

# *A/3'Eqputwekqp' ( 'Tgpqxcvkqp'NNE*

## SECURITY FENCES, SLIDING GATES, AND SWING GATES

### MATERIALS

#### PART 1 POSTS, RAILS, AND BRACES

##### 1.1 GENERAL

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- A. Framework shall be resistance-welded, coated steel tubing. The tubing shall be cold rolled from ATSM A569 or A607 strip, hot dipped galvanized to 1.0 oz. /sq. ft., with a chromate conversion coating and a thermoplastic acrylic top-coat of 5 mil. Pipe shall comply with ASTM A53 and shall comply with federal specifications RR-F-191/3C, class 1, grade B. SS-40 fence pipe is acknowledged to be an approved equal to the Schedule 40 material. SS-40 material shall be fabricated of steel conforming to ASTM A569 with a minimum yield strength of 50,000 psi, and shall receive a triple coating comprised of 1 ounce per square feet + or - 0.1 ounce per square feet of zinc; 30 micrograms per sq. inch + or - 15 micrograms per square inch of chromate coating; and a clear coating of a nominal 0.0005 inch + or - 0.0002 inch of cross linked acrylic polyurethane. Internal surface shall be coated, after welding, with a zinc-rich based organic coating having an 87% zinc powder loading capable of providing galvanic protection.
- B. End, Corner Brace, and Pull Posts
- Four inch outside diameter x 6.56 lbs/ft. x 16 ft. pipe.
- C. Line Posts
- Line Posts shall be 2.876 in. outside diameter x 4.64 lbs/ft. x 15.5 ft. pipe.
- D. Gate and Support Posts
- Gate and Support Posts Shall be 4-inch outside diameter x 6.56 lbs/ft. x 11 ft. pipe.
- E. Top and Bottom Rails
- Use 1.66-inch outside diameter pipe. Furnish manufacturer's standard lengths of approximately 21 feet with couplings approximately 6 inches long for each joint; every fifth coupling in a run shall have an expansion spring. Provide means for attaching rail securely to each gate corner, pull, and end post.

## 1.2 CHAIN LINK FABRIC

### A. SPECIFICATIONS

Chain link type: Shall consist of a steel wire, helically wound and interwoven in such a manner to form a continuous mesh. The fabric shall be made of 0.40 oz/sq ft. aluminum coated wire according to ASTM A491. The finish fabric size shall be 144" and 96" wide x 2" mesh x 9 gauge coated wire. The top and bottom salvage shall be barbed.

## 1.3 ACCESSORIES

### A. Post Caps

Post Caps shall be galvanized pressed steel, 11 gauge, and so designed to be weather-tight closure cap (for posts).

### B. Loop Caps

Loop Caps shall be galvanized pressed steel, 11 gauge, and so designed to connect the top rail with the line posts and as a weather tight closure cap (for posts).

### C. Rail Ends

Rail Ends shall be galvanized steel offset design. Rail ends shall be used to attach rails to terminal posts and shall be secured to the post by brace bands.

### D. Tension Bars

Tension Bars shall be galvanized pressed steel and shall measure 3/16" x 3/4" x 96" or 144". Tension bars shall be attached to the terminal posts and shall be secured to the terminal post with tension bands.

### E. Tension Bands

Tension Bands shall be galvanized pressed steel, 11 gauge, and 3/4" wide, plain style and shall use 5/16" x 1/4" galvanized carriage bolts. Tension bands shall be spaced 15" O.C. and hold tension bars to terminal posts.

### F. Brace Bands

Brace Bands shall be galvanized pressed steel, 11 gauge, and 3/4" wide, plain style and shall use 5/16" x 1/4" galvanized carriage bolts. Brace bands shall be used to secure rail ends to the terminal posts.

### G. Tension Wire

Tension Wire shall be aluminum, 7 gauge, marcelled steel, and shall be stretched between terminal posts.

H. Tie Wire

Tie Wire shall be 9 gauge steel with 0.40 aluminum coating to match the fence fabric and with sufficient length to wrap 360 degrees around the fabric wire and framework. The tie shall be installed around the frame member and a single strand of fence fabric. The two ends shall be mechanically twisted together three times, forcing the tie to conform to the shape of the frame member to make it difficult to insert an object between the tie and the frame member. The pointed ends of the tie shall lay in the direction of travel of the fabric and the tips shall be severed to reduce the hazard to personnel and make it difficult to untwist the tie. Tie wire shall be spaced on 12" centers on line posts and 24" centers for base rails.

I. Barbed Tape Clip and Pin

Barbed Tape Clip and Pin shall be made of stainless steel and shall be designed to clinch around the barb tape.

J. Barbed Wire Support Arms

Barbed Wire Support Arms shall be galvanized steel v-shape to support six strands of barbed wire, with set screw fastener. Wire shall lock to arms without need for ties. Arms shall withstand downward pull of 250 pounds applied at end of arm.

K. Hog Rings

Hog Rings shall be 9 gauge steel, with 0.40 aluminum coating to attach fabric to tension wire, and bull panels to fence fabric, and hog rings shall be 11 gauge stainless steel to attach all barbed tape to fence fabric.

L. Gate Hinges

Gate Hinges shall be 3/16" galvanized pressed steel, non-moveable box type. Two hinges per gate leaf and all bottom hinges shall have a galvanized cast gate hinge plug for hinge bearing surface.

M. Gate Latches

For single gate leafs: shall be 1/8" galvanized pressed steel forked type (to permit operation from either side of gate) with integral padlock eye. For double leaf gates: shall be 3/16" galvanized pressed steel fork and center drop rod assembly. This assembly shall latch the two leafs together as well as to the ground by a 1 3/8" O.D. galvanized drop rod. The drop rod shall be secured to the ground by a 2.5" O.D. galvanized sleeve which shall be set in concrete.

