

PART V

DRAWINGS

Plum Creek Watershed – REHABILITATION
Floodwater Retarding Structure Site 10
Hays County, Texas

Drawing No. TX-EN-0740
(Cover page + 45 sheets)

PLUM CREEK WATERSHED

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION HAYS COUNTY, TEXAS

DRAINAGE AREA 1,192.2 ACRES
TOTAL STORAGE 840.8 AC. FT.
HEIGHT OF DAM 36.2 FEET

SPONSORED BY

CALDWELL-TRAVIS SOIL AND WATER CONSERVATION DISTRICT
HAYS COUNTY SOIL AND WATER CONSERVATION DISTRICT
AND
PLUM CREEK CONSERVATION DISTRICT

COOPERATING WITH

NATURAL RESOURCES CONSERVATION SERVICE
OF THE
U.S. DEPARTMENT OF AGRICULTURE

2021

CONSTRUCTION DRAWINGS APPROVED
ENGINEERING JOB CLASS VII.



M&E CONSULTANTS
Soil & Water Engineering Solutions
F-4324



B. Trent Street
B. TRENT STREET
TEXAS REG. P.E. NO. 61421

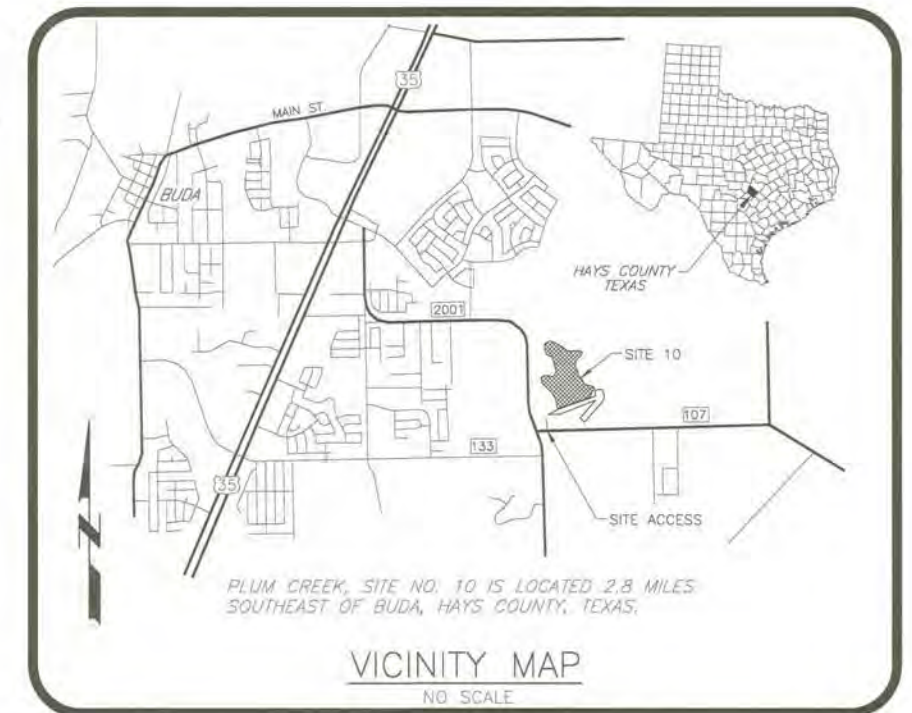
R. R. Sula
STATE CONSERVATION ENGINEER N.R.C.S.
TEMPLE, TEXAS

2/3/2021

DATE

2/3/2021

DATE



PLUM CREEK, SITE NO. 10 IS LOCATED 2.8 MILES
SOUTHEAST OF BUDA, HAYS COUNTY, TEXAS.

VICINITY MAP
NO SCALE

DRAWING NO. FN: PC10_COVER.dwg
TX-EN-0740

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CONSTRUCTION NOTES:

1. PRIOR TO PLACING EARTHFILL, THE APPROVED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 4" TO FACILITATE BONDING OF THE FILL TO THE UNDERLYING SUBGRADE.
2. EARTHFILL SHALL NOT BE PLACED UNTIL THE FOUNDATION HAS BEEN APPROVED BY THE ENGINEER.
3. VERTICAL SLOPES SHALL BE SHAPED TO NO STEEPER THAN 1.5:1 - TYPICAL ALL LOCATIONS.

GENERAL NOTES:

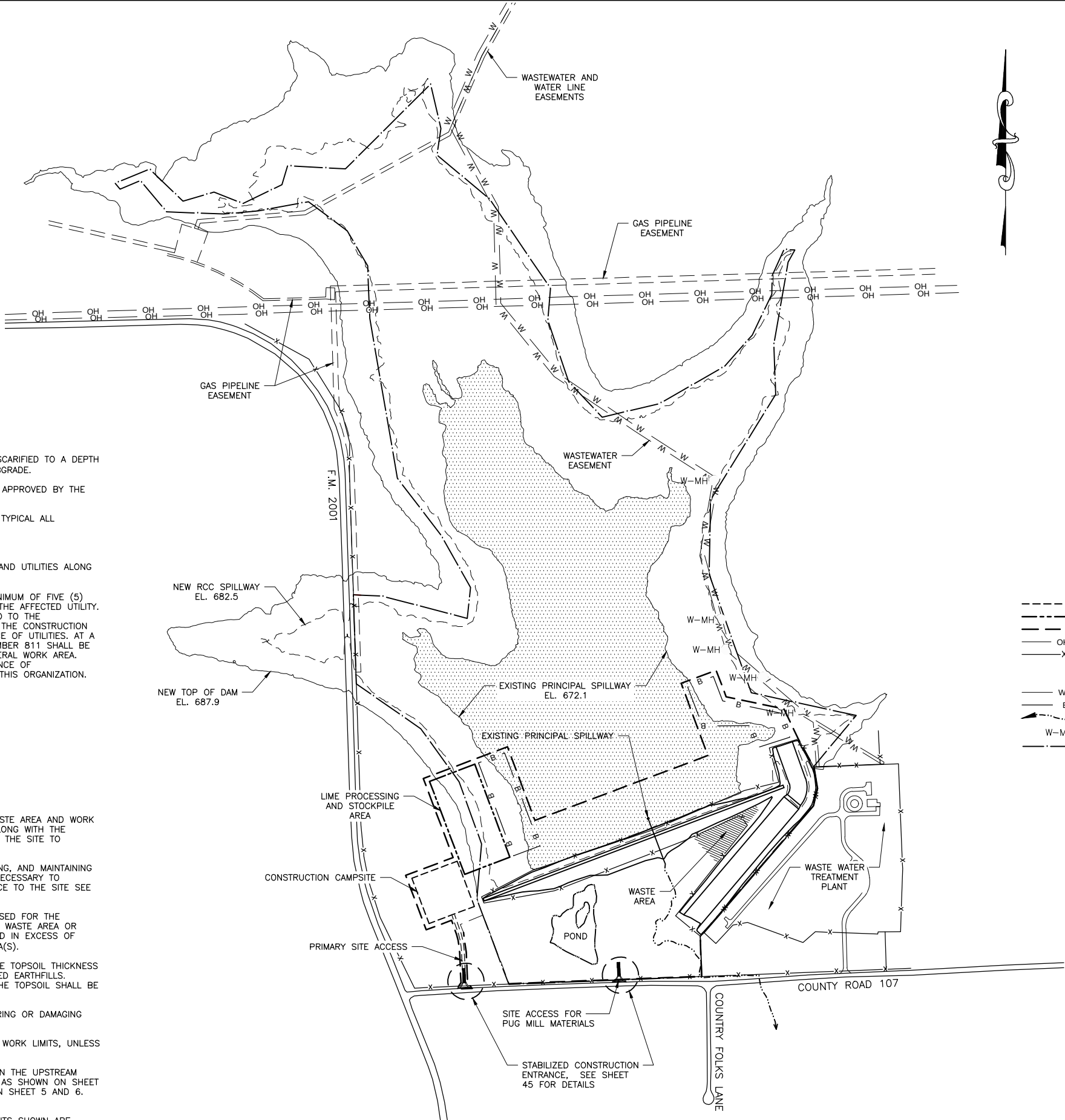
1. THE CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO IMPROVEMENTS AND UTILITIES ALONG THE ACCESS ROUTE AND AT OR NEAR THE WORKSITE.
2. THE CONTRACTOR SHALL NOTIFY THE OWNERS OF ALL UTILITIES A MINIMUM OF FIVE (5) DAY IN ADVANCE OF INTENT TO PERFORM WORK IN THE VICINITY OF THE AFFECTED UTILITY. THE NOTICE SHALL BE IN WRITING AND A COPY SHALL BE FURNISHED TO THE CONTRACTING OFFICER. UTILITIES MAY EXIST AND NOT BE SHOWN ON THE CONSTRUCTION DRAWINGS. THE SITE SHALL BE CAREFULLY SCRUTINIZED FOR EVIDENCE OF UTILITIES. AT A MINIMUM, PRIOR TO ANY GROUND DISTURBANCE, THE TELEPHONE NUMBER 811 SHALL BE CALLED TO ASCERTAIN IF UNDERGROUND UTILITIES EXIST IN THE GENERAL WORK AREA. CALLING THIS TELEPHONE NUMBER WILL ONLY ASCERTAIN THE EXISTENCE OF UNDERGROUND UTILITIES OWNED BY COMPANIES THAT SUBSCRIBE TO THIS ORGANIZATION. THERE MAY BE OTHER UNDERGROUND UTILITIES IN THE WORK AREA.

CALL BEFORE YOU DIG!

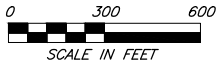
 **TEXAS 811**
PARTICIPANTS REQUEST
48 HOURS NOTICE BEFORE YOU DIG,
DRILL, OR BLAST - STOP AND CALL
Know what's below.
Call before you dig.
811

THE LONE STAR
NOTIFICATION COMPANY
AT 1-800-669-8344

3. THE LOCATIONS OF THE CAMPSITE, SITE ACCESS, BORROW AREAS, WASTE AREA AND WORK LIMITS SHOWN ARE APPROXIMATE. THE FINAL LOCATIONS OF THESE ALONG WITH THE STOCKPILE AREAS WILL BE DESIGNATED AT THE TIME OF SHOWING OF THE SITE TO PROSPECTIVE BIDDERS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL BARRICADES, WARNING SIGNS, TRAFFIC CONTROL DEVICES, ETC. NECESSARY TO CONTROL TRAFFIC AND PROVIDE FOR PUBLIC SAFETY AT THE ENTRANCE TO THE SITE SEE CONSTRUCTION SPECIFICATION 9.
5. SUITABLE MATERIAL FROM EXCAVATIONS SHALL BE PROCESSED AND USED FOR THE EARTHFILL MATERIALS. UNSUITABLE MATERIALS SHALL BE PLACED IN A WASTE AREA OR OTHER AREAS APPROVED BY THE ENGINEER. EARTH MATERIALS NEEDED IN EXCESS OF REQUIRED EXCAVATIONS SHALL BE OBTAINED FROM THE BORROW AREA(S).
6. TOPSOIL SHALL BE PLACED ON FILL AND EXPOSED AREAS ONLY. THE TOPSOIL THICKNESS SHALL BE 6 INCHES ON EARTHFILLS AND 12 INCHES ON LIME TREATED EARTHFILLS. EARTHFILL AREAS WHERE THE TOTAL FILL IS LESS THAN 6 INCHES, THE TOPSOIL SHALL BE THE THICKNESS OF THE FILL.
7. ROCK RIPRAP SHALL BE PLACED IN A MANNER TO PREVENT PUNCTURING OR DAMAGING THE GEOTEXTILE BENEATH THE ROCK.
8. CONSTRUCTION ACTIVITIES SHALL NOT OCCUR OUTSIDE THE DESIGNED WORK LIMITS, UNLESS OTHERWISE AUTHORIZED..
9. REMOVAL OR STRIPPING OF SOIL MATERIALS SHALL BE PERFORMED ON THE UPSTREAM EMBANKMENT SLOPE AND THE AUXILIARY SPILLWAY SIDE SLOPE AREA AS SHOWN ON SHEET 2. THE LIMITS OF THE AUXILIARY SPILLWAY REMOVAL ARE SHOWN ON SHEET 5 AND 6. SEE CONSTRUCTION SPECIFICATION 420.
10. THE FINAL GRADES AND ELEVATIONS FOR ALL WORKS OF IMPROVEMENTS SHOWN ARE APPROXIMATE AND SHALL BE ADJUSTED IN THE FIELD BY THE ENGINEER TO BEST FIT THE TOPOGRAPHY OF THE SITE.
11. THE FENCE THAT CROSSES THE EMBANKMENT AT APPROX. STA. 9+65 SHALL BE REMOVED, SALVAGED AND RECONSTRUCTED. THE LIMITS OF FENCE REMOVAL ARE APPROX. 150'. THE ACTUAL LIMITS OF REMOVAL SHALL BE DESIGNATED AT THE SHOWING OF THE SITE TO PROSPECTIVE BIDDERS. SEE CONSTRUCTION SPECIFICATION 8.



GENERAL PLAN OF RESERVOIR



STORAGE TABLE

Elevation	Surface Acres	Storage	
		Acre Feet	Inches
652.0	0.0	0.0	0.00
654.0	0.5	0.46	0.00
656.0	1.2	2.12	0.02
658.0	5.1	8.38	0.08
660.0	9.1	22.54	0.23
662.0	11.6	43.20	0.43
664.0	14.8	69.57	0.70
666.0	19.1	103.50	1.04
668.0	26.0	148.60	1.50
670.0	35.4	209.92	2.11
672.0	49.3	294.55	2.97
672.2	50.6	304.54	3.07
674.0	61.4	405.29	4.08
676.0	72.7	539.36	5.43
678.0	86.3	698.38	7.03
680.0	100.7	885.35	8.91
682.0	117.8	1102.76	11.10
682.1	119.4	1114.56	11.22
684.0	136.6	1358.20	13.67
686.0	156.3	1651.63	16.63
687.9	175.5	1966.83	19.80
688.0	176.6	1984.44	19.98

Top of Dam (Effective) Elev.	687.9
Auxiliary Spillway Crest Elev.	682.1
Principal Spillway Crest Elev.	672.2
Sediment Storage, Acre Feet	306.0
Floodwater Storage, Acre Feet	840.8
Drainage Area, Acres	1,192.2
Auxiliary Spillway Capacity At El. 687.9 (CFS)	5382.0
Principal Spillway Discharge At El. 682.1 (CFS)	107.4

LEGEND

- CONSTRUCTION CAMPSITE

----- APPROX. LIMITS OF LIME PROCESSING & STOCKPILE AREA

----- APPROX. LIMITS OF WORK AREA

OH ----- OVERHEAD POWER LINES

-X- ----- EXISTING FENCE
- W ----- WASTEWATER EASEMENT LINES

B ----- BORROW AREA

----- STREAM CHANNEL

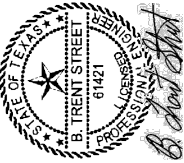
W-MH ----- WASTEWATER MANHOLE

----- DAM PROPERTY BOUNDARY

PRINCIPAL SPILLWAY CREST	EXISTING AS-BUILTS (1958)	NRCS 2017 GPS SURVEY (OPUS CORRECTED)	Δ
	671.9	672.16	0.26

NOTE:
THE PERMANENT WATER LEVEL FOR THIS DESIGN AND AS SHOWN ON THESE CONSTRUCTION DRAWINGS IS 672.1 AND IS 0.06 FEET LOWER THAN THE CURRENT PERMANENT WATER LEVEL.

2/3/2021





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GENERAL PLAN
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

United States
Department of
Agriculture



Natural Resources
Conservation Service

DRAWING NO.
TX-EN-0740

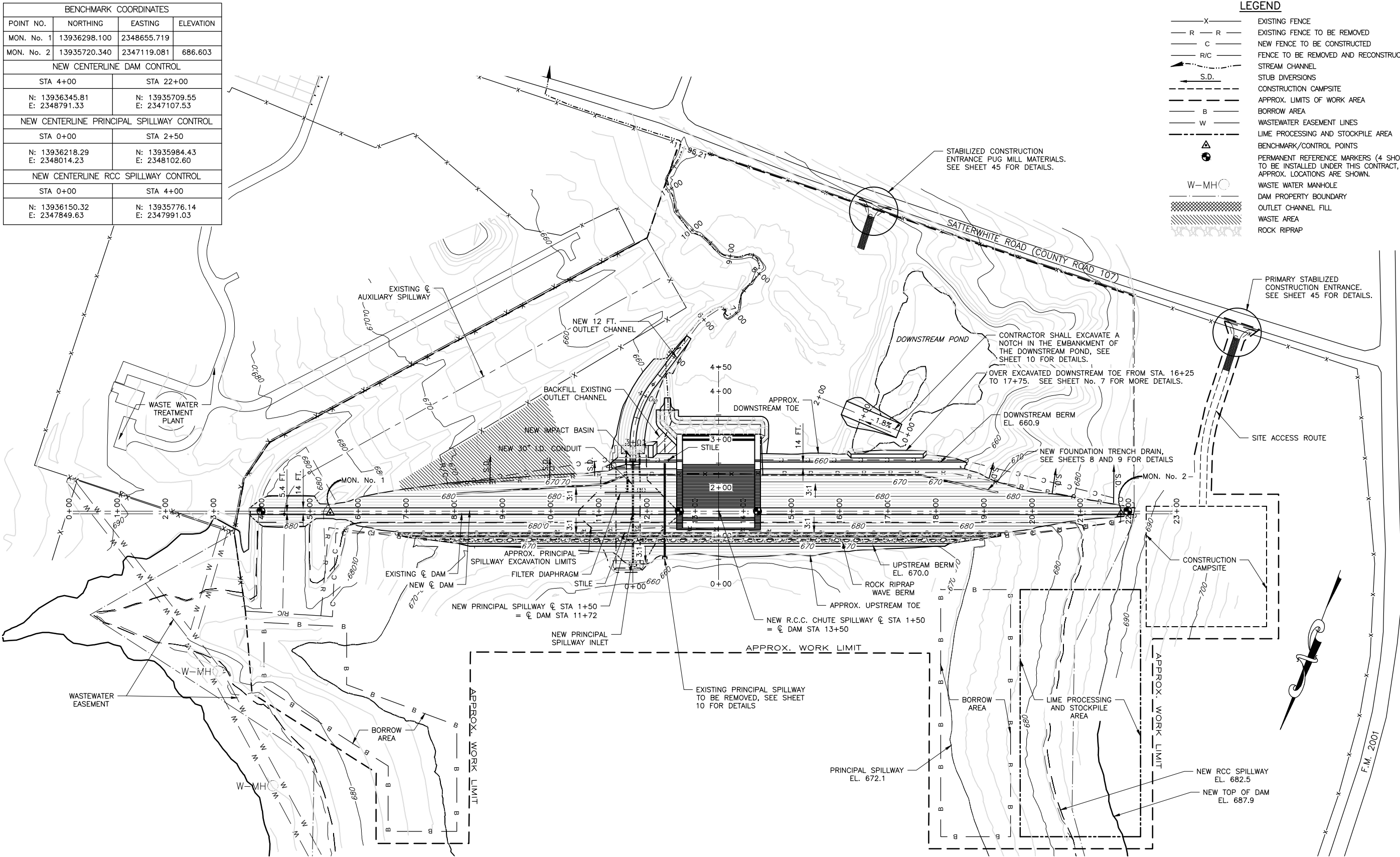
SHEET NO.

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REVISIONS		
DATE	APPROVED	TITLE

BENCHMARK COORDINATES			
POINT NO.	NORTHING	EASTING	ELEVATION
MON. No. 1	13936298.100	2348655.719	
MON. No. 2	13935720.340	2347119.081	686.603
NEW CENTERLINE DAM CONTROL			
STA 4+00		STA 22+00	
N: 13936345.81 E: 2348791.33		N: 13935709.55 E: 2347107.53	
NEW CENTERLINE PRINCIPAL SPILLWAY CONTROL			
STA 0+00		STA 2+50	
N: 13936218.29 E: 2348014.23		N: 13935984.43 E: 2348102.60	
NEW CENTERLINE RCC SPILLWAY CONTROL			
STA 0+00		STA 4+00	
N: 13936150.32 E: 2347849.63		N: 13935776.14 E: 2347991.03	



PLAN OF EMBANKMENT AND SPILLWAYS



STUB DIVERSIONS (S.D.) SHALL HAVE 13 FT. MINIMUM BASE WIDTH, 3:1 SIDE SLOPES, AND AN 18" EFFECTIVE HEIGHT. EFFECTIVE HEIGHT MAY BE SECURED BY GRADING A CHANNEL ACROSS HIGH POINTS TO REDUCE THE HEIGHT OF FILL REQUIRED IN LOW AREAS. WHERE A CHANNEL SECTION IS REQUIRED, THE MINIMUM BOTTOM WIDTH OF THE CHANNEL SHALL BE 12 FT. (SEE CONSTRUCTION SPECIFICATION 27.)

THE DIVERSIONS WILL VARY IN LENGTH WITH THE MOST UP SLOPE DIVERSION BEING LONGER THAN THE NEXT ONE DOWN SLOPE TO PREVENT THE DOWN SLOPE DIVERSION FROM CATCHING WATER FROM THE UP SLOPE DIVERSIONS.

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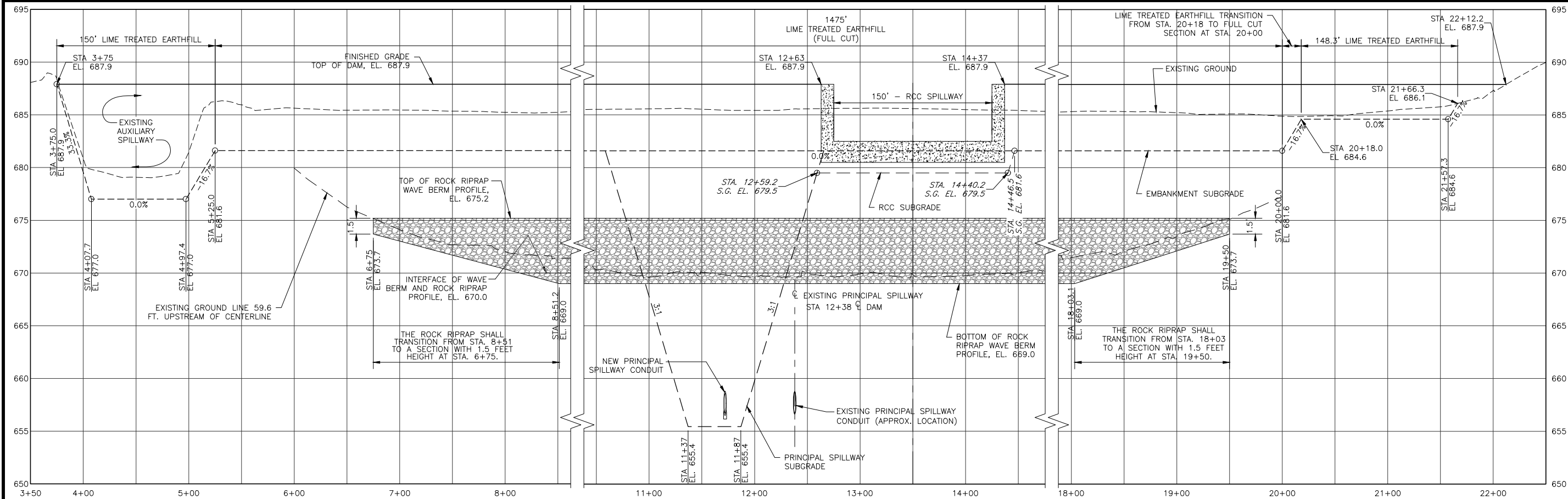
PLAN OF EMBANKMENT AND SPILLWAYS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
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HAYS COUNTY, TEXAS

United States
Department of
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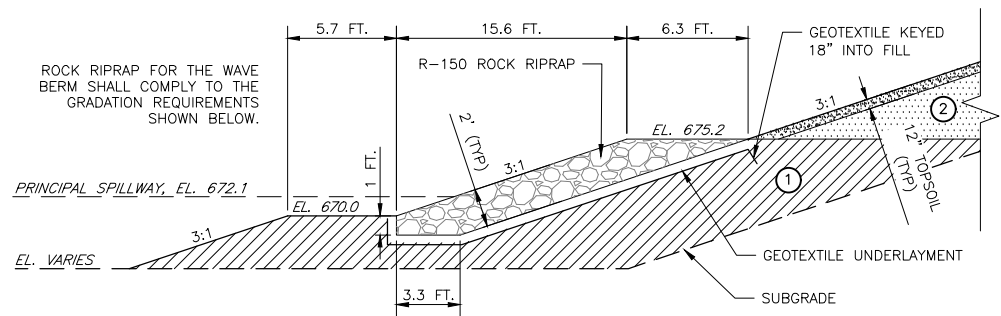
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Conservation Service

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PROFILE — EMBANKMENT

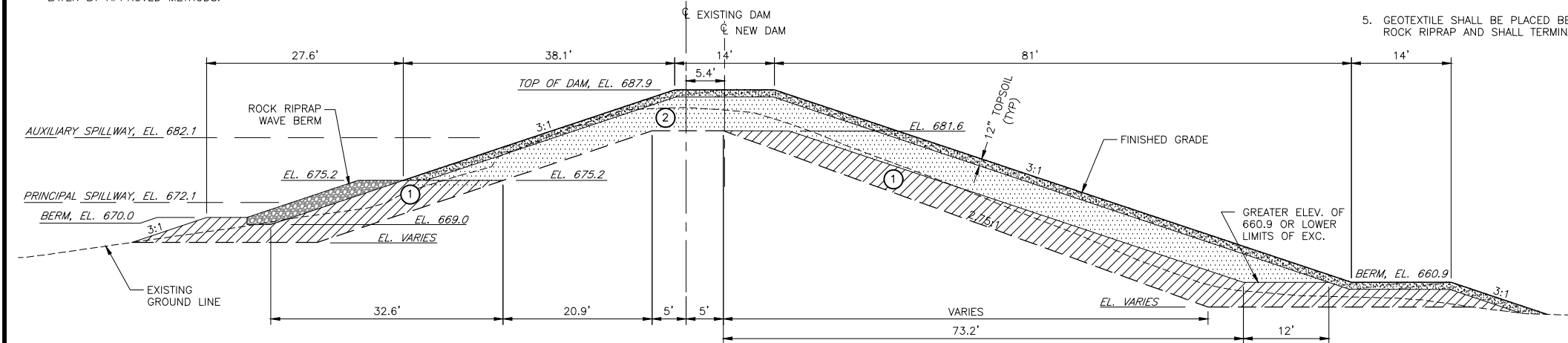


TYPICAL SECTION — WAVE BERM

(NOT TO SCALE)

- MATERIALS FOR ALL TYPES OF EARTHFILLS AND BACKFILLS SHALL BE OBTAINED FROM REQUIRED SITE EXCAVATIONS. ADDITIONAL MATERIAL, IF REQUIRED, WILL COME FROM THE APPROVED BORROW AREAS DESIGNATED ON THE DRAWINGS.
- THE SOIL MATERIALS EXCAVATED FROM THE EMBANKMENT (FROM ANY GIVEN LOCATION) SHALL BE REPLACED WITH LIKE MATERIALS.
- EARTHFILLS AND BACKFILLS TO BE COMPACTED BY HAND TAMPING OR WITH MANUALLY DIRECTED POWER TAMPERS OR PLATE VIBRATORS SHALL BE PLACED IN LAYERS NOT EXCEEDING FOUR INCHES IN THICKNESS BEFORE COMPACTION. MAXIMUM ALLOWABLE PARTICLE SIZE FOR SUCH MATERIAL SHALL BE TWO INCHES. EACH LAYER SHALL BE CAREFULLY BONDED TO THE PRECEDING LAYER BY APPROVED METHODS.

- ROCK RIPRAP FOR THE WAVE BERM SHALL MEET THE GRADATION REQUIREMENTS OF ASTM D6092 FOR R-150 ROCK RIPRAP. IT IS ESTIMATED THAT 3,095 SQUARE YARDS OF GEOTEXTILE UNDERLAYMENT AND 2,508 TONS OF R-150 ROCK RIPRAP WILL BE REQUIRED TO CONSTRUCT THE WAVE BERM ARMORING.
- ALL ROCK RIPRAP SHALL COMPLY WITH CONSTRUCTION SPECIFICATION 61, AND MATERIAL SPECIFICATION 523.
- SPALLS AND ROCK DUST THAT PASS A 3" SIEVE SHALL CONSIST OF LESS THAN 5 PERCENT BY WEIGHT.
- ROCK PLACED AGAINST CONCRETE WORKS SHALL BE PLACED CAREFULLY TO AVOID DAMAGE.
- GEOTEXTILE SHALL BE PLACED BETWEEN THE ROCK RIPRAP AND EARTHFILL. IT SHALL BE KEYED 18" INTO THE FILL AT THE TOP OF ROCK RIPRAP AND SHALL TERMINATE AT THE BERM ELEVATION AT THE MOST UPSTREAM EDGE OF THE ROCK RIPRAP.



TYPICAL SECTION — EMBANKMENT

(NOT TO SCALE)

LEGEND

	TOPSOIL
	COMPACTED EARTHFILL
	LIME TREATED EARTHFILL
	ROCK RIPRAP

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DATE	APPROVED	TITLE

2/3/2021

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DRAWN BY: _____

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DATE CHECKED: 10/8/2020

BTS

QMK

TPB

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PROFILE, TYPICAL SECTIONS AND MATERIALS PLACEMENT DATA

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN

HAYS COUNTY, TEXAS

United States Department of Agriculture

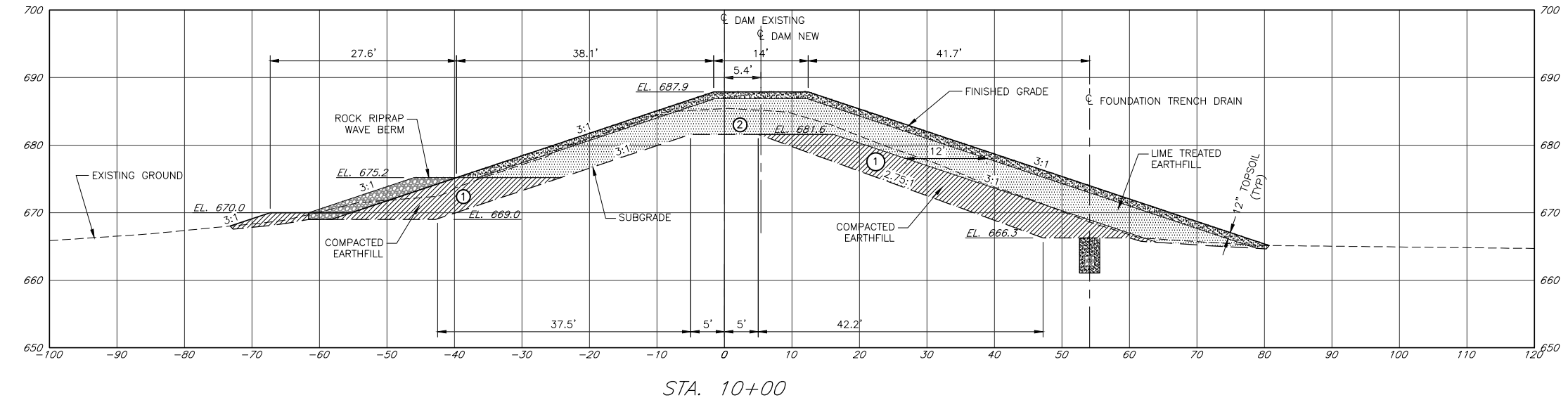
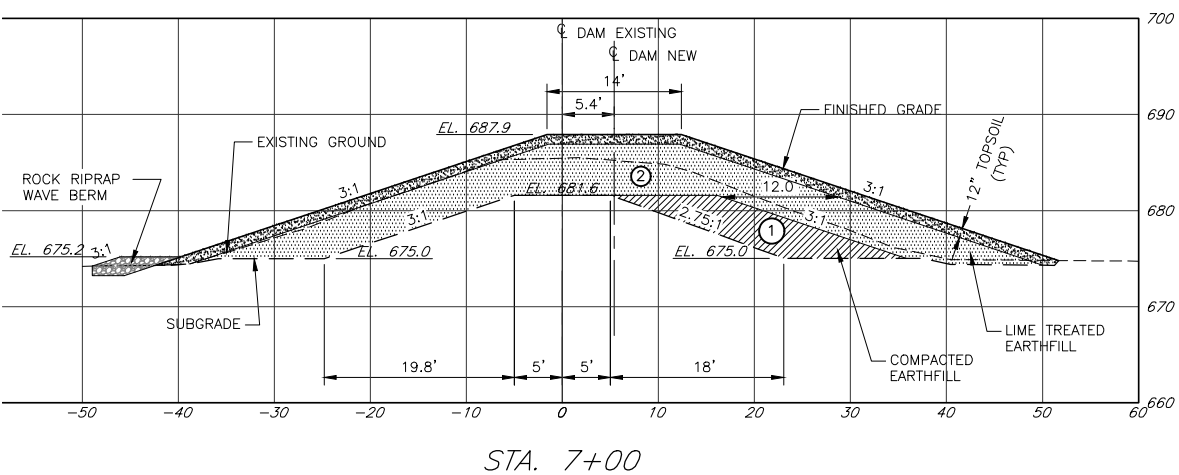
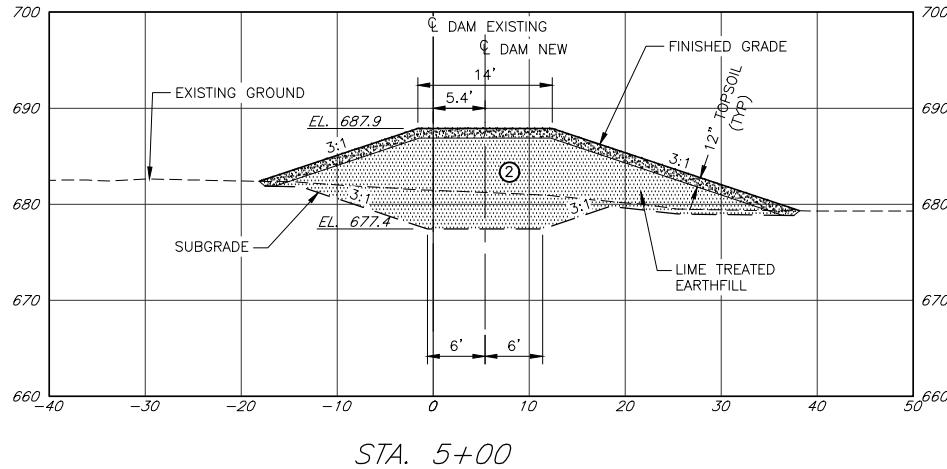
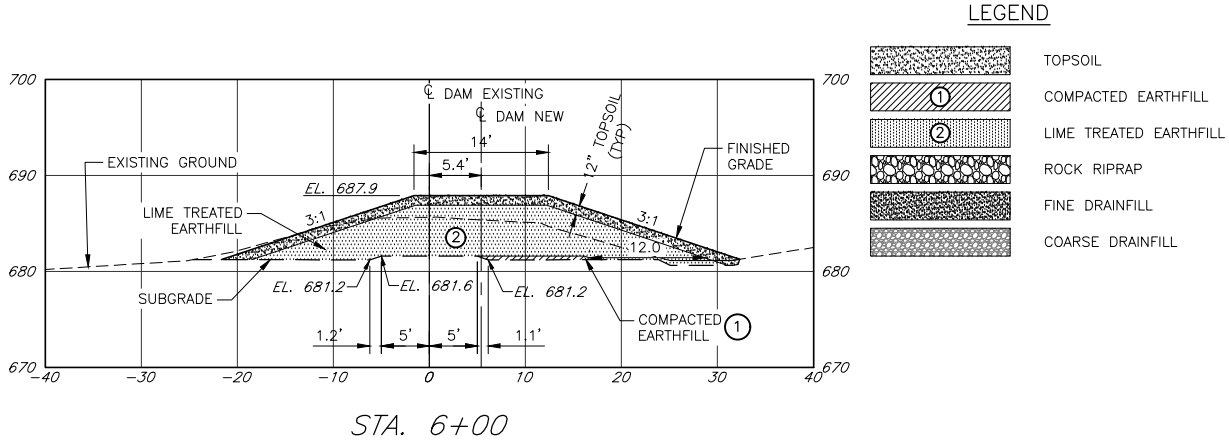
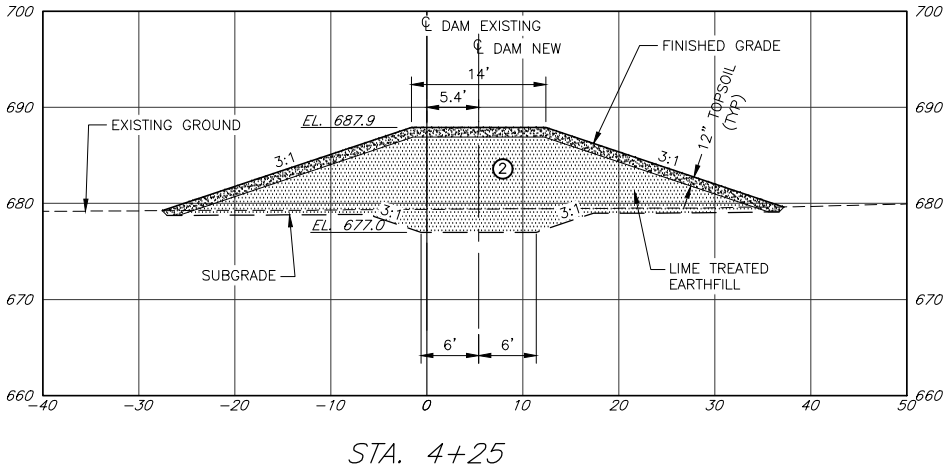
USDA

Natural Resources Conservation Service

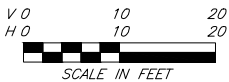
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OF	45

STARTING POINT FOR DOWNSTREAM EXCAVATION		
EXISTING CL STA.	OFFSET FROM CL	APPROX. ELEV.
6+00	13'	684.6
6+50	32'	677.8
7+00	39'	675.0
7+50	46'	672.9
8+00	50'	671.2
8+50	57'	669.9
9+00	56'	668.7
9+50	59'	667.4
10+00	67'	666.3
10+50	74'	664.6
11+00	75'	663.5
11+50	92'	660.1
12+00	105'	657.2
12+50	97'	657.1
13+00	93'	657.2
13+50	100'	657.3
14+00	96'	657.4
14+50	98'	657.5
15+00	99'	657.6
15+50	95'	658.1
16+00	102'	658.5
16+50	90'	658.7
17+00	89'	658.7
17+50	87'	659.0
18+00	81'	660.0
18+50	70'	663.0
19+00	57'	667.6
19+50	38'	673.3
20+00	27'	678.1
20+50	3'	684.6

THE DOWNSTREAM EXCAVATION STARTING POINTS SHALL BE STAKED BY THE CONTRACTOR. THE POINTS SHALL BE APPROVED BY THE ENGINEER BEFORE EXCAVATION IS STARTED. THE POINT MAY BE ADJUSTED BY THE ENGINEER TO BEST FIT THE EXISTING TOPOGRAPHY.



EMBANKMENT SECTIONS



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EMBANKMENT SECTIONS

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN

HAYS COUNTY, TEXAS

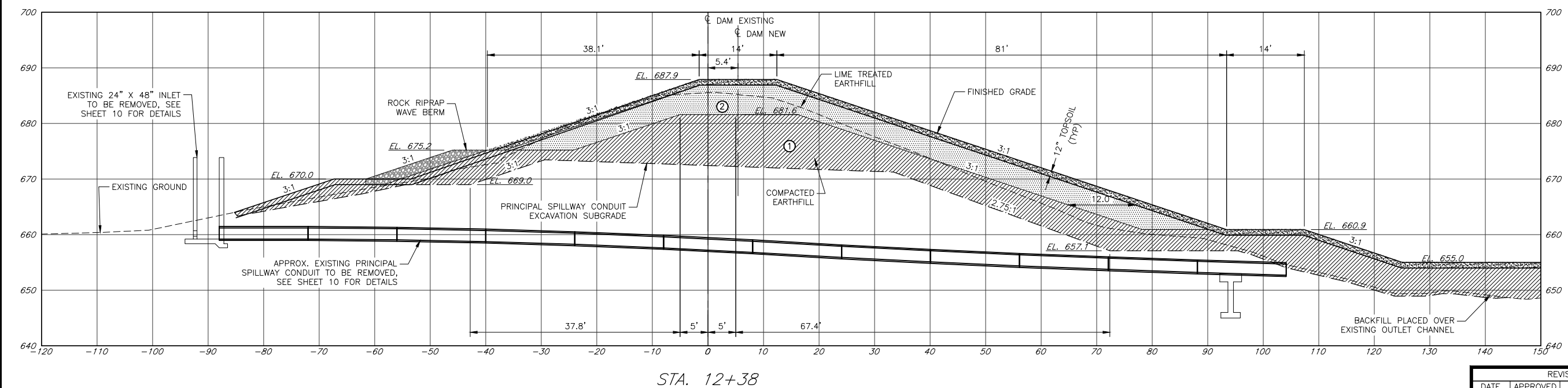
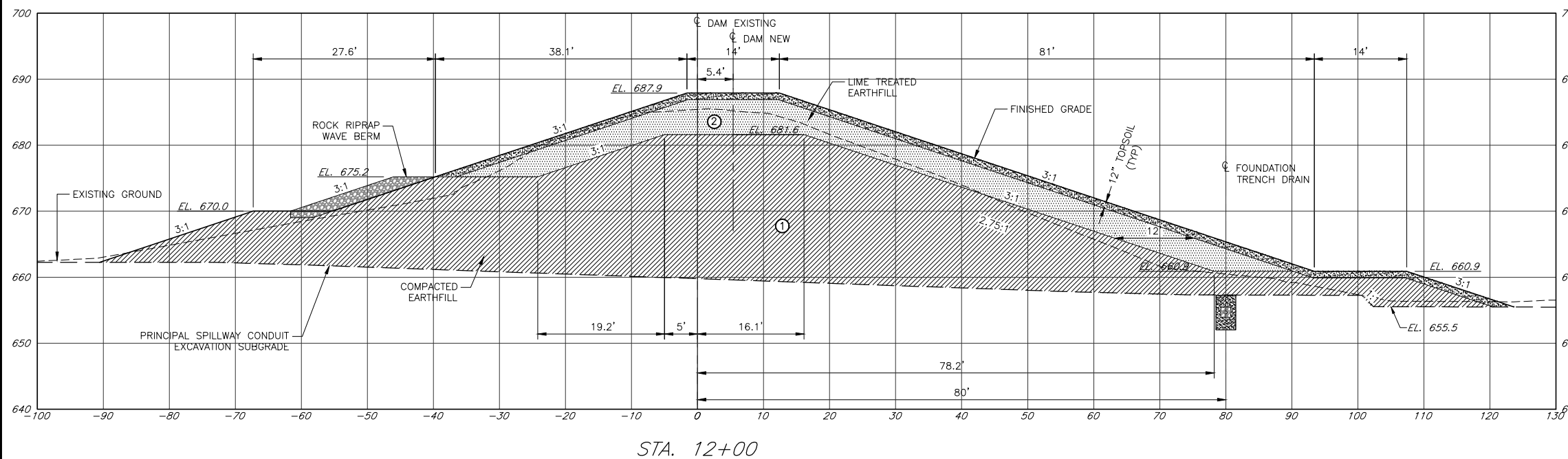
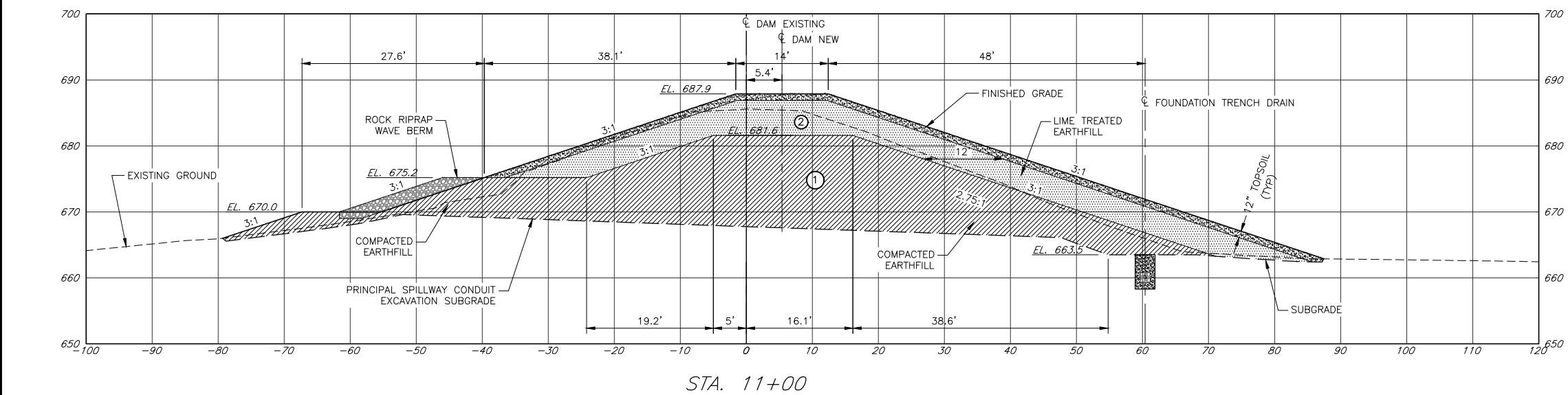
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STATE OF TEXAS
B. TRENT STREET
61421
PROFESSIONAL ENGINEER
LICENSE NO. 13553

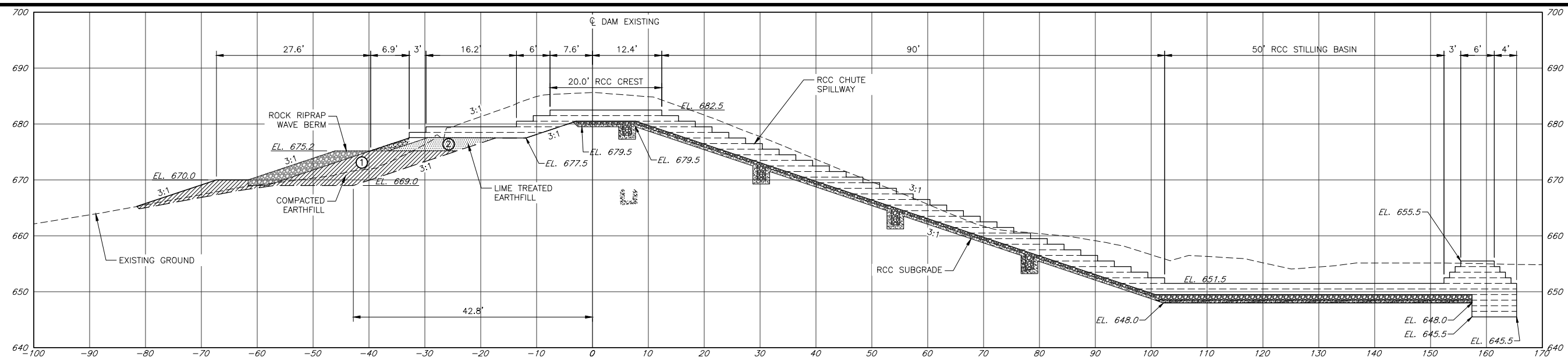
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B. Trent Street

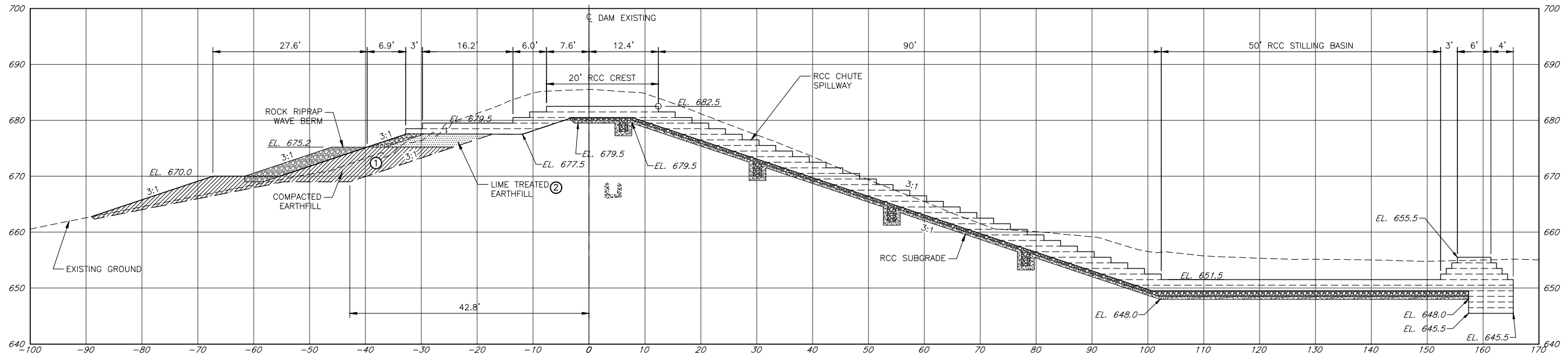
EMBANKMENT SECTIONS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

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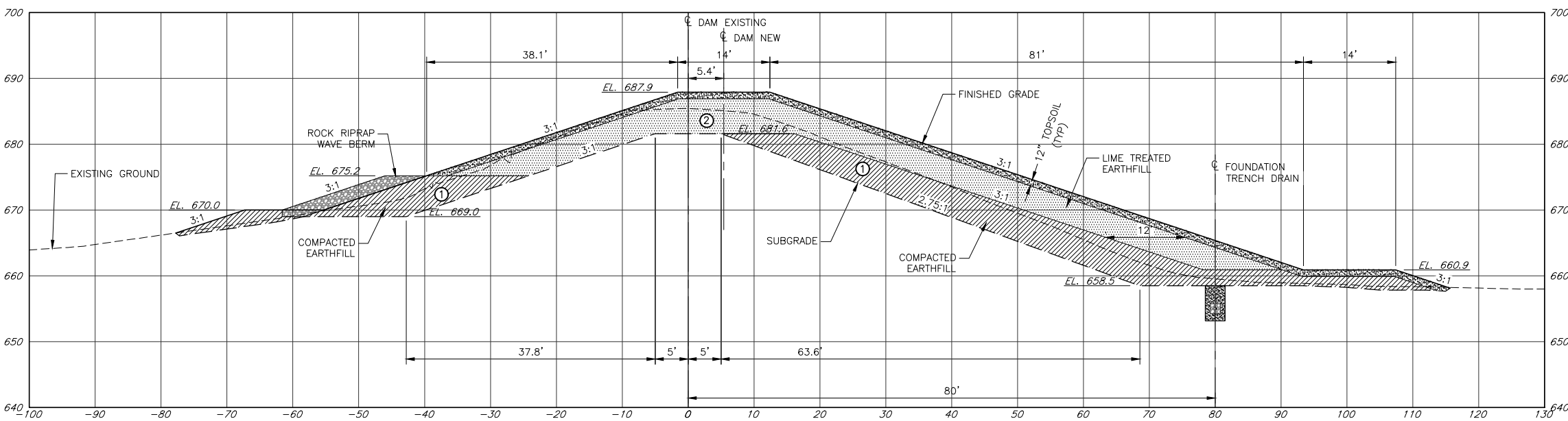
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STA. 13+00



