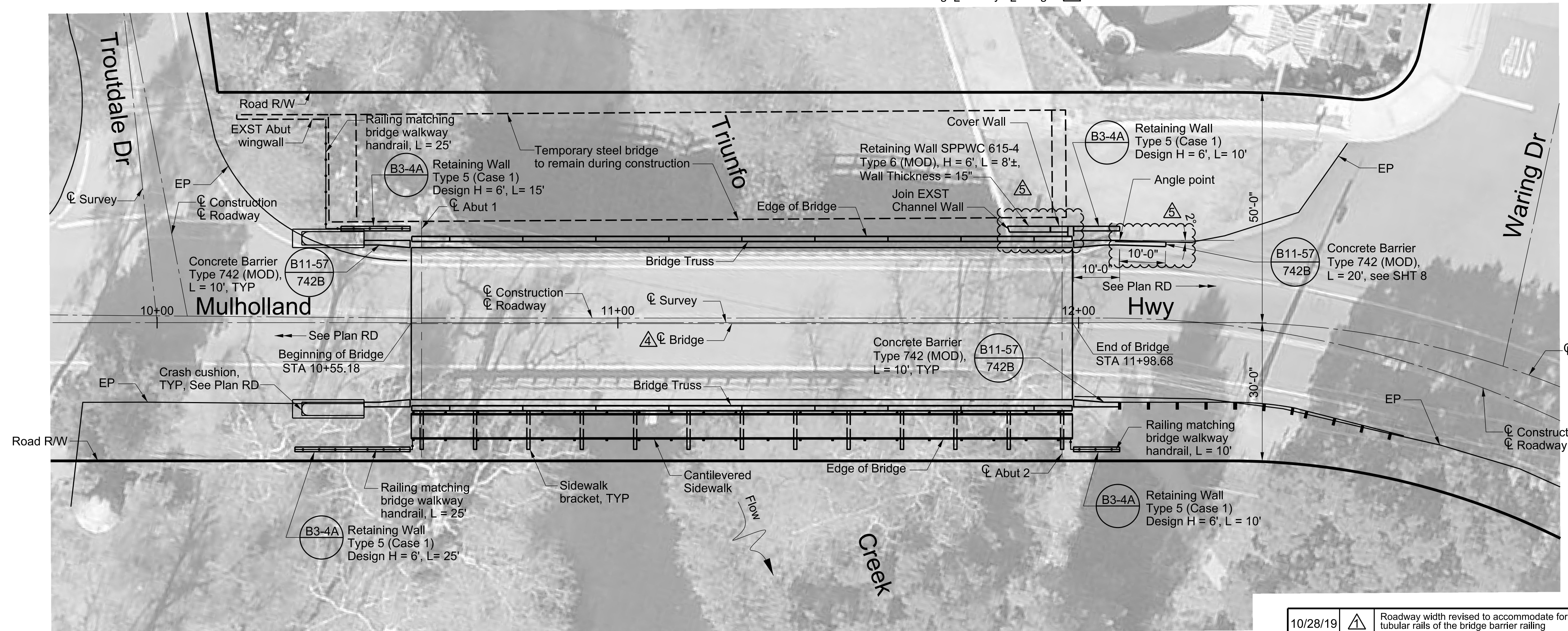
Note: Section is looking west  
 \* Top of deck to bottom steel distance shall not exceed 51"  
 \*\* Dimensions shown are approximate. Final geometry of the bridge will be verified by the Engineer per truss steel bridge shop drawings.  
 \*\*\* Bridge vehicular railing shall be of independent tubular rail system mounted to bridge deck or floor beam with 42" height measured from top of deck and TL-3 rating minimum.

**ELEVATION**  
Scale: 1" = 10'-0"

Note: 1. Shop drawings and calculations of Pratt truss steel bridge with arched top chords shall be submitted to the Engineer for review and approval per Special Provisions. Fabrication of the bridge, the construction of the bridge components and foundation shall not start until the shop drawings and engineering calculations have been approved by the Engineer.  
 2. Cantilevered walkway and handrails not shown for clarity.  
 3. Abutment  $\bar{C}$  Brg shall line up with  $\bar{C}$  Pile.  
 4. All stations callout are along  $\bar{C}$  Survey/ $\bar{C}$  Bridge.

**GENERAL NOTES**  
**LOAD AND RESISTANCE FACTOR DESIGN**

DESIGN:	AASHTO LRFD Bridge Design Specifications, Sixth Edition, with California Amendments.
DEAD LOAD:	Includes 35 psf for future wearing surface Includes 260 plf for future utilities on cantilevered support beam
LIVE LOADING:	HL93 and Permit Design Vehicle
SEISMIC DESIGN:	Caltrans Seismic Design Criteria (SDC), Version 1.7, April 2013
SEISMIC LOADING:	Peak Ground Acceleration = 0.527 g
REINFORCED CONCRETE:	$f_y = 60,000$ psi $f'_c = 4,000$ psi $n = 8$
DESIGN SOIL PRESSURE:	Based on "Geotechnical Investigation" prepared by Los Angeles County Public Works, Geotechnical and Materials Engineering Division. At-Rest Equivalent Fluid Pressure = 55 pcf Active Equivalent Fluid Pressure = 40 pcf Passive Equivalent Fluid Pressure = 220 pcf (2,200 psf MAX)
DESIGN BEARING PRESSURE:	Allowable Uniform Bearing Stress = 3,000 psf Ultimate Gross Uniform Bearing Stress = 9,000 psf
STRUCTURAL STEEL:	$f_y = 50,000$ psi
CONSTRUCTION:	(Materials & Methods) Standard Specifications - State of California Department of Transportation, 2018 Edition.

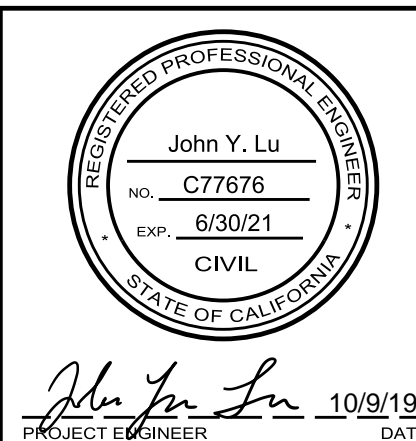


**GENERAL PLAN**  
Scale: 1" = 15'-0"

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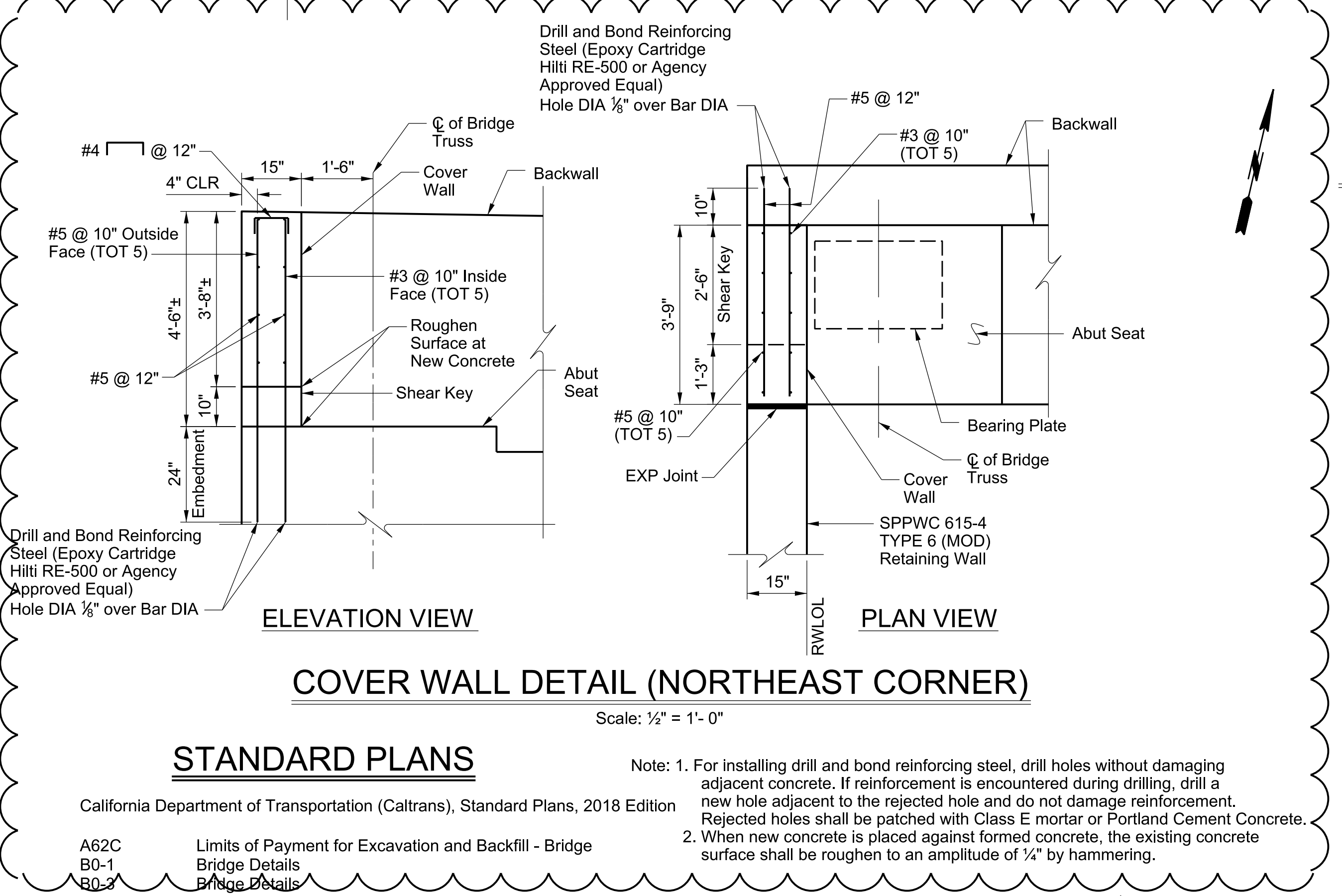
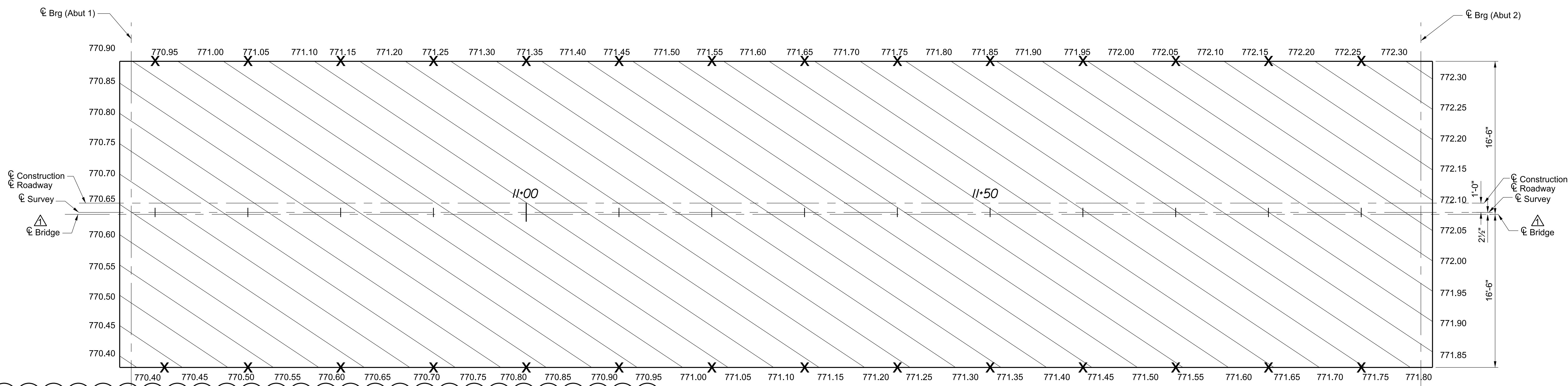
DATE	REVIEWED BY	CADD PROJECT FILE NAME	CHECKER	DESIGNER	DRAFTER
		RDC0016378-STRUCTURES.dgn	K. Ho	J. Lu	S. Saeithao

DATE	BY	DESCRIPTION
10/28/19	JL	Roadway width revised to accommodate for the tubular rails of the bridge barrier railing
10/28/19	JL	Bridge railing detail provided to clarify the type of railing to be used
05/12/20	JL	Bridge geometry revised to be consistent with approved shop drawings
05/12/20	JL	Centerline of bridge shifted based on bridge geometry from approved shop drawings
12/29/20	JL	Lengthen concrete barrier and additional retaining wall



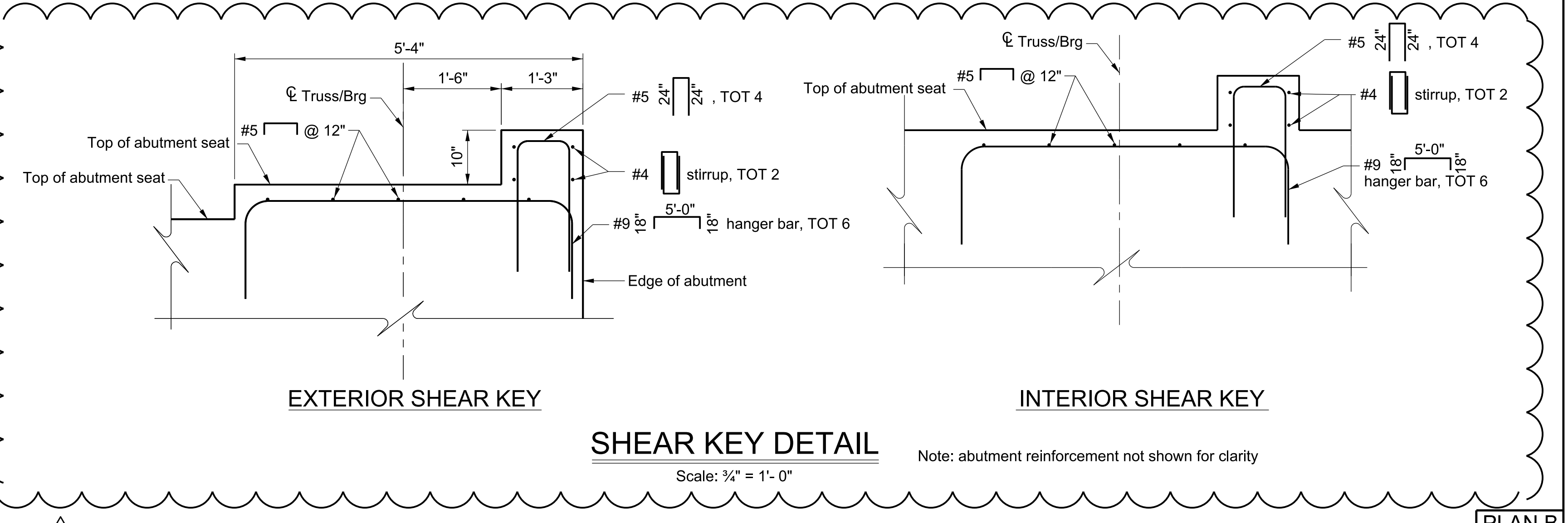
LOS ANGELES COUNTY PUBLIC WORKS  
**GENERAL PLAN**  
 MULHOLLAND HIGHWAY  
 OVER  
 TRIUNFO CREEK  
 BRIDGE 1180 ON-SYSTEM (RDC WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 2 OF 9  
 STATE BR. NO. 53C2380



**DECK CONTOUR**  
Scale: 3/16" = 1'-0"

- Note:
- X - 10' intervals along station line
  - Contours do not include camber
  - Contour interval is 0.05'
  - See Plan Rd beyond bridge

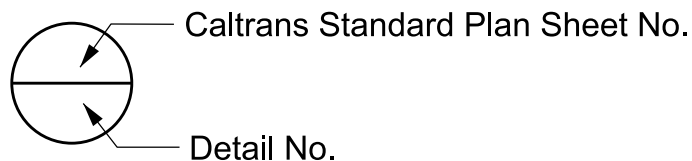


**STANDARD PLANS**

California Department of Transportation (Caltrans), Standard Plans, 2018 Edition

- A62C Limits of Payment for Excavation and Backfill - Bridge
- B0-1 Bridge Details
- B0-2 Bridge Details
- B0-5 Bridge Details
- B3-4A Retaining Wall Type 5
- B3-5 Retaining Wall Detail No. 1
- B11-51 Tubular Hand Railing
- B11-57 Concrete Barrier Type 742
- D89 Pipe Culvert Headwalls Straight and "L"

- Note: 1. For installing drill and bond reinforcing steel, drill holes without damaging adjacent concrete. If reinforcement is encountered during drilling, drill a new hole adjacent to the rejected hole and do not damage reinforcement. Rejected holes shall be patched with Class E mortar or Portland Cement Concrete.
2. When new concrete is placed against formed concrete, the existing concrete surface shall be roughened to an amplitude of 1/4" by hammering.



THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DATE \_\_\_\_\_  
REVIEWED BY \_\_\_\_\_  
CADD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
CHECKER: K. Ho  
DESIGNER: J. Lu  
DRAFTER: S. Seetha

DATE	MK	DESCRIPTION
05/13/20	△	Bridge centerline shifted based on bridge geometry shown in approved shop drawings
05/13/20	△	Monolithic shear key added
12/29/20	△	Cover wall details at northeast corner of abutment 2 added

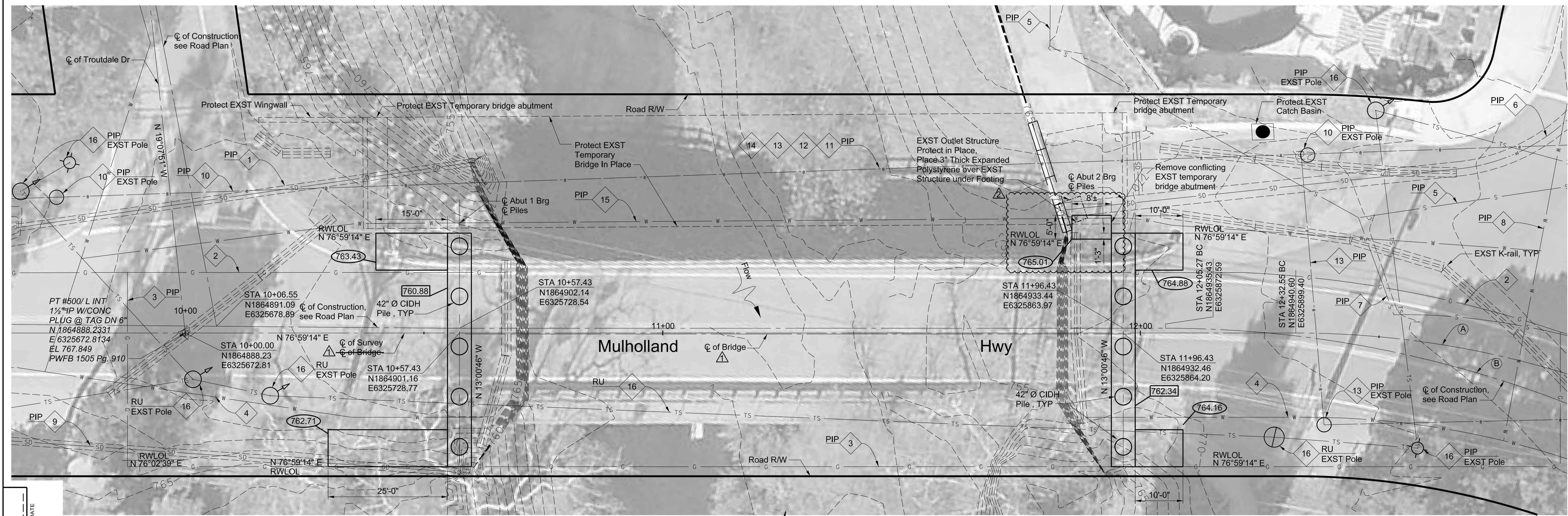


LOS ANGELES COUNTY PUBLIC WORKS

**DECK CONTOURS**  
MULHOLLAND HIGHWAY  
OVER  
TRIUNFO CREEK  
BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 3 OF 9  
STATE BR. NO. 53C2380

AS BUILT DRAWINGS



UTILITY	OWNER/DESCRIPTION
1	18" CMP STORM DRAIN COUNTY OF LOS ANGELES
2	4" GAS LINE (ABANDONED) SOUTHERN CALIFORNIA GAS
3	4" GAS LINE SOUTHERN CALIFORNIA GAS
4	12" WATER LINE (ABANDONED) LAS VIRGENES MUNICIPAL WATER DISTRICT
5	36" SEWER LINE LAS VIRGENES MUNICIPAL WATER DISTRICT
6	36" RCP STORM DRAIN LOS ANGELES COUNTY
7	36" SEWER LINE LAS VIRGENES MUNICIPAL WATER DISTRICT
8	10" WATER LINE LAS VIRGENES MUNICIPAL WATER DISTRICT
9	10" CMP STORM DRAIN LOS ANGELES COUNTY
10	ELECTRICAL (OVERHEAD) SOUTHERN CALIFORNIA EDISON
11	TELECOMMUNICATION (OVERHEAD) AT&T
12	CABLE TELEVISION (OVERHEAD) CHARTER COMMUNICATIONS
13	ELECTRICAL (OVERHEAD) SOUTHERN CALIFORNIA EDISON
14	TELECOMMUNICATION (OVERHEAD) CROWN CASTLE
15	14" WATER LINE LAS VIRGENES MUNICIPAL WATER DISTRICT
16	TRAFFIC SIGNAL ELETRIC LINE (OH) LOS ANGELES COUNTY

### UTILITY NOTES

- Location of utility facilities shown on these plans are approximate and shall be verified by the contractor prior to construction.
- Overhead electrical distribution and transmission lines are located within the project limits. Contractor shall maintain adequate clearances per Cal/OSHA and Southern California Edison requirements.
- See Plan RD for additional utility information.
- UTILITY LEGEND:  
 PIP Utility To Be Protected In Place By Contractor  
 RU Utility To Be Relocated By Owners  
 RU (C) Utility To Be Relocated By Contractor  
 R Utility To Be Removed By Owners  
 R (C) Utility To Be Removed By Contractor  
 SIP Utility To Be Supported In Place By Contractor

### BENCHMARK

PT #500/¢ INT MALIBU 2008 ADJ EL. 767.849  
 NAVD 1988

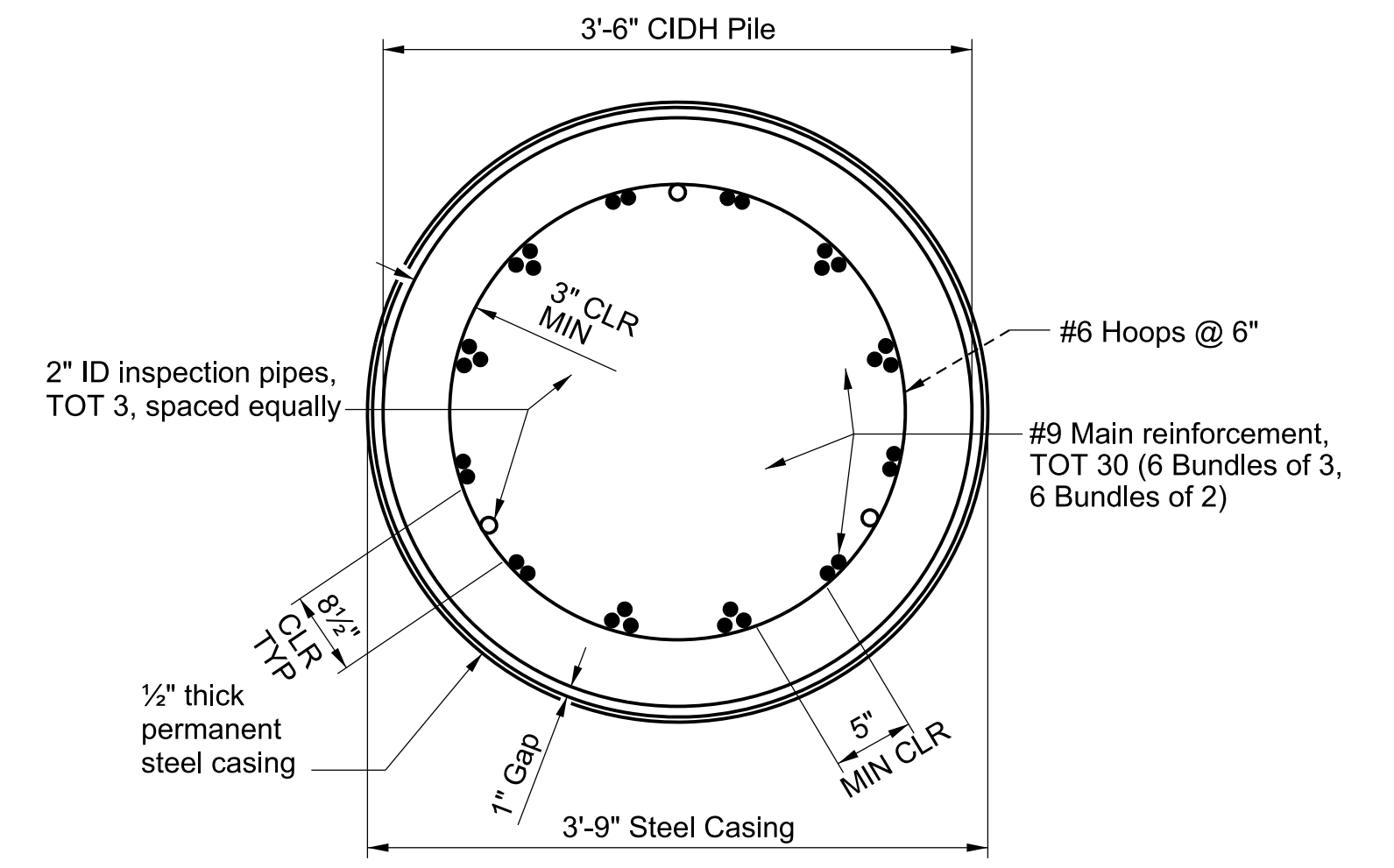
1 1/2" IP W/CONC PLUG & TAG DN 6" N 1864888.2331 E 6325672.8134 PWFB 1505 PAGE 910

### FOUNDATION PLAN

- Scale: 1" = 10'-0"
- Notes:
- Existing topography shall be verified in the field by the Contractor.
  - Existing contours and elevations are based on a Los Angeles County Public Works survey of Mulholland Highway over Triunfo Creek dated July 23, 2019.
  - Bottom of abutment footing elevations indicated thus:
  - Bottom of retaining wall footing elevations indicated thus:

PILE DATA TABLE					
Location	Pile Type	Allowable Resistance		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
		Compression (kips)	Tension (kips)		
Abut 1	42" CIDH	820	-	728	728
Abut 2	42" CIDH	820	-	728	728

CURVE DATA						
Curve	Radius (ft)	Curve Angle			Length (ft)	Tangent (ft)
		Deg.	Min.	Sec.		
(A)	192.59	75	49	50	254.89	150.01
(B)	232.00	74	24	21	301.28	176.21



### TYPICAL 42" DIA CIDH PILE SECTION

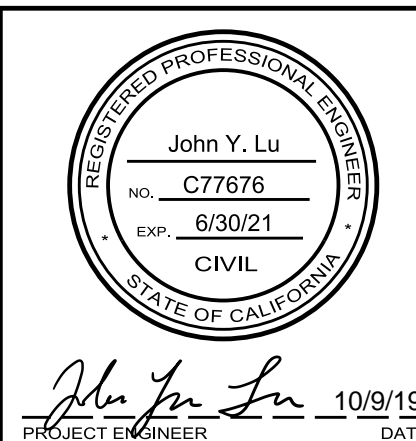
Note: 1. All hoops are "Ultimate" butt spliced continuous.  
 2. Fill gap between steel casing and CIDH pile with expanded polystyrene.  
 3. Pile installation sequence shall be per Special Provisions.

Scale: 1" = 1'-0"

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DATE \_\_\_\_\_  
 REVIEWED BY \_\_\_\_\_  
 CAD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
 CHECKER: K. Ho  
 DESIGNER: J. Lu  
 DRAFTER: S. Saeithao

DATE	MK	DESCRIPTION
05/13/20		Bridge centerline shifted based on bridge geometry shown in approved shop drawings
12/29/20		Construct additional retaining wall
REVISIONS		



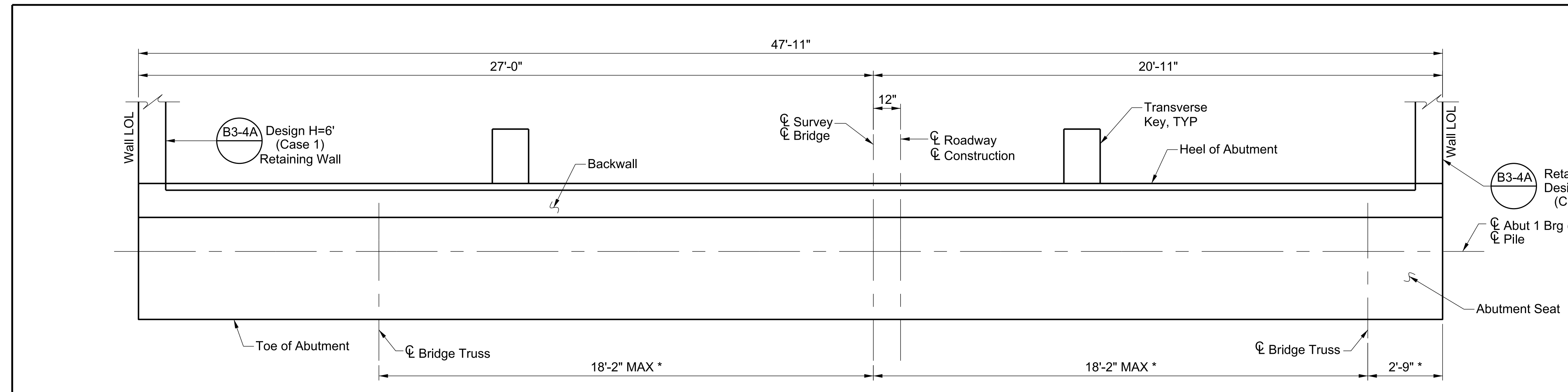
LOS ANGELES COUNTY PUBLIC WORKS

## FOUNDATION PLAN

### MULHOLLAND HIGHWAY OVER TRIUNFO CREEK

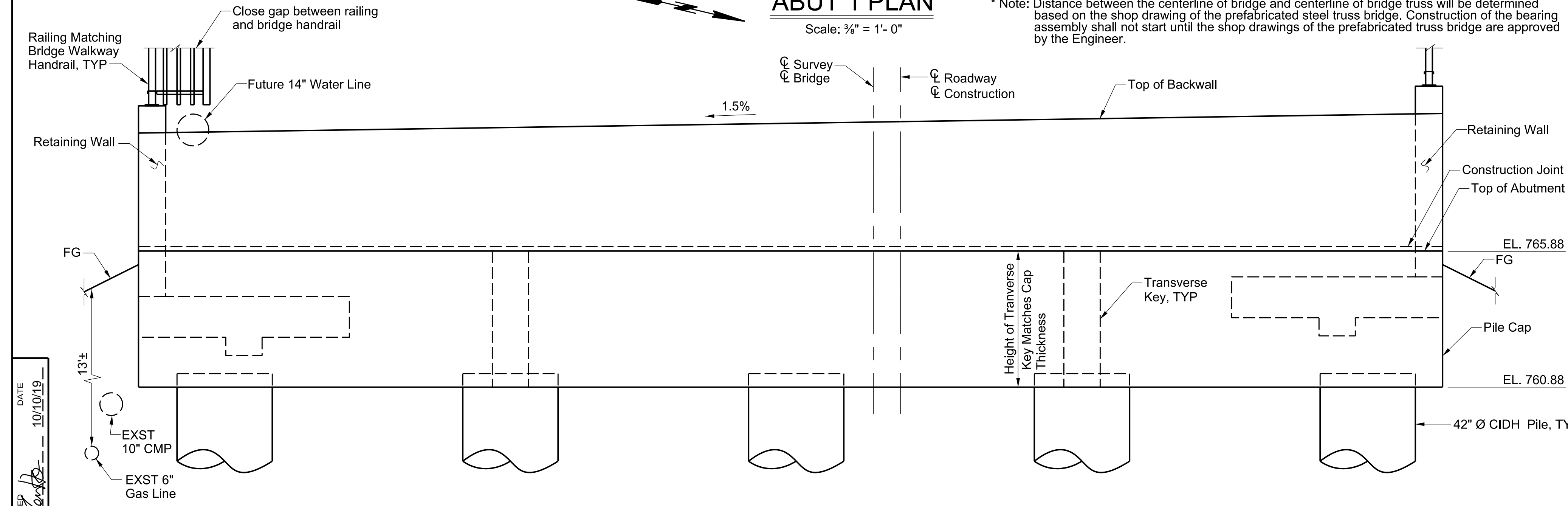
BRIDGE 1180 ON-SYSTEM (2018WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 4 OF 9  
 STATE BR. NO. 53C2380



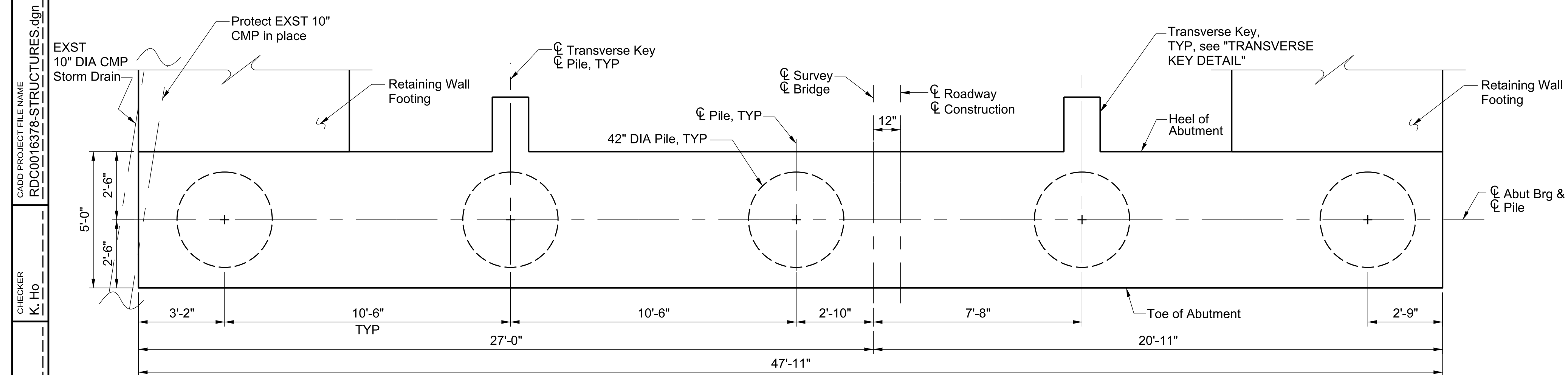
**ABUT 1 PLAN**  
Scale: 3/8" = 1'-0"

\* Note: Distance between the centerline of bridge and centerline of bridge truss will be determined based on the shop drawing of the prefabricated steel truss bridge. Construction of the bearing assembly shall not start until the shop drawings of the prefabricated truss bridge are approved by the Engineer.



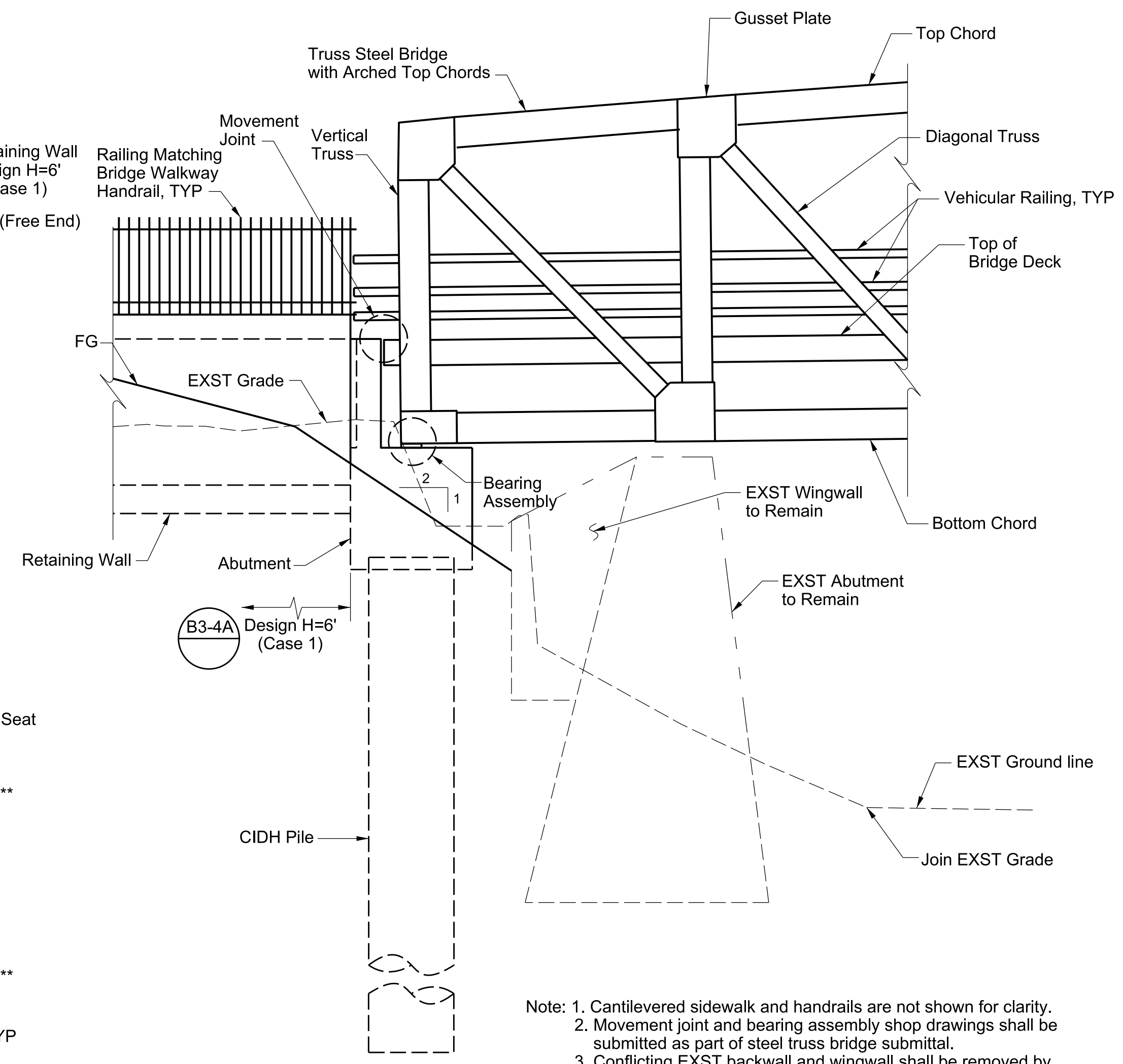
**ELEVATION**  
Scale: 3/8" = 1'-0"

\*\* Note: Final bottom of footing and seat elevations will be verified and finalized after the shop drawing of prefabricated steel truss bridge has been reviewed and approved by the Engineer. Construction of the pile cap shall not start until the elevations have been verified by the Engineer.



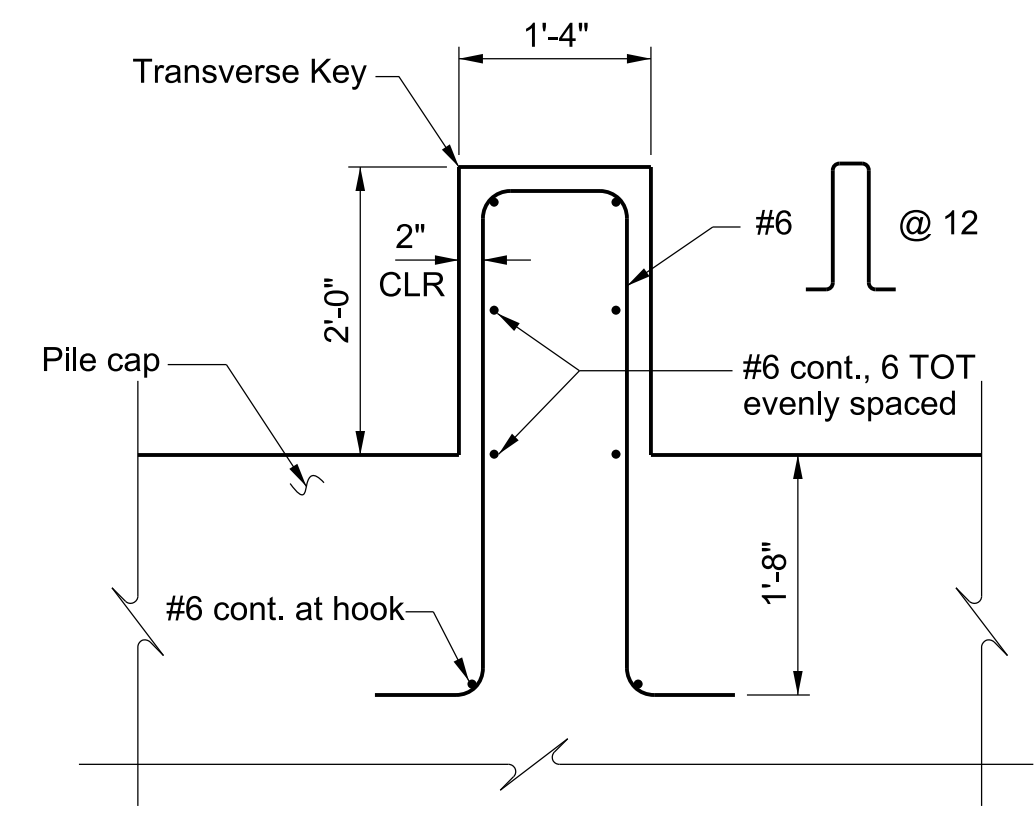
**PILE LAYOUT**  
Scale: 3/8" = 1'-0"

**PILE CONSTRUCTION SEQUENCE**  
1. Construction of CIDH piles shall begin with the center pile, and the center pile shall meet the gamma-gamma test acceptance criteria before starting the construction for the remaining piles.  
2. Northmost pile shall be constructed last.



**RETAINING WALL ELEVATION**  
Scale: 1/4" = 1'-0"

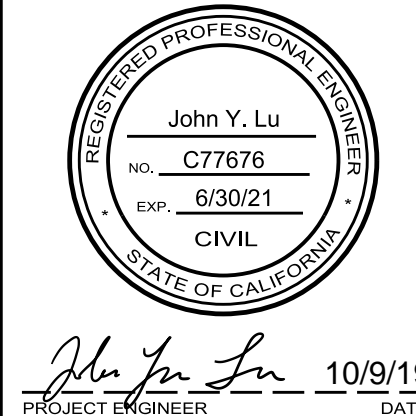
Note: 1. Cantilevered sidewalk and handrails are not shown for clarity.  
2. Movement joint and bearing assembly shop drawings shall be submitted as part of steel truss bridge submittal.  
3. Conflicting EXST backwall and wingwall shall be removed by saw-cutting neatly to create straight and smooth surface. Exposed rebar resulted from the cut shall be burnt 2" below surface and patched with mortar.



**TRANSVERSE KEY DETAIL**  
Scale: 3/8" = 1'-0"

DATE: 10/10/19  
REVIEWED BY: [Signature]  
CADD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
CHECKER: K. Ho  
DESIGNER: J. Lu  
DRAFTER: D. Rojas

DATE	MK	DESCRIPTION
REVISIONS		

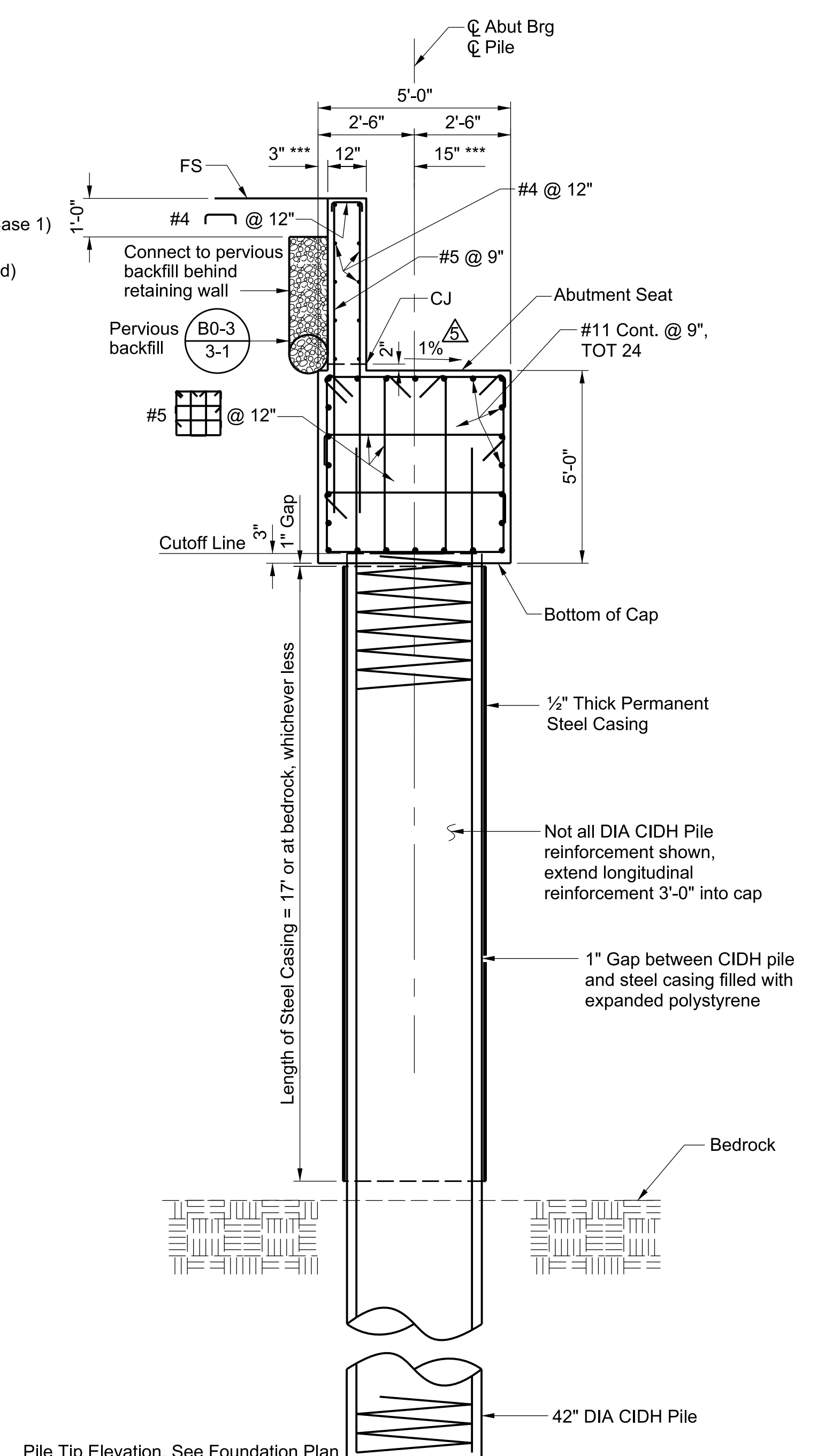
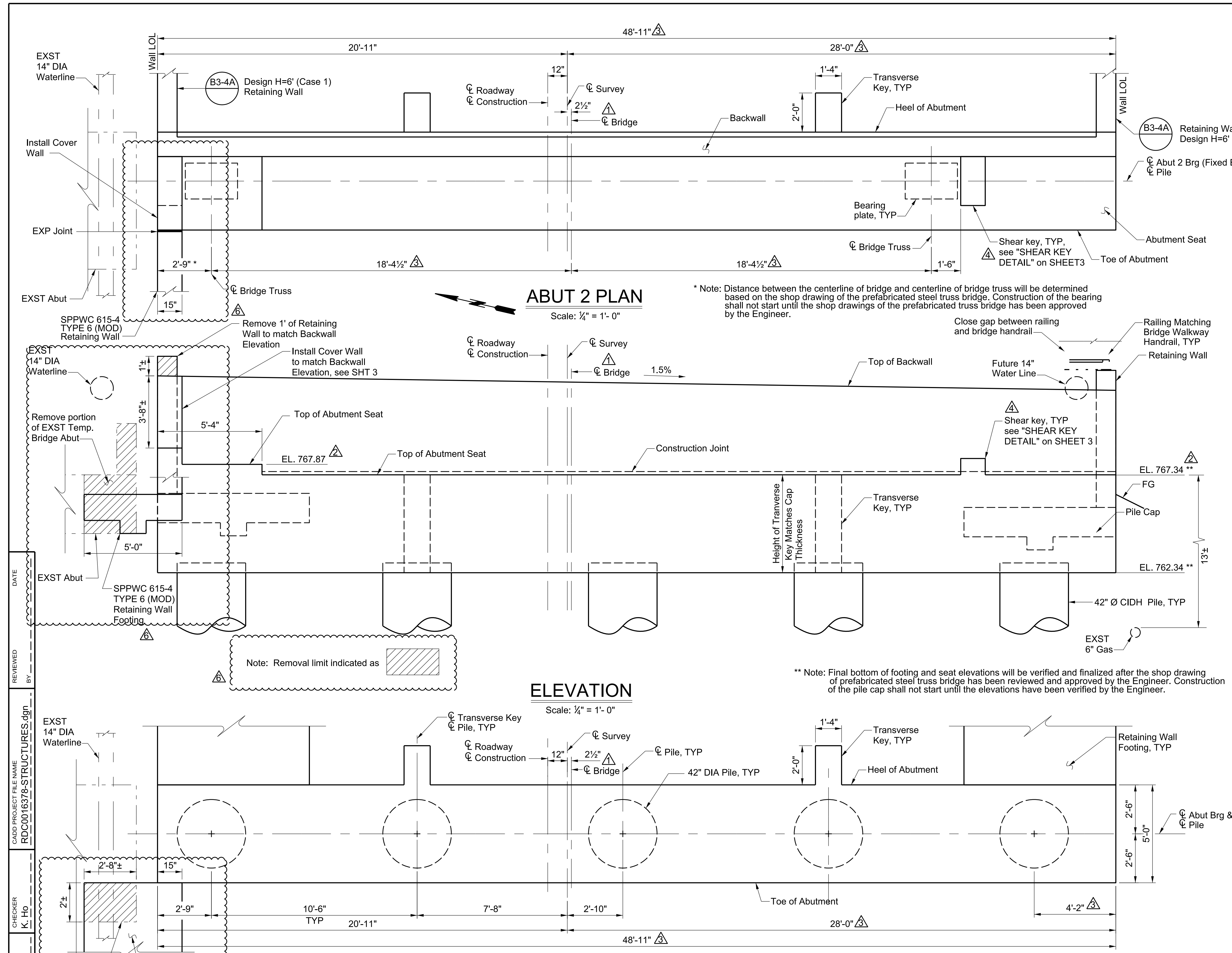


LOS ANGELES COUNTY PUBLIC WORKS  
**ABUTMENT 1 PLAN**  
MULHOLLAND HIGHWAY  
OVER  
TRIUNFO CREEK  
BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 5 OF 9  
STATE BR. NO. 53C2380

PLAN B

AS BUILT DRAWINGS



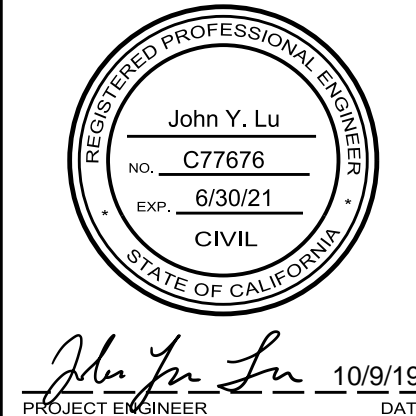
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REVIEWED BY  
CADD PROJECT FILE NAME  
RDC0016378-STRUCTURES.dgn  
CHECKER  
K. Ho  
DESIGNER  
J. Lu  
DRAFTER  
S. Saethao

Note: 1. Temporary shoring to support the roadway and slope is shown schematically. The Contractor shall determine the type of shoring, dimension and layout. The Contractor shall submit shoring plan for review and approval.  
2. Temporary shoring for pile cap construction shall remain in place. The portion interfering with bridge superstructure and retaining wall shall be cut.

**PILE LAYOUT**  
Scale: 1/4" = 1'-0"

**PILE CONSTRUCTION SEQUENCE**  
1. Construction of CIDH piles shall begin with the center pile, and the center pile shall meet the gamma-gamma test acceptance criteria before starting the construction for the remaining piles.  
2. Northmost pile shall be constructed last.

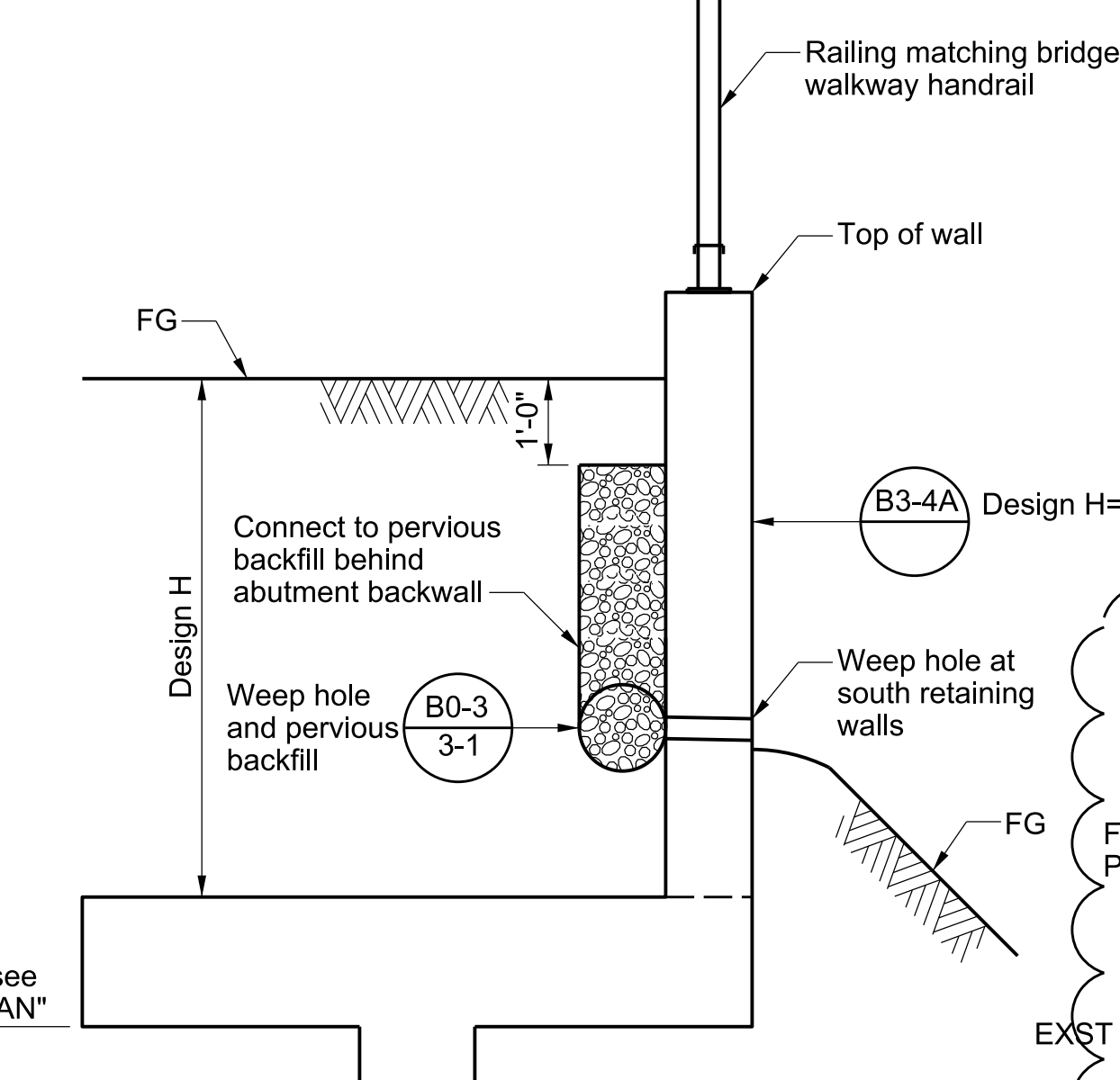
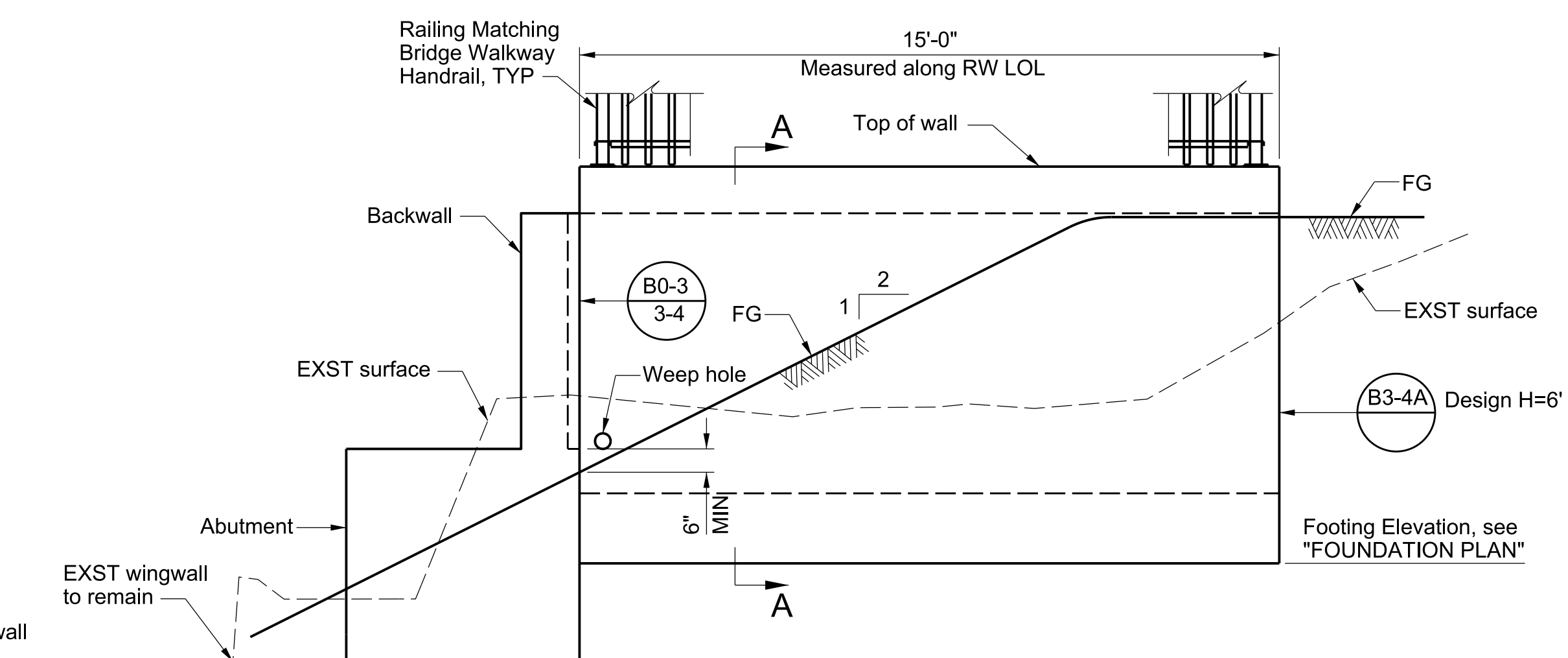
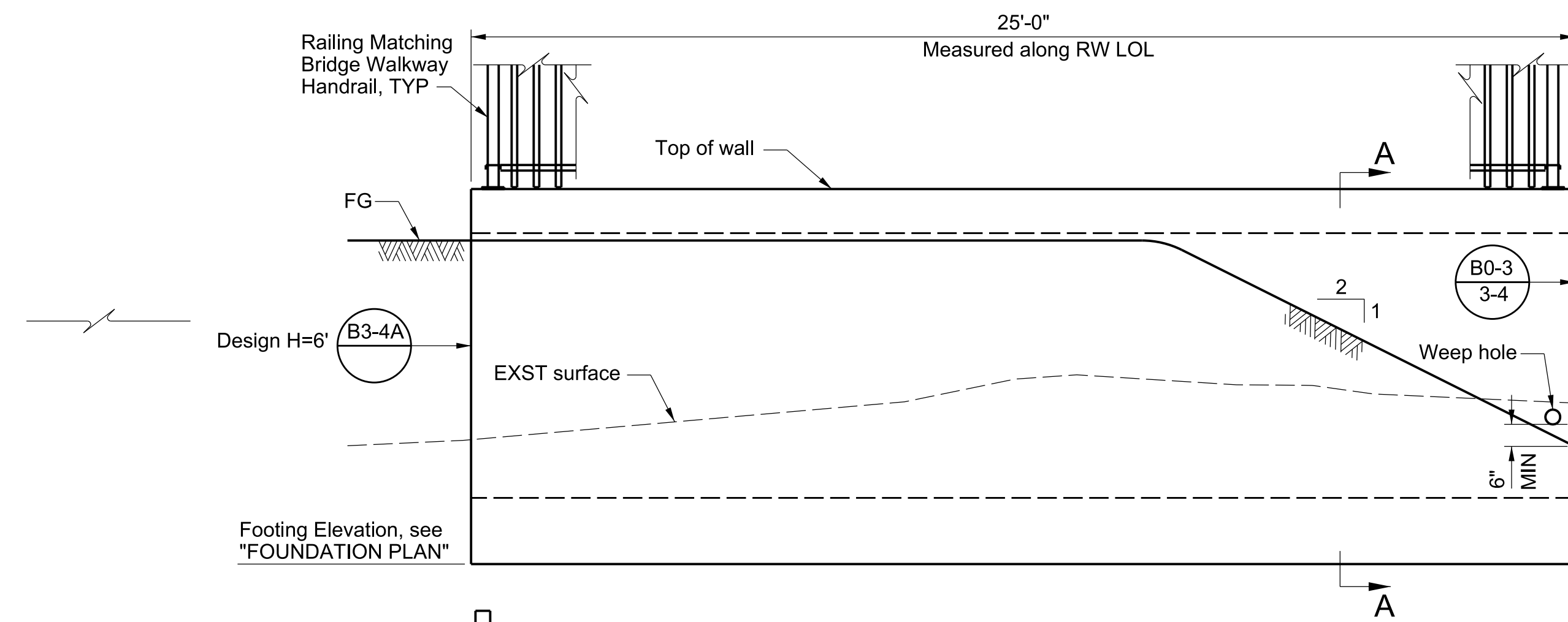
DATE	BY	DESCRIPTION
12/29/20		Construct cover wall and additional retaining wall
05/13/20		Bridge centerline shifted based on bridge geometry shown in approved shop drawings
05/13/20		Elevations updated based on bridge geometry shown in approved shop drawings
05/13/20		Pile cap geometry revised based on bridge dimensions from approved shop drawings
05/13/20		Monolithic shear key added
05/13/20		1% slope to abutment seat added
DATE	MK	DESCRIPTION
REVISIONS		



THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

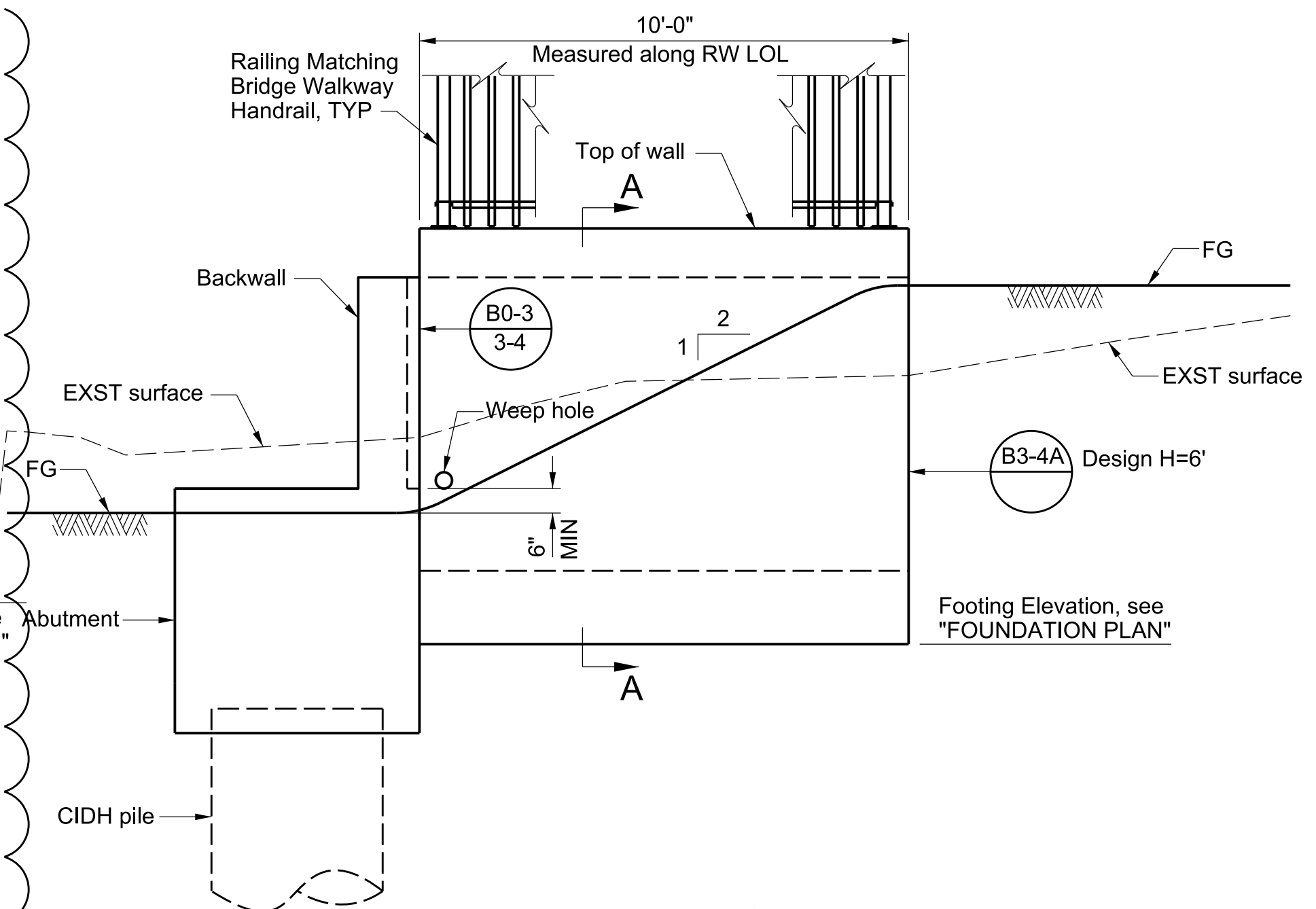
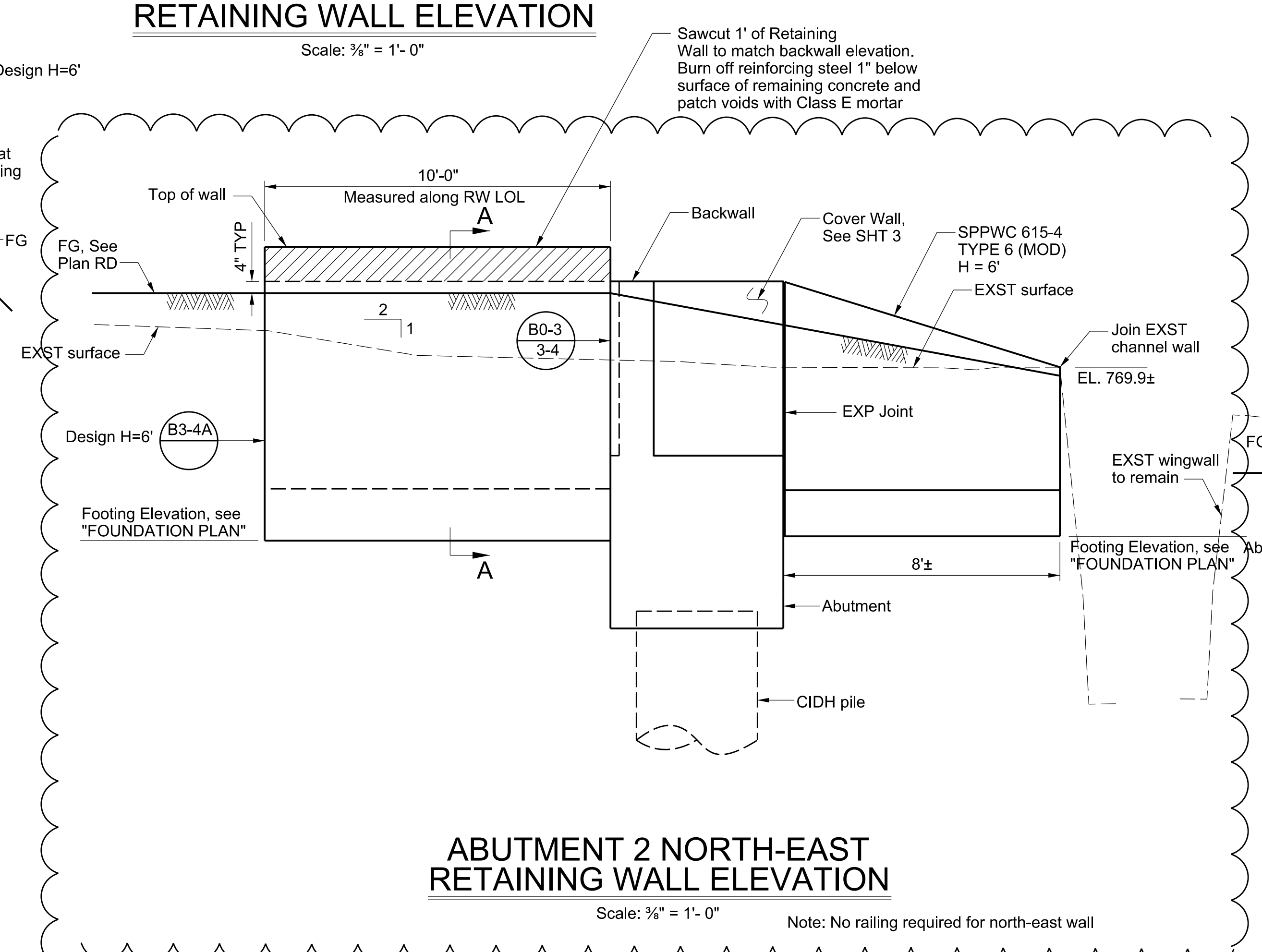
LOS ANGELES COUNTY PUBLIC WORKS  
**ABUTMENT 2 PLAN**  
MULHOLLAND HIGHWAY  
OVER  
TRIUNFO CREEK  
BRIDGE 1180 ON-SYSTEM (RDC WOOLSEY FIRE)  
PROJECT ID NO. RDC0016378

AS BUILT DRAWINGS



**ABUTMENT 1 SOUTH-WEST  
RETAINING WALL ELEVATION**  
Scale: 3/8" = 1'-0"

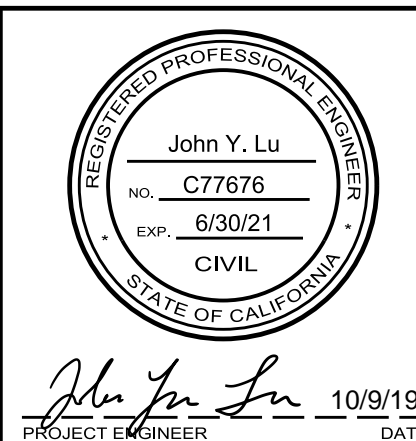
**ABUTMENT 1 NORTH-WEST  
RETAINING WALL ELEVATION**  
Scale: 3/8" = 1'-0"



**ABUTMENT 2 NORTH-EAST  
RETAINING WALL ELEVATION**  
Scale: 3/8" = 1'-0"

**ABUTMENT 2 SOUTH-EAST  
RETAINING WALL ELEVATION**  
Scale: 3/8" = 1'-0"

DATE	MK	DESCRIPTION
12/29/20		Construct cover wall and additional retaining wall



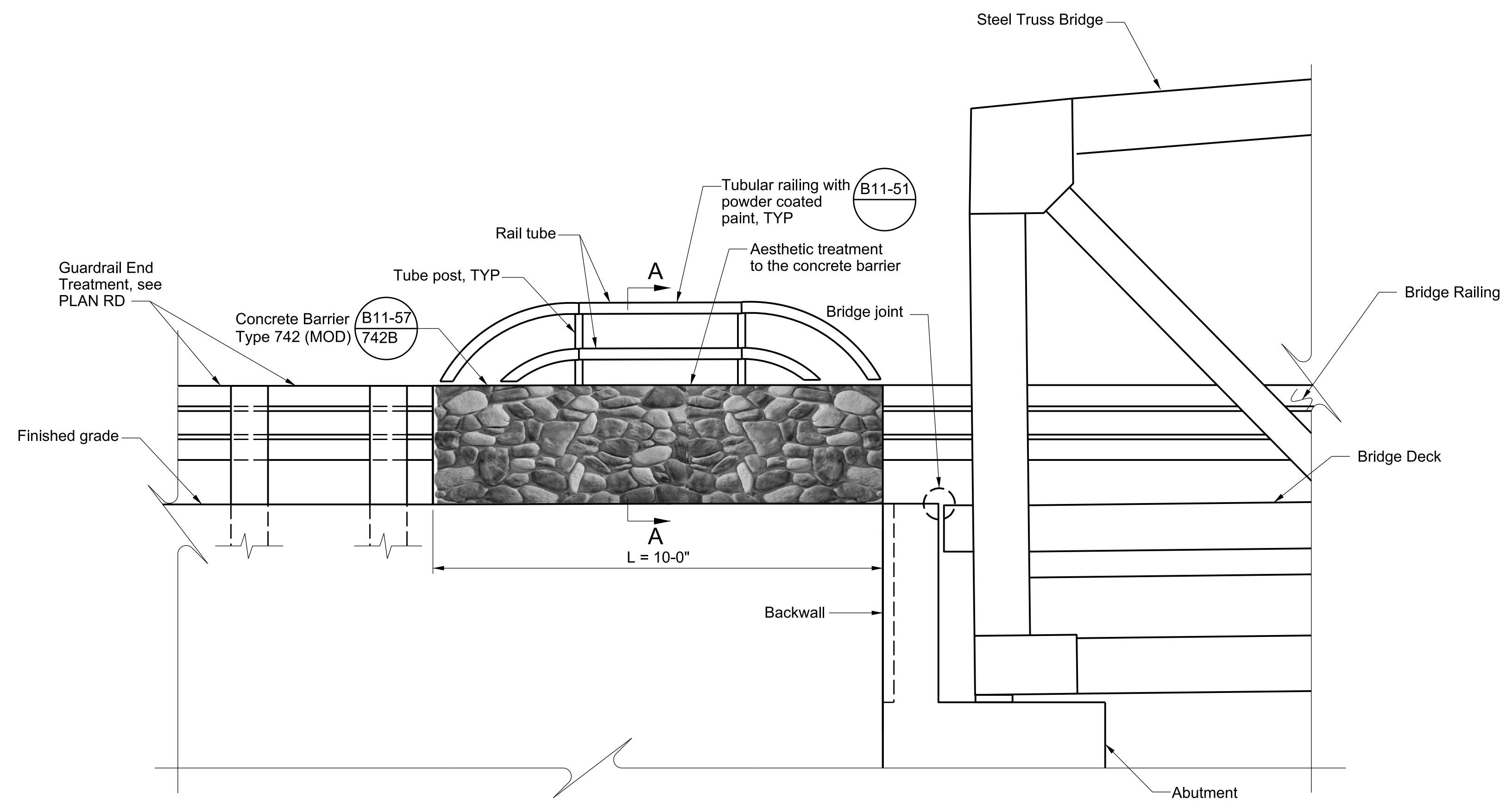
LOS ANGELES COUNTY PUBLIC WORKS  
**ABUTMENT DETAILS**  
 MULHOLLAND HIGHWAY  
 OVER  
 TRIUNFO CREEK  
 BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 7 OF 9  
 STATE BR. NO. 53C2380

DATE \_\_\_\_\_  
 REVIEWED BY \_\_\_\_\_  
 CADD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
 CHECKER: K. Ho  
 DESIGNER: J. Lu  
 DRAFTER: D. Rojas

PLAN B

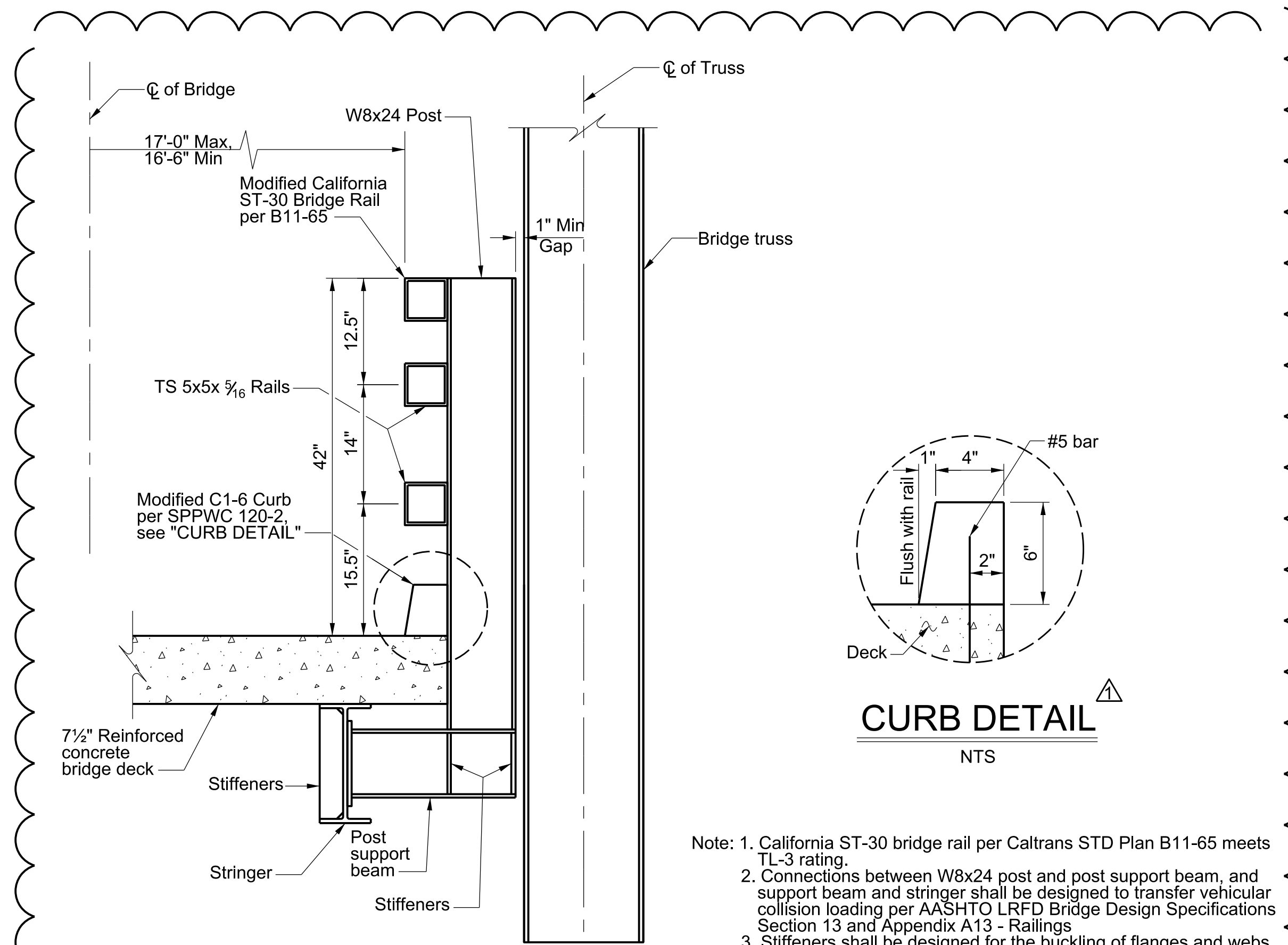
AS BUILT DRAWINGS



**ELEVATION**

Scale: 1/2" = 1'-0"

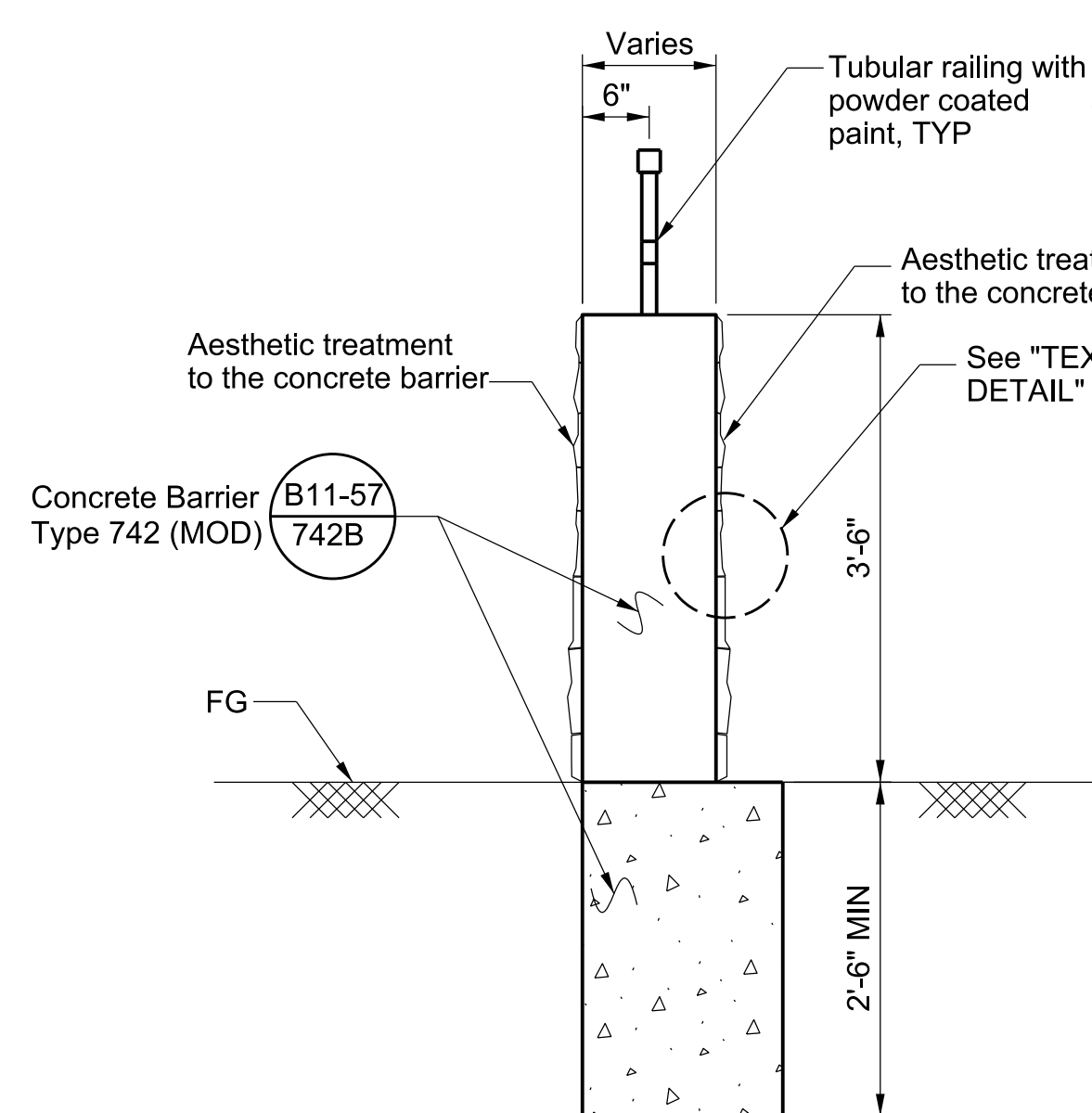
Note: Aesthetic treatment to the concrete barrier shall consist of river rock veneer with 2'-8" diameter per Special Provisions. Color of rock veneer shall be of beige, brown and gray.



