

RISER MAINTENANCE REPAIRS

DEEP CREEK WATERSHED, DAM NO. 19A

STATE DAM ID: YADKI-019 - HIGH HAZARD DAM

YADKIN COUNTY SOIL AND WATER CONSERVATION DISTRICT

YADKIN COUNTY, NC

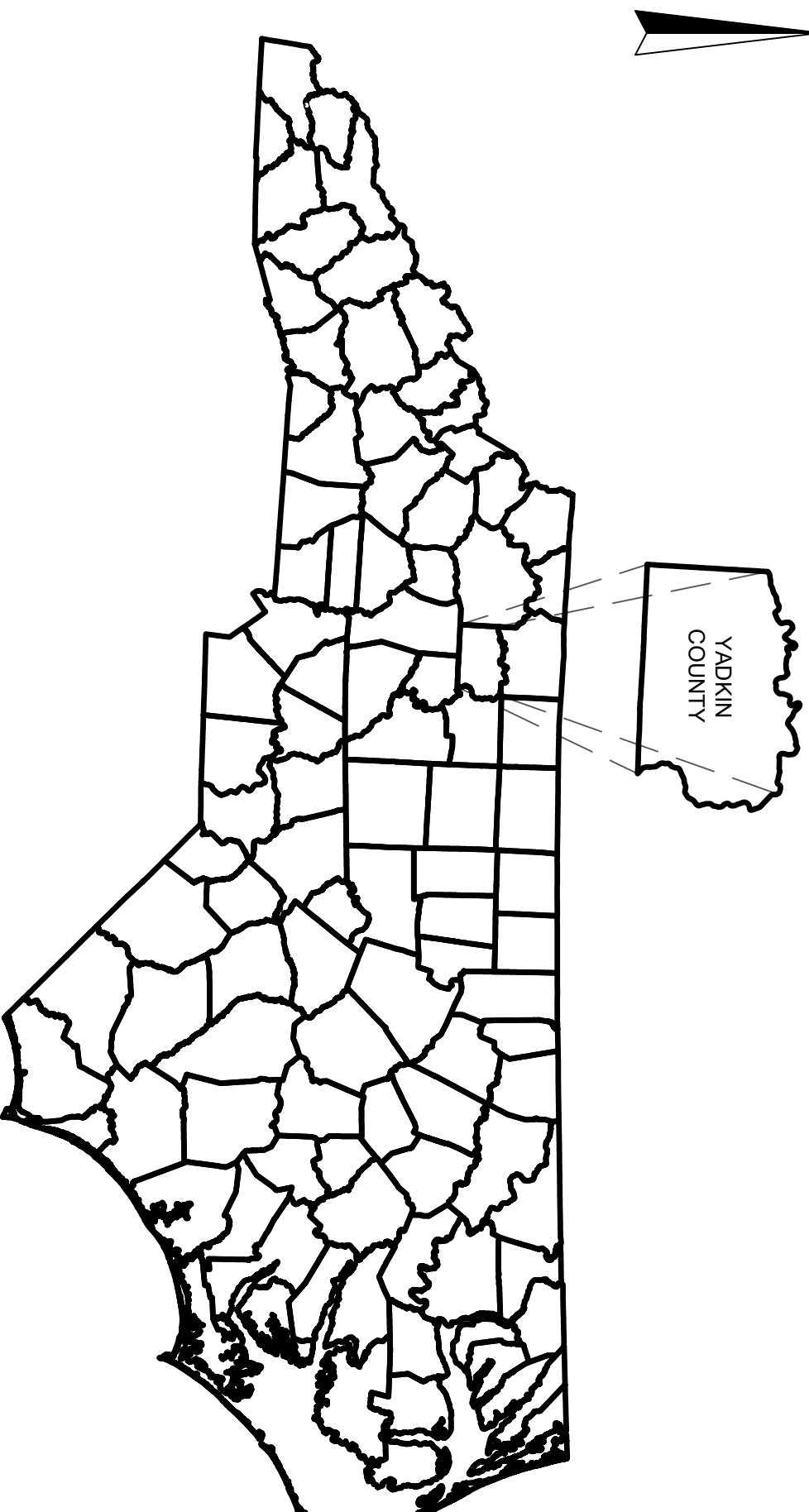
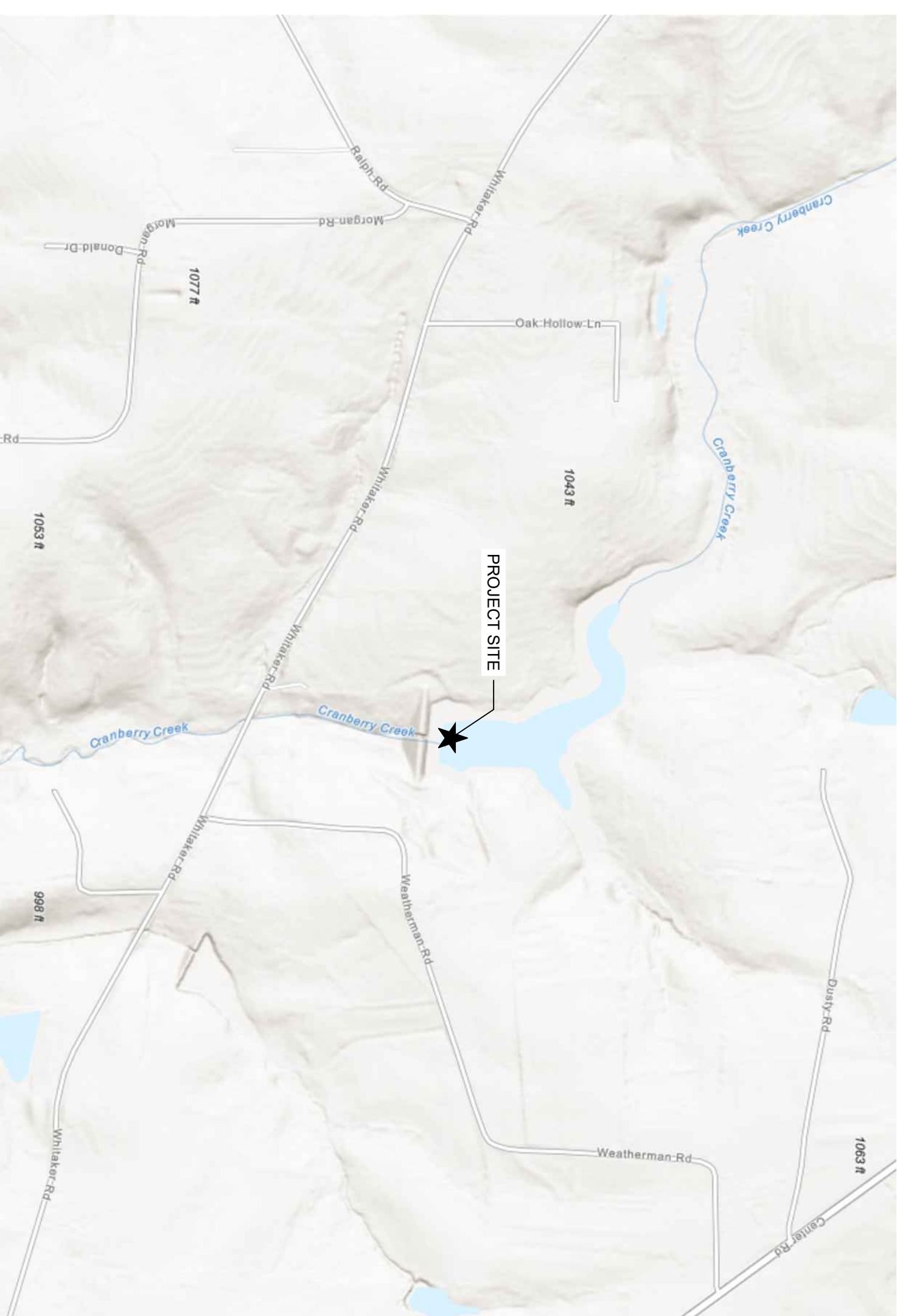
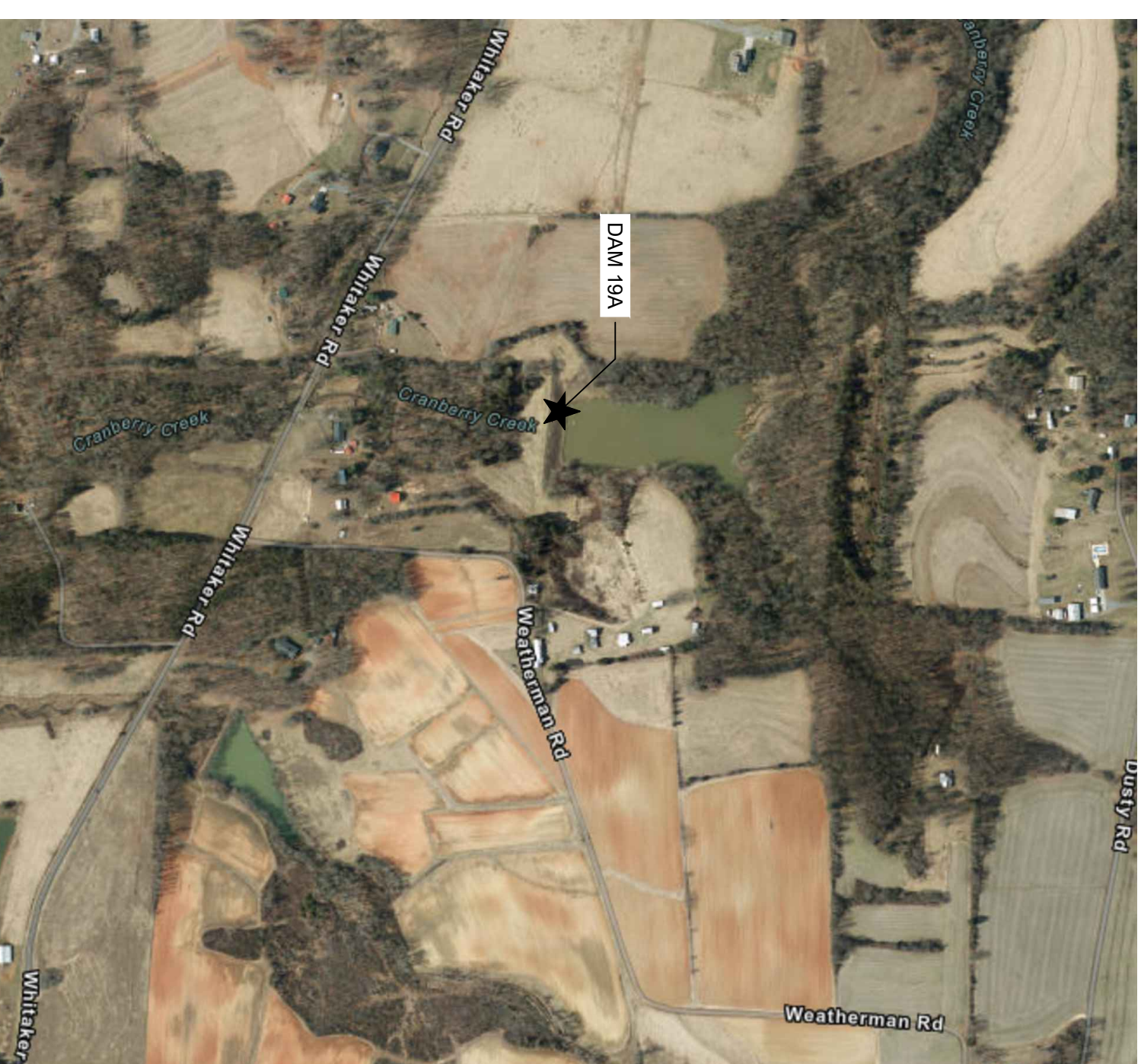
PREPARED BY

SCHNABEL ENGINEERING SOUTH, P.C.

