

**REVISIONS**

NO.	DATE

**PLAN INFORMATION**

PROJECT NO.	AWH-20000
FILENAME	AWH20000-CD-PKG-02-D1
CHECKED BY	.
DRAWN BY	.
SCALE	N.T.S.
DATE	05. 08. 2023

**SHEET**

**SANITARY SEWER DETAILS**  
**C8.07**

**CONCURRENT REVIEW APPROVAL**

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations.

PUBLIC UTILITIES Timothy Beasley





McADAMS

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CLIENT

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RALEIGH, NORTH CAROLINA 27609  
PHONE: 919. 422. 7663  
CONTACT: BOB MISHLER



THE POINT  
PHASES 3, 4, 5, 7 AND 10  
CONSTRUCTION DRAWINGS - PACKAGE 2  
EAST YOUNG STREET  
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
WAKE COUNTY, NORTH CAROLINA

CD 20-08



5-4-2023

REVISIONS

NO. DATE

PLAN INFORMATION

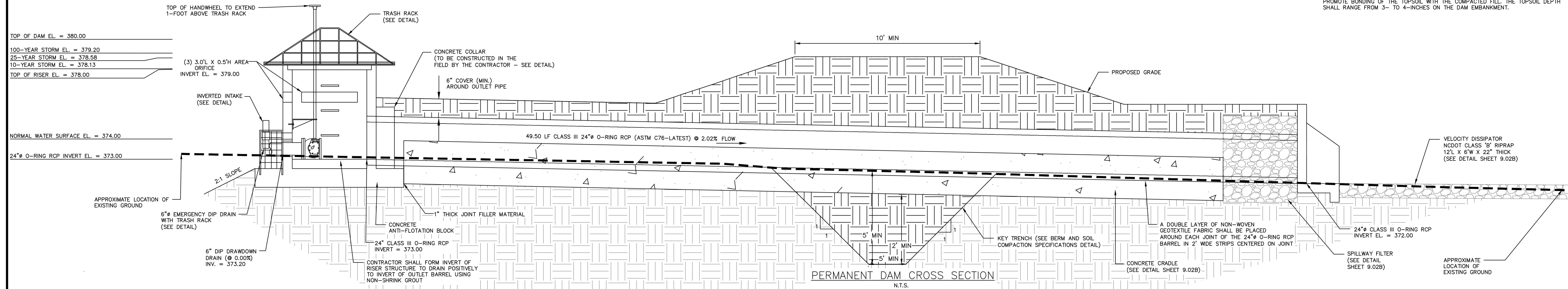
PROJECT NO. AWH-20000  
FILENAME AWH20000 - SCM B  
CHECKED BY DCW  
DRAWN BY JKD  
SCALE AS NOTED  
DATE 05.08.2023

SHEET

STORMWATER CONTROL  
MEASURE 'B' DETAILS

C9.01B

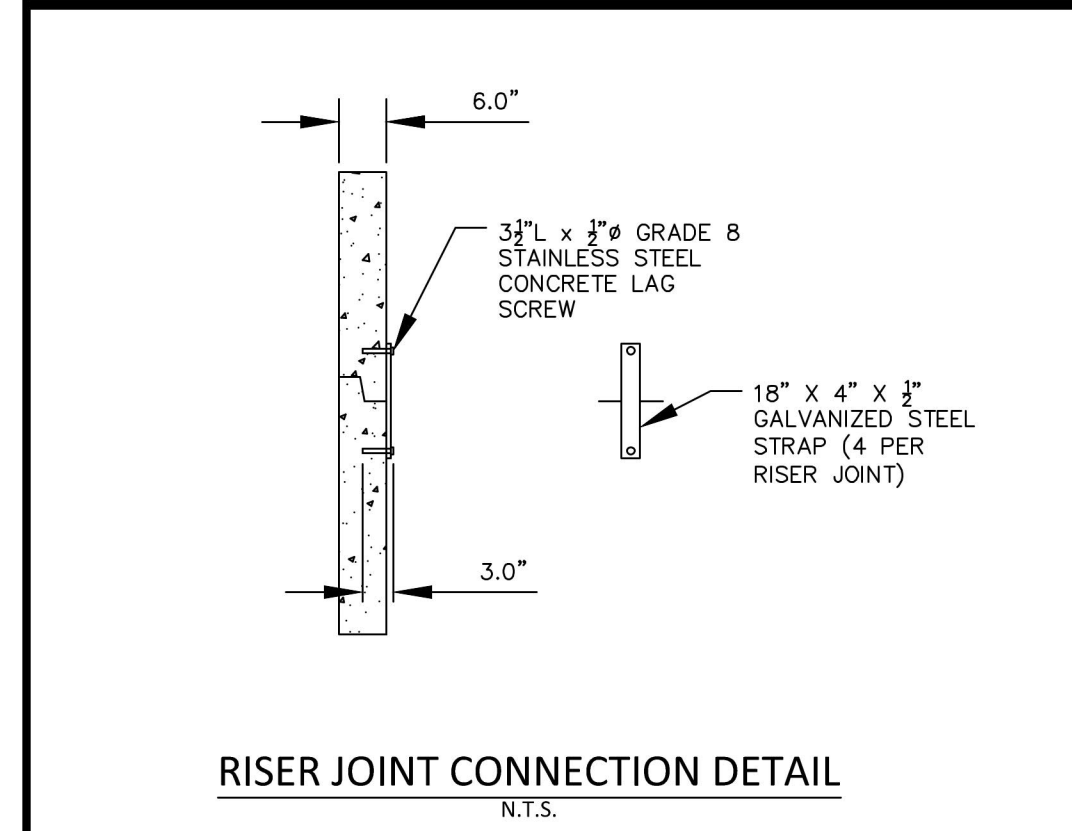
NOTE:  
REMOVED TOPSOIL SHALL BE STOCKPILED FOR USE IN PLANTING (SEEDING) THE DAM  
EMBANKMENT ONCE FINAL GRADES (AS SHOWN ON THE GRADING PLAN) HAVE BEEN  
ESTABLISHED WITH COMPACTED FILL PRIOR TO TOPSOIL INSTALLATION. THE  
CONTRACTOR SHALL SCARIFY THE TOP 2- TO 3-INCHES OF THE BERM SECTION TO  
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SHALL RANGE FROM 3- TO 4-INCHES ON THE DAM EMBANKMENT.



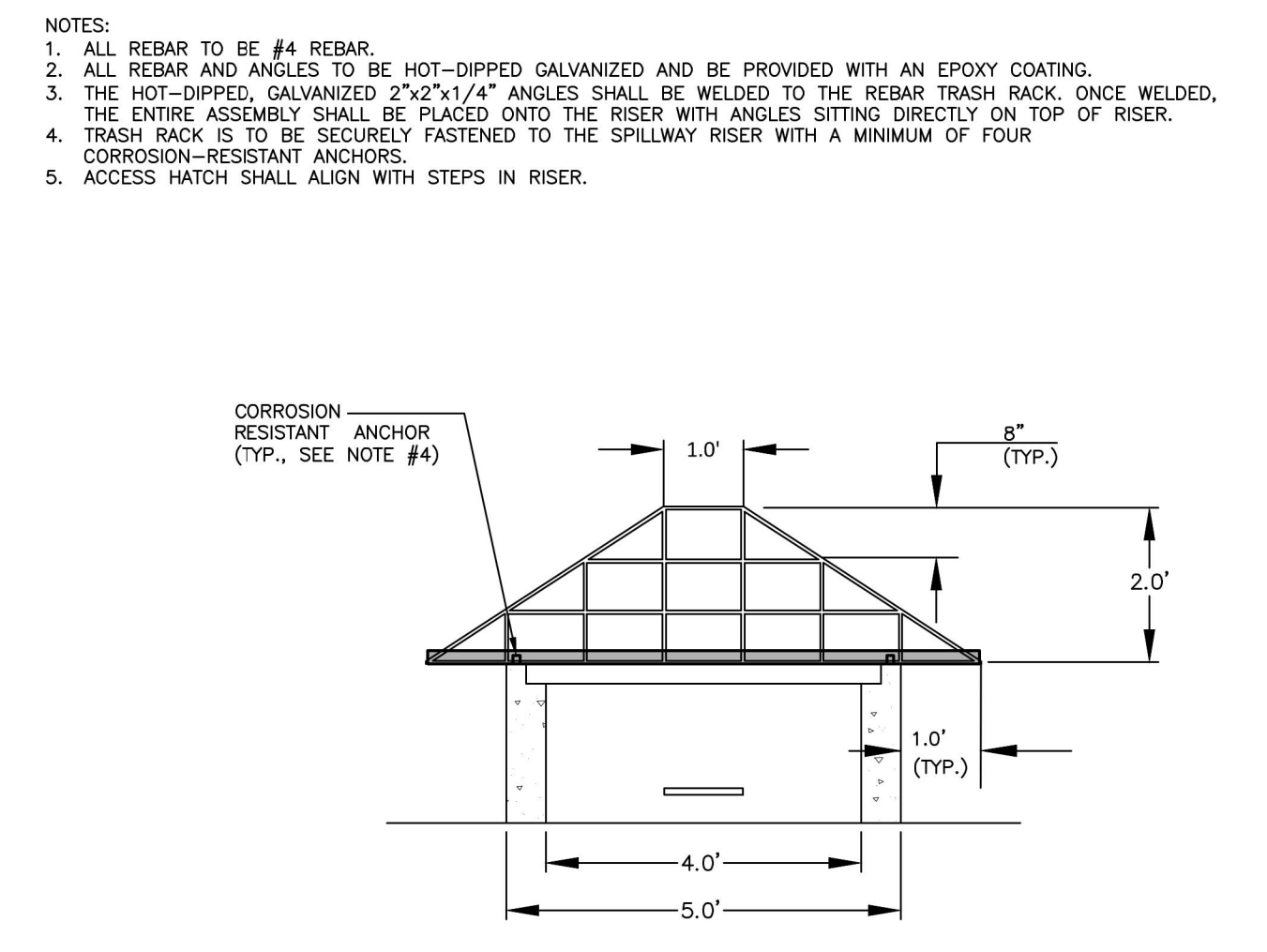
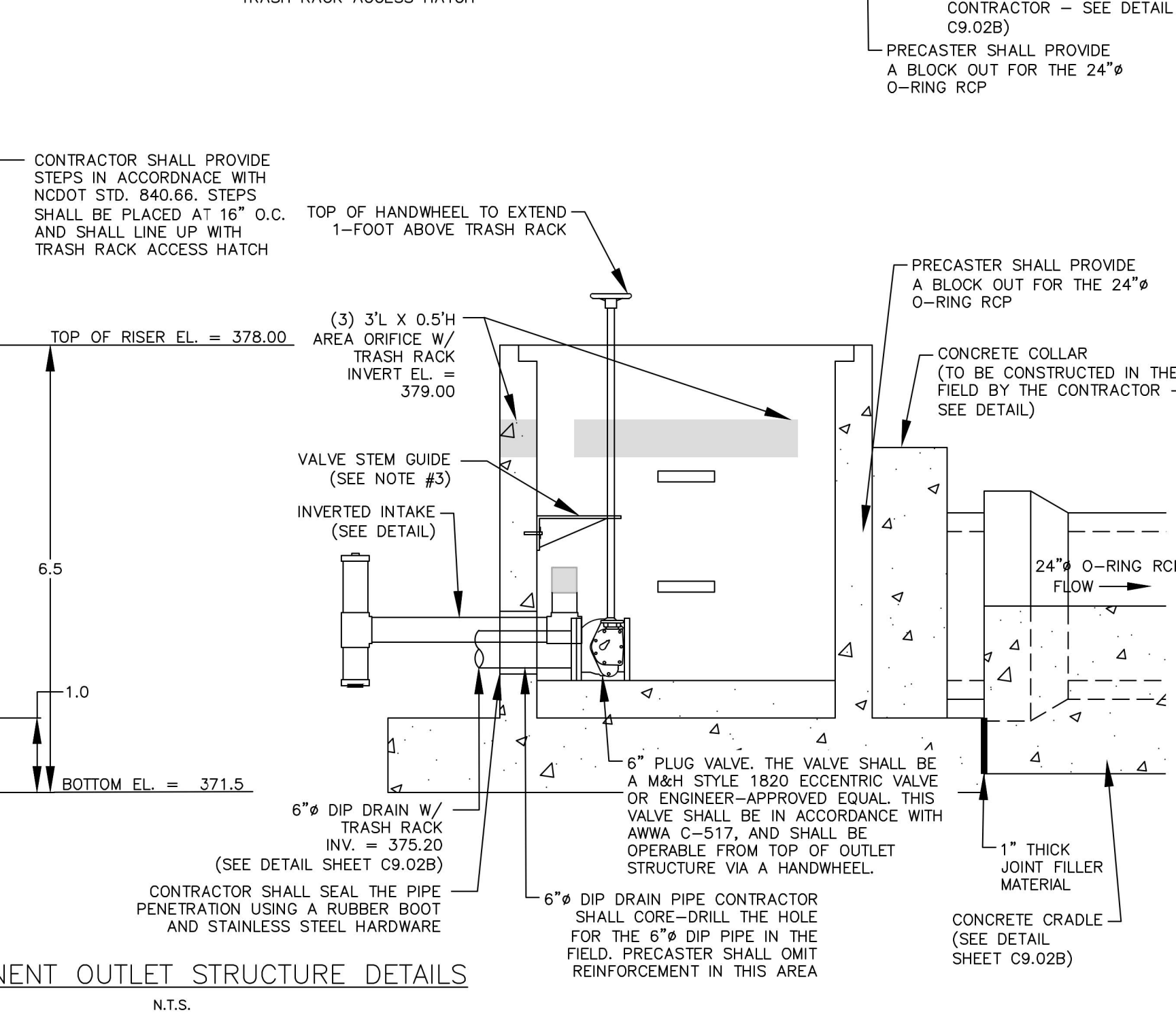
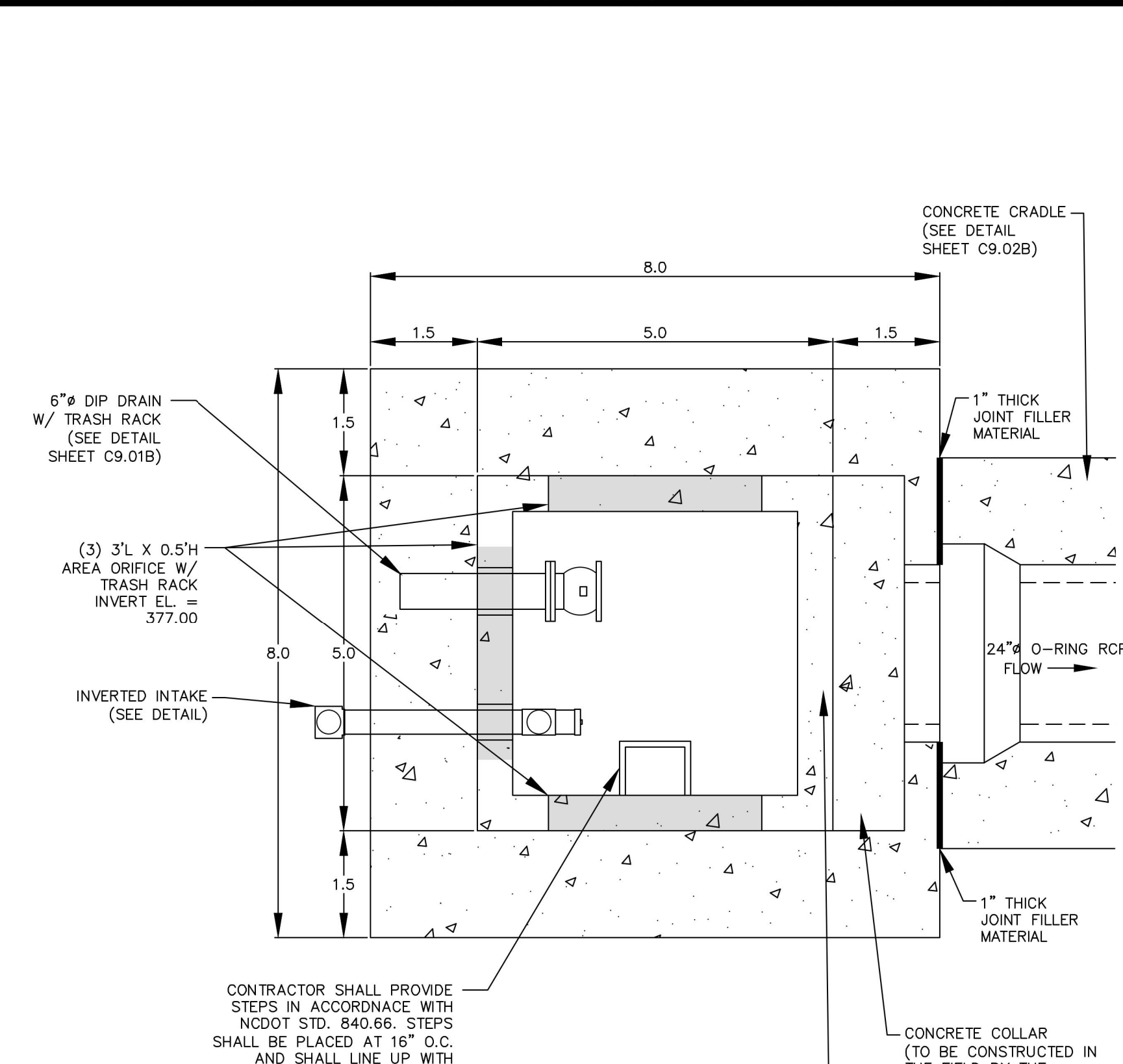
TOP OF DAM EL. = 380.00  
100-YEAR STORM EL. = 379.20  
25-YEAR STORM EL. = 378.98  
10-YEAR STORM EL. = 378.13  
TOP OF RISER EL. = 378.00

NORMAL WATER SURFACE EL. = 374.00  
24" O-RING RCP INVERT EL. = 373.00

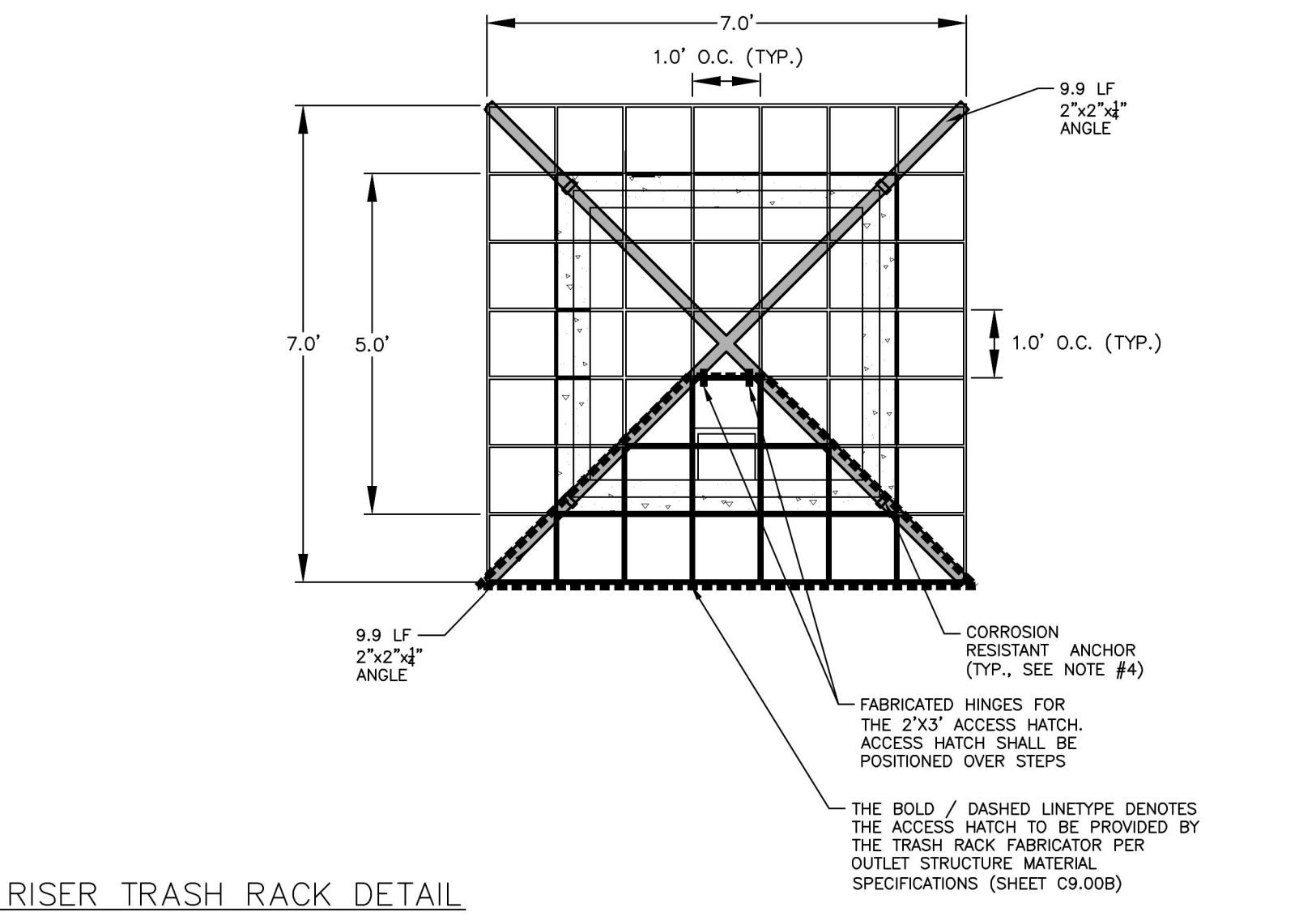
APPROXIMATE LOCATION OF  
EXISTING GROUND  
6" EMERGENCY DIP DRAIN  
WITH TRASH RACK  
(SEE DETAIL)  
6" DIP DRAWDOWN  
DRAIN (Ø 0.00%)  
INV. = 373.20



NOTES:  
1. CONCRETE ANTI-FLOTATION BLOCK TO BE PROVIDED WITH MINIMUM TEMPERATURE AND SHRINKAGE STEEL REINFORCEMENT.  
2. TRASH RACKS NOT SHOWN FOR CLARITY.  
3. THE NUMBER OF GUIDES FOR THE VALVE STEM SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE VALVE STEM MUST BE OPERABLE FROM THE TOP OF THE RISER VIA THE HANDWHEEL WITH AN INSIGNIFICANT AMOUNT OF PLAY IN THE VALVE STEM.  
4. CONTRACTOR SHALL PROVIDE A JOINT IN THE OUTLET BARREL NO MORE THAN 5-FT FROM THE RISER.



