

GENERAL NOTES

FABRIC - THE FABRIC MAY BE WOVEN WITH EITHER ZINC COATED STEEL WIRE OR ALUMINUM-ALLOY WIRE IN A 2-INCH MESH. COATED WIRE AND ALUMINUM-ALLOY SHALL HAVE A DIAMETER OF 0.148 INCHES. THE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS: (1) ZINC-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181, TYPE 1, CLASS D. (2) ALUMINUM-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181 TYPE II. THE UNIT WEIGHT OF THE COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213. THE ALUMINUM-COATED STEEL FABRIC SHALL BE GIVEN A CLEAR ORGANIC COATING AFTER FABRICATION. (3) ALUMINUM-ALLOY FABRIC SHALL BE MADE FROM WIRE CONFORMING TO THE REQUIREMENTS OF AASHTO M 181 TYPE III.

METAL POSTS - METAL POSTS (LINE, CORNER, END, PULL AND GATE POSTS) SHALL BE THE SHAPES, DIMENSIONS, AND WEIGHT SHOWN IN THE TABLES. (1) STEEL PIPE, TYPE A, SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF ASTM F 1083. (2) STEEL PIPE, TYPE B, SHALL BE MANUFACTURED FROM COLD ROLLED ELECTRIC RESISTANCE WELDED, HEATED AND TEMPERED STEEL. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 569 OR ASTM A 607. THE WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE TABLE. THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF THE PIPE MEETING THE REQUIREMENTS OF ASTM F 1083. (3) STEEL PIPE, TYPE C, SHALL BE MANUFACTURED BY ROLLED FORMING ALUMINIZED STEEL TYPE 2 STRIP AND ELECTRIC RESISTANCE WELDING INTO TUBULAR FORM. THE OUTSIDE OF THE WELD AREA SHALL BE METALLIZED WITH COMMERCIAL PURE ALUMINUM TO A THICKNESS SUFFICIENT TO PROVIDE RESISTANCE TO CORROSION EQUAL TO THAT OF THE REMAINDER OF THE TUBE. THE ALUMINUM COATING WEIGHT SHALL BE A MINIMUM OF 0.75 OUNCES PER SQUARE FOOT, TRIPLE SPOT TEST, 0.70 OUNCES PER SQUARE FOOT SINGLE SPOT TEST, AS MEASURED IN ACCORDANCE WITH ASTM A 428. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 787 TYPE 1 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 P.S.I. THE WEIGHT OF THE PIPE SHALL NOT BE LESS THAN THAT SHOWN ON THE PLANS AND THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF PIPE MEETING THE REQUIREMENTS OF ASTM A 120. (4) STRUCTURAL SHAPES SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M 281, GRADES A OR B. ROLLED FORMED SECTIONS SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 570, GRADES 36 THRU 50, WITH A MAXIMUM TENSILE STRENGTH OF 80,000 POUNDS PER SQUARE INCH. ALL STRUCTURAL SHAPES AND ROLLED FORMED SECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENTS OF AASHTO M 120. THE ZINC COATING SHALL BE NOT LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE. (5) SQUARE HOLLOW STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500, GRADE B OR ASTM A 501. THE TUBING SHALL BE GALVANIZED INSIDE AND OUTSIDE IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENT OF AASHTO M 120. THE ZINC COATING SHALL NOT BE LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE.

TOP RAILS - THE TOP RAILS SHALL BE 1.625 INCH O.D., GALVANIZED OR ALUMINUM COATED PIPE HAVING A MINIMUM BENDING STRENGTH OF 202 LBS. AT THE CENTER OF A 10 FT. SPAN.

BOTTOM TENSION WIRE - THE BOTTOM TENSION WIRE SHALL BE #9 GAUGE GALVANIZED STEEL WIRE MEETING THE REQUIREMENTS OF AASHTO M 181, THE WIRE SHALL BE STRETCHED TIGHT WITH GALVANIZED TURNBUCKLES SPACED AT INTERVALS NOT MORE THAN 1,000 FEET. THE ZINC COATING SHALL BE NOT LESS THAN 12 OUNCES PER SQUARE FOOT OF SURFACE.