PROJECT NO. 22210042.000

PROJECT DESCRIPTION

THESE DRAWINGS AND SPECIFICATIONS ARE FOR THE MAINTENANCE REPAIRS OF AN EXISTING FLOOD CONTROL DAM IN YAKINI COUNTY. THE WORK INVOLVES REMOVAL OF THE EXISTING HIGH-STAGE TRASH RACK, INSTALLATION OF GALVANIZED STEEL HIGH-STAGE TRASH RACK, INSTALLATION OF GALVANIZED STEEL LADDER, SEDIMENT REMOVAL AS NEEDED FOR REMOVAL OF THE EXISTING CAST IRON SLIDE GATE, AND THE INSTALLATION OF A NEW 20-IN x 20-IN (NOMINAL OPENING) CAST IRON SLIDE GATE AND APPURTENANCES.






VICINITY MAP

MAP SOURCE: ARCGIS ONLINE WORLD TOPOGRAPHIC MAP

LOCATION MAP

MAP SOURCE: ARCGIS ONLINE WORLD TOPOGRAPHIC MAP

KEY MAP

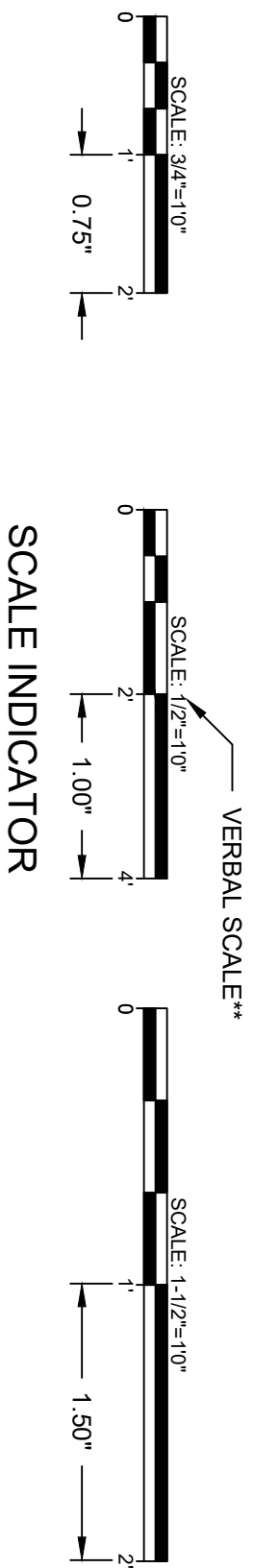
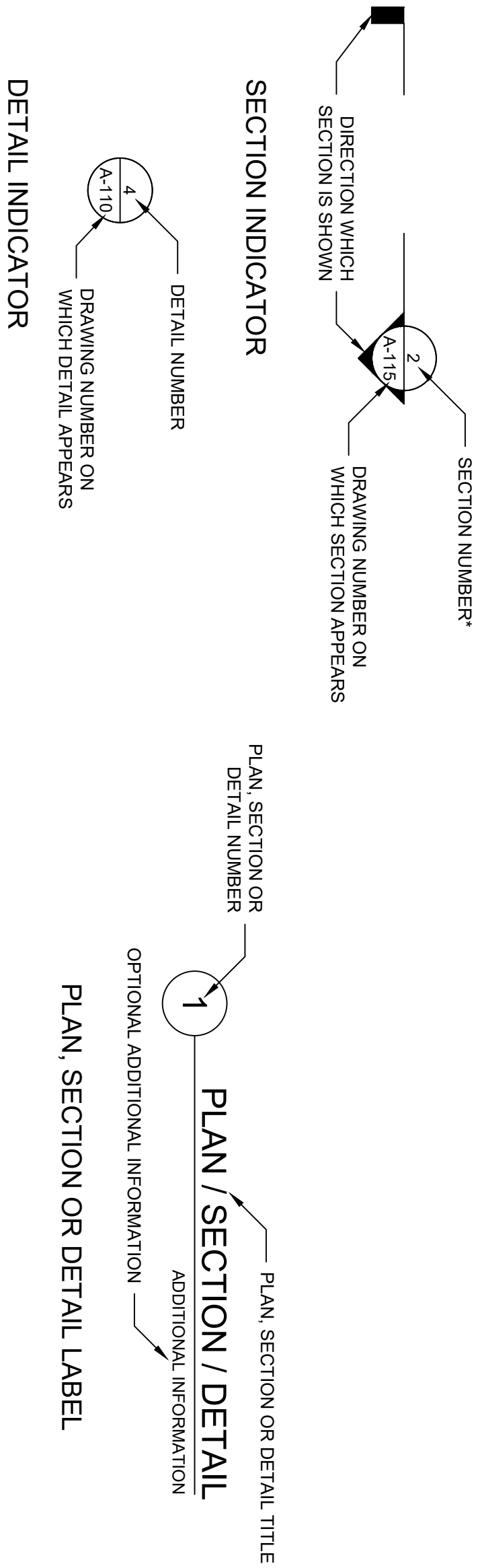
PROJECT: 22210042.000 DATE: JANUARY 2023 DRAWING NO. G-01 SHEET 01 OF 10			<div>RISER MAINTENANCE REPAIRS DEEP CREEK WATERSHED, DAM NO. 19A YADKIN COUNTY, NORTH CAROLINA</div> <div>COVER SHEET</div>	 <div>Schnabel ENGINEERING</div> <div>LICENSE NUMBER C-2599</div> <div>11A Oak Branch Drive / Greensboro, NC / 27407 T/ 336-274-8456 F/ 336-274-8486 / schnabel-sno.com</div>		<div>DESIGNED BY: MRG</div> <div>DRAWN BY: WMH</div> <div>CHECKED BY: RAS</div> <div>MARIDEE ROMERO-GRAVES, P.E.</div> <div>DATE: _____</div> <div>STATE PROFESSIONAL ENGINEER 042119</div> <table><thead><tr><th>REV.</th><th>DESCRIPTION</th><th>DATE</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	REV.	DESCRIPTION	DATE																														
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ABBREVIATIONS	
EL	ELEVATION
DIA	DIAMETER
ID	INSIDE DIAMETER
IN	INCHES
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
TYP	TYPICAL

LINEWORK AND HATCH	
	CONCRETE STRUCTURE - EXISTING
	CONCRETE STRUCTURE - PROPOSED
	EDGE OF WATER
	STAGING AREA

SHEET INDEX	
DRAWING NUMBER	SHEET TITLE
G-01	COVER SHEET
G-02	STANDARDS LEGEND AND SHEET INDEX
G-03	SITE ACCESS AND STAGING PLAN
C-01	AS-BUILT DRAWINGS - EXISTING RISER LOCATION
C-02	AS-BUILT DRAWINGS - EXISTING RISER DETAILS
C-03	TOPOGRAPHIC SURVEY OF DAM 19A SHEET 1 OF 2
C-04	TOPOGRAPHIC SURVEY OF DAM 19A SHEET 2 OF 2
C-05	OVERALL PROPOSED REPAIR
C-06	PROPOSED REPLACEMENT DETAILS
C-07	SEDIMENT REMOVAL PLAN AND SECTIONS

DRAWING SYMBOLS LEGEND

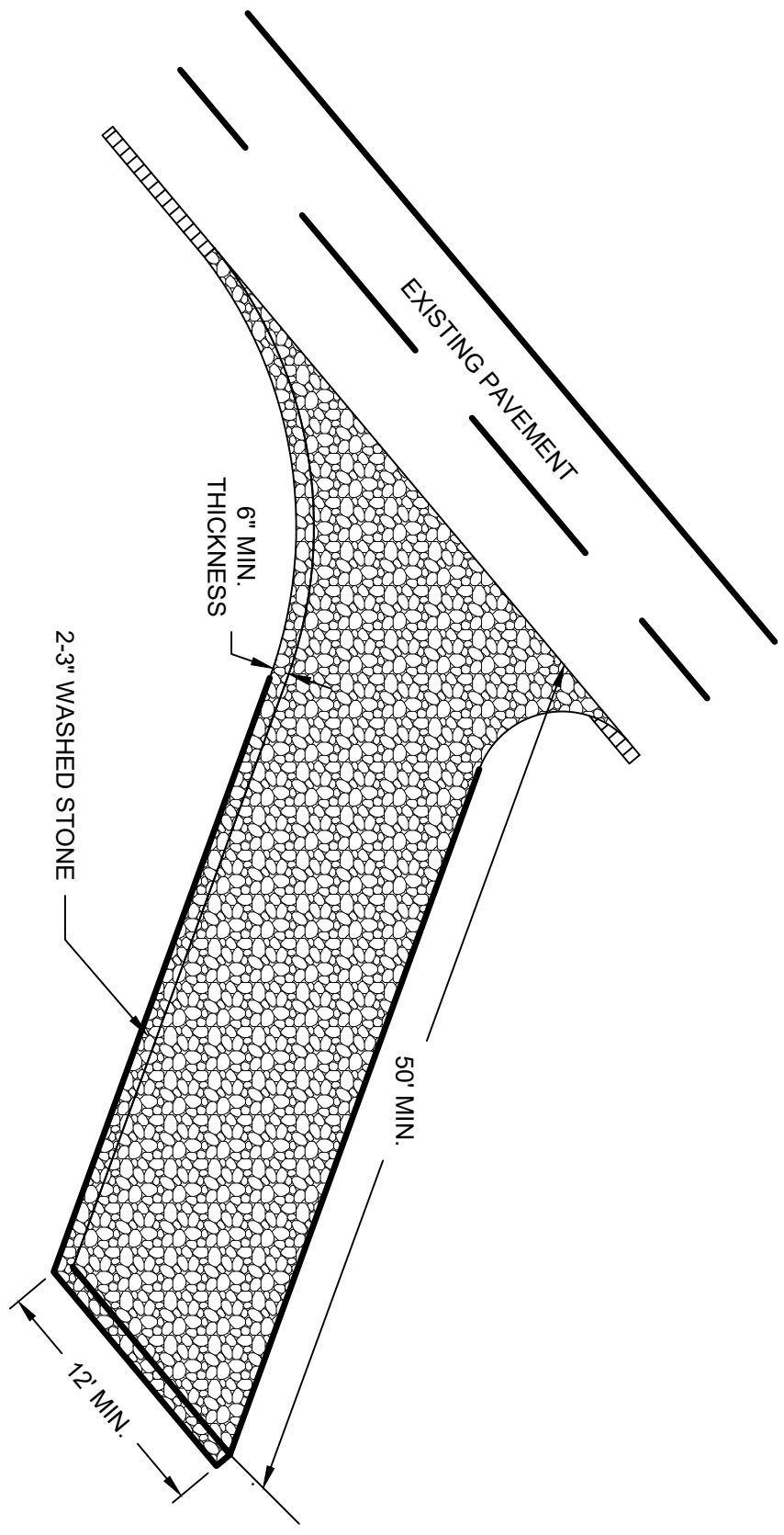


* SECTION AND ELEVATION INDICATORS ARE SIMILAR. SECTION AND ELEVATION NUMBERS ARE COMBINED AND SEQUENTIAL ON EACH DRAWING.

