

ORNAMENTAL FENCE NOTES

DESCRIPTION
THIS ITEM CONSISTS OF FURNISHING AND INSTALLING ORNAMENTAL FENCING ON NEW CONCRETE BRIDGE PARAPET. CONSTRUCT IN A MANNER THAT PROVIDES A RIGID, TAUT FENCE CLOSELY CONFORMING TO THE TOP SURFACE OF THE CONCRETE PARAPET. UNLESS OTHERWISE SPECIFIED IN THE PLANS, INSTALL POSTS AND PICKETS PLUMB.

DESIGN SPECIFICATIONS:

THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, AND THIS DRAWING.

- 1) FENCE LINE POSTS (VERTICAL) SHALL BE 2 1/2" OUTSIDE DIMENSION SQUARE POST AND FITTED WITH COMPATIBLE CAPS.
- 2) FENCE PICKETS (VERTICAL) SHALL BE 3/4" MIN. OR 1" MAX. OUTSIDE DIMENSION SQUARE PICKETS.
- 3) FENCE RINGS SHALL BE 4" MAX. OUTSIDE DIAMETER AND RIVETED OR WELDED.
- 4) FENCE RAIL MEMBERS (HORIZONTAL) SHALL BE MIN. 1 3/8" x 1 1/2" U-CHANNEL RAIL.
- 5) FENCE WIRE MESH SHALL BE 1" SQUARE DIAMOND (10 GAUGE) GALVANIZED INTERCRIMPED WIRE MESH (EDGED WITH U-CHANNELS) PLACED ON THE OUTSIDE FACE OF FENCE.
- 6) PICKETS, POSTS, RINGS, VISIBLE HARDWARE, AND CONNECTORS SHALL BE STAINLESS STEEL AS PER STATE OF OHIO / DEPARTMENT OF TRANSPORTATION / CONSTRUCTION AND MATERIALS SPECIFICATIONS 730.09 & 730.10.
- 7) ALL FENCE COMPONENTS, INCLUDING BUT NOT LIMITED TO; PANELS, PICKETS, RAILS, CAPS, RINGS, POSTS, WIRE MESH PANELS, AND ALL VISUAL HARDWARE SHALL BE POWDER COATED OVER HOT DIP GALVANIZING AS PER THE FOLLOWING:

1. HOT DIP GALVANIZE (DO NOT WATER OR CHROMATE QUENCH) MINIMUM OF 2 OUNCES PER SQUARE FOOT AREA AS PER ASTM A 123.
2. REMOVE ALL DRAINAGE SPIKES AND SURFACE DEFECTS.
3. POWDERCOAT WITHIN 12 HOURS OF GALVANIZING TO 3 MIL THICKNESS. DO NOT GET SURFACES WET. DO NOT LEAVE OUTSIDE.
4. KEEP THE SURFACE CLEAN. DO NOT TRANSPORT UNCOVERED LOADS. DIESEL FUMES WILL CONTAMINATE SURFACE.
5. IF SURFACE CONTAMINATION HAS OCCURRED OR IS SUSPECTED, CLEAN SURFACE WITH MANUFACTURER APPROVED SOLVENT/DETERGENT DESIGNED FOR PRE-CLEANING PRIOR TO POWDERCOATING.
6. USE ZINC PHOSPHATE PRETREATMENT FOR HIGHEST ADHESION. SURFACE MUST BE PERFECTLY CLEAN. ZINC PHOSPHATE HAS NO DETERGENT ACTION AND WILL NOT REMOVE OIL OR SOIL.
7. USE IRON PHOSPHATE FOR PRE-GALVANIZED PRODUCTS. IRON PHOSPHATE HAS A SLIGHT DETERGENT ACTION AND WILL REMOVE SMALL AMOUNTS OF SURFACE CONTAMINANTS.
8. PRE-HEAT WORK PRIOR TO POWDER APPLICATION.
9. USE SUPER DURABLE POLYESTER TGIC OR TGIC FREE; MIRROR BLACK COLOR AS MANUFACTURED BY SHERWIN WILLIAMS OR AMERICOATS OR APPROVED EQUAL.
10. CHECK FOR CORRECT CURING BY SOLVENT TESTING. ADJUST PRE-HEAT AND LINE SPEED TO ENSURE FULL CURE.

