

CITY OF WILSON

LOWER BLOOMERY SWAMP SEWER IMPROVEMENTS

WILSON COUNTY, NORTH CAROLINA

SEPTEMBER, 2022



CITY OF WILSON

MAYOR:

CARLTON L. STEVENS

COUNCIL MEMBERS:

GILLETTIA MORGAN
MICHAEL S. BELL
WILLIAM THOMAS FYLE
JAMES M. JOHNSON, III
DONALD I. EVANS
LOGAN T. LILES
DERRICK D. CREECH

CITY MANAGER:

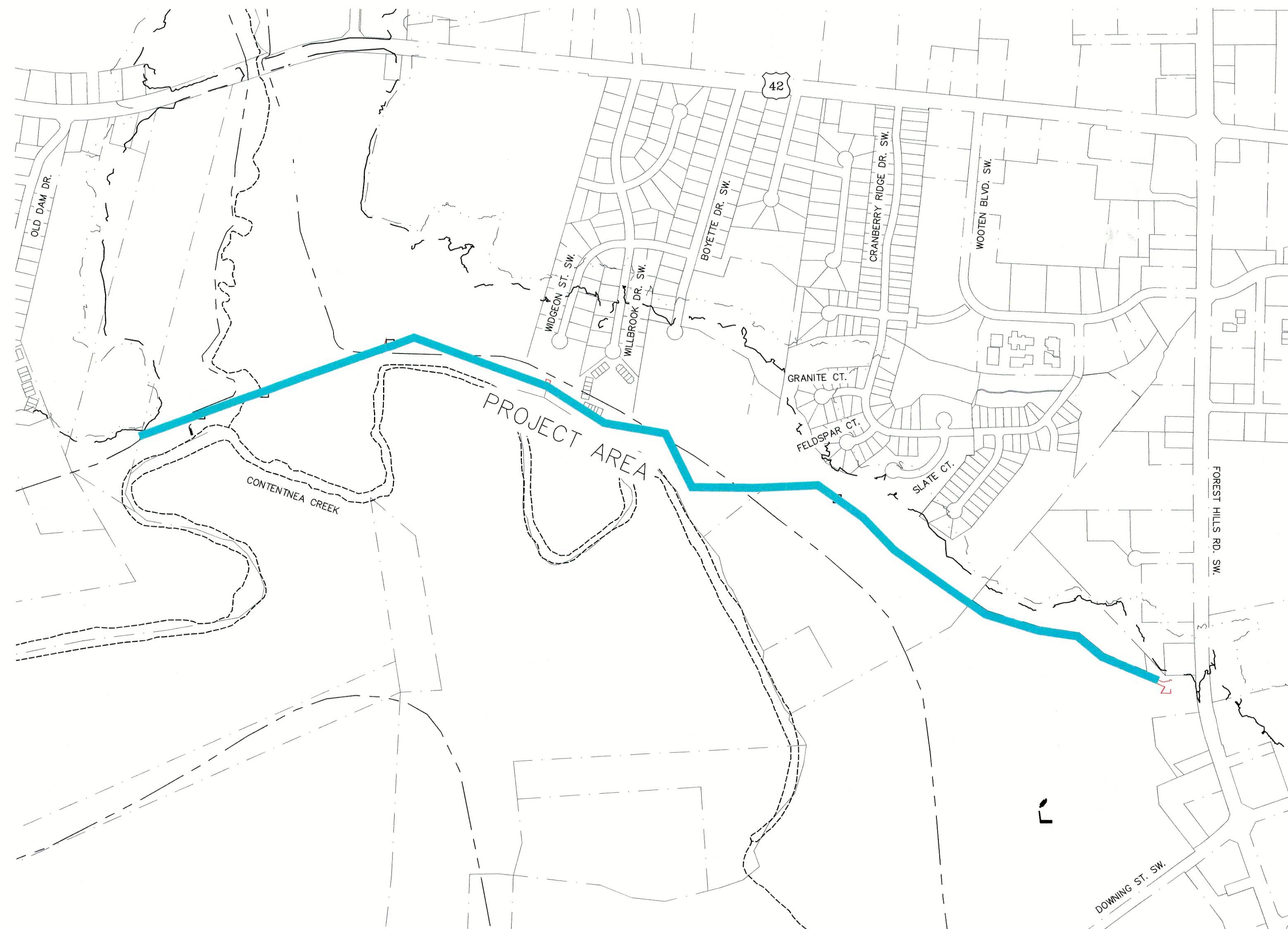
GRANT GOINGS

DIRECTOR OF
PUBLIC WORKS:

BILL BASS IV, PE

ASSISTANT DIRECTOR
OF PUBLIC WORKS:

KYLE F. MANNING, PE



LOCATION MAP
Scale 1" = 500'

GENERAL

- | SHT | SHEET TITLE |
|-----|--|
| 1. | COVER SHEET |
| 2. | INDEX, GENERAL NOTES AND ABBREVIATIONS |
| 3. | SHEET INDEX |
| 3A. | EROSION CONTROL OVERALL PLAN |
| 4. | CONTENTNEA LIFE STATION (EXISTING) |

GRAVITY SEWER

- | SH | SHEET TITLE | STATIONING |
|-----|---|----------------|
| 5. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 0+00 TO 13+50 |
| 6. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 13+50 TO 27+00 |
| 7. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 27+00 TO 40+50 |
| 8. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 40+50 TO 54+00 |
| 9. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 54+00 TO 67+50 |
| 10. | LOWER BLOOMERY SWAMP PLAN & PROFILE | 67+50 TO 73+50 |
| 11. | MARBLE CT. / SLATE CT. LATERAL | |
| 12. | FELDSPAR CT. / BOYETTE DR. LATERAL | |
| 13. | WIDGEON DR/ MILLBROOK TOWNHOME LATERAL | |
| 14. | GREENFIELD SCHOOL/ UPPER BLOOMERY SWAMP LATERAL | |

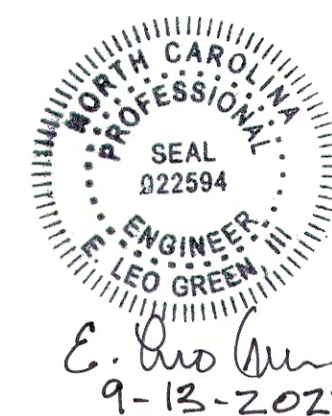
NPDES NOTES

- | SH | SHEET TITLE |
|-----|--------------------------------|
| N-1 | NPDES NCG01 CONSTRUCTION NOTES |
| N-2 | NPDES NCG01 CONSTRUCTION NOTES |

DETAILS

- | SH | SHEET TITLE |
|-----|-------------|
| D-1 | DETAIL |
| D-2 | DETAIL |
| D-3 | DETAIL |
| D-4 | DETAIL |
| D-5 | DETAIL |
- GRAND TOTAL: 22 SHEETS

Green Engineering
NC FIRM LICENSE: P-0115
WATER, WASTEWATER, SURVEYING
PLANNING, PROJECT MANAGEMENT

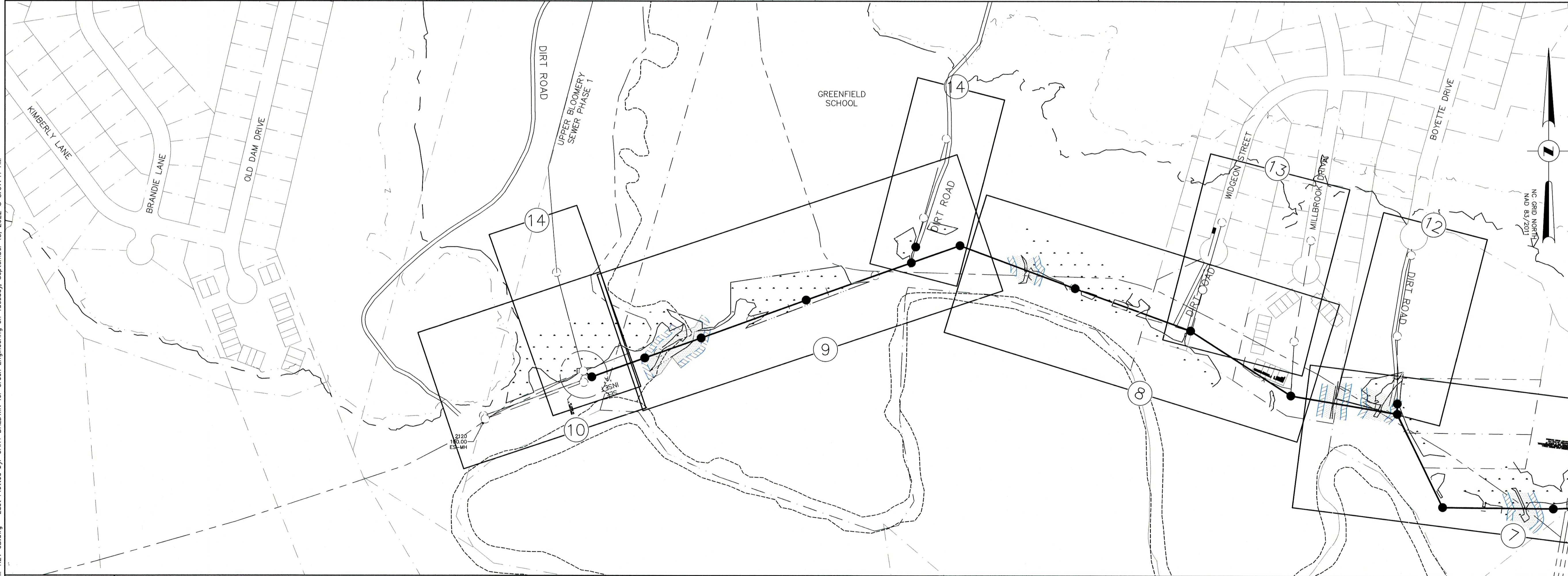
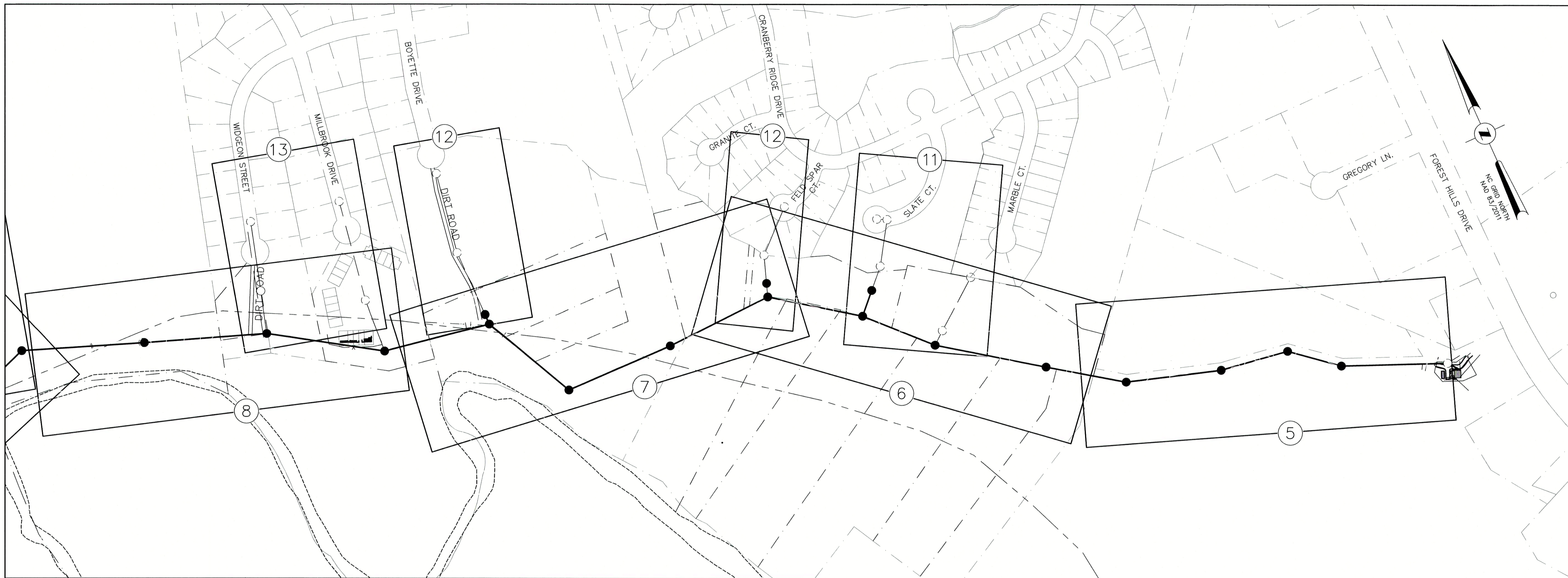


303 GOLDSBORO ST. E., P.O. BOX 609, WILSON, NC 27893
TEL 252.237.5365 FAX 252.243.7489 office@greeneng.com

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CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS
WILSON COUNTY, NORTH CAROLINA

RELEASED FOR CONSTRUCTION



GENERAL

SHT SHEET TITLE

1. COVER SHEET
2. INDEX, GENERAL NOTES AND ABBREVIATIONS
3. SHEET INDEX
- 3A. EROSION CONTROL OVERALL PLAN
4. CONTENTNEA LIFE STATION (EXISTING)

GRAVITY SEWER

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NPDES NOTES

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- N-2 NPDES NCG01 CONSTRUCTION NOTES

DETAILS

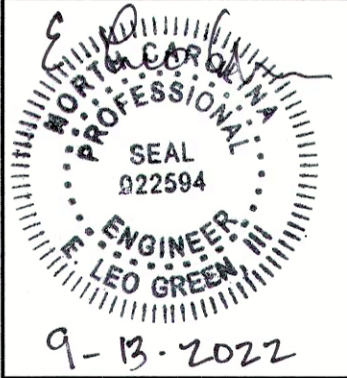
SHT SHEET TITLE

- D-1 DETAIL
- D-2 DETAIL
- D-3 DETAIL
- D-4 DETAIL
- D-5 DETAIL

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GREEN ENGINEERING
 WATER, WASTEWATER, SURVEYING, PLANNING, PROJECT MANAGEMENT
 NORTH CAROLINA FIRM LICENSE: P-0115
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CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS
 CITY OF WILSON
 WILSON COUNTY, NORTH CAROLINA

SHEET INDEX

REVISION	DATE	BY

DATE: SEPTEMBER 2022
 GRAPHIC SCALE

 SCALE IN FEET

CLIENT CODE: WILSO
 JOB NUMBER: 22-140
 FIELD BOOK: XXX
 CADFILE: 22140-BM-REV 08.dwg
 ASCII FILE:
 LAST MODIFIED: 13-Sep-22
 MODIFIED BY: GLB
SHEET NO. 3 OF 22



TOTAL AREA OF DISTURBANCE = 6.70 AC

LEGEND

- LIMITS OF DISTURBANCE
- SILT FENCE
- SILT FENCE OUTLET (USE AT LOW SPOTS ALONG SILT FENCE AS NEEDED)
- TEMP. ROCK CHECK DAM
- DEWATERING SILT BAG
- CONCRETE WASHOUT
- STAGING AND STOCKPILE AREAS AS DESCRIBED

EROSION CONTROL CONSTRUCTION SEQUENCE (GRAVITY SEWER MAINS)

1. OBTAIN GRADING PERMIT PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION OF PROJECT. CONTACT NORTH CAROLINA 811 (NC811).
3. CONTRACTOR SHALL INSTALL PROJECT CONSTRUCTION BOX TO HOLD ASSOCIATED PERMITS AND INSTALL PROJECT RAIN GAUGE NEARBY.
4. CONTRACTOR SHALL MAINTAIN AN ACTIVITY LOG CONCERNING GRADING OPERATIONS, WHICH INCLUDES TRENCHING AND EROSION CONTROL MEASURES AND RECORDING RAINFALL DATA. THE OWNER'S INSPECTOR OR PROJECT REPRESENTATIVE SHALL FILL OUT THE SELF-INSPECTION FORM FOR THE PROJECT, WHICH IS TO REMAIN ON PROJECT SITE AT ALL TIMES.
5. CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH ALL INTERESTED PARTIES IN ATTENDANCE (CITY OF WILSON, CONTRACTOR, NCEQE, DUKE ENERGY, ETC.)
6. CONTACT THE OWNER AND NCEQE A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION COMMENCEMENT.
7. INSTALL PERIMETER EROSION CONTROL DEVICES FIRST: INSTALL TEMPORARY STONE CONSTRUCTION ENTRANCES, SILT FENCING, SILT FENCE OUTLETS, ROCK CHECK DAMS, SILT MATS, FILTER BERMS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. INSTALL TIMBER MATS AS NEEDED IF NECESSARY TO PROVIDE ACCESS ALONG EXISTING UTILITY EASEMENTS.
8. BEGIN CLEARING & GRUBBING ACTIVITIES ONLY WHERE REQUIRED. ALL STORM DRAINAGE STRUCTURES RECEIVING STORMWATER RUNOFF EITHER FROM OR THROUGH THE PROJECT AREA SHALL BE PROTECTED SUCH THAT SEDIMENT LADEN RUNOFF DOES NOT ENTER THESE STRUCTURES.
9. INSTALL SANITARY SEWER MAINS AS SHOWN ON DRAWINGS AND DETAILED IN PROJECT SPECIFICATIONS. ALL TRENCH DEWATERING SHALL BE PERFORMED THROUGH A SILT BAG INSTALLATION WITH FLOATING INTAKE. REFERENCE SHEET D-2 OF 22 FOR DETAIL. INSTALL CHECK DAMS IMMEDIATELY DOWN GRADE OF CURRENT CONSTRUCTION AREAS AT THE END OF EACH DAY.
10. AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED. LEAVE NO TRENCHES OPEN. CONTRACTOR SHALL PLACE CHECK DAMS IN ALL DITCHES DOWNSTREAM OF THE DAY'S DISTURBANCE.
11. SILT FENCE SHALL BE PLACED DOWNSTREAM OF DISTURBANCE IN AREAS OF SHEET FLOW AND SPILL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH DURING EXCAVATION ACTIVITIES.
12. INSTALL ADDITIONAL TEMPORARY CONSTRUCTION ENTRANCES AS REQUIRED (AS PHASED) ACCORDING TO THE PROJECT EROSION CONTROL PLAN AND THE OVERALL CONSTRUCTION SEQUENCE. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN EACH ENTRANCE ENSURING SEDIMENT DOESN'T TRACK ONTO STREETS AND ROADS.
13. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, TEMPORARY MATTING, DITCH LININGS, ETC. ENSURE SEDIMENT IS CONTAINED AND DOES NOT TRAVEL DOWNSTREAM TO STORM DRAINAGE STRUCTURES OR WATERCOURSES
14. INSPECT ALL EROSION CONTROL MEASURES AFTER EACH SIGNIFICANT RAINFALL EVENT (GREATER THAN 0.25" RAINFALL) AND MAKE REPAIRS AS NECESSARY TO ENSURE COMPLIANCE.
15. ANY DITCHES ERODED OR SCOURED AS A RESULT OF CONSTRUCTION SHALL BE RESTORED TO ORIGINAL FORM, REINFORCED WITH SUITABLE RECP OR IF NECESSARY, STONE LINING, AND SEEDED APPROPRIATELY.
16. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL FOR INSPECTION BY ENVIRONMENTAL INSPECTOR.
17. IF SITE IS APPROVED, REMOVE TEMPORARY CONSTRUCTION ENTRANCES, SILT FENCING AND OUTLETS, FILTER BERMS, ETC., AND SEED OUT ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES (SUCH AS VELOCITY DISSIPATORS) SHOULD BE INSTALLED NOW.
18. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR FINAL SITE INSPECTION BY ENVIRONMENTAL INSPECTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SITE UNTIL 80% GROWTH IS ACHIEVED, OR THE PROJECT SITE IS RELEASED BY THE CITY OF WILSON AND THE NCEQE, UPON FINAL INSPECTION.

EROSION AND SEDIMENTATION CONTROL NARRATIVE

- I. **PROJECT DESCRIPTION**
The purpose of this project is to extend approximately 7,000 linear feet of 24", 14" LF of 8" and 30" LF of 10" PVC/DIP sewer main with 32 manholes and associated appurtenances along Contentnea Creek, near Forest Hill Street. The extended utility will be owned by the City of Wilson. Approximately 7 acres will be disturbed during construction. All the work will be within an existing sewer easement with an additional 10' temporary construction easement in certain locations throughout the project.

The project is scheduled to begin construction in July 2014 with project completion and final stabilization by June 2015. The erosion and sediment control program for this project will include the installation of silt fence and rock check dams, with temporary seeding and permanent seeding and/or sodding of the site.
- II. **EXISTING SITE CONDITIONS**
The proposed site is currently urban/developed and zoned residential. The site mainly drains to the south of the property, flowing into a Contentnea Creek, which is part of the Neuse River Basin.
- III. **ADJACENT PROPERTY**
All adjacent property lines and property Owners are shown on the site plan.
- IV. **SOILS**
The soils at this site is mainly sandy loam with Altavista (AaA) as the predominant soil type.
- V. **EROSION AND SEDIMENT CONTROL MEASURES**

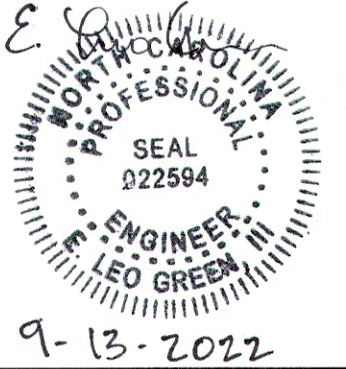
All vegetative and structural erosion and sediment control practices shall be constructed and maintained by the Contractor according to these plans and specifications and the minimum standards of the DEMLR, Land Quality Section. The Contractor shall also follow any additional requirements as outlined by the Project Engineer.

- A. **Structural Practices**
The contractor is responsible for securing a material lay down and stockpile storage area for this contract. As such, the contractor is responsible for the necessary erosion control measures, including but not necessarily limited to, a construction entrance, silt fence, protection of streams/buffers, clean up and restoration of site to the satisfaction of both the owner and the DEMLR, Land Quality Section.
Vehicle wheels shall be clean when leaving the site to prevent the tracking of mud on paved roads.
Construction Road Stabilization: Construction traffic shall be limited to stabilized areas. At a minimum, a temporary gravel construction entrance shall be provided as shown on this drawing.
- B. **Vegetative Practices**
Temporary Seeding: All denuded area or areas to be graded during the construction phases that are not to be brought to final grade within 7 days shall receive temporary seeding within 7 days of completing initial earthwork. Graded slopes and fills shall receive temporary or permanent seeding within the required calendar days after completion of any phase of grading in accordance with the stabilization chart.
Temporary Seeding shall also be used to stabilize finished grade areas if the time of year is outside the specified permanent seeding periods. Temporary seeding shall be in accordance with paragraph V D below.
- C. **Management Strategies**
Perimeter measures are to be installed prior to grubbing or grading.
Stock pile and/or waste areas must be maintained within the limits of the areas protected by the proposed measures and otherwise temporarily seeded if to be left stockpiled over 14 days.
Construction shall be planned so that grading operations can begin and end as quickly as possible.
Silt Fences shall also be installed prior to or as a first step in construction.
The Contractor shall be responsible for the installation and maintenance of all erosion and sediment control practices.
- D. **Vegetative Ground Cover**
Immediately following grading, all areas shall receive either permanent or temporary seeding, as applicable, in accordance with the City of Wilson's seeding specification. See Detail 350.01.

- E. **Seed Bed Preparation**
The soil shall be scarified or otherwise loosened to a depth of not less than 5 inches except as otherwise directed by the Engineer. Clods shall be broken and the top three inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows.
On 2:1 slopes a seedbed preparation will be required that is the same depth as that required on flatter areas, although the degree of smoothness may be reduced from that required on the flatter areas.
Seedbed preparation within two feet of the edge of any pavement shall be limited to a depth of two to three inches.
The preparation of seedbeds shall not be done when the soil is frozen, extremely wet, or when the Engineer determines that it is in an otherwise unfavorable working condition.
Before mulch is applied, the Contractor shall remove and dispose of all exposed stones in excess of one inch in diameter and all roots or other debris which prevent proper contact of the mulch with the soil. Segregation of exposed stone under one inch shall be avoided and, if found, dispersed or disposed of at the direction of the Engineer.
- F. **Maintenance**
1. Reseed and mulch bare spots larger than 9 square feet (limited to 5% maximum of site area.)
2. Maintain all seeded areas until uniform stand is acceptable.
3. If growth is not established by final project inspection, continue specified attention until the stand is acceptable.
- G. **Calculations**
The practice utilized for the proposed site did not require formal calculations. No calculations have been provided.
- VI. **OWNERS ADDRESS**
City of Wilson
Attn: Barry Parks
112 Goldsboro Street East
Wilson, NC 27894
(252) 399-2374
7. Correct and repair all undue settling and erosion within 1 year after final inspection.
8. Remove from the site, all erosion control structures after complete stabilization at end of construction period.
9. Remove silt from sediment pits and from behind check dams when silt is within half depth of the pit or spillway. Dispose of in an area where silt cannot re-enter pit/trap.
10. Place rock from rock check dams and gravel/rip rap filter basins in ditch line as armor protection. Do not dispose of rock. All stone armor protection is to fit contour of channel. Do not dump but handspread.

