

CEDAR CREEK WATERSHED PROJECT FLOODWATER RETARDING DAM NO.88

DRAINAGE AREA 717 ACRES
TOTAL STORAGE 405 AC. FT
WATER SURFACE AREA 16 ACRES
HEIGHT OF DAM 22 FEET
VOLUME OF FILL 48,450 CU. YDS.

SOIL CONSERVATION SERVICE
OF THE
U. S. DEPARTMENT OF AGRICULTURE
COOPERATING WITH

KAUFMAN-VAN ZANDT

SOIL CONSERVATION DISTRICT
1966

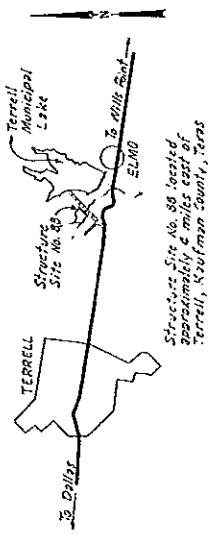
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7	STEEL PLACEMENT-PRINCIPAL SPILLWAY INLET
8	FENCE DETAILS
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CONSTRUCTION DRAWINGS APPROVED

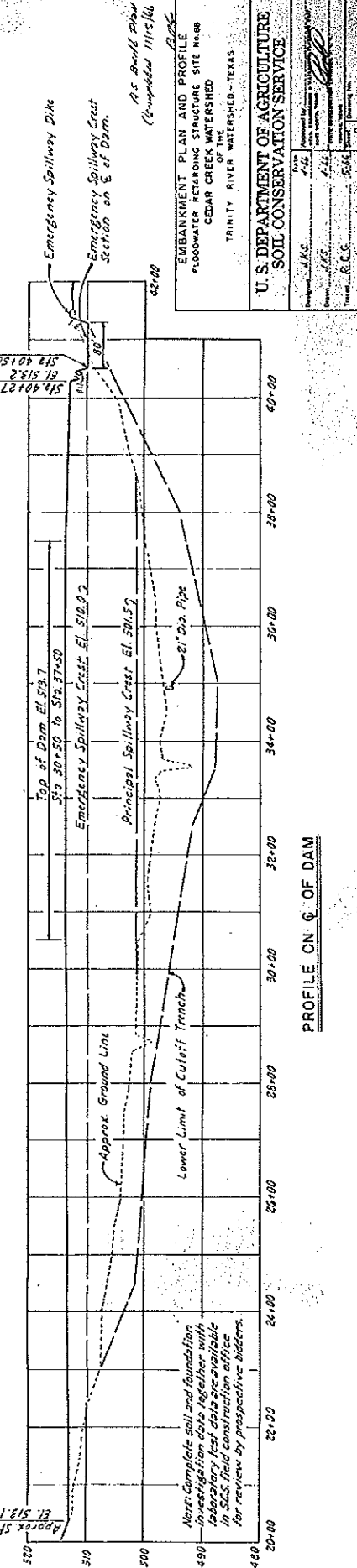
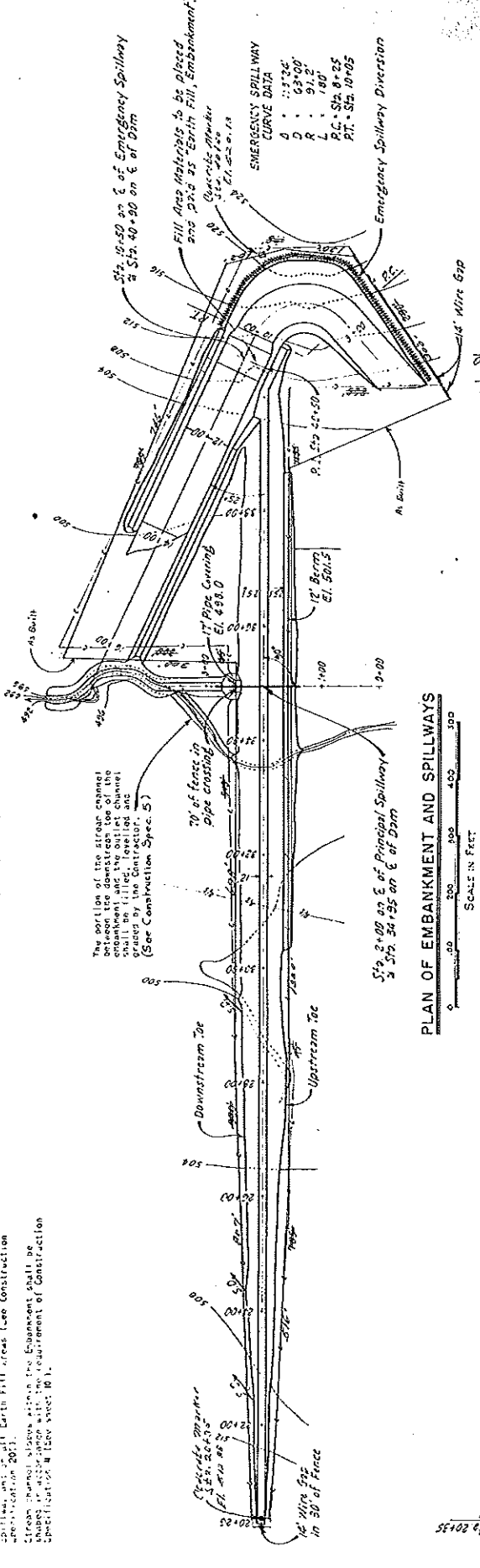
AS BUILT PLANS
Completed 11/15/66