REQUIRED TESTS ON:

SMOOTH GLOSSY FINISHES

- IMPACT TEST - ASTM D2794
- ADHESION - ISO 2409
- DEEP-DRAWING - ISO 1520
- BENDING TEST - ISO 1519
- SALT SPRAY - ISO 9227
- ACCELERATED WEATHERING - EN ISO 11341
- HUMIDITY TEST - DIN 50017

IMPACT, ADHESION AND BENDING TESTS SHALL BE CARRIED OUT ON UNICHIM STEEL PANELS WITH COATING THICKNESS OF ABOUT 60 MICRONS.
SALT SPRAY AND HUMIDITY TESTS SHALL BE CARRIED OUT ON BONDER 26S/60/OC PANELS WITH COATING THICKNESS OF ABOUT 60 MICRONS.

SUBMITTAL:

- 3 COLOR CHIPS ON GALVANIZED STEEL COUPONS FOR CITY'S REVIEW AND ACCEPTANCE.
- 1 MOCKUP FENCE PANEL AND POSTS.

8) FENCE SUPPLIER SHALL DESIGN AND PROVIDE THE STAINLESS STEEL CAST-IN-PLACE ANCHORS, BASE PLATE TYPE, POSTS, RAILS, CONNECTORS, RINGS, PICKETS, AND SHIMS (LEVEL OR BEVELED) AS NEEDED TO BE USED AND PROVIDE A SCHEMATIC DECK PLAN AND/OR ELEVATIONS SHOWING THE FENCE POST SPACING. DESIGN / ERECTION PLAN SHALL CONFORM TO THE PROJECT BRIDGE PLANS.