NEW STABILIZATION TIMEFRAMES (EFFECTIVE AUG. 3, 2011)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

RELEASED FOR CONSTRUCTION



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LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS
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WILSON COUNTY, NORTH CAROLINA

EROSION CONTROL OVERALL PLAN

REVISION	DATE	BY	DATE: SEPTEMBER 2022

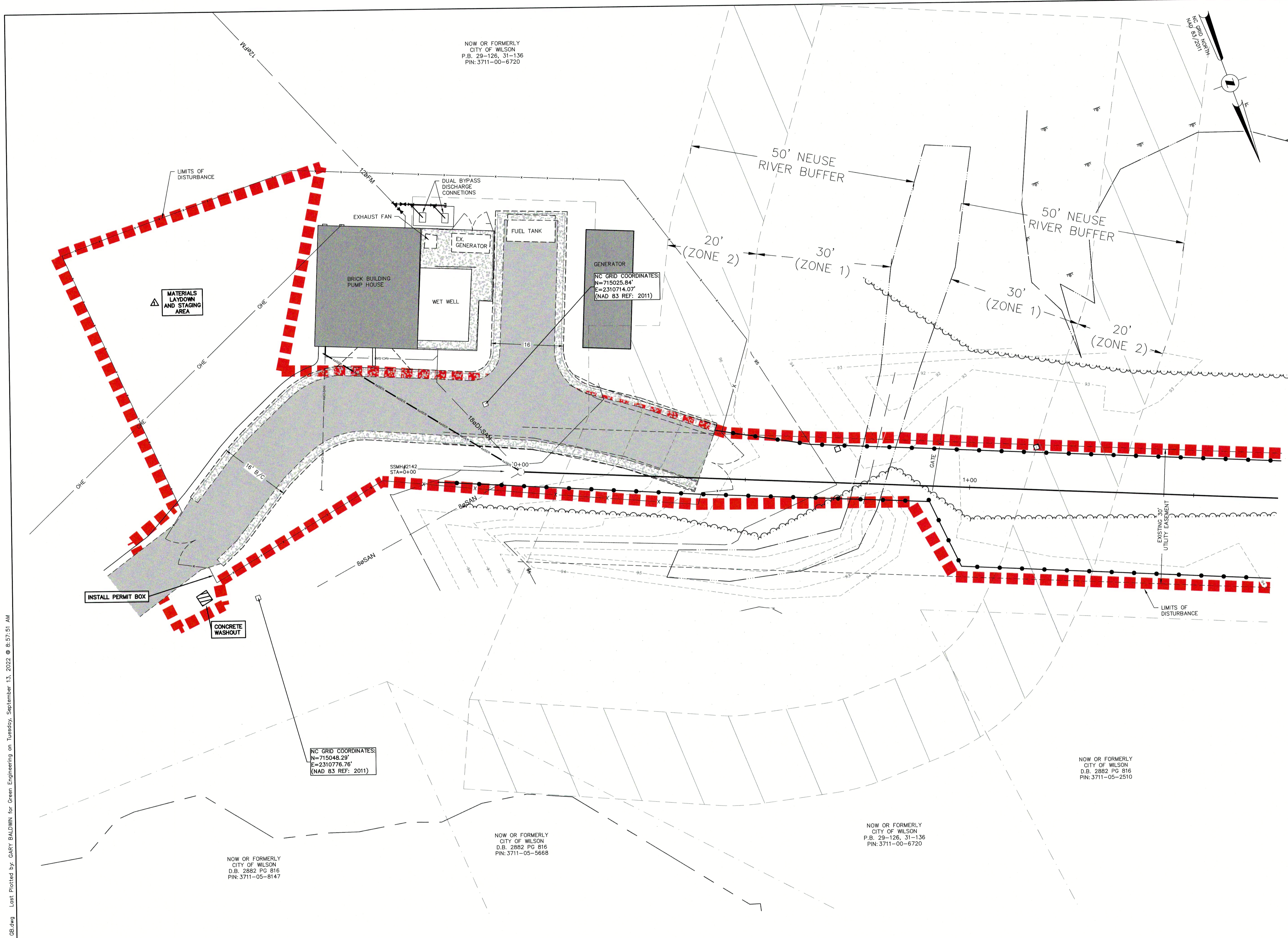
GRAPHIC SCALE
0 150 300 600
SCALE IN FEET

CLIENT CODE: WILSO
JOB NUMBER: 22-140
FIELD BOOK: XXX
CAD FILE: 22140-BM-REV
ASCI FILE:
LAST MODIFIED: 13-Sep-22
MODIFIED BY: GLB

SHEET NO. 3A OF 22

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LEGEND

- 100 --- EXISTING MAJOR CONTOUR
- 101 --- EXISTING MINOR CONTOUR
- --- EXISTING PROPERTY LINE
- --- EXISTING RIGHT-OF-WAY
- --- PROPOSED RIGHT-OF-WAY
- --- EXISTING CENTERLINE
- --- EXISTING EASEMENT
- --- PROPOSED EASEMENT
- --- EXTRATERRITORIAL JURISDICTION
- --- EXISTING BUFFER
- --- 1% ANNUAL CHANCE FLOOD
- --- EXISTING EDGE OF PAVEMENT
- --- LIMITS OF DISTURBANCE
- --- TEMPORARY BENCH MARK
- --- EXISTING WATER LINE
- --- EXISTING WATER METER
- --- PROP. AIR RELEASE VALVE
- --- EXISTING WELL SITE RADIUS
- --- ELEV: 999.9' --- 1% ANNUAL CHANCE FLOODPLAIN
- --- EXISTING SEWER LINE
- --- PROPOSED SEWER LINE
- --- EXISTING SEWER FORCE MAIN
- --- PROPOSED SEWER FORCE MAIN
- --- EXISTING SEWER MANHOLE
- --- PROPOSED SEWER LINE PLUG END
- --- EXISTING SEWER MANHOLE
- --- EXISTING SEWER LINE PLUG END
- --- EXISTING STORM DRAIN LINE
- --- PROPOSED STORM DRAIN LINE
- --- EXISTING STORM DRAIN MANHOLE
- --- EXISTING STORM DRAIN MANHOLE
- --- EXISTING PAVEMENT
- --- EXISTING CONCRETE
- --- EXISTING GRAVEL
- --- ZONE AE
- --- EXISTING GAS LINE
- --- EXISTING OVERHEAD ELECTRIC
- --- PROPOSED BORE & JACK
- --- EXISTING VALVE
- --- EXISTING GAS VALVE
- --- EXISTING RAILROAD TRACKS
- --- EXISTING FENCE LINE
- --- EXISTING TREE LINE
- --- EXISTING WETLANDS LINE
- --- EXISTING ROAD GUARDRAIL
- --- SILT FENCE
- --- SILT FENCE OUTLET
- --- ROCK CHECK DAM
- --- DISSIPATER PAD
- --- FLARED END SECTION
- --- DITCH LINER
- --- CONSTRUCTION ENTRANCE
- --- LIMITS OF DISTURBANCE
- --- CONCRETE WASHOUT
- --- STAGING AND STOCKPILE AREAS AS DESCRIBED
- --- TEMPORARY DIVERSION SWALE

- SEWER NOTES**
- ALL DESIGN & CONSTRUCTION SHALL CONFORM TO THE CITY OF WILSON SPECIFICATIONS, LATEST REVISION.
 - GRAVITY SEWER MUST HAVE A MINIMUM COVER OF FIVE (5) FT IN TRAFFIC AREAS AND THREE (3) FT IN NON-TRAFFIC AREAS PER MANUAL SPECIFICATIONS STANDARDS AND DESIGN.
 - ALL MANHOLES SHALL BE 6' DIA. UNLESS OTHERWISE NOTED ON PLANS.
 - EXISTING 18" GRAVITY SEWER LINE TO BE REPLACED WITH A 24" DIAMETER GRAVITY SEWER PIPE AS SHOWN ON PLANS.
- GENERAL NOTES**
- THE LIMITS OF DISTURBANCE ARE CONFINED BY DISTURBED AREAS WHICH FALL WITHIN PERMANENT EASEMENTS, AND PUBLIC ROAD RIGHT-OF-WAYS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ANY/ALL EXISTING FACILITIES IN THE PROJECT AREA AND PROTECT THOSE FACILITIES DURING CONSTRUCTION. CONTRACTOR TO BE RESPONSIBLE FOR REMOVAL & REPLACEMENT OF THESE FACILITIES, IF DAMAGED.
 - THE CONTRACTOR SHALL PROVIDE A BY-PASS PUMPING PLAN FOR REVIEW & APPROVAL BY THE OWNER/ENGINEER.
- FLOOD NOTES**
- REFERENCE FLOOD INSURANCE RATE MAPS PANEL 3701, MAP NUMBER 3720370100J AND PANEL 3711, MAP NUMBER 3710371100J, BOTH DATED APRIL 16, 2013.
 - FLOOD PLAIN ELEVATION (1% ANNUAL CHANCE) RANGES FROM 99.80 TO 102.00.
 - THE FLOOD PLAIN ELEVATION (1% ANNUAL CHANCE) IS IDENTIFIED AT EACH MANHOLE LOCATION.
 - FLOOD ELEVATIONS REFERENCED ON THIS MAP ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

RELEASED FOR CONSTRUCTION

REVISION	DATE	BY

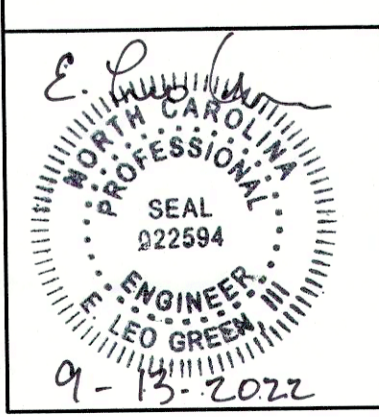
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SHEET NO. 4 OF 22



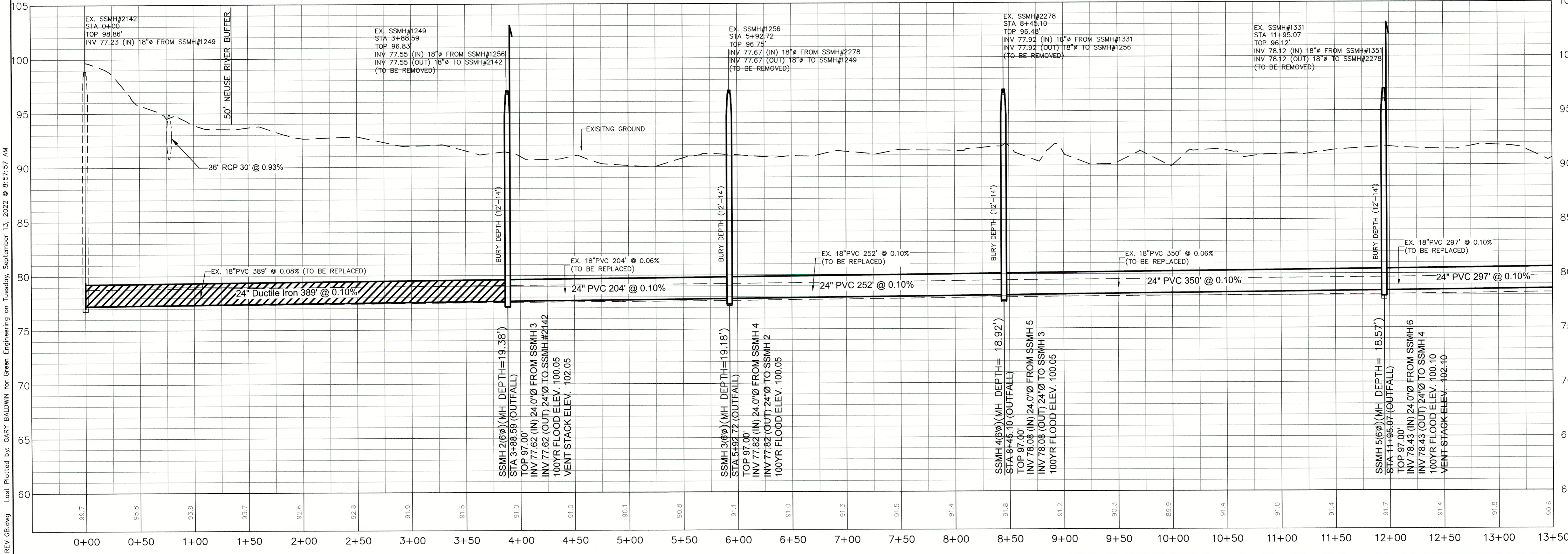
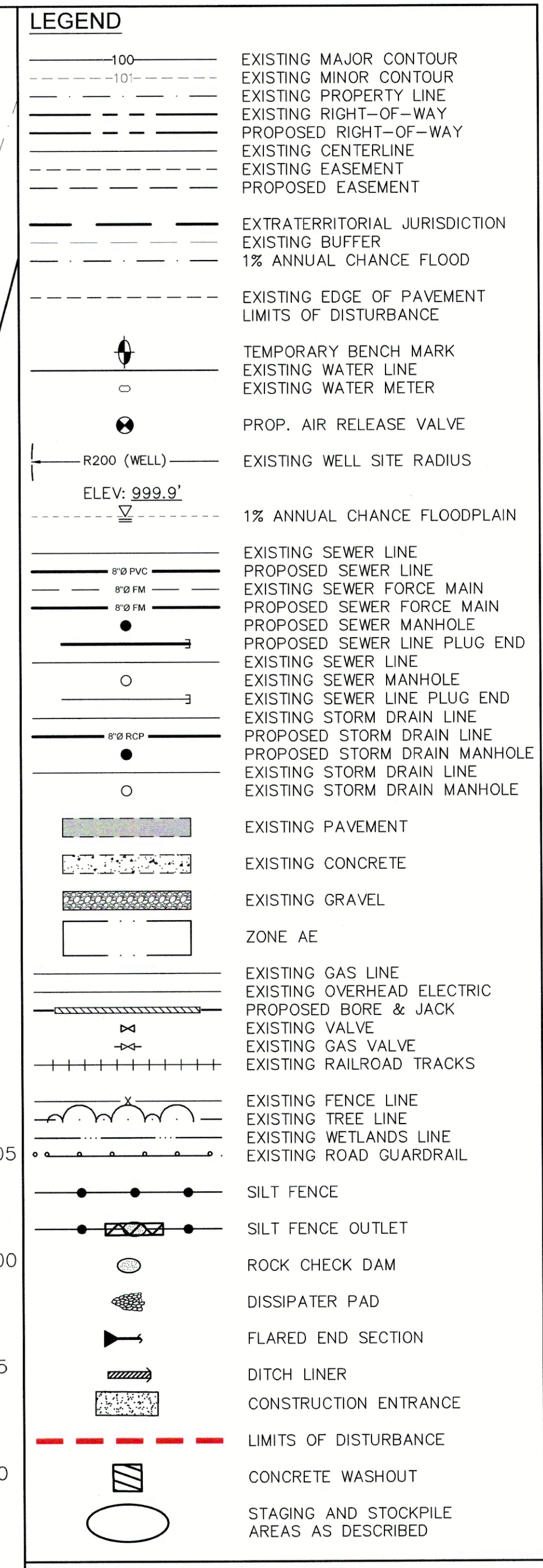
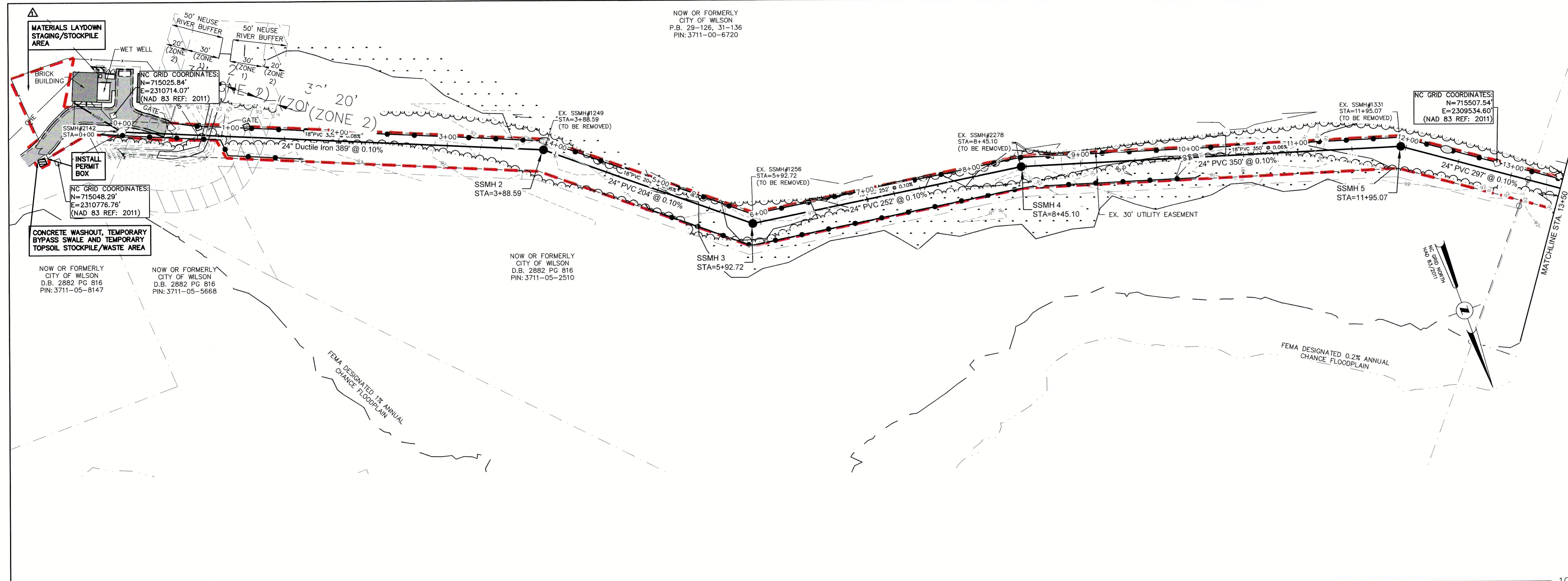
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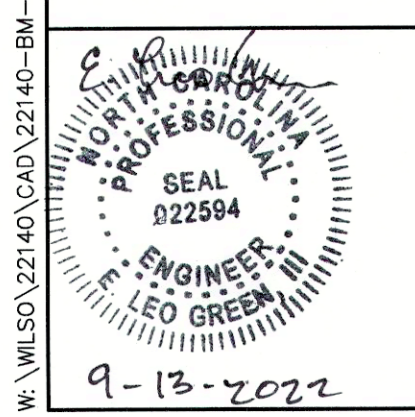
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CONTENTNEA
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 TEL (252) 237-5365 FAX (252) 243-7489 OFFICE@GREENENG.COM

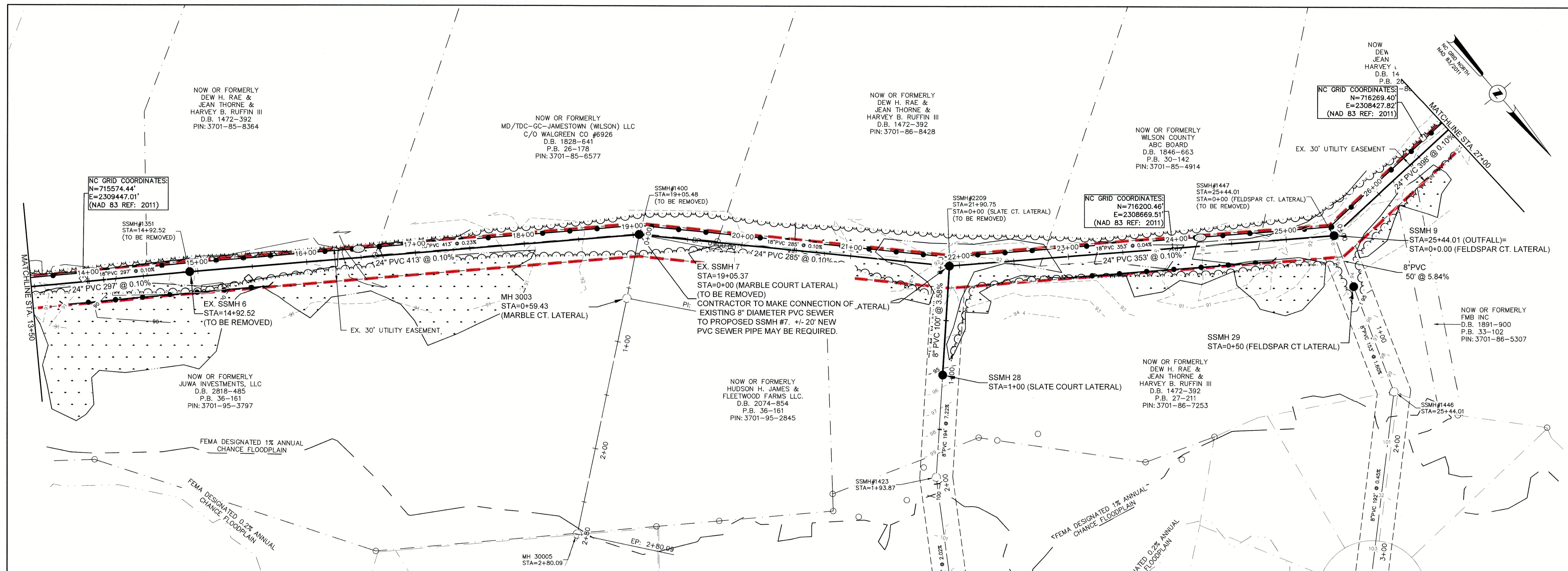
CITY OF WILSON
 LOWER BLOOMERY SWAMP
 SEWER IMPROVEMENTS
 WILSON COUNTY, NORTH CAROLINA

**PLAN AND PROFILE
 LOWER BLOOMERY
 SWAMP OUTFALL**

REVISION	DATE	BY

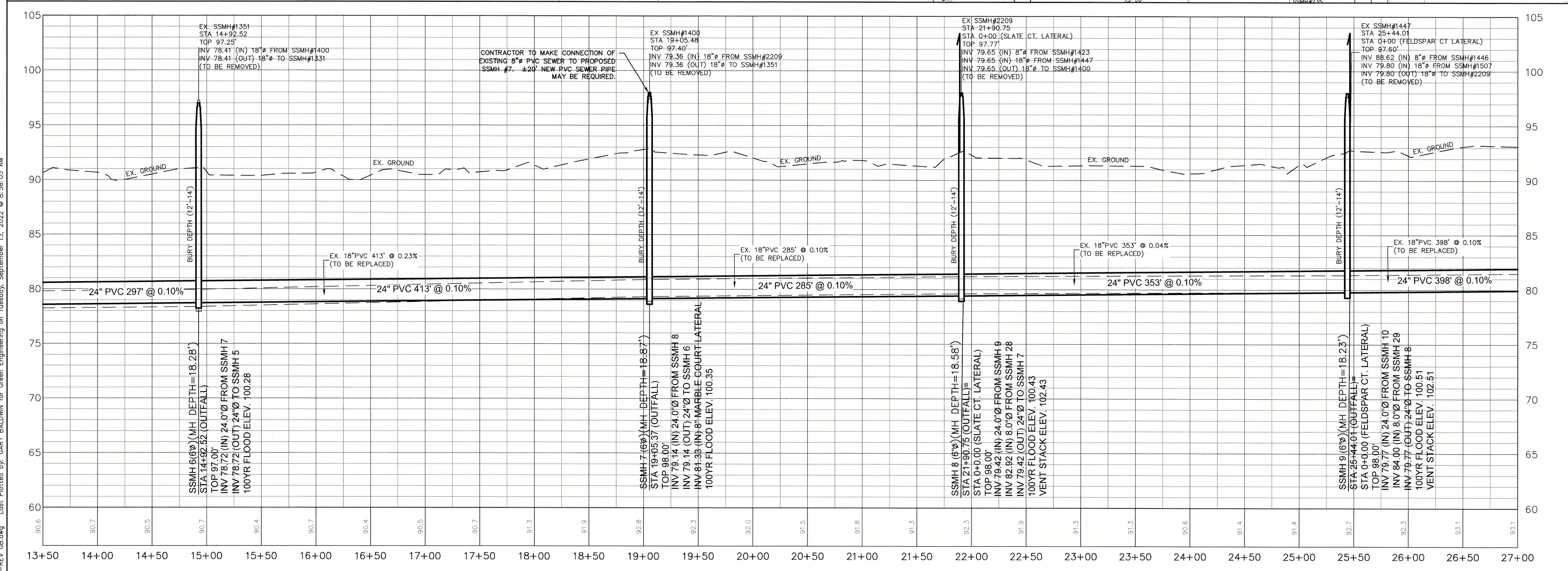
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JOB NUMBER: 22-140	FIELD BOOK: XXX
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LAST MODIFIED: 13-Sep-22	MODIFIED BY: GLB
SHEET NO. 5 OF 22	

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LEGEND

- 100 --- EXISTING MAJOR CONTOUR
- 101 --- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXTRATERRITORIAL JURISDICTION
- EXISTING BUFFER
- 1% ANNUAL CHANCE FLOOD
- EXISTING EDGE OF PAVEMENT
- LIMITS OF DISTURBANCE
- TEMPORARY BENCH MARK
- EXISTING WATER LINE
- EXISTING WATER METER
- PROP. AIR RELEASE VALVE
- EXISTING WELL SITE RADIUS
- ELEV. 999.9' --- 1% ANNUAL CHANCE FLOODPLAIN
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER FORCE MAIN
- PROPOSED SEWER FORCE MAIN
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- EXISTING SEWER LINE PLUG END
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER LINE PLUG END
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN MANHOLE
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING GRAVEL
- ZONE AE
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC
- PROPOSED BORE & JACK
- EXISTING VALVE
- EXISTING GAS VALVE
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- EXISTING TREE LINE
- EXISTING WETLANDS LINE
- EXISTING ROAD GUARDRAIL
- SILT FENCE
- SILT FENCE OUTLET
- ROCK CHECK DAM
- DISSIPATER PAD
- FLARED END SECTION
- DITCH LINER
- CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- CONCRETE WASHOUT
- STAGING AND STOCKPILE AREAS AS DESCRIBED



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CITY OF WILSON
 LOWER BLOOMERY SWAMP
 SEWER IMPROVEMENTS

WILSON COUNTY, NORTH CAROLINA

**PLAN AND PROFILE
 LOWER BLOOMERY
 SWAMP OUTFALL**

REVISION	DATE	BY

RELEASED FOR CONSTRUCTION

DATE: SEPTEMBER 2022

GRAPHIC SCALE

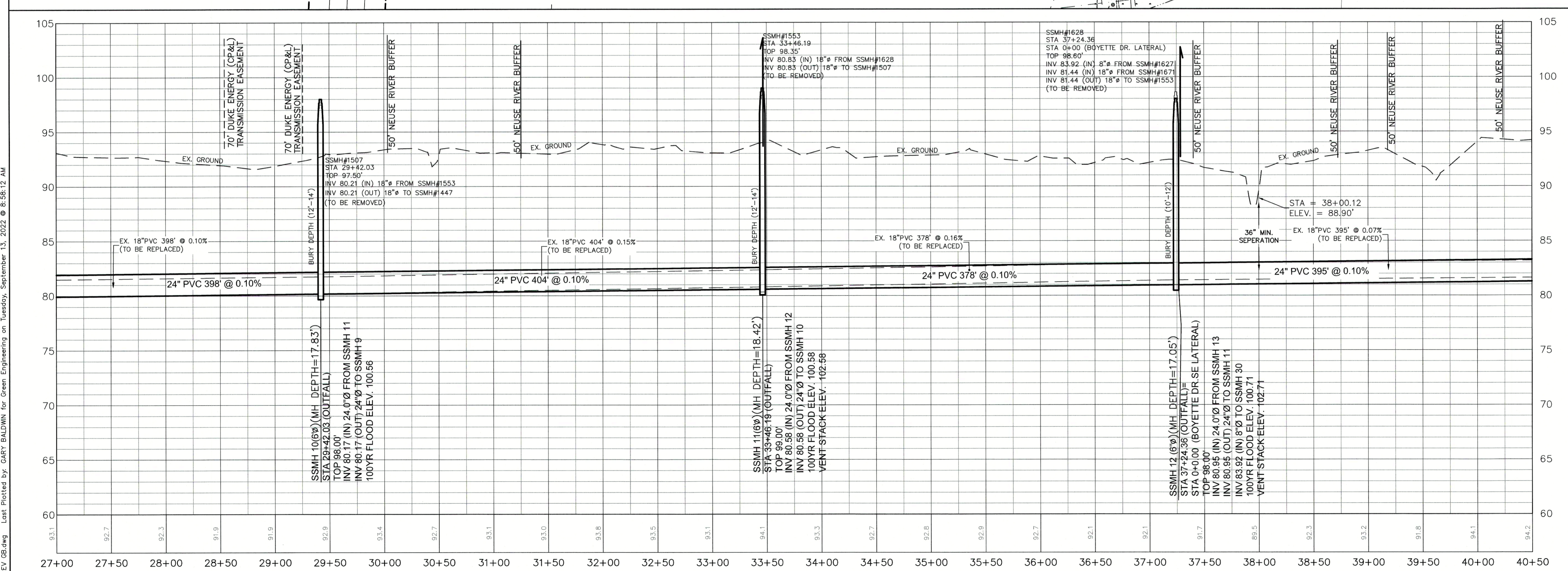
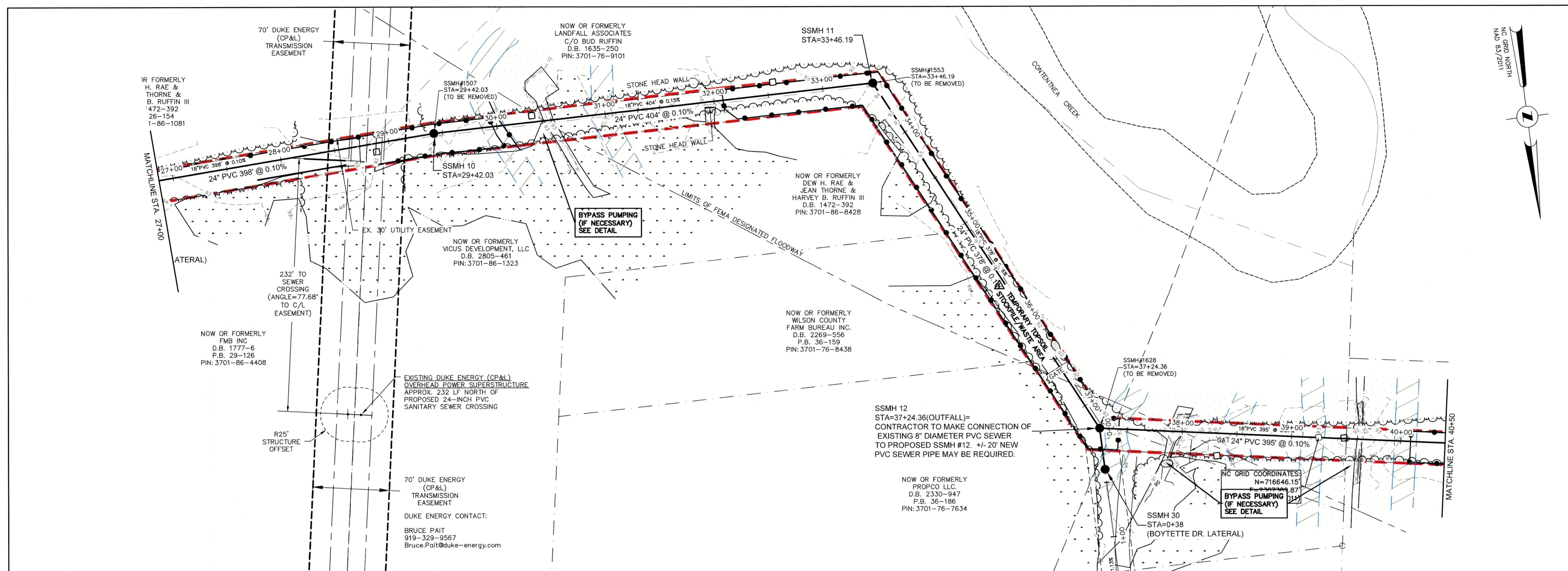
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 PLAN & PROFILE (HORIZONTAL)

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 PROFILE (VERTICAL)

CLIENT CODE: WILSO
 JOB NUMBER: 22-140
 FIELD BOOK: XXX
 CAD FILE: 22140-BM-REV 08.dwg
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 MODIFIED BY: GLB