STA. 14+00



STA. 16+00

LEGEND

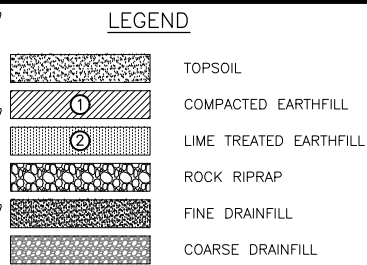
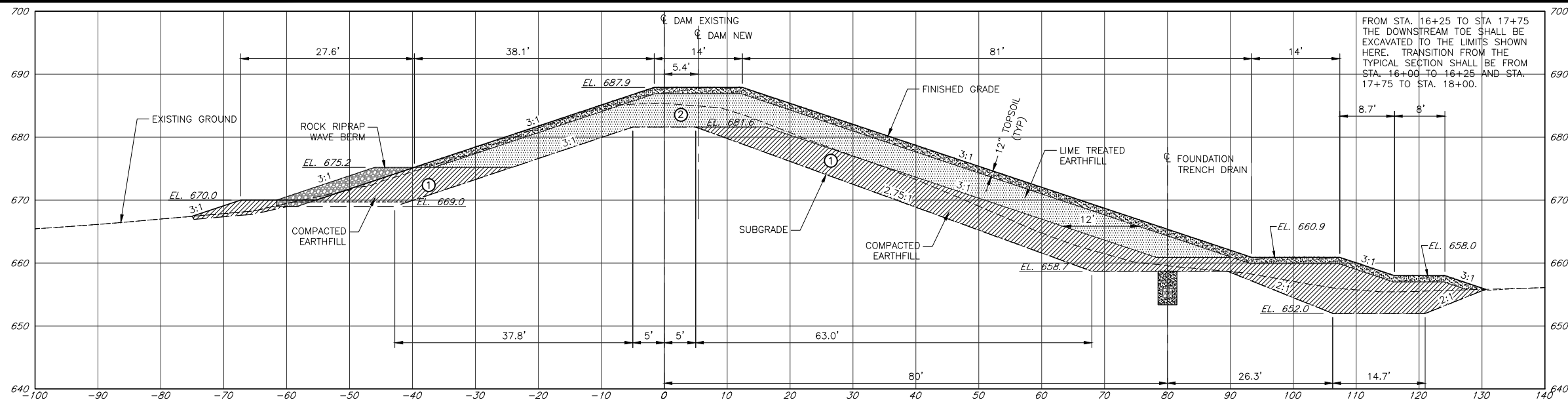
- TOPSOIL
- COMPACTED EARTHFILL
- LIME TREATED EARTHFILL
- ROCK RIPRAP
- FINE DRAINFILL
- COARSE DRAINFILL

EMBANKMENT SECTIONS

SCALE IN FEET

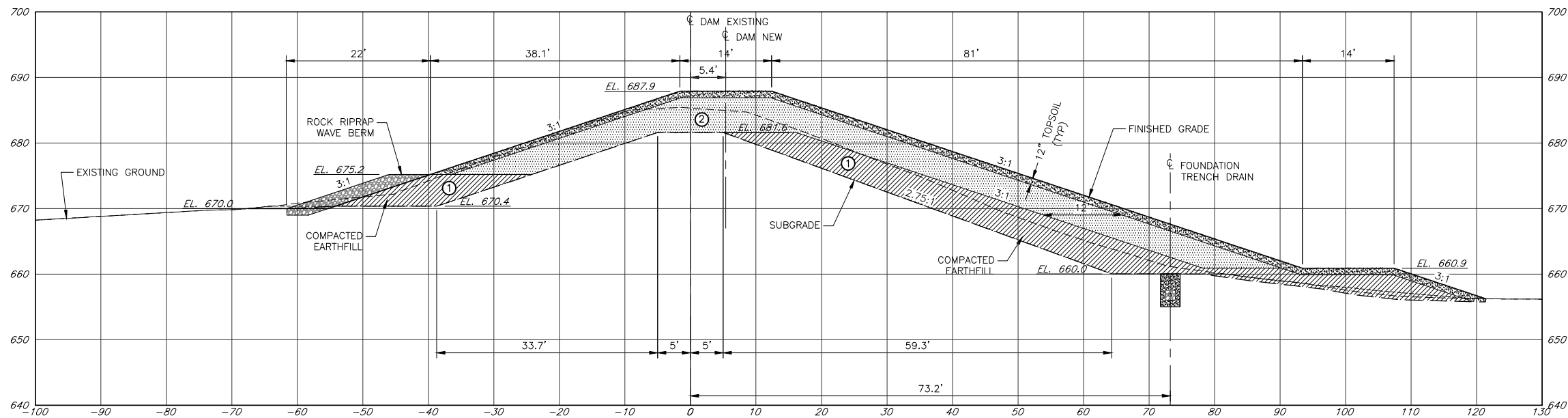
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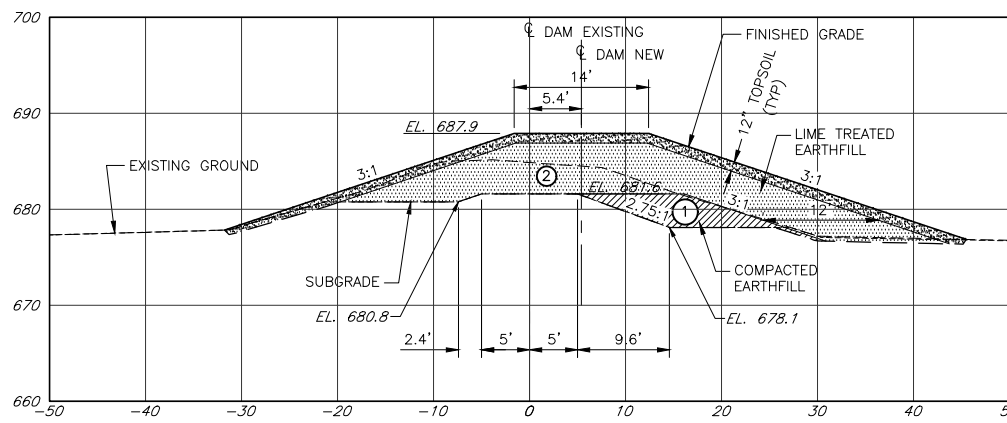


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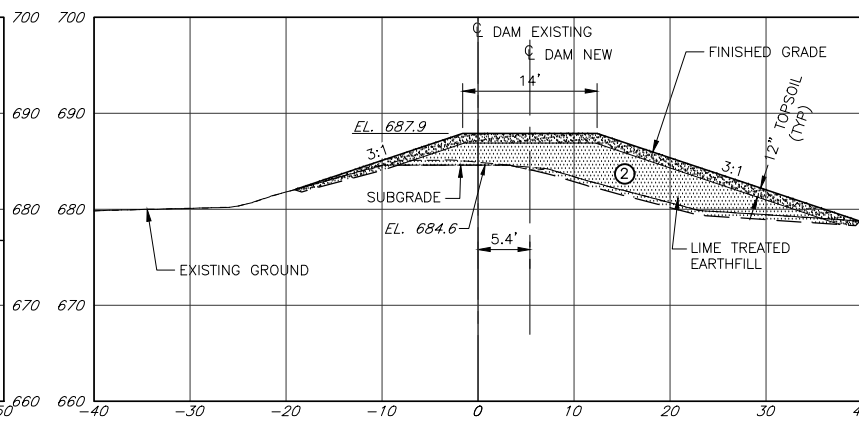
STA. 16+50



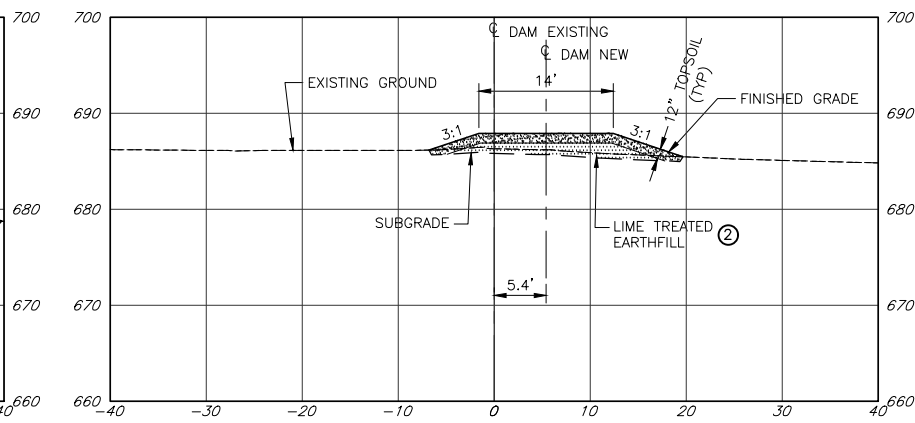
STA. 18+00



STA. 20+00



STA. 20+50



STA. 21+75

EMBANKMENT SECTIONS

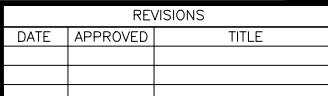
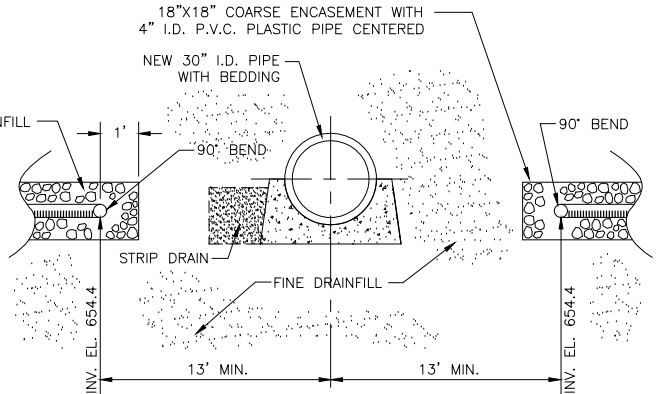


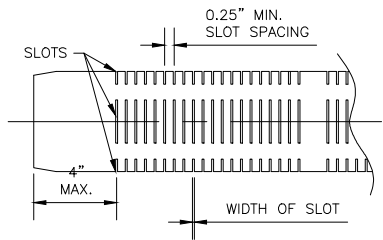
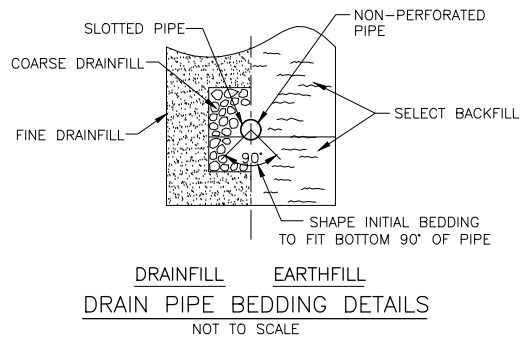
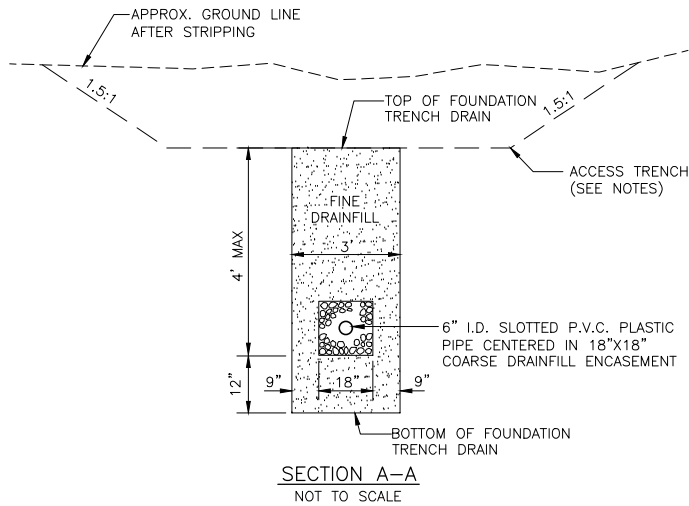
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DATE	APPROVED	TITLE

EMBANKMENT SECTIONS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



DRAWING NO.
TX-EN-0740
SHEET NO.
7
OF
45



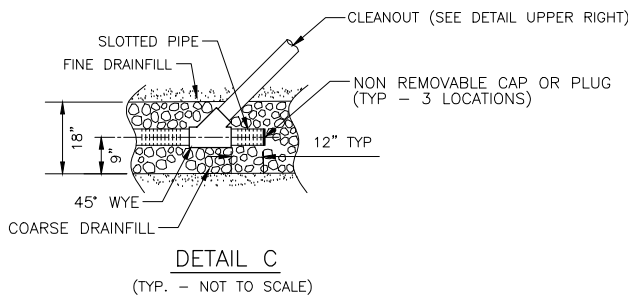


ALL P.V.C. PLASTIC PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 547 AND CONSTRUCTION SPECIFICATION 45.

SLOTTED P.V.C. PLASTIC PIPE DETAILS

SLOTTED P.V.C. PLASTIC PIPE SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THE MINIMUM REQUIREMENTS ARE AS FOLLOWS:

1. THE SLOT WIDTH SHALL NOT BE LESS THAN 0.12 OR GREATER THAN 0.15 INCHES.
2. SLOT SPACING SHALL BE 0.25 INCHES.
3. SLOTS SHALL BE PLACED IN NO MORE THAN FOUR (4) ROWS SYMMETRICALLY ABOUT THE PIPE CENTERLINE. THE SLOT SPACING BETWEEN EACH ROW SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
4. SLOTTED PIPE SHALL PROVIDE A MINIMUM ONE (1) SQ. IN. OF OPEN AREA PER FOOT OF PIPE.

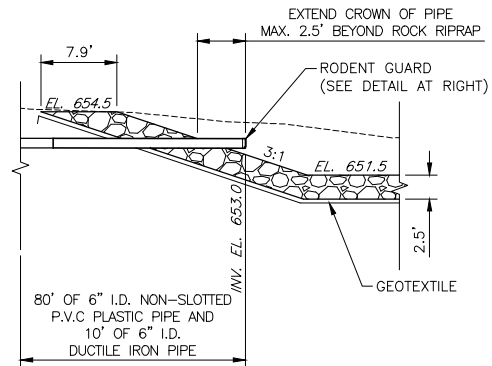


CONSTRUCTION NOTES:

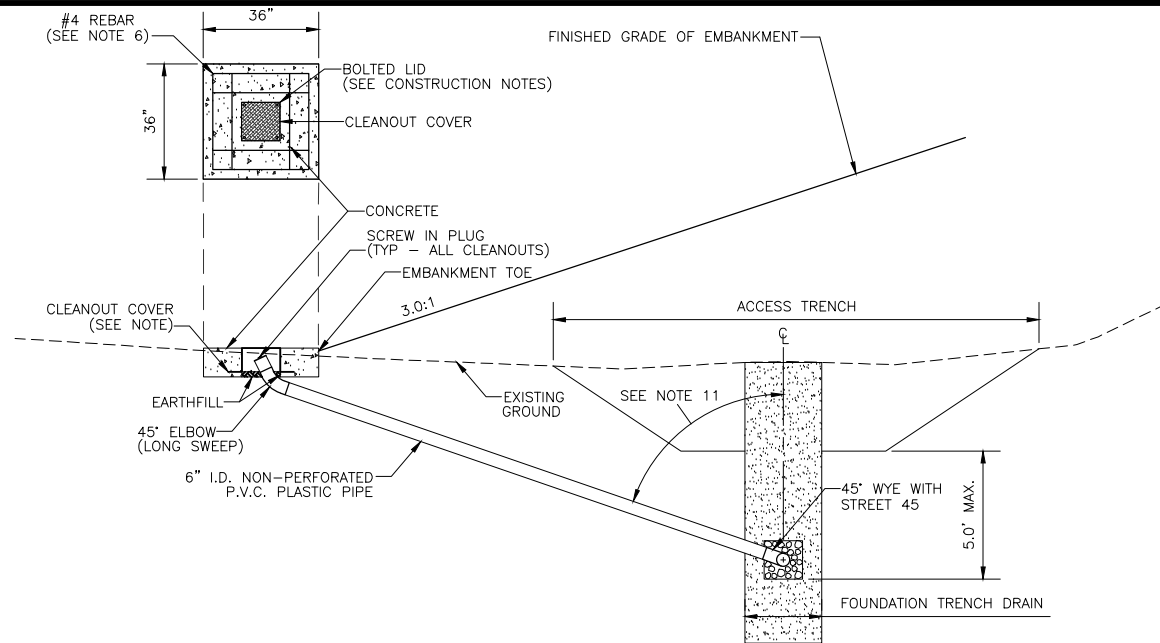
1. EXCAVATION FOR THE TRENCH DRAIN SHALL HAVE VERTICAL SIDES AND BE 3.0' WIDE AS SHOWN IN SECTION A-A. (SEE CONSTRUCTION SPECIFICATION 24)
2. AN ACCESS TRENCH SHALL BE EXCAVATED TO THE LIMIT SHOWN, OR AS STAKED BY THE ENGINEER, FOR THE INSTALLATION OF THE TRENCH DRAIN. THE ACCESS TRENCH SHALL HAVE 1.5:1 SIDE SLOPES AND MIN. 8' BOTTOM WIDTH. ADDITIONAL SHORING AND/OR TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE REQUIREMENTS IN ACCORDANCE WITH OSHA REGULATIONS (SEE CONSTRUCTION SPECIFICATION 21).
3. INITIAL BACKFILL OF THE ACCESS TRENCH AND FILL IMMEDIATELY ABOVE (2 FT. MINIMUM THICKNESS) AND ADJACENT TO THE TOP OF THE TRENCH DRAIN SHALL BE ZONE 1 MATERIALS AND PLACED AS SPECIFIED ON SHEET 3. THIS FILL TO BE PLACED AND PAID FOR AS "EARTHFILL". STOCKPILING OF THESE MATERIALS MAY BE REQUIRED.
4. WHERE THE GROUND LINE IS LOWER THAN THE TOP OF THE FOUNDATION TRENCH DRAIN, EARTHFILL SHALL BE FILLED TO THE TOP GRADE OF THE TRENCH BEFORE TRENCH EXCAVATION FOR PLACEMENT OF DRAINFILL. THE EARTHFILL SHALL BE PLACED AS SPECIFIED IN CONSTRUCTION SPECIFICATION 23.
5. SELECTIVE BACKFILL SHALL BE ZONE 1 MATERIALS OR OTHER MATERIALS AS APPROVED BY THE ENGINEER.

DRAIN PIPE INSTALLATION NOTES:

1. THE LINES AND GRADES FOR THE SLOTTED AND NON-PERFORATED PIPE AND FITTINGS SHALL BE AS SHOWN. JOINING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. PIPE MATERIAL, PRESSURE CLASSIFICATION, BACKFILL AND COMPACTION REQUIREMENTS SHALL BE AS SPECIFIED IN CONSTRUCTION SPECIFICATIONS 24 AND 45 AS REQUIRED.
2. 6" I.D. SLOTTED P.V.C. PLASTIC PIPE SHALL BE CENTERED IN 18" X 18" COARSE DRAINFILL ENCASEMENT TO THE LINES AND GRADES SHOWN BETWEEN APPROX. CENTERLINE OF DAM STA. 9+01 TO STA. 11+58 AND STA. 11+85 TO STA. 18+25.
3. 78' OF 6" I.D. NON-PERFORATED P.V.C. PLASTIC PIPE IS REQUIRED FOR THE FOUNDATION TRENCH DRAIN OUTLETS. THE PIPE SHALL EXTEND THROUGH THE IMPACT BASIN, AS SHOWN IN THE DETAILS ON SHEET 9.
4. REVERSE GRADE IN THE TWO OUTFALL LINES WILL NOT BE ALLOWED.
5. BENDS IN PIPE ALIGNMENT SHALL NOT EXCEED PIPE MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY STANDARDS.
6. OFFSET DISTANCES FROM DAM CENTERLINE ARE AS INDICATED IN THE PLAN VIEW. STATIONS SHOWN REFLECT DISTANCES ALONG THE EMBANKMENT CENTERLINE, UNLESS OTHERWISE INDICATED.



RIGHT OUTFALL LINE PROFILE
NOT TO SCALE

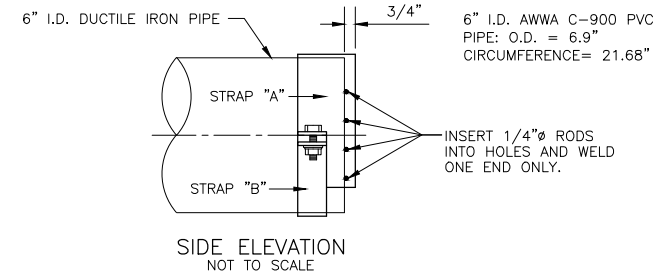
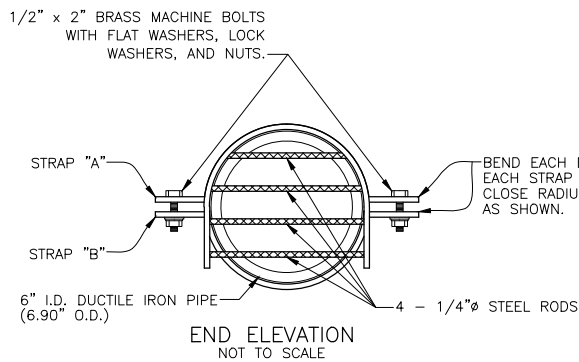


TYPICAL CLEANOUT DETAIL

(TYPICAL FIVE (5) LOCATIONS)
NOT TO SCALE

CLEANOUT CONSTRUCTION NOTES:

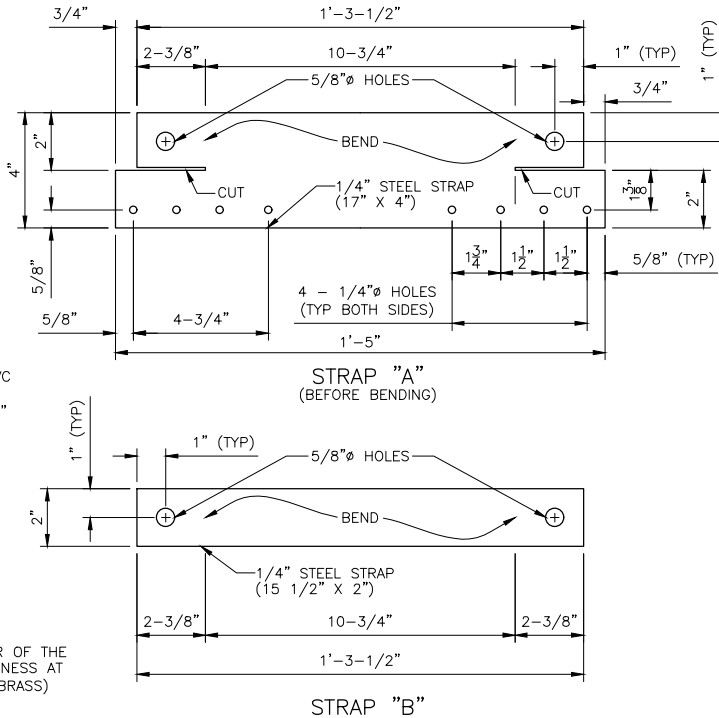
1. CLEANOUT COVERS SHALL BE NEENAH FOUNDRY COMPANY R-1978-B SQUARE WITH BOLTED LID OR EQUIVALENT AS APPROVED BY THE ENGINEER.
2. THE CLEANOUT LID SHALL HAVE A TYPE "E" FASTENING DEVICE AND BE COMPATIBLE WITH COUNTERSUNK HEX BOLTS AS INDICATED BY THE NEENAH FOUNDRY CATALOG.
3. THE CLEANOUT LID SHALL HAVE A TYPE "A" LIFT HOLE AS INDICATED BY THE NEENAH FOUNDRY CATALOG.
4. ALL BOLTING HARDWARE SHALL CONSIST OF STAINLESS STEEL WASHERS, LOCK WASHERS, AND HEX HEAD BOLTS.
5. A CONCRETE MIX OF 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF MIX SHALL BE USED.
6. EIGHT (8) PIECES OF NO. 4 REINFORCING BAR SHALL BE PLACED 3" BELOW THE FINISHED SLAB GRADE. THE REINFORCING BAR SHALL BE PLACED NO CLOSER THAN 3" FROM THE OUTSIDE FACE AND NO CLOSER THAN 3" FROM THE CLEANOUT COVER. FINAL STEEL LAYOUT SHALL BE AS APPROVED BY THE ENGINEER.
7. FINISHED GRADE OF THE CONCRETE AND CLEANOUT COVER SHALL EXTEND NO MORE THAN 0.1' ABOVE THE SURROUNDING TOPOGRAPHY (TYP- ALL FOUR SIDES).
8. CLEANOUT COVERS SHALL BE ORIENTED TO PREVENT PONDING OF WATER.
9. CONCRETE THICKNESS SHALL BE A MINIMUM OF 12" THICK AND ENOUGH TO FULLY ENCASE THE CAST IRON CLEANOUT COVER.
10. THE AREA SURROUNDING THE COVERS SHALL BE BLADED AND DRESSED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE COVERS.
11. THE 45° WYE FOR THE TRENCH DRAIN CLEANOUTS SHALL BE ROTATED/ORIENTED ABOUT THE SLOTTED PIPE TO ALLOW THE CLEANOUTS TO BE INSTALLED BEYOND THE TOE OF THE EMBANKMENT AS SHOWN. FINAL LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
12. THE 6" NON PERFORATED P.V.C. PIPE LOCATED BETWEEN THE 45° WYE AND THE 45° LONG SWEEP ELBOW FOR THE CHIMNEY DRAIN/R.C.C. DRAIN CLEANOUTS SHALL BE FIELD FIT TO ENSURE THE VERTICAL CLEANOUT SECTION OF 6" NON-PERFORATED P.V.C. PIPE EXTENDS TO THE CENTER OF THE CLEANOUT COVER.
13. THE CLEANOUT COVERS FOR THE CHIMNEY DRAIN AND R.C.C. DRAINAGE SYSTEM SHALL BE CONSTRUCTED ADJACENT TO THE R.C.C. SIDEWALLS AT AN ELEVATION CORRESPONDING TO THE R.C.C. STEP ELEVATION AS SHOWN.



BEND STRAPS "A" AND "B" ON A RADIUS 1/16" LARGER THAN THE OUTSIDE DIAMETER OF THE CONDUIT. INSTALL THE RODENT GUARD SO THAT THE CONDUIT HAS FULL WALL THICKNESS AT POINT OF INSTALLATION. INSTALL WITH RODS HORIZONTAL. ALL MATERIALS (EXCEPT BRASS) SHALL BE GALVANIZED AFTER FABRICATION. (SEE CONSTRUCTION SPECIFICATION 81.)

6" PIPE RODENT GUARD DETAILS

ONE (1) REQUIRED
NOT TO SCALE



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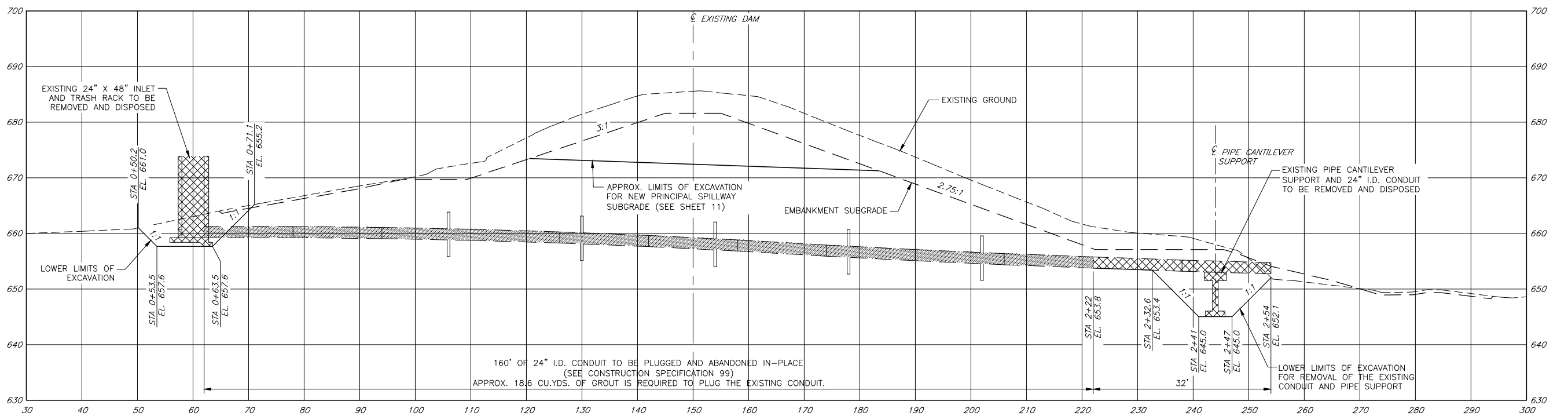
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F-4324

FOUNDATION TRENCH DRAIN DETAILS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

United States
Department of
Agriculture
USDA
Natural Resources
Conservation Service

DRAWING NO.	TX-EN-0740
SHEET NO.	9
OF	45

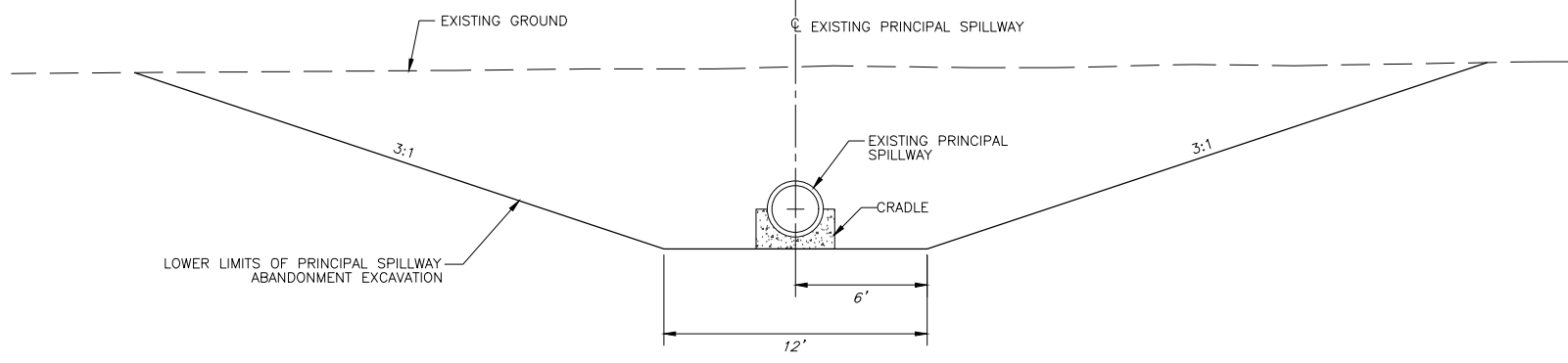


EXISTING PRINCIPAL SPILLWAY ABANDONMENT



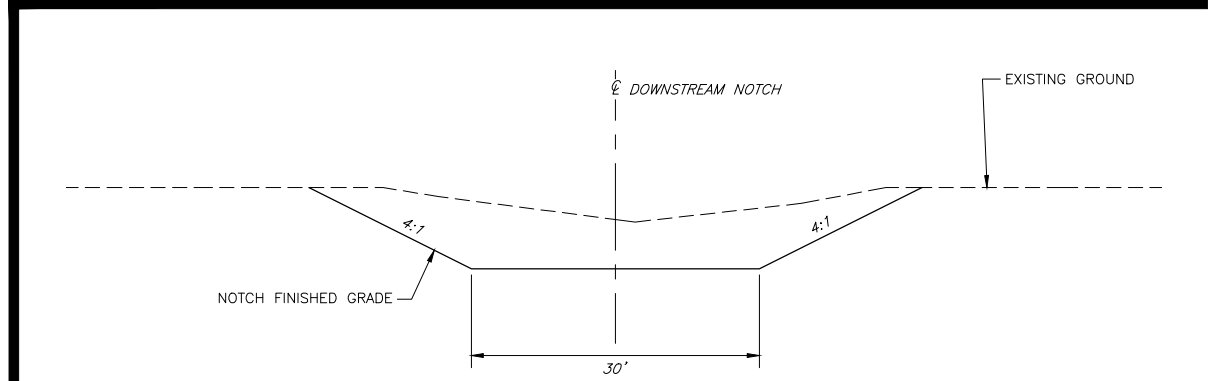
THE BOTTOM OF THE EXISTING CONCRETE CRADLE/BEDDING SHALL BE THE LOWER LIMITS OF EXCAVATION FROM STA 2+22 TO STA 2+32.6. THE LOWER LIMITS OF EXCAVATION FROM STA 2+36.2 TO STA 2+54 SHALL BE AS SHOWN ABOVE.

NOTE:
EXISTING CONDUIT SHALL BE USED TO DEWATER THE SITE DURING CONSTRUCTION. SEE CONSTRUCTION SPECIFICATION 11.

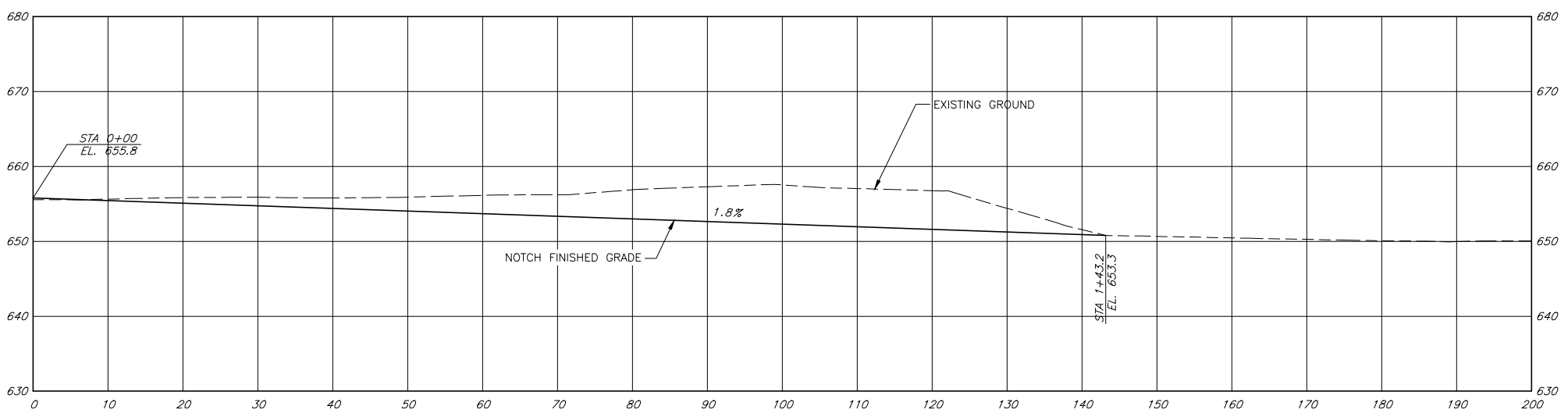


TYPICAL SECTION - PRINCIPAL SPILLWAY ABANDONMENT EXCAVATION

NOT TO SCALE



DOWNSTREAM POND NOTCH - TYPICAL SECTION



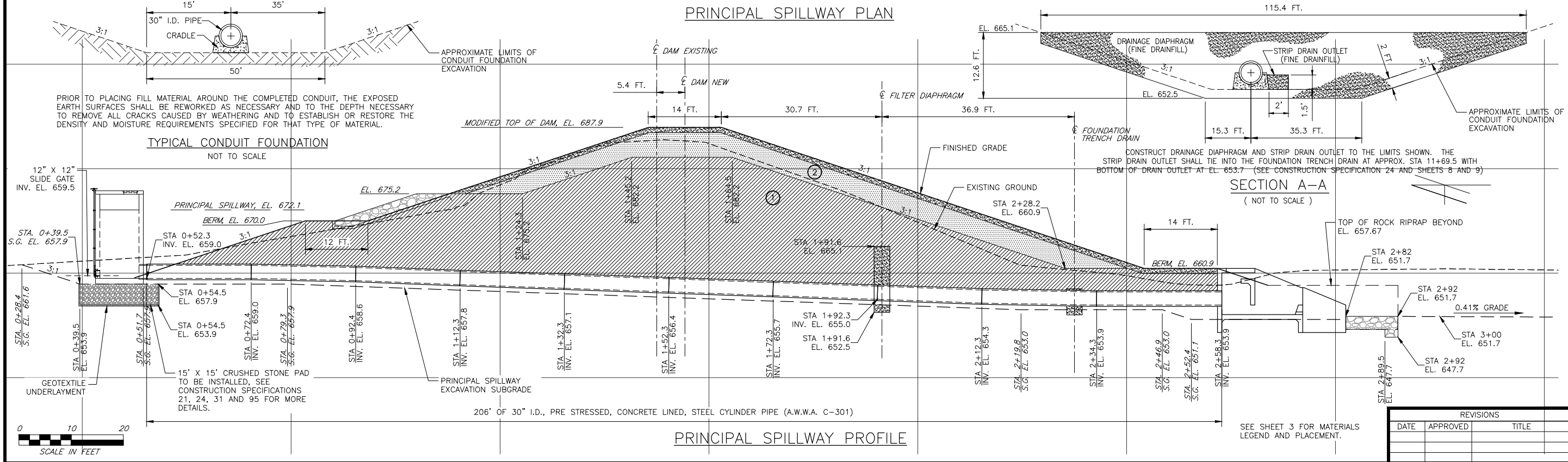
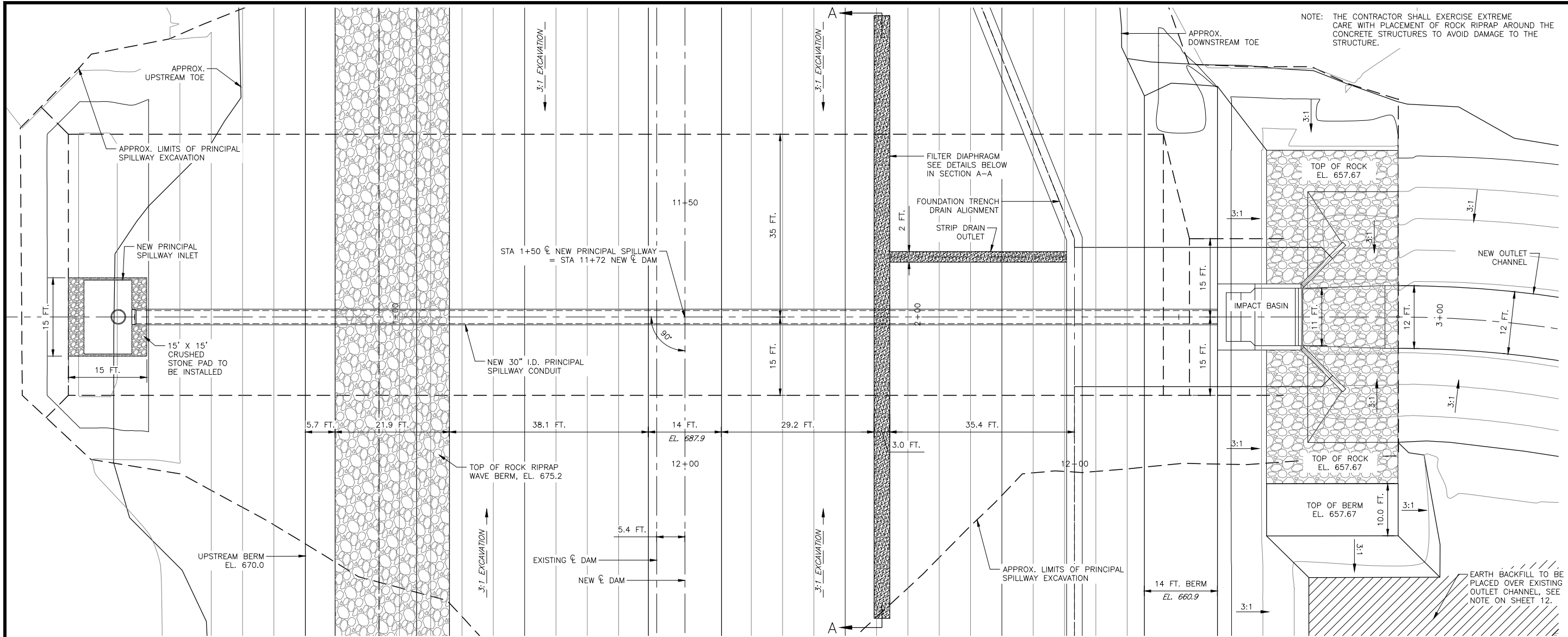
DOWNSTREAM POND NOTCH - PROFILE

NOTE: FINAL EXCAVATED WIDTH AND GRADES FOR THE DOWNSTREAM POND NOTCH SHALL BE TO THE EXTENTS NECESSARY TO ALLOW UNIFORM FLOW OF WATER AND WILL FREELY DRAIN THE POND IN THE AREA AROUND THE NEW DOWNSTREAM TOE. THE FINISHED SURFACE SHALL BE SMOOTH, UNIFORM AND SHALL BLEND WITH THE SURROUNDING TOPOGRAPHY. THE FINISHED SURFACE SHALL BE AS APPROVED BY THE ENGINEER.



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PRINCIPAL SPILLWAY PLAN AND PROFILE

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN HAYS COUNTY, TEXAS

United States Department of Agriculture

Natural Resources Conservation Service

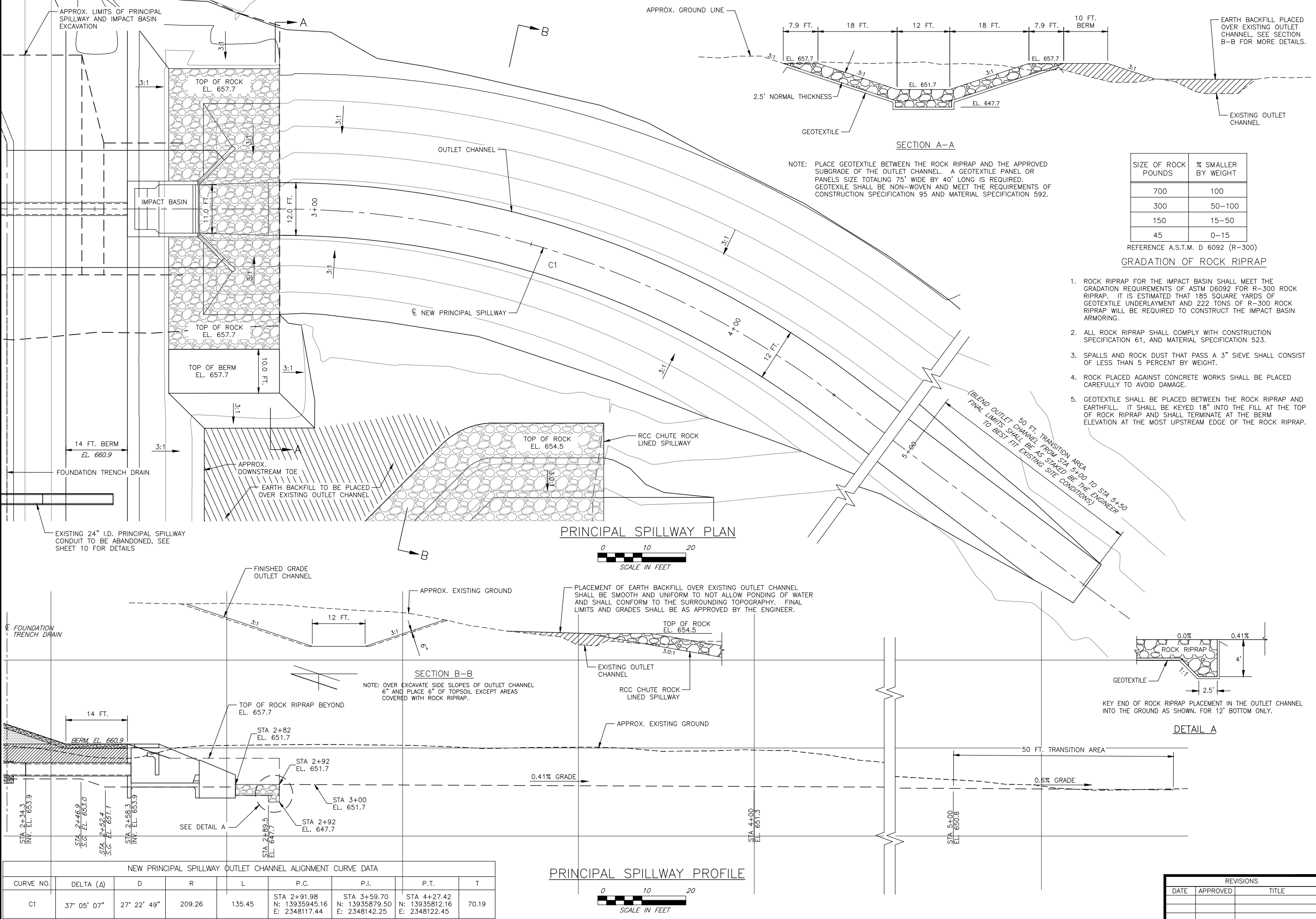
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PRINCIPAL SPILLWAY PLAN AND PROFILE

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN

HAYS COUNTY, TEXAS

United States Department of Agriculture

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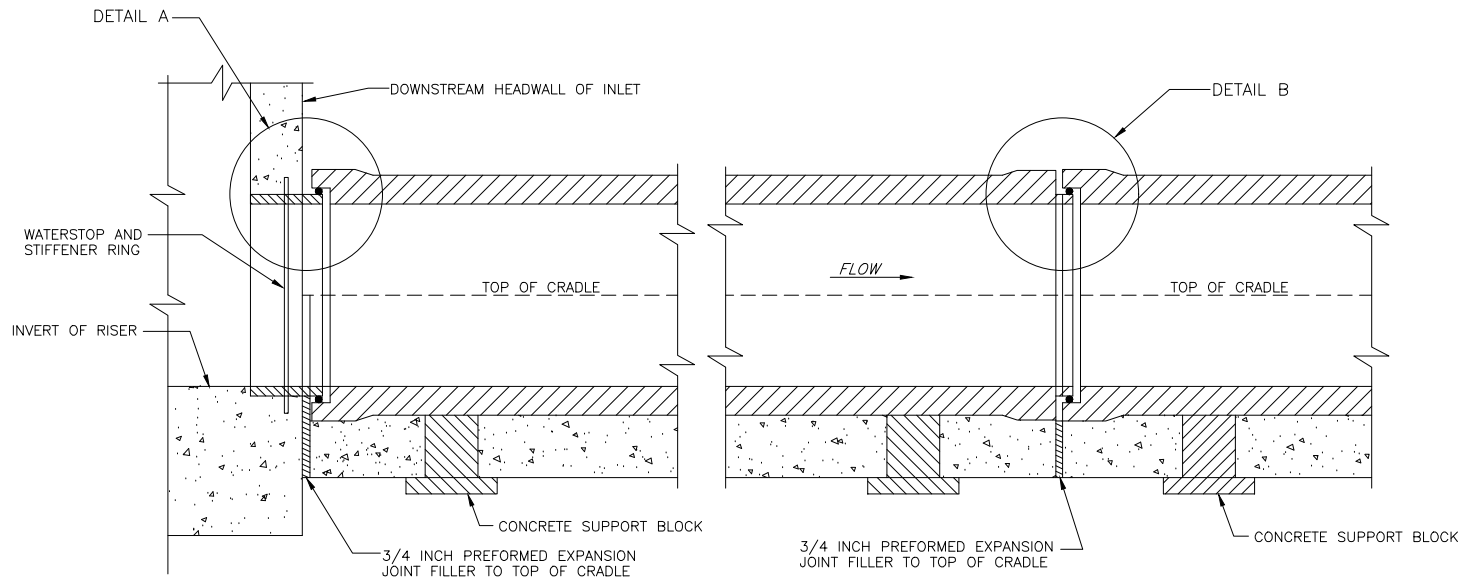
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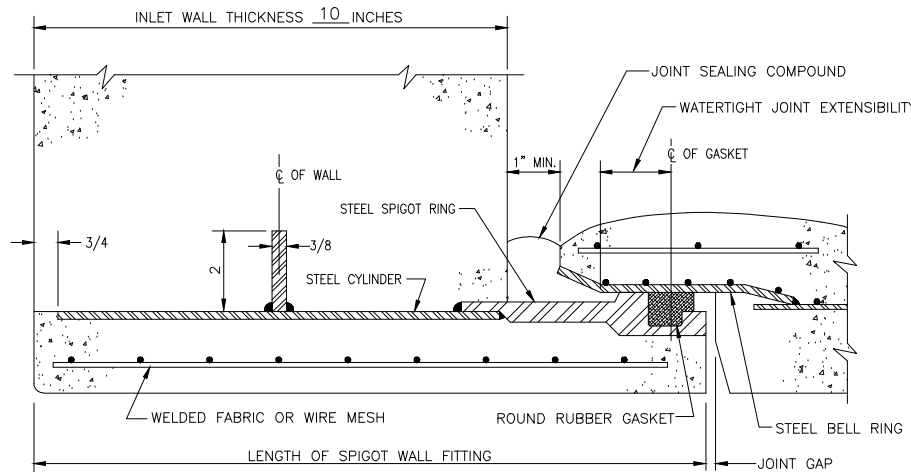
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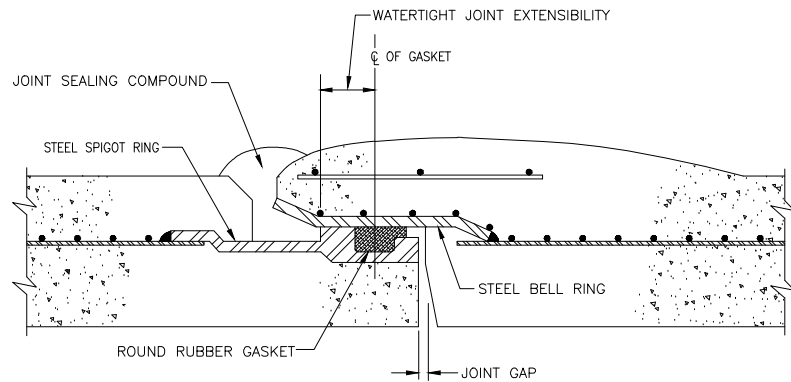


DETAIL OF SPIGOT WALL FITTING

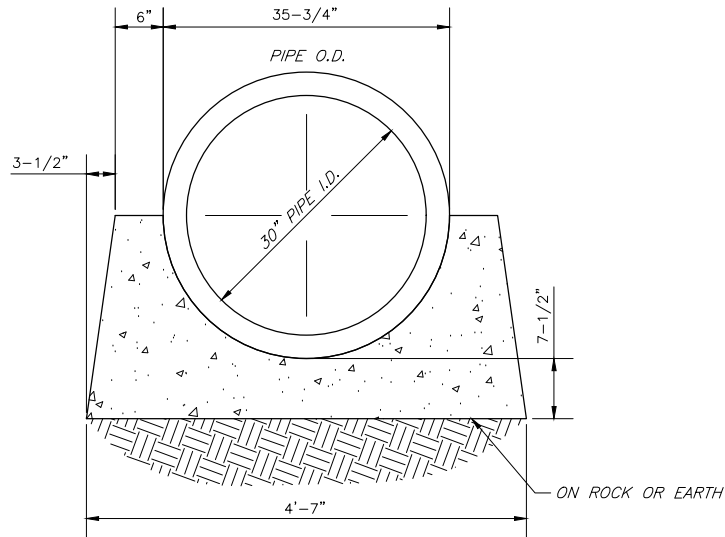
DETAIL OF PIPE JOINT



DETAIL A



DETAIL B



DETAIL OF CRADLE

QUANTITIES

CONCRETE QUANTITY IS BASED ON AN OUTSIDE DIAMETER OF PIPE OF 35 3/4".

