

GENERAL NOTES:

CONSTRUCTION SPECIFICATIONS:

KDOT Standard Specifications for State and Road Bridge Construction, 2015 Edition.

DESIGN:

Design is in accordance with the 2016 AREMA Manual for Railway Engineering.

DIMENSIONS:

Dimensions, Elevations, and Stations shown on the plans were taken from incomplete "As Built" drawings of the original construction, Repair plans dated 2005, and field measurements. The Contractor shall verify all dimensions, elevations and stations before ordering or fabricating new materials. The dimensions shown on the plans are horizontal dimensions unless otherwise noted. Survey information for the site, including a "point cloud" is available to the Contractor upon request.

EXISTING UTILITIES:

The information shown on these plans concerning type, size, and location of underground and other utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making his own determination as to the type, size, and location of underground utilities and other utilities as may be necessary to avoid damage thereto, before proceeding with the work.

COORDINATION WITH RAILROAD:

The work entailed herein involves repairs and modifications to an in-service BNSF bridge. While access to the track area of the bridge is not anticipated, the Contractor shall coordinate all activities with BNSF Railway prior to commencing work. All required permits, access rights, insurance, and other documents required to complete the work shall be obtained by the Contractor.

UNIT STRESSES:

Precast Concrete $f'c = 5 \text{ ksi}$
 CIP Concrete $f'c = 4 \text{ ksi}$
 Reinforcing Steel $Fy = 60 \text{ ksi}$

REINFORCING STEEL:

All new reinforcing steel shall be deformed new billet steel conforming to the requirements of ASTM A615 (Grade 60), Epoxy Coated. Minimum clearance to reinforcing steel shall be 2" unless shown otherwise. All reinforcing bends shall be detailed in accordance with the Concrete Reinforcing Steel Institute (CSRI) Manual of Standard Practice. Bent bar dimensions are given out to out of bars. Bar spacings are center to center of bars.

CONCRETE:

All concrete for precast members shall be Grade 5.0 (AE) in accordance with specifications. All concrete for cast-in-place columns and barrier rails shall be Grade 4.0 (AE) in accordance with the specifications. Exposed edges shall be chamfered $\frac{3}{4}$ ", unless noted otherwise.

STRUCTURAL STEEL:

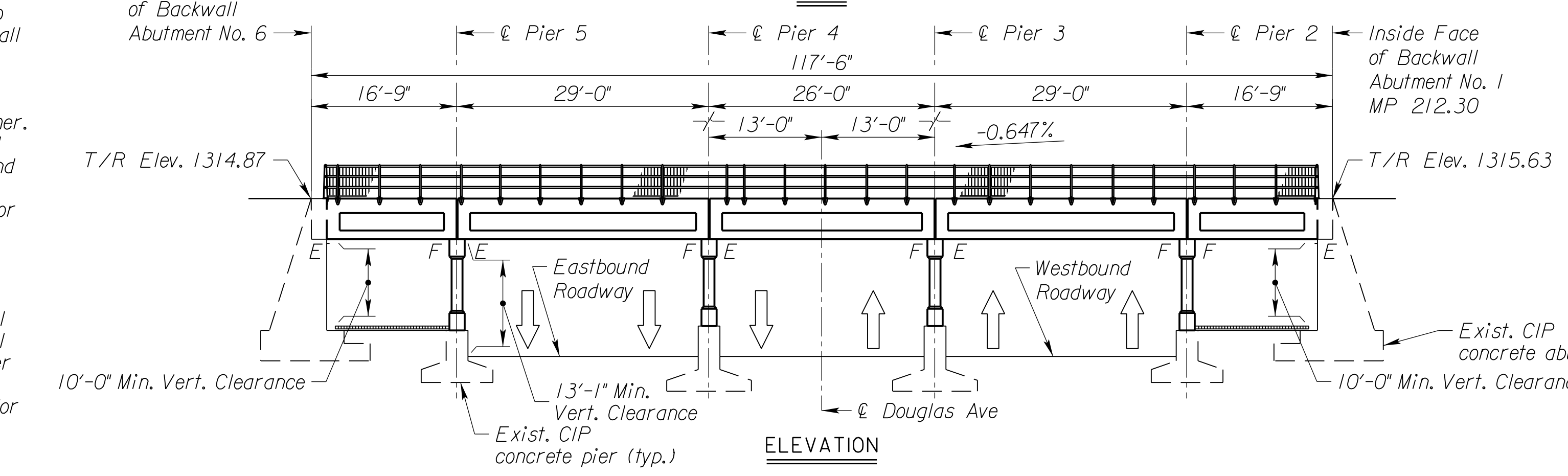
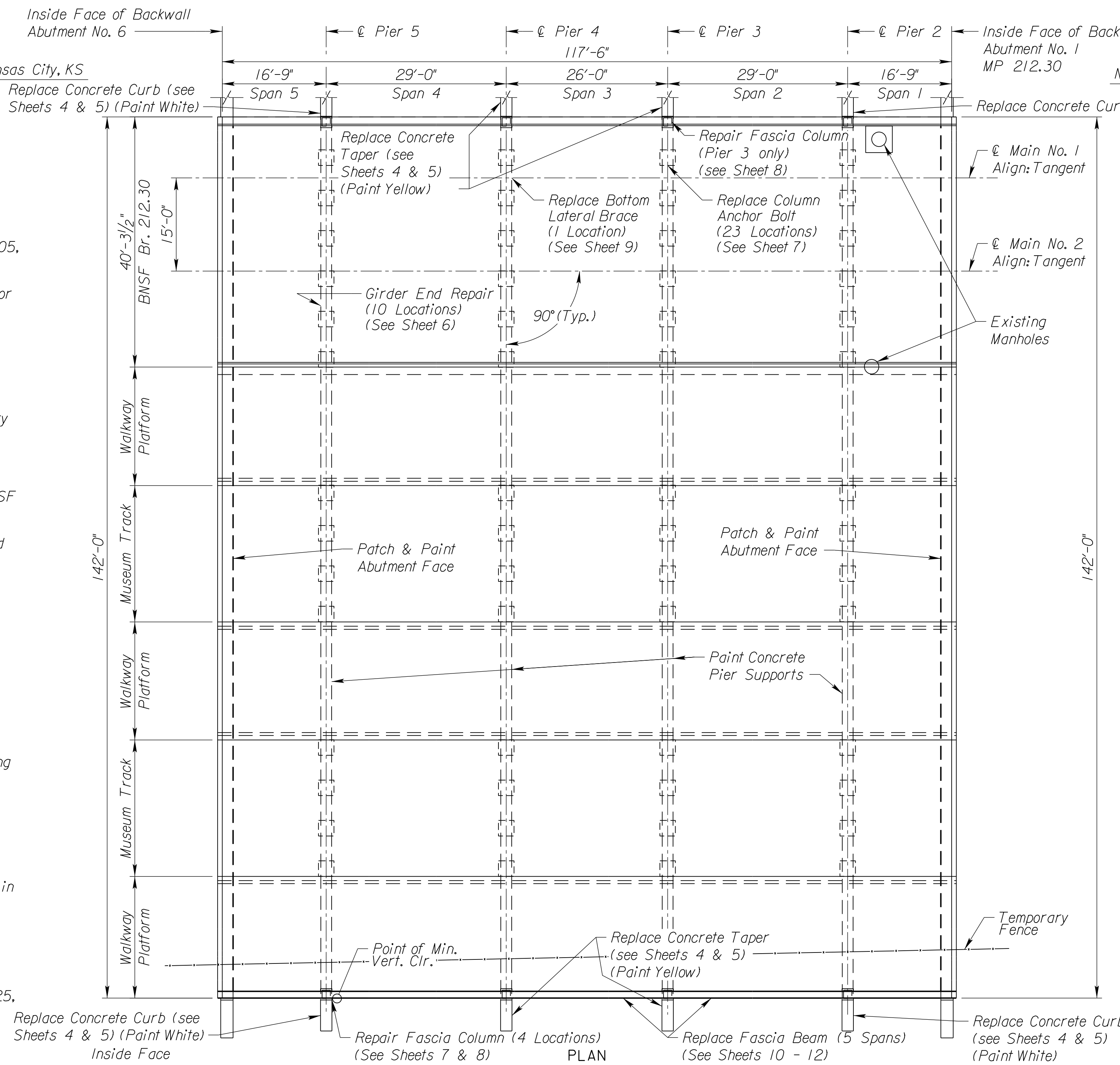
All steel shall be ASTM A709 GR50T2, unless noted otherwise. All fasteners shall be $\frac{7}{8}$ " diameter high strength bolts per ASTM F3125 GR A325, TYPE 1 with $\frac{15}{16}$ " diameter open holes, unless noted otherwise.

STEEL PIER PAINTING:

The existing steel piers shall be painted. The piers shall first be power washed to remove loose and flaking paint, dirt and pigeon droppings. The power washing shall be done according to SSPC-SPI2 Low-Pressure Water Cleaning. The cleaning equipment used shall be capable of generating 3,000 psi of pressure.
 -Bare metal shall first be spot primed with KemKromik Universal Primer.
 -All areas shall then be coated with a prime coat of Pro-Block Acrylic Primer.
 -Final top coat shall be Sher-Cryl High Performance Acrylic Paint. The final top coat color shall be "Red Iron". A sample of the final color shall be prepared and submitted for approval prior to final painting.
 Surface Cleaning, preparation and painting is included in the Lump Sum price for "Steel Pier Painting".

STEEL GIRDER PAINTING:

The steel girders that receive repairs shall be spot painted. The spot painting shall be completed using the same procedure outlined in "Steel Pier Painting". The final top coat color for the spot painting shall be "White". Area of 2 SF for each girder was assumed for quantity. Surface Cleaning, preparation and painting is included in the square foot price for "Steel Girder Painting".



SCOPE OF WORK ITEMS	
ITEM	DESCRIPTION OF WORK
1	Repair Girder Ends (10 Locations)
2	Replace Column Anchor Bolts (23 Locations)
3	Replace Bottom Lateral Brace (1 Location)
4	Repair East Fascia Columns (4 Locations)
5	Replace East Fascia Beams (5 Spans)
6	Repair Curbs and Tapers (8 Locations)
7	Paint Concrete (Abutments, Pier Barriers, Fascia Beam and Tapers)
8	Paint Piers
9	Patch Concrete Abutments

INDEX OF DRAWINGS	
SHEET	DRAWING TITLE
2	GENERAL PLAN & ELEVATION
3	TYPICAL SECTIONS
4	BARRIER CONCRETE REMOVAL
5	BARRIER CONCRETE CONSTRUCTION
6	GIRDER END REPAIR DETAILS
7	COLUMN REPAIR DETAILS 1 OF 2
8	COLUMN REPAIR DETAILS 2 OF 2
9	COLUMN BRACING REPAIR DETAILS
10	EAST FASCIA BEAM DETAILS 1 OF 3
11	EAST FASCIA BEAM DETAILS 2 OF 3
12	EAST FASCIA BEAM DETAILS 3 OF 3
13	CONCRETE SURFACE REPAIR

SUMMARY OF QUANTITIES		
ITEM	QUANTITY	UNIT
Concrete Beam Replacement	116.8	LF
Pier Diaphragm Repair	1	Each
Anchor Bolt Replacement	23	Each
Girder End Repair	10	Each
Concrete Column Repair	5	Each
Concrete Painting	1,250	SY
Steel Pier Painting	1	LS
Steel Girder Painting	20	SF
Concrete Removal	1	LS
Concrete Grade 4.0 (Barrier Rail)	34.1	CY
Reinforcing Steel (Gr. 60) (Barrier Rail)	1,269	LBS
Concrete Surface Repair	375	SF

Note:
Field verify minimum clearance.

PRINTS ISSUED		
DATE	PURPOSE	NO.
7.31.17	90% Submittal Set	

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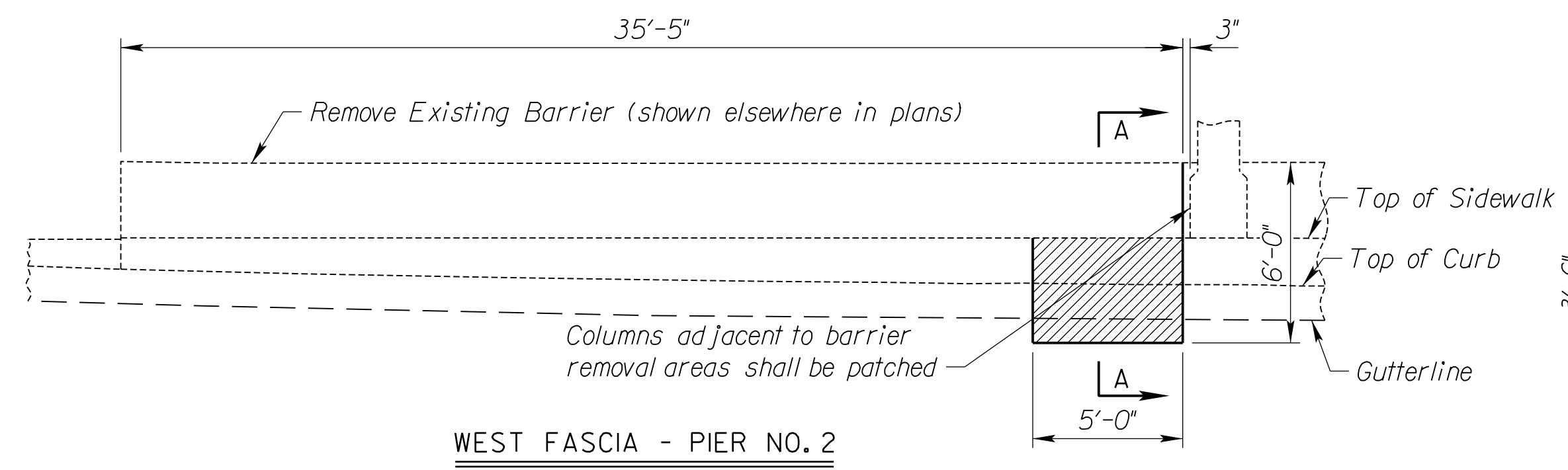
PROJECT NUMBER:
17145

SHEET TITLE:
GENERAL PLAN & ELEVATION

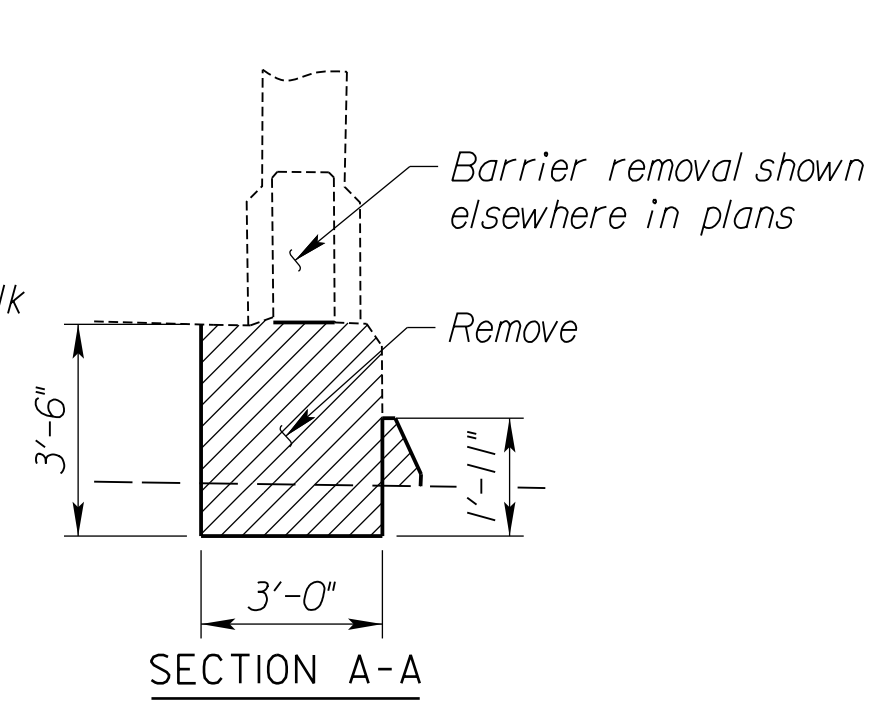
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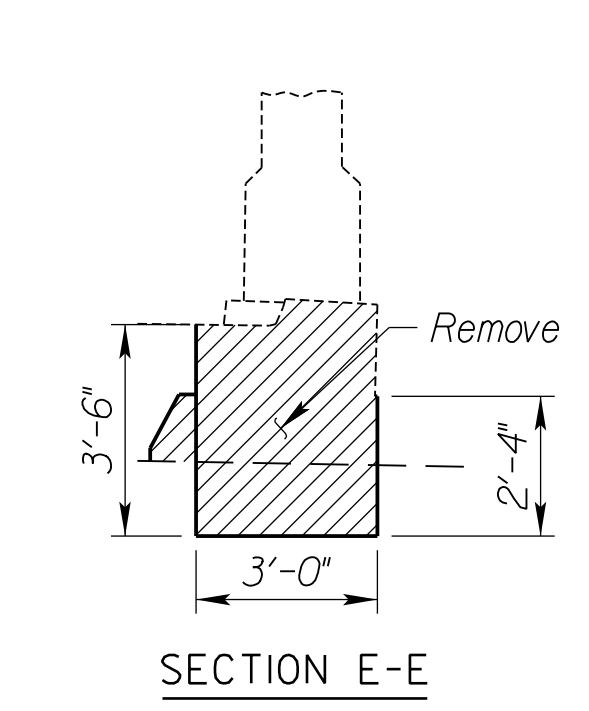
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 LONG: 97.33001W



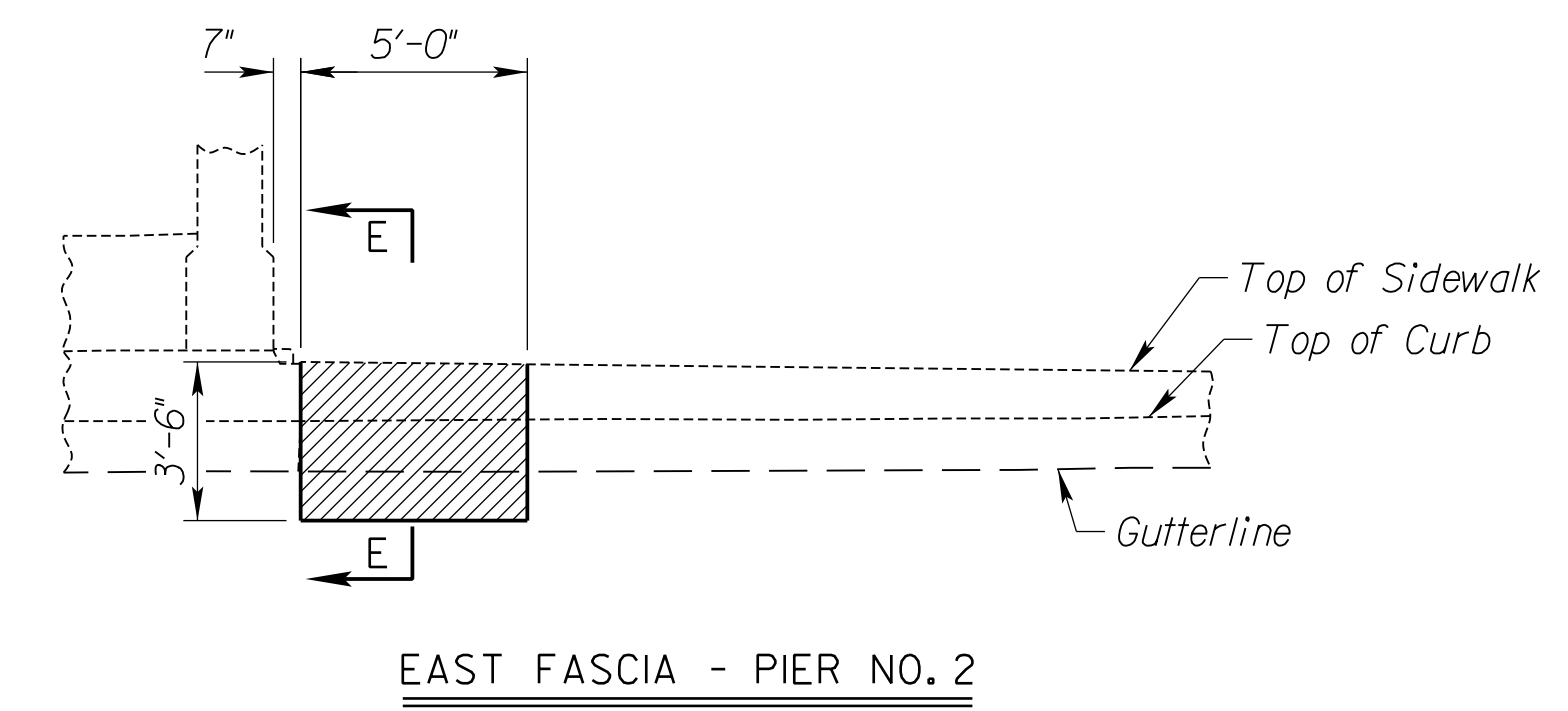
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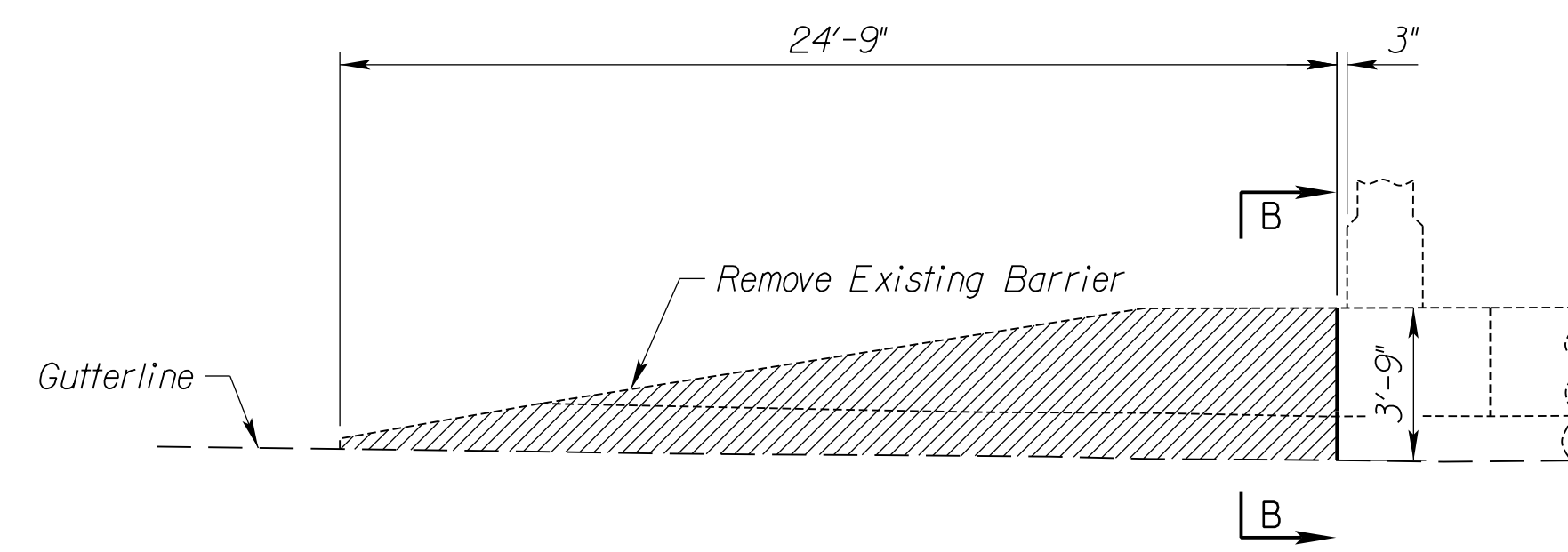
SECTION A-A



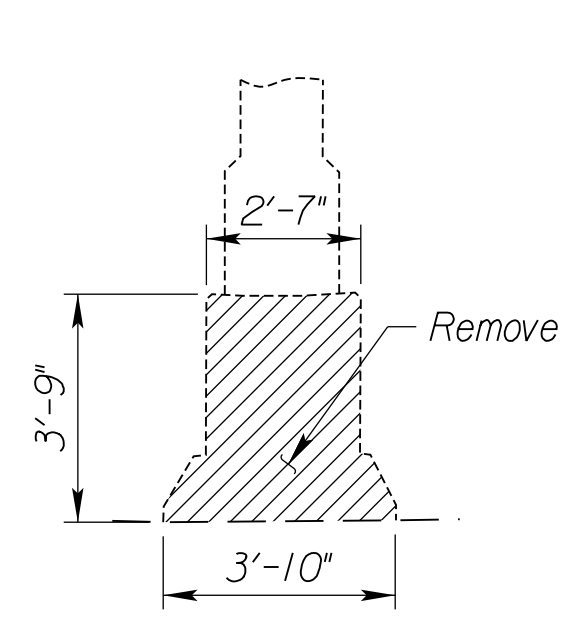
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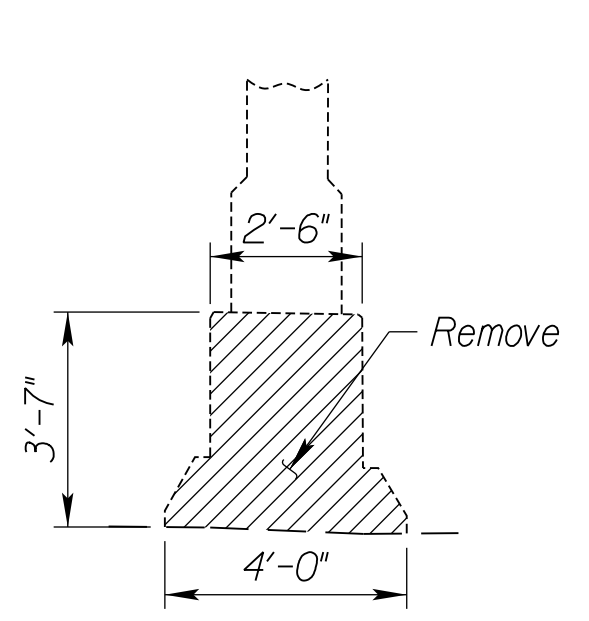
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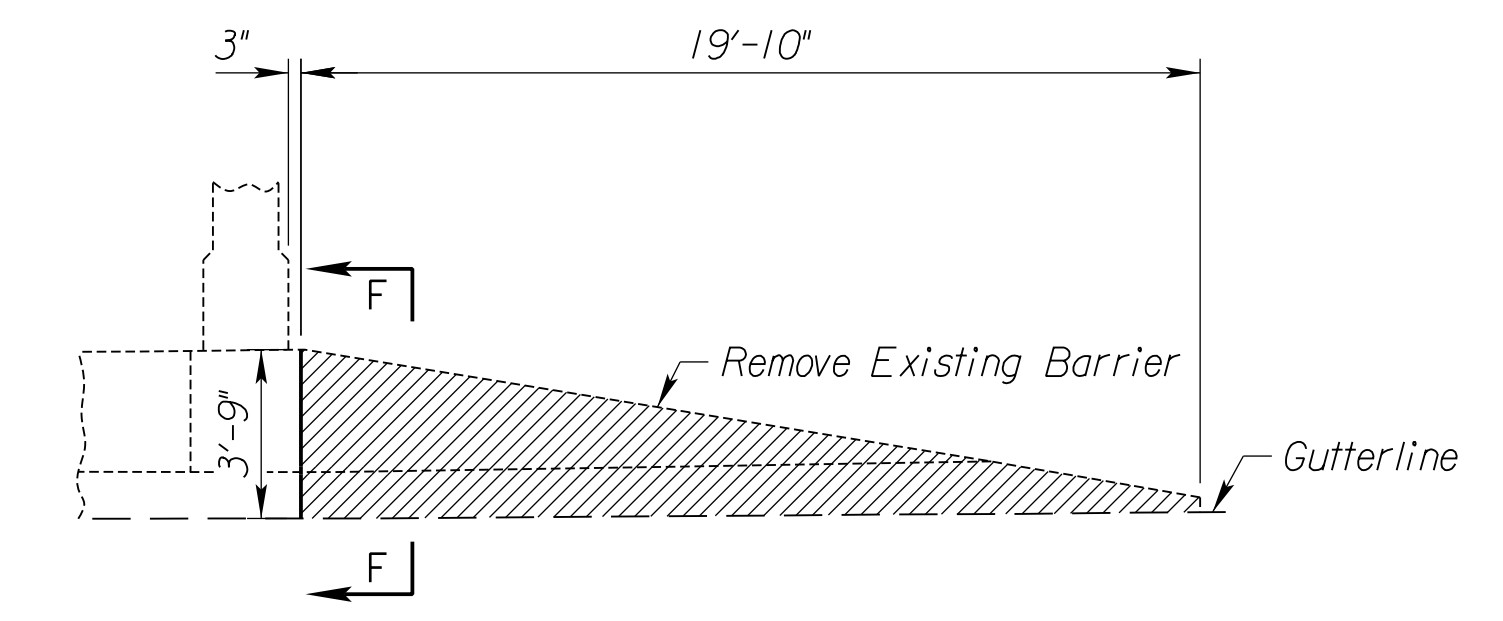
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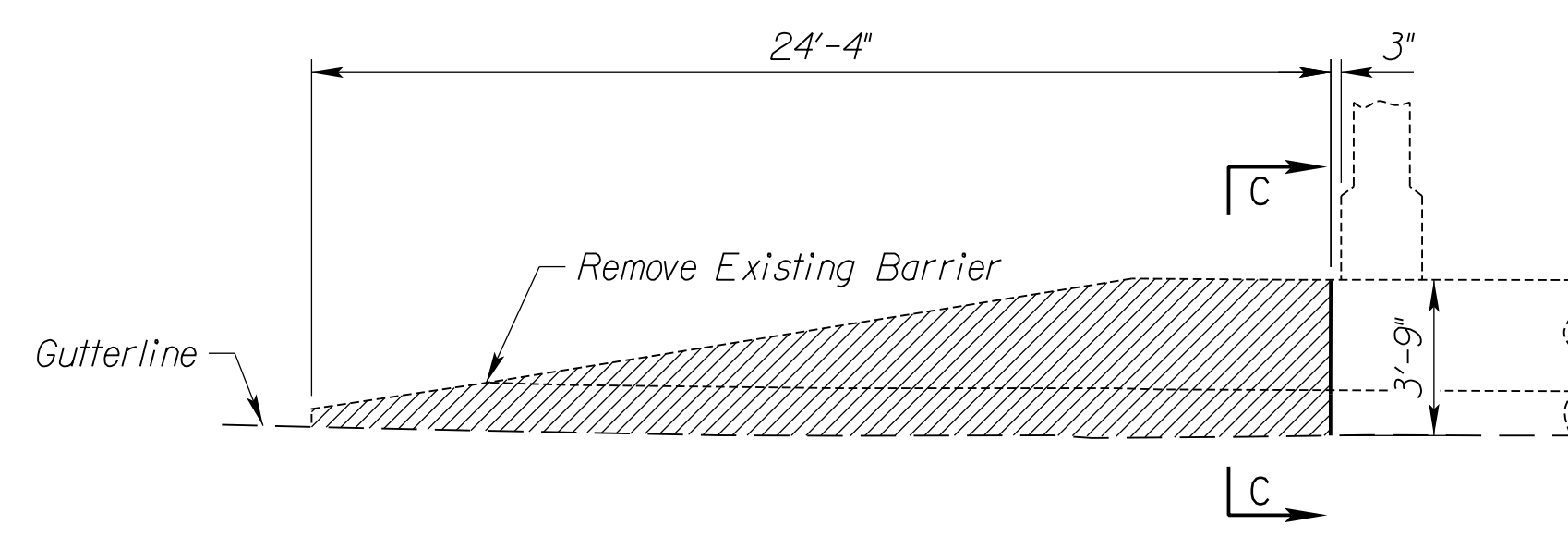
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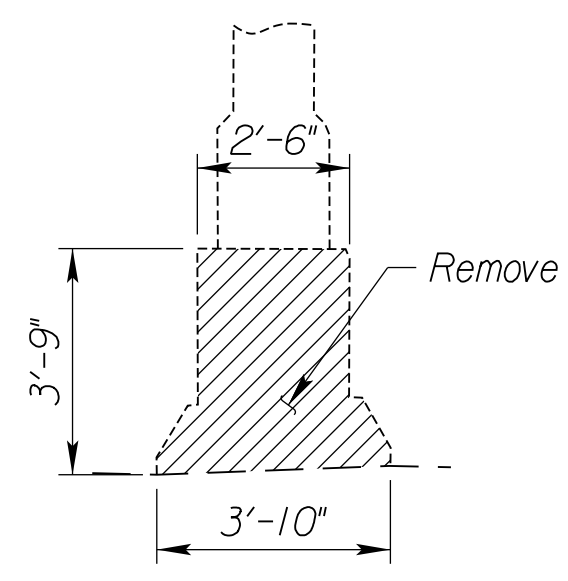
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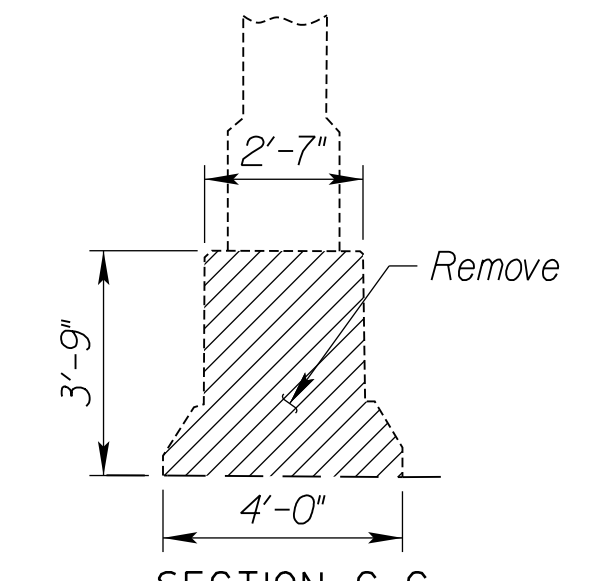
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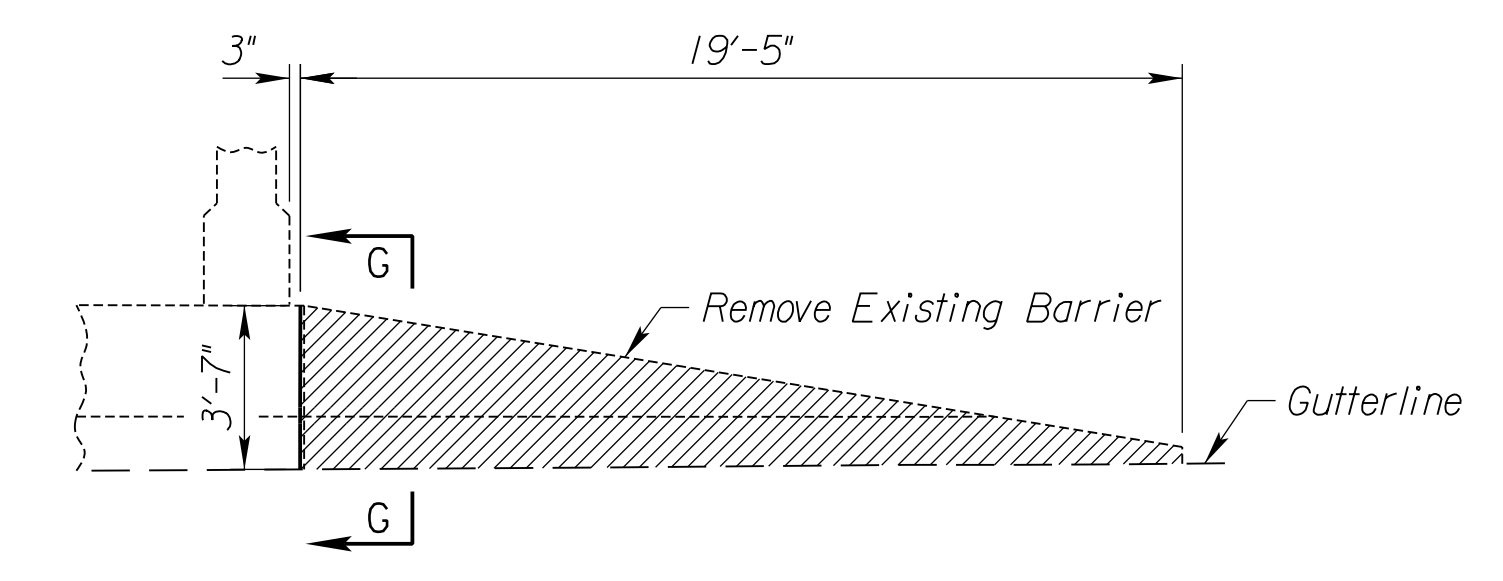
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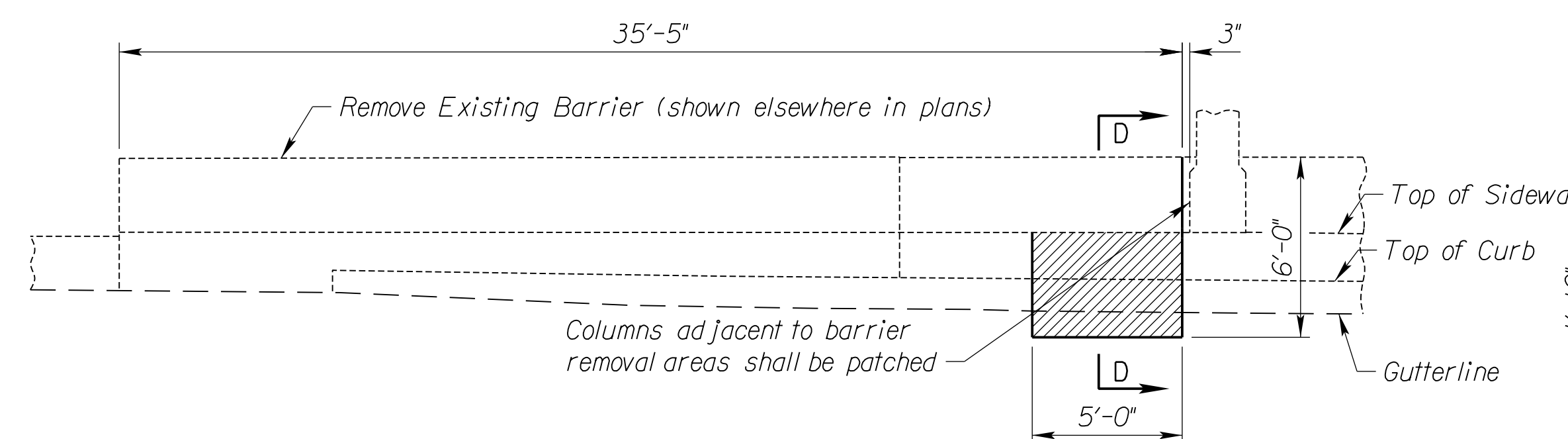
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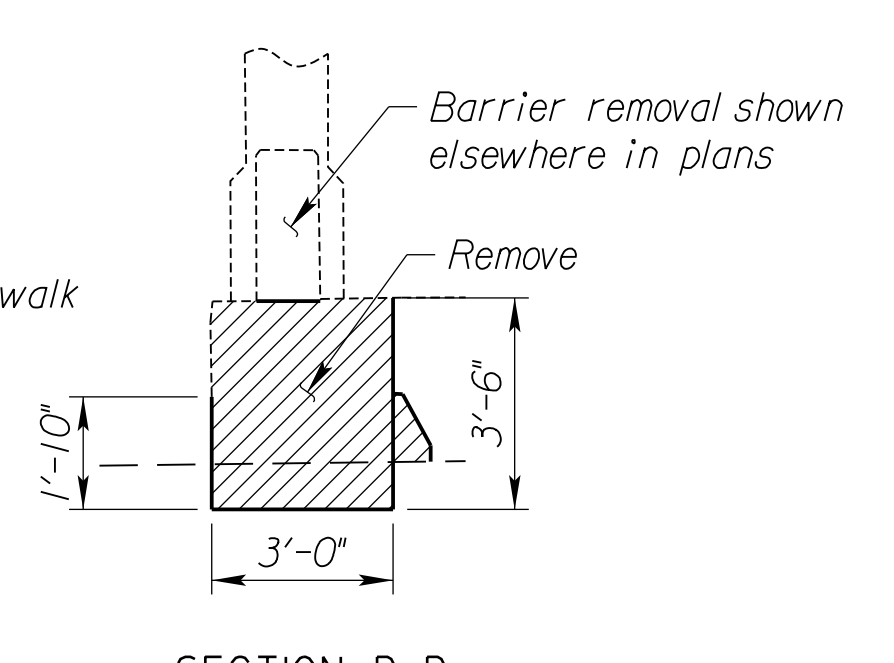
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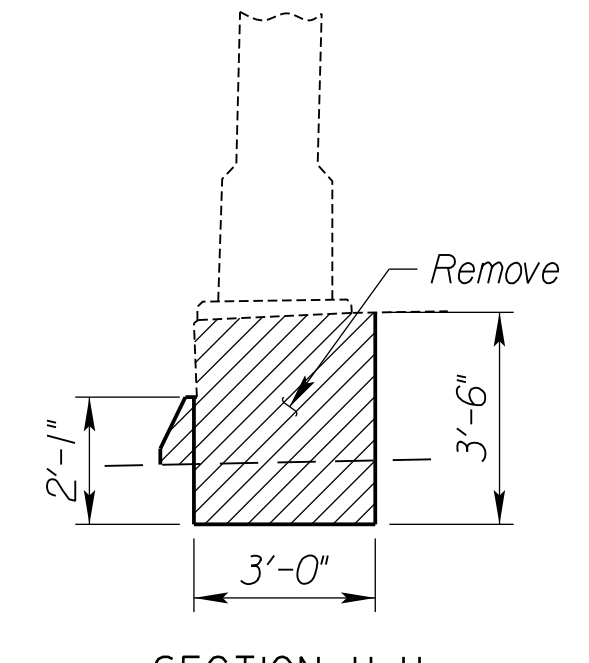
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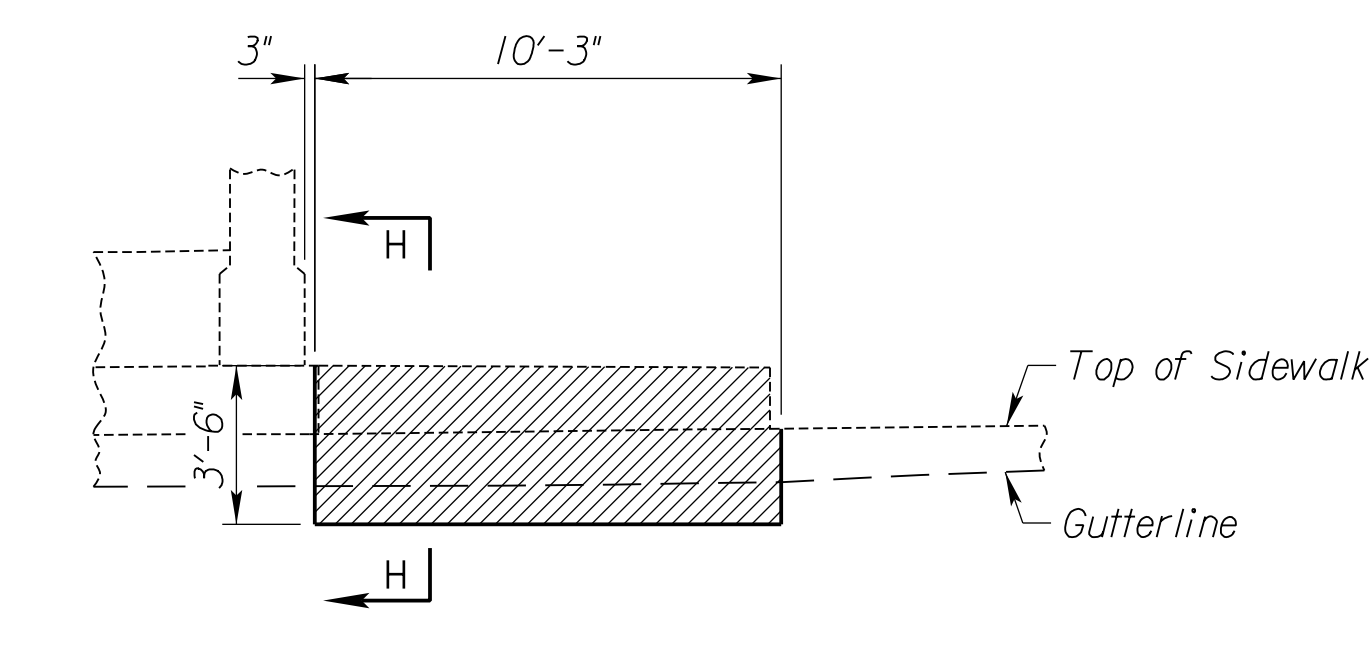
WEST FASCIA - PIER NO. 5



