

ENERGY TRANSFER PARTNERS

BROWNSVILLE TERMINAL - COVER PAGE AND DRAWING INDEX

STRUCTURAL-DOCK BRIDGE

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SUN-001

BROWNSVILLE, TEXAS

J | TAM ENGINEERING

JANUARY 2021

ISSUED FOR
CONSTRUCTION

ABB.: DESCRIPTION.:

AR	ANCHOR ROD
APPROX	APPROXIMATE
ASPH	ASPHALT
BLDG	BUILDING
BM	BENCH MARK
BOC	BOTTOM OF CONCRETE
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BB	BOTTOM OF BANK
BOC	BOTTOM OF CONCRETE
BP	BASE PLATE
BRKT	BRACKET
BS	BOTH SIDES
C	CENTERLINE
C C	CENTER TO CENTER
CJ	CONTROL JOINT
CLR	CLEAR, CLEARANCE
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CTR	CENTER
CTS	CABLE TRAY SUPPORT
CU FT	CUBIC FEET
CU YD	CUBIC YARD
CVR	COVER
DET	DETAIL
DG	DIRT GRADE
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
DWL	DOWEL
E	EAST
EA	EACH
EC	EDGE OF CONCRETE
EF	EACH FACE
EG	EXISTING GRADE
EJ	EXPANSION JOINT
EL	ELEVATION
ENGR	ENGINEER
EQ	EQUAL, EQUALLY
EQUIP	EQUIPMENT
ER	EDGE OF ROAD
ESMT	EASEMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
FB	FLAT BAR
FDN	FOUNDATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FIN	FINISH
FL	FLOWLINE
FLG	FLANGE
FOC	FACE OF CONCRETE
FP	FIREPROOF
FPF	FIREPROOF TOP FLANGE EXPOSED
FS	FAR SIDE
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GAS	GAS LINE
GB	GRADE BREAK
GR	GRADE

ABB.: DESCRIPTION.:

CMCP	GALVANIZED CORRUGATED METAL PIPE
GRND	GROUND
GRGTG	GRATING
HB	HIGH BANK
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HDWL	HEADWALL
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HANDRAIL
HT	HEIGHT
ID	INSIDE DIAMETER
IJ	ISOLATION JOINT
LF	LINEAR FEET
LG	LONG, LENGTH
LP	LOW POINT
LS	LIGHT POLE
LT	LEFT
MATL	MATERIAL
MAX	MAXIMUM
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MK	MARK
MON	MONUMENT
MPS	MISCELLANEOUS PIPE SUPPORT
MSL	MEAN SEA LEVEL
N	NORTH
NG	NATURAL GROUND
NS	NEAR SIDE
NTS	NOT TO SCALE
O C	ON CENTER
O O	OUT TO OUT
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP H	OPPOSITE HAND
PERP	PERPENDICULAR
PJF	PREFORMED JOINT FILLER
PL	PLATE
PLTF	PLATFORM
POB	POINT OF BEGINNING
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PP	POWER POLE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
PWR LN	POWER LINE
PRELIM	PRELIMINARY
PROP.	PROPOSED
PS	PIPE SUPPORT
R	RISER
RAD	RADIUS
RB	REST BLOCK
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REBAR	REINFORCING BAR
REF	REFERENCE
REQ'D	REQUIRED
R.O.W.	RIGHT-OF-WAY
RT	RIGHT
L	ROAD CL RADIUS ARC LENGTH
S	SOUTH
SCH	SCHEDULE
SHT	SHEET
SIM	SIMILAR
SQ	SQUARE

ABB.: DESCRIPTION.:

SQ FT	SQUARE FEET
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STM	STORM SEWER LINE
STIFF	STIFFENER
STL	STEEL
T&B	TOP & BOTTOM
TAN	TANGENT
TBM	TEMPORARY BENCH MARK
TEMP	TEMPORARY
THK	THICK, THICKNESS
THRD	THREAD
THRU	THROUGH
TOE	TOE OF SLOPE
TB	TOP OF BANK
TOC	TOP OF CONCRETE
TOCS	TOP OF CRUSHED STONE
TODG	TOP OF DIRT GRADE
TOG	TOP OF GROUT
TOS	TOP OF STEEL
TYP	TYPICAL
U G	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WEST
W	WITH
W O	WITH OUT
WF	WIDE FLANGE
WL	WATERLINE
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

STEEL NOTES:

1. STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF AISC PUBLICATION "MANUAL OF STEEL CONSTRUCTION".
2. CONTRACTOR SHALL FURNISH STRUCTURAL STEEL SHOP DRAWINGS, COMPLETE WITH INDIVIDUAL PIECE MARKS AND ERECTION DRAWINGS, FOR APPROVAL PRIOR TO FABRICATION.
3. PLATFORM SECTIONS TO BE FABRICATED AS INDIVIDUAL SHOP WELDED ASSEMBLIES TO GREATER EXTENT POSSIBLE. CONTINUOUS 3/16" MINIMUM SIZED FILLETS WELDS TO BE USED AT ALL CONNECTIONS UNLESS NOTED OTHERWISE
4. BEAM CONNECTIONS SHALL BE DESIGNED TO SUPPORT ONE HALF THE TOTAL ALLOWABLE UNIFORM LOAD CAPACITY SHOWN IN PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION, FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED
5. BRACING CONNECTIONS SHALL BE DESIGNED TO FULLY DEVELOP THE BRACING MEMBER IN COMPRESSION AND FOR A TENSION LOAD EQUAL IN MAGNITUDE TO THE MAXIMUM COMPRESSION CAPACITY OF THE MEMBER. HOWEVER, A MINIMUM OF 2 BOLTS IN SINGLE SHEAR & 3/8" THICK GUSSET PLATE SHALL BE USED.
6. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36/A6/A992, UNLESS OTHERWISE NOTED. STEEL PIPE SECTIONS USED AS STRUCTURAL SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A53, GRADE B, HAVING A MINIMUM TENSILE STRENGTH OF 60,000 PSI AND A MINIMUM YIELD POINT OF 36 KSI.
7. UNLESS OTHERWISE INDICATED, ALL FILLET WELDS SHALL BE 3/16" MINIMUM IN SIZE.
8. ALL STRUCTURAL STEEL FABRICATION SHALL BE IMPRINTED WITH THE APPROPRIATE MARK NUMBER USING A STEEL STENCIL.
9. ALL STRUCTURAL STEEL & BOLTS SHALL BE GALVANIZED IN ACCORDANCE WITH GALVANIZED NOTES, UNLESS OTHERWISE MARKED.
10. ALL BOLT HOLES SHALL BE REQUIRED TO REMOVE ANY EXCESS COATING BUILD-UP TO ALLOW FOR PROPER INSTALLATION OF BOLTS. PROPER COATING THICKNESS SHALL REMAIN INTACT.
11. STRUCTURES ARE DESIGNATED AS STABLE UNTIL AFTER ALL COMPONENT PARTS ARE IN PLACE. EACH CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING, BRACING AND INSTALLATION AIDS TO ENSURE SAFETY AND STABILITY DURING ERECTION FOR ANY COMPONENT BEING INSTALLED.
12. ALL BOLTS ARE TO BE 3/4" DIA. ASTM A325, HEAVY HEX, UNLESS NOTED OTHERWISE.
13. CONTRACTOR SHALL PROVIDE ALL HILTI HIT-RE 500 ANCHORS AND U-BOLTS WHEREVER SPECIFIED ON THE DRAWING.

GALVANIZING NOTES:

- A. BOLTS
1. HOT-DIP GALVANIZING SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF ASTM DESIGNATION A153 "STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE" AND A385 "STANDARD PRACTICE FOR PROVIDING HIGH-QUALITY ZINC COATINGS (HOT-DIP)".
 2. ALL THREADS SHALL BE CLEANED WITH A THREAD CHASER AFTER GALVANIZING.
- B. FABRICATED ASSEMBLIES
1. FABRICATION WELDS SHALL BE SAND BLASTED TO NEAR-WHITE METAL (SSPC-SP-10) PRIOR TO GALVANIZING.
 2. HOT-DIP GALVANIZING SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF ASTM DESIGNATION A1 23" STANDARD SPECIFICATION FOR ZINC (HOT -DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS AND A385 "STANDARD PRACTICE FOR PROVIDING HIGH QUALITY ZINC COATINGS (HOT-DIP)".
 3. ALL FIELD WELDS MADE ON GALVANIZED MATERIALS SHALL BE CLEANED TO NEAR-WHITE METAL AND COATED WITH 3 MILS. OF "COLD-GALV" (PRESSURIZED SPRAY CONTAINER).

CONCRETE AND CONCRETE CONSTRUCTION:

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, LATEST EDITION, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. UNLESS NOTED ON DRAWING, CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AND SHALL CONFORM TO THE LATEST EDITION OF ASTM C150 FOR PORTLAND CEMENT AND ASTM C33, LATEST EDITION FOR AGGREGATE. IN ORDER TO PROVIDE RESISTANCE TO FREEZE-THAW DETERIORATION, PROVIDE 5 TO 7 % ENTRAINED AIR AND A WATER/CEMENT RATIO OF 0.50 OR LESS FOR EXPOSED CONCRETE AND 0.45 RATIO OR LESS FOR CONCRETE EXPOSED TO DEICERS, WITH THE COMPANY APPROVAL.
3. EXPOSED EDGES OF CONCRETE SHALL HAVE A 1" x 45° CHAMFER TO 6" BELOW GRADE UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS.
4. CONTRACTOR TO VERIFY VENDOR EQUIPMENT DRAWINGS FOR ANCHOR ROD SIZE AND SPACING BEFORE POURING CONCRETE.
5. IN PLACEMENT OF CONCRETE INTO FORMS, A VERTICAL DROP OF 3'-0" SHALL NOT BE EXCEEDED.
6. ANY EXCESS CONCRETE OR CHUTE MATERIAL BE DEPOSITED AT A SITE DESIGNATED BY THE COMPANY REPRESENTATIVE. COVER ROADS OR BORROW DITCHES SHALL NOT BE USED FOR THIS PURPOSE.
7. NEW CONCRETE SHALL HAVE FULL 7 DAYS OF CURE TIME IN ACCORDANCE WITH ACI 302. PRIOR TO RECEIVING ANY LOADING UNLESS AUTHORIZED BY THE FIELD ENGINEER.
8. THE FINISHED SURFACE OF ALL EXPOSED CONCRETE WALK SURFACE SHALL BE GIVEN A "LIGHT BROOM" FINISH.
9. ALL VERTICAL SURFACES ABOVE GRADE SHALL BE FREE OF HONEYCOMB AND RECEIVE A GROUT RUBBED FINISH.
10. CONCRETE WORK PERFORMED BELOW 40°F SHALL BE DONE IN ACCORDANCE WITH ACI 306.
11. CONCRETE WORK PERFORMED ABOVE 90°F SHALL BE DONE IN ACCORDANCE WITH ACI 305.
12. FLOWABLE FILL SHALL BE IN ACCORDANCE WITH ACI 229R, LATEST EDITION, "CONTROLLED LOW-STRENGTH MATERIAL". IT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 300 PSI IN ACCORDANCE WITH ASTM D4832 AND SHALL HAVE A MINIMUM FLOWABILITY OF 6 INCHES IN ACCORDANCE WITH ASTM D6103.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM A615, LATEST REVISION, GRADE 60.
2. REBAR SPICES SHALL BE MADE BY LAPPING BARS PER MINIMUM LAP LENGTHS GIVEN IN ACI 318 UNO ON DESIGN DRAWINGS. CLASS B SPICES SHALL BE USED. REBAR SHALL BE SUPPORTED OFF OF GROUND BY APPROVED CONCRETE BLOCKS OR METAL, FACTORY-MADE BAR SUPPORTS (CLASS 1 OR 2)

CLASS B CONTACT LAP SPLICE LENGTH FOR MINIMUM 4,000 PSI CONCRETE, MINIMUM 2
CONCRETE COVER AND BAR SPACINGS NOT LESS THAN 6" C/C.

	BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH (INCHES)	TOP BARS	15	20	24	29	42	48	60	74	89
	OTHER BARS	12	15	19	23	33	37	46	57	68

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW THE BAR.

ALL HORIZONTAL BARS IN CONCRETE WITH A VERTICAL DIMENSION MORE THAN 15" ARE CONSIDERED TO BE TOP BARS, EXCEPT FOR THE BOTTOM REBAR MAT, IF PLACED WITHIN 12" OF THE BOTTOM SURFACE OF CONCRETE ALL VERTICAL BARS ARE "OTHER BARS".

3. ALL REINFORCING STEEL SHALL BE BENT AND CUT BY CONTRACTOR AS SHOWN IN DRAWINGS.
4. REINFORCING BARS SHALL BE SUPPORTED, SPACED AND ACCURATELY SECURED IN PLACE BY BOLSTERS, SPACERS OR CHAIRS IN ACCORDANCE WITH SPECIFICATIONS FOR PLACING REINFORCEMENT AND FOR PLACING ACCESSORIES MEETING THE REQUIREMENTS OF THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING SHALL BE AS FOLLOWS:
 - A. CONCRETE DEPOSITED DIRECTLY AGAINST THE GROUND: 3 INCHES CLEAR.
 - B. CONCRETE EXPOSED TO EARTH OR WEATHER AFTER REMOVAL OF FORMS: 2 INCHES CLEAR FOR BARS #4 AND LARGER AND 1½ INCHES CLEAR FOR SMALLER BARS.
6. EMBEDDED STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, LATEST EDITION.

NON-SHRINKING GROUTING:

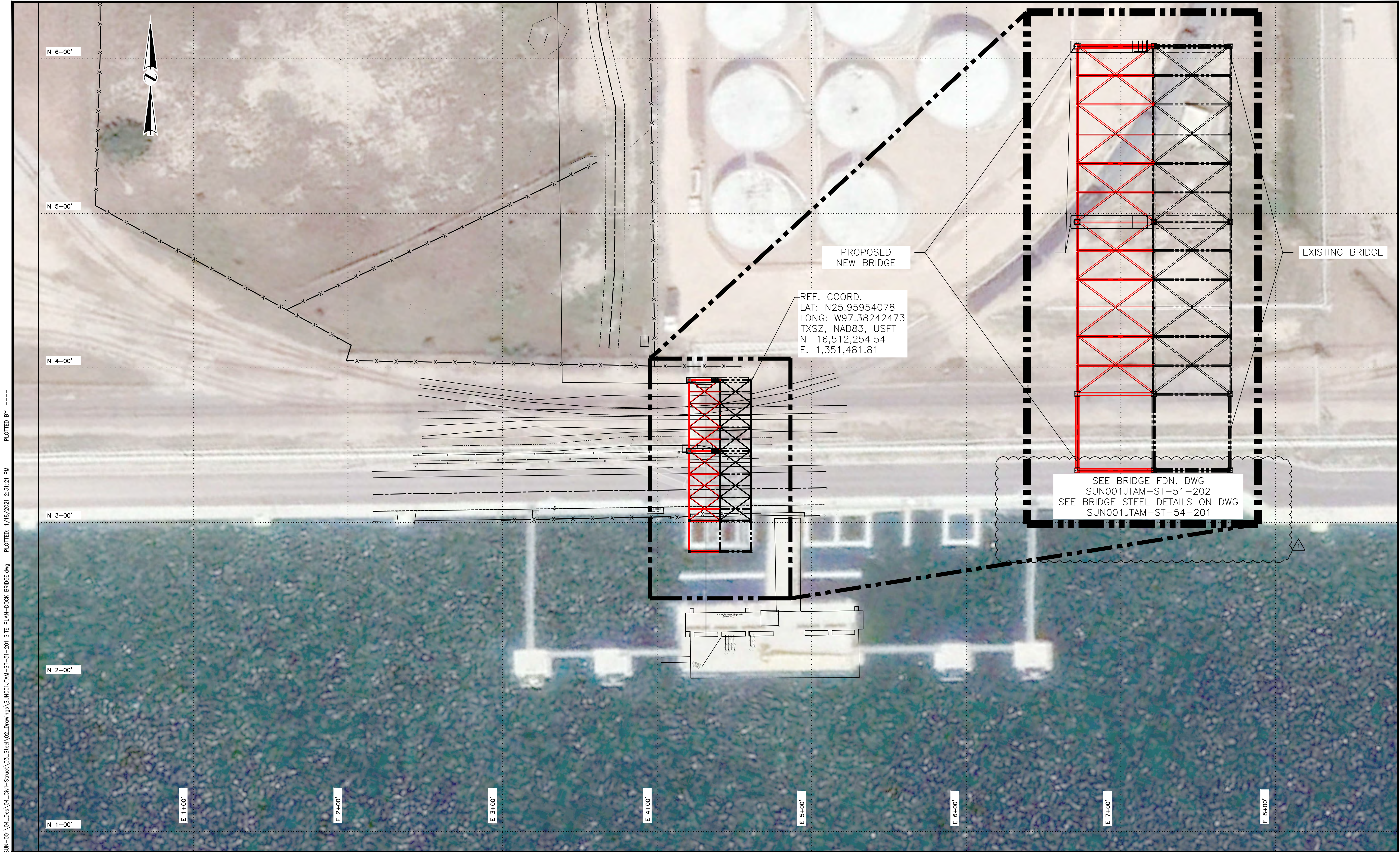
1. GROUT SHALL BE AS PER MECHANICAL SPECIFICATIONS UNLESS NOTED OTHERWISE.
2. GROUTING MATERIAL FOR MACHINERY AND EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND SHALL BE EPOXY GROUT.
3. GROUTING FOR PIPE SUPPORTS AND GENERAL PURPOSE SHALL BE CEMENTITIOUS UNLESS NOTED OTHERWISE ON DESIGN DRAWING. CEMENTITIOUS GROUT SHALL CONFORM TO THE SPECIFICATIONS OF ASTM C-1107 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI.
4. GROUT SHALL BE INSTALLED PER API RECOMMENDED PRACTICE 686, UNLESS NOTED OTHERWISE.
5. GROUT SHALL HAVE A 1" x 45° CHAMFER UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS.

