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REVISION OF SECTION 607
FENCE CHAIN LINK SPECIAL

PERMANENT CHANGES TO PROJECT DATED SPECIAL PROVISIONS

REVISION OF SECTION 607 FENCE CHAIN LINK SPECIAL

DATE	AUTHOR	DESCRIPTION OF CHANGE
12/18/91	M. Dodson	Minor changes to format.
05/06/92	MAL	Revised to say, "post clips, wire ties or hog rings shall be galvanized, and vinyl coated 9-gauge (before galvanizing) steel wire.
4/13/93	MAL	Added option for alternate pipe for consistency with the M & S Standards. Note, for special designs the designer needs to check the strength and stiffness of the alternate pipe before using this special provision, especially when extra-strong A53 pipe is needed. The alternate pipe is ok for the 1.5" extra-strong pipe in our pretensioned splash guards, Worksheets B-607-3 & 5. At the time of this revision Staff Bridge had 3 special provisions for chain link fence. The other two specials were incorporated into this one. This special provision covers all typical bridge and retaining wall mounted fences, whether or not vinyl coating or pretensioning is required. The other two special provisions have been deleted. Replaced ASTM references with AASHTO M181 where it now adequately covers the subject matter. Added AASHTO M181 material designations.
3/09/98	MLM	Add metric units.
6/8/98	SLW	Corrected coating requirements and metric units.
9/30/1999	M.Nord	Verified the specification references for conformance with the *1999 Colorado DOT Standard Specifications for Road and Bridge Construction*. No exceptions were found. Converted to Microsoft Word 97 SR-2

September 30, 1999

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04.11.2023 M. Kayen Revisions to make spec online ADA-compliant.
5.22.23 Additional ADA.

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Revise Section 607 of the Standard Specifications for this project as follows:

Subsection 607.02 shall include the following:

All materials shall meet the requirements specified in AASHTO M181 except as otherwise noted in the plans and these specifications. The Contractor shall provide certification from the manufacturer that all materials used are in compliance with the requirements of the plans and these specifications.

All material shall be galvanized. When required by the plans the fence shall also be vinyl coated. The color shall be as noted in the plans. All exposed materials shall have a uniform coloration. Temporary members and attachments that are to be removed need not be vinyl coated. The inside of pipes shall not be vinyl coated. When the fence is vinyl coated bolts and nuts shall be either vinyl coated or painted to match fence coating. Anchor bolts, threaded rods, anchor studs, post dowels, and other unexposed portions of anchorage assemblies shall be galvanized and not vinyl coated or painted.

The Contractor shall furnish to the Engineer for approval a 300 mm X 300 mm (12" X 12") sample of the fabric (showing the exact coating and fabric construction to be used) and manufacturer's literature covering all aspects of the system he intends to install before ordering or fabricating any parts.

The fabric shall be AASHTO M181 Class C; or, when vinyl coating is specified in the plans, Class B. The mesh and wire sizes shall be as specified in the plans. When 10 mm (3/8") mesh with 2.7 mm (12 gauge) wire is specified in the plans the following properties shall apply.

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For other mesh and wire sizes the properties shall be as specified by AASHTO M181.

Mesh	10 mm (3/8") clear opening
Core wire breaking strength	2891 N (650 lbs) (minimum)
Core wire diameter	2.7 mm +/- 0.125 mm (0.105 inch +/-0.005")
Galvanizing, Class C fabric	366 g/sq. m. (1.2 oz./sq. ft.)
Galvanizing, Class B fabric	92 g/sq. m. (0.30 oz./sq. ft.)
Vinyl Coating Class B Fabric	0.20 mm +/-0.05 mm (0.008 inch +/-0.002 inch)

Tension wires shall be AASHTO M181 Type 1 Class 2; or, when vinyl coating is specified in the plans, Type 4.

Tension wires and their fittings shall have a minimum breaking strength of 8540 newtons (1920 pounds).

Truss rods and their fittings shall have a minimum breaking strength of 17080 newtons (3840 pounds) for fences without horizontal members and with a minimum prestress force given by the plans.

Posts and horizontal members shall be standard or extra strong steel pipe, as noted in the plans, satisfying ASTM A53 Type E or S, Grade B (Fy = 242 Mpa (35000 psi)); or, at the Contractor's option, ASTM A466 Grade D pipe (345 Mpa (50000 psi)) minimum yield strength) conforming to the following table may be substituted for both the standard and extra strong pipe of the same outside diameter called for in the plans. All fittings and connections dependent on the pipe's inside diameter shall be modified as necessary for proper fit-up, as approved by the Engineer.

Alternative Pipe

Nominal Diameter mm (In.)	Outside Diameter mm (In.)	Kg. (Lb.) per Meter (Ft.)	Wall Thickness mm (In.)
32 (1.25)	42 (1.660)	2.73 (1.836)	2.82 (0.111)
38 (1.50)	48 (1.900)	3.40 (2.281)	3.05 (0.120)
50 (2.00)	60 (2.375)	4.64 (3.117)	3.30 (0.130)
63 (2.50)	73 (2.875)	6.91 (4.640)	4.06 (0.160)

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Stretcher bars, truss rods, tension wires, post tops, and other required fittings and hardware shall be commercial quality steel, or better, or cast or malleable iron as appropriate to the article. A pair of two tension wires with appropriate turnbuckles or other adjustment devices, may be substituted for each truss rod.

Post clips, wire ties, or hog rings shall be galvanized 4.2 mm (9 gauge) or 1.9 mm (14 gauge) (before galvanizing) steel wire, and vinyl coated when specified by the plans. Wire ties shall be given at least one complete turn. Ends of wire ties shall be directed away from traffic.

Subsection 607.03 shall include the following:

For fences without permanent horizontal members and with a minimum prestress force given by the plans, the following shall apply.

The total pretension force in the tension wires and the mesh combined shall not be less than the value shown in the plans. Each tension wire, truss rod, and the mesh should have some pretension and shall not be slack. This is to assure the strength and stiffness of the fence system under the anticipated loads.

The Contractor shall control the quality of the fence tensioning by checking that the deflection of the fence does not exceed the value shown in the plans when the test load described in the plans is applied. The Engineer may choose to assure this quality by observing these tests, or by performing tests of his own. If the deflection is excessive, the Contractor shall retension the fence components.

The temporary horizontal members shall be removed after the tensioning of the fence is accepted.

Subsection 607.04 shall include the following:

Fence Chain Link (Special) ( ) and Fence Chain Link Special will be measured by the meter (linear foot). Measurement will be along the base of the fence from center to center of the extreme end posts.

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Subsection 607.05 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Fence Chain Link (Special)( )	Meter (Linear Foot)
Fence Chain Link Special	Meter (Linear Foot)

Payment per meter (linear foot) shall include all costs for a complete installation of anchorages, posts, horizontal members, truss rods, tension wires, fabric, stretcher bars, and ties as required by the plans. All other incidental hardware required will not be measured and paid for separately but shall be included in the work.