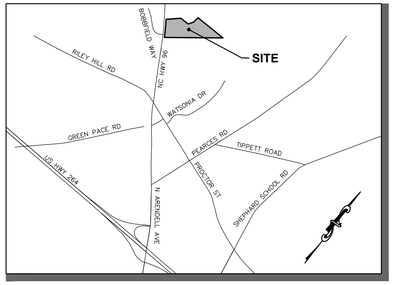
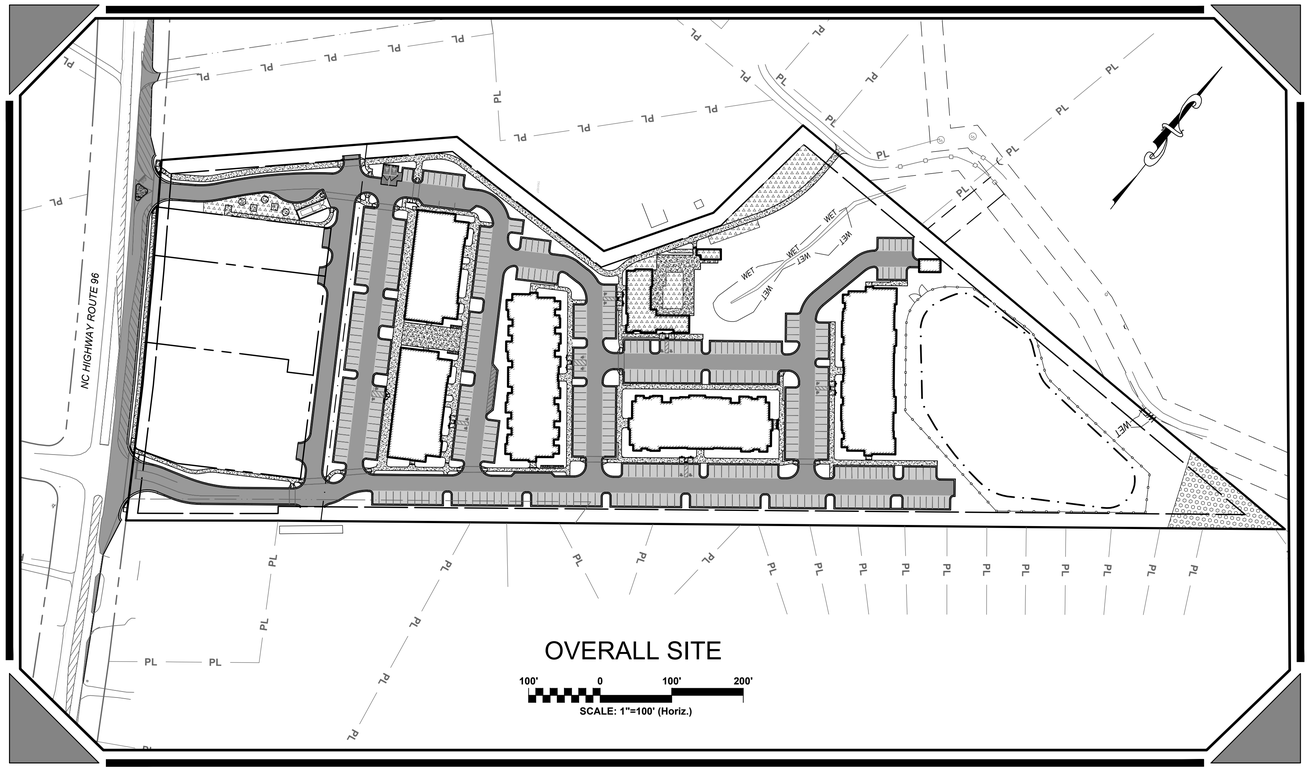
VICINITY MAP **N.T.S.**



GATEWAY ZEBULON MIXED-USE

CONSTRUCTION DRAWINGS

Sheet List Table		ORIGINAL ISSUE DATE	REVISION DATE	REVISION NUMBER
Sheet Number	Sheet Title			
C1.0	COVER SHEET	10/22/2025	02/12/2026	B
C1.1	NOTES & LEGEND	10/22/2025	02/12/2026	B
C1.2	NCDEQ NOTES	10/22/2025	02/12/2026	B
C2.0	SURVEY	10/22/2025	02/12/2026	B
C2.1	SURVEY	10/22/2025	02/12/2026	B
C2.2	EXISTING CONDITIONS AND DEMOLITION PLAN	10/22/2025	02/12/2026	B
C3.0	SITE PLAN - OVERALL	10/22/2025	02/12/2026	B
C3.1	SITE PLAN - ENLARGED	10/22/2025	02/12/2026	B
C3.2	SITE PLAN - ENLARGED	10/22/2025	02/12/2026	B
C4.0	EROSION CONTROL STAGE 1 - OVERALL	10/22/2025	02/12/2026	B
C4.1	EROSION CONTROL STAGE 1 - ENLARGED	10/22/2025	02/12/2026	B
C4.2	EROSION CONTROL STAGE 1 - ENLARGED	10/22/2025	02/12/2026	B
C5.0	EROSION CONTROL STAGE 2 - OVERALL	10/22/2025	02/12/2026	B
C5.1	EROSION CONTROL STAGE 2 - ENLARGED	10/22/2025	02/12/2026	B
C5.2	EROSION CONTROL STAGE 2 - ENLARGED	10/22/2025	02/12/2026	B
C7.0	GRADING PLAN - OVERALL	10/22/2025	02/12/2026	B
C7.1	GRADING PLAN - ENLARGED	10/22/2025	02/12/2026	B
C7.2	GRADING PLAN - ENLARGED	10/22/2025	02/12/2026	B
C8.0	UTILITY PLAN - OVERALL	10/22/2025	02/12/2026	B
C8.1	UTILITY PLAN - ENLARGED	10/22/2025	02/12/2026	B
C8.2	UTILITY PLAN - ENLARGED	10/22/2025	02/12/2026	B
C8.3	WATER PLAN AND PROFILE - SOUTH TIE IN & MU	10/22/2025	02/12/2026	B
C8.4	WATER PLAN AND PROFILE - NORTH TIE IN & OP	10/22/2025	02/12/2026	B
C8.5	WATER PLAN AND PROFILE - AC	10/22/2025	02/12/2026	B
C8.6	WATER PLAN AND PROFILE - D	10/22/2025	02/12/2026	B
C8.7	SEWER PLAN AND PROFILE - SSMH 1-8	10/22/2025	02/12/2026	B
C8.8	SEWER PLAN AND PROFILE - SSMH 8-16	10/22/2025	02/12/2026	B
C8.9	SEWER PLAN AND PROFILE - SSMH 6-7 & 17-14	10/22/2025	02/12/2026	B
C8.10	SEWER PLAN AND PROFILE - SSMH 11 - 9	10/22/2025	02/12/2026	B
C8.11	STORM STRUCTURE TABLE	10/22/2025	02/12/2026	B
C8.12	STORM PIPE TABLE	10/22/2025	02/12/2026	B
C8.13	DRAINAGE AREA PLAN	10/22/2025	02/12/2026	B
C8.14	HYDRANT PLAN	12/23/2025	02/12/2026	B
C9.0	ROADWAY IMPROVEMENT PLAN	10/22/2025	02/12/2026	B
C9.1	ROAD IMPROVEMENT GRADING PLAN	10/22/2025	02/12/2026	B
C9.2	ROADWAY PLAN - ENLARGED	02/12/2026		B
C9.3	SIGHT DISTANCE PLAN AND PROFILE	10/22/2025	02/12/2026	B
C9.4	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.5	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.6	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.7	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.8	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.9	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.10	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.11	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.12	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.13	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.14	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C9.15	HWY 96 CROSS SECTIONS	10/22/2025	02/12/2026	B
C10.0	LANDSCAPE PLAN - OVERALL	12/23/2025	02/12/2026	B
C10.1	LANDSCAPE PLAN - ENLARGED	10/22/2025	02/12/2026	B
C10.2	LANDSCAPE PLAN - ENLARGED	10/22/2025	02/12/2026	B
C10.3	BUFFER EXHIBIT	10/22/2025	02/12/2026	B
C10.4	LANDSCAPE DETAILS	10/22/2025	02/12/2026	B
C11.1	ZEBULON DETAILS	10/22/2025	02/12/2026	B
C11.2	ZEBULON DETAILS	10/22/2025	02/12/2026	B
C11.3	ZEBULON DETAILS	10/22/2025	02/12/2026	B
C11.4	ZEBULON DETAILS	10/22/2025	02/12/2026	B
C12.0	EROSION CONTROL DETAILS	10/22/2025	02/12/2026	B
C12.1	EROSION CONTROL DETAILS	10/22/2025	02/12/2026	B
C12.2	EROSION CONTROL DETAILS	10/22/2025	02/12/2026	B
C13.1	DRAINAGE DETAILS	10/22/2025	02/12/2026	B
C14.1	UTILITY DETAILS	10/22/2025	02/12/2026	B
C14.2	UTILITY DETAILS	10/22/2025	02/12/2026	B
C15.1	ROADWAY DETAILS	02/12/2026		B
C15.2	ROADWAY DETAILS	02/12/2026		B
C16.0	STORMWATER CONTROL MEASURE DETAILS	10/22/2025	02/12/2026	B



RALEIGH WATER INSPECTIONS QUANTITIES (SUBDIVISIONS AND SITE PLANS)			
Phase Number(s)	PHASE 1	PHASE 2	PHASE 3
Number of Lot (s)	10		
Number of Units	216		
Public Water (LF)	31		
Public Sewer (LF)	127		
Public Force Main (LF)	0		
Private Sewer* (LF)	2,169		
Water Service Stubs (Quantity)	2		
Sewer Service Stubs (Quantity)	0		
Average Daily Flow per phase**	31,775		
COMMERCIAL PROJECTS WITH SINGLE WATER AND SEWER SERVICE			
Fire Service (Size)	4"		
Domestic Meter Size	3"		
Irrigation Meter Size	3/4"		
Average Daily Flow per phase**	31,775		

*Sewer mains and manholes as part of a collection system
**Entire Project Flow. Based on 75gpd per bedroom for residential (Apartments, single Family dwelling, townhouse, condos), or based on 15A NCAC 02T .0114 Wastewater Design Flow Rates for Commercial and Industrial.
The meter size must match domestic service size (Exemption - 3/4" service tap with 5/8" meter)

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL WAKE COUNTY PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

SITE IMPERVIOUS CHART		
LAND COVER	EXISTING	PROPOSED
ROADS & PARKING	N/A	**4.82 AC.**
BUILDINGS/ROOFS	**0.36 AC.**	**1.82 AC.**
SIDEWALK/CONCRETE	**N/A**	**1.30 AC.**

JAN2025M

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Raleigh Water Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors and schedule a Pre-construction meeting prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require re-installation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of Raleigh Water Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT
APPROVED
EROSION CONTROL ☐ S-_____
STORMWATER MGMT. ☐ S-_____
FLOOD STUDY ☐ S-_____
DATE_____
WAKE COUNTY GOVERNMENT
ENVIRONMENTAL CONSULTANT SIGNATURE

SITE STATISTICS

TAX MAP & PARCEL #:	1796748489, 1796854029, 1796845839
PROJECT AREA:	14.546 ACRES
EXISTING ZONING:	PD (REZONING # 1556960, APPROVED MAY 6, 2025)
EXISTING LAND USE:	SINGLE-FAMILY RESIDENTIAL, UNDEVELOPED
PROPOSED LAND USE:	MIXED USE (COMMERCIAL, MIXED-USE, MULTI-FAMILY RESIDENTIAL)

DIMENSIONAL STANDARDS

MAXIMUM NUMBER OF DWELLING UNITS:	250 UNITS
MAXIMUM COMMERCIAL / NON-RESIDENTIAL:	25,000 SF
MINIMUM BUILDING SEPARATION:	10'

SITE SETBACKS

FRONT SETBACK:	25 FEET
SIDE INTERIOR SETBACK:	10 FEET (ABUTTING RESIDENTIAL: 15 FEET)
SIDE STREET SETBACK:	20 FEET
REAR SETBACK:	30 FEET

STRUCTURES

MAXIMUM BUILDING HEIGHT:	60 FEET
MAXIMUM BUILDING STORIES:	4 STORIES
MAXIMUM BUILDING LENGTH:	250 FEET

BUFFERS:

STREETSCAPE BUFFER:	15 FEET WIDE ALONG ZEBULON ROAD/NC HWY 96 TYPE C BUFFER W/ SHRUBS PER UDO SECTION 5.6.12. E
PERIMETER BUFFERS*:	10' TYPE A SEPARATION BUFFER AGAINST ADJACENT HC ZONING 20' TYPE B INTERMITTENT BUFFER AGAINST ADJACENT R-2 & R-13 SUD ZONING

*EXISTING TREES AND SHRUBS WILL BE UTILIZED TO MEET BUFFER LANDSCAPE REQUIREMENTS WHERE EXISTING MATERIAL MEETS BUFFER OBJECTIVES.

OWNERS

NAME: LONNIE P. STANCIL, JR.
ADDRESS: 1938 ZEBULON RD.
ZEBULON, NC 27597-8146

NAME: MARTHA B. STANCIL
ADDRESS: 1938 ZEBULON RD.
ZEBULON, NC 27597-8146

DEVELOPER

NAME: SPECTRUM INVESTMENT SOLUTIONS, LLC
ADDRESS: 2500 STONINGTON DRIVE
APEX, NC 27523
CONTACT: SCOTT HUFFMAN
PHONE #: (919) 422-5837
EMAIL: scott@greystonehomesnc.co

CIVIL ENGINEER

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588, Fax: (704) 841-2567
NC License# F-1222
www.mckimcreed.com

Know what's below. Call before you dig.

ZEBULON, NORTH CAROLINA
FEBRUARY 2026

REVIEW DRAWINGS
NOT FOR CONSTRUCTION
02/12/2026

REV NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

GATEWAY ZEBULON MIXED-USE
09572-0002
ZEBULON, NORTH CAROLINA

EROSION CONTROL GENERAL NOTES:

1. HYDROSEED WITH GRASS SEED ON ALL DISTURBED AREAS. SEE SEEDING SCHEDULE FOR SPECIFIC GRASS SEED TYPE. SEEDING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER SEEDBED PREPARATION. HYDROSEED MIXTURE SHALL CONTAIN CELLULOSE MULCH APPLIED AT A RATE OF 2,000 LBS./ACRE, WITH A MAXIMUM OF 50 LBS./100 GAL. OF WATER. IF SEEDING IS DELAYED AFTER MIXING 1/2-2 HOURS ADD AN ADDITIONAL 50% OF SEED MIX, IF DELAY IS LONGER THAN 2 HOURS, BEGIN WITH NEW MIXTURE. ALL SLOPES 2:1 OR GREATER SHALL BE COVERED WITH "CURLEX" BLANKETS. SEE SPECIFICATIONS FOR SEED ESTABLISHMENT REQUIREMENTS.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED ACCORDING TO THE NPDES GROUNDCOVER STABILIZATION TIMEFRAME TABLE PROVIDED ON SHEET C1.2.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAIN EVENT AND AT LEAST ONCE PER WEEK. IF REPAIRS ARE NECESSARY, DEVICES SHOULD BE REBUILT TO MEET PLAN, DETAIL AND SPECIFICATION REQUIREMENTS.
4. ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY NEED TO BE INSTALLED IF DEEMED NECESSARY BY EITHER ENGINEER OR WATERSHED MANAGER.
5. TEMPORARY SEDIMENT CONTROL MEASURES (SILT FENCE, CONSTRUCTION ENTRANCE, ETC..) SHALL BE MAINTAINED UNTIL ALL CONTRIBUTING AREAS ARE GRADED AND STABILIZED.
6. DUST CONTROL ON SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS STRICTLY PROHIBITED.
7. IF THE MAJORITY OF MUD OR DIRT IS NOT REMOVED FROM CONSTRUCTION TRAFFIC, CONTRACTOR SHALL CONSTRUCT VEHICLE WASH AREAS AT CONSTRUCTION TRAFFIC EXIT POINTS. MUD AND DIRT SHALL BE INTERCEPTED AND TRAPPED BEFORE WASH WATER IS ALLOWED TO BE DISCHARGED OFFSITE. RINSE-OFF WILL NOT BE ALLOWED OUTSIDE THE PROJECT CONSTRUCTION LIMITS.
8. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT REACHES 4-INCHES DEEP.
9. EROSION AND SEDIMENTATION CONTROL MEASURES, STRUCTURES, AND DEVICES SHALL BE SO PLANNED, DESIGNED, AND CONSTRUCTED AS TO PROVIDE PROTECTION FROM THE CALCULATED MAXIMUM PEAK RATE OF RUN-OFF FROM THE 10-YEAR STORM. RUNOFF RATES SHALL BE CALCULATED USING THE PROCEDURES AS OUTLINES IN THE WAKE COUNTY SEDIMENTATION AND EROSION CONTROL ORDINANCE.

SOIL STOCKPILE MAINTENANCE REQUIREMENTS:

1. SEEDING OR COVERING OF 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 UNDER 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 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).
5. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET TALL.
6. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.

SELF INSPECTION NOTICE:

NOTIFICATION OF LAND RESOURCES SEDIMENT AND EROSION CONTROL SELF-INSPECTION PROGRAM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH STAGE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS MUST BE CONDUCTED AFTER EACH STAGE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH NCGS 113A-54.1 AND 15A NCAC 4B.0131. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM HTTP://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/ EROSION-SEDIMENT-CONTROL/FORMS IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THIS OFFICE AT (919) 791-4200.

REQUIRED WAKE COUNTY CONSTRUCTION SEQUENCE:

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND-DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL 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, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES 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 COMPETE AND ALL AREAS ARE STABILIZED, 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 CONTROLS 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.
10. SEE SHEETS C4.0 AND C5.0 FOR FURTHER CONSTRUCTION SEQUENCING INFORMATION FOR EACH STAGE OF CONSTRUCTION.

LIMITS OF DISTURBANCE NOTES:

1. LIMITS OF DISTURBANCE LINES ARE CLEARING LIMIT LINES WHICH WILL BE FLAGGED FOR A MINIMUM OF ONE PER 50-FT OR CLOSER DEPENDING ON VISIBILITY.
2. SILT FENCE AND TREE PROTECTION FENCE LINES ALSO DELINEATE THE LIMITS OF DISTURBANCE. ALL SILT FENCING OR TREE PROTECTION FENCING SHALL BE INSTALLED INSIDE LIMITS OF DISTURBANCE.
3. TOTAL DISTURBED AREA: **16.0 ACRES**

TOWN OF ZEBULON UTILITY NOTE:

- ALL WATER AND SEWER UTILITY WORK WILL BE IN ACCORDANCE TO THE CITY OF RALEIGH HANDBOOK OR SPECIAL CONSTRUCTION DETAILS PROVIDED BY ENGINEER OF RECORD.

STANDARD UTILITY NOTES (FOR CITY OF RALEIGH AND MERGER TOWNS)

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
   A) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
   B) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
   C) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
   D) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
   E) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORMDRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W- 41 & S-49).
   F) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. SEWER BYPASS PUMPING – A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
8. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
9. INSTALL WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
10. INSPECTIONS OF 4" AND LARGER WATER MAINS OF THE PRIVATE DISTRIBUTION SYSTEM WILL BE INSPECTED AS PART OF THE INFRASTRUCTURE PERMIT.
11. PRIVATE SEWER MAINS AS PART OF A COLLECTION SYSTEM ARE PERMITTED AND INSPECTED UNDER THE PRIVATE INFRASTRUCTURE PERMIT FOR SEWER.
12. ANY WATER OR SEWER SERVICES ON PRIVATE PROPERTY THAT WILL BE INSTALLED UNDER CONSTRUCTION DRAWINGS MAY REQUIRE A PLUMBING UTILITY PERMIT IN THE CITY OF RALEIGH. CONSULT WITH THE ENGINEERING INSPECTION COORDINATOR DURING THE PRE-CONSTRUCTION MEETING ON THE NECESSARY PERMITS.
13. INSTALL SEWER SERVICES WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED PER THE CURRENT NC PLUMBING CODE.
14. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
15. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
16. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
17. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
18. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
19. THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
20. THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A – GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
21. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH, INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
22. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN $250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.
23. PRIVATE SUB-METERING - NO RESALE OF WATER SHALL OCCUR WITHOUT APPROVAL OF THE NORTH CAROLINA UTILITY COMMISSION. SUB-METERING SHALL BE IN ACCORDANCE WITH SECTION 1400 OF THE "SAFE DRINKING WATER ACT".

GENERAL NOTES:

1. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
2. CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL AT 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL".
3. OVERHEAD ELECTRIC LINES MAY EXIST ON THE SITE. CONTRACTOR SHALL CONTACT DUKE ENERGY AT (919) 329-5928 PRIOR TO COMMENCING ANY ACTIVITY WITHIN DUKE ENERGY RIGHT OF WAY OR EASEMENTS.
4. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON BEST AVAILABLE RECORD DRAWINGS.
5. SOIL UNDER PROPOSED BUILDINGS, PAVED AREAS AND WITHIN SLOPES GREATER THAN 3:1 (H:V) SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THESE SOILS SHALL BE COMPACTED TO THE STANDARD PROCTOR MAXIMUM DRY DENSITY UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
6. ALL GRADED AREAS SHALL BE SLOPED SUCH THAT NO AREAS OF STANDING WATER OCCUR AND ALL AREAS POSITIVELY DRAIN TO DRAINAGE STRUCTURES, SWALES OR STORMWATER MANAGEMENT FACILITIES.
7. GRADED SLOPES STEEPER THAN 3:1 OR GREATER THAN 10' IN HEIGHT SHALL BE STABILIZED WITH CURLEX SINGLE NET (CURLEX I) MATTING BY AMERICAN EXCELSIOR COMPANY OR APPROVED EQUAL.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS AND SHALL REPLACE ALL MARKERS REMOVED IF DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR IS RESPONSIBLE FOR DEWATERING AS NECESSARY THROUGHOUT CONSTRUCTION.
10. CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL PERMIT CONDITIONS, MONITORING AND REPORTING REQUIREMENTS.

TOWN OF ZEBULON CURB AND GUTTER NOTES:

- ALL CURB AND GUTTER SHALL BE CONSTRUCTED ACCORDING TO STANDARD DETAILS OF THE TOWN OF ZEBULON STREET AND STORM DRAINAGE STANDARDS & SPECIFICATIONS MANUAL. ALLOWABLE SECTIONS SHALL BE THE STANDARD 30" CURB AND GUTTER (PREFERRED) AND THE 30" VALLEY GUTTER TYPE. CONCRETE VALLEY GUTTER TYPE IS ALLOWED ONLY ON LOCAL AND CUL-DE-SAC STREETS.
- ALL CURB AND GUTTER REQUIRES CONCRETE TESTING FOR THE FOLLOWING REQUIREMENTS:
  - a. 4" CONCRETE SLUMP
  - b. TEMPERATURE: 50° AND 90°F
  - c. AIR MIXTURE RANGE: 3.5% TO 6.5%
  - d. STRUCTURAL STRENGTH -- LAB BREAK TEST -- 7, 14, 28 DAYS -- 3000 PSI AT 28 DAYS
  - e. SAMPLES EVERY 1000 LF OF CURB AND GUTTER TO ENSURE QUALITY.
  - f. MAXIMUM WATER-CEMENT RATIO BY WEIGHT: 0.594
  - g. MINIMUM CEMENT CONTENT (LBS/CY): 602
- CONCRETE SIDEWALK TESTING IS NOT REQUIRED, UNLESS CONSTRUCTION INSPECTION DETERMINES THAT QUALITY IS INFERIOR AND DOES NOT MEET INDUSTRY STANDARDS. CONTRACTOR MUST MAINTAIN A 4" CONCRETE SLUMP FOR ALL SIDEWALK WORK. AIR TEMPERATURES AT PLACEMENT MUST BE 40º AND RISING. SURFACE TEMPERATURE SHALL BE 50º OR GREATER.

TOWN OF ZEBULON ROADWAY NOTES:

DEFINITIONS:

- ROADWAY SUB-GRADE: THE BASE SOIL ELEVATION DETERMINED BY APPROVED ENGINEERED DRAWINGS PRIOR TO PLACEMENT OF ROADWAY ABC AND ASPHALT.
- ROADWAY STONE GRADE: THE APPROVED COMPACTED ROADWAY SUB-GRADE PLUS THE COMPACTED STONE GRADE PRIOR TO PLACEMENT OF ASPHALT.
- •• IN ALL CASES, THE ROADWAY SUB-GRADE MUST PASS A PROOF-ROLL TEST BEFORE PLACEMENT OF STONE. THE DEVELOPER/OWNER/CONTRACTOR SHOULD PROVIDE THIRD PARTY NCDOT CERTIFIED GEOTECHNICAL FIRM TO PERFORM DENSITY TESTING OF SUB-GRADE EVERY 300 FEET AND ROADWAY ABC EVERY 150 FEET VIA A NUCLEAR GAUGE. THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR WILL SELECT VARIOUS LOCATIONS OF THE DENSITY TESTING. IT IS RECOMMENDED THAT TESTING BE PERFORMED AT FILL LOCATIONS OR UTILITY CUTS. A TOWN OF ZEBULON CONSTRUCTION INSPECTOR MUST BE PRESENT DURING ALL TESTING. ALL TEST RESULTS SHALL BE SUBMITTED TO AND APPROVED BY THE TOWN OF ZEBULON PUBLIC WORKS DIRECTOR BEFORE ROADWAY STONE IS INSTALLED.
- •• ON ROADWAYS DESIGNED FOR LOCAL, DUL-DE-SACS, AND RESIDENTIAL COLLECTORS AREAS MUST MEET ALL THE FOLLOWING REQUIREMENTS:
  - a. PROOF ROLL STANDARD- A FULLY LOADED TANDEM DUMP TRUCK/MOTOR GRADER A MINIMUM GROSS WEIGHT OF AT LEAST 40,000 POUNDS (20 TONS) UNDER THE OBSERVATION OF THE TOWN OF ZEBULON REPRESENTATIVE. NO OTHER METHOD WILL BE ACCEPTED. ALL AREAS OF THE ROADWAY SUB-GRADE OR ROADWAY STONE SHALL BE COVERED BY THE WHEELS OF THE PROOF-ROLLER OPERATING AT WALKING SPEED (TWO TO THREE MILES PER HOUR) OR 225 TO 300 FEET PER MINUTE.
  - b. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL STRUCTURAL FACILITIES ON THE PROJECT SUCH AS BRIDGES, BOX CULVERTS, PIPE CULVERTS. AND UTILITIES FROM DAMAGE FROM PROOF ROLLING EQUIPMENT.
  - c. PROOF ROLLS ARE REQUIRED AT THE ROADWAY SUB-GRADE CONSTRUCTION PHASE AND ROADWAY STONE CONSTRUCTION PHASE.
  - d. ANY AND ALL AREAS, WHICH RUT OR PUMP EXCESSIVELY UNDER THE WHEELS OF THE PROOF-ROLLER SHALL BE REPAIRED BY THE DEVELOPER/CONTRACTOR BEFORE ROADWAY STONE OR ASPHALT IS INSTALLED.
  - e. PROOF ROLL AREAS AGAIN FOLLOWING THE COMPLETION OF THE NECESSARY CORRECTIONS. ALL COST ASSOCIATED WITH THE PROOF ROLLING PROCESS IS THE RESPONSIBILITY OF DEVELOPER/OWNER OR CONTRACTOR.
- THE TOWN SHALL NOT BE RESPONSIBLE FOR ENSURING PROPER GRADES AND ALIGNMENT OF ROADWAY AND CURB AND GUTTER. IF THE ALIGNMENT AND GRADES ARE INCORRECT, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER TO MAKE CORRECTIVE REPAIRS AT THEIR OWN EXPENSE.

ROADWAY SUBGRADE TESTING/INSTALLATION REQUIREMENTS

A. REQUIREMENTS: 98% STANDARD PROCTOR ON ALL SOILS EVERY 300'. ALL LOCATIONS TESTED SHALL MEET THE TESTING REQUIREMENTS. AVERAGING OF DENSITY SCORES TO MEET STANDARD IS NOT ALLOWED.
SUCCESSFUL PROOF-ROLLS REQUIRED FOR ALL SUB-GRADE SOILS.

B. FAILURE OF PROOF ROLL TEST OR DENSITY TEST AT ROADWAY SUB-GRADE:

ALL ROADWAY SUB-GRADE MUST PASS A PROOF-ROLL TEST (NO EXCEPTIONS).

ROADWAY SUB GRADE THAT DOES NOT PASS THE PROOF ROLL TEST OR DENSITY TEST WLL REQUIRE REMEDIAL REPAIRS. REPAIR RECOMMENDATIONS FROM GEO-TECHNICAL FIRM CAN BE MADE BY USING SEVERAL METHODS INCLUDING THE USE OF GEO-GRID/STABILIZATON FABRIC AND ADDITIONAL ABC STONE, CEMENT STABILIZATION. LIME STABILIZATION OR REPLACEMENT OF UNSUITABLE SOILS WITH DRIER/MORE SUITABLE SOILS. REGARDLESS OF THE METHOD CHOSEN BY THE CONTRACTOR, GEOTECHNICAL FIRM, DEVELOPER OR OWNER FOR REMEDIAL REPAIRS: A SUCCESSFUL PROOF-ROLL MUST BE OBTAINED PRIOR TO PLACEMENT OF ABC STONE CAN BEGIN.

C. SUCCESSFUL PROOF ROAD TEST AT ROADWAY SUB-GRADE:

IF REPAIRS WERE MADE TO THE ROADWAY SUB-GRADE INVOLVE USING GEO-GRID/STABILIZATION FABRIC AND ADDITIONAL STONE; NO DENSITY ADDITIONAL TESTING IS REQUIRED. IF REPAIRS TO THE ROADWAY SUB GRADE INVOLVE UNDERCUTTING UNSUITABLE SOILS AND REPLACEMENT WITH OTHER MORE SUITABLE SOILS THEN DENSITY TESTINGS REQUIRED TO VERIFY COMPLIANCE OF 98% COMPACTION REQUIREMENT. THE CONTRACTOR/GEO-TECHNICAL FIRM MUST PROVIDE THE TOWN OF ZEBULON INSPECTOR WTH DENSITY TEST RESULTS PRIOR TO PLACEMENT OF ABC STONE WERE REQUIRED. ALL COST OF DENSITY TESTING SHALL BE BY THE DEVELOPER OR OWNER.

NOTE: IF THE ROADWAY SUB-GRADE IS EXPOSED TO PRECIPITATION (RAIN, SNOW, ICE, ETC.) GREATER THAN A 1/10 OF INCH BEFORE IT IS COVERED WITH ABC STONE. THE EXPOSED SUB-GRADE MUST PASS AN ADDITIONAL PROOF-ROLL ADDITIONAL DENSITY TESTING IS NOT REQUIRED UNDER THESE CONDITIONS.

ROADWAY ABC STONE TESTING/INSTALLATION REQUIREMENTS

A. REQUIREMENTS: 98% STANDARD PROCTOR ON ALL ROADWAY ABC EVERY 150'. ALL LOCATIONS TESTED SHALL MEET THE 98% TESTING REQUIREMENTS. AVERAGING OF DENSITY SCORES TO MEET STANDARD IS NOT ALLOWED.

SUCCESSFUL PROOF-ROLLS REQUIRED FOR ALL ROADWAY ABC STONE.

B. ROADWAY ABC STONE MUST BE INSTALLED PER TOWN OF ZEBULON MINIMUM REQUIREMENTS AND/OR APPROVED ENGINEERING ROADWAY DRAWINGS. ROADWAY ABC STONE SHALL BE INSTALLED IN COMPACTED LIFTS PER MANUFACTURE EQUIPMENT RECOMMENDATIONS. A MINIMUM OF SIX INCHES OF COMPACTED ABC STONE SHALL BE INSTALLED UNDER CURB AND GUTTER. ALL ROADWAYS WILL HAVE A MINIMUM OF EIGHT INCHES OF COMPACTED ABC STONE. THE PLACEMENT OF ROADWAY ABC STONE IS REQUIRED TO PASS A PROOF-ROLL AND PASS DENSITY TESTING OF 98% MINIMUM EVERY 150 FEET. THE ZEBULON CONSTRUCTION INSPECTOR MUST HAVE DENSITY TESTING RESULTS PRIOR TO START OF PAVING. THE ROADWAY STONE CROSS-SLOPE, FROM CROWN TO CURB, SHALL BE CHECKED WITH A STRING LINE PRIOR TO THE PLACEMENT OF ASPHALT.

C. THE ROADWAY STONE SHALL BE PROOF ROLLED JUST PRIOR TO THE PLACEMENT OF ASPHALT. IF A SECTION OF ROADWAY FAILS PRIOR TO PLACEMENT OF ASPHALT AFTER ALL OTHER SUCCESSFUL TESTS; ADDITIONAL ASPHALT AT THE DIRECTION OF THE CONSTRUCTION INSPECTOR MAY BE ALLOWED. ONE INCH OF ASPHALT MAY BE SUBSTITUTED FOR EVERY TWO INCHES OF STONE.

ASPHALT INSTALLATION REQUIREMENTS: INSTALLATION AND TESTING

A. ASPHALT PLACEMENT SHOULD BE IN ACCORDANCE WITH ENGINEERING DRAWINGS, SIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL INSTALL ASPHALT IN TWO LAYERS. THE FINAL 1" OVERLAY WILL BE AT THE BUILDING PERMIT LEVEL FOR EACH PHASE OR AT THE DIRECTION OF THE PUBLIC WORKS DIRECTOR. ASPHALT CORES WILL BE TAKEN AT BOTH OVERLAYS TO INSURE COMPLIANCE WITH ENGINEERING DRAWINGS FOR THICKNESS.

B. IF MORE THAN 2.5 INCHES OF SF 9.5 ASPHALT IS REQUIRED, ASPHALT MUST BE PLACED IN TWO LIFTS, THE FIRST LIFT HAVING A THICKNESS OF NOT LESS THAN 1.5 INCHES.

C. ASPHALT MIXTURES SHALL NOT BE PLACED DURING RAINY WEATHER, WHEN SUBGRADE OR COURSE IS FROZEN, OR WHEN THE MOISTURE ON THE SURFACE TO BE PAVED WOULD PREVENT A PROPER BOND. ASPHALT MATERIAL MUST NOT BE PLACED WHEN THE AIR TEMPERATURE MEASURED IN THE SHADE AWAY FROM ARTIFICIAL HEAT AT THE LOCATION OF THE PAVING OPERATION AND THE ROAD SURFACE TEMPERATURE IN THE SHADE AT THE PAVING SITE IS BELOW 40 DEGREES AIR TEMPERATURE AND 50 DEGREES MINIMUM SURFACE TEMPERATURE.

D. A TACK COAT OF LIQUID ASPHALT IS REQUIRED FOR EXISTING LAYERS OF ASPHALT OR CONCRETE SURFACES TO PROMOTE A BOND BETWEEN OLD PAVEMENT SURFACES AND THE NEW ASPHALT LAYER. PRIOR TO PLACING ASPHALT TACK, THE FOLLOWING CONDITIONS MUST BE MET:
   a. EXISTING PAVEMENT SURFACE MUST BE CLEAN.
   b. RATE OF APPLICATION MUST COMPLY WITH NCDOT STANDARDS.
   c. UNFORMED COVERAGE OVER THE ENTIRE AREAS TO BE PAVED.
   d. ALLOW TACK TO THOROUGHLY CURE BEFORE PLACING THE NEW ASPHALT.

H. CORE SAMPLES SHOULD BE SELECTED EVERY 300' OR MINIMUM TWO CORES PER ROADWAY FOR ANALYSIS OF THICKNESS AND DENSITY. ASPHALT PAVEMENT MIX SF9.5 B SHOULD BE COMPACTED TO A MINIMUM OF 92% OF THE MAXIMUM SPECIFIC GRAVITY. ASPHALT PAVEMENT MIX SF9.5 A SHOULD BE COMPACTED TO A MINIMUM OF 90% OF THE MAXIMUM SPECIFIC GRAVITY. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING/CREATING A CHART/MAP OF THE CORED LOCATIONS FOR SUBMITTAL WITH THE TESTING. CORES WILL BE RANDOM TAKEN IN THE LONGITUDINAL DIRECTIONS ACROSS THE ROADWAY BUT NOT WITHIN THE ONE FOOT OF THE EDGE OF PAVEMENT. THE RESULTS OF THE SAMPLES WILL NOT BE AVERAGED AND USED TO VERIFY COMPLIANCE WITH TOWN OF ZEBULON SPECIFICATIONS. CORE SAMPLES SHALL BE TAKEN BY THIRD PARTY NCDOT CERTIFIED TECHNICIANS/FIRMS. ALL COST ASSOCIATED WITH SAMPLES SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER OR CONTRACTOR. (AMENDED AUGUST 31, 2011)

I. GENERAL: TESTING FOR ASPHALT DENSITY IS TO FOLLOW NCDOT "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES," SECTION 609-9, "FIELD COMPACTION QUALITY MANAGEMENT," LATEST REVISION. ALL OTHER APPLICABLE SECTIONS OF SECTION 609 OF THE NCDOT "STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES" SHALL APPLY RELATING TO QUALITY CONTROL PLAN, MIX DESIGN, CONTROL LIMITS, CORRECTIVE ACTION, EQUIPMENT AND MEASUREMENT UNLESS ONLINE IN SPECIFICATIONS.

GENERAL LEGEND

FEATURE	EXISTING	PROPOSED
PARCEL LINE (PROPOSED)		
PROPERTY LINE (EXISTING/ADJOINING)	PL	
PROJECT BOUNDARY (SITE)		
EASEMENT (OTHER)		
EASEMENT (STORM DRAINAGE)	PDE	PDE
EASEMENT (SIDEWALK)		
EASEMENT (SEWER)		
EASEMENT (TEMP. CONSTRUCTION)		TCE
RAIL ROAD		
RIGHT-OF-WAY (ROAD)	R/W R/W	R/W R/W
BUFFER		
BUILDING SETBACK		
POND / WATER FEATURE		
TOP OF BANK	TB	
BOTTOM OF BANK	BB	
MAJOR TOPO CONTOUR	650	650
MINOR TOPO CONTOUR	648	648
FENCE LINE		
GUARDRAIL		
℄ CREEK/STREAM		
℄ DITCH/SWALE		<
℄ ROAD		
TREE LINE		
WETLAND BOUNDARY	WET	
FORCEMAIN	SS	FM
OVERHEAD UTILITY	OE	
SANITARY SEWER	SS	
STORM	SD	
UNDERGROUND FIBER OPTIC	FO	
UNDERGROUND GAS	G	
UNDERGROUND TELEPHONE	TC	
UNDERGROUND WATERLINE	W	W
PEDESTRIAN RAILS		
SANITARY EASEMENT		
TREE SAVE AREA		
COMMON OPEN SPACE AREA		
EXISTING FEATURE DEMOLITION		
STREETSCAPE BUFFER		
STREAMSIDE ZONE	ST	ST
UPLAND ZONE	UP	UP
MANAGED USE ZONE	MU	MU
ZONING BOUNDARY	ZL	ZL
RIPARIAN BUFFER ZONE 1		
RIPARIAN BUFFER ZONE 2		
HEAVY DUTY PAVEMENT		
LIGHT WEIGHT PAVEMENT		

STORM AND DRAINAGE LEGEND

FEATURE	EXISTING	PROPOSED
DRAINAGE MH	D	ST
DROP INLET		
CATCH BASIN		OR
DOUBLE CATCH BASIN		OR
YARD INLET		
JUNCTION BOX	JB	ST
FLAIRED -END SECTION (FES)		OR
GRAVEL RIPRAP APRON		
HEADWALL		
STORM STRUCTURE NUMBER		A2
SLAB TYPE CATCH BASIN		
PERMANENT DITCH / SWALE		<
Tc - SHEET FLOW		
Tc - SHALLOW FLOW		
Tc - CHANNELIZED FLOW		

EROSION CONTROL LEGEND

FEATURE	PROPOSED
SILT FENCE	SF
TREE PROTECTION FENCING	TP
TREE PROTECTION/SILT FENCE	SF+TP
DENUDED LIMITS	
LIMITS OF DISTURBANCE	LOD
TEMPORARY DIVERSION DITCH	TDD
CLEAN WATER DITCH	CWD
DRAINAGE AREA	
DRAINAGE AREA (CATCH BASIN / PIPE)	
TEMPORARY SILT FENCE OUTLET	
TEMPORARY SILT FENCE OUTLET J-HOOK	
TEMPORARY WATTLE CHECK DAM	
TEMPORARY PIPE SLOPE DRAIN	
ROCK CHECK DAM	
HARDWARE CLOTH & GRAVEL INLET PROTECTION	
GRAVEL AND RIP RAP FILTER BERM BASIN	
GRAVEL RIPRAP APRON	
SPILLWAY	
GRAVEL CONSTRUCTION ENTRANCE	
SEDIMENT BASIN	
SEDIMENT BASIN BAFFLE	
TREE SAVE AREA	
SOIL DELINEATION	CeA

WATER LEGEND

FEATURE	EXISTING	PROPOSED
WATER MANHOLE	WMH	
FIRE HYDRANT	FH	
WELL	W	
WATER METER	WM	
HOSE BIB		
WATER VALVE	WV	
AIR RELEASE VALVE		
BLOW OFF VALVE	BO	
REDUCER		
WATER TEES & BENDS		

SANITARY SEWER LEGEND

FEATURE	EXISTING	PROPOSED
SANITARY SEWER MH	SS	SSMH
CLEAN OUT / SEWER LATERAL	CO	CO

TOWN OF ZEBULON STORMWATER DRAINAGE NOTES:

- ALL STORM DRAINAGE PIPES ARE TO BE CLASS III NCDOT APPROVED RCP WITH 2' COVER MINIMUM OR CLASS IV OR V PIPE IS REQUIRED UNLESS OTHERWISE NOTED.
- THE TOWN OF ZEBULON WILL BE RESPONSIBLE FOR ALL STREET DRAINAGE WITHIN THE RIGHT OF WAY AND DEDICATED PUBLIC DRAINAGE EASEMENTS UNTIL THE STILLING BASIN. ALL STORMWATER DRAINAGE SYSTEMS BEHIND LOTS SHOWN IN EASEMENTS WILL BE OWNED AND MAINTAINED BY THE HOA. ALL BMP/DRY AND WET DETENTION PONDS WILL BE OWNED AND MAINTAINED BY THE HOA.
- PIPE SYSTEMS, CHANNELS, DITCHES, OR RETAINING WALLS LOCATED IN OPEN SPACE AREAS ARE TO BE OWNED AND MAINTAINED BY THE HOA.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

NOTES & LEGEND

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C1.1
DRAWING NUMBER
B
REVISION

STATUS: **REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION**

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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

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

2. Additional Documentation to be Kept on Site

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

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

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

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

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

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

(d) Anticipated bypasses and unanticipated bypasses.

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

2. Reporting Timeframes and Other Requirements

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

Occurrence	Reporting Timeframes [After Discovery] and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours,*** an oral or electronic notification. • ***Within 7 calendar days,*** a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours,*** an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours,*** an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours,*** an oral or electronic notification. • ***Within 7 calendar days,*** a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

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

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

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

PAINT AND OTHER LIQUID WASTE

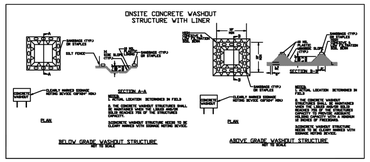
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled,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

PORTABLE TOILETS

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

EARTHEN STOCKPILE MANAGEMENT

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



CONCRETE WASHOUTS

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

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NORTH CAROLINA Environmental Quality

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPER PHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEED SCHEDULE). DO NOT USE LIME OR FERTILIZER ON STREAM BANKS OR IN WETLAND AREAS. MULCH DOES NOT NEED TO BE USED IN WETLAND AREAS.
4. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
5. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
6. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
7. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

PERMANENT SEEDING NOTES:

1. PERMANENT SEEDING, SODDING, OR OTHER MEANS OF STABILIZATION ARE REQUIRED WHEN ALL CONSTRUCTION WORK IS COMPLETED ACCORDING TO THE "SEEDING STABILIZATION TIMEFRAMES" CHART.
2. A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST (OR EQUAL) SHOULD BE OBTAINED FOR ALL AREAS TO BE SEEDED, SPRIGGED, SODDED OR PLANTED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHOULD BE INCORPORATED TO THE SOIL.
3. USE A SEEDING MIX OF NON-INVASIVE, NATIVE SPECIES THAT WILL EVENTUALLY PROVIDE A PERMANENT GROUNDCOVER.
4. IMMEDIATE VEGETATIVE COVER WILL ALWAYS REQUIRE ADDITIONAL FERTILIZATION, SOIL TESTS, OVERSEEDING AND MAINTENANCE UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.

TEMPORARY SEEDING SPECIFICATION:

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE	RATE (LB/AC)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL 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 - APR. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY A MINIMUM OF 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) 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:
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING SPECIFICATION (CONTINUED):

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE	RATE (LB/AC)
GERMAN 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 RECOMMENDATIONS OF SOIL TESTS OR APPLY A MINIMUM OF 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) 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:
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE	RATE (LB/AC)
RYE (GRAIN)	120

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

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY A MINIMUM OF 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) 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:
REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

PERMANENT SEEDING SPECIFICATION:

3:1 SLOPES OR FLATTER:

1. APPLY AGRICULTURAL LIME AT THE RATE OF **75 LBS/1000 S.F.
2. APPLY COMMERCIAL FERTILIZER AT THE RATE OF 48 LBS/1000 S.F. FOR 5-10-10 FERTILIZER, 24 LBS/1000 S.F. FOR 10-20-20 FERTILIZER, OR 20 LBS/1000 S.F. FOR 18-24-6 FERTILIZER.
3. SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND APPLICATION RATES:

DATE:	TYPE:	PLANTING RATE:
AUG. 15 - NOV. 1	TALL FESCUE	300 LBS/AC OR 7 LBS/1000 S.F.
	RYE GRAIN	120 LBS/AC OR 3 LBS/1000 S.F.
NOV. 1 - MAR. 1*	TALL FESCUE AND	300 LBS/AC OR 7 LBS/1000 S.F.
	ABRUZZI RYE	25 LBS/AC OR 1/2 LB/1000 S.F.
MAR. 1 - APR. 15	TALL FESCUE	300 LBS/AC OR 7 LBS/1000 S.F.
APR. 15 - JUL. 30	HULLED COMMON BERMUDA GRASS	25 LBS/AC OR 1/2 LB/1000 S.F.
JUL. 1 - AUG. 15	TALL FESCUE AND	300 LBS/AC OR 7 LBS/1000 S.F.
	BROWN TOP MILLET OR SORGHUM SUDAN HYBRIDS	35 LBS/AC OR 3/4 LB/1000 S.F. 30 LBS/AC OR 3/4 LB/1000 S.F.