ANCHOR RODS:

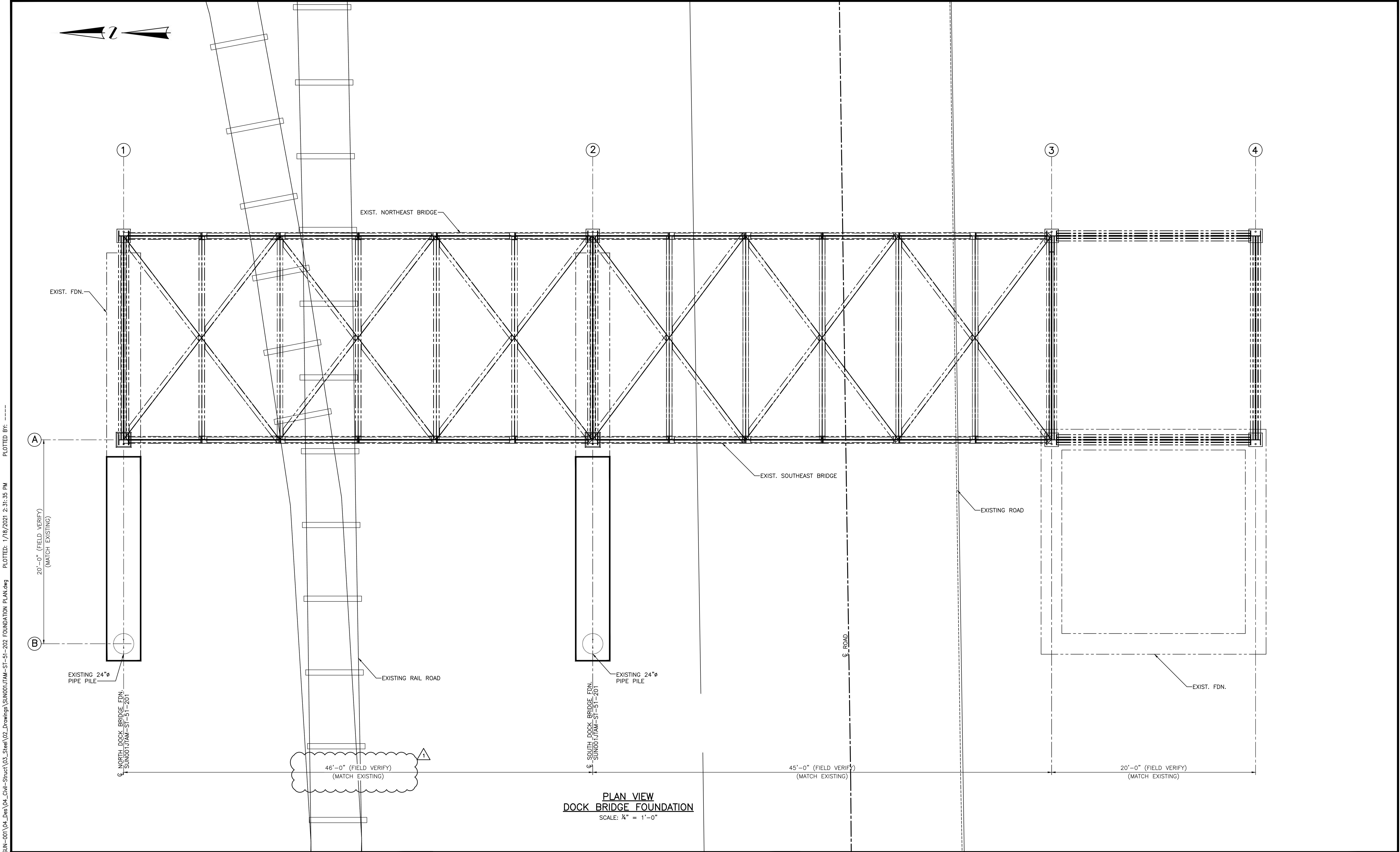
1. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 36 WITH UNC-2A THREADS UNLESS NOTED OTHERWISE.
2. HEAVY HEX NUTS TO BE ASTM A563 GRADE DH OR ASTM A193 GRADE 2H.
3. STANDARD FLAT WASHER ARE TO BE ASTM F844 OR ASTM F436 (TYPE 1) USE ON BASE PLATE THICKNESS LESS THAN 1/4".
4. PLATE WASHERS ARE TO BE USED ON BASE PLATE THICKNESS GREATER THAN 1/4", SEE CHART BELOW.
5. HARDENED STEEL BEVELED WASHER ARE TO BE ASTM F436 USE ON ALL BEAM FLANGES AND CHANNEL FLANGES UNLESS NOTED OTHERWISE.
6. ANCHOR RODS & HARDWARE SHALL BE GALVANIZED AS PER ASTM AS APPLICABLE UNLESS NOTED OTHERWISE.

PLATE WASHER			
ANCHOR ROD Ø	WASHER I.D.	WASHER O.D. (MIN)	WASHER THICKNESS (MIN)
¾"Ø	1⅜"	2"	¼"
⅞"Ø	1½"	2½"	⅝"
1"Ø	1⅞"	3"	¾"
1¼"Ø	1⅞"	3"	½"
1½"Ø	1⅞"	3½"	½"
1¾"Ø	1⅞"	4"	⅝"
2"Ø	2⅞"	5"	¾"
2½"Ø	2⅞"	5½"	⅞"

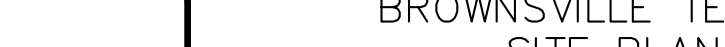
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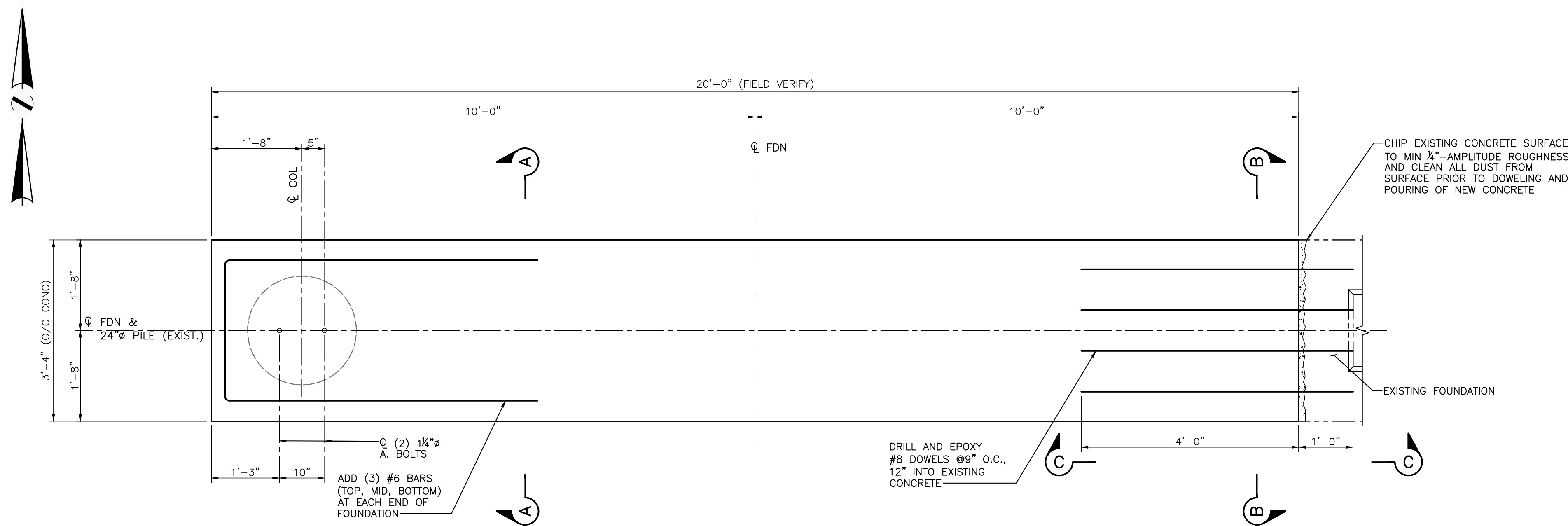
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											DRAWN	JMOORE	12/09/20						
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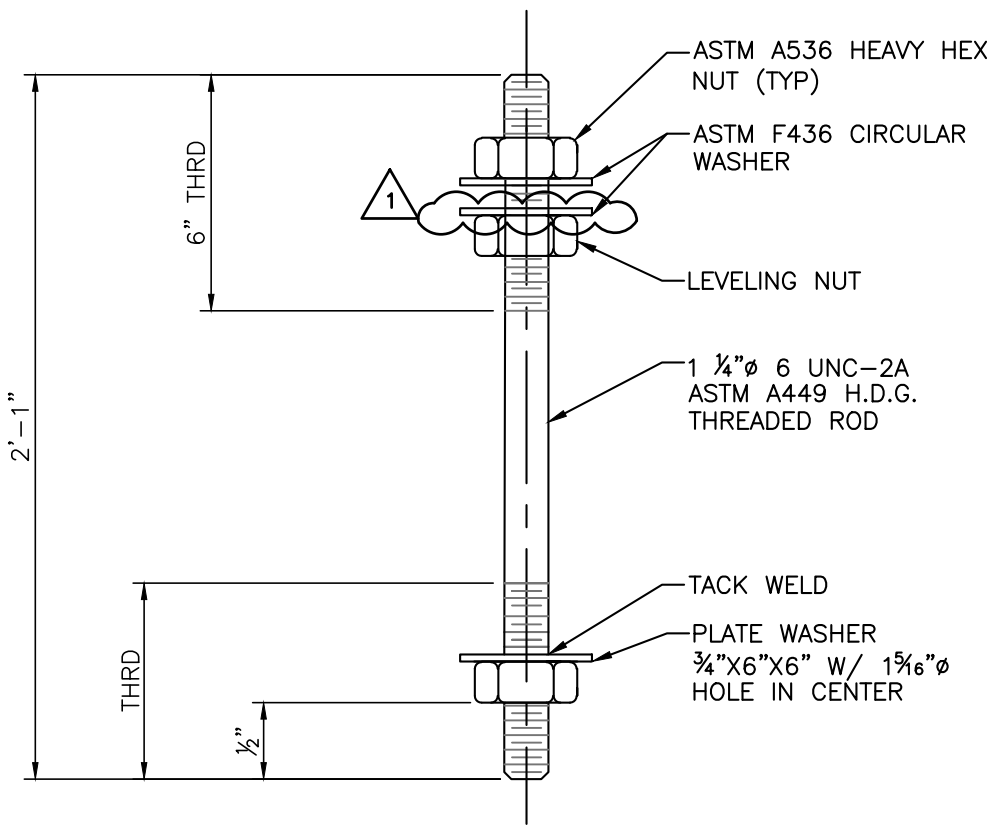
PLAN VIEW
DOCK BRIDGE FOUNDATION
SCALE: 1/4" = 1'-0"

