



USDA-SCS-FORT WORTH, TEXAS

T.D. 101 3-72



# FLOODWATER RETARDING DAM NO.8 (FIRST PHASE CONSTRUCTION) **SANDERSON CANYON WATERSHED PROJECT**

BREWSTER, PECOS AND TERRELL COUNTIES, TEXAS

DRAINAGE AREA	2144 ACRES
TOTAL STORAGE	740 AC.FT.
HEIGHT OF DAM	48 FEET

SPONSORED BY  
RIO GRANDE-PECOS RIVER, BIG BEND AND TRANS-PECOS SOIL AND WATER CONSERVATION DISTRICTS  
TERRELL, PECOS AND BREWSTER COUNTY COMMISSIONERS COURTS  
COOPERATING WITH  
SOIL CONSERVATION SERVICE  
OF THE  
U.S. DEPARTMENT OF AGRICULTURE  
1976

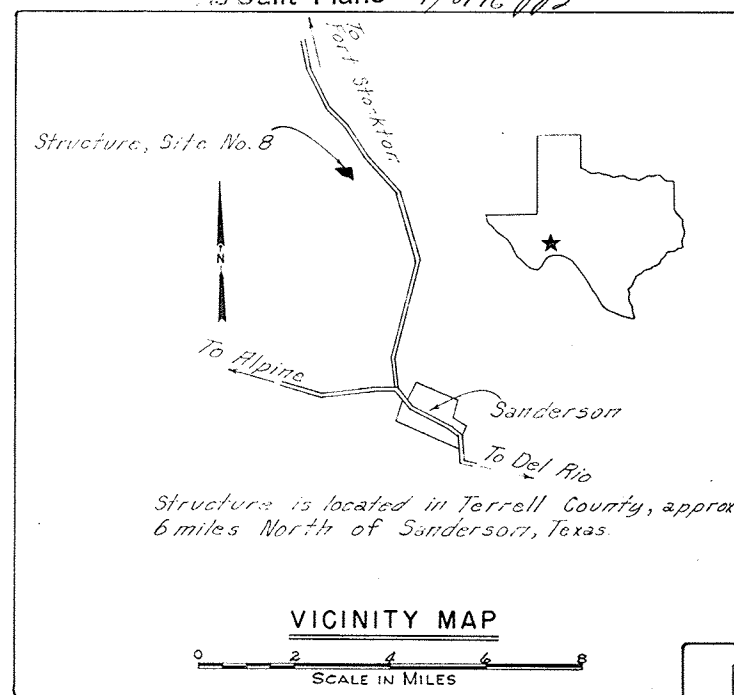
CONSTRUCTION DRAWINGS APPROVED

*Gene C. Vittetoe (M. W. K.)* 6-16-76  
STATE CONSERVATION ENGINEER DATE  
TEMPLE, TEXAS  
*Jack W. Adair* Approved by letter dated 6-18-76  
HEAD ENGINEERING & WATERSHED PLANNING UNIT  
FORT WORTH, TEXAS

