

**GENERAL NOTES**

- ALL MATERIAL DIMENSIONS AND WEIGHTS ON THIS STANDARD ARE NOMINAL UNLESS OTHERWISE INDICATED.
- AT EACH LOCATION WHERE AN ELECTRIC TRANSMISSION, DISTRIBUTION OR SECONDARY LINE CROSSES A WOOD POST FENCE, THE CONTRACTOR SHALL FURNISH AND INSTALL A GROUND CONFORMING TO ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE. THE GROUND ROD SHALL BE A MINIMUM DIAMETER OF 1/2 IN. AND 8 FT. IN LENGTH, AND DRIVEN AT LEAST 7 1/2 FT. INTO THE GROUND. THE ROD SHALL BE CONNECTED TO EACH WIRE WITH A MINIMUM AWG NO. 8 STRANDED COPPER WIRE. GROUNDING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.  
A METAL LINE POST SHALL BE INSTALLED A MAXIMUM OF EVERY 500 FT. ALONG A WOOD POST FENCE. THE METAL POST SHALL BE WITHIN 1 FT. OF THE NEAREST WOOD POST, AND SHALL BE TIED TO EACH STRAND WITH A WIRE CLAMP.
- DIMENSIONS SHOWN FOR "STANDARD" AND "ALTERNATIVE" APPLY FOR BOTH WOOD AND METAL POST FENCE.
- FENCE WIRE SHALL BE ENDED, DOUBLE WRAPPED AND TIED OFF AT END POSTS, ANGLE POSTS AND LINE BRACE POSTS. FENCE TO BE CONTINUED SHALL THEN BE RESTARTED IN THE SAME MANNER.
- FENCE WIRE SHALL BE PLACED ON EITHER ROAD OR FIELD SIDE OF POSTS, DEPENDING ON LOCAL CONDITIONS, i.e. ON CURVES, THE WIRE SHALL BE PLACED ON THE SIDE OF THE POST WHICH WILL RESULT IN THE LEAST TENSION ON FENCE TIES. THIS WILL ALSO APPLY WHERE WIND DRIFT, TUMBLE WEEDS OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE. WHERE POSSIBLE, WIRE SHOULD BE PLACED ON THE LIVESTOCK SIDE OF THE POSTS.
- WHERE STEEL POSTS ARE SPECIFIED, EVERY FIFTH POST SHALL BE WOOD, WHEN SPECIFIED ON THE PLANS.
- RIGHT OF WAY FENCES SHALL BE CONSTRUCTED APPROXIMATELY 6 IN. INSIDE THE BOUNDARY OF THE RIGHT OF WAY AS SHOWN ON THE PLANS, OR AS STAKED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING DISTURBED OR DESTROYED SURVEY MONUMENTS TO THE APPROPRIATE ACCURACY IN ACCORDANCE WITH SUBSECTION 625.08 OF THE STANDARD SPECIFICATIONS.

**WOOD POSTS:**

ALL LINE POSTS SHALL HAVE A MINIMUM DIAMETER OF 4 IN. AND BE A MINIMUM OF 6 FT.-0 IN. LONG.

ALL END, CORNER, INTERSECTION AND BRACE POSTS SHALL HAVE A MINIMUM DIAMETER OF 5 IN. AND BE 7 FT. IN LENGTH.

WOOD POSTS HAVING NONUNIFORM CROSS SECTION SHALL BE SET WITH THE LARGER DIAMETER END IN THE GROUND.

FENCE WIRE SHALL BE STAPLED TO WOOD POSTS OR TIED TO METAL POSTS AS SHOWN MARKED + ON BARBED WIRE OR COMBINATION WIRE FENCE DETAILS. STAPLES SHALL BE NO. 9 WIRE MINIMUM, AND AT LEAST 1 1/2 IN. LONG.

**METAL POSTS:**

ALL POSTS AND BRACES SHALL BE THE TYPES AND WEIGHTS SHOWN OR ACCEPTABLE EQUIVALENTS, AND SHALL BE IN ACCORDANCE WITH AASHTO M 281. HOLES SHALL BE PROVIDED IN END, CORNER, AND GATE POSTS AS DETAILED.