**BRIDGE RAILING DETAIL**

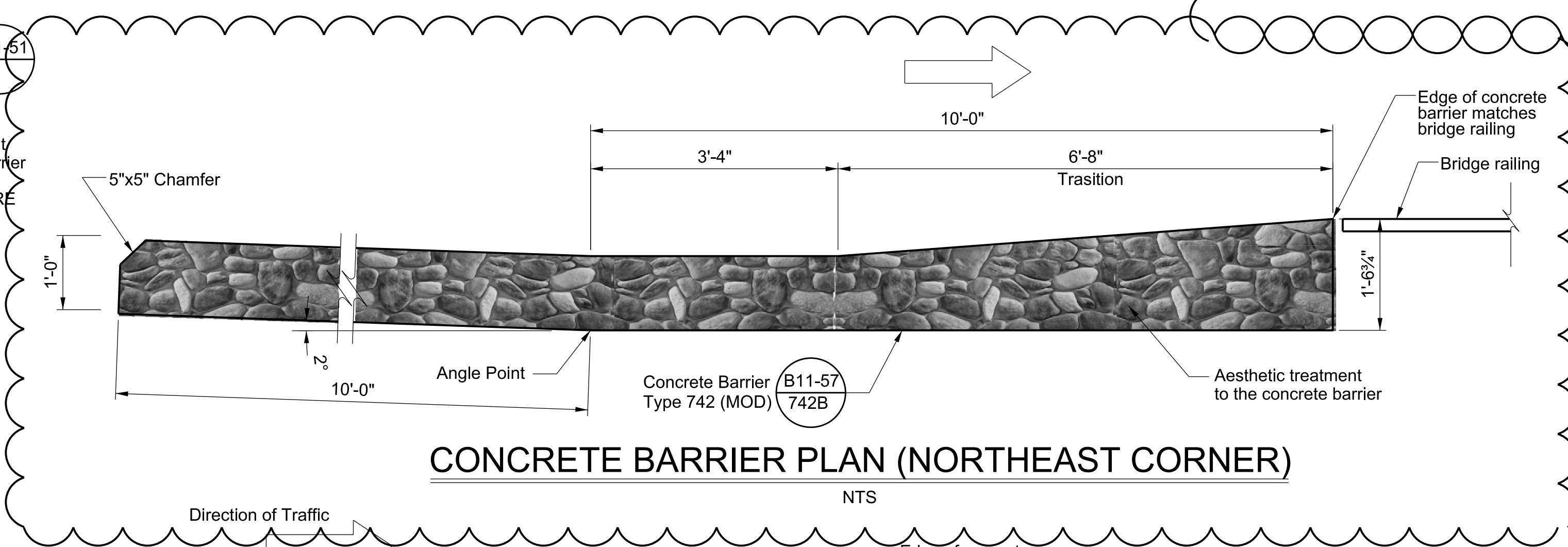
NTS

- Note: 1. California ST-30 bridge rail per Caltrans STD Plan B11-65 meets TL-3 rating.
- 2. Connections between W8x24 post and post support beam, and support beam and stringer shall be designed to transfer vehicular collision loading per AASHTO LRFD Bridge Design Specifications Section 13 and Appendix A13 - Railings.
- 3. Stiffeners shall be designed for the buckling of flanges and webs of the support beams and stringers.
- 4. Calculations for the bridge railings and connections to account for collision loading shall be submitted for review and approval.



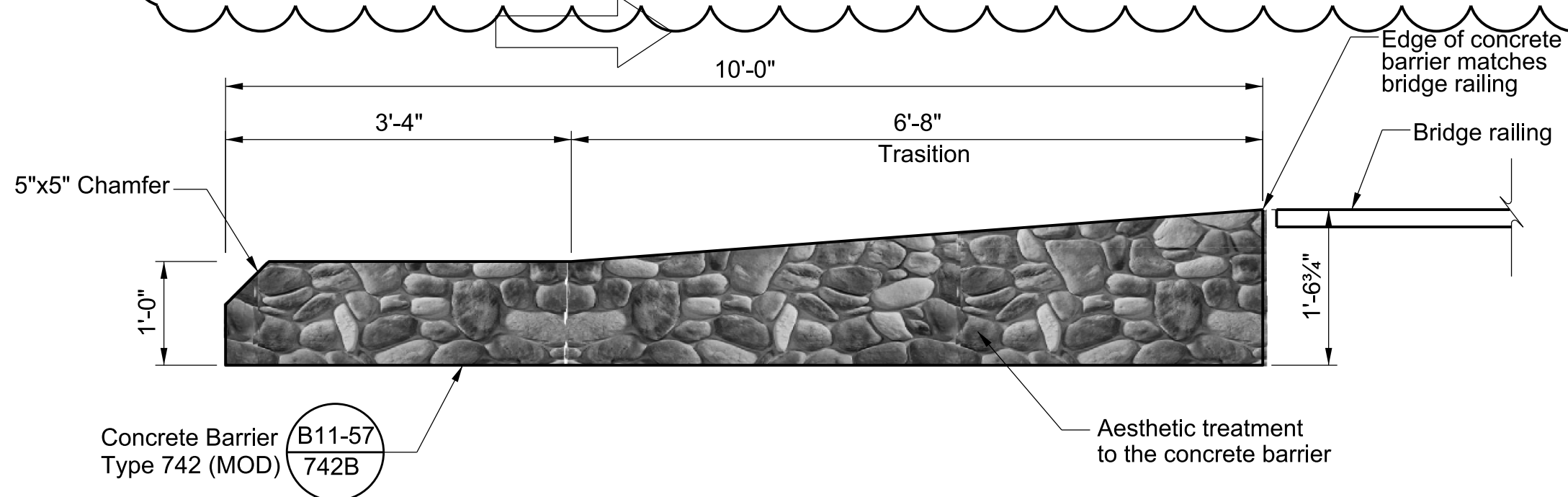
**SECTION A-A**

NTS



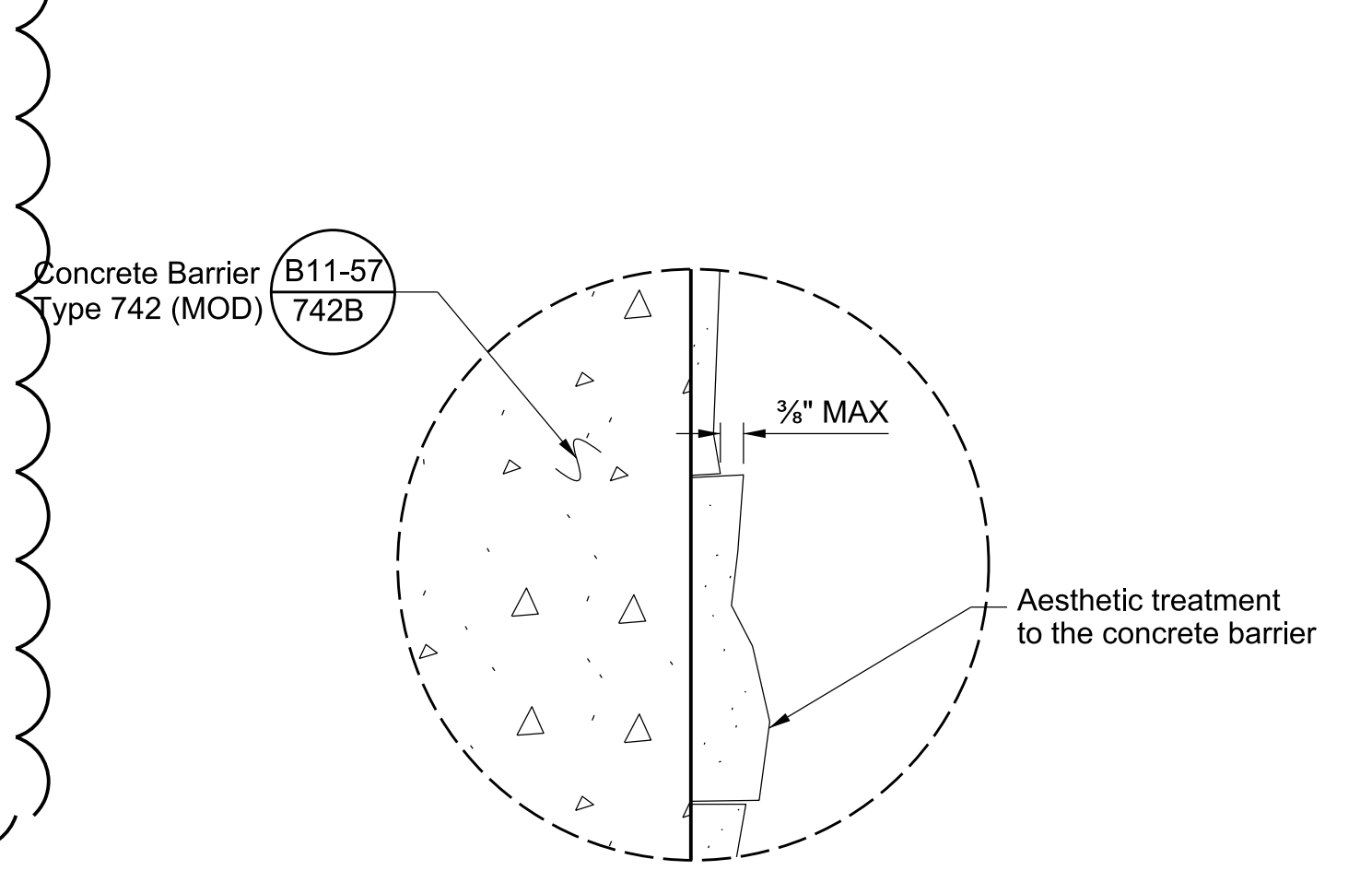
**CONCRETE BARRIER PLAN (NORTHEAST CORNER)**

NTS



**CONCRETE BARRIER PLAN**

NTS



**TEXTURE DETAIL**

NTS

DATE \_\_\_\_\_  
 REVIEWED BY \_\_\_\_\_  
 CAD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
 CHECKER: K. Ho  
 DESIGNER: J. Lu  
 DRAFTER: D. Rojas

DATE	MK	DESCRIPTION
10/28/19		Bridge railing detail provided to clarify the type of railing to be used
12/29/20		Extend concrete barrier 10' at northeast corner

REGISTERED PROFESSIONAL ENGINEER  
 John Y. Lu  
 No. C77676  
 Exp. 6/30/21  
 CIVIL  
 STATE OF CALIFORNIA  
 PROJECT ENGINEER

LOS ANGELES COUNTY PUBLIC WORKS  
**BARRIER DETAILS**  
 MULHOLLAND HIGHWAY  
 OVER  
 TRIUNFO CREEK  
 BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
 PROJECT ID NO. RDC0016378

BR. NO. 4283 PCA X931001559 DWG PB691891 SHEET 8 OF 9  
 STATE BR. NO. 53C2380

PLAN B

AS BUILT DRAWINGS

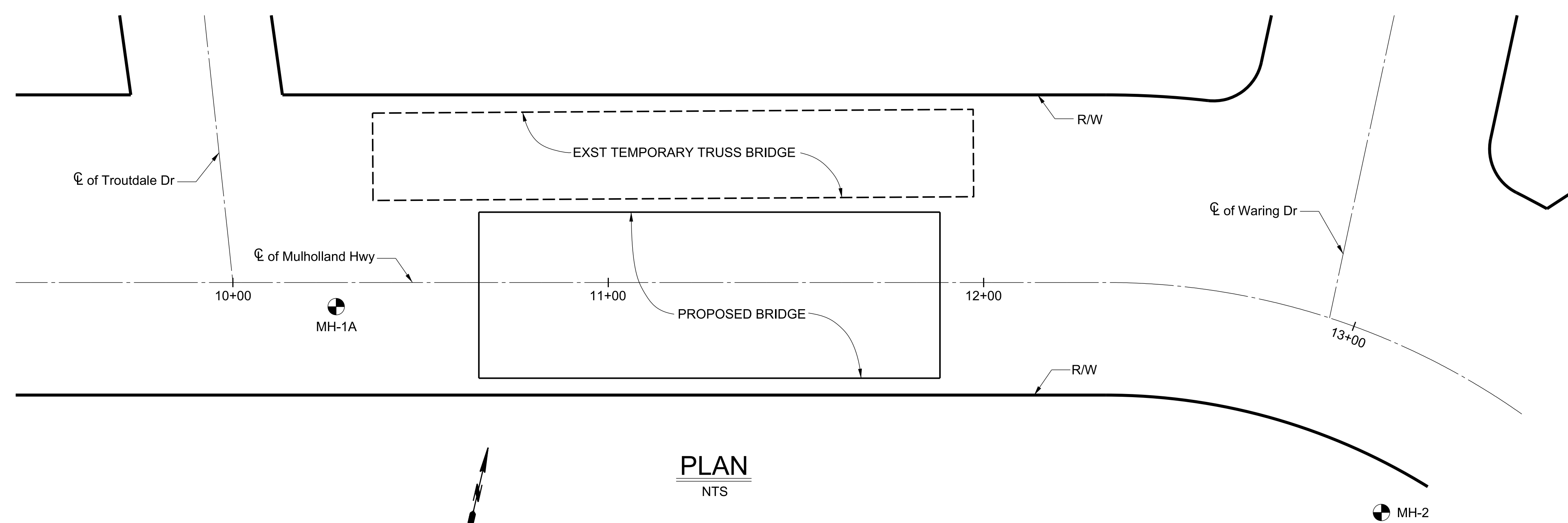


BORING NUMBER MH-1A PAGE 1 OF 2										
CLIENT: Design Division PROJECT NAME: Mulholland Highway over Triunfo Creek (Bridge 1180) PROJECT LOCATION: West side of bridge (see location map) PROJECT NUMBER: X231001559 Boring Location: West Side of Mulholland Highway Drilling Contractor: Cascade Drilling Method: Air-Rotary Drill Rig Type: ARCH Drill Rig Hammer Description: N/A Notes: 2018 Woolsey Fire										
DEPTH (ft)	SPACING	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (IN VALUE)	COMMENTS	DEPTH (ft)	ATTENBERG LIMITS	PLASTICITY	FLUIDITY
0		ASPHALT								
0		BASE								
0		ALLUVIUM								
0		Groundwater encountered				@19' cuttings are wet				
22		VOLCANIC BEDROCK				Andesite gray with some oxidation, very hard, wet.				
22		@25' rounded, coarse gravel fragments, magenta				Change to hammer bit @ 10.42 Driller can tell coarse gravel is coming in where hole is not cased between 22'-26'				

BORING NUMBER MH-1A PAGE 2 OF 2										
CLIENT: Design Division PROJECT NAME: Mulholland Highway over Triunfo Creek (Bridge 1180) PROJECT LOCATION: West side of bridge (see location map) PROJECT NUMBER: X231001559 Boring Location: West Side of Mulholland Highway Drilling Contractor: Cascade Drilling Method: ARCH Drill Rig Drill Rig Type: ARCH Drill Rig Hammer Description: N/A Notes: 2018 Woolsey Fire										
DEPTH (ft)	SPACING	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (IN VALUE)	COMMENTS	DEPTH (ft)	ATTENBERG LIMITS	PLASTICITY	FLUIDITY
35		VOLCANIC BEDROCK (continued)								
45		TD=45'				Groundwater encountered @ 20' Backfilled with bentonite chips to 10' Dine casing to 22' Casing above LVL switch to hammer bit @ 25' Top of creek @ 19' below road grade on 2/13/19				

BORING NUMBER MH-2 PAGE 1 OF 2										
CLIENT: Design Division PROJECT NAME: Mulholland Highway over Triunfo Creek (Bridge 1180) PROJECT LOCATION: West side of bridge (see location map) PROJECT NUMBER: X231001559 Boring Location: West Side of Mulholland Highway Drilling Contractor: Cascade Drilling Method: ARCH Drill Rig Drill Rig Type: ARCH Drill Rig Hammer Description: N/A Notes: 2018 Woolsey Fire										
DEPTH (ft)	SPACING	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (IN VALUE)	COMMENTS	DEPTH (ft)	ATTENBERG LIMITS	PLASTICITY	FLUIDITY
0		ASPHALT								
0		BASE								
0		ALLUVIUM				Rocky, small cobbles up to 6 in, rounded, volcanic, dry				
20		VOLCANIC BEDROCK				Andesite, medium gray, very hard, dry Below 25' white mineral in fractures				
25		@ 25' white mineral veining (calcium carbonate) in fractures								

BORING NUMBER MH-2 PAGE 2 OF 2										
CLIENT: Design Division PROJECT NAME: Mulholland Highway over Triunfo Creek (Bridge 1180) PROJECT LOCATION: West side of bridge (see location map) PROJECT NUMBER: X231001559 Boring Location: West Side of Mulholland Highway Drilling Contractor: Cascade Drilling Method: ARCH Drill Rig Drill Rig Type: ARCH Drill Rig Hammer Description: N/A Notes: 2018 Woolsey Fire										
DEPTH (ft)	SPACING	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY (%)	BLOW COUNTS (IN VALUE)	COMMENTS	DEPTH (ft)	ATTENBERG LIMITS	PLASTICITY	FLUIDITY
35		VOLCANIC BEDROCK (continued)								
45		TD=45'				Groundwater not encountered Dine casing to 17' Backfilled with cuttings				



PLAN  
NTS

PROFESSIONAL GEOLOGIST  
Karin L. Burger  
No. 2507  
CERTIFIED ENGINEERING GEOLOGIST  
10/1/19

DATE: 10/10/19  
REVIEWED BY: [Signature]  
CADD PROJECT FILE NAME: RDC0016378-STRUCTURES.dgn  
CHECKER: W. MAN  
DESIGNER: K. MENDEZ  
DRAFTER: D. ROJAS

DATE	MK	DESCRIPTION
REVISIONS		

REGISTERED PROFESSIONAL ENGINEER  
KAREN MENDEZ  
NO. C 88375  
EXP. 3-31-2021  
CIVIL  
STATE OF CALIFORNIA  
10/1/19  
PROJECT ENGINEER

LOS ANGELES COUNTY PUBLIC WORKS  
**LOG OF BORING**  
MULHOLLAND HIGHWAY  
OVER  
TRIUNFO CREEK  
BRIDGE 1180 ON-SYSTEM (2018 WOOLSEY FIRE)  
PROJECT ID NO. RDC0016378

BR. NO. 1180 PCA X931001559 DWG PB691891 SHEET 9 OF 9  
STATE BR. NO. 53C2380

AS BUILT DRAWINGS

DATE PLOTTED June 9, 2020

S:\JOBS\CALIFORNIA\200045-Los Angeles Co, CA Galvanized Truss\Drawings\Revisions\200045 Rev14 6-3-20 AS20\Detail1a-4.dwg

**GENERAL NOTES:**

- FABRICATION DRAWINGS PREPARED IN CONJUNCTION WITH CONTRACT DRAWINGS BY PUBLIC WORKS DATED 10-21-2019.
- DESIGN SPECIFICATION:  
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 7TH EDITION (2014), WITH ALL INTERIM SPECIFICATIONS AND CALTRANS AMENDMENTS IN EFFECT.
- MATERIAL:  
ALL SUPERSTRUCTURE STEEL SHALL BE ASTM A709, GRADE 50 (A572), UNLESS NOTED OTHERWISE. ALL STEEL GALVANIZED AFTER FABRICATION. ALL FASTENERS, UNLESS NOTED OTHERWISE SHALL BE 7/8"Ø HIGH STRENGTH BOLTS, ASTM F3125 A325 TYPE 1 (GALV) WITH ASTM A563 GRADE DH OR DH3 NUT AND ONE F436 WASHER PER BOLT. FASTENERS SHALL BE FURNISHED WITH ROTATIONAL CAPACITY TEST.  
  
FLOOR BEAM, FLOOR BEAM END PLATES, BOTTOM CHORD, BOTTOM CHORD STIFFENER PLATES, BOTTOM CHORD SPLICE PLATES, GUSSET PLATES & TENSION DIAGONALS ARE DESIGNATED AS FRACTURE CRITICAL MEMBERS. ALL FRACTURE CRITICAL MEMBERS SHALL MEET TOUGHNESS TESTING CRITERIA FOR FC ZONE 2 CVN (25 FT-LBS @ 40°F). STRINGERS SHALL MEET TOUGHNESS TESTING CRITERIA FOR: NFC ZONE 2 CVN (15 FT-LBS @ 40°F).  
  
IN LIEU OF PROVIDING STEEL WITH THE FCM DESIGNATION ON THE MILL CERTIFICATION, THE REVIEWING AGENCY ACKNOWLEDGES THE FOLLOWING PROCESS IS AN ACCEPTABLE ALTERNATE TO THAT SPECIFIED IN AASHTO/AWS D1.5 12.4.2 AND 12.4.3 FOR DOCUMENTING FRACTURE CRITICAL (FC) MILL ROLLED MATERIAL USED IN FRACTURE CRITICAL MEMBERS (FCM):  
  - THE FABRICATOR SHALL VERIFY THAT THE STEEL HAS BEEN PRODUCED USING FINE-GRAINED PRACTICE BY REVIEW OF THE HEAT MATERIAL RECORDS INDEPENDENT OF THE ORIGIN OF THE STEEL ORDER (MILL OR WAREHOUSE).
  - THE FABRICATOR SHALL VERIFY THAT THE STEEL MEETS THE CHARPY V-NOTCH (CVN) IMPACT TESTING AS STATED ABOVE BY REVIEW OF THE ACCOMPANYING RECORDS, OR BY TEST RECORDS PERFORMED OR CONTRACTED BY THE FABRICATOR, INDEPENDENT OF THE ORIGIN OF THE STEEL ORDER (MILL OR WAREHOUSE).
  - THE FABRICATOR SHALL VERIFY THAT ALL FC MATERIAL HAS BEEN IMPACTED TESTED AT A (P) FREQUENCY PIECE TESTING INTERVAL FOR ROLLED SHAPES AND (PP) FREQUENCY PIECE TESTING INTERVAL FOR PLATE.

- CONSTRUCTION/FABRICATION:  
AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010), WITH ALL INTERIM SPECIFICATIONS IN EFFECT.
- WELDING:  
ALL WELDING SHALL BE IN ACCORDANCE WITH AASHTO/AWS D1.5 BRIDGE WELDING CODE AND THE AASHTO FRACTURE CONTROL, WHERE APPLICABLE.  
  
NON-DESTRUCTIVE TESTS OF ALL WELDS SHALL BE PERFORMED AS FOLLOWS:  
FILLET WELDS - VISUAL INSPECTION - 100%  
FILLET WELDS - MAGNETIC PARTIAL TESTING - 10% MIN PER AWS D1.5
- FLOORING:  
7 1/2" RC DECK ON 2" ASTM A653 SIP FORM, MIN f'c = 3600psi.

- ANCHOR BOLTS:  
THE ANCHOR BOLTS SHALL BE EITHER CAST-IN-PLACE DURING THE ABUTMENT CONSTRUCTION OR DRILLED AND ANCHORED TO THE ABUTMENTS PRIOR TO THE BRIDGE BEING ERECTED. IF DRILLED AND ANCHORED, THE AMBIENT TEMPERATURE OF AIR AND SUBSTRUCTURE MUST BE ABOVE 35°F AND BELOW 110°F. THE ANCHOR BOLTS SHALL BE ANCHORED USING AC100 GOLD ADHESIVE MORTAR OR EQUAL. THE EPOXY ADHESIVE SHALL BE MIXED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS. AC100 GOLD IS A PRODUCT OF POWERS FASTENING INNOVATIONS, 2 POWERS LANE, BREWSTER, NY 10509, PHONE: 800-524-3244. THE STRUCTURAL EPOXY IS FURTHER DESCRIBED AS A TWO COMPONENT VINYLESTER ADHESIVE SYSTEM. MEETS ASTM C881-90, TYPE I,II,IV,V GRADE 3, CLASS A AND B.
- BOLT LENGTHS:  
THE LENGTH OF BOLTS IN THESE PLANS HAS BEEN DESIGNED TO PROVIDE A FULLY TENSIONED BOLT WITH 1 HARDENED WASHER AND A THREAD STICK-THROUGH OF BETWEEN 1 AND 3 THREADS, BASED ON THE THEORETICAL SECTION PROPERTIES OF THE JOINED MEMBERS. THREADED STICK THROUGH OF A FULLY TENSIONED BOLT WITH MORE THAN 3 THREADS IS PERMITTED AND MAY OCCUR BECAUSE OF THINNER MEMBERS THAT ARE WITHIN ACCEPTABLE MILL TOLERANCES. THE MINIMUM STICK THROUGH SHALL NOT BE LESS THAN 0 THREADS (FLUSH).  
  
ANY CHANGES TO THE INSTALLED BOLT LENGTHS CALLED FOR IN THESE SHOP DRAWINGS SHALL BE REPORTED TO THE ENGINEERING DEPARTMENT TO BE RECORDED AS AN "AS-BUILT" CONDITION.  
  
THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE FIELD BOLTS IN ACCORDANCE WITH THESE DRAWINGS. INCORRECTLY INSTALLED BOLTS BY THE CONTRACTOR WILL RESULT IN CHANGED QUANTITIES FROM THOSE INTENDED. THE CONTRACTOR'S INSTALLATION IS SUBJECT TO FIELD REVIEW BY A U.S. BRIDGE REPRESENTATIVE BEFORE ANY CLAIM FOR ADDITIONAL BOLT QUANTITIES OR DELAYS WILL BE CONSIDERED.

**FIELD PAINT:**  
FIELD ASSEMBLED CONNECTIONS SHALL REQUIRE FIELD PAINTING OF THE JOINED MEMBERS. JOINED FACES (FAYING SURFACES) SHALL BE SHOP PRIMED BUT BE MASKED OFF FOR SUBSEQUENT COATS. MASKING WILL BE STEPPED BACK TO REVEAL THE PRIME AND INTERMEDIATE COATS. COMPLETE FIELD PAINTING OF THESE JOINTS AND CONNECTIONS WITH PAINT THAT MATCHES THE SHOP APPLIED COATINGS IN ACCORDANCE WITH THE PLANS AND MANUFACTURER'S RECOMMENDATIONS. FIELD PAINTING SHALL BE COMPLETED AFTER THE BRIDGE HAS BEEN ERECTED AND SET. FINAL ACCEPTANCE OF THE FIELD PAINTING SHALL BE BY THE OWNER.

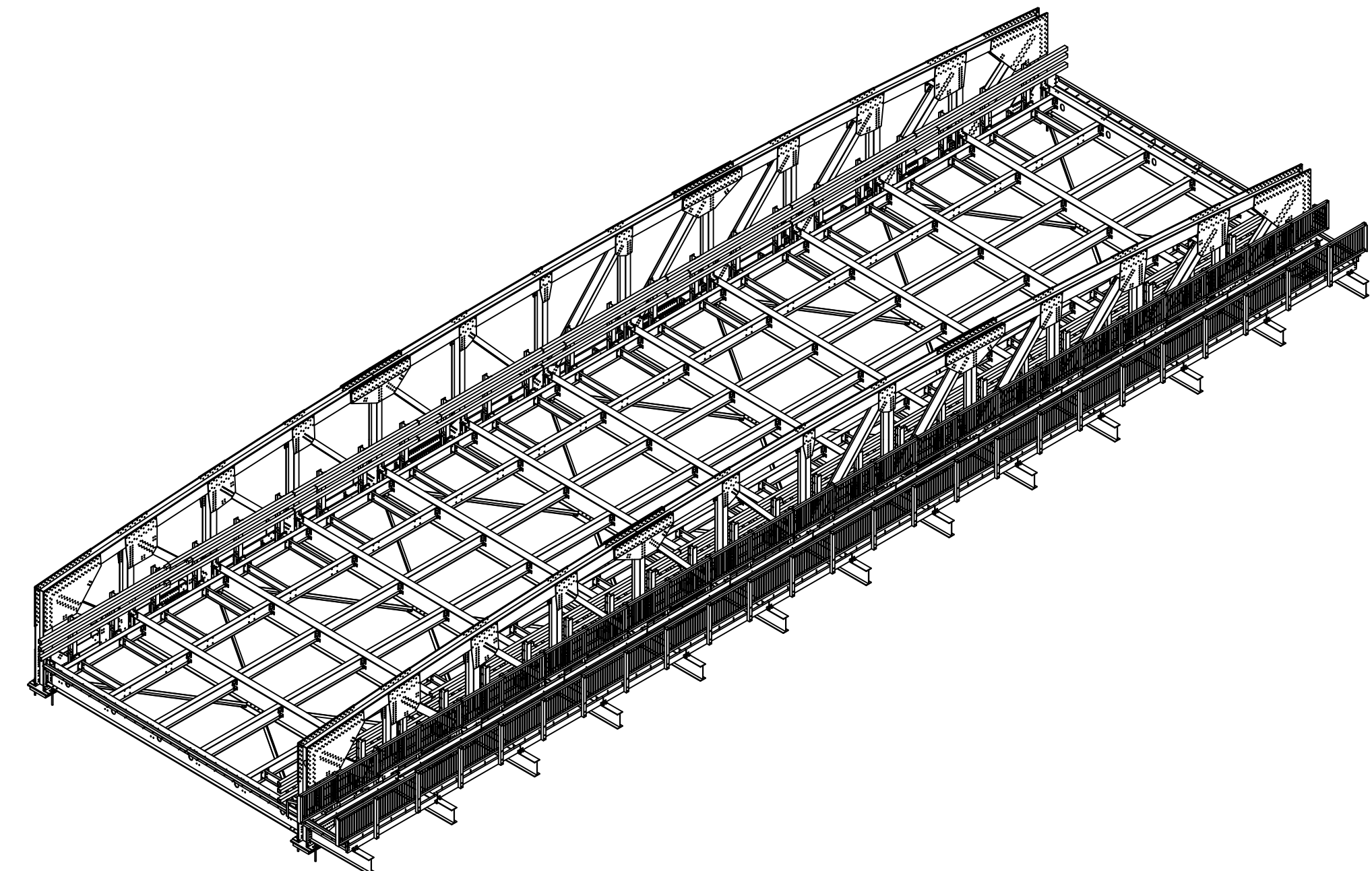
**FIELD TOUCH-UP PAINTING:**  
TOUCH-UP PAINTING SHALL BE PERFORMED ON AREAS THAT HAVE BEEN DAMAGED OR MARRED DURING UNLOADING AND INSTALLATION. THESE MAY INCLUDE BUT ARE NOT LIMITED TO SCRATCHES, SCUFFS, TEARS, OR LOSS OF FINISH THROUGH ANY COATING LAYER. THE CONTRACTOR SHALL USE CARE AND PROTECT PAINTED PIECES AND ASSEMBLIES DURING UNLOADING, STAGING, FIELD ASSEMBLY AND FINAL ERECTION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING REPAIRS TO THE PAINT COATINGS UNDER THIS ITEM AND SHALL COORDINATE THIS WORK WITH THE REQUIRED FIELD PAINTING DESCRIBED ABOVE.

**PAINT:**  
MEMBER REQUIRING PAINT:  
ALL STEEL EXCLUDING EXPANSION JOINT  
(TOTAL SURFACE AREA = 42652.83 FT²)

PAINT TO BE A 2 COAT SYSTEM, APPLICATION AND PROCESS TO BE DETERMINED BY U.S. BRIDGE ACCORDING TO SPECIFICATIONS PROVIDED BY THE CUSTOMER.

FINAL COLOR - RAL 8029 PEARL COPPER OR EQUIVALENT EQUAL.

# MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA



ILLUSTRATIVE VIEW OF PROJECT

PROJECT DESIGN CRITERIA:	
SPAN:	139'-0" C/C BEARINGS
ROADWAY WIDTH:	33'-0"
SIDEWALK:	5'-0" EXTERIOR
SKEW:	N/A
DESIGN LIVE LOAD:	HL93, CALTRANS P15
EXPANSION:	NA
CONNECTIONS:	FIELD BOLTED & SHOP WELDED
DESIGN LOADS:	
PEDESTRIAN LOAD	75 PSF (LOAD ON TRUSS)
	90 PSF (LOAD ON SUPPORTING MEMEBERS)
7 1/2" CONCRETE DECK	95 PSF
DECK FORMS + FILL	15 PSF
HAUNCHES	5 PSF
DECK EDGE END AND CONCRETE CURB	35 PLF
FUTURE SURFACING	35 PSF
CONC. SIDEWALK DECK	75 PSF
ROADWAY RAILING	80 PLF
SIDEWALK RAILING	40 PLF
FUTURE UTILITY	260 PLF
TRUSS SHOE REACTION (UNFACTORED):	
DEAD LOAD, DC	252.48K
DEAD LOAD, DW	59.77K
LIVE LOAD	239.3K
IMPACT	54.3K

INDEX OF SHEETS		
SERIES #	NO. OF SHTS	DESCRIPTION
1	2	TITLE SHEET
2	1	CONSTRUCTION PLANS/FRAMING
3	2	CONSTRUCTION PLANS/TRANSVERSE SECTIONS
4	2	CONSTRUCTION PLANS/ABUTMENTS
5	2	CONSTRUCTION PLANS/FIELD ASSEMBLY
6	2	CONSTRUCTION PLANS/FLOORING PLAN
7	1	CONSTRUCTION PLANS/RAILING LAYOUT
8	2	BILL OF MATERIALS
9	11	SHOP DETAILS/TRUSS ASSEMBLY
10	9	SHOP DETAILS/SHOP ASSEMBLY
11	9	SHOP DETAILS/PROFILES
12	8	SHOP DETAILS/PLATES
13	7	SHOP DETAILS/FLOORING
TOTAL	58	

DWG#: PB691891

6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 1a
TITLE SHEET		USB JOB# 200045	58 TOTAL

SUBMITTAL LOG			IMPORTANT LEGAL NOTICE			
INITIAL SUBMITTAL	DATE		Rev.	Date	Description	By
RESUBMITTAL NO. 4	6-9-20		1	5/13/2020	APPROVED FOR FABRICATION	ABJ
CUSTOMER APPROVAL	-		1	5/15/2020	CP2 & CP3 WELD SYMBOL	ABJ
SHOP REVIEW	3-18-20		2	5/18/2020	DRAWING CLEAN UP - SHTS 10a,10c,10f,11a,12c	JEC
PRE FAB MTG	-		3	5/22/2020	ROADWAY RAIL SPLICE REVISED	JEC
APPROVED FOR FAB	5-13-20		4	6/4/2020	stud2 QTY REVISED, ALL CEF ASSY'S REVISED	JEC

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888-872-7434  
www.usbridge.com

**BOLTING TIGHTENING PROCEDURES:**

- CARE SHALL BE TAKEN IN STORING ALL FASTENER COMPONENTS (BOLTS, NUTS & WASHERS). DO NOT MIX FASTENERS BETWEEN THE SUPPLIED KEGS. FASTENERS SHALL BE PROTECTED FROM DIRT AND MOISTURE AT THE JOBSITE. ONLY AS MANY FASTENERS AS ARE ANTICIPATED TO BE INSTALLED DURING A WORK SHIFT SHALL BE TAKEN FROM PROTECTIVE STORAGE. FASTENERS NOT USED SHALL BE RETURNED TO PROTECTIVE STORAGE AT THE END OF THE SHIFT.
- FASTENERS SHALL NOT BE CLEANED OF THE LUBRICANT THAT IS PRESENT IN THE "AS-DELIVERED" CONDITION. IF FASTENERS REQUIRE CLEANING DUE TO RUST OR DIRT, THEY SHALL BE RELUBRICATED AND TESTED BEFORE THEY CAN BE USED IN THE WORK.
- PRIOR TO A CONNECTION BEING TIGHTENED, ALL PLIES OF THE JOINT SHALL BE BROUGHT INTO FIRM CONTACT WITH EACH OTHER. THE FASTENERS SHALL THEN BE SNUG TIGHTENED USING THE WASHER-SIDE OF THE CONNECTION FOR TURNING. CONNECTIONS WITH STANDARD HOLES MAY BE TIGHTENED WITH THE WASHER BENEATH THE NUT (CASE 1a) OR BENEATH THE HEAD (CASE 1b). SNUG TIGHT IS DEFINED AS A FEW IMPACTS FROM AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH.
- CONNECTIONS WITH IN SHORT SLOTTED HOLES SHALL BE ASSEMBLED WITH ONE OR TWO HARDENED WASHERS IN ACCORDANCE WITH CASE 2 OR CASE 3 DEPENDING ON THE ASSEMBLY. CONNECTIONS WITH LONG SLOTTED HOLES SHALL BE ASSEMBLED WITH PLATE AND HARDENED WASHERS IN ACCORDANCE WITH CASE 3 OR CASE 4 DEPENDING ON THE ASSEMBLY.
- TO ENSURE THAT FASTENERS ARE NOT OVER TIGHTENED, THE MAXIMUM TORQUE FOR EACH LOT OF BOLTS HAS BEEN ROTATION-CAPACITY (R-C) TESTED BY THE MANUFACTURER AND IS STIPULATED ON THE BOLT KEGS.
- TO VERIFY THAT THE FASTENERS WILL BE TENSIONED PROPERLY, U.S. BRIDGE RECOMMENDS THE OWNER REQUIRE THE INSTALLER TO PERFORM A TORQUE-TENSION CAPACITY TEST, ALSO KNOWN AS A "TURN-OF-NUT VERIFICATION" TEST. IN DOING THIS TEST, THE INSTALLER DEMONSTRATES THAT A FASTENER, UNDER THE CONDITIONS AT THE SITE, CAN BE TENSIONED TO THE REQUIRED MINIMUM PRETENSION BY TURNING THE NUT IN A MEASURABLE AND REPEATABLE WAY. THE INSTALLER WILL NEED TO HAVE A BOLT-TENSION CALIBRATOR MACHINE TO DO THESE TESTS. WHILE FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, THE TEST SHALL INDICATE THAT THE TURN-OF-NUT METHOD, BASED ON THE FOLLOWING NUT ROTATIONS, CAN PRODUCE A BOLT TENSION EQUAL TO OR GREATER THAN THE LISTED TENSION VALUES (1.05 TIMES THAT SHOWN IN RCSC'S TABLE 8.1, REPRODUCED BELOW).

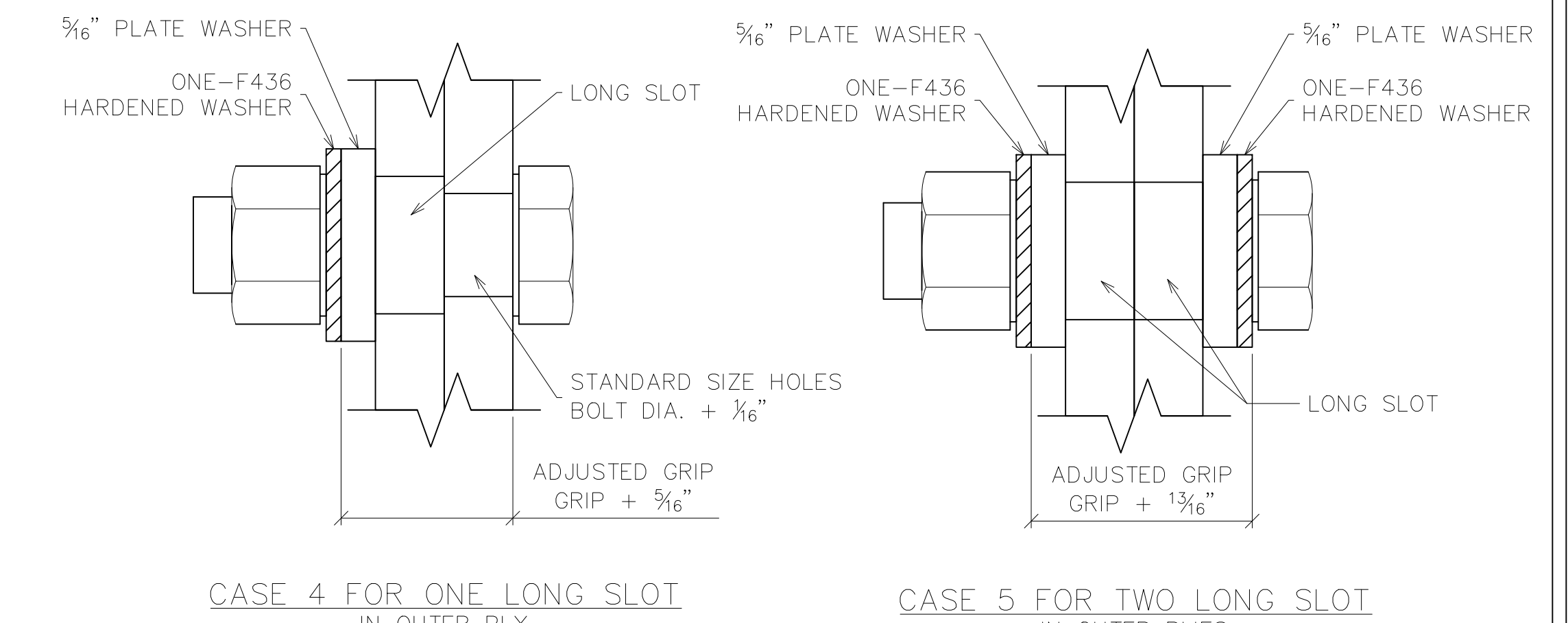
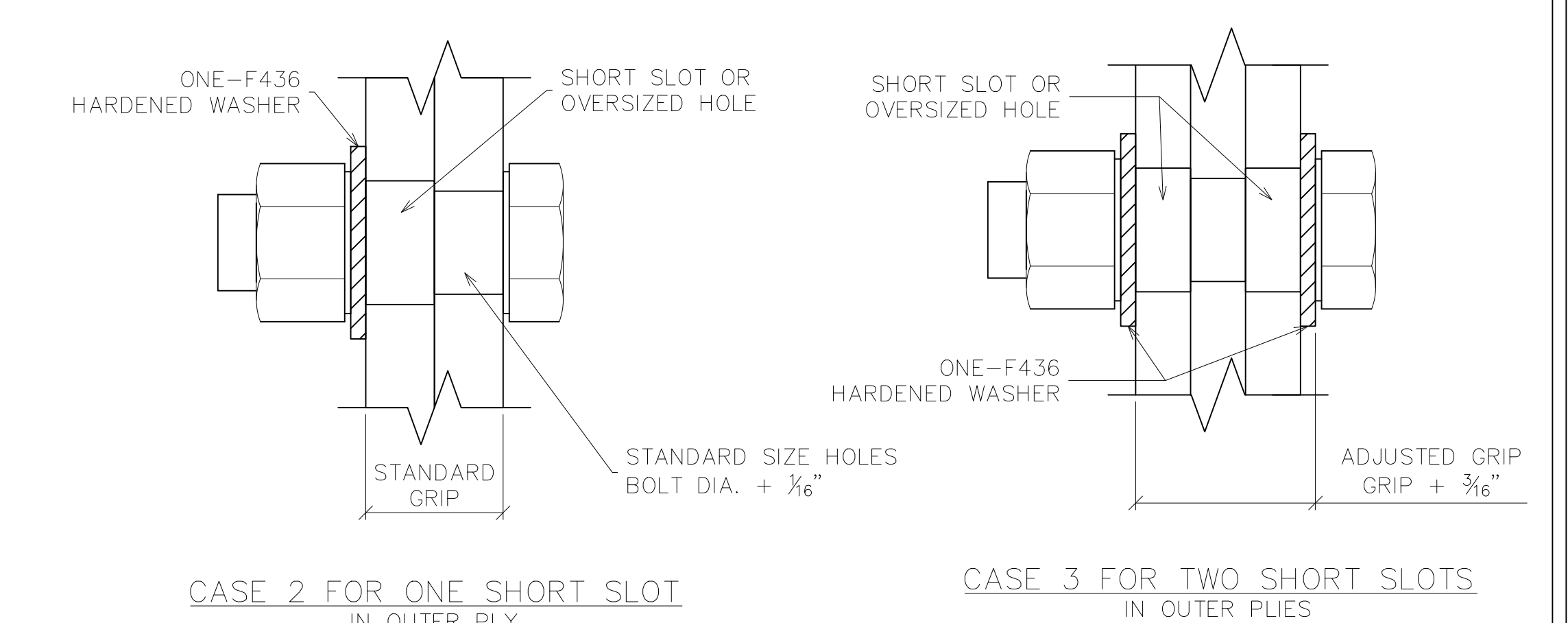
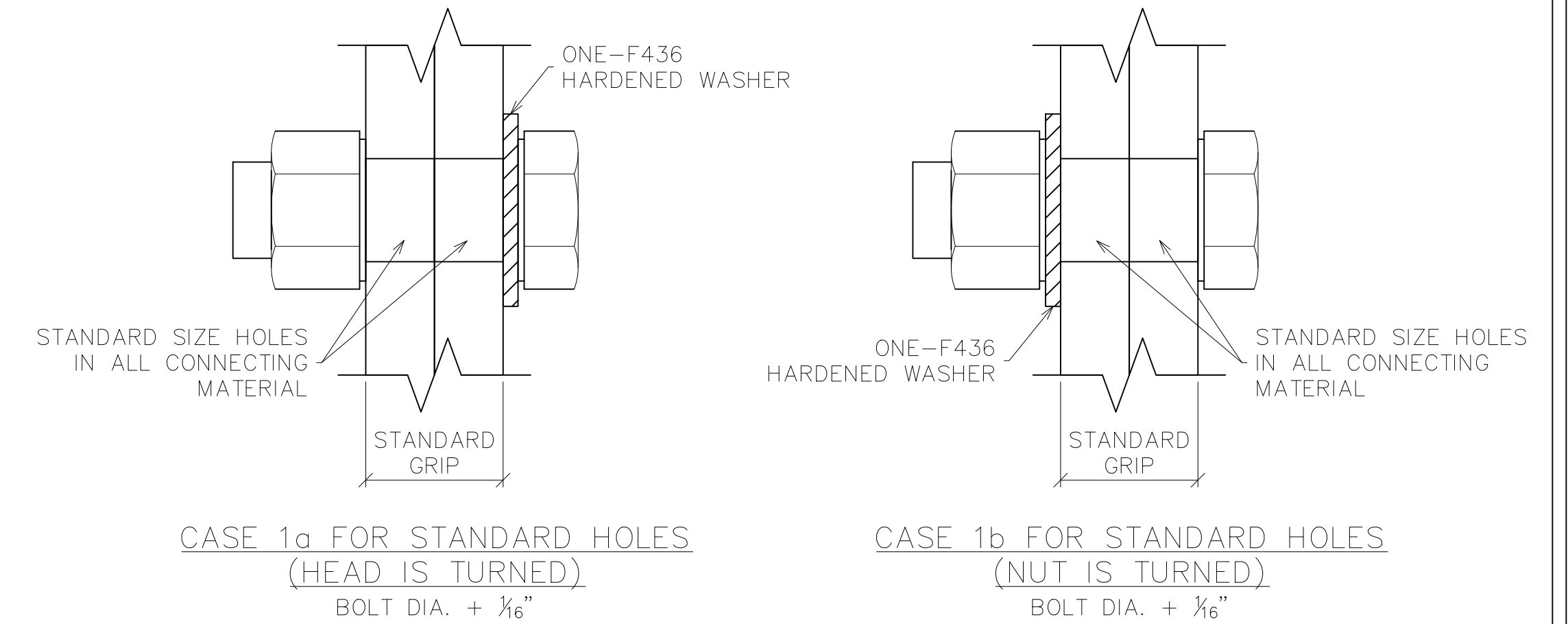


TABLE 8.2. NUT ROTATION FROM SNUG-TIGHT CONDITION FOR TURN-OF-NUT PRETENSIONING<sup>a,b</sup>

BOLT LENGTH <sup>c</sup>	DISPOSITION OF OUTER FACES OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 <sup>d</sup>	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS <sup>d</sup>
NOT MORE THAN 4d <sup>b</sup>	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN 4d <sup>b</sup> BUT NOT MORE THAN 8d <sup>b</sup>	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN 8d <sup>b</sup> BUT NOT MORE THAN 12d <sup>b</sup>	2/3 TURN	5/6 TURN	1 TURN

a. NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

b. APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

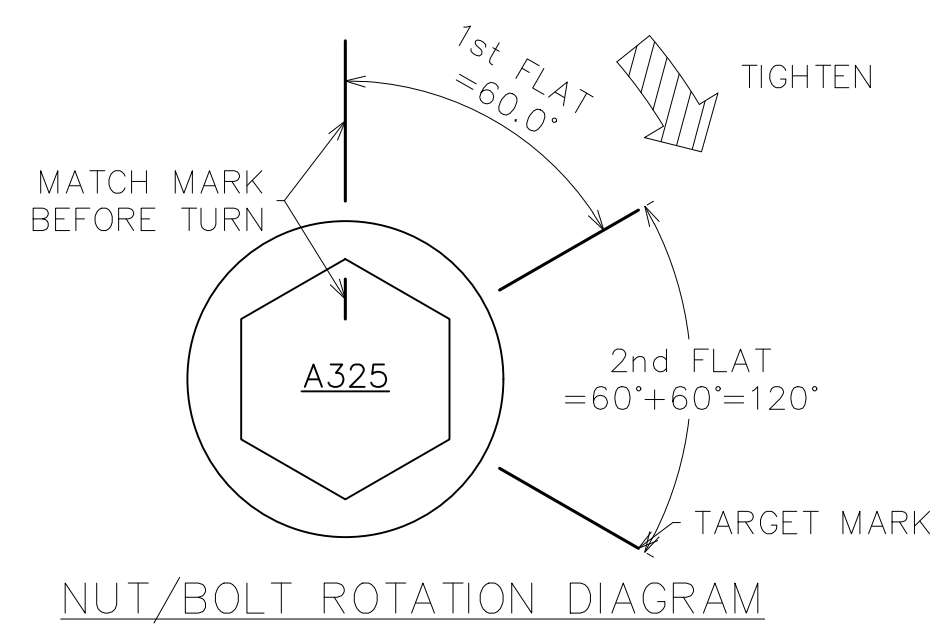
c. WHEN THE BOLT LENGTH EXCEEDS 12d<sup>b</sup>, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

d. BEVELED WASHER NOT USED.

TABLE 8.1. MINIMUM BOLT PRETENSION, PRETENSIONED AND SLIP-CRITICAL JOINTS

NOMINAL BOLT DIAMETER, d <sub>b</sub> , in.	SPECIFIED MINIMUM BOLT PRETENSION, T <sub>m</sub> , kips <sup>a</sup>	
	ASTM A325 AND F1852	ASTM A490 AND F2280
1/2	12	15
5/8	19	24
3/4	28	35
7/8	39	49
1	51	64
1 1/8	56	80
1 1/4	71	102
1 3/8	85	121
1 1/2	103	148

<sup>a</sup> EQUAL TO 70 PERCENT OF THE SPECIFIED MINIMUM TENSILE STRENGTH OF BOLTS AS SPECIFIED IN ASTM SPECIFICATIONS FOR TESTS OF FULL-SIZE ASTM A325 AND A490 BOLTS WITH UNC THREADS LOADED IN AXIAL TENSION, ROUNDED TO THE NEAREST kip.



NOTE: ALL TIGHTENING TO BE DONE ON HARDENED FLAT WASHER SIDE ONLY. SOME CASES MAY NOT APPLY.

DWG#: PB691891

6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

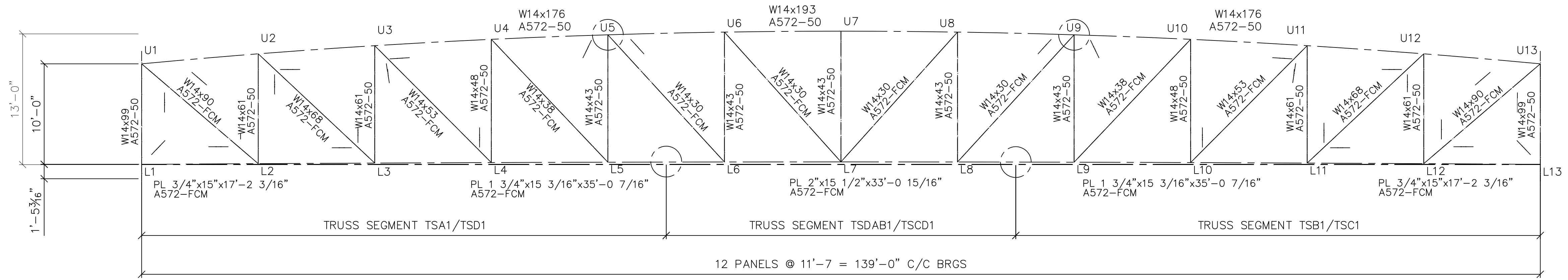
DESIGN/REVIEW: DLM/SAF DRAW: ABJ CHECK: JEC

CONSTRUCTION PLANS USB JOB# 200045

SHEET 1b TOTAL 58

**U.S. BRIDGE**  
BRIDGING AMERICA SINCE 1936

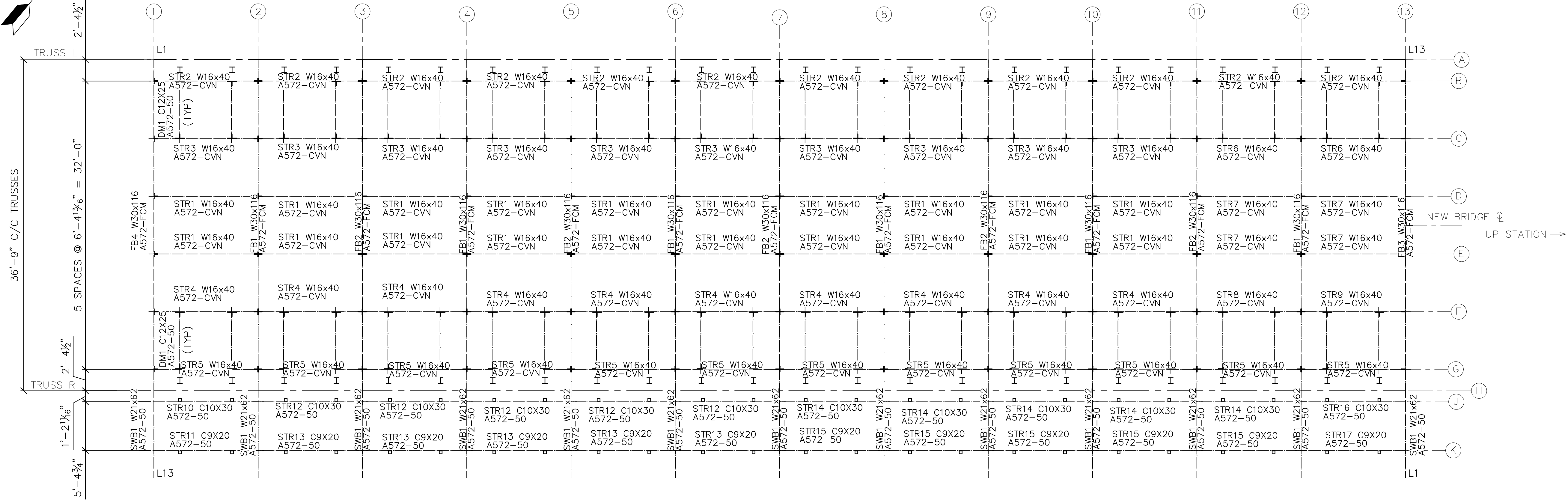
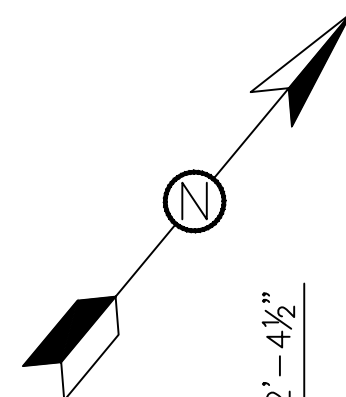
201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com



○ = FIELD CONNECTIONS

1%  
TRUSS ELEVATION  
GEOMETRY SHOWN IN FINAL  
LOADED POSITION  
ROADWAY SHOWN FACING UP

TOTAL SHOP CAMBER = 2<sup>15</sup>/<sub>16</sub>"  
(REFER TO TRUSS ASSEMBLY DWGS)



FRAMING PLAN

ABUT #1  
C BRG  
(EXP)

ABUT #2  
C BRG  
(FIX)

DWG#: PB691891

6/9/2020

REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:



201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

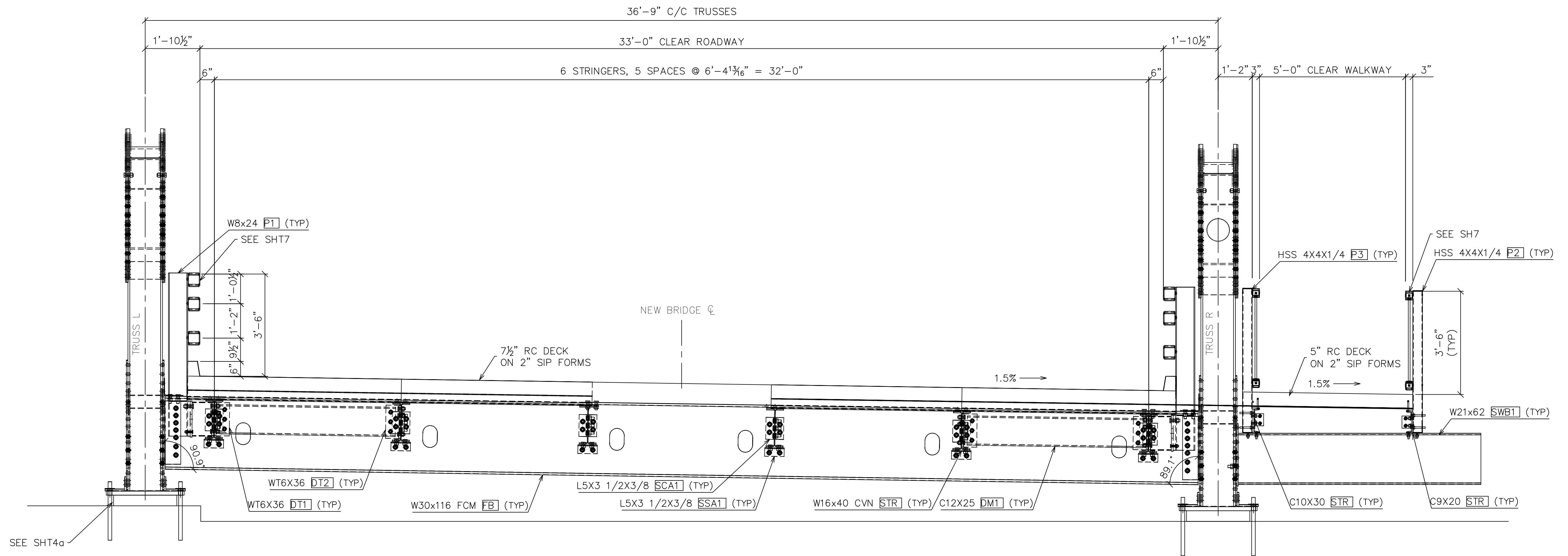
SHEET 2

CONSTRUCTION PLANS

FRAMING PLAN

USB JOB#  
200045

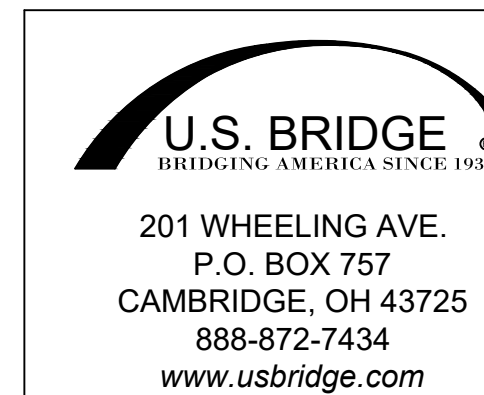
58 TOTAL



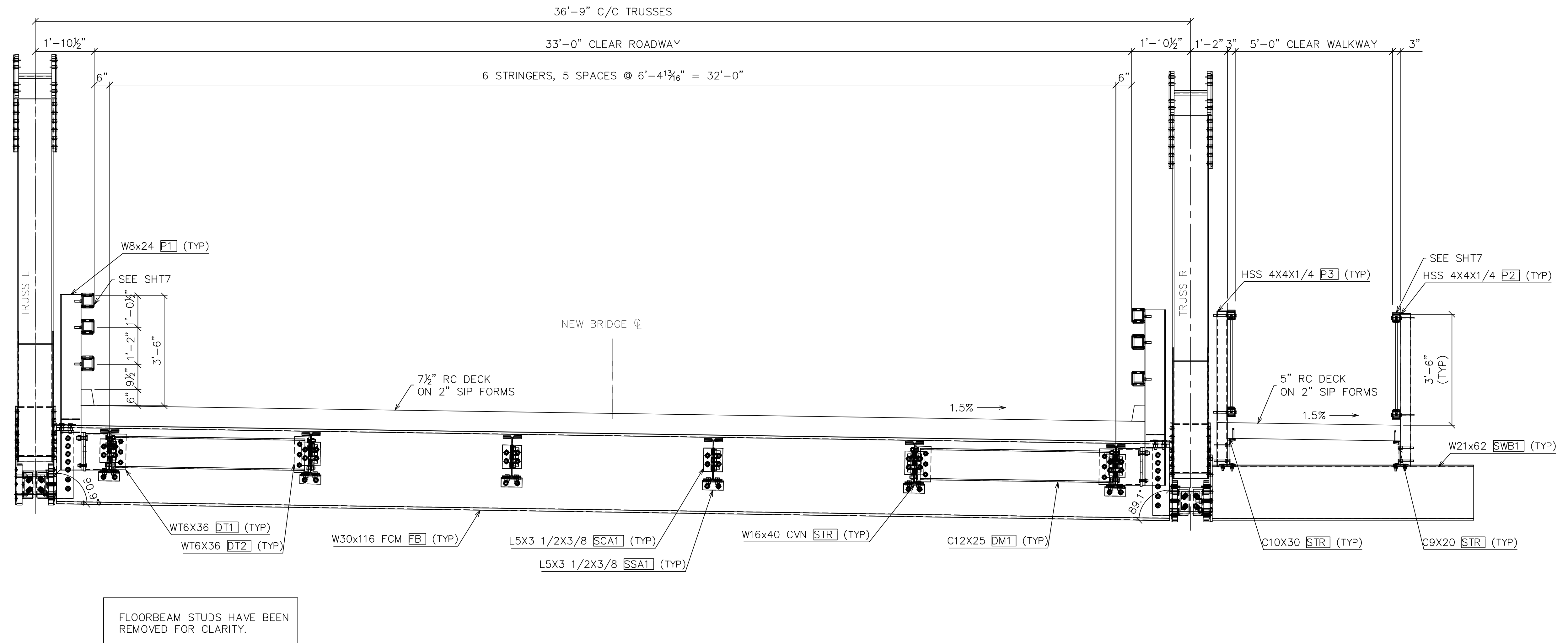
TRANSVERSE SECTION AT ABUTMENT

DWG#: PB691891

6/9/2020 REVISED - SEE REVISION TABLE



<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC
CONSTRUCTION PLANS / TRANSVERSE SECTION		USB JOB# 200045
		SHEET 3a
		58 TOTAL



TRANSVERSE SECTION AT FLOORBEAM

DWG#: PB691891

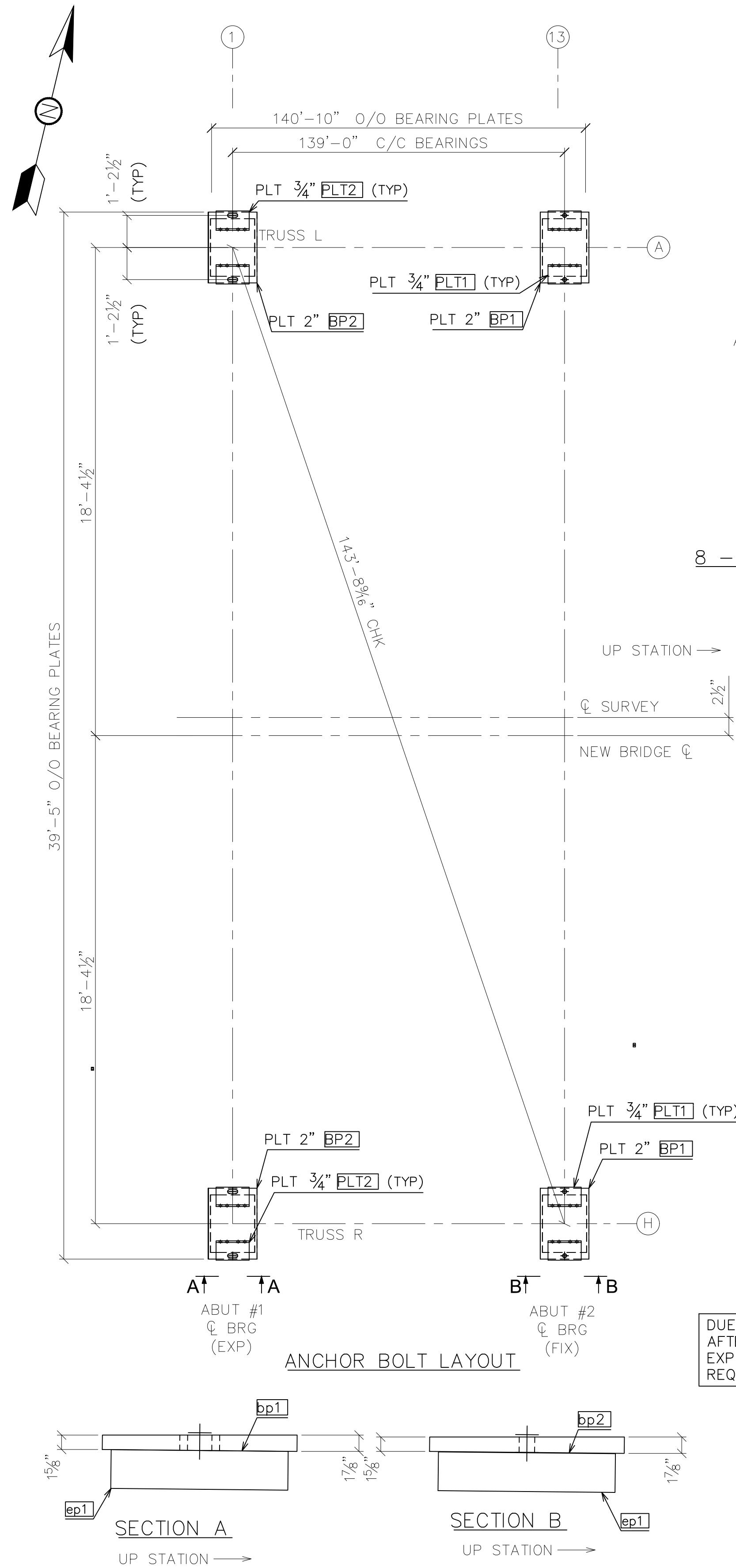
6/9/2020 REVISED - SEE REVISION TABLE



<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC
CONSTRUCTION PLANS / TRANSVERSE SECTION		USB JOB# 200045
		SHEET 3b 58 TOTAL

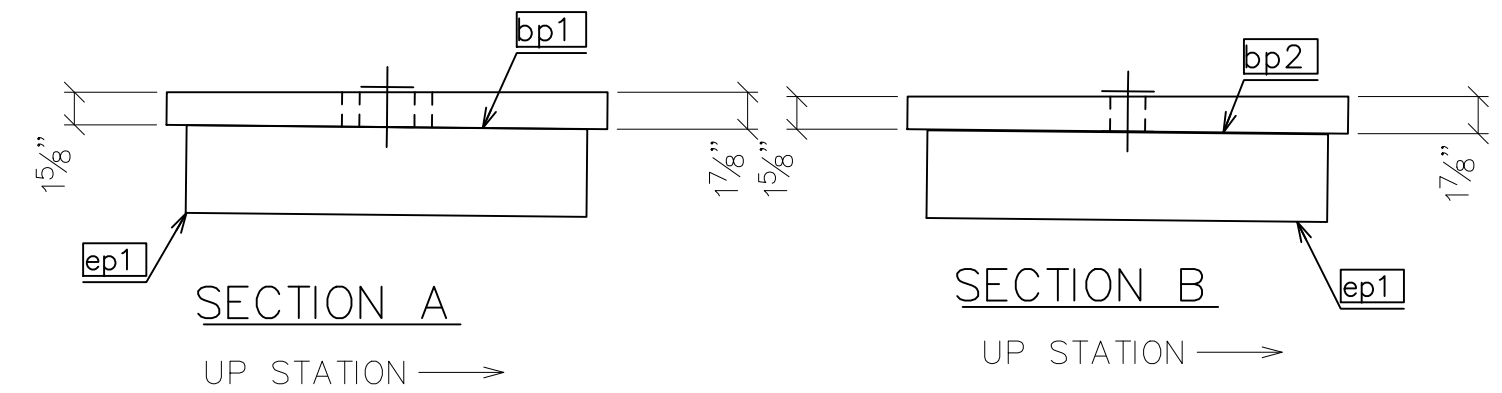
DATE PLOTTED June 9, 2020

S:\JOBS\CALIFORNIA\200045-Los Angeles Co, CA Galvanized Truss\Drawings\Revisions\200045 Rev14 6-3-20 AS20\Detail\4a.dwg

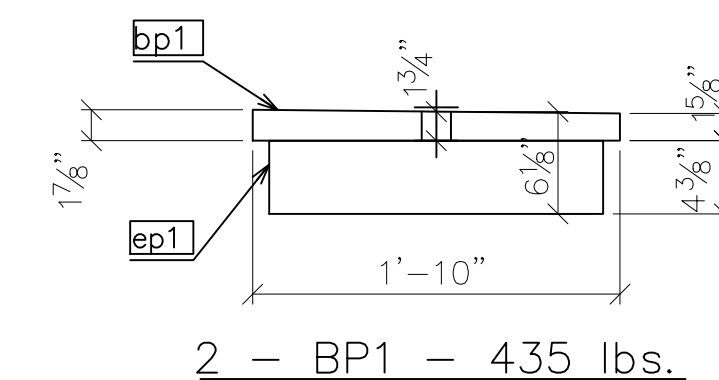
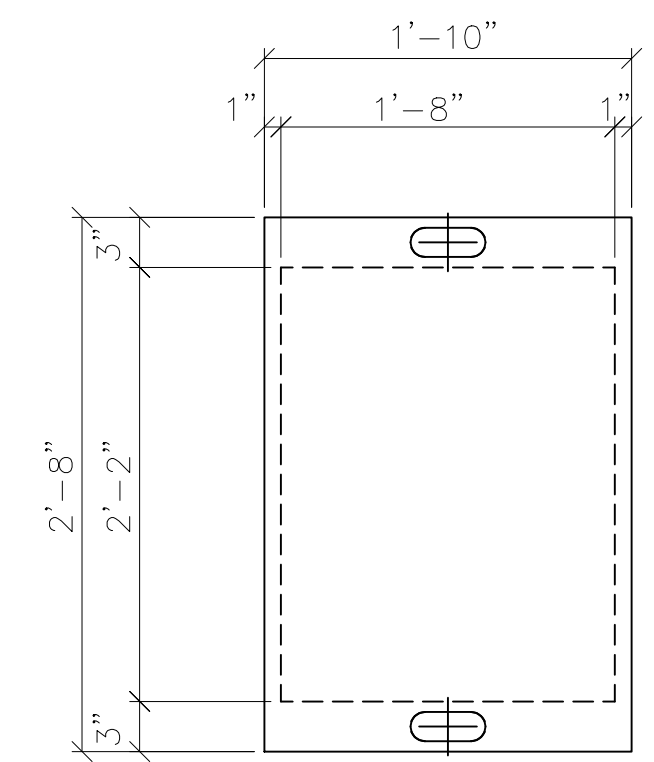
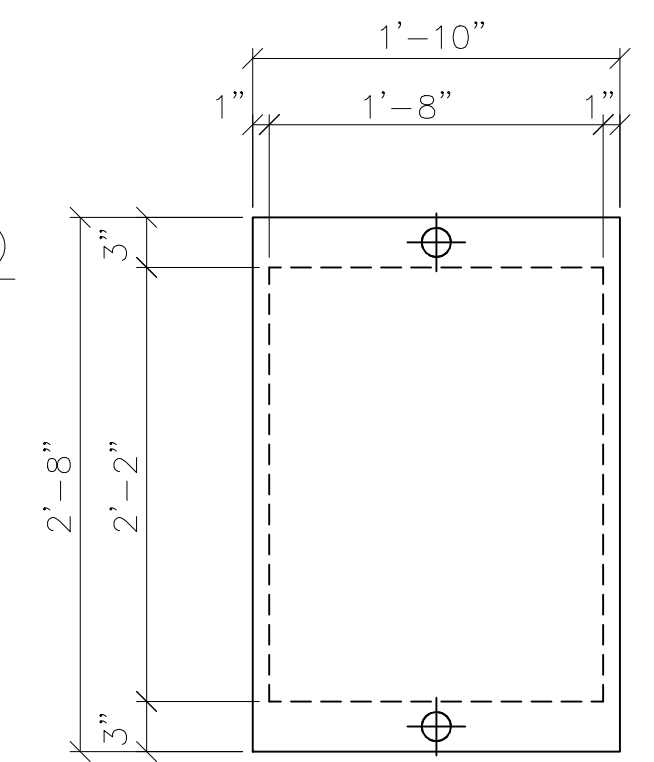
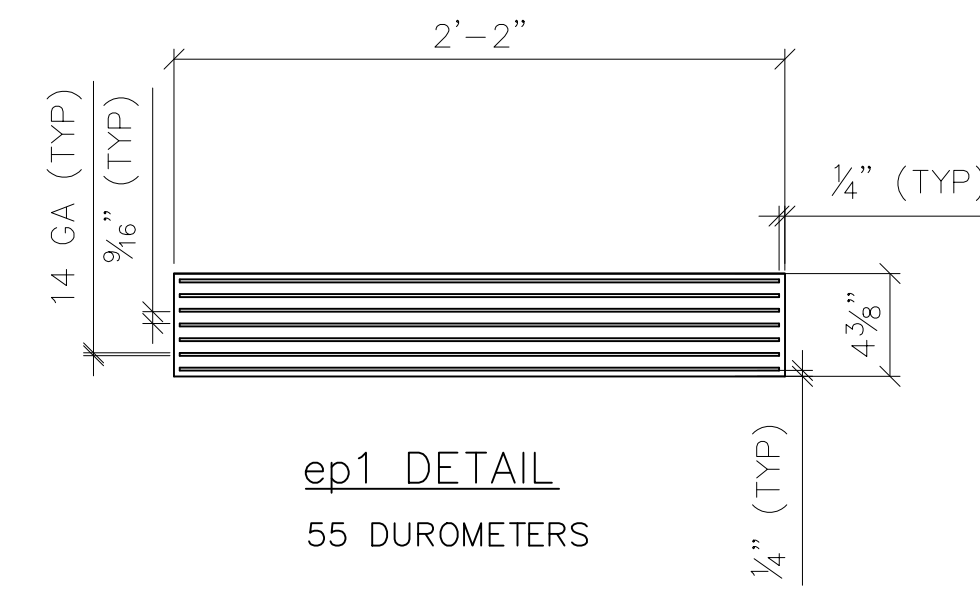
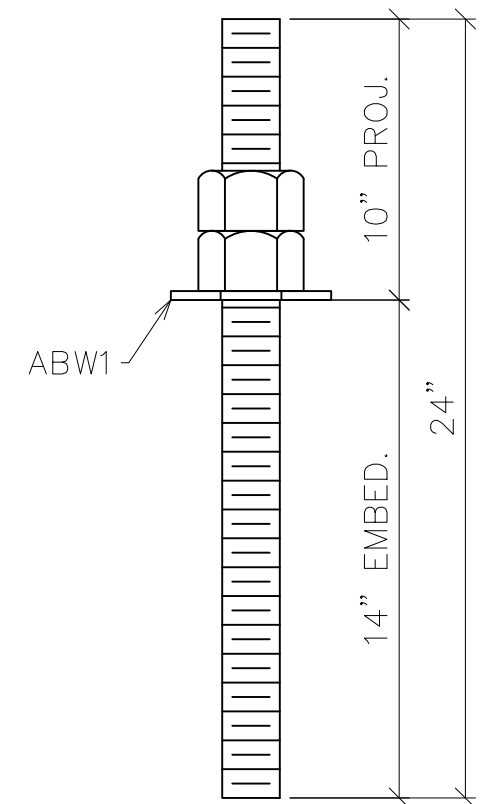


**8 - TRUSS ANCHOR BOLT - AB1**  
 1 1/2" ø A449  
 ALL THREAD GALV.  
 ROD WITH 2 NUTS  
 & ONE PLATE WASHER (ABW1)

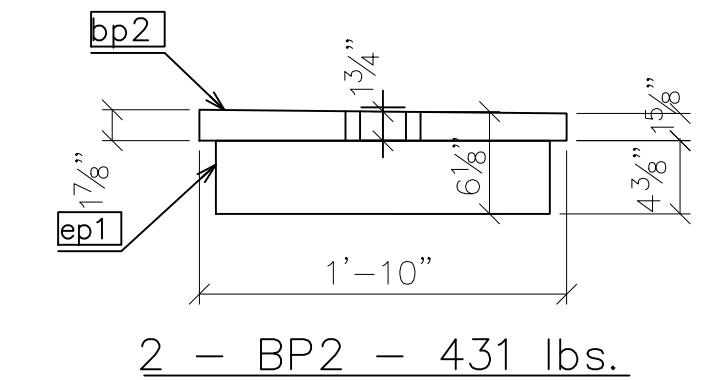
DUE TO BRIDGE LENGTHENING  
 AFTER DECK POUR, THE  
 EXPANSION BEARINGS WILL  
 REQUIRE SETTING.



MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bp1	2	BEARING PLATE	PL 2"x22"x2'-8"	2'-8"	A572-50	GLV&PNT	345	690	
bp2	2	BEARING PLATE	PL 2"x22"x2'-8"	2'-8"	A572-50	GLV&PNT	340	681	
ep1	4	ELASTOMERIC PAD 55 DURO	PL 4 3/8"x20"x2'-2"	2'-2"	Rubber		90	362	
							TOTAL:	1732	

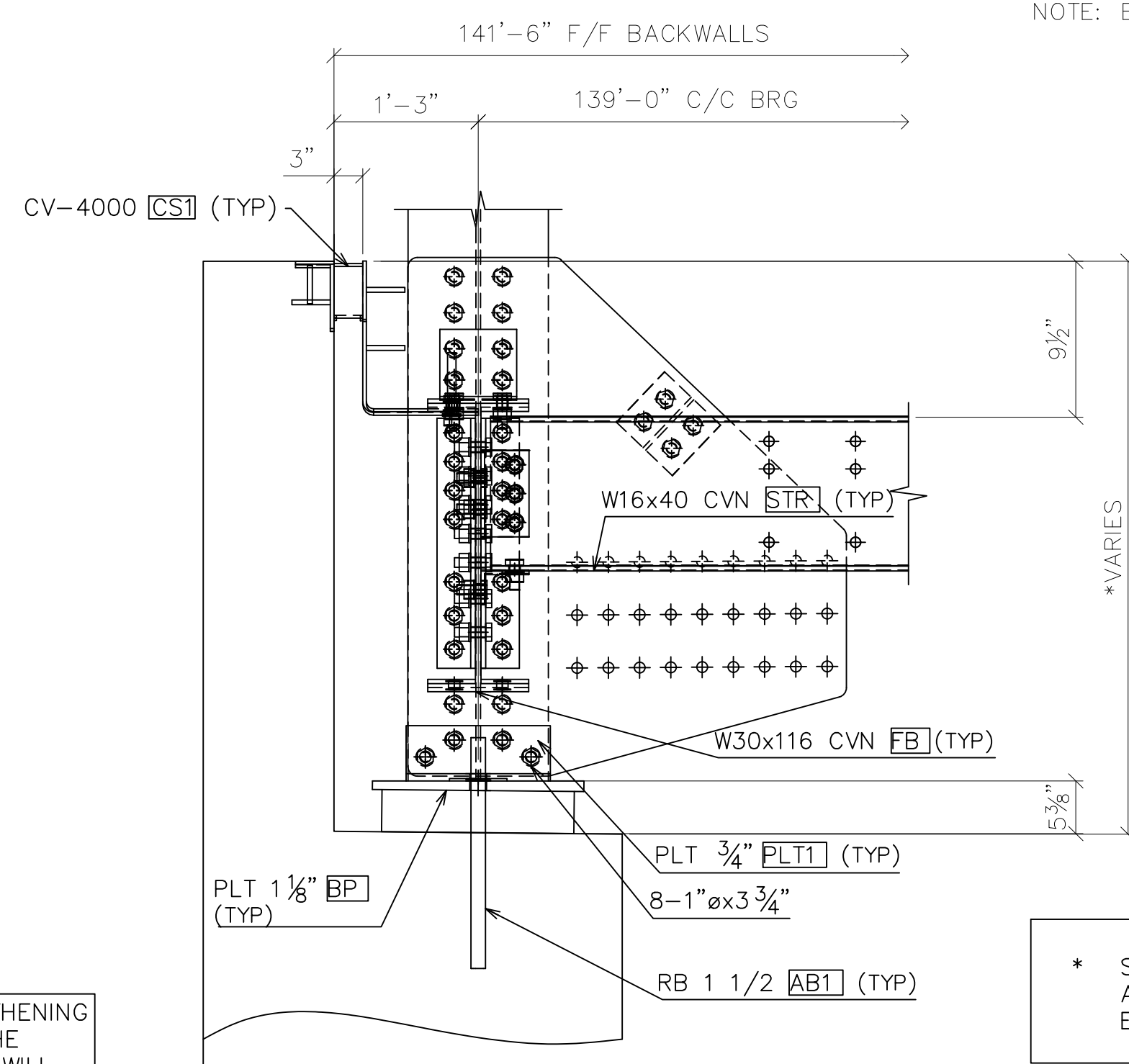


2 - BP1 - 435 lbs.

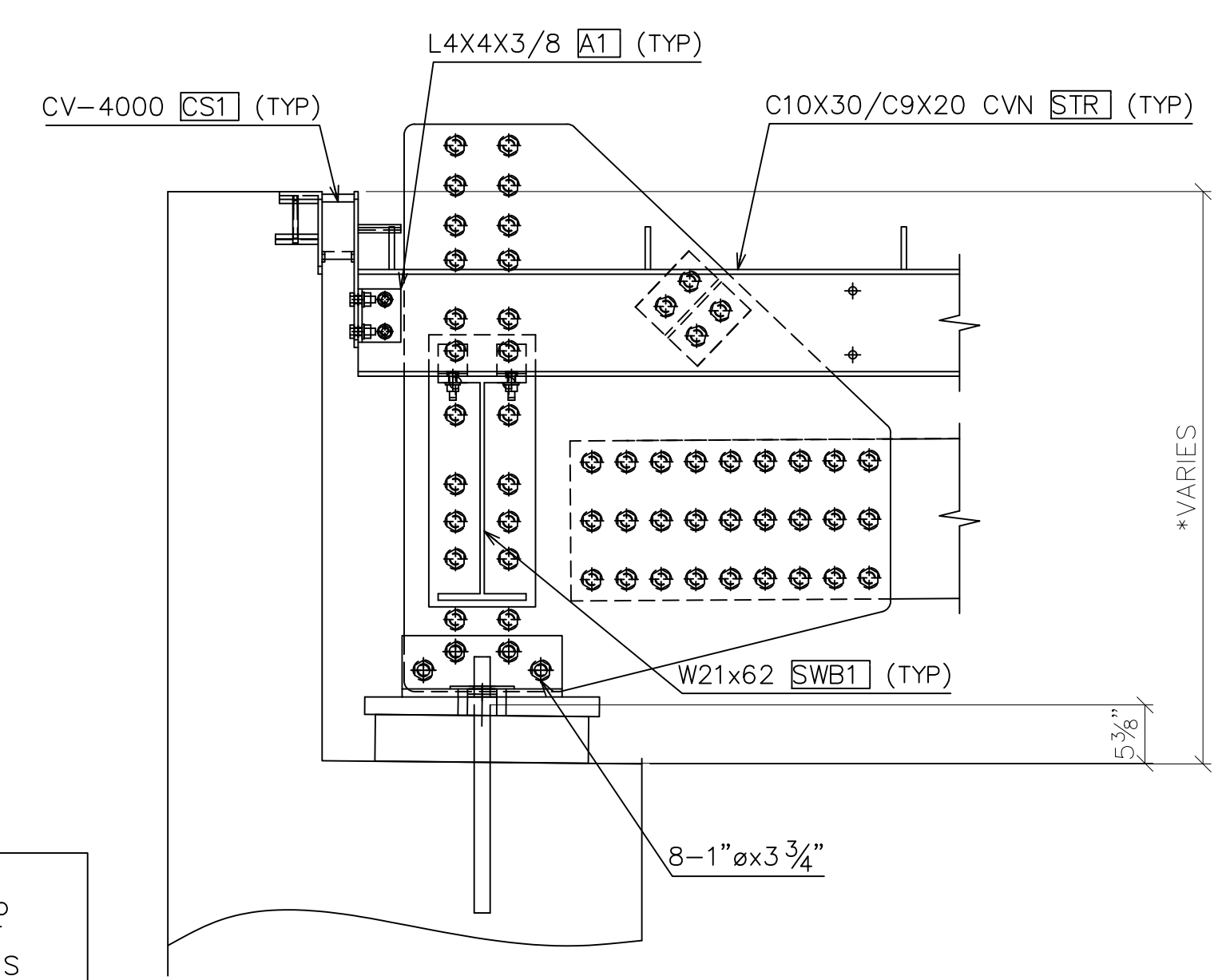


2 - BP2 - 431 lbs.