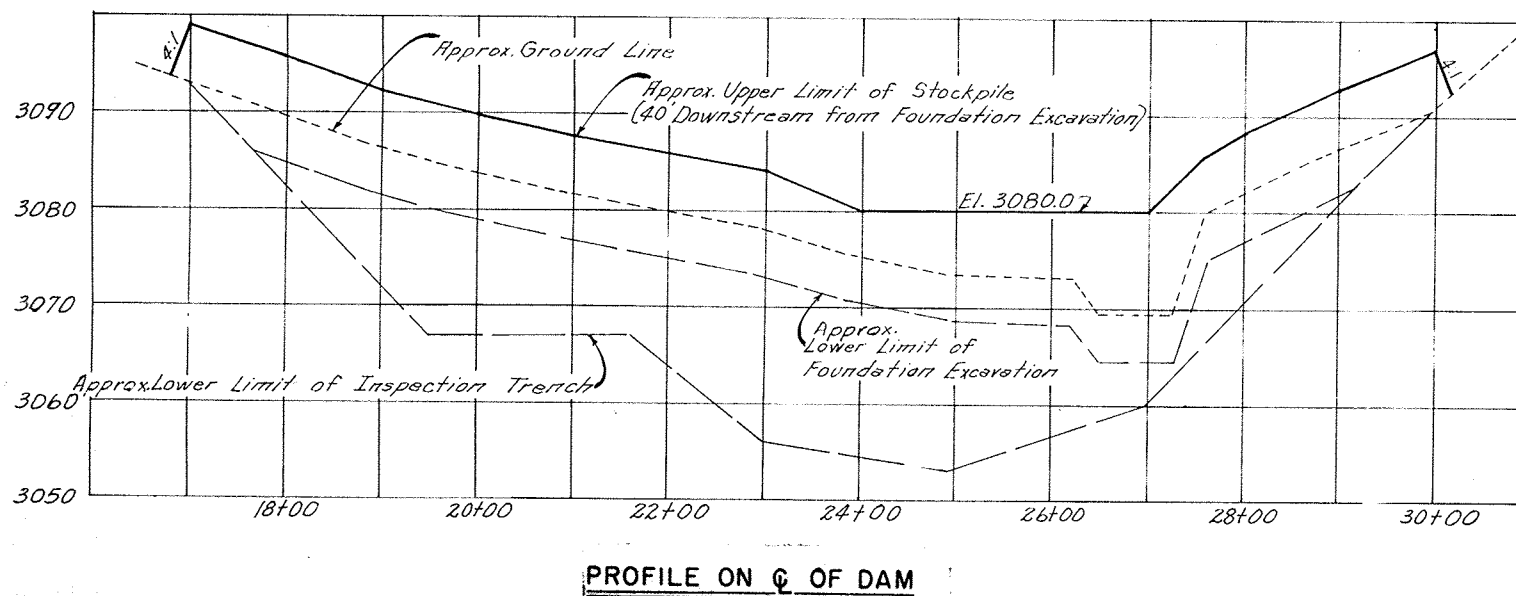
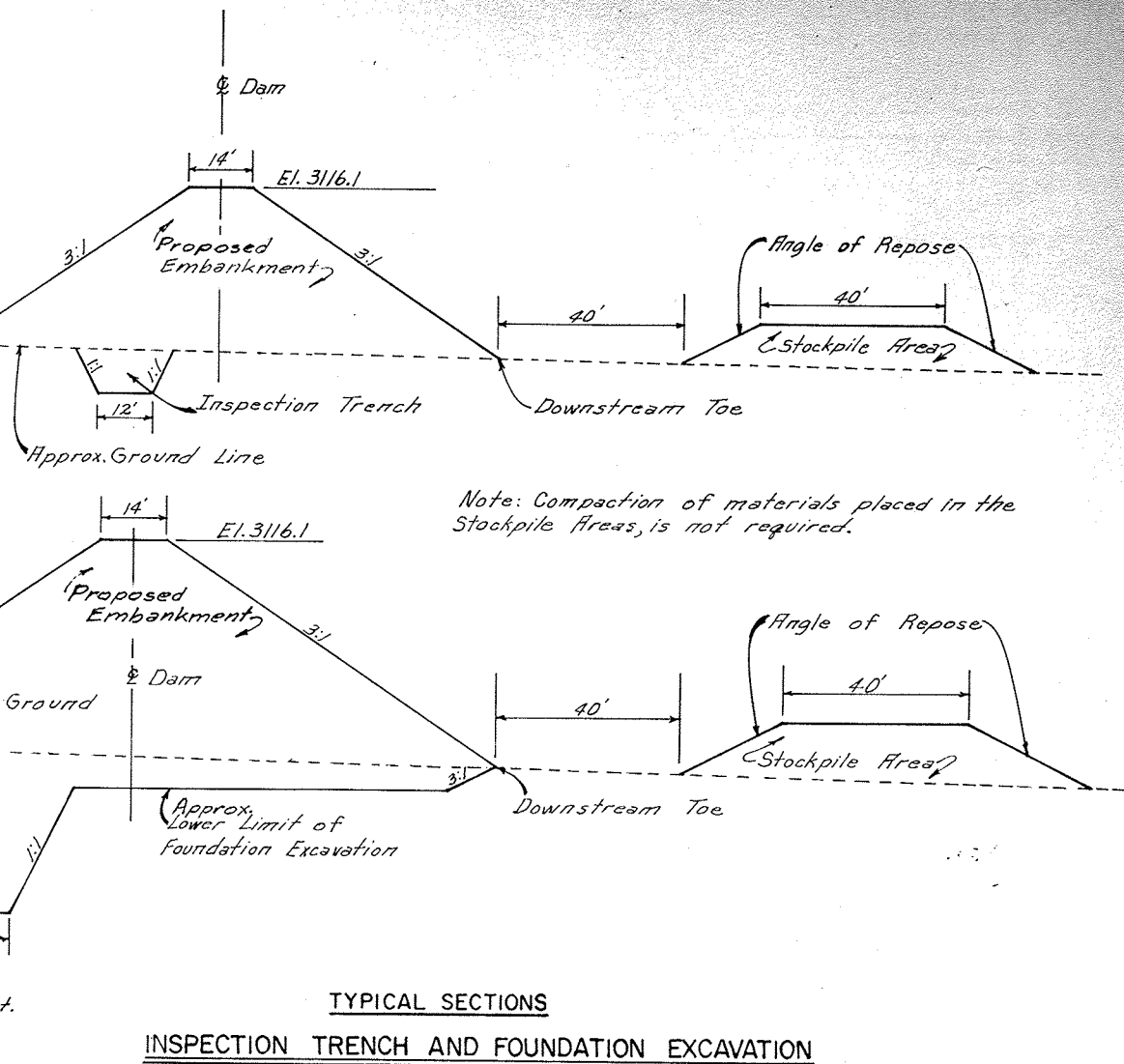
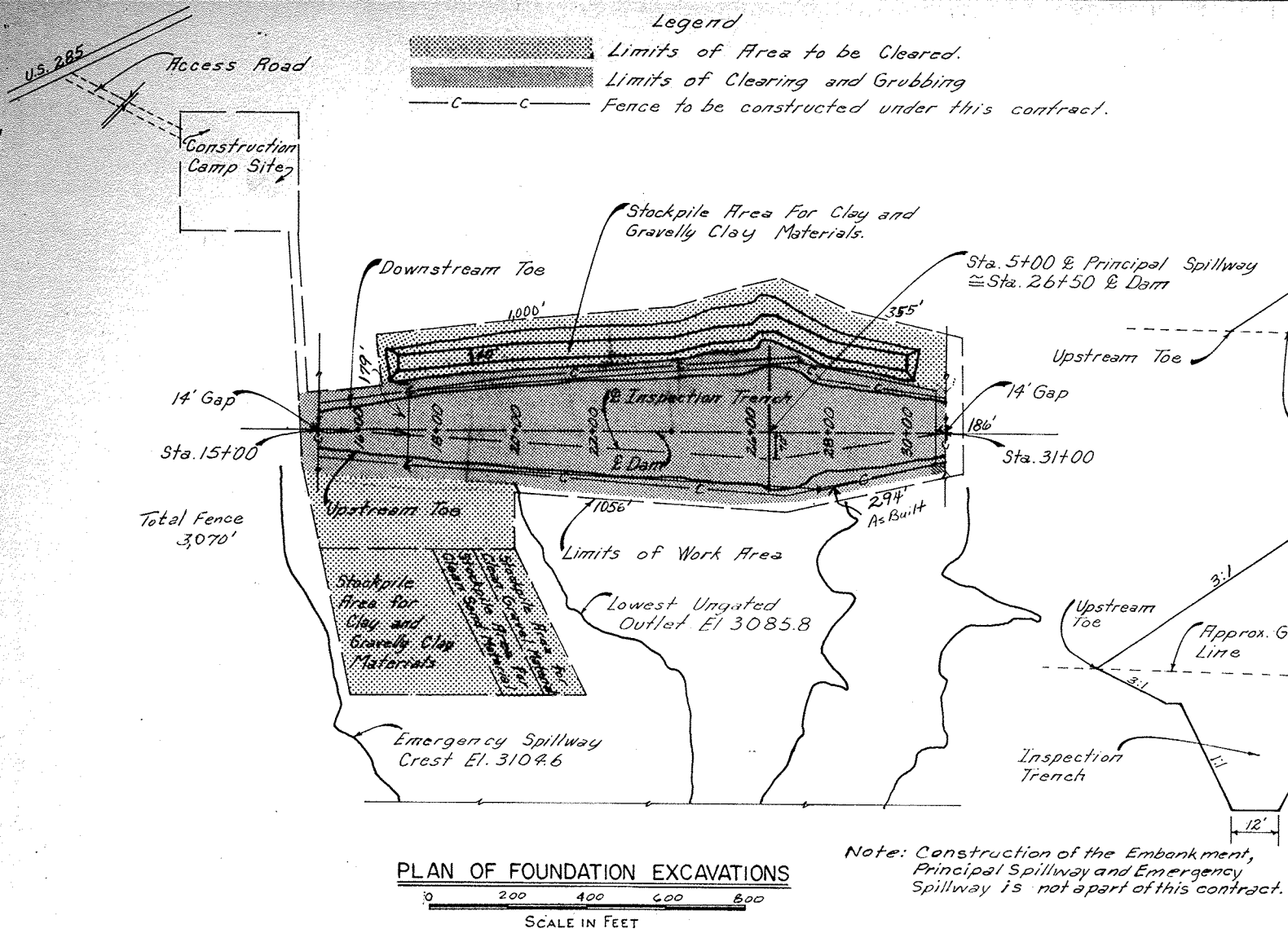
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	SECONDARY INVESTIGATION
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As-Built Plans 9/8/16 973