THIS QUANTITY IS GIVEN BY:

0.20633 CU. YDS. PER LINEAL FOOT OF CRADLE

TOTAL CONCRETE QUANTITY = 205.7 FT. X 0.20633 = 42.44 CU. YDS.

PRINCIPAL SPILLWAY PIPE DETAILS

JOINT REQUIREMENTS			
LENGTH OF PIPE SECTION	MINIMUM JOINT LENGTH	MINIMUM JOINT LIMITING ANGLE	
FEET	INCHES	RADIANS	DEGREES
20	3 1/8	0.0253	1'-27'
22	3 1/8	0.0253	1'-27'
24	3 1/8	0.0253	1'-27'

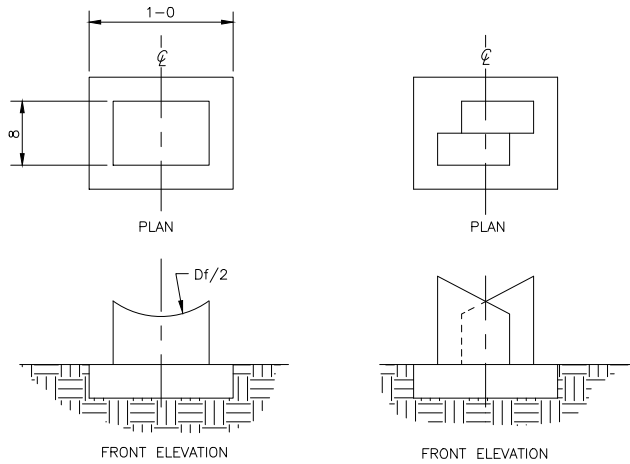
FOR PIPE LENGTH OTHER THAN SHOWN, JOINT REQUIREMENTS WILL BE DETERMINED BY THE ENGINEER.

WHERE PIPES OF DIFFERENT LENGTH ARE CONNECTED, ADJOINING PIPES SHALL MEET THE REQUIREMENTS OF THE LONGER PIPE.

PRIOR TO DELIVERY OF PIPE, THE PIPE JOINT DETAIL PROPOSED FOR USE SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL.

JOINT LENGTH EQUALS WATERTIGHT JOINT EXTENSIBILITY PLUS JOINT GAP.

THE PIPE SHALL BE DRAWN TOGETHER SO THAT THE MAXIMUM JOINT GAP DOES NOT EXCEED 3/8 INCH FOR PIPE LAID ON A STRAIGHT LINE. FOR CAMBERED PIPE OR PIPE LAID ON A CURVED LINE, THE JOINT GAP AT THE CLOSEST POINT SHALL NOT EXCEED 3/8 INCH.

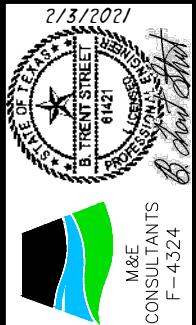


SUFFICIENT BLOCKS OR WEDGES SHALL BE PROVIDED TO SUPPORT THE PIPE TO THE REQUIRED LINE AND GRADE. THE CONTRACTOR SHALL DETERMINE THE NUMBER AND SIZE OF BLOCKS OR WEDGES REQUIRED. A MINIMUM OF TWO SUPPORTS SHALL BE REQUIRED FOR EACH SECTION OF PIPE.

SUGGESTED SUPPORT BLOCKS AND WEDGES

STRENGTH REQUIREMENTS			
I.D. OF PIPE	INTERNAL LOAD	EXTERNAL LOAD	
	HYDROSTATIC PRESSURE	MINIMUM 3-EDGE BEARING STRENGTH IN POUNDS PER LINEAL FOOT OF PIPE	
		APPLICABLE STANDARD SPECIFICATION	
		AWWA C-301	AWWA C-300
INCHES	FEET	LOAD TO PRODUCE 0.001 IN. CRACK ONE FOOT LONG	LOAD TO PRODUCE 0.01 IN. CRACK ONE FOOT LONG
30	50	3,500	—

THE OUTSIDE DIAMETER OF THE 30 INCH PIPE ASSUMED IN DESIGN IS 35.75 INCHES. WHERE THE PIPE FURNISHED HAS AN OUTSIDE DIAMETER GREATER THAN ASSUMED IN DESIGN, THE THREE-EDGE BEARING STRENGTH OF THE PIPE FURNISHED MUST NOT BE LESS THAN THE SPECIFIED THREE-EDGE BEARING STRENGTH MULTIPLIED BY THE RATIO OF THE OUTSIDE DIAMETER OF THE PIPE FURNISHED TO THE OUTSIDE DIAMETER ASSUMED IN DESIGN.



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PRINCIPAL SPILLWAY PIPE DETAILS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



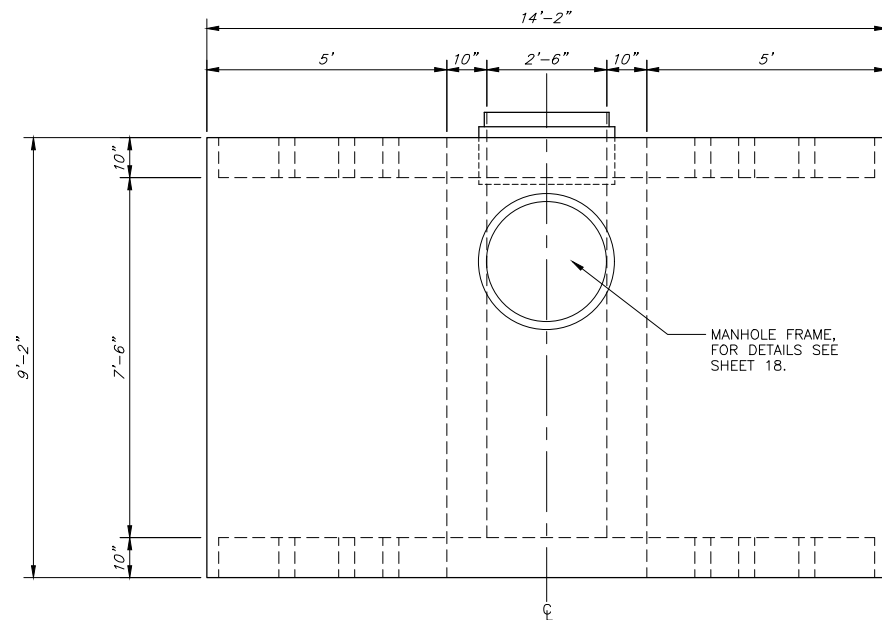
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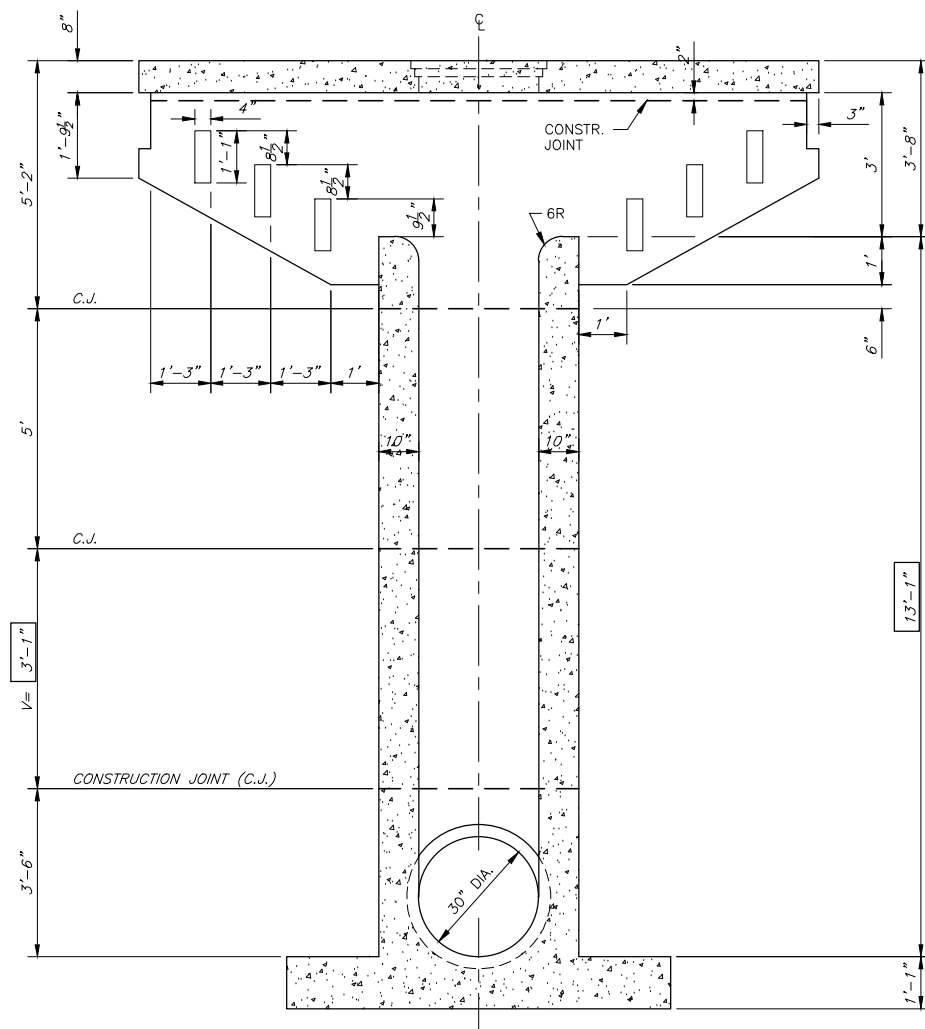
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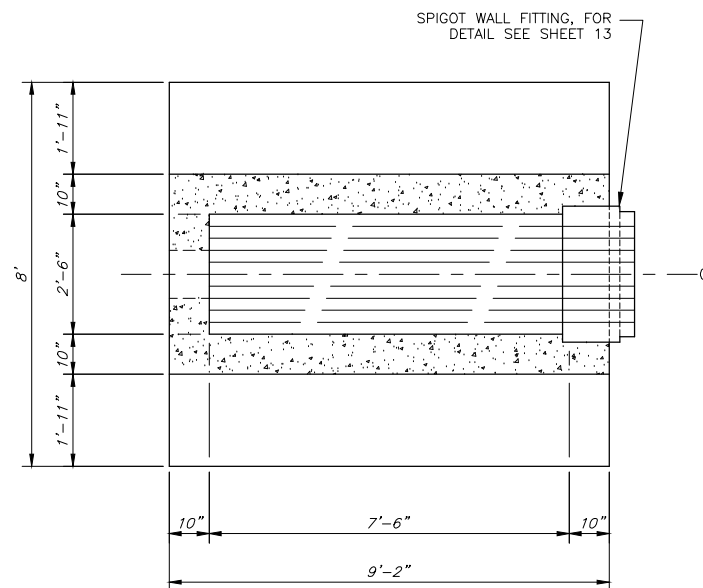
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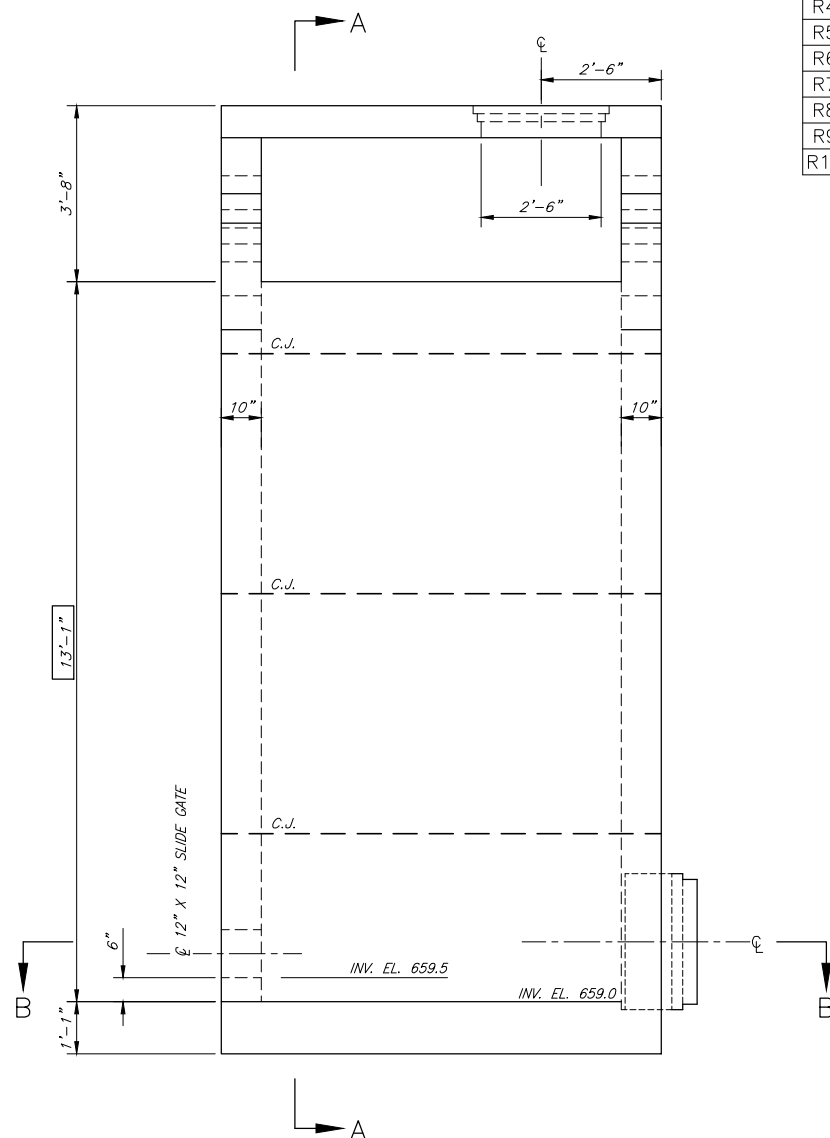
TOP PLAN



SECTION A-A



SECTION B-B



SIDEWALL ELEVATION

MARK	SIZE	QUANTITY	LENGTH	TYPE	B	C	TOTAL LENGTH
B1	6	10	7-6	1	—	—	75-0
B2	5	9	8-9	1	—	—	78-9
B3	7	34	9-0	21	3-1	5-11	306-0
B4	5	8	8-9	1	—	—	70-0
B5	5	9	7-6	1	—	—	67-6
B6	5	2	3-0	1	—	—	6-0
B7	5	5	6-9	21	1-0	5-9	33-9
B8	6	3	6-9	21	1-0	5-9	20-3
B9	5	14	6-9	21	1-0	5-9	94-6
B10	6	10	8-3	1	—	—	82-6
B11	5	4	3-3	1	—	—	13-0
B12	6	3	2-3	1	—	—	6-9
B13	5	3	2-3	1	—	—	6-9
B14	5	10	5-9	21	0-6	5-3	57-6
B15	5	18	8-0	21	2-9	5-3	144-0
B16	5	8	1-8	1	—	—	13-4
B17	5	8	3-0	1	—	—	24-0
R1	5	14	9-3	1	—	—	129-6
R2	6	8	8-3	1	—	—	66-0
R3	5	6	3-3	1	—	—	19-6
R4	5	14	9-5	1	—	—	131-10
R5	5	12	8-0	21	2-9	5-3	96-0
R6	5	6	9-8	1	—	—	58-0
R7	5	6	9-8	1	—	—	58-0
R8	5	28	8-0	21	2-9	5-3	224-0
R9	5	8	3-3	1	—	—	26-0
R10	5	10	8-3	1	—	—	82-6
T1	5	6	4-9	1	—	—	28-6
T2	5	2	3-2	1	—	—	6-4
T3	5	4	8-2	1	—	—	32-8
T4	5	2	6-6	1	—	—	13-0
T5	5	2	5-6	1	—	—	11-0
T6	5	2	8-2	1	—	—	16-4
T7	5	2	10-8	1	—	—	21-4
T8	5	2	13-4	1	—	—	26-8
T9	5	4	4-0	1	—	—	16-0
T10	5	4	3-8	1	—	—	14-8
T11	5	4	3-0	1	—	—	12-0
T12	5	4	2-3	1	—	—	9-0
T13	5	4	6-1	23	2-0	4-1	24-4
T14	5	6	5-0	1	—	—	30-0
T15	5	8	8-0	21	2-9	5-3	64-0
T16	5	2	6-6	1	—	—	13-0
T17	5	2	5-10	1	—	—	11-8
T18	5	2	8-4	1	—	—	16-8
T19	5	2	10-10	1	—	—	21-8
T20	5	2	13-4	1	—	—	26-8
T21	5	4	6-1	21	1-9	4-4	24-4
T22	5	4	5-8	21	1-9	3-11	22-8
T23	5	4	5-0	21	1-9	3-3	20-0
T24	5	4	4-4	21	1-9	2-7	17-4
T25	5	4	4-1	21	1-9	2-4	16-4
T26	5	4	4-3	1	—	—	17-0
T27	5	6	3-6	21	1-9	1-9	21-0
T28	5	2	1-7	21	0-10	1-9	3-2
T29	4	2	4-9	1	—	—	9-6
T30	4	14	8-2	1	—	—	114-4
T31	4	7	13-10	1	—	—	96-10
T32	4	4	5-6	1	—	—	22-0
T33	5	2	4-10	1	—	—	9-8
T34	5	12	8-5	1	—	—	101-0
T35	5	4	8-10	1	—	—	35-4
T36	4	7	13-10	1	—	—	96-10
T37	4	4	5-5	1	—	—	21-8
T38	5	8	3-3	1	—	—	26-0

WEIGHT PER LIN. FOOT	BAR SIZE	LENGTH IN FEET		TOTAL LENGTH IN FEET	TOTAL WEIGHT IN POUNDS
		B,T&R BARS	R1 THRU R7 BARS		
0.668	4	361-2	—	361-2	241.3
1.043	5	1670-11	492-10	2,163-9	2,256.8
1.502	6	184-6	66-0	250-6	376.3
2.044	7	306-0	—	306-0	625.5
2.670	8	—	—	—	—

TOTAL WEIGHT IN POUNDS	=	3,500
------------------------	---	-------

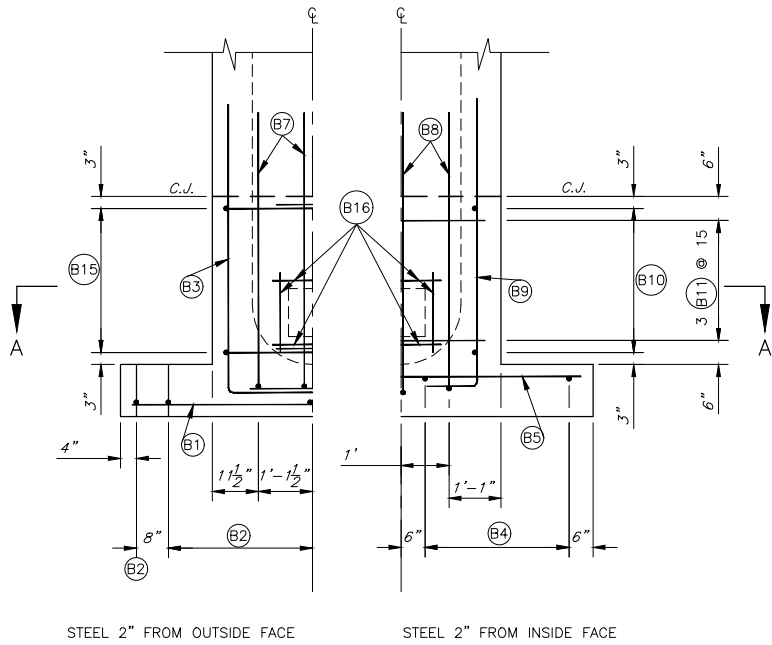
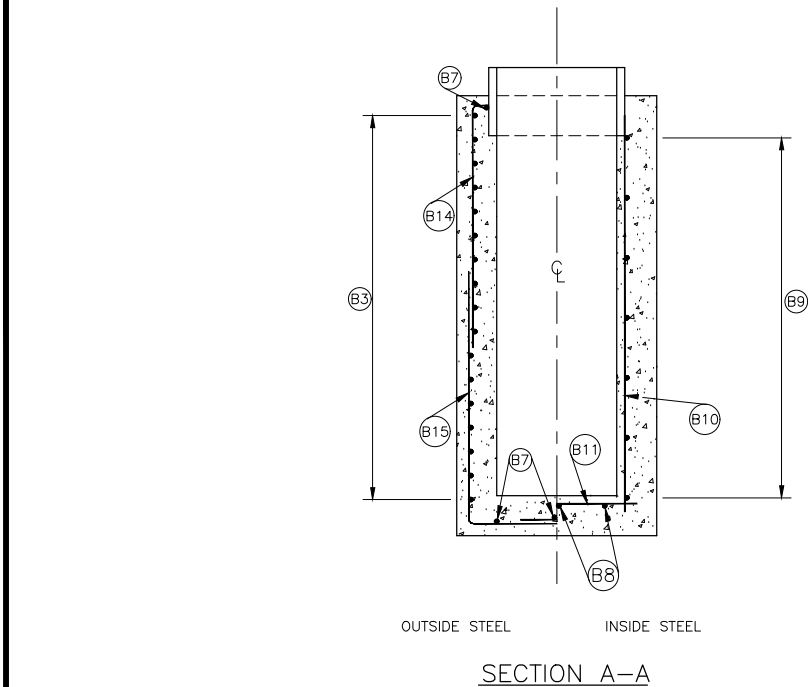
CONCRETE QUANTITIES

$$15.90 + 0.72V = 18.1 \text{ CU. YDS.}$$

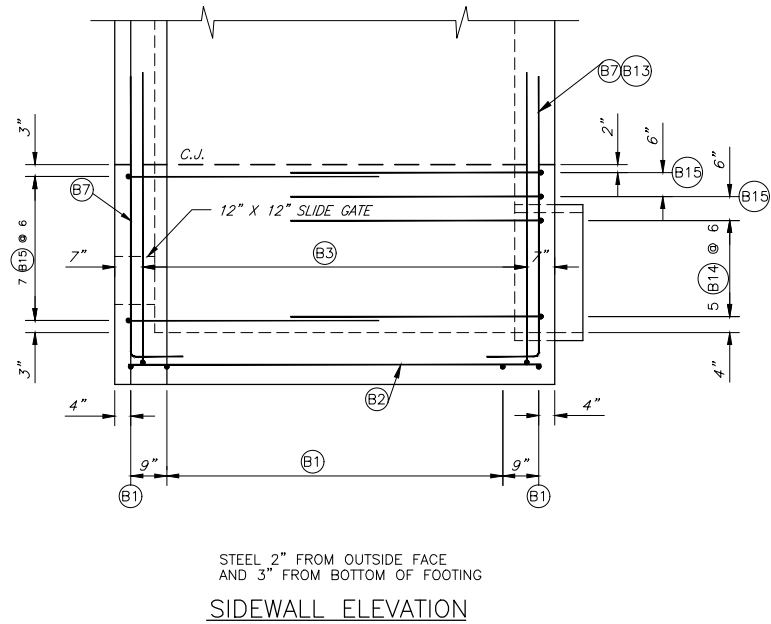
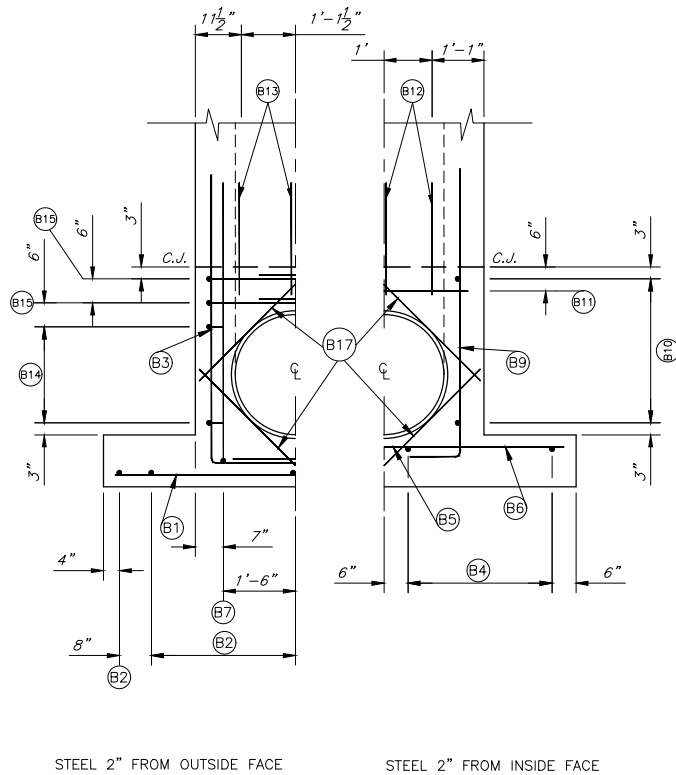
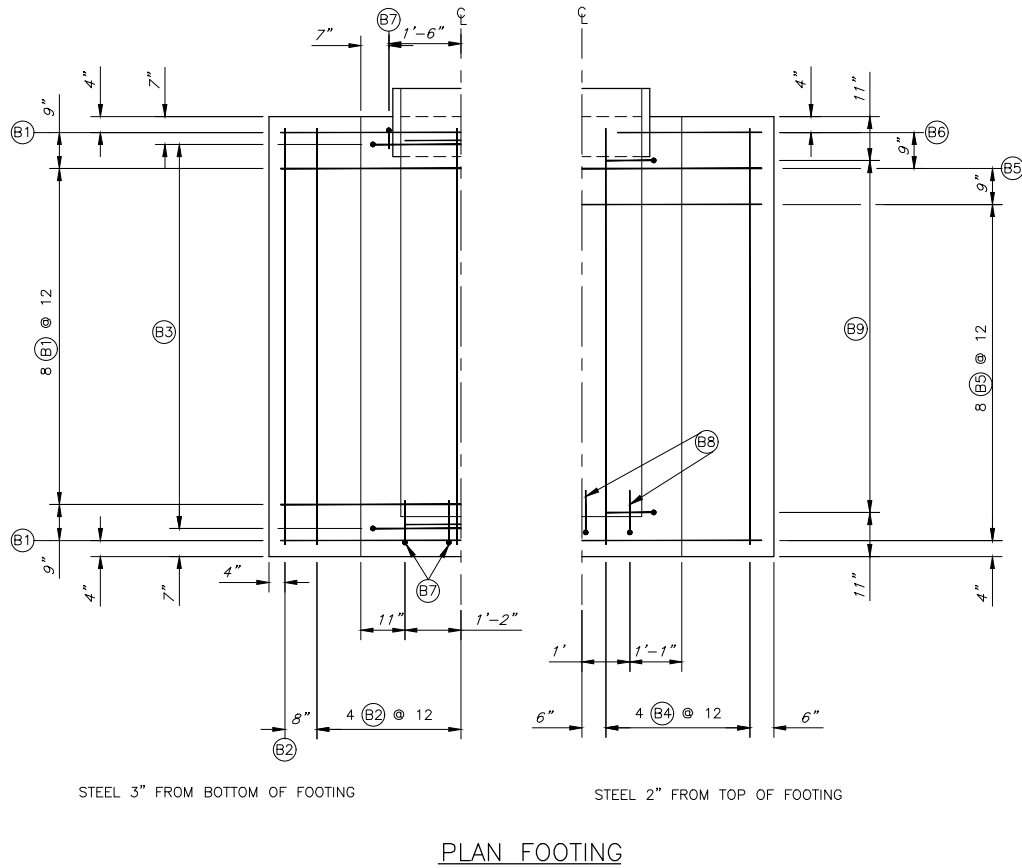
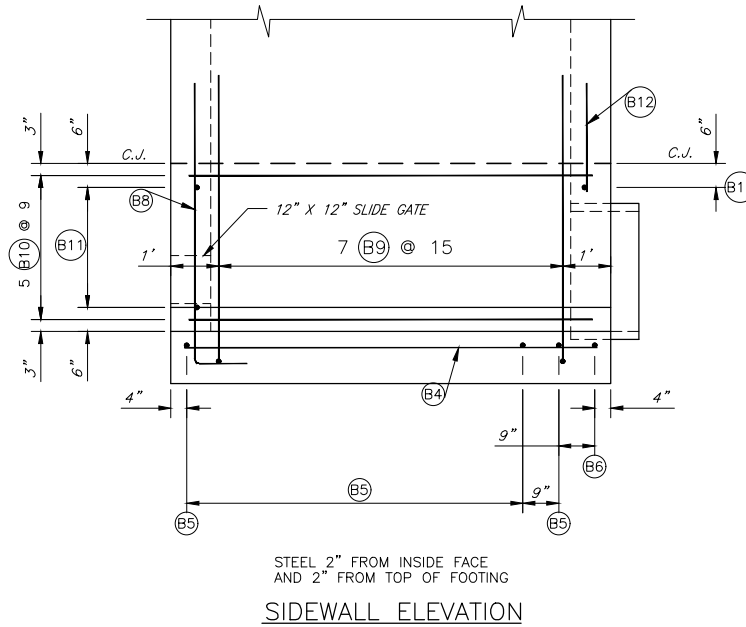
STANDARD BAFFLER RISER	
STANDARD DWG. NO.	ES-3230-1515 R
DATE	9-79 SHEET 1 OF 4
ADAPTED FROM	
STANDARD COVERED RISER	
DESIGN CONSTANTS	
$f'c = 4000$ psi $n = 8$	$fc = 1600$ psi $fs = 20,000$ psi
STANDARD DWG. NO.	ES-3030-2015 R
DATE	4-65 SHEET 1 OF 4

REVISIONS		
DATE	APPROVED	TITLE

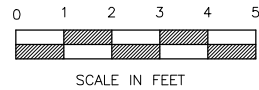
Y:\PUBLIC\Projects - Current\Plum 10 Rehab Design\DWG\PC10_INLET.dwg



NOTE: CUT OR SHIFT STEEL AS NECESSARY TO INSURE A 2" CLEAR DISTANCE FROM SLIDE GATE WALL THIMBLE. FRAME SLIDE GATE OPENING WITH FOUR #5 BARS 1'-8" LONG BOTH TOP AND BOTTOM AS DETAILED.



STANDARD BAFFLER RISER	
STANDARD DWG. NO.	ES-3230-1515 R
DATE	9-79
SHEET 2 OF 4	
ADAPTED FROM	
STANDARD COVERED RISER	
DESIGN CONSTANTS	
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$n = 8$	$f_s = 20,000$ psi
STANDARD DWG. NO.	ES-3030-2015 R
DATE	3-65
SHEET 2 OF 4	



REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

M&E CONSULTANTS
F-4324

DESIGNED BY: BTS

DRAWN BY: QMK

CHECKED BY: TPB

FILE NAME: PC10_INLET.dwg

DATE CHECKED: 10/8/2020

PRINCIPAL SPILLWAY INLET STEEL PLACEMENT
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

United States
Department of
Agriculture

Natural Resources
Conservation Service

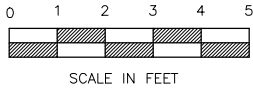
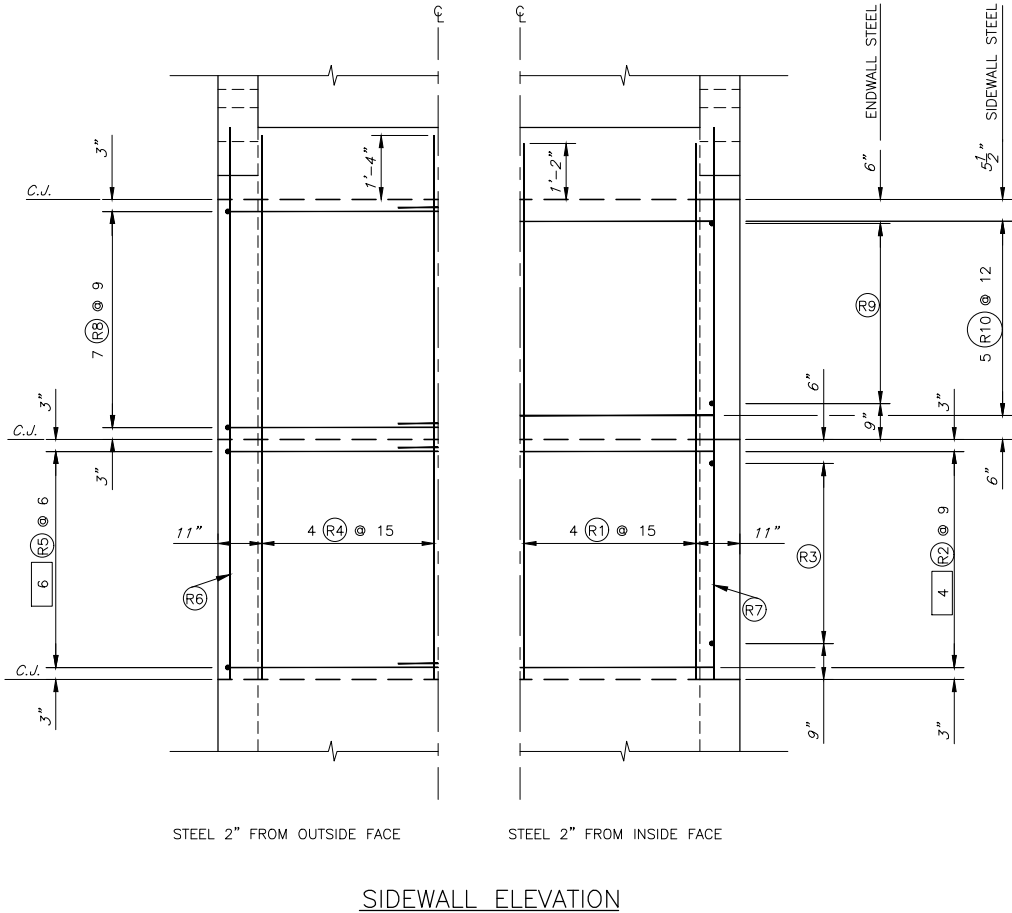
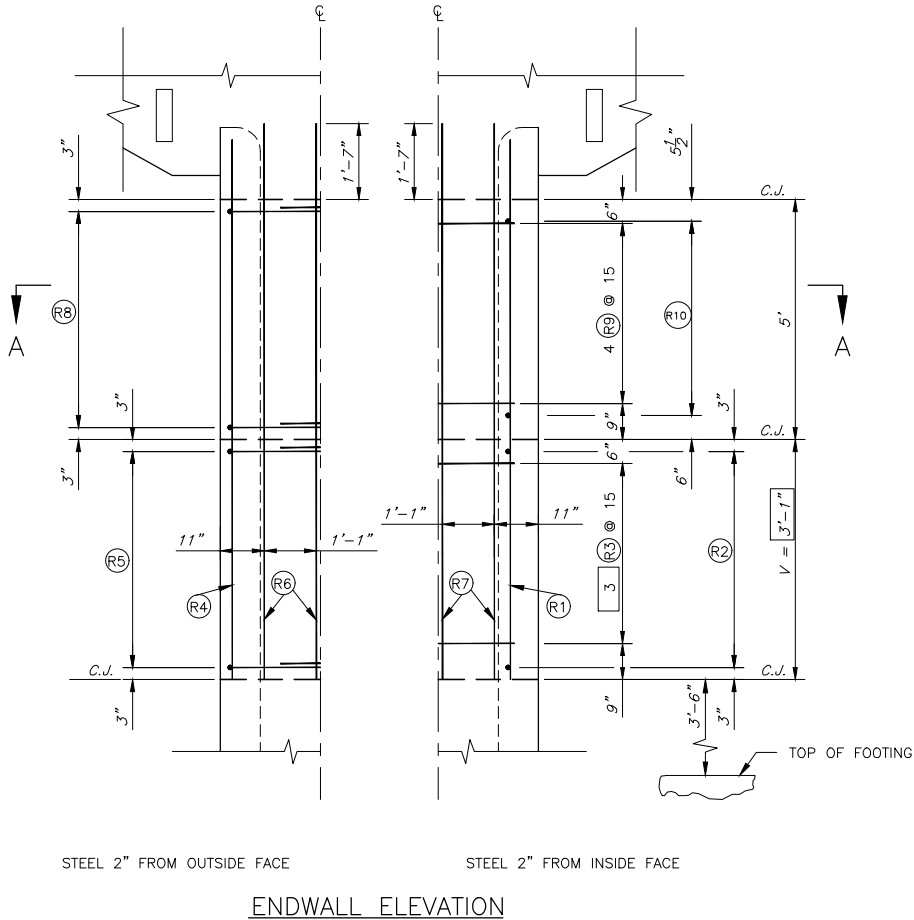
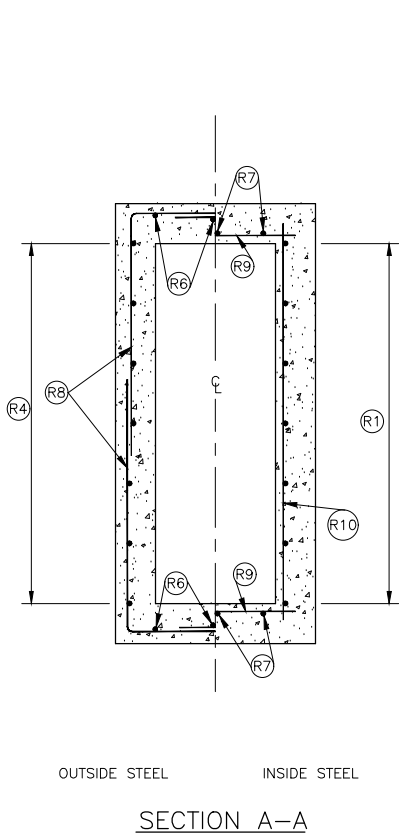
DRAWING NO.
TX-EN-0740

SHEET NO.
15

OF
45

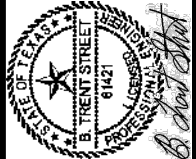
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STANDARD BAFFLER RISER	
STANDARD DWG. NO.	ES-3230-1515 R
DATE	9-79
SHEET 3 OF 4	
ADAPTED FROM	
STANDARD COVERED RISER	
DESIGN CONSTANTS	
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$f_c = 1600 \text{ psi}$ $f_s = 20,000 \text{ psi}$	
STANDARD DWG. NO.	ES-3030-2015 R
DATE	3-65
SHEET 3 OF 4	



REVISIONS		
DATE	APPROVED	TITLE

2/3/2021





M&E
CONSULTANTS
F-4324

DESIGNED BY: BTS
DRAWN BY: GMK
CHECKED BY: TPB
FILE NAME: PC10_INLET.dwg
DATE CHECKED: 10/8/2020

PRINCIPAL SPILLWAY INLET STEEL PLACEMENT
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



United States
Department of
Agriculture

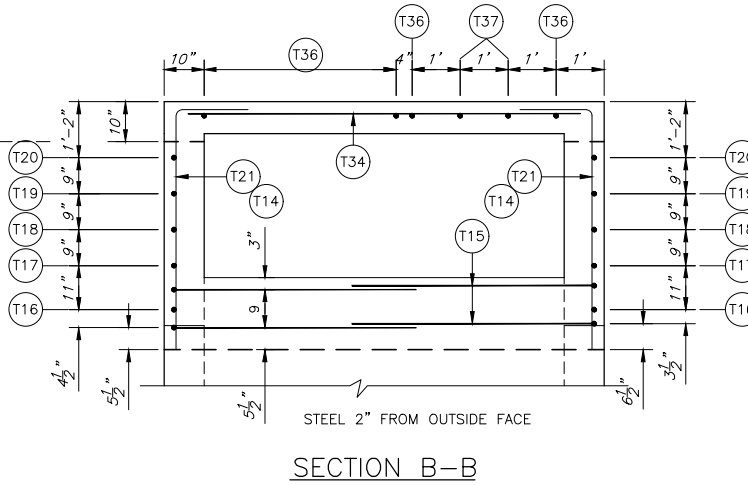
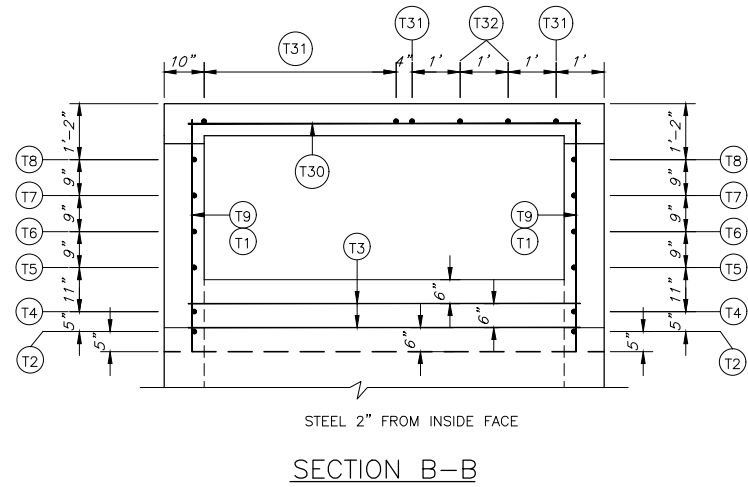
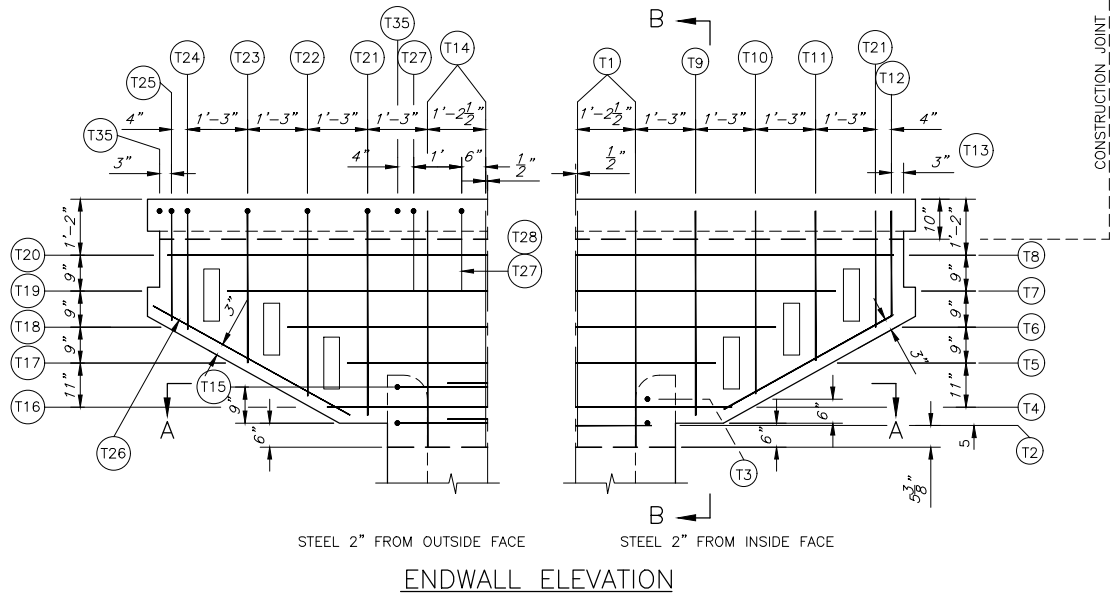
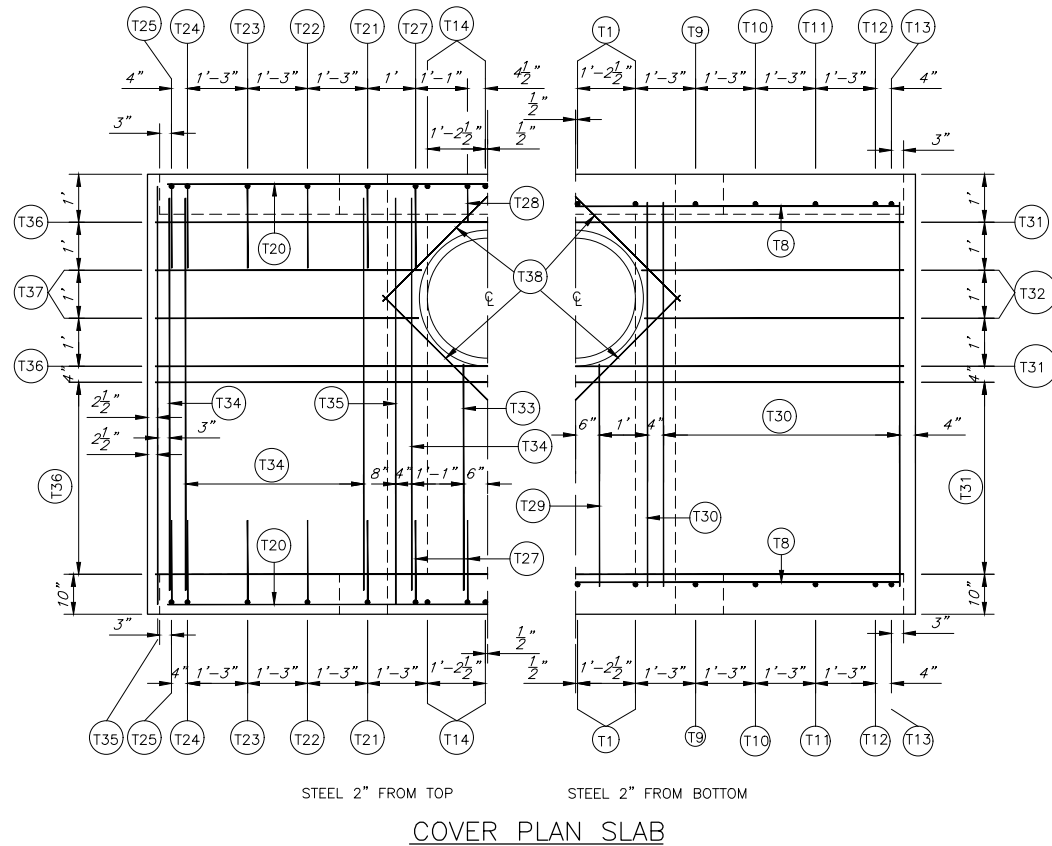
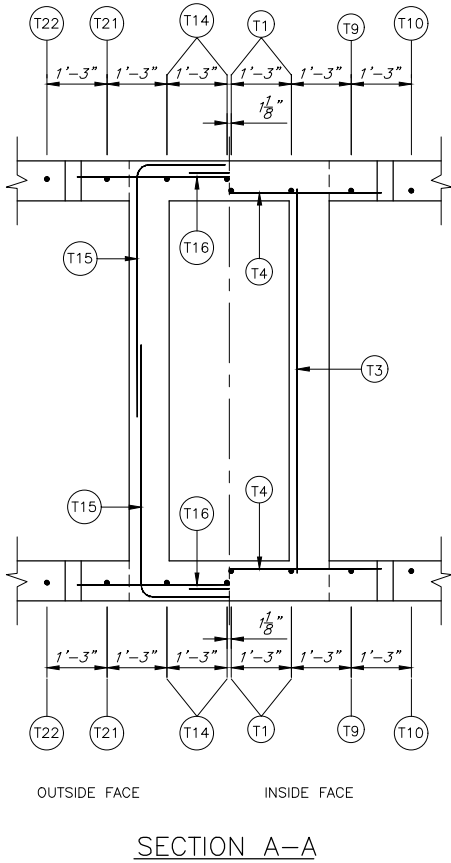
Natural Resources
Conservation Service

DRAWING NO.
TX-EN-0740

SHEET NO.
16

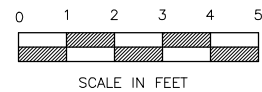
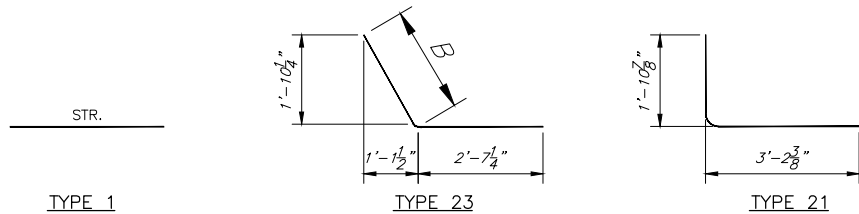
OF
45

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- NOTES:
1. BAR DIMENSIONS ARE OUT TO OUT OF BAR.
 2. RADIUS OF BENDS EQUAL 3 BAR DIAMETERS FOR SIZES < #7 AND 4 BAR DIAMETERS FOR #8.
 3. THE 2" AND 3" DISTANCES FROM SPECIFIED CONCRETE SURFACES ARE CLEAR DISTANCE.