SECTION D-D



SECTION H-H



EAST FASCIA - PIER NO. 5

Notes:
 Any reinforcing encountered extending into removal areas shall be cleaned and incorporated into new work if possible.
 All work required to remove existing concrete barriers and patch West concrete columns shall be included in the Lump Sum for "Concrete Removal"

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PROJECT NUMBER:

17145

SHEET TITLE:
**BARRIER CONCRETE
 REMOVAL**

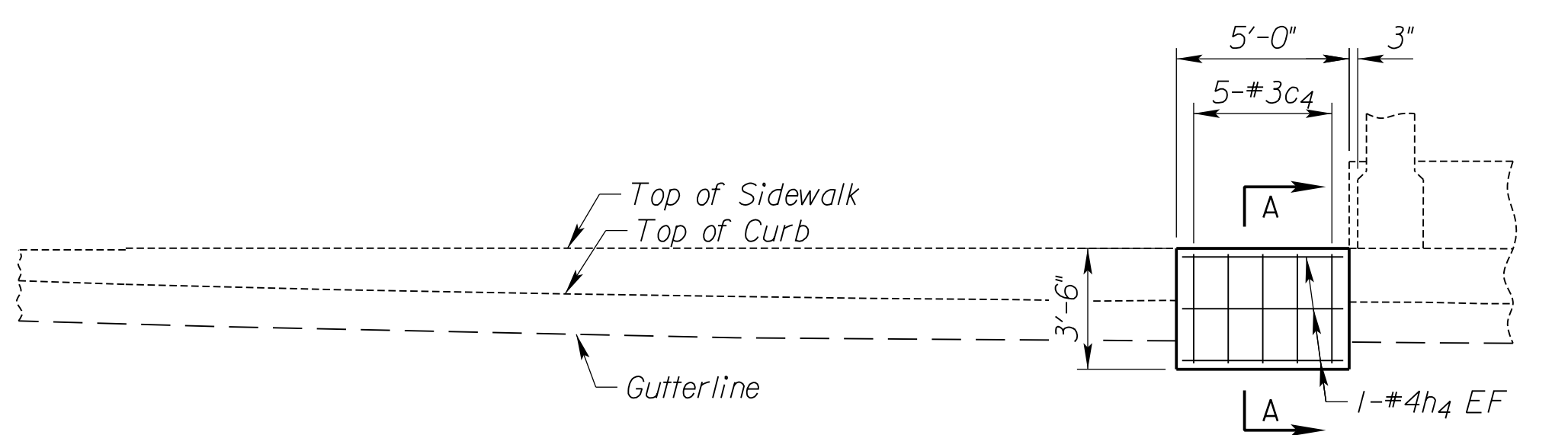
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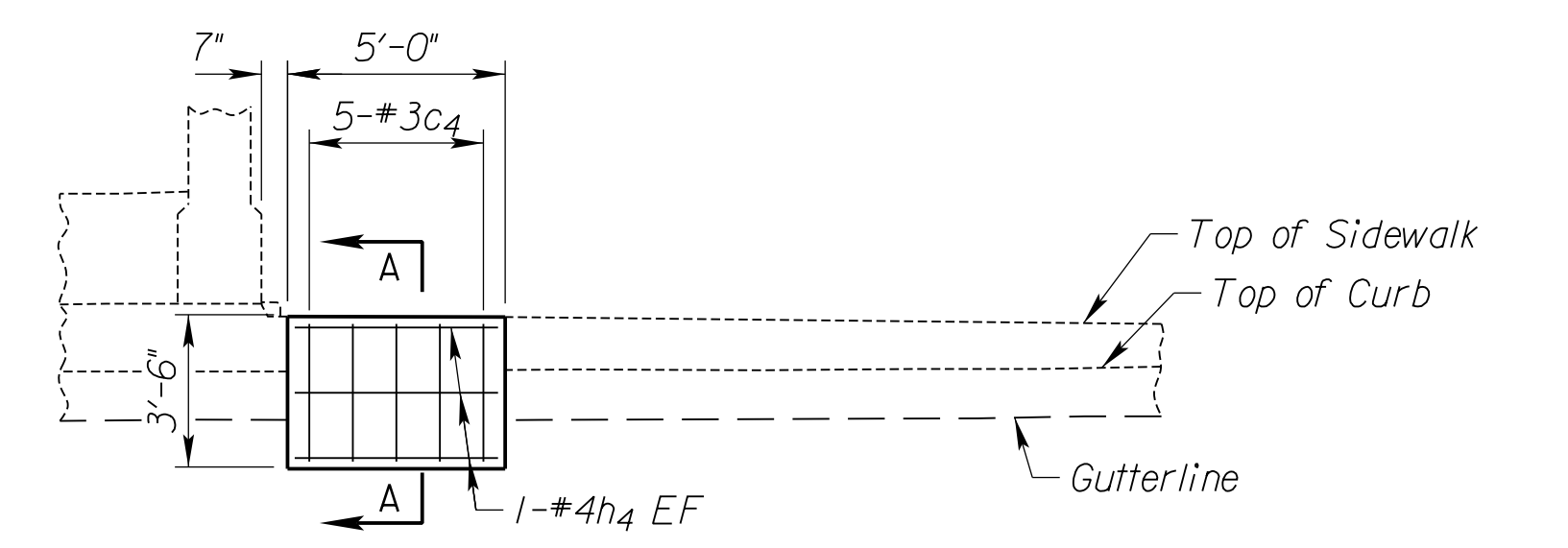


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 LONG: 97.33001°W

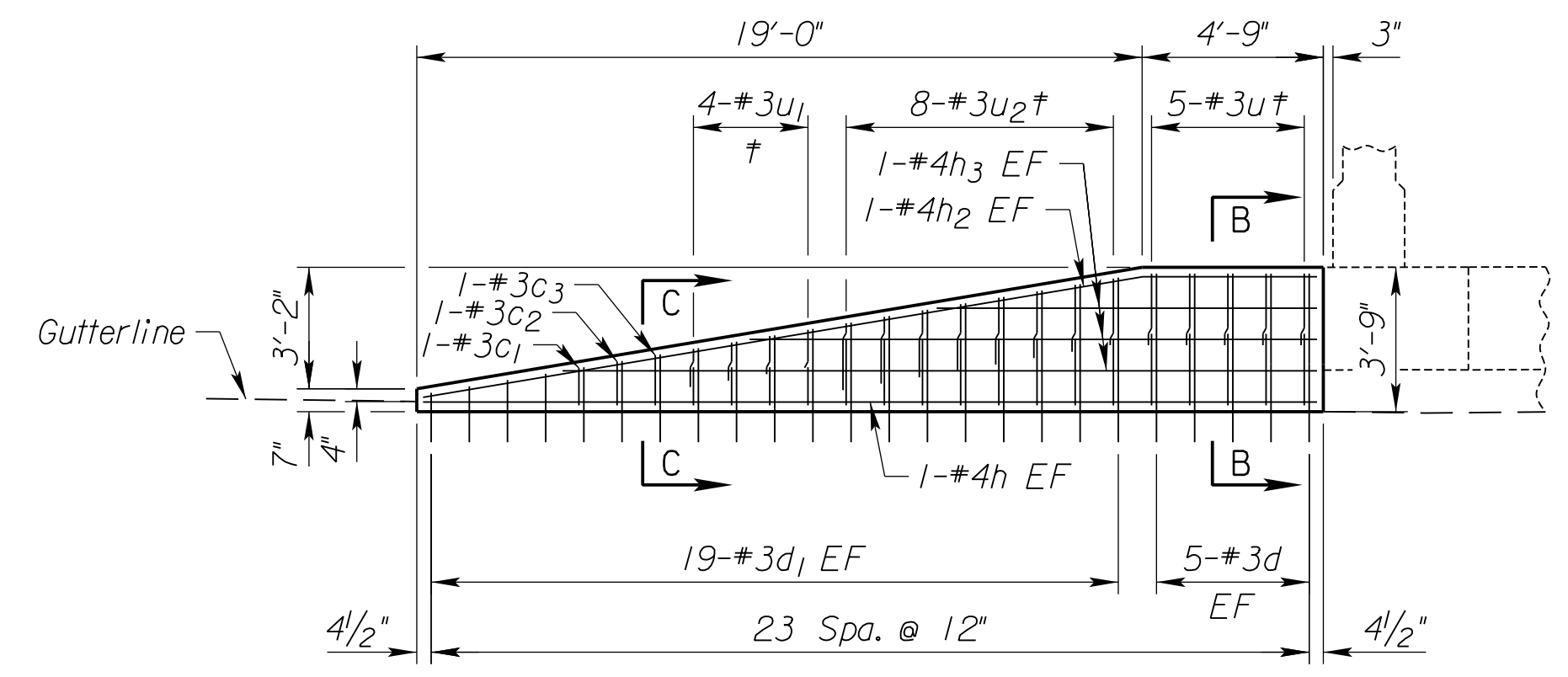
Notes:
 EF denotes Each Face.
 † In Pairs.
 Dimensions are out to out unless noted otherwise.
 No allowance for bend curvature is to be made except for standard hook and radii in excess of the same.
 Anchor bolt assemblies shall be incidental to the price for "Concrete Grade 4.0 (Barrier Rail)".
 Concrete tapers shall be painted safety yellow after construction.



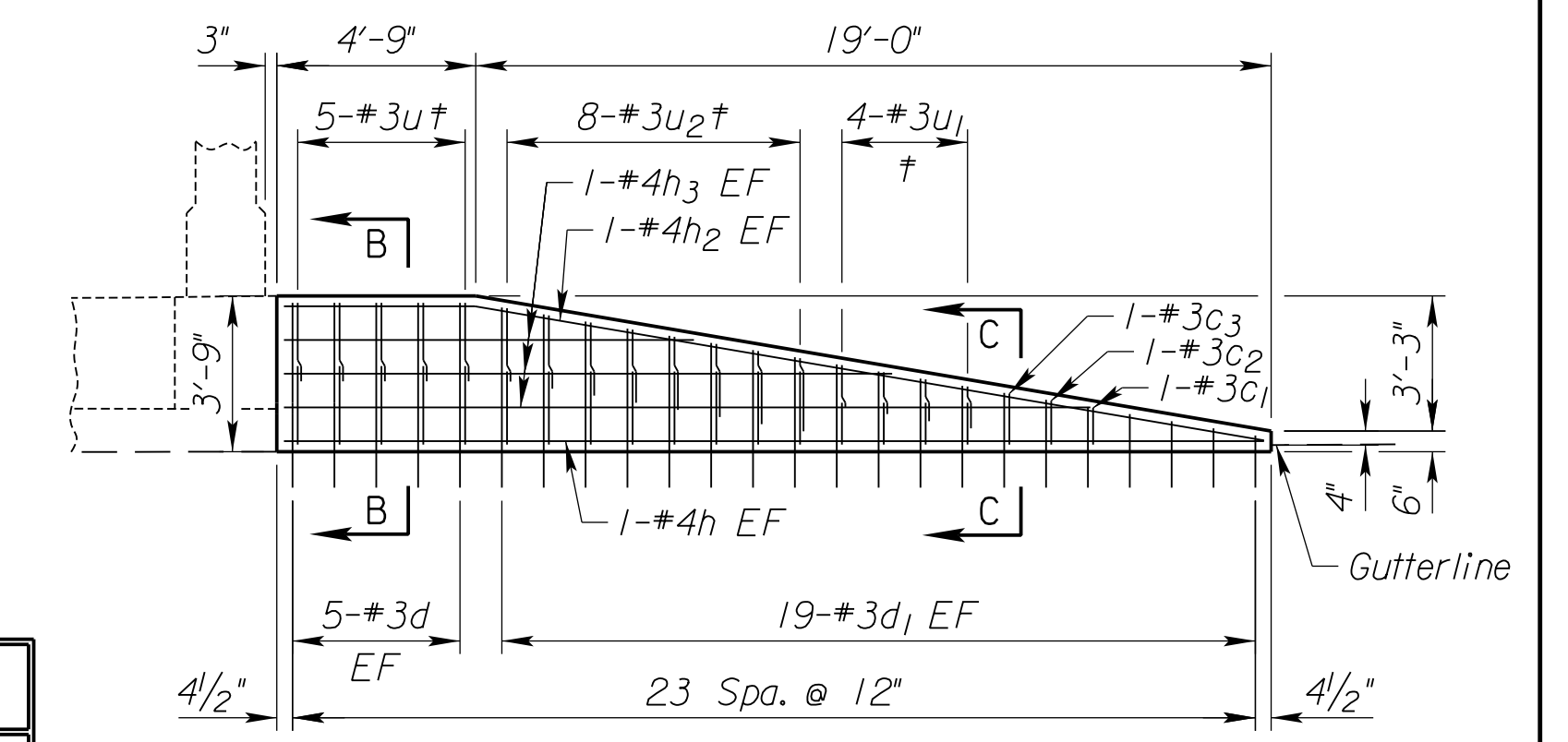
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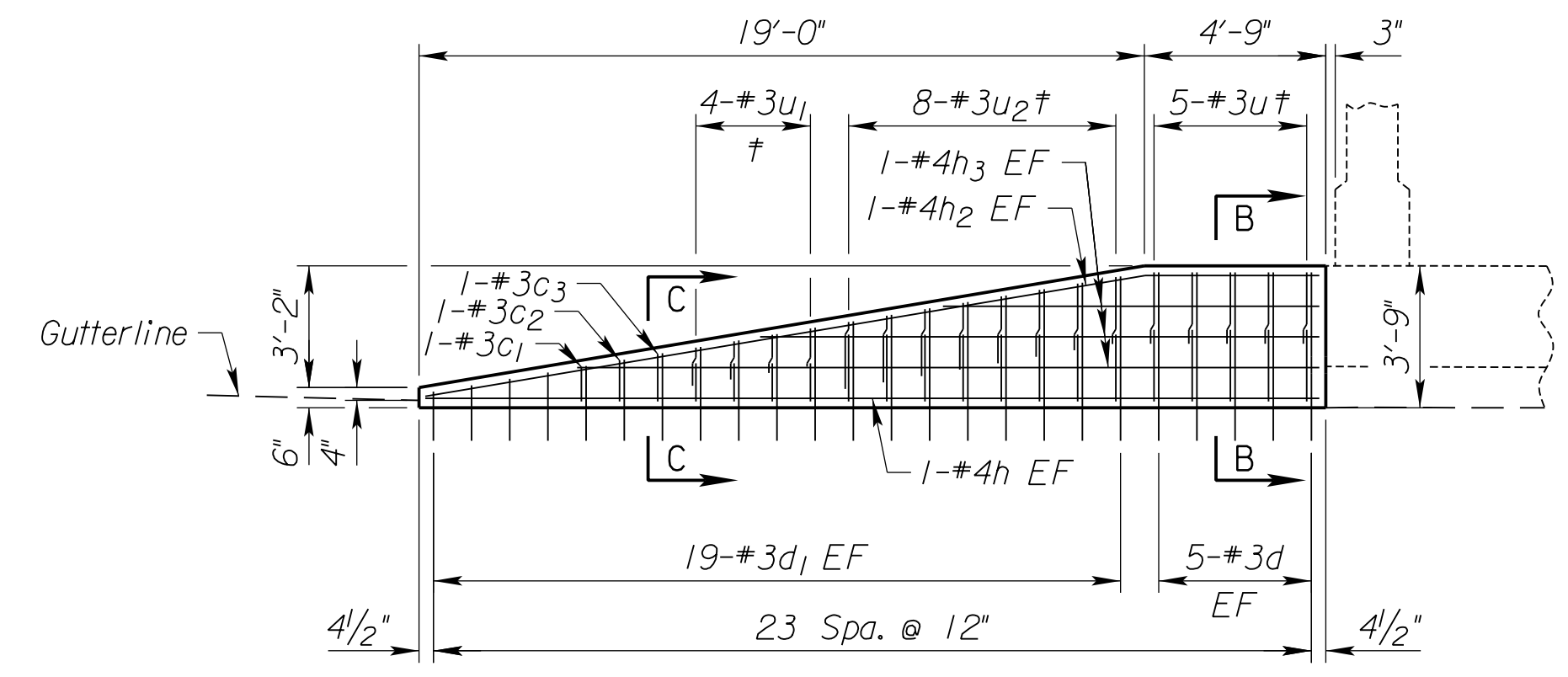
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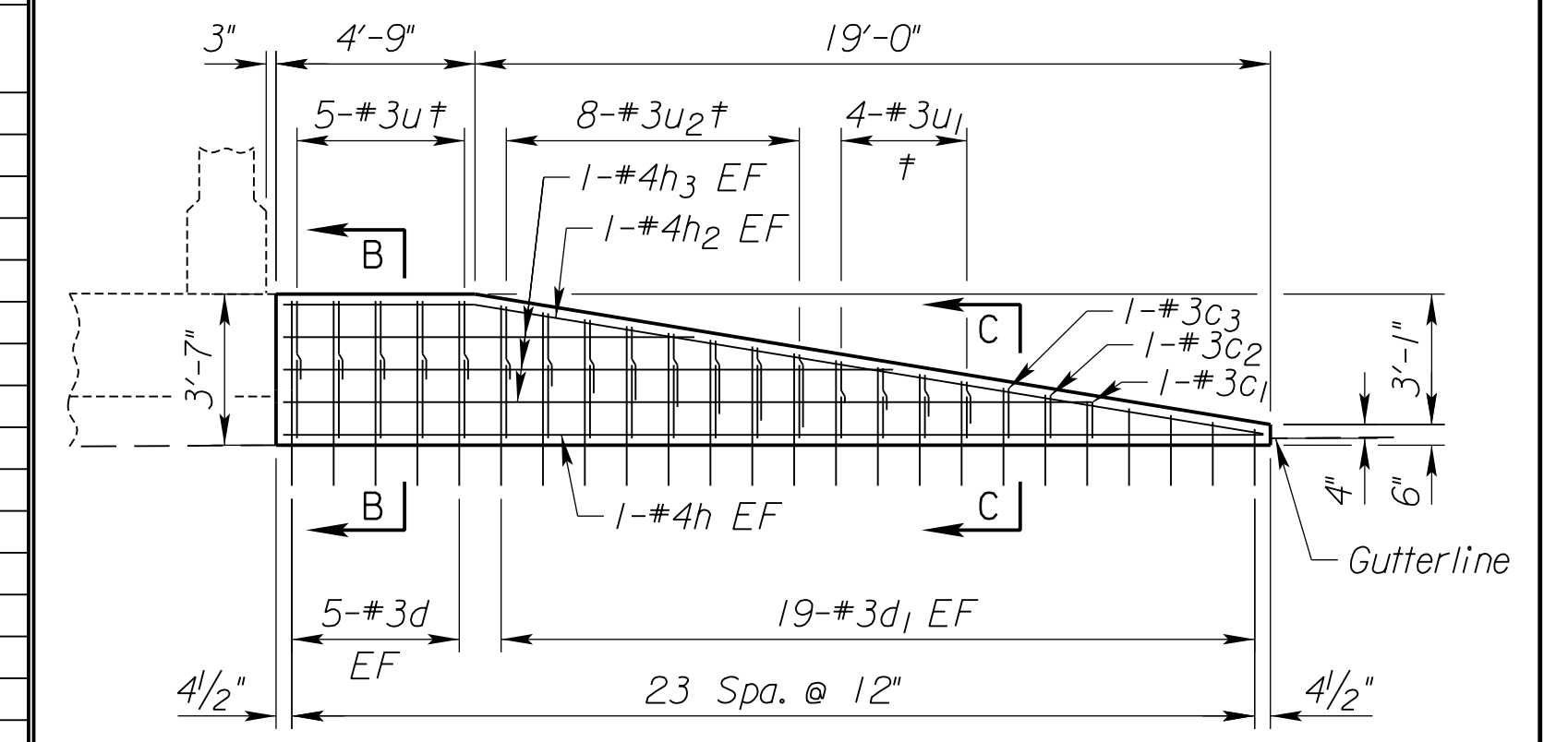
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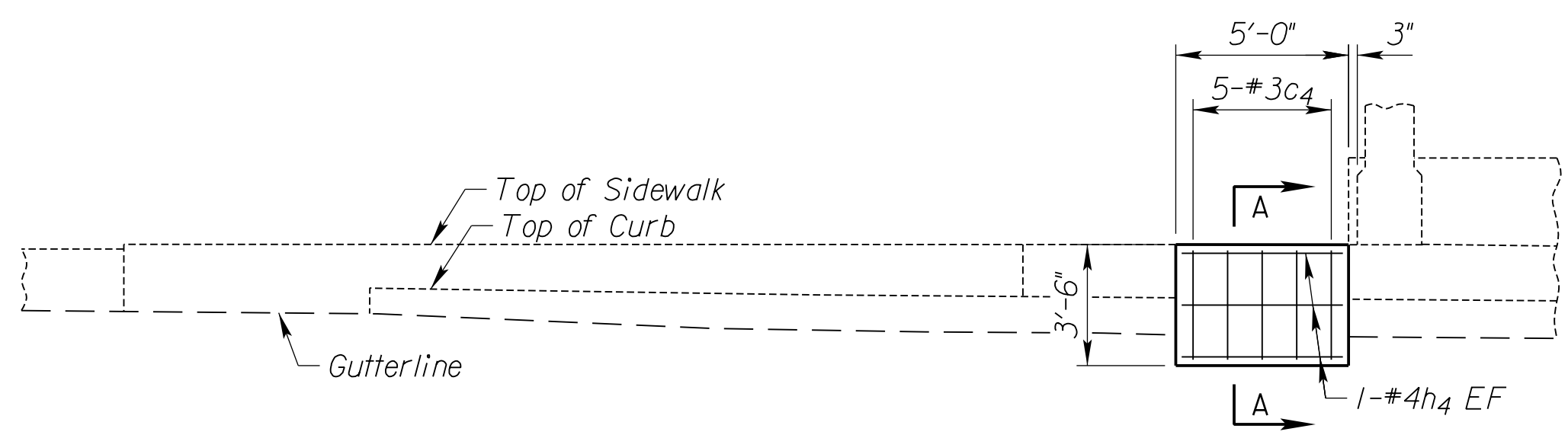
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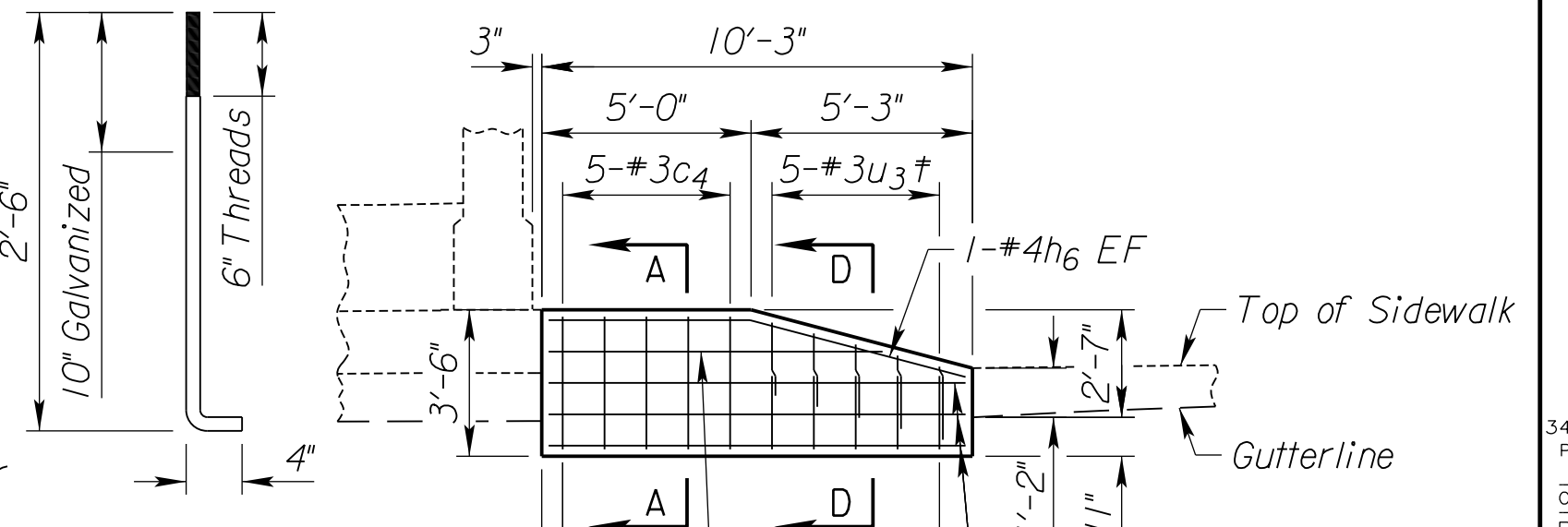
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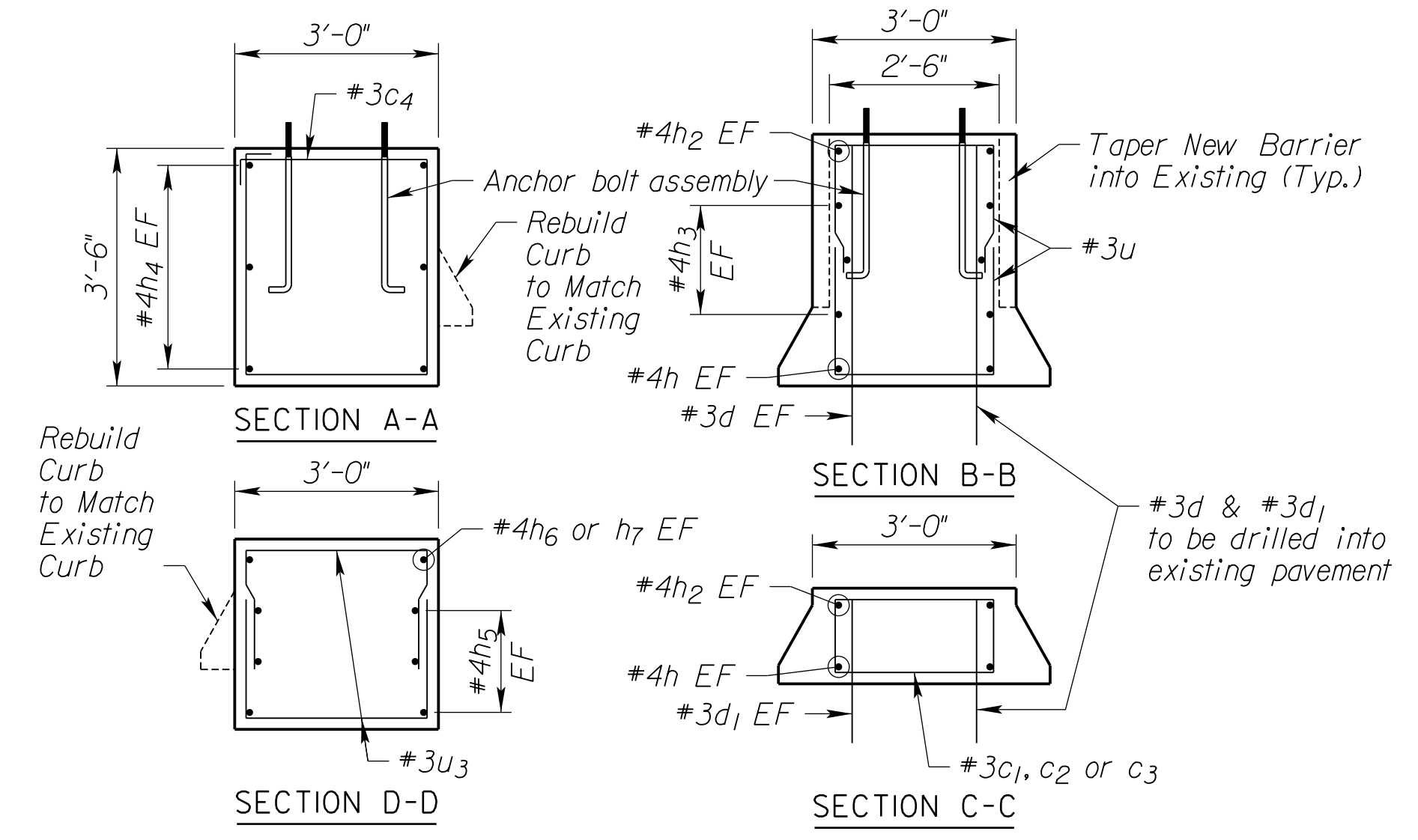
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WEST FASCIA - PIER NO. 5

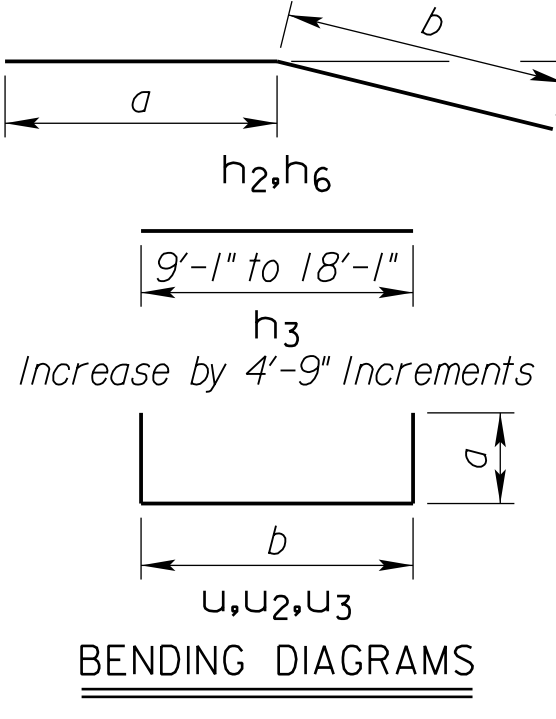
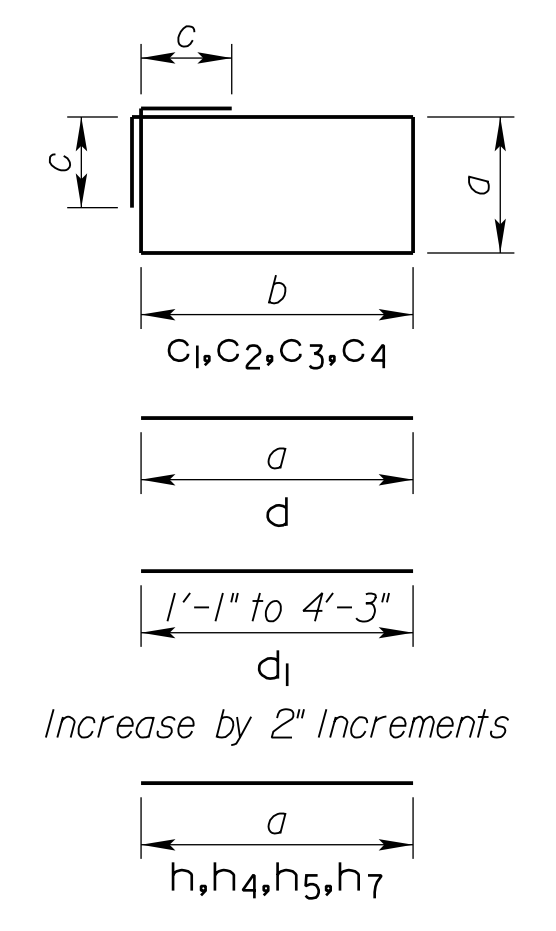


EAST FASCIA - PIER NO. 5

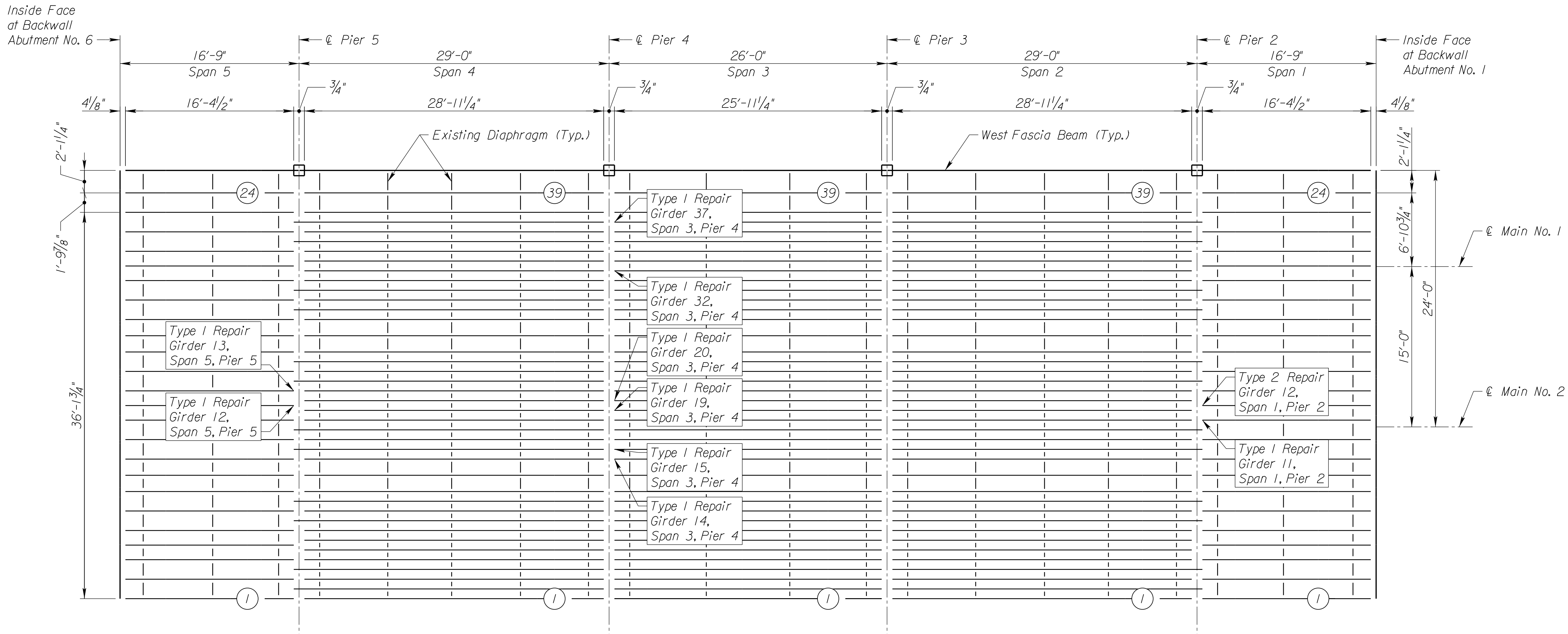


BILL OF REINFORCING STEEL - BARRIER RAIL
 GRADE 60 - EPOXY COATED

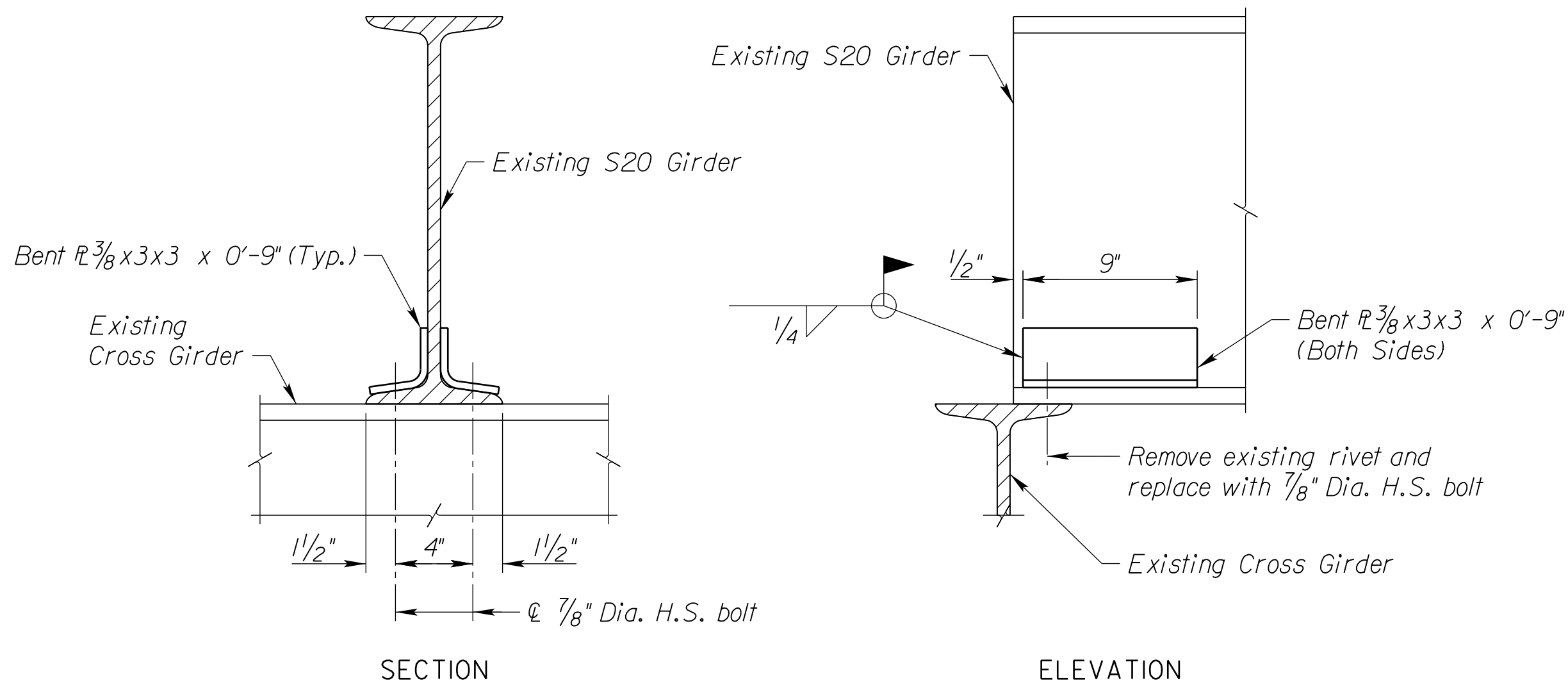
LOCATION	BAR LABEL	NO. REQUIRED	SIZE	TOTAL LENGTH	DIMENSIONS			lbs.
					a	b	c	
BARRIERS	c1	4	3	7'-0"	7 7/8"	2'-6"	4 1/2"	11
	c2	4	3	7'-5"	9 3/4"	2'-6"	4 1/2"	11
	c3	4	3	7'-9"	11 7/8"	2'-6"	4 1/2"	12
	c4	20	3	12'-5"	3'-2"	2'-8"	4 1/2"	93
	d	40	3	4'-5"	4'-5"			66
	d1	152	3	Varies				155
	h	8	4	23'-5"	23'-5"			125
	h2	8	4	23'-8"	4'-7"	19'-1"	3'-2"	126
	h3	24	4	Varies				234
	h4	18	4	4'-8"	4'-8"			56
	h5	6	4	9'-11"	9'-11"			40
	h6	2	4	10'-2"	4'-10"	5'-4"	1'-4"	14
	h7	2	4	8'-0"	8'-0"			11
	u	40	3	6'-3"	1'-10 1/2"	2'-6"		94
	u1	32	3	4'-6"	1'-0"	2'-6"		54
u2	64	3	6'-0"	1'-9"	2'-6"		144	
u3	10	3	6'-2"	1'-9"	2'-8"		23	



Coordinate anchor bolt assembly installation with new light poles shown elsewhere in these plans.