4. MULCH WITH STRAW APPLIED AT THE RATE OF 95 LBS/1000 S.F.

* HEAVILY MULCHED DURING JANUARY - MARCH PERIOD.
** CONTRACTOR MAY OBTAIN SOIL TEST TO DETERMINE AMOUNT OF LIME REQUIRED TO OBTAIN A pH RANGE OF 6.5 TO 7.0.
*** SEED TYPE, RATES AND/OR SOIL AMENDMENTS SPECIFIED ABOVE MAY BE MODIFIED AND/OR ELIMINATED IF REQUIRED BY OTHER LOCAL, STATE OR FEDERAL AGENCIES (EG. NRCS, NC COOPERATIVE EXTENSION OFFICE, ETC.). PRIOR TO MODIFICATIONS OR ELIMINATIONS, CONTRACTOR SHALL SUBMIT WRITTEN DOCUMENTATION SUPPORTING THE REQUEST FOR APPROVAL PRIOR TO MAKING MODIFICATION.

SLOPES GREATER THAN 3:1

1. APPLY AGRICULTURAL LIME AT A RATE OF **90 LBS/1000 S.F.
2. APPLY COMMERCIAL FERTILIZER AT THE RATE OF 48 LBS/1000 S.F. FOR 5-10-10 FERTILIZER, 24 LBS/1000 S.F. FOR 10-20-20 FERTILIZER, OR 20 LBS/1000 S.F. FOR 18-24-6 FERTILIZER.
3. SEED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND APPLICATION RATES:

DATE:	TYPE:	PLANTING RATE:
MAR. - JUN. 1	SERICEA LESPEDEZA	50 LBS/AC OR 1 1/2 LBS/1000 S.F.
	RYE GRAIN (SCARIFIED) AND	25 LBS/AC OR 3/4 LBS/1000 S.F.
MAR. - APR. 1	ADD TALL FESCUE	150 LBS/AC OR 3 1/2 LBS/1000 S.F.
JUN. - SEPT. 1***	TALL FESCUE AND	120 LBS/AC OR 2 1/2 LBS/1000 S.F.
	BROWN TOP MILLET OR SORGHUM SUDAN HYBRIDS	35 LBS/AC OR 3/4 LB/1000 S.F. 30 LBS/AC OR 3/4 LB/1000 S.F.
SEPT. - MAR. 1	SERICEA LESPEDEZA (UNHULLED - UNSCARIFIED)	70 LBS/AC OR 1 3/4 LBS/1000 S.F.
	TALL FESCUE	120 LBS/AC OR 2 1/2 LBS/1000 S.F.
	MILLET OR SUDAN	20 LBS/AC OR 1/2 LB/1000 S.F.

4. MULCH APPLIED AT THE RATE OF 95 LBS/1000 S.F. AND ANCHOR WITH ASPHALT EMULSION TACK COAT APPLIED AT THE RATE OF 10-15 GAL/1000 S.F. OR 450 GAL/AC.

* TEMPORARY RESEED SEPT. 1 AT RECOMMENDED RATES.
** CONTRACTOR MAY OBTAIN SOIL TEST TO DETERMINE AMOUNT OF LIME REQUIRED TO OBTAIN A pH RANGE OF 6.5 TO 7.0.
*** SEED TYPE, RATES AND/OR SOIL AMENDMANTS SPECIFIED ABOVE MAY BE MODIFIED AND/OR ELIMINATED IF REQUIRED BY OTHER LOCAL, STATE OR FEDERAL AGENCIES (EG. NRCS, NC COOPERATIVE EXTENSION OFFICE, ETC.). PRIOR TO MODIFICATIONS OR ELIMINATIONS, CONTRACTOR SHALL SUBMIT WRITTEN DOCUMENTATION SUPPORTING THE REQUEST FOR APPROVAL PRIOR TO MAKING MODIFICATION.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

NCDEQ NOTES

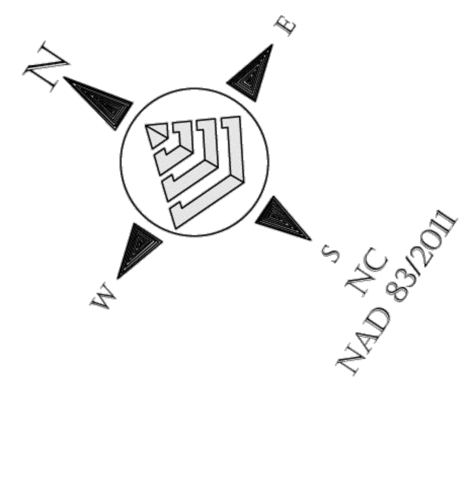
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STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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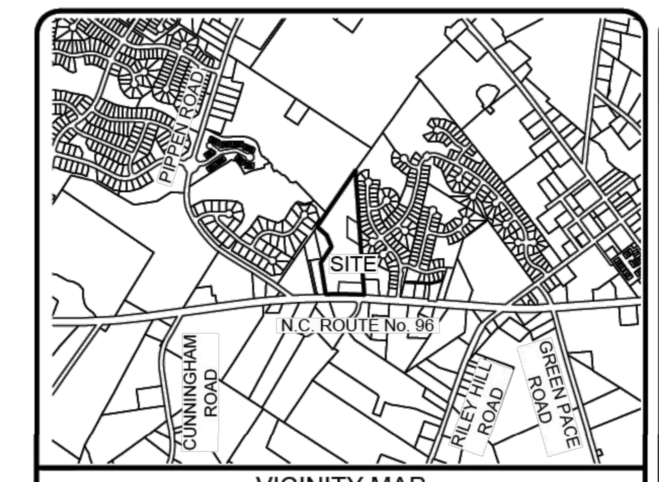
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ADJACENT PROPERTY LINE
ADJACENT PROPERTY LINE (NOT SURVEYED)
ACCESS EASEMENT LINE
STORM DRAINAGE EASEMENT LINE
EDGE OF PAVING
EDGE OF GRAVEL
EARTHEN PATH
OVERHEAD ELECTRIC LINES
WOOD FENCE LINE
CHAIN LINK FENCE LINE
EDGE OF WATER

UTILITY LEGEND

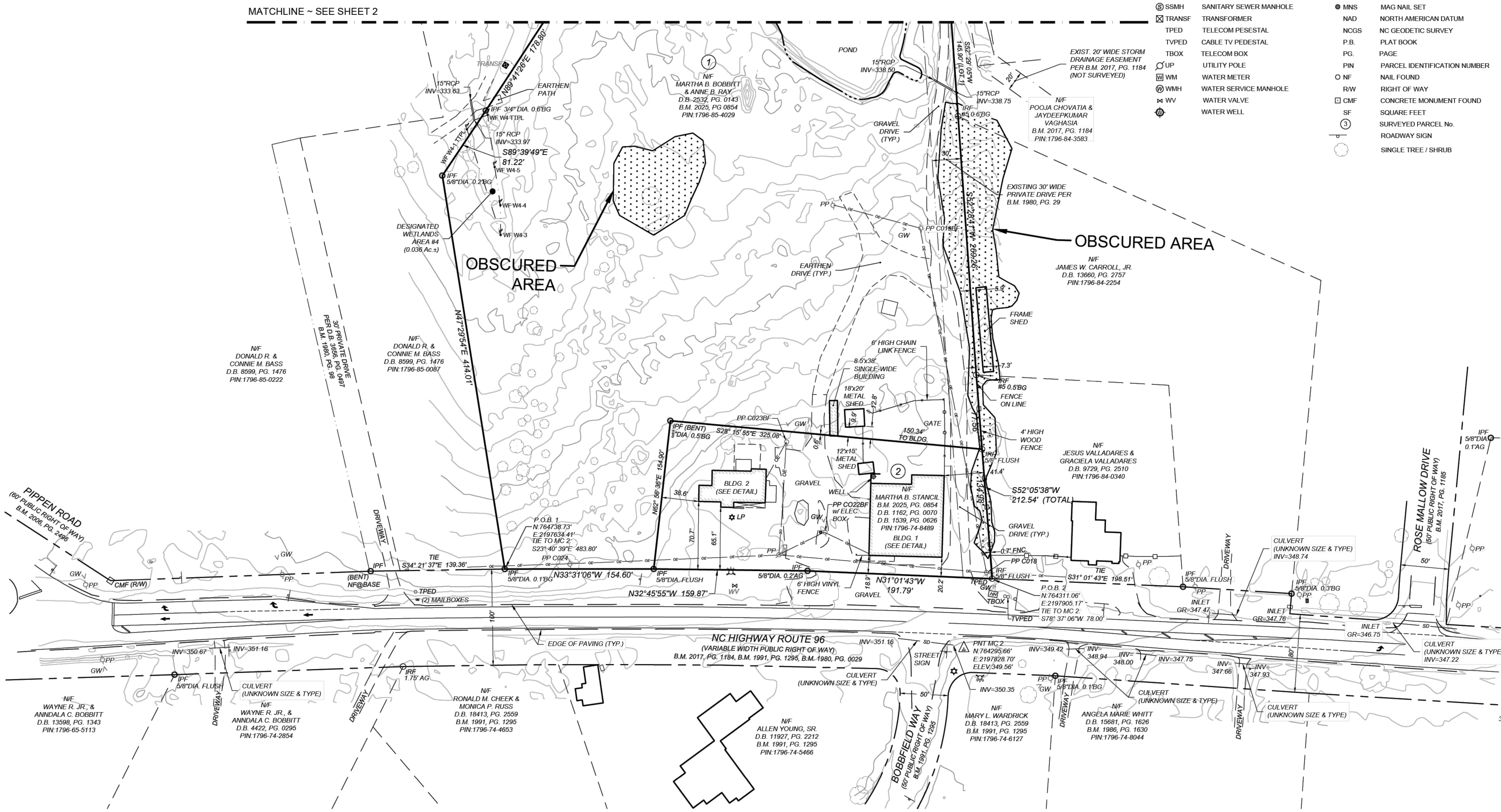
A/C	AIR CONDITION
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
	FIRE HYDRANT
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
	HANDHOLE
INV	INVERT
LP	LAMP POST
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SDMH	STORM DRAINAGE MANHOLE
SSMH	SANITARY SEWER MANHOLE
TRANSF	TRANSFORMER
TPED	TELECOM PESESTAL
TVPED	CABLE TV PEDESTAL
TBOX	TELECOM BOX
UP	UTILITY POLE
WM	WATER METER
WMH	WATER SERVICE MANHOLE
WV	WATER VALVE
	WATER WELL

BOUNDARY LEGEND

AG	ABOVE GROUND
BG	BELOW GROUND
BM#	BENCH MARK & No.
B.M.	BOOK OF MAPS
CMF	CONCRETE MONUMENT FOUND
DB	DEED BOOK
(E- 20')	EASEMENT TIE
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
IRS	IRON ROD SET
ELEV	ELEVATION
FFE	FINISHED FLOOR ELEVATION
MNF	MAG NAIL FOUND
MNS	MAG NAIL SET
NAD	NORTH AMERICAN DATUM
NCGS	NC GEODETIC SURVEY
P.B.	PLAT BOOK
PG.	PAGE
PIN	PARCEL IDENTIFICATION NUMBER
NF	NAIL FOUND
R/W	RIGHT OF WAY
CMF	CONCRETE MONUMENT FOUND
SF	SQUARE FEET
(3)	SURVEYED PARCEL No.
	ROADWAY SIGN
	SINGLE TREE / SHRUB



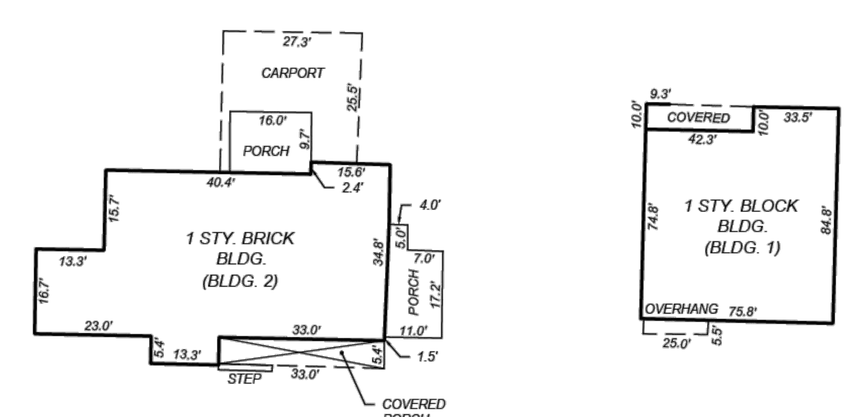
VICINITY MAP
(NOT TO SCALE)



SURVEY NOTES:

1. THE PURPOSE OF THIS SURVEY IS TO PERFORM AN EXISTING CONDITION SURVEY OF WAKE COUNTY PARCELS 179-685-4029, 1795-74-8489 & 1796-84-5839.
2. THE DEPICTED SURVEY WAS DERIVED FROM AN ACTUAL FIELD AND AERIAL SURVEY MADE BY THIS OFFICE AND PERFORMED BETWEEN SEPTEMBER 11, 2024 AND JULY 5, 2025.
3. OWNER INFORMATION PER DEEDS AND PLATS OF THE WAKE COUNTY REGISTER OF DEEDS.
4. VRS GPS OBSERVATIONS (3 MINUTE MULTIPLE OBSERVATIONS) WERE MADE ON TWO (2) MAIN CONTROL POINTS TO ESTABLISH GEODETIC AND STATE GRID COORDINATES (NAD83 NSRS 2011) USING AVERAGE POSITIONS FROM THE MULTIPLE OBSERVATIONS. THE VERTICAL DATUM USED WAS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON GEOID 18.
5. CONTOURS SHOWN AT 1 FOOT INTERVAL AND WERE DERIVED FROM AERIAL LIDAR DATA.
6. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN US SURVEY FEET. BEARINGS ARE BASED ON NC GRID (NAD83/2011).
7. ALL AREAS SHOWN WERE COMPUTED BY THE COORDINATE CALCULATION METHOD.
8. THE LOCALIZED COORDINATE SYSTEM USED FOR THIS PROJECT IS BASED ON CONTROL POINT "2" HAVING THE FOLLOWING LOCALIZED NAD 83-2011 COORDINATES AND NAVD 88 ELEVATION:

   COORDINATES N: 764,295.66; E: 2,197,828.70; ELEV.: 349.56
9. PROJECT COMBINED GRID FACTOR USED IS 0.9999153 (GROUND TO GRID)
10. THIS PROPERTY IS LOCATED IN FLOOD ZONE AREA, "ZONE X", AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON FEMA MAP NUMBER 3720179600K WITH AN EFFECTIVE DATE OF 7/19/2022.
11. UNLESS OTHERWISE NOTED ALL NEW IRON PINS (IRS) WERE SET USING 5/8" REBAR SET FLUSH WITH THE GROUND.
12. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ALL EASEMENTS, RIGHTS OF WAYS, AND OR ENCUMBRANCES THAT MAY EFFECT THIS PROPERTY.
13. THE SUBJECT PARCEL IS ZONED HC (HEAVY COMMERCIAL) PER WAKE COUNTY GIS DATA.
14. THE PARCELS SHOWN HEREON ARE THE SAME PARCELS (OR A PORTION OF THE PARCELS) DESCRIBED IN DEED BOOK 2532 PAGE 0143; DEED BOOK 1162, PAGE 0070; DEED BOOK 1539, PAGE 0626; DEED BOOK 4633, PAGE 0665 & BOOK OF MAPS 1980, PAGE 0029.



BUILDING DETAILS
N.T.S.



PARCEL INFORMATION

(1) PARCEL 1 -
OWNER: MARTHA B. BOBBITT & ANNE B. RAY
DEED: D.B. 2532, PG. 0143
ADDRESS: 0 ZEBULON RD., ZEBULON NC 27597-8146
AREA: 531,715 S.F. / 12.206 Acres±

(2) PARCEL 2 -
OWNER: MARTHA B. STANCIL
DEED: D.B. 1162, PG. 0070 ; D.B. 1539, PG. 0626
ADDRESS: 1928 & 2008 ZEBULON RD., ZEBULON NC 27597-8146
AREA: 48,305 S.F. / 1.109 Acres±

(3) PARCEL 3 -
OWNER: MARTHA B. STANCIL & LONNIE P. STANCIL, JR.
DEED: D.B. 4633, PG. 0665 ; B.M. 1980, PG. 0029
ADDRESS: 1938 ZEBULON RD., ZEBULON NC 27597-8146
AREA: 53,641 S.F. / 1.231 Acres±

AERIAL LIDAR (~20 PPSM) AND IMAGERY (~.124 US FT GSD) WAS SIMULTANEOUSLY DUAL-COLLECTED ON 07-05-2025 WITH A MANNED AERIAL SYSTEM EQUIPPED WITH A LEICA CITY MAPPER H2 (SN95518).
ABOVE GROUND LEVEL (AGL): 2625 US FT
FOCAL LENGTH: 83MM
DATE OF DATA SET COMPILATION: JULY, 2025 - AUGUST, 2025

THIS DATA SET WAS PRODUCED TO MEET ASPRS POSITIONAL ACCURACY STANDARDS FOR DIGITAL GEOSPATIAL DATA, EDITION 2, VERSION 2 (2024) FOR A:

0.49 (US FT) RMSEH HORIZONTAL POSITIONAL ACCURACY CLASS.

0.64 (US FT) RMSEV VEGETATED VERTICAL ACCURACY (VVA) CLASS.

THIS DATA SET WAS TESTED TO MEET ASPRS POSITIONAL ACCURACY STANDARDS FOR DIGITAL GEOSPATIAL DATA, EDITION 2, VERSION 2 (2024) FOR A:

0.33 (USFT) RMSEV NON-VEGETATED VERTICAL ACCURACY (NVA) CLASS.

INDEPENDENT CHECKPOINTS FOR THE NVA WHEN COMPARED TO THE LIDAR SURFACE RESULTED IN AN RMSEZ OF 0.111 US FT.

GPS CERTIFICATION:

I, KEVIN D. MEDEIROS, PLS CERTIFY THAT THIS MAP WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

1. CLASS OF SURVEY: A
2. POSITIONAL ACCURACY: H- 0.03' / V- 0.04'
3. TYPE OF GPS FIELD PROCEDURE: NC VRS NETWORK
4. DATES OF SURVEY: 9-12-2024
5. DATUM/EPOCH: NAD 83 NSRS 2011 - NAVD 88
6. PUBLISHED/FIXED CONTROL: FIXED
7. GEOID MODEL: 18
8. COMBINED GRID FACTOR: 0.9999153 (GROUND TO GRID)
9. UNITS: US SURVEY FEET

I, KEVIN D. MEDEIROS, PLS L-4668, CERTIFY THAT THIS EXISTING CONDITION AND TOPOGRAPHIC SURVEY WAS COMPLETED UNDER MY DIRECT SUPERVISION; THAT THE GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL TO MEET THE CLASS A HORIZONTAL REQUIREMENT AND THE CLASS B VERTICAL REQUIREMENT FOR TOPOGRAPHIC/PLANIMETRIC SURVEYS; THAT THE AERIAL SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL TO MEET THE CLASS A HORIZONTAL REQUIREMENT AND THE CLASS B VERTICAL REQUIREMENT FOR TOPOGRAPHIC/PLANIMETRIC SURVEYS; THAT THE ORIGINAL DATA WAS OBTAINED BETWEEN SEPTEMBER 11, 2024 AND JULY 5, 2025; THAT THE CONTOURS LINES MAY NOT MEET THE STATED STANDARD; THAT THE SURVEY WAS COMPLETED ON JULY 3, 2025; AND THAT ALL COORDINATES AND ELEVATIONS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD83-2011), AND ALL ELEVATIONS ARE BASED ON NAVD88. THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600) AS AMENDED.

WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER, AND SEAL THIS THE 28TH DAY OF AUGUST, 2025 A.D.

PRELIMINARY PLAT
NOT FOR RECORDATION
CONVEYANCE OR SALES

KEVIN D. MEDEIROS L-4668
PROFESSIONAL LAND SURVEYOR

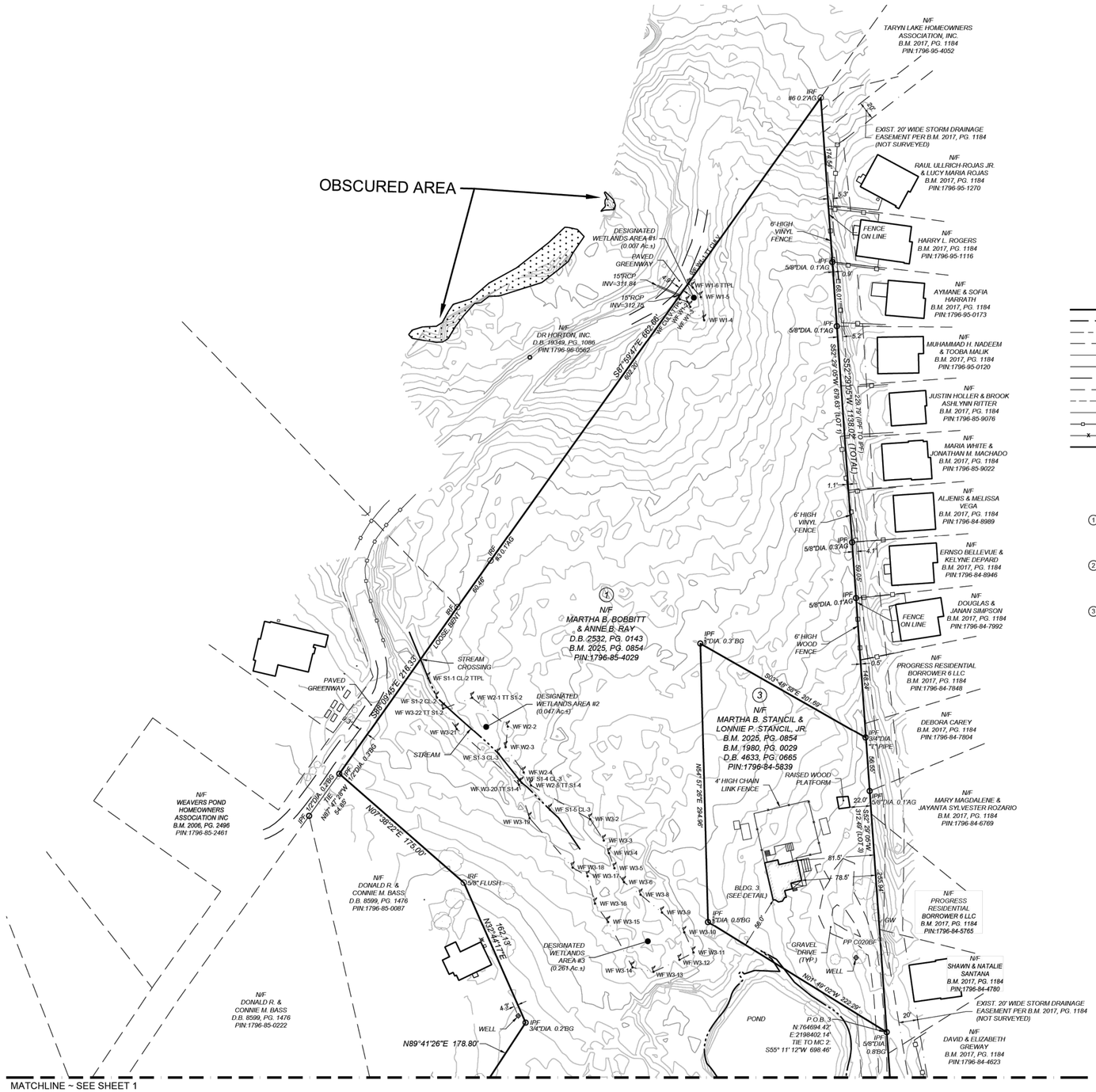
DATE	REVISION	BY
:	:	:

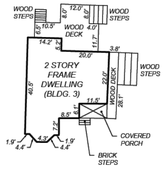
MCKIM & CREED
4300 Edwards Mill Road
Suite 200, Raleigh, NC 27612
Phone: (919) 233-8091, Fax: (919) 233-8031
NC License# F-1222
Internet Site: http://www.mckimcreed.com

PRELIMINARY PLAT
NOT FOR RECORDATION
CONVEYANCE OR SALES

PROJECT #: 095720001
PROJ. SVYR: KDM
DRAWN BY: LWT
FIELD BK.:
COMP. FILE: .
SHEET #: 1 OF 2
DWG. #: .

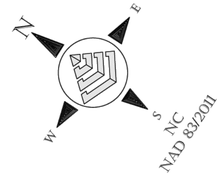
EXISTING CONDITION SURVEY
OF THE
STANCIL & BOBBITT PROPERTIES
FOR
SPECTRUM INVESTMENT SOLUTIONS, LLC
DATE: AUGUST 28, 2025 SCALE: AS NOTED
LITTLE RIVER TOWNSHIP WAKE COUNTY NORTH CAROLINA

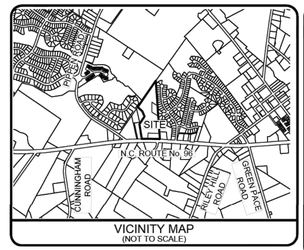




BUILDING DETAIL
N.T.S.

60' 0 60' 120'
SCALE: 1"=60' (Horiz.)





VICINITY MAP
(NOT TO SCALE)

LINETYPE LEGEND

- SUBJECT PARCEL BOUNDARY
- RIGHT OF WAY
- ADJACENT PROPERTY LINE
- ADJACENT PROPERTY LINE (NOT SURVEYED)
- ACCESS EASEMENT LINE
- STORM DRAINAGE EASEMENT LINE
- EDGE OF PAVING
- EDGE OF GRAVEL
- EARTHEN PATH
- OVERHEAD ELECTRIC LINES
- WOOD FENCE LINE
- CHAIN LINK FENCE LINE
- EDGE OF WATER

UTILITY LEGEND

A/C	AIR CONDITION
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
	FIRE HYDRANT
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
INV	INVERT
LP	LAMP POST
PP	POWER POLE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
SDMH	STORM DRAINAGE MANHOLE
SSMH	SANITARY SEWER MANHOLE
TRANSF	TRANSFORMER
TPED	TELECOM PESESTAL
TVPED	CABLE TV PEDESTAL
TBOX	TELECOM BOX
UP	UTILITY POLE
WM	WATER METER
WMH	WATER SERVICE MANHOLE
WV	WATER VALVE
	WATER WELL

BOUNDARY LEGEND

AG	ABOVE GROUND
BG	BELOW GROUND
BM#	BENCH MARK & No.
B.M.	BOOK OF MAPS
CMF	CONCRETE MONUMENT FOUND
DB	DEED BOOK
(E- 20')	EASEMENT TIE
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
IRS	IRON ROD SET
ELEV	ELEVATION
FFE	FINISHED FLOOR ELEVATION
MNF	MAG NAIL FOUND
MNS	MAG NAIL SET
NAD	NORTH AMERICAN DATUM
NCGS	NC GEODETIC SURVEY
P.B.	PLAT BOOK
PG.	PAGE
PIN	PARCEL IDENTIFICATION NUMBER
NF	NAIL FOUND
R/W	RIGHT OF WAY
CMF	CONCRETE MONUMENT FOUND
SF	SQUARE FEET
(3)	SURVEYED PARCEL No.

PARCEL INFORMATION

(1) PARCEL 1 -
OWNER: MARTHA B. BOBBITT & ANNE B. RAY
DEED: D.B. 2532, PG. 0143
ADDRESS: 0 ZEBULON RD., ZEBULON NC 27597-8146
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OWNER: MARTHA B. STANCIL
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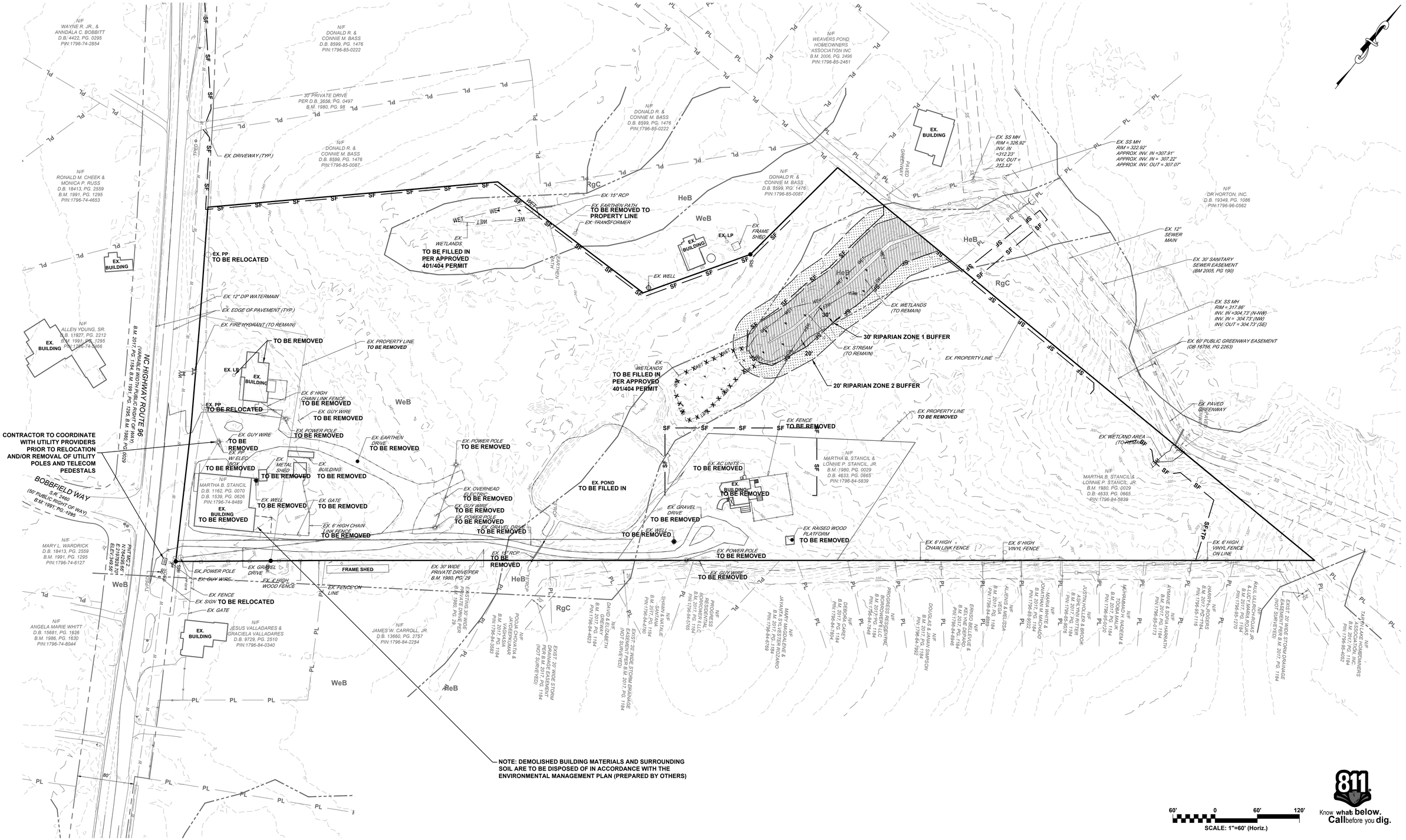
DATE	REVISION	BY
:	:	

MCKIM & CREED
4300 Edwards Mill Road
Suite 200, Raleigh, NC 27612
Phone: (919) 233-8091, Fax: (919) 233-8031
NC License# F-1222
Internet Site: http://www.mckimcreed.com

PRELIMINARY PLAT
NOT FOR RECORDATION
CONVEYANCE OR SALE

PROJECT #: 095720001
PROJ. SVYR.: KDM
DRAWN BY: LWT
FIELD BK: .
COMP. FILE: .
SHEET #: 2 OF 2
DWG. #: .

EXISTING CONDITION SURVEY
OF THE
STANCIL & BOBBITT PROPERTIES
FOR
SPECTRUM INVESTMENT SOLUTIONS, LLC
DATE: AUGUST 28, 2025 SCALE: AS NOTED
LITTLE RIVER TOWNSHIP WAKE COUNTY NORTH CAROLINA



REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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DO NOT REMOVE FROM ELECTRONIC FILE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM & CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

EXISTING CONDITIONS AND DEMOLITION PLAN

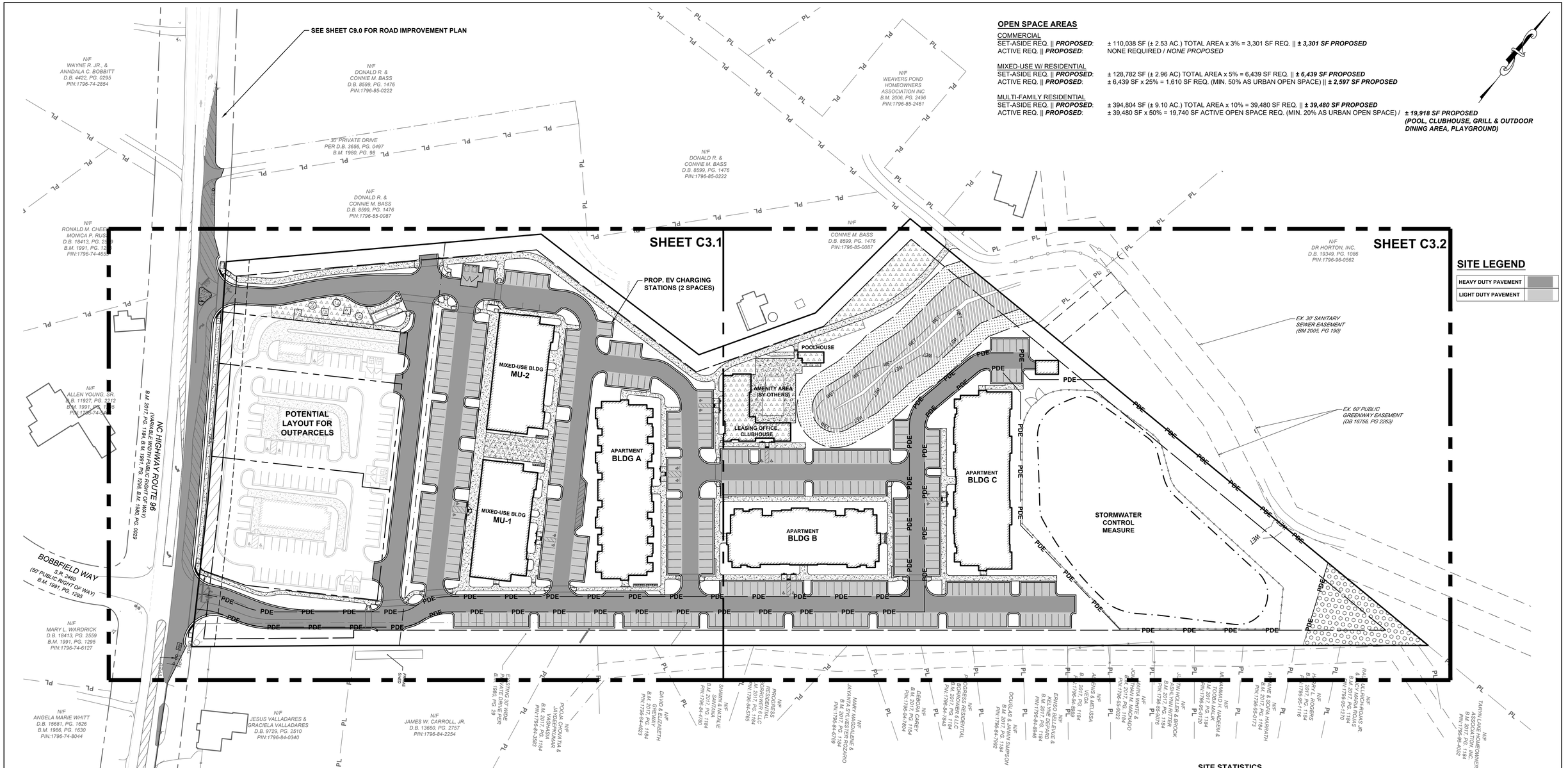
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C2.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C2.0 EX COND & DEMO.DWG ---- 02/12/2026 21:36:24



OPEN SPACE AREAS

COMMERCIAL
SET-ASIDE REQ. || ***PROPOSED***: ± 110,038 SF (± 2.53 AC.) TOTAL AREA x 3% = 3,301 SF REQ. || ***± 3,301 SF PROPOSED***
ACTIVE REQ. || ***PROPOSED***: NONE REQUIRED / *NONE PROPOSED*

MIXED-USE W/ RESIDENTIAL
SET-ASIDE REQ. || ***PROPOSED***: ± 128,782 SF (± 2.96 AC) TOTAL AREA x 5% = 6,439 SF REQ. || ***± 6,439 SF PROPOSED***
ACTIVE REQ. || ***PROPOSED***: ± 6,439 SF x 25% = 1,610 SF REQ. (MIN. 50% AS URBAN OPEN SPACE) || ***± 2,597 SF PROPOSED***

MULTI-FAMILY RESIDENTIAL
SET-ASIDE REQ. || ***PROPOSED***: ± 394,804 SF (± 9.10 AC.) TOTAL AREA x 10% = 39,480 SF REQ. || ***± 39,480 SF PROPOSED***
ACTIVE REQ. || ***PROPOSED***: ± 39,480 SF x 50% = 19,740 SF ACTIVE OPEN SPACE REQ. (MIN. 20% AS URBAN OPEN SPACE) / ***± 19,918 SF PROPOSED (POOL, CLUBHOUSE, GRILL & OUTDOOR DINING AREA, PLAYGROUND)***

SITE LEGEND

HEAVY DUTY PAVEMENT	
LIGHT DUTY PAVEMENT	

NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

OUTPARCELS 1, 2 AND 3 SHALL BE LIMITED TO A WEIGHTED C-FACTOR OF 0.8.

MIXED - USE RETAIL

Bldg	Stories	Floorplate	Leasable SF	P'kg Required	P'kg Provided
MU 1	1	10,656 sf	9,482 sf	37	37
MU 2	1	10,656 sf	9,482 sf	37	37

PARKING COUNT SUMMARY

NOTE: PARKING REQUIREMENTS ARE TAKEN FROM THE APPROVED REZONING PLAN.

RESIDENTIAL PARKING REQUIRED: 1.5 SPACES PER RESIDENTIAL UNIT
BLDGS A, B, C, MU-1, MU-2: 216 TOTAL UNITS x 1.5 SPACE/UNIT = **324 SPACES**

VISITOR PARKING REQUIRED: 0.25 SPACE PER UNIT
BLDGS A, B, C, MU-1, MU-2: 216 TOTAL UNITS x 0.25 SPACE/UNIT = **54 SPACES**

TOTAL REQUIRED RESIDENTIAL PARKING: **378 SPACES**

MIXED-USE RETAIL PARKING REQUIRED: 74 SPACES (SEE TABLE THIS SHEET FOR BREAKDOWN)

TOTAL REQUIRED PARKING: **452** SPACES
20% PARKING REDUCTION: **362 SPACES**

SHARED PARKING (WEEKDAY PEAK HOURS) = 14 SPACES
TOTAL PARKING PROVIDED = 362* SPACES, EXCLUDES OUTPARCEL PARKING SPACES.

*COMPACT PARKING PROVIDED = 108 COMPACT SPACES (30% OF 362)
MAX. COMPACT PARKING SPACES = 30% OF PARKING PROVIDED.
TWO (2) ELECTRIC VEHICLE (EV) CHARGING STATIONS ARE NOTED ON THE PLAN.

DIMENSIONAL STANDARDS

MINIMUM BUILDING SEPARATION: 10'
SITE SETBACKS
FRONT SETBACK: 25 FEET
SIDE INTERIOR SETBACK: 10 FEET (ABUTTING RESIDENTIAL: 15 FEET)
SIDE STREET SETBACK: 20 FEET
REAR SETBACK: 30 FEET

STRUCTURES
MAXIMUM BUILDING HEIGHT: 60 FEET
MAXIMUM BUILDING STORIES: 4 STORIES
MAXIMUM BUILDING LENGTH: 250 FEET

BUFFERS:
STREETSCAPE BUFFER: 15 FEET WIDE ALONG ZEBULON ROAD/NC HWY 96
TYPE C BUFFER W/ SHRUBS PER UDO SECTION 5.6.12. E
PERIMETER BUFFERS*: 10' TYPE A SEPARATION BUFFER AGAINST ADJACENT HC ZONING
20' TYPE B INTERMITTENT BUFFER AGAINST ADJACENT R-2 & R-13 SUD ZONING
*EXISTING TREES AND SHRUBS WILL BE UTILIZED TO MEET BUFFER LANDSCAPE REQUIREMENTS WHERE EXISTING MATERIAL MEETS BUFFER OBJECTIVES.

SITE STATISTICS

TAX MAP & PARCEL #: 1796748489, 1796854029, 1796845839
PROJECT AREA: 14.546 ACRES
EXISTING ZONING: PD (REZONING # 1556960, APPROVED MAY 6, 2025)
EXISTING LAND USE: SINGLE-FAMILY RESIDENTIAL, UNDEVELOPED
PROPOSED LAND USE: MIXED USE (COMMERCIAL, MIXED-USE, MULTI-FAMILY RESIDENTIAL)

MAXIMUM NUMBER OF DWELLING UNITS: 250 UNITS
MAXIMUM COMMERCIAL / NON-RESIDENTIAL: 25,000 SF

60' 0 60' 120'
SCALE: 1"=60' (Horiz.)

Know what's below. Call before you dig.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM & CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SITE PLAN - OVERALL

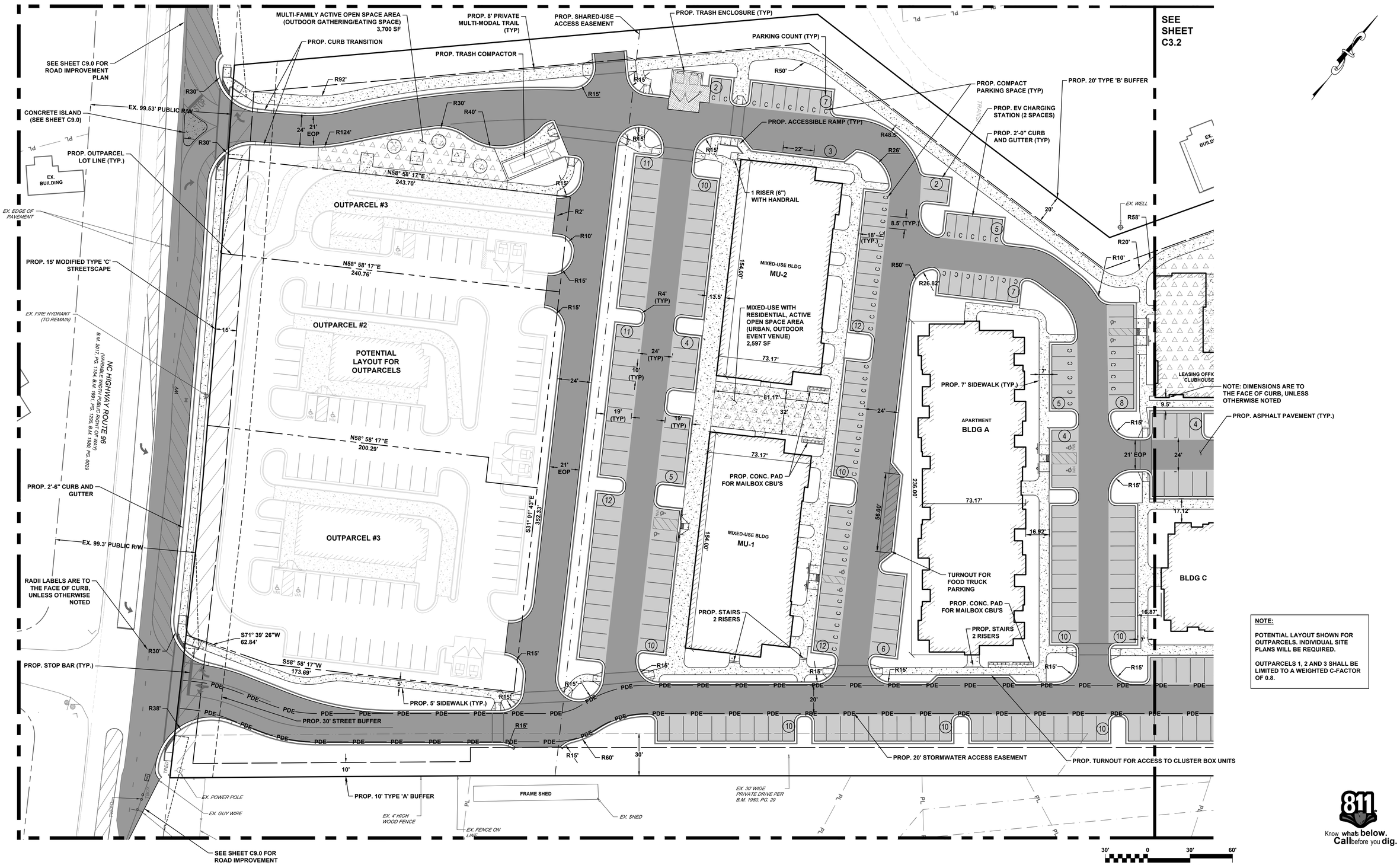
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C3.0
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C3.0 SITE PLAN.DWG ---- 02/12/2026 21:37:16



NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

OUTPARCELS 1, 2 AND 3 SHALL BE LIMITED TO A WEIGHTED C-FACTOR OF 0.8.