4-E-21,642



Structure Site No. 88 located approximately 6 miles east of Terrell, Kaufman County, Texas

SCALE IN MILES
0 1 2 3 4



Emergency Spillway Construction and Use Divisions (S.D. 1):
18' effective height, 31' crest and 13' minimum
width. The spillway crest shall be constructed
on the plan. Final location of the diversion
shall be determined by the Engineer (See Construction
Specification #1).

A 6" trench shall be placed in Emergency
spillway, and shall Earth Fill areas (See Construction
Specification #2).

Stream channel shown within the Embankment shall be
constructed in accordance with the Construction
Specification #1 (See Sheet 10).

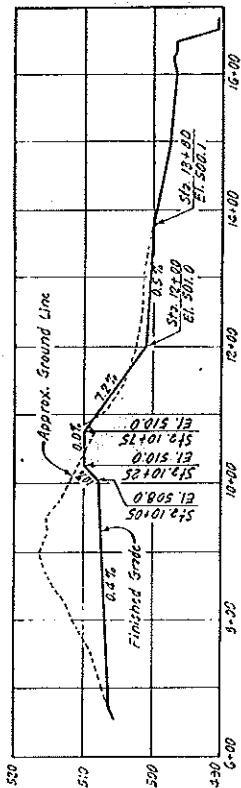
Note: Complete soil and foundation
investigation data together with
laboratory test data are available
in SCS field construction office
for review by prospective bidders.

EMBAKMENT PLAN AND PROFILE
FLOODWATER RETARDING STRUCTURE SITE NO. 88
CEDAR CREEK WATERSHED
OF THE
TRINITY RIVER WATERSHED - TEXAS

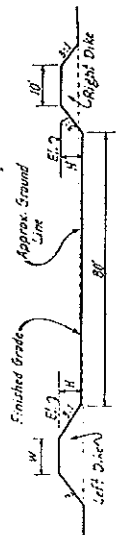
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed: J.K.S. Date: 4-16-64
Drawn: J.K.S. Date: 4-16-64
Checked: J.K.S. Date: 4-16-64
Approved: J.K.S. Date: 4-16-64

Project No. 4-E-21,642



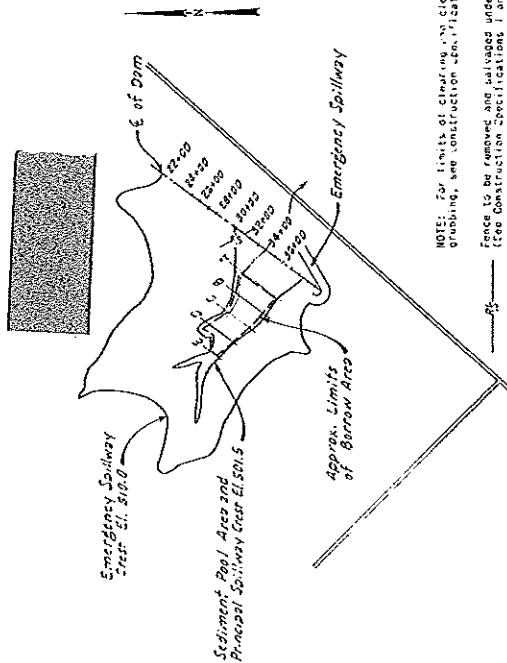
PROFILE ON C OF EMERGENCY SPILLWAY



Right Ditch:
From Sta. 10+05 to embankment @ El. 513.2, W=10', Z=2.5:
Ditch is transitional embankment to Sta. 12+00.
From Sta. 12+00 to Sta. 14+00, W=10', Z=2.5:
From Sta. 14+00 to Sta. 16+00, W=10', Z=2.5.

Left Ditch:
From Sta. 10+05 to Sta. 10+75 @ El. 513.2:
Ditch is transitional from Sta. 10+75 to Sta. 11+00.
From Sta. 11+00 to Sta. 12+00, W=3'.
Material forming ditches shall be placed
and paid for "Earth Fill, Embankment".