STANDARD BAFFLER RISER	
STANDARD DWG. NO.	ES-3230-1515 R
DATE	9-79
SHEET 3 OF 4	
ADAPTED FROM	
STANDARD COVERED RISER	
DESIGN CONSTANTS	
$f'_c = 4000$ psi	$f_c = 1600$ psi
$n = 8$	$f_s = 20,000$ psi
STANDARD DWG. NO.	ES-3030-2015 R
DATE	3-65
SHEET 4 OF 4	



REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

M&E CONSULTANTS
F-4324

DESIGNED BY: BTS

DRAWN BY: GMK

CHECKED BY: TPB

FILE NAME: PC10_INLET.dwg

DATE CHECKED: 10/8/2020

UNITED STATES
DEPARTMENT OF
AGRICULTURE

UNITED STATES
DEPARTMENT OF
AGRICULTURE
NATURAL RESOURCES
CONSERVATION SERVICE

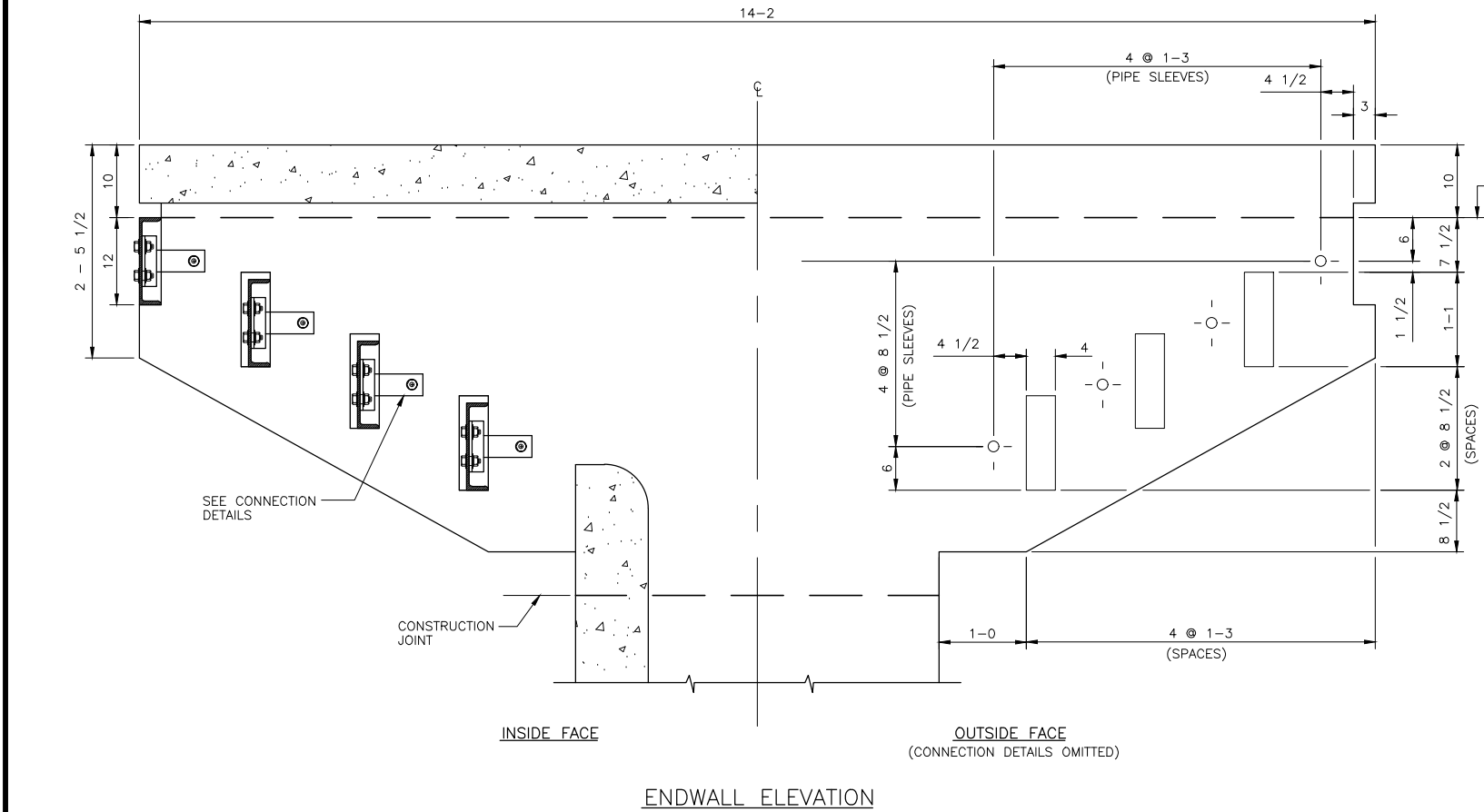
PRINCIPAL SPILLWAY INLET STEEL PLACEMENT
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

DRAWING NO.
TX-EN-0740

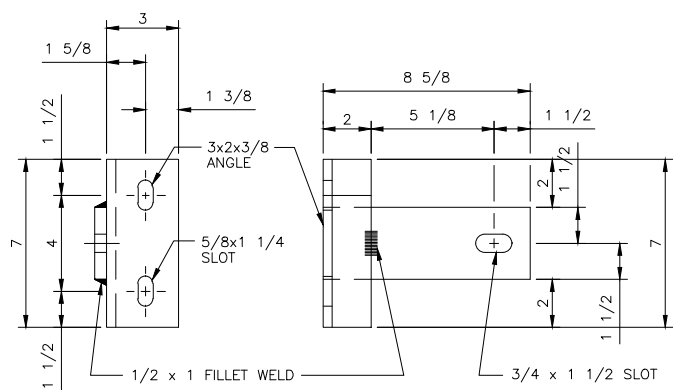
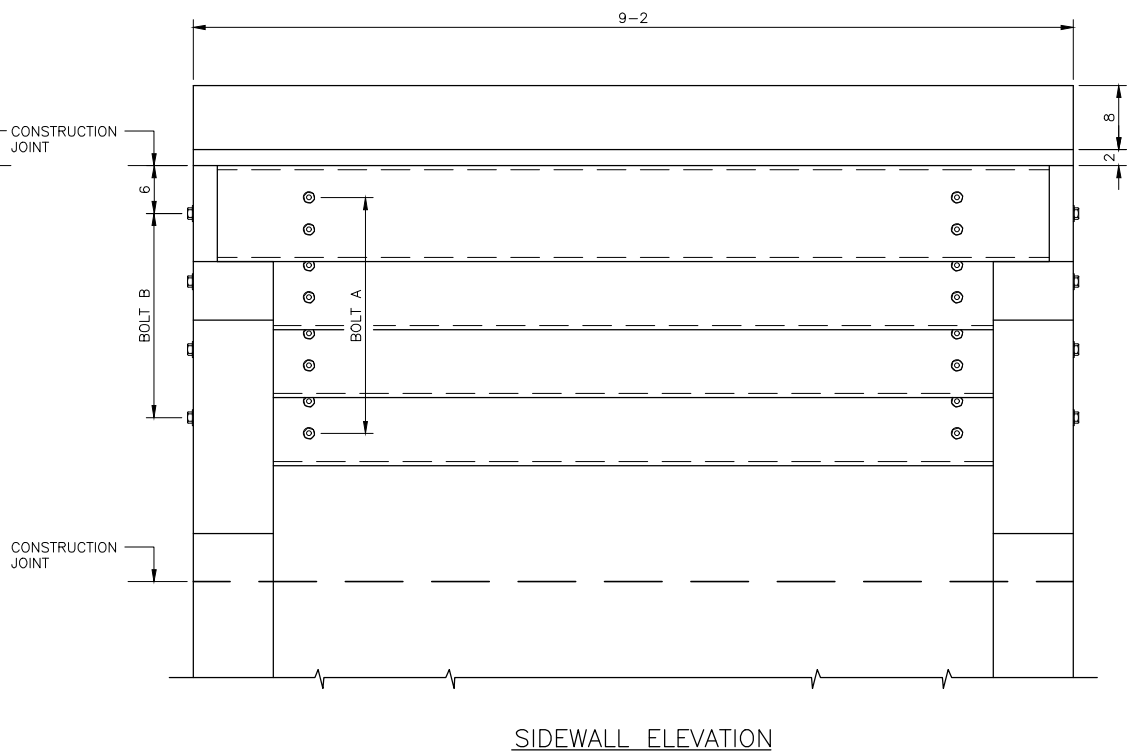
SHEET NO.
17

OF
45

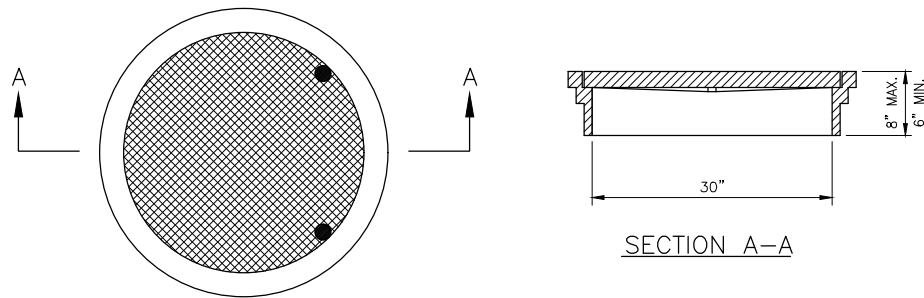
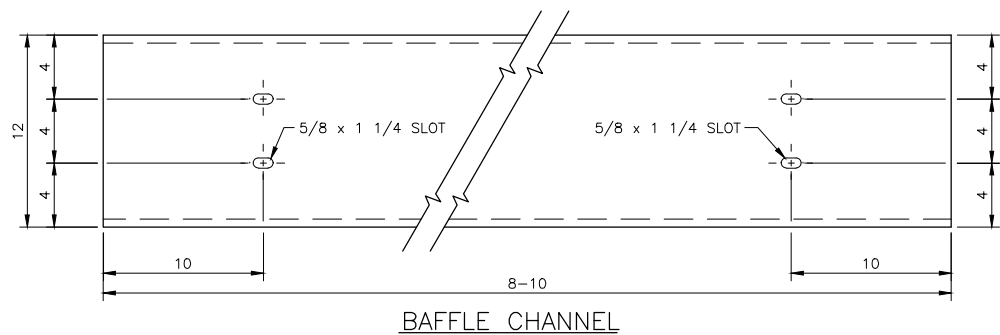
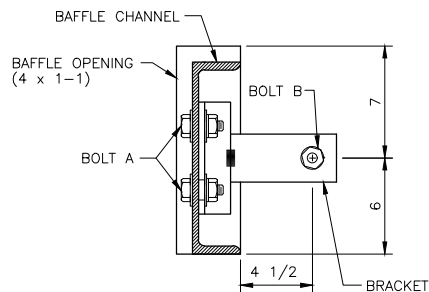
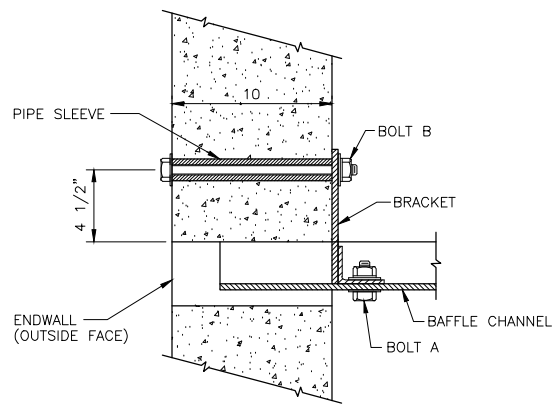
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NOTE: MANHOLE NOT SHOWN.



(FABRICATE BRACKET FROM 3/8 INCH STEEL PLATE AND ANGLE)



NOTE: MANHOLE COVER SHALL BE NEENAH FOUNDRY COMPANY R-6078 ROUND SERIES WITH TYPE E LOCKING DEVICE (WITH STAINLESS STEEL CAP SCREWS) OR EQUIVALENT AS APPROVED BY THE ENGINEER. IF AN APPROVED EQUIVALENT IS USED, IT SHALL HAVE A SIMILAR LOCKING DEVICE. (SEE CONSTRUCTION SPECIFICATION 81.)

MANHOLE COVER DETAILS

SCHEDULE OF QUANTITIES		
ITEM	SIZE	QUANTITY
CHANNEL	C12x 25	8
BRACKET	SEE DETAIL	16
BOLT A	1/2 x 2 1/2	32
BOLT B	5/8 x 12	16
PIPE SLEEVE	3/4 x 10	16

1/2 BOLT WITH TWO FLAT WASHERS, ONE LOCK WASHER AND NUT.

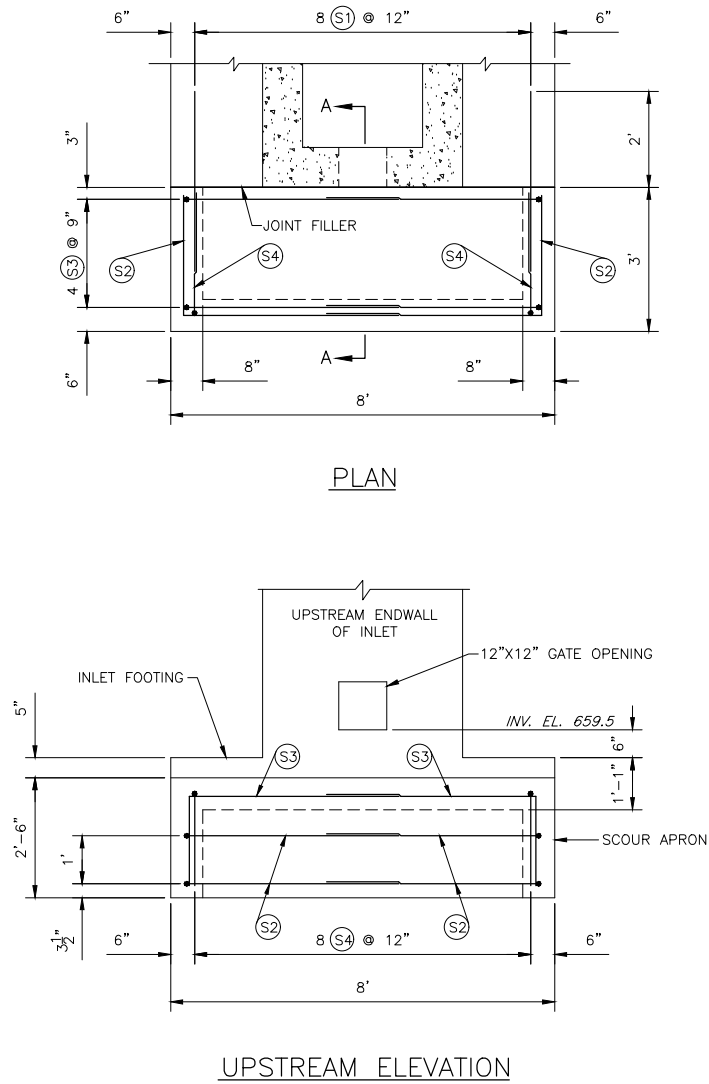
NOTE: ALL PARTS OF TRASH RACK SHALL BE GALVANIZED AFTER FABRICATION.

TRASHRACK-STANDARD BAFFLE RISER-3230			
STANDARD DWG. NO. SNCT-3			
DESIGNED QKM	DRAWN EAK	CHECKED WHL	
DATE 5-83	SHEET 1 OF 1		

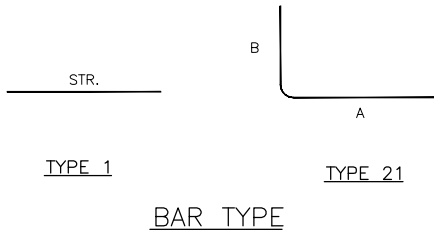
REVISIONS		
DATE	APPROVED	TITLE

DRAWING NO.	TX-EN-0740
SHEET NO.	18
OF	45

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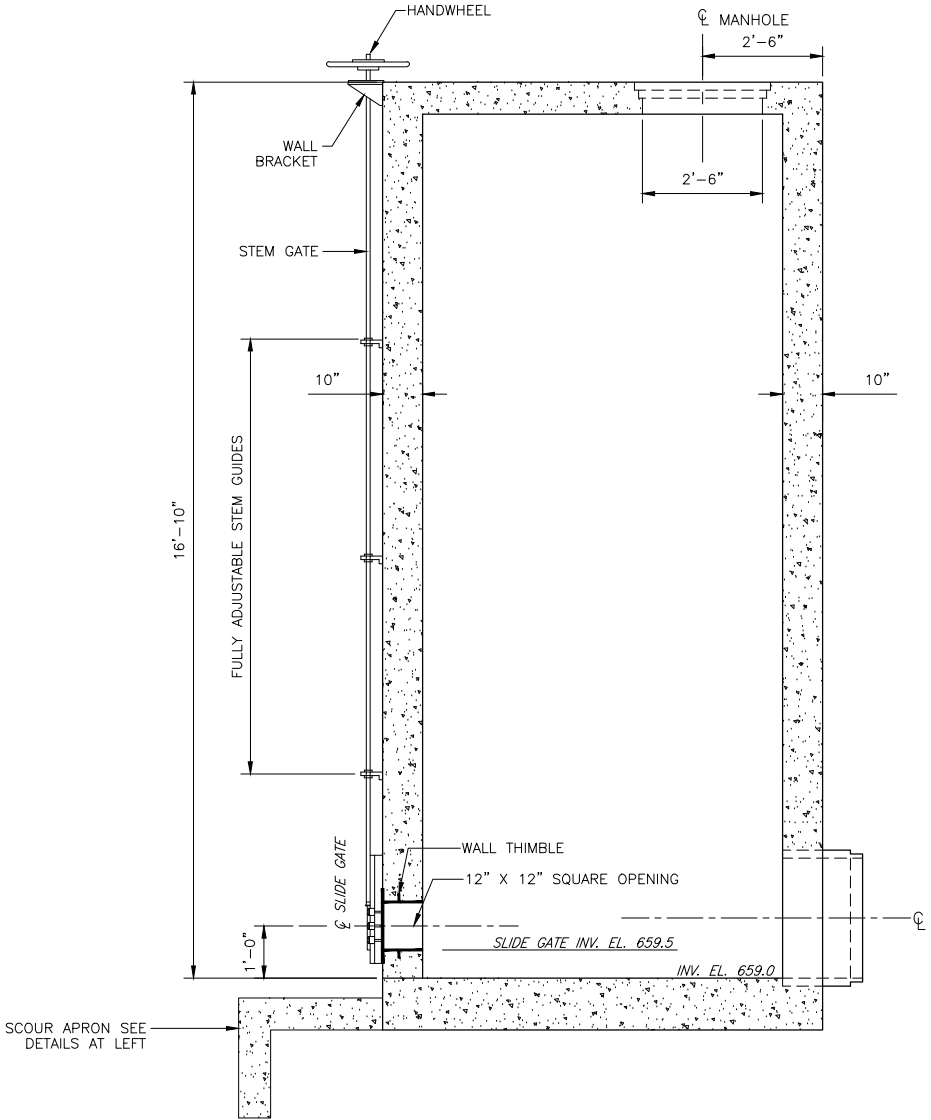
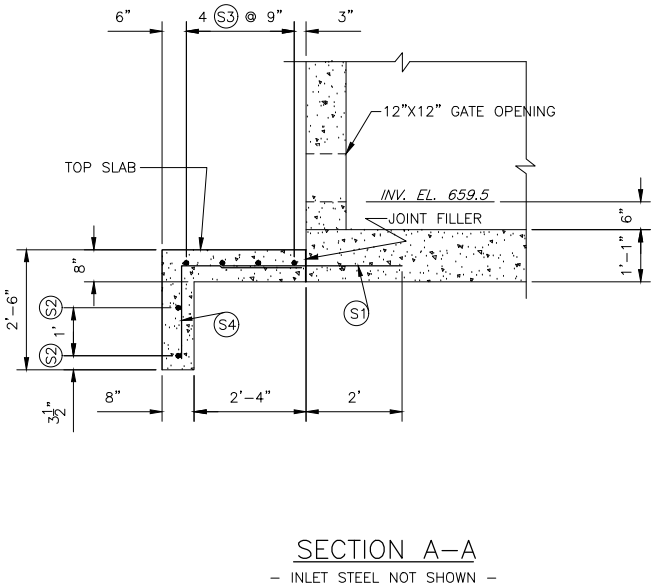
SCOUR APRON - DETAILS



BAR NO.	SIZE	TYPE	QTY.	LENGTH	B	C	TOTAL LENGTH
S1	6	STR.	8	3'-9"	-	-	30'-0"
S2	4	21	4	7'-1"	2'-8"	4'-5"	28'-4"
S3	4	21	8	6'-4"	1'-11"	4'-5"	50'-8"
S4	4	21	8	4'-5"	1'-11"	2'-6"	35'-4"
TOTAL STEEL (SIZE 6) = 30'-0" = 45.06 LBS.							
TOTAL STEEL (SIZE 4) = 114'-4" = 76.37 LBS.							
TOTAL STEEL IN SCOUR APRON = 121.43 LBS.							
TOTAL REINFORCED CONC. IN SCOUR APRON = 1.2 CU. YDS.							

THE SCOUR APRON SHALL BE FASTENED TO THE INLET BASE WITH 6 S1 BARS, 3'-9" LONG. ALL STEEL SHALL BE CENTERED IN THE TOP SLAB AND FOOTING, EXCEPT WHERE DIMENSIONED.

JOINT FILLER SHALL BE 3/4" PREFORMED EXPANSION JOINT FILLER. CONCRETE SHALL EQUAL OR EXCEED CLASS 4000.



THE SLIDE GATE SHALL BE CENTERED IN THE UPSTREAM ENDWALL OF THE PRINCIPAL SPILLWAY INLET. WALL BRACKET AND STEM GUIDES SHALL HAVE SUFFICIENT ADJUSTMENT TO INSURE A VERTICAL MOUNTING FOR THE GATE STEM. SEE MANUFACTURER'S DATA FOR DETAILS OF GATE FRAME, STEM SPLICES, AND ANCHOR BOLT LAYOUT. (SEE CONSTRUCTION SPECIFICATION 71.)

12" X 12" SLIDE GATE DETAILS
- NOT TO SCALE -

REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

DESIGNED BY: BTS

DRAWN BY: GMK

CHECKED BY: TPB

FILE NAME: PC10_INLET.dwg

DATE CHECKED: 10/8/2020

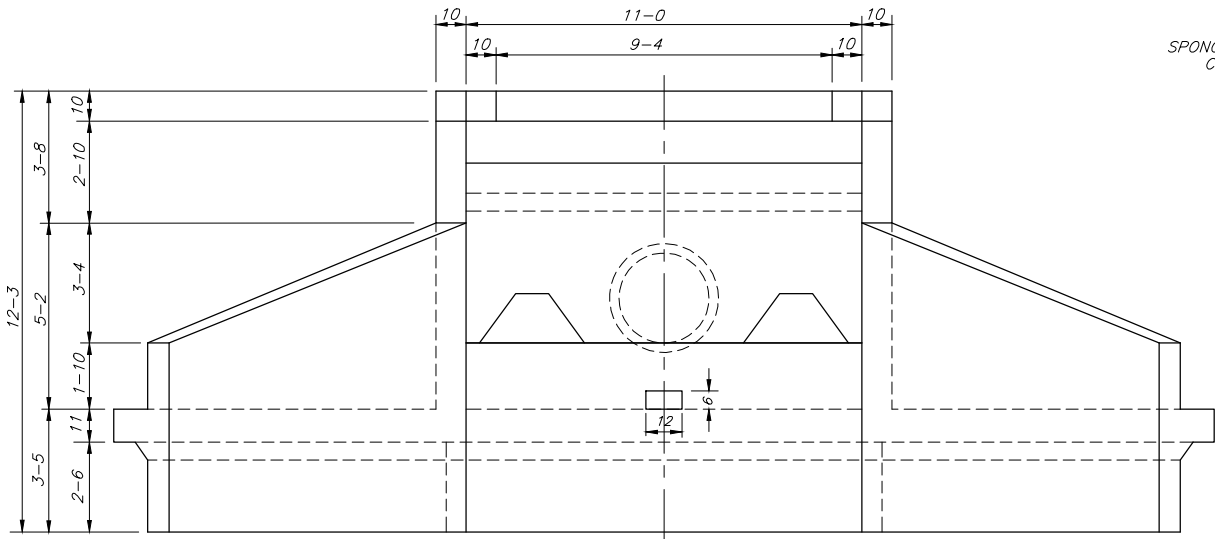
United States
Department of
Agriculture

Natural Resources
Conservation Service

DRAWING NO.
TX-EN-0740

SHEET NO.
19
OF
45

SCOUR APRON AND SLIDE GATE DETAILS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



DOWNSTREAM ELEVATION

EXPANSION JOINT FILLER SHALL BE ASTM D 1752, TYPE 1 SPONGE RUBBER, 1/2" THICK AND SHALL BE A 10" WIDE STRIP COMPLETELY ENCOMPASSING THE 30" PIPE. (SEE MATERIAL SPECIFICATION 535)

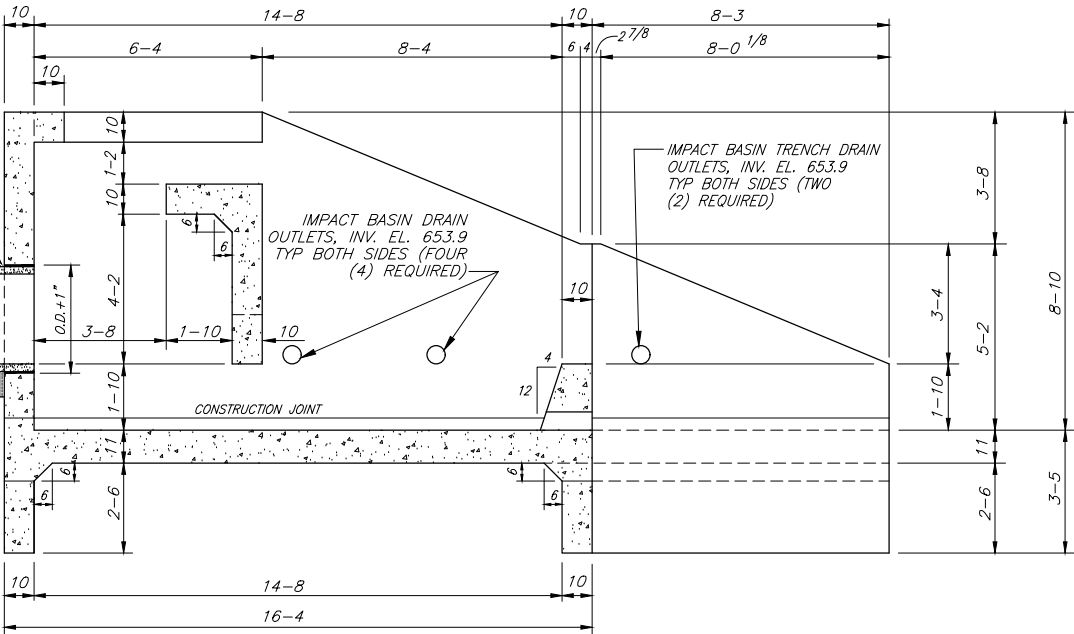
EXPANSION JOINT FILLER
SEE NOTE ABOVE

BOTTOM OF CRADLE

6" OF SPONGE RUBBER FILLER TO BE INSTALLED BETWEEN THE UPSTREAM FACE OF THE HEADWALL AND THE DOWNSTREAM FACE OF THE CRADLE.

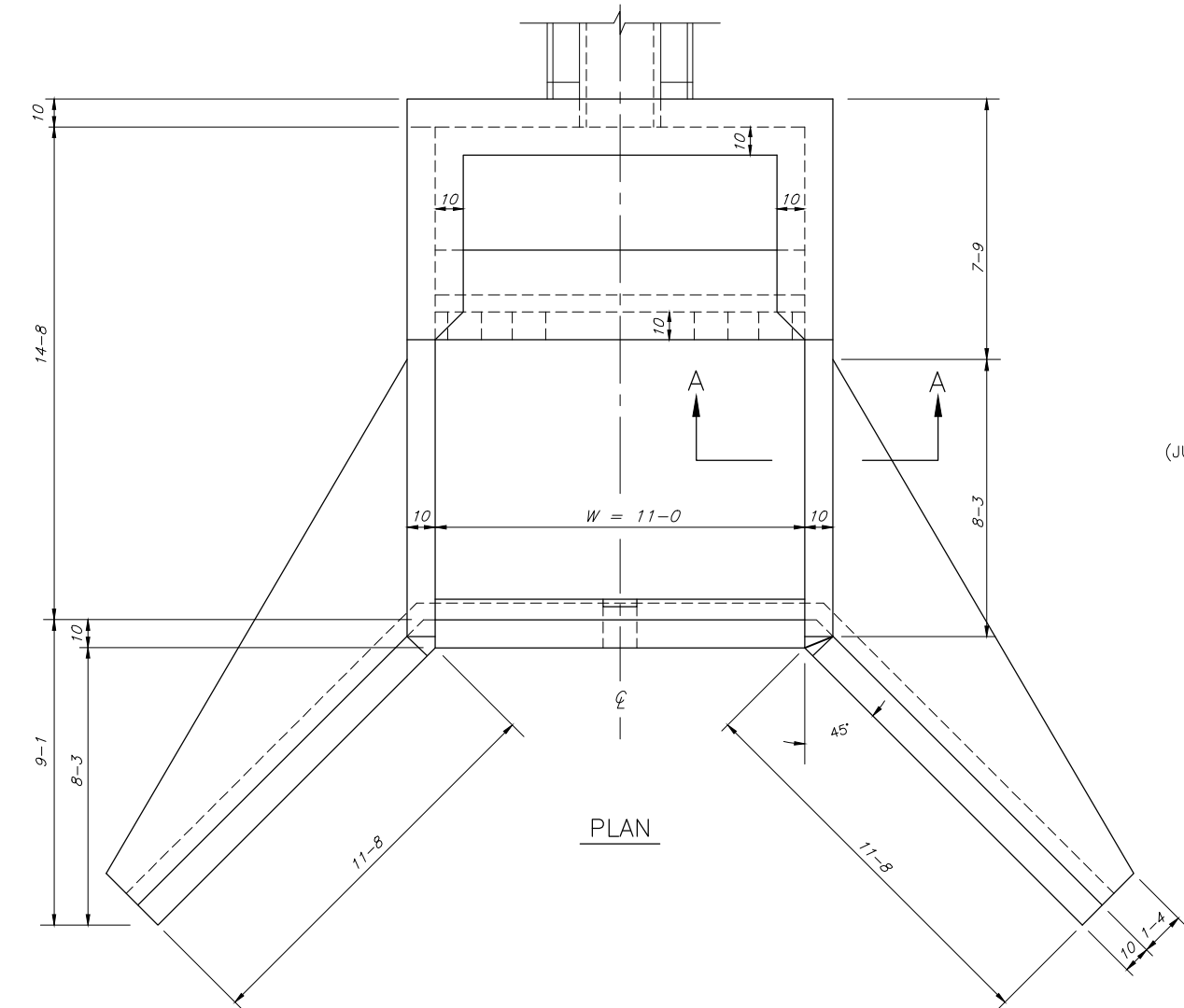
SPONGE RUBBER FILLER SHALL COMPLY WITH ASTM D 1752 - TYPE 1.

LAMINATE SEVERAL LAYERS TOGETHER TO FORM A GOOD TIGHT COMPRESSIBLE LAYER (SEE CONSTRUCTION SPECIFICATION 31).

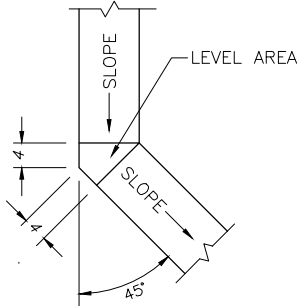


SECTION ON CENTERLINE

NOTE: FOR IMPACT BASIN DRAINFILL REQUIREMENTS, SEE SHEET 25.

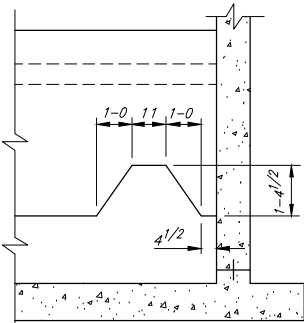


PLAN

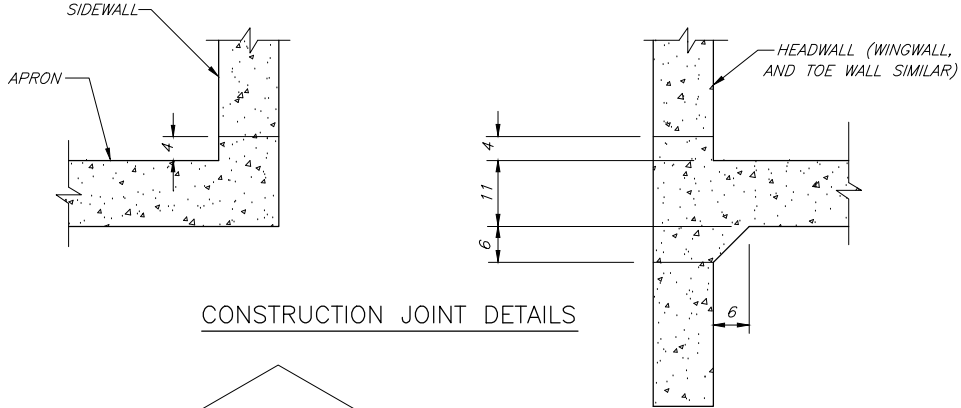


PLAN

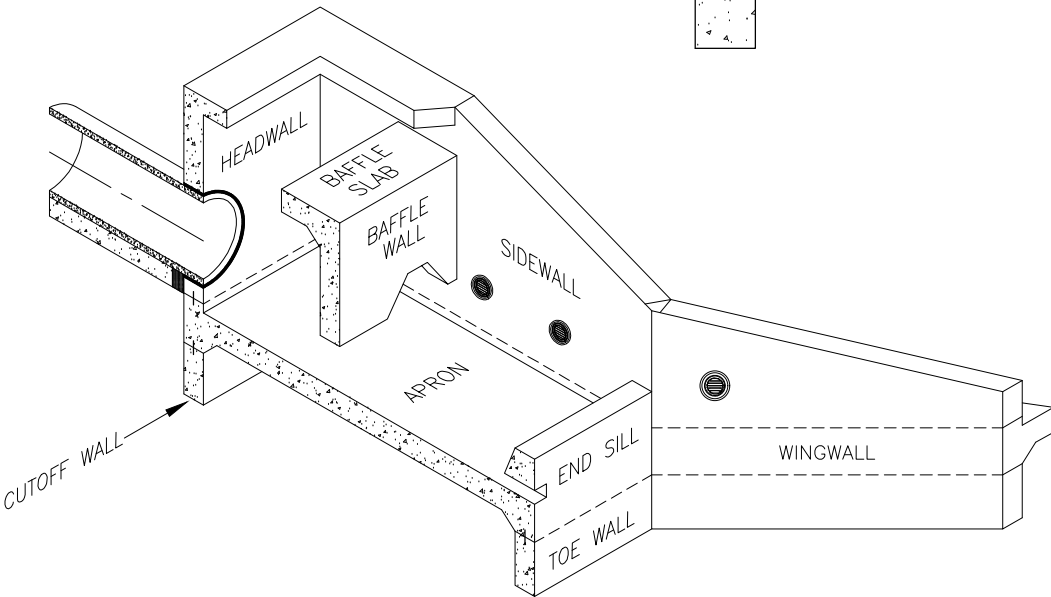
(JUNCTION OF SIDEWALL AND WINGWALL)



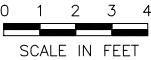
SECTION A-A



CONSTRUCTION JOINT DETAILS



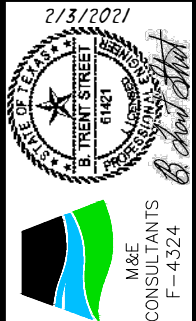
SECTION ISOMETRIC VIEW



STANDARD IMPACT BASIN			
DESIGN CONSTANTS		CARL ROHDE	
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STANDARD DRAWING NO. ES-4110		Consulting Engineer	
DATE 1-70	SHEET 1 OF 5	654 Ridgeway Rd Lake Oswego, Ore	

THIS AUTOCAD DRAWING WAS CREATED FROM A SCANNED VERSION OF THE STANDARD DRAWING AND INCLUDES REVISIONS PER "SCS STANDARD IMPACT BASIN MODIFICATIONS" DOCUMENT DATED AUGUST 26-30, 1974 BY SCS DESIGN ENGINEER DONALD BASINGER - BTS WITH M&E CONSULTANTS, 11/2018

REVISIONS		
DATE	APPROVED	TITLE

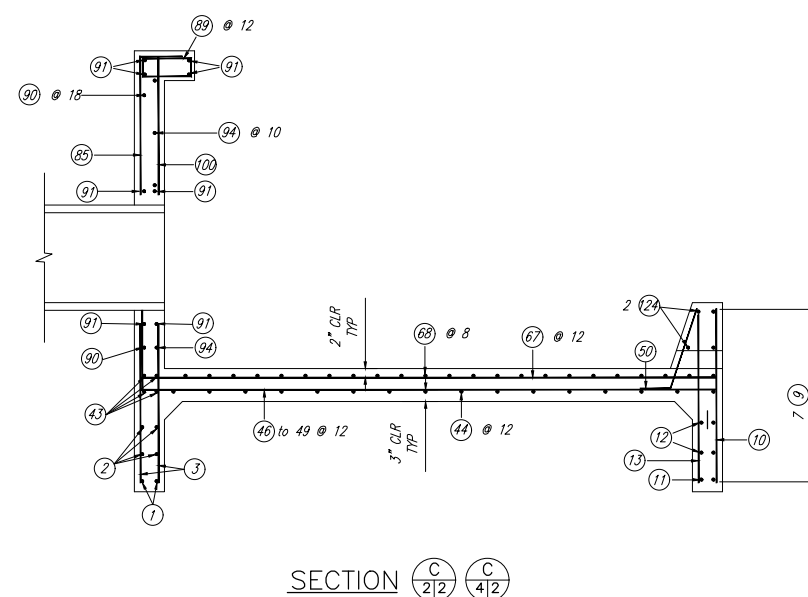
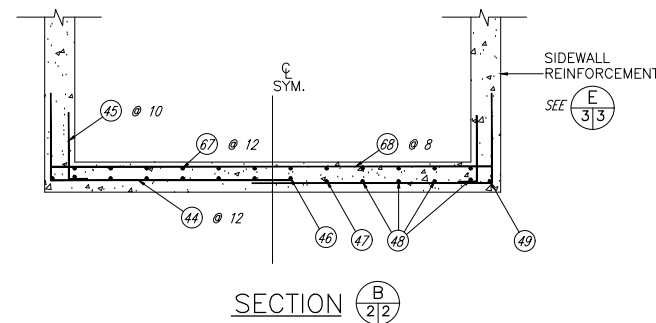
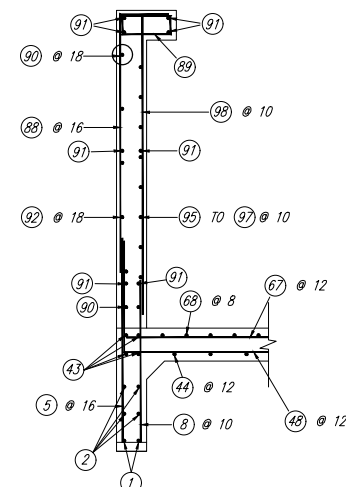
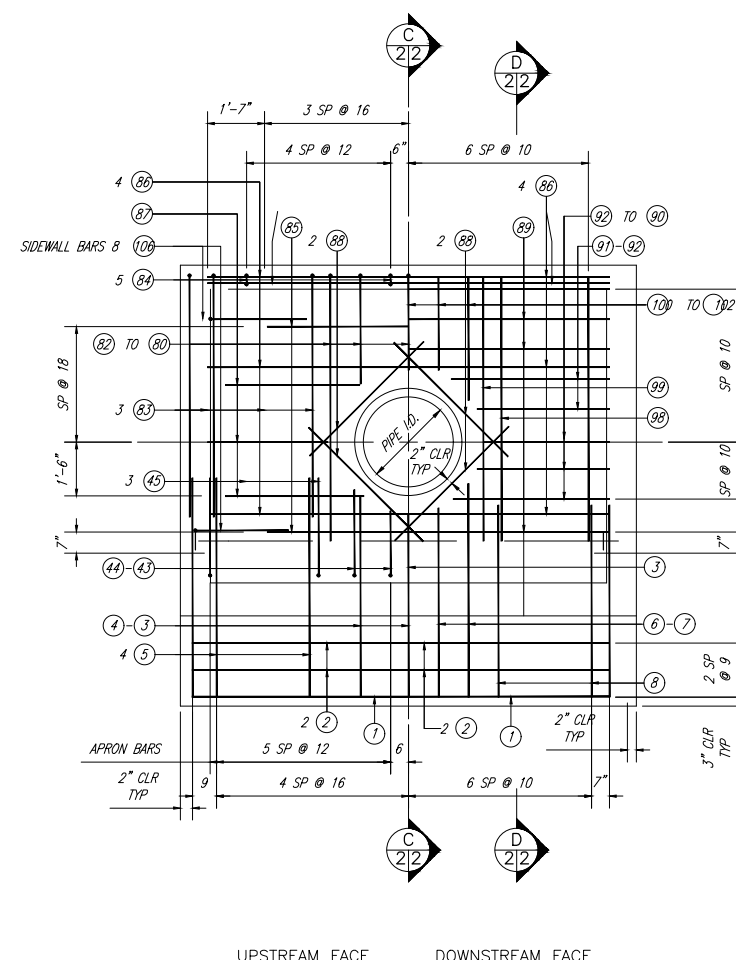
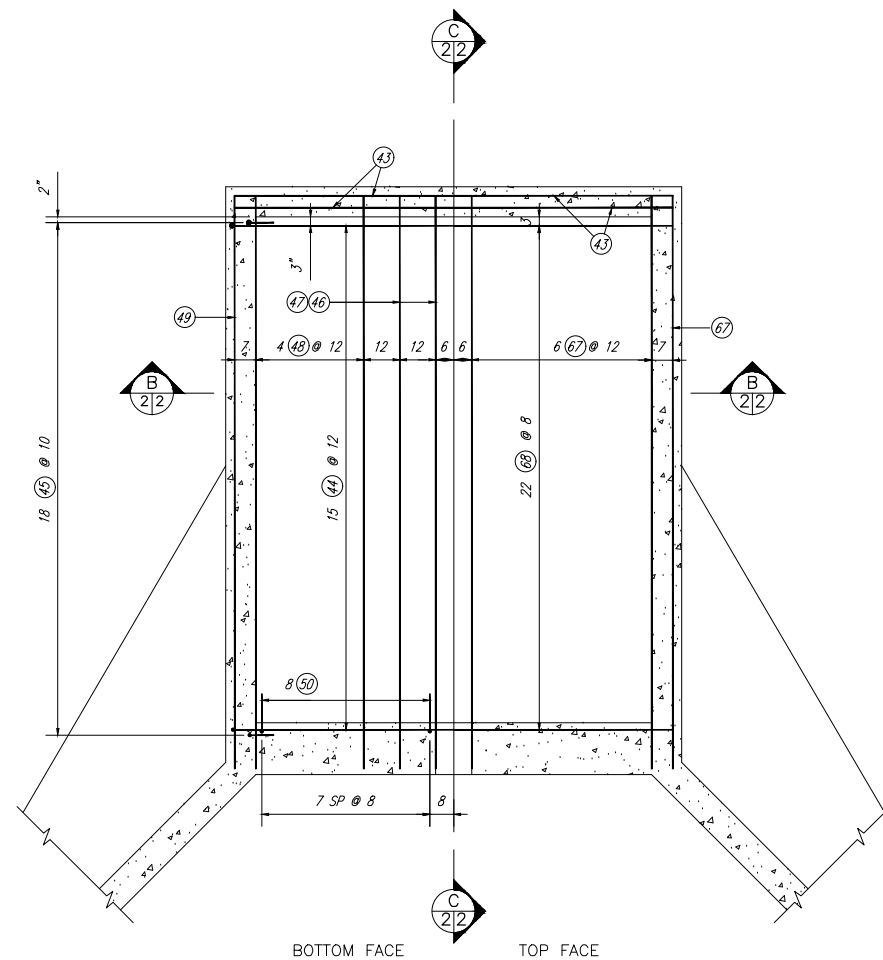


DESIGNED BY:	BTS
DRAWN BY:	GMK
CHECKED BY:	TPB
FILE NAME:	PC10_IB.dwg
DATE CHECKED:	10/8/2020

IMPACT BASIN PLAN AND SECTION VIEW
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



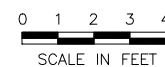
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SHEET NO.	20
OF	45



STANDARD IMPACT BASIN			
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STANDARD DRAWING NO. ES-4110			
DATE 1-70		SHEET 2 OF 5	

CARL ROHDE
Consulting Engineer
654 Ridgeway Rd Lake Oswego, Ore

REVISIONS		
DATE	APPROVED	TITLE



THIS AUTOCAD DRAWING WAS CREATED FROM A SCANNED VERSION OF
THE STANDARD DRAWING AND INCLUDES REVISIONS PER "SCS STANDARD
IMPACT BASIN MODIFICATIONS" DOCUMENT DATED AUGUST 26-30, 1974
BY SCS DESIGN ENGINEER DONALD BASINGER - BTS WITH M&E
CONSULTANTS, 11/2018

REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

B. Trent Street
61421

PROFESSIONAL
DESIGN

B. Trent Street

M&E
CONSULTANTS
F-4324

DRAWN BY: GMK
 CHECKED BY: TPB
 FILE NAME: PC10_IB.dwg
 DATE CHECKED: 10/8/2020

IMPACT BASIN STEEL PLACEMENT
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



United States
Department of
Agriculture

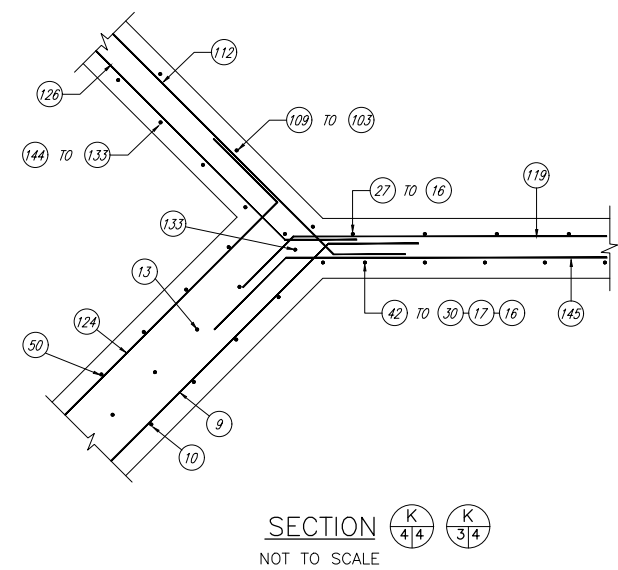
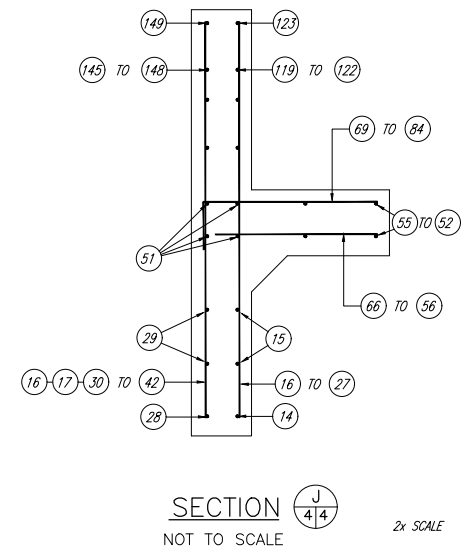
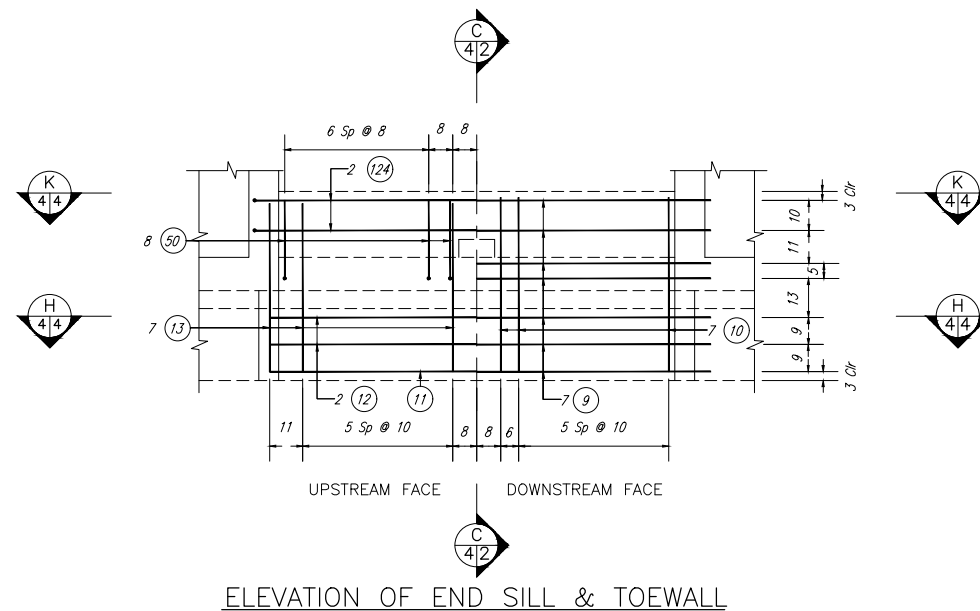
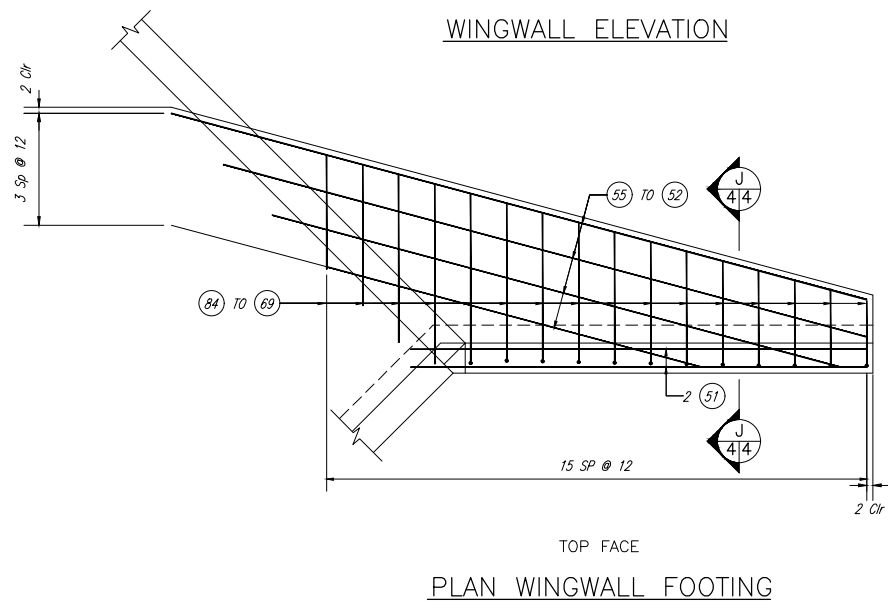
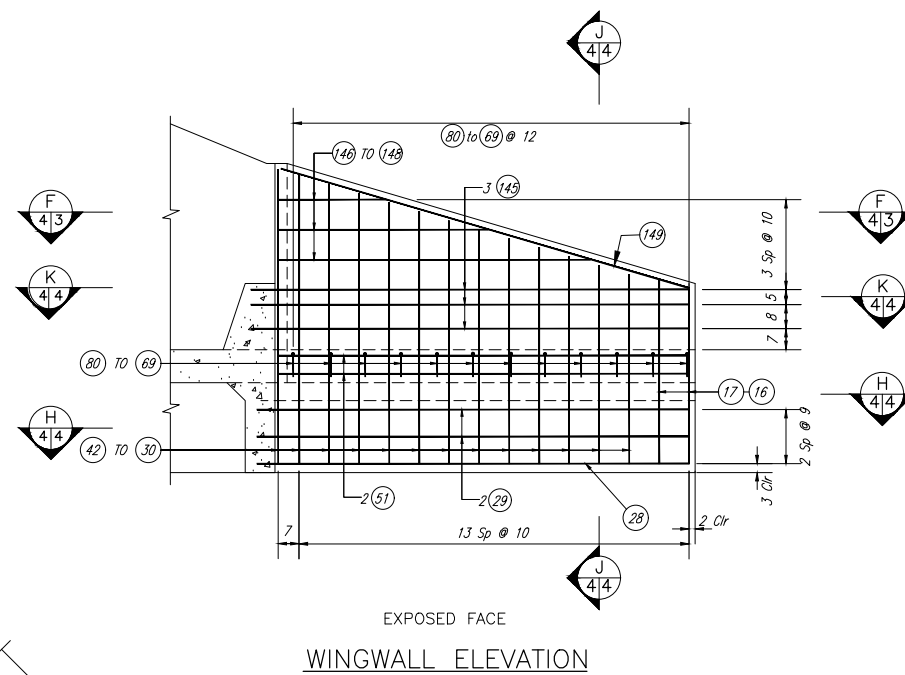
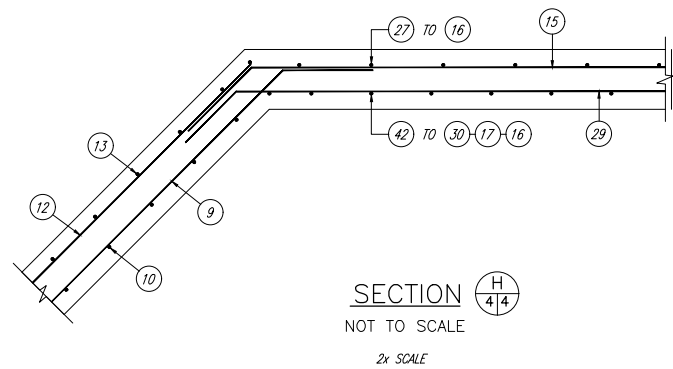
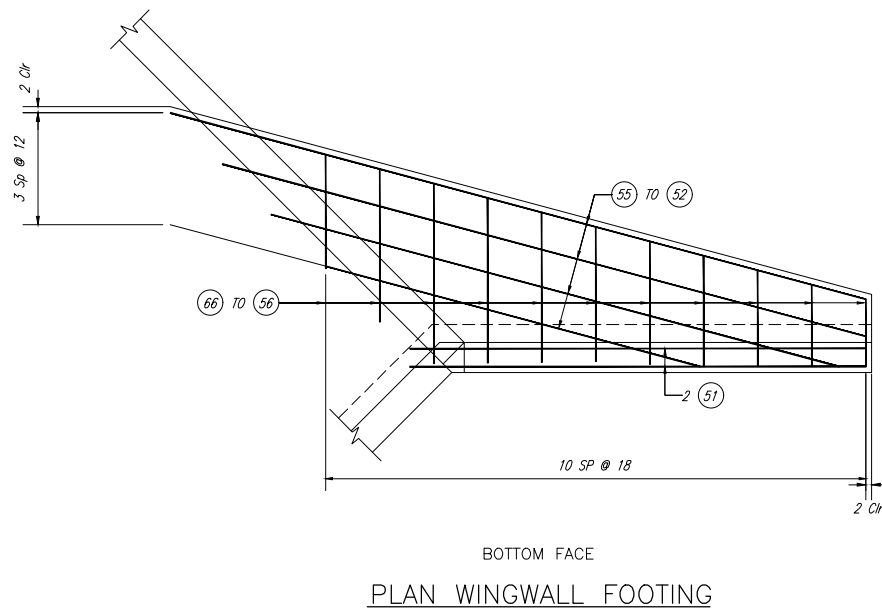
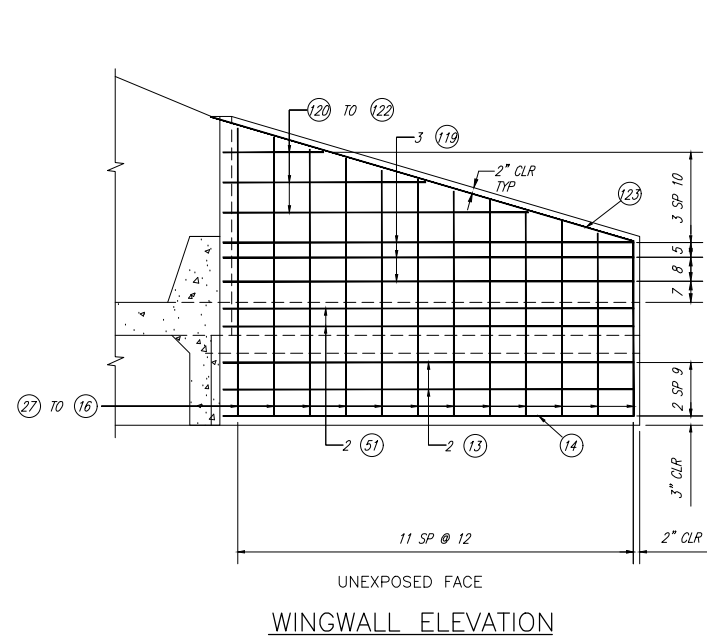
**Natural Resources
Conservation Service**

DRAWING NO.
TX-EN-0740

ET NO.