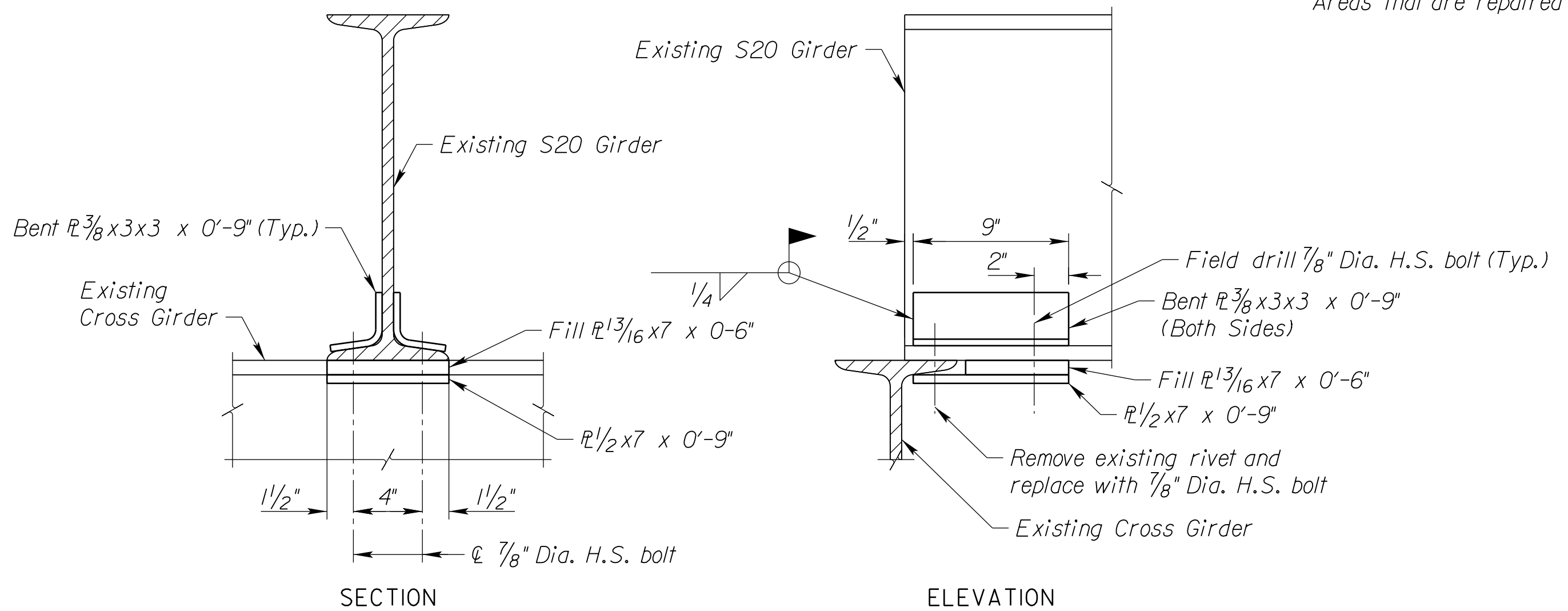


Note:
 Areas that are repaired shall be spot painted.



GIRDER END REPAIR DETAIL - TYPE 1

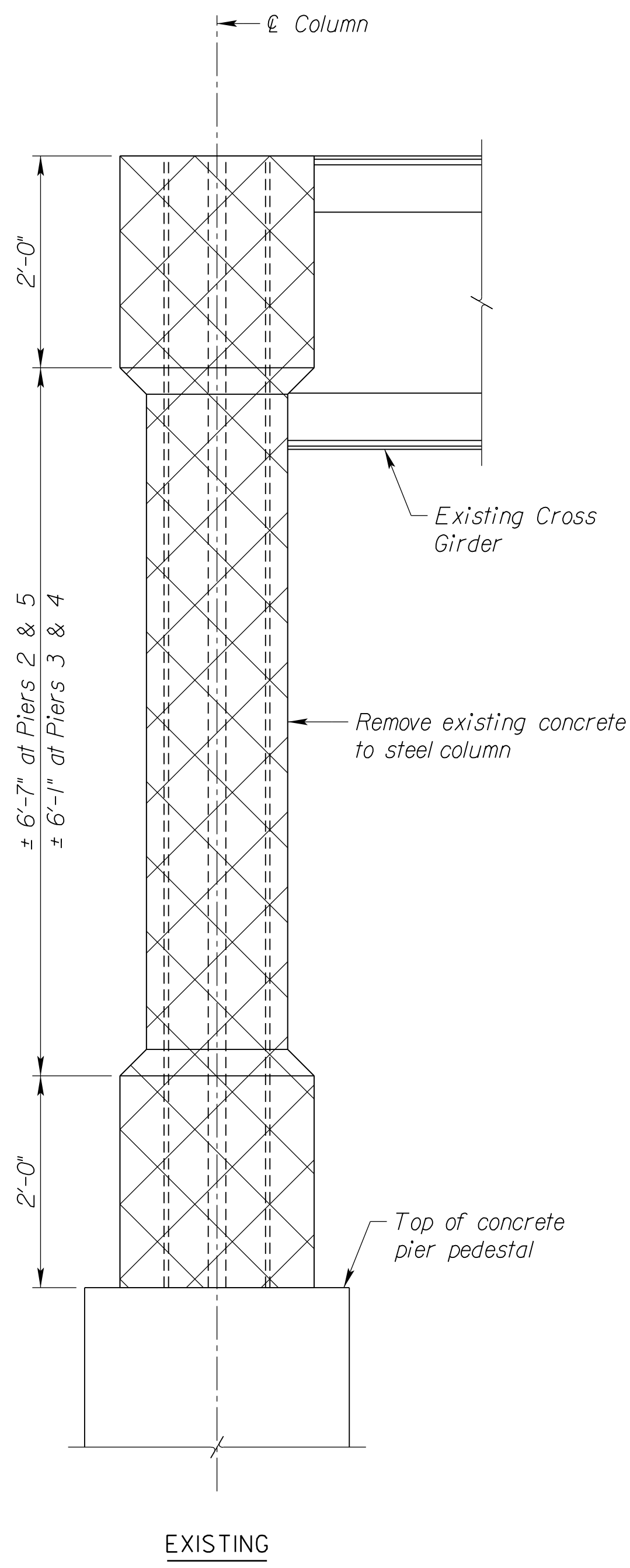
9 Req'd



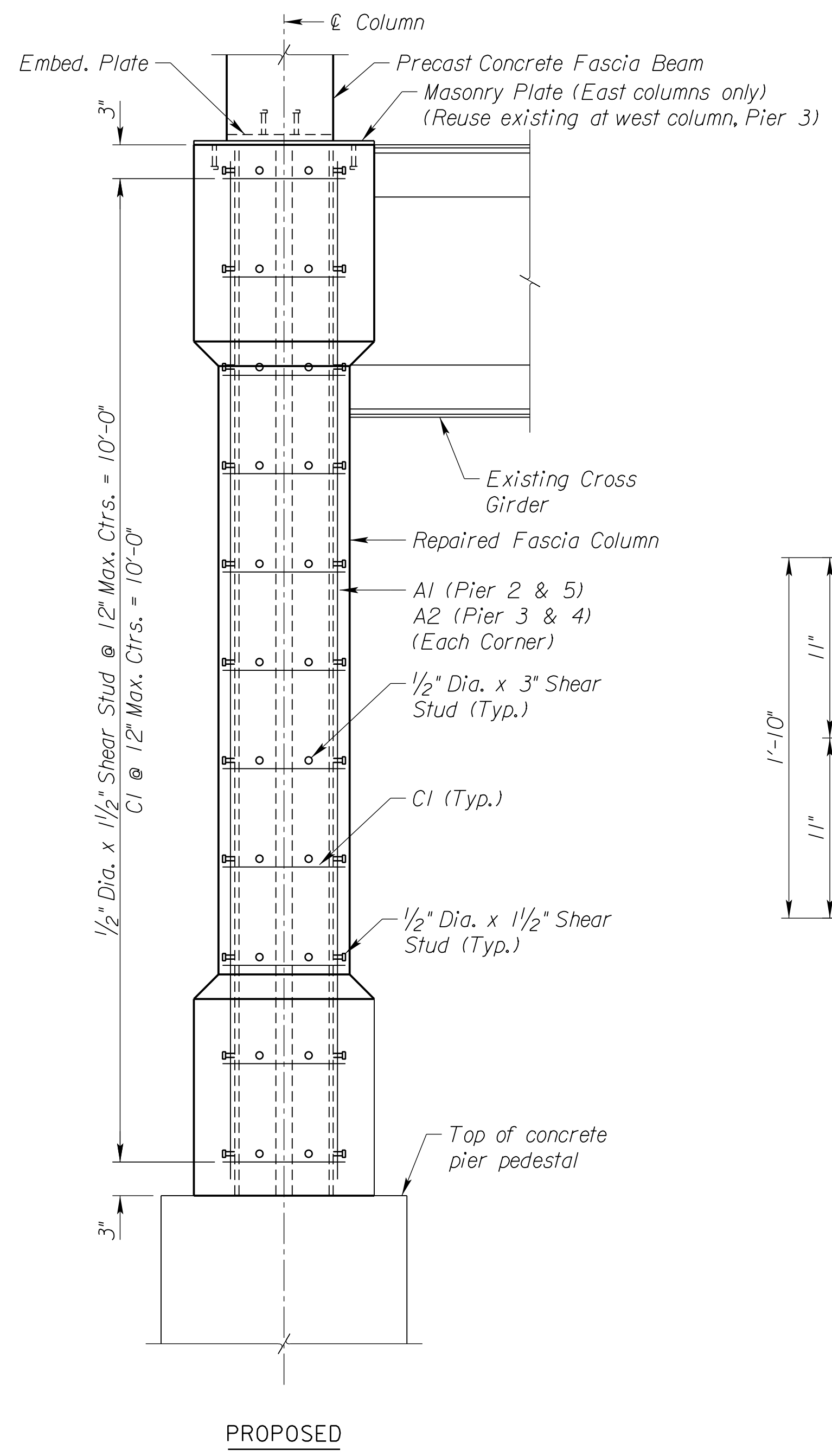
GIRDER END REPAIR DETAIL - TYPE 2

1 Req'd





EXISTING



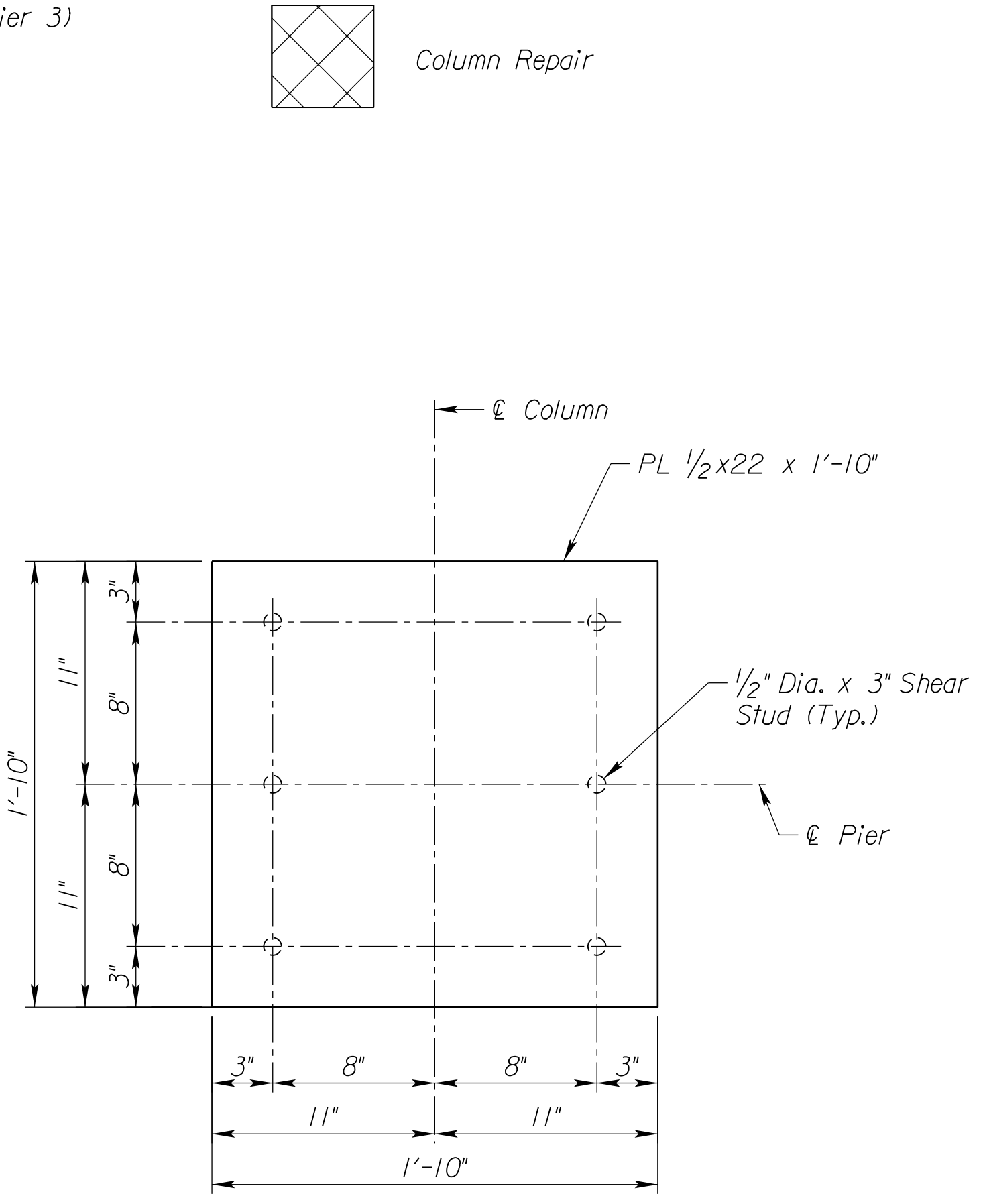
PROPOSED

FASCIA COLUMN SIDE VIEW

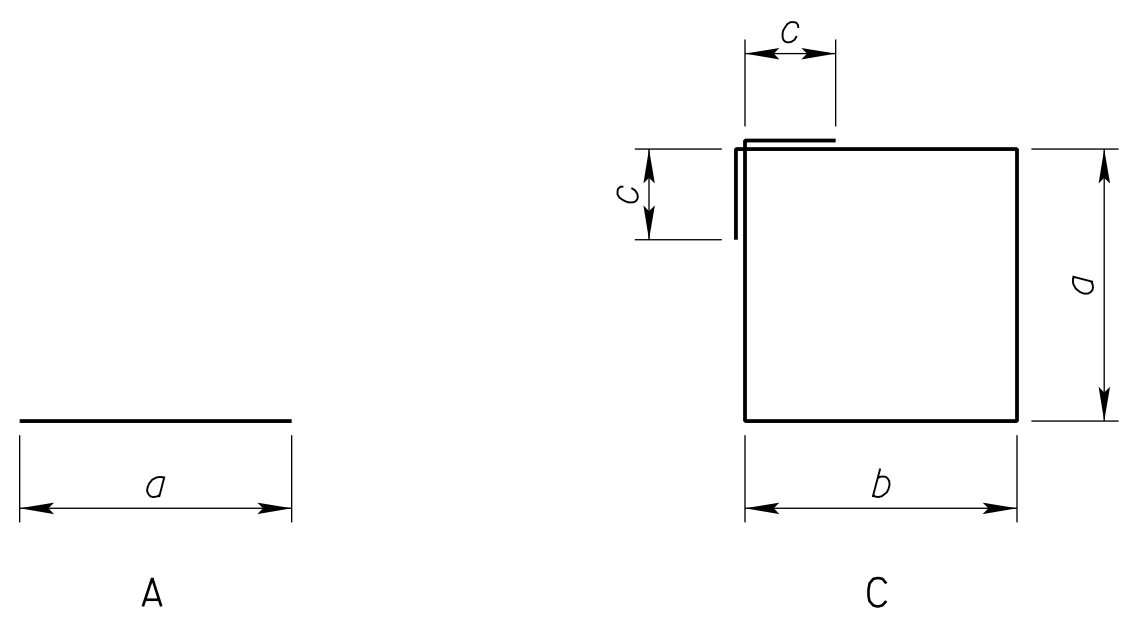
Note:
 Repair 4 Fascia columns at east side of bridge and 1 Fascia Column (Pier 3) at west side of bridge.
 Field verify dimensions.

BILL OF REINFORCING STEEL - SUBSTRUCTURE GRADE 60									
FASCIA CLMNS.	LOCATION	BAR LABEL	NO. REQUIRED	BEND	SIZE	TOTAL LENGTH	DIMENSIONS		
							a	b	c
		A1	8	A	4	10'-3"	10'-3"		
		A2	12	A	4	9'-9"	9'-9"		
		C1	55	C	4	5'-7"	1'-3"	1'-2"	4 1/2"

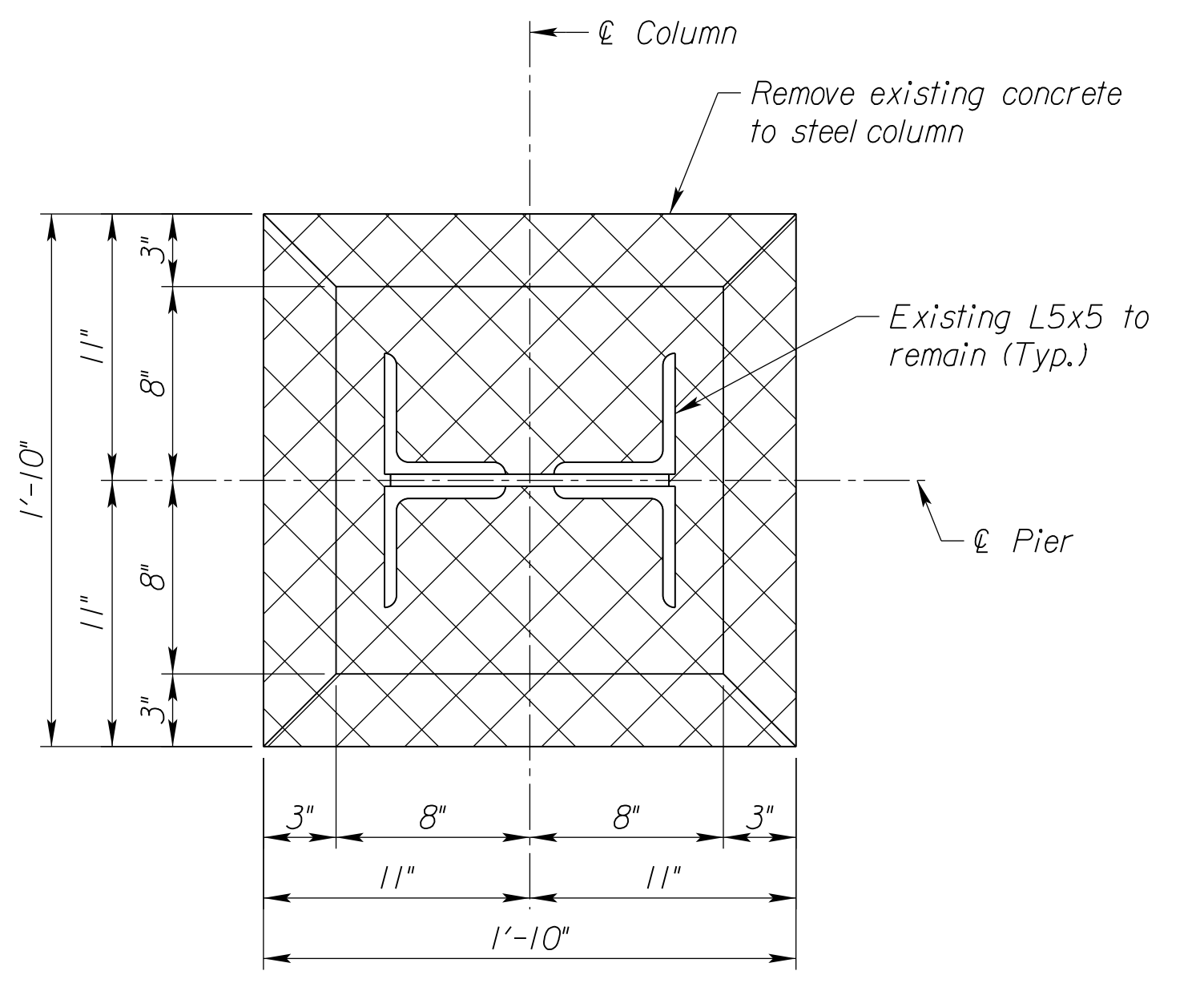
For Information Only



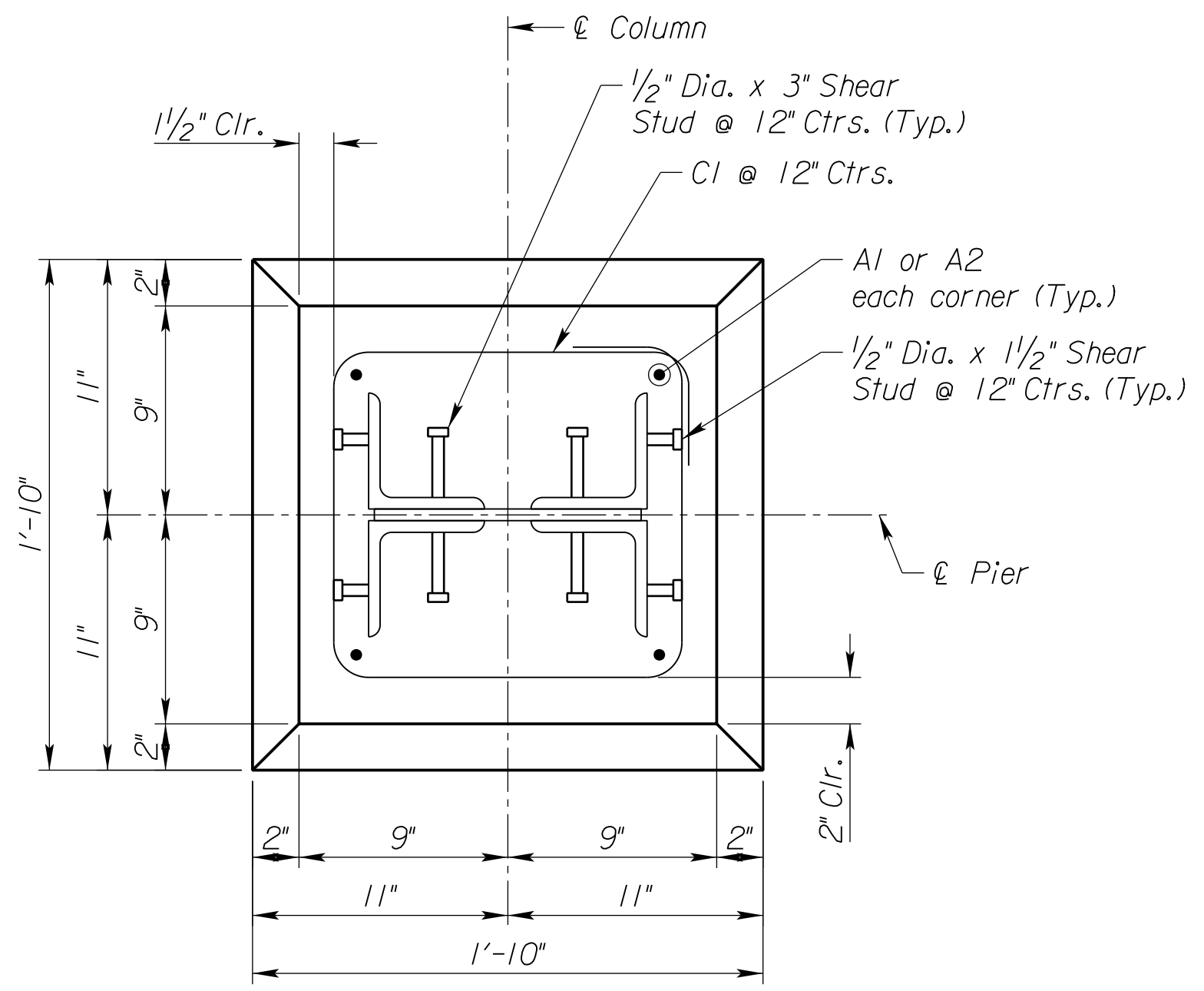
MASONRY PLATE DETAIL
 (ASTM A709 Gr. 50)
 (4 Required)



BENDING DIAGRAMS



EXISTING

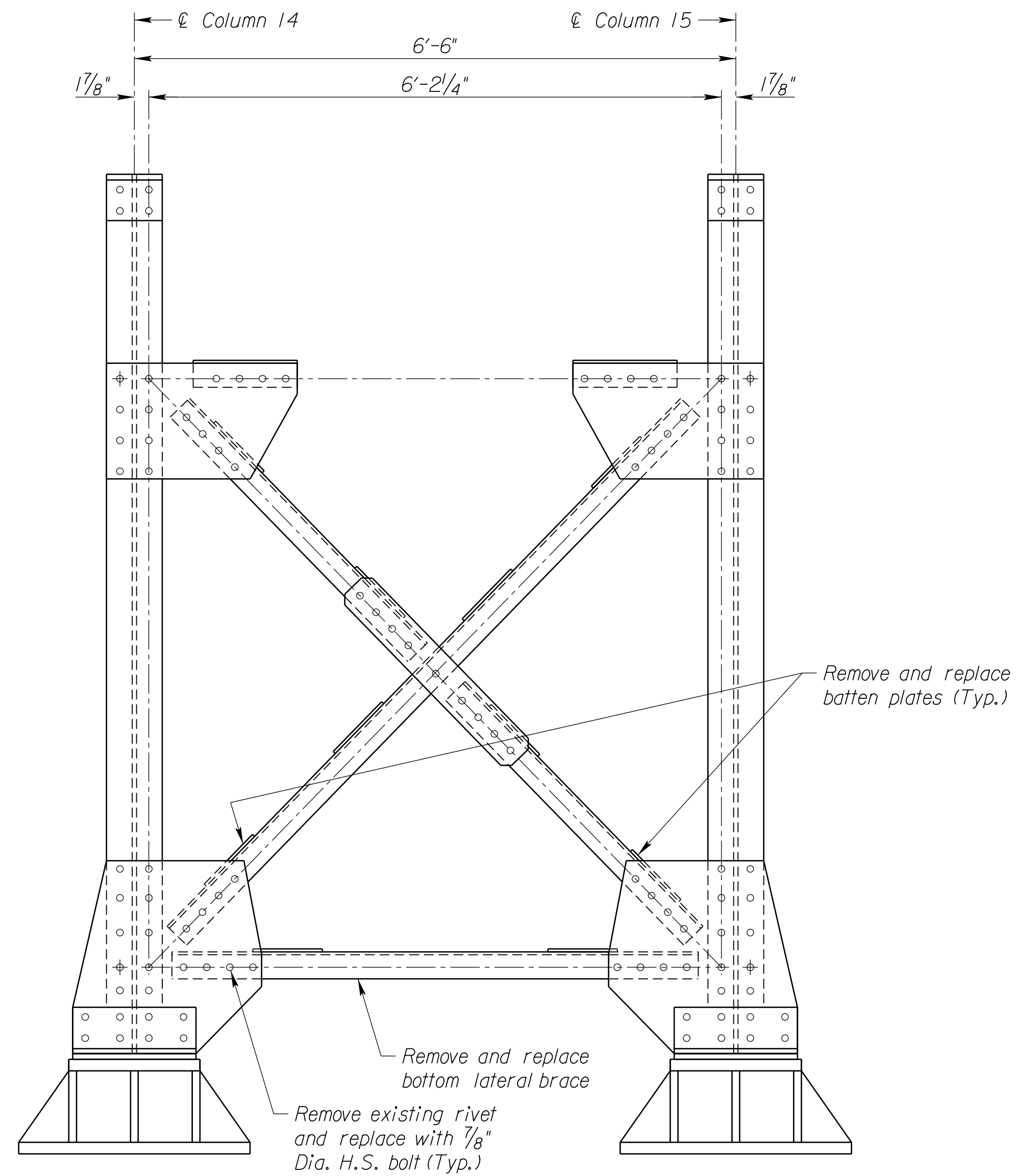


PROPOSED

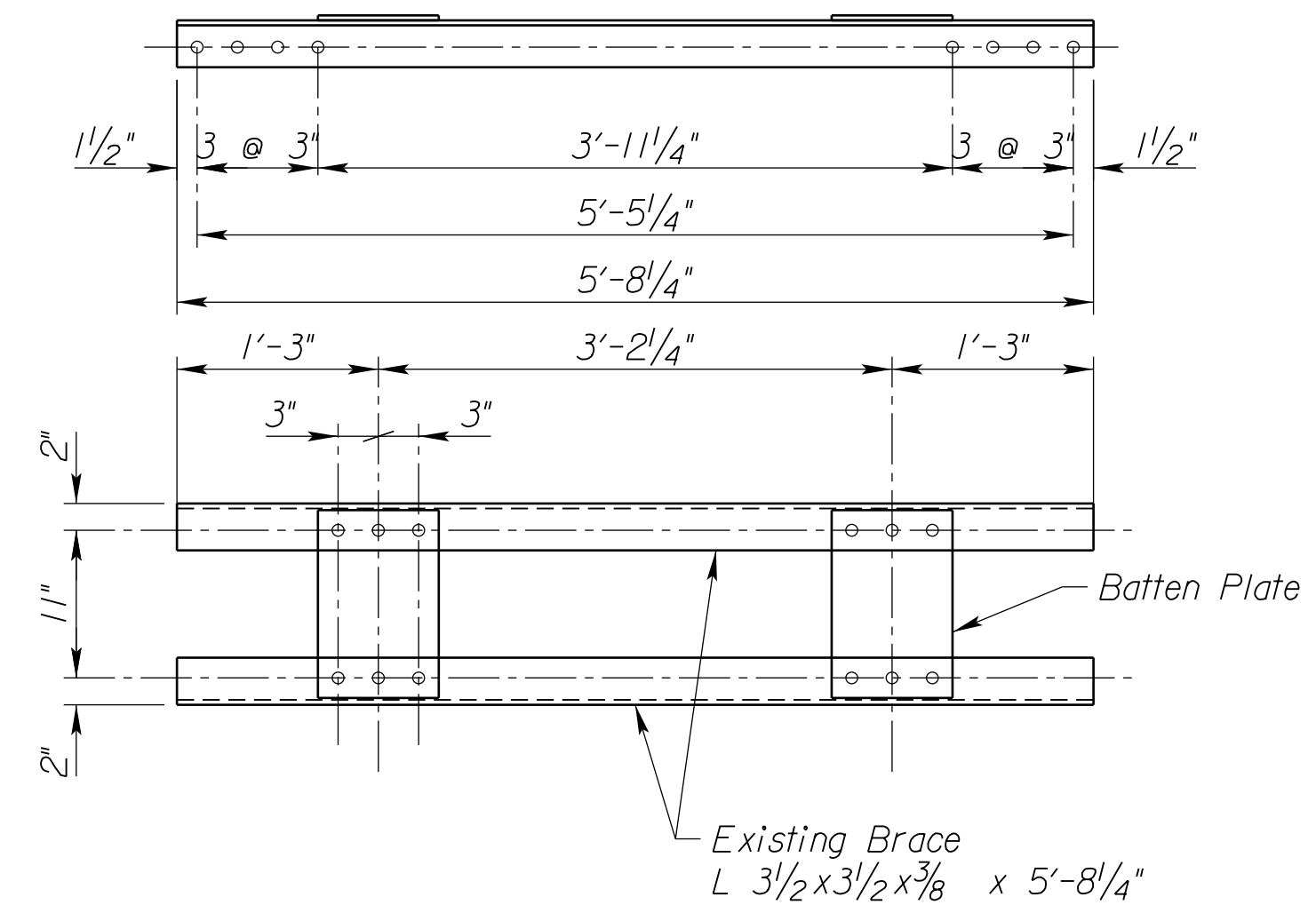
FASCIA COLUMN SECTION

Notes:
 "A" denotes bending mark. Dimensions are out to out unless noted otherwise.
 No allowance for bend curvature is to be made except for standard hook and radii in excess of the same.
 All materials and labor required to complete the concrete encasement, including removal and disposal of old concrete, rebar, shear studs and other incidentals shall be included in the price for bid item "Concrete Column Repair".



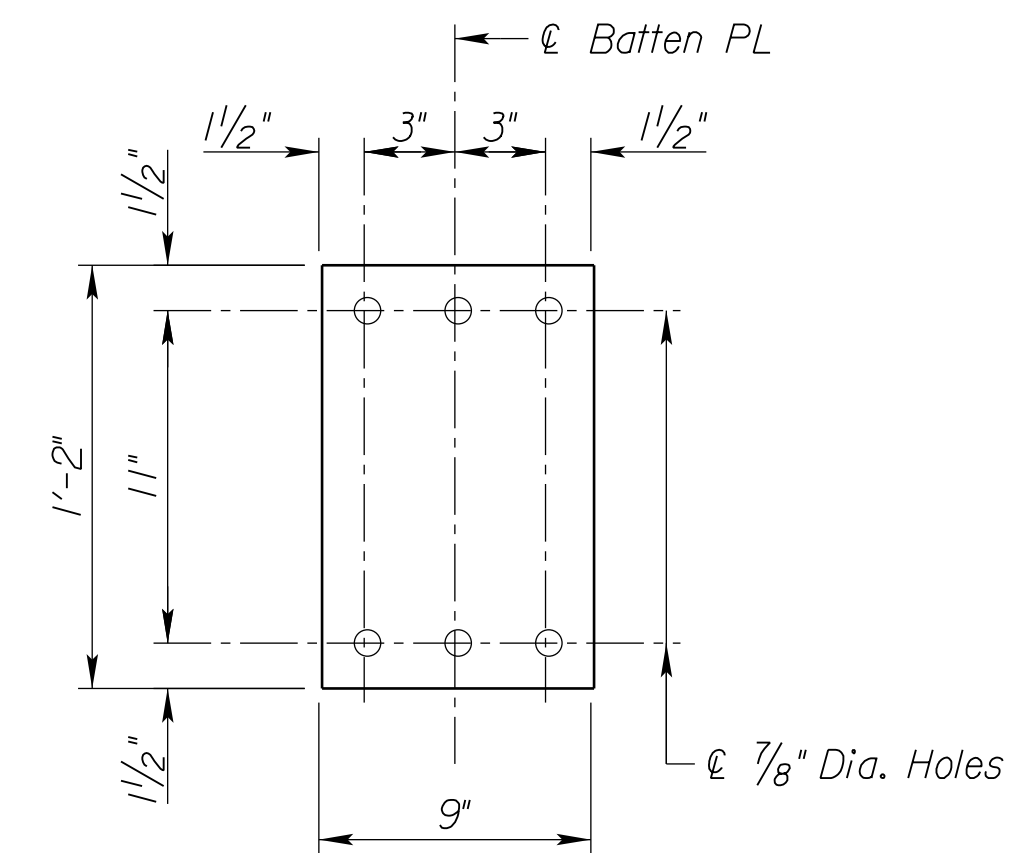


COLUMN BRACING REPAIR DETAIL



BOTTOM LATERAL BRACE

1 Req'd



BATTEN PLATE

4 Req'd

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CONTACT: --
 PROJECT NUMBER:

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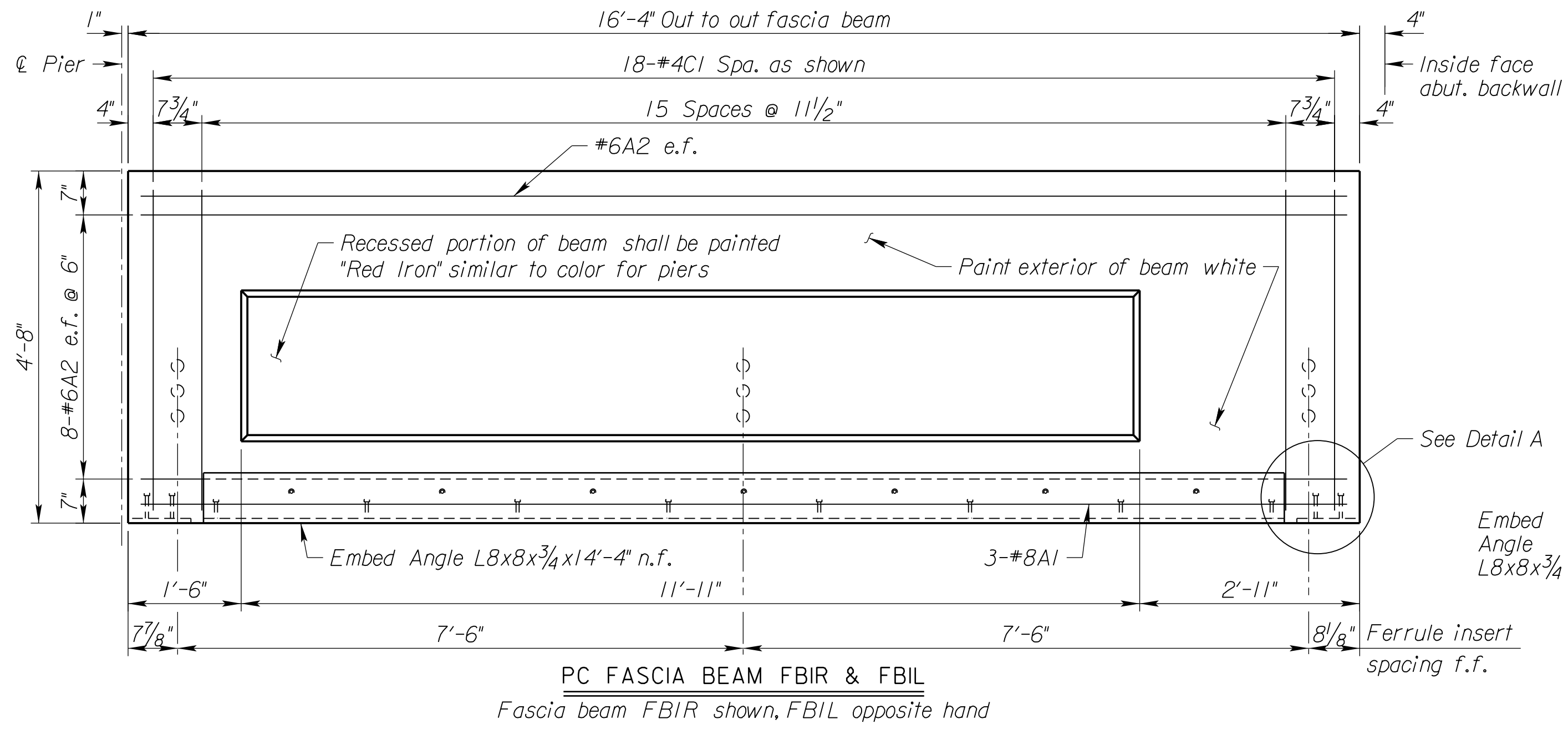
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COLUMN BRACING REPAIR DETAILS

SHEET NUMBER:

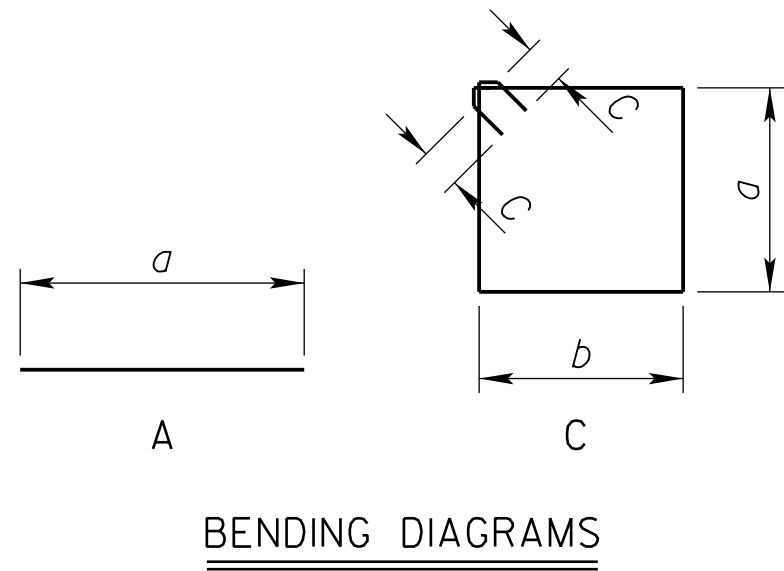
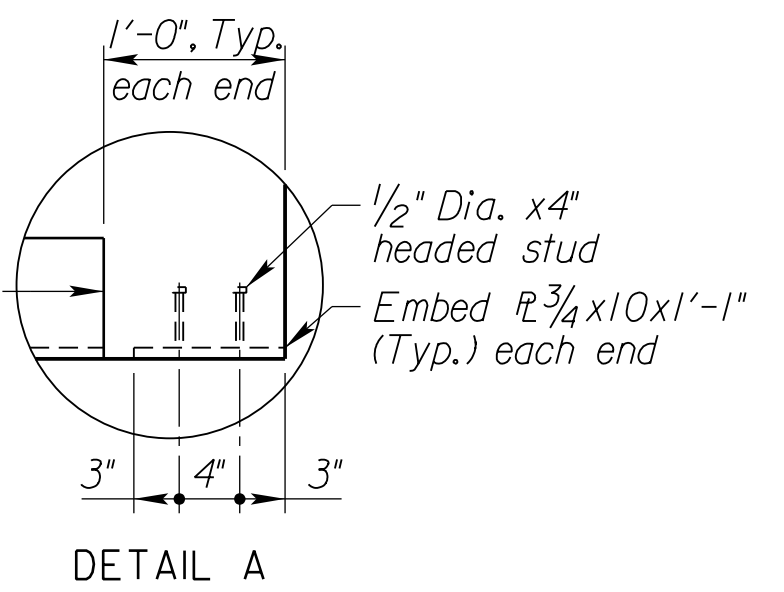
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LAT: 37.68622°N
 LONG: 97.33001°W

