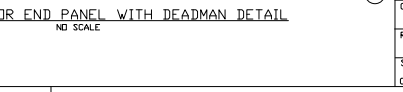
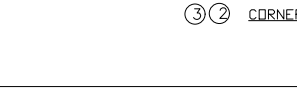
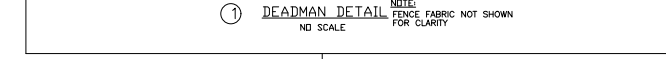
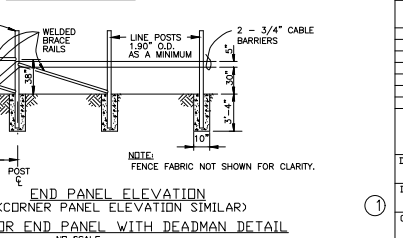
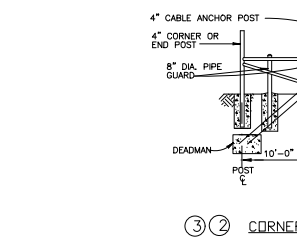
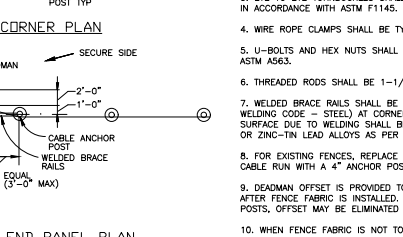
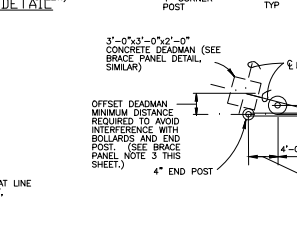
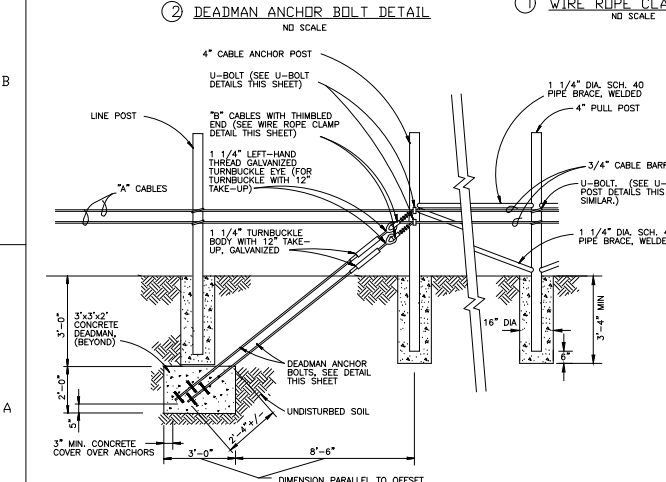
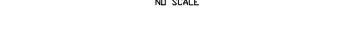
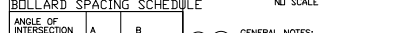