FILENAME: C:\Projects\Sunoco\	REFERENCE DRAWINGS									FACILITY CODE OR ACCOUNT NO:			BROWNSVILLE TERMINAL SITE PLANS FOUNDATION PLAN		WBS NO.	
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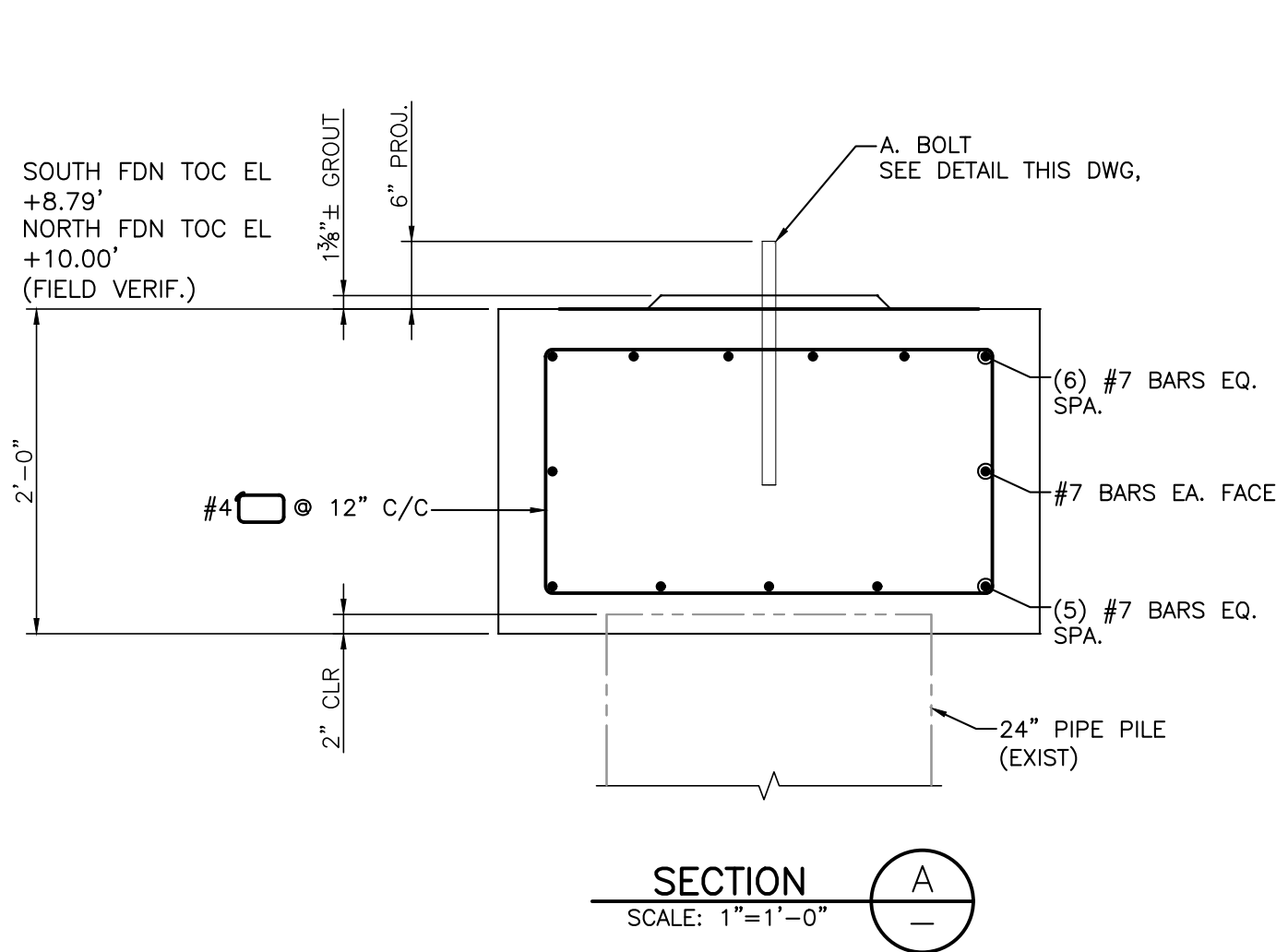
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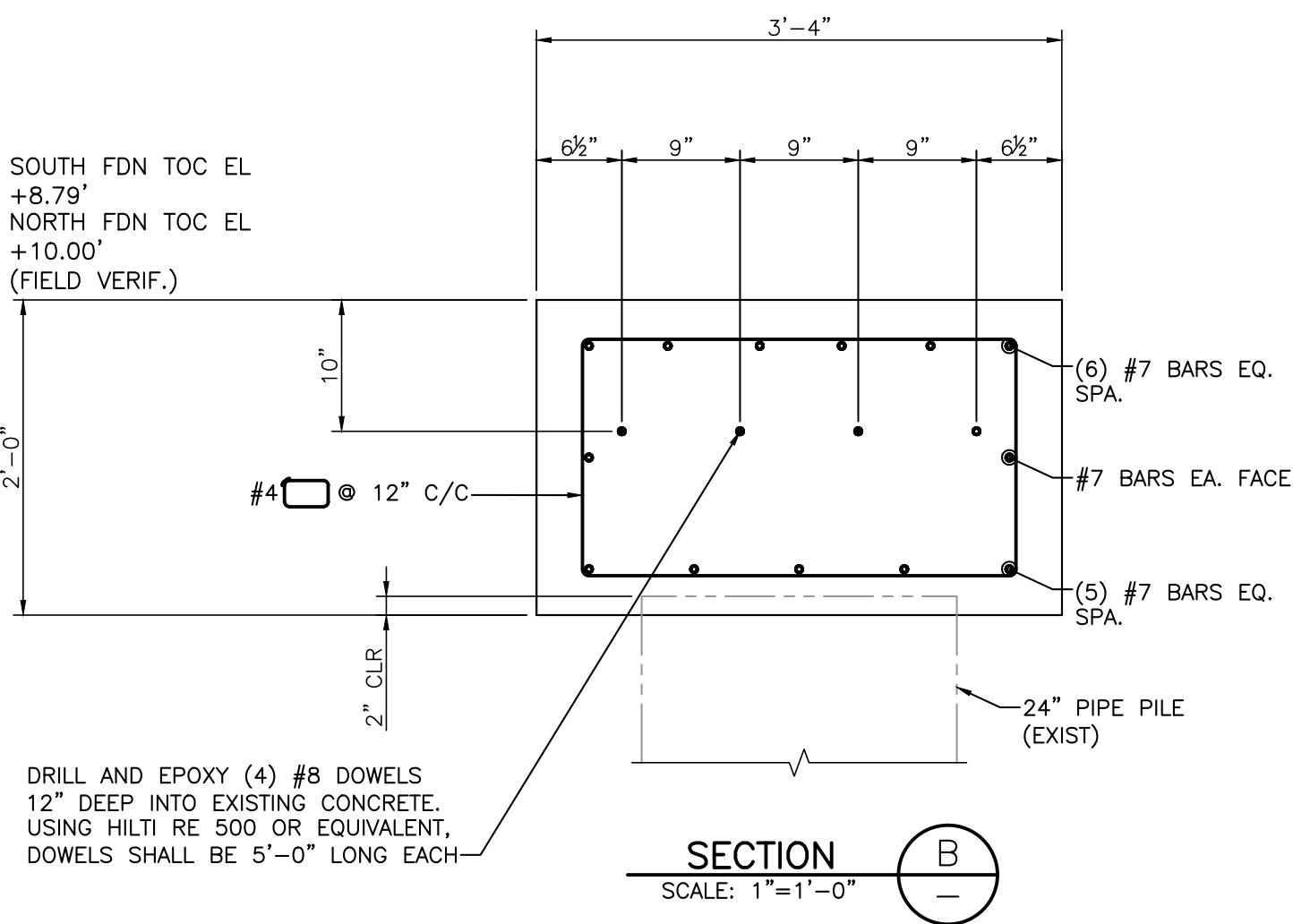
PLAN VIEW
NORTH & SOUTH DOCK BRIDGE FOUNDATIONS
SCALE: 1/8" = 1'-0"
(FOR LOCATION AND ORIENTATION SEE DWG
SUN001JTAM-ST-51-202)
(2) REQ'D.



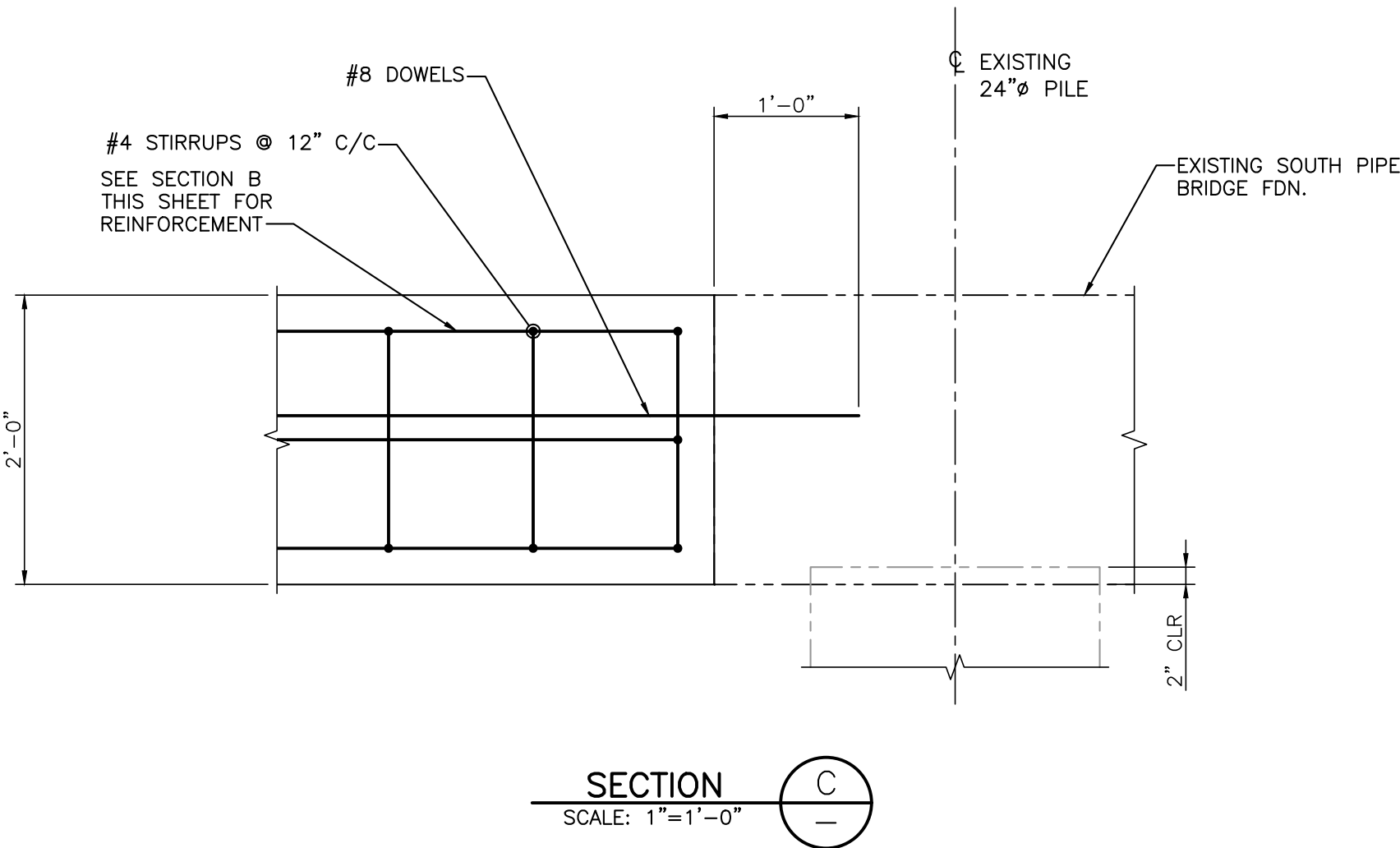
ANCHOR BOLT DETAIL
SCALE: NTS



SECTION A
SCALE: 1"=1'-0"



SECTION B
SCALE: 1"=1'-0"



SECTION C
SCALE: 1"=1'-0"

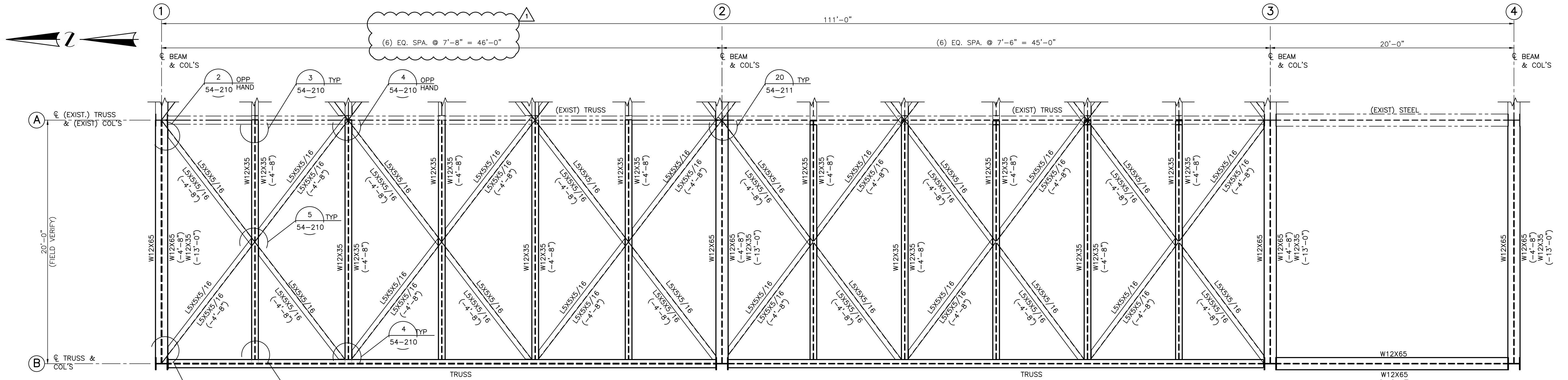
NOTES:

- FOR GENERAL NOTES SEE DWG. SUN001JTAM-ST-50-202
- CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS AND COORDINATES PRIOR TO FABRICATION AND INSTALLATION.
- WATER SHALL BE DIVERTED AWAY FROM FOUNDATION. NO WATER PONDING WILL BE ALLOWED NEAR FOUNDATION.
- TOC SHALL BE VERIFIED BY CONTRACTOR AND APPROVED BY PORT OF BROWNSVILLE FIELD REPRESENTATIVE PRIOR TO POURING CONCRETE FOUNDATIONS.

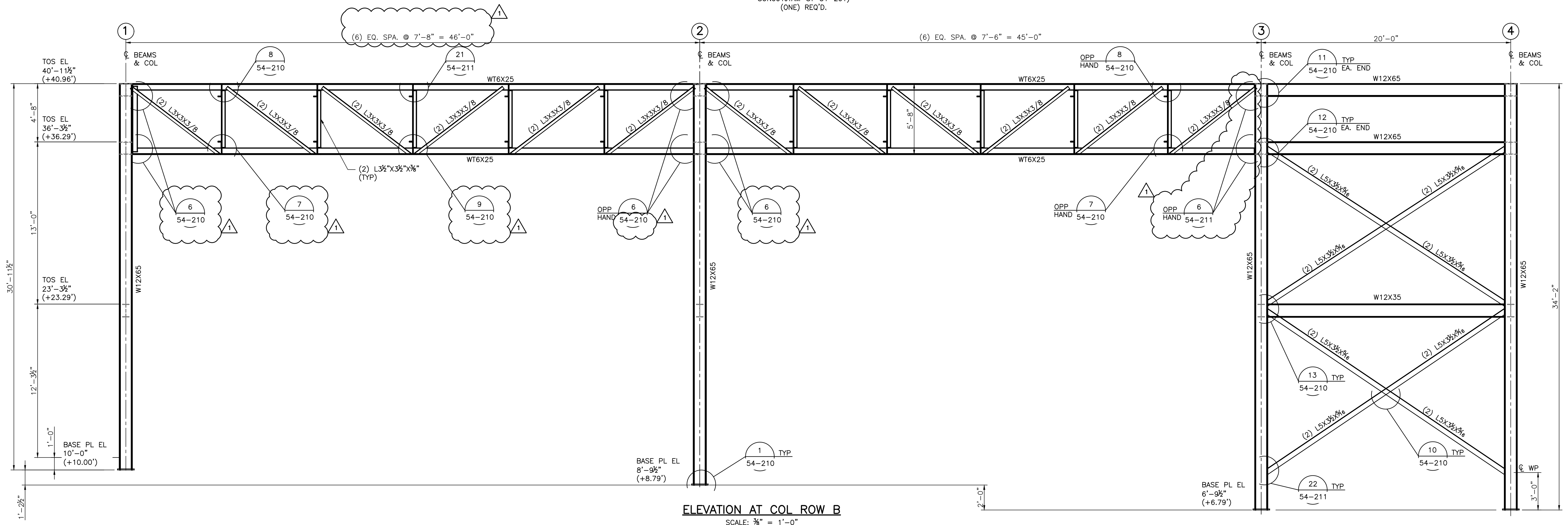
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REV		DESCRIPTION		BY		DATE		CHK'D		APP'D		SCALE: NONE				CAMERON COUNTY, TEXAS	
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ISSUED FOR
CONSTRUCTION

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PLAN VIEW
DOCK BRIDGE AT TOS EL. 40'-11½" (+40.96')
SCALE: ½" = 1'-0"
(FOR LOCATION AND ORIENTATION SEE DWG
SUN001JTAM-ST-51-201)
(ONE) REQ'D.



NOTES:

1. FOR GENERAL NOTES SEE DWG. SUN001JTAM-ST-50-202
2. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS AND COORDINATES PRIOR TO FABRICATION AND INSTALLATION.
3. ALL STEEL SHALL BE GALVANIZED.