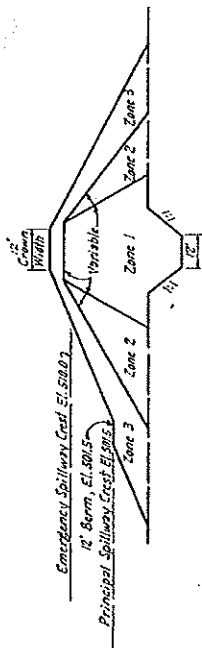
TYPICAL SECTION - EMERGENCY SPILLWAY



NOTE: For limits of clearing, no clearing and grubbing, see Construction Specifications 1 and 2.
Fence to be removed and salvaged under this contract.
(See Construction Specifications 1 and 3).

GENERAL PLAN OF RESERVOIR

SCALE IN FEET



TYPICAL SECTION - ZONED EMBANKMENT

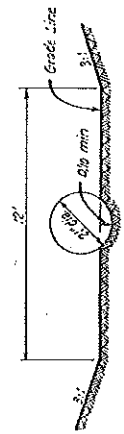
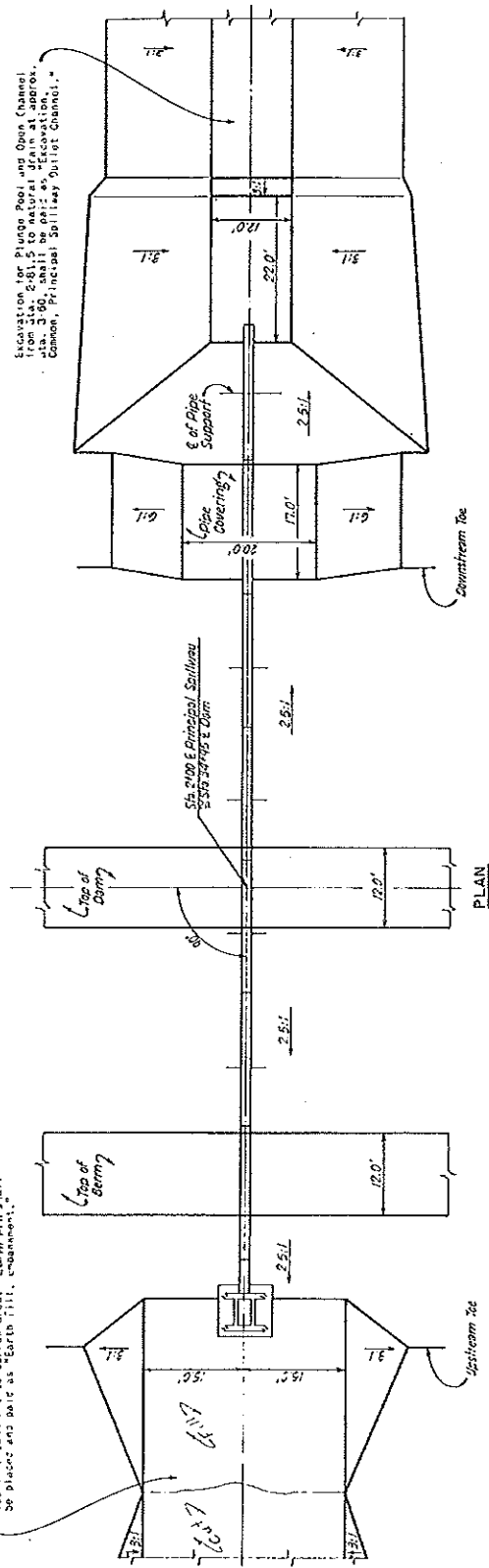
Laboratory Zone No.	Source of Fill Materials	Average Soil Classification	Type of Utilized Soil	Field Control Test		Placement and Compaction Requirements		Laboratory Test Data	
				ASTM Test	Number	Max. Unconsolidated Moisture Content (%)	Min. Dry Density (pcf)	ASTM Test	Moisture Content (%)
1	Swampy	CL	CL	11557	2	9"	90	11557	100.5
2	Gravel	CL	CL	11557	2	9"	90	11557	100.5
3	Borrow	CL	CL	11557	2	9"	90	11557	100.5
4	Borrow	CL	CL	11557	2	9"	90	11557	100.5
5	Borrow	CL	CL	11557	2	9"	90	11557	100.5
6	Borrow	CL	CL	11557	2	9"	90	11557	100.5
7	Borrow	CL	CL	11557	2	9"	90	11557	100.5
8	Borrow	CL	CL	11557	2	9"	90	11557	100.5
9	Borrow	CL	CL	11557	2	9"	90	11557	100.5
10	Borrow	CL	CL	11557	2	9"	90	11557	100.5
11	Borrow	CL	CL	11557	2	9"	90	11557	100.5
12	Borrow	CL	CL	11557	2	9"	90	11557	100.5
13	Borrow	CL	CL	11557	2	9"	90	11557	100.5
14	Borrow	CL	CL	11557	2	9"	90	11557	100.5
15	Borrow	CL	CL	11557	2	9"	90	11557	100.5
16	Borrow	CL	CL	11557	2	9"	90	11557	100.5
17	Borrow	CL	CL	11557	2	9"	90	11557	100.5
18	Borrow	CL	CL	11557	2	9"	90	11557	100.5
19	Borrow	CL	CL	11557	2	9"	90	11557	100.5
20	Borrow	CL	CL	11557	2	9"	90	11557	100.5
21	Borrow	CL	CL	11557	2	9"	90	11557	100.5
22	Borrow	CL	CL	11557	2	9"	90	11557	100.5
23	Borrow	CL	CL	11557	2	9"	90	11557	100.5
24	Borrow	CL	CL	11557	2	9"	90	11557	100.5
25	Borrow	CL	CL	11557	2	9"	90	11557	100.5
26	Borrow	CL	CL	11557	2	9"	90	11557	100.5
27	Borrow	CL	CL	11557	2	9"	90	11557	100.5
28	Borrow	CL	CL	11557	2	9"	90	11557	100.5
29	Borrow	CL	CL	11557	2	9"	90	11557	100.5
30	Borrow	CL	CL	11557	2	9"	90	11557	100.5