NOTE: ELASTOMERIC PAD TO BE BONDED TO TRUSS LOAD PLATE (VULCANIZE BEARING PLATES)



BEARING DETAIL AT SHOE  
 ROAD SIDE



BEARING DETAIL AT SHOE  
 SIDEWALK SIDE

\* SEE SHT4b  
 ABUTMENT  
 ELEVATIONS

DWG#: PB691891

**U.S. BRIDGE**  
 BRIDGING AMERICA SINCE 1936  
 201 WHEELING AVE.  
 P.O. BOX 757  
 CAMBRIDGE, OH 43725  
 888-872-7434  
 www.usbridge.com

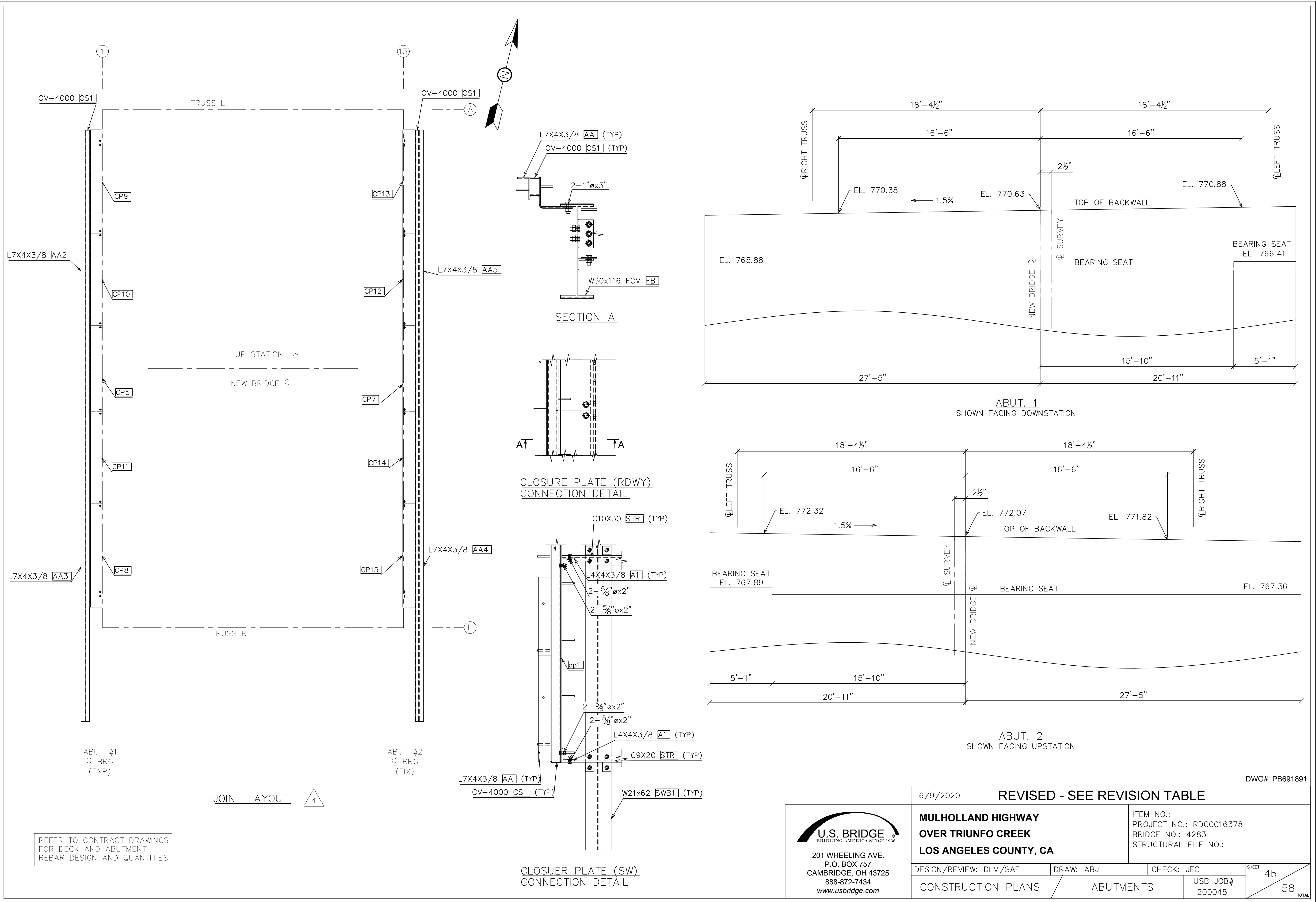
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
 OVER TRIUNFO CREEK  
 LOS ANGELES COUNTY, CA**

ITEM NO.:  
 PROJECT NO.: RDC0016378  
 BRIDGE NO.: 4283  
 STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF DRAW: ABJ CHECK: JEC SHEET: 4a

CONSTRUCTION PLANS ABUTMENTS USB JOB# 200045 58 TOTAL



REFER TO CONTRACT DRAWINGS FOR DECK AND ABUTMENT REBAR DESIGN AND QUANTITIES

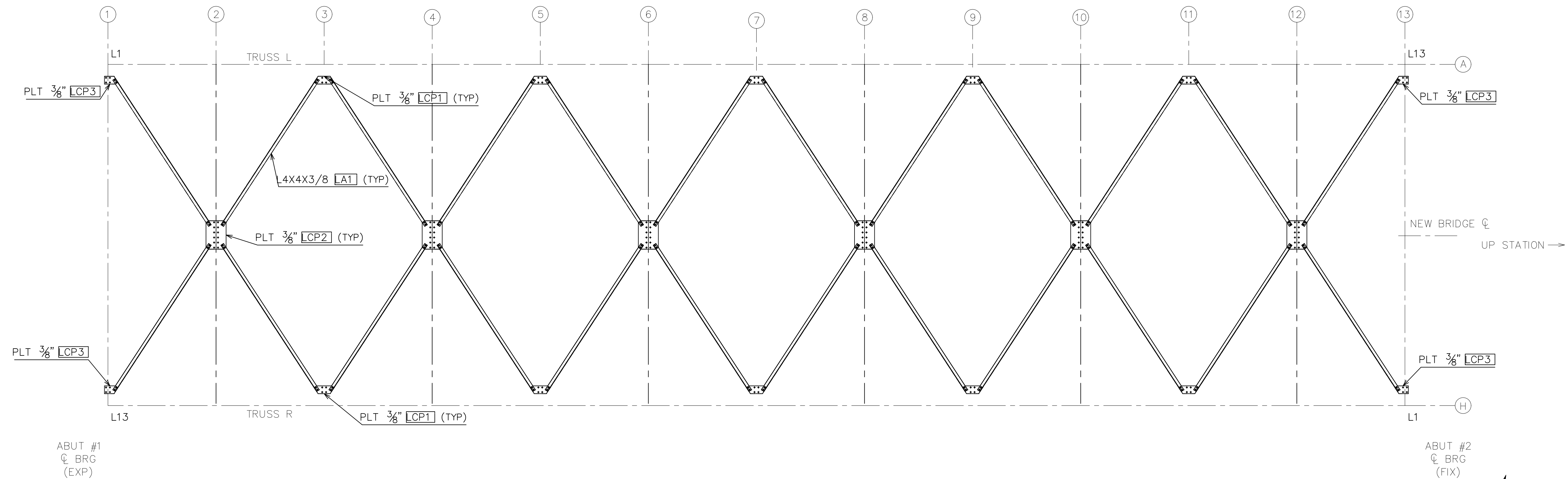
JOINT LAYOUT 4

CLOSURE PLATE (SW) CONNECTION DETAIL

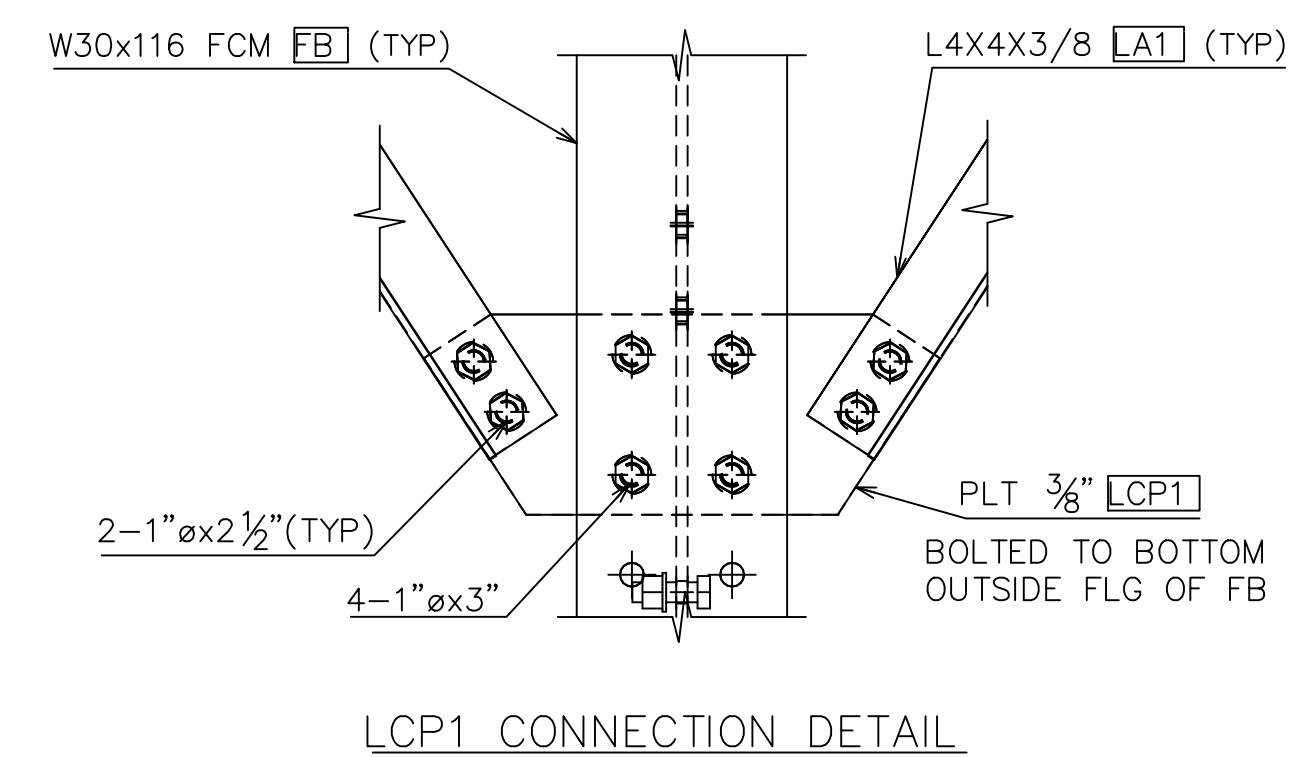
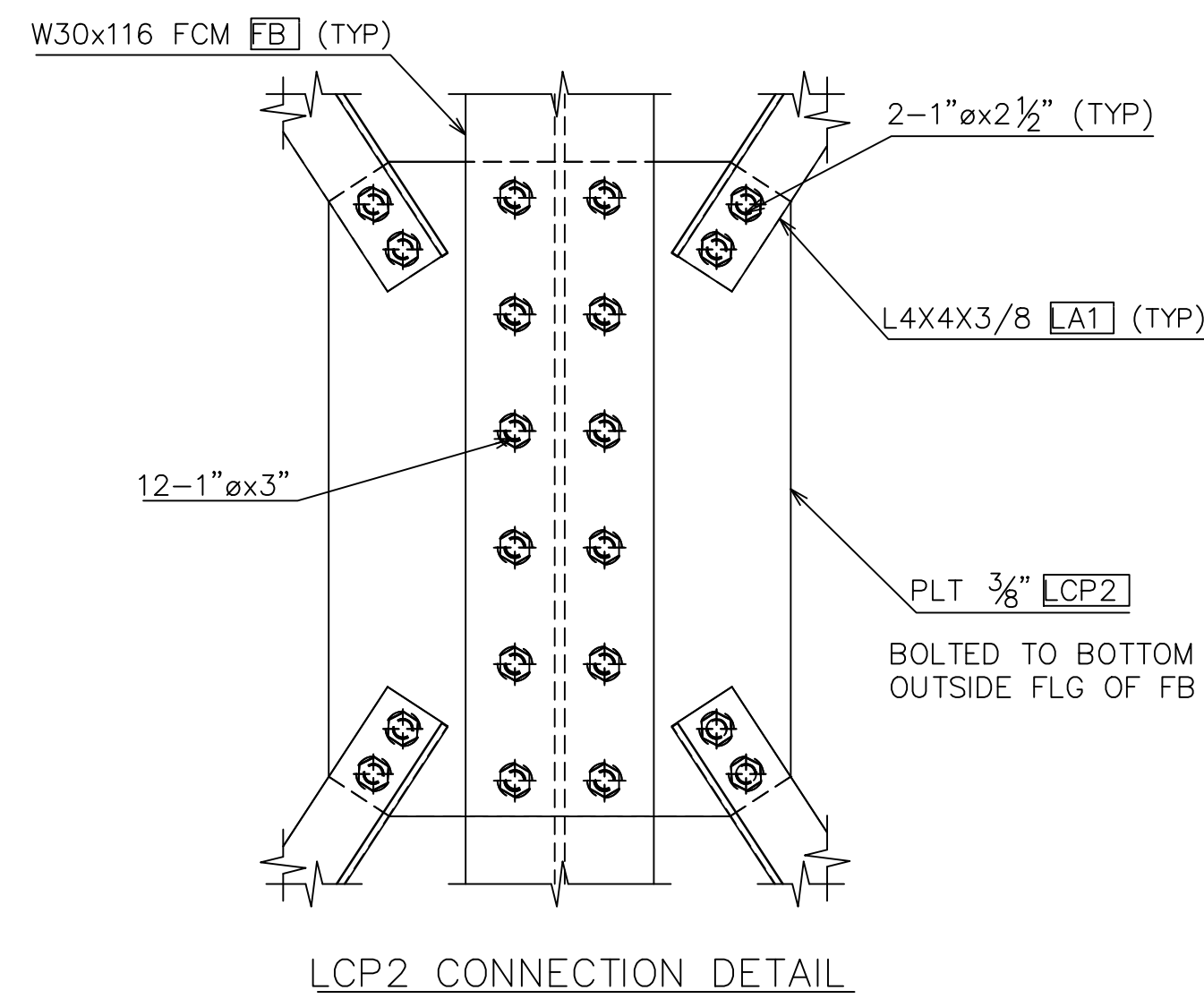
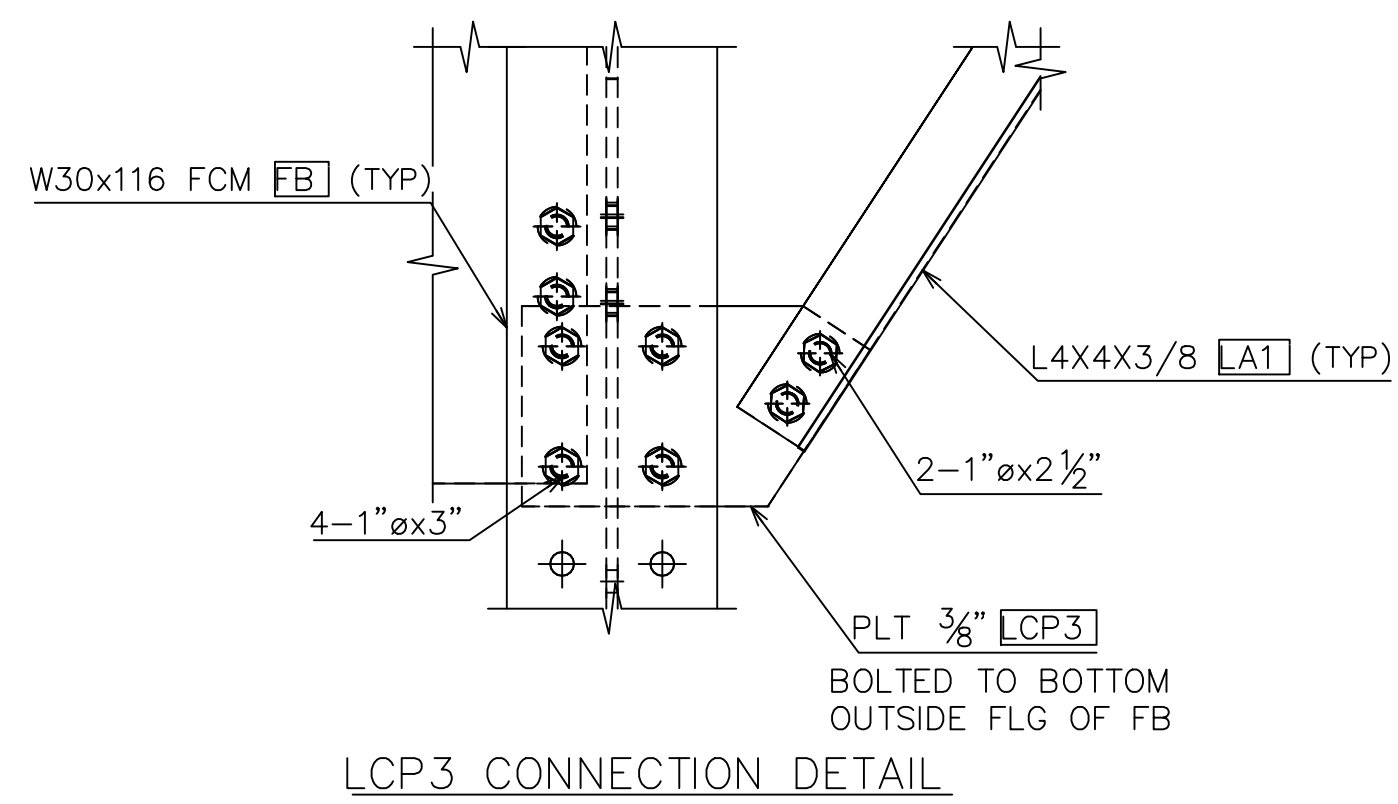


6/9/2020		<b>REVISED - SEE REVISION TABLE</b>		DWG#: PB691891	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>			ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:		
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 4b		
CONSTRUCTION PLANS		ABUTMENTS		58 TOTAL	
CONSTRUCTION PLANS			ABUTMENTS		
CONSTRUCTION PLANS			ABUTMENTS		





LATERAL LAYOUT



DWG#: PB691891

6/9/2020 REVISED - SEE REVISION TABLE



MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

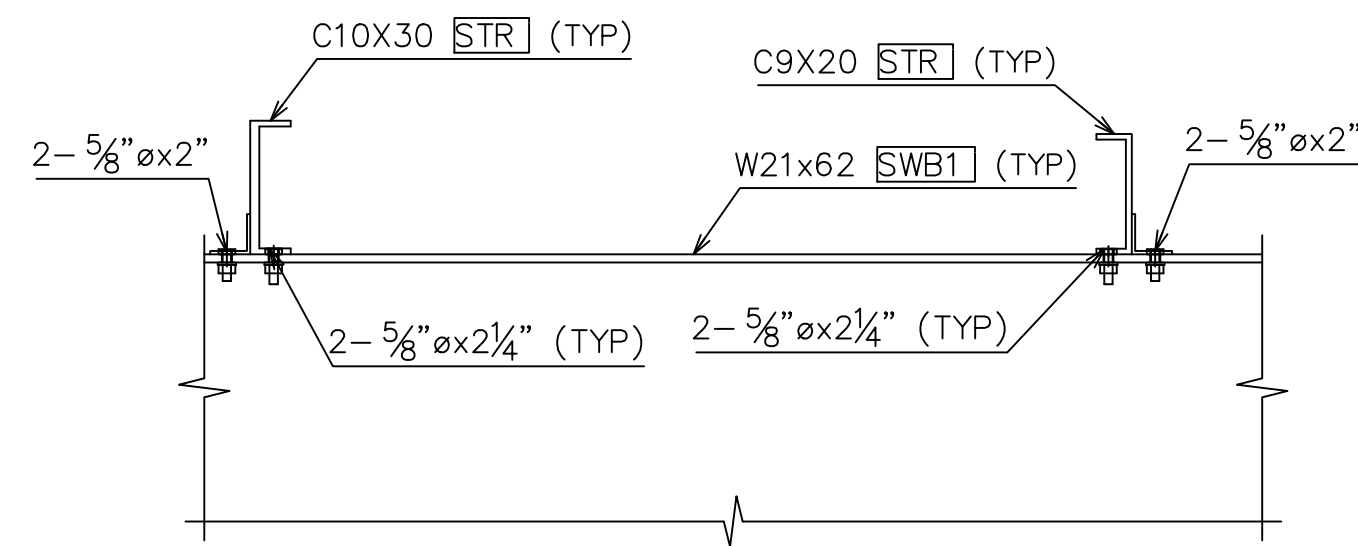
SHEET 5a

CONSTRUCTION PLANS

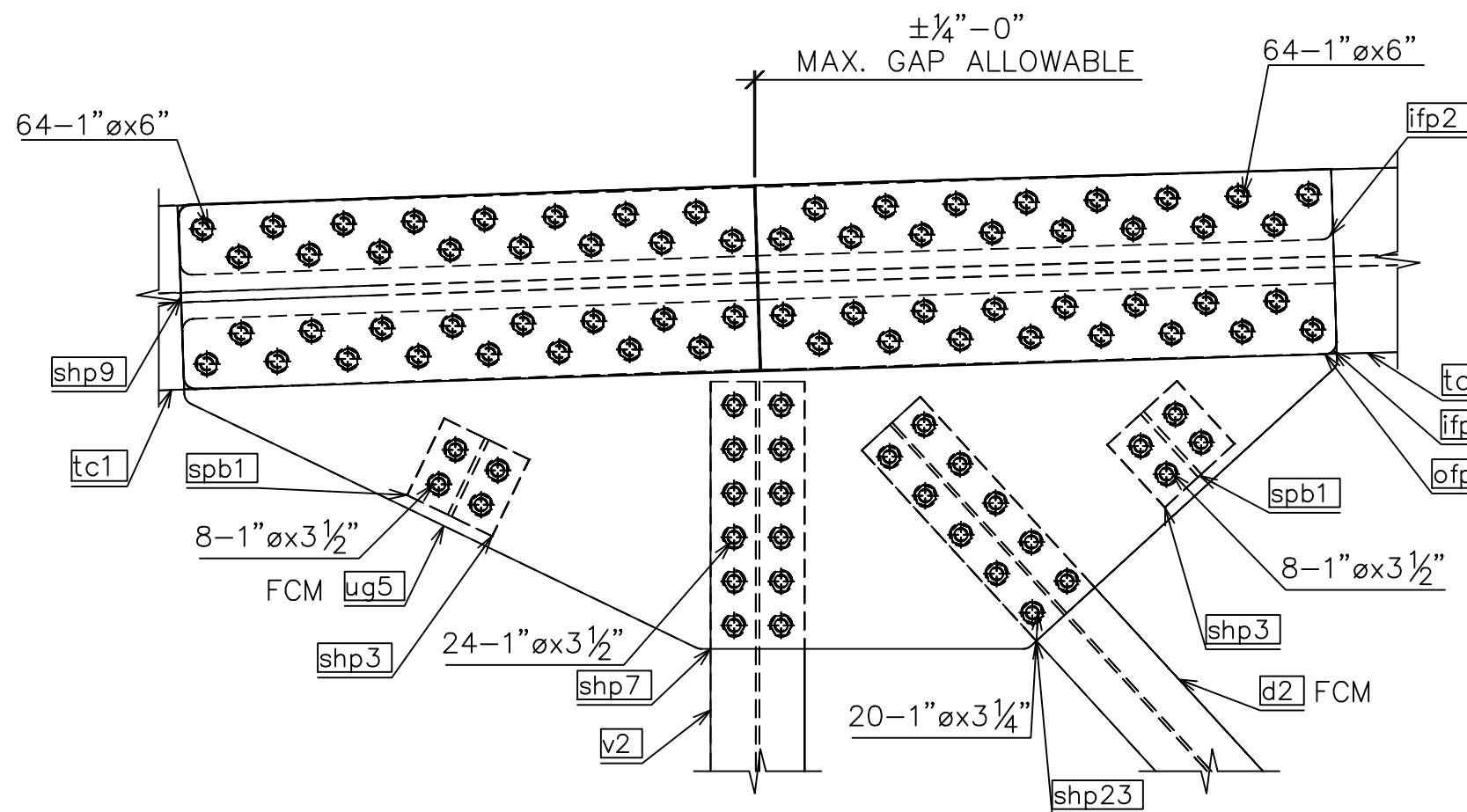
FIELD ASSEMBLY

USB JOB# 200045

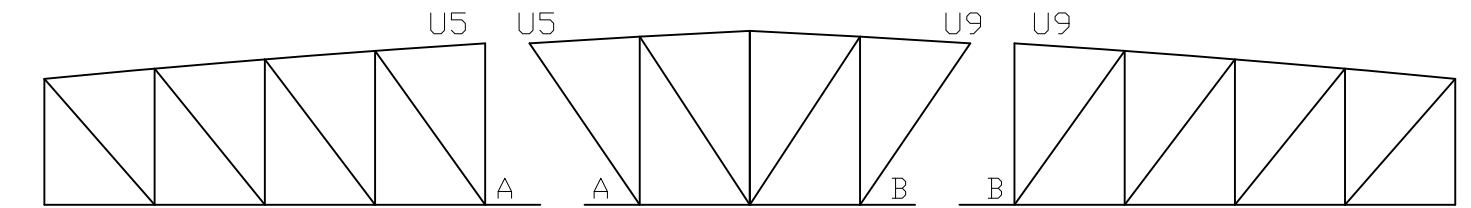
58 TOTAL



SIDEWALK STRINGER TO SIDEWALK BRACKET CONNECTION

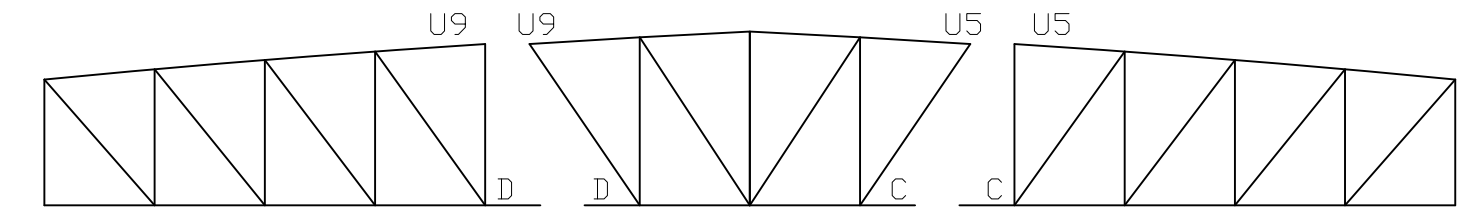


U5/U9 CONNECTION DETAIL



ABUT #1 TSA1 ABUT #2 TSB1  
SEC. LIFT WGT = 36.8 kips SEC. LIFT WGT = 28.2 kips SEC. LIFT WGT = 36.8 kips

TRUSS "L" ASSY (ROADWAY SIDE FACING UP)



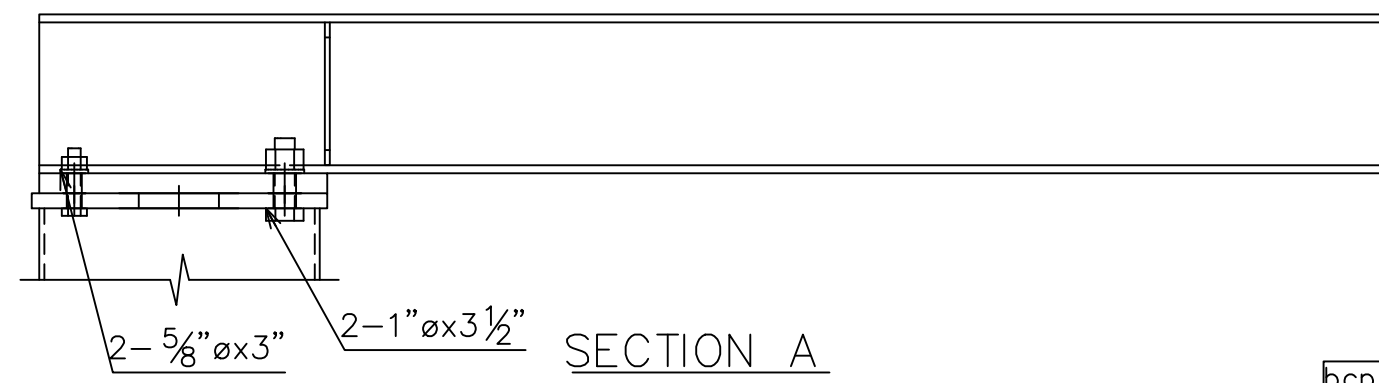
ABUT #1 TSD1 ABUT #2 TSC1  
SEC. LIFT WGT = 36.8 kips SEC. LIFT WGT = 28.2 kips SEC. LIFT WGT = 36.8 kips

TRUSS "R" ASSY (ROADWAY SIDE FACING DOWN)

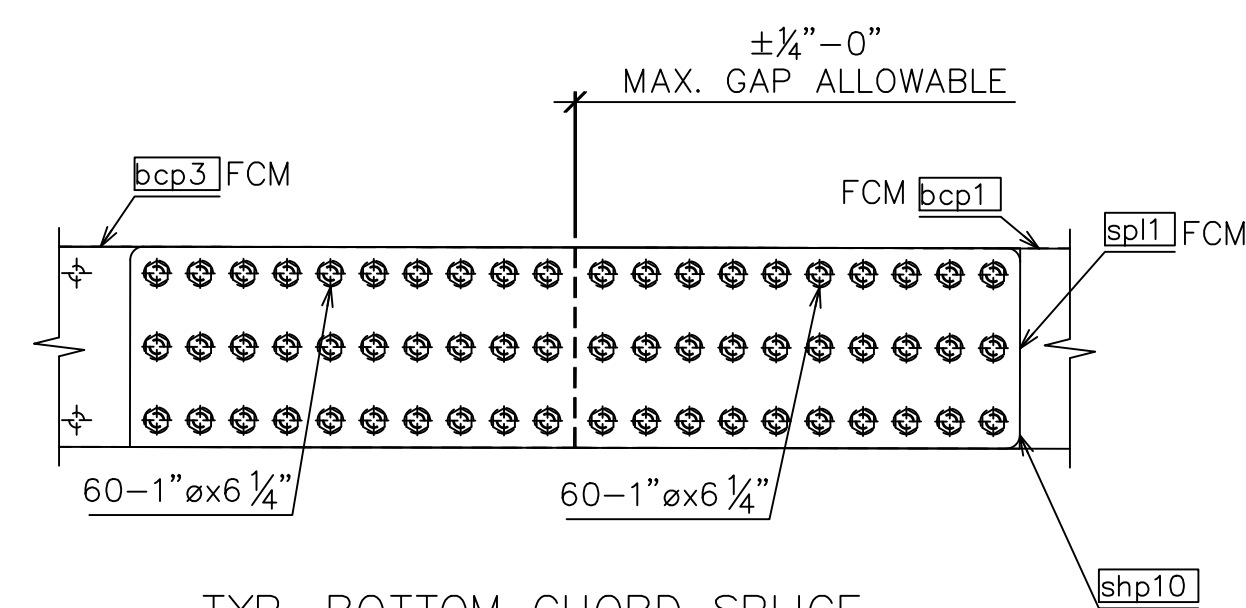
TOTAL LIFTING WEIGHT PER TRUSS = 102.54K  
INCLUDES GALV., SPLICE PLATES & BOLTS

TRUSS MATCH MARKINGS

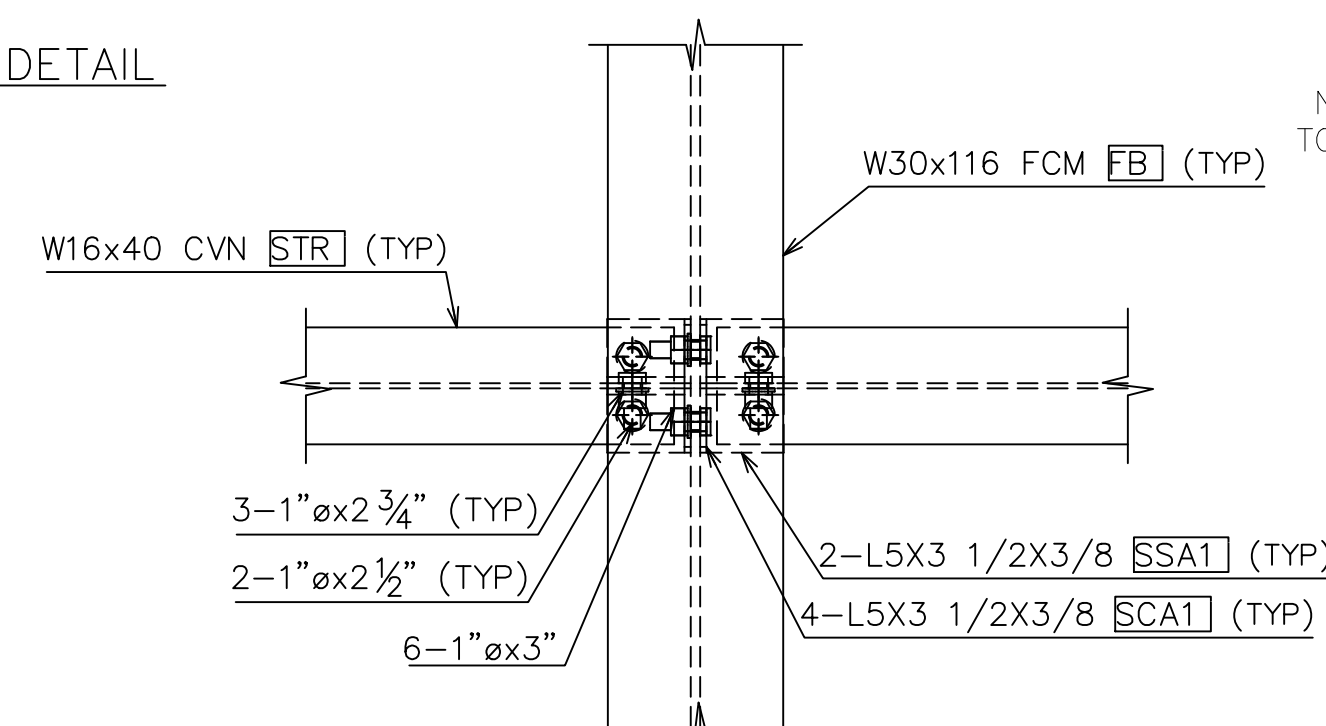
NOTE: MATCH MARK LETTERS TO BE TAGGED TO EACH TRUSS SEGMENT. PRIOR TO SHIPPING, MARK EACH TRUSS WITH ITS APPLICABLE MATCH MARK WITH A PAINT MARKER.



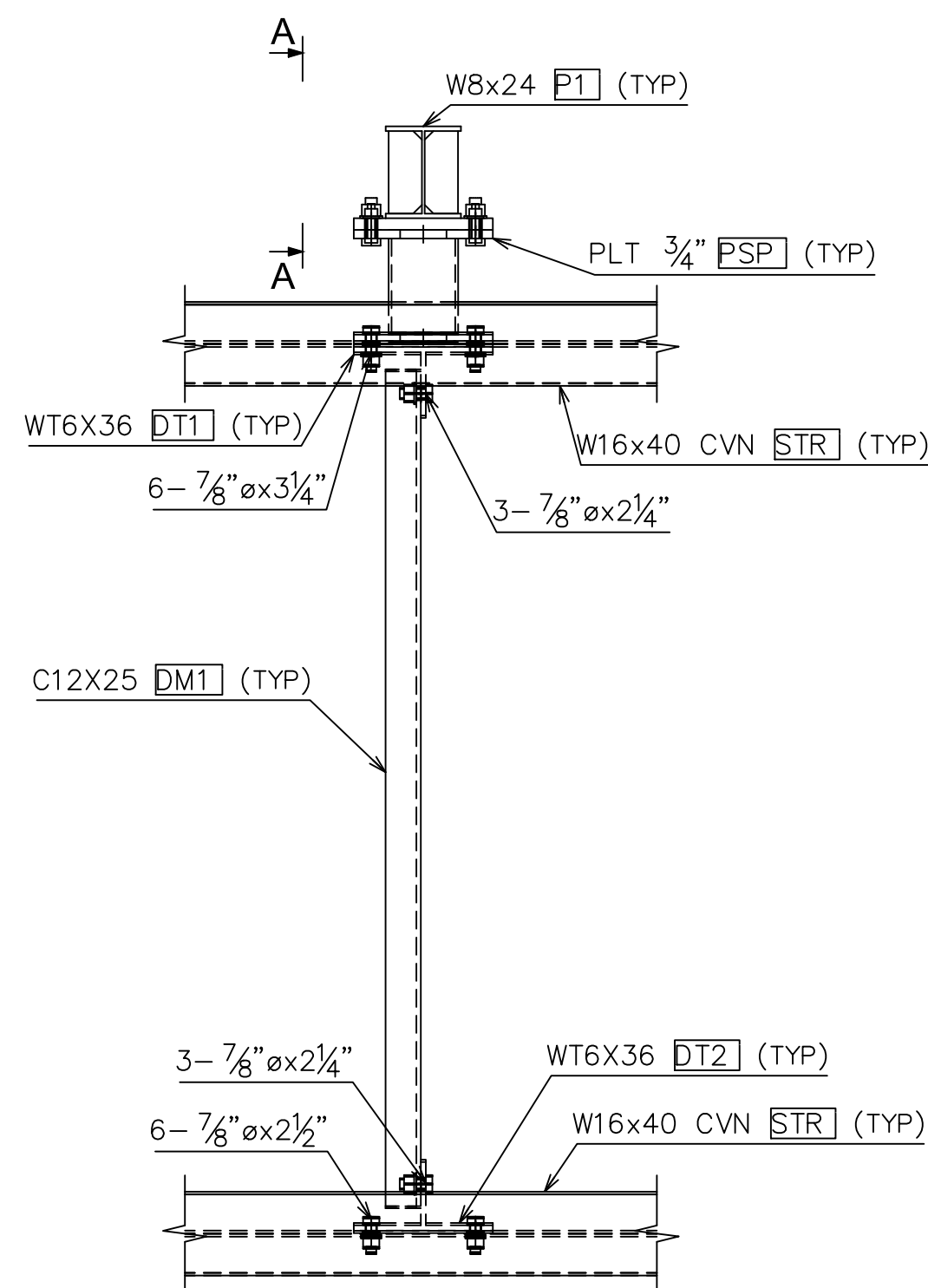
SECTION A



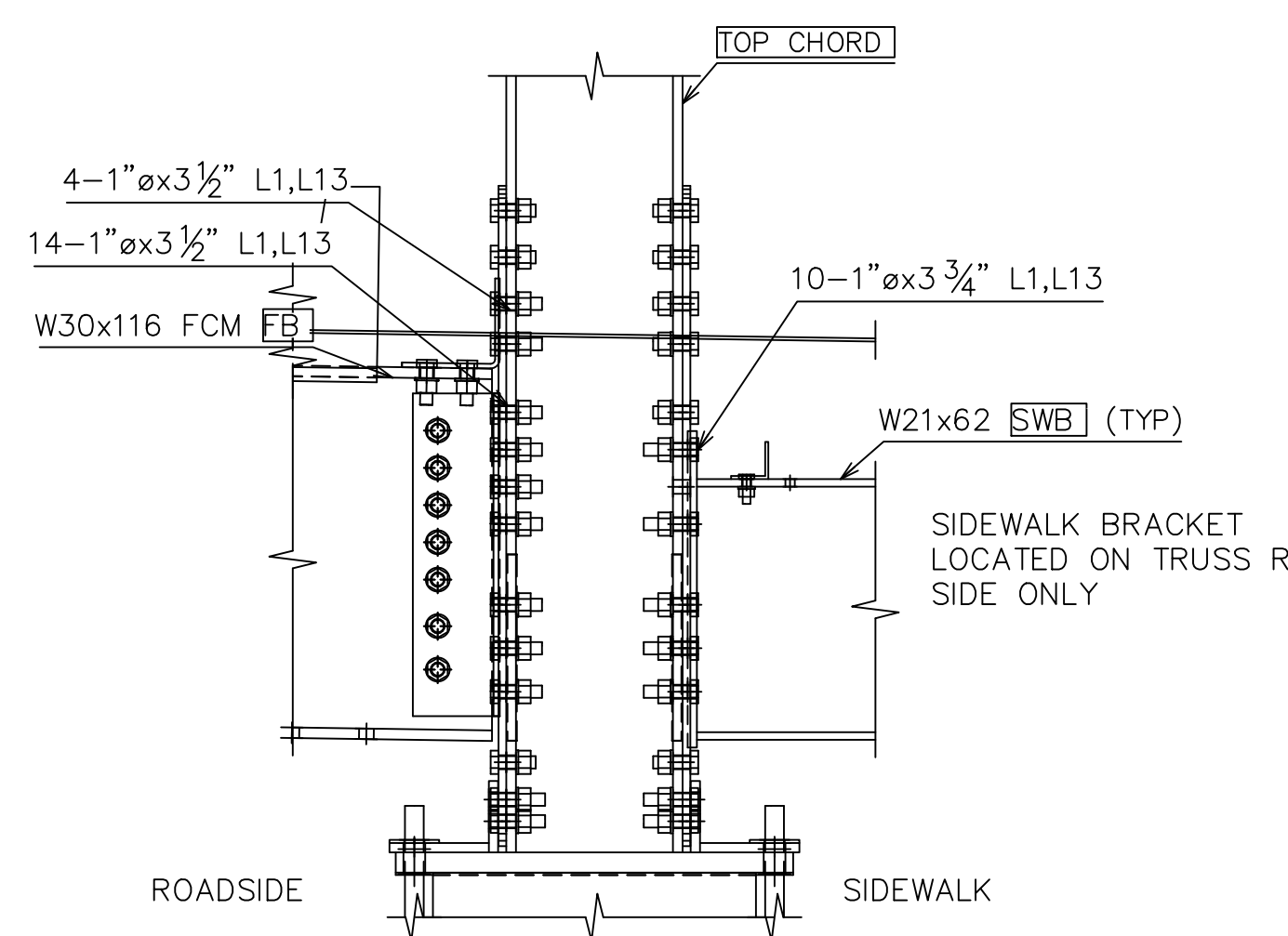
TYP. BOTTOM CHORD SPLICE



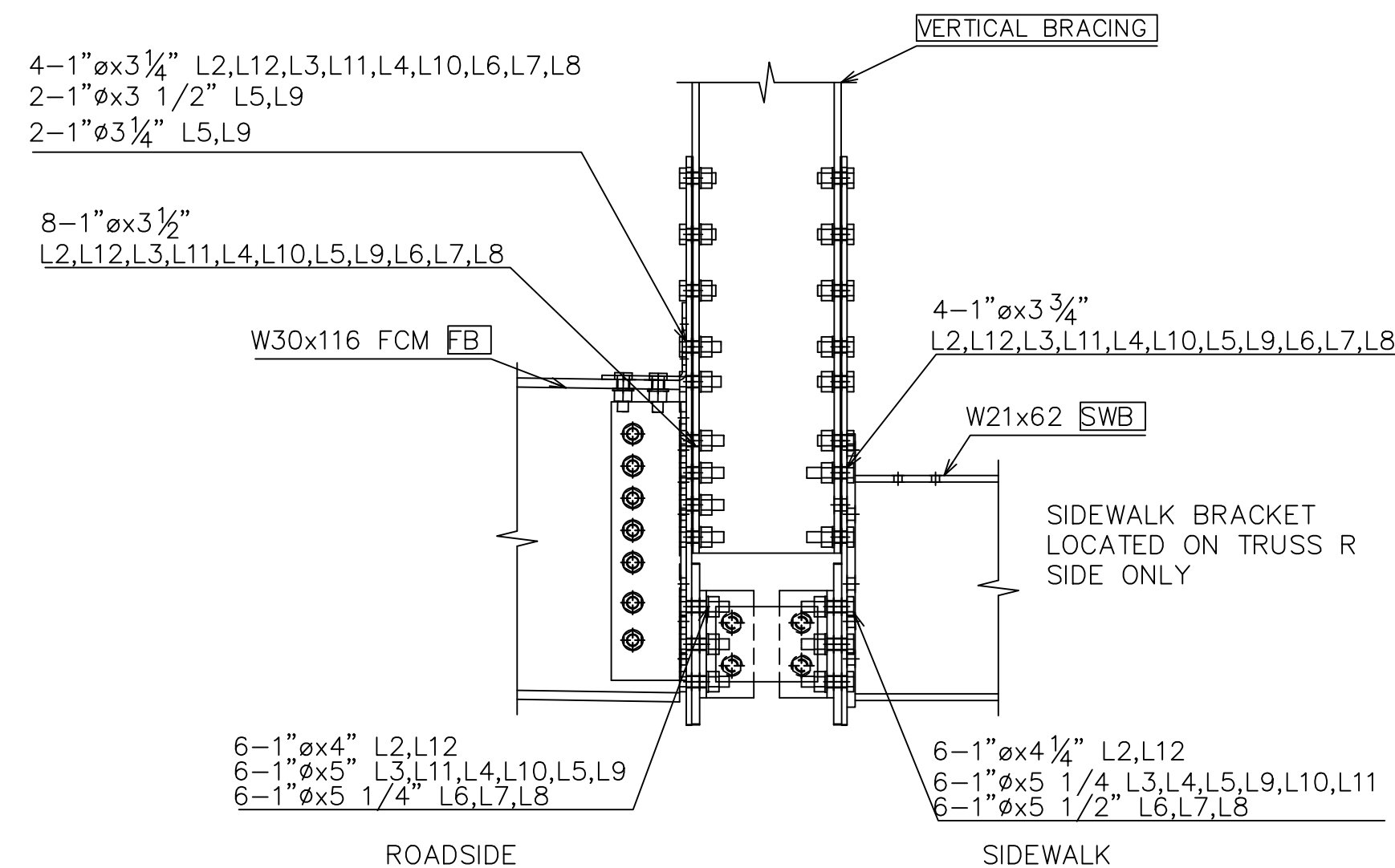
TYP. INTERIOR STRINGER TO FLOORBEAM CONNECTION



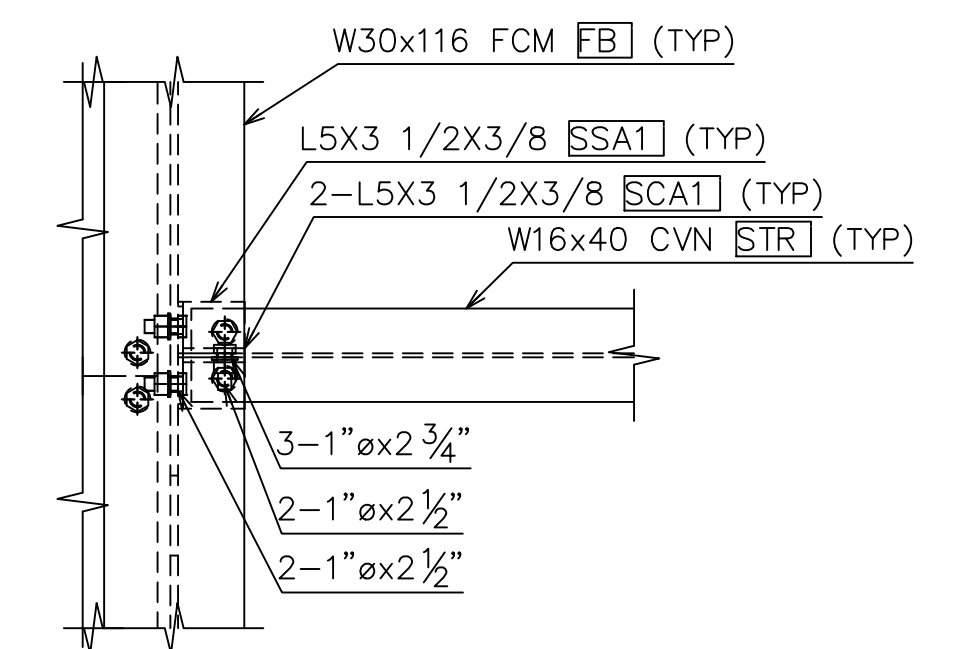
TYP. DIAPHRAGM CONNECTION



SIDEWALK L1/L13 FLOORBEAM CONNECTION



ROADWAY TYP. FLOORBEAM CONNECTION



TYP. STRINGER TO END FLOORBEAM CONNECTION

6/9/2020 REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:



DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 5b

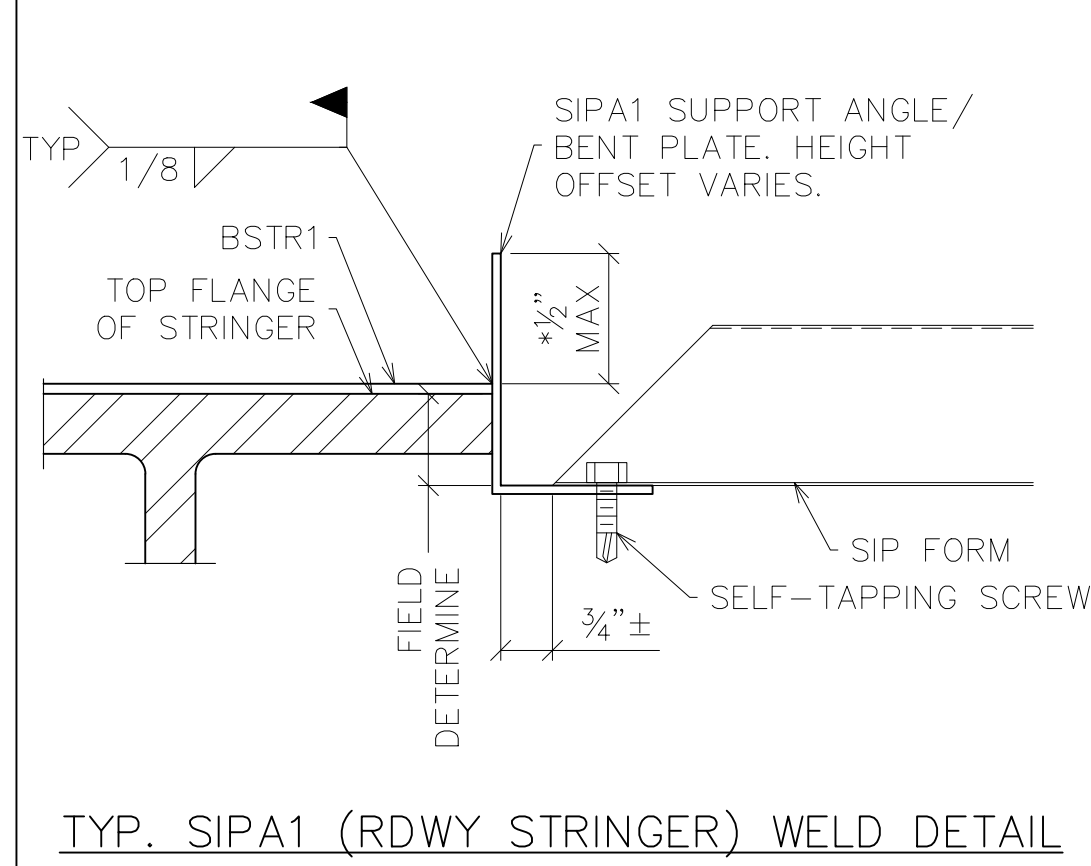
CONSTRUCTION PLANS

FIELD ASSEMBLY

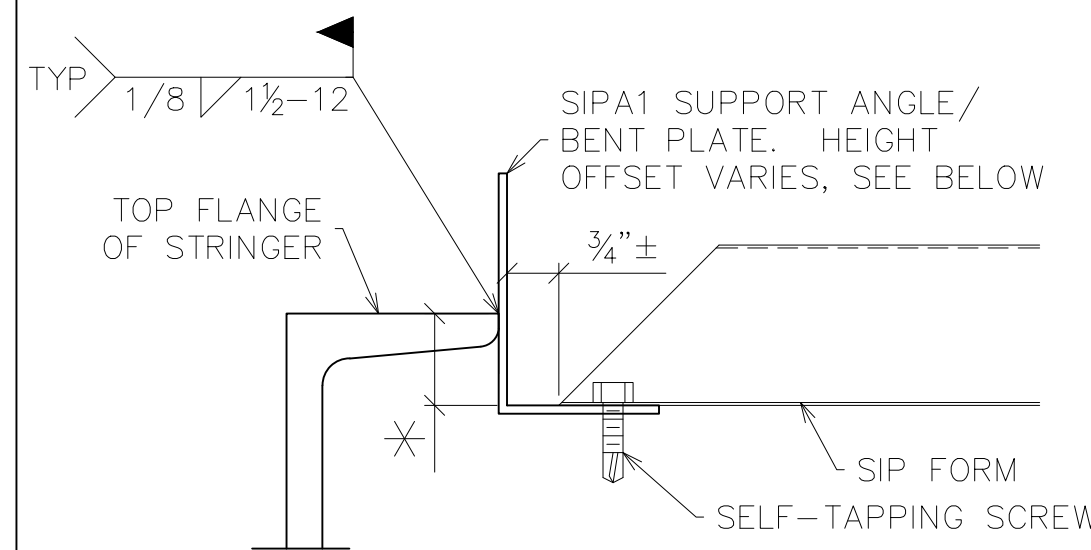
USB JOB# 200045

58 TOTAL

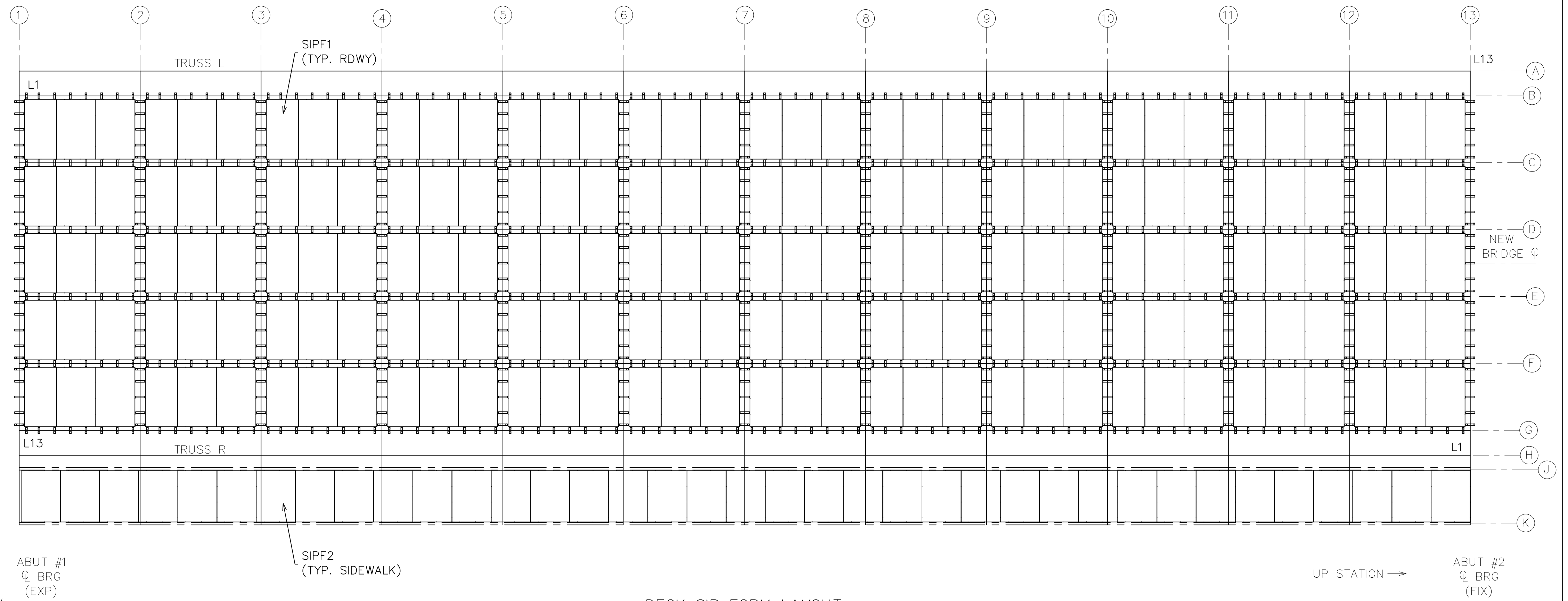
DWG#: PB691891



TYP. SIPA1 (RDWY STRINGER) WELD DETAIL



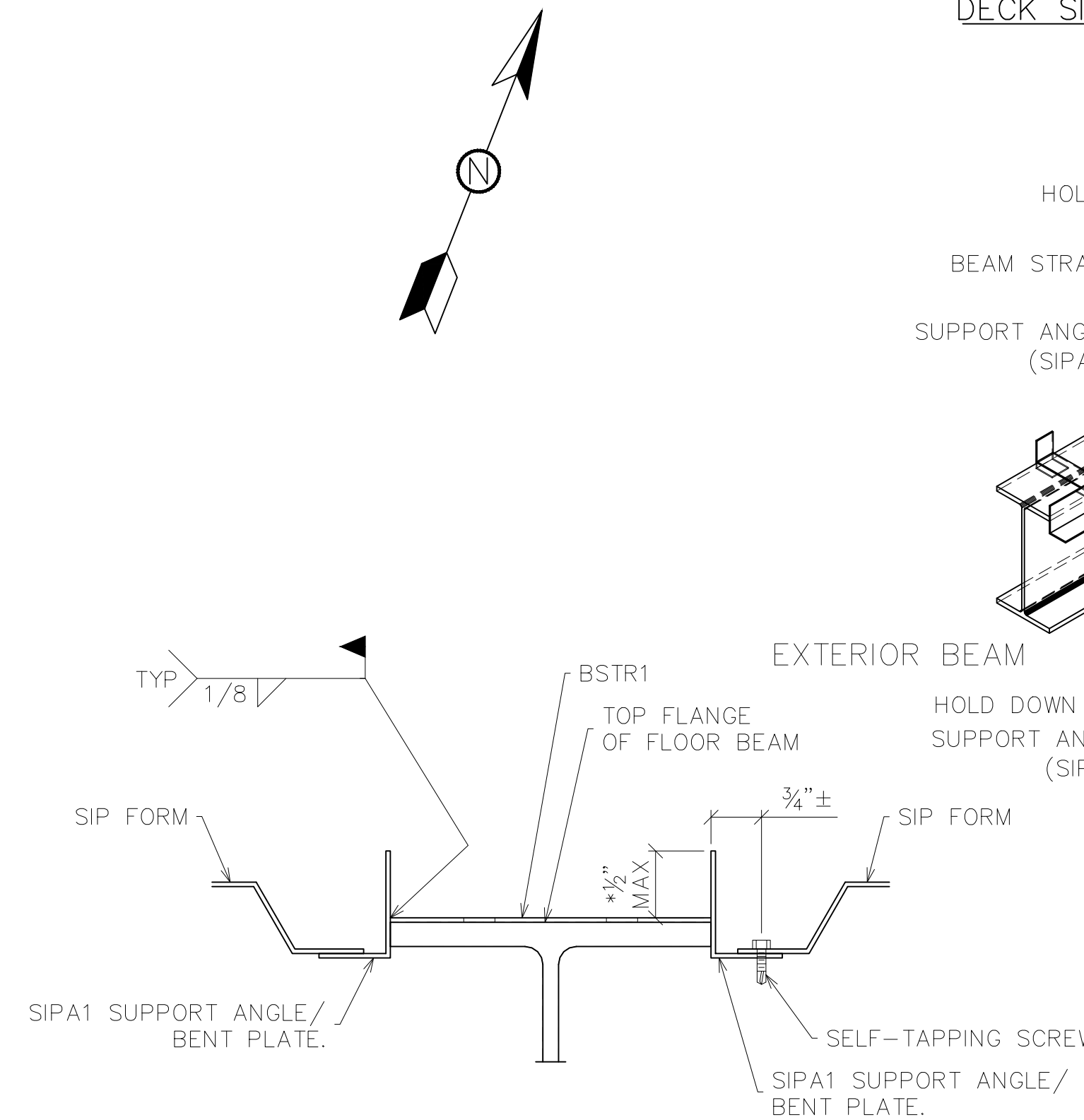
TYP. SIPA1 (SIDEWALK STRINGER) WELD DETAIL



DECK SIP FORM LAYOUT

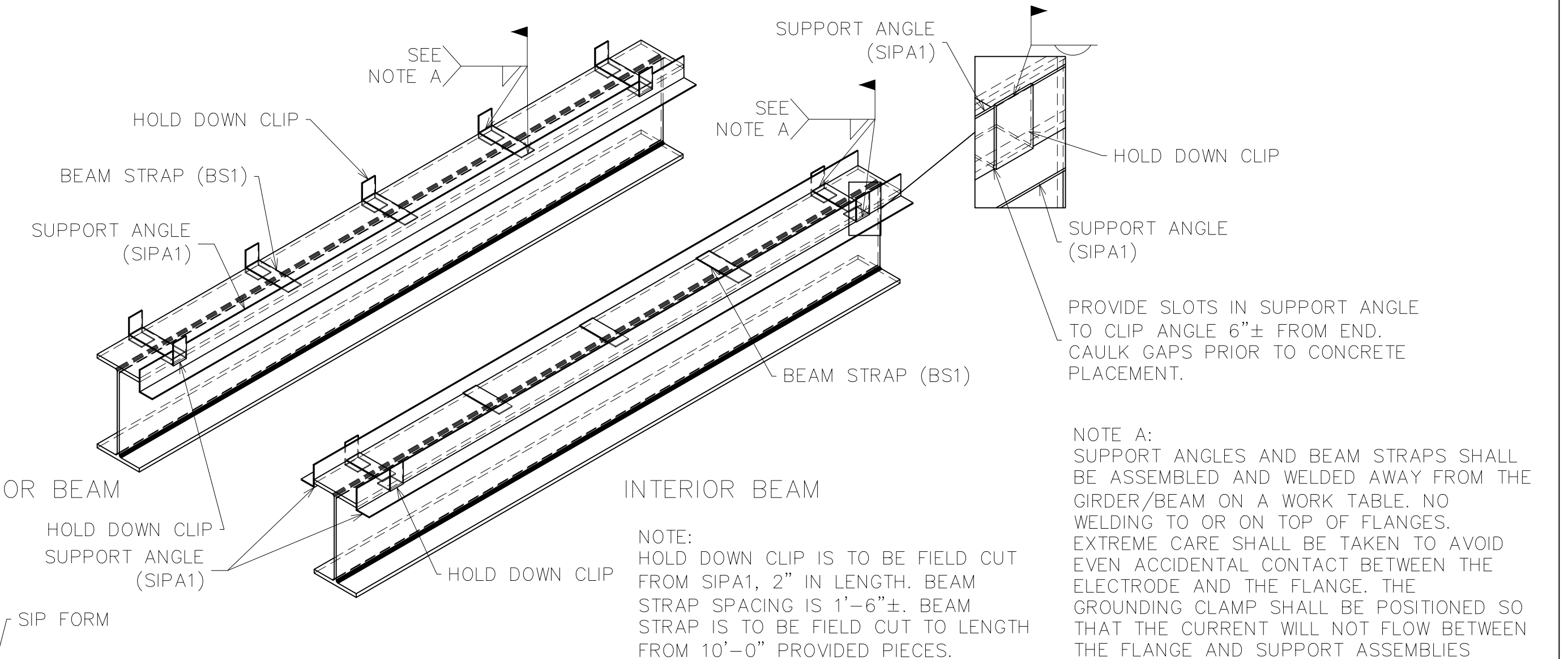
**FORM INSTALLATION NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS.
2. CARE SHALL BE TAKEN TO AVOID DAMAGING THE INSTALLED FORM FROM EITHER STACKING OF MATERIALS, DROPPING EQUIPMENT OR HEAVY CONSTRUCTION TRAFFIC.
3. EACH SHEET MUST BE FASTENED TO SUPPORTS IMMEDIATELY UPON PLACEMENT TO AVOID HAZARD FROM HORIZONTAL MOVEMENT OR SUDDEN UPLIFT.
4. BRIDGE DECK FORM AND ACCESSORY MATERIALS NOT PROMPTLY ERECTED SHALL BE STORED OFF THE GROUND WITH ONE END ELEVATED FOR DRAINAGE.
5. GENERAL CONTRACTOR SHALL TAKE GRADES ON BEAMS AT MINIMUM OF 10'-0" INTERVALS TO ALLOW FOR ADJUSTMENT OF SUPPORTS TO FOLLOW FINISHED ROADWAY PROFILES. ( $\pm 1/8"$ )
6. PLACE FORMS IN THE OPPOSITE DIRECTION OF PLANNED POUR TO MINIMIZE DIFFERENTIAL DEFLECTION.
7. UNLESS OTHERWISE NOTED, ALL SUPPORT ANGLES ARE TO BE WELDED TO TOP FLANGE USING A  $1/8" \times 1/2"$  FILLET WELD SPACED AT 12" ON CENTER WITH WELDS AT EACH END OF EACH SUPPORT.
8. SELF-DRILLING SCREWS SHALL BE INSTALLED AS FOLLOWS  
 -ALONG SUPPORTS: AT MID-WIDTH & AT SIDELAPS  
 -ALONG SIDELAPS: SPACED AT 18" O.C. MAX.
9. FORMS SHALL BEAR A MINIMUM OF 1" ON ALL SUPPORTS.
10. ALL CUTTING OF FORM SHEETS AND ACCESSORY ITEMS SHALL BE DONE BY SAW, SHEAR OR OTHER APPROVED METHODS. CUTTING BY BURNING IS NOT PERMITTED.
11. CALCIUM CHLORIDE (OR ANY ADMIXTURE CONTAINING CHLORIDE SALTS) SHALL NOT BE USED IN THE CONCRETE PLACED ON FORMS.
12. CONCRETE SHALL NOT BE DUMPED ON FORMS TO A DEPTH GREATER THAN 10" ABOVE TOP OF FORM.
13. ANY ADDITIONAL CONCRETE REQUIRED DUE TO MIS-USE OF FORMS SHALL BE AT THE CONTRACTORS EXPENSE.



TYP. SIPA1 WELD DETAIL TO FLOOR BEAM

\* FIELD TRIM SIPA1 AS REQUIRED TO MEET  $1/2"$  MAX. DIMENSION.



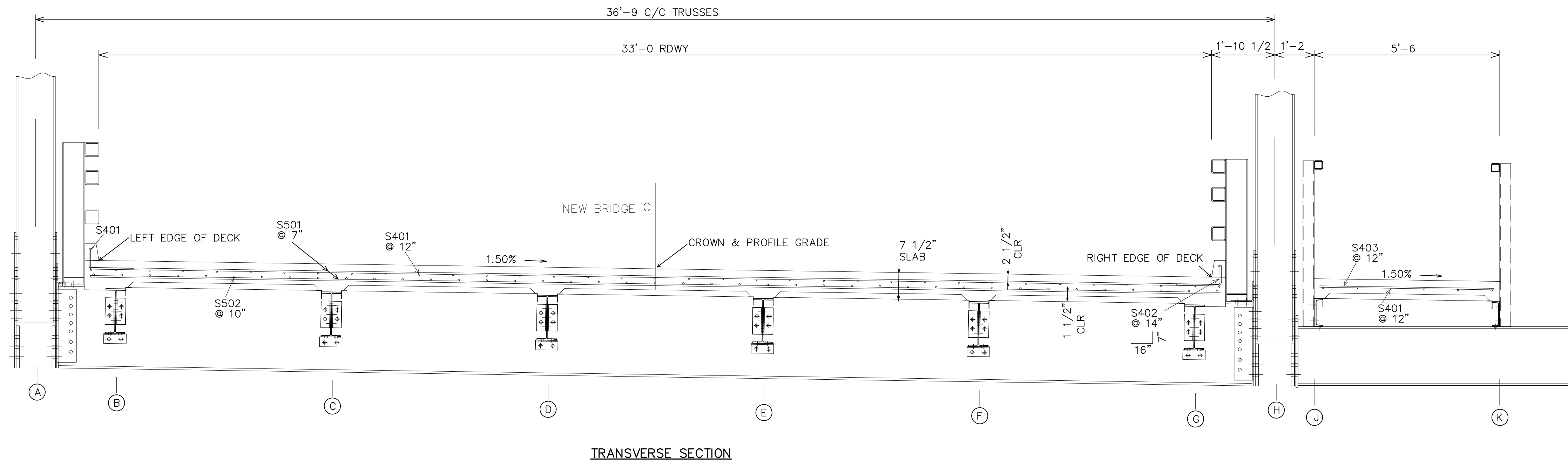
NOTE: HOLD DOWN CLIP IS TO BE FIELD CUT FROM SIPA1, 2" IN LENGTH. BEAM STRAP SPACING IS 1'-6"  $\pm$ . BEAM STRAP IS TO BE FIELD CUT TO LENGTH FROM 10'-0" PROVIDED PIECES.

NOTE A: SUPPORT ANGLES AND BEAM STRAPS SHALL BE ASSEMBLED AND WELDED AWAY FROM THE GIRDER/BEAM ON A WORK TABLE. NO WELDING TO OR ON TOP OF FLANGES. EXTREME CARE SHALL BE TAKEN TO AVOID EVEN ACCIDENTAL CONTACT BETWEEN THE ELECTRODE AND THE FLANGE. THE GROUNDING CLAMP SHALL BE POSITIONED SO THAT THE CURRENT WILL NOT FLOW BETWEEN THE FLANGE AND SUPPORT ASSEMBLIES WHEN WELDING THE HOLD DOWN CLIPS AND ANGLE RUNNER. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO/AWS D1.5 OF THE BRIDGE WELDING CODE.

DWG#: PB691891

**U.S. BRIDGE**  
 BRIDGING AMERICA SINCE 1936  
 201 WHEELING AVE.  
 P.O. BOX 757  
 CAMBRIDGE, OH 43725  
 888-872-7434  
 www.usbridge.com

6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 6a
CONSTRUCTION PLANS	FLOORING PLAN	USB JOB# 200045	58 TOTAL



TRANSVERSE SECTION

DECK PLAN

\*MIN SPLICE LENGTH = S401 TOP BARS - 27"  
S502 BOTTOM BARS - 35"

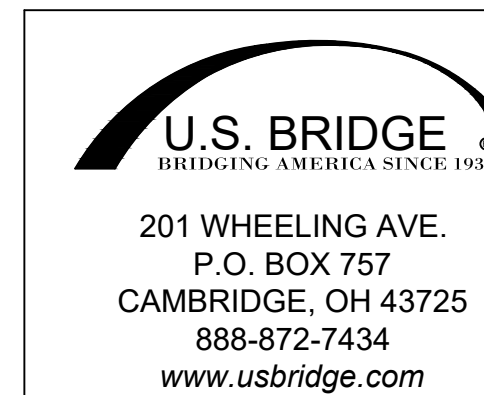
NOTES:

1. CONCRETE FOR DECK SLAB TO BE MIN  $f'_c = 3600$  PSI
2. EPOXY COATED REINFORCING STEEL MAY BE FIELD OR SHOP BENT TO ACCOMMODATE THE CROWN.

DWG#: PB691891

6/9/2020

REVISED - SEE REVISION TABLE



**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
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DESIGN/REVIEW: DLM/SAF

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SHEET 6b

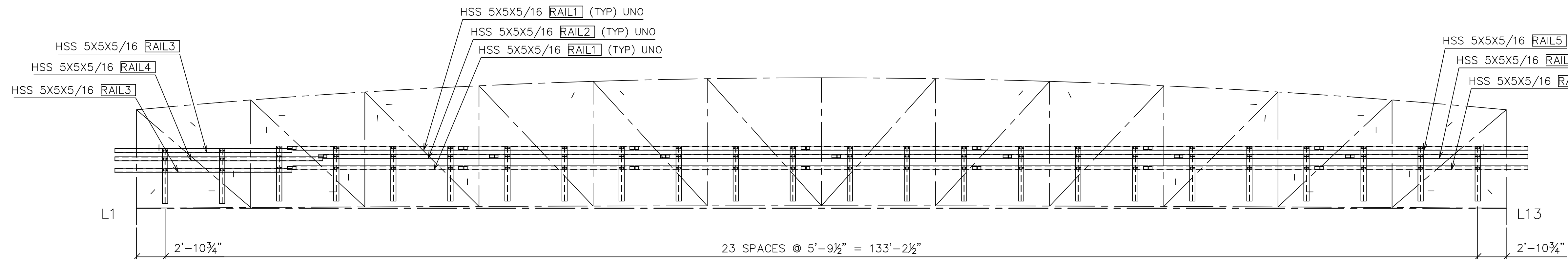
CONSTRUCTION PLANS

USB JOB#  
200045

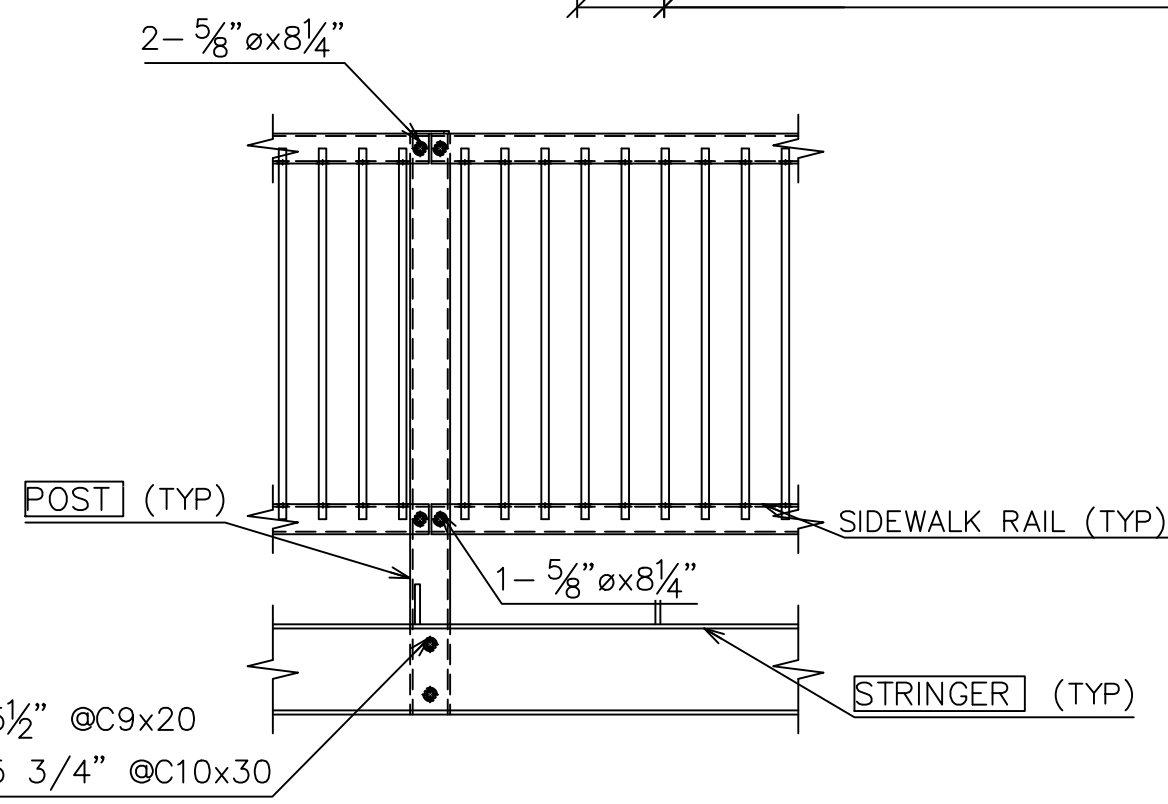
58 TOTAL

DATE PLOTTED June 9, 2020

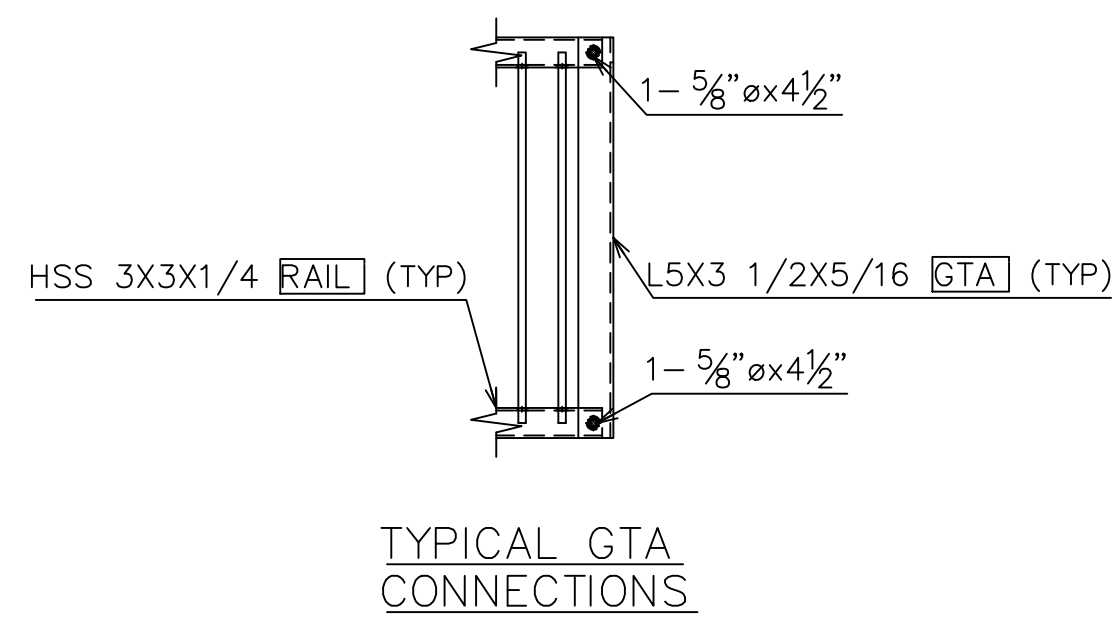
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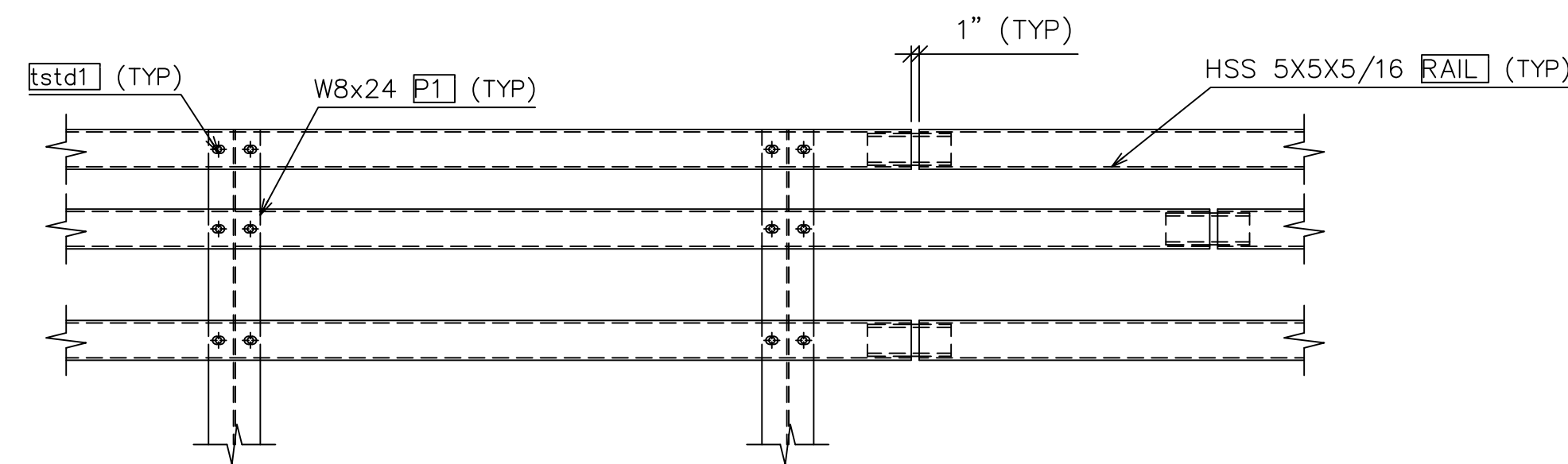
RAILING LAYOUT  
ROADSIDE SHOWN FACING UP



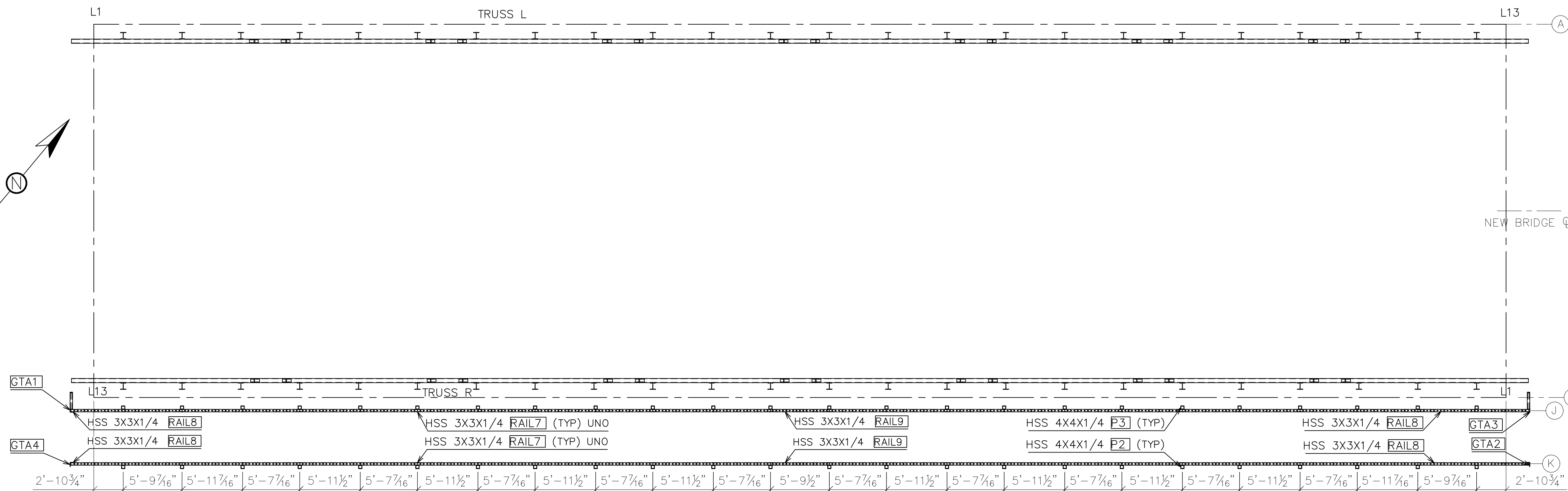
TYP. SIDEWALK RAIL CONNECTION



TYPICAL GTA CONNECTIONS



TYPICAL RAIL CONNECTION

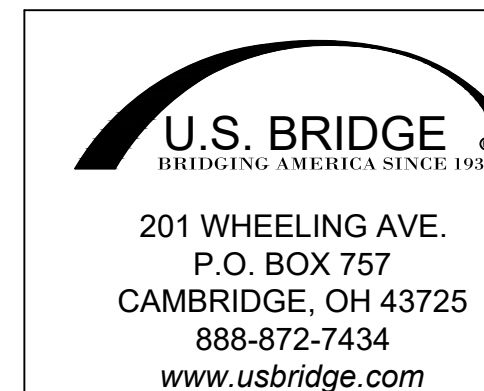


SIDEWALK RAILING LAYOUT

ABUT #1  
CL BRG  
(EXP)

ABUT #2  
CL BRG  
(FIX)

DWG#: PB691891



6/9/2020 REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
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DRAW: ABJ