** VERBAL SCALE IS SHOWN FOR CONVENIENCE. ALL DRAWINGS SHOULD BE CHECKED TO ENSURE THAT THE SCALE BAR ITSELF IS SHOWN AT ACTUAL SIZE. DRAWINGS NOT PLOTTED AT THEIR INTENDED SIZE (ANSI D 22" x 34") WILL NOT SCALE PROPERLY.



1 SITE ACCESS AND STAGING PLAN VIEW



2 CONSTRUCTION ENTRANCE DETAIL
N.T.S.

CONSTRUCTION NOTES:

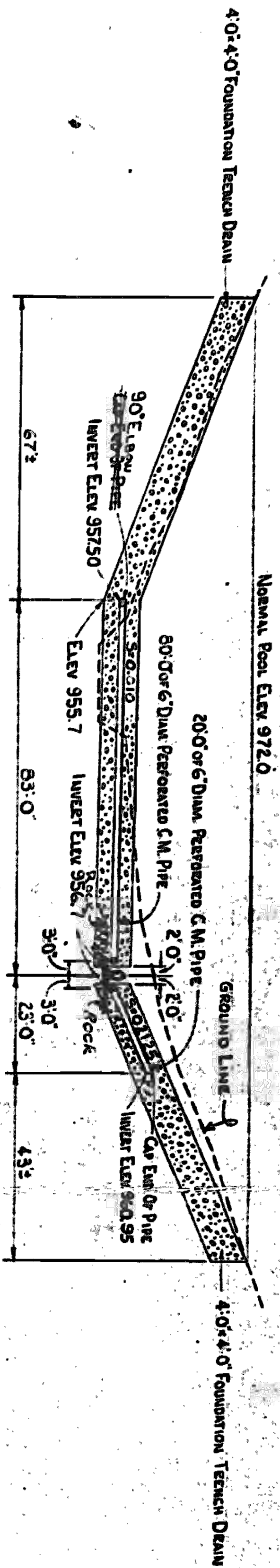
1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND GRADE PROPERLY.
2. PLACE GEOTEXTILE OVER CLEARED AREA TO SEPARATE COARSE AGGREGATE FROM SUBGRADE.
3. PLACE WASH STONE TO THE SPECIFIC DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
4. PROVIDE DRAINAGE TO CARRY WATER TO A SUITABLE OUTLET.
5. COARSE AGGREGATE: 2.3 INCH WASHED STONE
6. MINIMUM THICKNESS: 6 INCHES
7. MINIMUM LENGTH: 50 FEET
8. MINIMUM WIDTH: 12 FEET
9. GEOTEXTILE: WOVEN POLYPROPYLENE FABRIC DESIGNED FOR USE IN SUBGRADE AND BASE COURSE REINFORCEMENT APPLICATIONS SUCH AS TENCATE/MIKAP HP270, OR APPROVED EQUAL.

MAINTENANCE NOTES:

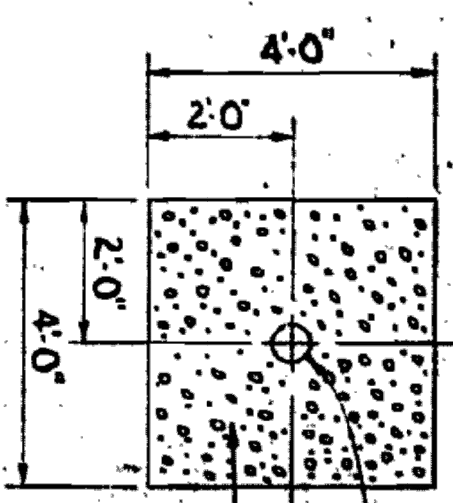
1. MAINTAIN THE STONE PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE.
2. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
3. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPOILED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.
4. PLACE ADDITIONAL COARSE AGGREGATE AS CONDITIONS DEMAND.

GENERAL NOTES:

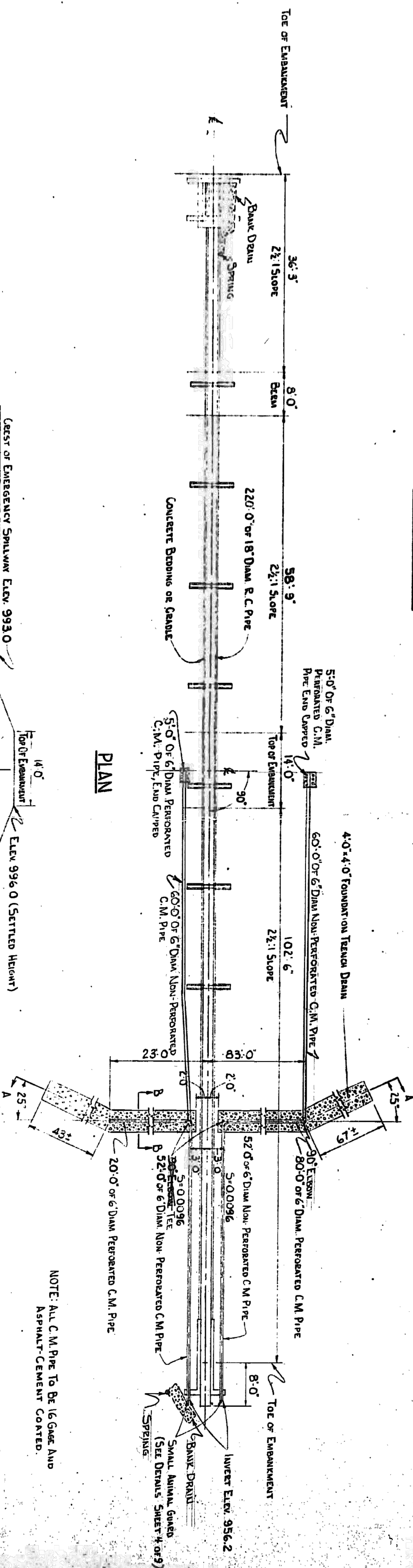
1. AERIAL PHOTOGRAPH OBTAINED FROM NC ONE MAP 2022.
2. ACCESS ROUTE TO BE RESTORED TO PRE-CONSTRUCTION CONDITIONS FOLLOWING PROPOSED RISER REPAIRS.
3. DRAINAGE AREA AT DAM IS 3.5 SQUARE MILES (2,240 ACRES).
4. CONTACT YADKIN COUNTY TO CONFIRM ACCESS ROUTE THAT WAS AGREED UPON WITH LANDOWNERS.



ELEVATION ALONG CENTERLINE OF FOUNDATION TRENCH DRAIN
SECTION A-A

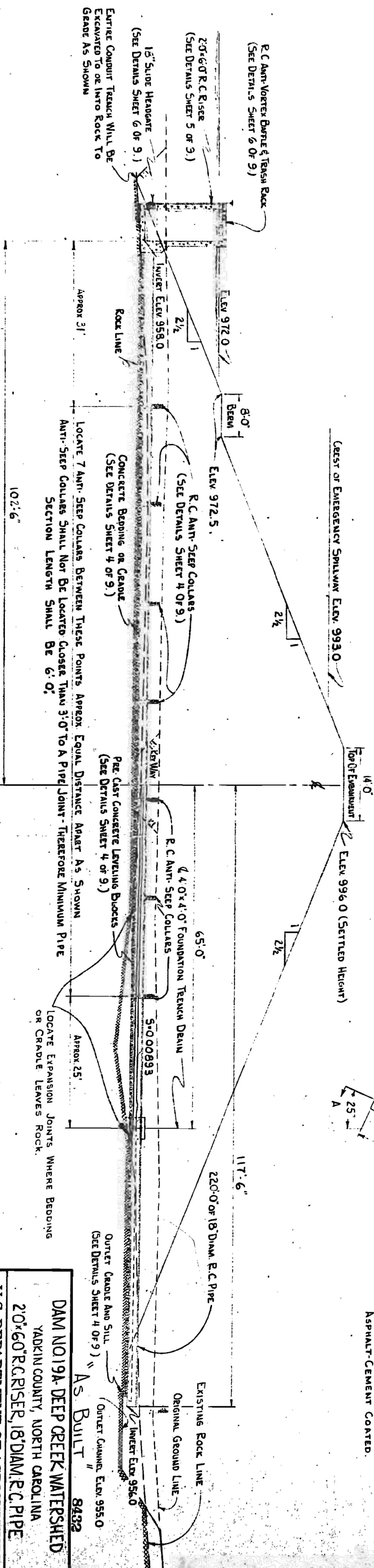


SECTION B-B



PLAN

NOTE: ALL C.M. PIPE TO BE 16 GAGE AND ASPHALT-CEMENT COATED.



NOTE: FOR PROFILE ALONG E OF CONDUIT SHOWING SOIL BORINGS SEE SHEET 8 OF 9.