NOTES:  
1. ALL REBAR TO BE #4 REBAR.  
2. ALL REBAR AND ANGLES TO BE HOT-DIPPED GALVANIZED AND BE PROVIDED WITH AN EPOXY COATING.  
3. THE HOT-DIPPED, GALVANIZED 2"x2"x1/4" ANGLES SHALL BE WELDED TO THE REBAR TRASH RACK. ONCE WELDED, THE ENTIRE ASSEMBLY SHALL BE PLACED ONTO THE RISER WITH ANGLES SITTING DIRECTLY ON TOP OF RISER.  
4. TRASH RACK IS TO BE SECURELY FASTENED TO THE SPILLWAY RISER WITH A MINIMUM OF FOUR CORROSION-RESISTANT ANCHORS.  
5. ACCESS HATCH SHALL ALIGN WITH STEPS IN RISER.



AS:\Projects\AWH\AWH-20000\04-Production\Water Resources\South Side\Current Drawings\SCM B\CD\2023.3.18\23 PM\_Tommy Dabbitt

FINAL DRAWING - RELEASED FOR CONSTRUCTION





STORMWATER CONTROL MEASURE 'G' CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

- 1. PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY.
2. THE FINAL CERTIFICATION FOR THIS FACILITY WILL INCLUDE A CERTIFICATION BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE PROJECT WAS CONSTRUCTED PER THE APPROVED PLANS.
3. ALL CONSTRUCTION ACTIVITY RELATED TO THE PROPOSED STORMWATER CONTROL MEASURE SHALL BE PER THE DETAILS AND SPECIFICATIONS SHOWN IN THESE DRAWINGS.
4. DURING THE INITIAL STAGES OF CONSTRUCTION, THE STORMWATER CONTROL MEASURE MAY BE USED AS A SEDIMENT BASIN FOR EROSION CONTROL PURPOSES.

OUTLET STRUCTURE MATERIAL SPECIFICATIONS

- 1. THE 36" RCP OUTLET BARREL SHALL BE CLASS III RCP, MODIFIED BELLS AND SPIGOT, MEETING THE REQUIREMENTS OF ASTM C76-LATEST.
2. THE STRUCTURAL DESIGN FOR THE 5' X 5' (INTERNAL DIMENSIONS) RISER BOX WITH EXTENDED BASE SHALL BE BY OTHERS.
3. THE RISER BOX OUTLET STRUCTURE SHALL BE PROVIDED WITH STEPS 16" ON CENTER. STEPS SHALL BE PROVIDED ON THE INNER WALL OF THE RISER BOX.
4. THE CONCRETE ANTI-FLOTATION BLOCK SHALL BE CAST-IN-PLACE. STEEL REINFORCEMENT AND CONNECTION TO THE RISER SHALL BE PROVIDED IN ACCORDANCE WITH THE DETAIL ON SHEET C9.02G.

- 5. THE RISER BOX JOINTS SHALL BE SEALED USING BUTYL RUBBER SEALANT CONFORMING TO ASTM C990-LATEST.
6. PRIOR TO ORDERING, THE CONTRACTOR SHALL SUBMIT TRASH RACK SHOP DRAWINGS TO THE ENGINEER FOR REVIEW.
7. ALL POURED CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE NOTED:

-MINIMUM 3000 PSI (28 DAY)
-SLUMP = 3" - 5"
-ENTRAINED AIR = 5% - 7%

PLEASE NOTE NO CONCRETE SHALL BE POURED WHEN THE AMBIENT AIR TEMPERATURES ARE EXPECTED TO BE ABOVE 85°F OR BELOW 40°F. CAST-IN-PLACE CONCRETE SHALL BE "WET CURED" AFTER FINISHING FOR A MINIMUM OF 48 HOURS.

- ON-SITE GEOTECHNICAL ENGINEER TO ENSURE AND CERTIFY ALL POURED CONCRETE MEETS THE ABOVE SPECIFICATIONS.
8. GEOTEXTILE FABRIC FOR THE 36" RCP OUTLET BARREL JOINTS SHALL BE MIRAFI 180N OR ENGINEER APPROVED EQUAL (NON-WOVEN FABRIC).
9. STORMWATER CONTROL MEASURE EMERGENCY DRAW DOWN IS VIA AN 6" PLUG VALVE. THE VALVE SHALL BE A MBH STYLE 1820 ECCENTRIC VALVE OR APPROVED EQUAL.

CONSTRUCTION SEQUENCE

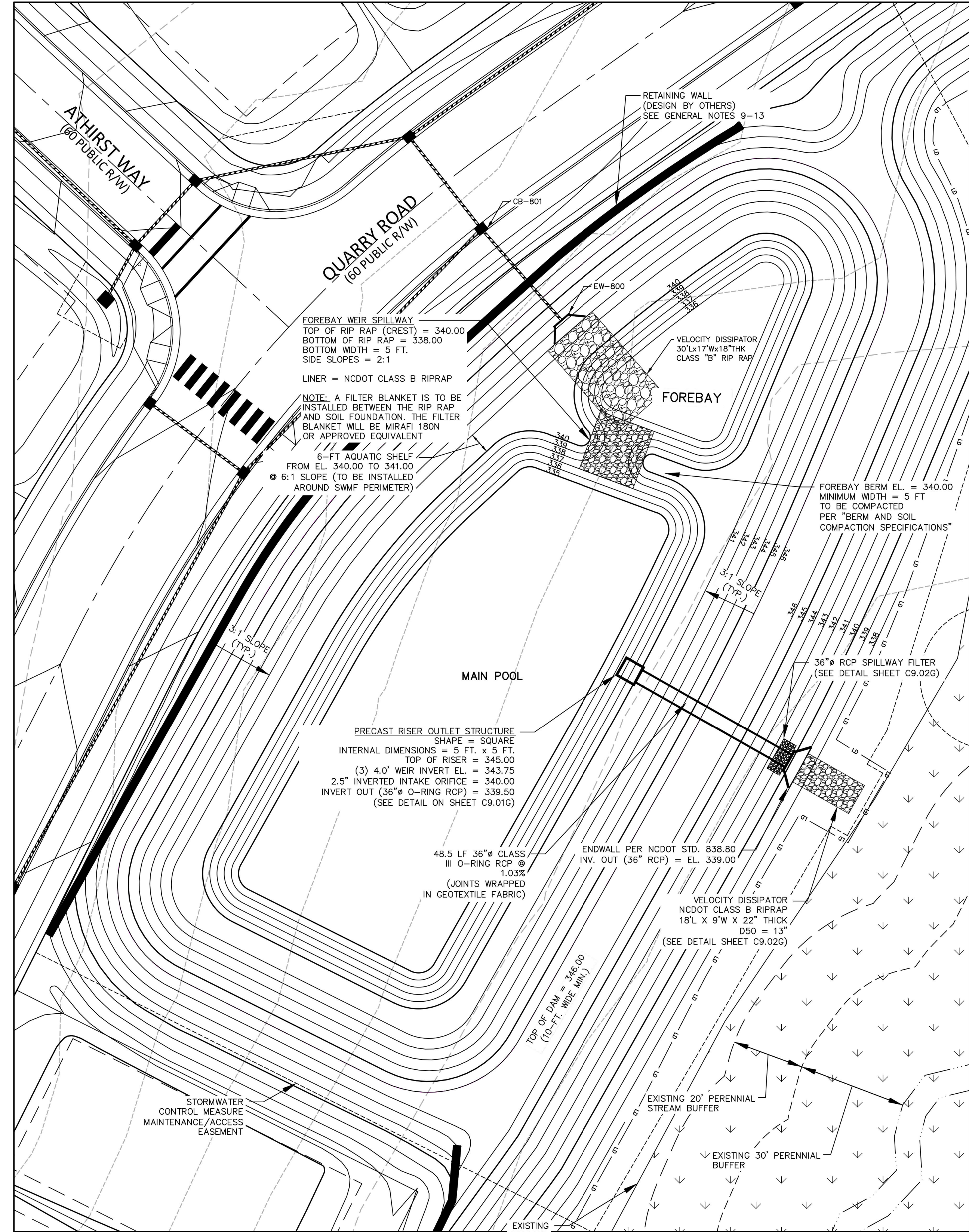
- 1. PRIOR TO CONSTRUCTION, THE OWNER SHALL OBTAIN A LAND DISTURBING (GRADING) PERMIT AND AN "APPROVAL TO CONSTRUCT" FROM THE TOWN OF ROLESVILLE AND ALL OTHER NECESSARY PERMITS FROM APPLICABLE AGENCIES (E.G. 404 / 401 PERMITS)
2. INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PER THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
3. CLEAR AND GRUB AREA WITHIN THE LIMITS OF THE PROPOSED DAM CONSTRUCTION. ALL TREES AND THEIR ENTIRE ROOT SYSTEMS MUST BE REMOVED FROM THE DAM FOOTPRINT AREA.
4. EXCAVATE FOR THE NEW KEY TRENCH ALONG THE CENTERLINE OF THE PROPOSED DAM EMBANKMENT.
5. BEGIN PLACEMENT OF BACKFILL WITHIN THE KEY TRENCH. THE KEY TRENCH SHALL BE COMPACTED TO THE SPECIFICATIONS LISTED ITEM 4 OF THE SECTION TITLED "BERM AND SOIL COMPACTION SPECIFICATIONS".
6. PRIOR TO INSTALLATION, SUBGRADE CONDITIONS ALONG THE SPILLWAY PIPES SHOULD BE EVALUATED BY THE ON-SITE GEOTECHNICAL ENGINEER TO ASSESS WHETHER SUITABLE BEARING CONDITIONS EXIST AT THE SUBGRADE LEVEL.

BERM AND SOIL COMPACTION SPECIFICATIONS

- 1. PRIOR TO CONSTRUCTION, THE ON-SITE GEOTECHNICAL ENGINEER SHALL IDENTIFY BORROW / FILL AREAS AND VERIFY THEIR SUITABILITY FOR USE WITHIN THE DAM EMBANKMENT.
2. ALL FILL MATERIALS TO BE USED FOR THE DAM EMBANKMENT SHALL BE TAKEN FROM BORROW AREAS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER.
3. FILL PLACEMENT FOR THE EMBANKMENT SHALL NOT EXCEED A MAXIMUM 6" LIFT (UNCOMPACTED).
4. ALL FILL SOILS USED IN THE EMBANKMENT CONSTRUCTION SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698).
5. THE DESIGN ENGINEER SHALL BE PROVIDED WITH REPORTS AND CERTIFICATION, BY THE ON-SITE GEOTECHNICAL ENGINEER, THAT THE GEOTECHNICAL ASPECTS OF THE FACILITY HAVE BEEN CONSTRUCTED PER PLAN.
6. TESTING OF THE NEW FILL MATERIALS SHALL BE PERFORMED TO VERIFY THAT THE RECOMMENDED LEVEL OF COMPACTION IS ACHIEVED DURING CONSTRUCTION.

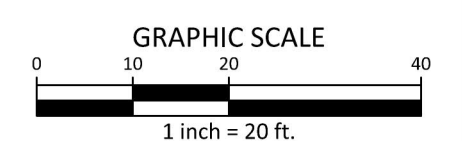
STATEMENT OF RESPONSIBILITY

- 1. ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THE STORMWATER CONTROL MEASURE SHALL BE THE RESPONSIBILITY OF THE OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.



STORMWATER CONTROL MEASURE 'G' PLAN VIEW

1" = 20'



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THE POINT
PHASES 3, 4, 5, 7 AND 10
CONSTRUCTION DRAWINGS - PACKAGE 2
EAST YOUNG STREET
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,
WAKE COUNTY, NORTH CAROLINA

CD 20-08



5-4-2023

REVISIONS

Table with columns: NO., DATE

PLAN INFORMATION

PROJECT NO. AWH-20000
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SCALE 1"=20'
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SHEET

STORMWATER CONTROL MEASURE 'G' PLAN VIEW

C9.00G



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ASHTON WOODS

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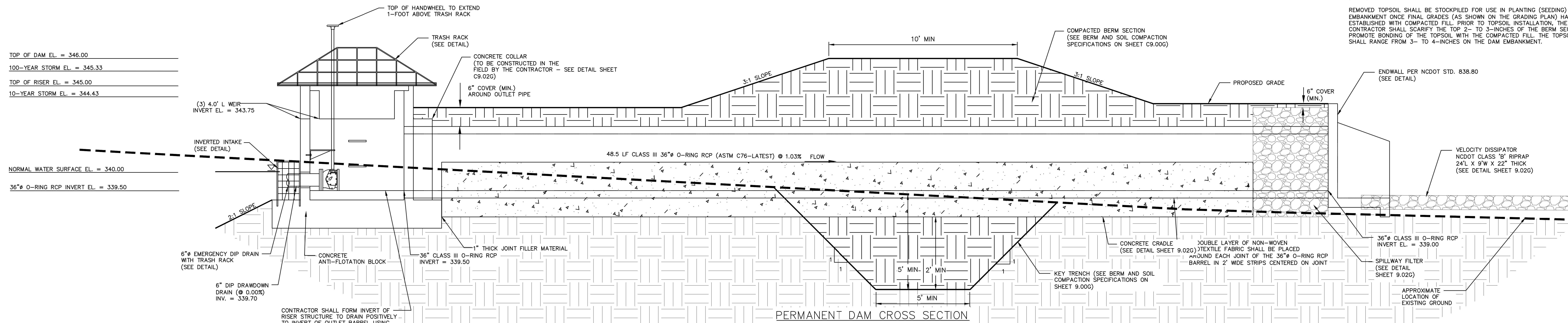
SHEET

STORMWATER CONTROL  
MEASURE 'G' DETAILS

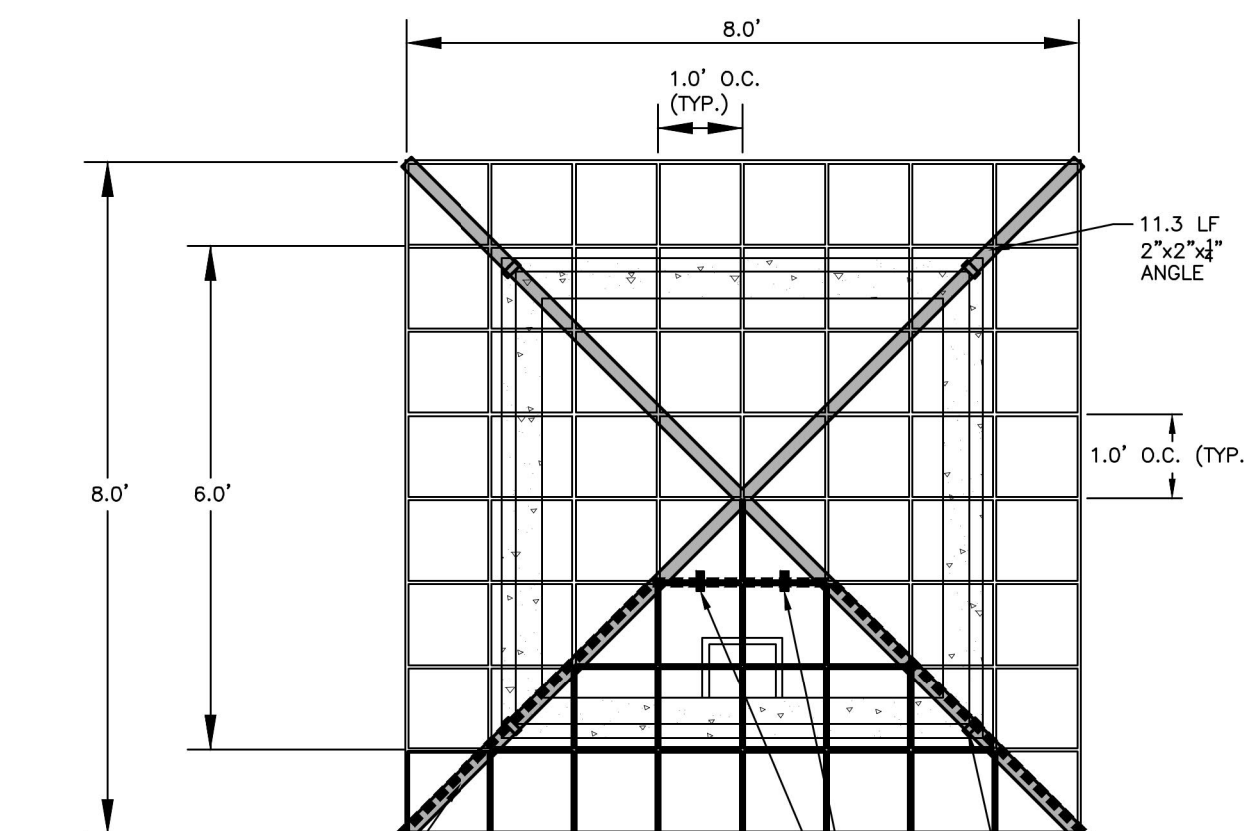
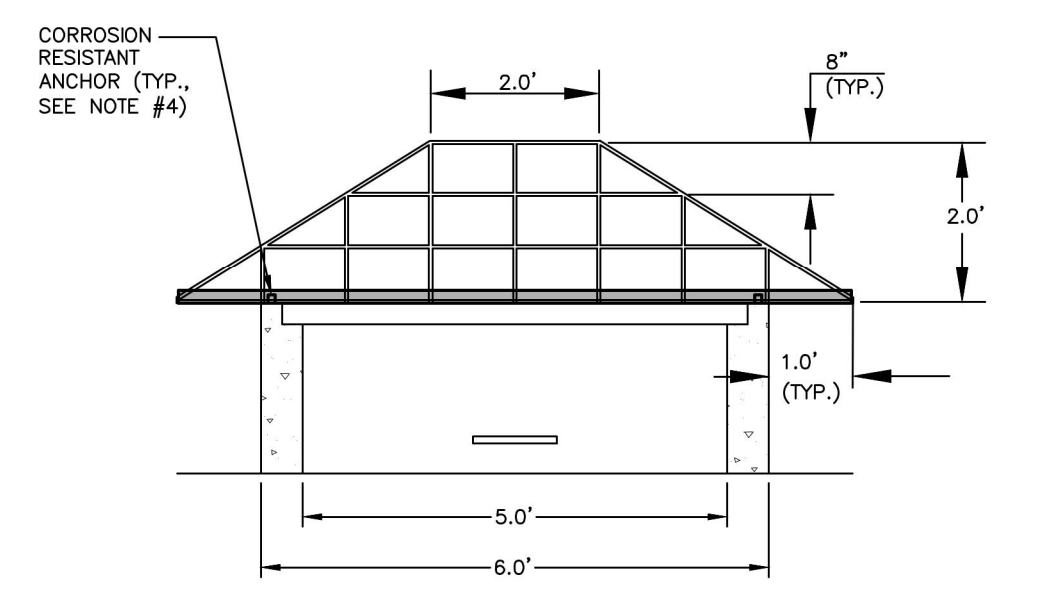
C9.01G

NOTE:

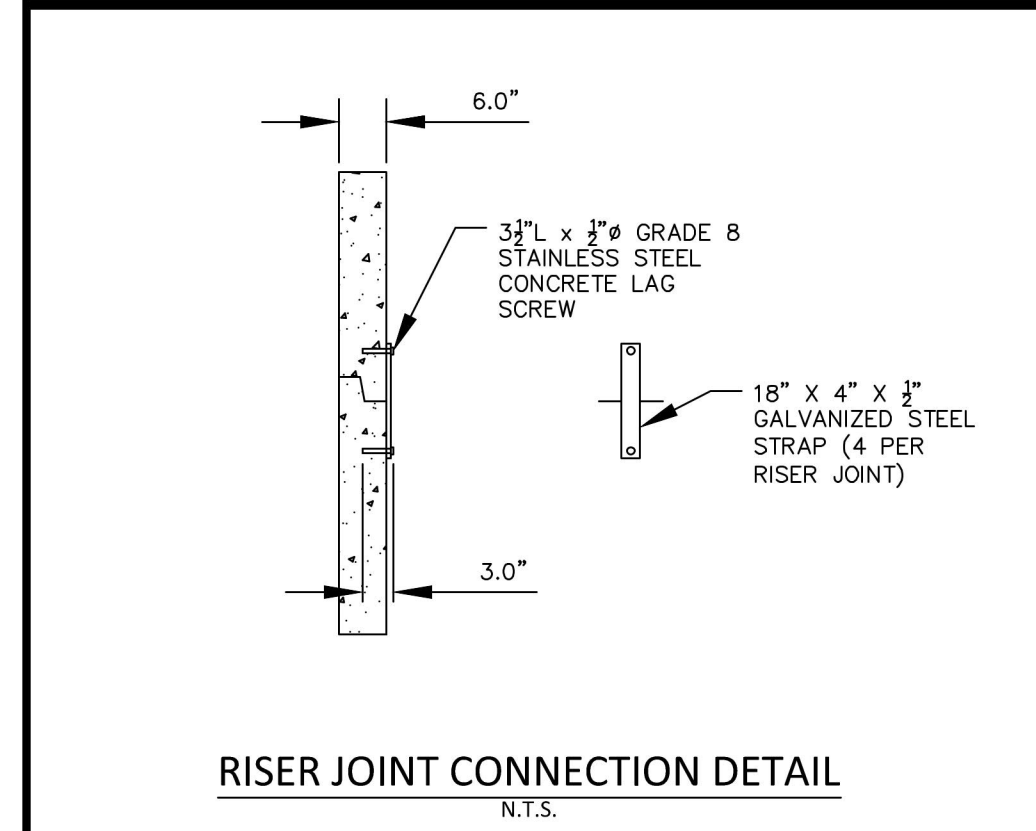
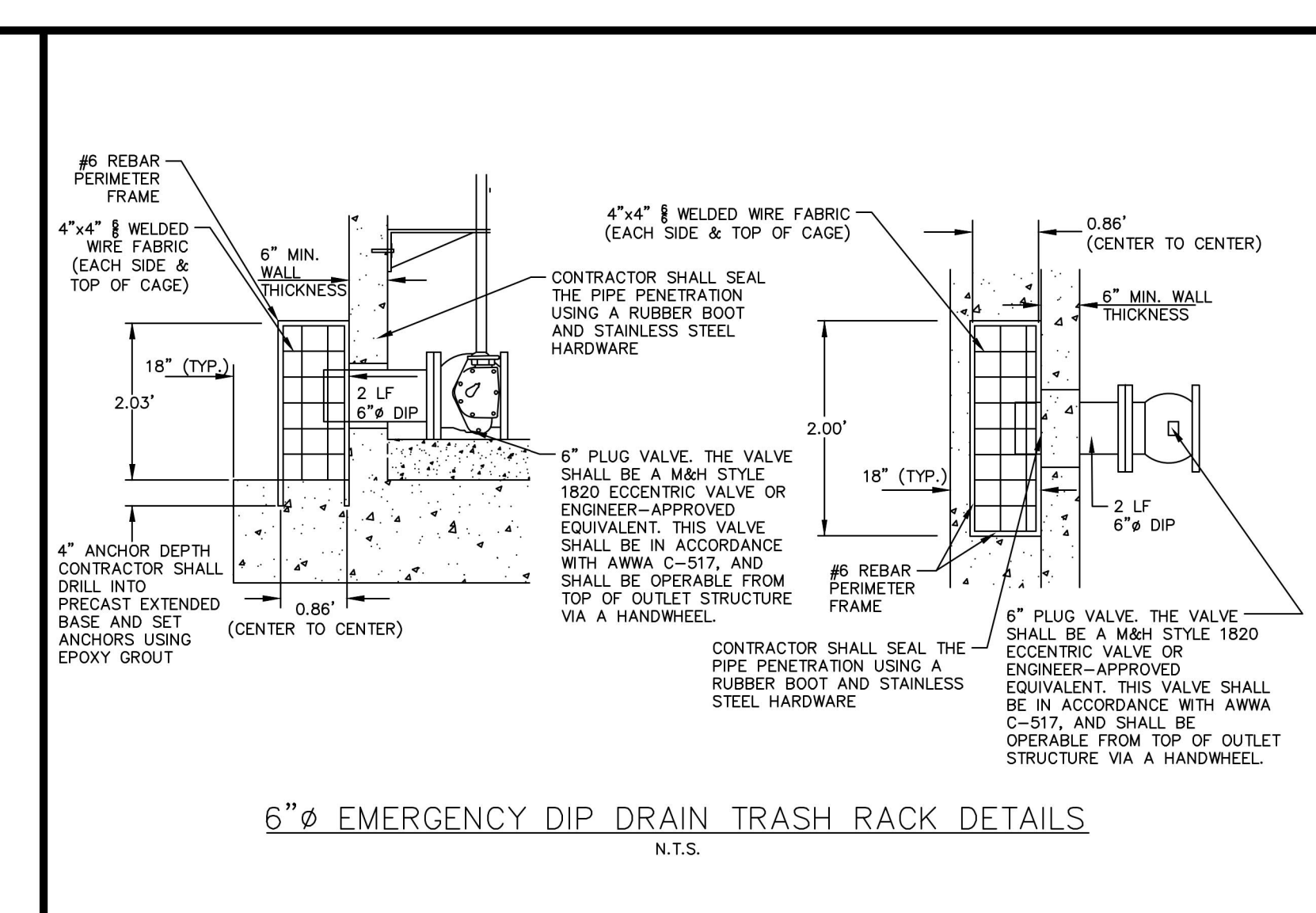
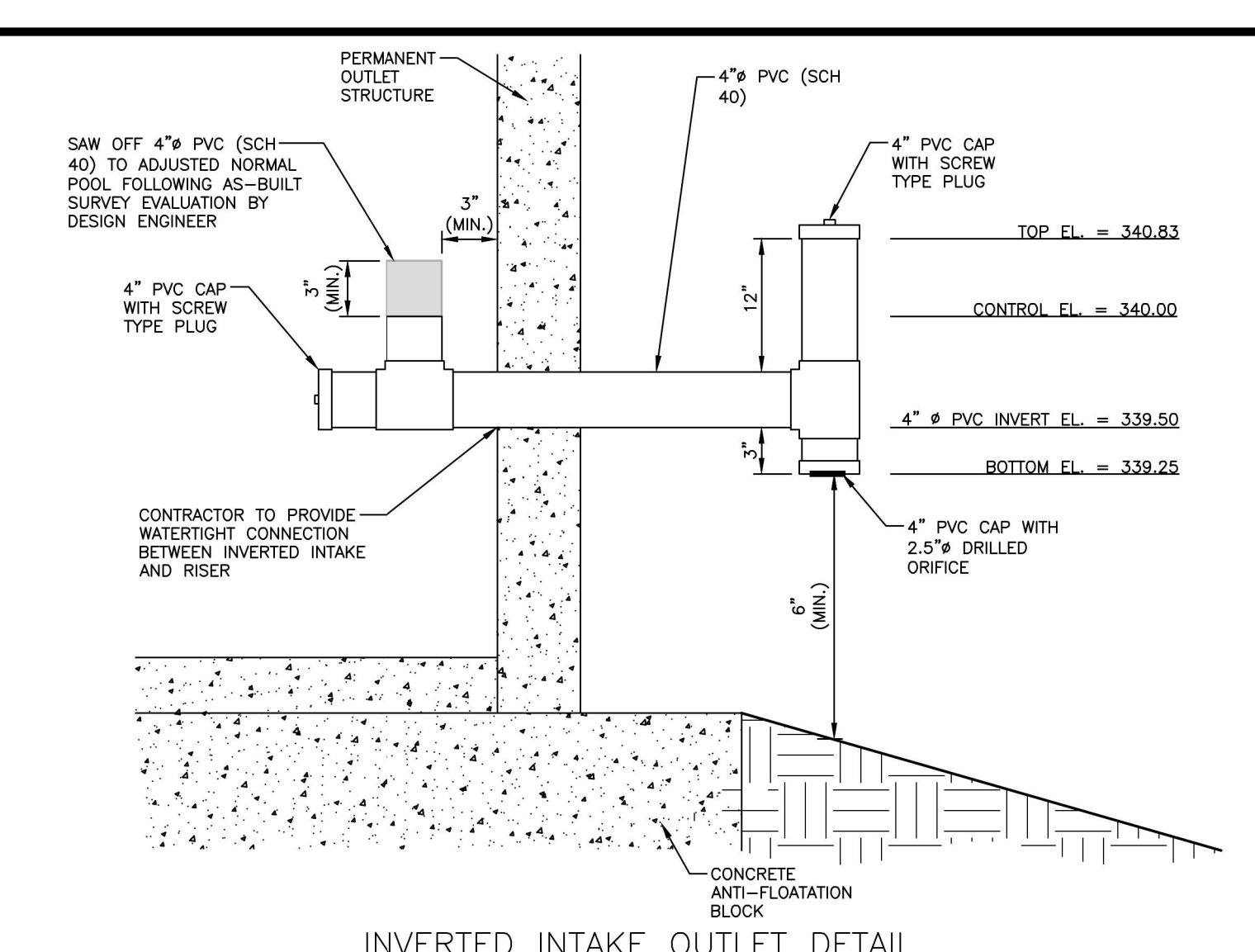
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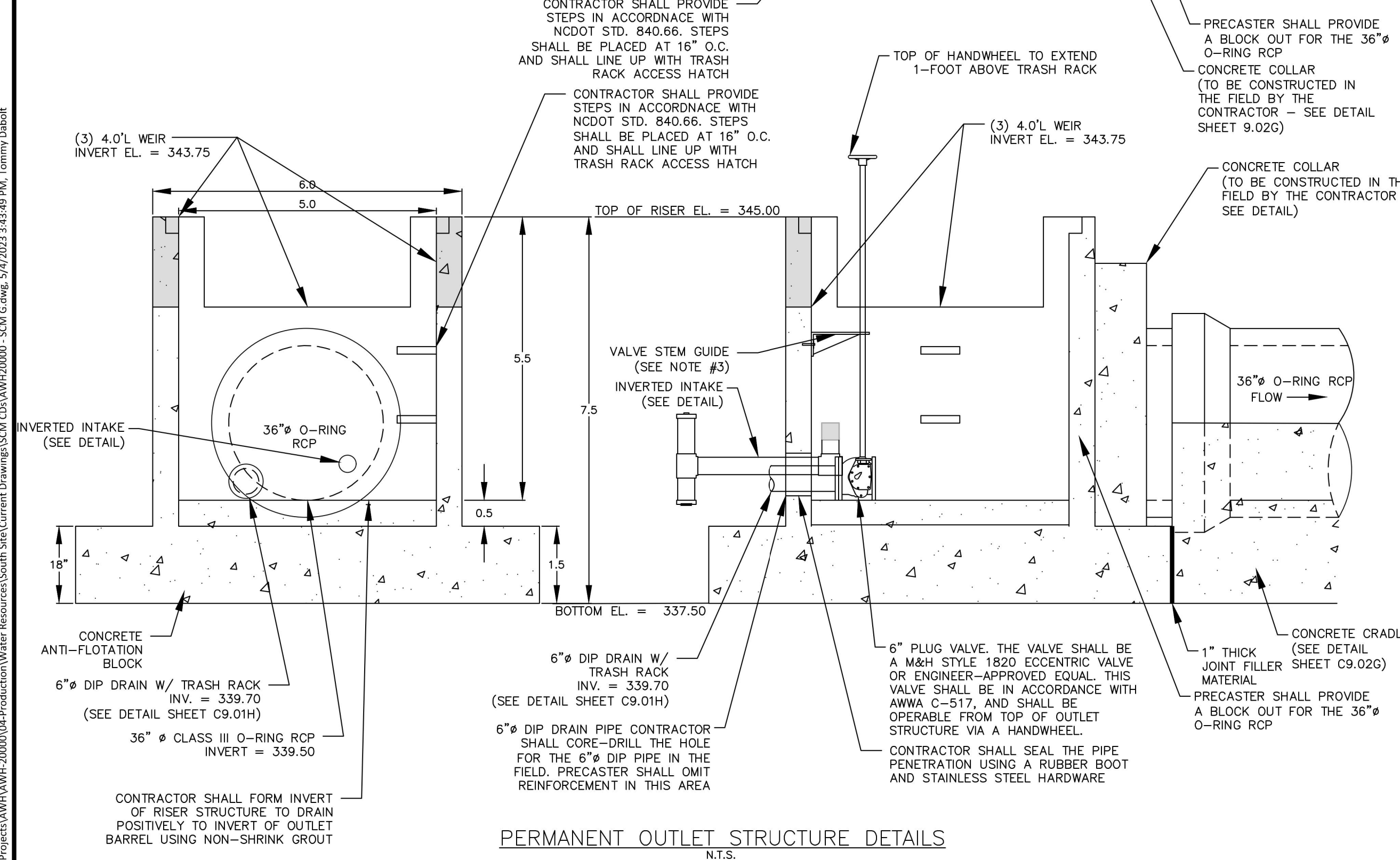
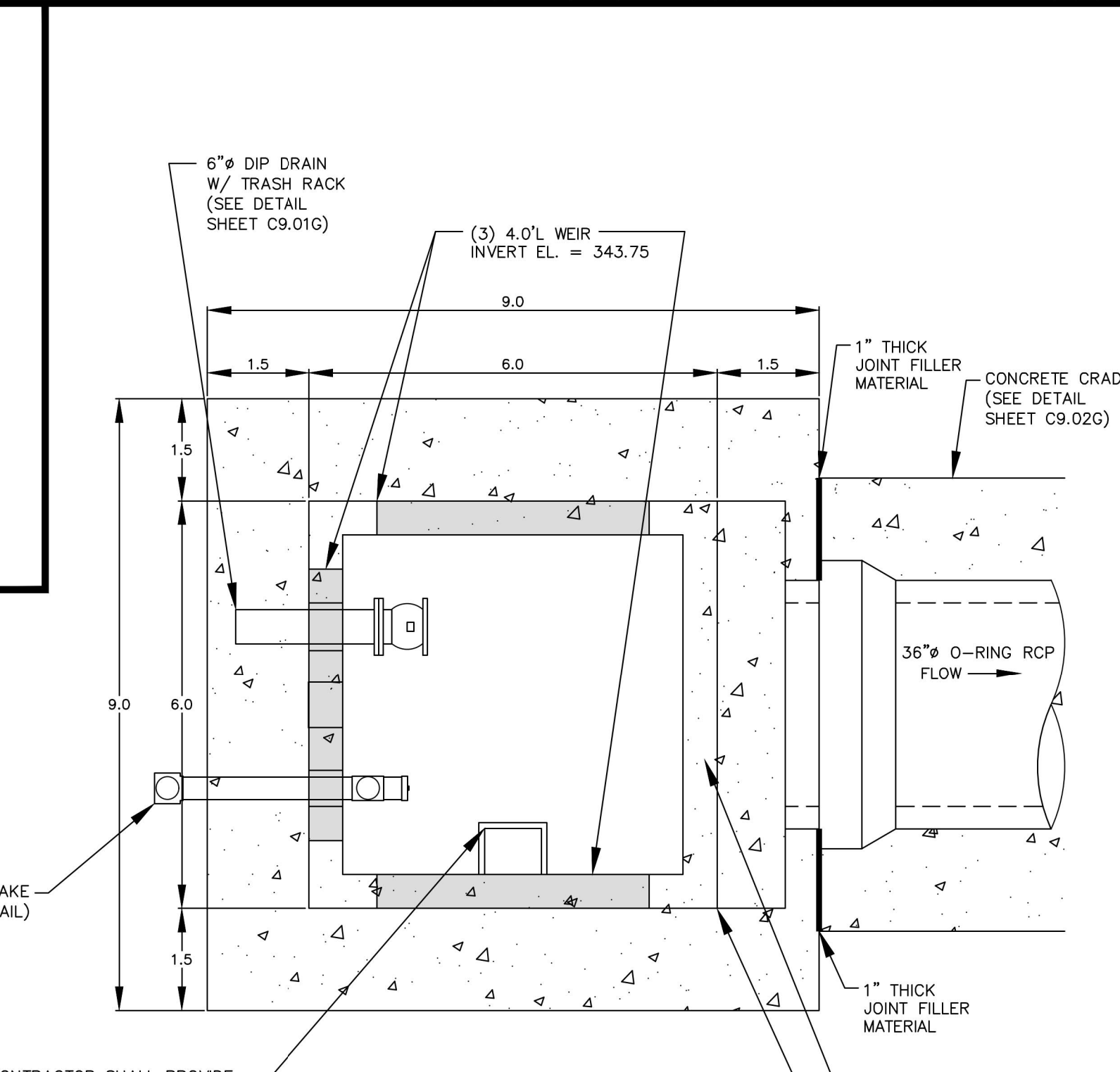
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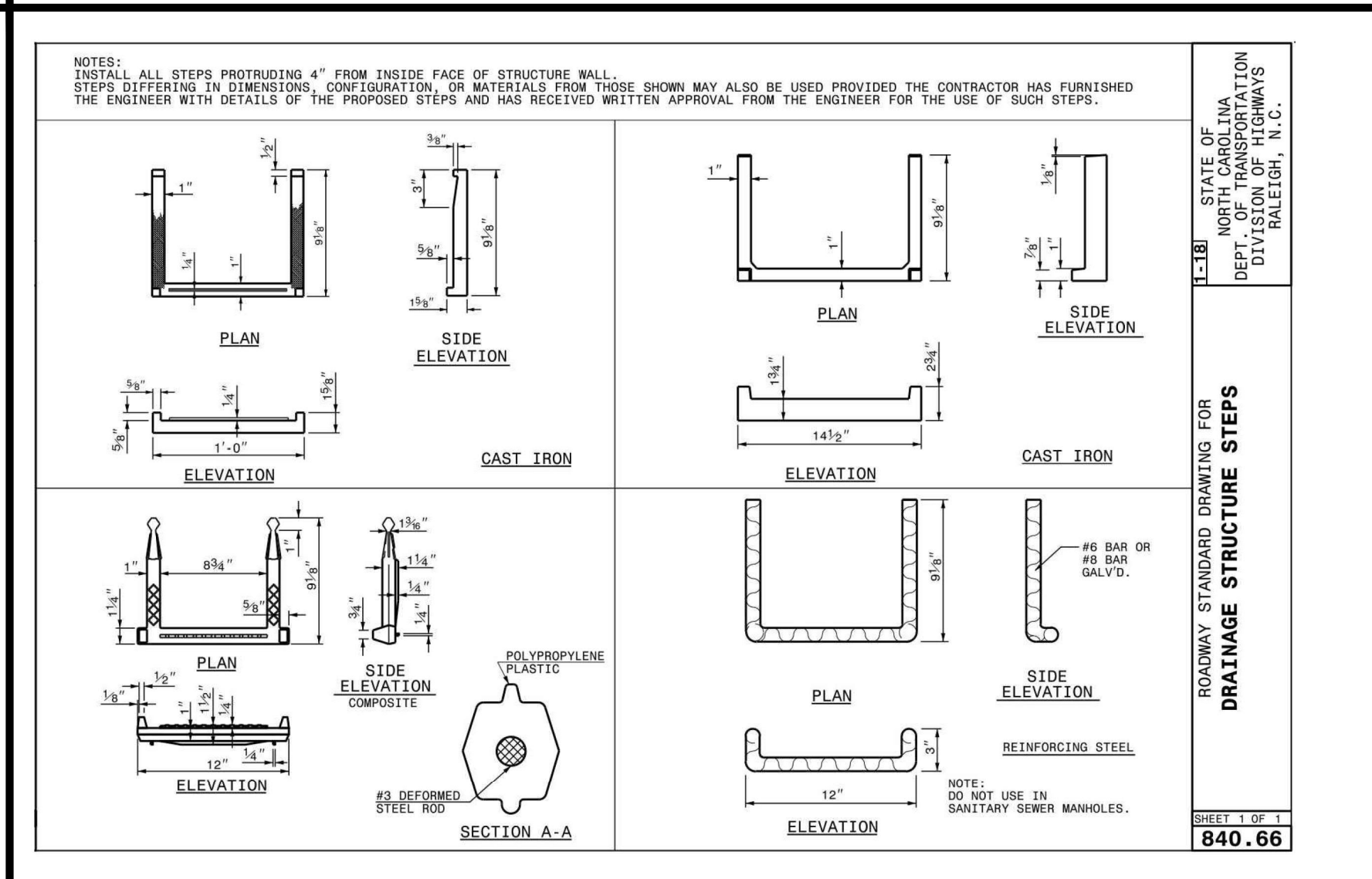
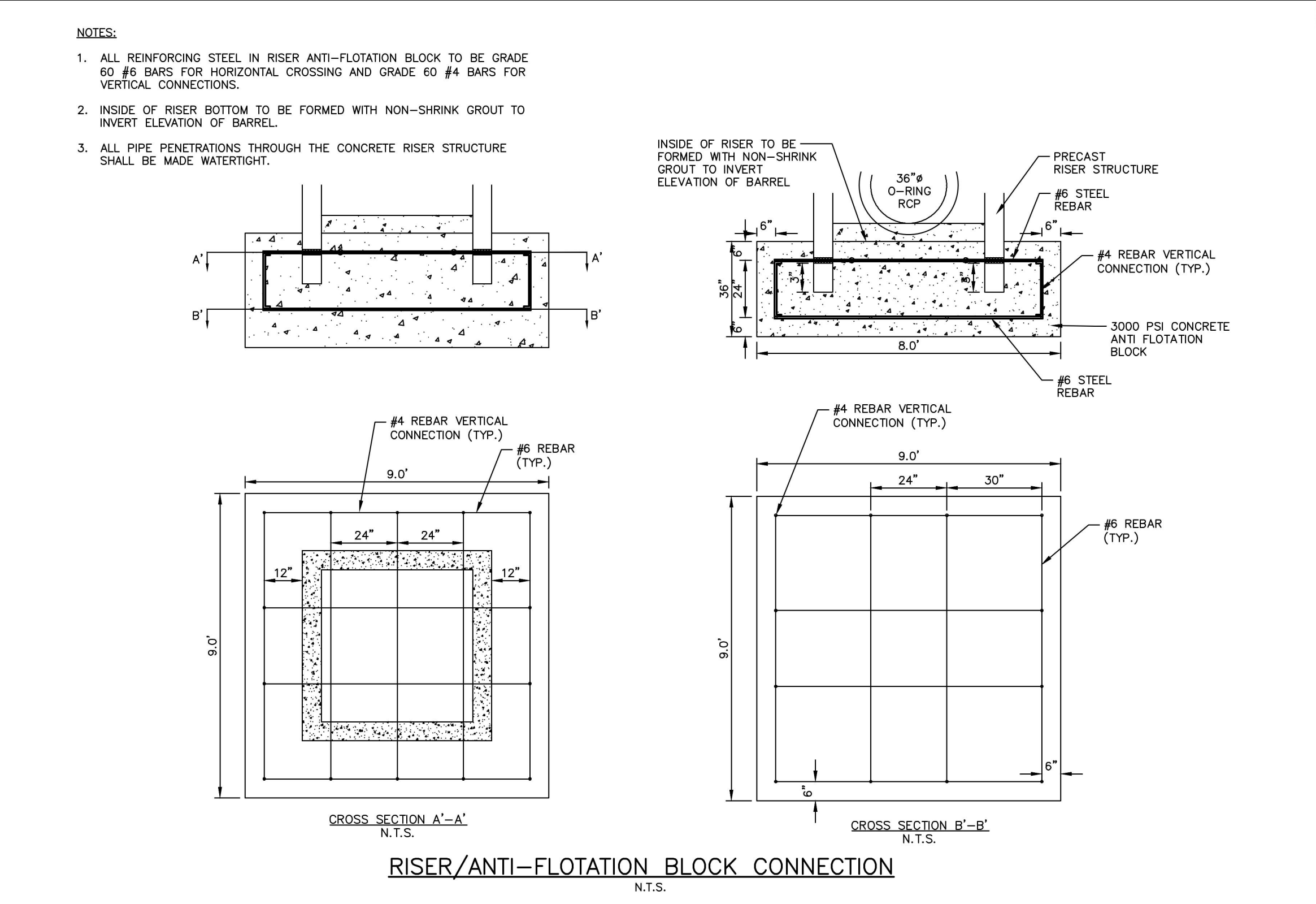
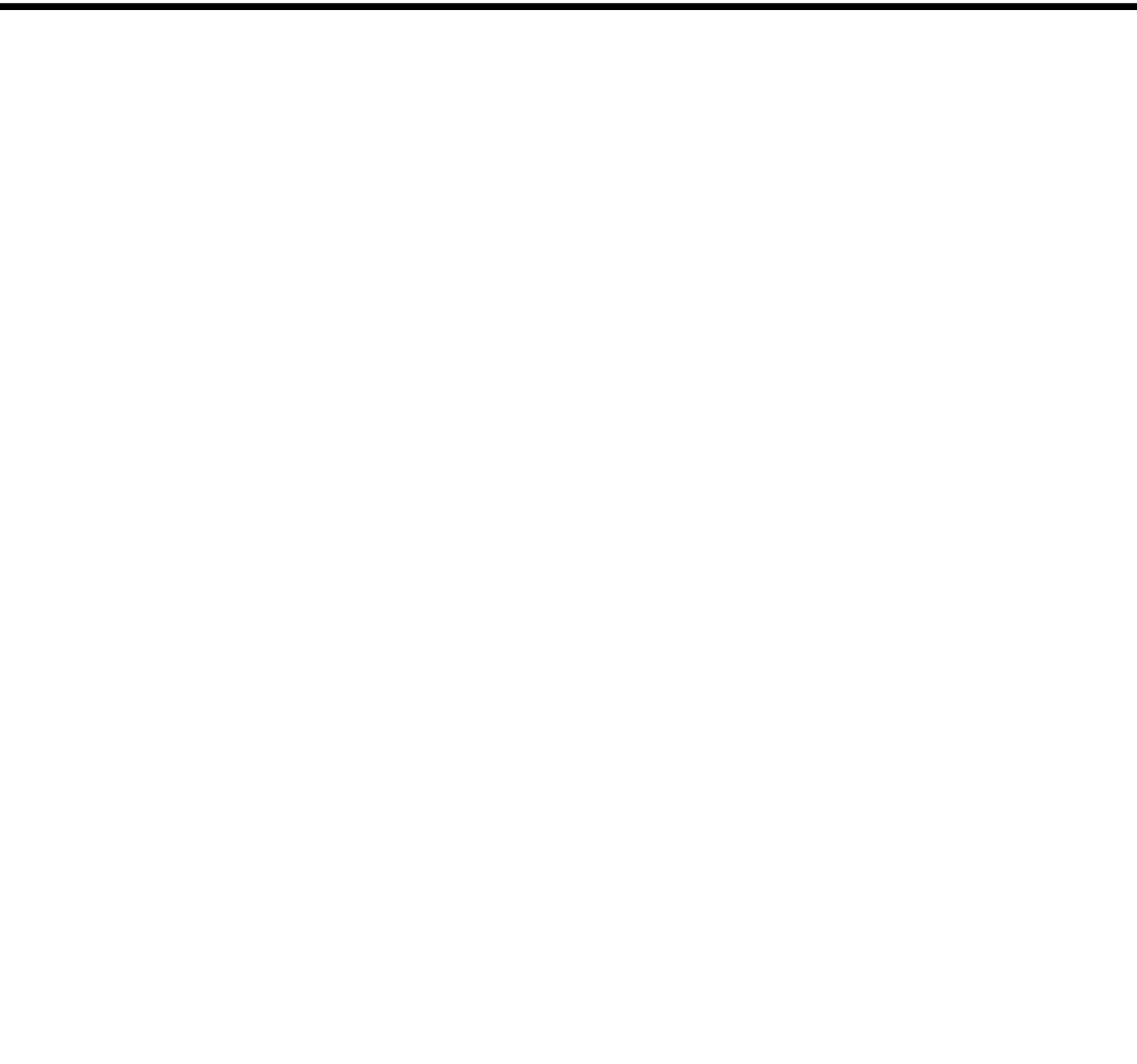
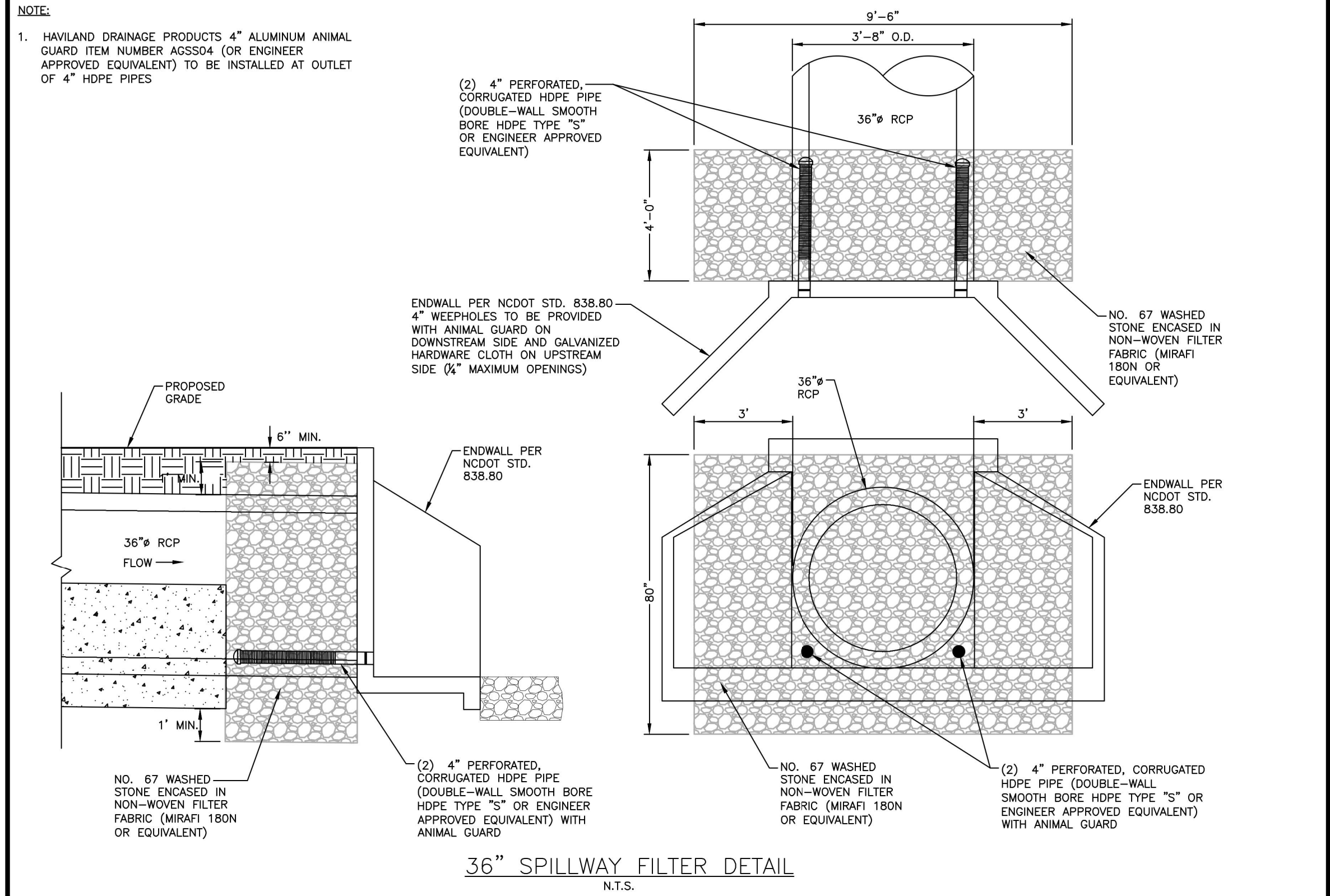
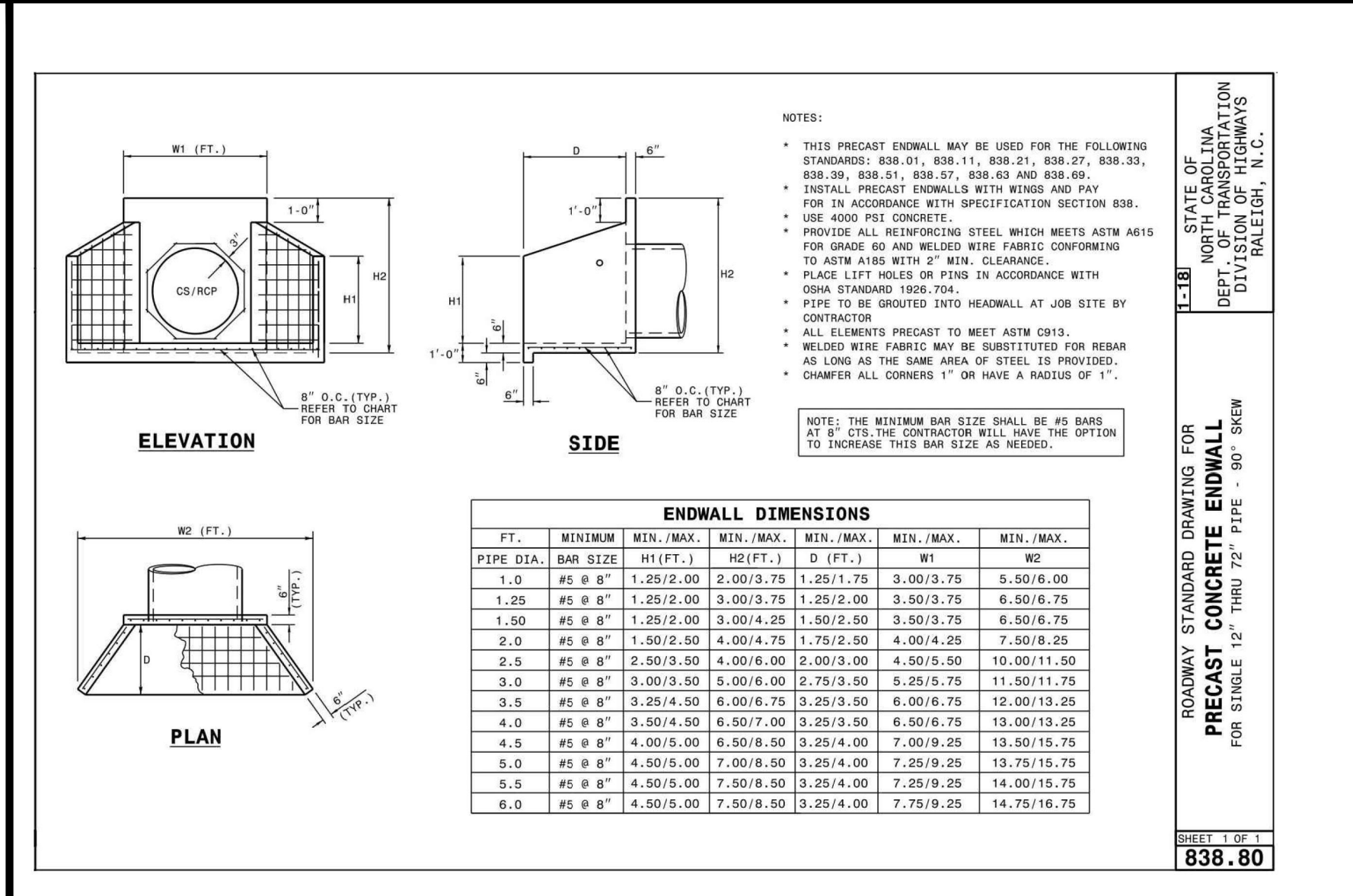
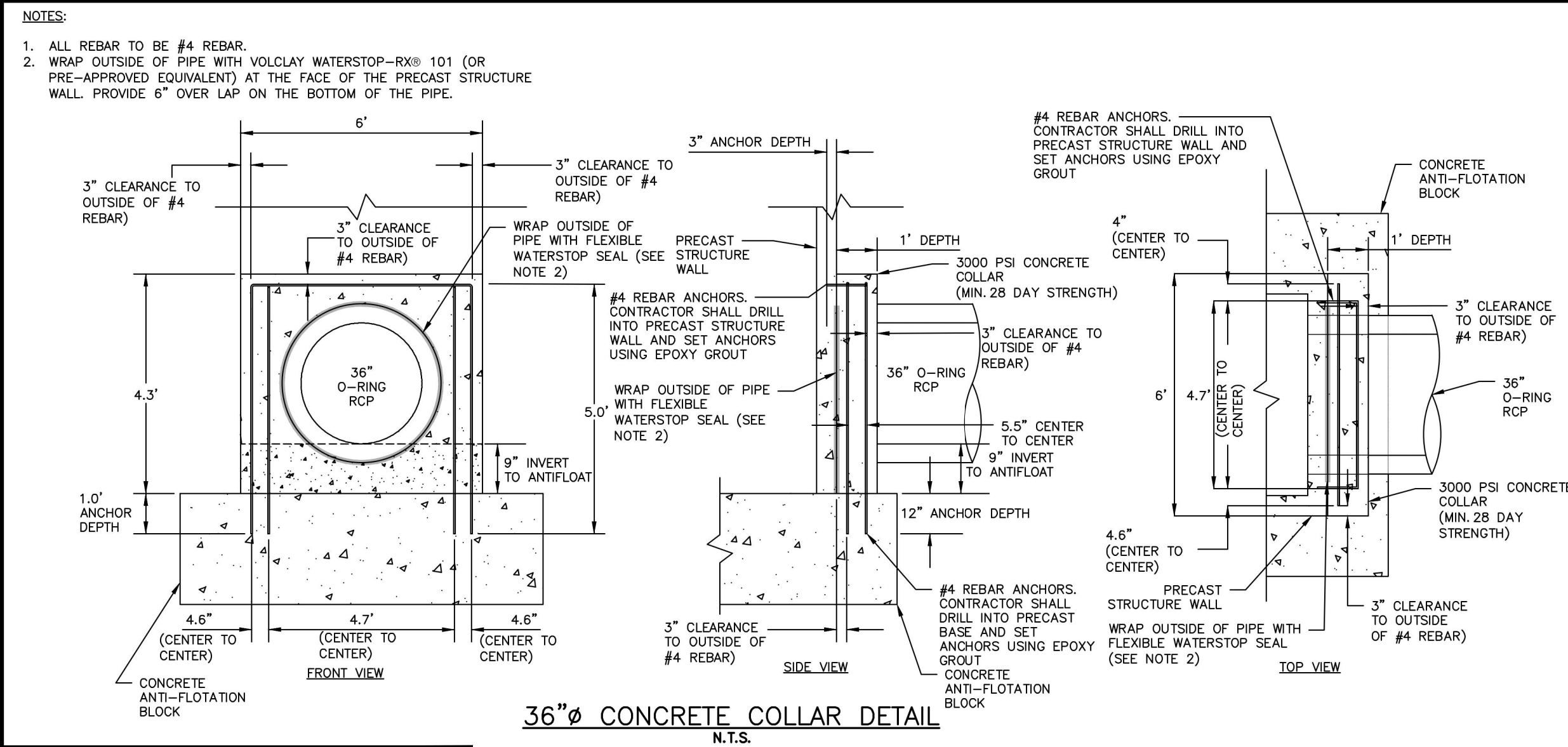
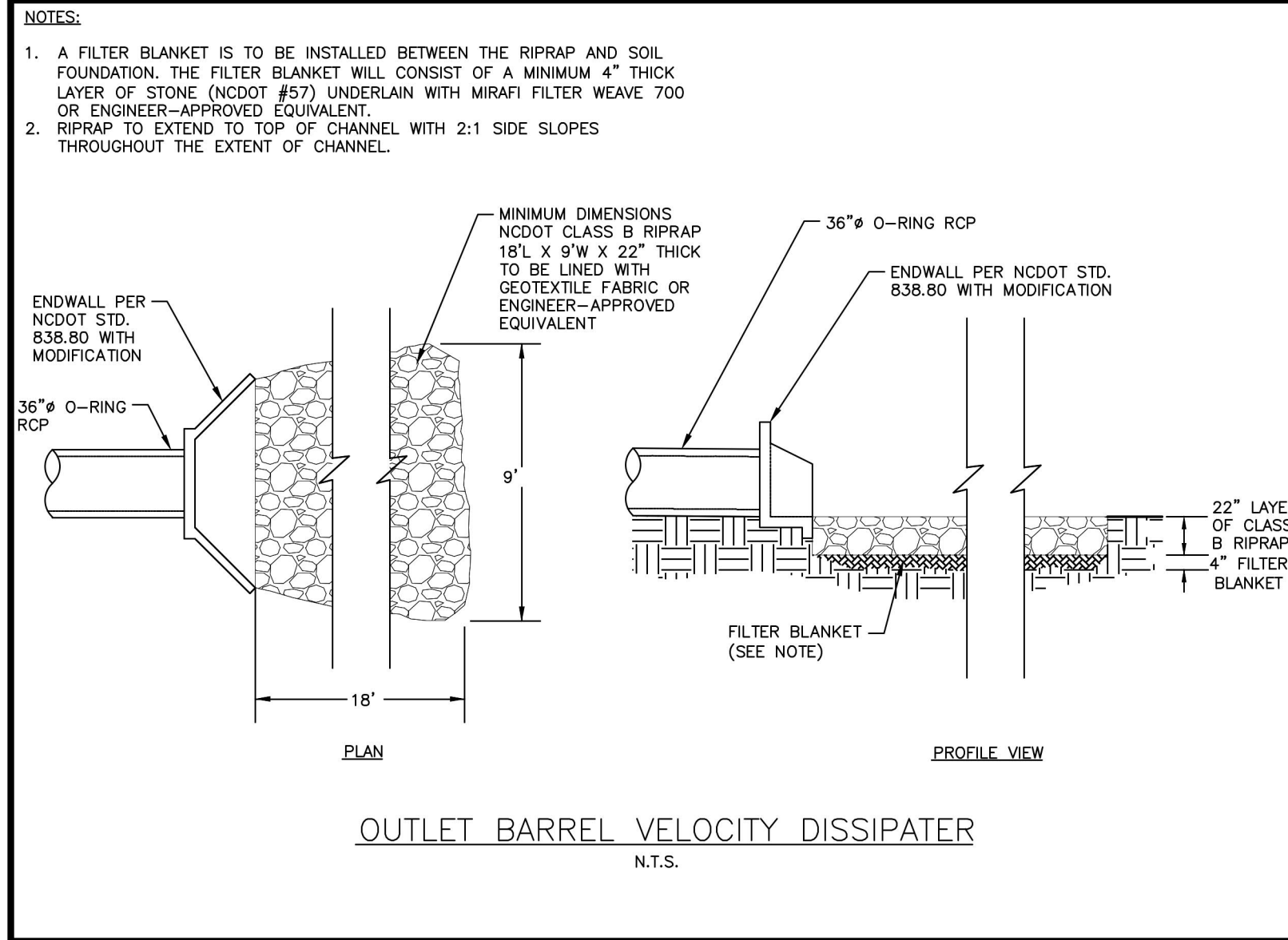
6" EMERGENCY DIP DRAIN TRASH RACK DETAILS N.T.S.