CHECK: JEC

SHEET 7

CONSTRUCTION PLANS

RAILING LAYOUT

USB JOB#  
200045

58

TOTAL

DATE PLOTTED June 9, 2020

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4 ASSEMBLY LIST (WEIGHTS DO NOT INCLUDE BOLTS OR COATING)								
Mark	Amount	Model Role	Description	Length	Grade	Coating	Ass'y Wgt. Ea.	Phase
A1	4	ANGLE	L4X4X3/8	5"	A572-50	GLV&PNT	4	
AA2	1	ABUTMENT ANGLE	L7X4X3/8	20'-0"	A572-50	GLV	280	
AA3	1	ABUTMENT ANGLE	L7X4X3/8	21'-11 9/16"	A572-50	GLV	307	
AA4	1	ABUTMENT ANGLE	L7X4X3/8	21'-11 9/16"	A572-50	GLV	307	
AA5	1	ABUTMENT ANGLE	L7X4X3/8	20'-0"	A572-50	GLV	280	
AB1	8	ANCHOR BOLT W/ZN	RB 1 1/2	2'-0"	A449	GLV	12	
ABW1	8	ANCHOR BOLT WASHER	PL 1/4"x4"x6"	6"	A36	GLV	2	
BP1	2	BEARING PLATE	PL 2"x22"x2-8"	2'-8"	A572-50	GLV&PNT	435	
BP2	2	BEARING PLATE	PL 2"x22"x2-8"	2'-8"	A572-50	GLV&PNT	431	
BSTR1	63	BEAM STRAP 12GA	PL 1/8"x2"x10'-0"	10'-0"	STEEL	GLV	9	
CP5	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	156	
CP7	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	156	
CP8	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	336	
CP9	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	190	
CP10	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	167	
CP11	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	167	
CP12	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	167	
CP13	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	190	
CP14	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	167	
CP15	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	336	
CS1	2	COMPRESSION SEAL	CV-4000	41'-11 1/2"	Rubber		323	
DM1	48	DIAPHRAGM	C12X25	6'-0 1/4"	A572-50	GLV&PNT	150	
DT1	48	DIAPHRAGM TEE	WT6X36	1'-1 5/8"	A572-50	GLV&PNT	40	
DT2	48	DIAPHRAGM TEE	WT6X36	1'-1 5/8"	A572-50	GLV&PNT	40	
FB1	6	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4267	
FB2	5	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4268	
FB3	1	FLOOR BEAM	W30x116	35'-5"	A572-FCM	GLV&PNT	4218	
FB4	1	FLOOR BEAM	W30x116	35'-5"	A572-FCM	GLV&PNT	4218	
GTA1	1	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	72	
GTA2	1	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	
GTA3	1	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	72	
GTA4	1	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	
LA1	25	LATERAL ANGLE	L4X4X3/8	18'-8 13/16"	A572-50	GLV&PNT	183	
LCP1	11	LATERAL CONNECTION PLATE	PL 3/8"x10"x2'-1 3/4"	2'-1 3/4"	A572-50	GLV&PNT	22	
LCP2	6	LATERAL CONNECTION PLATE	PL 3/8"x25 3/4"x3'-0 1/2"	3'-0 1/2"	A572-50	GLV&PNT	135	
LCP3	4	LATERAL CONNECTION PLATE	PL 3/8"x10"x1'-5 3/8"	1'-5 3/8"	A572-50	GLV&PNT	15	
P1	48	POST	W8x24	5'-7"	A572-50	GLV&PNT	187	
P2	24	POST	HSS 4X4X1/4	4'-10"	A500 GR.B	GLV&PNT	60	
P3	24	POST	HSS 4X4X1/4	4'-11"	A500 GR.B	GLV&PNT	61	
PLT1	4	PLATE	PL 3/4"x8"x1'-3"	1'-3"	A572-50	GLV&PNT	42	
PLT2	4	PLATE	PL 3/4"x8"x1'-3"	1'-3"	A572-50	GLV&PNT	41	
PSP1	24	POST SUPPORT PLATE	PL 3/4"x12"x1'-2 3/4"	1'-2 3/4"	A572-50	GLV&PNT	89	
PSP2	24	POST SUPPORT PLATE	PL 3/4"x12"x1'-2 3/4"	1'-2 3/4"	A572-50	GLV&PNT	88	
RAIL1	24	RAIL	HSS 5X5X5/16	17'-3 3/8"	A500 GR.B	GLV&PNT	347	
RAIL2	12	RAIL	HSS 5X5X5/16	17'-3 15/16"	A500 GR.B	GLV&PNT	348	
RAIL3	4	RAIL	HSS 5X5X5/16	17'-11 9/16"	A500 GR.B	GLV&PNT	345	
RAIL4	2	RAIL	HSS 5X5X5/16	21'-1"	A500 GR.B	GLV&PNT	404	
RAIL5	4	RAIL	HSS 5X5X5/16	21'-1"	A500 GR.B	GLV&PNT	419	
RAIL6	2	RAIL	HSS 5X5X5/16	17'-11 9/16"	A500 GR.B	GLV&PNT	360	
RAIL7	20	RAIL	HSS 3X3X1/4	11'-6 11/16"	A500 GR.B	GLV&PNT	358	
RAIL8	4	RAIL	HSS 3X3X1/4	10'-11 1/16"	A500 GR.B	GLV&PNT	338	
RAIL9	2	RAIL	HSS 3X3X1/4	5'-9 3/16"	A500 GR.B	GLV&PNT	179	
SCA1	288	STRINGER CONNECTION ANGLE	L5X3 1/2X3/8	9"	A572-50	GLV&PNT	7	
SCR1	2253	1/4-14x1" SPAN MASTER	RB 1/4	1"	STEEL	GLV	0	
SIPA1	276	SIP SUPPORT ANGLE	2x3x12GA SIP ANGLE	10'-0"	STEEL	GLV	19	
SIPF1	180	SIP FORM	2.0x45x20GA (9P)	5'-8 5/16"	STEEL	GLV	37	
SIPF2	37	SIP FORM	2.0x45x20GA (9P)	4'-10 13/16"	STEEL	GLV	32	
SSA1	144	STRINGER SEAT ANGLE	L5X3 1/2X3/8	8"	A572-50	GLV&PNT	7	
STR1	20	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	454	
STR2	12	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR3	10	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR4	10	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR5	12	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR6	2	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR7	4	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	454	
STR8	1	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR9	1	STRINGER	W16x40	11'-4 3/8"	A572-CVN	GLV&PNT	453	
STR10	1	STRINGER	C10X30	12'-6 5/16"	A572-50	GLV&PNT	380	
STR11	1	STRINGER	C9X20	12'-6 5/16"	A572-50	GLV&PNT	255	
STR12	5	STRINGER	C10X30	11'-6 7/16"	A572-50	GLV&PNT	349	
STR13	5	STRINGER	C9X20	11'-6 7/16"	A572-50	GLV&PNT	234	
STR14	5	STRINGER	C10X30	11'-6 7/16"	A572-50	GLV&PNT	349	
STR15	5	STRINGER	C9X20	11'-6 7/16"	A572-50	GLV&PNT	234	
STR16	1	STRINGER	C10X30	12'-6 5/16"	A572-50	GLV&PNT	380	
STR17	1	STRINGER	C9X20	12'-6 5/16"	A572-50	GLV&PNT	255	
SWB1	13	SIDEWALK BRACKET	W21x62	8'-3 3/4"	A572-50	GLV&PNT	567	
TSA1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	32799	
TSAB1	1	TOP CHORD	W14x193	46'-3 11/16"	A572-50	GLV&PNT	25488	
TSB1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	32804	
TSC1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	32799	
TSCD1	1	TOP CHORD	W14x193	46'-3 11/16"	A572-50	GLV&PNT	25488	
TSD1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	32804	

4 COMPLETE BOLT CHART			
Qty	Description	Length	Remark
200	Nut A563A - 5/8		GALV
200	Washer F844 - 5/8		GALV
312	A563-DH Nut - 5/8		GALV
312	Washer F436 - 5/8		GALV
864	A563-DH Nut - 7/8		GALV
864	Washer F436 - 7/8		GALV
9528	Washer F436 - 1		GALV
9528	A563-DH Nut - 1		GALV
68	F3125 A325 5/8 x 2	2"	GALV
52	F3125 A325 5/8 x 2 1/4	2 1/4"	GALV
288	F3125 A325 7/8 x 2 1/4	2 1/4"	GALV
288	F3125 A325 7/8 x 2 1/2	2 1/2"	GALV
832	F3125 A325 1 x 2 1/2	2 1/2"	GALV
1430	F3125 A325 1 x 2 3/4	2 3/4"	GALV
96	F3125 A325 5/8 x 3	3"	GALV
1444	F3125 A325 1 x 3	3"	GALV
288	F3125 A325 7/8 x 3 1/4	3 1/4"	GALV
1558	F3125 A325 1 x 3 1/4	3 1/4"	GALV
2156	F3125 A325 1 x 3 1/2	3 1/2"	GALV
176	F3125 A325 1 x 3 3/4	3 3/4"	GALV
344	F3125 A325 1 x 4	4"	GALV
140	F3125 A325 1 x 4 1/4	4 1/4"	GALV
8	A307 - 5/8 x 4 1/2	4 1/2"	GALV
276	F3125 A325 1 x 4 1/2	4 1/2"	GALV
18	F3125 A325 1 x 4 3/4	4 3/4"	GALV
72	F3125 A325 1 x 5	5"	GALV
72	F3125 A325 1 x 5 1/4	5 1/4"	GALV
18	F3125 A325 1 x 5 1/2	5 1/2"	GALV
48	F3125 A325 5/8 x 5 1/2	5 1/2"	GALV
48	F3125 A325 5/8 x 5 3/4	5 3/4"	GALV
512	F3125 A325 1 x 6	6"	GALV
480	F3125 A325 1 x 6 1/4	6 1/4"	GALV
192	A307 - 5/8 x 8 1/4	8 1/4"	GALV

4 SHOP BOLT CHART			
Qty	Description	Length	Remark
6130	Washer F436 - 1		GALV
6130	A563-DH Nut - 1		GALV
376	F3125 A325 1 x 2 1/2	2 1/2"	GALV
994	F3125 A325 1 x 2 3/4	2 3/4"	GALV
896	F3125 A325 1 x 3	3"	GALV
1390	F3125 A325 1 x 3 1/4	3 1/4"	GALV
1652	F3125 A325 1 x 3 1/2	3 1/2"	GALV
80	F3125 A325 1 x 3 3/4	3 3/4"	GALV
320	F3125 A325 1 x 4	4"	GALV
128	F3125 A325 1 x 4 1/4	4 1/4"	GALV
276	F3125 A325 1 x 4 1/2	4 1/2"	GALV
18	F3125 A325 1 x 4 3/4	4 3/4"	GALV

4 FIELD BOLT CHART			
Qty	Description	Length	Remark
200	Washer F844 - 5/8		GALV
200	Nut A563A - 5/8		GALV
312	Washer F436 - 5/8		GALV
312	A563-DH Nut - 5/8		GALV
864	Washer F436 - 7/8		GALV
864	A563-DH Nut - 7/8		GALV
3398	A563-DH Nut - 1		GALV
3398	Washer F436 - 1		GALV
68	F3125 A325 5/8 x 2	2"	GALV
52	F3125 A325 5/8 x 2 1/4	2 1/4"	GALV
288	F3125 A325 7/8 x 2 1/4	2 1/4"	GALV
288	F3125 A325 7/8 x 2 1/2	2 1/2"	GALV
456	F3125 A325 1 x 2 1/2	2 1/2"	GALV
436	F3125 A325 1 x 2 3/4	2 3/4"	GALV
96	F3125 A325 5/8 x 3	3"	GALV
548	F3125 A325 1 x 3	3"	GALV
168	F3125 A325 1 x 3 1/4	3 1/4"	GALV
288	F3125 A325 7/8 x 3 1/4	3 1/4"	GALV
504	F3125 A325 1 x 3 1/2	3 1/2"	GALV
96	F3125 A325 1 x 3 3/4	3 3/4"	GALV
24	F3125 A325 1 x 4	4"	GALV
12	F3125 A325 1 x 4 1/4	4 1/4"	GALV
8	A307 - 5/8 x 4 1/2	4 1/2"	GALV
72	F3125 A325 1 x 5	5"	GALV
72	F3125 A325 1 x 5 1/4	5 1/4"	GALV
18	F3125 A325 1 x 5 1/2	5 1/2"	GALV
48	F3125 A325 5/8 x 5 1/2	5 1/2"	GALV
48	F3125 A325 5/8 x 5 3/4	5 3/4"	GALV
512	F3125 A325 1 x 6	6"	GALV
480	F3125 A325 1 x 6 1/4	6 1/4"	GALV
192	A307 - 5/8 x 8 1/4	8 1/4"	GALV

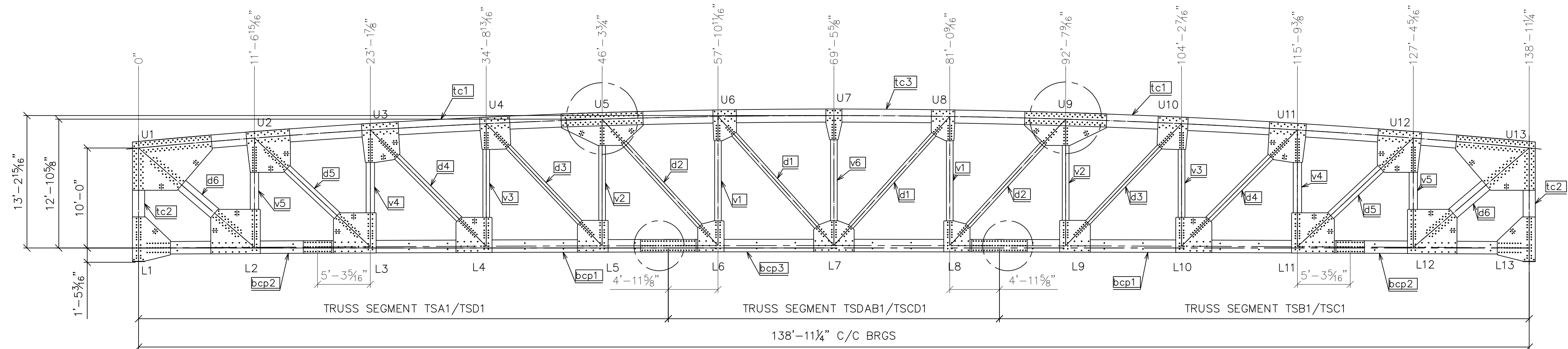
4 COMPLETE BOLT CHART (WEIGHTS)			
Quantity	Description	Length	Weight
832	1" F3125 A325-1	2 1/2"	1233.9
1430	1" F3125 A325-1	2 3/4"	2192.2
1444	1" F3125 A325-1	3"	2300.3
1558	1" F3125 A325-1	3 1/4"	2559.8
2156	1" F3125 A325-1	3 1/2"	3650.2
176	1" F3125 A325-1	3 3/4"	308.5
344	1" F3125 A325-1	4"	620.2
140	1" F3125 A325-1	4 1/4"	260.8
276	1" F3125 A325-1	4 1/2"	528.0
18	1" F3125 A325-1	4 3/4"	35.5
72	1" F3125 A325-1	5"	145.7
72	1" F3125 A325-1	5 1/4"	150.0
18	1" F3125 A325-1	5 1/2"	38.6
512	1" F3125 A325-1	6"	1153.6
480	1" F3125 A325-1	6 1/4"	1110.3
8	5/8" A307	4 1/2"	4.8
192	5/8" A307	8 1/4"	175.2
68	5/8" F3125 A325-1	2"	30.5
52	5/8" F3125 A325-1	2 1/4"	24.9
96	5/8" F3125 A325		

DATE PLOTTED June 9, 2020

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MATERIAL LIST								
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight
a1	4	ANGLE	L4X4X3/8	5"	A572-50	GLV&PNT	4	16
a2	52	ANGLE	L3X3X1/4	2 3/4"	A572-50	GLV&PNT	1	57
aa2	2	ABUTMENT ANGLE	L7X4X3/8	20"-0"	A572-50	GLV	272	544
aa3	2	ABUTMENT ANGLE	L7X4X3/8	21"-11 9/16"	A572-50	GLV	299	597
ab1	8	ANCHOR BOLT W/ZN	RB 1 1/2"	2'-0"	A449	GLV	12	96
abw1	8	ANCHOR BOLT WASHER	PL 1/4"x4"x6"	6"	A36	GLV	2	12
ap1	2	ARMOR PLATE	PL 3/8"x13 7/8"x8"-1 9/16"	8'-1 9/16"	A572-50	GLV	144	288
bar	2	EXTRUSION BAR	RV 1/4"	21"-11 1/2"	A36	GLV	5	9
bar2	2	EXTRUSION BAR	RV 1/4"	19"-11 13/16"	A36	GLV	4	9
bar4	2	EXTRUSION BAR	RV 1/4"	6'-1 5/8"	A36	GLV	1	3
bar8	2	EXTRUSION BAR	RV 1/4"	15'-5 1/8"	A36	GLV	3	7
bar9	2	EXTRUSION BAR	RV 1/4"	7'-3 3/4"	A36	GLV	2	3
bar10	2	EXTRUSION BAR	RV 1/4"	6'-6 7/16"	A36	GLV	1	3
bar11	2	EXTRUSION BAR	RV 1/4"	6'-6 3/8"	A36	GLV	1	3
bcp1	8	BOTTOM CHORD PLATE	PL 1 3/4"x15 3/16"x35"-0 7/16"	35'-0 7/16"	A572-FCM	GLV&PNT	3079	24634
bcp2	8	BOTTOM CHORD PLATE	PL 3/4"x15"x17"-2 3/16"	17'-2 3/16"	A572-FCM	GLV&PNT	644	5150
bcp3	4	BOTTOM CHORD PLATE	PL 2"x15 1/2"x33"-0 15/16"	33'-0 15/16"	A572-FCM	GLV&PNT	3314	13256
bcs1	56	BOTTOM CHORD SPACER	L5X3 1/2X3/8	10"	A572-50	GLV&PNT	8	462
bcs2	32	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	18	561
bcs3	16	BOTTOM CHORD SPACER	L4X4X3/8	10"	A572-50	GLV&PNT	8	124
bcs4	12	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	17	204
bp1	2	BEARING PLATE	PL 2"x22"x2"-8"	2'-8"	A572-50	GLV&PNT	345	690
bp2	2	BEARING PLATE	PL 2"x22"x2"-8"	2'-8"	A572-50	GLV&PNT	340	681
bstr1	63	BEAM STRAP 12GA	PL 1/8"x2"x10"-0"	10'-0"	STEEL	GLV	9	567
cp5	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	154	154
cp7	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	154	154
cp8	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	187	187
cp9	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	187	187
cp10	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	164	164
cp11	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	164	164
cp12	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	164	164
cp13	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	187	187
cp14	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	164	164
cp15	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	187	187
cs	2	COMPRESSION SEAL	CV-4000	41'-11 1/2"	Rubber		323	645
d1	4	DIAGONAL BRACE	W14x30	14'-10 15/16"	A572-FCM	GLV&PNT	444	1777
d2	4	DIAGONAL BRACE	W14x30	14'-5 7/8"	A572-FCM	GLV&PNT	431	1723
d3	4	DIAGONAL BRACE	W14x38	14'-4 5/8"	A572-FCM	GLV&PNT	539	2156
d4	4	DIAGONAL BRACE	W14x53	13'-9 3/4"	A572-FCM	GLV&PNT	719	2878
d5	4	DIAGONAL BRACE	W14x68	13'-0 7/16"	A572-FCM	GLV&PNT	868	3471
d6	4	DIAGONAL BRACE	W14x90	11'-10 7/16"	A572-FCM	GLV&PNT	1044	4176
dm1	48	DIAPHRAGM	C12x25	6'-0 1/4"	A572-50	GLV&PNT	150	7197
dt1	48	DIAPHRAGM TEE	WT6X36	1'-1 5/8"	A572-50	GLV&PNT	40	1907
dt2	48	DIAPHRAGM TEE	WT6X36	1'-1 5/8"	A572-50	GLV&PNT	40	1907
ep1	4	ELASTOMERIC PAD	PL 4 3/8"x20"x2"-2"	2'-2"	Rubber		90	362
fb1	6	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4095	24570
fb2	5	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4096	20480
fb3	1	FLOOR BEAM	W30x116	35'-5"	A572-FCM	GLV&PNT	4046	4046
fb4	1	FLOOR BEAM	W30x116	35'-5"	A572-FCM	GLV&PNT	4046	4046
fb1a	26	FLOOR BEAM ANGLE	L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	958
fb2a	26	FLOOR BEAM ANGLE	L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	958
qta2	2	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	57
qta4	2	GATE ANGLE	L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	57
qta5	1	GATE ANGLE	L3X3X1/4	1'-11 1/4"	A572-50	GLV&PNT	9	9
qta6	1	GATE ANGLE	L3X3X1/4	1'-8 7/8"	A572-50	GLV&PNT	8	8
qta9	1	GATE ANGLE	L3X3X1/4	1'-11 1/4"	A572-50	GLV&PNT	9	9
qta10	1	GATE ANGLE	L3X3X1/4	1'-8 7/8"	A572-50	GLV&PNT	8	8
gtc1	4	GATE CHANNEL	C6X8.2	1'-7 5/16"	A572-50	GLV&PNT	13	53
ifp1	8	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	1580
ifp2	8	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	1580
la1	25	LATERAL ANGLE	L4X4X3/8	18'-8 13/16"	A572-50	GLV&PNT	183	4580
lcp1	11	LATERAL CONNECTION PLATE	PL 3/8"x10"x2"-1 3/4"	2'-1 3/4"	A572-50	GLV&PNT	22	237
lcp2	6	LATERAL CONNECTION PLATE	PL 3/8"x25 3/4"x3"-0 1/2"	3'-0 1/2"	A572-50	GLV&PNT	135	807
lcp3	4	LATERAL CONNECTION PLATE	PL 3/8"x10"x1"-5 3/8"	1'-5 3/8"	A572-50	GLV&PNT	15	61
lq1	8	LOWER GUSSET	PL 5/8"x45 5/8"x4"-5 3/16"	4'-5 3/16"	A572-FCM	GLV&PNT	323	2584
lq2	8	LOWER GUSSET	PL 1/2"x53 5/16"x4"-11 7/16"	4'-11 7/16"	A572-FCM	GLV&PNT	430	3441
lq3	8	LOWER GUSSET	PL 1/2"x48 7/16"x4"-3 5/16"	4'-3 5/16"	A572-FCM	GLV&PNT	338	2703
lq4	8	LOWER GUSSET	PL 1/2"x42 1/4"x3"-7 1/4"	3'-7 1/4"	A572-FCM	GLV&PNT	249	1991
lq5	8	LOWER GUSSET	PL 1/2"x36 13/16"x3"-2 1/16"	3'-2 1/16"	A572-FCM	GLV&PNT	190	1523
lq6	8	LOWER GUSSET	PL 1/2"x31 1/2"x3"-1 1/4"	3'-1 1/4"	A572-FCM	GLV&PNT	153	1226
lq7	4	LOWER GUSSET	PL 1/2"x37 1/4"x4"-0 9/16"	4'-0 9/16"	A572-FCM	GLV&PNT	227	907
ofp1	8	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	4211
p1	48	POST	W8x24	5'-7"	A572-50	GLV&PNT	133	6391
p2	24	POST	HSS 4X4X1/4	4'-10"	A500 GR.B	GLV&PNT	59	1406
p3	24	POST	HSS 4X4X1/4	4'-11"	A500 GR.B	GLV&PNT	60	1430
p4	13	FLOOR BEAM CONNECTION PLATE	PL 3/8"x8"x1"-2 3/8"	1'-2 3/8"	A572-50	GLV&PNT	11	149
p5	13	FLOOR BEAM CONNECTION PLATE	PL 3/8"x8"x1"-2 5/16"	1'-2 5/16"	A572-50	GLV&PNT	11	147
plaq1	2	PLAQUE	PL 1/4"x9 1/4"x9 1/4"	9 1/4"	STEEL		5	10
plt2	8	PLATE	PL 3/4"x5 3/4"x1"-3"	1'-3"	A572-50	GLV&PNT	17	139
plt3	4	PLATE	PL 3/4"x8"x1"-3"	1'-3"	A572-50	GLV&PNT	25	100
plt4	4	PLATE	PL 3/4"x8"x1"-3"	1'-3"	A572-50	GLV&PNT	24	96
pp1	48	POST PLATE	PL 1"x12"x1"-2 3/8"	1'-2 3/8"	A572-50	GLV&PNT	48	2311
ps1	24	POST SUPPORT	HSS 14X6X1/4	8 9/16"	A500 GR.B	GLV&PNT	23	553
ps2	24	POST SUPPORT	HSS 14X6X1/4	8 5/16"	A500 GR.B	GLV&PNT	22	535
psp1	48	POST SUPPORT PLATE	PL 3/4"x12"x1"-1 5/8"	1'-1 5/8"	A572-50	GLV&PNT	31	1501
psp2	48	POST SUPPORT PLATE	PL 3/4"x12"x1"-2 3/4"	1'-2 3/4"	A572-50	GLV&PNT	34	1654
rail1	24	RAIL	HSS 5X5X5/16	17'-3 3/8"	A500 GR.B	GLV&PNT	330	7915
rail2	12	RAIL	HSS 5X5X5/16	17'-3 15/16"	A500 GR.B	GLV&PNT	331	3967
rail3	6	RAIL	HSS 5X5X5/16	17'-11 9/16"	A500 GR.B	GLV&PNT	343	2056
rail4	6	RAIL	HSS 5X5X5/16	21'-1"	A500 GR.B	GLV&PNT	402	2414
rail7	40	RAIL	HSS 3X3X1/4	11'-6 11/16"	A500 GR.B	GLV&PNT	100	4007
rail8	8	RAIL	HSS 3X3X1/4	10'-11 1/16"	A500 GR.B	GLV&PNT	95	757
rail9	2	RAIL	HSS 3X3X1/4	5'-9 3/16"	A500 GR.B	GLV&PNT	50	100
rail10	2	RAIL	HSS 3X3X1/4	5'-9 3/16"	A500 GR.B	GLV&PNT	50	100
rec1	48	RAIL END CAP	PL 1/4"x3 3/4"x3 3/4"	3 3/4"	A572-50	GLV&PNT	1	47
rp1	842	RAIL PICKET	RB 3/4"	3'-1"	A36	GLV&PNT	5	3903
sca1	288	STRINGER CONNECTION ANGLE	L5X3 1/2X3/8	9"	A572-50	GLV&PNT	7	2098
scr1	2253	1/4-14x1" SPAN MASTER	RB 1/4"	1"	STEEL	GLV	0	33
shp1	48	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	553
shp2	32	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	61
shp3	16	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	215

MATERIAL LIST CONTINUED								
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight
shp4	12	SHIM PLATE	PL 1"x8"x1"-8 1/4"	1'-8 1/4"	A572-50	GLV&PNT	43	512
shp5	12	SHIM PLATE	PL 1/4"x8"x1"-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	11	135
shp6	8	SHIM PLATE	PL 1"x15"x1"-5"	1'-5"	A572-50	GLV&PNT	68	546
shp7	8	SHIM PLATE	PL 1"x8"x1"-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	387
shp9	8	SHIM PLATE	PL 1/4"x15 5/8"x4"-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	417
shp10	8	SHIM PLATE	PL 1/4"x15"x2"-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	266
shp11	8	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	31
shp12	8	SHIM PLATE	PL 1/4"x8"x2"-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	111
shp13	8	SHIM PLATE	PL 1/4"x8"x2"-8 1/4"	2'-8 1/4"	A572-50	GLV&PNT	17	138
shp14	8	SHIM PLATE	PL 1/8"x10"x3"-1"	3'-1"	A572-50	GLV&PNT	12	100
shp15	8	SHIM PLATE	PL 3/4"x10"x3"-1"	3'-1"	A572-50	GLV&PNT	74	590
shp16	8	SHIM PLATE	PL 3/4"x14 1/2"x4"-1"	4'-1"	A572-50	GLV&PNT	145	1156
shp17	8	SHIM PLATE	PL 3/4"x8"x2"-6"	2'-6"	A572-50	GLV&PNT	47	379
shp18	8	SHIM PLATE	PL 3/4"x10"x2"-8"	2'-8"	A572-50	GLV&PNT	64	512
shp19	8	SHIM PLATE	PL 3/8"x8"x1"-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	17	135
shp20	8	SHIM PLATE	PL 5/8"x14 5/8"x4"-9 13/16"	4'-9 13/16"	A572-50	GLV&PNT	126	1008
shp21	8	SHIM PLATE	PL 5/8"x6 3/4"x1"-11 1/2"	1'-11 1/2"	A572-50	GLV&PNT	26	206
shp22	8	SHIM PLATE	PL 7/8"x6 3/4"x1"-1 3/4"	1'-1 3/4"	A572-50	GLV&PNT	21	169
shp23	8	SHIM PLATE	PL 7/8"x6 3/4"x1"-10"	1'-10"	A572-50	GLV&PNT	34	276
shp24	8	SHIM PLATE	PL 7/8"x8"x1"-10"	1'-10"	A572-50	GLV&PNT	40	322
shp25	8	SHIM PLATE	PL 7/8"x10"x2"-6"	2'-6"	A572-50	GLV&PNT	70	561
sipa1	276	SIP SUPPORT ANGLE	2x3x12GA SIP ANGLE	10'-0"	STEEL	GLV	19	5305
sipf1	180	SIP FORM	2.0x45x20GA (9P)	5'-8 5/16"	STEEL	GLV	37	6641
sipf2	37	SIP FORM	2.0x45x20GA (9P)	4'-10 13/16"	STEEL	GLV	32	1175
sp1	32	SPACER PLATE	PL 1/2"x7"x7 1/2"	7 1/2"	A572-50	GLV&PNT	7	219
sp2	8	SPACER PLATE	PL 1/2"x7"x8"	8"	A572-50	GLV&PNT	7	59
sp3	8	SPACER PLATE	PL 1/2"x7"x9 1/2"	9 1/2"	A572-50	GLV&PNT	9	71
sp4	6	SPACER PLATE	PL 1/2"x7"x7"	7"	A572-50	GLV&PNT	6	38
sp5	4	SPACER PLATE	PL 1/2"x7"x9 11/16"	9 11/16"	A572-50	GLV&PNT	9	3

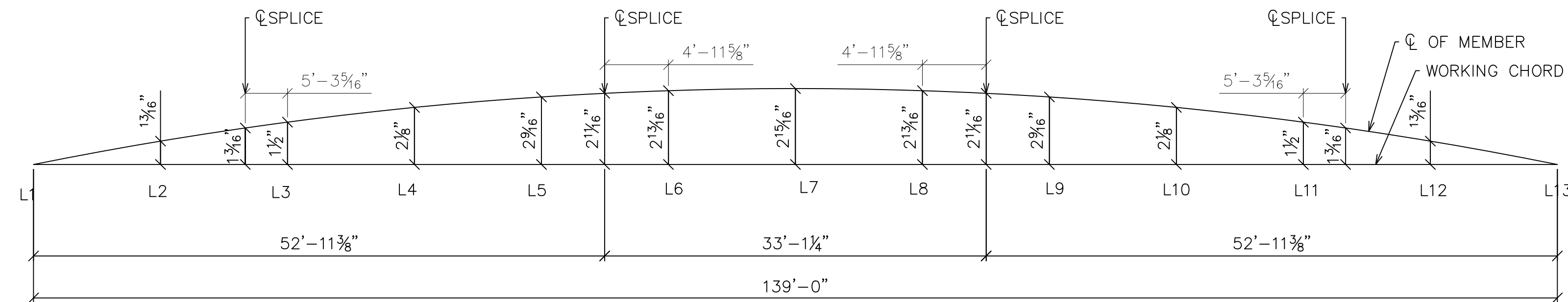


ABUT #1  
 C/BRG  
 (EXP)

○ = FIELD CONNECTIONS

ABUT #2  
 C/BRG  
 (FIX)

TRUSS LAYOUT  
 ROADSIDE SHOWN FACING UP



BOTTOM CHORD CAMBER DIAGRAM

TRUSS ASSEMBLY NOTES:

1. THE SQUARE CORNER OF THE LOWER & UPPER GUSSET PLATES ARE TO FACE TOWARDS THE C OF THE TRUSS.
2. SHEETS 9a-9c CONTAIN THE DRAWINGS FOR THE COMPLETED TRUSSES L&R.
3. THE TRUSS LAYOUT IS SHOWN IN THE "UNLOADED" POSITION.
4. FOR FIELD BOLT QUANTITIES AND LENGTHS, SEE SHEET ?
5. THE BOLT CHARTS ARE SHOWN ON SHEETS 9b-9d.
6. ASSEMBLY DRAWINGS PROVIDE THE MAXIMUM THICKNESS OF SHIMS PERMITTED.
7. TRUSS MEMBERS ARE DESIGNED FOR A 1/8" GAP BETWEEN MEMBERS (1/4" MAX) AT COMPLETE FIT UP.

DWG#: PB691891

SHOP NOTES

1. "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
2. "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
3. "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
4. NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
5. LOWER CASE PIECE MARKS INDICATE INDIVIDUAL PIECES.
6. UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
7. ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
8. GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
9. 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
10. TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
11. ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| C: CENTERLINE         | WP/◆: WORK POINT            |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/Ø: DIAMETER       | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



201 WHEELING AVE.  
 P.O. BOX 757  
 CAMBRIDGE, OH 43725  
 888-872-7434  
 www.usbridge.com

**MULHOLLAND HIGHWAY  
 OVER TRIUNFO CREEK  
 LOS ANGELES COUNTY, CA**

ITEM NO.:  
 PROJECT NO.:  
 BRIDGE NO.:  
 STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: JEC/ABJ

CHECK: JEC

SHOP ASSEMBLY

TRUSS ASSEMBLY

USB JOB#  
 200045

SHEET  
 9a

TOTAL





SHOP BOLT CHART			
Qty	Description	Length	Remark
1292	Washer F436 - 1		GALV
1292	A563-DH Nut - 1		GALV
44	F3125 A325 1 x 2 1/2	2 1/2"	GALV
248	F3125 A325 1 x 2 3/4	2 3/4"	GALV
204	F3125 A325 1 x 3	3"	GALV
286	F3125 A325 1 x 3 1/4	3 1/4"	GALV
340	F3125 A325 1 x 3 1/2	3 1/2"	GALV
20	F3125 A325 1 x 3 3/4	3 3/4"	GALV
72	F3125 A325 1 x 4	4"	GALV
78	F3125 A325 1 x 4 1/2	4 1/2"	GALV

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bcp1	2	BOTTOM CHORD PLATE	PL 1 3/4"x15 3/16"x35'-0 7/16"	35'-0 7/16"	A572-FCM	GLV&PNT	3079	6158	
bcp2	2	BOTTOM CHORD PLATE	PL 3/4"x15"x17'-2 3/16"	17'-2 3/16"	A572-FCM	GLV&PNT	644	1288	
bcs1	14	BOTTOM CHORD SPACER	L5X3 1/2X3/8	10'	A572-50	GLV&PNT	8	116	
bcs2	8	BOTTOM CHORD SPACER	WT5X22.5	10'	A572-50	GLV&PNT	18	140	
d3	1	DIAGONAL BRACE	W14x38	14'-4 5/8"	A572-FCM	GLV&PNT	539	539	
d4	1	DIAGONAL BRACE	W14x53	13'-9 3/4"	A572-FCM	GLV&PNT	719	719	
d5	1	DIAGONAL BRACE	W14x68	13'-0 7/16"	A572-FCM	GLV&PNT	868	868	
d6	1	DIAGONAL BRACE	W14x90	11'-10 7/16"	A572-FCM	GLV&PNT	1044	1044	
ifp1	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
ifp2	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
lq1	2	LOWER GUSSET	PL 5/8"x45 5/8"x4'-5 3/16"	4'-5 3/16"	A572-FCM	GLV&PNT	323	646	
lq2	2	LOWER GUSSET	PL 1/2"x53 5/16"x4'-11 7/16"	4'-11 7/16"	A572-FCM	GLV&PNT	430	860	
lq3	2	LOWER GUSSET	PL 1/2"x48 7/16"x4'-3 5/16"	4'-3 5/16"	A572-FCM	GLV&PNT	338	676	
lq4	2	LOWER GUSSET	PL 1/2"x42 1/4"x3'-7 1/4"	3'-7 1/4"	A572-FCM	GLV&PNT	249	498	
lq5	2	LOWER GUSSET	PL 1/2"x36 13/16"x3'-2 1/16"	3'-2 1/16"	A572-FCM	GLV&PNT	190	381	
ofp1	1	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	526	
shp1	12	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	12	138	
shp2	8	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	15	
shp3	2	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	27	
shp6	2	SHIM PLATE	PL 1"x15"x1'-5"	1'-5"	A572-50	GLV&PNT	68	136	
shp7	1	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	48	
shp9	1	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	52	
shp10	1	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	33	
shp11	2	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	8	
shp12	2	SHIM PLATE	PL 1/4"x8"x2'-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	28	
shp13	2	SHIM PLATE	PL 1/4"x8"x2'-8 1/4"	2'-8 1/4"	A572-50	GLV&PNT	17	34	
shp14	2	SHIM PLATE	PL 1/8"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	12	25	
shp15	2	SHIM PLATE	PL 3/4"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	74	148	
shp16	2	SHIM PLATE	PL 3/4"x14 1/2"x4'-1"	4'-1"	A572-50	GLV&PNT	145	289	
shp17	2	SHIM PLATE	PL 3/4"x8"x2'-6"	2'-6"	A572-50	GLV&PNT	47	95	
shp18	2	SHIM PLATE	PL 3/4"x10"x2'-8"	2'-8"	A572-50	GLV&PNT	64	128	
shp19	2	SHIM PLATE	PL 3/8"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	17	34	
shp20	2	SHIM PLATE	PL 5/8"x14 5/8"x4'-9 13/16"	4'-9 13/16"	A572-50	GLV&PNT	126	252	
shp21	2	SHIM PLATE	PL 5/8"x6 3/4"x1'-11 1/2"	1'-11 1/2"	A572-50	GLV&PNT	26	51	
shp23	1	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	34	
shp24	2	SHIM PLATE	PL 7/8"x8"x1'-10"	1'-10"	A572-50	GLV&PNT	40	81	
shp25	2	SHIM PLATE	PL 7/8"x10"x2'-6"	2'-6"	A572-50	GLV&PNT	70	140	
sp1	8	SPACER PLATE	PL 1/2"x7"x7 1/2"	7 1/2"	A572-50	GLV&PNT	7	55	
sp3	2	SPACER PLATE	PL 1/2"x7"x9 1/2"	9 1/2"	A572-50	GLV&PNT	9	18	
sp5	1	SPACER PLATE	PL 1/2"x7"x9 11/16"	9 11/16"	A572-50	GLV&PNT	9	9	
spb1	14	SPACER BEAM	W14x53	7 1/4"	A572-50	GLV&PNT	31	428	
sp1	2	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	667	
sp2	4	SPLICE PLATE	PL 1/2"x15"x2'-10 1/8"	2'-10 1/8"	A572-FCM	GLV&PNT	68	274	
tc1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	8051	8051	
tc2	1	TOP CHORD	W14x99	11'-11 7/16"	A572-50	GLV&PNT	1099	1099	
uq1	2	UPPER GUSSET	PL 1/2"x62 7/16"x8'-3 1/2"	8'-3 1/2"	A572-FCM	GLV&PNT	679	1357	
uq2	2	UPPER GUSSET	PL 1/2"x51 7/16"x4'-4 1/8"	4'-4 1/8"	A572-FCM	GLV&PNT	346	691	
uq3	2	UPPER GUSSET	PL 1/2"x44 1/16"x3'-11 3/16"	3'-11 3/16"	A572-FCM	GLV&PNT	271	542	
uq4	2	UPPER GUSSET	PL 1/2"x35 7/8"x3'-3 1/4"	3'-3 1/4"	A572-FCM	GLV&PNT	188	376	
uq5	1	UPPER GUSSET	PL 1/2"x40"x8'-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	423	
v2	1	VERTICAL BRACING	W14x43	11'-2 3/4"	A572-50	GLV&PNT	476	476	
v3	1	VERTICAL BRACING	W14x48	10'-9 9/16"	A572-50	GLV&PNT	509	509	
v4	1	VERTICAL BRACING	W14x61	10'-2 9/16"	A572-50	GLV&PNT	611	611	
v5	1	VERTICAL BRACING	W14x61	9'-5 7/16"	A572-50	GLV&PNT	563	563	

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

REFERENCE SHT 9b FOR ASSEMBLY DETAIL

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| CL: CENTERLINE        | WP/⊕: WORK POINT            |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| ○\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/∅: DIAMETER       | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020

REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 9c

SHOP ASSEMBLY

TRUSS ASSEMBLY

USB JOB# 200045

58 TOTAL

DWG#: PB691891

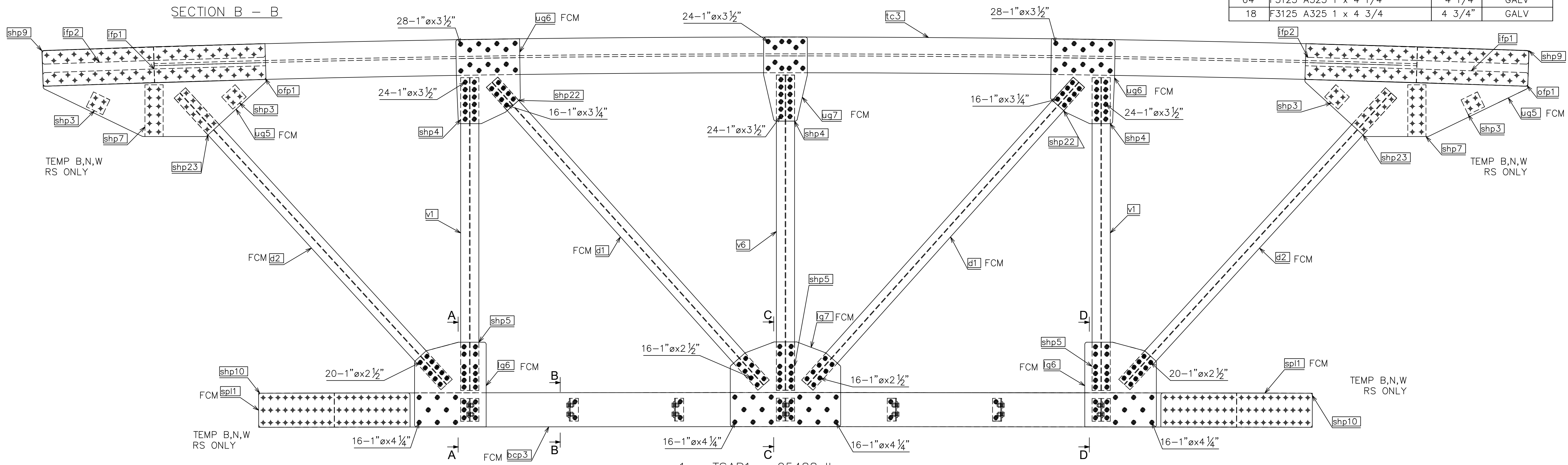
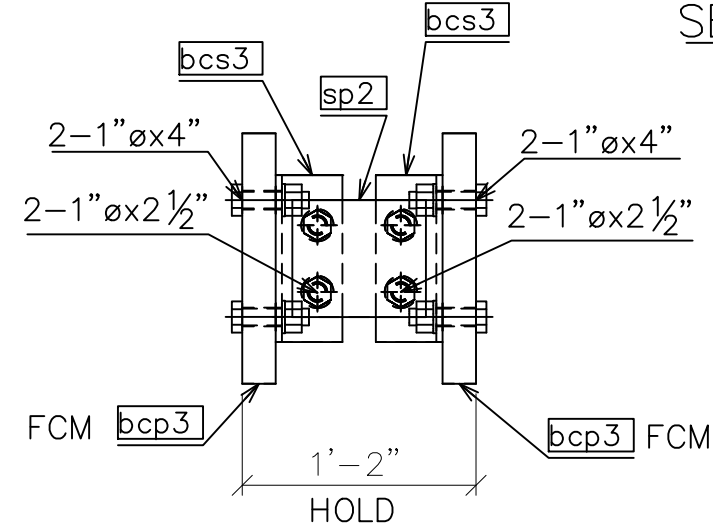
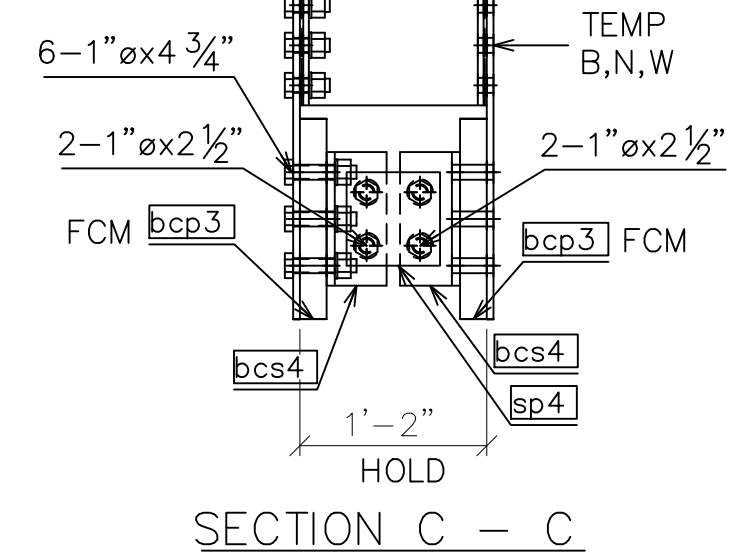
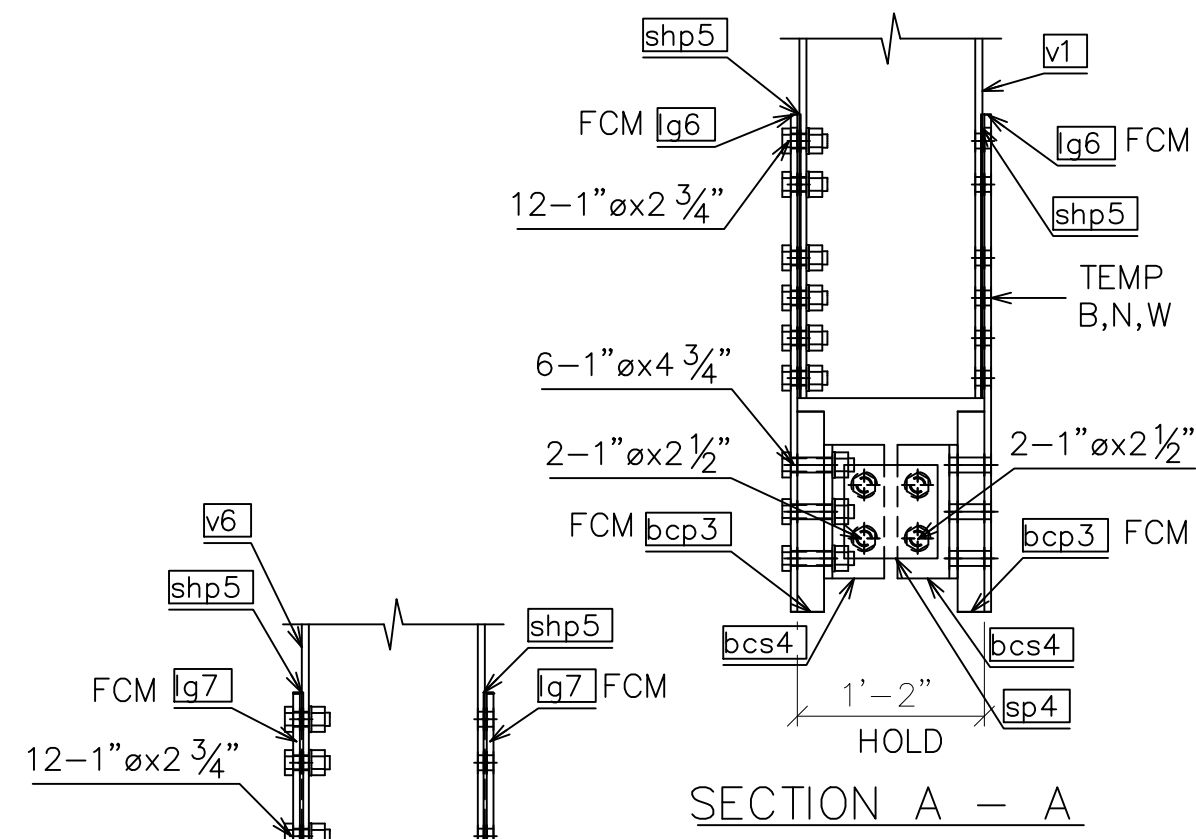
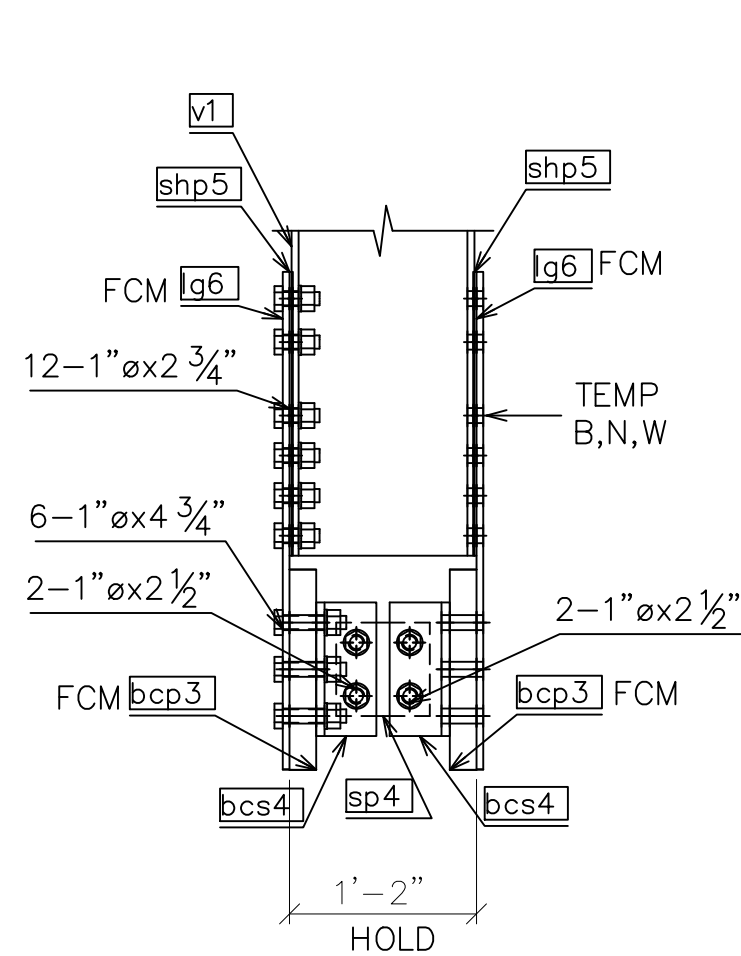
DATE PLOTTED June 9, 2020

NOTE: ALL GUSSETS AND SHIMS = QTY OF 2 (1 ES) UNO.

OVERALL LENGTH = 54'-6 7/16"  
OVERALL HEIGHT = 14'-3 1/16"

SHOP NOTES:

- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- MATCH MARK LETTERS TO BE TAGGED TO EACH TRUSS SEGMENT. PRIOR TO SHIPPING, MARK EACH TRUSS WITH ITS APPLICABLE MATCH MARK WITH A PAINT MARKER.
- BOLT QUANTITIES LISTED ARE THE TOTAL FOR BOTH SIDES OF THE CONNECTION.



1 - TSAB1 - 25488 lbs.  
(WEIGHT DOES NOT INCLUDE GALV. OR BOLTS)  
ROADSIDE SHOWN FACING UP

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bcp3	2	BOTTOM CHORD PLATE	PL 2"x15 1/2"x33'-0 15/16"	33'-0 15/16"	A572-FCM	GLV&PNT	3314	6628	
bcs3	8	BOTTOM CHORD SPACER	L4x4x3/8	10"	A572-50	GLV&PNT	8	62	
bcs4	6	BOTTOM CHORD SPACER	WT5x22.5	10"	A572-50	GLV&PNT	17	102	
d1	2	DIAGONAL BRACE	W14x30	14'-10 15/16"	A572-FCM	GLV&PNT	444	889	
d2	2	DIAGONAL BRACE	W14x30	14'-5 7/8"	A572-FCM	GLV&PNT	431	861	
ifp1	2	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	395	
ifp2	2	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	395	
lg6	4	LOWER GUSSET	PL 1/2"x31 1/2"x3'-1 1/4"	3'-1 1/4"	A572-FCM	GLV&PNT	153	613	
lg7	2	LOWER GUSSET	PL 1/2"x37 1/4"x4'-0 9/16"	4'-0 9/16"	A572-FCM	GLV&PNT	227	454	
ofp1	2	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	1053	
shp3	4	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	54	
shp4	6	SHIM PLATE	PL 1"x8"x1'-8 1/4"	1'-8 1/4"	A572-50	GLV&PNT	43	256	
shp5	6	SHIM PLATE	PL 1/4"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	11	67	
shp7	2	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	97	
shp9	2	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	104	
shp10	2	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	67	
shp22	4	SHIM PLATE	PL 7/8"x6 3/4"x1'-1 3/4"	1'-1 3/4"	A572-50	GLV&PNT	21	84	
shp23	2	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	69	
sp2	4	SPACER PLATE	PL 1/2"x7"x8"	8"	A572-50	GLV&PNT	7	29	
sp4	3	SPACER PLATE	PL 1/2"x7"x7"	7"	A572-50	GLV&PNT	6	19	
sp11	4	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	1334	
tc3	1	TOP CHORD	W14x193	46'-3 11/16"	A572-50	GLV&PNT	8856	8856	
ug5	2	UPPER GUSSET	PL 1/2"x40"x8'-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	847	
ug6	4	UPPER GUSSET	PL 1/2"x28 1/16"x3'-1 1/8"	3'-1 1/8"	A572-FCM	GLV&PNT	131	523	
ug7	2	UPPER GUSSET	PL 1/2"x19 1/4"x3'-1"	3'-1"	A572-FCM	GLV&PNT	84	169	
v1	2	VERTICAL BRACING	W14x43	11'-5 5/8"	A572-50	GLV&PNT	486	972	
v6	1	VERTICAL BRACING	W14x43	11'-6 5/8"	A572-50	GLV&PNT	490	490	

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

SHOP BOLT CHART			
Qty	Description	Length	Remark
418	Washer F436 - 1		GALV
418	A563-DH Nut - 1		GALV
100	F3125 A325 1 x 2 1/2"	2 1/2"	GALV
36	F3125 A325 1 x 2 3/4"	2 3/4"	GALV
32	F3125 A325 1 x 3 1/4"	3 1/4"	GALV
152	F3125 A325 1 x 3 1/2"	3 1/2"	GALV
16	F3125 A325 1 x 4"	4"	GALV
64	F3125 A325 1 x 4 1/4"	4 1/4"	GALV
18	F3125 A325 1 x 4 3/4"	4 3/4"	GALV

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| Q: CENTERLINE         | WP: WORK POINT              |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/\ø: DIAMETER      | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



6/9/2020 REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET

SHOP ASSEMBLY

TRUSS ASSEMBLY

USB JOB#  
200045

9d

58 TOTAL

DWG#: PB691891



SHOP BOLT CHART			
Qty	Description	Length	Remark
1292	Washer F436 - 1		GALV
1292	A563-DH Nut - 1		GALV
44	F3125 A325 1 x 2 1/2	2 1/2"	GALV
248	F3125 A325 1 x 2 3/4	2 3/4"	GALV
204	F3125 A325 1 x 3	3"	GALV
286	F3125 A325 1 x 3 1/4	3 1/4"	GALV
340	F3125 A325 1 x 3 1/2	3 1/2"	GALV
20	F3125 A325 1 x 3 3/4	3 3/4"	GALV
72	F3125 A325 1 x 4	4"	GALV
78	F3125 A325 1 x 4 1/2	4 1/2"	GALV

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bcp1	2	BOTTOM CHORD PLATE	PL 1 3/4"x15 3/16"x35'-0 7/16"	35'-0 7/16"	A572-FCM	GLV&PNT	3079	6158	
bcp2	2	BOTTOM CHORD PLATE	PL 3/4"x15"x17'-2 3/16"	17'-2 3/16"	A572-FCM	GLV&PNT	644	1288	
bcs1	14	BOTTOM CHORD SPACER	L5X3 1/2X3/8	10"	A572-50	GLV&PNT	8	116	
bcs2	8	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	18	140	
d3	1	DIAGONAL BRACE	W14x38	14'-4 5/8"	A572-FCM	GLV&PNT	539	539	
d4	1	DIAGONAL BRACE	W14x53	13'-9 3/4"	A572-FCM	GLV&PNT	719	719	
d5	1	DIAGONAL BRACE	W14x68	13'-0 7/16"	A572-FCM	GLV&PNT	868	868	
d6	1	DIAGONAL BRACE	W14x90	11'-10 7/16"	A572-FCM	GLV&PNT	1044	1044	
ifp1	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
ifp2	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
lg1	2	LOWER GUSSET	PL 5/8"x45 5/8"x4'-5 3/16"	4'-5 3/16"	A572-FCM	GLV&PNT	323	646	
lg2	2	LOWER GUSSET	PL 1/2"x53 5/16"x4'-11 7/16"	4'-11 7/16"	A572-FCM	GLV&PNT	430	860	
lg3	2	LOWER GUSSET	PL 1/2"x48 7/16"x4'-3 5/16"	4'-3 5/16"	A572-FCM	GLV&PNT	338	676	
lg4	2	LOWER GUSSET	PL 1/2"x42 1/4"x3'-7 1/4"	3'-7 1/4"	A572-FCM	GLV&PNT	249	498	
lg5	2	LOWER GUSSET	PL 1/2"x36 13/16"x3'-2 1/16"	3'-2 1/16"	A572-FCM	GLV&PNT	190	381	
ofp1	1	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	526	
plaq1	1	PLAQUE	PL 1/4"x9 1/4"x9 1/4"	9 1/4"	STEEL		5	5	
shp1	12	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	12	138	
shp2	8	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	15	
shp3	2	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	27	
shp6	2	SHIM PLATE	PL 1"x15"x1'-5"	1'-5"	A572-50	GLV&PNT	68	136	
shp7	1	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	48	
shp9	1	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	52	
shp10	1	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	33	
shp11	2	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	8	
shp12	2	SHIM PLATE	PL 1/4"x8"x2'-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	28	
shp13	2	SHIM PLATE	PL 1/4"x8"x2'-8 1/4"	2'-8 1/4"	A572-50	GLV&PNT	17	34	
shp14	2	SHIM PLATE	PL 1/8"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	12	25	
shp15	2	SHIM PLATE	PL 3/4"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	74	148	
shp16	2	SHIM PLATE	PL 3/4"x14 1/2"x4'-1"	4'-1"	A572-50	GLV&PNT	145	289	
shp17	2	SHIM PLATE	PL 3/4"x8"x2'-6"	2'-6"	A572-50	GLV&PNT	47	95	
shp18	2	SHIM PLATE	PL 3/4"x10"x2'-8"	2'-8"	A572-50	GLV&PNT	64	128	
shp19	2	SHIM PLATE	PL 3/8"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	17	34	
shp20	2	SHIM PLATE	PL 5/8"x14 5/8"x4'-9 13/16"	4'-9 13/16"	A572-50	GLV&PNT	126	252	
shp21	2	SHIM PLATE	PL 5/8"x6 3/4"x1'-11 1/2"	1'-11 1/2"	A572-50	GLV&PNT	26	51	
shp23	1	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	34	
shp24	2	SHIM PLATE	PL 7/8"x8"x1'-10"	1'-10"	A572-50	GLV&PNT	40	81	
shp25	2	SHIM PLATE	PL 7/8"x10"x2'-6"	2'-6"	A572-50	GLV&PNT	70	140	
sp1	8	SPACER PLATE	PL 1/2"x7"x7 1/2"	7 1/2"	A572-50	GLV&PNT	7	55	
sp3	2	SPACER PLATE	PL 1/2"x7"x9 1/2"	9 1/2"	A572-50	GLV&PNT	9	18	
sp5	1	SPACER PLATE	PL 1/2"x7"x9 11/16"	9 11/16"	A572-50	GLV&PNT	9	9	
spb1	14	SPACER BEAM	W14x53	7 1/4"	A572-50	GLV&PNT	31	428	
sp1	2	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	667	
sp2	4	SPLICE PLATE	PL 1/2"x15"x2'-10 1/8"	2'-10 1/8"	A572-FCM	GLV&PNT	68	274	
tc1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	8051	8051	
tc2	1	TOP CHORD	W14x99	11'-11 7/16"	A572-50	GLV&PNT	1099	1099	
ug1	2	UPPER GUSSET	PL 1/2"x62 7/16"x8'-3 1/2"	8'-3 1/2"	A572-FCM	GLV&PNT	679	1357	
ug2	2	UPPER GUSSET	PL 1/2"x51 7/16"x4'-4 1/8"	4'-4 1/8"	A572-FCM	GLV&PNT	346	691	
ug3	2	UPPER GUSSET	PL 1/2"x44 1/16"x3'-11 3/16"	3'-11 3/16"	A572-FCM	GLV&PNT	271	542	
ug4	2	UPPER GUSSET	PL 1/2"x35 7/8"x3'-3 1/4"	3'-3 1/4"	A572-FCM	GLV&PNT	188	376	
ug5	1	UPPER GUSSET	PL 1/2"x40"x8'-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	423	
v2	1	VERTICAL BRACING	W14x43	11'-2 3/4"	A572-50	GLV&PNT	476	476	
v3	1	VERTICAL BRACING	W14x48	10'-9 9/16"	A572-50	GLV&PNT	509	509	
v4	1	VERTICAL BRACING	W14x61	10'-2 9/16"	A572-50	GLV&PNT	611	611	
v5	1	VERTICAL BRACING	W14x61	9'-5 7/16"	A572-50	GLV&PNT	563	563	

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

REFERENCE SHT 9e FOR ASSEMBLY DETAIL

DWG#: PB691891

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS	
ES: EACH SIDE	NS: NEAR SIDE
EQ: EQUAL	FS: FAR SIDE
CL: CENTERLINE	WP/⊕: WORK POINT
REF: REFERENCE	GA: GAUGE
CHK: CHECK	ID: INSIDE DIAMETER
○\○: OUT TO OUT	OD: OUTSIDE DIAMETER
\C\C: CENTER TO CENTER	BRG: BEARING
F\F: FACE TO FACE	TYP: TYPICAL
DIA/∅: DIAMETER	UNO: UNLESS NOTED OTHERWISE
R: RADIUS	ABUT: ABUTMENT
CS: CREEKSIDE	T&B: TOP & BOTTOM
RS: ROADSIDE	



6/9/2020 **REVISED - SEE REVISION TABLE**

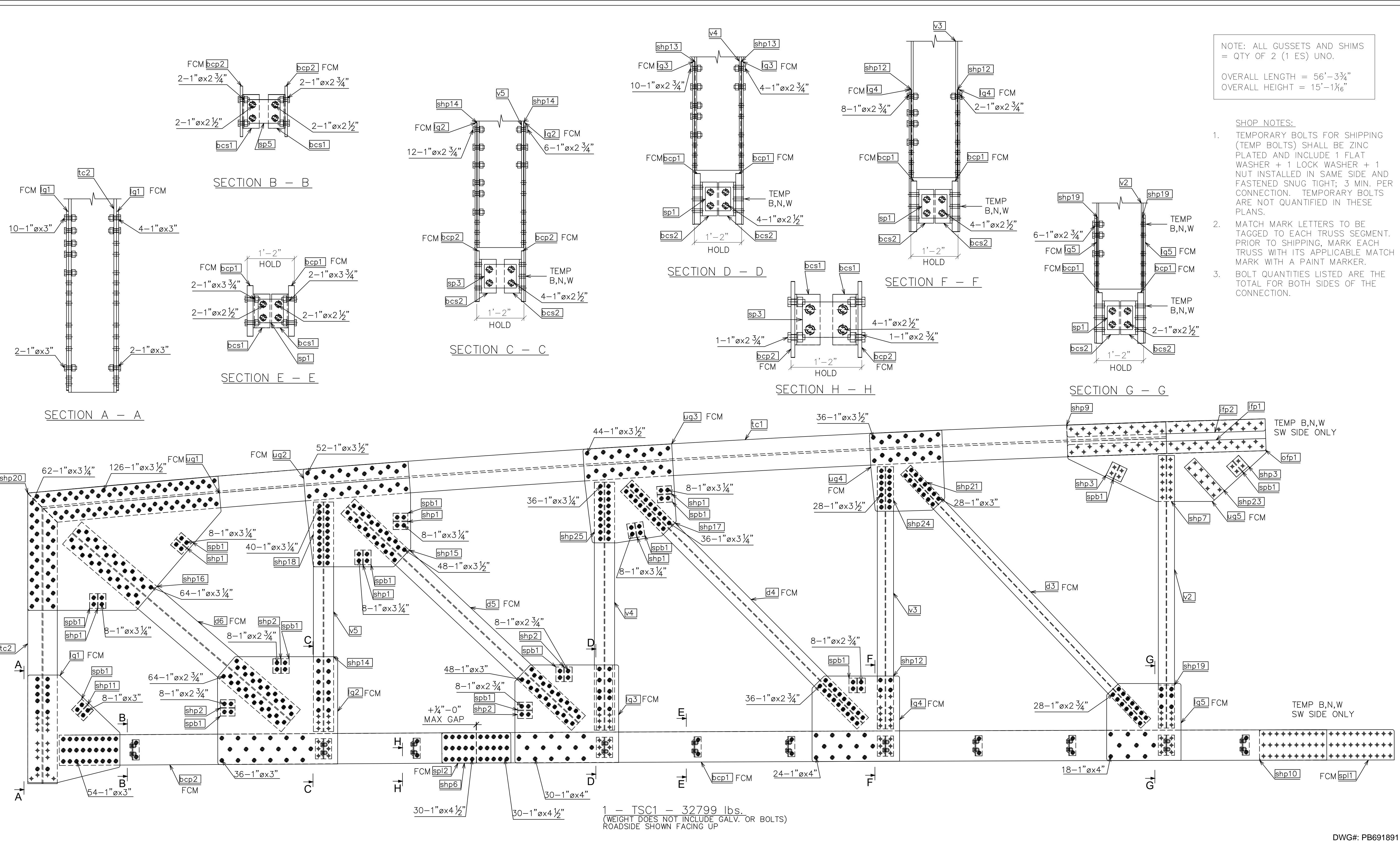
**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF DRAW: ABJ CHECK: JEC

SHOP ASSEMBLY / FIELD ASSEMBLY

USB JOB# 200045 SHEET 9f TOTAL 58



NOTE: ALL GUSSETS AND SHIMS = QTY OF 2 (1 ES) UNO.  
OVERALL LENGTH = 56'-3 3/4"  
OVERALL HEIGHT = 15'-1 1/6"

- SHOP NOTES:
1. TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
  2. MATCH MARK LETTERS TO BE TAGGED TO EACH TRUSS SEGMENT. PRIOR TO SHIPPING, MARK EACH TRUSS WITH ITS APPLICABLE MATCH MARK WITH A PAINT MARKER.
  3. BOLT QUANTITIES LISTED ARE THE TOTAL FOR BOTH SIDES OF THE CONNECTION.

- SHOP NOTES
1. "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
  2. "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
  3. "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
  4. NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
  5. LOWER CASE PIECE MARKS INDICATE INDIVIDUAL PIECES.
  6. UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
  7. ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
  8. GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
  9. 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
  10. TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
  11. ALL WELDS TO HAVE 1/4" ± 1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

ES: EACH SIDE	NS: NEAR SIDE
EQ: EQUAL	FS: FAR SIDE
Q: CENTERLINE	WP/•: WORK POINT
REF: REFERENCE	GA: GAUGE
CHK: CHECK	ID: INSIDE DIAMETER
O\O: OUT TO OUT	OD: OUTSIDE DIAMETER
C\C: CENTER TO CENTER	BRG: BEARING
F\F: FACE TO FACE	TYP: TYPICAL
DIA/ø: DIAMETER	UNO: UNLESS NOTED OTHERWISE
R: RADIUS	ABUT: ABUTMENT
CS: CREEKSIDE	T&B: TOP & BOTTOM
RS: ROADSIDE	

**U.S. BRIDGE**  
BRIDGING AMERICA SINCE 1936

201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 9g
SHOP ASSEMBLY		TRUSS ASSEMBLY	58 TOTAL

USB JOB# 200045

DWG#: PB691891

SHOP BOLT CHART			
Qty	Description	Length	Remark
1228	Washer F436 - 1		GALV
1228	A563-DH Nut - 1		GALV
44	F3125 A325 1 x 2 1/2	2 1/2"	GALV
220	F3125 A325 1 x 2 3/4	2 3/4"	GALV
192	F3125 A325 1 x 3	3"	GALV
286	F3125 A325 1 x 3 1/4	3 1/4"	GALV
334	F3125 A325 1 x 3 1/2	3 1/2"	GALV
20	F3125 A325 1 x 3 3/4	3 3/4"	GALV
72	F3125 A325 1 x 4	4"	GALV
60	F3125 A325 1 x 4 1/2	4 1/2"	GALV

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bcp1	2	BOTTOM CHORD PLATE	PL 1 3/4"x15 3/16"x35'-0 7/16"	35'-0 7/16"	A572-FCM	GLV&PNT	3079	6158	
bcp2	2	BOTTOM CHORD PLATE	PL 3/4"x15"x17'-2 3/16"	17'-2 3/16"	A572-FCM	GLV&PNT	644	1288	
bcs1	14	BOTTOM CHORD SPACER	L5X3 1/2X3/8	10"	A572-50	GLV&PNT	8	116	
bcs2	8	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	18	140	
d3	1	DIAGONAL BRACE	W14x38	14'-4 5/8"	A572-FCM	GLV&PNT	539	539	
d4	1	DIAGONAL BRACE	W14x53	13'-9 3/4"	A572-FCM	GLV&PNT	719	719	
d5	1	DIAGONAL BRACE	W14x68	13'-0 7/16"	A572-FCM	GLV&PNT	868	868	
d6	1	DIAGONAL BRACE	W14x90	11'-10 7/16"	A572-FCM	GLV&PNT	1044	1044	
ifp1	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
ifp2	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
lq1	2	LOWER GUSSET	PL 5/8"x45 5/8"x4'-5 3/16"	4'-5 3/16"	A572-FCM	GLV&PNT	323	646	
lq2	2	LOWER GUSSET	PL 1/2"x53 5/16"x4'-11 7/16"	4'-11 7/16"	A572-FCM	GLV&PNT	430	860	
lq3	2	LOWER GUSSET	PL 1/2"x48 7/16"x4'-3 5/16"	4'-3 5/16"	A572-FCM	GLV&PNT	338	676	
lq4	2	LOWER GUSSET	PL 1/2"x42 1/4"x3'-7 1/4"	3'-7 1/4"	A572-FCM	GLV&PNT	249	498	
lq5	2	LOWER GUSSET	PL 1/2"x36 13/16"x3'-2 1/16"	3'-2 1/16"	A572-FCM	GLV&PNT	190	381	
ofp1	1	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	526	
shp1	12	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	12	138	
shp2	8	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	15	
shp3	2	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	27	
shp6	2	SHIM PLATE	PL 1"x15"x1'-5"	1'-5"	A572-50	GLV&PNT	68	136	
shp7	1	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	48	
shp9	1	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	52	
shp10	1	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	33	
shp11	2	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	8	
shp12	2	SHIM PLATE	PL 1/4"x8"x2'-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	28	
shp13	2	SHIM PLATE	PL 1/4"x8"x2'-8 1/4"	2'-8 1/4"	A572-50	GLV&PNT	17	34	
shp14	2	SHIM PLATE	PL 1/8"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	12	25	
shp15	2	SHIM PLATE	PL 3/4"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	74	148	
shp16	2	SHIM PLATE	PL 3/4"x14 1/2"x4'-1"	4'-1"	A572-50	GLV&PNT	145	289	
shp17	2	SHIM PLATE	PL 3/4"x8"x2'-6"	2'-6"	A572-50	GLV&PNT	47	95	
shp18	2	SHIM PLATE	PL 3/4"x10"x2'-8"	2'-8"	A572-50	GLV&PNT	64	128	
shp19	2	SHIM PLATE	PL 3/8"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	17	34	
shp20	2	SHIM PLATE	PL 5/8"x14 5/8"x4'-9 13/16"	4'-9 13/16"	A572-50	GLV&PNT	126	252	
shp21	2	SHIM PLATE	PL 5/8"x6 3/4"x1'-11 1/2"	1'-11 1/2"	A572-50	GLV&PNT	26	51	
shp23	1	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	34	
shp24	2	SHIM PLATE	PL 7/8"x8"x1'-10"	1'-10"	A572-50	GLV&PNT	40	81	
shp25	2	SHIM PLATE	PL 7/8"x10"x2'-6"	2'-6"	A572-50	GLV&PNT	70	140	
sp1	8	SPACER PLATE	PL 1/2"x7"x7 1/2"	7 1/2"	A572-50	GLV&PNT	7	55	
sp3	2	SPACER PLATE	PL 1/2"x7"x9 1/2"	9 1/2"	A572-50	GLV&PNT	9	18	
sp5	1	SPACER PLATE	PL 1/2"x7"x9 11/16"	9 11/16"	A572-50	GLV&PNT	9	9	
spb1	14	SPACER BEAM	W14x53	7 1/4"	A572-50	GLV&PNT	31	428	
sp11	2	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	667	
sp12	4	SPLICE PLATE	PL 1/2"x15"x2'-10 1/8"	2'-10 1/8"	A572-FCM	GLV&PNT	68	274	
tc1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	8051	8051	
tc2	1	TOP CHORD	W14x99	11'-11 7/16"	A572-50	GLV&PNT	1099	1099	
ug1	2	UPPER GUSSET	PL 1/2"x62 7/16"x8'-3 1/2"	8'-3 1/2"	A572-FCM	GLV&PNT	679	1357	
ug2	2	UPPER GUSSET	PL 1/2"x51 7/16"x4'-4 1/8"	4'-4 1/8"	A572-FCM	GLV&PNT	346	691	
ug3	2	UPPER GUSSET	PL 1/2"x44 1/16"x3'-11 3/16"	3'-11 3/16"	A572-FCM	GLV&PNT	271	542	
ug4	2	UPPER GUSSET	PL 1/2"x35 7/8"x3'-3 1/4"	3'-3 1/4"	A572-FCM	GLV&PNT	188	376	
ug5	1	UPPER GUSSET	PL 1/2"x40"x8'-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	423	
v2	1	VERTICAL BRACING	W14x43	11'-2 3/4"	A572-50	GLV&PNT	476	476	
v3	1	VERTICAL BRACING	W14x48	10'-9 9/16"	A572-50	GLV&PNT	509	509	
v4	1	VERTICAL BRACING	W14x61	10'-2 9/16"	A572-50	GLV&PNT	611	611	
v5	1	VERTICAL BRACING	W14x61	9'-5 7/16"	A572-50	GLV&PNT	563	563	

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

REFERENCE TO SH 9g FOR ASSEMBLY DETAIL

DWG#: PB691891

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

ES: EACH SIDE  
EQ: EQUAL  
CL: CENTERLINE  
REF: REFERENCE  
CHK: CHECK  
O\O: OUT TO OUT  
C\C: CENTER TO CENTER  
F\F: FACE TO FACE  
DIA/Ø: DIAMETER  
R: RADIUS  
CS: CREEKSIDE  
RS: ROADSIDE

NS: NEAR SIDE  
FS: FAR SIDE  
WP/⦿: WORK POINT  
GA: GAUGE  
ID: INSIDE DIAMETER  
OD: OUTSIDE DIAMETER  
BRG: BEARING  
TYP: TYPICAL  
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6/9/2020

REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 9h

SHOP ASSEMBLY

TRUSS ASSEMBLY

USB JOB# 200045

58 TOTAL

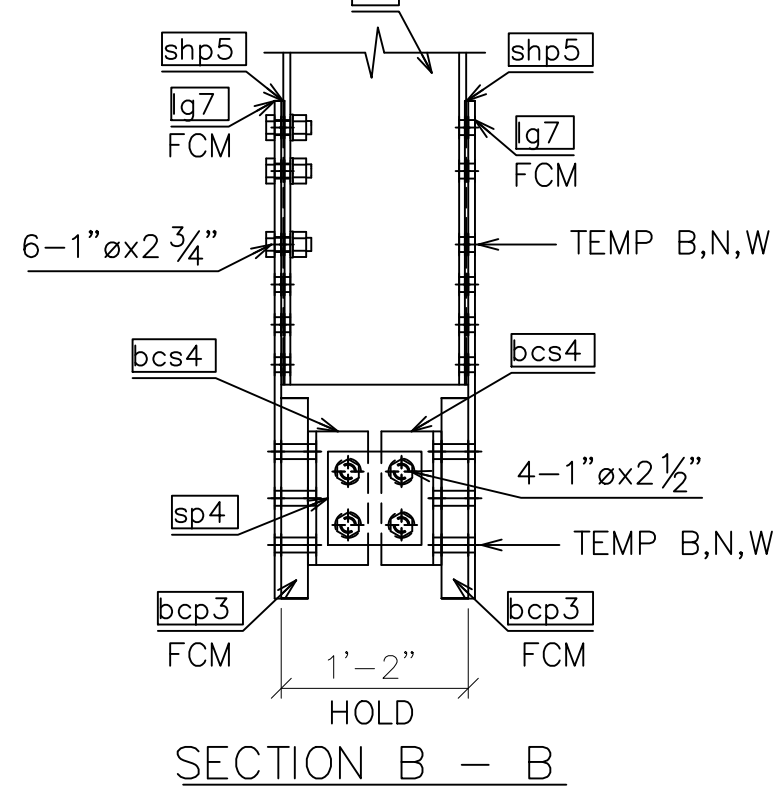
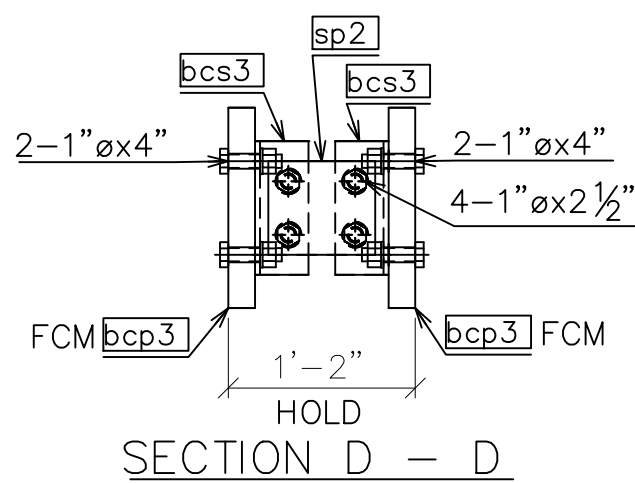
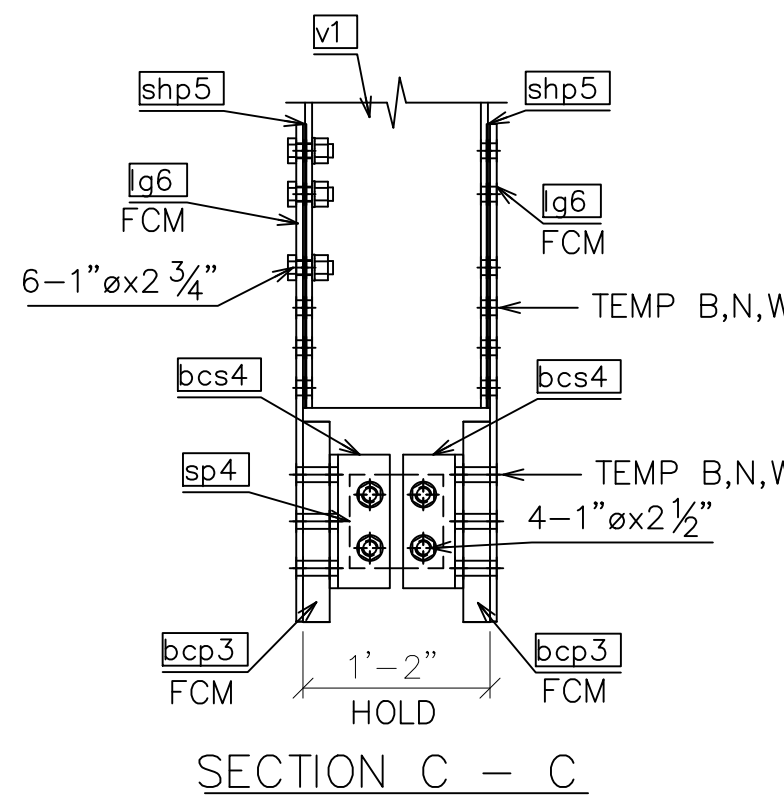
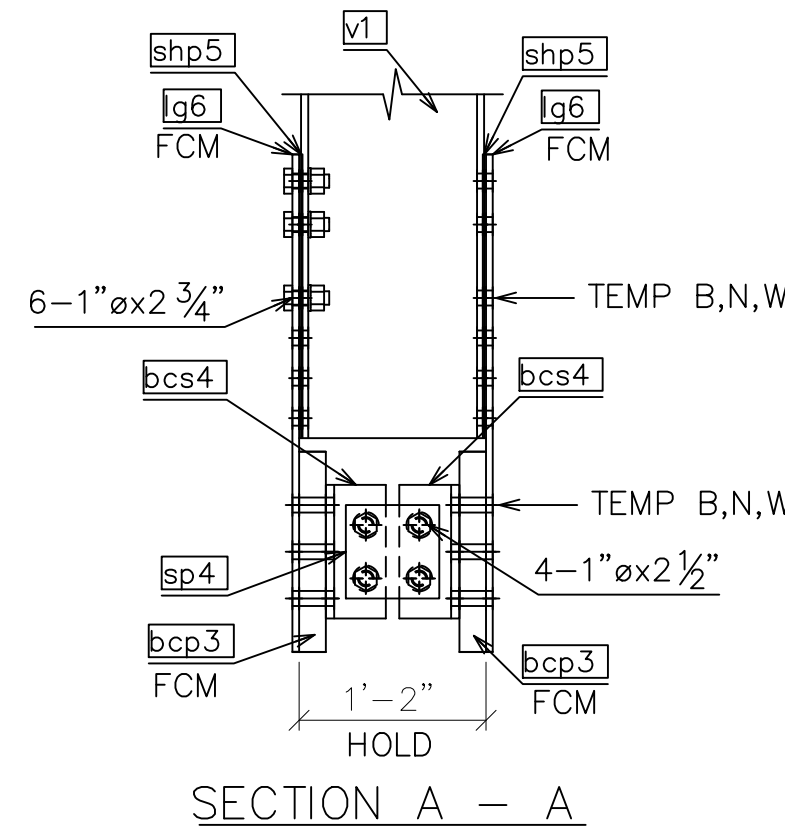
DATE PLOTTED June 9, 2020

NOTE: ALL GUSSETS AND SHIMS = QTY OF 2 (1 ES) UNO.

OVERALL LENGTH = 54'-6 7/16"  
OVERALL HEIGHT = 14'-3 1/16"

SHOP NOTES:

- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- MATCH MARK LETTERS TO BE TAGGED TO EACH TRUSS SEGMENT. PRIOR TO SHIPPING, MARK EACH TRUSS WITH ITS APPLICABLE MATCH MARK WITH A PAINT MARKER.
- BOLT QUANTITIES LISTED ARE THE TOTAL FOR BOTH SIDES OF THE CONNECTION.

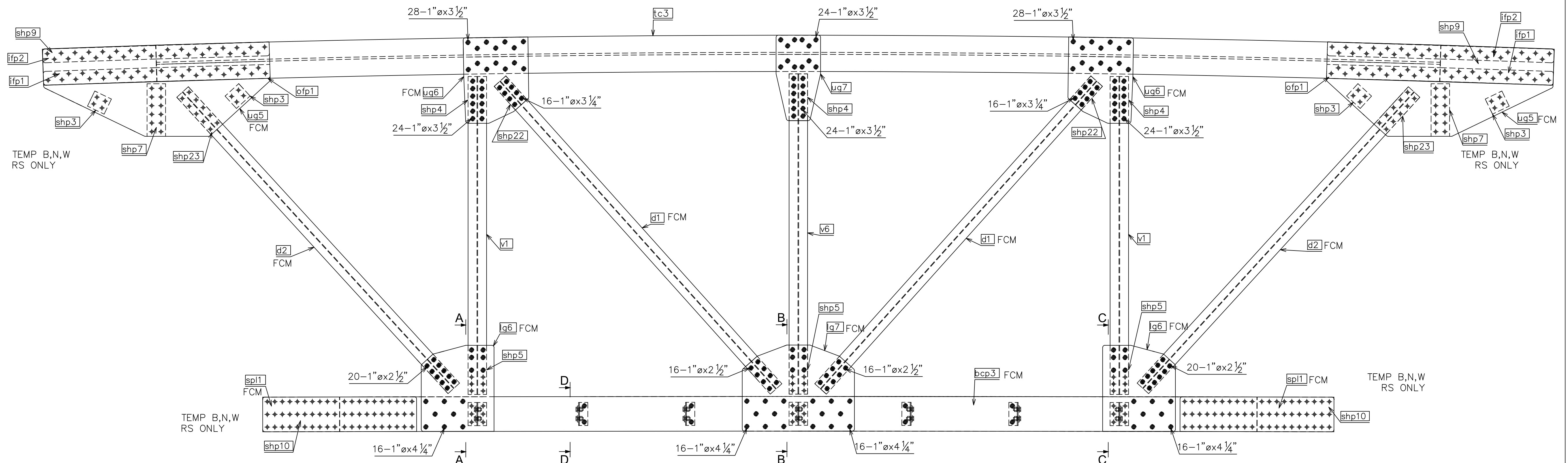


Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight
bcp3	2	BOTTOM CHORD PLATE	PL 2"x15 1/2"x33"-0 15/16"	33'-0 15/16"	A572-FCM	GLV&PNT	3314	6628
bcs3	8	BOTTOM CHORD SPACER	L4X4X3/8	10"	A572-50	GLV&PNT	8	62
bcs4	6	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	17	102
d1	2	DIAGONAL BRACE	W14X30	14'-10 15/16"	A572-FCM	GLV&PNT	444	889
d2	2	DIAGONAL BRACE	W14X30	14'-5 7/8"	A572-FCM	GLV&PNT	431	861
ifp1	2	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	395
ifp2	2	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	395
lq6	4	LOWER GUSSET	PL 1/2"x31 1/2"x3'-1 1/4"	3'-1 1/4"	A572-FCM	GLV&PNT	153	613
lq7	2	LOWER GUSSET	PL 1/2"x37 1/4"x4'-0 9/16"	4'-0 9/16"	A572-FCM	GLV&PNT	227	454
ofp1	2	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8"-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	1053
shp3	4	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	54
shp4	6	SHIM PLATE	PL 1"x8"x1'-8 1/4"	1'-8 1/4"	A572-50	GLV&PNT	43	256
shp5	6	SHIM PLATE	PL 1/4"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	11	67
shp7	2	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	97
shp9	2	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	104
shp10	2	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	67
shp22	4	SHIM PLATE	PL 7/8"x6 3/4"x1'-1 3/4"	1'-1 3/4"	A572-50	GLV&PNT	21	84
shp23	2	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	69
sp2	4	SPACER PLATE	PL 1/2"x7"x8"	8"	A572-50	GLV&PNT	7	29
sp4	3	SPACER PLATE	PL 1/2"x7"x7"	7"	A572-50	GLV&PNT	6	19
sp11	4	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	1334
tc3	1	TOP CHORD	W14X193	46'-3 11/16"	A572-50	GLV&PNT	8856	8856
ug5	2	UPPER GUSSET	PL 1/2"x40"x8"-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	847
ug6	4	UPPER GUSSET	PL 1/2"x28 1/16"x3'-1 1/8"	3'-1 1/8"	A572-FCM	GLV&PNT	131	523
ug7	2	UPPER GUSSET	PL 1/2"x19 1/4"x3'-1"	3'-1"	A572-FCM	GLV&PNT	84	169
v1	2	VERTICAL BRACING	W14X43	11'-5 5/8"	A572-50	GLV&PNT	486	972
v6	1	VERTICAL BRACING	W14X43	11'-6 5/8"	A572-50	GLV&PNT	490	490

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

SHOP BOLT CHART

Qty	Description	Length	Remark
382	Washer F436 - 1		GALV
382	A563-DH Nut - 1		GALV
100	F3125 A325 1 x 2 1/2	2 1/2"	GALV
18	F3125 A325 1 x 2 3/4	2 3/4"	GALV
32	F3125 A325 1 x 3 1/4	3 1/4"	GALV
152	F3125 A325 1 x 3 1/2	3 1/2"	GALV
16	F3125 A325 1 x 4	4"	GALV
64	F3125 A325 1 x 4 1/4	4 1/4"	GALV



DWG#: PB691891

SHOP NOTES

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- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 3/8" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8" ± 1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| Q: CENTERLINE         | WP: WORK POINT              |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/\ø: DIAMETER      | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEK/SIDE        | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



6/9/2020

REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 9j

SHOP ASSEMBLY

TRUSS ASSEMBLY

USB JOB# 200045

58 TOTAL

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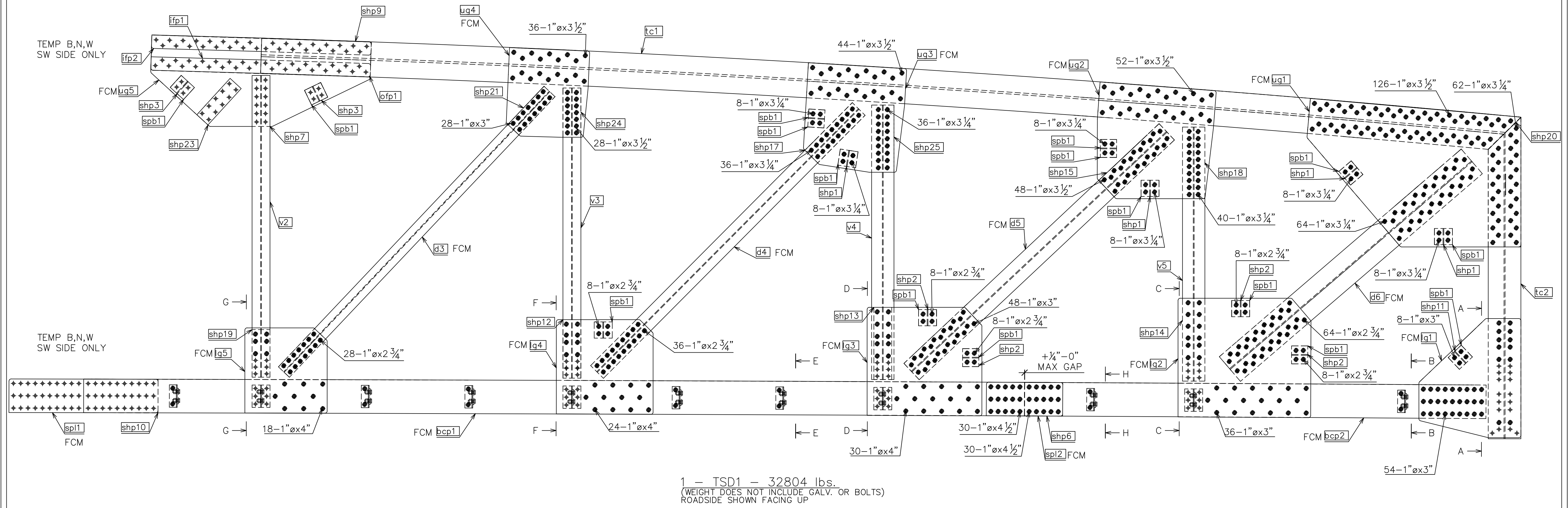


NOTE: ALL GUSSETS AND SHIMS = QTY OF 2 (1 ES) UNO.  
 OVERALL LENGTH = 56'-3 3/4"  
 OVERALL HEIGHT = 15'-1 1/8"

SHOP NOTES:

- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- MATCH MARK LETTERS TO BE TAGGED TO EACH TRUSS SEGMENT. PRIOR TO SHIPPING, MARK EACH TRUSS WITH ITS APPLICABLE MATCH MARK WITH A PAINT MARKER.
- BOLT QUANTITIES LISTED ARE THE TOTAL FOR BOTH SIDES OF THE CONNECTION.