- The zone boundaries shown in the typical section are approximate. Adjustments will be made by the Engineer to permit the use, within the limits of the embankment, of all soil materials from the required excavations.
- Materials from the required excavations that are not tabulated in the table above and that are suitable and acceptable for earth fill shall have the same placement and control requirements as that specified for the materials covered under Materials Placement Data.

ZONED EMBANKMENT DATA

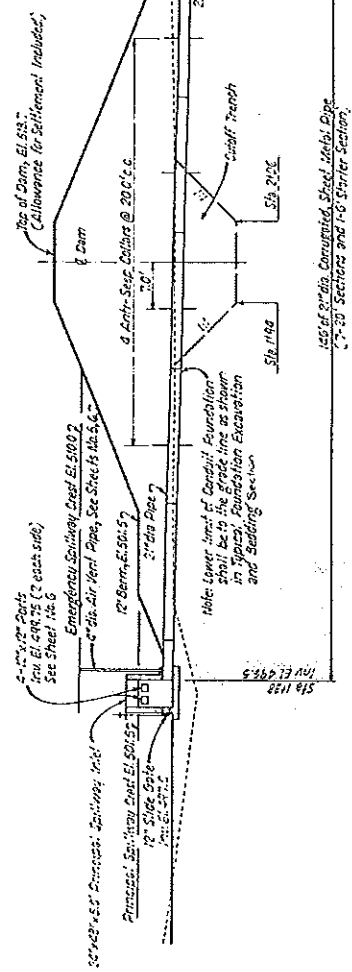
ELEVATION	SURFACE AREA	STORAGE
300	9	18
500.5	16	37
501	32	98
508	55	276
510	73	405
512	88	565
514	130	1002
Top of One Rectangular Tank 512		
Emergency Railway Tank Elev. 510		
Circular Oil Tank Elev. 501.5		
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Circular Oil Tank Elev.		

Principal Spillway Intake Channel: Gravel and fill to 11'-11" is shown at Elev. 805. Earth fill shall be placed and paid as "Earth fill, embankment."



Cost of shaping bedding prior to placing of pipe shall be included in the unit price of 18" pipe. The bedding shall be 1.0' thick of loose material. The bedding shall be 1.0' thick of loose material. The bedding shall be 1.0' thick of loose material. The bedding shall be 1.0' thick of loose material.

TYPICAL FOUNDATION EXCAVATION AND BEDDING



SECTION

PRINCIPAL SPILLWAY

PRINCIPAL SPILLWAY - PLAN AND SECTION
FLOODWATER RETARDING STRUCTURE SITE NEAR
CEDAR RIVER WATERSHED
TRINITY RIVER WATERSHED - TEXAS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Project No.	44-2
Sheet No.	44-2
Date	5-22-62
Drawn by	J.K.S.
Checked by	J.K.S.
Approved by	J.K.S.
Project Name	4-E-21,642

As Built Plan
Completed 11/15/62
No Changes or Additions

SCHEDULE OF QUANTITIES

TRASH GUARD

Panel "A" (4 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "B" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "C" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "D" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "E" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "F" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "G" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "H" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "I" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "J" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "K" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "L" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "M" (12 required)
Quantities for each Panel