NOTE: RISER AND BEDDING OR GRADE WILL BE POWERED TO ROCK TO FIRST PIPE JOINT BEYOND WHERE BEDDING OR GRADE NORMALLY WOULD LEAVE EXISTING ROCK LINE. THESE PIPE JOINTS SHALL BE EXPANSION JOINTS

SECTION ALONG CENTERLINE OF 18 INCH DIAM. REINFORCED CONCRETE PIPE

STA 10+40 & DAM

<p>DAM NO. 19A- DEEP CREEK WATERSHED YADKIN COUNTY, NORTH CAROLINA 20'x60' R.C. RISER, 18" DIAM. R.C. PIPE</p>		<p>U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</p>	
<p>Checked _____ Drawn H. S. Barker Title Field</p>	<p>Dated _____ G. L. S. & W. B. T. 3-60 1/40</p>	<p>Approved by _____ Title FIELD ENGINEER, DISTRICT <i>10. 24. 1960</i></p>	<p>Sheet _____ Drawing No. 2-E-55,054</p>



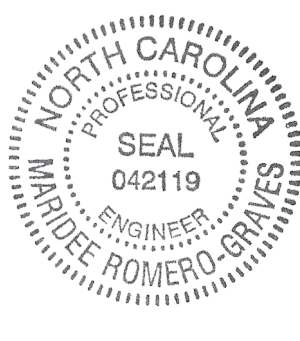
RISER MAINTENANCE REPAIRS
DEEP CREEK WATERSHED, DAM NO. 19A
YADKIN COUNTY, NORTH CAROLINA

AS-BUILT DRAWINGS -
EXISTING RISER LOCATION



LICENSE NUMBER C-2599

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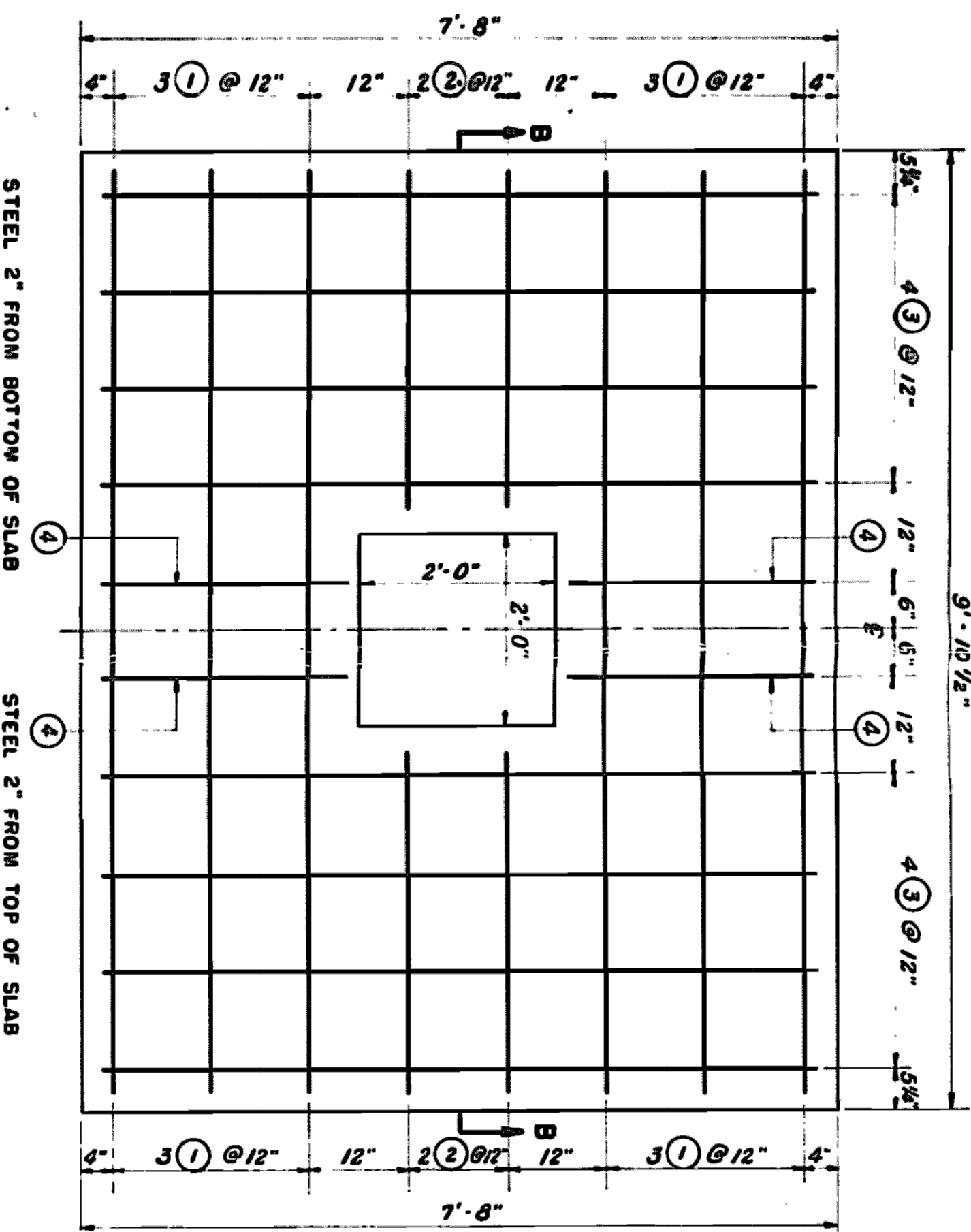
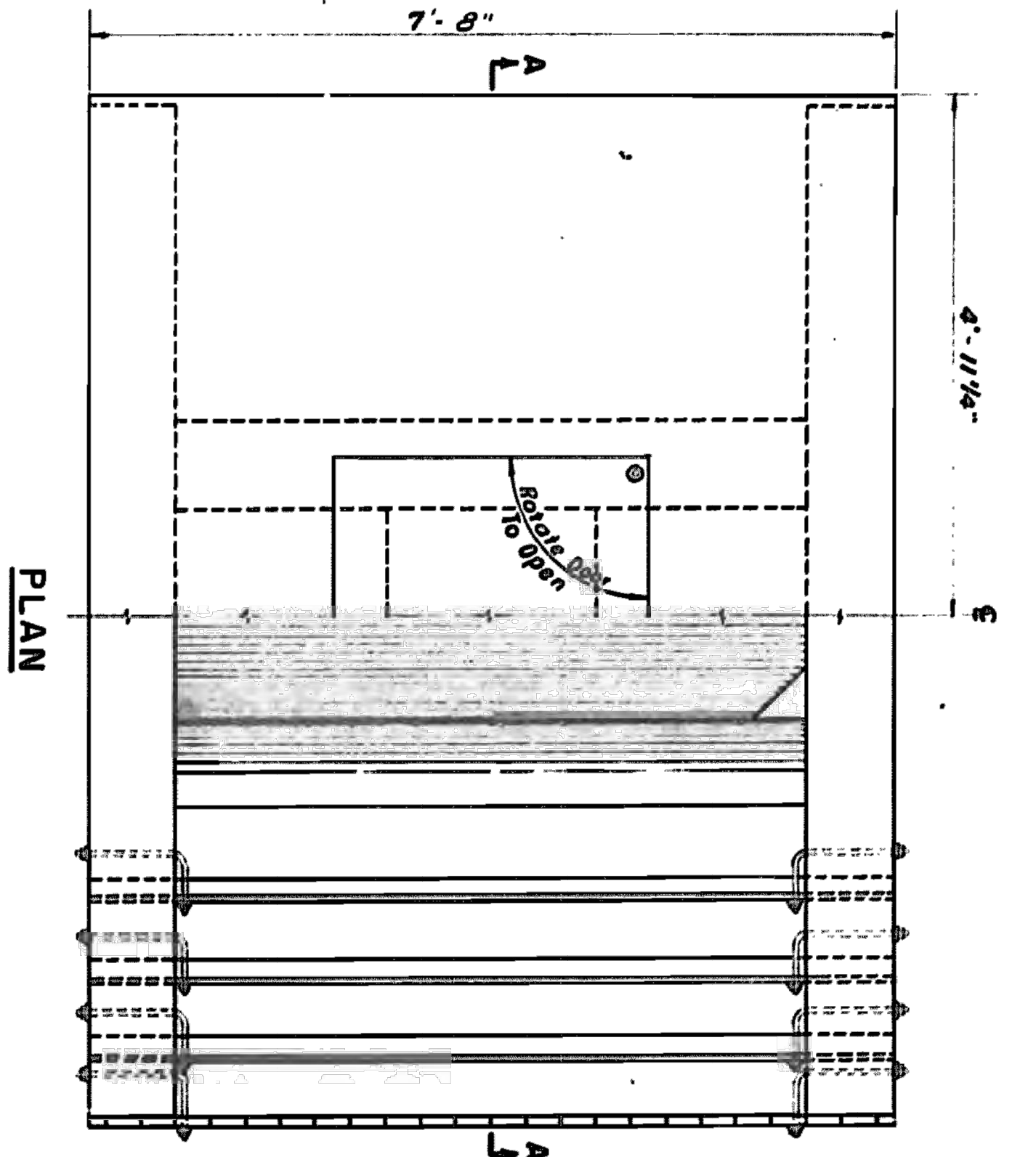
DESIGNED BY: MRG	DRAWN BY: WMH	CHECKED BY: RAS
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MARIDEE ROMERO-GRAVES, P.E.

DATE: _____

STATE PROFESSIONAL ENGINEER 042119

REV.	DESCRIPTION	DATE



STEEL SCHEDULE FOR ANTI-VORTEX BAFFLE					
LOCATION	MARK	SIZE	QUAN.	LENGTH	TOTAL FEET
Anti-Vortex Baffle Slab	C-1	4	12	9'-6"	ST 114'-0"
Anti-Vortex Baffle Slab	C-2	4	8	3'-6"	ST 28'-0"
Anti-Vortex Baffle Slab	C-3	4	16	7'-3"	ST 116'-0"
Anti-Vortex Baffle Slab	C-4	4	8	2'-6"	ST 20'-0"

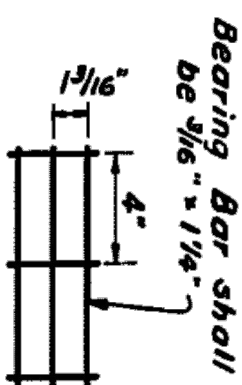
QUANTITIES					
REINFORCING STEEL #4 BARS 272.0 L.W. FT. 185.7 LBS.					
CLASS B CONCRETE 1.77 CU YDS.					