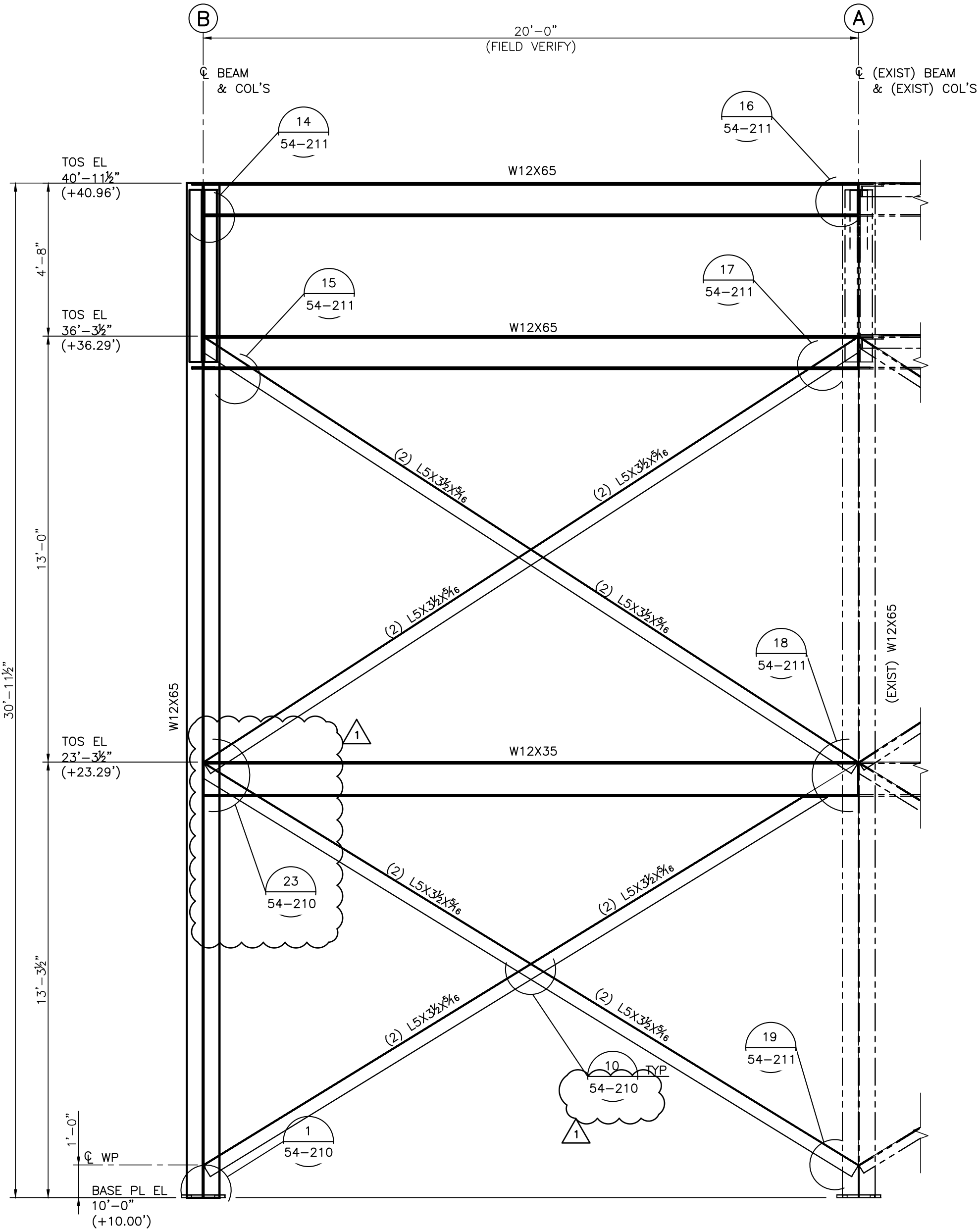
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0				ISSUED FOR CONSTRUCTION				JM		12/17/20		LB		CH		APPROVED		CH							
REV		DESCRIPTION						BY		DATE		CHK'D		APP'D		SCALE: NONE									
																		CAMERON COUNTY, TEXAS				DRAWING NO. SUN001JTAM-ST-54-201		REV. NO. 1	

ISSUED FOR
CONSTRUCTION

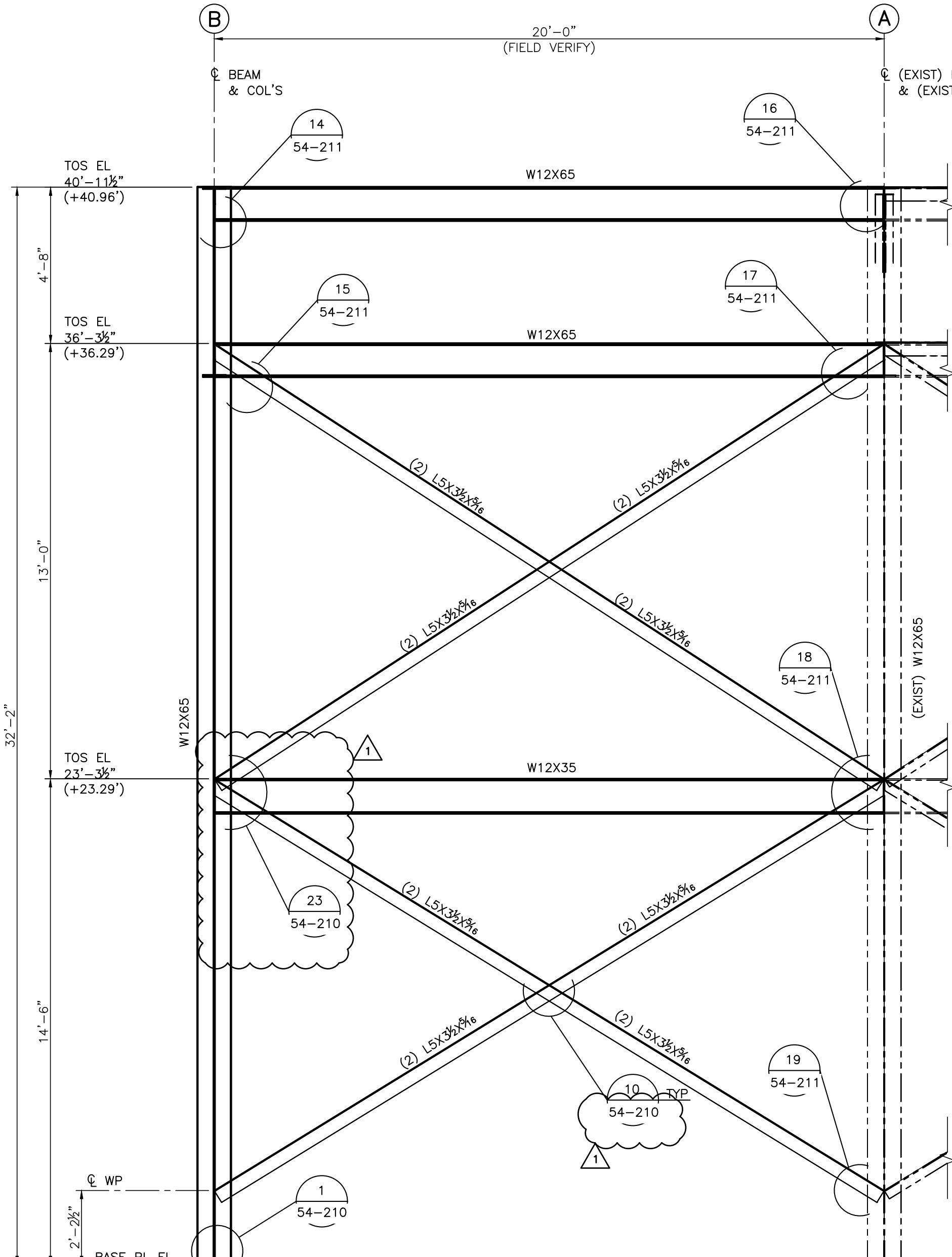
CAMERON COUNTY, TEXAS

SUN001JTAM-ST-54-201
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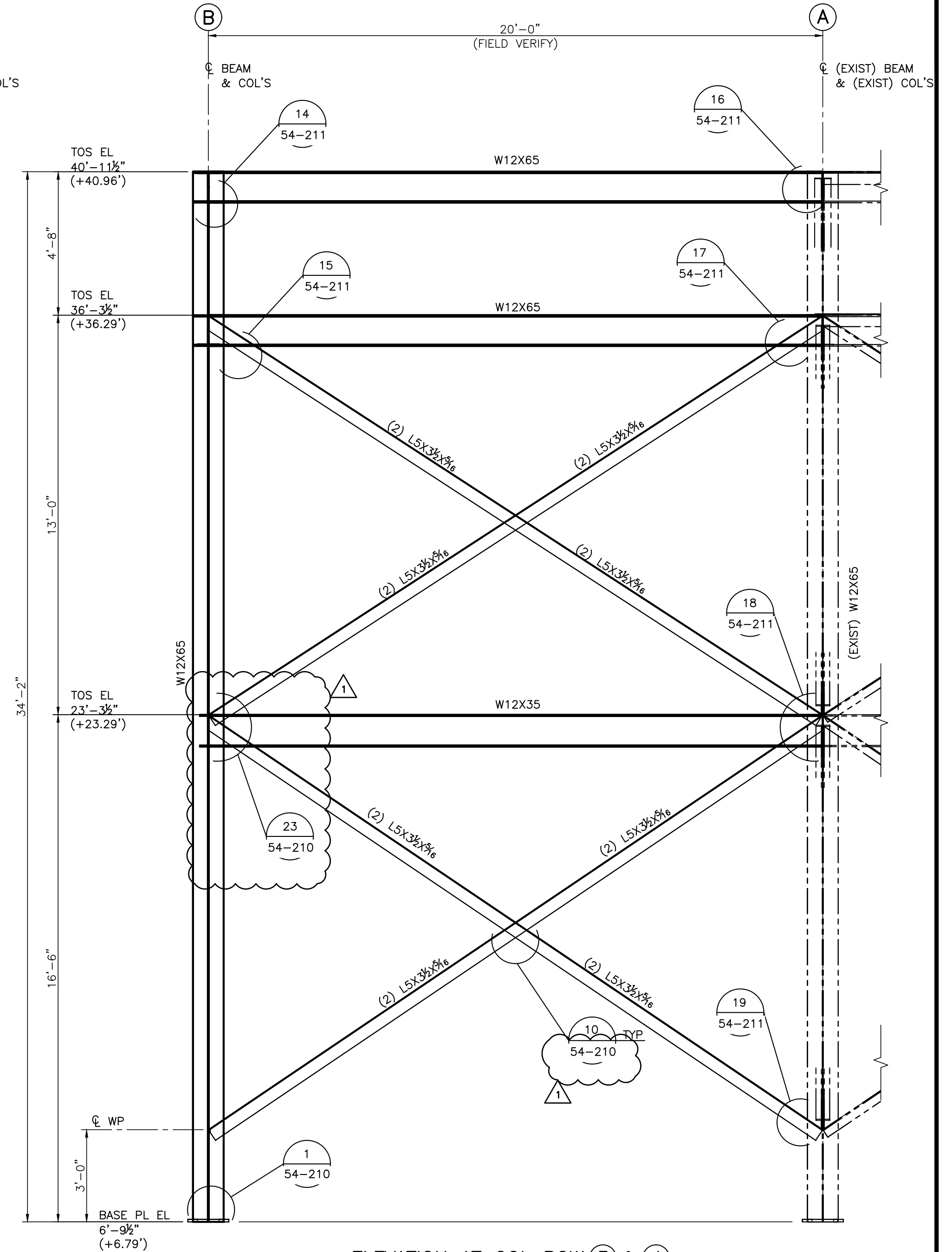
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ELEVATION AT COL ROW ①
SCALE: 3/8" = 1'-0"



ELEVATION AT COL ROW ②
SCALE: 3/8" = 1'-0"



ELEVATION AT COL ROW ③ & ④
SCALE: 3/8" = 1'-0"

NOTES:

1. FOR GENERAL NOTES SEE DWG. SUN001JTAM-ST-50-202
2. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS AND COORDINATES PRIOR TO FABRICATION AND INSTALLATION.
3. ALL STEEL SHALL BE GALVANIZED.

REFERENCE DRAWINGS

ISSUED FOR
CONSTRUCTION

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE	NONE
1	REVISED AS NOTED	JM	01/18/21	CK	CH		
0	ISSUED FOR CONSTRUCTION	JM	12/17/20	LB	CH		

FACILITY CODE OR ACCOUNT NO.		
CONSTRUCTION YEAR:		
DRAWN	BY	DATE
CHECK	JMOORE	12/09/20
APPROVED	CH	

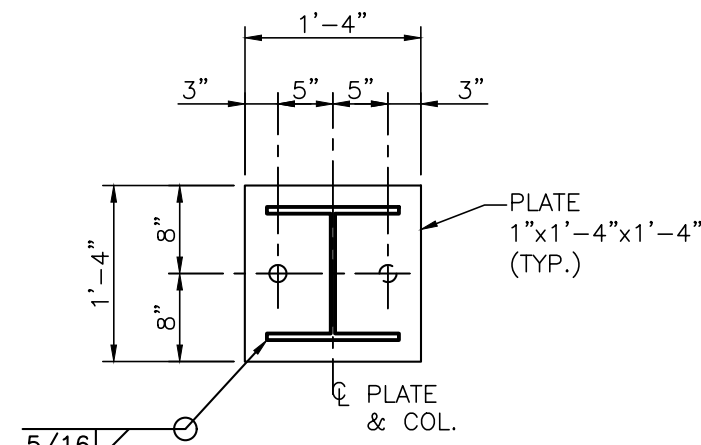
SUNOCOLP®

BROWNSVILLE TERMINAL
STEEL DETAILS
DOCK BRIDGE-STEEL ELEVATIONS

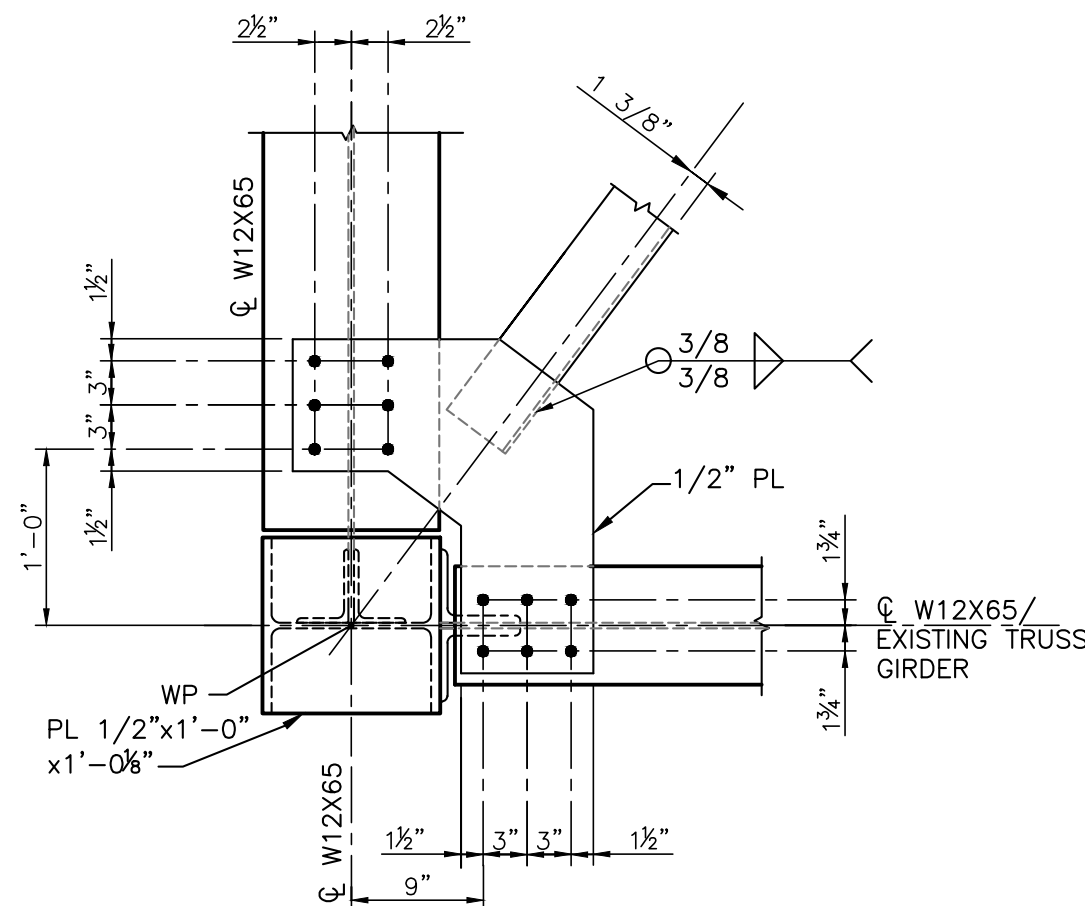
CAMERON COUNTY, TEXAS

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OLD DRAWING NO.	
DRAWING NO.	REV. NO.
SUN001JTAM-ST-54-202	1