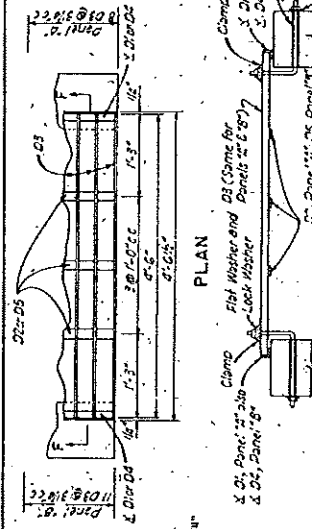
Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3

Panel "N" (12 required)
Quantities for each Panel

Qty.	Item
------	------

1	Angle D1
2	Angle D2
3	Stiffener D3
8	Bearing Bar D3



PLAN

SECTION F-F

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION O-O

SECTION P-P

SECTION Q-Q

SECTION R-R

SECTION S-S

SECTION T-T

SECTION U-U

SECTION V-V

SECTION W-W

SECTION X-X

SECTION Y-Y

SECTION Z-Z

SECTION AA-AA

SECTION BB-BB

SECTION CC-CC

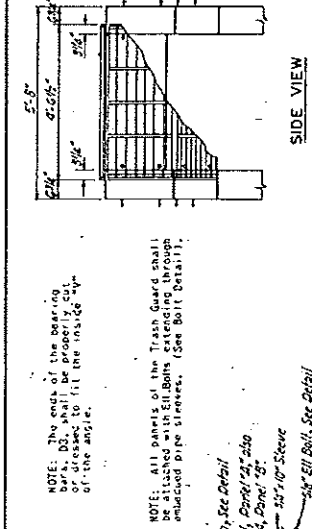
SECTION DD-DD

SECTION EE-EE

SECTION FF-FF

SECTION GG-GG

SECTION HH-HH



PLAN

SECTION F-F

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION O-O

SECTION P-P

SECTION Q-Q

SECTION R-R

SECTION S-S

SECTION T-T

SECTION U-U

SECTION V-V

SECTION W-W

SECTION X-X

SECTION Y-Y

SECTION Z-Z

SECTION AA-AA

SECTION BB-BB

SECTION CC-CC

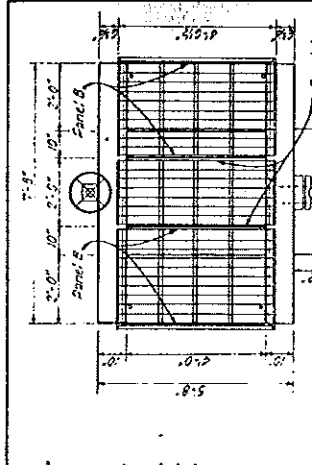
SECTION DD-DD

SECTION EE-EE

SECTION FF-FF

SECTION GG-GG

SECTION HH-HH



PLAN

SECTION F-F

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION O-O

SECTION P-P

SECTION Q-Q

SECTION R-R

SECTION S-S

SECTION T-T

SECTION U-U

SECTION V-V

SECTION W-W

SECTION X-X

SECTION Y-Y

SECTION Z-Z

SECTION AA-AA

SECTION BB-BB

SECTION CC-CC

SECTION DD-DD

SECTION EE-EE

SECTION FF-FF

SECTION GG-GG

SECTION HH-HH



PLAN

SECTION F-F

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION I-I

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

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SECTION P-P

SECTION Q-Q

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SECTION X-X

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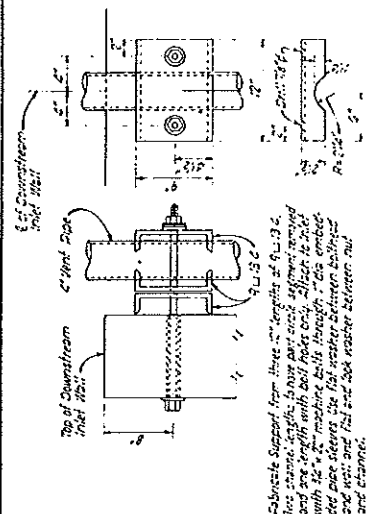
SECTION GG-GG