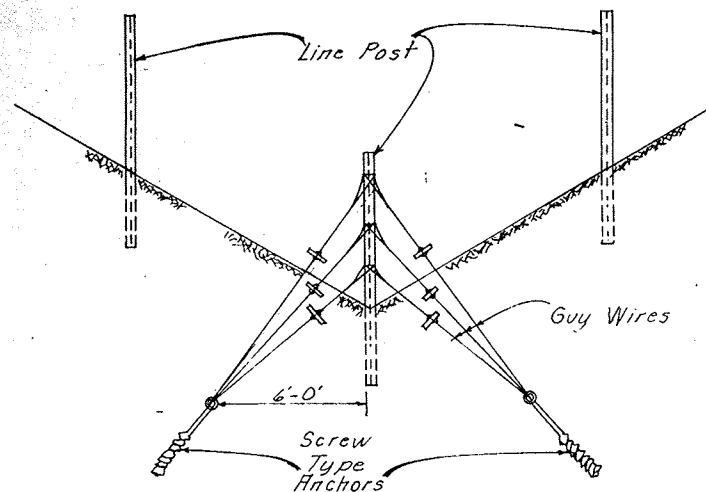


Drawing No  
**4-E-35,594**



As-Built Plans 9/8/76 JJB

PHASE I CONSTRUCTION-SECONDARY INVESTIGATION			
FLOODWATER RETARDING STRUCTURE SITE No. 8			
SANDERSON CANYON WATERSHED			
IN			
BREWSTER, PECOS AND TERRELL COUNTIES, TEXAS			
U. S. DEPARTMENT OF AGRICULTURE			
SOIL CONSERVATION SERVICE			
DESIGNED	W.L.P.	DATE	6-76
DRAWN	K.C.P.	DATE	6-76
TRACED	K.C.P.	DATE	6-76
CHECKED	M.D.K.	DATE	6-76
APPROVED BY		JJB	
STATE CONSERVATION ENGINEER, S. C. E.		TITLE	
TEMPLE, TEXAS		DRAWING NO.	
SHEET		4-E-35,594	
of 4			



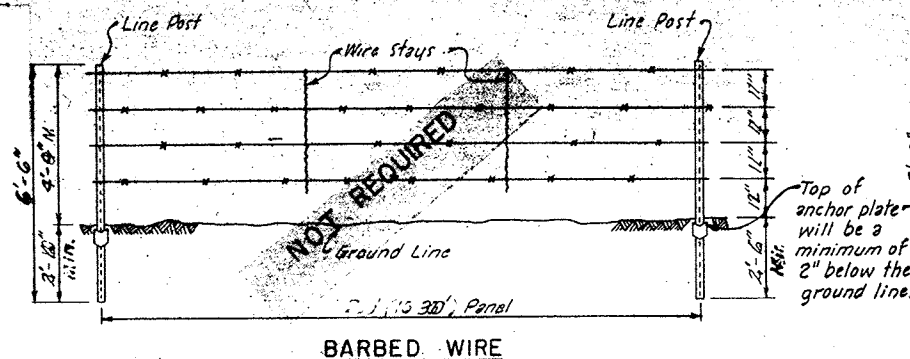
CORNER ASSEMBLY

Note:

Guy wires shall not be less than four strands of #4 gage galvanized smooth wire.