REFERENCE SHT 9g FOR CUT VIEW DETAILS



1 - TSD1 - 32804 lbs.  
 (WEIGHT DOES NOT INCLUDE GALV. OR BOLTS)  
 ROADSIDE SHOWN FACING UP

DWG#: PB691891

<p><b>SHOP NOTES</b></p> <ol style="list-style-type: none"> <li>"REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).</li> <li>"CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.</li> <li>"HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.</li> <li>NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.</li> <li>lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.</li> <li>UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.</li> <li>ALL FASTENERS INCLUDE 1 BOLT, 1 NUT &amp; 1 WASHER UNLESS NOTED OTHERWISE.</li> <li>GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.</li> <li>1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.</li> <li>TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.</li> <li>ALL WELDS TO HAVE 1/4" ± 1/8" HOLD BACK UNLESS NOTED OTHERWISE.</li> </ol>	<p><b>SYMBOLS &amp; ABBREVIATIONS</b></p> <p>ES: EACH SIDE                  EQ: EQUAL                  C: CENTERLINE                  REF: REFERENCE                  CHK: CHECK                  O\O: OUT TO OUT                  C\C: CENTER TO CENTER                  F\F: FACE TO FACE                  DIA/Ø: DIAMETER                  R: RADIUS                  CS: CREEKSIDE                  RS: ROADSIDE</p> <p>NS: NEAR SIDE                  FS: FAR SIDE                  WP/•: WORK POINT                  GA: GAUGE                  ID: INSIDE DIAMETER                  OD: OUTSIDE DIAMETER                  BRG: BEARING                  TYP: TYPICAL                  UNO: UNLESS NOTED OTHERWISE                  ABUT: ABUTMENT                  T&amp;B: TOP &amp; BOTTOM</p>	<p><b>U.S. BRIDGE</b>                  BRIDGING AMERICA SINCE 1936</p> <p>201 WHEELING AVE.                  P.O. BOX 757                  CAMBRIDGE, OH 43725                  888-872-7434                  www.usbridge.com</p>	<p>6/9/2020 <b>REVISED - SEE REVISION TABLE</b></p>		<p>ITEM NO.:                  PROJECT NO.: RDC0016378                  BRIDGE NO.: 4283                  STRUCTURAL FILE NO.:</p>			
			<p><b>MULHOLLAND HIGHWAY                  OVER TRIUNFO CREEK                  LOS ANGELES COUNTY, CA</b></p>			DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC
			<p>SHOP ASSEMBLY / TRUSS ASSEMBLY</p>			USB JOB# 200045	SHEET 9k	58 TOTAL

SHOP BOLT CHART			
Qty	Description	Length	Remark
1232	A563-DH Nut - 1		GALV
1232	Washer F436 - 1		GALV
44	F3125 A325 1 x 2 1/2	2 1/2"	GALV
224	F3125 A325 1 x 2 3/4	2 3/4"	GALV
192	F3125 A325 1 x 3	3"	GALV
286	F3125 A325 1 x 3 1/4	3 1/4"	GALV
334	F3125 A325 1 x 3 1/2	3 1/2"	GALV
20	F3125 A325 1 x 3 3/4	3 3/4"	GALV
72	F3125 A325 1 x 4	4"	GALV
60	F3125 A325 1 x 4 1/2	4 1/2"	GALV

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
bcp1	2	BOTTOM CHORD PLATE	PL 1 3/4"x15 3/16"x35'-0 7/16"	35'-0 7/16"	A572-FCM	GLV&PNT	3079	6158	
bcp2	2	BOTTOM CHORD PLATE	PL 3/4"x15"x17'-2 3/16"	17'-2 3/16"	A572-FCM	GLV&PNT	644	1288	
bcs1	14	BOTTOM CHORD SPACER	L5X3 1/2X3/8	10"	A572-50	GLV&PNT	8	116	
bcs2	8	BOTTOM CHORD SPACER	WT5X22.5	10"	A572-50	GLV&PNT	18	140	
d3	1	DIAGONAL BRACE	W14x38	14'-4 5/8"	A572-FCM	GLV&PNT	539	539	
d4	1	DIAGONAL BRACE	W14x53	13'-9 3/4"	A572-FCM	GLV&PNT	719	719	
d5	1	DIAGONAL BRACE	W14x68	13'-0 7/16"	A572-FCM	GLV&PNT	868	868	
d6	1	DIAGONAL BRACE	W14x90	11'-10 7/16"	A572-FCM	GLV&PNT	1044	1044	
ifp1	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
ifp2	1	INSIDE FLANGE PLATE	PL 1 1/4"x6 1/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	197	197	
lg1	2	LOWER GUSSET	PL 5/8"x45 5/8"x4'-5 3/16"	4'-5 3/16"	A572-FCM	GLV&PNT	323	646	
lg2	2	LOWER GUSSET	PL 1/2"x53 5/16"x4'-11 7/16"	4'-11 7/16"	A572-FCM	GLV&PNT	430	860	
lg3	2	LOWER GUSSET	PL 1/2"x48 7/16"x3'-3 5/16"	3'-3 5/16"	A572-FCM	GLV&PNT	338	676	
lg4	2	LOWER GUSSET	PL 1/2"x42 1/4"x3'-7 1/4"	3'-7 1/4"	A572-FCM	GLV&PNT	249	498	
lg5	2	LOWER GUSSET	PL 1/2"x36 13/16"x3'-2 1/16"	3'-2 1/16"	A572-FCM	GLV&PNT	190	381	
ofp1	1	OUTSIDE FLANGE PLATE	PL 1 1/4"x15 7/8"x8'-2 1/8"	8'-2 1/8"	A572-50	GLV&PNT	526	526	
plaq1	1	PLAQUE	PL 1 1/4"x9 1/4"x9 1/4"	9 1/4"	STEEL		5	5	
shp1	12	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	12	138	
shp2	8	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	15	
shp3	2	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	27	
shp6	2	SHIM PLATE	PL 1"x15"x1'-5"	1'-5"	A572-50	GLV&PNT	68	136	
shp7	1	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	48	
shp9	1	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	52	
shp10	1	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	33	
shp11	2	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	8	
shp12	2	SHIM PLATE	PL 1/4"x8"x2'-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	28	
shp13	2	SHIM PLATE	PL 1/4"x8"x2'-8 1/4"	2'-8 1/4"	A572-50	GLV&PNT	17	34	
shp14	2	SHIM PLATE	PL 1/8"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	12	25	
shp15	2	SHIM PLATE	PL 3/4"x10"x3'-1"	3'-1"	A572-50	GLV&PNT	74	148	
shp16	2	SHIM PLATE	PL 3/4"x14 1/2"x4'-1"	4'-1"	A572-50	GLV&PNT	145	289	
shp17	2	SHIM PLATE	PL 3/4"x8"x2'-6"	2'-6"	A572-50	GLV&PNT	47	95	
shp18	2	SHIM PLATE	PL 3/4"x10"x2'-8"	2'-8"	A572-50	GLV&PNT	64	128	
shp19	2	SHIM PLATE	PL 3/8"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	17	34	
shp20	2	SHIM PLATE	PL 5/8"x14 5/8"x4'-9 13/16"	4'-9 13/16"	A572-50	GLV&PNT	126	252	
shp21	2	SHIM PLATE	PL 5/8"x6 3/4"x1'-11 1/2"	1'-11 1/2"	A572-50	GLV&PNT	26	51	
shp23	1	SHIM PLATE	PL 7/8"x6 3/4"x1'-10"	1'-10"	A572-50	GLV&PNT	34	34	
shp24	2	SHIM PLATE	PL 7/8"x8"x1'-10"	1'-10"	A572-50	GLV&PNT	40	81	
shp25	2	SHIM PLATE	PL 7/8"x10"x2'-6"	2'-6"	A572-50	GLV&PNT	70	140	
sp1	8	SPACER PLATE	PL 1/2"x7"x7 1/2"	7 1/2"	A572-50	GLV&PNT	7	55	
sp3	2	SPACER PLATE	PL 1/2"x7"x9 1/2"	9 1/2"	A572-50	GLV&PNT	9	18	
sp5	1	SPACER PLATE	PL 1/2"x7"x9 11/16"	9 11/16"	A572-50	GLV&PNT	9	9	
spb1	14	SPACER BEAM	W14x53	7 1/4"	A572-50	GLV&PNT	31	428	
sp1	2	SPLICE PLATE	PL 1 1/4"x15"x5'-6 5/8"	5'-6 5/8"	A572-FCM	GLV&PNT	334	667	
sp2	4	SPLICE PLATE	PL 1/2"x15"x2'-10 1/8"	2'-10 1/8"	A572-FCM	GLV&PNT	68	274	
tc1	1	TOP CHORD	W14x176	46'-11 7/16"	A572-50	GLV&PNT	8051	8051	
tc2	1	TOP CHORD	W14x99	11'-11 7/16"	A572-50	GLV&PNT	1099	1099	
ug1	2	UPPER GUSSET	PL 1/2"x62 7/16"x8'-3 1/2"	8'-3 1/2"	A572-FCM	GLV&PNT	679	1357	
ug2	2	UPPER GUSSET	PL 1/2"x51 7/16"x4'-4 1/8"	4'-4 1/8"	A572-FCM	GLV&PNT	346	691	
ug3	2	UPPER GUSSET	PL 1/2"x44 1/16"x3'-11 3/16"	3'-11 3/16"	A572-FCM	GLV&PNT	271	542	
ug4	2	UPPER GUSSET	PL 1/2"x35 7/8"x3'-3 1/4"	3'-3 1/4"	A572-FCM	GLV&PNT	188	376	
ug5	1	UPPER GUSSET	PL 1/2"x40"x8'-2 1/8"	8'-2 1/8"	A572-FCM	GLV&PNT	423	423	
v2	1	VERTICAL BRACING	W14x43	11'-2 3/4"	A572-50	GLV&PNT	476	476	
v3	1	VERTICAL BRACING	W14x48	10'-9 9/16"	A572-50	GLV&PNT	509	509	
v4	1	VERTICAL BRACING	W14x61	10'-2 9/16"	A572-50	GLV&PNT	611	611	
v5	1	VERTICAL BRACING	W14x61	9'-5 7/16"	A572-50	GLV&PNT	563	563	

QTY'S SHOWN ARE FOR ONE TRUSS SEGMENT

REFERENCE SHT 9k FOR ASSEMBLY DETAIL

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
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- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- LOWER CASE PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| CL: CENTERLINE        | WP/•: WORK POINT            |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/\φ: DIAMETER      | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |

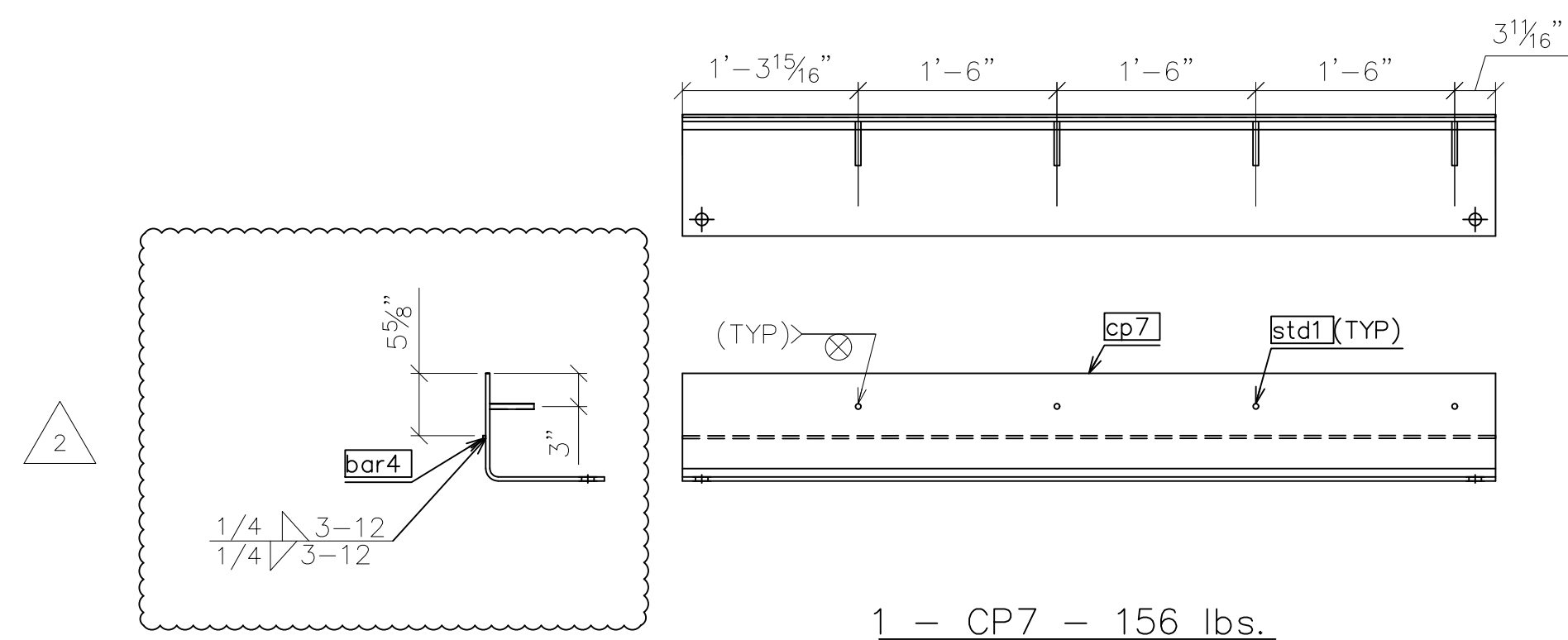
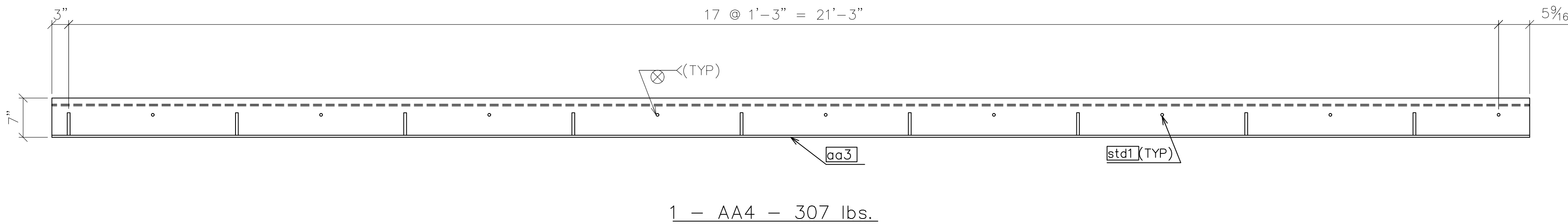
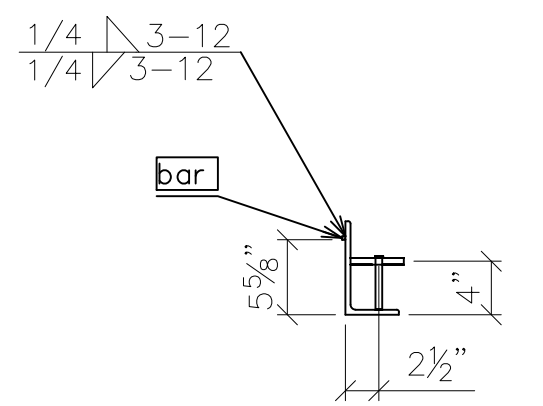
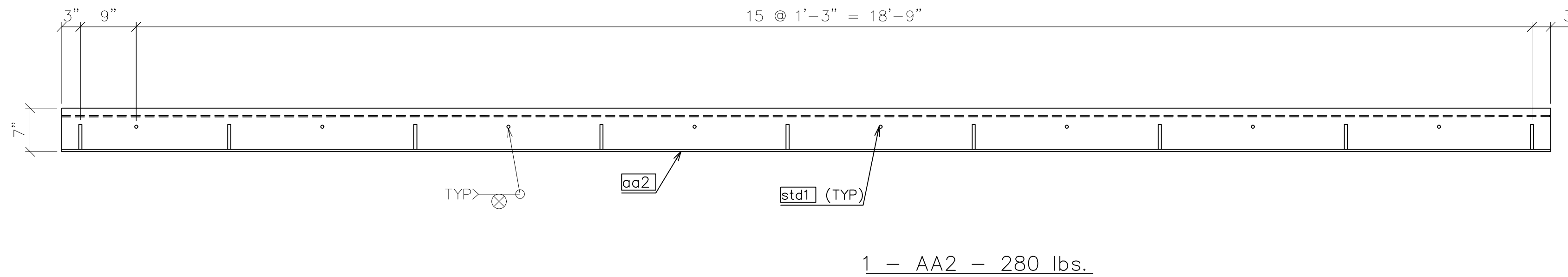
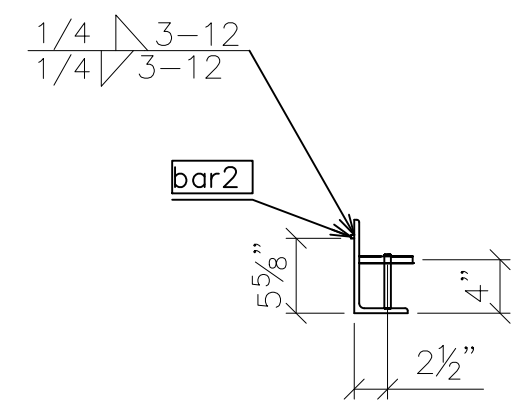
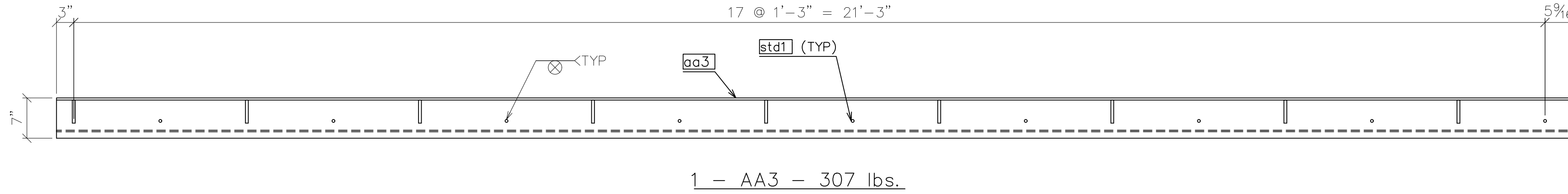
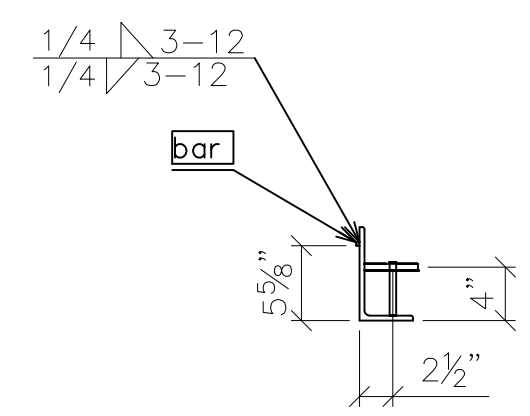


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888-872-7434  
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6/9/2020				REVISED - SEE REVISION TABLE			
MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA				ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:			
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET	9m			
SHOP ASSEMBLY			TRUSS ASSEMBLY			USB JOB# 200045	
				58 TOTAL			

DWG#: PB691891

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
aa2	1	ABUTMENT ANGLE	L7X4X3/8	20'-0"	A572-50	GLV	272	272	
aa3	2	ABUTMENT ANGLE	L7X4X3/8	21'-11 9/16"	A572-50	GLV	299	597	
bar	2	EXTRUSION BAR	RV 1/4	21'-11 1/2"	A36	GLV	5	9	
bar2	1	EXTRUSION BAR	RV 1/4	19'-11 13/16"	A36	GLV	4	4	
bar4	1	EXTRUSION BAR	RV 1/4	6'-1 5/8"	A36	GLV	1	1	
cp7	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	154	154	
std1	57	STUD	RB 1/2	4"	A108		0	13	



DWG#: PB691891

SHOP NOTES

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- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

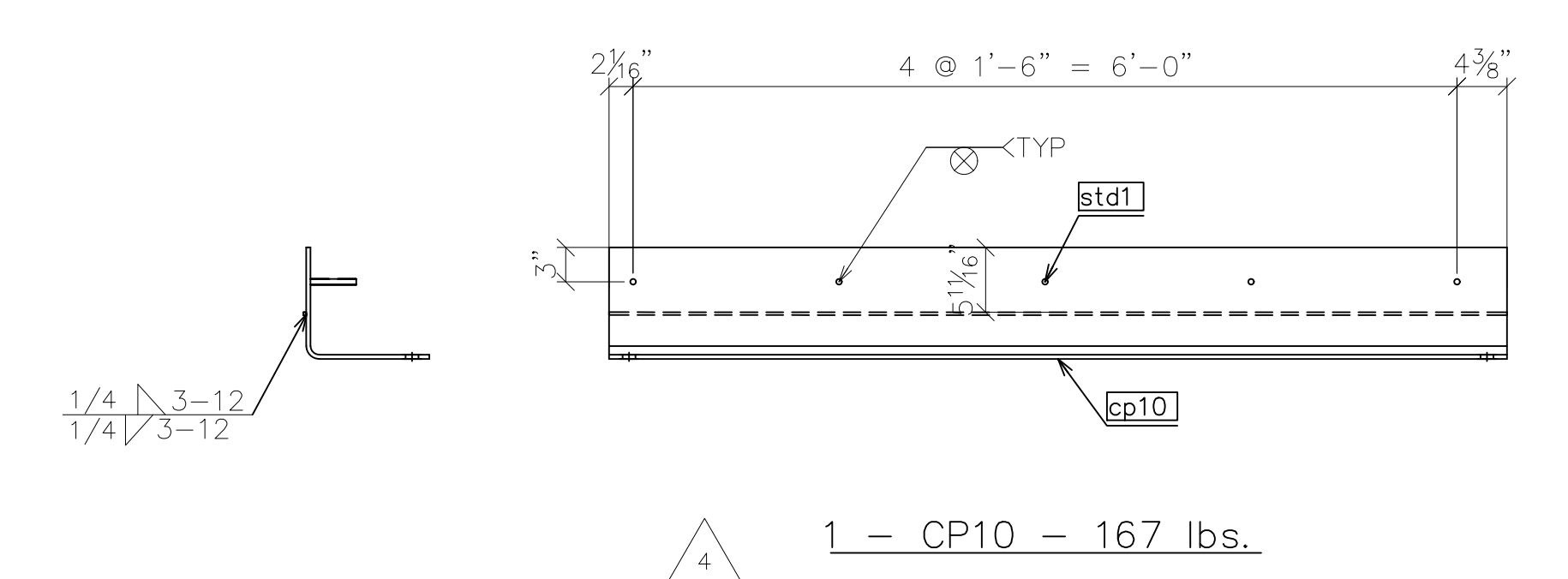
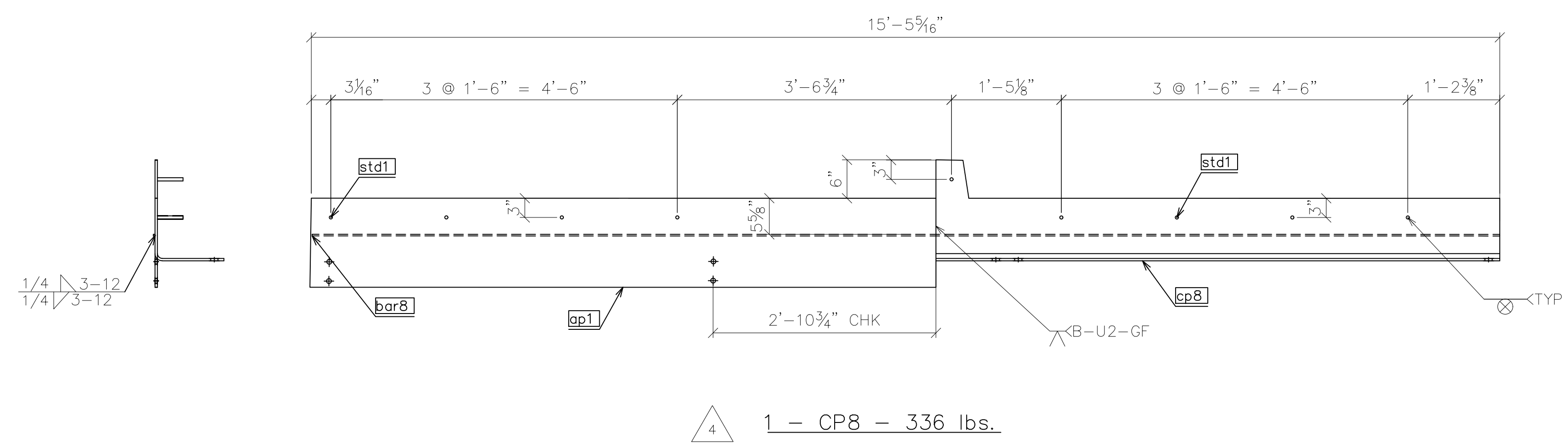
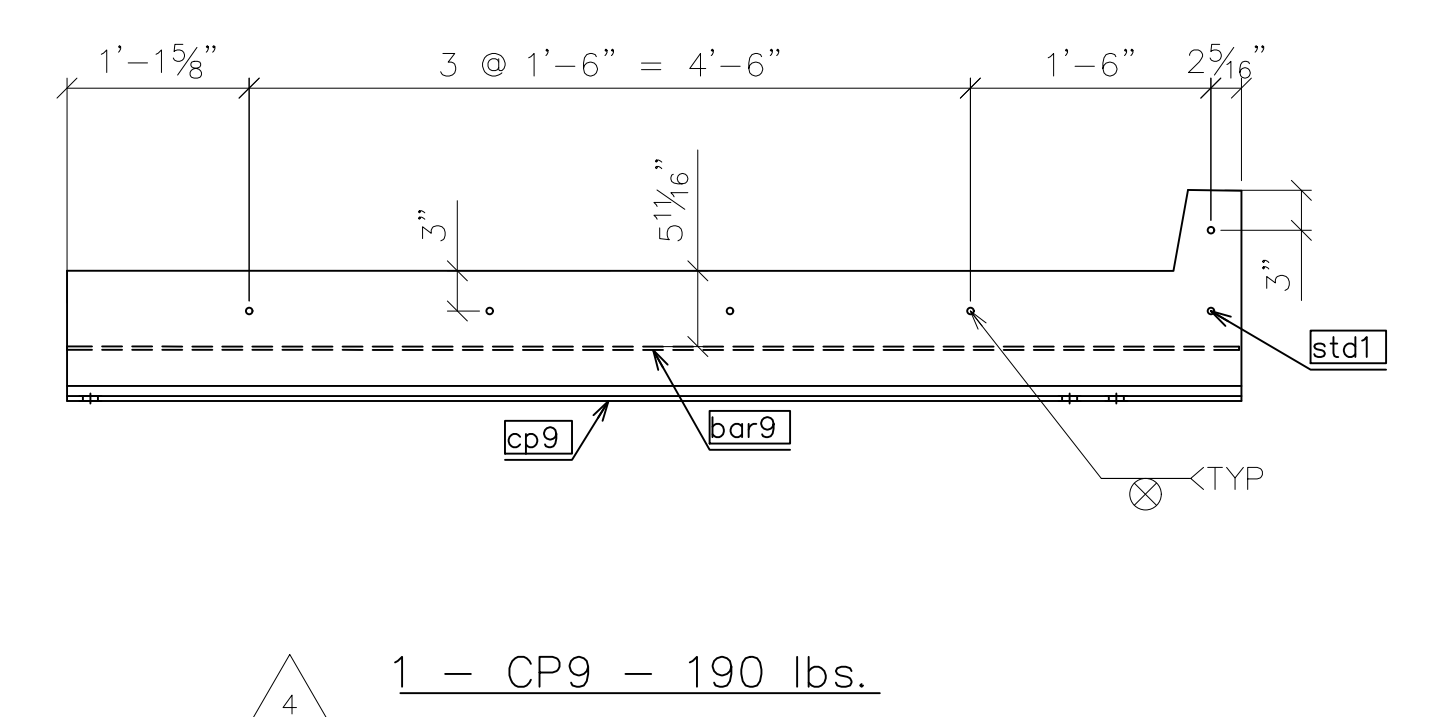
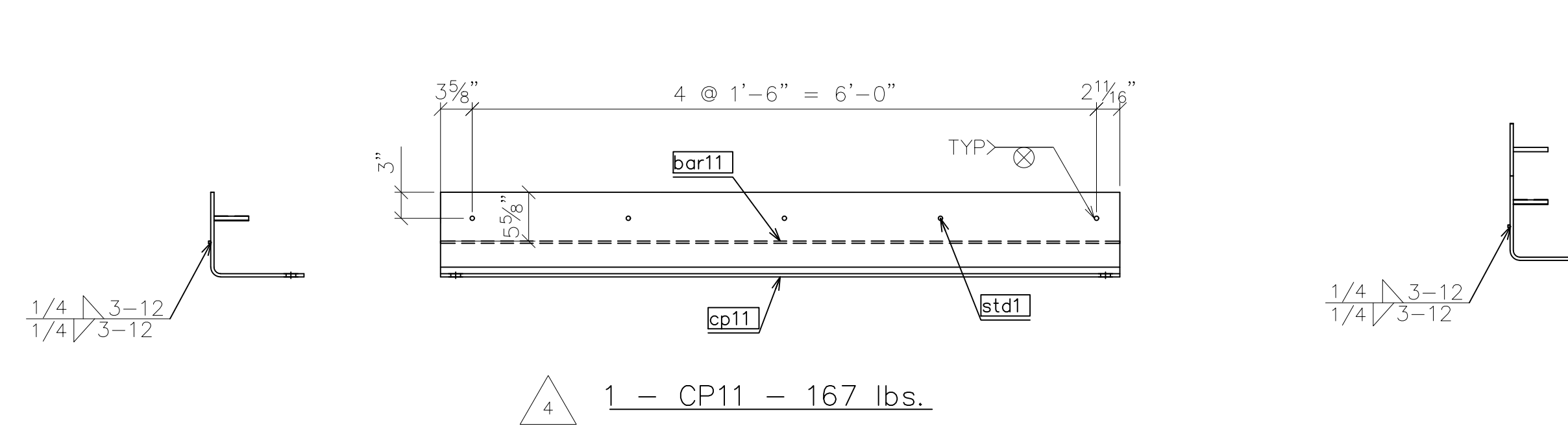
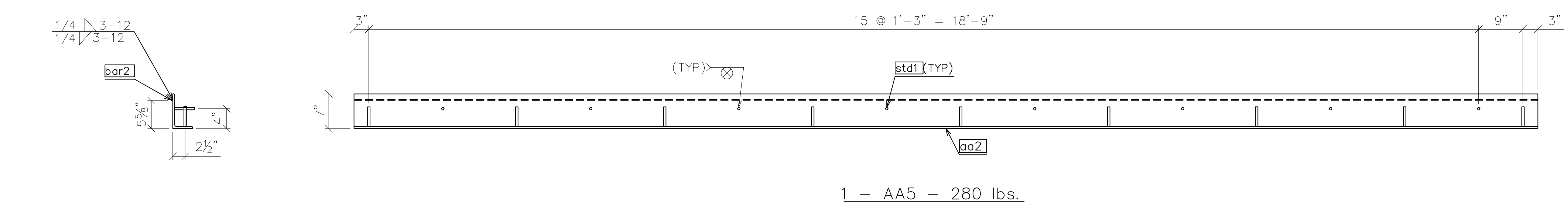
SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| CL: CENTERLINE        | WP/◆: WORK POINT            |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
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6/9/2020		REVISED - SEE REVISION TABLE	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 10a
SHOP ASSEMBLY		ASSEMBLY	
		USB JOB# 200045	58 TOTAL

MATERIAL LIST									
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aa2	1	ABUTMENT ANGLE	L7X4X3/8	20'-0"	A572-50	GLV	272	272	
ap1	1	ARMOR PLATE	PL 3/8"x13 7/8"x8'-1 9/16"	8'-1 9/16"	A572-50	GLV	144	144	
bar2	1	EXTRUSION BAR	RV 1/4	19'-11 13/16"	A36	GLV	4	4	
bar8	1	EXTRUSION BAR	RV 1/4	15'-5 1/8"	A36	GLV	3	3	
bar9	1	EXTRUSION BAR	RV 1/4	7'-3 3/4"	A36	GLV	2	2	
bar10	1	EXTRUSION BAR	RV 1/4	6'-6 7/16"	A36	GLV	1	1	
bar11	1	EXTRUSION BAR	RV 1/4	6'-6 3/8"	A36	GLV	1	1	
cp8	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	187	187	
cp9	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	187	187	
cp10	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	164	164	
cp11	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	164	164	
std1	42	STUD	RB 1/2	4"	A108		0	9	



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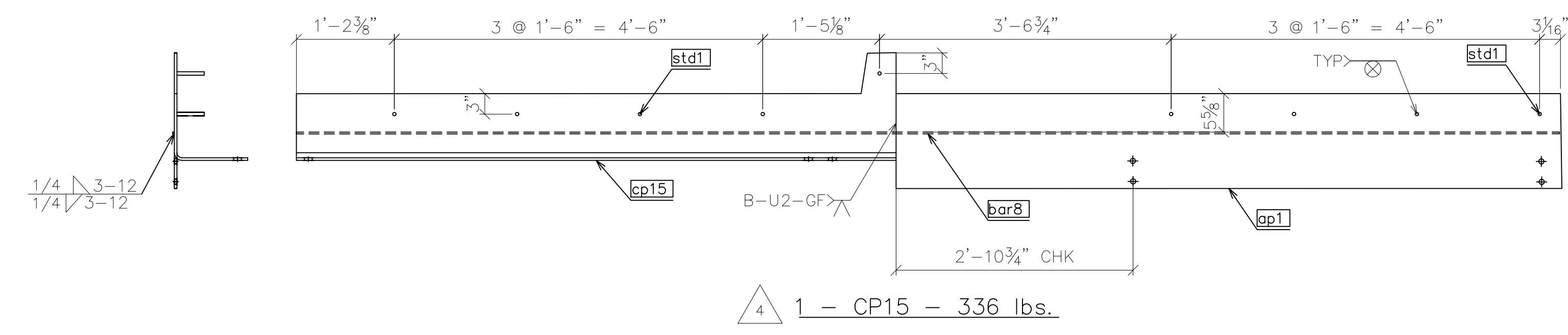
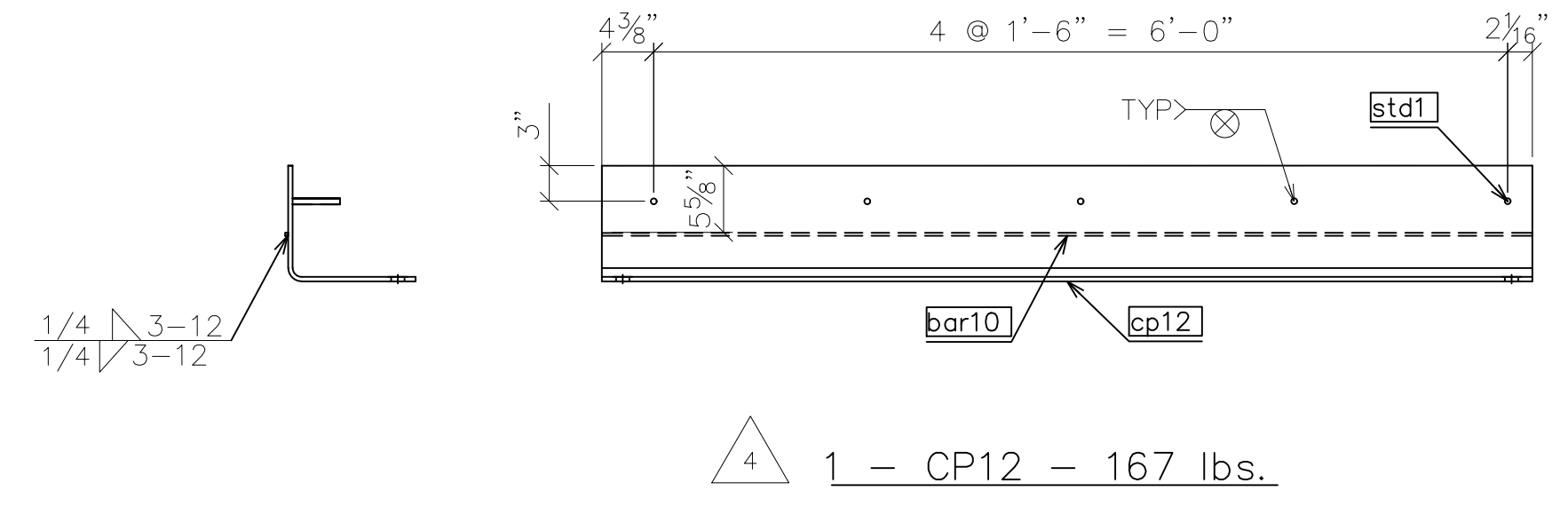
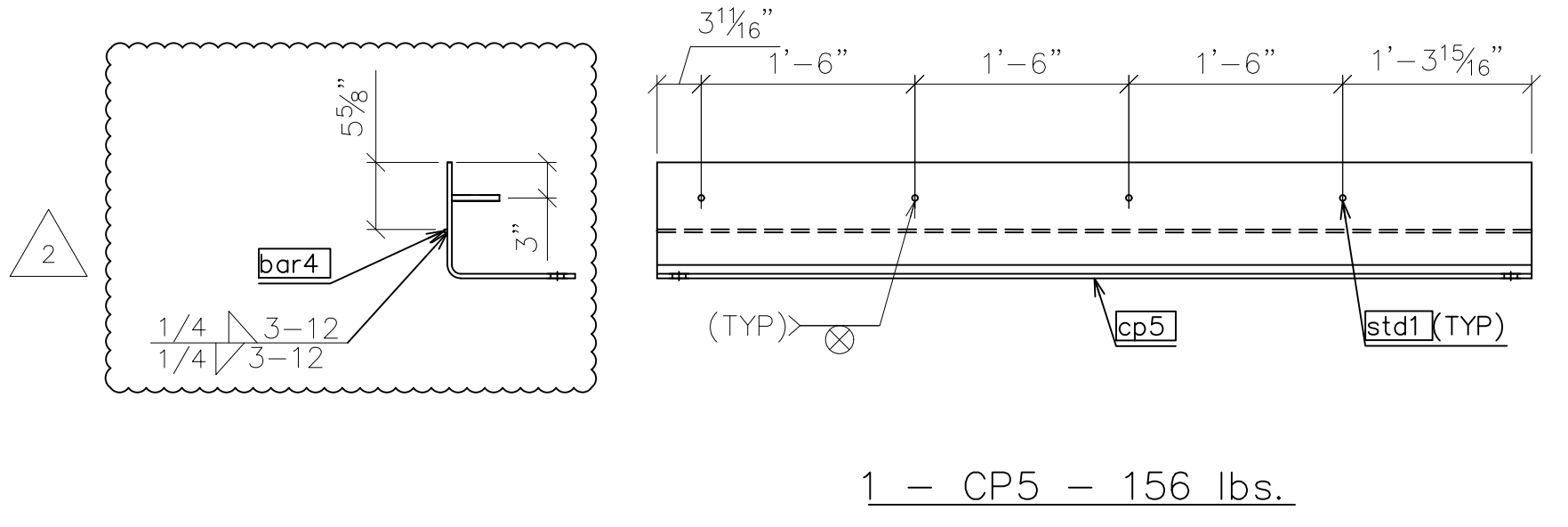
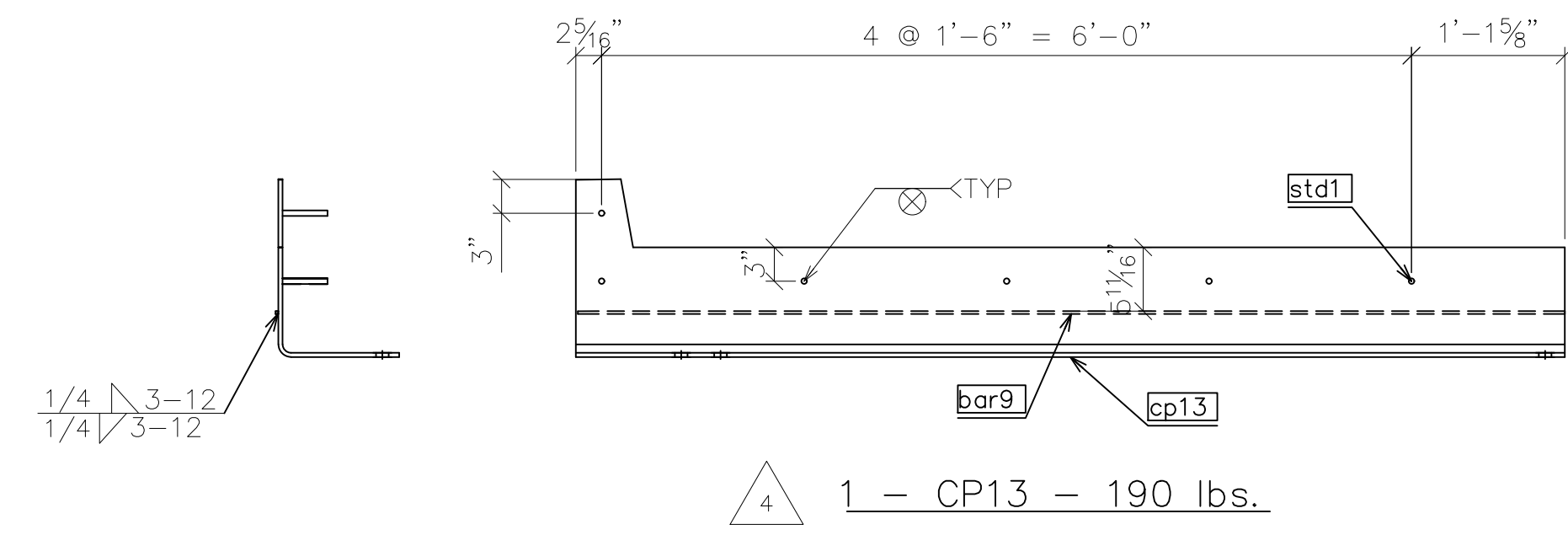
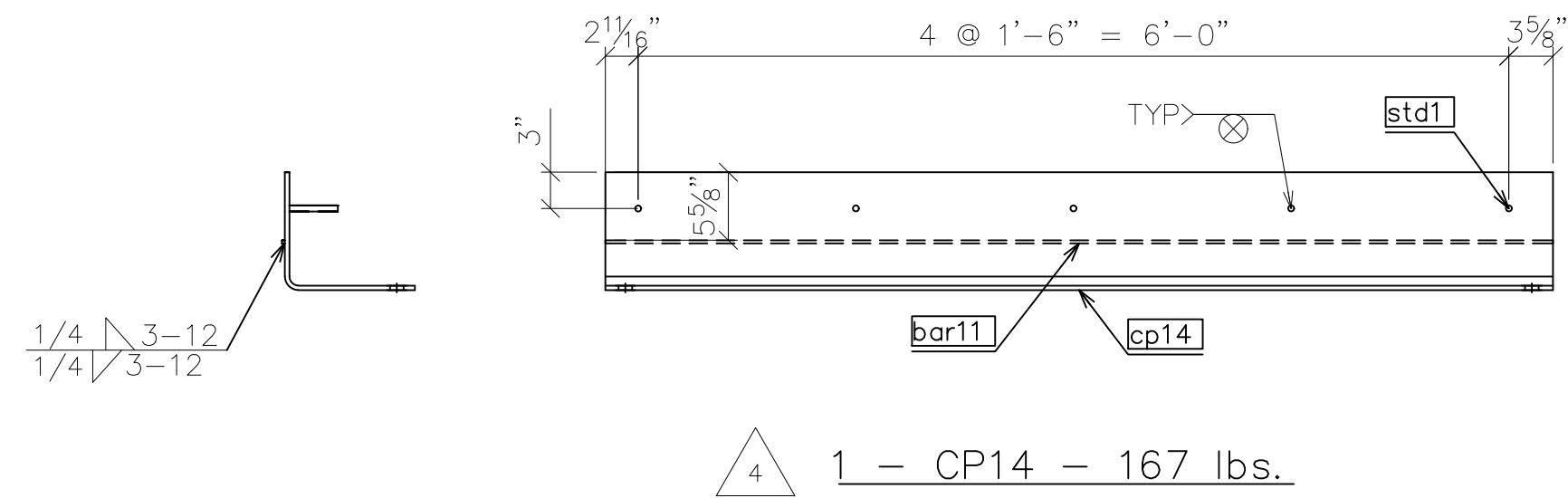
**SYMBOLS & ABBREVIATIONS**

ES: EACH SIDE	NS: NEAR SIDE
EQ: EQUAL	FS: FAR SIDE
CL: CENTERLINE	WP/◆: WORK POINT
REF: REFERENCE	GA: GAUGE
CHK: CHECK	ID: INSIDE DIAMETER
O/O: OUT TO OUT	OD: OUTSIDE DIAMETER
C/C: CENTER TO CENTER	BRG: BEARING
F/F: FACE TO FACE	TYP: TYPICAL
DIA/Ø: DIAMETER	UNO: UNLESS NOTED OTHERWISE
R: RADIUS	ABUT: ABUTMENT
CS: CREEKSIDE	T&B: TOP & BOTTOM
RS: ROADSIDE	



6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 10b
SHOP ASSEMBLY		ASSEMBLY	
USB JOB# 200045		58 TOTAL	

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
ap1	1	ARMOR PLATE	PL 3/8"x13 7/8"x8'-1 9/16"	8'-1 9/16"	A572-50	GLV	144	144	
bar4	1	EXTRUSION BAR	RV 1/4	6'-1 5/8"	A36	GLV	1	1	
bar8	1	EXTRUSION BAR	RV 1/4	15'-5 1/8"	A36	GLV	3	3	
bar9	1	EXTRUSION BAR	RV 1/4	7'-3 3/4"	A36	GLV	2	2	
bar10	1	EXTRUSION BAR	RV 1/4	6'-6 7/16"	A36	GLV	1	1	
bar11	1	EXTRUSION BAR	RV 1/4	6'-6 3/8"	A36	GLV	1	1	
cp5	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-1 5/8"	6'-1 5/8"	A572-50	GLV	154	154	
cp12	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 7/16"	6'-6 7/16"	A572-50	GLV	164	164	
cp13	1	CLOSURE PLATE	PL 3/8"x25 3/4"x7'-3 15/16"	7'-3 15/16"	A572-50	GLV	187	187	
cp14	1	CLOSURE PLATE	PL 3/8"x19 11/16"x6'-6 3/8"	6'-6 3/8"	A572-50	GLV	164	164	
cp15	1	CLOSURE PLATE	PL 3/8"x25 11/16"x7'-3 7/8"	7'-3 7/8"	A572-50	GLV	187	187	
std1	29	STUD	RB 1/2	4"	A108		0	6	



SHOP NOTES

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- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4" ± 1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

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| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
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6/9/2020 REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHOP ASSEMBLY

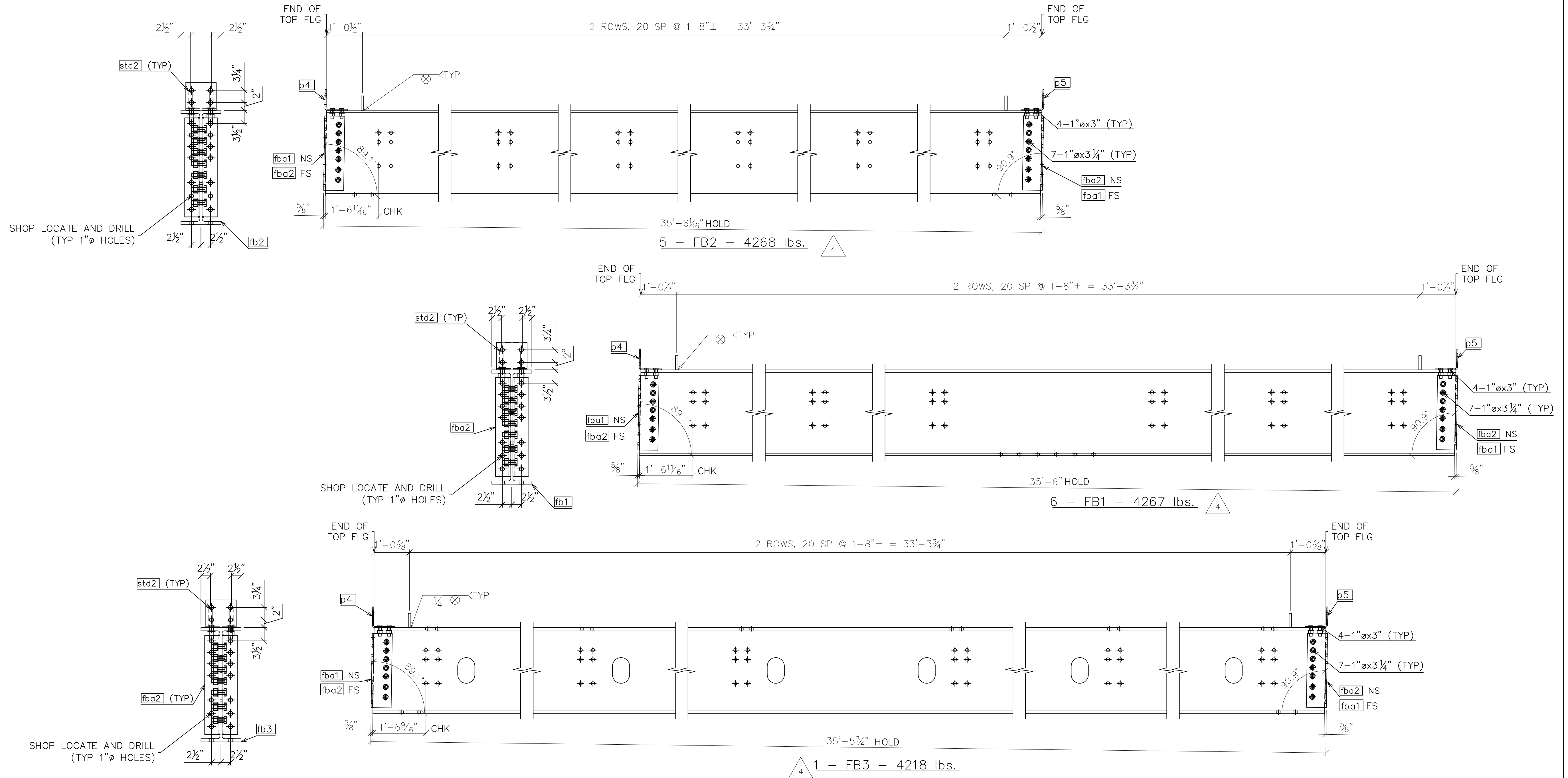
ASSEMBLY

USB JOB#  
200045

SHEET  
10c  
58 TOTAL

SHOP BOLT CHART			
Qty	Description	Length	Remark
264	Washer F436 - 1		GALV
264	A563-DH Nut - 1		GALV
96	F3125 A325 1 x 3	3"	GALV
168	F3125 A325 1 x 3 1/4	3 1/4"	GALV

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
fb1	6	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4095	24570	
fb2	5	FLOOR BEAM	W30x116	35'-5 1/4"	A572-FCM	GLV&PNT	4096	20480	
fb3	1	FLOOR BEAM	W30x116	35'-5"	A572-FCM	GLV&PNT	4046	4046	
fbal	24	FLOOR BEAM ANGLE	L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	885	
fbal2	24	FLOOR BEAM ANGLE	L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	885	
p4	12	FLOOR BEAM CONNECTION PLATE	PL 3/8"x8"x1'-2 3/8"	1'-2 3/8"	A572-50	GLV&PNT	11	137	
p5	12	FLOOR BEAM CONNECTION PLATE	PL 3/8"x8"x1'-2 5/16"	1'-2 5/16"	A572-50	GLV&PNT	11	136	
std2	504	STUD	RB 7/8	5"	A108	GLV&PNT	1	430	



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DWG#: PB691891

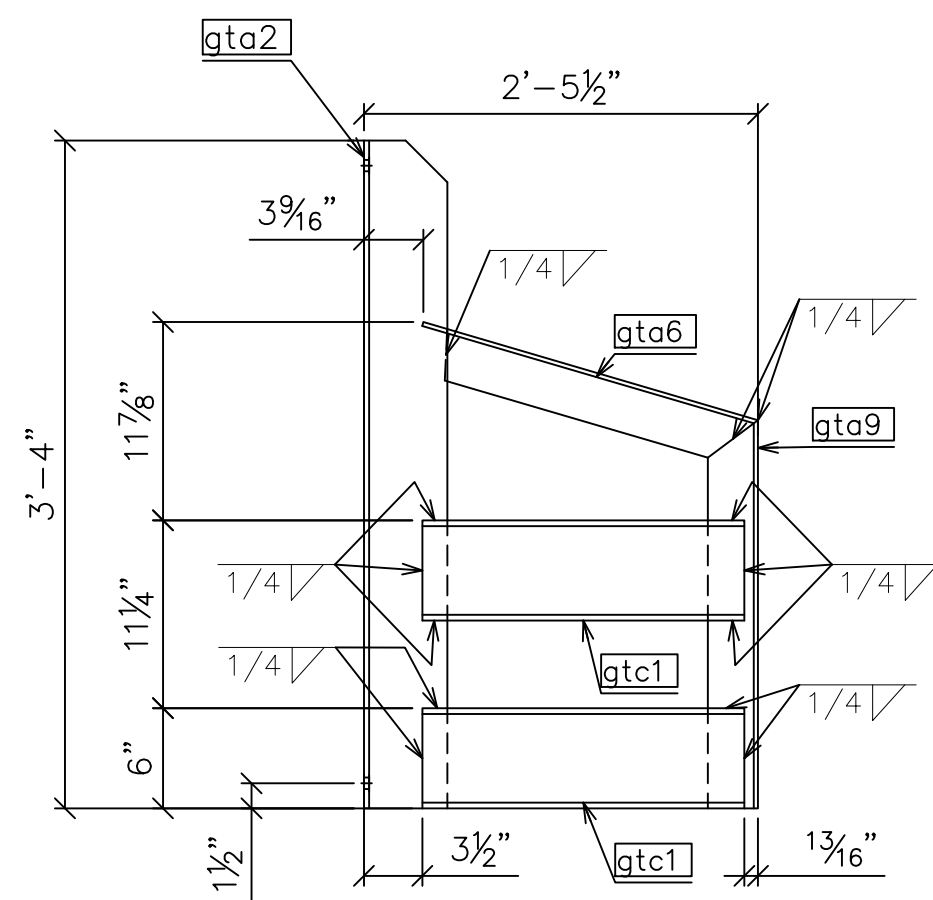
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

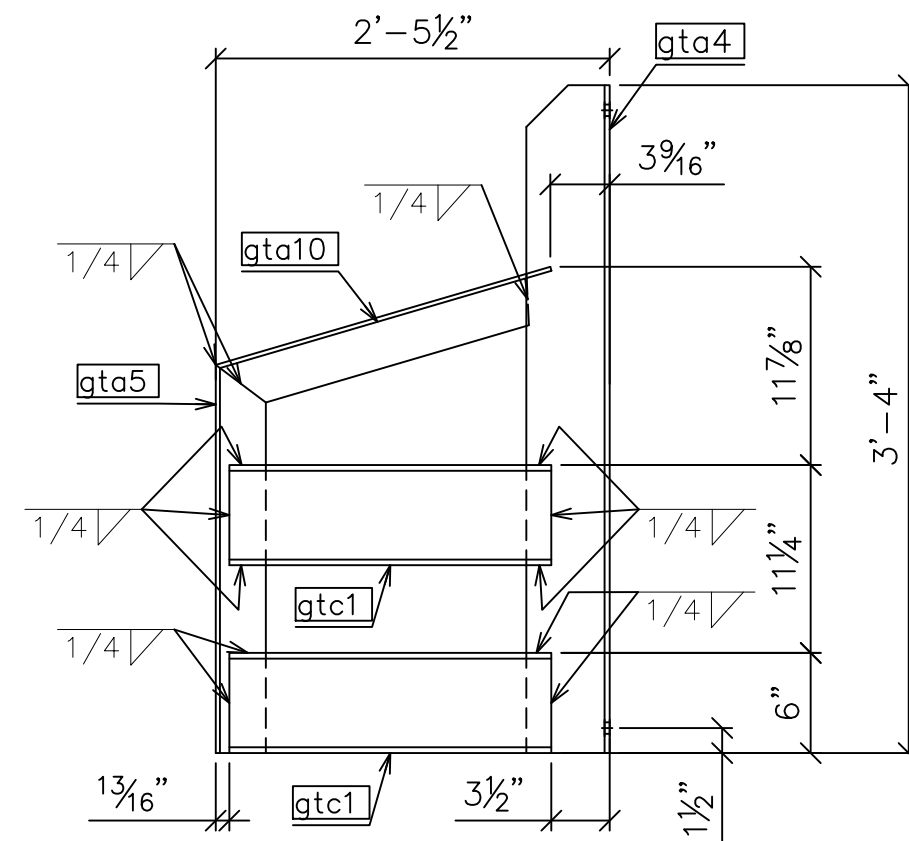
ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 10d
SHOP ASSEMBLY		ASSEMBLY	58 TOTAL

USB JOB# 200045



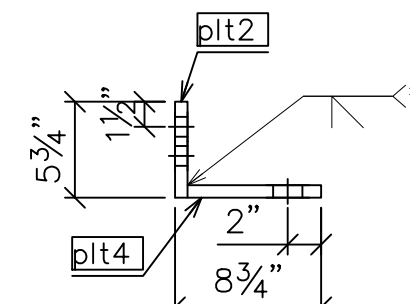
1 - GTA1 - 72 lbs.



1 - GTA3 - 72 lbs.

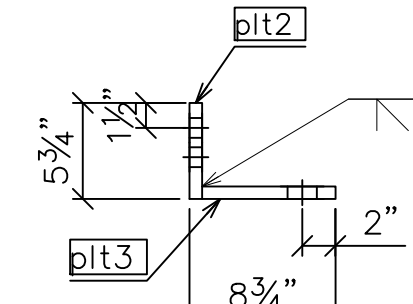
SHOP BOLT CHART			
Qty	Description	Length	Remark
22	Washer F436 - 1		GALV
8	A563-DH Nut - 1		GALV
8	F3125 A325 1 x 3	3"	GALV
14	F3125 A325 1 x 3 1/4	3 1/4"	GALV

MATERIAL LIST									
Mark	Amount	Model	Role	Description	Length	Grade	Coating	Part weight	Total weight
fb4	1	FLOOR BEAM		W30x116	35'-5"	A572-FCM	GLV&PNT	4046	4046
fbal	2	FLOOR BEAM ANGLE		L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	74
fbab	2	FLOOR BEAM ANGLE		L7X4X1/2	2'-2"	A572-50	GLV&PNT	37	74
gta2	1	GATE ANGLE		L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	29
gta4	1	GATE ANGLE		L5X3 1/2X5/16	3'-4"	A572-50	GLV&PNT	29	29
gta5	1	GATE ANGLE		L3X3X1/4	1'-11 1/4"	A572-50	GLV&PNT	9	9
gta6	1	GATE ANGLE		L3X3X1/4	1'-8 7/8"	A572-50	GLV&PNT	8	8
gta9	1	GATE ANGLE		L3X3X1/4	1'-11 1/4"	A572-50	GLV&PNT	9	9
gta10	1	GATE ANGLE		L3X3X1/4	1'-8 7/8"	A572-50	GLV&PNT	8	8
gtc1	4	GATE CHANNEL		C6X8.2	1'-7 5/16"	A572-50	GLV&PNT	13	53
p1	48	POST		W8x24	5'-7"	A572-50	GLV&PNT	133	6391
p4	1	FLOOR BEAM CONNECTION PLATE		PL 3/8"x8"x1'-2 3/8"	1'-2 3/8"	A572-50	GLV&PNT	11	11
p5	1	FLOOR BEAM CONNECTION PLATE		PL 3/8"x8"x1'-2 5/16"	1'-2 5/16"	A572-50	GLV&PNT	11	11
plt2	8	PLATE		PL 3/4"x5 3/4"x1'-3"	1'-3"	A572-50	GLV&PNT	17	139
plt3	4	PLATE		PL 3/4"x8"x1'-3"	1'-3"	A572-50	GLV&PNT	25	100
plt4	4	PLATE		PL 3/4"x8"x1'-3"	1'-3"	A572-50	GLV&PNT	24	96
pp1	48	POST PLATE		PL 1"x12"x1'-2 3/8"	1'-2 3/8"	A572-50	GLV&PNT	48	2311
ps1	24	POST SUPPORT		HSS 14X6X1/4	8 9/16"	A500 GR.B	GLV&PNT	23	553
ps2	24	POST SUPPORT		HSS 14X6X1/4	8 5/16"	A500 GR.B	GLV&PNT	22	535
psp1	48	POST SUPPORT PLATE		PL 3/4"x12"x1'-1 5/8"	1'-1 5/8"	A572-50	GLV&PNT	31	1501
psp2	48	POST SUPPORT PLATE		PL 3/4"x12"x1'-2 3/4"	1'-2 3/4"	A572-50	GLV&PNT	34	1654
std2	42	STUD		RB 7/8	5"	A108	GLV&PNT	1	36
stp1	192	STIFFENER		PL 1/4"x2 7/8"x7 1/8"	7 1/8"	A572-50	GLV&PNT	1	271



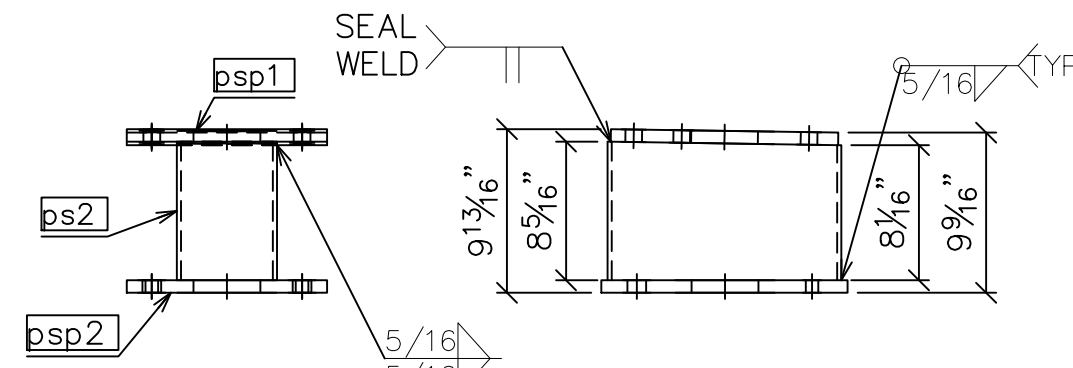
4 - PLT2 - 41 lbs.

\* TC-U-4b-GF  
NO UT REQUIRED

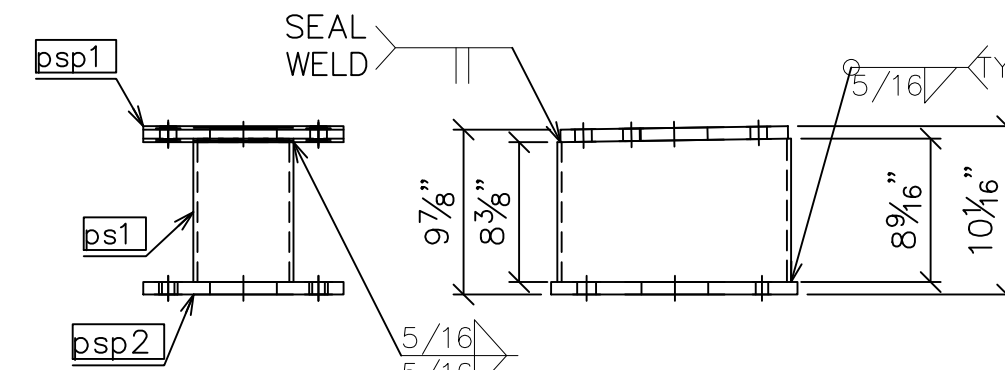


4 - PLT1 - 42 lbs.

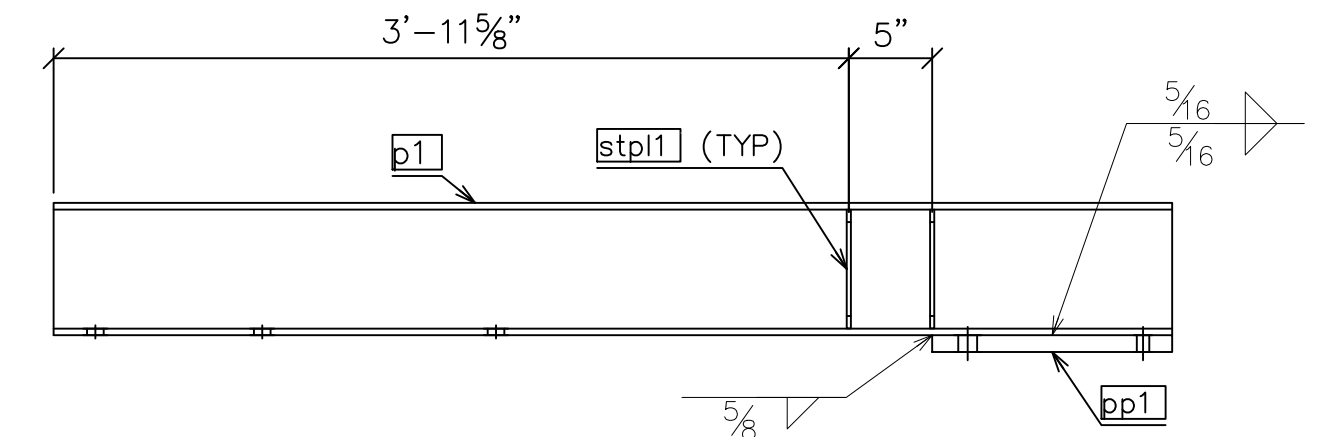
\* TC-U-4b-GF  
NO UT REQUIRED



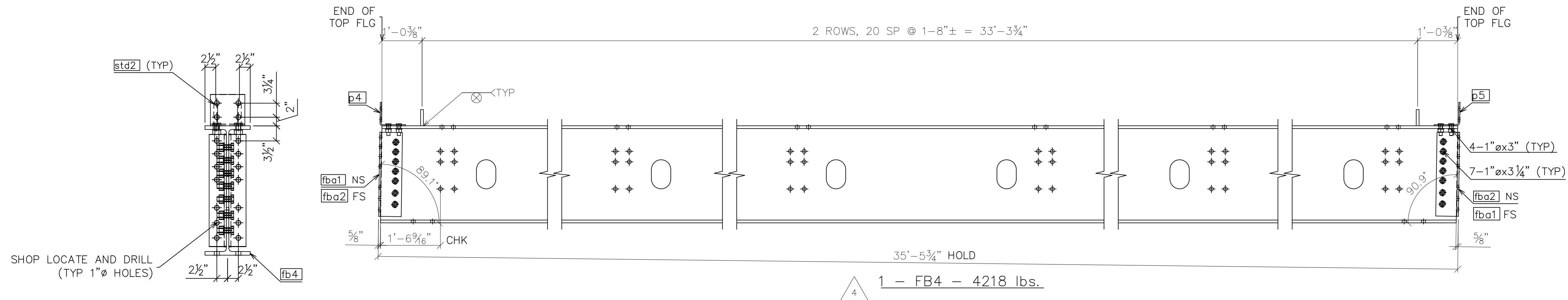
24 - PSP2 - 88 lbs.



24 - PSP1 - 89 lbs.



48 - P1 - 187 lbs.



1 - FB4 - 4218 lbs.

DWG#: PB691891

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SYMBOLS & ABBREVIATIONS

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6/9/2020 REVISED - SEE REVISION TABLE

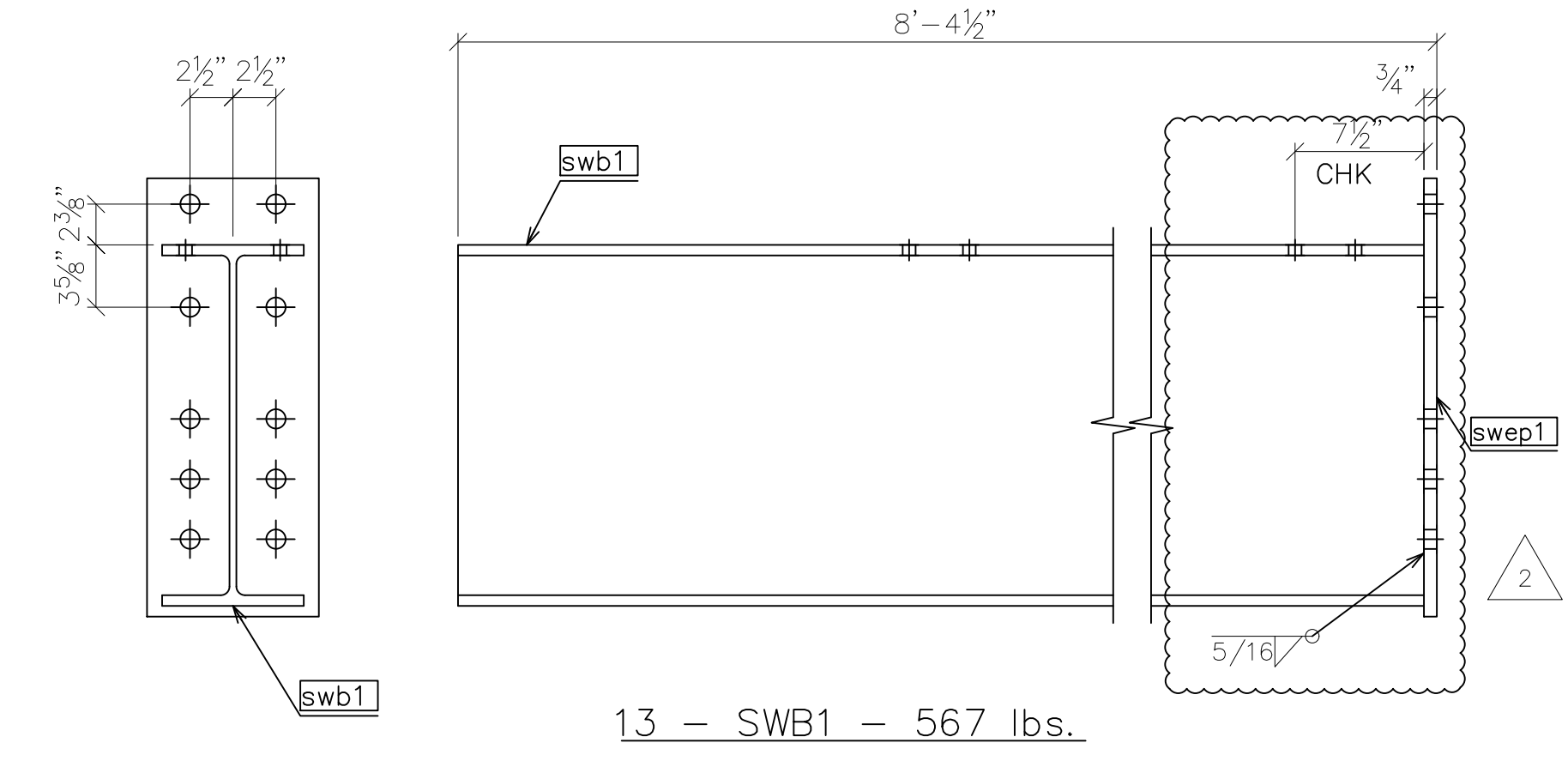
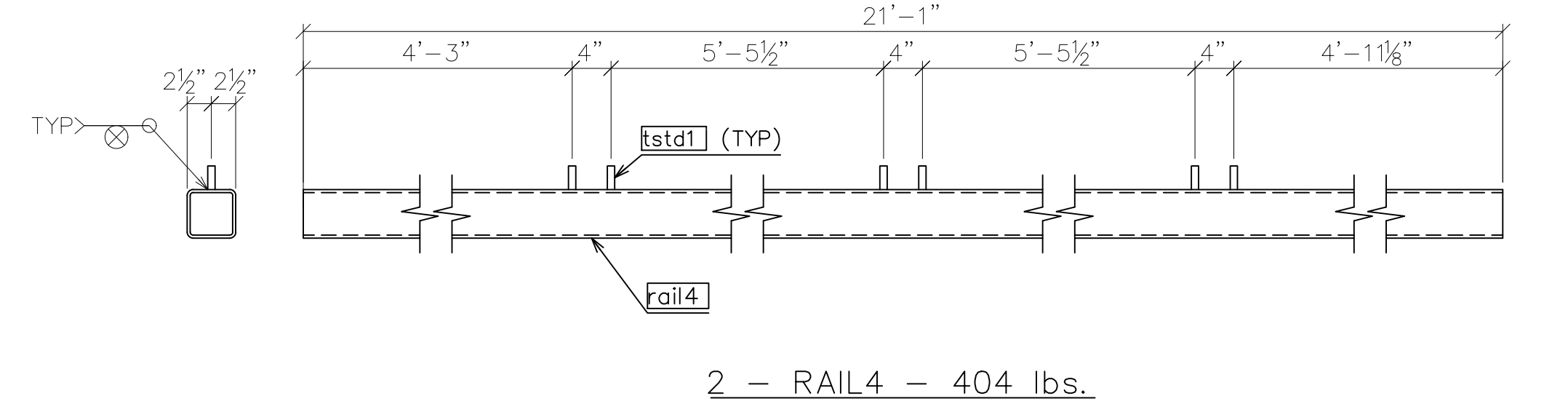
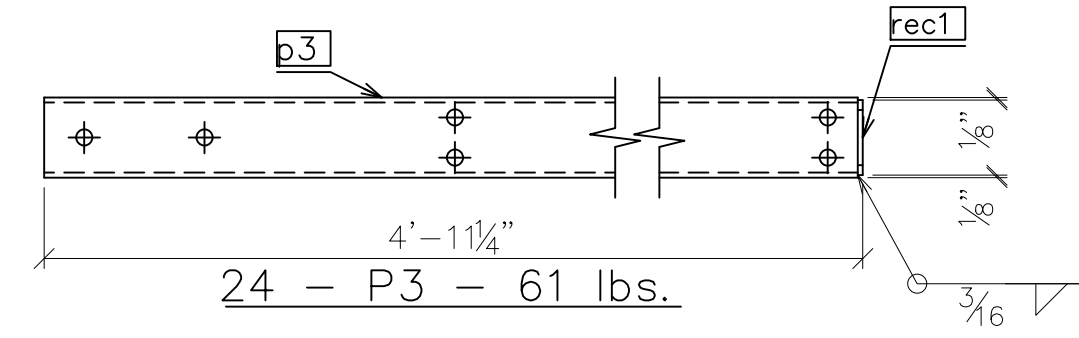
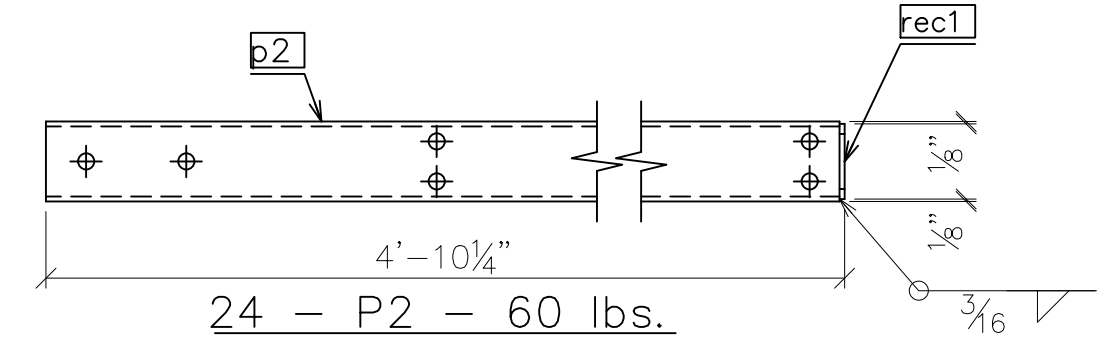
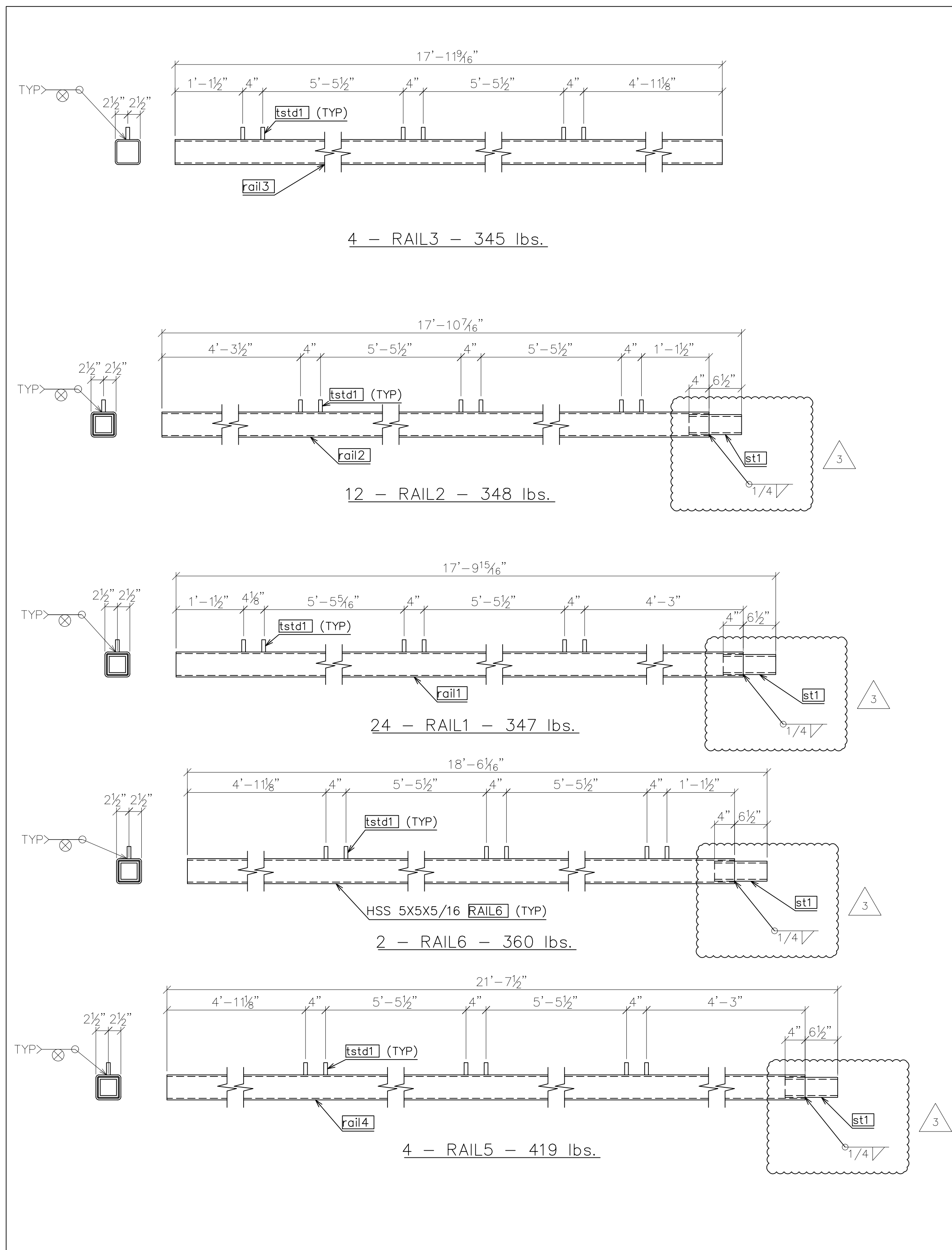
MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 10e
SHOP ASSEMBLY		ASSEMBLY	58 TOTAL
USB JOB# 200045			

DATE PLOTTED June 9, 2020

S:\JOBS\CALIFORNIA\200045-Los Angeles Co, CA Galvanized Truss\Drawings\Revisions\200045 Rev14 6-3-20 AS20\Details\10f.dwg



MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
p2	24	POST	HSS 4X4X1/4	4'-10"	A500 GR.B	GLV&PNT	59	1406	
p3	24	POST	HSS 4X4X1/4	4'-11"	A500 GR.B	GLV&PNT	60	1430	
rail1	24	RAIL	HSS 5X5X5/16	17'-3 3/8"	A500 GR.B	GLV&PNT	330	7915	
rail2	12	RAIL	HSS 5X5X5/16	17'-3 15/16"	A500 GR.B	GLV&PNT	331	3967	
rail3	6	RAIL	HSS 5X5X5/16	17'-11 9/16"	A500 GR.B	GLV&PNT	343	2056	
rail4	6	RAIL	HSS 5X5X5/16	21'-1"	A500 GR.B	GLV&PNT	402	2414	
rec1	48	RAIL END CAP	PL 1/4"x3 3/4"x3 3/4"	3 3/4"	A572-50	GLV&PNT	1	47	
st1	42	SPLICE TUBE	HSS 4X4X3/8	10 1/2"	A500 GR.B	GLV&PNT	15	635	
swb1	13	SIDEWALK BRACKET	W21x62	8'-3 3/4"	A572-50	GLV&PNT	515	6692	
swep1	13	SIDEWALK BRACKET ENDPLATE	PL 3/4"x10"x2'-1 1/2"	2'-1 1/2"	A572-50	GLV	52	678	
tstd1	288	THREADED STUD W/1N,1W	RB 3/4"	2 7/16"	A108	GLV&PNT	0	88	

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6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

