LITTLE RIVER PARK - PHASE 1

1800 WEST GANNON AVENUE
ZEBULON, NC 27597

CONSULTANTS

LANDSCAPE ARCHITECT

benesch

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CIVIL ENGINEER

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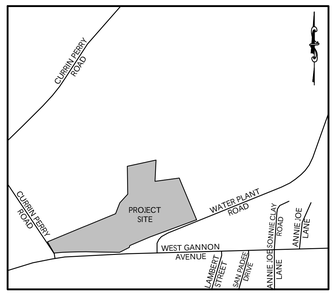
ELECTRICAL ENGINEER

LIGHTHOUSE ENGINEERING

Lighthouse Engineering
400 W. Morgan Street, Suite 100
Raleigh, NC 27603

P 919.835.9781

Parks & Recreation
ZEBULON
NORTH CAROLINA



VICINITY MAP

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
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C1.01	ENLARGED EXISTING CONDITIONS DEMOLITION PLAN
C200	OVERALL SITE PLAN
C201	ENLARGED SITE PLAN
C300	OVERALL EROSION CONTROL PLAN
C301	EROSION CONTROL PLAN PHASE 1
C302	EROSION CONTROL PLAN PHASE 2
C303	OVERALL GRADING PLAN
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C400	OVERALL UTILITY PLAN
C401	ENLARGED UTILITY PLAN
C500	RESTROOM AND SHELTER DETAILS
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ELECTRICAL	
E0.1	ELECTRICAL LEGEND AND NOTES
E0.2	ELECTRICAL SITE PLAN
E1.0	ELECTRICAL FLOOR PLAN AND RISER

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL ☐ SEC-_____

STORMWATER MGMT.☐SWF-_____

FLOOD STUDY ☐ SWF-_____

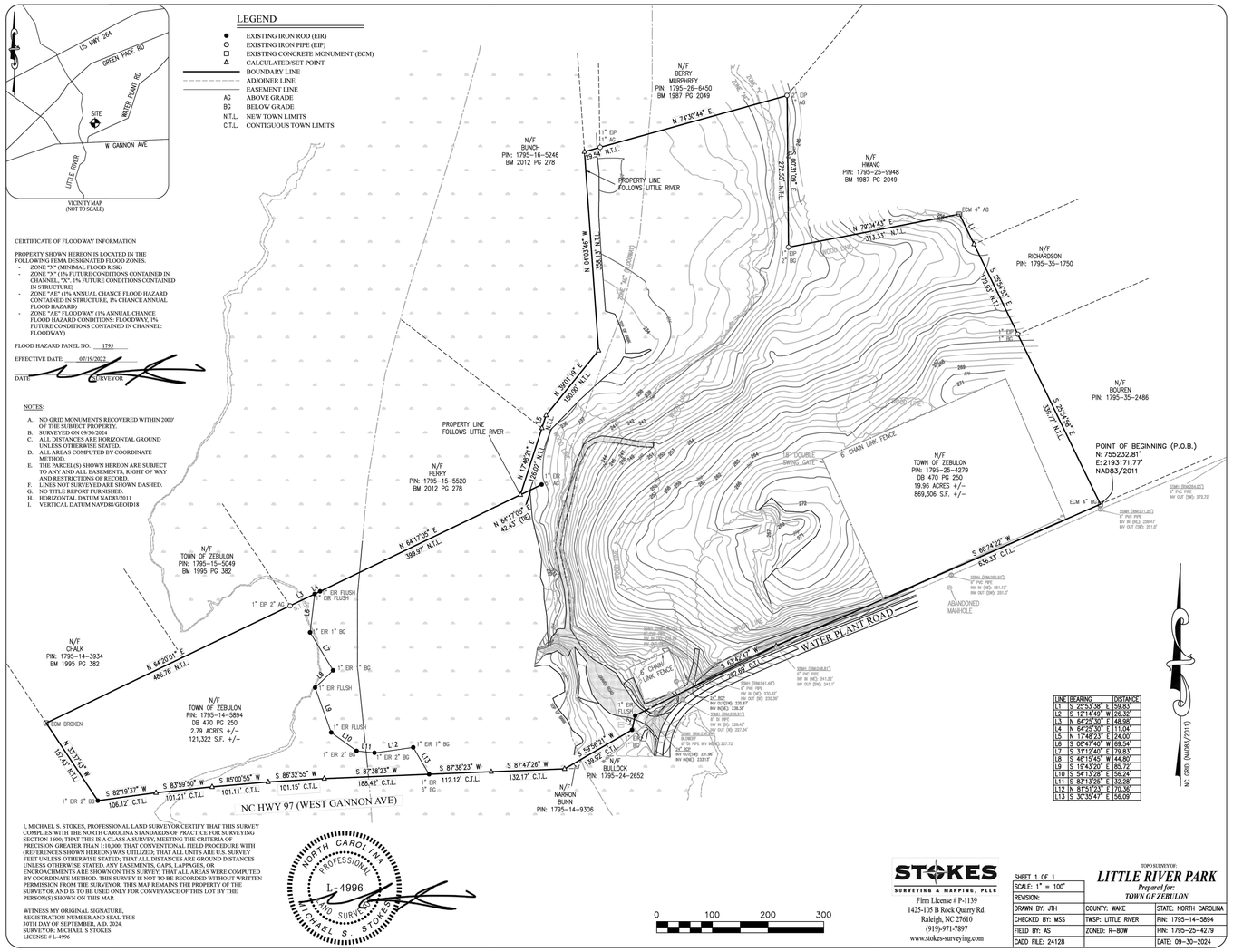
DATE_____

WAKE COUNTY NORTH CAROLINA EST. 1847

ENVIRONMENTAL CONSULTANT SIGNATURE

Issued for Permits

DATE OF ISSUE: 4/18/2025 SET NO.:_____



LINE	BEARING	DISTANCE
L1	S 52°53'58" E	59.83'
L2	S 12°14'49" W	26.32'
L3	N 64°25'30" E	48.98'
L4	N 64°25'30" E	111.04'
L5	N 17°48'23" E	24.00'
L6	S 08°47'40" W	69.54'
L7	S 31°12'40" E	79.83'
L8	S 46°15'45" W	44.80'
L9	S 19°43'20" E	85.72'
L10	S 54°13'28" E	56.24'
L11	S 83°13'29" E	12.28'
L12	N 81°51'23" E	70.36'
L13	S 30°35'47" E	56.09'

T:\North Carolina\17XX-5000\1725-500672.00_Zebulon_Little_River\Eng_Docs\Drawings\1725-500672.00-C0\1725-500672.00 SURVEY.dwg

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LITTLE RIVER PARK
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SURVEY

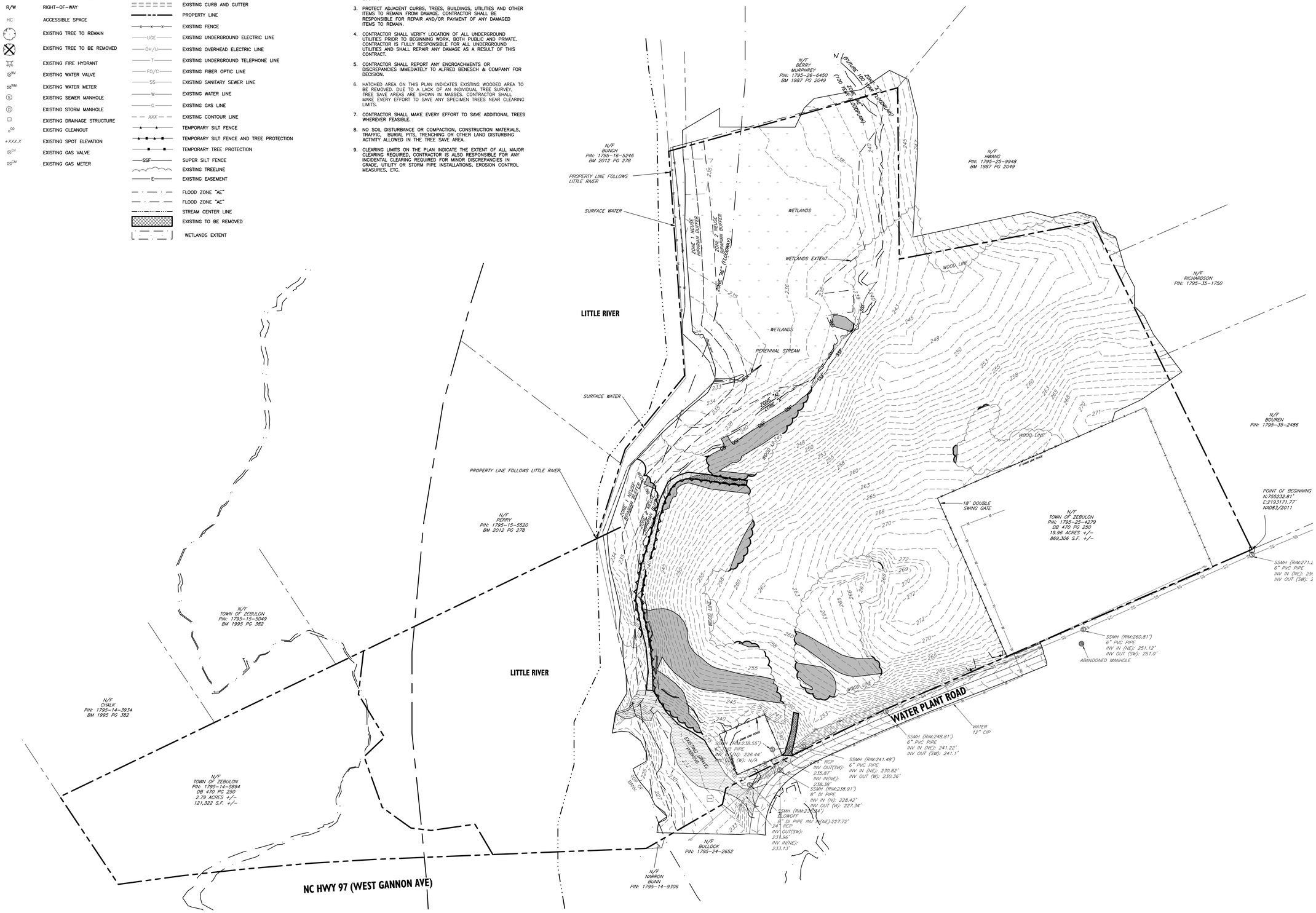
Sheet No:
C0.10

LEGEND

	EXISTING SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
WM	EXISTING WATER METER
S	EXISTING SEWER MANHOLE
D	EXISTING STORM MANHOLE
	EXISTING DRAINAGE STRUCTURE
CO	EXISTING CLEANOUT
+XXX.X	EXISTING SPOT ELEVATION
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
OR \\\\\	EXISTING ITEMS TO BE REMOVED
	EXISTING TREE CLEARING
	SAWCUT LINE
	EXISTING CURB AND GUTTER
	PROPERTY LINE
—x—x—x—	EXISTING FENCE
UGE	EXISTING UNDERGROUND ELECTRIC LINE
OH/U	EXISTING OVERHEAD ELECTRIC LINE
T	EXISTING UNDERGROUND TELEPHONE LINE
FO/C	EXISTING FIBER OPTIC LINE
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
XXX	EXISTING CONTOUR LINE
	TEMPORARY SILT FENCE
	TEMPORARY SILT FENCE AND TREE PROTECTION
	TEMPORARY TREE PROTECTION
SSF	SUPER SILT FENCE
	EXISTING TREELINE
E	EXISTING EASEMENT
	FLOOD ZONE "AE"
	FLOOD ZONE "AE"
	STREAM CENTER LINE
	EXISTING TO BE REMOVED
	WETLANDS EXTENT

DEMOLITION/CLEARING NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY PREPARED BY STOKES SURVEYING & MAPPING, PLLC DATED 9/30/2024.
2. CONTRACTOR SHALL REMOVE EXISTING TREES, CONCRETE, ASPHALT AND OTHER EXISTING STRUCTURES INDICATED ON PLAN. CONTRACTOR TO DISPOSE OF ALL DEBRIS TO AN APPROVED (LEGAL) OFF-SITE LOCATION.
3. PROTECT ADJACENT CURBS, TREES, BUILDINGS, UTILITIES AND OTHER ITEMS TO REMAIN FROM DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR PAYMENT OF ANY DAMAGED ITEMS TO REMAIN.
4. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
5. CONTRACTOR SHALL REPORT ANY ENCROACHMENTS OR DISCREPANCIES IMMEDIATELY TO ALFRED BENESCH & COMPANY FOR DECISION.
6. HATCHED AREA ON THIS PLAN INDICATES EXISTING WOODED AREA TO BE REMOVED. DUE TO A LACK OF AN INDIVIDUAL TREE SURVEY, TREE SAVE AREAS ARE SHOWN IN MASSES. CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ANY SPECIMEN TREES NEAR CLEARING LIMITS.
7. CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ADDITIONAL TREES WHEREVER FEASIBLE.
8. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE SAVE AREA.
9. CLEARING LIMITS ON THE PLAN INDICATE THE EXTENT OF ALL MAJOR CLEARING REQUIRED, CONTRACTOR IS ALSO RESPONSIBLE FOR ANY INCIDENTAL CLEARING REQUIRED FOR MINOR DISCREPANCIES IN GRADE, UTILITY OR STORM PIPE INSTALLATIONS, EROSION CONTROL MEASURES, ETC.



NORTH

SCALE: 1"=60'

Know what's **below.** **Call** before you dig.

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Seals:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 050 JOSEPH PUNG
4/18/25

Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

OVERALL EXISTING CONDITIONS DEMOLITION PLAN

Sheet No:

CI.00

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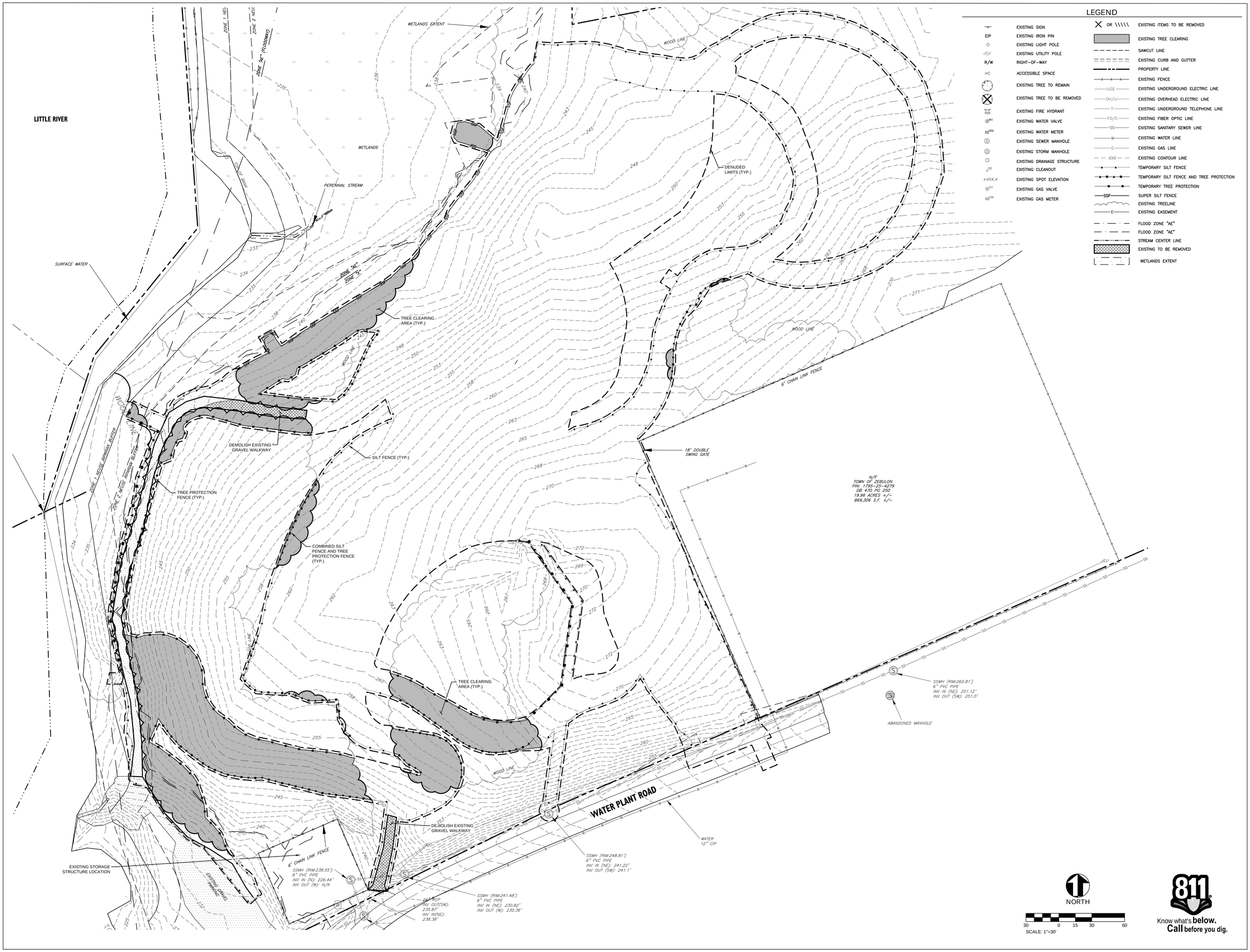

LEGEND

	EXISTING SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
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S	EXISTING SEWER MANHOLE
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CO	EXISTING CLEANOUT
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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

ENLARGED EXISTING CONDITIONS DEMOLITION PLAN

Sheet No:

C1.01

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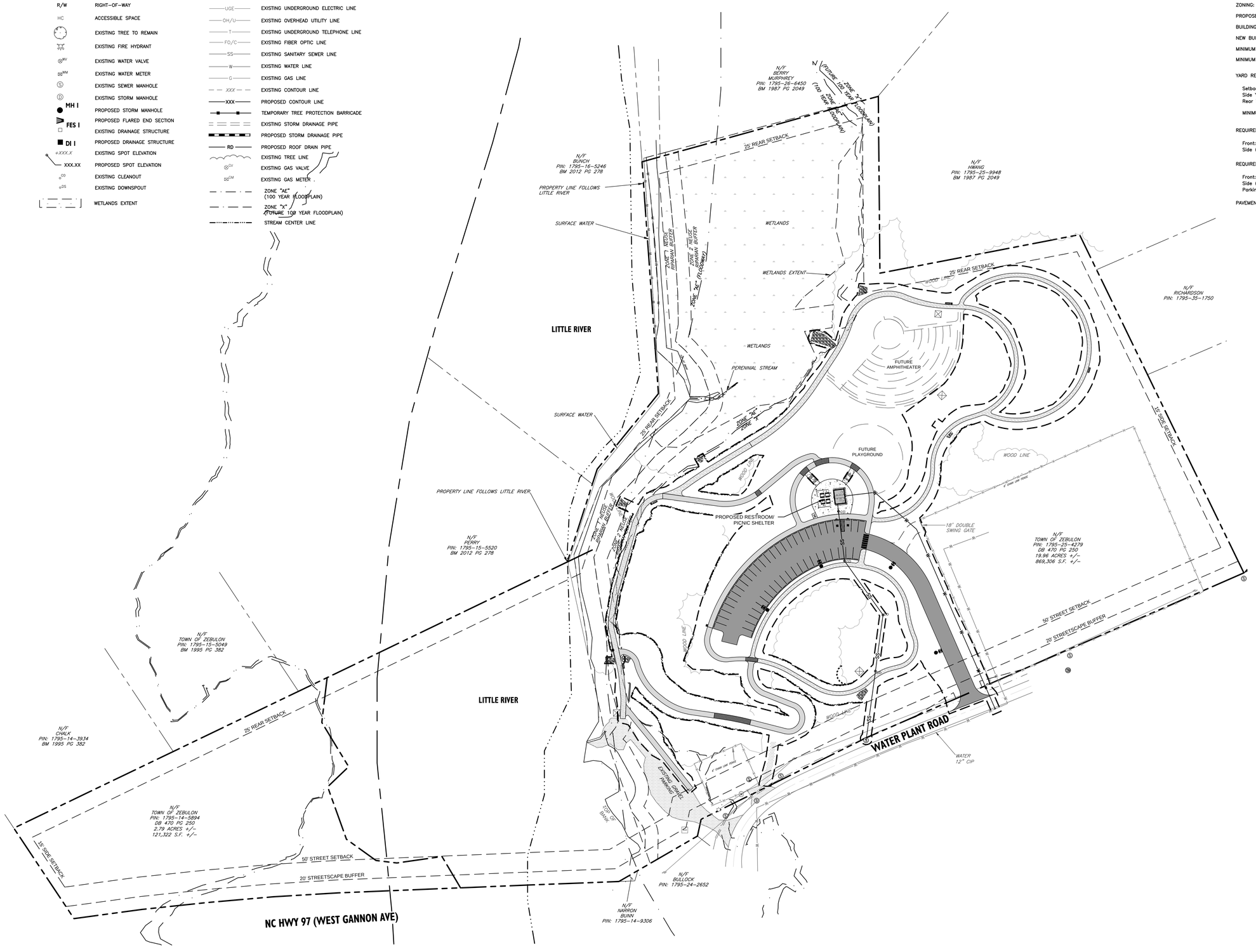
LEGEND

	EXISTING SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
WM	EXISTING WATER METER
S	EXISTING SEWER MANHOLE
D	EXISTING STORM MANHOLE
MH I	PROPOSED STORM MANHOLE
FES I	PROPOSED FLARED END SECTION
	EXISTING DRAINAGE STRUCTURE
DI I	PROPOSED DRAINAGE STRUCTURE
+XXX.X	EXISTING SPOT ELEVATION
XXX.XX	PROPOSED SPOT ELEVATION
CO	EXISTING CLEANOUT
DS	EXISTING DOWNSPOUT
	WETLANDS EXTENT
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	PROPERTY LINE
X X X	EXISTING FENCE
UGE	EXISTING UNDERGROUND ELECTRIC LINE
OH/U	EXISTING OVERHEAD UTILITY LINE
T	EXISTING UNDERGROUND TELEPHONE LINE
FO/C	EXISTING FIBER OPTIC LINE
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
XXX	EXISTING CONTOUR LINE
XXX	PROPOSED CONTOUR LINE
	TEMPORARY TREE PROTECTION BARRICADE
	EXISTING STORM DRAINAGE PIPE
	PROPOSED STORM DRAINAGE PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING TREE LINE
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
	ZONE "AE" (100 YEAR FLOODPLAIN)
	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
	STREAM CENTER LINE



ZONING CODE SUMMARY

PROJECT NAME: LITTLE RIVER PARK

OWNER: TOWN OF ZEBULON PHONE # 919-269-7455

PLANS PREPARED BY: BENESCH PHONE # 984-275-2490

ZONING: R2 (RESIDENTIAL SUBURBAN DISTRICT) JURISDICTION: TOWN OF ZEBULON

PROPOSED USE: RECREATIONAL PARK

BUILDING HEIGHT: 12' Feet, Stories: 1

NEW BUILDING COVERAGE: 1,144 Sq.Ft. NEW GROSS FLOOR AREA: 1,144 Sq.Ft.