All anchors shall be galvanized screw type 48" in overall length with a 3/4" rod and a screw plate of not less than 6" in diameter. The eye of the anchor shall have a diameter of not less than 1 1/2". All anchors shall be installed at an approx. 45° angle normal to the ground, and not closer than 6' to the post. The anchor will be rotated into the ground to a point where the eye is approx. ground level next to the corner, gate, or brace post, unless otherwise approved by the Engineer.

Note: An acceptable alternate to the screw anchors shown and specified is a "dead man" type of installation. The dead man shall be a 30" length of 4" (minimum) diameter treated pine post or approved equal. Guy wires shall be as specified above and shall have two complete wraps around the dead man. The dead man shall be installed in a trench not less than 30" in depth and shall be located not less than 9' from the post to which the guy wires are attached. The trench for the installation of the guy wires shall not be more than 4" in width. Backfill of the trenches shall be thoroughly tamped in layers not more than 4" in thickness prior to compaction. The Engineer may require the addition of moisture to the backfill materials to obtain the desired degree of compaction.

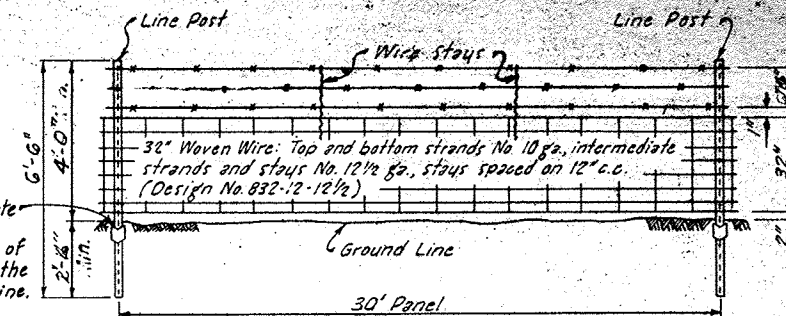


BARBED WIRE

Barbed wire to be 12 1/2 ga. galv. double strand barbed wire with 14 ga. 2 point barbs at 4" c.c. See Construction Spec. 92 for fasteners required.

Barbed wire and woven wire shall conform to Federal Spec. R.R. - F-221 and shall have Class 1 or 2 zinc coating.

Wire stays to be 9 ga. (min. size), galv. two strand spiral, twist-on type, spaced equally, two stays per line post panel. Stays to be twisted firmly against top strand. The minimum length for barbed wire fences shall be 42' and for woven wire fences shall be 24'.



WOVEN WIRE

Steel line post will meet Federal Specification R.R.-F-221, for Style 1, T-Section, painted.

End, pull, brace and gate post shall be 2" x 4" x 8" galvanized pipe.

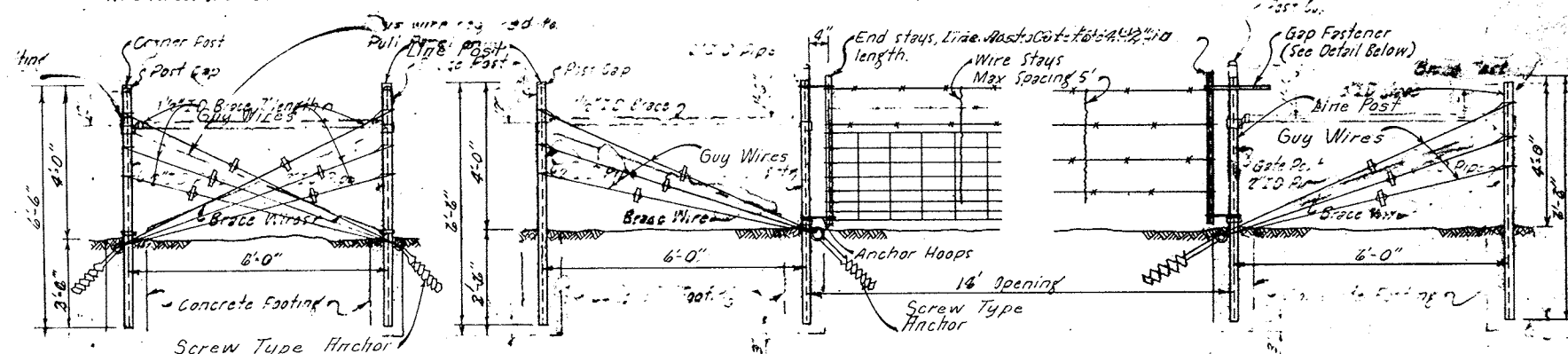
Gate braces shall be 2" x 4" x 8" galvanized pipe.