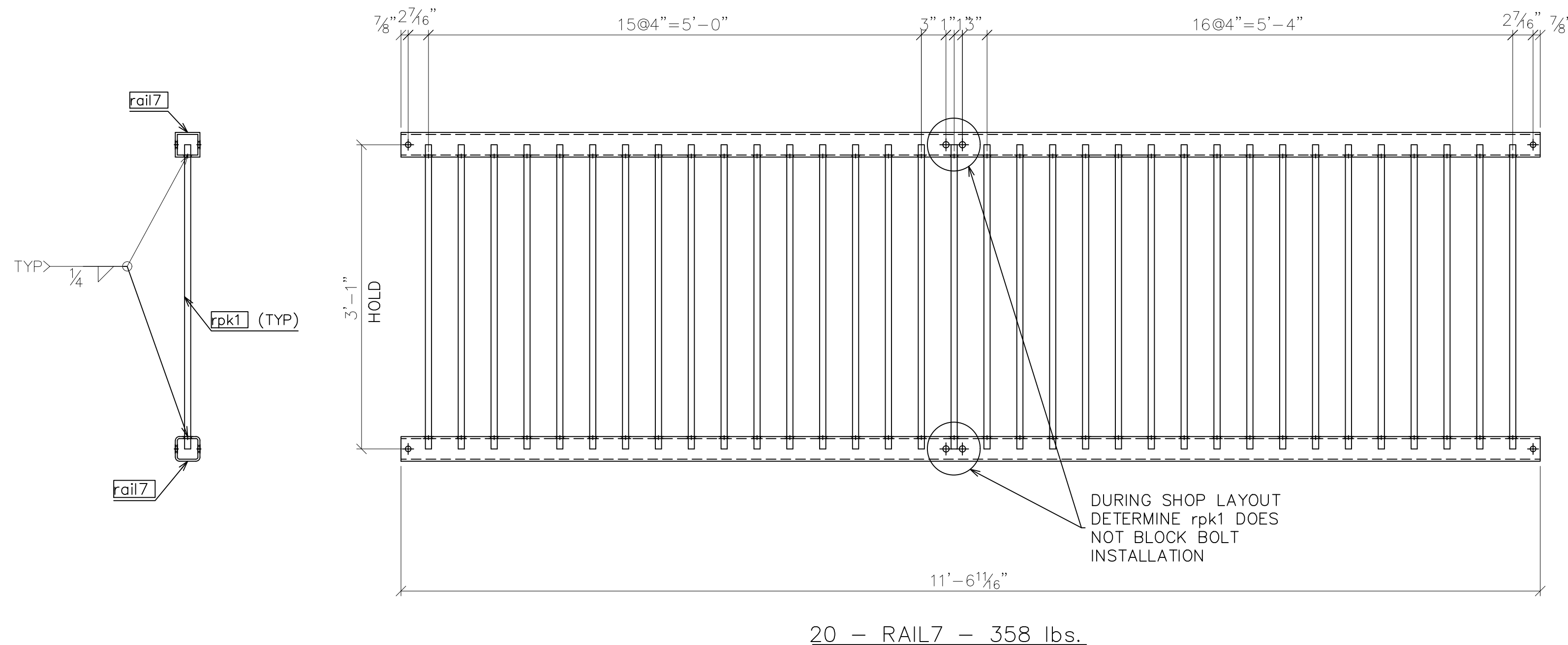
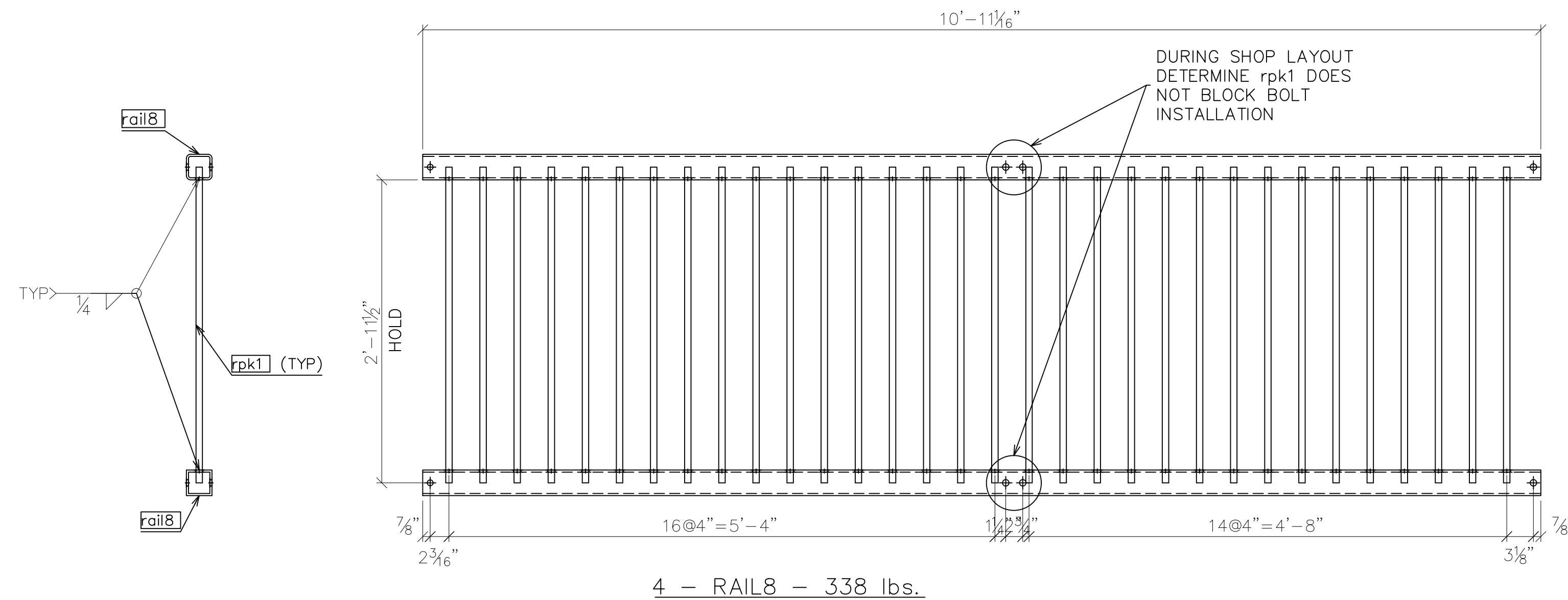
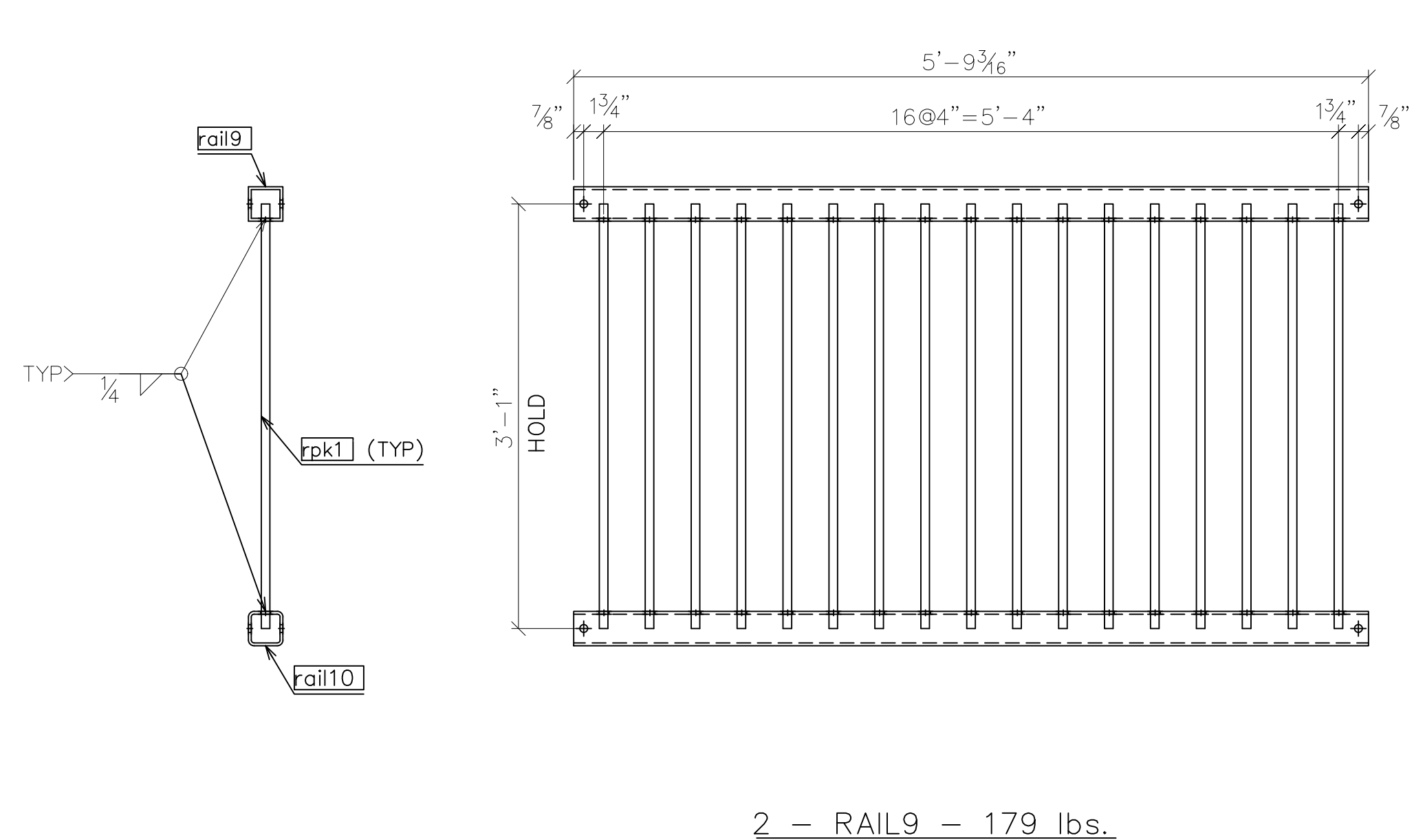
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 10f
SHOP ASSEMBLY		ASSEMBLY	58 TOTAL

USB JOB# 200045

DWG#: PB691891



MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
rail7	40	RAIL	HSS 3X3X1/4	11'-6 11/16"	A500 GR.B	GLV&PNT	100	4007	
rail8	8	RAIL	HSS 3X3X1/4	10'-11 1/16"	A500 GR.B	GLV&PNT	95	757	
rail9	2	RAIL	HSS 3X3X1/4	5'-9 3/16"	A500 GR.B	GLV&PNT	50	100	
rail10	2	RAIL	HSS 3X3X1/4	5'-9 3/16"	A500 GR.B	GLV&PNT	50	100	
rpk1	842	RAIL PICKET	RB 3/4	3'-1"	A36	GLV&PNT	5	3903	



DWG#: PB691891

SHOP NOTES

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
| EQ: EQUAL             | FS: FAR SIDE                |
| CL: CENTERLINE        | WP/◆: WORK POINT            |
| REF: REFERENCE        | GA: GAUGE                   |
| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O\O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C\C: CENTER TO CENTER | BRG: BEARING                |
| F\F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/Ø: DIAMETER       | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



201 WHEELING AVE.  
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CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020

REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

USB JOB#  
200045

SHOP ASSEMBLY

ASSEMBLY

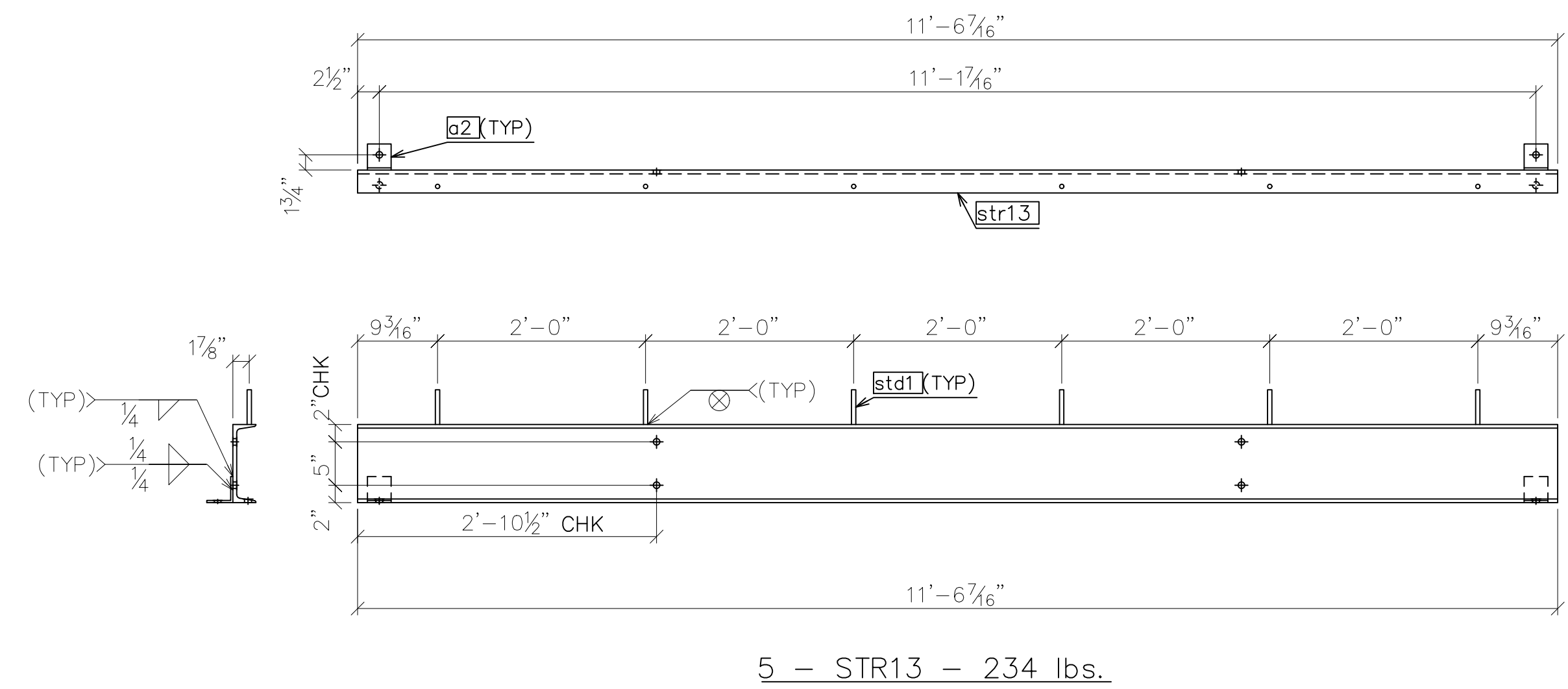
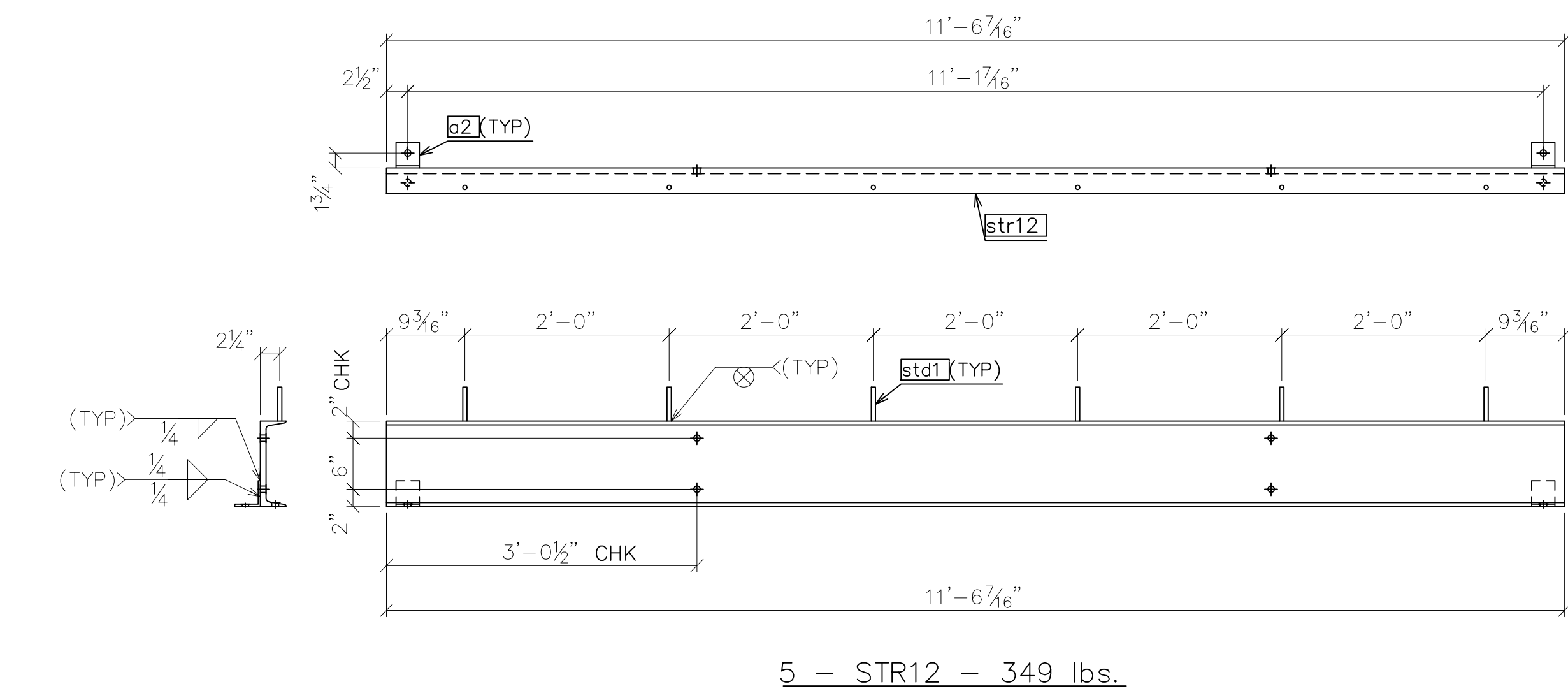
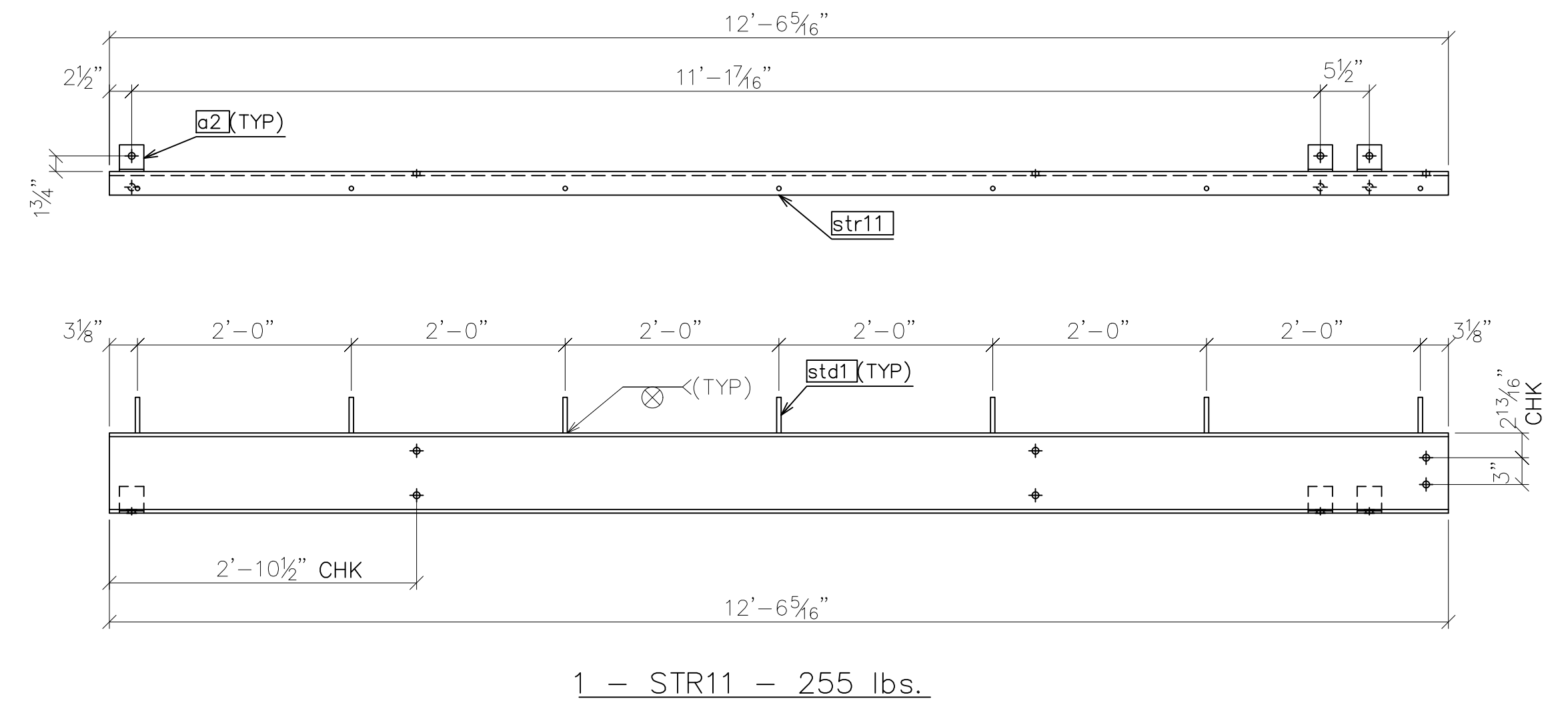
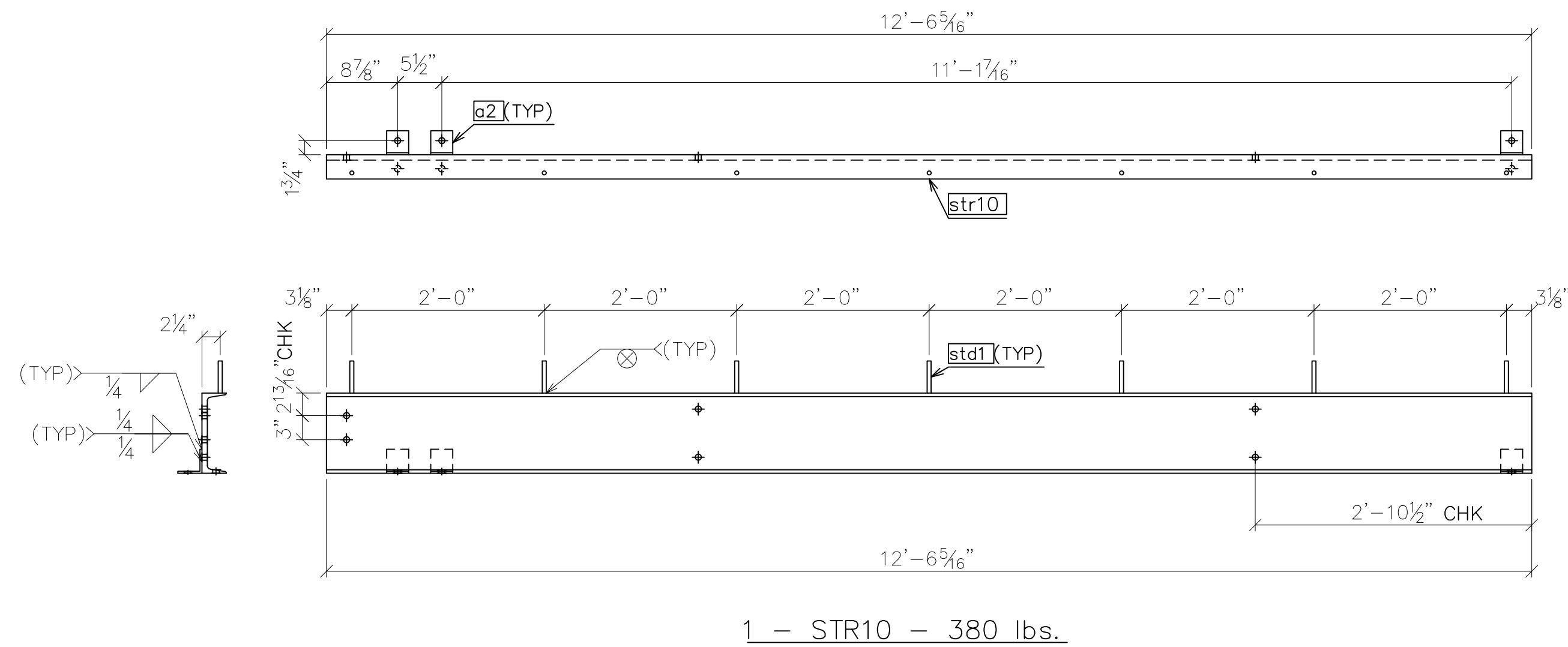
SHEET

10g

58

TOTAL

MATERIAL LIST									
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight	
a2	26	ANGLE	L3X3X1/4	2 3/4"	A572-50	GLV&PNT	1	28	
std1	74	STUD	RB 1/2	4"	A108		0	17	
str10	1	STRINGER	C10X30	12'-6 5/16"	A572-50	GLV&PNT	375	375	
str11	1	STRINGER	C9X20	12'-6 5/16"	A572-50	GLV&PNT	250	250	
str12	5	STRINGER	C10X30	11'-6 7/16"	A572-50	GLV&PNT	346	1728	
str13	5	STRINGER	C9X20	11'-6 7/16"	A572-50	GLV&PNT	230	1152	



SHOP NOTES

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- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

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| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

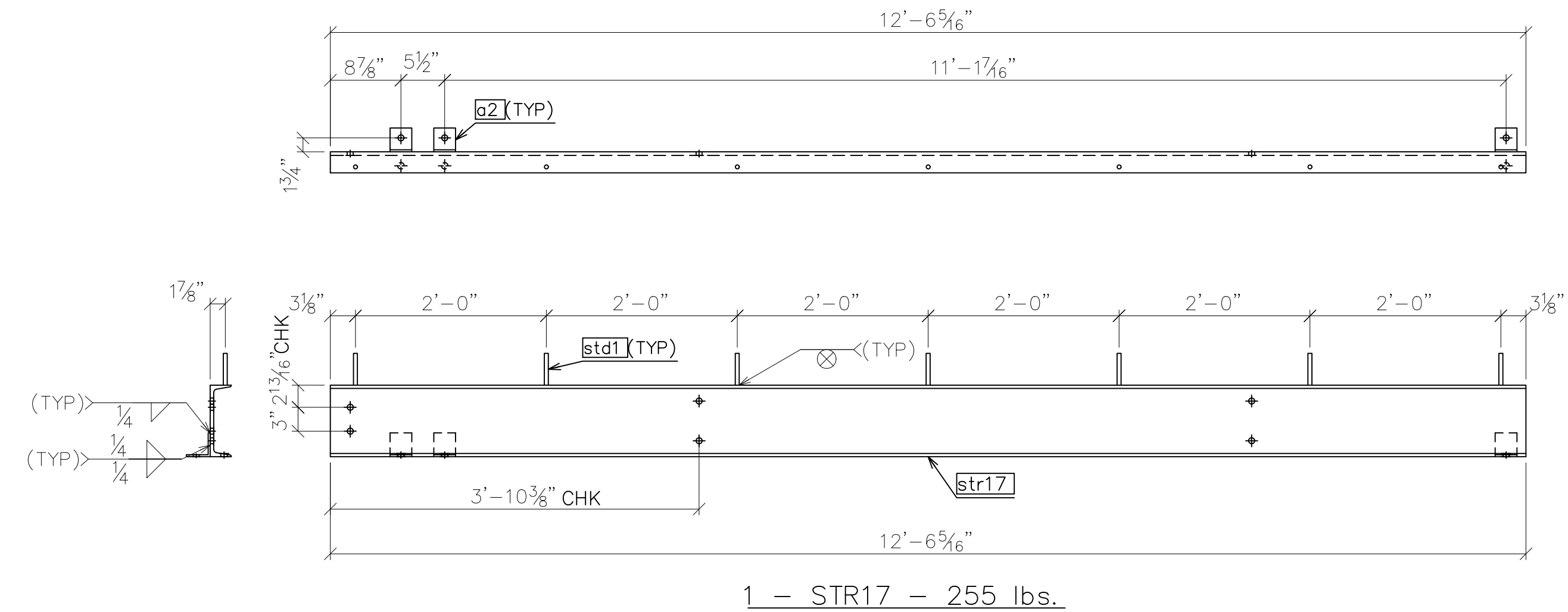
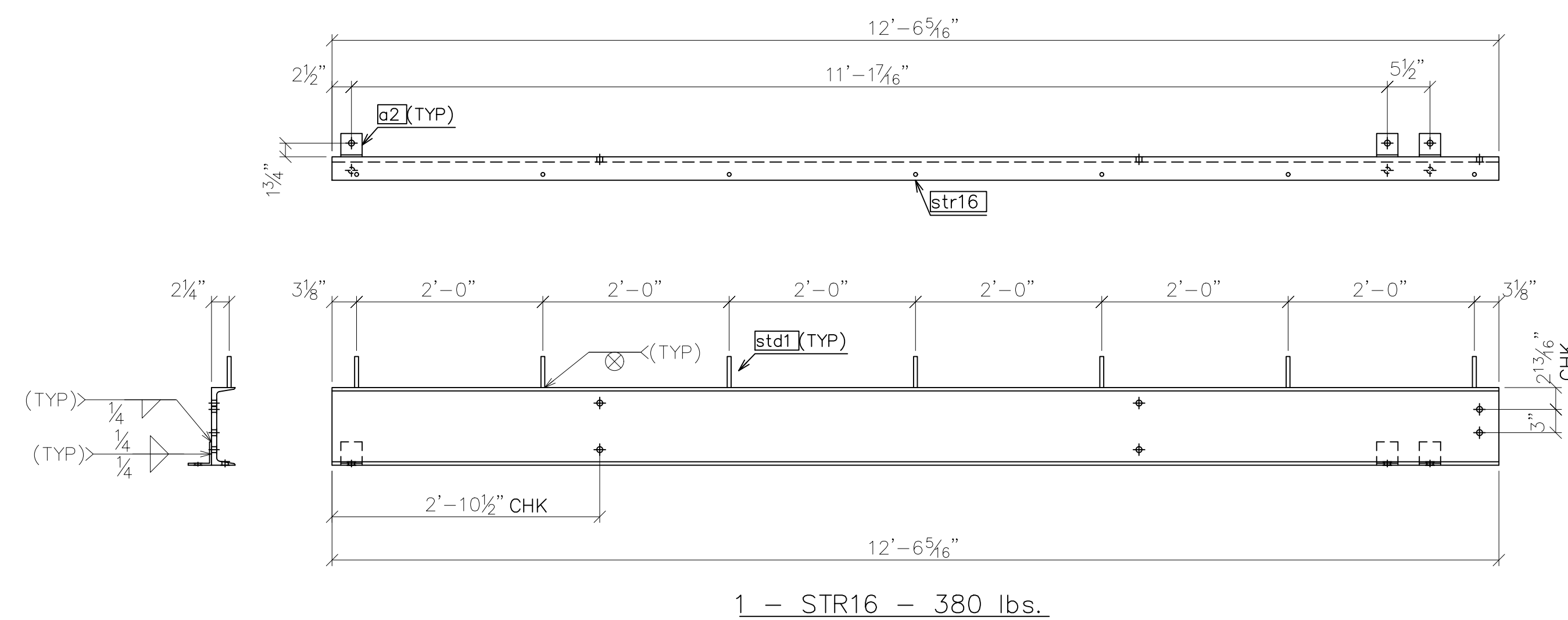
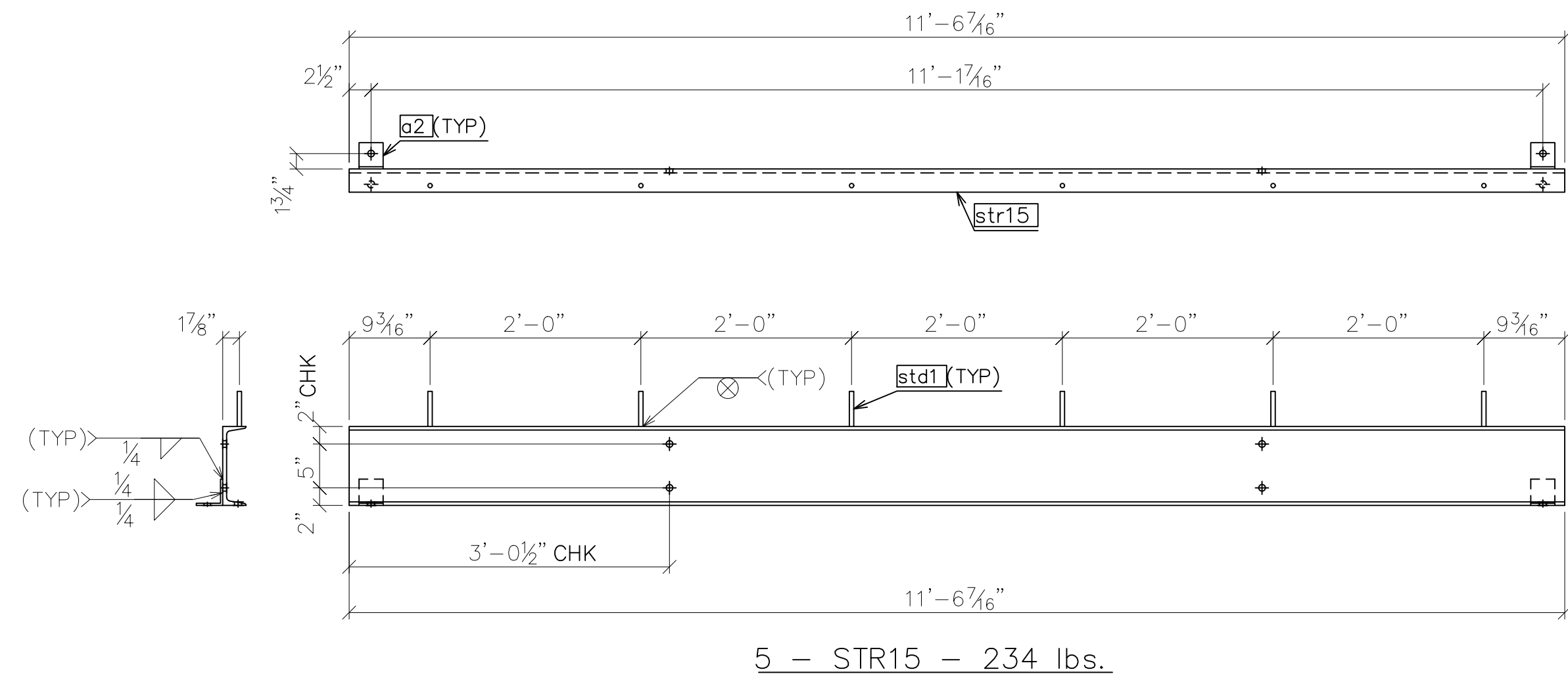
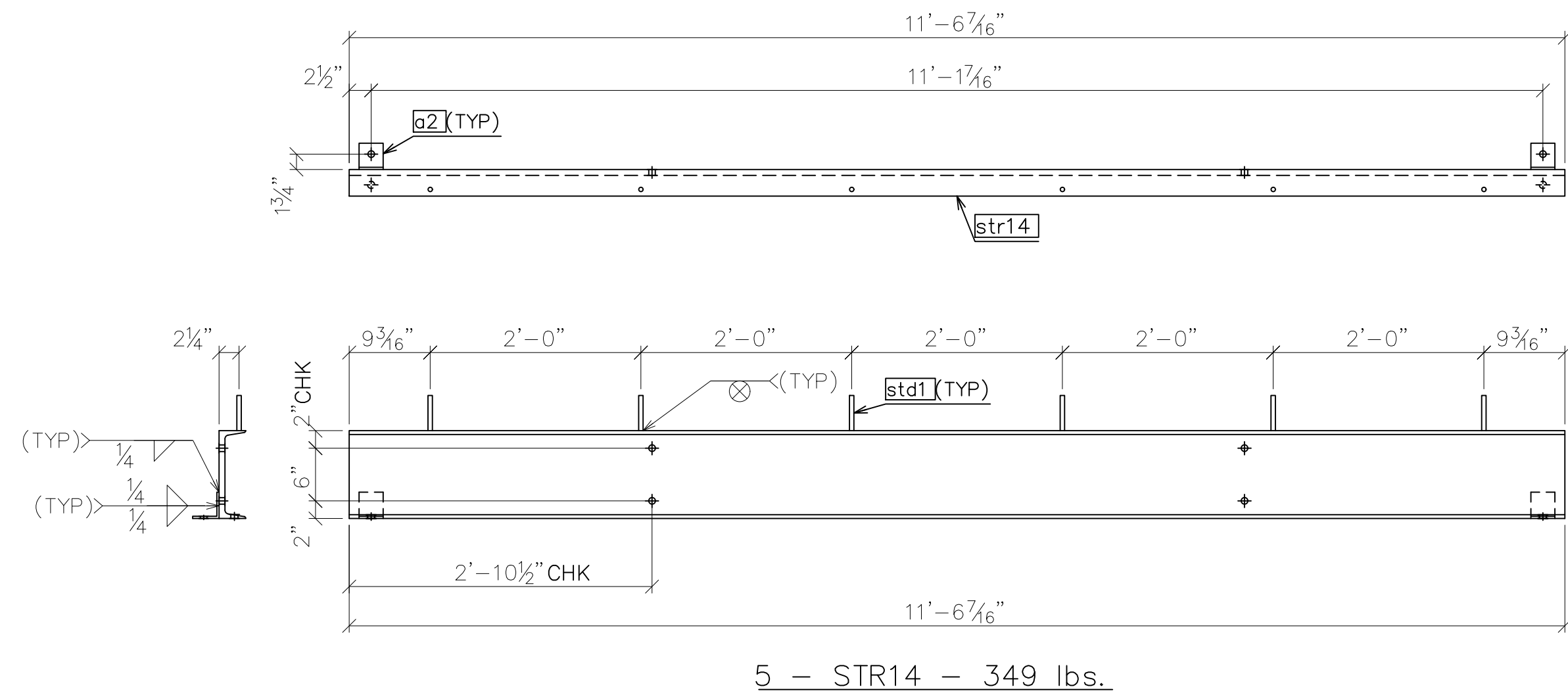
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SHOP ASSEMBLY ASSEMBLY

USB JOB# 200045

SHEET 10h TOTAL 58

MATERIAL LIST								
Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight
a2	26	ANGLE	L3X3X1/4	2 3/4"	A572-50	GLV&PNT	1	28
std1	74	STUD	RB 1/2	4"	A108		0	17
str14	5	STRINGER	C10X30	11'-6 7/16"	A572-50	GLV&PNT	346	1728
str15	5	STRINGER	C9X20	11'-6 7/16"	A572-50	GLV&PNT	230	1152
str16	1	STRINGER	C10X30	12'-6 5/16"	A572-50	GLV&PNT	375	375
str17	1	STRINGER	C9X20	12'-6 5/16"	A572-50	GLV&PNT	250	250



SHOP NOTES

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- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 3/8" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT; 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/4" ± 1/8" HOLD BACK UNLESS NOTED OTHERWISE.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
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| RS: ROADSIDE          |                             |



6/9/2020 REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

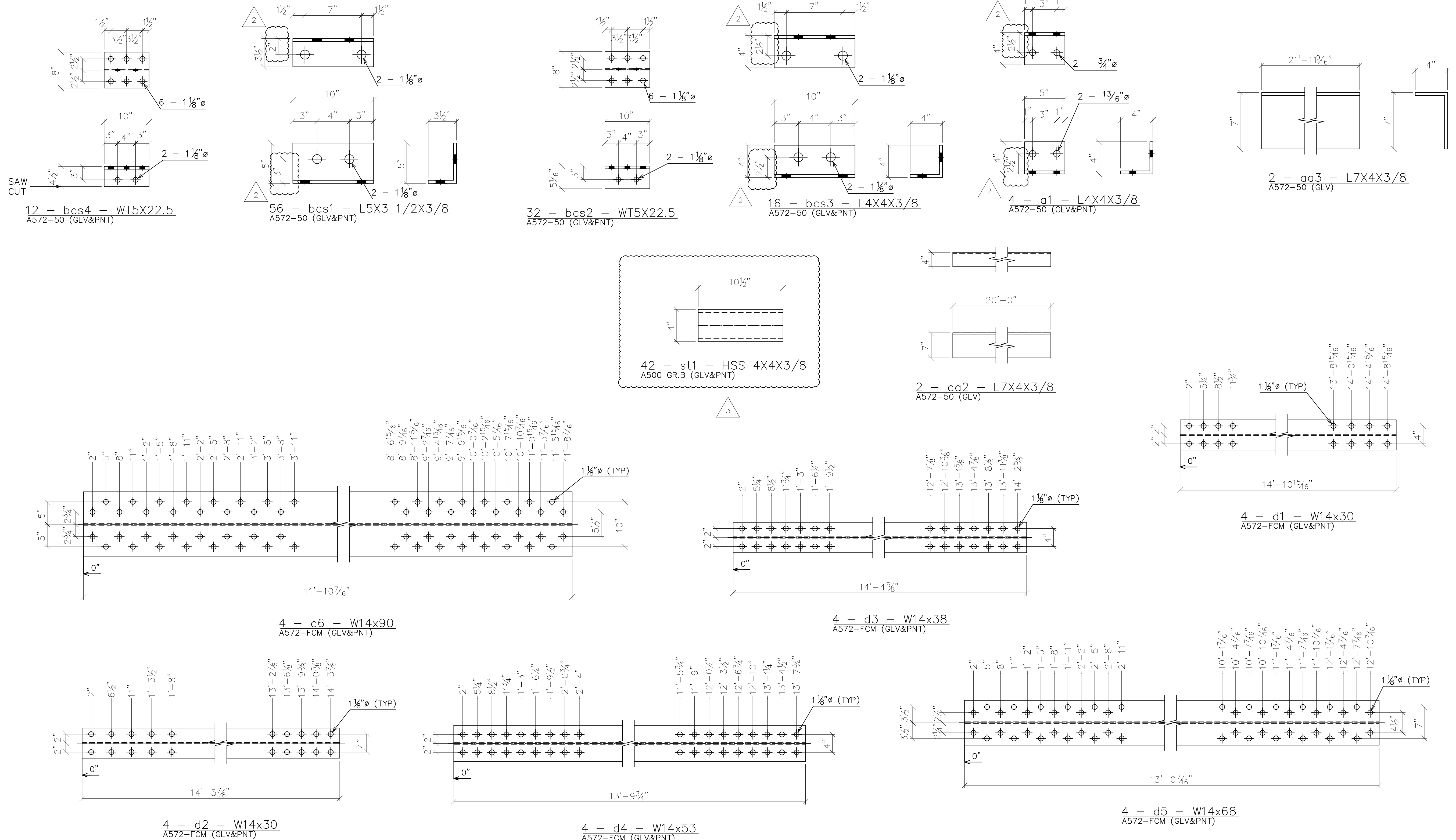
ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF DRAW: ABJ CHECK: JEC

SHOP ASSEMBLY ASSEMBLY

USB JOB# 200045

SHEET 10j TOTAL 58

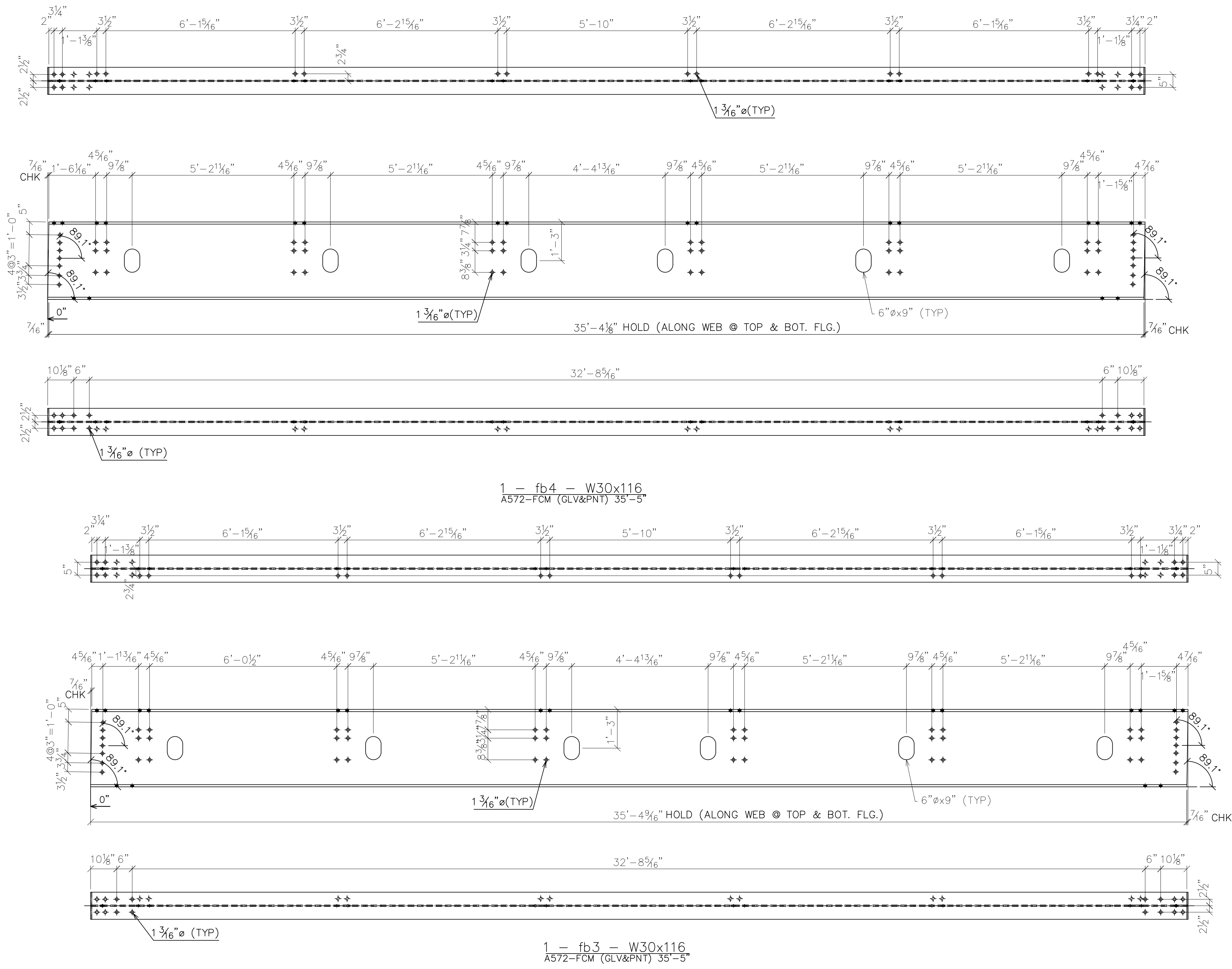


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  - NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
  - lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
  - UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
  - ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
  - GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
  - 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
  - TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT, 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
  - ALL WELDS TO HAVE 1/8"± HOLD BACK UNLESS NOTED OTHERWISE.
  - ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

- SYMBOLS & ABBREVIATIONS**
- |                       |                             |
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6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11a
SHOP DETAILS		PROFILES	USB JOB# 200045
			58 TOTAL



1 - fb4 - W30x116  
A572-FCM (GLV&PNT) 35'-5"

1 - fb3 - W30x116  
A572-FCM (GLV&PNT) 35'-5"

DWG#: PB691891

SHOP NOTES

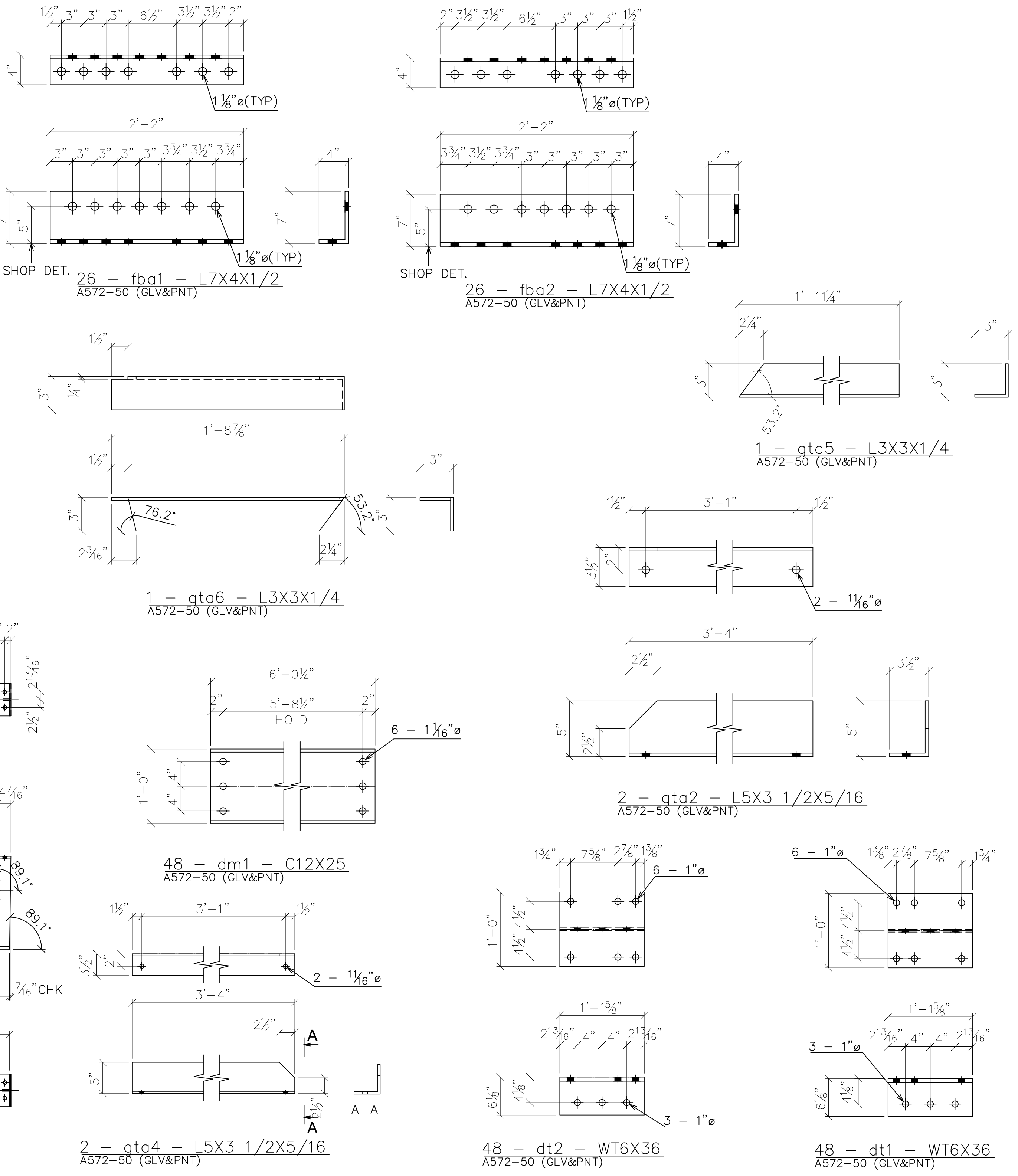
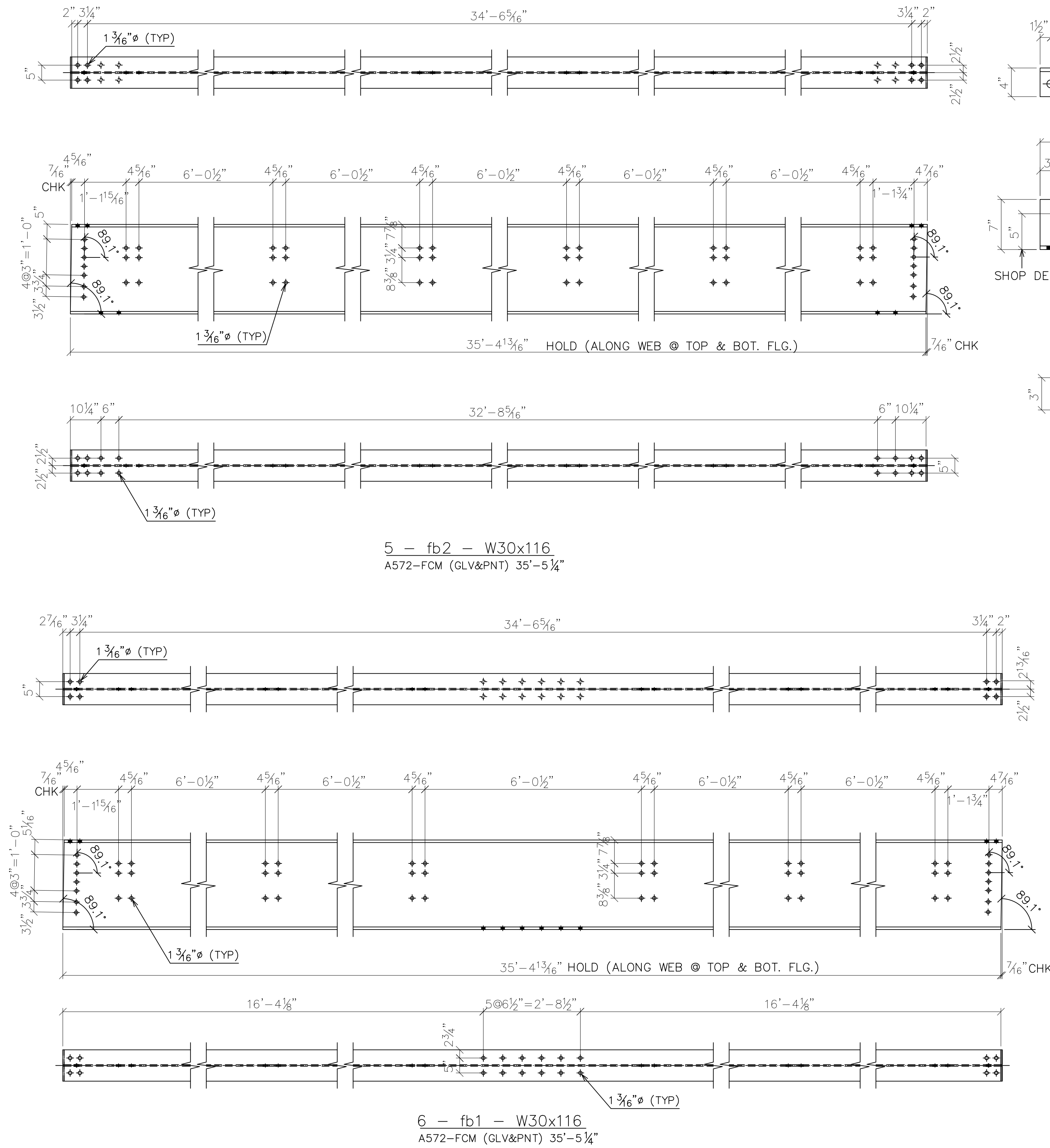
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- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT, 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8"±1/16" HOLD BACK UNLESS NOTED OTHERWISE.
- ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

**SYMBOLS & ABBREVIATIONS**

ES: EACH SIDE	NS: NEAR SIDE
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6/9/2020		REVISED - SEE REVISION TABLE	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11b
SHOP DETAILS		PROFILES	
USB JOB# 200045		58 TOTAL	



- SHOP NOTES**
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- SYMBOLS & ABBREVIATIONS**
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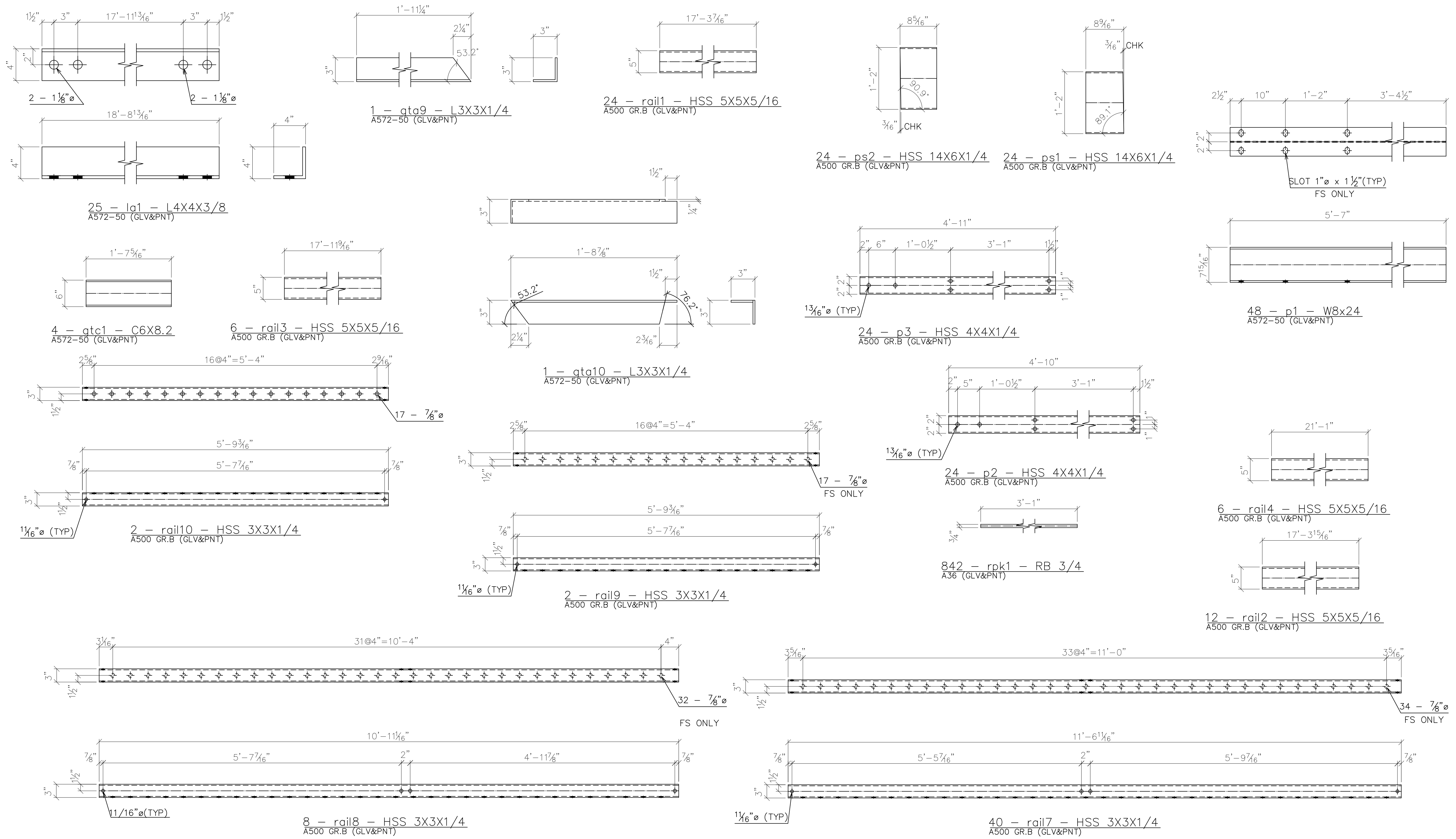
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11c
SHOP DETAILS		PROFILES	58 TOTAL

DWG#: PB691891



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- LOWER CASE PIECE MARKS INDICATE INDIVIDUAL PIECES.
- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
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- ALL WELDS TO HAVE 1/8"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.
- ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

**SYMBOLS & ABBREVIATIONS**

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**U.S. BRIDGE**  
BRIDGING AMERICA SINCE 1936

201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

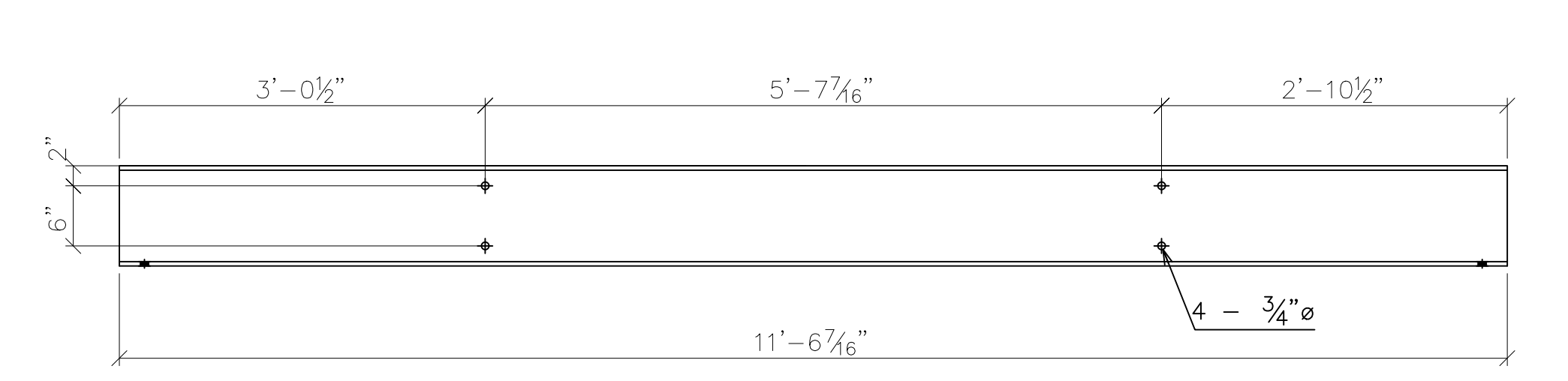
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

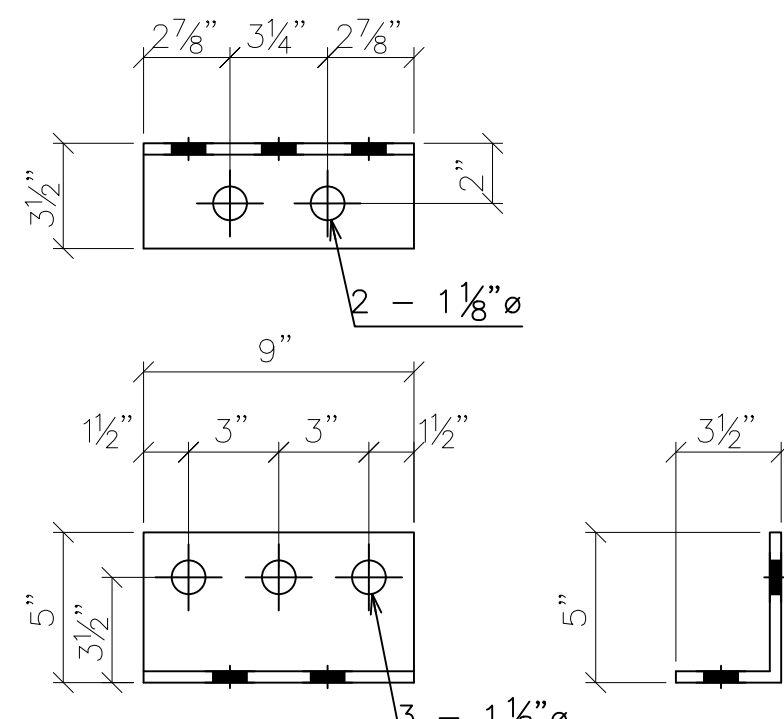
ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET
SHOP DETAILS		PROFILES	11d
		USB JOB# 200045	58 TOTAL

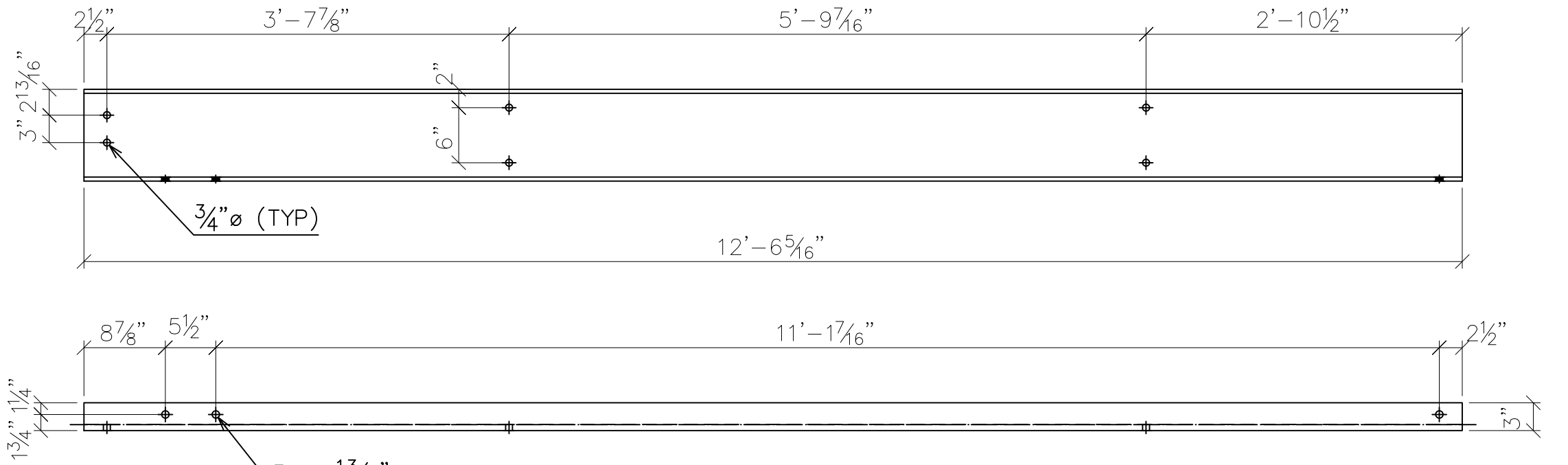
DWG#: PB691891



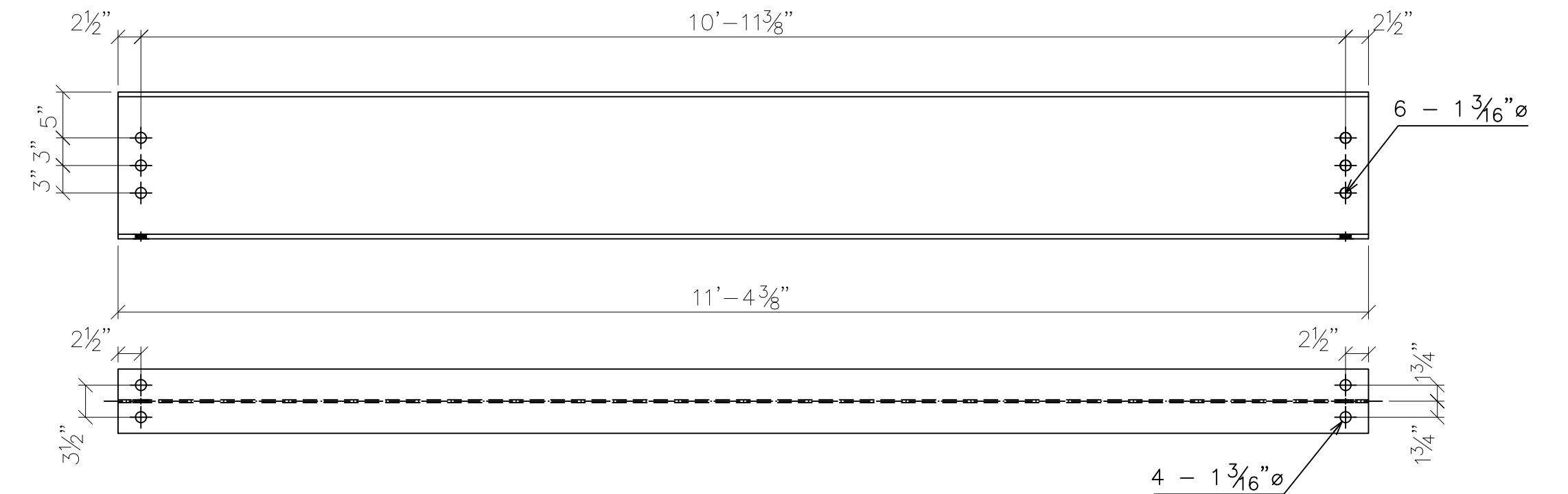
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A572-50 (GLV&PNT) 11'-6 7/16"



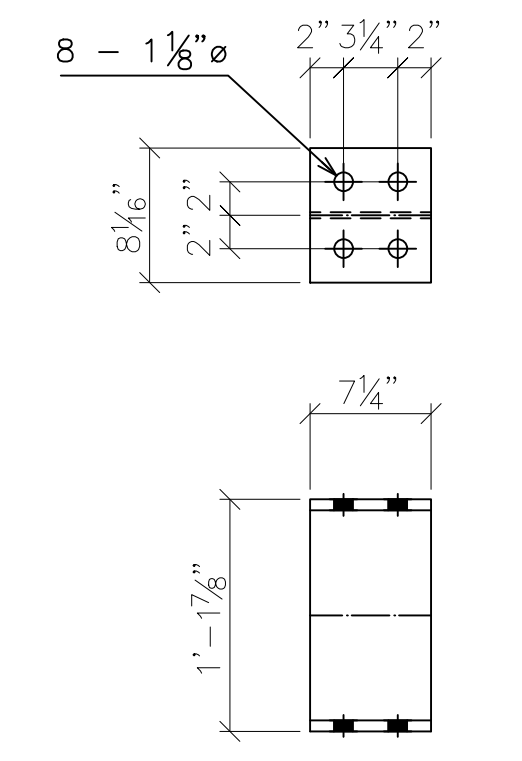
288 - sca1 - L5X3 1/2X3/8  
A572-50 (GLV&PNT)



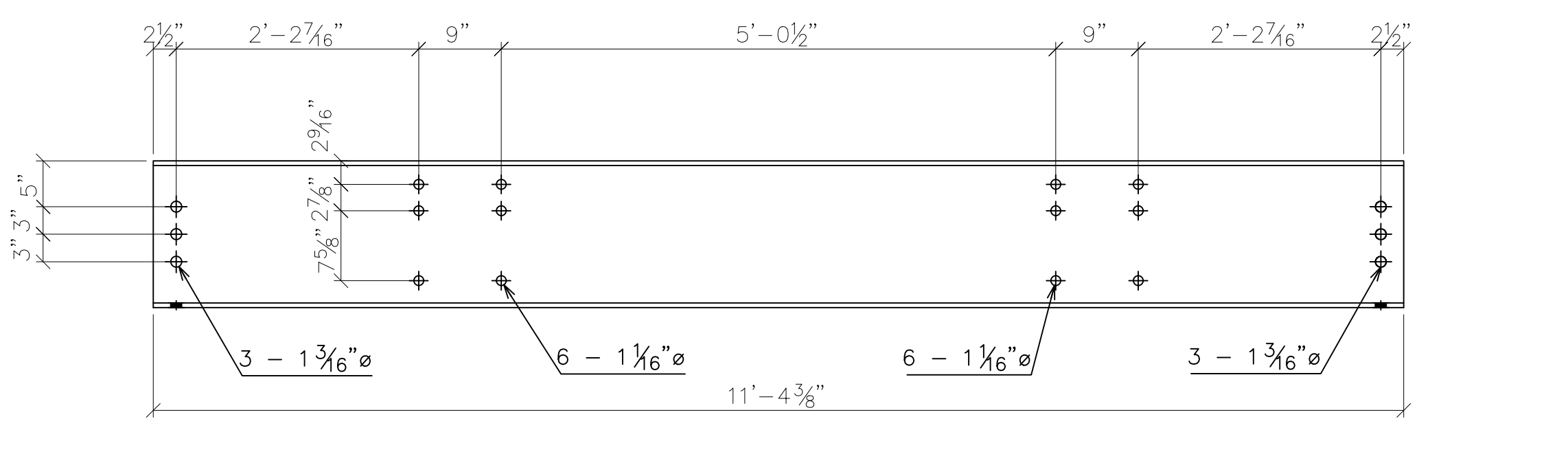
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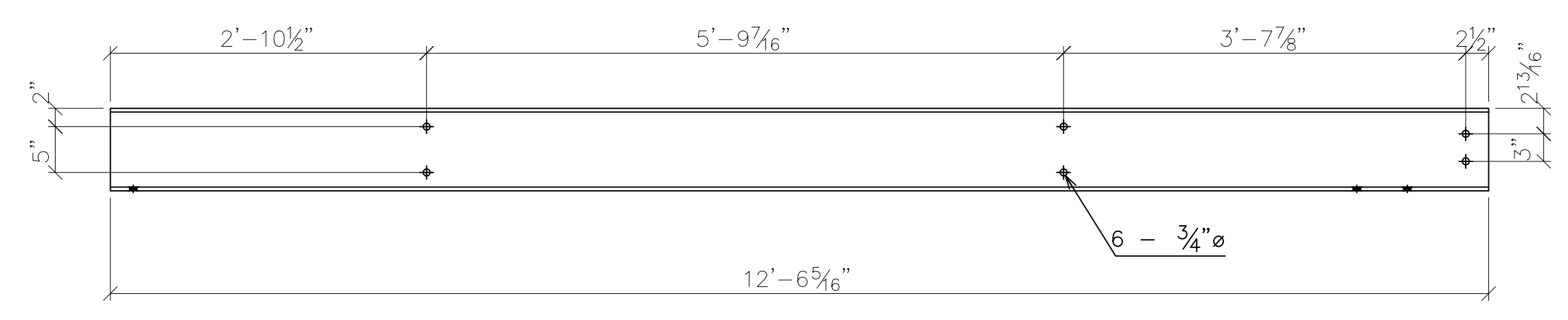
20 - str1 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



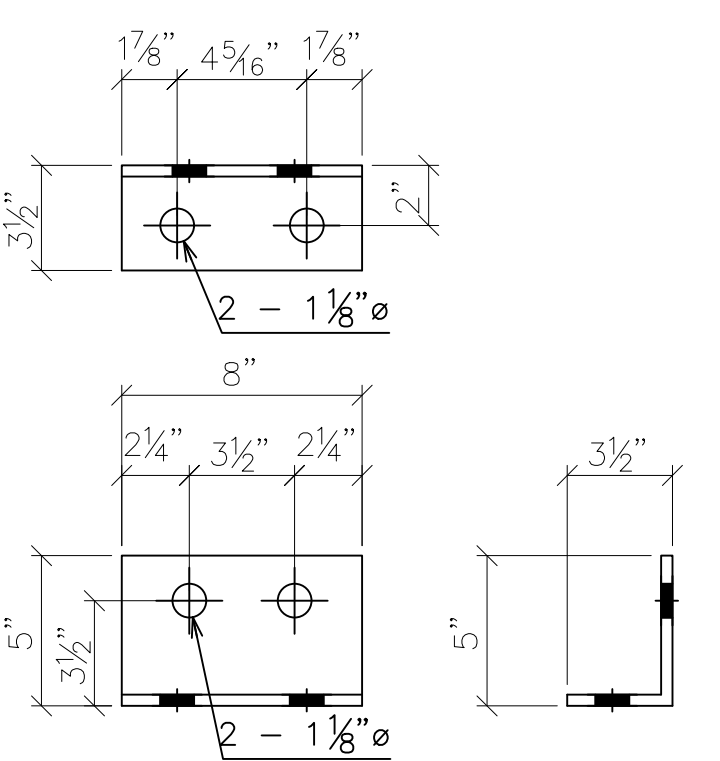
56 - spb1 - W14x53  
A572-50 (GLV&PNT)



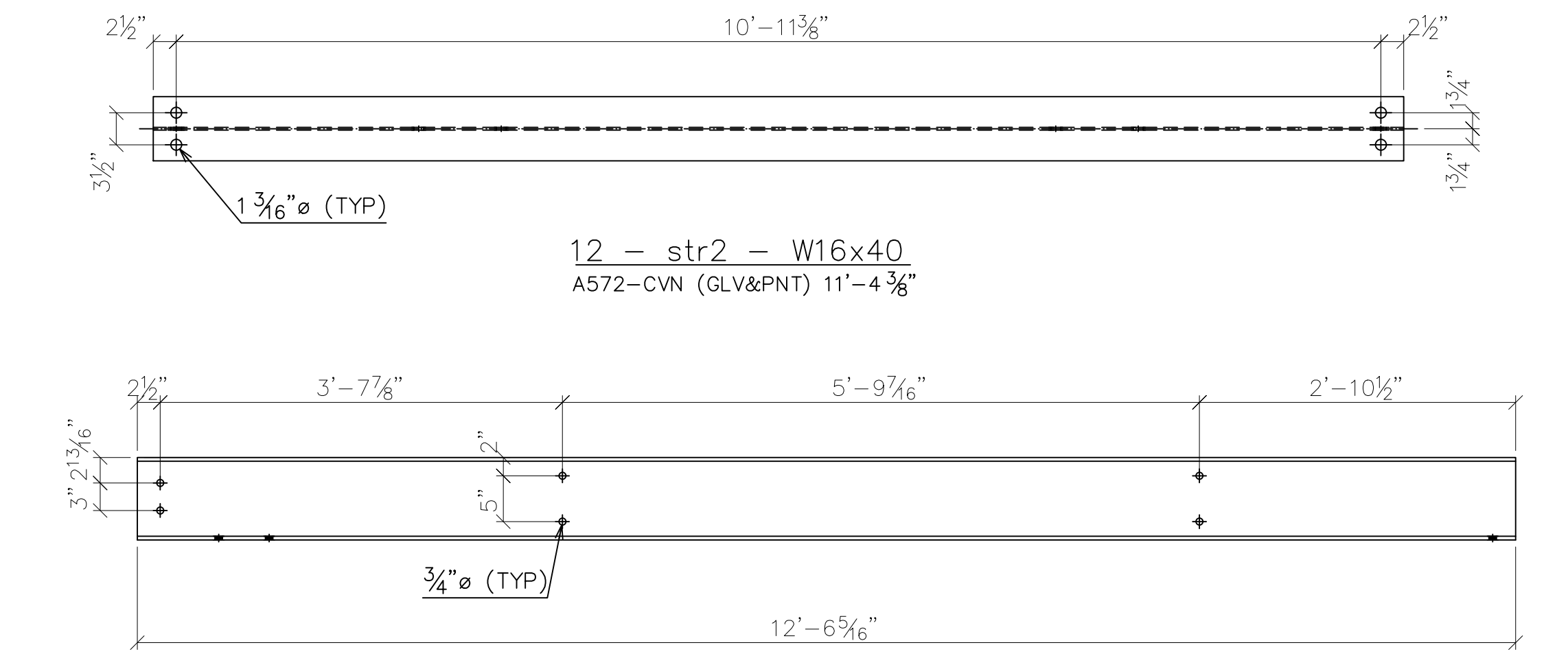
12 - str2 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



1 - str11 - C9X20  
A572-50 (GLV&PNT) 12'-6 5/16"



144 - ssa1 - L5X3 1/2X3/8  
A572-50 (GLV&PNT)



1 - str17 - C9X20  
A572-50 (GLV&PNT) 12'-6 5/16"

SHOP NOTES

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- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
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- UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
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- ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