SHEET NO. 6 OF 22

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LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
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- EXISTING RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXTRATERRITORIAL JURISDICTION
- EXISTING BUFFER
- 1% ANNUAL CHANCE FLOOD
- EXISTING EDGE OF PAVEMENT
- LIMITS OF DISTURBANCE
- TEMPORARY BENCH MARK
- EXISTING WATER LINE
- EXISTING WATER METER
- PROP. AIR RELEASE VALVE
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- EXISTING SEWER LINE
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- EXISTING SEWER FORCE MAIN
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- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN MANHOLE
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING GRAVEL
- ZONE AE
- EXISTING GAS LINE
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REVISION	DATE	BY

DATE: SEPTEMBER 2022

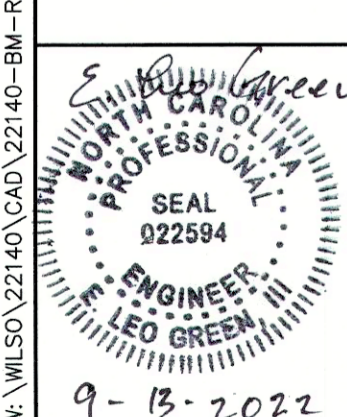
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PLAN & PROFILE (HORIZONTAL)

0 5 10
PROFILE (VERTICAL)

CLIENT CODE: WILSO
JOB NUMBER: 22-140
FIELD BOOK: XXX
CADFILE: 22140-BM-REV.dwg
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LAST MODIFIED: 13-Sep-22
MODIFIED BY: GLB

SHEET NO. 7 OF 22



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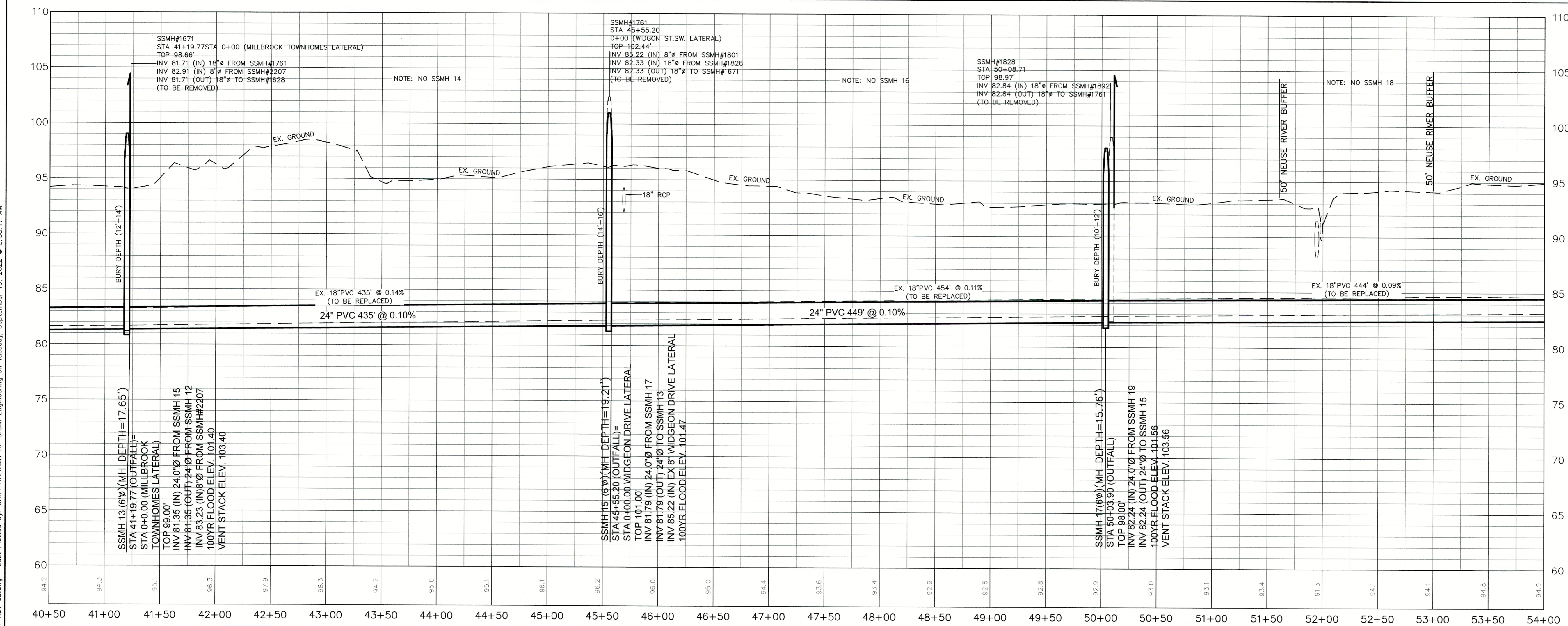
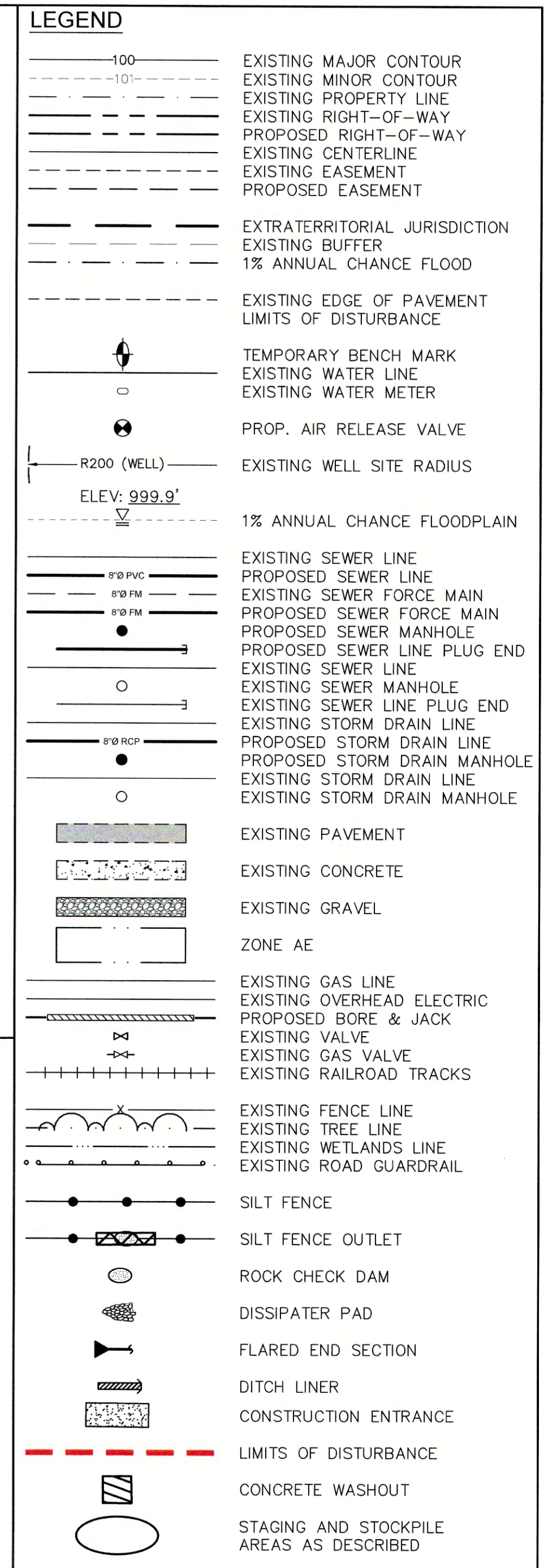
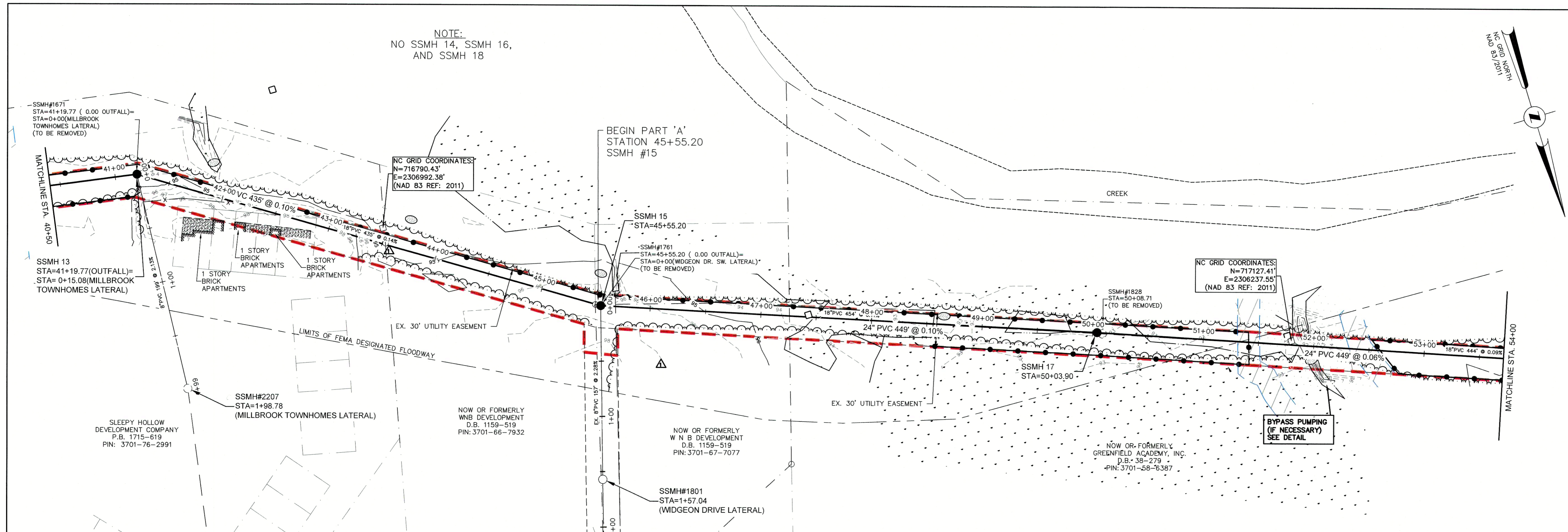
NORTH CAROLINA FIRM LICENSE: P-0115
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CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS

CITY OF WILSON
WILSON COUNTY, NORTH CAROLINA

**PLAN AND PROFILE
LOWER BLOOMERY
SWAMP OUTFALL**

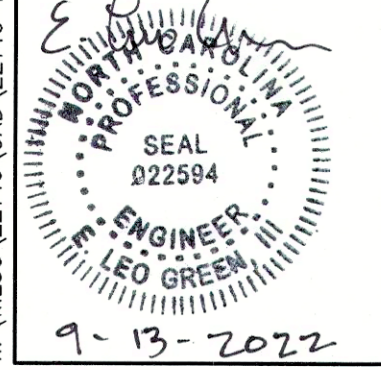
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NO SSMH 14, SSMH 16,
AND SSMH 18



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CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS

CITY OF WILSON
WILSON COUNTY, NORTH CAROLINA

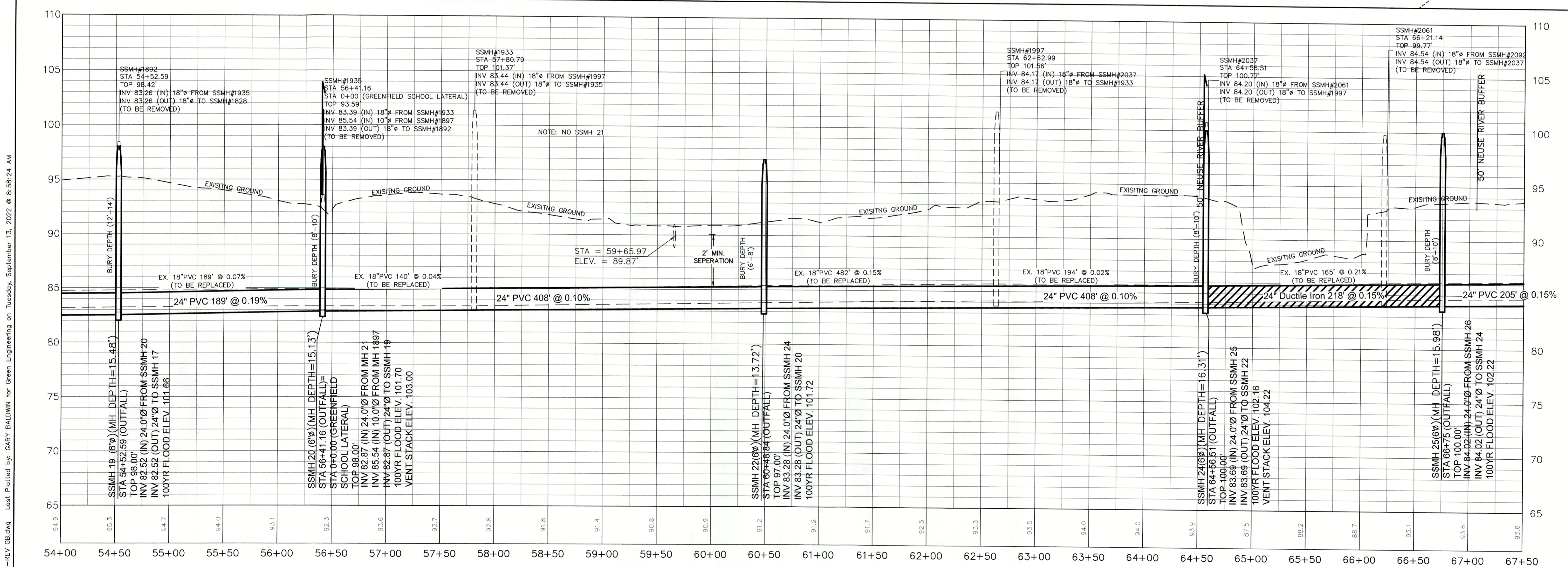
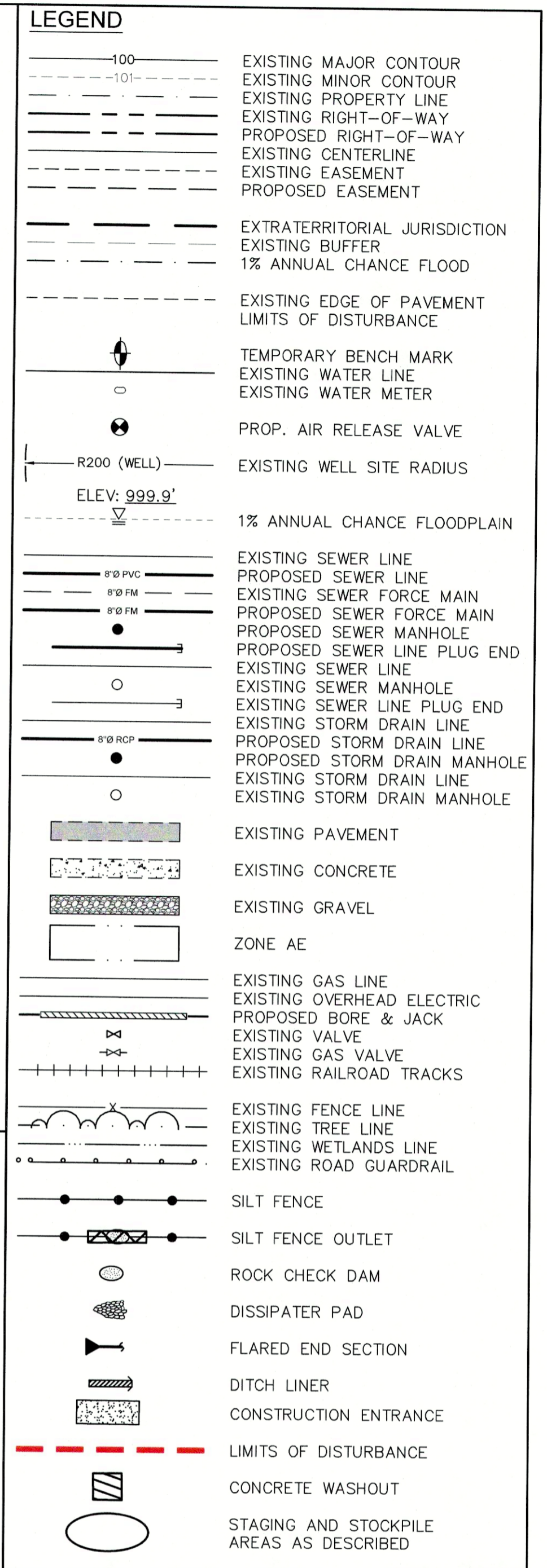
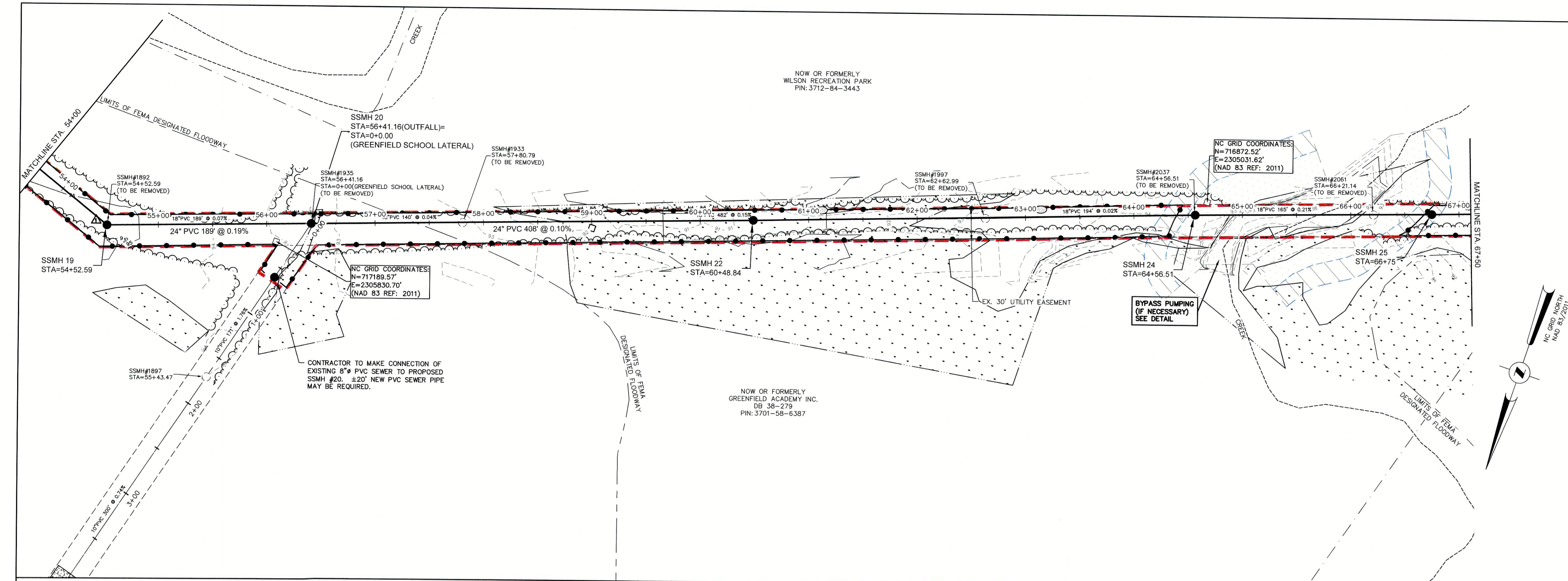
**PLAN AND PROFILE
LOWER BLOOMERY
SWAMP OUTFALL**

REVISION	DATE	BY

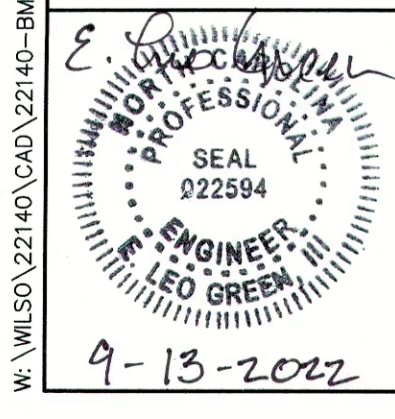
DATE: SEPTEMBER 2022

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SHEET NO. 8 OF 22



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 WATER, WASTEWATER, SURVEYING, PLANNING, PROJECT MANAGEMENT

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CITY OF WILSON
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 SEWER IMPROVEMENTS

CITY OF WILSON
 WILSON COUNTY, NORTH CAROLINA

**PLAN AND PROFILE
 LOWER BLOOMERY
 SWAMP OUTFALL**

REVISION	DATE	BY

DATE: SEPTEMBER 2022

GRAPHIC SCALE

0 25 50 100
 PLAN & PROFILE (HORIZONTAL)

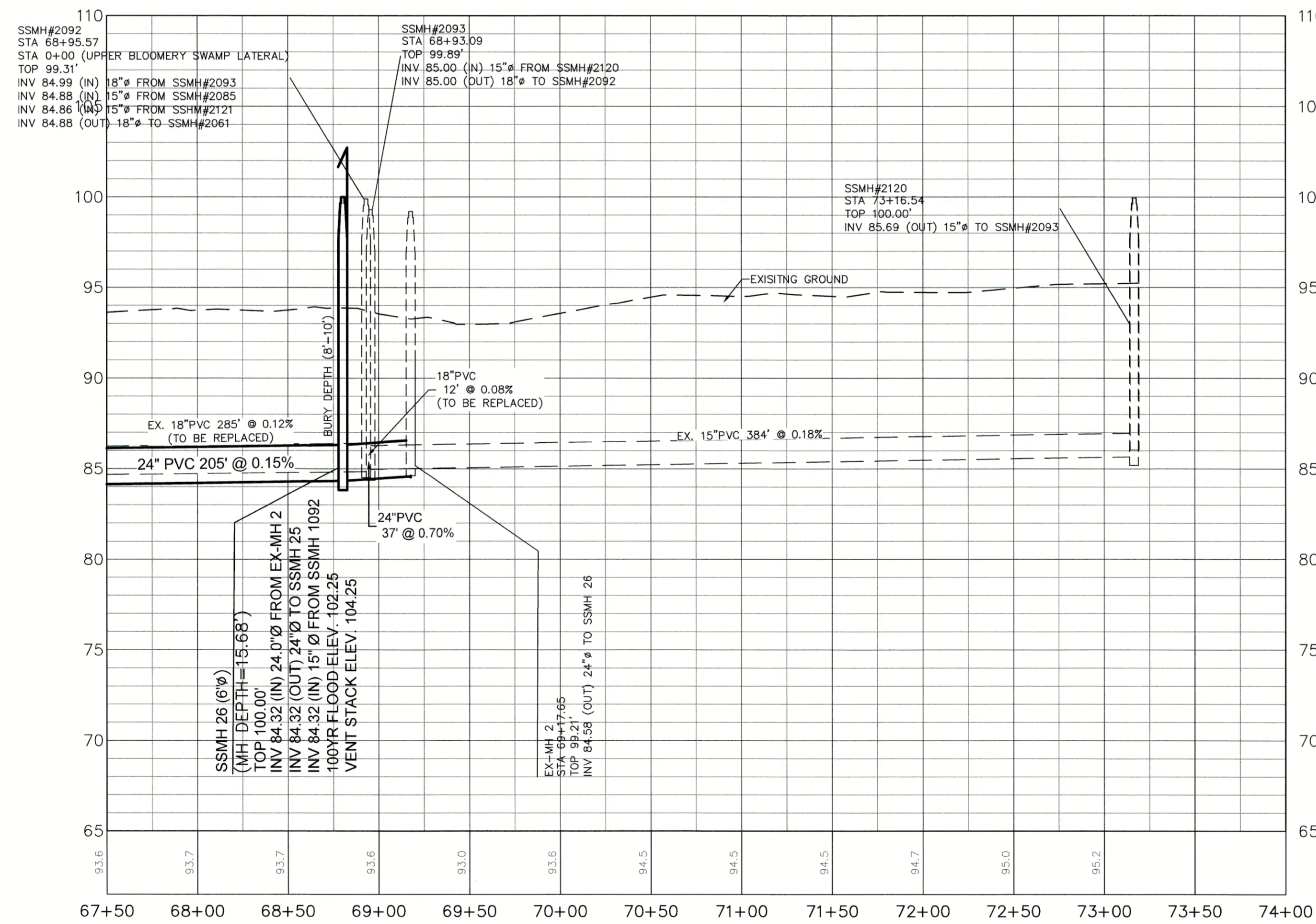
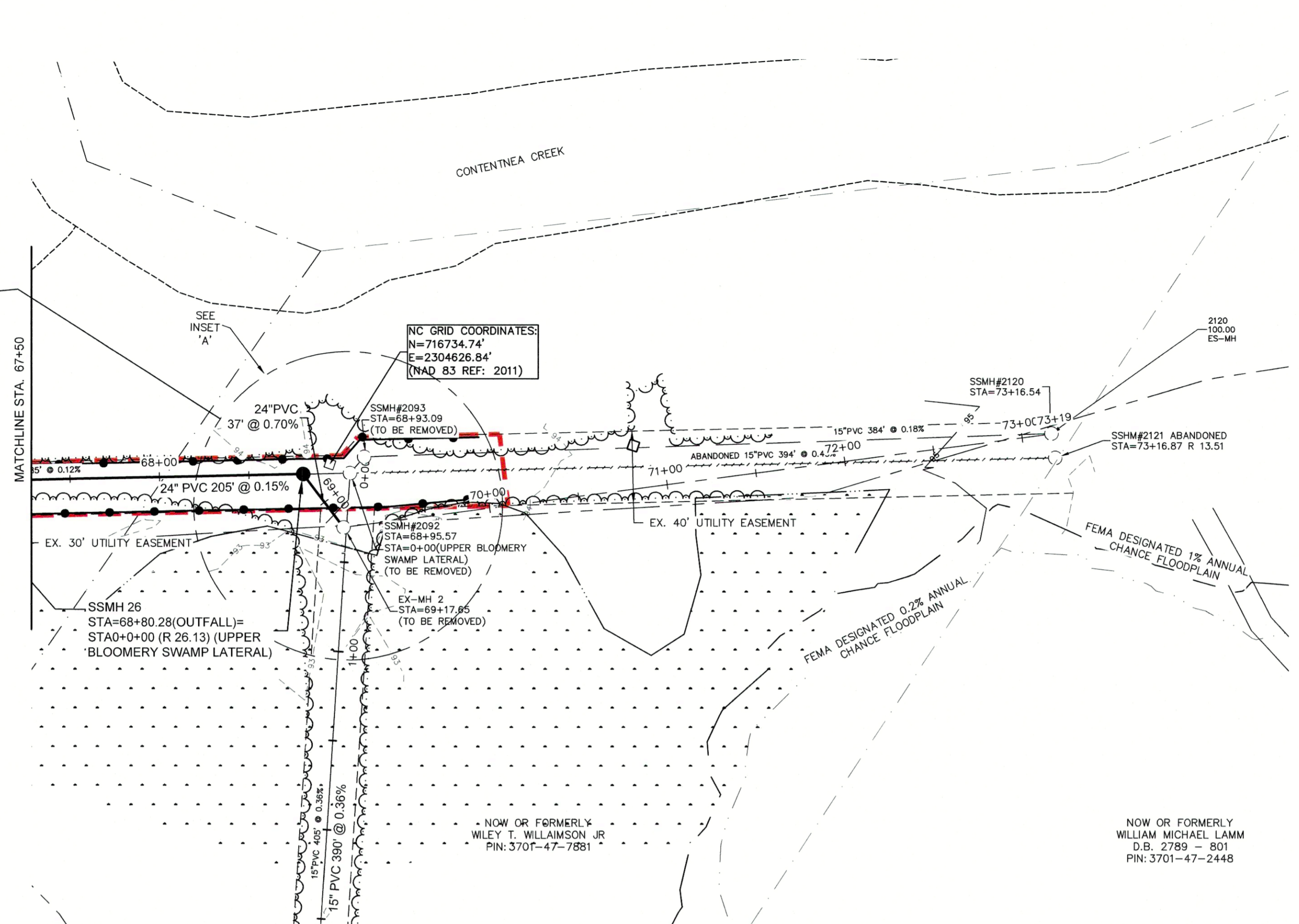
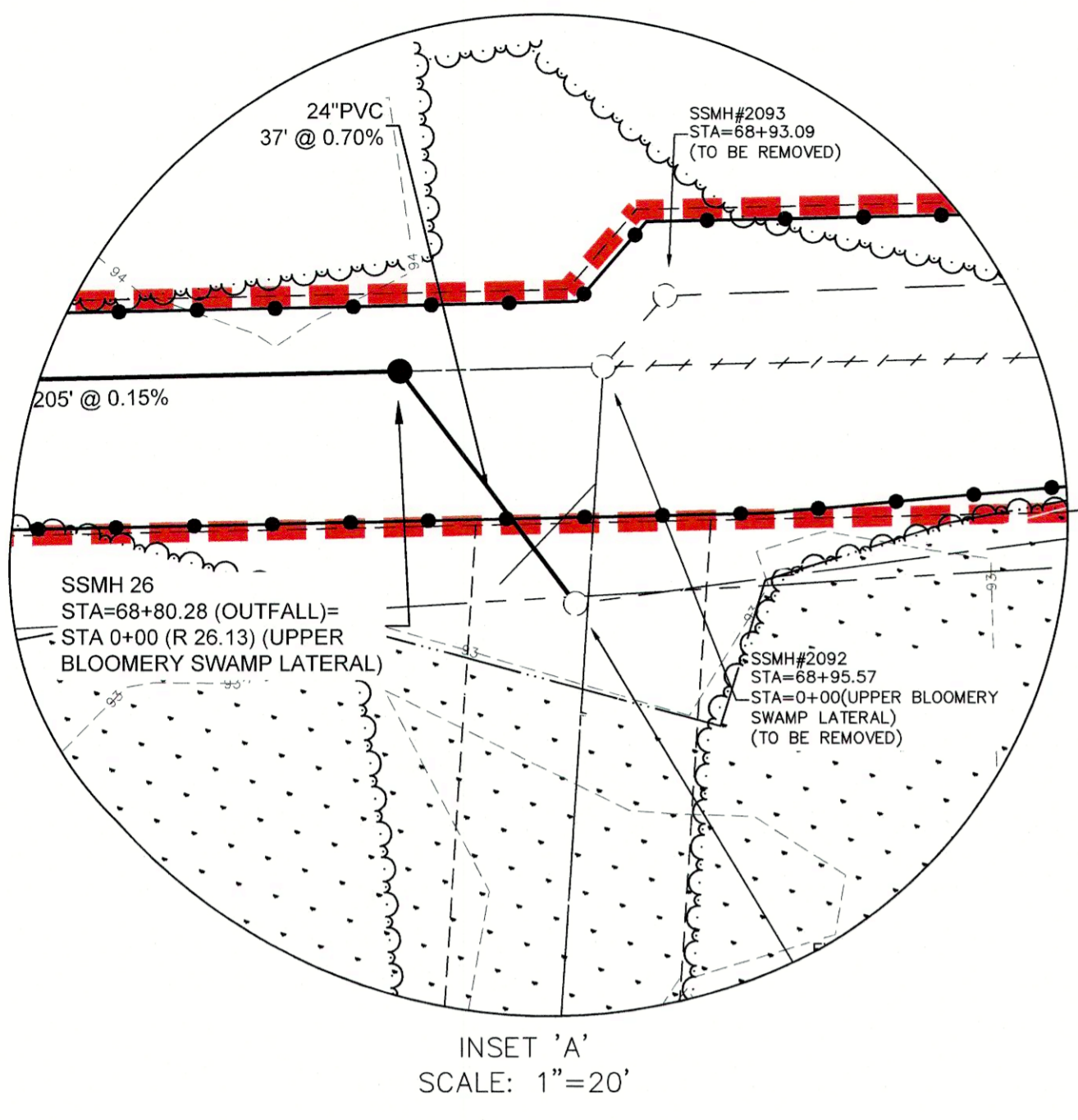
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 PROFILE (VERTICAL)