HORIZONTAL BRACES - THE BRACES SHALL BE "STANDARD WEIGHT" GALVANIZED STEEL PIPE MEETING THE SPECIFICATIONS FOR LINE POSTS AND SHALL BE THE SAME DIMENSIONS AND WEIGHT AS REQUIRED FOR THE TOP RAIL.

TRUSS RODS - THE TRUSS RODS SHALL BE 3/8" ROUND GALVANIZED STEEL ROD WITH GALVANIZED TURNBUCKLES. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

GATE - THE GATE TYPE AND SIZE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS AND AS PROVIDED IN THE SPECIAL PROVISIONS.

POST TOPS - THE POST TOPS SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

STRETCHER BARS - THE STRETCHER BARS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/4" X 3/4" AND THE STRETCHER BAR BANDS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/8" X 1" WITH A 3/8" DIAMETER GALVANIZED CARRIAGE BOLT. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

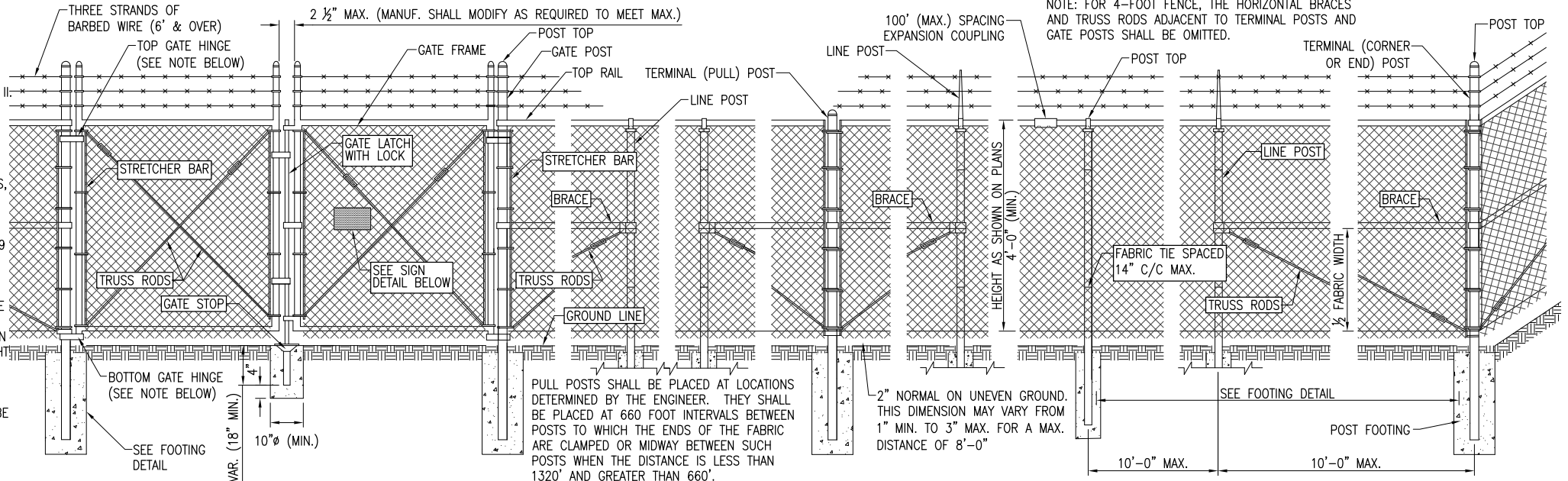
FABRIC TIES - THE FABRIC TIES SHALL BE HOG RINGS, OR ALUMINUM WIRE, OR GALVANIZED STEEL WIRE NOT LESS THAN #9 GAUGE. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

FITTINGS - THE PERTINENT FITTINGS FOR FENCE AND GATES SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE IN ACCORDANCE WITH AASHTO M 232.

STRUCTURAL P.C. CONCRETE - THE STRUCTURAL P.C. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ITEM 610 OF THE STANDARD SPECIFICATIONS.

BOLTS AND NUTS - THE BOLTS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND SHALL BE ZINC COATED IN ACCORDANCE WITH AASHTO M 232 OR M 298, CLASS 50.

