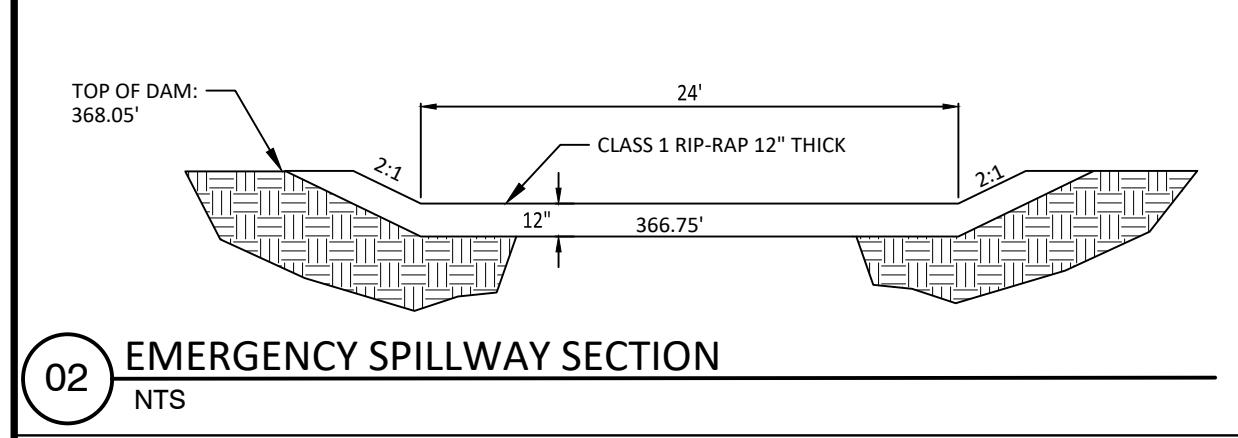
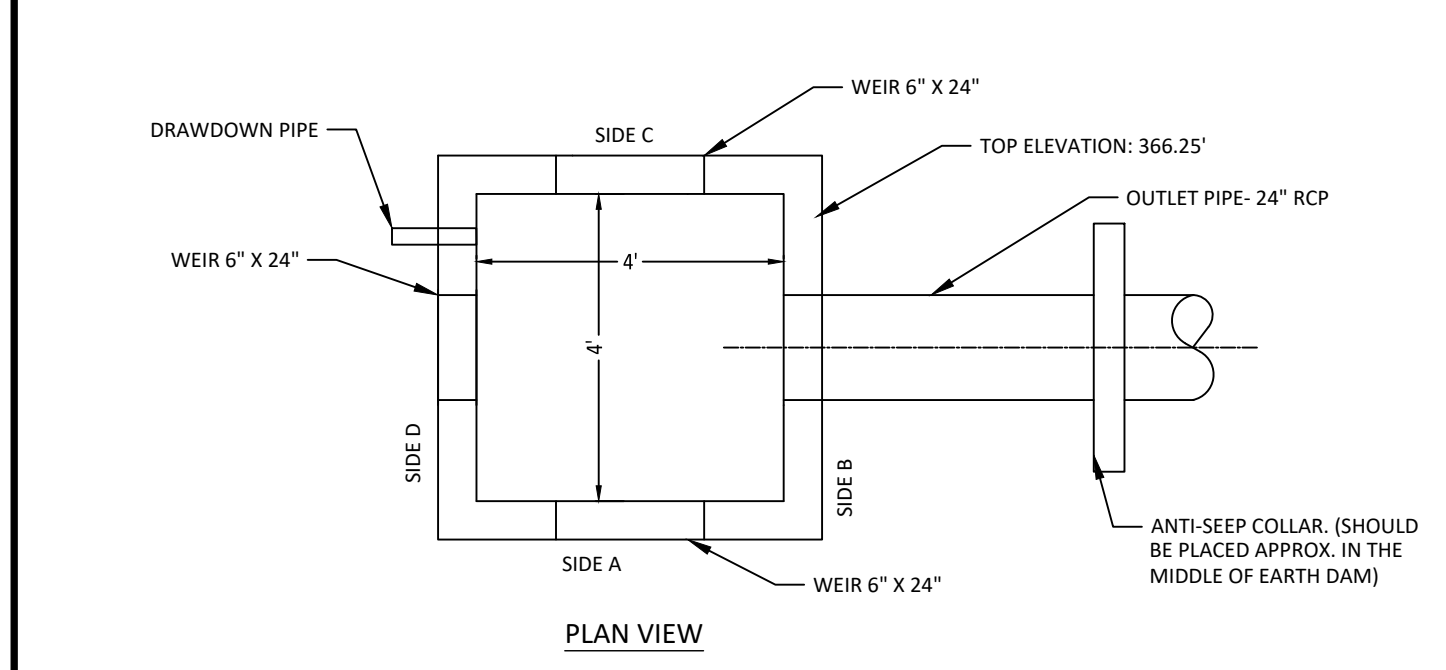


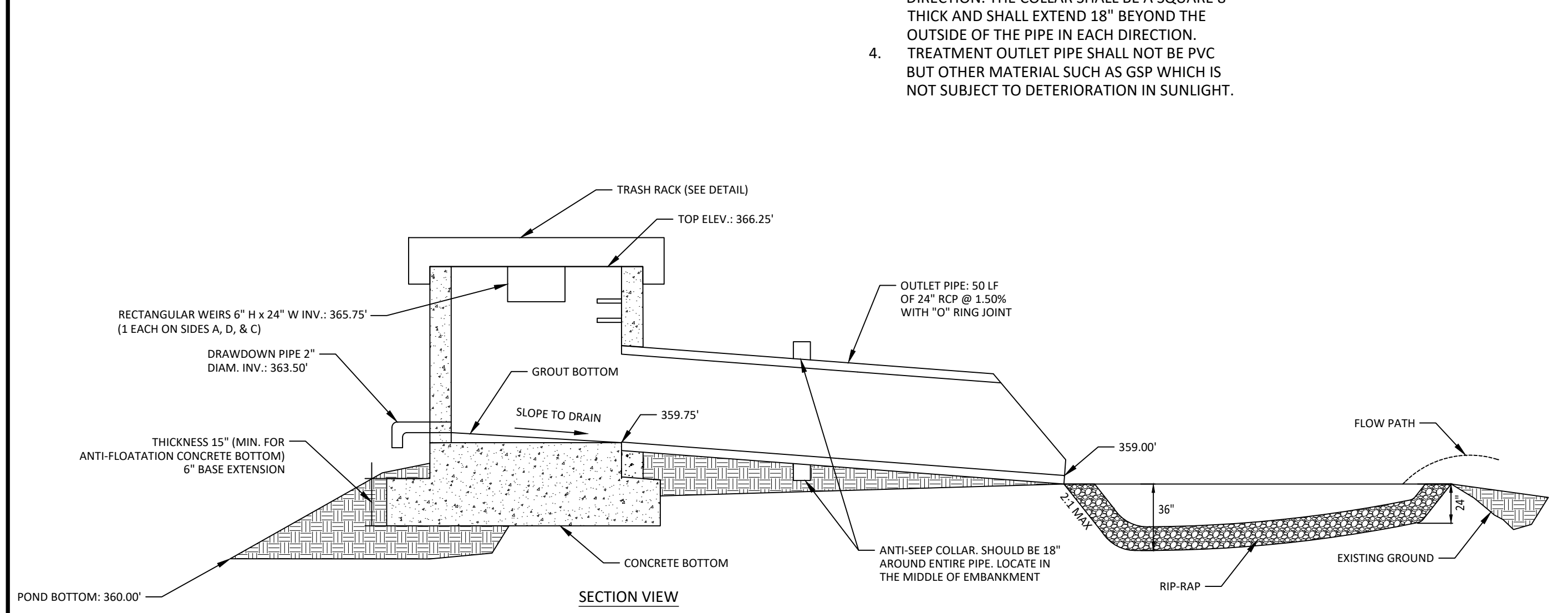
01 RETENTION POND
NTS



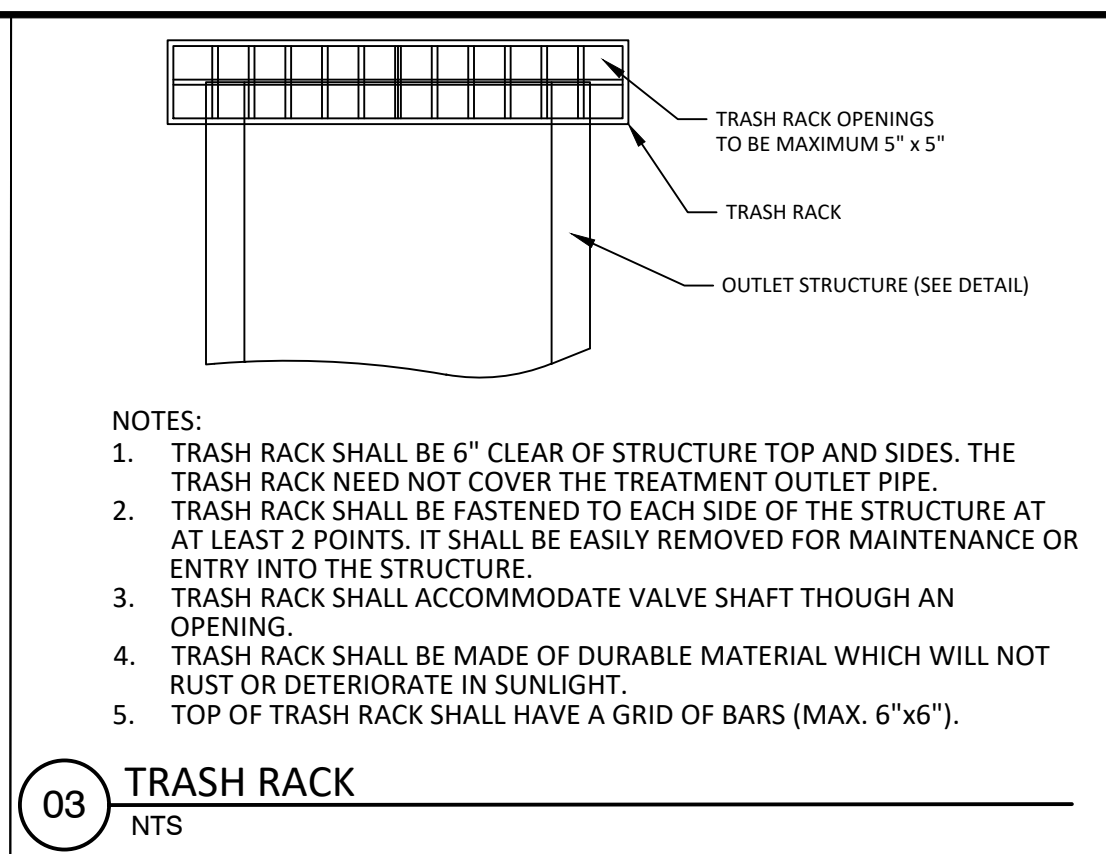
02 EMERGENCY SPILLWAY SECTION
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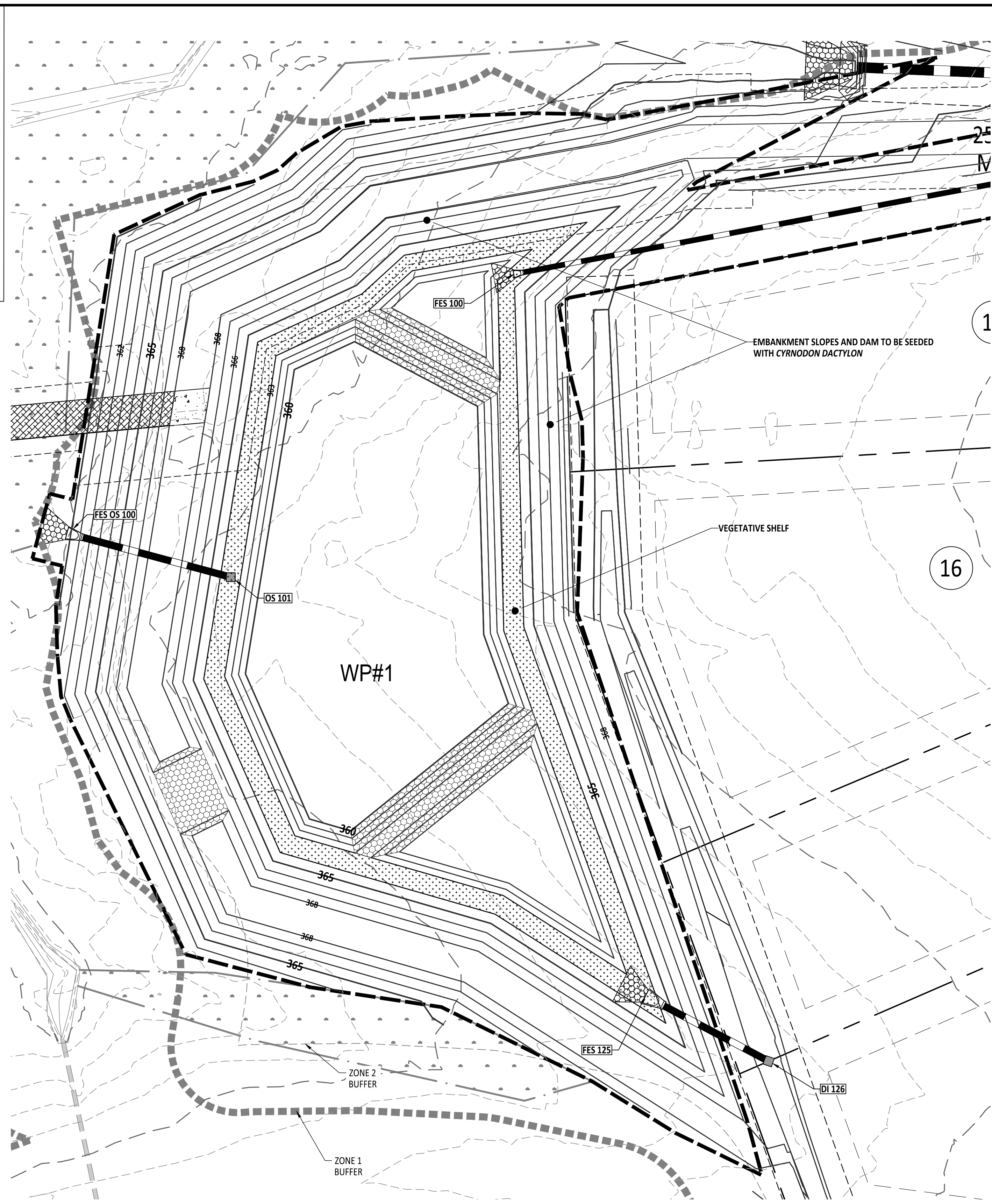
- NOTES:
 1. WALL THICKNESS AND REINFORCEMENT TO BE DETERMINED BY PRECAST CONCRETE MANUFACTURER.
 2. OUTLET STRUCTURE ELEVATIONS SHOWN ON THE DETAILS ON THIS SHEET ARE CRITICAL AND MUST BE WITHIN 0.02' OF THAT SHOWN. IF OUTLET STRUCTURES ARE PRE-CAST OFF-SITE, THE HOLE FOR THE OUTLET PIPE SHALL BE ENLARGED TO ALLOW UP TO 0.3' OF VERTICAL MOVEMENT. WHEN INSTALLED, THE EXCESS OPENING SHALL BE FILLED WITH GROUT.
 3. OUTLET PIPES SHALL HAVE AN ANTI-SEEP COLLAR OF CONCRETE LOCATED APPROXIMATELY UNDER THE MIDDLE OF THE DAM IN WHICH IT IS LOCATED. IT SHALL CONSIST OF CONCRETE POURED AROUND THE PIPE IN A VERTICAL DIRECTION. THE COLLAR SHALL BE A SQUARE 8" THICK AND SHALL EXTEND 18" BEYOND THE OUTSIDE OF THE PIPE IN EACH DIRECTION. TREATMENT OUTLET PIPE SHALL NOT BE PVC BUT OTHER MATERIAL SUCH AS GSP WHICH IS NOT SUBJECT TO DETERIORATION IN SUNLIGHT.
 4.



04 OUTLET STRUCTURE #1
NTS

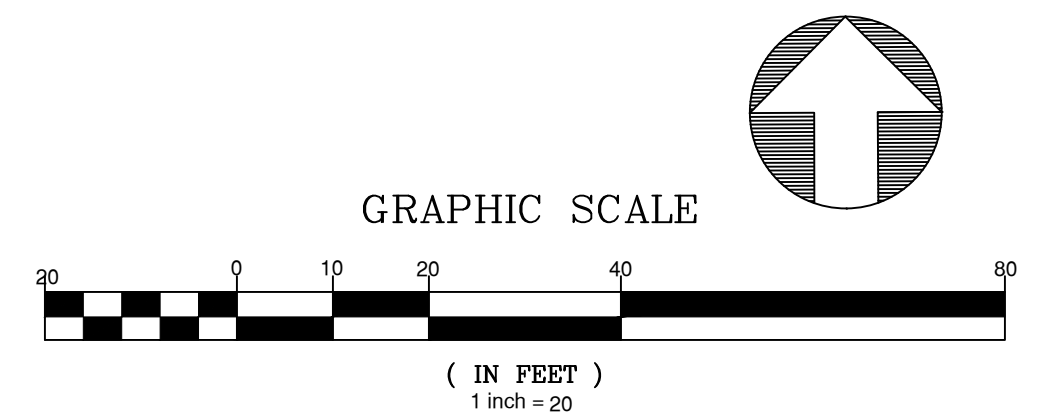


03 TRASH RACK
NTS



- PLANT LIST VEGETATED SHELF PLANT SCHEDULE:
 VEGETATED SHELF (HERB.)
 EF EUPATORIUM FISTRULOSUM JOE PYE WEED 4-6" POT @ 3' SPACING
 HC HIBISCUS COCCINEA SCARLET ROSE MALLOW 4-6" POT @ 3' SPACING
 CG CHELONE GLABRA WHITE TURTLEHEAD 4-6" POT @ 3' SPACING
 LC LOBELIA CARDINALIS CARDINAL FLOWER 4-6" POT @ 3' SPACING

LANDSCAPE PLAN:
 VEGETATED SHELF= 3,503 sf (USE 876 PLANTS FROM LIST ABOVE)
 USE EQUAL NUMBER OF PLANTS FROM LIST ABOVE
 CALCULATION: 50 PLANTS PER 200 SF



NO.	DATE	REVISION:
1	02/25/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

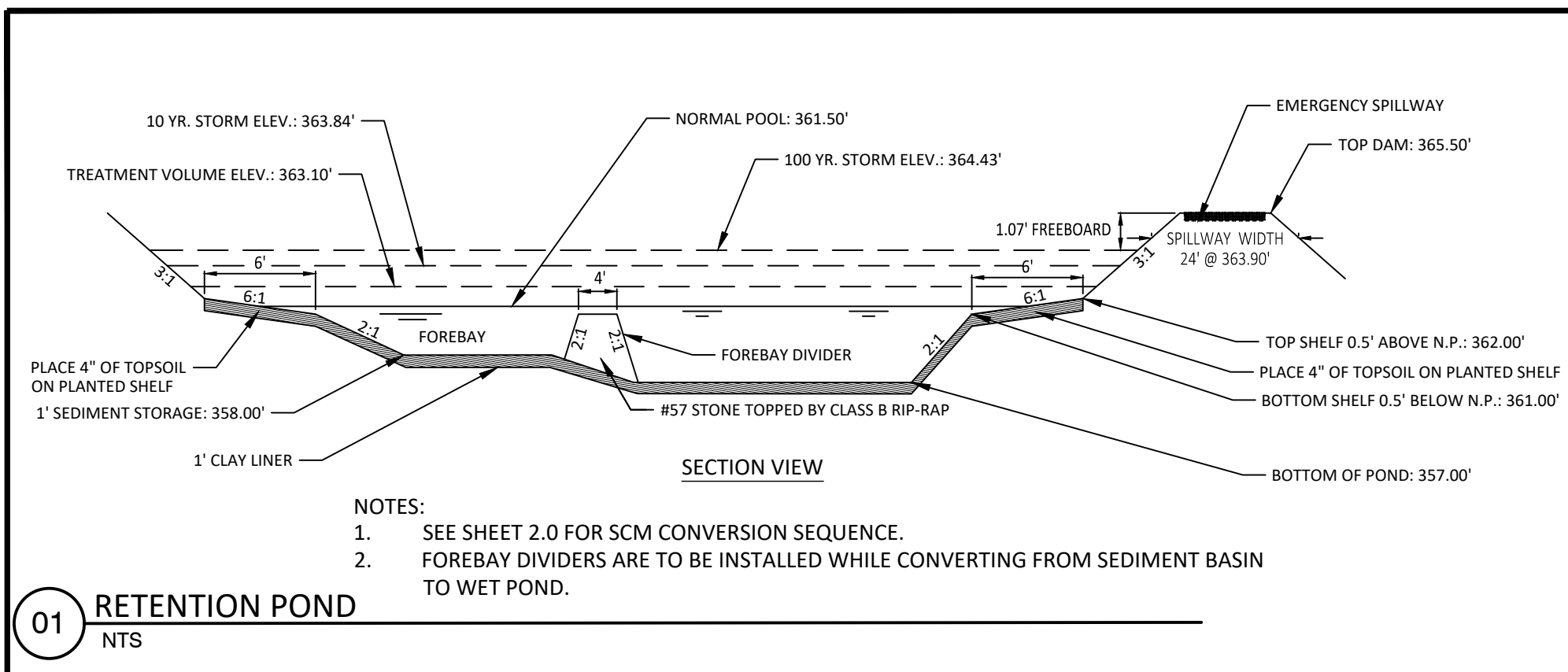
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 THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

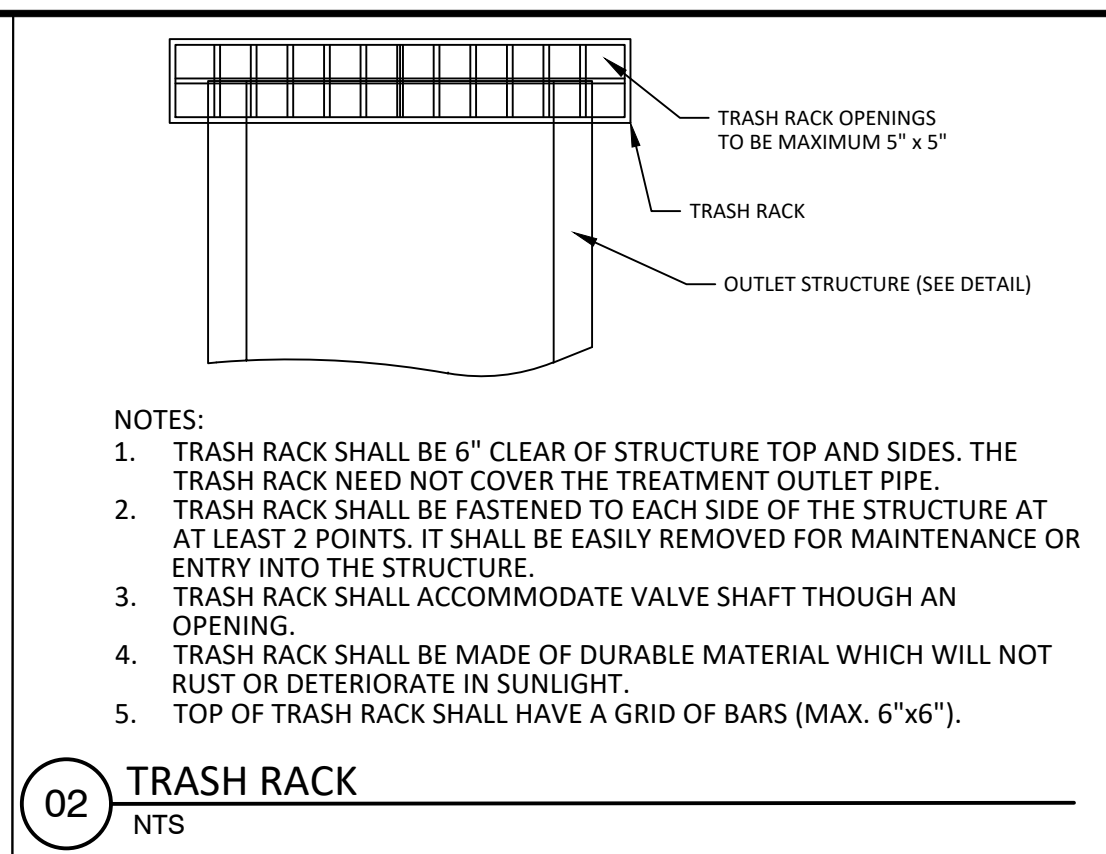
JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:
SCM 1
 SHEET NO.:
C8.0



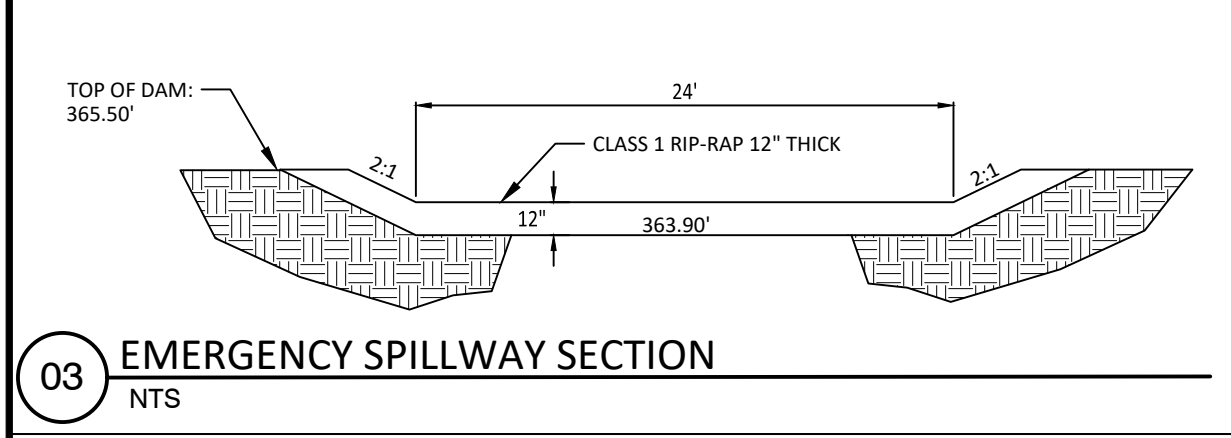
February 3, 2025
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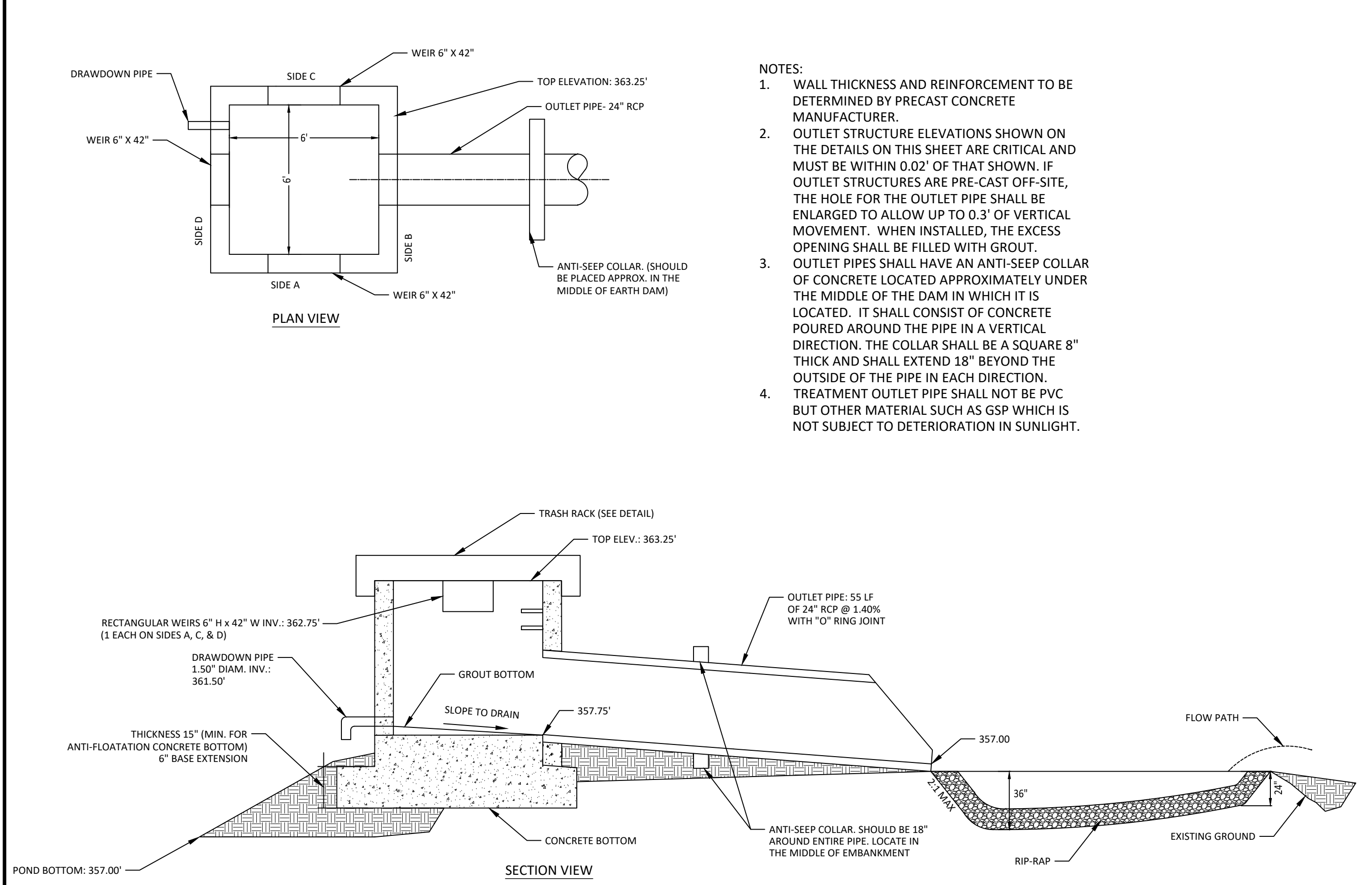
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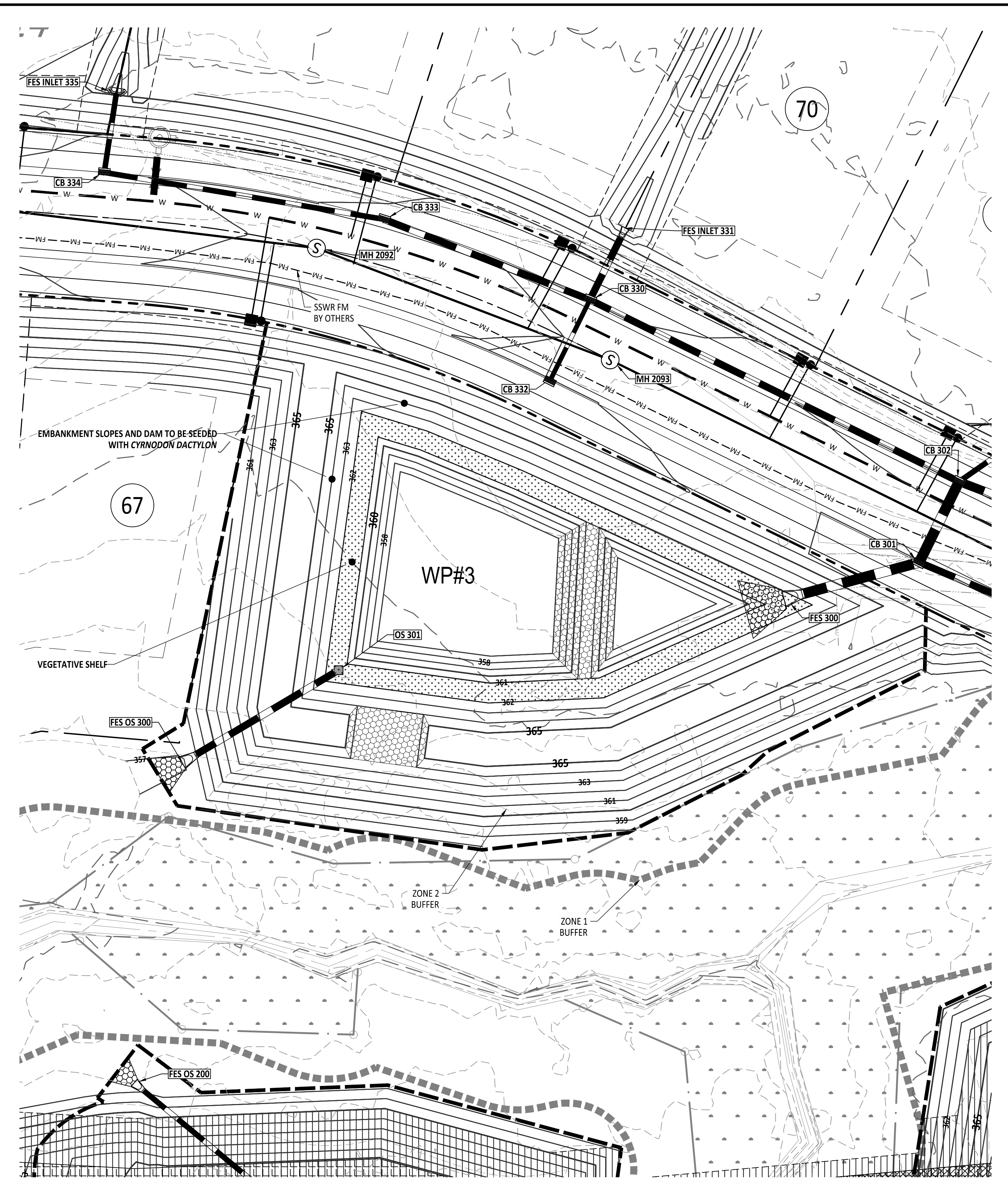
02 TRASH RACK
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03 EMERGENCY SPILLWAY SECTION
NTS



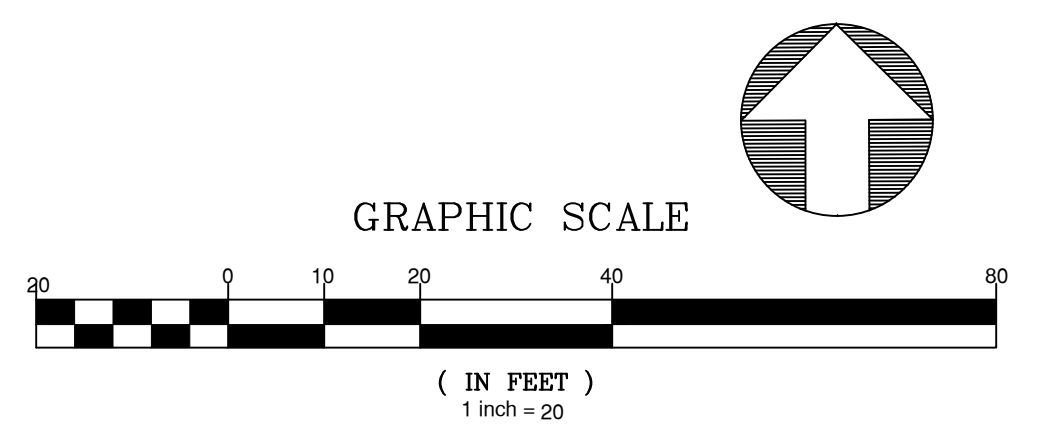
04 OUTLET STRUCTURE #3
NTS



PLANT LIST VEGETATED SHELF PLANT SCHEDULE:

VEGETATED SHELF (HERB.)	PLANT	POT SIZE	SPACING
EF	EUPATORIUM FISTRULOSUM	4-6" POT	@ 3' SPACING
HC	HIBISCUS COCCINEA	4-6" POT	@ 3' SPACING
CG	CHELONE GLABRA	4-6" POT	@ 3' SPACING
LC	LOBELIA CARDINALIS	4-6" POT	@ 3' SPACING
	JOE PYE WEED	4-6" POT	@ 3' SPACING
	SCARLET ROSE MALLOW	4-6" POT	@ 3' SPACING
	WHITE TURTLEHEAD	4-6" POT	@ 3' SPACING
	CARDINAL FLOWER	4-6" POT	@ 3' SPACING

LANDSCAPE PLAN:
 VEGETATED SHELF= 2,109 SF (USE 528 PLANTS FROM LIST ABOVE)
 USE EQUAL NUMBER OF PLANTS FROM LIST ABOVE
 CALCULATION: 50 PLANTS PER 200 SF



NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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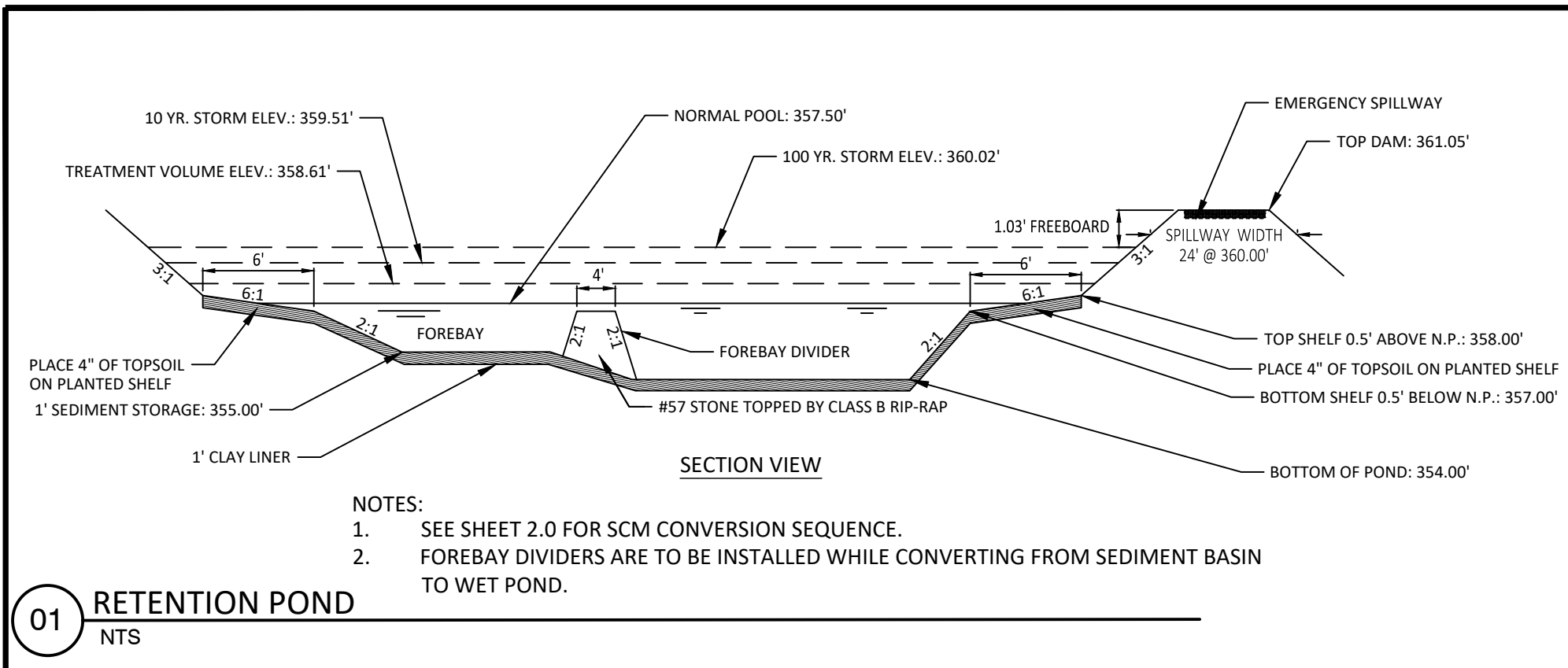
THE PRESERVE
 AT
 MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:

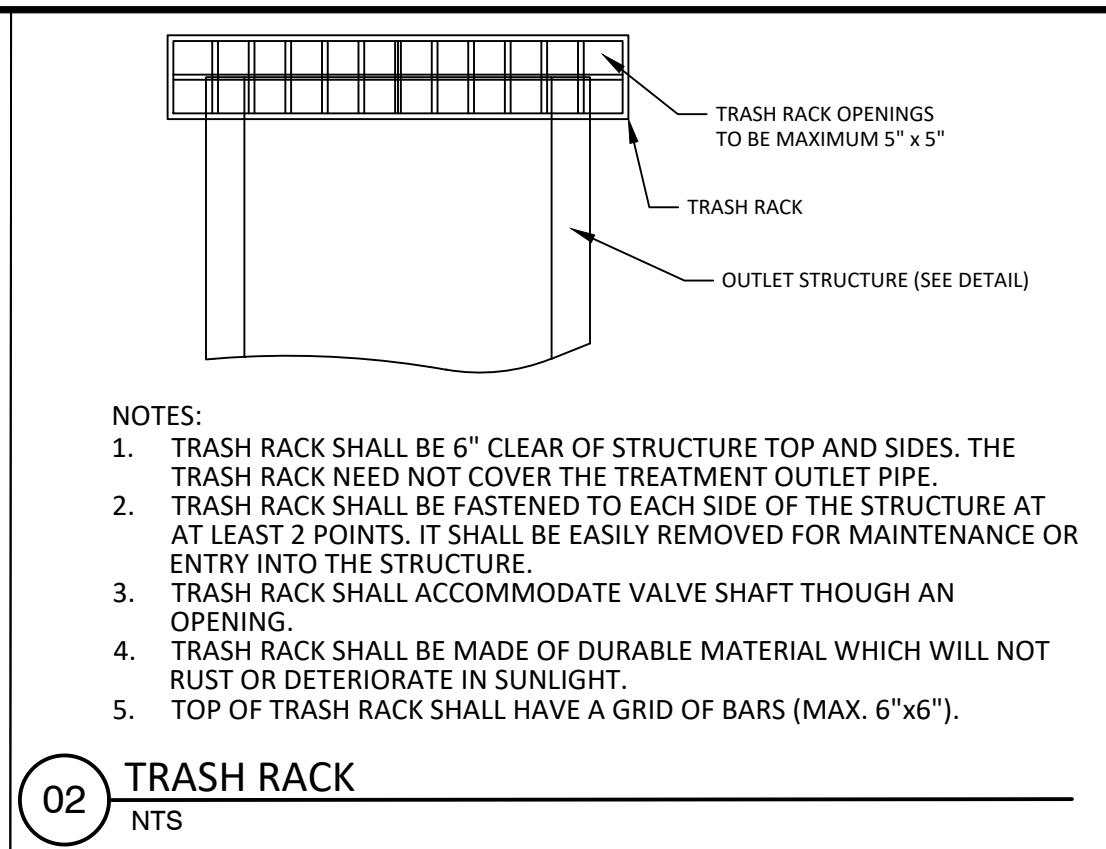
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 SHEET NO.:
 C8.2



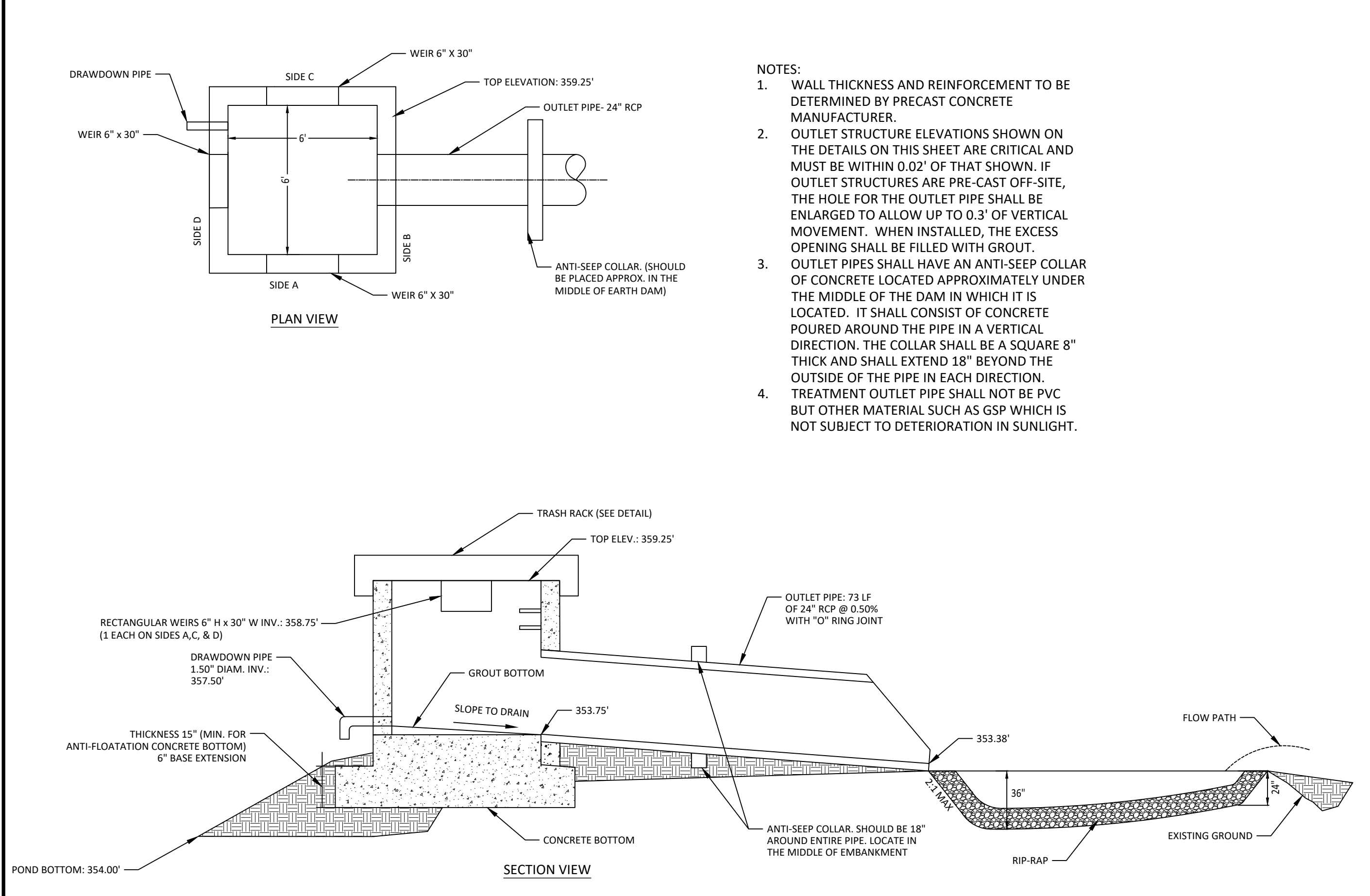
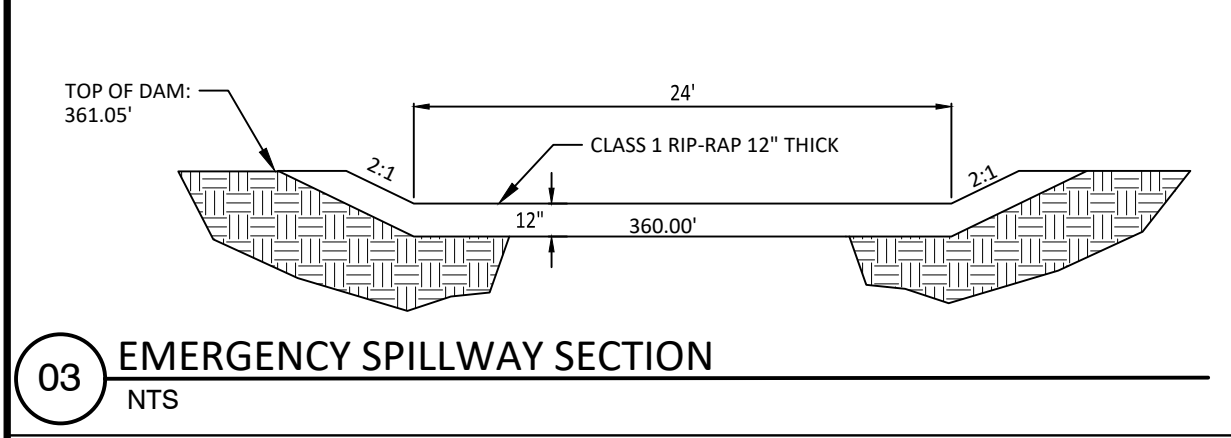
February 3, 2025
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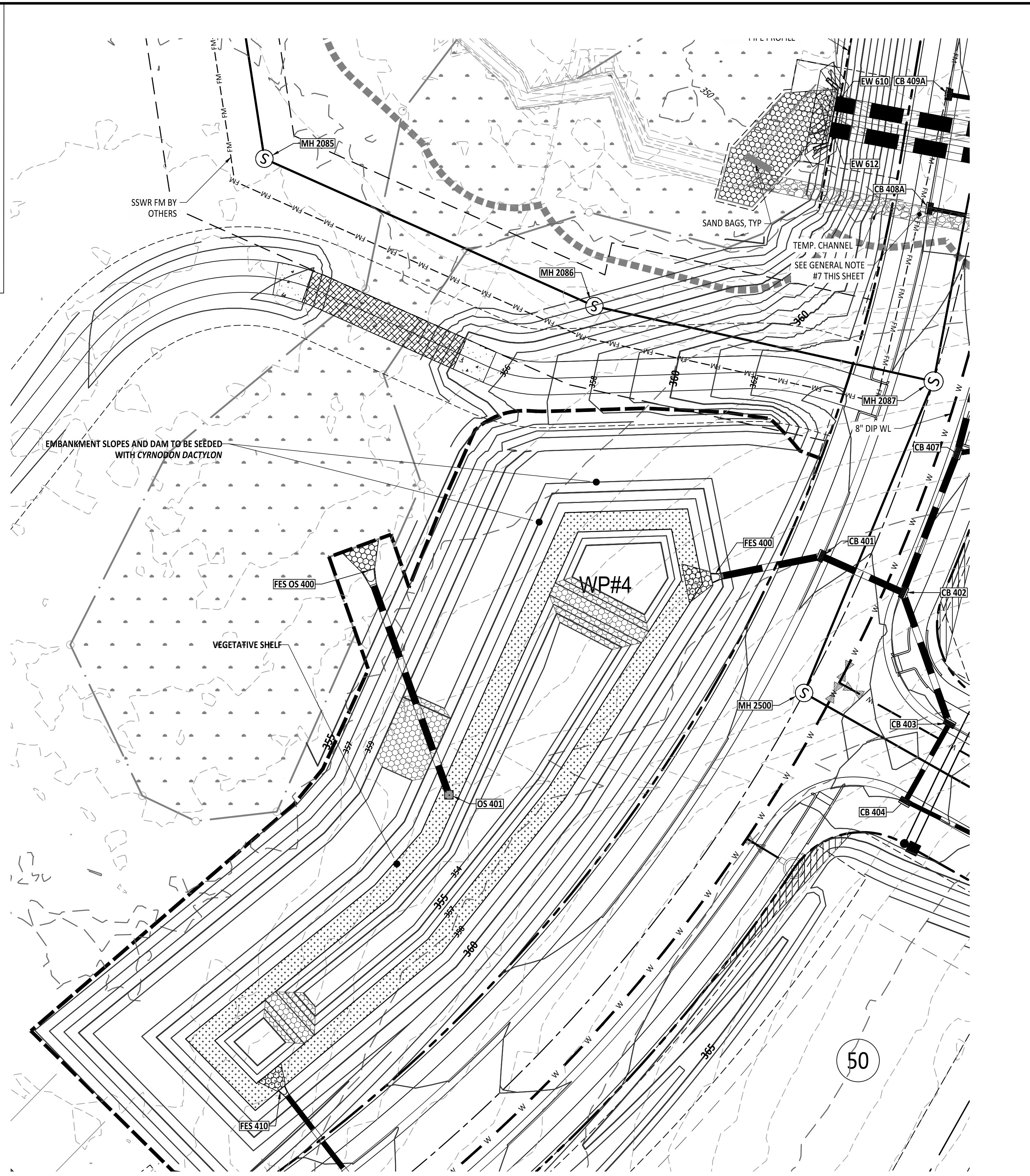
01 RETENTION POND
NTS



02 TRASH RACK
NTS



04 OUTLET STRUCTURE #4
NTS



PLANT LIST VEGETATED SHELF PLANT SCHEDULE:
VEGETATED SHELF (HERB.)
EF EUPATORIUM FISTRULOSUM JOE PYE WEED 4-6" POT @ 3' SPACING
HC HIBISCUS COCCINEA SCARLET ROSE MALLOW 4-6" POT @ 3' SPACING
CG CHELONE GLABRA WHITE TURTLEHEAD 4-6" POT @ 3' SPACING
LC LOBELIA CARDINALIS CARDINAL FLOWER 4-6" POT @ 3' SPACING

LANDSCAPE PLAN:
VEGETATED SHELF= 2,890 SF (USE 723 PLANTS FROM LIST ABOVE)
USE EQUAL NUMBER OF PLANTS FROM LIST ABOVE
CALCULATION: 50 PLANTS PER 200 SF

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 20'

North Carolina 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:
SCM 4
SHEET NO.: C8.3

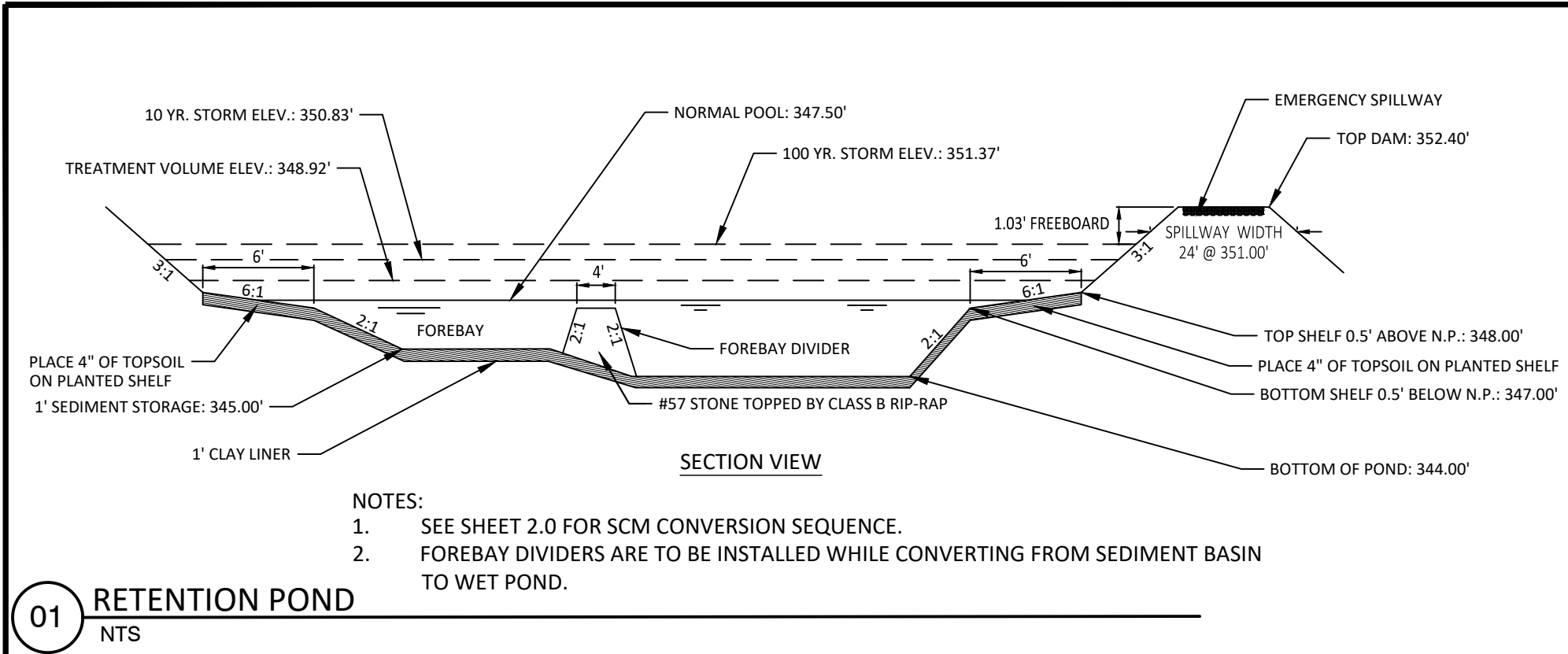
AMERICAN Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101

PROFESSIONAL ENGINEER
NORTH CAROLINA
AMERICAN ENGINEERING ASSOCIATES SOUTHEAST C-3881
DATE OF REGISTRATION: 06/15/2018
EXPIRES: 06/15/2025
KOB P. KLEIN

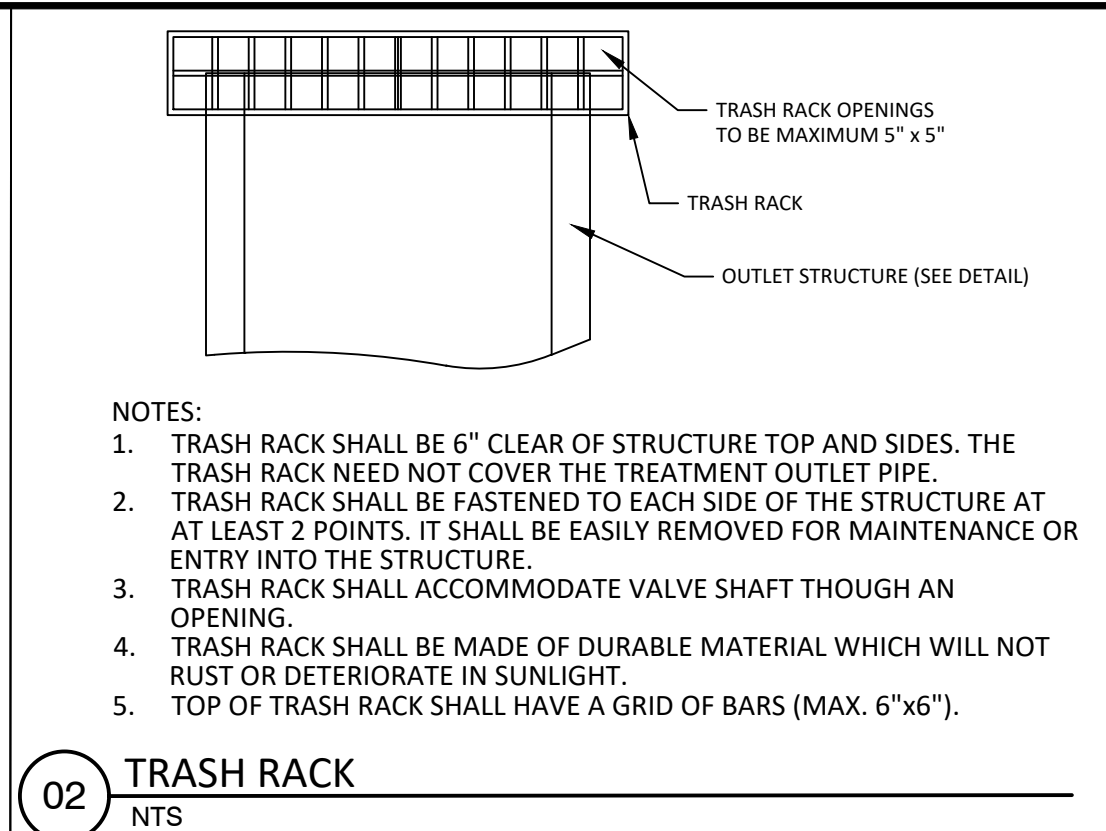
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NO. DATE DESCRIPTION
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STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

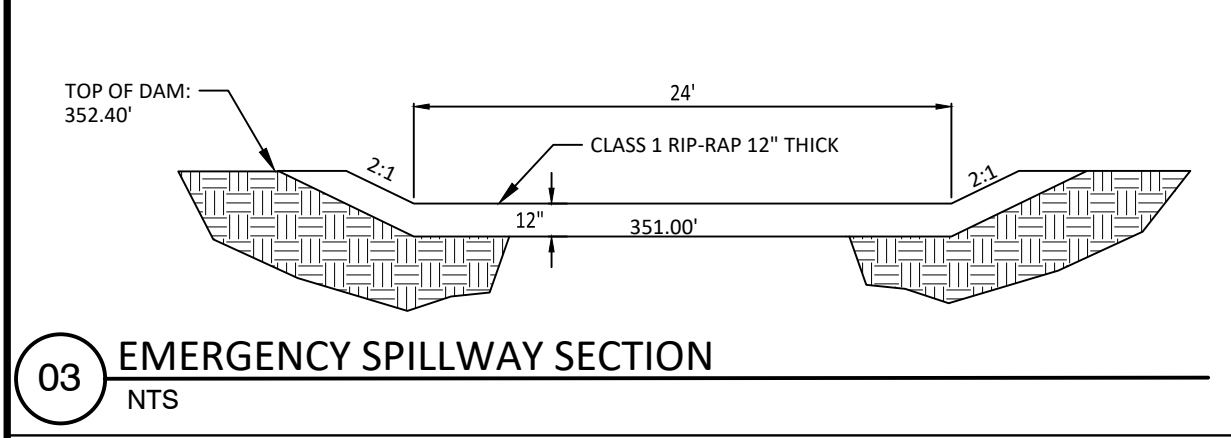
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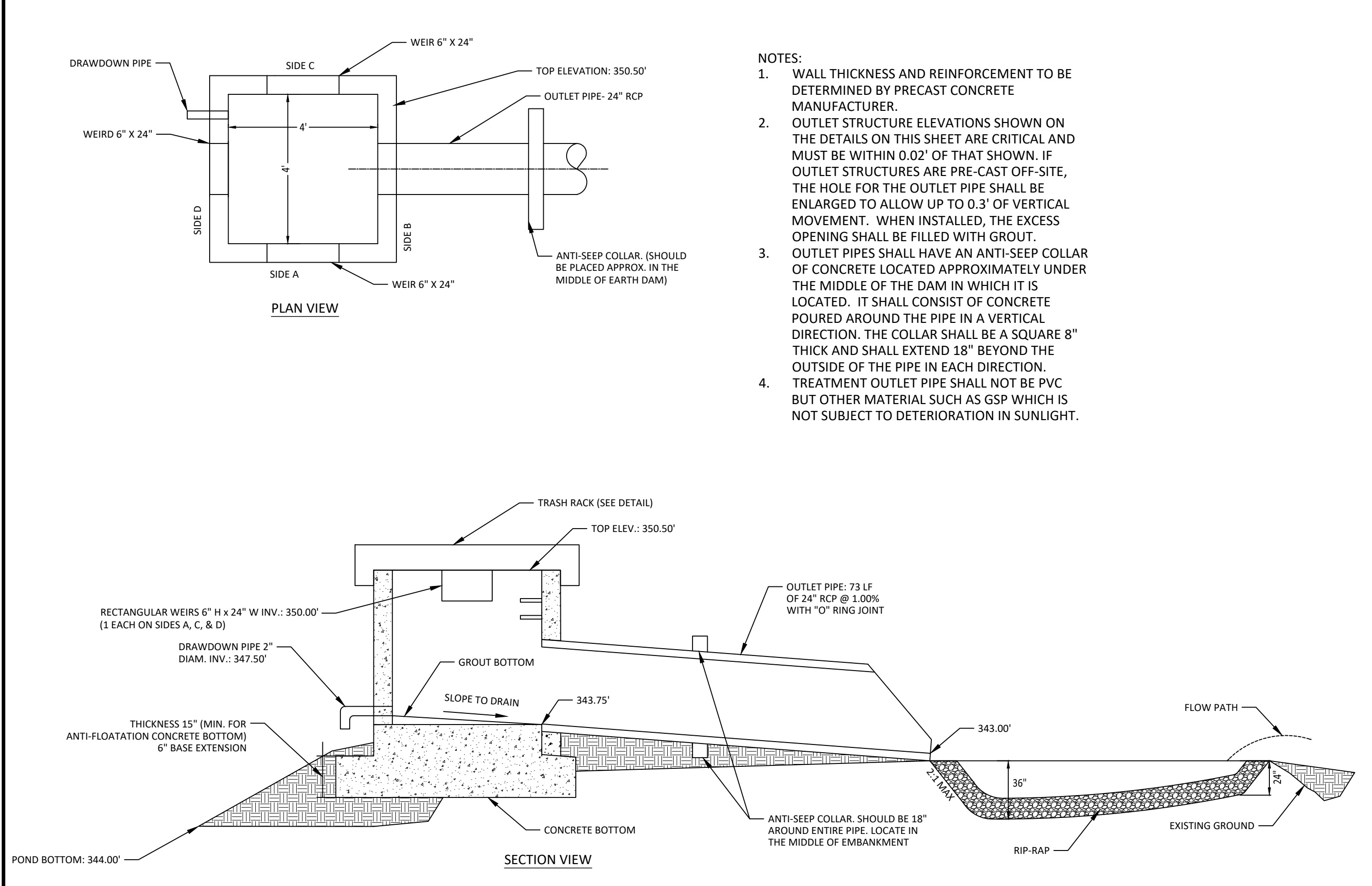
01 RETENTION POND
NTS



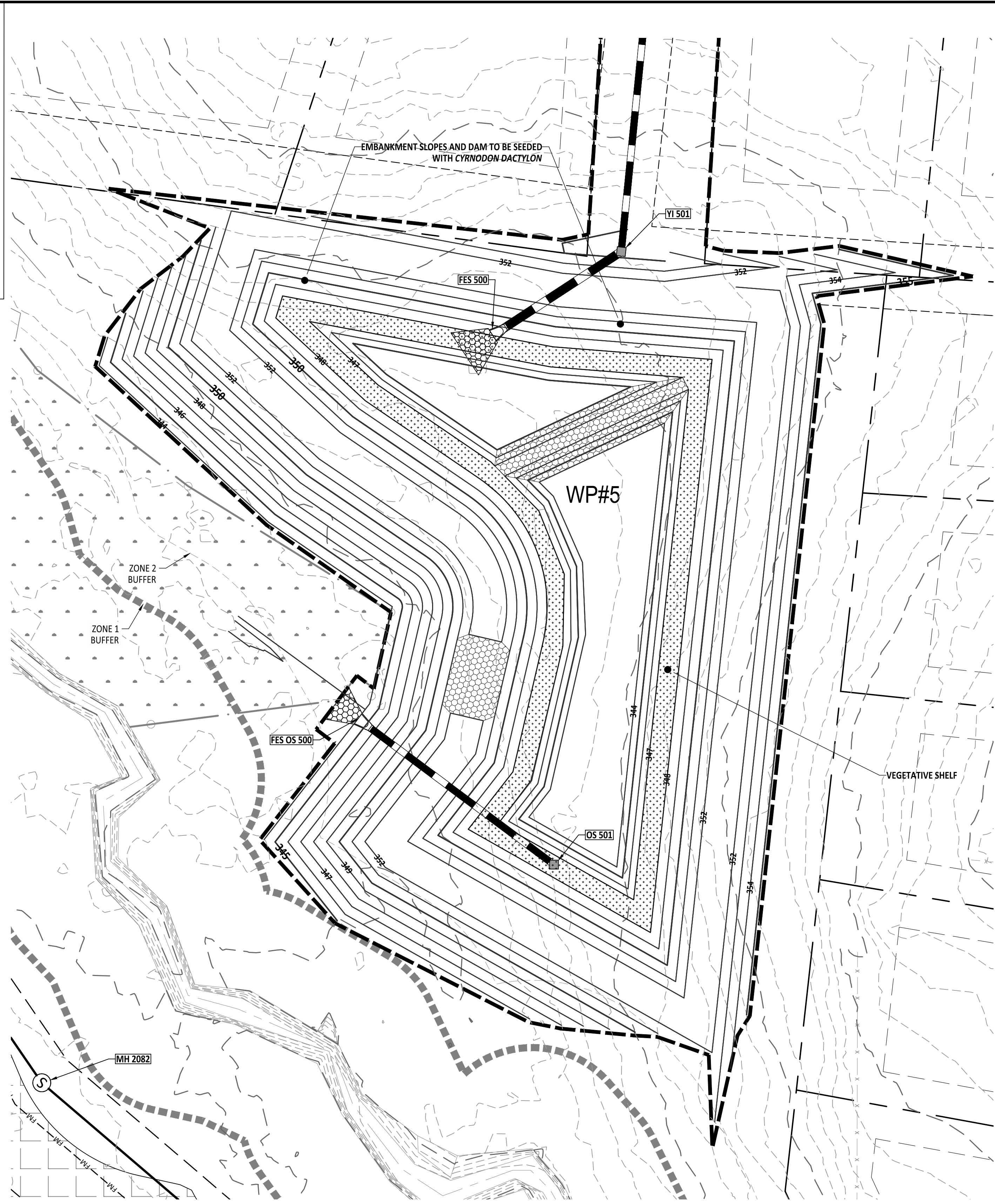
02 TRASH RACK
NTS



03 EMERGENCY SPILLWAY SECTION
NTS

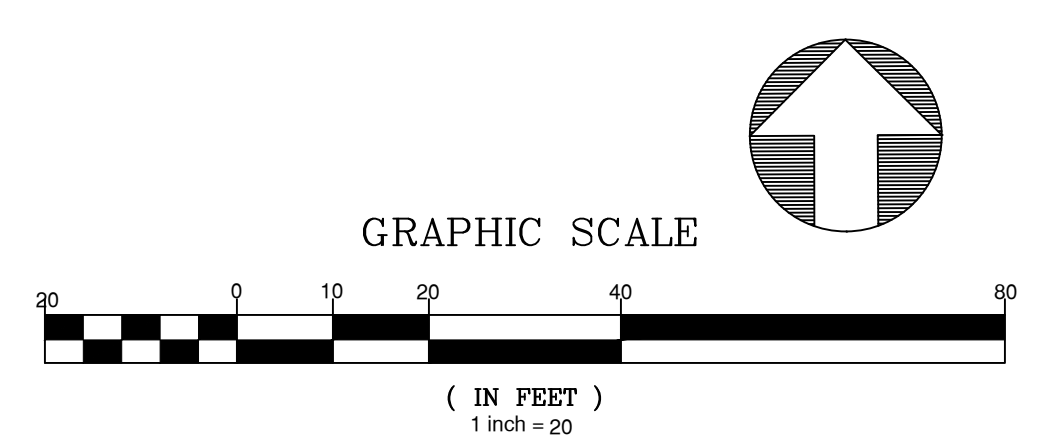


04 OUTLET STRUCTURE #5
NTS



PLANT LIST VEGETATED SHELF PLANT SCHEDULE:
 VEGETATED SHELF (HERB.)
 EF EUPATORIUM FISTRULOSUM JOE PYE WEED 4-6" POT @ 3' SPACING
 HC HIBISCUS COCCINEA SCARLET ROSE MALLOW 4-6" POT @ 3' SPACING
 CG CHELONE GLABRA WHITE TURTLEHEAD 4-6" POT @ 3' SPACING
 LC LOBELIA CARDINALIS CARDINAL FLOWER 4-6" POT @ 3' SPACING

LANDSCAPE PLAN:
 VEGETATED SHELF = 3172 sf (USE 793 PLANTS FROM LIST ABOVE)
 USE EQUAL NUMBER OF PLANTS FROM LIST ABOVE
 CALCULATION: 50 PLANTS PER 200 SF



NO.	DATE	REVISION
1	02/25/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE
 AT
 MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:
SCM 5
 SHEET NO.:
C8.4



February 3, 2025
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NO.	DATE	REVISION
1	02/25/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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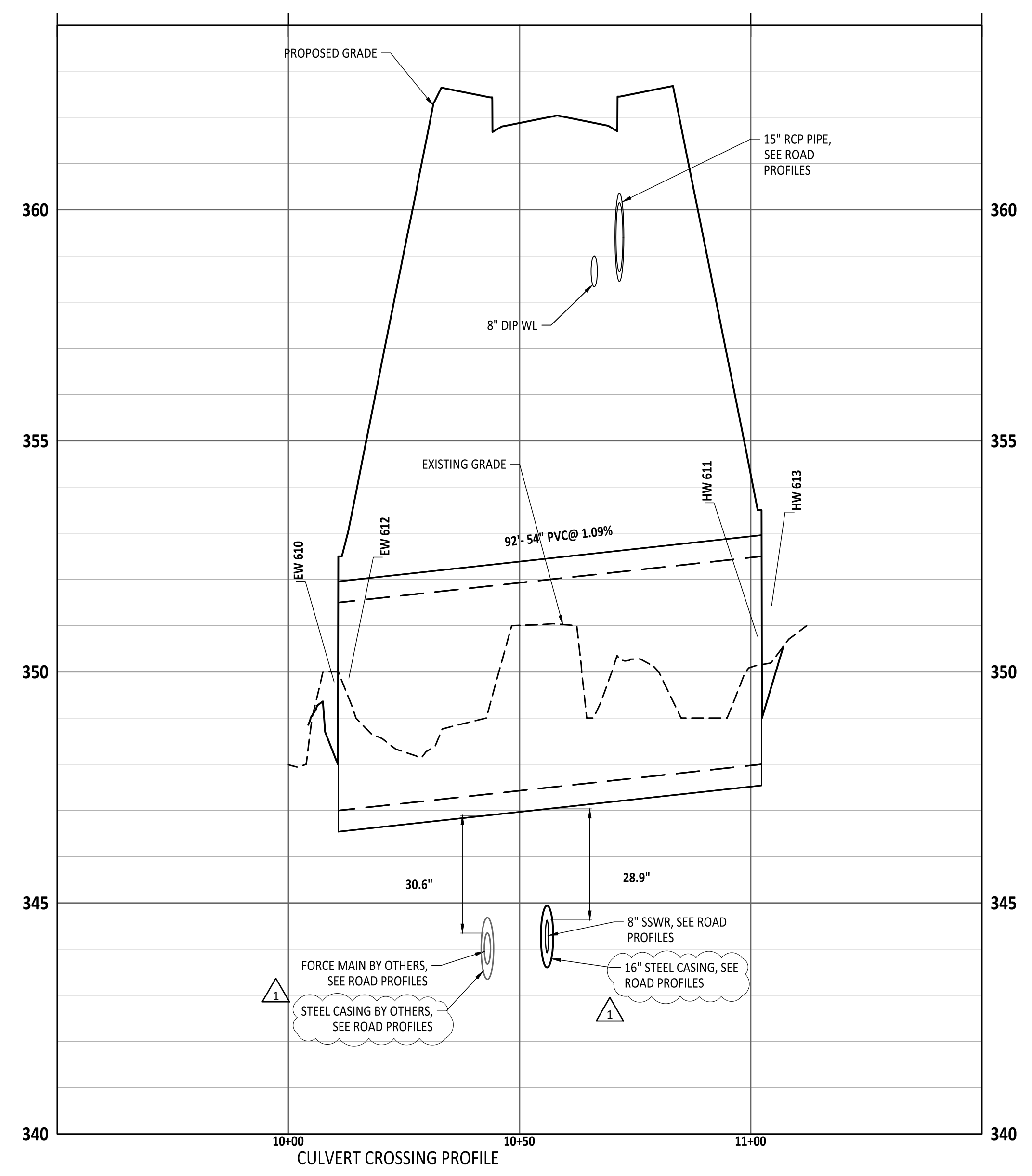
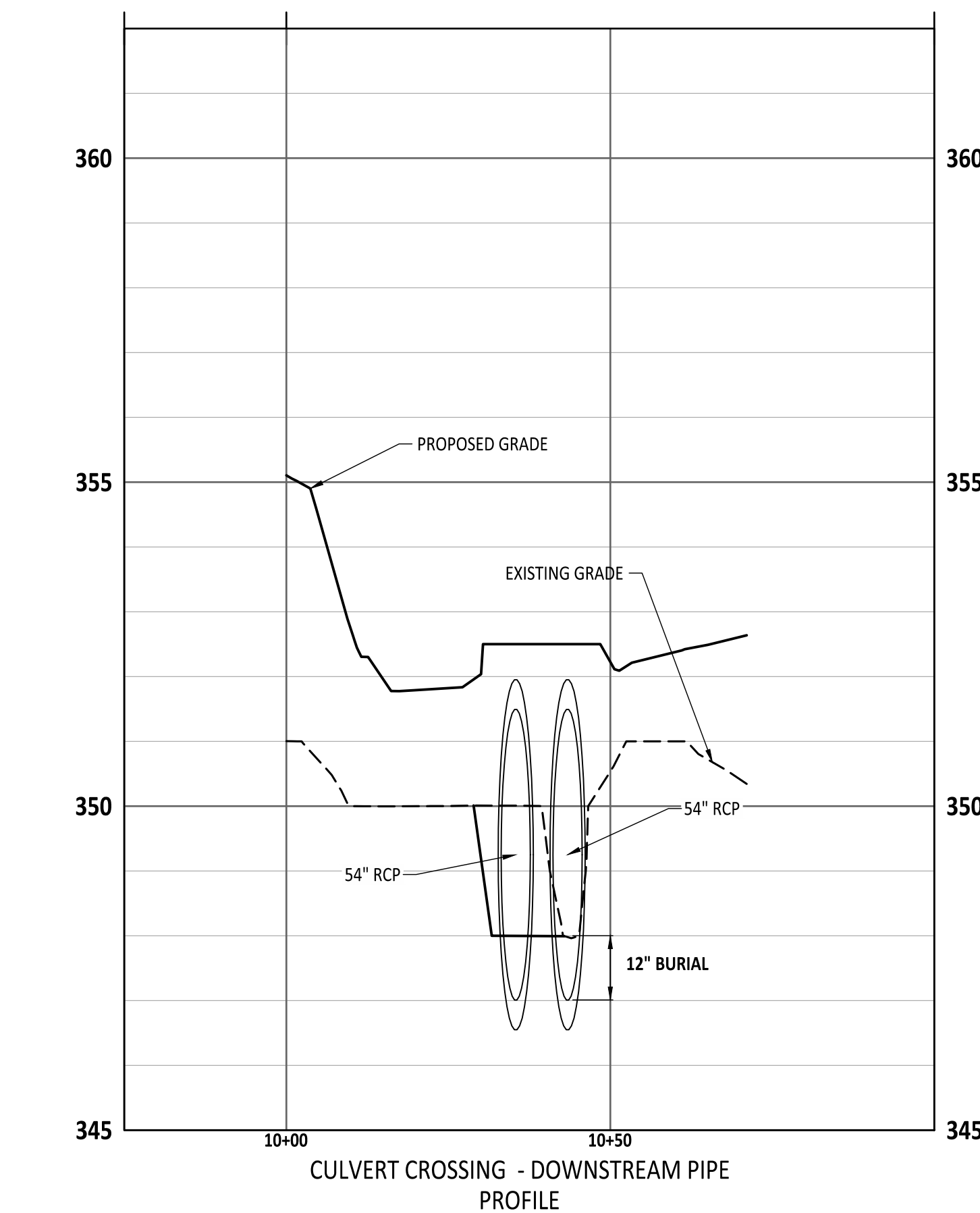
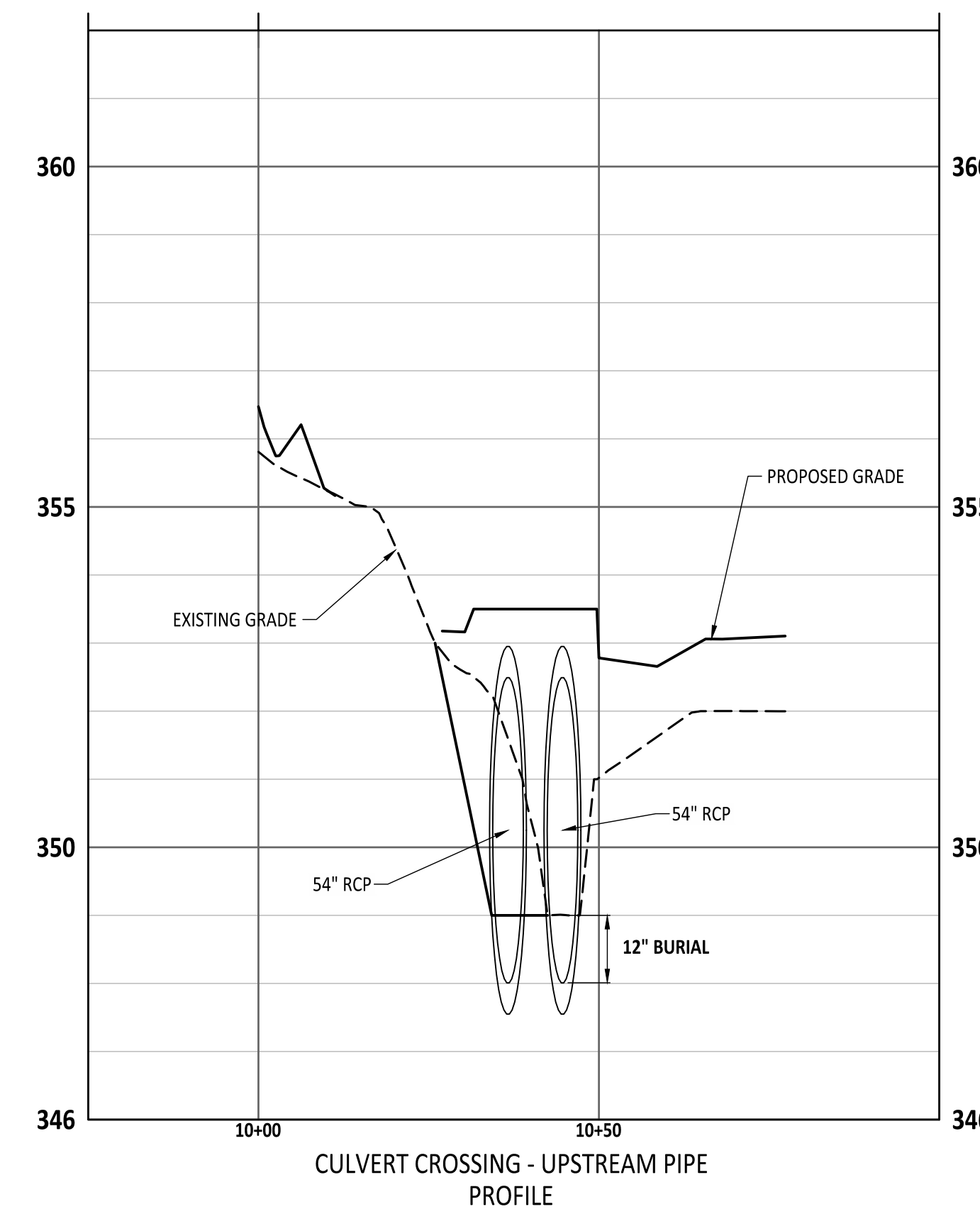
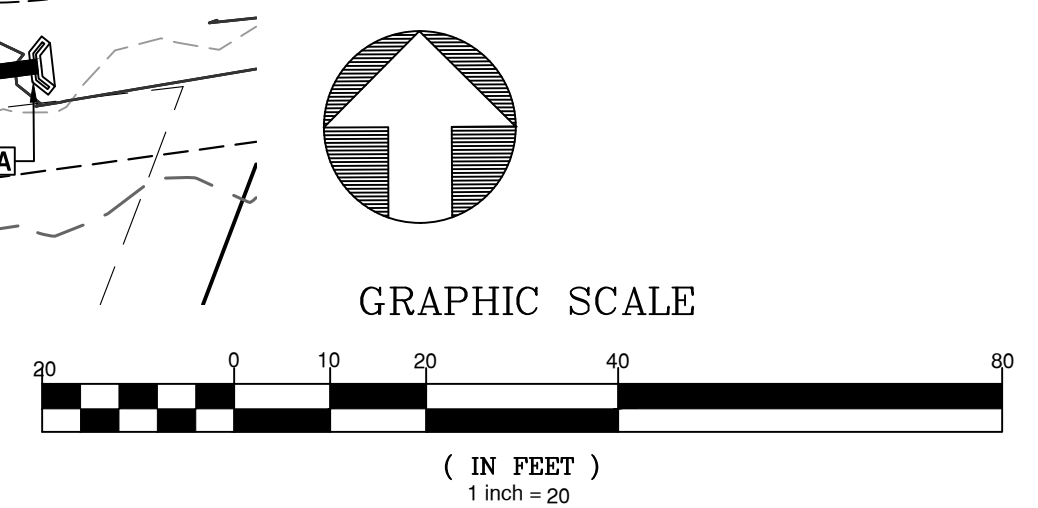
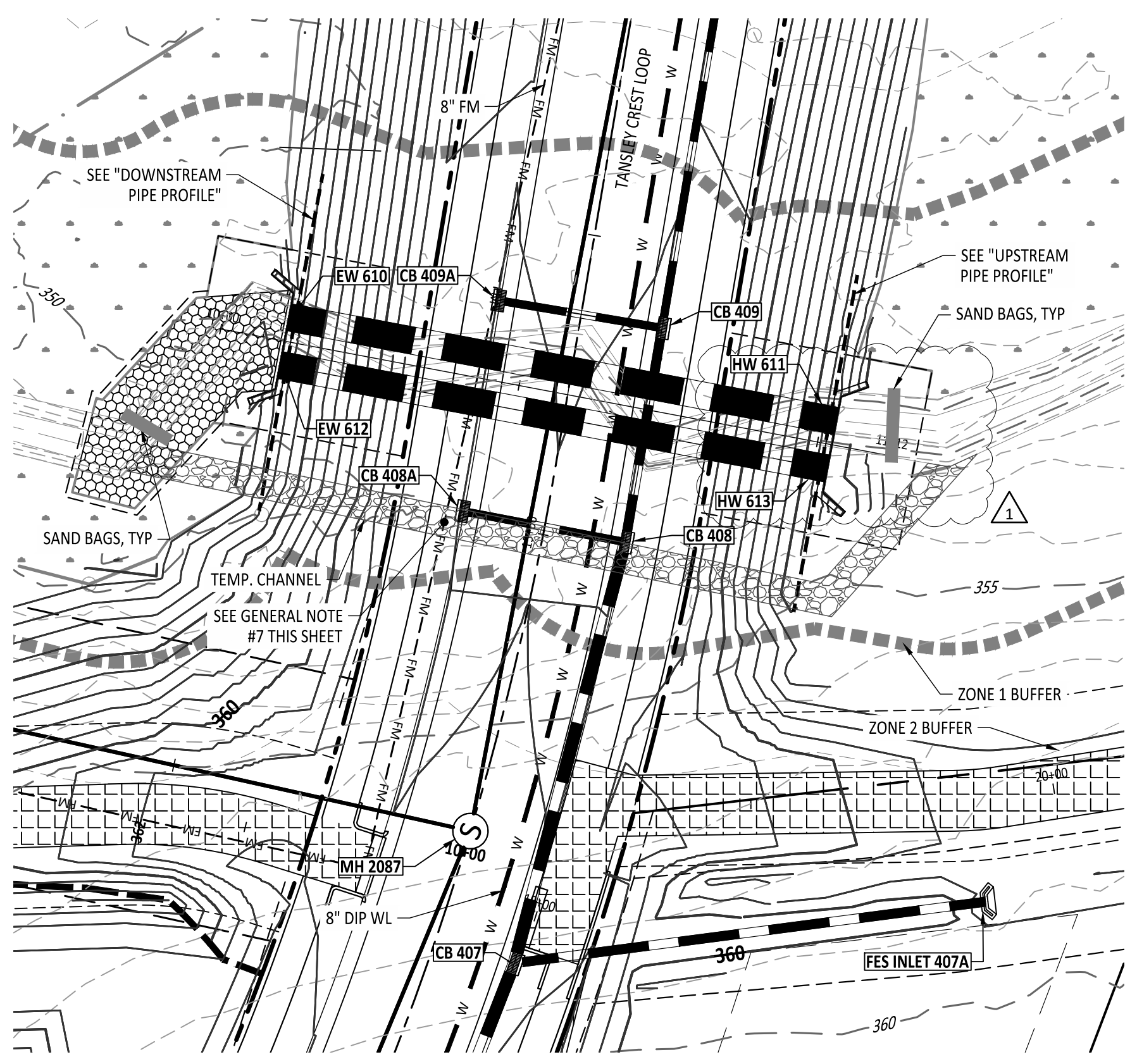
THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM

DATE: 02/03/2025
SHEET TITLE:

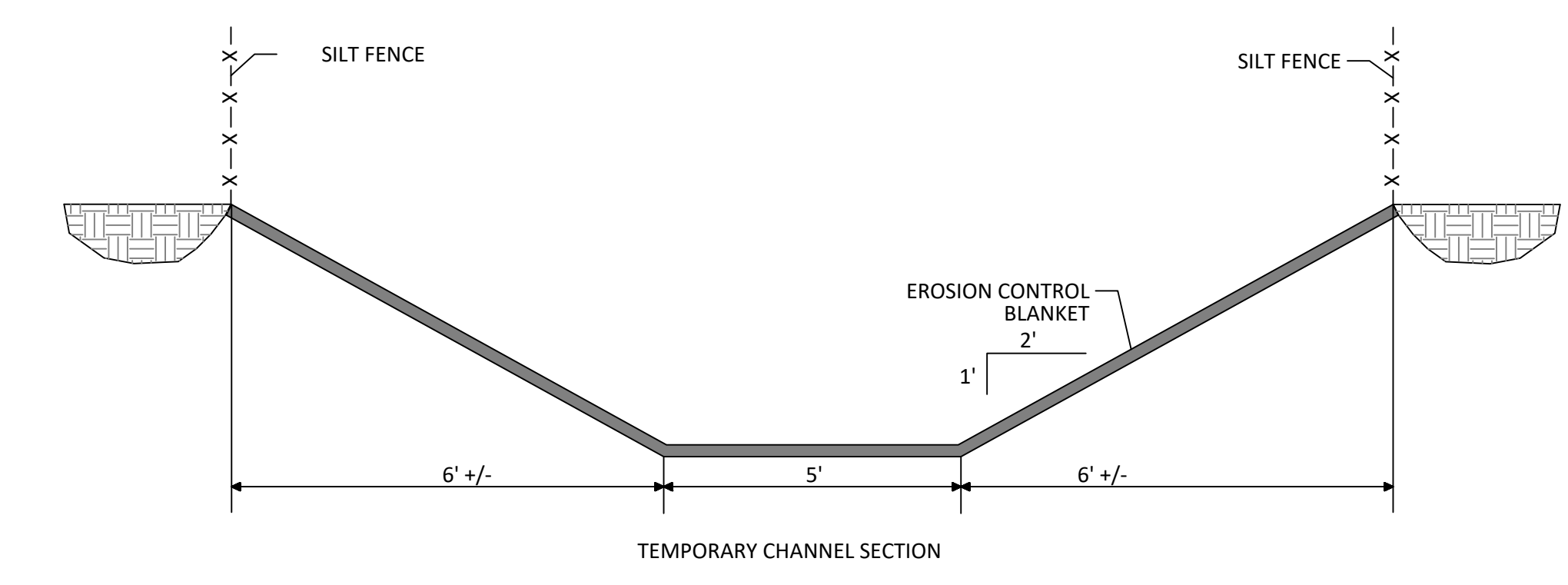
CULVERT CROSSING

SHEET NO.: **C8.5**



SEQUENCE FOR 54" RCP CULVERT CROSSING

- STAGE 1A CREEK CROSSING INSTALLATION**
1. CONDUCT MEETING WITH WAKE COUNTY INSPECTOR PRIOR TO PROCEEDING WITH THE STREAM CROSSING CONSTRUCTION.
 2. INSTALL THE BYPASS CHANNEL AS SHOWN WITH LINING LEAVING A PORTION OF THE STREAM BANK ON EACH END TO ACT AS A DAM TO PREVENT WATER FLOW DURING CONSTRUCTION OF THE CHANNEL. **(STEPS 3 - 8 SHOULD BE ACCOMPLISHED DURING ONE WORKDAY).**
 3. DURING A PERIOD OF DRY WEATHER REMOVE THE DOWNSTREAM DAM FIRST AND CONSTRUCT THE REMAINDER OF THE CHANNEL TO THE EXISTING STREAM BED.
 4. REMOVE THE UPSTREAM DAM AND CONSTRUCT THE REMAINDER OF THE CHANNEL ON THAT END INCLUDING LINING.
 5. ADD SANDBAGS ACROSS THE STREAM AT THE UPSTREAM END TO FORCE THE STREAM FLOW INTO THE BY-PASS CHANNEL.
 6. ADD SANDBAGS ACROSS THE DOWNSTREAM END OF THE STREAM JUST ABOVE THE POINT WHERE THE BY-PASS CHANNEL RE-ENTERS THE STREAM TO PREVENT FLOW INTO THE LOCATION OF THE PIPE TO BE INSTALLED.
 7. RELOCATE BRIDGE MAT OVER THE TEMPORARY BY-PASS CHANNEL.
 8. SEED/SOD AND STABILIZE ALL DENUDED AREAS ONCE THE CHANNEL IS IN PLACE.
- STAGE 1B CREEK CROSSING INSTALLATION**
1. OBTAIN PERMISSION FROM THE WAKE COUNTY INSPECTOR TO PROCEED WITH THIS STEP.
 2. EXCAVATE AREA AS SHOWN AND INSTALL PIPE WITH HEADWALLS AND DOWNSTREAM RIP RAP AS SHOWN IN RIP-RAP CROSS-SECTION.
 3. OBTAIN WAKE COUNTY APPROVAL OF THE PIPE INSTALLATION.
- STAGE 1C CREEK CROSSING INSTALLATION**
1. REMOVE TEMPORARY DAM ON DOWNSTREAM END.
 2. REMOVE TEMPORARY DAM ON UPSTREAM END.
 3. REMOVE LINING ON UPSTREAM END OF BY-PASS CHANNEL AND INSTALL EARTHEN DAM ACROSS THE UPSTREAM END OF THE BY-PASS CHANNEL TO FORCE STREAM FLOW THROUGH THE PIPE.
 4. INSTALL EARTHEN DAM ACROSS THE DOWNSTREAM OF THE BY-PASS CHANNEL AFTER REMOVING THE LINING.
 5. REMOVE REMAINDER OF THE BY-PASS CHANNEL LINING AND FILL THE CHANNEL COMPACTING THOROUGHLY IN LAYERS.
 6. INSTALL SILT FENCE AT THE TOE OF SLOPES AND TIE TO ENDWALLS AS SHOWN ON THIS PLAN.
 7. COMPLETE FILL AROUND THE PIPE TO A LEVEL AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE TO ALLOW CONSTRUCTION EQUIPMENT TO PASS OVER IT.
 8. COMPLETE FILL BRINGING THE AREA TO FINISHED GRADE.
 9. INSTALL PAVEMENT AND FOLLOW THE SEEDING SCHEDULE FOR ALL BARE AREAS.
 10. REFER TO MAIN CONSTRUCTION SEQUENCE FOR OTHER DETAILS.