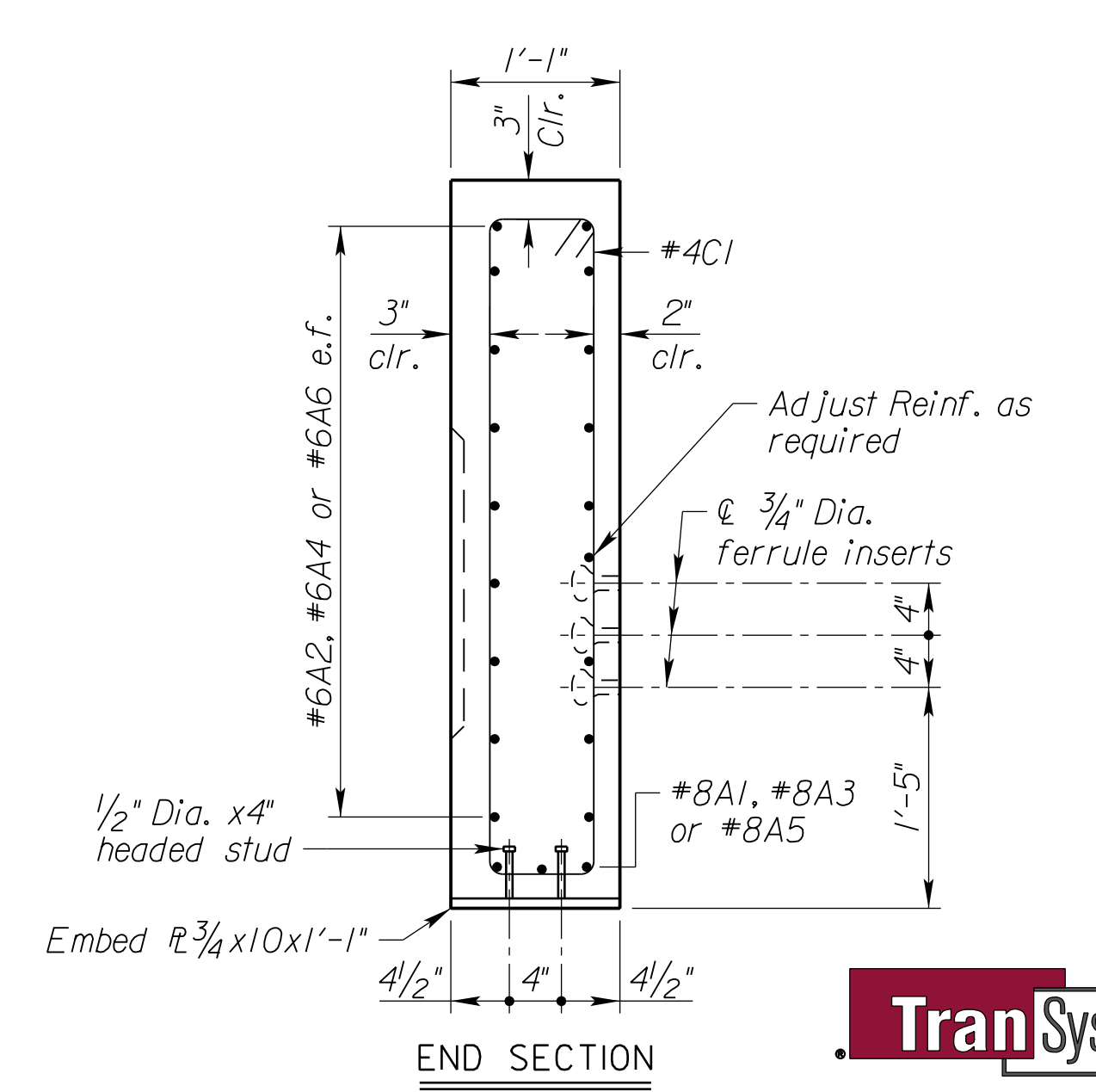
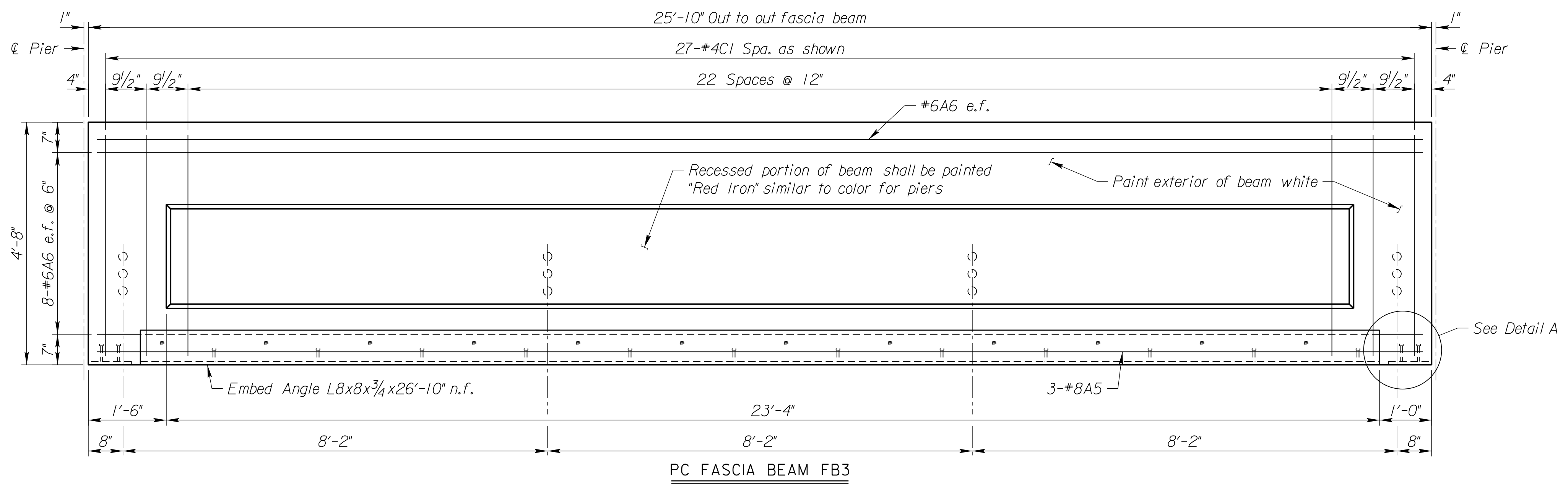
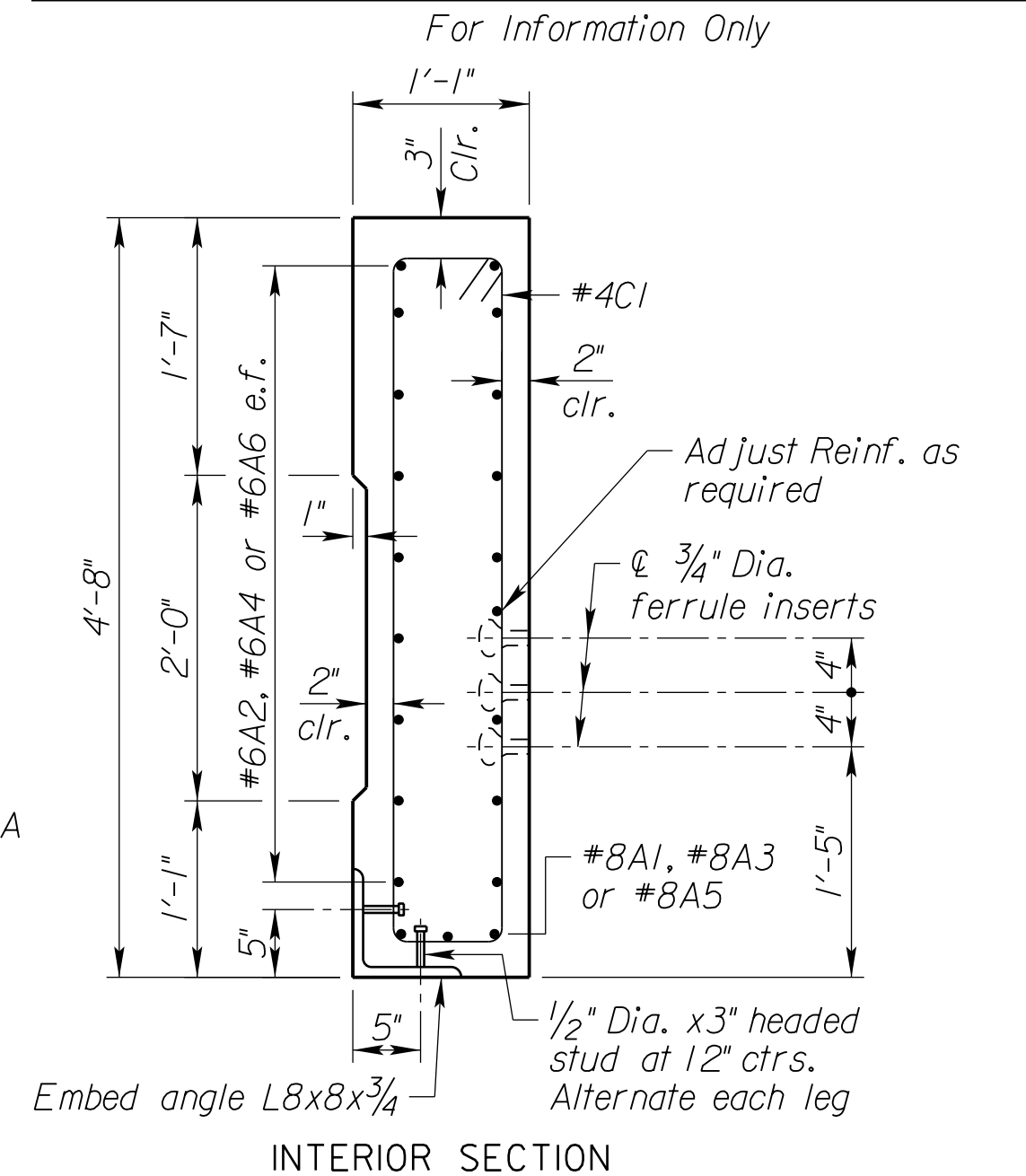
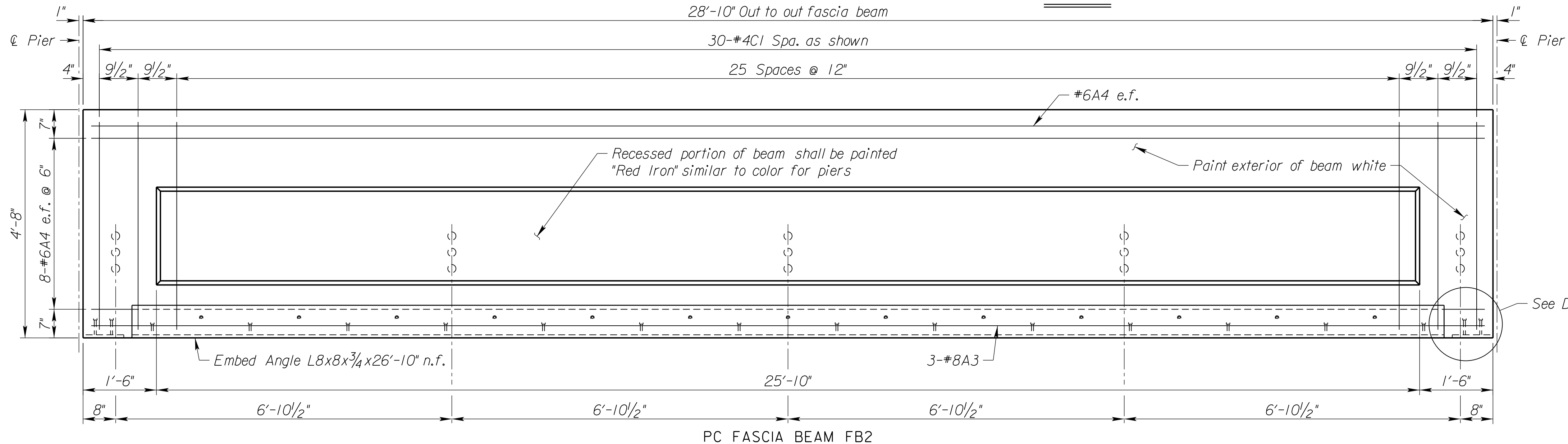




Notes:
"A" denotes bending mark. Dimensions are out to out unless noted otherwise.
No allowance for bend curvature is to be made except for standard hook and radii in excess of the same.
All labor and materials required to remove the existing fascia beam, fabricate, ship and erect the new fascia beams, including demolition and disposal of existing beam, blocking and shoring, as well as concrete, diaphragms, rebar and bearings for new beams shall be included in the bid item "Concrete Beam Replacement".
Removal and replacement of existing fence along East fascia, as well as installation and maintenance of temporary fence during construction shall also be included in the bid item "Concrete Beam Replacement".



BILL OF REINFORCING STEEL - PC FASCIA BEAM GRADE 60 - EPOXY COATED								
LOCATION	BAR LABEL	NO. REQUIRED	BEND	SIZE	TOTAL LENGTH	DIMENSIONS		
						a	b	c
FBIL	A1	3	A	8	16'-0"	16'-0"		
	A2	18	A	6	16'-0"	16'-0"		
	C1	18	C	4	10'-5"	4'-2"	8"	4 1/2"
FBIR	A1	3	A	8	16'-0"	16'-0"		
	A2	18	A	6	16'-0"	16'-0"		
	C1	18	C	4	10'-5"	4'-2"	8"	4 1/2"
FB2	A3	3	A	8	28'-6"	28'-6"		
	A4	18	A	6	28'-6"	28'-6"		
	C1	30	C	4	10'-5"	4'-2"	8"	4 1/2"
FB3	A5	3	A	8	25'-6"	25'-6"		
	A6	18	A	6	25'-6"	25'-6"		
	C1	27	C	4	10'-5"	4'-2"	8"	4 1/2"



PRINTS ISSUED
DATE PURPOSE NO.
7.31.17 90% Submittal Set

DOUGLAS AVE.-BNSF
RAILROAD UNDERPASS
IMPROVEMENTS
WICHITA, KS

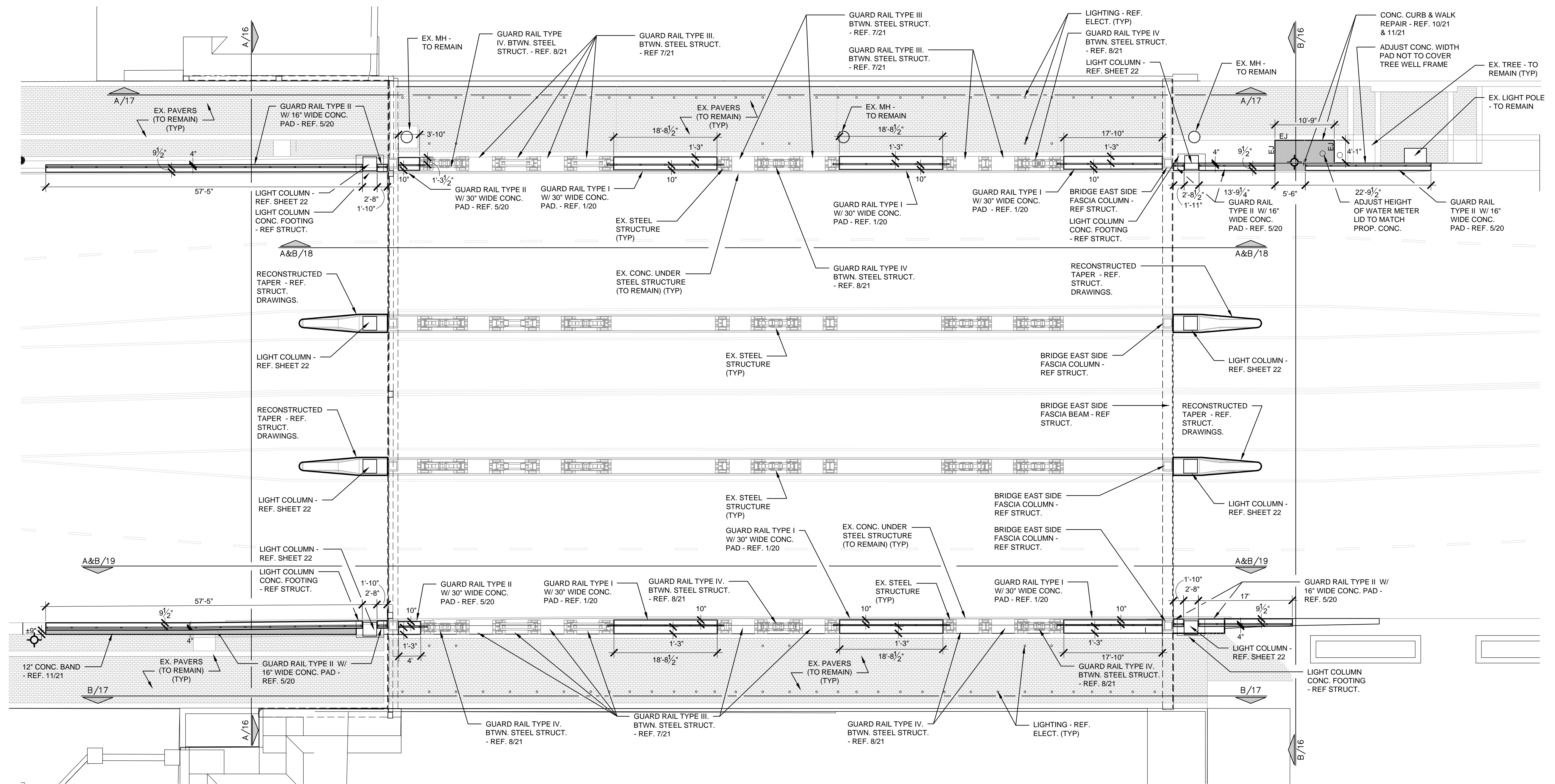
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345 RIVERVIEW, WICHITA, KS 67203
Phone (316) 268-0230 Fax: (316) 268-0205

PROJECT NUMBER:
17145
SHEET TITLE:
**EAST FASCIA BEAM
DETAILS 3 OF 3**

SHEET NUMBER:
12
LAT: 37.68622°N
LONG: 97.33001°W





A SITE ARCHITECTURAL PLAN
 1"=10'-0"
 NORTH

GUARDRAIL NOTES:

1. ALL GUARDRAILS ARE TO BE HOT DIPPED GALVANIZED PER KDOT SPECIFICATION SECTION 1624 (ZINC COATING)
2. GUARDRAILS ARE TO BE A DUPLEX SYSTEM. GALVANIZER SHALL PREPARE GUARDRAILS ACCORDINGLY TO ACCEPT PRIMER AND TOPCOAT.
3. PREPARE GALVANIZED METAL PER SSPC-SPI SOLVENT CLEANING AND SSPC-SP16 BRUSH BLASTING, OR MPI #25 CLEANING, ETCHER FOR GALVANIZED STEEL. PREPARE GALVANIZED SURFACES PER ASTM D6386.
4. PAINTED AREAS SHALL BE COATED WITH PRO-CRYL UNIVERSAL PRIMER (MP1 134)
5. TOP COAT SHALL BE SHER-CRYL HIGH PERFORMANCE ACRYLIC PAINT.
6. FINAL TOP COAT SHALL BE 'RED IRON' OR 'OXIDE RED'. FINAL COLOR TO BE PREPARED AND SUBMITTED FOR APPROVAL PRIOR TO FINAL PAINTING.
7. PROVIDE (1) ONE MOCK-UP OF EACH GUARDRAIL TYPE FOR REVIEW PRIOR TO GALVANIZING.

DOUGLAS AVE.-BNSF
 RAILROAD UNDERPASS
 IMPROVEMENTS
 WICHITA, KS

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CONTACT: JEFFREY A. BEST, PLA

PROJECT NUMBER:

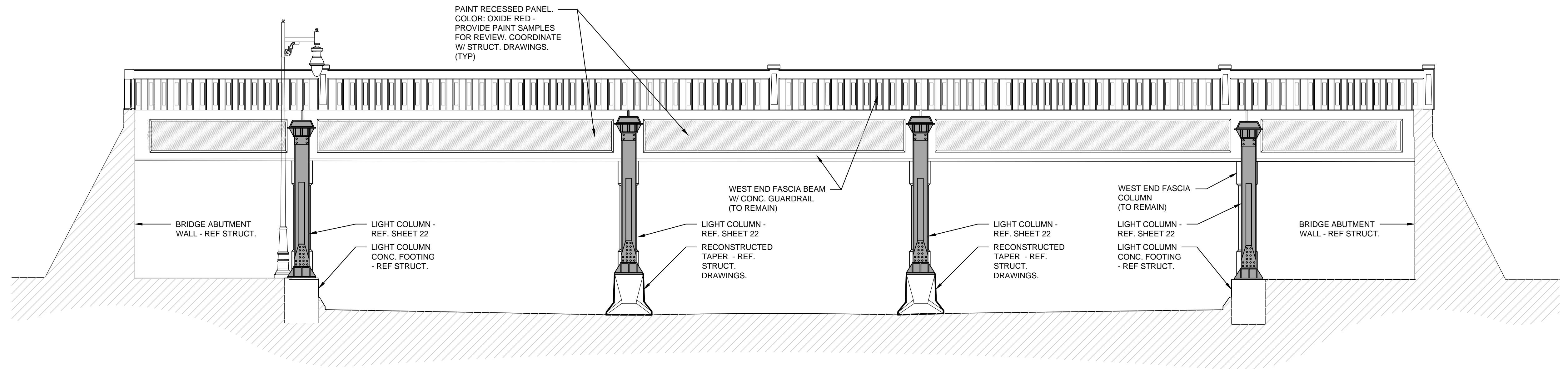
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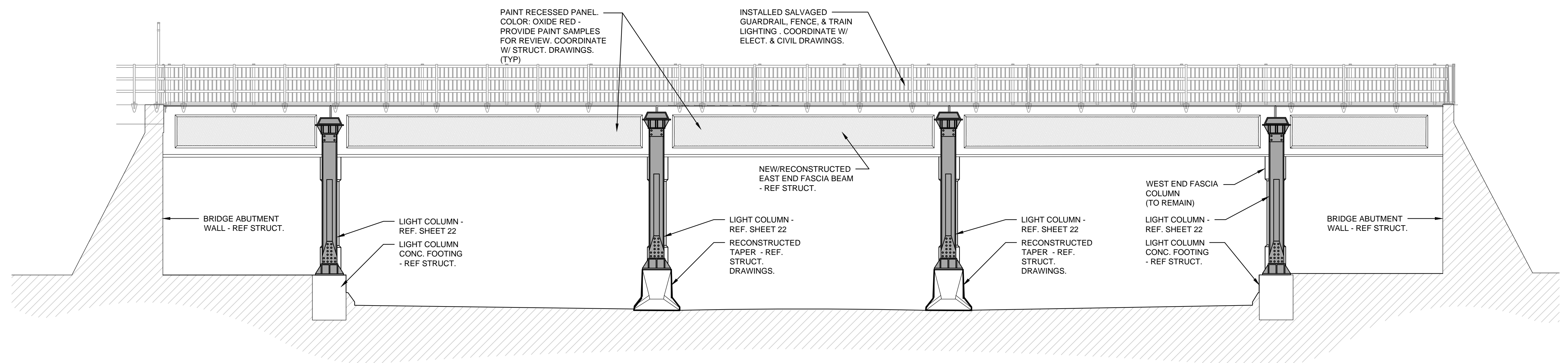
**SITE ARCHITECTURAL
 PLAN**

SHEET NUMBER:

15



A WEST BRIDGE ELEVATION
 3/16"=1'-0"



B EAST BRIDGE ELEVATION
 3/16"=1'-0"

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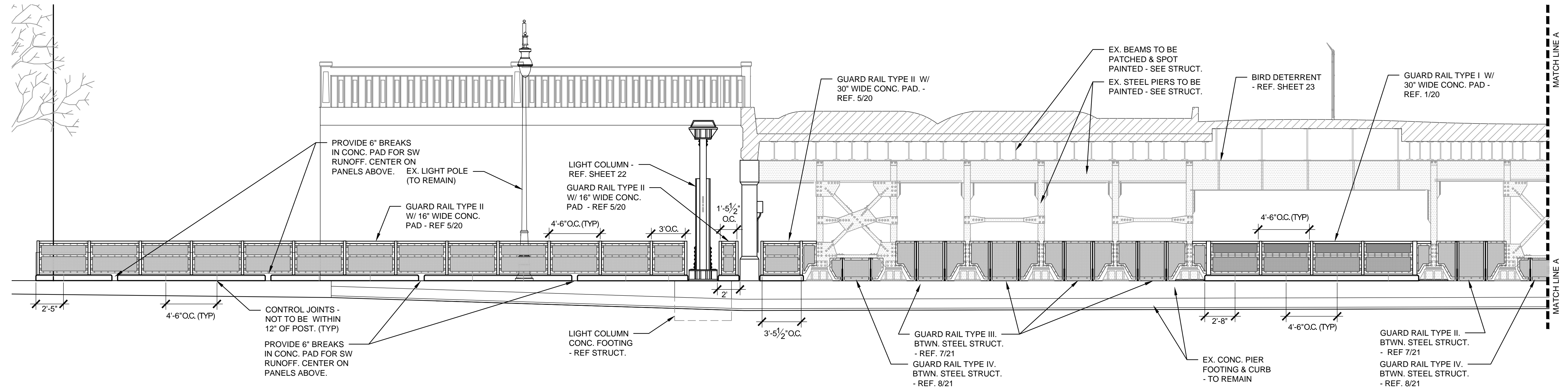
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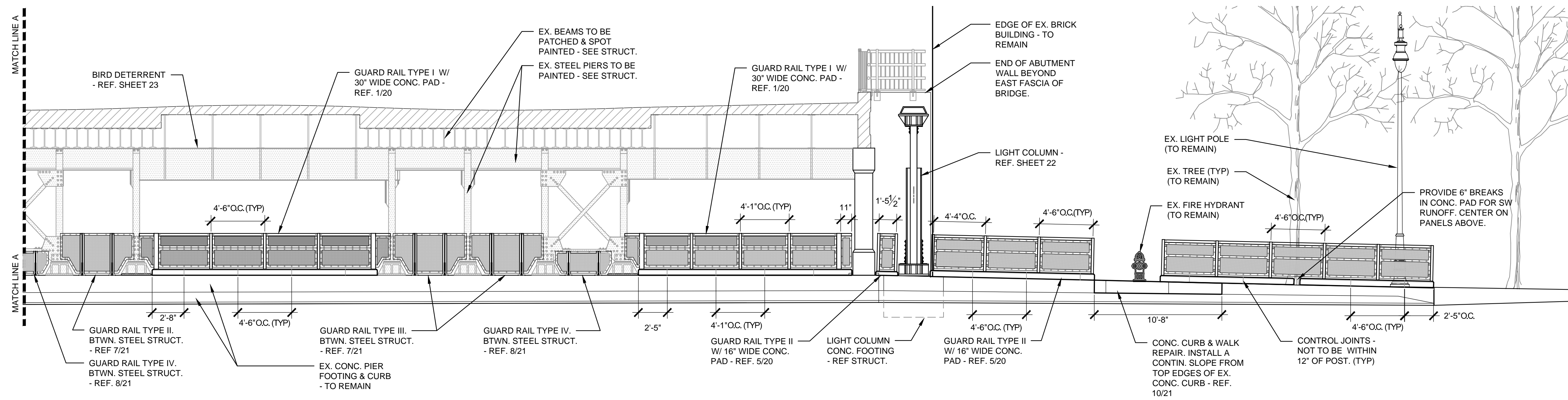
**EAST/WEST BRIDGE
 ELEVATIONS**

SHEET NUMBER:

16



A NORTHWEST BRIDGE ELEVATION
 3/16"=1'-0"



B NORTHEAST BRIDGE ELEVATION
 3/16"=1'-0"

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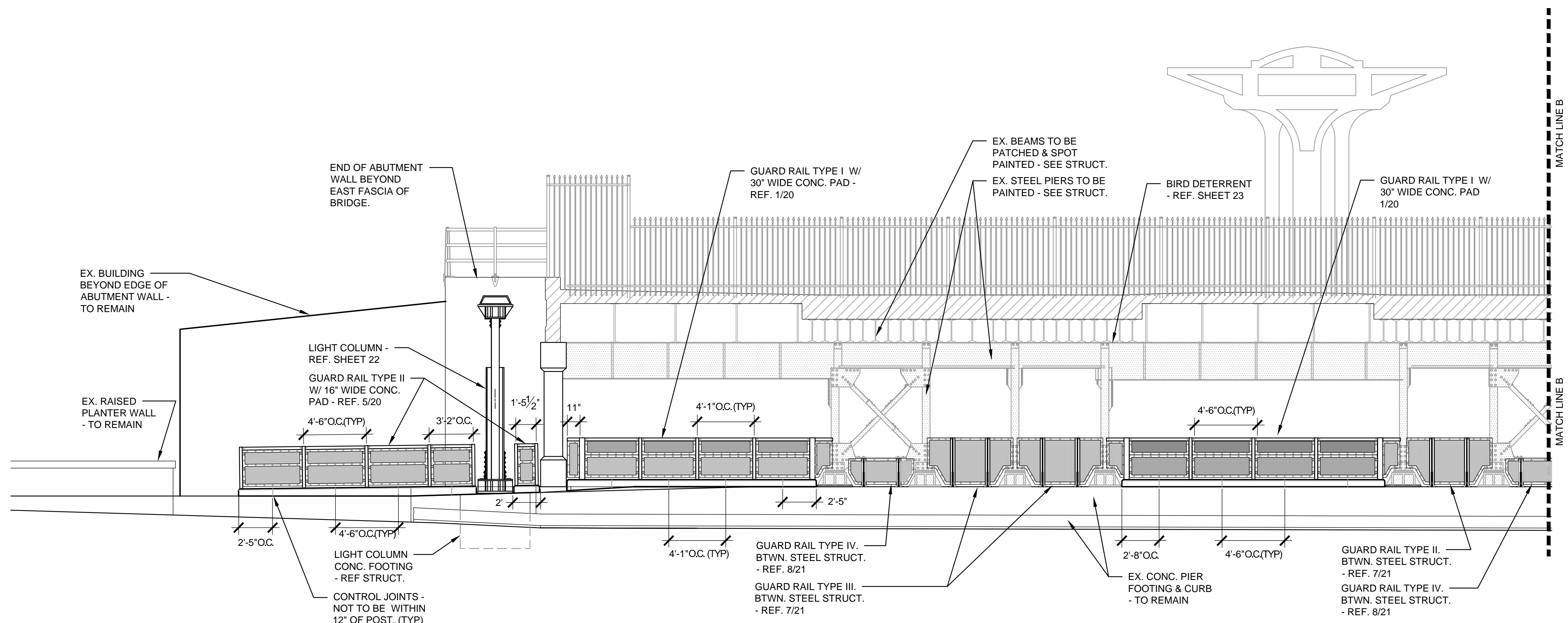
CONTACT: JEFFREY A. BEST, PLA
 PROJECT NUMBER:

17145

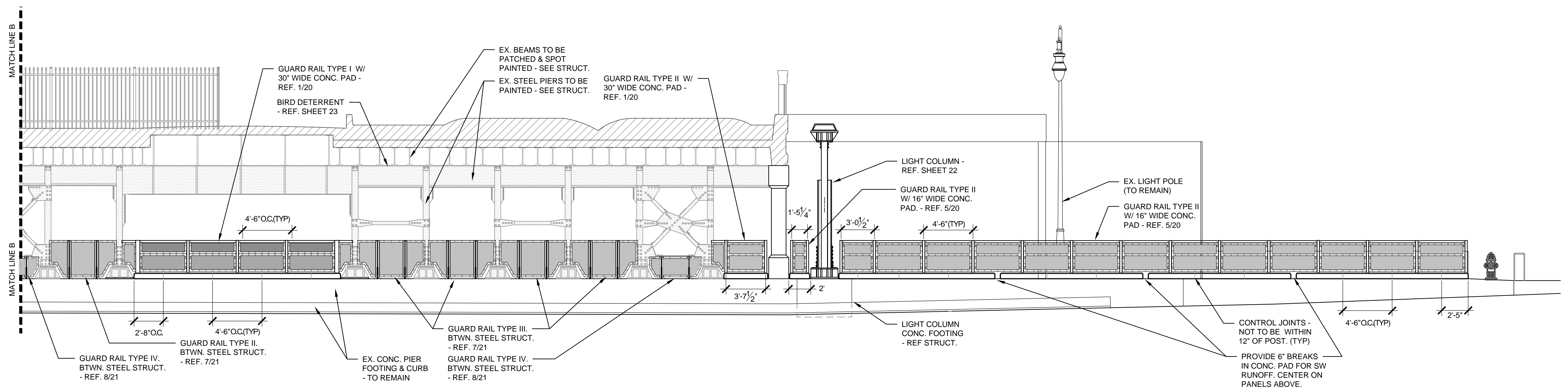
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**NORTH BRIDGE
 ELEVATIONS**

SHEET NUMBER:

18



A SOUTH EAST BRIDGE ELEVATION
 3/16"=1'-0"