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

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SITE PLAN - ENLARGED

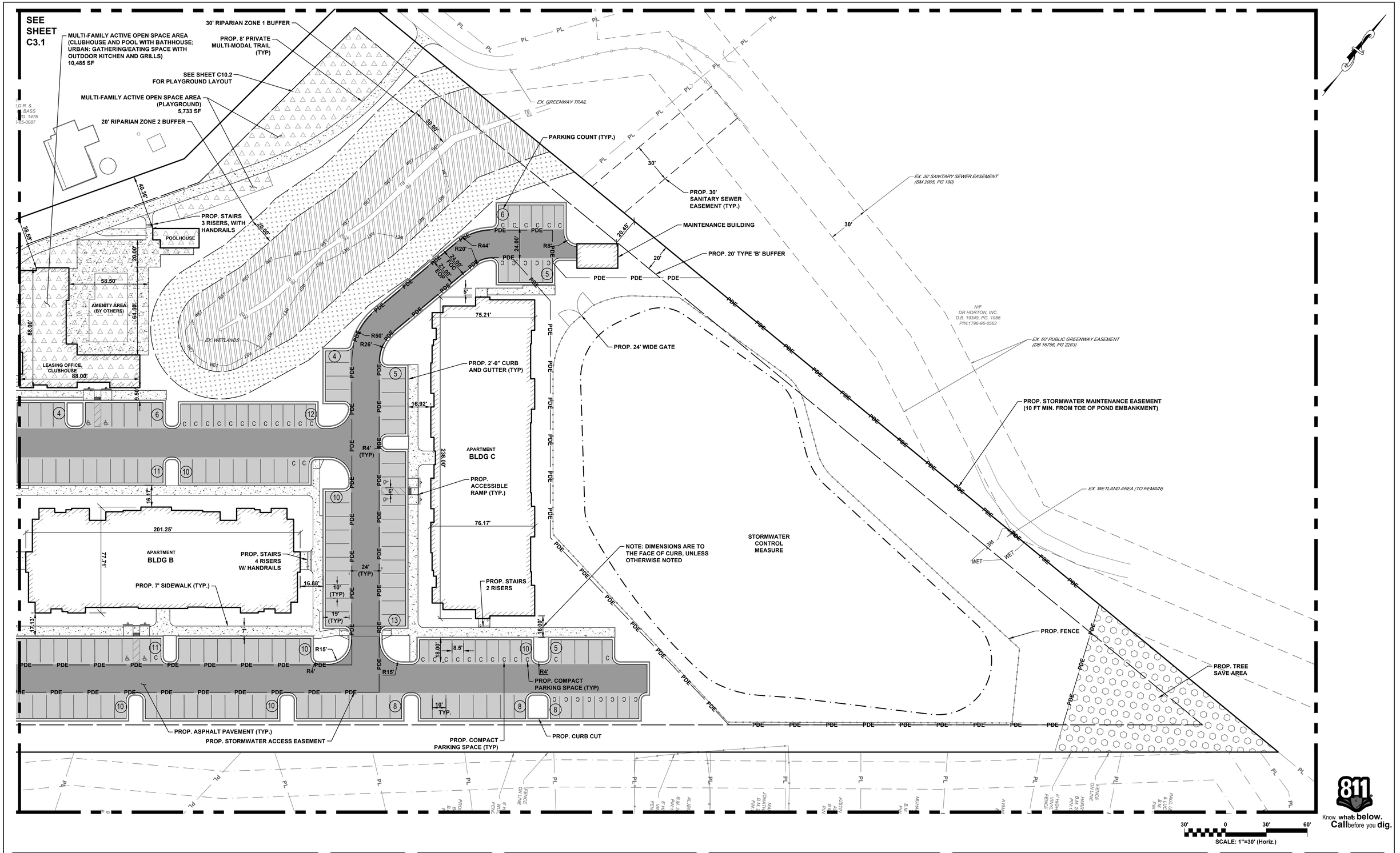
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE — HORIZONTAL: 1" = 30' — VERTICAL: N/A

C3.1 — DRAWING NUMBER — B — REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C3.0 SITE PLAN.DWG ---- 02/12/2026 21:37:28



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

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SITE PLAN - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C3.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

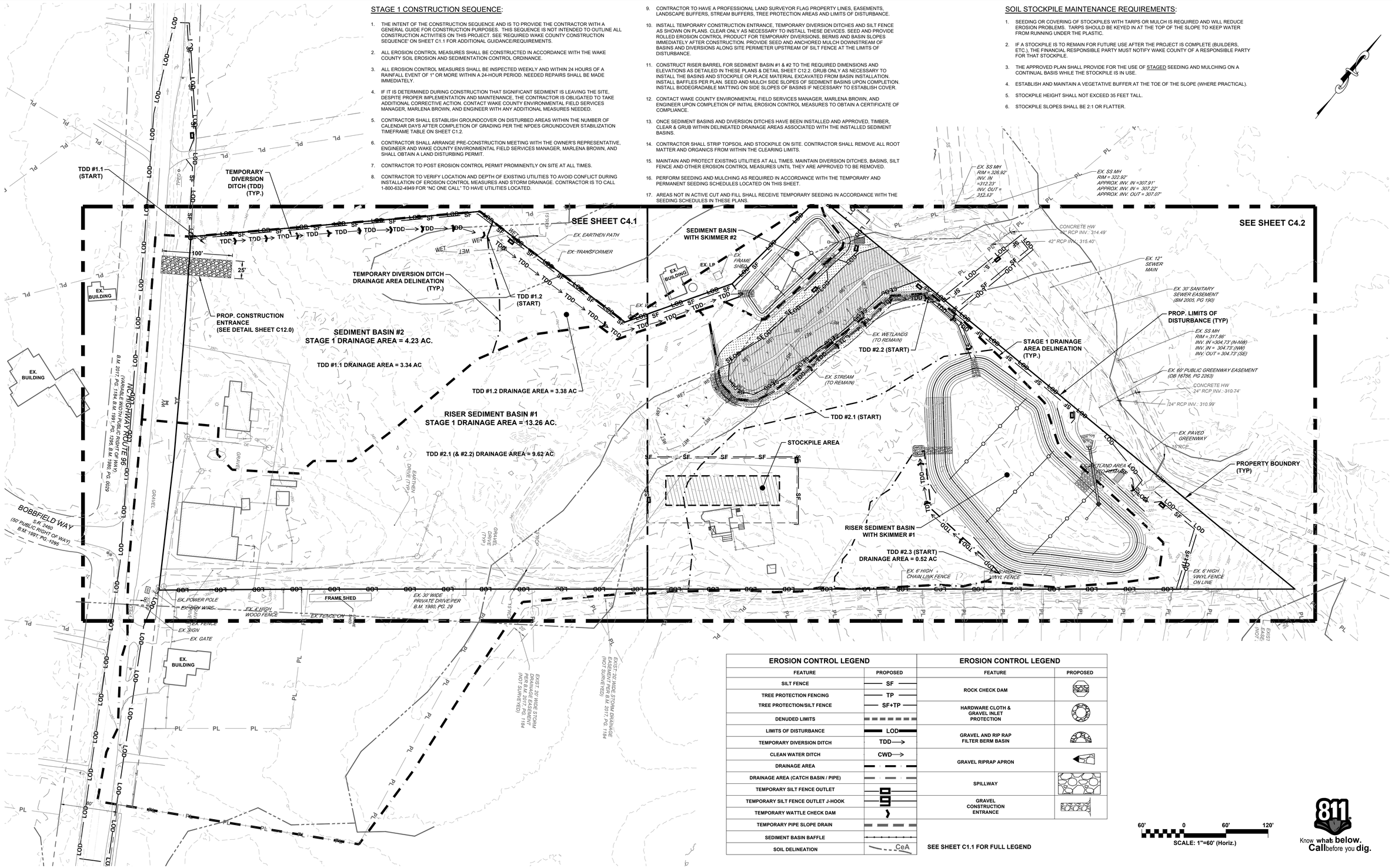
I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C3.0 SITE PLAN.DWG ---- 02/12/2026 21:37:42

STAGE 1 CONSTRUCTION SEQUENCE:

1. THE INTENT OF THE CONSTRUCTION SEQUENCE AND IS TO PROVIDE THE CONTRACTOR WITH A GENERAL GUIDE FOR CONSTRUCTION PURPOSES. THIS SEQUENCE IS NOT INTENDED TO OUTLINE ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT. SEE 'REQUIRED WAKE COUNTY CONSTRUCTION SEQUENCE' ON SHEET C1.1 FOR ADDITIONAL GUIDANCE/REQUIREMENTS.
2. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE WAKE COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
3. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 1" OR MORE WITHIN A 24-HOUR PERIOD. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
4. IF IT IS DETERMINED DURING CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE SITE, DESPITE PROPER IMPLEMENTATION AND MAINTENANCE, THE CONTRACTOR IS OBLIGATED TO TAKE ADDITIONAL CORRECTIVE ACTION. CONTACT WAKE COUNTY ENVIRONMENTAL FIELD SERVICES MANAGER, MARLENA BROWN, AND ENGINEER WITH ANY ADDITIONAL MEASURES NEEDED.
5. CONTRACTOR SHALL ESTABLISH GROUNDCOVER ON DISTURBED AREAS WITHIN THE NUMBER OF CALENDAR DAYS AFTER COMPLETION OF GRADING PER THE NPDES GROUNDCOVER STABILIZATION TIMEFRAME TABLE ON SHEET C1.2.
6. CONTRACTOR SHALL ARRANGE PRE-CONSTRUCTION MEETING WITH THE OWNER'S REPRESENTATIVE, ENGINEER AND WAKE COUNTY ENVIRONMENTAL FIELD SERVICES MANAGER, MARLENA BROWN, AND SHALL OBTAIN A LAND DISTURBING PERMIT.
7. CONTRACTOR TO POST EROSION CONTROL PERMIT PROMINENTLY ON SITE AT ALL TIMES.
8. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES TO AVOID CONFLICT DURING INSTALLATION OF EROSION CONTROL MEASURES AND STORM DRAINAGE. CONTRACTOR IS TO CALL 1-800-632-4949 FOR "NC ONE CALL" TO HAVE UTILITIES LOCATED.
9. CONTRACTOR TO HAVE A PROFESSIONAL LAND SURVEYOR FLAG PROPERTY LINES, EASEMENTS, LANDSCAPE BUFFERS, STREAM BUFFERS, TREE PROTECTION AREAS AND LIMITS OF DISTURBANCE.
10. INSTALL TEMPORARY CONSTRUCTION ENTRANCE, TEMPORARY DIVERSION DITCHES AND SILT FENCE AS SHOWN ON PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED AND PROVIDE ROLLED EROSION CONTROL PRODUCT FOR TEMPORARY DIVERSIONS, BERMS AND BASIN SLOPES IMMEDIATELY AFTER CONSTRUCTION. PROVIDE SEED AND ANCHORED MULCH DOWNSTREAM OF BASINS AND DIVERSIONS ALONG SITE PERIMETER UPSTREAM OF SILT FENCE AT THE LIMITS OF DISTURBANCE.
11. CONSTRUCT RISER BARREL FOR SEDIMENT BASIN #1 & #2 TO THE REQUIRED DIMENSIONS AND ELEVATIONS AS DETAILED IN THESE PLANS & DETAIL SHEET C12.2. GRUB ONLY AS NECESSARY TO INSTALL THE BASINS AND STOCKPILE OR PLACE MATERIAL EXCAVATED FROM BASIN INSTALLATION. INSTALL BAFFLES PER PLAN. SEED AND MULCH SIDE SLOPES OF SEDIMENT BASINS UPON COMPLETION. INSTALL BIODEGRADABLE MATTING ON SIDE SLOPES OF BASINS IF NECESSARY TO ESTABLISH COVER.
12. CONTACT WAKE COUNTY ENVIRONMENTAL FIELD SERVICES MANAGER, MARLENA BROWN, AND ENGINEER UPON COMPLETION OF INITIAL EROSION CONTROL MEASURES TO OBTAIN A CERTIFICATE OF COMPLIANCE.
13. ONCE SEDIMENT BASINS AND DIVERSION DITCHES HAVE BEEN INSTALLED AND APPROVED, TIMBER, CLEAR & GRUB WITHIN DELINEATED DRAINAGE AREAS ASSOCIATED WITH THE INSTALLED SEDIMENT BASINS.
14. CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON SITE. CONTRACTOR SHALL REMOVE ALL ROOT MATTER AND ORGANICS FROM WITHIN THE CLEARING LIMITS.
15. MAINTAIN AND PROTECT EXISTING UTILITIES AT ALL TIMES. MAINTAIN DIVERSION DITCHES, BASINS, SILT FENCE AND OTHER EROSION CONTROL MEASURES UNTIL THEY ARE APPROVED TO BE REMOVED.
16. PERFORM SEEDING AND MULCHING AS REQUIRED IN ACCORDANCE WITH THE TEMPORARY AND PERMANENT SEEDING SCHEDULES LOCATED ON THIS SHEET.
17. AREAS NOT IN ACTIVE CUT AND FILL SHALL RECEIVE TEMPORARY SEEDING IN ACCORDANCE WITH THE SEEDING SCHEDULES IN THESE PLANS.

SOIL STOCKPILE MAINTENANCE REQUIREMENTS:

1. SEEDING OR COVERING OF 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 UNDER 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 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).
5. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET TALL.
6. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.



EROSION CONTROL LEGEND		EROSION CONTROL LEGEND	
FEATURE	PROPOSED	FEATURE	PROPOSED
SILT FENCE	SF	ROCK CHECK DAM	
TREE PROTECTION FENCING	TP		
TREE PROTECTION/SILT FENCE	SF+TP	HARDWARE CLOTH & GRAVEL INLET PROTECTION	
DENUDED LIMITS			
LIMITS OF DISTURBANCE	LOD	GRAVEL AND RIP RAP FILTER BERM BASIN	
TEMPORARY DIVERSION DITCH	TDD		
CLEAN WATER DITCH	CWD	GRAVEL RIPRAP APRON	
DRAINAGE AREA			
DRAINAGE AREA (CATCH BASIN / PIPE)		SPILLWAY	
TEMPORARY SILT FENCE OUTLET			
TEMPORARY SILT FENCE OUTLET J-HOOK		GRAVEL CONSTRUCTION ENTRANCE	
TEMPORARY WATTLE CHECK DAM			
TEMPORARY PIPE SLOPE DRAIN			
SEDIMENT BASIN BAFFLE			
SOIL DELINEATION	CeA		

SEE SHEET C1.1 FOR FULL LEGEND

60' 0 60' 120'
SCALE: 1"=60' (Horiz.)

Know what's below. Call before you dig.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

EROSION CONTROL STAGE 1 - OVERALL

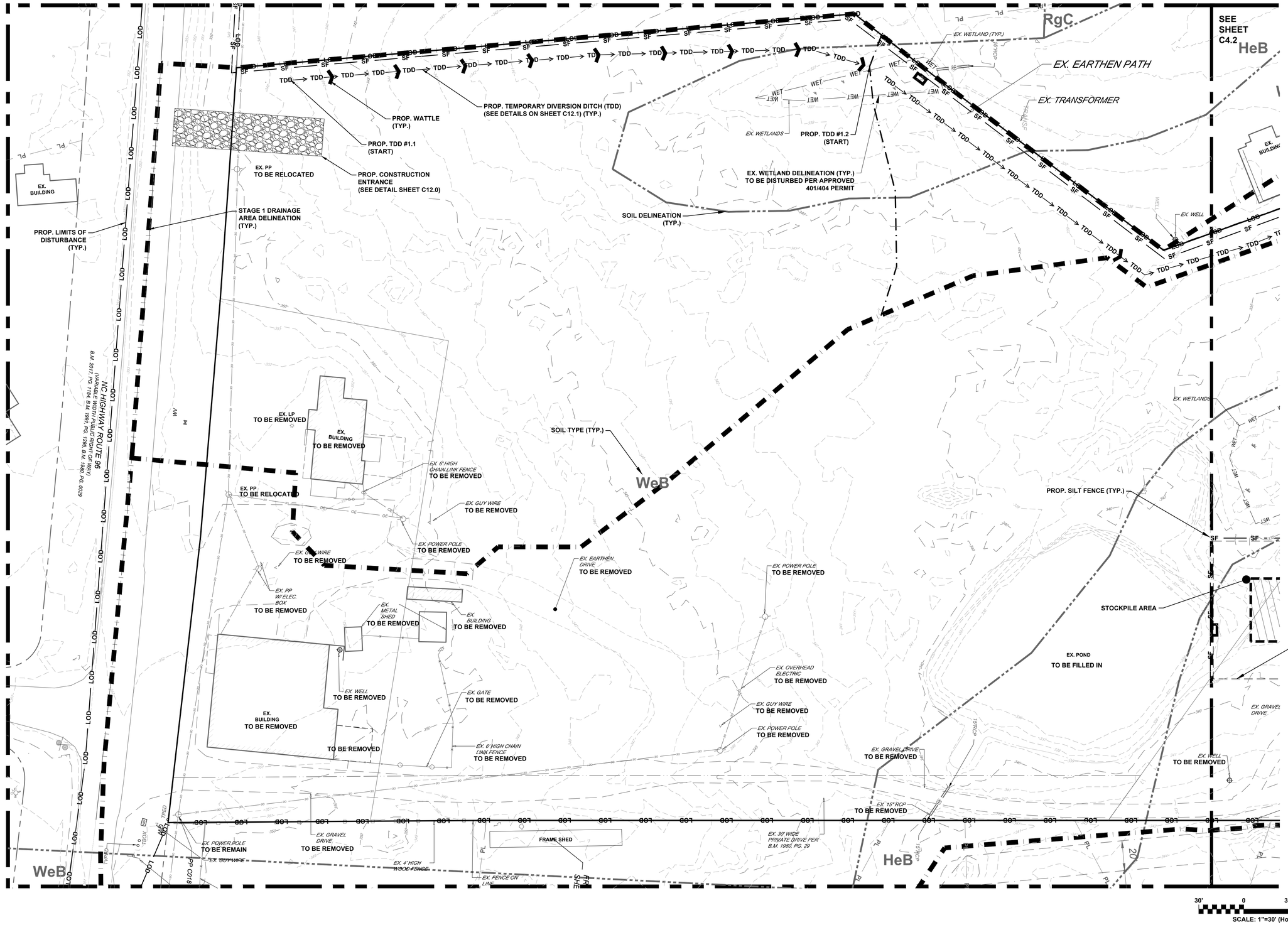
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C4.0
DRAWING NUMBER
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I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C4.0 EROSION CONTROL STAGE 1.DWG ---- 02/12/2026 21:38:50



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WAKE COUNTY

EROSION CONTROL STAGE 1 - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
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DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

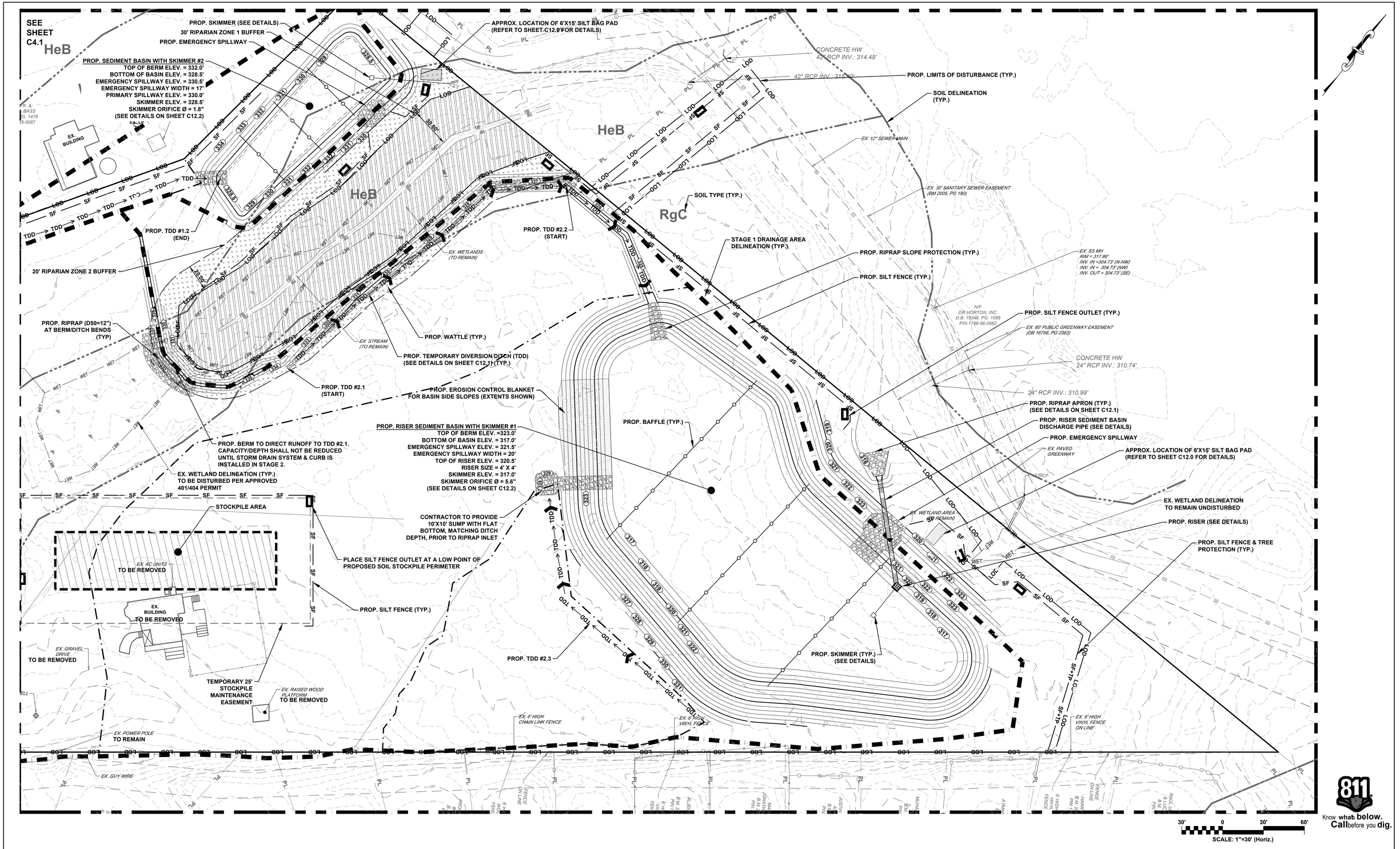
SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C4.1
DRAWING NUMBER
B
REVISION

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WAKE COUNTY

EROSION CONTROL STAGE 1 - ENLARGED

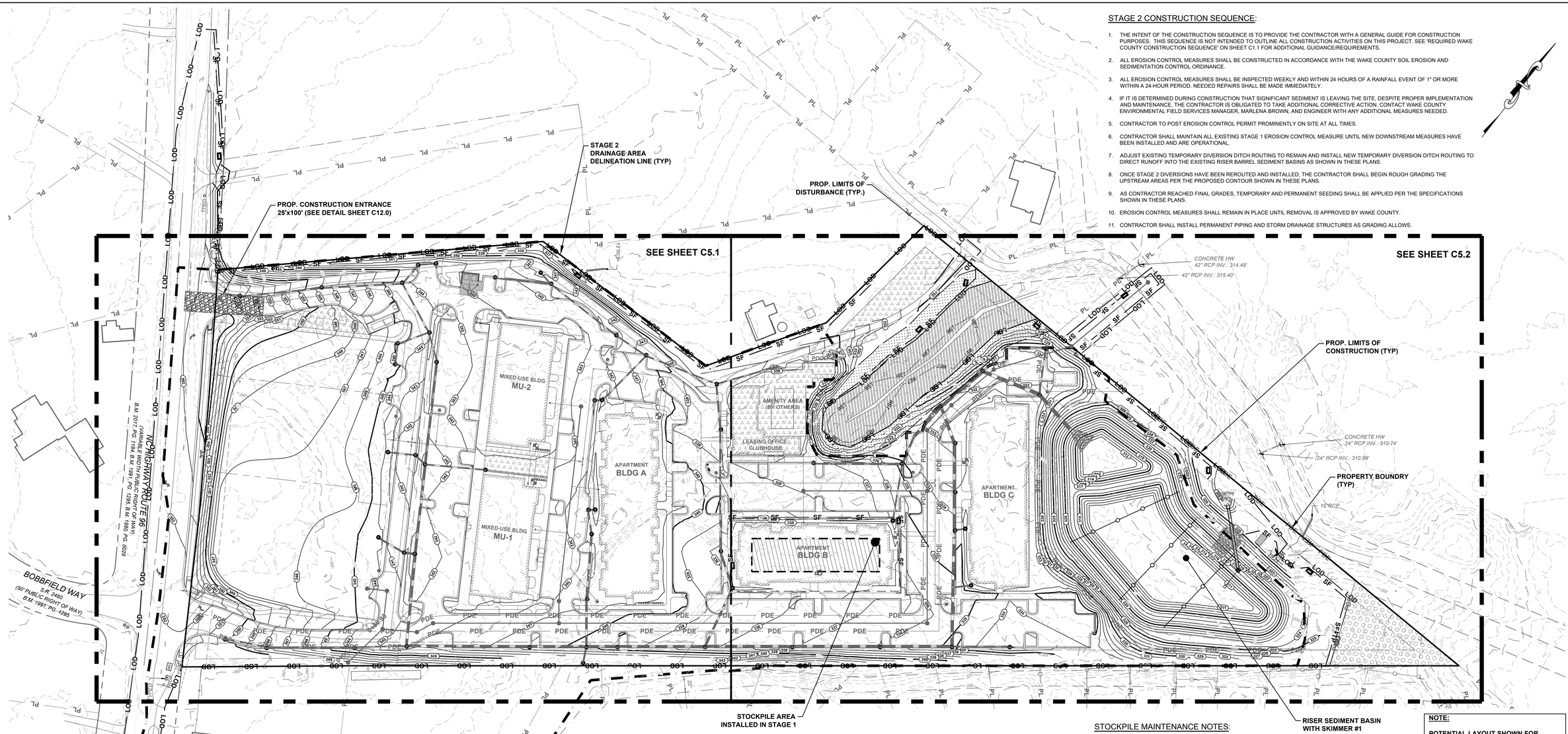
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C4.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C4.0 EROSION CONTROL STAGE 1.DWG ---- 02/12/2026 21:39:20



STAGE 2 CONSTRUCTION SEQUENCE:

1. THE INTENT OF THE CONSTRUCTION SEQUENCE IS TO PROVIDE THE CONTRACTOR WITH A GENERAL GUIDE FOR CONSTRUCTION PURPOSES. THIS SEQUENCE IS NOT INTENDED TO OUTLINE ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT. SEE 'REQUIRED WAKE COUNTY CONSTRUCTION SEQUENCE' ON SHEET C1.1 FOR ADDITIONAL GUIDANCE/REQUIREMENTS.
2. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE WAKE COUNTY SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
3. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 1" OR MORE WITHIN A 24-HOUR PERIOD. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
4. IF IT IS DETERMINED DURING CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE SITE, DESPITE PROPER IMPLEMENTATION AND MAINTENANCE, THE CONTRACTOR IS OBLIGATED TO TAKE ADDITIONAL CORRECTIVE ACTION. CONTACT WAKE COUNTY ENVIRONMENTAL FIELD SERVICES MANAGER, MARLENA BROWN, AND ENGINEER WITH ANY ADDITIONAL MEASURES NEEDED.
5. CONTRACTOR TO POST EROSION CONTROL PERMIT PROMINENTLY ON SITE AT ALL TIMES.
6. CONTRACTOR SHALL MAINTAIN ALL EXISTING STAGE 1 EROSION CONTROL MEASURE UNTIL NEW DOWNSTREAM MEASURES HAVE BEEN INSTALLED AND ARE OPERATIONAL.
7. ADJUST EXISTING TEMPORARY DIVERSION DITCH ROUTING TO REMAIN AND INSTALL NEW TEMPORARY DIVERSION DITCH ROUTING TO DIRECT RUNOFF INTO THE EXISTING RISER BARREL SEDIMENT BASINS AS SHOWN IN THESE PLANS.
8. ONCE STAGE 2 DIVERSIONS HAVE BEEN REROUTED AND INSTALLED, THE CONTRACTOR SHALL BEGIN ROUGH GRADING THE UPSTREAM AREAS PER THE PROPOSED CONTOUR SHOWN IN THESE PLANS.
9. AS CONTRACTOR REACHED FINAL GRADES, TEMPORARY AND PERMANENT SEEDING SHALL BE APPLIED PER THE SPECIFICATIONS SHOWN IN THESE PLANS.
10. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL REMOVAL IS APPROVED BY WAKE COUNTY.
11. CONTRACTOR SHALL INSTALL PERMANENT PIPING AND STORM DRAINAGE STRUCTURES AS GRADING ALLOWS.

EROSION CONTROL LEGEND		EROSION CONTROL LEGEND	
FEATURE	PROPOSED	FEATURE	PROPOSED
SILT FENCE	SF	ROCK CHECK DAM	
TREE PROTECTION FENCING	TP		
TREE PROTECTION/SILT FENCE	SF+TP	HARDWARE CLOTH & GRAVEL INLET PROTECTION	
DENUDED LIMITS			
LIMITS OF DISTURBANCE	LOD	GRAVEL AND RIP RAP FILTER BERM BASIN	
TEMPORARY DIVERSION DITCH	TDD		
CLEAN WATER DITCH	CWD	GRAVEL RIPRAP APRON	
DRAINAGE AREA			
DRAINAGE AREA (CATCH BASIN / PIPE)		SPILLWAY	
TEMPORARY SILT FENCE OUTLET			
TEMPORARY SILT FENCE OUTLET J-HOOK		GRAVEL CONSTRUCTION ENTRANCE	
TEMPORARY WATTLE CHECK DAM			
TEMPORARY PIPE SLOPE DRAIN			
SEDIMENT BASIN BAFFLE			
SOIL DELINEATION	CeA		

SEE SHEET C1.1 FOR FULL LEGEND

STOCKPILE MAINTENANCE NOTES:

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).

BASIN REMOVAL SEQUENCE:

1. SCHEDULE A MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
2. CONTACT NCDEQ - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS. *AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY*, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THAT EMAIL SHOULD INCLUDE: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENCIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN #, C) DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01. (KEEP EMAIL FOR NPDES MONITORING DOCUMENTATION)
3. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
5. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
6. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES, INSTALLING WATER QUALITY ORIFICES/WEIRS FOR WET POND CONVERSION, AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

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

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

EROSION CONTROL STAGE 2 - OVERALL

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C5.0
DRAWING NUMBER
B
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STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C5.0 EROSION CONTROL STAGE 2.DWG ---- 02/12/2026 21:40:42



NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

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WAKE COUNTY

EROSION CONTROL STAGE 2 - ENLARGED

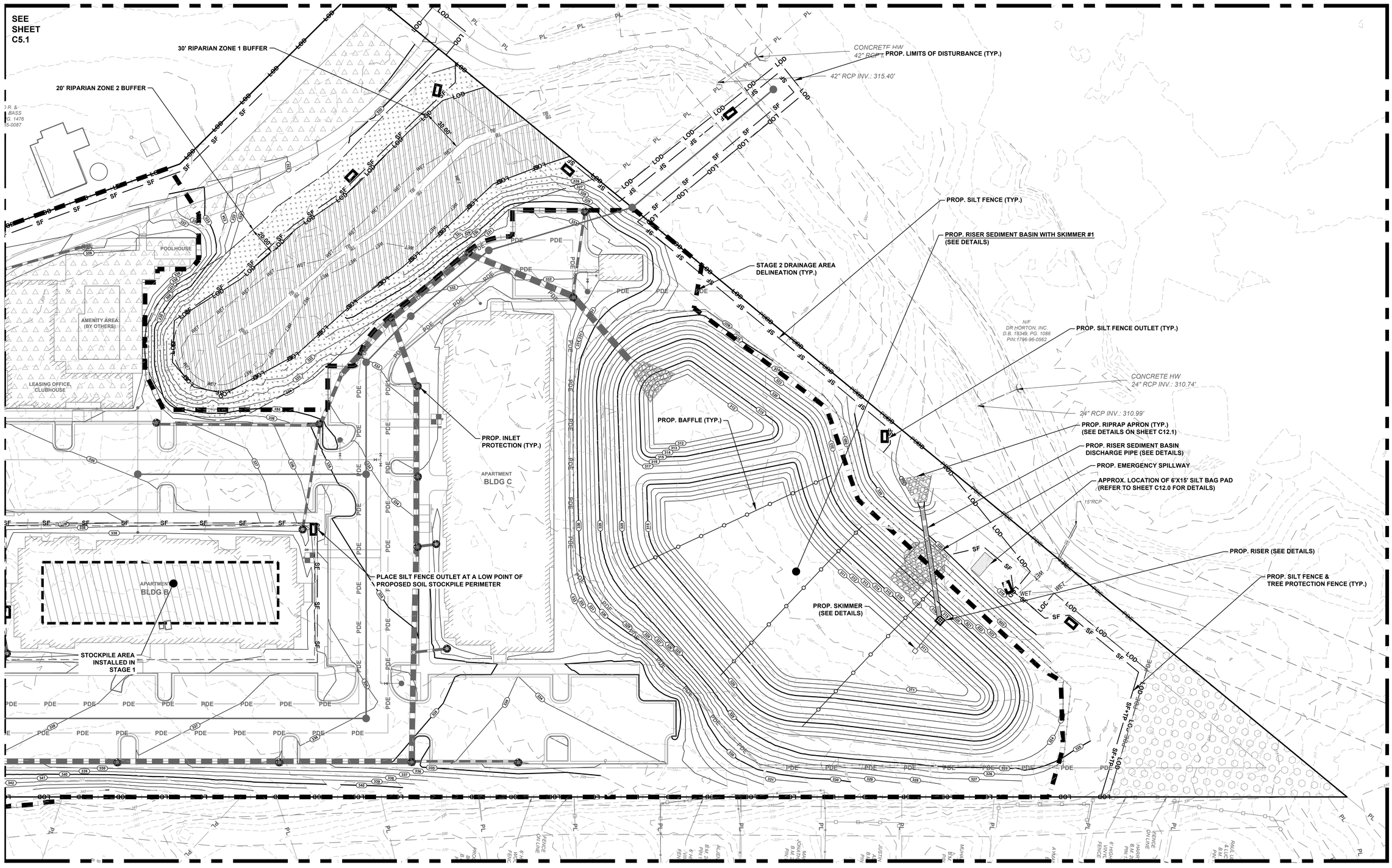
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C5.1
DRAWING NUMBER
B
REVISION

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02/13/2026
SEAL
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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
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WAKE COUNTY

EROSION CONTROL STAGE 2 - ENLARGED

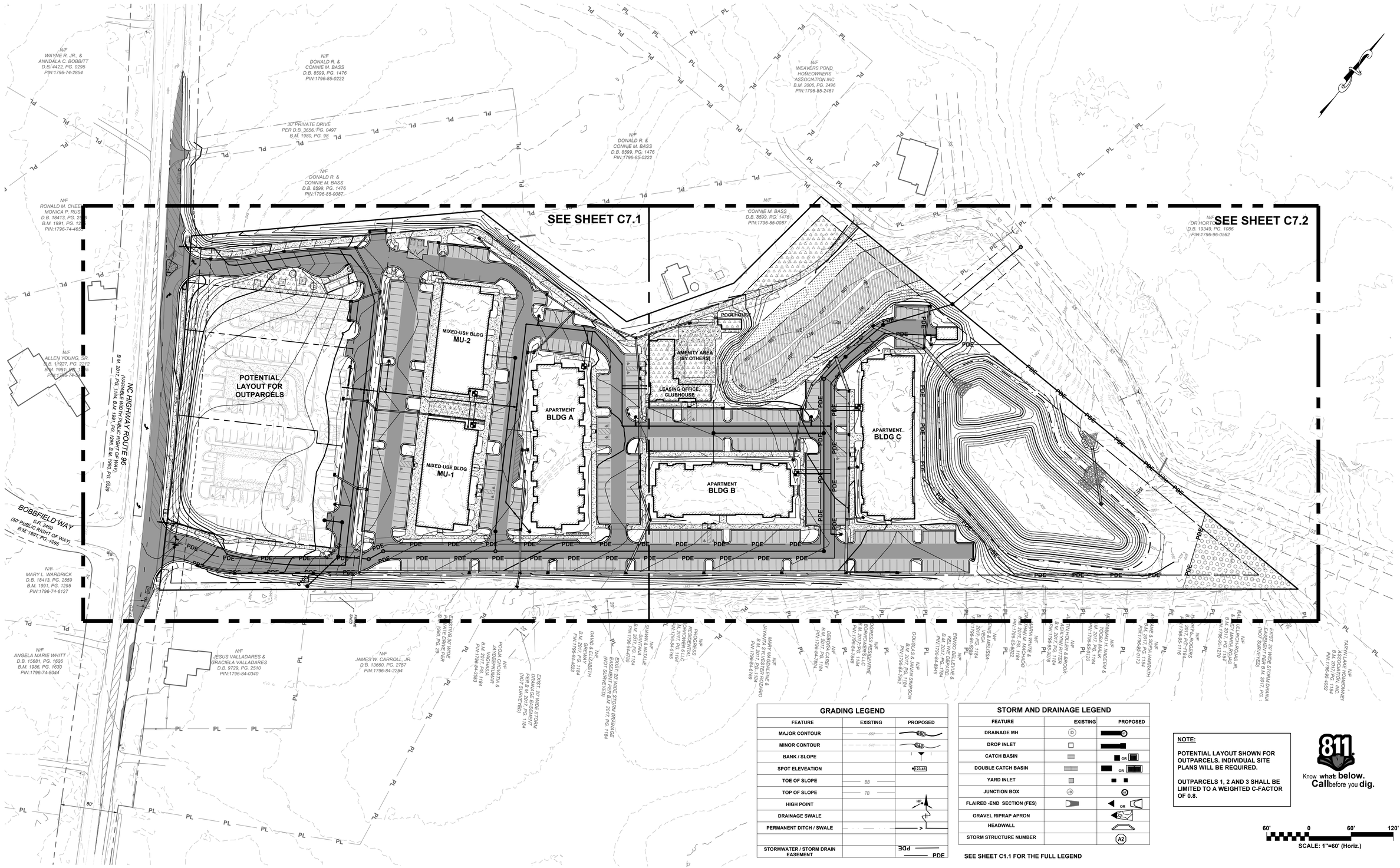
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DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C5.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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GRADING LEGEND

FEATURE	EXISTING	PROPOSED
MAJOR CONTOUR	650	650
MINOR CONTOUR	648	648
BANK / SLOPE		
SPOT ELEVEATION		123.45
TOE OF SLOPE	BB	
TOP OF SLOPE	TB	
HIGH POINT		HP
DRAINAGE SWALE		
PERMANENT DITCH / SWALE		
STORMWATER / STORM DRAIN EASEMENT		PDE / PDE

STORM AND DRAINAGE LEGEND

FEATURE	EXISTING	PROPOSED
DRAINAGE MH	D	D
DROP INLET		
CATCH BASIN		OR
DOUBLE CATCH BASIN		OR
YARD INLET		
JUNCTION BOX	JB	JB
FLAIRED -END SECTION (FES)		OR
GRAVEL RIPRAP APRON		
HEADWALL		
STORM STRUCTURE NUMBER		A2

SEE SHEET C1.1 FOR THE FULL LEGEND

NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

OUTPARCELS 1, 2 AND 3 SHALL BE LIMITED TO A WEIGHTED C-FACTOR OF 0.8.

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

60' 0 60' 120'

SCALE: 1"=60' (Horiz.)

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WAKE COUNTY

GRADING PLAN - OVERALL

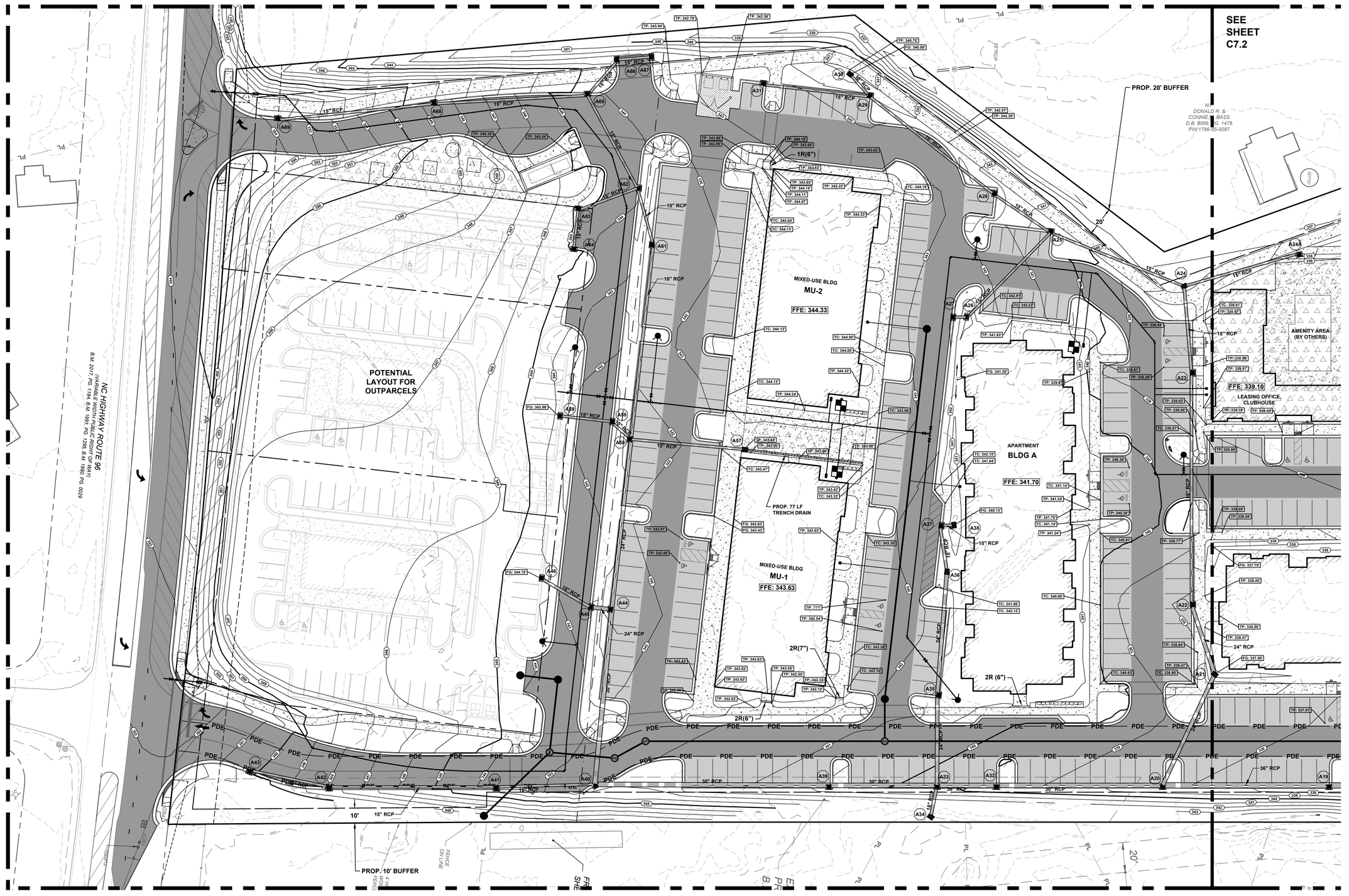
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C7.0
DRAWING NUMBER
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REVISION

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I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C7.0 GRADING PLAN.DWG ---- 02/12/2026 21:42:48



NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

OUTPARCELS 1, 2 AND 3 SHALL BE LIMITED TO A WEIGHTED C-FACTOR OF 0.8.

30' 0 30' 60'

SCALE: 1"=30' (Horiz.)

Know what's below. Call before you dig.

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GATEWAY ZEBULON MIXED-USE
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GRADING PLAN - ENLARGED

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DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C7.1
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C7.0 GRADING PLAN.DWG ---- 02/12/2026 21:42:57

SEE SHEET C7.1

PROP. TREE SAVE AREA

30' RIPARIAN ZONE 1 BUFFER

20' RIPARIAN ZONE 2 BUFFER

EX. GREENWAY TRAIL

CONCRETE HW
42" RCP INV.: 314.49'

42" RCP INV.: 315.40'

MAINTENANCE BUILDING

PROP. 20' BUFFER

FFE: 339.10
POOLHOUSE

AMENITY AREA
(BY OTHERS)

FFE: 339.10
LEASING OFFICE,
CLUBHOUSE

PROP. CURB CUT

APARTMENT
BLDG C
FFE: 334.33

APARTMENT
BLDG B
FFE: 338.50

FFE: 332.00

3R(6.5")

4R(6")

2R (5")

C

STORMWATER
CONTROL MEASURE
(SEE DETAILS ON
SHEET C16.0)

N/F
DR HORTON, INC.
D.B. 19349, PG. 1086
PIN: 1796-96-0562

CONCRETE HW
24" RCP INV.: 310.74'

24" RCP INV.: 310.99'

PROP. STORMWATER MAINTENANCE EASEMENT
(10 FT MIN. FROM TOE OF POND EMBANKMENT)

EX. WETLAND AREA (TO REMAIN)

PROP. FENCE

PROP. TREE SAVE AREA

PROP. CURB CUT

Know what's below. Call before you dig.

30' 0 30' 60'

SCALE: 1"=30' (Horiz.)

