GENERAL NOTES

C. Rail options:
1. Galvanized steel pipe, Schedule 40, 1½" nominal dia., zinc galvanized at the rate of 1.8 oz./ft²; ASTM A53 Table 2, ASTM F1083, and AASHTO M111.
2. Aluminum coated steel pipe, ASTM A53 steel, X 2 Tables Schedule 40, 1½" nominal dia., 1,860°O.D.; coated at the rate of 0.40 oz./ft²; AASHTO M111.
3. Aluminum alloy pipe, 1½" nominal dia.; ASTM B241 or B221, Alloy 6063, T6.

D. Chain link fabric options (2" mesh with twisted and barbed selvage top and bottom for all options except as described in Note No. 12):
1. Steel wire No. 7 gage coated at the rate of 1.2 oz./ft²; ASTM F1043 metric equivalent internal coating Types A, B, C, or D, and external coating Types A, B, or C, the chromate conversion coating of external Type B shall have a thickness of 15µg/in², and the polymer film topcoat shall have a thickness of 0.0003 in. internal and external coatings are not restricted to the combinations of Table 2, ASTM F1043.

E. Tension wire options:
1. Steel wire No. 7 gage zinc galvanized at the rate of 1.2 oz./ft²; AASHTO M181.
2. Aluminum alloy wire with a diameter of 0.1875" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
3. Aluminum coated steel wire No. 7 gage coated at the rate of 0.040 oz./ft²; AASHTO M181.

F. Tie wire and hog ring options:
1. Steel wire No. 8 gage zinc galvanized at the rate of 1.2 oz./ft²; AASHTO M181.
2. Aluminum alloy wire with a diameter of 0.1443" or larger conforming to the requirements of ASTM B211, Alloy 5056 Temper H38, or, Alclad Alloy 5056 Temper H192.
3. Aluminum coated steel wire No. 8 gage coated at the rate of 0.040 oz./ft²; AASHTO M181.

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GENERAL NOTES CONTINUED

5. Unless a specific material is called for in the plans the Contractor may elect to use either a single type of material or a combination of material types from the component options listed in note 4. Combinations of optional materials are restricted as follows:
   (a) Only one fabric optional material will be permitted between corner and/or end post assemblies.
   (b) Only one line post optional material will be permitted between corner and/or end post assemblies.
   (c) Pull post assemblies shall be optional materials identical to the line post optional material or the corner and end post assembly optional material; but, pull post assemblies shall be the same optional material between any set of corner and/or end post assemblies.

6. Concrete for bases shall be Class NS concrete as specified in Section 347 of the Standard Specifications or a packaged, dry mix material meeting the requirements of a concrete under ASTM C-387. Materials for Class NS concrete may be proportioned by volume and/or by weight.

7. Line posts shall be 8'-4" long (Standard). Line posts are to be set in concrete as described above or by the following method:
   (a) In accordance with special details and/or as specifically described in the contract plans and specifications.
   (b) In accordance with ASTM F567, Subsections 5.4 through 5.10 as approved by the Engineer.

Line post installed in accordance with Section 5.8 shall be 9'-6" long. Post mounted in concrete structures or solid rock shall be mounted in accordance with the base plate detail "Fence Mounting On Concrete Endwalls and Retaining Wall", Sheet 3; or, by embedment in accordance with ASTM F567, Subsection 5.5.

End, pull, and corner post assemblies shall be in concrete as described above for all soil conditions other than solid rock. Post within assemblies that are located on concrete structures or solid rock shall be set by base plate or by embedment as prescribed under (b) above for line post.

Line and assembly posts for 6' fence which must be lengthened due to a variation in the normal ground clearance, shall be set an additional 3' in depth for each 3' of additional ground clearance.

8. Pull post shall be used at breaks in vertical grades of 15° or more, or at approximately 350' centers except that this maximum interval may be reduced by the Engineer on curves where the curve is greater than 3°.

9. Corner posts are to be installed at all horizontal breaks in fence at 15° or more and as required at vertical breaks over 15° as determined by the Engineer.

10. When fence has an installed top of fabric height less than 6' knuckled top and bottom selvages shall be used unless the plans specifically identify locations for twisted selvage fabrics.

11. Unless sliding gates or special gates are called for in the plans, all gates shall be chain link swing gates meeting the material requirements described and as approved by the Engineer. Payment shall include the gates, simple or double, all necessary hardware for installation and any additional length and/or wire for posts at the opening. Gates shall be paid for under the contract unit price for Fence Gates, EA.

12. For construction purposes corner post assemblies shall consist of one corner post, two braces, two truss rods, and all necessary fittings and hardware as detailed. End post assemblies shall consist of one end post, one brace, one truss rod and all necessary fittings and hardware as detailed.

13. In areas where there are physical constraints outside the right-of-way which restricts the fence construction, the fabric may be installed on the inside of the posts.

<table>
<thead>
<tr>
<th>TYPE IV VINYL COATED FABRIC</th>
<th></th>
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<tbody>
<tr>
<td>AASHTO M181 Table 4 Redefined As Follows</td>
<td></td>
</tr>
<tr>
<td>Specified Diameter Of Metallic Coated Core Wire</td>
<td>Minimum Weight Of Zinc Coating</td>
</tr>
<tr>
<td>in.</td>
<td>mm</td>
</tr>
<tr>
<td>0.148</td>
<td>3.77</td>
</tr>
<tr>
<td>0.173</td>
<td>4.40</td>
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</tbody>
</table>

DESIGN NOTE
This Index details fencing that is constructed with chain link fabric 6' (nominal) in height and with specific ground clearance. For fencing of different height or installation details, the fence shall be fully detailed in the Contract plans.
FENCE MOUNTING ON CONCRETE ENDWALL AND RETAINING WALLS

FENCE POSITION AT LOCATIONS WITHOUT FRONTAGE ROADS

*Refer to Detail Plans for Fence Position at Locations with Frontage Roads*

**NOTES**

Attachments to be used only when called for in the plans.

- Attachments to extend in direction of restraint, unless otherwise called for in plans, direction of restraint will be as follows:
  - (a) Outward on limited access right of way line.
  - (b) Outward on controlled access right of way line.
  - (c) Outward from lateral ditches, outfalls, retention basins, within highway right of way.
  - (d) Outward from lateral ditches, culverts, retention basins, canals, borrow areas and similar support facilities.
  - (e) Outward on pedestrian ways.

The cap-arm shall be designed to provide a drive fit over the top of posts and to exclude moisture in posts with tubular sections.

**BASE PLATE AND ANCHOR NOTES:**

1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   - 12" Cast In Place, 10" Embedment
     - Headed Bolts, U-Bolts or Cluster Plates.
     - Headed Bolts, U-Bolts or Cluster Plates.
   - 8" Diameter anchors or bolts set in drilled holes with an Adhesive Material System in accordance with Specification Sections 416 and 937.
   - Drilled holes shall be larger in diameter than the anchor bolts.

**BARB WIRE ATTACHMENT**

1. Base plate identical for line, pull, end and corner posts and shall be considered an integral part of the respective posts for basis of payment.
2. Post to be plumbed by grout shim under base plate.
3. Anchors (Galvanized Steel):
   - 12" Cast In Place, 10" Embedment
     - Headed Bolts, U-Bolts or Cluster Plates.
     - Headed Bolts, U-Bolts or Cluster Plates.
   - 8" Diameter anchors or bolts set in drilled holes with an Adhesive Material System in accordance with Specification Sections 416 and 937.
   - Drilled holes shall be larger in diameter than the anchor bolts.

**Expansion Bolts Not Permitted.**