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\\projects\AWH\AWH-20000\04-Production\Water Resources\South Side\Current Drawings\SCM G\AWH20000 - SCM G.dwg, 5/4/2023 3:43:48 PM, Tommy Dabolt



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**ASHTON WOODS.**

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Daniel C. Wiebeck  
Professional Engineer  
Seal 043300  
9-4-2023

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**STORMWATER CONTROL MEASURE 'G' DETAILS**

**C9.02G**

FINAL DRAWING - RELEASED FOR CONSTRUCTION



STORMWATER CONTROL MEASURE 'G' LANDSCAPE SPECIFICATIONS

LEGEND

Table with columns: QTY., SYM., SCIENTIFIC NAME, COMMON NAME, HATCH, TYPE, SPACING. Lists plants for Shallow Water and Shallow Land.

SEEDBED PREPARATION

- 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3-4 INCHES DEEP OVER ADVERSE SOIL CONDITIONS. TOPSOIL SHOULD BE INCORPORATED INTO THE FINAL GRADING OF THE BASIN SIDE SLOPES AND AQUATIC SHELF...

TEMPORARY SEEDING SCHEDULE

Table with columns: SEEDING DATE, SEEDING MIXTURE, APPLICATION RATE. Lists seeding dates from JAN 1 - MAY 1 and MAY 1 - AUG 15.

SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER...

MULCH APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE JAN 1 - AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

AUG 15 - DEC 30: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

PERMANENT SEEDING SCHEDULE (DAM EMBANKMENTS)

Table with columns: SEEDING DATE, SEEDING MIXTURE OPTIONS (CHOOSE ONE), APPLICATION RATE. Lists seeding dates from MAY 1 - AUG 31 and APRIL 1 - SEPT 1.

SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 1000 LB/AC 10-10-10 FERTILIZER.

MULCH APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE IN LATE WINTER OF THE FOLLOWING YEAR; USE SOIL TESTS OR APPLY 150 LB/AC 10-10-10 FERTILIZER. MOW REGULARLY TO A HEIGHT OF 2-4 INCHES.

NOTE: PERMANENT SEEDING SCHEDULE IS FOR SLOPES OF THE BASIN AND TOP OF BERM.

PLANTING INSTRUCTIONS

- PLANTING TECHNIQUES A. ENSURE THAT ROOTS, ONCE REMOVED FROM POT, ARE STRAIGHTENED AND FACE DOWNWARD. B. CREATE PLANTING AREA FOR EACH PLANT AND EXCAVATE PIT.

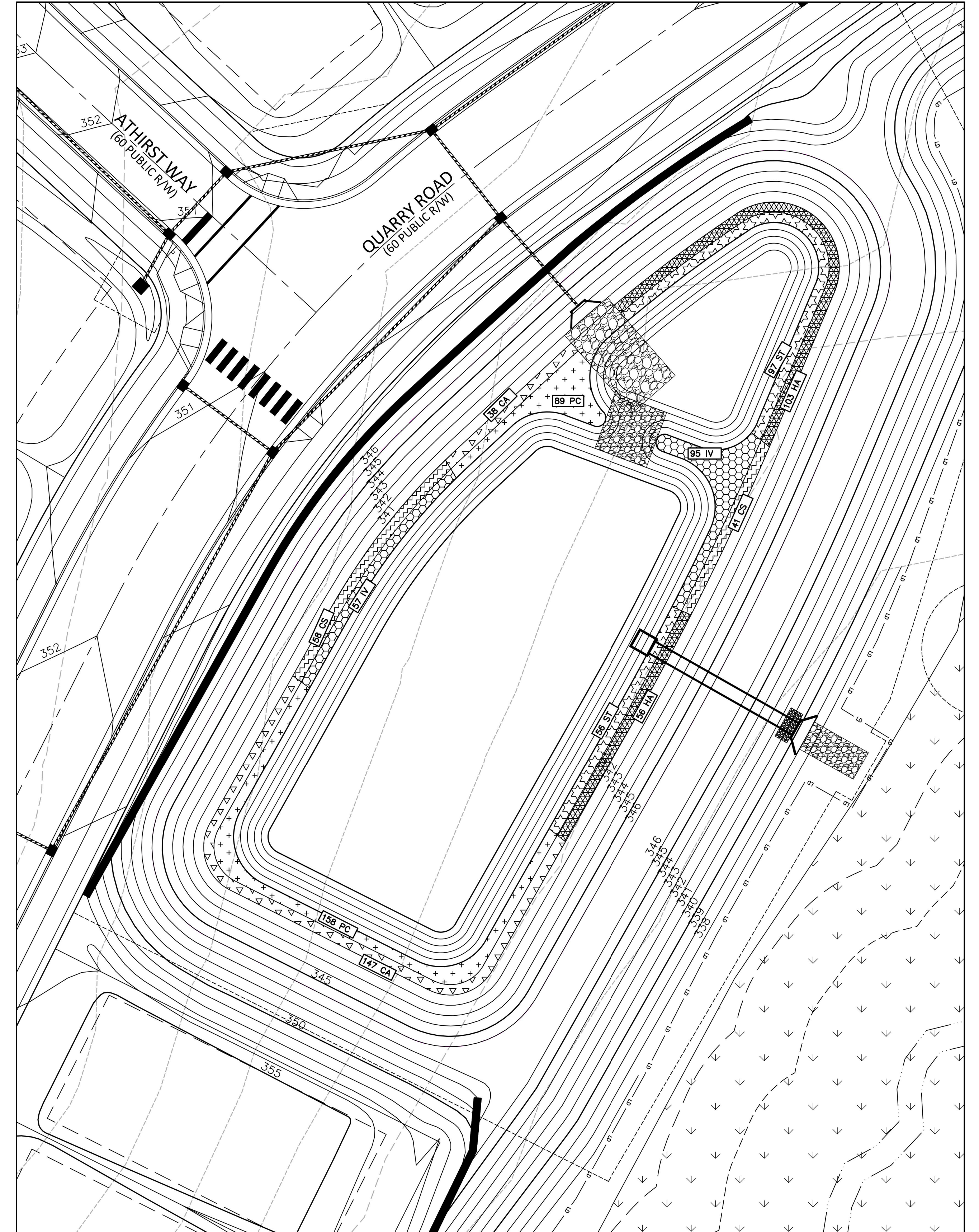
- CONTAINER STOCK / BARE ROOT A. STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER ONCE REMOVED FROM THE CONTAINER.