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 RICK N. HARTMAN
02/13/2026

McKIM&CREED

8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

GRADING PLAN - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C7.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C7.0 GRADING PLAN.DWG ---- 02/12/2026 21:43:08

NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

60' 0 60' 120'

SCALE: 1"=60' (Horiz.)

SEE SHEET C8.1

SEE SHEET C8.2

POTENTIAL LAYOUT FOR OUTPARCELS

MIXED-USE BLDG MU-2

MIXED-USE BLDG MU-1

APARTMENT BLDG A

APARTMENT BLDG B

APARTMENT BLDG C

POOLHOUSE

AMENITY AREA (BY OTHERS)

LEASING OFFICE, CLUBHOUSE

NC HIGHWAY ROUTE 96 (VARIABLE WIDTH PUBLIC RIGHT-OF-WAY) B.M. 2017, PG. 184, B.M. 1991, PG. 1295, B.M. 1982, PG. 0039

BOBBFIELD WAY S.R. 2460 (50' PUBLIC RIGHT OF WAY) B.M. 1991, PG. 1295

N/F WAYNE R. JR., & ANNDALA C. BOBBITT D.B. 4422, PG. 0295 PIN:1796-74-2854

N/F DONALD R. & CONNIE M. BASS D.B. 8599, PG. 1476 PIN:1796-85-0222

30' PRIVATE DRIVE PER D.B. 3656, PG. 0497 B.M. 1980, PG. 98

N/F DONALD R. & CONNIE M. BASS D.B. 8599, PG. 1476 PIN:1796-85-0087

N/F WEAVERS POND HOMEOWNERS ASSOCIATION INC B.M. 2006, PG. 2496 PIN:1796-85-2461

N/F RONALD M. CHEEK & MONICA P. RUSS D.B. 18413, PG. 2529 B.M. 1991, PG. 1295 PIN:1796-74-4655

N/F ALLEN YOUNG, SR. D.B. 11927, PG. 2512 B.M. 1991, PG. 1295 PIN:1796-74-5411

N/F MARY L. WARDRICK D.B. 18413, PG. 2559 B.M. 1991, PG. 1295 PIN:1796-74-6127

N/F ANGELA MARIE WHITT D.B. 15681, PG. 1626 B.M. 1986, PG. 1630 PIN:1796-74-8044

N/F JESUS VALLADARES & GRACIELA VALLADARES D.B. 9729, PG. 2510 PIN:1796-84-0340

N/F JAMES W. CARROLL, JR. D.B. 13660, PG. 2757 PIN:1796-84-2254

N/F DR HORTON, INC. D.B. 19349, PG. 1086 PIN:1796-96-0562

CONCRETE HW 42" RCP INV.: 314.49'

42" RCP INV.: 315.40'

CONCRETE HW 24" RCP INV.: 310.74'

24" RCP INV.: 310.99'

15"RCP

SANITARY SEWER MANHOLE RIM=322.32' INV. IN 314.34' INV. OUT 306.20' (SE)

SANITARY SEWER MANHOLE RIM=317.86' INV. IN 306.72' (NW) INV. OUT 306.62' (SE)

EXISTING 30' WIDE PRIVATE DRIVE PER B.M. 1980, PG. 29

N/F POOJA CHOVATIA & JAYDEEPKUMAR PATEL B.M. 2017, PG. 184 PIN:1796-84-3563

N/F DAVID & ELIZABETH B.M. 2017, PG. 184 PIN:1796-84-4823

N/F SHAWN & NATHALIE SANTANA B.M. 2017, PG. 184 PIN:1796-84-4780

N/F PROGRESS RESIDENTIAL BORROWER 6 LLC B.M. 2017, PG. 184 PIN:1796-84-5705

N/F MARY MARGARENE & JAYANTA SYLVESTER ROZARIO B.M. 2017, PG. 184 PIN:1796-84-6709

N/F DEBORA CAREY B.M. 2017, PG. 184 PIN:1796-84-7804

N/F PROGRESS RESIDENTIAL BORROWER 6 LLC B.M. 2017, PG. 184 PIN:1796-84-7848

N/F DOUGLAS & JAMAN SIMPSON B.M. 2017, PG. 184 PIN:1796-84-7992

N/F ERNSO BELLEVUE & B.M. 2017, PG. 184 PIN:1796-84-8949

N/F ALEXIS & MELISSA B.M. 2017, PG. 184 PIN:1796-84-9918

N/F JOSEPH & MARGARET WHITE & B.M. 2017, PG. 1184 PIN:1796-85-1076

N/F ASHLYNN RITTER B.M. 2017, PG. 1184 PIN:1796-85-1120

N/F MARIAMMAL HARIDEM & TOOBA HALIM B.M. 2017, PG. 1184 PIN:1796-85-1173

N/F ANNE & SOFIA HARRATH B.M. 2017, PG. 1184 PIN:1796-85-1219

N/F KERYL L. ROGERS B.M. 2017, PG. 1184 PIN:1796-85-1116

N/F RAMIRO LUCERO-ROJAS JR & ANGY MARIA ROJAS B.M. 2017, PG. 1184 PIN:1796-85-1270

N/F TARYN LAUREN TOMLINSON ASSOCIATION B.M. 2017, PG. 1184 PIN:1796-85-4032

RALEIGH WATER UTILITY NOTES:

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
   A) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
   B) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
   C) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
   D) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
   E) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORMDRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W- 41 & S-49).
   F) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. SEWER BYPASS PUMPING – A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
8. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
9. INSTALL WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
10. INSPECTIONS OF 4" AND LARGER WATER MAINS OF THE PRIVATE DISTRIBUTION SYSTEM WILL BE INSPECTED AS PART OF THE INFRASTRUCTURE PERMIT.
11. PRIVATE SEWER MAINS AS PART OF A COLLECTION SYSTEM ARE PERMITTED AND INSPECTED UNDER THE PRIVATE INFRASTRUCTURE PERMIT FOR SEWER.
12. ANY WATER OR SEWER SERVICES ON PRIVATE PROPERTY THAT WILL BE INSTALLED UNDER CONSTRUCTION DRAWINGS MAY REQUIRE A PLUMBING UTILITY PERMIT IN THE CITY OF RALEIGH. CONSULT WITH THE ENGINEERING INSPECTION COORDINATOR DURING THE PRE-CONSTRUCTION MEETING ON THE NECESSARY PERMITS.
13. INSTALL SEWER SERVICES WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED PER THE CURRENT NC PLUMBING CODE.
14. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
15. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
16. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
17. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
18. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
19. THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
20. THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A – GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
21. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH, INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
22. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN $250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.
23. PRIVATE SUB-METERING - NO RESALE OF WATER SHALL OCCUR WITHOUT APPROVAL OF THE NORTH CAROLINA UTILITY COMMISSION. SUB-METERING SHALL BE IN ACCORDANCE WITH SECTION 1400 OF THE "SAFE DRINKING WATER ACT".

JAN2025M

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Raleigh Water Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors and schedule a Pre-construction meeting prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require re-installation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of Raleigh Water Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

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

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM & CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

UTILITY PLAN - OVERALL

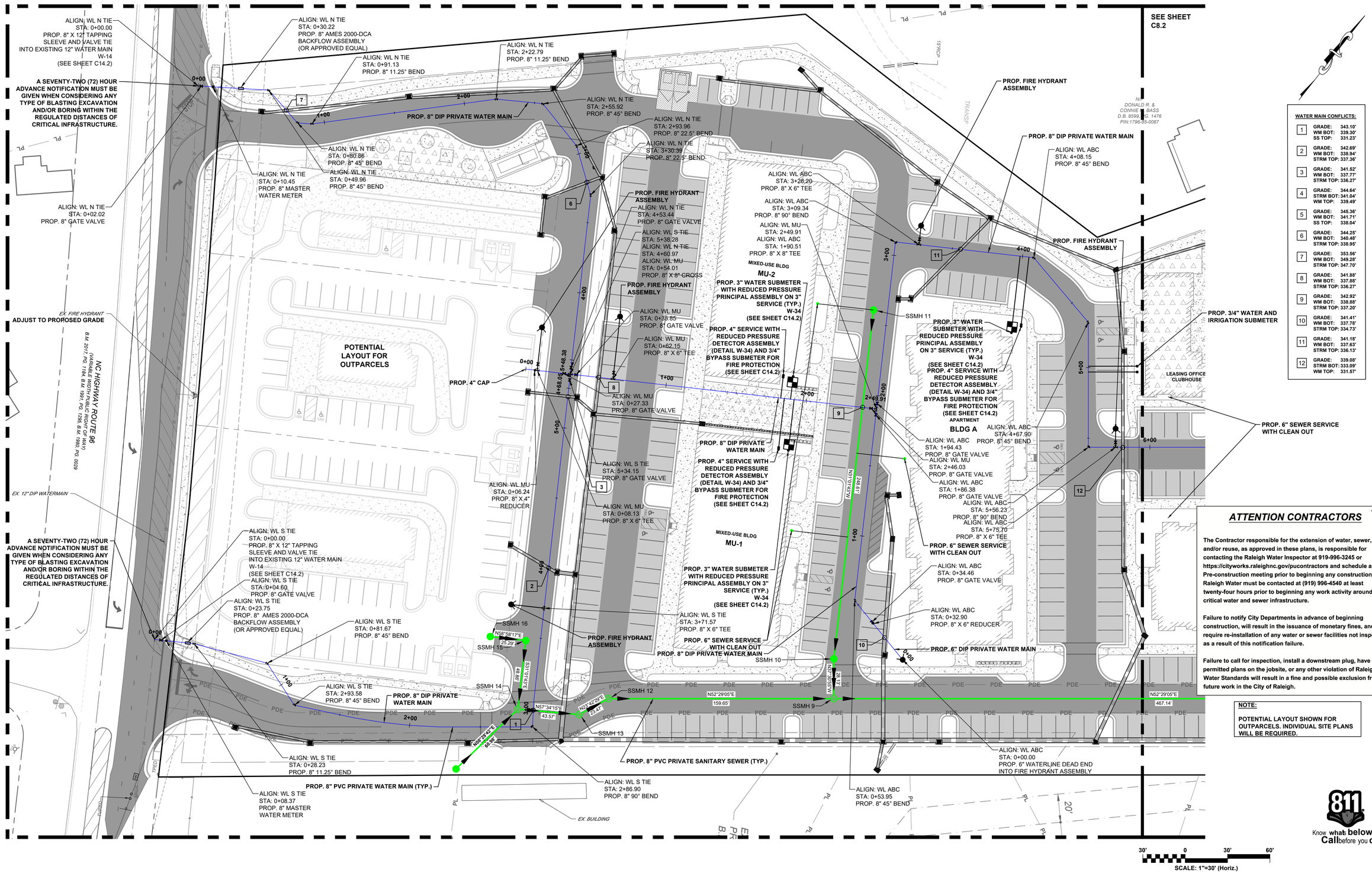
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C8.0 DRAWING NUMBER
B REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.0 UTILITY PLAN.DWG ---- 02/13/2026 10:49:12



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Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

UTILITY PLAN - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
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SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C8.1
DRAWING NUMBER
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I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.0 UTILITY PLAN.DWG ---- 02/13/2026 10:49:26

SEE SHEET
C8.1

WATER MAIN CONFLICTS:

13	GRADE:	334.00'
	WM BOT:	330.22'
	SS TOP:	324.54'
14	GRADE:	332.54'
	WM BOT:	328.76'
	STRM TOP:	327.18'
15	GRADE:	335.33'
	WM BOT:	331.57'
	STRM TOP:	330.06'
16	GRADE:	330.69'
	STRM BOT:	322.98'
	WM TOP:	321.43'
17	GRADE:	329.51'
	STRM BOT:	325.15'
	WM TOP:	323.59'

ATTENTION CONTRACTORS

JAN2025M

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

SCALE: 1"=30' (Horiz.)

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GATEWAY ZEBULON MIXED-USE
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UTILITY PLAN - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
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PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C8.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

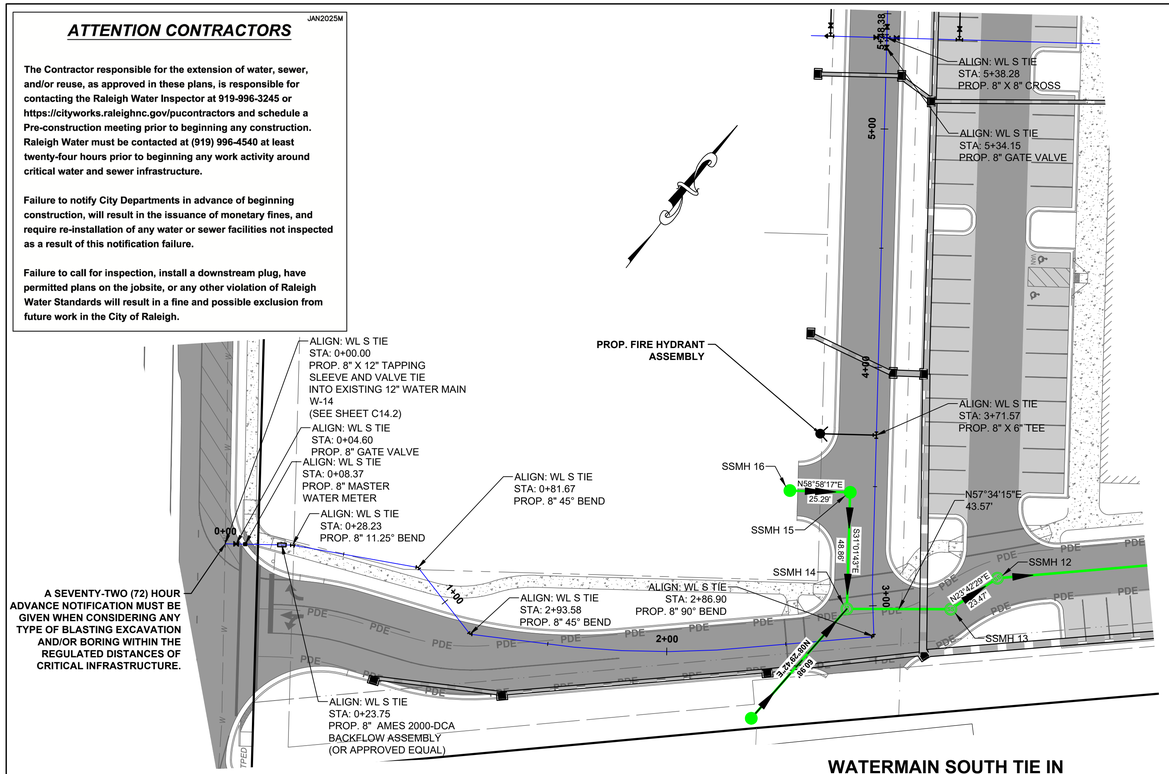
JAN2025M

ATTENTION CONTRACTORS

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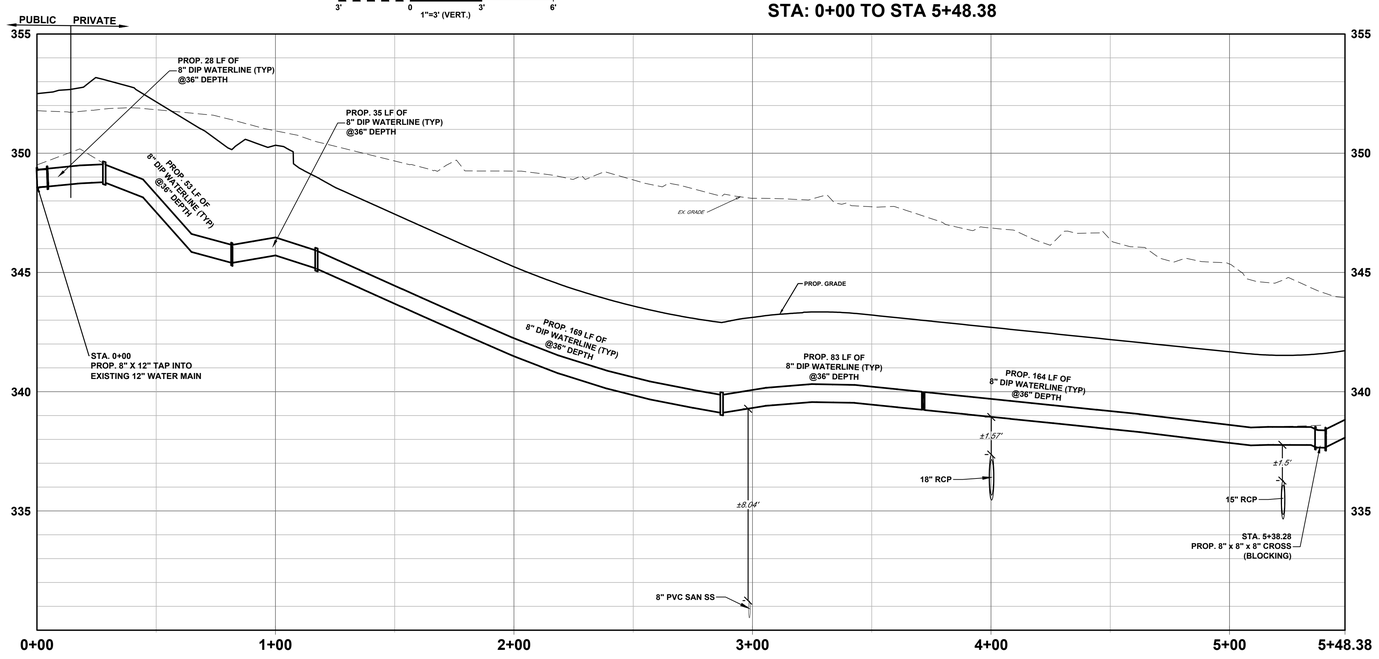
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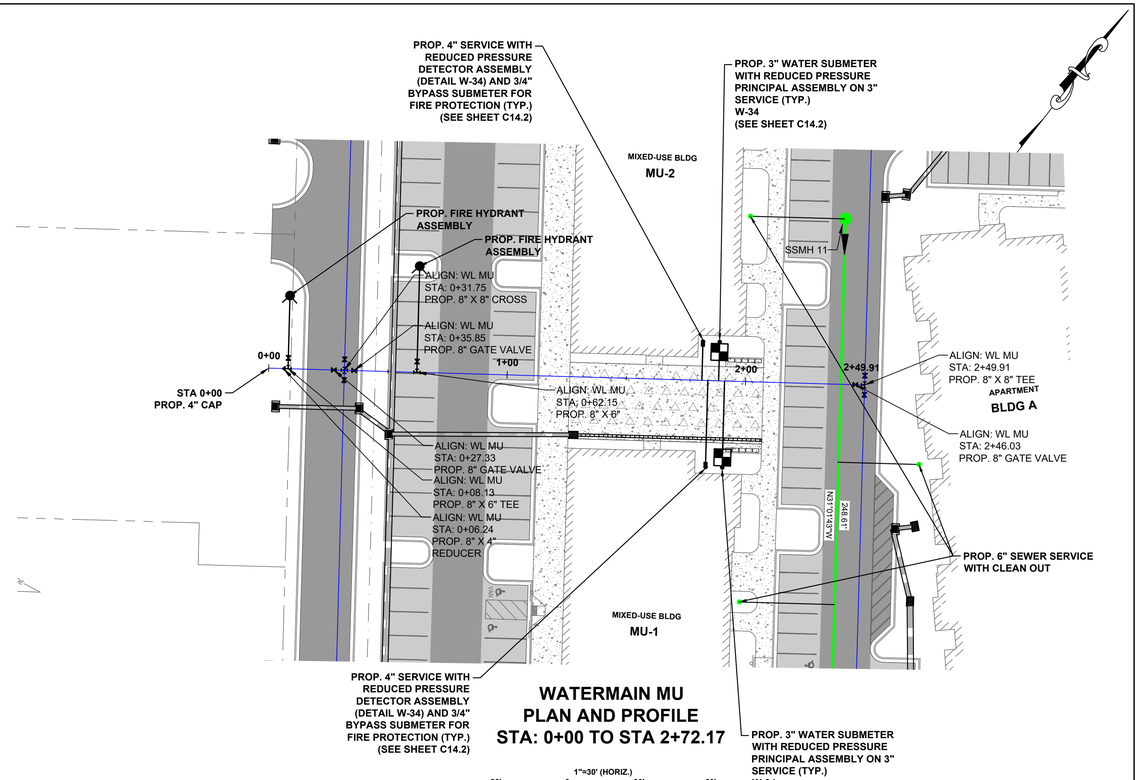
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1"=30' (HORIZ.)
1"=3' (VERT.)

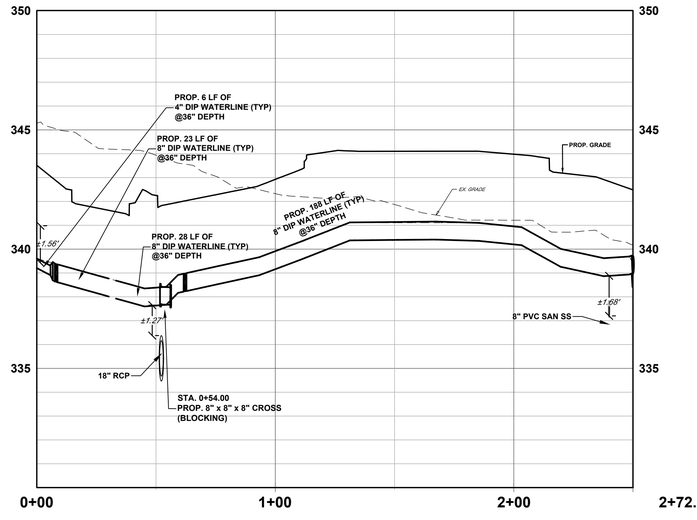
WATERMAIN SOUTH TIE IN PLAN AND PROFILE STA: 0+00 TO STA 5+48.38





1"=30' (HORIZ.)
1"=3' (VERT.)

WATERMAIN MU PLAN AND PROFILE STA: 0+00 TO STA 2+72.17



Know what's below. Call before you dig.

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NORTH CAROLINA PROFESSIONAL ENGINEER
2/12/13/2026
SEAL
057953
PATRICK N. HARTMAN

McKIM & CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

WATER PLAN AND PROFILE - SOUTH TIE IN & MU

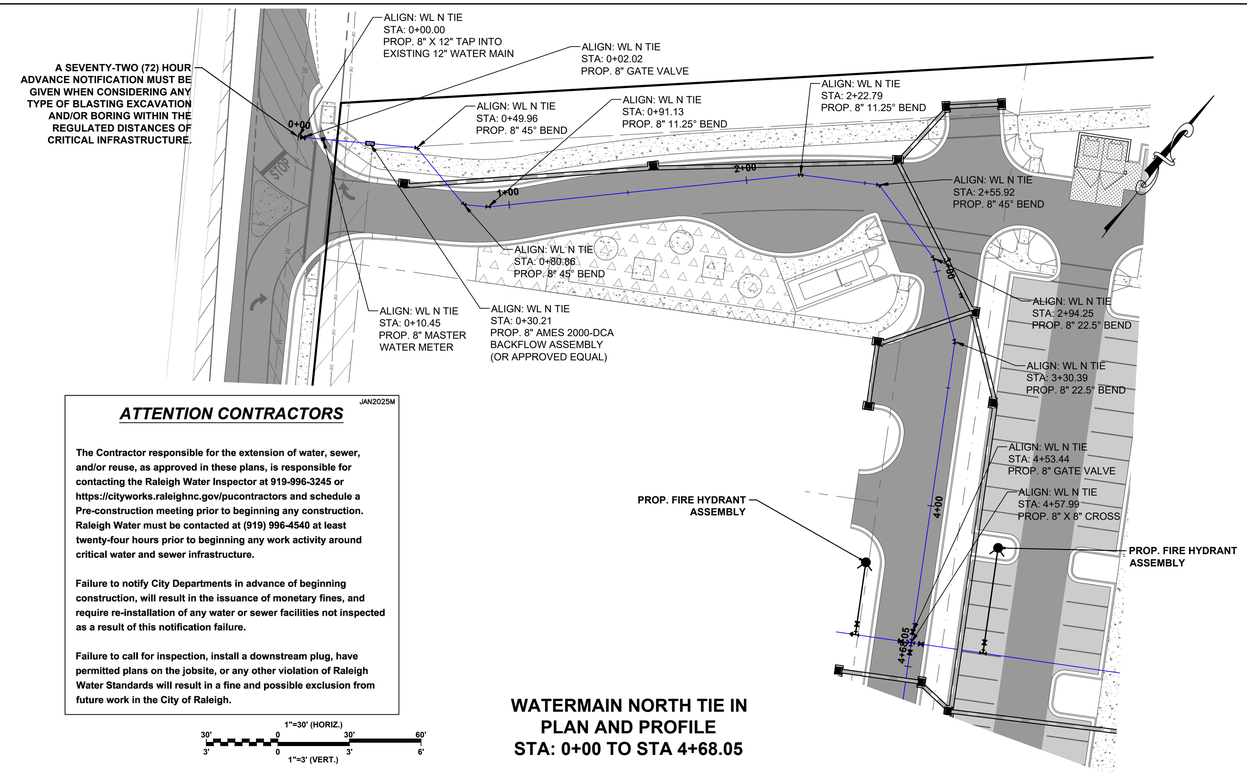
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.3
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.3 WATER PLAN AND PROFILE.DWG ---- 02/13/2026 10:49:54



JAN2025M

ATTENTION CONTRACTORS

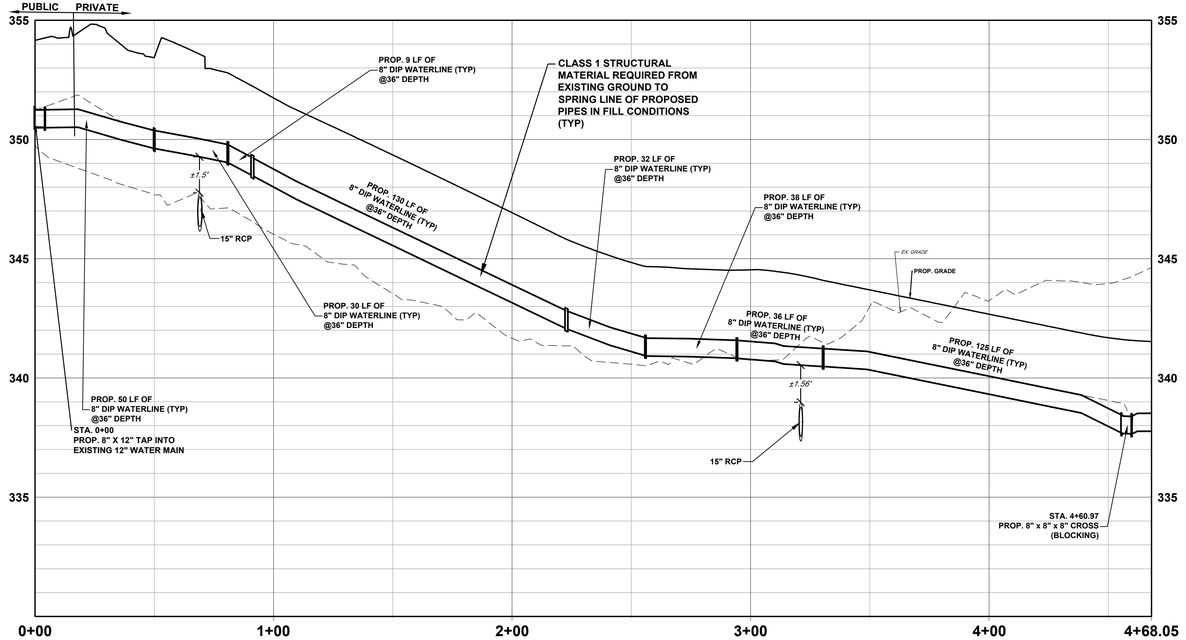
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1"=30' (HORIZ.)
30' 0 30' 60'
3' 0 3' 6'
1"=3' (VERT.)

WATERMAIN NORTH TIE IN PLAN AND PROFILE STA: 0+00 TO STA 4+68.05



Know what's below. Call before you dig.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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McKIM & CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

WATER PLAN AND PROFILE - NORTH TIE IN & OP

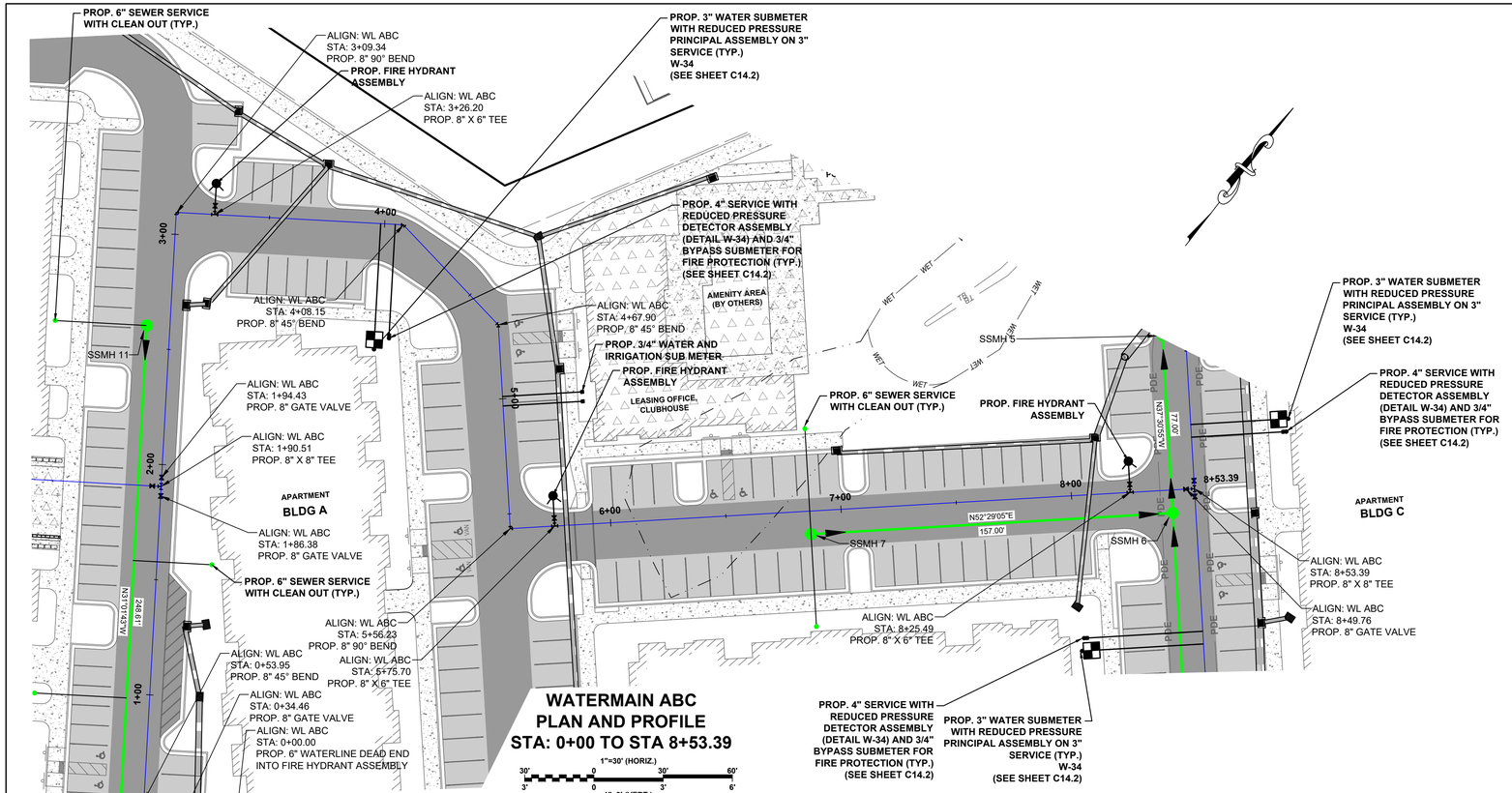
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.4
DRAWING NUMBER
B
REVISION

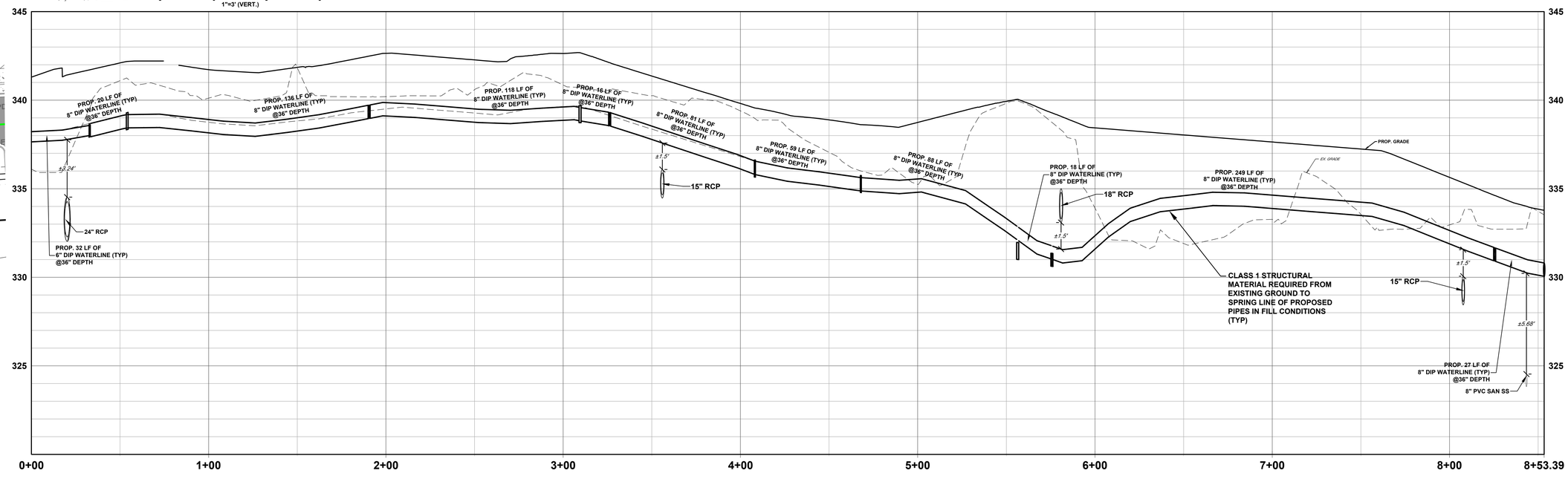
STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.3 WATER PLAN AND PROFILE.DWG ---- 02/13/2026 10:50:00



WATERMAIN ABC
PLAN AND PROFILE
STA: 0+00 TO STA 8+53.39

1"=30' (HORIZ.)
1"=3' (VERT.)



ATTENTION CONTRACTORS

JAN2025M

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

REV. NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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02/13/2026

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

WATER PLAN AND PROFILE - AC

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.5
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.3 WATER PLAN AND PROFILE.DWG ---- 02/13/2026 10:50:07

ATTENTION CONTRACTORS

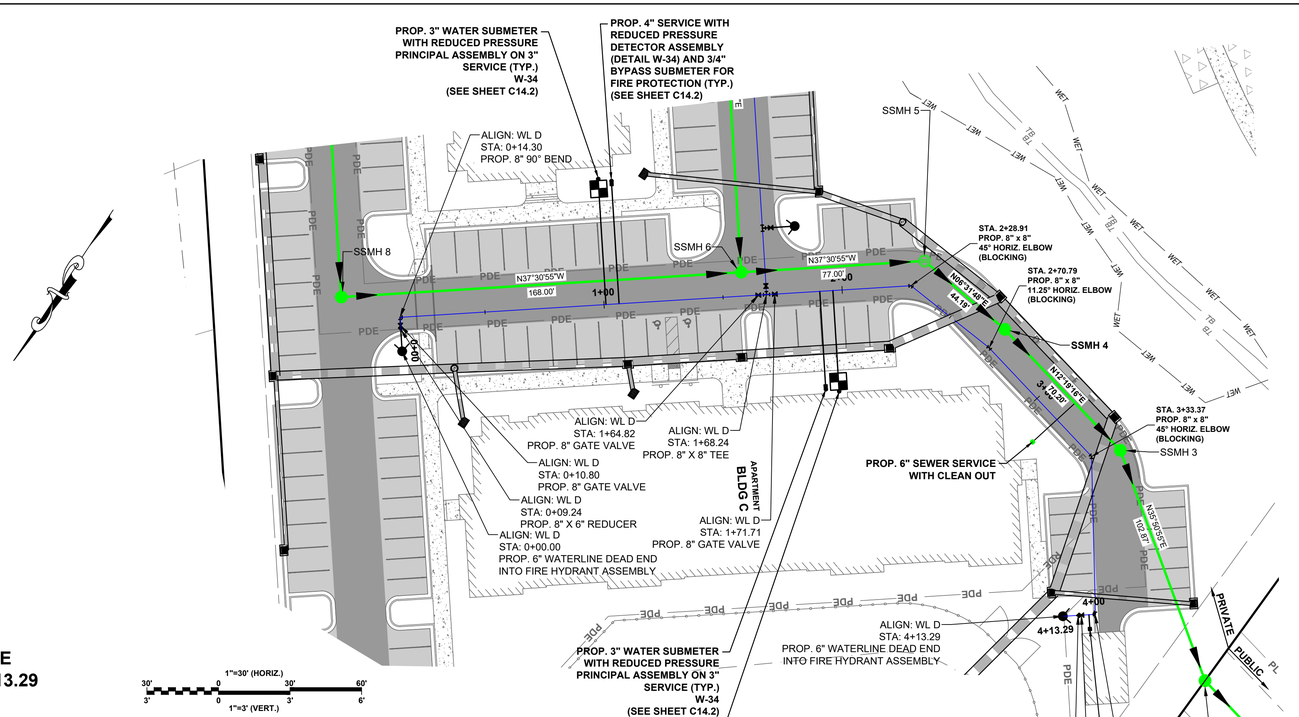
JAN2025M

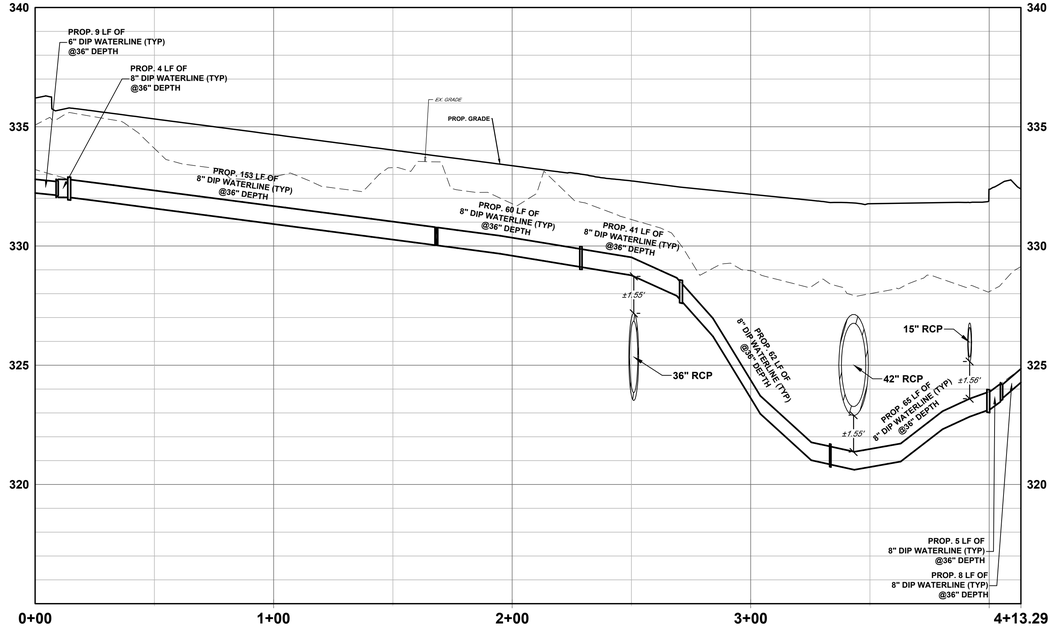
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WATERMAIN D
PLAN AND PROFILE
STA: 0+00 TO STA 4+13.29





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REV.NO.	DESCRIPTIONS	DATE
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Charlotte, North Carolina 28227
Phone: (704) 841-2588
NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

WATER PLAN AND PROFILE - D

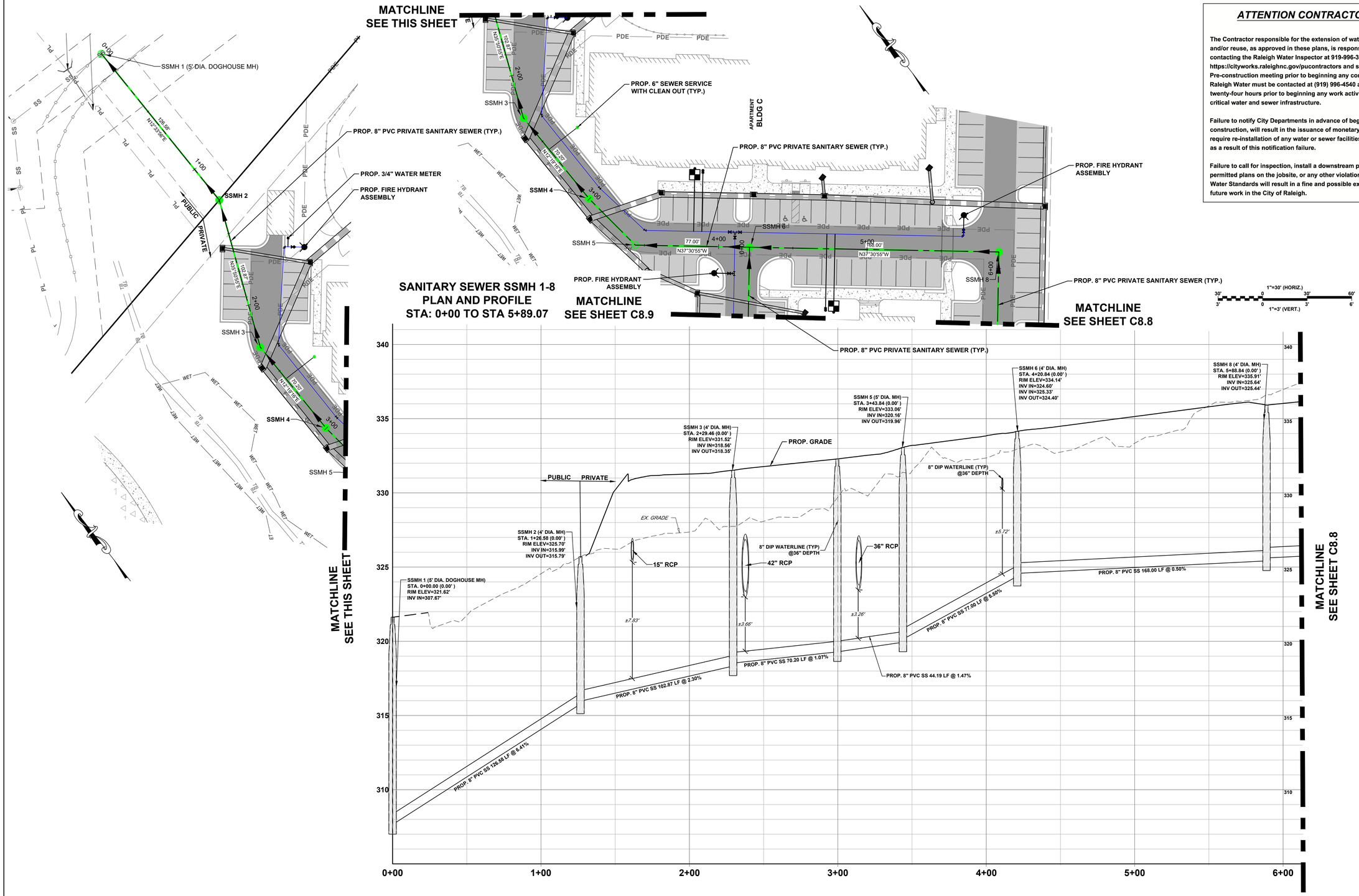
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.6
DRAWING NUMBER
B
REVISION

STATUS: **REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION**

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.3 WATER PLAN AND PROFILE.DWG ---- 02/13/2026 10:50:17



ATTENTION CONTRACTORS

JAN2025M

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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SEWER PLAN AND PROFILE - SSMH 1-8

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

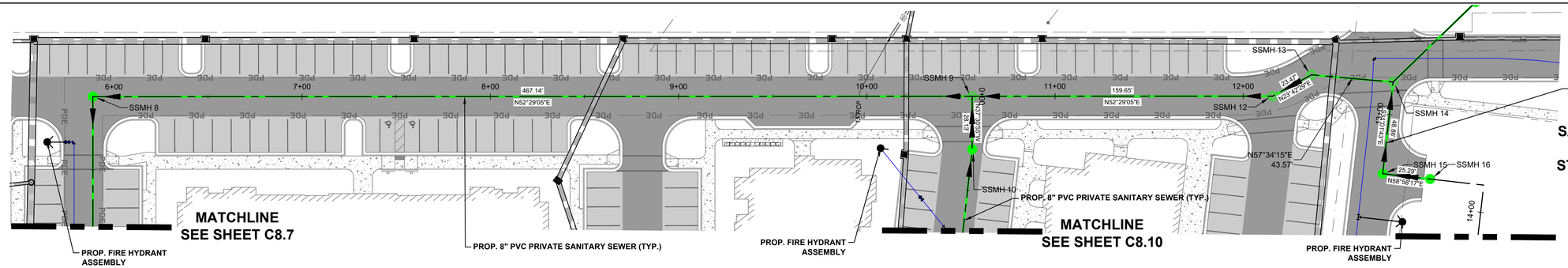
SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.7
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

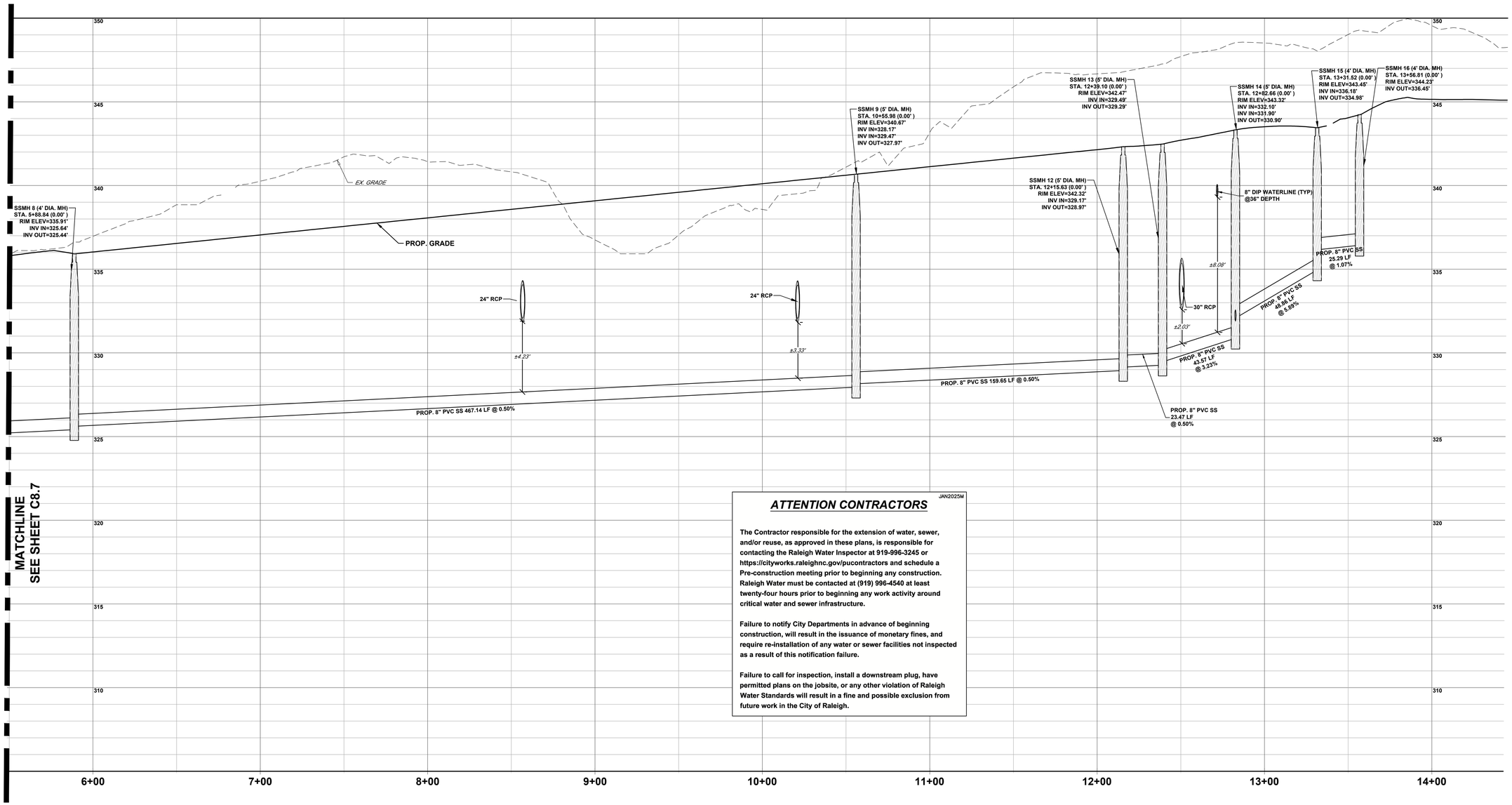
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Know what's below. Call before you dig.