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**ITEM 1 Fence Material and Accessories "**

QUANT	UNIT	MATERIAL	UNIT COST	TOTAL COST
800	L/F	FABRIC 2" X 6 gauge X 144" TT ALMZ		
400	L/F	FABRIC 2" X 9 gauge X 132" KK ALMZ		
104	PCS	RAIL 1 5/8" X 21' SS40		
80	PCS	TERM POST 4" X 12' SS40		
20	PCS	LINE POST 3" X 12' SS40		
140	L/F	FABRIC 2" X 9 gauge X 144" KK ALMZ		
6	PCS	TERM POST 4" X 16' SS40		
10	PCS	LINE POST 3" X 16' SS40		
20	PCS	BLVD CLAMPS 1 5/8" X 1 5/8"		
10	PCS	BLVD CLAMPS 3" x 1 5/8"		
60	PCS	BLVD NUTS & BOLTS 5/16" X 2 1/2"		
30	PCS	LOOP CAP 3" PS		
86	PCS	DOME CAP 4" PS		

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QUANT	UNIT	MATERIAL	UNIT COST	TOTAL COST
170	PCS	TENSION BARS 3/16" X 3/4" X 142"		
40	PCS	TENSION BANDS 1 5/8" X 7/8" 12GA BEVELED		
2000	PCS	TENSION BANDS 4" X 7/8" 12GA BEVELED		
400	PCS	BRACE BANDS 4" X 7/8" 12GA BEVELED		
10	PCS	BRACE BANDS 1 5/8" X 7/8" 12 GA BEVELED		
450	PCS	RAIL ENDS 1 5/8" PS COMBO		
2500	PCS	FENCE NUTS & BOLTS 5/16" X 1 1/2" CARRIAGE		
2500	PCS	SECURITY TIE 1 5/8"		
400	PCS	SECURITY TIE 3"		
200	PCS	HOG RING 13 GA SS		
100	PCS	FLANGE PLATES 8" X 8" X 1/4" GALV 5/8" HOLE		
25	PCS	GATE FRAMEWORK 2" X 24' SS40		
50	PCS	GATE CAPS 2"		
50	PCS	GATE BARS 3/16" X 3/4" X 82"		
400	PCS	GATE BANDS 2" X 7/8" 12GA BEVELED		
100	PCS	GATE TIES 2"		
500	PCS	GATE NUTS & BOLTS 1 1/2" X 5/16" CARRIAGE		
50	PCS	GATE HINGES 4" BULLDOG		
25	PCS	GATE HINGE PLUGS 2"		
25	PCS	GATE PADLOCK HASP 3/8" X 4" GALV FLAT		

TOTAL ITEM # 1: \$ \_\_\_\_\_

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**ITEM 2 Fence Material and Accessories**

<b>QUANT</b>	<b>UNIT</b>	<b>MATERIAL</b>	<b>UNIT COST</b>	<b>TOTAL COST</b>
800	L/F	FABRIC 2" X 6 gauge X 144" TT ALMZ		
400	L/F	FABRIC 2" X 9 gauge X 132" KK ALMZ		
104	PCS	RAIL 1 5/8" X 21' SS40		
80	PCS	TERM POST 4" X 12' SS40		
20	PCS	LINE POST 3" X 12' SS40		
140	L/F	FABRIC 2" X 9 gauge X 144" KK ALMZ		
6	PCS	TERM POST 4" X 16' SS40		
10	PCS	LINE POST 3" X 16' SS40		
20	PCS	BLVD CLAMPS 1 5/8" X 1 5/8"		
10	PCS	BLVD CLAMPS 3" x 1 5/8"		
60	PCS	BLVD NUTS & BOLTS 5/16" X 2 1/2"		
30	PCS	LOOP CAP 3" PS		
86	PCS	DOME CAP 4" PS		
170	PCS	TENSION BARS 3/16" X 3/4" X 142"		
40	PCS	TENSION BANDS 1 5/8" X 7/8" 12GA BEVELED		
2000	PCS	TENSION BANDS 4" X 7/8" 12GA BEVELED		
400	PCS	BRACE BANDS 4" X 7/8" 12GA BEVELED		
10	PCS	BRACE BANDS 1 5/8" X 7/8" 12 GA BEVELED		
450	PCS	RAIL ENDS 1 5/8" PS COMBO		

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QUANT	UNIT	MATERIAL	UNIT COST	TOTAL COST
2500	PCS	FENCE NUTS & BOLTS 5/16" X 1 1/2" CARRIAGE		
2500	PCS	SECURITY TIE 1 5/8"		
400	PCS	SECURITY TIE 3"		
200	PCS	HOG RING 13 GA SS		
100	PCS	FLANGE PLATES 8" X 8" X 1/4" GALV 5/8" HOLE		
25	PCS	GATE FRAMEWORK 2" X 24' SS40		
50	PCS	GATE CAPS 2"		
50	PCS	GATE BARS 3/16" X 3/4" X 82"		
400	PCS	GATE BANDS 2" X 7/8" 12GA BEVELED		
100	PCS	GATE TIES 2"		
500	PCS	GATE NUTS & BOLTS 1 1/2" X 5/16" CARRIAGE		
50	PCS	GATE HINGES 4" BULLDOG		
25	PCS	GATE HINGE PLUGS 2"		
25	PCS	GATE PADLOCK HASP 3/8" X 4" GALV FLAT		

TOTAL ITEM #2: \$ \_\_\_\_\_

GRAND TOTAL ITEM #1 & #2: \$ \_\_\_\_\_

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ DAYS AFTER RECEIPT OF ORDER.

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