MINIMUM LOT AREA: 20,000 SF LOT AREA: 19.96 AC

MINIMUM LOT WIDTH: 100 LF MAX LOT COVERAGE: 45%

YARD REQUIREMENTS:

Setback (front): 50' Ft. from R/W,
Side Yard (L): 15' Ft. Side Yard (R): 15' Ft.
Rear Yard: 25' Ft.

MINIMUM SPACING BETWEEN PRINCIPAL BUILDINGS ON THE SAME LOT: 15' Ft.

REQUIRED BUFFERS:

Front: NO / (YES) 15' MIN. Ft. Rear: NO / (YES) 10' MIN. Ft.
Side (L): NO / (YES) 10' MIN. Ft. Side (R): NO / (YES) 10' MIN. Ft.

REQUIRED SCREENING:

Front: (NO) / YES Rear: (NO) / YES
Side (L): (NO) / YES Side (R): (NO) / YES
Parking Only: NO / (YES)

PAVEMENT COVERAGE: 58,736 (Sq. Ft) / Acres

SITE NOTES

1. DIMENSIONS AND COORDINATE POINTS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CORNER OF BUILDING UNLESS OTHERWISE NOTED.
2. ALL IMPROVEMENTS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE AND LOCAL STANDARDS.
3. ANY DISCREPANCIES FOUND IN THE FIELD SHALL BE CALLED TO THE ATTENTION OF THE OWNER OR ENGINEER PRIOR TO PROCEEDING WITH WORK.
4. PRIOR TO BEGINNING CONSTRUCTION, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS (BOTH SITE AND BUILDING RELATED) INCLUDING BUT NOT LIMITED TO REGULATORY FEES, LICENSES, AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
5. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES, AND RIGHT-OF-WAYS, PUBLIC AND PRIVATE, PRIOR TO WORKING IN THESE AREAS.
6. GENERAL CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND THE PUBLIC SHALL BE PROTECTED FROM INJURY.
7. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
8. USE CAUTION WHEN REPRODUCING COPIES OF THE CONSTRUCTION DRAWINGS. COPIES ARE SUBJECT TO DISTORTION AND INACCURACY IN THE SCALE OF DRAWINGS. VERIFY ANY DISCREPANCIES WITH BENESCH.
9. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION AS AMENDED.
10. ALL PAVEMENT MARKINGS SHALL BE FOUR (4) INCHES WIDE UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
11. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
12. CONTRACTOR SHALL SAW-CUT EXISTING ASPHALT PAVEMENT AREAS TO TIE IN SMOOTHLY TO PROPOSED PAVEMENT AT DRIVEWAY ENTRANCES.
13. REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
14. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC FILE OF THESE DRAWINGS UPON REQUEST.
15. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE OWNER.
16. STOP BEFORE YOU DIG. CALL 811. IT'S THE LAW.
17. HEAVY DUTY PAVEMENT SHOWN ON THIS PLAN IS CAPABLE OF SUPPORTING AN 80,000 LB FIRE TRUCK.

Know what's **below.** **Call** before you dig.

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Seals:

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Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
OVERALL SITE PLAN

Sheet No:
C200

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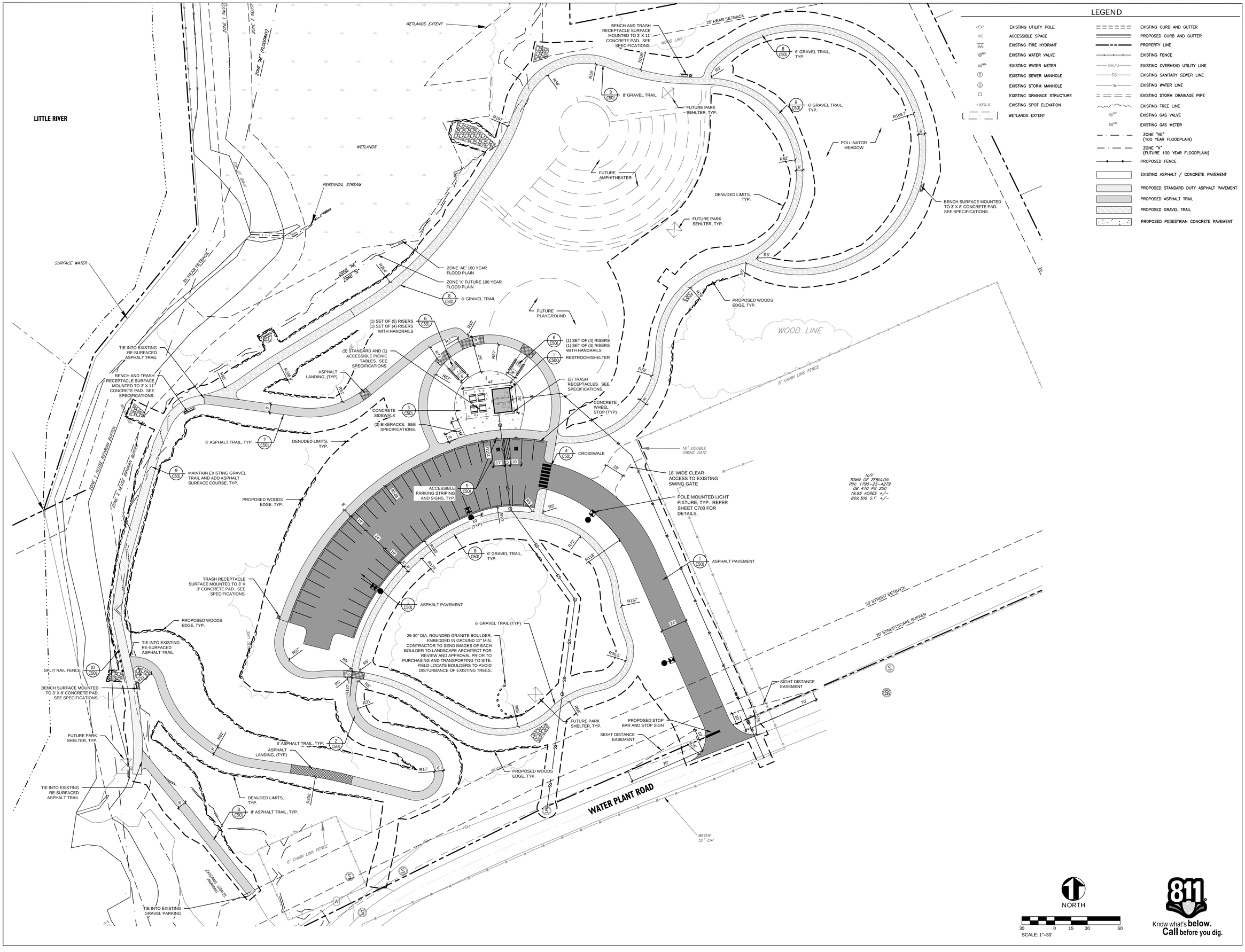

LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
ACCESSIBLE SPACE	PROPOSED CURB AND GUTTER
EXISTING FIRE HYDRANT	PROPERTY LINE
EXISTING WATER VALVE	EXISTING FENCE
EXISTING WATER METER	EXISTING OVERHEAD UTILITY LINE
EXISTING SEWER MANHOLE	EXISTING SANITARY SEWER LINE
EXISTING STORM MANHOLE	EXISTING WATER LINE
EXISTING DRAINAGE STRUCTURE	EXISTING STORM DRAINAGE PIPE
EXISTING SPOT ELEVATION	EXISTING TREE LINE
WETLANDS EXTENT	EXISTING GAS VALVE
	EXISTING GAS METER
	ZONE "AE" (100 YEAR FLOODPLAIN)
	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
	PROPOSED FENCE
	EXISTING ASPHALT / CONCRETE PAVEMENT
	PROPOSED STANDARD DUTY ASPHALT PAVEMENT
	PROPOSED ASPHALT TRAIL
	PROPOSED GRAVEL TRAIL
	PROPOSED PEDESTRIAN CONCRETE PAVEMENT

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4/18/25

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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

ENLARGED SITE PLAN

Sheet No:

C201

Know what's **below.** **Call** before you dig.

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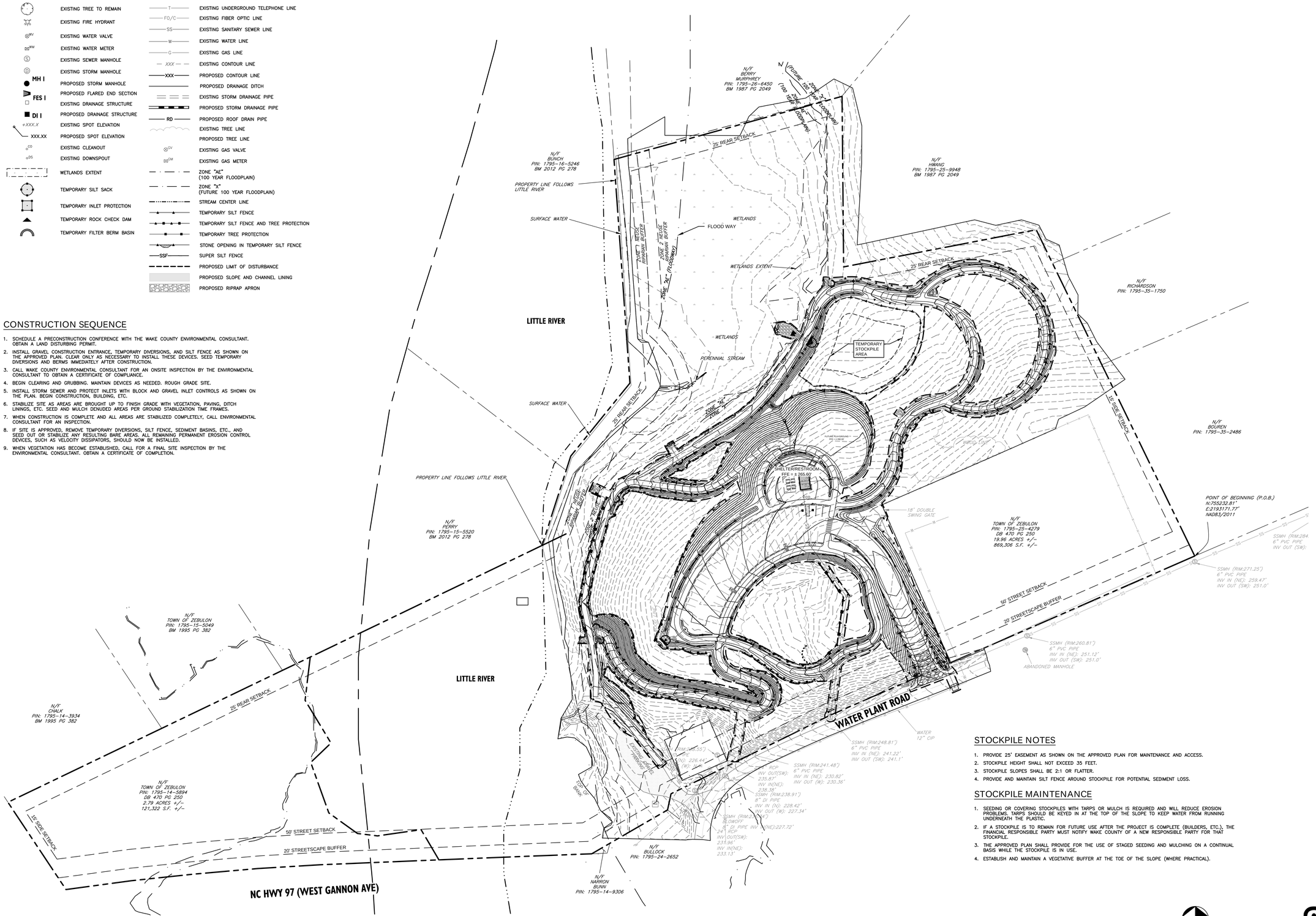
LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
EXISTING IRON PIN	PROPOSED CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING FENCE
RIGHT-OF-WAY	EXISTING UNDERGROUND ELECTRIC LINE
ACCESSIBLE SPACE	EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	EXISTING UNDERGROUND TELEPHONE LINE
EXISTING FIRE HYDRANT	EXISTING FIBER OPTIC LINE
EXISTING WATER VALVE	EXISTING SANITARY SEWER LINE
EXISTING WATER METER	EXISTING WATER LINE
EXISTING SEWER MANHOLE	EXISTING GAS LINE
EXISTING STORM MANHOLE	EXISTING CONTOUR LINE
MH 1 PROPOSED STORM MANHOLE	PROPOSED CONTOUR LINE
PROPOSED FLARED END SECTION	PROPOSED DRAINAGE DITCH
FES 1 EXISTING DRAINAGE STRUCTURE	EXISTING STORM DRAINAGE PIPE
DI 1 PROPOSED DRAINAGE STRUCTURE	PROPOSED STORM DRAINAGE PIPE
EXISTING SPOT ELEVATION	PROPOSED ROOF DRAIN PIPE
XXX.XX PROPOSED SPOT ELEVATION	EXISTING TREE LINE
EXISTING CLEANOUT	PROPOSED TREE LINE
EXISTING DOWNSPOUT	EXISTING GAS VALVE
WETLANDS EXTENT	EXISTING GAS METER
TEMPORARY SILT SACK	ZONE "AE" (100 YEAR FLOODPLAIN)
TEMPORARY INLET PROTECTION	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
TEMPORARY ROCK CHECK DAM	STREAM CENTER LINE
TEMPORARY FILTER BERM BASIN	TEMPORARY SILT FENCE
	TEMPORARY SILT FENCE AND TREE PROTECTION
	TEMPORARY TREE PROTECTION
	STONE OPENING IN TEMPORARY SILT FENCE
	SUPER SILT FENCE
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SLOPE AND CHANNEL LINING
	PROPOSED RIPRAP APRON

CONSTRUCTION SEQUENCE

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE WAKE COUNTY ENVIRONMENTAL CONSULTANT. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION ENTRANCE, TEMPORARY DIVERSIONS, AND SILT FENCE AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS AND BERMS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL WAKE COUNTY ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.



STOCKPILE NOTES

1. PROVIDE 25' EASEMENT AS SHOWN ON THE APPROVED PLAN FOR MAINTENANCE AND ACCESS.
2. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
3. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
4. PROVIDE AND MAINTAIN SILT FENCE AROUND STOCKPILE FOR POTENTIAL SEDIMENT LOSS.

STOCKPILE MAINTENANCE

1. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
2. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

Know what's **below.** **Call** before you dig.

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2359 Perimeter Pointe Parkway, Suite 300
Charlotte, NC 28208
www.benesch.com
P 704.521.9880

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Corp. NC License: F-1320

LITTLE RIVER PARK

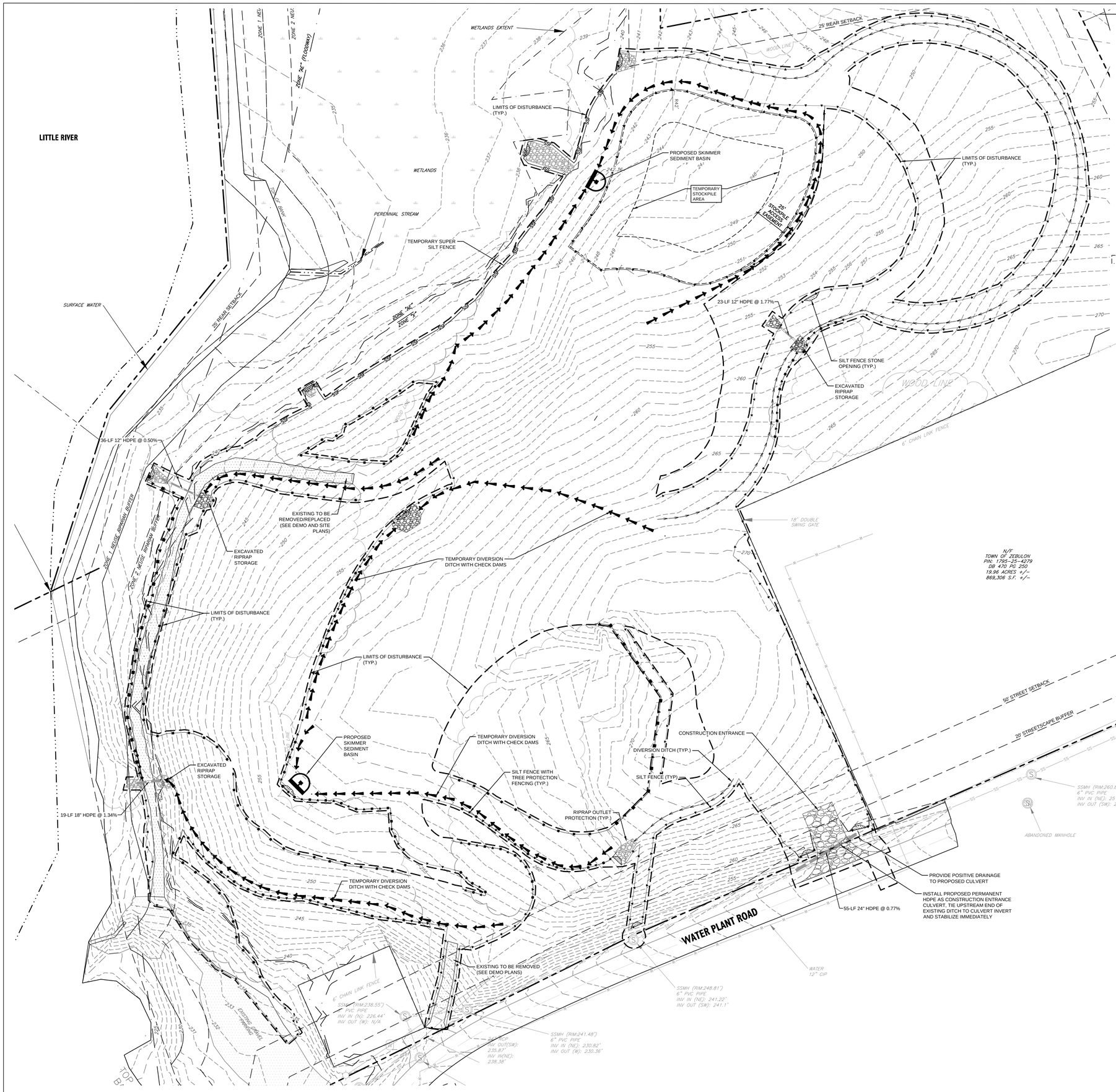
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
OVERALL EROSION CONTROL PLAN

Sheet No:
C300

Y:\North Carolina\TPXC\1725\1725-500672.00_Zebulon_Little_River\Eng_Docs\Drawings\1725-500672.00 C03\1725-500672.00 EROSION CONTROL PLAN.dwg



LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
EIP EXISTING IRON PIN	PROPOSED CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING FENCE
R/W RIGHT-OF-WAY	UGE EXISTING UNDERGROUND ELECTRIC LINE
HC ACCESSIBLE SPACE	OH/U EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING FIRE HYDRANT	FO/C EXISTING FIBER OPTIC LINE
WV EXISTING WATER VALVE	SS EXISTING SANITARY SEWER LINE
WM EXISTING WATER METER	W EXISTING WATER LINE
EXISTING SEWER MANHOLE	G EXISTING GAS LINE
EXISTING STORM MANHOLE	XXX EXISTING CONTOUR LINE
MH I PROPOSED STORM MANHOLE	XXX PROPOSED CONTOUR LINE
FES I PROPOSED FLARED END SECTION	PROPOSED DRAINAGE DITCH
EXISTING DRAINAGE STRUCTURE	EXISTING STORM DRAINAGE PIPE
DI I PROPOSED DRAINAGE STRUCTURE	PROPOSED STORM DRAINAGE PIPE
+XXX.X EXISTING SPOT ELEVATION	RD PROPOSED ROOF DRAIN PIPE
XXX.XX PROPOSED SPOT ELEVATION	EXISTING TREE LINE
CO EXISTING CLEANOUT	PROPOSED TREE LINE
DS EXISTING DOWNSPOUT	GV EXISTING GAS VALVE
	GM EXISTING GAS METER
WETLANDS EXTENT	ZONE "AE" (100 YEAR FLOODPLAIN)
TEMPORARY SILT SACK	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
TEMPORARY INLET PROTECTION	STREAM CENTER LINE
TEMPORARY ROCK CHECK DAM	TEMPORARY SILT FENCE
TEMPORARY FILTER BERM BASIN	TEMPORARY SILT FENCE AND TREE PROTECTION
	TEMPORARY TREE PROTECTION
	STONE OPENING IN TEMPORARY SILT FENCE
	SSF SUPER SILT FENCE
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SLOPE AND CHANNEL LINING
	PROPOSED RIPRAP APRON
	CONSTRUCTION ENTRANCE
	TEMPORARY DIVERSION DITCH

NOTES

1. SEE GRADING PLAN SHEET (C303) FOR PIPE INVERTS.

CONSTRUCTION SEQUENCE

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE WAKE COUNTY ENVIRONMENTAL CONSULTANT. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION ENTRANCE, TEMPORARY DIVERSIONS, AND SILT FENCE AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS AND BERMS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL WAKE COUNTY ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.