- PLANT LOCATIONS A. NEW PLANTINGS SHALL BE LOCATED WHERE SHOWN ON PLAN EXCEPT WHERE CHANGES HAVE BEEN MADE IN PROPOSED CONSTRUCTION.

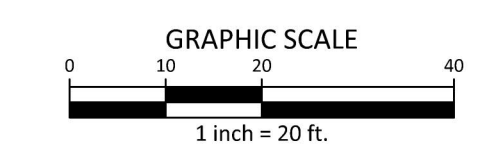
WATER WATER SHALL BE POTABLE AND SHALL NOT CONTAIN ELEMENTS TOXIC TO PLANT LIFE.

PLANTING SCHEDULE

- 1. ONCE THE GRADING IS COMPLETE, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION AND AN AS-BUILT SURVEY PRIOR TO INSTALLATION OF THE STORMWATER MANAGEMENT FACILITY PLANTS.



STORMWATER CONTROL MEASURE 'G' PLAN VIEW 1" = 20'



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CLIENT ASHTON RALEIGH RESIDENTIAL, LLC. 900 RIDGEFIELD DRIVE, SUITE 335 RALEIGH, NORTH CAROLINA 27609. Phone: 919. 422. 7663. Contact: BOB MISHLER.

ASHTON WOODS logo.

THE POINT PHASES 3, 4, 5, 7 AND 10 CONSTRUCTION DRAWINGS - PACKAGE 2 EAST YOUNG STREET TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP, WAKE COUNTY, NORTH CAROLINA CD 20-08

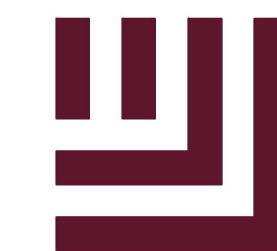
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REVISIONS table with columns: NO., DATE.

PLAN INFORMATION table with columns: PROJECT NO., FILENAME, CHECKED BY, DRAWN BY, SCALE, DATE.

STORMWATER CONTROL MEASURE 'G' LANDSCAPE PLANS C9.03G





McADAMS

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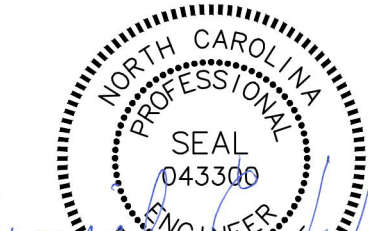
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ASHTON WOODS.

THE POINT  
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CONSTRUCTION DRAWINGS - PACKAGE 2  
EAST YOUNG STREET  
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
WAKE COUNTY, NORTH CAROLINA

CD 20-08



5-4-2023

REVISIONS

NO. DATE

PLAN INFORMATION

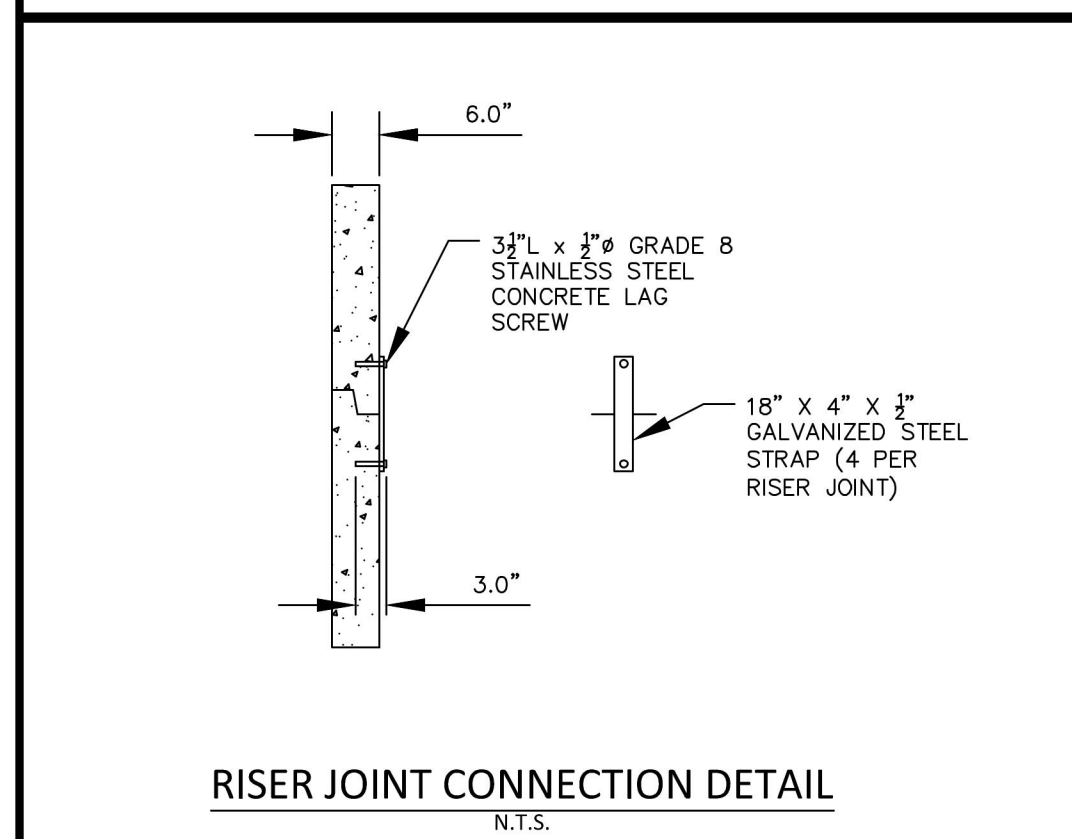
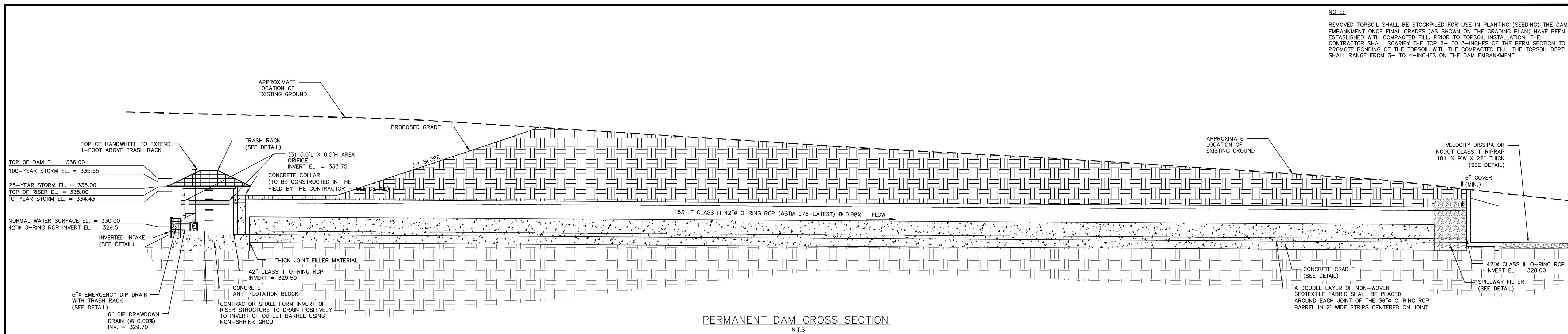
PROJECT NO. AWH-20000  
FILENAME AWH20000 - SCM H  
CHECKED BY DCW  
DRAWN BY JKD  
SCALE AS SHOWN  
DATE 05.08.2023

SHEET

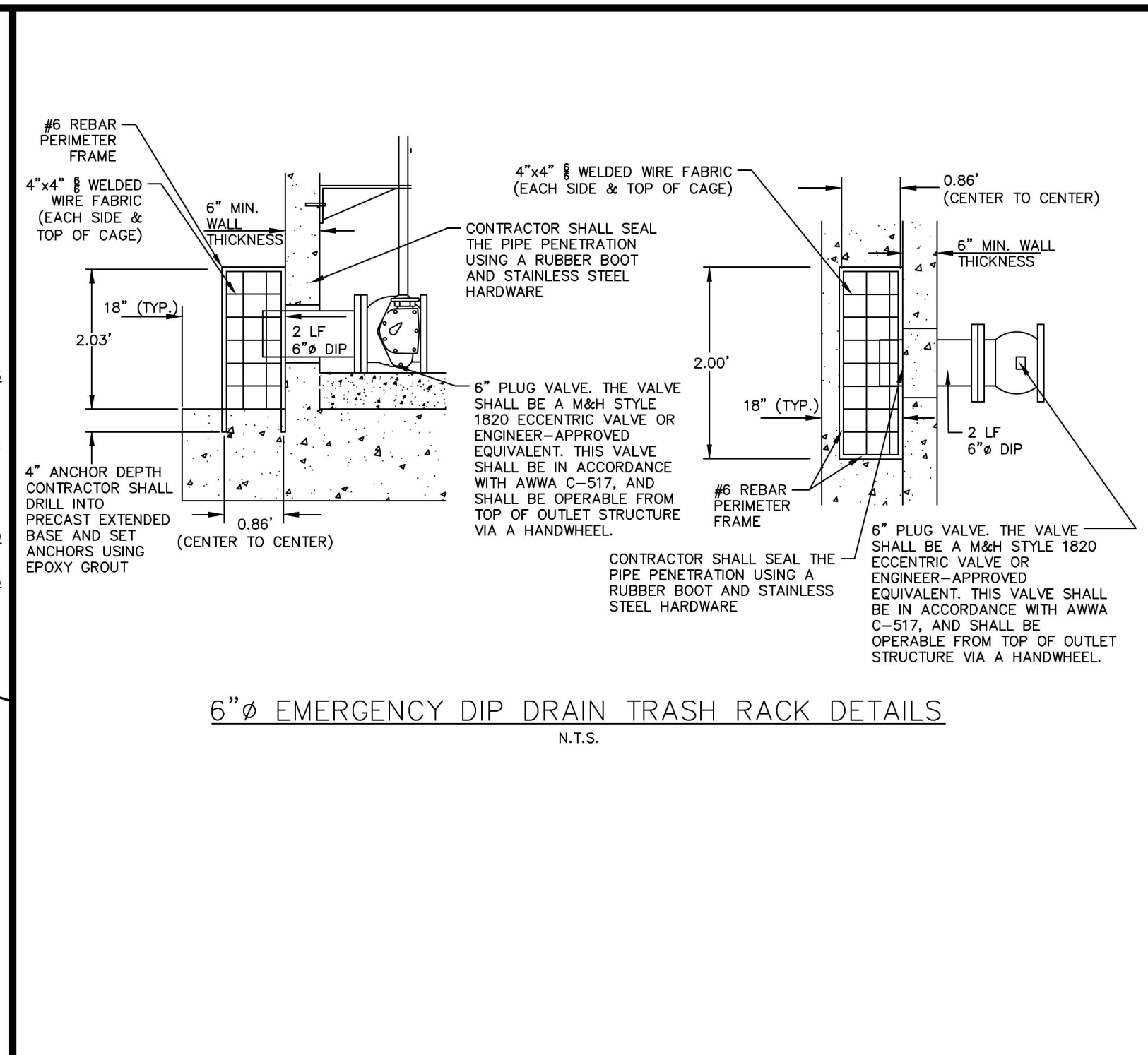
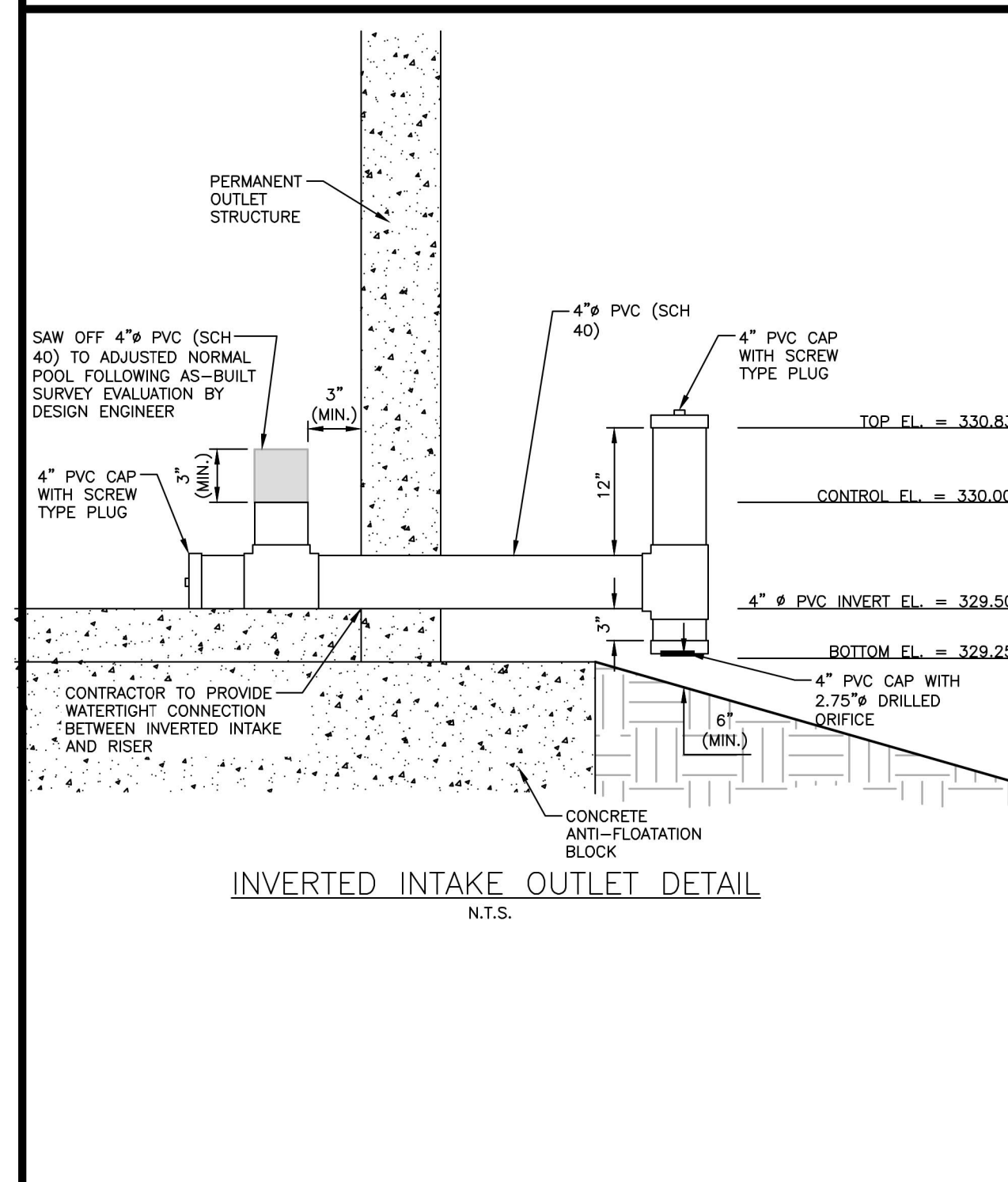
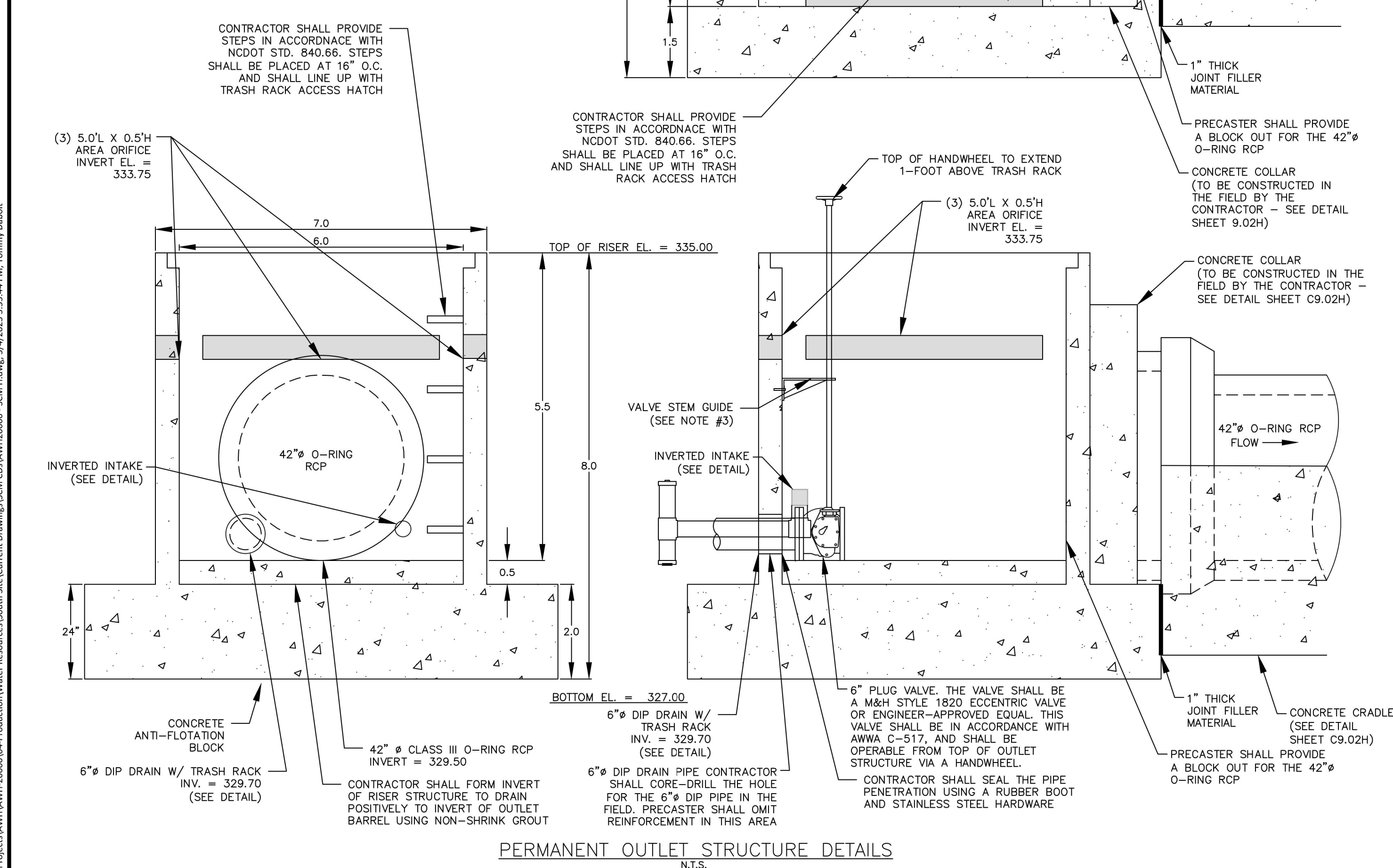
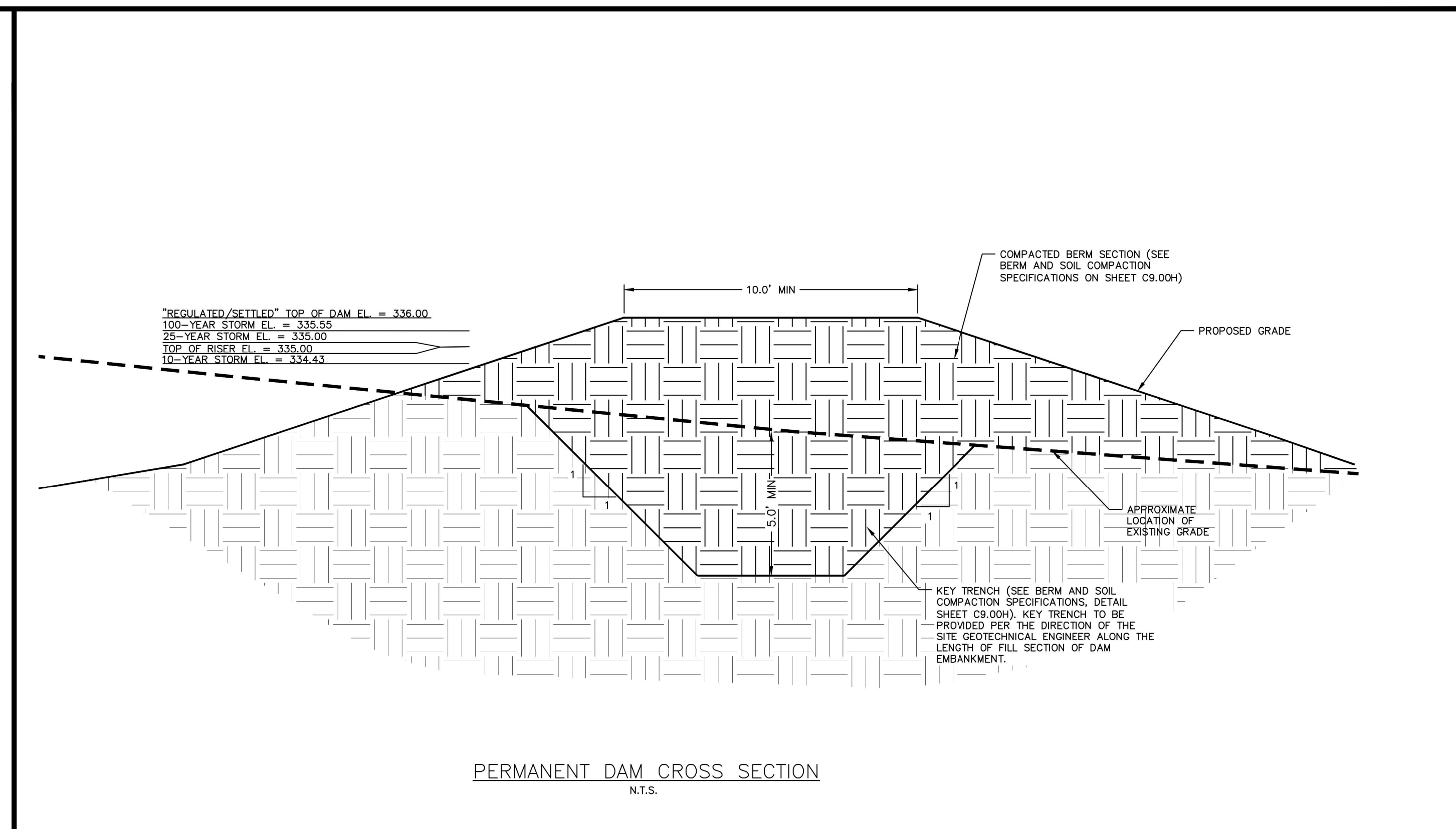
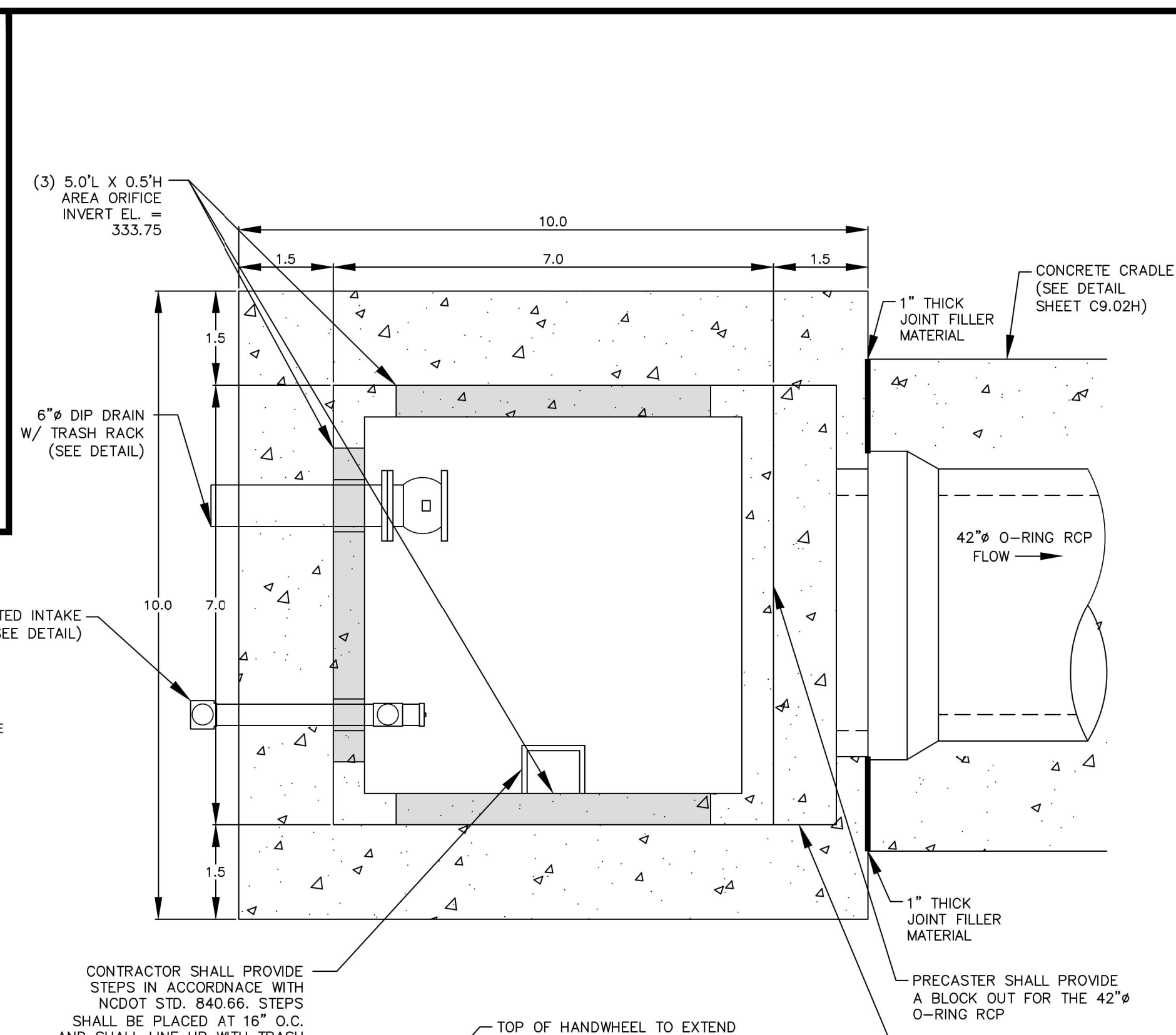
STORMWATER CONTROL  
MEASURE 'H' DETAILS