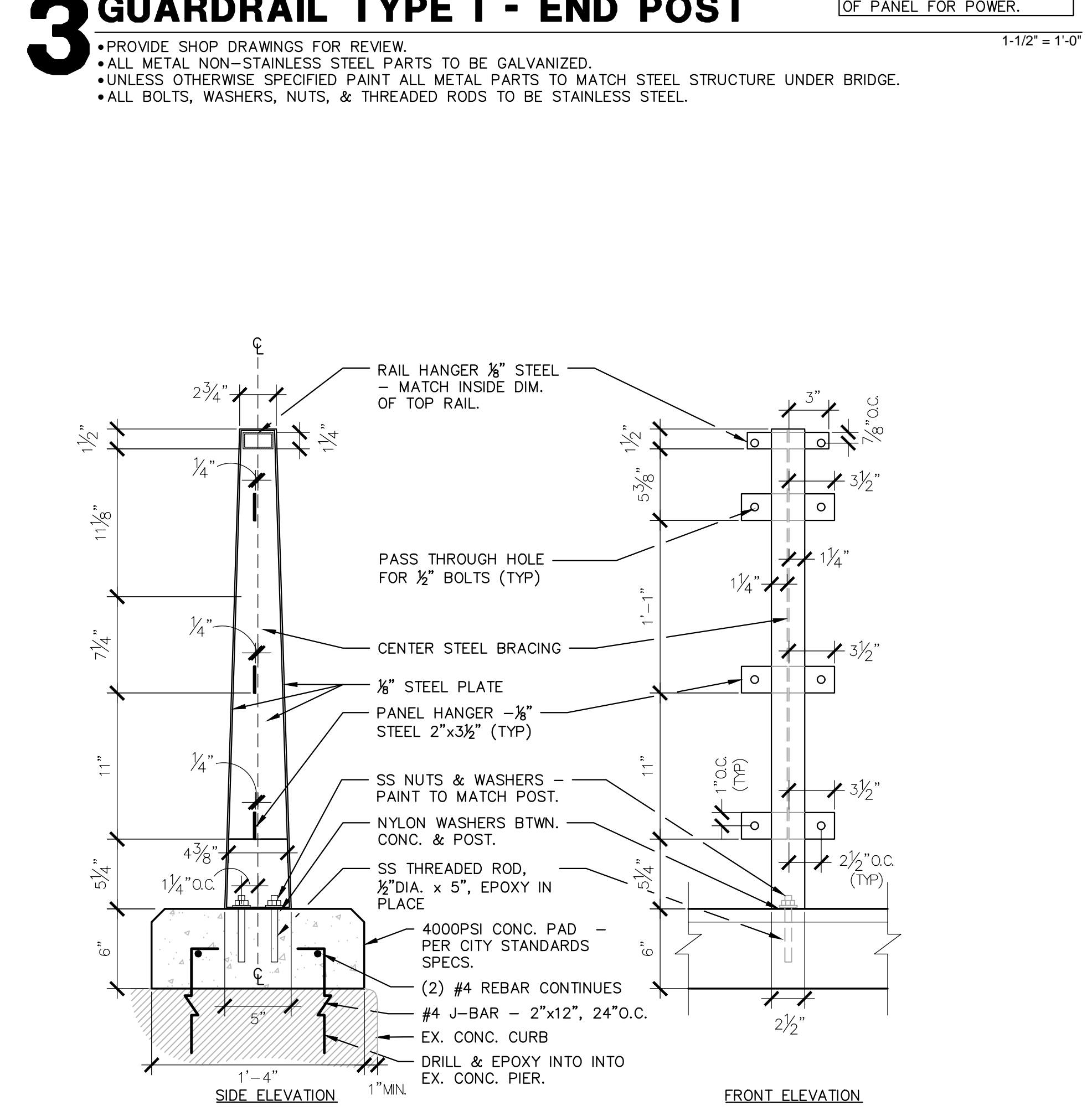
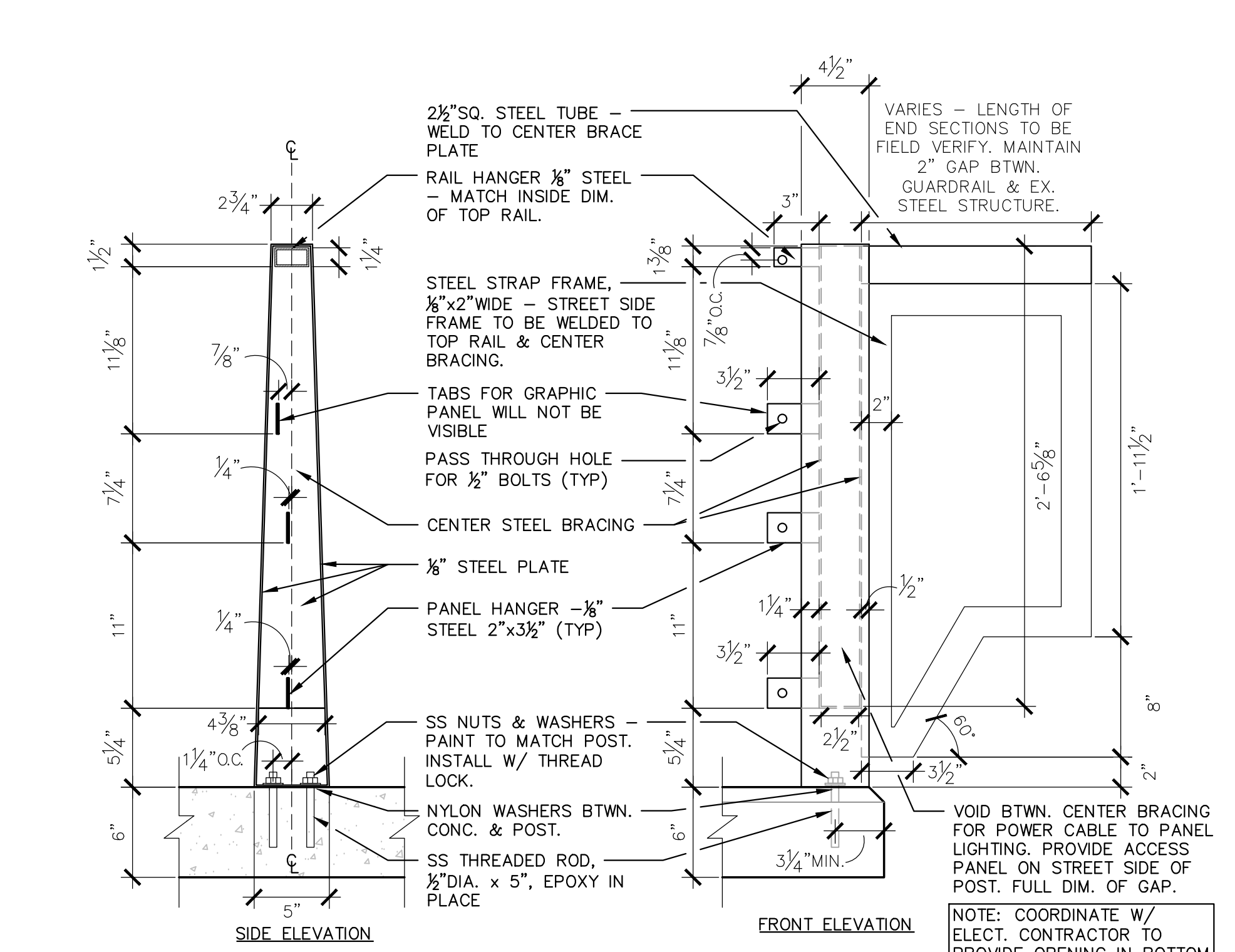
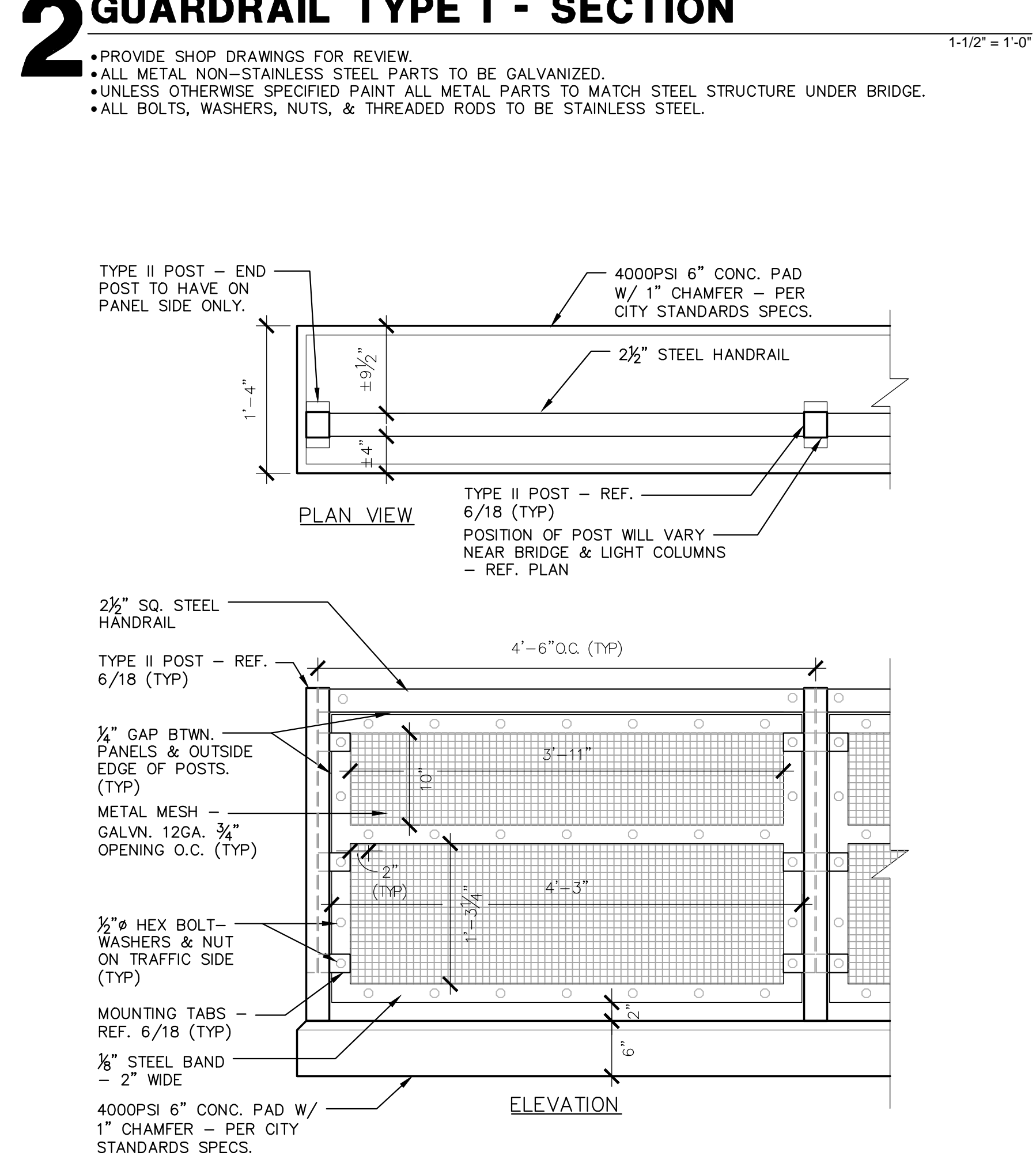
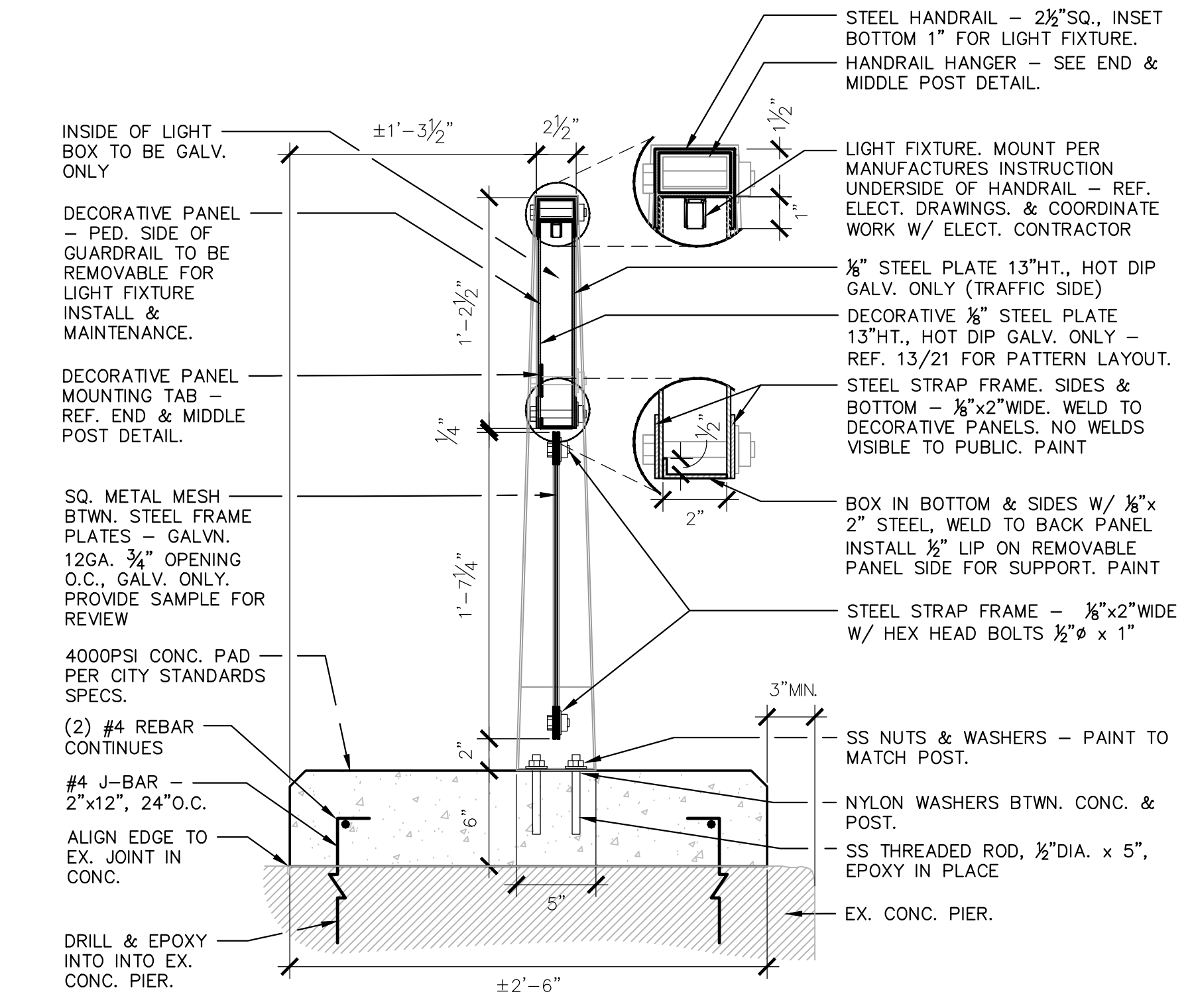
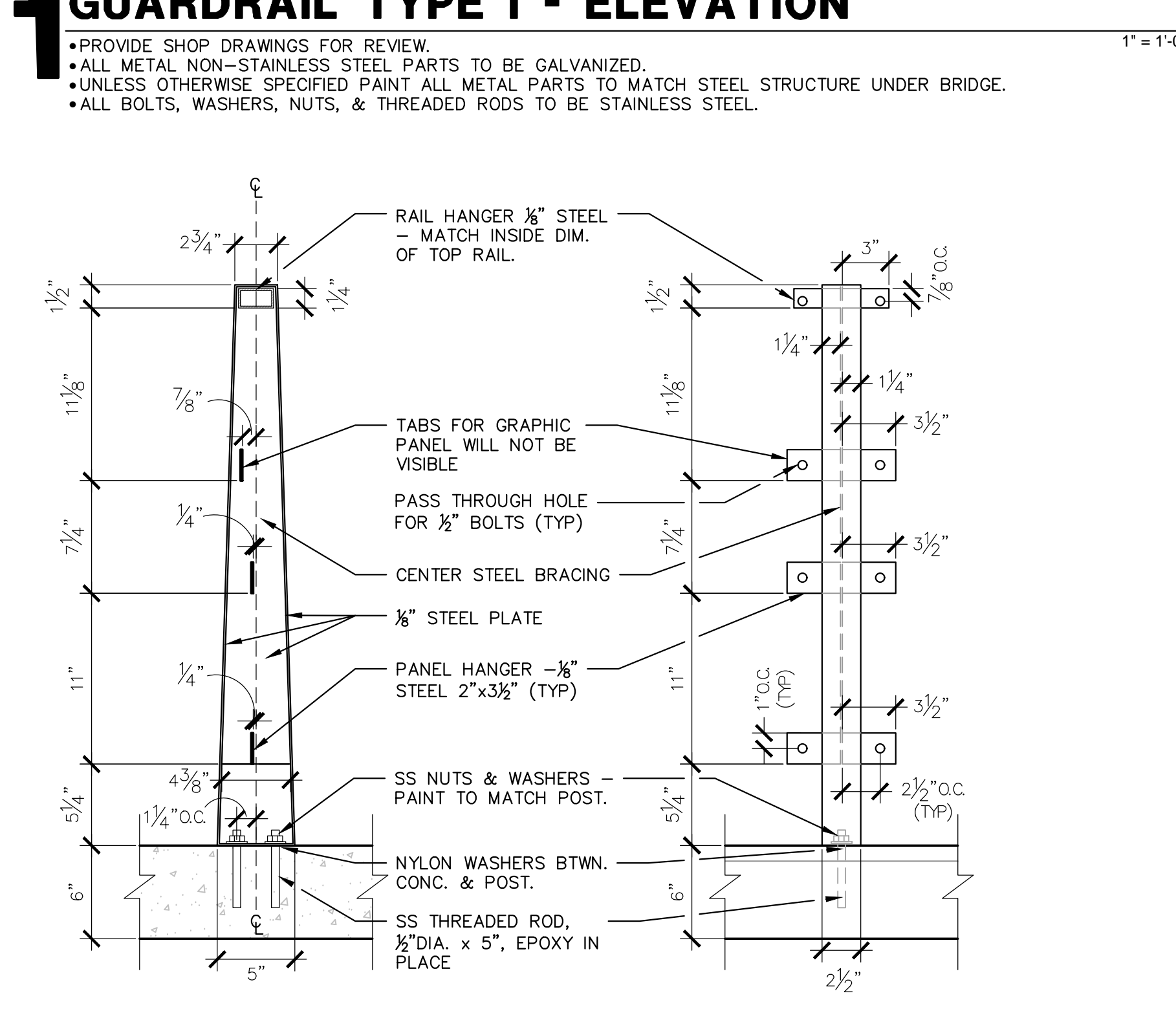
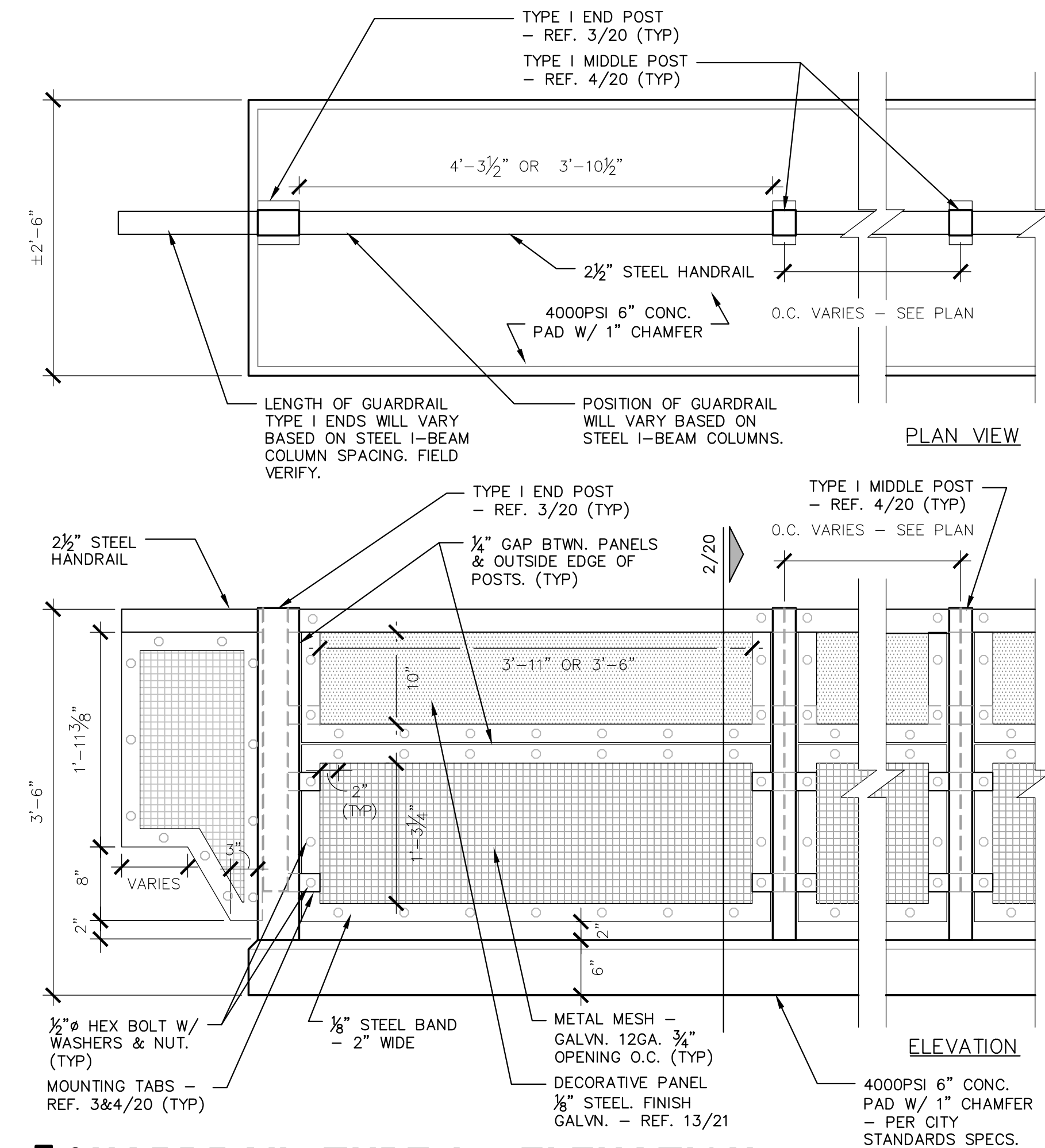


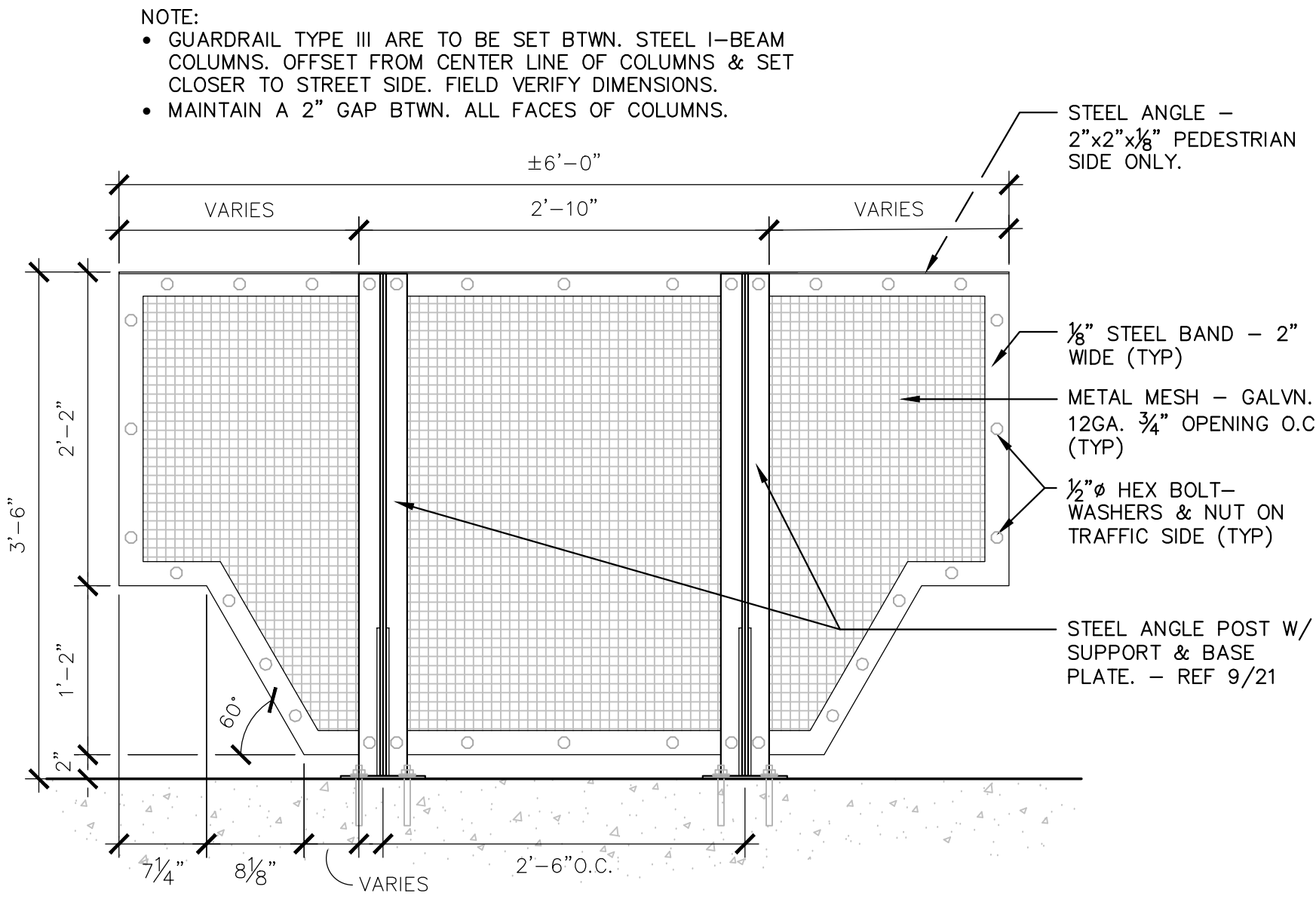
B SOUTHWEST BRIDGE ELEVATION
 3/16"=1'-0"

DOUGLAS AVE.-BNSF
 RAILROAD UNDERPASS
 IMPROVEMENTS
 WICHITA, KS

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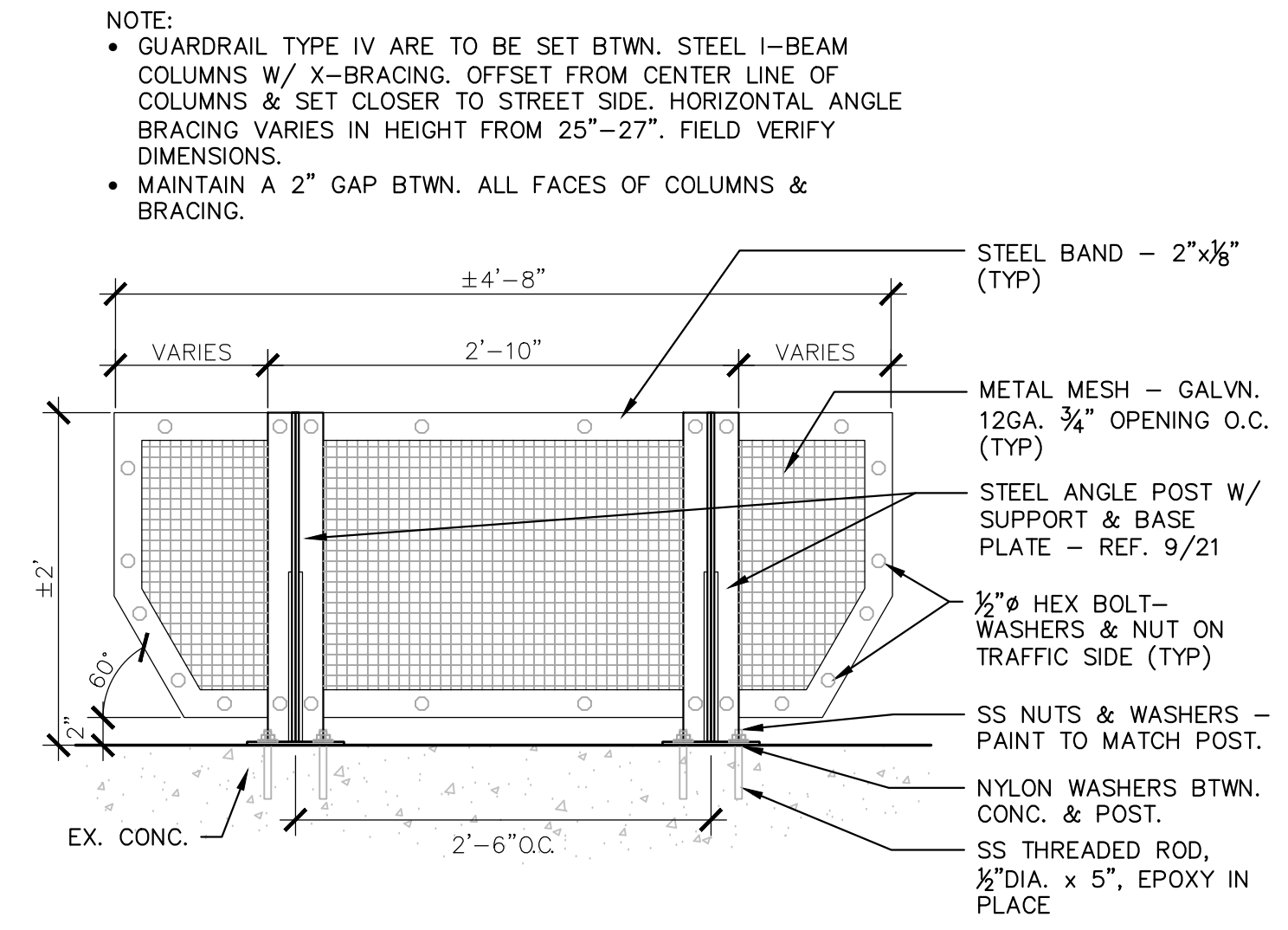
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 Phone (316) 268-0230 Fax (316) 268-0205
 CONTACT: JEFFREY A. BEST, PLA
 PROJECT NUMBER:
17145
 SHEET TITLE:
SOUTH BRIDGE ELEVATIONS
 SHEET NUMBER:
19





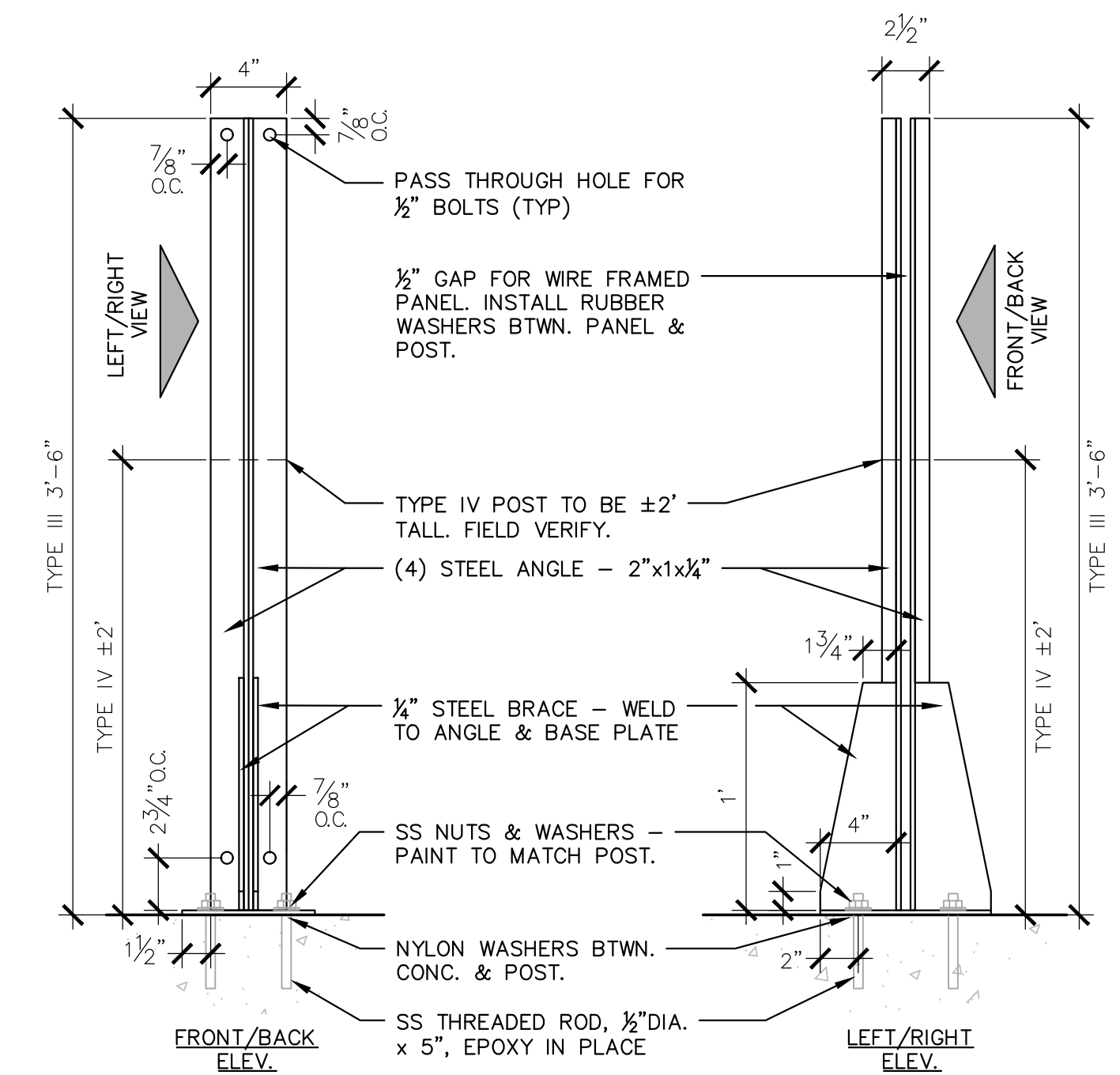
7 GUARDRAIL TYPE III - ELEVATION
 1" = 1'-0"

- PROVIDE SHOP DRAWINGS FOR REVIEW.
- ALL METAL NON-STAINLESS STEEL PARTS TO BE GALVANIZED.
- UNLESS OTHERWISE SPECIFIED PAINT ALL METAL PARTS TO MATCH STEEL STRUCTURE UNDER BRIDGE.
- ALL BOLTS, WASHERS, NUTS, & THREADED RODS TO BE STAINLESS STEEL.



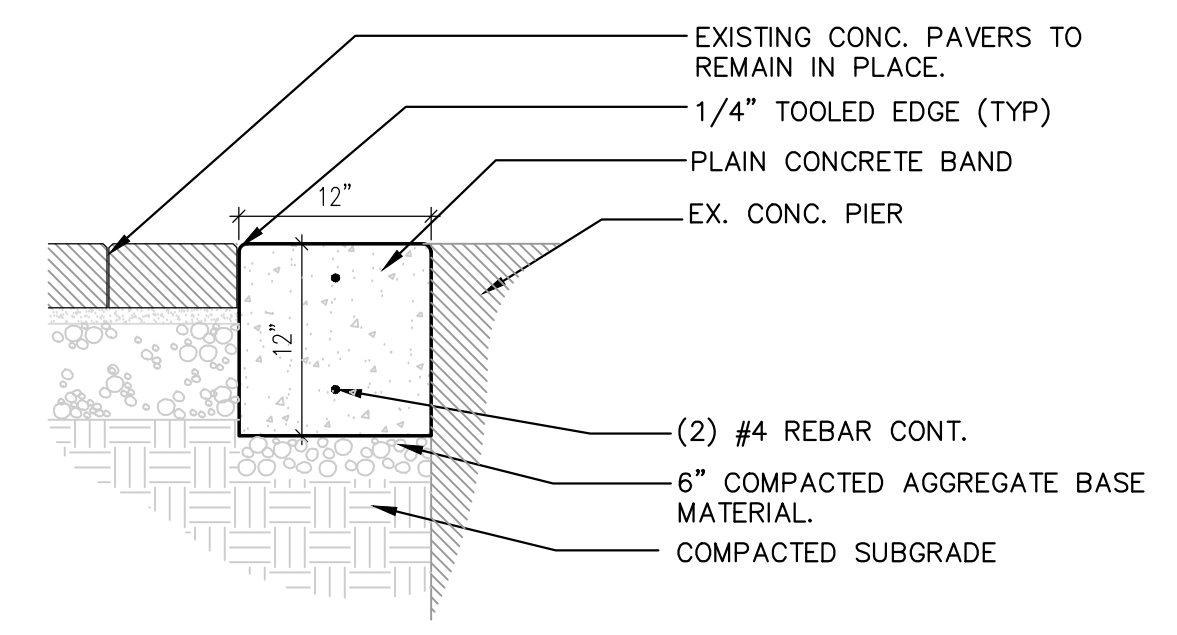
8 GUARDRAIL TYPE IV - ELEVATION
 1" = 1'-0"

- PROVIDE SHOP DRAWINGS FOR REVIEW.
- ALL METAL NON-STAINLESS STEEL PARTS TO BE GALVANIZED.
- UNLESS OTHERWISE SPECIFIED PAINT ALL METAL PARTS TO MATCH STEEL STRUCTURE UNDER BRIDGE.
- ALL BOLTS, WASHERS, NUTS, & THREADED RODS TO BE STAINLESS STEEL.

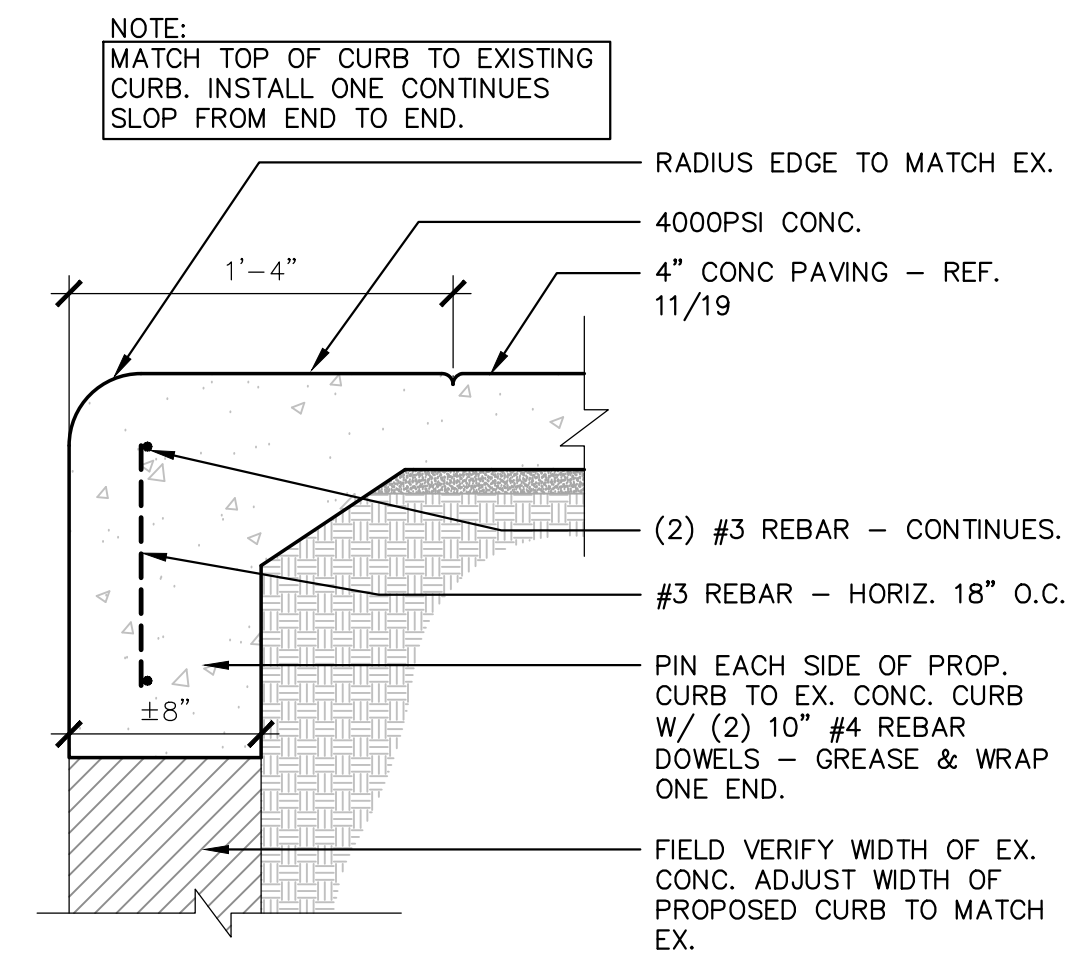


9 GUARDRAIL TYPE III & IV - POST
 1-1/2" = 1'-0"

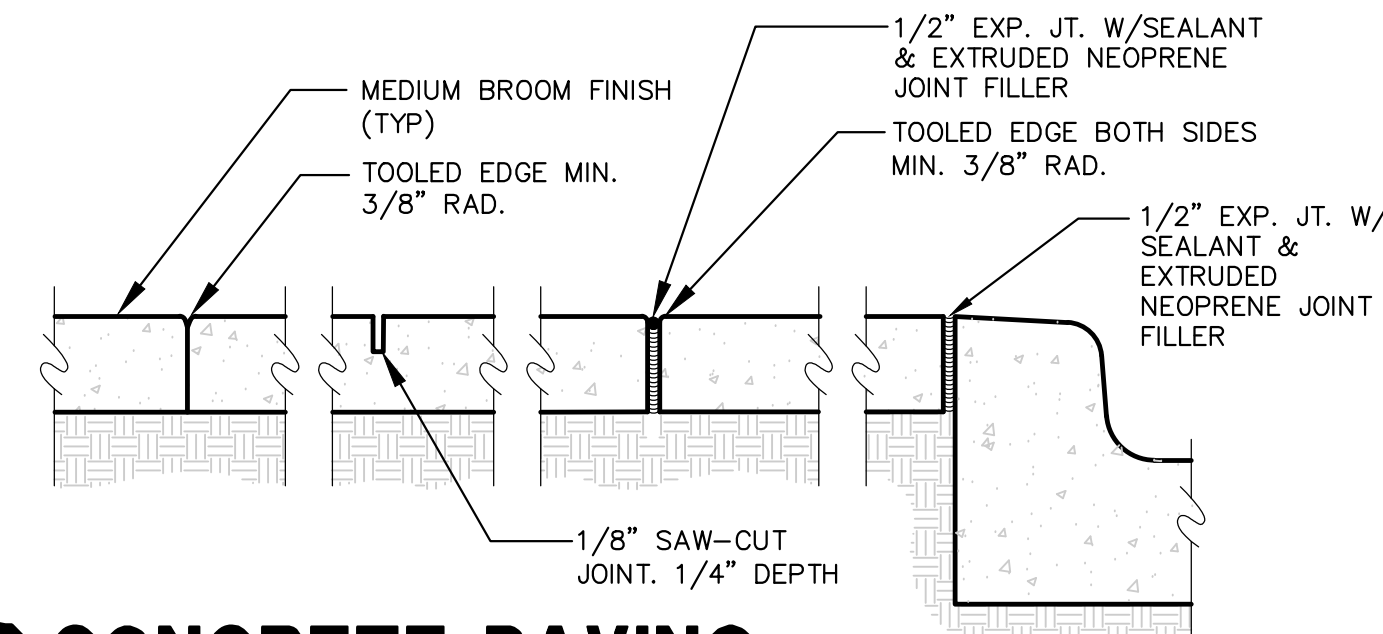
- PROVIDE SHOP DRAWINGS FOR REVIEW.
- ALL METAL NON-STAINLESS STEEL PARTS TO BE GALVANIZED.
- UNLESS OTHERWISE SPECIFIED PAINT ALL METAL PARTS TO MATCH STEEL STRUCTURE UNDER BRIDGE.
- ALL BOLTS, WASHERS, NUTS, & THREADED RODS TO BE STAINLESS STEEL.



11 REINFORCED CONC. BANDING
 1" = 1'-0"

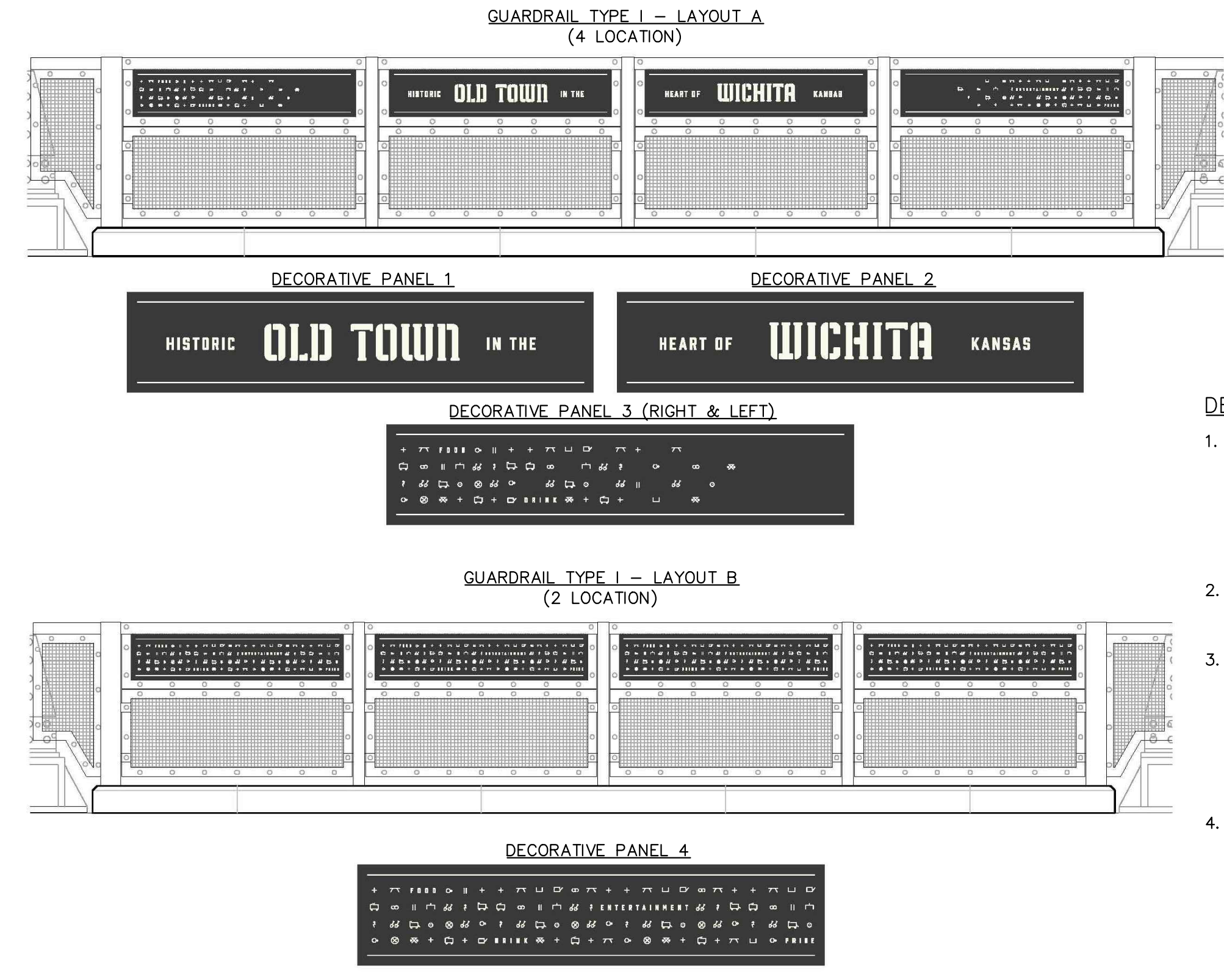


10 CONCRETE CURB REPAIR
 CONCRETE PER CITY STANDARD SPECS. 1-1/2" = 1'-0"



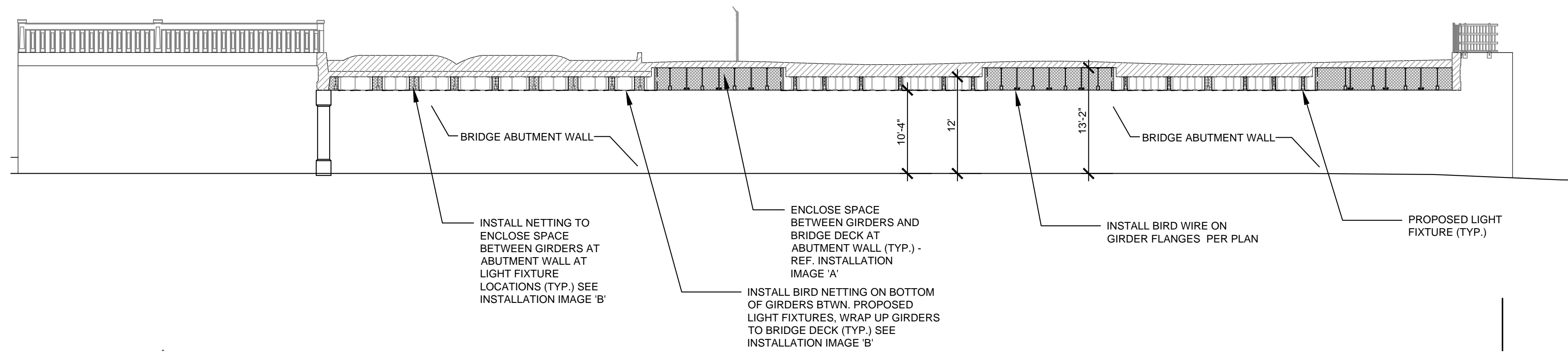
12 CONCRETE PAVING
 1-1/2" = 1'-0"

- 1/2" EXPANSION JOINT FOR CONCRETE WALK SHALL BE "SONOLASTIC EXPANSION JOINT FILLER" (GRAY); SONNEBORN, CHEMREX INC. OR APPROVED EQUIVALENT
- SEALANT SHALL BE MULTI-PART POURABLE URETHANE SEALANT: "POURTHANE"; W.R. MEADOWS, INC. OR APPROVED EQUIVALENT.
- ALL LABOR AND MATERIALS FOR EXPANSION AND CONTRACTION JOINTS SHALL BE SUBSIDIARY TO CONCRETE SIDEWALK.