NORTH

SCALE: 1"=30'

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4/18/25

Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

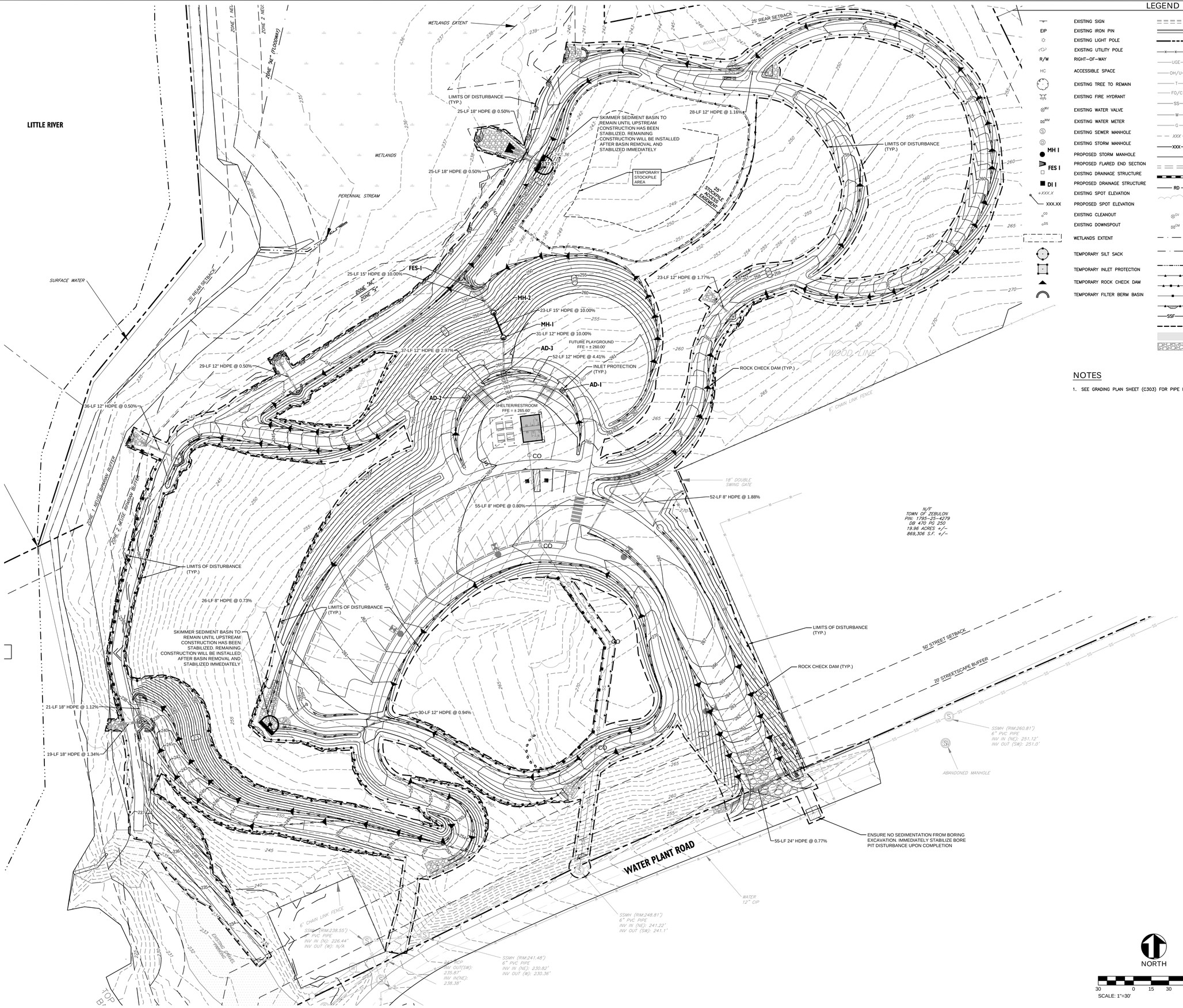
Sheet Title:

EROSION CONTROL PLAN PHASE 1

Sheet No:

C301

Y:\North Carolina\17XX-X\9\1725-500672.00_Zebulon_Little_River\Eng_Docs\Drawings\1725-500672.00-CD-1725-500672.00 EROSION CONTROL PLAN.dwg



LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
EIP EXISTING IRON PIN	PROPOSED CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING FENCE
R/W RIGHT-OF-WAY	UGE EXISTING UNDERGROUND ELECTRIC LINE
HC ACCESSIBLE SPACE	OH/U EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING FIRE HYDRANT	FO/C EXISTING FIBER OPTIC LINE
WV EXISTING WATER VALVE	SS EXISTING SANITARY SEWER LINE
WM EXISTING WATER METER	W EXISTING WATER LINE
EXISTING SEWER MANHOLE	G EXISTING GAS LINE
EXISTING STORM MANHOLE	XXX EXISTING CONTOUR LINE
MH I PROPOSED STORM MANHOLE	XXX PROPOSED CONTOUR LINE
FES I PROPOSED FLARED END SECTION	PROPOSED DRAINAGE DITCH
EXISTING DRAINAGE STRUCTURE	EXISTING STORM DRAINAGE PIPE
DI I PROPOSED DRAINAGE STRUCTURE	PROPOSED STORM DRAINAGE PIPE
+XXX.X EXISTING SPOT ELEVATION	RD PROPOSED ROOF DRAIN PIPE
XXX.XX PROPOSED SPOT ELEVATION	EXISTING TREE LINE
CO EXISTING CLEANOUT	PROPOSED TREE LINE
DS EXISTING DOWNSPOUT	GV EXISTING GAS VALVE
	GM EXISTING GAS METER
WETLANDS EXTENT	ZONE "AE" (100 YEAR FLOODPLAIN)
TEMPORARY SILT SACK	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
TEMPORARY INLET PROTECTION	STREAM CENTER LINE
TEMPORARY ROCK CHECK DAM	TEMPORARY SILT FENCE
TEMPORARY FILTER BERM BASIN	TEMPORARY SILT FENCE AND TREE PROTECTION
	TEMPORARY TREE PROTECTION
	STONE OPENING IN TEMPORARY SILT FENCE
	SSF SUPER SILT FENCE
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SLOPE AND CHANNEL LINING
	PROPOSED RIPRAP APRON

NOTES

1. SEE GRADING PLAN SHEET (C303) FOR PIPE INVERTS.

NORTH

SCALE: 1"=30'

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4/18/25

Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

EROSION CONTROL PLAN PHASE 2

Sheet No:

C302

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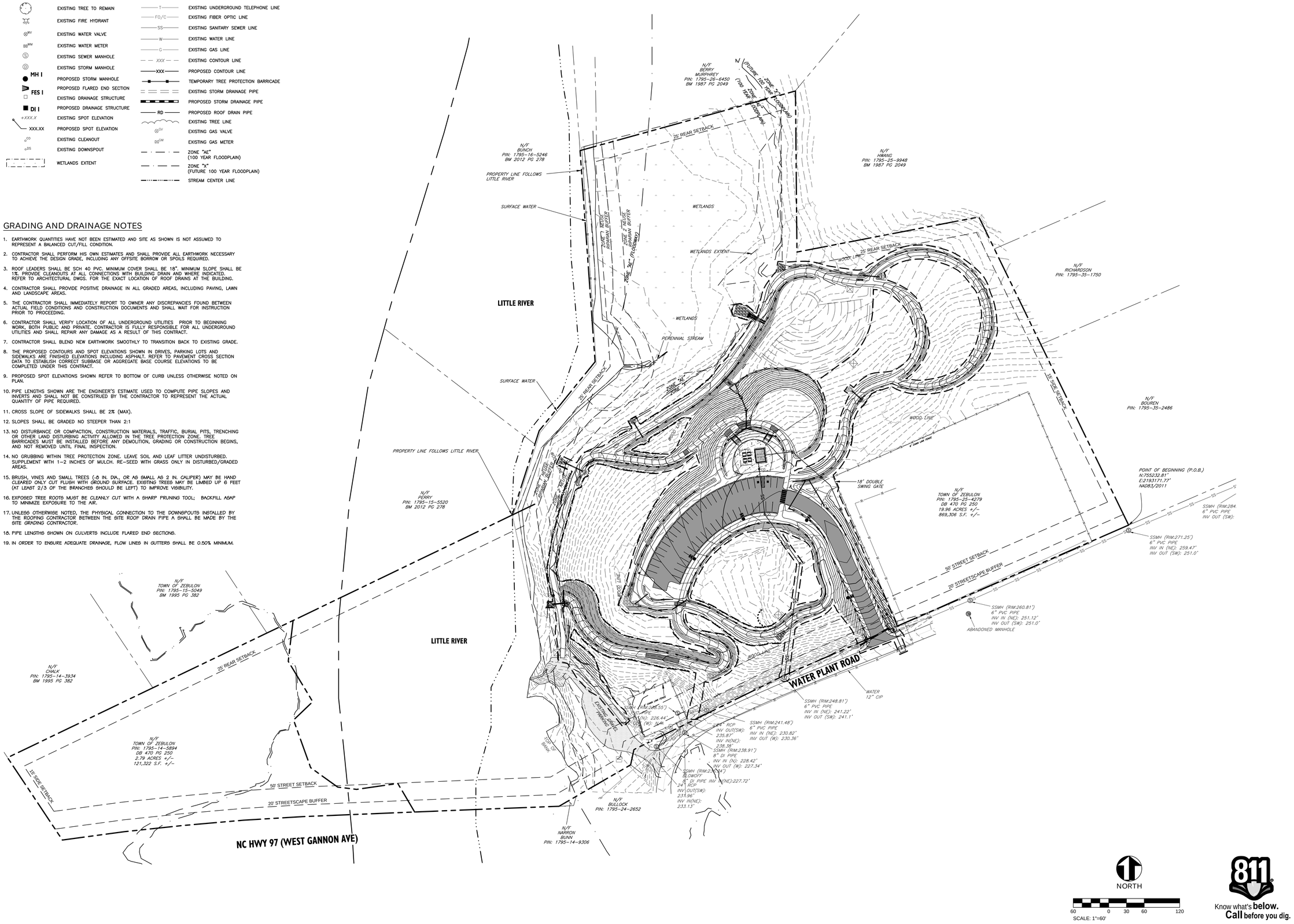
LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	X—X—X	EXISTING FENCE
R/W	RIGHT-OF-WAY	UGE	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	OH/U	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	T	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	FO/C	EXISTING FIBER OPTIC LINE
WV	EXISTING WATER VALVE	SS	EXISTING SANITARY SEWER LINE
WM	EXISTING WATER METER	W	EXISTING WATER LINE
S	EXISTING SEWER MANHOLE	G	EXISTING GAS LINE
D	EXISTING STORM MANHOLE	XXX	EXISTING CONTOUR LINE
MH I	PROPOSED STORM MANHOLE	XXX	PROPOSED CONTOUR LINE
FES I	PROPOSED FLARED END SECTION		TEMPORARY TREE PROTECTION BARRICADE
	EXISTING DRAINAGE STRUCTURE		EXISTING STORM DRAINAGE PIPE
DI I	PROPOSED DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
+XXX.X	EXISTING SPOT ELEVATION	RD	PROPOSED ROOF DRAIN PIPE
XXX.XX	PROPOSED SPOT ELEVATION		EXISTING TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER
	WETLANDS EXTENT		ZONE "AE" (100 YEAR FLOODPLAIN)
			ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
			STREAM CENTER LINE

GRADING AND DRAINAGE NOTES

1. EARTHWORK QUANTITIES HAVE NOT BEEN ESTIMATED AND SITE AS SHOWN IS NOT ASSUMED TO REPRESENT A BALANCED CUT/FILL CONDITION.
2. CONTRACTOR SHALL PERFORM HIS OWN ESTIMATES AND SHALL PROVIDE ALL EARTHWORK NECESSARY TO ACHIEVE THE DESIGN GRADE, INCLUDING ANY OFFSITE BORROW OR SPOILS REQUIRED.
3. ROOF LEADERS SHALL BE SCH 40 PVC. MINIMUM COVER SHALL BE 18". MINIMUM SLOPE SHALL BE 1%. PROVIDE CLEANOUTS AT ALL CONNECTIONS WITH BUILDING DRAIN AND WHERE INDICATED. REFER TO ARCHITECTURAL DWGS. FOR THE EXACT LOCATION OF ROOF DRAINS AT THE BUILDING.
4. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL GRADED AREAS, INCLUDING PAVING, LAWN AND LANDSCAPE AREAS.
5. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
6. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
7. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
8. THE PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN DRIVES, PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
9. PROPOSED SPOT ELEVATIONS SHOWN REFER TO BOTTOM OF CURB UNLESS OTHERWISE NOTED ON PLAN.
10. PIPE LENGTHS SHOWN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
11. CROSS SLOPE OF SIDEWALKS SHALL BE 2% (MAX).
12. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1
13. NO DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
14. NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
15. BRUSH, VINES AND SMALL TREES (.6 IN. DIA., OR AS SMALL AS 2 IN. CALIPER) MAY BE HAND CLEARED ONLY CUT FLUSH WITH GROUND SURFACE. EXISTING TREES MAY BE LIMBED UP 8 FEET (AT LEAST 2/3 OF THE BRANCHES SHOULD BE LEFT) TO IMPROVE VISIBILITY.
16. EXPOSED TREE ROOTS MUST BE CLEANLY CUT WITH A SHARP PRUNING TOOL; BACKFILL ASAP TO MINIMIZE EXPOSURE TO THE AIR.
17. UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION TO THE DOWNSPOUTS INSTALLED BY THE ROOFING CONTRACTOR BETWEEN THE SITE ROOF DRAIN PIPE A SHALL BE MADE BY THE SITE GRADING CONTRACTOR.
18. PIPE LENGTHS SHOWN ON CULVERTS INCLUDE FLARED END SECTIONS.
19. IN ORDER TO ENSURE ADEQUATE DRAINAGE, FLOW LINES IN GUTTERS SHALL BE 0.50% MINIMUM.



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Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
OVERALL GRADING PLAN

Sheet No:
C303

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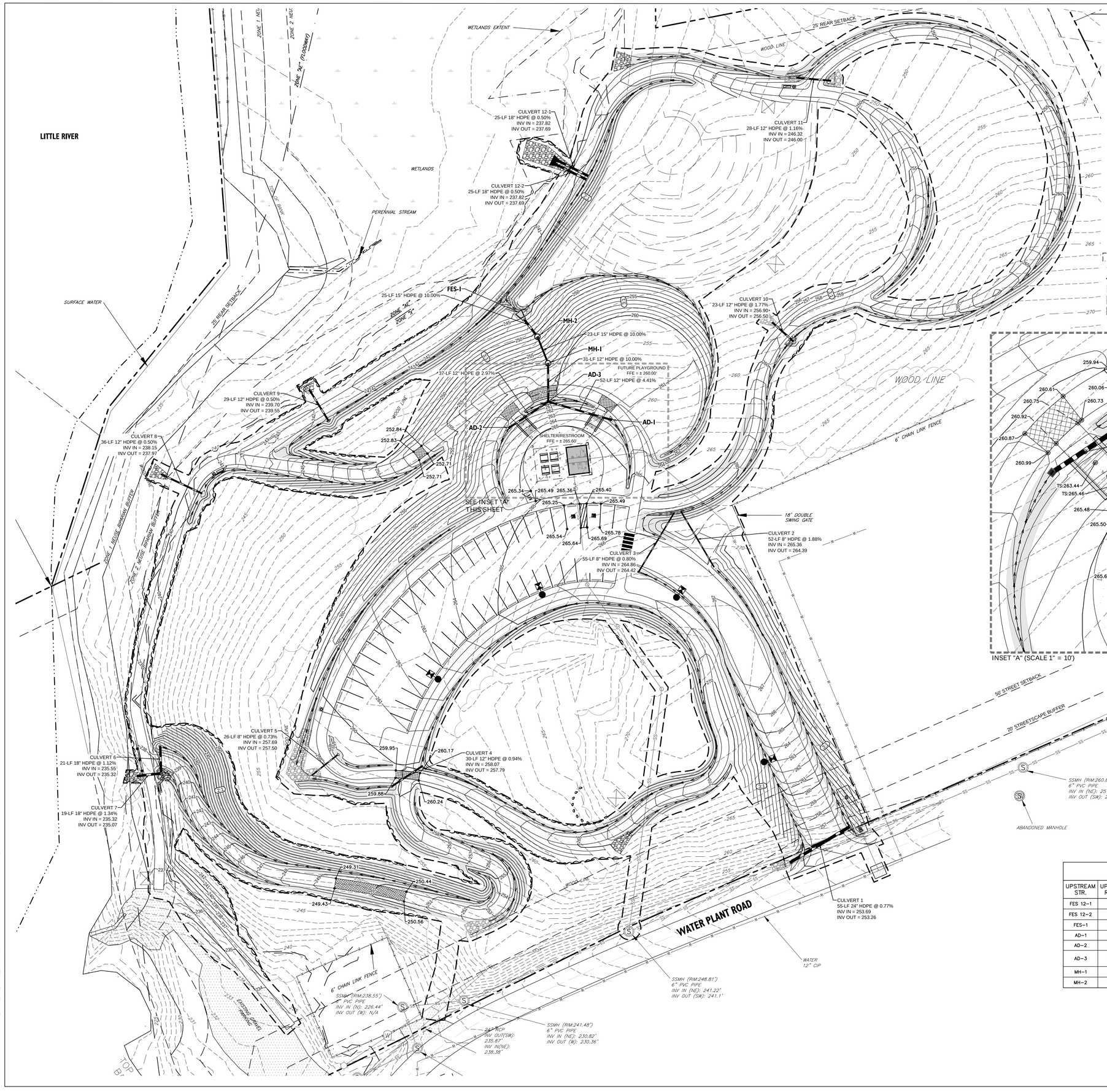
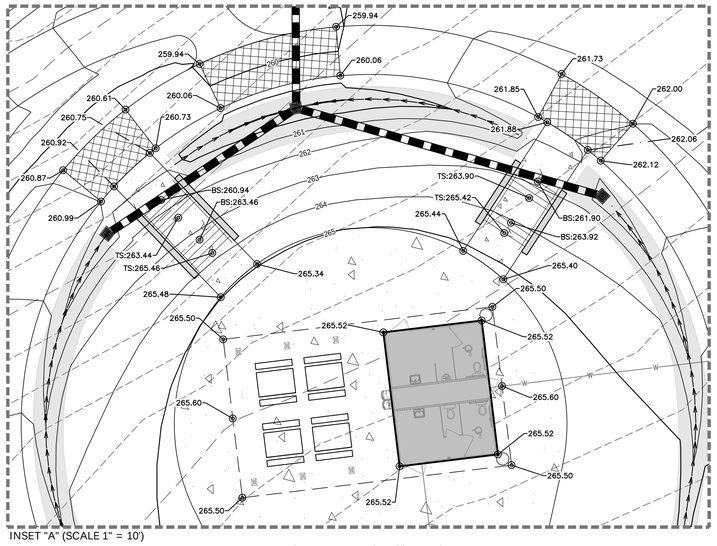


LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	—x—x—x—	EXISTING FENCE
R/W	RIGHT-OF-WAY	—UGE—	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	—OH/U—	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	—T—	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	—FO/C—	EXISTING FIBER OPTIC LINE
		—SS—	EXISTING SANITARY SEWER LINE
WV	EXISTING WATER VALVE	—W—	EXISTING WATER LINE
WM	EXISTING WATER METER	—G—	EXISTING GAS LINE
S	EXISTING SEWER MANHOLE	— XXX —	EXISTING CONTOUR LINE
D	EXISTING STORM MANHOLE	—XXX—	PROPOSED CONTOUR LINE
MH I	PROPOSED STORM MANHOLE		PROPOSED DRAINAGE DITCH
FES I	PROPOSED FLARED END SECTION		EXISTING STORM DRAINAGE PIPE
	EXISTING DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
DI I	PROPOSED DRAINAGE STRUCTURE	—RD—	PROPOSED ROOF DRAIN PIPE
+XXX.X	EXISTING SPOT ELEVATION		EXISTING TREE LINE
XXX.XX	PROPOSED SPOT ELEVATION		PROPOSED TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER
	WETLANDS EXTENT		ZONE "AE" (100 YEAR FLOODPLAIN)
	TEMPORARY TREE PROTECTION		ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
	PROPOSED LIMIT OF DISTURBANCE		STREAM CENTER LINE
	PROPOSED SLOPE AND CHANNEL LINING		TEMPORARY SILT FENCE
	PROPOSED RIPRAP APRON		TEMPORARY SILT FENCE AND TREE PROTECTION
	PROPOSED WALK LANDING		



INSET "A" (SCALE 1" = 10')

STORM SEWER PIPE SCHEDULE

Pipe Name	INVERT EL. (UPSTREAM)	INVERT EL. (DOWNSTREAM)	LENGTH (FT)	DIA (IN)	MATERIAL	SLOPE (FT/FT)
CULVERT 1	253.69	253.26	55	24	HDPE	0.0077
CULVERT 2	265.36	264.39	52	8	HDPE	0.0188
CULVERT 3	264.86	264.42	55	8	HDPE	0.0080
CULVERT 4	258.07	257.79	30	12	HDPE	0.0094
CULVERT 5	257.69	257.50	26	8	HDPE	0.0073
CULVERT 6	235.55	235.32	21	18	HDPE	0.0112
CULVERT 7	235.32	235.07	19	18	HDPE	0.0134
CULVERT 8	238.15	237.97	36	12	HDPE	0.0050
CULVERT 9	239.70	239.55	29	12	HDPE	0.0050
CULVERT 10	256.90	256.50	23	12	HDPE	0.0177
CULVERT 11	246.32	246.00	28	12	HDPE	0.0116

STORM SEWER STRUCTURE & PIPE SCHEDULE

UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH (FT)	D.S. PIPE DIA (IN)	D.S. PIPE MATERIAL	D.S. PIPE SLOPE (FT/FT)
FES 12-1	239.34	237.69 (18" -)						
FES 12-2	239.34	237.69 (18" -)						
FES-1	244.67	243.23 (15" - MH-2)						
AD-1	261.25		259.25	AD-3	52	12	HDPE	0.044
AD-2	260.09		258.06	AD-3	37	12	HDPE	0.030
AD-3	258.96	256.96 (12" - AD-1) 256.96 (12" - AD-2)	256.86	MH-1	31	12	HDPE	0.100
MH-1	257.99	253.80 (12" - AD-3)	251.24	MH-2	23	15	HDPE	0.100
MH-2	251.15	248.96 (15" - MH-1)	245.69	FES-1	25	15	HDPE	0.100

NORTH

30 0 15 30 60

SCALE: 1"=30'

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Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

GRADING PLAN ENLARGEMENT

Sheet No:

C304

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LEGEND

	EXISTING SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
WM	EXISTING WATER METER
S	EXISTING SEWER MANHOLE
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+XXX.X	EXISTING SPOT ELEVATION
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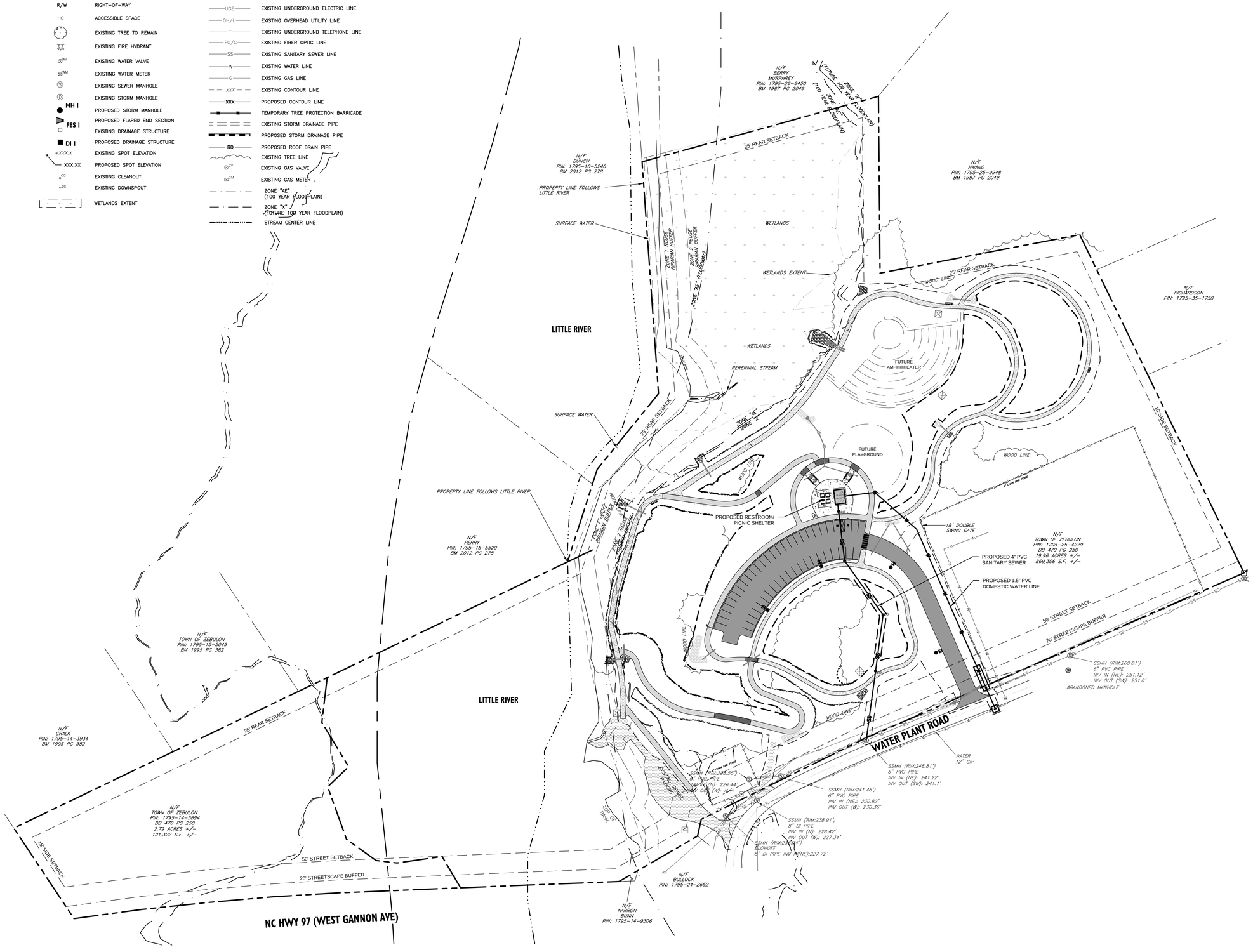
	WETLANDS EXTENT
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	PROPERTY LINE
X X X	EXISTING FENCE
UGE	EXISTING UNDERGROUND ELECTRIC LINE
OH/U	EXISTING OVERHEAD UTILITY LINE
T	EXISTING UNDERGROUND TELEPHONE LINE
FO/C	EXISTING FIBER OPTIC LINE
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
XXX	EXISTING CONTOUR LINE
XXX	PROPOSED CONTOUR LINE
	TEMPORARY TREE PROTECTION BARRICADE
	EXISTING STORM DRAINAGE PIPE
	PROPOSED STORM DRAINAGE PIPE
RD	PROPOSED ROOF DRAIN PIPE
	EXISTING TREE LINE
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
	ZONE "AE" (100 YEAR FLOODPLAIN)
	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
	STREAM CENTER LINE



UTILITY NOTES

1. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODE REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES (STORM DRAINAGE, ELECTRIC, GAS, TELEPHONE, ETC.) PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF ANY DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND ACTUAL FIELD CONDITIONS ARE FOUND.
4. MINIMUM COVER FOR ALL SANITARY SEWER MAINS SHALL BE 3'-0". DUCTILE IRON PIPE SHALL BE SUBSTITUTED WHEN MINIMUM COVER CAN NOT BE MAINTAINED.
5. THE STANDARD DEPTH OF COVER FOR WATER MAINS SHALL BE 3'-0" MIN. EXCEPT AT VALVE OR HYDRANT LOCATIONS, OR OTHER SPECIAL CONDITIONS.
6. THE CONNECTION TO EXISTING WATER MAINS SHALL BE PERFORMED ONLY AFTER ALL PRESSURE TESTING AND CHLORINATION ARE SUCCESSFULLY COMPLETED AND THE LOCAL REVIEW AUTHORITY HAS APPROVED THE CONNECTION. THE CONTRACTOR SHALL AVOID DISRUPTION OF EXISTING SERVICE.
7. REFER TO PLUMBING DRAWING SERIES FOR THE LOCATION OF WATER AND SANITARY SEWER SERVICE CONNECTIONS AT THE BUILDING.
8. UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION BETWEEN THE SITE UTILITY LINES AND THE PIPE INSTALLED BY THE PLUMBING CONTRACTOR SHALL BE MADE BY THE SITE UTILITY CONTRACTOR.
9. PIPE LENGTHS SHOWN ON PLAN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
10. 10' HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER AND SANITARY SEWER LINES.
11. 12" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER LINES OR DIP SPECIFIED 10' EACH DIRECTION.
12. 18" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER (OVER) AND SANITARY SEWER LINES (UNDER) AT CROSSINGS OR DIP SPECIFIED 10' EACH DIRECTION.
13. ALL PROPOSED WATER AND SEWER PIPES AND STRUCTURES TO BE INSTALLED PER CURRENT TOWN OF ZEBULON AND CITY OF RALEIGH PUBLIC UTILITIES CURRENT STANDARDS AND SPECIFICATIONS.

NORTH

60 0 30 60 120
SCALE: 1"=60'

811 Know what's **below.** **Call** before you dig.

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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
OVERALL UTILITY PLAN

Sheet No:
C400

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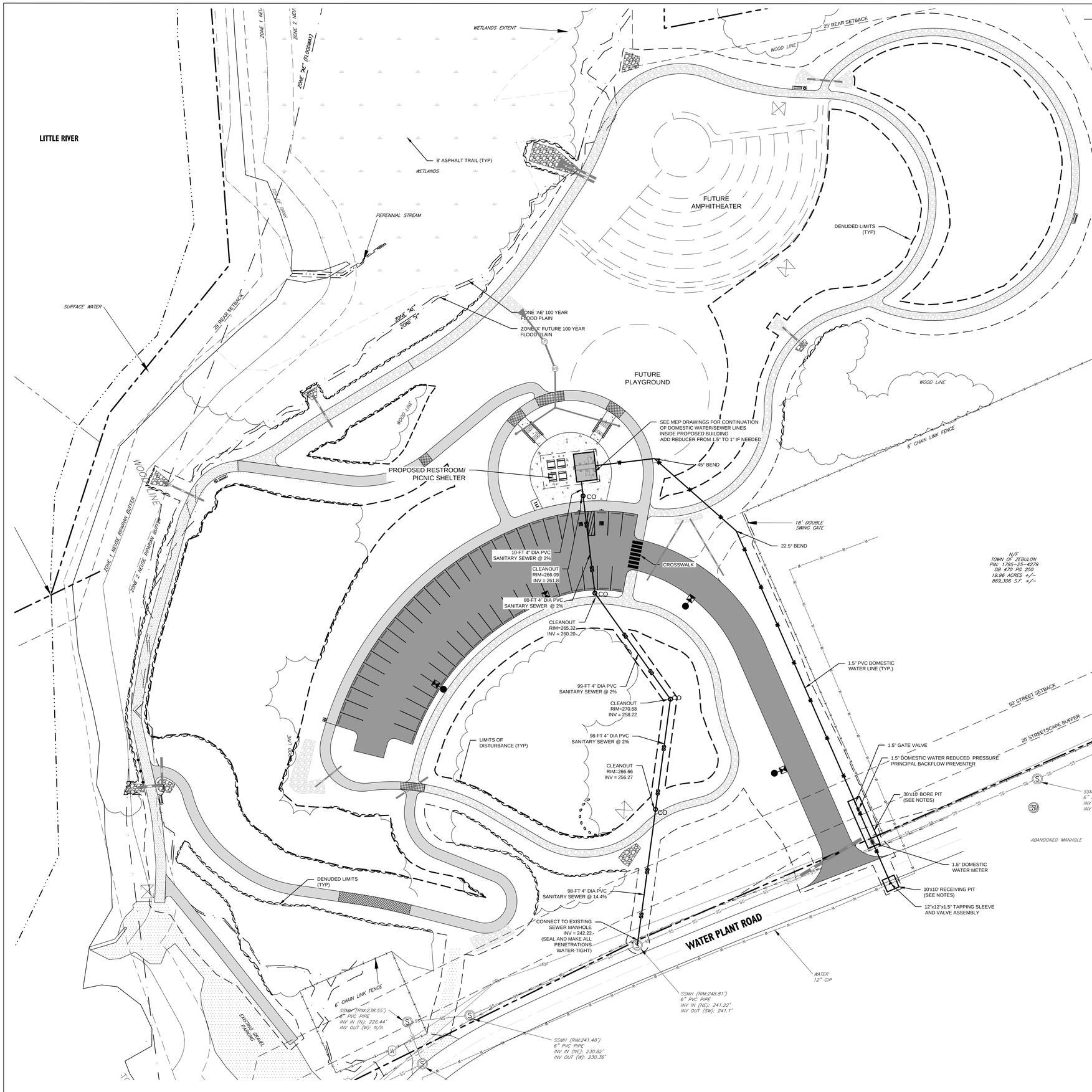

LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
EIP EXISTING IRON PIN	PROPOSED CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING FENCE
R/W RIGHT-OF-WAY	UGE EXISTING UNDERGROUND ELECTRIC LINE
HC ACCESSIBLE SPACE	OH/U EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING FIRE HYDRANT	FO/C EXISTING FIBER OPTIC LINE
PIV EXISTING WATER VALVE	SS EXISTING SANITARY SEWER LINE
WM EXISTING WATER METER	W EXISTING WATER LINE
EXISTING SEWER MANHOLE	G EXISTING GAS LINE
EXISTING STORM MANHOLE	XXX EXISTING CONTOUR LINE
MH 1 PROPOSED STORM MANHOLE	XXX PROPOSED CONTOUR LINE
FES 1 PROPOSED FLARED END SECTION	TEMPORARY TREE PROTECTION BARRICADE
EXISTING DRAINAGE STRUCTURE	EXISTING STORM DRAINAGE PIPE
DI 1 PROPOSED DRAINAGE STRUCTURE	PROPOSED STORM DRAINAGE PIPE
+XXX.X EXISTING SPOT ELEVATION	RD PROPOSED ROOF DRAIN PIPE
XXX.XX PROPOSED SPOT ELEVATION	EXISTING TREE LINE
CO EXISTING CLEANOUT	GV EXISTING GAS VALVE
DS EXISTING DOWNSPOUT	GM EXISTING GAS METER
	ZONE "AE" (100 YEAR FLOODPLAIN)
WETLANDS EXTENT	ZONE "X" (FUTURE 100 YEAR FLOODPLAIN)
	STREAM CENTER LINE

NOTES

1. BORE PIT SIZES ARE APPROXIMATE. CONTRACTOR SHALL VERIFY SIZE WITH UTILITY COMPANY.

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1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

ENLARGED UTILITY PLAN

Sheet No:

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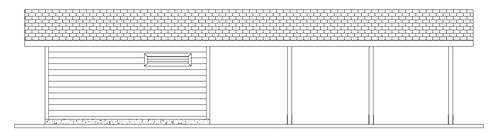
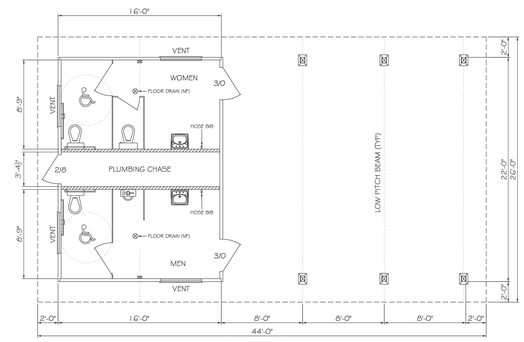


FRONT ELEVATION

RIGHT SIDE ELEVATION



FLOOR PLAN

PRELIMINARY
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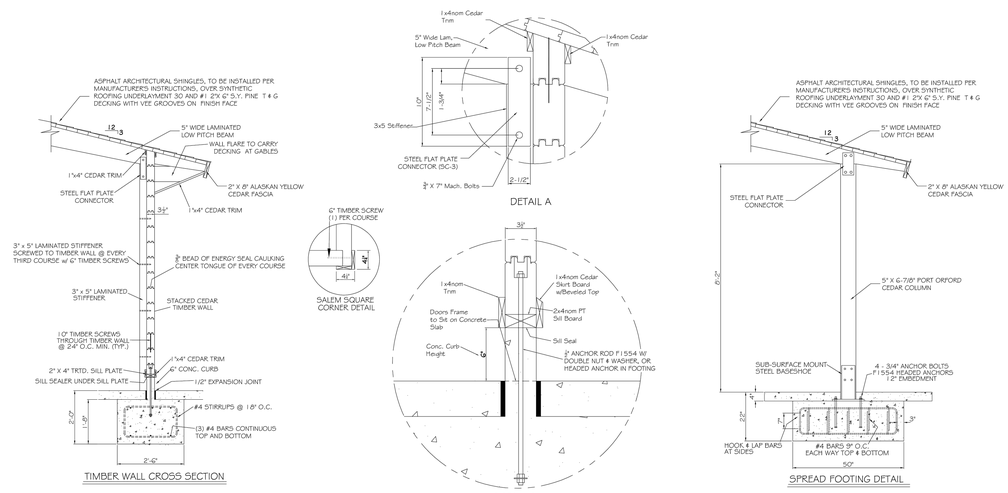
THE FOLLOWING WILL BE THE RESPONSIBILITY OF OTHERS:
1. ALL CONSTRUCTION SHOULD MEET STATE & LOCAL BLDG. CODE REQMTS.
2. ASSUMED SOIL BEARING CAPACITY = 1500 P.S.F. ALL FOOTINGS TO BEAM ON UNDISTURBED SOIL.
3. CONSULT WITH A LOCAL REGISTERED STRUCTURAL ENGINEER IF SOIL BEARING CONDITIONS ARE OTHER THAN ABOVE.
4. DESIGN, EXCAVATION AND CONSTRUCTION OF THE STRUCTURES FOUNDATION MUST BE VERIFIED BY A REGISTERED STRUCTURAL ENGINEER.
5. DETERMINE ALL DESIGN LOADS PER LOCAL CODES.
6. CONCRETE TO BE 3,000 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS.
7. REINFORCING STEEL TO BE A.S.T.M. A-615 GR.60.
8. ALL CONSTRUCTION SURVEYING AND FIELD VERIFICATION OF ALL DIMENSIONS.
9. ALL ANCHOR BOLTS, REINFORCING STEEL, MISCELLANEOUS STEEL & ANCHOR BOLTS.
10. UNLESS ALL TRUSSES DELIVERING C.F.P. MATERIALS.
11. ERECTION OF THE STRUCTURES.
12. ALL CONCRETE EPOXY ANCHORS MUST BE APPROVED BY A STRUCTURAL ENGINEER.

OWNER INFO:	LITTLE RIVER PARK	REVISION DATES:	DRAWING # : KLY-1145
DESCRIPTION:	CUSTOM PAC 26' X 44'	REV: 3-10-25	DATE: 3-5-25
Possible Options:	☐ 29ga METAL ROOF ☐ STANDING SEAM ROOF ☐ CEDAR SHINGLES ☐ METAL BASE SHOES ☐ STEEL COLUMNS ☐ CUSTOM ROOF PITCH ☐ LIGHTNING PROTECTION ☐ 2 TIER ROOF ☐ CUPOLA	REV:	DRAWN BY: KODY
		REV:	PAGE NUMBER: 1 OF 2
		REV:	



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OWNER INFO: LITTLE RIVER PARK
DESCRIPTION: CUSTOM PAC 26' X 44'
Possible Options: ☐ 29ga METAL ROOF ☐ STANDING SEAM ROOF ☐ CEDAR SHINGLES ☐ METAL BASE SHOES ☐ STEEL COLUMNS ☐ CUSTOM ROOF PITCH ☐ LIGHTNING PROTECTION ☐ 2 TIER ROOF ☐ CUPOLA
REVISION DATES: REV: 3-10-25 REV: REV: REV:
DRAWING # : KLY-1145
DATE: 3-5-25
DRAWN BY: KODY
PAGE NUMBER: 2 OF 2

1 RESTROOM / SHELTER
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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:

RESTROOM AND SHELTER DETAILS

Sheet No:

C500

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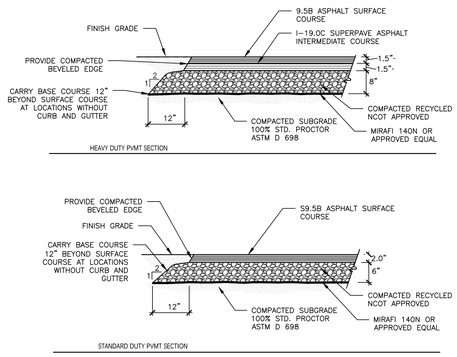
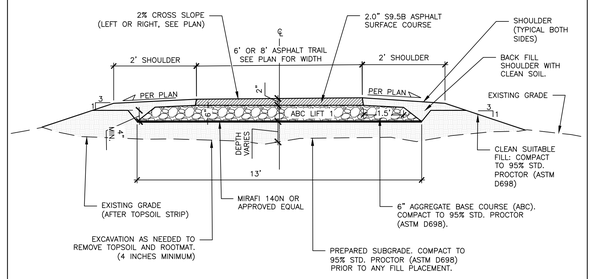


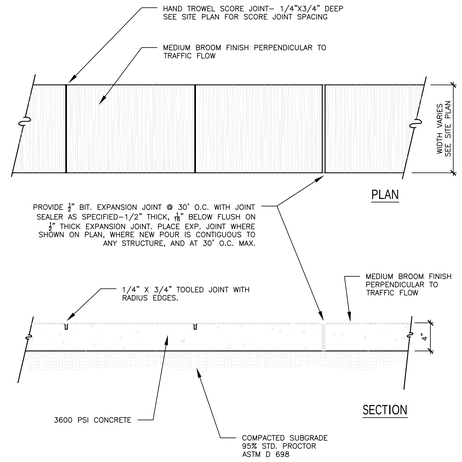
NOTES:

1. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
2. HEAVY DUTY PAVEMENT AREAS INDICATED TO RECEIVE A NEW SURFACE/BINDER COURSE ON THE EXISTING BASE COURSE (OVERLAY) SHALL USE 2½" OF I-19.0B INTERMEDIATE COURSE AND 1" OF 9.5B SURFACE COURSE.
3. ASPHALT MIX SHALL NOT CONTAIN MORE THAN 30% RECYCLED ASPHALT PRODUCT (RAP).

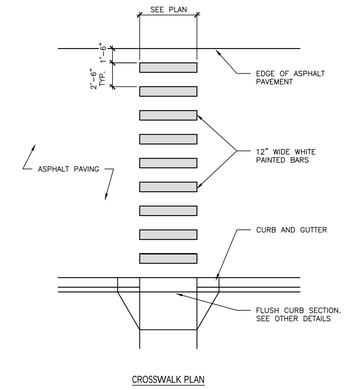
1 ASPHALT PAVING SECTION
N.T.S.



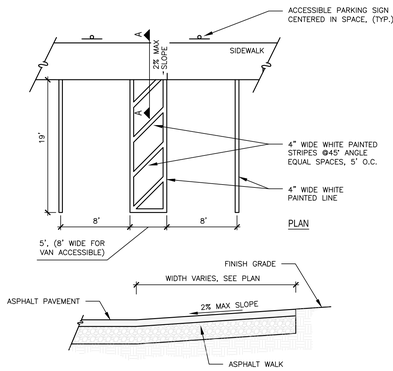
2 8'-WIDE ASPHALT TRAIL WITH 6" BASE COURSE
N.T.S.



3 CONCRETE SIDEWALK
N.T.S.



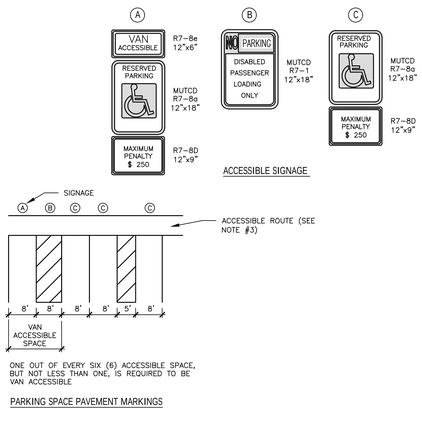
4 PAINTED CROSSWALK
N.T.S.



ACCESSIBLE RAMP SECTION A-A

NOTES

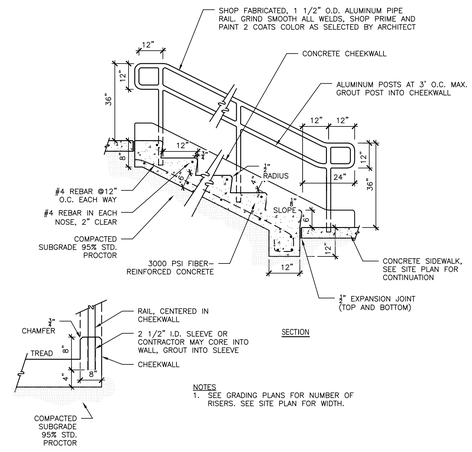
1. ALL 12"x18" ACCESSIBLE SIGNS (R7-8a AND R7-1) SHALL BE MOUNTED AT 7 FEET FROM GRADE TO BOTTOM EDGE OF SIGN FACE (MUTCD). MOUNTING HEIGHT CAN BE REDUCED TO 5 FEET IF PLACED IN AN AREA BETWEEN SIDEWALK AND BUILDING FACE IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.
2. REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT.