C9.01H

NOTE:  
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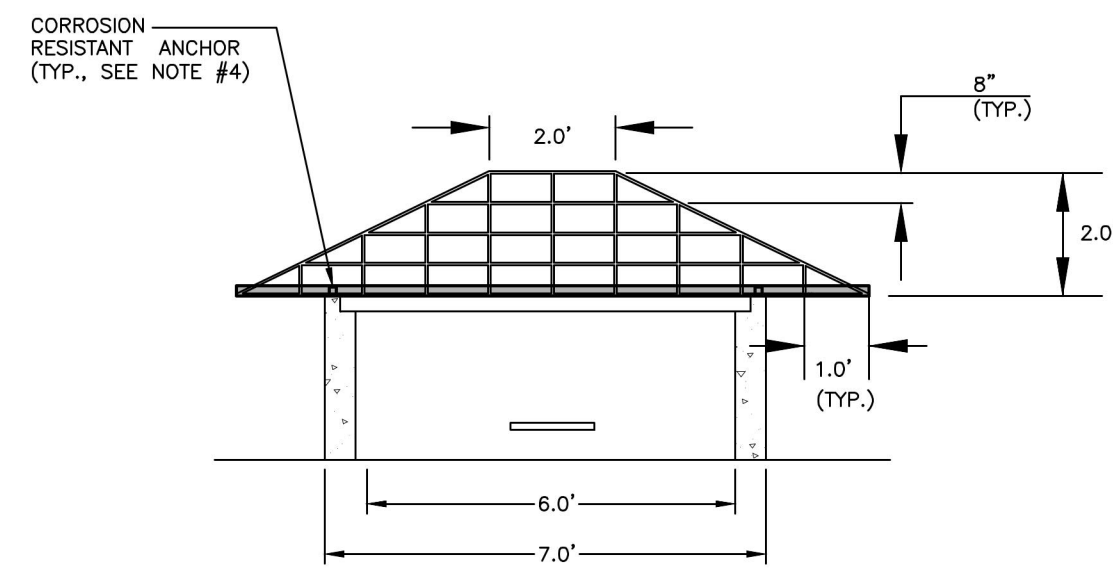


- NOTES:  
1. CONCRETE ANTI-FLOTATION BLOCK TO BE PROVIDED WITH MINIMUM TEMPERATURE AND SHRINKAGE STEEL REINFORCEMENT.  
2. TRASH RACKS NOT SHOWN FOR CLARITY.  
3. THE NUMBER OF GUIDES FOR THE VALVE STEM SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE VALVE STEM MUST BE OPERABLE FROM THE TOP OF THE RISER VIA THE HANDWHEEL WITH AN INSIGNIFICANT AMOUNT OF PLAY IN THE VALVE STEM.  
4. CONTRACTOR SHALL PROVIDE A JOINT IN THE OUTLET BARREL NO MORE THAN 5-FT FROM THE RISER.

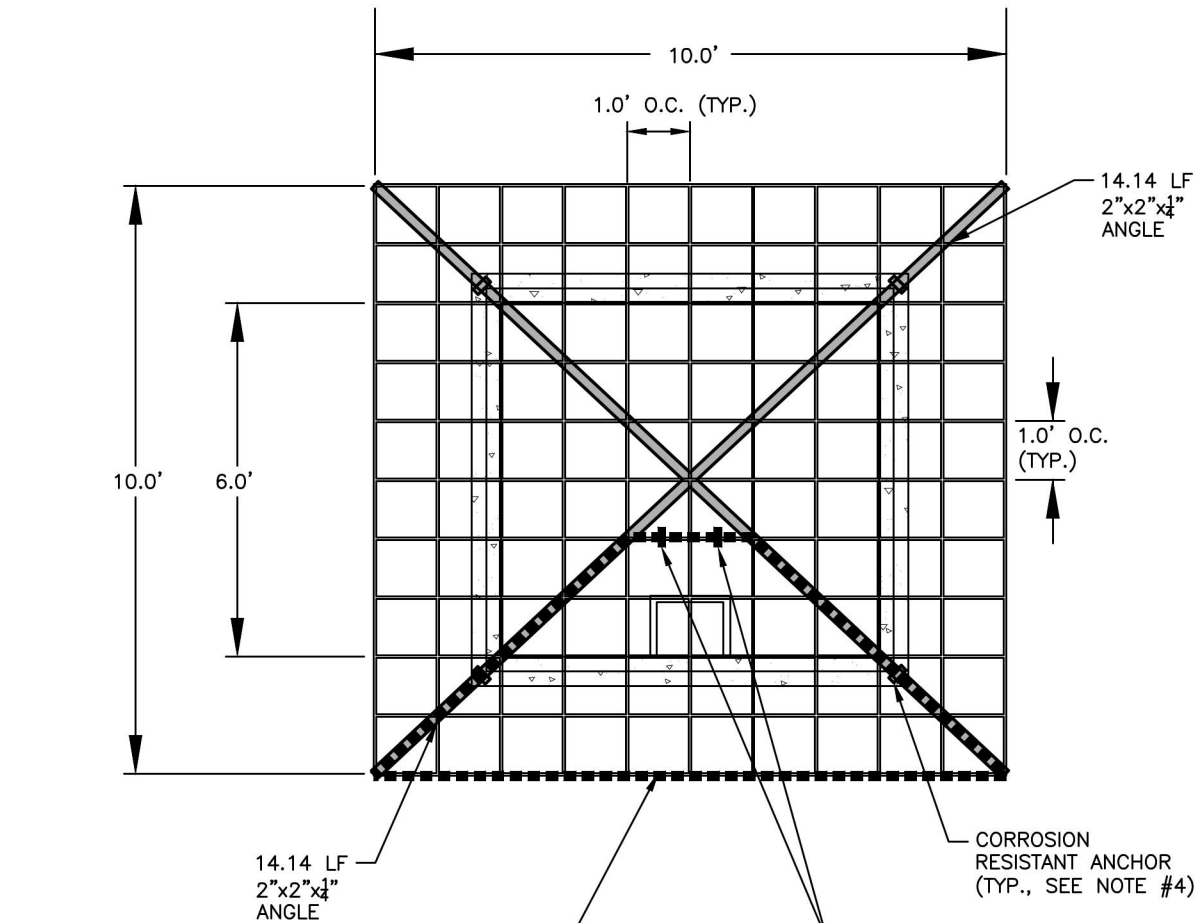


FINAL DRAWING - RELEASED FOR CONSTRUCTION

- NOTES:
1. ALL REBAR TO BE #4 REBAR.
  2. ALL REBAR AND ANGLES TO BE HOT-DIPPED GALVANIZED AND BE PROVIDED WITH AN EPOXY COATING.
  3. THE HOT-DIPPED, GALVANIZED 2"x2"x1/4" ANGLES SHALL BE WELDED TO THE REBAR TRASH RACK. ONCE WELDED, THE ENTIRE ASSEMBLY SHALL BE PLACED ONTO THE RISER WITH ANGLES SITTING DIRECTLY ON TOP OF RISER.
  4. TRASH RACK IS TO BE SECURELY FASTENED TO THE SPILLWAY RISER WITH A MINIMUM OF FOUR CORROSION-RESISTANT ANCHORS.
  5. ACCESS HATCH SHALL ALIGN WITH STEPS IN RISER.



6' x 6' RISER TRASH RACK DETAIL

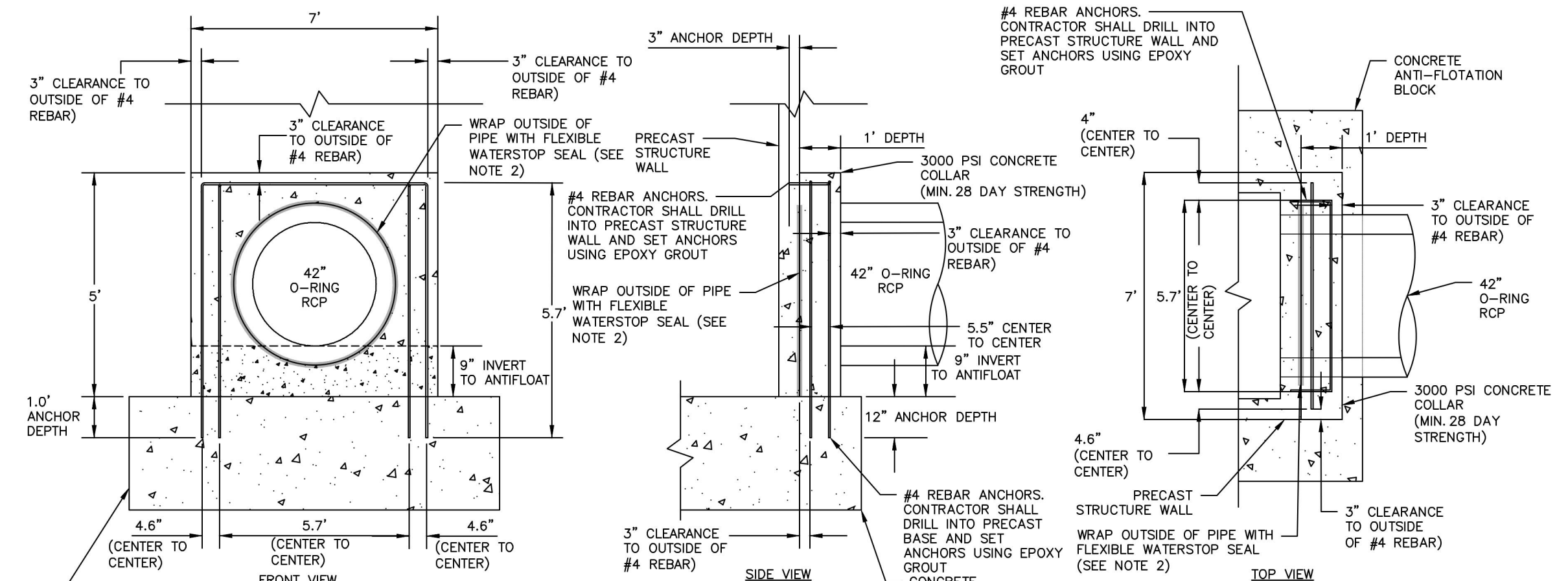


THE BOLD / DASHED LINETYPE DENOTES THE ACCESS HATCH TO BE PROVIDED BY THE TRASH RACK FABRICATOR PER OUTLET STRUCTURE MATERIAL SPECIFICATIONS (SHEET C9.00H)

FABRICATED HINGES FOR THE 2'x2' ACCESS HATCH. ACCESS HATCH SHALL BE POSITIONED OVER STEPS.

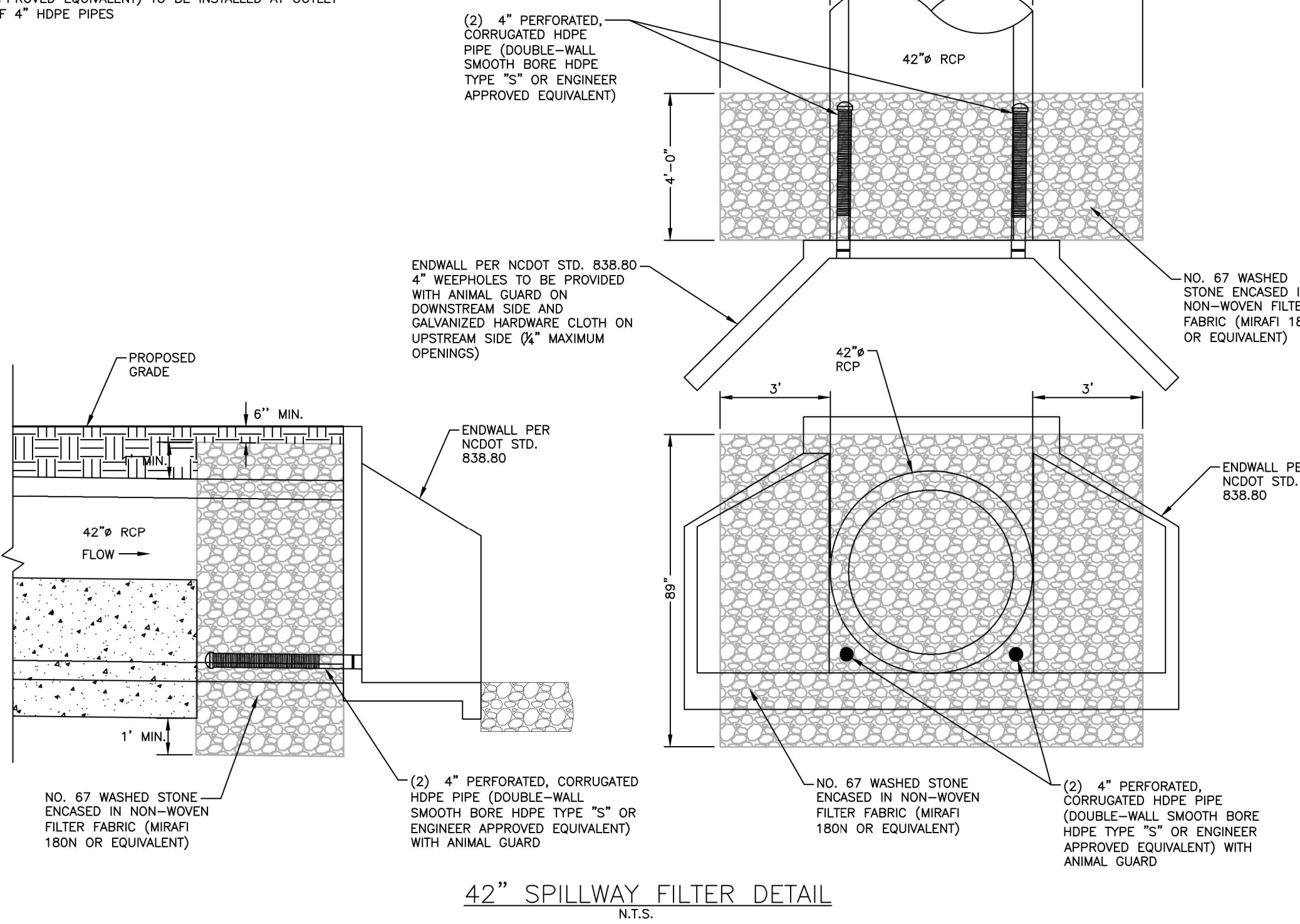
CORROSION RESISTANT ANCHOR (TYP., SEE NOTE #4)

- NOTES:
1. ALL REBAR TO BE #4 REBAR.
  2. WRAP OUTSIDE OF PIPE WITH VOLCLAY WATERSTOP-Rx® 101 (OR PRE-APPROVED EQUIVALENT) AT THE FACE OF THE PRECAST STRUCTURE WALL. PROVIDE 6" OVER LAP ON THE BOTTOM OF THE PIPE.



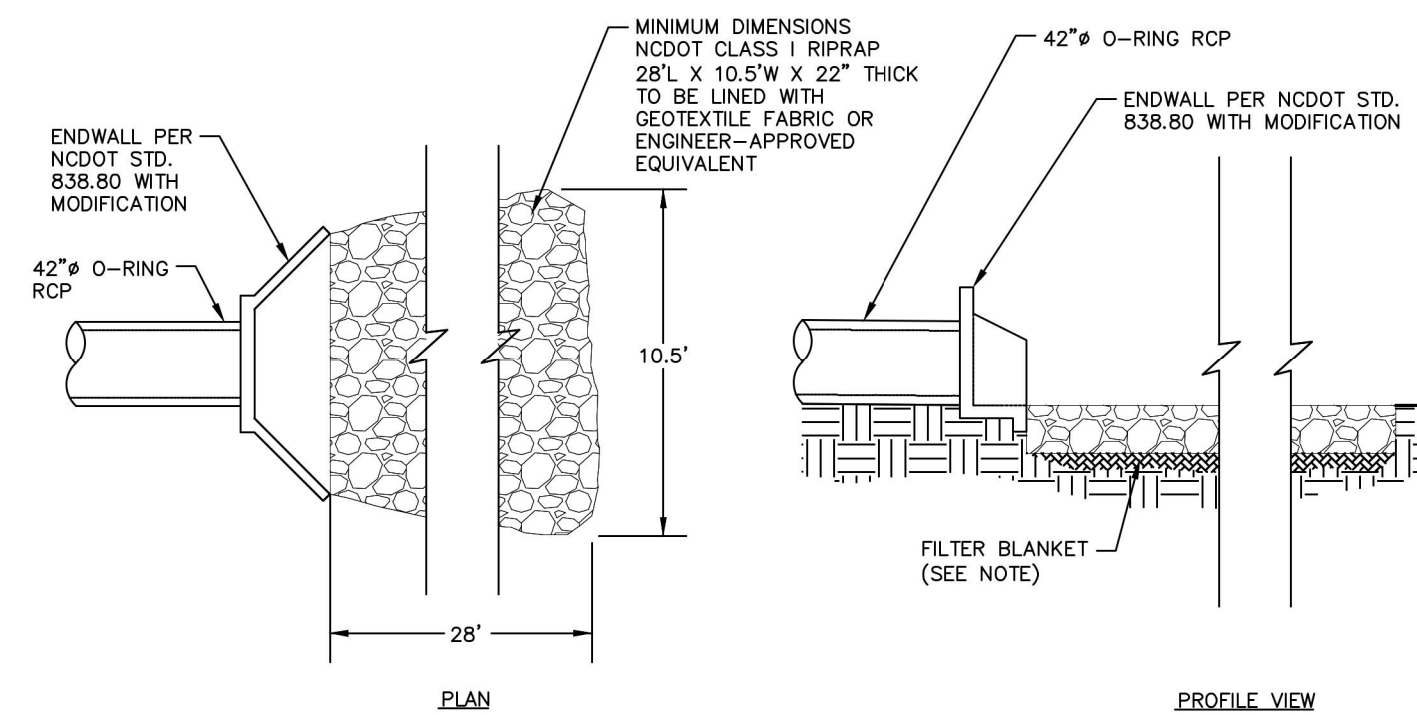
42" Ø CONCRETE COLLAR DETAIL

- NOTE:
1. HAVILAND DRAINAGE PRODUCTS 4" ALUMINUM ANIMAL GUARD ITEM NUMBER AGSS04 (OR ENGINEER APPROVED EQUIVALENT) TO BE INSTALLED AT OUTLET OF 4" HDPE PIPES

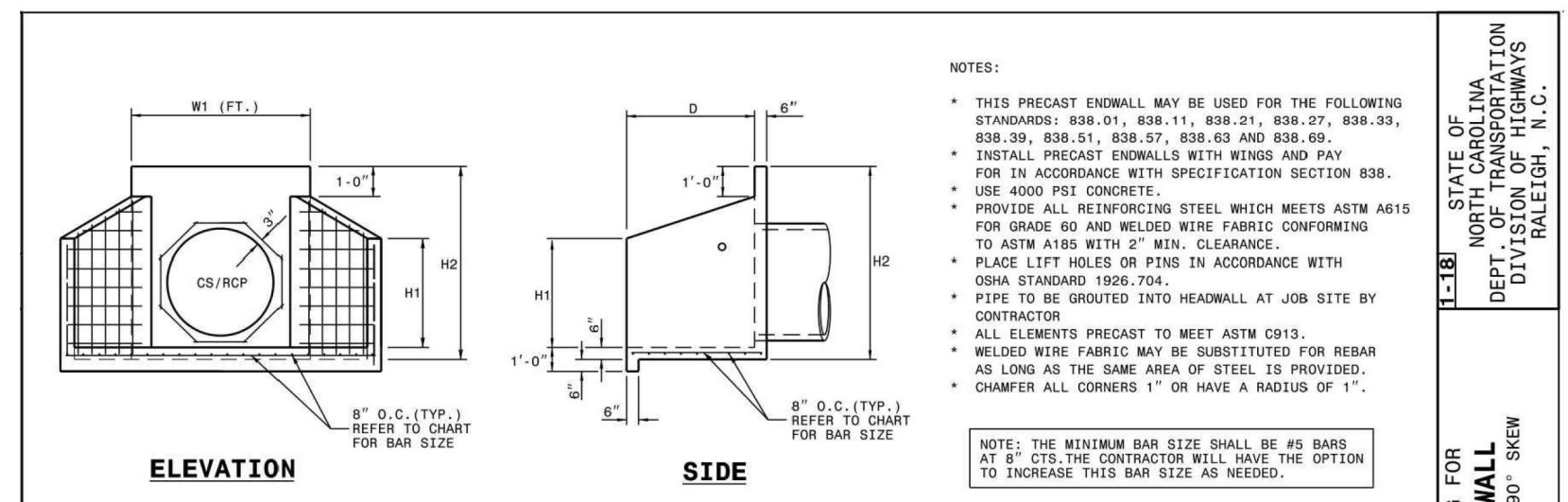


42" SPILLWAY FILTER DETAIL

- NOTES:
1. A FILTER BLANKET IS TO BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION. THE FILTER BLANKET WILL CONSIST OF A MINIMUM 4" THICK LAYER OF STONE (NCDOT #57) UNDERLAIN WITH MIRAFI FILTER WEAVE 700 OR ENGINEER-APPROVED EQUIVALENT.
  2. RIPRAP TO EXTEND TO TOP OF CHANNEL WITH 2:1 SIDE SLOPES THROUGHOUT THE EXTENT OF CHANNEL.