CLIENT CODE: WILSO
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 MODIFIED BY: GLB

SHEET NO. **9** OF **22**

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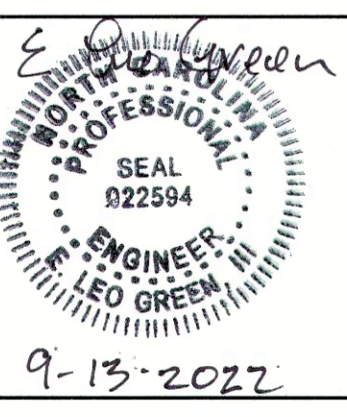
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LEGEND	
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
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	EXISTING BUFFER
	1% ANNUAL CHANCE FLOOD
	EXISTING EDGE OF PAVEMENT
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	EXISTING SEWER LINE
	EXISTING SEWER MANHOLE
	EXISTING SEWER LINE PLUG END
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
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 WILSON COUNTY, NORTH CAROLINA

**PLAN AND PROFILE
 LOWER BLOOMERY
 SWAMP OUTFALL**

REVISION	DATE	BY

DATE: SEPTEMBER 2022

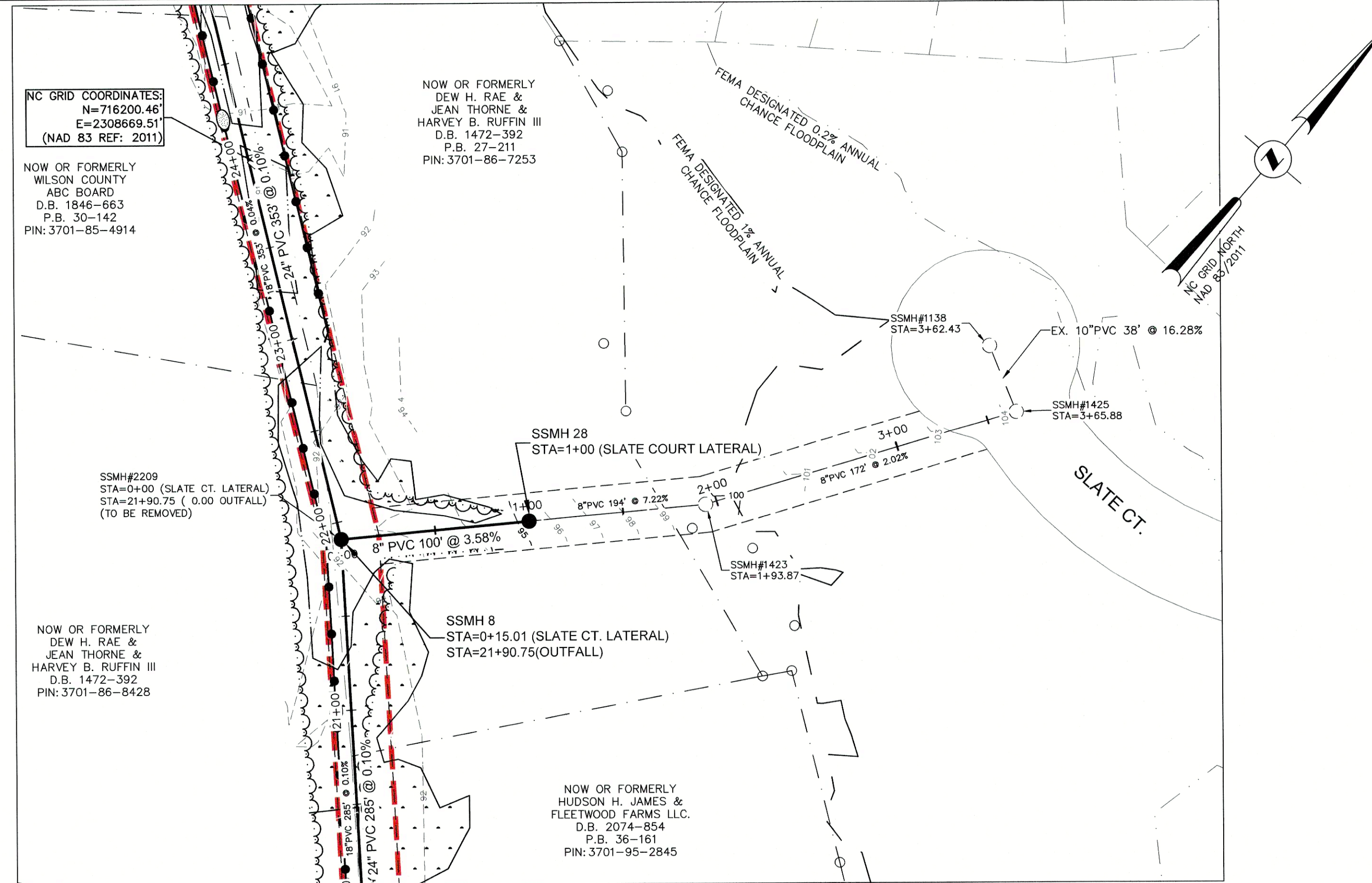
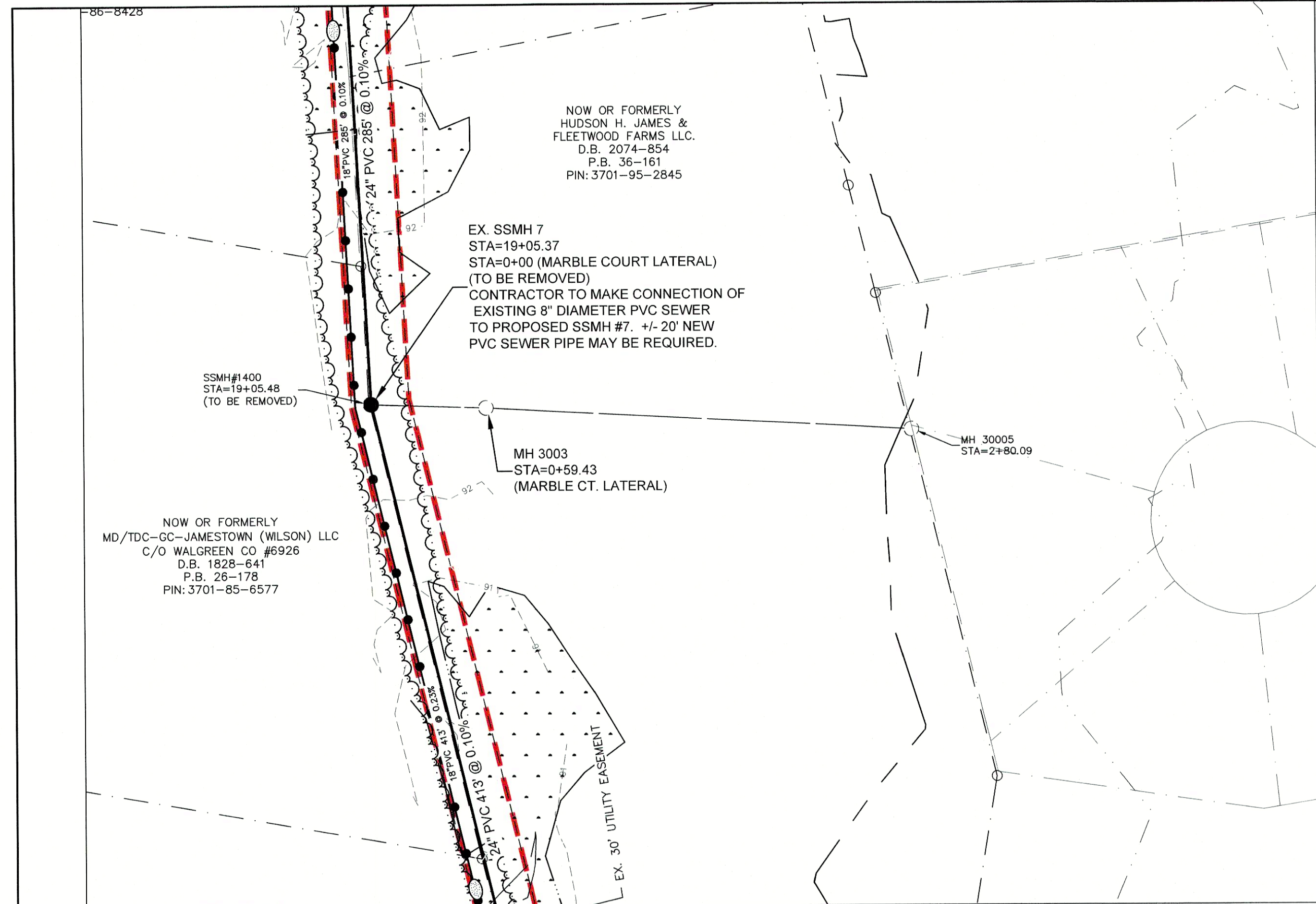
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 PLAN & PROFILE (HORIZONTAL)

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 PROFILE (VERTICAL)

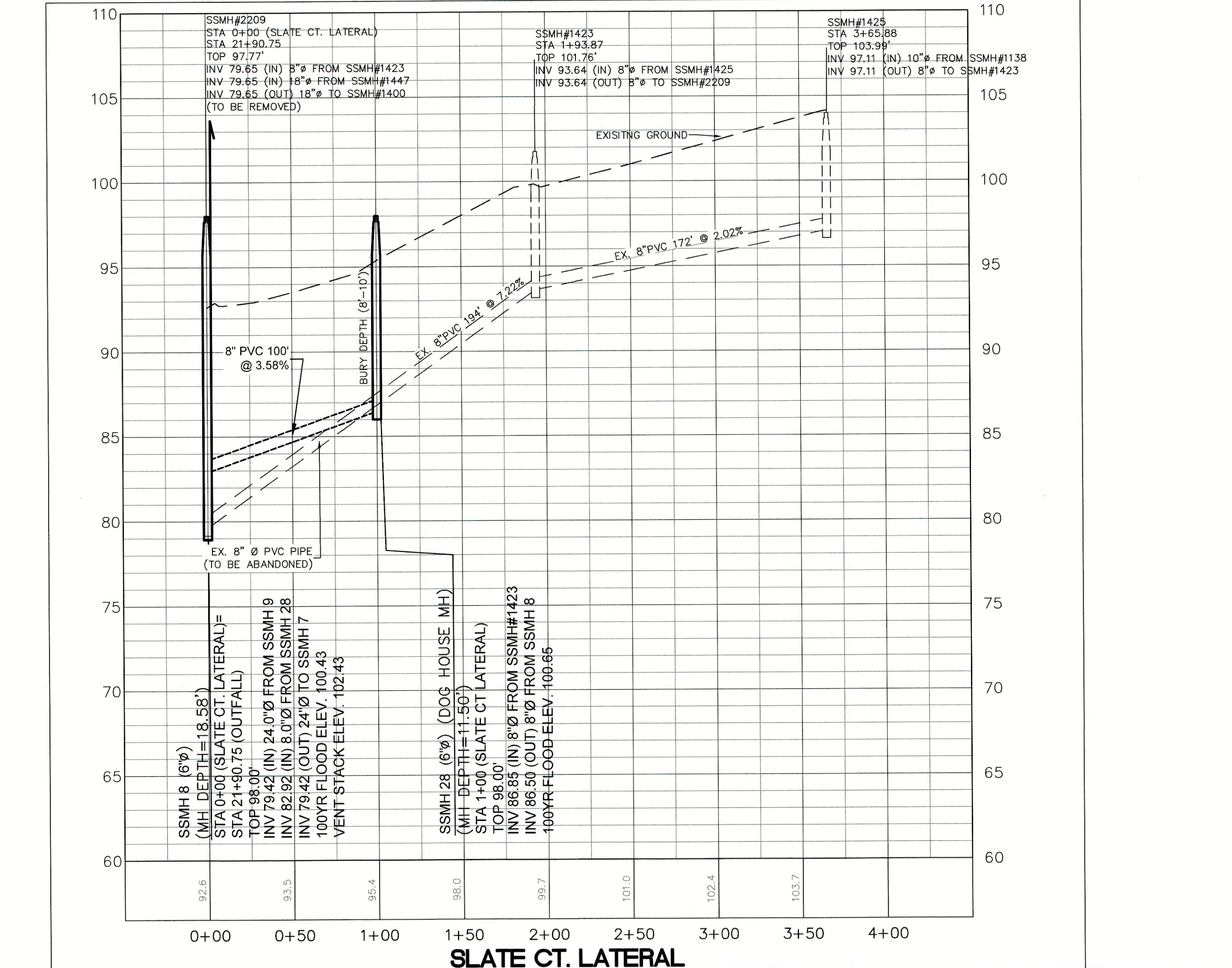
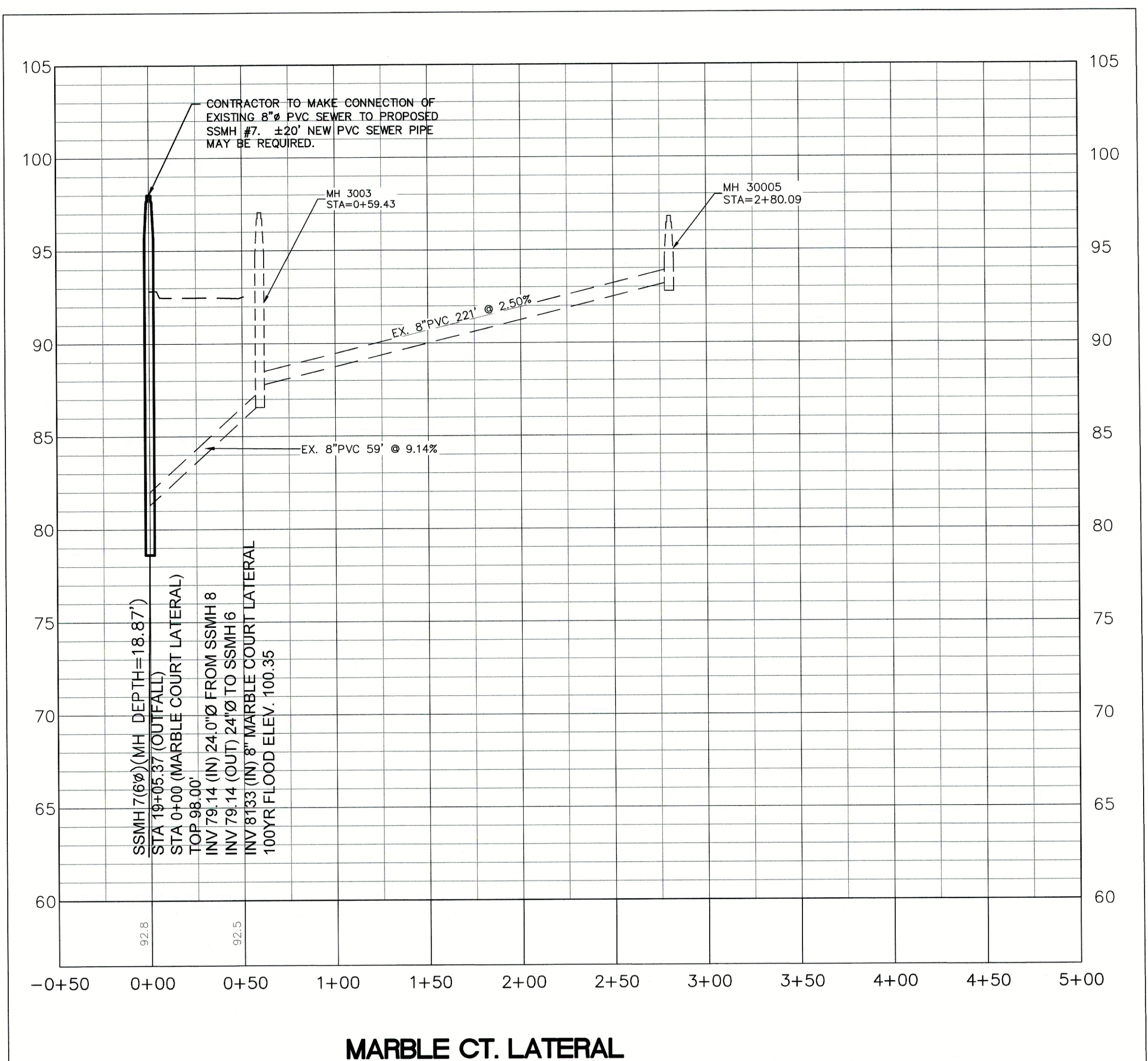
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 JOB NUMBER: 22-140
 FIELD BOOK: XXX
 CAD FILE: 22140-BM-REV
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 LAST MODIFIED: 13-Sep-22
 MODIFIED BY: GLB

SHEET NO. 10 OF 22



LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXTRATERRITORIAL JURISDICTION
	EXISTING BUFFER
	1% ANNUAL CHANCE FLOOD
	EXISTING EDGE OF PAVEMENT
	LIMITS OF DISTURBANCE
	TEMPORARY BENCH MARK
	EXISTING WATER LINE
	EXISTING WATER METER
	PROP. AIR RELEASE VALVE
	EXISTING WELL SITE RADIUS
	1% ANNUAL CHANCE FLOODPLAIN
	EXISTING SEWER LINE
	PROPOSED SEWER LINE
	EXISTING SEWER FORCE MAIN
	PROPOSED SEWER FORCE MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER LINE PLUG END
	EXISTING SEWER MANHOLE
	EXISTING SEWER LINE PLUG END
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	EXISTING STORM DRAIN MANHOLE
	EXISTING PAVEMENT
	EXISTING CONCRETE
	EXISTING GRAVEL
	ZONE AE
	EXISTING GAS LINE
	EXISTING OVERHEAD ELECTRIC
	PROPOSED BORE & JACK
	EXISTING VALVE
	EXISTING GAS VALVE
	EXISTING RAILROAD TRACKS
	EXISTING FENCE LINE
	EXISTING TREE LINE
	EXISTING WETLANDS LINE
	EXISTING ROAD GUARDRAIL
	SILT FENCE
	SILT FENCE OUTLET
	ROCK CHECK DAM
	DISSIPATER PAD
	FLARED END SECTION
	DITCH LINER
	CONSTRUCTION ENTRANCE
	LIMITS OF DISTURBANCE
	CONCRETE WASHOUT
	STAGING AND STOCKPILE AREAS AS DESCRIBED



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RELEASED FOR CONSTRUCTION

REVISION	DATE	BY	DATE: SEPTEMBER 2022

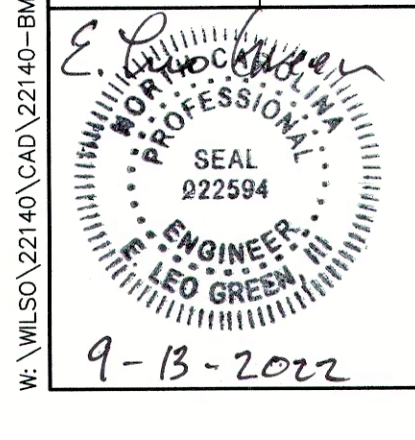
GRAPHIC SCALE

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PROFILE (VERTICAL): 0 5 10

CLIENT CODE: WILSO
JOB NUMBER: 22-140
FIELD BOOK: XXX
CADFILE: 22140-BM-REV
ASCI FILE:
LAST MODIFIED: 13-Sep-22
MODIFIED BY: GLB

SHEET NO. 11 OF 22

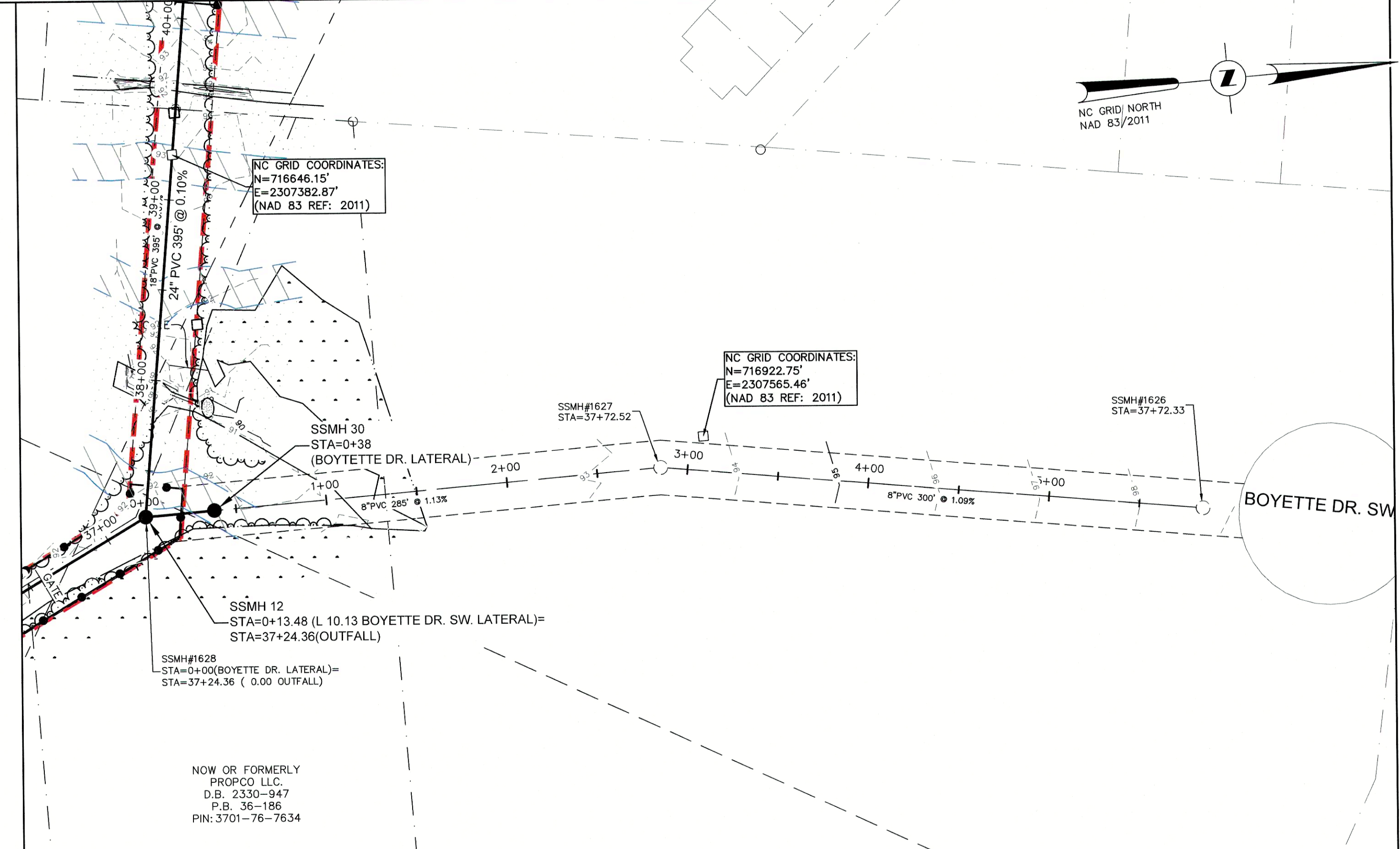
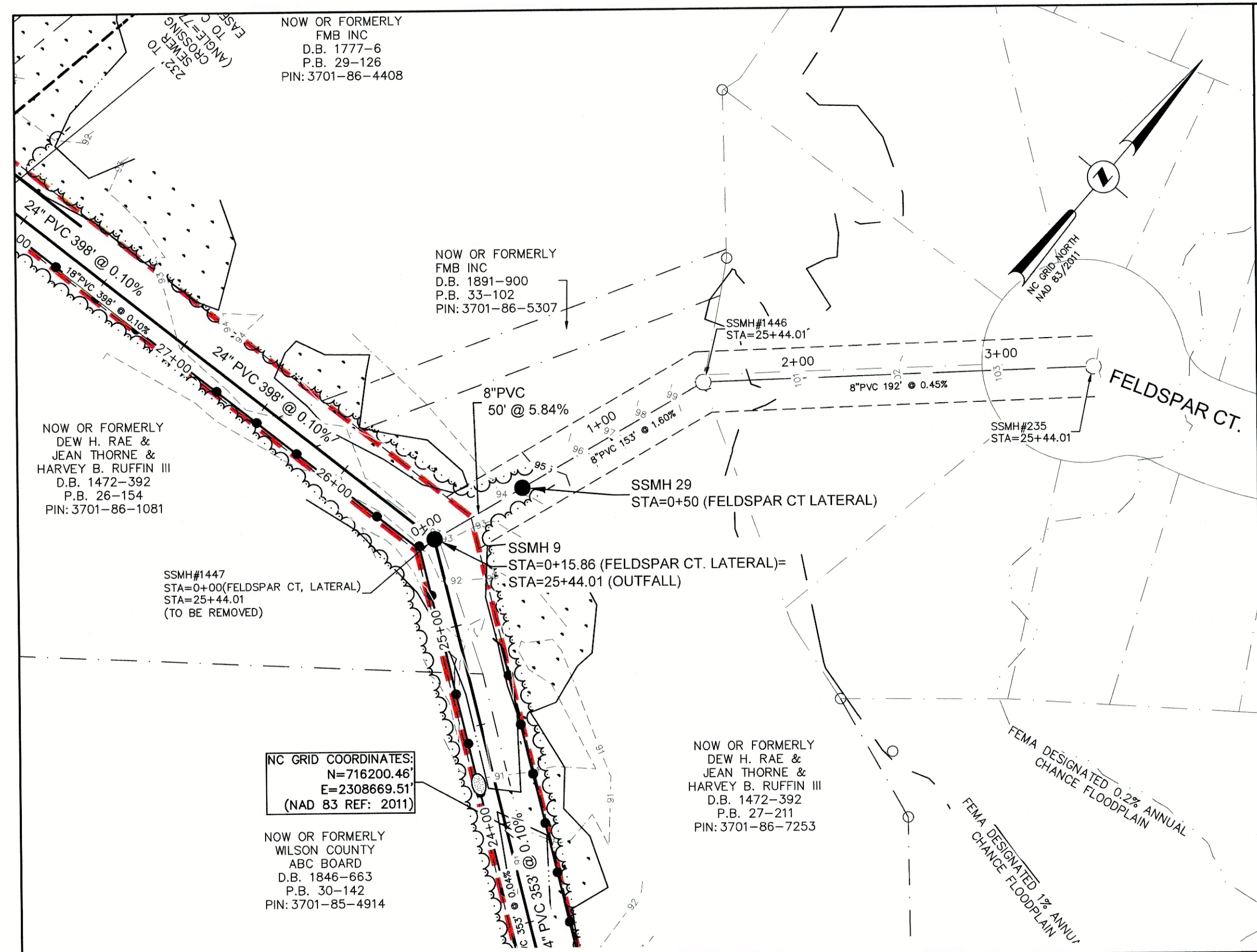