ONE OUT OF EVERY SIX (6) ACCESSIBLE SPACE, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE

PARKING SPACE PAVEMENT MARKINGS

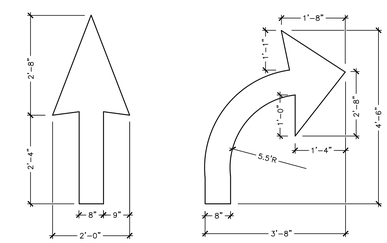
5 ACCESSIBLE PARKING / SIGNAGE / STRIPING
N.T.S.



NOTES

1. SEE GRADING PLANS FOR NUMBER OF RISERS. SEE SITE PLAN FOR WIDTH.

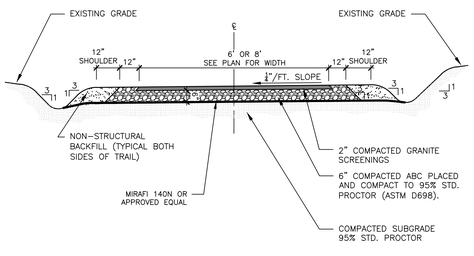
6 CONCRETE STEPS WITH HANDRAIL
N.T.S.



NOTE:
1. ALL ARROWS TO BE PAINTED WHITE.

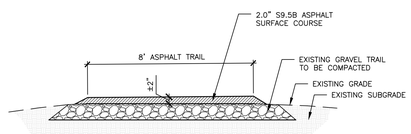
PLAN

7 PAINTED DIRECTIONAL ARROWS
N.T.S.

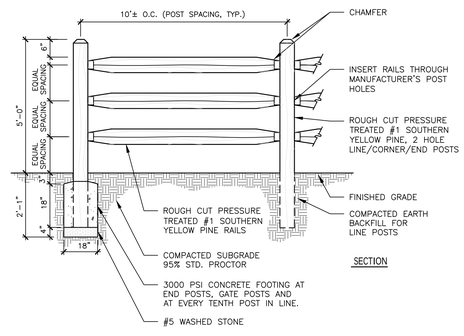


NOTES
1. EXTEND ABC BASE 12" BEYOND GRANITE SCREENINGS EDGE.
2. SEED AND STRAW ALL DISTURBED AREAS. SEE SPECIFICATIONS FOR SEED TYPE.

8 GRAVEL TRAIL
N.T.S.



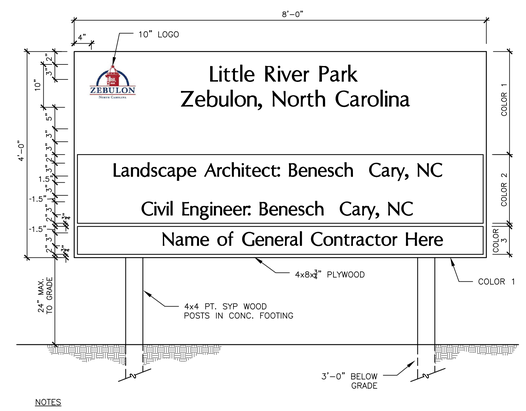
9 ASPHALT TRAIL OVER EXISTING GRAVEL TRAIL
N.T.S.



NOTES

1. ALL WOOD SHALL BE PRESSURE TREEATED WITH A NET RETENTION OF 0.40 LBS/C.F. WOOD SHALL BE DRIED AFTER TREATMENT.
2. BACKFILL ALL POSTS AND RESTORE GRADE AT POST BASE TO ORIGINAL CONDITION. REMOVE ANY EXCESS SOIL FROM POST BASE.

10 SPLIT RAIL FENCE
N.T.S.



NOTES

1. COLORS: TOP PANEL/BORDER – COLOR AS SELECTED BY OWNER.
   MIDDLE PANEL – COLOR AS SELECTED BY ARCHITECT
   BOTTOM PANEL – COLOR AS SELECTED BY ARCHITECT
   ALL LETTERING – COLOR AS SELECTED BY ARCHITECT.
2. ALL LETTERING SHALL BE OPTIMA SEMI-BOLD TYPEFACE.
3. CONTRACTOR TO SUBMIT MOCK-UP OR SHOP DRAWING OF PROJECT SIGN PRIOR TO FABRICATION.
4. FIELD LOCATE SIGN WITH BENESCH PRIOR TO INSTALLATION.

11 TEMPORARY PROJECT SIGN
N.T.S.

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1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C501

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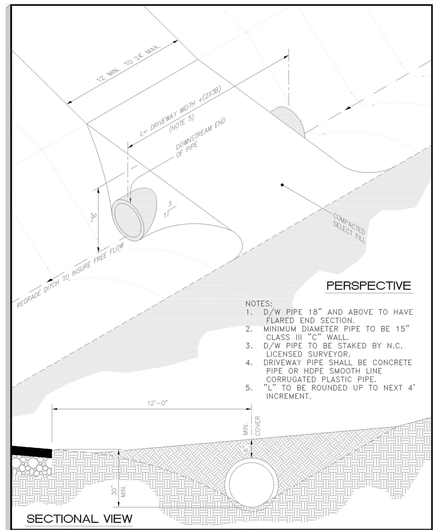
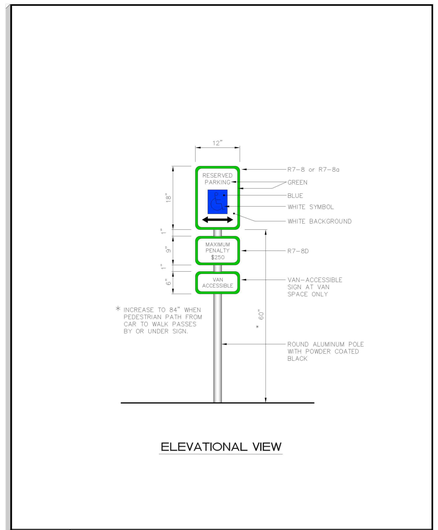
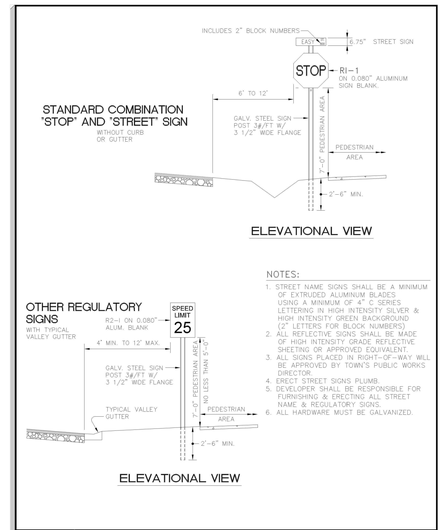


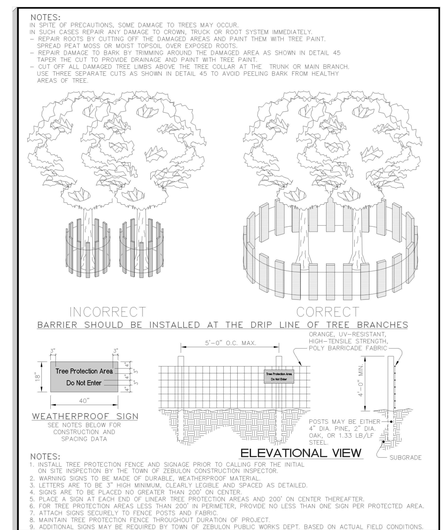
1 INSTALLATION OF D/W PIPE IN STREET SECTION
N.T.S.



2 R7-8 HANDICAP SIGN
N.T.S.



3 STANDARD SIGN INSTALLATION
N.T.S.



4 STANDARD TREE PROTECTION
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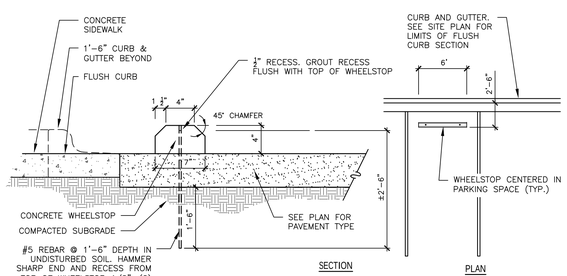


5 CONCRETE WHEELSTOP DETAIL
N.T.S.

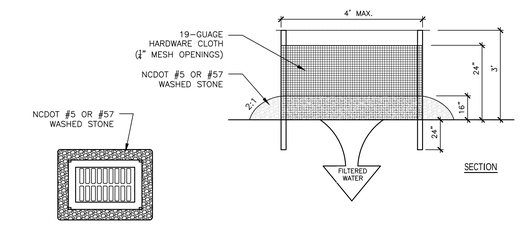


FIGURE 6.51A HARDWARE CLOTH AND GRAVEL INLET PROTECTION PLAN

CONSTRUCTION SPECIFICATIONS

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POST EVENLY AROUND THE PERIMETER OF THE INLET. A MAXIUM OF 4' FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT#5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.

MAINTENANCE

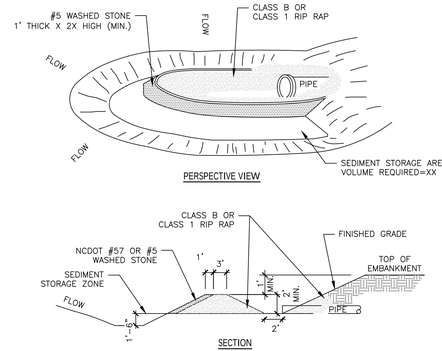
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

REFERENCES

INLET PROTECTION
6.52, BLOCK AND GRAVEL INLET PROTECTION
6.54, ROCK DOUGHNUT INLET PROTECTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROADS AND STRUCTURES

6 HARDWARE CLOTH AND GRAVEL INLET PROTECTION
NCDEQ STD. 6.51



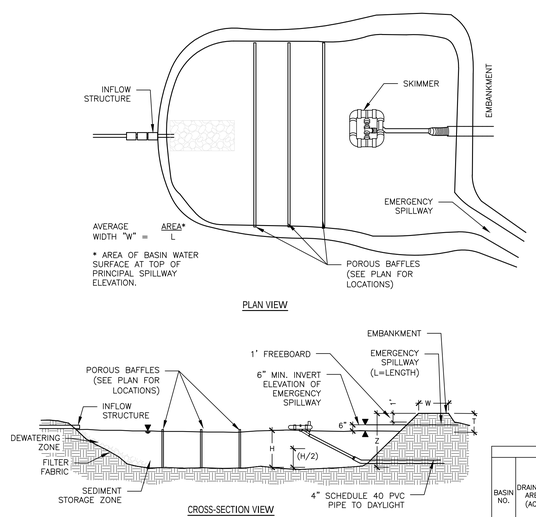
CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. INSTALL THE CLASS B OR CLASS I RIPRAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT UP HIGHER ON EACH END WHERE IT TIES INTO THE EMBANKMENT. THE MINIMUM CREST WIDTH OF THE RIPRAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET. THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE SHOULDER OF THE EMBANKMENT OR DIVERSIONS
3. A 1 FOOT THICK LAYER OF NC DOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP
4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE
5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND ESTABLISH FINAL GRADING ELEVATIONS, COMPACT AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE REQUIREMENTS

1. INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (½INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.
2. CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY
3. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER

7 TEMPORARY FILTER BERM BASIN
NCDEQ STD. 6.55



MAINTENANCE

1. INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IT IF IS CLOGGED; IF SO REMOVE THE DEBRIS.
4. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR SIGNS OF SEEPAGE. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
6. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

GENERAL NOTES:

1. CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE OBJECTS AND OBSTRUCTIONS DEEMED UNSUITABLE FOR STOCKPILE OR DISPOSE OF IT PROPERLY. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. PLACE FILL IN LAYERS NO LARGER THAN THAT THAT CAN BE MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR INSTALL RIPRAP.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
4. SEDIMENT BASIN EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
5. STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY, AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE OUTLET AND INLET OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
6. REQUIRED STORAGE IS 1800 CUBIC FEET OF STORAGE VOLUME PER ACRES OF DISTURBED AREA. MINIMUM REQUIRED SURFACE AREA REQUIRED SHALL BE 325 ST PER CFS OF Q10 PEAK INFLOW.
7. THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM. (ARTHEN SPILLWAYS-INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADES, DESIGN, WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONE FOOT OUT ON THE BOTTOM ANCHORING ANY EXTENDED PART. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS SPANNING THE COMPLETE WIDTH MAY BE USED. THE UPPER SECTIONS THEN SHOULD OVERLAP THE LOWER SECTIONS TO ENSURE WATER CANNOT GET UNDERNEATH THE FABRIC. SECURE THE UPPER EDGES AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
8. INLETS-DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER IN UPPER END OF THE TRAP.
9. EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED, DIVERT SURFACE WATER AWAY FROM BARE AREAS, COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED, STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
10. WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SITTLING. BAFFLES SHOULD BE PROVIDED IN THE BASIN, BASED ON SECTION 6.65.
11. CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL CLEANOUT POINT, OF THE BASIN.
12. SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT TRAPS THAT ARE IN VICINITY TO NON-CONSTRUCTION PEDESTRIAN TRAFFIC AND NOT ALREADY PROTECTED BY FENCING.
13. FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
14. THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE AND BASIN MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY NCDENR LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
15. ALL EROSION CONTROL MEASURES ARE TO BE DESIGNED TO THE STANDARDS DOCUMENTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SKIMMER CONSTRUCTION SPECIFICATIONS

1. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
2. PLACE THE BARREL (TYPICALLY 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE OR AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE WHEN COMPACTING. IF THE PIPE IS RAISED WHEN COMPACTING UNDER THE PIPE HAUNCHES, PLACE A MINIMUM DEPTH OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
3. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
4. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

DATA BLOCK

BASIN NO.	DRAINAGE AREA (AC.)	DENUDED AREA (AC.)	Q10 (CFS)	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	SKIMMER ø (IN.)	SKIMMER ORIFICE ø (IN.)
				REQUIRED (CU. FT.)	PROVIDE (CU. FT.)	REQUIRED (SQ. FT.)	PROVIDE (SQ. FT.)								
1															
2															

8 Temporary Skimmer Basin
NCDEQ STD. 6.64

benesch
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Charlotte, NC 28208
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P 704.521.9880

Seals:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032787 JOSEPH PUNG
4/18/25

Corp. NC License: F-1320

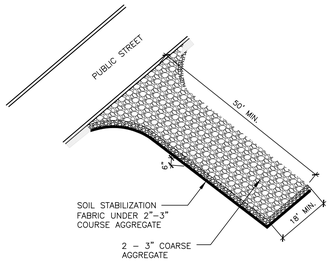
LITTLE RIVER PARK
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C502

Y:\North Carolina\17XX-595\1725-500672.00_Zebulon_Little_River\Eng_Docs\Drawings\1725-500672.00-CD\1725-500672.00 DETAILS.dwg



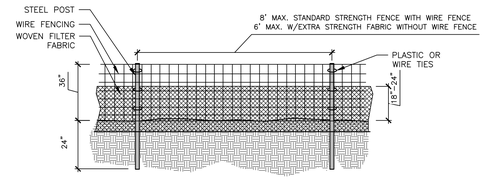
NOTES:

1. A STABILIZED ENTRANCE PAD OF 2"–3" COURSE AGGREGATE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE MAY BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. IF CONDITIONS AT THE SITE ARE SUCH THAT MOST OF THE MUD AND SEDIMENT ARE NOT REMOVED BY VEHICLES TRAVELING OVER THE GRAVEL, THE TIRES SHALL BE WASHED. WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS IN A SEDIMENT TRAP OR OTHER SUITABLE DISPOSAL AREA. A WASH RACK MAY ALSO BE USED.
4. SOIL STABILIZATION FABRIC (AS SPECIFIED BY THE DESIGNER) SHALL BE USED.

MAINTENANCE NOTES:

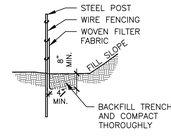
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2–INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN OUT AS NECESSARY, IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

1 CONSTRUCTION ENTRANCE
N.T.S.



GENERAL NOTES:

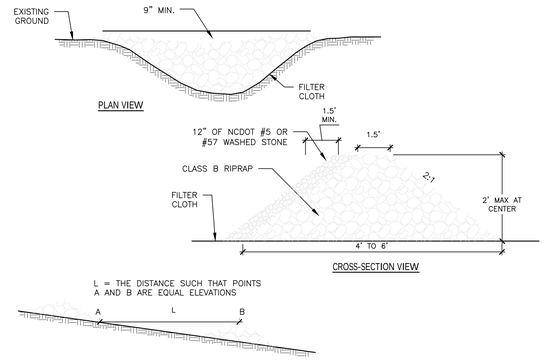
1. FILTER FABRIC FENCE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
3. STEEL POSTS SHALL BE 5'–0" IN HEIGHT AND BE OF THE SELF–FASTENER ANGLE STEEL TYPE.
4. WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
5. TURN SILT FENCE UP SLOPE AT ENDS.
6. WIRE MESH SHALL BE MIN. 13 GAGE WITH MAXIMUM 12" OPENINGS.
7. ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE (WITHIN 5 FT.) WHEN GRADING IS ADJACENT TO SWIM BUFFERS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES).



MAINTENANCE NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROX. HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

2 SILT FENCE
N.T.S.



NOTES:

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. KEE THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FORM DISPLACED STONES.

3 CHECK DAM
N.T.S.

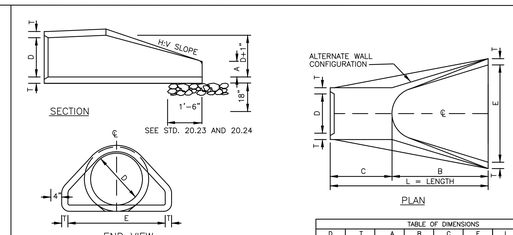
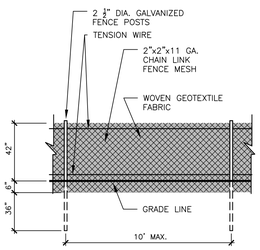


TABLE OF DIMENSIONS									
D	T	A	B	C	E	L	H:V	WT.
12"	2–1/4"	4"	2'–0"	4'–1"	2'–0"	6'–1"	3:1	730
15"	2–1/4"	6"	2'–3"	3'–10"	2'–0"	6'–1"	3:1	730
18"	2–1/2"	9"	2'–3"	3'–10"	3'–0"	6'–1"	3:1	1190
24"	3"	10"	3'–8"	2'–6"	4'–0"	6'–2"	3:1	1770
30"	3–1/2"	1'–0"	4'–6"	1'–8"	5'–0"	6'–2"	3:1	2380
36"	4"	1'–3"	5'–3"	2'–11"	6'–0"	8'–2"	3:1	5320
42"	4–1/2"	1'–9"	5'–3"	2'–11"	6'–6"	8'–2"	3:1	5920
48"	5"	2'–0"	6'–0"	2'–2"	7'–0"	8'–2"	3:1	7470
54"	5–1/2"	2'–3"	5'–6"	2'–10"	7'–6"	8'–4"	3:1	8810
60"	6"	2'–6"	5'–0"	3'–3"	8'–0"	8'–3"	3:1	11180
66"	6–1/2"	3'–0"	6'–0"	2'–3"	8'–6"	8'–3"	3:1	12530
72"	7"	3'–0"	6'–6"	1'–9"	9'–0"	8'–3"	3:1	13980

GENERAL NOTES:

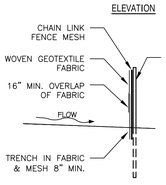
1. SEE CURRENT NCDOT STANDARD 310.01 FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMENTER PER AASHTO M170, TABLE 2, WALL B.
3. ALL CONCRETE TO BE 4000 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

4 FLARED END SECTION
N.T.S.



NOTES:

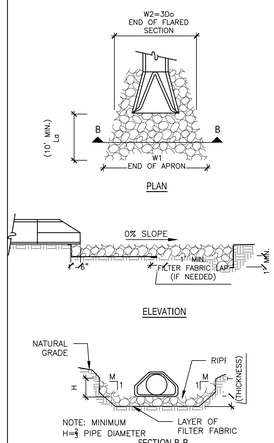
1. DIG AN 8" TRENCH AND PLACE THE POSTS ON 10' CENTERS.
2. USE A TENSION BAR AND 3 CLAMPS TO SECURE THE MESH TO THE FIRST POST. PLACE MESH IN TRENCH AND ON THE UPHILL SIDE OF POSTS.
3. STRETCH THE MESH TIGHTLY AND ATTACH TO TERMINAL POST USING A TENSION BAR AND BANDS
4. ATTACH MESH TO EACH POSTS WITH WIRE TIES, 3 PER POST.
5. RUN TENSION WIRE AT TOP AND BOTTOM OF THE MESH. ATTACH THE MESH TO THE TENSION WIRE USING HOG RINGS 5' ON CENTER.
6. ATTACH THE SILT FENCE FABRIC TO THE MESH USING PLASTIC WIRE TIES 2' ON CENTER TOP AND BOTTOM.



MAINTENANCE NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5 TEMPORARY SUPER SILT FENCE
N.T.S.



* d50 (SEE FIG. 8.06 A&B "NC SEDIMENT AND EROSION CONTROL MANUAL"
DMAX = 1.5 X d50
T = 1.5 X DMAX

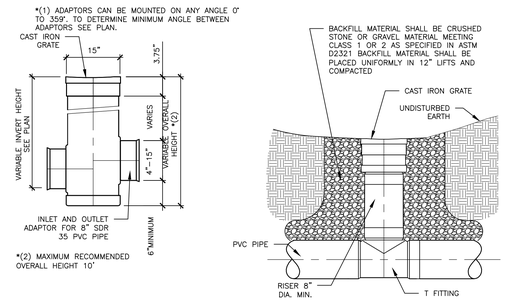
NOTES:

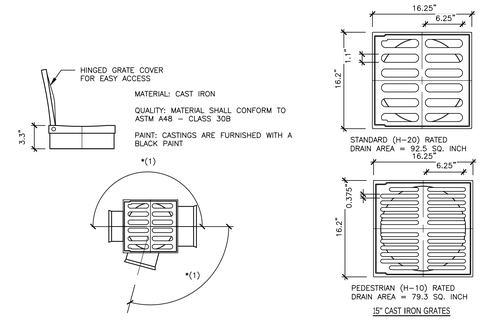
1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES' EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE ATTHE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.