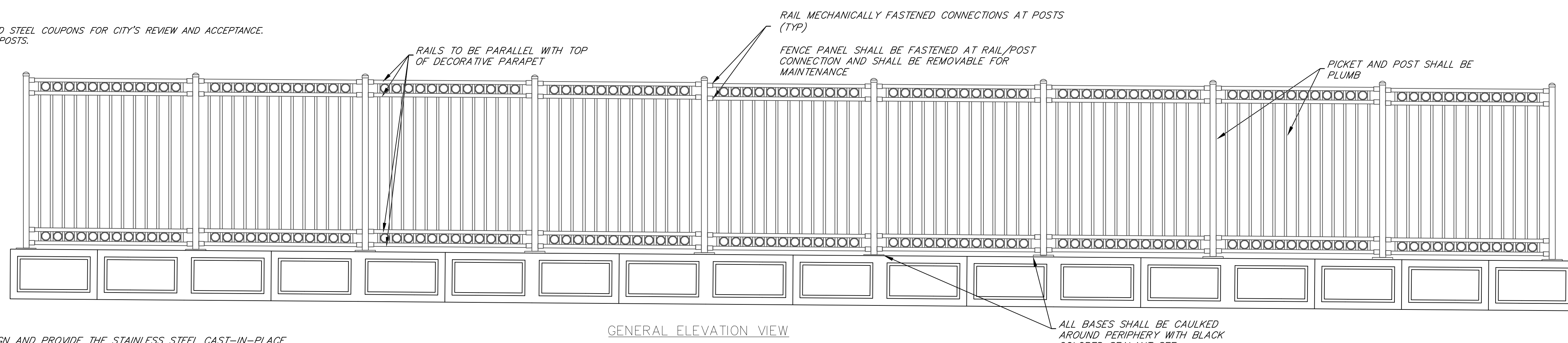
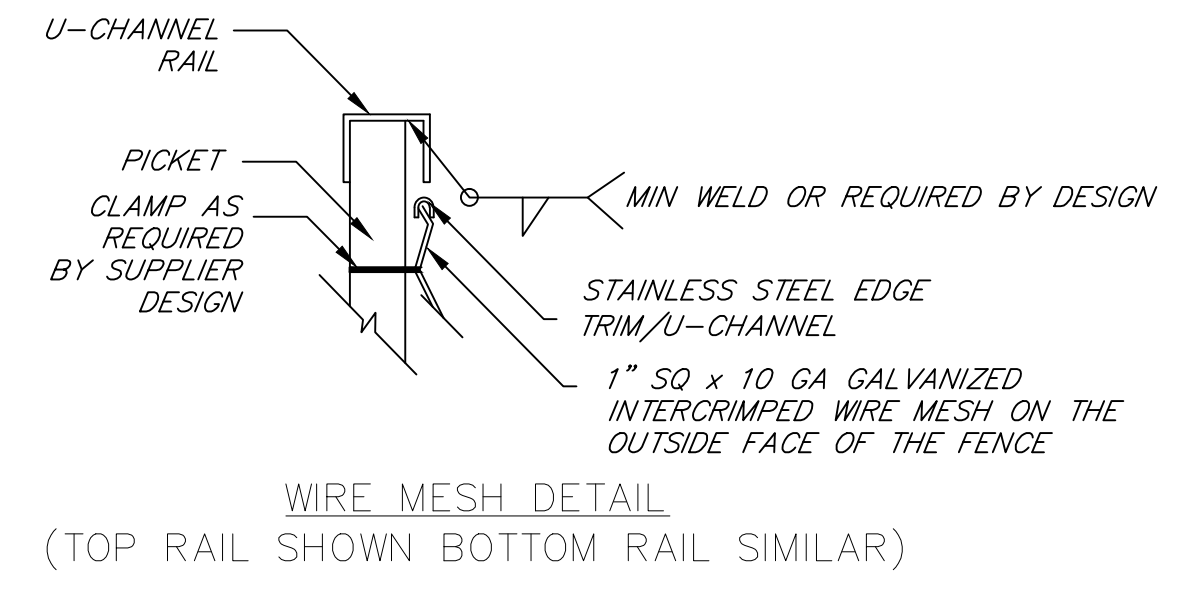