BILL OF MATERIAL FOR TRASH RACK & DOOR			
ITEM	QUAN.	LENGTH	TOTAL FEET
2 1/2" x 2 1/2" x 1/4" Angles	6	7'-8"	46'-0"
3/8" G.M. Angle Bolts Washers	20	1'-9 1/4"	16'-8"
3/4" I.D. Pipe Sleeve	20	0'-10"	16'-8"
1 1/2" x 1-9" Metal Grating	2	7'-8"	15'-4"
1/4" x 2" Metal Strip	4	1'-9"	7'-0"
3/8" x 3/8" x 3-0" Carbon Steel Plate Door	1		
3/8" x 6" G.M. Anchor Bolts Washers	2		
3/8" x 3" Metal Strip - Weld to Door	1	2'-6"	2'-6"
3/4" x 1" Metal Handle	1	1'-6"	1'-6"

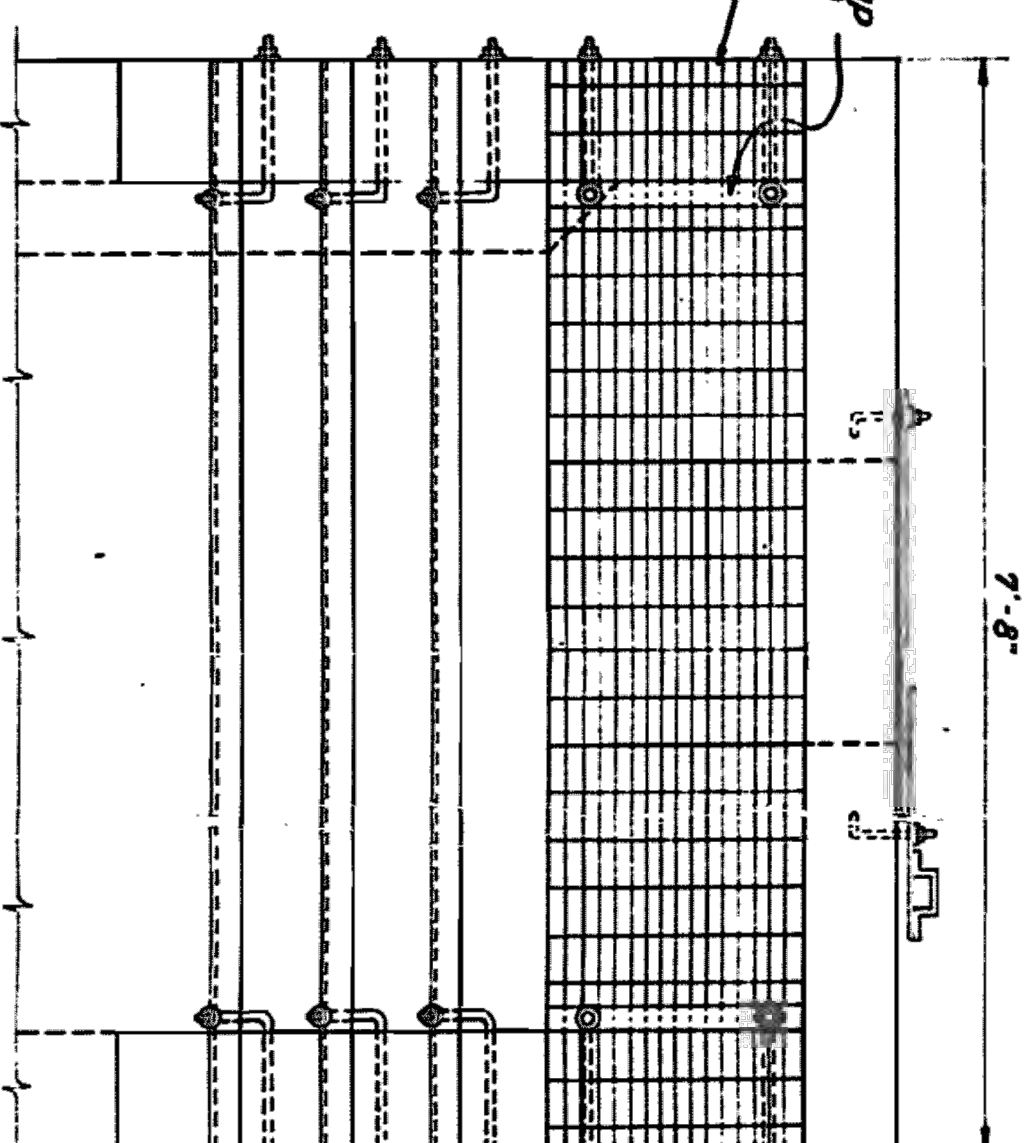
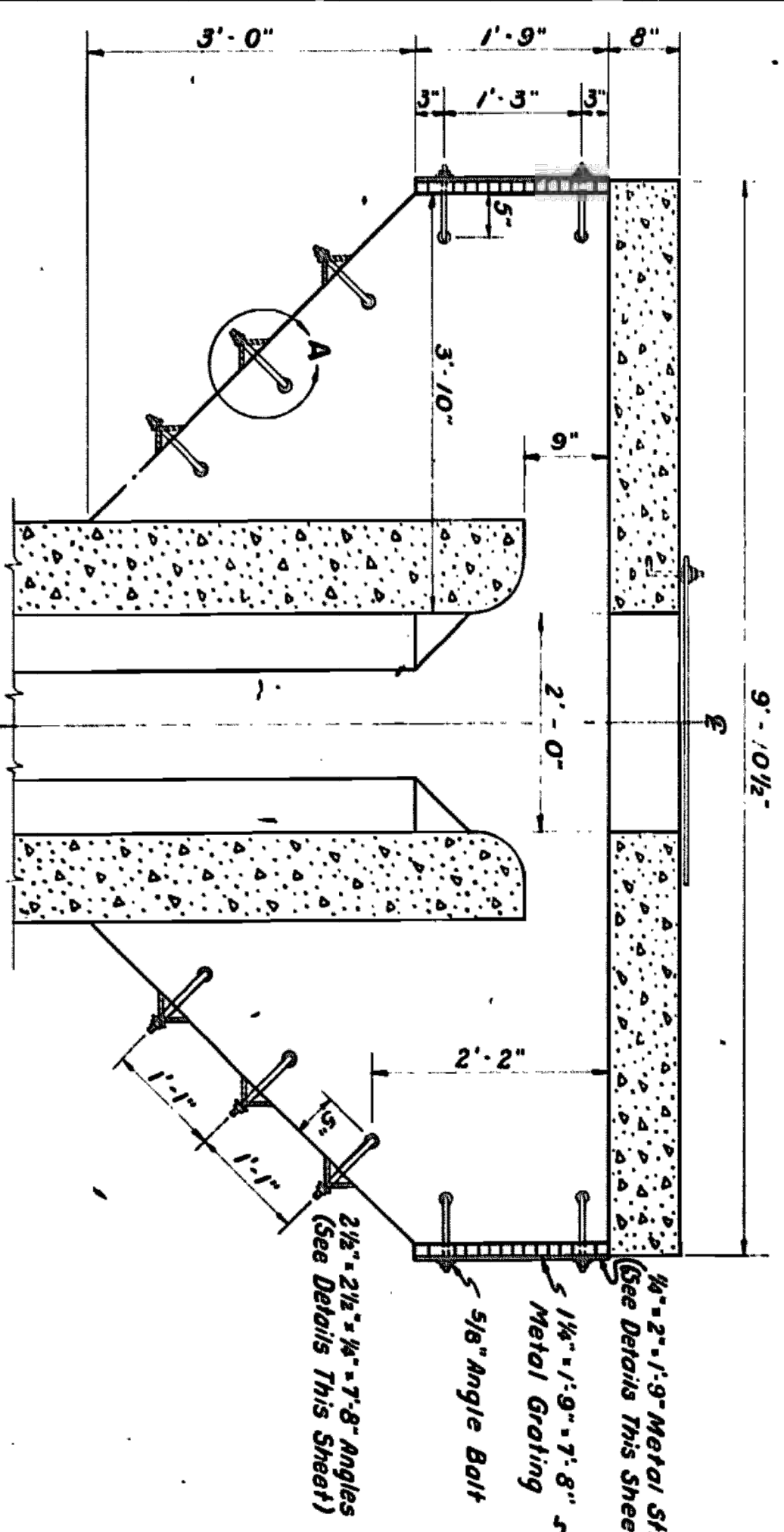
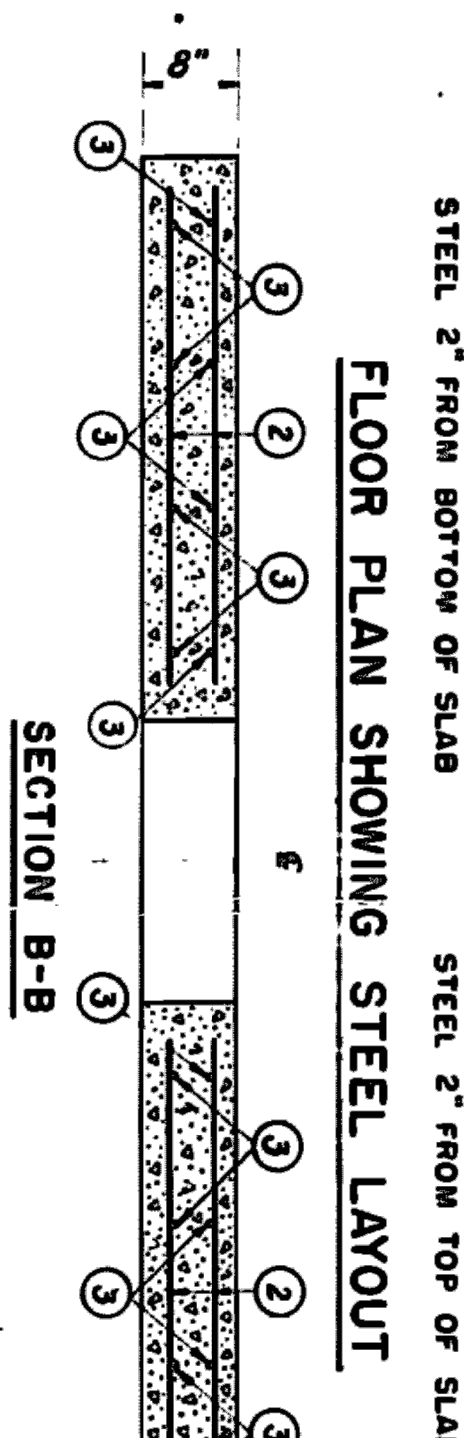
BAR TYPE

STRAIGHT

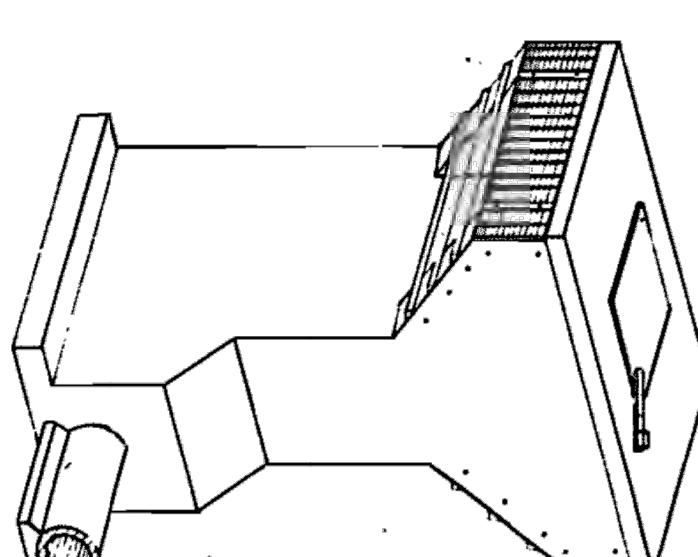
Chamfer All Exposed Edges of Concrete 3/4".
NOTE: Steel Grating shall Conform to Federal Specifications, RRG-561a Dated Jan. 20, 1936.