DESIGN DATA TAKEN FROM THE USDA NOMOGRAPH LOCATED IN THE NC SEDIMENT AND EROSION CONTROL MANUAL

OUTLET PROTECTION SUMMARY						
OUTLET	La	W1	W2	*T	H	CLASS RR
FES 3	26'	30'	12'	34.5"	32"	2
FES 100	26'	30'	12'	34.5"	32"	2

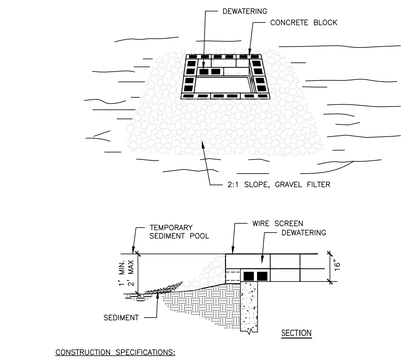
6 OUTLET PROTECTION
N.T.S.





15" CAST IRON GRATES

7 15" AREA DRAIN
N.T.S.



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 2 X 4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH ½ INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN #57 STONE, ¾ TO ½ 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.

8 BLOCK AND GRAVEL DROP INLET PROTECTION
N.T.S.

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

SEEDING DATES
MOUNTAINS-AUG. 15 - DEC. 30
COASTAL PLAIN AND PIEDMONT-AUG. 15 - DEC. 30

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF NECESSARY TO EXTENT TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COSTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
GERMAIN MILLET	40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

SEEDING DATES
MOUNTAINS-MAY 15 - AUG. 15
PIEDMONT-MAY 1 - AUG. 15
COASTAL PLAIN-APR. 15 - AUG. 15

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

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

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COSTAL PLAIN, KOREAN IN MOUNTAINS)	50

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SEEDING DATES
MOUNTAINS-ABOVE 2500 FEET: FEB. 15 - MAY 15
BELOW 2500 FEET: FEB. 1 - MAY 1
PIEDMONT-JAN. 1 - MAY 1
COASTAL PLAIN-DEC. 1 - APRIL 15

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE, RESEED.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

9 TEMPORARY SEEDING SPECIFICATIONS
N.T.S.

SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING RATE
AUG 15 – NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 – MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE 25 LBS/ACRE
MAR 1 – APR 15	TALL FESCUE	300 LBS/ACRE
APR 15 – JUN 30	HULLED COMMON BERMUDA 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

SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING RATE
MAR 1 – JUN 1	SERICEA LESPEDEZA (SCARIFIED) AND	50 LBS/ACRE
MAR 1 – APR 15	ADD TALL FESCUE	120 LBS/ACRE
MAR 1 – JUN 30	OR ADD HULLED COMMON BERMUDA GRASS	25 LBS/ACRE
JUN 1 – SEP 1	***TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM–SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
SEP 1 – MAR 1	SERICEA LESPEDEZA (UNHULLED–UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE 120 LBS/ACRE
NOV 1 – MAR 1	ADD ABRUZZI RYE	25 LBS/ACRE

SEEDBED PREPARATION
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL–PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4–8" DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIR OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, RESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

* APPLY: AGRICULTURAL LIMESTONE – 2 TONS/ACRE
FERTILIZER – 1000 LBS/ACRE 10–10–10
SUPERPHOSPHATE – 500 LBS/ACRE 20%
MULCH – 2 TONS/ACRE –SMALL GRAIN STRAW
ANCHOR – ASPHALT EMULSION

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY – RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

SOW SEED USING A SPREADER OR SEEDING MACHINE. DO NOT SEED WHEN WIND VELOCITY EXCEEDS 5 MPH. DISTRIBUTE SEED EVENLY OVER ENTIRE AREA BY SOWING EQUAL QUANTITY IN 2 DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.

SOW NOT LESS THAN THE QUANTITY OF SEED SPECIFIED OR SCHEDULED.

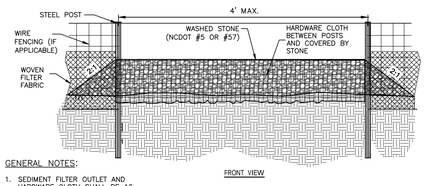
RAKE SEED LIGHTLY INTO TOP 1/8" OF SOIL, ROLL LIGHTLY, AND WATER WITH A FINE SPRAY.

PROTECT SEEDED SLOPES OF GREATER THAN 3:1 AGAINST EROSION WITH EROSION NETTING OR OTHER METHODS ACCEPTABLE TO THE LANDSCAPE ARCHITECT.

PROTECT SEEDED AREAS AGAINST EROSION BY SPREADING SPECIFIED LAWN MULCH AFTER COMPLETION OF SEEDING OPERATIONS. SPREAD UNIFORMLY TO FORM A CONTINUOUS BLANKET NOT LESS THAN 1 1/2" LOOSE MEASUREMENT OVER SEEDED AREAS.

ANCHOR MULCH BY SPRAYING WITH ASPHALT EMULSION AT THE RATE OF 10–13 GALLONS PER 1,000 S.F. TAKE PRECAUTIONS TO PREVENT DAMAGE OR STAINING OF CONSTRUCTION OR OTHER PLANTINGS ADJACENT TO MULCHED AREAS.

10 PERMANENT SEEDING SPECIFICATIONS
N.T.S.

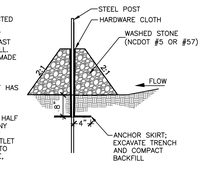


GENERAL NOTES:

1. SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
2. HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEYED IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLED PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. **#6.02** (19 GAUGE, 1/4" SPACING).
3. POSTS SHALL BE NO MORE THAN 4 FEET APART.
4. SITE OUTLETS AT ANY POINT SMALL CONCENTRATED FLOWS ARE ANTICIPATED AND AT THE DIRECTION OF THE INSPECTOR.

MAINTENANCE NOTES:

1. FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.



11 TEMPORARY STONE OPENING IN SILT FENCE
N.T.S.

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Corp. NC License: F-1320

LITTLE RIVER PARK
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C503

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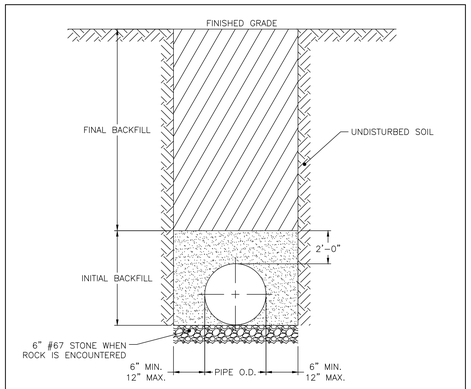
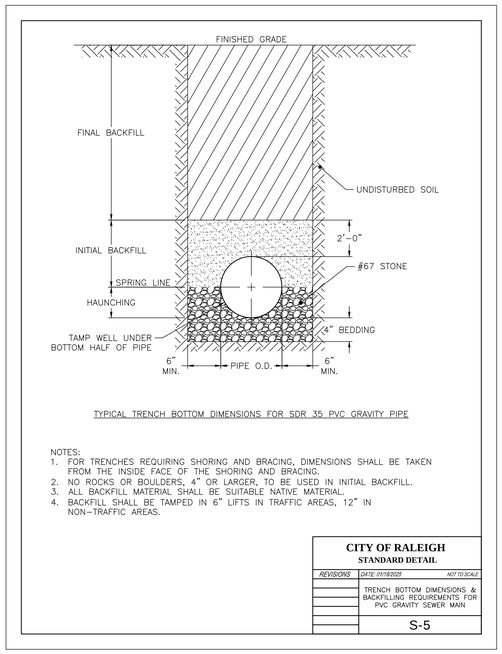


NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN 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
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
	S-4	

1 TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON
N.T.S.



TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

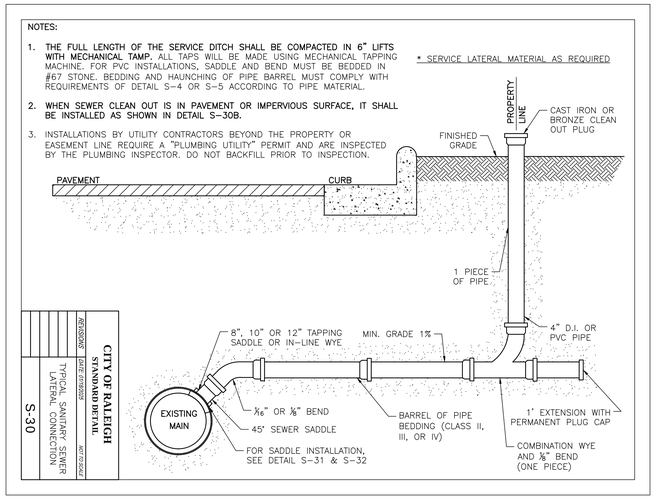
NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS, 4" OR LARGER, TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN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

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN	
	S-5	

2 TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN
N.T.S.

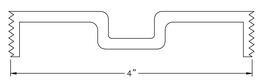
NOTES:
1. **THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LIFTS WITH MECHANICAL TAMP.** ALL TAPS WILL BE MADE USING MECHANICAL TAPPING MACHINE. FOR PVC INSTALLATIONS, SADDLE AND BEND MUST BE BEDDED IN #67 STONE. BEDDING AND HAUNCHING OF PIPE BARREL MUST COMPLY WITH REQUIREMENTS OF DETAIL S-4 OR S-5 ACCORDING TO PIPE MATERIAL.
2. **WHEN SEWER CLEAN OUT IS IN PAVEMENT OR IMPERVIOUS SURFACE, IT SHALL BE INSTALLED AS SHOWN IN DETAIL S-30B.**
3. INSTALLATIONS BY UTILITY CONTRACTORS BEYOND THE PROPERTY OR EASEMENT LINE REQUIRE A "PLUMBING UTILITY" PERMIT AND ARE INSPECTED BY THE PLUMBING INSPECTOR. DO NOT BACKFILL PRIOR TO INSPECTION.



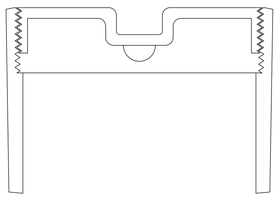
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TYPICAL SANITARY SEWER LATERAL CONNECTION	
	S-30	

3 TYPICAL SANITARY SEWER LATERAL CONNECTION
N.T.S.



STANDARD 4" BRONZE CLEANOUT PLUG



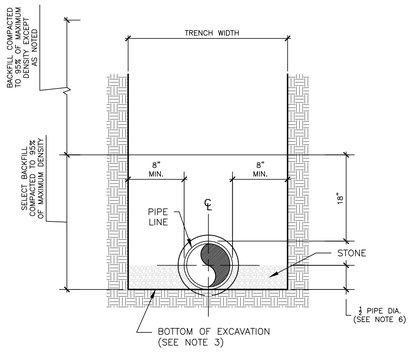
CLEANOUT FERRULE WITH PLUG

STYLES ACCEPTED:
INVERTED NUT
RAISED NUT

CITY OF RALEIGH
STANDARD DETAIL

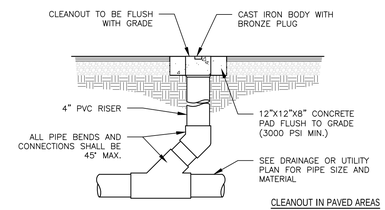
REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	4" CLEANOUT PLUG	
	S-34	

4 4" CLEANOUT PLUG
N.T.S.

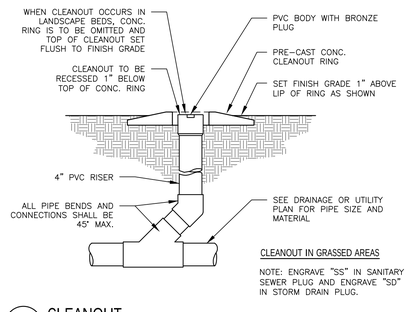


NOTES:
1. BACKFILL TO 95% OF MAXIMUM DENSITY WHERE EXCAVATIONS CUT THROUGH PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS, AND UNDER OR ADJACENT TO STRUCTURES.
2. STONE TO BE SIZE 3/4" TO 1-1/2", WELL TAMPED.
3. STONE IS REQUIRED TO 6" BELOW PIPE WHERE WET CONDITIONS OR ROCK IS ENCOUNTERED, ONLY AS DIRECTED.
4. HAND SHAPE TRENCH BOTTOM FOR LOWER QUADRANT OF PIPE AND BELLS.
5. PROVIDE MINIMUM 3'-0" COVER OVER PIPE.
6. STONE TO 1/2 PIPE DIA. NOT REQUIRED FOR C-900 PVC OR DUCTILE IRON PIPE.

5 UTILITY TRENCH
N.T.S.



CLEANOUT IN PAVED AREAS



CLEANOUT IN GRASSED AREAS

NOTE: ENGRAVE "SS" IN SANITARY SEWER PLUG AND ENGRAVE "SD" IN STORM DRAIN PLUG.

6 CLEANOUT
N.T.S.

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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SITE CONSTRUCTIONDET

Sheet No:
C504

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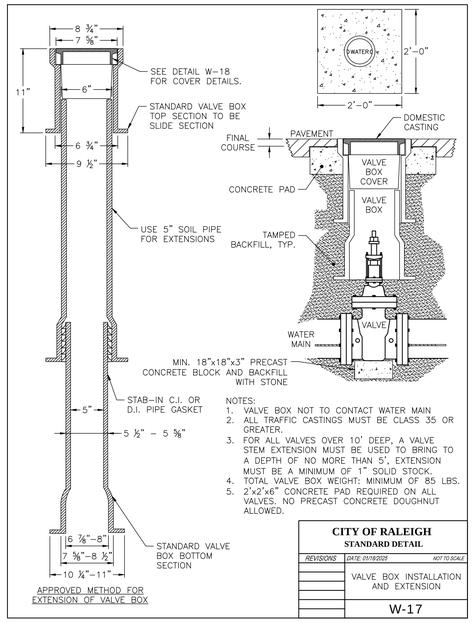
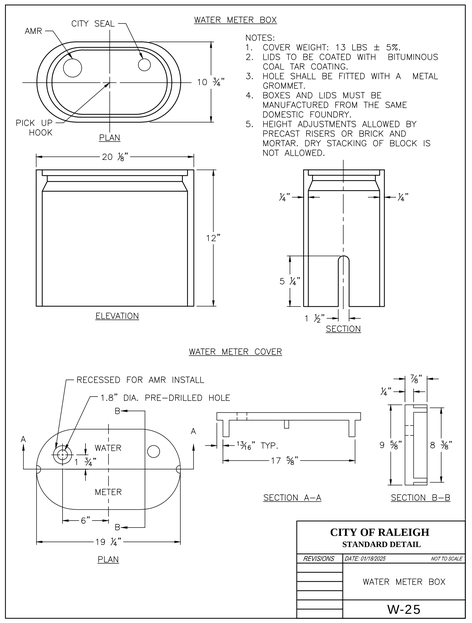


NOTES:
1. VALVE BOX NOT TO CONTACT WATER MAIN
2. ALL TRAFFIC CASTINGS MUST BE CLASS 35 OR GREATER.
3. FOR ALL VALVES OVER 10' DEEP, A VALVE STEM EXTENSION MUST BE USED TO BRING TO A DEPTH OF NO MORE THAN 5', EXTENSION MUST BE A MINIMUM OF 1" SOLID STOCK.
4. TOTAL VALVE BOX WEIGHT: MINIMUM OF 85 LBS.
5. 2'x2'x6" CONCRETE PAD REQUIRED ON ALL VALVES. NO PRECAST CONCRETE DOUGHNUT ALLOWED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	VALVE BOX INSTALLATION AND EXTENSION	
	W-17	

1 VALVE BOX INSTALLATION AND EXTENSION
N.T.S.

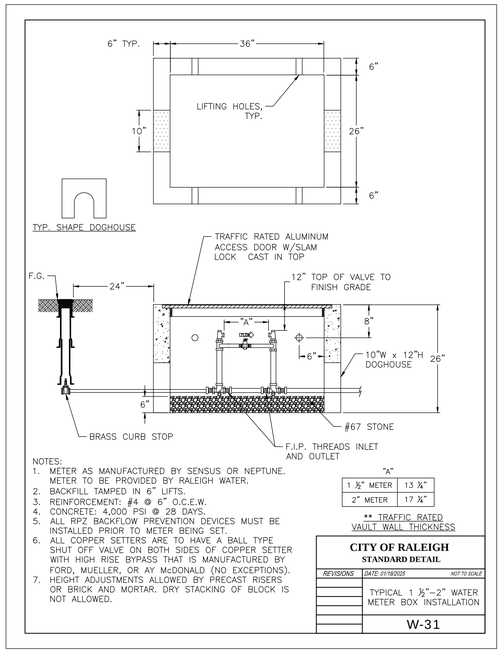


NOTES:
1. COVER WEIGHT: 13 LBS ± 5%.
2. LIDS TO BE COATED WITH BITUMINOUS COAL TAR COATING.
3. HOLE SHALL BE FITTED WITH A METAL GROMMET.
4. BOXES AND LIDS MUST BE MANUFACTURED FROM THE SAME DOMESTIC FOUNDRY.
5. HEIGHT ADJUSTMENTS ALLOWED BY PRECAST RISERS OR BRICK AND MORTAR. DRY STACKING OF BLOCK IS NOT ALLOWED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	WATER METER BOX	
	W-25	

2 WATER METER BOX
N.T.S.



NOTES:
1. METER AS MANUFACTURED BY SENSUS OR NEPTUNE. METER TO BE PROVIDED BY RALEIGH WATER.
2. BACKFILL TAMPED IN 6" LIFTS.
3. REINFORCEMENT: #4 @ 6" O.C.E.W.
4. CONCRETE: 4,000 PSI @ 28 DAYS.
5. ALL RPZ BACKFLOW PREVENTION DEVICES MUST BE INSTALLED PRIOR TO METER BEING SET.
6. ALL COPPER SETTERS ARE TO HAVE A BALL TYPE SHUT OFF VALVE ON BOTH SIDES OF COPPER SETTER WITH HIGH RISE BYPASS THAT IS MANUFACTURED BY FORD, MUELLER, OR AY McDONALD (NO EXCEPTIONS).
7. HEIGHT ADJUSTMENTS ALLOWED BY PRECAST RISERS OR BRICK AND MORTAR. DRY STACKING OF BLOCK IS NOT ALLOWED.

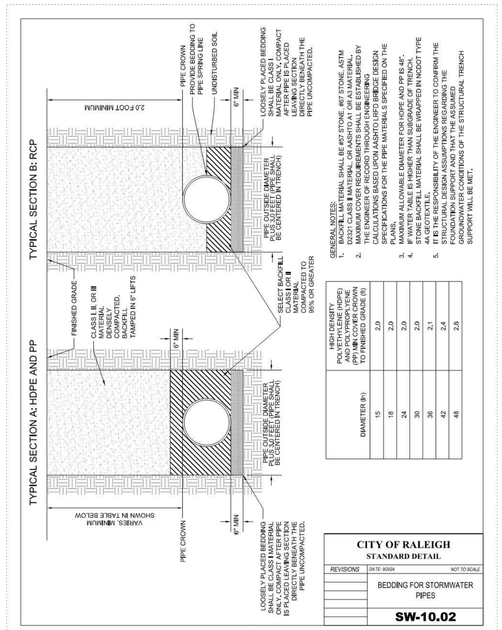
	"A"
1 ½" METER	13 ¾"
2" METER	17 ¾"

** TRAFFIC RATED VAULT WALL THICKNESS

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	TYPICAL 1 ½"–2" WATER METER BOX INSTALLATION	
	W-31	

3 TYPICAL 1 1/2"-2" WATER METER BOX INSTALLATION
N.T.S.



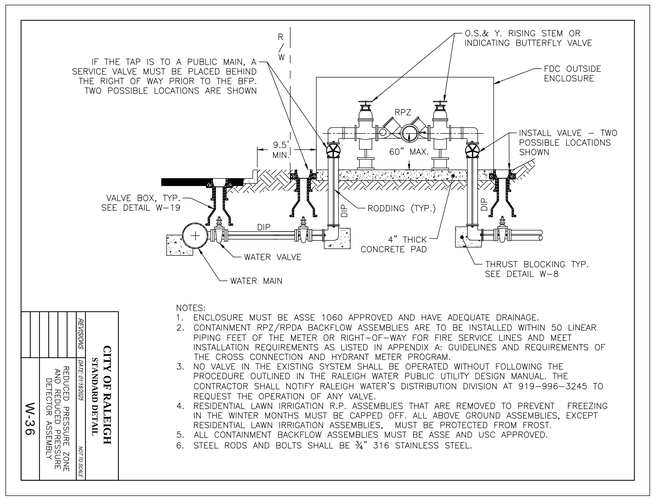
GENERAL NOTES:
1. BACKFILL MATERIAL SHALL BE #57 STONE, #67 STONE, ASTM C33 CLASS 57 OR 67 SAND, OR ASTM D2321 CLASS I MATERIAL. MAXIMUM COVER REQUIREMENTS SHALL BE ESTABLISHED BY THE ENGINEER OF RECORD THROUGH ENGINEERING CALCULATIONS BASED ON ASTM D2321 DESIGN SPECIFICATIONS FOR THE PIPE MATERIALS SPECIFIED ON THE PLANS.
2. MAXIMUM ALLOWABLE EMMETER FOR HDPE AND PP IS 40'.
3. IF WATER TABLE IS HIGHER THAN SUBGRADE OF TRENCH, ALL MATERIAL SHALL BE WRAPPED IN NONOUT TYPE 4A GEOTEXTILE.
4. ETR THE RESPONSIBILITY OF THE ENGINEER TO CONFIRM THE ETR IS SUFFICIENT FOR THE SITE. ENGINEER TO CONFIRM THE FOUNDATION SUPPORT AND THAT THE ASSUMED FOUNDATION SUPPORT FOR THE STRUCTURAL TRENCH SUPPORT WILL BE MET.