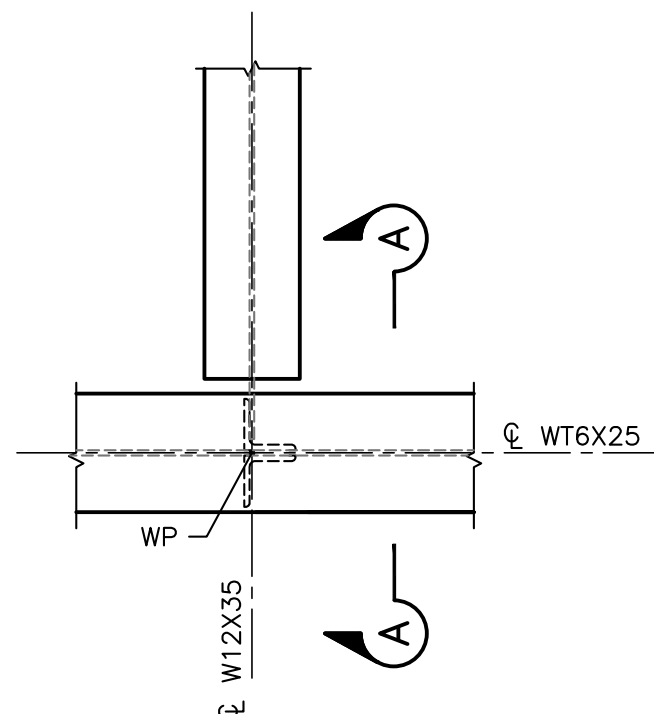
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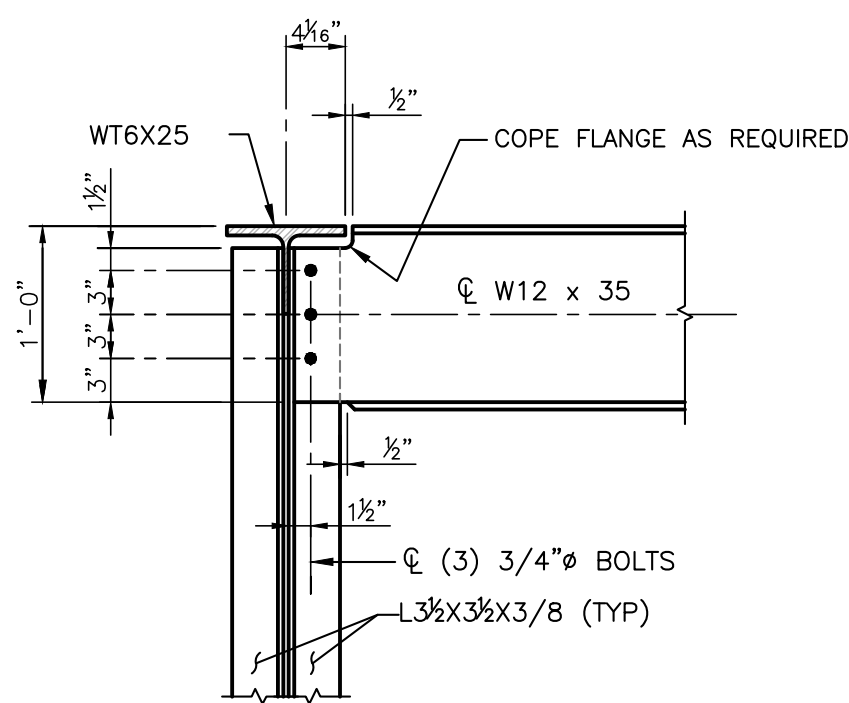
DETAIL 1
SCALE: 1"=1'-0" 54-201 & 202



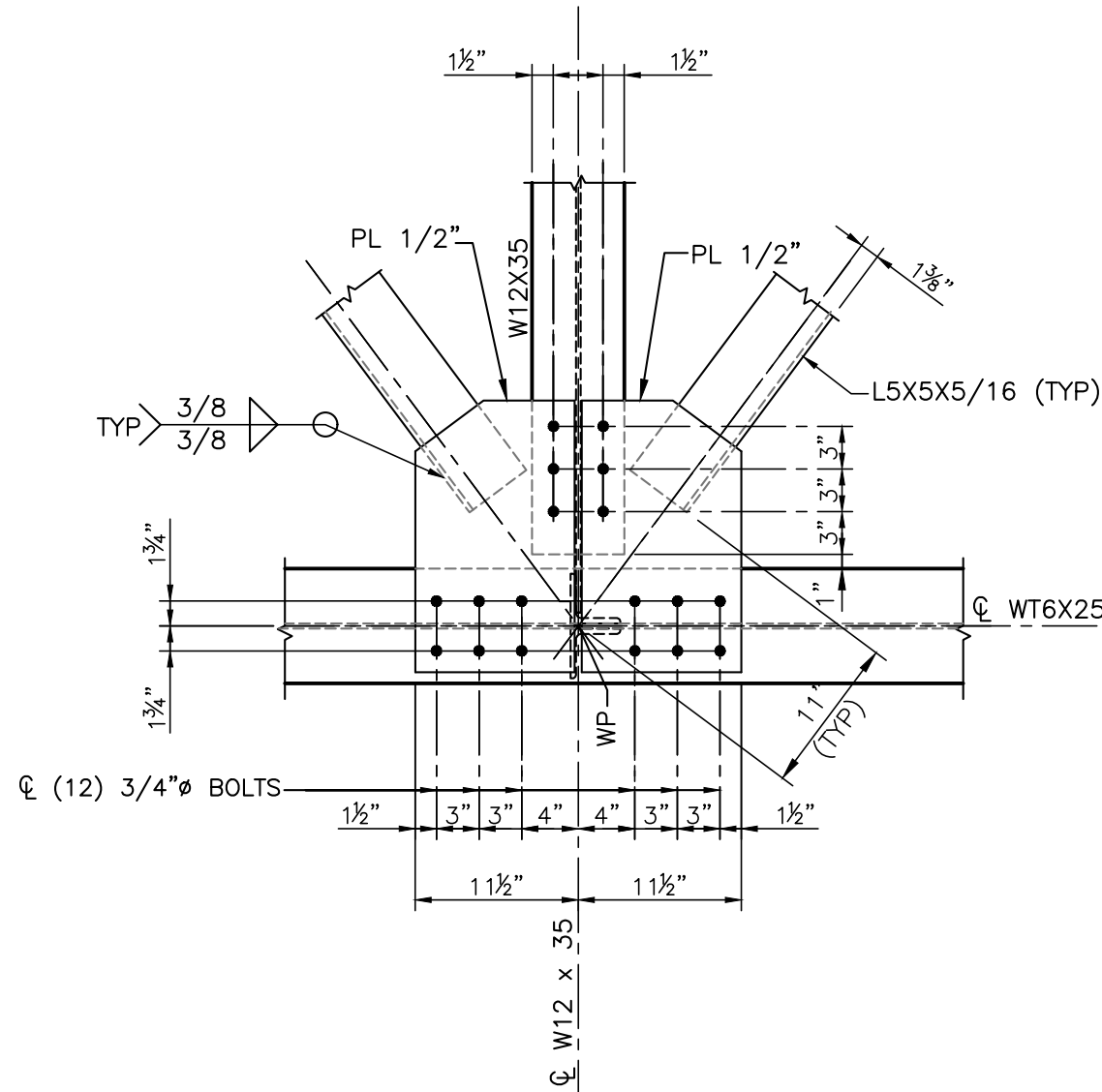
DETAIL 2
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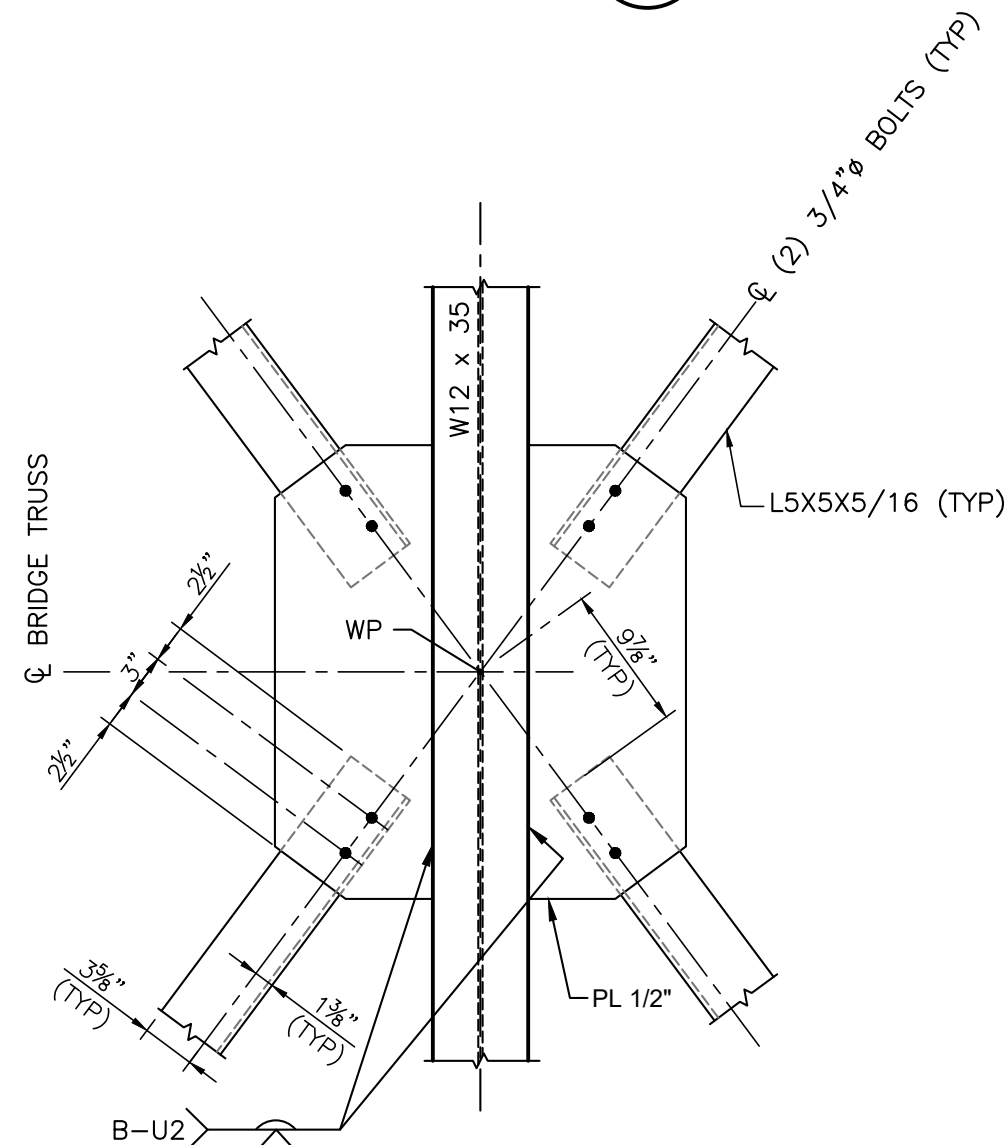
DETAIL 3
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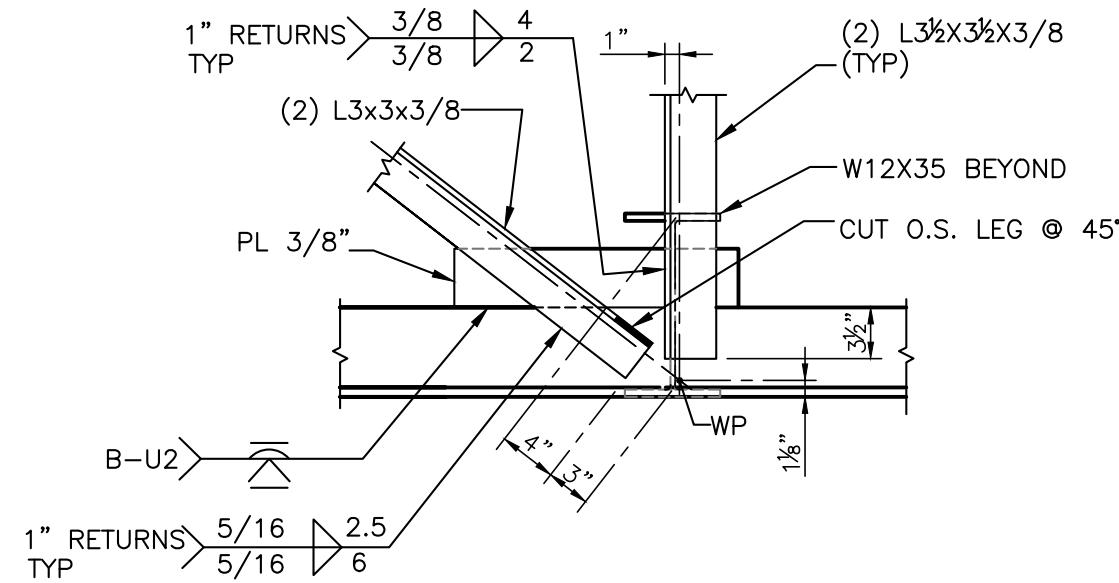
SECTION A
SCALE: 1"=1'-0" 54-201



