

SECTION 03010 - FENCING MATERIALS

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Replace Section 03010 of the Standard Specifications except for the Section number and title with the following:

Description

03010.00 Scope - This Section includes the requirements for barbed wire, woven wire fabric, chain link fabric, wildlife wire fabric, metal posts, braces, hardware, and gates.

Materials

03010.10 Barbed Wire - Furnish two-strand and either 12 1/2 gauge or 15 1/2 gauge barbed wire with four-point barbs spaced at 5-inch intervals according to the requirements of AASHTOM 280 (ASTM A121) with Class 3 galvanizing.

Install new or like new barbed wire on the Project and use the same diameter unless otherwise approved.

03010.20 Woven Wire Fabric - Furnish 12 1/2-gauge galvanized steel woven wire fabric according to the requirements of AASHTO M 279 (ASTM A116), Class 3 coating or 11 gauge or 12 1/2-gauge aluminum coated steel wire according to the applicable requirements of ASTM A116. Furnish 12 1/2-gauge aluminum coated steel wire having the same coating thickness required for 11-gauge steel wire in Table 2 of ASTM A116.

03010.21 Wildlife Wire Fabric - Furnish 12 1/2-gauge galvanized steel wire for wildlife wire fabric according to the requirements of ASTM A116, Design Number 2096-6-12 1/2.

03010.30 Chain Link Fabric, Ties, and Tension Wire - Furnish chain link fabric, ties, and tension wire according to the requirements of AASHTO M 181 supplemented and modified as follows:

- Fabric may be zinc-coated steel meeting Type I, Class D coating requirement, aluminum-coated steel, or aluminum alloy. Use only one type on the Project.
- Wire fabric ties, wire ties, and hog rings may be zinc-coated steel wire, aluminum-coated steel, or aluminum alloy as elected, regardless of the type of wire fabric used.

- Use ductile, zinc-coated steel meeting the coating requirements of ASTM A641, Class 1 for wire fabric ties, wire ties, and hog rings. Coat aluminum-coated steel wire fabric ties, wire ties and hog rings with at least 0.30 ounce per square foot.
- Furnish tension wire with a Class 2 coating.
- Furnish 9-gauge wire woven in 3 1/2-inch by 5 1/2-inch diamond mesh for the fence to be installed with pickets. Knuckled finish top and bottom selvage.

03010.31 Pickets - Furnish pickets that are either standard Grade A redwood or cedar pickets, 3/8-inch x 2 1/2-inch x 6 feet, or industry standard metal, or plastic pickets as shown or approved.

03010.40 Vinyl Clad Fabric - Furnish vinyl clad chain link fabric according to AASHTO M 181, Type IV. The color of the PVC coating is either medium or dark green.

03010.50 Metal Fence Posts, Braces, and Appurtenances - Furnish metal fence posts, braces and appurtenances according to the requirements indicated on the Plans and the following:

(a) **Painted Metal Posts** - Furnish the same kind and color of all painted metal posts.

(b) **Posts, Braces, and Appurtenances for Chain Link Fence** - Furnish posts, braces, and appurtenances for chain link fence according to the requirements of AASHTO M 181.

Furnish posts, braces, and appurtenances for bridge protective fence according to the requirements of AASHTO M 181, Grade 1, ASTM F1083 and ASTM F1043, Group IA-2.

(c) **Posts, Braces, and Appurtenances for Barbed Wire and Woven Wire Fence:**

(1) **Tubular Steel Posts** - Furnish tubular steel posts, braces and appurtenances according to the requirements of AASHTO M 181. Fit tubular posts with a snug-fitting, galvanized metal cap.

(2) **Other Shapes** - Furnish metal posts and braces, other than tubular shape, for barbed wire and woven wire fences, according to AASHTO M 281 (ASTM A702), except that galvanizing may conform to the requirements of AASHTO M 111 (ASTM A123). The posts and braces may be either galvanized or painted, as elected. Furnish wire fasteners meeting the coating requirements of ASTM A641, Class 1.

(3) **Fence Stays, Brace Guys, and Wire Loops** - Furnish metal fence stays, brace guy wires, wire loops for gateways and other miscellaneous wire used in barbed and woven wire fences with Class 1 coating as required by ASTM A641. Either 9 1/2-gauge or 10-gauge wire is acceptable for fence stays.

(d) **Concrete In Footings** - Furnish concrete for footings according to Section 00440.

(e) **Grounding Rod** - 5/8 inch by 8 feet, nonrusting, copper covered steel rod with a bronze grounding wire clamp.

(f) **Grounding Wire** - AWG 4/0 Solid Copper or No. 6 bare aluminum wire with clamps.

(g) Posts, Braces, and Appurtenances for Wildlife Fence - Furnish posts, braces, and appurtenances for wildlife fence according to the requirements of AASHTO M 181.

03010.60 Fence Gates:

(a) General - Furnish tubular steel gate frames according to AASHTO M 181. For fabric in gates used with chain link fence, use chain link of the same gauge and according to applicable requirements of 03010.30. For fabric in gates used with woven wire fence, furnish woven wire fabric according to 03010.20 or chain link fabric according to the applicable requirements of 03010.30, except that the zinc coating may be either Class C or Class D. Use wildlife fence fabric according to 03010.21 for fabric in gates used with wildlife fence.

(b) Hardware - Furnish all fence and gate hardware according to the requirements of AASHTO M 181, except that the thickness of galvanizing is according to AASHTO M 232 (ASTM A153).

03010.75 Protective Fence Materials, On and Off Structures - Provide certification according to 00165.35 that the anchor system selected conforms to requirements as shown.

- **Resin Bonded Anchor System** - Furnish the resin bonded anchor system used to install the fence post anchor rods in the concrete bridge rail from the QPL and install according to the manufacturer's recommendations.
- **Posts** - Modify posts to attach to the Structure as shown.
- **Steel Plates, Angles, and Bolts** - Furnish steel plates, angles, and bolts meeting the applicable requirements of Section 02530 and galvanized according to 02530.70.
- **Chain Link Fabric, Ties, and Tension Wire** - Furnish chain link fabric, ties, and tension wire according to the requirements of 03010.30.
- **Pickets** - Furnish pickets meeting the requirements of 03010.31.

03010.80 Acceptance - Acceptance of fencing Materials is according to 00165.35 and this Section.