SECTION HH-HH

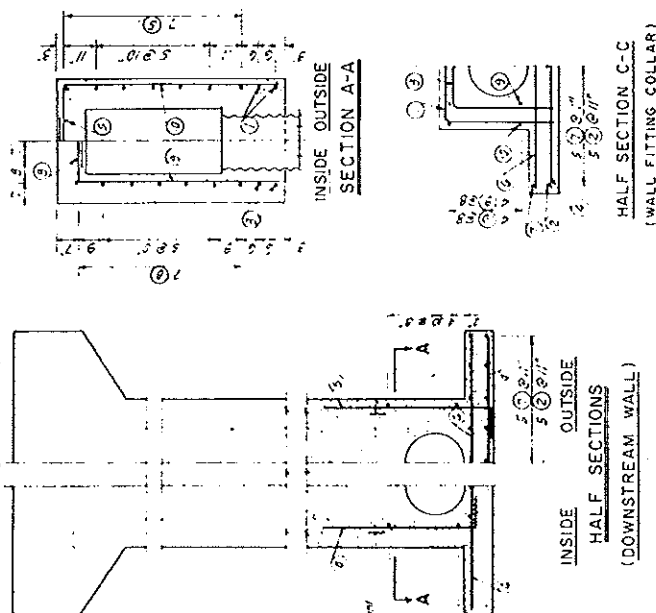
[illegible]

inlet = 48.4" • 1030.8 lbs
 sp. Spillage inlet • 5.75 cu Yds
 Note: Cut or defect steel
 to clear parts.

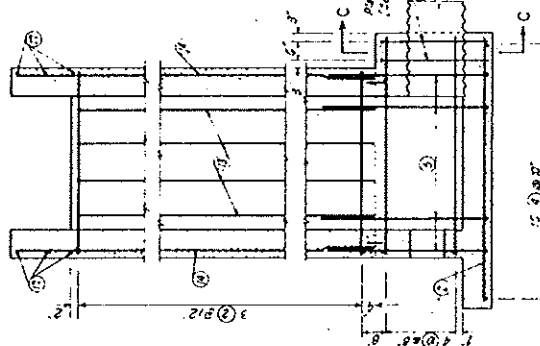
THESE ARE THE RESULTS OF THE
PROCEEDINGS OF THE



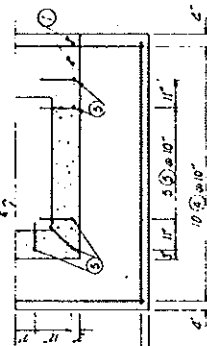
AIR VENT SUPPORT DETAIL



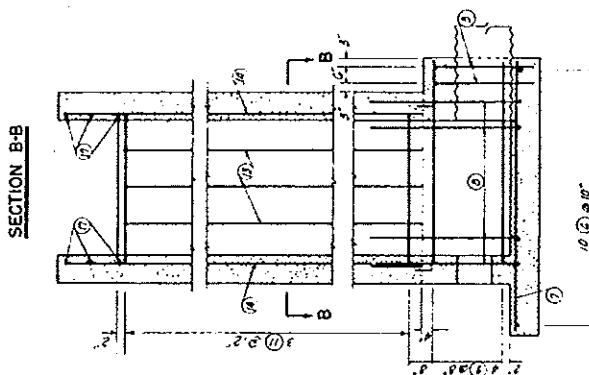
INSIDE OUTSIDE
HALF SECTIONS
DOWNSTREAM WALL



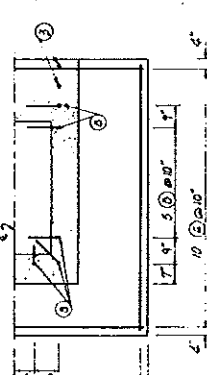
OUTSIDE



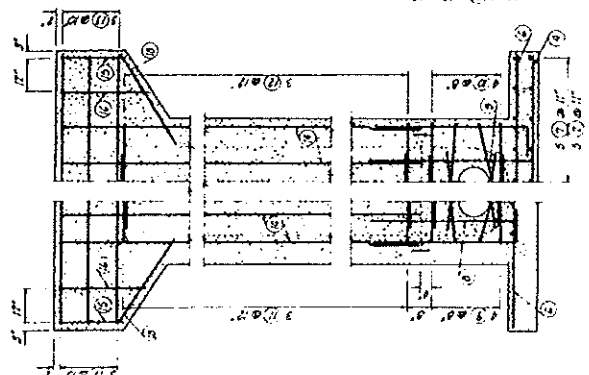
from bottom of Base
BOTTOM



INSIDE



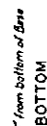
Sheet - from top of Base
TOP



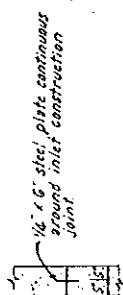
INSIDE OUTSIDE
HALF SECTIONS
(UPSTREAM WALL)