DIAMETER (in)	HDPE DENSITY POLYETHYLENE (HDPE) AND POLYPROPYLENE (PP) PIPE COVER CROWN TO FINISHED GRADE (ft)
15	2.0
18	2.0
24	2.0
30	2.0
36	2.1
42	2.4
48	2.8

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	BEDDING FOR STORMWATER PIPES	
	SW-10.02	

4 BEDDING FOR STORMWATER PIPES
N.T.S.

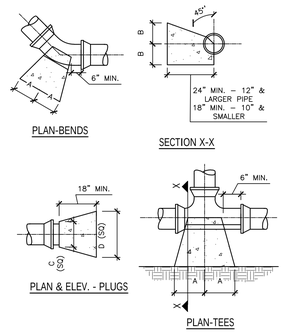


NOTES:
1. ENCLOSURE MUST BE ASSE 1060 APPROVED AND HAVE ADEQUATE DRAINAGE.
2. CONTAINMENT RPZ/RPDA BACKFLOW ASSEMBLIES ARE TO BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT–OF–WAY FOR FIRE SERVICE LINES AND MEET INSTALLATION REQUIREMENTS AS LISTED IN APPENDIX A: GUIDELINES AND REQUIREMENTS OF THE CROSS CONNECTION AND HYDRANT METER PROGRAM.
3. NO VALVE IN THE EXISTING SYSTEM SHALL BE OPERATED WITHOUT FOLLOWING THE PROCEDURE OUTLINED IN THE RALEIGH WATER PUBLIC UTILITY DESIGN MANUAL. THE CONTRACTOR SHALL NOTIFY RALEIGH WATER'S DISTRIBUTION DIVISION AT 919–996–3245 TO REQUEST THE OPERATION OF ANY VALVE.
4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
5. ALL CONTAINMENT BACKFLOW ASSEMBLIES MUST BE ASSE AND USC APPROVED.
6. STEEL RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	REDUCED PRESSURE ZONE AND REDUCED PRESSURE DETECTOR ASSEMBLY	
	W-36	

5 REDUCED PRESSURE ZONE AND REDUCED PRESSURE DETECTOR ASSEMBLY
N.T.S.

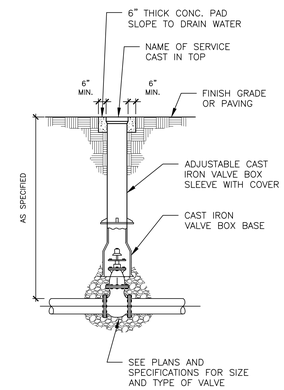


SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
2 1/2"–4"	16"	10"	9"	10"	8"	8"	10"	12"	10"	21"
6"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

NOTE:
BASED ON 100 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND

6 CONCRETE THRUST BLOCK
N.T.S.

NOTES:
1. FIRE LINE VALVE COVERS TO BE LOCAKABLE AND PAINTED RED (SUBMIT SHOP DRAWING).
2. DOMESTIC LINE VALVE COVERS TO BE LOCAKABLE AND PAINTED BLUE (SUBMIT SHOP DRAWING).



7 GATE VALVE
N.T.S.

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LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C505

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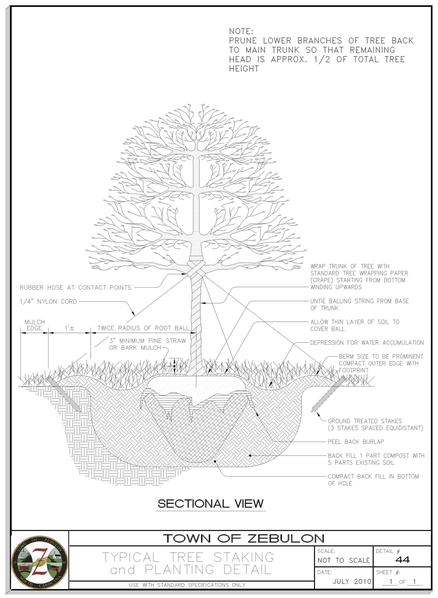
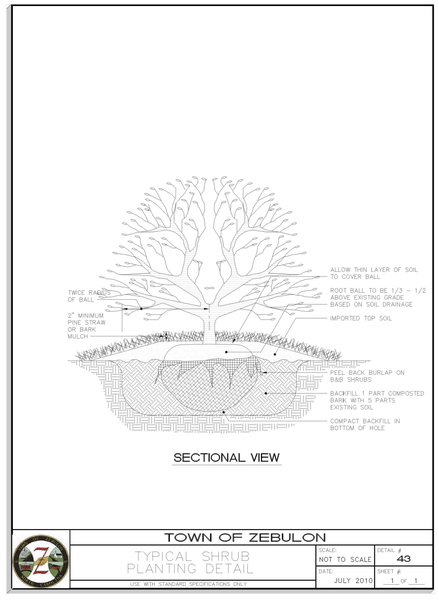
PLANTING NOTES

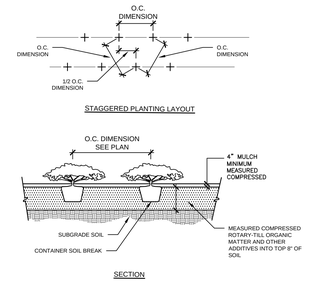
1. TREES AND SHRUBS SHALL BE WARRANTED FOR THE DURATION OF ONE FULL GROWING SEASON AFTER PLANTING AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE WARRANTY PERIOD. THE GROWING SEASON IS DEFINED AS ONE FULL YEAR AFTER ACCEPTANCE OF PLANTING, IN WRITING, BUT NOT BEFORE SUBSTANTIAL COMPLETION.
2. DO NOT STAKE TREES EXCEPT WHERE SPECIFIED BY LANDSCAPE ARCHITECT. STAKING IS REQUIRED FOR TREES PLANTED ON SLOPES.
3. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4-6" OVER THE ENTIRE AREA.
4. FOR CONTAINER GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
5. FOR FIELD GROWN TREES, CUT BURLAP, ROPE AND WIRE BASKET AWAY FROM TOP AND SIDES OF ROOT BALL.
6. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
7. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.
8. DO NOT WRAP TRUNK; MARK NORTH SIDE OF TREE IN THE NURSERY AND LOCATE TO THE NORTH IN THE FIELD.
9. WIDTH OF PLANTING HOLE IS 3X ROOT BALL AT THE SURFACE, SLOPING TO 2X THE ROOT BALL DIAMETER AT THE DEPTH OF THE ROOT BALL.
10. BEFORE PLANTING, ADD 3-4" OF WELL COMPOSTED LEAVES, RECYCLED YARD WASTE OR OTHER COMPOST AND TILL INTO TOP 6" OF PREPARED SOIL. ADD COMPOST AT 20-35% BY VOLUME TO BACKFILL.
11. PERFORM PERCOLATION TEST FOR EACH TREE PIT TO CONFIRM THAT WATER DRAINS OUT OF THE SOIL. PROVIDE GRAVEL SUMP FILTER FABRIC & VENT PIPE IF DRAINAGE DOES NOT OCCUR WITHIN 24 HOURS. INCLUDE ALL SUMPS IN BASE BID. SHOULD SUMPS NOT BE NECESSARY AFTER PERCOLATION TEST, PROVIDE CHANGE ORDER DEDUCT TO OWNER.
12. IF PLANTING HOLES ARE DUG WITH A LARGE AUGER BREAKING DOWN THE SIDES WITH A SHOVEL CAN ELIMINATE GLAZING AND CREATE THE PREFERRED SLOPING SIDE.
13. TREES SHALL HAVE SINGLE LEADERS. TREES WITH 2 LEADERS WILL BE REJECTED.
14. DO NOT PLACE MULCH IN CONTACT WITH TRUNK.
15. PROVIDE GATOR BAGS FOR ALL TREES WHERE IRRIGATION IS NOT PROVIDED.



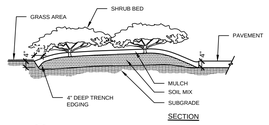
1 Typical Tree Planting
N.T.S.



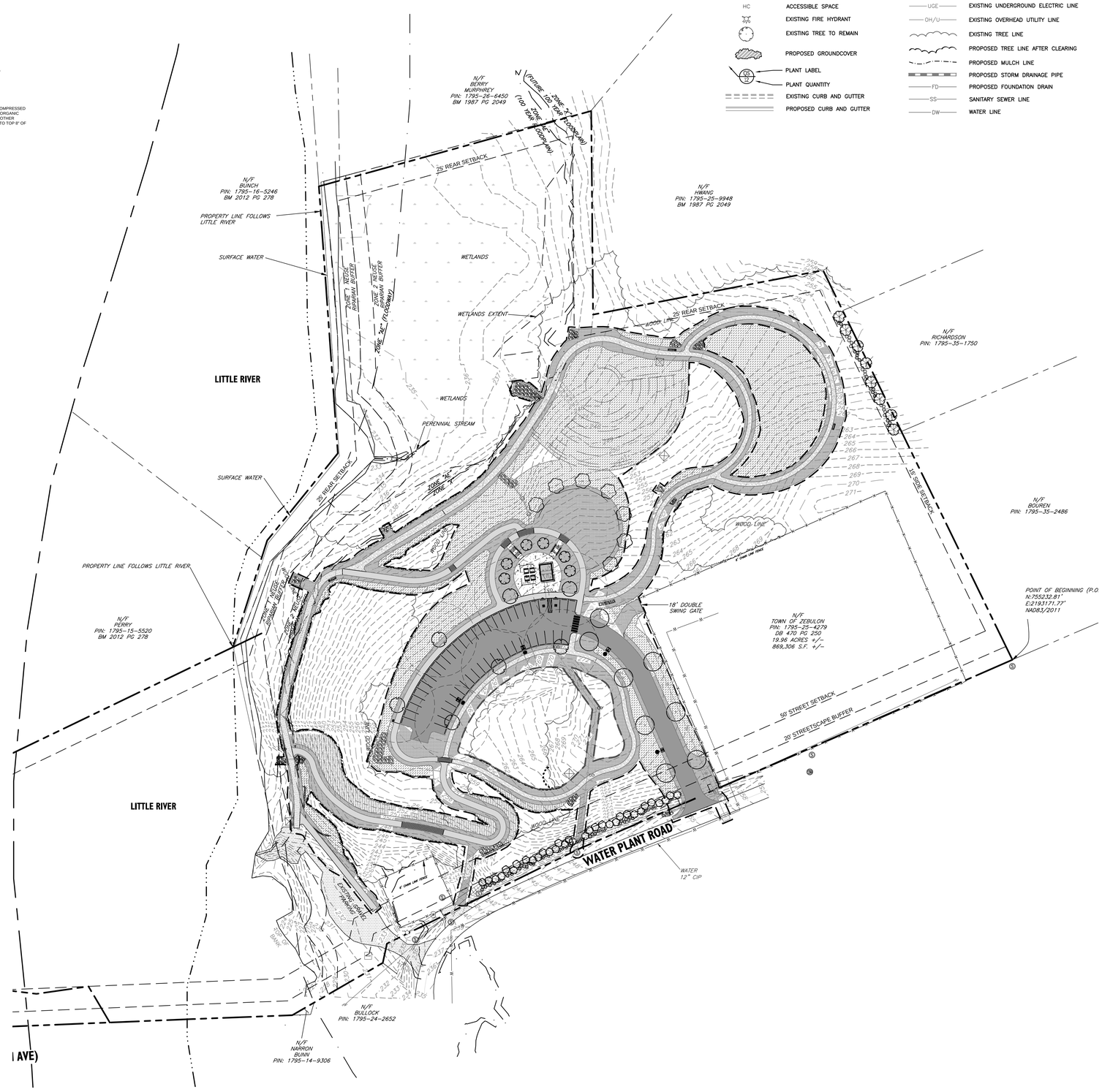
2 Typical Shrub Planting
N.T.S.



3 Groundcover Planting Detail
N.T.S.



4 Trench-cut Edging
N.T.S.



LEGEND

SIGN	PROPERTY LINE
EXISTING LIGHT POLE	EXISTING FENCE
EXISTING UTILITY POLE	PROPOSED FENCE
HC ACCESSIBLE SPACE	UGE EXISTING UNDERGROUND ELECTRIC LINE
EXISTING FIRE HYDRANT	OH/U EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	EXISTING TREE LINE
PROPOSED GROUNDCOVER	PROPOSED TREE LINE AFTER CLEARING
PLANT LABEL	PROPOSED MULCH LINE
PLANT QUANTITY	PROPOSED STORM DRAINAGE PIPE
EXISTING CURB AND GUTTER	FD PROPOSED FOUNDATION DRAIN
PROPOSED CURB AND GUTTER	SS SANITARY SEWER LINE
	DW WATER LINE

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Corp. NC License: F-1320

LITTLE RIVER PARK

1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
OVERALL LANDSCAPE PLAN

Sheet No:
C600

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STREETSCAPE BUFFER REQUIREMENTS

STREETSCAPE BUFFER
- SHALL MAINTAIN A MINIMUM WIDTH OF AT LEAST 15' FROM THE LOT LINE.
- STREETSCAPE BUFFERS SHALL NOT BE LOCATED WITHIN REQUIRED SIGHT DISTANCE TRIANGLE.
- STREETSCAPE BUFFERS SHALL BE CONFIGURED AS A TYPE 'C' SEMI-OPAQUE BUFFER EXCEPT THAT THE MINIMUM NUMBER OF REQUIRED SHRUBS IS REDUCED FROM 25 TO 20, AND THE ON-CENTER SPACING IS REDUCED TO 5'.

PLANT MATERIAL REQUIREMENTS
4 UNDERSTORY TREES PER 100 LF
6 UNDERSTORY TREES PER 100 LF (MAXIMUM SPACING OF 16' O.C.)
20 SHRUBS PER 100 LF MAXIMUM SPACING OF 5' O.C.
(75% OF REQUIRED SHRUBS NEED TO BE EVERGREEN)

LOCATION	WATER PLANT ROAD FRONTAGE (OVERHEAD POWER LINES PRESENT)
TOTAL LF	324 LF
BUFFER WIDTH	15'
REQUIRED CANOPY TREES	N/A (OVERHEAD POWER LINES PRESENT)
REQUIRED UNDERSTORY TREES	33 REQUIRED UNDERSTORY TREES
PROVIDED UNDERSTORY TREES	33 PROVIDED UNDERSTORY TREES
REQUIRED SHRUBS	65 REQUIRED SHRUBS
PROVIDED SHRUBS	67 PROVIDED SHRUBS

PERIMETER BUFFER REQUIREMENTS

PLANT MATERIAL REQUIREMENTS
4 UNDERSTORY TREES PER 100 LF
15 SHRUBS PER 100 LF (50% MINIMUM EVERGREEN SHRUBS)

BUFFER LOCATION	EASTERN PROPERTY BOUNDARY
BUFFER TYPE	TYPE 'A'
BUFFER LF	180 LF
BUFFER WIDTH	10' WIDE
TOTAL CANOPY TREES REQUIRED	NONE
TOTAL UNDERSTORY TREES REQUIRED	8 UNDERSTORY TREES REQUIRED
TOTAL UNDERSTORY TREES PROVIDED	8 UNDERSTORY TREES PROVIDED
TOTAL SHRUBS REQUIRED	27 SHRUBS REQUIRED
TOTAL SHRUBS PROVIDED	30 SHRUBS PROVIDED

PARKING LOT REQUIREMENTS

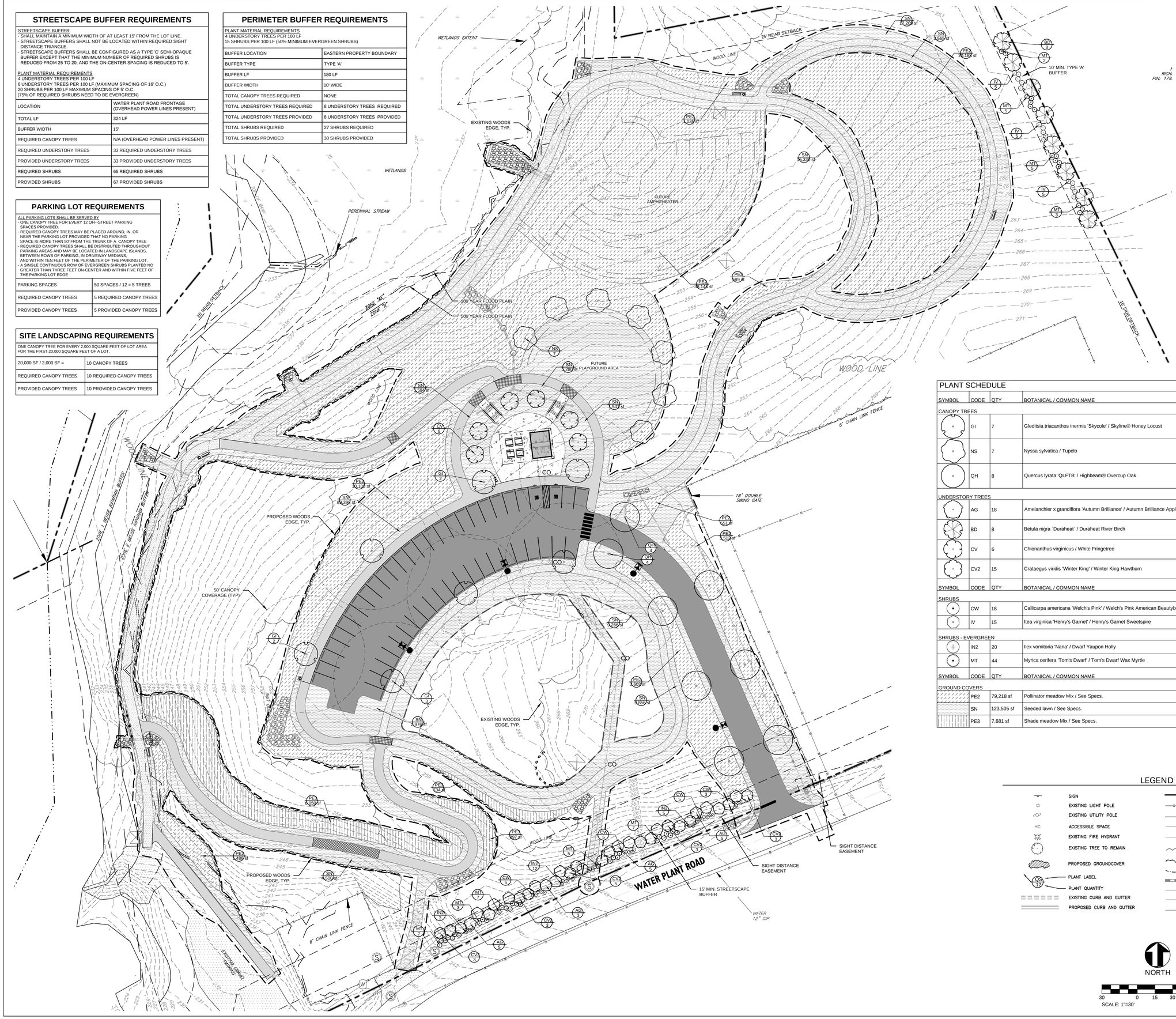
ALL PARKING LOTS SHALL BE SERVED BY
- ONE CANOPY TREE FOR EVERY 12 OFF-STREET PARKING SPACES PROVIDED.
- REQUIRED CANOPY TREES MAY BE PLACED AROUND, IN, OR NEAR THE PARKING LOT PROVIDED THAT NO PARKING SPACE IS MORE THAN 50' FROM THE TRUNK OF A CANOPY TREE
- REQUIRED CANOPY TREES SHALL BE DISTRIBUTED THROUGHOUT PARKING AREAS AND MAY BE LOCATED IN LANDSCAPE ISLANDS, BETWEEN ROWS OF PARKING, IN DRIVEWAY MEDIANS, AND WITHIN TEN FEET OF THE PERIMETER OF THE PARKING LOT.
- A SINGLE CONTINUOUS ROW OF EVERGREEN SHRUBS PLANTED NO GREATER THAN THREE FEET ON-CENTER AND WITHIN FIVE FEET OF THE PARKING LOT EDGE

PARKING SPACES	50 SPACES / 12 = 5 TREES
REQUIRED CANOPY TREES	5 REQUIRED CANOPY TREES
PROVIDED CANOPY TREES	5 PROVIDED CANOPY TREES

SITE LANDSCAPING REQUIREMENTS

ONE CANOPY TREE FOR EVERY 2,000 SQUARE FEET OF LOT AREA FOR THE FIRST 20,000 SQUARE FEET OF A LOT.

20,000 SF / 2,000 SF =	10 CANOPY TREES
REQUIRED CANOPY TREES	10 REQUIRED CANOPY TREES
PROVIDED CANOPY TREES	10 PROVIDED CANOPY TREES



PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	CAL.	REMARKS
CANOPY TREES						
	GI	7	Gleditsia triacanthos inermis 'Skycole' / Skyline® Honey Locust	B & B	2.5"Cal	
	NS	7	Nyssa sylvatica / Tupelo	B & B	2.5"Cal	
	QH	8	Quercus lyrata 'QLFTB' / Highbeam® Overcup Oak	B & B	2.5"Cal	
UNDERSTORY TREES						
	AG	18	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry	B & B	1.5" Cal. min.	
	BD	8	Betula nigra 'Duraheat' / Duraheat River Birch	B & B	1.5" Cal. min.	Single Stem
	CV	6	Chionanthus virginicus / White Fringetree	B & B	1.5" Cal. min.	
	CV2	15	Crataegus viridis 'Winter King' / Winter King Hawthorn	B & B	1.5" Cal. min.	
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS	HEIGHT
SHRUBS						
	CW	18	Callicarpa americana 'Welch's Pink' / Welch's Pink American Beautyberry	3 gal		18" MIN.
	IV	15	Itea virginica 'Henry's Garnet' / Henry's Garnet Sweetspire	3 gal		18" MIN.
SHRUBS - EVERGREEN						
	IN2	20	Ilex vomitoria 'Nana' / Dwarf Yaupon Holly	3 gal		18" MIN.
	MT	44	Myrica cerifera 'Tom's Dwarf' / Tom's Dwarf Wax Myrtle	3 gal		18" MIN.
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS	SPACING
GROUND COVERS						
	PE2	79,218 sf	Pollinator meadow Mix / See Specs.	seed		
	SN	123,505 sf	Seeded lawn / See Specs.	seed		
	PE3	7,681 sf	Shade meadow Mix / See Specs.	seed		

LEGEND

SIGN	PROPERTY LINE
EXISTING LIGHT POLE	EXISTING FENCE
EXISTING UTILITY POLE	PROPOSED FENCE
ACCESSIBLE SPACE	EXISTING UNDERGROUND ELECTRIC LINE
EXISTING FIRE HYDRANT	EXISTING OVERHEAD UTILITY LINE
EXISTING TREE TO REMAIN	EXISTING TREE LINE
PROPOSED GROUNDCOVER	PROPOSED TREE LINE AFTER CLEARING
PLANT LABEL	PROPOSED MULCH LINE
PLANT QUANTITY	PROPOSED STORM DRAINAGE PIPE
EXISTING CURB AND GUTTER	PROPOSED FOUNDATION DRAIN
PROPOSED CURB AND GUTTER	SANITARY SEWER LINE
	WATER LINE

NORTH

30 0 15 30 60
SCALE: 1"=30'

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Corp. NC License: F-1320

LITTLE RIVER PARK
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

Project No: 1725-500672.00
Date: 4.18.25
Revisions:

Sheet Title:
LANDSCAPE PLAN

Sheet No:
C601

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LIGHTING FIXTURE SCHEDULE

MARK	MANUF.	CATALOG NUMBER	LAMP DATA NO.	LAMP DATA TYPE	VOLTS	BALLAST DATA NO.	BALLAST DATA TYPE	INPUT WATTS	MOUNTING	DESCRIPTION
A	HE WILLIAMS	6DR-TL-L20/835-DIM-UNV-L-M-OF-WET/CC	-	LED	120/277	-	-	19	RECESSED	GENERAL - 6" WET LISTED RECESSED LED.