BARBED WIRE - BARBED WIRE MAY BE EITHER GALVANIZED STEEL BARBED WIRE OR ALUMINUM-COATED STEEL BARBED WIRE CONSISTING OF 2 STRANDS OF 12 1/2 GAUGE WIRE WITH 4-POINT BARBS OF 14 GAUGE WIRE SPACED 5 INCHES APART CONFORMING TO THE FOLLOWING REQUIREMENTS: (1) GALVANIZED BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS OF ZINC-COATED (GALVANIZED) STEEL BARBED WIRE, AASHTO M 280, CLASS 3 WITH A MINIMUM COATING OF 0.80 OUNCES PER SQUARE FOOT OF WIRE SURFACE (2) ALUMINUM-COATED STEEL BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS FOR GALVANIZED STEEL BARBED WIRE, EXCEPT THE WIRE SHALL BE ALUMINUM COATED. THE WIRE SHALL HAVE NOT LESS THAN 0.25 OUNCES OF COATING OF ALUMINUM ALLOY PER SQUARE FOOT OF UNCOATED SURFACE. THE WEIGHT OF THE ALUMINUM ALLOY COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213.

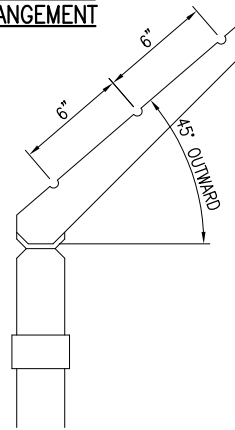


VEHICLE GATE ARRANGEMENT

PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

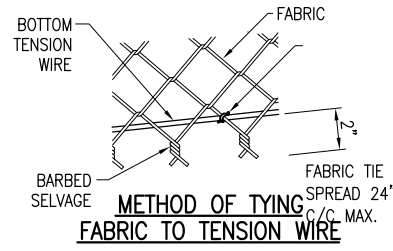
CORNER OR END POST ARRANGEMENT



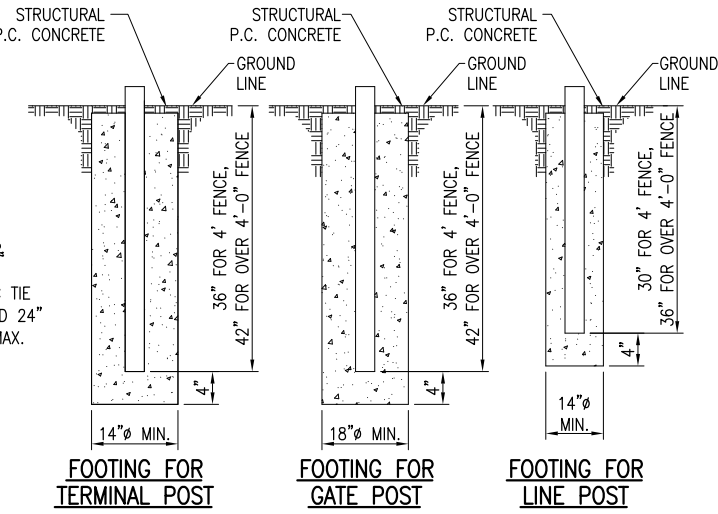
DETAIL - BARBED WIRE ARM OF LINE POST
(ONLY FOR OVER 48" FENCE)

10' FENCE-POST & BRACE TABLE		
DESCRIPTION	DIA. - INCH (O.D.)	WT. LBS./FT.
LINE POST	2.875	5.79
TERMINAL POST	4.0	9.11
END POST	4.0	9.11
CORNER POST	4.0	9.11
PULL POST	4.0	9.11
GATE POST	6.625	18.97
TOP RAIL	1.66	2.27

NOTE: TABLE ABOVE IS FOR SCHEDULE 40 PIPE. OTHER MATERIALS ARE ACCEPTABLE, IN ACCORDANCE WITH THE PARAGRAPH AT LEFT, AND SHALL BE OF EQUAL CAPACITY AND STRENGTH TO THAT SHOWN FOR SCHEDULE 40, BUT NOT NECESSARILY OF EQUAL DIMENSION DUE TO THE VARIOUS MATERIAL CHARACTERISTICS.