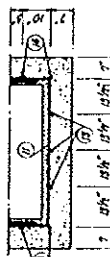
BASE SLAB



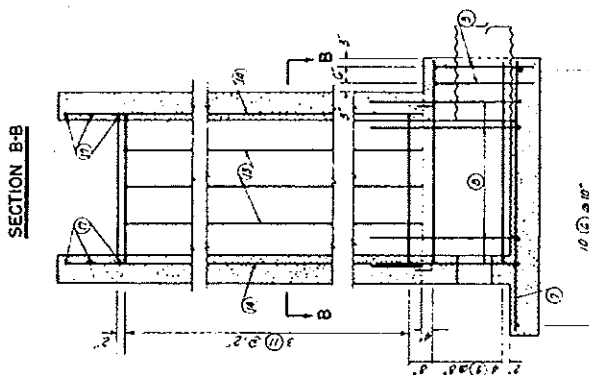
CONSTRUCTION JOINT PLATE DETAIL



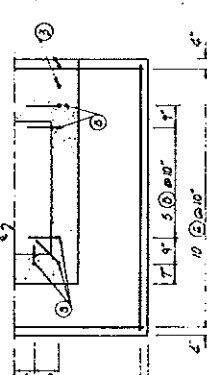
OUTSIDE



INSIDE



INSIDE



Sheet - from top of Base
TOP

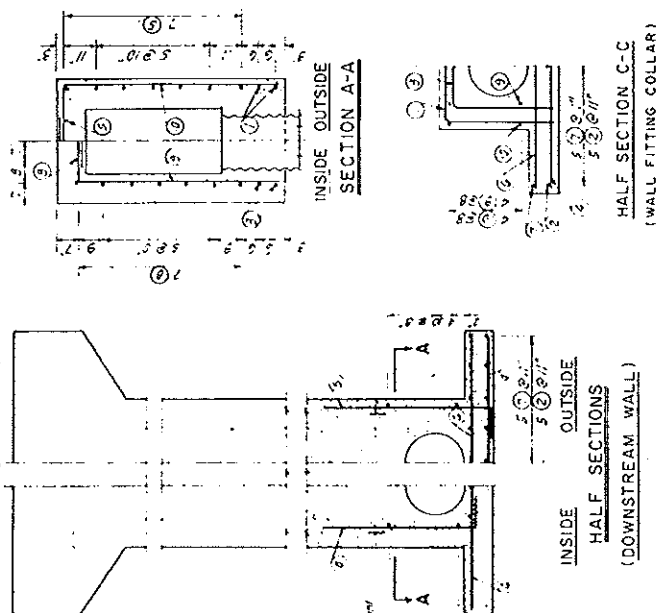
BASE SLAB

from bottom of Base
BOTTOM

OUTSIDE

INSIDE OUTSIDE
HALF SECTIONS
DOWNSTREAM WALL

INSIDE OUTSIDE
SECTION A-A



HALF SECTION C-C
(WALL FITTING COLLAR)

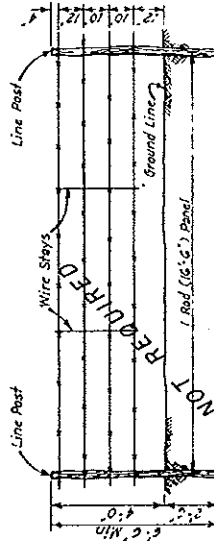
Note: All steel shapes have a minimum of 2" cover from exposed surfaces unless otherwise specified.

As Built from
Copyright 11/15/66
McPherson, Kansas

STEEL PLACEMENT - PRINCIPAL SPILLWAY INLET
FLOODWATER RETARDING STRUCTURE SITE NO. 88
CEDAR CREEK WATERSHED
OF THE
TRINITY RIVER WATERSHED - TEXAS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

[illegible]

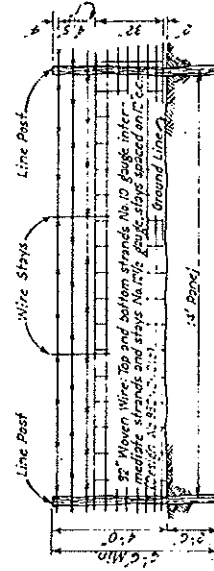


BARBED WIRE

Barbed wire to be 14 1/2 ga. galv. double strand barbed wire with 14 ga. point bars at 4 ft. Staples to be 9 ga. galv. 1 1/2" minimum length for bars & 3" for corner posts and 1 1/2" minimum length for bars & 3" for corner posts and 1 1/2" minimum length for bars & 3" for corner posts.

All pipe shall be standard weight, galvanized, and shall conform to Federal Specification for pipe.

NOTE: Barbed wire and staples shall conform to Federal Specifications for barbed wire and staples.

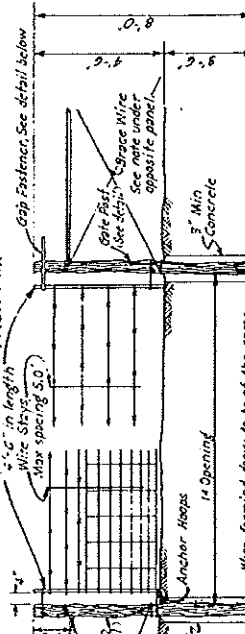


WOVEN WIRE

Minimum Post Size
Corner: 8 dia
Line Posts: 4 dia
Other: See specifications.