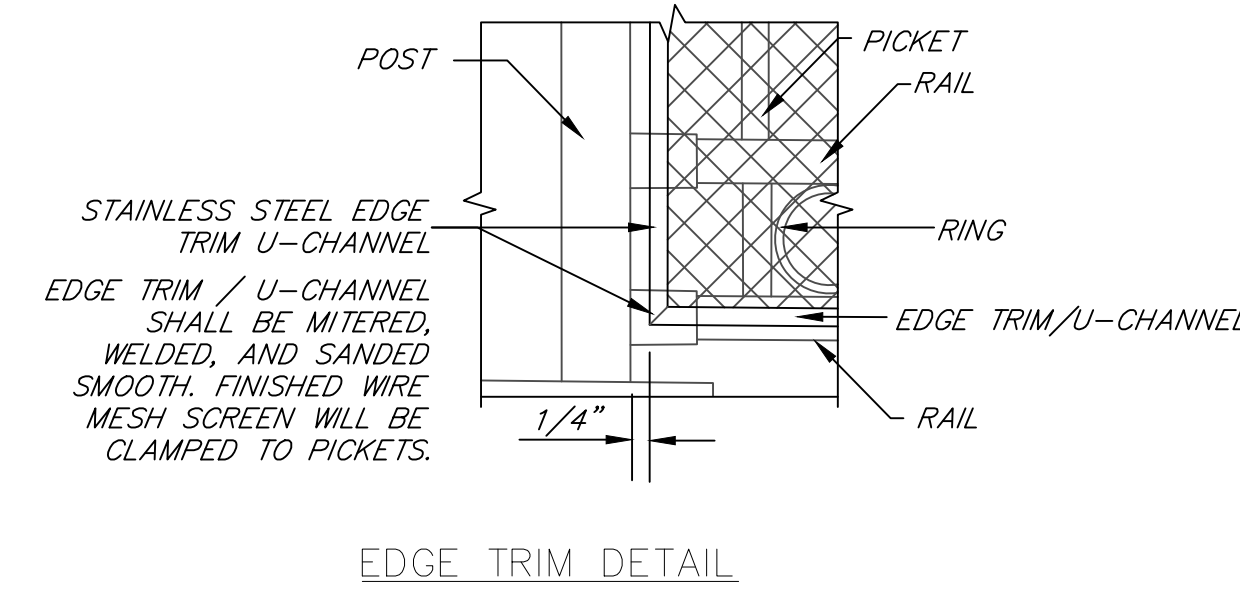
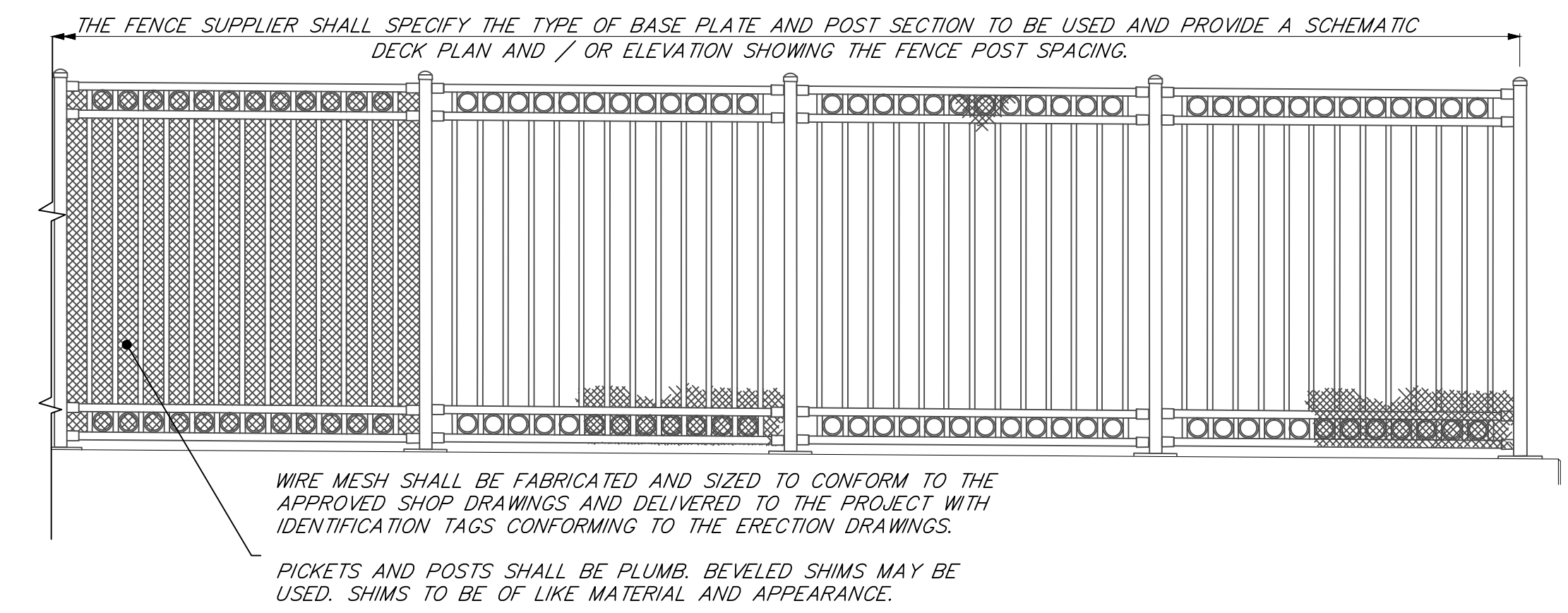