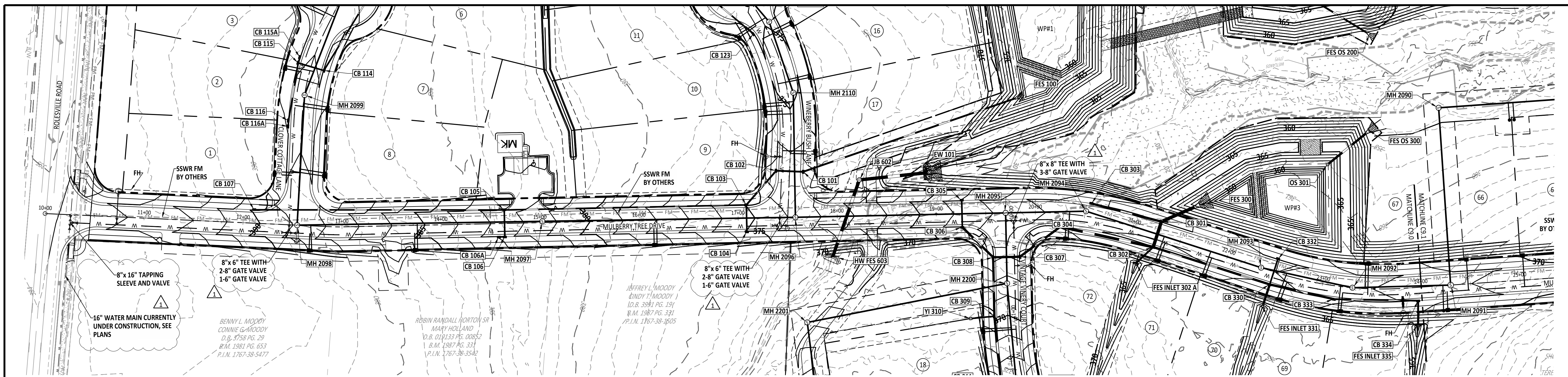
GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH WAKE COUNTY STANDARDS AND REGULATIONS.
2. THERE SHALL BE NO DISTURBANCE OUTSIDE THE LIMITS SHOWN ON THIS PLAN WITHOUT AN APPROVED PLAN AMENDMENT BY WAKE COUNTY.
3. ALL DISTURBED AREAS SHALL BE SEEDED PER THE TABLE.
4. PERMANENT GROUND COVER SHALL BE ESTABLISHED PER NPDES SEEDING SCHEDULE AT EITHER 7 DAYS OR 14 DAYS DEPENDING ON MEASURE AND SLOPE.
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SELF-INSPECTION LOG.
6. CUT AND FILL SLOPES THAT ARE 2:1 OR GREATER SHALL BE STABILIZED WITH PERMANENT SLOPE RETENTION DEVICES OR A SUITABLE COMBINATION OF PLANTING AND RETENTION DEVICES. SLOPES GREATER THAN 3:1 SHALL NOT BE STABILIZED WITH TURF GRASS BUT MUST BE STABILIZED WITH VEGETATION THAT REQUIRES MINIMAL MAINTENANCE: WEEPING LOVE GRASS, RED FESCUE, OR OTHER APPROVED VARIETY.
7. CONTRACTOR TO LOCATE EXISTING FORCE MAIN AND MAINTAIN ADEQUATE COVER WHEN ROUTING TEMPORARY CHANNEL.

2/26/25 10:00 AM, Moody Development Tract (B2100003) (DWG), Working Drawg/Construction Set (B.S.), 1:20 Plot, DWG, February 3, 2025

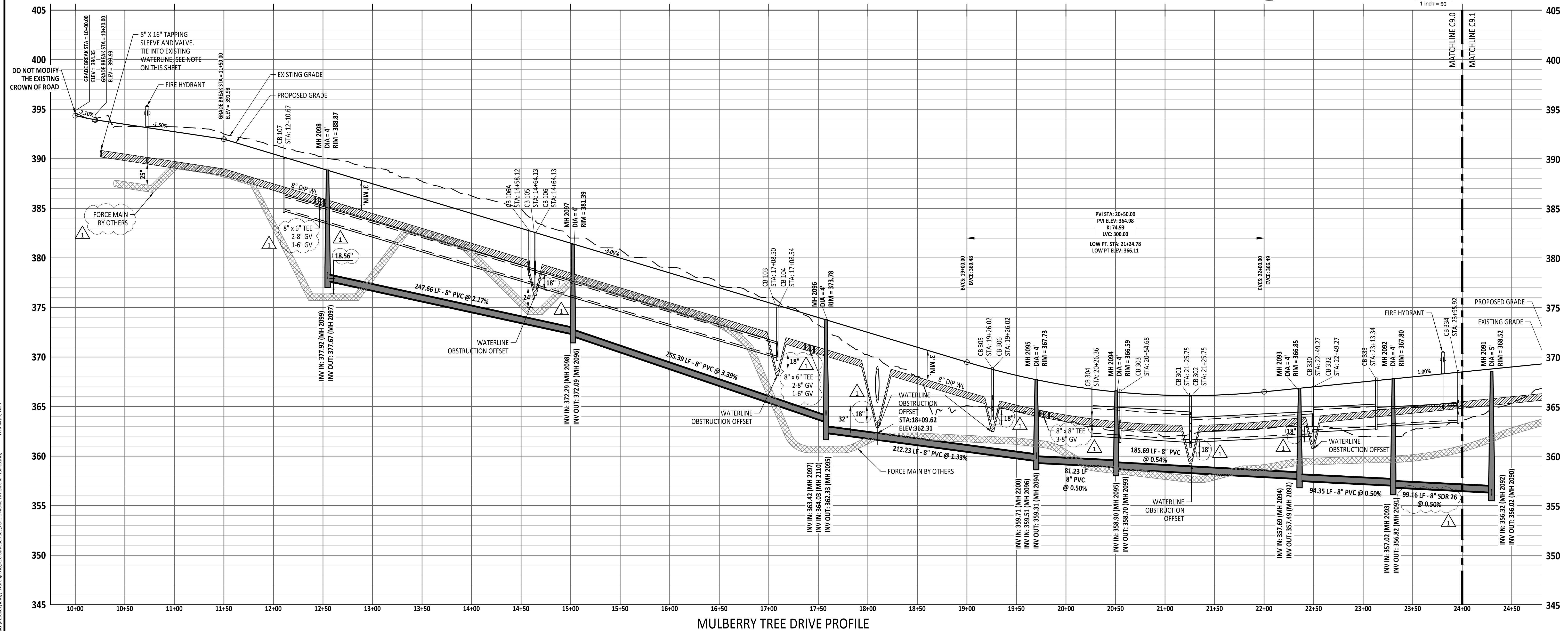
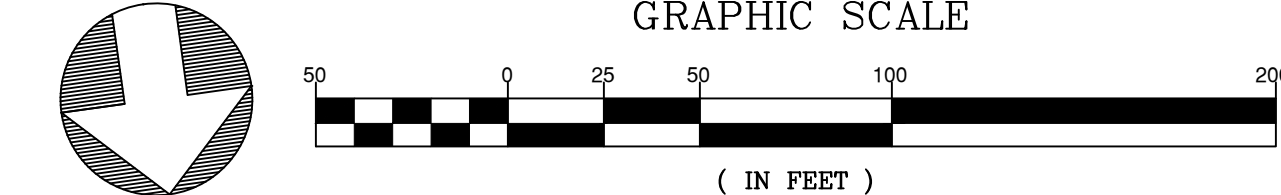
<p>Public Sewer Collection / Extension System The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>	<p>Public Water Distribution / Extension System The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>
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North 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-432-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm



NOTE:
1. CONTRACTOR TO CONFIRM LOCATION, DEPTH, SIZE, AND MATERIAL OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES TO AMERICAN ENGINEERING.

MULBERRY TREE DRIVE PLAN



MULBERRY TREE DRIVE PROFILE



NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025

SHEET TITLE:
MULBERRY PLAN AND PROFILE

SHEET NO.:
C9.0

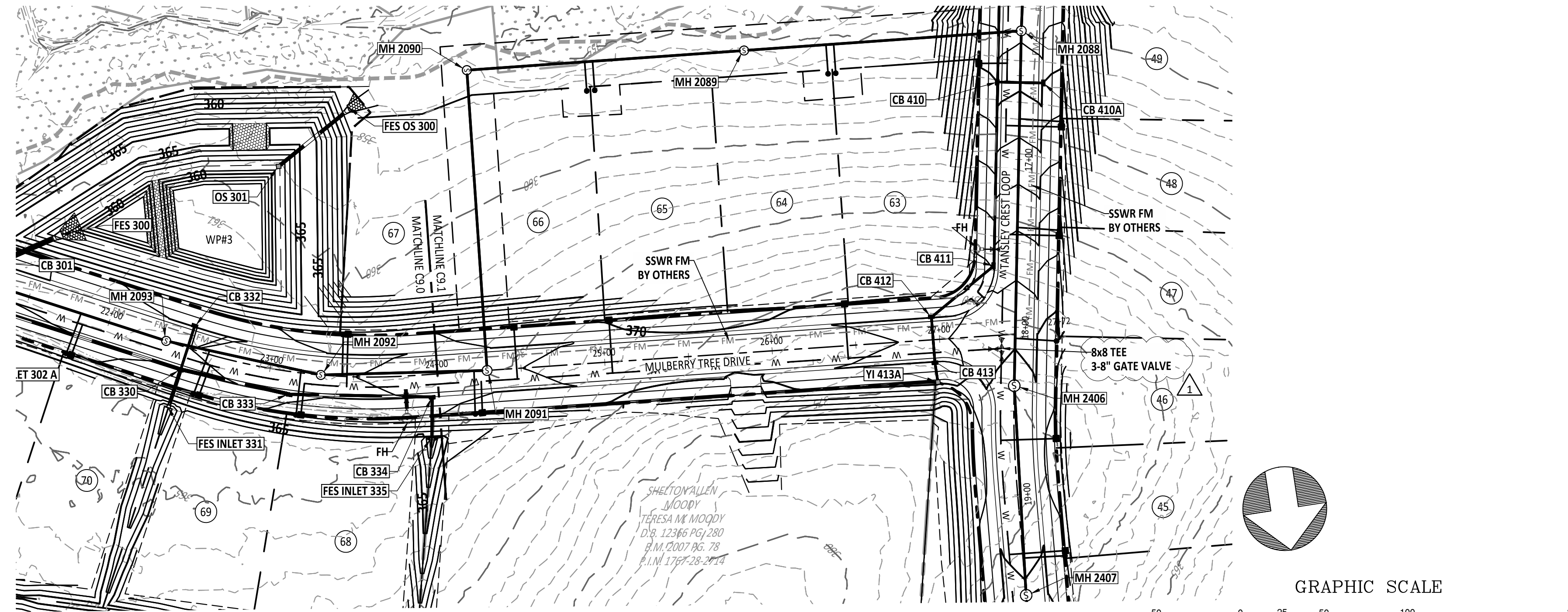
Public Sewer Collection / Extension System
The City of Raleigh consents to the construction and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit #

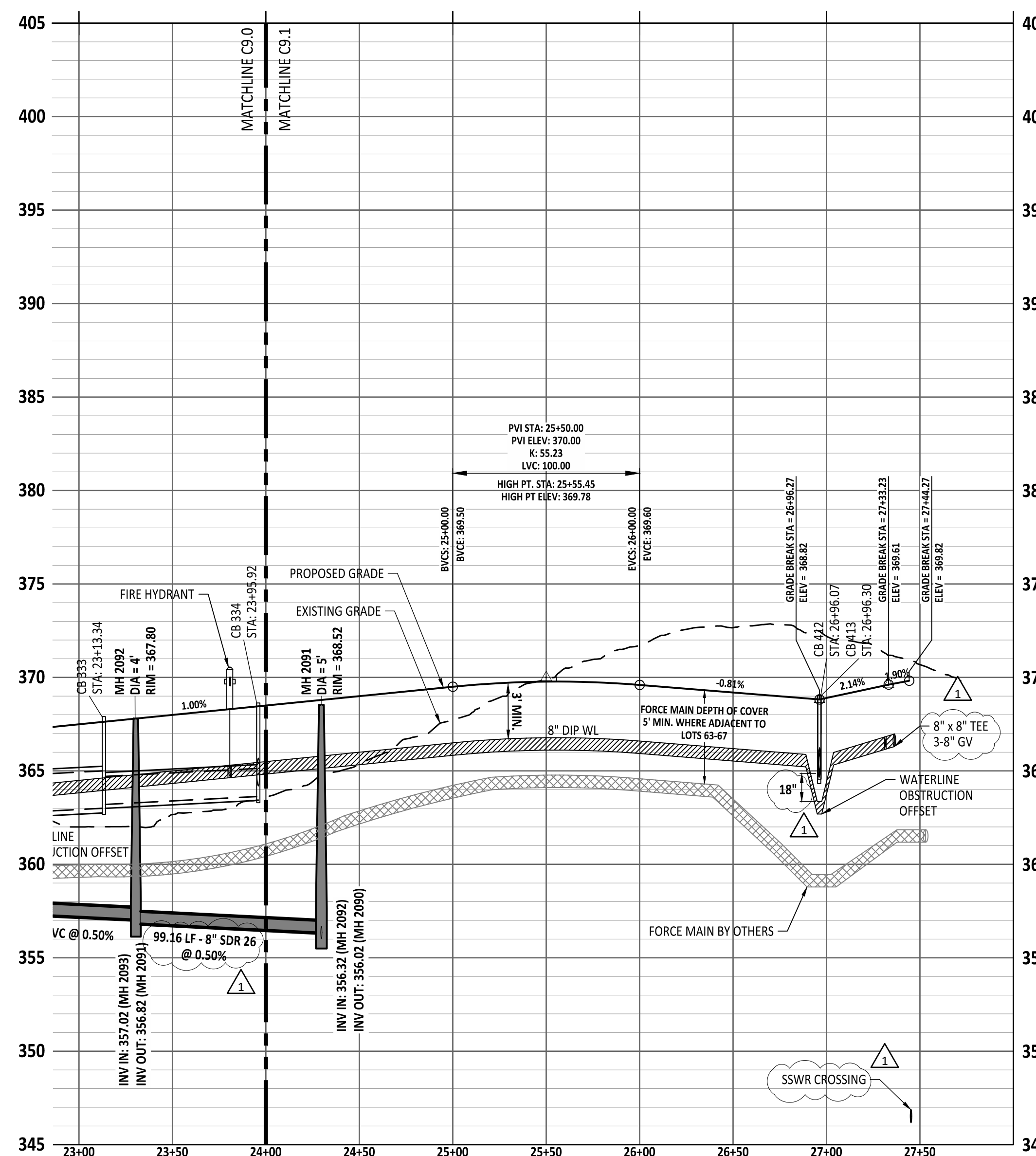
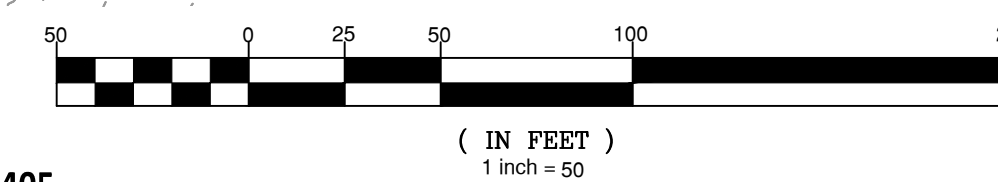
Public Water Distribution / Extension System
The City of Raleigh consents to the construction and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit #

*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
<http://nc811.org/newremoteentry.htm>



MULBERRY TREE DRIVE PLAN



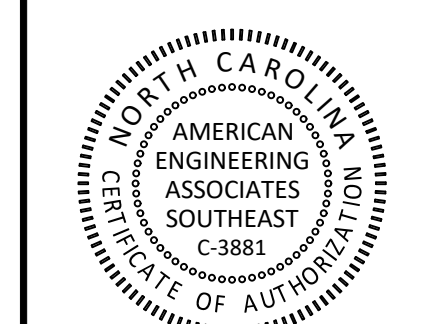
MULBERRY TREE DRIVE PROFILE

<p>Public Sewer Collection / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>	<p>Public Water Distribution / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>
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North 811

*** 3 Days Before Digging ***

North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
<http://nc811.org/remoteticketentry.htm>



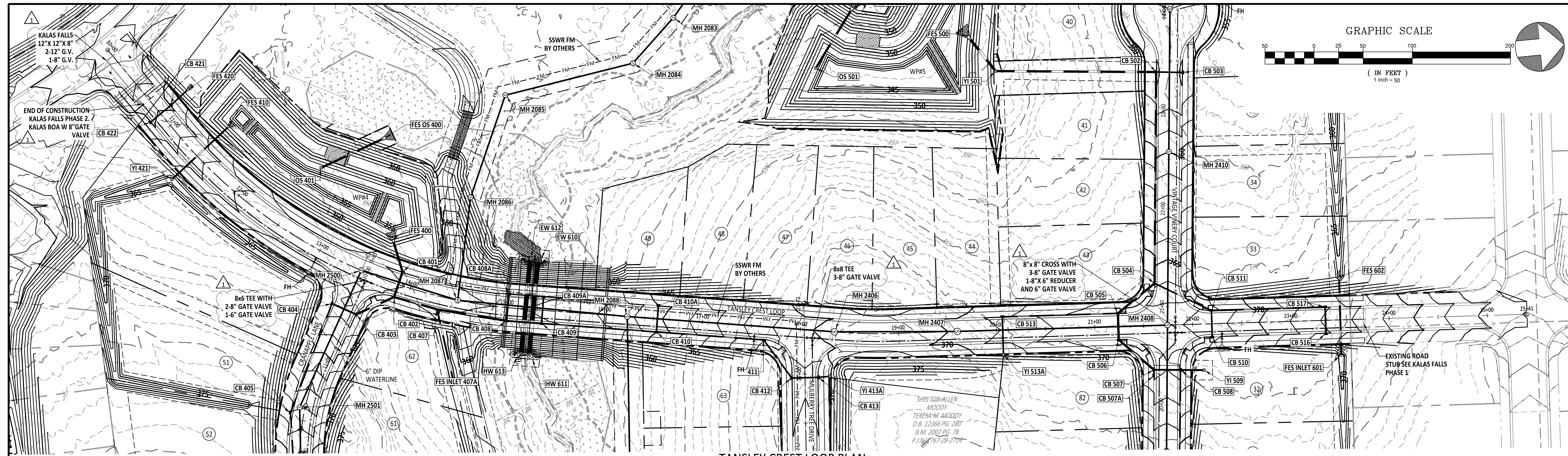
NO.	DATE	REVISION:
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE

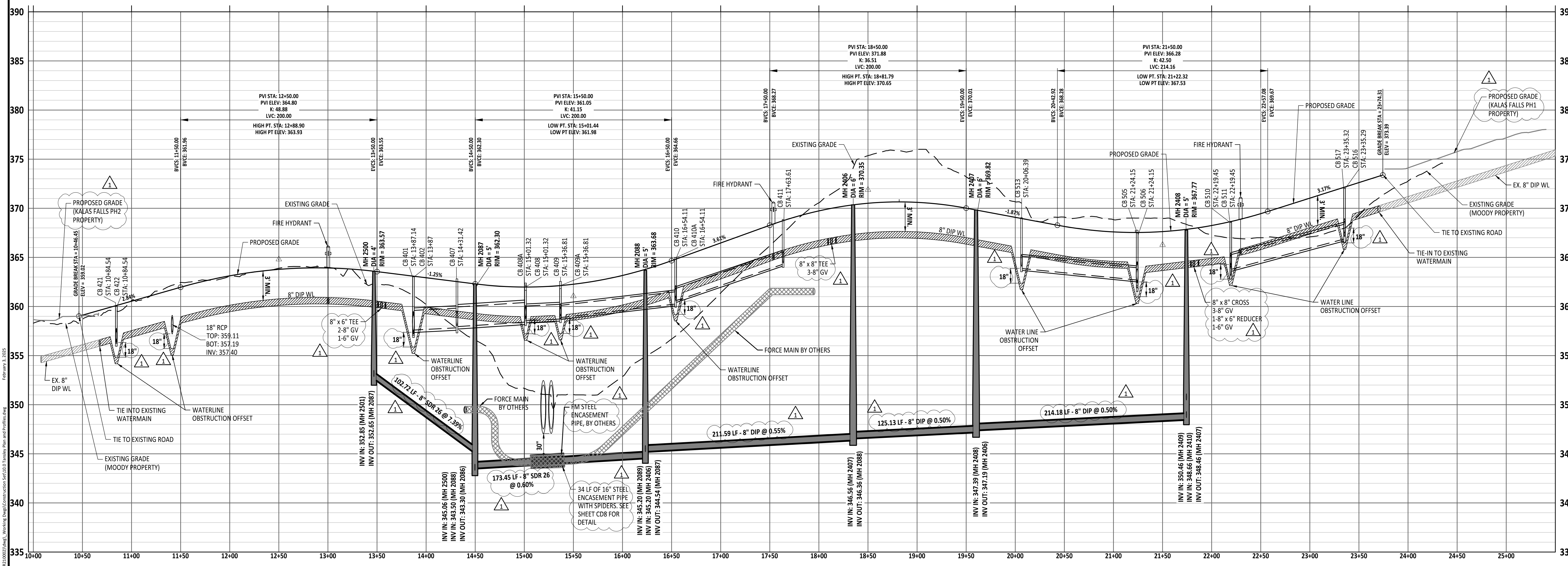
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

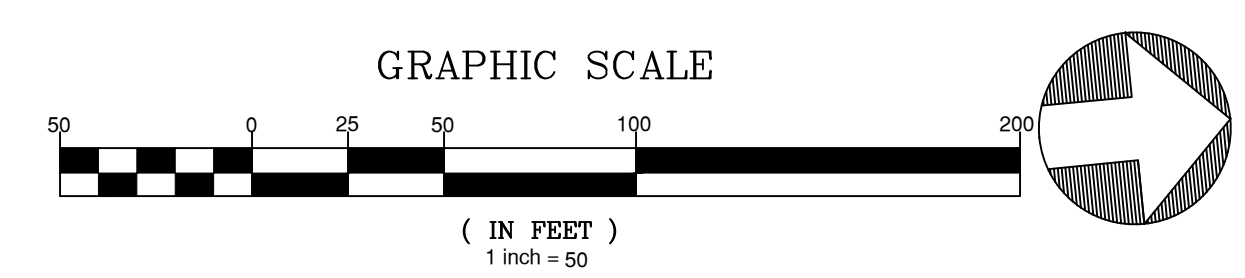
JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE: MULBERRY PLAN AND PROFILE
SHEET NO.: C9.1



TANSLEY CREST LOOP PLAN



TANSLEY CREST LOOP PROFILE



AMERICAN
Engineering
American Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101



NO.	DATE	REVISION
1	02-03-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

TANSLEY CREST LOOP PLAN AND PROFILE
SHEET NO.: **C10.0**

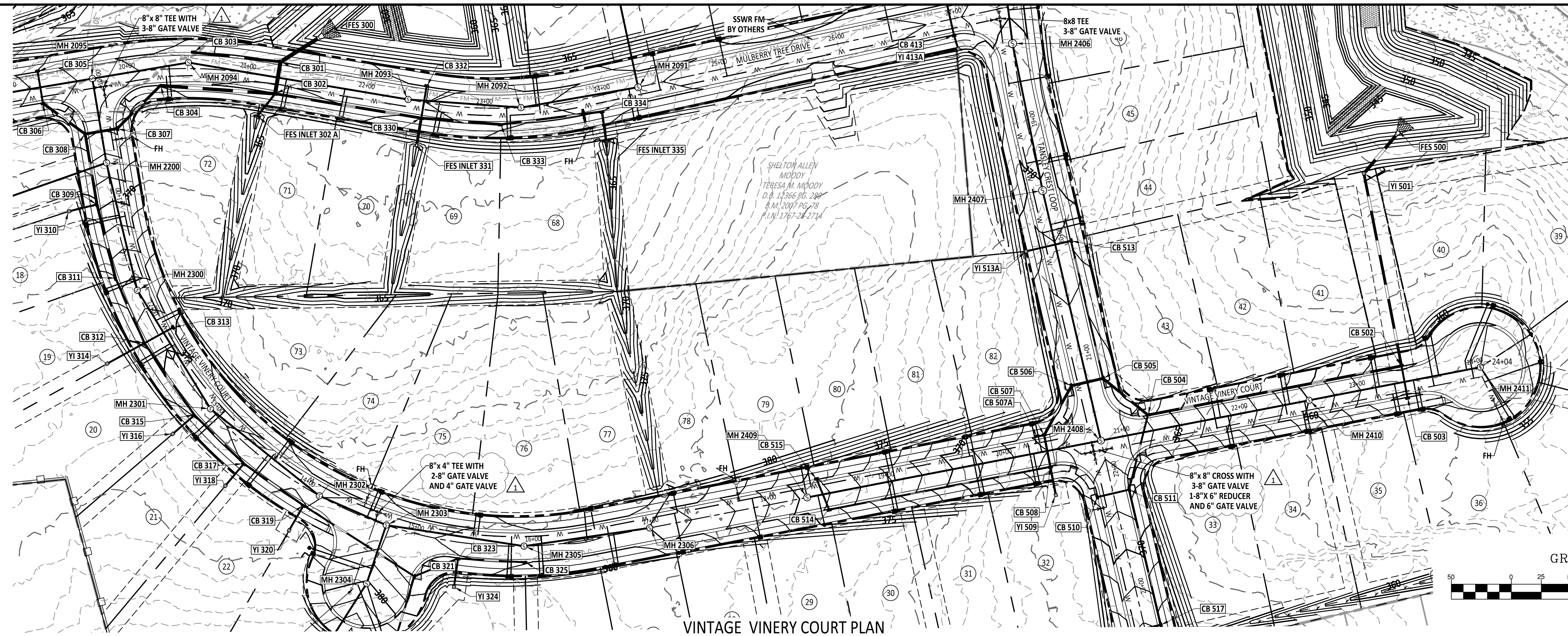
Public Sewer Collection / Extension System
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Public Water Distribution / Extension System
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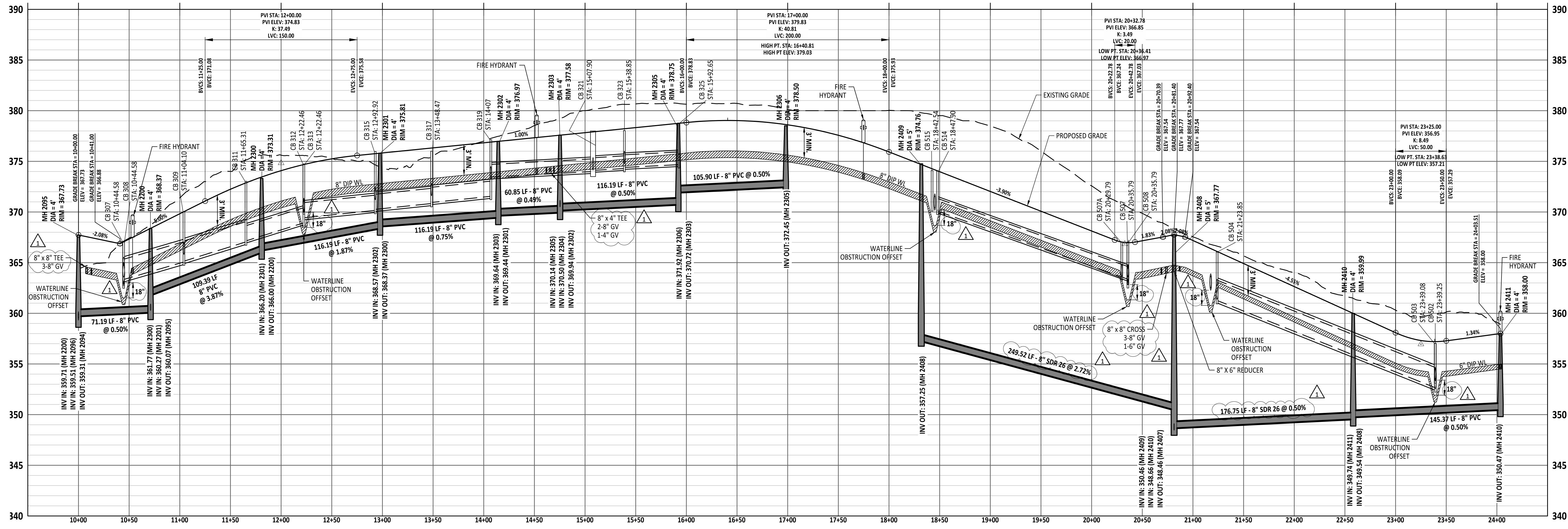
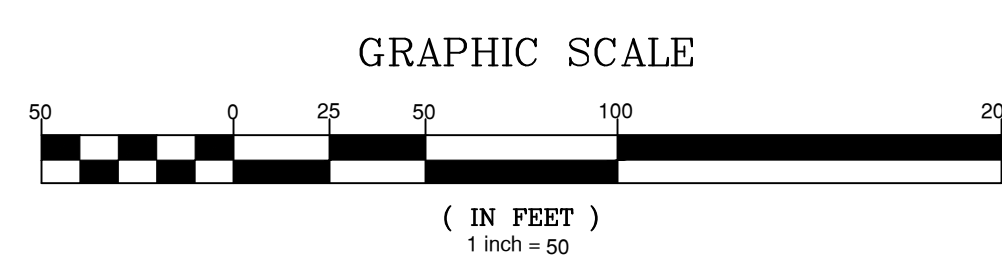
City of Raleigh
Public Utilities Department/Permit #

City of Raleigh
Public Utilities Department/Permit #

North Carolina 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm



VINTAGE VINERY COURT PLAN



VINTAGE VINERY COURT PROFILE

NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

VINTAGE VINERY CT PLAN AND PROFILE

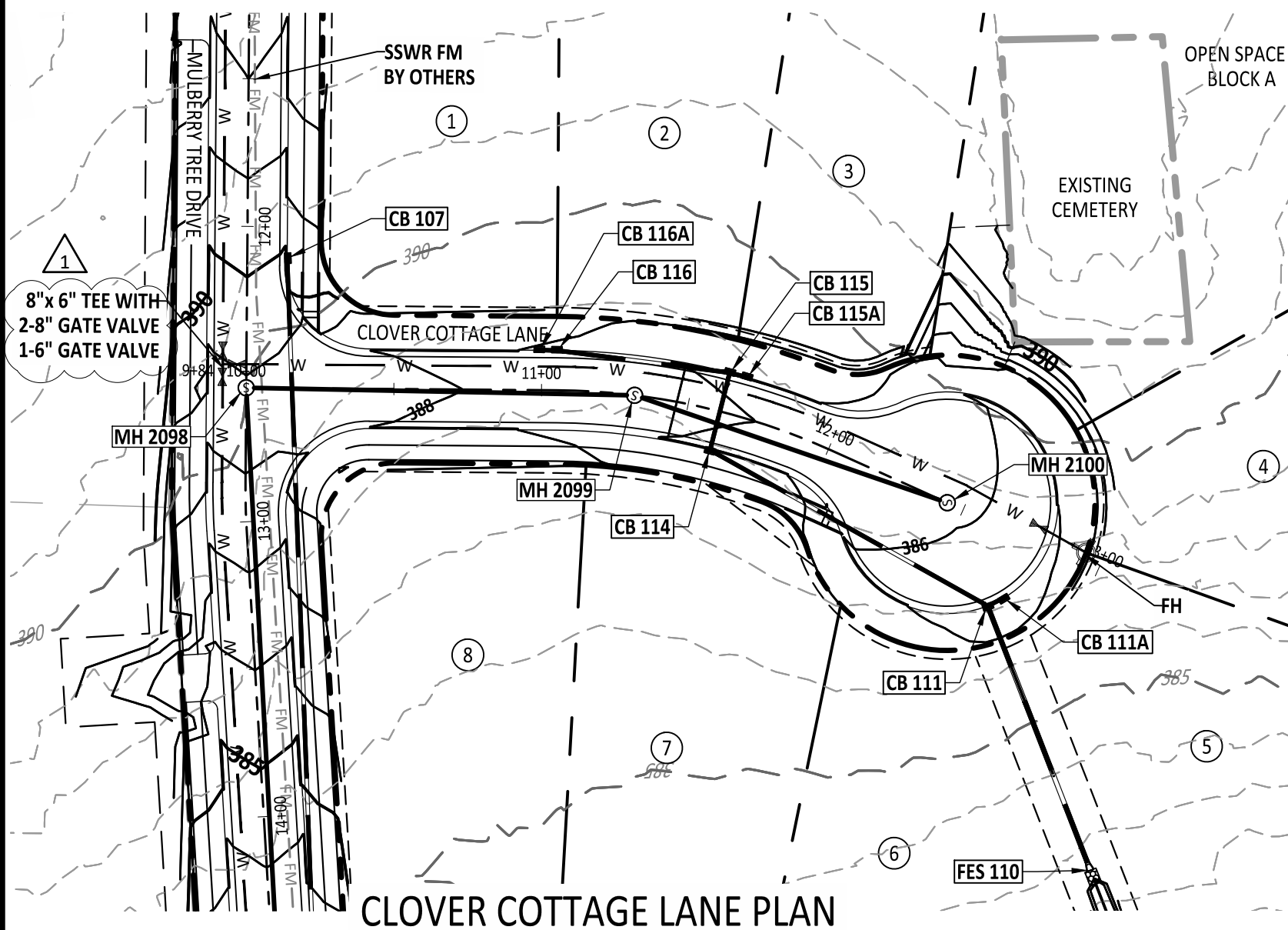
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Public Sewer Collection / Extension System
The City of Raleigh consents to the construction and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh
Public Utilities Department/Permit #

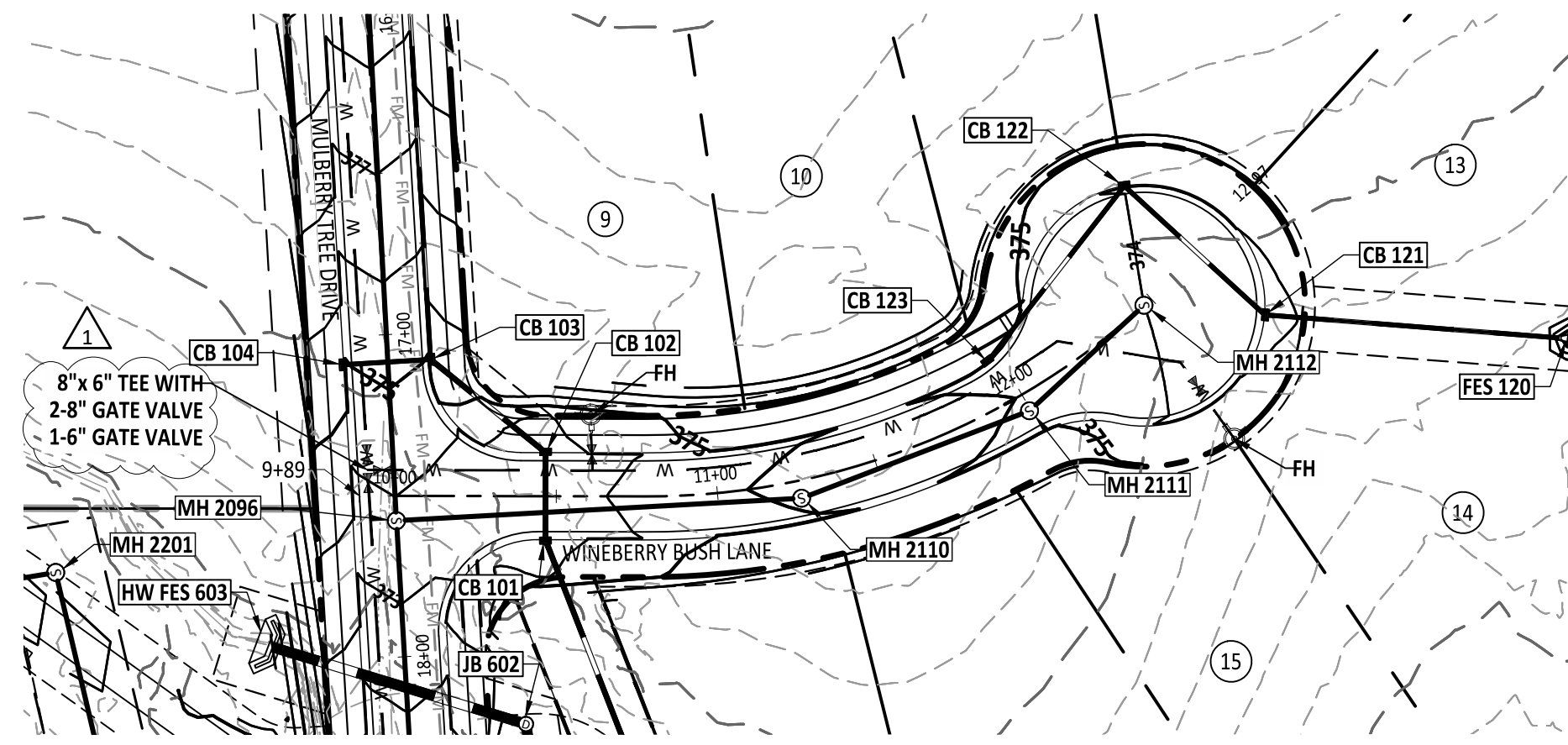
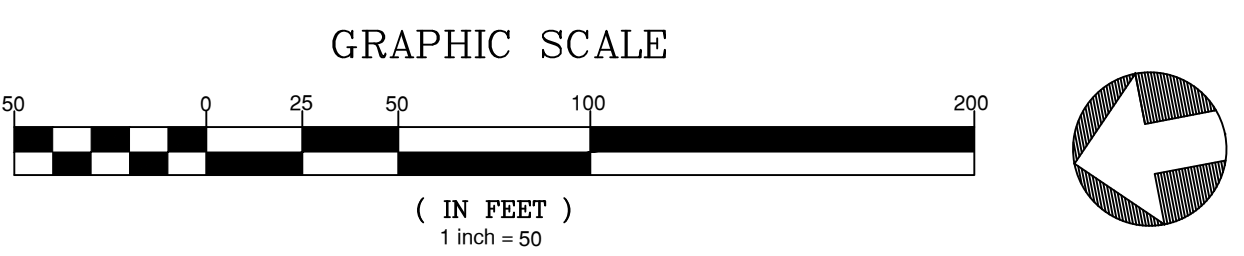
Public Water Distribution / Extension System
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City of Raleigh
Public Utilities Department/Permit #

North 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-432-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

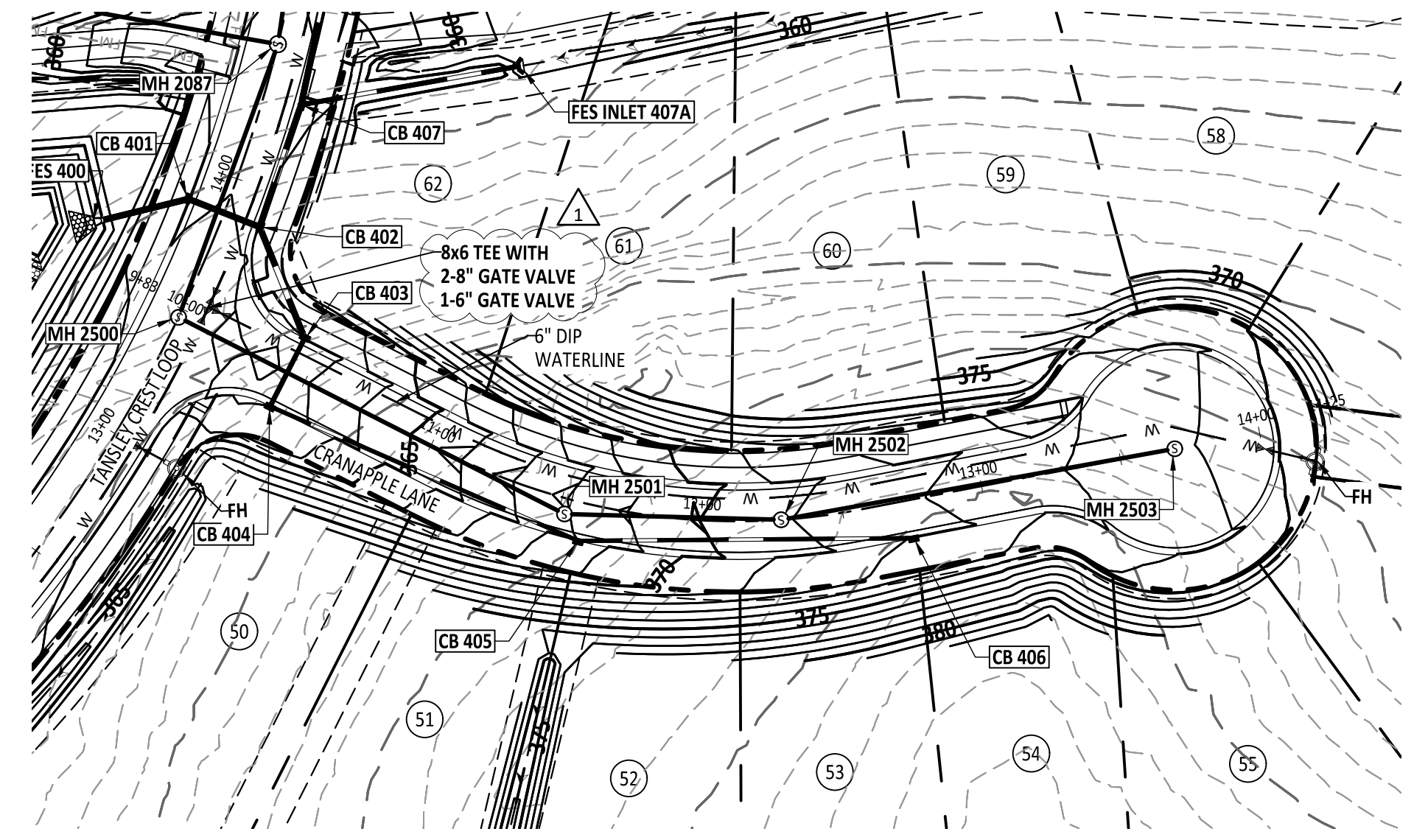
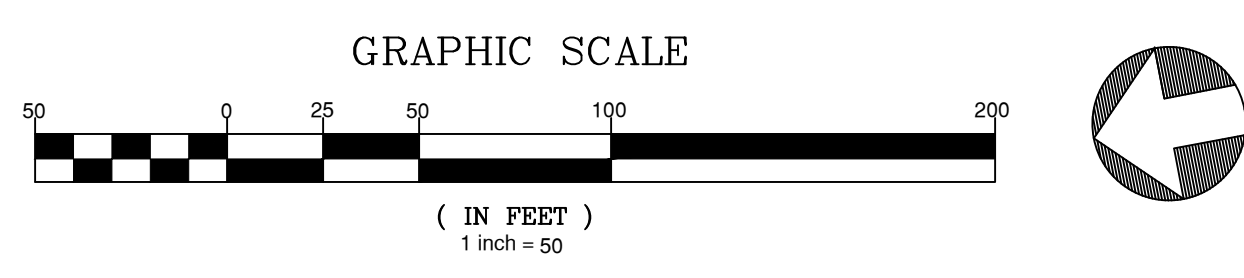
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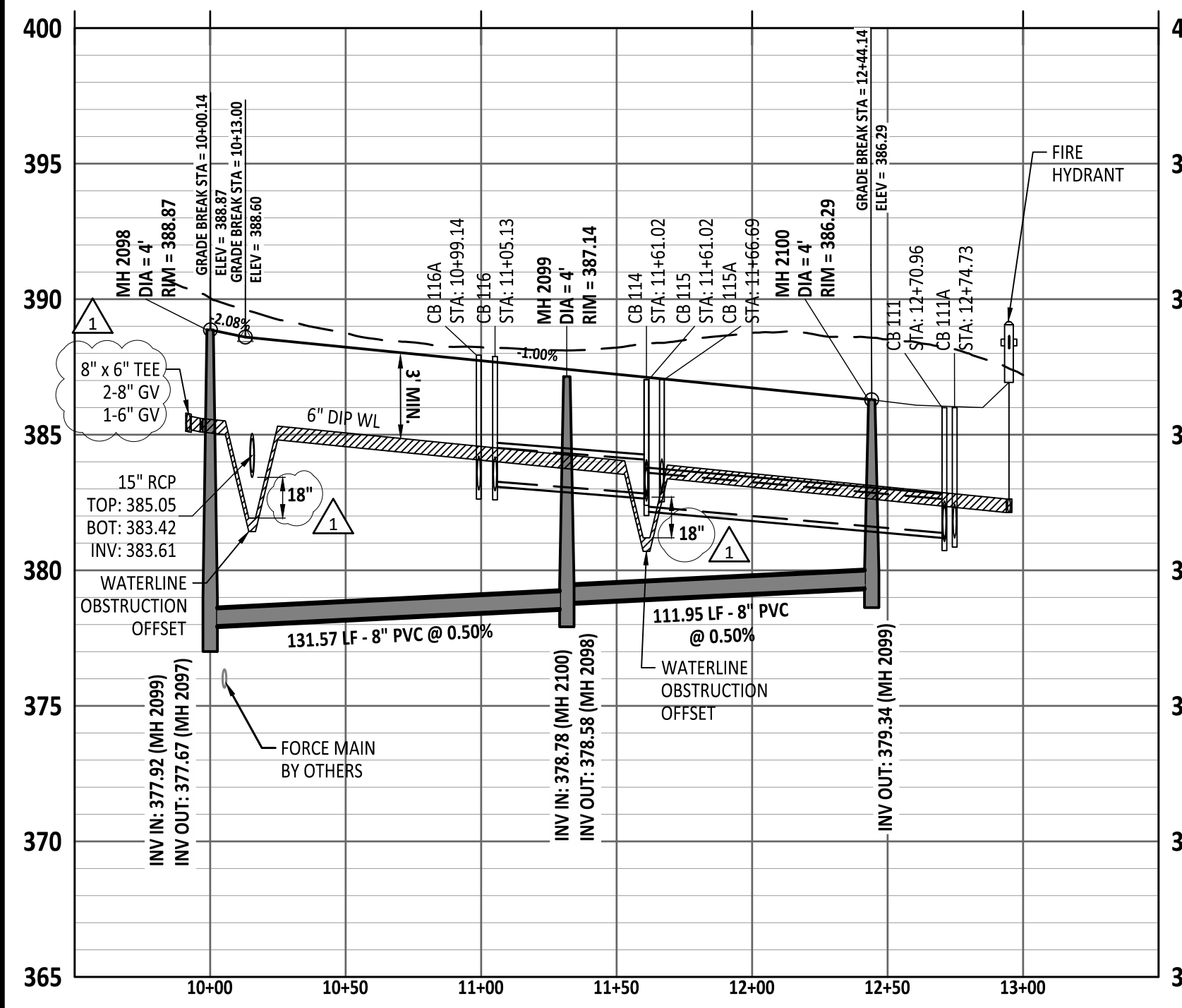
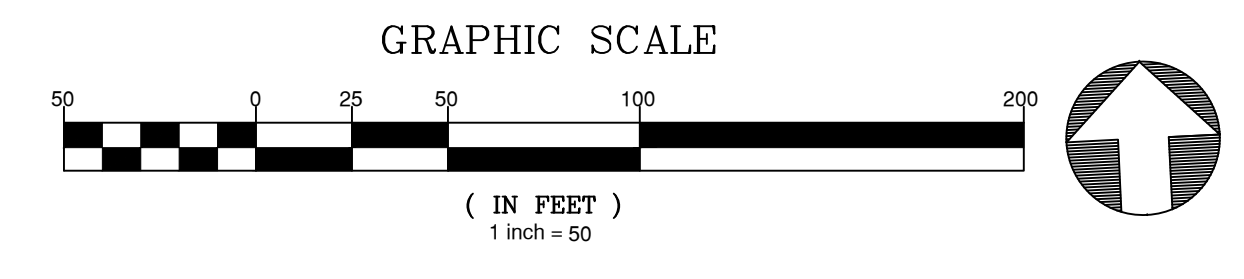
CLOVER COTTAGE LANE PLAN



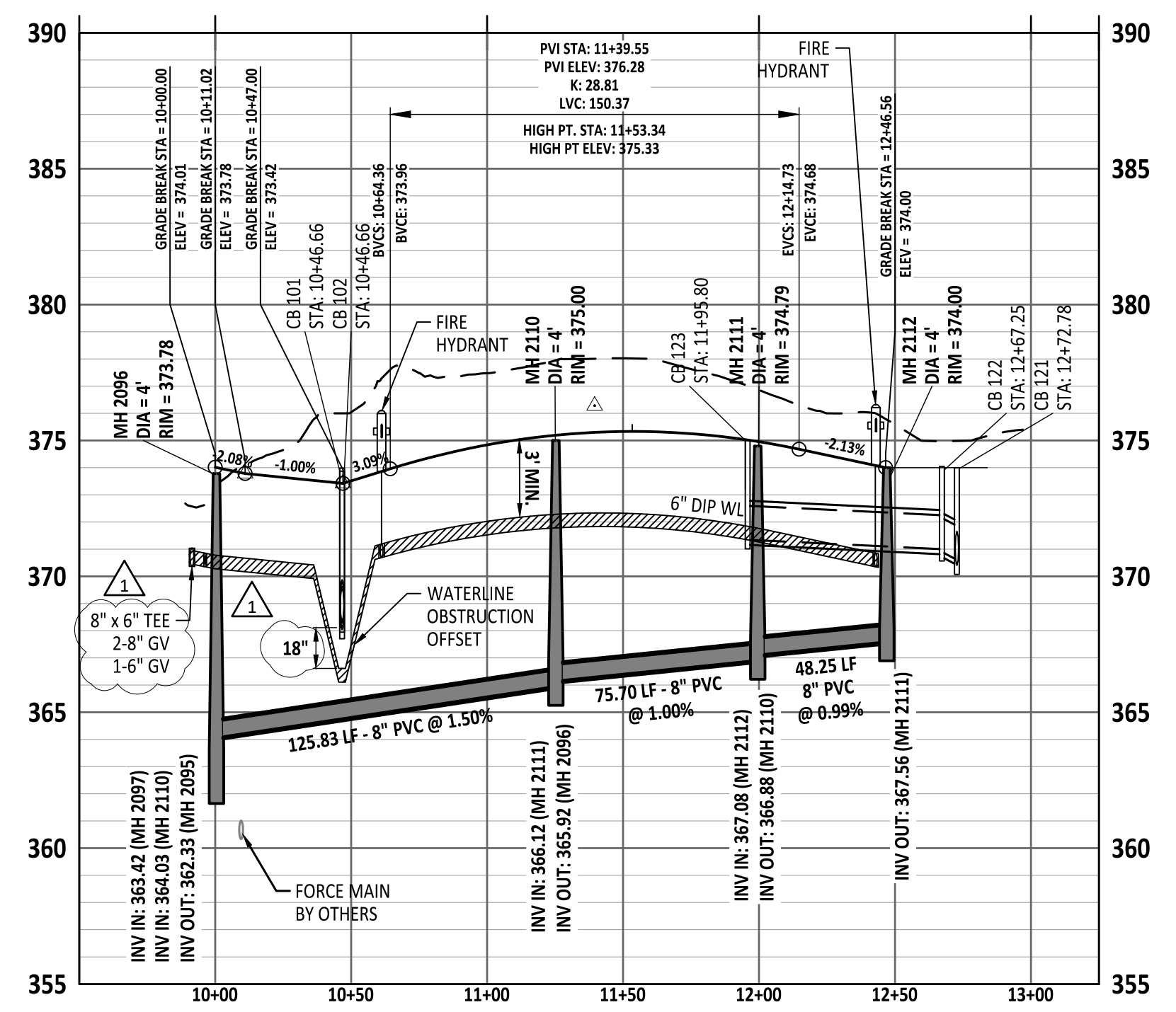
WINEBERRY BUSH LANE PLAN



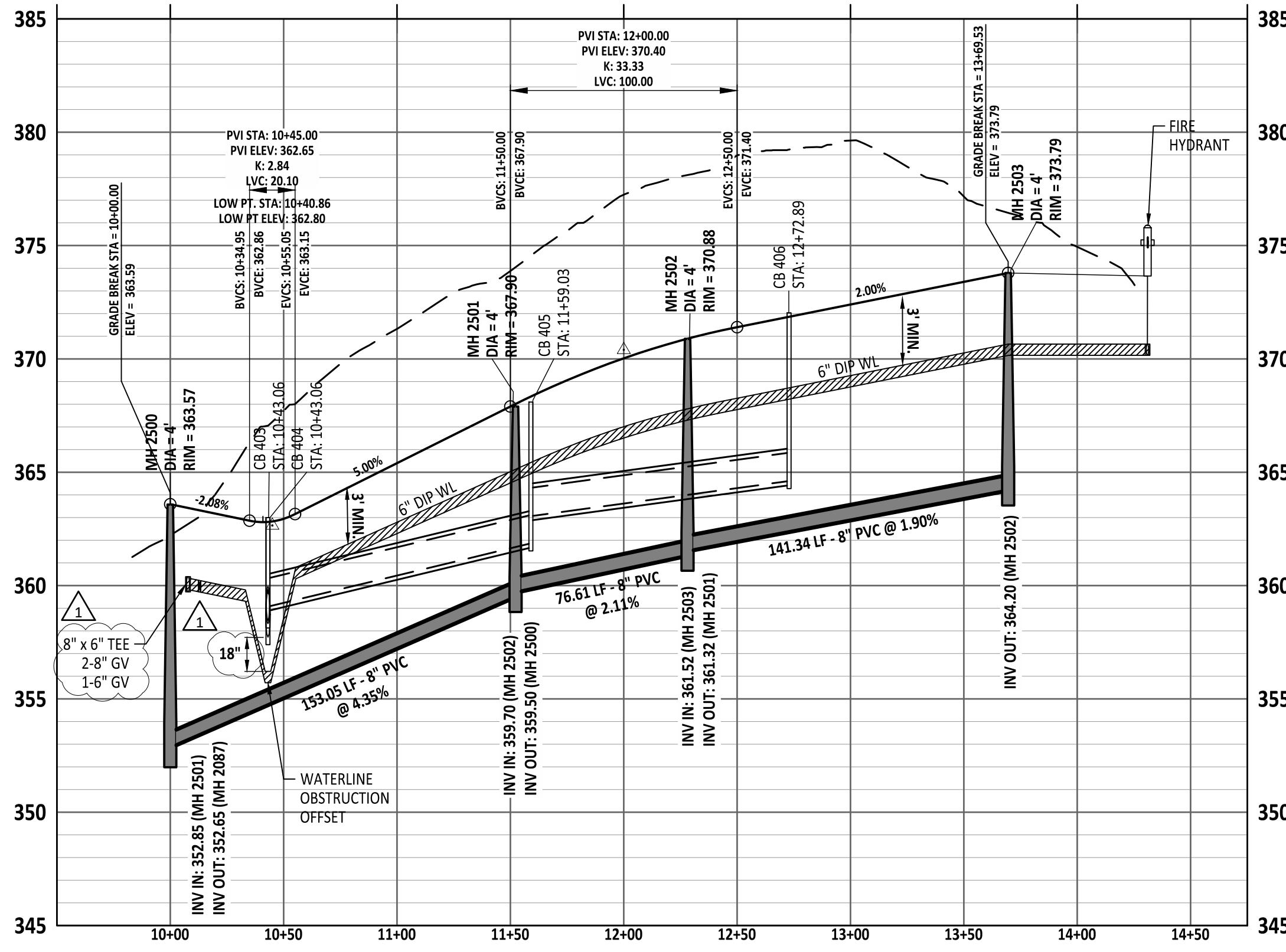
CRANAPPLE LANE PLAN



CLOVER COTTAGE LANE PROFILE



WINEBERRY BUSH LANE PROFILE



CRANAPPLE LANE PROFILE

NO.	DATE	REVISION:
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:
CUL-DE-SAC AND STUB PLAN AND PROFILES

SHEET NO.:
C12.0

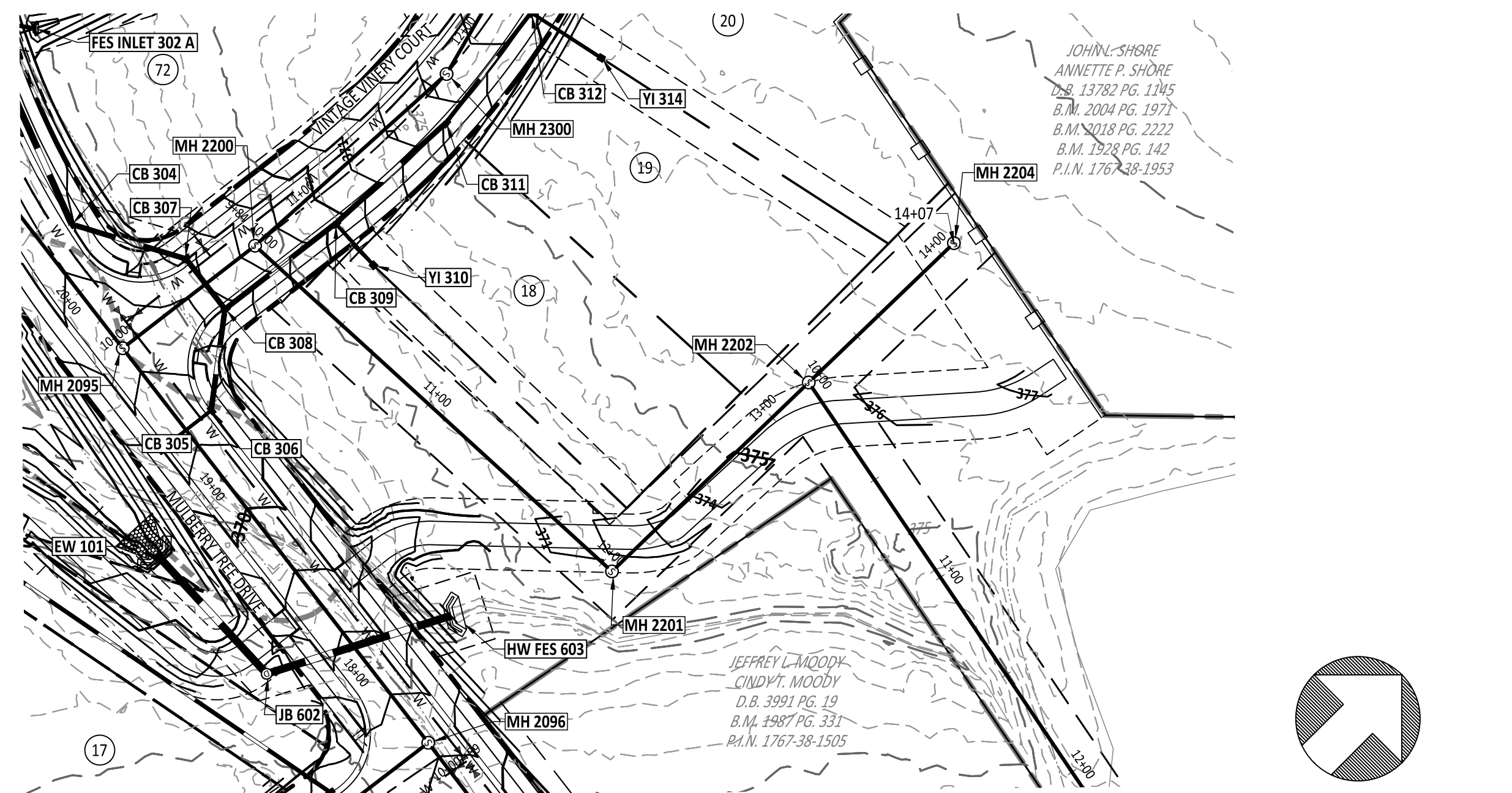
Public
Sewer Collection / Extension System
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Public
Water Distribution / Extension System
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City of Raleigh
Public Utilities Department Permit #

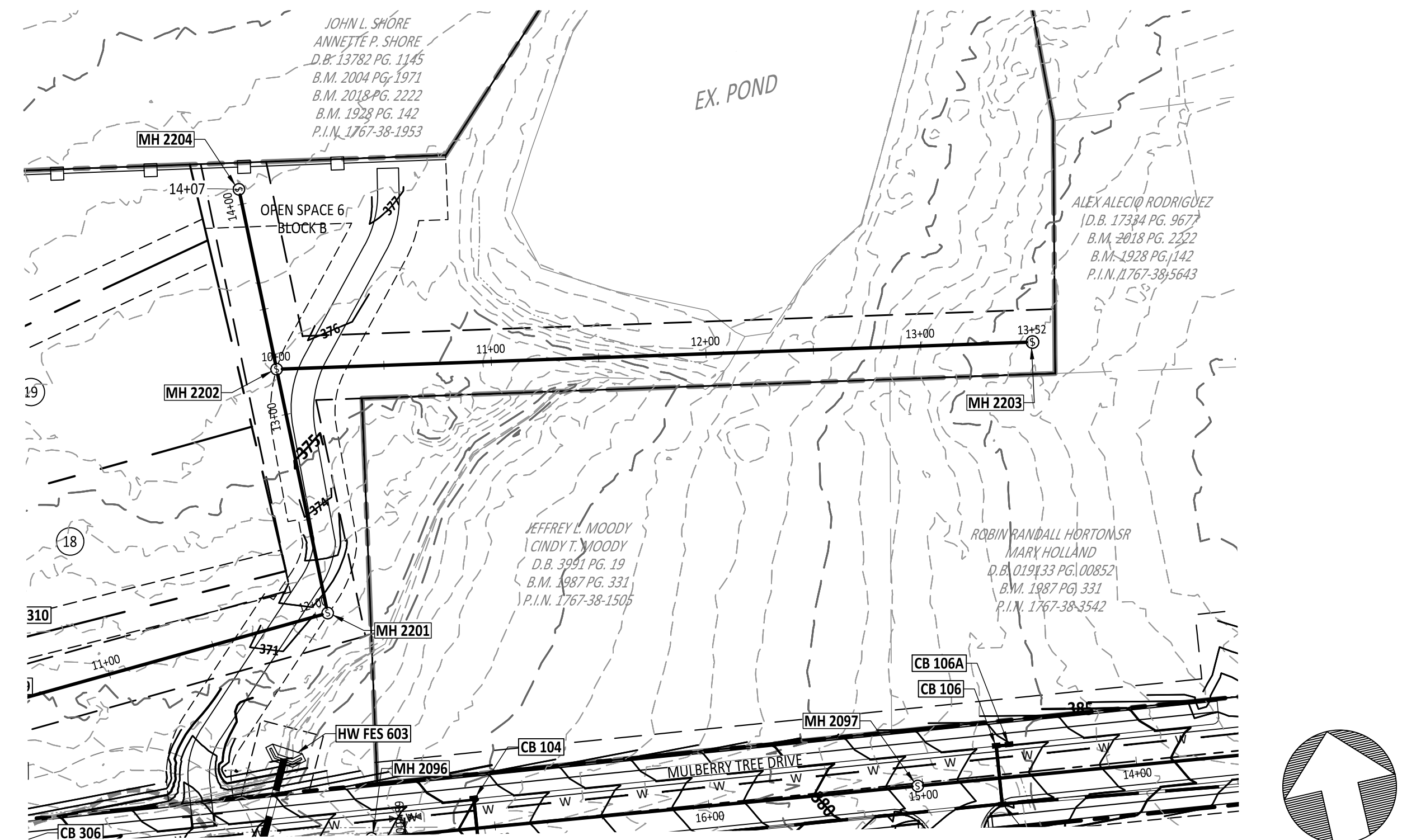
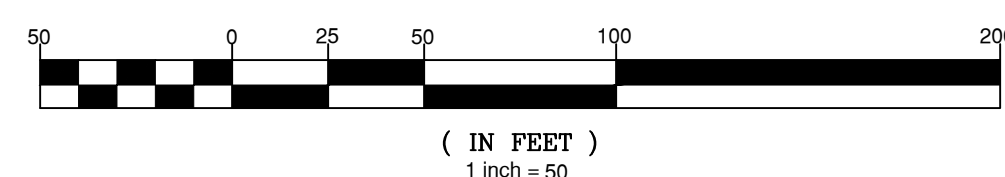
North Carolina 811
*** 3 Days Before Digging ***
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm

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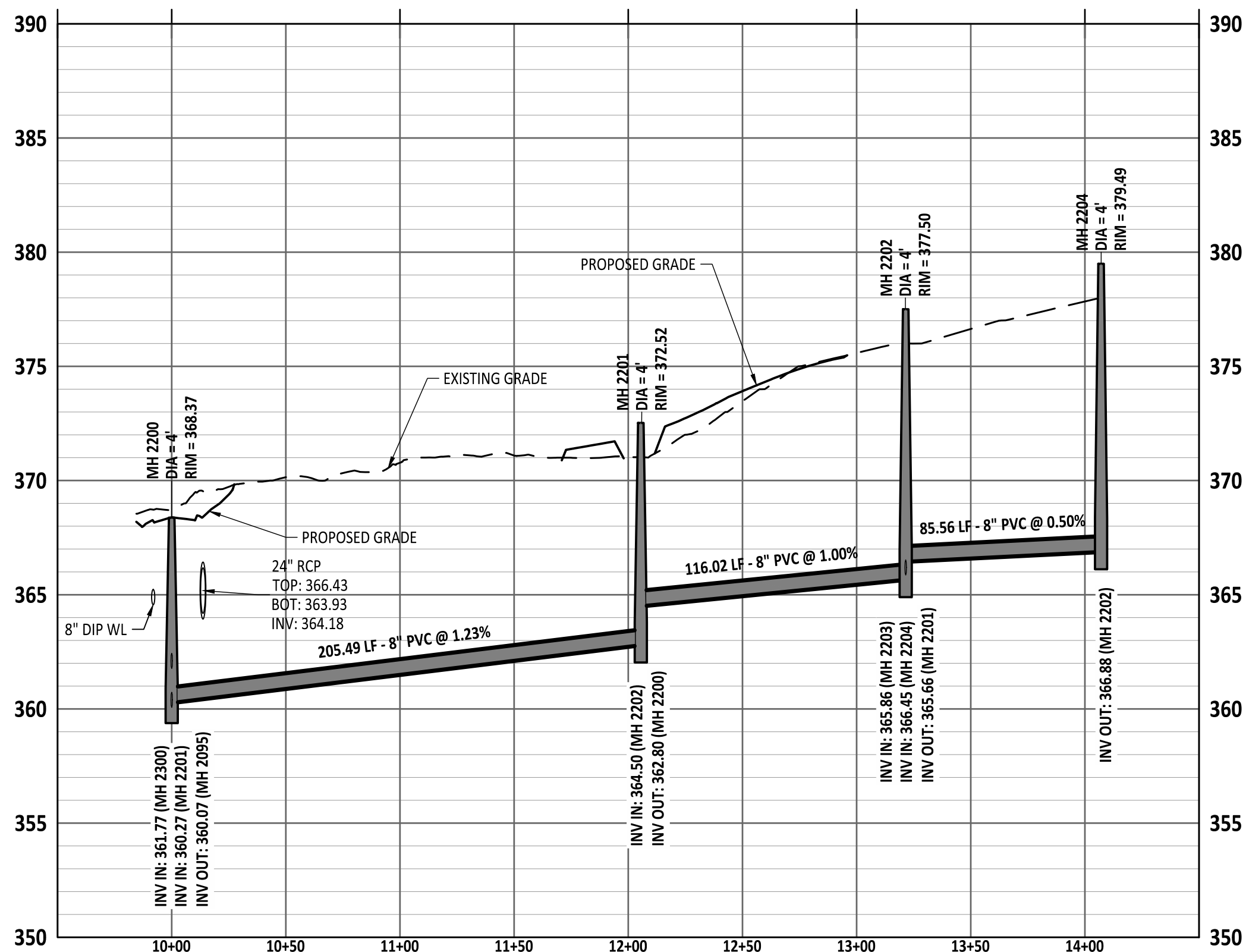
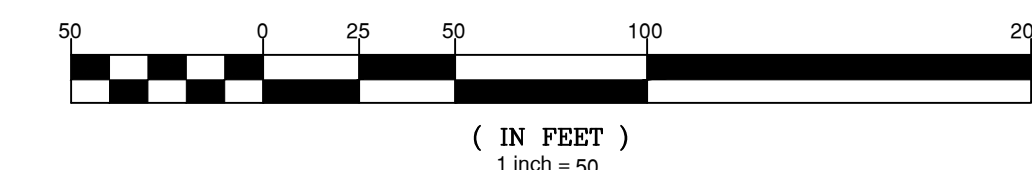
SEWER OUTFALL (A) AT VINTAGE VINERY COURT PLAN

GRAPHIC SCALE

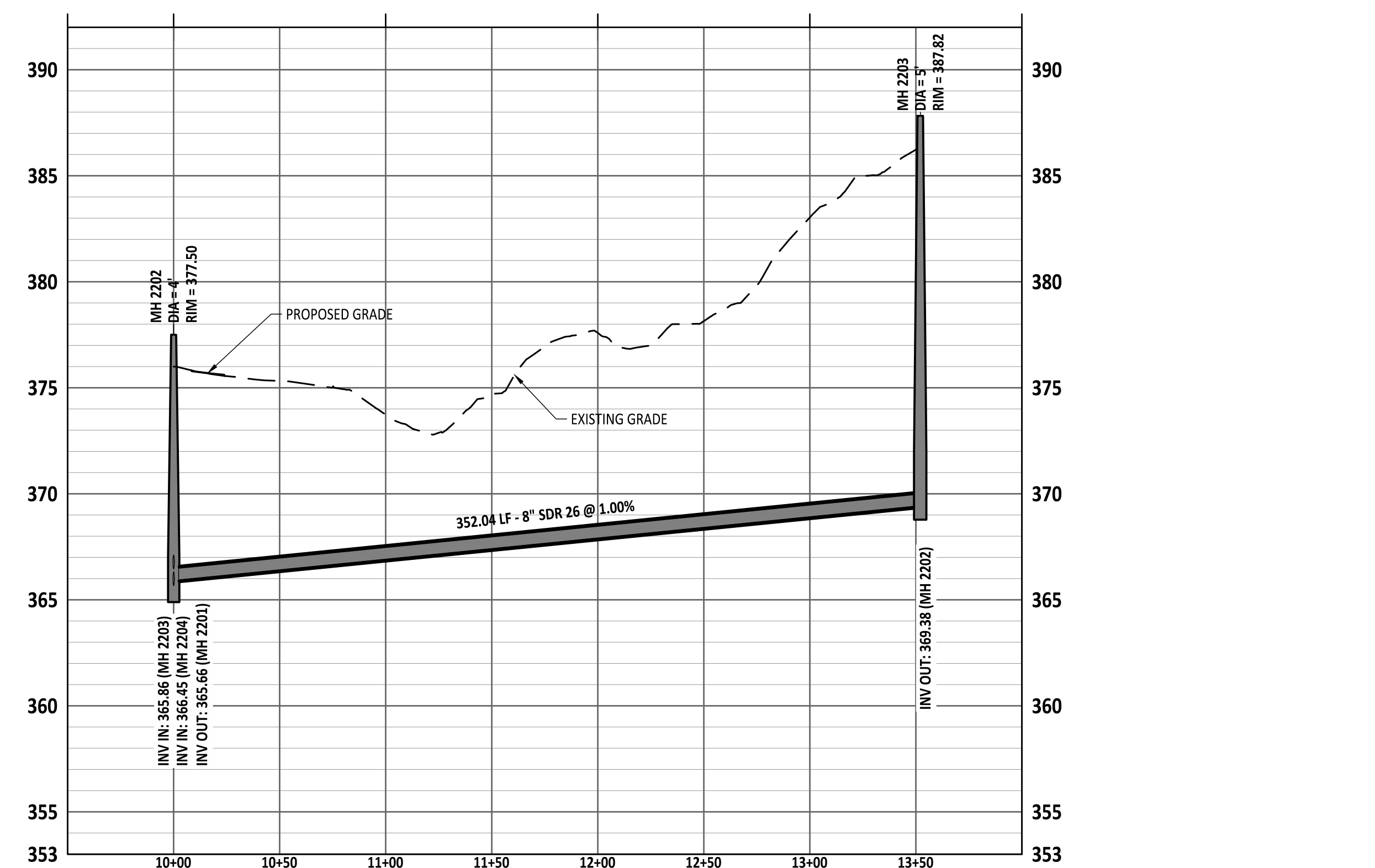


SEWER OUTFALL (B) AT VINTAGE VINERY COURT PLAN

GRAPHIC SCALE



SEWER OUTFALL (A) AT VINTAGE VINERY COURT PROFILE



SEWER OUTFALL (B) AT VINTAGE VINERY COURT PROFILE

NO.	DATE	REVISION
1	02/23/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

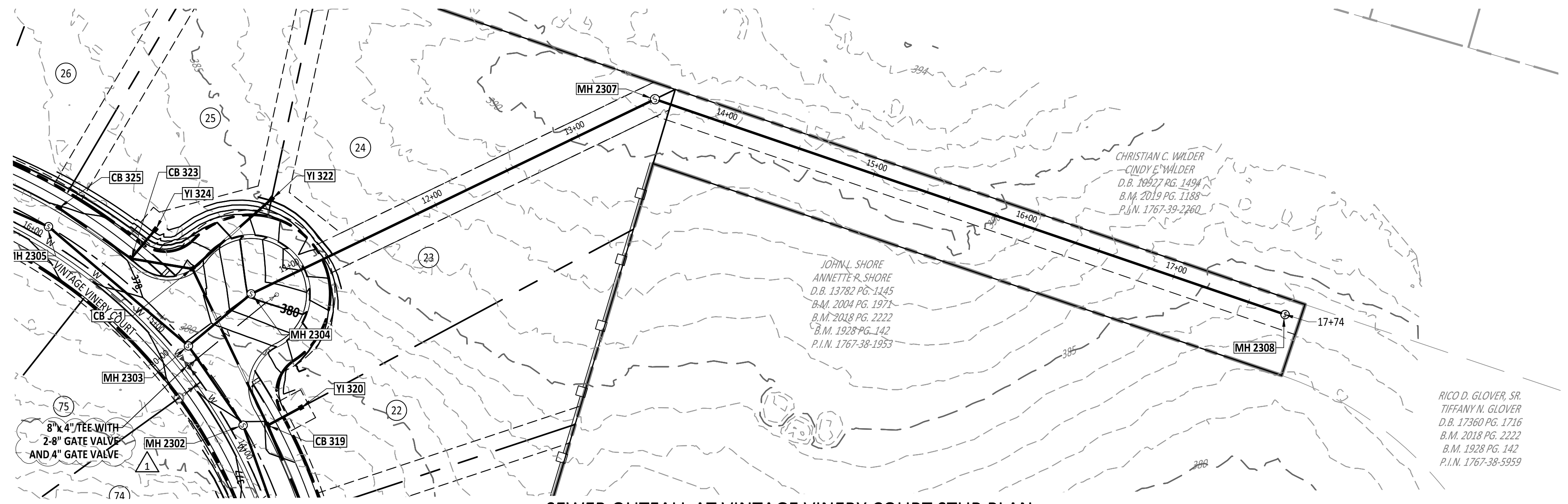
JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

SEWER OUTFALL

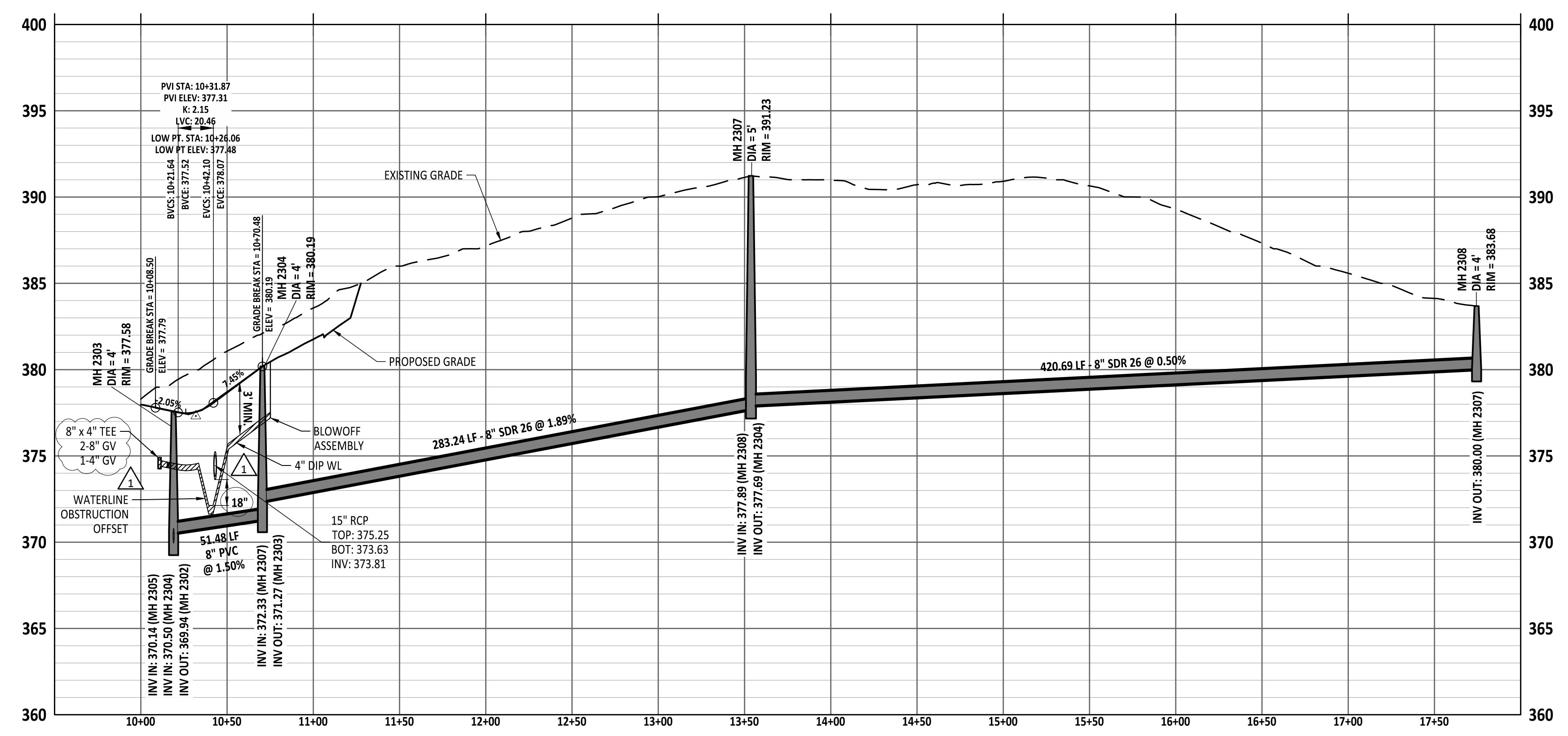
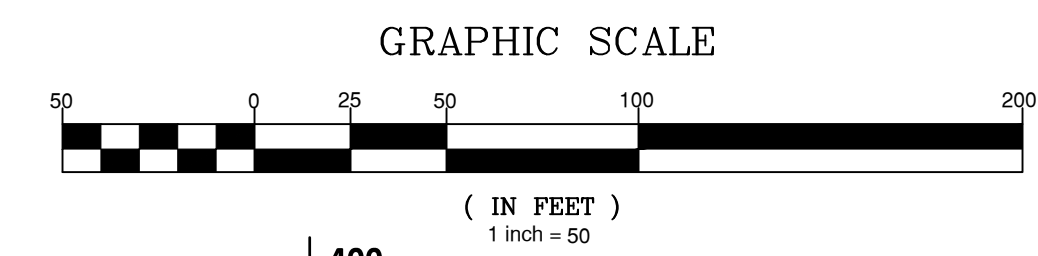
SHEET NO.: **C13.0**

Z:\Projects\2025\02_Moody\Development\Trac\B2100003\Draw\Working\Draw\Construction\541130 Sewer Outfall Plan and Profile.dwg February 3, 2025

<p>Public Sewer Collection / Extension System The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #</p>	<p>Public Water Distribution / Extension System The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #</p>	<p>North 811 *** 3 Days Before Digging *** North Carolina 811 811 or 1-800-432-4949 Remote Ticket Entry http://nc811.org/remoteticketentry.htm</p>
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SEWER OUTFALL AT VINTAGE VINERY COURT STUB PLAN



SEWER OUTFALL AT VINTAGE VINERY COURT STUB PROFILE

NO.	DATE	REVISION:
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

SEWER OUTFALL

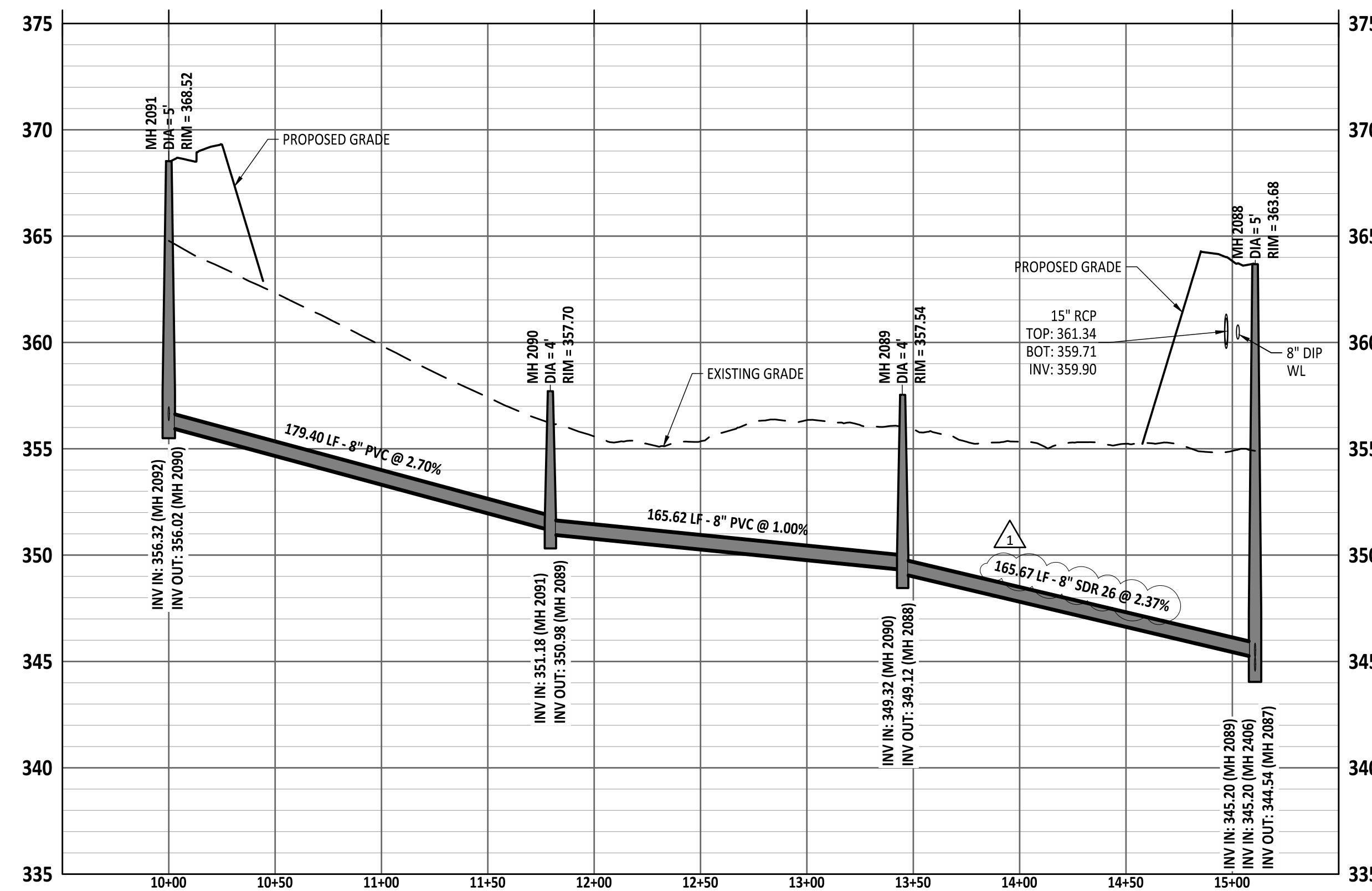
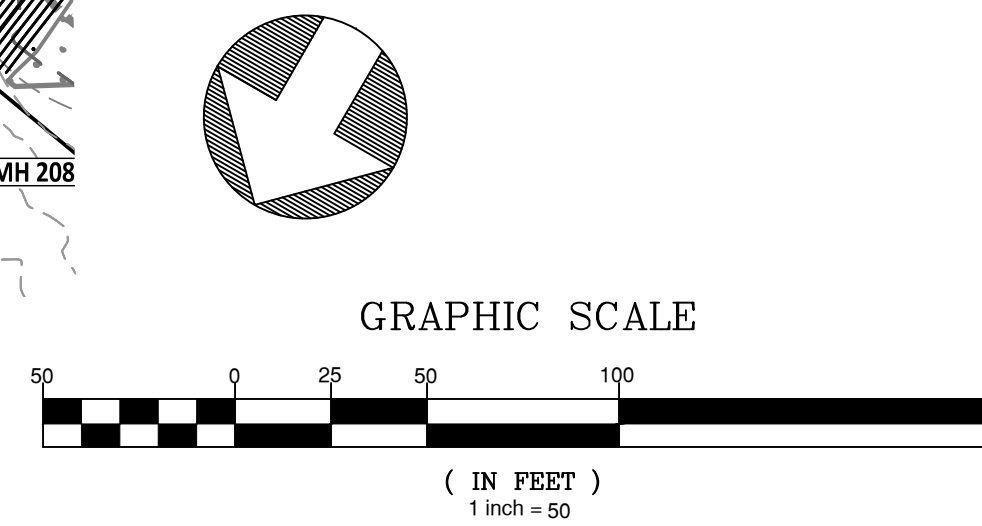
SHEET NO.:
C13.1