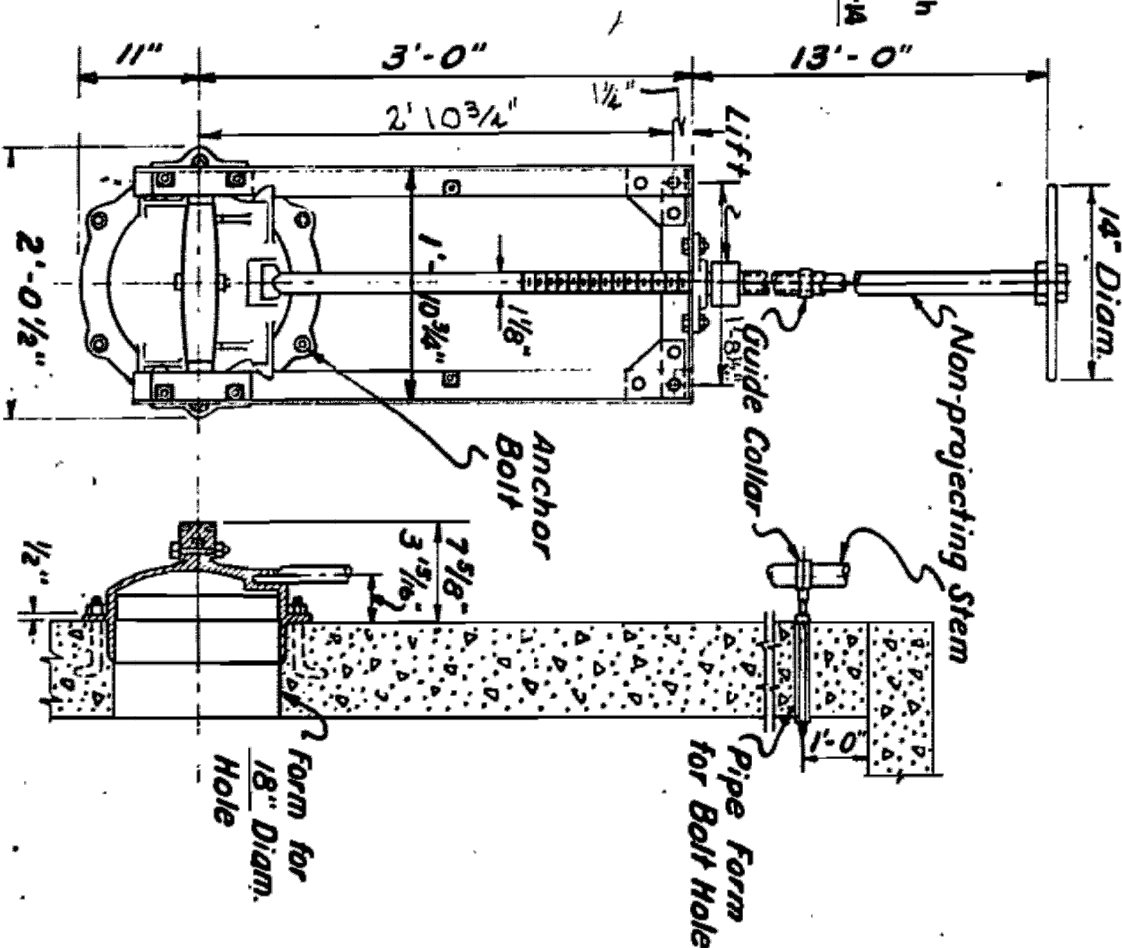
DETAILS OF GRATING



ISOMETRIC VIEW



NOTE: Gate shall be Aranco Model 20-10C Spring Back Tings with Bronze Seat Fittings and Aranco Model H14 Lift with Bronze Lift Nut or Equal.



DETAILS OF 18" DIAM. SLIDE GATE

"AS BUILT"

8432

DAM NO. 19-A DEEP CREEK WATERSHED
YADKIN COUNTY, NORTH CAROLINA
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

H.L. Priddy 4-60
C.R. Holland 4-60
N.D. Clark 5-60
E.O.D. & H.L.P. 5-60

STATE CONSERVATION ENGINEER
18
2-E-55-0954



RISER MAINTENANCE REPAIRS
DEEP CREEK WATERSHED, DAM NO. 19A
YADKIN COUNTY, NORTH CAROLINA
AS-BUILT DRAWINGS -
EXISTING RISER DETAILS



LICENSE NUMBER C-2599
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DESIGNED BY: MRG
DRAWN BY: WMH
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MARIDEE ROMERO-GRAVES, P.E.
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- NOTES:
- ASSUMED AS-BUILT ELEVATIONS REFERENCE VERTICAL DATUM NGVD29
 - AS-BUILT DRAWINGS ARE PROVIDED AS A REFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DIMENSIONS BY TAKING FIELD MEASUREMENTS OF THE STRUCTURES.

DETAIL A

20-ANGLE BOLTS REQUIRED

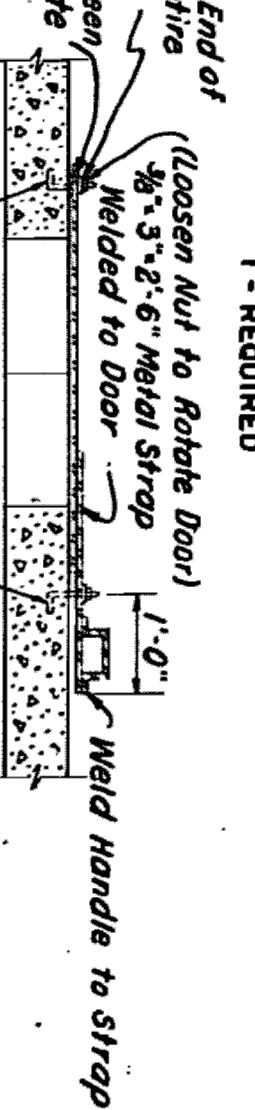
DETAILS OF ANGLES FOR TRASH RACK

6-REQUIRED

DETAILS OF CARBON STEEL

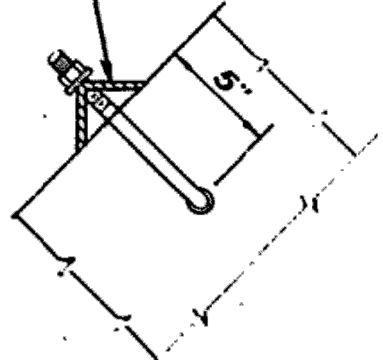
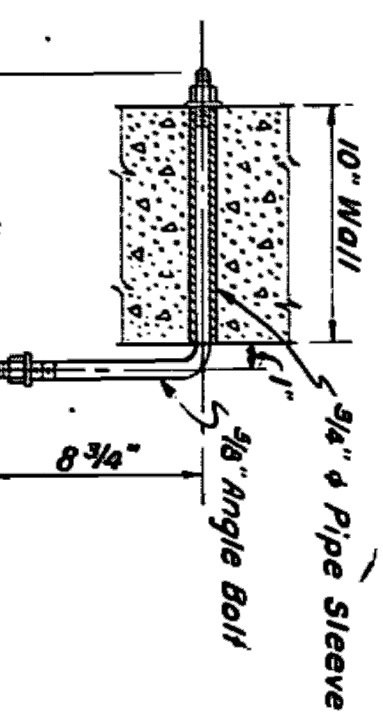
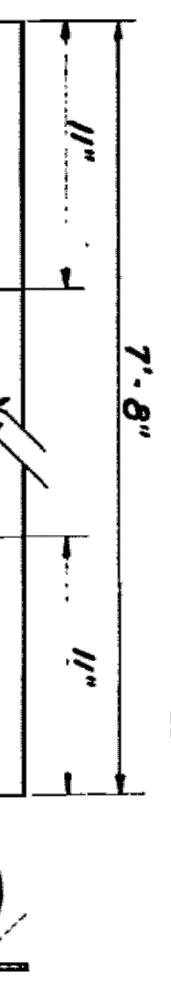
PLATE ACCESS DOOR