13 GUARDRAIL - DECORATIVE PANEL
 1-1/2" = 1'-0"

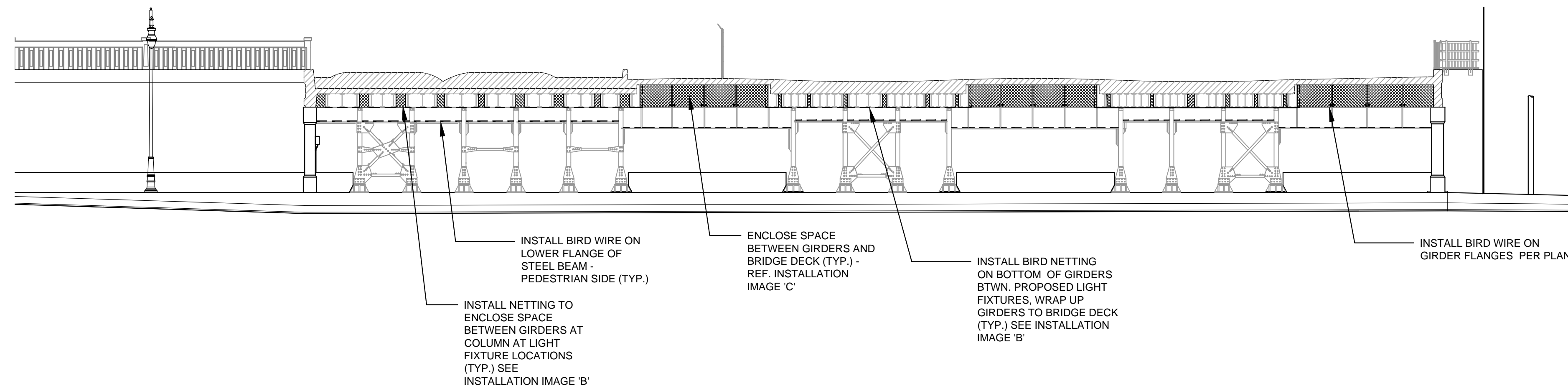
- DECORATIVE PANEL NOTES:
1. FABRICATOR TO CONTACT ARCHITECT FOR VECTOR FILES FOR EACH PANEL TO BE CUT. THE CONTRACTOR WILL RECEIVE (5) FIVE VECTOR FILES; PANEL 1, PANEL 2, PANEL 3 (RIGHT), PANEL 3 (LEFT), AND PANEL 4
 2. PROVIDE SHOP DRAWINGS OF PANEL LAYOUT AND QUANTITIES FOR REVIEW.
 3. CONTRACTOR TO PROVIDE MOCKUPS FOR EACH PANEL CONCEPT FOR APPROVAL BY ARCHITECT. A TOTAL OF (5) FIVE PANELS WILL BE PROVIDED FOR REVIEW. IF ACCEPTED, MOCK-UP PANELS MAY BE USED IN FINAL WORK.
 4. PANELS DESIGNS ARE TO BE CUT USING A WATER JET METHOD, OR APPROVED EQUIVALENT. CUT AREAS ARE TO HAVE CLEAN AND SMOOTH EDGES. ANY PANEL WITH DEFECTS WILL BE REJECTED.



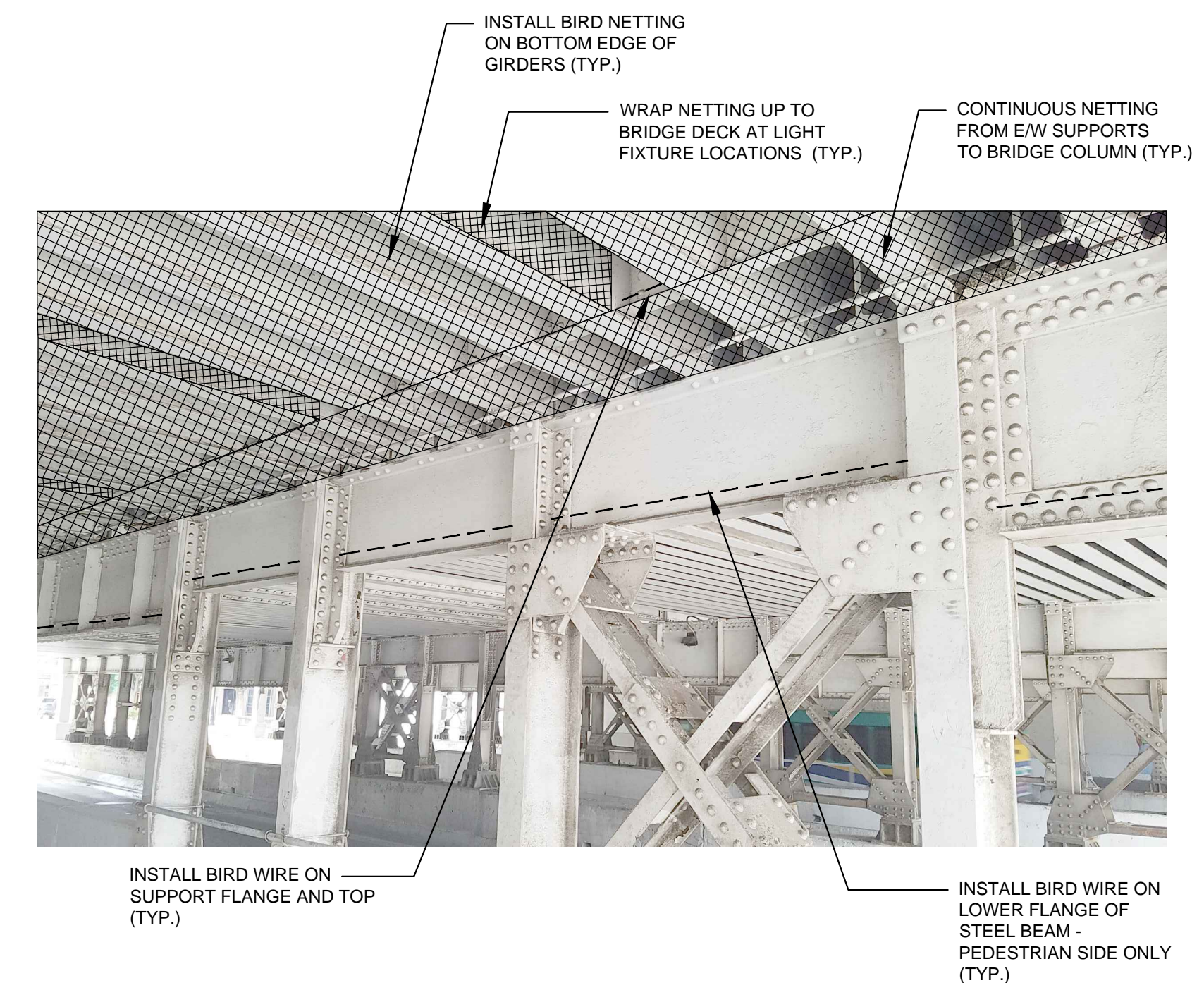
A TYPICAL BRIDGE ABUTMENT ELEVATION
 1"=10'-0"



INSTALLATION IMAGE 'A'



B TYPICAL INTERIOR PIER ELEVATION
 1"=10'-0"



INSTALLATION IMAGE 'B'

BIRD DETERRENT SYSTEM

THE BIRD CONTROL PLAN HAS BEEN DESIGNED AROUND BIRD-B-GONE PRODUCTS AND INSTALLATION GUIDELINES AND SHALL BE INSTALLED BY A BIRD-B-GONE CERTIFIED INSTALLER WITH A MINIMUM FIVE (5) YEARS OF INSTALLATION EXPERIENCE.

A MANUFACTURER REPRESENTATIVE SHALL BE ON-SITE FOR FINAL APPROVAL OF ALL BIRD DETERRENT PRODUCT INSTALLATION.

CONTRACTOR SHALL SUBMIT QUALIFICATIONS AND PRODUCT INFORMATION FOR ALTERNATIVE MANUFACTURER AND PRODUCTS DURING BIDDING FOR ARCHITECT REVIEW AND ACCEPTANCE. NO ALTERNATIVES WILL BE ACCEPTED AFTER PROJECT BID.

POWER WASHING AND CLEANING OF THE ENTIRE UNDERSIDE OF THE BRIDGE STRUCTURE SHALL BE BID SUBSIDIARY TO THE INSTALLATION OF THE BIRD NETTING AND BIRD WIRE.

BIRD NET 2000 HEAVY DUTY NETTING
 MATERIAL: UV PROTECTED POLYETHYLENE KNOTTED NETTING
 3/8" GALVANIZED CABLE
 M8 TURNBUCKLES
 2" HEAVY-DUTY CLAMPS
 COLOR: BLACK
 WARRANTY: 10 YEARS

BIRD WIRE
 MATERIAL: 316 STAINLESS STEEL WIRE COATED WITH UV STABILIZER CLEAR NYLON
 POSTS: 316 STAINLESS STEEL 4mm
 SPRINGS: 316 STAINLESS STEEL (STANDARD SIZE)
 WARRANTY: 5 YEARS

INSTALLATION: INSTALL WIRE PER MANUFACTURER SPECIFICATIONS AND GUIDELINES.

EDGE WIRE: 1" FROM EDGE
 EACH INTERIOR WIRE: 3" O.C. MAX
 POSTS SHALL NOT EXCEED 5' O.C.

BIRD POPULATION REDUCTION

THE CONTRACTOR SHALL PROVIDE A PIGEON TRAPPING PROGRAM TO COMMENCE AT NOTICE TO PROCEED FOR A DURATION OF 6 WEEKS. DURING THIS PERIOD THE CONTRACTOR SHALL VISIT THE SITE A MINIMUM 3 TIMES PER WEEK. IF ADDITIONAL SITE VISITS BECOME NECESSARY DUE TO QUANTITY OF TRAPPED BIRDS, THIS SHALL BE APPROVED BY THE CITY OF WICHITA AND PAID AT THE BID PRICE PER TRIP.

THE CONTRACTOR SHALL EMPLOY AN INDIVIDUAL WHO HOLDS A CURRENT STATE OF KANSAS HUNTING LICENSE AND IS EXPERIENCED IN THE TRAPPING AND DISPOSAL OF FERAL PIGEONS AND LICENSED BY THE KANSAS FISH & WILDLIFE COMMISSION.

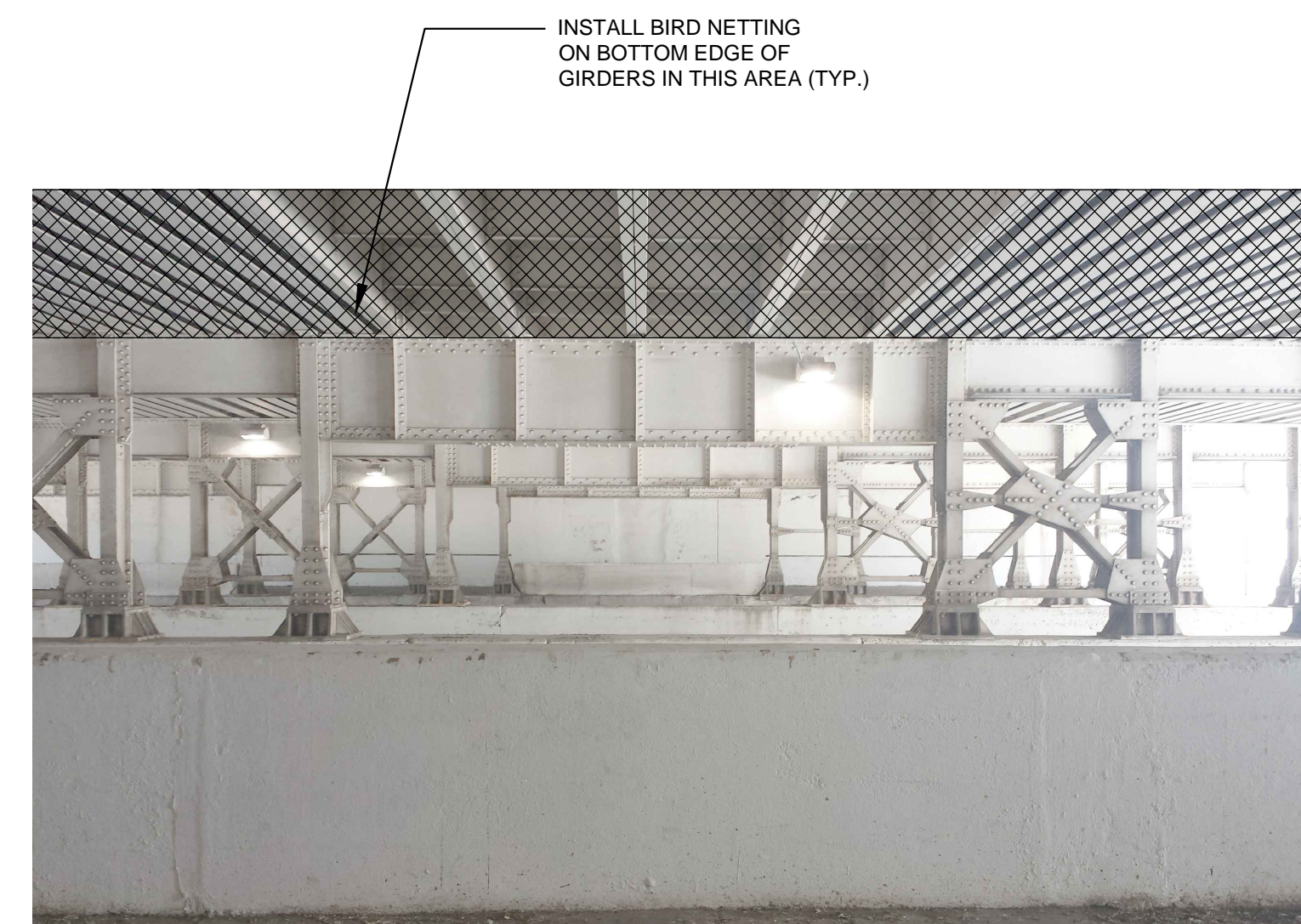
THE CONTRACTOR SHALL PROVIDE THE CITY OF WICHITA A FULL TRAPPING PROGRAM WHICH DEFINES THE TRAPPING PROCEDURES, TRAP TYPES, QUANTITIES AND LOCATIONS. THE TRAPPING PROGRAM SHALL ALSO GIVE DETAILS ON PRE-BAITING, SCHEDULE AND SITE VISITS. INCLUDE THE METHOD OF HUMANE EUTHANIZATION OF CAPTURED PIGEONS WHICH COMPLIES WITH STATE OF KANSAS WILDLIFE, PARKS AND TOURISM LAWS AND REGULATIONS.

TRAPPED PIGEONS MAY NOT BE LEFT IN TRAPS FOR MORE THAN 24 HOURS WITHOUT FOOD AND WATER.

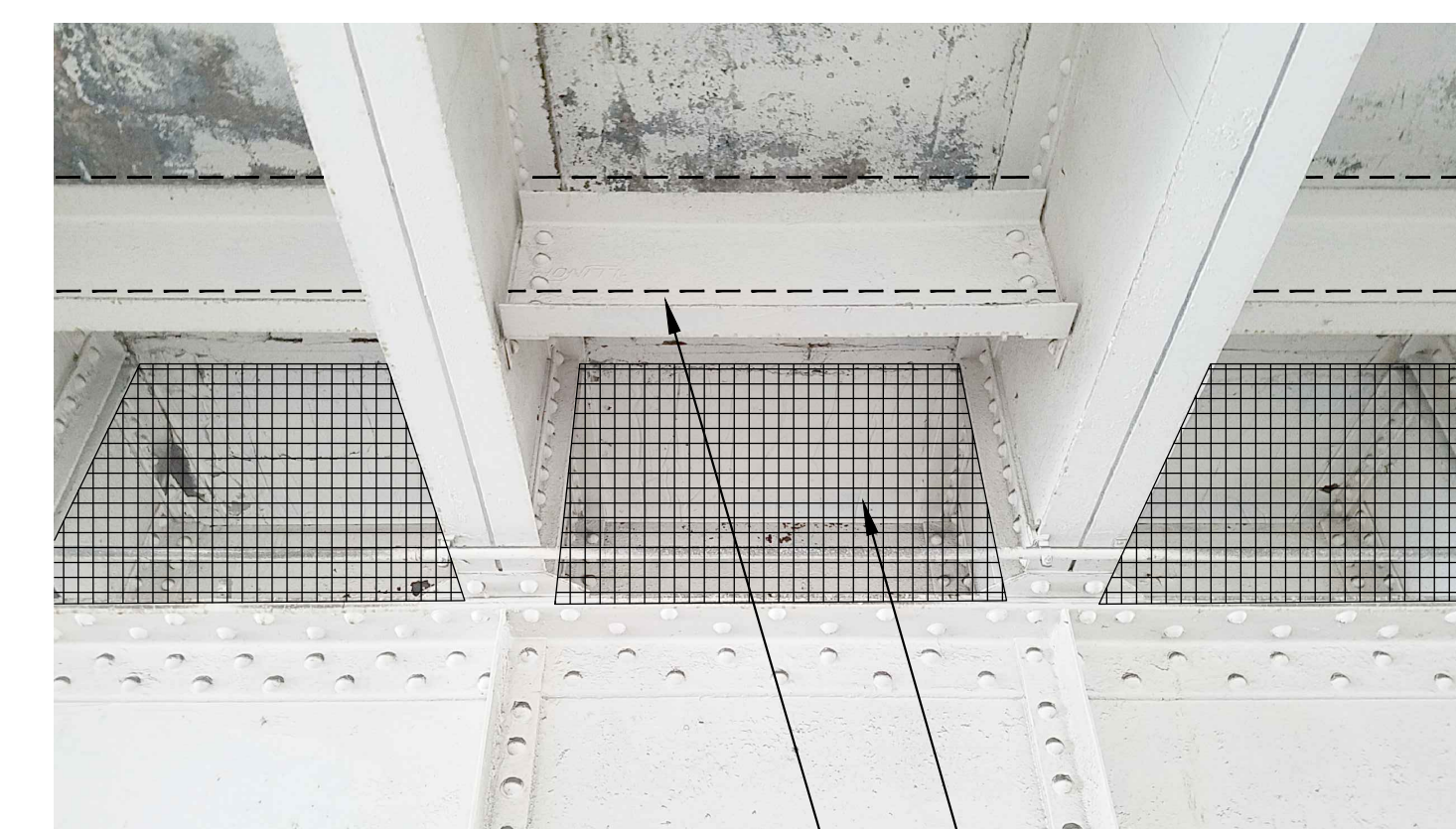
TRAPPING OF BIRDS CAN BE DONE BY COMMON BIRD TRAPS. MIST NETTING MAY BE USED IF TRAPPING DOES NOT ACHIEVE POPULATION REDUCTION. NO POISON OR OTHER HARMFUL ITEMS MAY BE UTILIZED IN TRAPPING OF PIGEONS.

ALL TRAPPING SHALL BE DONE IN A DISCRETE MANNER. TRAPS SHALL BE POSITIONED IN SUCH A WAY AS NOT TO BE THREATENED BY PEOPLE, PETS AND WILD ANIMALS.

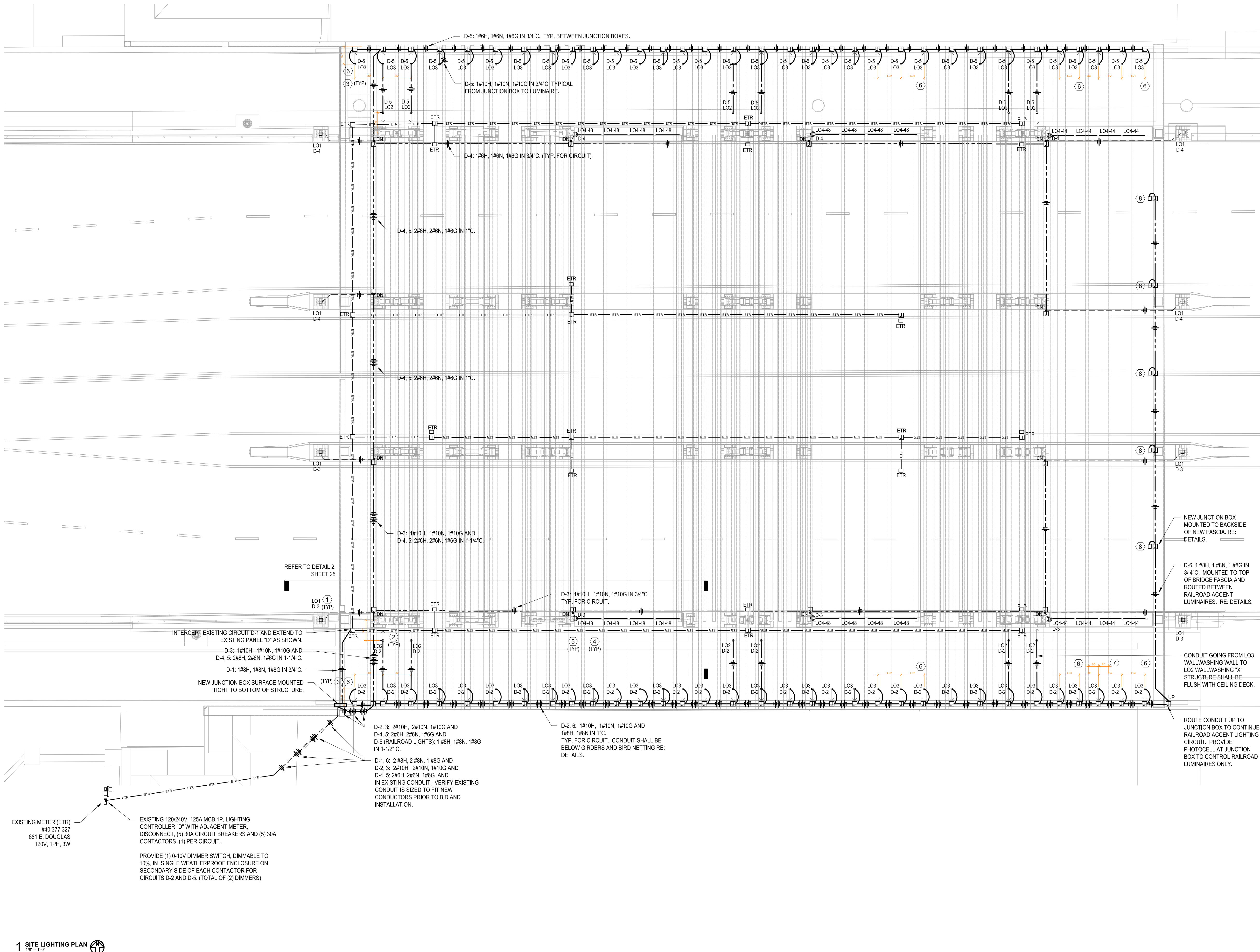
THE GOAL OF THE TRAPPING PROGRAM IS A 70% REDUCTION IN RESIDENT PIGEON POPULATION.



INSTALLATION IMAGE 'D'



INSTALLATION IMAGE 'C'



- DEMO NOTES:**
- DEMO ALL COLD CATHODE LIGHTING OVER SIDEWALKS. REMOVE CONDUIT, WIRING, ASSOCIATED BOXES, ETC. REFER TO DEMO PLANS.
- GENERAL NOTES:**
- THE LIGHTING INSTALLATION WORK & MATERIALS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES.
 - CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & PROPORTIONS ASSOCIATED WITH LIGHTING LAYOUTS. AESTHETICS AND ILLUMINATION PERFORMANCE SHALL BE CONSIDERED PRIOR TO SHIFTING OR REVISING LUMINAIRE MOUNTING LOCATION DUE TO FIELD CONDITIONS. REFER TO ARCHITECT FOR APPROVAL PRIOR TO MODIFYING LAYOUTS.
 - COORDINATE EXACT LOCATION AND COLOR OF CONDUIT WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. ALL PAINTING OF THE CONDUITS IS SUBSIDIARY TO THE INSTALLATION COST.
 - COORDINATE ALL LUMINAIRE MOUNTING HEIGHTS WITH ARCHITECTURE DETAILS AND ELEVATIONS. ARCHITECTURAL ELEVATIONS SHALL TAKE PRECEDENCE FOR ALL PENDANT MOUNTING ARRANGEMENTS.
 - CONTRACTOR TO VERIFY THAT ALL REQUIRED ELECTRICAL AND PHYSICAL CONNECTOR COMPONENTS ARE INCLUDED WITH EACH LUMINAIRE TYPE AS MAY BE REQUIRED TO MAKE A COMPLETE AND FUNCTIONAL LUMINAIRE ASSEMBLY AS DESCRIBED IN LUMINAIRE SCHEDULE DESCRIPTION AND ACCORDING TO MANUFACTURER'S RECOMMENDATION. REFER TO ARCHITECT'S DETAILS FOR ADDITIONAL INFORMATION.
 - CONTRACTOR TO FIELD VERIFY CEILING DIMENSIONS AND CONDITIONS PRIOR TO INSTALLATION OF LUMINAIRES TO IDENTIFY POTENTIAL MOUNTING CONFLICTS. IF QUESTIONS, CONTACT ARCHITECT TO CONFIRM MOUNTING LOCATION.
 - ALL WIRE IS #10 IN 1/2\"/>

- PLAN LIGHTING KEY NOTES:**
- (8) LO1 POLES MOUNTED TO LANE DIVIDER.
 - LO2 TO WASH LIGHT ON "X" STRUCTURE. REFER TO DETAILS ON SHEET 27 AND ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
 - LO3 TO WASH LIGHT ON WALL. REFER TO DETAILS ON SHEET 27 AND ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
 - LO4 LINEAR LIGHTING INTEGRAL TO GUARDRAIL. REFER TO DETAILS ON SHEET 27 AND ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION. LENGTHS ARE FOR INITIAL REFERENCE. VERIFY FINAL LENGTHS WITH FINAL GUARDRAIL SHOP DRAWINGS.
 - REMOTE OUTDOOR RATED DRIVER REQUIRED. RE: DETAILS FOR ADDITIONAL INFORMATION.
 - LO3 NOT CENTERED BETWEEN GIRDERS IN THIS LOCATION ONLY. USE DIMENSION INFORMATION FOR PLACEMENT.
 - LO2 AND LO3 SHOULD BE TYPICALLY CENTERED BETWEEN GIRDERS AS SHOWN.
 - EXISTING RAILROAD ACCENT LUMINAIRES. RE-INSTALL ON FENCING PER EXISTING MOUNTING AND CONNECT TO NEW ELECTRICAL SYSTEM.

- PLAN CONTROL GENERAL NOTES:**
- SITE LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL ON, TIMELOCK OFF.
 - TYPE LO1 CUSTOM POLE AND LO4 GUARDRAIL SHALL BE ON OFF.
 - TYPE LO2 WASH FOR RED "X" STRUCTURE AND LO3 WASH FOR WALLS WILL BE ON DIMMER FOR ONE TIME ADJUSTMENT THAT FINE TUNES LIGHT LEVELS TO BE COMPATIBLE WITH SURROUNDS. SET LIGHT LEVELS WITH OWNER'S REPRESENTATIVE AT NIGHT.

EXISTING METER (ETR)
#40 377 327
681 E. DOUGLAS
120V, 1PH, 3W

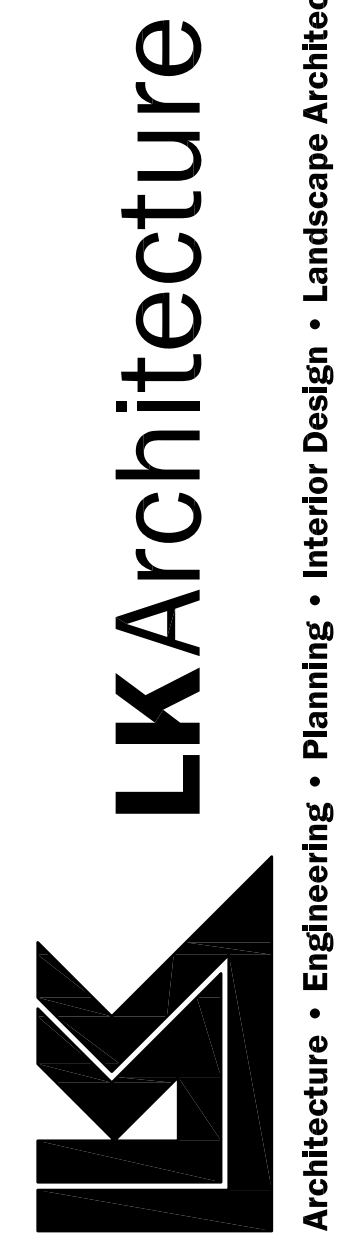
EXISTING 120/240V, 125A MCB, 1P, LIGHTING CONTROLLER "D" WITH ADJACENT METER. DISCONNECT, (5) 30A CIRCUIT BREAKERS AND (5) 30A CONTACTORS, (1) PER CIRCUIT.

PROVIDE (1) 0-10V DIMMER SWITCH, DIMMABLE TO 10% IN SINGLE WEATHERPROOF ENCLOSURE ON SECONDARY SIDE OF EACH CONTACTOR FOR CIRCUITS D-2 AND D-5. (TOTAL OF (2) DIMMERS)

PRINTS ISSUED

DATE	PURPOSE	NO.
09.13.17	FOR CONSTRUCTION	

DOUGLAS AVE.-BNSF
RAILROAD UNDERPASS
IMPROVEMENTS
WICHITA, KS



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345 RIVERVIEW WICHITA, KS 67203
Phone (316) 268-0230 Fax: (316) 268-0205

PROJECT NUMBER:
17145

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NUMBER:
26



DOUGLAS AVE.-BNSF
 RAILROAD UNDERPASS
 IMPROVEMENTS
 WICHITA, KS



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LEGEND

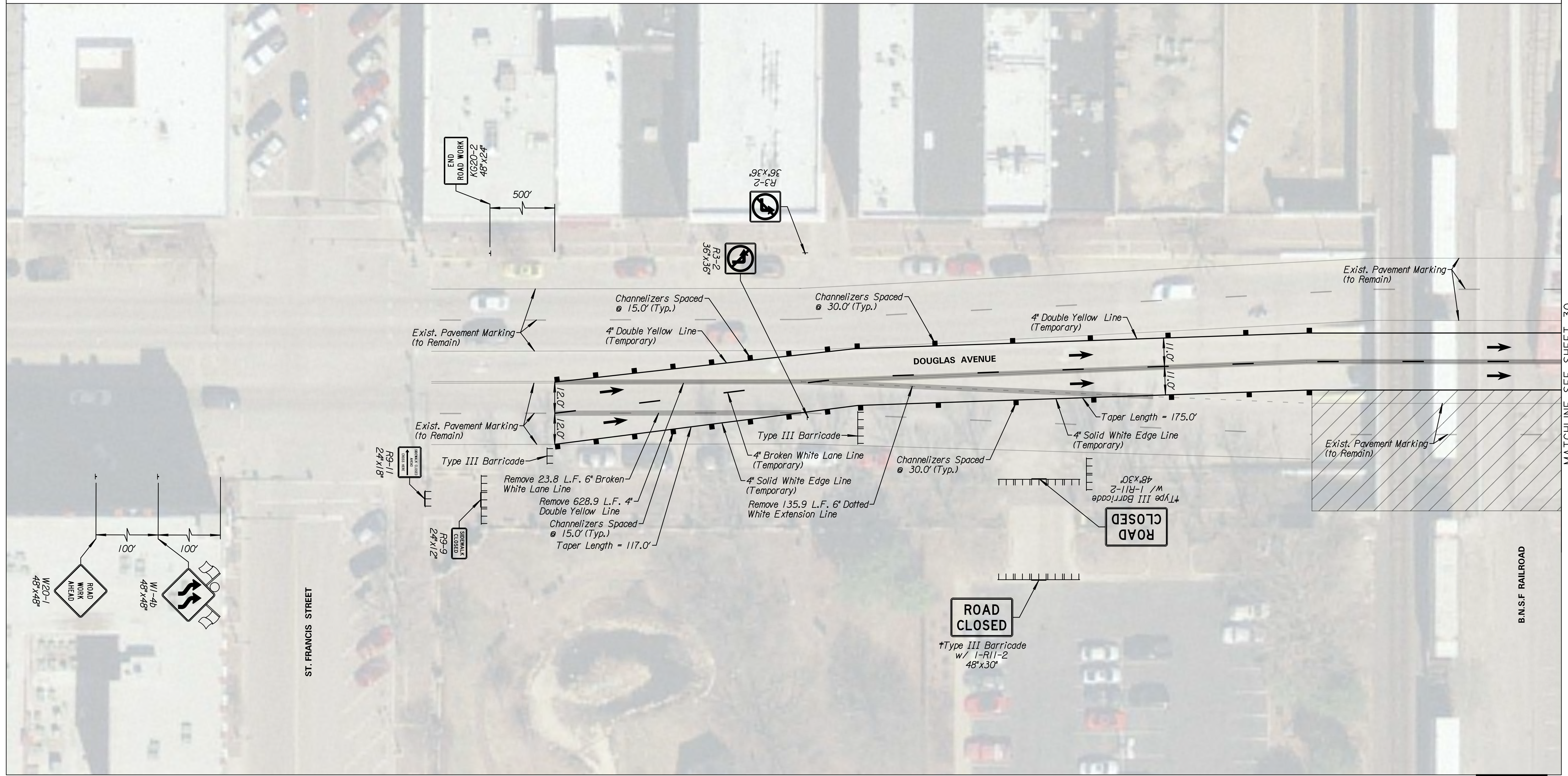
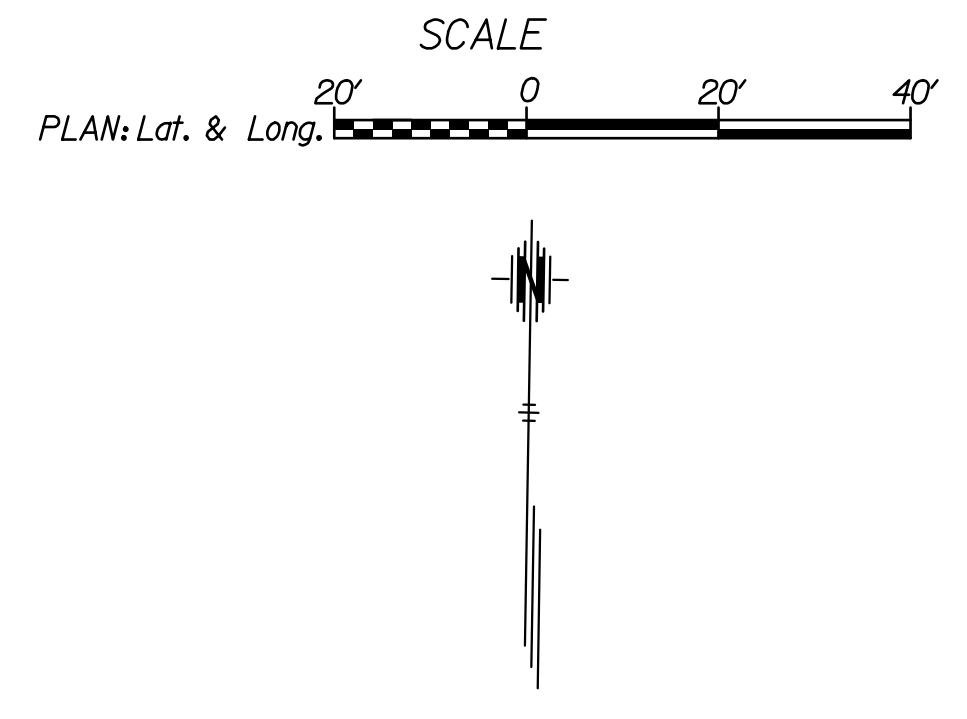
	Phase I
	Single Post/Skid Mounted Sign
	Channelizer
	Type III Barricade
	Type III Barricade w/ Sign
	Pavement Marking Removal

Note:
 Throughout construction the Contractor may have to alter the lane arrangements to complete the removal and construction of the fascia beam. The Contractor shall submit plans to the Engineer for approval prior to changing the lane configurations. During this time, the Contractor shall always maintain one (1) lane traffic in all directions.

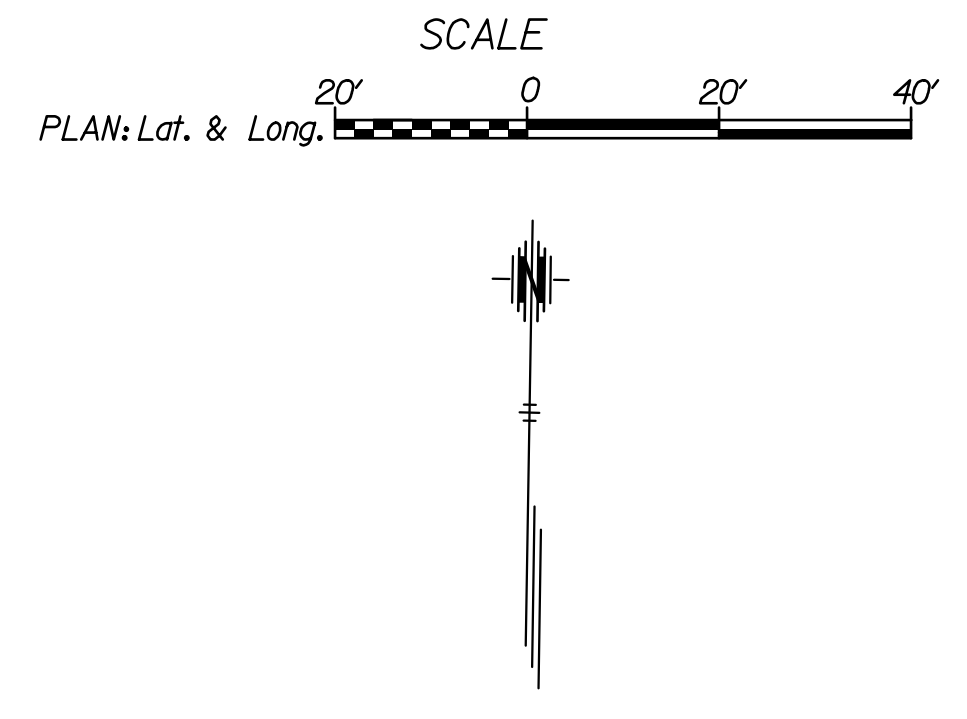
Pavement marking removal shall be in accordance with the City of Wichita Standard Specifications. The Contractor shall have the option to either remove the existing pavement marking or mask with an appropriate type of removable table.

If the Contractor decides to remove the existing pavement marking in conflict, the Contractor is responsible for the replacement of the removed markings as needed throughout construction. The Contractor shall restore all pavement markings to reflect the existing conditions after construction is complete. All work and material needed to replace the pavement marking back to existing conditions shall be considered **SUBSIDIARY** to the bid item, "Traffic Control".