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LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS
WILSON COUNTY, NORTH CAROLINA

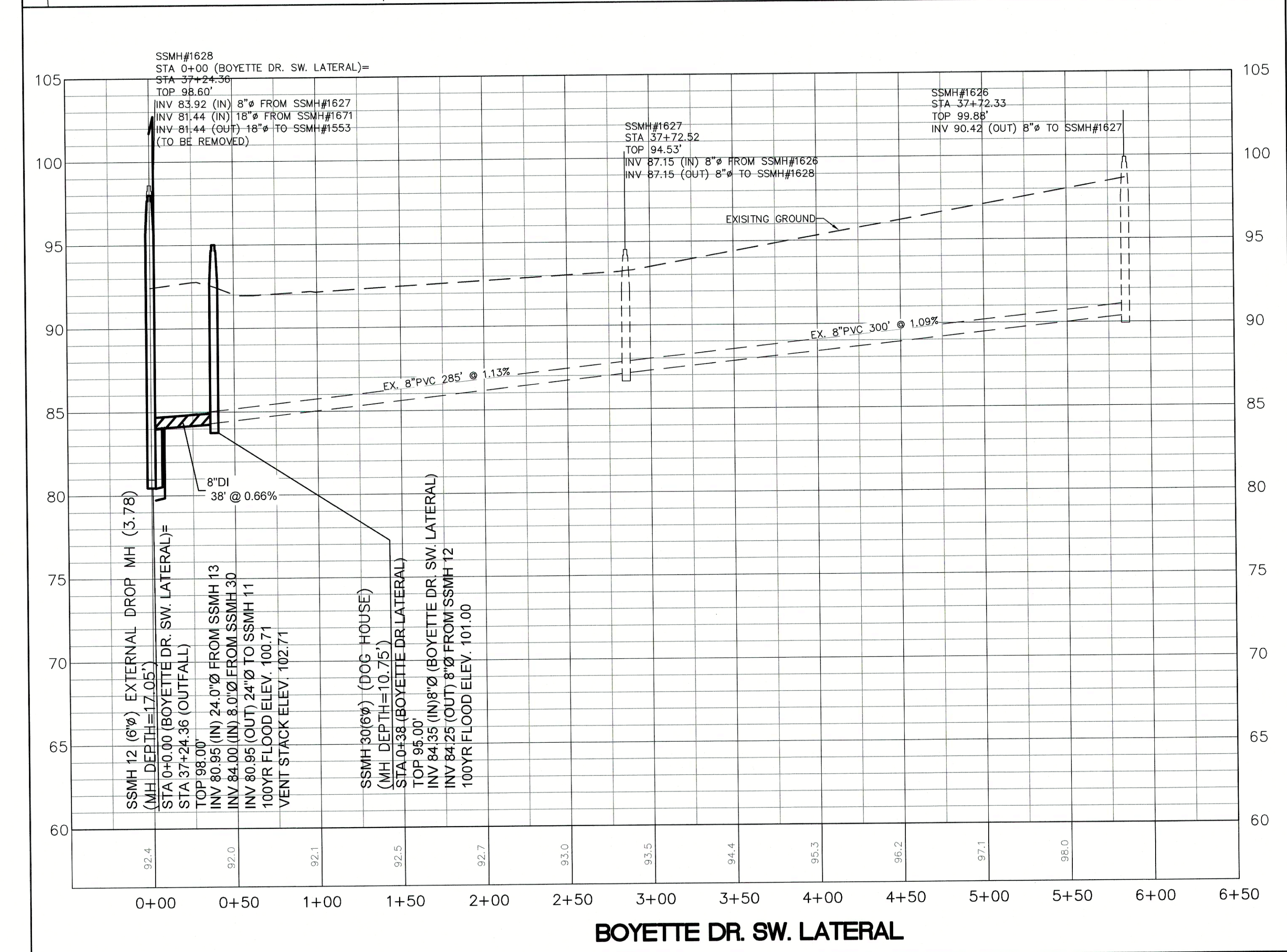
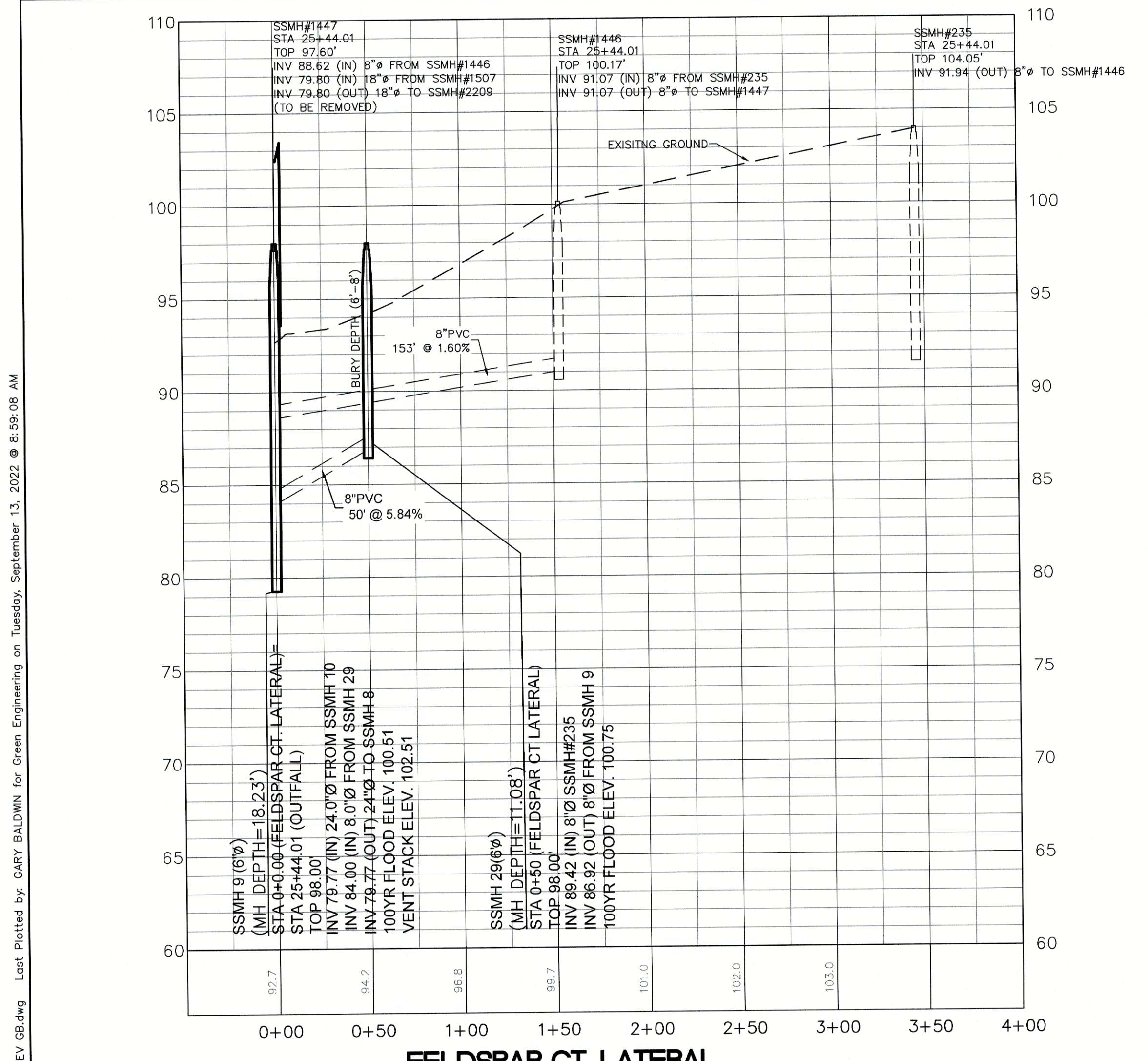
PLAN AND PROFILE
MARBLE CT.
SLATE CT. LATERAL

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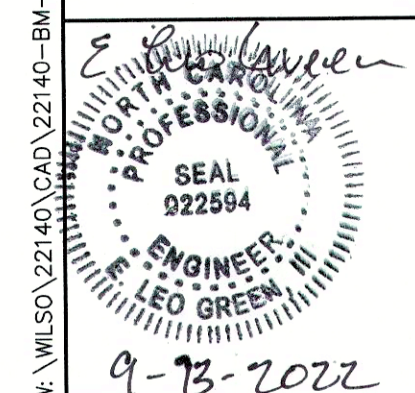


LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXTRATERRITORIAL JURISDICTION
	EXISTING BUFFER
	1% ANNUAL CHANCE FLOOD
	EXISTING EDGE OF PAVEMENT
	LIMITS OF DISTURBANCE
	TEMPORARY BENCH MARK
	EXISTING WATER LINE
	EXISTING WATER METER
	PROP. AIR RELEASE VALVE
	EXISTING WELL SITE RADIUS
	1% ANNUAL CHANCE FLOODPLAIN
	EXISTING SEWER LINE
	PROPOSED SEWER LINE
	EXISTING SEWER FORCE MAIN
	PROPOSED SEWER FORCE MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER LINE PLUG END
	EXISTING SEWER LINE
	EXISTING SEWER LINE PLUG END
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM DRAIN MANHOLE
	EXISTING STORM DRAIN LINE
	EXISTING STORM DRAIN MANHOLE
	EXISTING PAVEMENT
	EXISTING CONCRETE
	EXISTING GRAVEL
	ZONE AE
	EXISTING GAS LINE
	EXISTING OVERHEAD ELECTRIC
	EXISTING BORE & JACK
	EXISTING VALVE
	EXISTING GAS VALVE
	EXISTING RAILROAD TRACKS
	EXISTING FENCE LINE
	EXISTING TREE LINE
	EXISTING WETLANDS LINE
	EXISTING ROAD GUARDRAIL
	SILT FENCE
	SILT FENCE OUTLET
	ROCK CHECK DAM
	DISSIPATER PAD
	FLARED END SECTION
	DITCH LINER
	CONSTRUCTION ENTRANCE
	LIMITS OF DISTURBANCE
	CONCRETE WASHOUT
	STAGING AND STOCKPILE AREAS AS DESCRIBED



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CITY OF WILSON
 LOWER BLOOMERY SWAMP
 SEWER IMPROVEMENTS
 WILSON COUNTY, NORTH CAROLINA

PLAN AND PROFILE
FELDSPAR CT.
BOYETTE DR. LATERAL

REVISION	DATE	BY

DATE: SEPTEMBER 2022

GRAPHIC SCALE

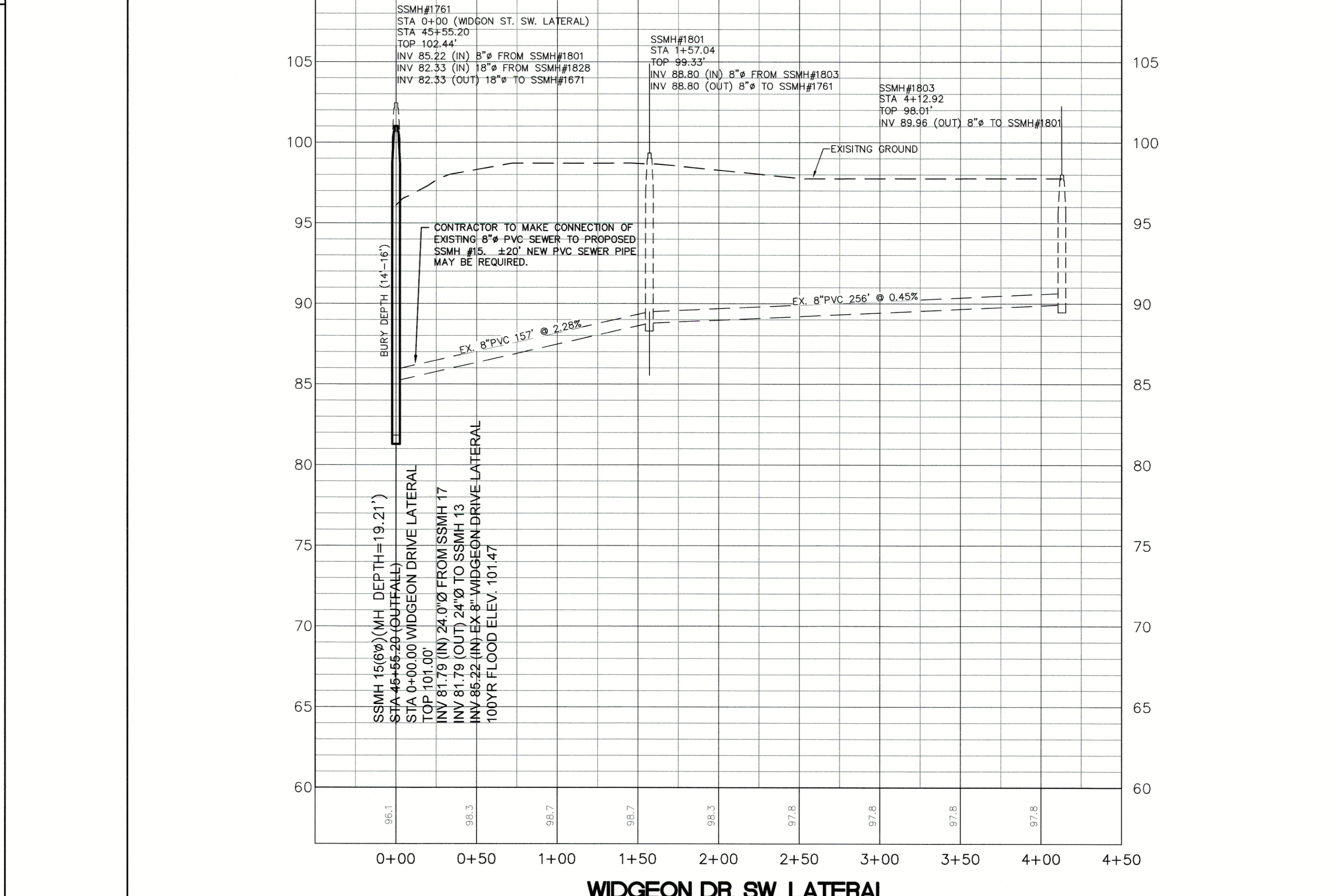
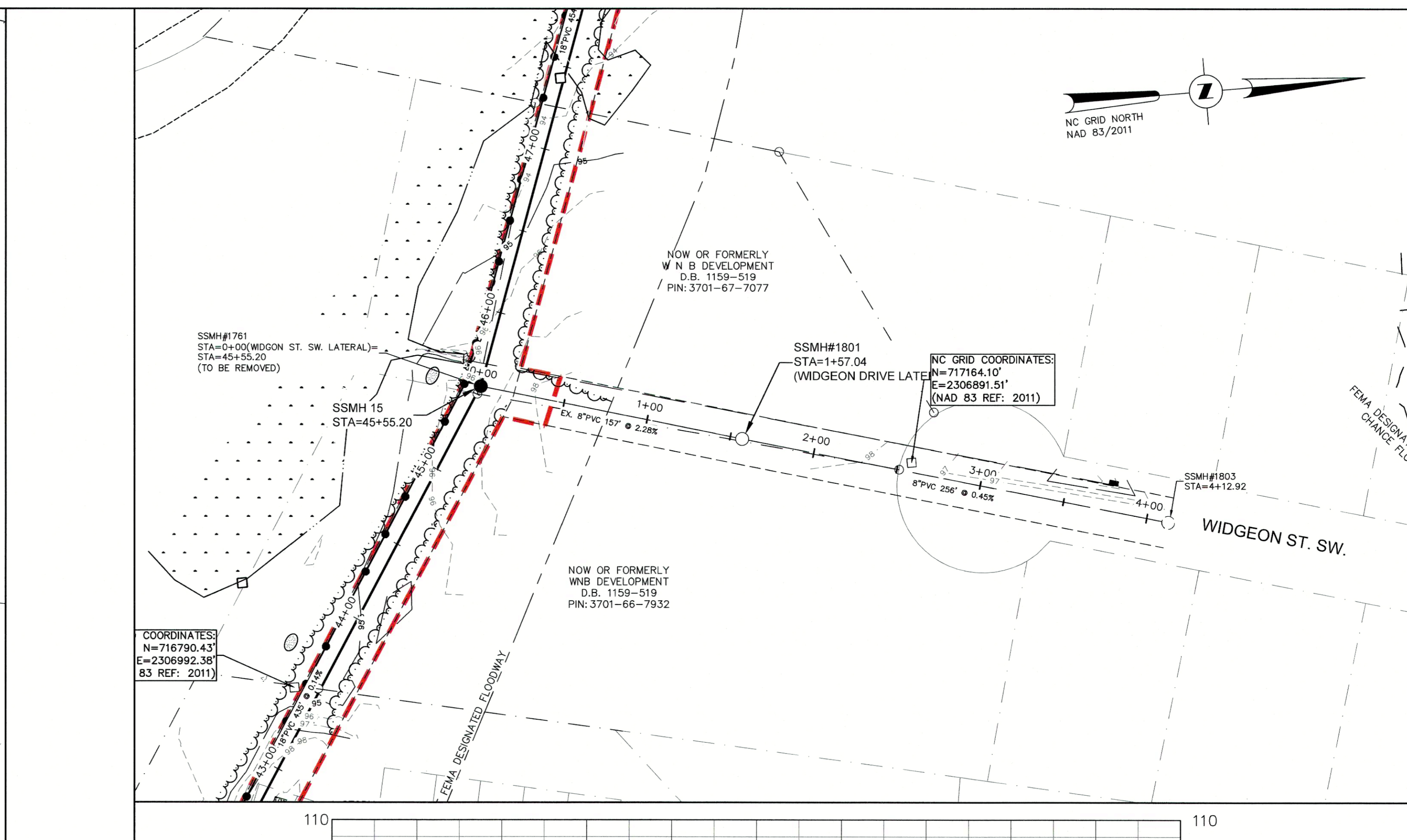
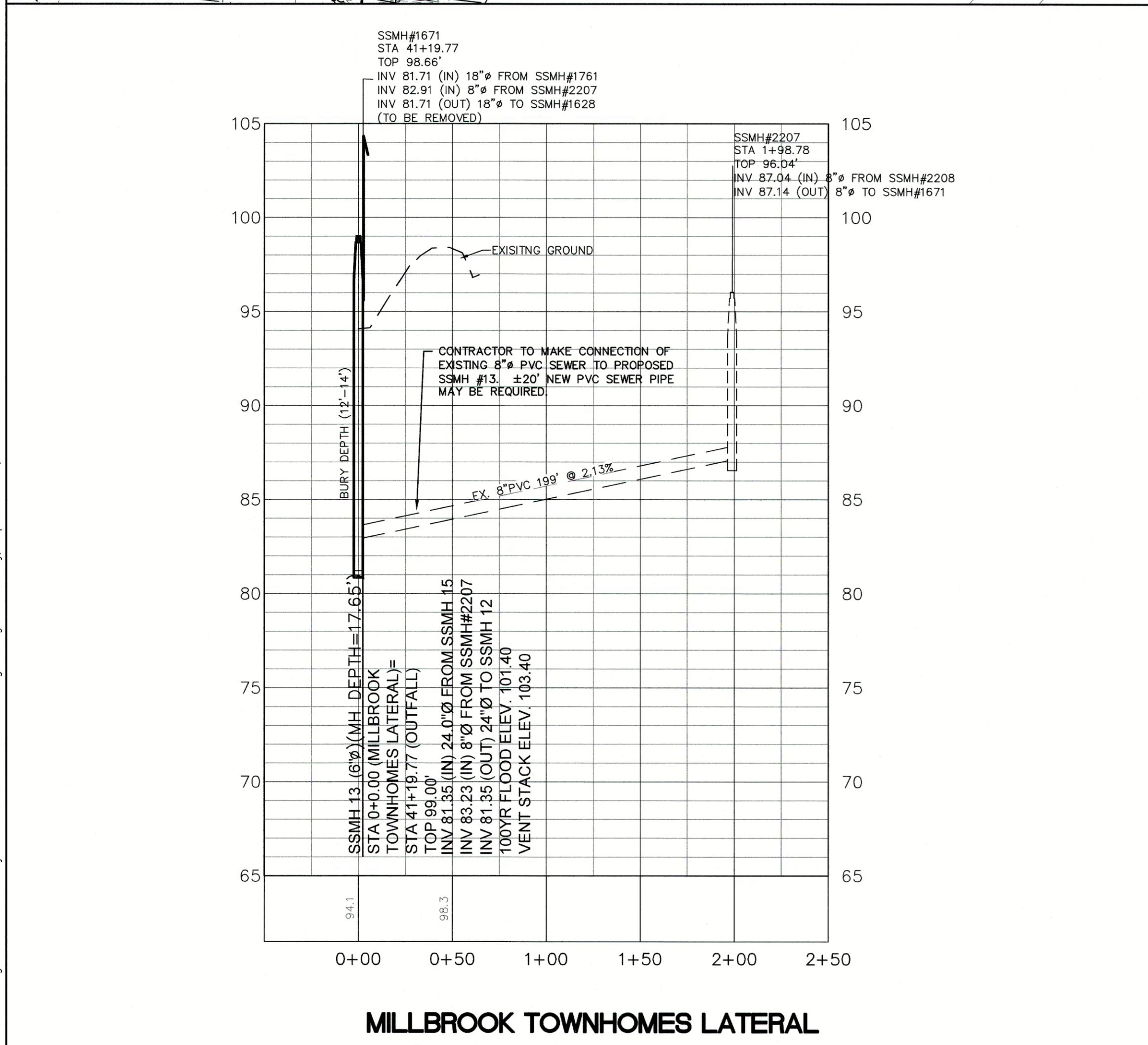
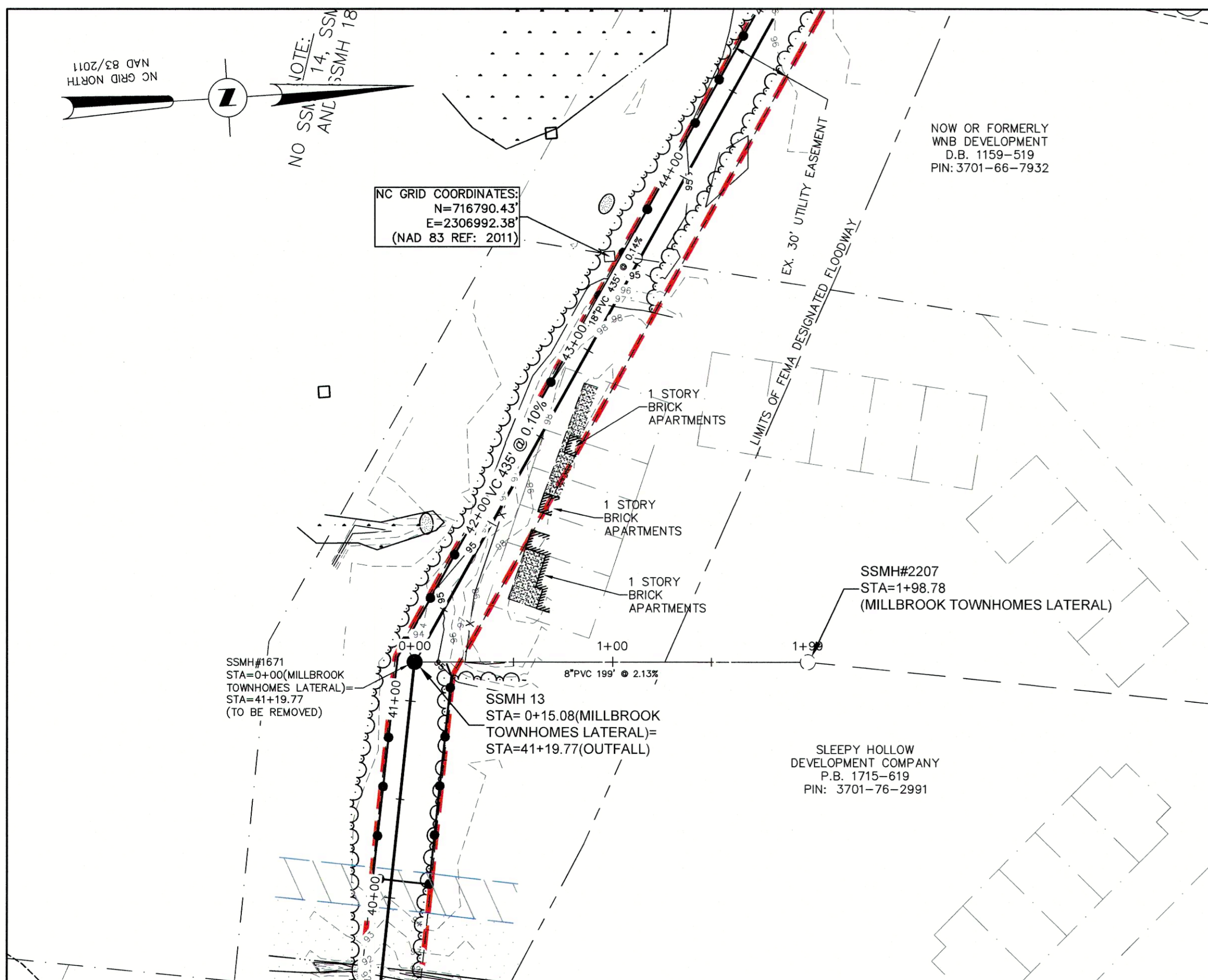
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0 5 10
 PROFILE (VERTICAL)

CLIENT CODE: WILSO
 JOB NUMBER: 22-140
 FIELD BOOK: XXX
 CADFILE: 22140-BM-REV
 ASCII FILE:
 LAST MODIFIED: 13-Sep-22
 MODIFIED BY: GLB

SHEET NO. 12 OF 22

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LEGEND

- 100 --- EXISTING MAJOR CONTOUR
- 10' --- EXISTING MINOR CONTOUR
- EXISTING PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING CENTERLINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXTRATERRITORIAL JURISDICTION
- EXISTING BUFFER
- 1% ANNUAL CHANCE FLOOD
- EXISTING EDGE OF PAVEMENT
- LIMITS OF DISTURBANCE
- TEMPORARY BENCH MARK
- EXISTING WATER LINE
- EXISTING WATER METER
- PROP. AIR RELEASE VALVE
- R200 (WELL)
- ELEV. 999.9'
- 1% ANNUAL CHANCE FLOODPLAIN
- EXISTING SEWER LINE
- PROPOSED SEWER LINE
- EXISTING SEWER FORCE MAIN
- PROPOSED SEWER FORCE MAIN
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER LINE PLUG END
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER LINE PLUG END
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN MANHOLE
- EXISTING PAVEMENT
- EXISTING CONCRETE
- EXISTING GRAVEL
- ZONE AE
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC
- PROPOSED BORE & JACK
- EXISTING VALVE
- EXISTING GAS VALVE
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- EXISTING TREE LINE
- EXISTING WETLANDS LINE
- EXISTING ROAD GUARDRAIL
- SILT FENCE
- SILT FENCE OUTLET
- ROCK CHECK DAM
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RELEASED FOR CONSTRUCTION

REVISION	DATE	BY

DATE: SEPTEMBER 2022

GRAPHIC SCALE

0 25 50 100
PLAN & PROFILE (HORIZONTAL)

0 5 10
PROFILE (VERTICAL)

CLIENT CODE: WILSO
JOB NUMBER: 22-140
FIELD BOOK: XXX
CADFILE: 22140-BM-REV
ASCII FILE:
LAST MODIFIED: 13-Sep-22
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SHEET NO. 13 OF 22