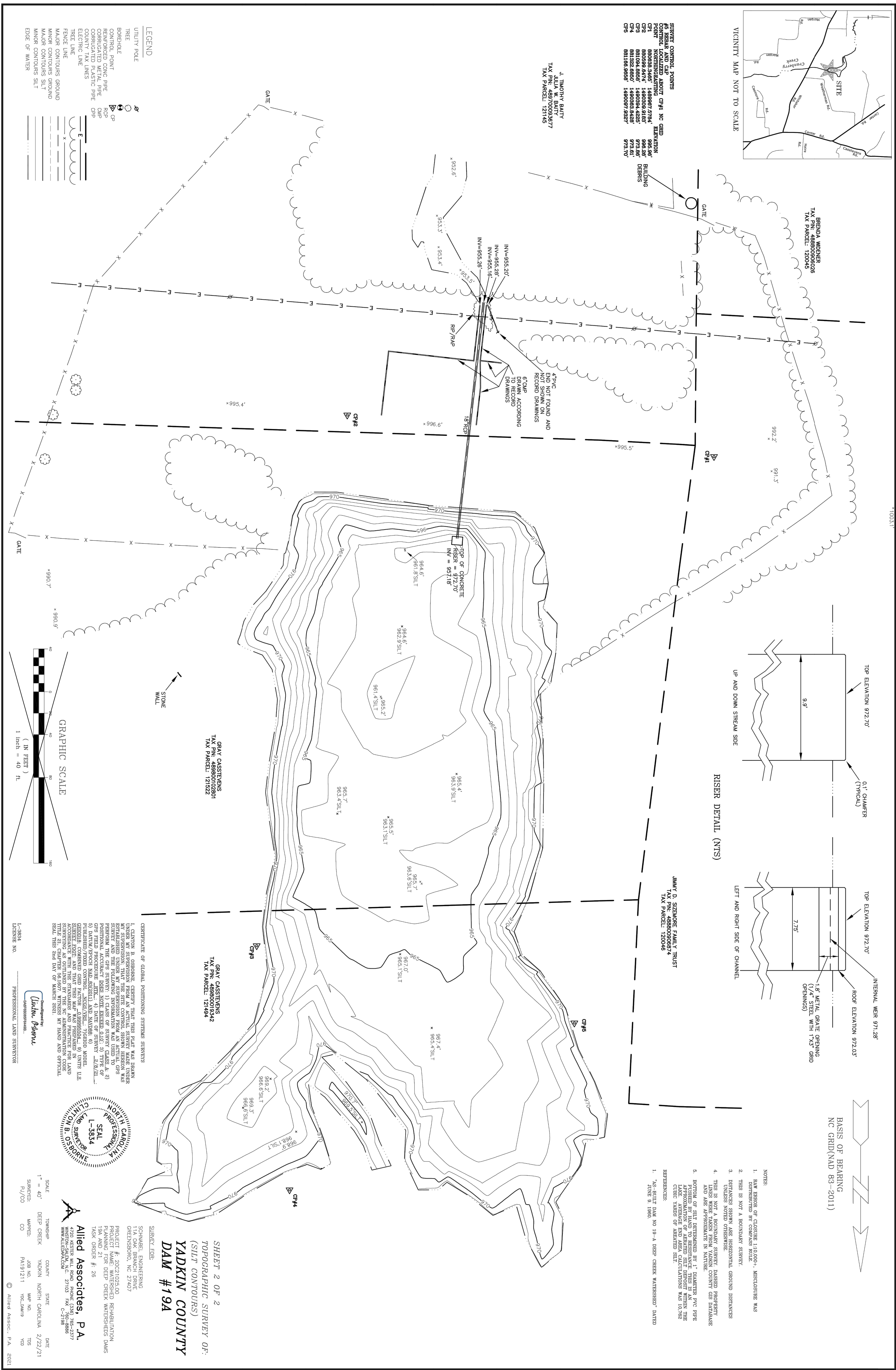
SECTION C-C

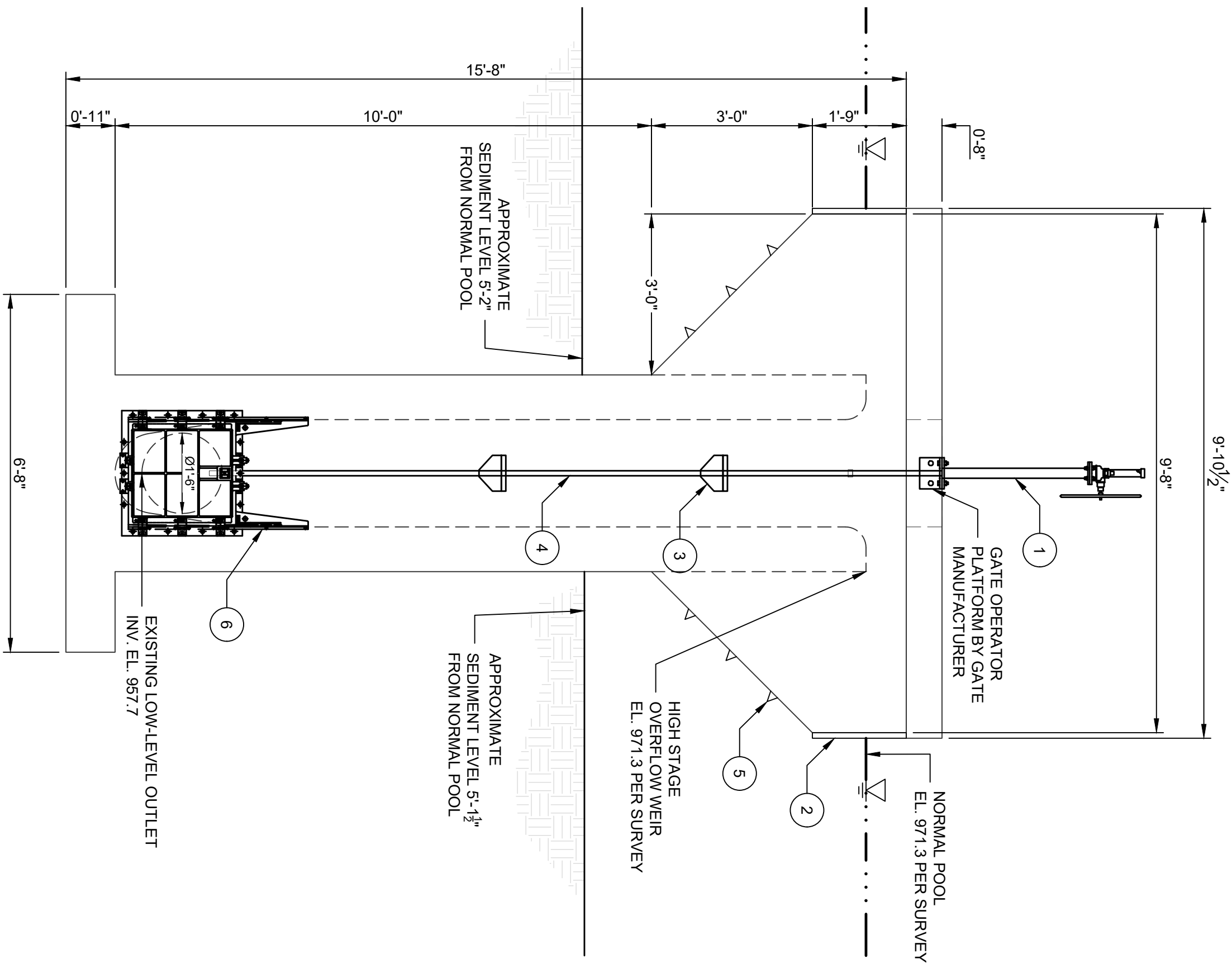


DETAILS OF METAL STRAP

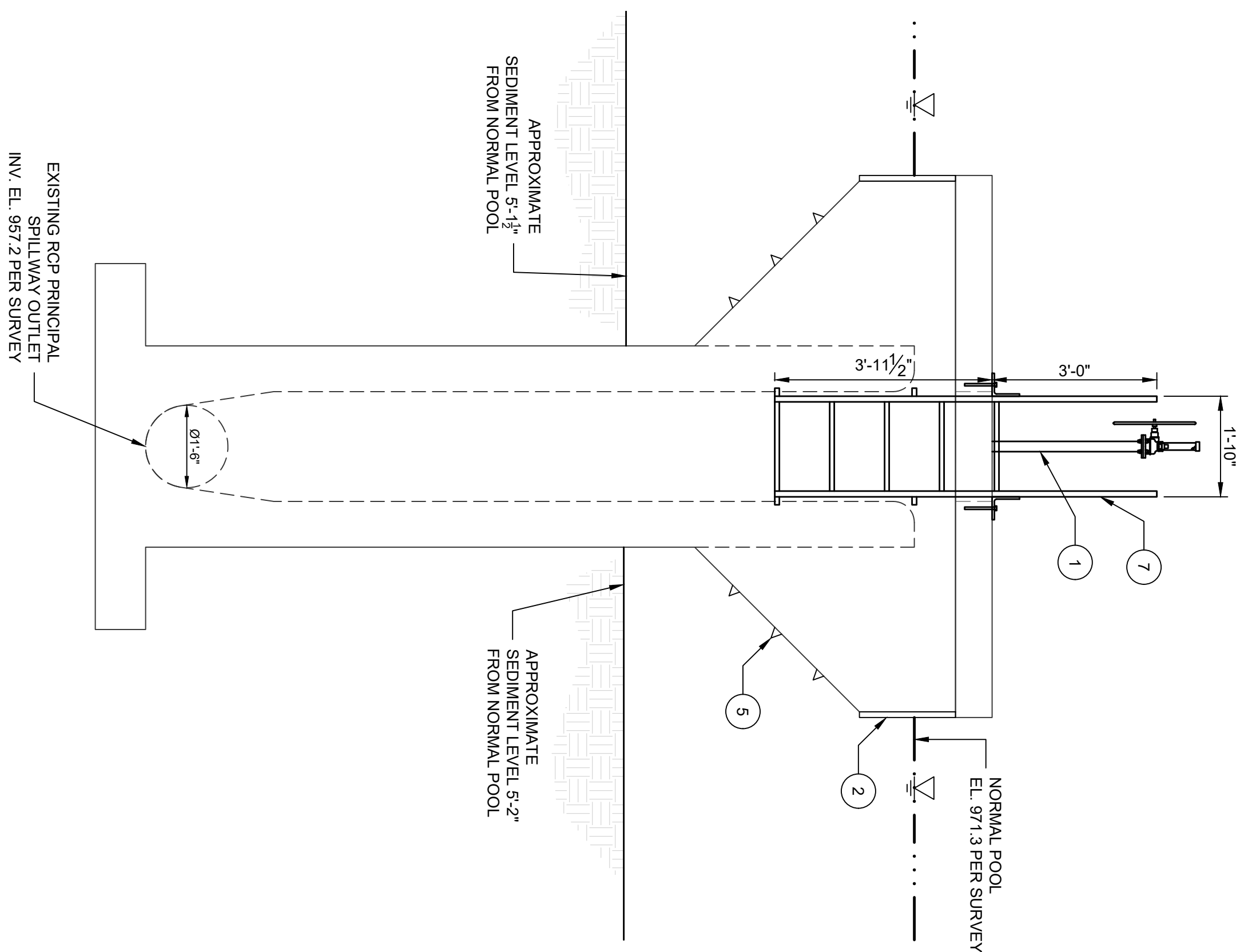
4-REQUIRED



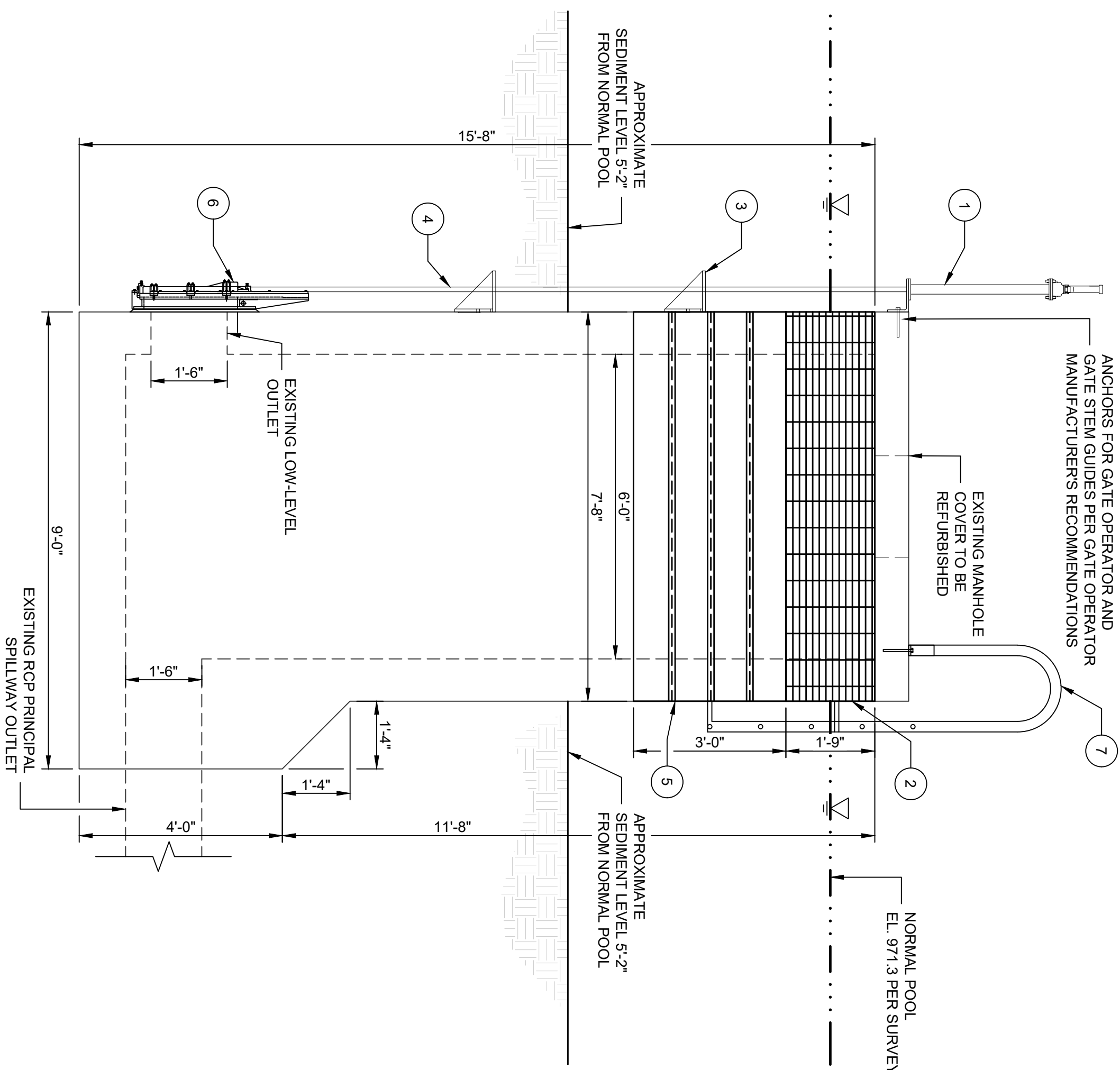




1 PROPOSED REPAIRS UPSTREAM WALL



2 PROPOSED REPAIRS DOWNSTREAM WALL



3 PROPOSED REPAIRS SIDE WALL

NOTES:

1. SEE DRAWING C-06 FOR CONSTRUCTION SEQUENCE NOTES.
2. EXISTING LOW-LEVEL OUTLET GATE, STEM, AND STEM GUIDES ARE NOT SHOWN FOR CLARITY.
3. ALL ELEVATIONS REFERENCE THE VERTICAL DATUM NAVD8.
4. REMOVE AND REPLACE LOW-LEVEL GATE SYSTEM, AND HIGH STAGE TRASH RACK AND HIGH STAGE GRATING.
5. REFURBISH EXISTING MANHOLE COVER.

SCHEDULE OF PARTS

KEY NOTE NO.	ITEM DESCRIPTION	MATERIAL
1	OPERATOR / HARDWARE	PER GATE MANUFACTURER SPECIFICATIONS
2	HIGH STAGE GRATING	ASTM A36 GALVANIZED STEEL
3	STEM GUIDE	STAINLESS STEEL
4	STEM	STAINLESS STEEL
5	HIGH STAGE TRASH RACK	ASTM A36 GALVANIZED STEEL
6	SLIDE GATE	CAST IRON
7	LADDER / HARDWARE	ASTM A36 GALVANIZED STEEL

LEGEND



RISER MAINTENANCE REPAIRS
DEEP CREEK WATERSHED, DAM NO. 19A
YADKIN COUNTY, NORTH CAROLINA

OVERALL
PROPOSED REPAIR



LICENSE NUMBER C-2599

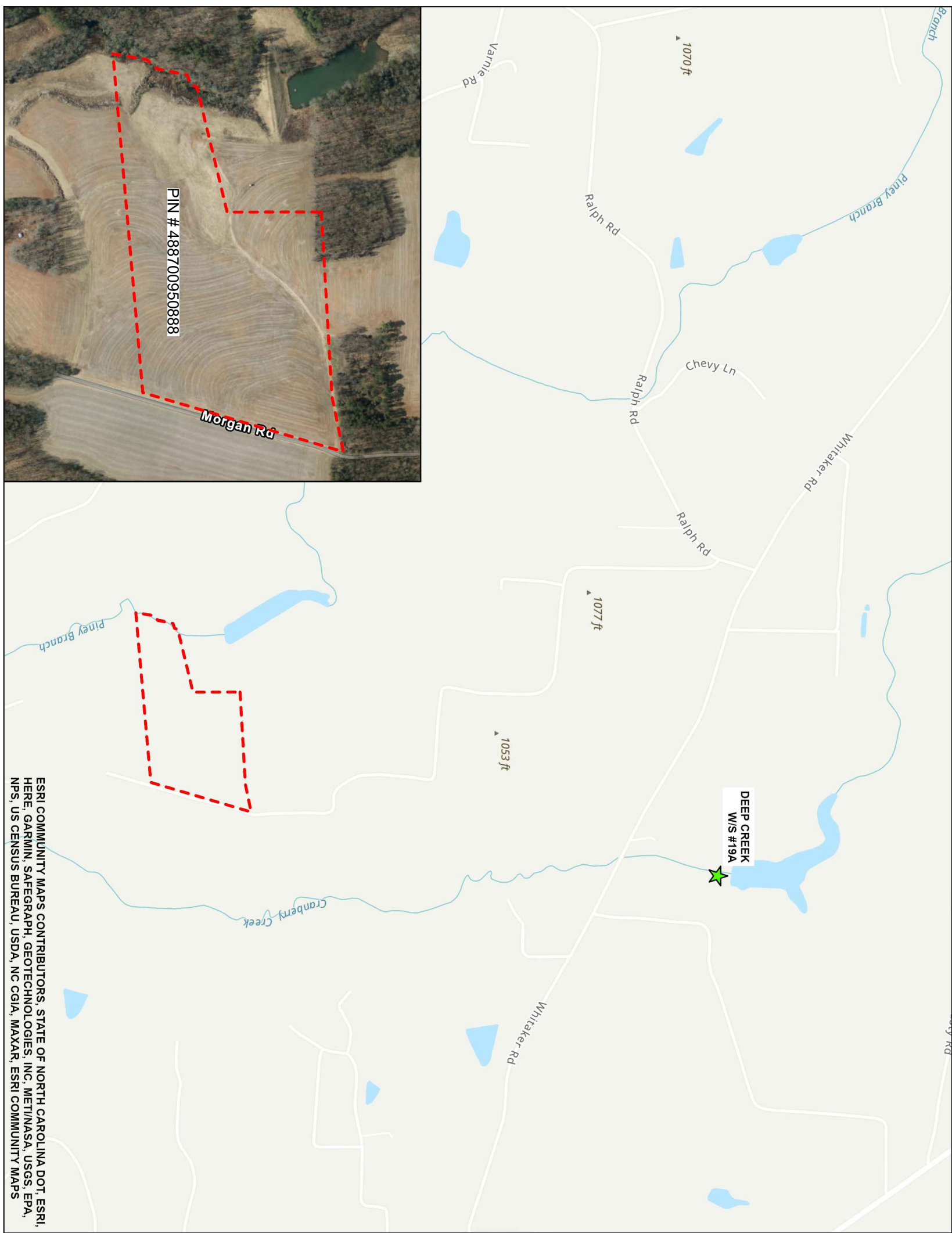