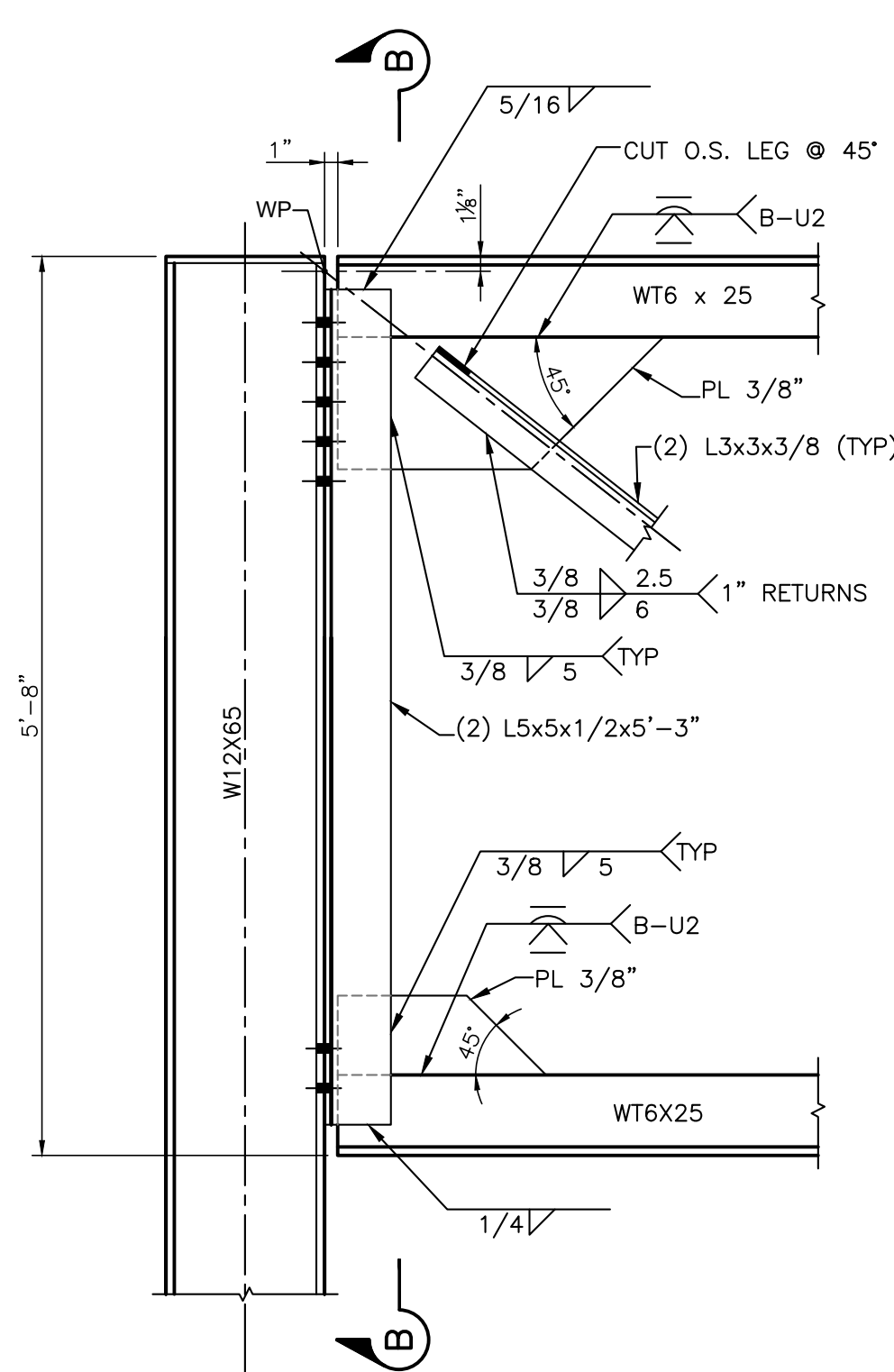
DETAIL 4
SCALE: 1"=1'-0" 54-201



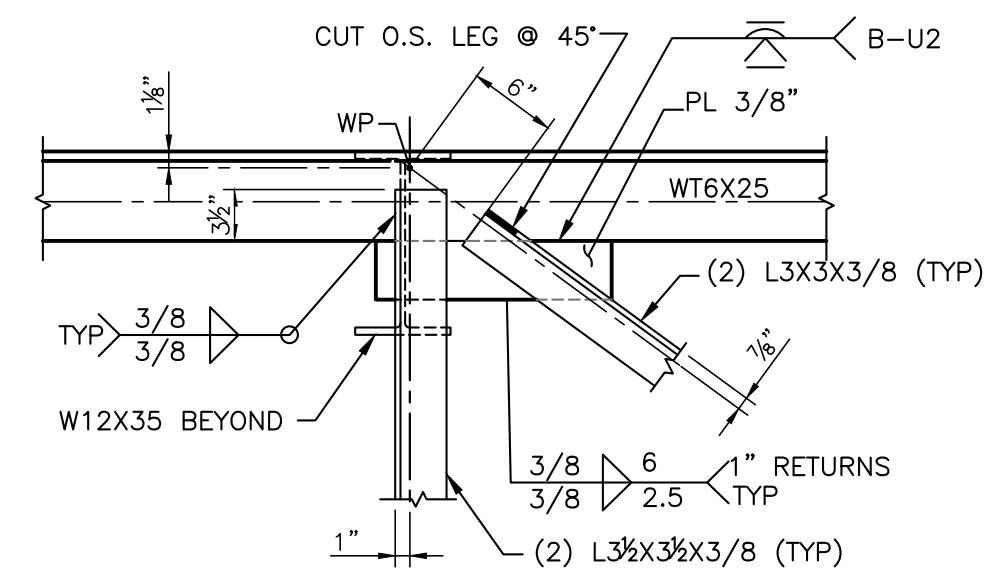
DETAIL 5
SCALE: 1"=1'-0" 54-201



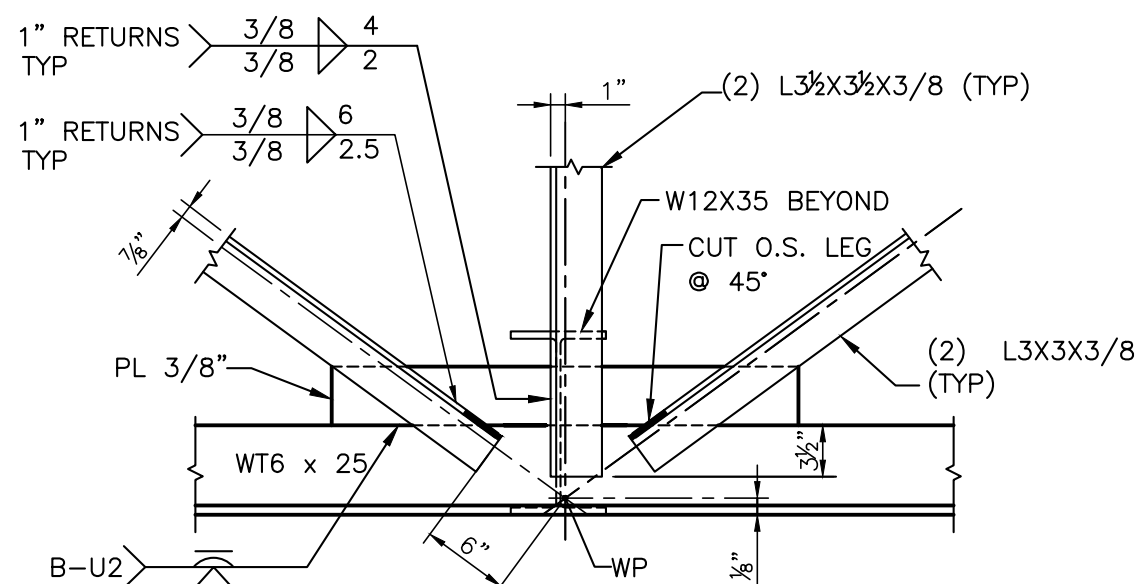
DETAIL 7
SCALE: 1"=1'-0" 54-201



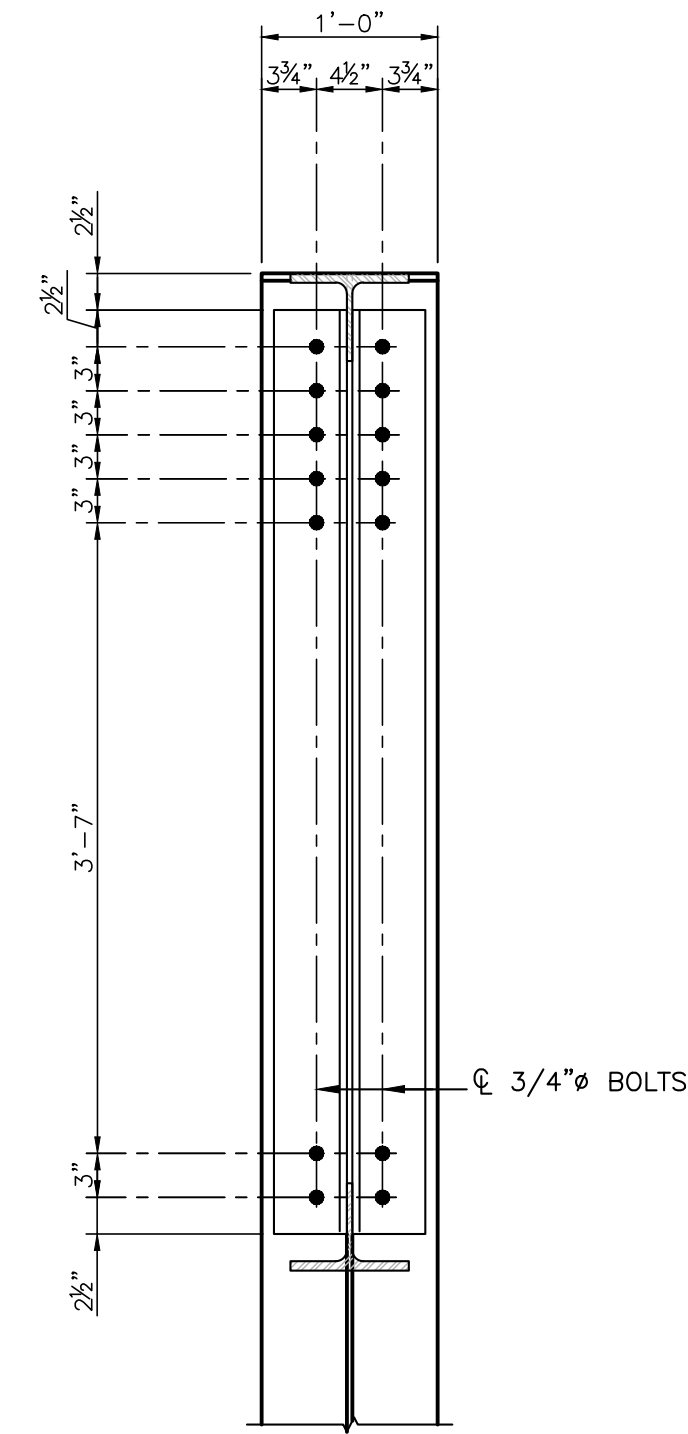
DETAIL 6
SCALE: 1"=1'-0" 54-201



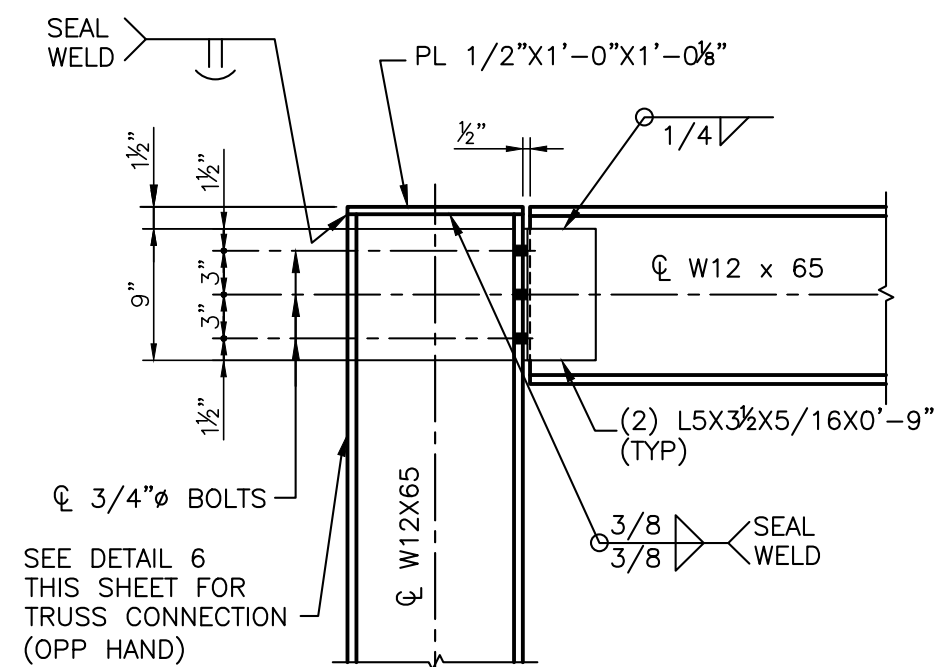
DETAIL 8
SCALE: 1"=1'-0" 54-201



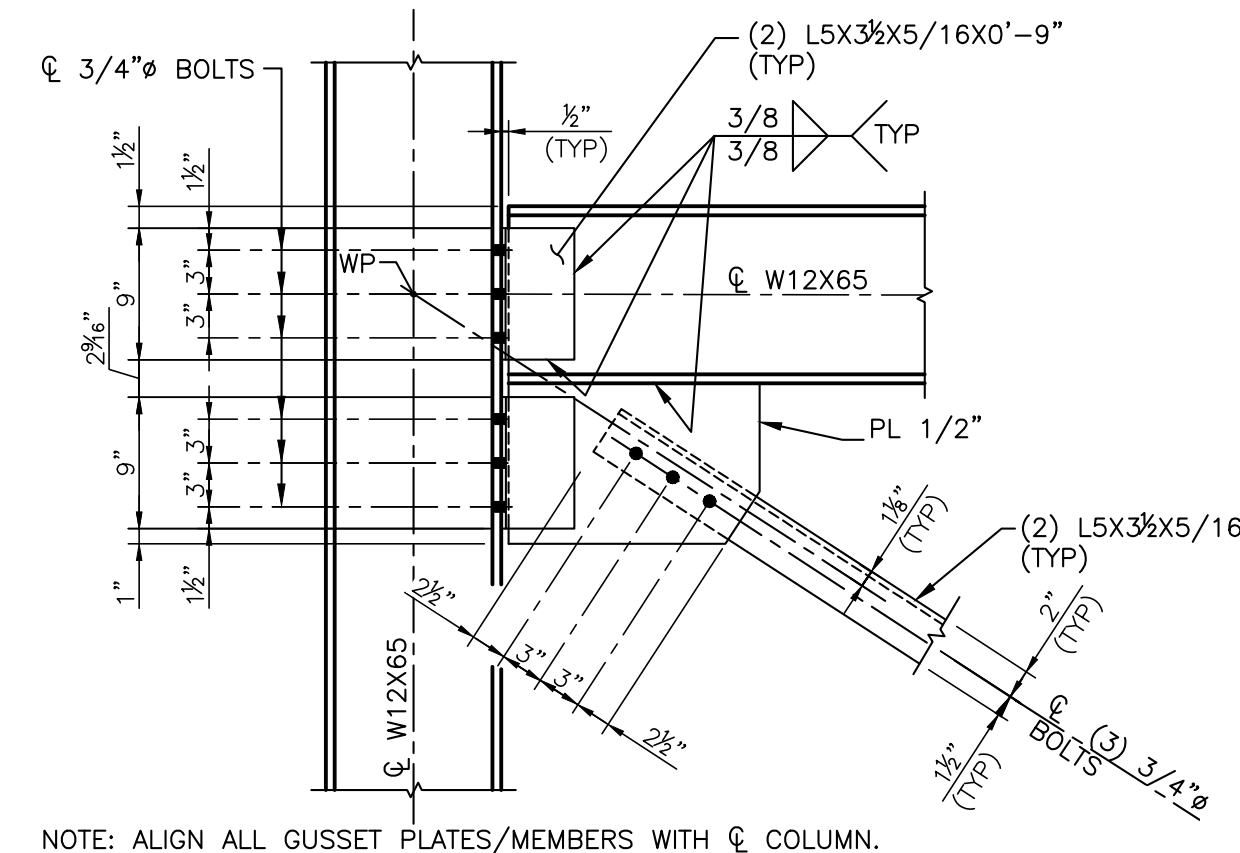
DETAIL 9
SCALE: 1"=1'-0" 54-201



SECTION B
SCALE: 1"=1'-0" 54-201

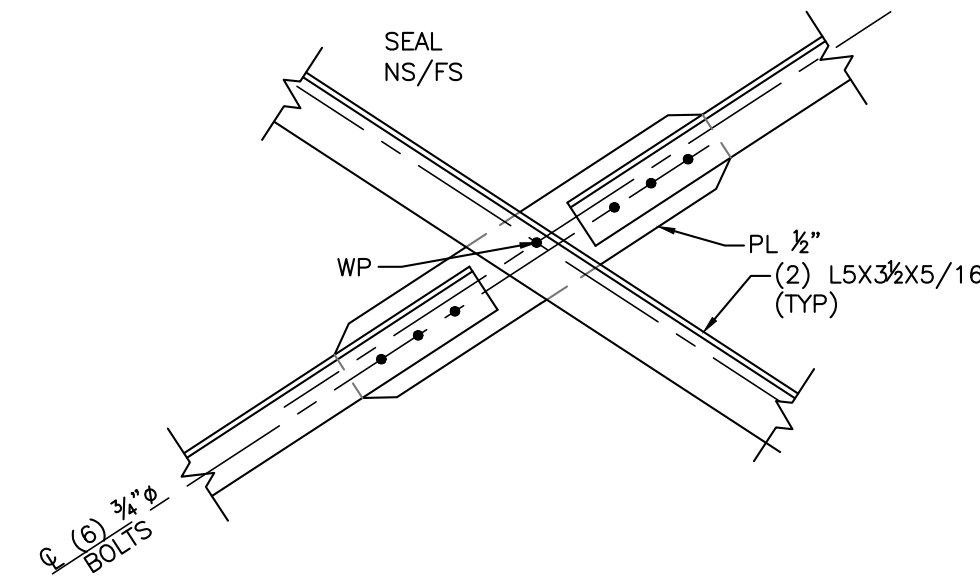


DETAIL 11
SCALE: 1"=1'-0" 54-201

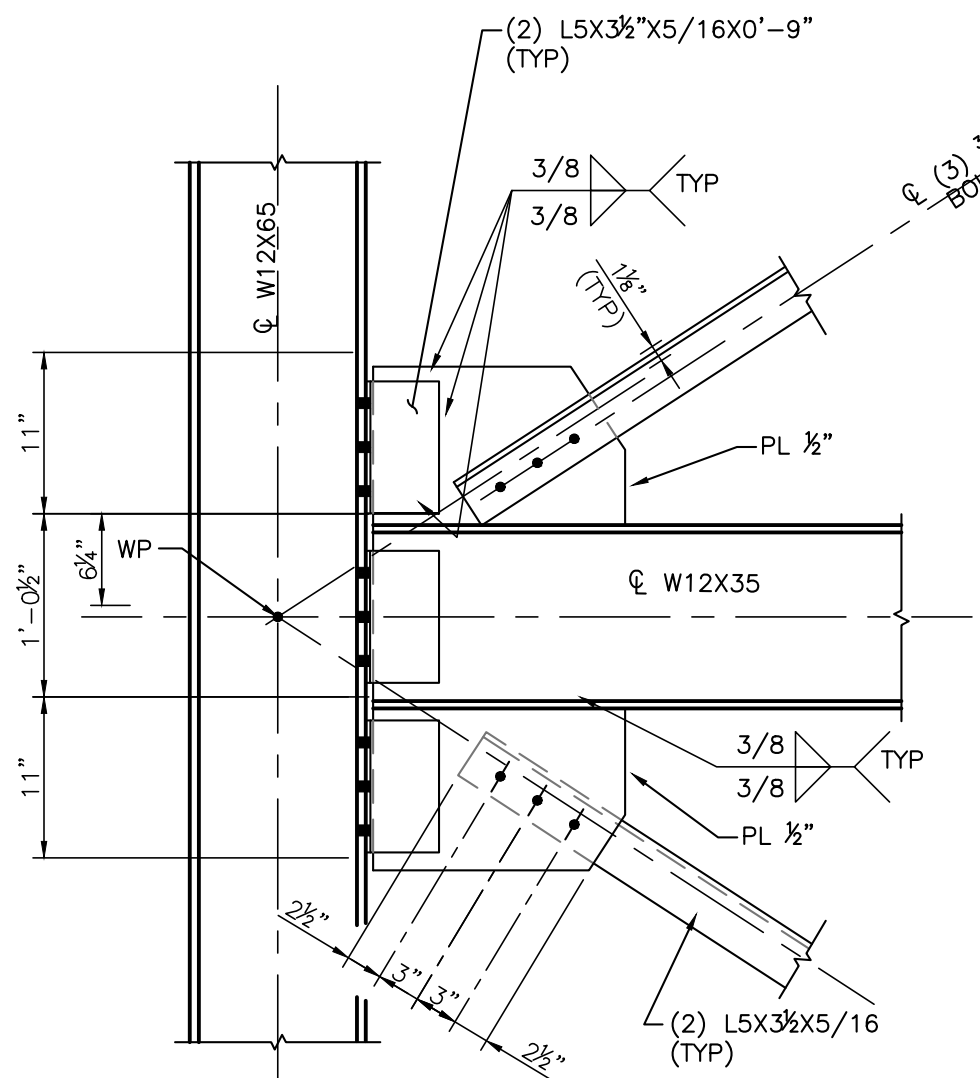


NOTE: ALIGN ALL GUSSET PLATES/MEMBERS WITH COLUMN.