**SYMBOLS & ABBREVIATIONS**

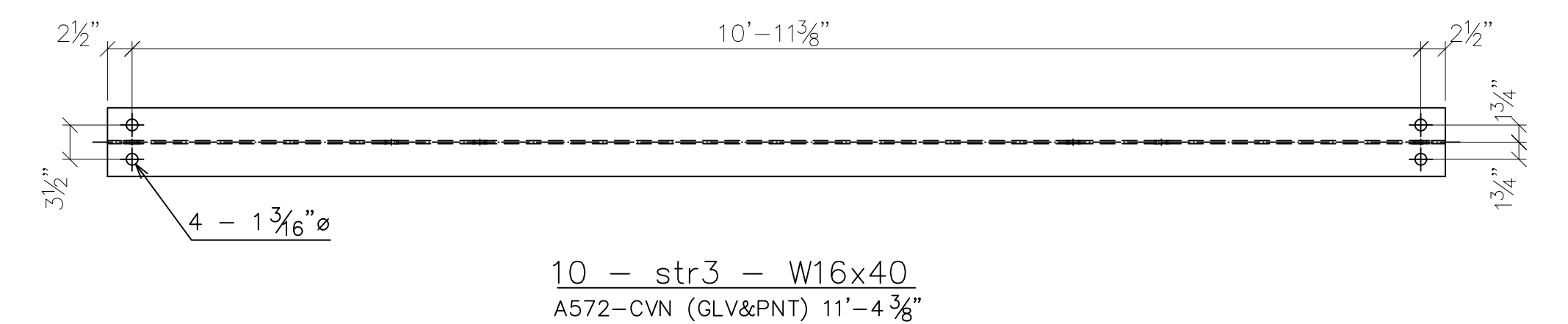
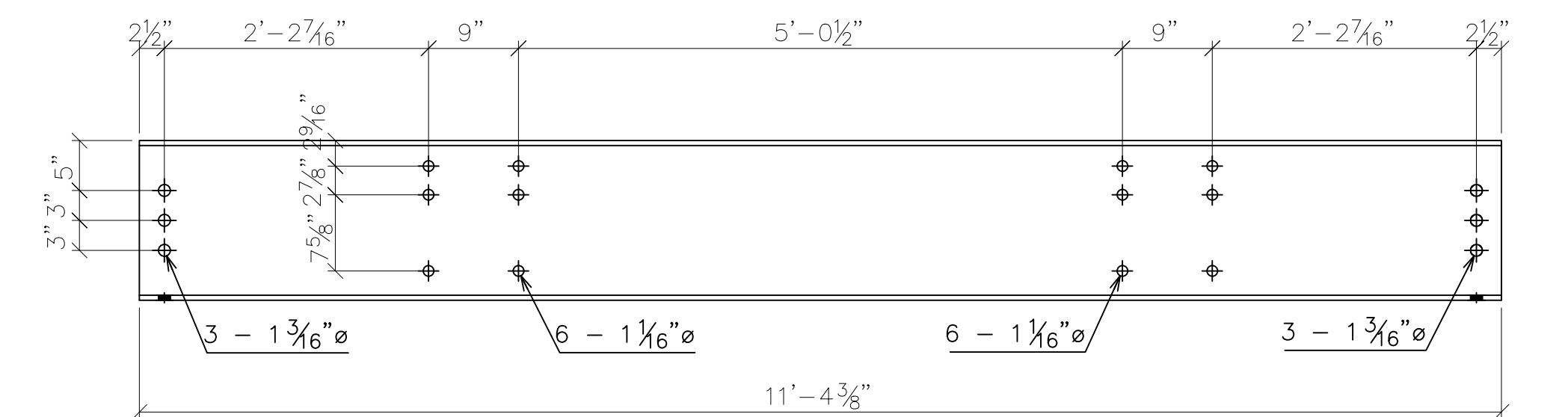
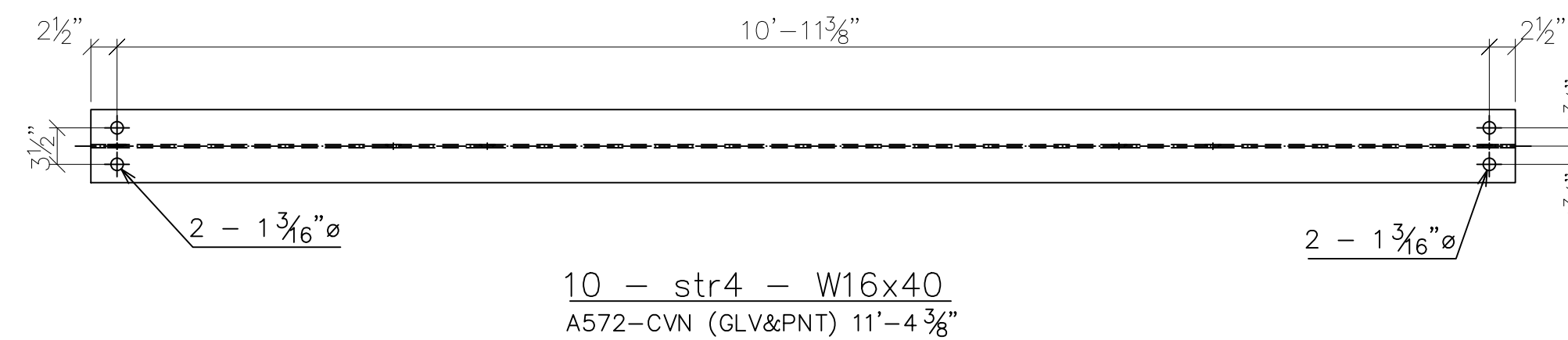
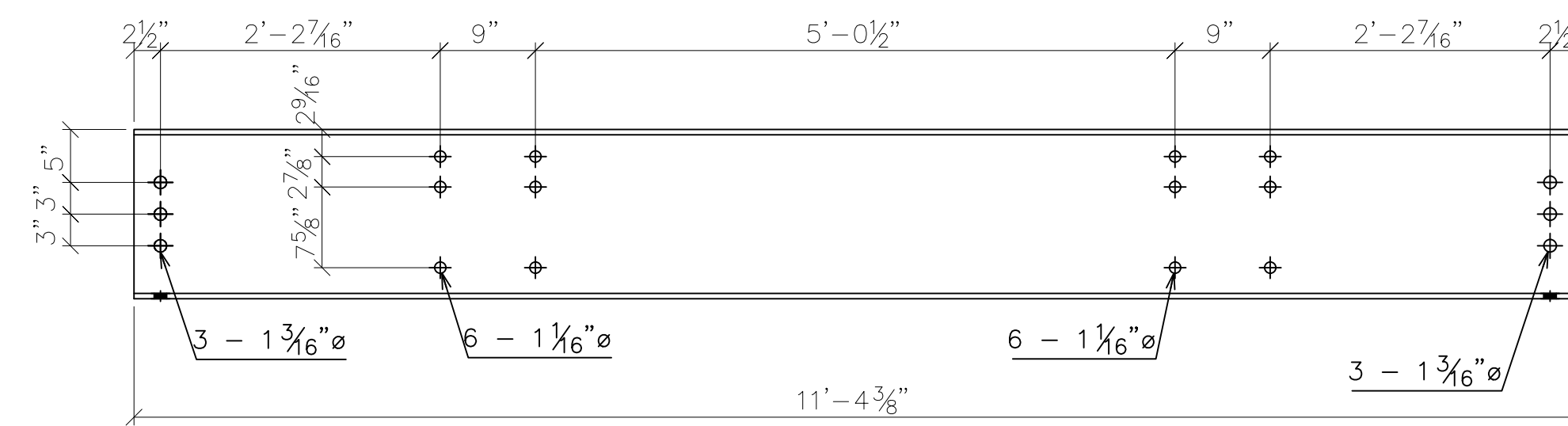
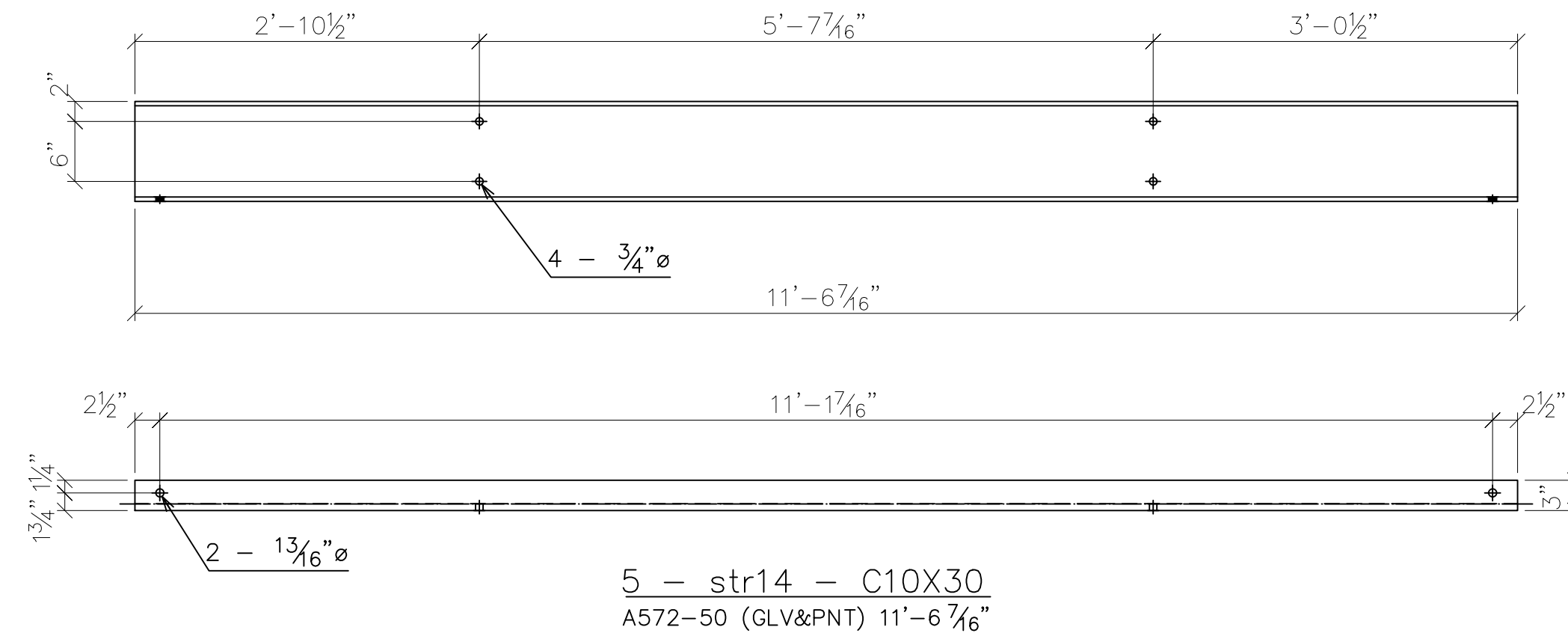
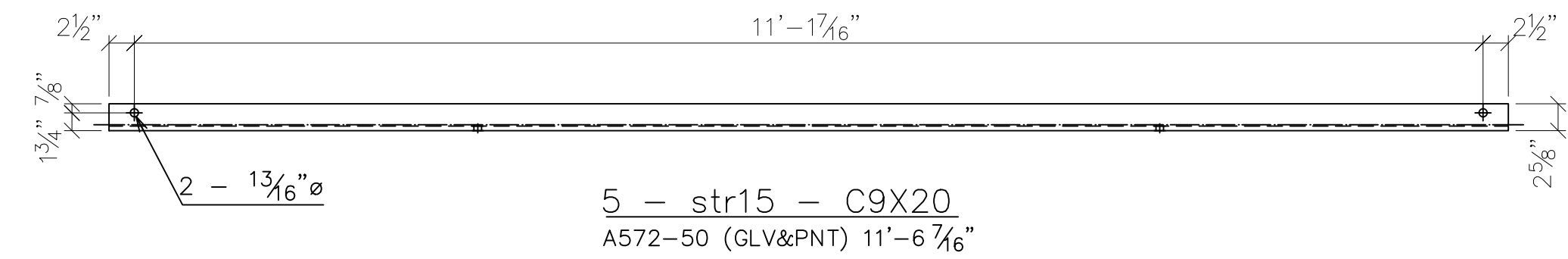
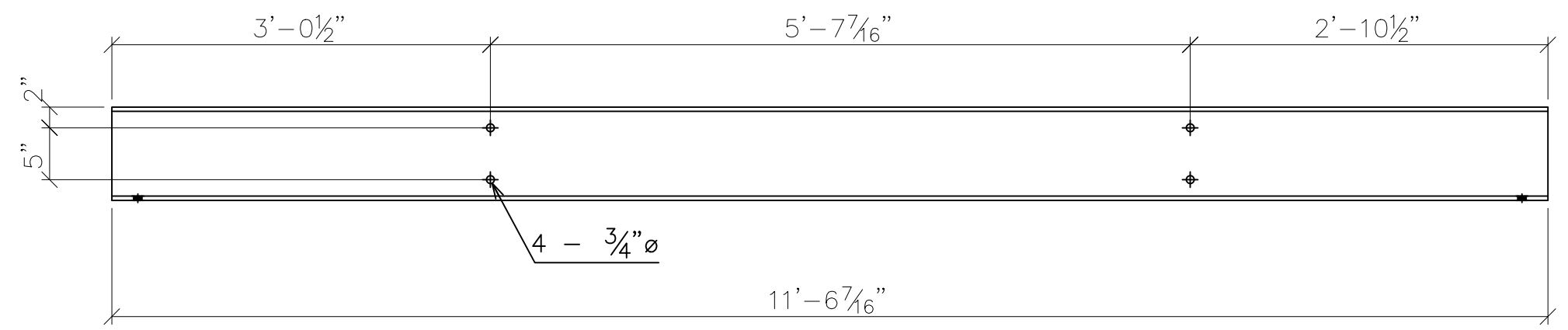
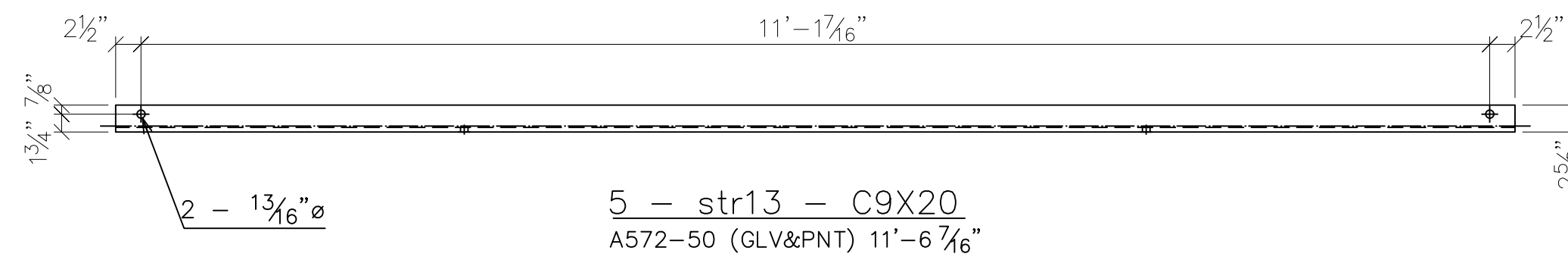
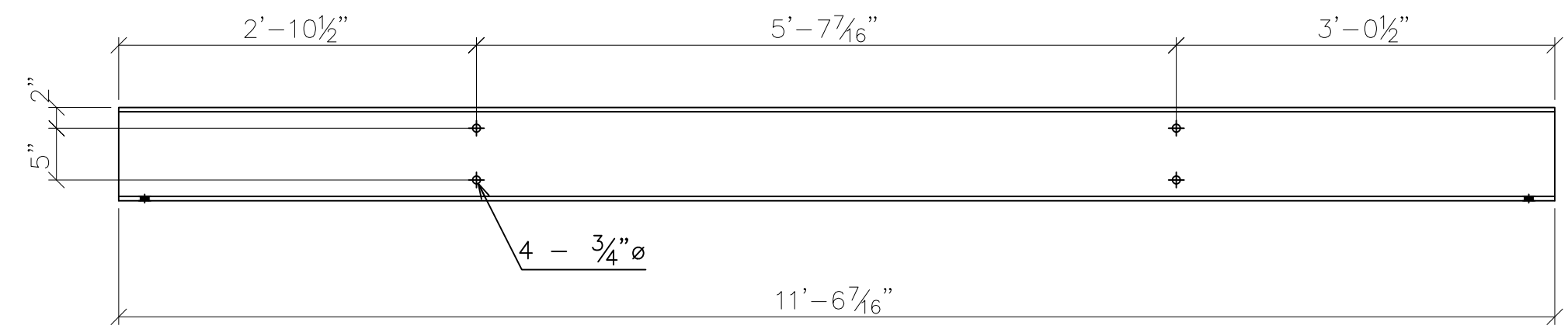
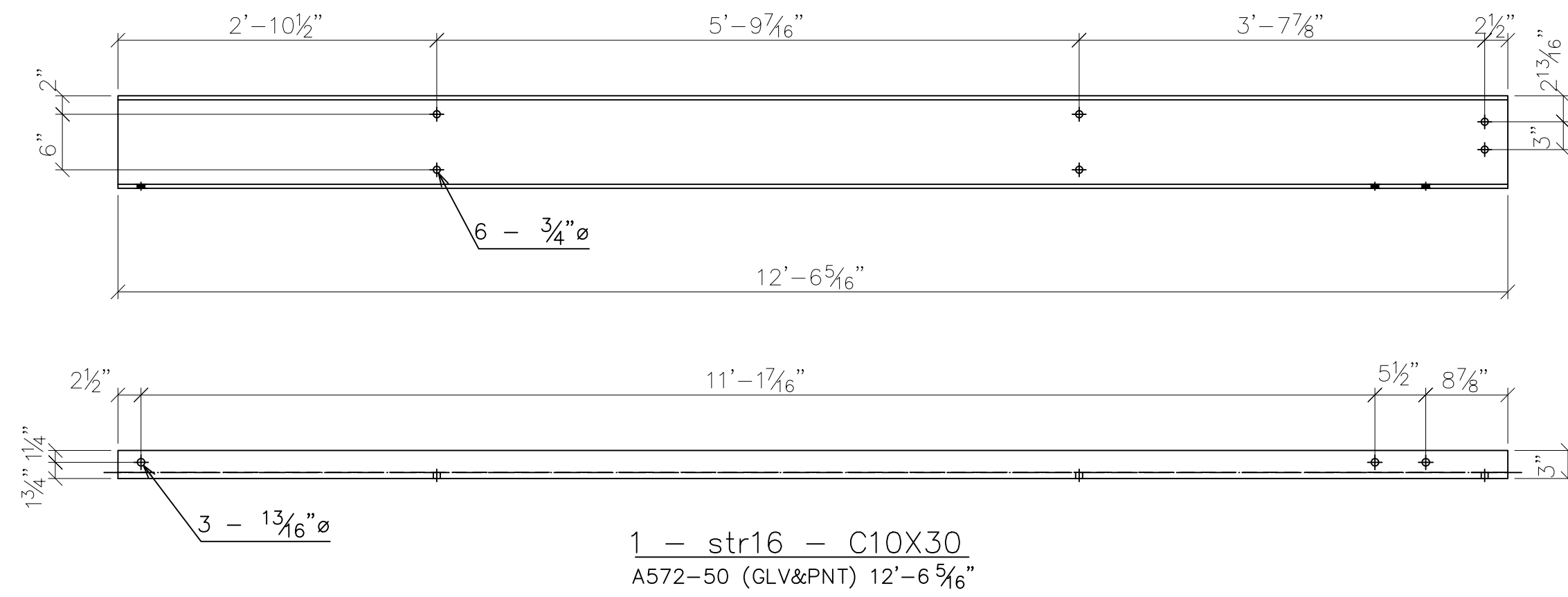
ES: EACH SIDE	NS: NEAR SIDE
EQ: EQUAL	FS: FAR SIDE
Q: CENTERLINE	WP/•: WORK POINT
REF: REFERENCE	GA: GAUGE
CHK: CHECK	ID: INSIDE DIAMETER
O\O: OUT TO OUT	OD: OUTSIDE DIAMETER
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CS: CREEKSIDE	T&B: TOP & BOTTOM
RS: ROADSIDE	



6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11e
SHOP DETAILS		PROFILES	58 TOTAL
		USB JOB# 200045	

DWG#: PB691891





DWG#: PB691891

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SYMBOLS & ABBREVIATIONS

- |                       |                             |
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| F/F: FACE TO FACE     | TYP: TYPICAL                |
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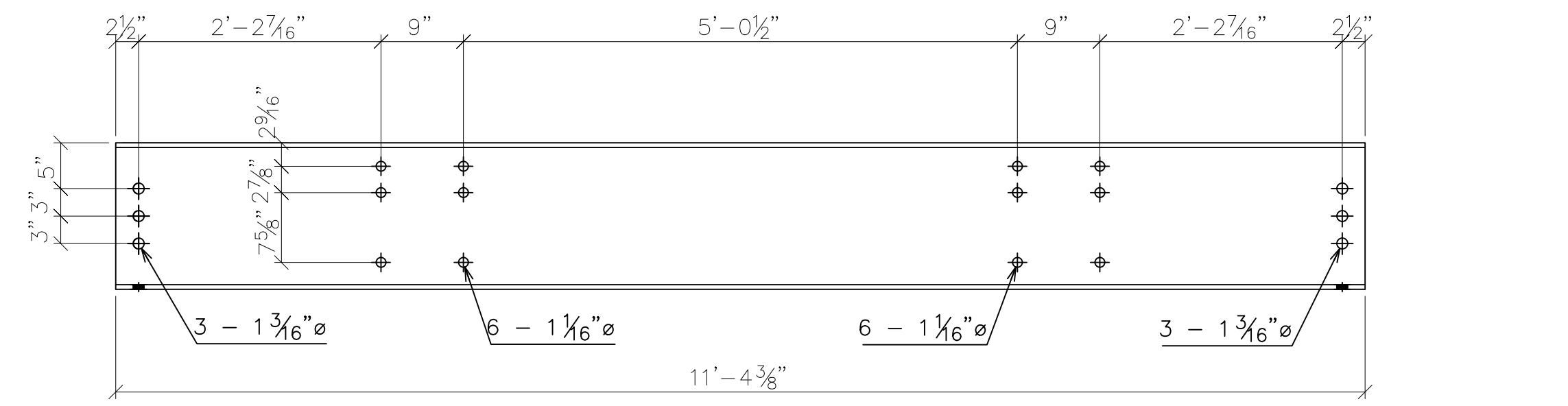
201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020 REVISED - SEE REVISION TABLE

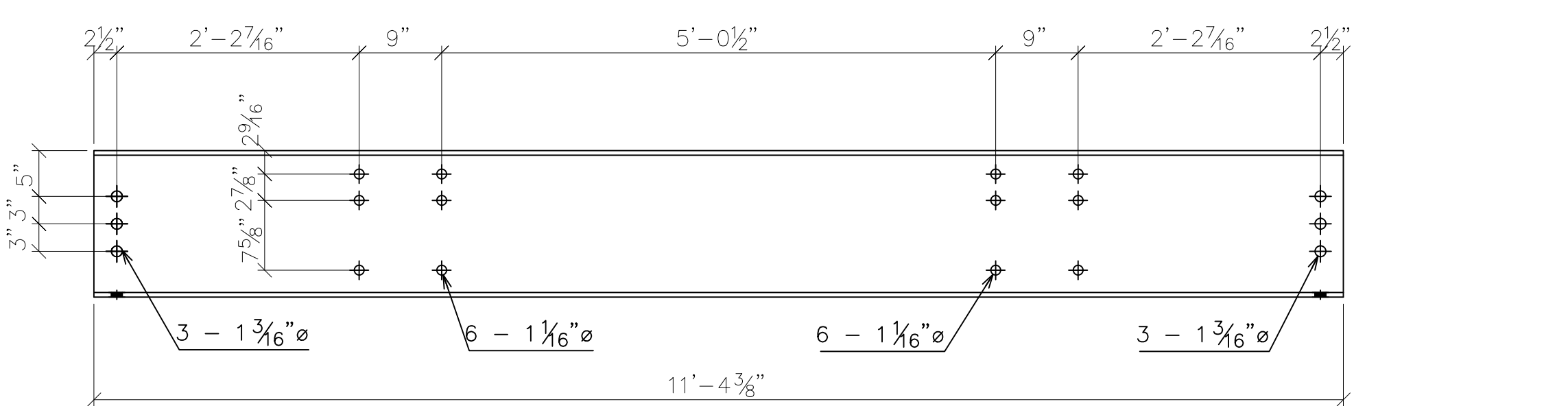
**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

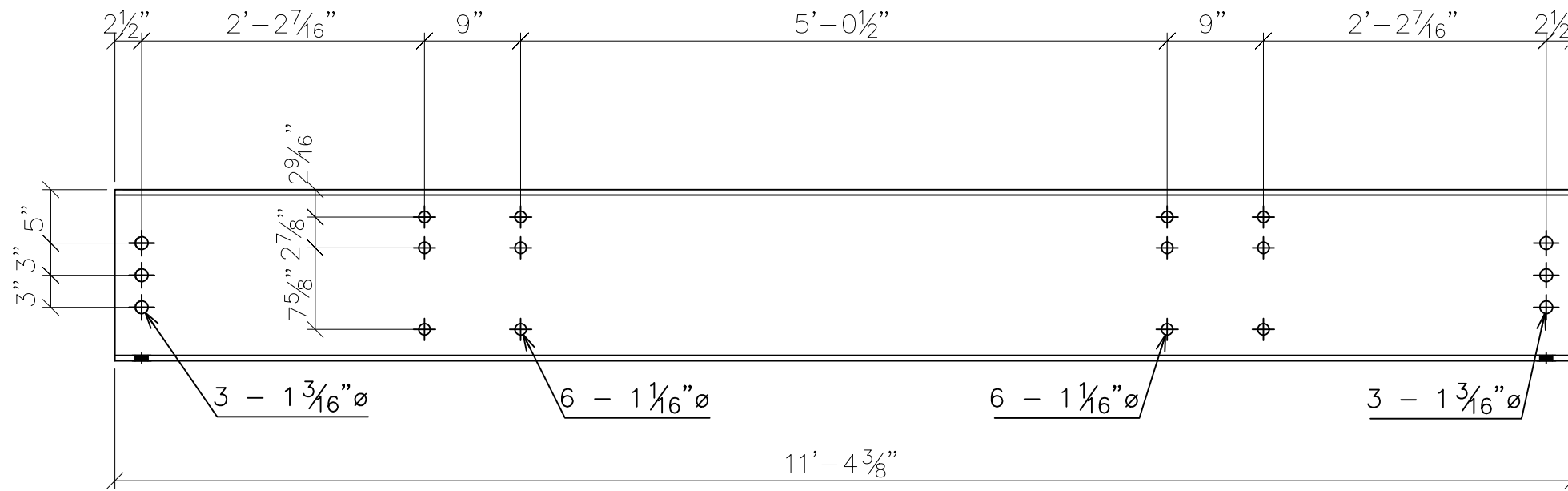
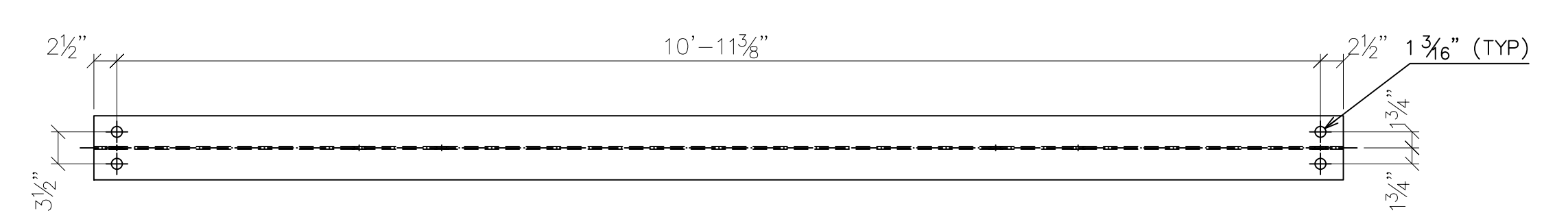
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11f
SHOP DETAILS		PROFILES	58 TOTAL
USB JOB# 200045			



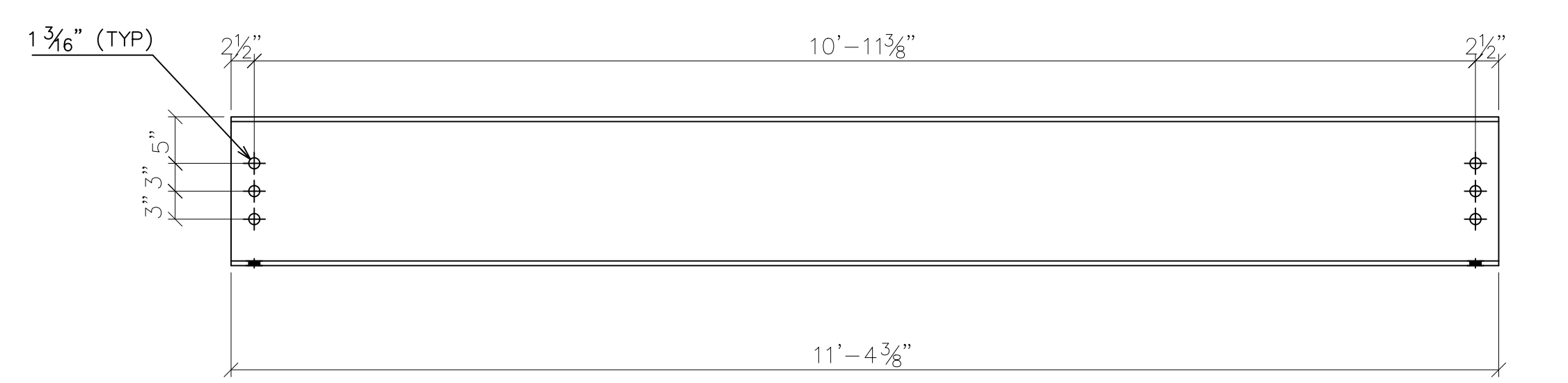
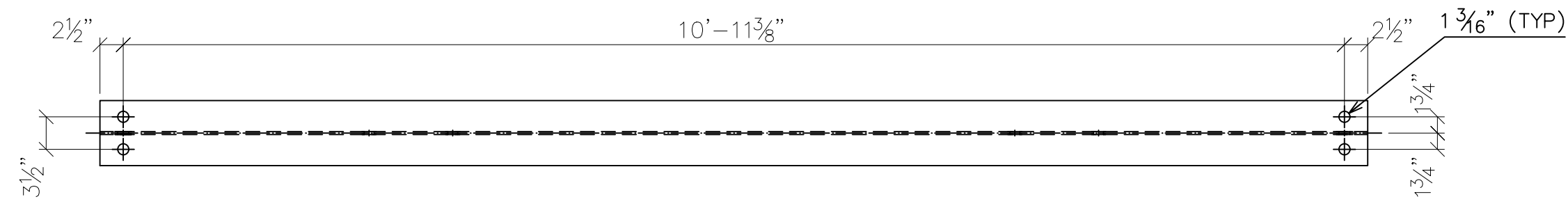
1 - str9 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



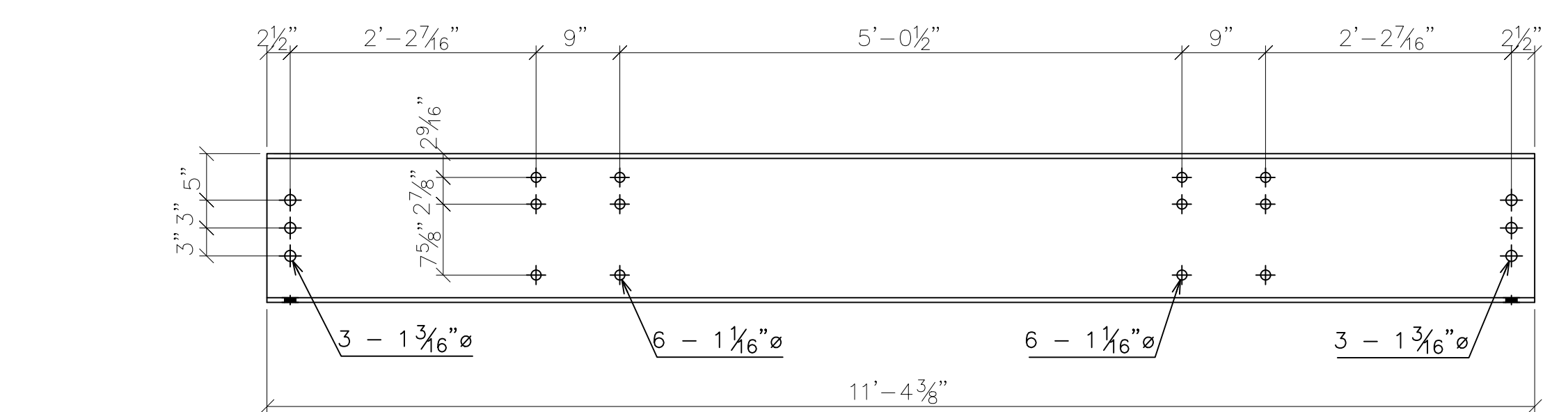
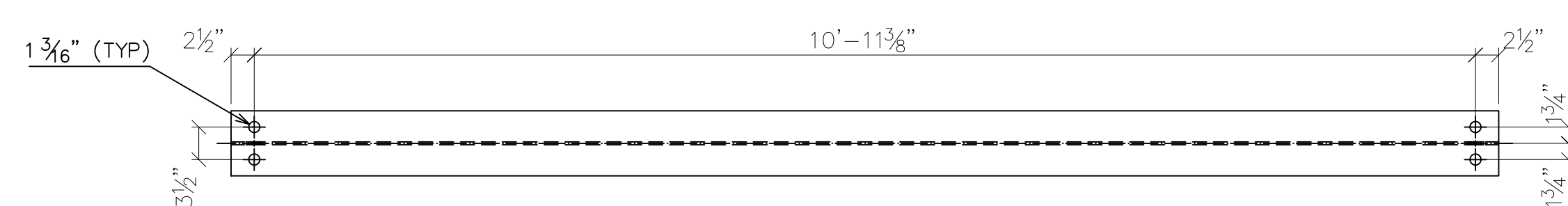
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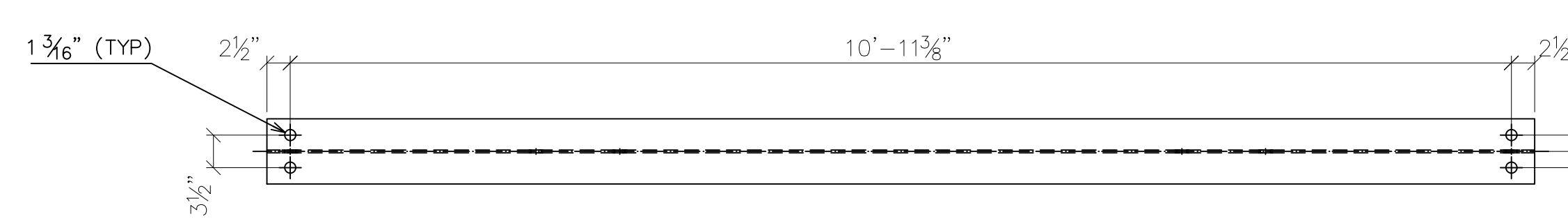
12 - str5 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



4 - str7 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



2 - str6 - W16x40  
A572-CVN (GLV&PNT) 11'-4 3/8"



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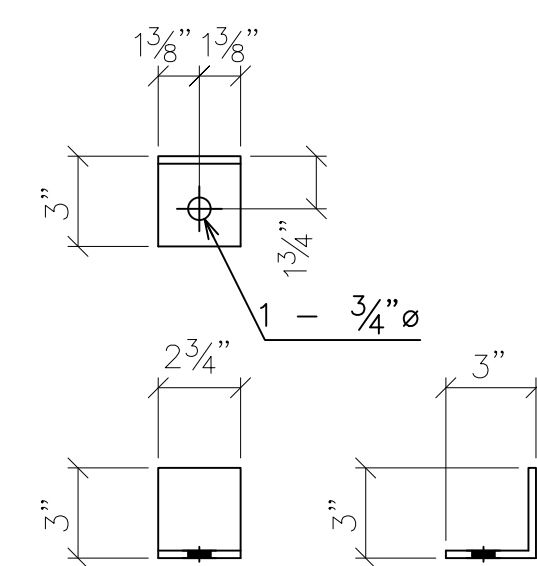
SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
| ES: EACH SIDE         | NS: NEAR SIDE               |
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| DIA/ø: DIAMETER       | UNO: UNLESS NOTED OTHERWISE |
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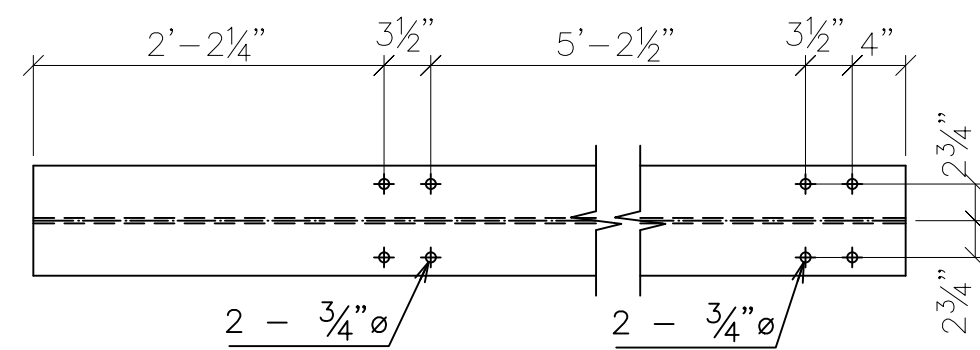


6/9/2020		REVISED - SEE REVISION TABLE	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11g
SHOP DETAILS		PROFILES	
		USB JOB# 200045	58 TOTAL

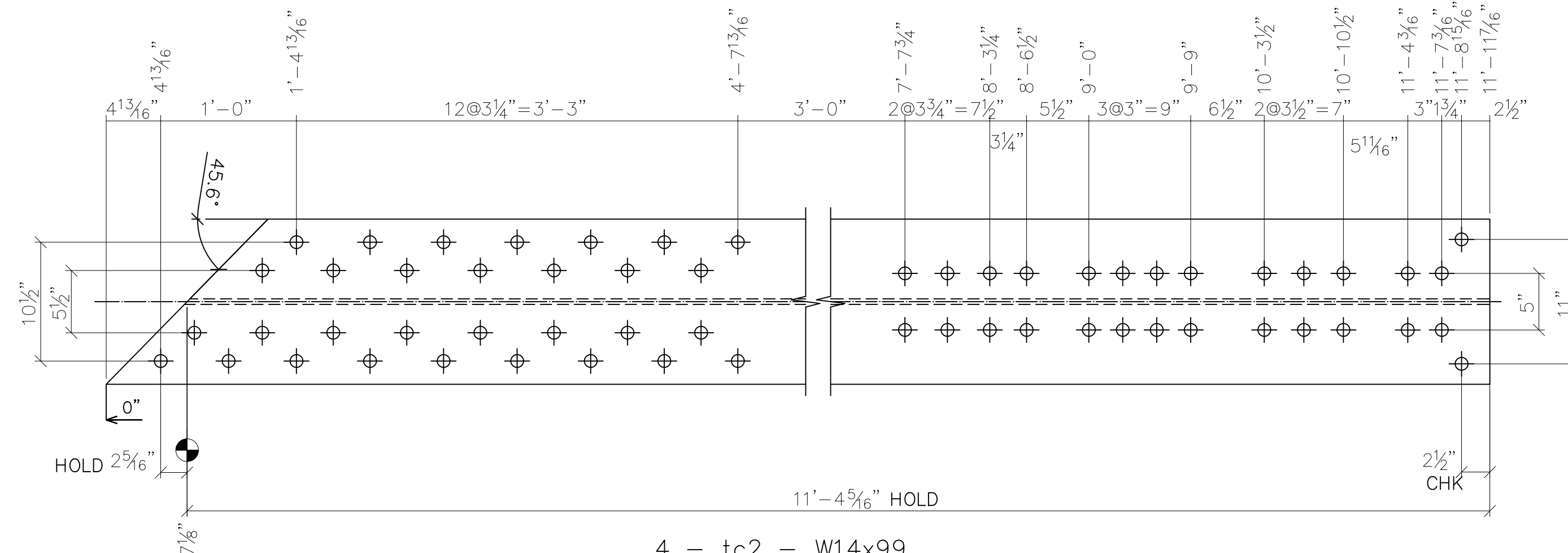
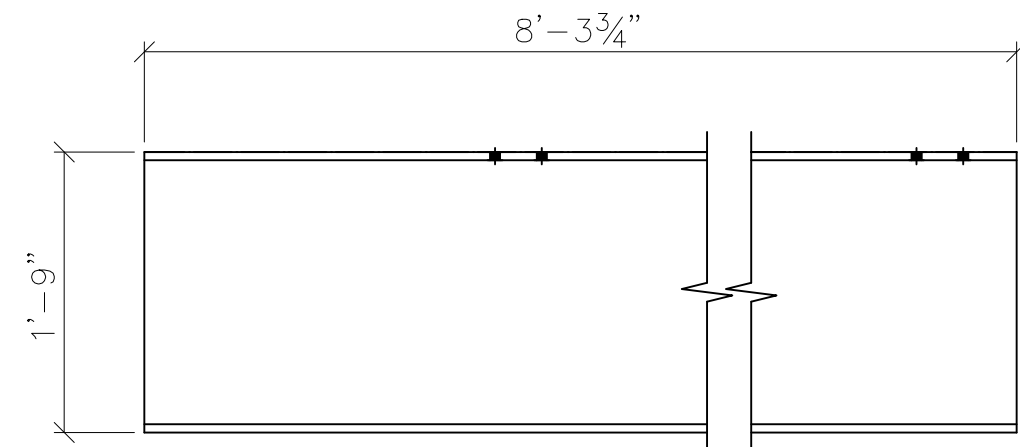
DWG#: PB691891



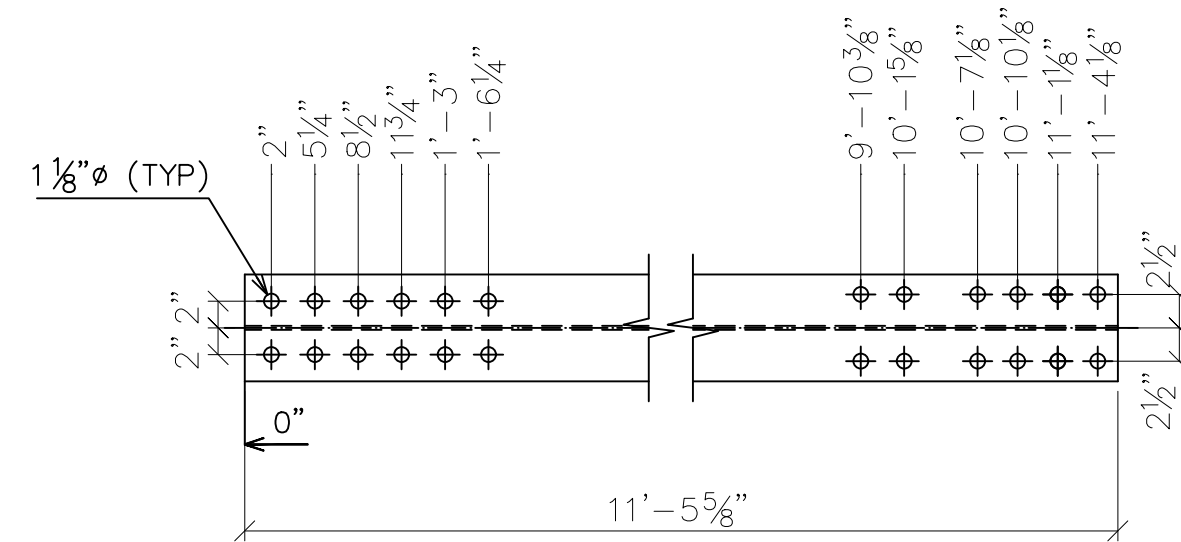
52 - a2 - L3X3X1/4  
A572-50 (GLV&PNT)



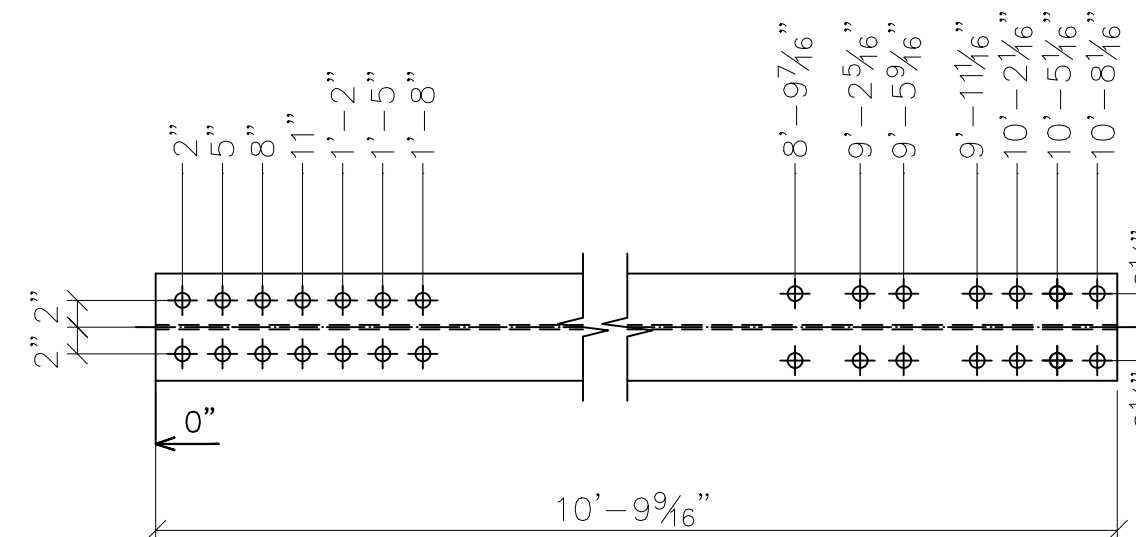
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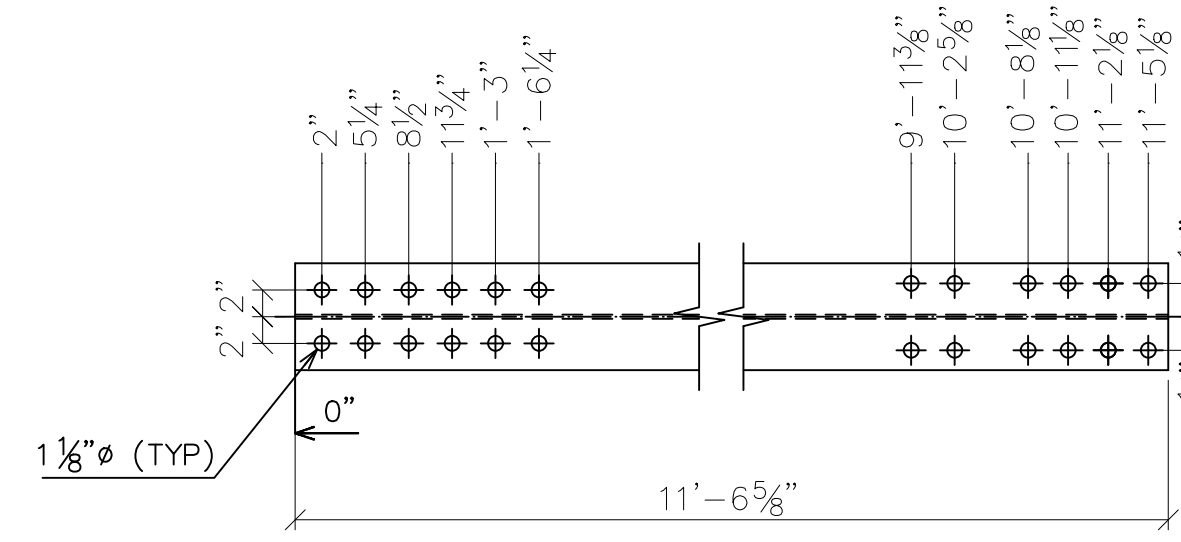
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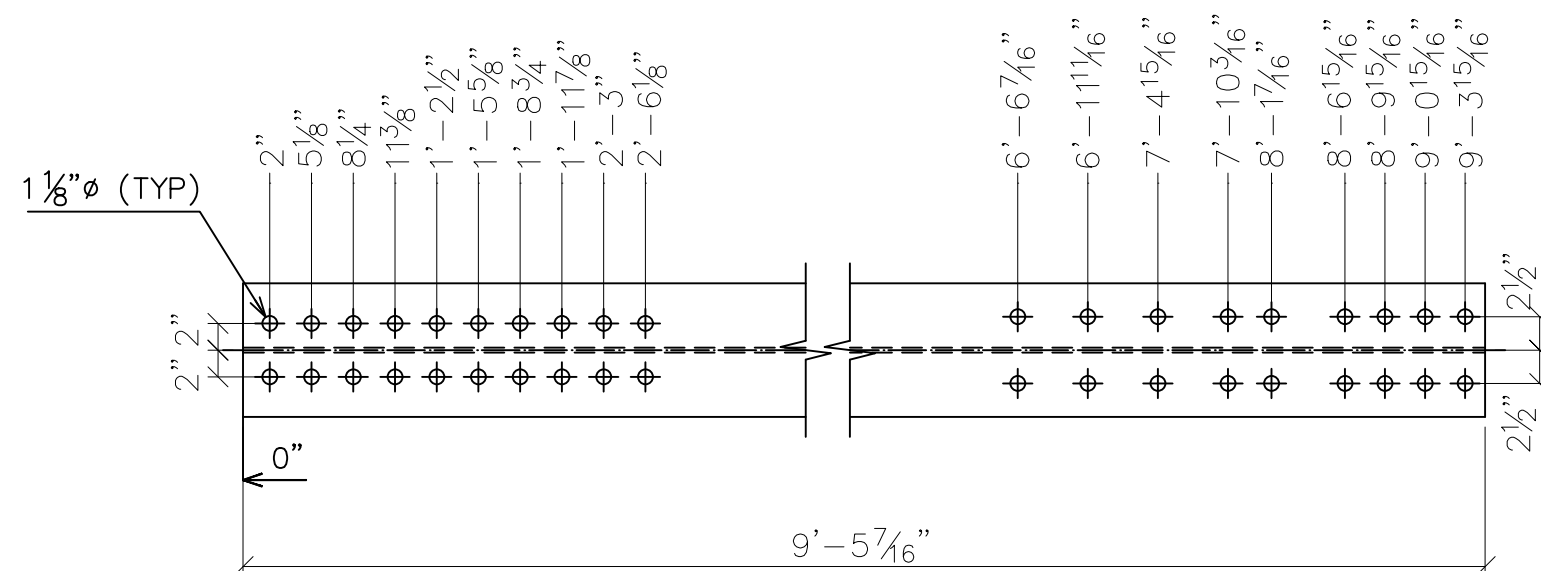
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A572-50 (GLV&PNT)



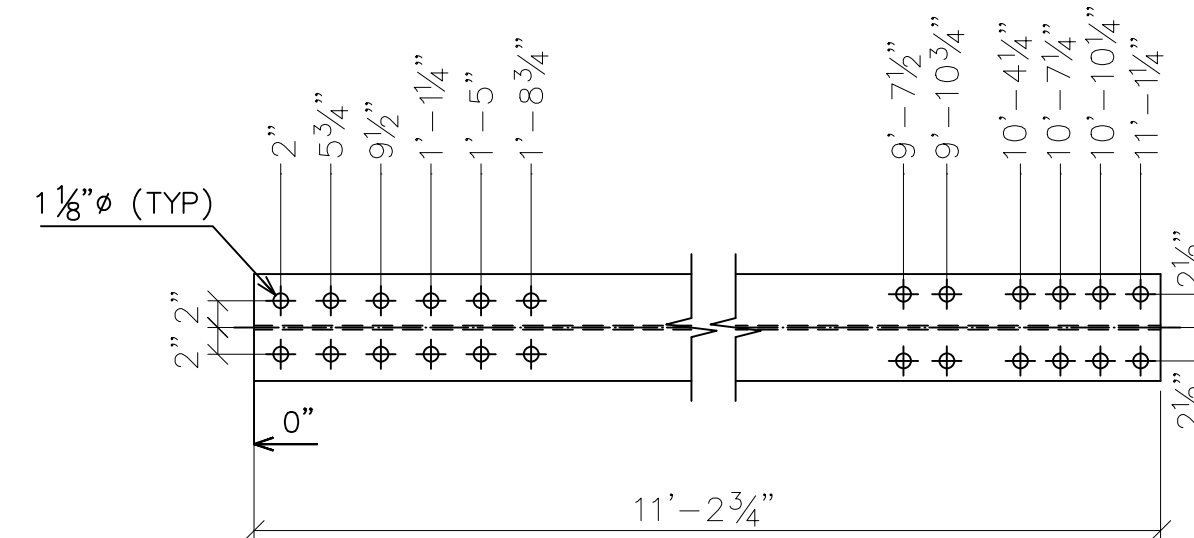
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A572-50 (GLV&PNT)



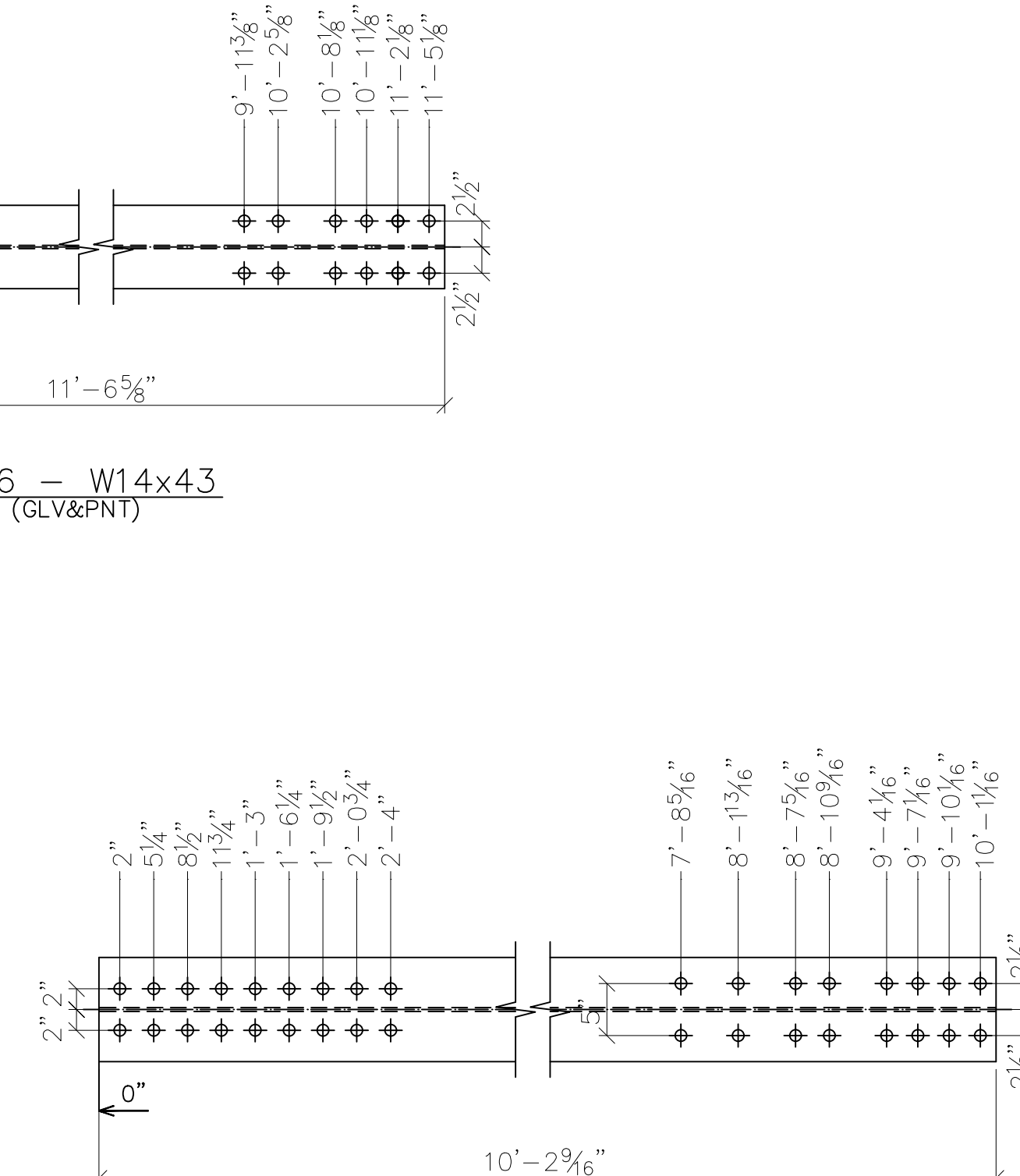
2 - v6 - W14x43  
A572-50 (GLV&PNT)



4 - v5 - W14x61  
A572-50 (GLV&PNT)



4 - v2 - W14x43  
A572-50 (GLV&PNT)



4 - v4 - W14x61  
A572-50 (GLV&PNT)

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6/9/2020

REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 11h

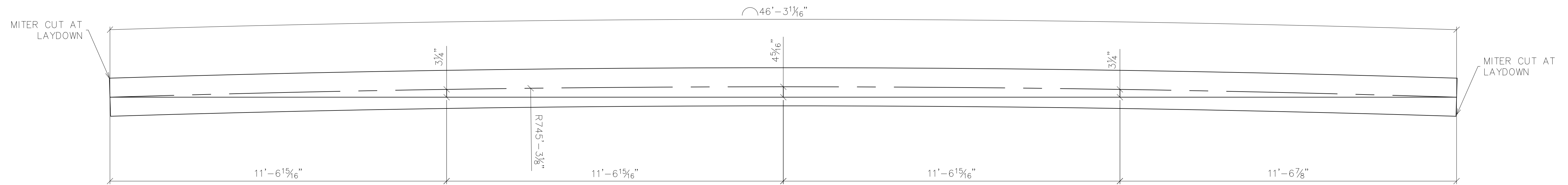
SHOP DETAILS

PROFILES

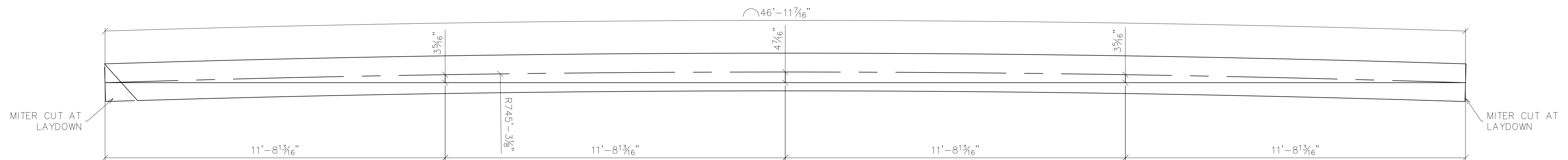
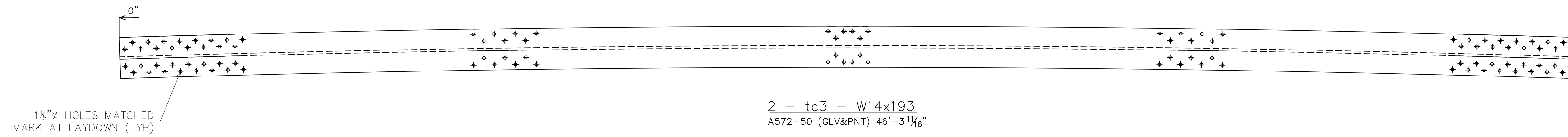
USB JOB# 200045

58 TOTAL

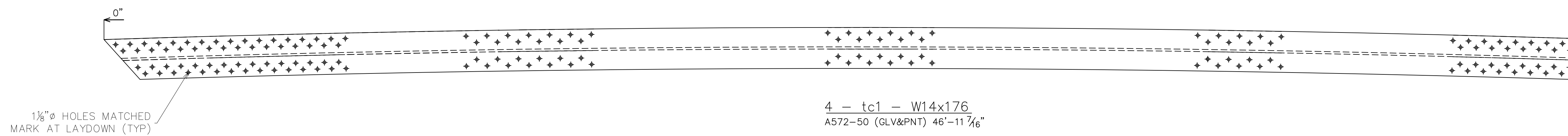
DWG#: PB691891



tc3 CAMBER AND CUT DETAIL



tc1 CAMBER AND CUT DETAIL



DWG#: PB691891

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- ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
- GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
- 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
- TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT, 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
- ALL WELDS TO HAVE 1/8"± HOLD BACK UNLESS NOTED OTHERWISE.
- ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

SYMBOLS & ABBREVIATIONS

- |                       |                             |
|-----------------------|-----------------------------|
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| EQ: EQUAL             | FS: FAR SIDE                |
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| CHK: CHECK            | ID: INSIDE DIAMETER         |
| O/O: OUT TO OUT       | OD: OUTSIDE DIAMETER        |
| C/C: CENTER TO CENTER | BRG: BEARING                |
| F/F: FACE TO FACE     | TYP: TYPICAL                |
| DIA/Ø: DIAMETER       | UNO: UNLESS NOTED OTHERWISE |
| R: RADIUS             | ABUT: ABUTMENT              |
| CS: CREEKSIDE         | T&B: TOP & BOTTOM           |
| RS: ROADSIDE          |                             |



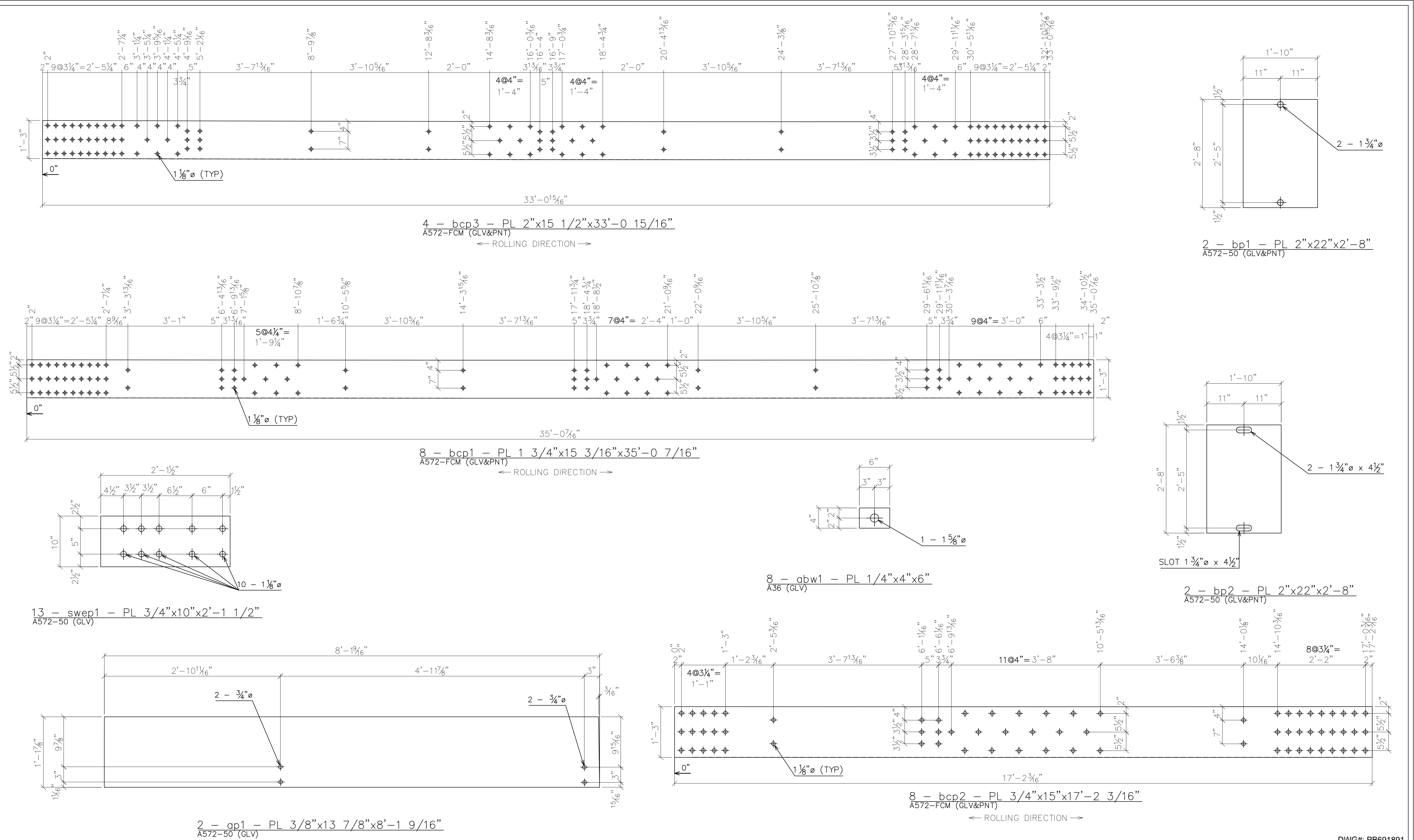
201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020 REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 11j
SHOP DETAILS		PROFILES	58 TOTAL



**SHOP NOTES**

- "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
- "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
- "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
- NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
- lower case PIECE MARKS INDICATE INDIVIDUAL PIECES.
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- ALL WELDS TO HAVE 1/8"±1/8" HOLD BACK UNLESS NOTED OTHERWISE.
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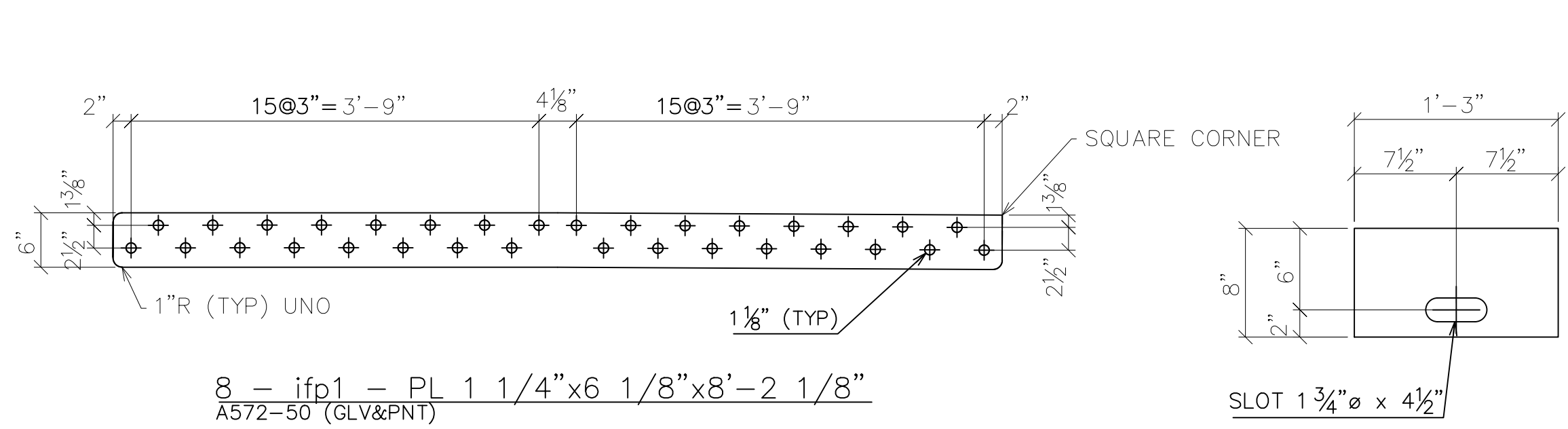
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

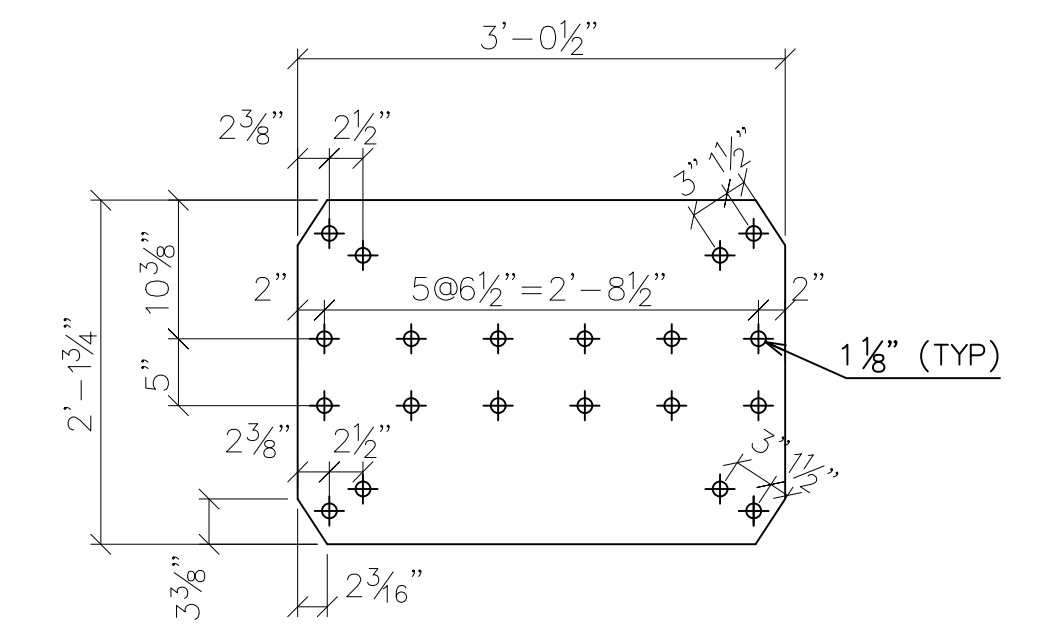
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET
SHOP DETAILS		PLATES	12a
		USB JOB# 200045	58

TOTAL

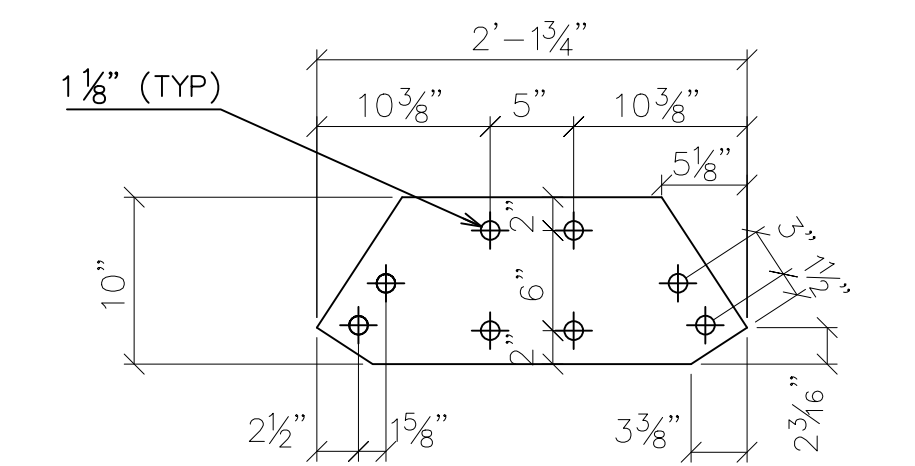


8 - ifp1 - PL 1 1/4"x6 1/8"x8'-2 1/8"  
A572-50 (GLV&PNT)

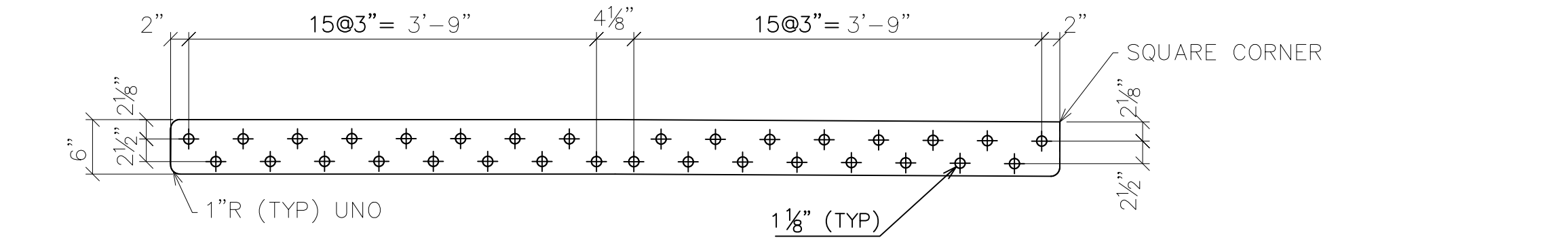
4 - plt4 - PL 3/4"x8"x1'-3"  
A572-50 (GLV&PNT)



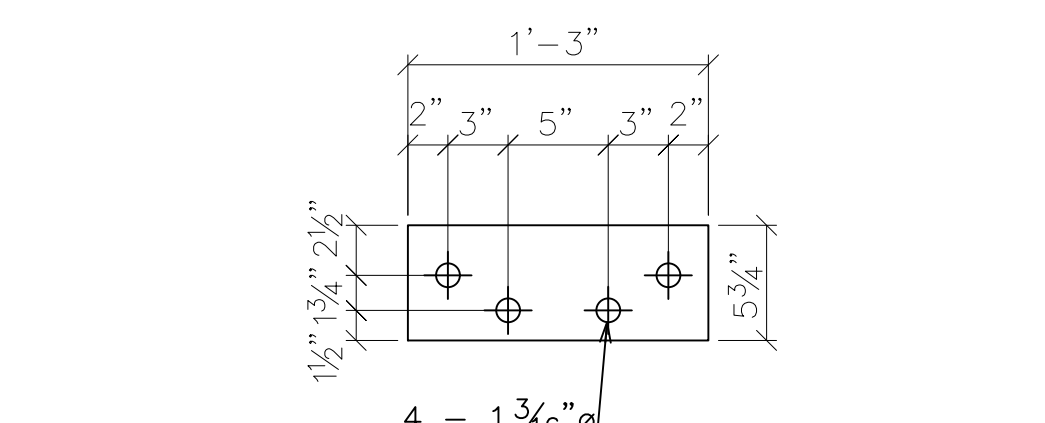
6 - lcp2 - PL 3/8"x25 3/4"x3'-0 1/2"  
A572-50 (GLV&PNT)



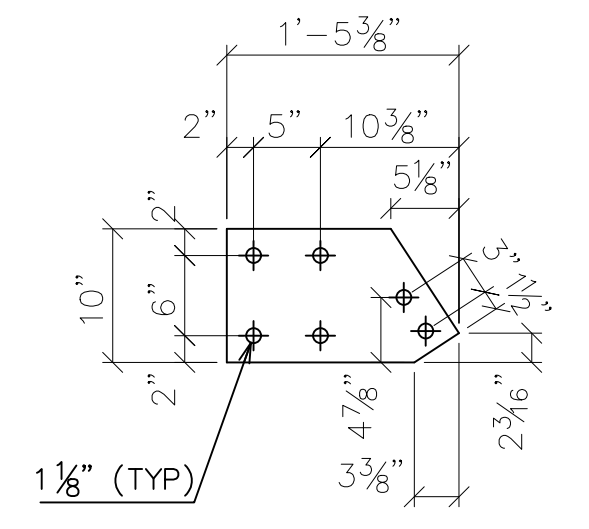
11 - lcp1 - PL 3/8"x10"x2'-1 3/4"  
A572-50 (GLV&PNT)



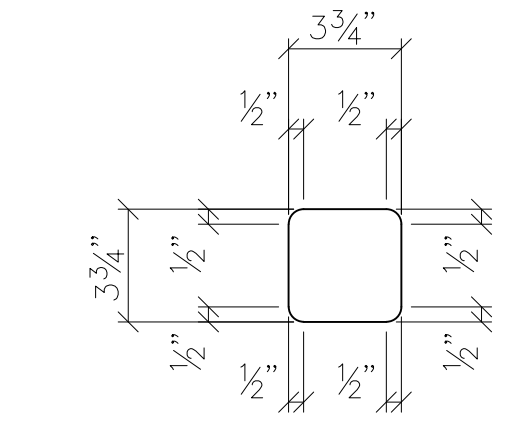
8 - ifp2 - PL 1 1/4"x6 1/8"x8'-2 1/8"  
A572-50 (GLV&PNT)



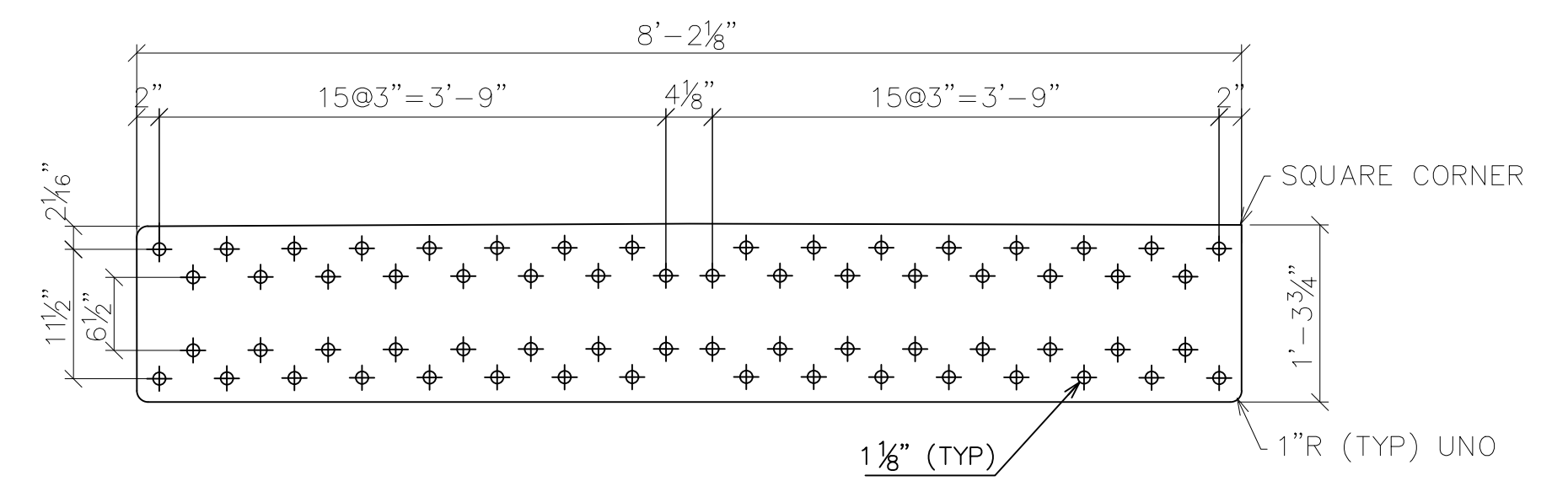
4 - plt2 - PL 3/4"x5 3/4"x1'-3"  
A572-50 (GLV&PNT)



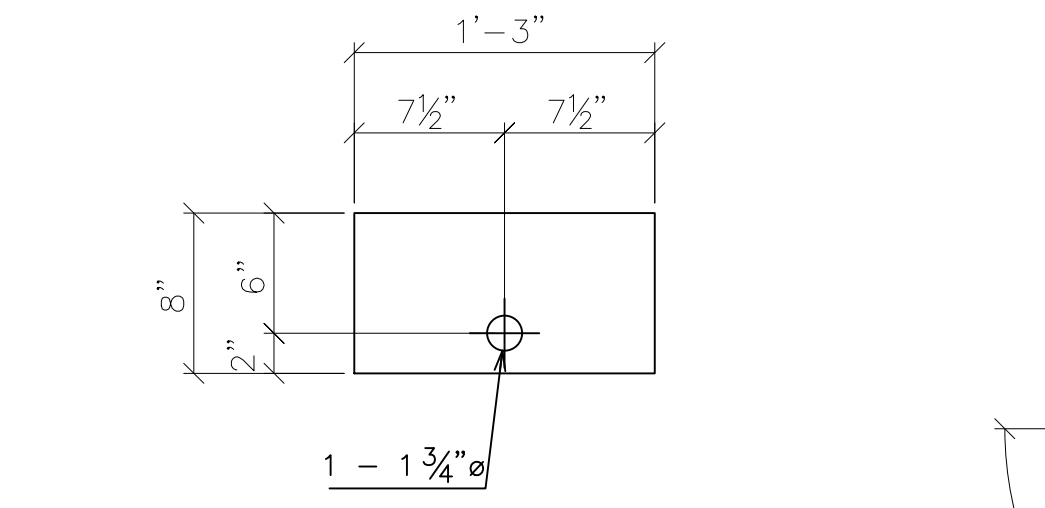
4 - lcp3 - PL 3/8"x10"x1'-5 3/8"  
A572-50 (GLV&PNT)



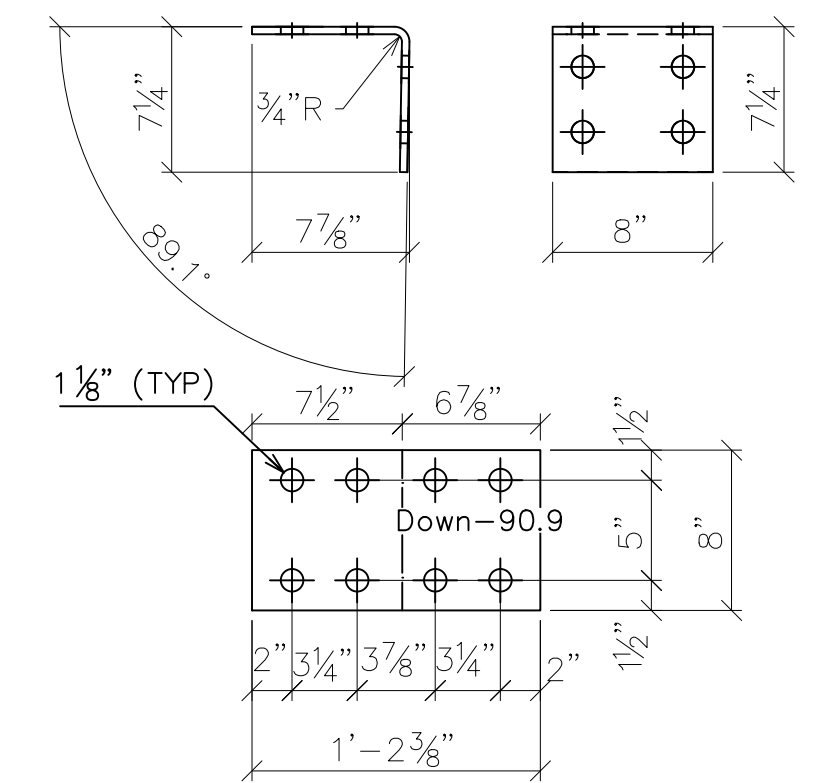
48 - rec1 - PL 1/4"x3 3/4"x3 3/4"  
A572-50 (GLV&PNT)



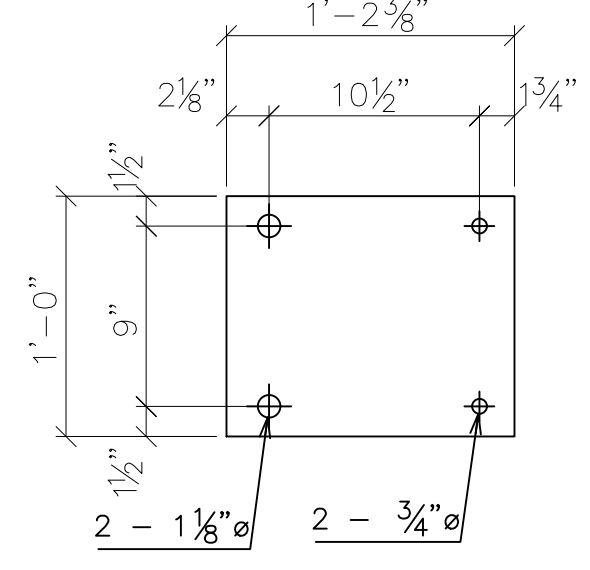
8 - ofp1 - PL 1 1/4"x15 7/8"x8'-2 1/8"  
A572-50 (GLV&PNT)



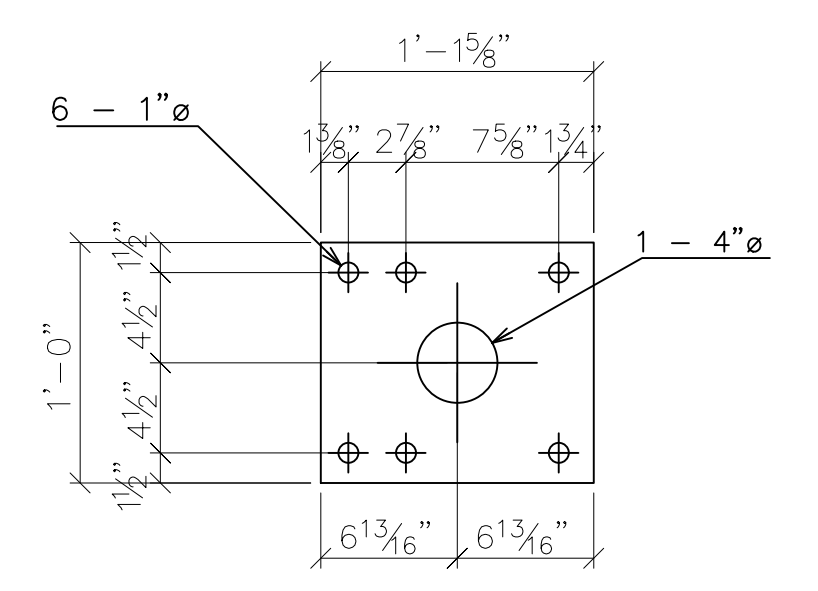
4 - plt3 - PL 3/4"x8"x1'-3"  
A572-50 (GLV&PNT)



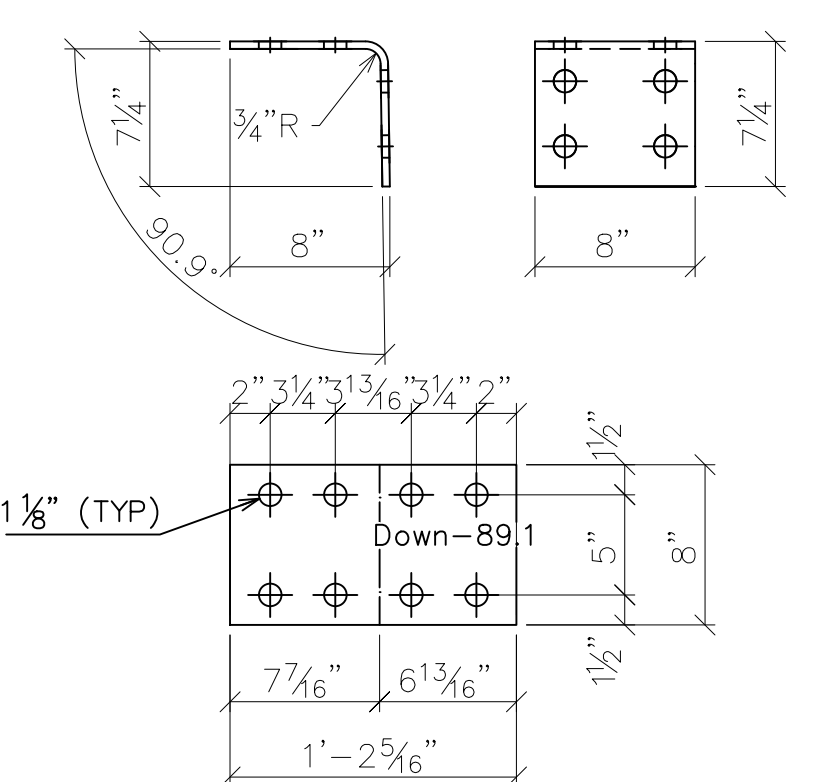
13 - p4 - PL 3/8"x8"x1'-2 3/8"  
A572-50 (GLV&PNT)



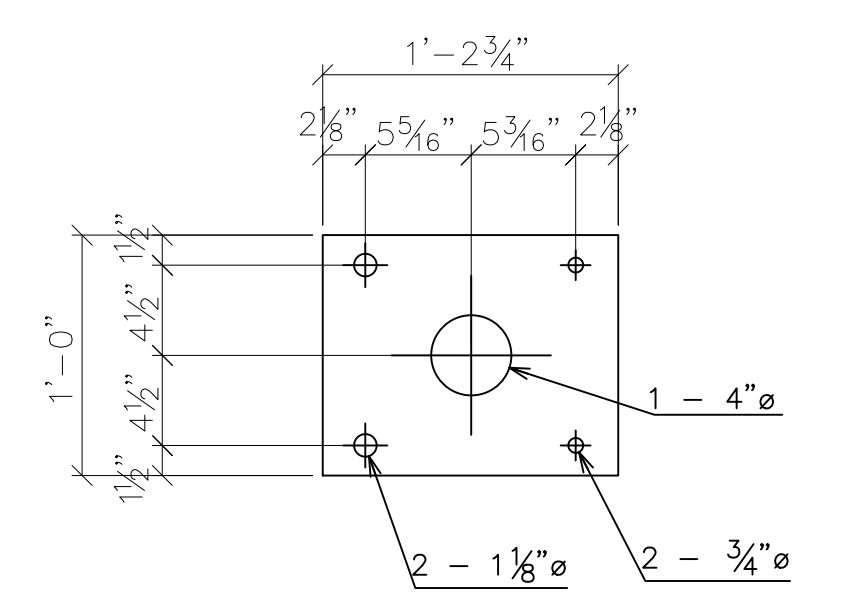
48 - pp1 - PL 1"x12"x1'-2 3/8"  
A572-50 (GLV&PNT)



48 - psp1 - PL 3/4"x12"x1'-1 5/8"  
A572-50 (GLV&PNT)



13 - p5 - PL 3/8"x8"x1'-2 5/16"  
A572-50 (GLV&PNT)



48 - psp2 - PL 3/4"x12"x1'-2 3/4"  
A572-50 (GLV&PNT)