Weight galvanized pipe 2.5 lb. per foot.

For fasteners, fast and brace, see spec.

For wire requirements, see R.R.-F-221.

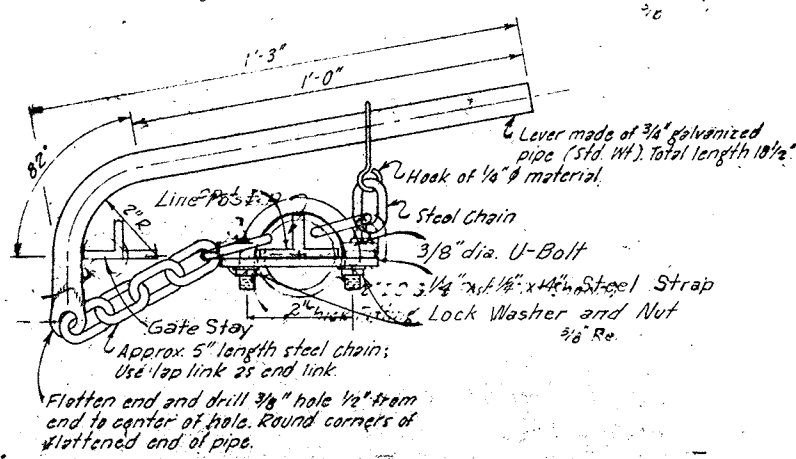
When woven wire fence is constructed along stream, wave beam, wire stays shall be required.



WIRE GAP PANEL

Wire forming gap(s) to be of the same type and spacing as the regular fence. Wire to be double wrapped around end stays. Anchor hoops to be 2" x 4" x 8" galvanized pipe. 12 gaps required.

At changes in vertical alignment, such as crossing of stub diversions, line posts or pull panel posts, that restrain upward pull of the fence strands, shall be anchored by setting such post in 18" of concrete. The engineer will designate the locations where this anchorage treatment is required. In addition, anchorage of fence wires to posts where there is a change in vertical alignment that produces upward or downward pull, shall be accomplished with double tie wires to each successive fence wire. The engineer will designate the posts where this special fastening of the fence wires is required.