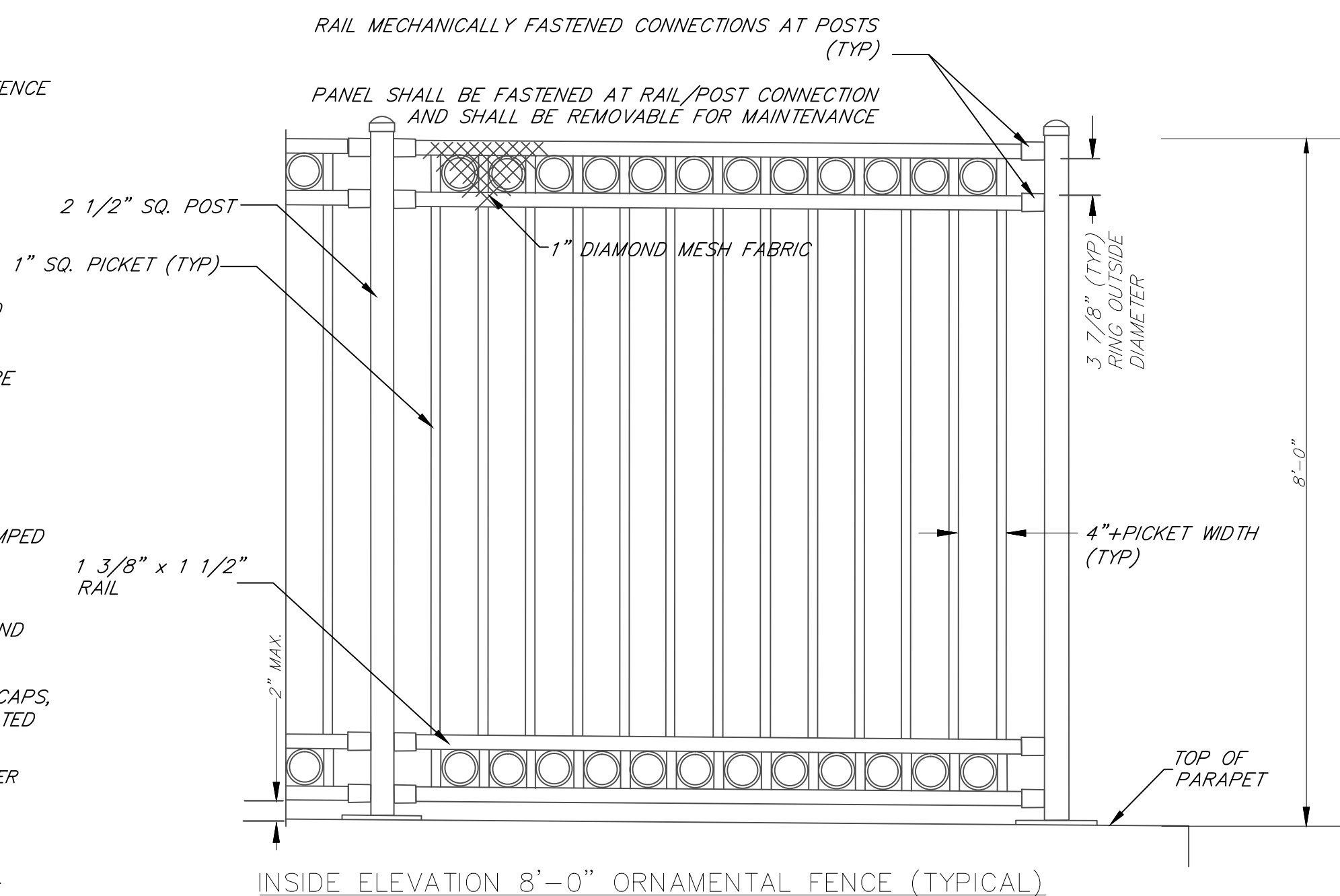
9) WELDS SHALL CONFORM TO CMS 51.3.