NOTE: Ash jumper is considered as meeting the requirements of the specifications for cedar posts. The requirements for cedar posts shall be as follows: Cedar posts shall be 6" dia or 4" dia and shall be 10' long.

Where woven wire fence is constructed with galvanized wire term, wire spacing shall be 12" on center and 18" on center at terminus end of term.

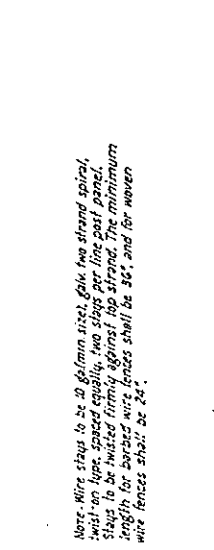


WIRE GAP PANEL

Wire forming gaps to be of the same pipe and spacing as the regular fence. Wire to be double wrapped around end stays and secured in place by drilling holes in bottom and top strands of wire, tying these strands with 14 gauge galvanized wire through the holes. Anchor stays to be two strands of 9 gauge wire staged at the back side of the gate post.

WIRE GAP PANEL

All changes in vertical alignment, such as crossings of stub diversions, line posts or pull panel posts that restrain upward pull of the fence strands shall be anchored by setting such posts in concrete, with a minimum 3" thickness of concrete at the ground surface and a minimum 3" thickness of concrete at the bottom of the post hole, as to provide the minimum 3" thickness of concrete at the bottom of the post hole. The engineer is required in addition, anchorage of fence wires to posts where there is a change in vertical alignment. Last produces upward or downward pull shall be accomplished with a special tie wire, in addition to stapling. A tie wire of a strand of 14 gauge galvanized wire shall be secured to the post with two wraps and the 3" above the top fence wire (where the pull is downward) or at the bottom fence wire (where the pull is upward) and shall be extended to each successive fence wire, securing each in position by the close drawing wraps. The engineer will designate the posts where this special fastening of the fence wires is required.



CORNER, END, OR PULL PANEL

Pull panel does not require concrete setting. Brace wires for Pull Panel will be two strands from top of each post to bottom of other. Brace wires for corner and end panels will be four strands from top of brace post to bottom of corner or end post.

NOTE: Chain used in gap fastener may be either straight link or twist link chain; material size from 1/4" to 1/2", link per foot from 10 to 16, with per foot from 0.1 to 0.2 lbs. Weldless wire must chain will not be permitted.



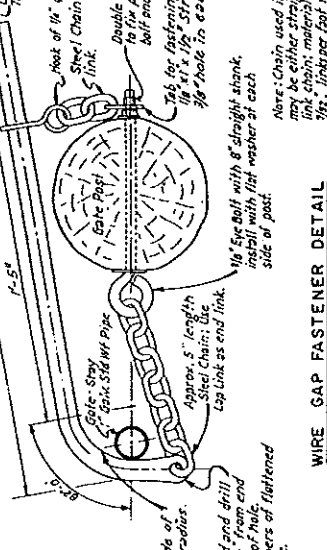
BRACE BUTT PLATE

Brace butt plate of plate steel 2" x 2" x 1/4" 3/4" dia hole drilled in center with nipple of 1" diameter steel pipe, 1 1/2" long, welded to plate; weld to be inside of plate with 1/4" gap between plate and steel pipe; no rivets.

NOTE: Chain used in gap fastener may be either straight link or twist link chain; material size from 1/4" to 1/2", link per foot from 10 to 16, with per foot from 0.1 to 0.2 lbs. Weldless wire must chain will not be permitted.

BRACE BUTT PLATE

NOTE: Chain used in gap fastener may be either straight link or twist link chain; material size from 1/4" to 1/2", link per foot from 10 to 16, with per foot from 0.1 to 0.2 lbs. Weldless wire must chain will not be permitted.



WIRE GAP FASTENER DETAIL

NOTE: Chain used in gap fastener may be either straight link or twist link chain; material size from 1/4" to 1/2", link per foot from 10 to 16, with per foot from 0.1 to 0.2 lbs. Weldless wire must chain will not be permitted.

FENCE DETAILS

FLOODWATER RETARDING STRUCTURE SITE NO. 88	
CEDAR CREEK WATERSHED	
TRINITY RIVER WATERSHED - TEXAS	
U.S. DEPARTMENT OF AGRICULTURE	
SOIL CONSERVATION SERVICE	
Drawn by	J.K.S.
Checked by	J.K.S.
Scale	1" = 10'
Sheet No.	5-60
Project No.	4-E-21642