<p>Public Sewer Collection / Extension System The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit # _____</p>	<p>Public Water Distribution / Extension System The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit # _____</p>
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North 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
<http://nc811.org/remoteticketentry.htm>



SEWER OUTFALL AT MULBERRY AND TANSLEY PLAN



SEWER OUTFALL AT MULBERRY AND TANSLEY PROFILE

NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

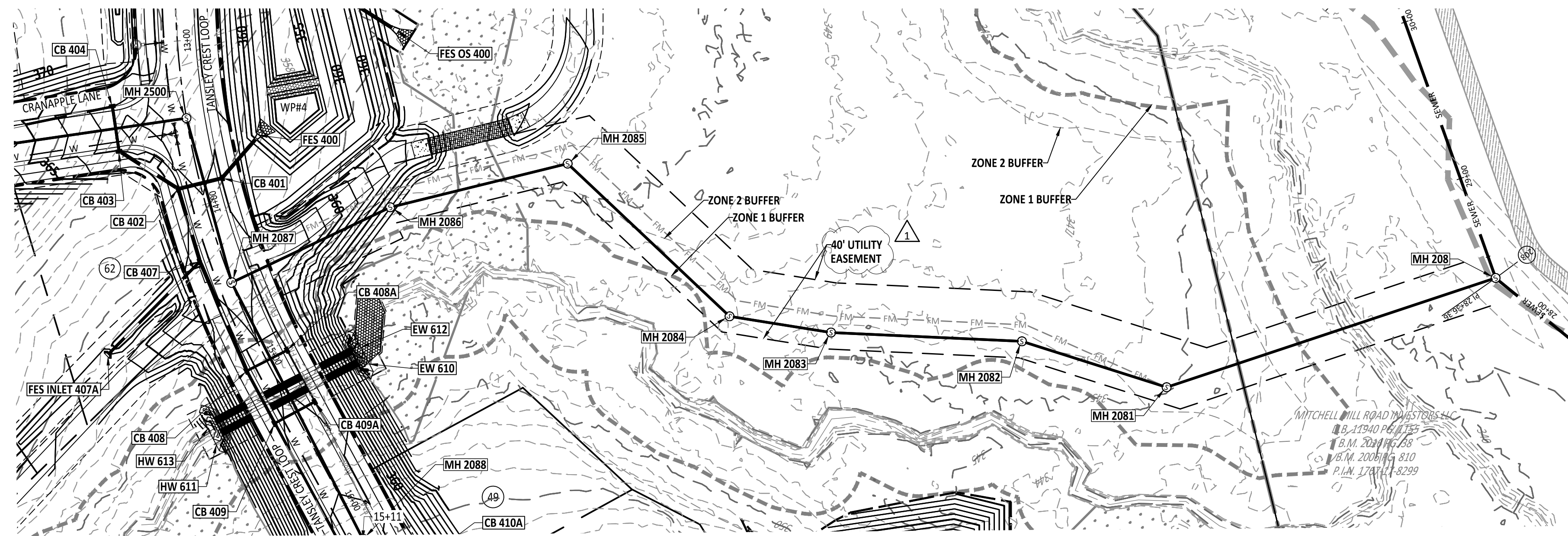
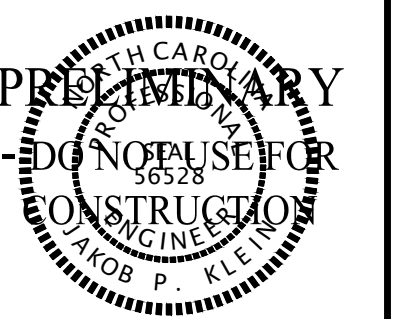
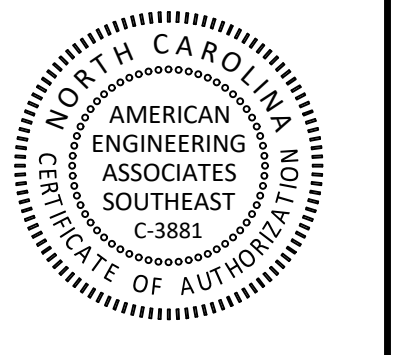
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CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

SEWER OUTFALL

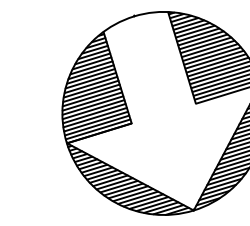
SHEET NO.:
C13.2

<p>Public Sewer Collection / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department/Permit #</p>	<p>Public Water Distribution / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department/Permit #</p>
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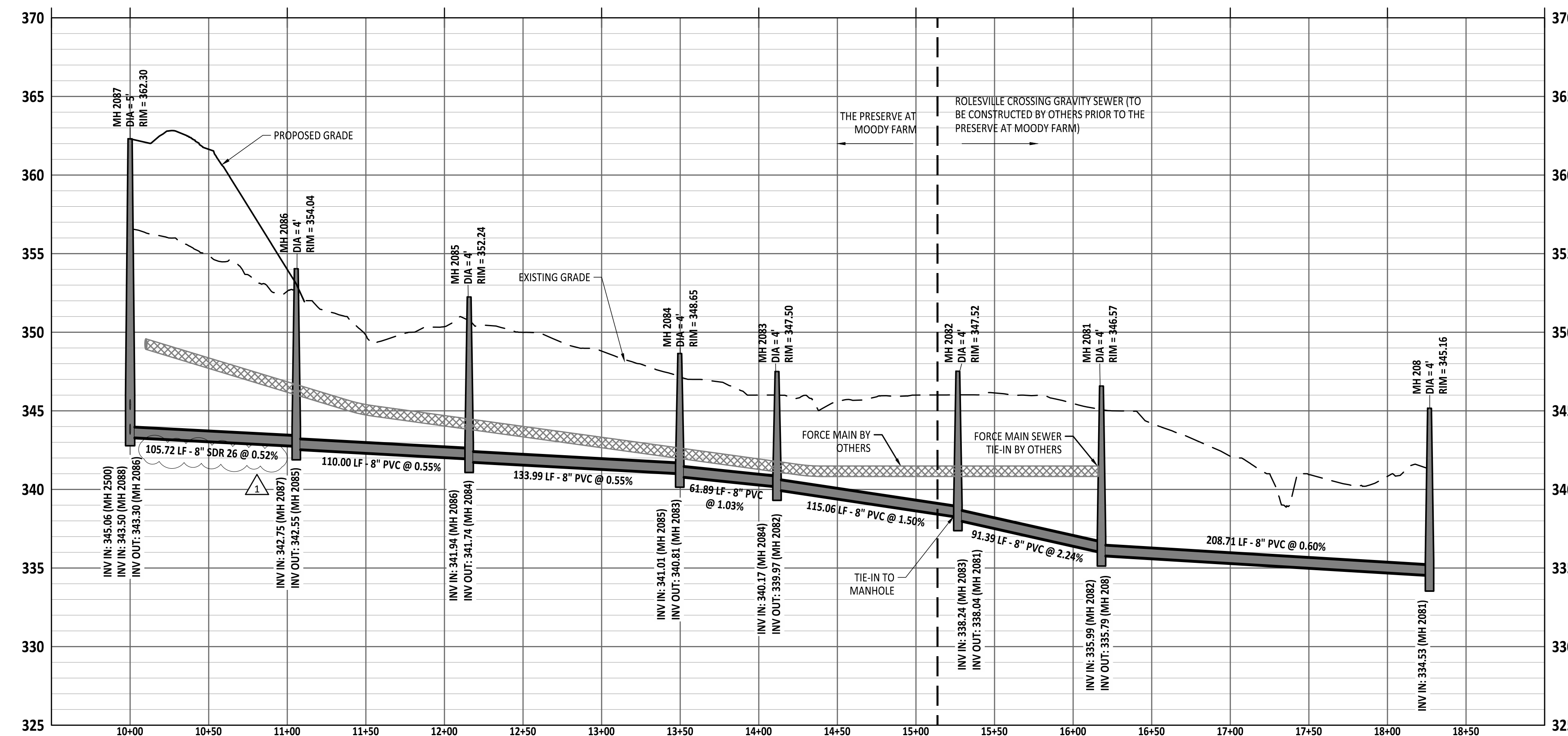
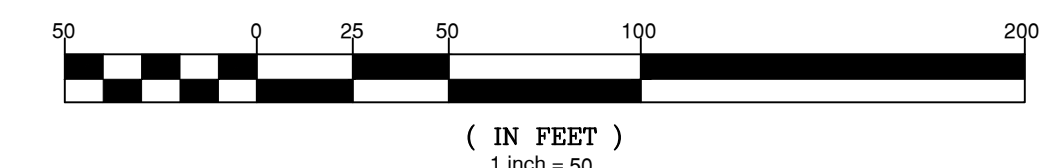
North 811
Call Before You Dig
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-432-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm



SEWER OUTFALL AT TANSLEY CREST LOOP (TIE-IN TO KALAS FALLS) PLAN



GRAPHIC SCALE



SEWER OUTFALL AT TANSLEY CREST LOOP (TIE-IN TO KALAS FALLS) PROFILE

NO.	DATE	REVISION:
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

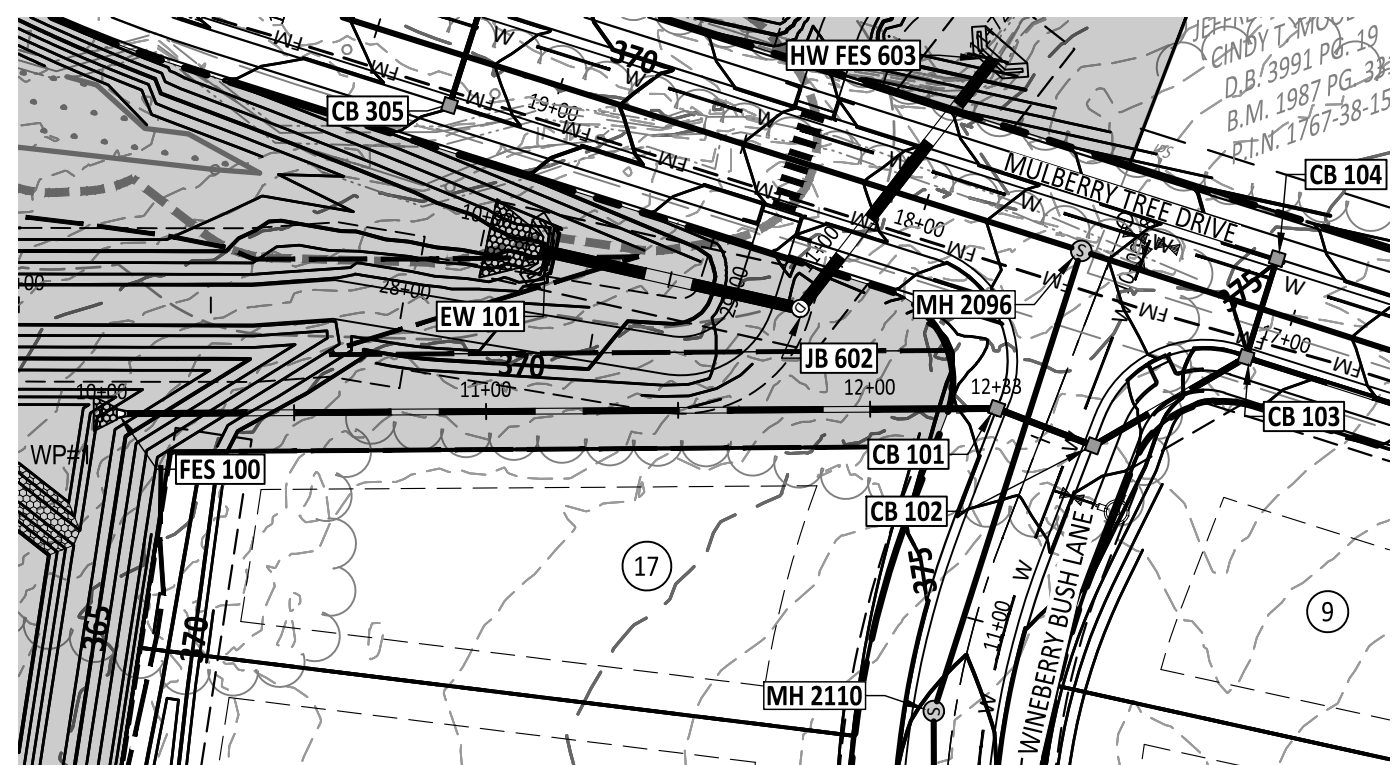
JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

SEWER OUTFALL

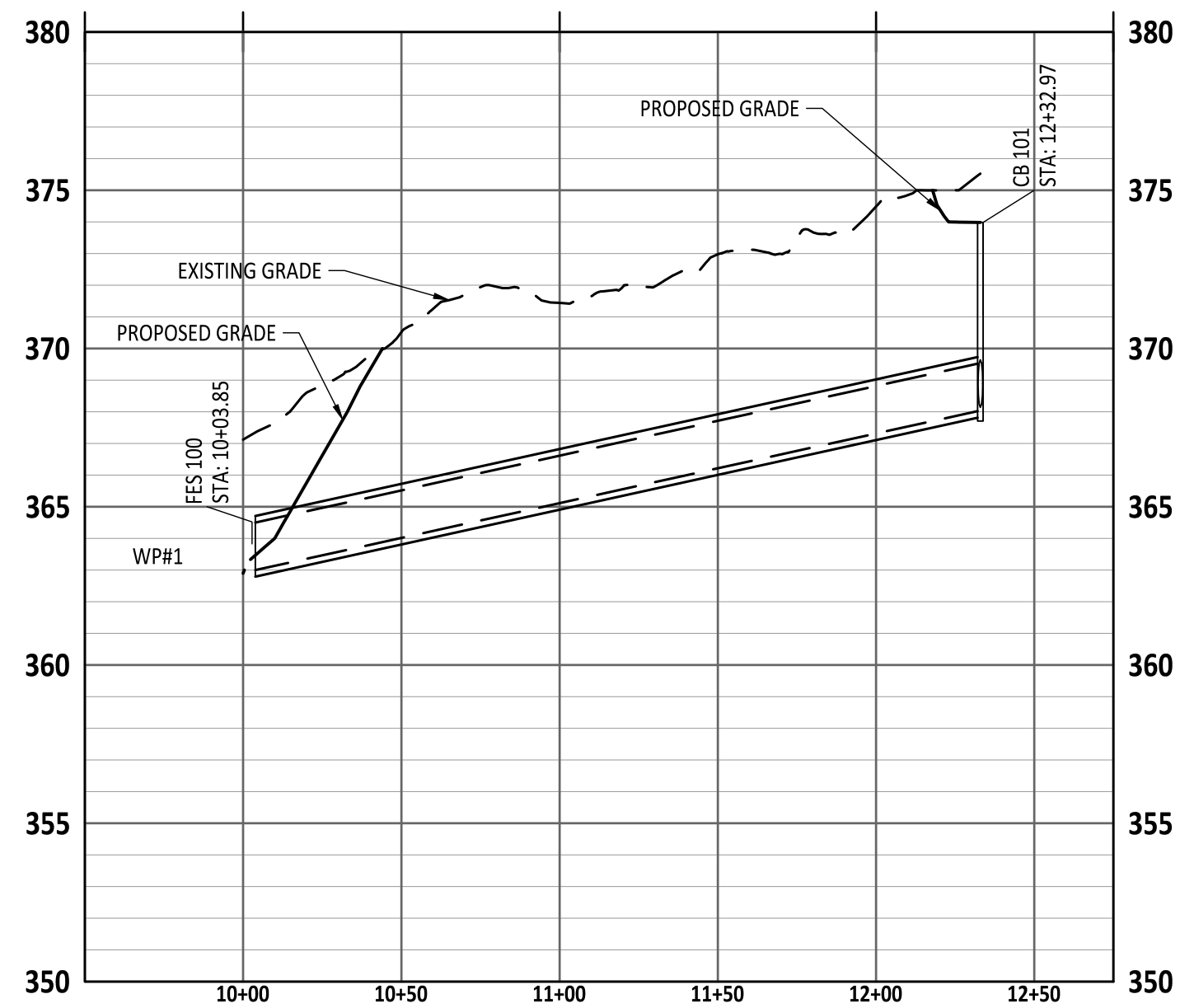
SHEET NO.: **C13.3**

<p>Public Sewer Collection / Extension System The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>	<p>Public Water Distribution / Extension System The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit #</p>
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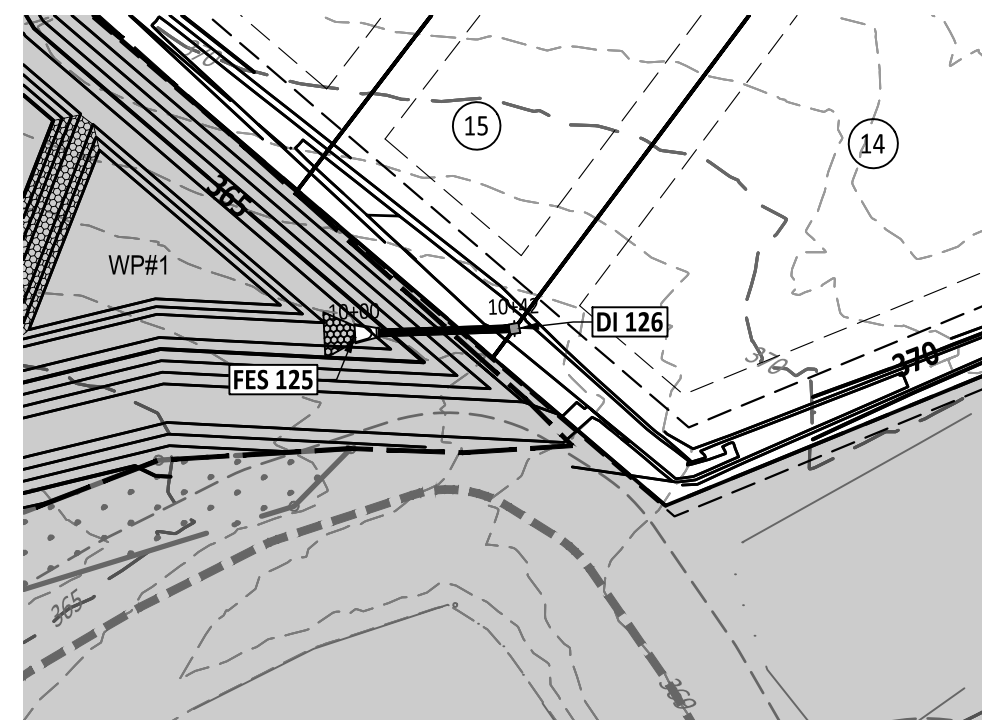
North 811
Call Before You Dig
811 or 1-800-632-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm



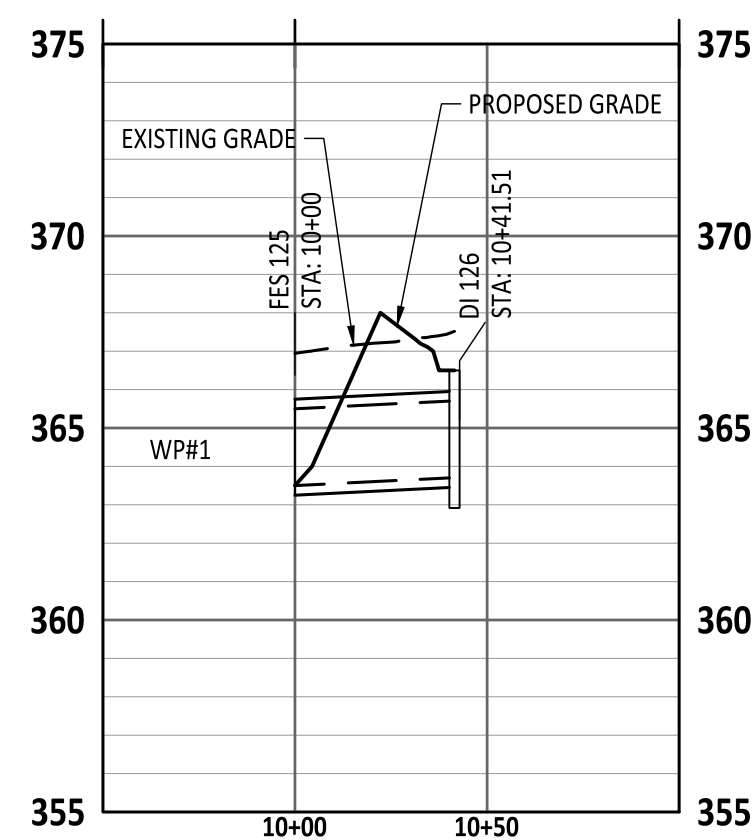
CB 101 TO FES 100 PLAN



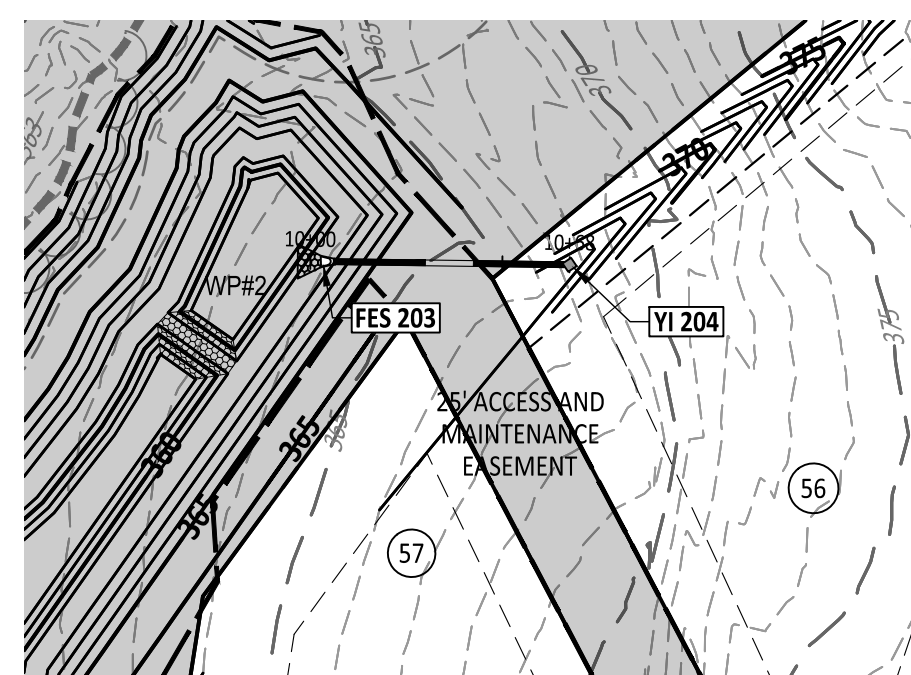
CB 101 TO FES 100 PROFILE



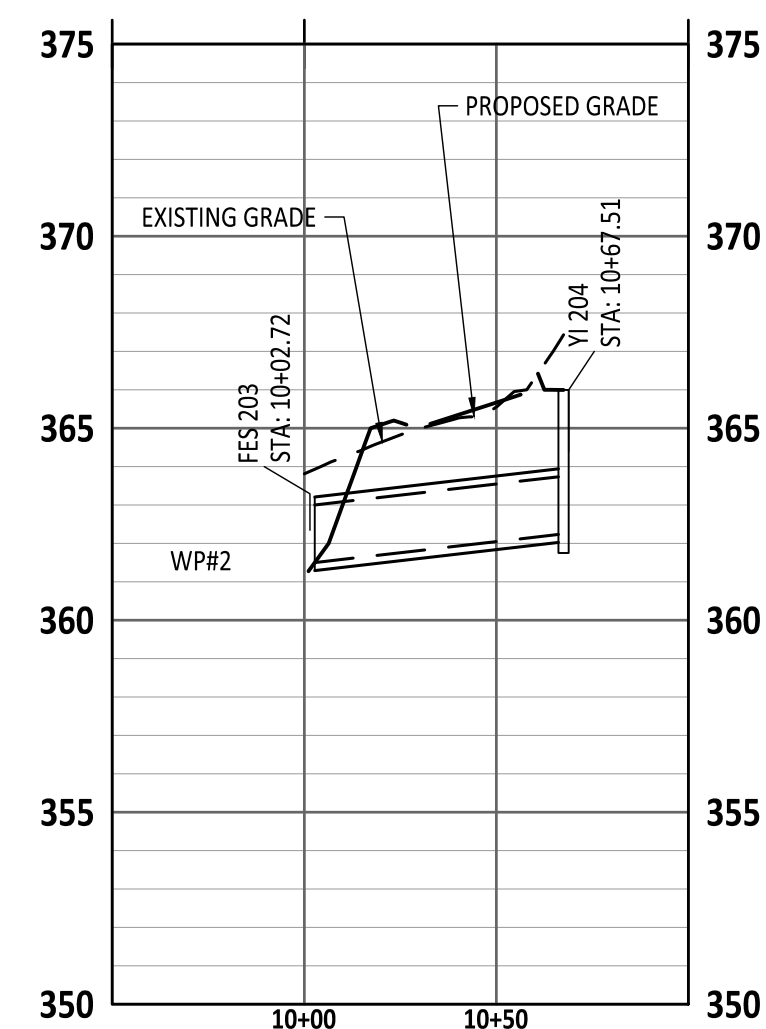
DI 126 TO FES 125 PLAN



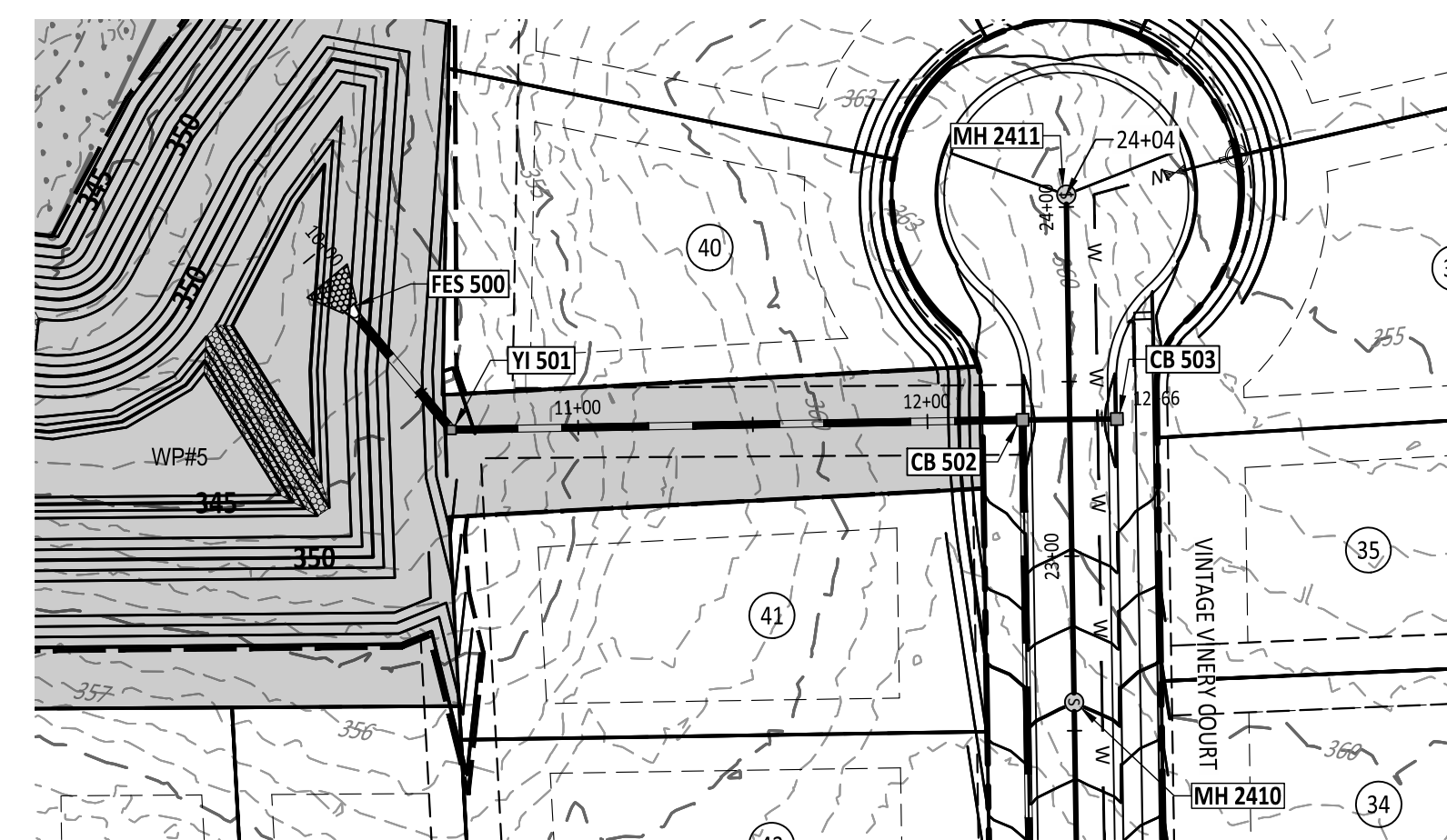
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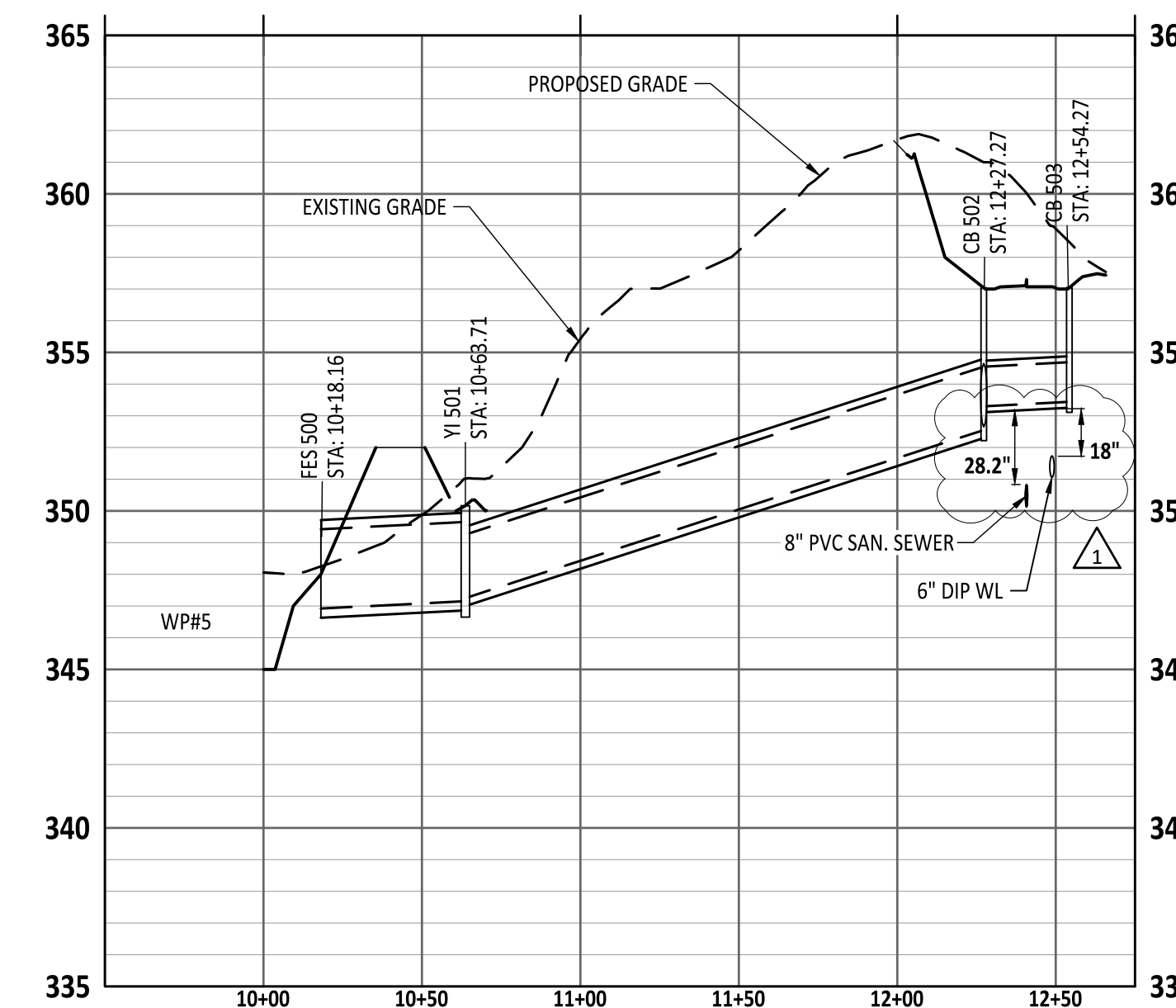
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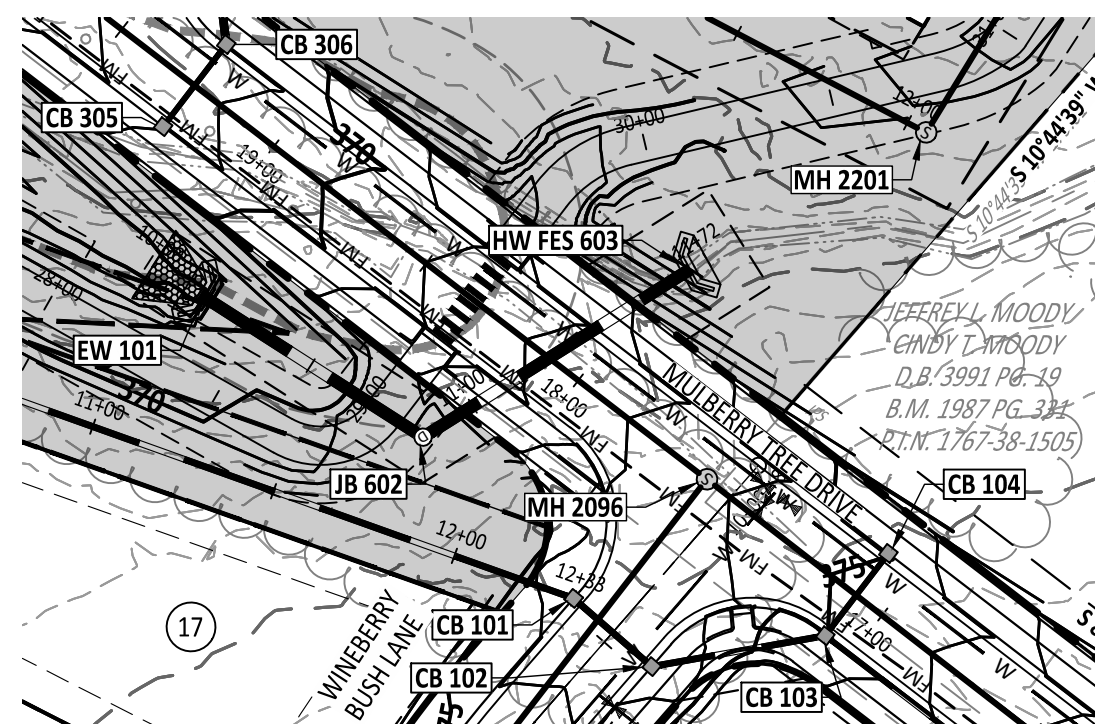
YI 204 TO FES 203 PROFILE



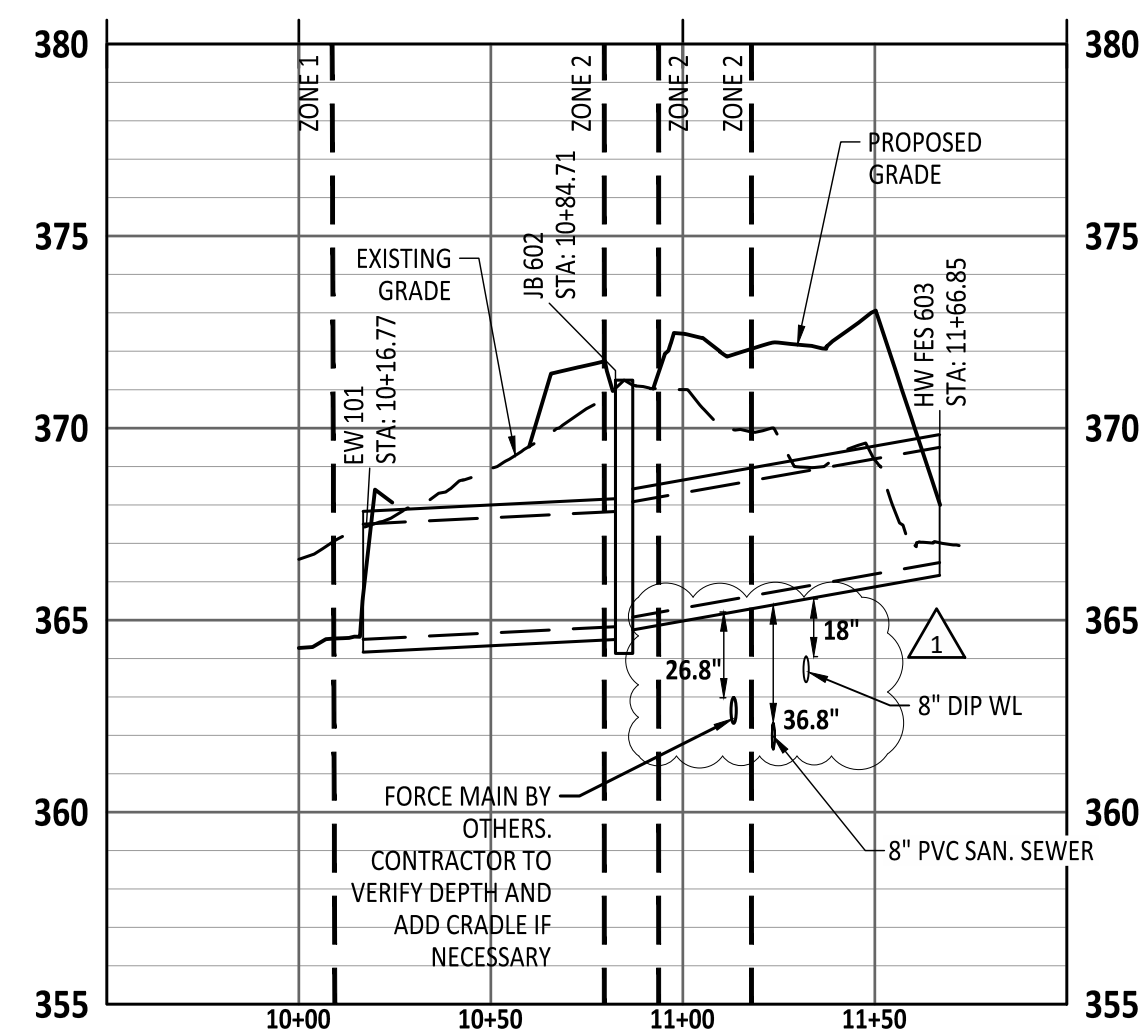
CB 503 TO FES 500 PLAN



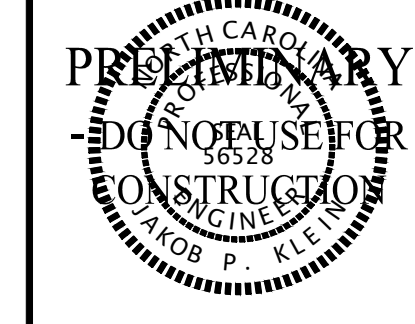
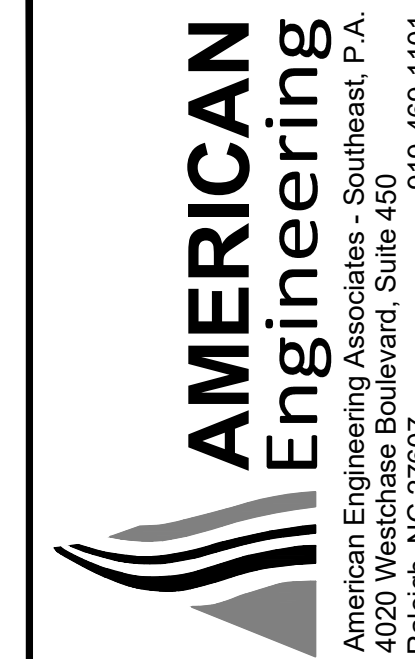
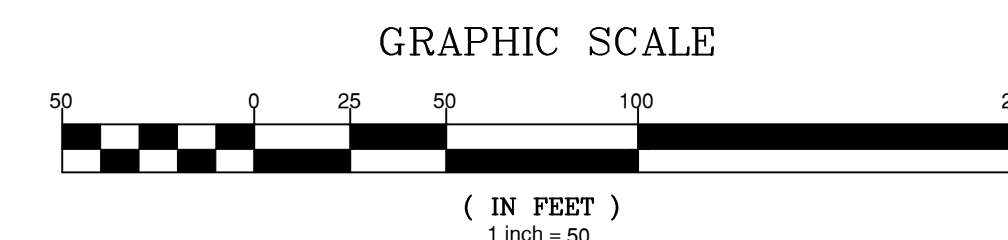
CB 503 TO FES 500 PROFILE



HW 603 TO EW 101 PLAN



HW 603 TO EW 101 PROFILE



NO.	DATE	REVISION
1	02-26-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
 THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

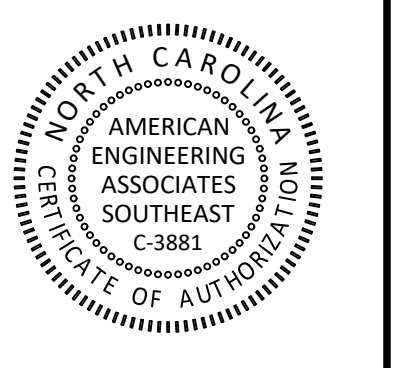
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 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:
STORM OUTFALL PLAN AND PROFILES
 SHEET NO.:
C14.0

Public Sewer Collection / Extension System
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
 City of Raleigh
 Public Utilities Department/Permit #

Public Water Distribution / Extension System
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 City of Raleigh
 Public Utilities Department/Permit #



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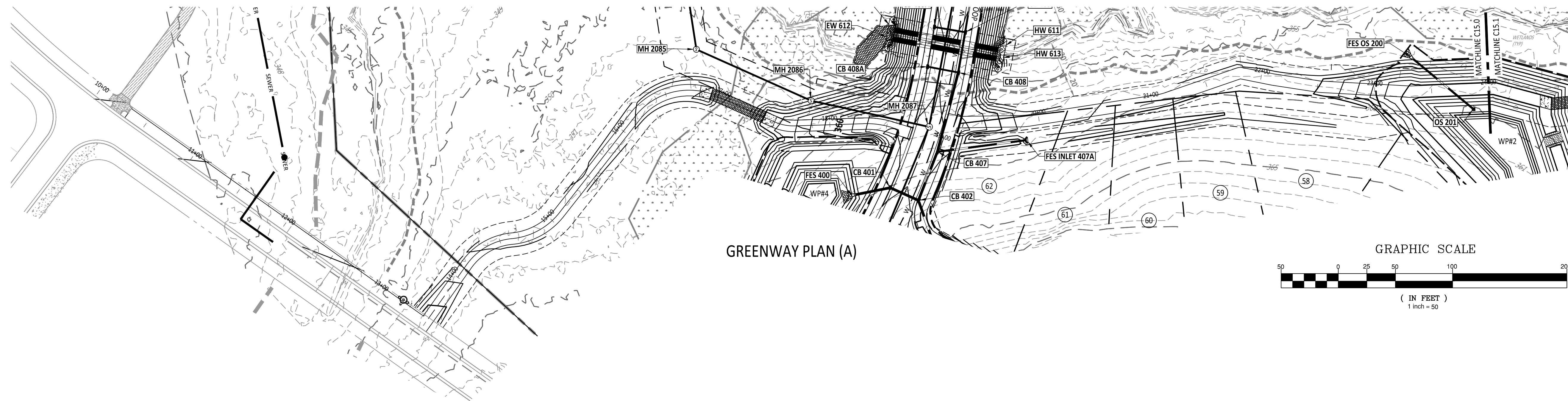


NO.	DATE	REVISION
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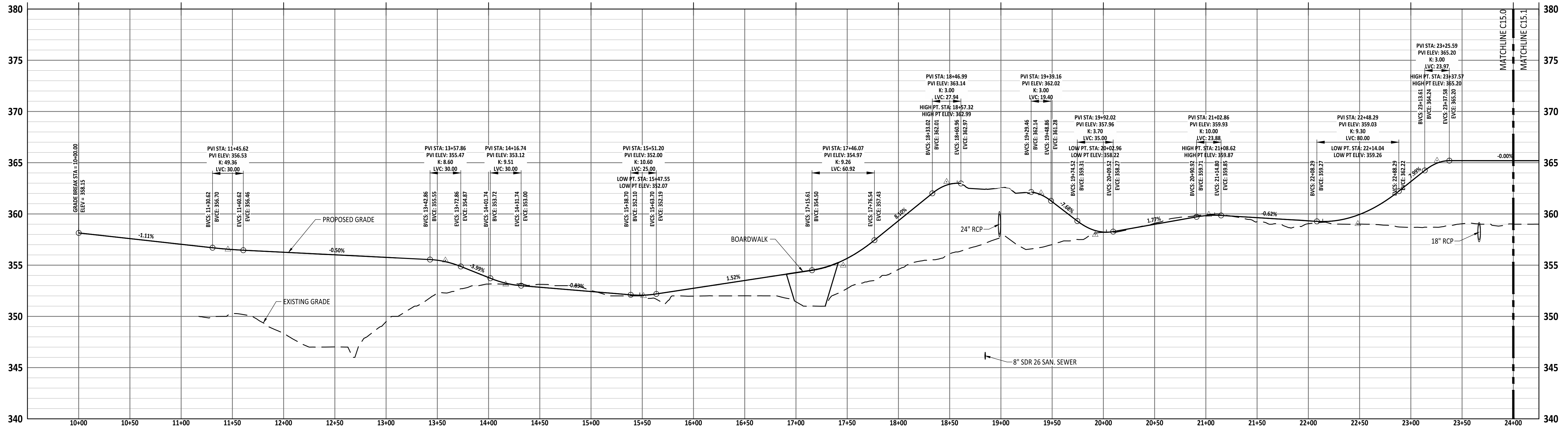
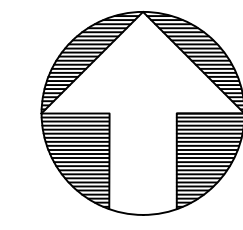
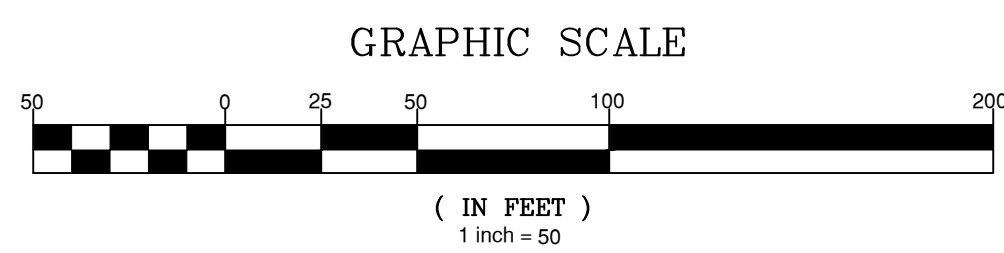
STIPULATION FOR REUSE
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**THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC**

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE: GREENWAY PLAN AND PROFILE
SHEET NO.: C15.0



GREENWAY PLAN (A)

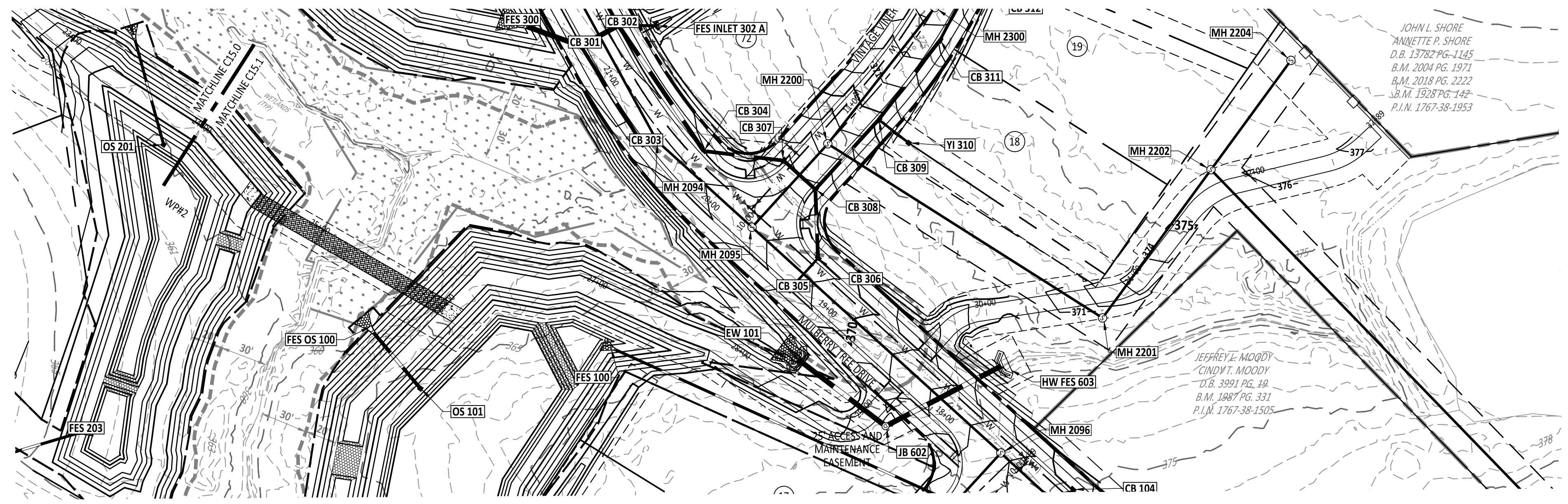


GREENWAY PROFILE (A)

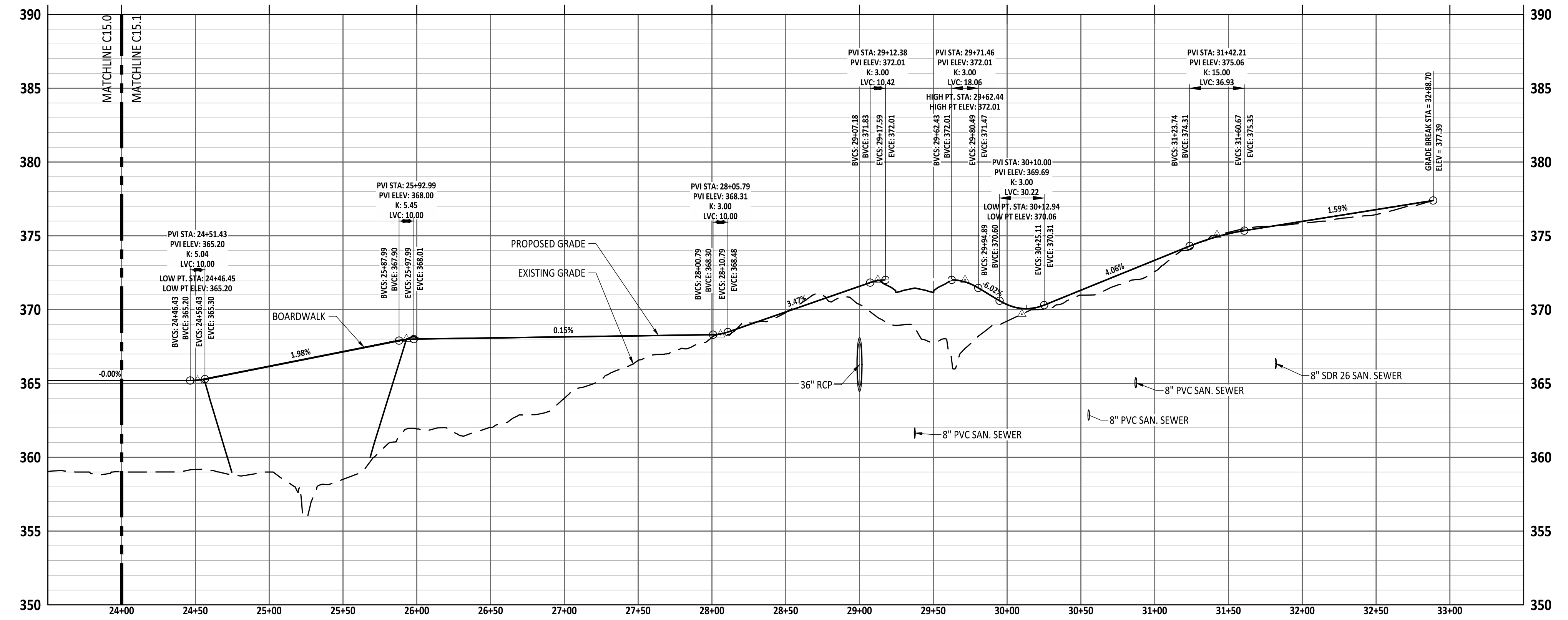
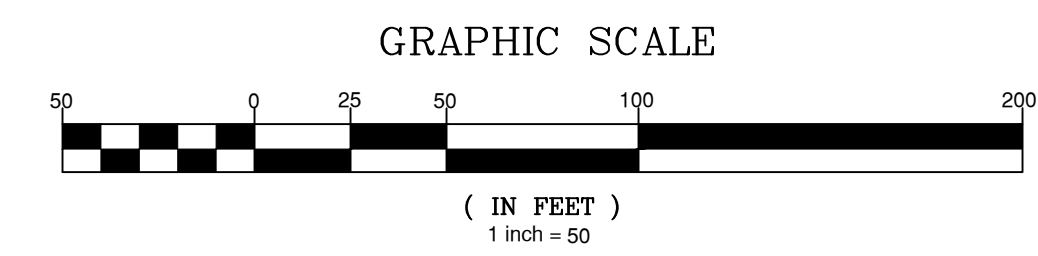
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Public Sewer Collection / Extension System The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #	Public Water Distribution / Extension System The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #
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North 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-432-4949
Remote Ticket Entry
http://nc811.org/remoteticketentry.htm



GREENWAY PLAN (B)



GREENWAY PROFILE (B)

NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:

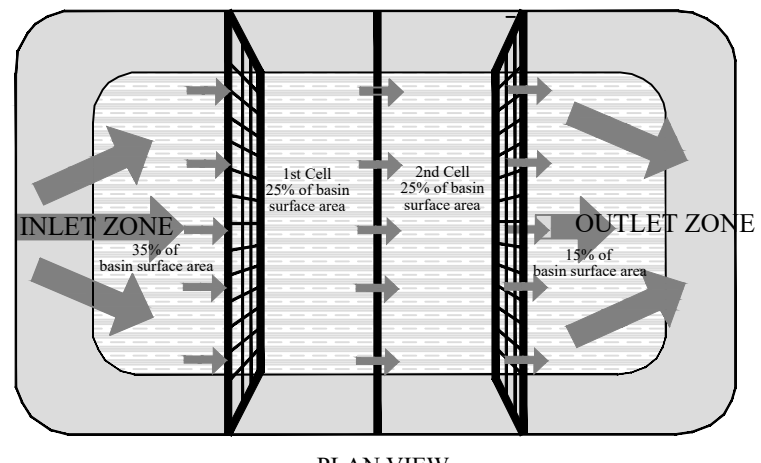
GREENWAY PLAN AND PROFILE

SHEET NO.: **C15.1**

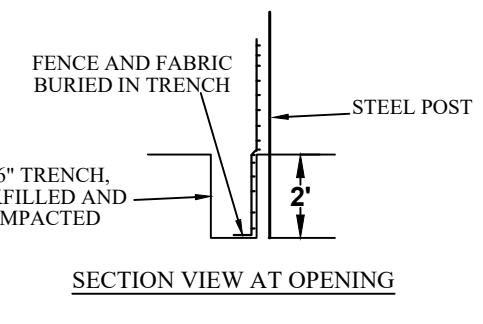
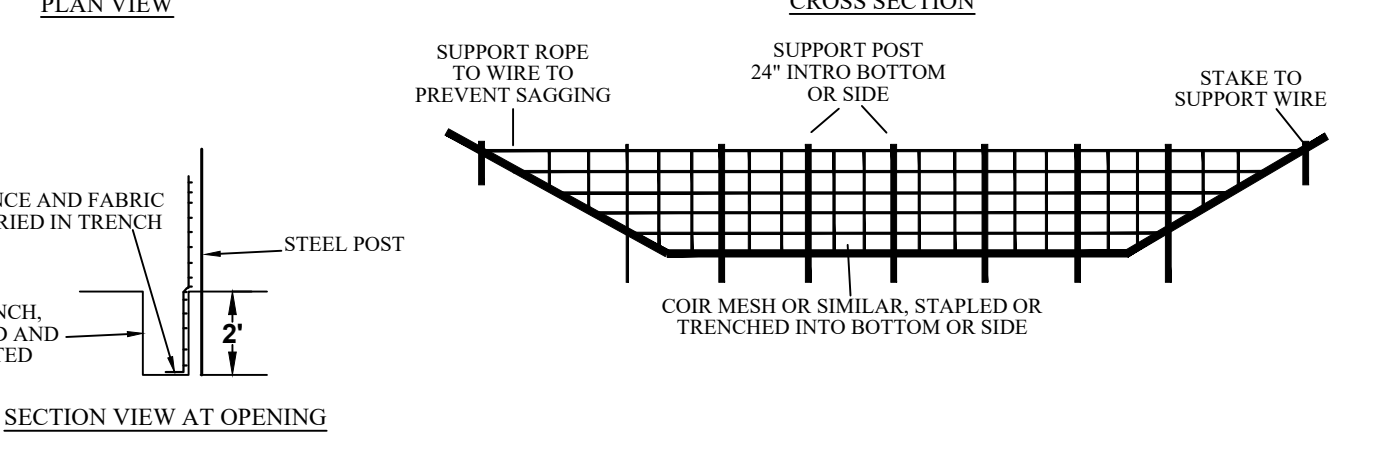
Public Sewer Collection / Extension System
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City of Raleigh
Public Utilities Department Permit # _____

Public Water Distribution / Extension System
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Public Utilities Department Permit # _____

North 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-632-4949
Remote Ticket Entry
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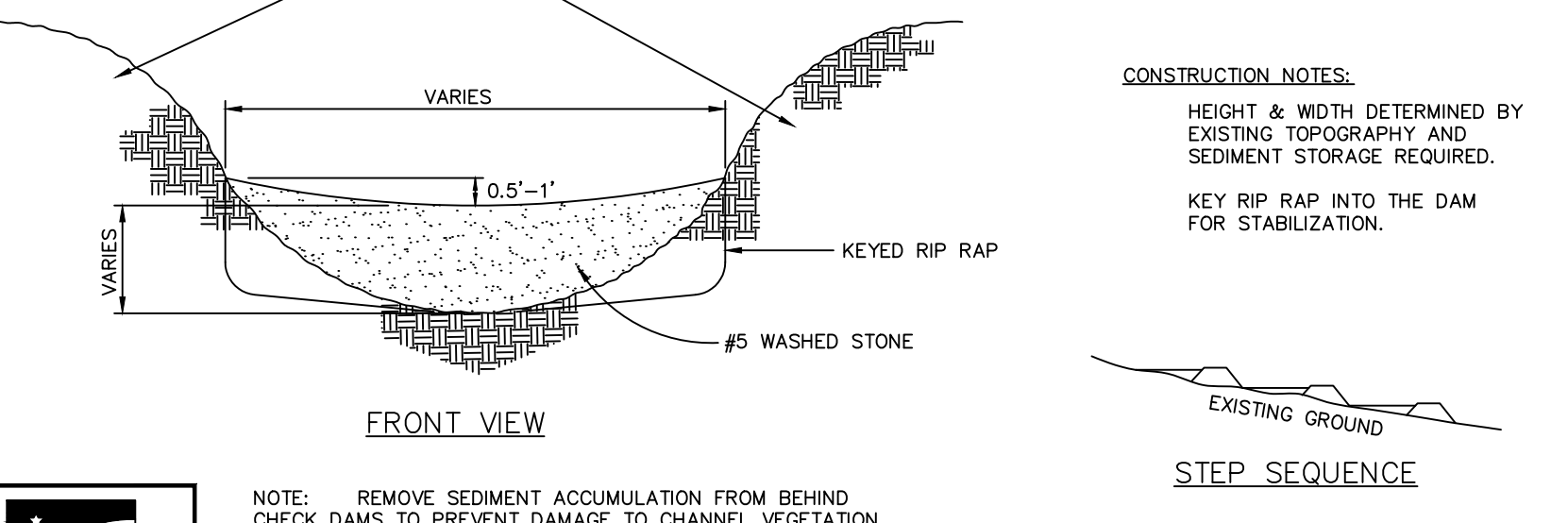
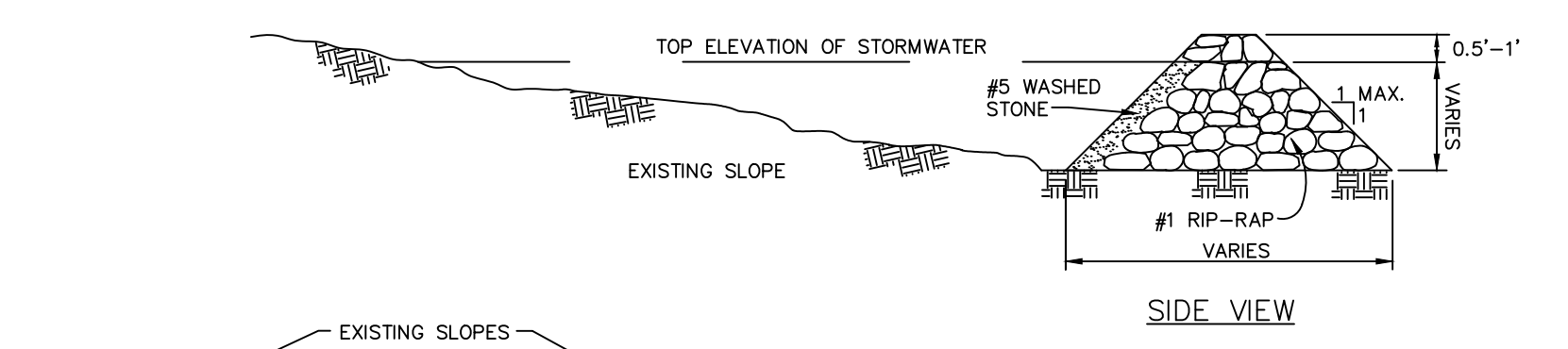


- NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
 2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
 3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
 4. BAFFLE SHALL BE 700 G/M2 COR EROSION BLANKET.
 5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
 6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.



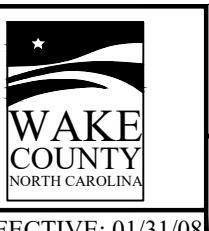
STANDARD BAFFLES DETAIL

EFFECTIVE: 01/31/08



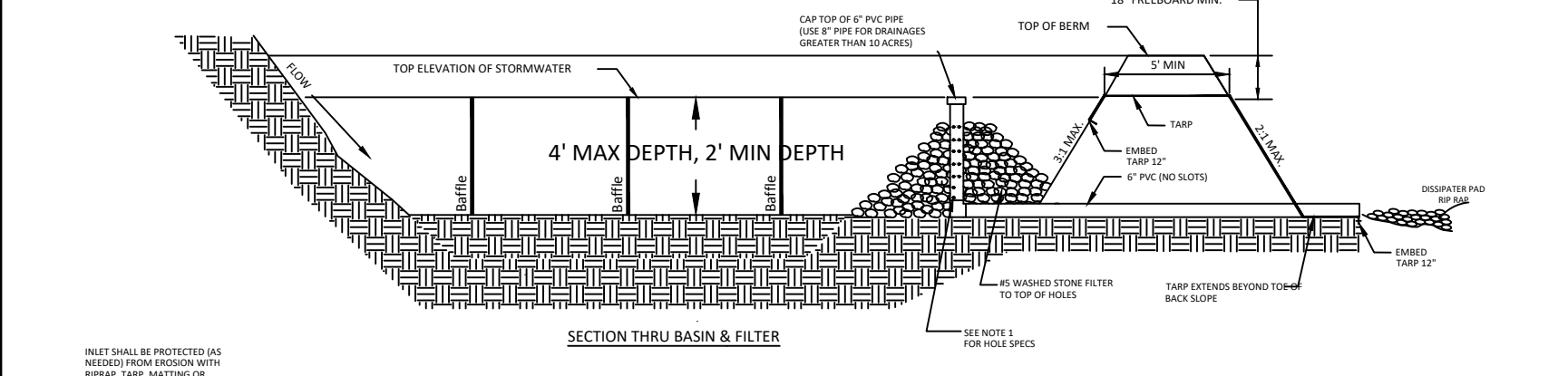
- CONSTRUCTION NOTES:
- HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
 - KEY RIP RAP INTO THE DAM FOR STABILIZATION.

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.



STANDARD CHECK DAM

EFFECTIVE: 01/31/08



- GENERAL NOTES:
1. DRAW DOWN RISER & BARREL SHALL BE 4" SCH 40 PVC WITH CLEAN OUT CAP AND 1/2" HOLES TO NOTE 1 FOR NUMBER AND SPACING OF HOLES.
 2. THE LENGTH OF THE TRAP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF AVAILABLE SUPPLY IS LIMITED, THE TRAP SHALL BE OVERLAPPED AT LEAST 2".
 3. THE UPSTREAM 1/2" TRAP SHALL OVERLAP THE DOWNSTREAM TRAP. THE TRAP SHALL BE TO BE KEPT OPEN TO ALLOW TRAPPING OR EQUALIZE FOR I.V. RESPONSE.
 4. MAINTENANCE: SEDIMENT TO BE REMOVED AND PROPERLY DISPOSED OF DOWNSTREAM TO PREVENT FLOODING. TRAP SHALL BE REPLACED AS NEEDED TO ENSURE DRAINAGE.

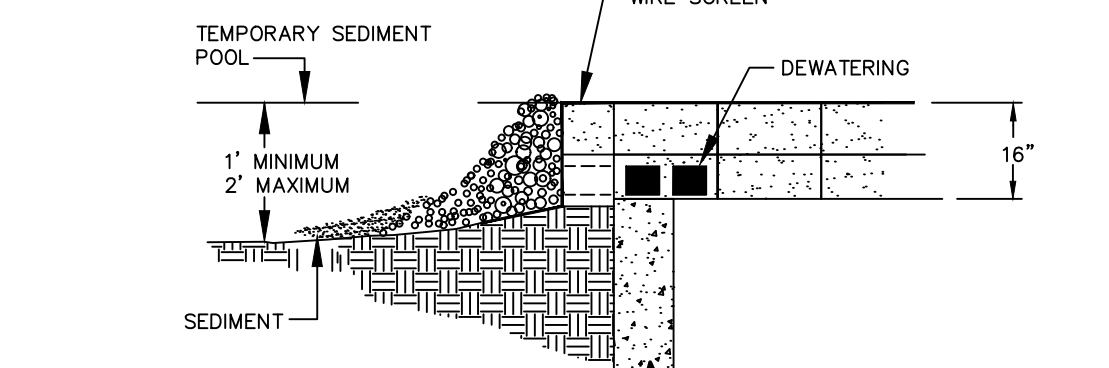
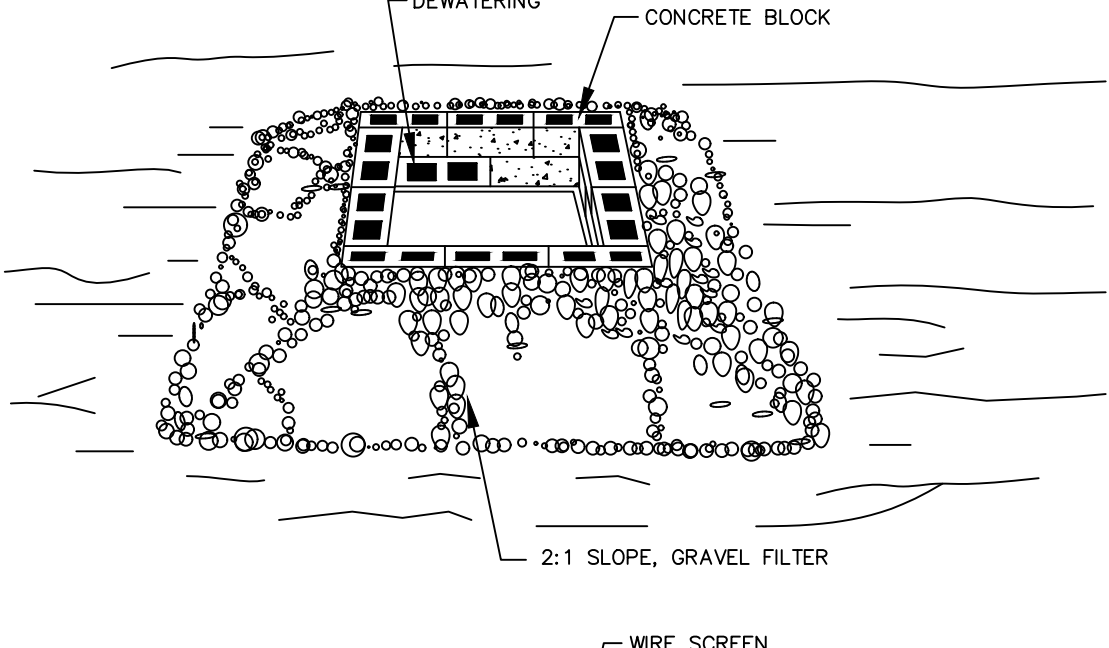
- NOTE 1:
- DEWATERING HOLES WILL BE INSTALLED IN SETS OF HORIZONTAL RINGS. THE FIRST SET OF HOLES WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER. RINGS WILL COMPARE UP THE RISER IN INTERVALS OF 3 INCHES. HOLES WILL BE 3/4 INCH IN DIAMETER AND WILL BE SPACED EQUALLY AROUND THE RISER. THE NUMBER OF HOLES FOR RING WILL BE EQUAL TO THE DRAINAGE AREA.
- EXAMPLE:
- PERFORMING 2.0 ACRES SHOULD HAVE 2 HOLES PER RING EVERY 3 INCHES ON THE RISER PIPE. THE FIRST RING (2 HOLES) WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER.
- NOTE: PERFORM DRAINAGE AREA TO THE NEAREST WHOLE NUMBER TO DETERMINE NUMBER OF HOLES.



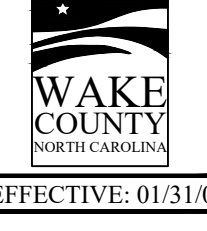
STANDARD CUSTOM BASIN

EFFECTIVE: 01/31/08

- CONSTRUCTION SPECIFICATIONS:
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
 2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
 3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.



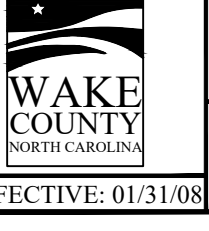
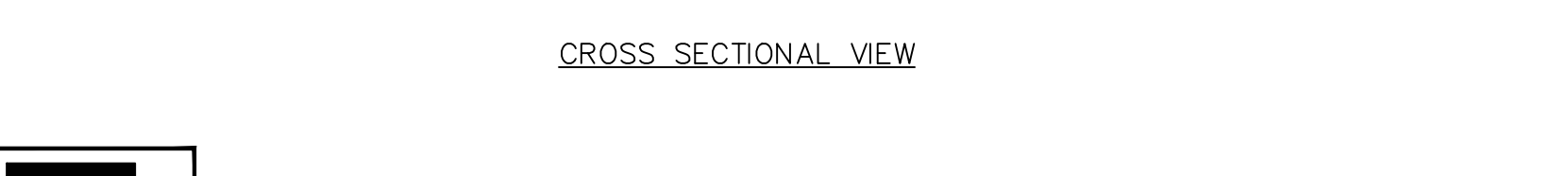
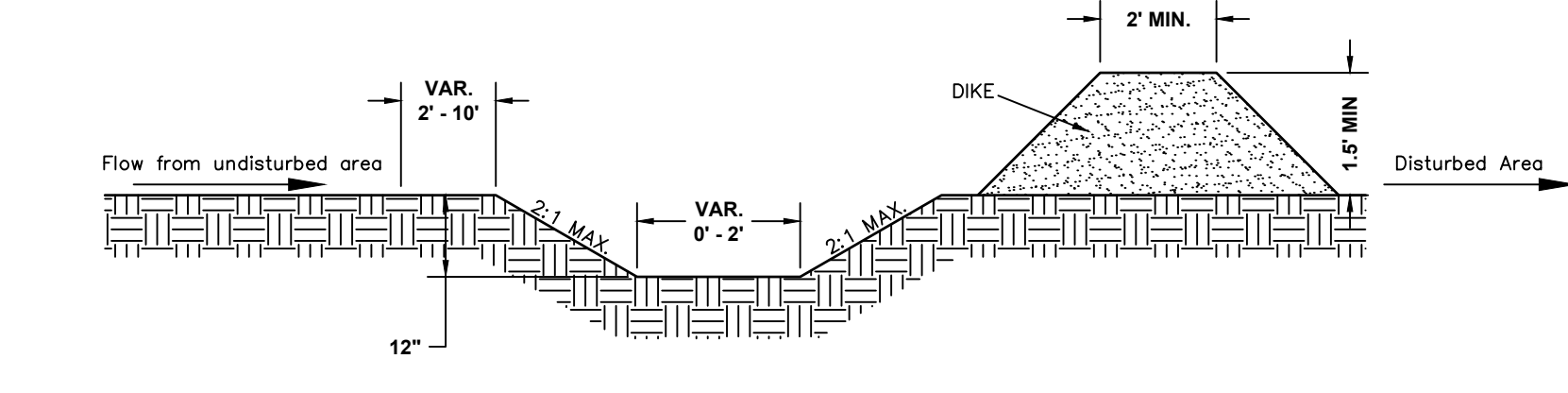
MAINTENANCE: INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

EFFECTIVE: 01/31/08

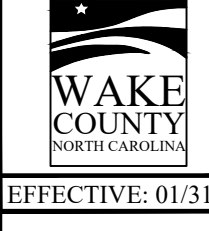
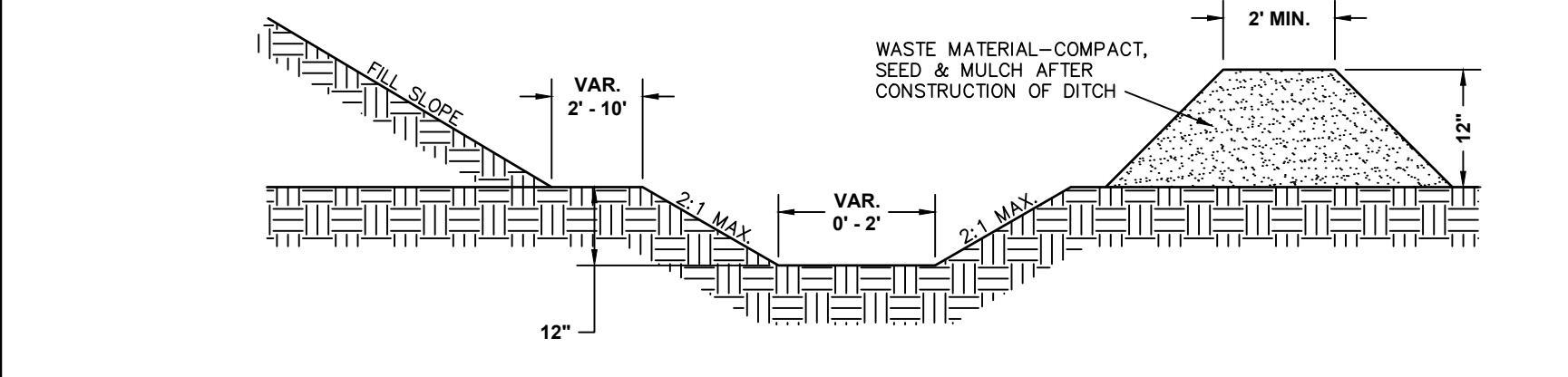
- NOTES:
1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
 2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
 3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 3 ACRES OR LESS.
 4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.



STANDARD CLEAN WATER DIVERSION

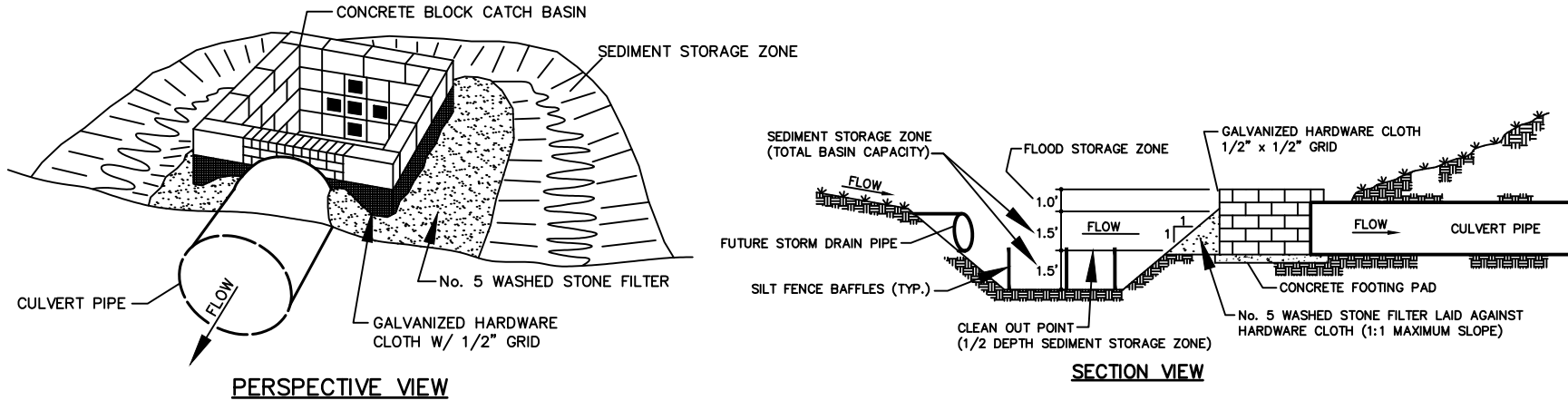
EFFECTIVE: 01/31/08

- NOTES:
1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
 2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
 3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
 4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

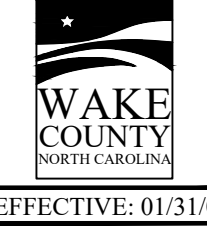
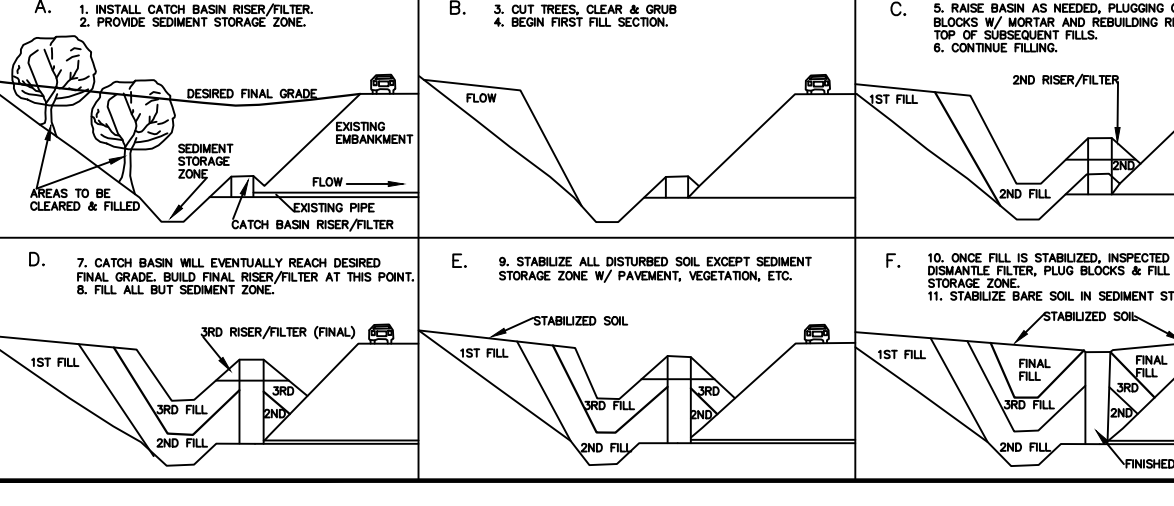


STANDARD TEMPORARY DIVERSION DITCH

EFFECTIVE: 01/31/08

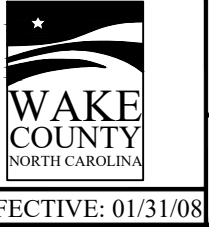
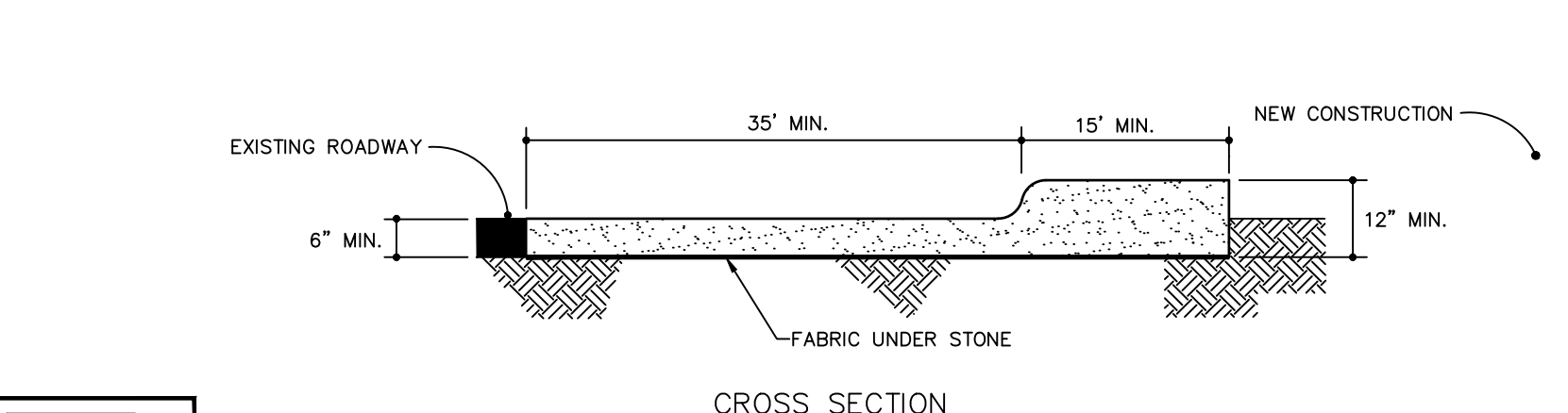
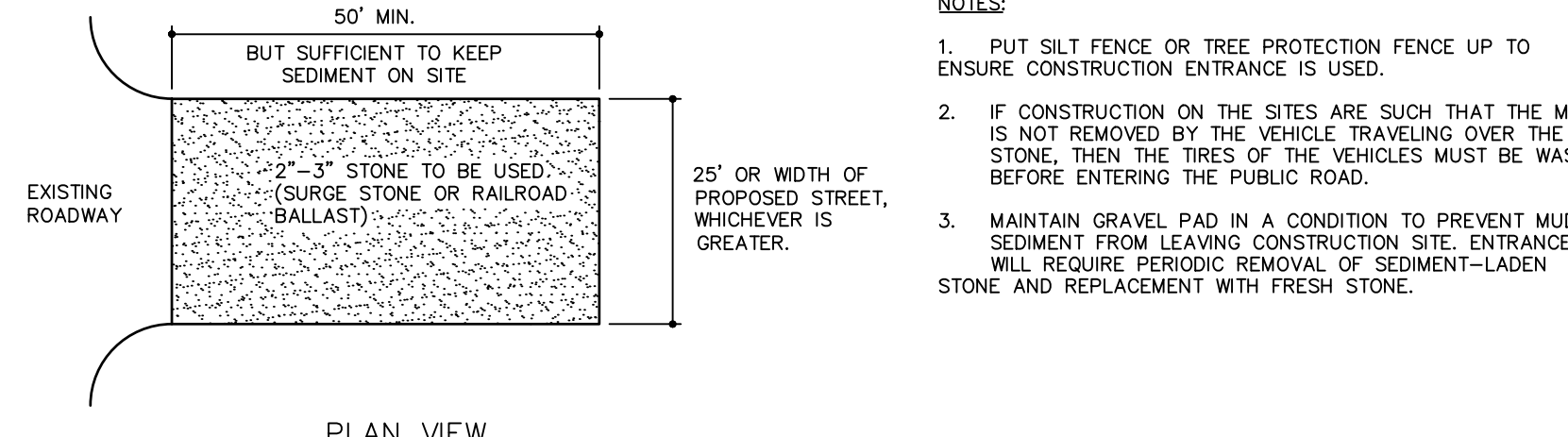


USE OF CATCH BASIN RISER/FILTER ON FILL SITES



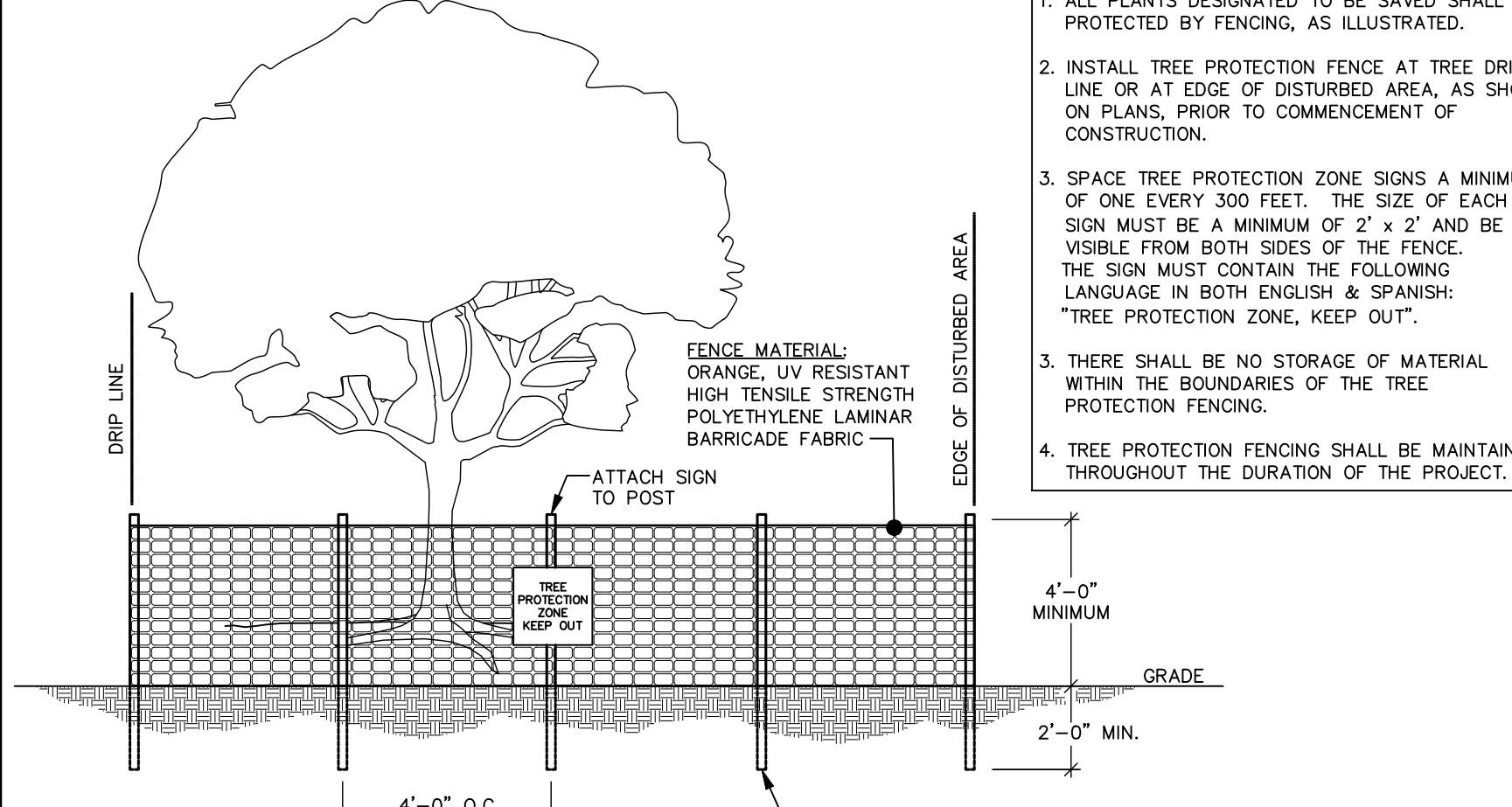
STANDARD CATCH BASIN RISER/FILTER

EFFECTIVE: 01/31/08



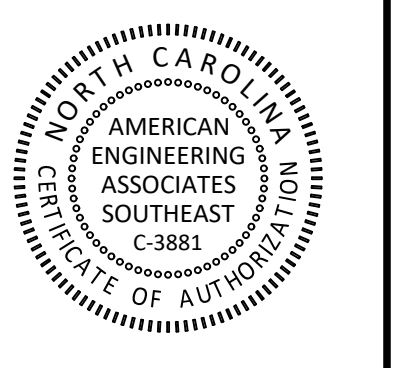
STANDARD CONSTRUCTION ENTRANCE

EFFECTIVE: 01/31/08



TREE PROTECTION FENCE

EFFECTIVE: 01/31/08



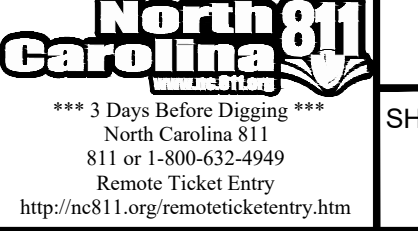
NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE

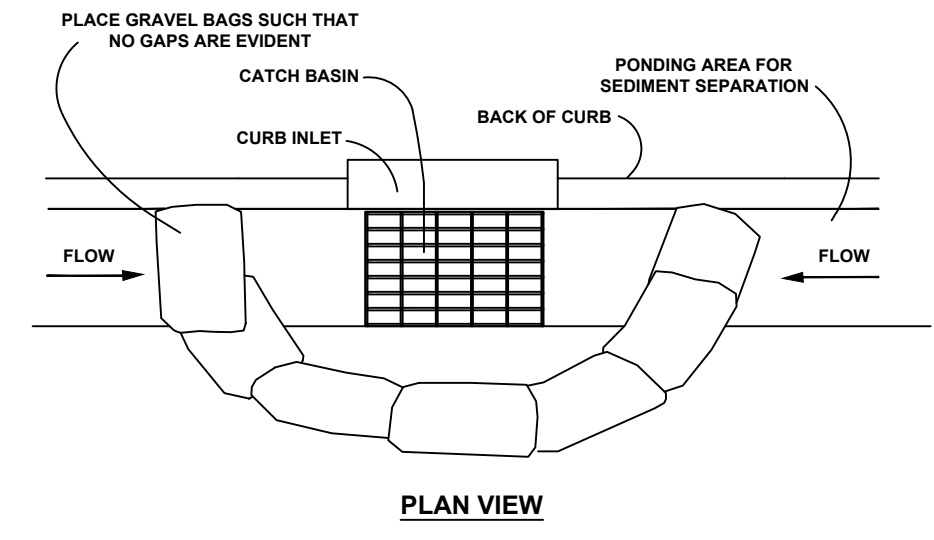
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THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC

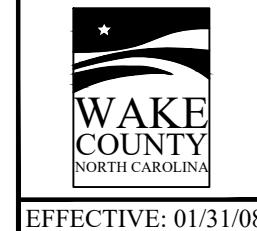
JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE: EROSION CONTROL DETAILS
 SHEET NO.: CD1



February 3, 2025
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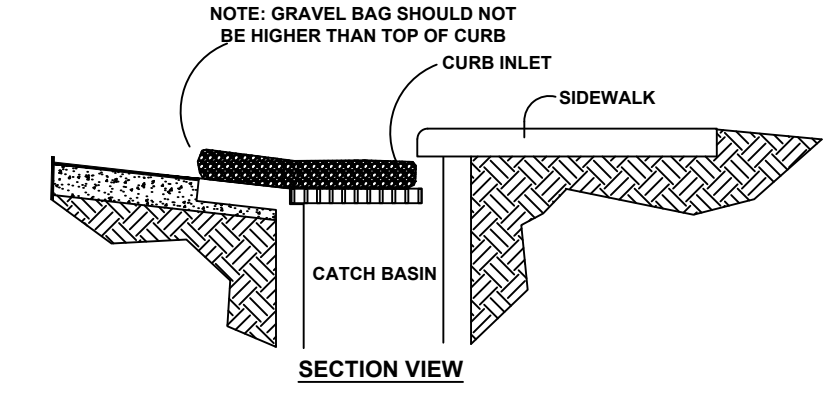


- NOTES:
1. PLACE GRAVEL BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
 2. USE SAND BAGS OF WOVEN GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH 1/2 INCH (OR SMALLER) GRAVEL BAGS MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
 3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.
 4. WHEN INSTALLING CURB INLET PROTECTION DEVICES, NEVER BLOCK THE CURB INLET.