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CITY OF WILSON

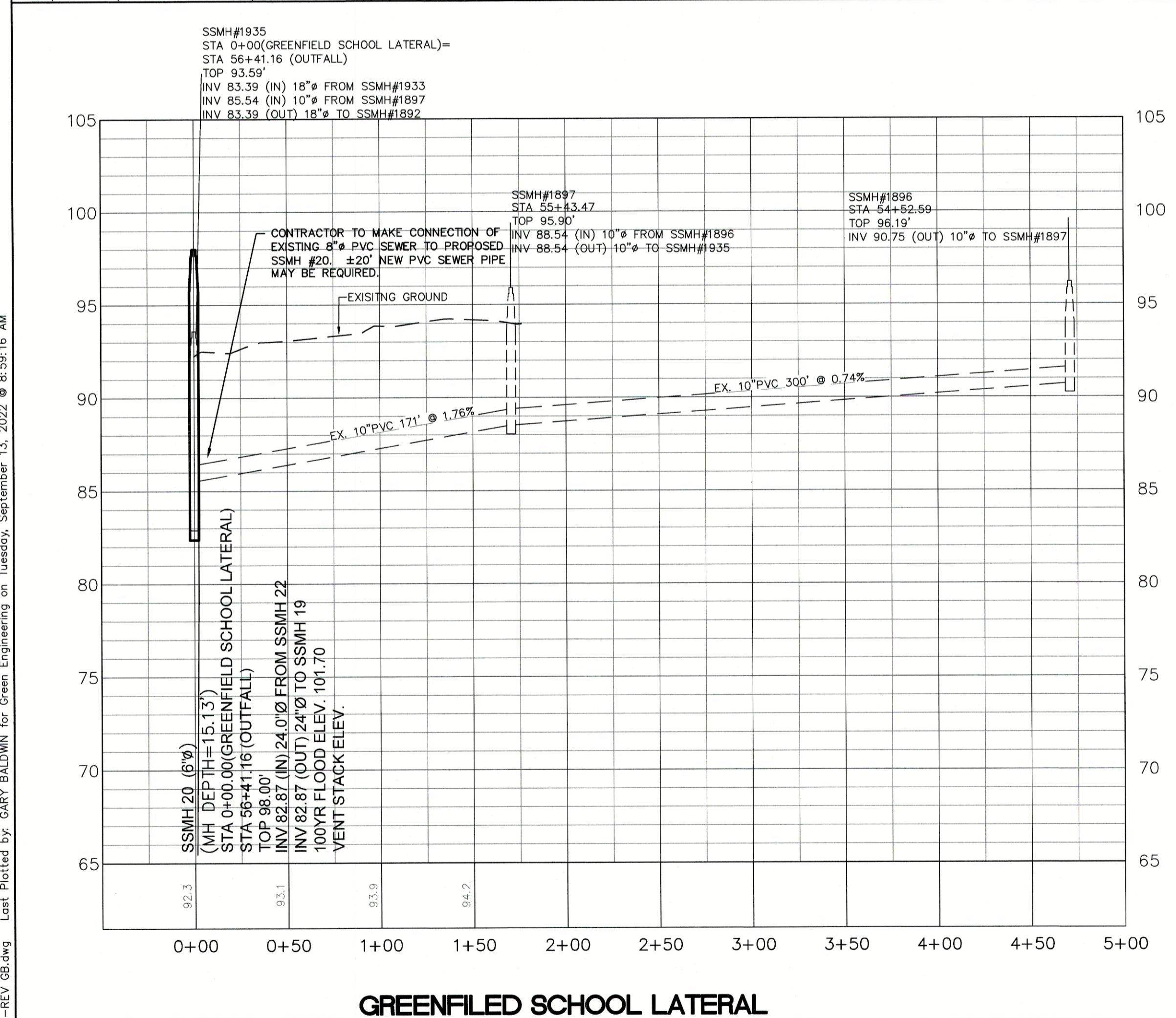
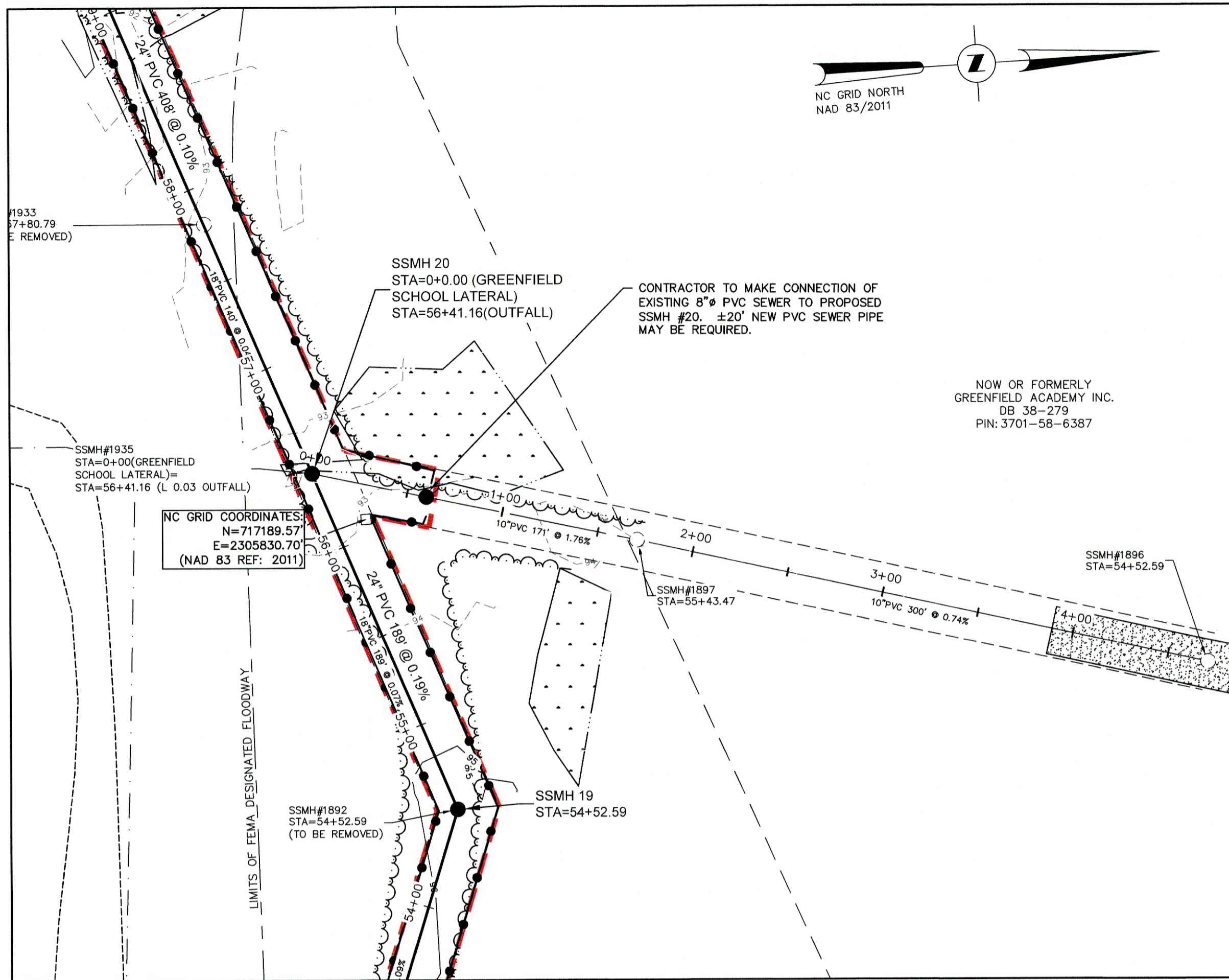
CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS

WILSON COUNTY, NORTH CAROLINA

PLAN AND PROFILE
WIDGEON DR /
MILLBROOK TOWNHOME
LATERAL

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GREENFIELD SCHOOL LATERAL

LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
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	EXISTING BUFFER
	1% ANNUAL CHANCE FLOOD
	EXISTING EDGE OF PAVEMENT
	LIMITS OF DISTURBANCE
	TEMPORARY BENCH MARK
	EXISTING WATER LINE
	EXISTING WATER METER
	PROP. AIR RELEASE VALVE
	EXISTING WELL SITE RADIUS
	1% ANNUAL CHANCE FLOODPLAIN
	EXISTING SEWER LINE
	PROPOSED SEWER LINE
	EXISTING SEWER FORCE MAIN
	PROPOSED SEWER FORCE MAIN
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER LINE PLUG END
	EXISTING SEWER MANHOLE
	EXISTING SEWER LINE PLUG END
	EXISTING STORM DRAIN LINE
	PROPOSED STORM DRAIN LINE
	EXISTING STORM DRAIN MANHOLE
	EXISTING STORM DRAIN MANHOLE
	EXISTING PAVEMENT
	EXISTING CONCRETE
	EXISTING GRAVEL
	ZONE AE
	EXISTING GAS LINE
	EXISTING OVERHEAD ELECTRIC
	PROPOSED BORE & JACK
	EXISTING VALVE
	EXISTING GAS VALVE
	EXISTING RAILROAD TRACKS
	EXISTING FENCE LINE
	EXISTING TREE LINE
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	SILT FENCE
	SILT FENCE OUTLET
	ROCK CHECK DAM
	DISSIPATER PAD
	FLARED END SECTION
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 9-13-2022

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CITY OF WILSON
 LOWER BLOOMERY SWAMP
 SEWER IMPROVEMENTS
 WILSON COUNTY, NORTH CAROLINA

PLAN AND PROFILE
GREENFIELD SCHOOL /
UPPER BLOOMERY SWAMP
LATERAL

REVISION	DATE	BY

DATE: **SEPTEMBER 2022**

GRAPHIC SCALE

0 25 50 100
 PLAN & PROFILE (HORIZONTAL)

0 5 10
 PROFILE (VERTICAL)

CLIENT CODE: WILSO
 JOB NUMBER: 22-140
 FIELD BOOK: XIX
 CADFILE: 22140-BM-REV
 ASCII FILE:
 LAST MODIFIED: 13-Sep-22
 MODIFIED BY: GLB

SHEET NO. 14 OF 22

**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 unattended 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-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event \geq 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 \geq 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 \geq 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 offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event \geq 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)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC 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 or an assurance 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&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

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

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency 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 30 days. 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.
- (c) All data used to complete the Notice of Intent and older 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).
- (a) 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.
- (b) Anticipated bypasses and unanticipated bypasses.
- (c) 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 Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

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.
(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 includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<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 reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

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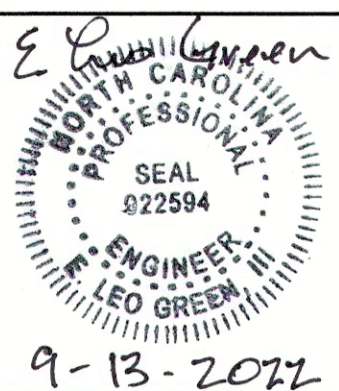
**NPDES NCG01
CONSTRUCTION
NOTES**

REVISION	DATE	BY	DATE: SEPTEMBER 2022

GRAPHIC SCALE

CLIENT CODE: WILSO
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FIELD BOOK: XXX
CADFILE: 13059-NPDES.dwg
ASCII FILE:
LAST MODIFIED: 13-Sep-22
MODIFIED BY: RVM

SHEET NO. **N-1** OF **22**



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

Required Ground Stabilization Timeframes		
Site Area Description	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
(d) Slopes 3:1 to 4:1	14	-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 -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 Rolled 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

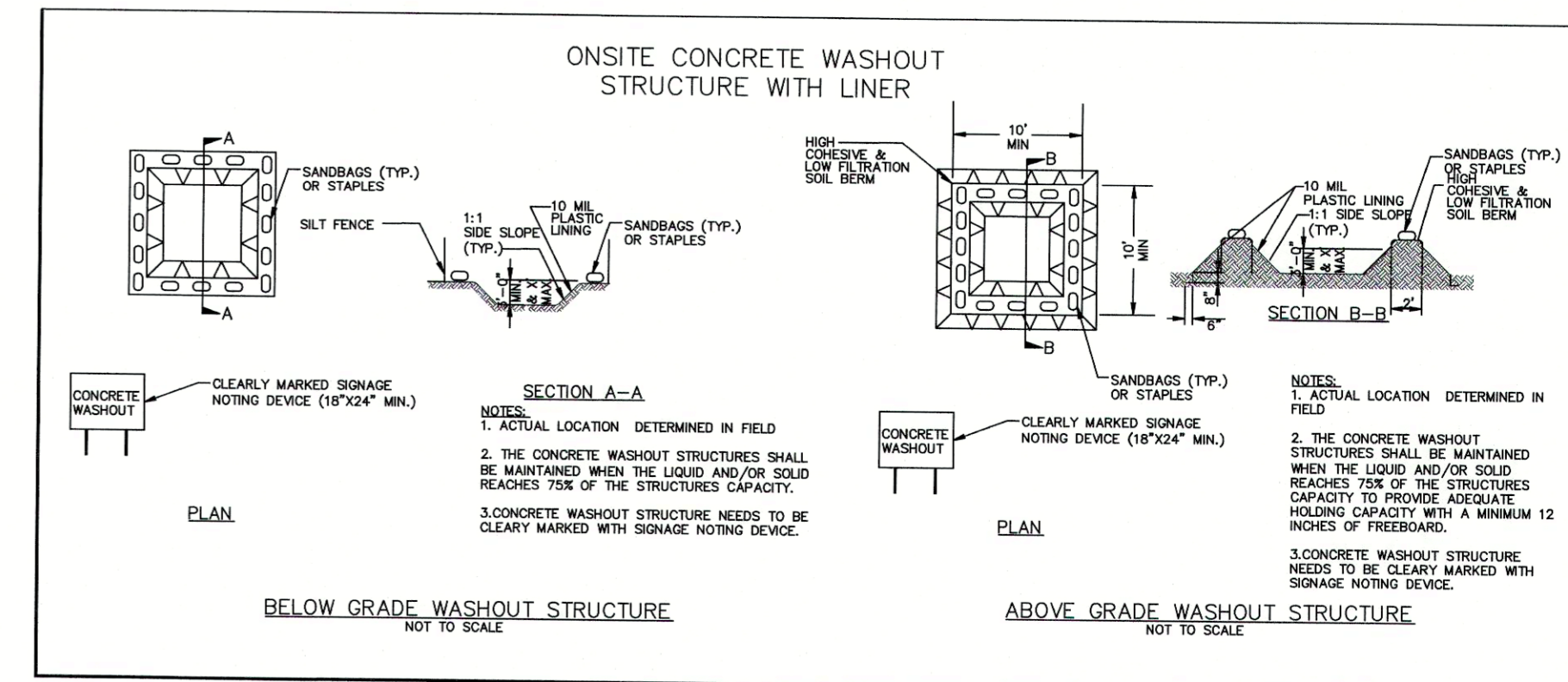
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, 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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

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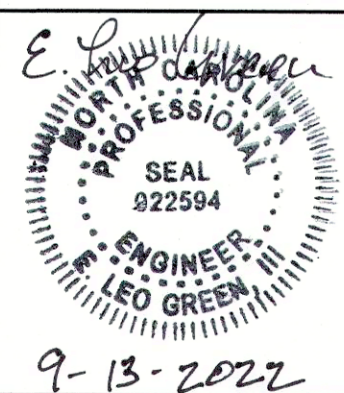
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GRAPHIC SCALE

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 ASCII FILE:
 LAST MODIFIED: 13-Sep-22
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SHEET NO. N-2 OF 22

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SEEDBED PREPARATION:

CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3" DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.

RIP ENTIRE AREA 6" DEEP.

REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.

APPLY AGRICULTURAL LIME AND FERTILIZER UNIFORMLY AND MIX WITH SOIL.

CONTINUE TILLAGE UNTIL A WELL PULVERIZED, REASONABLY UNIFORM SEEDBED IS PREPARED 4" TO 6" DEEP.

SPREAD SEED ON FRESHLY PREPARED SEEDBED AND COVER LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACKER AFTER SEEDING.

MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH BY TACKING WITH ASPHALT OR TACK RACK.

HYDROSEEDING

SURFACE ROUGHENING IS PARTICULARLY IMPORTANT WHEN HYDROSEEDING, AS A ROUGHENED SLOPE WILL PROVIDE SOME NATURAL COVERAGE FOR LIME, FERTILIZER, AND SEED. THE SURFACE SHOULD NOT BE COMPACTED OR SMOOTH. FINE SEEDBED PREPARATION IS NOT NECESSARY FOR HYDROSEEDING OPERATIONS: LARGE CLODS, STONES, AND IRREGULARITIES PROVIDE CAVITIES IN WHICH SEEDS CAN LODGE.

RATE OF WOOD FIBER (CELLULOSE) APPLICATION SHOULD BE AT LEAST 2,000 LB/ACRE.

APPLY LEGUME INOCULANTS AT FOUR TIMES THE RECOMMENDED RATE WHEN ADDING INOCULANT TO A HYDROSEEDER SLURRY.

IF A MACHINERY BREAKDOWN OF 1/2 TO 2 HOURS OCCURS, ADD 50% MORE SEED TO THE TASK, BASED ON THE PROPORTION OF THE SLURRY REMAINING. THIS SHOULD COMPENSATE FOR DAMAGE TO SEED. BEYOND 2 HOURS, FULL RATE OF NEW SEED MAY BE NECESSARY.

LIME IS NOT NORMALLY APPLIED WITH A HYDRAULIC SEEDER BECAUSE IT IS ABRASIVE. IT CAN BE BLOWN ONTO STEEP SLOPES IN DRY FORM.

CRIMPING STRAW MULCH

IF CRIMPING IS TO BE USED, APPLY 1/2 THE MULCH, THEN CRIMP, AND INSTALL THE OTHER HALF. CRIMPING CAN BE APPLIED TO AREAS ADJACENT TO ANY SECTION OF THE ROADWAY WHERE TRAFFIC IS TO BE MAINTAINED OR ALLOWED DURING CONSTRUCTION. IN AREAS WITHIN SIX FEET OF THE EDGE OF PAVEMENT, STRAW IS TO BE APPLIED AND THEN CRIMPED. AFTER THE CRIMPING OPERATION IS COMPLETE, AN ADDITIONAL APPLICATION OF STRAW SHALL BE APPLIED AND IMMEDIATELY TACKED WITH A SUFFICIENT AMOUNT OF UNDILUTED EMULSIFIED ASPHALT.

STRAW MULCH SHALL BE OF SUFFICIENT LENGTH AND QUALITY TO WITHSTAND THE CRIMPING OPERATION.

CRIMPING EQUIPMENT INCLUDING POWER SOURCE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER PROVIDING THAT MAXIMUM SPACING OF CRIMPER BLADES SHALL NOT EXCEED 8".

* REVERT TO SEEDBED PREPARATION FOR WETLAND REPAIR AREAS ON SHEET 2 OF 2 WETLAND IMPACTS FOR SEEDING REQUIREMENTS SPECIFIC TO WETLAND AREAS OF THIS PROJECT.

Table 6.14a
Mulching Materials and Application Rates

Material	Rate Per Acre	Quality	Notes
Organic Mulches			
Straw (ANCHOR STRAW BY TACKING WITH ASPHALT OR NETTING)	1-2 tons	Dry, unchopped, unweathered; avoid weeds.	Should come from wheat or oats; spread by hand or machine; must be tacked down.
Wood chips	5-6 tons	Air dry	Treat with 12 lbs nitrogen/ton. Apply with mulch blower, chip handler, or by hand. Not for use in fine turf.
Wood fiber	0.5-1 tons		Also referred to as wood cellulose. May be hydroseeded. Do not use in hot, dry weather.
Bark	35 cubic yards	Air dry, shredded or hammer-milled, or chips.	Apply with mulch blower, chip handler, or by hand. Do not use asphalt tack.
Corn stalks	4-6 tons	Cut or shredded in 4-6 in. lengths.	Apply with mulch blower or by hand. Not for use in fine turf.
Seriesa lespedeza seed-bearing stems	1-3 tons	Green or dry; should contain mature seed.	
Nets and Mats¹			
Jute net	Cover area	Heavy, uniform; woven of single jute yarn.	Withstands waterflow. Best when used with organic mulch.
Fiberglass net	Cover area		Withstands waterflow. Best when used with organic mulch.
Excelsior (wood fiber) mat	Cover area		Withstands waterflow.
Fiberglass roving	0.5-1 tons	Continuous fibers of drawn glass bound together with a non-toxic agent.	Apply with a compressed air ejector. Tack with emulsified asphalt at a rate of 25-35 gal/1,000 sq ft.
Chemical Stabilizers²			
Aquatain	follow manufacturer's specifications		Not beneficial to plant growth.
Aerospray			
Curasol AK			
Petrosel SB			
Terra Tack			
Crust 500			
Genagua 743			
M-145			

¹Refer to Practice No. 6.30, Grass Lined Channels.

²Use of trade names does not imply endorsement of product.

Maintenance Inspect all mulches periodically, and after rainstorms to check for rill erosion, dislocation or failure. Where erosion is observed, apply additional mulch. If washout occurs, repair the slope grade, reseed and reinstall mulch. Continue inspections until vegetation is firmly established.

SEEDING MAINTENANCE:

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING

Summer - March 1 - August 31

Lime	4,000 lbs/ac
Fertilizer	500 lbs/ac
Bermudagrass (hulled)	35 lbs/ac
Centipede	10 lbs/ac
German/Browntop Millet Grain	10 lbs/ac
Strew Mulch EMULSIFIED ASPHALT TACK	2 tons/ac
EMULSIFIED ASPHALT TACK	400 GALLON/ACRE

Winter - September 1 - February 28

Lime	4,000 lbs/ac
Fertilizer	500 lbs/ac
Bermudagrass (unhulled)	35 lbs/ac
Tall Fescue	50 lbs/ac
Annual Rye	10 lbs/ac
Strew Mulch EMULSIFIED ASPHALT TACK	2 tons/ac
EMULSIFIED ASPHALT TACK	400 GALLON/ACRE

LIME RATE IS PER SANDY SOILS. FOR CLAY SOIL TYPES, ADJUST LIME APPLICATION RATE TO 3 TONS PER ACRE, OR PER SOILS REPORT.

TEMPORARY SEEDING

Summer - March 1 - August 31

Lime	2 tons/ac
10-10-10 Fertilizer	700 lbs/ac
Browntop Millet	40 lbs/ac
Strew Mulch EMULSIFIED ASPHALT TACK	2 tons/ac

Winter - September 1 - February 28

Lime	2 tons/ac
10-10-10 Fertilizer	700 lbs/ac
Oats	50 lbs/ac
Rye Grain	20 lbs/ac
Strew Mulch EMULSIFIED ASPHALT TACK	2 tons/ac

LIME RATE IS PER SANDY SOILS. FOR CLAY SOIL TYPES, ADJUST LIME APPLICATION RATE TO 3 TONS PER ACRE, OR PER SOILS REPORT.

NOTES:

- Mulch will be doubled if crimping is the method used.
- Any variation from these specs must have approval of the Stormwater Program Manager or his/her duly authorized agent.

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DETAIL # 351.01

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MAINTENANCE:

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. SEDIMENTS BEHIND THE FENCE MUST NOT BE ALLOWED TO GO BEYOND 1/3 OF THE FENCE HEIGHT. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNUSABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

NOTES:

- Toe in backfill into trench and compact the soil firmly to anchor the bottom of the silt fence so that the runoff is forced to go through the fence. No runoff is to flow under the fence.
- Posts for sediment fences are to be 1.33 lb/LF steel with a minimum length of 5 ft. Make sure that steel posts have projections to facilitate fastening the fabric. Filter fabric may be attached using wire or plastic zip ties that have a minimum 50 lb tensile strength.
- Total drainage area flowing to silt fence may not exceed 1/4 acre per 100 Ft. of fence.
- Silt fences should not be used at pipe outlets or in areas of concentrated flow (creeks, ditches, swales, etc.)
- Construct the silt fence sediment barrier with either Standard Strength or Extra Strength synthetic filter fabrics. If Standard Strength fabric (TerraTex SF 90 or equiv.) is used, wire mesh support IS required. If Extra Strength fabric (Mirafix 100X or TerraTex SFD or equiv.) is used, NO support is required.
- Standard Strength fabric (TerraTex SF 90 or equiv.) with 8 ft max post spacing DOES require support by wire mesh fastened securely to the upslope side of the posts. Use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches. Extend the wire mesh support to the bottom of the trench. Fasten wire reinforcement, then fabric on the upslope side of the fence post using wire or plastic zip ties that have a minimum 50 lb tensile strength.
- Extra Strength Filter Fabric (Mirafix 100X or TerraTex SFD or equiv.) with 6 ft max. post spacing DOES NOT require wire mesh support. Securely fasten filter fabric directly to posts. Wire or plastic zip ties that have a minimum 50 lb tensile strength.

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SHEET # 1 of 2

DETAIL # 351.01

PURPOSE

To reduce erosion in a drainage channel by reducing the velocity of flow.

DESIGN CRITERIA

- Drainage area is limited to one half acre.
- Keep a maximum height of 2 feet at the center of the check dam.
- Keep the center of the check dam at least 9 inches lower than the outer edges at natural ground elevation.
- Keep the side slopes of the check dam at 2:1 or flatter.
- Ensure that the maximum spacing between check dams places the toe of the upstream check dam at the same elevation as the top of the downstream check dam.
- Stabilize outflow areas along channel to resist erosion.
- Use NCDOT Class B stone and line upstream side of the check dam with NCDOT #5 or #57 washed stone.
- Key the stone into the ditch banks and extend it beyond the abutments a minimum of 1.5 feet to avoid washouts from overflow around the dam.

CONSTRUCTION SPECIFICATIONS

- Place stone to the lines and dimensions shown in the plans on a filter fabric foundation.
- Keep the center stone section at least 9 inches below the natural ground level where the dam abuts the channel banks.
- Extend stone at least 1.5 feet beyond the ditch banks to keep water from cutting around the ends of the check dam.
- Set spacing between check dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper check dam.
- Protect the channel after the lowest check dam from heavy flow that could cause erosion.
- Make sure that the channel reach above the most upstream check dam is stable.
- Ensure that other areas of the channel, such as culvert entrances below the check dams, are not subject to damage or blockage from displaced stones.

MAINTENANCE

- Inspect check dams and channels at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Clean out sediment, straw, limbs, or other debris that could clog the channel when needed.
- Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the check dam. Correct all damage immediately, if significant erosion occurs between check dams, additional measures can be taken such as, installing a protective rip rap liner in that portion of the channel. (See detail 353.08)
- Remove sediment accumulated behind the check dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam and prevent large flows from carrying sediment over the check dam. Add stones to check dams as needed to maintain design height and cross section.

NOTES:

- Do not use check dams in intermittent or perennial streams.
- Contractor to verify / comply with NCDENR Erosion and Sediment Control Planning and Design Manual (Latest revision), detail 6.8.3.