10) STANDARD FENCE HEIGHT SHALL BE 8 FEET ON A STANDARD 2' 8" PARAPET. HEIGHT IS PROJECT SPECIFIC AND MAY BE ADJUSTED AS PER BRIDGE AGENCY REQUIREMENTS. PROJECT PLANS SHALL CLEARLY STATE REQUIREMENTS FROM APPROPRIATE AGENCIES.

11) THICKNESS OF MATERIALS SHALL BE 10 GA OR THICKER AS REQUIRED PER DESIGN.

12) PAYMENT WILL BE MADE FOR COMPLETED IN PLACE AND ACCEPTABLE QUANTITIES OF ORNAMENTAL FENCE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
607	FOOT	FENCE, TYPE ORNAMENTAL



GENERAL ELEVATION VIEW

REVISIONS:

1	ADD STAINLESS STEEL & POWDER COATING. 07/11/2012
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PARAPET NOTES

DESCRIPTION

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING CONCRETE DECORATIVE PARAPET MEETING THESE GUIDELINES. THE PROJECT PLANS SHALL PROVIDE THE NECESSARY ADDITIONAL CONCRETE PARAPET DIMENSIONS INCLUDING PARAPET LENGTHS, POST SPACING, REINFORCING STEEL LIST, ESTIMATED QUANTITIES, AND REFERENCE TO THIS DRAWING.

DESIGN SPECIFICATIONS:

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13) THESE DETAILS ARE TO AID IN DESIGN AND LAYOUT OF DECORATIVE PARAPET.

14) DECORATIVE PARAPET SHALL BE SEALED WITH EPOXY URETHANE SEALER CLOSELY MATCHING FEDERAL COLOR NUMBER 595b-27778, LIGHT NEUTRAL SEMI-GLOSS.

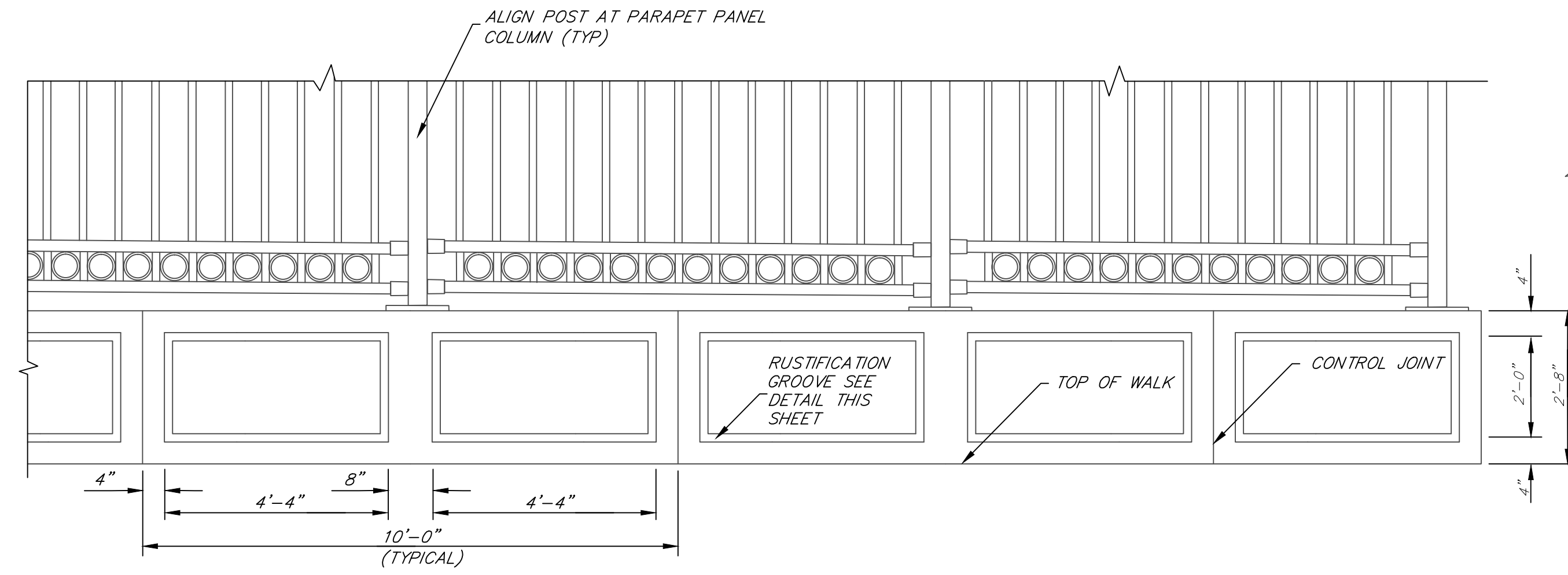
15) A RUBBED FINISH SHALL COVER ALL CONCRETE PLACED FOR DECORATIVE PARAPET AS PER CMS ITEM 511.18 (B). IMMEDIATELY AFTER REMOVING FORMS, CLEAN, DAMPEN AND FILL WITH MORTAR AL CAVITIES PRODUCED BY FORM TIES, HONEYCOMB SPOTS, BORKEN CORNERS OR EDGES, AIR ENTRAINMENT OR BUG HOLES, AND OTHER DEFECTS.

16) AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, SAW CUT 1 1/4" DEEP CONTROL JOINTS IN THE PERIMETER OF THE CONCRETE PARAPET STARTING AND ENDING AT THE ELEVATION OF THE SIDEWALK. PLACE THE SAW CUTS AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/2 INCH. SEAL THE PERIMETER OF THE DEFLECTION CONTROL JOINT TO A MINIMUM DEPTH OF 1 INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM 1/2 INCH OF THE INSIDE AND OUTSIDE FACE UNSEALED TO ALLOW WATER TO ESCAPE.

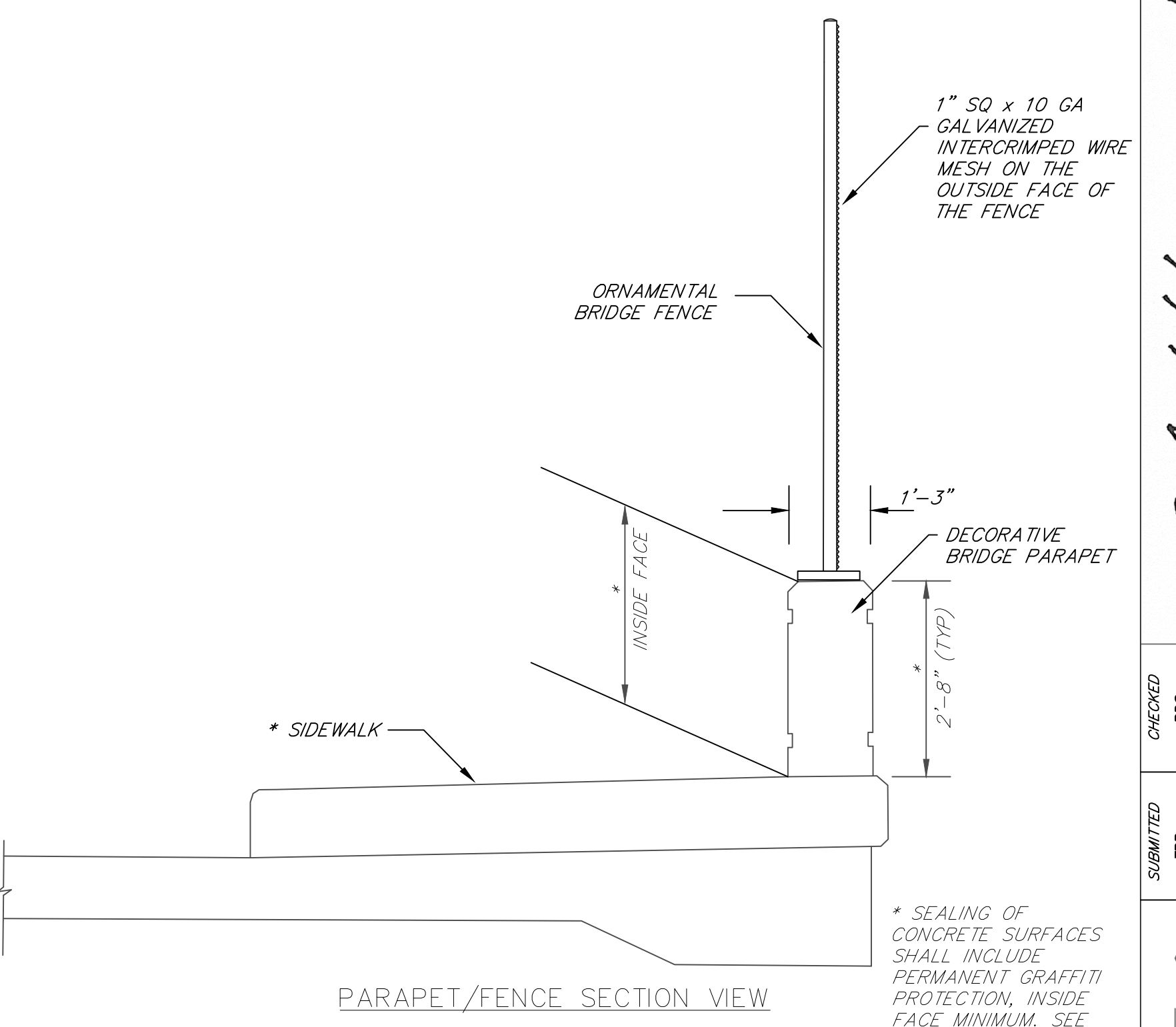
17) PROJECT PLANS AND NOTES SHALL SPECIFY PARAPET SEALING REQUIREMENTS.