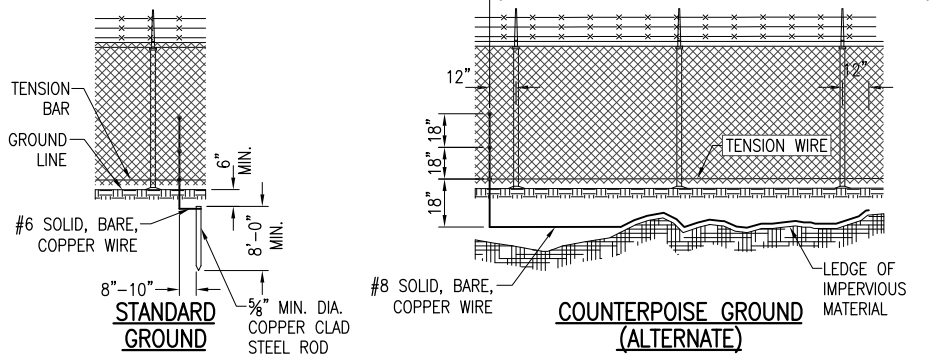
METHOD OF TYING FABRIC TO TENSION WIRE



FOOTING FOR TERMINAL POST

FOOTING FOR GATE POST

FOOTING FOR LINE POST



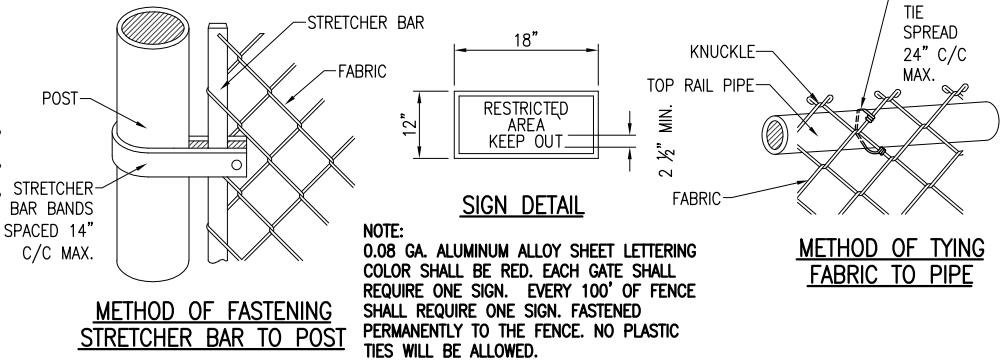
STANDARD GROUND

COUNTERPOISE GROUND (ALTERNATE)

PROTECTIVE ELECTRICAL GROUND

GENERAL NOTE:

CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT IN URBAN AREAS AND 1,000 FT IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 FT TO 50 FT AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE COUNTERPOISE GROUND SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED GROUNDING CONNECTORS OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED GROUNDING CONNECTORS SUITABLE FOR EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., DIRECT BURIAL IN EARTH OR SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437). EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS SUITABLE FOR EACH RESPECTIVE APPLICATION. GROUND RODS SHALL BE 5/8-IN. DIAMETER BY 8 FT LONG (MINIMUM), UL-LISTED, COPPER-CLAD. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.

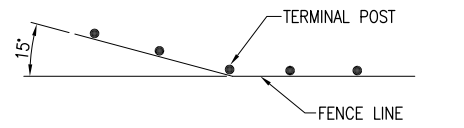


METHOD OF FASTENING STRETCHER BAR TO POST

METHOD OF TYING FABRIC TO PIPE

NOTE: 0.08 GA. ALUMINUM ALLOY SHEET LETTERING COLOR SHALL BE RED. EACH GATE SHALL REQUIRE ONE SIGN. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN. FASTENED PERMANENTLY TO THE FENCE. NO PLASTIC TIES WILL BE ALLOWED.

SIGN DETAIL



WHERE THE FENCE LINE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE. WHERE ANGLE IS LESS THAN 15° AND EXISTING CONDITIONS REQUIRE TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY ENGINEER.

DE074

REVISION	
DATE	

DECATUR, ILLINOIS
A.I.P. PROJ.: 3-17-0033-B4
IL PROJ.: DEC-4167

Hanson Proj. No. 11A0083D	Scale	05/08/2012
Filename C-571-FEN.dwg	NOT TO SCALE	
LAYOUT	KDM	02/16/12
DRAWN	BAK	02/16/12
REVIEWED	KNL/RAW	04/19/12

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Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Ph: (217) 788-2450 Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

REPLACE PERIMETER FENCE
PROPOSED FENCING DETAILS

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