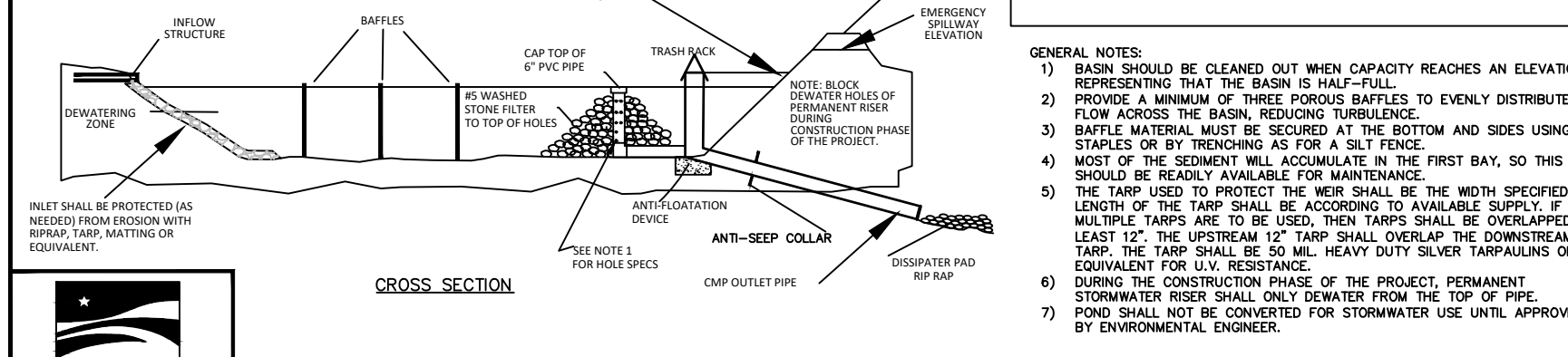
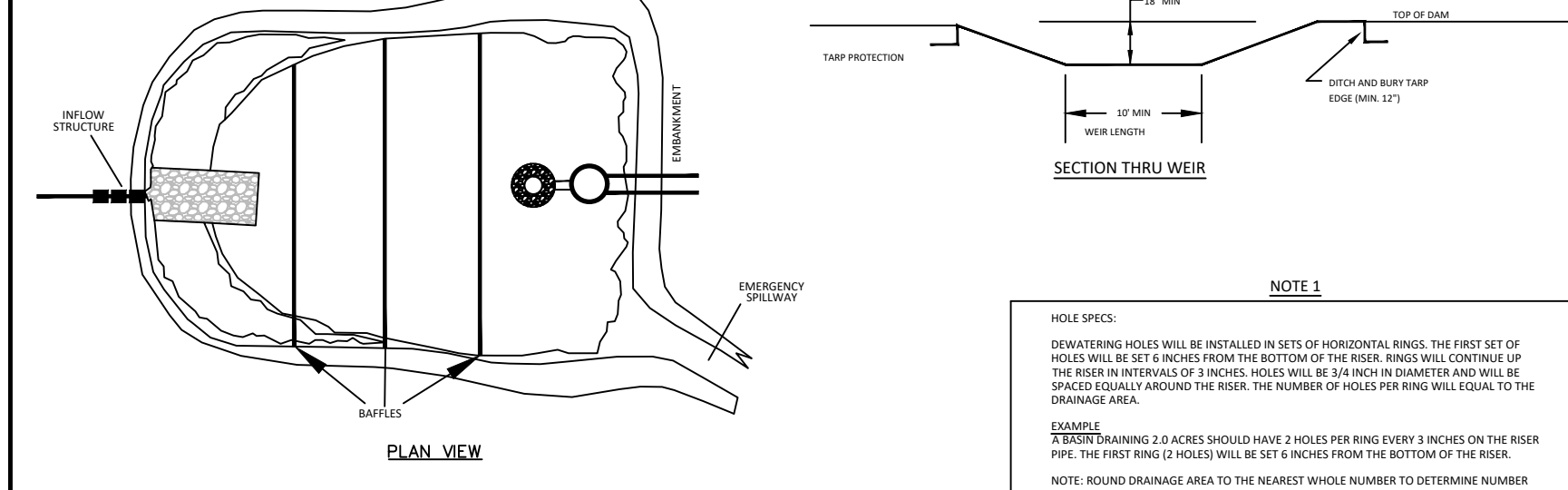


STANDARD GRAVEL BAG CURB INLET PROTECTION

EFFECTIVE: 01/31/08

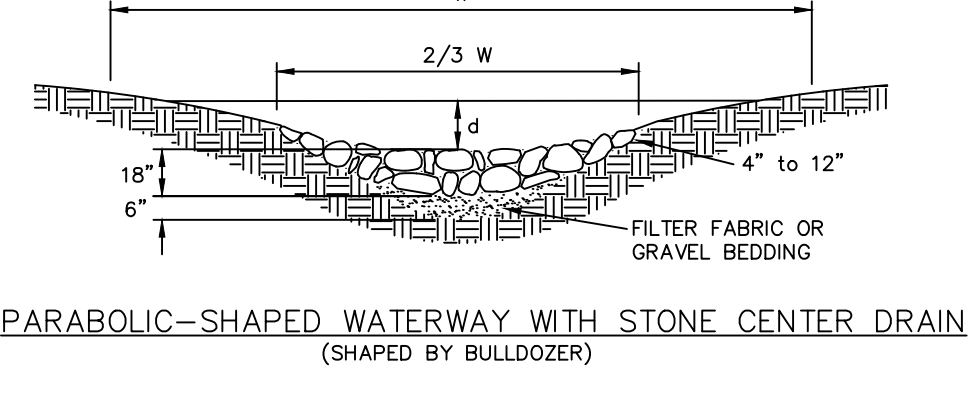


NOTE: GRAVEL BAG SHOULD NOT BE HIGHER THAN TOP OF CURB

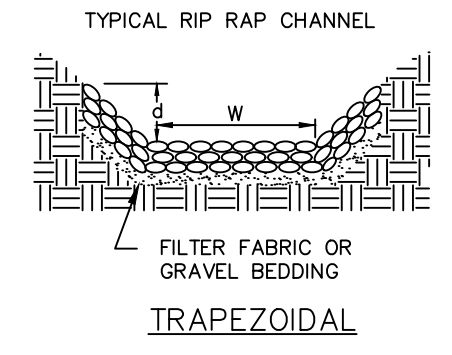


STANDARD CUSTOM BASIN ATTACHED TO PERMANENT RISER

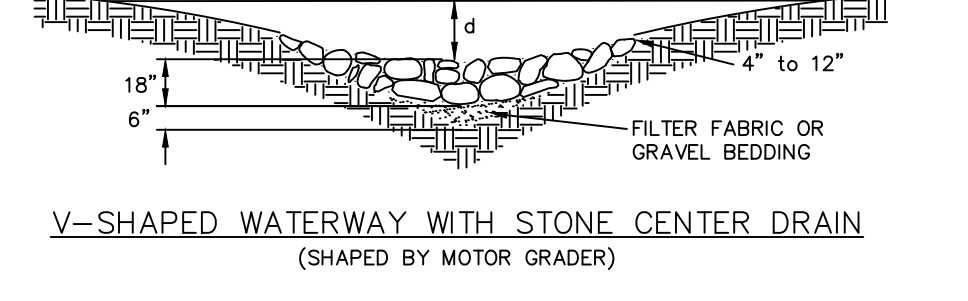
EFFECTIVE: 01/31/08



PARABOLIC-SHAPED WATERWAY WITH STONE CENTER DRAIN (SHAPE BY BULLDOZER)



TYPICAL RIP RAP CHANNEL



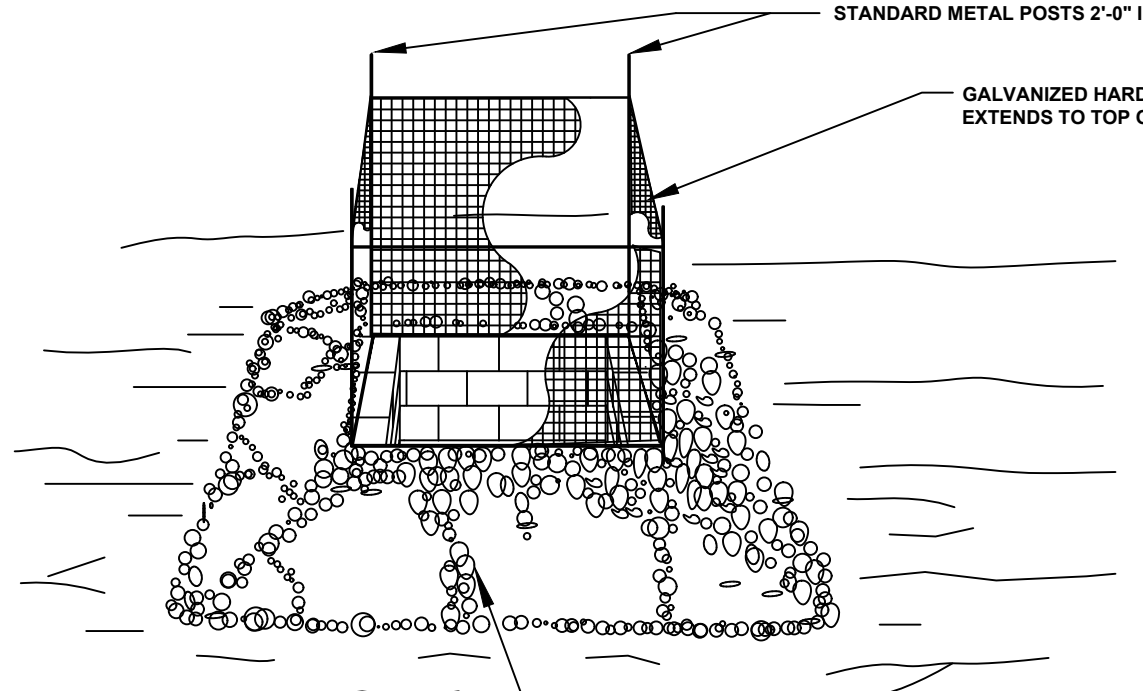
V-SHAPED WATERWAY WITH STONE CENTER DRAIN (SHAPE BY MOTOR GRADER)

- NOTES:
- TO BE USED WHERE EXCESSIVE STORMWATER VELOCITIES PROHIBIT VEGETATIVE LININGS.
 - SIZE OF STONE MUST BE DETERMINED BY APPROPRIATE DESIGN PROCEDURE.
 - DIMENSIONS FOR d & W VARIES ACCORDING TO DESIGN.

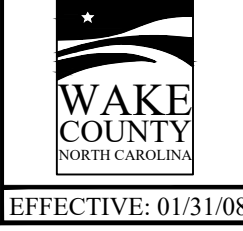


STANDARD RIP-RAP LINED CHANNELS

EFFECTIVE: 01/31/08

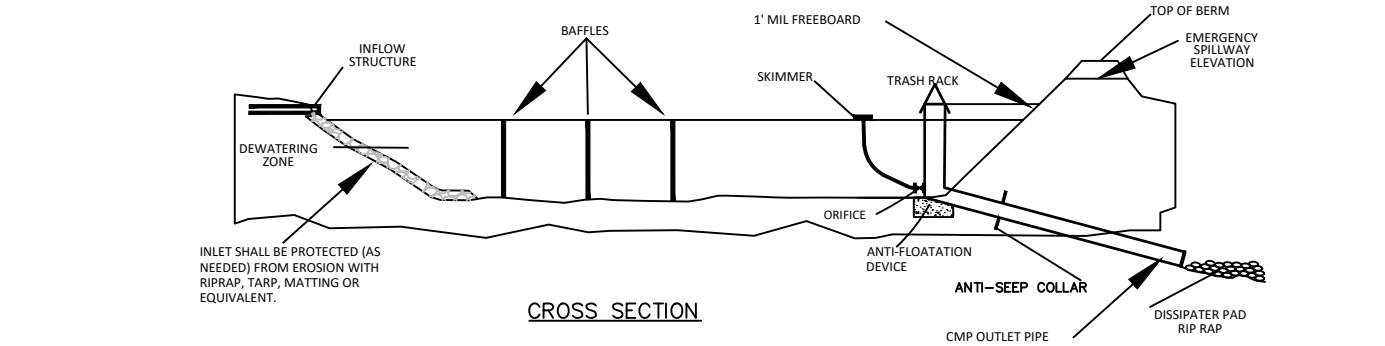
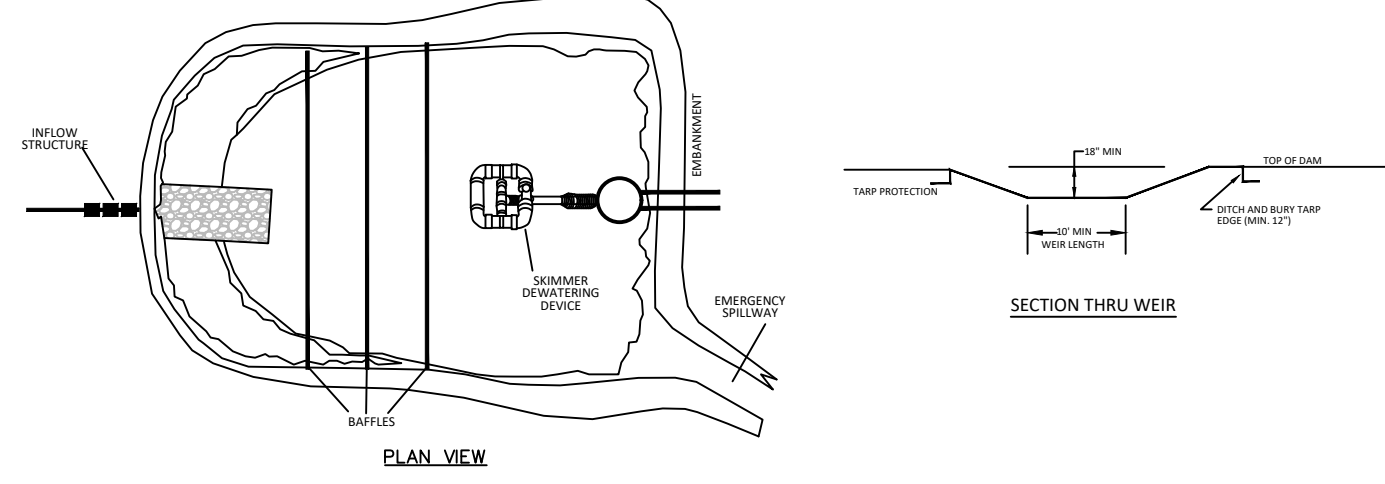


- NOTE:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



STANDARD GRAVEL YARD INLET PROTECTION

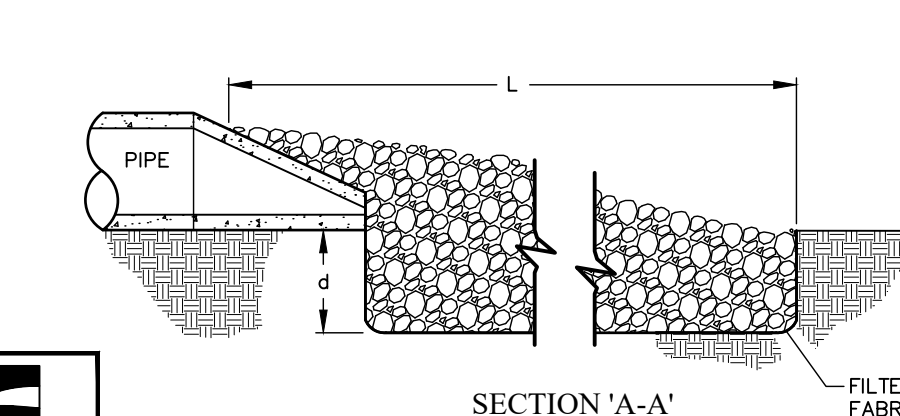
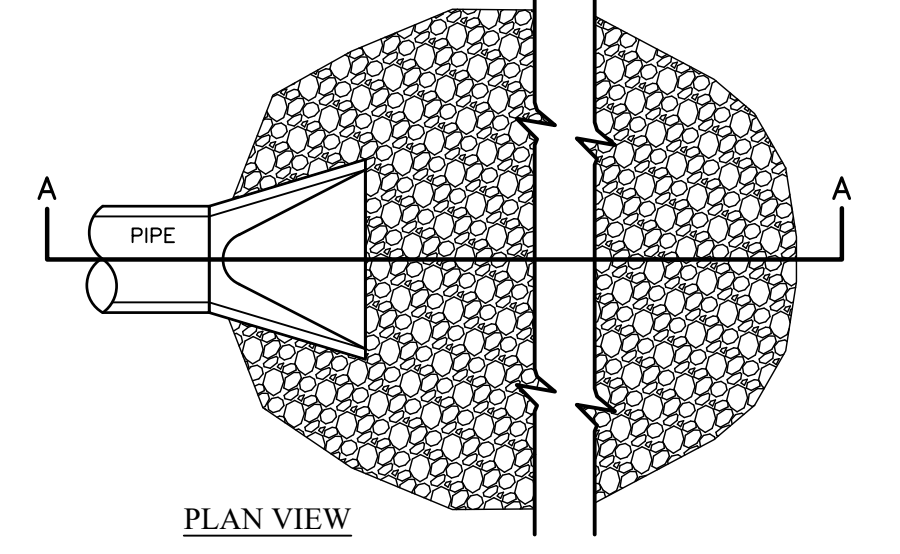
EFFECTIVE: 01/31/08



- NOTES:
- 1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
 - 2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO ANALYSE SUPPLY, I.E. UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE SO MIL HEAVY DUTY SILVER TARP/PLASTICS OR EQUIVALENT FOR UV RESISTANCE.
 - 3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
 - 4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRINCHING AS FOR A SILT FENCE.
 - 5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
 - 6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
 - 7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

STANDARD SKIMMER ATTACHED TO PERMANENT RISER

EFFECTIVE: 01/31/08

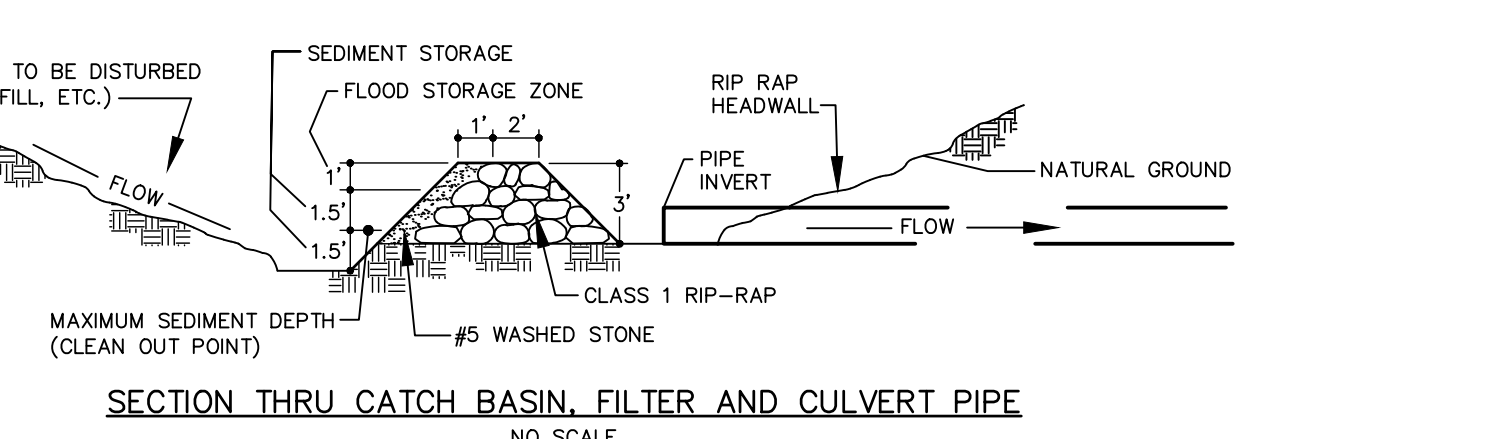
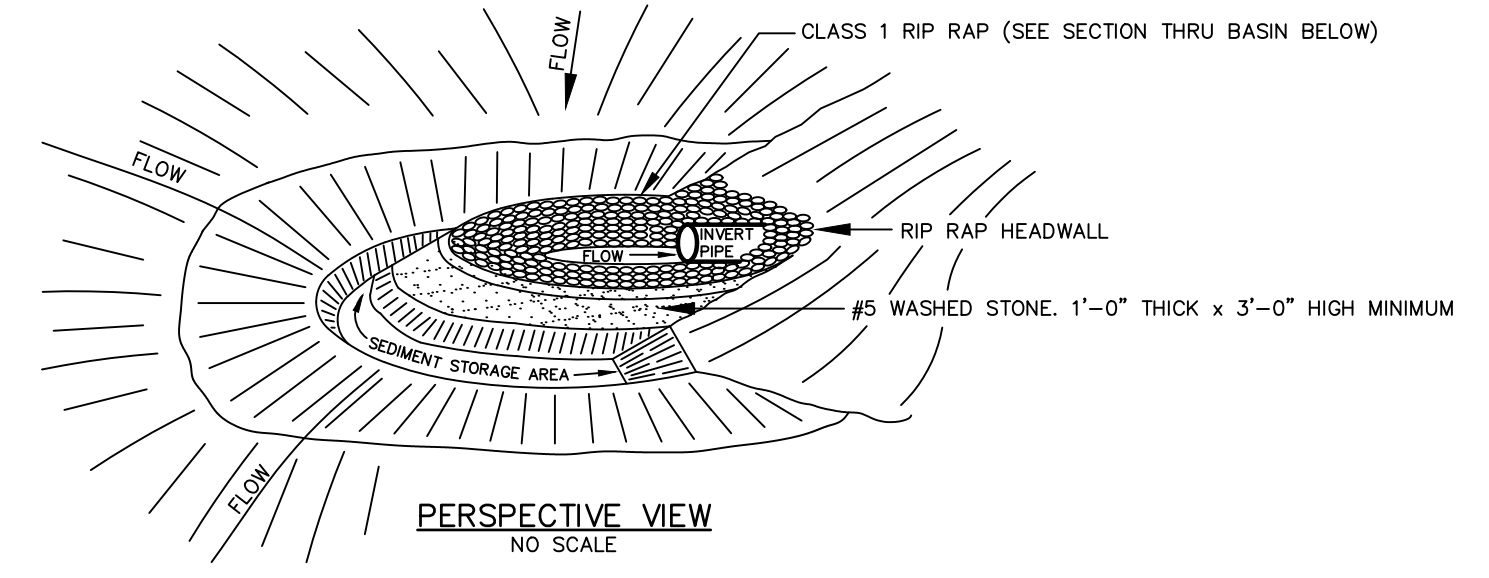


- NOTES:
1. L = THE LENGTH OF THE RIPRAP APRON.
 2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
 3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
 4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



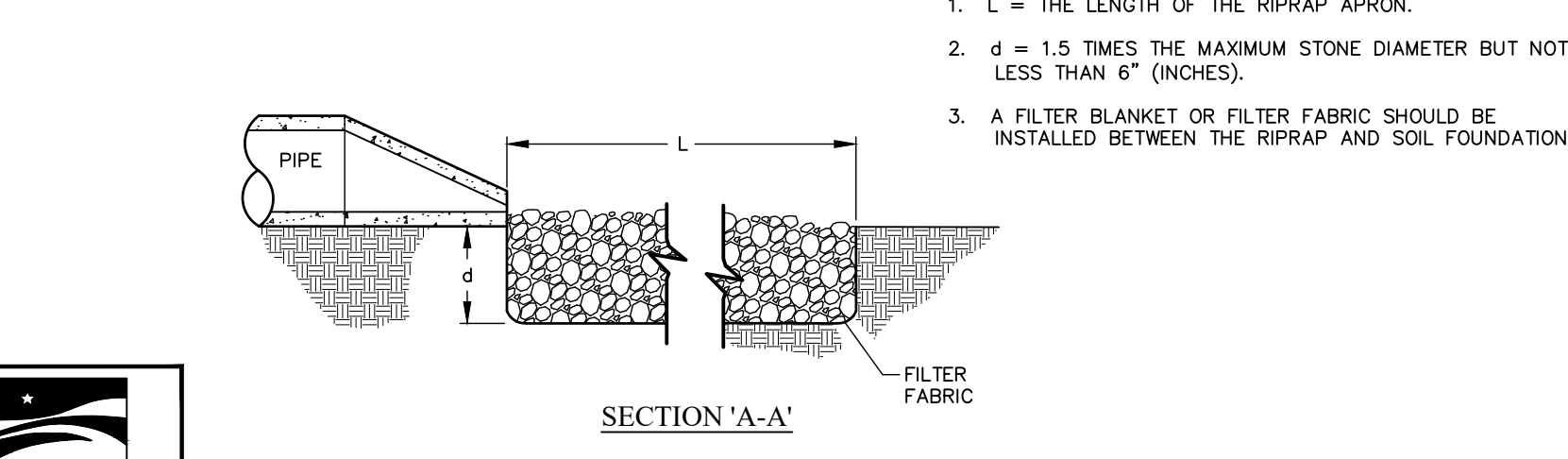
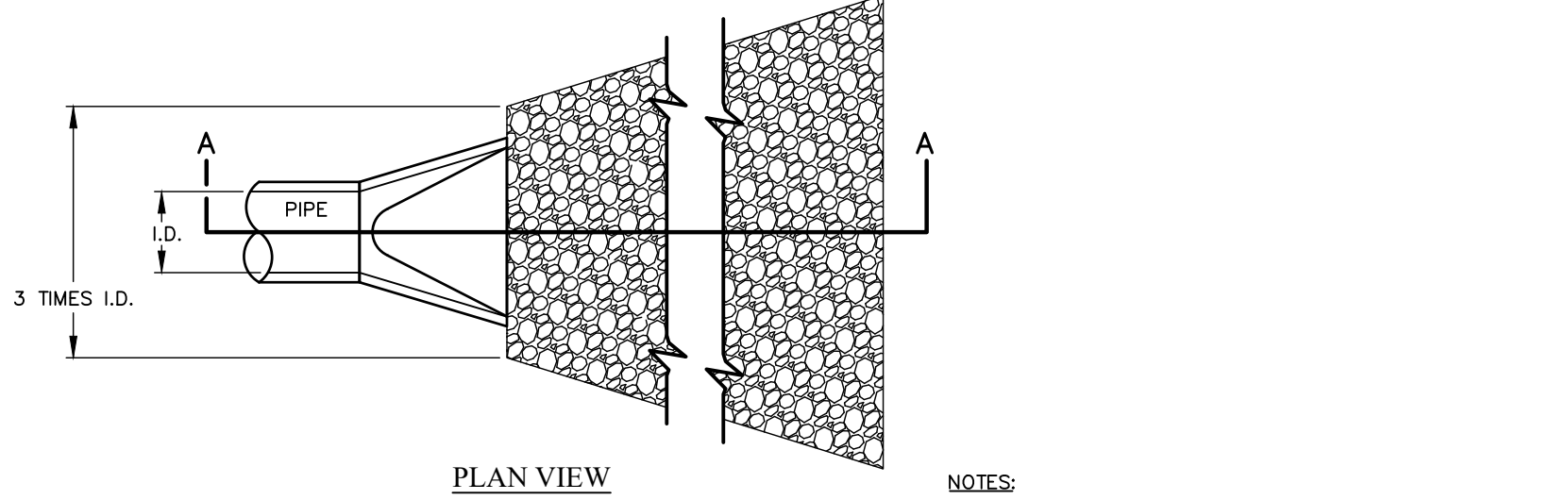
STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

EFFECTIVE: 01/31/08



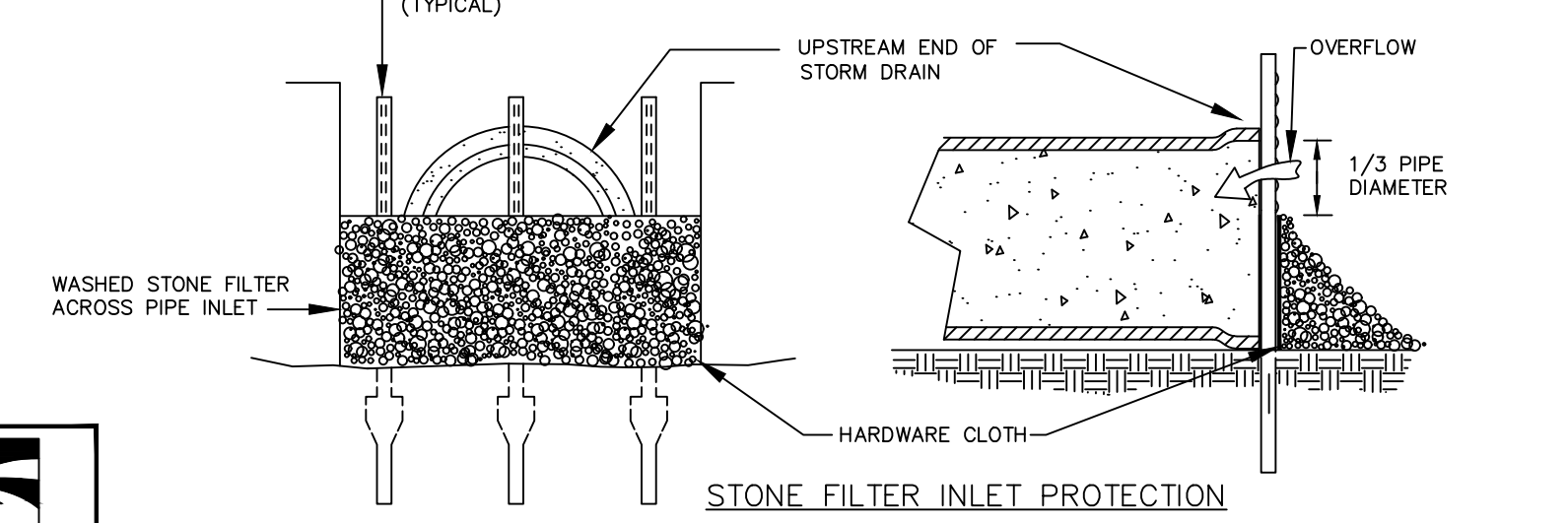
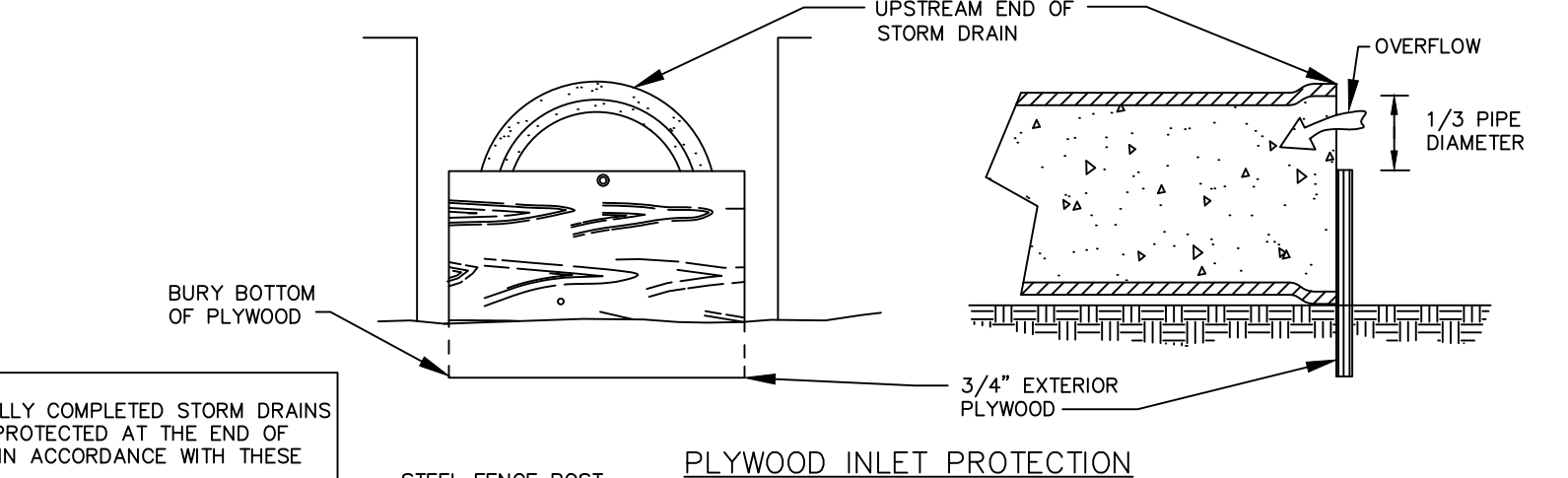
STANDARD HORSESHOE INLET PROTECTION

EFFECTIVE: 01/31/08



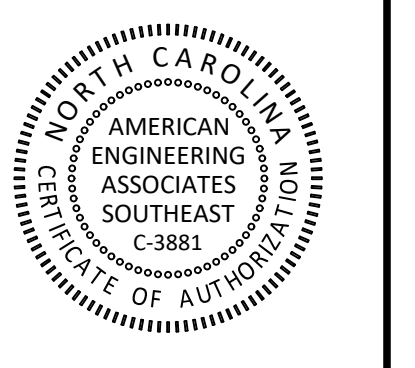
STANDARD PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL

EFFECTIVE: 01/31/08



STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)

EFFECTIVE: 01/31/08



NO.	DATE	REVISION
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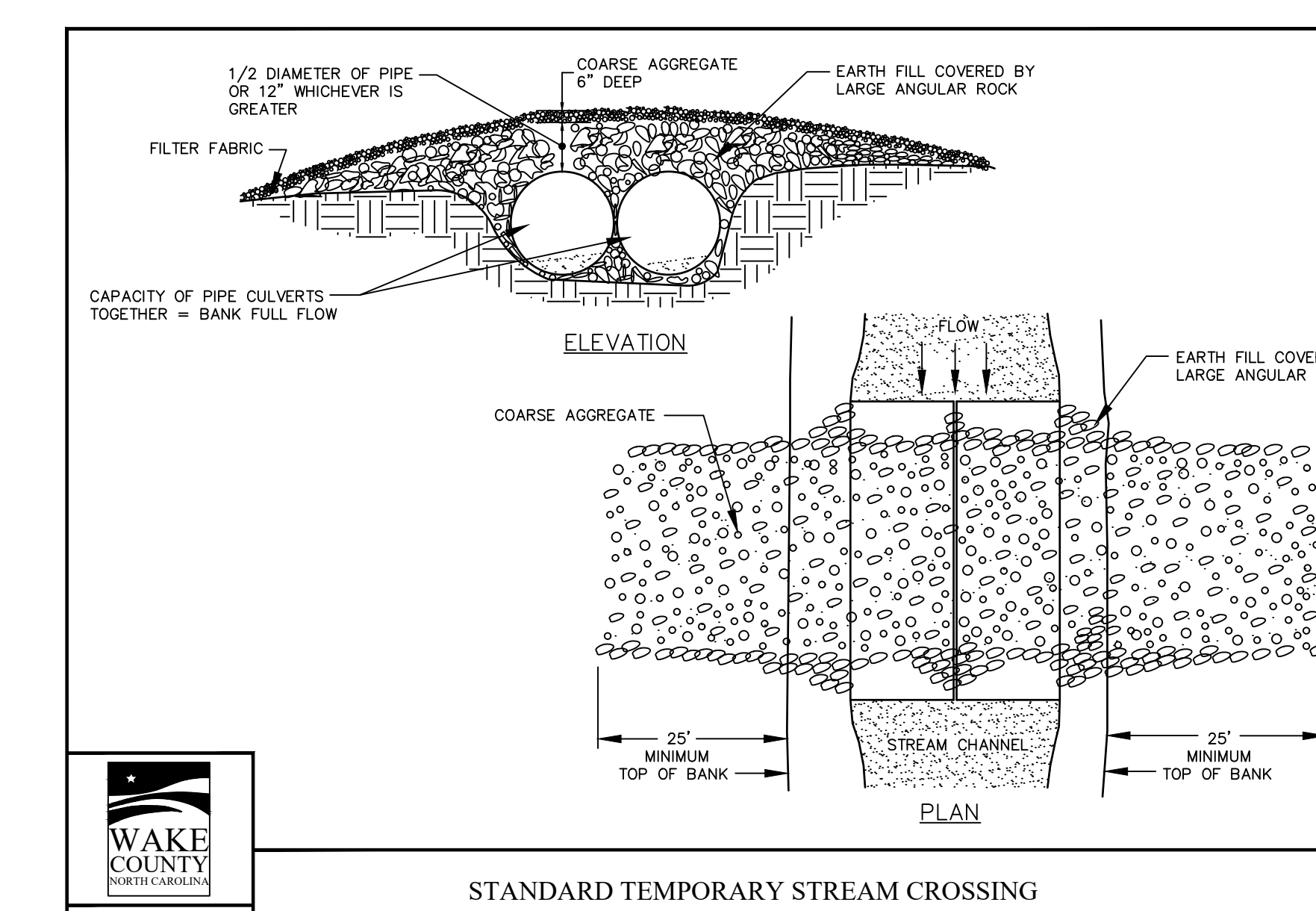
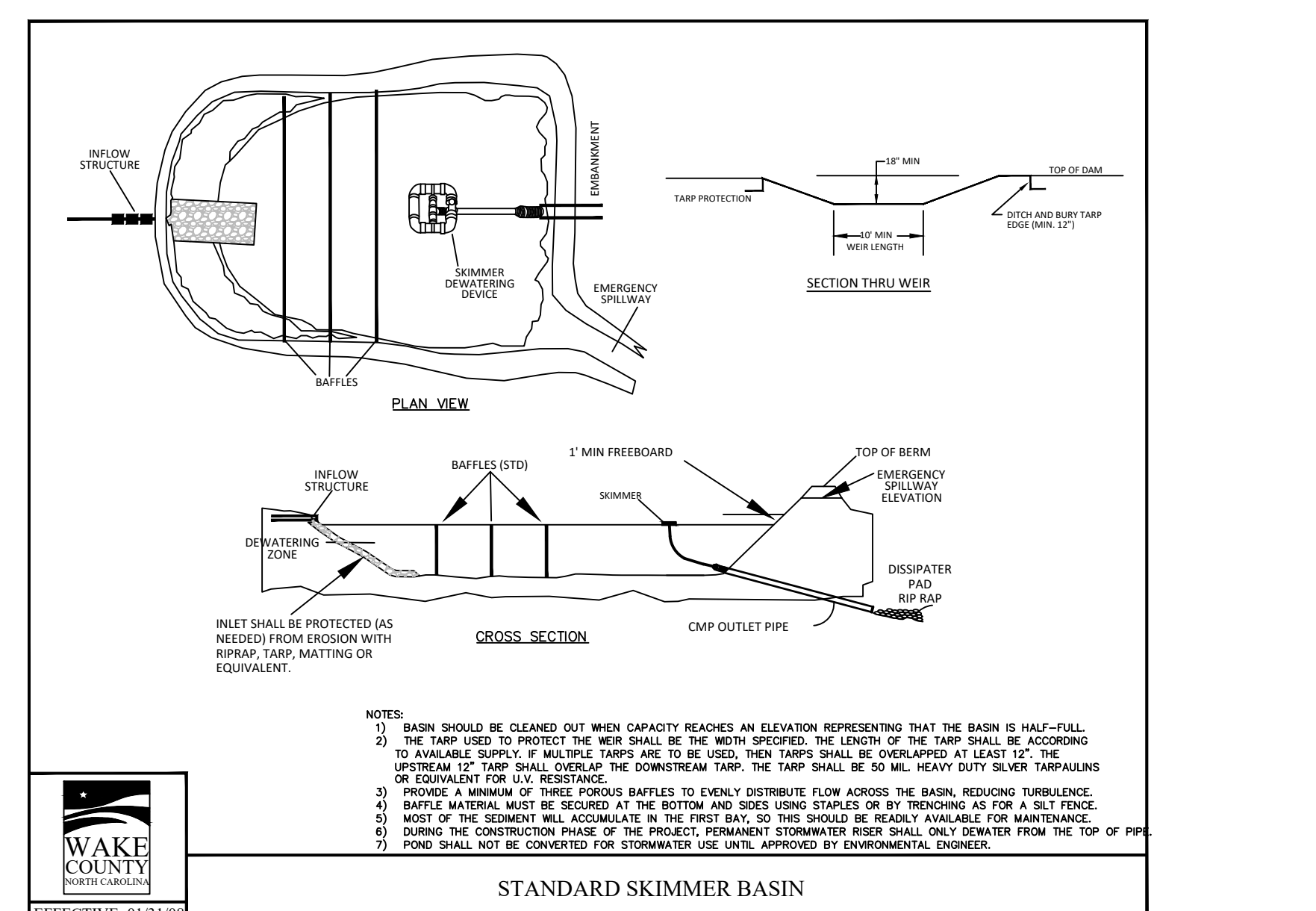
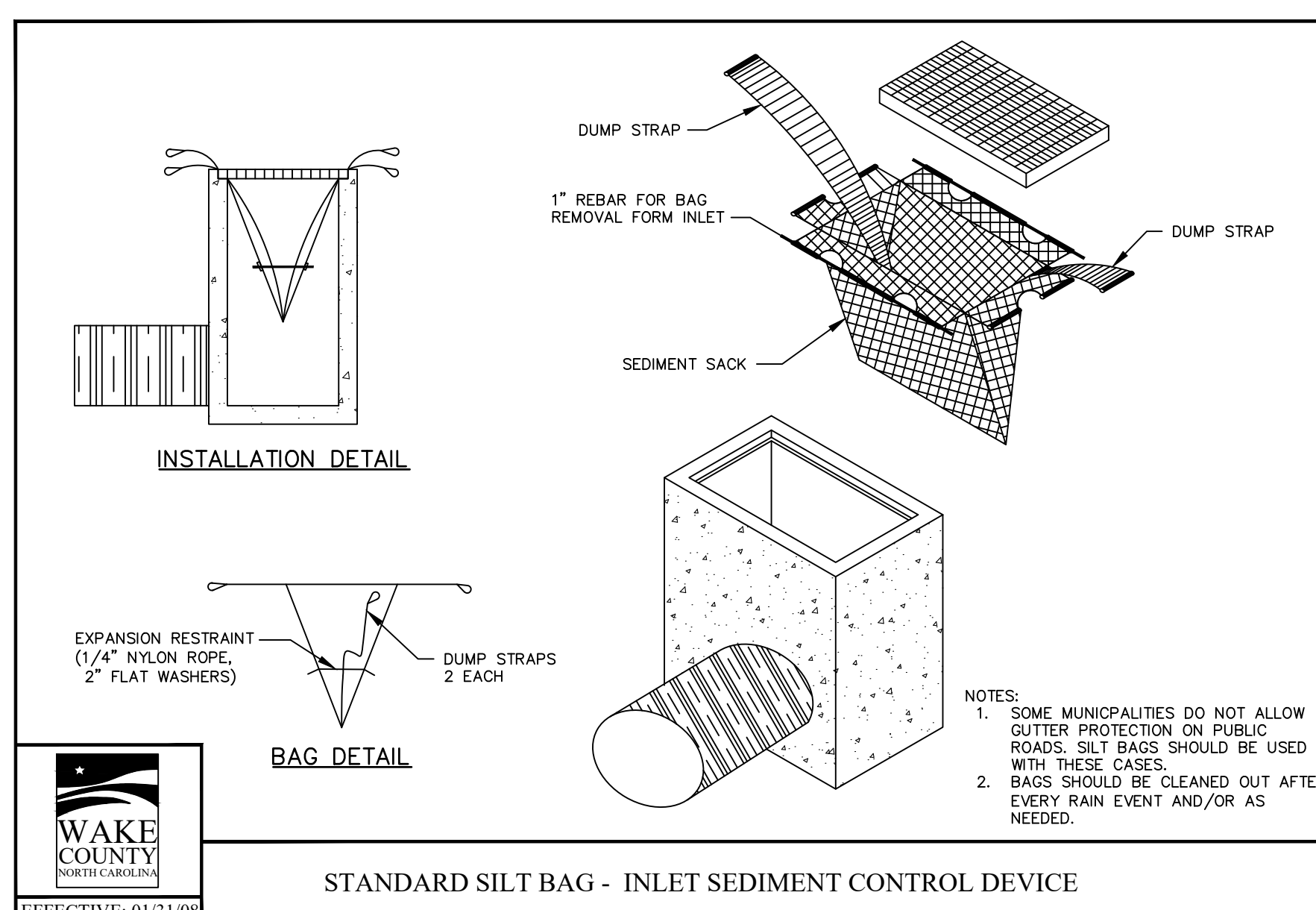
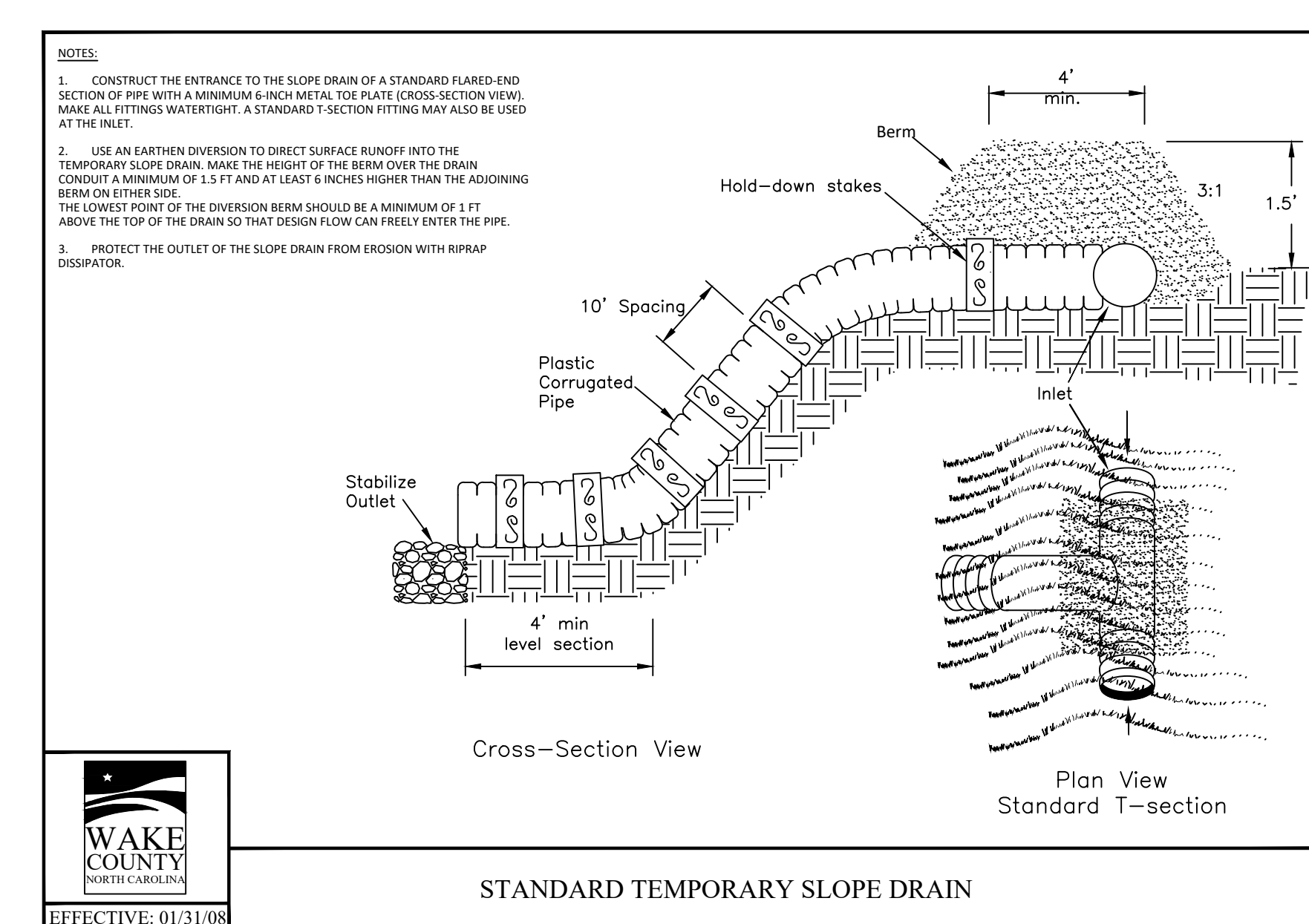
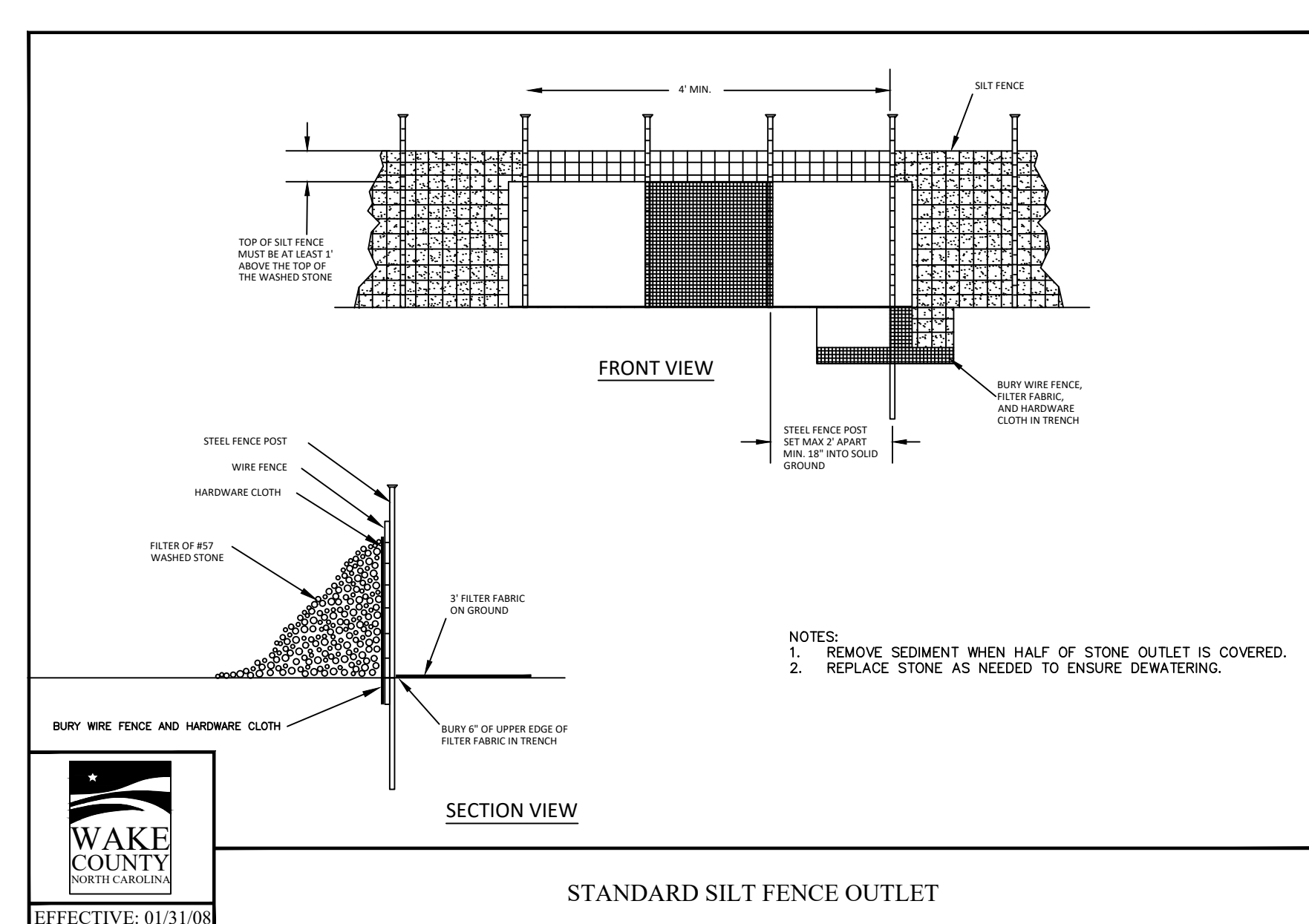
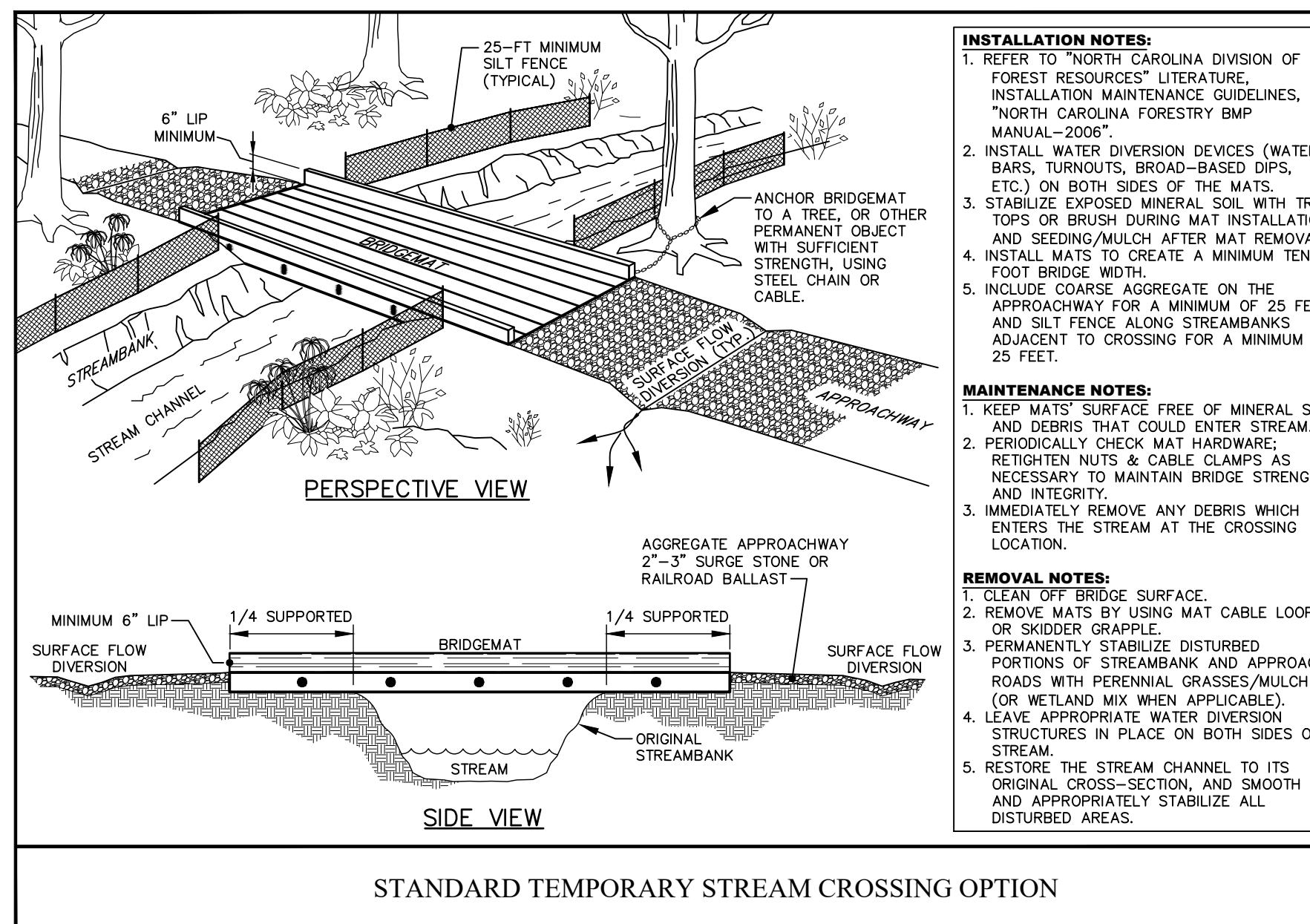
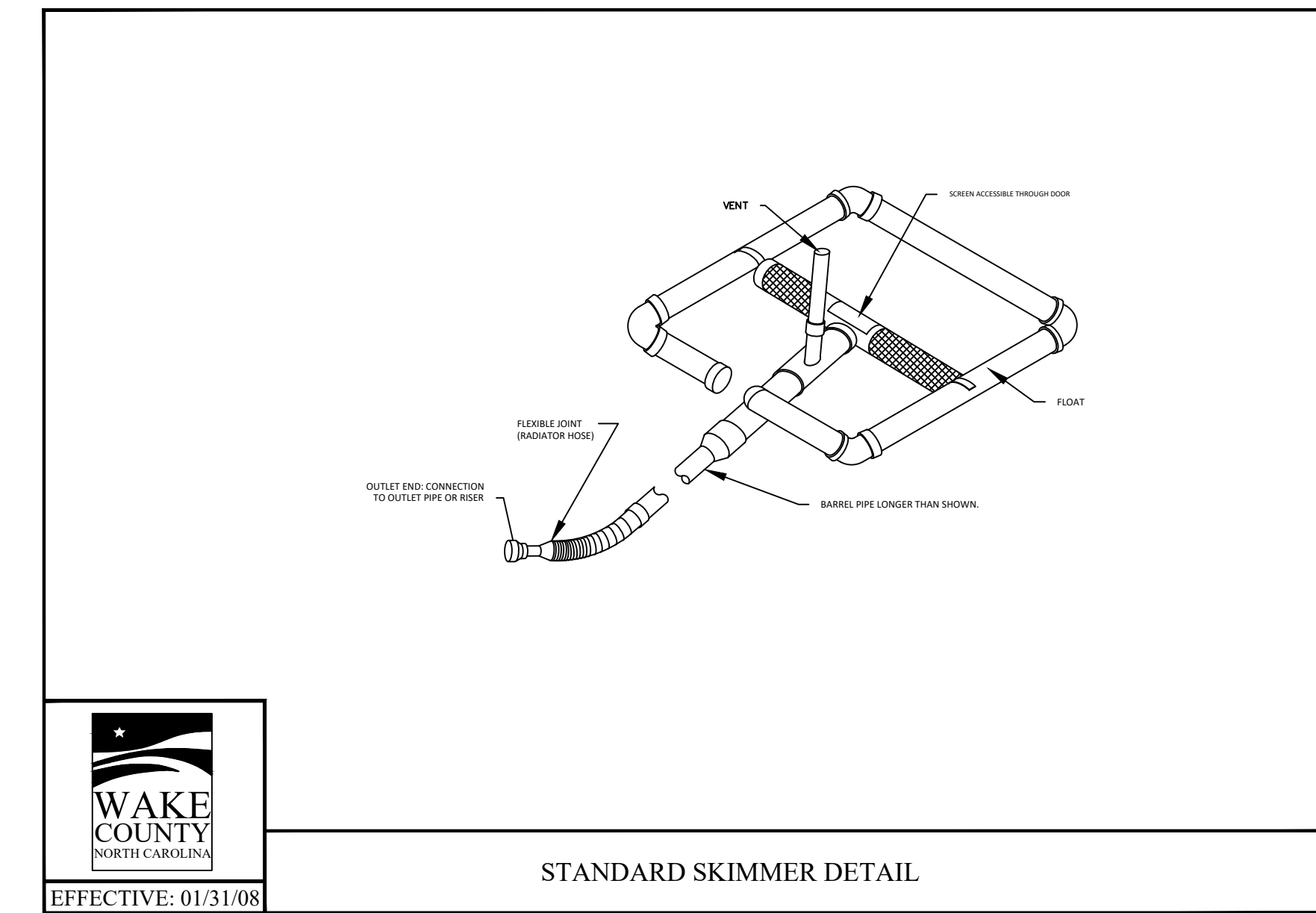
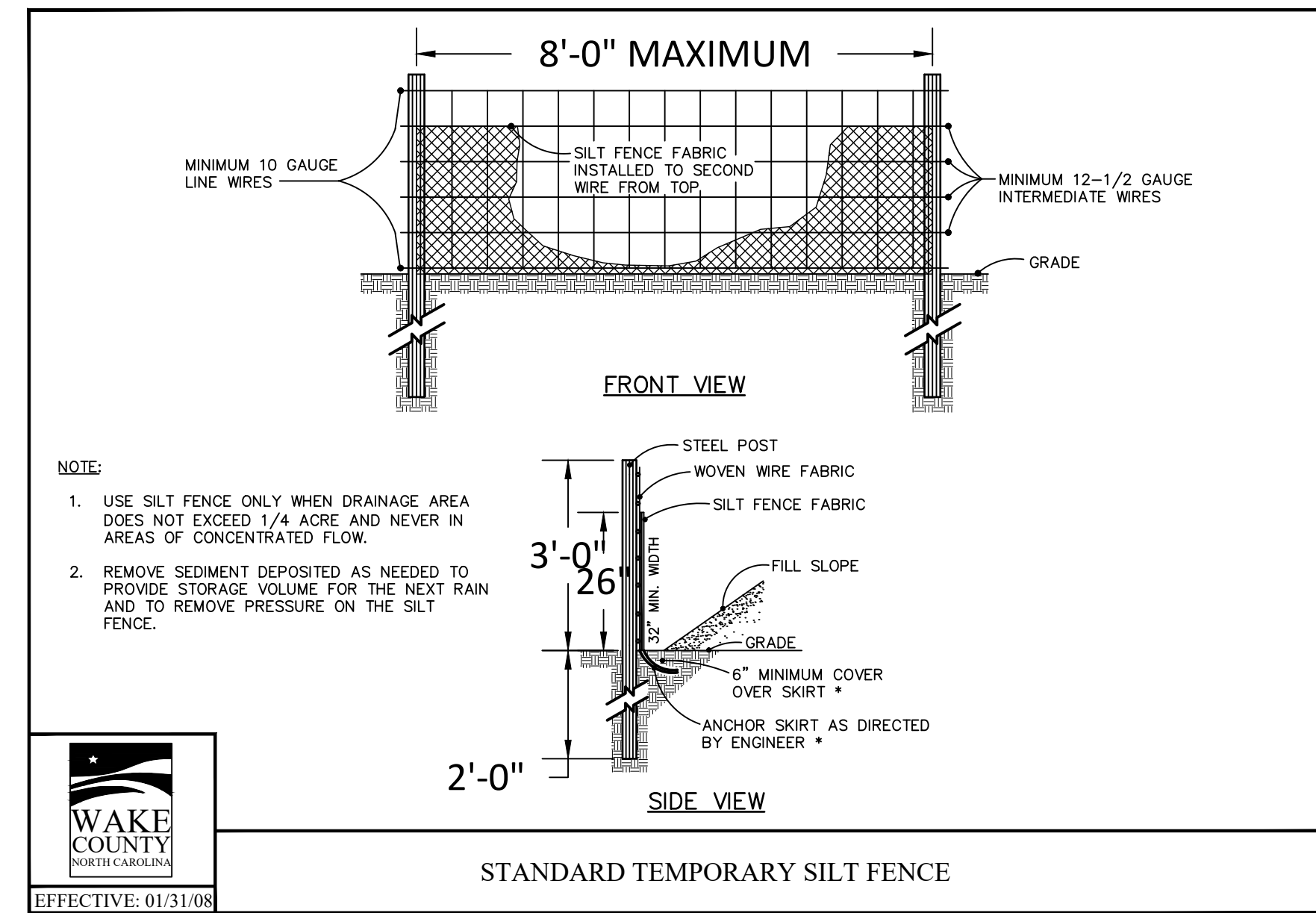
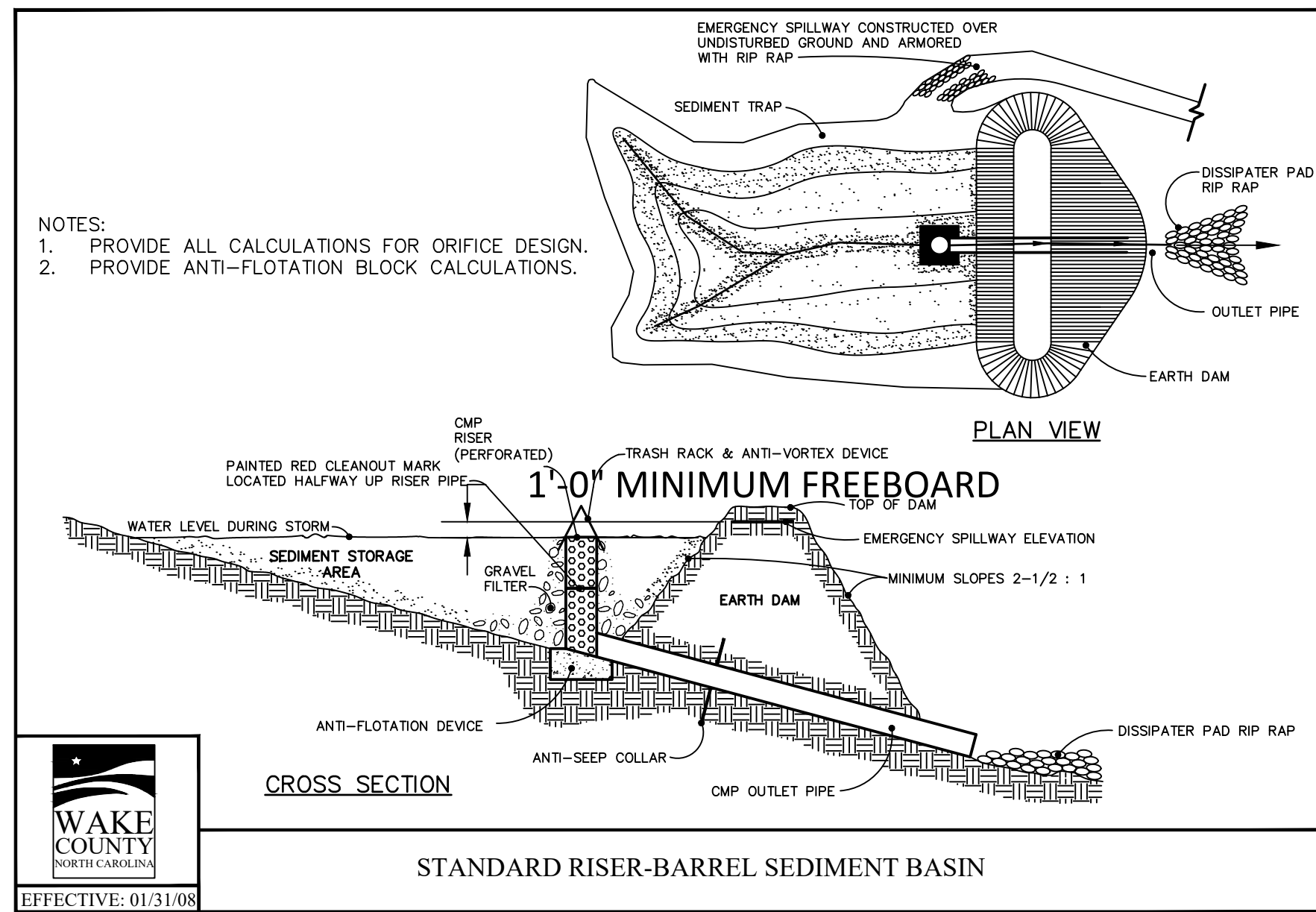
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THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE: EROSION CONTROL DETAILS
SHEET NO.: CD2



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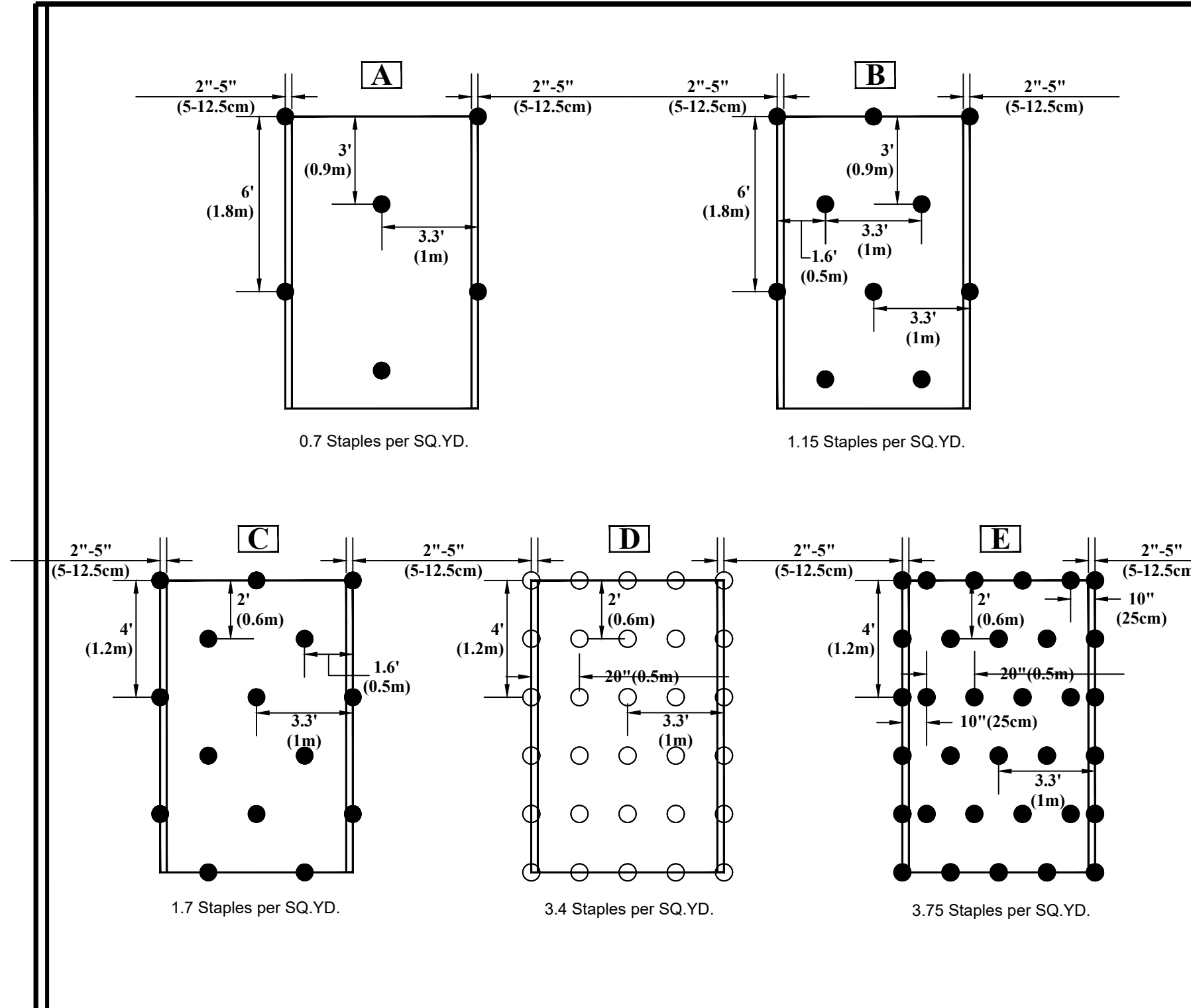


NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

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THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:
EROSION CONTROL DETAILS
 SHEET NO.:
CD3



STAPLE PATTERN GUIDE

- 4:1 Slopes (A)
- 3:1 Slopes (B)
- 2:1 Slopes (C)
- 1:1 & Steeper Slopes (D)
- Medium/High Flow Channel (D)
- High Flow Channel And Shoreline (E)

NOTES:
 * Use ECMD5® for more accurate staple pattern selection.

Drawing Not To Scale

NORTH AMERICAN GREEN
 5401 St. Wendel - Cynthia Rd. PO: 800-772-2040
 Poseyville, IN 47633 www.nagreen.com

Disclaimer:
 The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 5-4-17

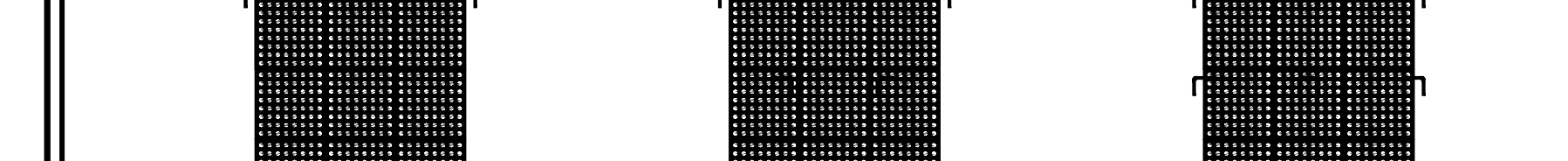
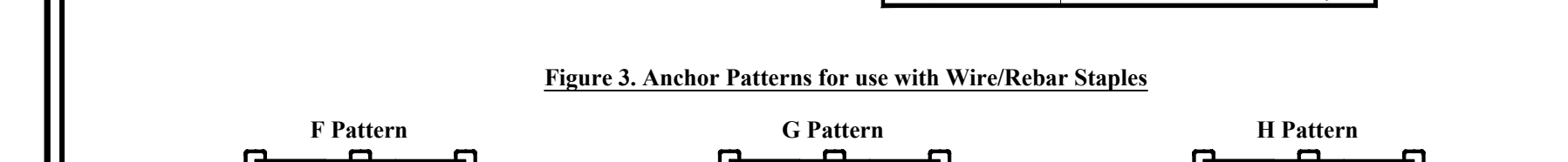
February 3, 2025

Figure 1. Minimum Anchor Pattern

Shear Stress	Velocity	Wave Height	Pattern
<= 6 lbs/ft ²	<= 14 ft/s	6 in.	F
> 6-8 lbs/ft ²	> 14-18 ft/s	12 in.	G
> 8 lbs/ft ²	> 18 ft/s	18 in.	H

Figure 2. Minimum Anchor Type

Soil Type	Anchor Type
Clay/Clay Loam	10 in Wire Staple
Silt Loam - Loam	10 in Wire Staple
Sandy Loam	12 in Wire Staple
Sand / Muck <= 6 in	12 in Rebar Staple
Sand / Muck 6-12 in	18 in Rebar Staple
Sand / Muck 12-18 in	24 in Earth Anchor + 12 in Rebar Staple
Sand / Muck > 18 in	36 in Earth Anchor + 18 in Rebar Staple



NOTE:
 Number of staples used per panel can be reduced by 30-40% when sharing staples between panels.

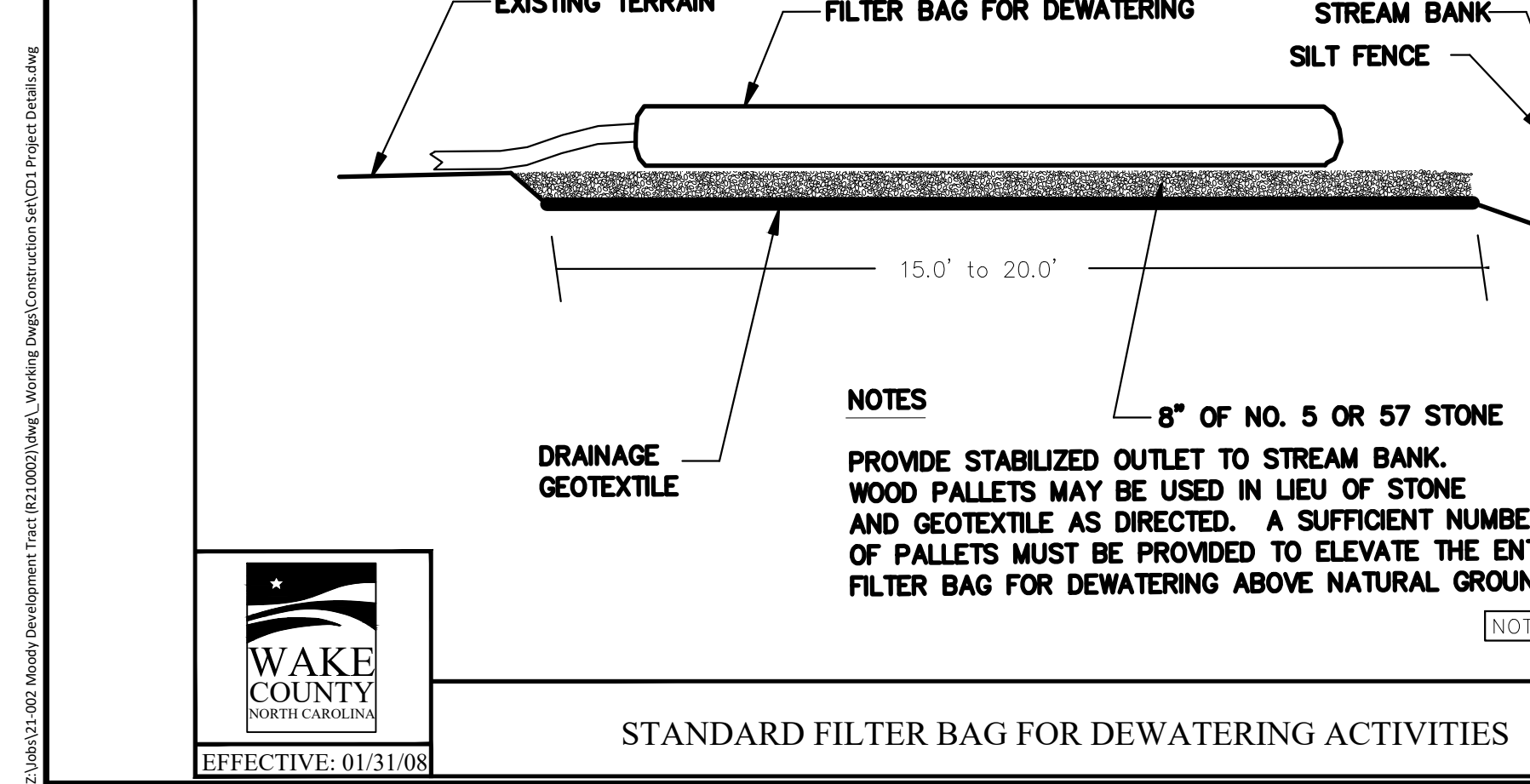
□ - Wire/Rebar Staple
 ⊕ - Percussion Earth Anchor

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February 3, 2025



WAKE COUNTY NORTH CAROLINA
 EFFECTIVE: 01/31/08

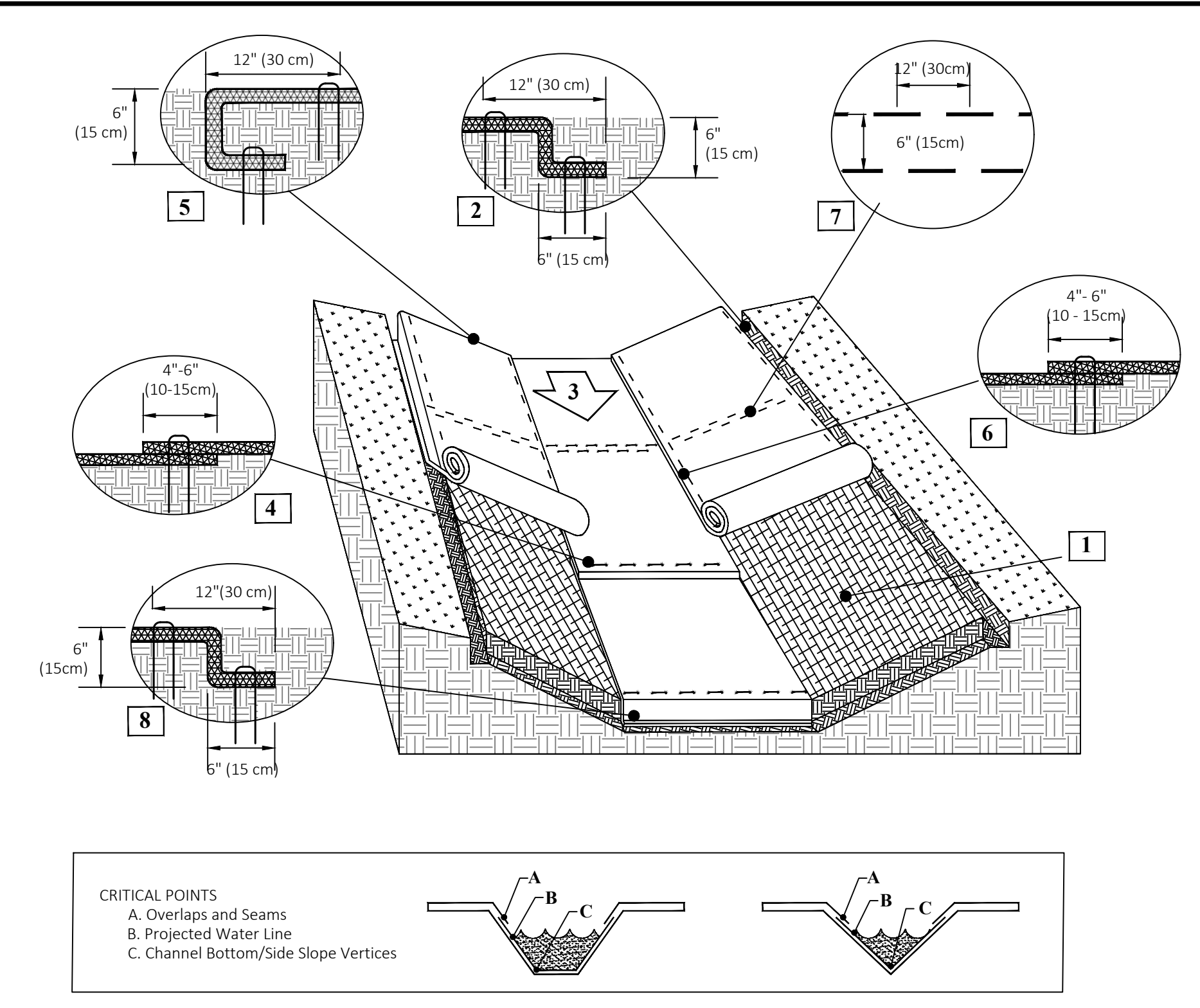
ShoreMax ANCHORING GUIDE

- When installing ShoreMax mat, the anchor pattern (figure 3 or 4) should be selected based on the expected maximum design conditions (shear stress, velocity, or wave impact) (figure 1).
- Anchor selection should be based on the soil type and pull-out strength required (figure 2). In soft, highly erodible soils percussion earth anchors may be necessary. Earth anchors can be installed in conjunction with rebar staples (figure 4).
- When using percussion earth anchors, position anchors in each corner and the center of the panel. Place staples in the appropriate pattern through remainder of mat. Staples should be shared between two adjacent panels.

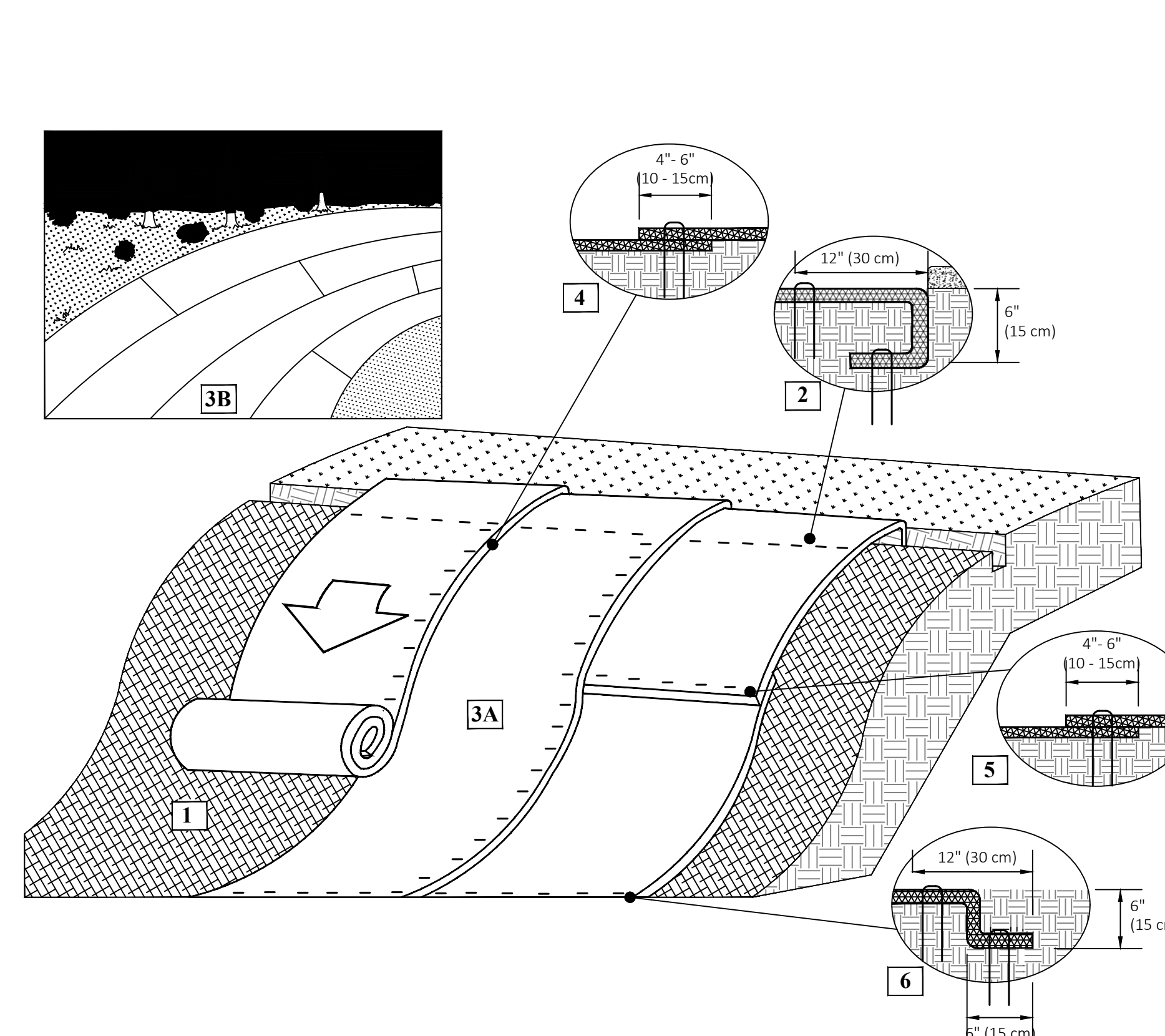
Note:
 Number of staples used per panel can be reduced by 30-40% when sharing staples between panels.