**CORNER AND LINE BRACE POSTS:**

TYPE: 2 1/2 IN. x 2 1/2 IN. x 1/4 IN. STRUCTURAL STEEL ANGLES  
WEIGHT: 4.10 LBS./LIN. FT.  
LENGTH: 6 FT.-6 IN. MIN.  
NUMBER OF BRACES: TWO

**LINE POSTS:**

TYPE: "STUDDED TEE" OR "U"  
WEIGHT: 1.33 LBS./LIN. FT. (WITHOUT ANCHOR)  
LENGTH: 6 FT.-0 IN. MINIMUM  
ANCHOR: SECURELY FASTENED, WITH BEARING SURFACE SUFFICIENT TO RESIST MOVEMENT OF POST. WEIGHT: 0.67 LB.

**METAL END POSTS AND GATE POSTS:**

TYPE: 2 1/2 IN. x 2 1/2 IN. x 1/4 IN. STRUCTURAL STEEL ANGLES  
WEIGHT: 4.10 LBS./LIN. FT.  
NUMBER OF BRACES: ONE  
LENGTH: END, 6 FT.-6 IN. MINIMUM. PANEL GATE, 7 FT.-0 IN. MINIMUM.

**BRACES: (FOR CORNER, END OR LINE BRACE POSTS)**

TYPE: 2 IN. x 2 IN. x 1/4 IN. STRUCTURAL STEEL ANGLES  
WEIGHT: 3.19 LBS./LIN. FT.  
LENGTH: SAME AS CORNER AND END POSTS USED.

**FOOTINGS OR BASES:**

CONCRETE SHALL BE CLASS B.  
CONCRETE WITH LIGHTWEIGHT AGGREGATES CONFORMING TO AASHTO M 195 (ASTM C 330) WILL BE PERMITTED.

**ALTERNATIVES: (CONTRACTOR'S OPTION)**

**END, CORNER AND LINE BRACE POSTS**

TYPE	I.D.	O.D.	WEIGHT	WALL THICKNESS
	INCHES	INCHES	LB/FT.	INCHES
1. STD. GALV. PIPE	2 1/2	2 7/8	5.79 ±5%	0.203
2. H.S. COLD ROLLED PIPE	2 1/2	2 7/8 ±0.16	4.64 ±5%	0.160 ±5%

LENGTHS SHALL BE 6 FT.-6 IN. MINIMUM

**BRACES:**

TYPE: 1 3/8 IN. O.D. TUBULAR STEEL WITH 2 1/2 IN. BRACE BAND, HINGE BOLT AND 1 3/8 IN. I.D. RAIL END; ALL GALVANIZED.  
WEIGHT: 16 LBS/LIN. FT. ±5%  
LENGTH: 6 FT.-6 IN. MINIMUM.

**BARBED WIRE:**

ZINC-COATED STEEL BARBED WIRE SHALL CONFORM TO AASHTO M 280, (ASTM A 121), 12-1/2 GAGE WITH CLASS 1 COATING, OR ALUMINUM-COATED STEEL BARBED WIRE CONFORMING TO ASTM A 585 TYPE 1.

**WOVEN WIRE MESH:**

WOVEN WIRE USED IN COMBINATION WIRE FENCE SHALL BE GALVANIZED AND CONFORM TO AASHTO M 279, (ASTM A 116) COATING CLASS 1, AND THE FOLLOWING:

STANDARD	WOVEN WIRE FIELD FENCE, STYLE OR DESIGN NO.	ALTERNATIVE 4 IN. X 4 IN. WIRE "V" MESH
832-6-11*	32 IN. WIDTH 0.65 LBS/LIN.FT.	34 IN. WIDTH - 0.75 LBS/LIN.FT.
726-6-11*	26 IN. WIDTH 0.55 LBS/LIN.FT.	26 IN. WIDTH - 0.54 LBS/LIN.FT.
		CROSS WIRES-1 STRAND-14-1/2 GAGE MIN. HORIZONTAL-2 STRAND-12-1/2 GAGE

\* 12-1/2 GAGE WOVEN WIRE FENCE FABRIC (832-6-12-1/2 OR 726-6-12-1/2) MAY BE USED WHEN SPECIFIED IN THE CONTRACT.