The Contractor shall maintain pedestrian access to all businesses throughout the duration of construction. These routes shall be ADA compliant and shall meet the specifications spelled out in the latest edition of, "Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way"



DOUGLAS AVE.-BNSF
 RAILROAD UNDERPASS
 IMPROVEMENTS
 WICHITA, KS



LEGEND

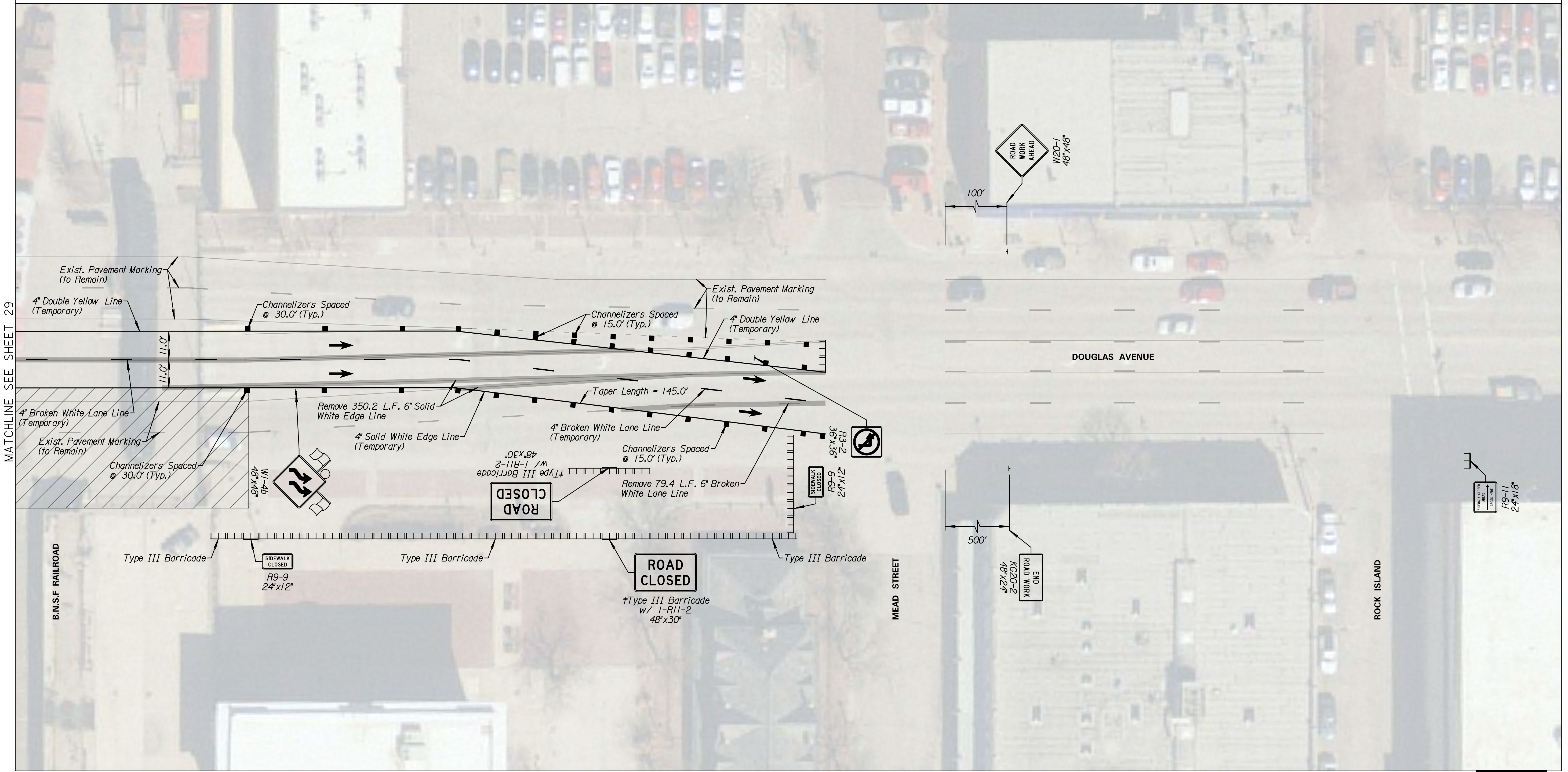
	Phase I
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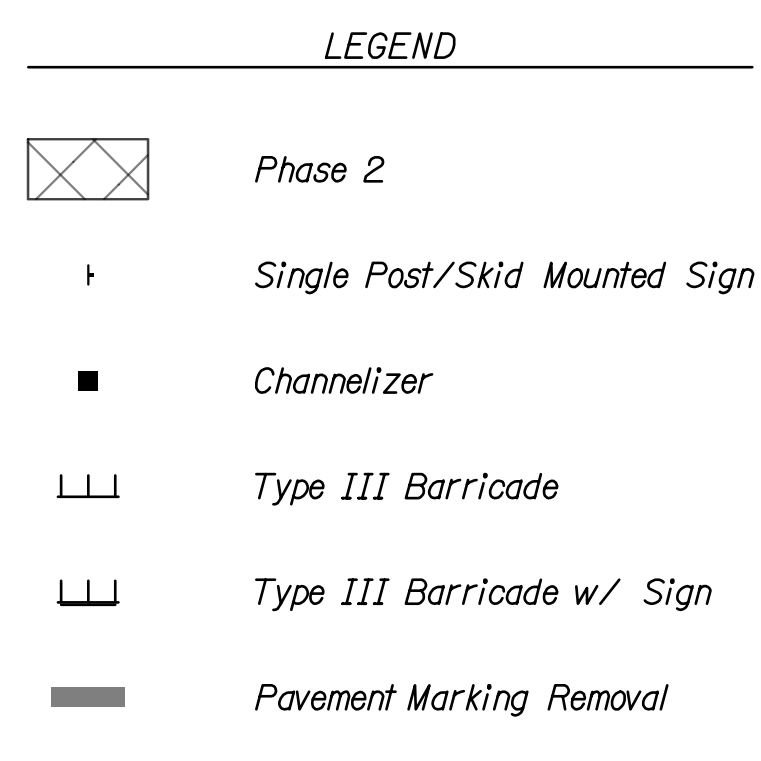
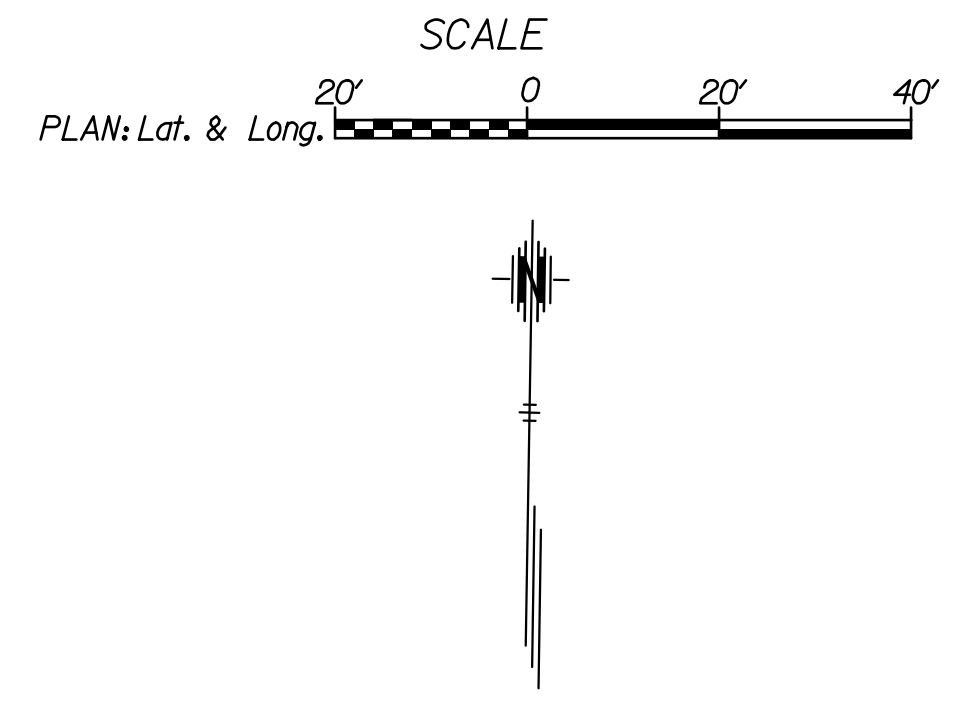
345 RIVERVIEW, WICHITA, KS 67203
 Phone (316) 268-0230 Fax: (316) 268-0205

CONTACT: --
 PROJECT NUMBER:
17145

SHEET TITLE:
TRAFFIC CONTROL PLAN PHASE 2
 SHEET NUMBER:

32

LAT: 37.68622°N
 LONG: 97.33001°W

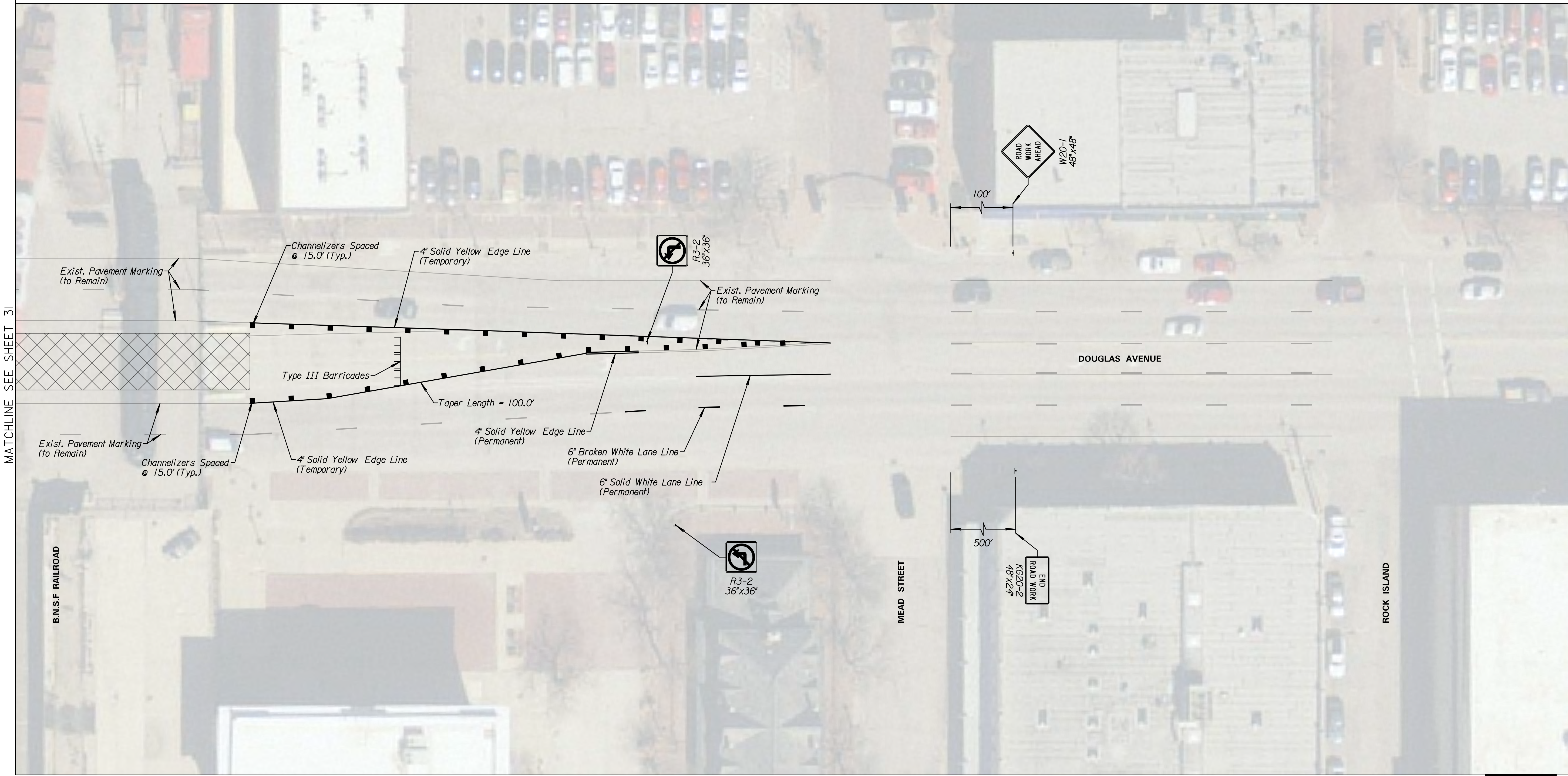


Note:
 Throughout construction the Contractor may have to alter the lane arrangements to complete the removal and construction of the fascia beam. The Contractor shall submit plans to the Engineer for approval prior to changing the lane configurations. During this time, the Contractor shall always maintain one (1) lane traffic in all directions.

Pavement marking removal shall be in accordance with the City of Wichita Standard Specifications. The Contractor shall have the option to either remove the existing pavement marking or mask with an appropriate type of removable table.

If the Contractor decides to remove the existing pavement marking in conflict, the Contractor is responsible for the replacement of the removed markings as needed throughout construction. The Contractor shall restore all pavement markings to reflect the existing conditions after construction is complete. All work and material needed to replace the pavement marking back to existing conditions shall be considered **SUBSIDIARY** to the bid item, "Traffic Control".

The Contractor shall maintain pedestrian access to all businesses throughout the duration of construction. These routes shall be ADA compliant and shall meet the specifications spelled out in the latest edition of, "Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way"



MATCHLINE SEE SHEET 31

B.N.S.F. RAILROAD

MEAD STREET

ROCK ISLAND



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 RAILROAD UNDERPASS
 IMPROVEMENTS
 WICHITA, KS



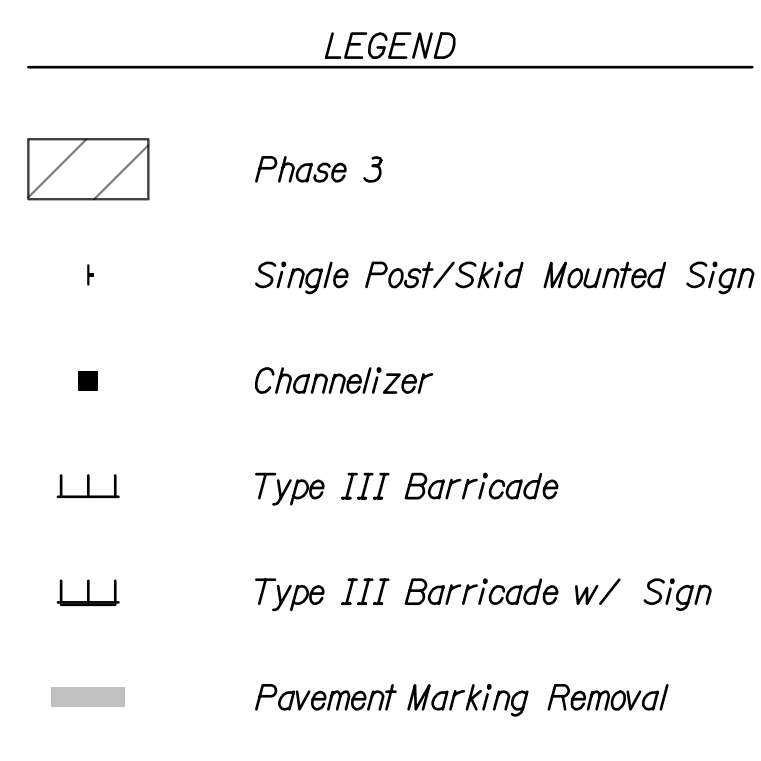
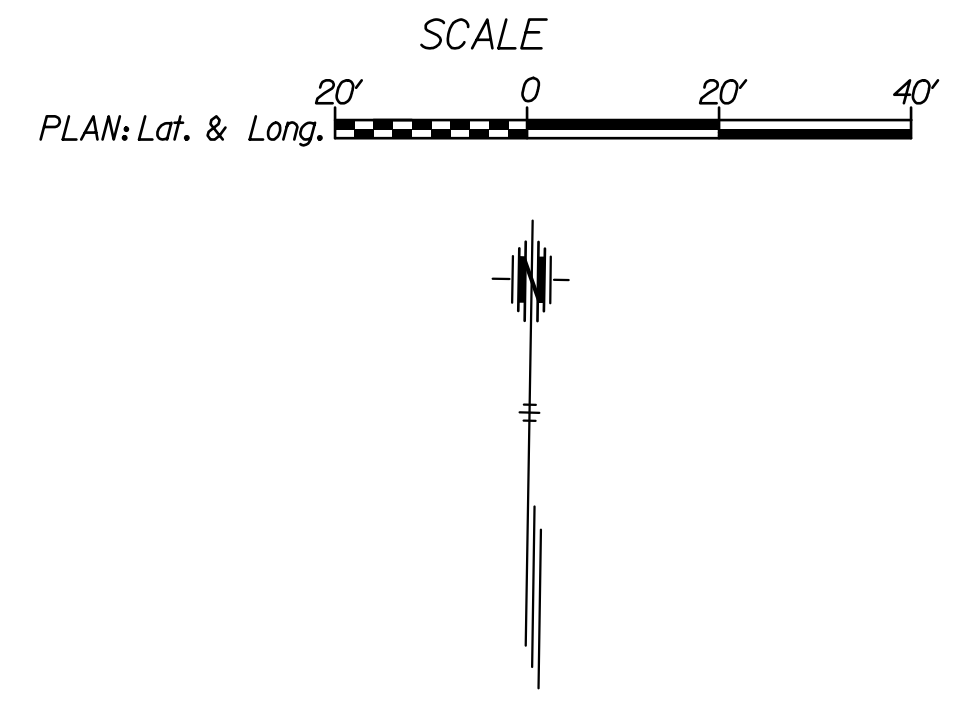
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 Phone (316) 268-0230 Fax: (316) 268-0205

CONTACT: -
 PROJECT NUMBER:
17145
 SHEET TITLE:
TRAFFIC CONTROL PLAN
PHASE 3
 SHEET NUMBER:

34

LAT: 37.68622°N
 LONG: 97.33001°W

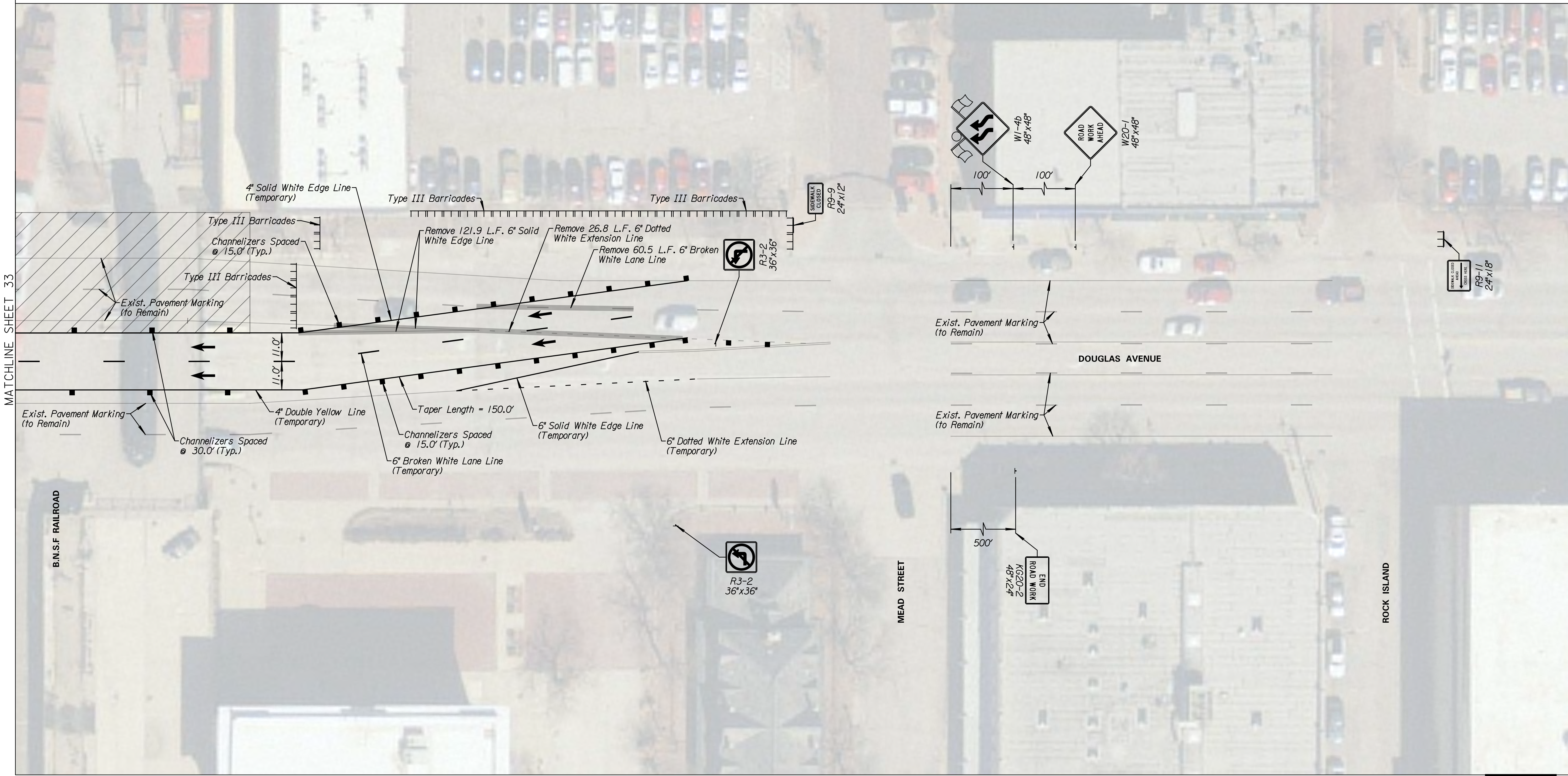


Note:
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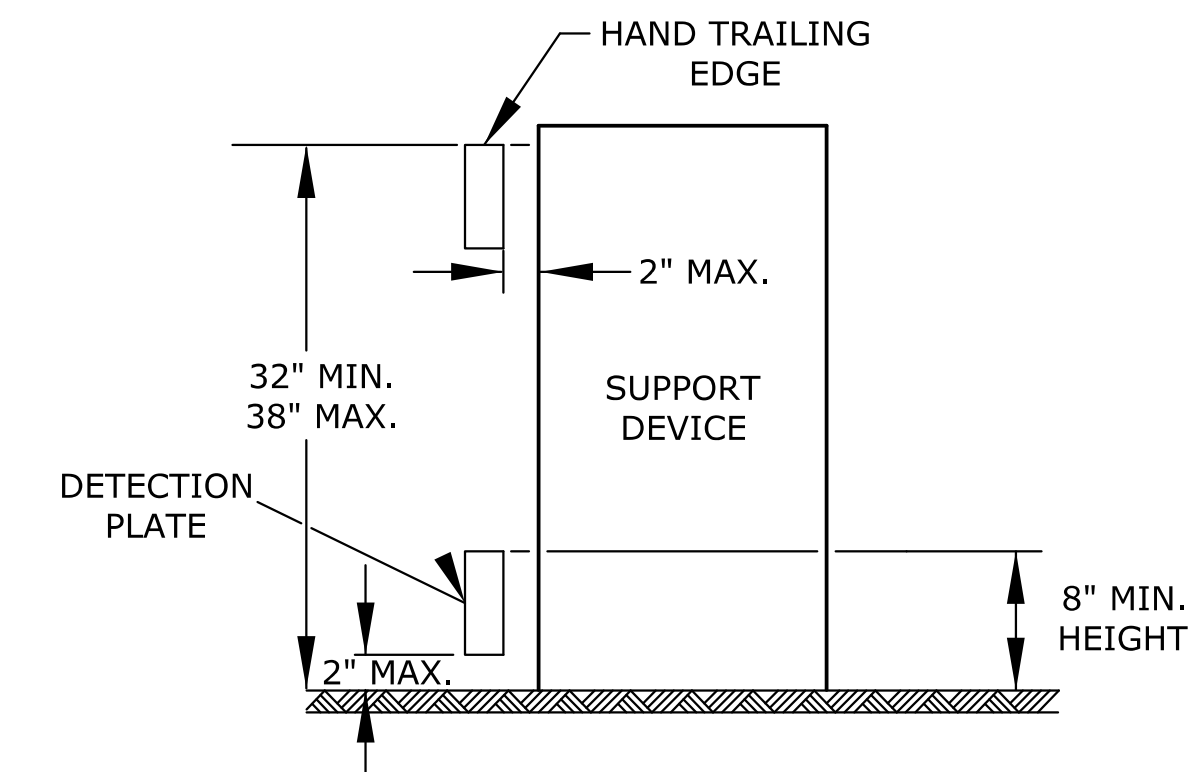
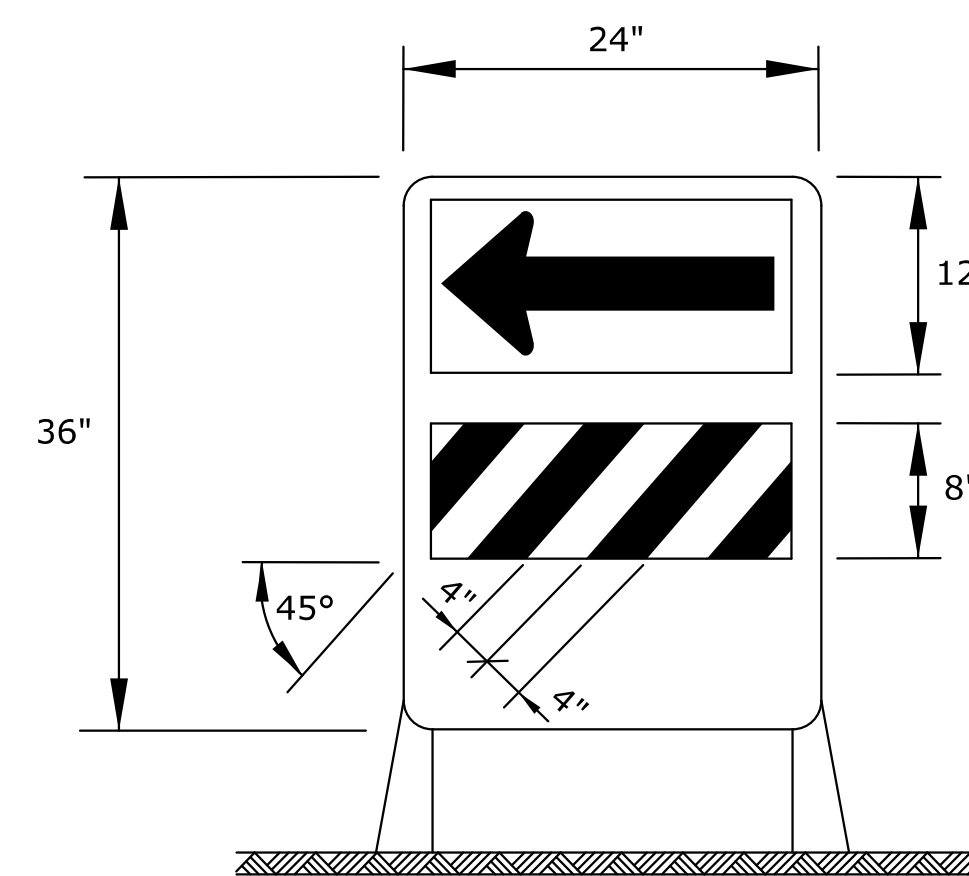
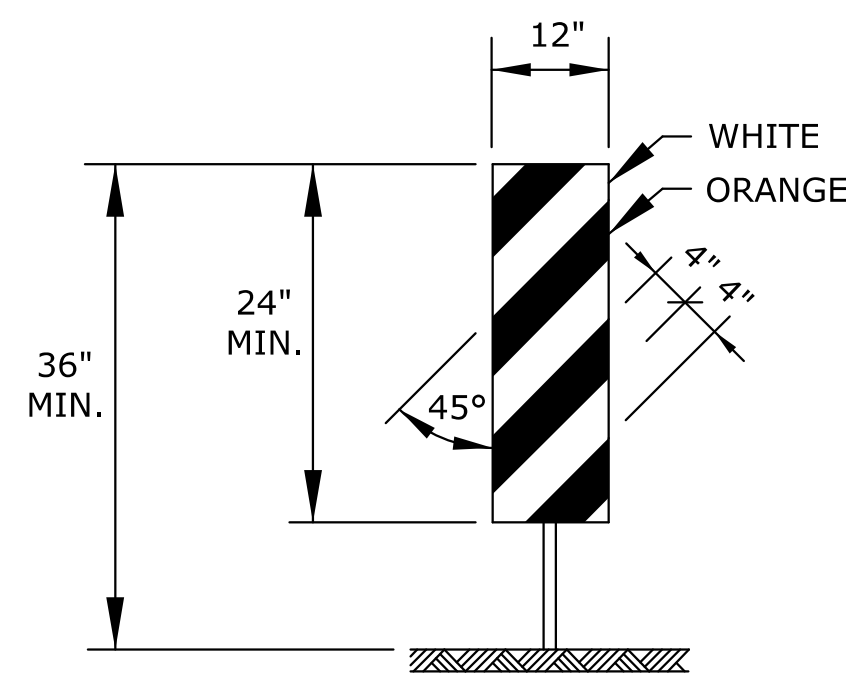
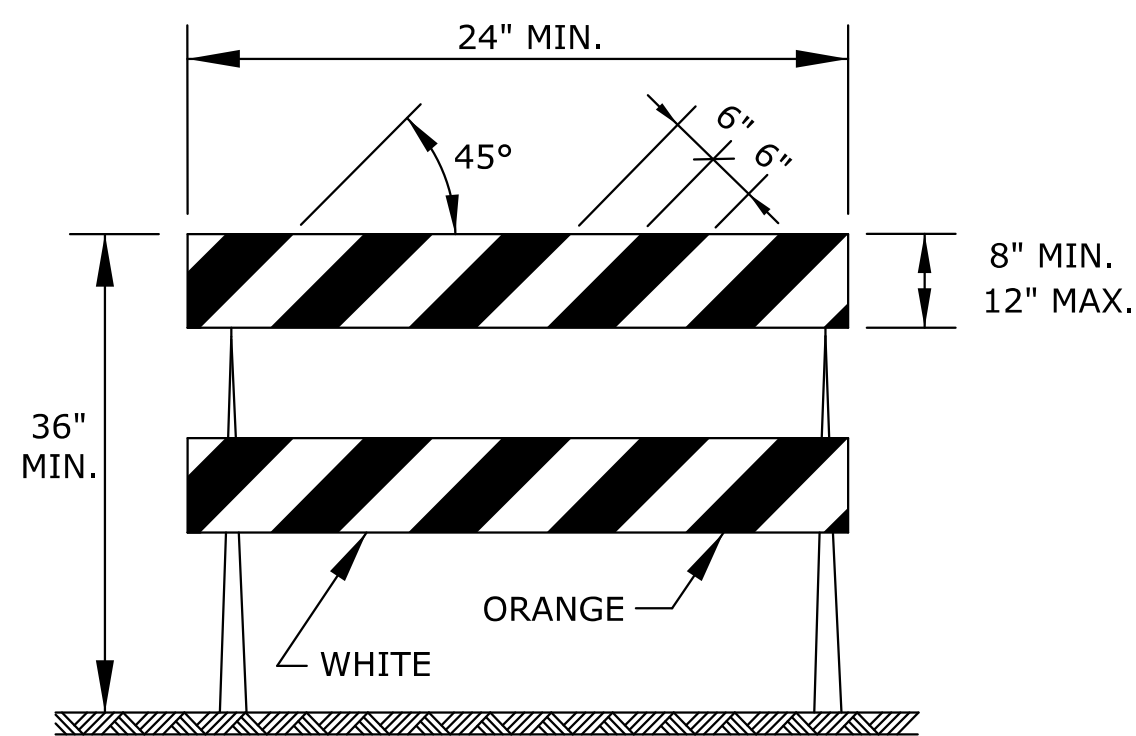
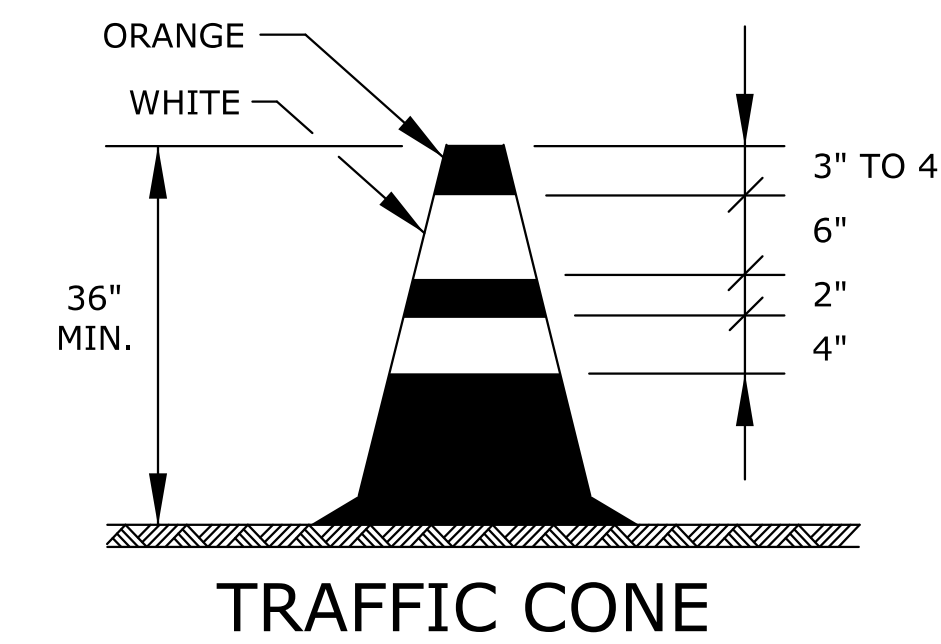
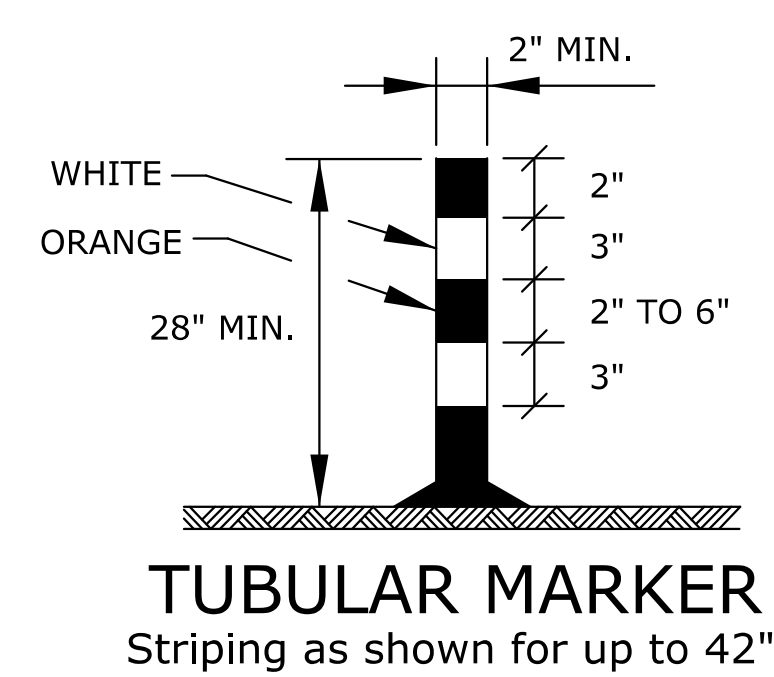
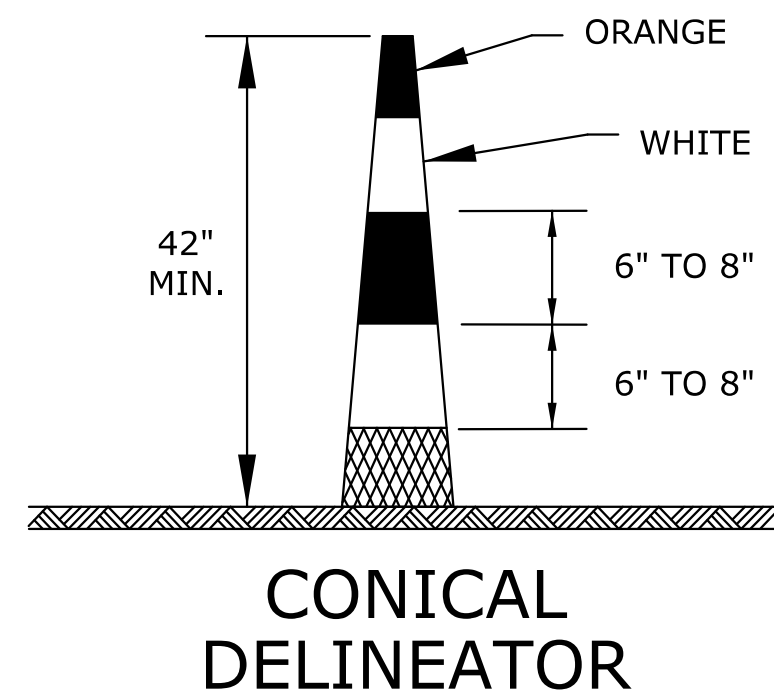
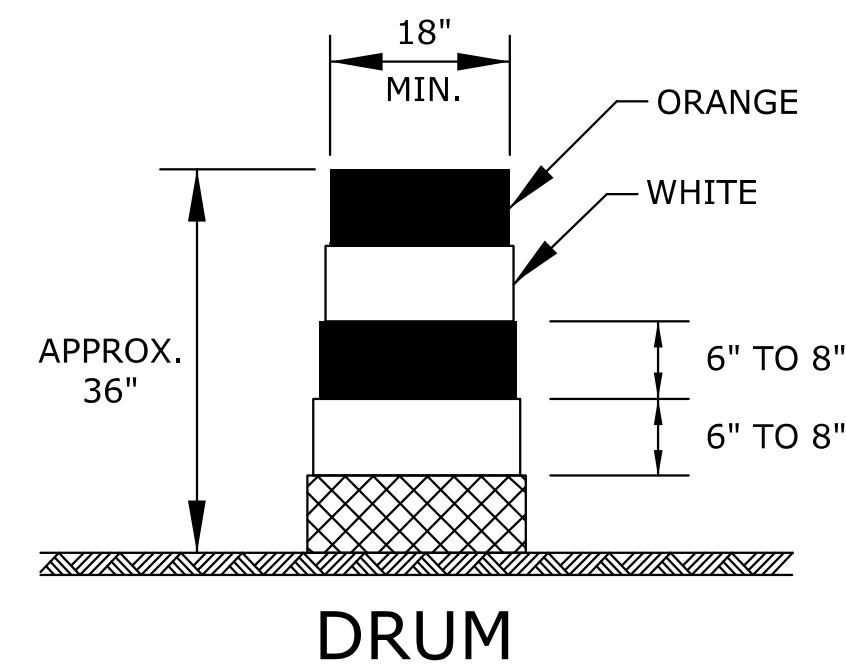
If the Contractor decides to remove the existing pavement marking in conflict, the Contractor is responsible for the replacement of the removed markings as needed throughout construction. The Contractor shall restore all pavement markings to reflect the existing conditions after construction is complete. All work and material needed to replace the pavement marking back to existing conditions shall be considered SUBSIDIARY to the bid item, "Traffic Control".

The Contractor shall maintain pedestrian access to all businesses throughout the duration of construction. These routes shall be ADA compliant and shall meet the specifications spelled out in the latest edition of, "Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way"



MATCHLINE SHEET 33





TYPE 2 BARRICADE

For rails less than 36" long, 4" wide stripes may be used. All stripes shall slope downward to the traffic side for channelization.

VERTICAL PANEL

The stripes shall slope downward to the traffic side for channelization.

DIRECTION INDICATOR BARRICADE

The stripes shall slope downward in the direction traffic is to pass. The direction indicator barricade shall be used in series to direct the motorist into the intended lane of travel.

PEDESTRIAN CHANNELIZER

1. Support device shall not project beyond the detection plate into the pathway.
2. Hand trailing edges and detection plates are optional for continuous walls.
3. Interconnect pedestrian channelizers to prevent displacement and to provide continuous guidance through or around work.
4. Alternate pathways shall be firm, stable, and slip resistant.
5. Treat height differentials > 1/2" in the surfaces of alternate paths with a firm, stable, and slip resistant temporary ramp having a slope of 12:1 or flatter and having a width equal to the alternate path.
6. Use alternating orange/white on interconnected devices.

ITEM	LOCATION	LOCATION								
		Cross-overs	Shoofly Divisions	Tangents	Tapers	Ramps	Head to Head	Object Identifier	Lead-in Devices	Gores
PORTABLE	Drums	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Conical Delineators	Yes	Yes	Yes	Yes	Yes	(1)	Yes	Yes	Yes
	Vertical Panels	(2)	(2)	(2)	(2)	(2)	(1,2)	YES	(2)	(2)
	Direction Indicator Barricade	NO	NO	NO	Yes	NO	NO	NO	NO	NO
	Type 2 Barricade	(2)	(2)	(2)	(2)	NO	NO	Yes	NO	NO
	Traffic Cones	NO	NO	(4)	(4)	(4)	NO	(4)	(4)	(4)
FIXED	Tubular Markers	(3)	(3)	(3)	NO	(3)	Yes	NO	Yes	Yes
	Vertical Panels	(3)	(3)	(3)	(3)	(3)	(3)	Yes	(2,3)	(2)

- (1) Not allowed on centerline delineation along freeways or expressways.
- (2) The stripes shall slope downward to the traffic side for channelization.
- (3) May be used upon the approval of the engineer.
- (4) Daytime operations only.