OUTLET BARREL VELOCITY DISSIPATER

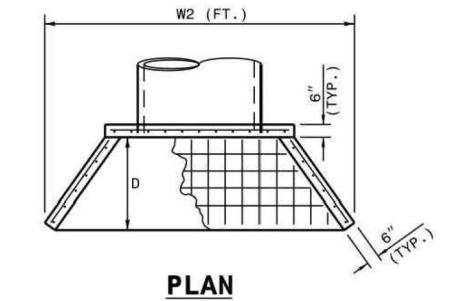


ELEVATION

SIDE

ENDWALL DIMENSIONS

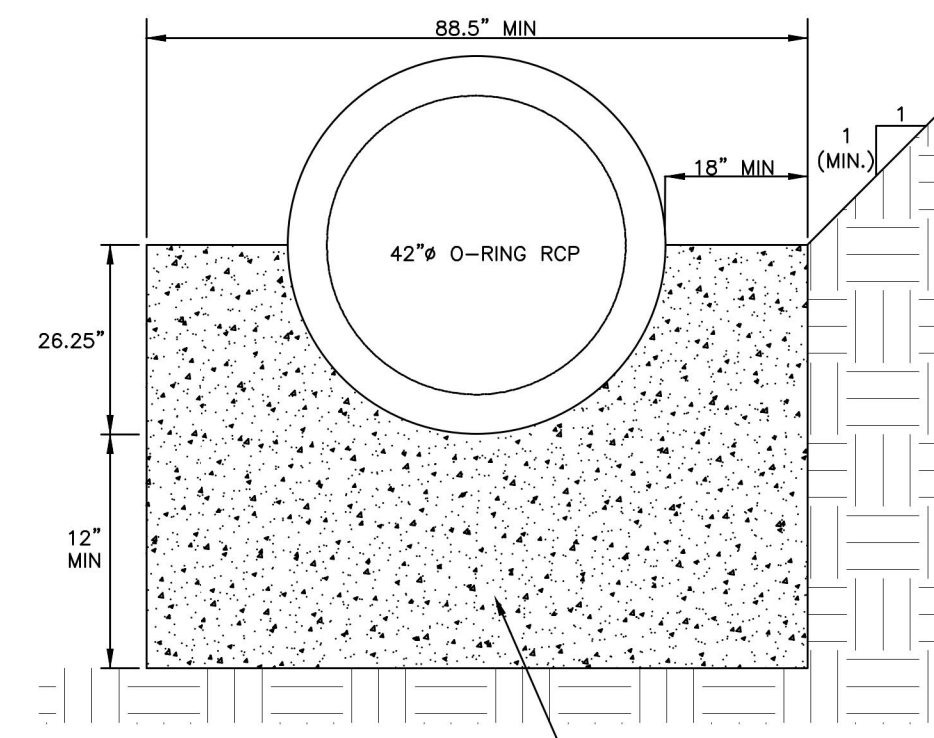
PIPE DIA.	MINIMUM BAR SIZE	MIN. / MAX. H1 (FT.)	MIN. / MAX. H2 (FT.)	MIN. / MAX. D (FT.)	MIN. / MAX. R2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	4.00/5.00	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/8.25
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/8.25
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/8.25
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/8.25



PLAN

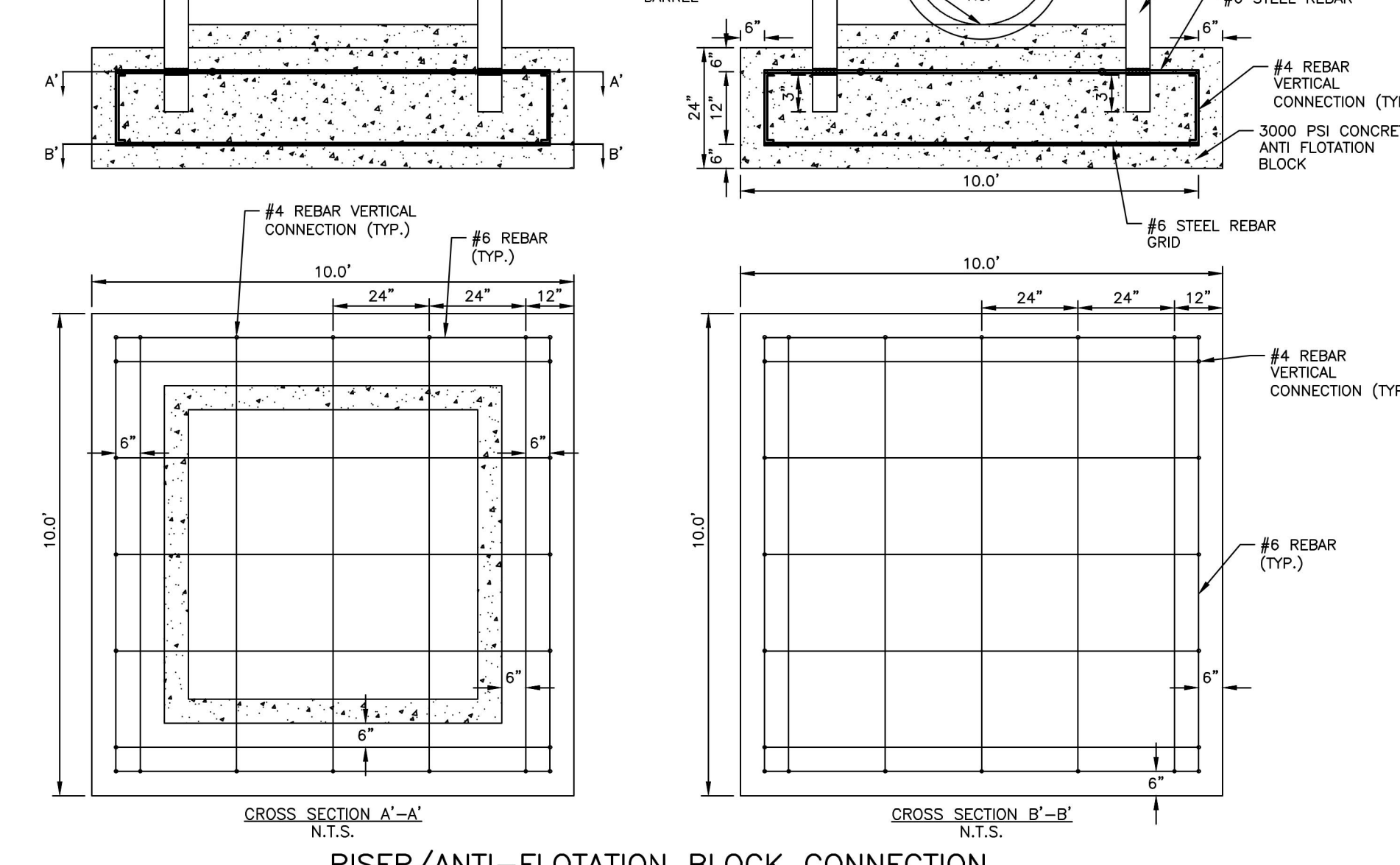
- NOTE:
1. AS AN ALTERNATE TO A CONCRETE CRADLE UNDER THE BARREL PIPE (THIS DETAIL), THE CONTRACTOR MAY CHOOSE TO ELIMINATE THE CONCRETE CRADLE AND USE COMPACTED BACKFILL IF THE ON-SITE GEOTECHNICAL ENGINEER WILL PROVIDE A NC PE SEALED LETTER CERTIFYING THAT THE COMPACTION UNDER, AROUND, AND ABOVE THE BARREL MEETS THE SPECIFICATIONS OF THE EMBANKMENT COMPACTION REQUIREMENTS AND MOISTURE CONTENT. THIS CERTIFICATION LETTER MUST BE SUBMITTED TO THE DESIGN ENGINEER BEFORE AS-BUILT CERTIFICATION OF THE FACILITY. THIS SEPARATE CERTIFICATION MUST BE SPECIFIC TO THE BARREL PIPE FOR THE FACILITY, AND MUST CLEARLY STATE THAT ALL SOIL MATERIAL UNDER, AROUND, AND ABOVE THE BARREL PIPE MEETS THE BERM MATERIAL SPECIFICATIONS. THIS CERTIFICATION IS TO INCLUDE REFERENCE TO BOTH MATERIAL AND COMPACTION, AND MUST STATE THAT ALL MATERIALS UNDER, AROUND, AND ABOVE THE BARREL HAVE BEEN COMPACTED PER THE BERM MATERIAL SPECIFICATIONS (AT LEAST 95% OF MAXIMUM DRY DENSITY USING ASTM D998 STANDARD PROCTOR) WITH NO VOID SPACES PRESENT. THE CONTRACTORS INTENT TO UTILIZE THIS ALTERNATIVE MUST BE STATED PRIOR TO CONSTRUCTION TAKING PLACE. THIS CONTRACTORS CERTIFICATION MUST BE PRESENTED TO THE DESIGN ENGINEER BEFORE AN AS-BUILT CERTIFICATION CAN BE ISSUED FOR THIS FACILITY.
  2. CONTRACTOR SHALL PROVIDE A JOINT IN THE OUTLET BARREL NO MORE THAN 5-FT FROM THE RISER.

- BARREL PIPE CONCRETE CRADLE CONSTRUCTION SEQUENCE
1. IF OPTION A IS CHOSEN FROM NOTE 9 OF THE CONSTRUCTION SEQUENCE SPECIFICATIONS, THEN BRING GRADE OF DAM EMBANKMENT TO SPRINGLINE OF PIPE ELEVATION. IF OPTION B IS CHOSEN FROM NOTE 9 OF THE CONSTRUCTION SEQUENCE SPECIFICATIONS, THEN CONSTRUCT FORMWORK FOR CONCRETE CRADLE ON EXISTING GRADE.
  2. IF OPTION A IS CHOSEN FROM NOTE 9 OF THE CONSTRUCTION SEQUENCE SPECIFICATIONS, THEN EXCAVATE TRENCH FOR CRADLE AND BARREL. PER DIMENSIONS ON DRAWINGS. IF OPTION B IS CHOSEN FROM NOTE 9 OF THE CONSTRUCTION SEQUENCE SPECIFICATIONS, PROCEED TO STEP 3 BELOW.
  3. PLACE BARREL PIPE ON CONCRETE BLOCKS TO GRADE. AT THIS STEP, CONTRACTOR SHALL WRAP A DOUBLE LAYER OF NON-WOVEN GEOTEXTILE FABRIC AROUND EACH JOINT OF THE 42" Ø O-RING RCP BARREL IN 2' WIDE STRIPS CENTERED ON JOINT.
  4. PLACE CONCRETE FOR CRADLE FOR EACH SECTION FROM ONE SIDE OF THE TRENCH. ALLOW CONCRETE TO FILL ENTIRE AREA UNDER PIPE AND PIPE HAUNCHES AS TO LEAVE NO VOIDS UNDER THE PIPE BEFORE PLACING CONCRETE ON THE OPPOSITE SIDE OF THE TRENCH. PLACE ENTIRE CRADLE AS ONE LIFT (VERTICALLY) PER DRAWINGS.
  5. CONCRETE CRADLE MAY BE ELIMINATED PER RECOMMENDATION FROM THE ON-SITE GEOTECHNICAL ENGINEER. ANY DEVIATION FROM THIS DETAIL SHALL BE SUBMITTED TO AND REVIEWED BY THE DESIGN ENGINEER PRIOR TO IMPLEMENTATION. IF THE CRADLE IS ELIMINATED, THEN A LETTER FROM AN NC PE CERTIFYING THAT ALL SOIL MATERIAL UNDER, AROUND, AND ABOVE THE BARREL PIPE MEETS THE BERM MATERIAL SPECIFICATIONS IS REQUIRED.
  6. ALLOW CRADLE TO CURE FOR A MINIMUM OF 7 DAYS BEFORE ANY VIBRATING COMPACTION EQUIPMENT IS USED IN THE VICINITY OF THE BARREL PIPE.
  7. TRENCH TO BE BACKFILLED IN 5" LIFTS WHEN COMPACTION IS BY HAND. BACKFILL IS IN 8" LIFTS WHEN CONDUCTED BY MACHINE. MINIMUM OF 2 FEET COVER MUST BE PRESENT ON 42" RCP BEFORE DRIVING OVER WITH HEAVY EQUIPMENT.

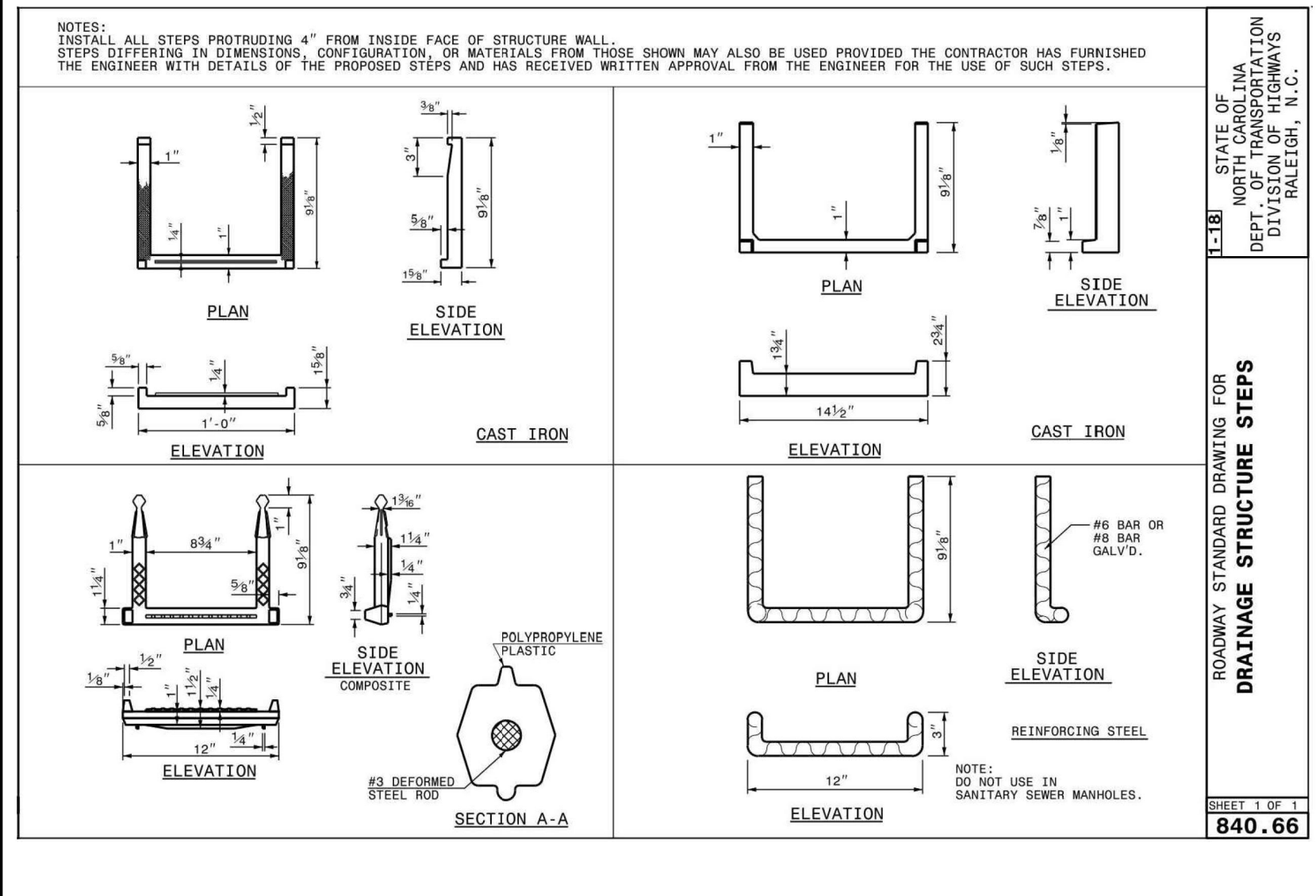


42" CONCRETE CRADLE DETAIL

- NOTES:
1. ALL REINFORCING STEEL IN RISER ANTI-FLOTATION BLOCK TO BE GRADE 60 #6 BARS FOR HORIZONTAL CROSSING AND GRADE 60 #4 BARS FOR VERTICAL CONNECTIONS.
  2. INSIDE OF RISER BOTTOM TO BE FORMED WITH NON-SHRINK GROUT TO INVERT ELEVATION OF BARREL.
  3. ALL PIPE PENETRATIONS THROUGH THE CONCRETE RISER STRUCTURE SHALL BE MADE WATERTIGHT.



RISER/ANTI-FLOTATION BLOCK CONNECTION



DRAINAGE STRUCTURE STEPS

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**ASHTON WOODS**

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EAST YOUNG STREET  
TOWN OF ROLESVILLE, WAKE FOREST TOWNSHIP,  
WAKE COUNTY, NORTH CAROLINA  
CD 20-08

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.  
SEAL  
043300  
ENGINEER  
DANIEL C. WIEBER  
5-4-2023

**REVISIONS**

NO.	DATE

**PLAN INFORMATION**

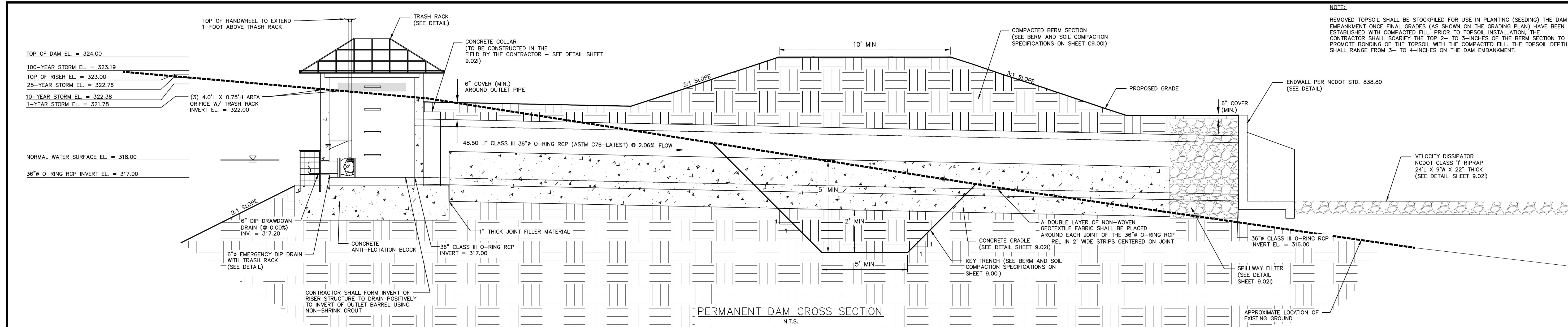
PROJECT NO.	AWH-20000
FILENAME	AWH20000 - SCM H
CHECKED BY	DCW
DRAWN BY	JKD
SCALE	AS SHOWN
DATE	05.08.2023

**STORMWATER CONTROL MEASURE 'H' DETAILS**  
**C9.02H**

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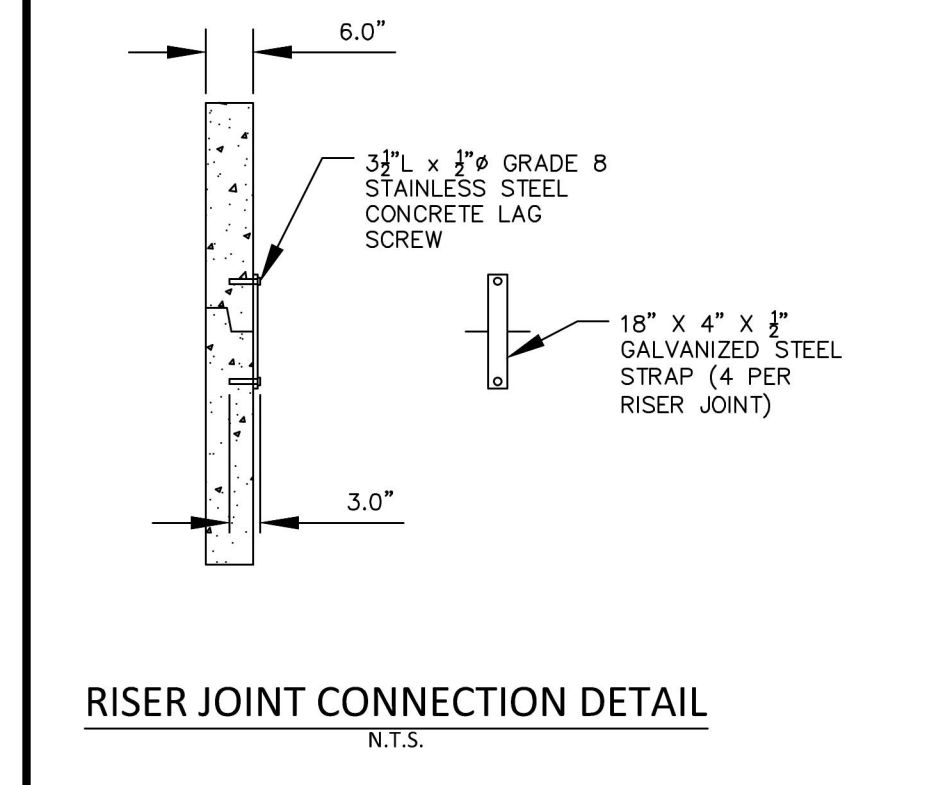