SANITARY SEWER SSMH 8-16 PLAN AND PROFILE STA: 5+89.07 TO STA 13+85.75

1"=30' (HORIZ.)
1"=3' (VERT.)



ATTENTION CONTRACTORS

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A	ADDRESSED TOWN COMMENTS	12/23/2025

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Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE ZEBULON, NC WAKE COUNTY

SEWER PLAN AND PROFILE - SSMH 8-16

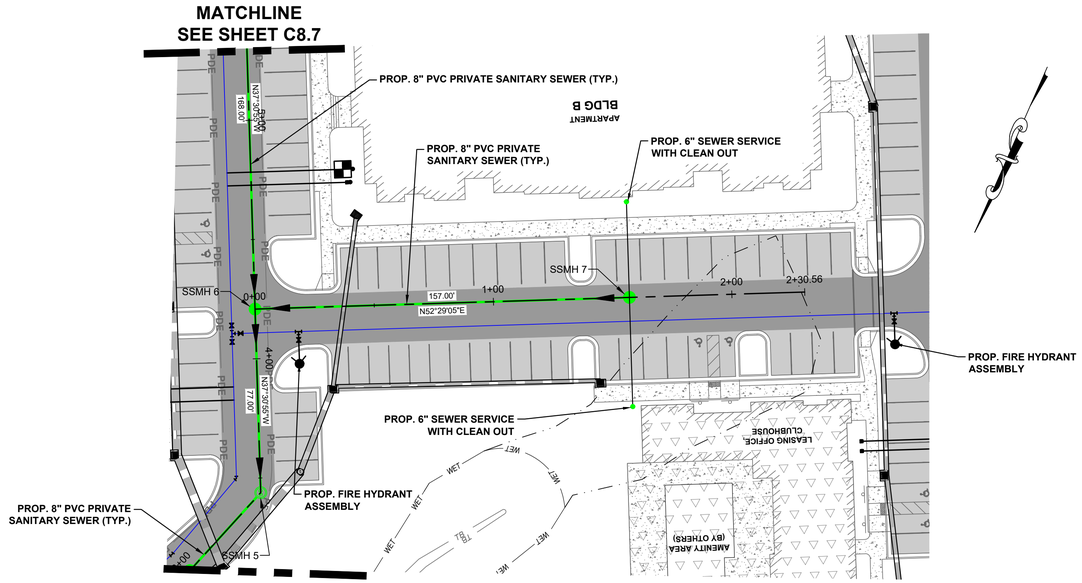
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.8
DRAWING NUMBER
B
REVISION

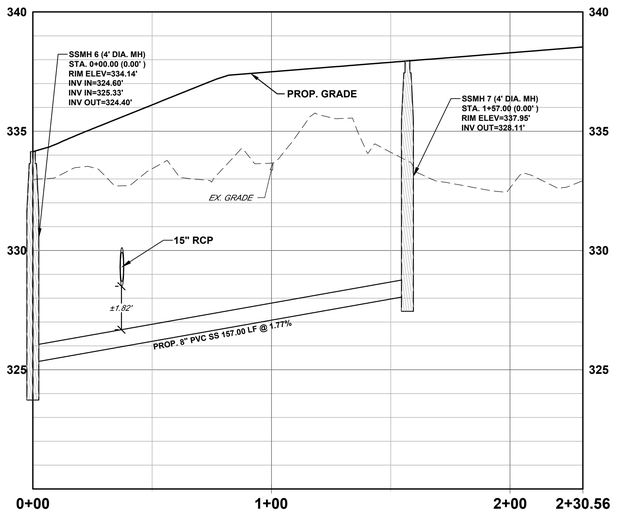
STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

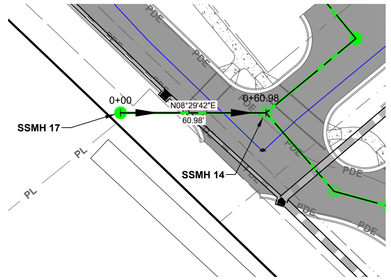
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SANITARY SEWER SSMH 6-7
PLAN AND PROFILE
STA: 0+00 TO STA 2+30.56

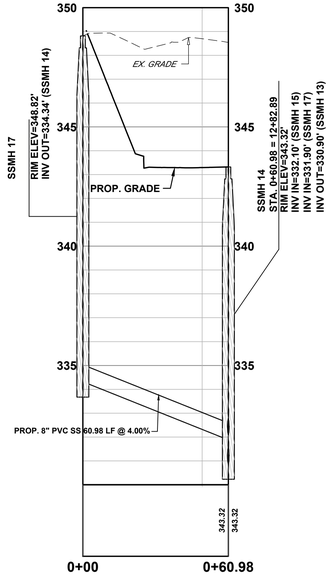
1"=30' (HORIZ.)
1"=3' (VERT.)





SANITARY SEWER SSMH 17 TO SSMH 14
PLAN AND PROFILE
STA: 0+00 TO STA 0+60.98

1"=30' (HORIZ.)
1"=3' (VERT.)



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ATTENTION CONTRACTORS

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A	ADDRESSED TOWN COMMENTS	12/23/2025

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McKIM & CREED

8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SEWER PLAN AND PROFILE - SSMH 6-7 & 17-14

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

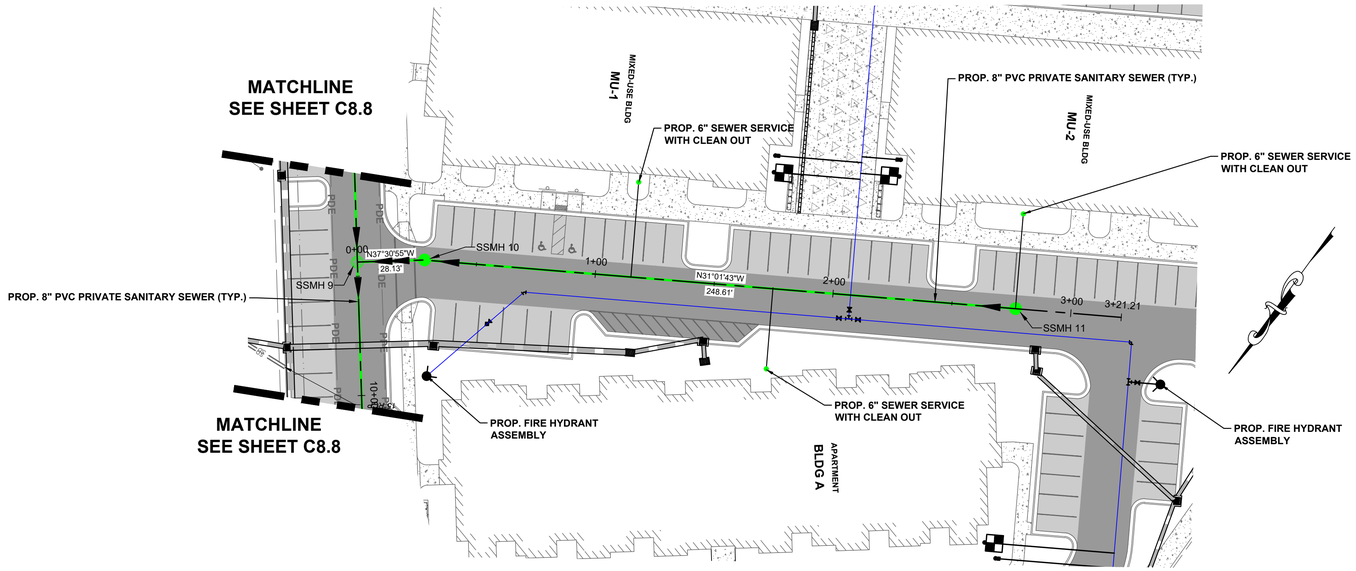
SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.9
DRAWING NUMBER

B
REVISION

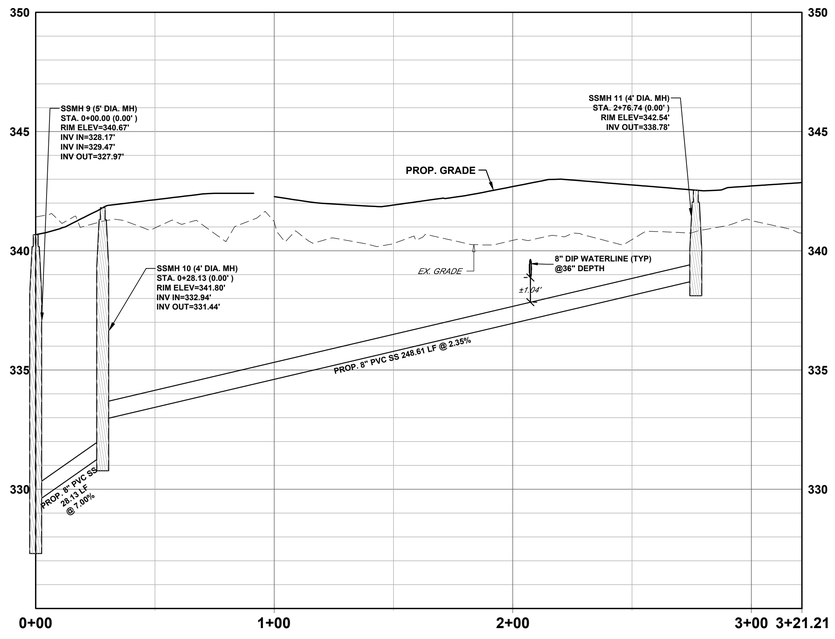
STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.7 SEWER PLAN AND PROFILE.DWG ---- 02/13/2026 10:51:14



SANITARY SEWER SSMH 11-9
PLAN AND PROFILE
STA: 0+00 TO STA 2+76.74

1"=30' (HORIZ.)
30' 0 30' 60'
3' 0 3' 6'
1"=3' (VERT.)



ATTENTION CONTRACTORS

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Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SEWER PLAN AND PROFILE - SSMH 11 - 9

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: 1" = 3'

C8.10
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.7 SEWER PLAN AND PROFILE.DWG ---- 02/13/2026 10:51:22

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
A69	RIM = 353.80 INV OUT = 346.66		Pipe - (115), 15" INV OUT =346.66
A43	RIM = 350.20 INV OUT = 346.52		Pipe - (78), 15" INV OUT =346.52
A68	RIM = 348.61 INV IN = 344.78 INV OUT = 344.78	Pipe - (115), 15" INV IN =344.78	Pipe - (113), 15" INV OUT =344.78
A42	RIM = 347.94 INV IN = 344.22 INV OUT = 344.22	Pipe - (78), 15" INV IN =344.22	Pipe - (77), 15" INV OUT =344.22
A62	RIM = 344.17 INV IN = 337.32 INV IN = 337.48 INV OUT = 337.32	Pipe - (116), 15" INV IN =337.32 Pipe - (129), 15" INV IN =337.48	Pipe - (114), 15" INV OUT =337.32
A65	RIM = 344.28 INV IN = 340.61 INV IN = 339.24 INV OUT = 339.24	Pipe - (113), 15" INV IN =340.61 Pipe - (143), 15" INV IN =339.24	Pipe - (116), 15" INV OUT =339.24
A28	RIM = 342.22 INV IN = 336.44 INV OUT = 336.44	Pipe - (121), 15" INV IN =336.44	Pipe - (122), 15" INV OUT =336.44
A27	RIM = 342.09 INV OUT = 338.21		Pipe - (123) (2), 15" INV OUT =338.21
A46	RIM = 344.75 INV OUT = 335.82		Pipe - (84), 18" INV OUT =335.82
A41	RIM = 343.61 INV IN = 339.28 INV OUT = 339.28	Pipe - (77), 15" INV IN =339.28	Pipe - (76), 15" INV OUT =339.28
A35	RIM = 341.27 INV IN = 332.21 INV OUT = 332.21	Pipe - (126) (1), 24" INV IN =332.21	Pipe - (127), 24" INV OUT =332.21
A29	RIM = 341.56 INV IN = 336.96 INV IN = 338.02 INV OUT = 336.96	Pipe - (132), 15" INV IN =336.96 Pipe - (140), 15" INV IN =338.02	Pipe - (121), 15" INV OUT =336.96
A45	RIM = 342.62 INV IN = 335.63 INV OUT = 335.13	Pipe - (84), 18" INV IN =335.63	Pipe - (84) (1), 24" INV OUT =335.13
A59	RIM = 343.57 INV OUT = 334.99		Pipe - (87), 15" INV OUT =334.99
A40	RIM = 342.47 INV IN = 338.80 INV IN = 332.77 INV OUT = 332.77	Pipe - (76), 15" INV IN =338.80 Pipe - (80), 30" INV IN =332.77	Pipe - (73), 30" INV OUT =332.77

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
A37	RIM = 341.21 INV IN = 336.65 INV OUT = 333.02	Pipe - (134), 15" INV IN =336.65	Pipe - (126), 18" INV OUT =333.02
A56	RIM = 341.32 INV IN = 334.54 INV IN = 334.72 INV IN = 337.50 INV OUT = 334.54	Pipe - (82), 18" INV IN =334.54 Pipe - (87) (2), 15" INV IN =334.72 Pipe - (119), 15" INV IN =337.50	Pipe - (81), 24" INV OUT =334.54
A61	RIM = 342.03 INV IN = 336.72 INV OUT = 335.19	Pipe - (114), 15" INV IN =336.72	Pipe - (82), 18" INV OUT =335.19
A44	RIM = 341.32 INV IN = 333.97 INV IN = 335.06 INV OUT = 333.36	Pipe - (81), 24" INV IN =333.97 Pipe - (84) (1), 24" INV IN =335.06	Pipe - (80), 30" INV OUT =333.36
A58	RIM = 341.41 INV IN = 334.82 INV OUT = 334.82	Pipe - (87), 15" INV IN =334.82	Pipe - (87) (2), 15" INV OUT =334.82
A39	RIM = 340.46 INV IN = 331.99 INV OUT = 331.99	Pipe - (73), 30" INV IN =331.99	Pipe - (72), 30" INV OUT =331.99
A33	RIM = 339.73 INV IN = 331.63 INV IN = 331.91 INV IN = 337.88 INV OUT = 331.63	Pipe - (72), 30" INV IN =331.63 Pipe - (127), 24" INV IN =331.91 Pipe - (141), 18" INV IN =337.88	Pipe - (71) (1), 30" INV OUT =331.63
A23	RIM = 337.97 INV IN = 333.63 INV OUT = 333.63	Pipe - (125), 18" INV IN =333.63	Pipe - (137), 18" INV OUT =333.63
A22	RIM = 337.73 INV IN = 332.86 INV OUT = 332.57	Pipe - (137), 18" INV IN =332.86	Pipe - (104) (1), 24" INV OUT =332.57
A20	RIM = 338.20 INV IN = 330.69 INV IN = 331.91 INV OUT = 330.69	Pipe - (71), 30" INV IN =330.69 Pipe - (104), 24" INV IN =331.91	Pipe - (70), 36" INV OUT =330.69
A9	RIM = 337.19 INV OUT = 333.13		Pipe - (103), 15" INV OUT =333.13
A7	RIM = 334.74 INV IN = 328.47 INV IN = 331.28 INV OUT = 326.77	Pipe - (145), 15" INV IN =328.47 Pipe - (103), 15" INV IN =331.28	Pipe - (102), 24" INV OUT =326.77
A19	RIM = 337.06 INV IN = 330.13 INV OUT = 330.13	Pipe - (70), 36" INV IN =330.13	Pipe - (69), 36" INV OUT =330.13
A17	RIM = 334.71 INV IN = 329.12 INV IN = 329.12 INV OUT = 329.12	Pipe - (69) (1), 36" INV IN =329.12 Pipe - (152), 15" INV IN =329.12	Pipe - (99) (1), 36" INV OUT =329.12
A13	RIM = 334.25 INV IN = 330.23 INV IN = 328.39 INV OUT = 328.39	Pipe - (98) (1) (1), 15" INV IN =330.23 Pipe - (99), 36" INV IN =328.39	Pipe - (98) (1), 36" INV OUT =328.39

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
A6	RIM = 333.56 INV IN = 326.41 INV OUT = 325.91	Pipe - (102), 24" INV IN =326.41	Pipe - (97) (1), 36" INV OUT =325.91
A2	RIM = 332.40 INV IN = 325.25 INV IN = 323.01 INV OUT = 321.51	Pipe - (147), 15" INV IN =325.25 Pipe - (146), 42" INV IN =323.01	Pipe - (66), 42" INV OUT =321.51
A1	RIM = 324.96 INV IN = 321.00	Pipe - (66), 42" INV IN =321.00	
A57	RIM = 343.62 INV OUT = 339.79		Pipe - (119), 15" INV OUT =339.79
A64	RIM = 344.78 INV OUT = 341.34		Pipe - (128), 15" INV OUT =341.34
A63	RIM = 344.78 INV IN = 341.22 INV OUT = 337.71	Pipe - (128), 15" INV IN =341.22	Pipe - (129), 15" INV OUT =337.71
A25	RIM = 340.12 INV IN = 336.21 INV IN = 334.50 INV OUT = 334.50	Pipe - (122), 15" INV IN =336.21 Pipe - (123), 15" INV IN =334.50	Pipe - (130), 15" INV OUT =334.50
A30	RIM = 340.50 INV OUT = 337.06		Pipe - (132), 15" INV OUT =337.06
A32	RIM = 339.33 INV IN = 331.34 INV OUT = 331.34	Pipe - (71) (1), 30" INV IN =331.34	Pipe - (71), 30" INV OUT =331.34
A24	RIM = 338.72 INV IN = 334.02 INV IN = 333.92 INV OUT = 333.92	Pipe - (130), 15" INV IN =334.02 Pipe - (151), 15" INV IN =333.92	Pipe - (125), 18" INV OUT =333.92
A12	RIM = 333.63 INV IN = 328.15 INV OUT = 328.15	Pipe - (98) (1), 36" INV IN =328.15	Pipe - (98), 36" INV OUT =328.15
A5	RIM = 332.27 INV IN = 325.65 INV IN = 323.74 INV OUT = 323.74	Pipe - (97) (1), 36" INV IN =325.65 Pipe - (149), 36" INV IN =323.74	Pipe - (97), 36" INV OUT =323.74
A38	RIM = 340.13 INV OUT = 336.70		Pipe - (134), 15" INV OUT =336.70
A31	RIM = 342.27 INV OUT = 338.74		Pipe - (140), 15" INV OUT =338.74
A36	RIM = 341.77 INV IN = 332.86 INV OUT = 332.62	Pipe - (126), 18" INV IN =332.86	Pipe - (126) (1), 24" INV OUT =332.62

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
A8	RIM = 336.52 INV OUT = 328.93		Pipe - (145), 15" INV OUT =328.93
A21	RIM = 337.65 INV IN = 332.32 INV OUT = 332.32	Pipe - (104) (1), 24" INV IN =332.32	Pipe - (104), 24" INV OUT =332.32
A16	RIM = 333.40 INV OUT = 330.30		Pipe - (99) (2), 15" INV OUT =330.30
A14	RIM = 333.76 INV OUT = 330.32		Pipe - (98) (1) (1), 15" INV OUT =330.32
A34	RIM = 340.82 INV OUT = 339.02		Pipe - (141), 18" INV OUT =339.02
A66	RIM = 343.36 INV IN = 339.39 INV OUT = 339.39	Pipe - (142), 15" INV IN =339.39	Pipe - (143), 15" INV OUT =339.39
A67	RIM = 342.94 INV OUT = 339.50		Pipe - (142), 15" INV OUT =339.50
A15	RIM = 335.22 INV IN = 330.17 INV IN = 328.75 INV OUT = 328.75	Pipe - (99) (2), 15" INV IN =330.17 Pipe - (99) (1), 36" INV IN =328.75	Pipe - (99), 36" INV OUT =328.75
A26	RIM = 340.80 INV IN = 337.36 INV OUT = 334.90	Pipe - (123) (2), 15" INV IN =337.36	Pipe - (123), 15" INV OUT =334.90
A18	RIM = 335.93 INV IN = 329.58 INV OUT = 329.58	Pipe - (69), 36" INV IN =329.58	Pipe - (69) (1), 36" INV OUT =329.58
A11	RIM = 332.81 INV IN = 327.28 INV OUT = 323.99	Pipe - (98), 36" INV IN =327.28	Pipe - (149), 36" INV OUT =323.99
A4	RIM = 331.55 INV IN = 323.40 INV OUT = 323.40	Pipe - (97), 36" INV IN =323.40	Pipe - (146), 42" INV OUT =323.40
A3	RIM = 330.77 INV OUT = 325.54		Pipe - (147), 15" INV OUT =325.54
A17A	RIM = 333.00 INV OUT = 329.49		Pipe - (152), 15" INV OUT =329.49
A24A	RIM = 337.79 INV OUT = 334.32		Pipe - (151), 15" INV OUT =334.32

NOTES:

- STORM STRUCTURE RIM ELEVATIONS ARE BASED OFF OF THE INSERTION POINT AT THE EDGE OF PAVEMENT

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

STORM STRUCTURE TABLE

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C8.11
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.11 STORM TABLE AND DRAINAGE PLAN.DWG ---- 02/12/2026 21:49:05

Pipe Table							
UPSTREAM STRUCTURE	INVERT UP	DOWNSTREAM STRUCTURE	INVERT DOWN	LENGTH (FT)	SLOPE	PIPE DIAMETER	PIPE MATERIAL
A2	321.51	A1	321.00	59	0.87%	42"	42" RCP
A3	325.54	A2	325.25	58	0.50%	15"	15" RCP
A4	323.40	A2	323.01	77	0.50%	42"	42" RCP
A5	323.74	A4	323.40	70	0.50%	36"	36" RCP
A6	325.91	A5	325.65	51	0.50%	36"	36" RCP
A7	326.77	A6	326.41	38	0.94%	24"	24" RCP
A8	328.93	A7	328.47	72	0.64%	15"	15" RCP
A9	333.13	A7	331.28	112	1.65%	15"	15" RCP
A11	323.99	A5	323.74	50	0.50%	36"	36" RCP
A12	328.15	A11	327.28	62	1.38%	36"	36" RCP
A13	328.39	A12	328.15	48	0.50%	36"	36" RCP
A14	330.32	A13	330.23	13	0.66%	15"	15" RCP
A15	328.75	A13	328.39	73	0.50%	36"	36" RCP
A16	330.30	A15	330.17	23	0.58%	15"	15" RCP
A17	329.12	A15	328.75	75	0.50%	36"	36" RCP
A17A	329.49	A17	329.12	73	0.50%	15"	15" RCP
A18	329.58	A17	329.12	91	0.50%	36"	36" RCP
A19	330.13	A18	329.58	111	0.50%	36"	36" RCP
A20	330.69	A19	330.13	111	0.50%	36"	36" RCP
A21	332.32	A20	331.91	82	0.50%	24"	24" RCP
A22	332.57	A21	332.32	49	0.51%	24"	24" RCP
A23	333.63	A22	332.86	155	0.50%	18"	18" RCP
A24	333.92	A23	333.63	58	0.50%	18"	18" RCP
A24A	334.32	A24	333.92	80	0.50%	15"	15" RCP
A25	334.50	A24	334.02	96	0.50%	15"	15" RCP

Pipe Table							
UPSTREAM STRUCTURE	INVERT UP	DOWNSTREAM STRUCTURE	INVERT DOWN	LENGTH (FT)	SLOPE	PIPE DIAMETER	PIPE MATERIAL
A26	334.90	A25	334.50	79	0.50%	15"	15" RCP
A27	338.21	A26	337.36	11	8.00%	15"	15" RCP
A28	336.44	A25	336.21	47	0.50%	15"	15" RCP
A29	336.96	A28	336.44	104	0.50%	15"	15" RCP
A30	337.06	A29	336.96	20	0.50%	15"	15" RCP
A31	338.74	A29	338.02	72	1.00%	15"	15" RCP
A32	331.34	A20	330.69	111	0.59%	30"	30" RCP
A33	331.63	A32	331.34	40	0.73%	30"	30" RCP
A34	339.02	A33	337.88	21	5.35%	18"	18" RCP
A35	332.21	A33	331.91	60	0.50%	24"	24" RCP
A36	332.62	A35	332.21	82	0.50%	24"	24" RCP
A37	333.02	A36	332.86	31	0.50%	18"	18" RCP
A38	336.70	A37	336.65	9	0.50%	15"	15" RCP
A39	331.99	A33	331.63	72	0.50%	30"	30" RCP
A40	332.77	A39	331.99	156	0.50%	30"	30" RCP
A41	339.28	A40	338.80	66	0.73%	15"	15" RCP
A42	344.22	A41	339.28	112	4.43%	15"	15" RCP
A43	346.52	A42	344.22	54	4.27%	15"	15" RCP
A44	333.36	A40	332.77	117	0.50%	30"	30" RCP
A45	335.13	A44	335.06	15	0.50%	24"	24" RCP
A46	335.82	A45	335.63	38	0.50%	18"	18" RCP
A56	334.54	A44	333.97	114	0.50%	24"	24" RCP
A57	339.79	A56	337.50	76	3.01%	15"	15" RCP
A58	334.82	A56	334.72	18	0.50%	15"	15" RCP
A59	334.99	A58	334.82	35	0.50%	15"	15" RCP

Pipe Table							
UPSTREAM STRUCTURE	INVERT UP	DOWNSTREAM STRUCTURE	INVERT DOWN	LENGTH (FT)	SLOPE	PIPE DIAMETER	PIPE MATERIAL
A61	335.19	A56	334.54	131	0.50%	18"	18" RCP
A62	337.32	A61	336.72	39	1.53%	15"	15" RCP
A63	337.71	A62	337.48	42	0.55%	15"	15" RCP
A64	341.34	A63	341.22	25	0.50%	15"	15" RCP
A65	339.24	A62	337.32	70	2.73%	15"	15" RCP
A66	339.39	A65	339.24	32	0.50%	15"	15" RCP
A67	339.50	A66	339.39	21	0.50%	15"	15" RCP
A68	344.78	A65	340.61	102	4.06%	15"	15" RCP
A69	346.66	A68	344.78	105	1.79%	15"	15" RCP

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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02/13/2026
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ENGINEER
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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

STORM PIPE TABLE

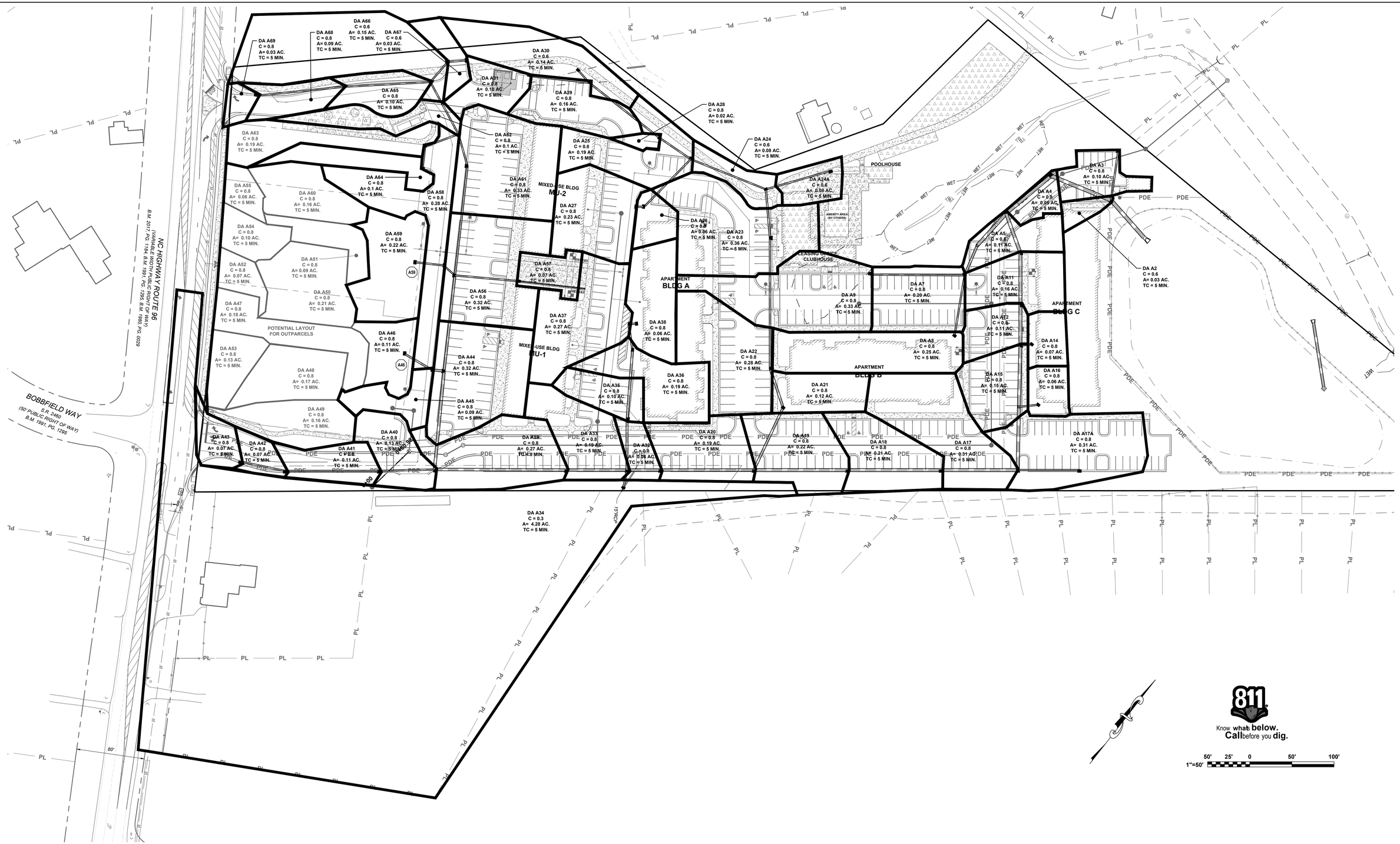
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C8.12
DRAWING NUMBER

B
REVISION

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Know what's below.
Call before you dig.

1"=50'

50' 25' 0 50' 100'

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WAKE COUNTY

DRAINAGE AREA PLAN

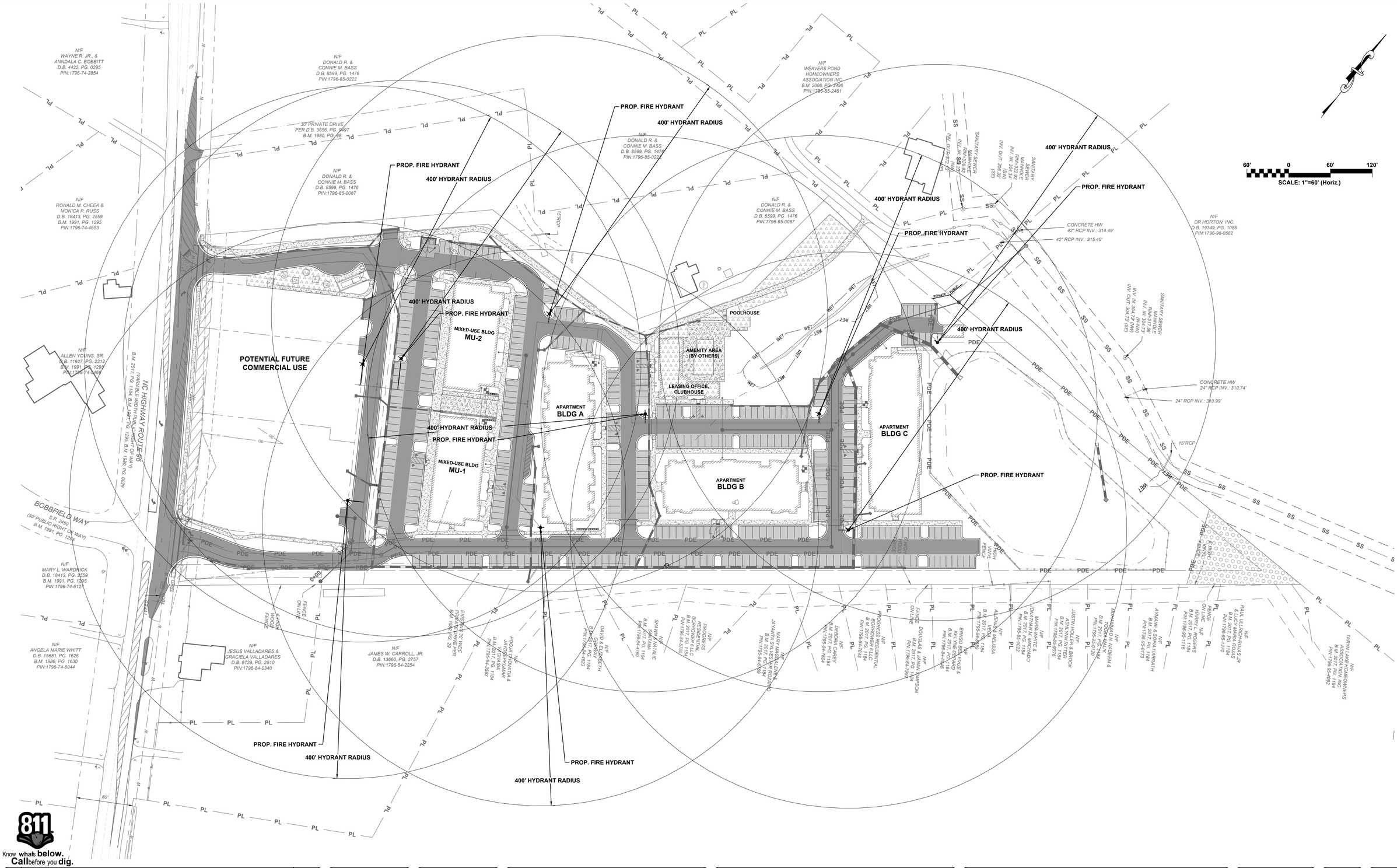
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 40'
VERTICAL: N/A

C8.13
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.11 STORM TABLE AND DRAINAGE PLAN.DWG ---- 02/12/2026 21:49:34



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

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ZEBULON, NC
WAKE COUNTY

HYDRANT PLAN

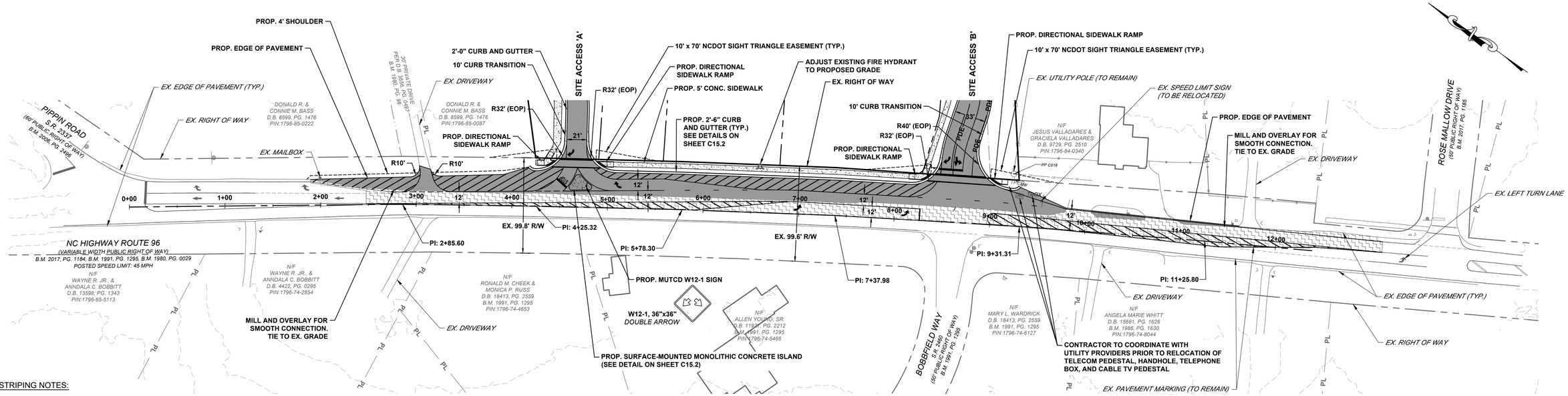
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS
DESIGNED	DJS
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

C8.14
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C8.15 HYDRANT PLAN.DWG ---- 02/12/2026 21:50:31



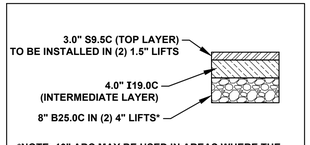
ROADWAY IMPROVEMENT PLAN
SCALE: 1" = 50'

ROAD STRIPING NOTES:

1. ALL STRIPING SHALL BE PER LATEST NCDOT MINIMUM CONSTRUCTION STANDARDS AND STANDARD DRAWINGS. SEE SHEETS **C15.1** AND **C15.2** FOR NCDOT STANDARD PAVEMENT MARKING DETAILS.
2. ALL SIGNAGE SHALL BE PER THE LATEST MUTCD.
3. ALL EXISTING STRIPING TO BE REMOVED SHALL BE MILLED PRIOR TO PLACEMENT OF NEW ASPHALT.
4. CONFLICTING MARKINGS SHALL BE REMOVED BY MILL AND OVERLAY.
5. NOTE: DIAGONAL STRIPING SHOWN IS NOT-TO-SCALE AND SHALL BE SPACED PER NCDOT DWG #1205.09 (SEE SHEET C15.1)

STRIPING LEGEND:

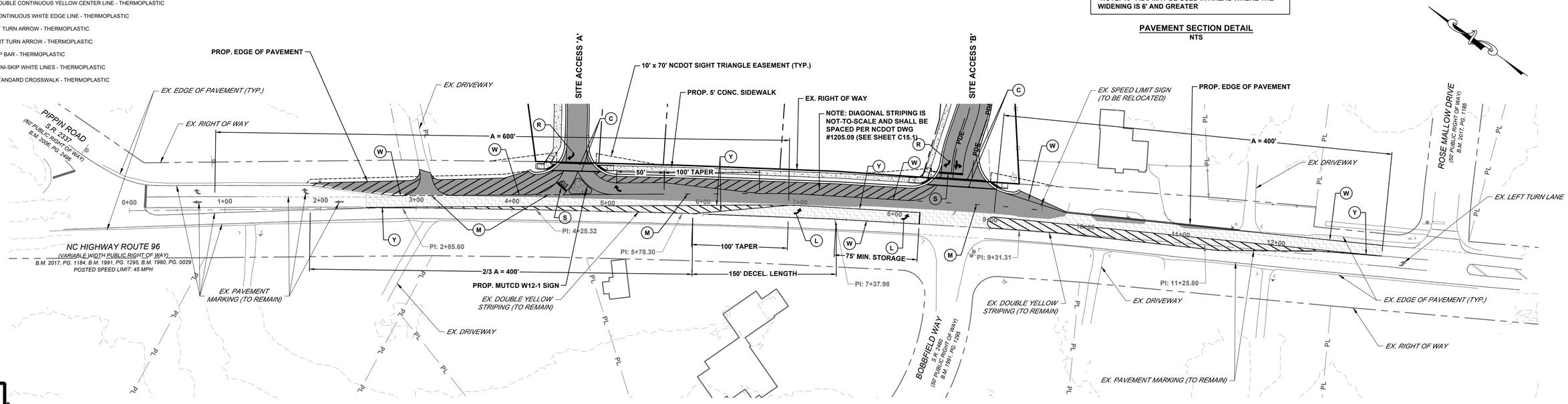
- (Y) 4" DOUBLE CONTINUOUS YELLOW CENTER LINE - THERMOPLASTIC
- (W) 4" CONTINUOUS WHITE EDGE LINE - THERMOPLASTIC
- (L) LEFT TURN ARROW - THERMOPLASTIC
- (R) RIGHT TURN ARROW - THERMOPLASTIC
- (S) STOP BAR - THERMOPLASTIC
- (M) 4" MINI-SKIP WHITE LINES - THERMOPLASTIC
- (C) 8" STANDARD CROSSWALK - THERMOPLASTIC



*NOTE: 10" ABC MAY BE USED IN AREAS WHERE THE WIDENING IS 6' AND GREATER

PAVEMENT SECTION DETAIL
NTS

PAVING LEGEND
- PROPOSED FULL DEPTH PAVEMENT *REFER TO DETAIL SHEET FOR DESIGN
- PROPOSED MILL AND OVERLAY *REFER TO DETAIL SHEET FOR DESIGN



PAVEMENT MARKING PLAN
SCALE: 1" = 50'

Know what's below. Call before you dig.

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ROADWAY IMPROVEMENT PLAN

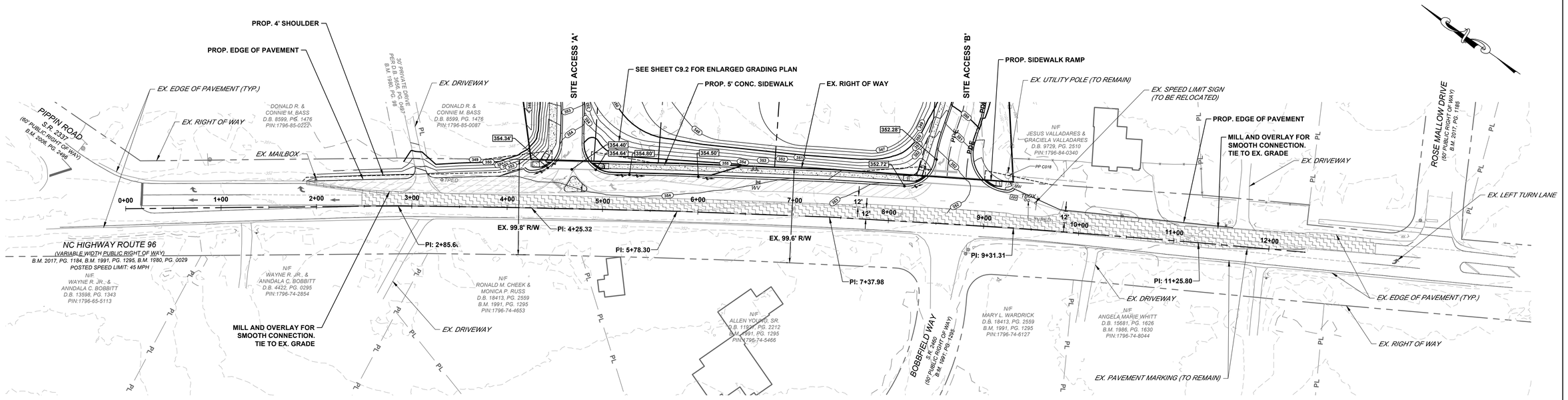
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 50'
VERTICAL: N/A

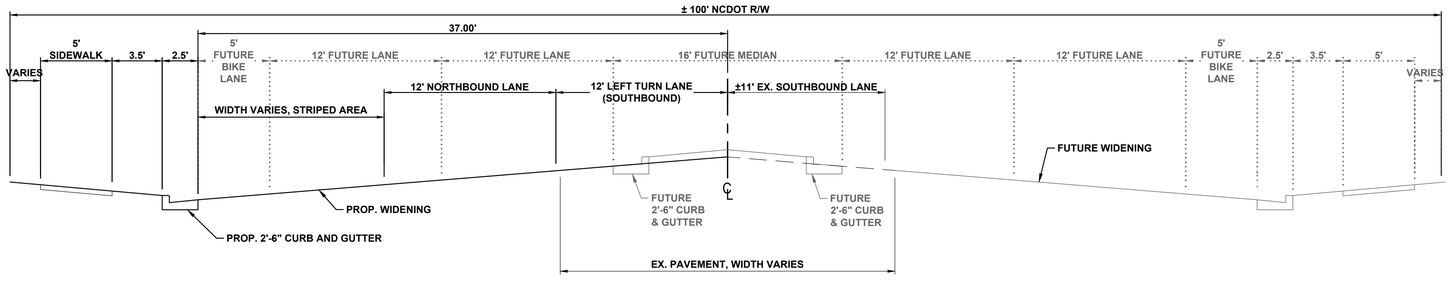
DRAWING NUMBER: C9.0
REVISION: B

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C9.0 ROAD IMPROVEMENT.DWG ---- 02/12/2026 21:51:44



GRADING PLAN
SCALE: 1" = 50'



NC HWY 96 - ULTIMATE SECTION (STATION 7+00 TO 8+00)
SCALE: 1" = 5'

NOTE:

- THIS ULTIMATE SECTION IS BASED ON THE ENGINEERING REPORT FOR NC 96 (ARENDELL AVENUE), PREPARED FOR THE TOWN OF ZEBULON, PREPARED BY CDM SMITH, DATED MARCH 27, 2012.

