1. This fence to be provided generally in rural areas. For supplemental information see Specifications 550.

2. Fabrience shall be wooden wire, either galvanized steel, meeting the requirements of ASTM A 214, No. 9 Grade 60, Design Number 1047-6-9, with Class 3 zinc coating; No. 12½ Grade 175, Design Number 1047-6-12½, with a 16½ gage top and bottom wire and with Class 3 zinc coating; or aluminum coated steel, meeting the requirements of ASTM A 538, No. 9 Farm, Design Number 1047-6-9, with a minimum coating weight of 0.40 oz./ft.².

For additional information see payment note below.

3. Fence shall be installed with wire to private property except on horizontal curves greater than 3° the fence shall be installed so as to pull against all posts.

4. Posts may be either timber, steel, recycled plastic or concrete. Unless a specific post material is called for in the plans, the Contractor may elect to use either a single material or a combination of timber, steel, recycled plastic or concrete materials, but must comply with the electrical grounding requirements in Section 550. Line posts of one material may be used with corner, pull and approach post assemblies of a different material. One line post of only one optional material and pull post assemblies of only one optional material will be permitted between corner and pull post assemblies, within individual corner and pull post assemblies only one optional material will be permitted.

5. Posts shall meet the material requirements of Specification 996. Timber line posts are to be minimum 4” diameter. Timber braces are to be minimum 4” diameter. (A) Staples for line posts to be 1½” minimum length; for approach, corner and pull posts 1½” minimum length. At approach, corner and pull posts, staple every line wire. At line posts, staple every line wire in top half and alternate line wires at bottom half. Staples shall be driven diagonally across the line wire with the points in separate grains. (B) Connections between timber posts and braces to be provided by dowels as shown in fastener details. (C) Wire to be wrapped and tied, as shown in the splice details, at the following locations: (i) At end posts, (ii) Corner post, including the assemblies at vertical bends of 10° or more and (iii) Pull posts where the wire is not spliced and pulled through the assembly. See General Note 18.

6. Steel posts and braces shall be standard steel posts, galvanized at the rate of 0.2 oz./ft., together with necessary hardware and wire clamps and meeting the following requirements: (A) Line posts: 8 long; 1.13 lbs./ft.; wall formed swaging; anchor plate attached, ASTM A 702 (18 in.). (B) Approach posts: 2½”x2½”x½” angles; 8 long; fabricated for attaching brace; with necessary hardware, clamps, etc. (C) Pull, end and corner posts: 2½”x2½”x½” angles; 8 long; fabricated for attaching brace; with necessary hardware, clamps, etc. (D) Braces: 2½”x2½”x½” angles with necessary hardware and fabricated for attaching to post. (E) The pull, corner, approach and end posts are to be set in concrete as per detail. See General Note 18.

7. Recycled plastic posts shall meet the following material requirements: line posts shall have a minimum section of 2” round or 2” square. Plastic posts shall not be used as corner, pull, end or approach posts unless such use is specifically detailed in the plans. The straightness of the post shall comply with Specification 994 for timber post. In installing plastic posts, the Contractor shall meet the requirements of the latest edition of the Southern Pine Inspection Bureau’s Standard Grading Rules for Southern Pine lumber No. PSR Stress Rated Grade Timber. Plastic posts can be set by either digging and tamped backfill or by driving into full depth preformed holes ½” to ½” smaller than cross section of post. Staples for fabric and barbed wire connection to plastic line posts shall be the same size, count and location as that for timber posts.

8. The Contractor, at his option, may use any suitable precast or prestressed concrete posts; however, approval by the Engineer of posts not shown on this index, will be required prior to construction of the fence. Precast prestressed concrete posts shall be Class I concrete. Prestressed concrete posts shall be Class I 1½ concrete. Lengths of concrete post to be as indicated for timber posts.

9. Aluminum post, braces and accessory framing hardware shall not be used unless the plans specifically detail their application or the Engineer specifically approves their incorporation in fence construction or repair. Aluminum framed gates are permitted as described in General Note 18.