18) PAYMENT WILL BE MADE FOR COMPLETED AND ACCEPTABLE QUANTITIES OF ORNAMENTAL DECORATIVE PARAPET AS FOLLOWS:

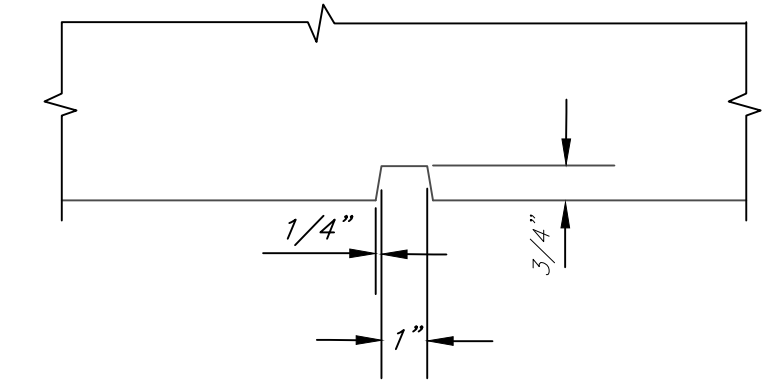
ITEM	UNIT	DESCRIPTION
511	CUBIC YARD	CLASS HP, CONCRETE BRIDGE DECK (DECORATIVE PARAPET)



DECORATIVE PARAPET DETAIL (BOTH FACES)



PARAPET/FENCE SECTION VIEW



RUSTIFICATION GROOVE DETAIL

* SEALING OF CONCRETE SURFACES SHALL INCLUDE PERMANENT GRAFFITI PROTECTION, INSIDE FACE MINIMUM. SEE PROJECT PLANS FOR SPECIFIC REQUIREMENTS AND PAY ITEM (SEE ALSO CMS SS 1083).

<p>Shultz DATE</p>				
<p>R. R. Schultz ADMINISTRATION BUREAU MANAGER</p>				
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<p>STANDARD DRAWING ORNAMENTAL BRIDGE FENCE & DECORATIVE BRIDGE PARAPET</p>				
<p>CITY OF CLEVELAND DIVISION OF ENGINEERING AND CONSTRUCTION</p>				
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