Know what's below. Call before you dig.

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ROAD IMPROVEMENT GRADING PLAN

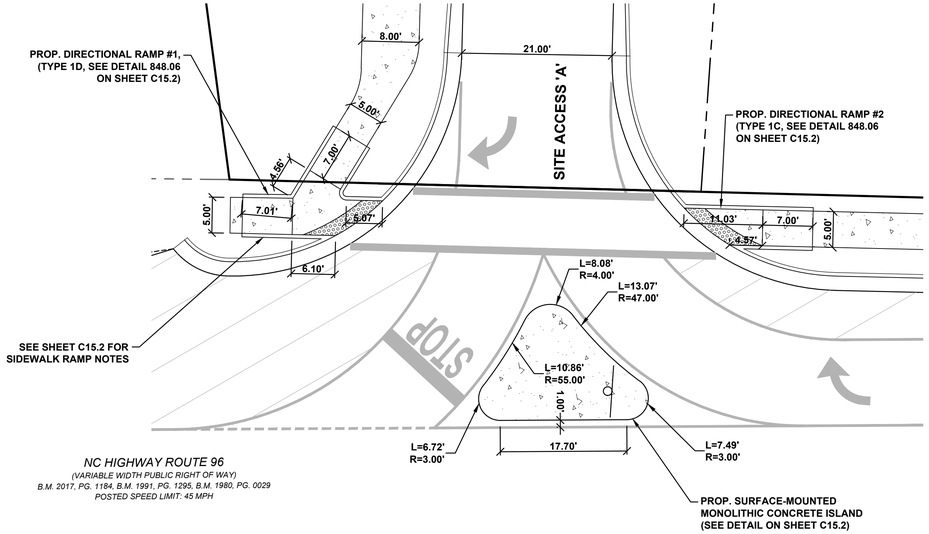
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 50'
VERTICAL: N/A

C9.1
DRAWING NUMBER
B
REVISION

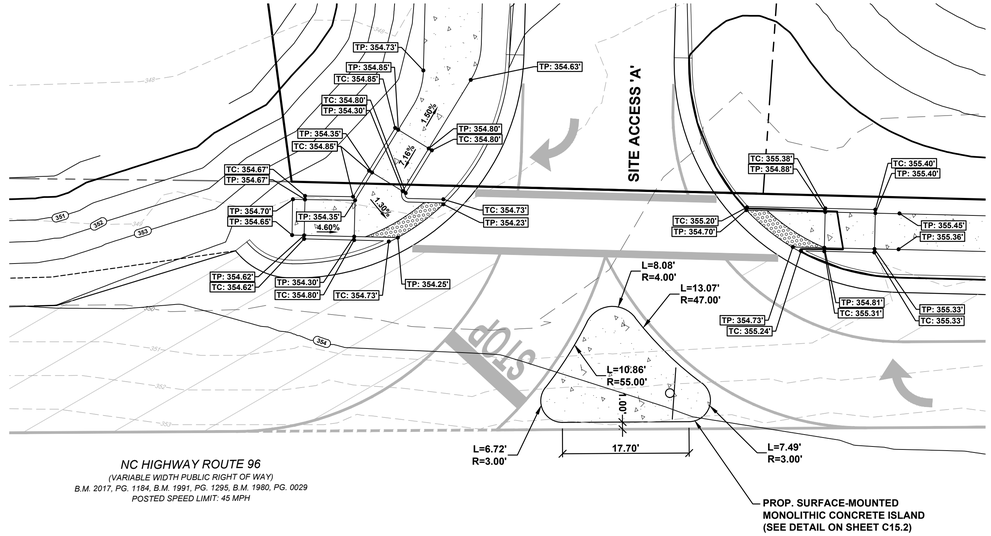
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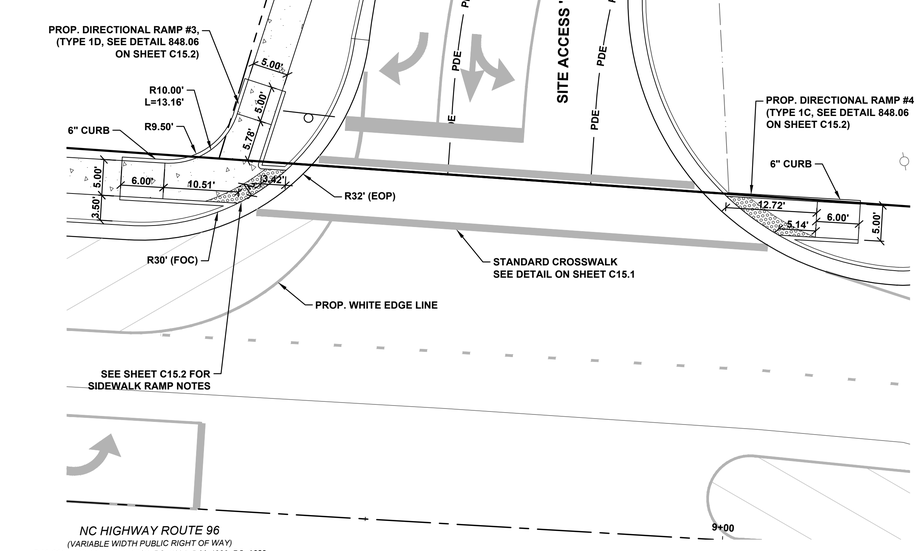
NC HIGHWAY ROUTE 96
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
B.M. 2017, PG. 1184, B.M. 1991, PG. 1295, B.M. 1980, PG. 0029
POSTED SPEED LIMIT: 45 MPH

SITE PLAN
SCALE: 1" = 10'



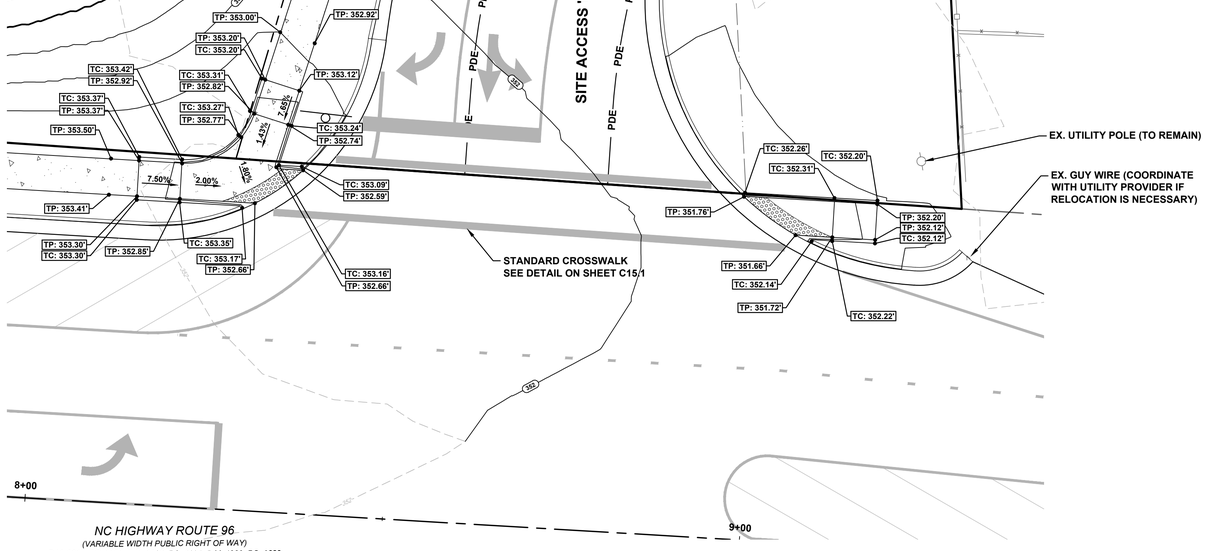
NC HIGHWAY ROUTE 96
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
B.M. 2017, PG. 1184, B.M. 1991, PG. 1295, B.M. 1980, PG. 0029
POSTED SPEED LIMIT: 45 MPH

GRADING PLAN
SCALE: 1" = 10'



NC HIGHWAY ROUTE 96
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
B.M. 2017, PG. 1184, B.M. 1991, PG. 1295, B.M. 1980, PG. 0029
POSTED SPEED LIMIT: 45 MPH

SITE PLAN
SCALE: 1" = 10'



NC HIGHWAY ROUTE 96
(VARIABLE WIDTH PUBLIC RIGHT OF WAY)
B.M. 2017, PG. 1184, B.M. 1991, PG. 1295, B.M. 1980, PG. 0029
POSTED SPEED LIMIT: 45 MPH

GRADING PLAN
SCALE: 1" = 10'

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02/13/2026

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ROADWAY PLAN - ENLARGED

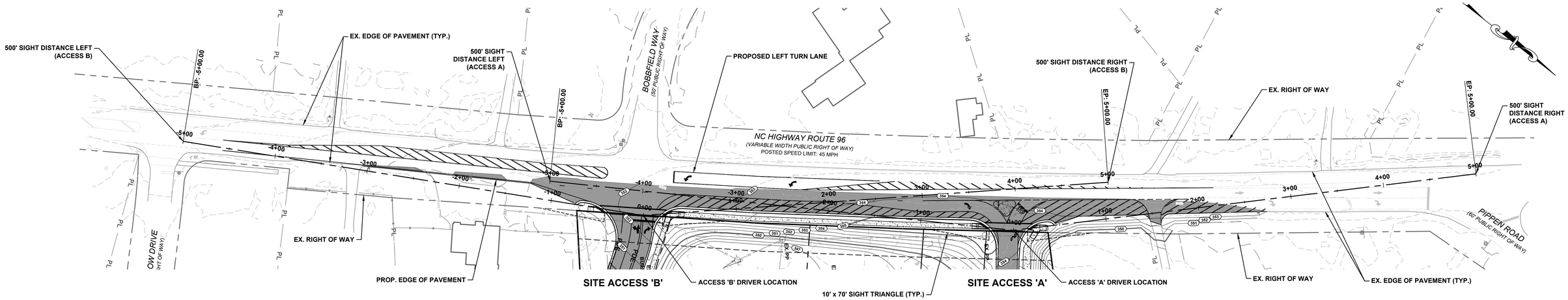
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	JLM
CHECKED	PH
PROJ. MGR.	PH

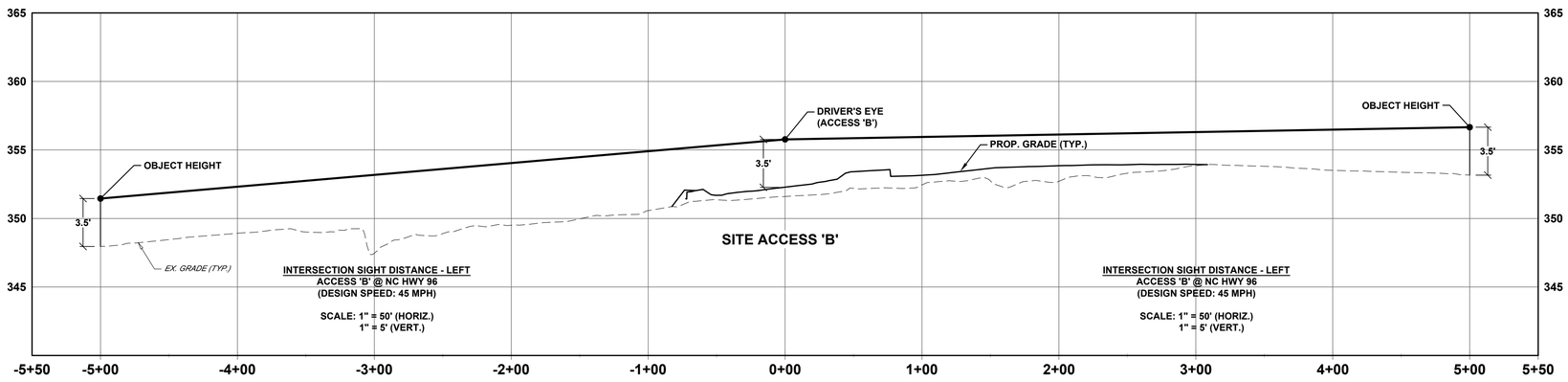
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VERTICAL: N/A

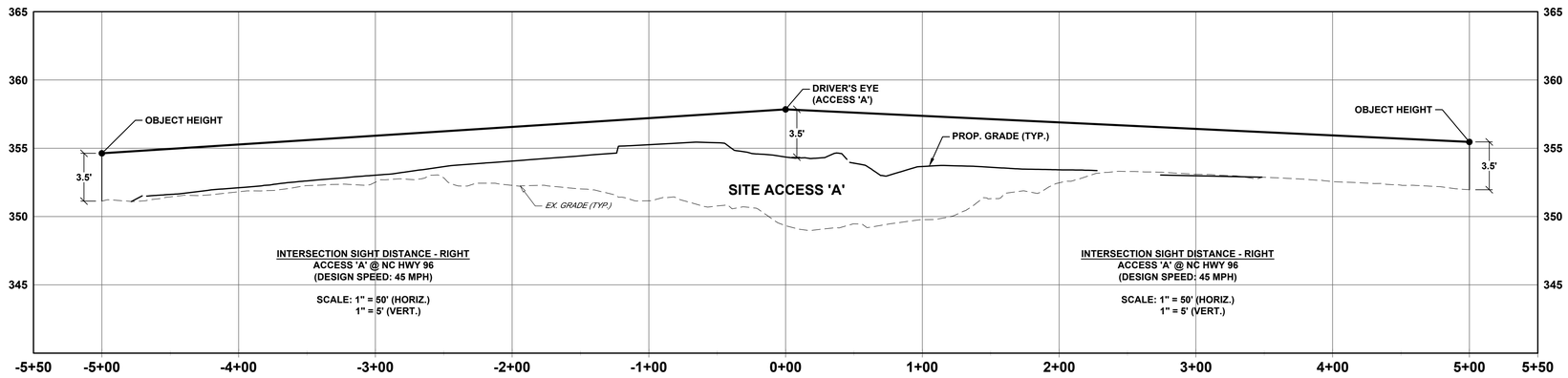
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DRAWING NUMBER
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REVISION

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NC License# F-1222

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ZEBULON, NC
WAKE COUNTY

SIGHT DISTANCE PLAN AND PROFILE

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

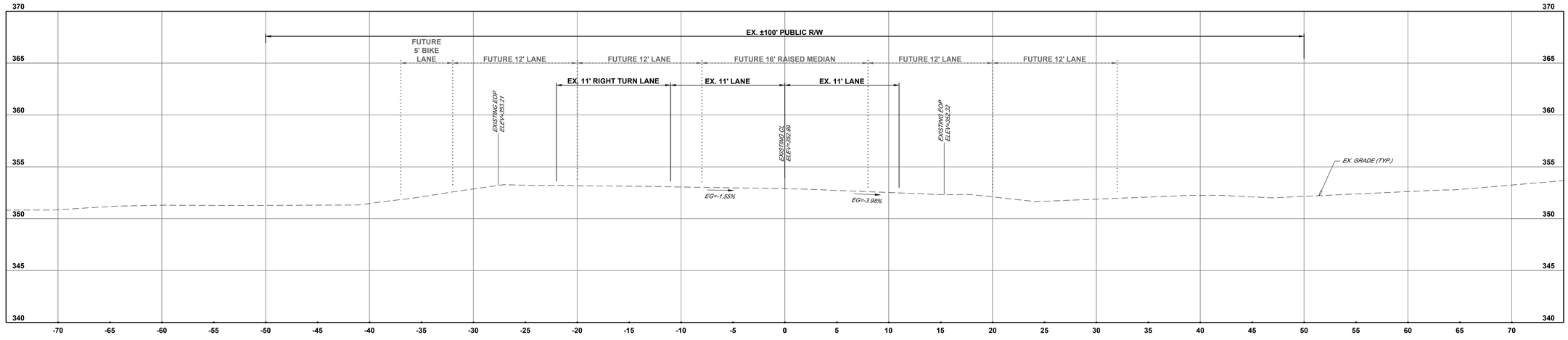
SCALE
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VERTICAL: 1" = 5'

C9.3
DRAWING NUMBER

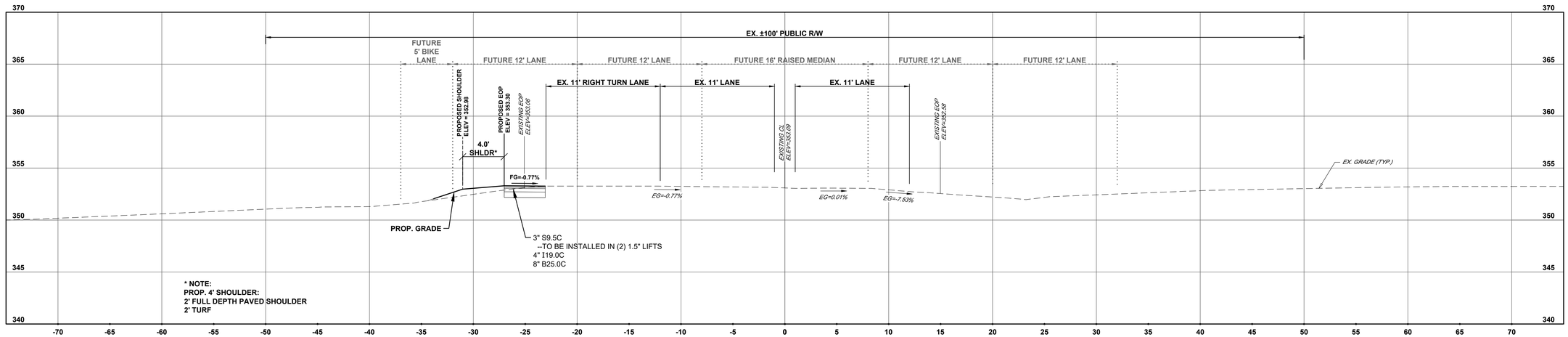
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REVISION

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SECTION STA 1+50



SECTION STA 2+00

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WAKE COUNTY

HWY 96 CROSS SECTIONS

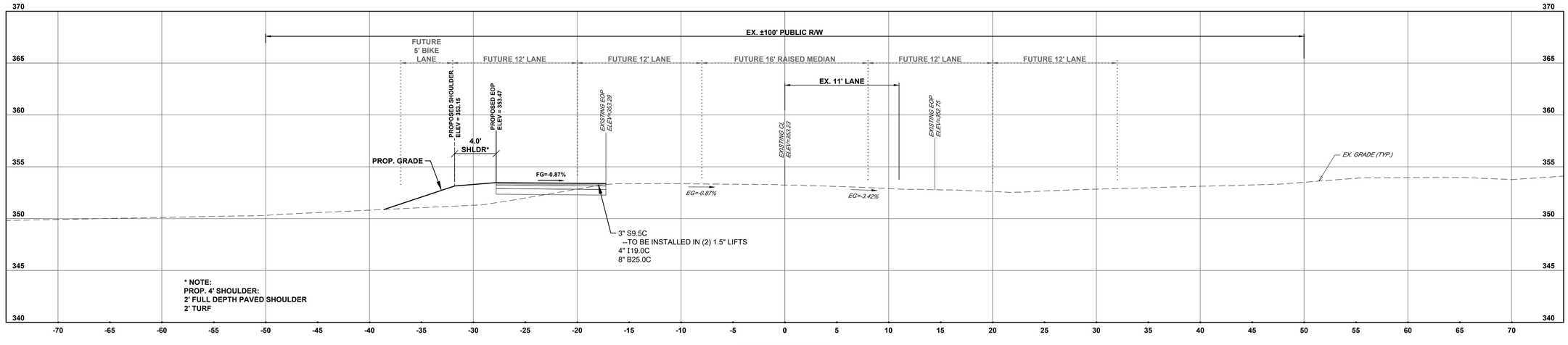
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

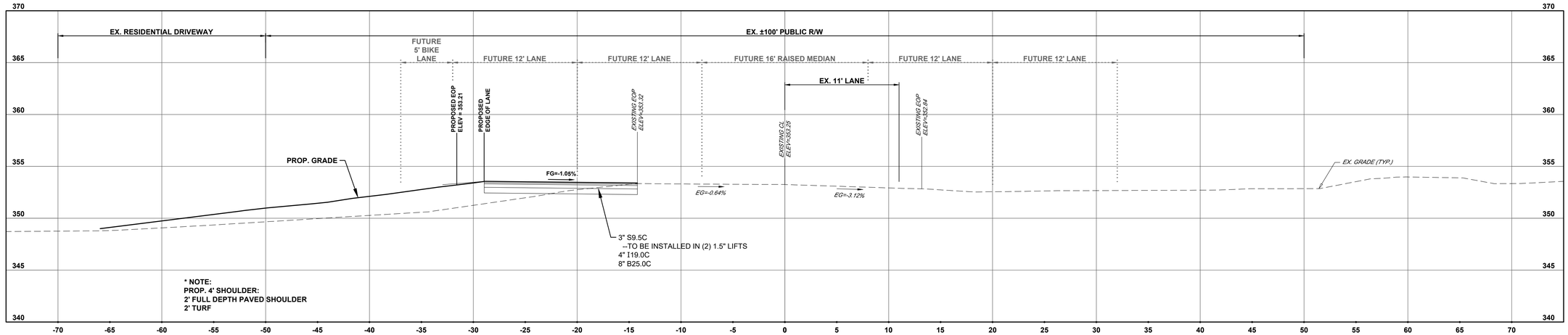
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REVISION

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SECTION STA 2+50



SECTION STA 3+00

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WAKE COUNTY

HWY 96 CROSS SECTIONS

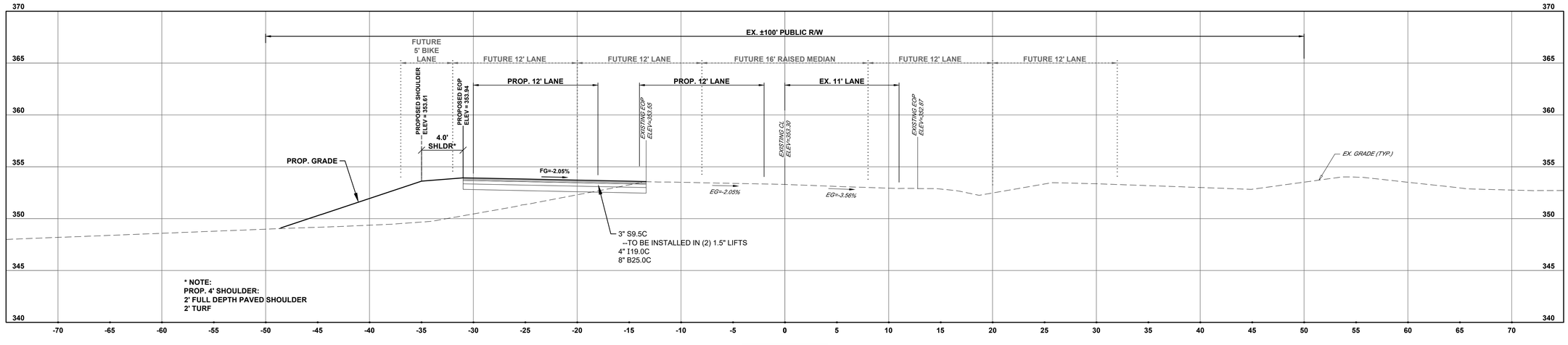
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

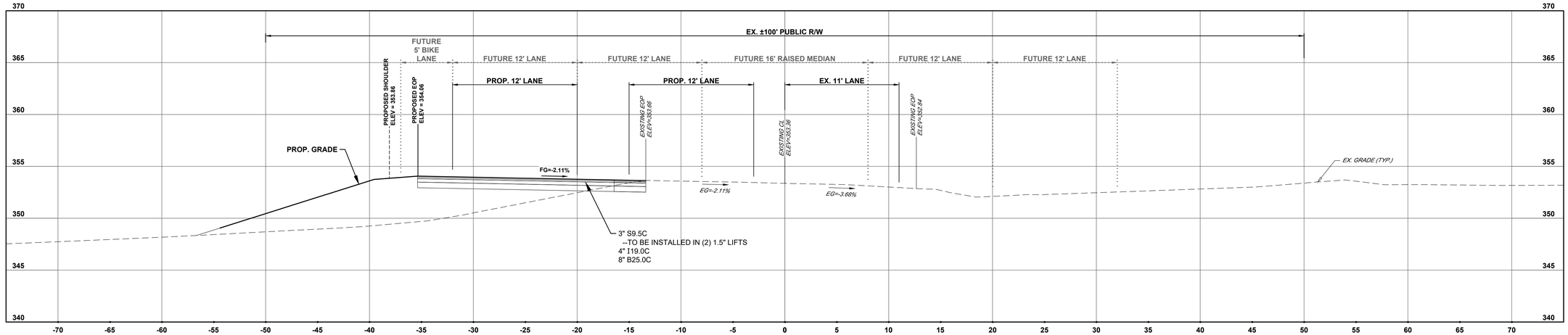
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SECTION STA 3+50



SECTION STA 4+00

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HWY 96 CROSS SECTIONS

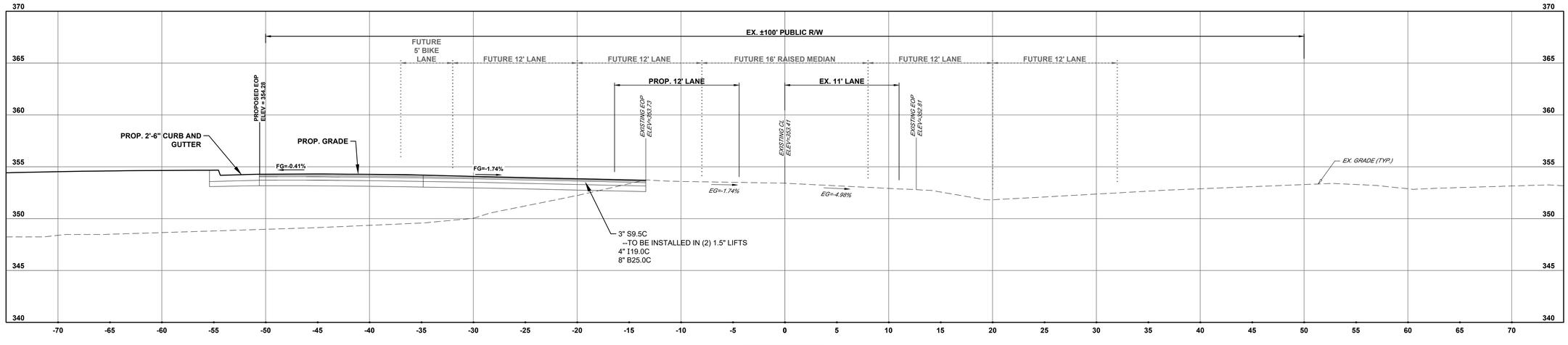
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

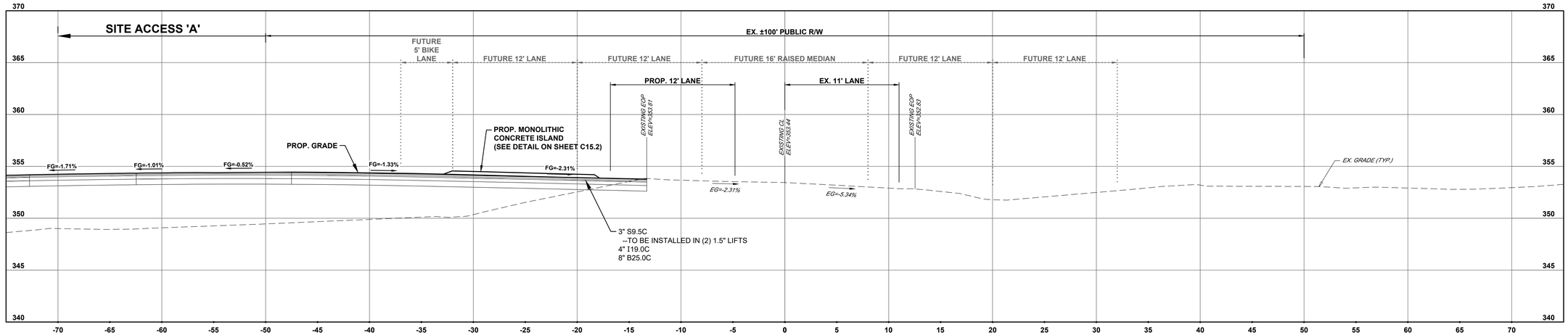
C9.6
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REVISION

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SECTION STA 4+50



SECTION STA 4+66

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WAKE COUNTY

HWY 96 CROSS SECTIONS

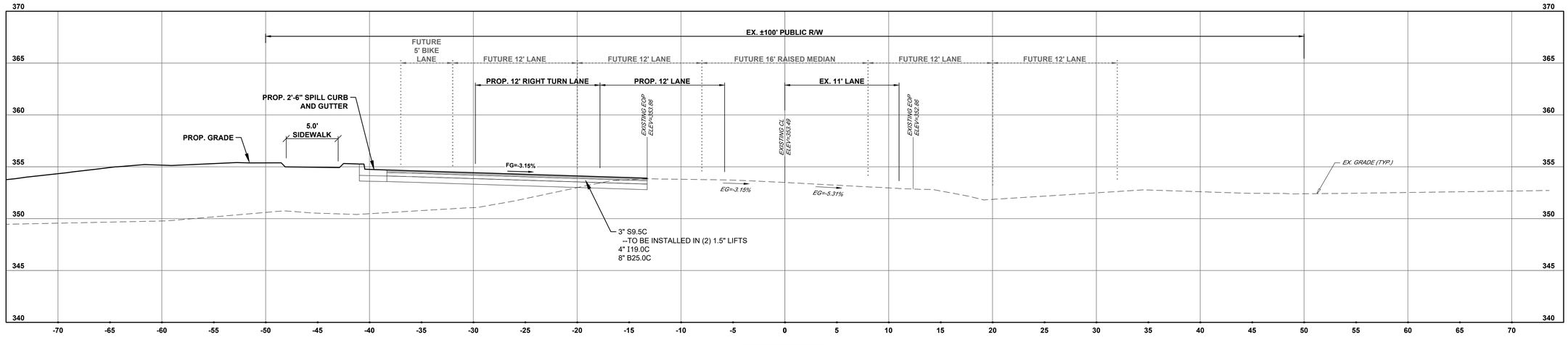
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

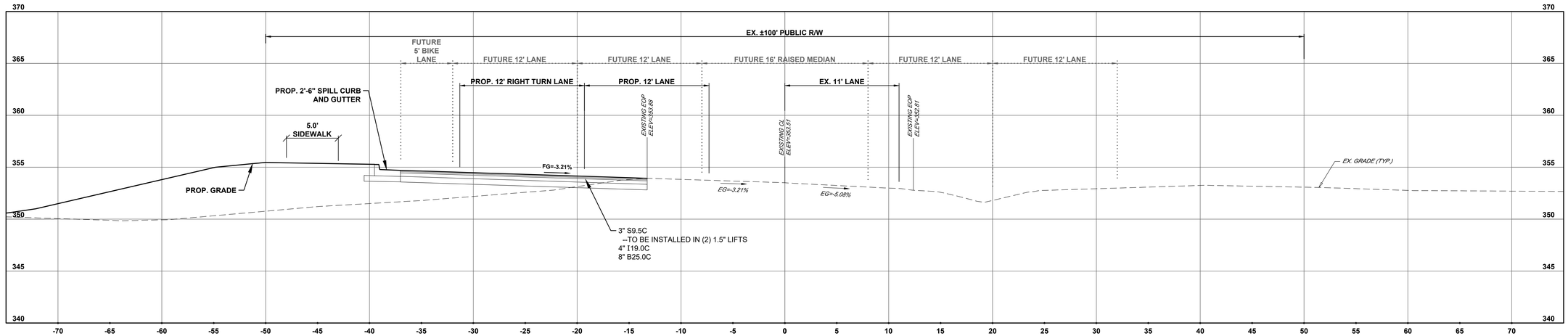
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SECTION STA 5+00



SECTION STA 5+50

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HWY 96 CROSS SECTIONS

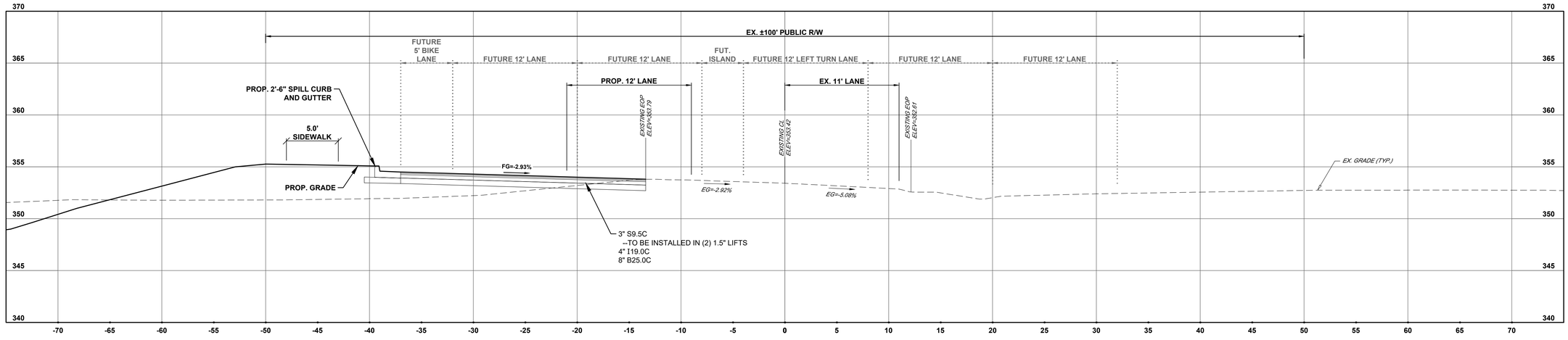
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
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PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

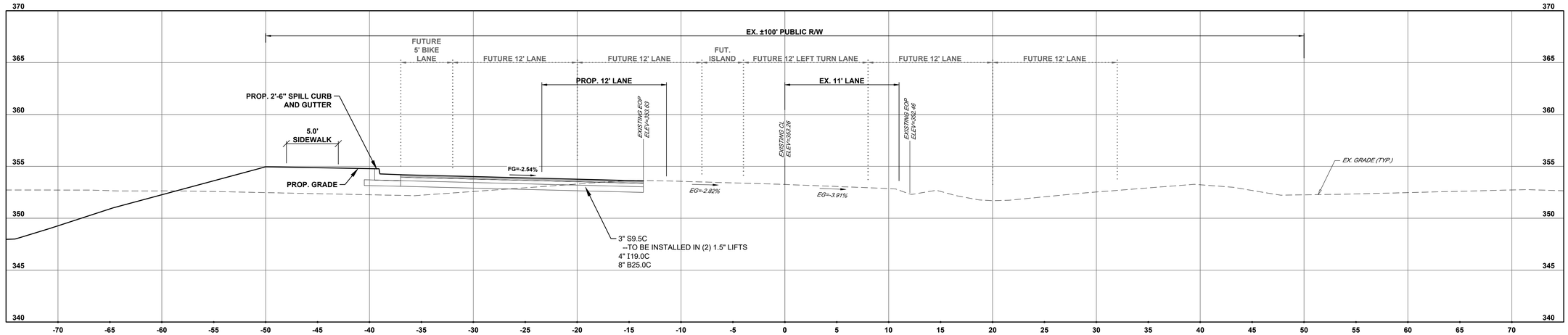
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SECTION STA 6+00



SECTION STA 6+50

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HWY 96 CROSS SECTIONS

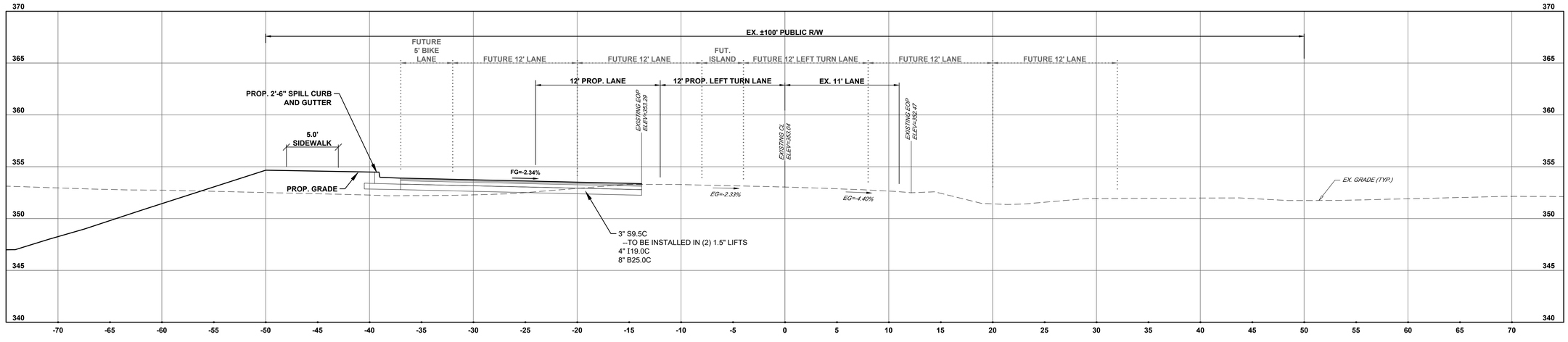
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

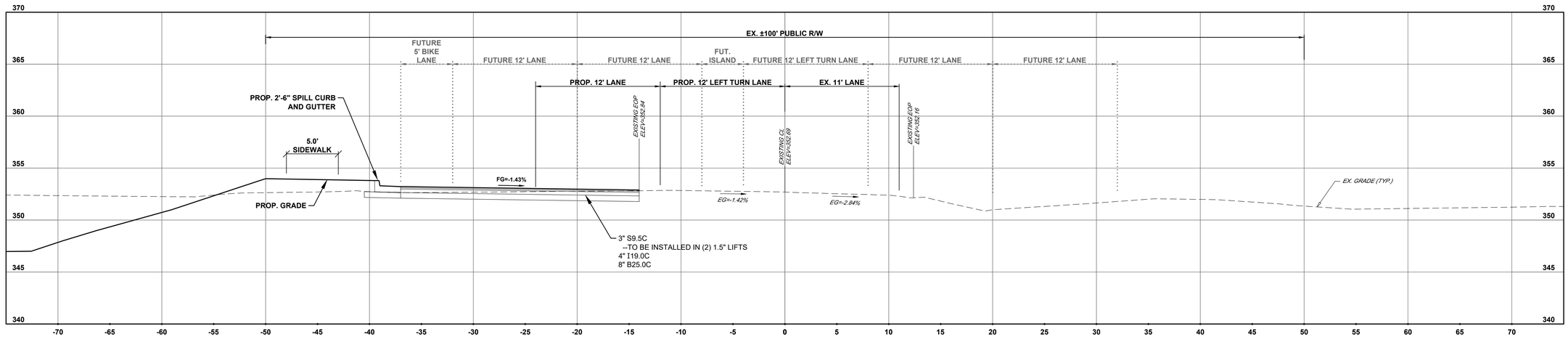
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SECTION STA 7+00



SECTION STA 7+50

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WAKE COUNTY

HWY 96 CROSS SECTIONS

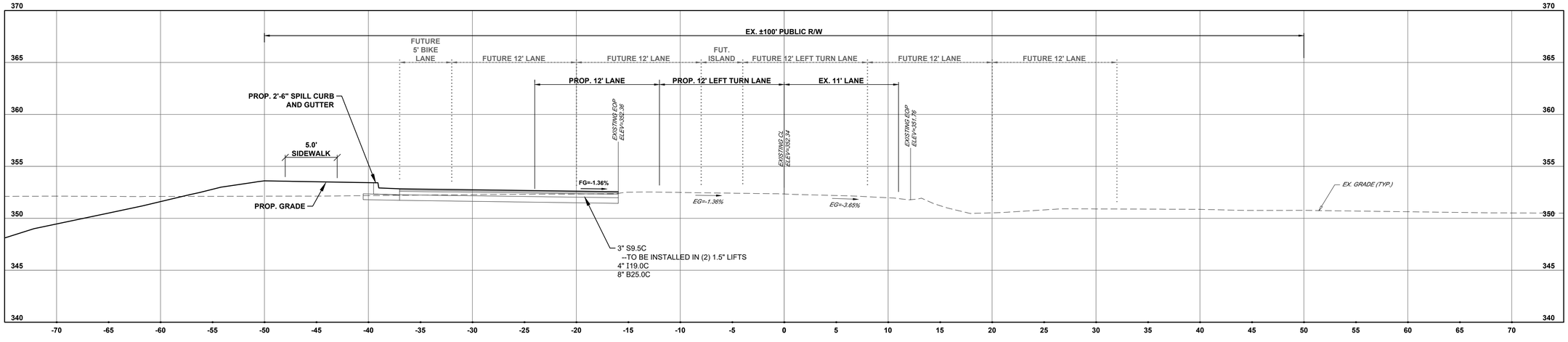
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MCE PROJ. #	09572-0002
DRAWN	JLM
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PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

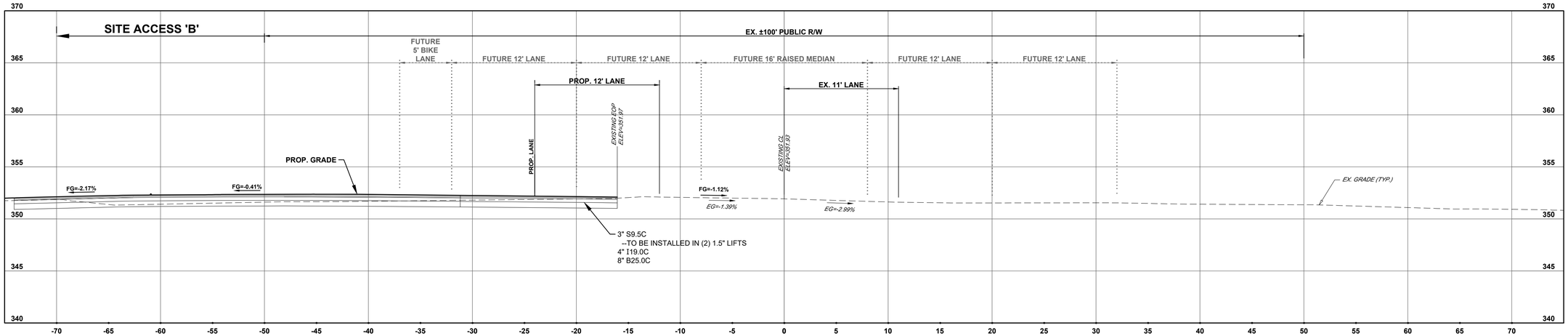
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SECTION STA 8+00



SECTION STA 8+50

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Phone: (704) 841-2588

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

HWY 96 CROSS SECTIONS

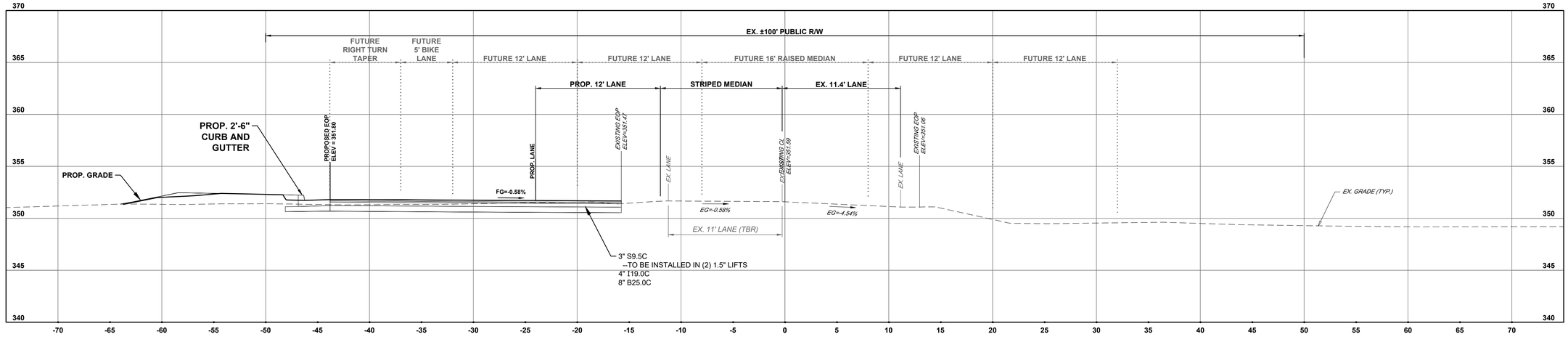
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 5'
VERTICAL: 1" = 5'