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6/9/2020

REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

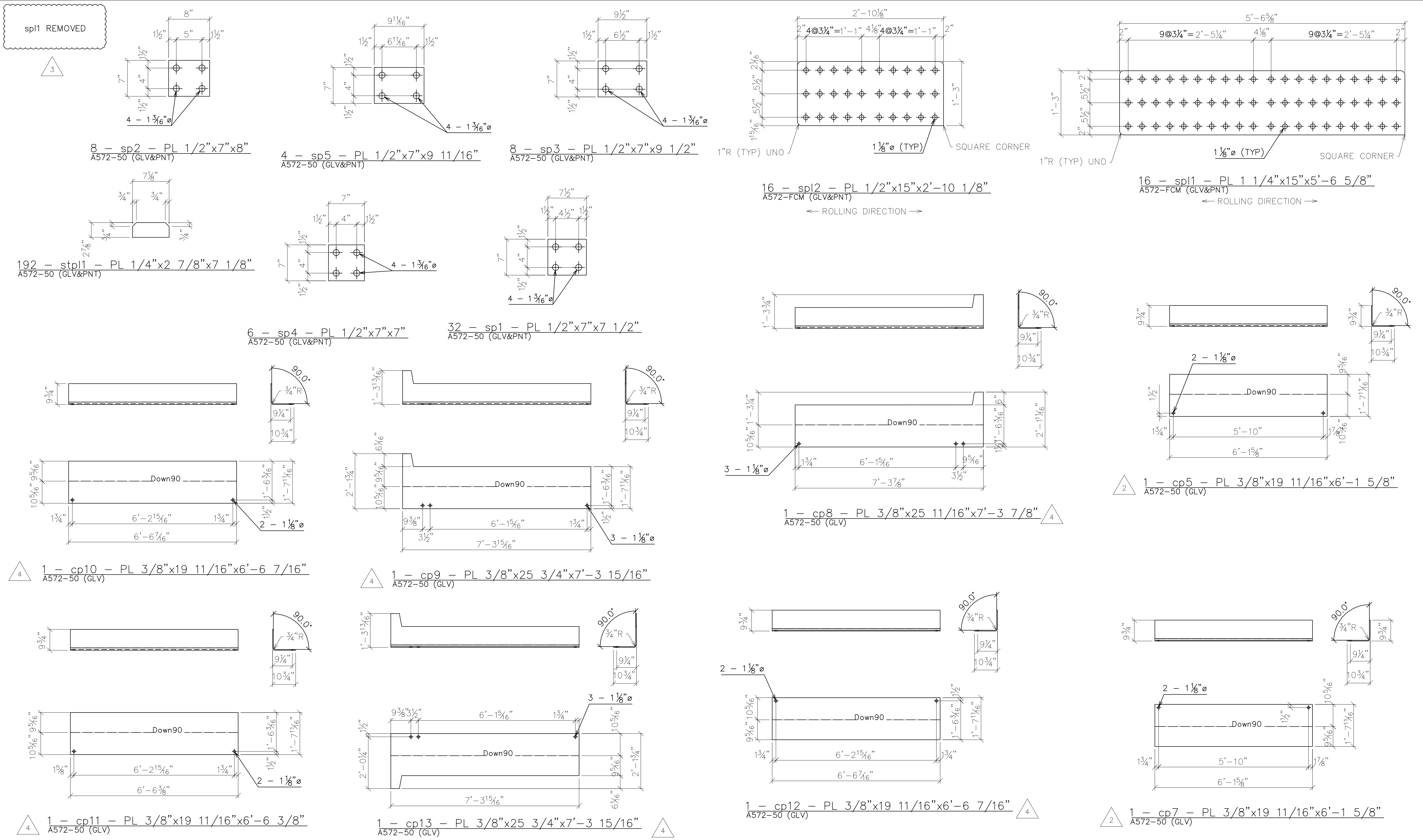
SHEET 12b

SHOP DETAILS

PLATES

USB JOB# 200045

58 TOTAL



- SHOP NOTES**
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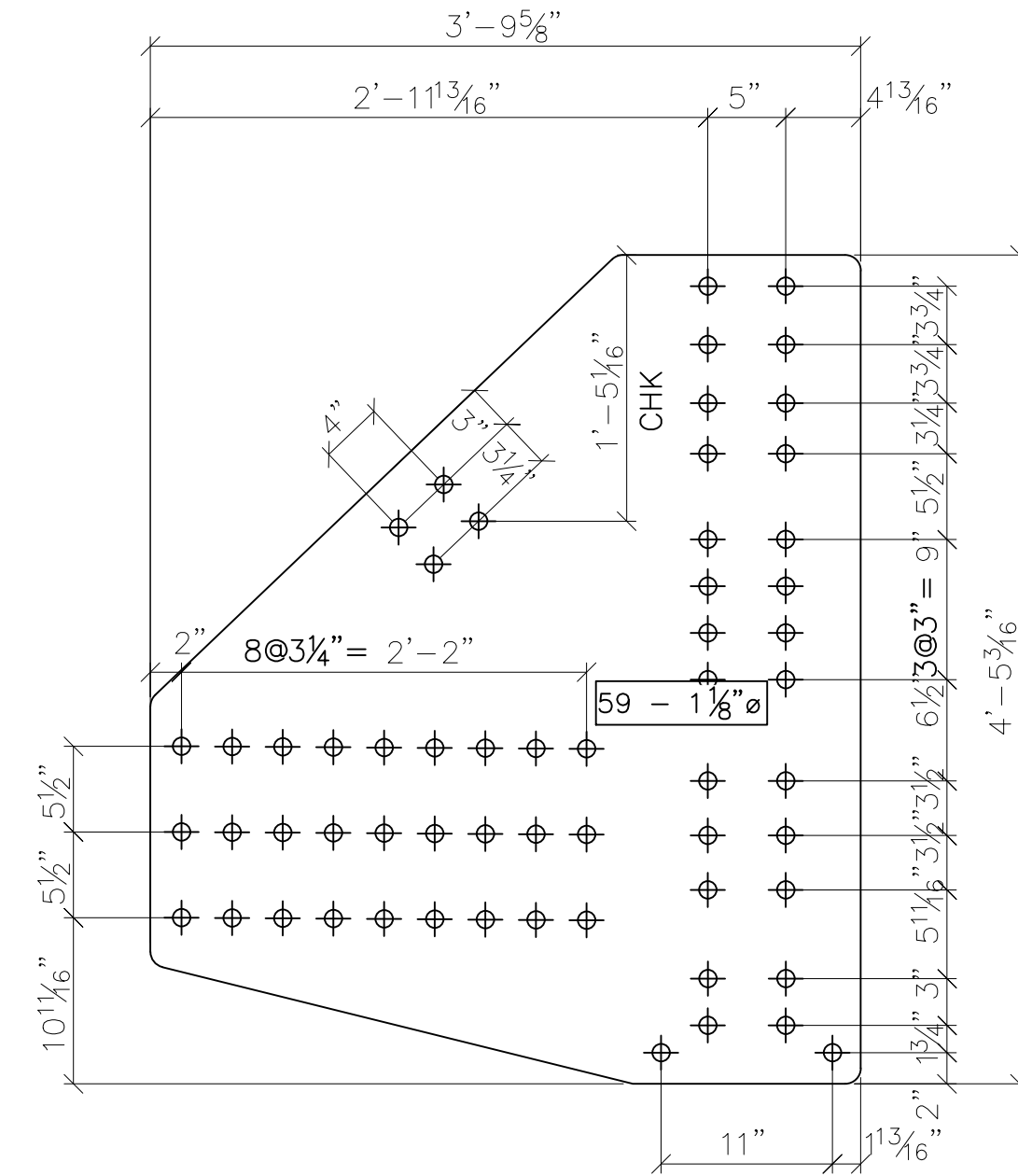
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

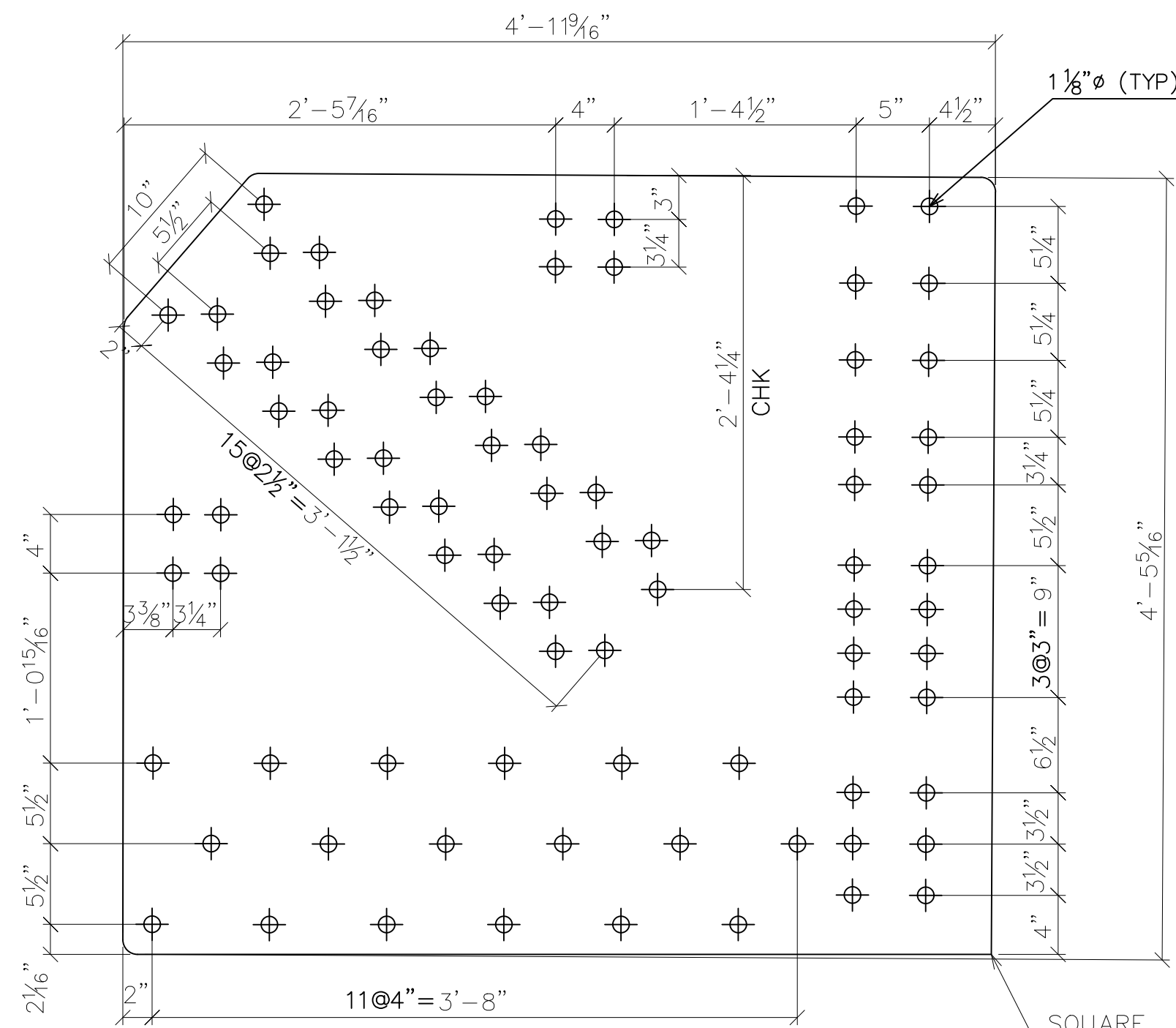
ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 12c
SHOP DETAILS		PLATES	58 TOTAL

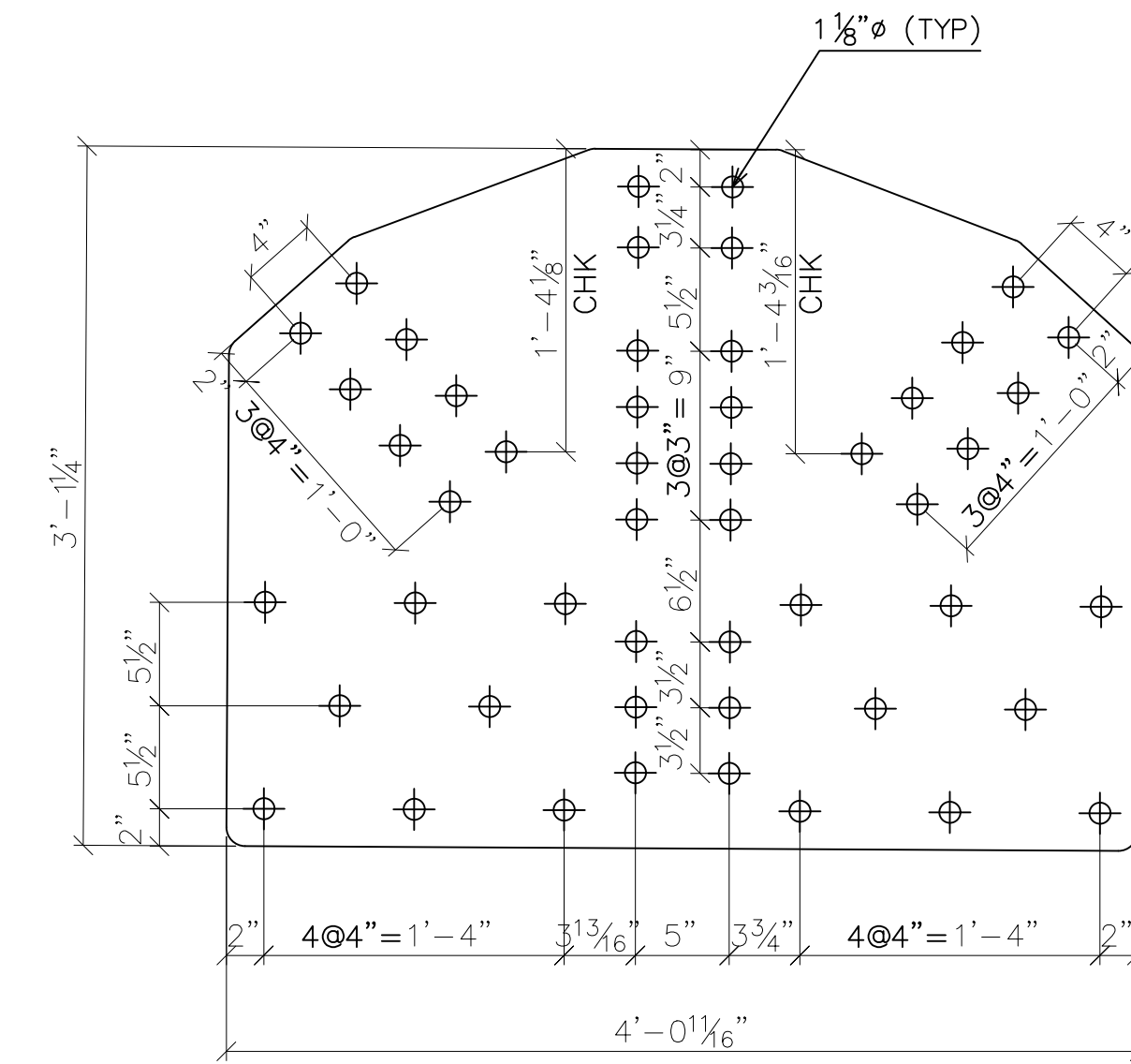
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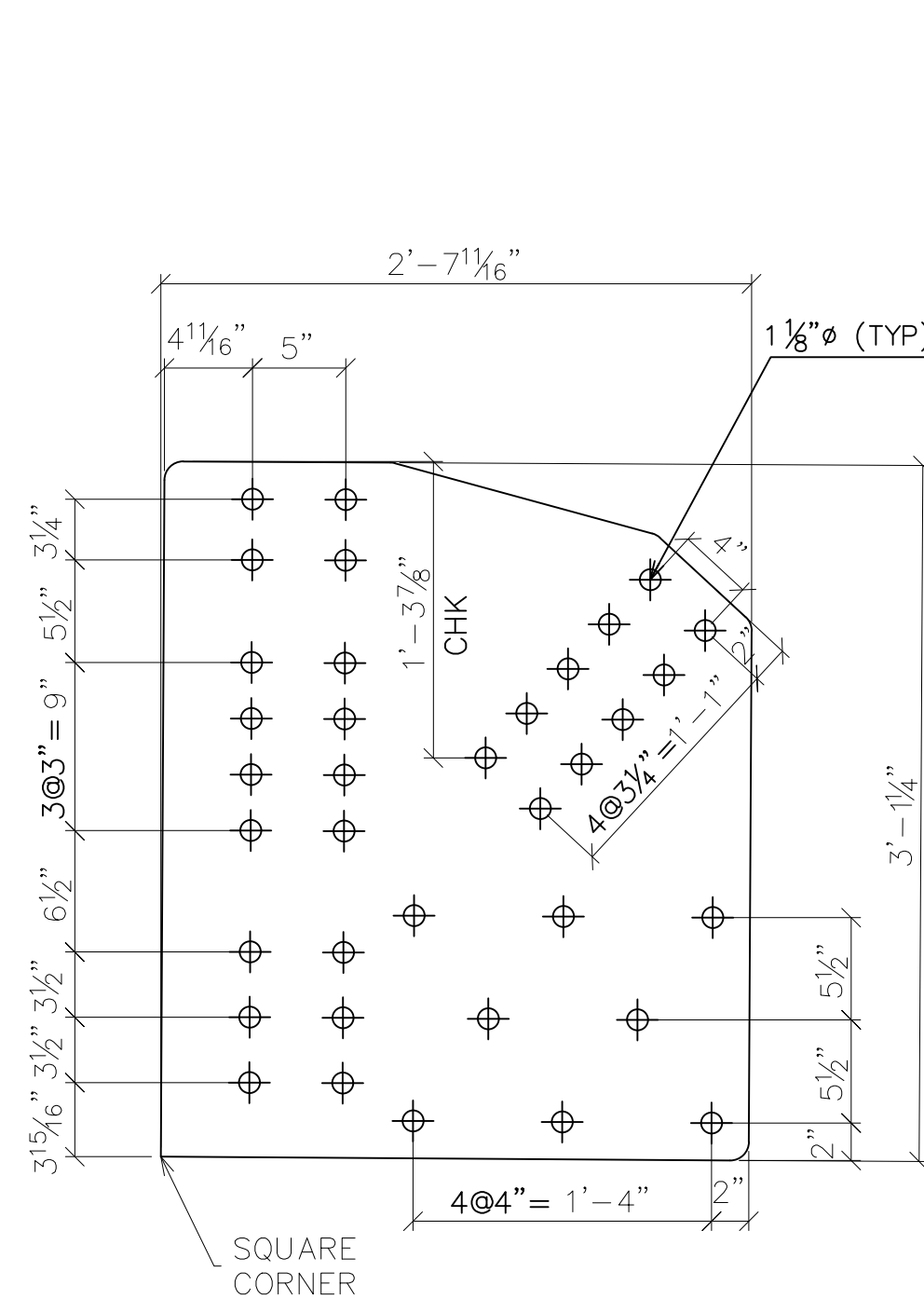
8 - lq1 - PL 5/8"x45 5/8"x4'-5 3/16"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



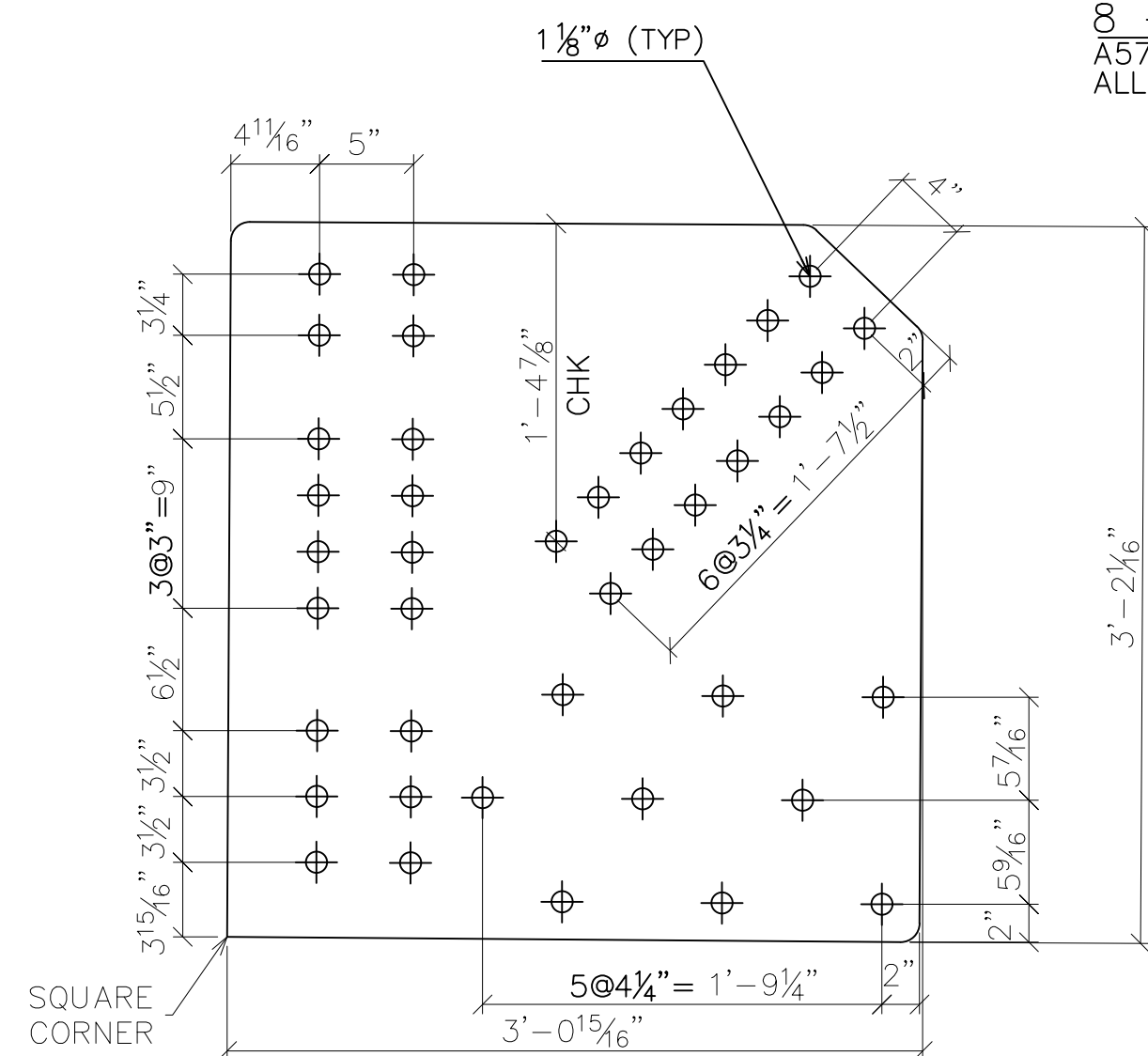
8 - lq2 - PL 1/2"x53 5/16"x4'-11 7/16"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



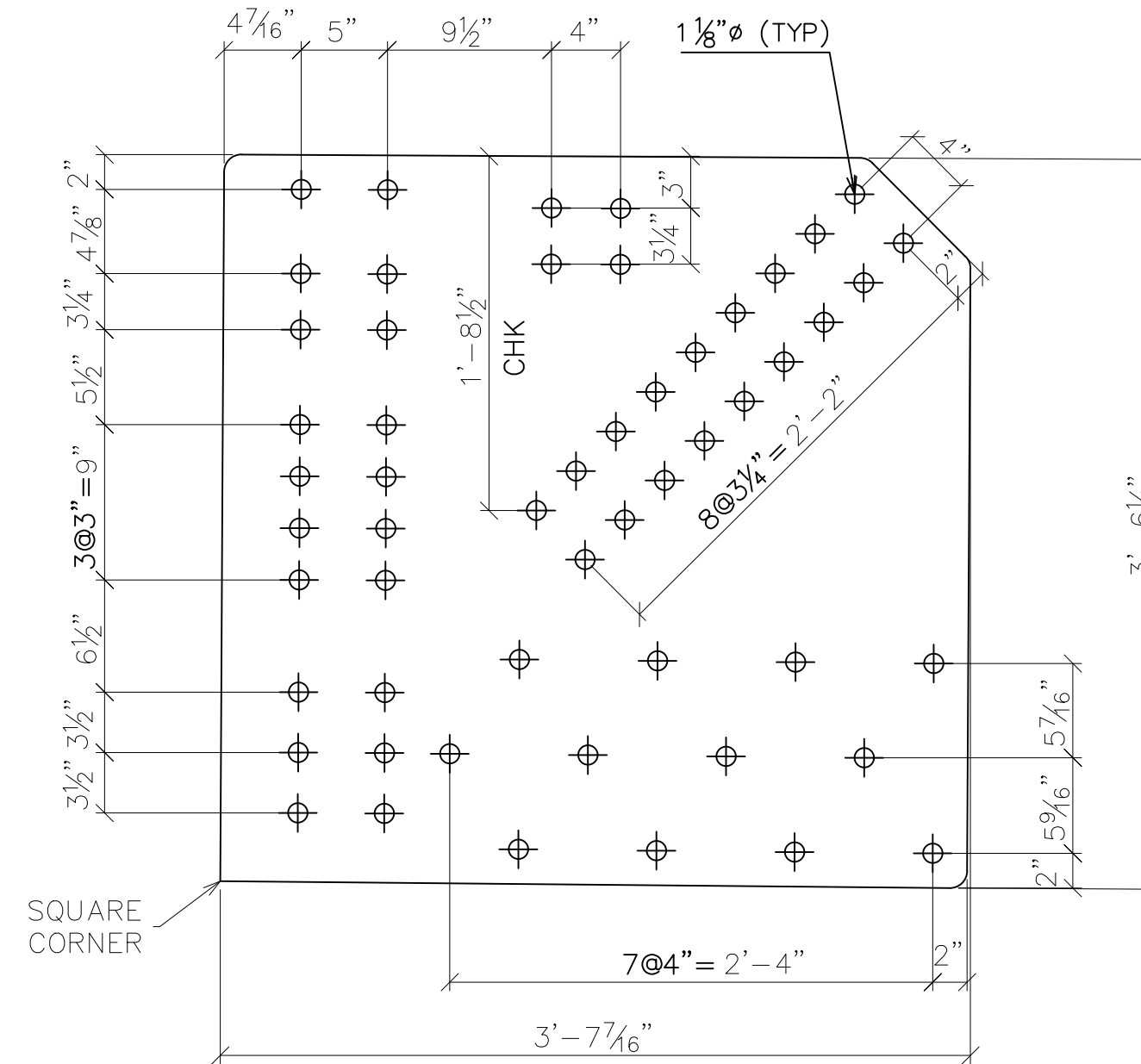
4 - lq7 - PL 1/2"x37 1/4"x4'-0 9/16"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



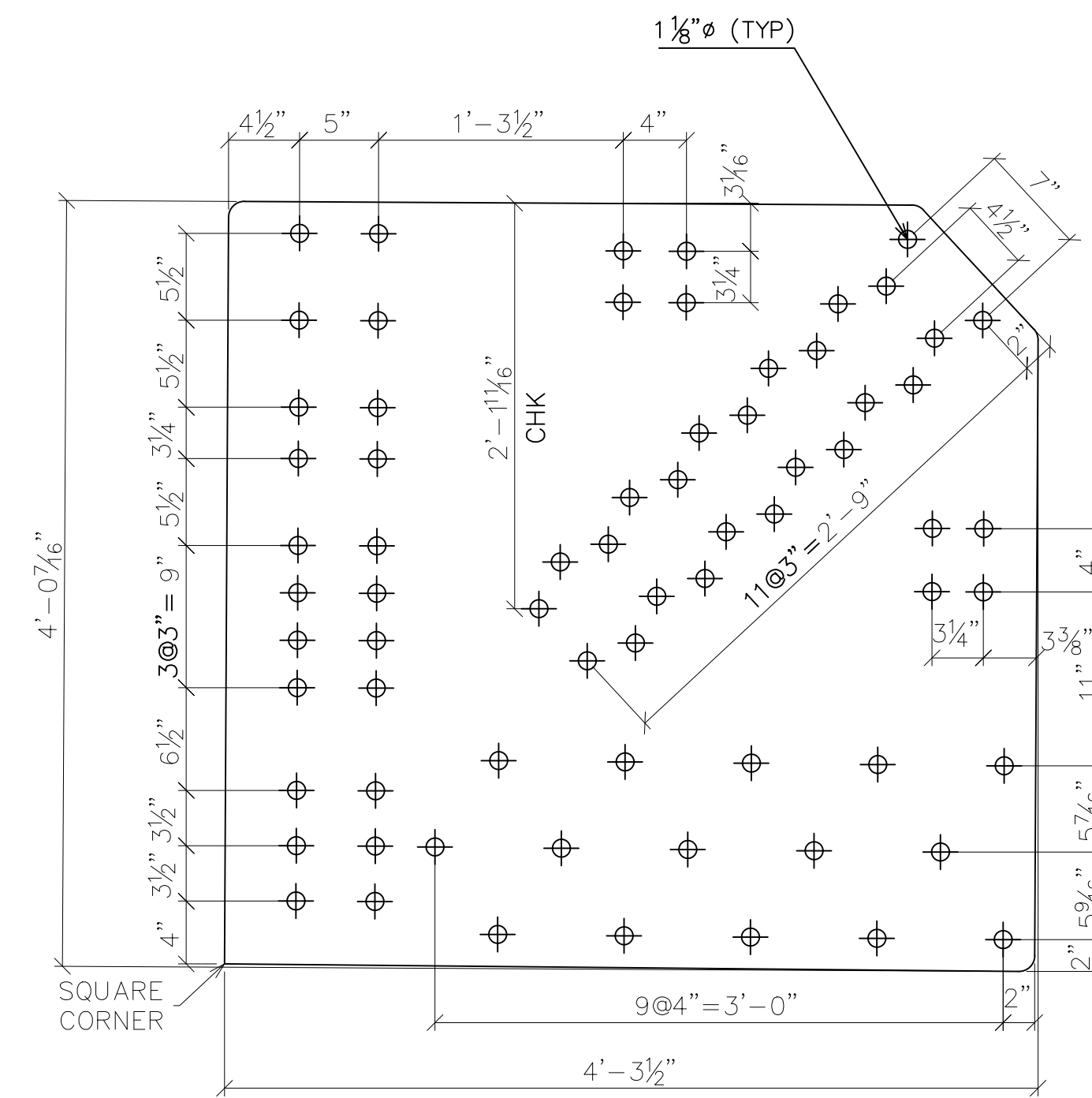
8 - lq6 - PL 1/2"x31 1/2"x3'-1 1/4"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



8 - lq5 - PL 1/2"x36 13/16"x3'-2 1/16"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



8 - lq4 - PL 1/2"x42 1/4"x3'-7 1/4"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO



8 - lq3 - PL 1/2"x48 7/16"x4'-3 5/16"  
A572-FCM (GLV&PNT)  
ALL CORNERS = 1"R UNO

DWG#: PB691891

SHOP NOTES

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6/9/2020

REVISED - SEE REVISION TABLE

MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET

SHOP DETAILS

PLATES

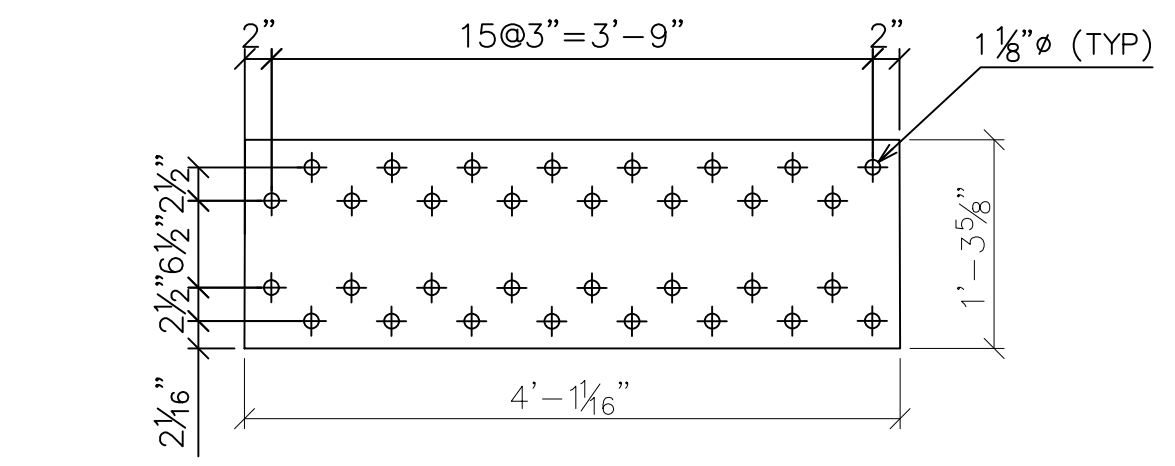
USB JOB#  
200045

12d  
58 TOTAL

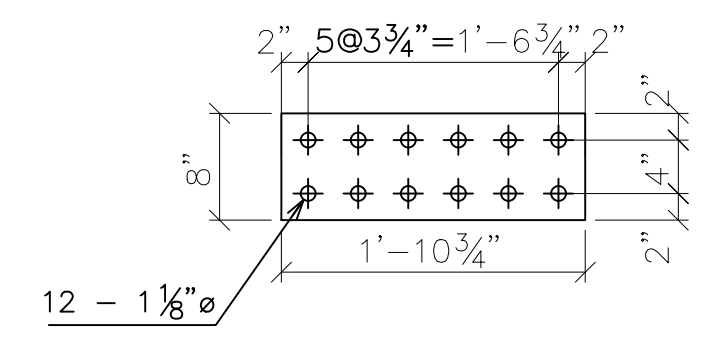




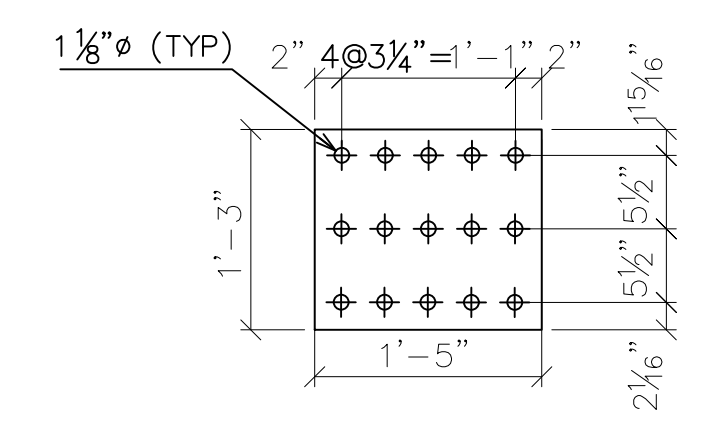




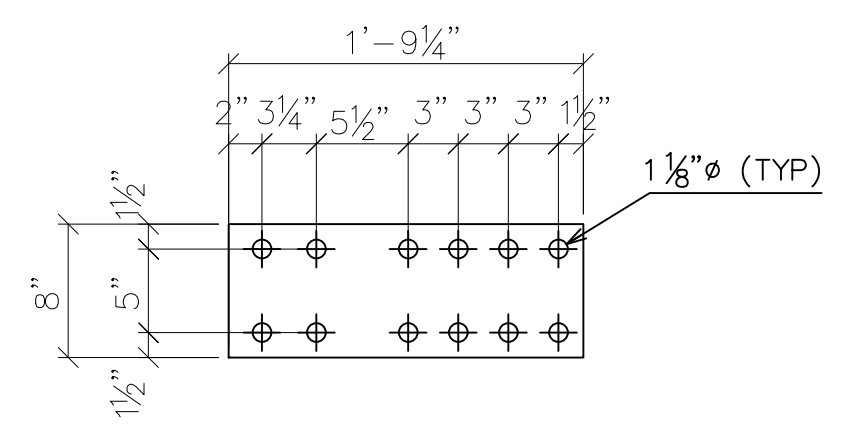
8 - shp9 - PL 1/4"x15 5/8"x4'-1 1/16"  
A572-50 (GLV&PNT)



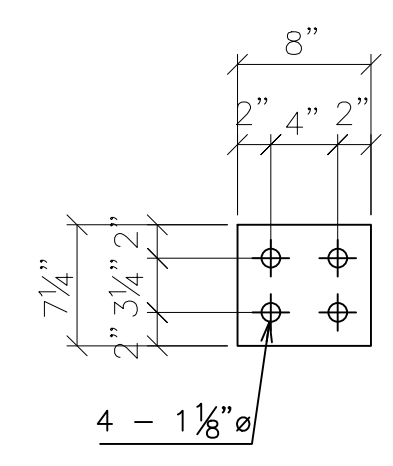
8 - shp7 - PL 1"x8"x1'-10 3/4"  
A572-50 (GLV&PNT)



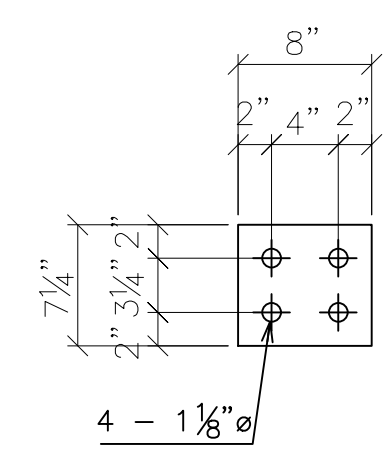
8 - shp6 - PL 1"x15"x1'-5"  
A572-50 (GLV&PNT)



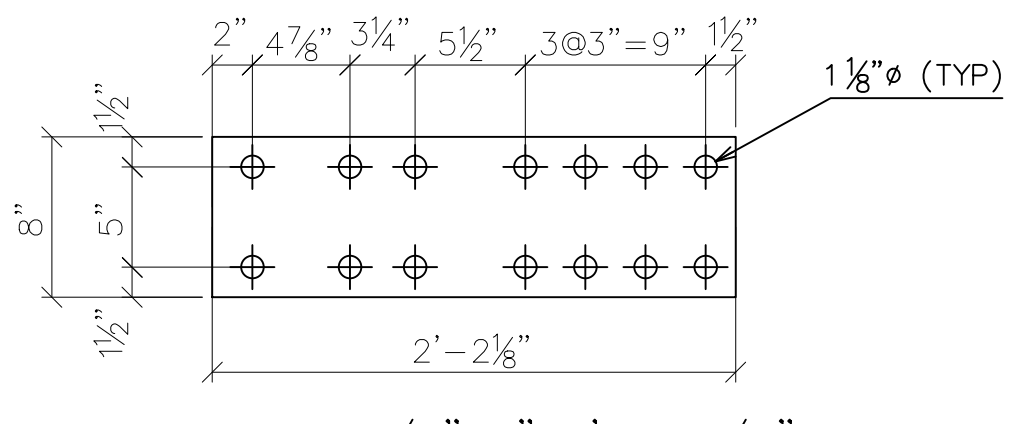
12 - shp5 - PL 1/4"x8"x1'-9 1/4"  
A572-50 (GLV&PNT)



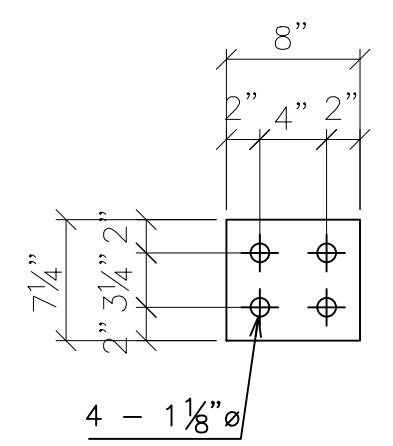
16 - shp3 - PL 7/8"x7 1/4"x8"  
A572-50 (GLV&PNT)



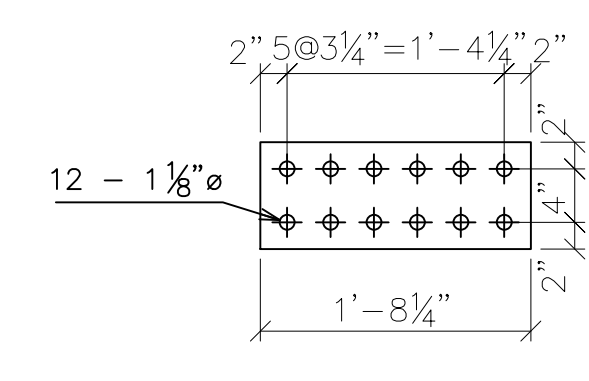
32 - shp2 - PL 1/8"x7 1/4"x8"  
A572-50 (GLV&PNT)



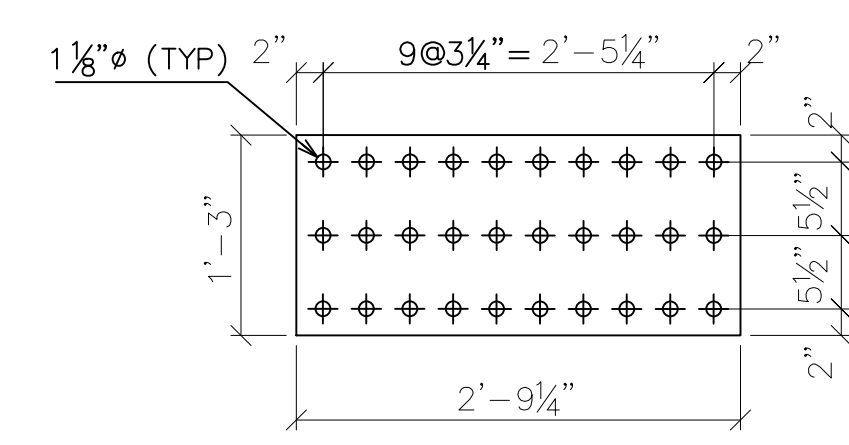
8 - shp12 - PL 1/4"x8"x2'-2 1/8"  
A572-50 (GLV&PNT)



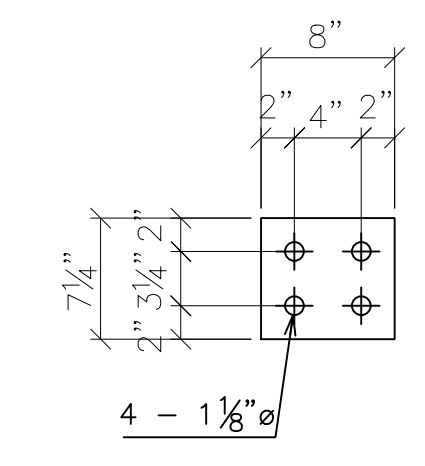
8 - shp11 - PL 1/4"x7 1/4"x8"  
A572-50 (GLV&PNT)



12 - shp4 - PL 1"x8"x1'-8 1/4"  
A572-50 (GLV&PNT)



8 - shp10 - PL 1/4"x15"x2'-9 1/4"  
A572-50 (GLV&PNT)



48 - shp1 - PL 3/4"x7 1/4"x8"  
A572-50 (GLV&PNT)

SHOP RECORD				MATERIAL LIST								
BEAM 1 DEPTH	BEAM 2 DEPTH	ACTUAL SHIM THICKNESS	ACTUAL SHIM QTY	Mark	Amount	Model Role	Description	Length	Grade	Coating	Part weight	Total weight
				shp1	48	SHIM PLATE	PL 3/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	12	553
				shp2	32	SHIM PLATE	PL 1/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	2	61
				shp3	16	SHIM PLATE	PL 7/8"x7 1/4"x8"	8"	A572-50	GLV&PNT	13	215
				shp4	12	SHIM PLATE	PL 1"x8"x1'-8 1/4"	1'-8 1/4"	A572-50	GLV&PNT	43	512
				shp5	12	SHIM PLATE	PL 1/4"x8"x1'-9 1/4"	1'-9 1/4"	A572-50	GLV&PNT	11	135
				shp6	8	SHIM PLATE	PL 1"x15"x1'-5"	1'-5"	A572-50	GLV&PNT	68	546
				shp7	8	SHIM PLATE	PL 1"x8"x1'-10 3/4"	1'-10 3/4"	A572-50	GLV&PNT	48	387
				shp9	8	SHIM PLATE	PL 1/4"x15 5/8"x4'-1 1/16"	4'-1 1/16"	A572-50	GLV&PNT	52	417
				shp10	8	SHIM PLATE	PL 1/4"x15"x2'-9 1/4"	2'-9 1/4"	A572-50	GLV&PNT	33	266
				shp11	8	SHIM PLATE	PL 1/4"x7 1/4"x8"	8"	A572-50	GLV&PNT	4	31
				shp12	8	SHIM PLATE	PL 1/4"x8"x2'-2 1/8"	2'-2 1/8"	A572-50	GLV&PNT	14	111

\*NOTE: SHOP TO CALCULATE ACTUAL THICKNESS AND QUANTITIES OF SHIMS REQUIRED. LISTED SIZES AND QUANTITIES ARE THEORETICAL ONLY.

- SHOP NOTES**
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  - ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

- SYMBOLS & ABBREVIATIONS**
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6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF DRAW: ABJ CHECK: JEC

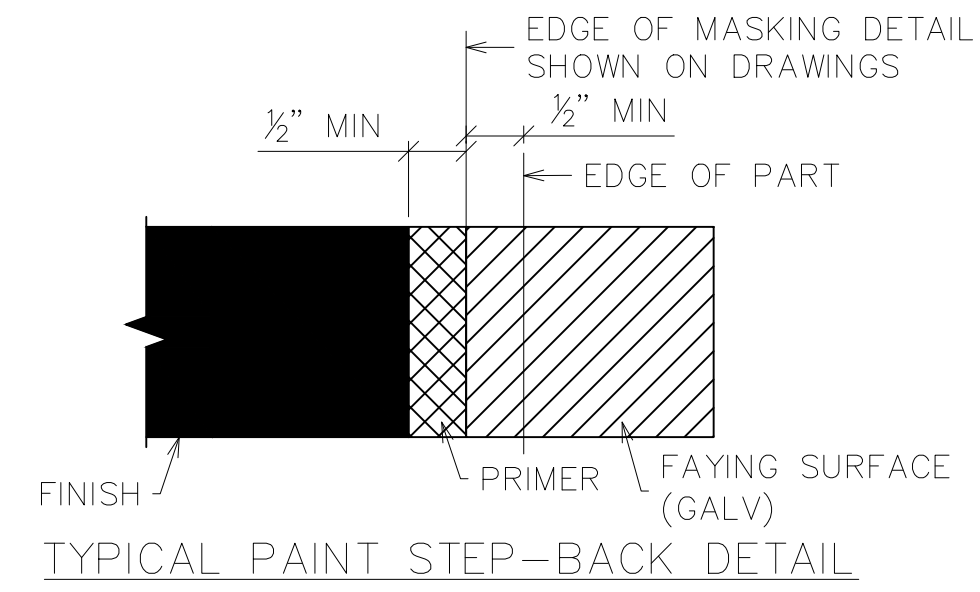
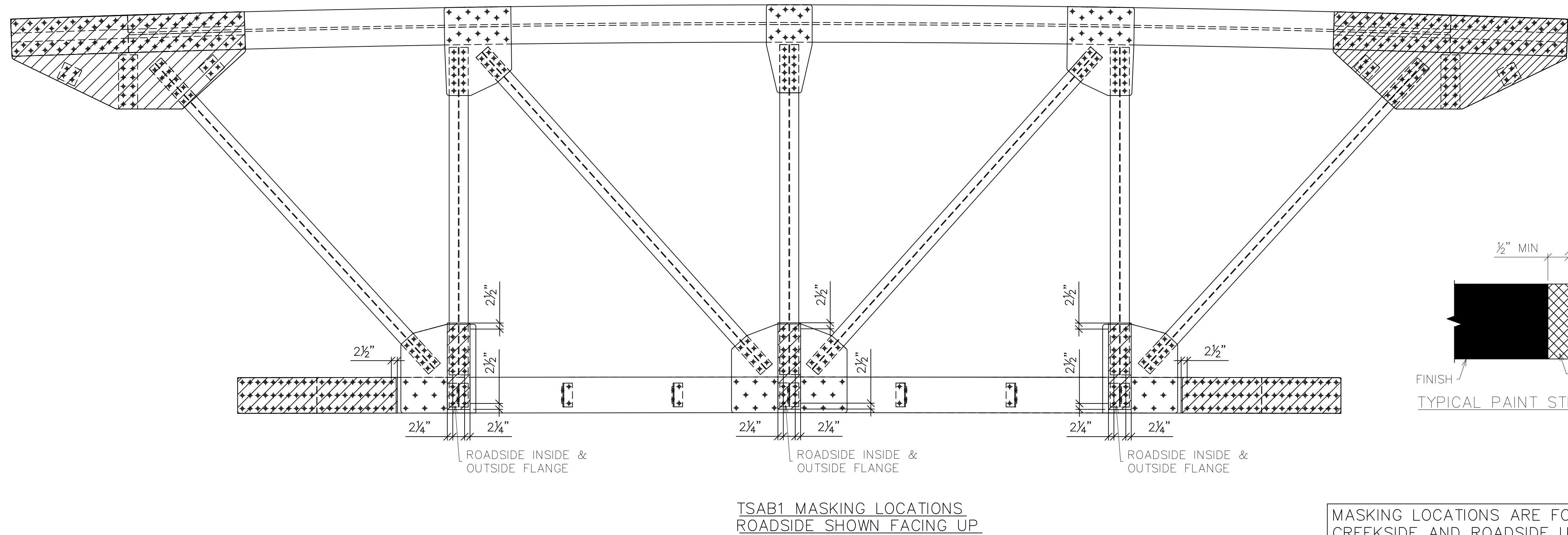
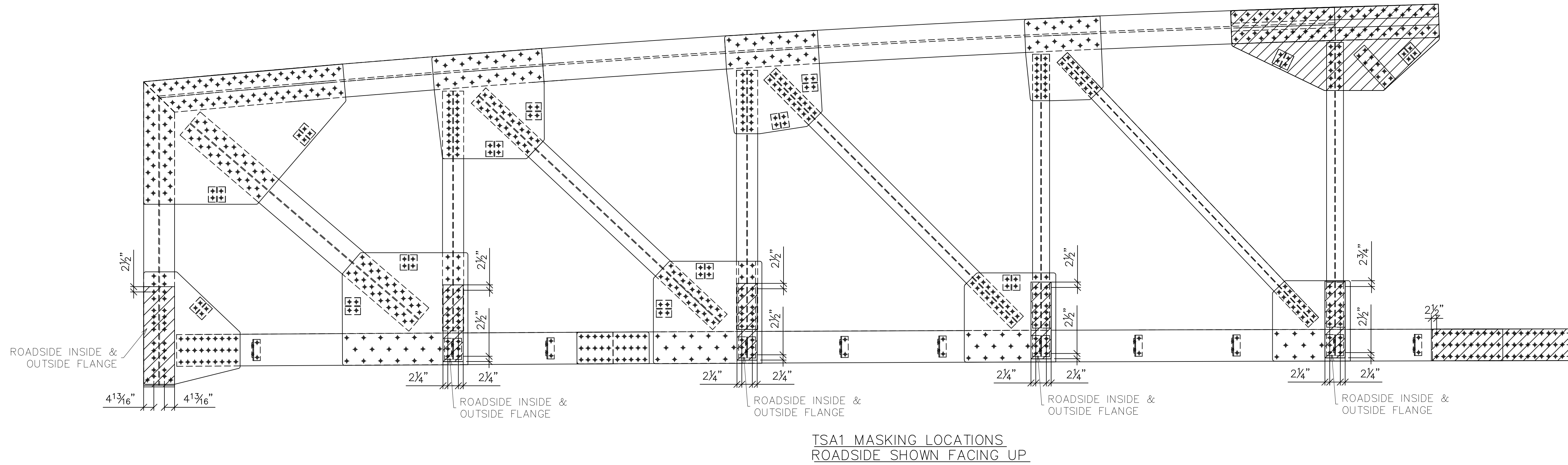
SHOP DETAILS / PLATES

USB JOB# 200045

SHEET 12g TOTAL 58

DWG#: PB691891





MASKING LOCATIONS ARE FOR CREEKSIDE AND ROADSIDE UNO.

DWG#: PB691891

SHOP NOTES

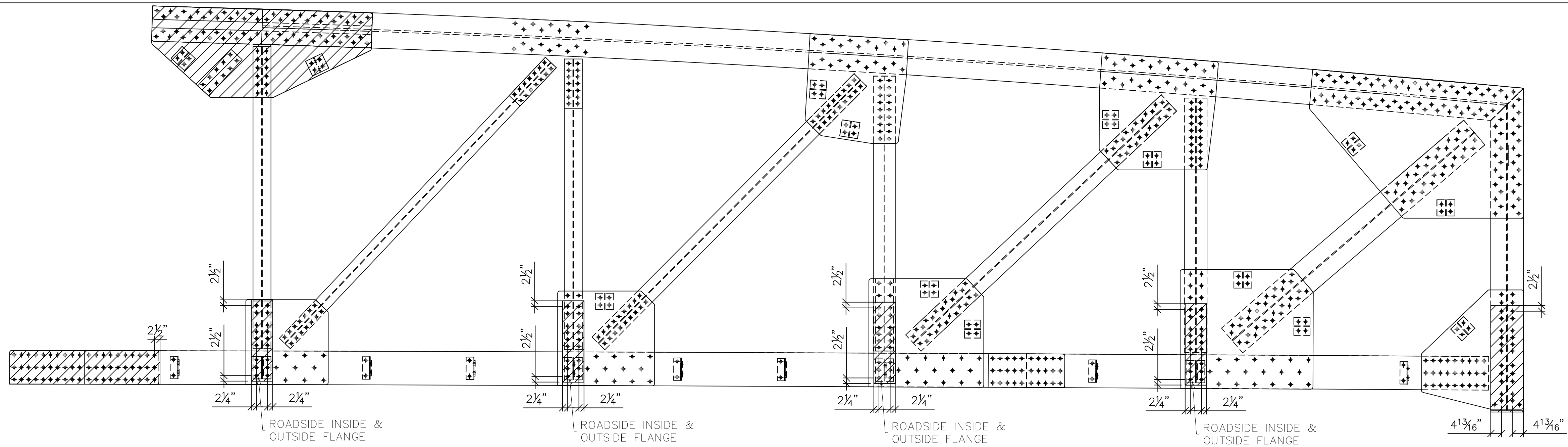
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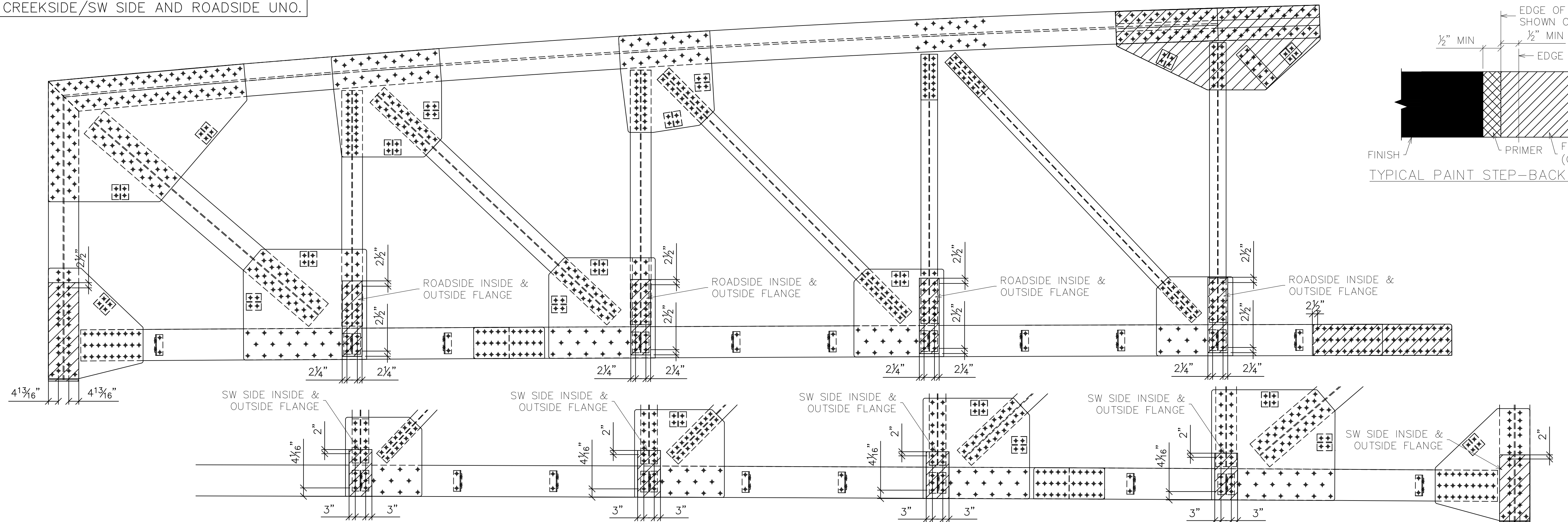
201 WHEELING AVE.  
P.O. BOX 757  
CAMBRIDGE, OH 43725  
888-872-7434  
www.usbridge.com

6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 13a
SHOP DETAILS		PAINT MASKING	
		USB JOB# 200045	58 TOTAL



TSB1 MASKING LOCATIONS  
ROADSIDE SHOWN FACING UP

MASKING LOCATIONS ARE FOR  
CREEKSIDE/SW SIDE AND ROADSIDE UNO.



TSC1 MASKING LOCATIONS  
ROADSIDE SHOWN FACING UP

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6/9/2020 REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
OVER TRIUNFO CREEK  
LOS ANGELES COUNTY, CA**

ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHOP DETAILS

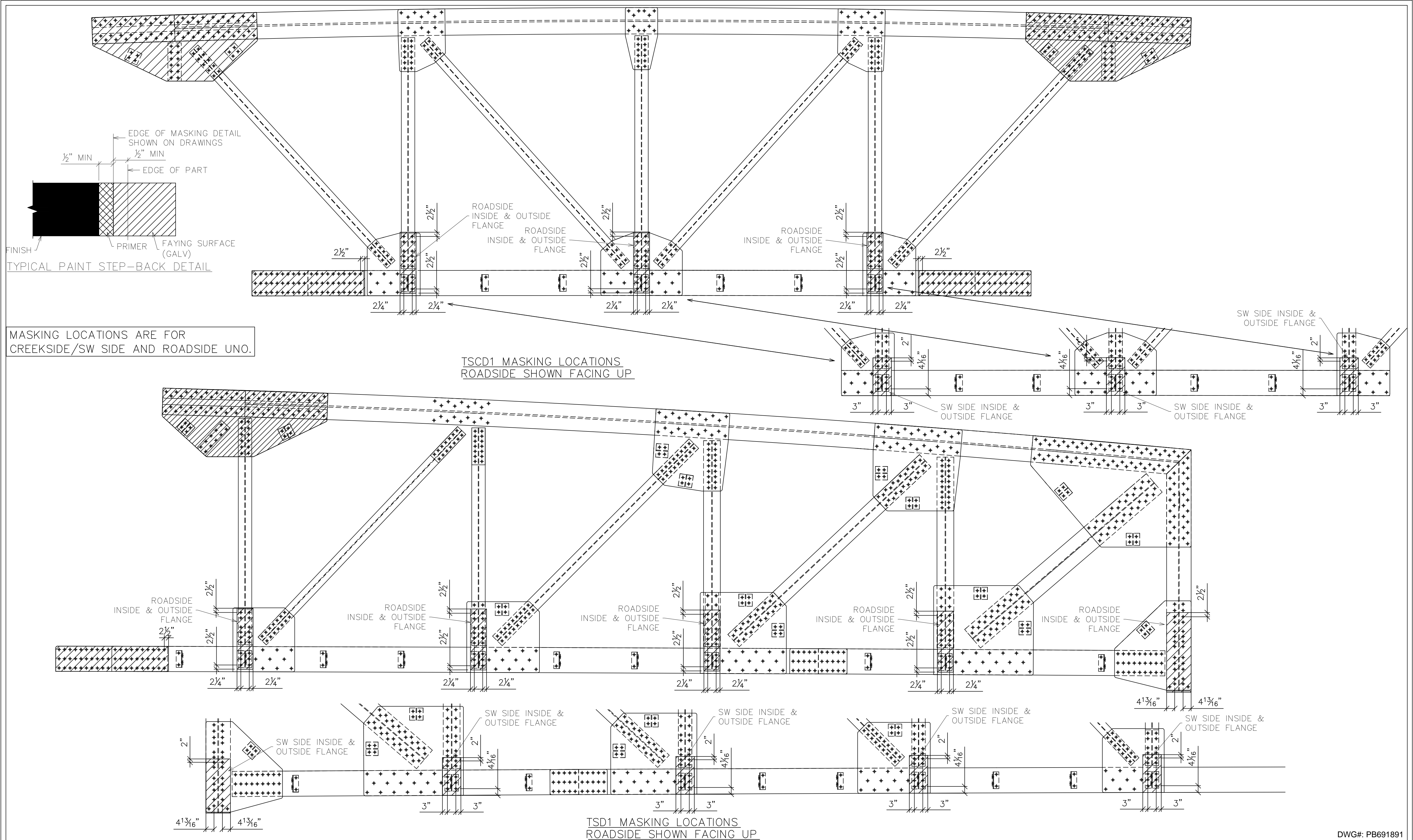
PAINT MASKING

USB JOB#  
200045

SHEET  
13b

58  
TOTAL

DWG#: PB691891



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**U.S. BRIDGE**  
 BRIDGING AMERICA SINCE 1936

201 WHEELING AVE.  
 P.O. BOX 757  
 CAMBRIDGE, OH 43725  
 888-872-7434  
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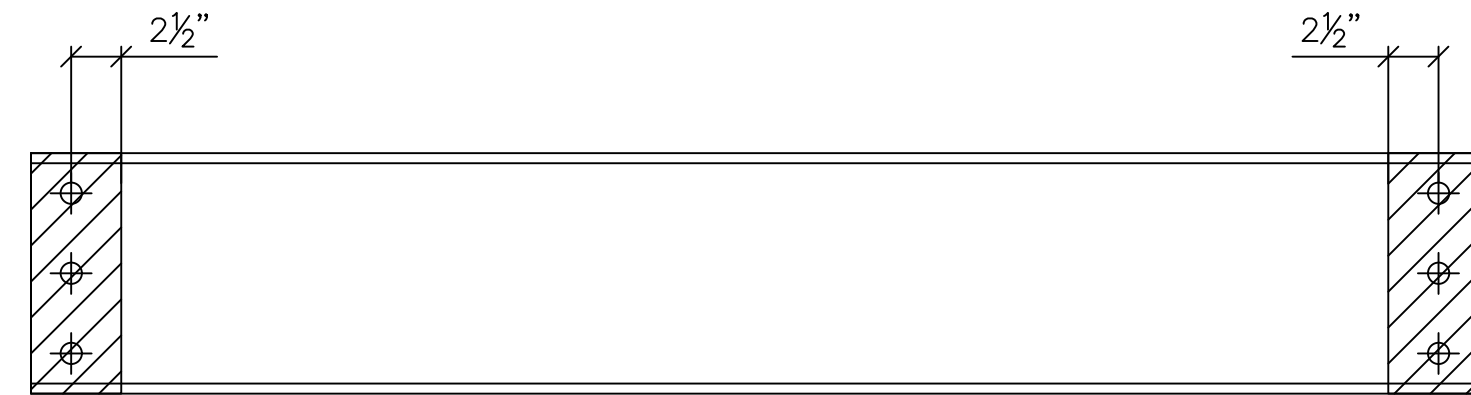
6/9/2020 **REVISED - SEE REVISION TABLE**

**MULHOLLAND HIGHWAY  
 OVER TRIUNFO CREEK  
 LOS ANGELES COUNTY, CA**

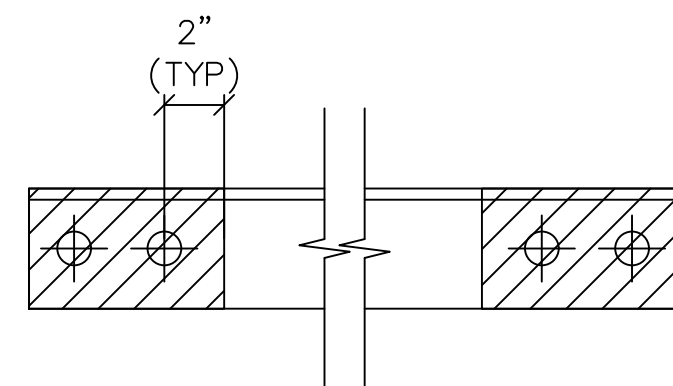
ITEM NO.:  
 PROJECT NO.: RDC0016378  
 BRIDGE NO.: 4283  
 STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 13c
SHOP DETAILS		PAINT MASKING	58 TOTAL

USB JOB# 200045



DM1 MASKING DETAIL



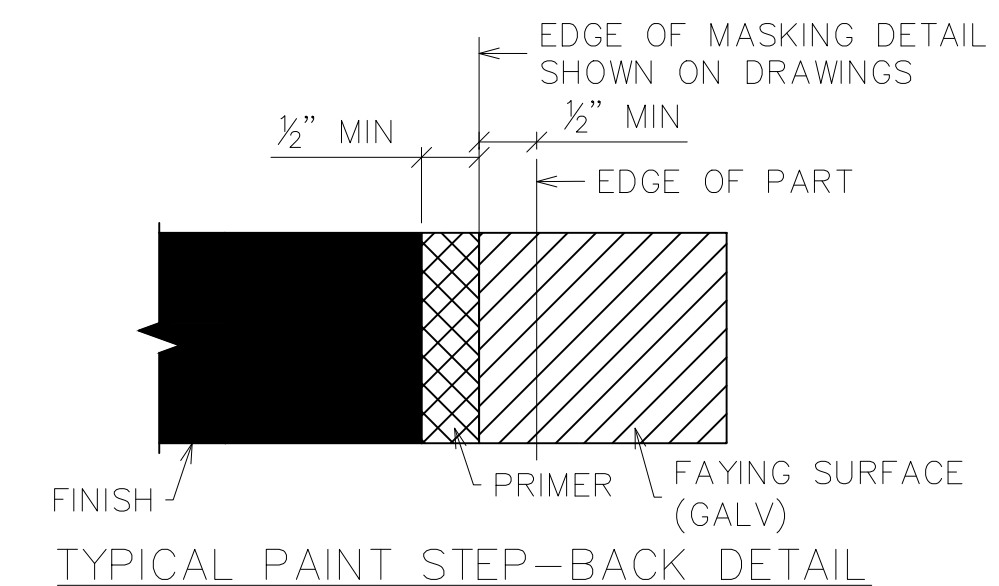
LA1 MASKING DETAIL

MISC ITEMS TO BE PAINTED, NO MASKING REQUIRED:

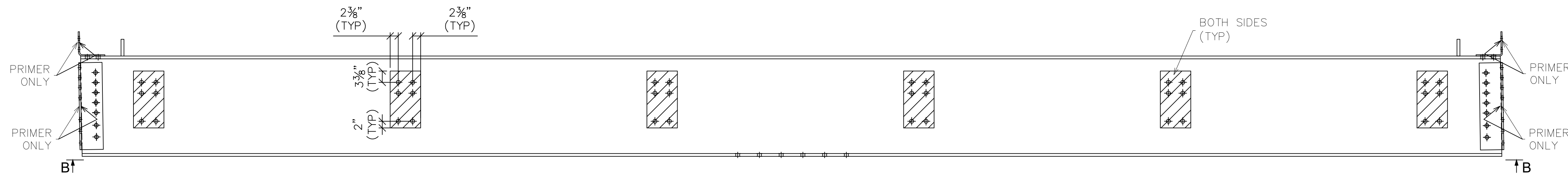
- RAIL1 - SEE SHT 10f
- RAIL2 - SEE SHT 10f
- RAIL3 - SEE SHT 10f
- RAIL4 - SEE SHT 10f
- RAIL5 - SEE SHT 10f
- RAIL6 - SEE SHT 10f
- RAIL7 - SEE SHT 10g
- RAIL8 - SEE SHT 10g
- RAIL9 - SEE SHT 10g
- GTA1 - SEE SHT 10e
- GTA2 - SEE SHT 11c
- GTA3 - SEE SHT 10e
- GTA4 - SEE SHT 11c
- BP1 - SEE SHT 4a
- BP2 - SEE SHT 4a

MISC ITEMS TO BE PRIMER COATED ONLY:

- DT1 - SEE SHT 11c
- DT2 - SEE SHT 11c
- SCA1 - SEE SHT 11e
- SSA - SEE SHT 11e
- PLT1 - SEE SHT 10e
- PLT2 - SEE SHT 10e
- LCP1 - SEE SHT 12b
- LCP2 - SEE SHT 12b
- LCP3 - SEE SHT 12c
- A1 - SEE SHT 11a

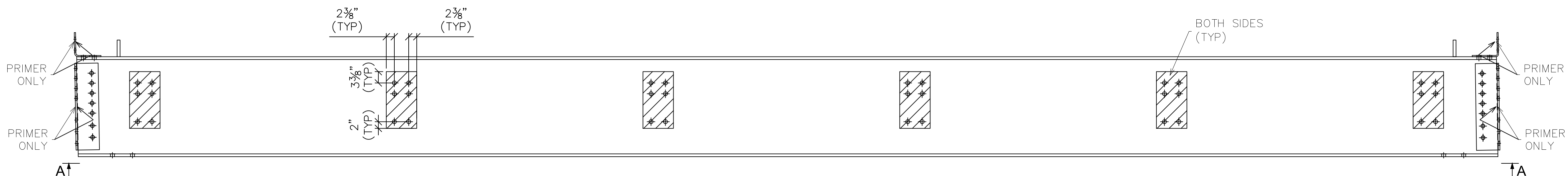


TYPICAL PAINT STEP-BACK DETAIL



SECTION B  
BOTH SIDES  
BOT. FLANGE

FB1 MASKING LOCATIONS



SECTION A  
BOTH SIDES  
BOT. FLANGE

FB2 MASKING LOCATIONS

DWG#: PB691891

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6/9/2020

REVISED - SEE REVISION TABLE

**MULHOLLAND HIGHWAY  
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ITEM NO.:  
PROJECT NO.: RDC0016378  
BRIDGE NO.: 4283  
STRUCTURAL FILE NO.:

DESIGN/REVIEW: DLM/SAF

DRAW: ABJ

CHECK: JEC

SHEET 13d

SHOP DETAILS

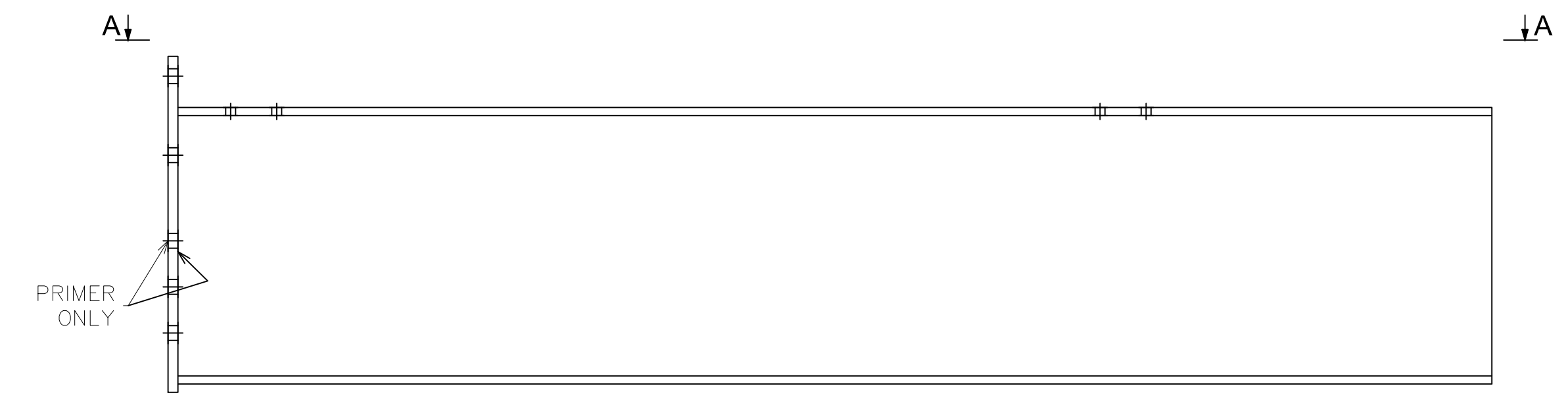
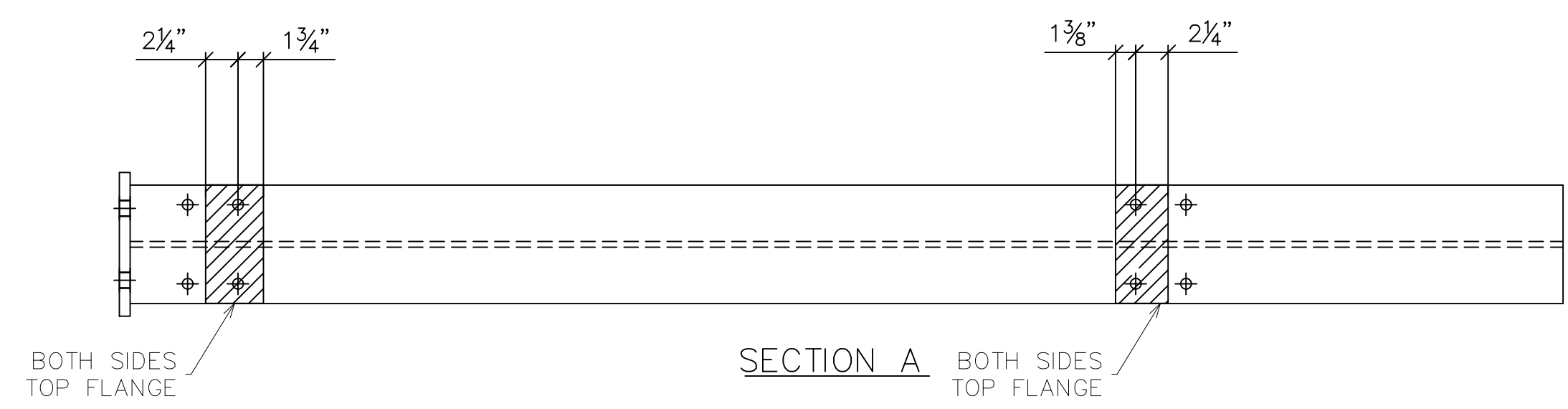
PAINT MASKING

USB JOB# 200045

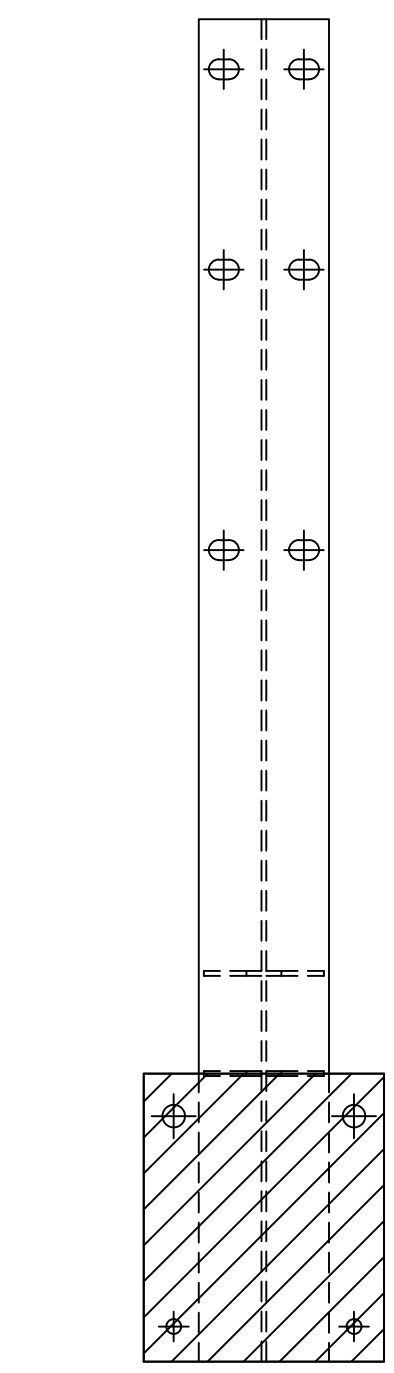
58

TOTAL

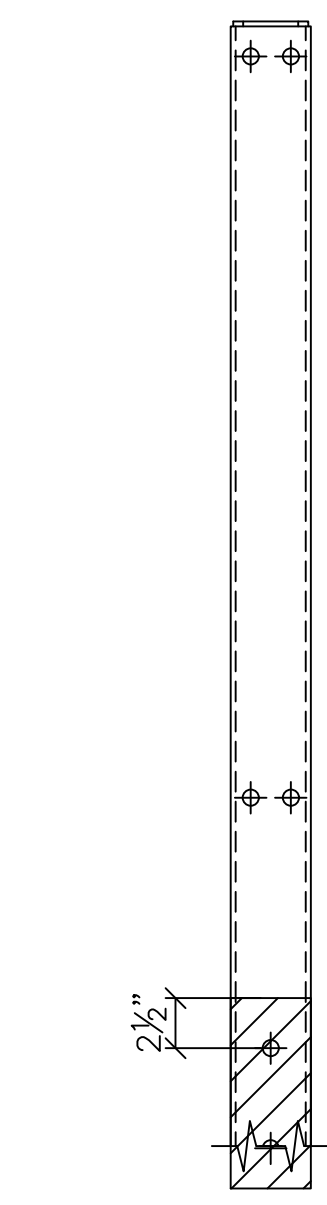




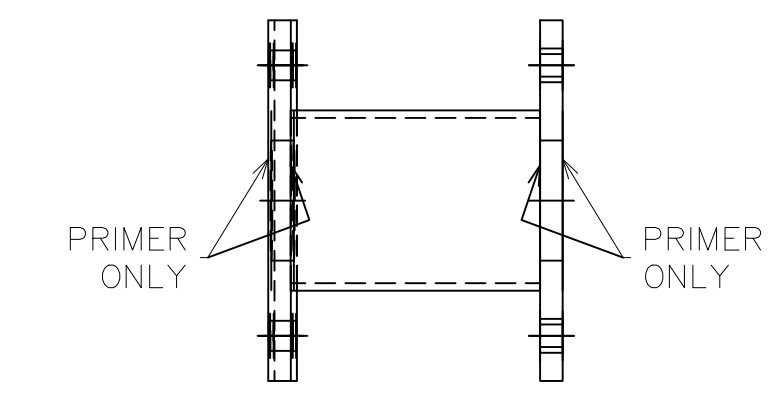
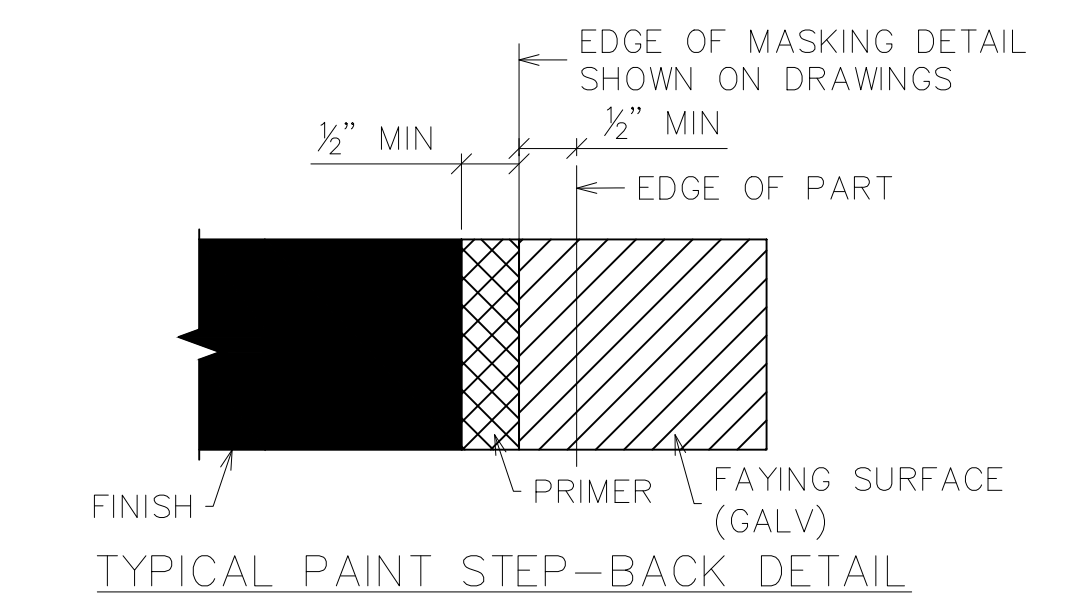
SWB1 MASKING LOCATIONS



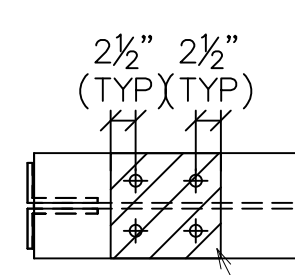
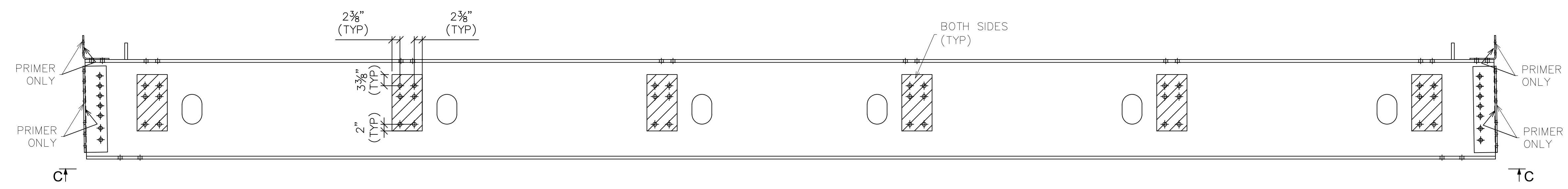
P1 MASKING LOCATIONS



P2, P3 MASKING LOCATIONS



PSP1, PSP2 MASKING LOCATIONS



SECTION C  
FB3, FB4 MASKING LOCATIONS

DWG#: PB691891

SHOP NOTES

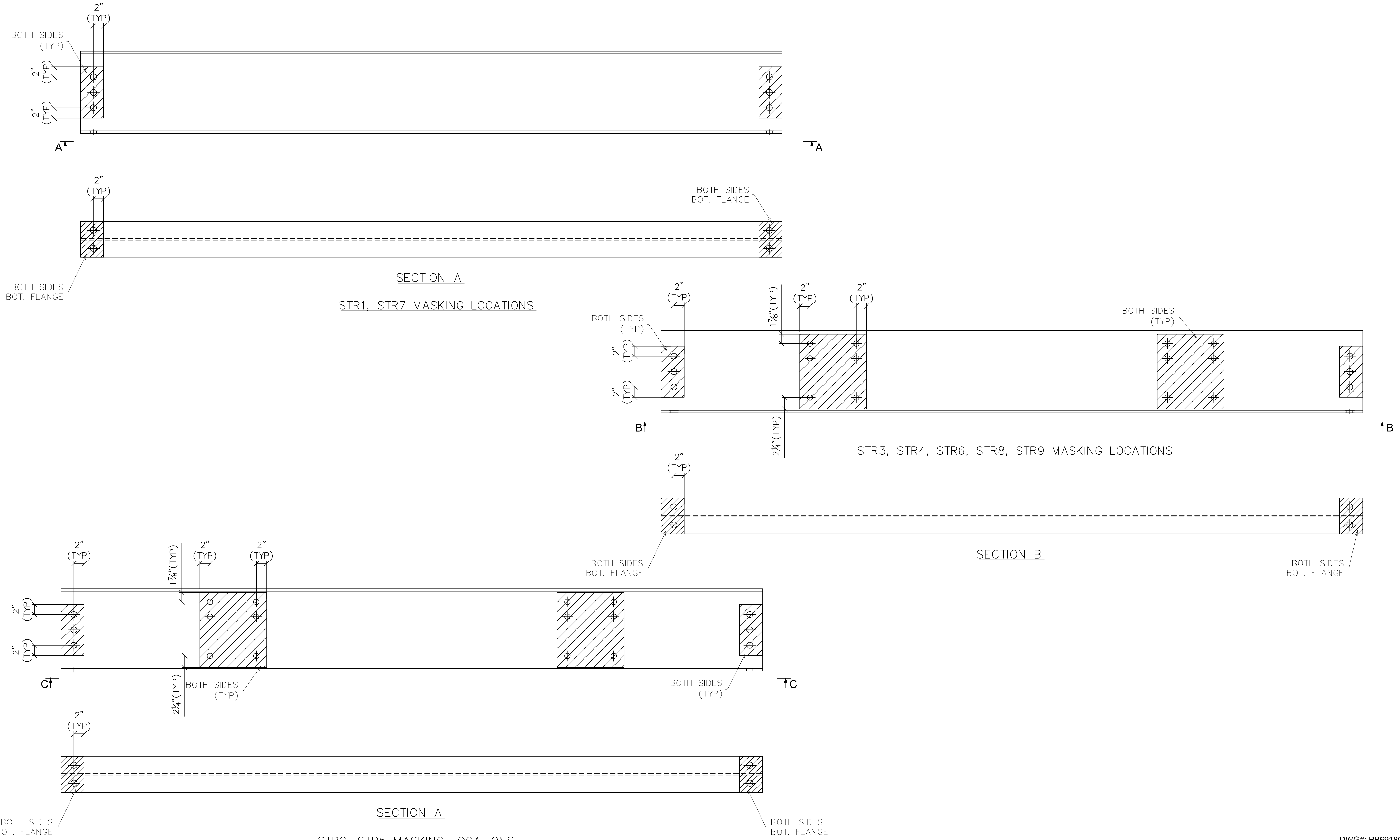
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7. ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
8. GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
9. 1/2" DIAMETER HOLES SHALL BE DRILLED IN PLAIN MATERIAL THAT IS TO BE GALVANIZED. BURNING BY TORCH IS PROHIBITED. TWO HOLES MINIMUM SHALL BE SYMMETRICALLY LOCATED ALONG A USUAL GAGE LINE OF THE SHAPE OR PLATE AND NO CLOSER THAN 2" TO ANY FREE EDGE.
10. TEMPORARY BOLTS FOR SHIPPING (TEMP BOLTS) SHALL BE ZINC PLATED AND INCLUDE 1 FLAT WASHER + 1 LOCK WASHER + 1 NUT INSTALLED IN SAME SIDE AND FASTENED SNUG TIGHT, 3 MIN. PER CONNECTION. TEMPORARY BOLTS ARE NOT QUANTIFIED IN THESE PLANS.
11. ALL WELDS TO HAVE 1/8" ± 1/16" HOLD BACK UNLESS NOTED OTHERWISE.
12. ALL FCM OR CVN DESIGNATED PARTS ARE TO HAVE "PC MARK" AND "HEAT#" STAMPED IN PROPER LOCATIONS.

**SYMBOLS & ABBREVIATIONS**

ES: EACH SIDE	NS: NEAR SIDE
EQ: EQUAL	FS: FAR SIDE
CL: CENTERLINE	WP/⊕: WORK POINT
REF: REFERENCE	GA: GAUGE
CHK: CHECK	ID: INSIDE DIAMETER
O\O: OUT TO OUT	OD: OUTSIDE DIAMETER
C\C: CENTER TO CENTER	BRG: BEARING
F\F: FACE TO FACE	TYP: TYPICAL
DIA/∅: DIAMETER	UNO: UNLESS NOTED OTHERWISE
R: RADIUS	ABUT: ABUTMENT
CS: CREEKSIDE	T&B: TOP & BOTTOM
RS: ROADSIDE	

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6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 13e
SHOP DETAILS		PAINT MASKING	USB JOB# 200045
			58 TOTAL



DWG#: PB691891

SHOP NOTES

1. "REF" INDICATES DIMENSION HAS BEEN TRANSPOSED FROM THE CONTRACT DOCUMENTS (CD'S).
2. "CHK" INDICATES DIMENSION IS TO BE USED TO CHECK FABRICATED MEMBER AFTER LAYOUT.
3. "HOLD" INDICATES DIMENSION HAS GOVERNING PRIORITY OVER OTHER DIMENSIONS.
4. NATURAL OR MILL CAMBER SHALL BE ORIENTED UP ON ALL MEMBERS UNLESS NOTED OTHERWISE.
5. LOWER CASE PIECE MARKS INDICATE INDIVIDUAL PIECES.
6. UPPER CASE PIECE MARKS INDICATE SHIPPABLE ASSEMBLIES.
7. ALL FASTENERS INCLUDE 1 BOLT, 1 NUT & 1 WASHER UNLESS NOTED OTHERWISE.
8. GUSSET PLATE MARKINGS AT VISIBLE PLACE ON OUTSIDE OF CONNECTION.
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6/9/2020		<b>REVISED - SEE REVISION TABLE</b>	
<b>MULHOLLAND HIGHWAY OVER TRIUNFO CREEK LOS ANGELES COUNTY, CA</b>		ITEM NO.: PROJECT NO.: RDC0016378 BRIDGE NO.: 4283 STRUCTURAL FILE NO.:	
DESIGN/REVIEW: DLM/SAF	DRAW: ABJ	CHECK: JEC	SHEET 13f
SHOP DETAILS		PAINT MASKING	58 TOTAL