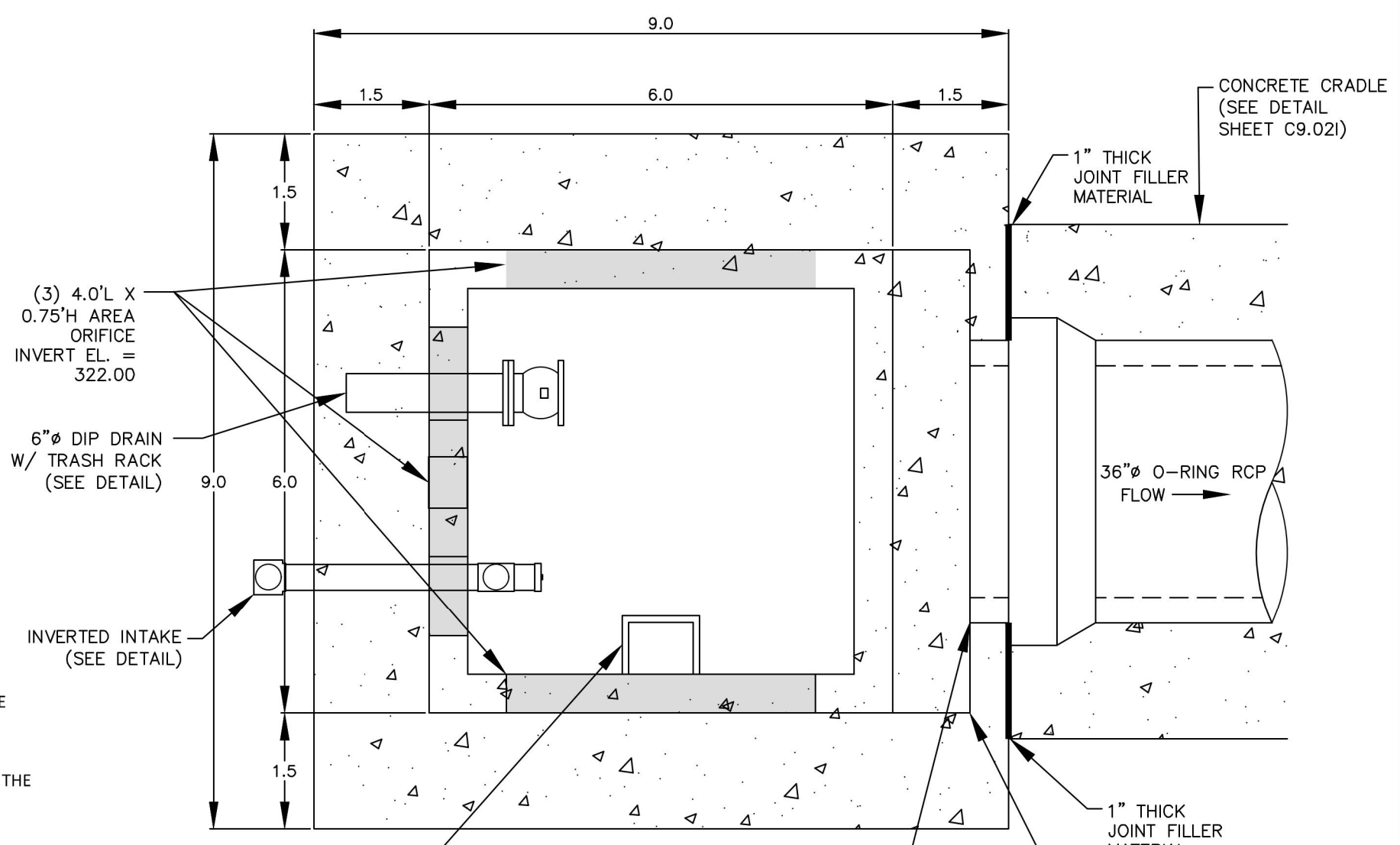
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TOP OF DAM EL. = 324.00  
100-YEAR STORM EL. = 323.19  
TOP OF RISER EL. = 323.00  
25-YEAR STORM EL. = 322.76  
10-YEAR STORM EL. = 322.38  
1-YEAR STORM EL. = 321.78

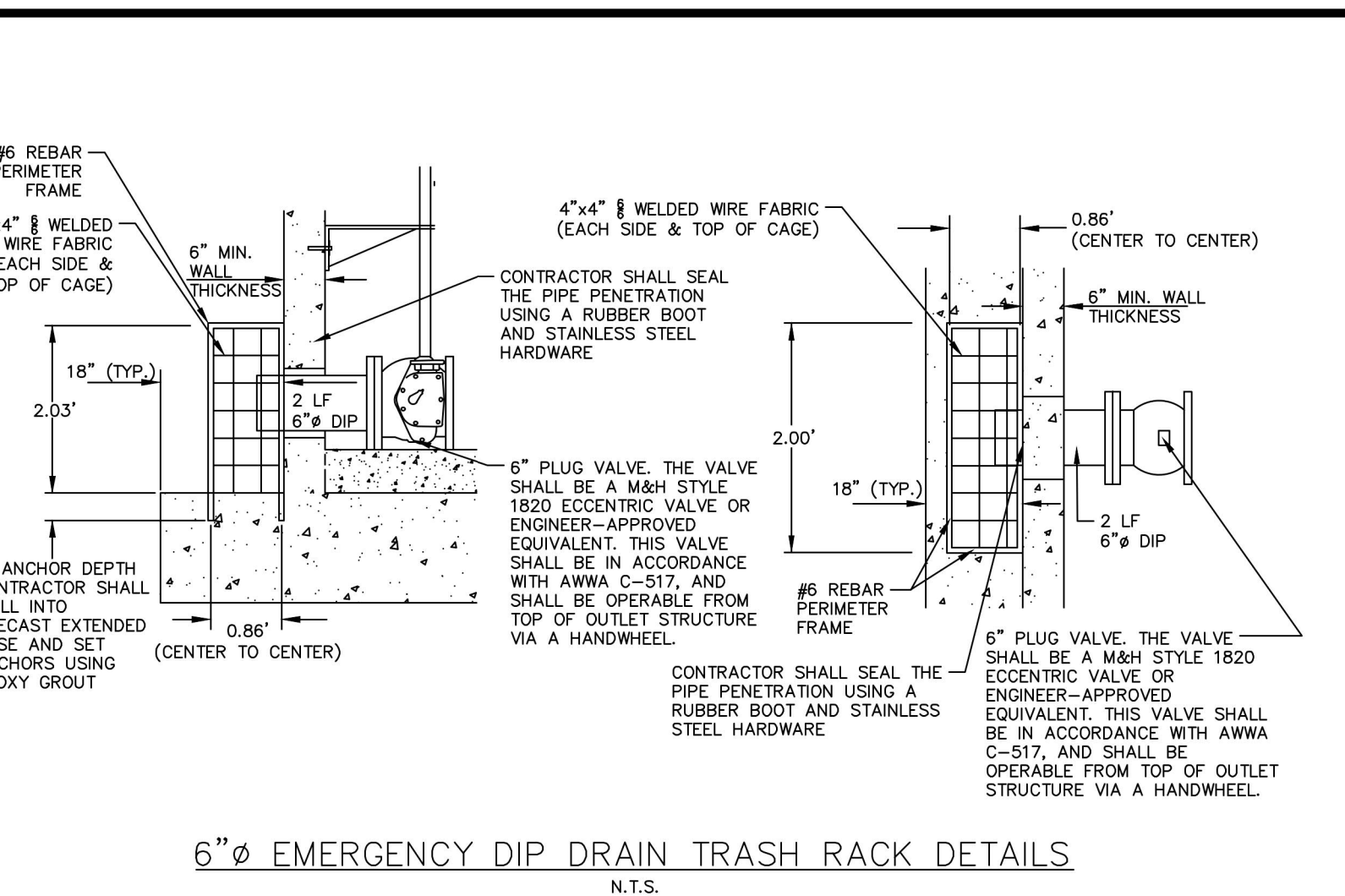
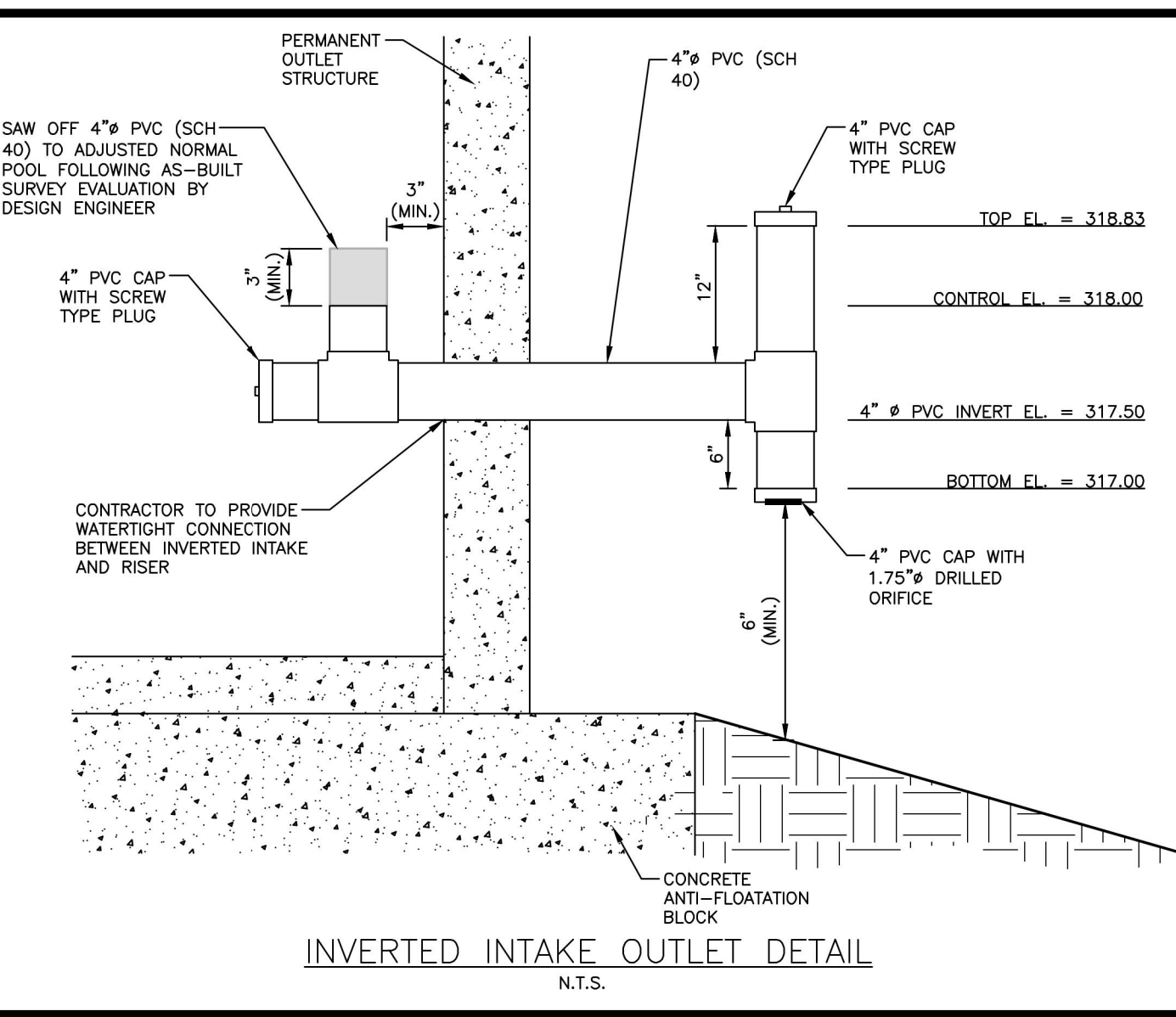
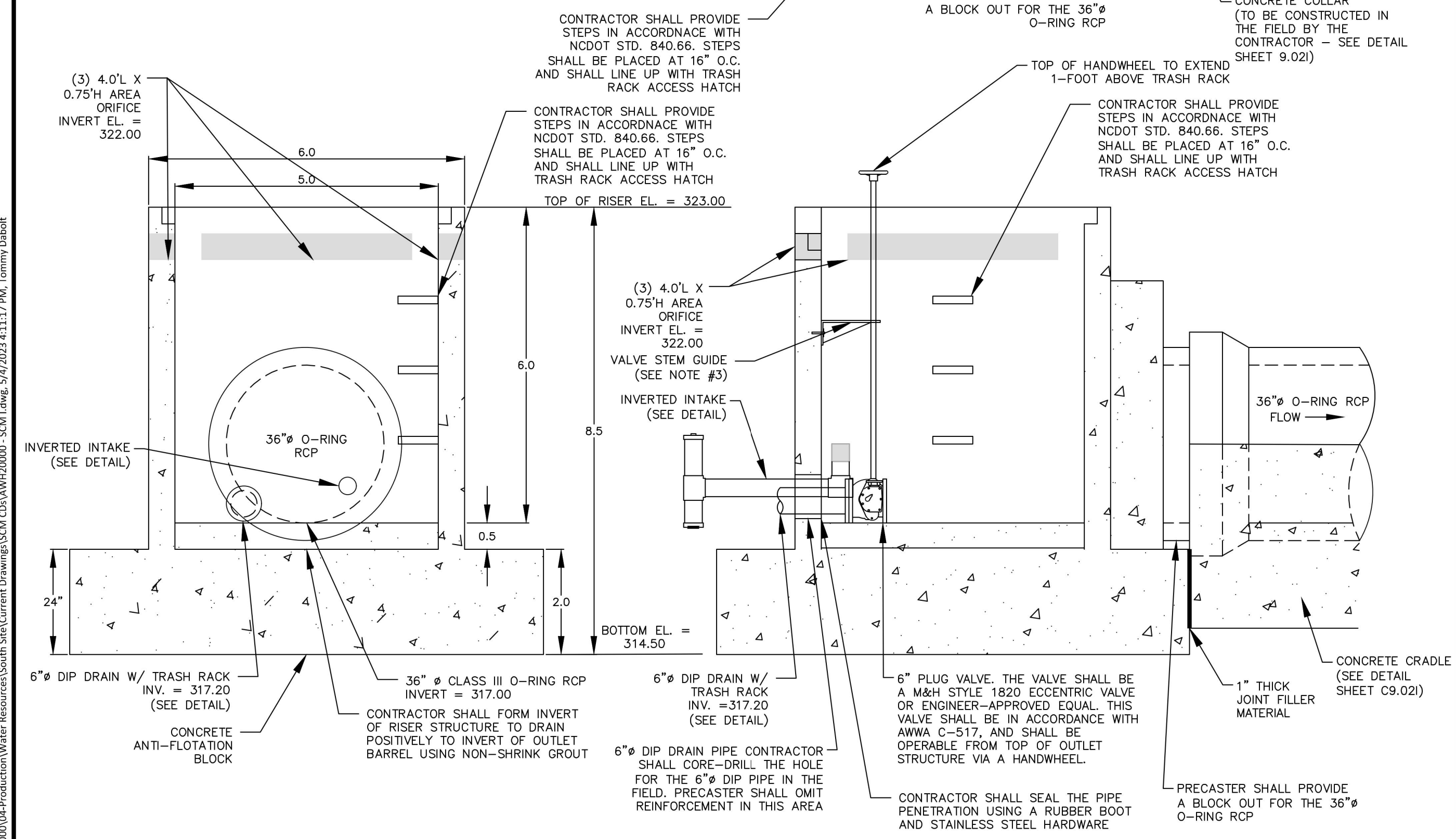
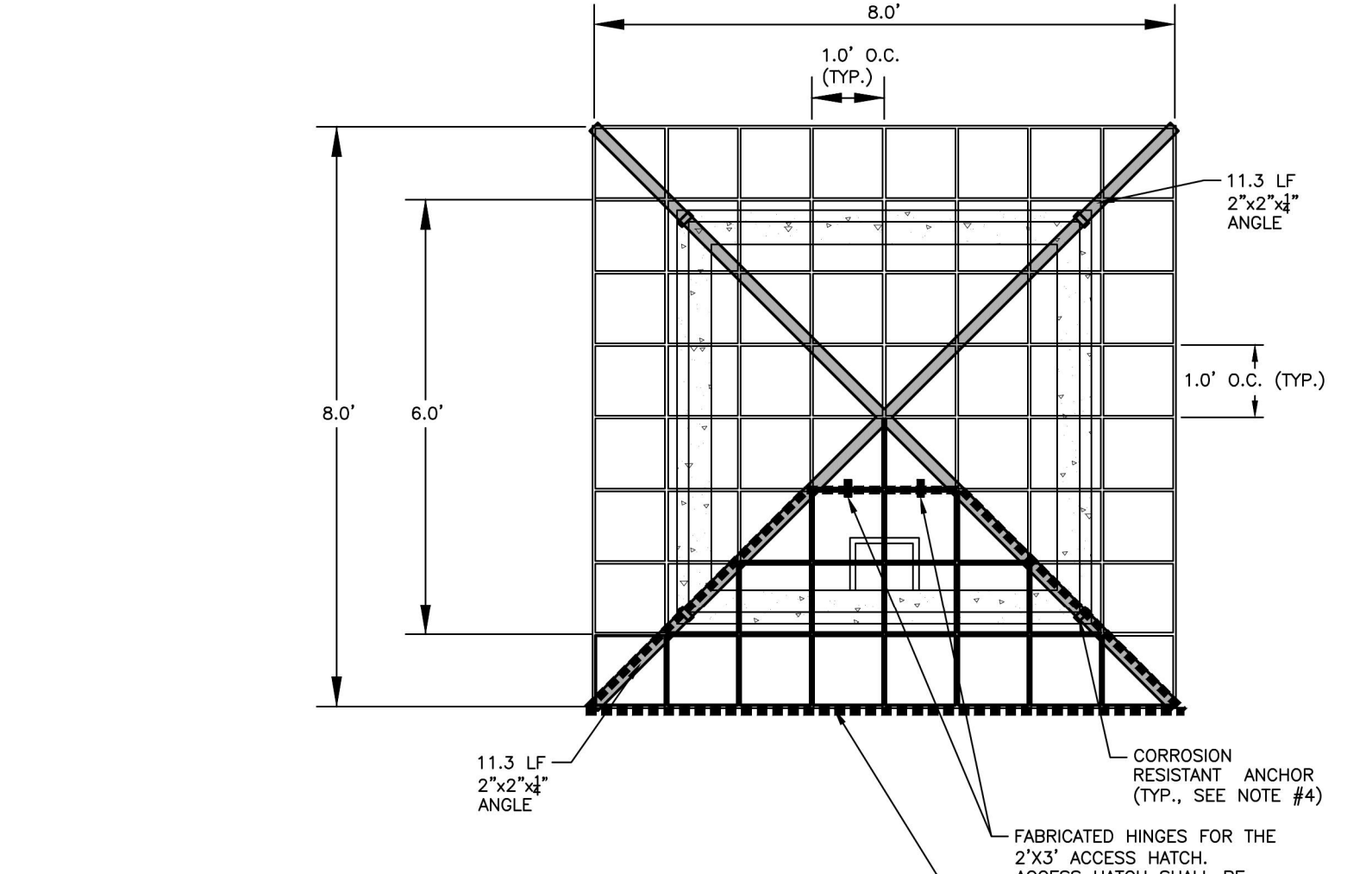
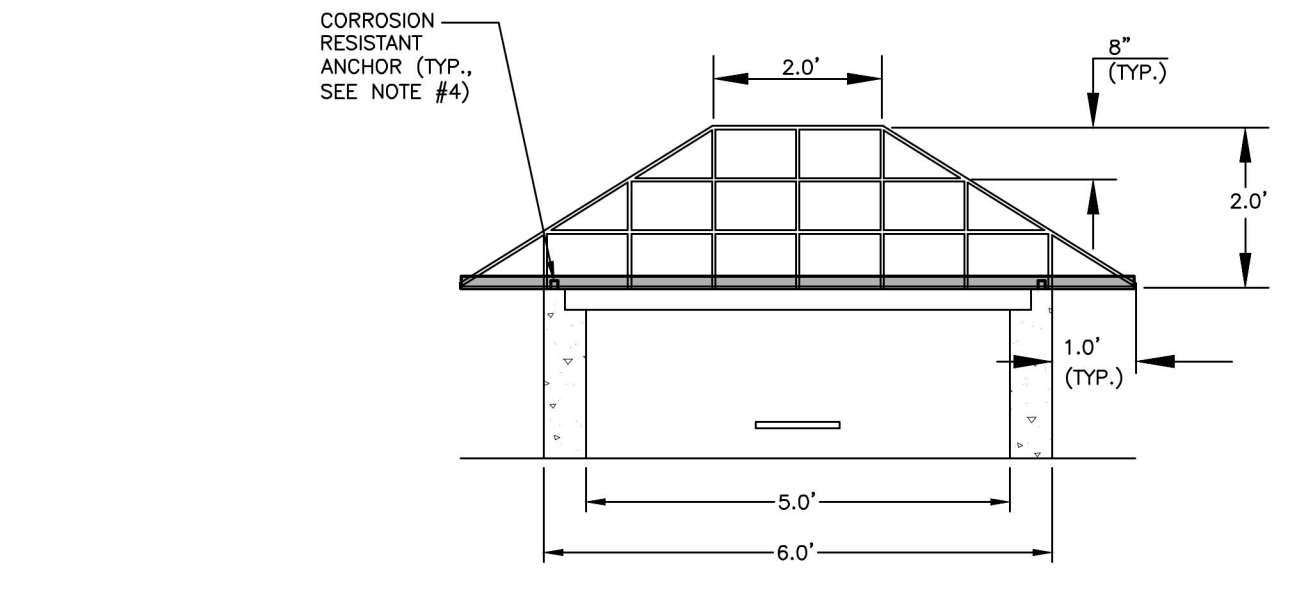
NORMAL WATER SURFACE EL. = 318.00  
36\"/>



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3. THE HOT-DIPPED, GALVANIZED 2\"/>



PERMANENT OUTLET STRUCTURE DETAILS  
N.T.S.

INVERTED INTAKE OUTLET DETAIL  
N.T.S.

6\"/>

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WAKE COUNTY, NORTH CAROLINA

CD 20-08

North Carolina Professional Seal  
Daniel C. Wieber  
5-4-2023

REVISIONS  
NO. DATE

PLAN INFORMATION  
PROJECT NO. AWH-20000  
FILENAME AWH20000 - SCM I  
CHECKED BY DCW  
DRAWN BY JKD  
SCALE AS SHOWN  
DATE 05.08.2023

STORMWATER CONTROL  
MEASURE 'I' DETAILS  
**C9.01I**