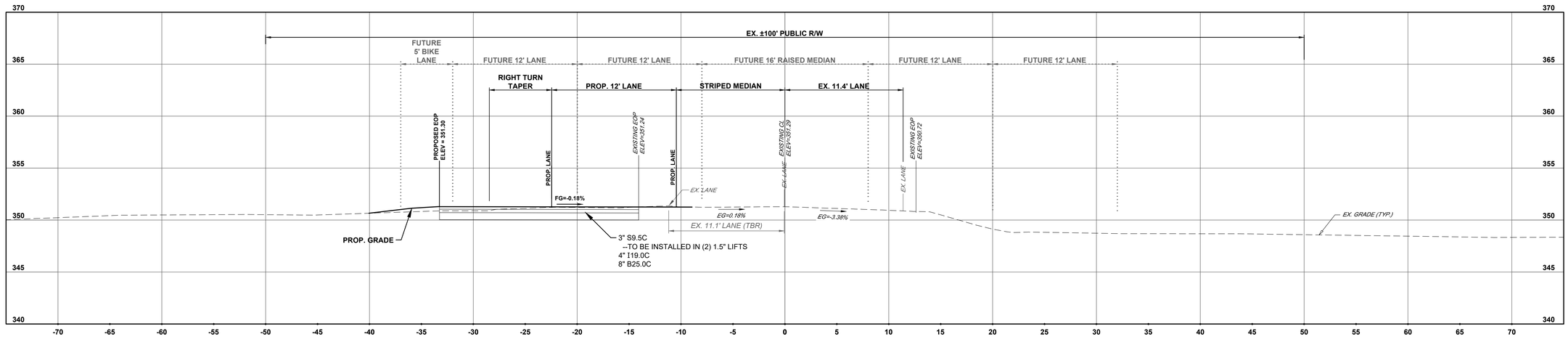
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B
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SECTION STA 9+00



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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

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Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
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WAKE COUNTY

HWY 96 CROSS SECTIONS

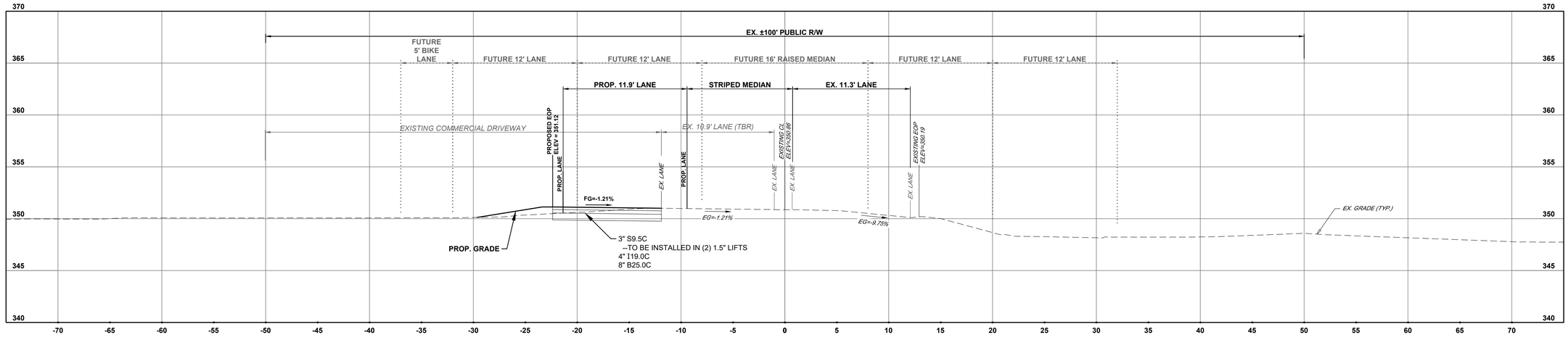
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MCE PROJ. #	09572-0002
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DESIGNED	ZMG
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PROJ. MGR.	PH

SCALE
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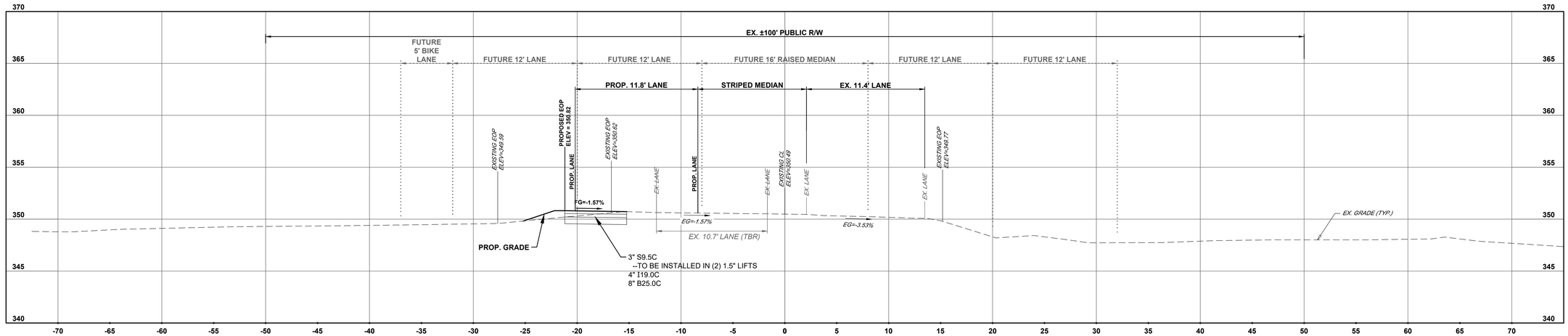
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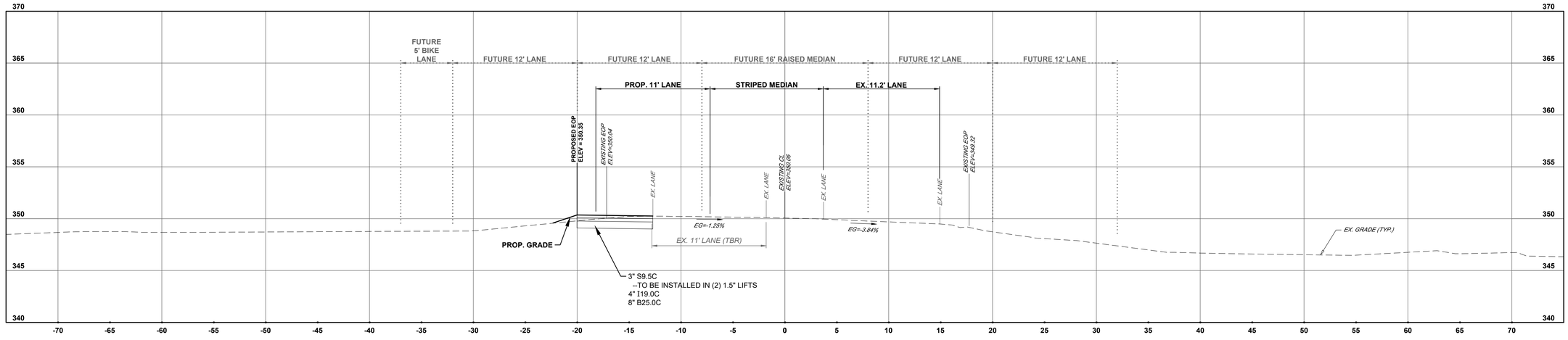
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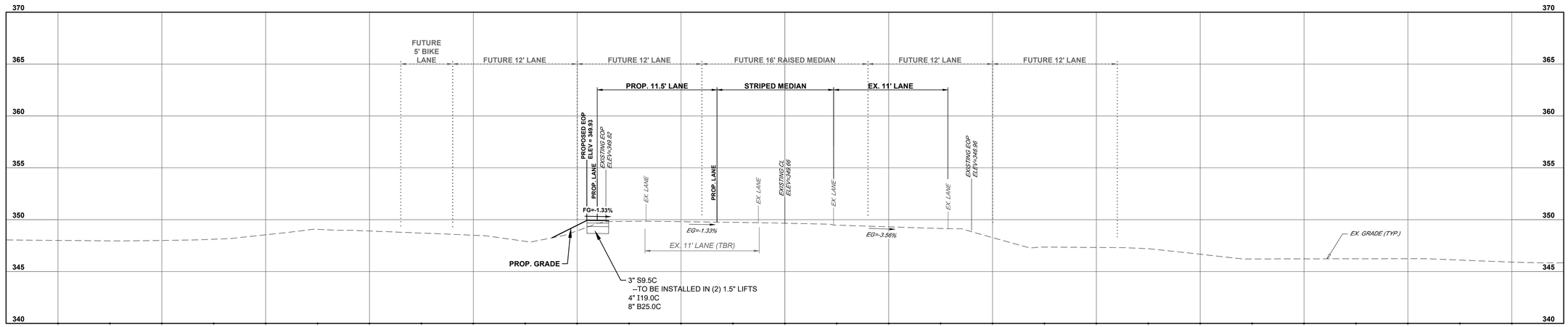
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SECTION STA 11+00



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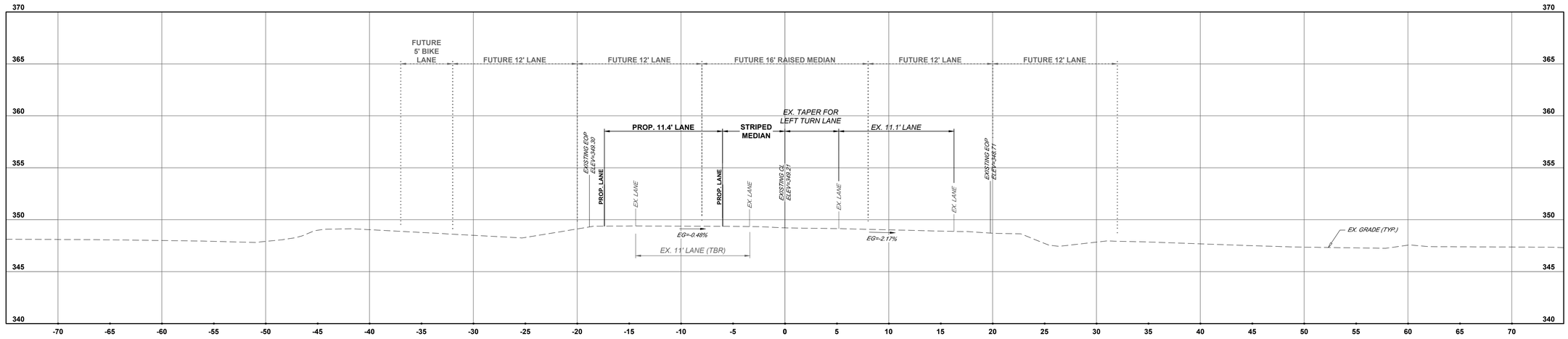
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02/13/2026
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057953
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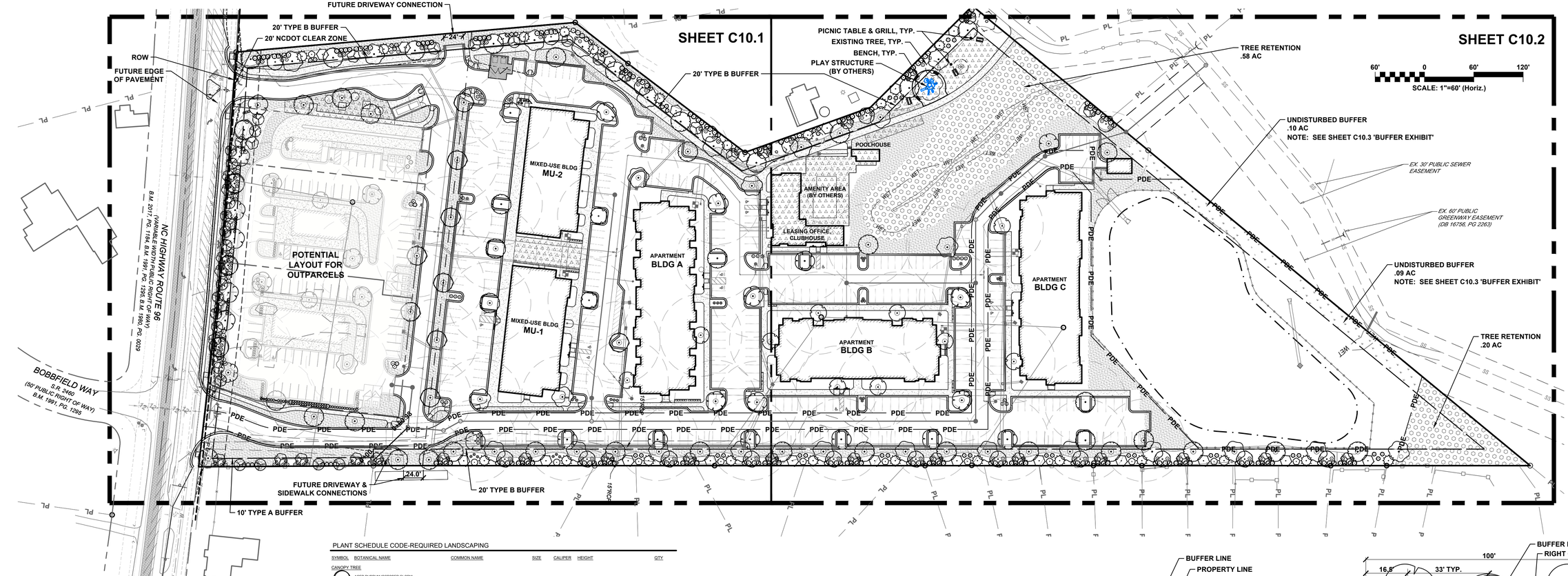
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LANDSCAPE CALCULATIONS

PARKING

LOT, REQUIRED: 34
1 CANOPY TREE / 12 PARKING SPACES: 406 SPACES / 12 = 34
NO PARKING SPACE MORE THAN 50' FROM THE TRUNK OF A CANOPY TREE
LOT, PROVIDED: 34 + 30 = 64

INTERIOR, REQUIRED: 54
MIN. 3 SHRUBS IF NO TREE PRESENT: 18 ISLANDS W/OUT TREES x 3 = 54
INTERIOR, PROVIDED: 62

PERIMETER, REQUIRED:
SINGLE ROW EVERGREEN SHRUBS @ 3' O.C., MAX HEIGHT 36": 249 LF / 3' = 83
PERIMETER, PROVIDED: 87

FOUNDATION

REQUIRED: EVERGREEN SHRUBS @ 3' O.C. W/IN 10' OF BUILDING ALONG FACADES VISIBLE FROM A STREET
PROVIDED: OP 1: TO BE DETERMINED WHEN PARCEL IS DEVELOPED
OP 2: TO BE DETERMINED WHEN PARCEL IS DEVELOPED
OP 3: TO BE DETERMINED WHEN PARCEL IS DEVELOPED

* APPROVED ZONING CONDITION: NO FOUNDATION SHRUBS IN FRONT OF RETAIL SPACE IN THE MIXED USE BUILDINGS.

APARTMENT BUILDING FACADES ARE NOT VISIBLE FROM A STREET. OPTIONAL PLANTINGS MAY BE INCLUDED WITH BUILDING PLANS, BY OTHERS IN A SEPARATE SUBMITTAL.

SITE

REQUIRED: 1 CANOPY TREE / 2,000 SF FOR THE FIRST 20,000 SF OF THE LOT
10 (20,000 SF / 2,000 SF)
PROVIDED: 10

SPECIES DIVERSITY

REQUIRED: 4 SPECIES WHEN 40 OR MORE TREES ARE REQUIRED
PROVIDED: 10 SPECIES

TREE RETENTION

REQUIRED: 5% OF THE TOTAL BUILDABLE AREA OF THE LOT
.73 AC (.05 X 14.546 AC)
PROVIDED: .78 AC

STREET TREES

REQUIRED: 10-11 TREES (+/- 506 LF / 45-50 LF)
PROVIDED: NO STREET TREES PROVIDED PER P.8, NCDOT 'GUIDELINES FOR PLANTING WITHIN HIGHWAY RIGHT-OF-WAY'

- 96 IS A STATE ROUTE, 45 MPH POSTED SPEED LIMIT, CURB & GUTTER
- REQUIRED CLEAR ZONE FOR LARGE* TREES = 20' MEASURED FROM EDGE OF TRAVEL LANE
  * LARGE TREE PER NCDOT: ANY TREE 4" CAL. OR OVER AT MATURITY

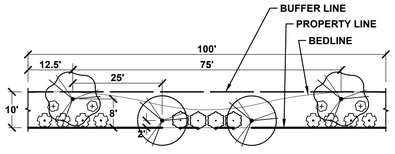
PLANT SCHEDULE CODE-REQUIRED LANDSCAPING

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY
CANOPY TREE						
	ACER RUBRUM 'OCTOBER GLORY' SPECIMEN, MATCHING	OCTOBER GLORY RED MAPLE	B & B	2.5" CAL.	8' HT. MIN.	4
	LIRIODENDRON TULIPIFERA `JFS-OZ`	EMERALD CITY® TULIP POPLAR	B & B	2.5" CAL.	8' HT. MIN.	29
	QUERCUS ACUTISSIMA	SAWTOOTH OAK	B & B	2.5" CAL.	8' HT. MIN.	42
	QUERCUS LYRATA 'MILLIKEN'	MILLIKEN OVERCUP OAK	B & B	2.5" CAL.	8' HT. MIN.	14
	ULMUS PARVIFOLIA 'UPMTF'	BOSQUE® LACEBARK ELM	670 GAL.	2.5" CAL.	8' HT. MIN.	9
	ZELKOVA SERRATA 'GREEN VASE' SPECIMEN, MATCHING	GREEN VASE JAPANESE ZELKOVA	B & B	2.5" CAL.	8' HT. MIN.	28
ORNAMENTAL TREES						
	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	15 GAL.		4' HT. MIN.	18
	CERCIS CANADENSIS 'APPALACHIAN RED'	APPALACHIAN RED EASTERN REDBUD	B & B	1.5" CAL.	4' HT. MIN.	8
	CERCIS CANADENSIS 'FOREST PANSY' SINGLE-STEM, MATCHING	FOREST PANSY EASTERN REDBUD	B & B	1.5" CAL.	4' HT. MIN.	36
	CORNUS KOUSA 'MILKY WAY' SINGLE-STEM, MATCHING	MILKY WAY KOUSA DOGWOOD	B & B	1.5" CAL.	4' HT. MIN.	13
	ILEX X ATTENUATA 'FOSTER NO. 2'	FOSTER NO. 2 HOLLY	B & B		4' HT. MIN.	22
	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM DWARF SOUTHERN MAGNOLIA	B & B		4' HT. MIN.	21
	PRUNUS CAROLINIANA 'MONUS'	BRIGHT 'N TIGHT CAROLINA CHERRY LAUREL	670 GAL.		4' HT. MIN.	2

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	QTY
SHRUBS							
	ABELIA CHINENSIS 'ABESRPRAS'	RASPBERRY PERFECTION™ ABELIA	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	6
	ABELIA X 'ROSE CREEK'	ROSE CREEK ABELIA	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	26
	ABELIA X GRANDIFLORA 'MINACARA'†	FUNSHINE® GLOSSY ABELIA	3 GAL.	18" MIN.		AS SHOWN	6
	CALLICARPA DICHOTOMA 'ISSAI'	ISSAI PURPLE BEAUTYBERRY	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	46
	CEPHALANTHUS OCCIDENTALIS 'BAILOPTICS'	FIBER OPTICS® BUTTONBUSH	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	48
	DISTYLIUM X 'VINTAGE JADE'	FIRST EDITIONS® VINTAGE JADE DISTYLIUM	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	84
	HAMAMELIS X INTERMEDIA 'DIANE'	DIANE WITCH HAZEL	5 GAL.	18" MIN.	18" MIN.	40' -50'	10
	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	3 GAL.	18" MIN.	15"-18" SPD.	AS SHOWN	96
	ILEX CRENATA 'SOFT TOUCH'	SOFT TOUCH JAPANESE HOLLY	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	73
	ILEX X 'RUTHOLA'	ARROW POINT® HOLLY	5 GAL.	18" MIN.	18" MIN.	AS SHOWN	51
	LIGUSTRUM SINENSE 'SUNSHINE'	SUNSHINE CHINESE PRIVET	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	26
	LOROPETALUM CHINENSE RUBRUM 'KURENAI'	JAZZ HANDS® PINK FRINGE FLOWER	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	26
	VIBURNUM ODORATISSIMUM 'COMPACT01'	SUGAR COOKIE® SWEET VIBURNUM	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	86
ORNAMENTAL GRASSES							
	MUHLENBERGIA CAPILLARIS 'WHITE CLOUD'	WHITE CLOUD MUHLY GRASS	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	18

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	% FILL	SPACING	QTY
GROUND COVERS							
	CYNODON DACTYLON X TRANSVAALENSIS 'DT-1'	TIFTUF™ BERMUDAGRASS	SOD				77,073 SF

BUFFER: EXISTING PLANT MATERIAL TO REMAIN



PLANT SCHEDULE 10' TYPE A BUFFER **(TYPICAL, PER 100 LF)**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY
ORNAMENTAL TREES						
	CERCIS CANADENSIS 'FOREST PANSY' SINGLE-STEM, MATCHING	FOREST PANSY EASTERN REDBUD	B & B	1.5" CAL.	4' HT. MIN.	2
	CORNUS KOUSA 'MILKY WAY' SINGLE-STEM, MATCHING	MILKY WAY KOUSA DOGWOOD	B & B	1.5" CAL.	4' HT. MIN.	1

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	QTY
SHRUBS							
	DISTYLIUM X 'VINTAGE JADE'	FIRST EDITIONS® VINTAGE JADE DISTYLIUM	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	8
	LIGUSTRUM SINENSE 'SUNSHINE'	SUNSHINE CHINESE PRIVET	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	3

BUFFER CALCULATIONS: 10' TYPE A 197 LF

REQUIRED: (4) UNDERSTORY TREES & (15) SHRUBS (50% EVERGREEN) / 100 LF
197 LF / 100 LF = 1.97 X 4 = 7.88 UNDERSTORY TREES
197 LF / 100 LF = 1.97 X 15 = 29.55 SHRUBS (MIN. 15 EVERGREEN)

PROVIDED: (9) UNDERSTORY TREES
(30) SHRUBS, 15 MIN. EVERGREEN

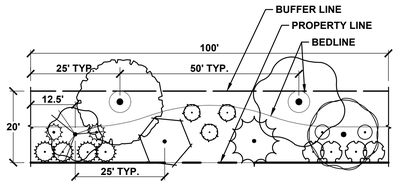
NOTE:
ALL LANDSCAPE AREAS NOT SHOWN AS TURF OR SEED TO RECEIVE 3" - 4" PINE STRAW MULCH.

NOTE:
POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL SITE PLANS WILL BE REQUIRED.

NOTE:
PLANT SCHEDULE INCLUDES MATERIAL QUANTITIES FOR FUTURE OUTPARCELS.

REFERENCE NOTES SCHEDULE CODE-REQUIRED LANDSCAPING

SYMBOL	CODE	DESCRIPTION	QTY
	1	RIVER ROCK MULCH	2.04 CY



PLANT SCHEDULE 20' TYPE B BUFFER **(TYPICAL, PER 100 LF)**

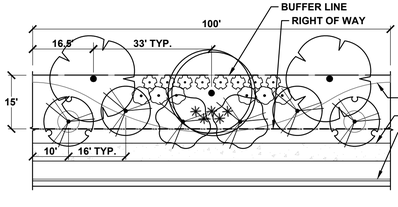
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY
CANOPY TREE						
	LIRIODENDRON TULIPIFERA `JFS-OZ`	EMERALD CITY® TULIP POPLAR	B & B	2.5" CAL.	8' HT. MIN.	1
	QUERCUS ACUTISSIMA	SAWTOOTH OAK	B & B	2.5" CAL.	8' HT. MIN.	1
ORNAMENTAL TREES						
	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	15 GAL.		4' HT. MIN.	1
	CERCIS CANADENSIS 'FOREST PANSY' SINGLE-STEM, MATCHING	FOREST PANSY EASTERN REDBUD	B & B	1.5" CAL.	4' HT. MIN.	1
	ILEX X ATTENUATA 'FOSTER NO. 2'	FOSTER NO. 2 HOLLY	B & B		4' HT. MIN.	1
	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM DWARF SOUTHERN MAGNOLIA	B & B		4' HT. MIN.	1

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	QTY
SHRUBS							
	CALLICARPA DICHOTOMA 'ISSAI'	ISSAI PURPLE BEAUTYBERRY	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	2
	CEPHALANTHUS OCCIDENTALIS 'BAILOPTICS'	FIBER OPTICS® BUTTONBUSH	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	2
	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	3 GAL.	18" MIN.	15"-18" SPD.	AS SHOWN	4
	ILEX X 'RUTHOLA'	ARROW POINT® HOLLY	5 GAL.	18" MIN.	18" MIN.	AS SHOWN	3
	VIBURNUM ODORATISSIMUM 'COMPACT01'	SUGAR COOKIE® SWEET VIBURNUM	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	4

BUFFER CALCULATIONS: STREETSCAPE - MODIFIED TYPE 'C' BUFFER, 15' MINIMUM WIDTH

REQUIRED: (3) CANOPY TREES / 100 LF
395.35 LF OF FRONTAGE / 100 = 3.95 (3) = 12 CANOPY TREES
(6) UNDERSTORY TREES / 100 LF
395.35 LF OF FRONTAGE / 100 = 3.95 (6) = 24 UNDERSTORY TREES
(20) SHRUBS / 100 LF
395.35 LF OF FRONTAGE / 100 = 3.95 (20) = 79 SHRUBS AT 5' MAX. SPACING, 75% EVERGREEN

PROVIDED: (12) CANOPY TREES, (24) UNDERSTORY TREES, (79 SHRUBS)



PLANT SCHEDULE 10' TYPE A BUFFER **(TYPICAL, PER 100 LF)**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	CALIPER	HEIGHT	QTY
ORNAMENTAL TREES						
	CERCIS CANADENSIS 'FOREST PANSY' SINGLE-STEM, MATCHING	FOREST PANSY EASTERN REDBUD	B & B	1.5" CAL.	4' HT. MIN.	2
	CORNUS KOUSA 'MILKY WAY' SINGLE-STEM, MATCHING	MILKY WAY KOUSA DOGWOOD	B & B	1.5" CAL.	4' HT. MIN.	1

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	QTY
SHRUBS							
	DISTYLIUM X 'VINTAGE JADE'	FIRST EDITIONS® VINTAGE JADE DISTYLIUM	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	8
	LIGUSTRUM SINENSE 'SUNSHINE'	SUNSHINE CHINESE PRIVET	3 GAL.	18" MIN.	18" MIN.	AS SHOWN	3

BUFFER CALCULATIONS: 20' TYPE B - 1148.53 LF (SOUTH) & 692.64 LF (NORTH)

REQUIRED:
(2) CANOPY TREES @ 50' OC / 100 LF
EAST BOUNDARY: 121.86 LF / 100 LF = 1.22 X 2 = 2.44 CANOPY TREES
NORTH BOUNDARY: 668.64 LF / 100 LF = 6.69 x 2 = 13.38 CANOPY TREES
SOUTH BOUNDARY: 1148.53 LF / 100 LF = 11.49 x 2 = 22.98 CANOPY TREES
(4) UNDERSTORY TREES @ 25' OC / 100 LF
EAST BOUNDARY: 121.86 LF / 100 LF = 1.22 X 4 = 4.88 UNDERSTORY TREES
NORTH BOUNDARY: 668.64 LF / 100 LF = 6.69 x 4 = 26.76 UNDERSTORY TREES
SOUTH BOUNDARY: 1148.53 LF / 100 LF = 11.49 x 4 = 45.96 UNDERSTORY TREES
(15) SHRUBS (60% EVERGREEN) / 100 LF
EAST BOUNDARY: 121.86 LF / 100 LF = 1.22 X 15 = 18.3 SHRUBS
NORTH BOUNDARY: 668.64 LF / 100 LF = 6.69 x 15 = 100.35 SHRUBS
SOUTH BOUNDARY: 1148.53 LF / 100 LF = 11.49 x 15 = 172.35 SHRUBS

PROVIDED:
EAST BOUNDARY: (2) CANOPY TREES
(5) UNDERSTORY TREES
(18) SHRUBS
NORTH BOUNDARY: (13) CANOPY TREES
(27) UNDERSTORY TREES
(100) SHRUBS
SOUTH BOUNDARY: (23) CANOPY TREES
(46) UNDERSTORY TREES
(176) SHRUBS

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GATEWAY ZEBULON MIXED-USE
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LANDSCAPE PLAN - OVERALL

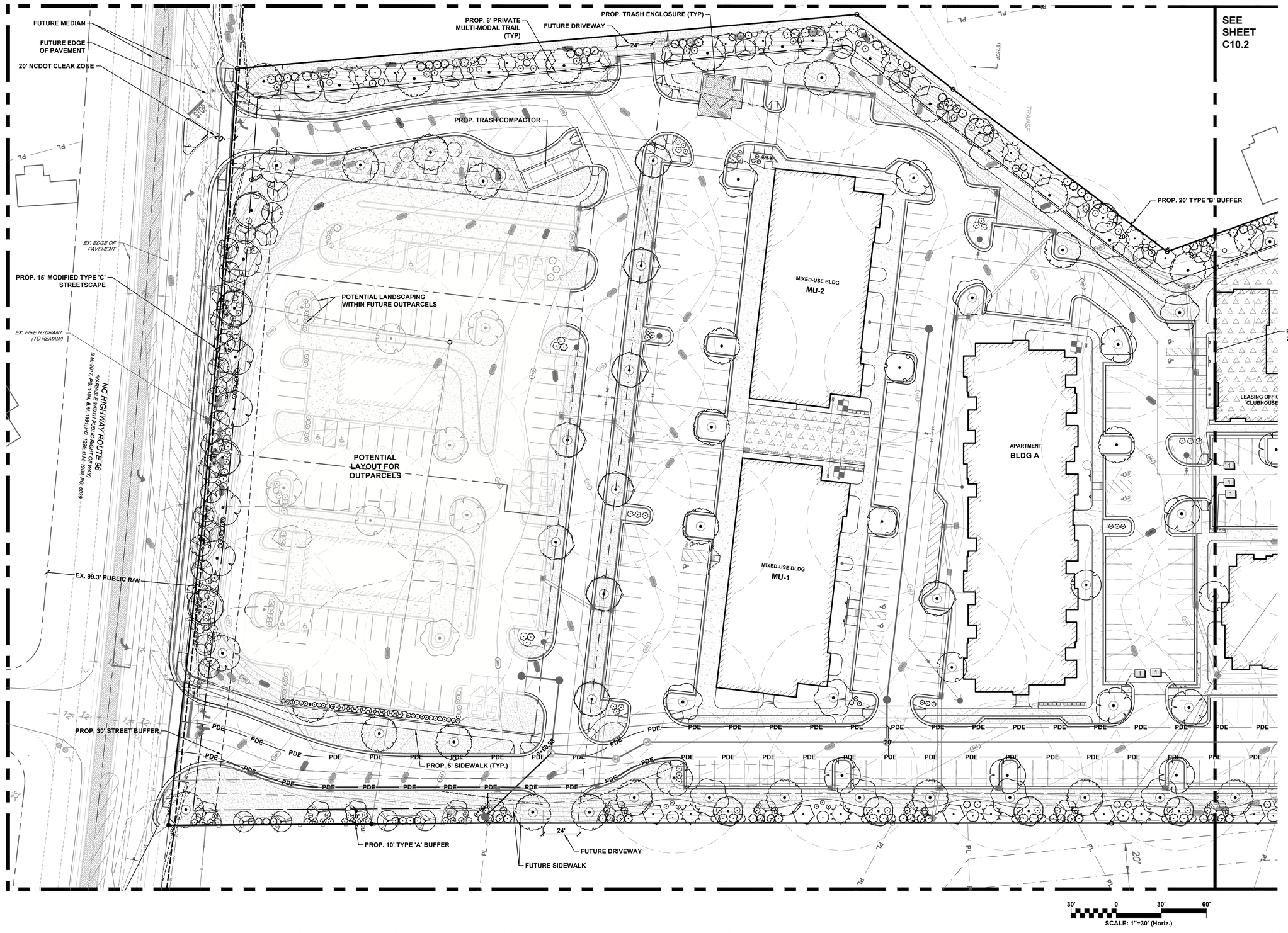
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PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 60'
VERTICAL: N/A

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DRAWING NUMBER
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STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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30' 0 30' 60'

SCALE: 1"=30' (Horiz.)

NOTE:

POTENTIAL LAYOUT SHOWN FOR OUTPARCELS. INDIVIDUAL LANDSCAPE PLANS WILL BE REQUIRED.

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A	ADDRESSED TOWN COMMENTS	12/23/2025

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

McKIM & CREED

8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

LANDSCAPE PLAN - ENLARGED

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	BBJ
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C10.1
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C10.0 LANDSCAPE.DWG ---- 02/12/2026 21:56:52

SEE SHEET C10.1

PICNIC TABLE & GRILL, TYP.
RAISED EDGING, TYP.
PLAY STRUCTURE (BY OTHERS)
BENCH, TYP.
PROP. 8' PRIVATE MULTI-MODAL TRAIL (TYP)
EX. GREENWAY TRAIL
PROP. TREE SAVE AREA (+/- .58 AC)
POOLHOUSE
AMENITY AREA (BY OTHERS)
LEASING OFFICE, CLUBHOUSE
APARTMENT BLDG B
APARTMENT BLDG C
PROP. 7' SIDEWALK (TYP.)
PROP. STORMWATER ACCESS EASEMENT
CONCRETE HW 42" RCP INV.: 314.49'
42" RCP INV.: 315.40'
30'
PROP. 30' SANITARY SEWER EASEMENT (TYP.)
MAINTENANCE BUILDING
PROP. 20' TYPE 'B' BUFFER (EXISTING TREES TO REMAIN, THIS AREA. SEE SHEET 10.3 BUFFER EXHIBIT.)
20'
EX. 30' PUBLIC SEWER EASEMENT
EX. 60' PUBLIC GREENWAY EASEMENT (DB 16756, PG 2263)
CONCRETE HW 24" RCP INV.: 310.74'
24" RCP INV.: 310.99'
PROP. STORMWATER MAINTENANCE EASEMENT (10 FT FROM TOE OF POND EMABNKMENT)
STORMWATER CONTROL MEASURE
15"RCP
EX. WETLAND AREA (TO REMAIN)
PROP. FENCE
PROP. TREE SAVE AREA (.2 AC)

30' 0 30' 60'
SCALE: 1"=30' (Horiz.)

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

REV.NO.	DESCRIPTIONS	DATE
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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

LANDSCAPE PLAN - ENLARGED

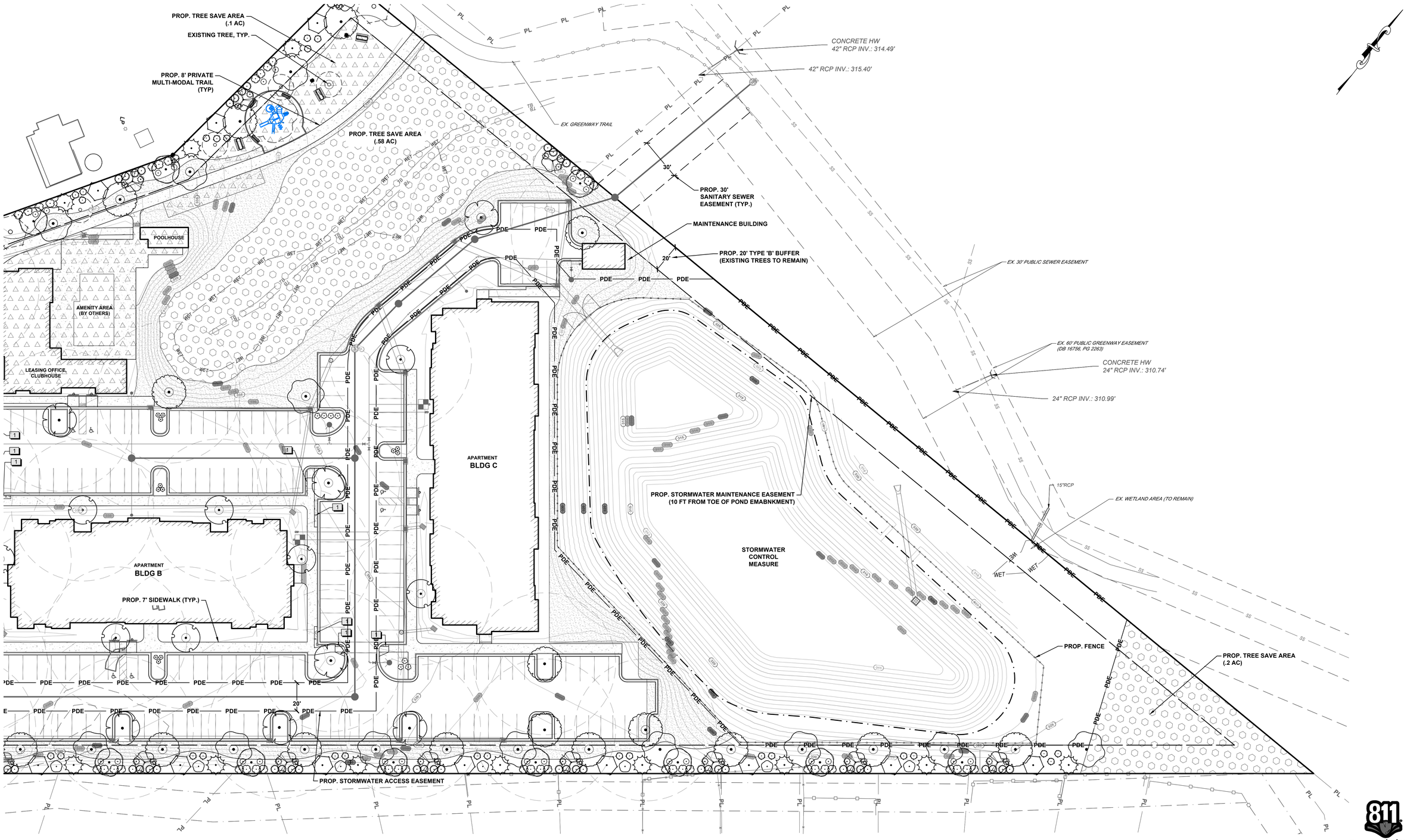
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	BBJ
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C10.2
DRAWING NUMBER
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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

BUFFER EXHIBIT

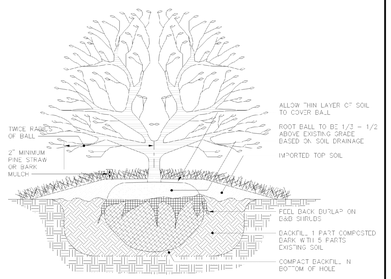
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	BBJ
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: 1" = 30'
VERTICAL: N/A

C10.3
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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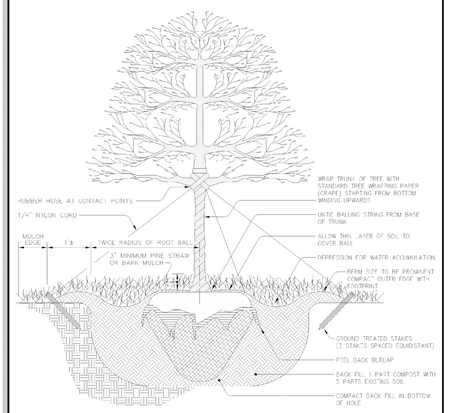


SECTIONAL VIEW

TOWN OF ZEBULON

TYPICAL SHRUB PLANTING DETAIL	SCALE: NOT TO SCALE	DETAIL #: 43
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

NOTE:
PRUNE LOWER BRANCHES OF TREE BACK TO MAIN TRUNK SO THAT REMAINING HEAD IS APPROX. 1/2 OF TOTAL TREE HEIGHT



SECTIONAL VIEW

TOWN OF ZEBULON

TYPICAL TREE STAKING and PLANTING DETAIL	SCALE: NOT TO SCALE	DETAIL #: 44
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

PRUNE DAMAGED BRANCHES WITH THREE CUTS TO AVOID PEELING BARK FROM THE TREE TRUNK WHEN LIMB FALLS



INCORRECT CORRECT



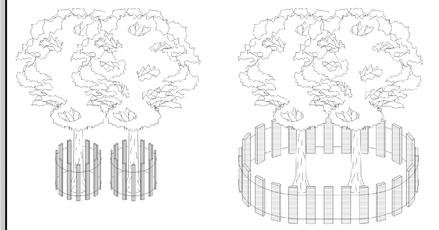
TRIM BARK WOUNDS WITH A TAPERED CUT, THEN APPLY TREE PAINT

TREE WOUND TRIM AND TAPER

TOWN OF ZEBULON

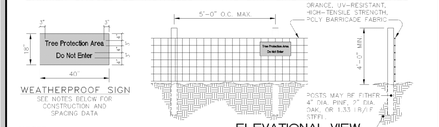
TREE SURGERY DETAIL	SCALE: NOT TO SCALE	DETAIL #: 45
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

NOTES:
IN SPITE OF PRECAUTIONS, SOME DAMAGE TO TREES MAY OCCUR.
IN SUCH CASES REPAIR ANY DAMAGE TO CROWN, TRUNK OR "ROOT" SYSTEM IMMEDIATELY.
- REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINT WITH TREE PAINT.
- SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
- REPAIR BARK TO BARK BY TRIMMING AROUND THE DAMAGED AREA AS SHOWN IN DETAIL 45.
- TAPER THE CUT TO PROVIDE DRAINAGE AND PAINT WITH TREE PAINT.
- CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH.
- USE THREE SEPARATE CUTS AS SHOWN IN DETAIL 45 TO AVOID PEELING BARK FROM HEALTHY AREAS OF TREE.



INCORRECT CORRECT

BARRIER SHOULD BE INSTALLED AT THE DRIP LINE OF TREE BRANCHES



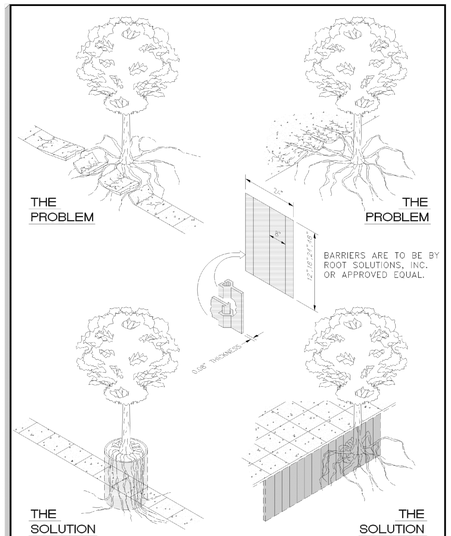
WEATHERPROOF SIGN
SEE NOTES BELOW FOR CONSTRUCTION AND SPACING DATA

ELEVATIONAL VIEW

NOTES:
1. INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR THE INITIAL ON SITE INSPECTION BY THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
3. LETTERS ARE TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE, AND SPACED AS DETAILED.
4. SIGNS ARE TO BE PLACED NO GREATER THAN 200' ON CENTER.
5. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AREAS AND 200' ON CENTER THEREAFTER.
6. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTED AREA.
7. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
8. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
9. ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF ZEBULON PUBLIC WORKS DEPT. BASED ON ACTUAL FIELD CONDITIONS.

TOWN OF ZEBULON

STANDARD TREE PROTECTION DETAIL	SCALE: NOT TO SCALE	DETAIL #: 46
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1



TOWN OF ZEBULON

STANDARD ROOT BARRIER DETAIL	SCALE: NOT TO SCALE	DETAIL #: 47
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET #: 1 OF 1

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

LANDSCAPE DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
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DESIGNED	BBJ
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C10.4
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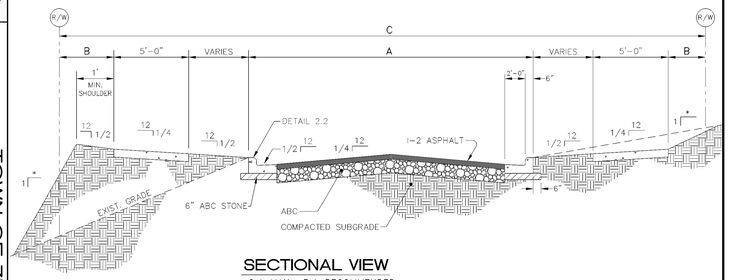
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TOWN OF ZEBULON

TYPICAL CURB & GUTTER STREET STANDARDS

USE WITH STANDARD SPECIFICATIONS ONLY

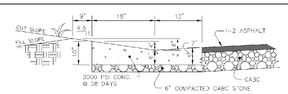
SCALE: NOT TO SCALE | DETAIL #: 1 | DATE: JULY 2010 | SHEET #: 1 OF 1



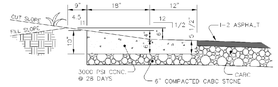
SECTIONAL VIEW

* 2:1 MAX., 3:1 RECOMMENDED

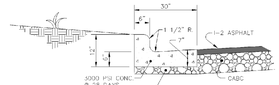
GEOMETRIC PROPERTIES					
CLASSIFICATION	A BACK TO BACK (FT)	B BACK TO BACK (FT)	PAVEMENT SECTION SF9.5	PAVEMENT SECTION CABC	C (ft)
CUL-DE-SAC	26'	N/A	3"	8"	50'
LOCAL STREET	26'	1' FROM R/W	3"	8"	50'
RESIDENTIAL COLLECTOR	35'	1' FROM R/W	4"	8"	60'
THOROUGHFARE	PER THOROUGHFARE PLAN	VARIES	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS



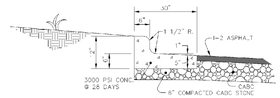
30° VALLEY - STANDARD



30° VALLEY - SPILL



STANDARD



SPILL

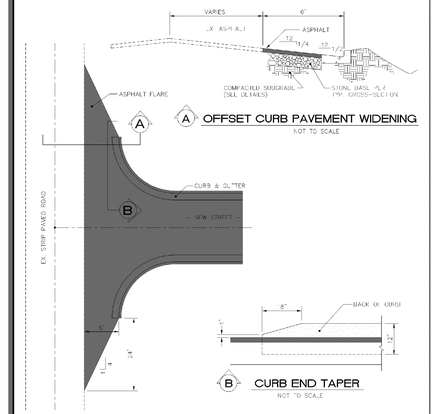
NOTES:
1. SCORE CURB / VALLEY GUTTER AT 15' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. FOR TRANSITION OF CURB TO CURB OPENING INLET, SEE STANDARD DETAIL 33.