□ - Wire/Rebar Staple
 ⊕ - Percussion Earth Anchor

Drawing Not To Scale



Drawing Not To Scale



Drawing Not To Scale

Instructions

- Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
- Begin at the top of the channel by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench with approximately 12" (30 cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes/pins approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12" (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced approximately 12" (30 cm) apart across the width of the RECPs.
- Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide.
- Place consecutive RECPs end-over-end (Shingle style) with a 4" - 6" (10 - 15 cm) overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
- Full length edge of the RECPs at top of side slopes must be anchored with a row of staples/stakes/pins spaced at S₁ apart in a 6" (15 cm) deep X 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
- Adjacent RECPs must be overlapped approximately 4" - 6" (10 - 15 cm) and secured with staples/stakes/pins at S₁.
- In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 - 12m) intervals. Use a double row of staples staggered 6" (15 cm) apart and 12" (30 cm) on center over entire width of the channel.
- The terminal end of the RECPs must be anchored with a row of staples/stakes/pins spaced at S₁ apart in a 6" (15 cm) deep X 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
- Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may be used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide

Plan View

Unroll Direction

Dimension	Staple Pattern
W ₁	20" (50 cm)
L ₁	20" (50 cm)
S ₁	18" (45 cm)
Nominal Frequency	3.8 / SY

• Pin / Staple / Twist Pin, as appropriate for field conditions

Drawing Not To Scale

February 3, 2025

Instructions

- Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
- Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at S₁ apart in the bottom of the trench. Backfill and compact the trench after stapling. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at S₁ apart across the width of the RECPs.
- Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMMax materials should utilize Staple Pattern D.
- The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
- Consecutive RECPs spliced down the slope must overlap with the upstream mat atop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
- At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at S₁. If exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
- Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may be used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide

Plan View

Unroll Direction

Dimension	Staple Pattern
W ₁	30" (75 cm) 24" (60 cm)
L ₁	30" (75 cm) 20" (50 cm)
S ₁	18" (45 cm) 18" (45 cm)
Nominal Frequency	1.7 / SY 3.0 / SY
Application	ECB (Degradable) TRM (Permanent)

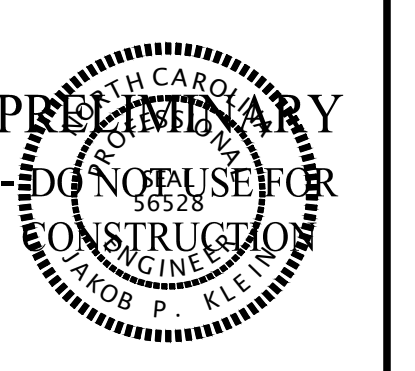
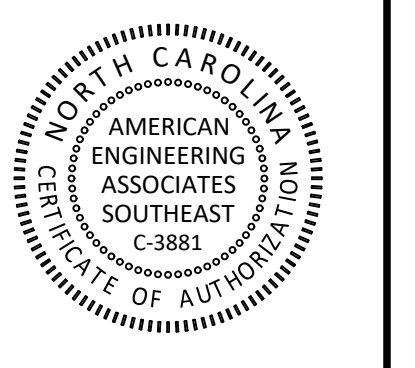
*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.

• Pin / Staple / Twist Pin, as appropriate for field conditions

Drawing Not To Scale

February 3, 2025

AMERICAN Engineering
 American Engineering Associates - Southeast, P.A.
 4020 Westchase Boulevard, Suite 450
 Raleigh, NC 27607
 919-469-1101



NO. 1
 DATE: 02-25-2025
 REVISION: CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE

THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

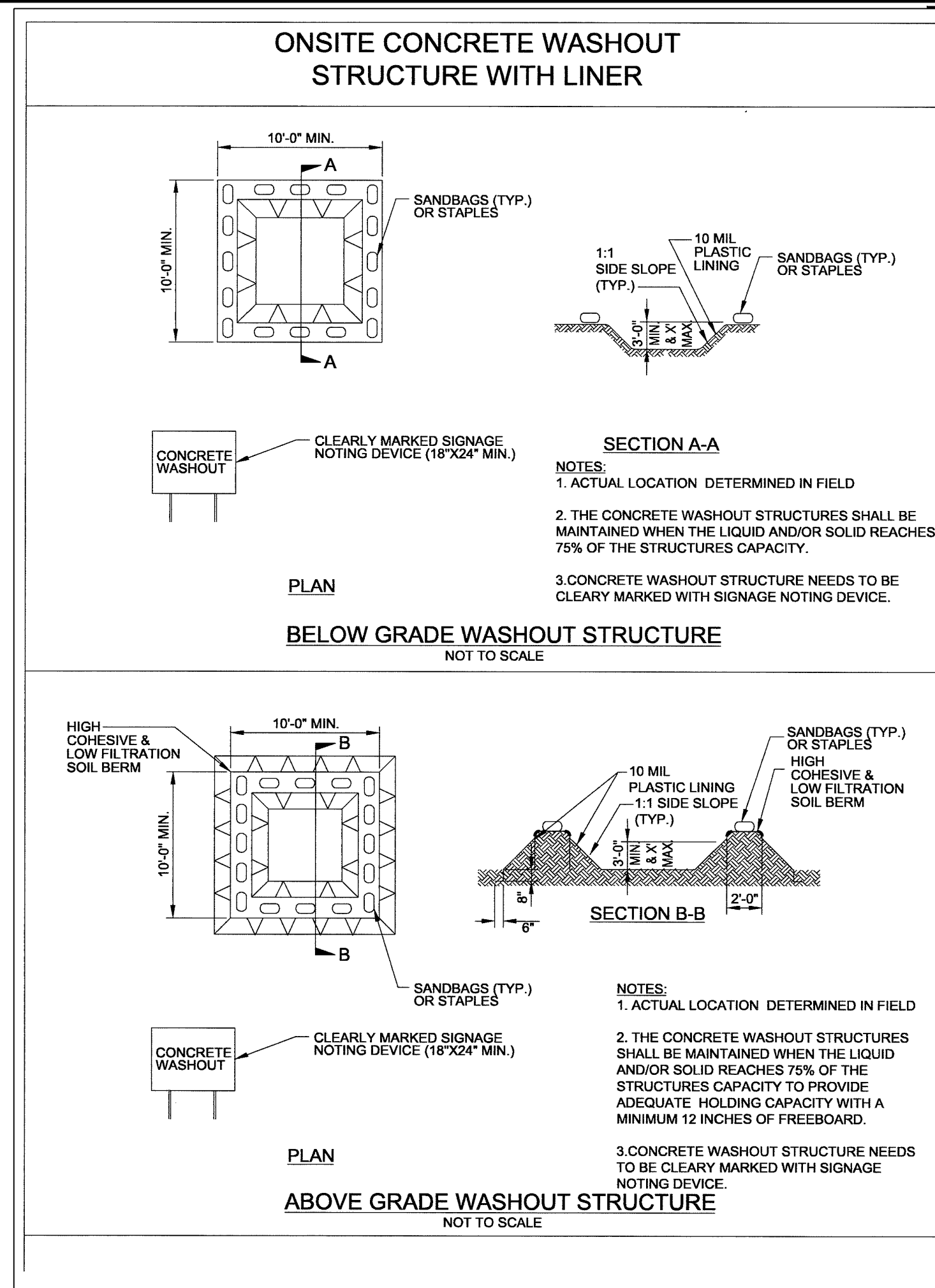
THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NO.:
CD4





PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-inspected days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or adjacent (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(c) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land disturbing activity, construction or redevelopment, permanent ground cover. 2. Documentation that the required ground stabilization measures have been provided within the required timeframe to ensure that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&S Plan Documentation

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign an inspection report that lists each E&S measure shown on the approved E&S plan. This documentation is required upon the initial installation of the E&S measures or if the E&S measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(c) Ground cover is located and installed in accordance with the approved E&S plan.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S measures.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.

PART III, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items.

(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2(c) and (d) of this permit.

(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.

(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.

(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and

(f) Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Required Ground Stabilization Timeframes	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None	
(b) High Quality Water (HQW) Zones	7	None	
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed -7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones	
(d) Slopes 3:1 to 4:1	14	-10 days for Falls Lake Watershed	
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope	

NOTE: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roll-on erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

- POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**
- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
 - Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
 - Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
 - Provide ponding area for containment of treated Stormwater before discharging offsite.
 - Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

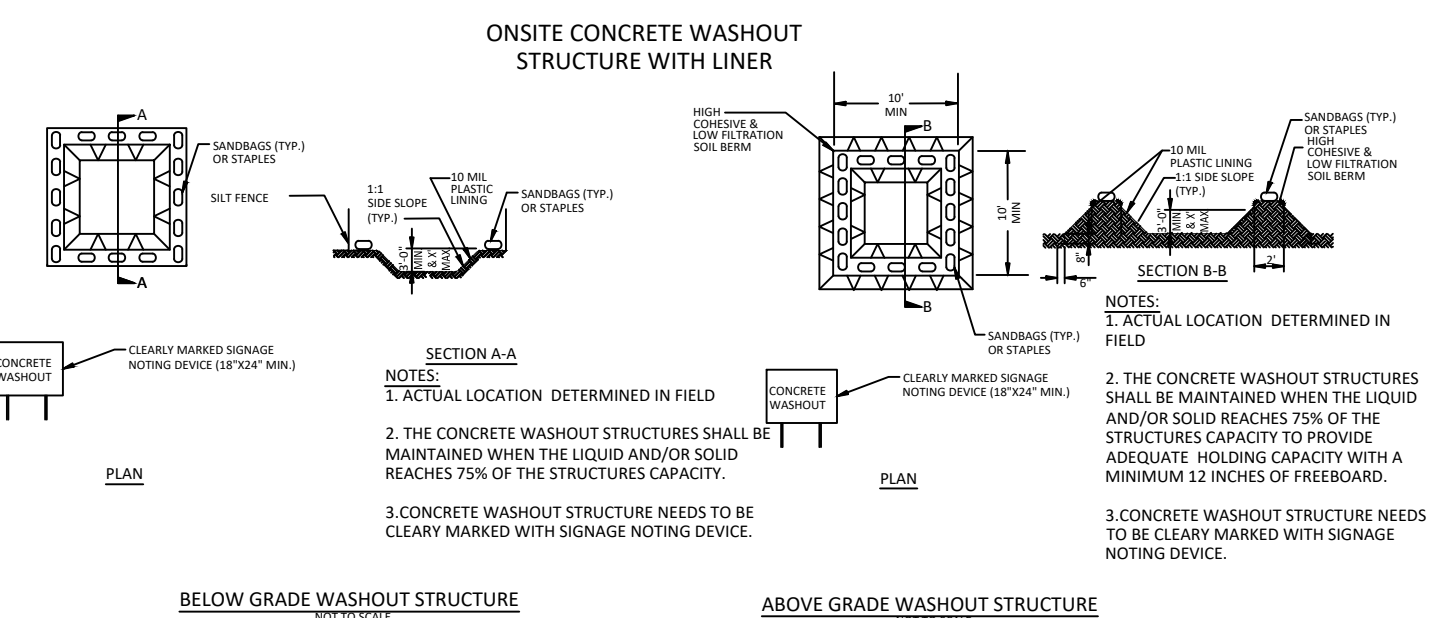
- EQUIPMENT AND VEHICLE MAINTENANCE**
- Maintain vehicles and equipment to prevent discharge of fluids.
 - Provide drip pans under any stored equipment.
 - Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
 - Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
 - Remove leaking vehicles and construction equipment from service until the problem has been corrected.
 - Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**
- Never bury or burn waste. Place litter and debris in approved waste containers.
 - Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
 - Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
 - Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
 - Anchor all lightweight items in waste containers during times of high winds.
 - Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
 - Dispose waste off-site at an approved disposal facility.
 - On business days, clean up and dispose of waste in designated waste containers.

- PAINT AND OTHER LIQUID WASTE**
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
 - Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
 - Contain liquid wastes in a controlled area.
 - Containment must be labeled, sized and placed appropriately for the needs of site.
 - Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

- PORTABLE TOILETS**
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
 - Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
 - Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

- EARTHEN STOCKPILE MANAGEMENT**
- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
 - Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
 - Provide stable stone access point when feasible.
 - Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

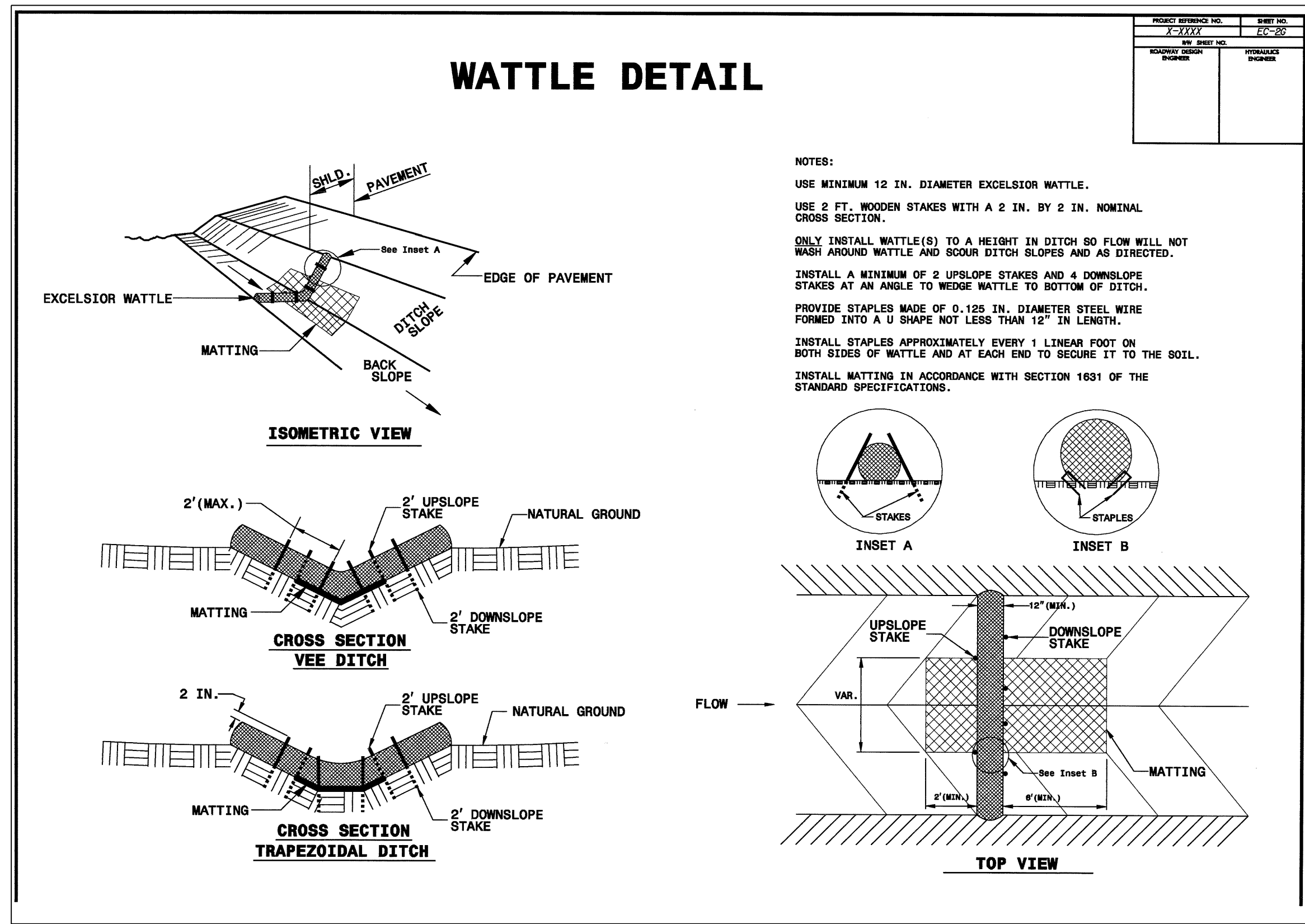


- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
 - Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
 - Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
 - Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
 - Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
 - Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
 - Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
 - Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
 - At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

- HERBICIDES, PESTICIDES AND RODENTICIDES**
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
 - Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
 - Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
 - Do not stockpile these materials onsite.

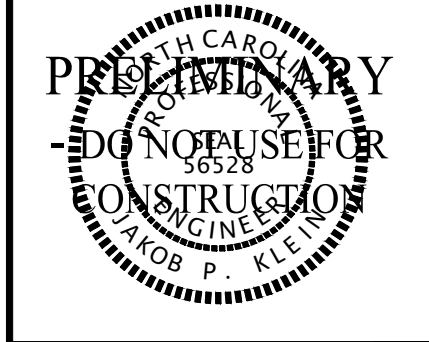
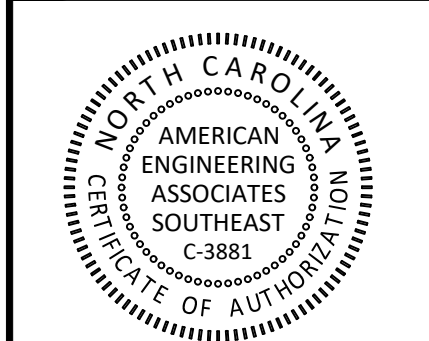
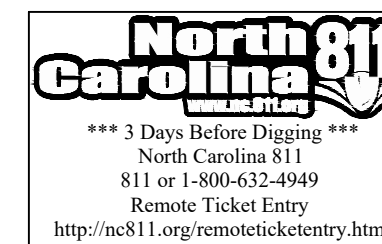
- HAZARDOUS AND TOXIC WASTE**
- Create designated hazardous waste collection areas on-site.
 - Place hazardous waste containers under cover or in secondary containment.
 - Do not store hazardous chemicals, drums or bagged materials directly on the ground.

WATTLE DETAIL



EFFECTIVE: 04/01/19

2/16/2019 10:00 AM Monday Development Team (18120003)\\saw\working\Drawings\Construction\Set\G01 Project Details.dwg



NO. 1 DATE: 02-29-2025 REVISION: CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

STIPULATION FOR REUSE

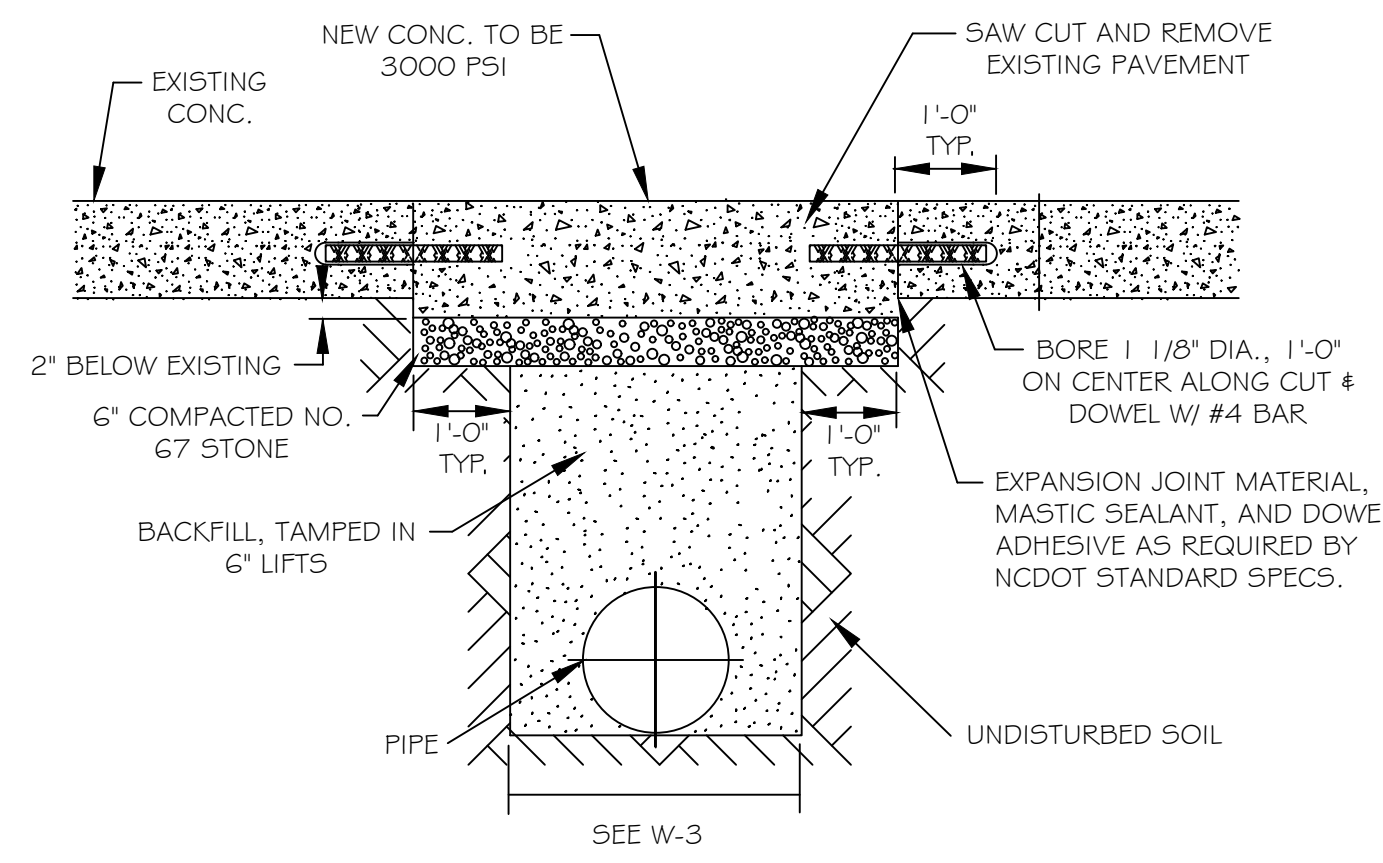
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025

SHEET TITLE:
EROSION CONTROL DETAILS

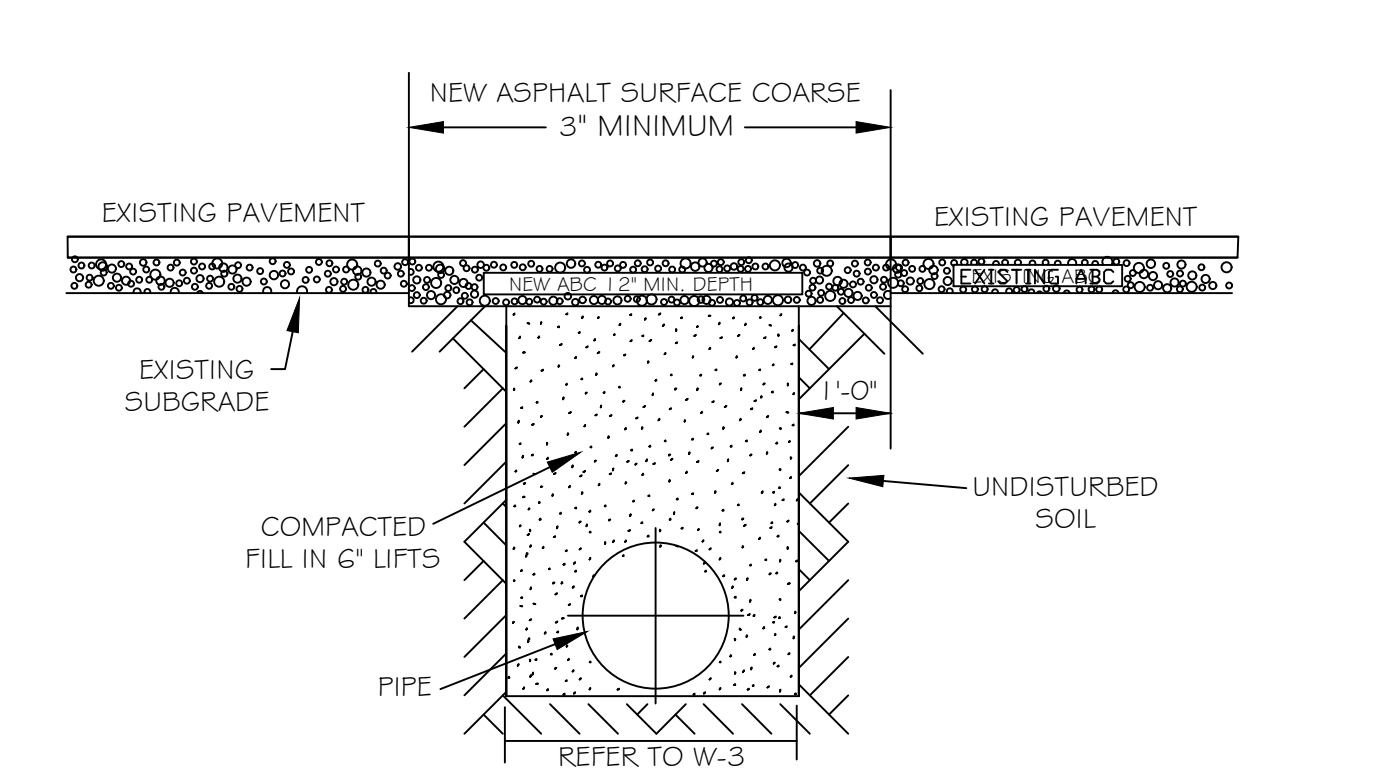
SHEET NO.:
CD5



NOTES:

- SEE CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING W-3 FOR ADDITIONAL DETAILS.
- PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.
- THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROVED SAW CUT MACHINE.
- THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT. 5. THE FINAL 6" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.

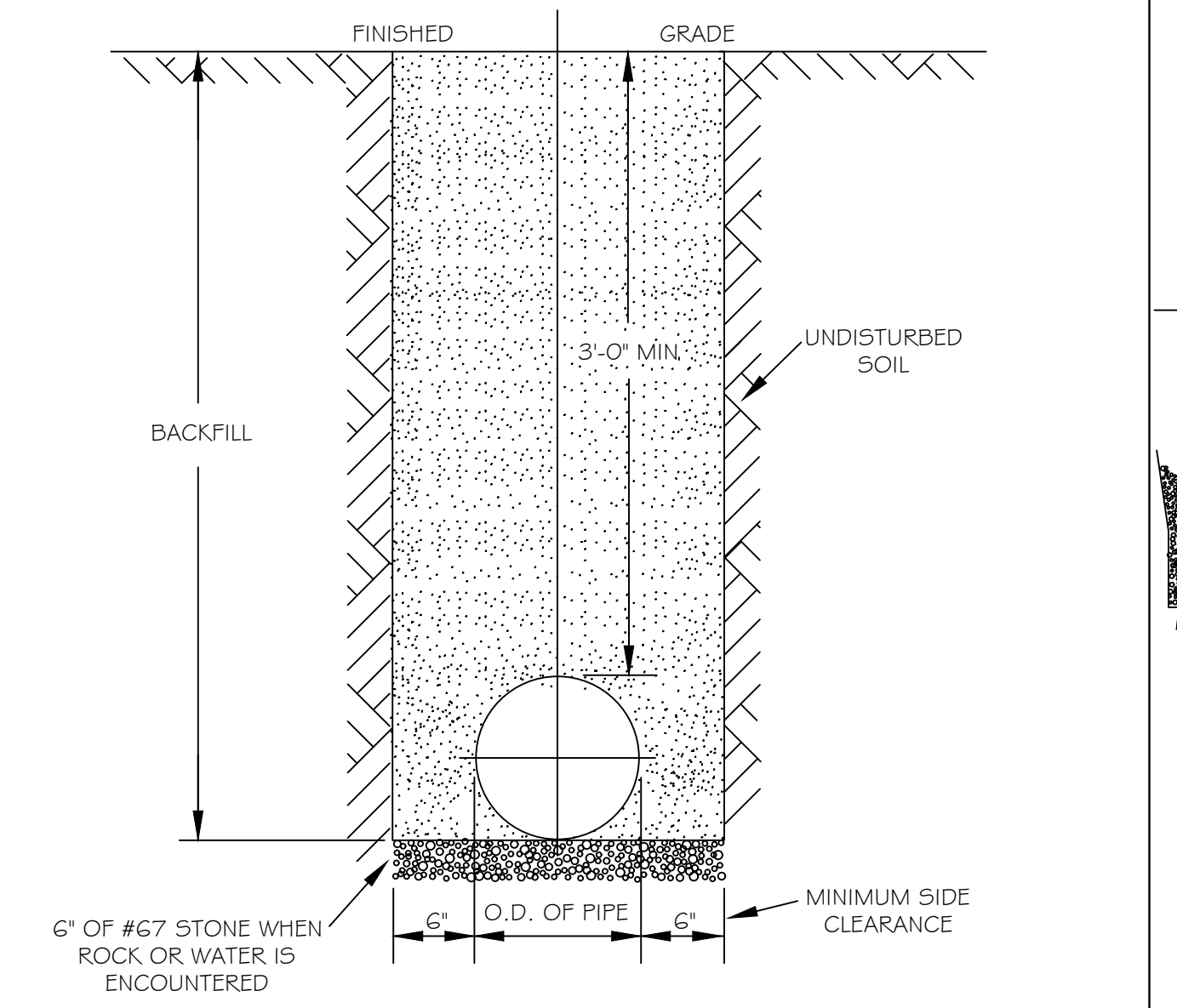
CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD CONCRETE PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-1	RRH	3-31-00	A.B.B.	10-29-10	
	A.B.B.	2-8-05	MAB	10-31-13	



NOTES:

- THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
- THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
- THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
- THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
- THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
- THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
- REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3, FOR ADDITIONAL DETAILS.
- NO HAND PATCHING ALLOWED.
- PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

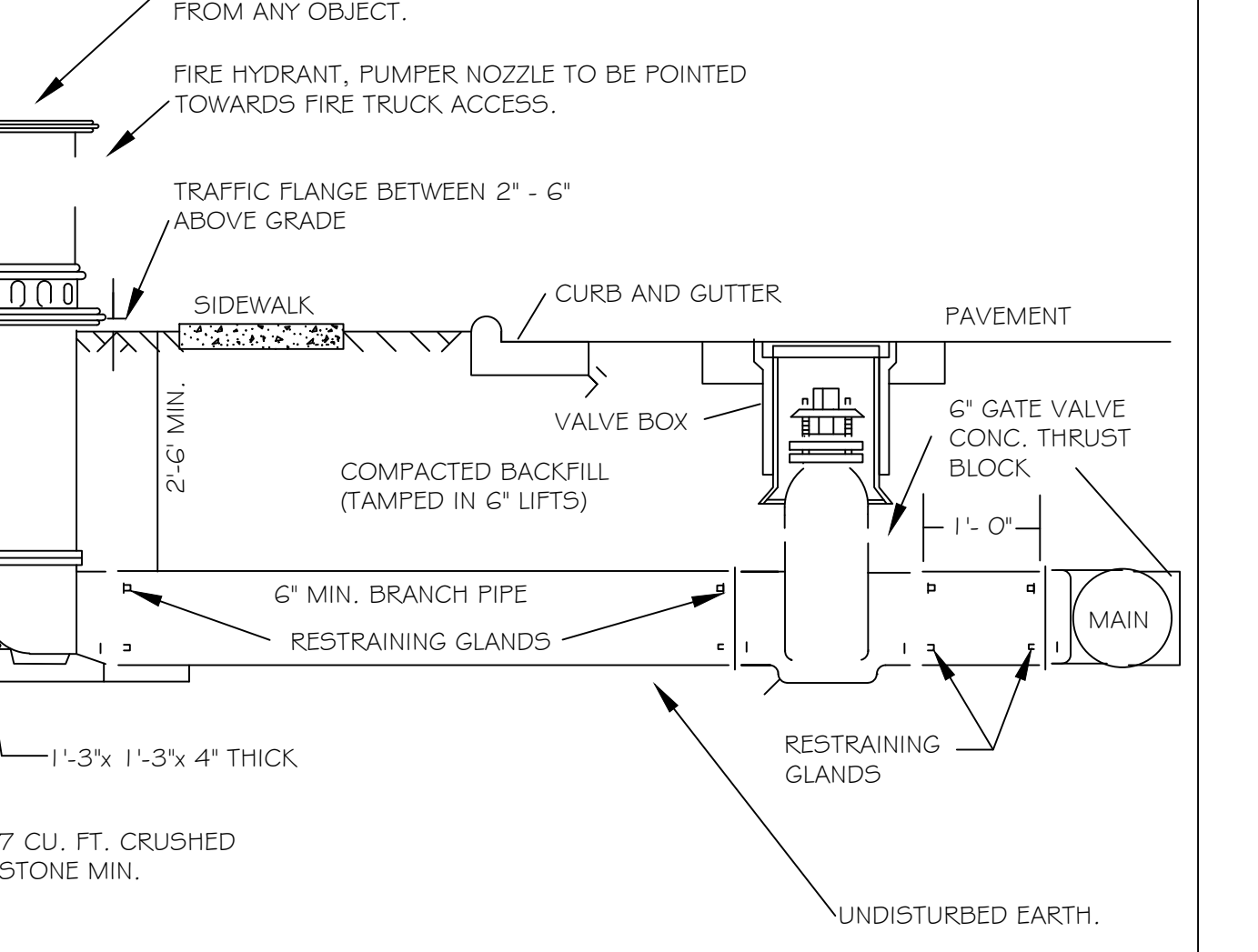
CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD ASPHALT PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-2	RRH	3-31-00	A.B.B.	4-16-04	
	D.W.C.	11-1-99	J.P.S.	10-29-10	



NOTES:

- TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
- NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
- ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
- BACKFILL SHALL BE TAMPED IN 6" LIFTS.
- ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-3	D.W.C.	9-3-99	ABB	2-15-05	
	RRH	3-31-00	J.P.S.	10-29-10	

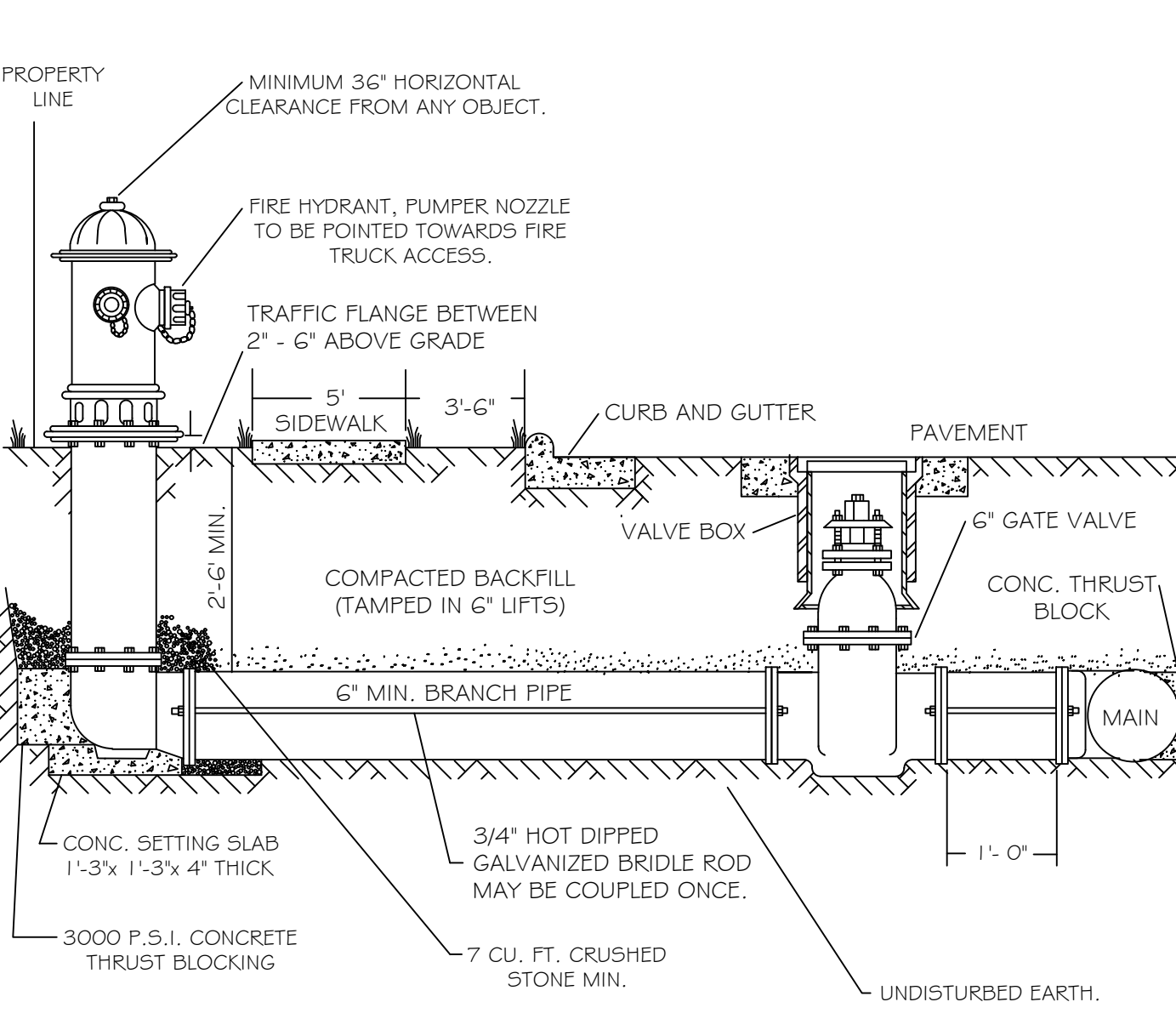


NOTES:

- FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATERLOUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
- BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96.
- 6" GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT.
- STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
- FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW.

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD FIRE HYDRANT INSTALLATION DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-4	ABB	4-6-04	PAP	2/17/09	
	DHL	2/14/08			

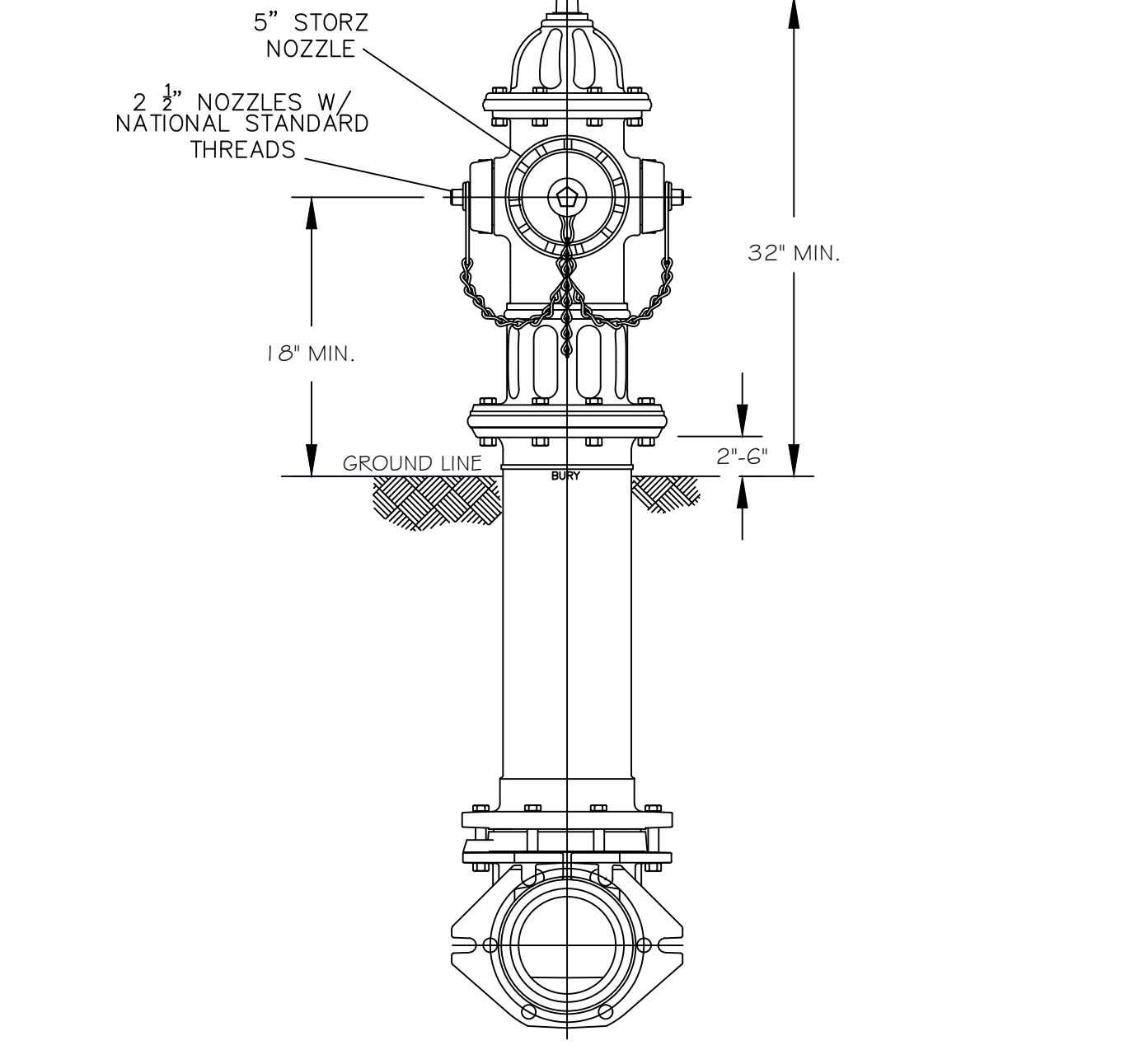


NOTES:

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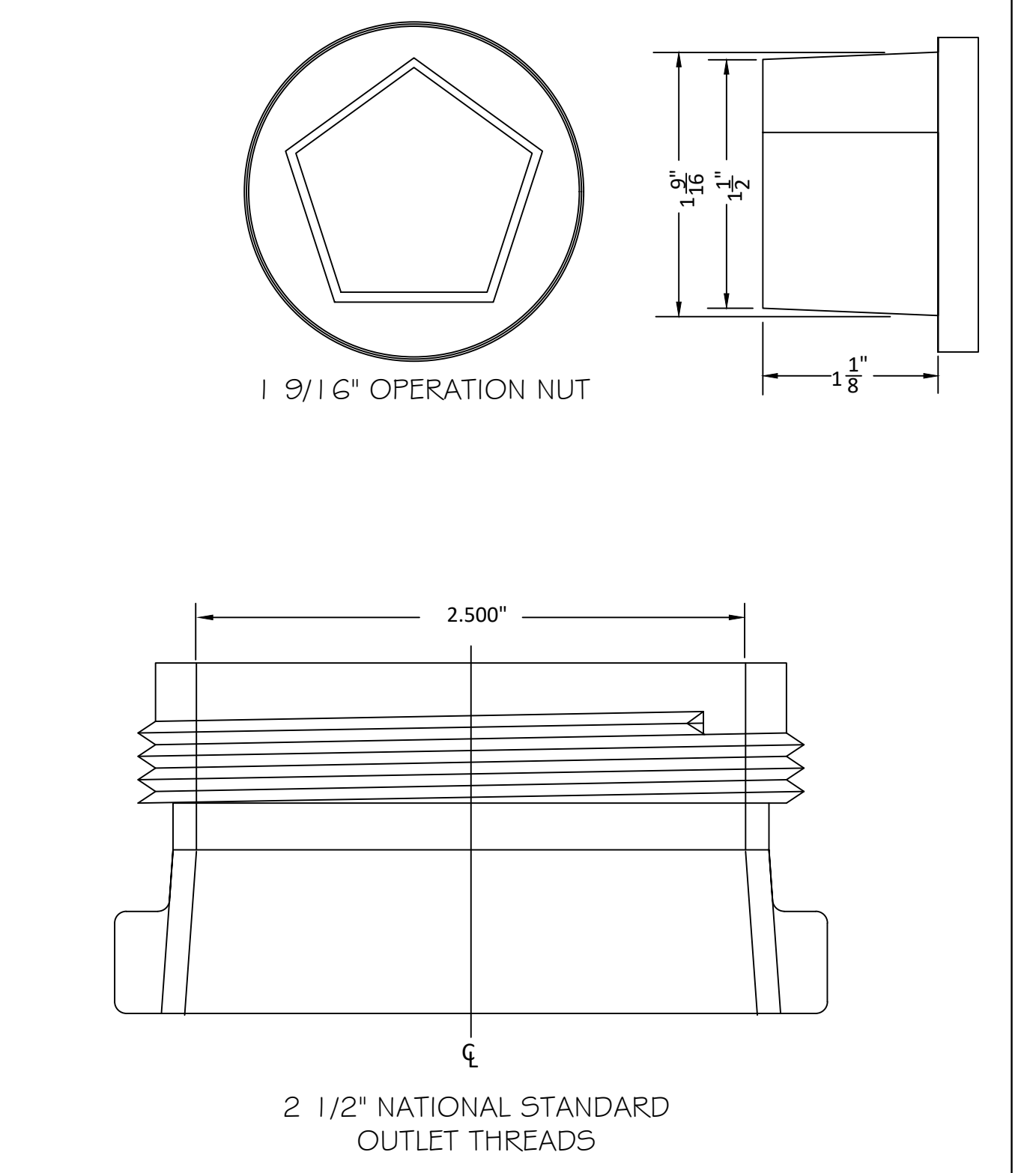
CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD FIRE HYDRANT INSTALLATION DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-4Q	ABB	4-6-04			



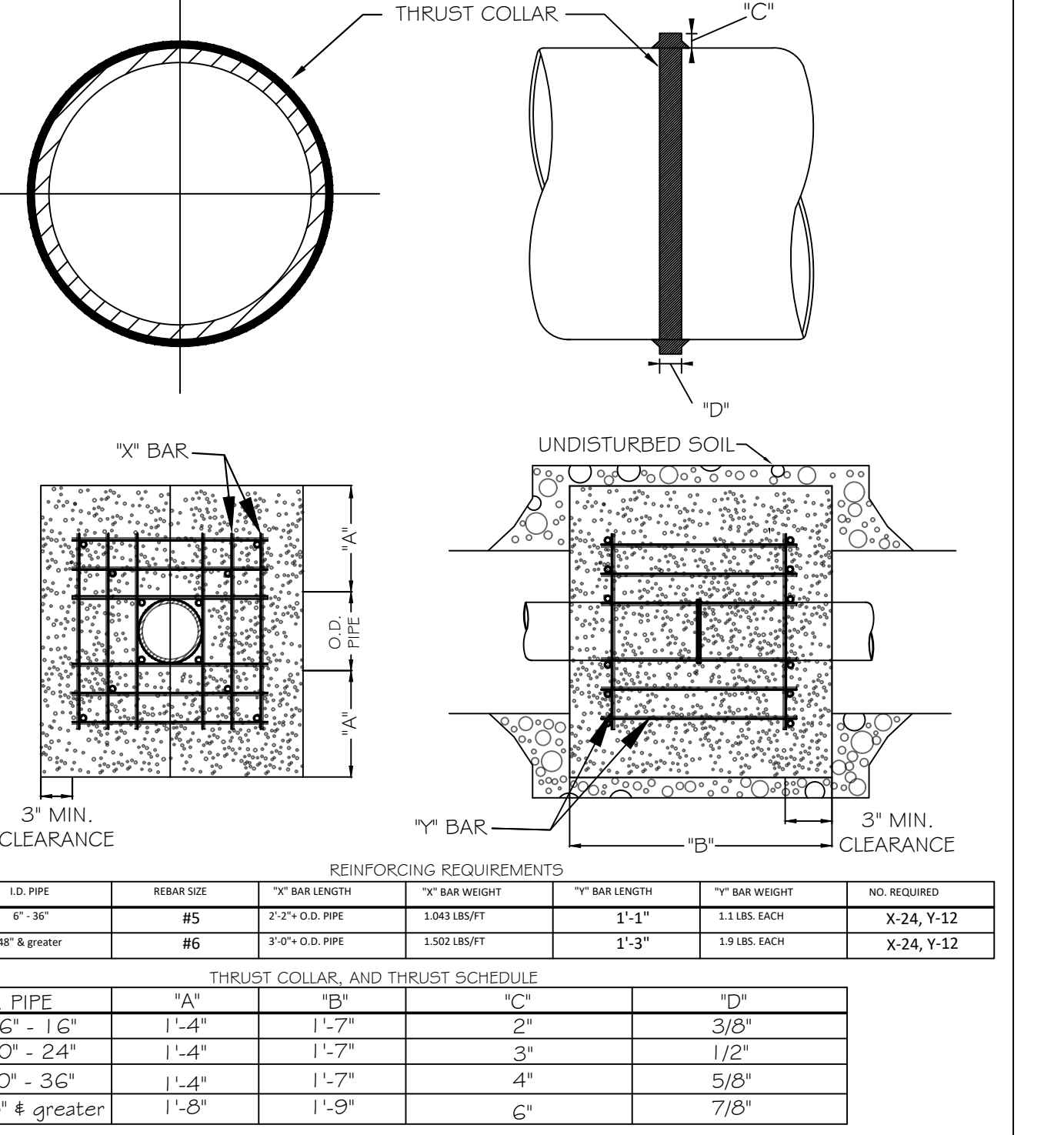
NOTES:

- ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
- ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-5	MAB	6-30-16			
	KAT	9-15-17			



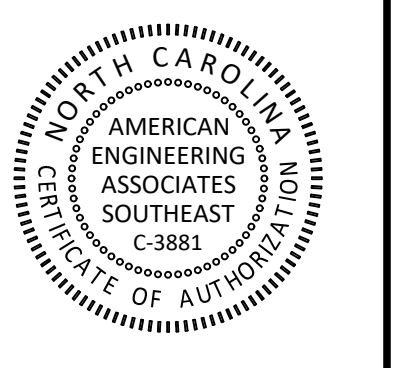
CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
HYDRANT OPERATING NUT AND 2 1/2" OUTLET THREADS					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-6	RRH	B-31-00	DHL	2-18-08	
	A.B.B.	4-13-04	J.P.S.	11-1-10	



NOTES:

- SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
- CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
- REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
- TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
- BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
- THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
THRUST BLOCKING DESIGN DATA FOR WATER MAINS					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-7	RRH	1-21-00	J.P.S.	11-1-10	
	D.H.L.	6-18-08			



NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE

THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE:

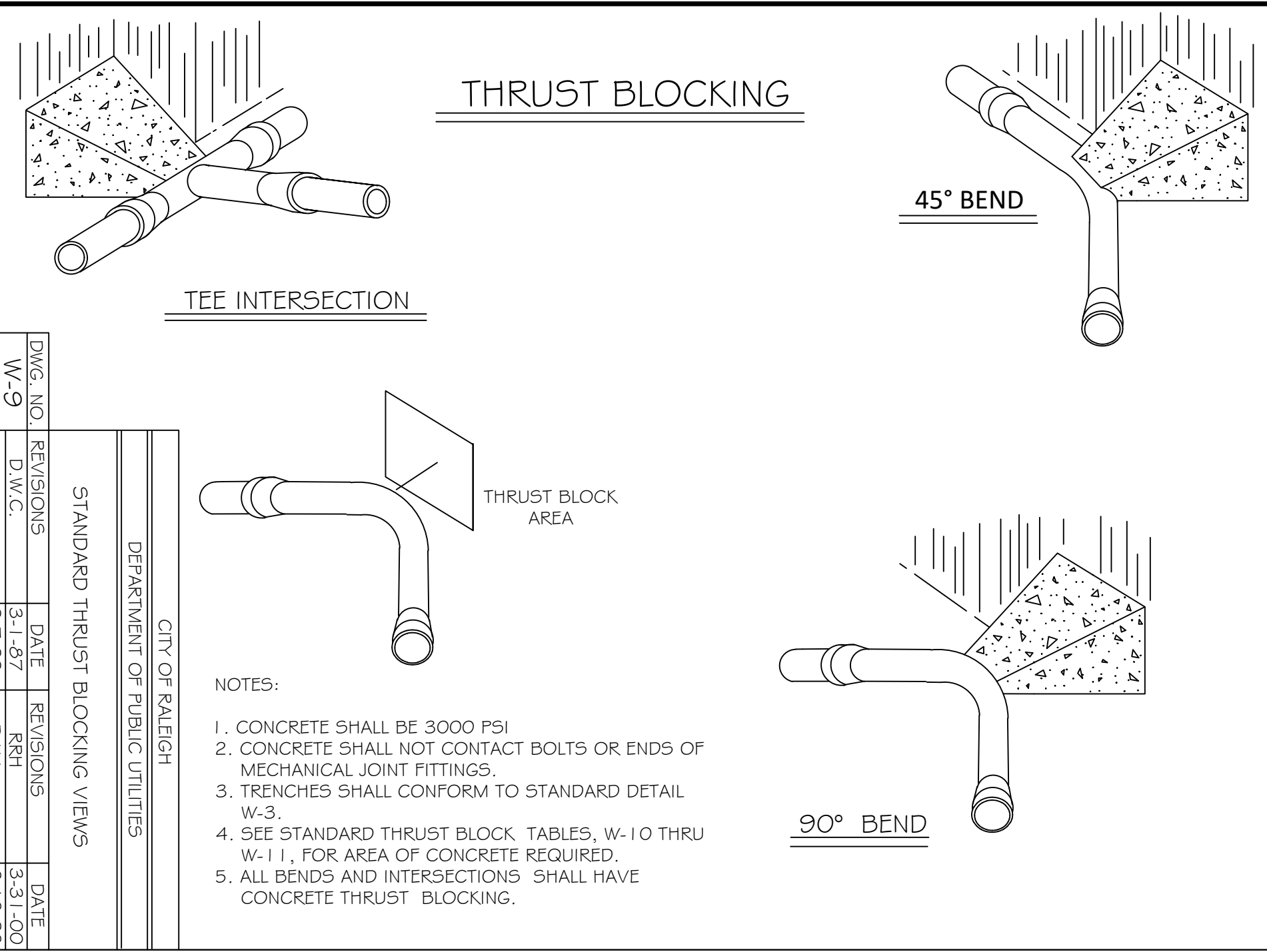
UTILITY DETAILS
 SHEET NO.: CD6

Public Sewer Collection / Extension System
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
 City of Raleigh Public Utilities Department Permit # _____

Public Water Distribution / Extension System
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
 City of Raleigh Public Utilities Department Permit # _____

*** 3 Days Before Digging ***
 North Carolina 811
 811 or 1-800-432-4949
 Remote Ticket Entry
<http://nc811.org/remoteticketentry.htm>

February 3, 2025
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DWG. NO.	REV. NO.	DATE	REV. NO.	DATE
W-9	D.W.C.	3-1-07	RRH	3-31-00
	D.H.L.	9-7-99	J.P.S.	6-18-03

STANDARD THRUST BLOCKING VIEWS
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

NOTES:
1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3
4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11, FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

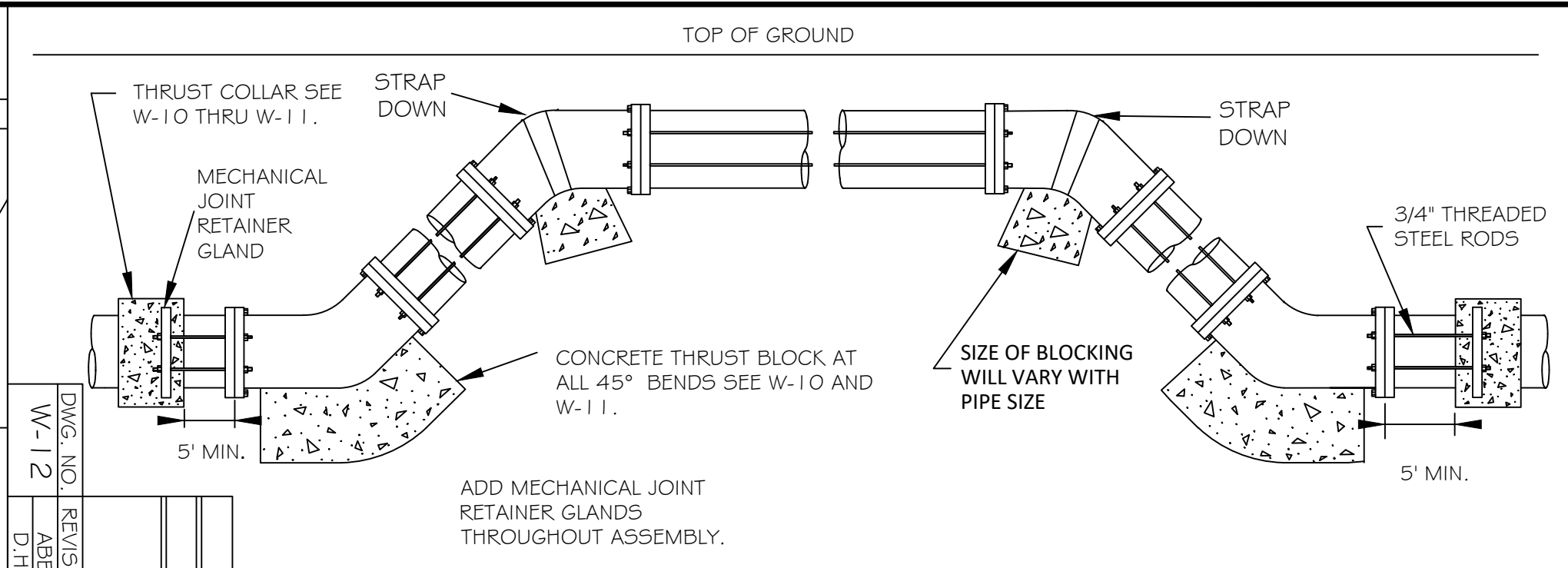
REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.
ALL AREAS GIVEN IN SQUARE FEET.

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	PROPERLY TYPED CLAY 4000 LBS/FT ²	SOFT CLAY 2000 LBS/FT ²	1000 LBS/FT ² GRAVEL / COARSE SAND	3000 LBS/FT ² DRY / ALWAYS DRY	SAND COMPACT FIRM 8000 LBS/FT ²	SAND CLEAN DRY 4000 LBS/FT ²	SOLID 1000 LBS/FT ² QUICKSAND - VERY POOR	ROCK - POOR 20,000 LBS/FT ²
6"									
11 1/4"	1,108	1	1	1	1	1	2	1	
22 1/2"	2,207	1	2	2	1	1	3	1	
45°	4,328	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4"	1,970	1	1	2	1	1	2	1	
22 1/2"	3,922	1	2	3	1	1	4	1	
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4"	4,433	2	3	3	1	1	2	5	1
22 1/2"	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	18	2
90°	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4"	7,881	2	4	5	1	1	2	8	1
22 1/2"	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

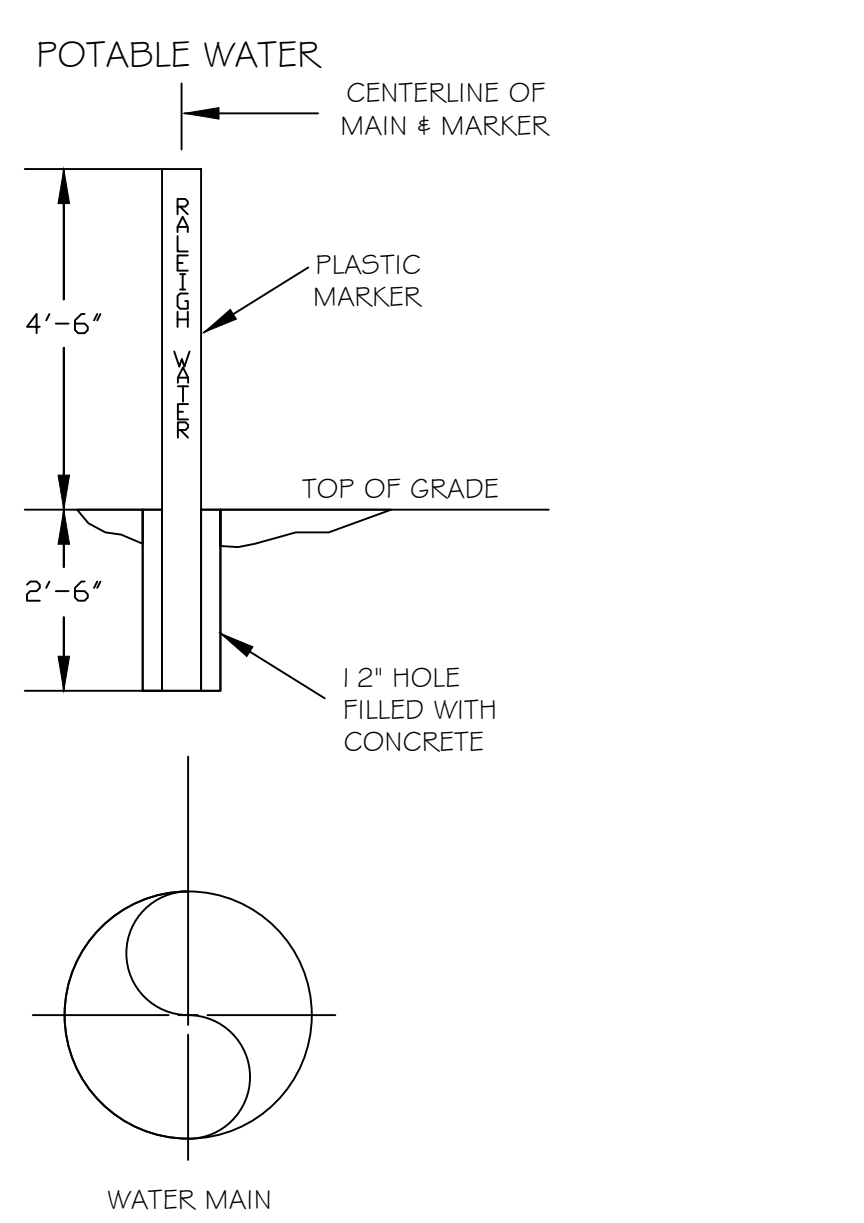
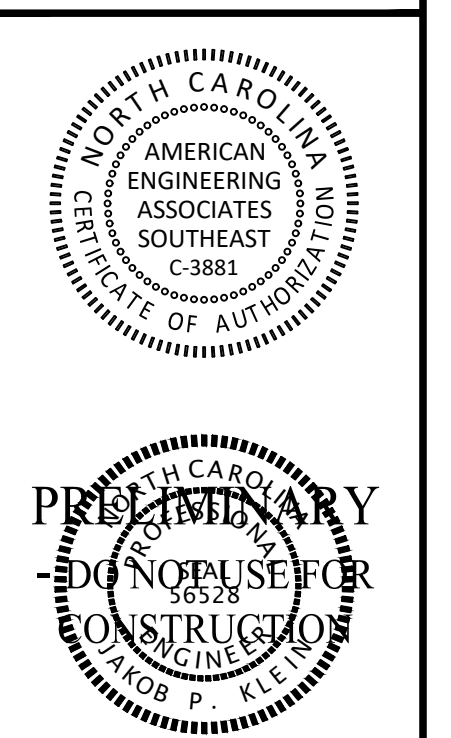
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	D.W.C.	6-23-99		



ROD REQUIREMENTS

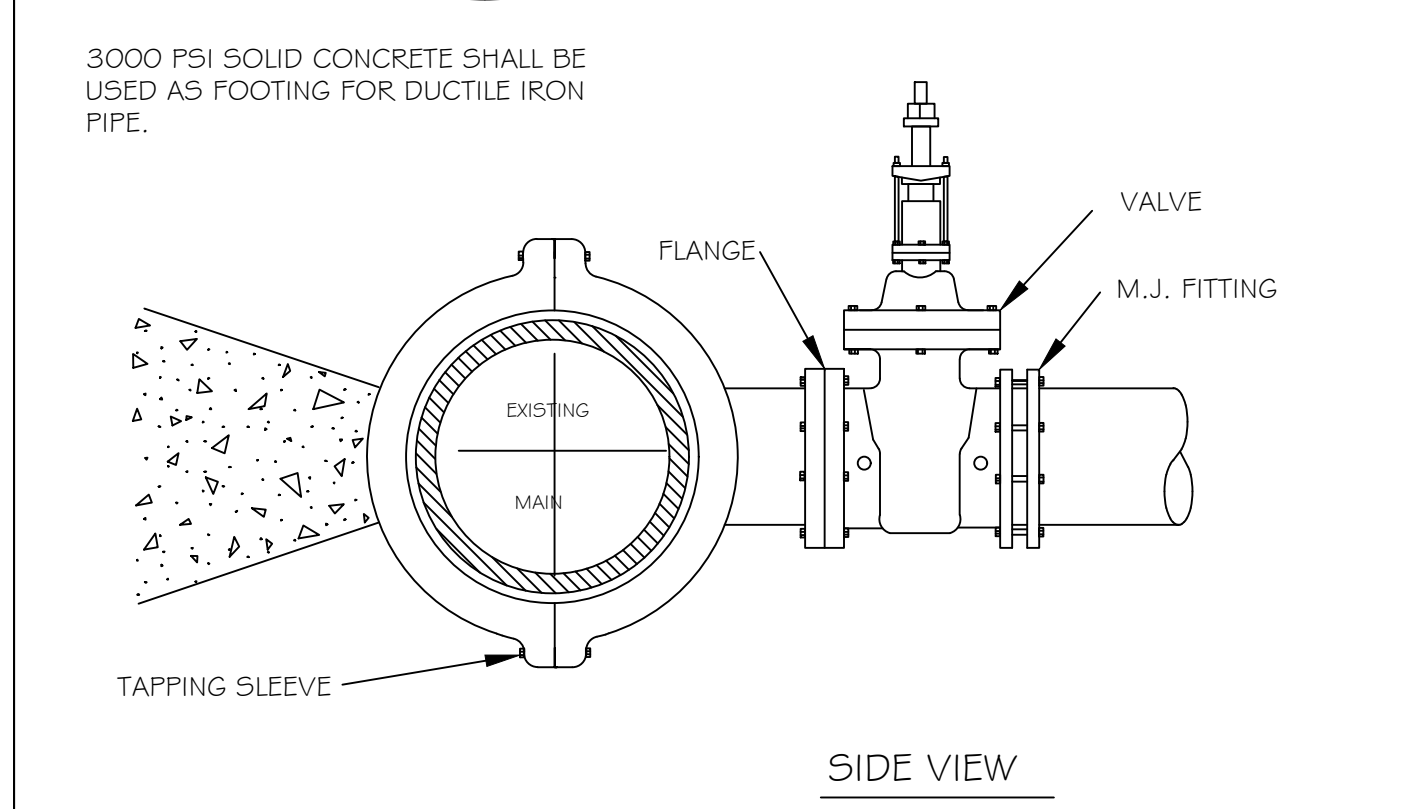
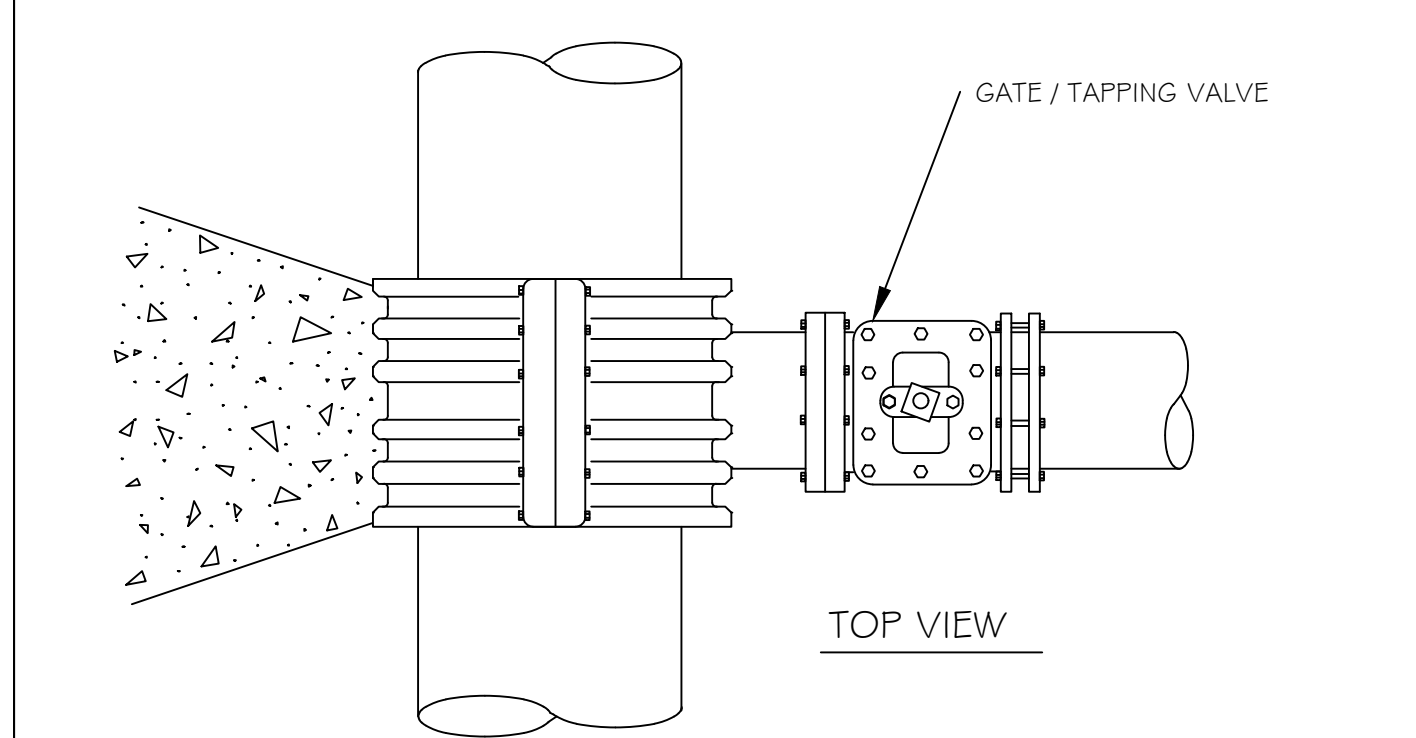
SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	8
24"	69,252	8

GENERAL NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
5. 3" MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS



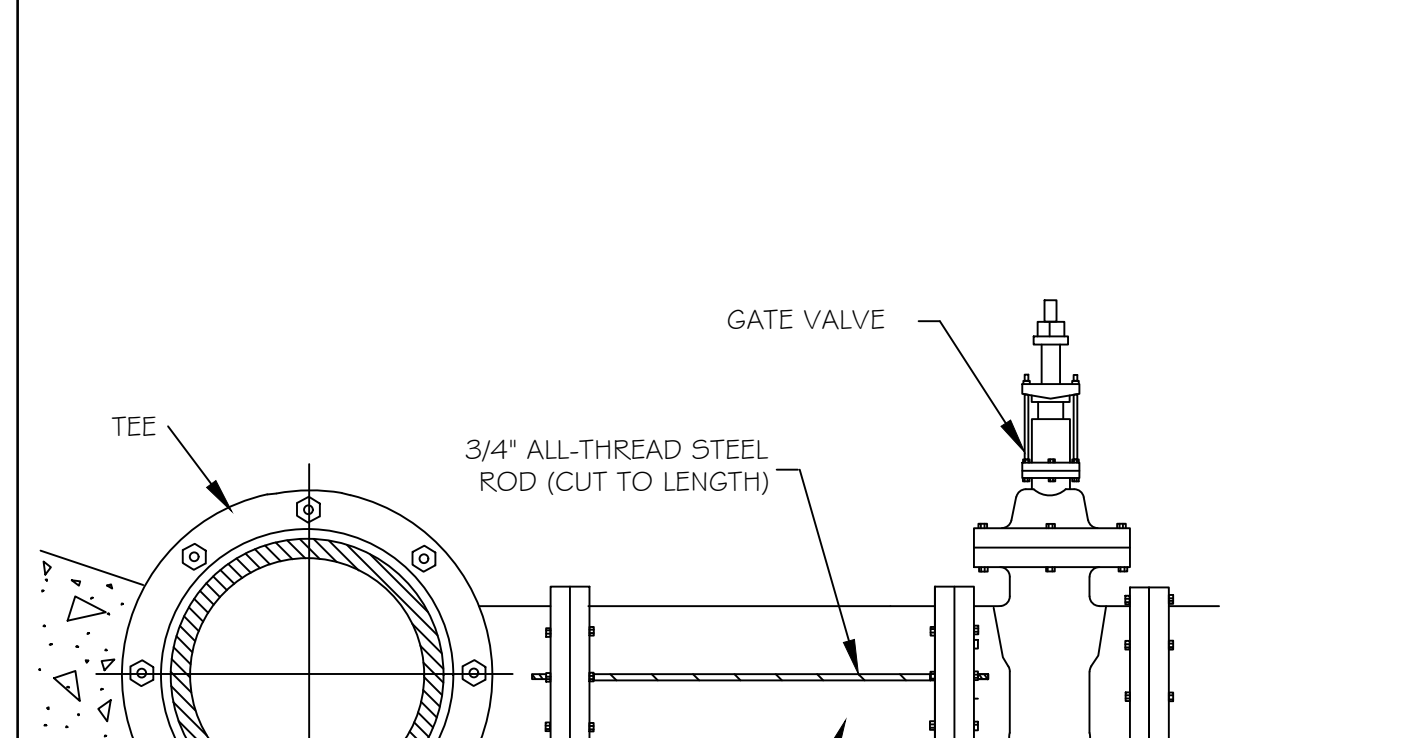
NOTES:
1. POTABLE WATER MARKER TO BE BLUE IN COLOR.
2. POTABLE WATER MARKER TO BE LABELED "RALEIGH WATER"
3. TO BE SPACED ALONG CENTERLINE OF MAIN EVERY 300 FEET.
4. MARKERS TO BE ROUND AND 4" IN DIAMETER.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MAIN & VALVE MARKERS FOR POTABLE & REUSE WATER IN EASEMENTS				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-13	D.W.C.	9-7-99	DHL	8-16-07
	RRH	3-31-00	J.P.S.	11-1-10



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD THRUST BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	12-31-91	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10

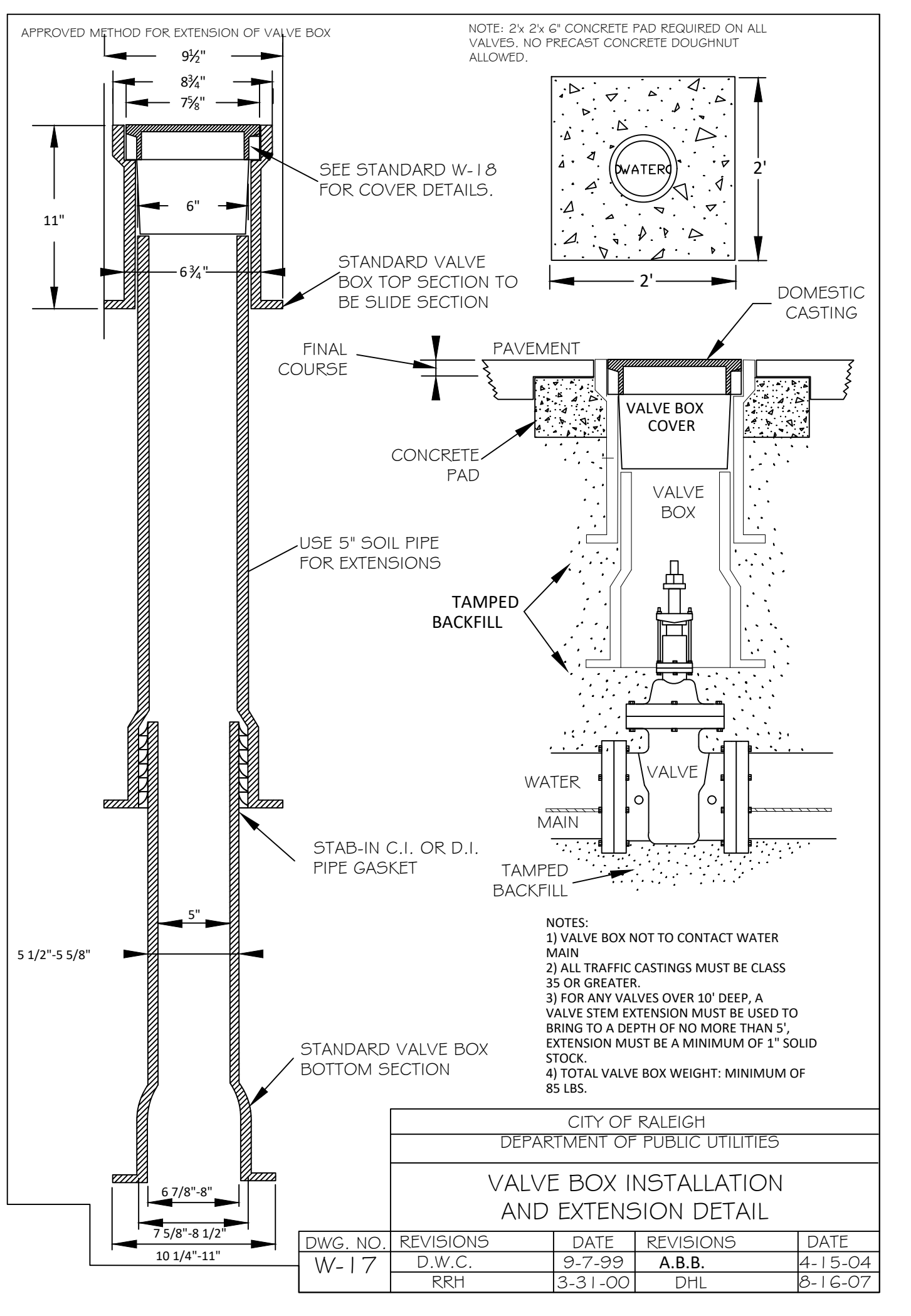


ROD REQUIREMENTS

NO. OF RODS	BRANCH SIZE
4"	2
6"	2
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. SEE STANDARD THRUST BLOCK TABLES W-10 AND W-11 FOR CONCRETE.
3. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.
4. THIS RODDING REQUIREMENT DOES NOT APPLY TO FIRE HYDRANTS.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
VALVE RESTRAINT AT TEES AND CROSSES FOR LINES (4"-24")				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-15	RRH	3-31-00	D.H.L.	6-16-08
	A.B.B.	4-19-04	J.P.S.	11-1-10



CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
VALVE BOX INSTALLATION AND EXTENSION DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-17	D.W.C.	9-7-99	A.B.B.	4-15-04
	RRH	3-31-00	DHL	8-16-07

NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

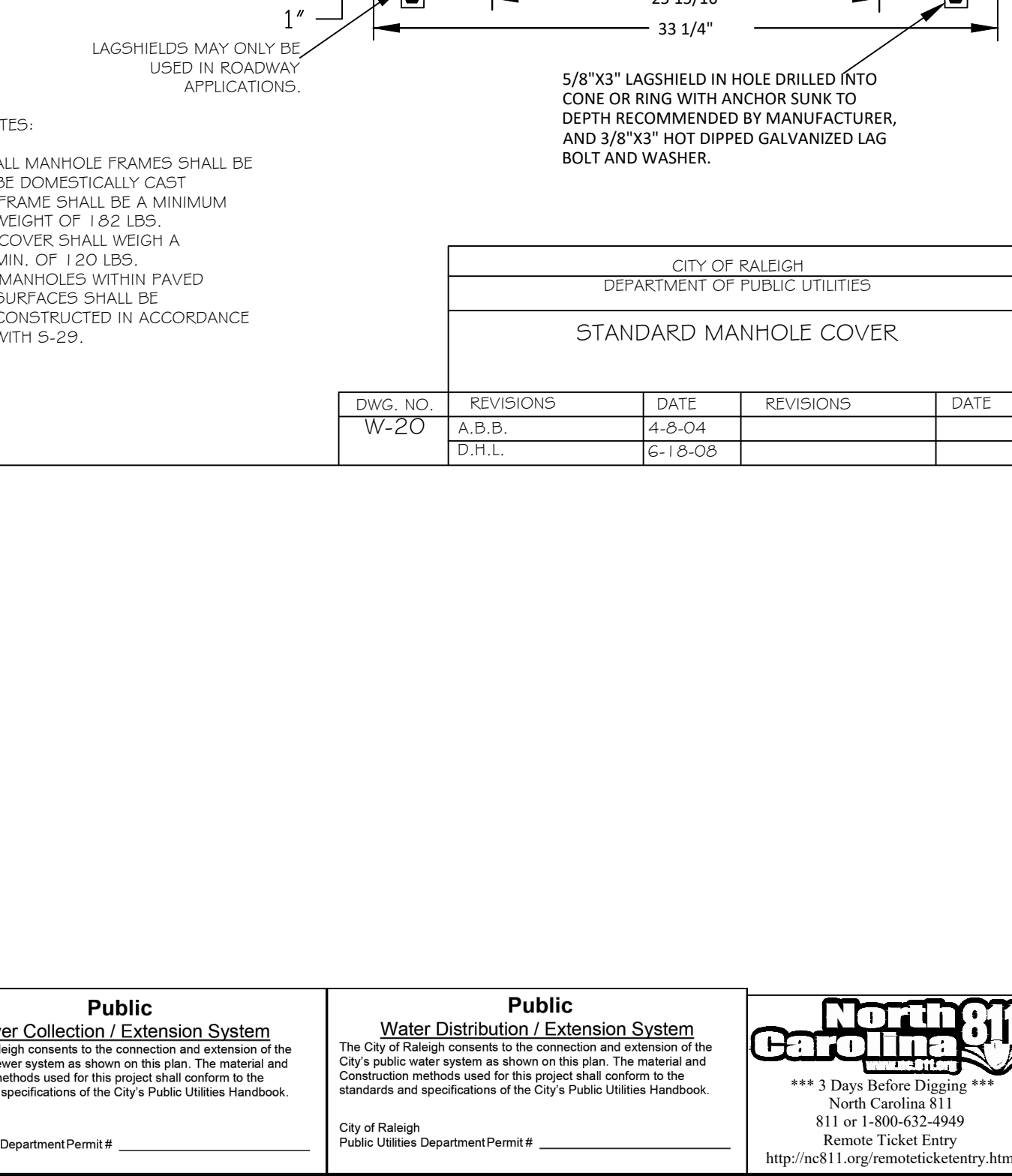
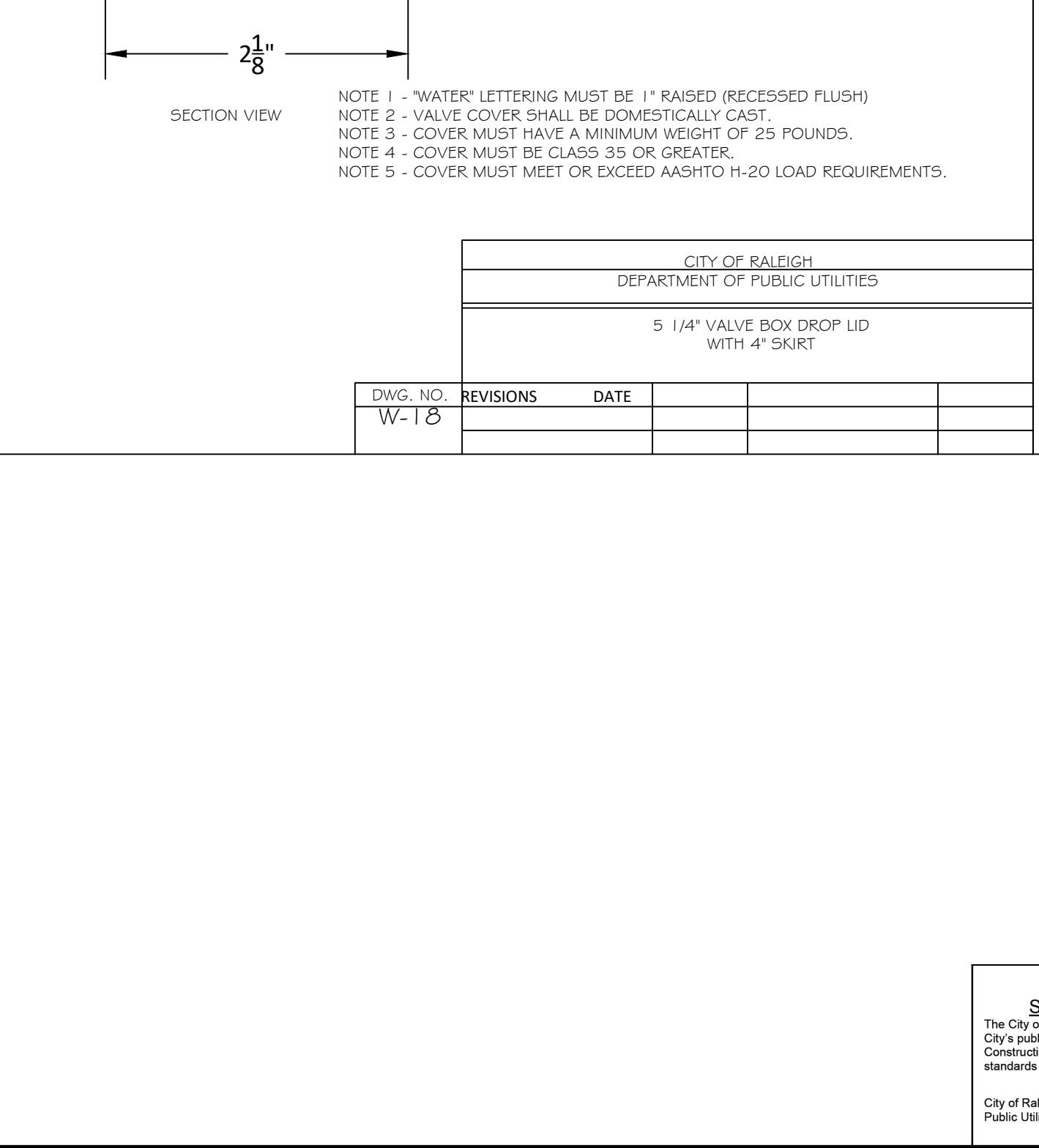
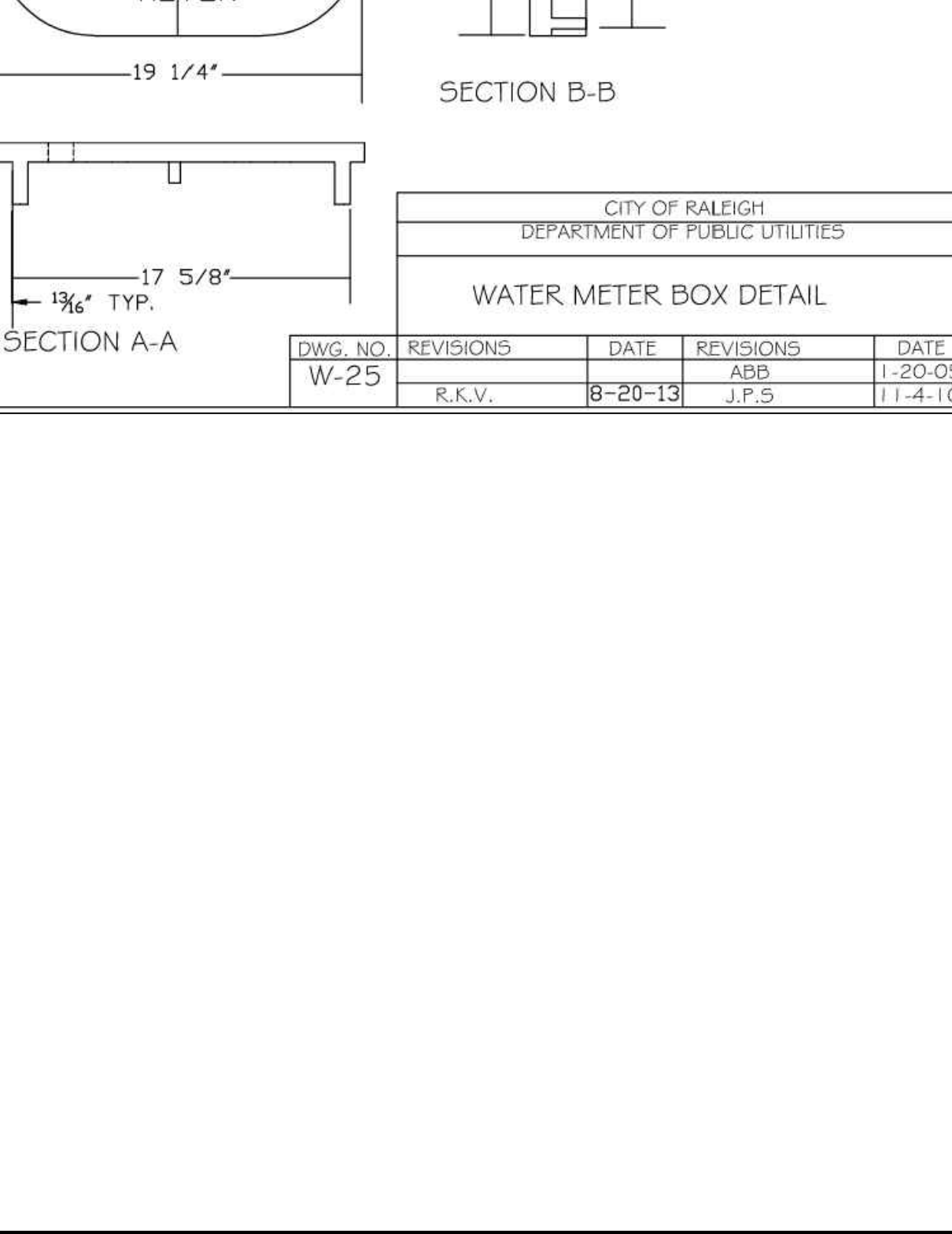
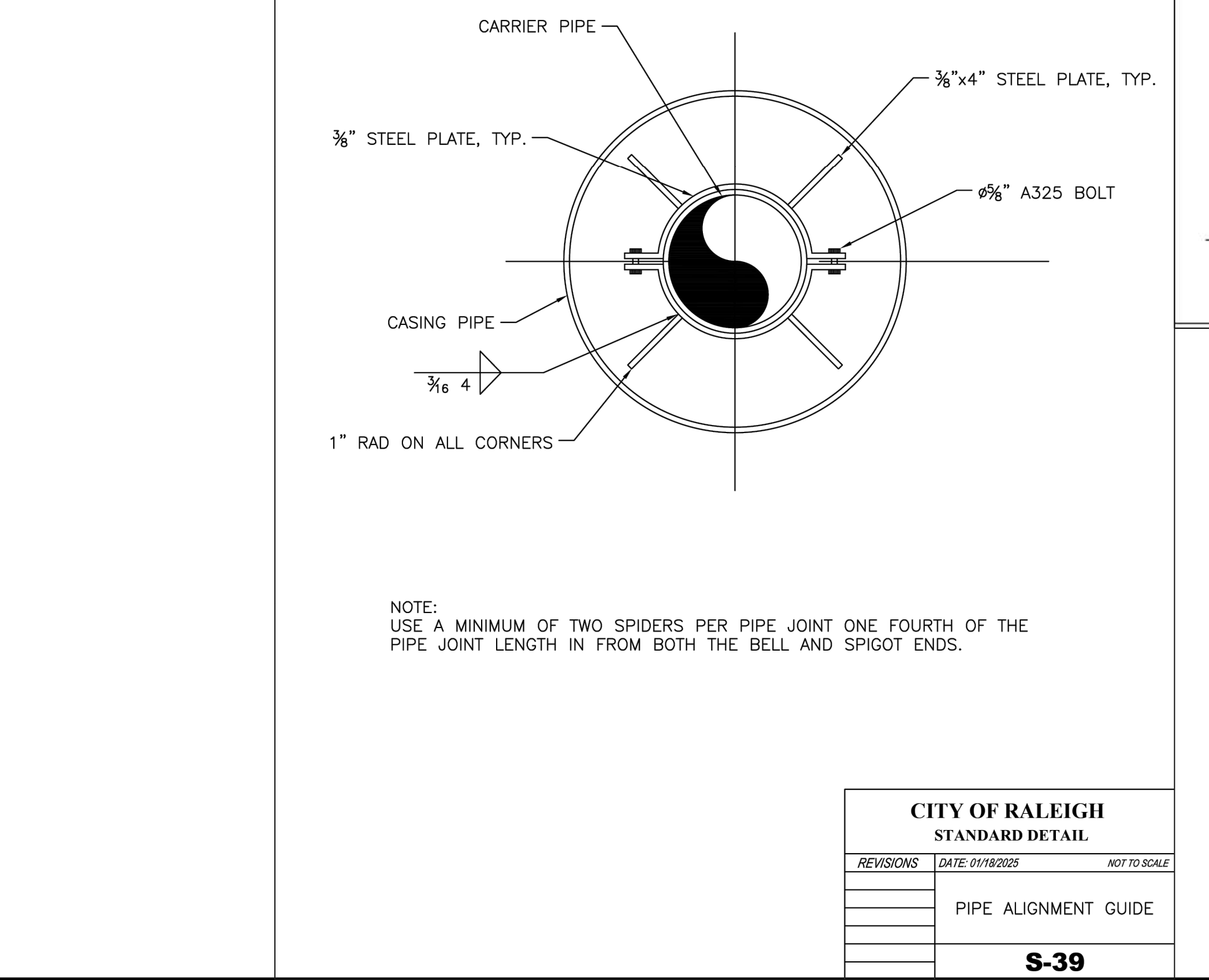
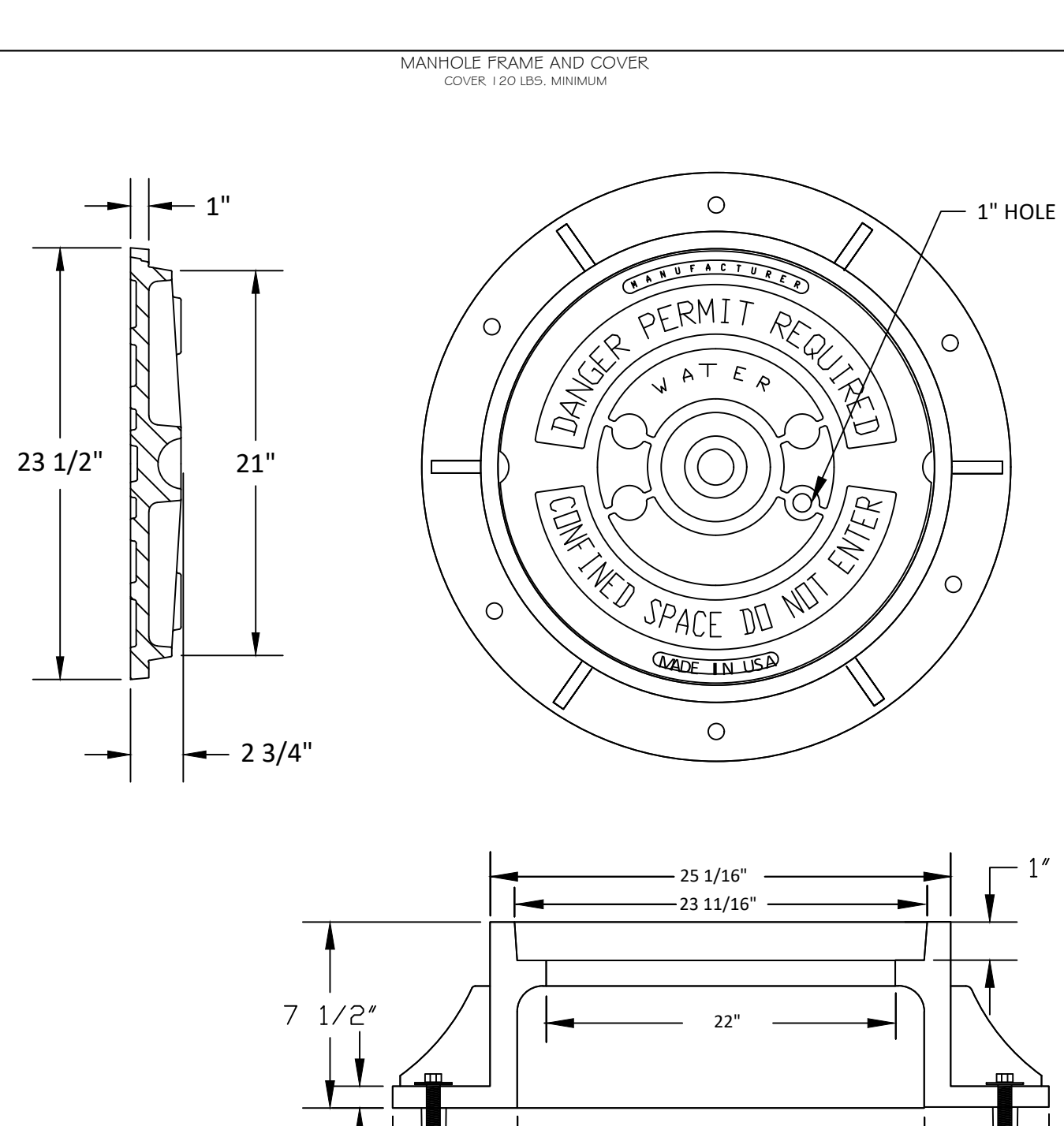
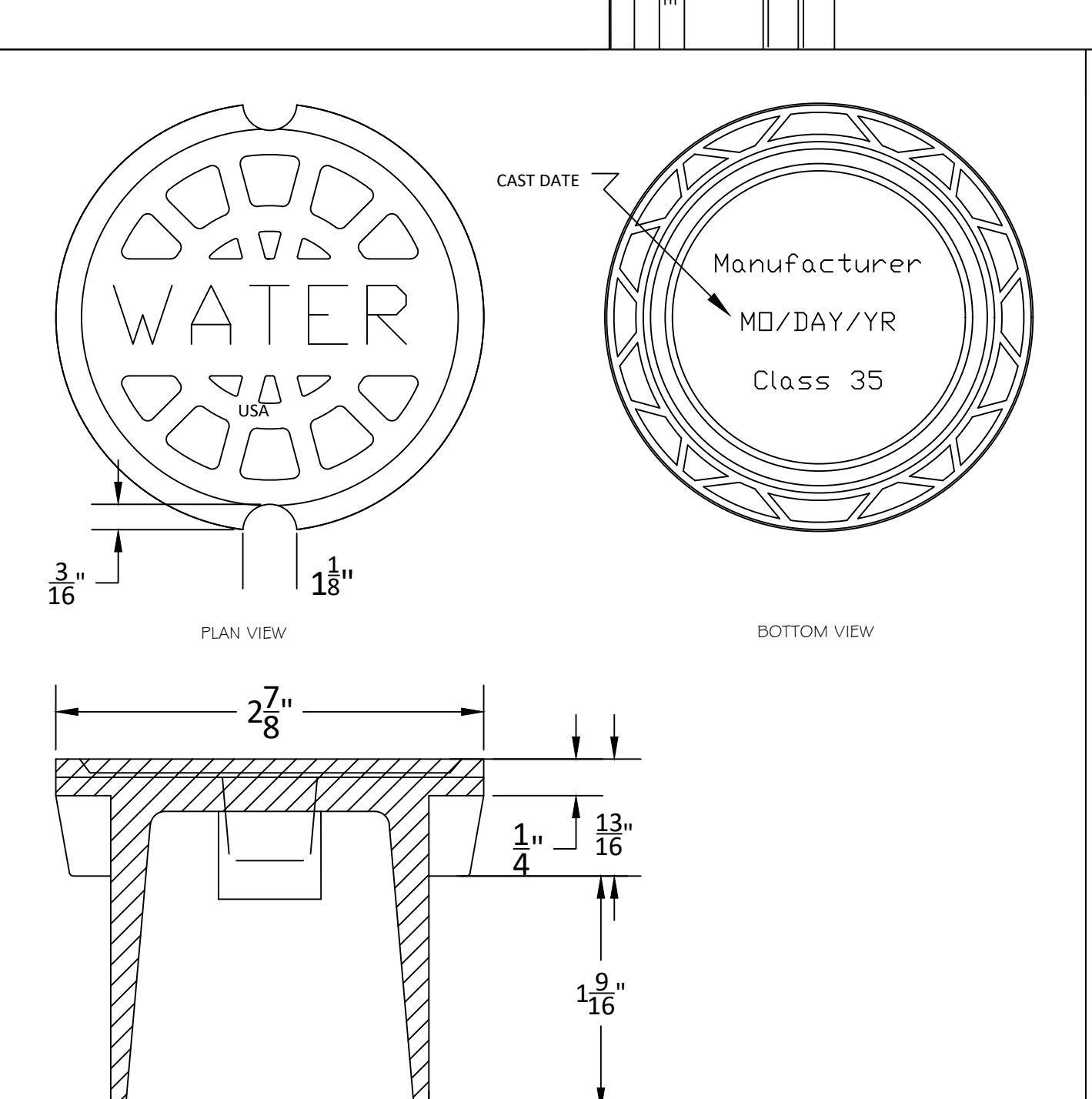
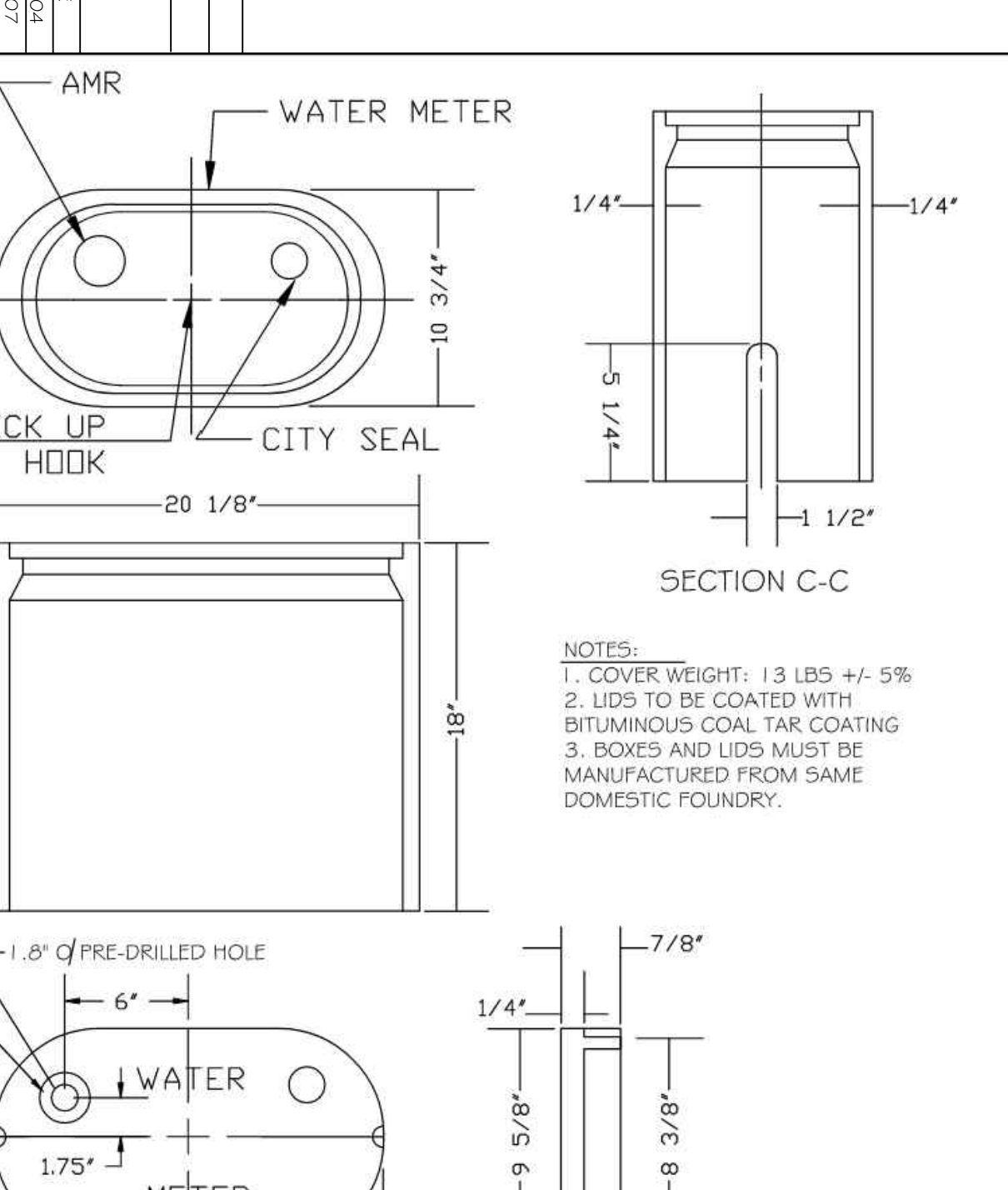
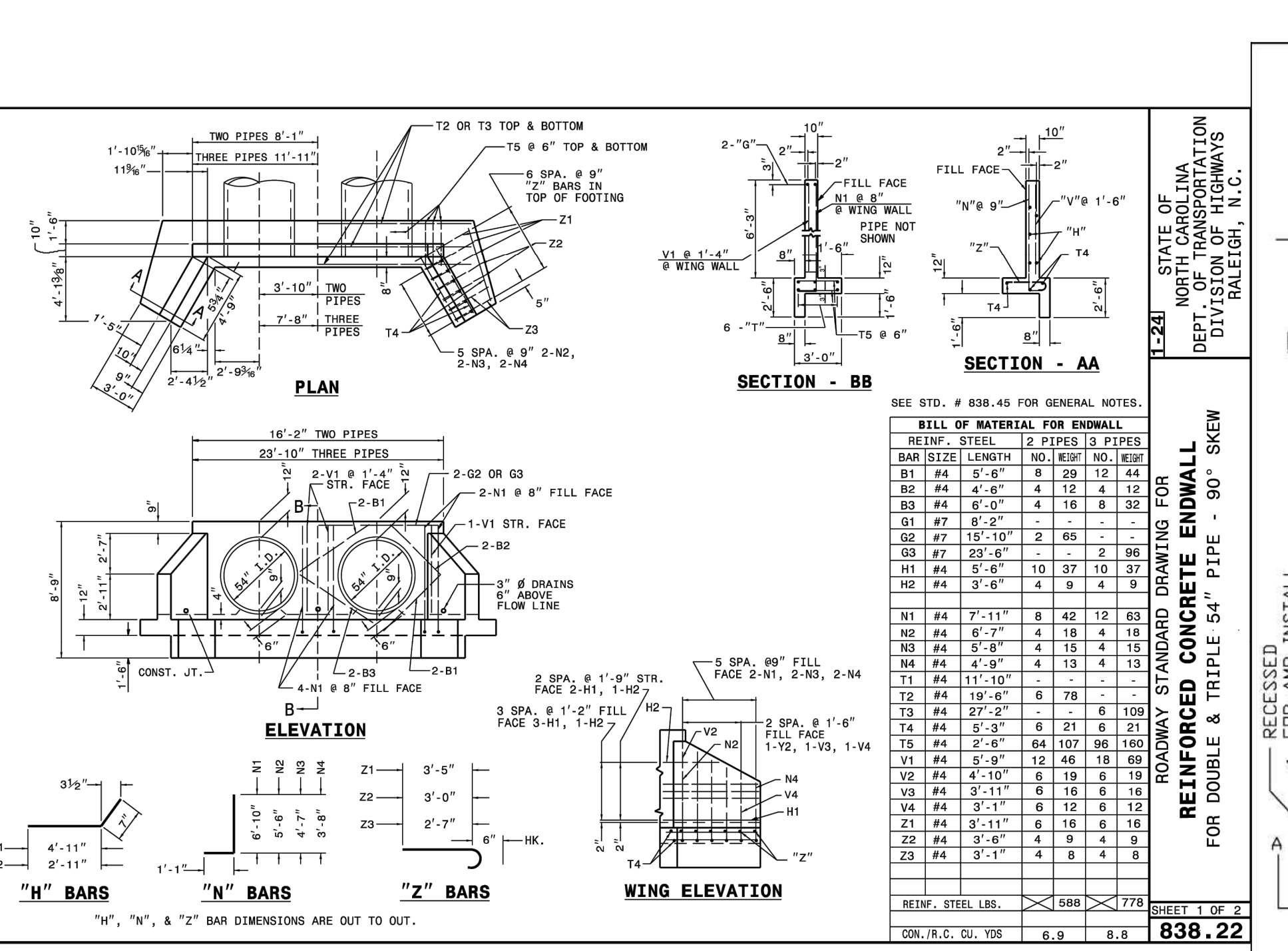
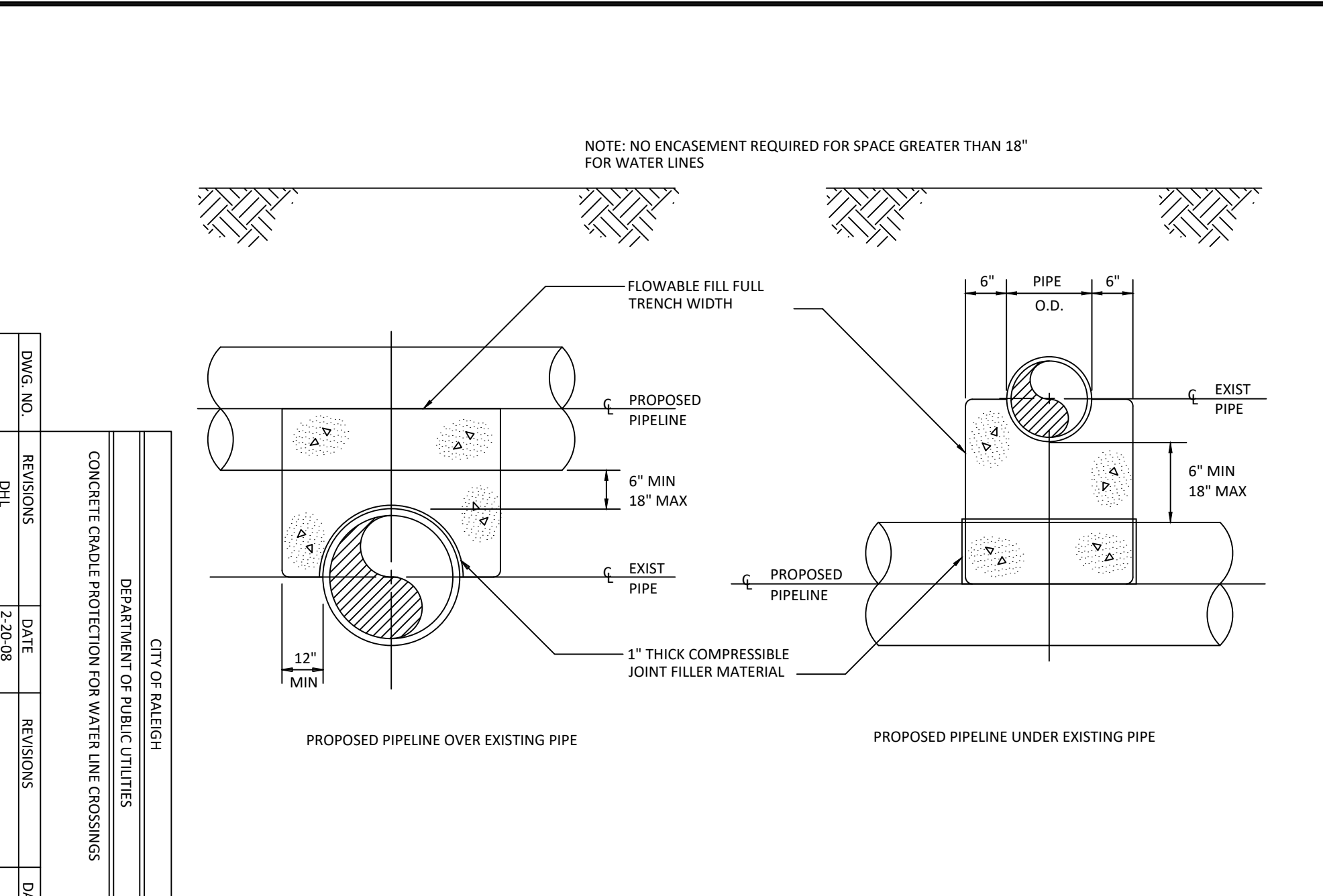
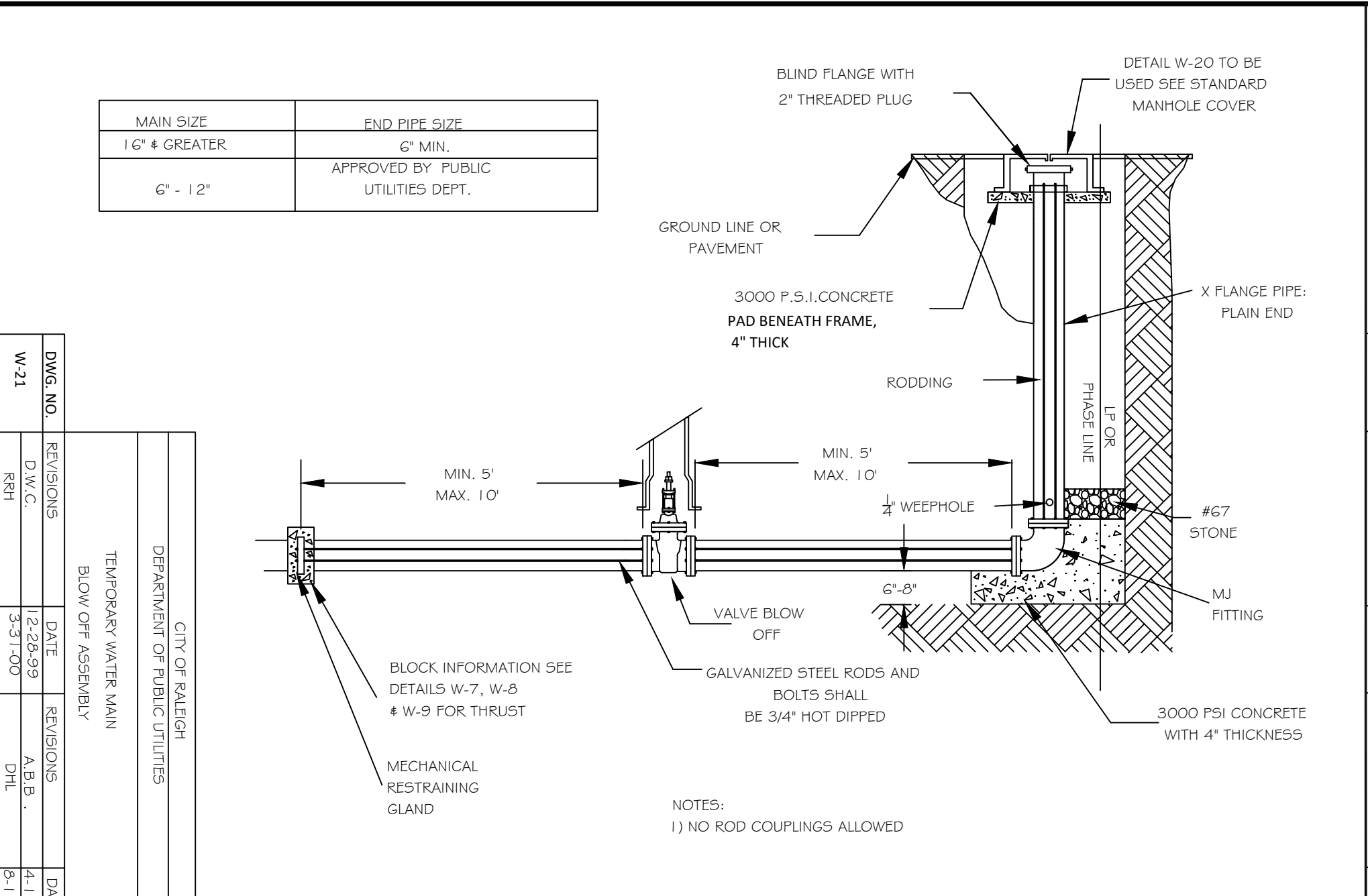
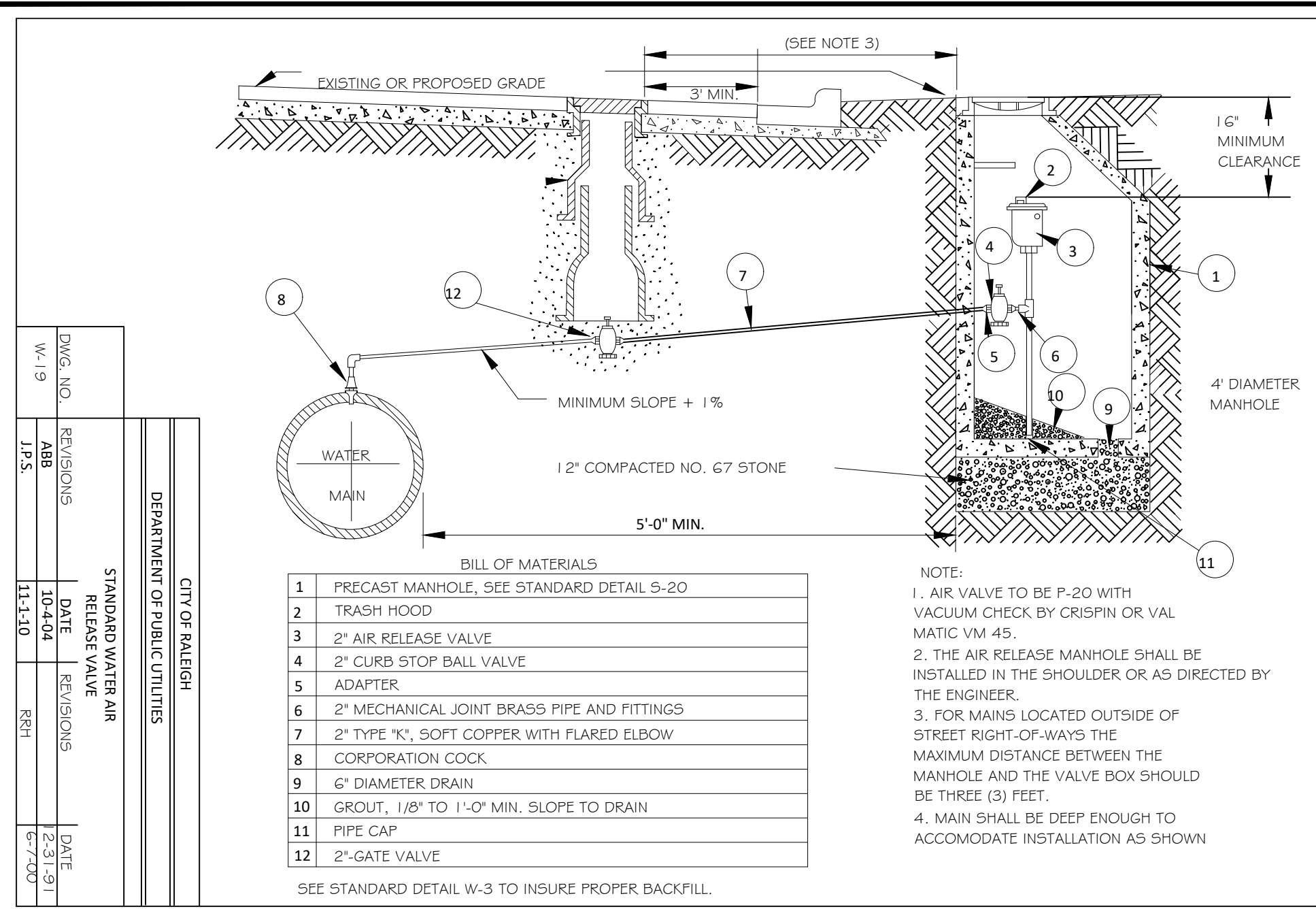
STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER:	21-002
CHECKED BY:	JK
DRAWN BY:	RC & SM
DATE:	02/03/2025

UTILITY DETAILS
SHEET NO.:
CD7





February 3, 2025
Z:\Info\31100_Moody\Development\Trac\B2100031100\Draw\Working\Draw\Construction\Std\CD1 Project Details.dwg

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE	BY	NOT TO SCALE
	01/18/2025		

PIPE ALIGNMENT GUIDE

S-39

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-25				
	R.K.V.	8-20-13	J.P.S.	1-20-05
				11-4-10

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

5 1/4" VALVE BOX DROP LID WITH 4" SKIRT

DWG. NO.	REVISIONS	DATE
W-13		

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD MANHOLE COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-20				
	A.B.B.	4-8-04		
	D.H.L.	6-15-08		

STIPULATION FOR REUSE

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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

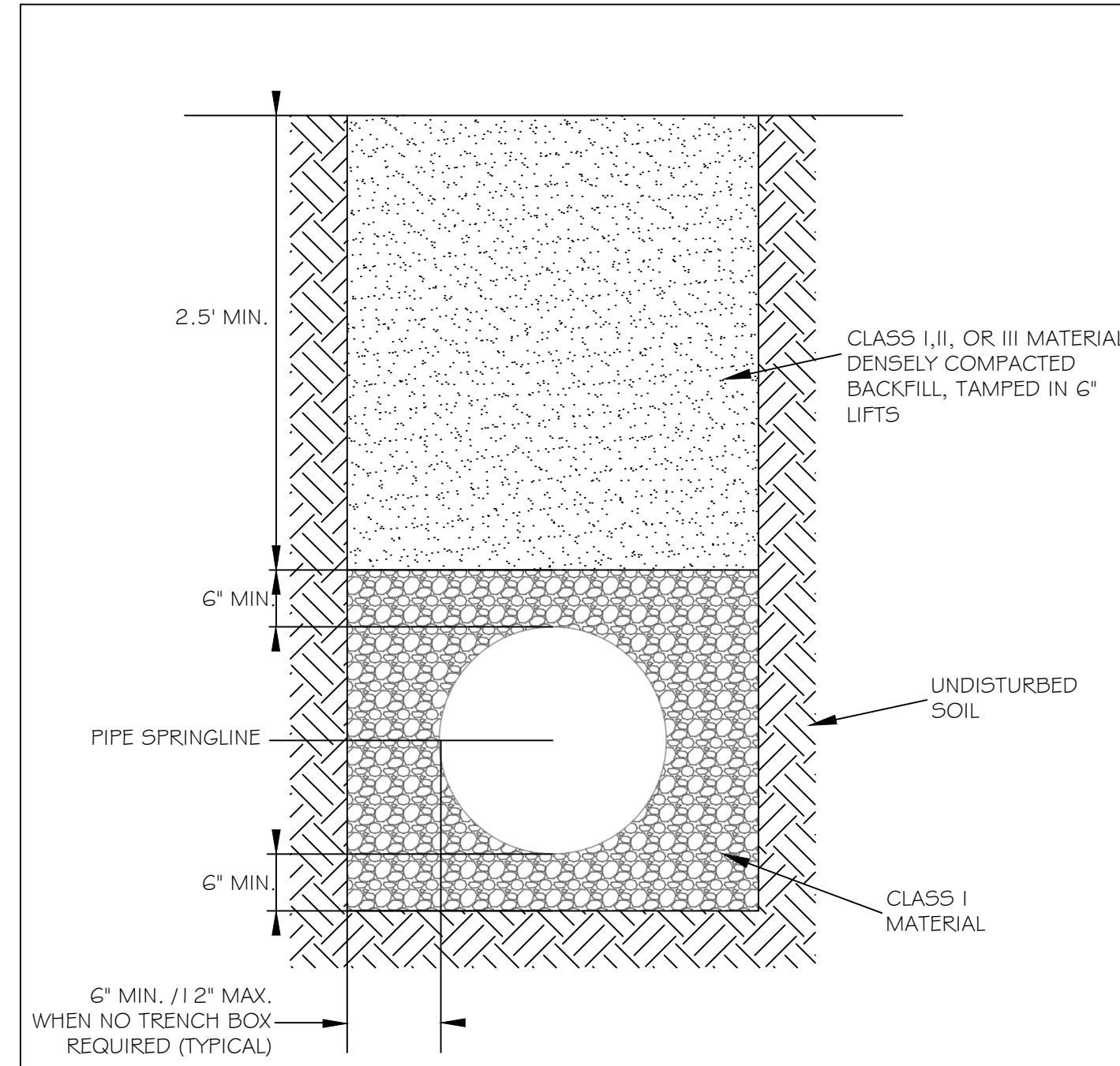
UTILITY DETAILS

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE:
UTILITY DETAILS
SHEET NO.:
CD8

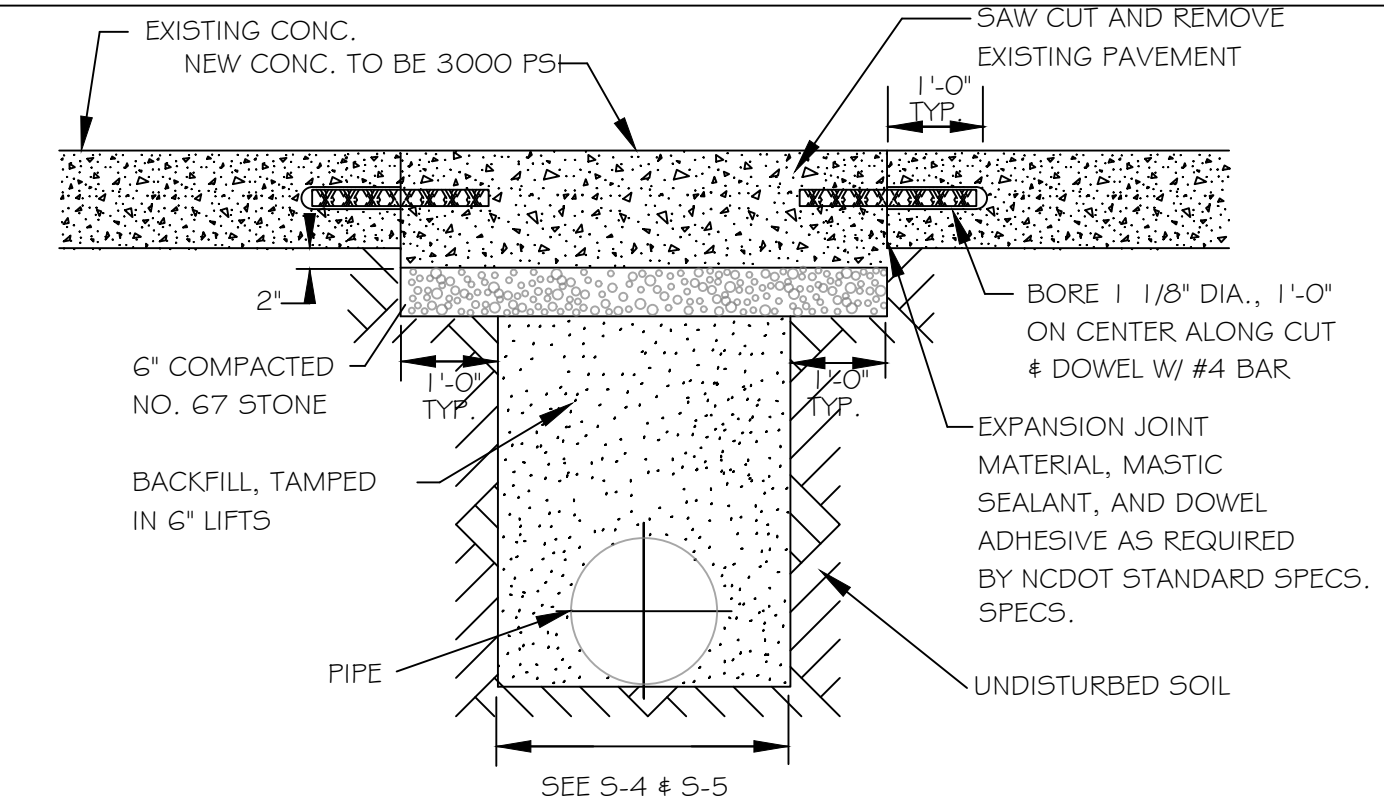
Public Sewer Collection / Extension System
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North 811
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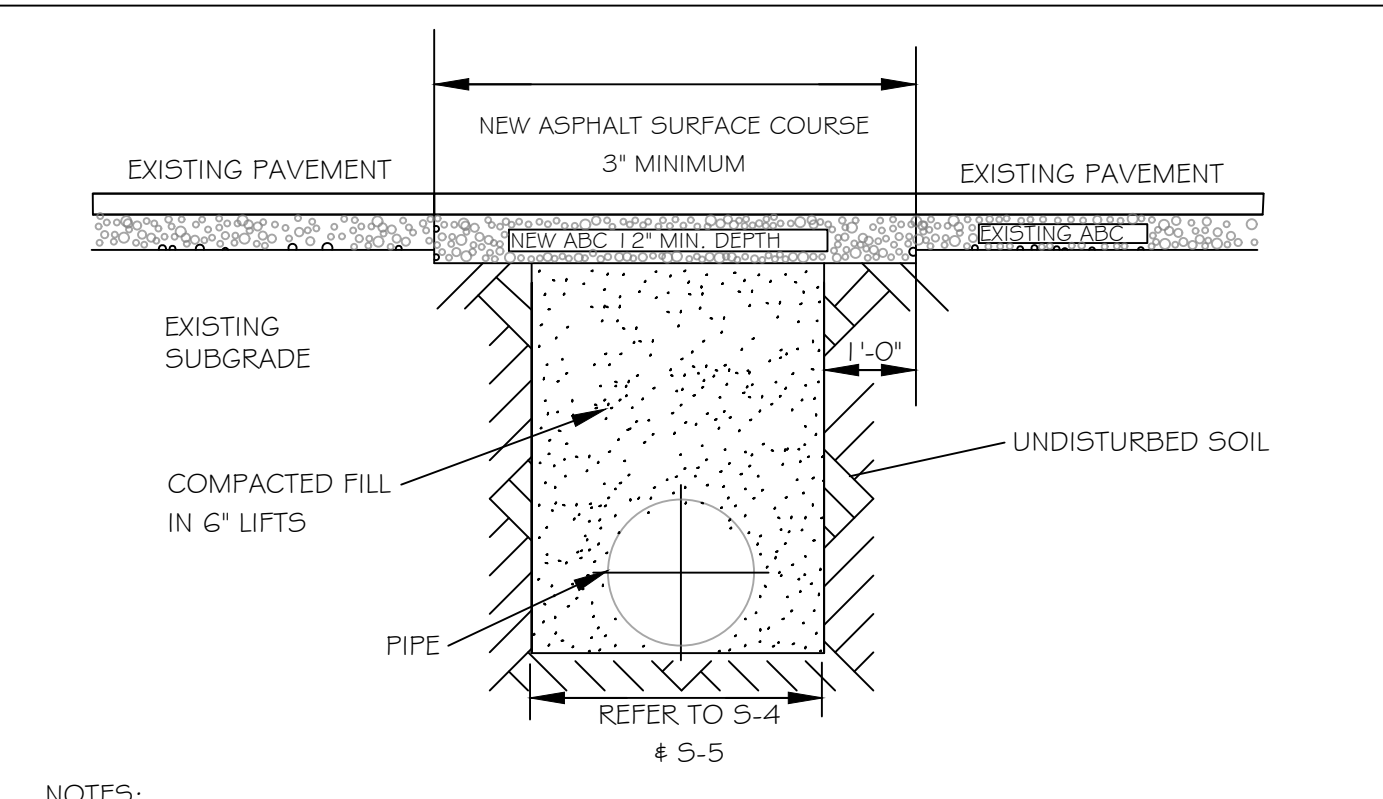


CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD BEDDING DETAILS FOR CCFRPM PIPES					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-1	J.P.S.	10-8-10			



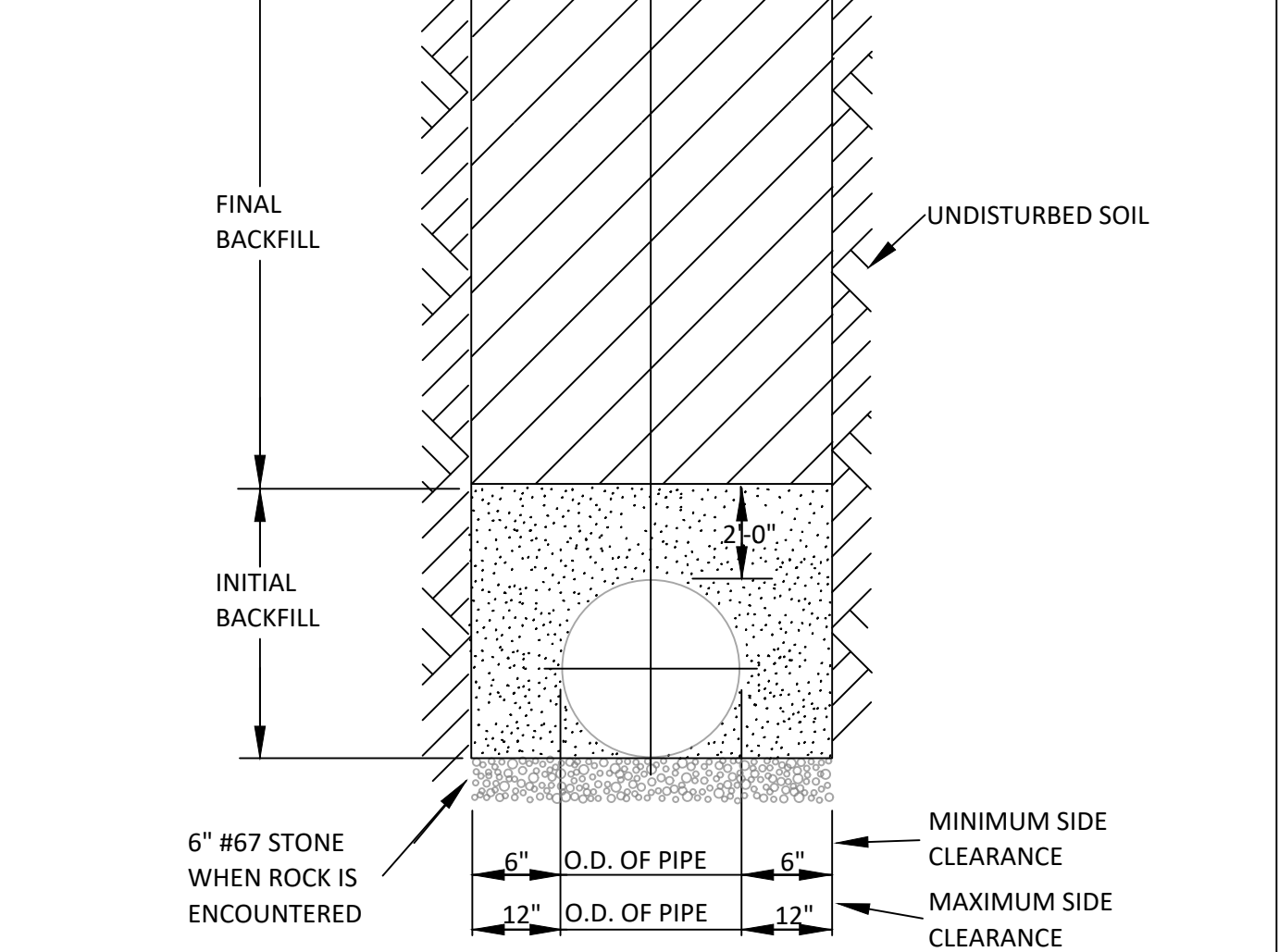
NOTES:
 1. See City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.
 2. Pavement cuts over 5'-0" in width shall be reinforced to N.C.D.O.T. standards.
 3. Pavement cuts shall be made with an appropriate saw cut machine.
 4. Pavement cuts within NCDOT ROW shall conform to the approved on site encroachment permit.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD CONCRETE PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-2	D.W.C. RRH	6-23-99 3-30-00	A.B.B. J.P.S.	4-19-04 10-8-10	



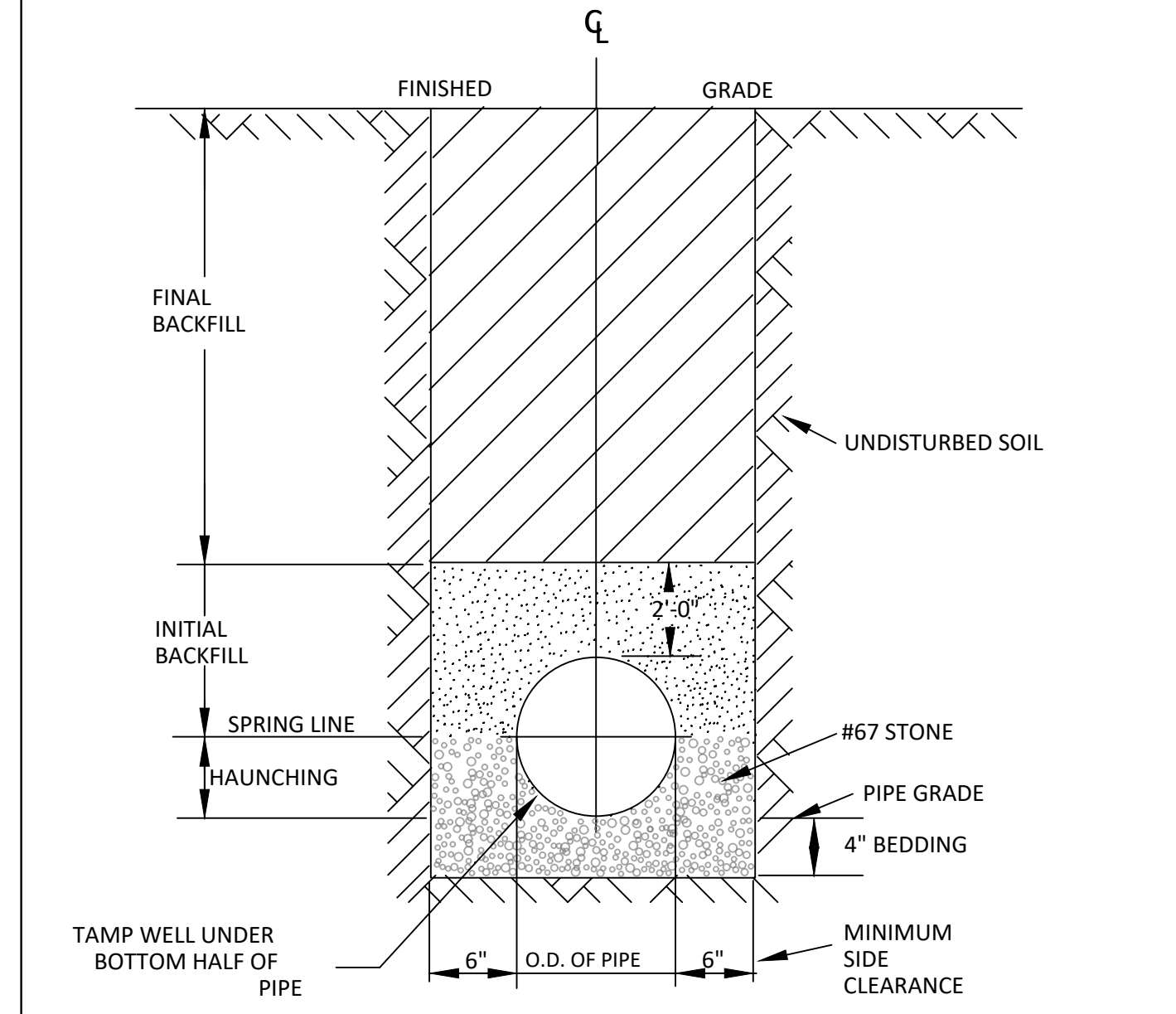
NOTES:
 1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
 2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
 3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
 4. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
 5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
 6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
 7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
 8. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL DETAILS.
 9. NO HAND PATCHING ALLOWED.
 10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD ASPHALT PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-3	D.W.C. RRH	1-1-99 3-30-00	A.B.B. J.P.S.	4-19-04 10-8-10	



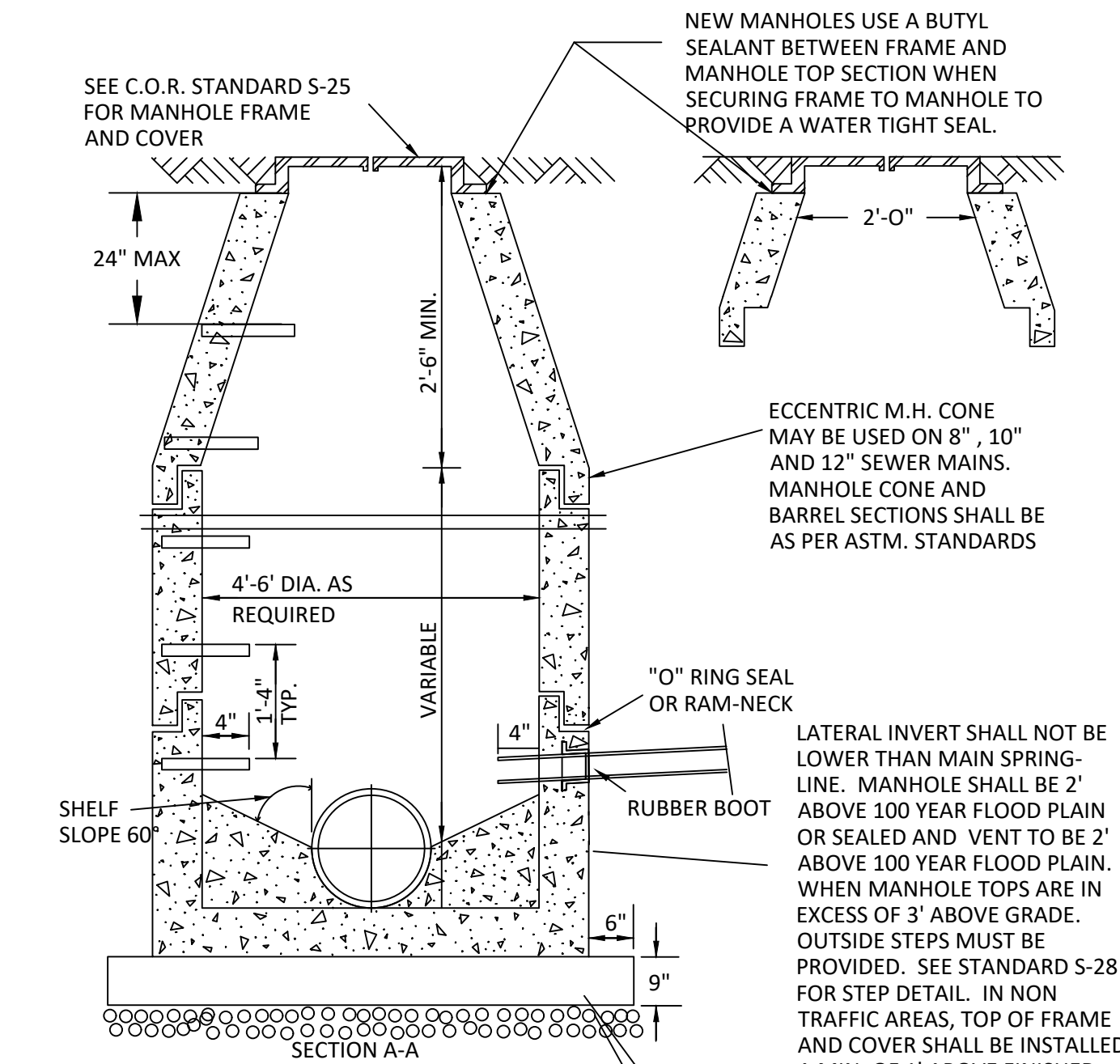
NOTES:
 1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
 5. ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
 6. IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
 7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-4	D.W.C. RRH	9-3-99 3-30-00			



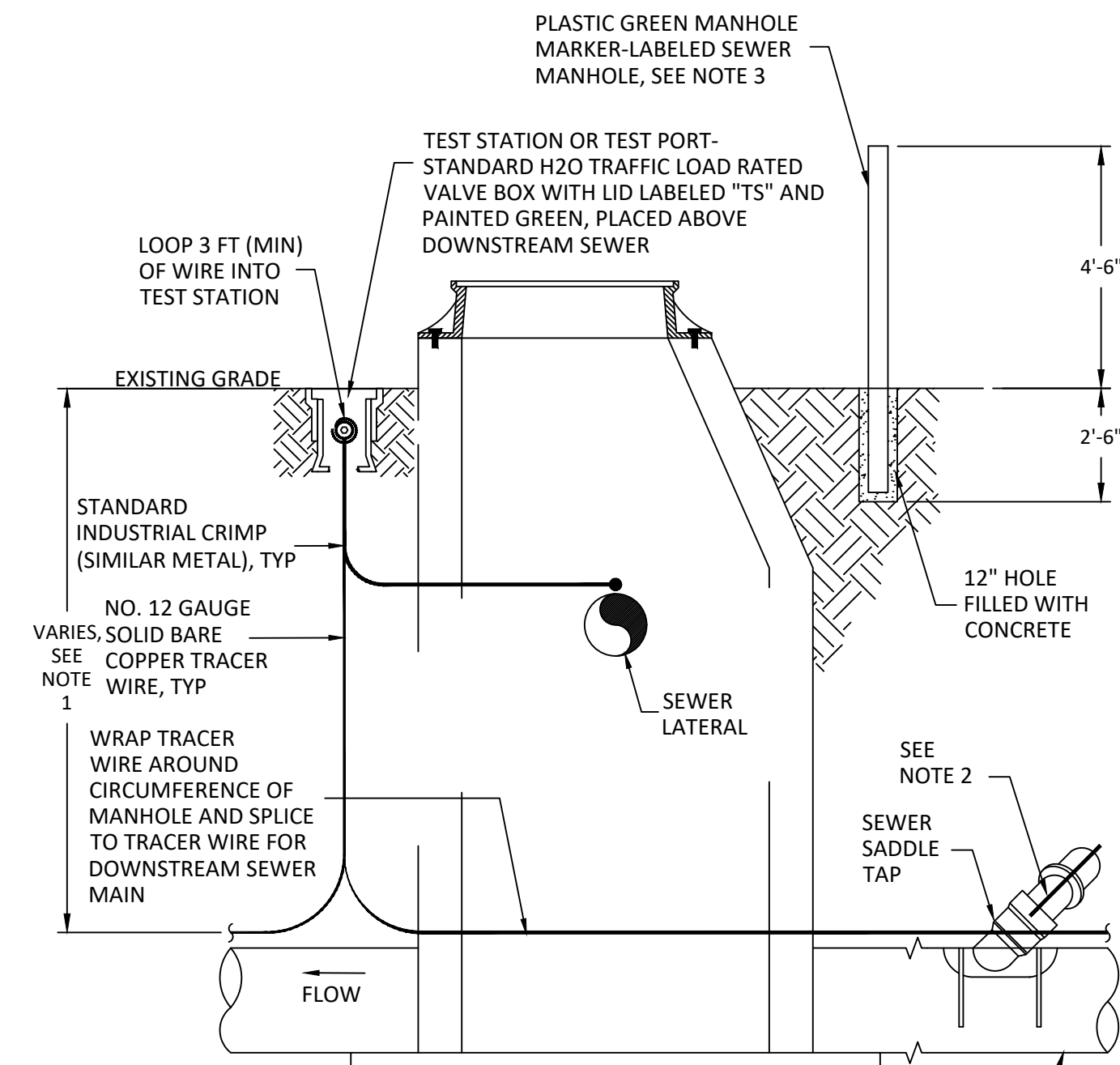
NOTES:
 1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
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 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-5	TO NOTES	3-1-87 7-2-82	D.W.C. RRH	9-3-99 3-30-00	



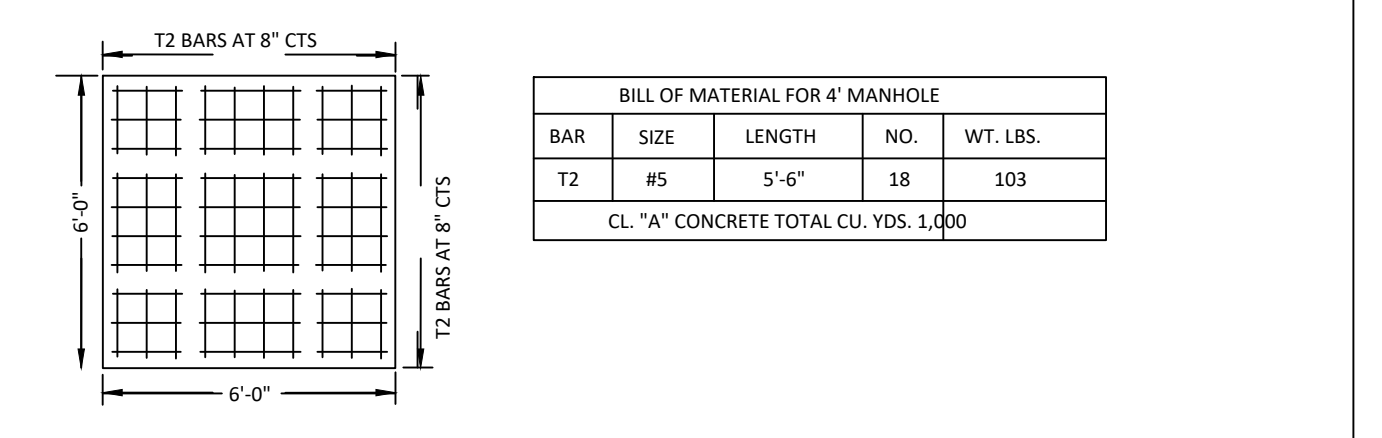
NOTES:
 1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT, THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
 2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO TO BE PLACED BETWEEN THE SADDLE AND MAIN.
 3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNER'S REPRESENTATIVE.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD PRECAST SANITARY SEWER MANHOLE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-20	Y.C.A. RRH	12-31-92 3-30-00	ABB D.H.L.	2-21-05 6-16-08	



NOTES:
 1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT, THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
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CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-20A	Wkd	09-14			



BILL OF MATERIAL FOR 4' MANHOLE					
BAR	SIZE	LENGTH	NO.	WT. LBS.	
T2	#5	5'-6"	18	103	
CL "A" CONCRETE TOTAL CU. YDS. 1.000					



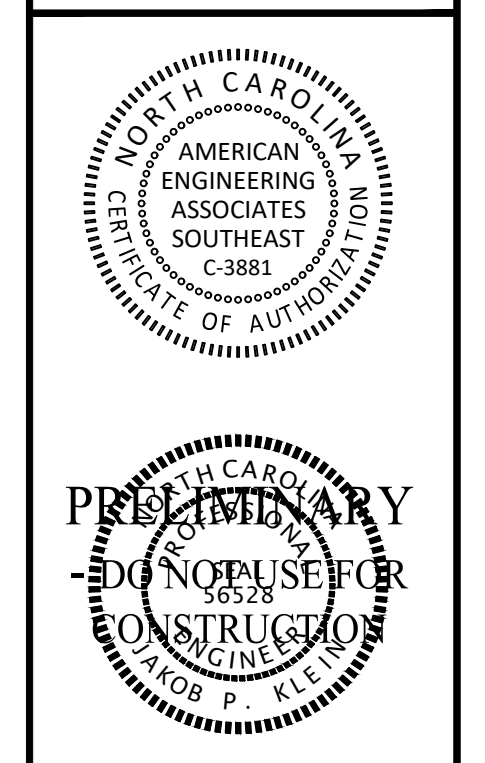
BILL OF MATERIAL FOR 4' MANHOLE					
BAR	SIZE	LENGTH	NO.	WT. LBS.	
T1	#5	6'-6"	20	136	
CL "A" CONCRETE TOTAL CU. YDS. 1.361					

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
EXTENDED BASE OR CAST-IN-PLACE REINFORCED CONCRETE BASE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-21	RRH	3-1-87 3-30-00	ABB	2-9-05	

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 811 or 1-800-432-4949
 Remote Ticket Entry
<http://nc811.org/remoteticketentry.htm>



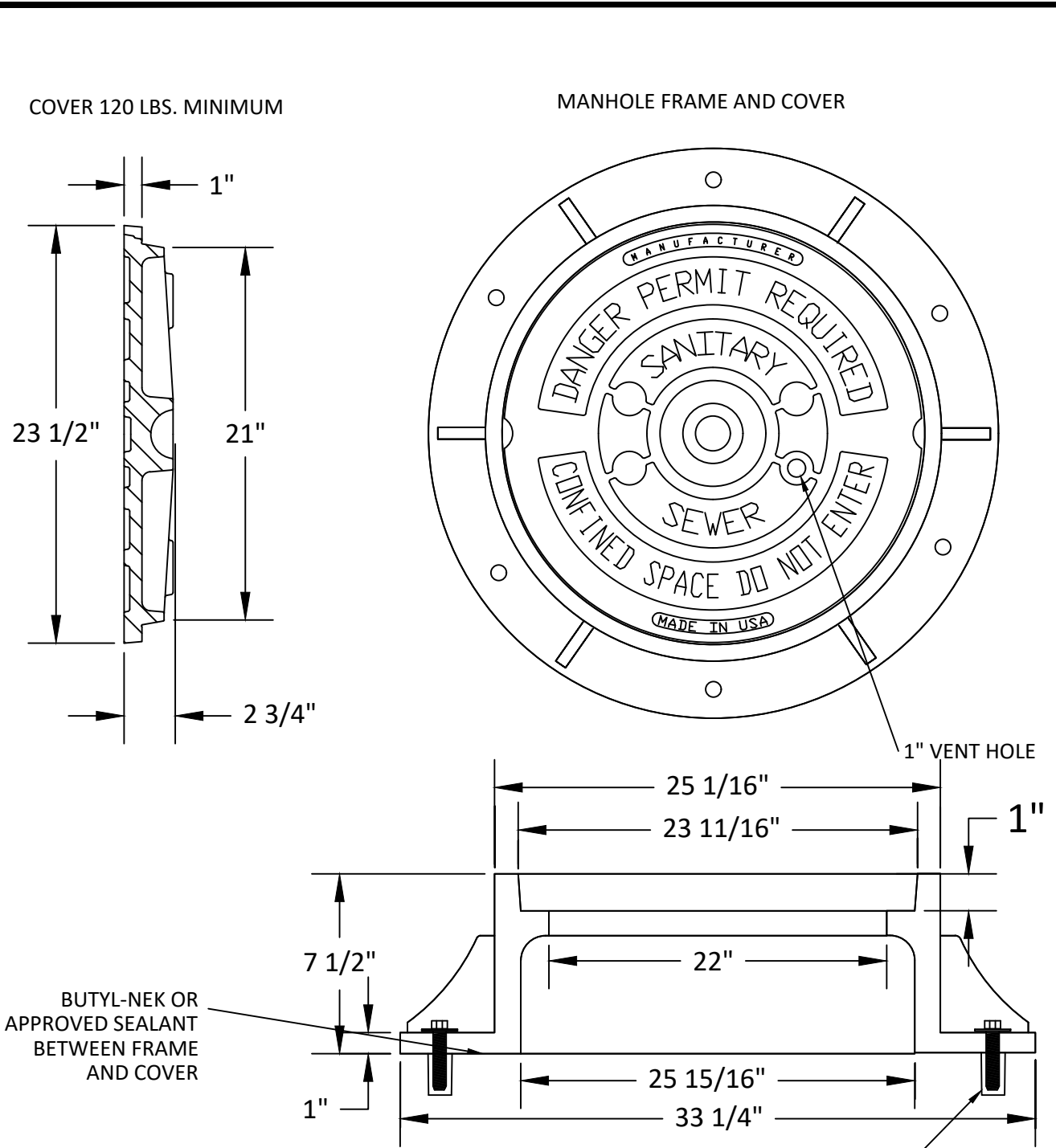
NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE
 THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
REINFORCED CONCRETE BASE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-21	RRH	3-1-87 3-30-00	ABB	2-9-05	

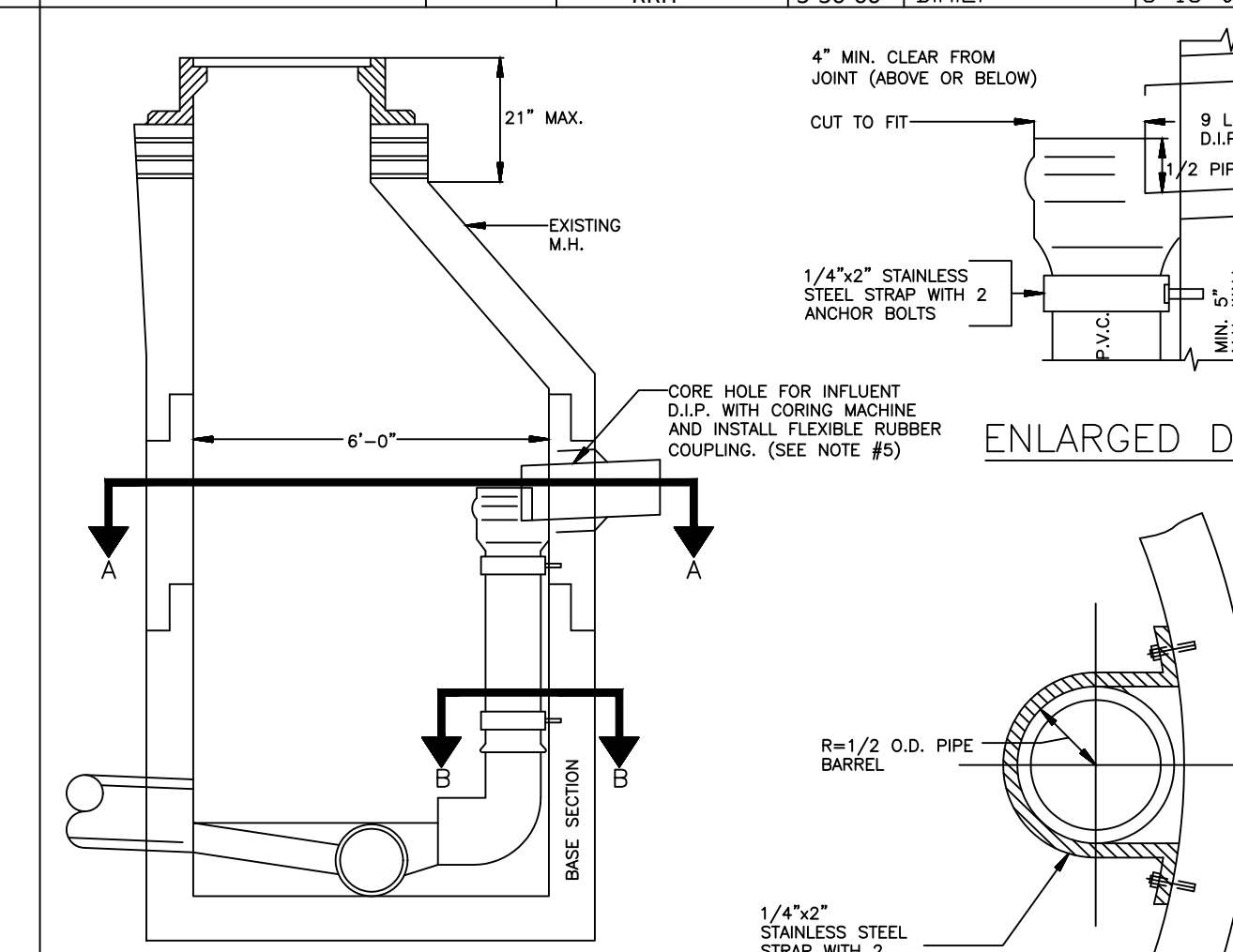
UTILITY DETAILS
 SHEET NO.: **CD9**



NOTES:
 1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
 2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
 3) COVER SHALL WEIGH A MIN. OF 120 LBS.
 4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

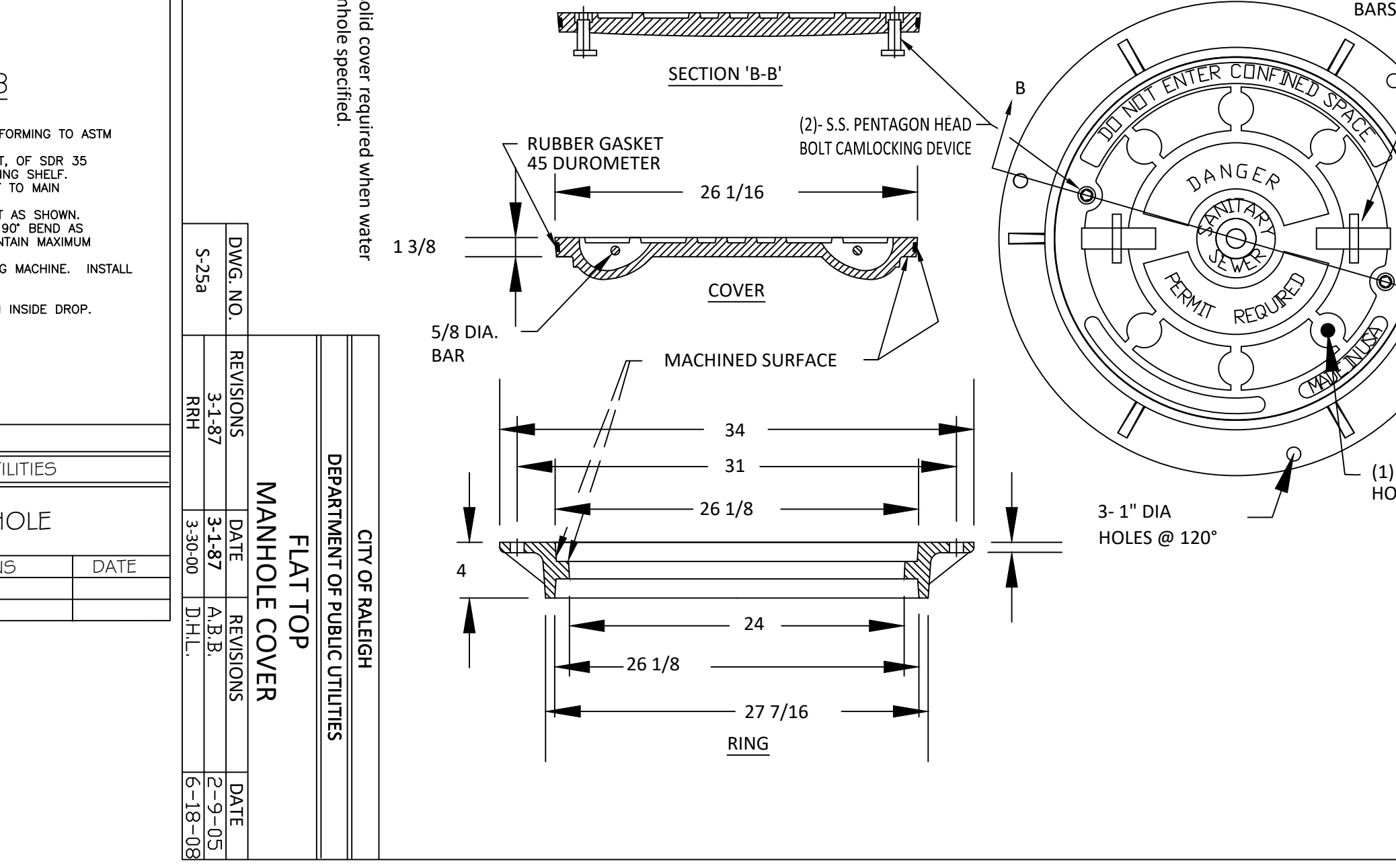
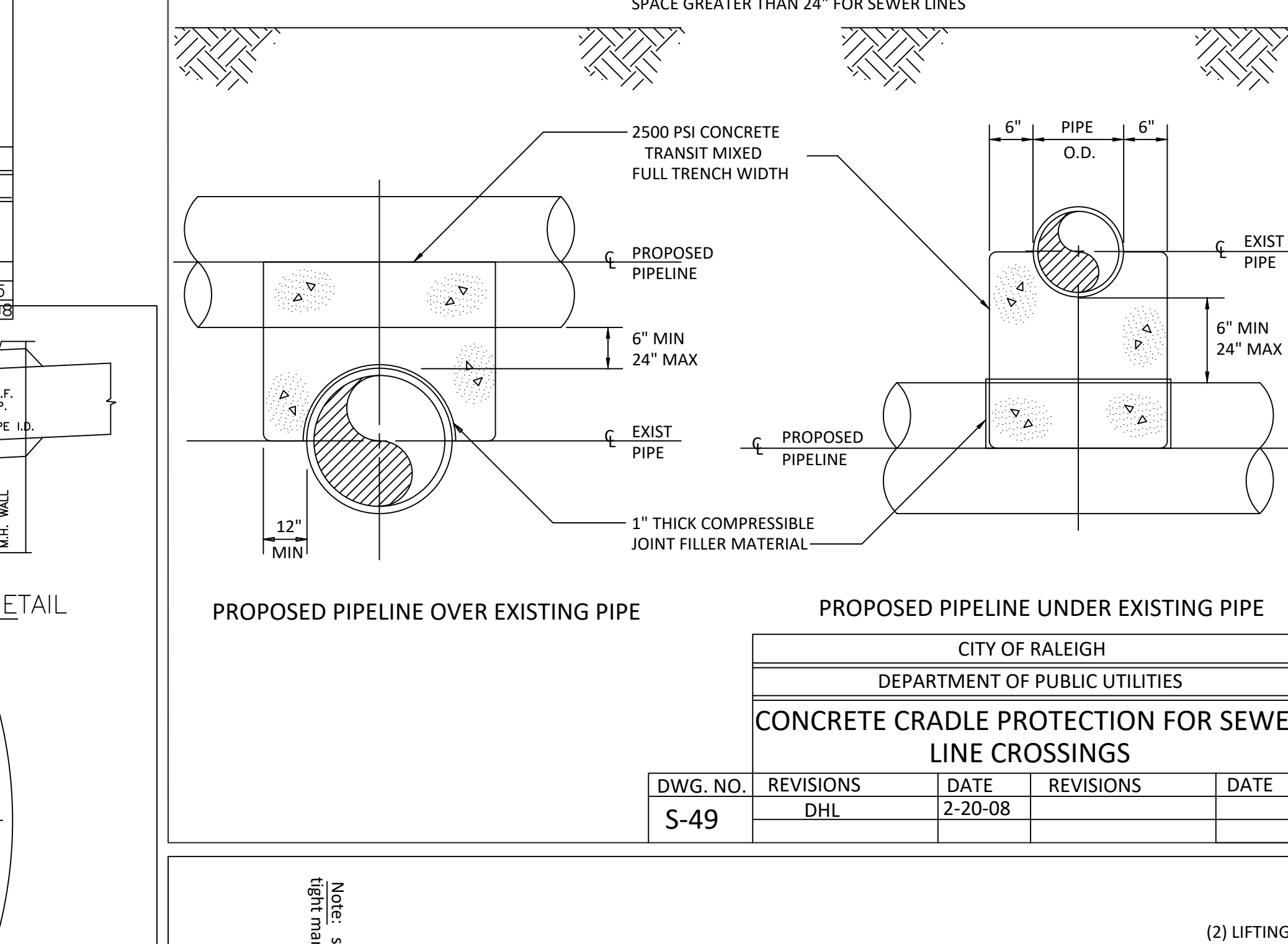
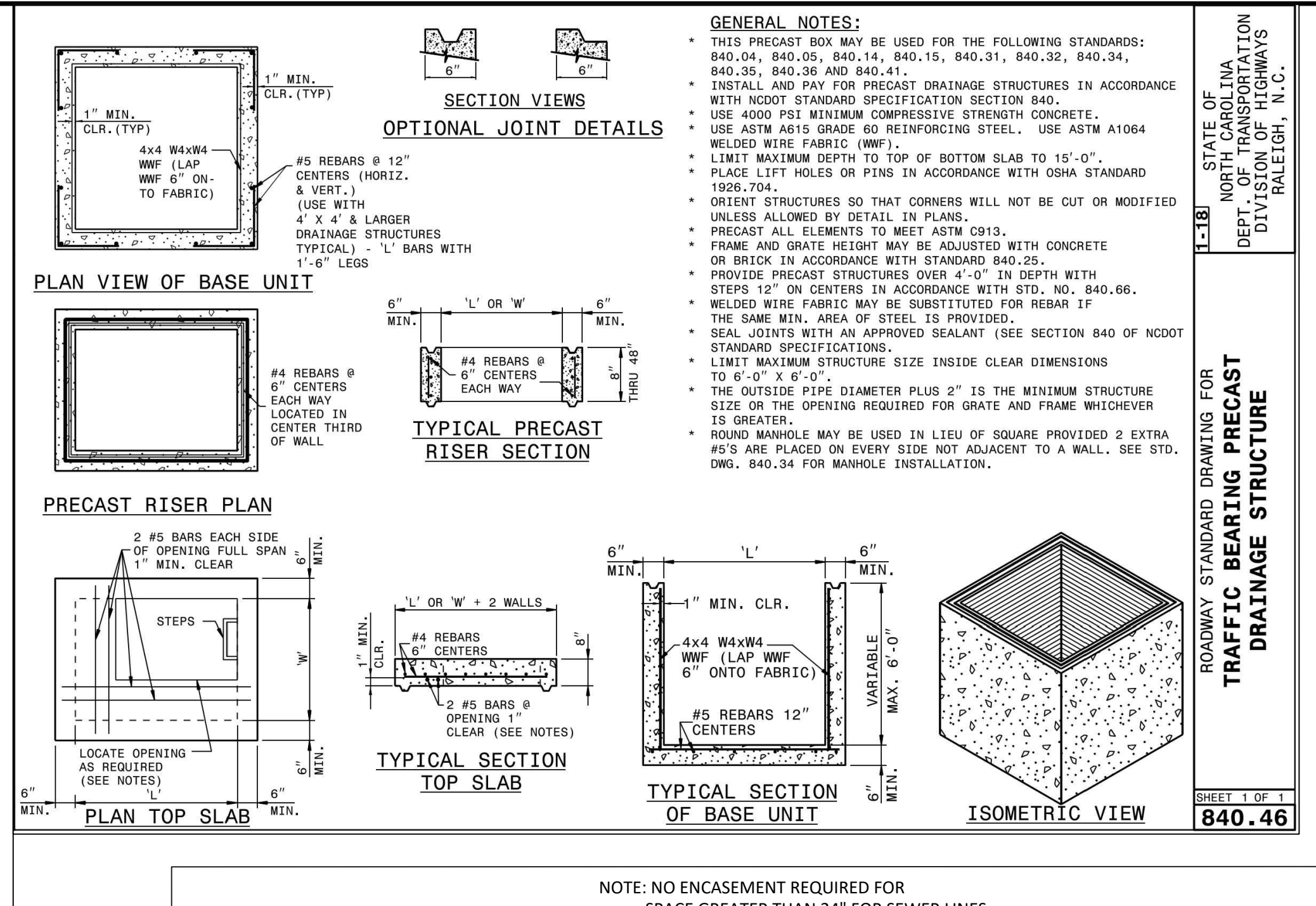
5/8"x3" LAGSHIELD IN HOLE DRILLED INTO CONE OR RING WITH ANCHOR SUNK TO DESIGN DEPTH, AND 3/8"x3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD MANHOLE COVER			
DWG. NO.	REVISIONS	DATE	DATE
S-25	RRH	3-30-00	6-18-08

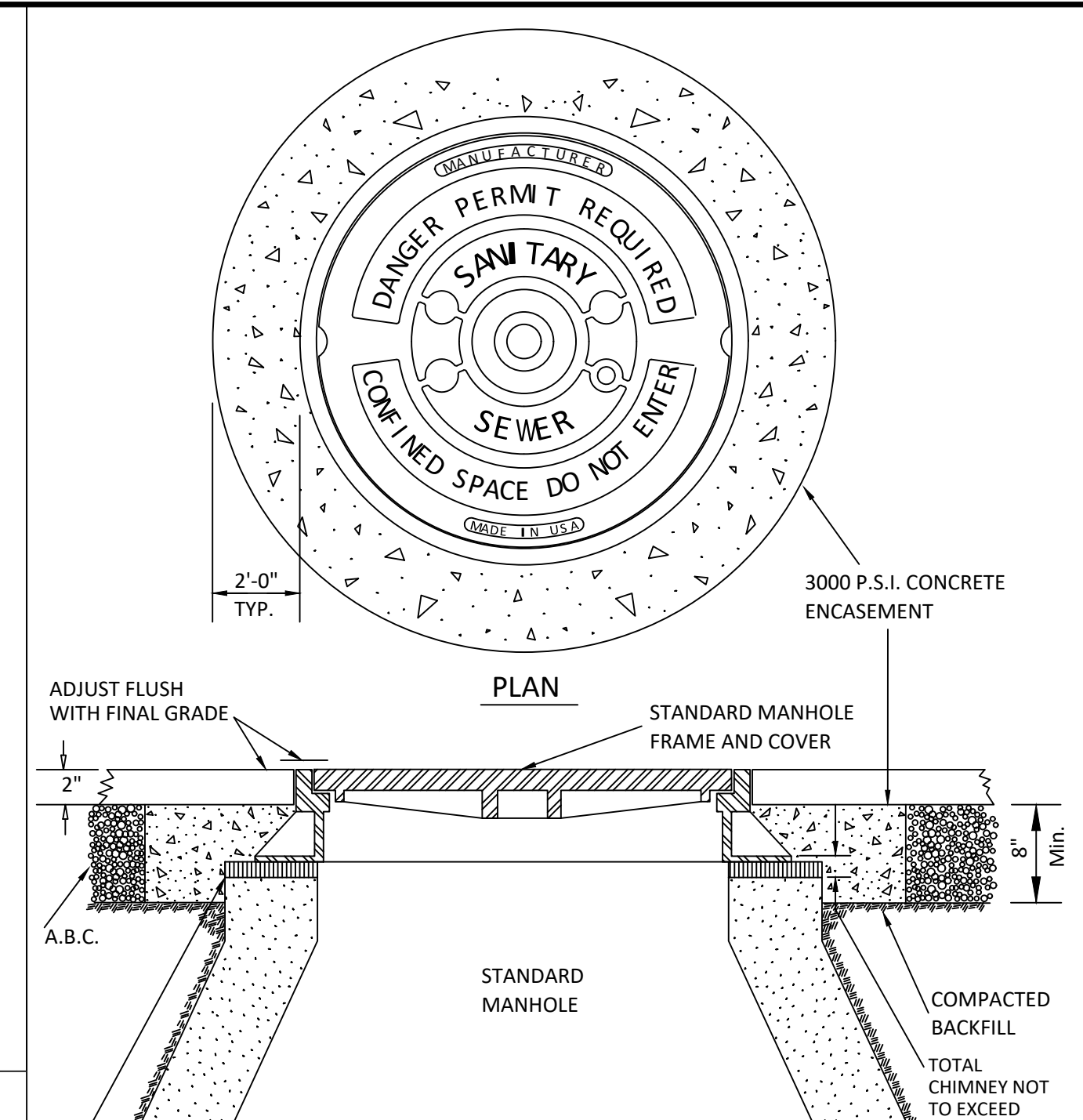


CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
INSIDE DROP MANHOLE			
DWG. NO.	REVISIONS	DATE	DATE
S-53	MAB	11-6-13	

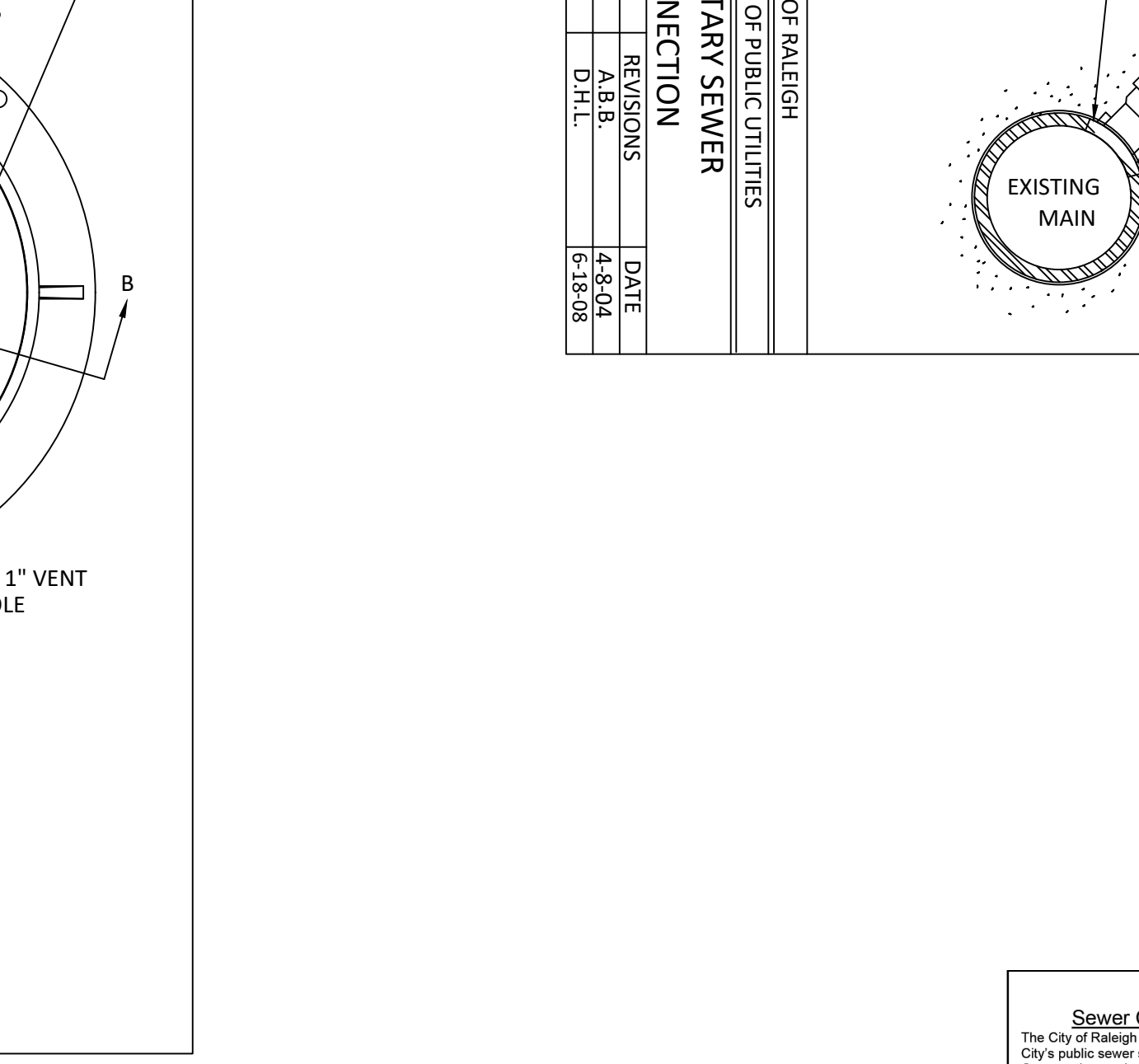
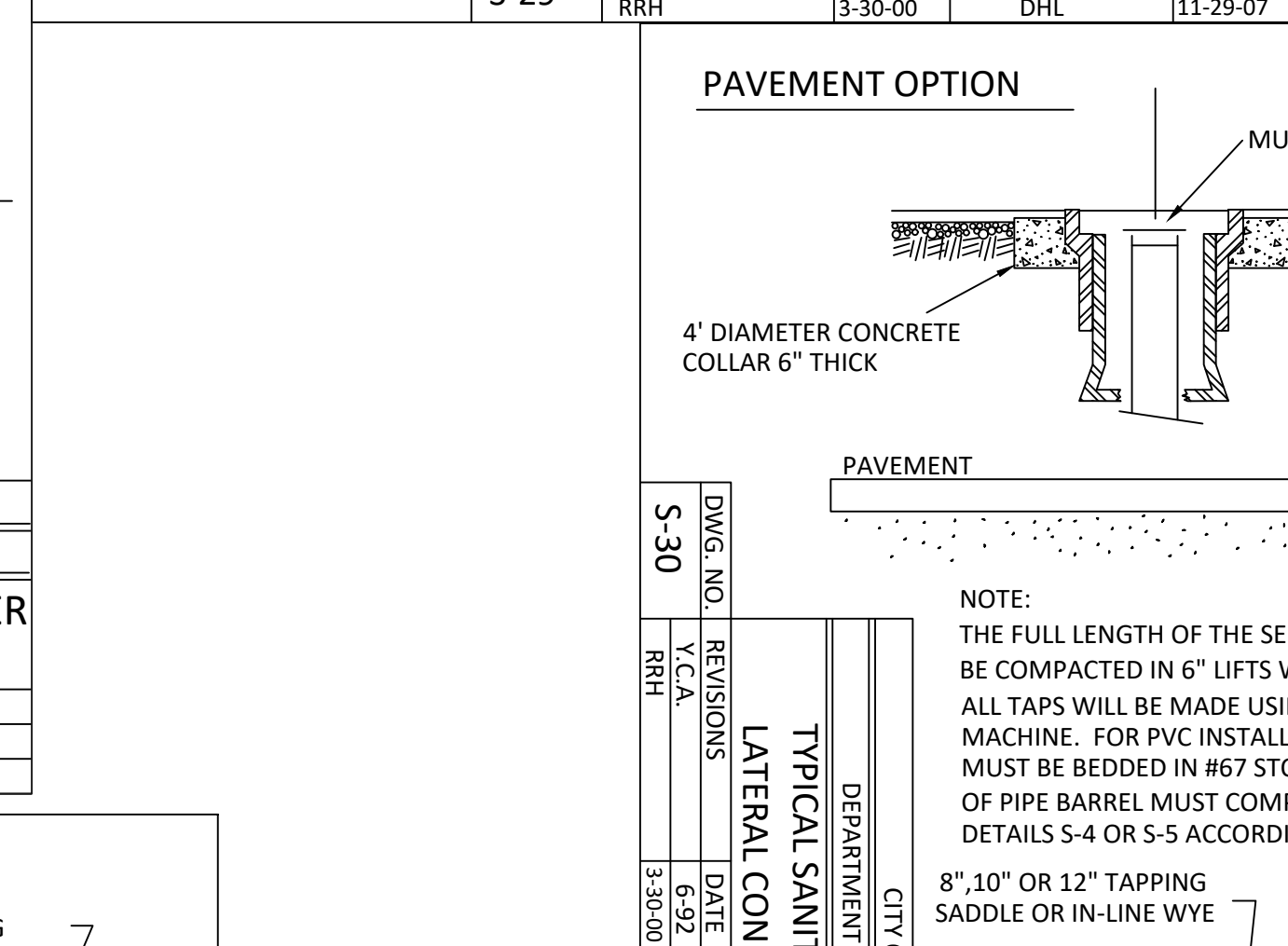
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
MANHOLE COVER FLAT TOP			
DWG. NO.	REVISIONS	DATE	DATE
S-28	RRH	3-1-87	2-9-05
		3-1-87	A.B.B.
		3-30-00	D.H.L.
		6-18-08	