22

45



STANDARD IMPACT BASIN							
DESIGN CONSTANTS		$f'_c = 4000 \text{ psi}$ $n = 8$	$f_c = 1600 \text{ psi}$ $f_s = 20,000 \text{ psi}$	CARL ROHDE			
STANDARD DRAWING NO. ES - 4110				Consulting Engineer			
DATE 1-70		SHEET 4 OF 5		654 Ridgeway Rd Lake Oswego, Ore			

REVISIONS		
DATE	APPROVED	TITLE

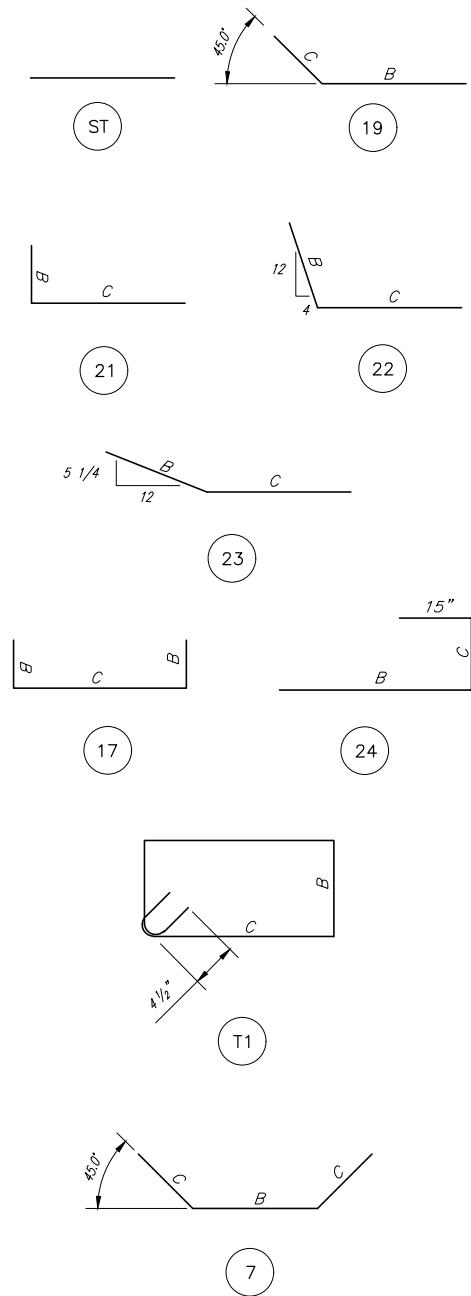
THIS AUTOCAD DRAWING WAS CREATED FROM A SCANNED VERSION OF
THE STANDARD DRAWING AND INCLUDES REVISIONS PER "SCS STANDARD
IMPACT BASIN MODIFICATIONS" DOCUMENT DATED AUGUST 26-30, 1974
BY SCS DESIGN ENGINEER DONALD BASINGER - BTS WITH M&E
CONSULTANTS, 11/2018

LOCATION	MARK	SIZE	QTY.	ENGTH	TYPE	B	C	TOTAL LGTH.
HEADWALL	1	5	2	12-4	ST			24-8
"	2	4	4	12-4	ST			49-4
"	3	4	2	4-6	ST			9-0
"	4	4	2	5-2	ST			10-4
"	5	4	8	5-8	ST			45-4
"	6	4	2	4-8	ST			9-4
"	7	4	2	5-8	ST			11-4
"	8	4	12	4-6	ST			54-0
ENDSILL	9	5	7	14-8	7	12-2	1-3	102-8
"	10	5	14	4-10	ST			67-8
"	11	5	1	11-7	ST			11-1
"	12	4	2	11-7	ST			23-2
"	13	4	14	4-8	ST			65-4
WINGWALL	14	5	2	13-0	19	1-3	11-9	26-0
"	15	4	4	12-9	19	1-0	11-9	51-0
"	16	5	4	4-10	ST			19-4
"	17	4	4	5-1	ST			20-4
"	18	4	2	5-5	ST			10-10
"	19	4	2	5-8	ST			11-4
"	20	4	2	6-0	ST			12-0
"	21	4	2	6-3	ST			12-6
"	22	4	2	6-7	ST			13-2
"	23	4	2	6-10	ST			13-8
"	24	4	2	7-2	ST			14-4
"	25	4	2	7-5	ST			14-10
"	26	4	2	7-9	ST			15-6
"	27	4	2	8-0	ST			16-0
"	28	5	2	13-3	19	1-3	12-0	26-6
"	29	4	4	13-0	19	1-0	12-0	52-0
"	30	4	2	5-3	ST			10-6
"	31	4	2	5-6	ST			11-0
"	32	4	2	5-9	ST			11-6
"	33	4	2	6-0	ST			12-0
"	34	4	2	6-3	ST			12-6
"	35	4	2	6-6	ST			13-0
"	36	4	2	6-9	ST			13-6
"	37	4	2	7-0	ST			14-0
"	38	4	2	7-3	ST			14-6
"	39	4	2	7-6	ST			15-0
"	40	4	2	7-9	ST			15-6
"	41	4	2	8-0	ST			16-0
"	42	4	2	8-2	ST			16-4
APRON	43	5	4	12-4	ST			49-4
"	44	5	30	9-10	21	3-2	6-8	295-0
"	45	4	36	2-8	21	2-0	0-8	96-0
"	46	4	2	17-11	21	1-11	16-0	35-10
"	47	4	2	18-9	21	2-9	16-0	37-6
"	48	4	8	19-1	21	3-1	16-0	152-8
"	49	4	2	16-0	ST			32-0
"	50	5	16	3-2	22	0-10	2-4	50-8
WINGWALL	51	4	8	12-8	ST			101-4
"	52	6	4	20-0	ST			80-0
"	53	4	4	18-6	ST			74-0
"	54	4	4	16-4	ST			65-4
"	55	4	4	10-9	ST			43-0
"	56	4	2	1-10	ST			3-8
"	57	4	2	2-3	ST			4-6
"	58	4	2	2-8	ST			5-4
"	59	4	2	3-1	ST			6-2
"	60	4	2	3-5	ST			6-10
"	61	4	2	3-10	ST			7-8
"	62	4	2	4-2	ST			8-4
"	63	4	2	4-7	ST			9-2
"	64	4	2	5-0	ST			10-0
"	65	4	2	4-3	ST			8-6
"	66	4	2	3-2	ST			6-4

LOCATION	MARK	SIZE	QTY.	LENGTH	TYPE	B	C	TOTAL LGTH.	
"	71	4	2	3-1	21	0-8	2-5	6-2	
"	72	4	2	3-4	21	0-8	2-8	6-8	
"	73	4	2	3-7	21	0-8	2-11	7-2	
"	74	4	2	3-10	21	0-8	3-2	7-8	
"	75	4	2	4-1	21	0-8	3-5	8-2	
"	76	4	2	4-4	21	0-8	3-8	8-8	
"	77	4	2	4-7	21	0-8	3-11	9-2	
"	78	4	2	4-10	21	0-8	4-2	9-8	
"	79	4	2	5-1	21	0-8	4-5	10-2	
"	80	4	2	5-5	21	0-8	4-9	10-10	
"	81	4	2	5-0	ST			10-0	
"	82	4	2	4-8	ST			9-4	
"	83	4	2	3-11	ST			7-10	
"	84	4	2	3-2	ST			6-4	
HEADWALL	85	4	1	5-2	21	3-10	1-4	5-2	
"	86	4	2	5-9	21	4-5	1-4	11-6	
"	87	5	2	9-8	21	8-4	1-4	19-4	
"	88	4	8	8-6	21	7-2	1-4	68-0	
"	89	4	11	4-5	11	0-6	1-4	48-7	
"	90	4	3	9-0	ST			27-0	
"	91	5	8	12-4	ST			98-8	
"	92	4	6	3-10	ST			23-0	
"	93	5	8	5-2	ST			41-4	
"	94	4	5	12-4	ST			61-8	
"	95	4	2	4-4	ST			8-8	
"	96	4	4	4-7	ST			18-4	
"	97			NONE REQUIRED					
"	98	4	10	8-4	ST			83-4	
"	99	5	2	8-4	ST			16-8	
"	100	4	1	3-10	ST			3-10	
"	101	4	2	4-0	ST			8-0	
"	102	4	2	5-0	ST			10-0	
SIDEWALL	103	4	2	4-8	ST			9-4	
"	104	4	2	5-2	ST			10-4	
"	105	4	2	5-0	ST			10-0	
"	106	4	2	5-7	ST			11-2	
"	107	4	2	6-2	ST			12-4	
"	108	4	2	6-9	ST			13-6	
"	109	4	10	8-9	21	7-5	1-4	87-6	
"	110	4	10	4-5	11	0-6	1-4	44-2	
"	111	4	16	12-1	21	2-10	9-3	193-4	
"	112	4	10	12-8	19	1-0	11-8	126-8	
"	113	4	2	11-1	ST			22-2	
"	114	4	2	11-3	ST			22-6	
"	115	4	2	9-3	ST			18-6	
"	116	4	2	9-9	ST			19-6	
"	117	5	4	8-3	21	1-3	7-0	33-0	
"	118	5	4	10-11	23	1-3	9-8	43-8	
WINGWALL	119	4	6	12-9	19	1-0	11-9	76-6	
"	120	4	2	9-11	19	1-0	8-11	19-10	
"	121	4	2	7-1	19	1-0	6-1	14-2	
"	122	4	2	4-3	19	1-0	3-3	8-6	
"	123	5	2	13-6	19	1-3	12-3	27-0	
ENDSILL	124	5	2	14-8	17	1-3	12-2	29-4	
SIDEWALL	125	4	18	7-0	ST			126-0	
"	126	4	10	13-3	19	1-0	12-3	132-6	
"	127	4	2	12-2	ST			24-4	
"	128	4	2	12-4	ST			24-8	
"	129	4	2	10-4	ST			20-8	
"	130	4	2	9-9	ST			19-6	
"	131	4	2	8-4	ST			16-8	
"	132	5	4	7-9	19	1-10	5-11	31-0	
"	133	4	2	4-8	ST			9-4	
"	134	4	2	5-0	ST			10-0	
"	135	4	2	5-4	ST			10-8	
"	136	4	2	5-8	ST			11-4	
"	137	4	2	6-0	ST			12-0	
"	138	4	2	6-4	ST			12-8	
"	139	4	2	6-9	ST			13-6	
"	140	4	2	7-1	ST			14-2	

LOCATION	MARK	SIZE	QTY.	LENGTH	TYPE	B	C	TOTAL LGTH.
"	141	4	2	7-5	ST			14-10
"	142	4	2	7-9	ST			15-6
"	143	4	2	8-1	ST			16-2
"	144	4	16	8-4	ST			133-4
WINGWALL	145	4	6	13-2	19	1-0	12-2	79-0
"	146	4	2	8-8	ST			17-4
"	147	4	2	5-10	ST			11-8
"	148	4	2	3-0	ST			6-0
"	149	5	2	13-0	19	1-3	11-9	26-0
BAFFLE	150	5	8	16-4	17	2-1	12-2	130-8
"	151	5	2	4-10	ST			9-8
"	152	4	17	6-3	11	0-6	2-3	106-3
"	153	5	4	15-2	17	1-6	12-2	60-8
"	154	5	6	6-3	24	4-7	0-5	37-6
"	155	5	4	6-0	24	4-4	0-5	24-0
"	156	5	6	4-11	24	3-3	0-5	29-6
"	157	5	4	5-7	21	1-0	4-7	22-4
"	158	5	2	11-2	7	3-6	3-10	22-4
"	159	5	11	3-11	17	1-0	1-11	43-1
	160	5	6	6-11	21	2-3	4-8	41-6
	161	5	4	6-6	21	2-3	4-3	26-0
	162	5	6	5-6	21	2-3	3-3	33-0
	163	5	6	16-4	17	2-1	12-2	98-0
TOTAL NUMBER 4 BARS REQUIRED = 3,482-1 = 2,326 LBS.								
TOTAL NUMBER 5 BARS REQUIRED = 1,351-11 = 1,410 LBS.								
TOTAL NUMBER 6 BARS REQUIRED = 80-0 = 120 LBS.								
TOTAL STEEL IN IMPACT BASIN						4,667 LBS.		

TOTAL REINFORCED CONCRETE = 33.0 CU. YDS.



BAR TYPES

STANDARD IMPACT BASIN					
DESIGN CONSTANTS		$f'_c = 4000 \text{ psi}$ $n = 8$	$f_c = 1600 \text{ psi}$ $f_s = 20,000 \text{ psi}$		
STANDARD DRAWING NO.			ES - 4 11 O		
DATE	1-70	SHEET	5	OF	5

CARL ROHDE

Consulting Engineer

654 Ridgeway Rd Lake Oswego, Ore

STEEL SCHEDULE – IMPACT BASIN

THIS AUTOCAD DRAWING WAS CREATED FROM A SCANNED VERSION OF
THE STANDARD DRAWING AND INCLUDES REVISIONS PER "SCS STANDARD
IMPACT BASIN MODIFICATIONS" DOCUMENT DATED AUGUST 26-30, 1974
BY SCS DESIGN ENGINEER DONALD BASINGER - BTS WITH M&E
CONSULTANTS, 11/2018

REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

STATE OF TEXAS
B. TRENT STREET
61421
PROFESSIONAL SEAL

M&E
CONSULTANTS
F-4324

DESIGNED BY: _____ RTS
DRAWN BY: _____ GML
CHECKED BY: _____ TPB
FILE NAME: _____ PC10_IB.dwg
DATE CHECKED: _____ 10/8/2020

IMPACT BASIN STEEL PLACEMENT
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



United States
Department of
Agriculture

Natural Resources
Conservation Service

DRAWING NO.
TX-EN-0740

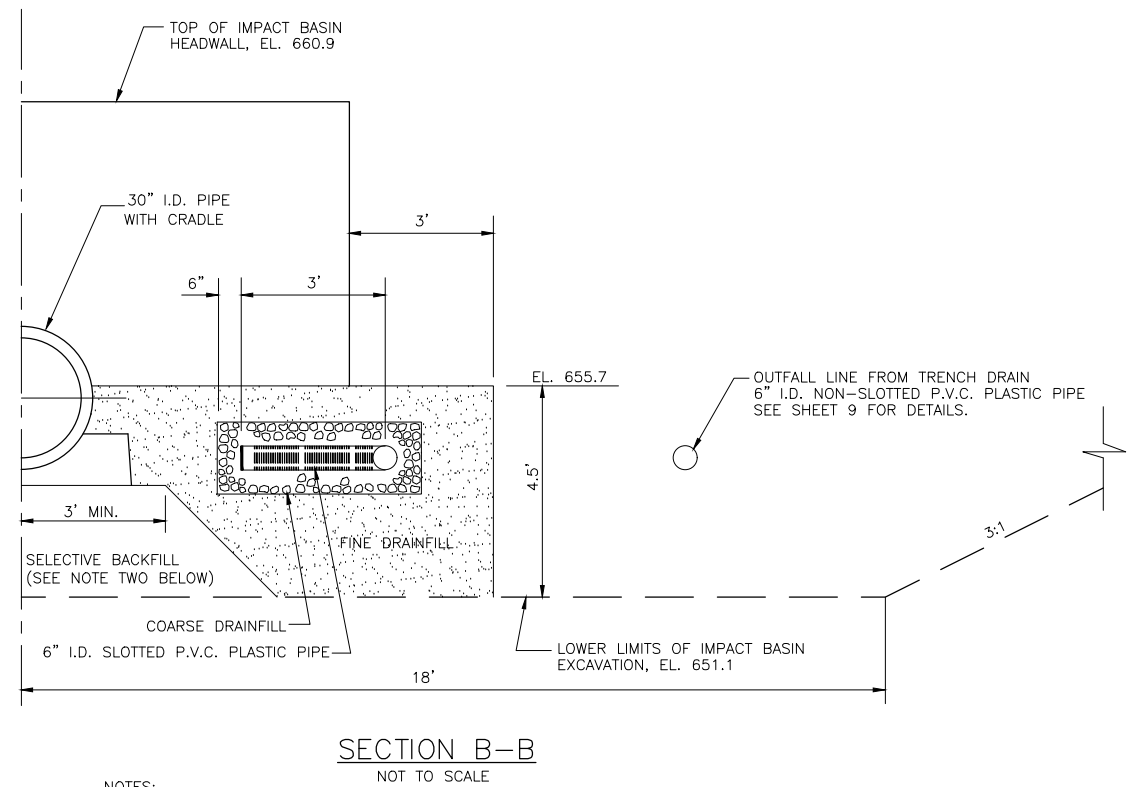
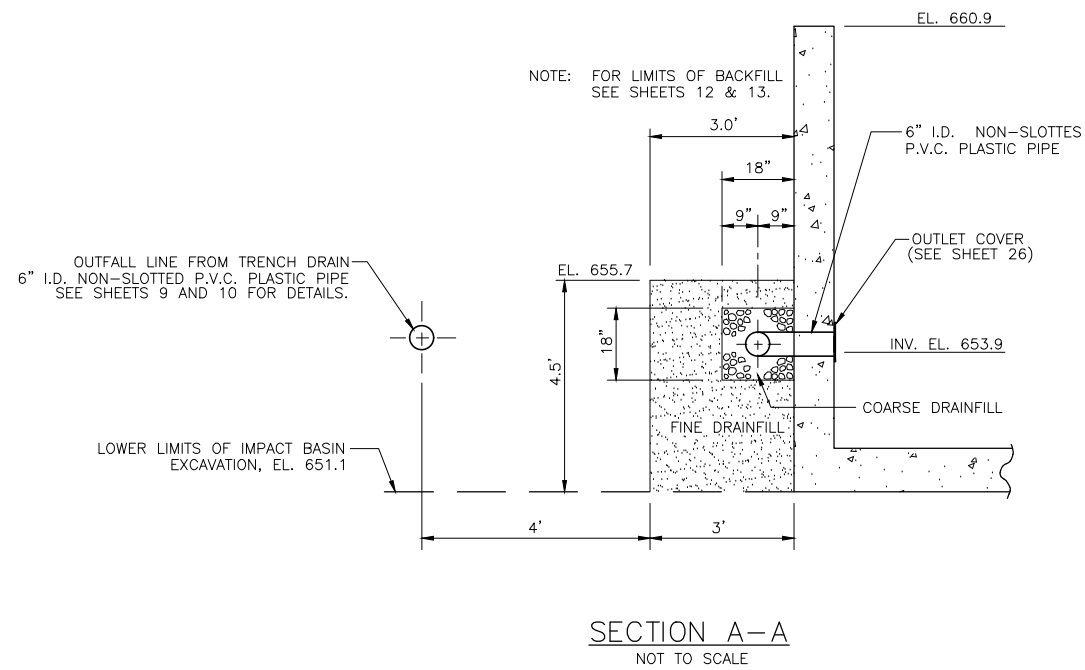
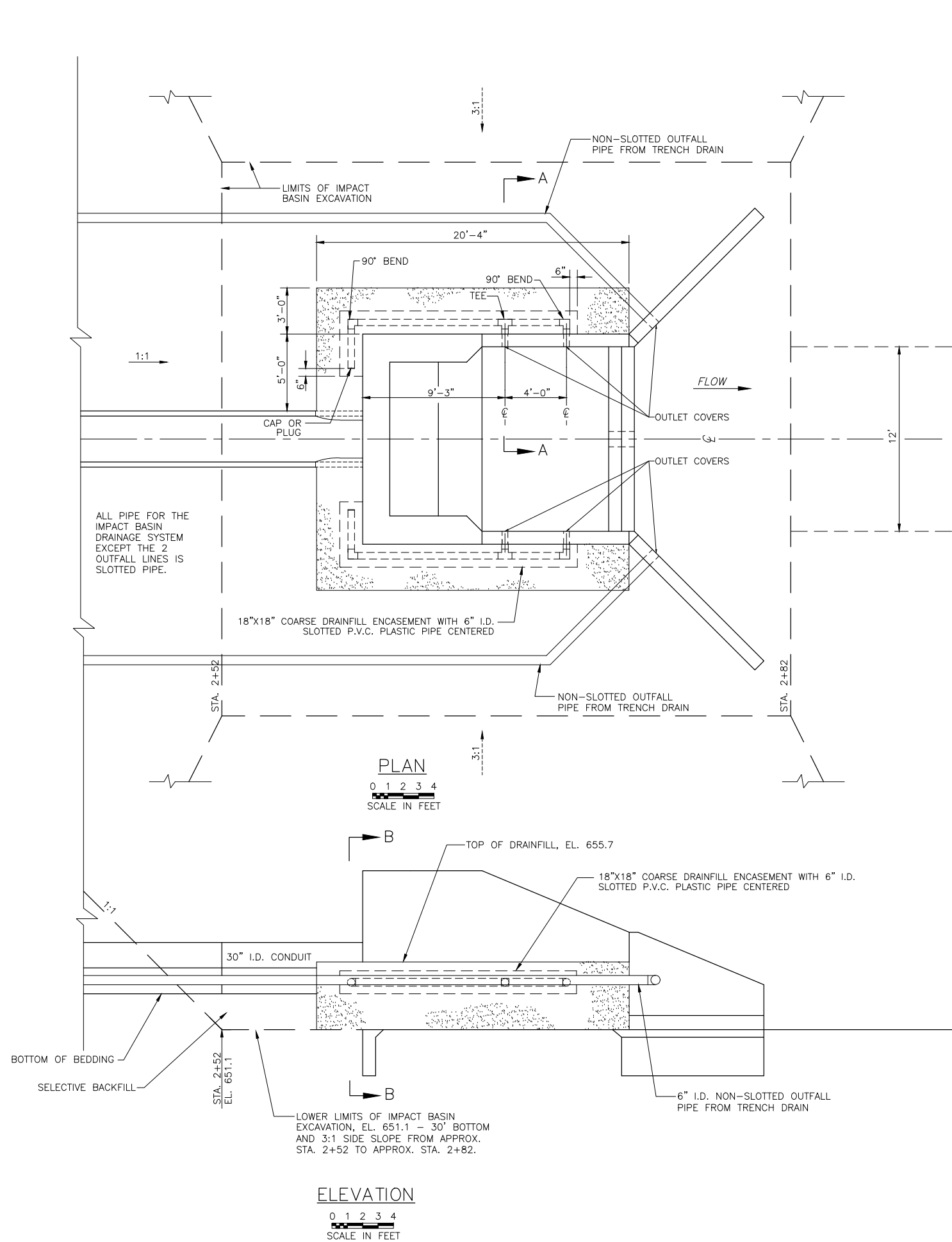
SHEET NO.

24

OF

45

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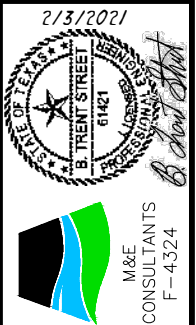
NOTES:

- SEE SHEET 8 DRAINFILL GRADATION REQUIREMENTS.
- SELECTIVE BACKFILL SHALL BE ZONE 1 MATERIALS OR OTHER MATERIALS AS APPROVED BY THE ENGINEER. USE SELECTIVE BACKFILL UNDER THE CONDUIT AND BEDDING IN THE AREA UPSTREAM OF THE BASIN HEADWALL TO THE LIMITS SHOWN.

QUANTITIES

FINE DRAINFILL	20	CU. YDS.
COARSE DRAINFILL	3	CU. YDS.
6" P.V.C. PIPE AND FITTINGS		
SLOTTED	36	LIN. FT.
NON-SLOTTED	6	LIN. FT.
90° BENDS	4	EACH
TEES	2	EACH
PLUGS	2	EACH

REVISIONS		
DATE	APPROVED	TITLE



DESIGNED BY: BTS
DRAWN BY: GMM
CHECKED BY: TPB
FILE NAME: PC10_IB.dwg
DATE CHECKED: 10/8/2020

IMPACT BASIN DRAINAGE SYSTEM
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

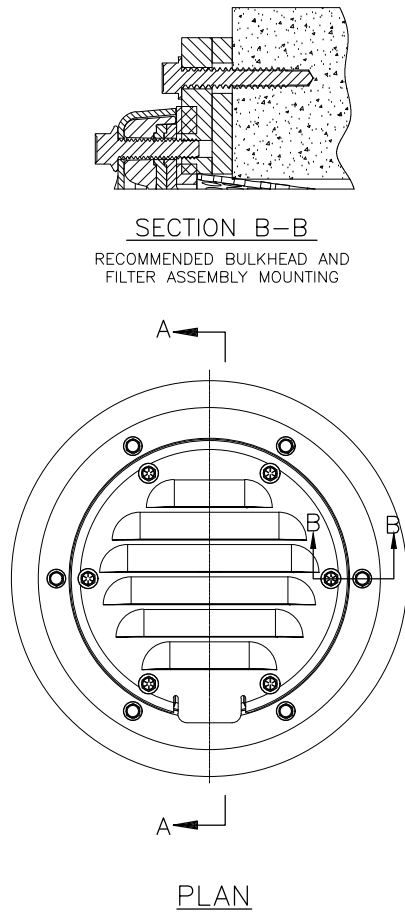
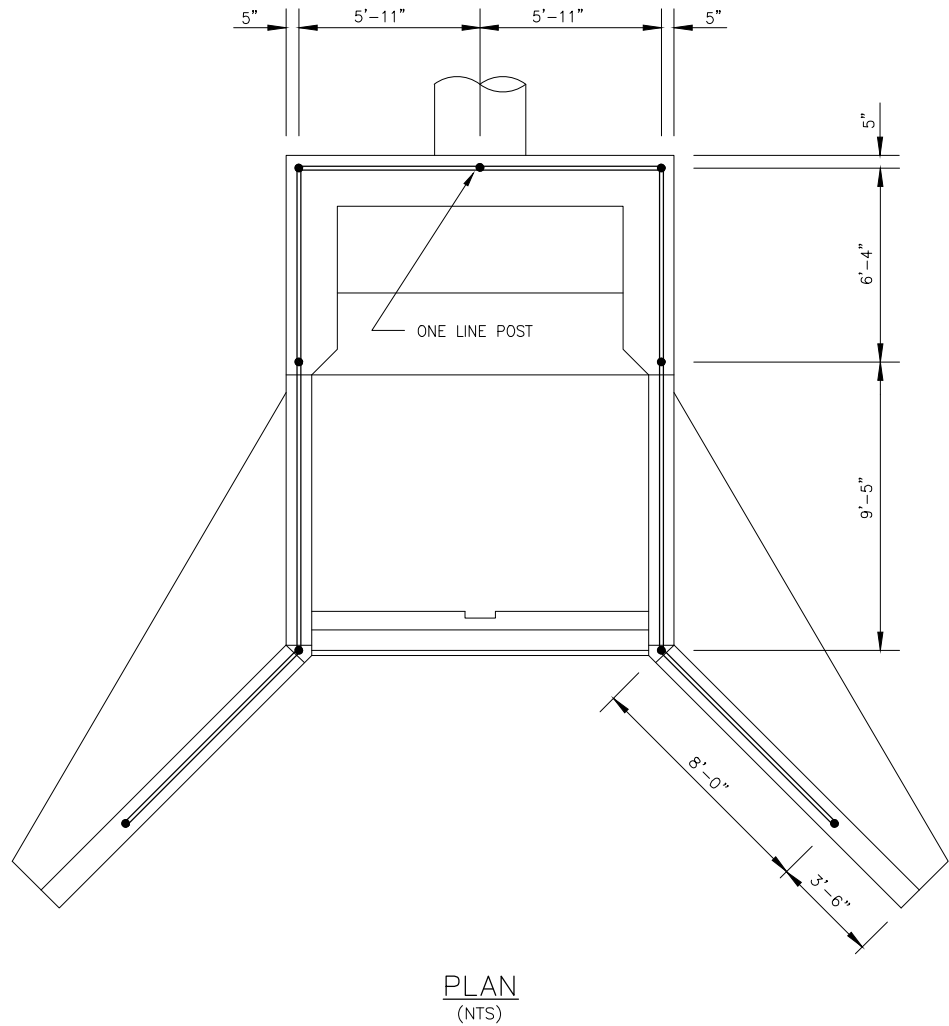


DRAWING NO.
TX-EN-0740

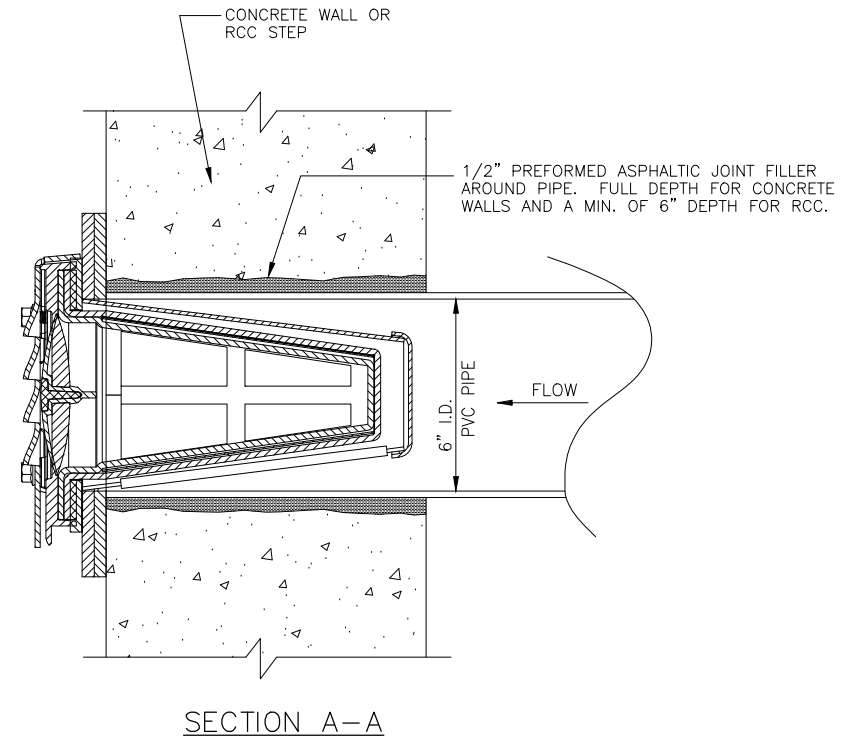
SHEET NO.
25

OF
45

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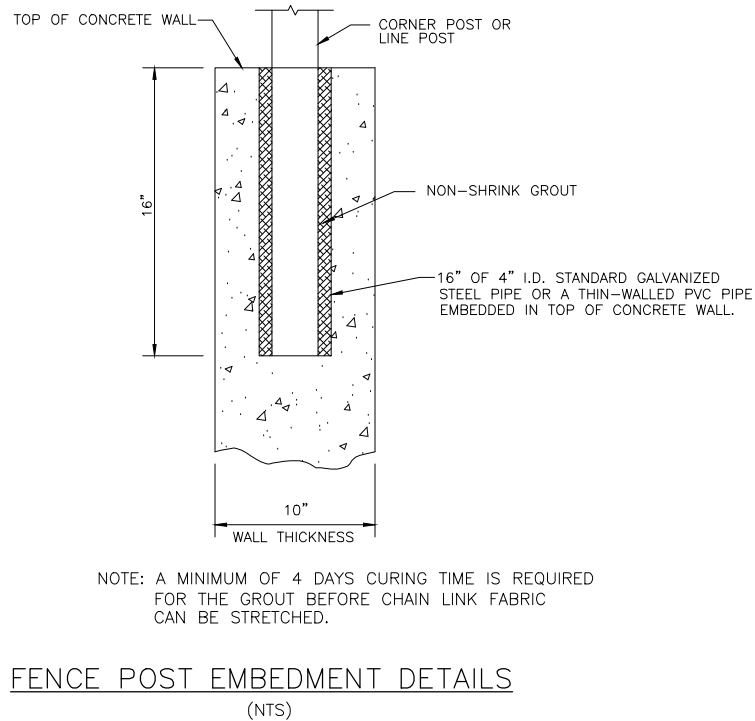
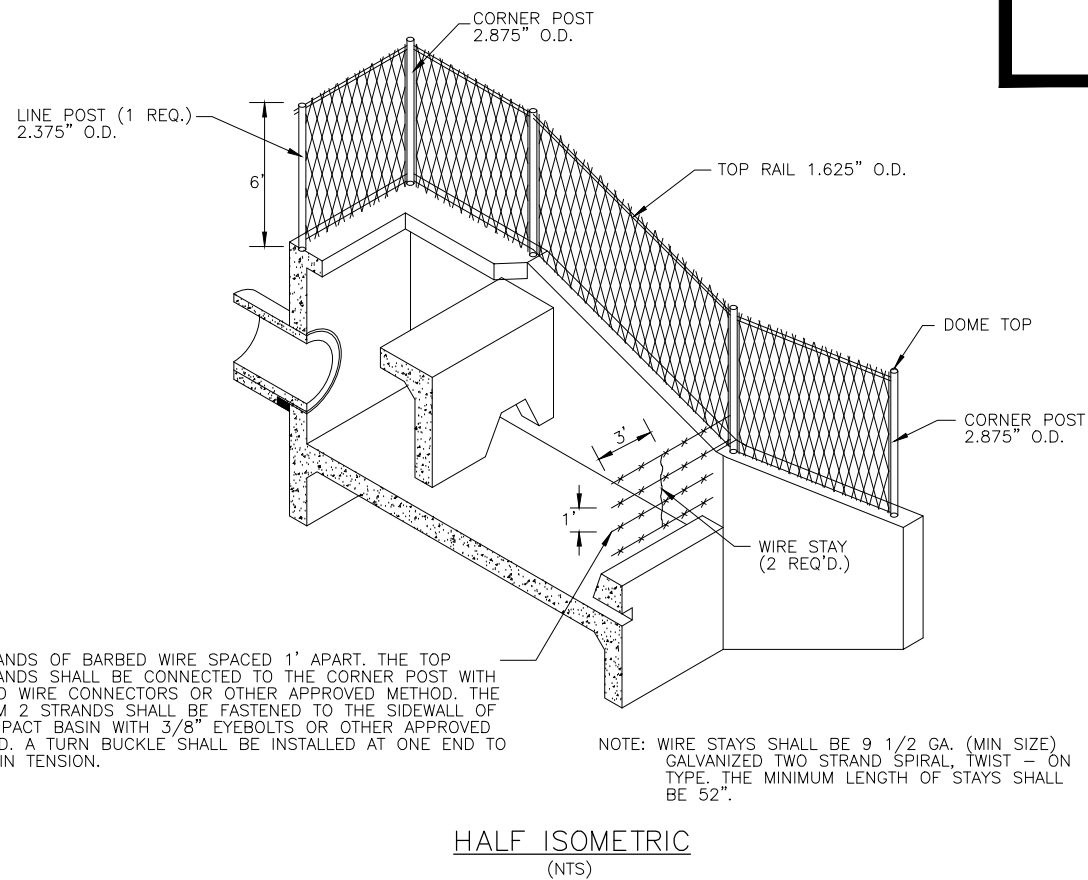


NOTE: USE 6" JET FILTER, PRODUCT NUMBER JF6SSCVLV



DRAINPIPE OUTLET COVERS

SIX (6) 6" OUTLET COVERS ARE REQUIRED FOR IMPACT BASIN AT LOCATIONS SHOWN ON SHEET 25 AND TWELVE (12) 6" OUTLET COVERS ARE REQUIRED FOR RCC SPILLWAY CHUTE AT LOCATIONS SHOWN ON SHEET 27 AND 32.

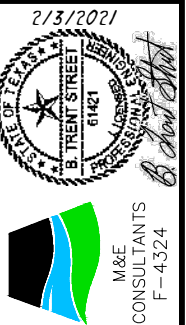


BILL OF MATERIALS	
60'-0"	2.875" O.D. TUBULAR STEEL PIPE FOR CORNER POST (CUT INTO 8 7'-6" POST)
7'-6"	2.375" O.D. TUBULAR STEEL PIPE FOR ONE LINE POST (CUT AS REQUIRED)
60'-0"	1.625" O.D. TUBULAR STEEL PIPE FOR TOP RAIL (CUT AS REQUIRED)
60'-0"	6'-0" HIGH CHAIN LINK FABRIC (SELVAGE SHALL BE KNUCKLED AT BOTTOM AND TOP)
14	STRETCHER BARS
98	STRETCHER BANDS
14	OFFSET CUPS (FOR TOP RAIL)
9	DOMES TOPS
45'-3"	BARBED WIRE (SEE NOTE)
4	BARBED WIRE CONNECTORS
4	TURN BUCKLES
4	3/8" EYE BOLTS
12'-0"	4" I.D. STANDARD GALVANIZED STEEL PIPE OR PVC FOR EMBEDMENT (CUT INTO 9 1'-4" LENGTHS)
0.6	CU. FT. OF NON-SHRINK GROUT

NOTE: QUANTITY OF TIE WIRE REQUIRED NOT INCLUDED IN TABLE ABOVE.

FOR TYPE AND SPECIFICATIONS OF FENCING MATERIALS SEE CONSTRUCTION SPECIFICATION 91.

REVISIONS		
DATE	APPROVED	TITLE



DESIGNED BY: BTS
DRAWN BY: QMK
CHECKED BY: TPB
FILE NAME: PC10_IB.dwg
DATE CHECKED: 10/8/2020

IMPACT BASIN SAFETY FENCE
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

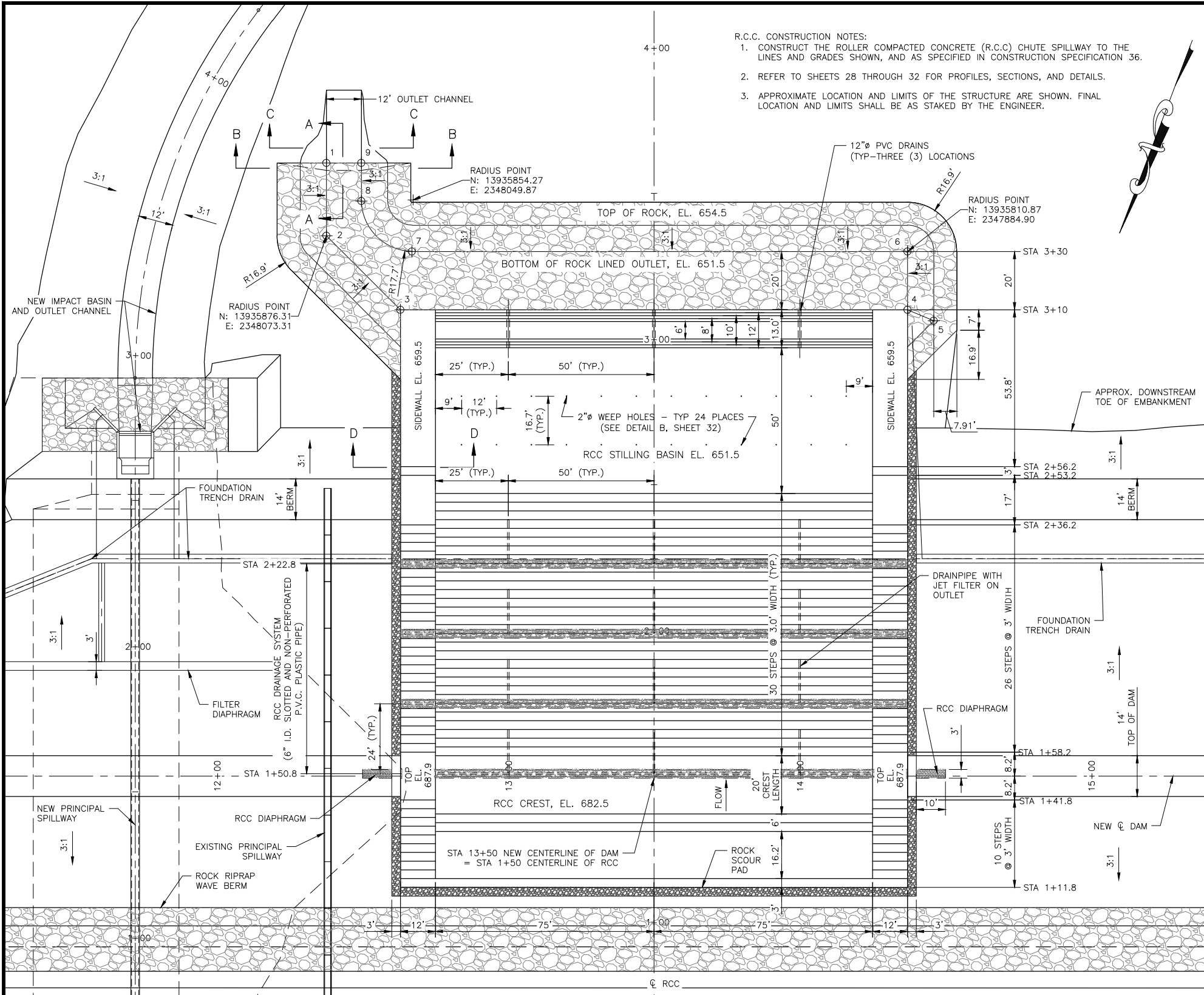


DRAWING NO.
TX-EN-0740

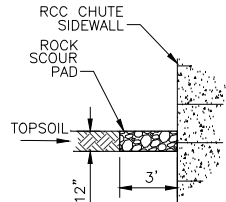
SHEET NO.
26

OF
45

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- R.C.C. CONSTRUCTION NOTES:
1. CONSTRUCT THE ROLLER COMPACTED CONCRETE (R.C.C) CHUTE SPILLWAY TO THE LINES AND GRADES SHOWN, AND AS SPECIFIED IN CONSTRUCTION SPECIFICATION 36.
 2. REFER TO SHEETS 28 THROUGH 32 FOR PROFILES, SECTIONS, AND DETAILS.
 3. APPROXIMATE LOCATION AND LIMITS OF THE STRUCTURE ARE SHOWN. FINAL LOCATION AND LIMITS SHALL BE AS STAKED BY THE ENGINEER.



SECTION D-D
NOT TO SCALE

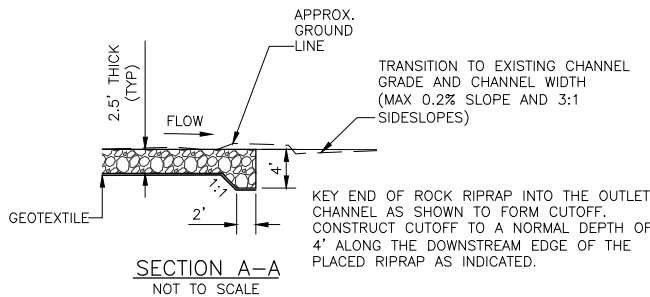
PREDOMINANT ROCK SIZE (INCHES)	MINIMUM ROCK SIZE (INCHES)	MAXIMUM ROCK SIZE (INCHES)
5 TO 7	3	9

AT LEAST 80 PERCENT OF THE ROCK PARTICLES, BY WEIGHT, SHALL BE WITHIN THE PREDOMINANT ROCK SIZE RANGE SHOWN ABOVE.

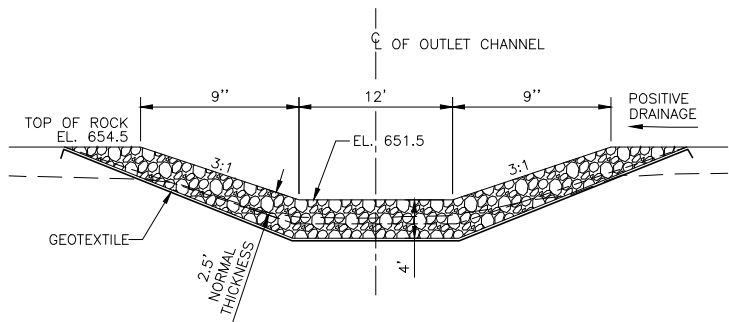
SPALLS AND ROCK DUST THAT WILL PASS A 3" SIEVE SHALL CONSIST OF LESS THAN 5 PERCENT BY WEIGHT.

IT IS ESTIMATED THAT APPROXIMATELY 89 TONS OF ROCK WILL BE REQUIRED TO CONSTRUCT THE ROCK SCOUR PADS.

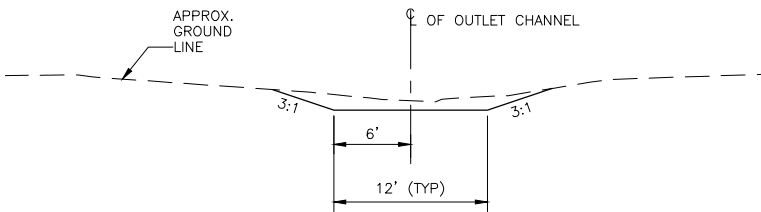
GRADATION OF ROCK FOR ROCK SCOUR PAD



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION C-C
NOT TO SCALE

1. ROCK RIPRAP FOR THE ROCK LINED OUTLET SHALL MEET THE GRADATION REQUIREMENTS OF ASTM D6092 FOR R-300 ROCK RIPRAP. IT IS ESTIMATED THAT 1,325 SQUARE YARDS OF GEOTEXTILE UNDERLAYMENT AND 1,511 TONS OF R-300 ROCK RIPRAP WILL BE REQUIRED TO CONSTRUCT THE ROCK LINED OUTLET ARMORING.
2. ALL ROCK RIPRAP SHALL COMPLY WITH CONSTRUCTION SPECIFICATION 61, AND MATERIAL SPECIFICATION 523.
3. SPALLS AND ROCK DUST THAT PASS A 3" SIEVE SHALL CONSIST OF LESS THAN 5 PERCENT BY WEIGHT.
4. ROCK PLACED AGAINST CONCRETE WORKS SHALL BE PLACED CAREFULLY TO AVOID DAMAGE.
5. GEOTEXTILE SHALL BE PLACED BETWEEN THE ROCK RIPRAP AND EARTHFILL. IT SHALL BE KEYED 18" INTO THE FILL AT THE TOP OF ROCK RIPRAP AND SHALL TERMINATE AT THE BERM ELEVATION AT THE MOST UPSTREAM EDGE OF THE ROCK RIPRAP.