ALL FENCE WIRE TIES, CLIPS, CLAMPS, STAPLES AND OTHER WIRE APPURTENANCES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

**DRIVEWAY GATES (SINGLE):**

HEIGHT: 42 IN.  
WEIGHT: NOT LESS THAN 90 LBS. COMPLETE WITH LATCH AND HINGES.  
WIDTH OF GATE OPENING: 16 FT.-0 IN. MINIMUM TO 20 FT.-0 IN. MAXIMUM.  
GATE FRAME: 1 IN. I.D. STANDARD GALVANIZED PIPE OR ACCEPTABLE EQUIVALENT AND SHALL BE OF ALL WELDED CONSTRUCTION.

WOVEN WIRE SHALL ENCLOSE THE GATE FRAME AS SHOWN AND SHALL BE THE SAME WOVEN WIRE DESIGN AS THE FENCE, OR AS APPROVED BY THE ENGINEER.

**ALTERNATIVE DRIVEWAY GATES (SINGLE PANEL):**

WEIGHT: GALVANIZED STEEL, 75 LBS.  
HEIGHT: APPROXIMATELY 42 IN. (5 PANELS),  
WIDTH OF GATE OPENING: 16 FT.-0 IN. MINIMUM TO 20 FT.-0 IN. MAXIMUM.

GATES SHALL BE OF RIVETED CONSTRUCTION AS FOLLOWS:

MINIMUM FOUR NO. 10 RIVETS AT EACH RIGHT ANGLE CONNECTION AND WHERE DIAGONAL BRACES CONNECT TO HORIZONTAL PANELS.

MINIMUM THREE NO. 10 RIVETS WHERE DIAGONAL BRACES CONNECT TO TOP AND BOTTOM PANELS.

**WALK GATES:**

HEIGHT: APPROXIMATELY 42 IN. (5 PANELS)  
WEIGHT: GALVANIZED STEEL, 16 LBS.; TEMPERED ALUMINUM, 10 LBS.  
WIDTH OF GATE OPENING: 3 FT.-0 IN. MINIMUM.

**ALTERNATIVE WALK GATES:**

HEIGHT: 42 IN.  
WEIGHT: NOT LESS THAN 18 LBS. COMPLETE WITH LATCH AND HINGES.

WIDTH OF GATE OPENING: 3 FT.-0 IN. MINIMUM.

GATE FRAME: 3/4 IN. I.D. STANDARD GALVANIZED PIPE OR ACCEPTABLE EQUIVALENT AND SHALL BE OF ALL-WELDED CONSTRUCTION.

WOVEN WIRE SHALL BE OF THE SAME CONSTRUCTION DESIGNATED FOR DRIVEWAY GATE.

ALTERNATIVE EQUIVALENT STANDARD METAL GATES OTHER THAN SHOWN WILL BE ACCEPTABLE SUBJECT TO THE ENGINEER'S APPROVAL.

IN LIEU OF GALVANIZED FINISH ON GATE FRAMES, CADMIUM-PLATED PIPE OR ALUMINUM PAINTING WILL BE ACCEPTED.

**LATCHES AND HINGES:**

GALVANIZED STEEL OR ALUMINUM OF STANDARD MANUFACTURE. HINGES SHALL BE PLACED AS SHOWN TO PREVENT THEFT.

IN LIEU OF STANDARD MAKE LATCHES, THE CONTRACTOR MAY USE AN ELECTRO-GALVANIZED CHAIN, EYEBOLT AND SNAPHOOK TYPE LATCH.

EYEBOLT, CHAIN AND SNAPHOOK ASSEMBLY SHALL BE SECURED TO LATCH SIDE OF GATE. GATE CLOSURE MAY BE ACCOMPLISHED BY WRAPPING CHAIN AROUND END POST AND SNAPPING HOOK INTO CHAIN.

**WOOD STAYS:**

WOOD STAYS SHALL BE UNTREATED NATIVE TIMBER. STAY DIMENSIONS SHALL BE 2 IN. x 2 IN. NOMINAL MINIMUM (1 1/2 IN. x 1 1/2 IN.). WOOD STAYS MAY BE STAPLED, OR DRILLED AND TIED WITH WIRE. METAL STAYS MAY BE TIED TO THE BOTTOM WIRE.

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**WIRE FENCES AND GATES**

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**STANDARD PLAN NO.**

**M-607-1**

**Sheet No. 1 of 3**