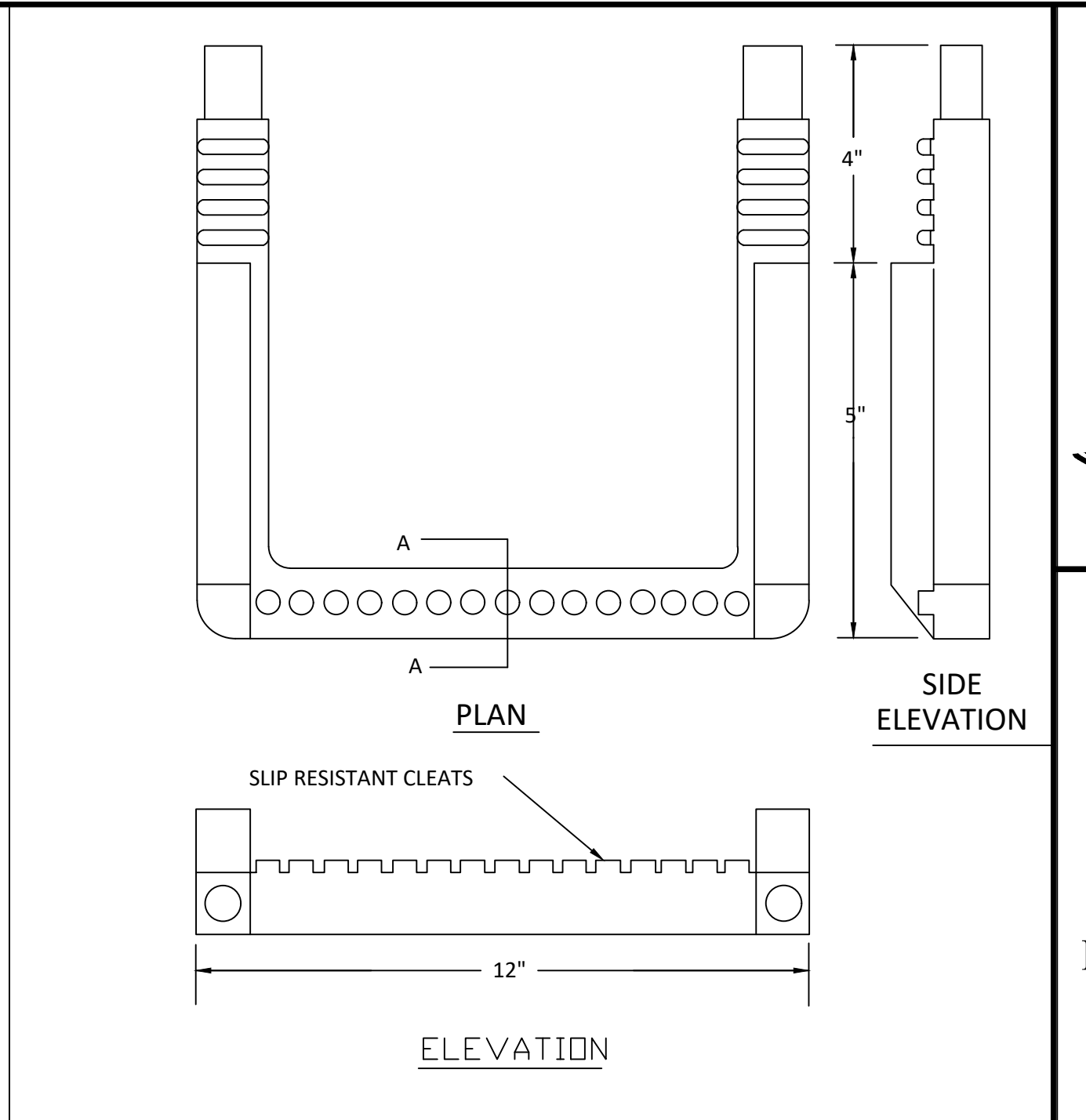
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
MANHOLE COVER FLAT TOP			
DWG. NO.	REVISIONS	DATE	DATE
S-28	RRH	3-1-87	2-9-05
		3-1-87	A.B.B.
		3-30-00	D.H.L.
		6-18-08	



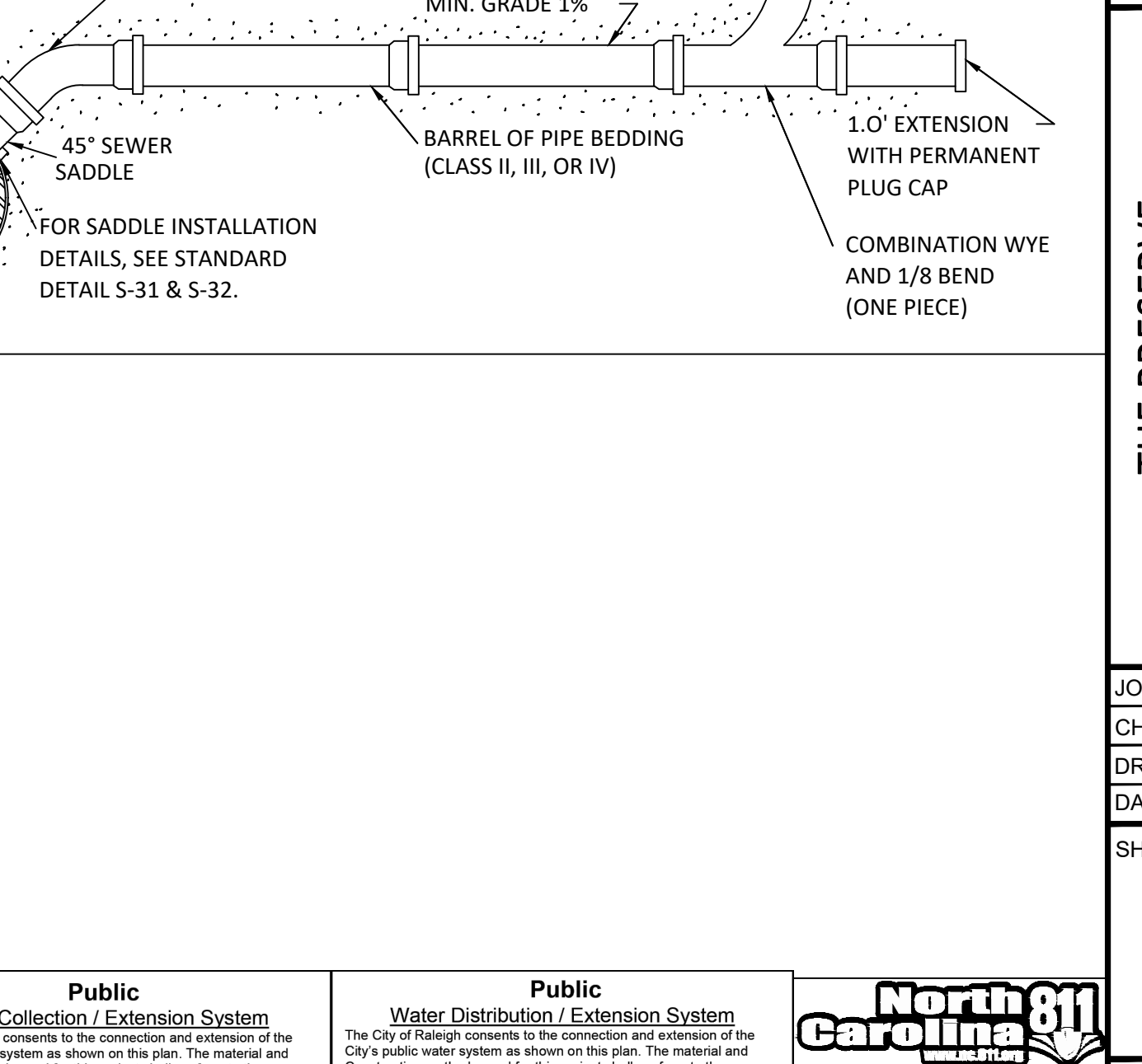
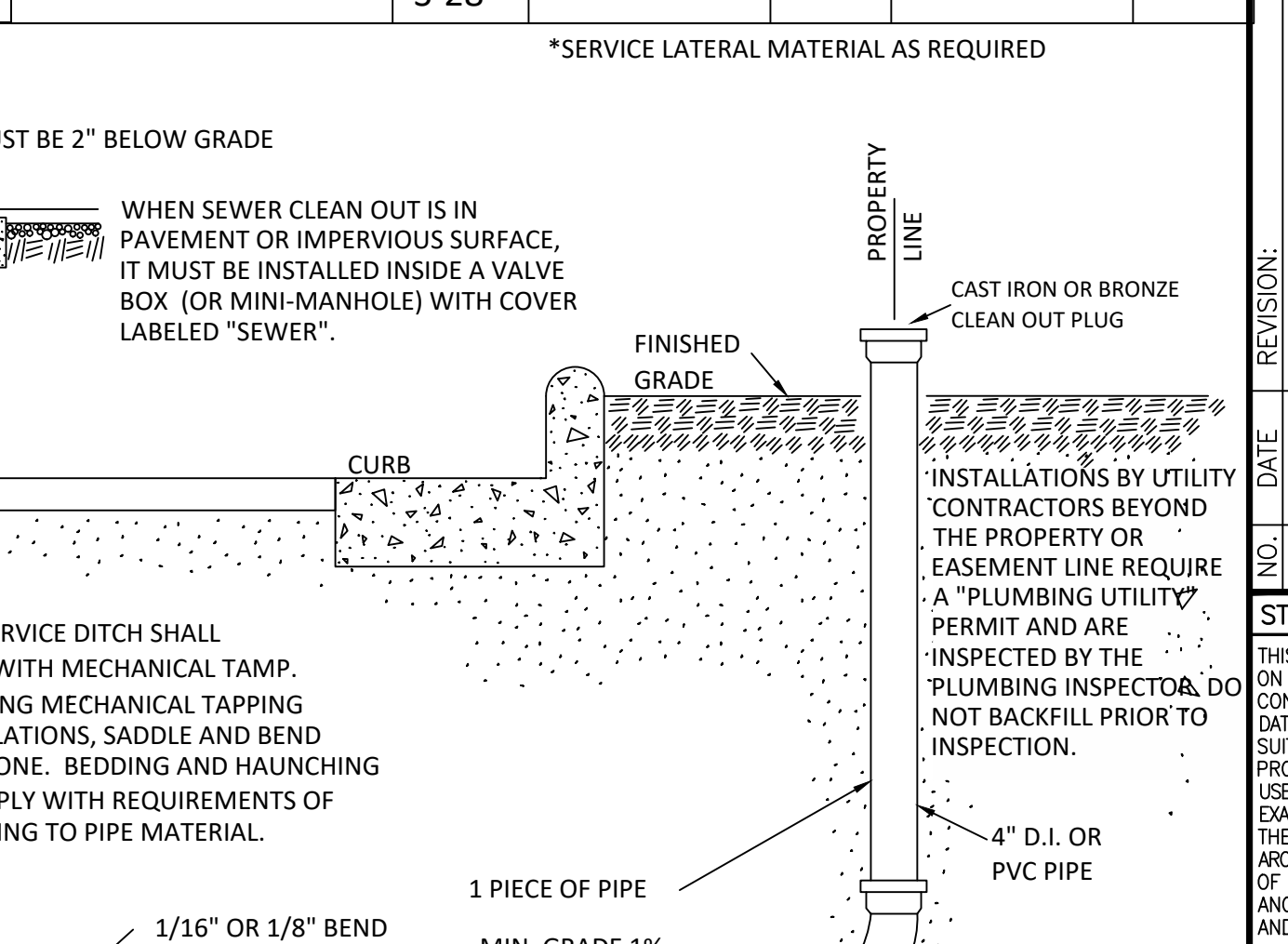
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN PAVED SURFACES			
DWG. NO.	REVISIONS	DATE	DATE
S-29	Y.C.A. / RRH	12-31-91 / 3-30-00	9-20-04 / 11-29-07



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TYPICAL SANITARY SEWER LATERAL CONNECTION			
DWG. NO.	REVISIONS	DATE	DATE
S-30	K.S.A. / D.H.L.	6-22-92 / 3-30-00	4-8-04 / 6-18-08



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD SLIP RESISTANT MANHOLE STEP DETAIL			
DWG. NO.	REVISIONS	DATE	DATE
S-28	RRH	3-30-00	



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TYPICAL SANITARY SEWER LATERAL CONNECTION			
DWG. NO.	REVISIONS	DATE	DATE
S-30	K.S.A. / D.H.L.	6-22-92 / 3-30-00	4-8-04 / 6-18-08

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840-66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840-05.
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. 840-45 OR 840-46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.
 CONSTRUCT WITH PIPE DOWNS MATCHING.
 SEE STANDARD DRAWING 840-25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
 INSTALL STONE DRAINS OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR MESH, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1
840.14

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE	
PIPE DIA.	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	FT. HT.	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015
15"	3'-0"	2'-0"	2'-3"	0.448	0.033	0.038	
18"	3'-0"	2'-0"	2'-6"	0.703	0.033	0.049	
24"	3'-0"	2'-0"	3'-0"	1.014	0.059	0.085	
30"	3'-0"	2'-0"	3'-6"	1.222	0.222	0.092	0.127

GENERAL NOTES:
 CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".
 PLACE 2 #6 "Y" BARS IN THE TOP OF ALL ENDWALL FOR PIPE CULVERTS 42" AND OVER WITH A MINIMUM OF 3" COVER AND A LENGTH OF 6" LESS THAN ENDWALL LENGTH.
 CONSTRUCT BOTTOM SLAB WITH FORMS.
 DO NOT INTERPRET WALL THICKNESS (T) SHOWN FOR THE THICKNESS ACCEPTABLE, BUT IS USED IN COMPUTING ENDWALL QUANTITIES.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE, PLACE BAR "X" DOWELS IN THE BASE AS SHOWN ON PLANS. SPACE BARS APPROXIMATELY ON 12" CENTERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE AND POUR THE BASE SEPARATELY LEAVE THE POUR ROUGH.
 USE CLASS "B" CONCRETE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS 15" THRU 48" PIPE - 90° SKEW

SHEET 1 OF 3
838.01

DIMENSIONS AND CONCRETE QUANTITIES USING CONCRETE PIPE											
COMMON DIMENSIONS											
D	H	B	G	T	S	L	VP ¹	M	L	VP ²	VP ³
15"	3'-3"	1'-8"	2'-9"	23/4"	9 1/2"	5'-6"	0.7	2'-2"	7'-8"	1.0	
18"	3'-7"	1'-10"	3'-2"	2 1/2"	10"	6'-4"	1.0	2'-7"	8'-11"	1.3	
24"	4'-2"	2'-11"	4'-0"	3"	10"	8'-0"	1.3	3'-10"	11'-5"	2.0	
30"	5'-0"	2'-6"	4'-7"	4 1/4"	11 1/2"	9'-2"	2.3	4'-3"	13'-5"	3.1	
36"	5'-8"	2'-8"	5'-4"	4 3/4"	11 1/2"	11'-0"	3.4	5'-0"	16'-0"	4.5	
42"	6'-2"	3'-1"	6'-4"	5 1/4"	11 1/2"	12'-8"	4.5	5'-10"	18'-6"	6.0	
48"	6'-8"	3'-5"	7'-2"	5 3/4"	11 1/2"	14'-4"	6.0	6'-8"	21'-0"	8.0	

GENERAL NOTES:
 CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".
 PLACE 2 #6 "Y" BARS IN THE TOP OF ALL ENDWALL FOR PIPE CULVERTS 42" AND OVER WITH A MINIMUM OF 3" COVER AND A LENGTH OF 6" LESS THAN ENDWALL LENGTH.
 CONSTRUCT BOTTOM SLAB WITH FORMS.
 DO NOT INTERPRET WALL THICKNESS (T) SHOWN FOR THE THICKNESS ACCEPTABLE, BUT IS USED IN COMPUTING ENDWALL QUANTITIES.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE, PLACE BAR "X" DOWELS IN THE BASE AS SHOWN ON PLANS. SPACE BARS APPROXIMATELY ON 12" CENTERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE AND POUR THE BASE SEPARATELY LEAVE THE POUR ROUGH.
 USE CLASS "B" CONCRETE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS 15" THRU 48" PIPE - 90° SKEW

SHEET 3 OF 3
838.01

GENERAL NOTES:
 CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".
 PLACE 2 #6 "Y" BARS IN THE TOP OF ALL ENDWALL FOR PIPE CULVERTS 42" AND OVER WITH A MINIMUM OF 3" COVER AND A LENGTH OF 6" LESS THAN ENDWALL LENGTH.
 CONSTRUCT BOTTOM SLAB WITH FORMS.
 DO NOT INTERPRET WALL THICKNESS (T) SHOWN FOR THE THICKNESS ACCEPTABLE, BUT IS USED IN COMPUTING ENDWALL QUANTITIES.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE, PLACE BAR "X" DOWELS IN THE BASE AS SHOWN ON PLANS. SPACE BARS APPROXIMATELY ON 12" CENTERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 WHEN THE CONTRACTOR ELECTS TO USE A CONSTRUCTION JOINT AT THE BOTTOM OF THE PIPE AND POUR THE BASE SEPARATELY LEAVE THE POUR ROUGH.
 USE CLASS "B" CONCRETE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS 15" THRU 48" PIPE - 90° SKEW

SHEET 3 OF 3
838.01

GENERAL NOTES:
 CHAMFER ALL EXPOSED CORNERS 1".
 ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO CENTERS OF BARS.
 PLACE A STONE DRAIN CONSISTING OF ONE (1) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A POROUS FABRIC AT EACH WEEP HOLE. PLACE SUBDRAIN FINE AGGREGATE BENEATH, AROUND AND OVER THE STONE DRAIN SO THE STONE DRAIN IS COMPLETELY COVERED BY A LAYER OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT THICK. WHERE THERE IS MORE THAN ONE WEEP HOLE IN A WING WALL, PLACE A HORIZONTAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION TO CONNECT ALL STONE DRAINS. PLACE A VERTICAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION AT EACH WEEP HOLE TO AN ELEVATION OF TWO (2) FEET BELOW THE SURFACE OF THE EMBANKMENT.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR REINFORCED CONCRETE ENDWALL STANDARD DRAWINGS 838.21 THRU 838.40

SHEET 1 OF 1
838.45

GENERAL NOTES:
 MORTAR JOINTS 1/2" +/- 1/8" THICK.
 USE CLASS "B" CONCRETE THROUGHOUT.
 USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
 USE #4 BAR DOWELS AT 12" CENTERS.
 REDUCT FOR PIPE(S) FROM TOTAL CU. YOD. OF BRICK MASONRY.
 PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840-66.
 USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840-05.
 FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STD. 840-45 OR 840-46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.
 CONSTRUCT WITH PIPE DOWNS MATCHING.
 SEE STANDARD DRAWING 840-25 FOR ATTACHMENT OF FRAMES AND GRATES.
 DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1
840.15

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONCRETE		CUBIC YARDS BRICK MASONRY		DEDUCTIONS FOR ONE PIPE	
PIPE DIA.	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	FT. HT.	WALL	FOOT HT.	C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032	
15"	3'-0"	2'-0"	2'-3"	0.268	0.313	0.600	0.031	0.047	
18"	3'-0"	2'-0"	2'-6"	0.268	0.313	0.678	0.044	0.065	
24"	3'-0"	2'-0"	3'-0"	0.268	0.313	0.835	0.078	0.113	
30"	3'-0"	2'-0"	3'-6"	0.268	0.313	0.991	0.122	0.170	

GENERAL NOTES:
 THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.
 INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
 USE 4000 PSI CONCRETE.
 PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
 PLACE LIFT HOLES OR PTNS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
 PIPE TO BE GRouted INTO HEADWALL AT JOB SITE BY CONTRACTOR.
 ALL ELEMENTS PRECAST TO MEET ASTM C913.
 WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
 CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".
 NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS. THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST CONCRETE ENDWALL FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 1
838.80

ENDWALL DIMENSIONS							
PIPE DIA.	BAR SIZE	MIN./MAX. H1 (FT.)	MIN./MAX. H2 (FT.)	MIN./MAX. D (FT.)	MIN./MAX. W1	MIN./MAX. W2	
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00	
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75	
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75	
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25	
2.5	#5 @ 8"	2.50/3.00	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50	
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75	
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25	
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25	
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75	
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75	
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75	
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75	

GENERAL NOTES:
 USE CLASS "A" CONCRETE.
 CHAMFER ALL EXPOSED CORNERS 1".
 ALL DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING STEEL ARE TO CENTERS OF BARS.
 PLACE A STONE DRAIN CONSISTING OF ONE (1) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A POROUS FABRIC AT EACH WEEP HOLE. PLACE SUBDRAIN FINE AGGREGATE BENEATH, AROUND AND OVER THE STONE DRAIN SO THE STONE DRAIN IS COMPLETELY COVERED BY A LAYER OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT THICK. WHERE THERE IS MORE THAN ONE WEEP HOLE IN A WING WALL, PLACE A HORIZONTAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION TO CONNECT ALL STONE DRAINS. PLACE A VERTICAL DRAIN OF SUBDRAIN FINE AGGREGATE AT LEAST ONE (1) FOOT SQUARE IN CROSS SECTION AT EACH WEEP HOLE TO AN ELEVATION OF TWO (2) FEET BELOW THE SURFACE OF THE EMBANKMENT.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR REINFORCED CONCRETE ENDWALL STANDARD DRAWINGS 838.21 THRU 838.40

SHEET 1 OF 1
838.45

GENERAL NOTES:
 THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST CONCRETE ENDWALL FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 1
838.80

AMERICAN Engineering
 American Engineering Associates - Southeast, P.A.
 4020 Westchase Boulevard, Suite 450
 Raleigh, NC 27607
 919-469-1101

PROFESSIONAL ENGINEER
 NORTH CAROLINA
 LICENSE NO. 56528
 BOB P. KLEIN

NO.	DATE	REVISION
1	02/23/2025	CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

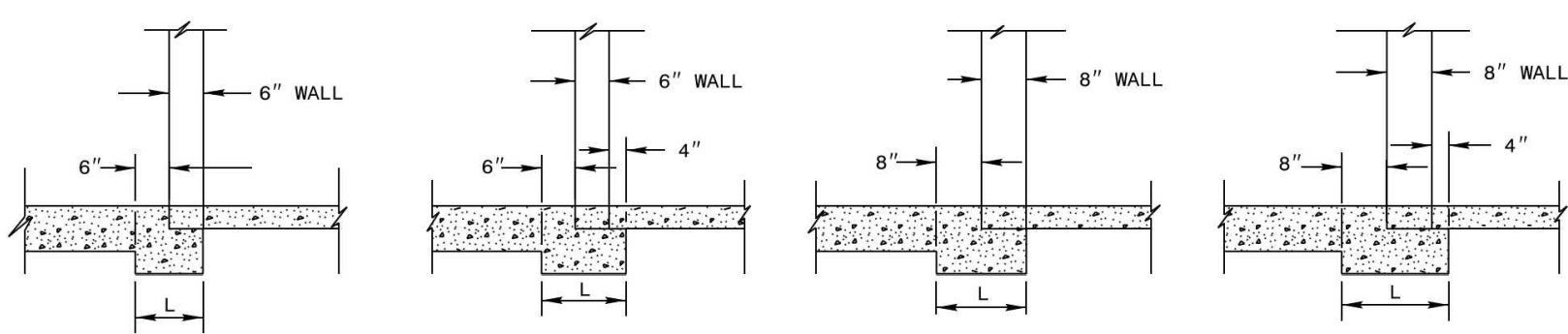
THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025

SHEET TITLE:
DRAINAGE DETAILS

SHEET NO.:
CD11

North 811
 *** 3 Days Before Digging ***
 North Carolina 811
 811 or 1-800-432-4949
 Remote Ticket Entry
 http://nc811.org/remoteticketentry.htm



PART SECTION 6" WALL
PART SECTION 6" WALL WITH 4" LIP
PART SECTION 8" WALL
PART SECTION 8" WALL WITH 4" LIP

TABLES OF QUANTITIES FOR PIPE SET IN PAD

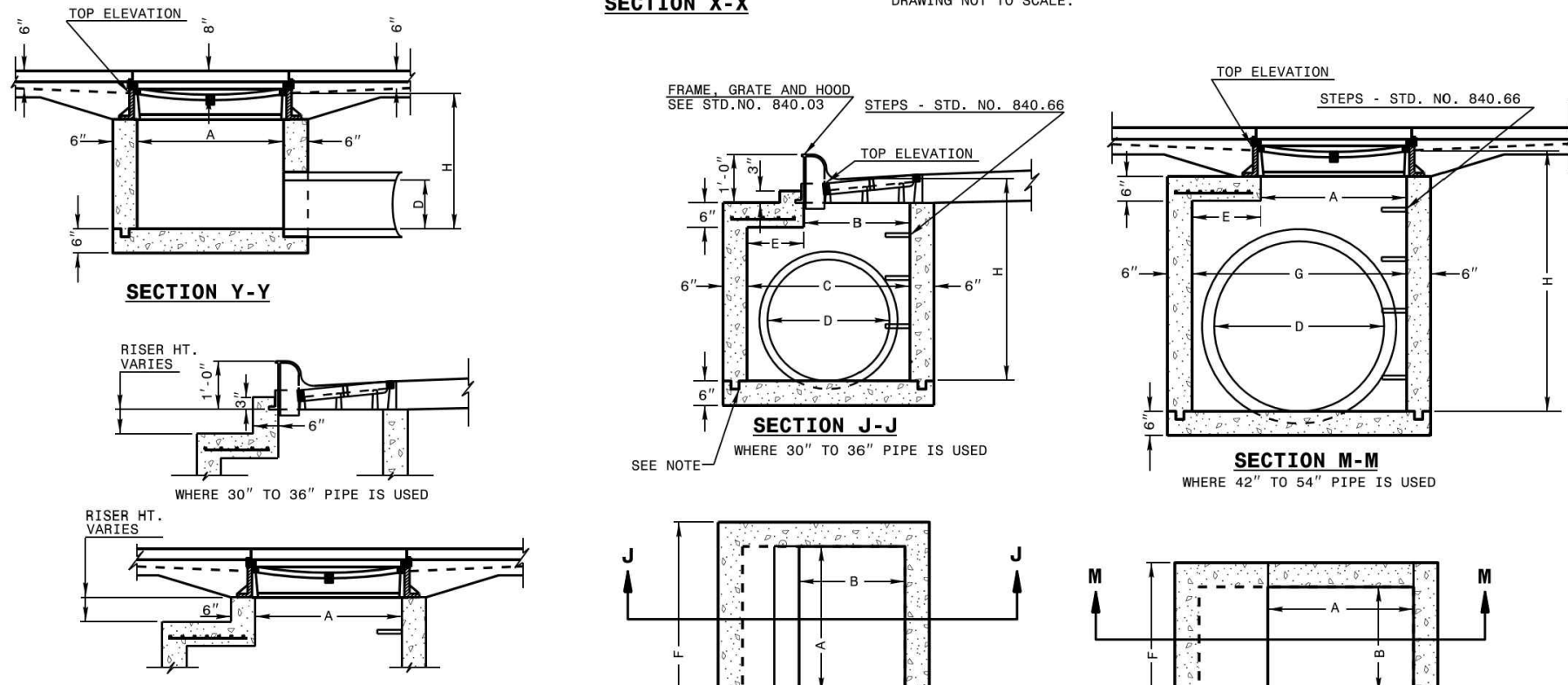
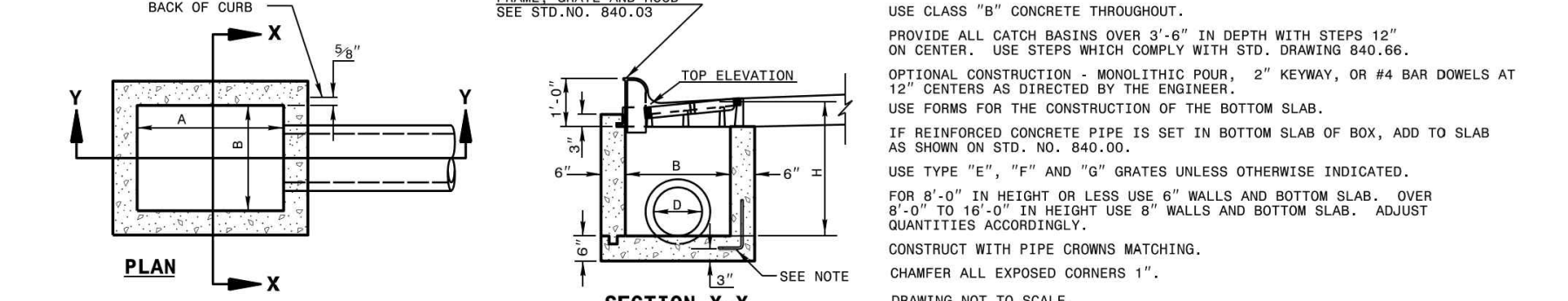
PIPE D	DIMENSIONS			C.Y. QUANTITIES WHEN L IS IS		
	"W"	"W1"	"T"	12"	16"	20"
12"	1'-1 7/8"	0'-7 7/8"	0'-2"	0.005	0.007	0.008
15"	1'-3 5/8"	0'-9 1/8"	0'-2"	0.006	0.008	0.010
18"	1'-5 1/4"	0'-10 5/8"	0'-2"	0.007	0.010	0.012
24"	1'-8 3/4"	0'-13 1/8"	0'-3"	0.011	0.014	0.018
30"	2'-0 1/4"	1'-2 3/4"	0'-3 1/2"	0.014	0.018	0.023
36"	2'-3 3/8"	1'-5 9/8"	0'-4"	0.017	0.023	0.025
42"	2'-7 1/8"	1'-7"	0'-5 1/4"	0.025	0.030	0.038
48"	2'-10 5/8"	1'-8 3/4"	0'-6 3/4"	0.028	0.038	0.047
54"	3'-2 1/8"	1'-10 1/2"	0'-8 1/4"	0.035	0.047	0.058
60"	3'-5 5/8"	2'-0 1/4"	0'-9 3/4"	0.042	0.056	0.071
66"	3'-9"	2'-2 1/4"	0'-7 1/4"	0.050	0.067	0.084
72"	4'-0 1/2"	2'-3 3/4"	0'-7 3/4"	0.059	0.078	0.098

GENERAL NOTES:
USE THIS STANDARD WITH ALL DRAINAGE STRUCTURES USING REINFORCED CONCRETE PIPE SET IN BASE SLAB.

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE BASE PAD FOR DRAINAGE STRUCTURES

SHEET 1 OF 1
840.00



GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.56.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER QUANTITIES ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

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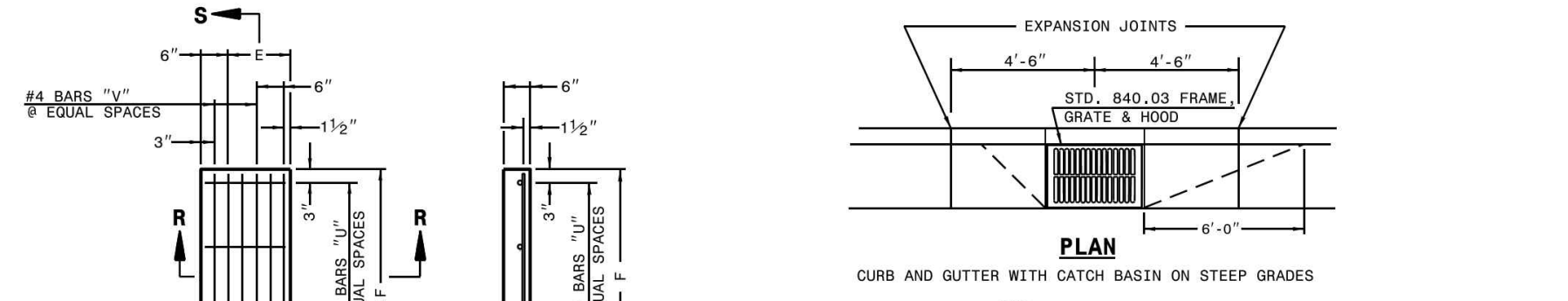
ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 1 OF 2
840.02

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ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 2 OF 2
840.02



MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO REBAR)

PIPE	DIMENSIONS OF BOX AND PIPE			COVER DIMENSION			REINFORCING			TOTAL C.Y. CONCR. IN BOX	DEDUCTIONS ONE PIPE
	SPAN	WIDTH	HEIGHT	MIN.	MAX.	MIN.	NO.	NO.	NO.		
12"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
15"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
18"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
24"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
30"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
36"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
42"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
48"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235
54"	3'-0"	2'-2"	2'-0"	2'-0"	2'-0"	2'-0"	NO.	NO.	NO.	0.235	0.235

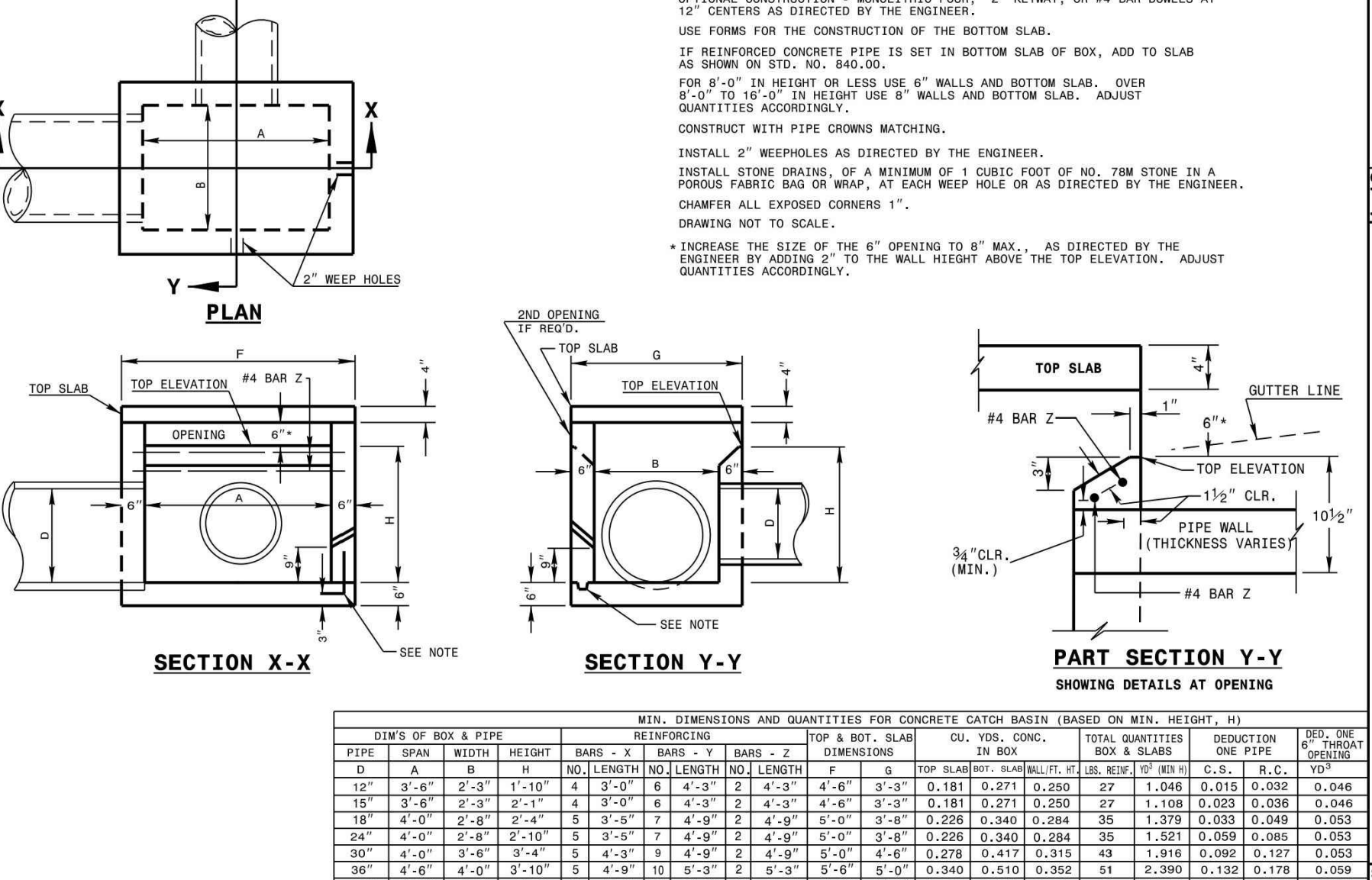
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

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ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2
840.03

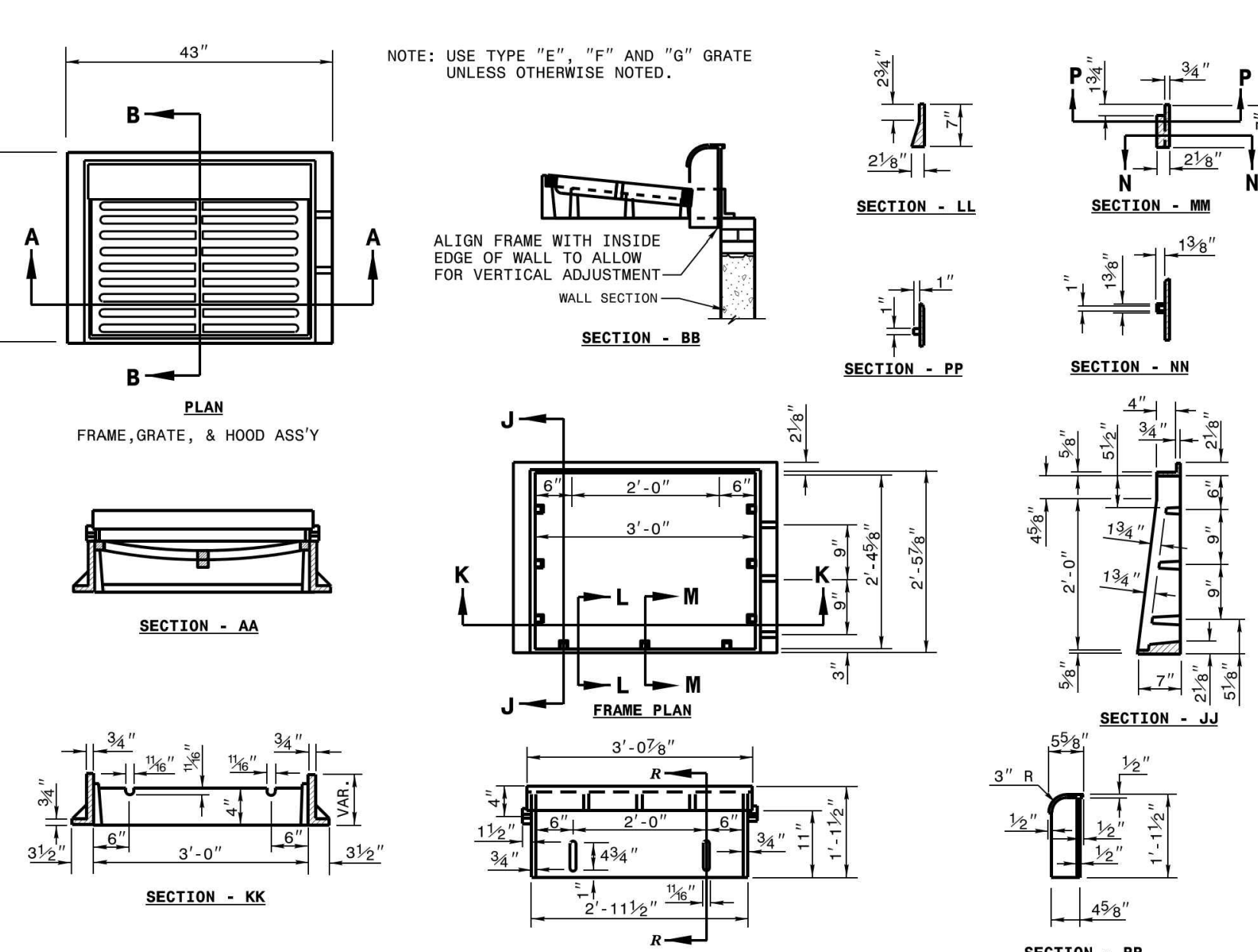
GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.56.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER QUANTITIES ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE GRATES, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 7MM STONE IN A PORTLAND CEMENT MORTAR, AT EACH WEEPHOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.
* INCREASE THE SIZE OF THE OPENING TO 8" MAX., AS DIRECTED BY THE ENGINEER BY ADDING TO THE WALL HEIGHT ABOVE THE TOP ELEVATION. ADJUST QUANTITIES ACCORDINGLY.



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ROADWAY STANDARD DRAWING FOR
CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 1 OF 2
840.04



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ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

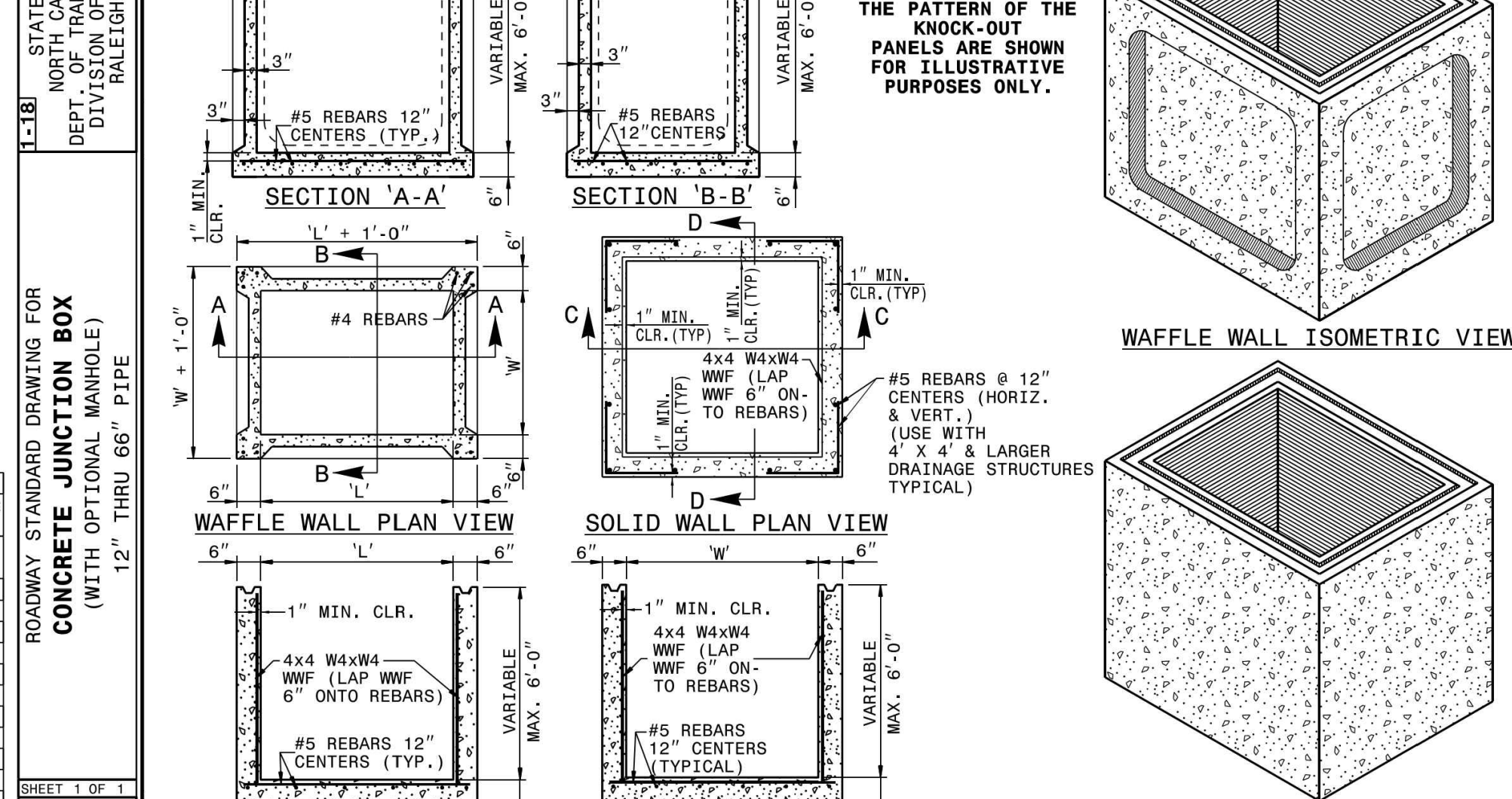
SHEET 1 OF 2
840.03

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

SHEET 1 OF 1
840.31

GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1".
USE CLASS "B" CONCRETE THROUGHOUT.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.56.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB).
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 15 FEET.



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ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE (SOLID AND WAFLE WALL)

SHEET 1 OF 2
840.45

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ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2
840.04

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ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE (GENERAL NOTES AND DETAILS)

SHEET 2 OF 2
840.45

GENERAL NOTES:
THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.13, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
DO NOT PLACE PRECAST DRAINAGE STRUCTURES UNDER TRAFFIC OR WHERE TRAFFIC WILL BE DETOURED. USE 4000 PSI CONCRETE.
PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A1064.
LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB FOR WAFFLE WALL STRUCTURE TO 10'-0"; LIMIT SOLID WALL STRUCTURE TO 15'-0".
PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
CUT OR FORM OPENINGS FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. ORIENT WAFFLE WALL STRUCTURES SO THAT PIPES ENTER THROUGH THE KNOCKOUT/WAFFLE PANELS ONLY. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES IF A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE.
ALL ELEMENTS PRECAST TO MEET ASTM C913.
FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS AS DIRECTED BY THE ENGINEER.
WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-198, TYPE B - BUTYL RUBBER.
LIMIT MAXIMUM STRUCTURE SIZE TO INSIDE CLEAR DIMENSIONS OF 5'-0" X 5'-0".
THE OUTSIDE PIPE DIAMETER PLUS 2" OR THE OPENING REQUIRED FOR FRAME AND GRATE IS THE MINIMUM STRUCTURE SIZE WHICHEVER IS GREATER.
USE MANHOLE FRAME AND COVER AS INDICATED ON THE PLANS. REINFORCE OPENING AS SHOWN ON THIS SHEET.

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ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 1 OF 2
840.04

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2
840.04

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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2
840.04

STATE OF NORTH CAROLINA
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ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2
840.04

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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
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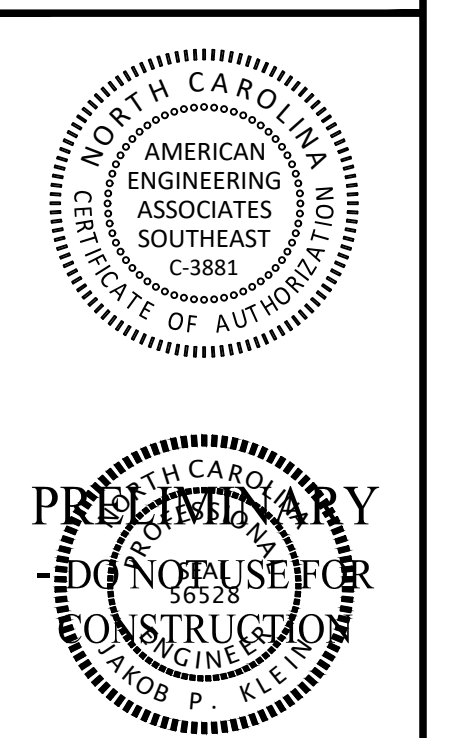
ROADWAY STANDARD DRAWING FOR
CONCRETE THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2
840.04

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC
JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025
SHEET TITLE: DRAINAGE DETAILS
SHEET NO.: CD12

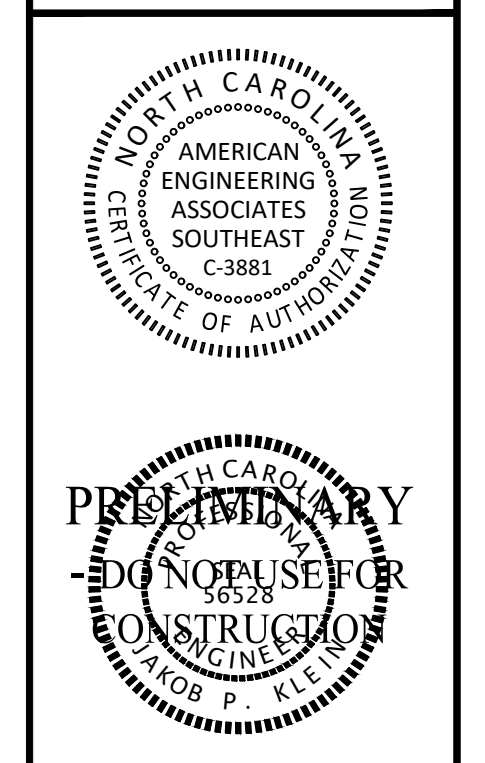
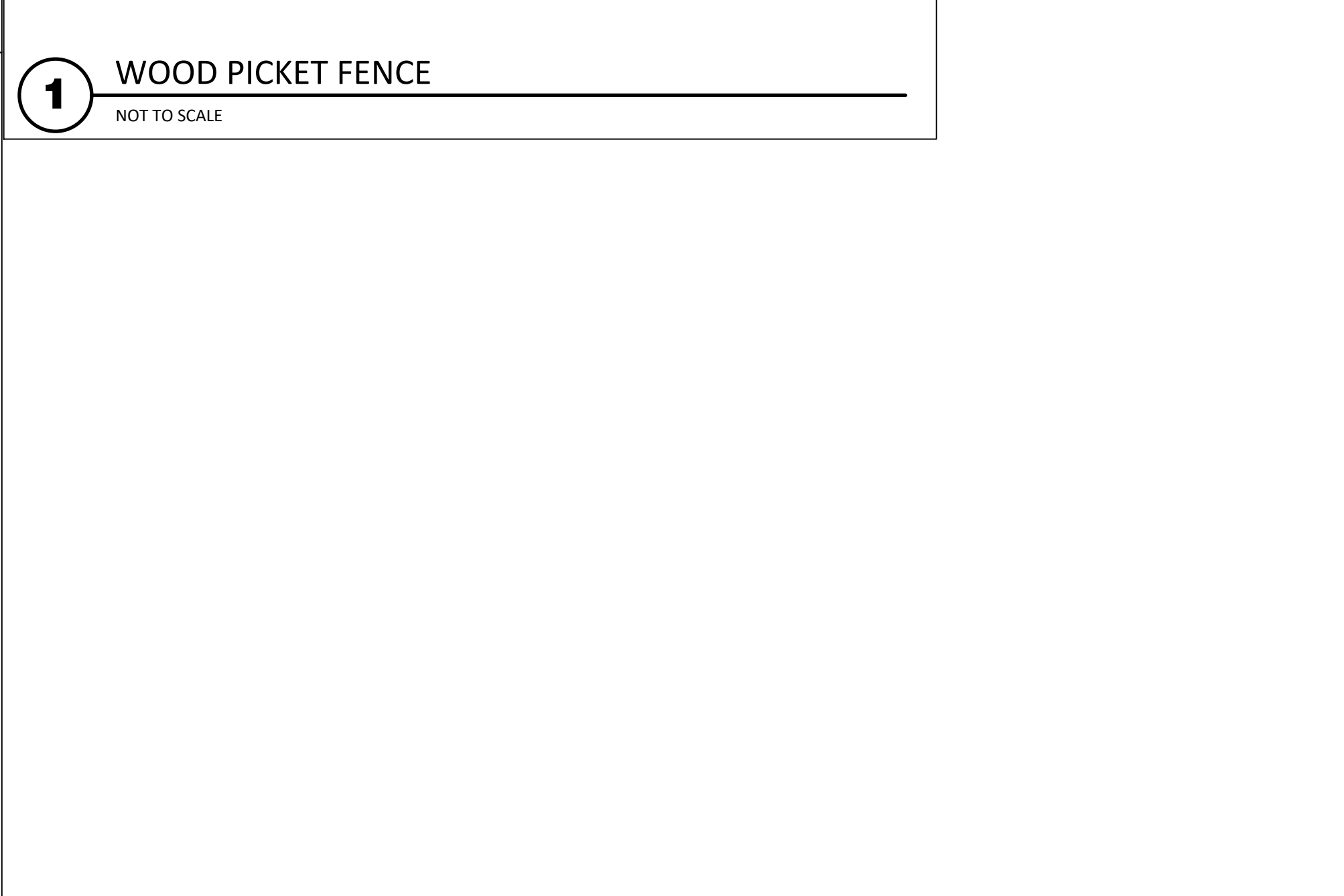
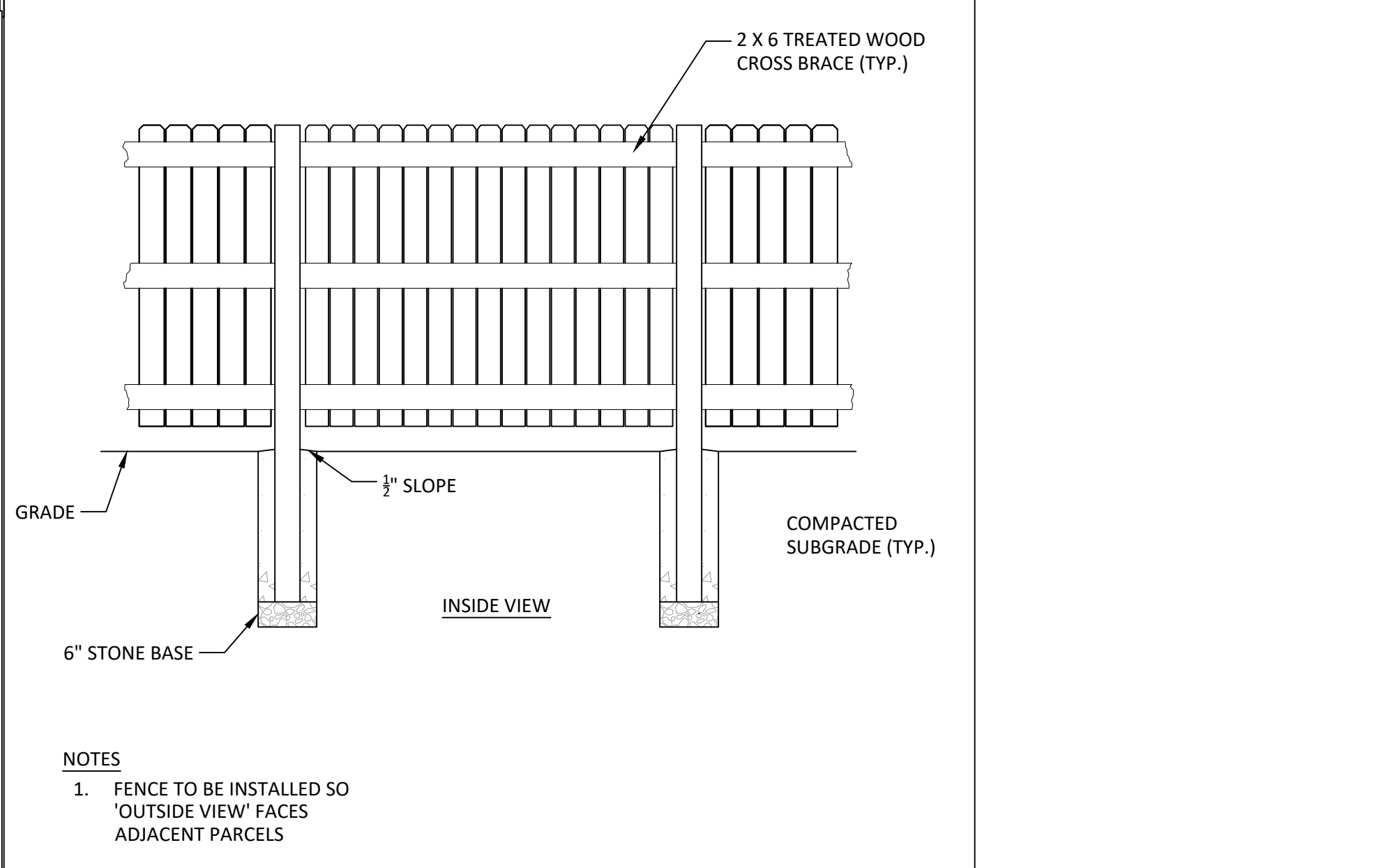
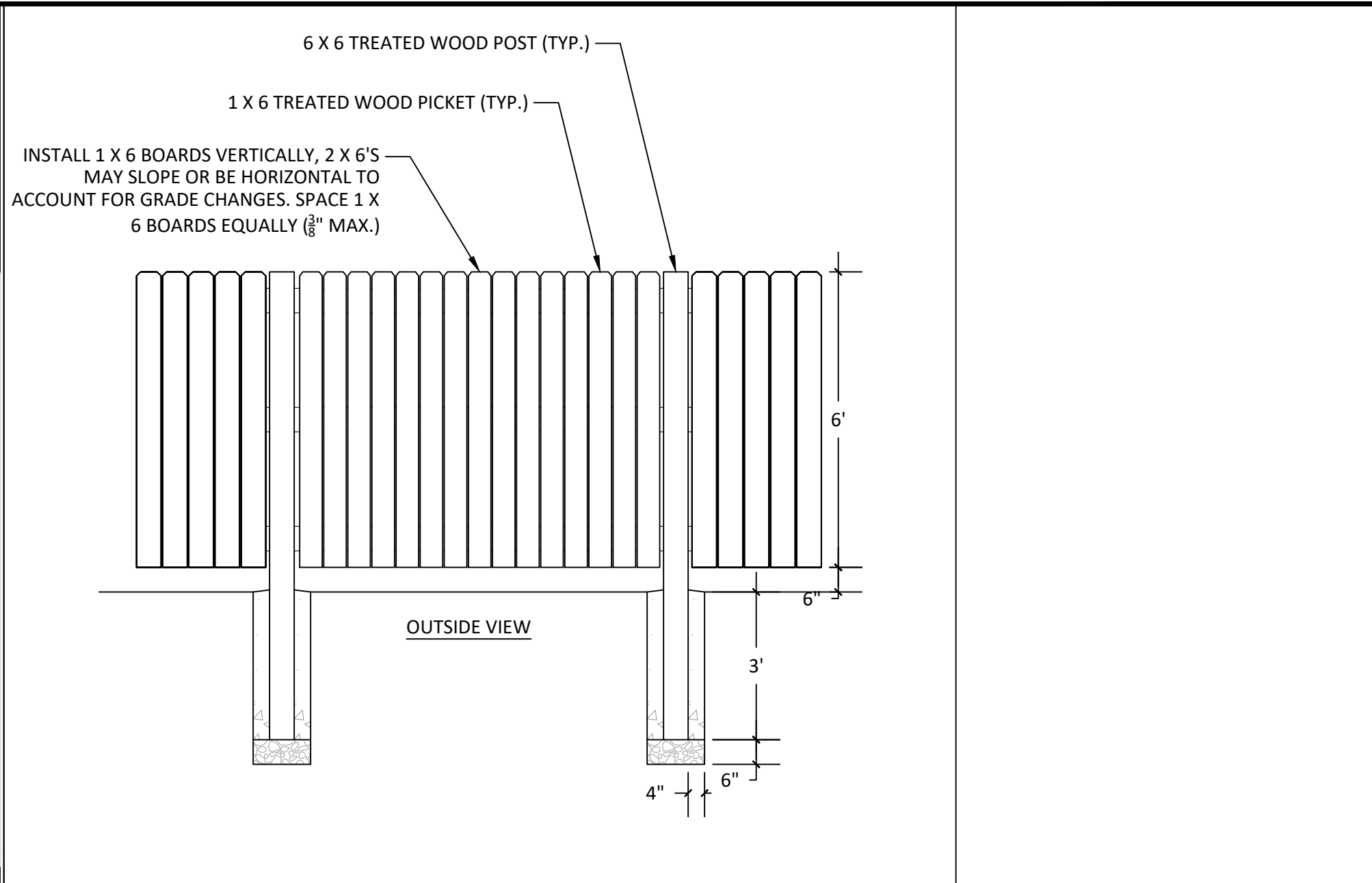
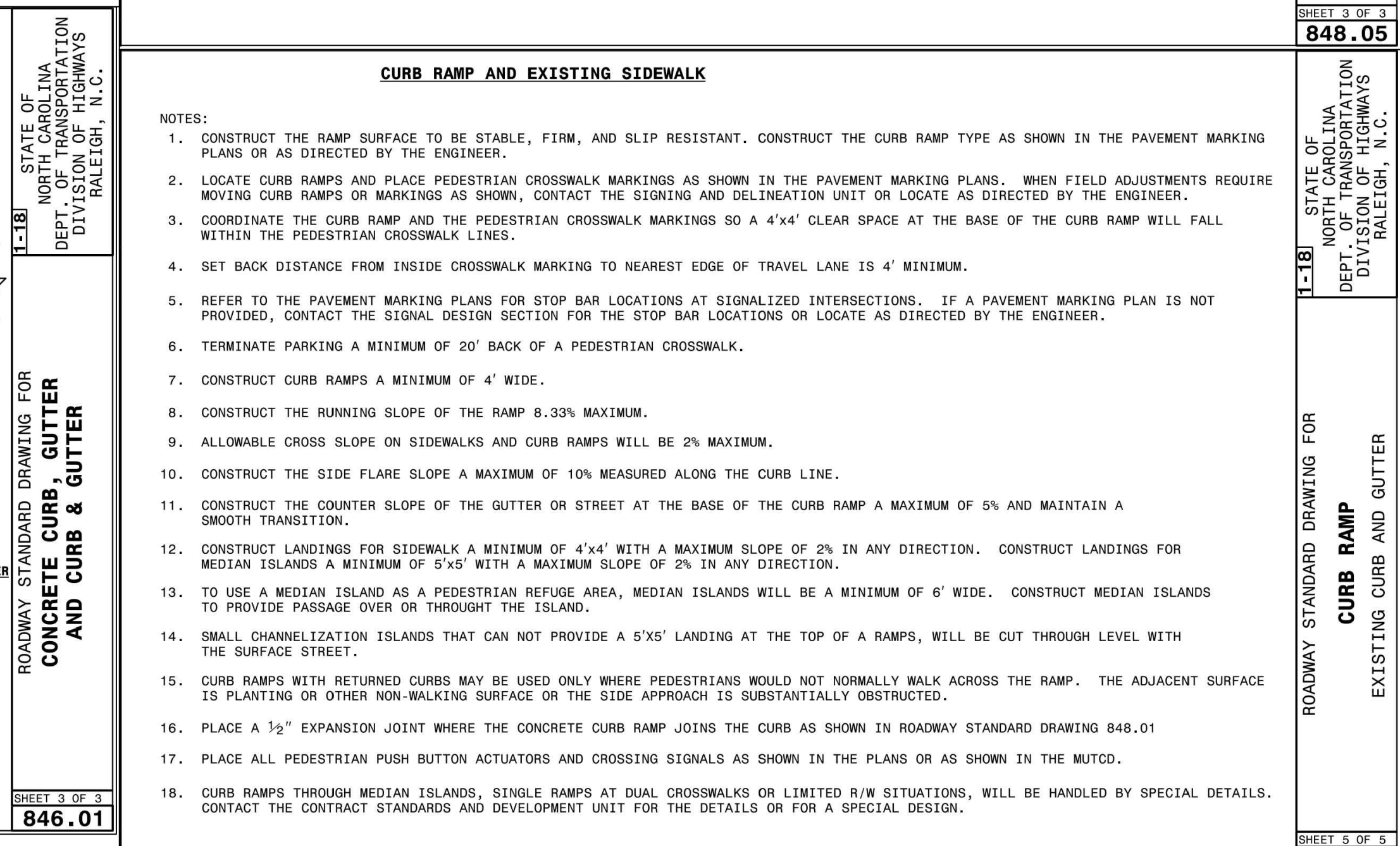
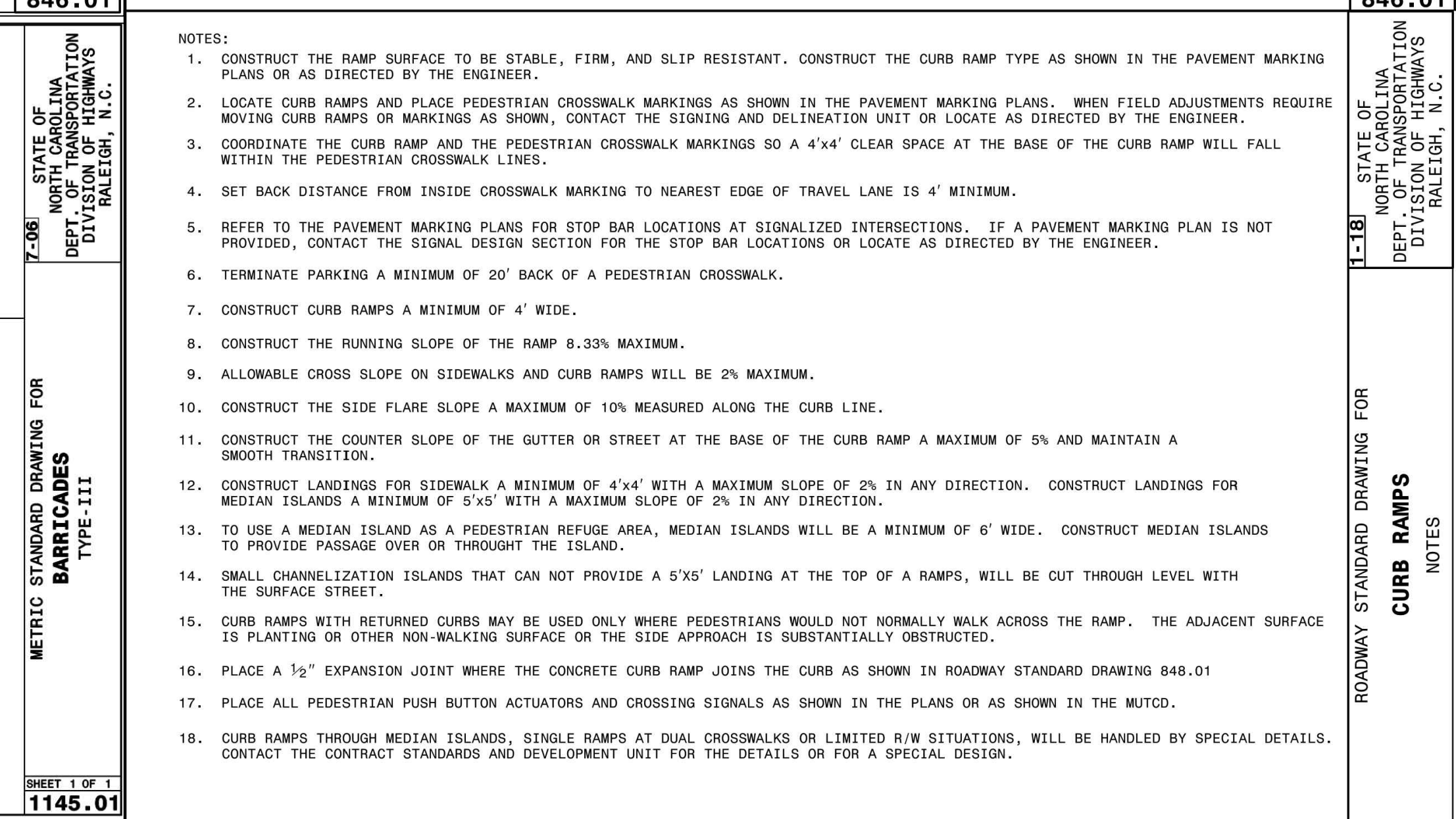
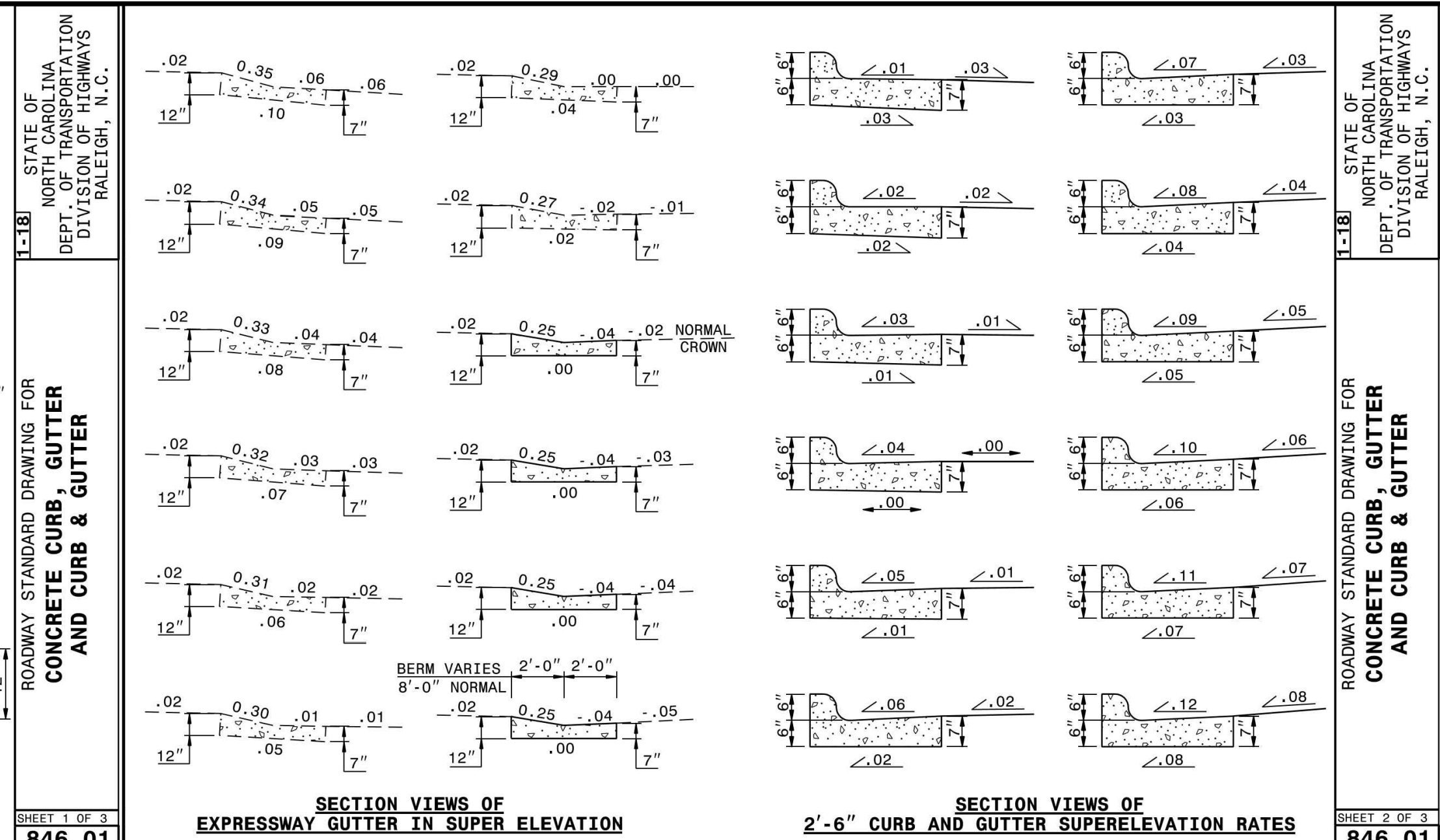
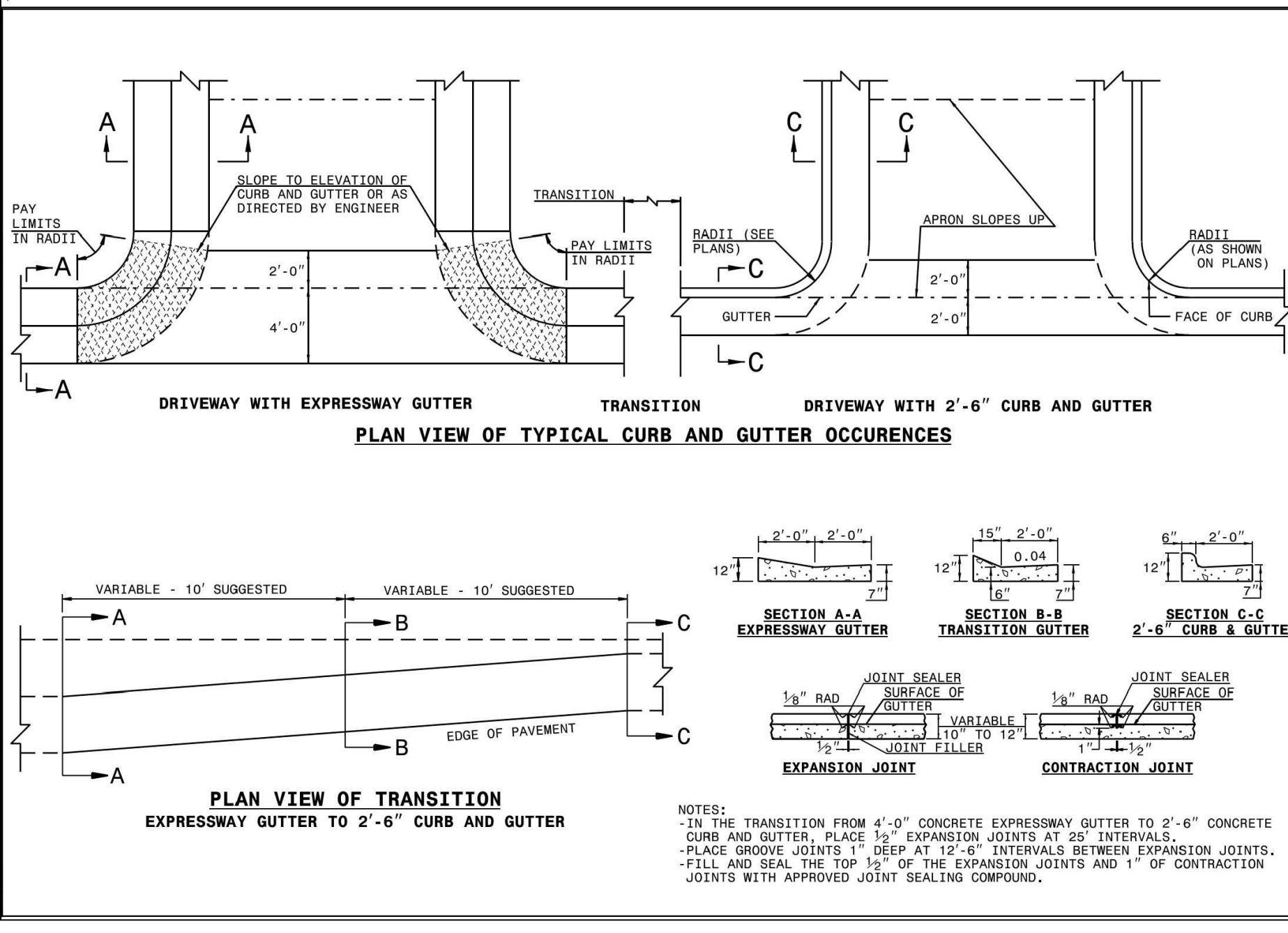
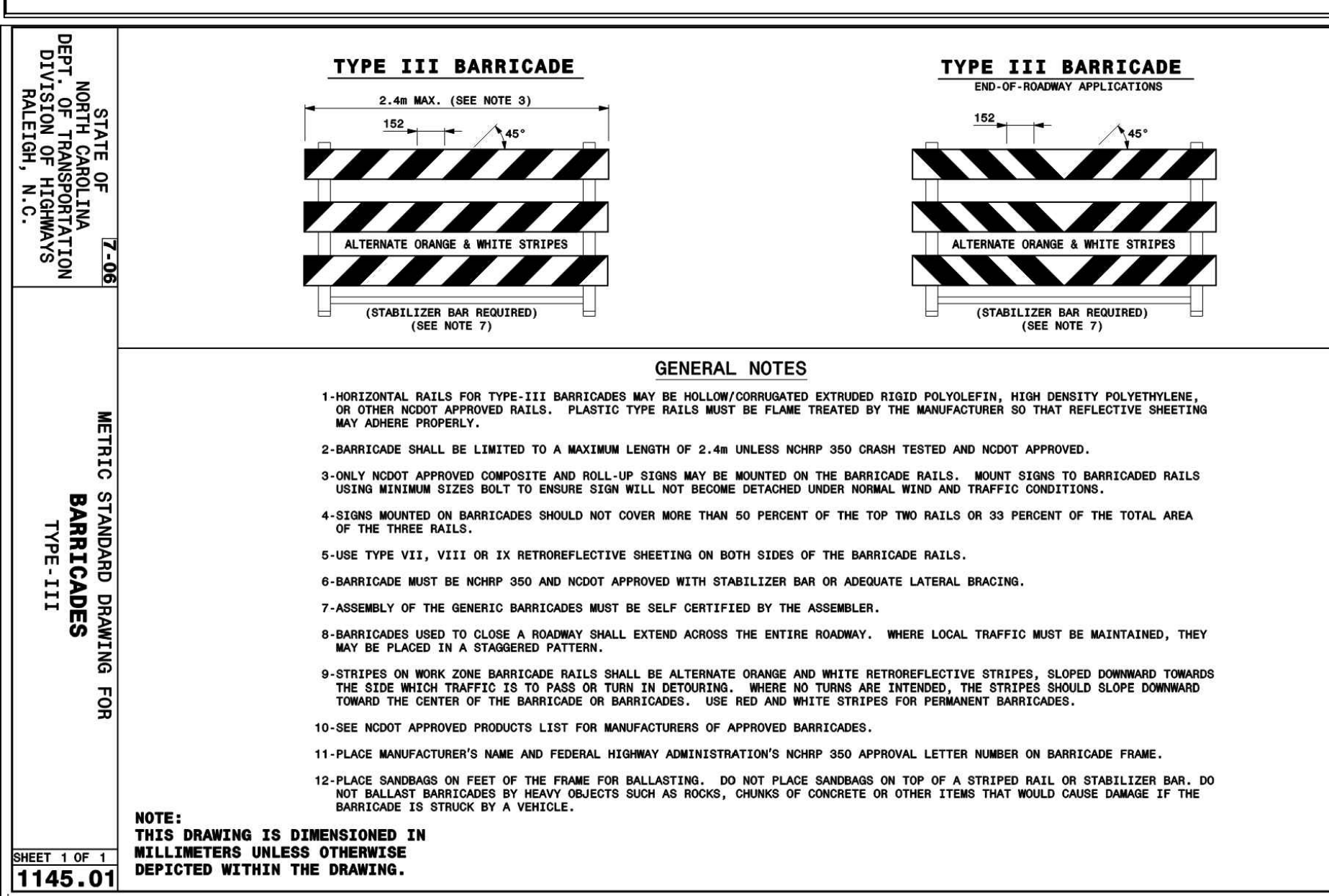
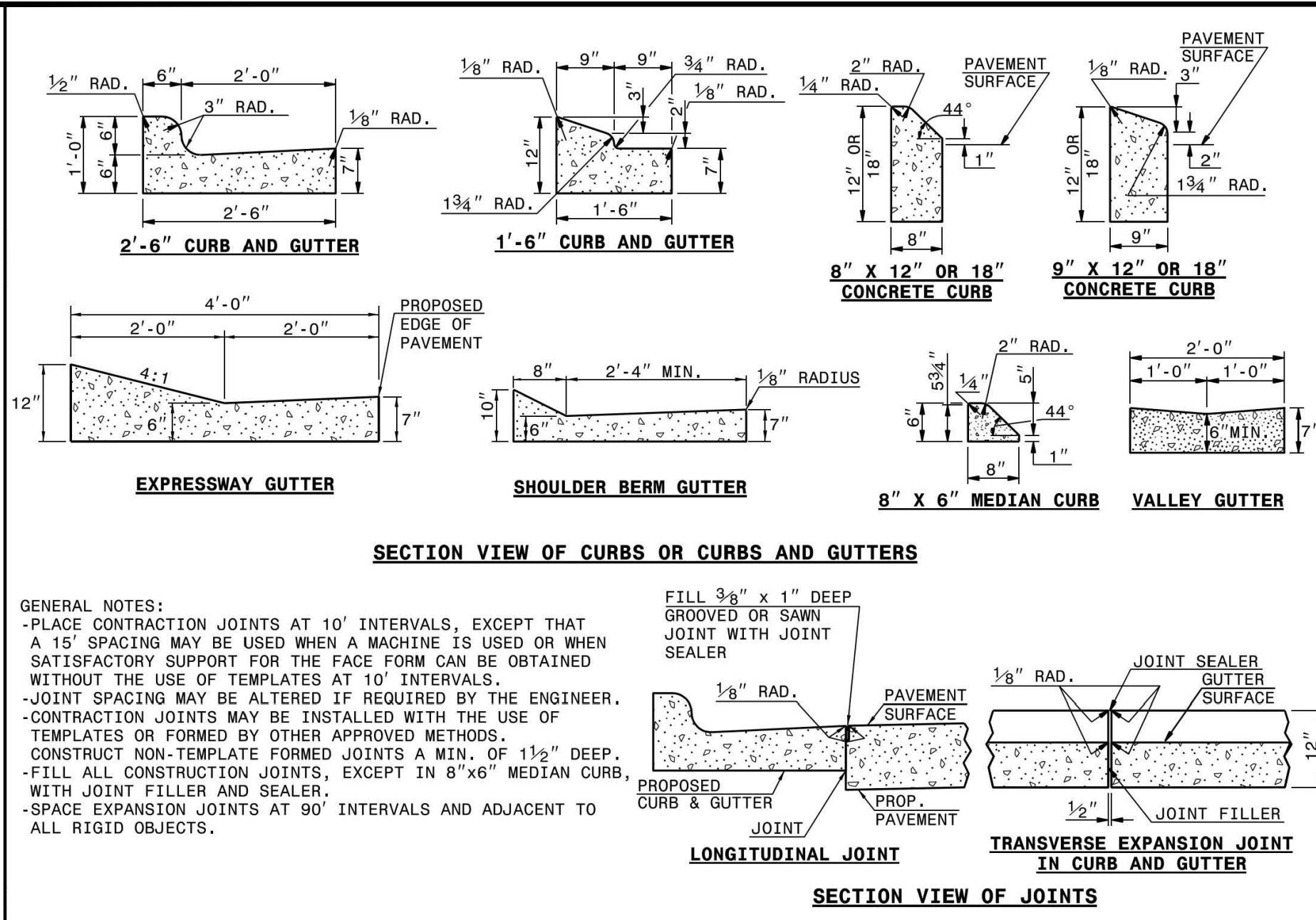
North Carolina 811
*** 3 Days Before Digging ***
North Carolina 811
811 or 1-800-432-4949
Remote Ticket Entry
http://nc811.org/remoticketentry.htm



NO. DATE REVISION

NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

AMERICAN Engineering Associates - Southeast, P.A.
4020 Westchase Boulevard, Suite 450
Raleigh, NC 27607
919-469-1101



NO.	DATE	REVISION
1	02-25-2025	CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

STIPULATION FOR REUSE
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THE PRESERVE AT MOODY FARM
 CID-24-09
 ROLESVILLE ROAD
 WAKE COUNTY, NC

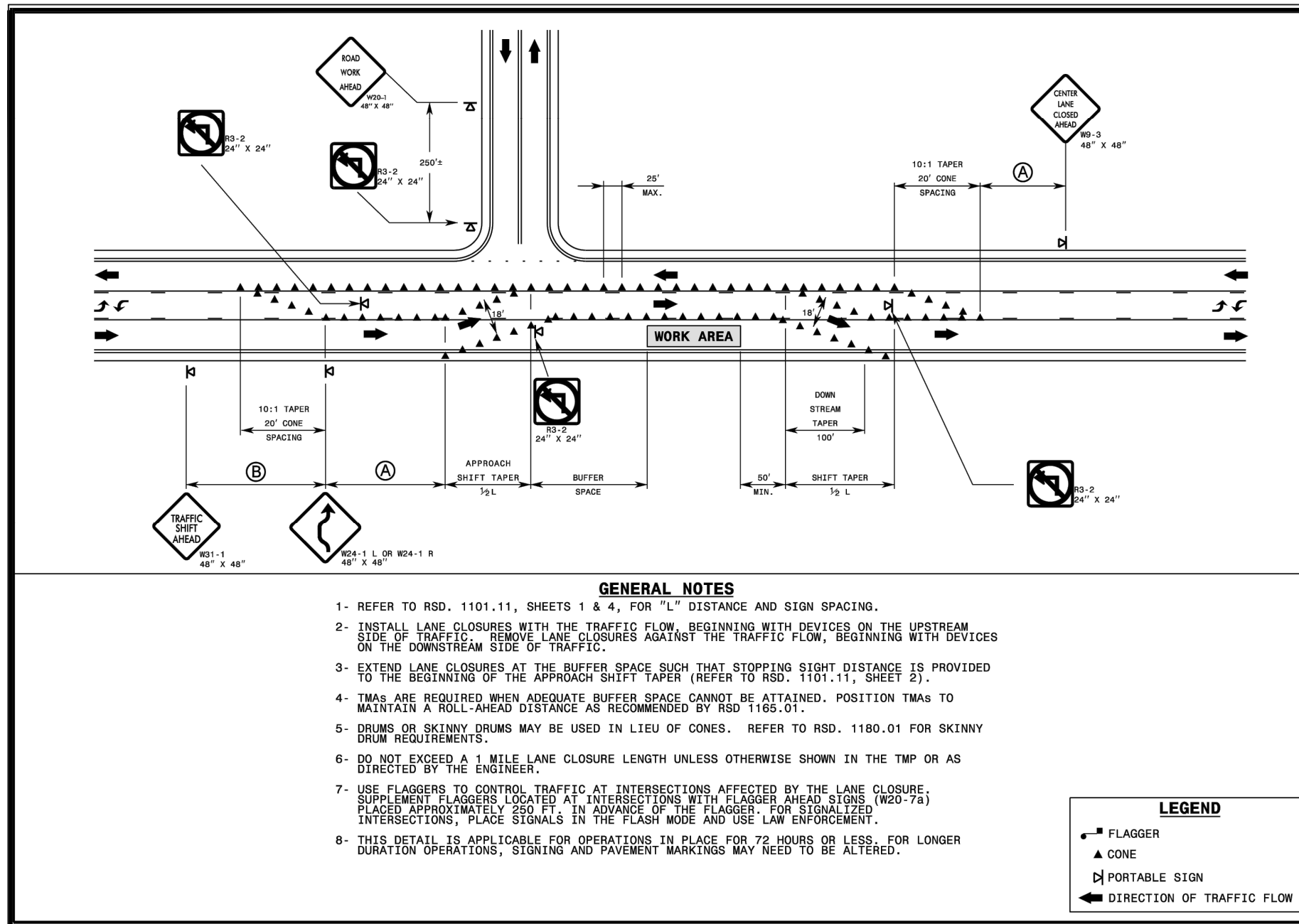
JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025

SHEET TITLE:
SITE DETAILS

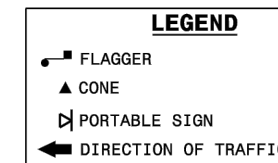
SHEET NO.:
CD13



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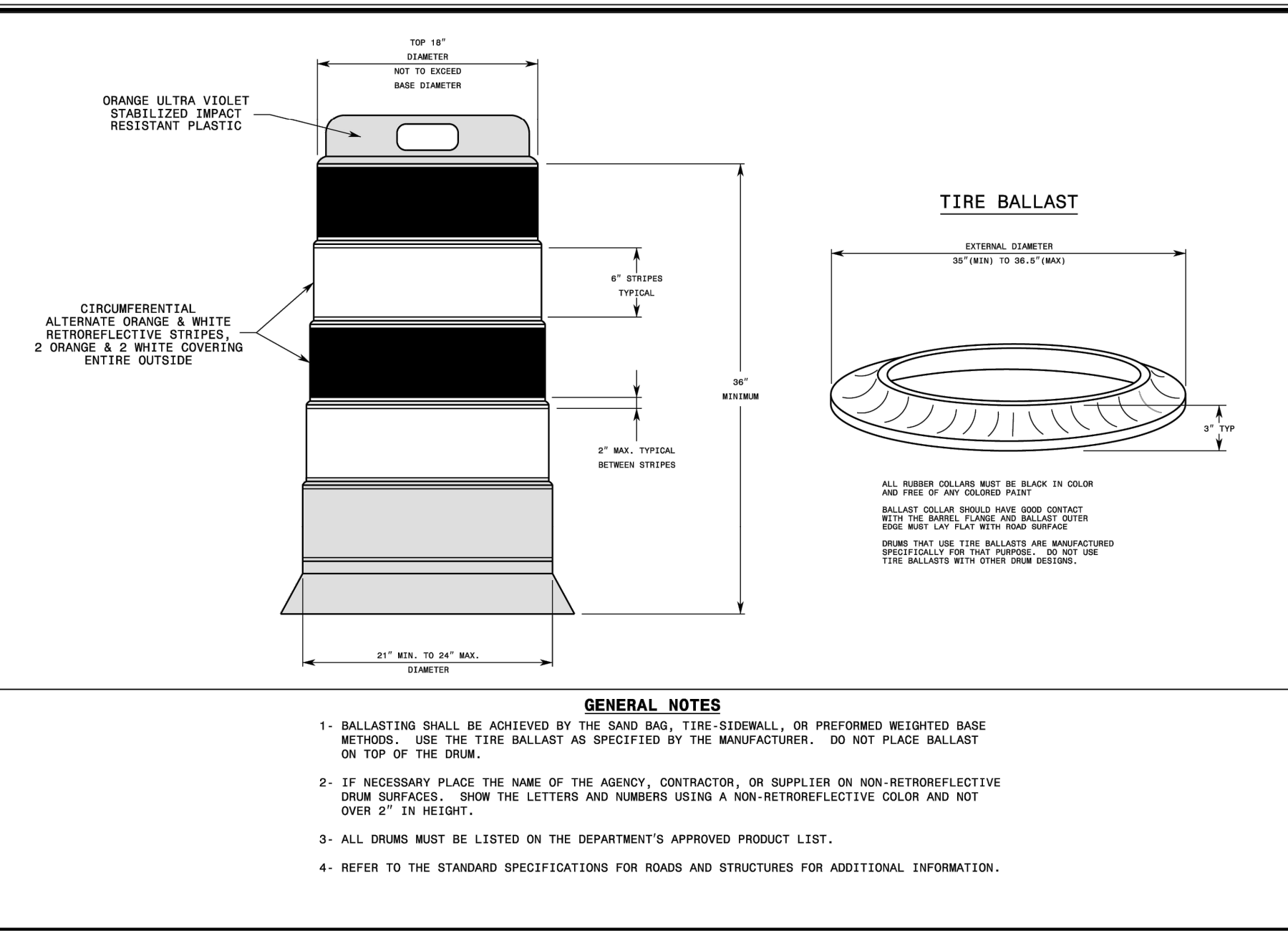
- GENERAL NOTES**
- REFER TO RSD, 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
 - INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
 - EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE BEGINNING OF THE APPROACH SHIFT TAPER (REFER TO RSD, 1101.11, SHEET 2).
 - TWAS ARE REQUIRED WHEN ADEQUATE BUFFER SPACE CANNOT BE ATTAINED. POSITION TWAS TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY RSD 1105.01.
 - DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD, 1180.01 FOR SKINNY DRUM REQUIREMENTS.
 - DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TWP OR AS DIRECTED BY THE ENGINEER.
 - USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. PLACE APPROXIMATELY 200 FEET IN ADVANCE OF THE FLAGGER AREA (RSD-75).
 - THIS DETAIL IS APPLICABLE FOR OPERATIONS IN PLACE FOR 72 HOURS OR LESS. FOR LONGER DURATION OPERATIONS, STOPPING AND PAVEMENT MARKINGS MAY NEED TO BE ALTERED.