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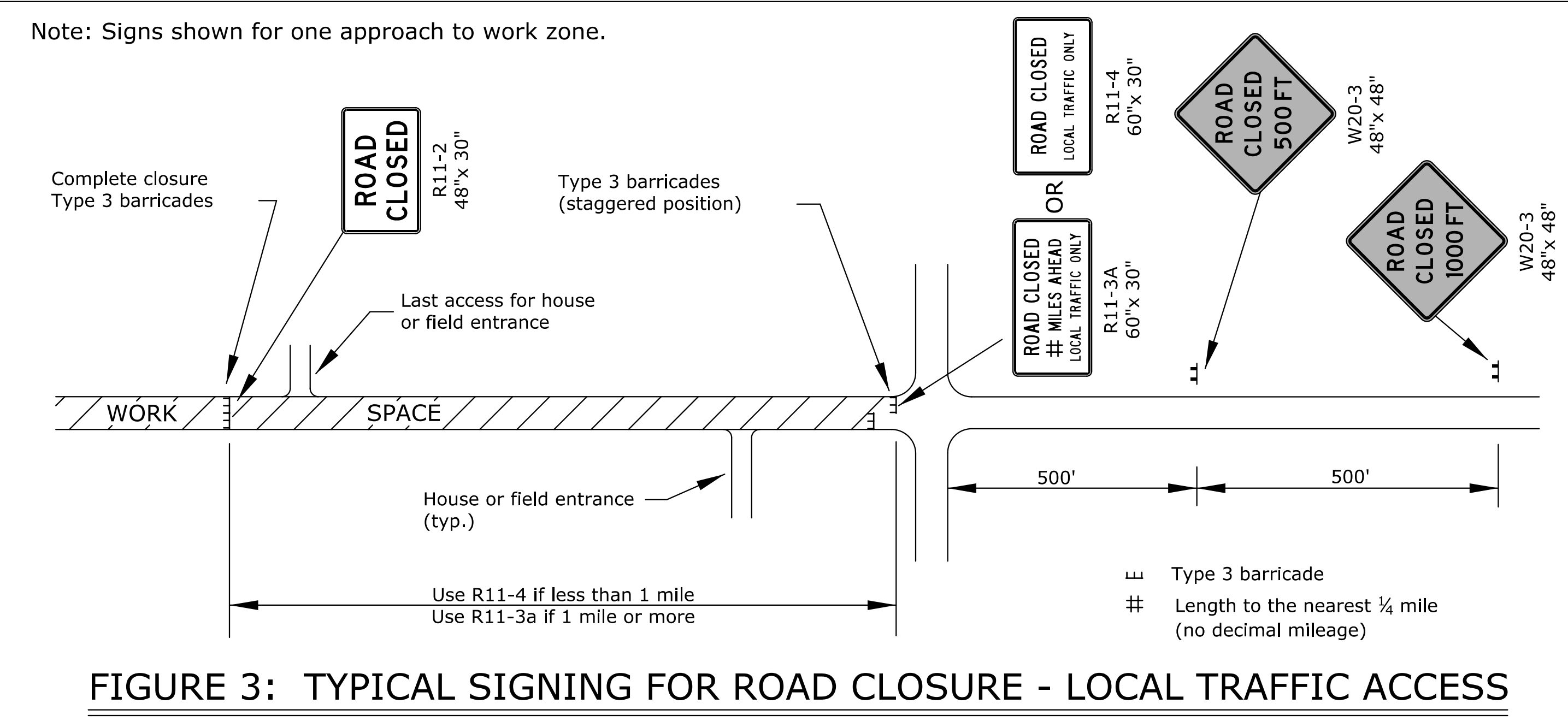
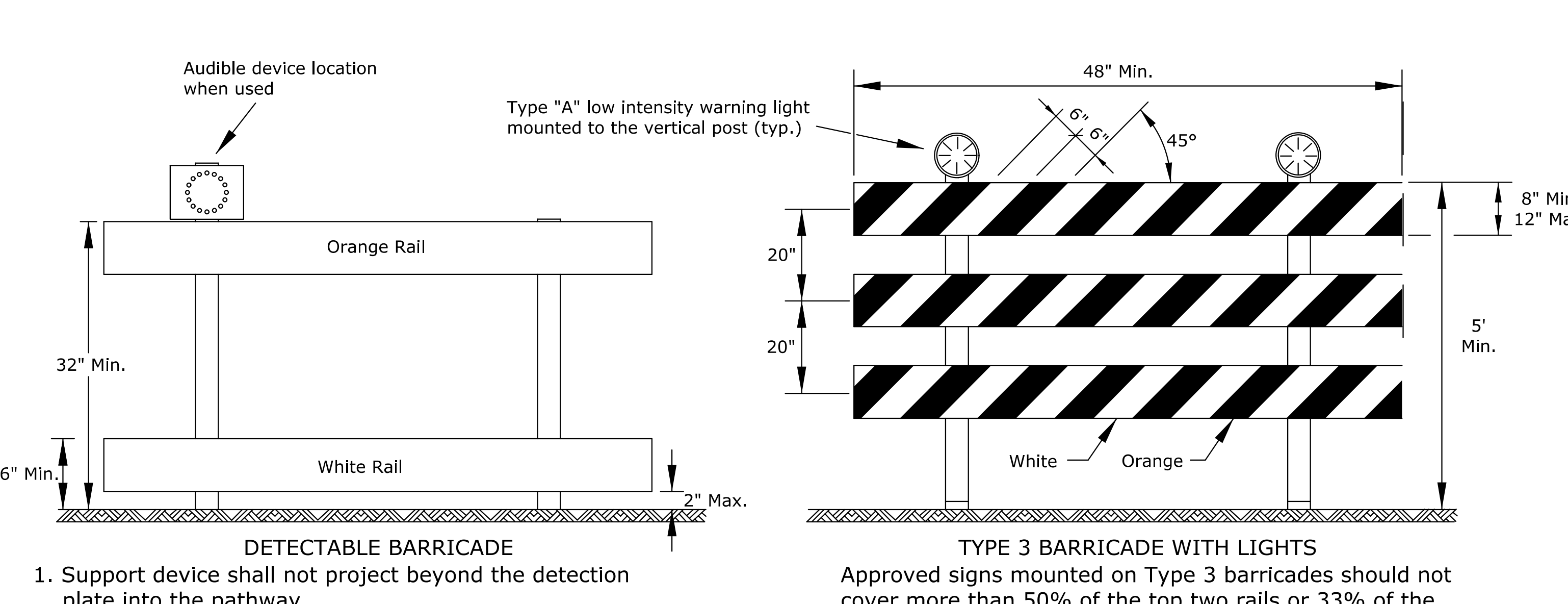
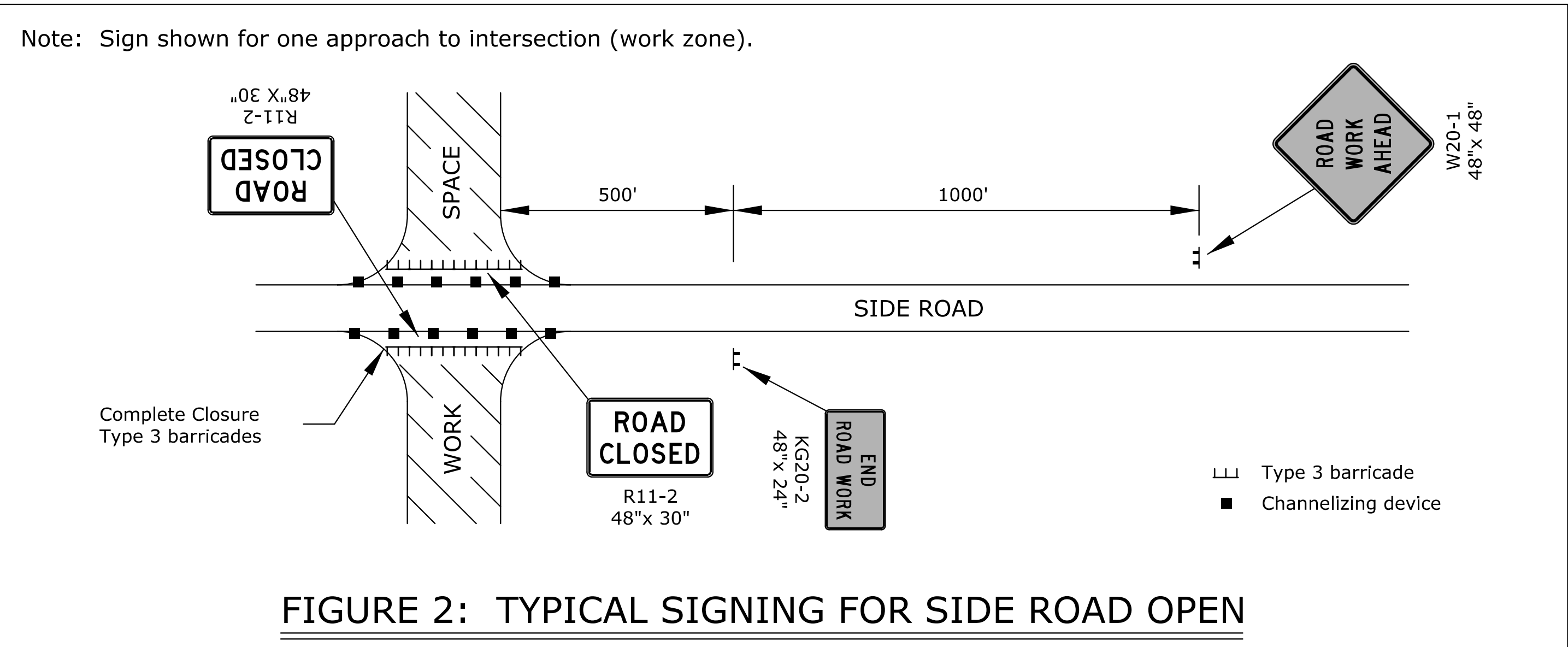
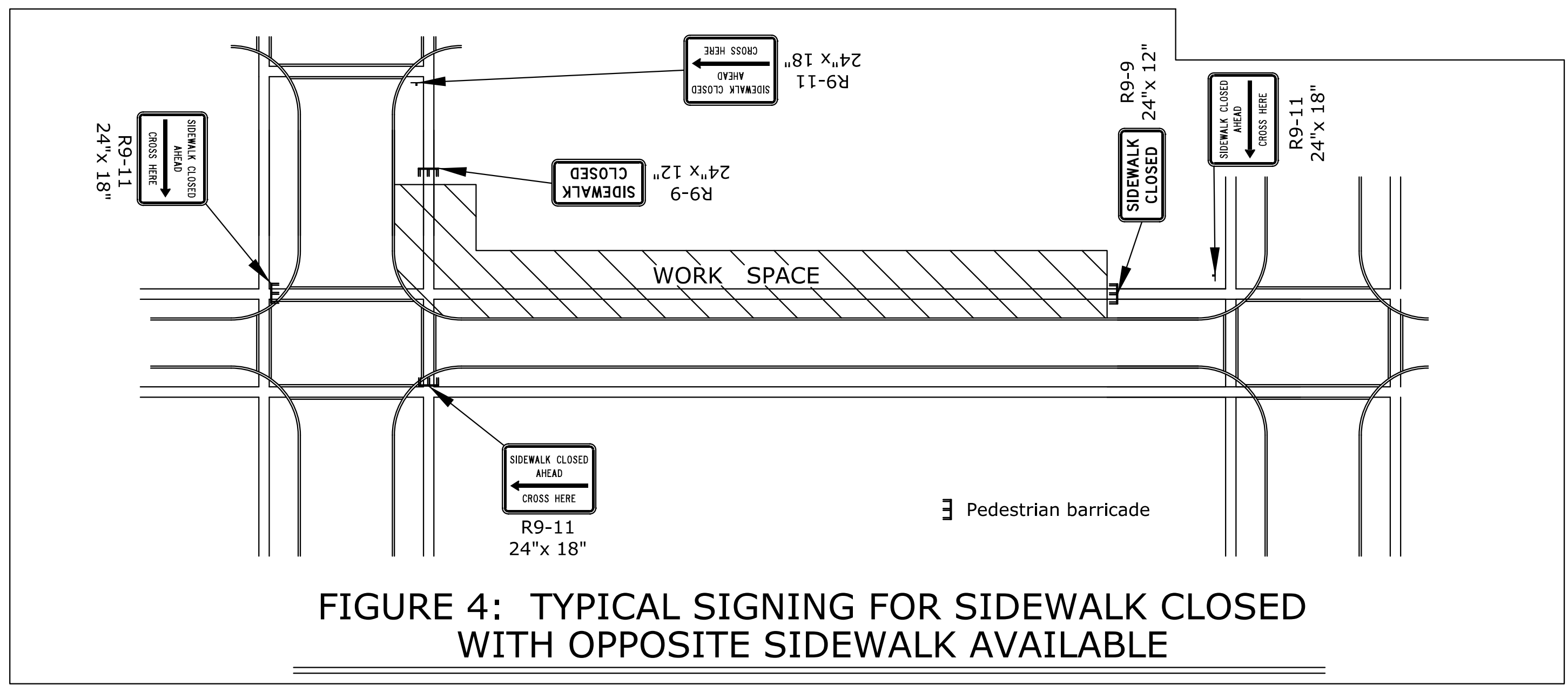
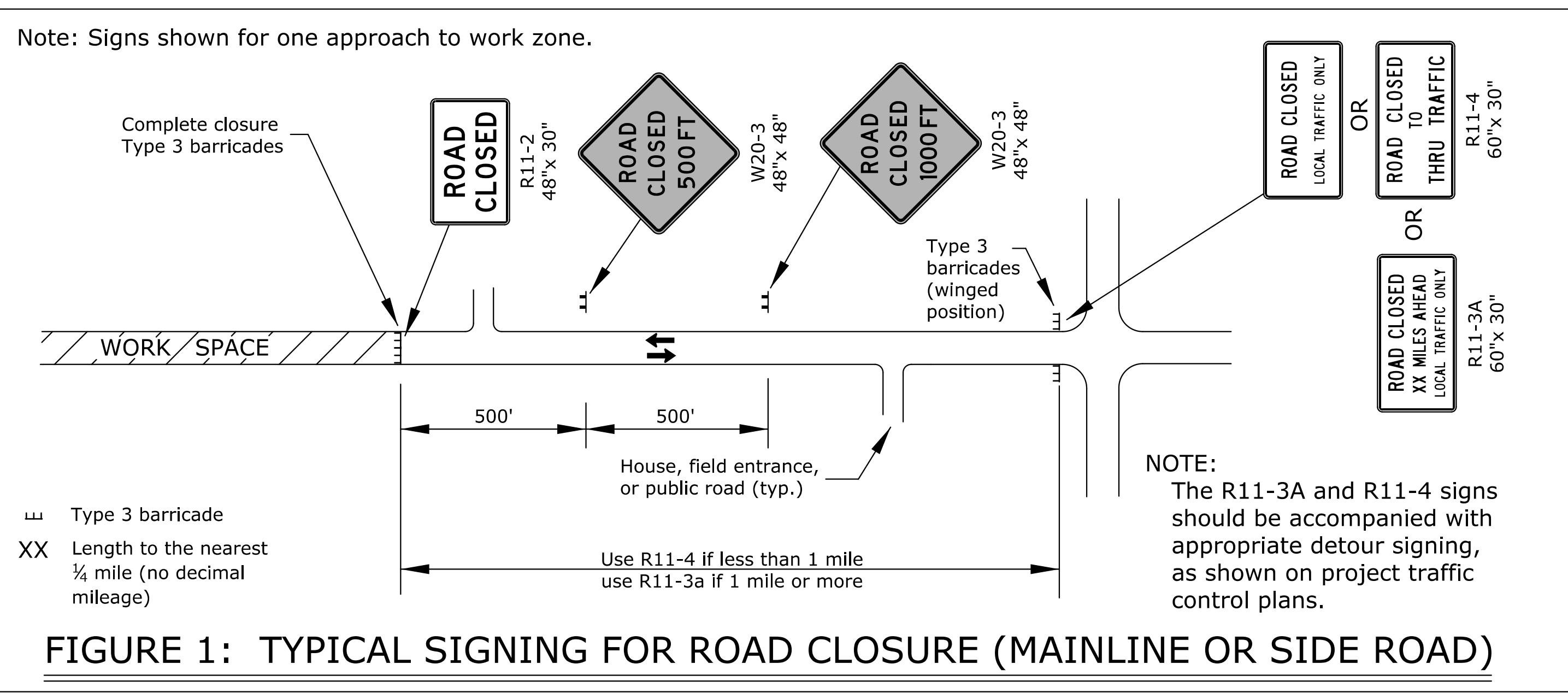
CONTACT: -
 PROJECT NUMBER:
17145

SHEET TITLE:
**TRAFFIC CONTROL
 CHANNELIZING DEVICES**

SHEET NUMBER:

36

LAT: 37.68622°N
 LONG: 97.33001°W



ROAD CLOSED GENERAL NOTES

As shown in Figure 1, at the point where thru traffic must detour and local traffic can proceed to the location where the roadway is completely closed, the R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) or R11-4 (ROAD CLOSED LOCAL TRAFFIC ONLY or ROAD CLOSED TO THRU TRAFFIC) sign shall be used with Type 3 barricades (winged position), placed on the shoulders of roadway.

As shown in Figure 3, when local traffic must be allowed access into the work zone, Type 3 barricades shall be longitudinally staggered to maintain the appearance of a closed roadway. A second line of end-to-end Type 3 barricades shall be placed just beyond the last access point in the work zone, to completely close the roadway.

The R11-4 (ROAD CLOSED TO THRU TRAFFIC or ROAD CLOSED LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is less than 1 mile.

The R11-3a (ROAD CLOSED # MILES AHEAD LOCAL TRAFFIC ONLY) sign shall be used when the distance to the point of complete closure of the roadway is 1 mile or greater.

The words "BRIDGE OUT" (or BRIDGE CLOSED) may be substituted for the words "ROAD CLOSED" on the R11-3a or R11-4 sign where applicable.

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SIGN LAYOUT INFORMATION

END ROAD WORK
 KG20-2
 STD. SIZE EXPWY/FREEWAY
 6" C
 48"x 24"

WAIT FOR PILOT CAR
 KG20-5
 STD. SIZE EXPWY/FREEWAY
 6" C
 48"x 24"

WORK ZONE
 KM4-20
 STD. SIZE EXPWY/FREEWAY
 3" C 24"x 6" 6" C 48"x 12"

NEXT X MILES
 W7-3a
 Mileage to be determined by the engineer.

ROAD WORK AHEAD
 W8-17
 STD. SIZE EXPWY/FREEWAY
 48"x 48"

SHOULDER DROP-OFF
 W8-17P (OPTIONAL)
 STD. SIZE EXPWY/FREEWAY
 30"x 24"

NB US-75 CLOSED FOLLOW DETOUR
 SP-01 (SPECIAL SIGN)
 STD. SIZE EXPWY/FREEWAY
 6" C 10" D

US-75 CLOSED NORTH OF Topeka FOLLOW DETOUR
 SP-02 (SPECIAL SIGN)
 STD. SIZE EXPWY/FREEWAY
 UPPERCASE: 6" C 10" D
 LOWERCASE: 4.5" C 8" D

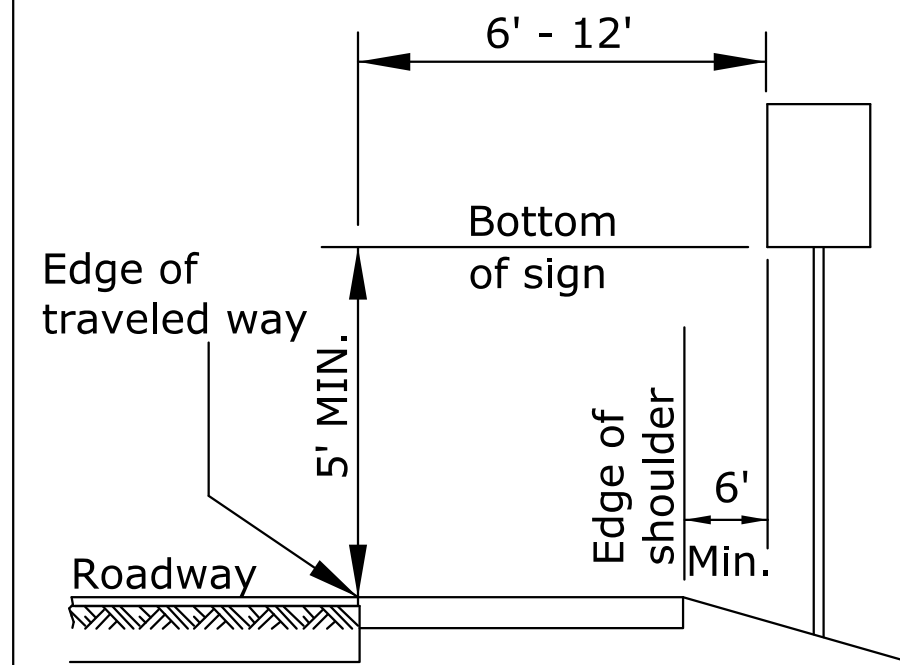
ALL CITY NAMES AND STREET NAMES ON SPECIAL SIGNS AND DESTINATION SIGNS MUST HAVE UPPER AND LOWER CASE LETTERS.

GROOVED PAVEMENT
 W8-15
 STD. SIZE EXPWY/FREEWAY
 8" D
 48"x 48"

LOOSE GRAVEL
 W8-7
 STD. SIZE EXPWY/FREEWAY
 8" D
 48"x 48"

BIKE LANE
 W8-15p
 STD. SIZE EXPWY/FREEWAY
 30"x 24"

UNEVEN LANES
 W8-11
 STD. SIZE EXPWY/FREEWAY
 8" D
 48"x 48"

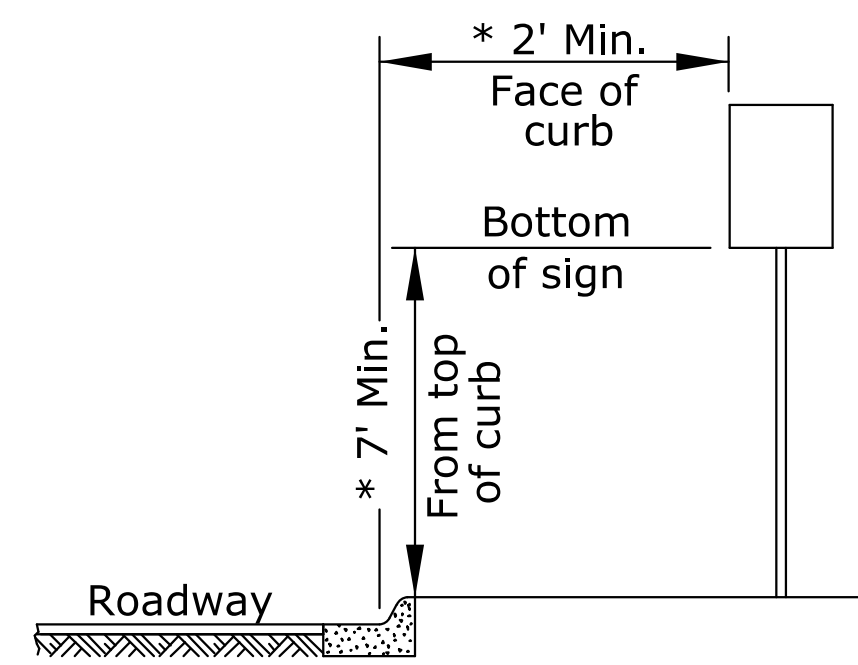


Rural

1) Ground-mounted signs shall be mounted at a minimum height of 5' measured from the bottom of sign to the near edge of the pavement.

2) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

3) The height of the secondary sign mounted below another sign may be 4' measured from the bottom of the sign to the near edge of the pavement. Signs shall not overlap each other.



Urban

1) Signs shall be mounted at a minimum height of 7' measured from the bottom of sign to the near edge of the pavement.

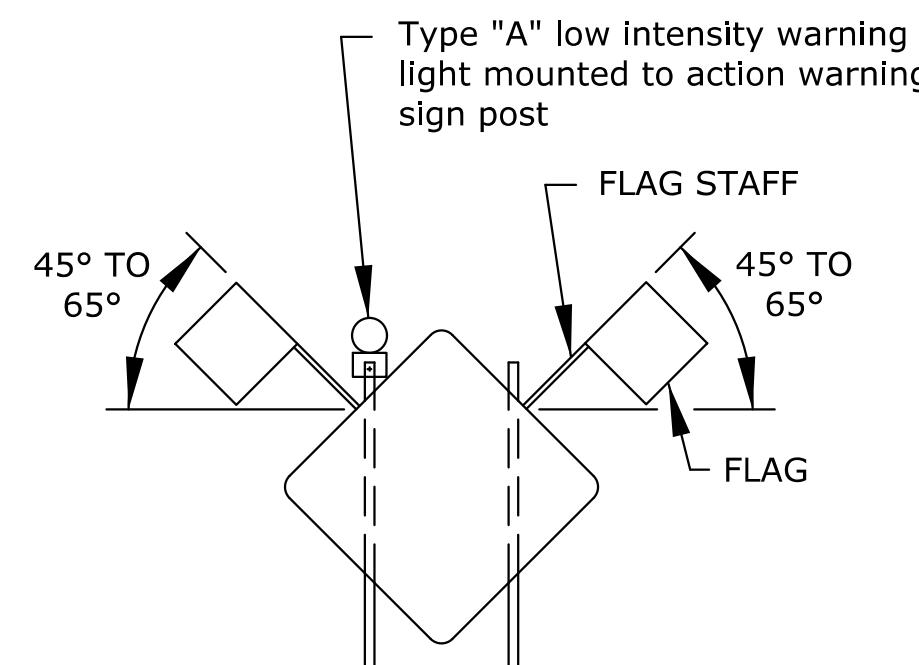
2) Neither portable nor permanent sign supports should be located on sidewalks or areas designated for pedestrian or bicycle traffic.

3) Signs mounted lower than 7' should not project more than 4" into pedestrian facilities.

4) The height from of the secondary sign mounted below another sign may be 6' measured from the bottom of sign to the near edge of the pavement. Signs shall not overlap each other.

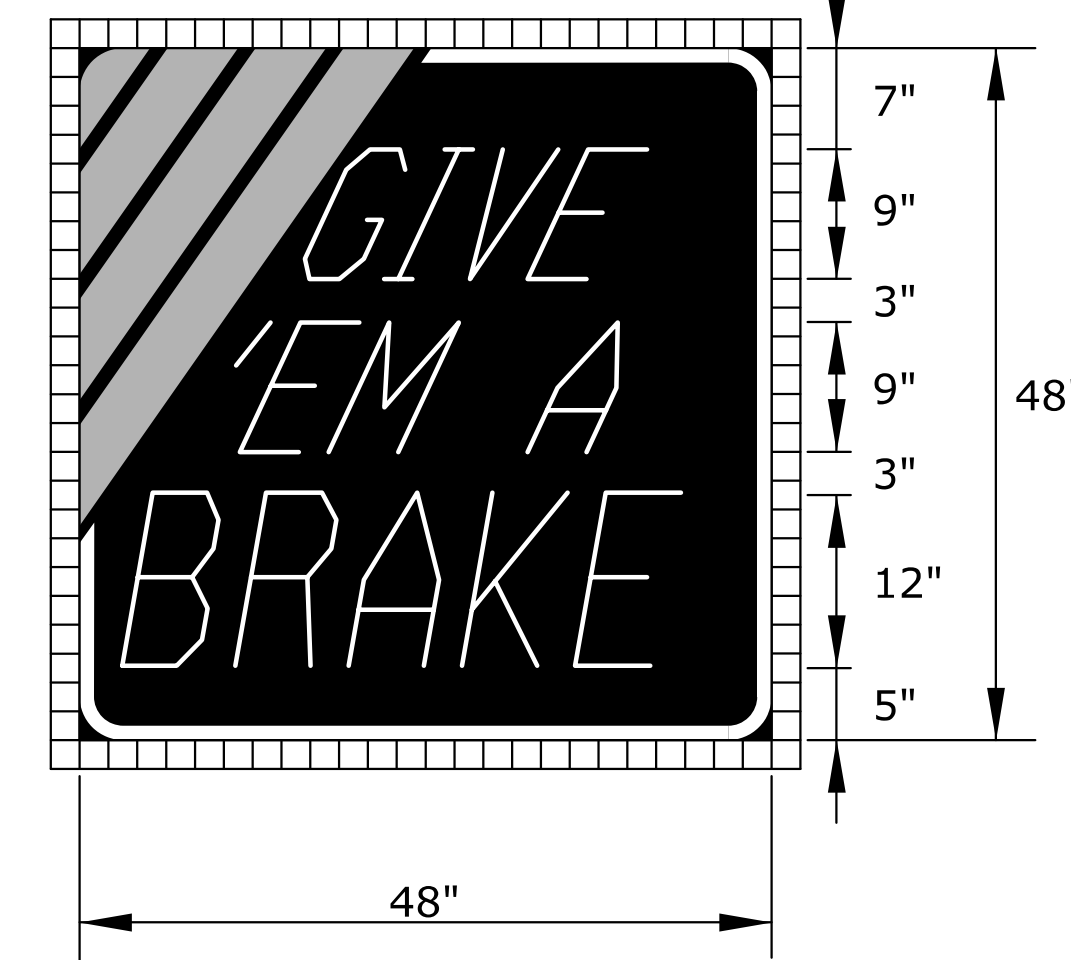
5) Large signs having an area exceeding 50 square feet installed on multiple breakaway posts shall be mounted a minimum of 7' above the ground.

* 6) Pedestrian detour signing shall be a minimum of 2' measured from the top of the pedestrian pathway to the bottom of the sign and shall not protrude into the walkway nor shall it project beyond the back of curb.



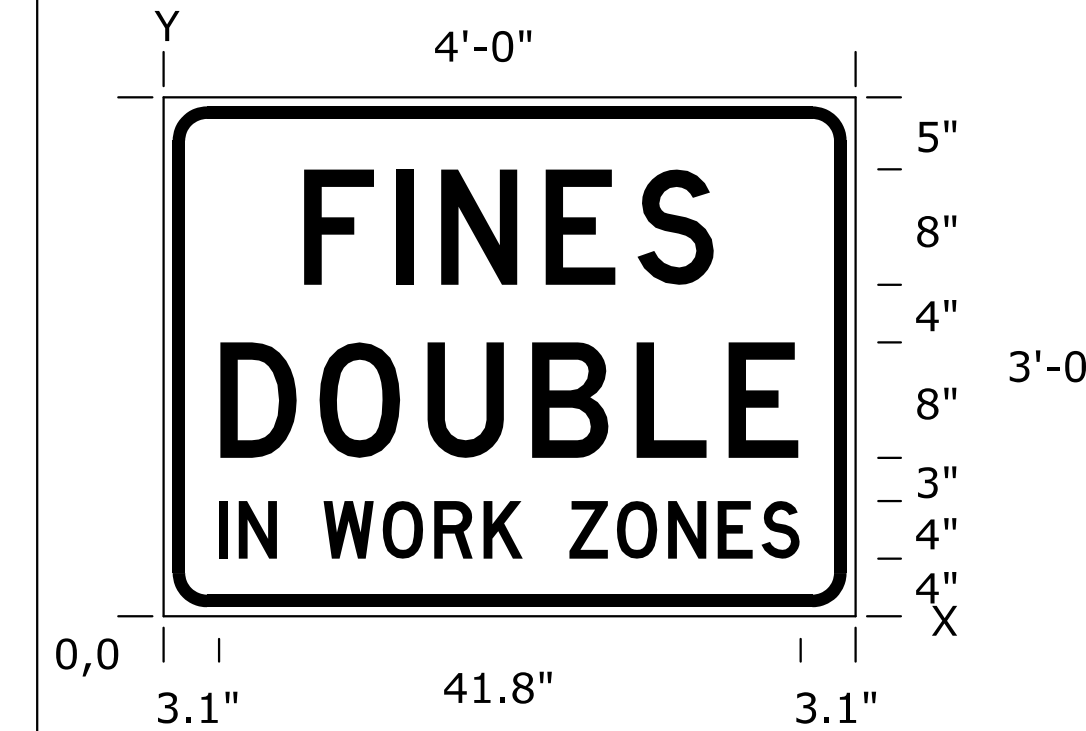
When the sign width is equal to or greater than 9', three or more wood posts may be used with a minimum of 4' between the centerline of each post. All signs less than 9' in width shall use a maximum of two wood posts.

- In the case of hitting rock when driving posts
1. Shift the sign location. Do not violate minimum sign spacing.
 2. With the engineer's approval, use acceptable alternative sign stands.



KI-104a

SIGN NUMBER	GIVE EM A BRAKE
WIDTH x HEIGHT	4'-0" x 4'-0"
BORDER WIDTH	1.0"
CORNER RADIUS	4.0"
STRIPE WIDTH	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: NON-REFLECTIVE COLOR: BLACK
LEGEND/BORDER	TYPE: REFLECTIVE COLOR: WHITE
LEGEND FONT	DUTCH 801 ROMAN SWC 25 DEGREE SLANT
STRIPES	TYPE: REFLECTIVE COLOR: ORANGE



KI-105a

SIGN NUMBER	FINES DOUBLE
WIDTH x HEIGHT	4'-0" x 3'-0"
BORDER WIDTH	0.9"
CORNER RADIUS	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: REFLECTIVE COLOR: WHITE
LEGEND/BORDER	TYPE: NON-REFLECTIVE COLOR: BLACK

DIMENSIONS IN INCHES SPACINGS ARE TO START OF NEXT LETTER

Y FONT	LETTER SPACINGS													HT LEN		
23.0 D	9.7	6.4	3.2	7.3	6.4	5.4	9.7							8.0		
11.0 D	3.9	6.9	7.5	7.3	7.3	6.4	4.9	3.9							40.3	
4.0 D	3.1	1.6	2.7	3.2	4.3	3.8	3.6	2.8	3.2	3.4	3.8	3.6	3.2	2.7	3.1	41.8

Notes:

Typically, there are two sets of informational signs installed per project: one for each direction of traffic.

Install signs a minimum of 500' in advance of the road work ahead sign. The engineer may designate a more appropriate location if conditions dictate.

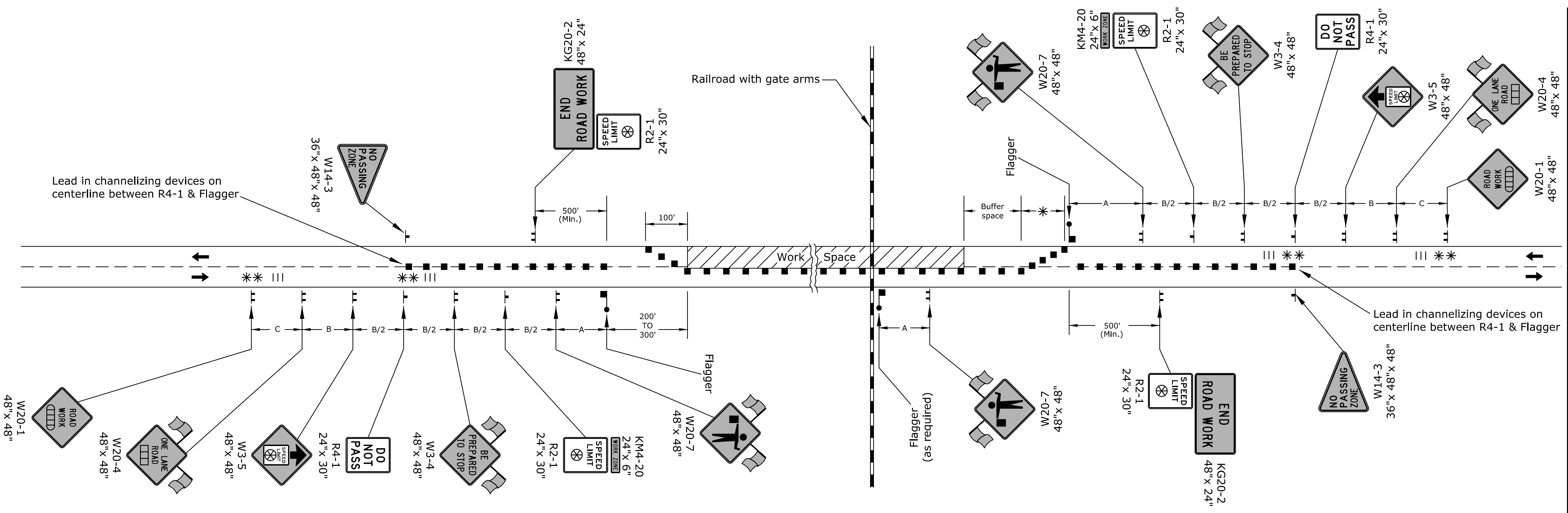
The informational signs are not to interfere with the traffic control signs for the project.

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FLAGGER



USE TE731 FOR FLAGGER OR PILOT CAR ON ROADWAYS WITH CONCRETE SHOULDERS GREATER THAN 8 FT.

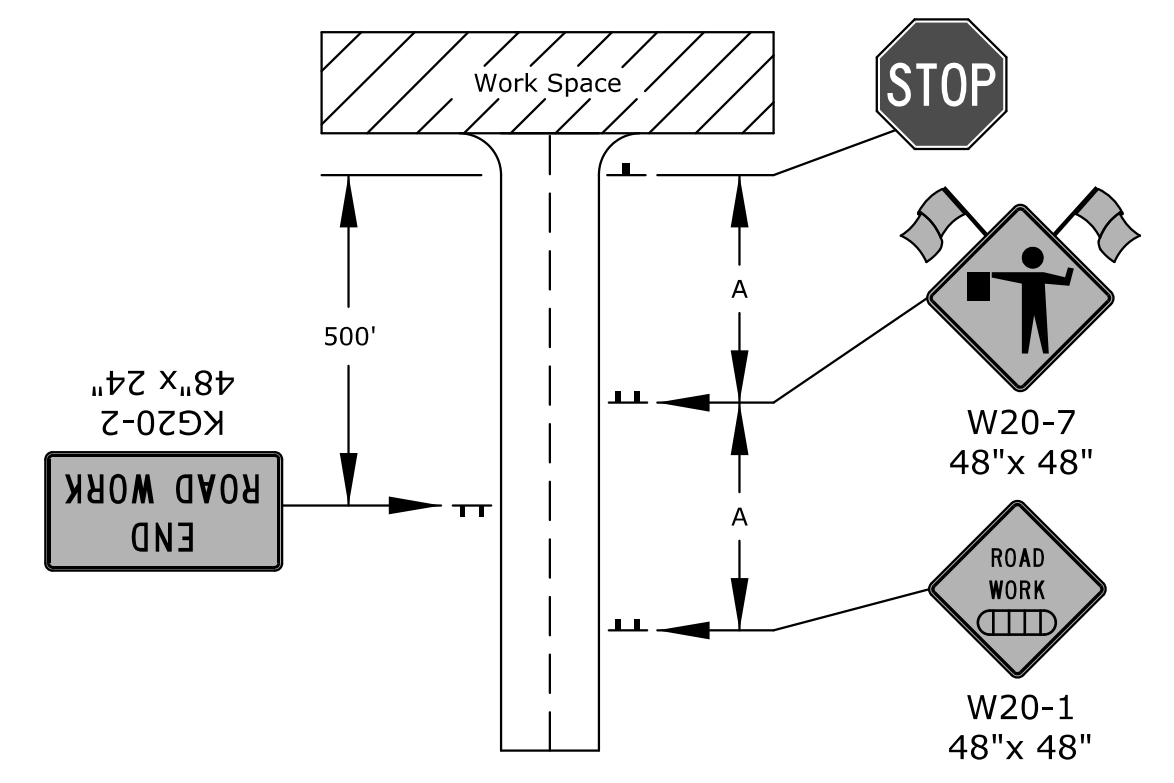
Notes:
 Trucks hauling material to the project should STOP at the Flagger. After stopping, upon approval of the Engineer, trucks may be allowed to move around the Flagger.
 Place a Flagger at all highway and major collector intersections and at-grade railroad intersections with lights and gates in the work space to control traffic crossing the tracks to the left of the gate arm. The need for a Flagger at minor side road intersections shall be determined by the Engineer. Place a W20-7 (Flagger symbol) sign on each side road that is controlled by a Flagger.
 Existing signs shall not be covered or removed between Flagger stations.
 Temporary rumble strips may be used in lieu of lead in channelizing devices when the roadway is less than or equal to 30' including paved shoulders. When extenuating circumstances exist, the Area Engineer may elect to eliminate both the lead in channelizers and the rumble strips.

* Minimum six (6) channelizers spaced at 20' intervals.
 ** Optional rumble strips may be placed: One set between the W20-1 and W20-4, and one set between the R4-1 and W3-4, on each approach.

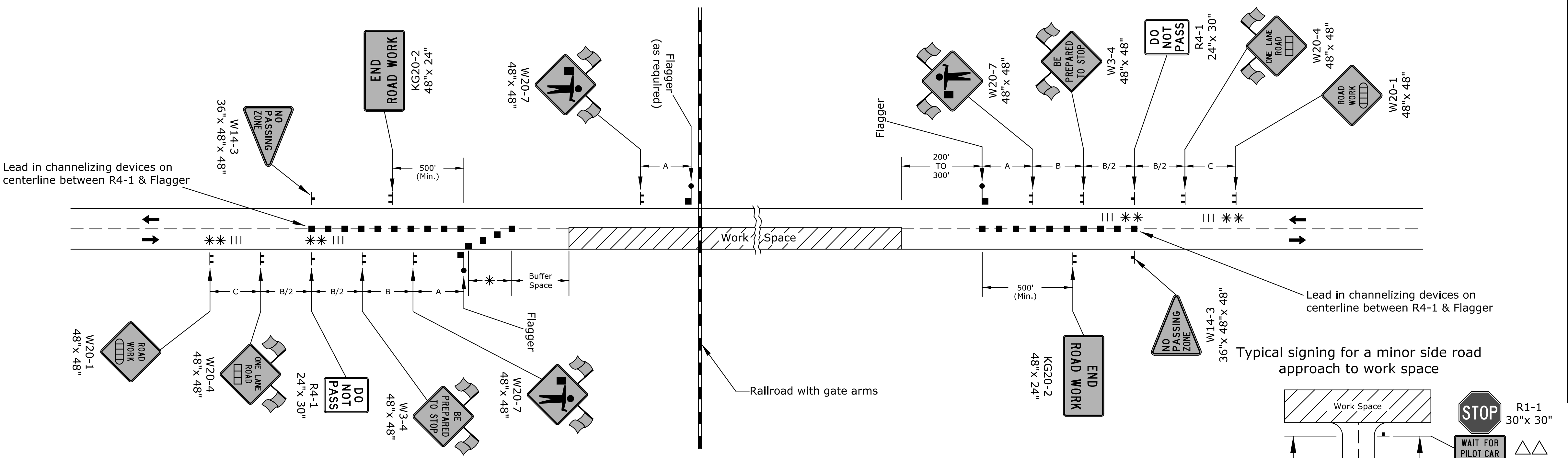
△ Not required on substantial maintenance projects (1R).
 △△ The KG20-5 (WAIT FOR PILOT CAR) sign shall be mounted on an approved portable support and not attached to the existing stop sign post.

The KG20-5 sign shall be placed immediately in front of the existing stop sign, a minimum of 6" below the bottom of the stop sign. The sign should be removed or covered when there is no pilot car.

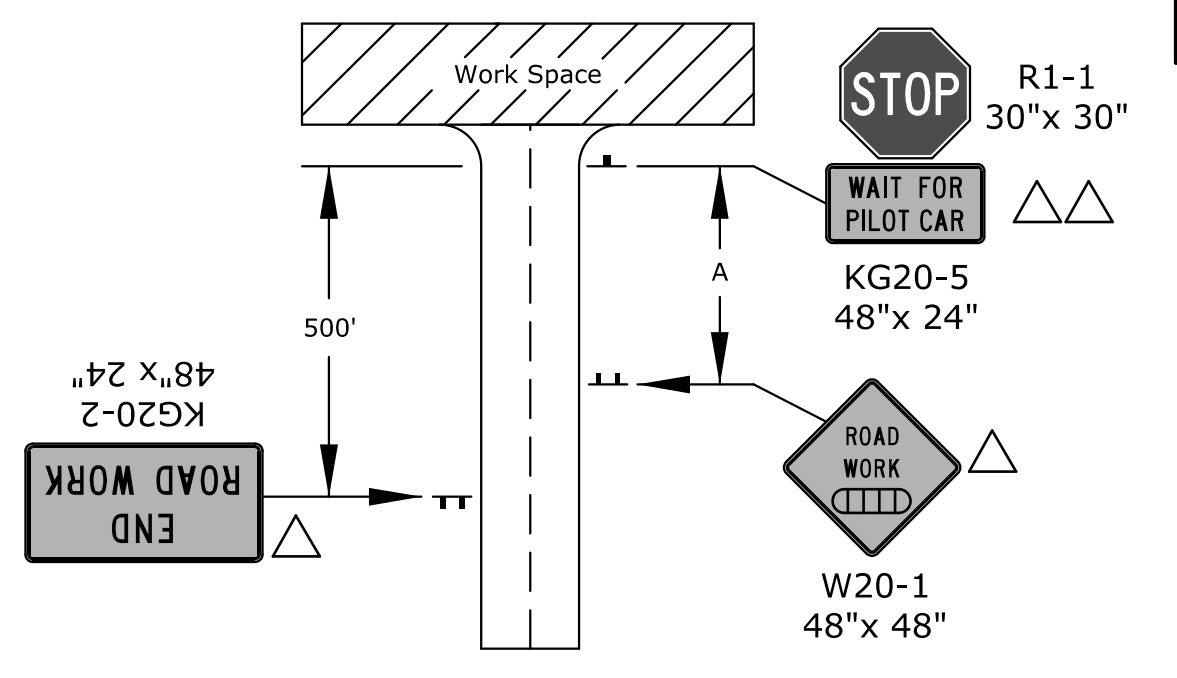
Typical signing for highway or major collector approach to work space



FLAGGER AND PILOT CAR



Typical signing for a minor side road approach to work space



- Channelizing device
- ▨ Ahead, 1500 ft, or 1 mile
- ▤ Ahead, 1000 ft, 1500 ft, or 1/2 mile
- ⊗ Speed to be determined by the Engineer
- Type "A" low intensity warning light
- ||| Temporary portable rumble strips

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