ROCK RIPRAP GRADATION

COORDINATES		
POINT #	NORTHING	EASTING
1	13935852.95	2348082.14
2	13935876.31	2348073.31
3	13935891.08	2348040.60
4	13935829.58	2347877.83
5	13935829.89	2347868.09
6	13935810.87	2347884.90
7	13935870.98	2348043.98
8	13935860.91	2348066.31
9	13935848.71	2348070.92



ROCK SCOUR PAD CONSTRUCTION NOTES:

1. CONSTRUCT THE ROCK SCOUR PADS TO THE DIMENSIONS AND LOCATIONS SHOWN IN THE CONSTRUCTION DRAWINGS.
2. THE ROCK SCOUR PAD SHALL EXTEND FROM THE TOP OF THE ROCK LINED OUTLET; ACROSS THE CROWN OF THE EMBANKMENT; AND ACROSS THE DOWNSTREAM SIDE OF THE CROSSING BERM ADJACENT TO THE R.C.C
3. THE ROCK SCOUR PADS SHALL BE LOCATED ON BOTH SIDES OF THE R.C.C. CHUTE AND FOLLOW THE GRADE AND CONTOUR OF THE EMBANKMENT FINISHED GRADE.

2/3/2021

DESIGNED BY: BTS

DRAWN BY: GMK

CHECKED BY: TPB

FILE NAME: PC10_RCC.dwg

DATE CHECKED: 10/8/2020

M&E CONSULTANTS F-4324

RCC CHUTE PLAN VIEW

FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN HAYS COUNTY, TEXAS

United States Department of Agriculture

USDA

Natural Resources Conservation Service

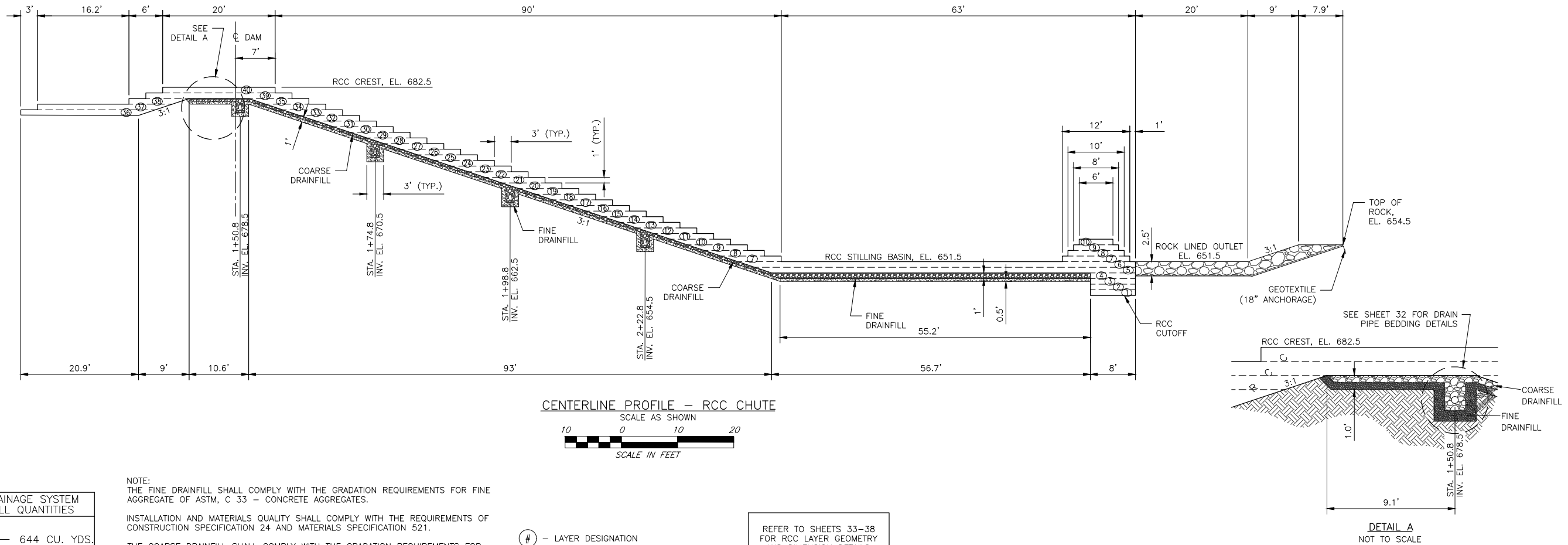
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SHEET NO. 27

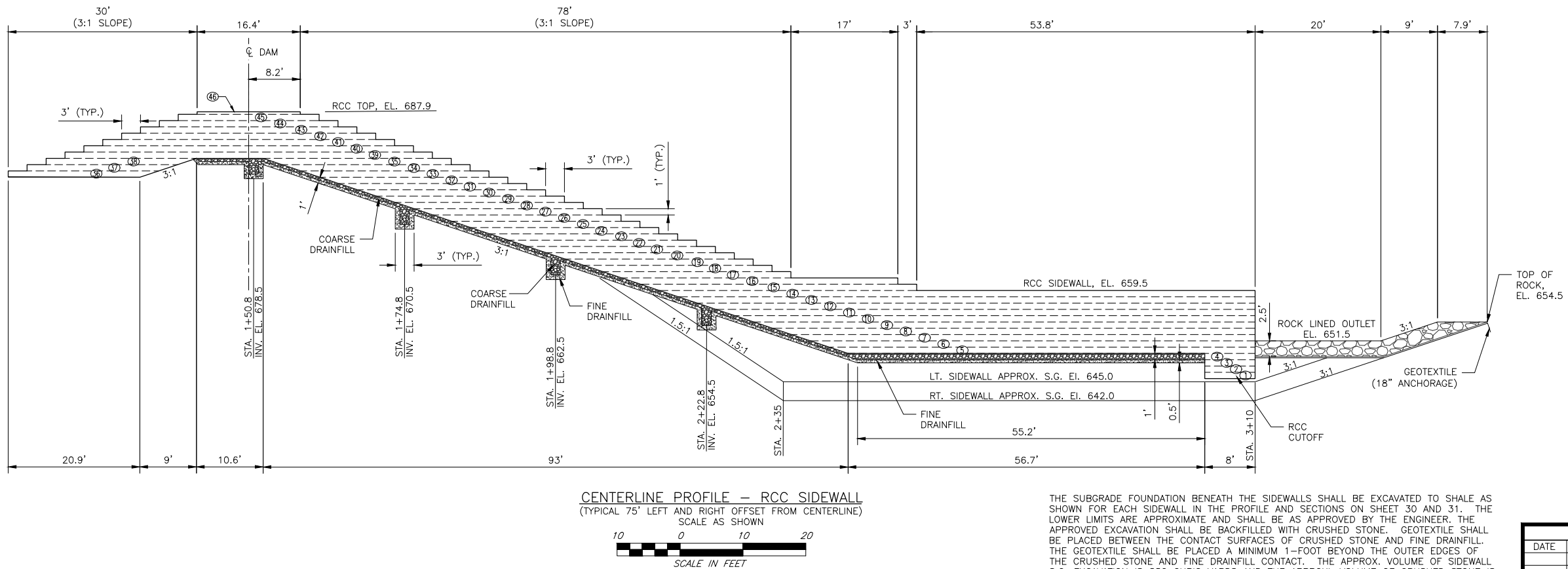
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DRAINFILL GRADATION REQUIREMENTS



2/3/2021



STATE OF TEXAS
TRENT STREET
61421



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F-4324

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FILE NAME: PC10_RCC.dwg
DATE CHECKED: 10/8/2020

RCC CHUTE PROFILES
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



United States
Department of
Agriculture



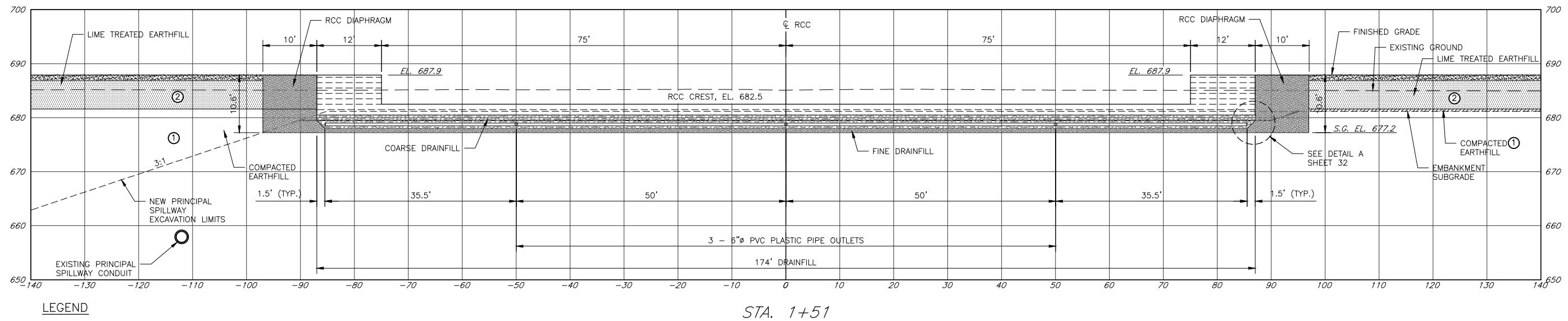
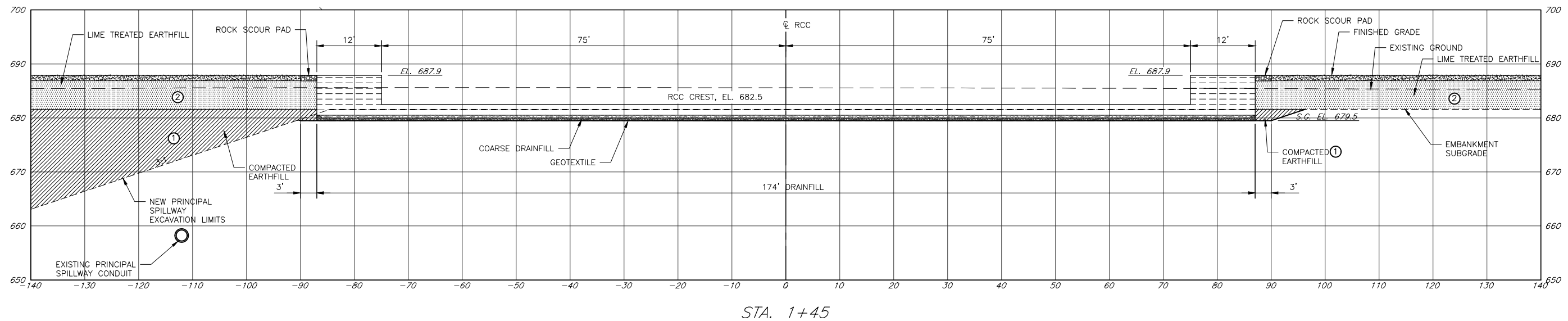
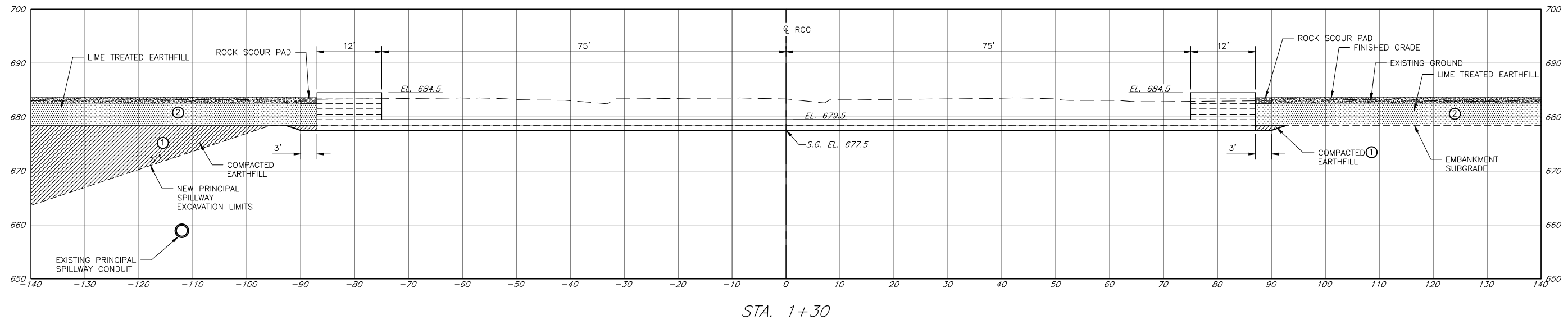
Natural Resources
Conservation Service

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TX-EN-0740

SHEET NO.
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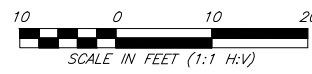
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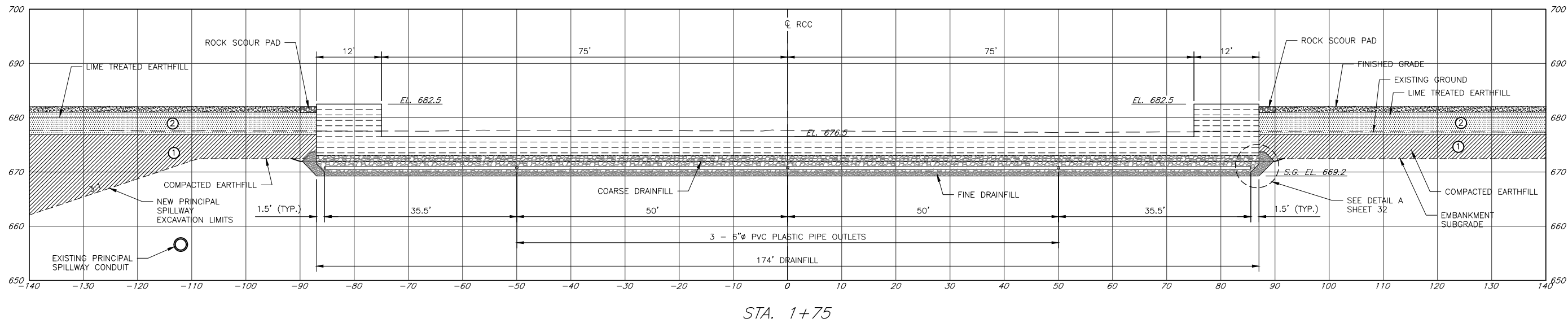
LEGEND

- TOPSOIL
- COMPACTED EARTHFILL
- LIME TREATED EARTHFILL

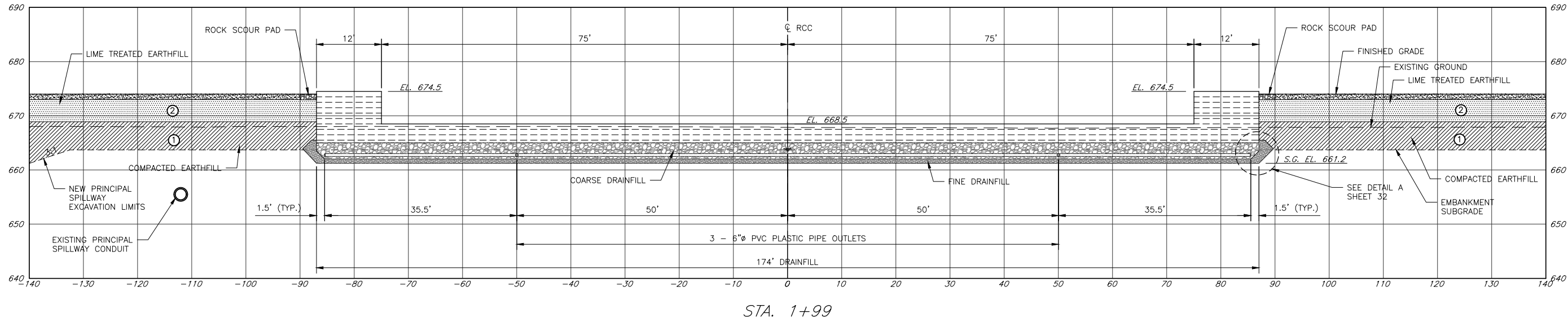


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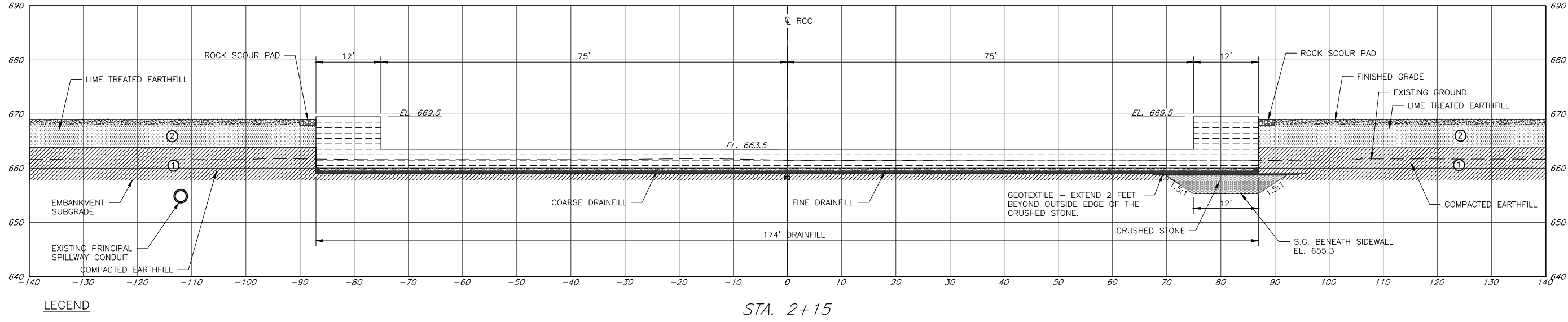
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STA. 1+75



STA. 1+99



STA. 2+15

- LEGEND**
- TOPSOIL
 - COMPACTED EARTHFILL
 - LIME TREATED EARTHFILL



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DATE	APPROVED	TITLE

2/3/2021



STATE OF TEXAS
COUNTY OF HAYS
CITY OF PLUM CREEK
61421



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CONSULTANTS
F-4324

DESIGNED BY: BTS

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CHECKED BY: TPB

FILE NAME: PC10_RCC.dwg

DATE CHECKED: 10/8/2020

RCC CHUTE CROSS SECTIONS

FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN

HAYS COUNTY, TEXAS



United States
Department of
Agriculture

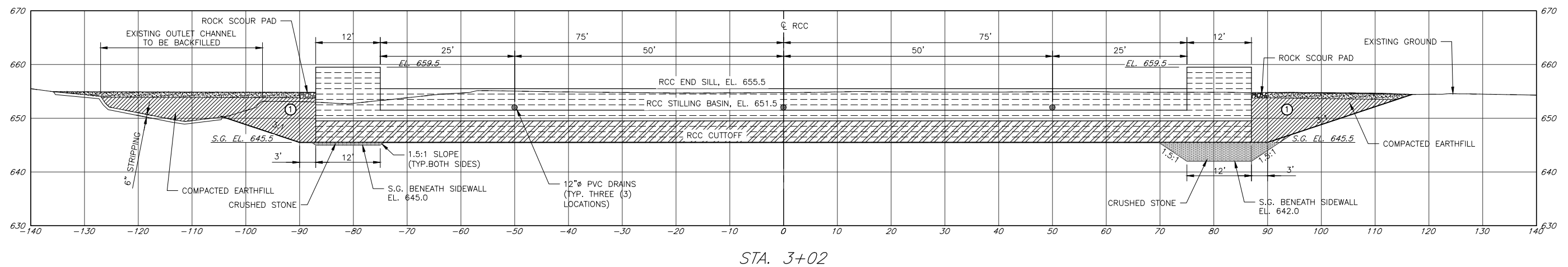
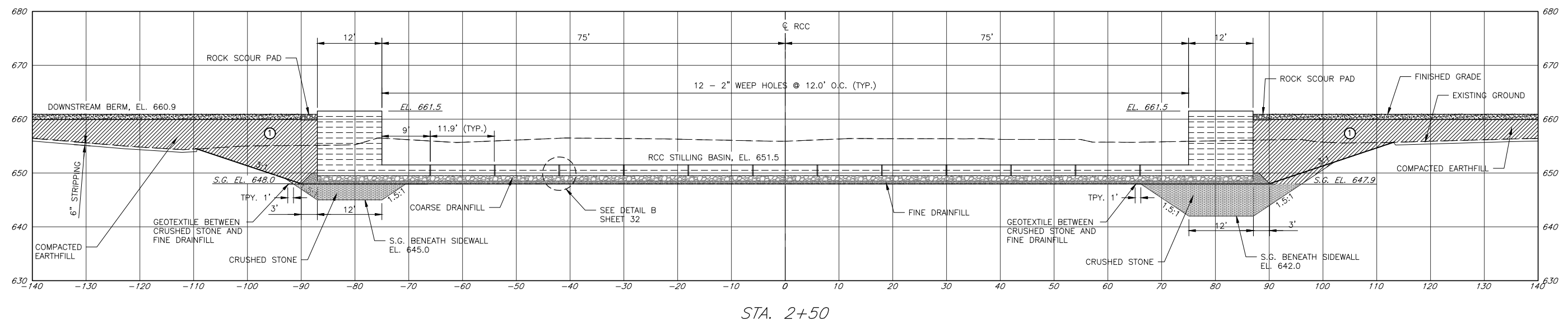
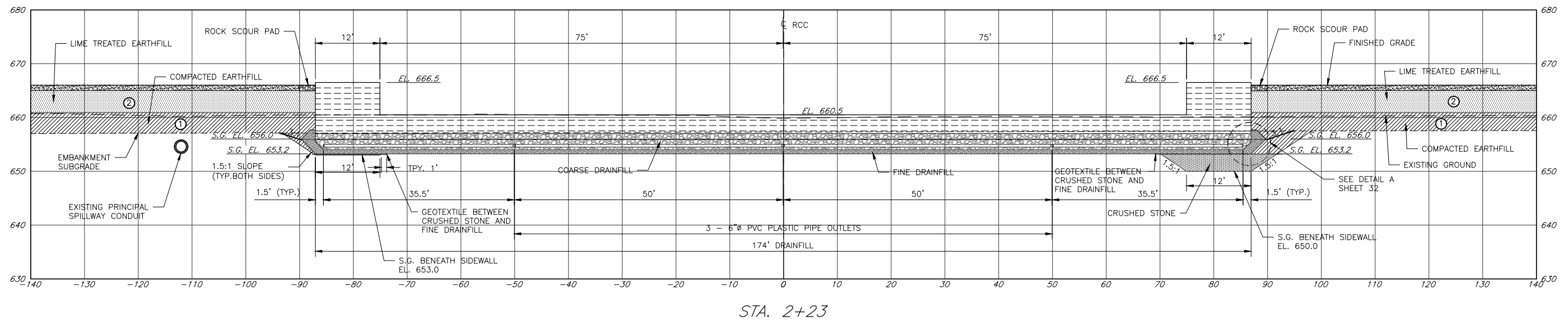


Natural Resources
Conservation Service

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TX-EN-0740

SHEET NO.
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OF
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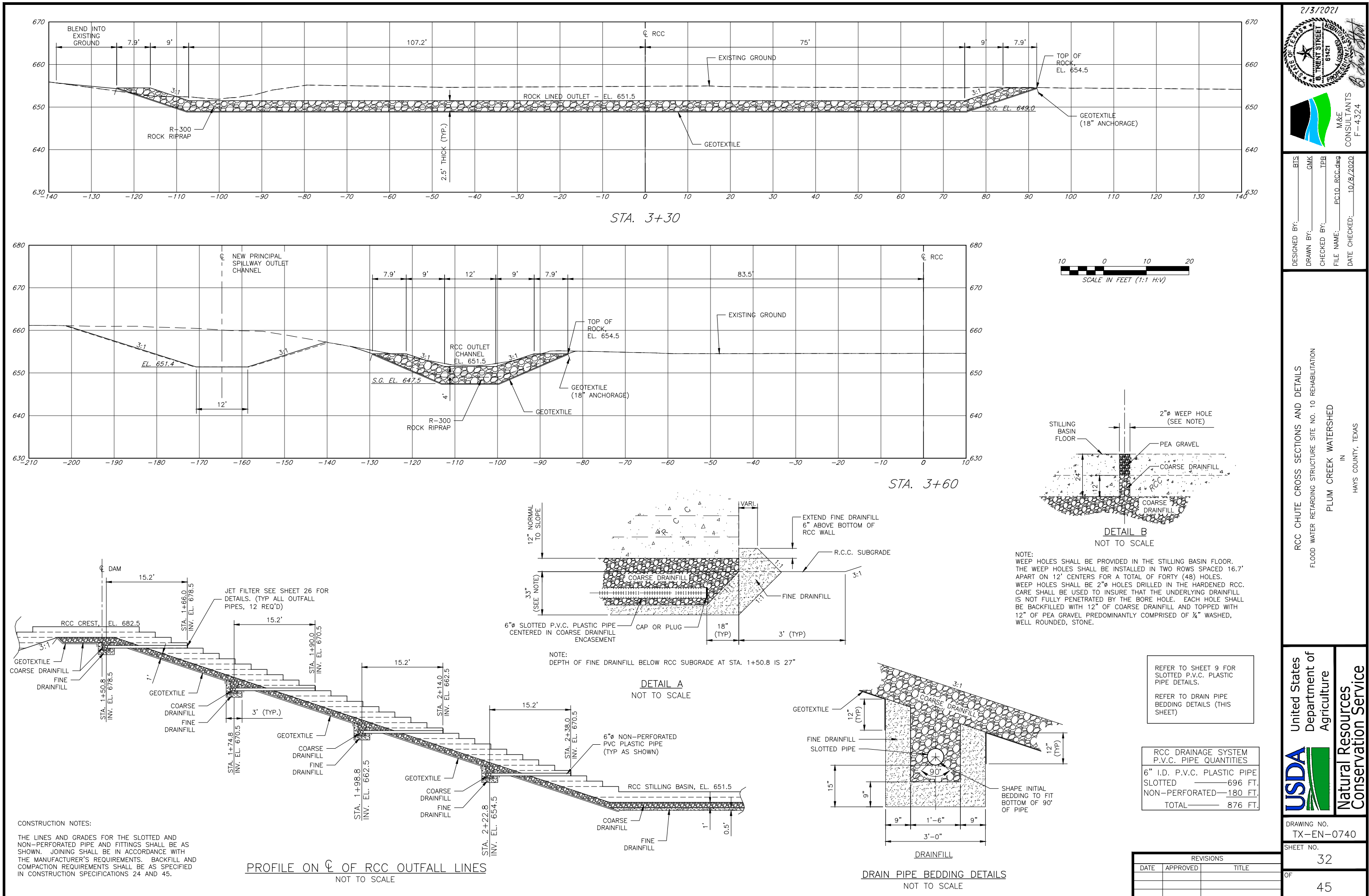
LEGEND

	TOPSOIL
	COMPACTED EARTHFILL
	LIME TREATED EARTHFILL

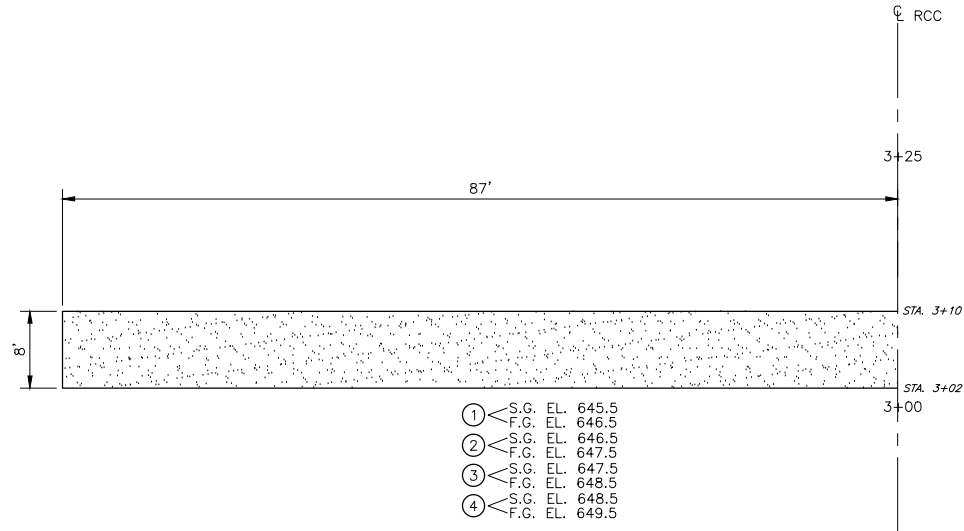


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HALF PLAN - LAYERS 1, 2, 3, & 4
SYMMETRIC ABOUT CENTERLINE

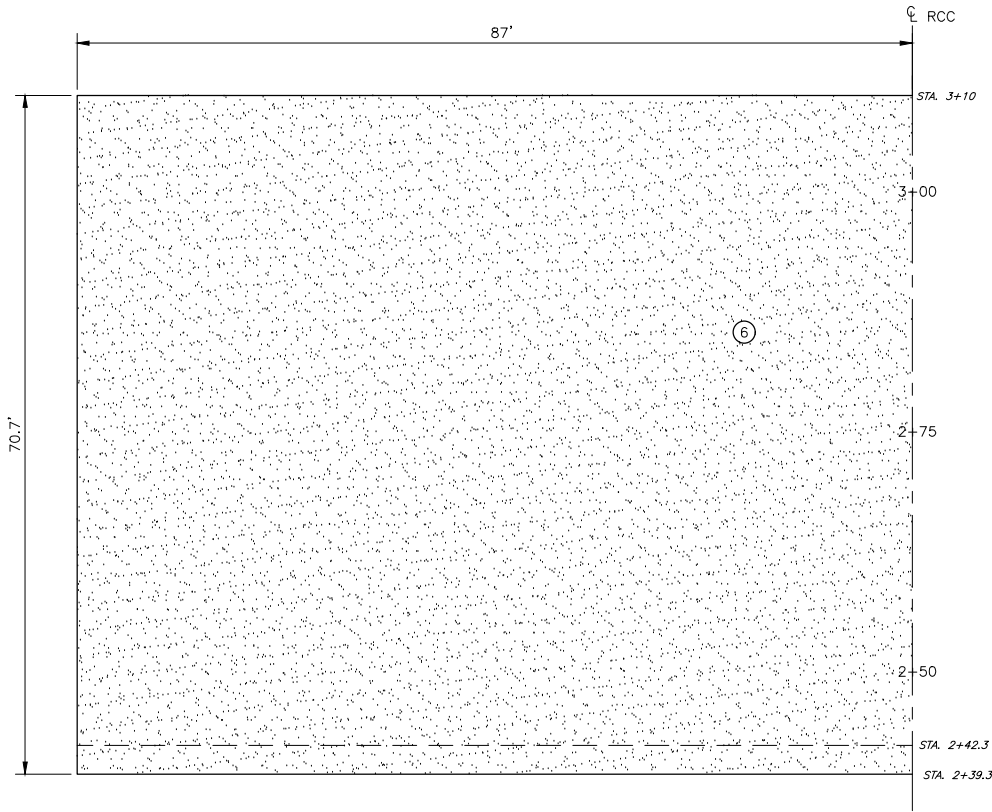
NOTE:

1) ALL LAYERS SHOWN ARE SYMMETRIC ABOUT CENTERLINE UNLESS OTHERWISE NOTED.

2) ALL LAYERS SHALL BE CONSTRUCTED OF ONE (1) 12" LIFTS AND BE 12" THICK AFTER COMPACTION UNLESS OTHERWISE NOTED (REFER TO CONSTRUCTION SPECIFICATION 36).

3) THE LAYER SEQUENCE SHOWN ON THIS SHEET IS A LOGICAL PROGRESSION FOR THE PLACEMENT OF THE ROLLER COMPACTED CONCRETE FOR THE CONSTRUCTION OF THE R.C.C. CHUTE SPILLWAY. ACTUAL ORDER AND LIMITS MAY VARY ONLY AS PERMITTED BY THE ENGINEER.

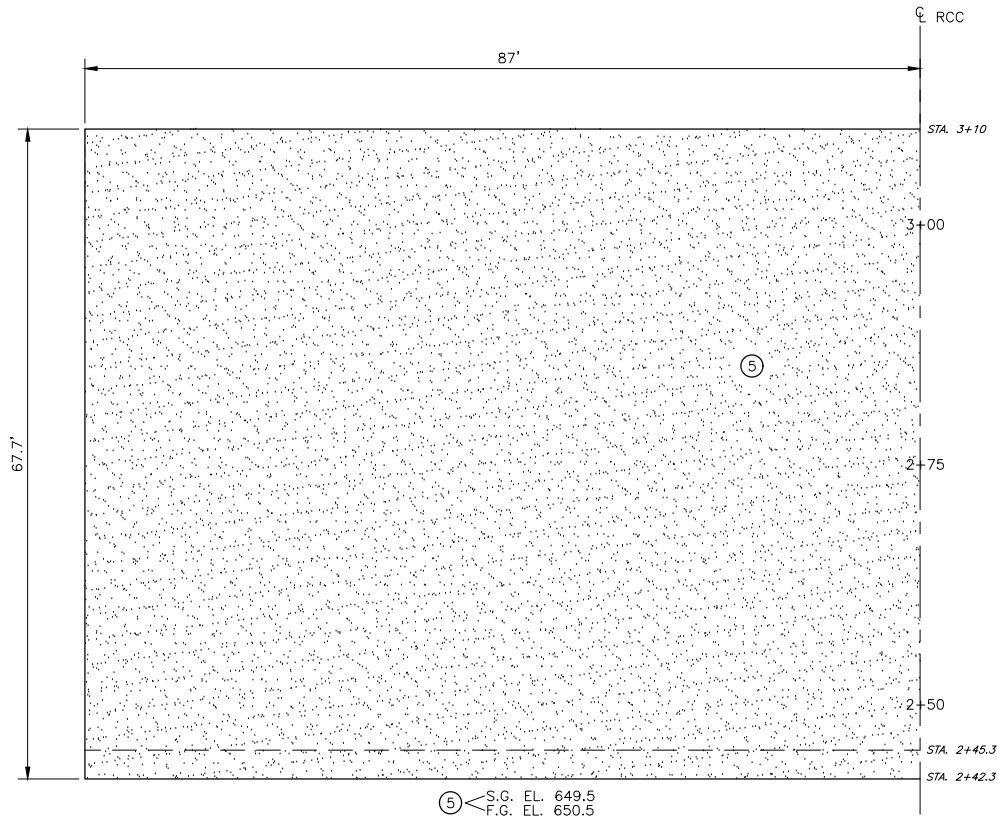
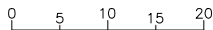
4) S.G. = SUBGRADE; F.G. = FINISHED GRADE



⑥ < S.G. EL. 650.5
F.G. EL. 651.5

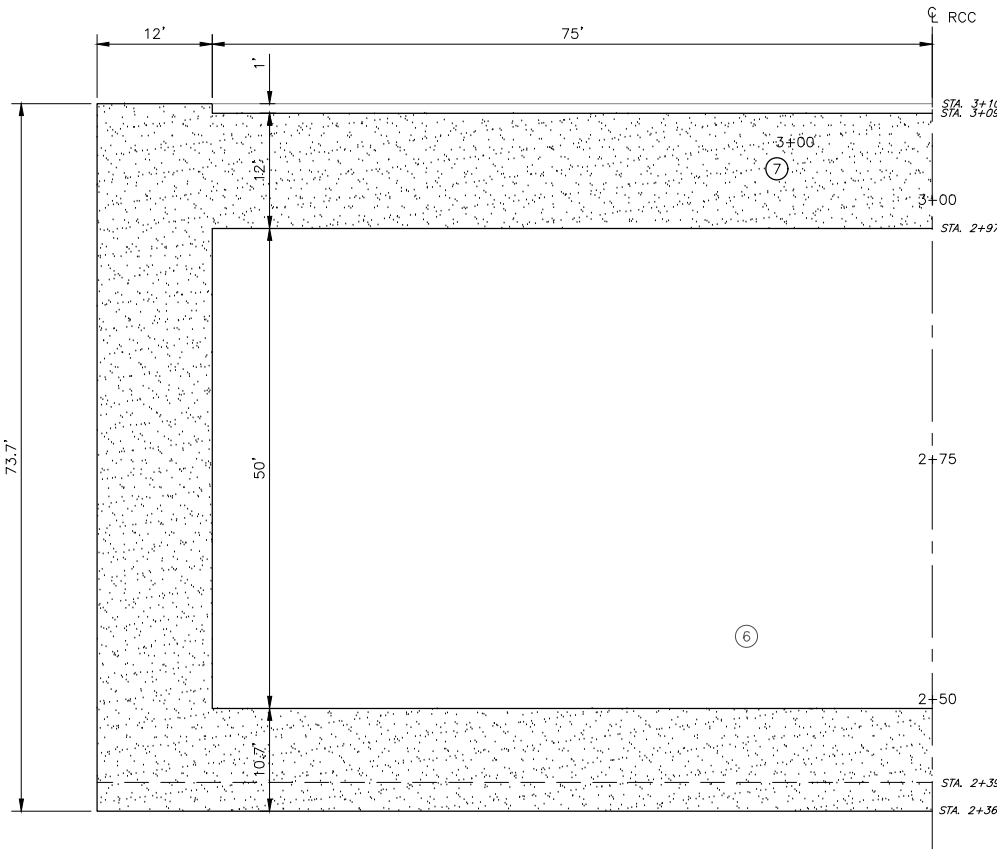
HALF PLAN - LAYER 6
SYMMETRIC ABOUT CENTERLINE

RCC CHUTE LAYER SCHEMATIC
SCALE AS SHOWN



⑤ < S.G. EL. 649.5
F.G. EL. 650.5

HALF PLAN - LAYER 5
SYMMETRIC ABOUT CENTERLINE



⑦ < S.G. EL. 651.5
F.G. EL. 652.5

HALF PLAN - LAYER 7
SYMMETRIC ABOUT CENTERLINE

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DRAWING NO.
TX-EN-0740

SHEET NO.
33

OF
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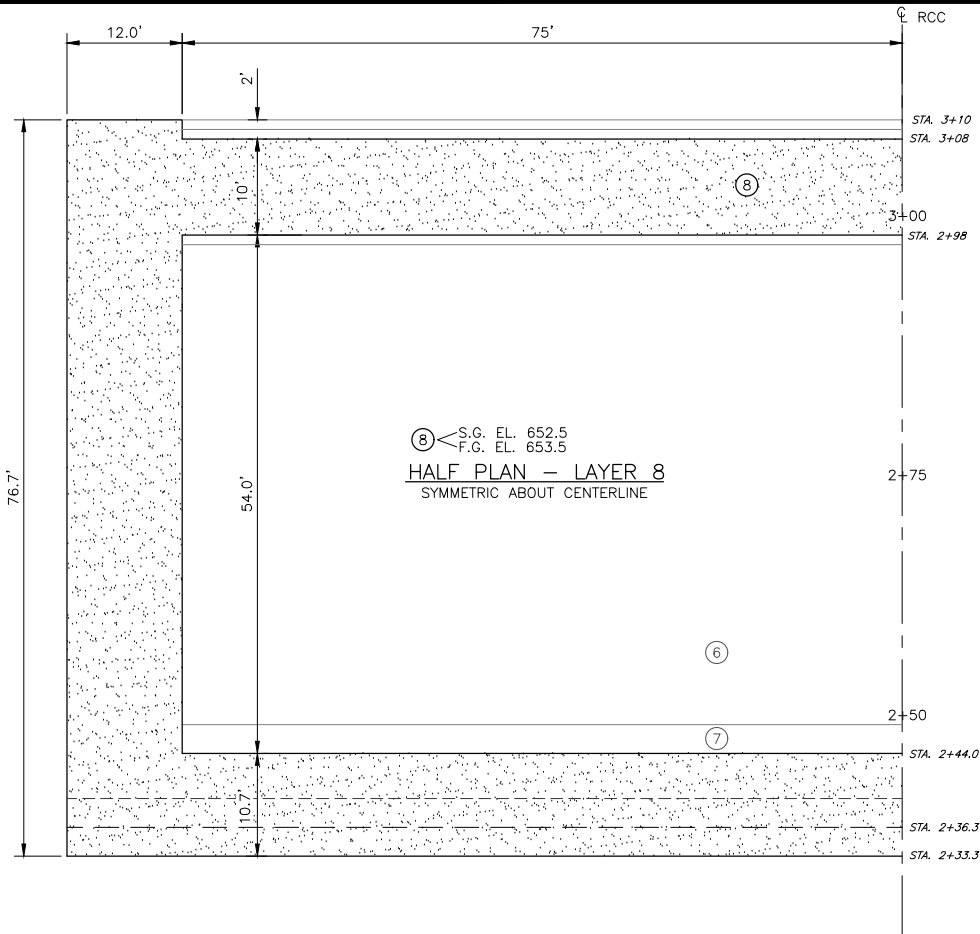
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FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

United States
Department of
Agriculture
USDA
Natural Resources
Conservation Service

2/3/2021
STATE OF TEXAS
COUNTY OF HAYS
PLUM CREEK WATERSHED
FLOOD WATER RETARDING STRUCTURE
SITE NO. 10 REHABILITATION
M&E
CONSULTANTS
F-4324
B. Shaw

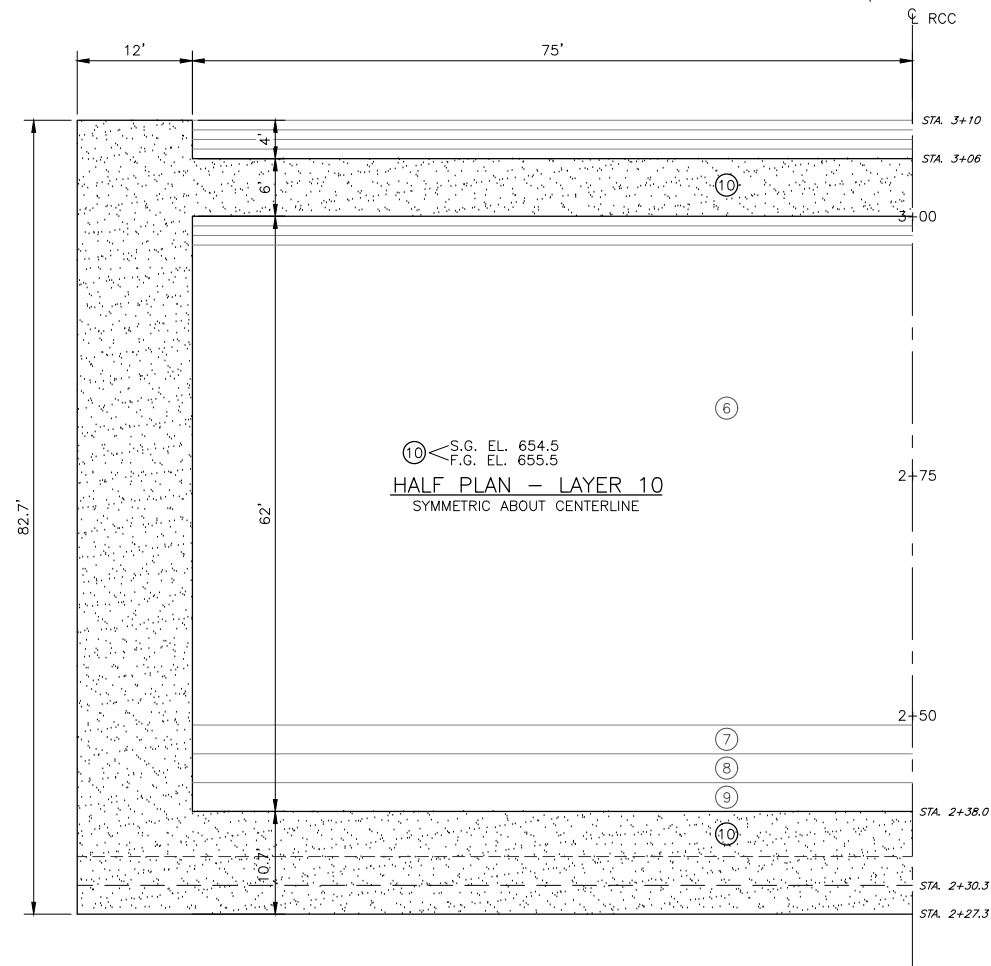
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DRAWN BY: QMK
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DATE CHECKED: 4/23/2021

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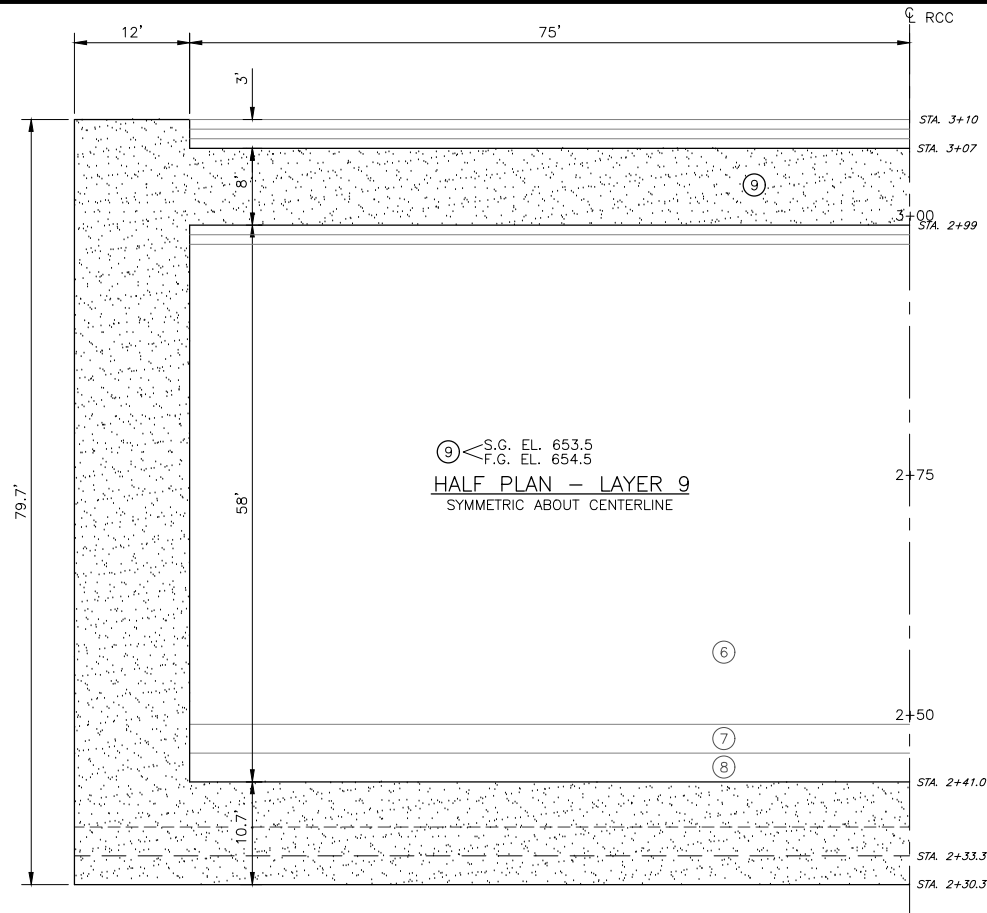
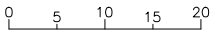
⑧ S.G. EL. 652.5
F.G. EL. 653.5
HALF PLAN - LAYER 8
SYMMETRIC ABOUT CENTERLINE

- NOTE:
- 1) ALL LAYERS SHOWN ARE SYMMETRIC ABOUT CENTERLINE UNLESS OTHERWISE NOTED.
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 - 4) S.G. = SUBGRADE; F.G. = FINISHED GRADE

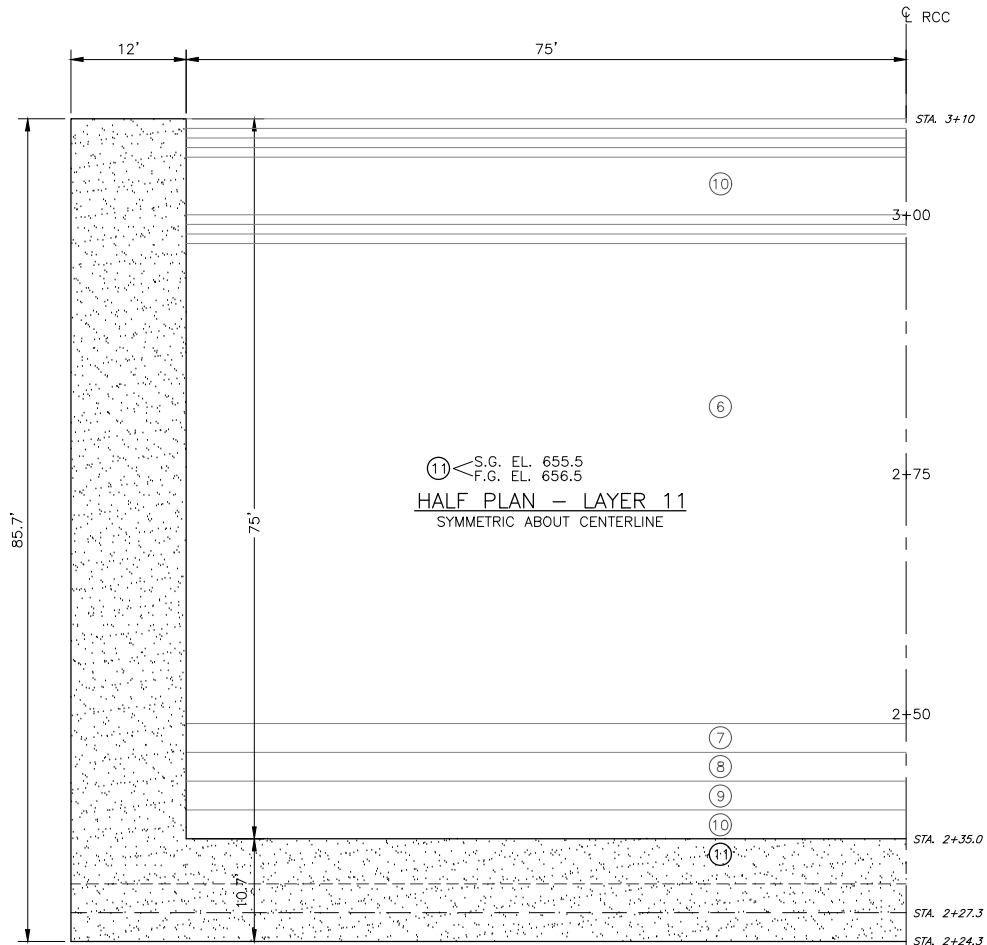


⑩ S.G. EL. 654.5
F.G. EL. 655.5
HALF PLAN - LAYER 10
SYMMETRIC ABOUT CENTERLINE

RCC CHUTE LAYER SCHEMATIC
SCALE AS SHOWN



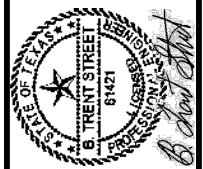
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F.G. EL. 654.5
HALF PLAN - LAYER 9
SYMMETRIC ABOUT CENTERLINE