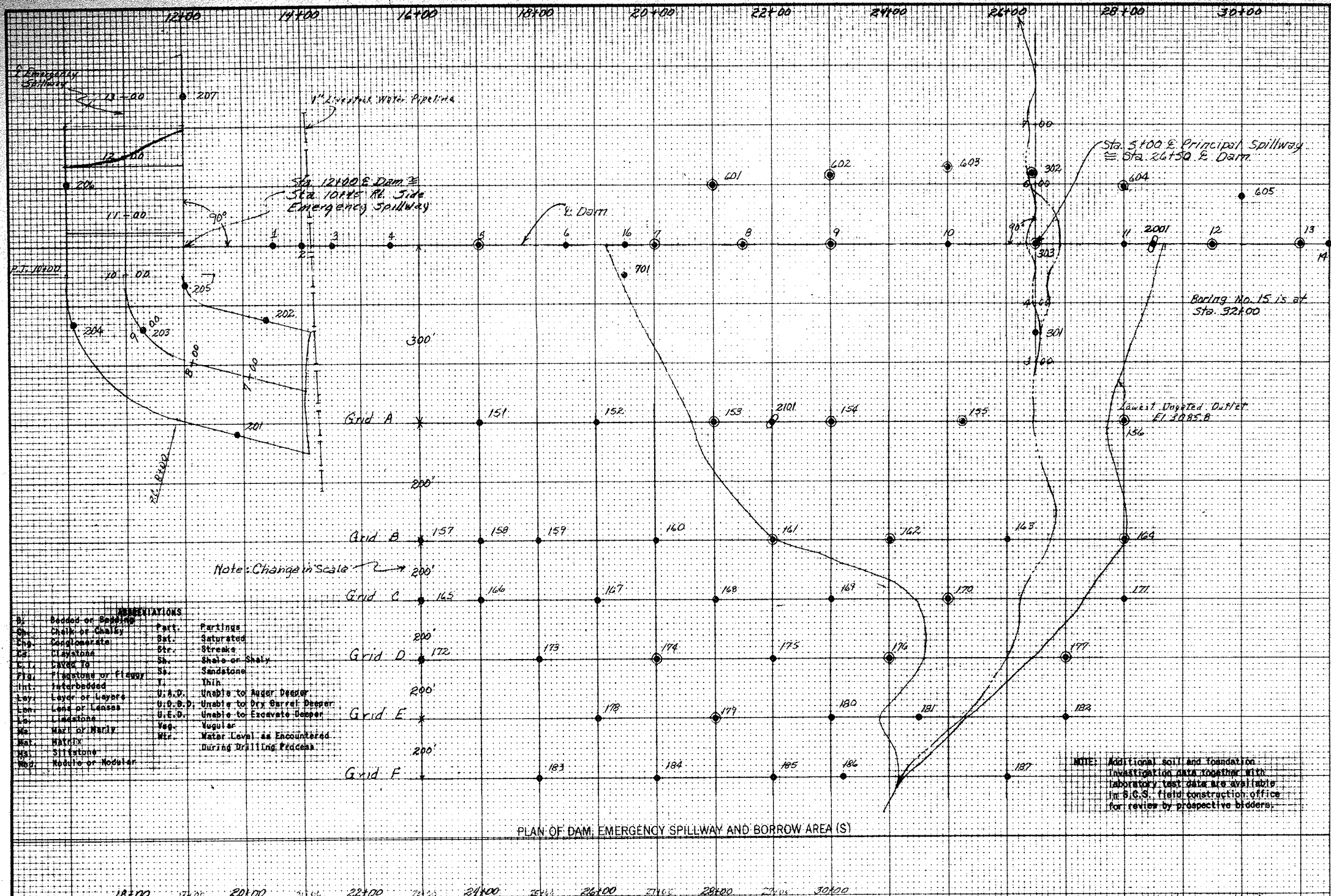


WIRE GAP FASTENER DETAIL

As-Built Plans 9/8/76 278

FENCE DETAILS			
FLOODWATER RETARDING STRUCTURE SITE NO. 8			
SANDERSON CANYON WATERSHED			
IN BREWSTER, PECOS AND TERRELL COUNTIES, TEXAS			
U. S. DEPARTMENT OF AGRICULTURE			
SOIL CONSERVATION SERVICE			
Designed	W. L. B.	Date	6-76
Drawn	K. C. L.	Date	6-76
Checked	M. D. B.	Date	6-76
Sheet	No. 2	Sheet	No. 2
Drawing No.		4-E-35,594	





### LEGEND

#### SYMBOLS

##### UNCONSOLIDATED MATERIAL

gravel	sand	silt	clay	cobbles, boulders
gravel, sandy	sand, gravelly	silt, gravelly	clay, gravelly	peat or muck
gravel, silty	sand, silty	silt, sandy	clay, sandy	
gravel, clayey	sand, clayey	silt, clayey	clay, silty	

##### CONSOLIDATED MATERIAL

###### Sedimentary Rocks

Conglomerate Cng.	shale sh.	limestone ls.	coal
breccia br.	siltstone Ms.	dolomite dol.	gypsum gyp.
sandstone ss.	marl	chalk ch.	chert cht.