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CITY OF WILSON, N.C.
USE WITH THE CITY OF WILSON STANDARD SPECIFICATIONS ONLY

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REVISION DATE: June, 2010
SHEET # 2 of 2

DETAIL # 351.01

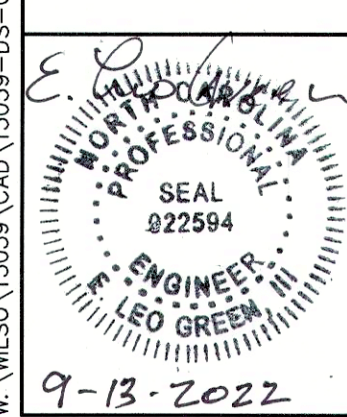
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DETAIL # 351.02

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CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS

CITY OF WILSON WILSON COUNTY, NORTH CAROLINA

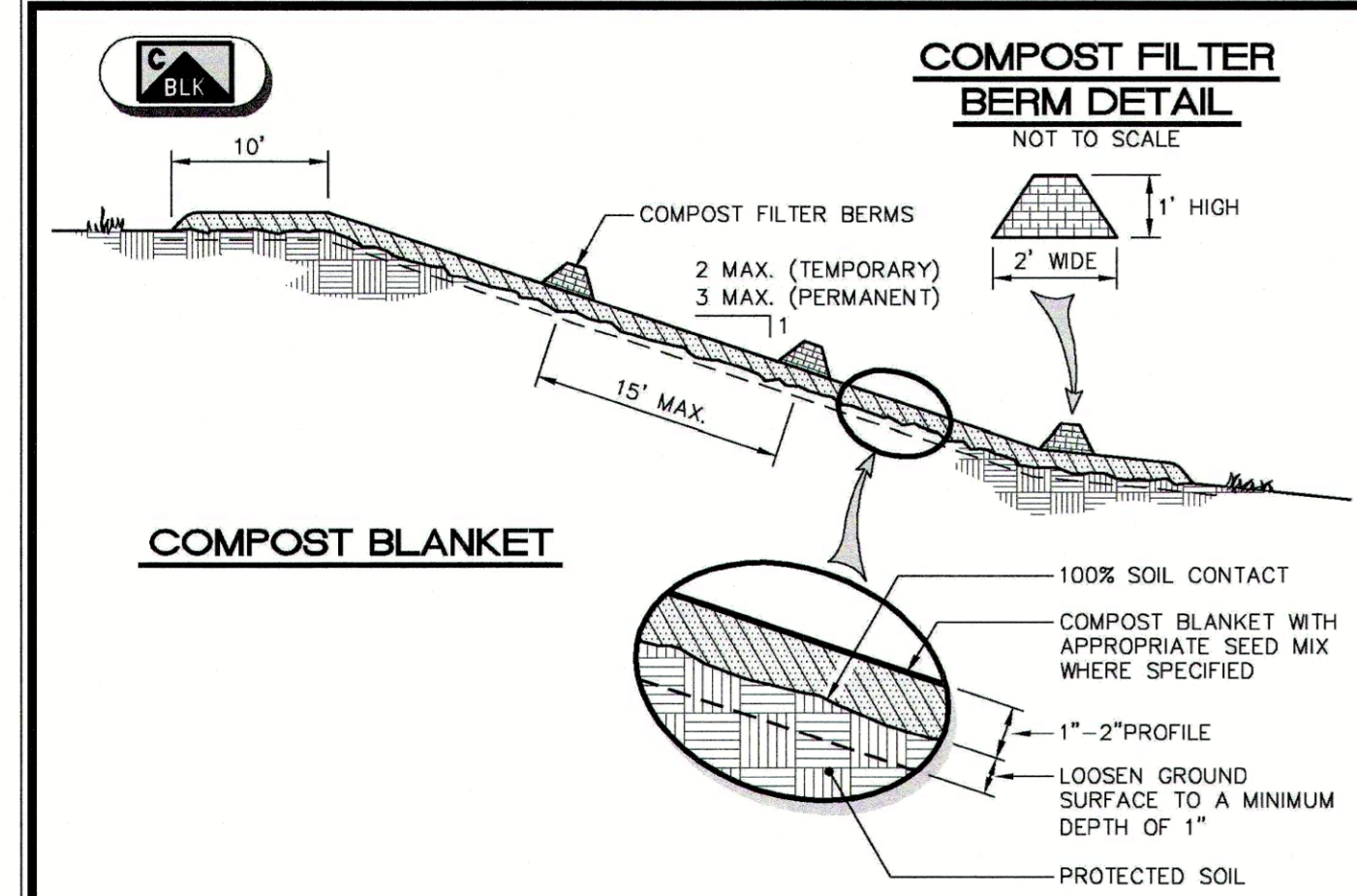
RELEASED FOR CONSTRUCTION

REVISION	DATE	BY	DATE: SEPTEMBER 2022

GRAPHIC SCALE
AS SHOWN

CLIENT CODE: WILSO
JOB NUMBER: 13-059
FIELD BOOK: XXX
CAD FILE: 13059-DS-COW-UPD
ASCI FILE:
LAST MODIFIED: Feb 23, 2021
MODIFIED BY: XXX

SHEET NO. D-1 OF 22



Compost Blanket Notes:

- See plan view for area of compost blanket.
- May be used in place of straw mulch or erosion control blanket in areas where access is difficult due to landscaping or other objects or in areas where a smooth turf grass finish is desired.
- Compost blankets shall only be utilized in areas where sheet flow conditions prevail; shall be prohibited in areas of possible concentrated flow.
- Soil preparation shall be complete per the specifications outlined in the Narrative covering the applicable project.
- When turf grass finish is not desired, surface roughening on slopes shall take place prior to application.
- Compost blanket shall be evenly applied to a depth of specified; generally 1 1/2 to 2 inches thick for vegetated compost surface mulch and 2 to 4 inches thick for unvegetated compost surface mulch.
- Compost blankets may be applied utilizing pneumatic blower or by hand.
- Seeding shall be drilled prior to the application of compost or seed may be combined and blown with the pneumatic blower.
- Where compost filter berms are required or indicated, filter berms shall run parallel to the contour.
- Compost filter berms shall be applied on slopes spaced at no more than a maximum of 15 feet on centers or as shown on the Erosion Control Plan.
- Compost filter berms shall be comprised of the same compost material as utilized for the development of the compost blanket.
- Inspect compost blankets weekly, during and after any rainstorm event.
- Compost used in the application of the compost blanket shall be compost as defined by the following physical, chemical and biological parameters:

Parameters

Parameters	Compost for Compost Blanket
pH	5.0 to 8.5
Soluble salts	Maximum 5 mmhos/cm
Moisture Content	30-60%, wet weight basis
Organic Matter Content	25-65%, dry weight basis
Particle Size	3" (75mm), 100% passing, dry weight basis 1" (25mm), 90-100% passing, dry weight basis 3/4" (19mm), 65-100% passing, dry weight basis 1/4" (6.4mm), 0-75% passing, dry weight basis Maximum particle length of 6" (152mm)
Stability	8 mg CO ₂ -C per g OM per day
Maturity	100%
Percent Emergence Relative Seedling Vigor	100%
Physical Contaminants (man-made inerts)	<1%, dry weight basis
Certification of Products (recommended)	US Composting Council's Seal of Testing (STA) Program

Construction Specifications

The following steps shall be taken for the installation of compost blankets for erosion/sediment control. The information shall also be included in the construction sequence on the approved erosion and sediment control plan.

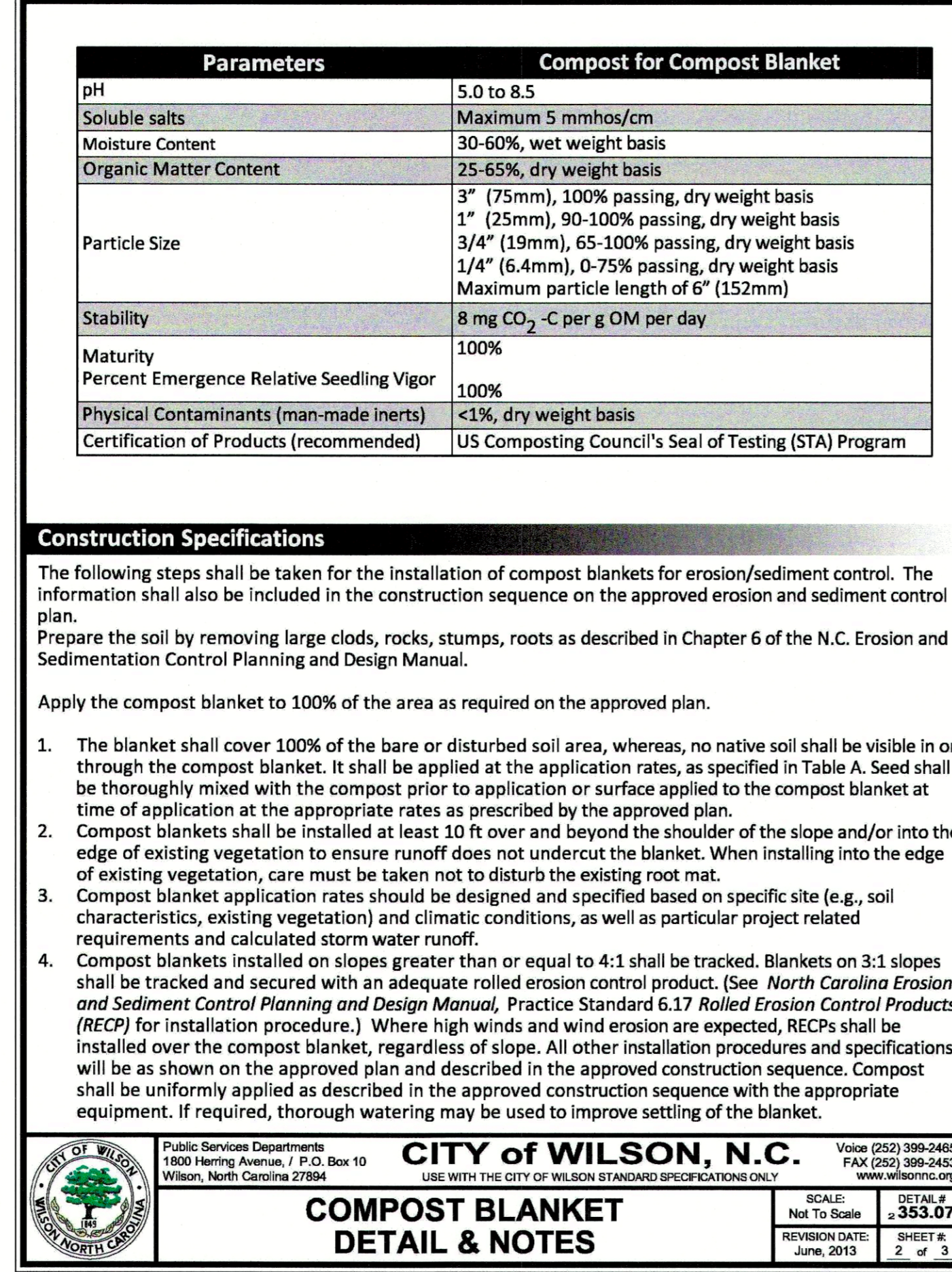
Prepare the soil by removing large clods, rocks, stumps, roots as described in Chapter 6 of the N.C. Erosion and Sedimentation Control Planning and Design Manual.

Apply the compost blanket to 100% of the area as required on the approved plan.

- The blanket shall cover 100% of the bare or disturbed soil area, whereas, no native soil shall be visible in or through the compost blanket. It shall be applied at the application rates, as specified in Table A. Seed shall be thoroughly mixed with the compost prior to application or surface applied to the compost blanket at time of application at the appropriate rates as prescribed by the approved plan.
- Compost blankets shall be installed at least 10 ft over and beyond the shoulder of the slope and/or into the edge of existing vegetation to ensure runoff does not undercut the blanket. When installing into the edge of existing vegetation, care must be taken not to disturb the existing root mat.
- Compost blanket application rates should be designed and specified based on specific site (e.g., soil characteristics, existing vegetation) and climatic conditions, as well as particular project related requirements and calculated storm water runoff.
- Compost blankets installed on slopes greater than or equal to 4:1 shall be tracked. Blankets on 3:1 slopes shall be tracked and secured with an adequate rolled erosion control product. (See *North Carolina Erosion and Sediment Control Planning and Design Manual*, Practice Standard 6.17 *Roller Erosion Control Products (RECP)* for installation procedure.) Where high winds and wind erosion are expected, RECPs shall be installed over the compost blanket, regardless of slope. All other installation procedures and specifications will be as shown on the approved plan and described in the approved construction sequence. Compost shall be uniformly applied as described in the approved construction sequence with the appropriate equipment. If required, thorough watering may be used to improve settling of the blanket.

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SHEET # 1 of 3



COMPOST BLANKET DETAIL & NOTES

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SHEET # 2 of 3

JUTE THATCH LINING

- BURY THE TOP OF THE JUTE STRIPS IN A TRENCH 4 INCHES OR MORE IN DEPTH.
- TAMP THE TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 10 INCH SPACING, 4 INCH DOWN FROM TRENCH.
- OVERLAP --- BURY UPPER END OF LOWER STRIP OVERLAP END OF TOP STRIP 4 INCHES AND STAPLE.
- EROSION STOP --- FOLD OF JUTE BURIED IN SLIT TRENCH AND TAMPED, DOUBLE ROW OF STAPLES.
- PLACE STAPLES 1 1/2 TO 6.0 FEET APART AS REQUIRED TO KEEP THE JUTE FIRMLY PRESSED INTO THE SOIL.
- PRESS ENDS OF JUTE 4 INCHES INTO THE SOIL AROUND STRUCTURES AND STAPLE SECURELY.
- INSTALL LINER TO Q10 DEPTH OF FLOW MINIMUM.

EXCELSIOR LOG / WATTLE

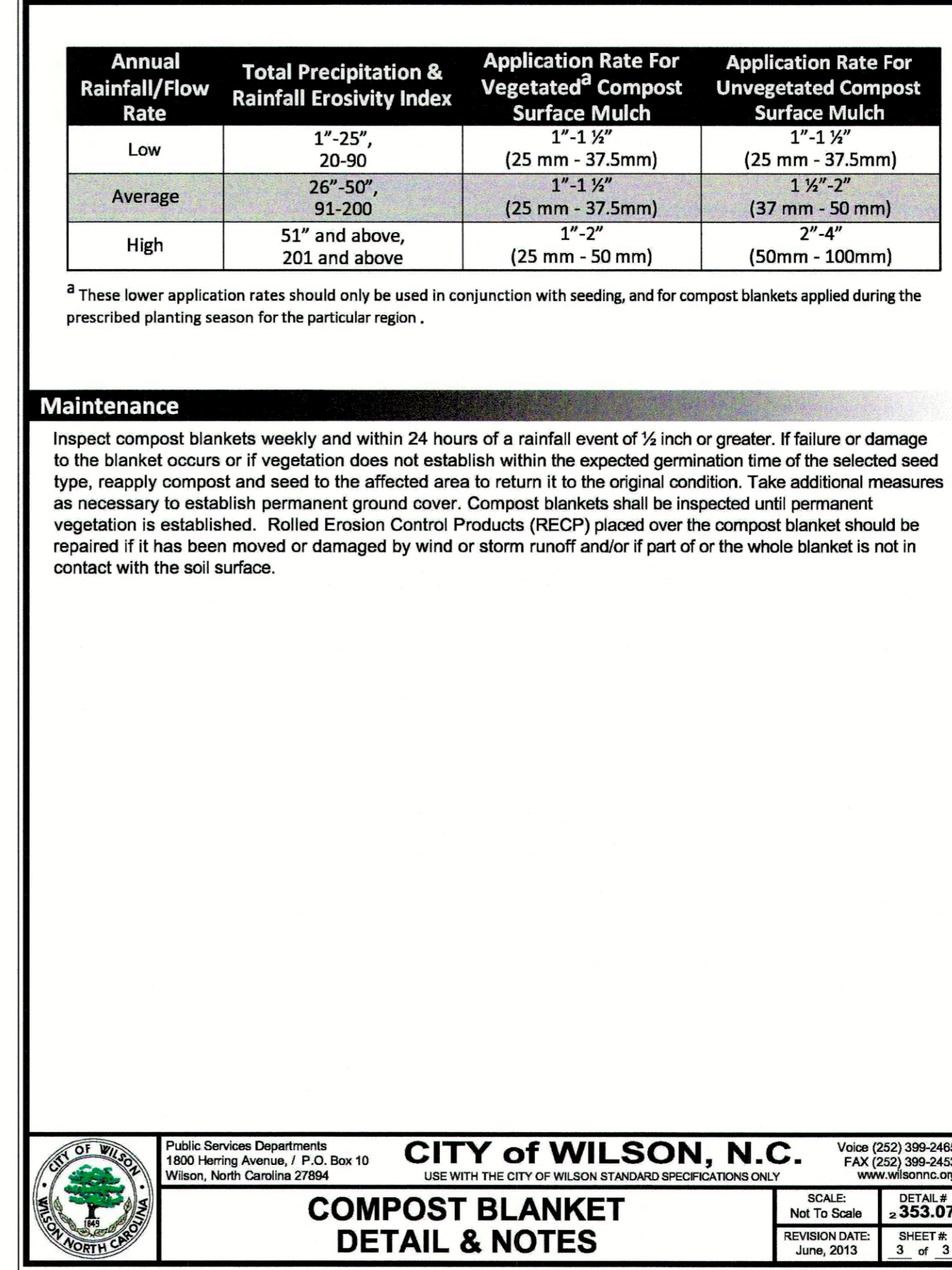
PLAN VIEW

- 16" MINIMUM STAKE BURY BELOW GROUND.
- DO NOT ALLOW FLOW TO OVERTOP DEVICE.

CROSS-SECTION VIEW

DESIGN CRITERIA

- TO BE UTILIZED AS A "GREEN" SUBSTITUTE FOR ROCK CHECK DAMS IN DITCHES AND OTHER CHANNELS. NCDENR AND/OR NCDOT APPROVAL REQUIRED.
- THE DRAINAGE AREA IS LIMITED TO ONE HALF ACRE PER DEVICE. DRAINAGE AREAS MUST BE FREE FROM DEBRIS, ROCKS, CLOUDS, ETC.
- GROUND SURFACE SHOULD BE SMOOTH PRIOR TO INSTALLATION TO ENSURE LOG / WATTLE REMAINS IN CONTACT WITH SIDE SLOPES AND CHANNEL.
- STABILIZE ANY OUTFLOW AREAS ALONG THE CHANNEL TO RESIST EROSION.
- AT A MINIMUM, UTILIZE 1" x 1" x 24" STAKES TO SECURE THE LOG / WATTLE TO THE GROUND SURFACE.
- INSTALLATION IN ROCKY, SANDY OR OTHERWISE LOOSE SOIL SHALL REQUIRE LONGER STAKES (GREATER THAN 24") TO BE UTILIZED.
- PLACE FIBER REINFORCED EROSION CONTROL MATTING AS AN APRON UPSTREAM OF LOG / WATTLE WHEN UTILIZING FOR SLOPE PROTECTION. SECURE MATTING BY ANCHORING TO SLOPE. SECURE LOG / WATTLE TO BLANKET TO ENSURE CONTACT OVER THE LENGTH OF THE INSTALLATION. A MINIMUM OF 1 FT. UPSTREAM APRON AND 2 FT. DOWNSTREAM APRON ARE REQUIRED FOR INSTALLATION FOR SLOPE PROTECTION.
- SUBSEQUENT DOWNSLOPE LOGS / WATTLES SHOULD BE APPROPRIATELY SPACED TO MINIMIZE VELOCITIES. SEAMS BETWEEN LOGS / WATTLES SHOULD BE OFFSET TO ENSURE MAXIMUM FILTRATION BETWEEN DEVICES. FIGURE A REPRESENTS A PROFILE VIEW FOR SLOPE INSTALLATION.
- REFERENCE NCDENR EROSION & SEDIMENTATION CONTROL DESIGN MANUAL FOR DESIGN STANDARDS & SPECIFICATIONS REGARDING MAINTENANCE CRITERIA.



COMPOST BLANKET DETAIL & NOTES

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SHEET # 3 of 3

TRENCH DEWATERING DETAIL

PLAN VIEW

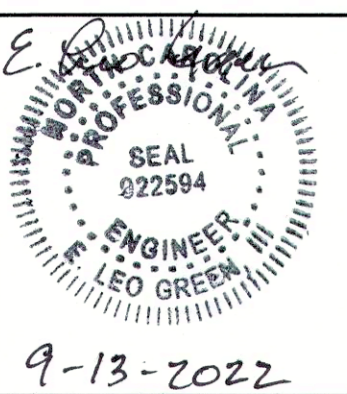
LENGTH OF TRENCH NOT TO EXCEED THAT WHICH CAN BE COMPLETED AND BACKFILLED IN ONE WORKING DAY

TRENCH DEWATERING DETAIL

SILT BAG OR OTHER APPROVED DEWATERING DEVICE PROVIDE POSITIVE DRAINAGE FROM SILT BAG DOWNGRADE DO NOT ALLOW DRAINAGE TO CONCENTRATE DOWNSTREAM

DEWATERING PUMP DISCHARGE HOSE
DEWATERING PUMP
FLEXIBLE INTAKE HOSE
SANITARY SEWER INSTALLATION TRENCH
FLOATING SKIMMER INLET DEVICE (FAIRCLOTH TYPE, OR EQUAL)

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LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS
CITY OF WILSON
WILSON COUNTY, NORTH CAROLINA

DETAILS

REVISION	DATE	BY	DATE: SEPTEMBER 2022

GRAPHIC SCALE
AS SHOWN

CLIENT CODE: WILSO
JOB NUMBER: 13-059
FIELD BOOK: XXX
CADFILE: 13059-DS-COW-UPD
ASCII FILE:
LAST MODIFIED: Feb 23, 2021
MODIFIED BY: XXX

SHEET NO. D-2 OF 22

RELEASED FOR CONSTRUCTION

WATERTIGHT DETAIL

APPROVED MODELS	EJW V-2384	CF MH-2001-WT
COVER WEIGHT	130 Lbs.	120 Lbs.
FRAME WEIGHT	190 Lbs.	190 Lbs.
LOAD RATING	HEAVY DUTY	
MATERIAL	ASTM A 48 CLASS 35B	
FINISH	UNCOATED	UNCOATED

COVER FACE

COVER SECTION

FRAME TOP VIEW

COVER BACK

ISOMETRIC

NOTES:

- Frame & Cover weight may not deviate by more than -5.0%.
- EJW = East Jordan Iron Works (shown) / CF = Capitol Foundry.

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LOCKABLE / WATERTIGHT MANHOLE FRAME and COVER
SCALE: Not To Scale
REVISION DATE: June, 2010
SHEET # 1 of 1

LONGITUDINAL SECTION

TRANSVERSE SECTION

ISOMETRIC PROFILE

NOTES:

- Concrete to be 3,000 psi.
- Pipe shall be ductile iron pipe.
- Filter fabric to be placed under rip-rap and keyed into embankment.
- City Engineer or Water Resources may require full concrete encasement of casing on sewer lines.
- City Engineer or Water Resources may require concrete encasement to be reinforced on a case-by-case basis.
- All stream crossings shall require steel casing. See detail C07.03. When possible, valves shall be a minimum of 20 ft from end of casing if valves are in line with casing.

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STANDARD STREAM/CREEK CROSSING (STEEL ENCASEMENT)
SCALE: Not To Scale
REVISION DATE: June, 2010
SHEET # 1 of 1

TYPICAL DETAIL FOR BORE UNDER PAVED ROADS / HIGHWAYS

CARRIER PIPE	CASING PIPE				
	RAILROAD	HIGHWAY			
NOMINAL DIAMETER	OUTSIDE DIAMETER	WALL THICKNESS	OUTSIDE DIAMETER	WALL THICKNESS	
6" & UNDER	6.90"	12 3/4"	0.188"	12 3/4"	0.188"
8"	9.05"	16"	0.250"	16"	0.188"
10"	11.10"	20"	0.281"	20"	0.188"
12"	13.20"	24"	0.344"	24"	0.188"
14"	15.30"	28"	0.406"	28"	0.219"
16"	17.40"	30"	0.406"	30"	0.250"
20"	21.60"	42"	0.563"	42"	0.281"
24"	25.80"	42"	0.563"	42"	0.344"

NOTES:

- Installation by dry bore & jacking.
- Bore to run from Right-of-Way to Right-of-Way unless approved otherwise by the City.
- Grease encasement pipe as required for ease of installation.
- Steel pipe to be 35,000 psi min. yield strength, grade B.

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TYPICAL DETAIL FOR BORE UNDER PAVED ROADS / HIGHWAYS
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END SEAL DETAIL

SECTION A-A

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TYPICAL DETAIL FOR BORE UNDER PAVED ROADS / HIGHWAYS
SCALE: Not To Scale
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SHEET # 2 of 2

FIELD + WOODS APPLICATION

STANDARD ECCENTRIC CONE PRECAST MANHOLE DETAIL

NOTES:

- Concrete strength to be 4,000 PSI minimum.
- Pipes will be grouted inside and out.
- Flexible sleeve boots cast in place or installed with stainless steel expander rings. Boots to meet ASTM C-923 standards.
- See detail 732.01 for typical invert shaping.
- Service laterals into existing manholes to be core drilled and booted.
- Maximum depth 4" diameter manhole = 12' (see sewer design section for other requirements / limitations).
- If height above grade exceeds 24", use eccentric flat top.
- For watertight applications, place butyl rubber between frame and cone.
- All banded connections shall be double banded. For pipe connections 12" and larger, 2 sets of bands shall be required.
- Lubricate the following: Pipe exterior, boot interior, boot exterior, S.S. bands (Top & bottom)
- Place manhole opening over the effluent line.
- Manholes subject to flooding shall have the top of the manhole rim a minimum of 24" above the 100 Yr. BFE unless approved otherwise by the City Engineer or Water Resources. When vents are permitted, vent every 3rd manhole, not exceeding 1,000 LF between vents. Vents shall be placed a minimum of 24" above the 100 Yr. BFE. See detail 732.10.
- Cutoff all manholes, regardless of manhole top elevation, shall be vented.

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STANDARD ECCENTRIC CONE PRECAST MANHOLE DETAIL
SCALE: Not To Scale
REVISION DATE: June, 2010
SHEET # 2 of 3

STANDARD ECCENTRIC CONE PRECAST MANHOLE DETAIL

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STANDARD ECCENTRIC CONE PRECAST MANHOLE DETAIL
SCALE: Not To Scale
REVISION DATE: June, 2010
SHEET # 3 of 3

To calculate the closest possible distance between two holes (openings) on the same horizontal centerline, use the following formula:

A = Distance between holes (in degrees)
B = Angle between centerline of pipes
C = Degrees for hole number one from chart below
D = Degrees for hole number two from chart below

$A = B - 1/2(C+D)$

If A < 0, the openings are overlapping
If A > 0, A = the distance between holes (in degrees)

4" DIA:
A = 90 - 1/2(95+95) = 90 - 95 = -5, **Holes too close**

5" DIA:
A = 90 - 1/2(75+75) = 90 - 75 = 15, **O.K. for 5" dia.**

There are 15° of angle between holes which is 7 7/8".

4" Dia. MH		8" Dia. MH	
Hole Dia.	Degrees	Hole Dia.	Degrees
12"	28°	12"	15°
12"	28°	18"	22°
18"	45°	24"	28°
24"	60°	36"	44°
30"	76°	40"	48°
36"	93°	42"	52°
		48"	60°
		55"	68°
		60"	80°
		70"	90°
		78"	108°

6" Dia. MH		10" Dia. MH	
Hole Dia.	Degrees	Hole Dia.	Degrees
12"	22°	12"	38°
18"	35°	18"	46°
24"	48°	24"	55°
30"	62.6°	30"	62°
36"	75°	36"	70°
40"	82°	40"	70°
48"	108°	48"	80°
		40"	65°
		45"	70°
		48"	84°
		55"	98°
		63"	125°

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DISTANCE BETWEEN TWO HOLES (OPENINGS) FORMULA
SCALE: Not To Scale
REVISION DATE: June, 2010
SHEET # 1 of 1

UNSUITABLE SUBGRADE TRENCH DETAIL TYPE A (SEWER & STORM DRAINAGE)

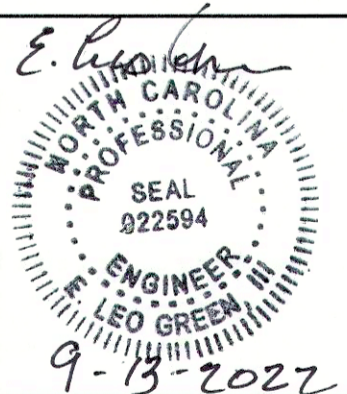
NOTES:

- 8" deep No. 57 stone or equal wrapped in non-woven geotextile filter fabric lightly compacted. Overlap fabric by minimum one pipe O.D.
- 4" deep No. 57 stone or equal lightly compacted pipe bedding.
- General backfill compacted to 90% Standard Proctor density in 6" maximum lifts.