**BOLLARD SPACING SCHEDULE**

ANGLE OF INTERSECTION	A	B
90 DEGREES OR LESS	2'-0"	4'-0" MAX
GREATER THAN 90 DEGREES	3'-0"	4'-0" MAX



- GENERAL NOTES:**
- CABLES SHALL BE CONTINUOUS FROM DEADMAN TO DEADMAN. NO SPLICES IN CABLE SHALL BE ALLOWED. CABLE BARRIER SHALL BE INSTALLED BETWEEN FENCE POSTS AND FENCE FABRIC AS PER PLANS. U-BOLTS ON LINE POSTS SHALL BE INSTALLED PERPENDICULAR TO THE STRANDS OF THE WIRE ROPE AND SHALL BE TIGHTENED AFTER SAG IN CABLE BARRIER HAS BEEN REMOVED. BRACE PANELS W/DEADMEN SHALL BE SPACED AT 200 FOOT MAXIMUM INTERVALS AND AT CHANGES IN ALIGNMENT EXCEEDING 45 DEGREES. DEADMAN SPACING IS BASED ON A SPECIFIC VEHICLE WITH A RESULTANT KINETIC ENERGY OF LESS THAN 400 K FOOT POUNDS. FOR LONGER DEADMAN RUNS AN ANALYSIS WILL HAVE TO BE MADE TO DETERMINE EFFECTIVENESS FOR ACCEPTABLE PENETRATION LIMITS.
  - CABLE BARRIER SHALL BE U.S. DOMESTIC 3/4 INCH 6X19 CLASS WIRE ROPE, REGULAR LAY, EXTRA IMPROVED FLOW STEEL (EIPS), INDEPENDENT WIRE ROPE CORE, (IWR), CLASS A GALVANIZED, IN ACCORDANCE WITH ASTM A1023/A1023M.
  - EYE TO EYE TURNBUCKLES SHALL BE 1-1/4" X 12", TYPE I, FORM 1 CLASS 4 ZINC COATED, IN ACCORDANCE WITH ASTM F1145.
  - WIRE ROPE CLAMPS SHALL BE TYPE I, CLASS I, GALVANIZED, IN ACCORDANCE WITH FS FT-C-450.
  - U-BOLTS AND HEX NUTS SHALL BE 1/2", GALVANIZED, IN ACCORDANCE WITH ASTM A307 AND ASTM A563.
  - THREADED RODS SHALL BE 1-1/4", GALVANIZED, IN ACCORDANCE WITH ASTM A307 OR A36.
  - WELDED BRACE RAILS SHALL BE INSTALLED AS PER THE PLANS AND AWS D1.1 (STRUCTURAL WELDING CODE - STEEL) AT CORNER, END, GATE, AND PULL POSTS. DAMAGE TO THE GALVANIZED SURFACE DUE TO WELDING SHALL BE REPAIRED WITH "REPAIR STICKS" OF ZINC-CADMIUM ALLOYS OR ZINC-TIN LEAD ALLOYS AS PER AWS W2C.
  - FOR EXISTING FENCES, REPLACE THE LINE POSTS AT THE BEGINNING AND END OF EVERY CABLE RUN WITH A 4" ANCHOR POST AND 4" PULL POST.
  - DEADMAN OFFSET IS PROVIDED TO ALLOW ACCESS TO TURNBUCKLES FOR FUTURE ADJUSTMENT AFTER FENCE FABRIC IS INSTALLED. IF FENCE FABRIC IS NOT TO BE INSTALLED ON THE BARRIER POSTS, OFFSET MAY BE ELIMINATED AS APPROVED.
  - WHEN FENCE FABRIC IS NOT TO BE INSTALLED, PROVIDE POSTS AND FITTINGS IN CONFORMANCE WITH DETAILS SHOWN ON THIS SHEET AND THE REQUIREMENTS FOR FENCE TYPE FES.

**\$\$\$ - THINK VALUE ENGINEERING - \$\$\$**

Symbol	Revisions	Date	Approved
(4)	REV #0004 GENERAL REVISIONS	5/23/06	JWE
(3)	REV #0003 GENERAL REVISIONS	3/29/06	JWE
(2)	REV #0002 GENERAL REVISIONS	15/06/04	JWE
(1)	REV #0001 GENERAL REVISIONS	3/17/04	JWE

U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
OMAHA, NEBRASKA

Designed by: X	BASE NAME	BASE LOCATION
Drawn by: X	STANDARD DETAILS FOR CHAIN-LINK SECURITY FENCES, FARM STYLE FENCES AND A DOUBLE CABLE BARRIER	
Checked by: X	DOUBLE CABLE BARRIER DETAILS	
Reviewed by: X	Plot Scale Ratio: 4:1	Date: 05/06/04
Submitted by: X	Design File: 15_cables.dgn	Sheet: 15
Chief: X	Spec. No: SACA 45	Drawing Code:
	Exp. No:	STD 872-90-15