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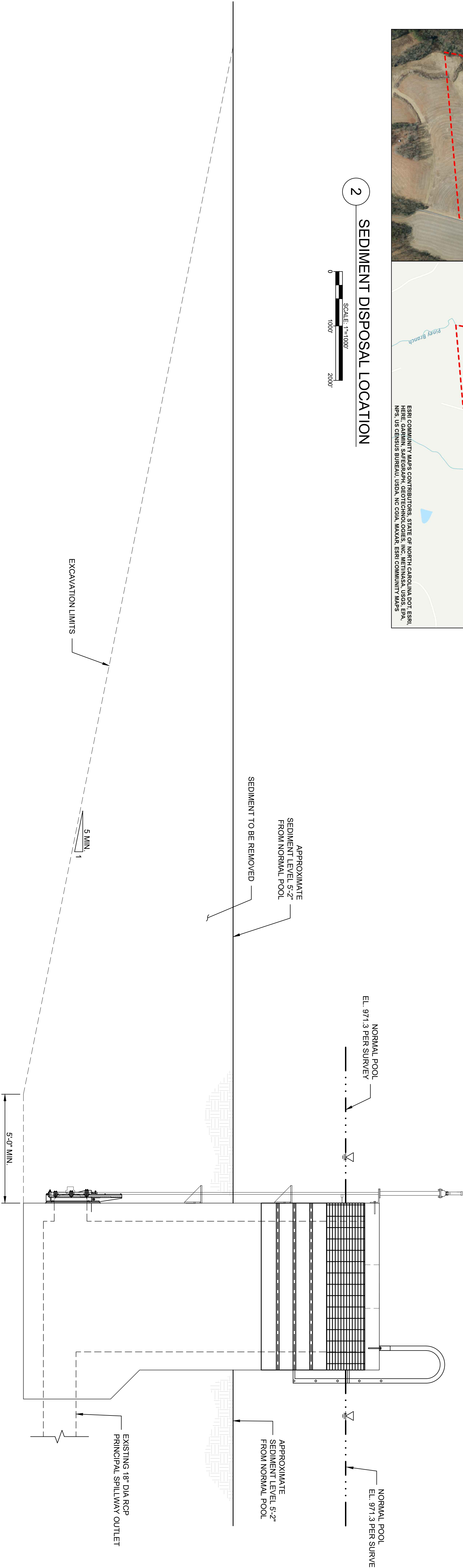
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SHEET
08 OF 10

PROJECT: 22210042.000
DATE: JANUARY 2023
DRAWING NO.
C-05



2 SEDIMENT DISPOSAL LOCATION



1 SEDIMENT REMOVAL SECTION AT CONCRETE RISER

N.T.S.

SEDIMENT REMOVAL NOTES:

1. CONTRACTOR SHALL EXCAVATE SEDIMENT TO THE EXTENT NECESSARY TO PERFORM THE WORK. THE EXCAVATED AREA SHALL HAVE A MINIMUM WIDTH OF 5 FEET UPSTREAM AND 10 FEET TO THE LEFT AND RIGHT OF THE RISER. CARE SHOULD BE TAKEN WHEN EXCAVATING NEAR THE RISER AND THE PRINCIPAL SPILLWAY RCP.
2. THE SLOPE OF THE SEDIMENT SHALL BE MAINTAINED AT A SLOPE NO STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL (5H:1V). ROCK RIPRAP SHALL BE USED AS NEEDED TO MAINTAIN A STABLE SLOPE DURING CONSTRUCTION.
3. EXCAVATED SEDIMENT SHALL BE SPREAD AND SEEDED AT DISPOSAL LOCATION SHOWN ABOVE.
4. CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO RELOCATION OF SEDIMENT.
5. SEE TECHNICAL SPECIFICATIONS FOR MORE DETAILS.



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SEDIMENT REMOVAL
PLAN AND SECTIONS



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SHEET 10 OF 10