###### Metamorphic Rocks

gneiss	schist	intrusive	extrusive
quartzite	slate	pyroclastic	
marble	soapstone talc	serpentine	Undifferentiated

#### Other Symbols

- hole logged only
- ⊙ hole sampled
- ↗ strike and dip
- pit or trench

#### ABBREVIATIONS

ang. angular	lam. laminated	G gravel, gravelly
bld. boulders (> 12")	lse. loose	S sand, sandy
calc. calcareous	mas. massive	M silt, silty
cali. caliche	med. medium	C clay, clayey
cav. cavities	mic. micaceous	O organic
cmt. cemented	mod. moderately	W well graded
cse. coarse	n. r. no recovery	P poorly graded
cbl. cobbles (3"-12")	per. permeable	
cpt. Compact	po. poorly	
con. concretions	rd. rounded	
xln. crystalline	sl. slightly	
ds. dense	sft. soft	
dip. dipping	s/ some	
d.s. downstream	slo. slowly	
fn. fine	stf. stiff	
frm. firm	t.b. thin-bedded	
frac. fractured	tuff. tuffaceous	
frg. fragments	u.s. upstream	
fri. friable	var. variable	
grn. grain	v/ very	
gyp. gypseous	w/ with	
hd. hard	wea. weathered	
h. highly	w.l. (date) static water level	

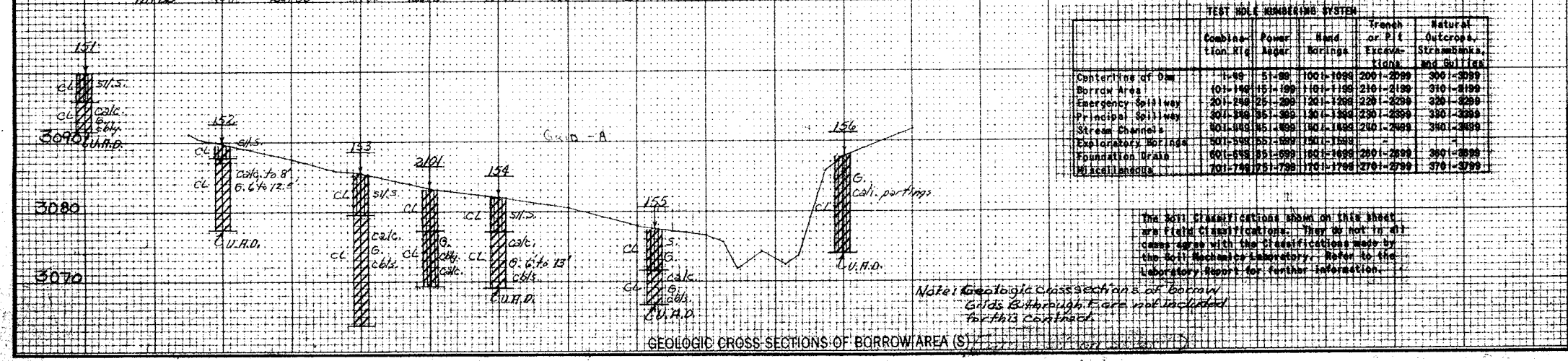
#### TEST HOLE NUMBERING SYSTEM

Centerline of dam	1 - 99	Stream channel	601 - 699
Borrow area	101 - 199	Relief wells	501 - 599
Emergency spillway	201 - 299		601 - 699
Centerline of outlet structure	301 - 399		701 - 799

#### UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOLS

GW	Well graded gravels; gravel-sand mixtures
GP	Poorly graded gravels
GM	Silty gravels; gravel-sand-silt mixtures
GC	Clayey gravels; gravel-sand-clay mixtures
SW	Well graded sands; sand-gravel mixtures
SP	Poorly graded sands
SM	Silty sand
SC	Clayey sands; sand-clay mixtures
ML	Silts with liquid limit of 50 or less
MH	Silts with liquid limit above 50
CL	Clays with liquid limit of 50 or less
CH	Clays with liquid limit above 50
OL	Organic silts and clays with liquid limit of 50 or less
OH	Organic silts and clays with liquid limit above 50

Revised February 1963



### PLAN AND PROFILES FOR GEOLOGIC INVESTIGATIONS

#### FLOODWATER RETARDING STRUCTURE SITE No. 8

#### SANDERSON CANYON WATERSHED

#### OF THE

#### BREWSTER, PECOS AND TERRELL COUNTIES, TEXAS

### U. S. DEPARTMENT OF AGRICULTURE

### SOIL CONSERVATION SERVICE

Investigated by	Date	Approved by
G. Evans	4-76	
Checked by		
Plotted by	Sheet	Drawing No.
F.W.G. 4-76	No. 3	4-E-35,594
Checked by	Sheet	Drawing No.
	No. 4	

ES 900 Sheet 1 of 3 SC-35A (April 1958)