⑪ S.G. EL. 655.5
F.G. EL. 656.5
HALF PLAN - LAYER 11
SYMMETRIC ABOUT CENTERLINE

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FILE NAME: PC10_RCC.dwg

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Agriculture



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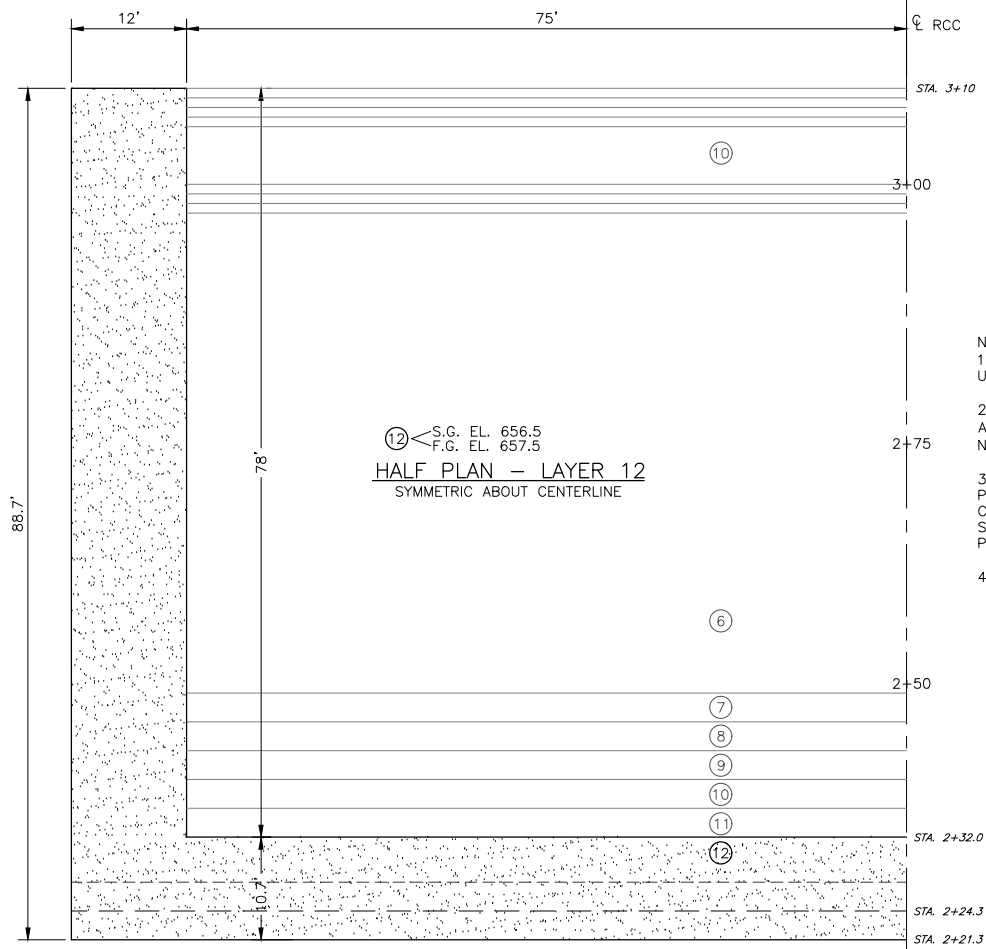
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TX-EN-0740

SHEET NO.
34

OF
45

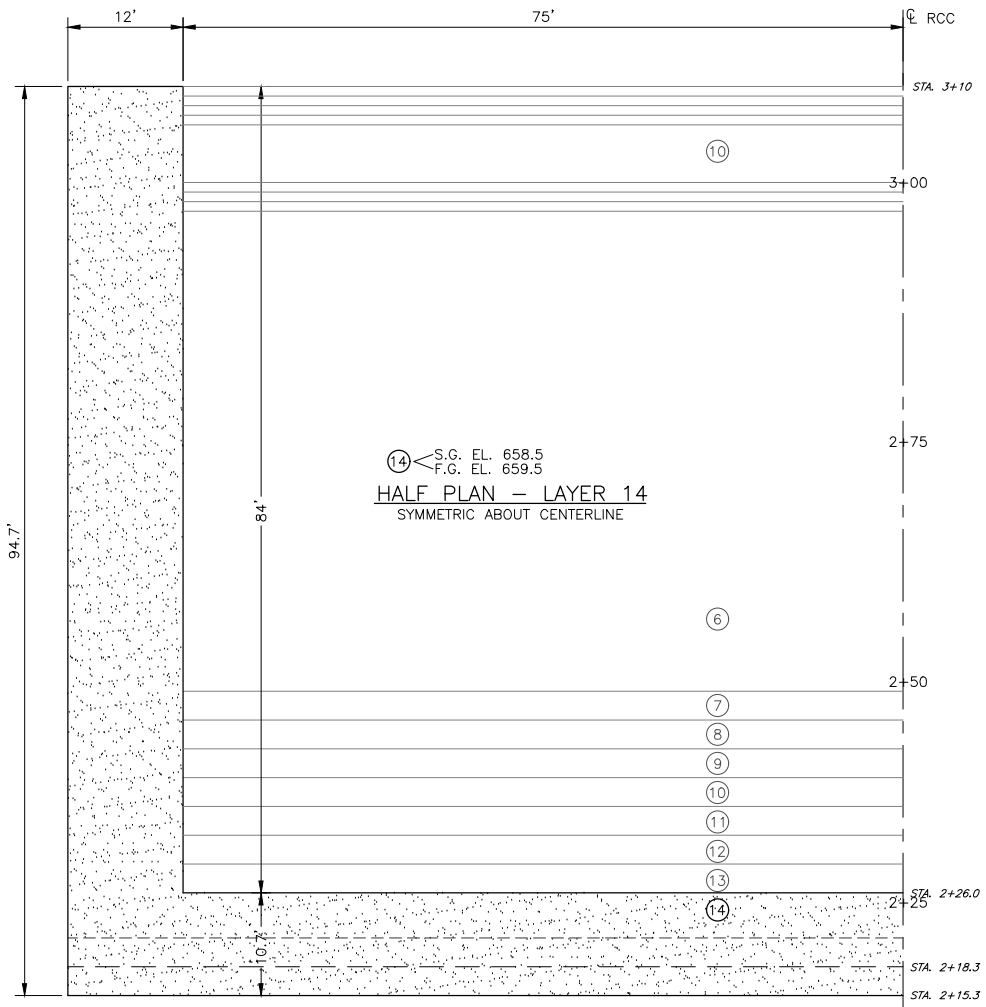
RCC CHUTE LAYER SCHEMATIC
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

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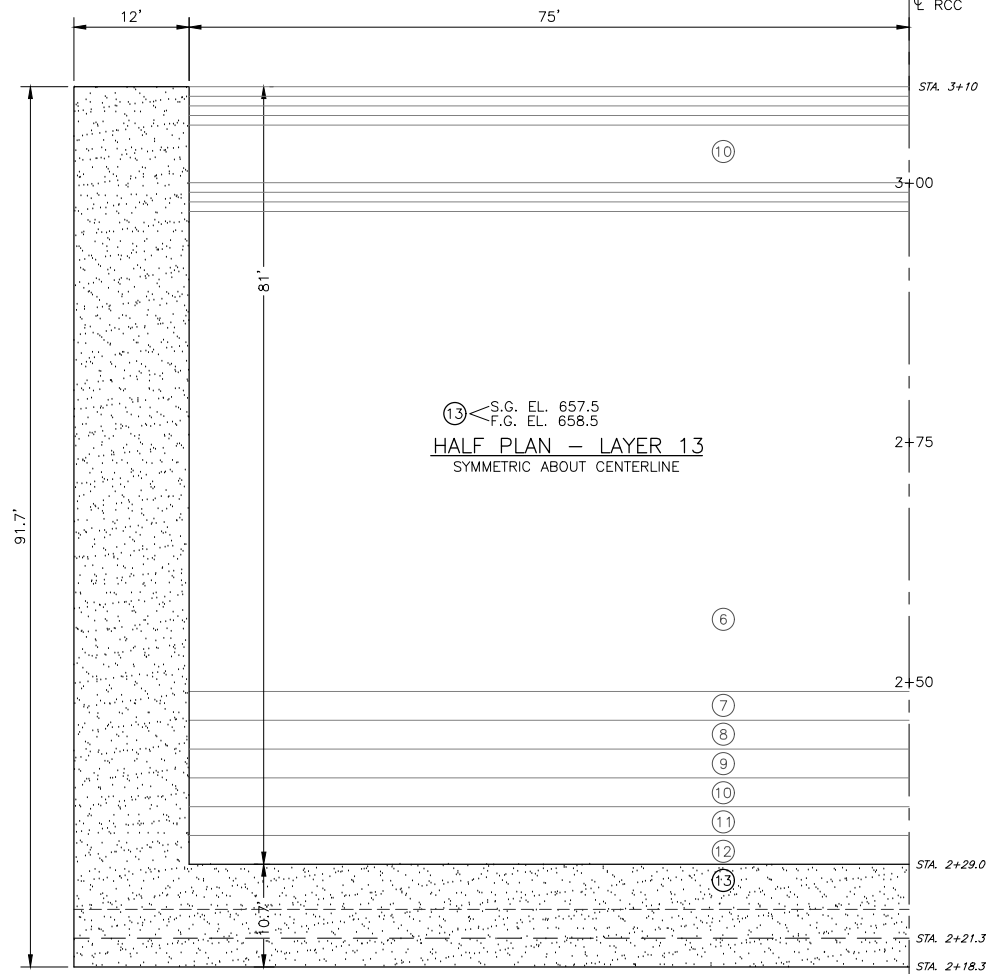
⑫ S.G. EL. 656.5
F.G. EL. 657.5
HALF PLAN - LAYER 12
SYMMETRIC ABOUT CENTERLINE

- NOTE:
- 1) ALL LAYERS SHOWN ARE SYMMETRIC ABOUT CENTERLINE UNLESS OTHERWISE NOTED.
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 - 4) S.G. = SUBGRADE; F.G. = FINISHED GRADE

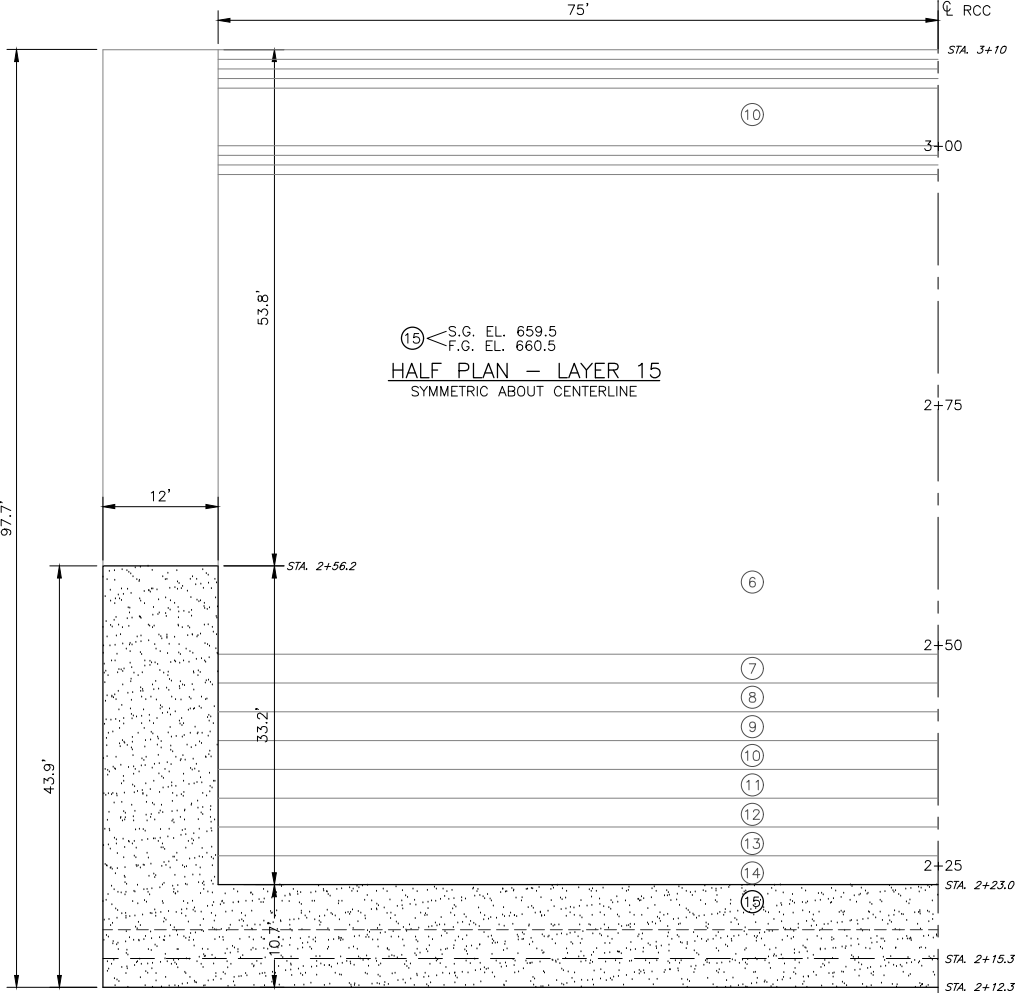


⑭ S.G. EL. 658.5
F.G. EL. 659.5
HALF PLAN - LAYER 14
SYMMETRIC ABOUT CENTERLINE

RCC CHUTE LAYER SCHEMATIC
SCALE AS SHOWN
0 5 10 15 20

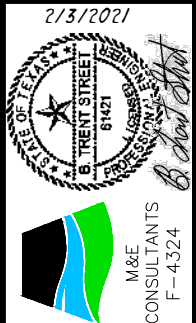


⑬ S.G. EL. 657.5
F.G. EL. 658.5
HALF PLAN - LAYER 13
SYMMETRIC ABOUT CENTERLINE



⑮ S.G. EL. 659.5
F.G. EL. 660.5
HALF PLAN - LAYER 15
SYMMETRIC ABOUT CENTERLINE

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DATE	APPROVED	TITLE



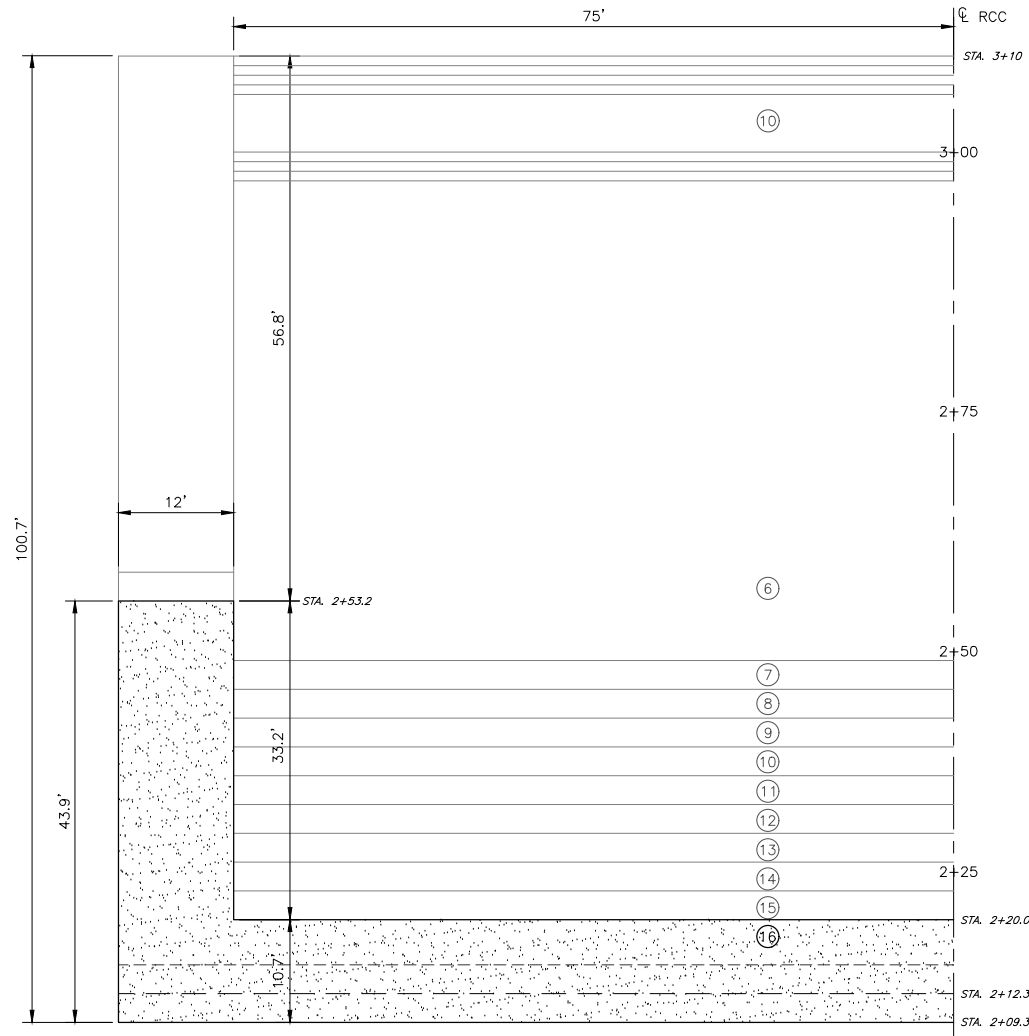
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RCC CHUTE LAYER SCHEMATIC
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

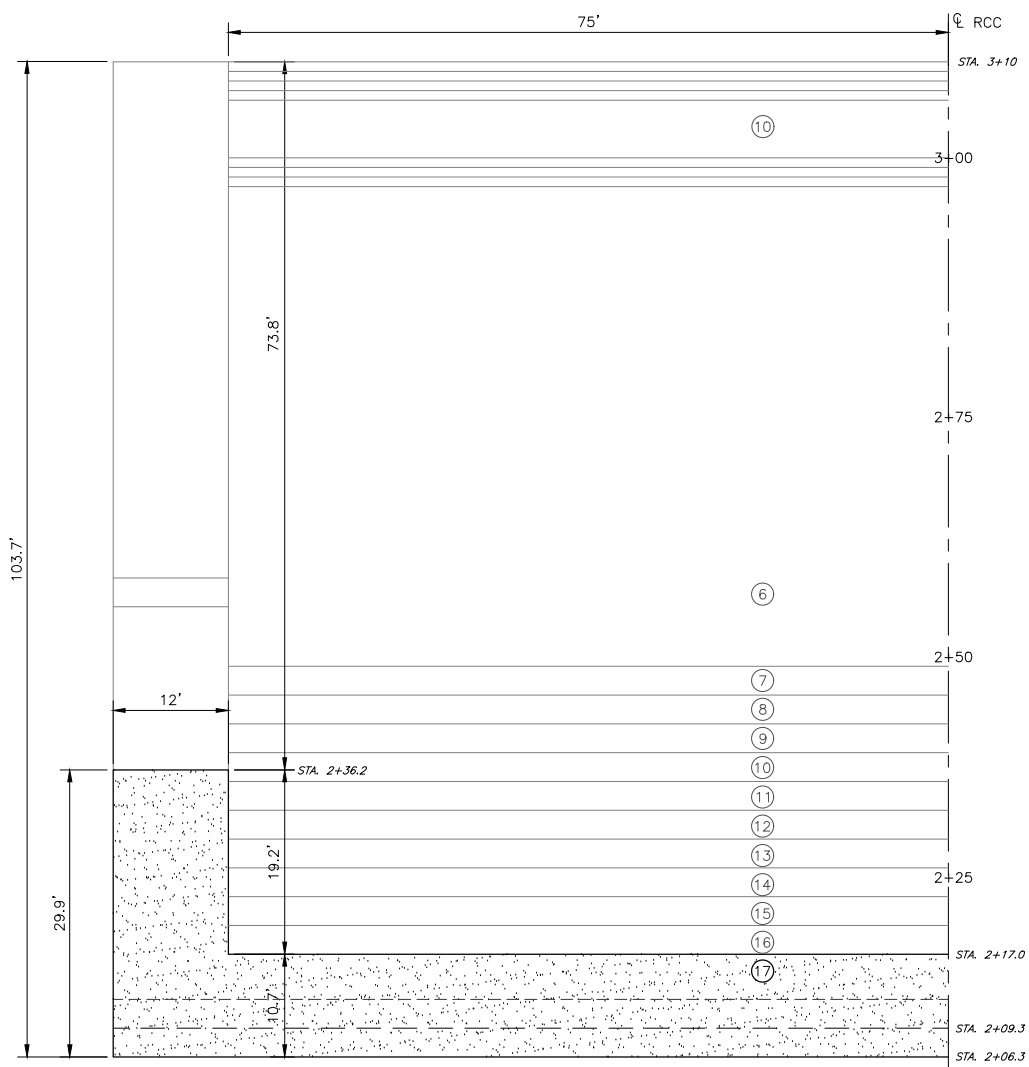


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OF
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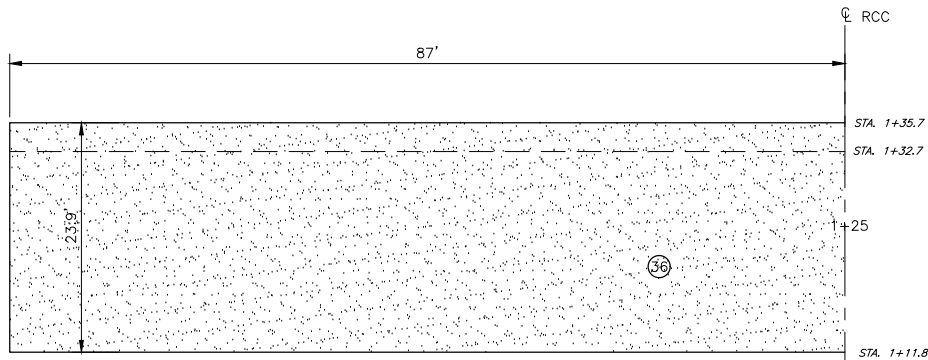
①⑥ S.G. EL. 660.5
F.G. EL. 661.5
HALF PLAN – LAYER 16
SYMMETRIC ABOUT CENTERLINE



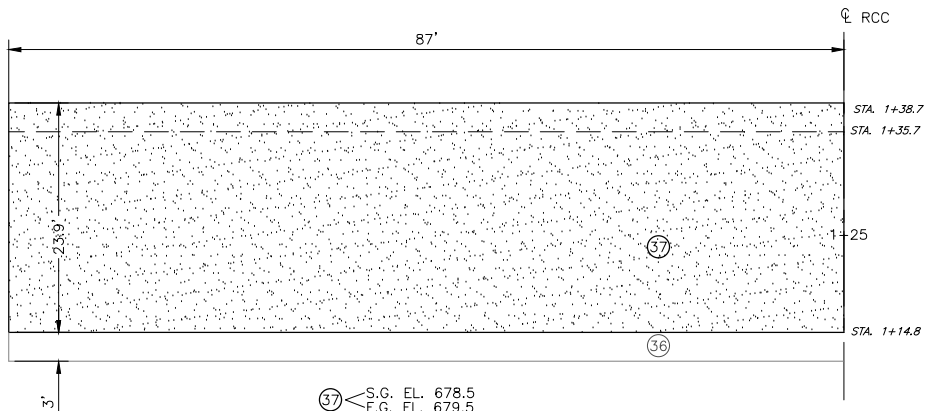
①⑦ S.G. EL. 661.5
F.G. EL. 662.5
HALF PLAN – LAYER 17
SYMMETRIC ABOUT CENTERLINE

HALF PLAN VIEWS OF LAYERS
18–35 ARE NOT SHOWN. THEY ARE
IDENTICAL TO LAYER 17 OTHER
THAN STATIONING AND ELEVATIONS.
REFER TO PLAN AND PROFILE
SHEETS FOR FURTHER DETAILS.

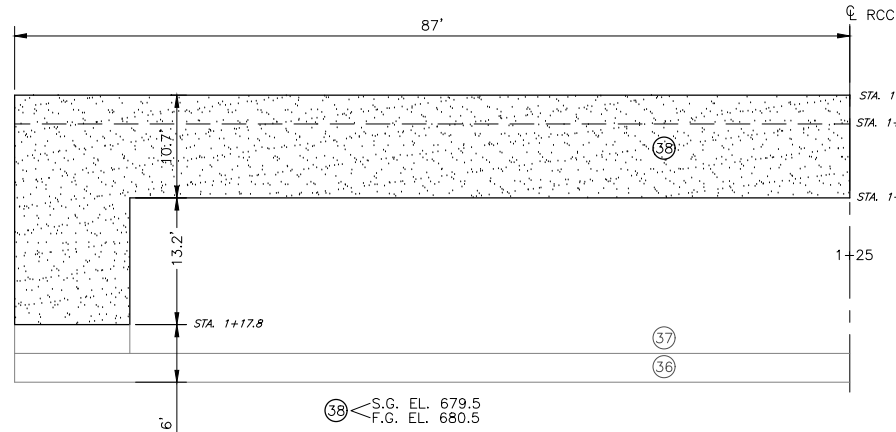
- NOTE:
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 - 4) S.G. = SUBGRADE; F.G. = FINISHED GRADE



①③⑥ S.G. EL. 677.5
F.G. EL. 678.5
HALF PLAN – LAYER 36
SYMMETRIC ABOUT CENTERLINE

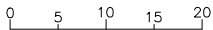


①③⑦ S.G. EL. 678.5
F.G. EL. 679.5
HALF PLAN – LAYER 37
SYMMETRIC ABOUT CENTERLINE



①③⑧ S.G. EL. 679.5
F.G. EL. 680.5
HALF PLAN – LAYER 38
SYMMETRIC ABOUT CENTERLINE

RCC CHUTE LAYER SCHEMATIC
SCALE AS SHOWN



DESIGNED BY: _____
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CHECKED BY: _____
FILE NAME: _____
DATE CHECKED: _____

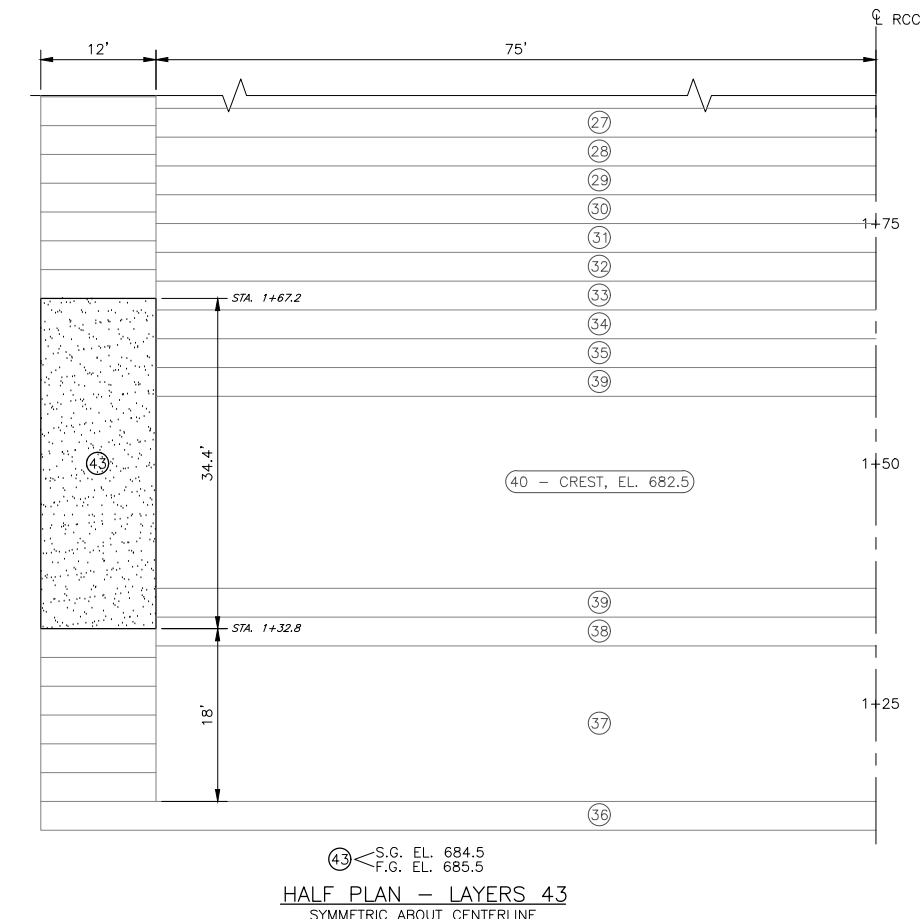
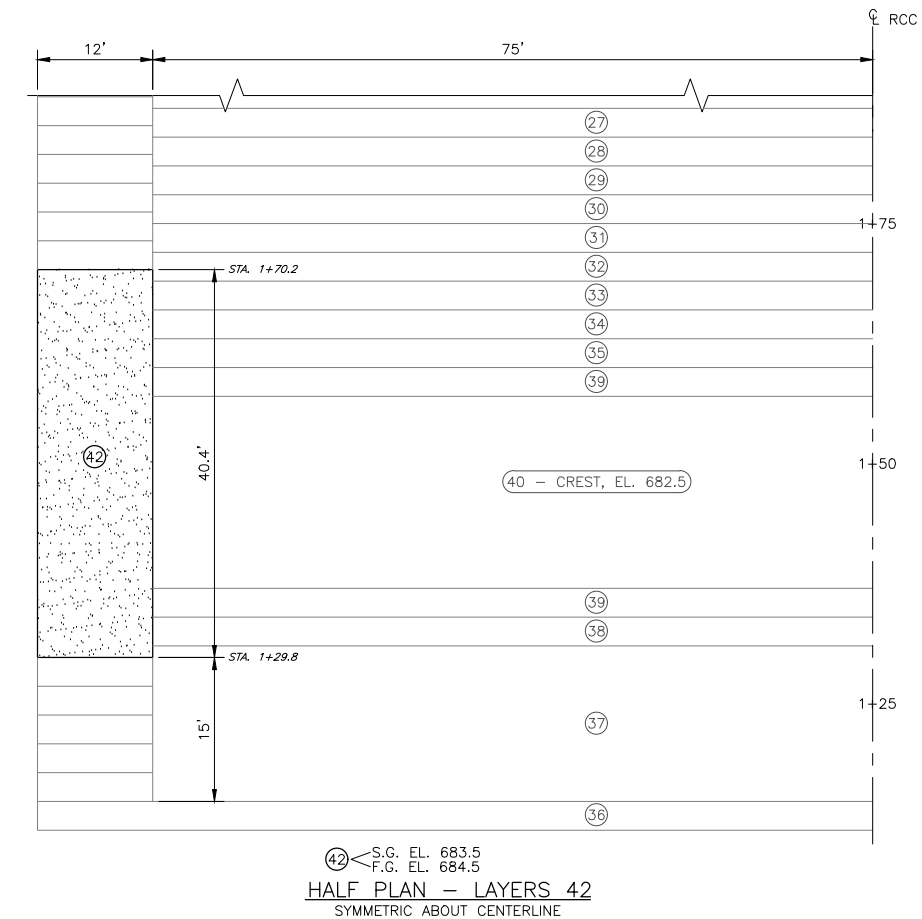
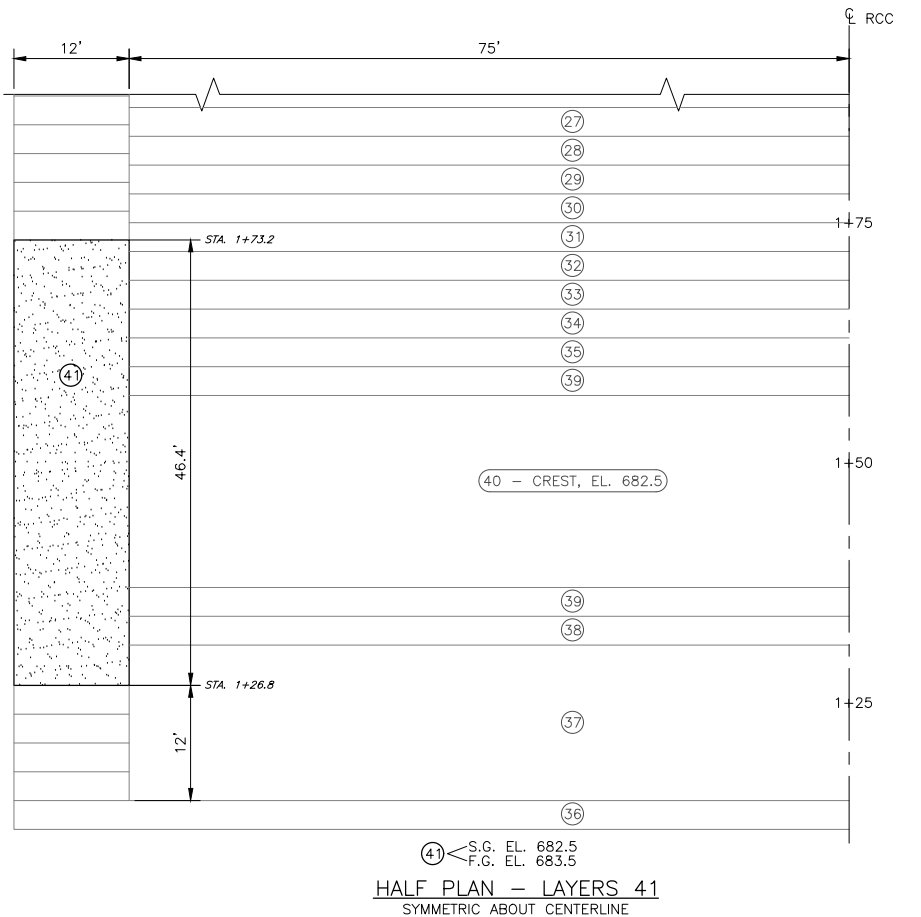
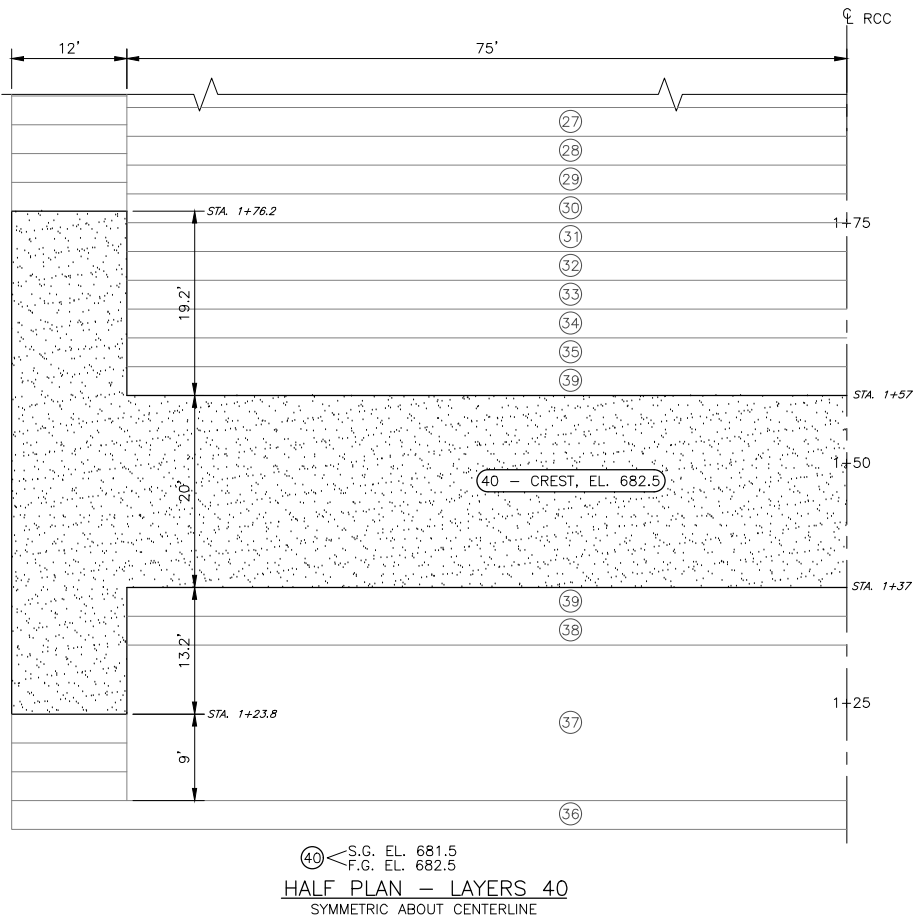
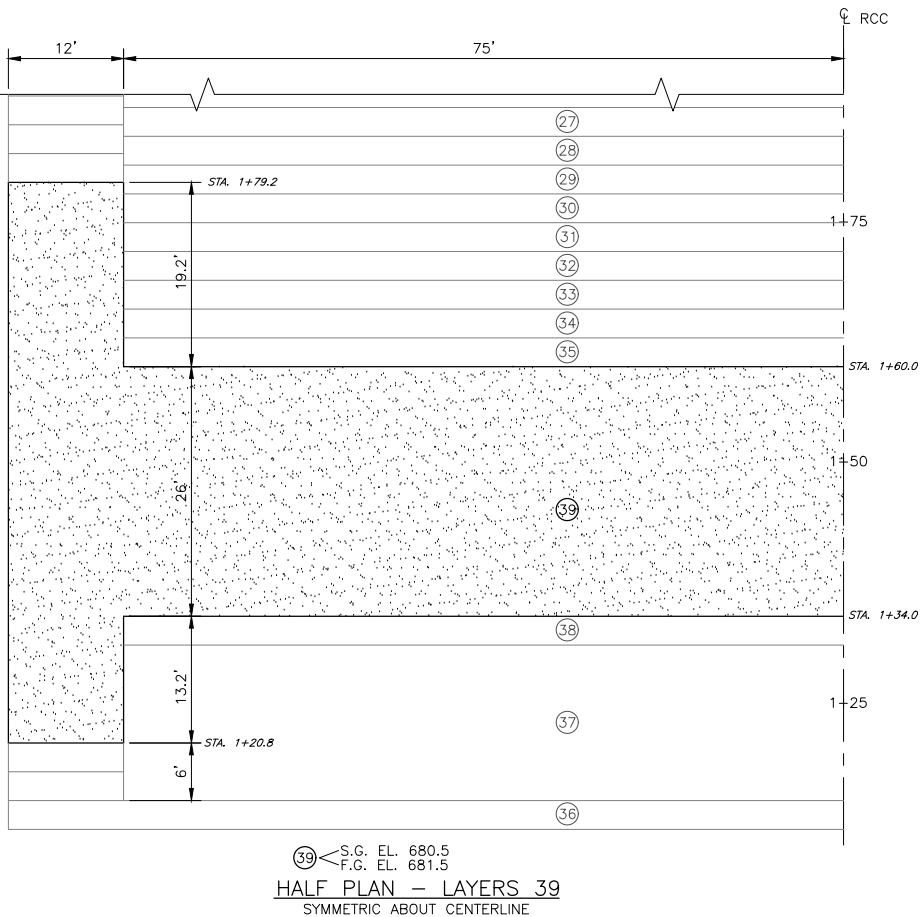
RCC CHUTE LAYER SCHEMATIC
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



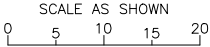
DRAWING NO.
TX-EN-0740
SHEET NO.
36
OF
45

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DATE	APPROVED	TITLE

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RCC CHUTE LAYER SCHEMATIC



- NOTE:
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RCC CHUTE LAYER SCHEMATIC
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



DRAWING NO.
TX-EN-0740

SHEET NO.
37

OF
45

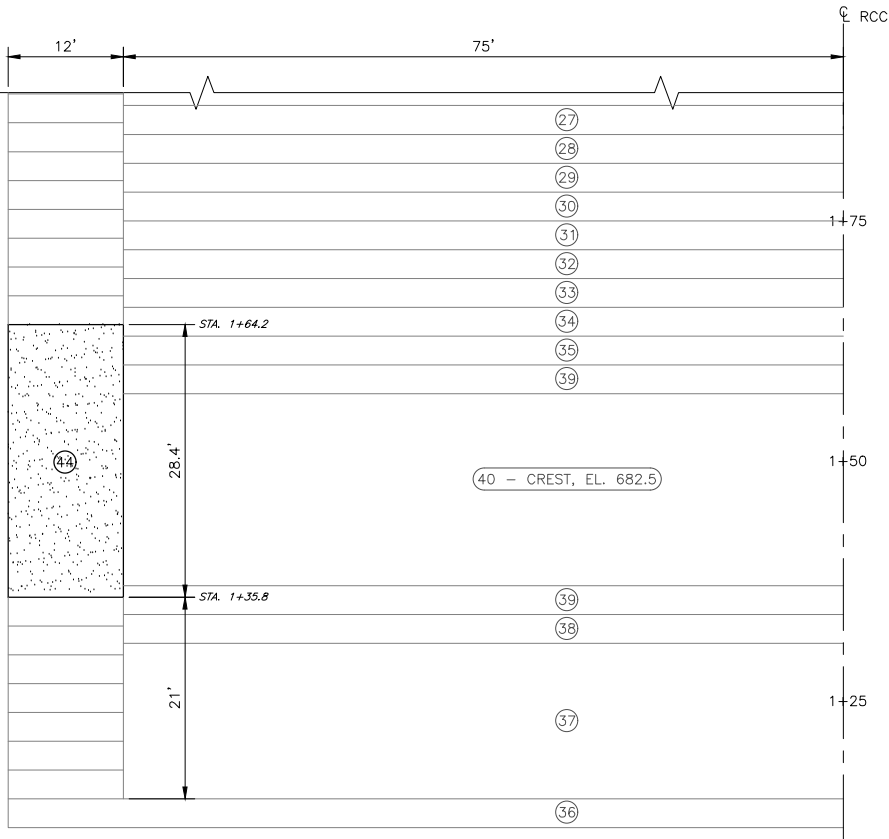
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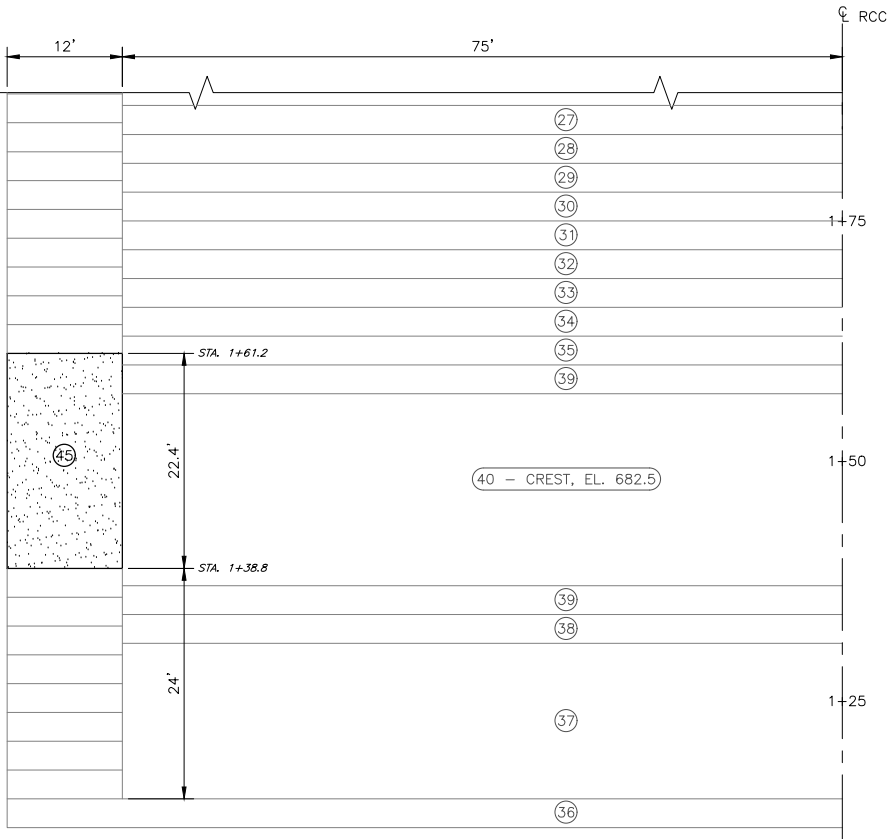
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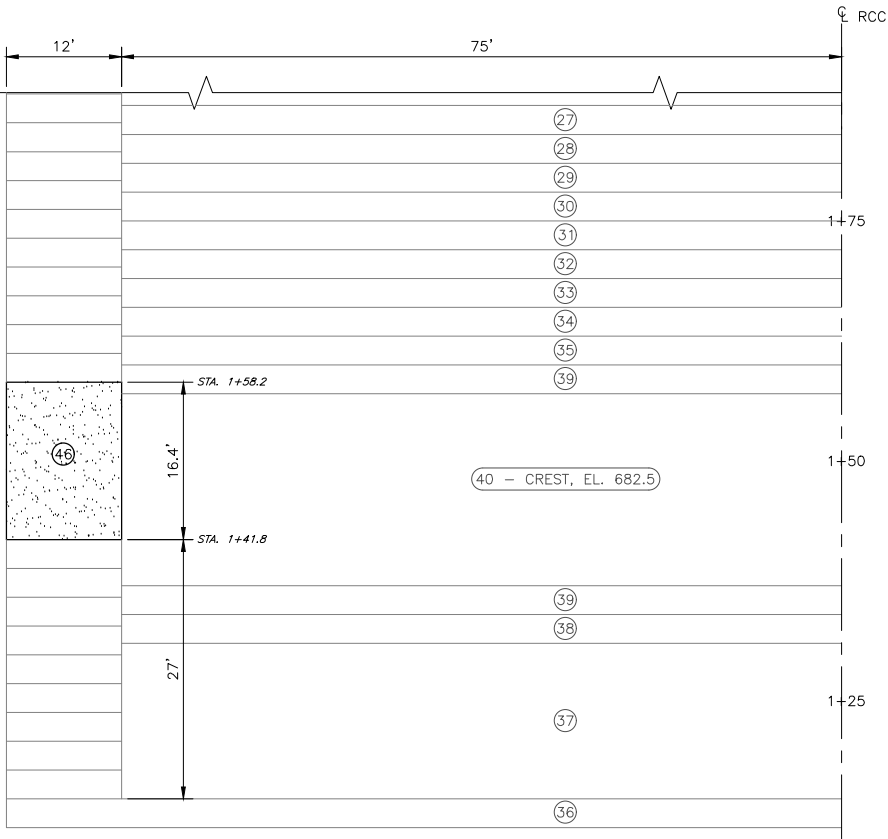


④4 S.G. EL. 685.5
F.G. EL. 686.5
HALF PLAN — LAYERS 44
SYMMETRIC ABOUT CENTERLINE



④5 S.G. EL. 686.5
F.G. EL. 687.5
HALF PLAN — LAYERS 45
SYMMETRIC ABOUT CENTERLINE

RCC CHUTE LAYER SCHEMATIC
SCALE AS SHOWN
0 5 10 15 20



④6 S.G. EL. 687.5
F.G. EL. 687.9
HALF PLAN — LAYERS 46
SYMMETRIC ABOUT CENTERLINE

NOTE:
1) ALL LAYERS SHOWN ARE SYMMETRIC ABOUT CENTERLINE UNLESS OTHERWISE NOTED.
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REVISIONS		
DATE	APPROVED	TITLE



2/3/2021

M&E CONSULTANTS
F-4324

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DRAWN BY: _____
CHECKED BY: _____
FILE NAME: _____
DATE CHECKED: _____

RCC CHUTE LAYER SCHEMATIC
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



United States
Department of
Agriculture

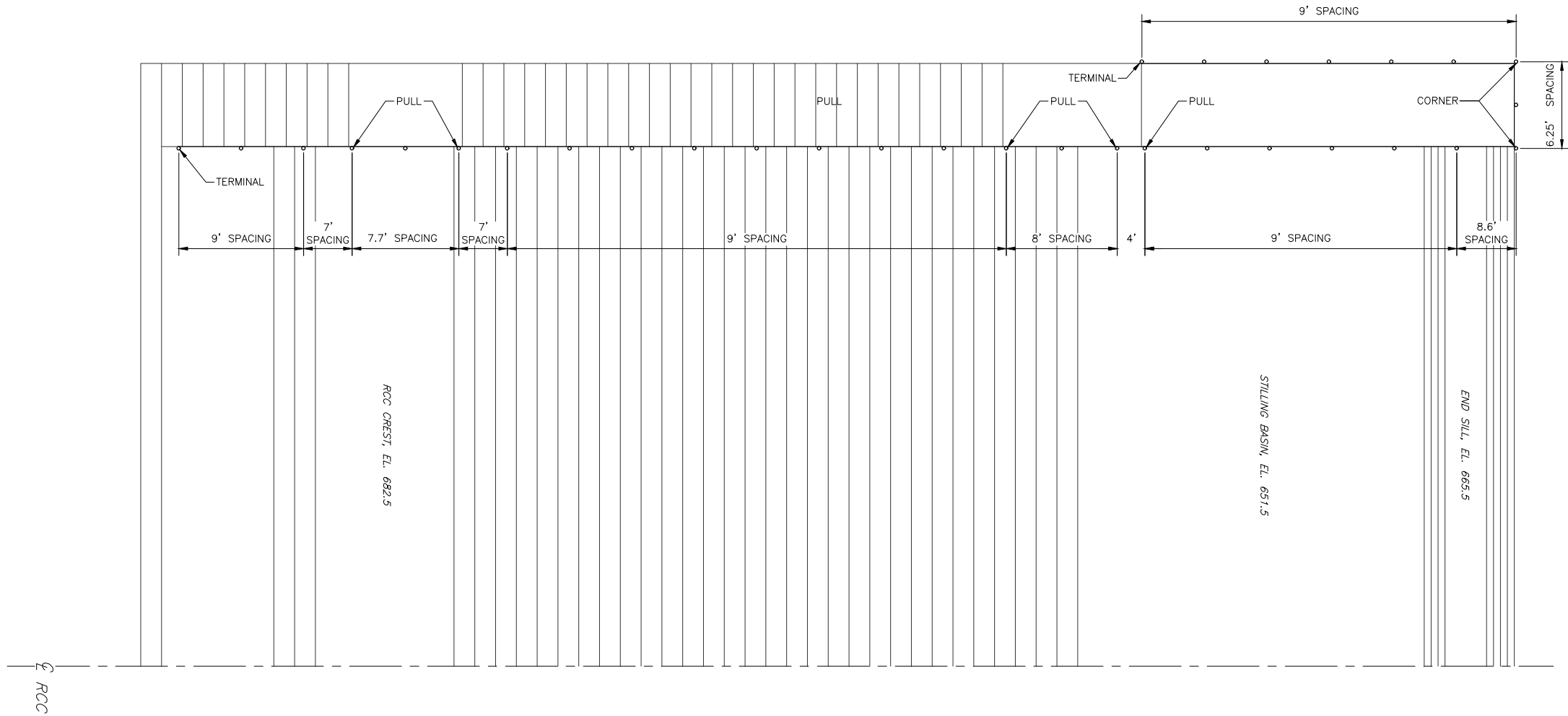
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Conservation Service