DETAIL 12
SCALE: 1"=1'-0" 54-201



DETAIL 10
SCALE: 1"=1'-0" 54-201 & 202



DETAIL 13
SCALE: 1"=1'-0" 54-201

NOTE: ALIGN ALL GUSSET PLATES/MEMBERS W/ COLUMN.

NOTES:

- FOR GENERAL NOTES SEE DWG. SUN001JTAM-ST-50-202
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- ALL STEEL SHALL BE GALVANIZED.

ISSUED FOR CONSTRUCTION

REFERENCE DRAWINGS

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE	NONE
0	ISSUED FOR CONSTRUCTION	JM	12/17/20	LB	CH		

FACILITY CODE OR ACCOUNT NO.	CONSTRUCTION YEAR:
DRAWN	JMOORE
CHECK	CH
APPROVED	CH

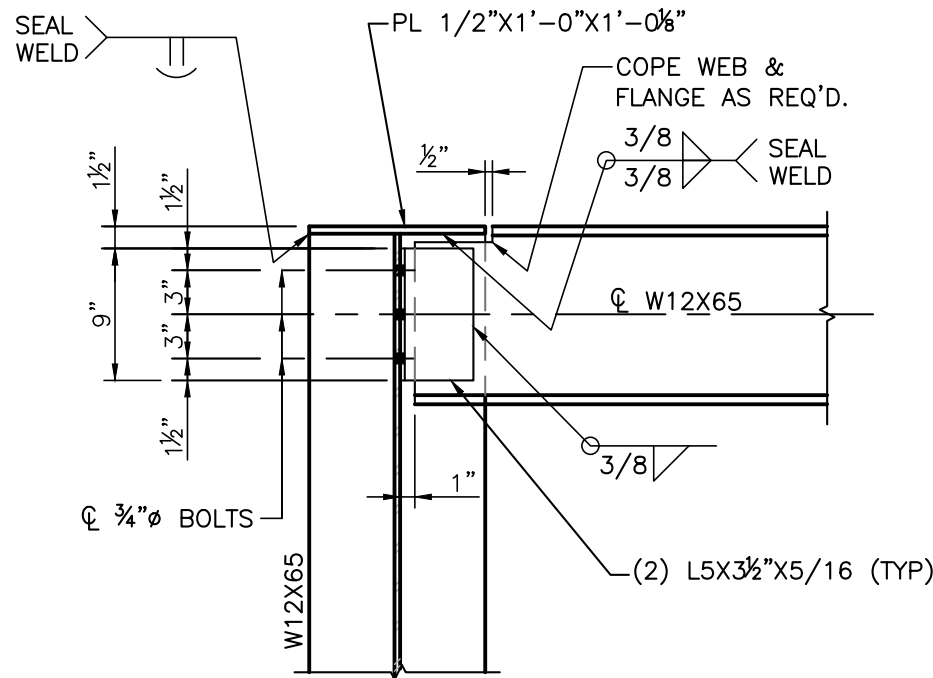
SUNOCOLP

BROWNSVILLE TERMINAL
STEEL DETAILS
DOCK BRIDGE-CONNECTION DETAILS

CAMERON COUNTY, TEXAS

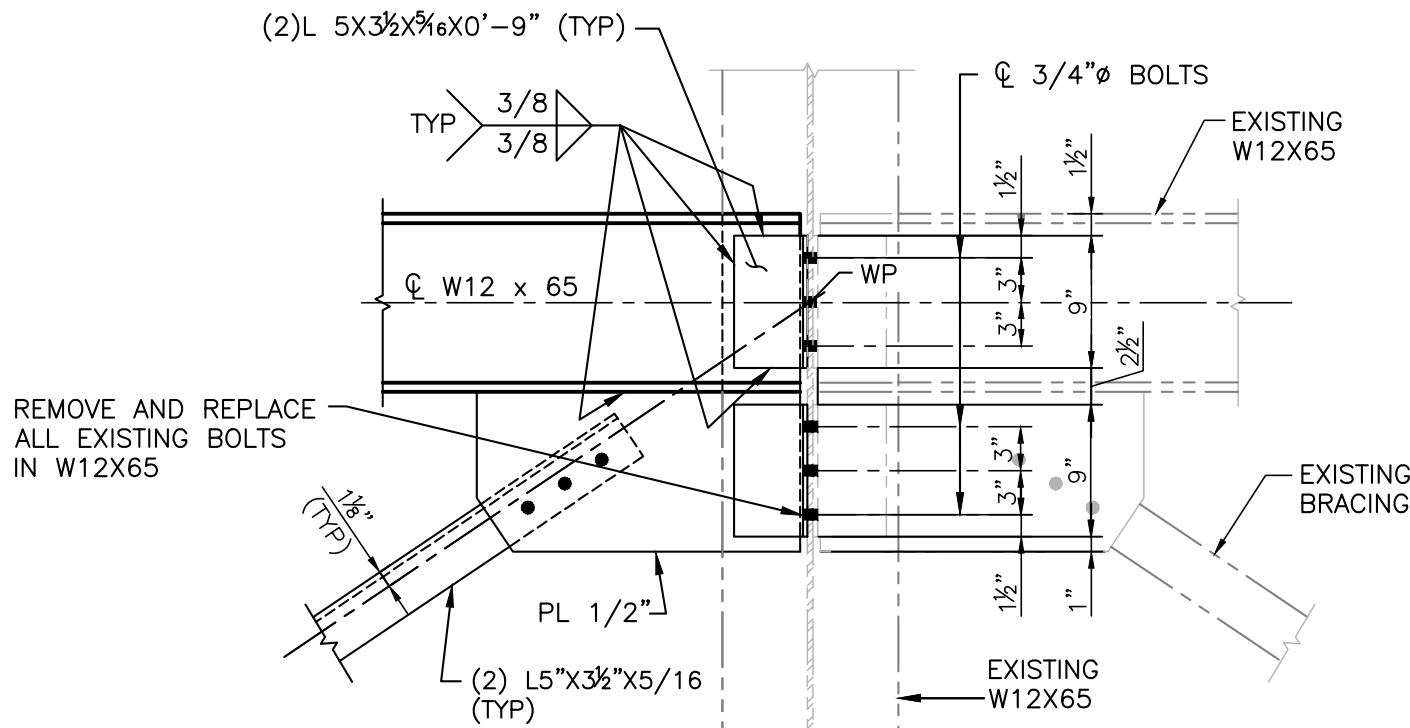
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OLD DRAWING NO.	
DRAWING NO.	SUN001JTAM-ST-54-210
REV. NO.	0

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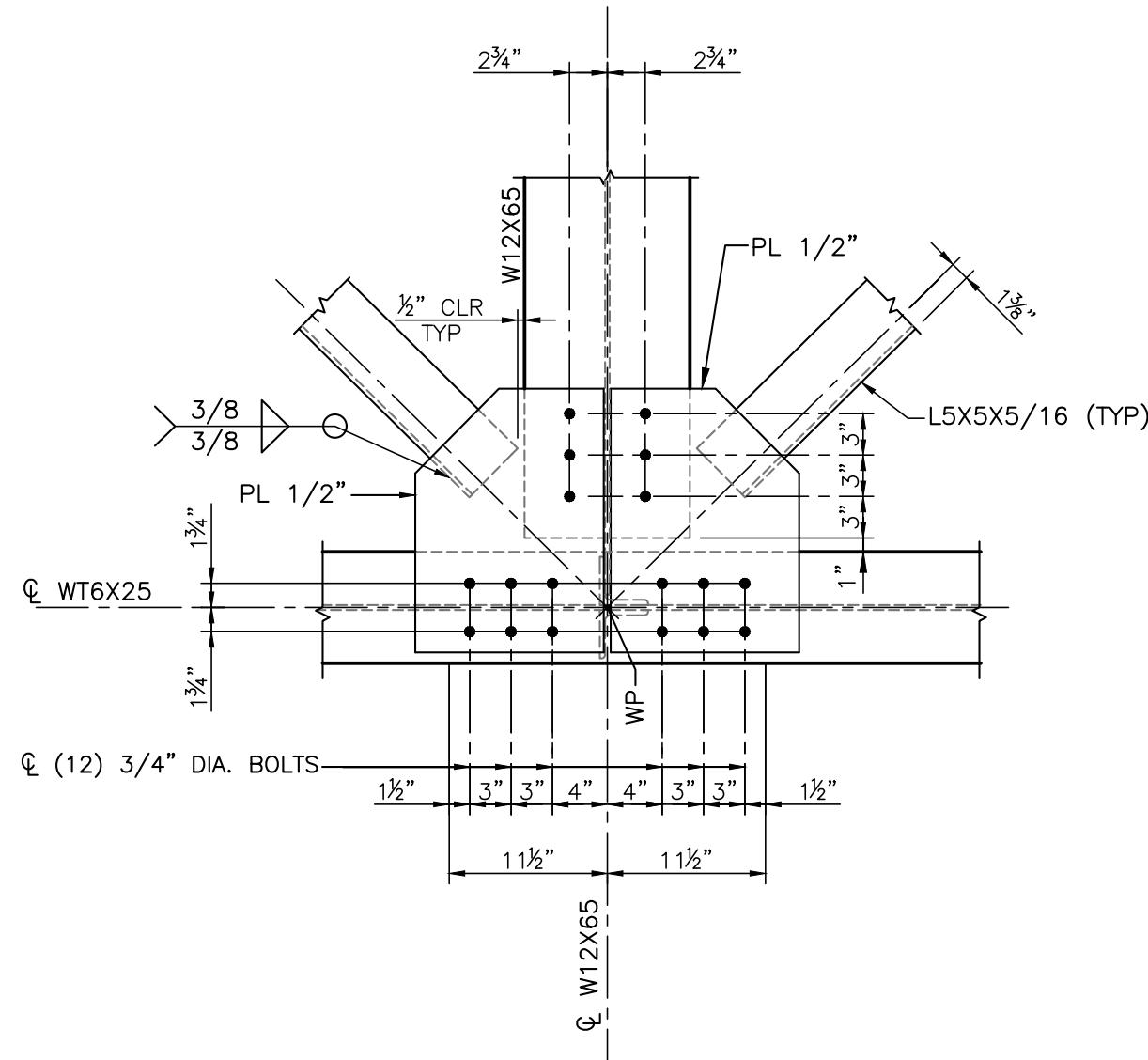
- NOTES:
- CROSS BRACING NOT SHOWN FOR CLARITY
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY

DETAIL 14
SCALE: 1"=1'-0"
54-202

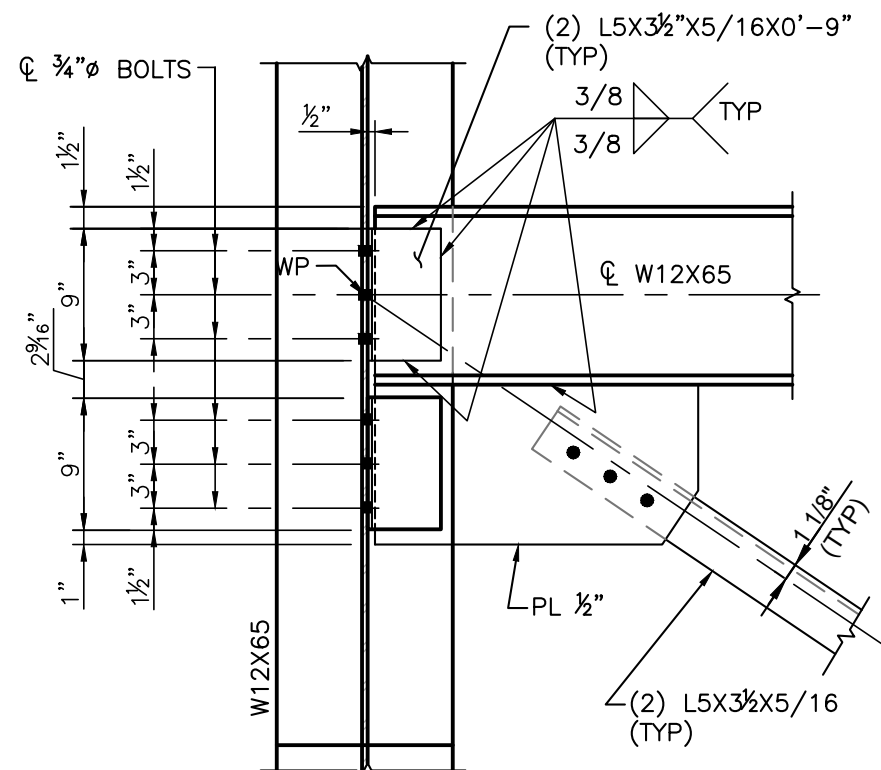


- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 17
SCALE: 1"=1'-0"
54-202

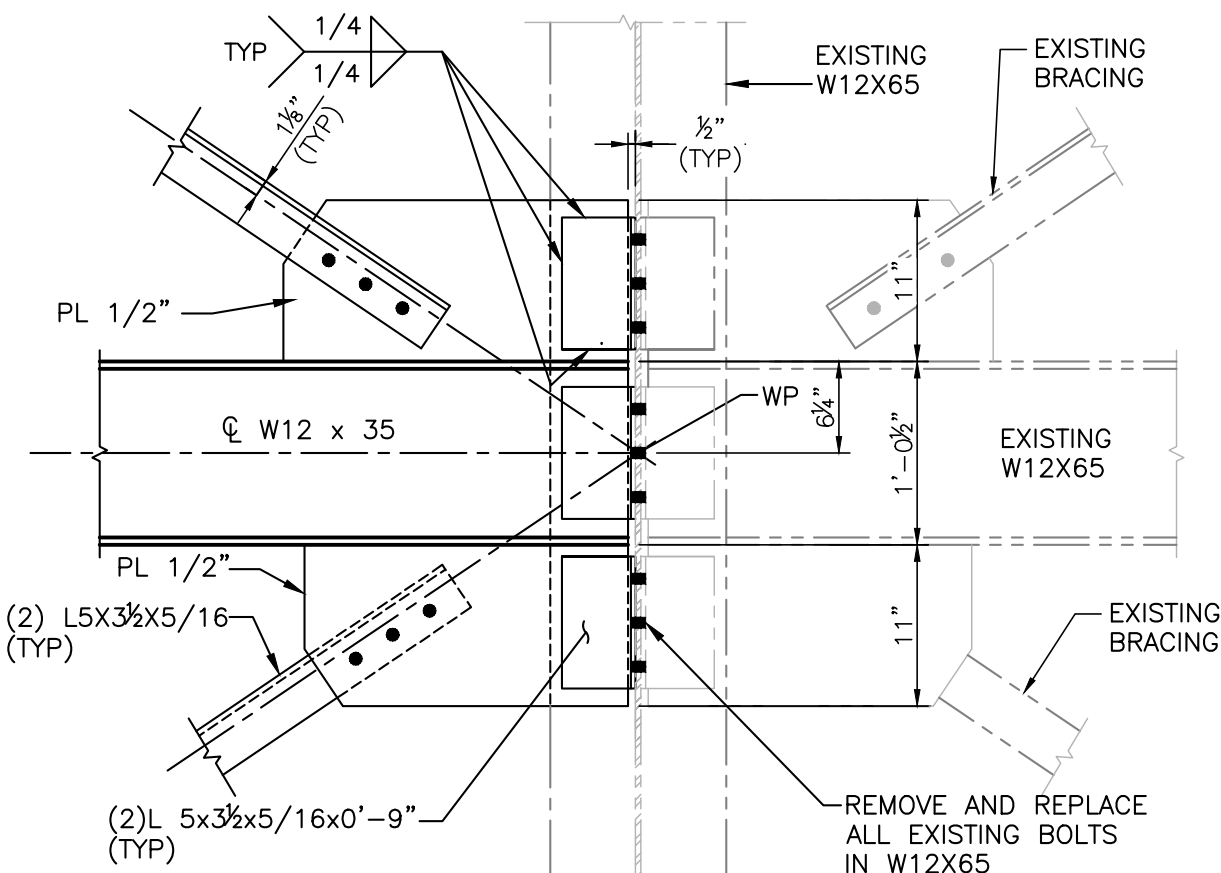


DETAIL 20
SCALE: 1"=1'-0"
54-201



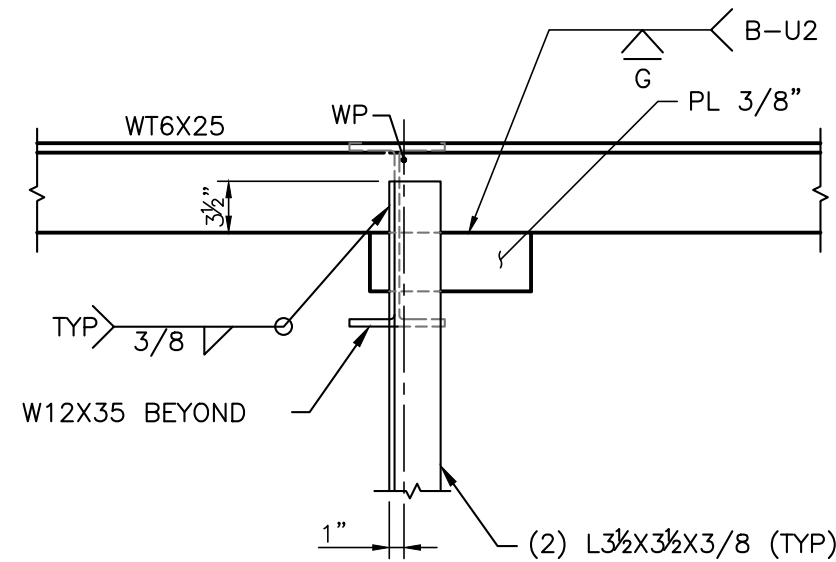
- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 15
SCALE: 1"=1'-0"
54-202