NOTES:
1. CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE).

LIGHTING SYSTEMS
ENERGY CONSERVATION CODE SECTION 405

THIS PROJECT IS CLASSIFIED AS - ☐ RESIDENTIAL ☒ COMMERCIAL (SEE BELOW)

LIGHTING POWER DENSITY CALCULATION COMPLIANCE

INTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.4.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

RESTROOM

INTERIOR WATTAGE SPECIFIED VS. ALLOWED 140 VS. 229

EXTERIOR LIGHTING POWER DENSITY CALCULATION PER TABLE 405.6.2. SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE INFORMATION.

TRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED 171 VS. 600
NONTRADABLE EXTERIOR WATTAGE SPECIFIED VS. ALLOWED NA VS. NA

DESIGNER STATEMENT:
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE LIGHTING SYSTEMS REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE, SECTION 505 AND ANY LOCAL AMENDMENTS THEREOF.

SIGNED:
NAME: JAMES HOFFMAN III
TITLE: ELECTRICAL ENGINEER

SECTION 406 COMPLIANCE - ☐ N/A ☐ 406.1.1 ☒ 406.1.2 ☐ 406.1.3 ☐ 406.1.4 ☐ 406.1.5 ☐ 406.1.6

ELECTRICAL SYMBOL LEGEND

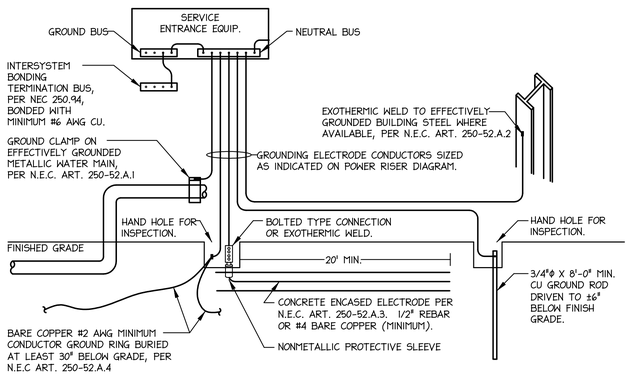
	CIRCUIT CONDUCTORS CONCEALED IN FLOOR, WALL OR CEILING.
	ARROWHEAD INDICATES HOMERUN TO PANEL NOTED.
S	SINGLE POLE SWITCH, 20A, 120/277 VOLT, 48" A.F.F. TO CENTER.
	DUPLEX RECEPTACLE, 15 AMP, 120 VOLT, 18" A.F.F. TO CENTER. FOR SINGLE RECEPTACLE ON A CIRCUIT, USE A 20A RECEPTACLE. "GFI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE. "WP" INDICATES WEATHERPROOF. "EWC" INDICATES MOUNT INSIDE ENCLOSURE OF ELECTRIC WATER COOLER.
	240/120V PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS.
	SURFACE, RECESSED OR GROUND MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR DETAILS.
	ELECTRIC UTILITY METER LOCATION.

ELECTRICAL ABBREVIATIONS

18"	DIMENSION INDICATES HEIGHT ABOVE FINISHED FLOOR AT WHICH CENTER OF DEVICE IS TO BE MOUNTED.
AFF	ABOVE FINISHED FLOOR.
AFG	ABOVE FINISHED GRADE.
EC	ELECTRICAL CONTRACTOR.
FPN	FUSE PER EQUIPMENT NAMEPLATE REQUIREMENTS.
GC	GENERAL CONTRACTOR.
MC	MECHANICAL CONTRACTOR.
PC	PLUMBING CONTRACTOR.
WP	INDICATES DEVICE TO HAVE WEATHERPROOF COVER.
UON	UNLESS OTHERWISE NOTED.

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES.
2. ALL MATERIAL, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
3. ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR. DRAWINGS ARE DIAGRAMMATIC ONLY AND INDICATE ONLY THE GENERAL ARRANGEMENT. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
4. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.
5. ELECTRICAL CONTRACTOR SHALL MAKE ALL ELECTRICAL POWER CONNECTIONS TO HVAC, PLUMBING AND OTHER EQUIPMENT AS REQUIRED.
6. A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
7. ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
8. CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID, UNLESS OTHERWISE NOTED. ALUMINUM CONDUCTORS AND MINIMUM SIZE OF #14 SHALL BE USED IN RESIDENTIAL UNITS. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE THHN OR THWN AS REQUIRED.
9. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. MINIMUM CONDUIT SIZE TO BE 1/2". TYPE NM, MC AND AC CABLE MAY BE USED WHERE PERMISSIBLE BY NEC. FLEXIBLE CONDUIT SHALL BE USED FOR CONNECTIONS TO VIBRATING EQUIPMENT AND LUMINAIRES, BUT SHALL NOT EXCEED 6' IN LENGTH.
10. PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
11. PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND.
12. FUSES 0 - 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.
13. ALL TERMINALS/LUGS SHALL BE 60/75° RATED. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL ('CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
14. VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START-UP. NOTIFY ENGINEER OF ANY CHANGES AS MAY BE REQUIRED.
15. E.C. TO VERIFY DEVICE PLATE COLOR AND MATERIAL WITH ARCHITECT PRIOR TO PURCHASE.
16. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.).
17. WHERE A HOME RUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT, DO NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN, THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS: A MAXIMUM OF THREE 20A BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN WITH SEPARATE NEUTRALS FOR A MAXIMUM TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATELY HOMERUN TO THE PANEL.
18. RECEPTACLES IN COMMERCIAL AREAS SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 5200/5300 SERIES; GROUND FAULT RECEPTACLES SHALL BE EQUAL TO HUBBELL GF-5362. LIGHTING SWITCHES SHALL BE SPECIFICATION GRADE EQUAL TO HUBBELL 1200 SERIES.
19. ALL EXTERIOR FIXTURES AND DEVICES SHALL BE RATED FOR OPERATION AT 0° F AND SHALL BE DAMP OR WET LABELED AS REQUIRED.
20. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL ELECTRICAL EQUIPMENT, DEVICES, ETC. IN ACCORDANCE WITH LOCAL SEISMIC CODE REQUIREMENTS. PROVIDE SEISMIC RESTRAINTS, ACCESSORIES AND INSTALLATION DETAIL AS REQUIRED.
21. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT AND MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.



1 **GROUNDING DETAIL**
NTS

GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC SECTION 250. ALL GROUNDING ELECTRODE CONDUCTORS SIZED AS INDICATED ON POWER RISER DIAGRAM. **ALL METHODS OF CREATING THE GROUNDING SYSTEM MAY NOT BE REQUIRED OR AVAILABLE.**

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tel 919.835.9781
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MECHANICAL ELECTRICAL PLUMBING

NORTH CAROLINA PROFESSIONAL SEAL 050734 ENGINEER JAMES L. HOFFMAN III
Apr 15, 2025

NORTH CAROLINA LIGHTHOUSE ENGINEERING,PA No. C-2714 CERTIFICATE OF AUTHORIZATION

LITTLE RIVER PARK
1800 WEST GANNON AVENUE
ZEBULON, NORTH CAROLINA

PROJECT NO: 1725-500672.00
DATE: 4/15/2025

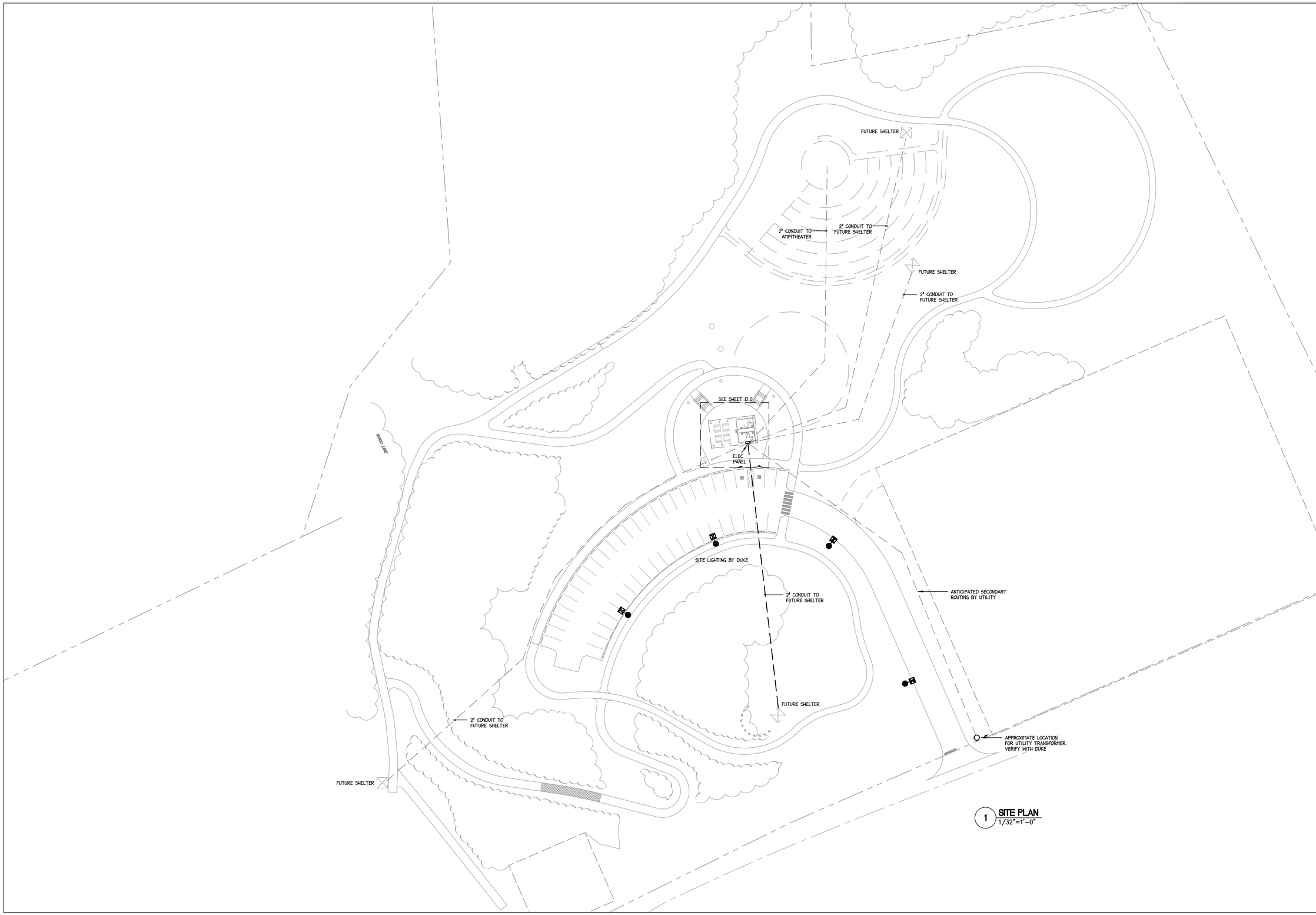
REVISION SCHEDULE

REV NO	REV DATE

ELECTRICAL
LEGEND AND NOTES

E0.1

ZM-2415-E0-1 - ELECTRICAL LEGEND AND NOTES.dwg
Apr 15, 2025-11:25am



1 SITE PLAN
1/32"=1'-0"

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MECHANICAL ELECTRICAL PLUMBING

NORTH CAROLINA PROFESSIONAL SEAL 050734 ENGINEER JAMES L. HOFFMAN III
Apr 15, 2025

NORTH CAROLINA LIGHTHOUSE ENGINEERING,PA No. C-2714 CERTIFICATE OF AUTHORIZATION

LITTLE RIVER PARK

1800 WEST GANNON AVENUE ZEBULON, NORTH CAROLINA

PROJECT NO:	1725-500672.00
DATE:	4/15/2025

REVISION SCHEDULE

REV NO	REV DATE

ELECTRICAL SITE PLAN

E0.2

ZM-2415-E0-2 - ELECTRICAL SITE PLAN.dwg
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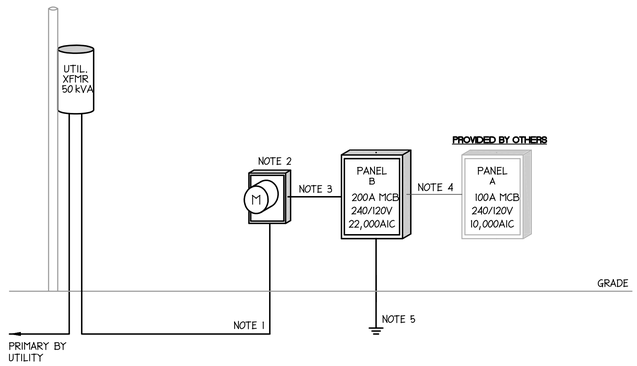


2 RESTROOM RISER DIAGRAM

DIAGRAMATIC ONLY

RISER DIAGRAM NOTES:

1. SERVICE LATERAL CONDUCTORS TO METER PROVIDED AND INSTALLED BY UTILITY. COORDINATE FOR TRENCHING AND CONDUIT REQUIREMENTS.
2. METER BASE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, TO UTILITY REQUIREMENTS. METER PROVIDED AND INSTALLED BY UTILITY. MOUNT METER AT THE MINIMUM HEIGHT ABOVE FINAL GRADE. COORDINATE REQUIREMENTS WITH UTILITY.
3. 3#250 KCM (AL), IN 2½" CONDUIT.
4. 3#3 (AL), IN 1" CONDUIT.
5. GROUNDING ELECTRODE CONDUCTOR SHALL BE #8 (CU) BONDED TO BUILDING STEEL (IF ANY), SLAB REINFORCING BARS (CONCRETE ENCASED ELECTRODE) AND DRIVEN GROUND ROD, SEE 1/E001.

PROVIDED BY OTHERS

VOLTAGE: 240/120V
AMPS: 100 - MCB

EXISTING
PANEL: A

1 PHASE 3 WIRE
SURFACE
NEMA 3R

- DESCRIPTION -	POLE	WIRE SIZE	BRK SIZE	CCT #	LOAD PER PHASE A	LOAD PER PHASE B	CCT #	BRK SIZE	WIRE SIZE	POLE	- DESCRIPTION -
RECEPTACLE	1	12	20	1	0.5/0.9		2	20	12	1	LIGHTS
SPACE	1	-	-	3		-/2.4	4	20	12	1	INSTA-HOT
SPACE	1	-	-	5	-/2.4		6	20	12	1	INSTA-HOT
SPACE	1	-	-	7		-/-	8	-	-	1	SPACE
SPACE	1	-	-	9	-/-		10	-	-	1	SPACE
SPACE	1	-	-	11		-/-	12	-	-	1	SPACE
SPACE	1	-	-	13	-/-		14	-	-	1	SPACE
SPACE	1	-	-	15		-/-	16	-	-	1	SPACE
SPACE	1	-	-	17	-/-		18	-	-	1	SPACE
SPACE	1	-	-	19		-/-	20	-	-	1	SPACE
SPACE	1	-	-	21	-/-		22	-	-	1	SPACE
SPACE	1	-	-	23		-/-	24	-	-	1	SPACE
SPACE	1	-	-	25	-/-		26	-	-	1	SPACE
SPACE	1	-	-	27		-/-	28	-	-	1	SPACE
SPACE	1	-	-	29	-/-		30	-	-	1	SPACE
SPACE	1	-	-	31		-/-	32	-	-	1	SPACE
SPACE	1	-	-	33	-/-		34	-	-	1	SPACE
SPACE	1	-	-	35		-/-	36	-	-	1	SPACE
SPACE	1	-	-	37	-/-		38	-	-	1	SPACE
SPACE	1	-	-	39		-/-	40	-	-	1	SPACE
SPACE	1	-	-	41	-/-		42	-	-	1	SPACE
					3.8	2.4					

TOTAL CONNECTED kVA: 6.2 — DEMAND kVA: 6.4
PANEL RMS SYM. AMPS: SEE RISER — DEMAND AMPS: 27

PANEL "A" LOAD SUMMARY

LOAD TYPE		KVA CONN	DEM FACT	KVA DEM
LOADS ON 100AMP MCB				
LIGHTS		0.9	1.25	1.1
RECEPTACLES	1ST 10kVA	0.5	1.0	0.5
	REMAINDER	-	0.5	-
WATER HEATER		4.8	1.0	4.8
TOTALS		6.2		6.4
TOTAL AMPS @ 240V 1Φ	26.7			

VOLTAGE: 240/120V
AMPS: 200 - MCB

NEW
PANEL: B

1 PHASE 3 WIRE
SURFACE MOUNTED
NEMA 3R

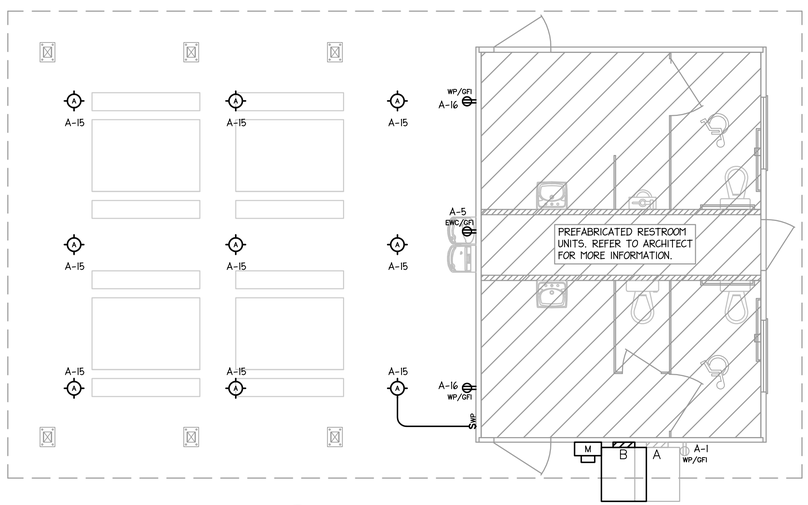
	- DESCRIPTION -	POLE	WIRE SIZE	BRK SIZE	CCT #	LOAD PER PHASE A	LOAD PER PHASE B	CCT #	BRK SIZE	WIRE SIZE	POLE	- DESCRIPTION -	
ATC	SITE LIGHTING	1	12	20	1	0.3/0.1		2	20	12	1	EXT. LIGHTING	ATC
GFI	EQ: EWC	1	12	20	3		0.8/0.4	4	20	12	1	EXT. RECEPTACLE	GFI
	LTS: FUTURE SHELTER	2	12	20	5	0.1/0.1		6	20	12	2	LTS: FUTURE SHELTER	
	REC: FUTURE SHELTER				7		0.2/0.2	8				REC: FUTURE SHELTER	
	LTS: FUTURE SHELTER	2	12	20	9	0.1/0.1		10	20	12	2	LTS: FUTURE SHELTER	
	REC: FUTURE SHELTER				11		0.2/0.2	12				REC: FUTURE SHELTER	
	SPARE	1	-	20	13	-/-		14	20	-	1	SPARE	
	SPARE	1	-	20	15		-/-	16	20	-	1	SPARE	
	SPARE	1	-	20	17	-/-		18	20	-	1	SPARE	
	SPARE	1	-	20	19		-/-	20	20	-	1	SPARE	
	SPACE	1	-	-	21	-/-		22	-	-	1	SPACE	
	SPACE	1	-	-	23		-/-	24	-	-	1	SPACE	
	SPACE	1	-	-	25	-/-		26	-	-	1	SPACE	
	SPACE	1	-	-	27		-/-	28	-	-	1	SPACE	
	SPACE	1	-	-	29	-/-		30	-	-	1	SPACE	
	SPACE	1	-	-	31		-/-	32	-	-	1	SPACE	
	SPACE	1	-	-	33	-/-		34	-	-	1	SPACE	
	SPACE	1	-	-	35		-/-	36	-	-	1	SPACE	
	SPACE	1	-	-	37	-/-		38	-	-	1	SPACE	
	SPACE	1	-	-	39		-/2.4	40	100	*	2	PANEL A	
	SPACE	1	-	-	41	-/3.8		42					
						4.6	4.4						

TOTAL CONNECTED kVA: 9.0 — DEMAND kVA: 9.4
PANEL RMS SYM. AMPS: SEE RISER — DEMAND AMPS: 39

1. PANEL SHALL BE SERVICE ENTRANCE RATED, EQUAL TO SIEMENS PI PANELBOARD..
2. ATC - CIRCUIT THROUGH 24-HR, 7-DAY, MULTI-POLE ASTRONOMICAL TIMECLOCK. LOCATE TIMECLOCK ADJACENT TO PANEL.
3. GFI - PROVIDE GFCI BREAKER FOR CIRCUIT. GFCI RECEPTACLES MAY BE USED IN LIEU OF GFCI BREAKERS SO LONG AS THE DEVICE(S) CONFORM TO NEC CODE REQUIREMENTS FOR GFCI PROTECTION.

PANEL "B" LOAD SUMMARY

LOAD TYPE		KVA CONN	DEM FACT	KVA DEM
LOADS ON 200AMP MCB				
LIGHTS		1.7	1.25	2.1
RECEPTACLES	1ST 10kVA	1.7	1.0	1.7
	REMAINDER	-	0.5	-
WATER HEATER		4.8	1.0	4.8
EQUIPMENT		0.8	1.0	0.8
TOTALS		9.0		9.4
TOTAL AMPS @ 240V 1Φ	39.2			



1 RESTROOM FLOOR PLAN

1/4"=1'-0"

GENERAL NOTES: (THIS SHEET)

1. FAINT ITEMS ARE PROVIDED BY OTHERS.

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MECHANICAL ELECTRICAL PLUMBING

NORTH CAROLINA PROFESSIONAL SEAL 050734 ENGINEER WESLEY HOFFMAN III APR 15, 2025

NORTH CAROLINA LIGHTHOUSE ENGINEERING,PA No. C-2714 CERTIFICATE OF AUTHORIZATION

LITTLE RIVER PARK
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ZEBULON, NORTH CAROLINA

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ELECTRICAL
FLOOR PLAN AND RISER

E1.0

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Apr 15, 2025-11:24am