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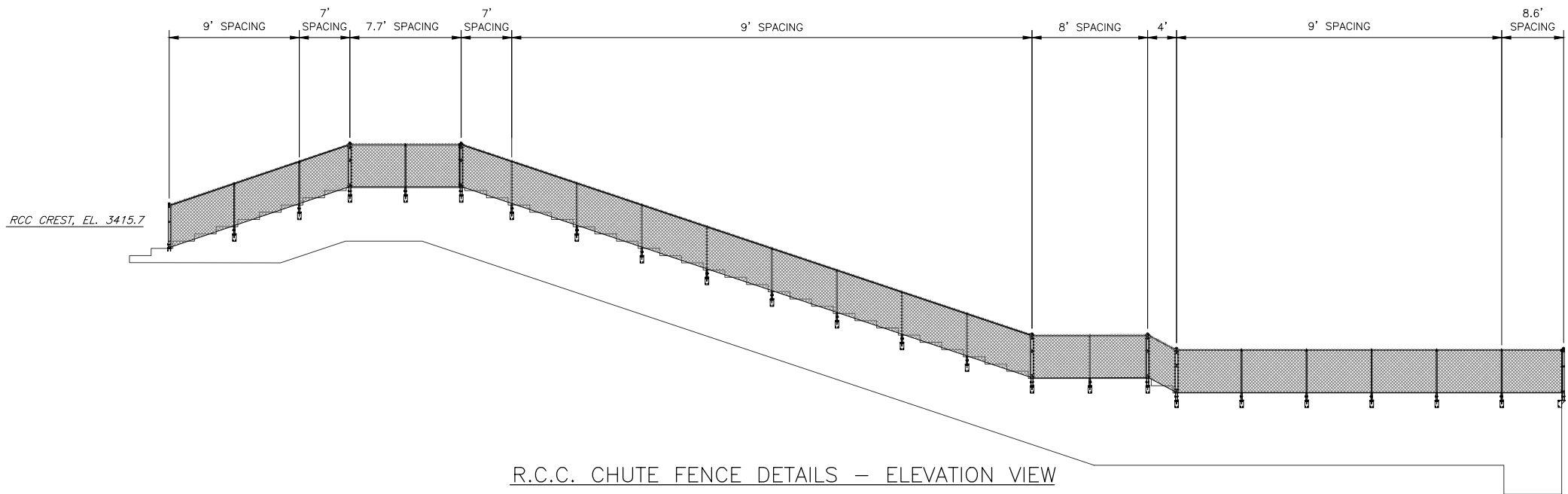
SHEET NO.
38

OF
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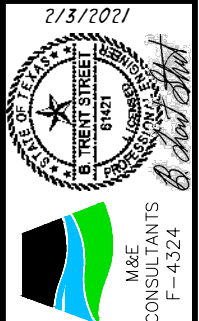
R.C.C. CHUTE FENCE DETAILS – PLAN VIEW



R.C.C. CHUTE FENCE DETAILS – ELEVATION VIEW



REVISIONS		
DATE	APPROVED	TITLE

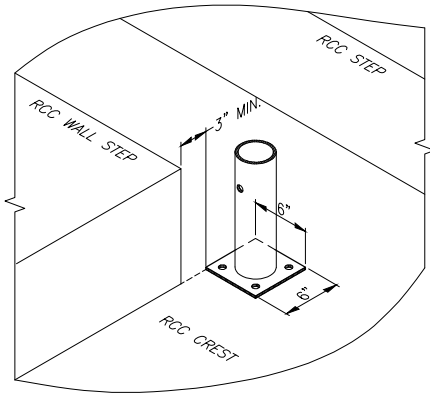


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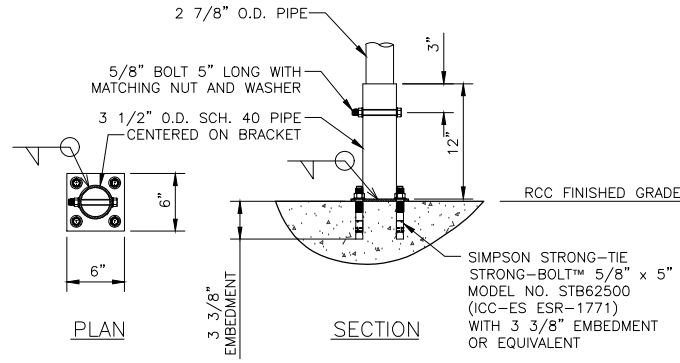
RCC CHUTE FENCE PLAN AND PROFILE
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS



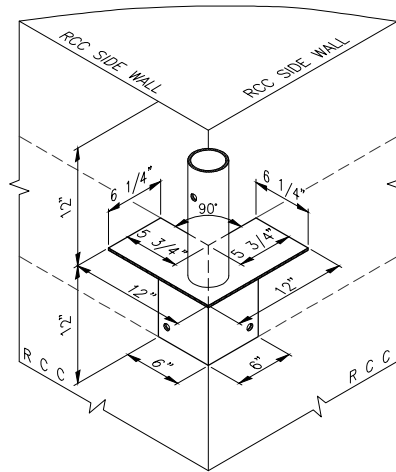
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OF 45



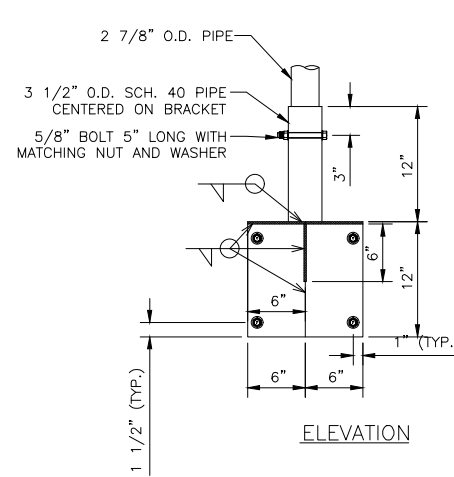
FLOOR MOUNTING BRACKET
ISOMETRIC VIEW



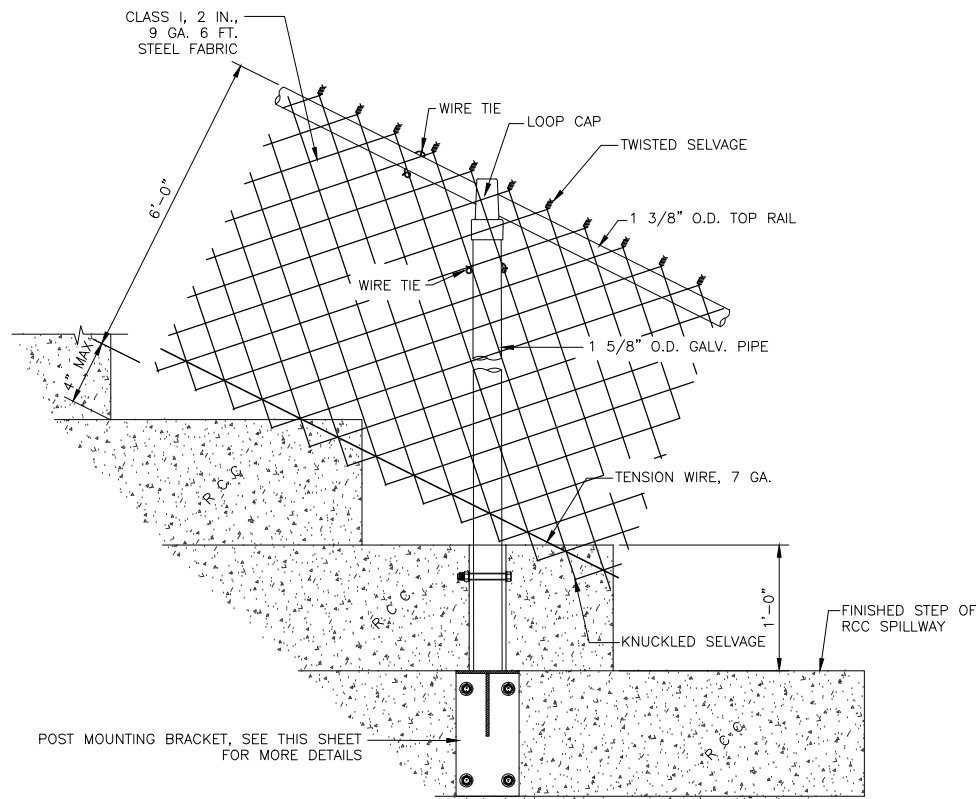
FLOOR MOUNTING BRACKET
NOT TO SCALE
BRACKET STEEL SHALL BE 1/4" THICK



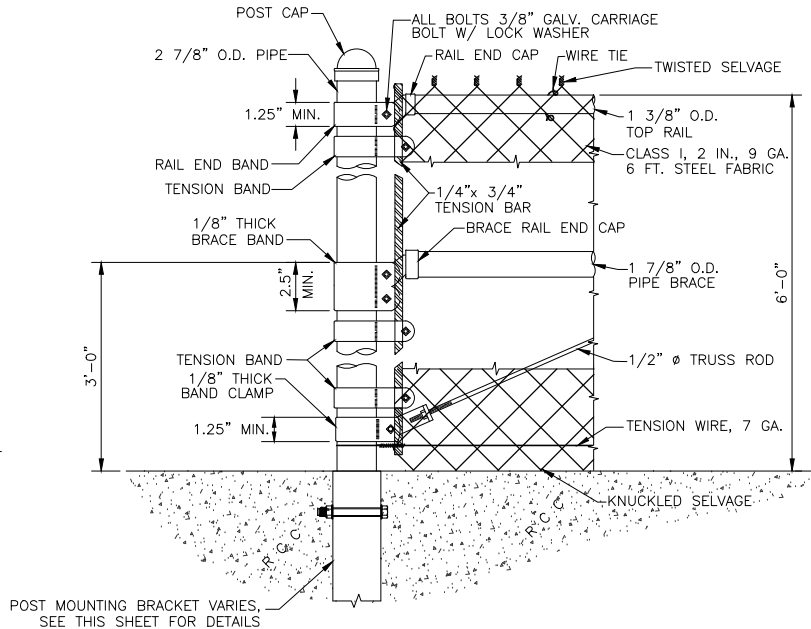
CORNER POST MOUNTING BRACKET
ISOMETRIC VIEW



CORNER POST MOUNTING BRACKET
NOT TO SCALE
BRACKET STEEL SHALL BE 1/4" THICK

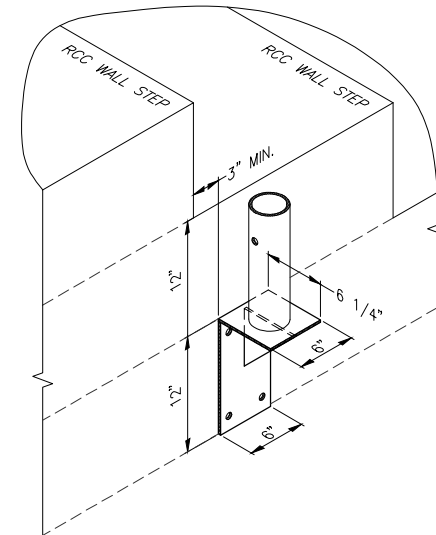


LINE POST DETAIL
(NOT TO SCALE)

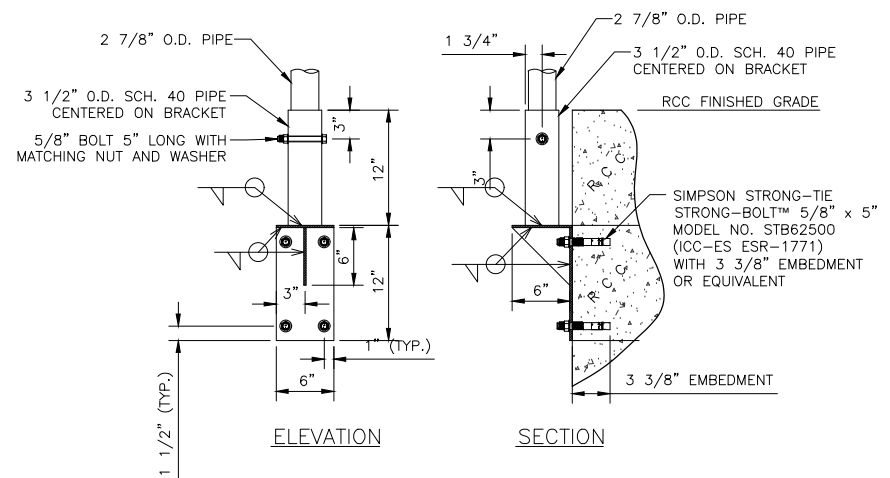


POST DETAIL
(CORNER, PULL & TERMINAL POST)
(NOT TO SCALE)

NOTES: WIRE TIES SHALL HAVE MAX. SPACING OF 24 INCHES ON TOP RAIL AND 12 INCHES ON LINE POSTS.
TIE WIRE SHALL BE MIN. 9 GAGE STEEL GALVANIZED WIRE.
FOUR (4) 12 GA. TENSION BANDS SHALL BE USED PER TENSION BAR.
TENSION WIRE SHALL BE MARCELLED (SPIRAL OR CRIMP) #7 GAGE AS PER ASTM A 824, TYPE II ZINC-COAT CLASS 2.



POST MOUNTING BRACKET
ISOMETRIC VIEW

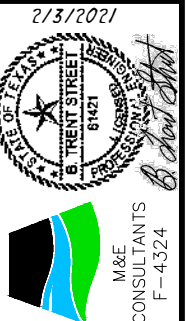


POST MOUNTING BRACKET
(LINE, PULL & TERMINAL POST)
NOT TO SCALE
BRACKET STEEL SHALL BE 1/4" THICK

NOTES: FOR 1 5/8" O.D. LINE POST, THE SAME BRACKET SHALL BE USED AS SHOWN IN POST MOUNTING BRACKET. IN LIEU OF USING THE 3 1/2" O.D. SCHEDULE 40 PIPE A 2 3/8" O.D. SCHEDULE 40 PIPE SHALL BE USED.

ALL PARTS OF MOUNTING BRACKETS SHALL BE GALVANIZED AFTER FABRICATION (SEE MATERIAL SPECIFICATION 582).

REVISIONS		
DATE	APPROVED	TITLE



DESIGNED BY: BTS
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FILE NAME: PC10_RCC.dwg
DATE CHECKED: 4/23/2021

RCC CHUTE FENCE DETAILS
FLOOD WATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

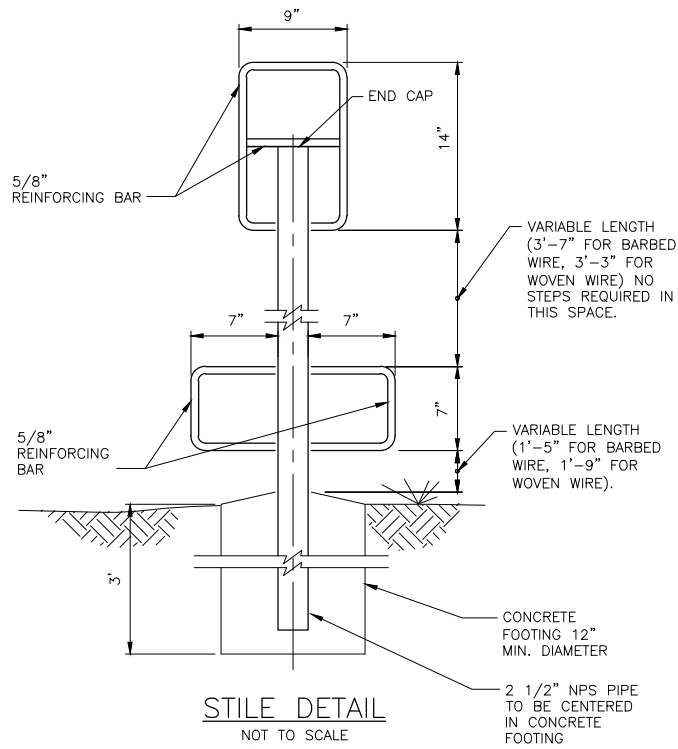


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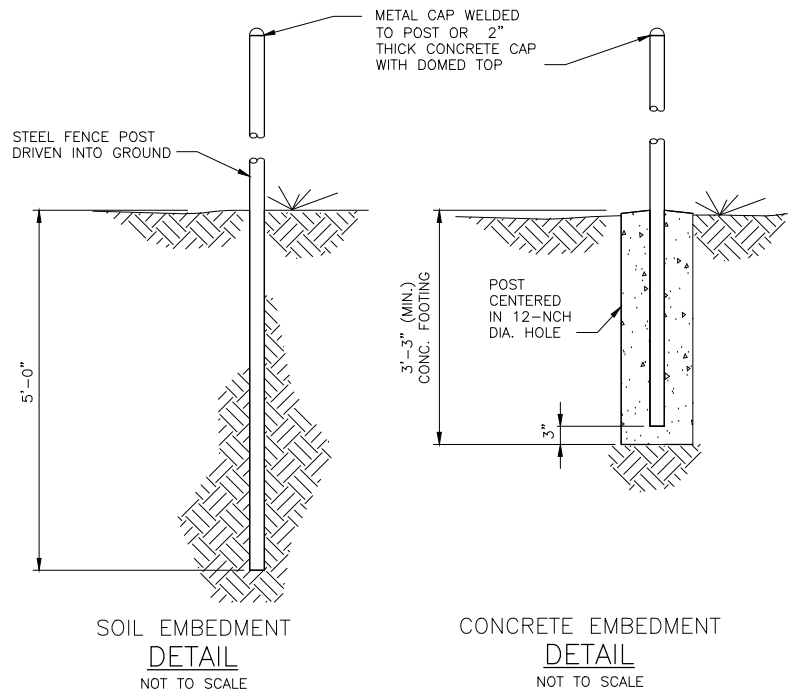
SHEET NO.
40

OF
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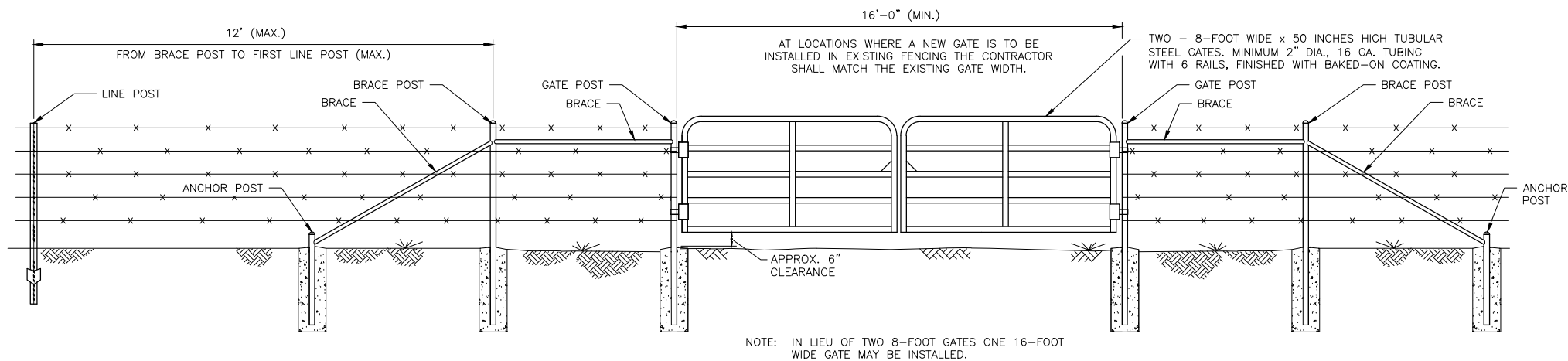
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NOTE:
POSITION STILE SO THAT STEPS AND HANDLE ARE PERPENDICULAR TO ALIGNMENT OF FENCE.
ALL BAR BENDS SHOWN SHALL HAVE AN INSIDE RADIUS OF APPROX. 1 1/2" PIPE FOR STILE SHALL BE 3" NPS SCHEDULE 40 STEEL PIPE.
ALL BAR CONNECTIONS SHALL HAVE ALL AROUND FILLET WELD.
ATTACH END CAP TO PIPE WITH ALL AROUND WELD AND BAR TO END CAP BY WELDING BOTH SIDES.
GALVANIZE STILE AFTER FABRICATION.
STILE LOCATIONS WILL BE DESIGNATED BY THE ENGINEER DURING FENCE LAYOUT.



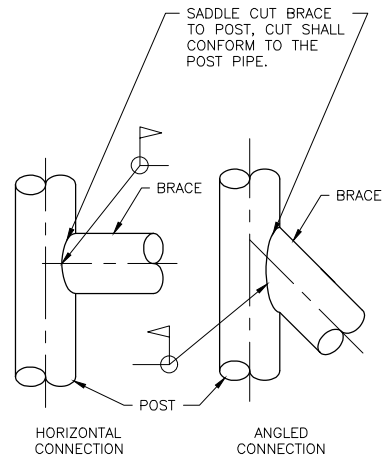
POST INSTALLATION — ALTERNATIVES



16' GATE OPENING

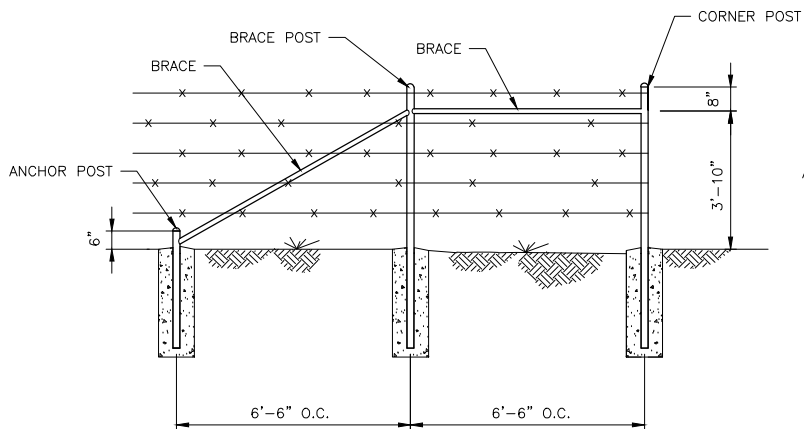
NOT TO SCALE
(THREE (3) GATE OPENINGS ARE REQUIRED.
THE LOCATIONS OF THE GATES SHALL BE DETERMINED DURING CONSTRUCTION)

STEEL LINE POST SHALL MEET THE REQUIREMENTS OF ASTM A702 WITH TWO COATS OF PAINT. ALL LINE POST SHALL BE THE SAME COLOR.
PIPE POSTS AND BRACES SHALL MEET THE REQUIREMENTS OF ASTM A500 OR ASTM A53, EXCEPT SECTION B, HYDROSTATIC TEST SHALL NOT APPLY.
GATE AND CORNER POSTS SHALL BE 3" NPS, BRACE POSTS, ANCHOR POSTS, AND BRACES SHALL BE MIN. 2 1/2" NPS. ALL POSTS AND BRACES SHALL BE SCHEDULE 40 PIPE.



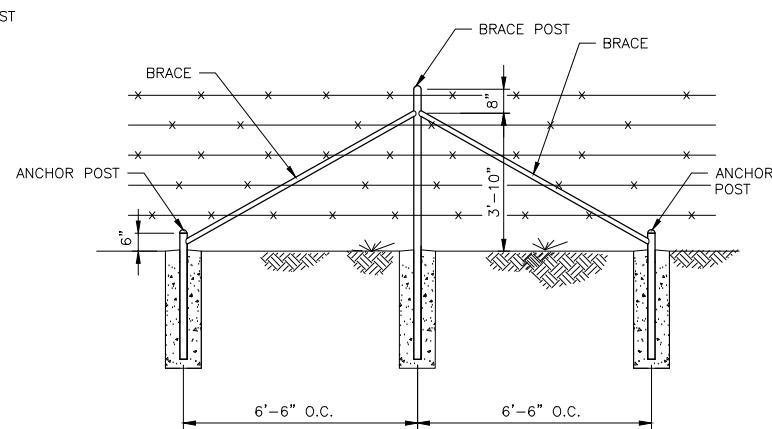
ELEVATION VIEW POST DETAILS

NOT TO SCALE



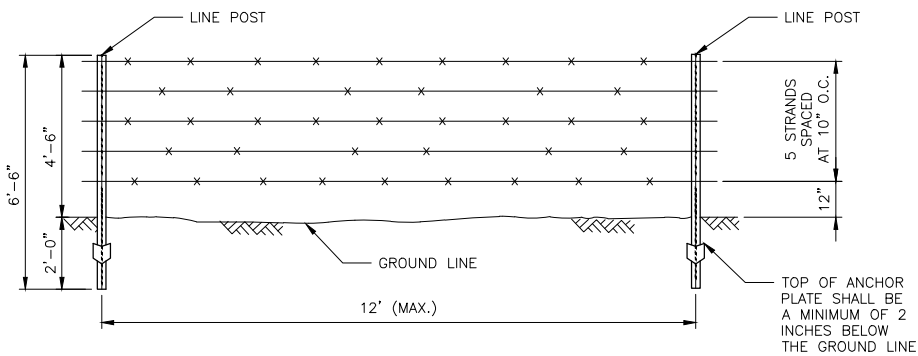
CORNER PANEL

NOT TO SCALE



PULL PANEL

NOT TO SCALE



BARBED WIRE REQUIRED SHALL BE STEEL DOUBLE STRAND 12 1/2 GA., COATING TYPE Z (ZINC GALVANIZED) AND COATING CLASS 3 WIRE CONFORMING TO ASTM A121.
BARBS SHALL BE (2) POINT, 14 GA. OR LARGER, ROUND OR FLAT AND ON 4" SPACING.
ATTACH EACH BARBED WIRE STRAND TO THE CORNER, END POST, AND PULL PANEL BRACE POST WITH A DOUBLE WRAP OF GALVANIZED WIRE TIED BACK WITH A MIN. OF 4 WRAPS.
WHERE THERE IS A CHANGE IN VERTICAL ALIGNMENT THAT EXCEEDS 10 DEGREES, THE WIRES SHALL BE ANCHORED TO THE POST WITH DOUBLE TIE WIRE. THE ENGINEER WILL DESIGNATE THE POSTS WHERE THIS SPECIAL FASTENING IS REQUIRED.

5-STRAND BARBED WIRE

NOT TO SCALE

THE APPROX. LOCATION OF FENCES TO BE CONSTRUCTED ARE SHOWN ON SHEET 2.

REVISIONS		
DATE	APPROVED	TITLE

2/3/2021



STATE OF TEXAS

B. TRENT STREET

61421

HOUSTON, TEXAS 77058

M&E CONSULTANTS

F-4324

DESIGNED BY: _____

DRAWN BY: _____

CHECKED BY: _____

FILE NAME: _____

DATE CHECKED: _____

BTS

QMK

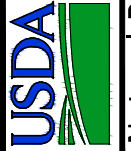
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10/8/2020

FENCE DETAILS
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

United States
Department of
Agriculture

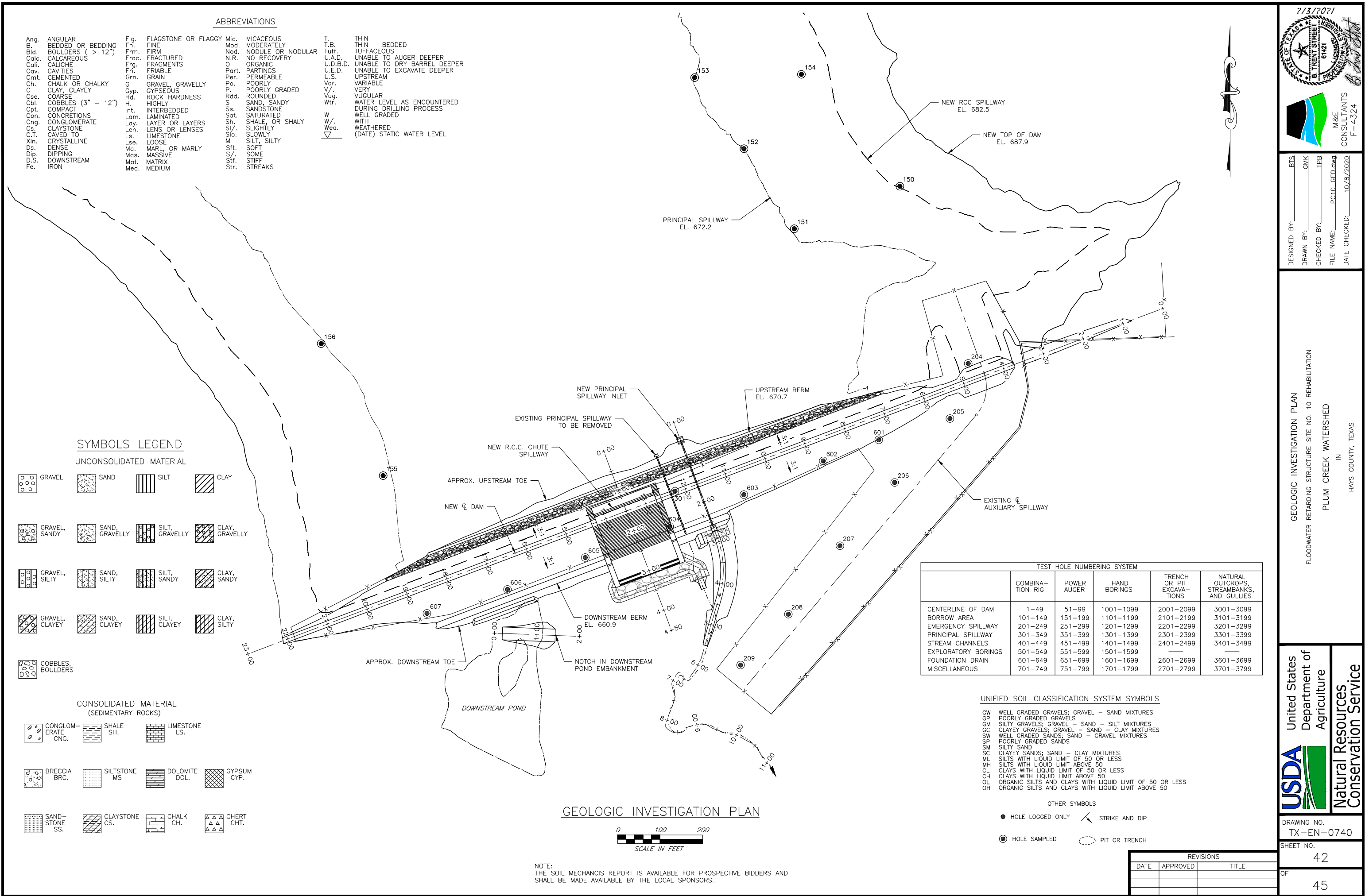


Conservation Service

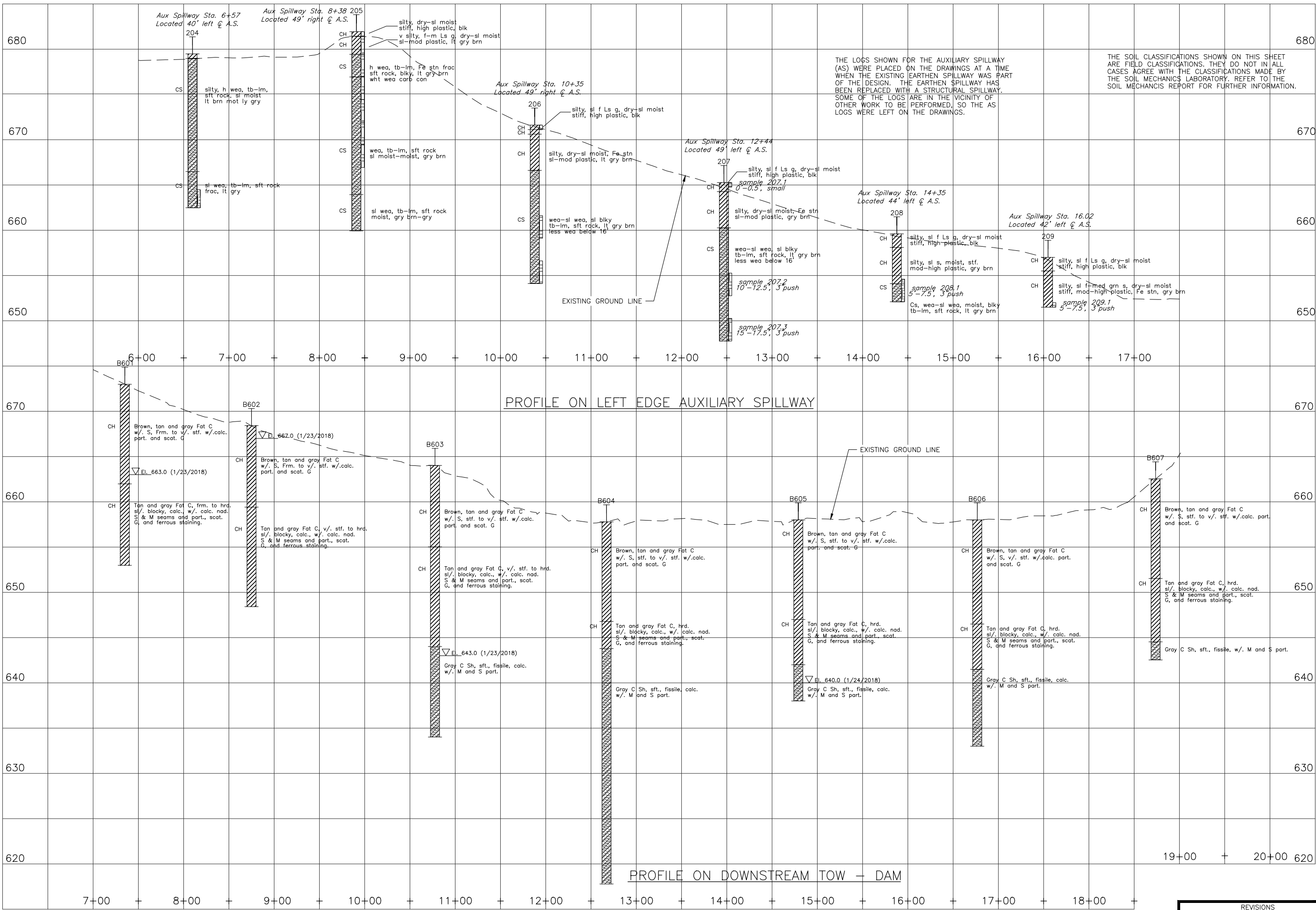
Natural Resources

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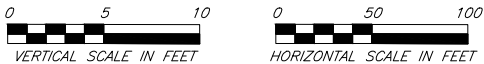
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GEOLOGIC INVESTIGATION PROFILES



REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

M&E CONSULTANTS F-4324

DESIGNED BY: BTS

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CHECKED BY: TPB

FILE NAME: PC10_GEO.dwg

DATE CHECKED: 10/8/2020

United States Department of Agriculture

Natural Resources Conservation Service

DRAWING NO. TX-EN-0740

SHEET NO. 43 OF 45

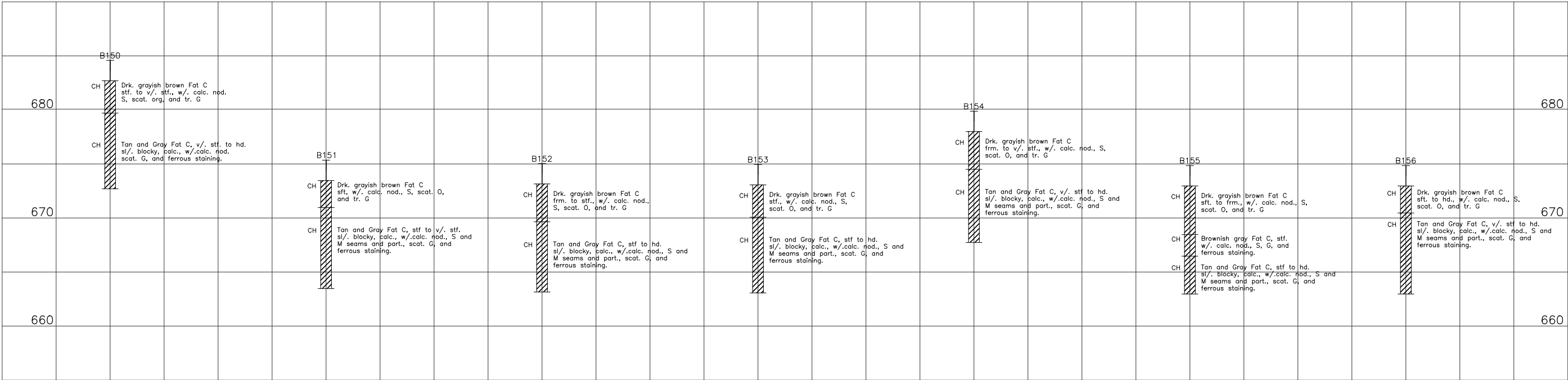
GEOLOGIC INVESTIGATION PROFILES

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

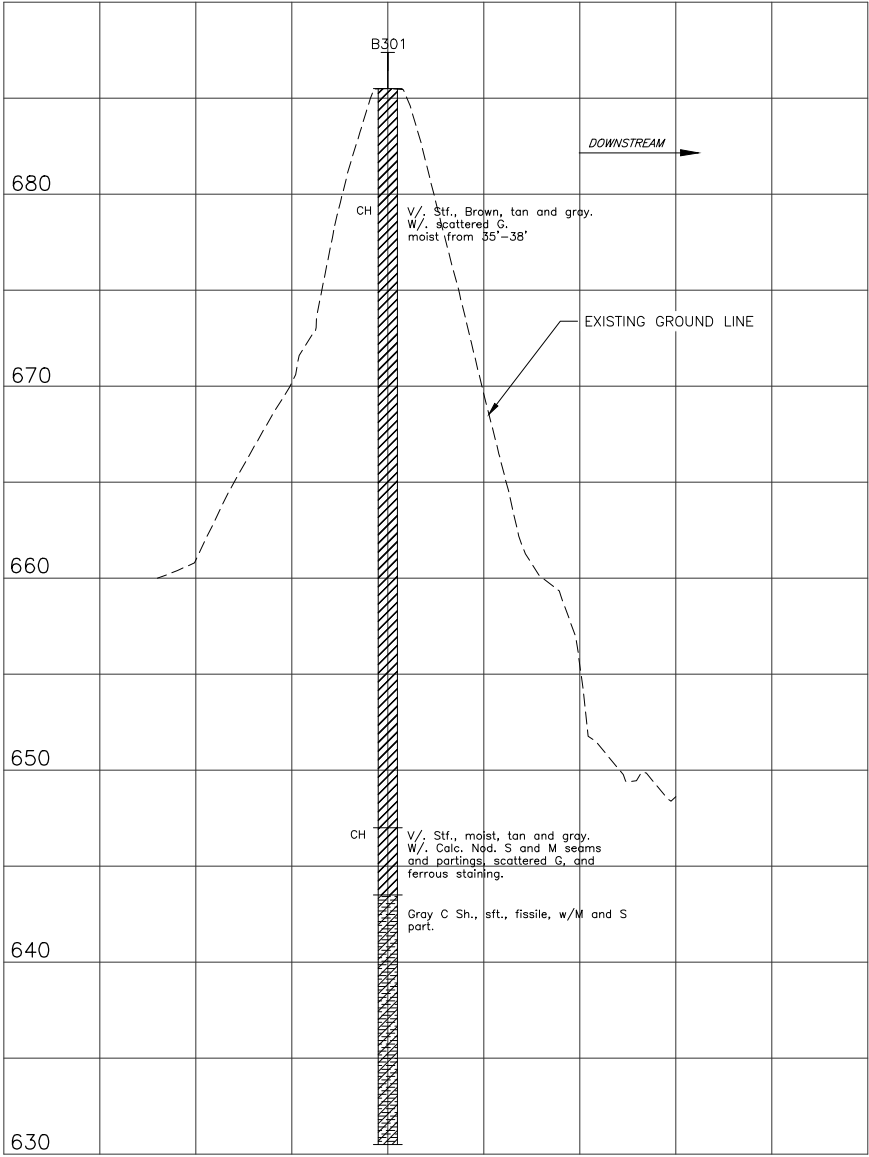
PLUM CREEK WATERSHED

IN HAYS COUNTY, TEXAS

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BORROW AREA – BORE HOLES



CENTERLINE DAM– STA. 12+27

GEOLOGIC INVESTIGATION PROFILES



THE SOIL CLASSIFICATIONS SHOWN ON THIS SHEET ARE FIELD CLASSIFICATIONS. THEY DO NOT IN ALL CASES AGREE WITH THE CLASSIFICATIONS MADE BY THE SOIL MECHANICS LABORATORY. REFER TO THE SOILS MECHANICS REPORT FOR FURTHER INFORMATION.

REVISIONS		
DATE	APPROVED	TITLE

2/3/2021

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United States
Department of
Agriculture

Natural Resources
Conservation Service

GEOLOGIC INVESTIGATION PROFILES

FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION

PLUM CREEK WATERSHED

IN

HAYS COUNTY, TEXAS

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NOTE:
CONTRACTOR SHALL ADD LOCATION(S) OF SILT FENCE TO PLAN AS REQUIRED.

APPROXIMATELY 3,400 FEET OF SILT FENCE IS CURRENTLY SHOWN.

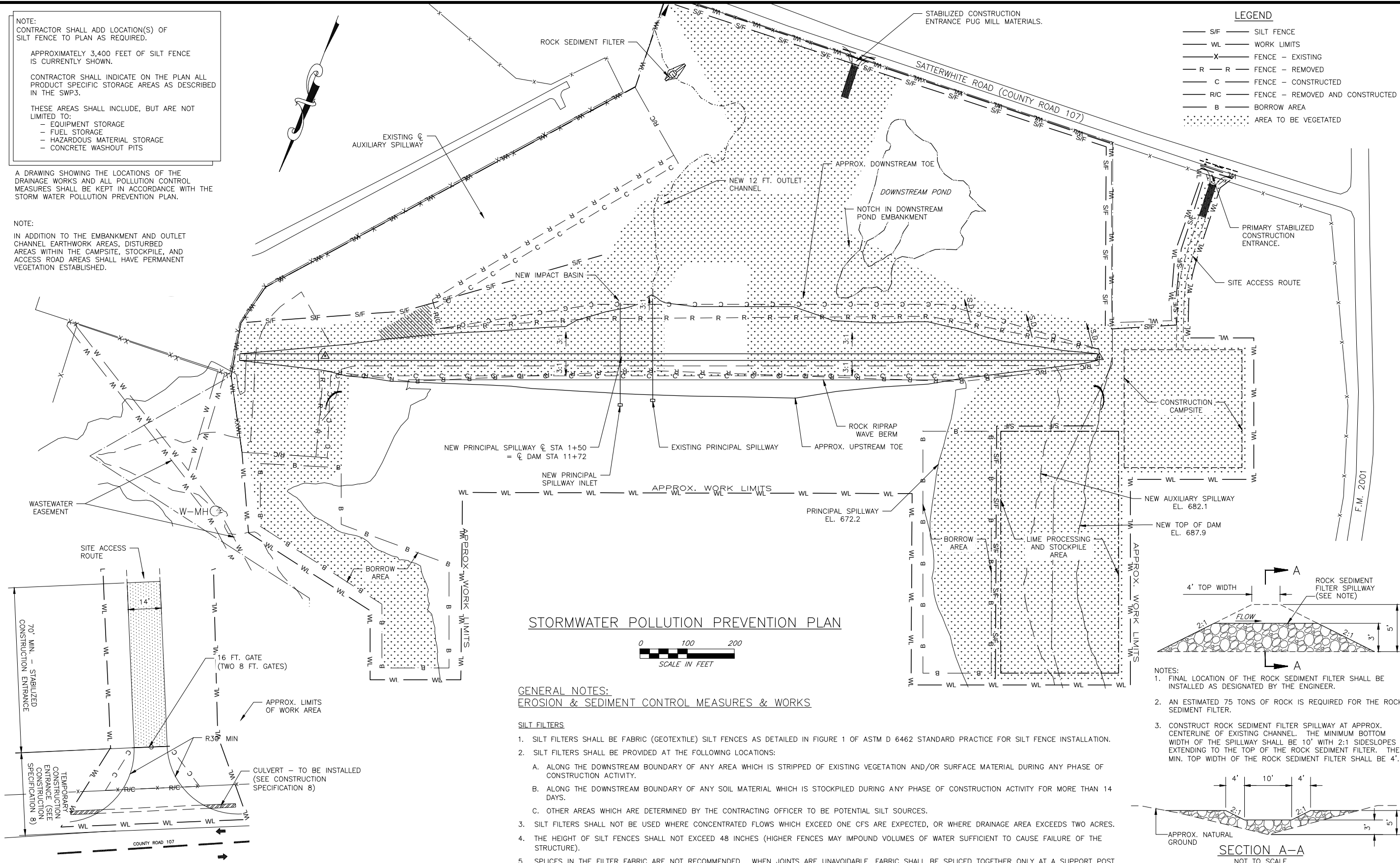
CONTRACTOR SHALL INDICATE ON THE PLAN ALL PRODUCT SPECIFIC STORAGE AREAS AS DESCRIBED IN THE SWP3.

THESE AREAS SHALL INCLUDE, BUT ARE NOT LIMITED TO:

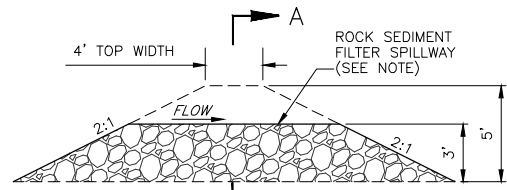
- EQUIPMENT STORAGE
- FUEL STORAGE
- HAZARDOUS MATERIAL STORAGE
- CONCRETE WASHOUT PITS

A DRAWING SHOWING THE LOCATIONS OF THE DRAINAGE WORKS AND ALL POLLUTION CONTROL MEASURES SHALL BE KEPT IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN.

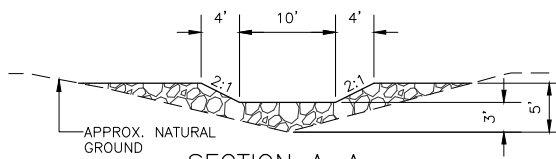
NOTE:
IN ADDITION TO THE EMBANKMENT AND OUTLET CHANNEL EARTHWORK AREAS, DISTURBED AREAS WITHIN THE CAMPSITE, STOCKPILE, AND ACCESS ROAD AREAS SHALL HAVE PERMANENT VEGETATION ESTABLISHED.



LEGEND	
— S/F —	SILT FENCE
— WL —	WORK LIMITS
— X —	FENCE — EXISTING
— R —	FENCE — REMOVED
— C —	FENCE — CONSTRUCTED
— R/C —	FENCE — REMOVED AND CONSTRUCTED
— B —	BORROW AREA
•••••	AREA TO BE VEGETATED



- NOTES:
1. FINAL LOCATION OF THE ROCK SEDIMENT FILTER SHALL BE INSTALLED AS DESIGNATED BY THE ENGINEER.
 2. AN ESTIMATED 75 TONS OF ROCK IS REQUIRED FOR THE ROCK SEDIMENT FILTER.
 3. CONSTRUCT ROCK SEDIMENT FILTER SPILLWAY AT APPROX. CENTERLINE OF EXISTING CHANNEL. THE MINIMUM BOTTOM WIDTH OF THE SPILLWAY SHALL BE 10' WITH 2:1 SIDESLOPES EXTENDING TO THE TOP OF THE ROCK SEDIMENT FILTER. THE MIN. TOP WIDTH OF THE ROCK SEDIMENT FILTER SHALL BE 4'.

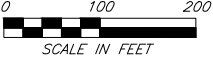


ROCK FOR THE SEDIMENT FILTER SHALL BE COMPRISED OF THE SAME SIZE AND TYPE OF ROCK USED TO CONSTRUCT THE STABILIZED CONSTRUCTION ENTRANCE (REFER TO NOTE 2 OF DETAIL ABOVE).

ROCK SEDIMENT FILTER — DETAIL

REVISIONS		
DATE	APPROVED	TITLE

STORMWATER POLLUTION PREVENTION PLAN



GENERAL NOTES: EROSION & SEDIMENT CONTROL MEASURES & WORKS

SILT FILTERS

1. SILT FILTERS SHALL BE FABRIC (GEOTEXTILE) SILT FENCES AS DETAILED IN FIGURE 1 OF ASTM D 6462 STANDARD PRACTICE FOR SILT FENCE INSTALLATION.
2. SILT FILTERS SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS:
 - A. ALONG THE DOWNSTREAM BOUNDARY OF ANY AREA WHICH IS STRIPPED OF EXISTING VEGETATION AND/OR SURFACE MATERIAL DURING ANY PHASE OF CONSTRUCTION ACTIVITY.
 - B. ALONG THE DOWNSTREAM BOUNDARY OF ANY SOIL MATERIAL WHICH IS STOCKPILED DURING ANY PHASE OF CONSTRUCTION ACTIVITY FOR MORE THAN 14 DAYS.
 - C. OTHER AREAS WHICH ARE DETERMINED BY THE CONTRACTING OFFICER TO BE POTENTIAL SILT SOURCES.
3. SILT FILTERS SHALL NOT BE USED WHERE CONCENTRATED FLOWS WHICH EXCEED ONE CFS ARE EXPECTED, OR WHERE DRAINAGE AREA EXCEEDS TWO ACRES.
4. THE HEIGHT OF SILT FENCES SHALL NOT EXCEED 48 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
5. SPLICES IN THE FILTER FABRIC ARE NOT RECOMMENDED. WHEN JOINTS ARE UNAVOIDABLE, FABRIC SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH LAP.
6. SEE MATERIAL SPECIFICATION 592 FOR MATERIAL AND SPACING REQUIREMENTS.

MAINTENANCE

1. SILT FILTERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SILT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE SEDIMENT FILTER.
3. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, THE FABRIC SHALL BE REPLACED PROMPTLY UNLESS INSPECTION REPORTS INDICATE THAT THE REPLACEMENT IS UNNECESSARY.

STABILIZED CONSTRUCTION ENTRANCE — DETAIL

- NOTES:
1. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATION 5.
 2. THE STABILIZED CONSTRUCTION ENTRANCE SHALL CONSIST OF A MINIMUM OF 8" THICKNESS OF CRUSHED ROCK PREDOMINANTLY 4" TO 8" IN SIZE. THE AGGREGATES SHALL BE CLEAN, HARD, DURABLE, AND FREE FROM ADHERENT COATINGS SUCH AS SALT, ALKALI, DIRT, CLAY, LOAM, SHALE, SOFT OR FLAKY MATERIALS, AND ORGANIC OR INJURIOUS MATTER.
 3. CONSTRUCT RECESSED ENTRY AT THE SITE ACCESS AS SHOWN ABOVE. (SEE CONSTRUCTION SPECIFICATION 8.)
 4. GATE AND FENCING AT ENTRANCE SHALL BE PER SHEET 41 AND CONSTRUCTION SPECIFICATION 92.

2/3/2021

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CHECKED BY: TPB
FILE NAME: PC10_SWPPP.dwg
DATE CHECKED: 10/8/2020

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STORMWATER POLLUTION PREVENTION PLAN
FLOODWATER RETARDING STRUCTURE SITE NO. 10 REHABILITATION
PLUM CREEK WATERSHED
IN
HAYS COUNTY, TEXAS

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