10. The woven wire shall be attached to steel and concrete posts by a minimum of four tie wires. The single tie wire shall be applied to the top, bottom and three intermittent line wires. The ends of each tie wire shall have a minimum of two tight turns around the line wire. Tie wires shall be steel wire not less than 0.120” diameter, zinc coating Class 3, soft temper, in accordance with ASTM A 467.

Type I: This type shall conform to the requirements of ASTM A 121, with two strands of 1½ gage wire; four-point bars, wire size 14 gage, twisted around both line wires; and, Class 3 coating. Design No. 12-4-5-RB.

Type IIA: This type same as Type I except the two strand wires are twisted in alternating directions between consecutive bars.

Type IIB: This type shall conform to the requirements of ASTM A 121 with two strands of 1½ gage high tensile wire; four-point bars, wire size 16 ⅛ gage twisted around both line wires; and Class 3 coating. Design No. 12-4-5-6R.

Aluminum Woven Barbed Wire shall be fabricated of 2 strands 0.110-inch wide with 0.08-inch diameter four-point bars spaced at approximately ½” and at a maximum spacing of 6”. The wire for the strands and for the bars shall be of ASTM A 121-M Alloy 300-138B or equivalent.

12. The woven wire shall be stretched only until one-half the tension curl has been pulled out of the line wires.

13. Posts to be set by driving or digging. If by digging, the posts shall be set at the center of the hole and the Soil tamped securely on all sides.

14. Longer posts than those indicated above may be required by the plans or for deeper installations.

15. Concrete bases for angular steel posts (pull, corner, end and approach) shall be Class NS in accordance with Specifications 347. Materials for Class NS concrete may be proportioned by volume and/or by weight.

16. Pull post assemblies shall be installed at approximately 30° centers except that this maximum interval may be reduced by the Engineer on curves where the radius is less than 3°.

17. Corner post assemblies are to be installed at all horizontal and vertical breaks in fence of 12½ or more.

18. A maximum length of 1320’ of wire may be installed as a unit. For pulls through a pull post assembly the fabric shall be spliced by crimping sleeves only. Pulls through a corner post assembly will not be permitted.

19. Unless otherwise called for in the plans gates shall be commercially available metal swing gates assembled and installed in accordance with the manufacturer’s specifications as approved by the Engineer. Chain link swing gates in accordance with index 550-002 may be substituted for metal swing gates as approved by the Engineer. Gate size is full opening width whether single leaf or double leaves. Payment for gates shall include the gate, single or double, all necessary hardware for installation and any additional length and/or size for posts at the corners. Gates shall be paid for under the contract unit price for Fence Gates, EA.

20. For construction purposes, assemblies are defined as follows: End post assemblies shall consist of: one end post, one approach post, two braces, four diagonal tension wires and all necessary fittings and hardware. Pull post assemblies shall consist of: one pull post, two braces, four diagonal tension wires and necessary fittings and hardware. Corner post assemblies shall consist of: one corner post, two approach posts. Four braces, eight diagonal tension wires and all necessary fittings and hardware.

21. All posts, braces, tension wires, fabric, tie wires, Class NS concrete, and all miscellaneous fittings and hardware to be included in the cost for Fencing, LF. Fencing shall be inclusive of the lengths of pull, end and corner post assemblies, but exclusive of gate widths.
REVISION DESCRIPTION:

REVISION LAST STANDARD PLANS FY 2020-21 SHEET 11/01/17

FENCE TYPE A

Note: Timber Post Illustrated.

See General Note 2.

DESIGN NOTE

This index details fencing that is constructed with farm fabric 4X6' (47 nominal) in height and with specific ground clearance and specific barbed wire spacings. For fencing of different height or installation details, the fence shall be fully detailed in the Contract plans.
FENCE TYPE A

REVISION

DESCRIPTION:

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