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ROADWAY STANDARD DRAWING FOR
TEMPORARY LANE CLOSURES
2-LANE, 2-WAY ROADWAY WITH 2-WAY TURN LANE
1 THRU LANE CLOSED

SHEET 2 OF 19
1101.02

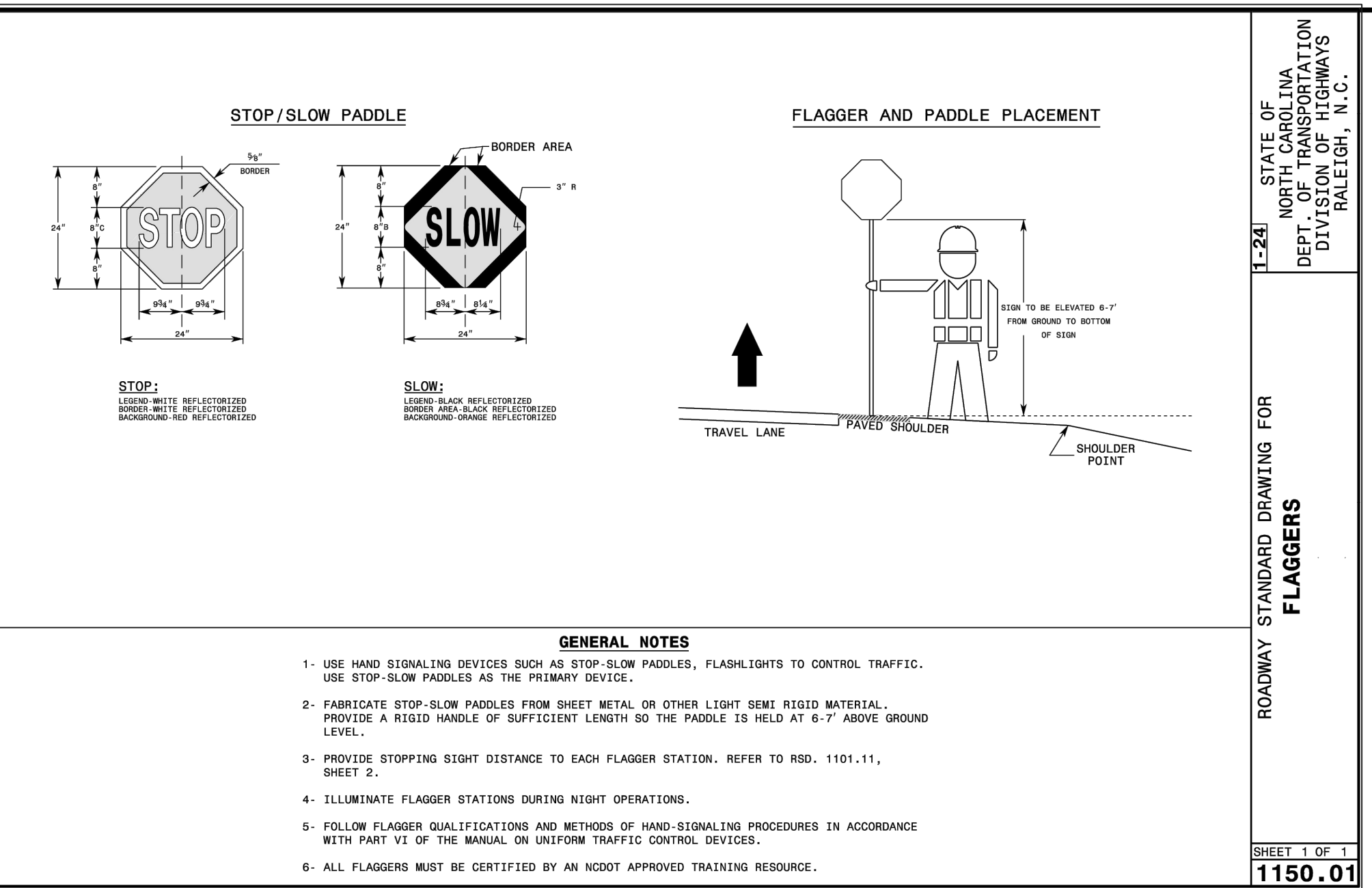


- GENERAL NOTES**
- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDWALL, OR PERFORMED WEIGHTED BASE METHODS. USE THE TIRE BALLAST AS SPECIFIED BY THE MANUFACTURER. DO NOT PLACE BALLAST ON TOP OF THE DRUM.
 - IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.
 - ALL DRUMS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCT LIST.
 - REFER TO THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES FOR ADDITIONAL INFORMATION.

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ROADWAY STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130.01

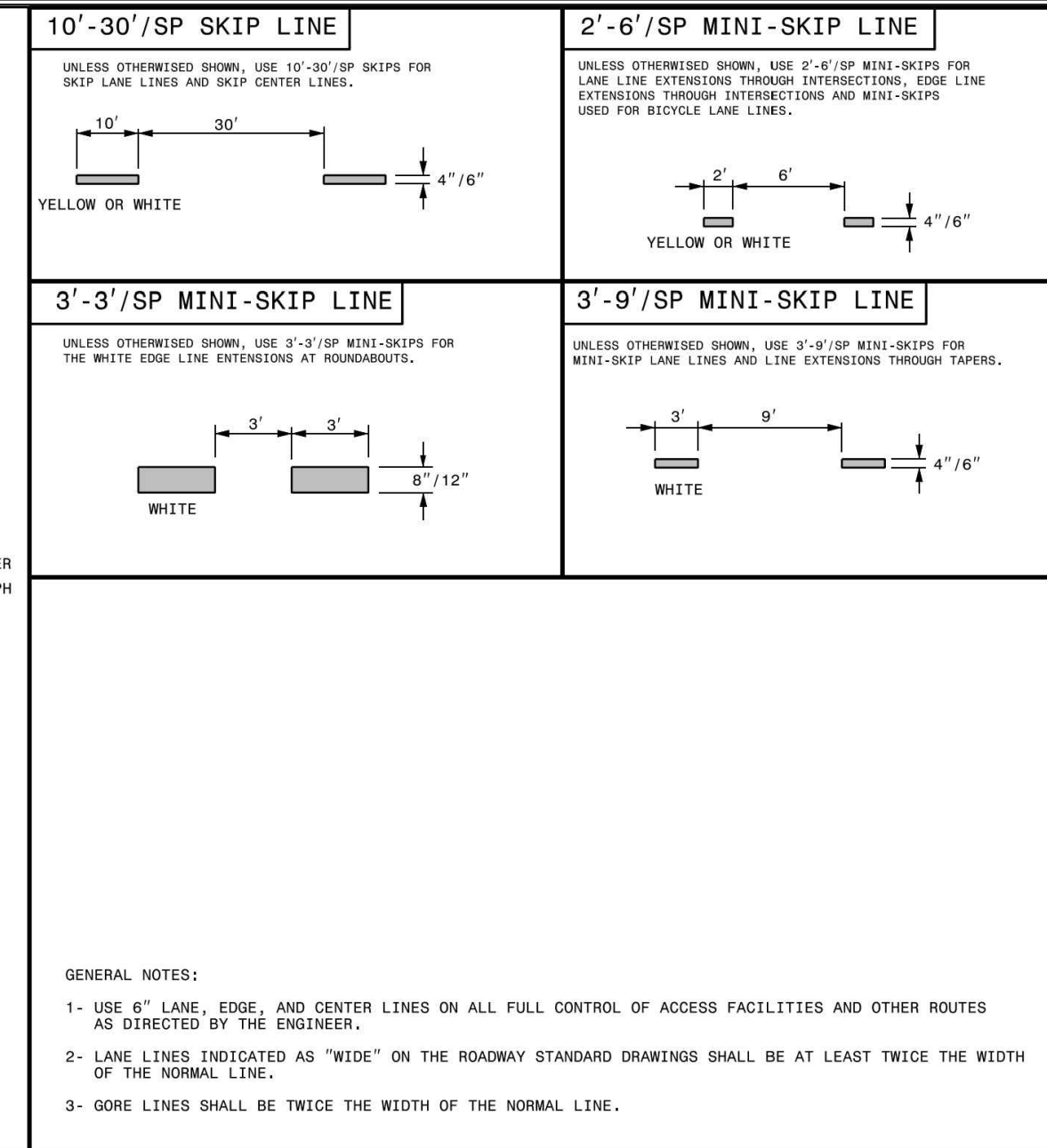
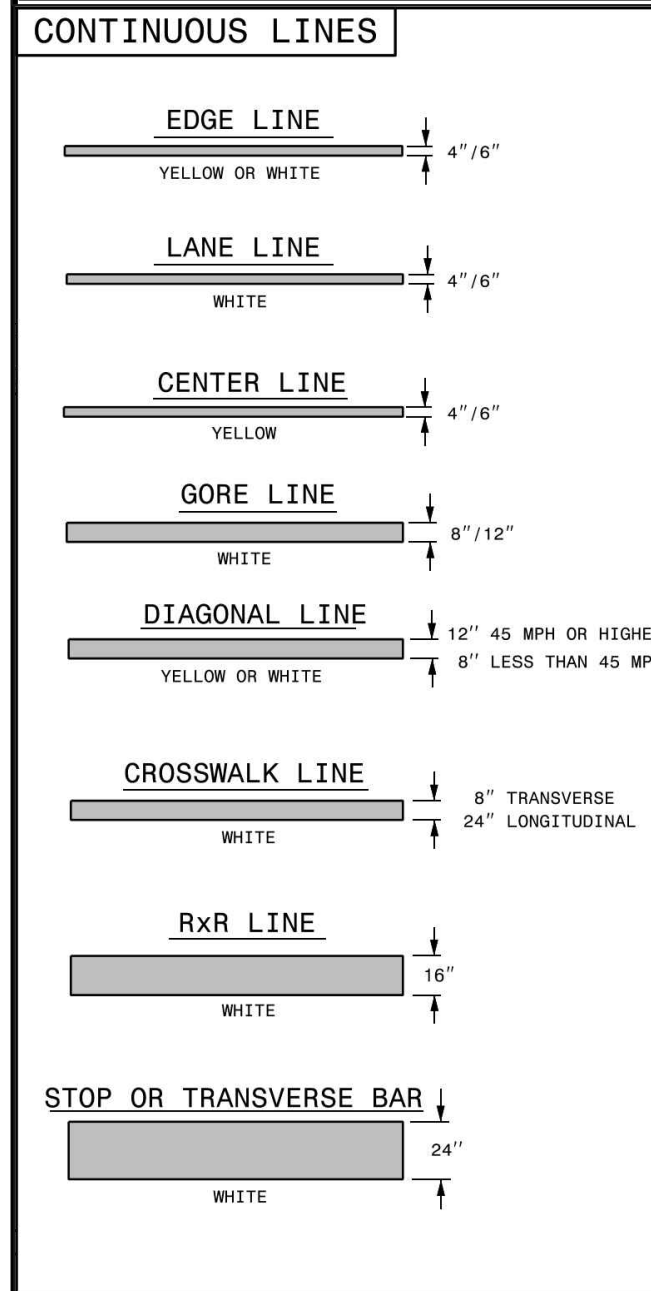


- GENERAL NOTES**
- USE HAND SIGNALING DEVICES SUCH AS STOP-SLOW PADDLES, FLASHLIGHTS TO CONTROL TRAFFIC. USE STOP-SLOW PADDLES AS THE PRIMARY DEVICE.
 - FABRICATE STOP-SLOW PADDLES FROM SHEET METAL OR OTHER LIGHT SEMI RIGID MATERIAL. PROVIDE A RIGID HANDLE OF SUFFICIENT LENGTH SO THE PADDLE IS HELD AT 6'-7" ABOVE GROUND LEVEL.
 - PROVIDE STOPPING SIGHT DISTANCE TO EACH FLAGGER STATION. REFER TO RSD, 1101.11, SHEET 2.
 - ILLUMINATE FLAGGER STATIONS DURING NIGHT OPERATIONS.
 - FOLLOW FLAGGER QUALIFICATIONS AND METHODS OF HAND-SIGNALING PROCEDURES IN ACCORDANCE WITH PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ALL FLAGGERS MUST BE CERTIFIED BY AN NCDOT APPROVED TRAINING RESOURCE.

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ROADWAY STANDARD DRAWING FOR
FLAGGERS

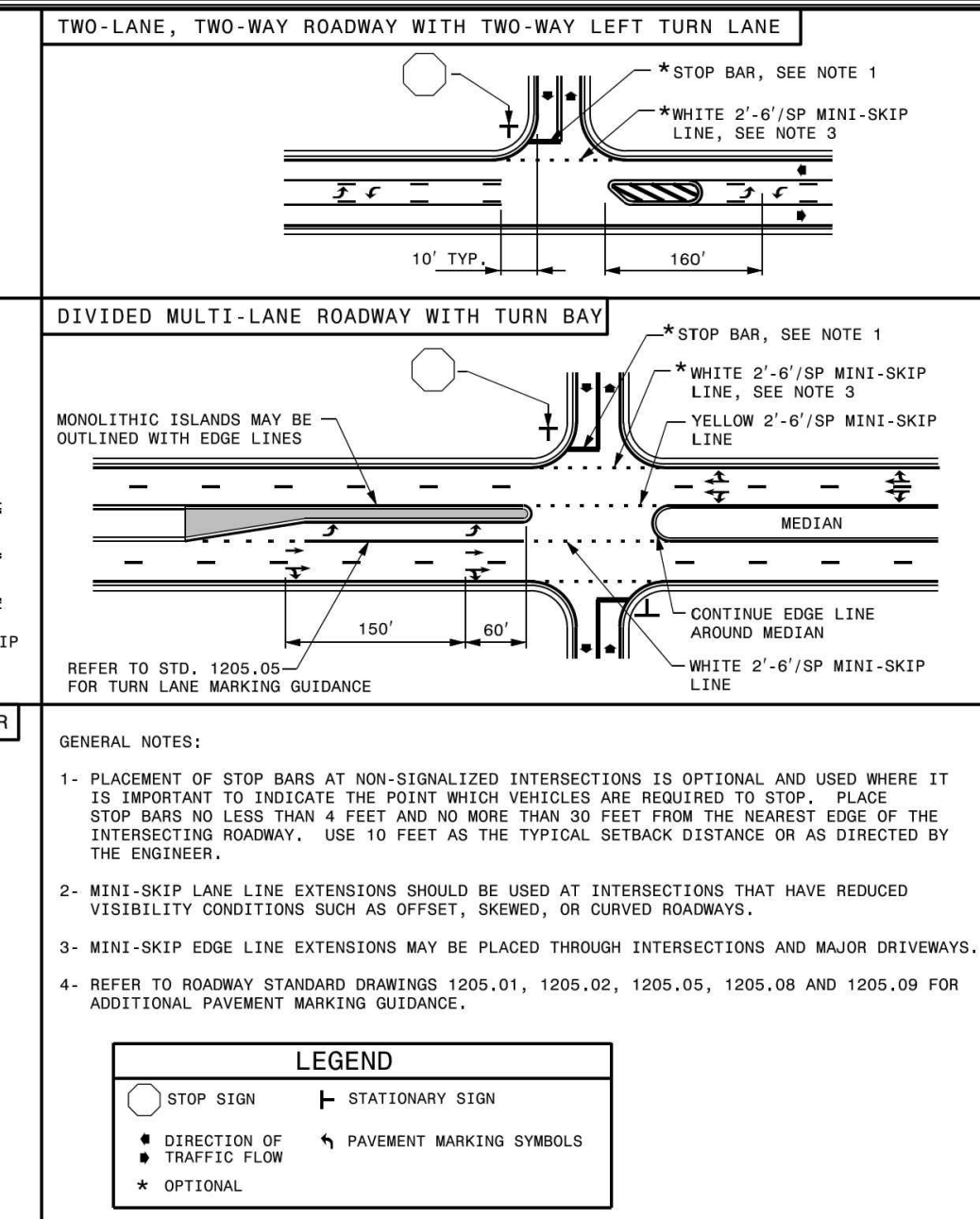
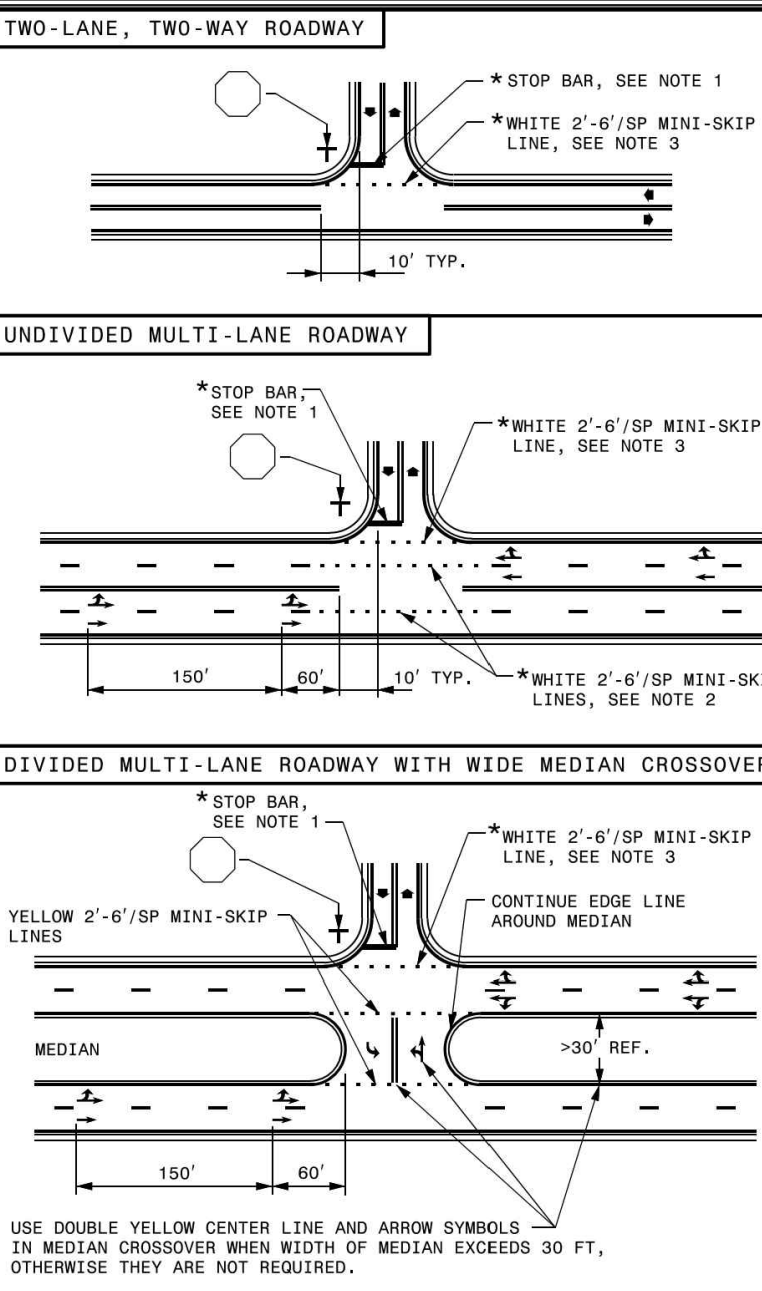
SHEET 1 OF 1
1150.01



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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

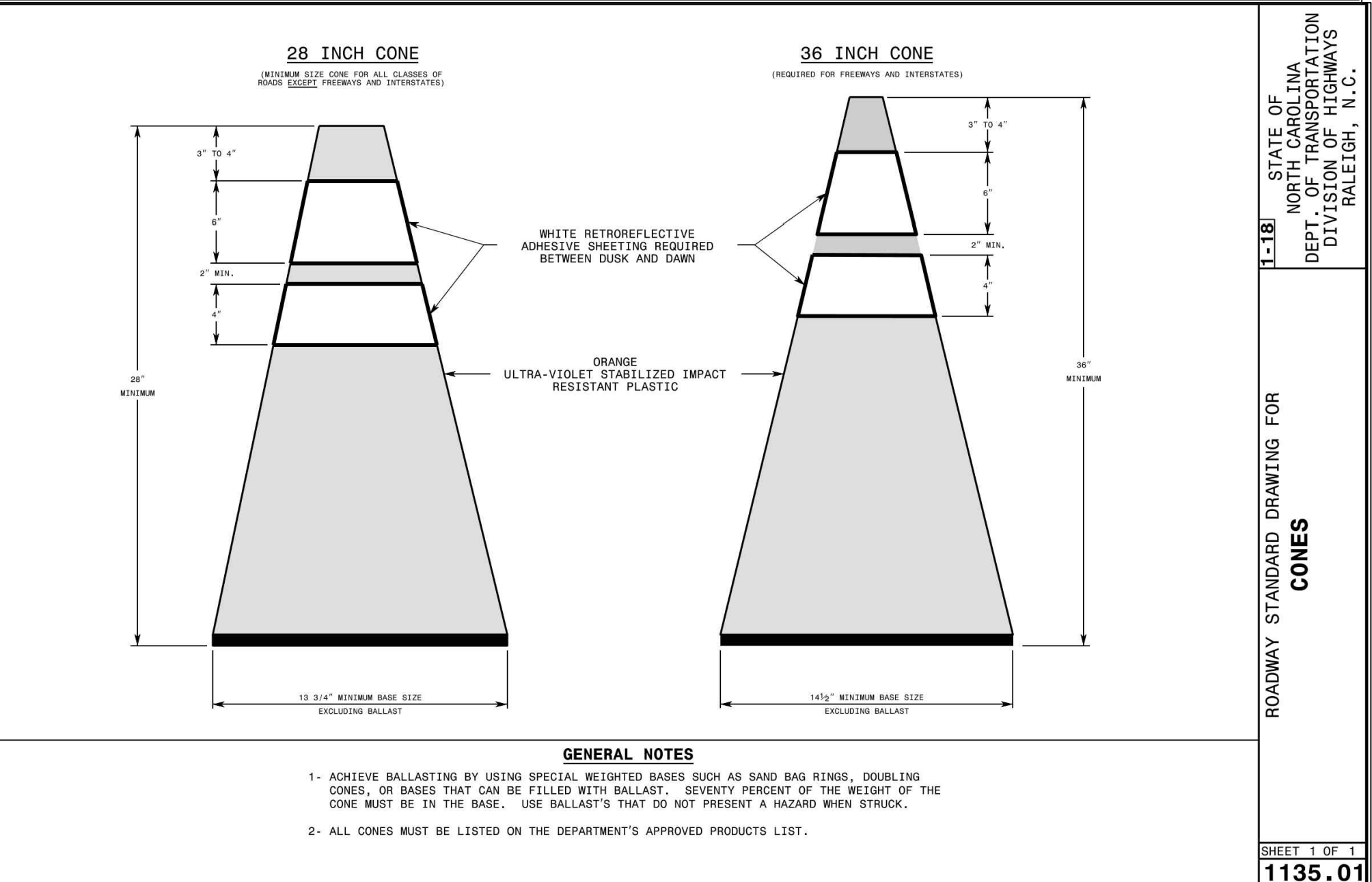
SHEET 1 OF 2
1205.01



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ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
INTERSECTIONS

SHEET 2 OF 2
1205.04

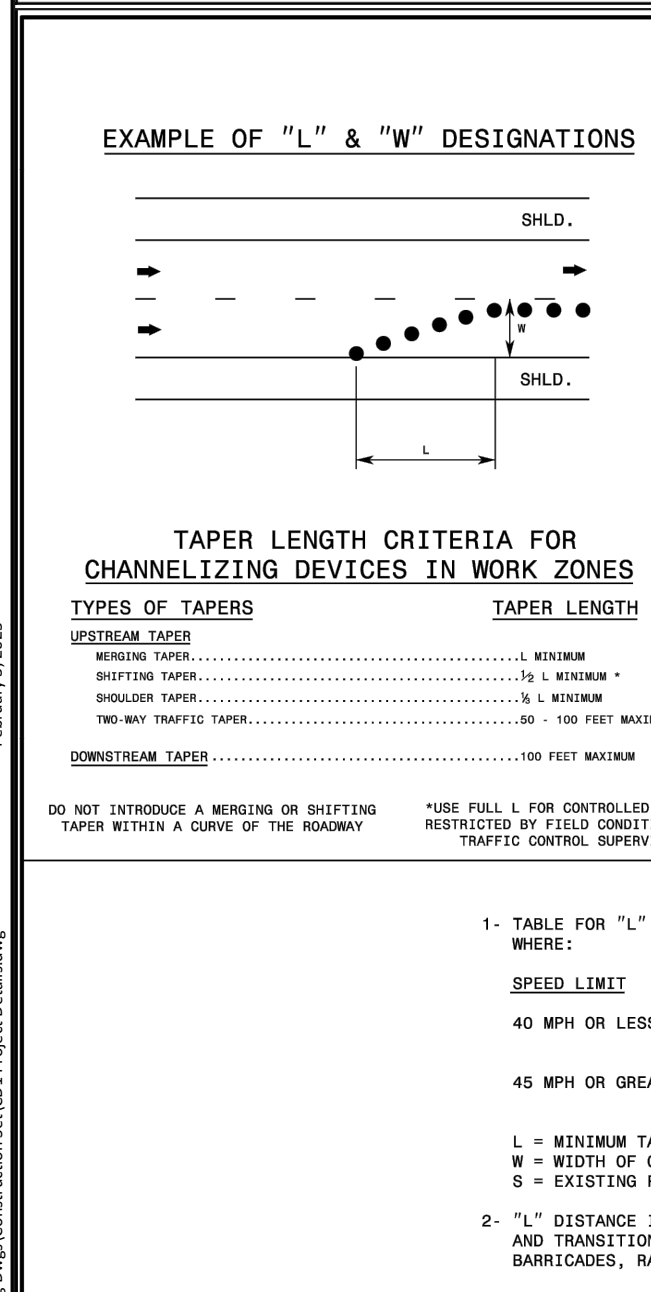


- GENERAL NOTES**
- ACHIEVE BALLASTING BY USING SPECIAL WEIGHTED BASES SUCH AS SAND BAG RINGS, DOUBLING CONES, OR BASES THAT CAN BE FILLED WITH BALLAST. SEVENTY PERCENT OF THE WEIGHT OF THE CONE MUST BE IN THE BASE. USE BALLASTS THAT DO NOT PRESENT A HAZARD WHEN STRUCK.
 - ALL CONES MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONES

SHEET 1 OF 1
1135.01



QUICK REFERENCE - "L" DISTANCE TABLE

POSTED SPEED (MPH)	EXISTING LONGITUDINAL DISTANCE "L" (FEET) (ROUNDED VALUES)											
	1	2	3	4	5	6	7	8	9	10	11	12
20	10	15	20	30	35	40	50	55	60	70	75	80
25	15	25	35	45	55	65	75	85	95	105	115	125
30	15	30	45	60	75	90	105	120	135	150	165	180
35	25	45	65	85	105	125	145	165	185	205	225	245
40	30	55	80	110	135	160	190	215	240	270	295	320
45	45	80	135	180	225	270	315	360	405	450	495	540
50	60	100	150	200	250	300	350	400	450	500	550	600
55	55	110	165	220	275	330	385	440	495	550	605	660
60	60	120	180	240	300	360	420	480	540	600	660	720
65	65	130	195	260	325	390	455	520	585	650	715	780
70	70	140	210	280	350	420	490	560	630	700	770	840

- GENERAL NOTES**
- TABLE FOR "L" DISTANCE IS BASED ON CHANNELIZATION TAPER FORMULA FROM THE MUTCD. WHERE:
SPEED LIMIT FORMULA:
40 MPH OR LESS $L_{min} = \frac{W \times S^2}{60}$
45 MPH OR GREATER $L_{min} = W \times S$
L = MINIMUM TAPER LENGTH IN FEET (LONGITUDINAL DISTANCE)
W = WIDTH OF OFFSET IN FEET (LATERAL DISTANCE)
S = EXISTING POSTED SPEED LIMIT PRIOR TO THE IMPLEMENTATION OF A WORK ZONE SPEED LIMIT REDUCTION
 - "L" DISTANCE IS FOR APPLICATION WITH CHANNELIZING DEVICE AND PAVEMENT MARKING TAPERS AND TRANSITIONS. CHANNELIZING DEVICES INCLUDE DRUMS, CONES, TUBULAR MARKING TAPERS, BARRICADES, RAISED ASPHALT ISLANDS, AND VERTICAL PANELS.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING DEVICE TAPER CRITERIA

SHEET 1 OF 4
1101.11

DESIGN SPEED BUFFER SPACE TABLE

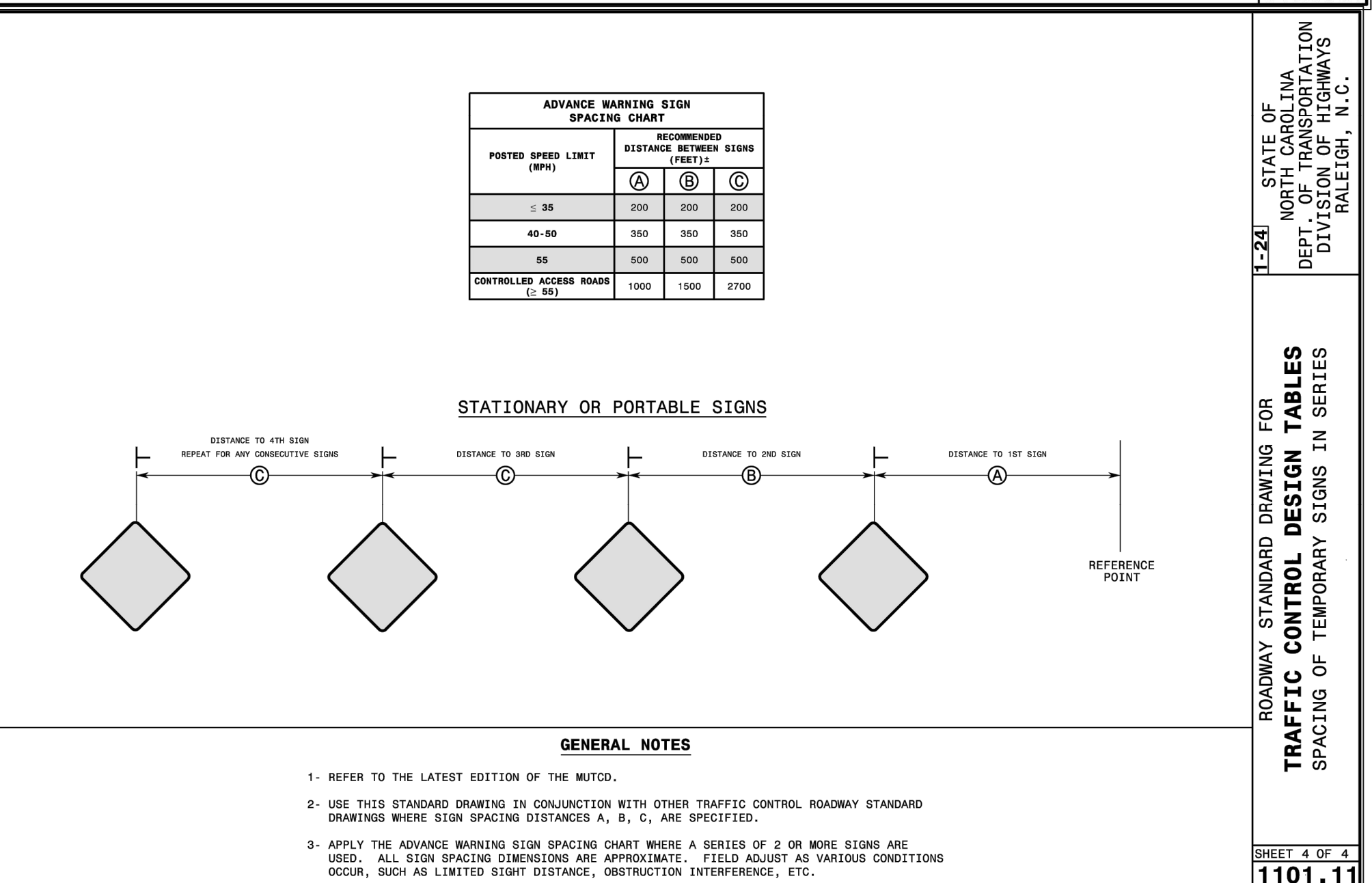
DESIGN SPEED (MPH)	MINIMUM SIGHT STOPPING SIGHT DISTANCE (FEET)	MINIMUM LONGITUDINAL BUFFER SPACE (FEET)
30	200	65
35	250	100
40	305	155
45	360	195
50	425	240
55	495	290
60	570	345
65	645	405
70	730	470
75	820	540
80	910	615

- GENERAL NOTES**
- TABLES ARE BASED ON THE ASHTO GREEN BOOK "A" POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". MINIMUM SIGHT DISTANCE VALUES ARE FOR PASSENGER CAR VEHICLES ON NET AND LEVEL ROADWAYS. CONSULT THE ASHTO GREEN BOOK TO MAKE FINAL DETERMINATION OF STOPPING SIGHT DISTANCE REQUIREMENTS.
 - BUFFER SPACE TABLE IS BASED ON THE BRAKING DISTANCE PORTION OF STOPPING SIGHT DISTANCE FOR WET AND LEVEL PAVEMENTS.
 - USE OF STOPPING SIGHT DISTANCE IN TRAFFIC CONTROL PLAN APPLICATIONS INCLUDES PROVIDING SIGHT DISTANCE FOR TRAFFIC APPROACHING A LANE CLOSURE. PROVIDE 2-LANE, 2-WAY ROADWAYS STOPPING SIGHT DISTANCE TO THE FLAGGER. FOR LANE CLOSURES ON MULTI-LANE ROADWAYS PROVIDE STOPPING SIGHT DISTANCE TO THE BEGINNING OF THE LANE CLOSURE WEDGE TAPER, OR FLAGGING ARROW BOARD. EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
BUFFER SPACE & SIGHT DISTANCE

SHEET 2 OF 4
1101.11



ADVANCE WARNING SIGN SPACING CHART

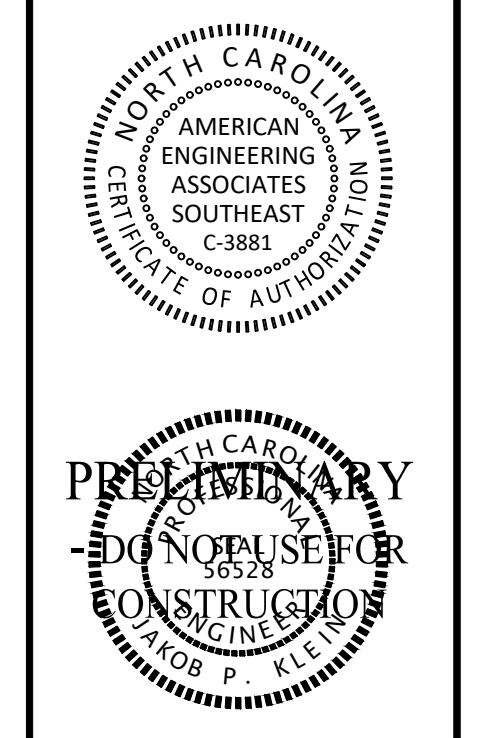
POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS (FEET)		
	A	B	C
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500
CONTROLLED ACCESS ROADS (≥ 55)	1000	1500	2700

- GENERAL NOTES**
- REFER TO THE LATEST EDITION OF THE MUTCD.
 - USE THIS STANDARD DRAWING IN CONJUNCTION WITH OTHER TRAFFIC CONTROL ROADWAY STANDARD DRAWINGS WHERE SIGN SPACING DISTANCES A, B, C, ARE SPECIFIED.
 - APPLY THE ADVANCE WARNING SIGN SPACING CHART WHEN A SERIES OF 2 OR MORE SIGNS ARE USED. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS VARIOUS CONDITIONS OCCUR, SUCH AS LIMITED SIGHT DISTANCE, OBSTRUCTION INTERFERENCE, ETC.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
SPACING OF TEMPORARY SIGNS IN SERIES

SHEET 4 OF 4
1101.11



NO. 1 DATE: 02-25-2025

REVISION: CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

STIPULATION FOR REUSE

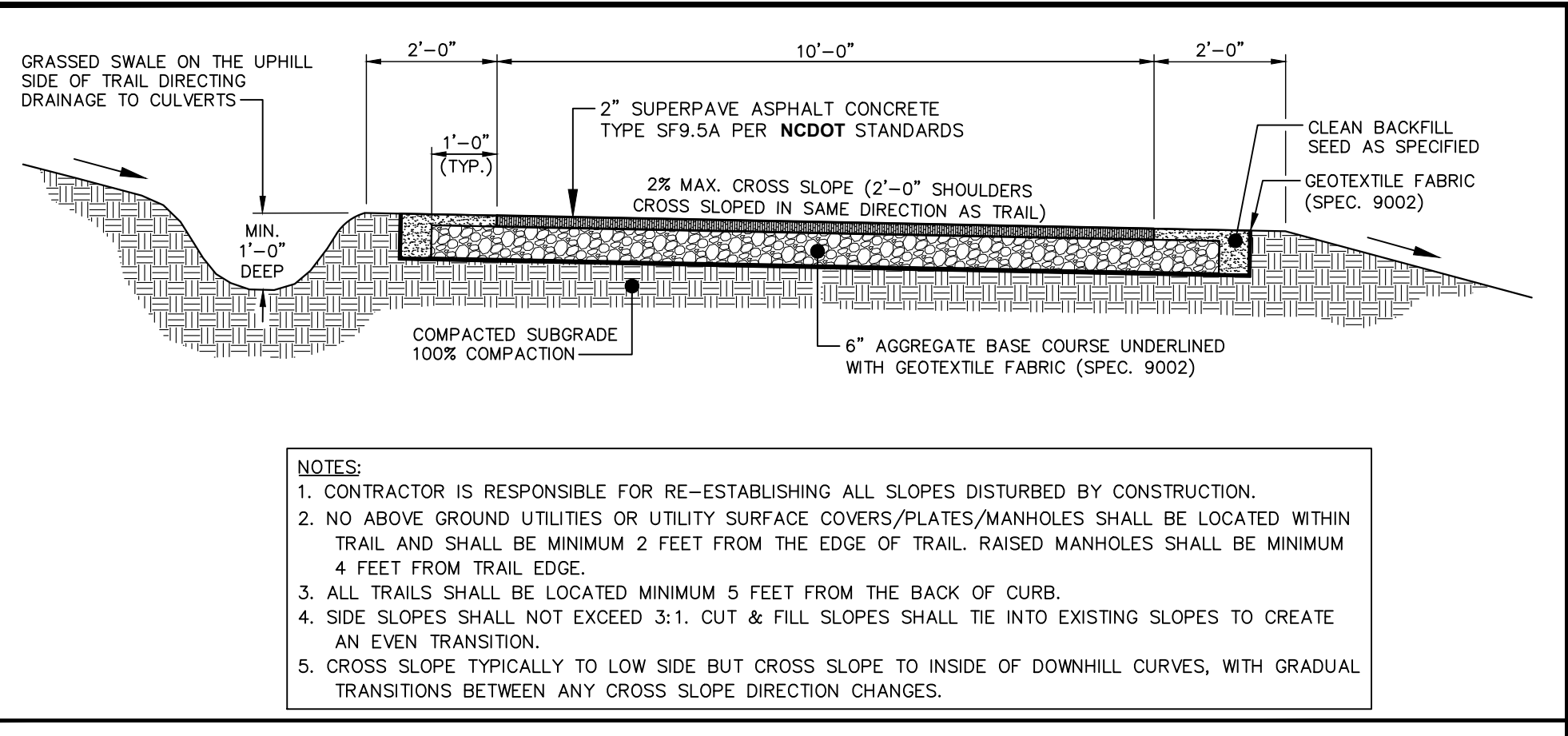
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025

SHEET TITLE:
SITE DETAILS
SHEET NO.:
CD14

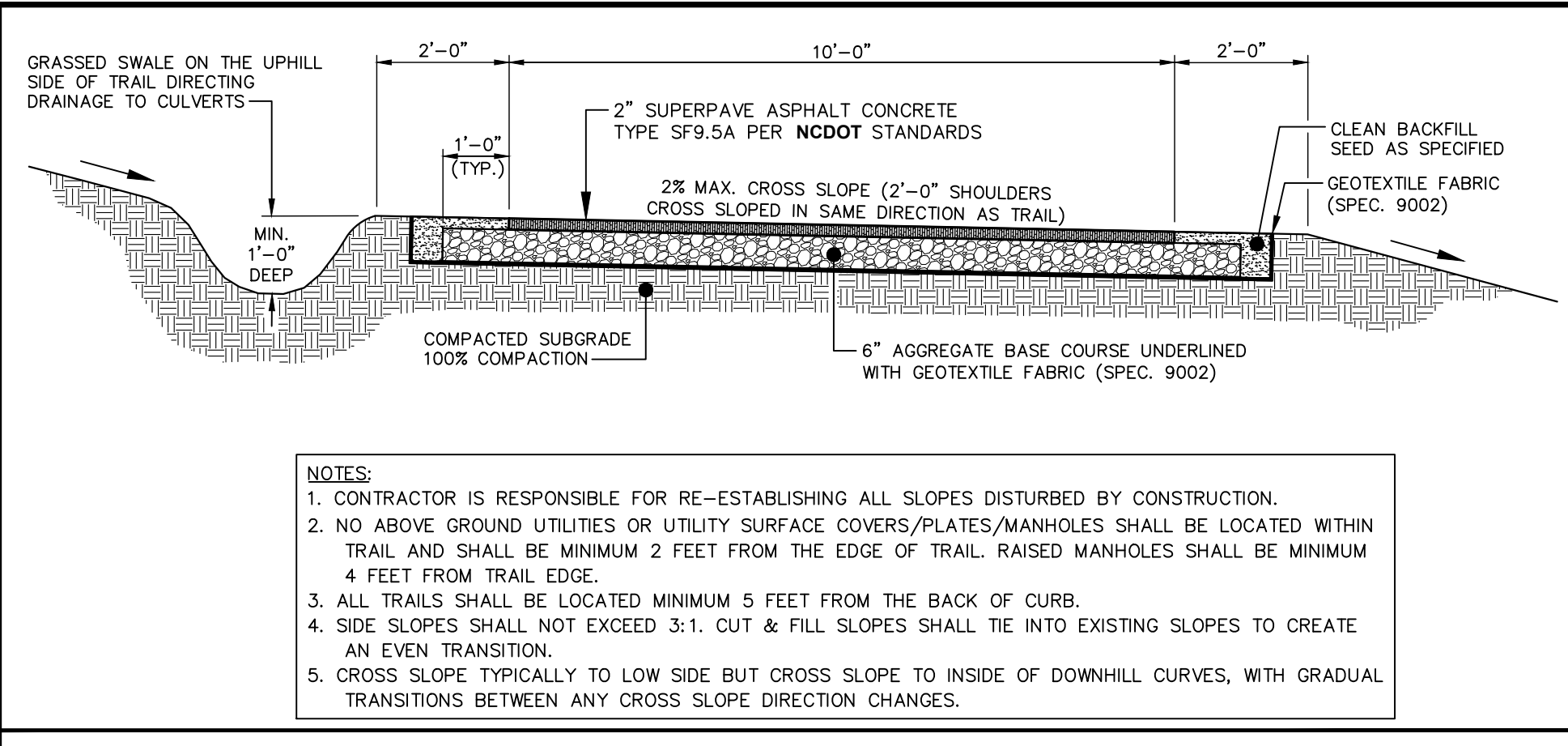




NOTES:

- CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ALL SLOPES DISTURBED BY CONSTRUCTION.
- NO ABOVE GROUND UTILITIES OR UTILITY SURFACE COVERS/PLATES/MANHOLES SHALL BE LOCATED WITHIN TRAIL AND SHALL BE MINIMUM 2 FEET FROM THE EDGE OF TRAIL. RAISED MANHOLES SHALL BE MINIMUM 4 FEET FROM TRAIL EDGE.
- ALL TRAILS SHALL BE LOCATED MINIMUM 5 FEET FROM THE BACK OF CURB.
- SIDE SLOPES SHALL NOT EXCEED 3:1. CUT & FILL SLOPES SHALL TIE INTO EXISTING SLOPES TO CREATE AN EVEN TRANSITION.
- CROSS SLOPE TYPICALLY TO LOW SIDE BUT CROSS SLOPE TO INSIDE OF DOWNHILL CURVES, WITH GRADUAL TRANSITIONS BETWEEN ANY CROSS SLOPE DIRECTION CHANGES.

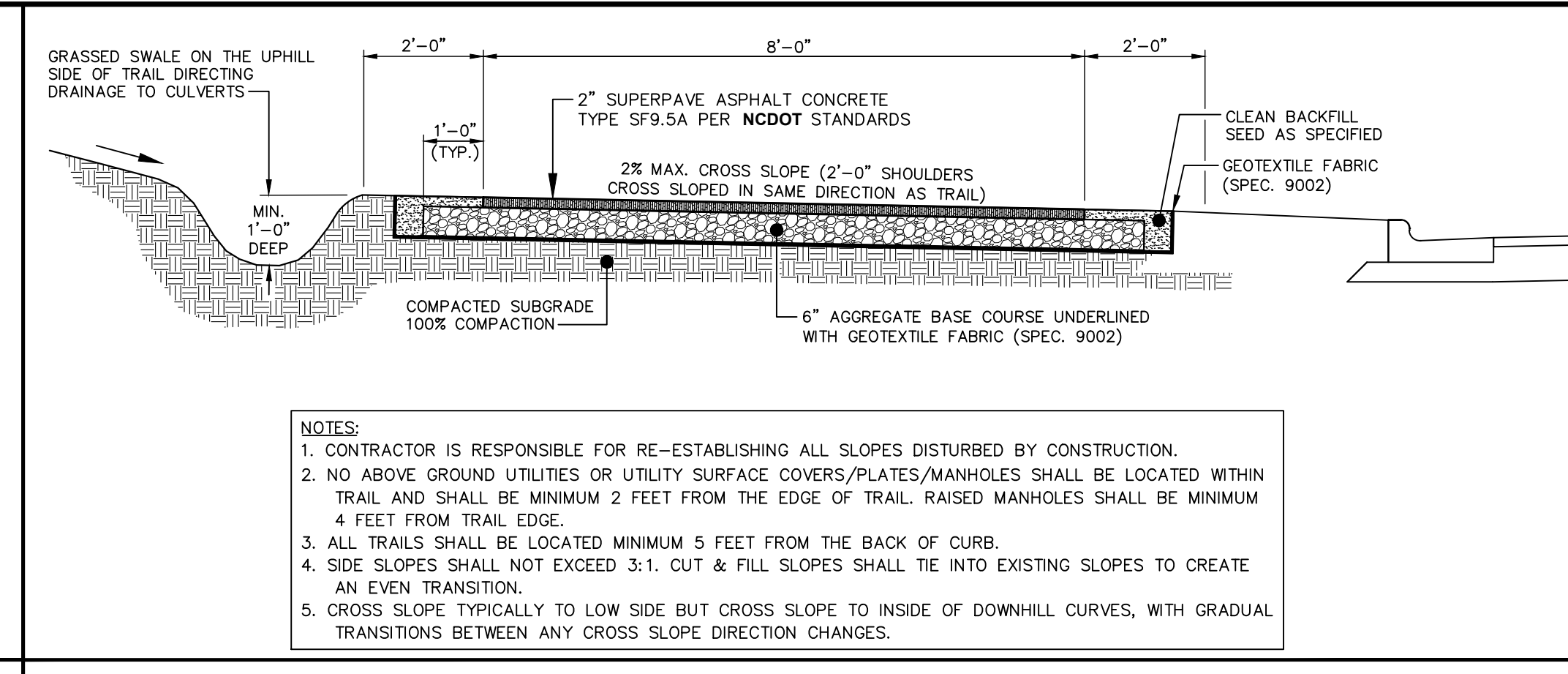
STANDARD 10-FT/STREET-SIDE TRAIL ASPHALT GREENWAY TRAIL



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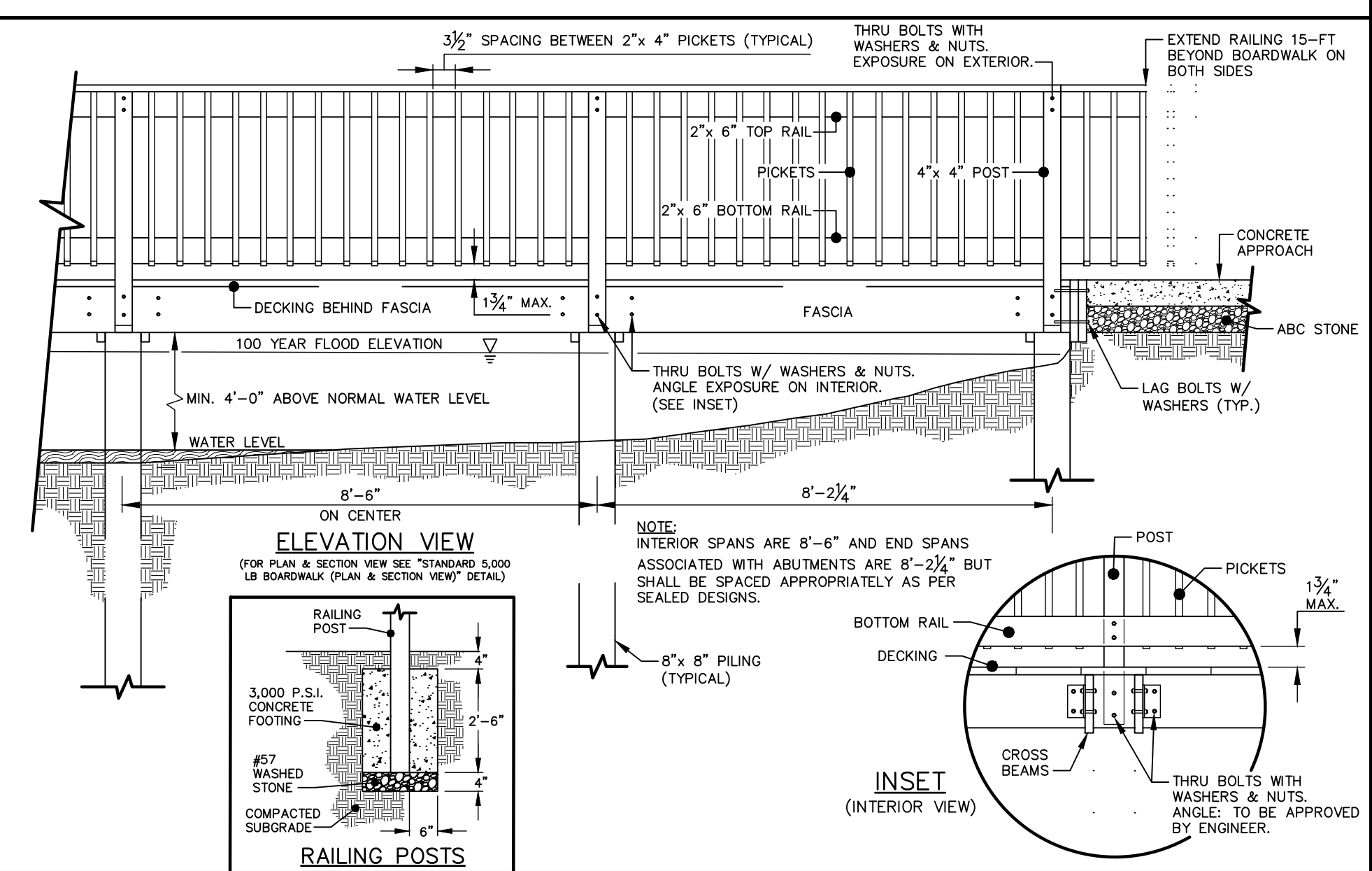
STANDARD 10-FT GREENWAY TRAIL



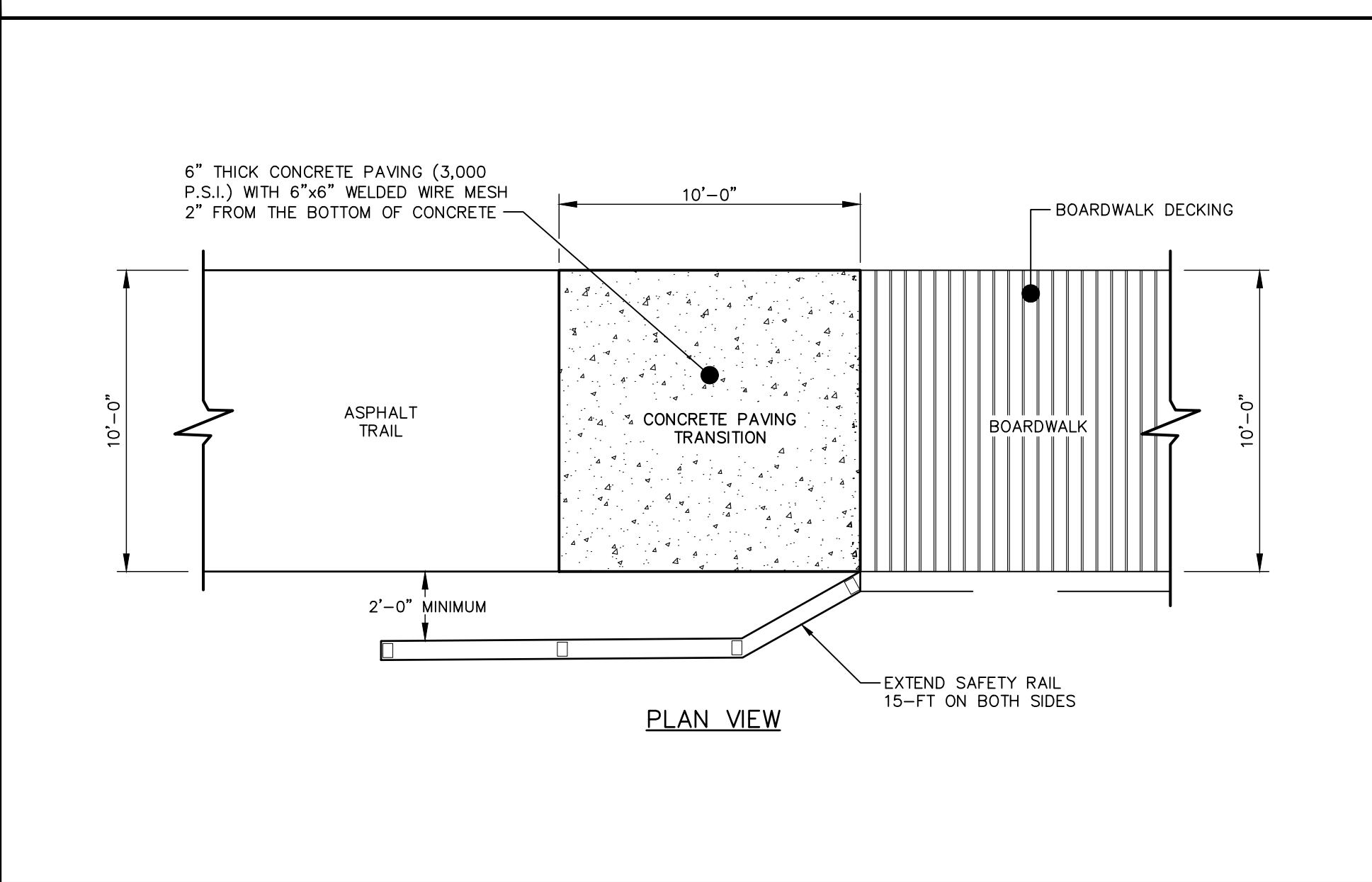
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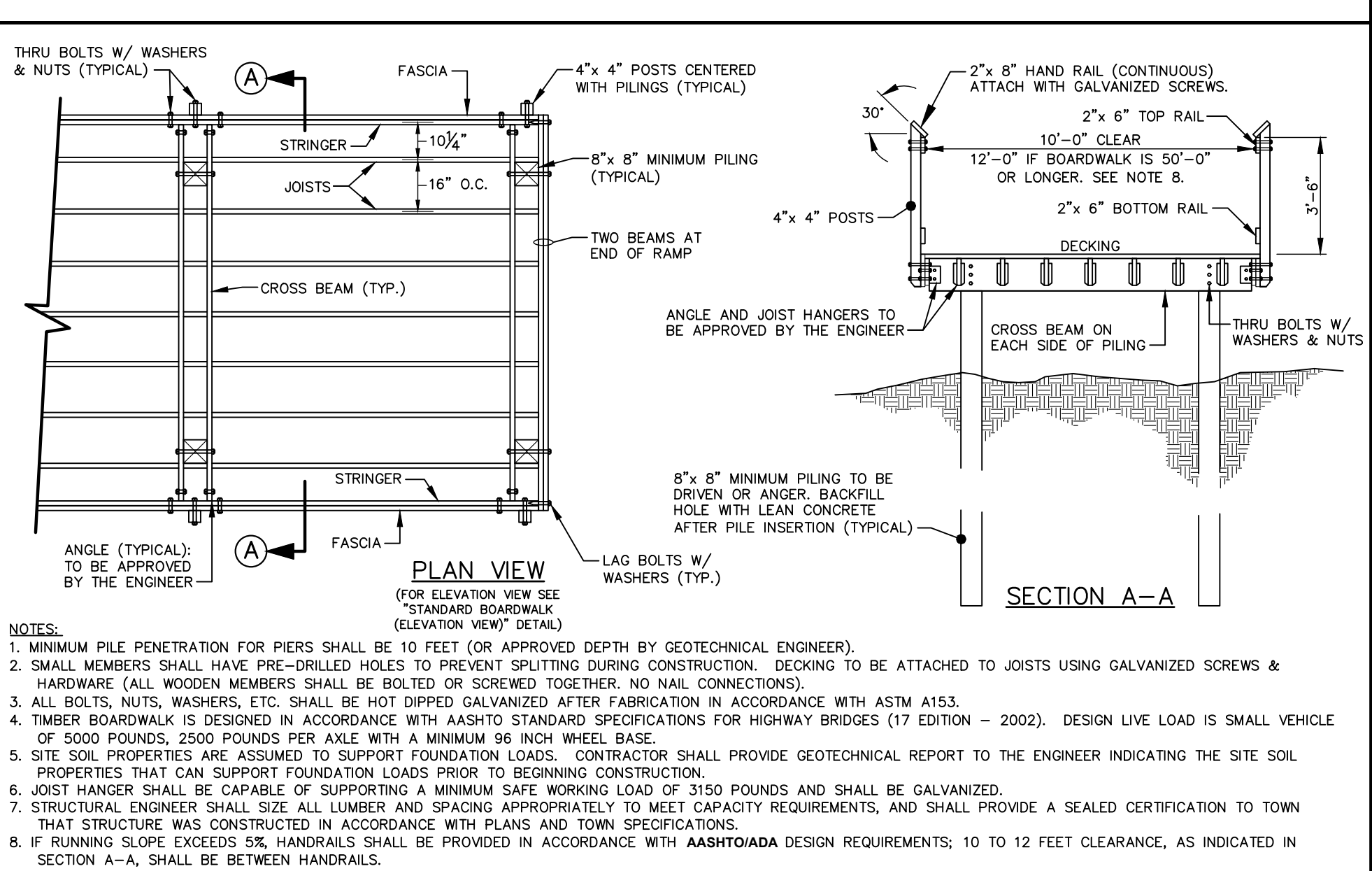
STANDARD 8-FT ROADWAY TRAIL



STANDARD BOARDWALK (ELEVATION VIEW)



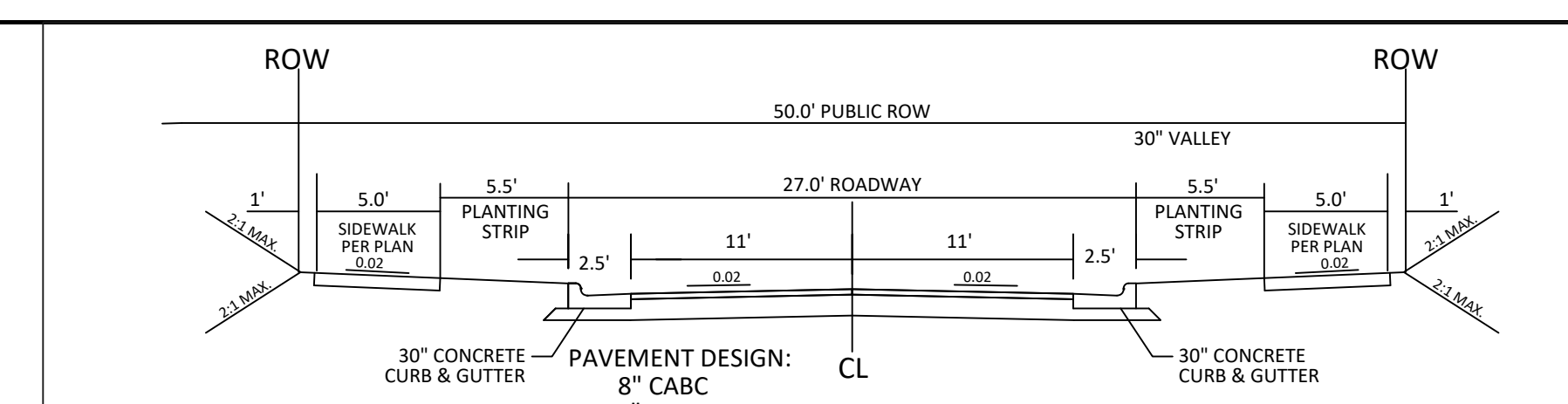
STANDARD 5,000 LB BOARDWALK APPROACH



STANDARD 5,000 LB BOARDWALK (PLAN & SECTION VIEW)

NOTES:

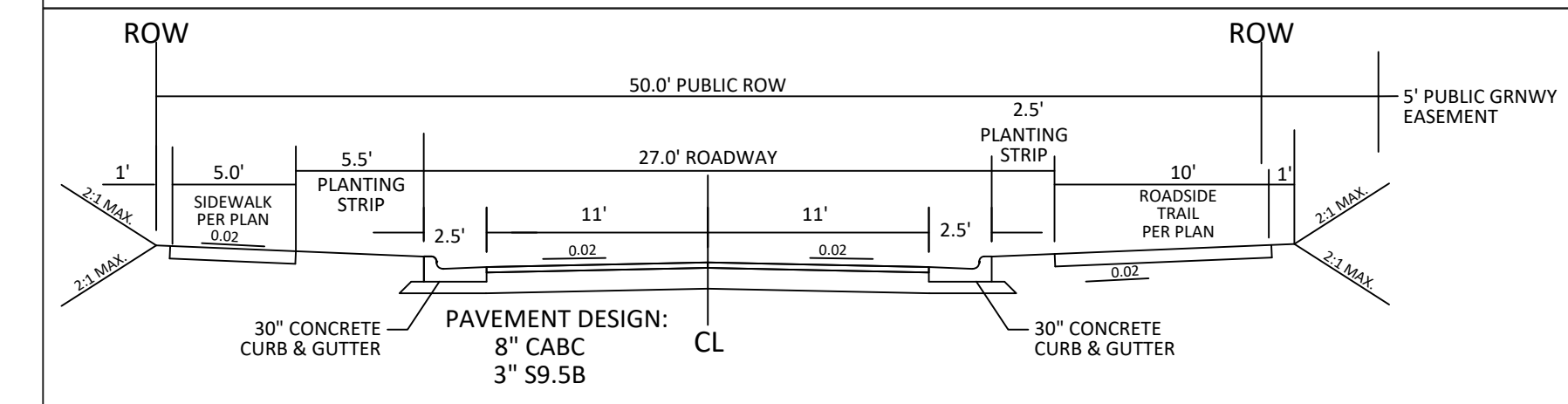
- MINIMUM PILE PENETRATION FOR PIERS SHALL BE 10 FEET (OR APPROVED DEPTH BY GEOTECHNICAL ENGINEER).
- SMALL MEMBERS SHALL HAVE PRE-DRILLED HOLES TO PREVENT SPLITTING DURING CONSTRUCTION. DECKING TO BE ATTACHED TO JOISTS USING GALVANIZED SCREWS & HARDWARE (ALL WOODEN MEMBERS SHALL BE BOLTED OR SCREWED TOGETHER. NO NAIL CONNECTIONS).
- ALL BOLTS, NUTS, WASHERS, ETC. SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153.
- TIMBER BOARDWALK IS DESIGNED IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (17 EDITION - 2002). DESIGN LIVE LOAD IS SMALL VEHICLE OF 5000 POUNDS, 2500 POUNDS PER AXLE WITH A MINIMUM 96 INCH WHEEL BASE.
- SITE SOIL PROPERTIES ARE ASSUMED TO SUPPORT FOUNDATION LOADS. CONTRACTOR SHALL PROVIDE GEOTECHNICAL REPORT TO THE ENGINEER INDICATING THE SITE SOIL PROPERTIES THAT CAN SUPPORT FOUNDATION LOADS PRIOR TO BEGINNING CONSTRUCTION.
- JOIST HANGER SHALL BE CAPABLE OF SUPPORTING A MINIMUM SAFE WORKING LOAD OF 2150 POUNDS AND SHALL BE GALVANIZED.
- STRUCTURAL ENGINEER SHALL SIZE ALL LUMBER AND SPACING APPROPRIATELY TO MEET CAPACITY REQUIREMENTS, AND SHALL PROVIDE A SEALED CERTIFICATION TO TOWN THAT STRUCTURE WAS CONSTRUCTED IN ACCORDANCE WITH PLANS AND TOWN SPECIFICATIONS.
- IF RUNNING SLOPE EXCEEDS 5%, HANDRAILS SHALL BE PROVIDED IN ACCORDANCE WITH AASHTO DESIGN REQUIREMENTS; 10 TO 12 FEET CLEARANCE, AS INDICATED IN SECTION A-A, SHALL BE BETWEEN HANDRAILS.



27' B-B ON A 50' R/W TYPICAL SECTION

NOTE:

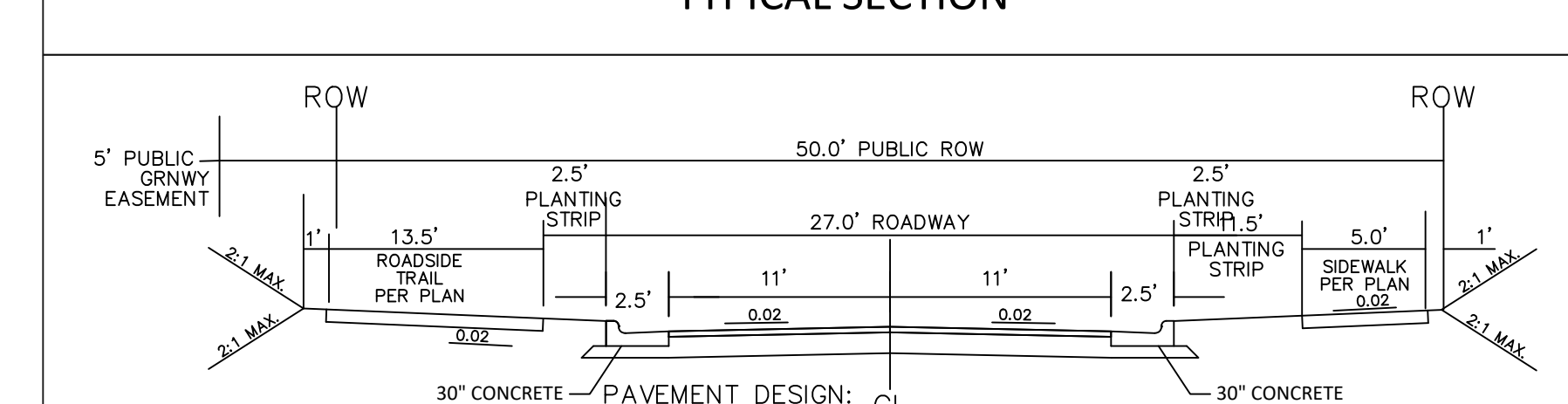
- NORMAL CROWN OF 0.02 UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.
- ASPHALT WILL BE INSTALLED AT A MIN. 1.5" LIFTS.



27' B-B ON A 50' R/W TYPICAL SECTION

NOTE:

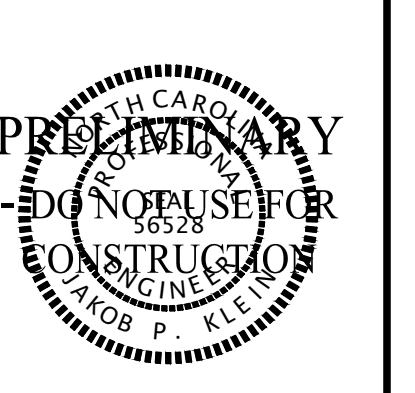
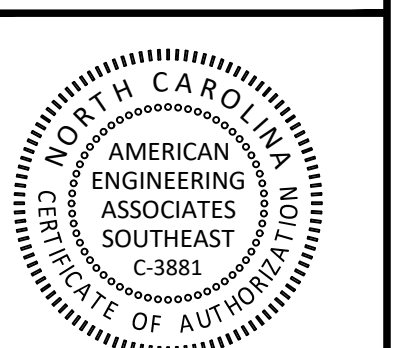
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27' B-B ON A 50' R/W TYPICAL SECTION

NOTE:

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- ASPHALT WILL BE INSTALLED AT A MIN. 1.5" LIFTS.



NO.	DATE	REVISION
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWINGS SUBMITTAL #1

STIPULATION FOR REUSE

THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE, NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

THE PRESERVE AT MOODY FARM CID-24-09 ROLESVILLE ROAD WAKE COUNTY, NC

JOB NUMBER: 21-002
 CHECKED BY: JK
 DRAWN BY: RC & SM
 DATE: 02/03/2025
 SHEET TITLE: SITE DETAILS
 SHEET NO.: CD16

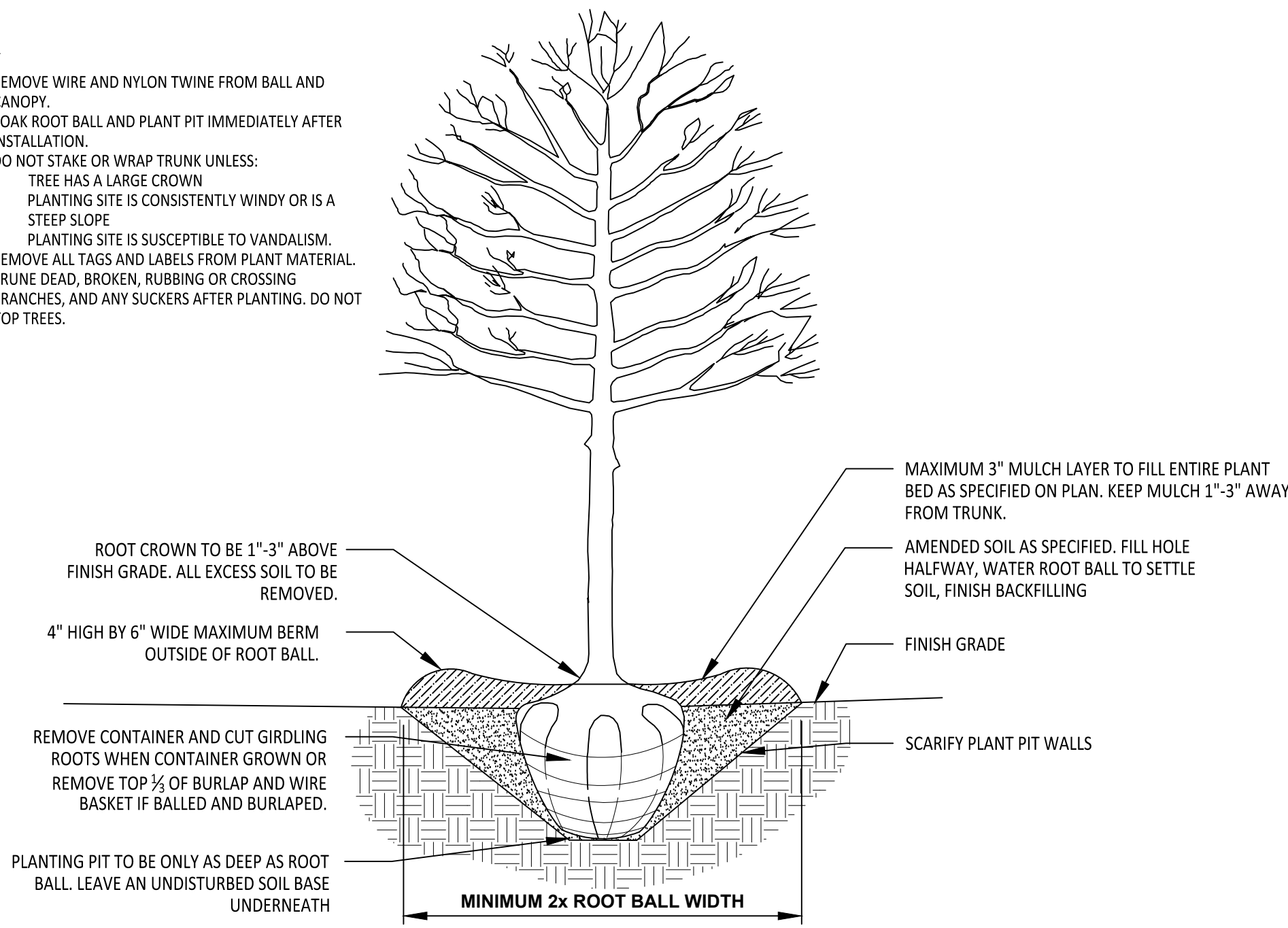


February 3, 2025 Z:\web\100_Moody_Development\Draw\B210003\Draw_Working\Draw\Construction\Set\CD16 Project Details.rvt

PLANT DETAILS

NOTES

- REMOVE WIRE AND NYLON TWINE FROM BALL AND CANOPY.
- SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.
- DO NOT STAKE OR WRAP TRUNK UNLESS:
 - TREE HAS A LARGE CROWN
 - PLANTING SITE IS CONSISTENTLY WINDY OR IS A STEEP SLOPE
 - PLANTING SITE IS SUSCEPTIBLE TO VANDALISM.
- REMOVE ALL TAGS AND LABELS FROM PLANT MATERIAL.
- PRUNE DEAD, BROKEN, RUBBING OR CROSSING BRANCHES, AND ANY SUCKERS AFTER PLANTING. DO NOT TOP TREES.



ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004)

FOR EXAMPLE:	CALIPER	HEIGHT (RANGE)	MAX. HEIGHT	MIN. ROOT BALL DIA.	MIN. ROOT BALL DEPTH
	2"	12'-14'	16'	24"	16"
	3"	14'-16'	18'	32"	21"

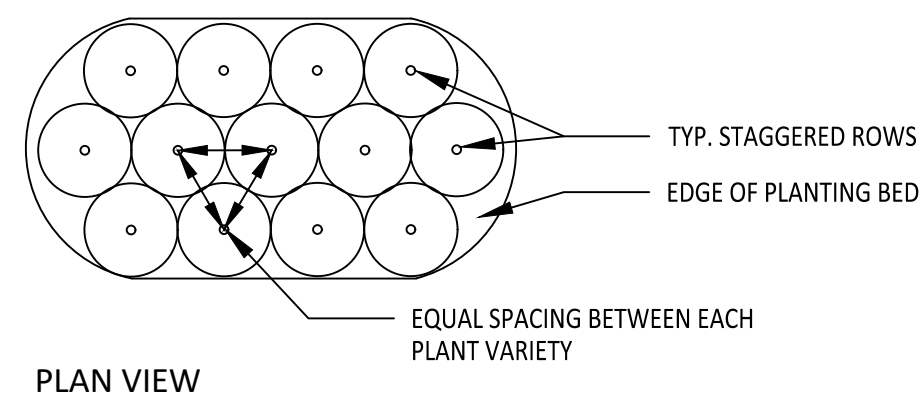
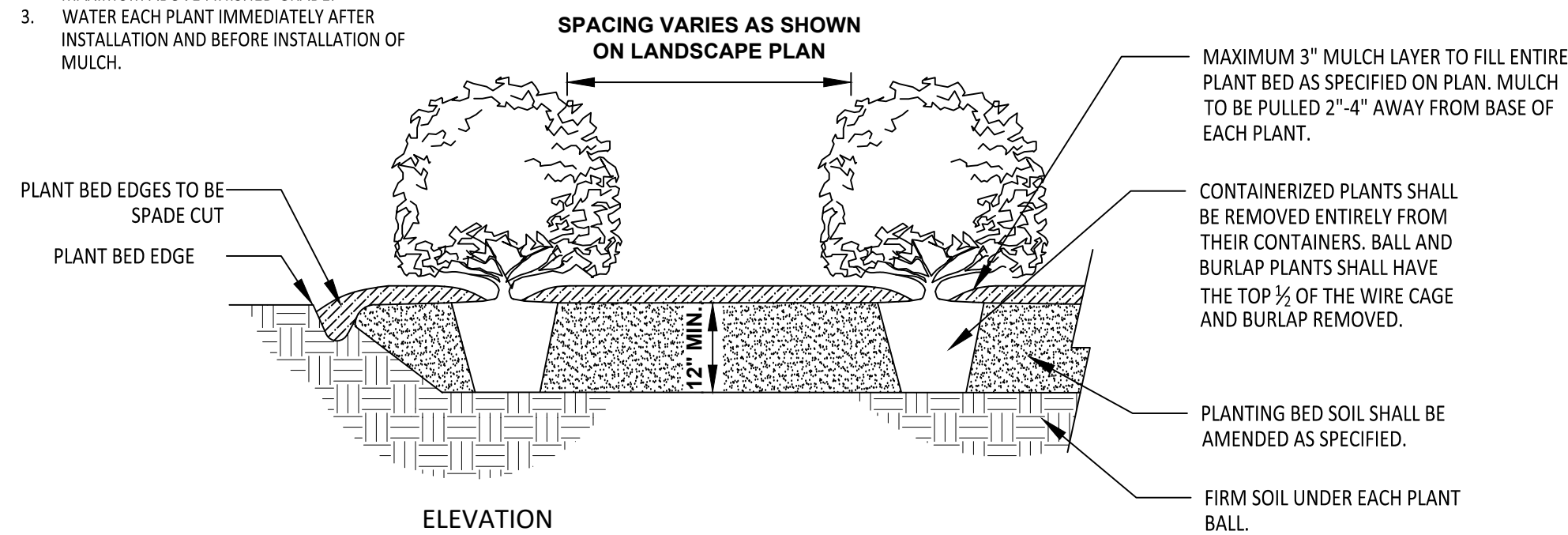
TYPICAL TREE PLANTING

(FOR SINGLE AND MULTI-STEM TREES)

NOT TO SCALE

NOTES

- SCARIFY ROOT MASS OF CONTAINERIZED PLANTS.
- PLANT ROOT BALL SHOULD BE INSTALLED 1"-3" MAXIMUM ABOVE FINISHED GRADE.
- WATER EACH PLANT IMMEDIATELY AFTER INSTALLATION AND BEFORE INSTALLATION OF MULCH.



TYPICAL SHRUB PLANTING

NOT TO SCALE

PLANT NOTES

PLANT INSTALLATION & MAINTENANCE NOTES:

- ALL LANDSCAPING SHALL BE OF NURSERY STOCK QUALITY AND SHALL BE INSTALLED TO ACCEPTED NC LANDSCAPE CONTRACTOR STANDARDS.
- ALL LANDSCAPING SHALL BE ADAPTABLE TO CLIMATIC CONDITIONS OF THE AREA.
- LARGE TREES SHOULD NOT BE PLANTED WITHIN EASEMENTS AND A MINIMUM OF 6' FROM UTILITY LINES, UNLESS OTHERWISE SPECIFIED BY REVIEWING AGENCY. SHRUBS MAY BE PLANTED IN EASEMENTS, BUT A MINIMUM OF 3' FROM UTILITY LINES, UNLESS OTHERWISE SPECIFIED BY REVIEWING AGENCY.
- ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION.
- ALL LANDSCAPING SHALL AT ALL TIMES PRESENT A HEALTHY, NEAT, CLEAN, ORDERLY, DISEASE-FREE AND PEST-FREE APPEARANCE.
- ALL LANDSCAPING SOIL AND FILL SHALL BE FREE FROM WEEDS, REFUSE, AND DEBRIS AT ALL TIMES.
- EXCESS SOIL SHALL BE DISPOSED OF IN A LEGAL MANNER.
- ANY DEAD PLANT MATERIAL OR MATERIAL THAT FAILS TO SHOW HEALTHY GROWTH MUST BE REMOVED WITHIN 30 DAYS.
- REPLACEMENT OF REMOVED PLANT MATERIAL MUST TAKE PLACE WITHIN 90 DAYS OF REMOVAL OR NOTIFICATION BY THE TOWN, WHICHEVER OCCURS FIRST.
- ANY REPLACEMENT PLANT MATERIAL MUST MEET THE SIZE AND OTHER CHARACTERISTICS OF NEWLY PLANTED MATERIAL.
- IF USING STAKES AND GUYS SUCH SUPPORTS SHALL BE DESIGNED SO AS TO PROTECT TREES AND SHRUBS FROM INJURY. TREES AND SHRUBS SHALL BE FASTENED TO THE SUPPORT WITH AN ACCEPTABLE COMMERCIAL TREE TIE OF PLASTIC OR HOSE-COVERED WIRE. AFTER THE WARRANTY PERIOD HAS ENDED, STAKES AND GUYS SHALL BE REMOVED.
- CONTRACTOR IS RESPONSIBLE TO CONTACT MISS UTILITIES (811) 48 HOURS PRIOR TO COMMENCEMENT OF WORK. CONTACT LANDSCAPE ARCHITECT IF FIELD CONFLICTS/DISCREPANCIES ARISE.
- CONTRACTOR RESPONSIBLE TO VERIFY PLANT COUNTS. PLANTING PLAN SHALL GOVERN IN THE CASE OF A CONFLICT.
- ALL PLANTS SHALL MEET OR EXCEED STANDARDS AS DETERMINED BY THE AMERICAN STANDARD OF NURSERY STOCK.
- CONTRACTOR SHALL WARRANTY ALL PLANTS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- WHEN POSSIBLE, PLANTING SHALL BE INSTALLED BETWEEN SEPTEMBER 1 - JUNE 30TH AND IN FAVORABLE WEATHER CONDITIONS. WHEN PLANTING MUST BE PERFORMED OUTSIDE OF SPECIFIED DATES, PLANTS MUST BE WATERED ON A REGULAR BASIS TO ENSURE VIABILITY.
- PLANT VARIETIES, SIZES AND LAYOUT SHALL CONFORM ACCURATELY TO THE LANDSCAPE PLAN. CONTACT LANDSCAPE ARCHITECT FOR FIELD CONFLICTS.
- DISTURBED AREAS SHALL BE SEEDED ACCORDING TO THE NOTES FOUND ON THIS PAGE.
- PLANT SUBSTITUTIONS SHALL BE BROUGHT TO THE ATTENTION OF AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- MULCH USED ON-SITE SHALL BE OF A NON-DYED, NATURAL HARDWOOD VARIETY TO BE INSTALLED AT A MAXIMUM DEPTH OF 3", MINIMUM DEPTH OF 2".

GENERAL NOTES:

- LOCATION OF STREET TREES MAY VARY DUE TO PROPOSED DRIVEWAYS. CONTRACTOR SHALL COORDINATE BETWEEN THE PROPOSED STREET TREES AND DRIVEWAYS. ENSURE A MINIMUM SPACING OF 15' BETWEEN SMALL STREET TREES, 25' BETWEEN MEDIUM STREET TREES, AND 35' BETWEEN LARGE STREET TREES IS MAINTAINED.

TOPSOIL / PLANTING MIX MINIMUM REQUIREMENTS:

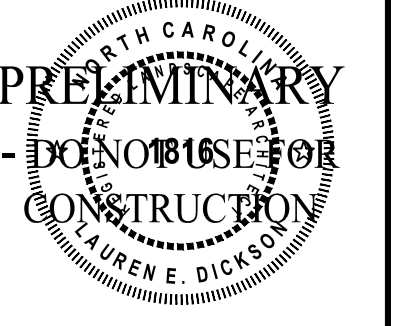
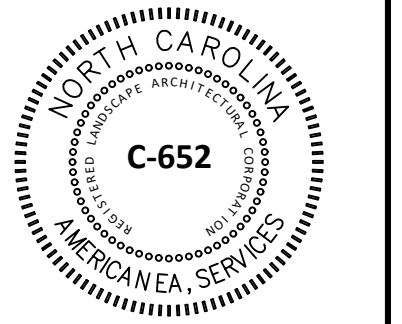
- TOPSOIL/PLANTING MIX SHOULD BE NATURAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHOULD BE UNIFORM COMPOSITION THROUGHOUT, WITH ADMIXTURE OF SUBSOIL. IT SHOULD BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS AND OTHER EXTRANEIOUS MATTER. TOPSOIL SHOULD NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
- TOPSOIL/PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF PH 5.5-7.0 AND THE FOLLOWING COMPOSITION:

CLAY (RED CLAY, WELL PULVERIZED)	MINIMUM 10%; MAXIMUM 35%
COMPOST*/ORGANIC	MINIMUM 5%; MAXIMUM 10%
SILT	MINIMUM 30%; MAXIMUM 50%
COARSE SAND (FREE OF ROCKS, 0.5 TO 1.0 MM F)	MINIMUM 30%; MAXIMUM 45%
- ORGANIC MATERIAL SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPOSITION PROCESS
- RECOMMENDATIONS:

CALCIUM	55 - 80%
MAGNESIUM	10 - 30%
POTASSIUM	5 - 8%

SEEDING SCHEDULE FOR LAWNS & SLOPES (MAXIMUM 3:1):

DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE AND ABRUZZI RYE OR ANNUAL RYE	300 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE OR HARD FESCUE	300 LBS/ACRE
MAR 1 - JUL 15	HULLED COMMON BERMUDA GRASS OR HYBRID BERMUDA GRASS OR CENTIPEDE GRASS OR ZOYSIA GRASS OR ST. AUGUSTINE GRASS	200 LBS/ACRE
APR 15 - JUN 30	WEEPING LOVE GRASS OR BAHIA GRASS	25 LBS/ACRE
JUL 1 - AUG 15	TALL FESCUE AND *** BROWNTOP MILLET *** OR SORGHUM-SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE



NO.	DATE	REVISION:
1	02/03/2025	CONSTRUCTION INFRASTRUCTURE DRAWING SUBMITTAL #1

STIPULATION FOR REUSE

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THE PRESERVE
AT
MOODY FARM
CID-24-09
ROLESVILLE ROAD
WAKE COUNTY, NC

JOB NUMBER: 21-002
CHECKED BY: JK
DRAWN BY: RC & SM
DATE: 02/03/2025

SHEET TITLE:
PLANTING NOTES AND DETAILS

SHEET NO.:
L3

<p>Public Sewer Collection / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit # _____</p>	<p>Public Water Distribution / Extension System</p> <p>The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit # _____</p>
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*** 3 Days Before Digging ***
811 or 1-800-632-4949
Remote Ticket Entry
<http://nc811.org/remoteticketentry.htm>