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UNSUITABLE SUBGRADE TRENCH DETAIL TYPE A (SEWER & STORM DRAINAGE)
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SEWER IMPROVEMENTS

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WILSON COUNTY, NORTH CAROLINA

DETAILS

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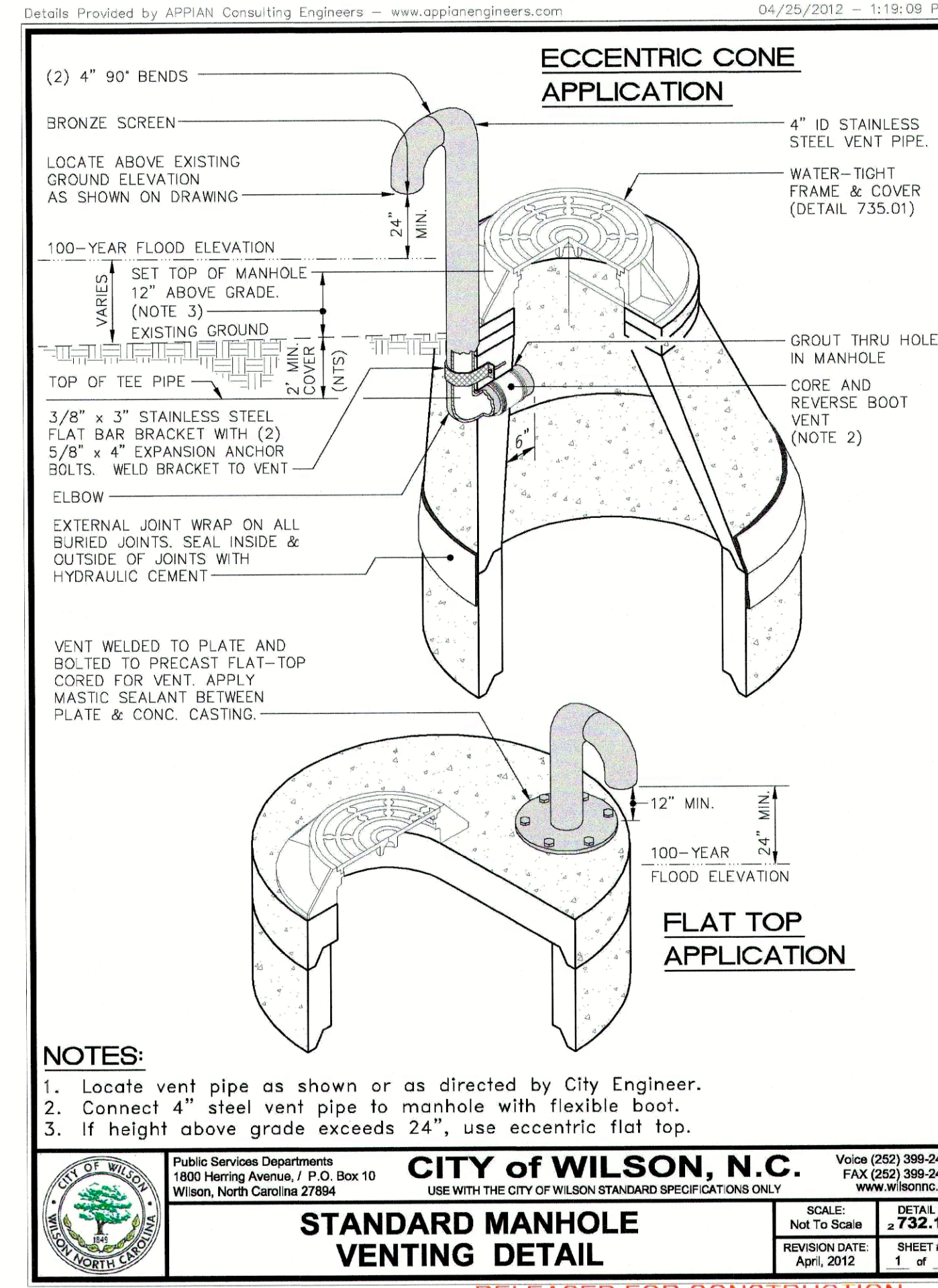
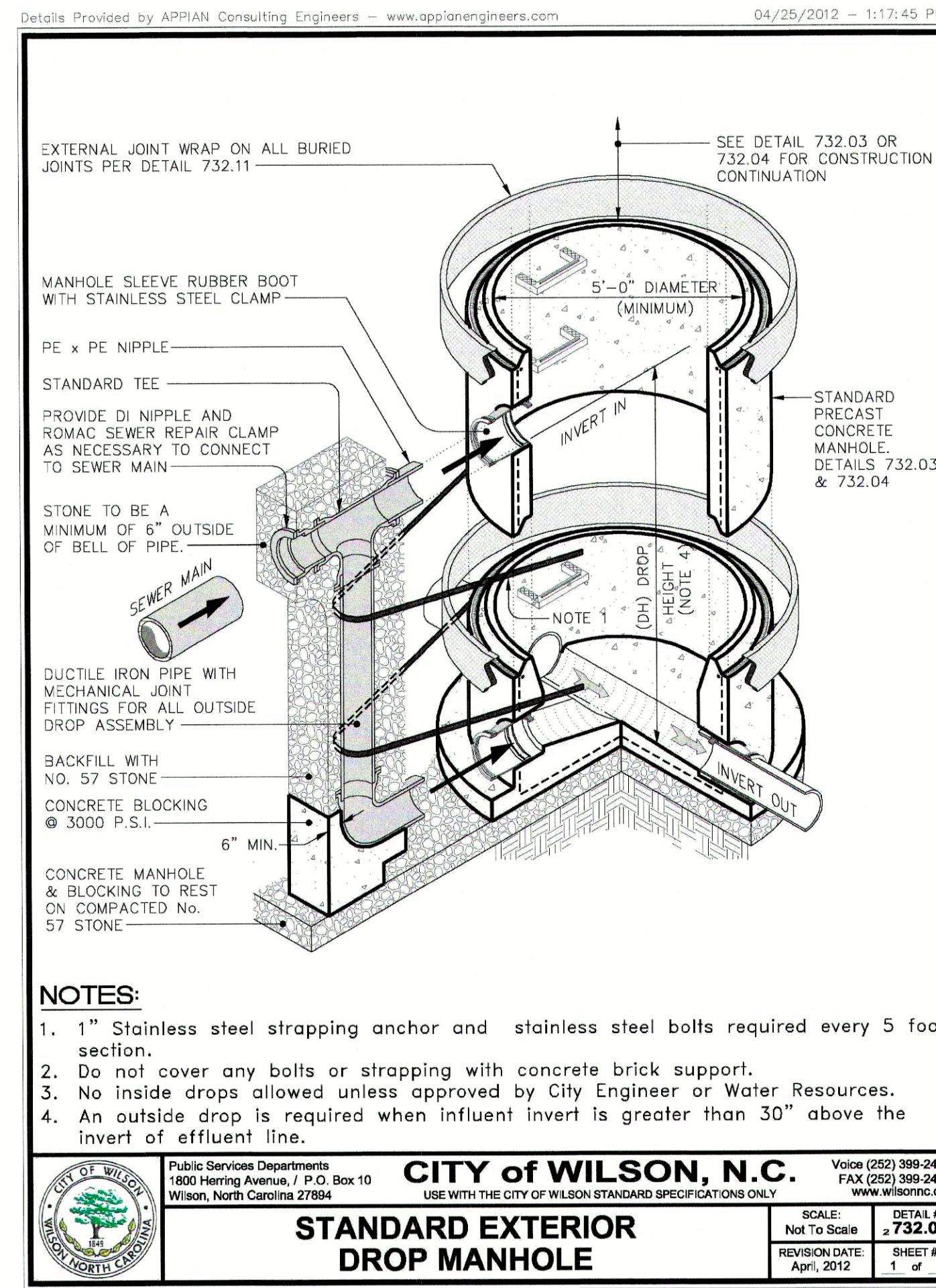
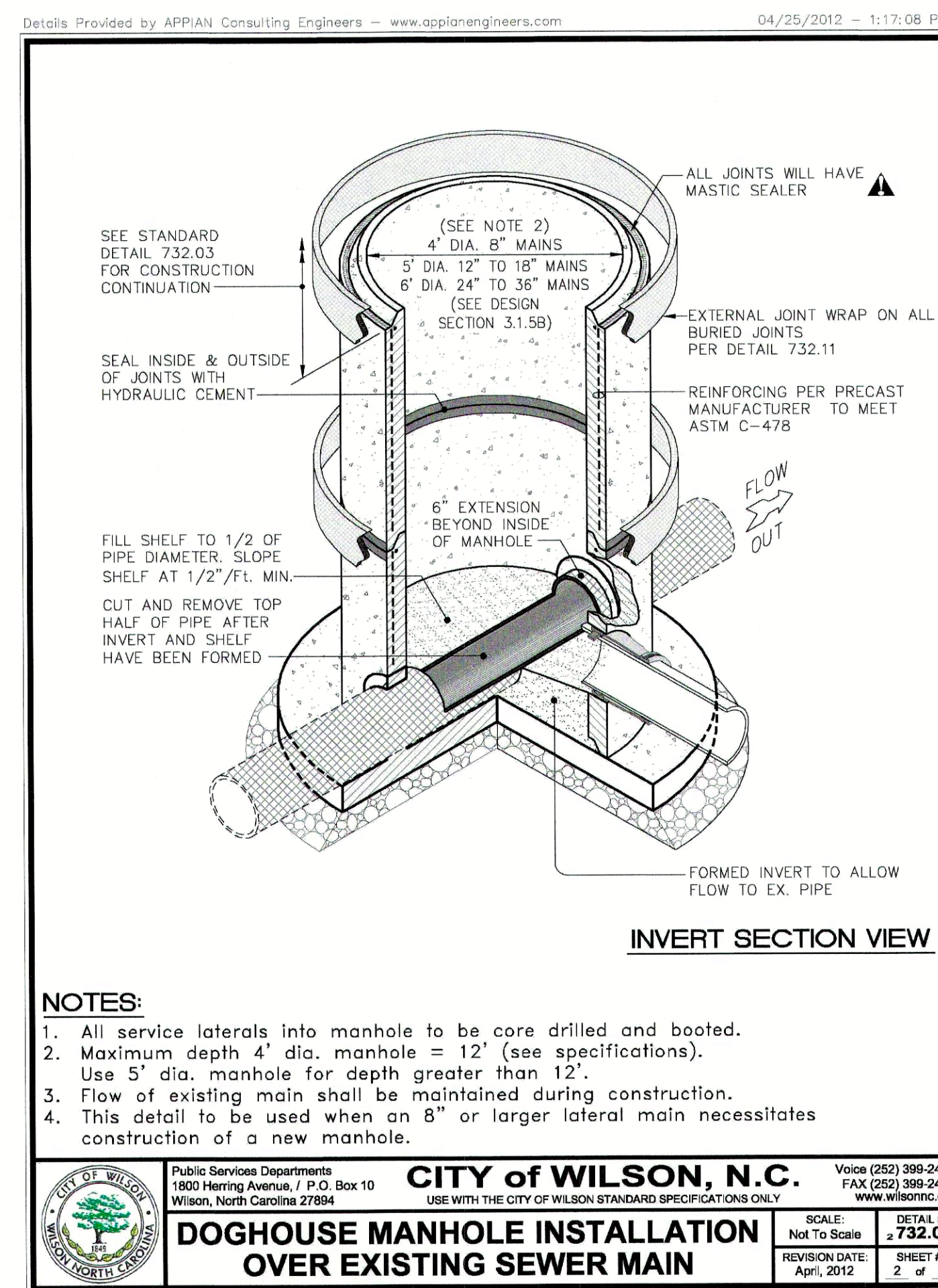
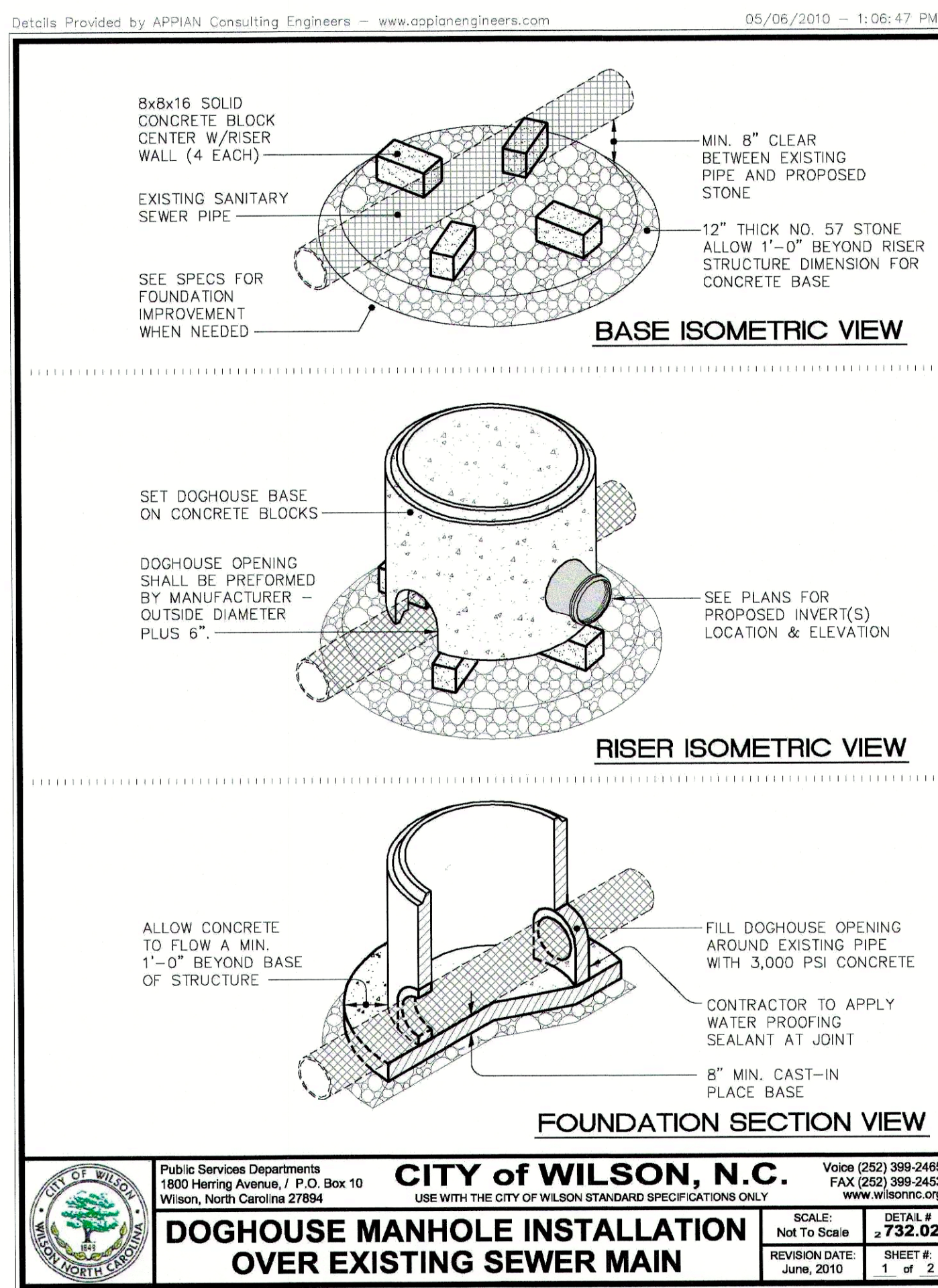
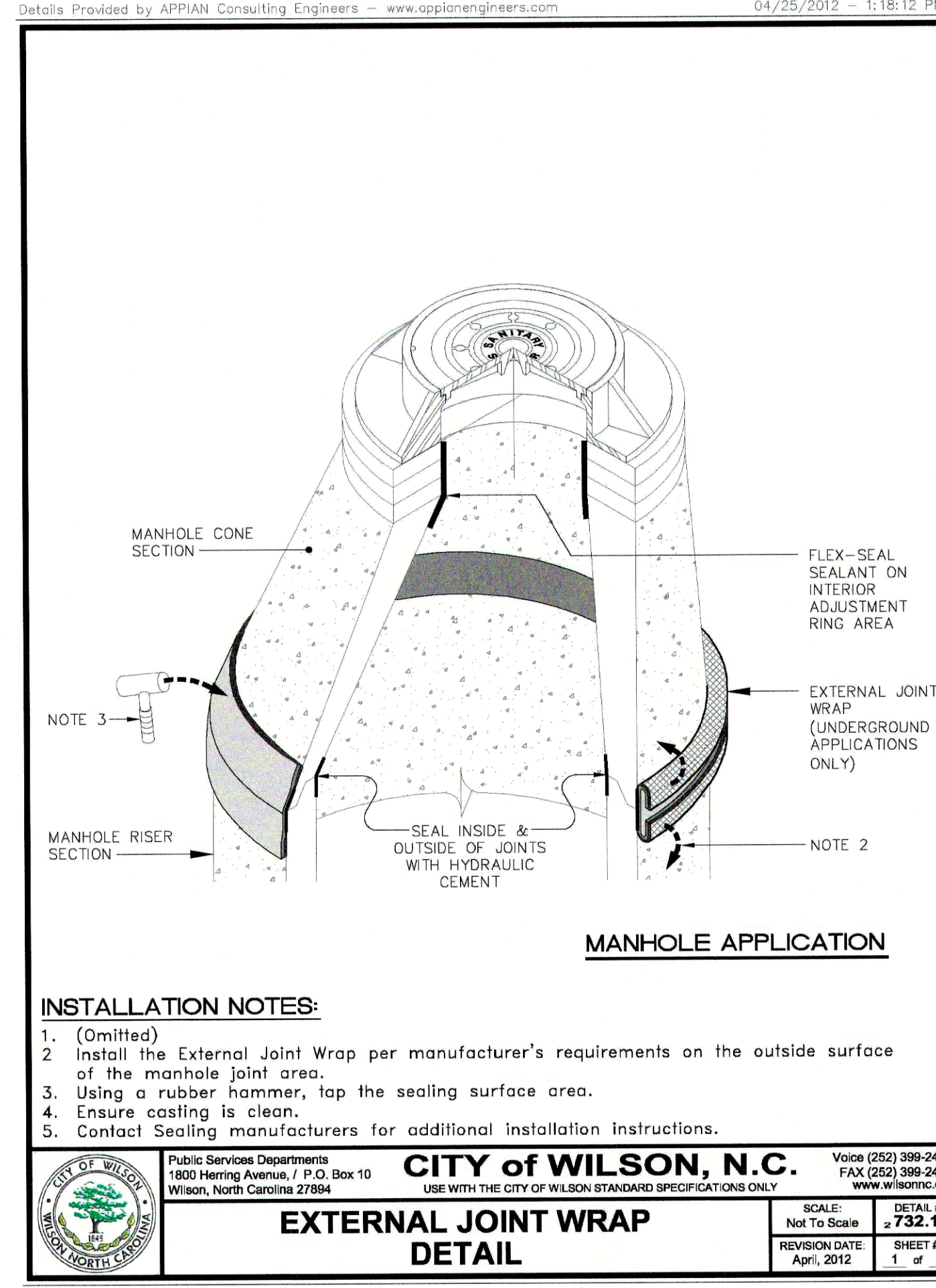
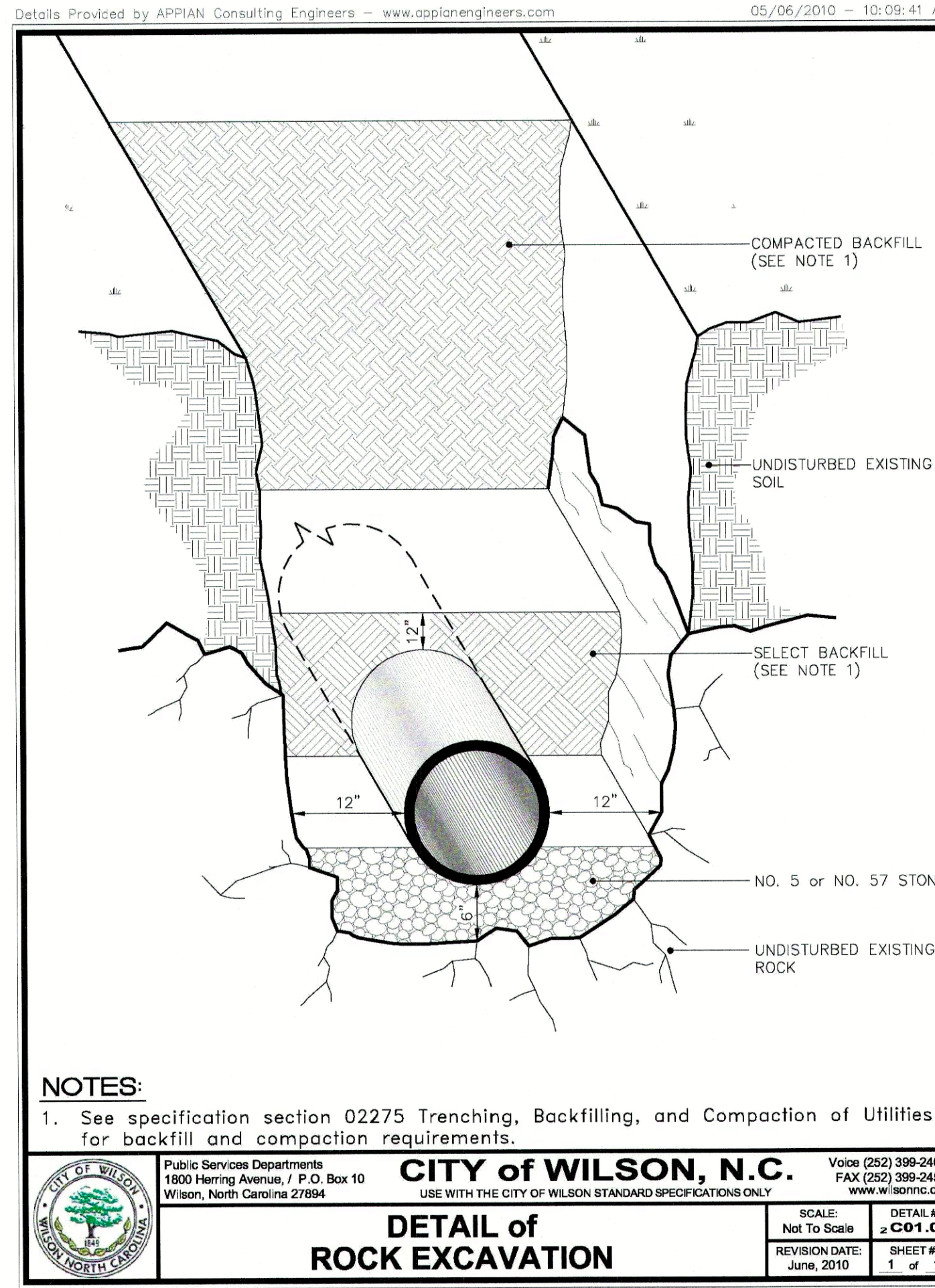
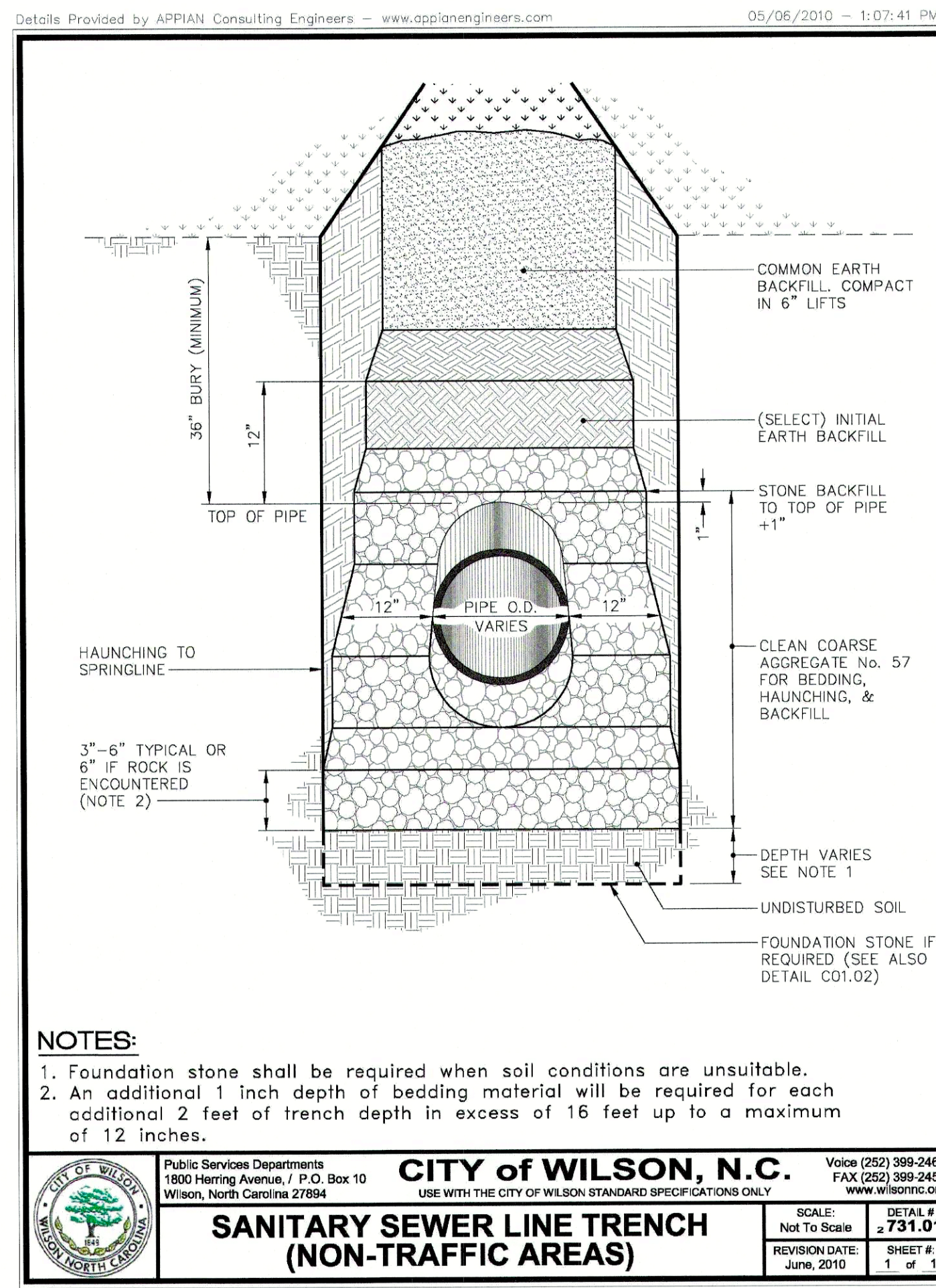
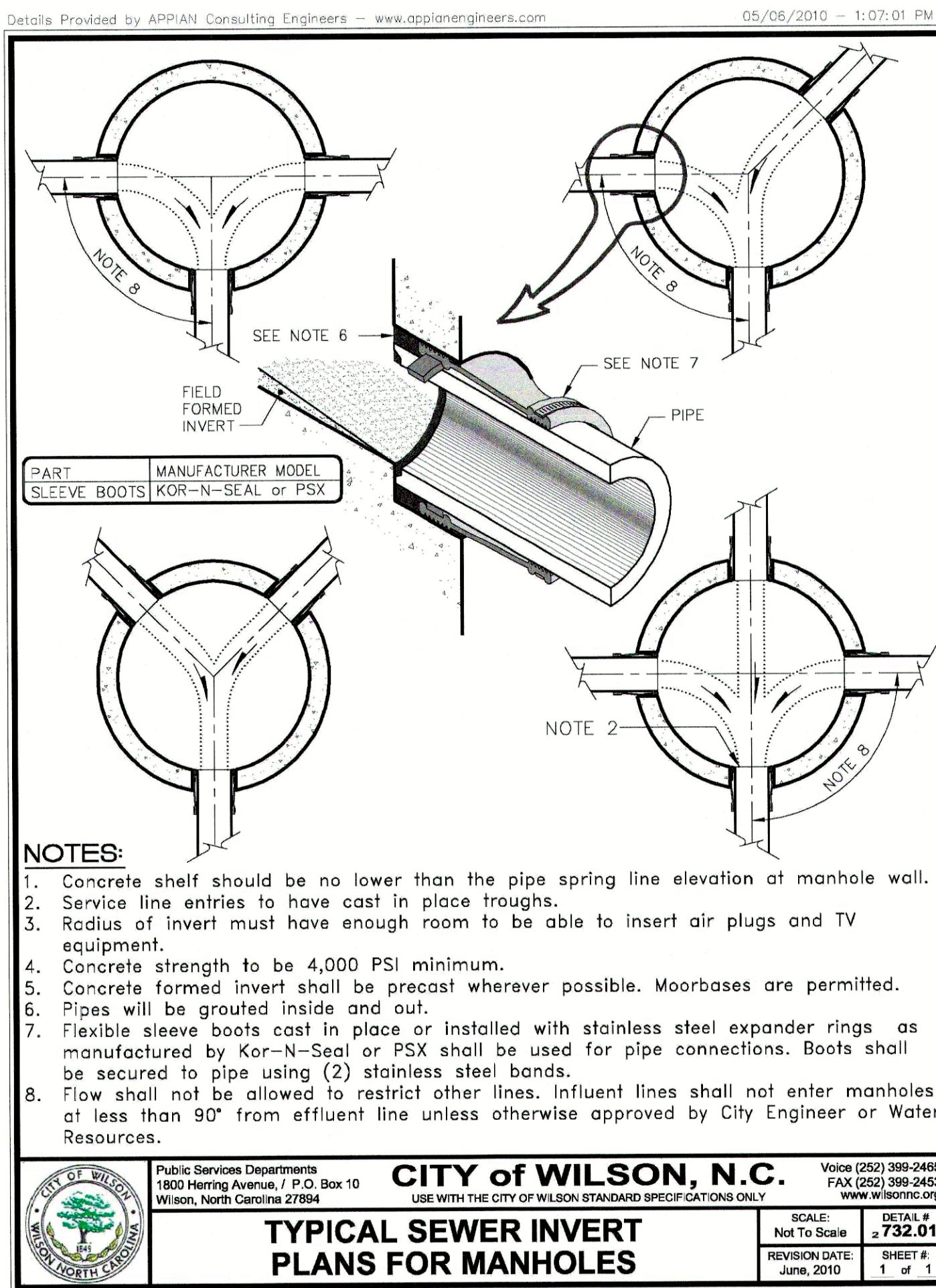
REVISION	DATE	BY	DATE: SEPTEMBER 2022

GRAPHIC SCALE

AS SHOWN

CLIENT CODE: WILSO
JOB NUMBER: 13-059
FIELD BOOK: XXX
LAST MODIFIED: Feb 23, 2021
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SHEET NO. D-4 OF 22



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GREEN ENGINEERING
WATER, WASTEWATER, SURVEYING, PLANNING, PROJECT MANAGEMENT

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CITY OF WILSON

CITY OF WILSON
LOWER BLOOMERY SWAMP
SEWER IMPROVEMENTS

WILSON COUNTY, NORTH CAROLINA

DETAILS

REVISION DATE BY DATE: SEPTEMBER 2022

GRAPHIC SCALE

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CLIENT CODE: WILSO
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CADFILE: 13059-DS-COW-UPD.ATED
ASCII FILE:
LAST MODIFIED: Feb 23, 2021
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