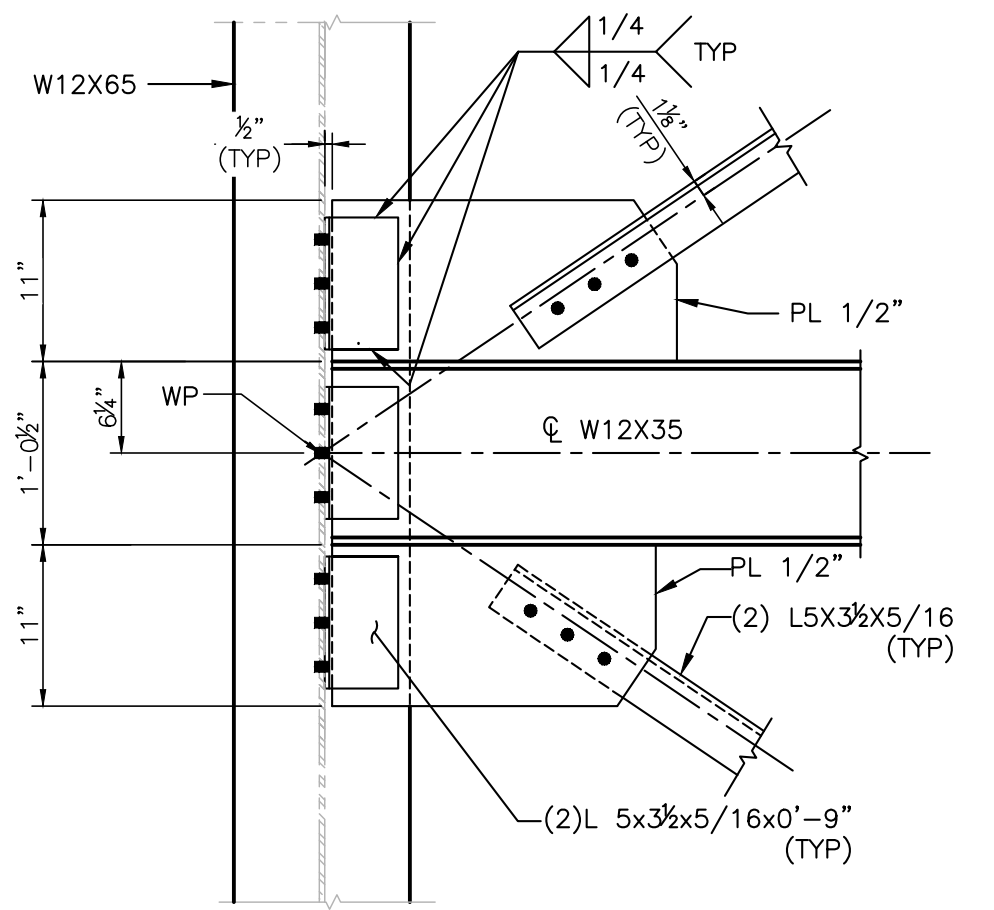


- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 18
SCALE: 1"=1'-0"
54-202

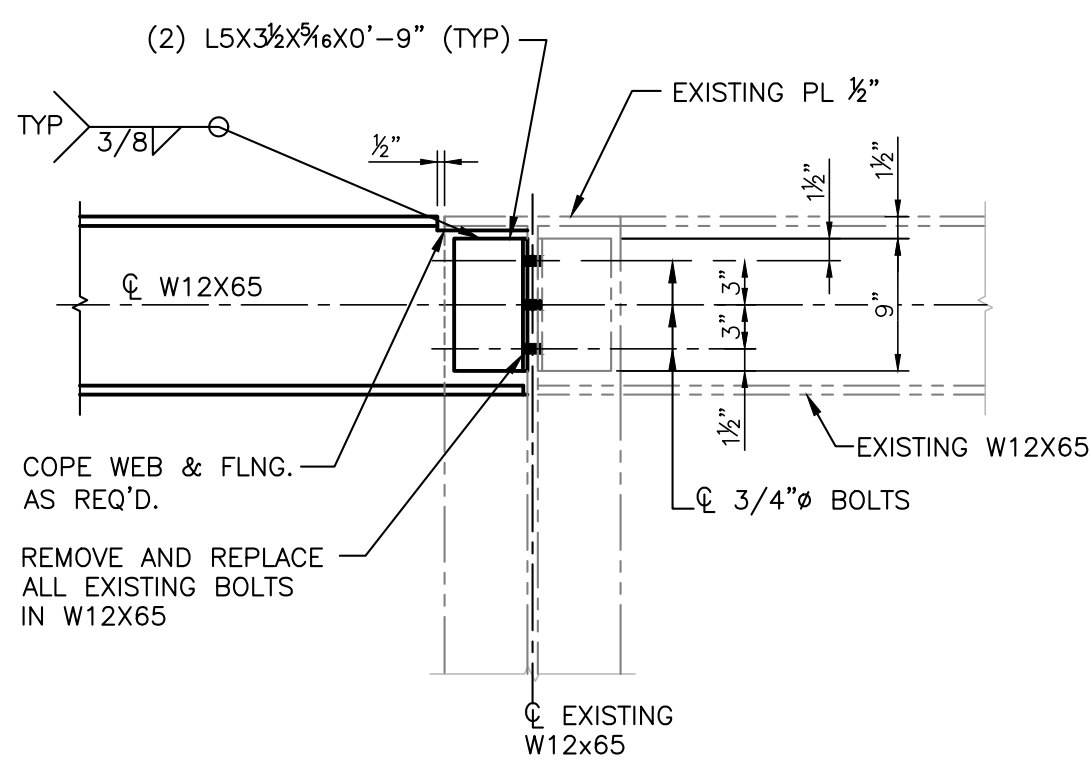


DETAIL 21
SCALE: 1"=1'-0"
54-201



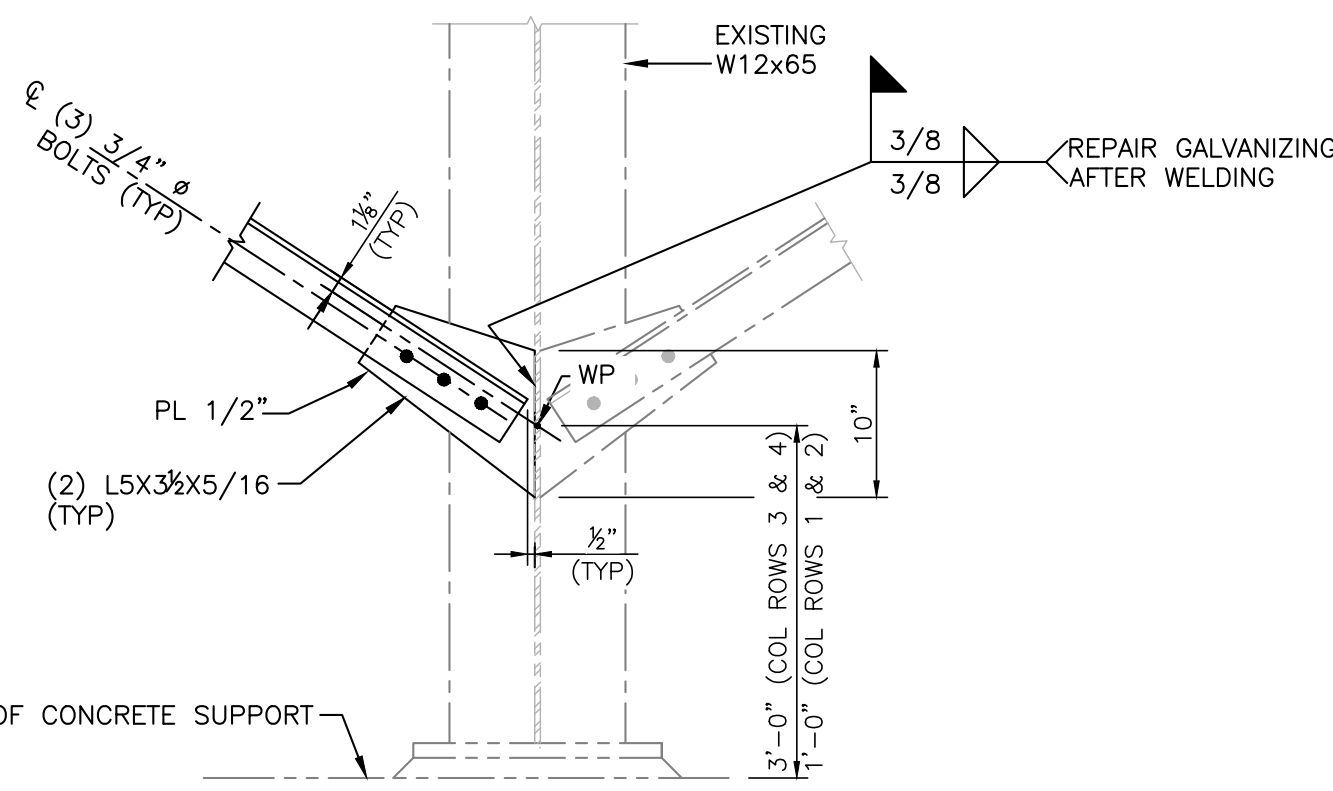
- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 23
SCALE: 1"=1'-0"
54-202



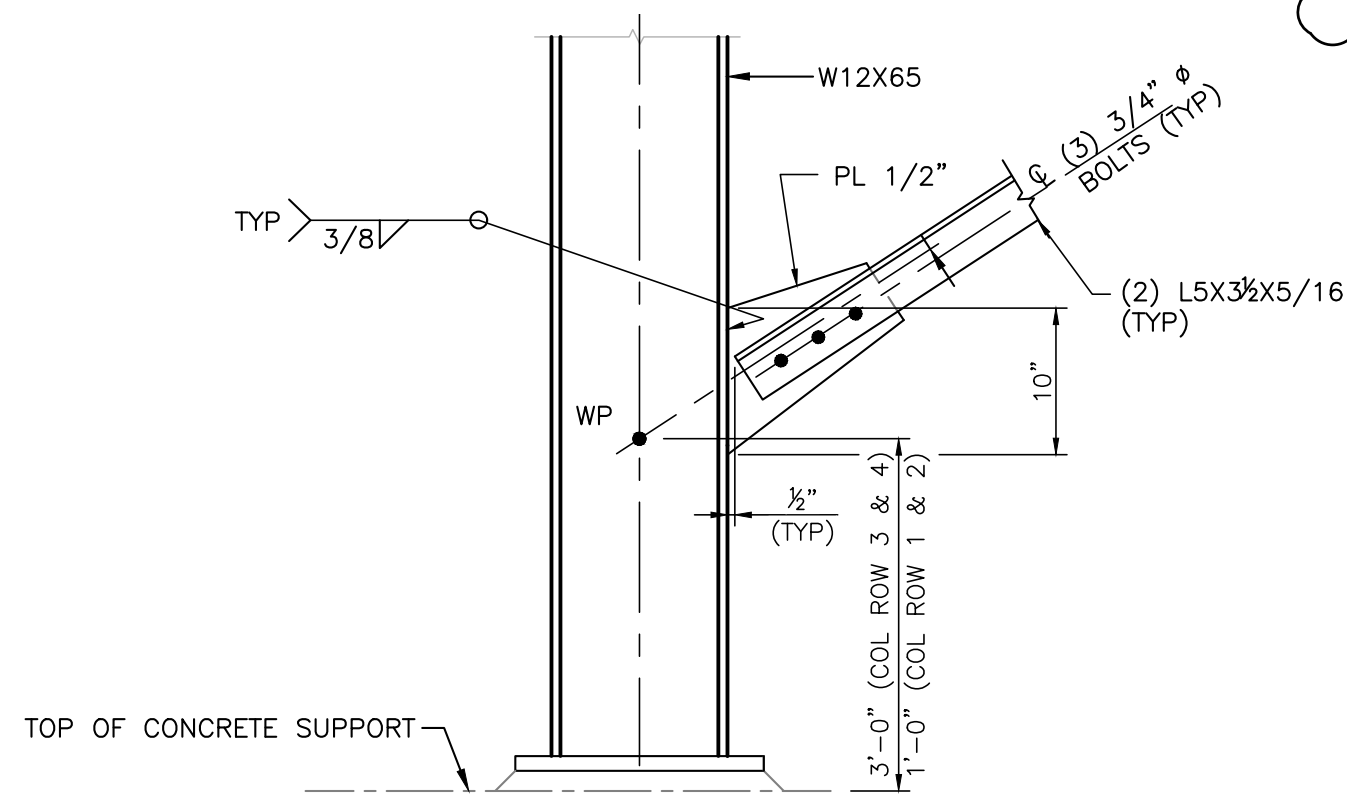
- NOTES:
- CROSS BRACING NOT SHOWN FOR CLARITY
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY

DETAIL 16
SCALE: 1"=1'-0"
54-202



- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 19
SCALE: 1"=1'-0"
54-202



- NOTES:
- ALIGN ALL GUSSET PLATES/MEMBERS WITH C. COL.
 - NEAR SIDE COL. FLANGE NOT SHOWN FOR CLARITY.
 - FOR DIAGONAL BRACE BOLT SPACING SEE DETAIL 14 THIS SHEET

DETAIL 22
SCALE: 1"=1'-0" 54-201 & 202

NOTES:

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REFERENCE DRAWINGS

ISSUED FOR
CONSTRUCTION

REV	DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE	NONE
1	REVISED AS NOTED	JM	01/18/21	CK	CH		
0	ISSUED FOR CONSTRUCTION	JM	12/17/20	LB	CH		

FACILITY CODE OR ACCOUNT NO:		
CONSTRUCTION YEAR:		
DRAWN	BY	DATE
CHECK	JMOORE	12/09/20
APPROVED	CH	

SUNOCOLP®

BROWNSVILLE TERMINAL
STEEL DETAILS
DOCK BRIDGE-CONNECTION DETAILS

CAMERON COUNTY, TEXAS

WBS NO.	
OLD DRAWING NO.	
DRAWING NO.	REV. NO.
SUN001JTAM-ST-54-211	1