TOWN OF ZEBULON

STD. CURB & GUTTER & VALLEY GUTTER DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 3 | DATE: JULY 2010 | SHEET #: 1 OF 1

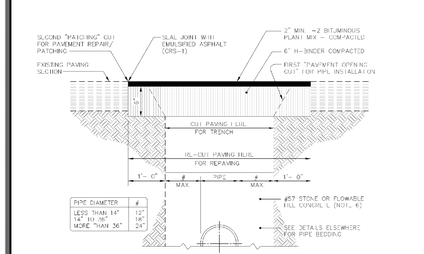


TOWN OF ZEBULON

TERMINAL END OF CURB at SHOULDER SECTIONS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 4 | DATE: JULY 2010 | SHEET #: 1 OF 1



SECTIONAL VIEW

NOTES:
1. PAVEMENT REPAIRS SHALL HAVE 6" COMPACTED H-BINDER AND 2" TOPPING OF SF9.5B.
2. TRENCH IS TO BE BACK FILLED IN 6" LIFTS AND COMPACTED TO 98% STANDARD DENSITY AS DETERMINED BY AASHTO TEST METHOD T-99 OR ASTM D-698 BEFORE PAVEMENT REPAIRS ARE MADE.
3. COMPACTION TEST MAY BE REQUIRED AT REQUEST OF INSPECTOR.
4. ALL EXISTING PAVED STREETS AND SECONDARY ROADS WHICH ARE OPEN CUT TO INSTALL SEWER OR WATER PIPE, MUST BE REPAIRED ACCORDING TO THIS DETAIL.
5. CABC BACKFILL IS NOT ALLOWED IN ANY PART OF TRENCH WITHIN PAVEMENT.
6. FIBER OPTIC & GAS: #57 STONE OR FLOWABLE FILL CONCRETE (MINIMUM 50 PSI) BUT MIN. 6" COMPACTED CLASS II OR III (DEFINITION IN SECTION 02210 - PARAGRAPH 3B OF SPECS) FILL OVER TOP OF FIBER OPTIC CABLE OR GAS PIPE.

TOWN OF ZEBULON

FULL DEPTH ASPHALT REPAIR DETAIL FOR UTILITY CUTS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 6 | DATE: JULY 2010 | SHEET #: 1 OF 1



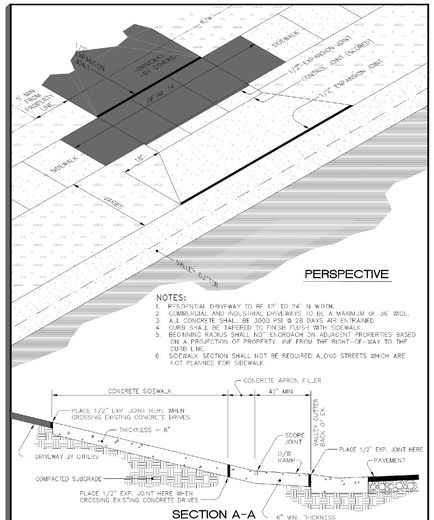
PLAN VIEW

TOWN OF ZEBULON

TIE-IN OF STREETS at DOT SHOULDER ROADS - STREETS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 7 | DATE: JULY 2010 | SHEET #: 1 OF 1

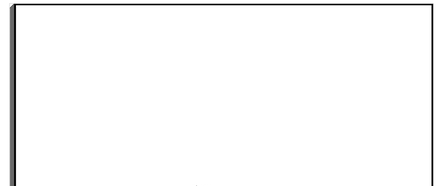


TOWN OF ZEBULON

FLARED DRIVEWAY ENTRANCE TO VALLEY GUTTER

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 9 | DATE: JULY 2010 | SHEET #: 1 OF 1



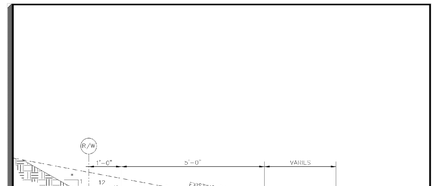
SECTIONAL VIEW

TOWN OF ZEBULON

STD. SUBDRAIN BEHIND CURB & GUTTER

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 11 | DATE: JULY 2010 | SHEET #: 1 OF 1



SECTIONAL VIEW

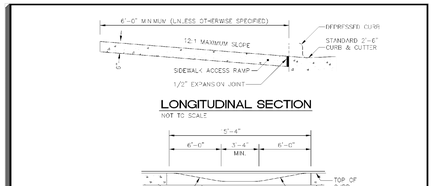
1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.
3. CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, AIR-ENTRAINED.
4. SUBGRADE SHOULD NOT CONTAIN ORGANIC MATTER OR PLASTIC CLAYS. WHEN FOUND, REFER TO SPECS OR CONTACT ENGINEER FOR DIRECTIONS.
5. AREAS OF FILL ARE TO BE COMPACTED TO 95% STANDARD PROCTOR USING NCDOT CLASS III BORROW OR BETTER. REMOVE TOPSOIL BEFORE PLACING BORROW.
6. SIDEWALK TRANSVERSE SLOPE MAY INCREASE TO 1/2 IN 12 WITH TOWN'S ENGINEER APPROVAL.

TOWN OF ZEBULON

TYP SIDEWALK in CUT or FILL SECTIONS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 13 | DATE: JULY 2010 | SHEET #: 1 OF 1



TOWN OF ZEBULON

SINGLE HANDICAP RAMP DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 20 | DATE: JULY 2010 | SHEET #: 1 OF 1

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
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ZEBULON DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
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CHECKED	PH
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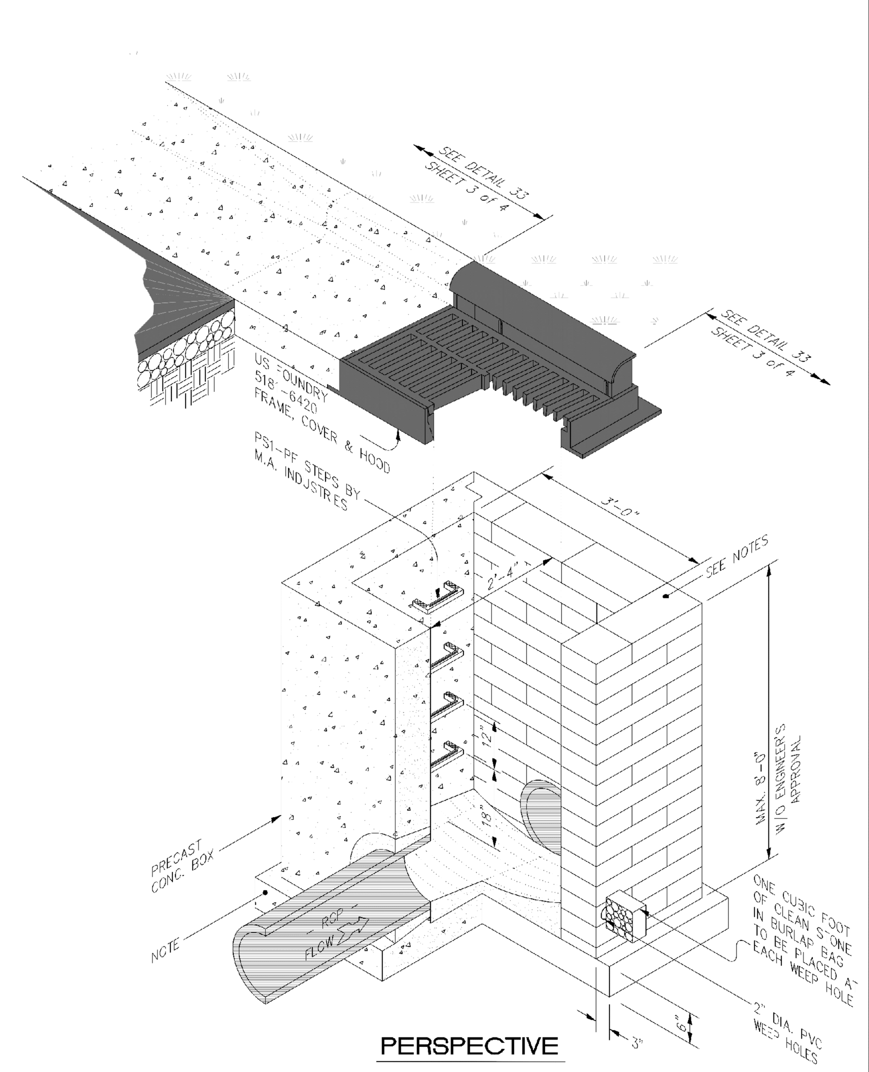
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VERTICAL: N/A

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DRAWING NUMBER

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REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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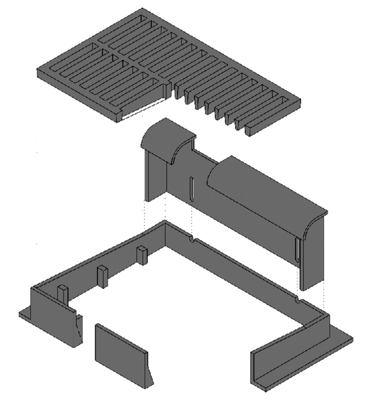
PERSPECTIVE

TOWN OF ZEBULON

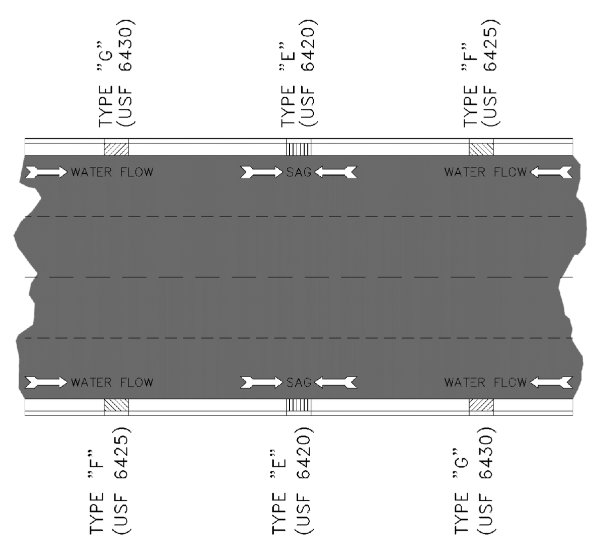
STD. C&G INLET W/HOOD DETAIL | SCALE: NOT TO SCALE | DETAIL # 33 | DATE: JULY 2010 | SHEET # 1 OF 4

USE WITH STANDARD SPECIFICATIONS ONLY

U.S. FOUNDRY 5181 CURB & GUTTER INLET FRAME (SHOWN WITH 6420 GRATE)
HEAVY DUTY FRAME, COVER & HOOD
FRAME, COVER & HOOD WEIGHT = 550 LBS.
WEIGHT MAY NOT DEVIATE BY MORE THAN -5.0%



PERSPECTIVE

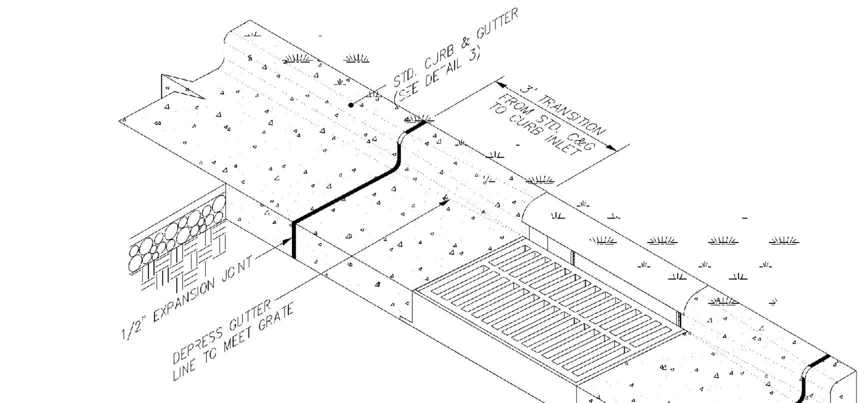


DETAIL SHOWING TYPES OF GRATES TO BE USED ACCORDING TO WATER FLOW

TOWN OF ZEBULON

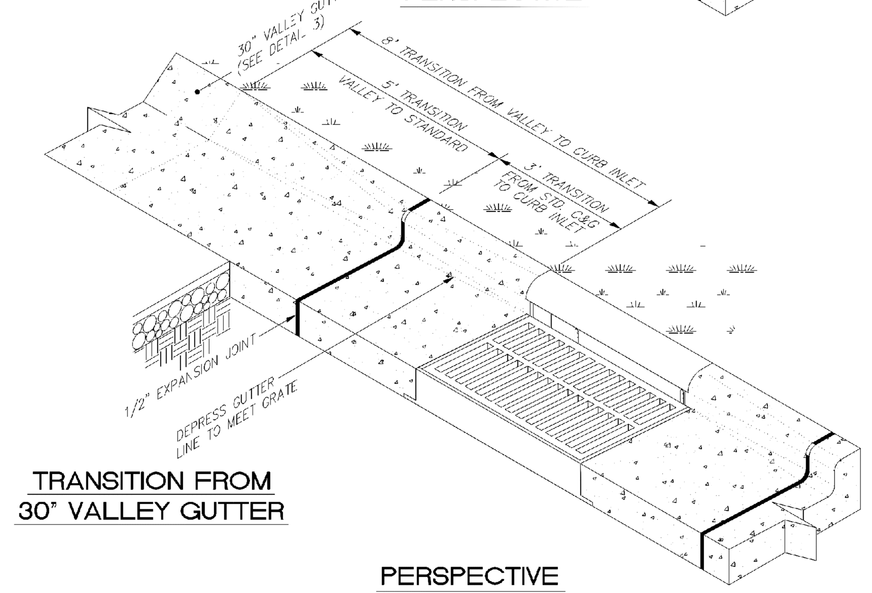
STD. C&G INLET W/HOOD DETAIL | SCALE: NOT TO SCALE | DETAIL # 33 | DATE: JULY 2010 | SHEET # 2 OF 4

USE WITH STANDARD SPECIFICATIONS ONLY



TRANSITION FROM STD. 30" CURB and GUTTER

PERSPECTIVE



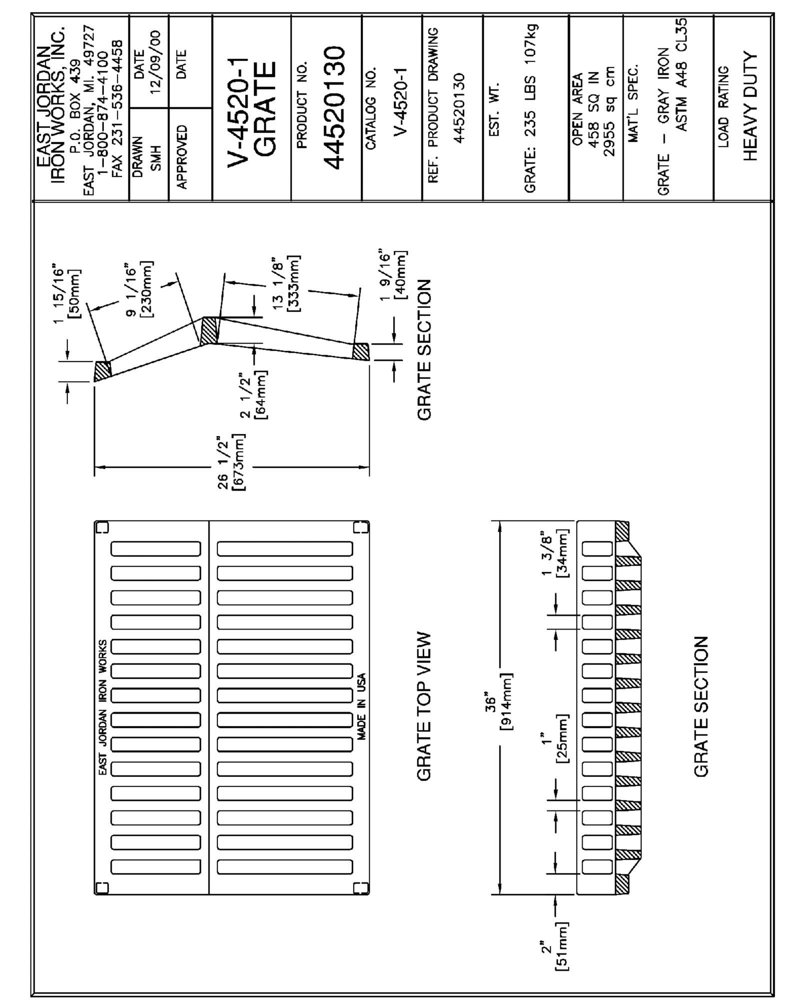
TRANSITION FROM 30" VALLEY GUTTER

PERSPECTIVE

TOWN OF ZEBULON

STD. TRANSITION FROM INLET TO STD. C&G / VALLEY GUTTER | SCALE: NOT TO SCALE | DETAIL # 33 | DATE: JULY 2010 | SHEET # 3 OF 4

USE WITH STANDARD SPECIFICATIONS ONLY

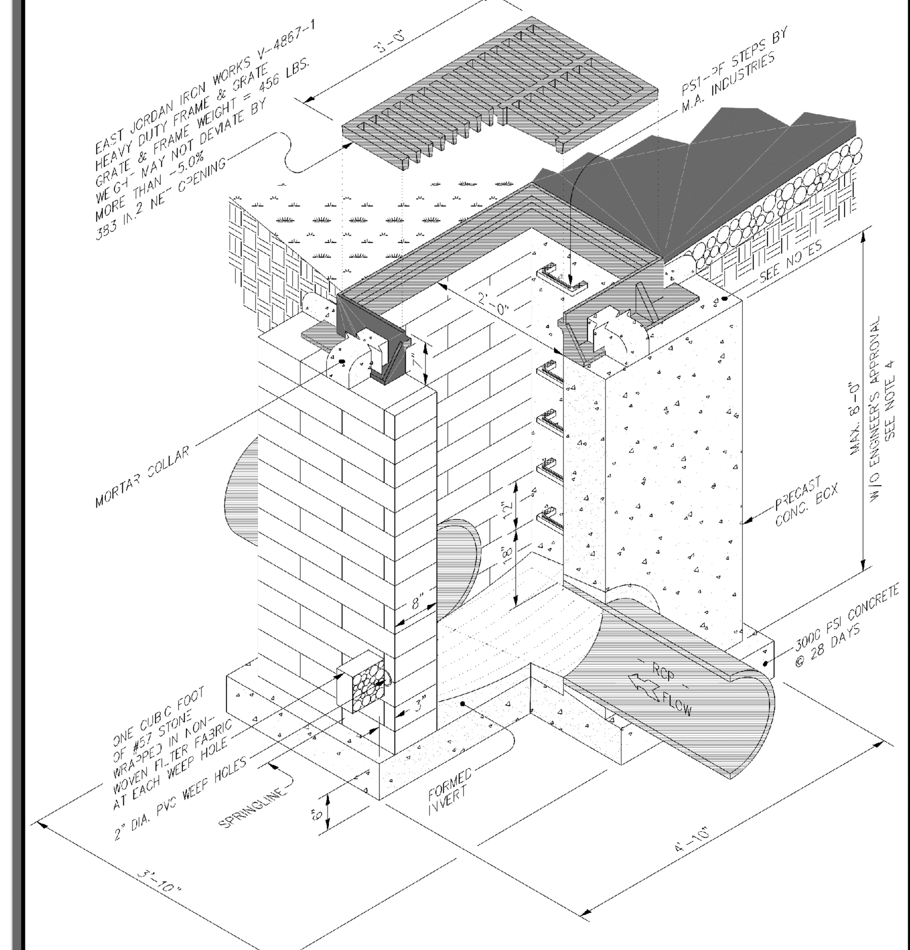


NOTE: USE EAST JORDAN IRON WORKS V-4520-1 GRATE OR EQUIVALENT BY US FOUNDRY.

TOWN OF ZEBULON

DETAIL FOR STORM DRAIN WITH DRIVEWAY CONFLICT | SCALE: NOT TO SCALE | DETAIL # 33 | DATE: JULY 2010 | SHEET # 4 OF 4

USE WITH STANDARD SPECIFICATIONS ONLY



PERSPECTIVE

TOWN OF ZEBULON

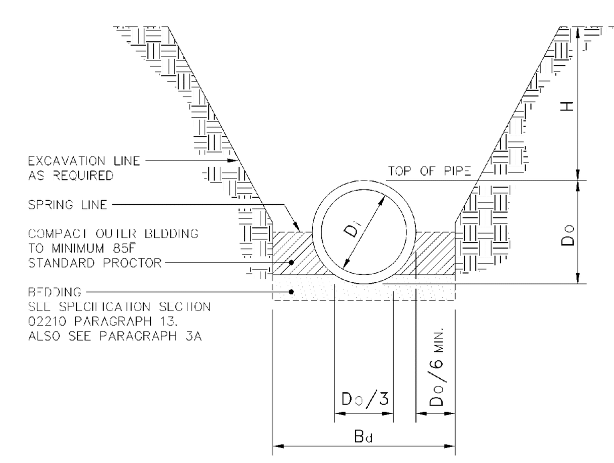
2x3 DROP INLET | SCALE: NOT TO SCALE | DETAIL # 34 | DATE: JULY 2010 | SHEET # 1 OF 1

USE WITH STANDARD SPECIFICATIONS ONLY

D_i = INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
B_d = TRENCH WIDTH
H = BACKFILL COVER ABOVE TOP OF PIPE

PIPE D_i	MAX. B_d	MAX. BURY H CLASS III (0.01" CRACK)	MAX. BURY H CLASS IV (0.01 CRACK)
15"	4'	9.5'	14.5'
18"	4'	9.5'	15.0'
24"	4'	12.0'	23.5'
30"	5.5'	10.0'	17.0'
36"	6'	10.5'	18.0'
42"	6.5'	13.0'	19.0'
48"	7'	13.5'	20.0'
54"	8'	13.0'	18.5'
60"	9'	11.0'	18.0'
72"	10'	13.0'	19.0'

THIS TABLE ASSUMES TYPE 4 INSTALLATION & NO STONE BEDDING



SECTIONAL VIEW

NOTES:
1. FOR OTHER BURY DEPTHS THAN SHOWN (H), NORTH CAROLINA PE TO PROVIDE CALCS ON PIPE BURY THAT EXCEED THOSE GIVEN IN THIS CHART FOR THE CONDITIONS IN WHICH IT IS PROPOSED TO BE USED.
2. THIS TABLE OF BURY DEPTHS (H) APPLIES EQUALLY TO A CLASS C STONE BEDDING, TYPE 4 LAYING CONDITIONS.
3. MINIMUM COVER NOT SHOWN BUT NO LESS THAN 12" W/O ENGINEERS APPROVAL UP TO 48" PIPE.

TOWN OF ZEBULON

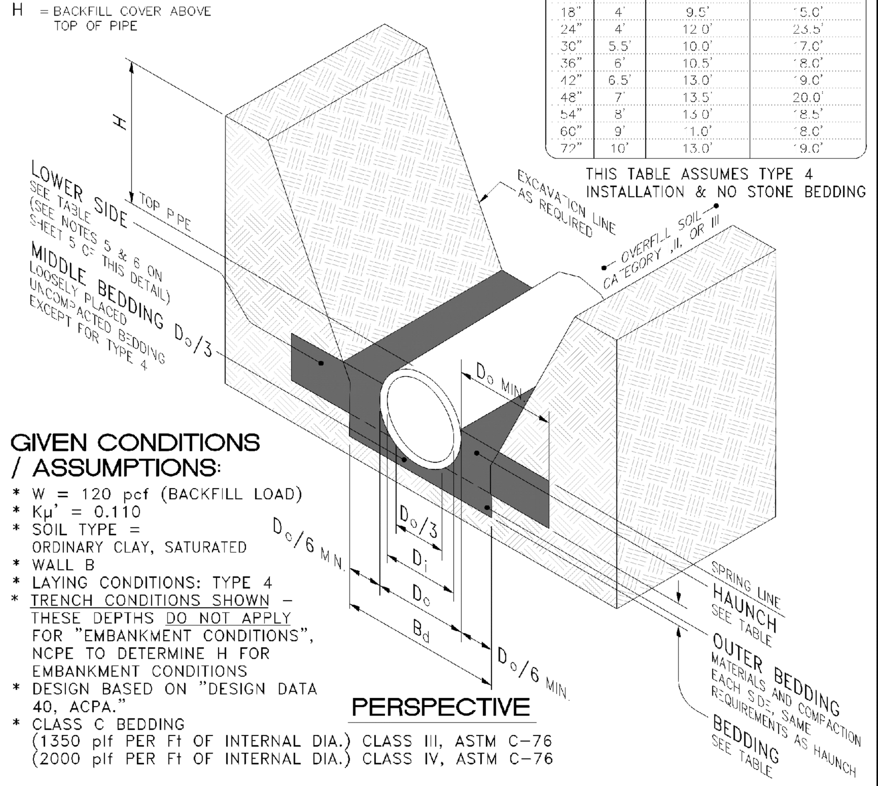
STD. TRENCH INSTALLATION FOR CONCRETE PIPE (FOR CONTRACTOR'S USE) | SCALE: NOT TO SCALE | DETAIL # 36 | DATE: JULY 2010 | SHEET # 1 OF 5

USE WITH STANDARD SPECIFICATIONS ONLY

D_i = INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
B_d = TRENCH WIDTH
H = BACKFILL COVER ABOVE TOP OF PIPE

PIPE D_i	MAX. B_d	MAX. BURY H CLASS III (0.01" CRACK)	MAX. BURY H CLASS IV (0.01 CRACK)
15"	4'	9.5'	14.5'
18"	4'	9.5'	15.0'
24"	4'	12.0'	23.5'
30"	5.5'	10.0'	17.0'
36"	6'	10.5'	18.0'
42"	6.5'	13.0'	19.0'
48"	7'	13.5'	20.0'
54"	8'	13.0'	18.5'
60"	9'	11.0'	18.0'
72"	10'	13.0'	19.0'

THIS TABLE ASSUMES TYPE 4 INSTALLATION & NO STONE BEDDING



PERSPECTIVE

GIVEN CONDITIONS / ASSUMPTIONS:
* W = 120 pcf (BACKFILL LOAD)
* Kμ' = 0.110
* SOIL TYPE = ORDINARY CLAY, SATURATED
* WALL B
* LAYING CONDITIONS: TYPE 4
* TRENCH CONDITIONS SHOWN – THESE DEPTHS DO NOT APPLY FOR "EMBANKMENT CONDITIONS", NCPE TO DETERMINE H FOR EMBANKMENT CONDITIONS
* DESIGN BASED ON "DESIGN DATA 40, ACPA."
* CLASS C BEDDING (1350 plf PER Ft OF INTERNAL DIA.) CLASS III, ASTM C-76 (2000 plf PER Ft OF INTERNAL DIA.) CLASS IV, ASTM C-76

NOTES:
1. GREATER DEPTHS ARE ACHIEVABLE BY EITHER CONTROLLING BACKFILL TYPE, NARROWING TRENCH WIDTH BUT SUPPLY SUFFICIENT ROOM FOR COMPACTION, IMPROVING BEDDING OR LOADING TO ULTIMATE LOAD (Du). FOR OTHER BURY DEPTHS THAN SHOWN (H), NORTH CAROLINA PE TO PROVIDE CALCS ON PIPE BURY THAT EXCEED THOSE GIVEN IN THIS CHART FOR THE CONDITIONS IN WHICH IT IS PROPOSED TO BE USED.
2. THIS TABLE OF BURY DEPTHS (H) APPLIES EQUALLY TO A CLASS C STONE BEDDING, TYPE 4. LAYING CONDITIONS
3. MINIMUM COVER NOT SHOWN
4. MAXIMUM BURY TABLE FOR "TRENCH CONDITIONS" PER THE DETAIL SHOWN THIS SHEET

TOWN OF ZEBULON

STD. TRENCH INSTALLATION FOR CONCRETE PIPE (FOR ENGINEER'S USE) | SCALE: NOT TO SCALE | DETAIL # 36 | DATE: JULY 2010 | SHEET # 2 OF 5

USE WITH STANDARD SPECIFICATIONS ONLY

Table 1 Equivalent USCS and AASHTO Soil CLassification for SIDD Soil Designations

	Representative Soil Types		Percent Compaction	
SIDD Soil	USCS,	AASHTO	Standard Proctor	Modified Proctor
Gravelly Sand (Category I)	SW, SP, GW, GP	A1,A3	100 95 90 85 80 61	95 90 85 80 75 59
Sandy Silt (Category II)	GM, SM, ML Also GC, SC with less than 20% passing #200 sieve	A2,A4	100 95 90 85 80 49	95 90 85 80 75 46
Silty Clay (Category III)	CL, MH GC, SC	A5,A6	100 95 90 85 80 45	90 85 80 75 70 40
	CH		100 95 90 45	90 85 80 40

TOWN OF ZEBULON

STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN) | SCALE: NOT TO SCALE | DETAIL # 36 | DATE: JULY 2010 | SHEET # 3 OF 5

USE WITH STANDARD SPECIFICATIONS ONLY

Table 2 Standard EMBANKMENT Installation Soils and Minimum Compaction Requirements

Installation Type[4]	Bedding Thickness	Haunch and Outer Bedding	Lower Side
Type 1	D_o/24 minimum, not less than 75 mm (3"). If rock foundation,use D_o/12 minimum, not less than 150 mm (6").	98% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	D_o/24 minimum, not les than 75 mm (3"). If rock foundation, use D_o/12 minimum,not less than 150 mm (6").	90% Category I or 95% Categiry I	85% Category I, 90% Category II, or 95% Category III
Type 3	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	D_o/24 minimum, not less than 75 mm (3") If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	No compaction required, except if Category III, use 85% Category III	No compaction required, except if Category III, use 85% Category III

Notes:
1. Compaction and soils symbols – i.e. "98% Category I' refers to Category 1 soil material with a minimum standard Proctor compaction of 98%. See Table 1 for equivalent modified Proctor values.
2. Soil in the outer bedding, haunch, and lower side zones, except within D0/3 from the pipe springline, shall be compacted to at least the same compaction as the majority of the soil in the overfill zone.
3. Subtrenches
3.1 A subtrench is defined as a trench with its top below finished grade by more than 0.1 H or, for roadways, its top is at an elevation lower than 0.3 m (1') below the bottom of the pavement base material.
3.2 The minimum width of a subtrench shall be 1.33 D_o or wider if required for adequate space to attain the specified compaction in the haunch and bedding zones.
3.3 For subtrenches with wall of natural soil, any portion of the lower side zone in the subtrench wall shall be at least as firm as an equivalent soil placed to the compaction requirements specified for the lower side zone and as firm as the majority of soil in the overfill zone, or shall be removed and replaced with soil compacted to the specified level.
4. Type 1 installation = relatively high quality material & high compaction effort. Type 4 installation = little or no control over material and compaction.

TOWN OF ZEBULON

STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN) | SCALE: NOT TO SCALE | DETAIL # 36 | DATE: JULY 2010 | SHEET # 4 OF 5

USE WITH STANDARD SPECIFICATIONS ONLY

Table 3 Standard TRENCH Installations Soils and Minimum Compaction Requirements

Installation Type[7]	Bedding Thickness	Haunch Outer Bedding	Lower Side
Type 1	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	98% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	No compaction required, except if Category II, use 85% Category II	No compaction required, except if Category II, use 85% Category II

Notes:
1. Compaction and soils symbols – i.e. "98% Category I" refers to Category I soil materials with minimum standard Proctor compaction of 98%. See Table 1 for equivalent modified Proctor values.
2. The trench top elevation shall be no lower than 0.1 H below finished grade or, for roadways, its top shall be no lower than an elevation of 0.3 m (1') below the bottom of the pavement base material.
3. Soil in bedding and haunch zones shall be compacted to at least the same compaction as specified for the majority of soil in the backfill zone.
4. The trench width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zone.
5. For trench walls that are within 10 degrees of vertical, the compaction or firmness of the soil in the trench walls and lower side zone need not be considered.
6. For trench walls with greater than 10 degrees slopes that consist of embankment, the lower side shall be compacted to at least the same compaction as specified for the soil in the backfill zone.
7. Type 1 installation = relatively high quality material & high compaction effort. Type 4 installation = little or no control over material and compaction.

TOWN OF ZEBULON

STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN) | SCALE: NOT TO SCALE | DETAIL # 36 | DATE: JULY 2010 | SHEET # 5 OF 5

USE WITH STANDARD SPECIFICATIONS ONLY

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL SEAL 057953 ENGINEER PATRICK N. HARTMAN 02/13/2026

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Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ZEBULON DETAILS

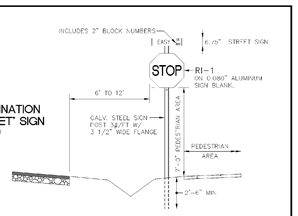
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C11.2
DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

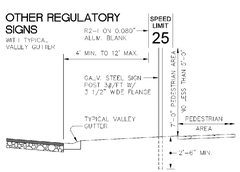
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STANDARD COMBINATION "STOP" AND "STREET" SIGN

ELEVATIONAL VIEW

OTHER REGULATORY SIGNS



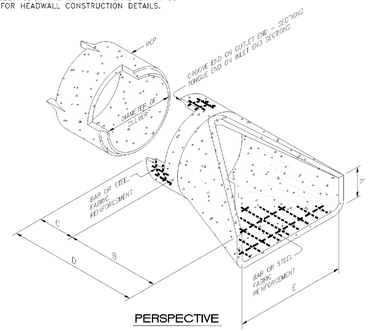
ELEVATIONAL VIEW

NOTES:
1. STREET NAME SIGNS SHALL BE A MINIMUM OF EXTRUDED ALUMINUM BLADES USING A MINIMUM OF 4" C. SERIES LETTERING IN HIGH INTENSITY SILVER & HIGH INTENSITY GREEN BACKGROUND (2" LETTERS FOR BLOCK NUMBERS)
2. ALL REFLECTIVE SIGNS SHALL BE MADE OF HIGH INTENSITY GRADE REFLECTIVE SHEETING OR APPROVED EQUIVALENT.
3. ALL SIGNS PLACED IN RIGHT-OF-WAY WILL BE APPROVED BY TOWN'S PUBLIC WORKS DIRECTOR.
4. ERECT STREET SIGNS PLUMB.
5. DEVELOPER SHALL BE RESPONSIBLE FOR FURNISHING & ERECTING ALL STREET NAME & REGULATORY SIGNS.
6. ALL HARDWARE MUST BE GALVANIZED.

TOWN OF ZEBULON		
STANDARD SIGN INSTALLATION DETAIL	SCALE: NOT TO SCALE	DETAIL # 30
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 1

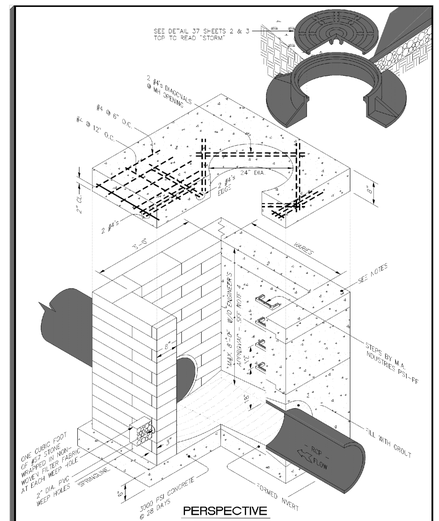
END SECTION DIMENSIONS					
DIA.	A	B	C	D	E
15"	7"	2'-3 1/4"	3'-11 1/2"	6'-2 3/4"	2'-6"
18"	9"	2'-3"	3'-11 3/4"	6'-2 3/4"	3'-0"
24"	9"	3'-7"	3'-1"	6'-8"	3'-11 3/4"
30"	1'-0"	4'-6 1/2"	1'-10 1/2"	6'-5"	5'-0"
36"	1'-4"	5'-0"	3'-1 1/2"	8'-1 1/2"	5'-11"
42"	1'-10 1/4"	5'-1 3/8"	3'-1"	8'-2 3/8"	6'-5 1/4"

NOTES:
1. DESIGN OF END-SECTION SHALL CONFORM TO STANDARD REINFORCED SECTIONAL CONCRETE CULVERT PIPE.
2. ANY TWIN BARREL SYSTEM GREATER THAN 42" RCP REQUIRES A HEADWALL.
3. ANY SYSTEM OF MORE THAN 2 PIPES REQUIRES A HEADWALL.
4. SEE NCDOT "ROADWAY STANDARD DRAWINGS" FOR HEADWALL CONSTRUCTION DETAILS.



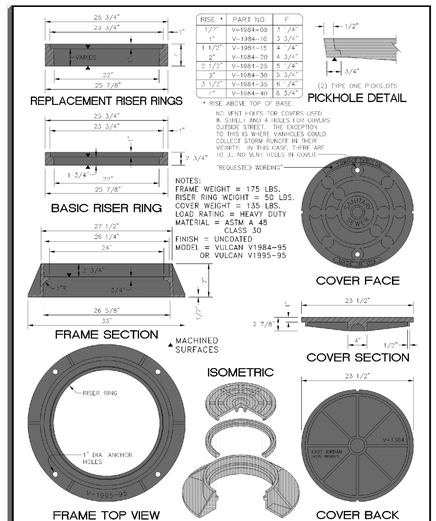
PERSPECTIVE

TOWN OF ZEBULON		
STD. FLARED END SECTIONS DESIGN AID DETAIL	SCALE: NOT TO SCALE	DETAIL # 35
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 1



PERSPECTIVE

TOWN OF ZEBULON		
STD. M.H. J.B. VARIABLE LENGTH	SCALE: NOT TO SCALE	DETAIL # 37
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 3



RISE *	PART NO.	F
1/2"	V-1984-05	3 1/4"
1"	V-1984-10	3 3/4"
1 1/2"	V-1984-15	4 1/4"
2"	V-1984-20	4 3/4"
2 1/2"	V-1984-25	5 1/4"
3"	V-1984-30	5 3/4"
3 1/2"	V-1984-35	6 1/4"
4"	V-1984-40	6 3/4"

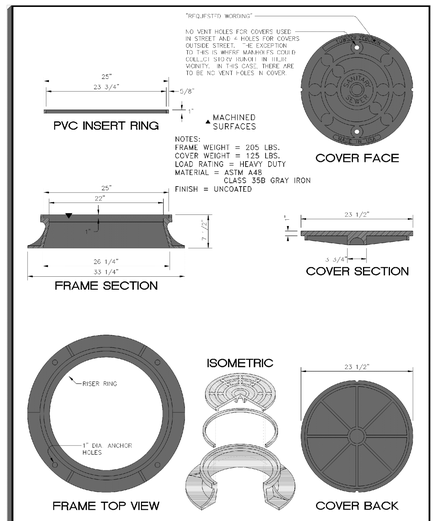
* RISE ABOVE TOP OF BASE

NO VENT HOLES FOR COVERS USED IN STREET AND 4 HOLES FOR COVERS OUTSIDE STREET. THE EXCEPTION TO THIS IS WHERE YARDKEYS COULD COLLECT STORM RUNOFF IN THEIR VICINITY. IN THIS CASE, THERE ARE 10 2- NO VENT HOLES IN COVER.

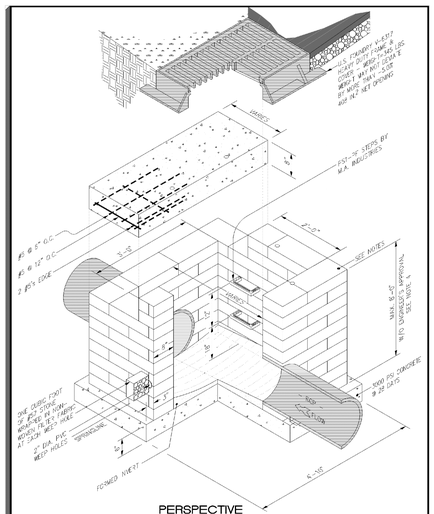
"REQUESTED WORDING"

NOTES:
FRAME WEIGHT = 175 LBS.
RISER RING WEIGHT = 50 LBS.
COVER WEIGHT = 135 LBS.
LOAD RATING = HEAVY DUTY
MATERIAL = ASTM A 48 CLASS 30
FINISH = UNCOATED
MODEL = VULCAN V1984-95 OR VULCAN V1995-95

TOWN OF ZEBULON		
STANDARD MANHOLE COVER & RING ADJUSTABLE - EAST JORDAN IRON WORKS V-1984	SCALE: NOT TO SCALE	DETAIL # 37
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 2 OF 3

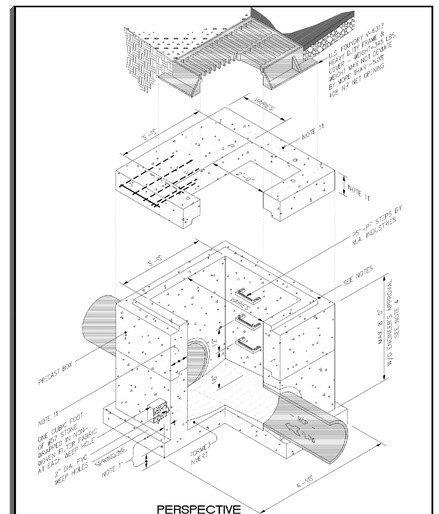


TOWN OF ZEBULON		
STANDARD MANHOLE & RING US FOUNDRY 700 KI	SCALE: NOT TO SCALE	DETAIL # 37
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 3 OF 3



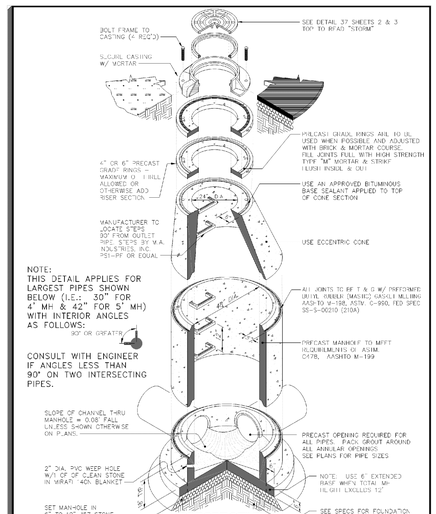
PERSPECTIVE

TOWN OF ZEBULON		
STD. 3' x VARIABLE LENGTH BOX WITH 2' x 3' C.B.	SCALE: NOT TO SCALE	DETAIL # 39
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 2



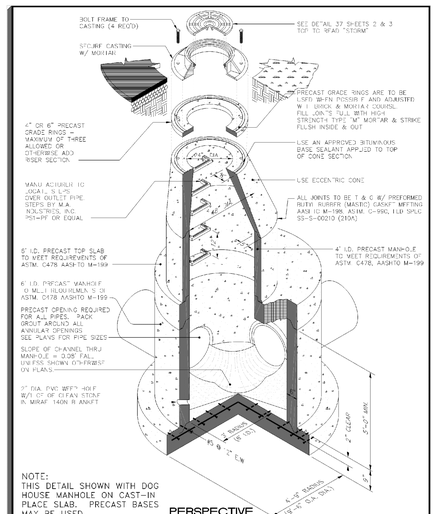
PERSPECTIVE

TOWN OF ZEBULON		
STD. 3' x VARIABLE LENGTH PRECAST BOX WITH 2' x 3' C.B.	SCALE: NOT TO SCALE	DETAIL # 39
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 2 OF 2



PERSPECTIVE

TOWN OF ZEBULON		
PRECAST CONCRETE 4' DIA. M I JB	SCALE: NOT TO SCALE	DETAIL # 40
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 1



PERSPECTIVE

TOWN OF ZEBULON		
PRECAST CONCRETE 6' TO 4' D A. MI JB	SCALE: NOT TO SCALE	DETAIL # 41
USE WITH STANDARD SPECIFICATIONS ONLY	DATE: JULY 2010	SHEET # 1 OF 1

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 RICK N. HARTMAN 02/13/2026

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Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ZEBULON DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C11.3
DRAWING NUMBER
B
REVISION

STATUS: **REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION**

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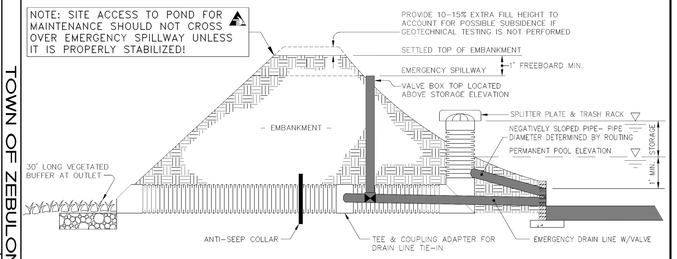
TOWN OF ZEBULON

TYPICAL SPILLWAY DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 42

DATE: JULY 2010 | SHEET # 1 OF 1



SECTIONAL VIEW

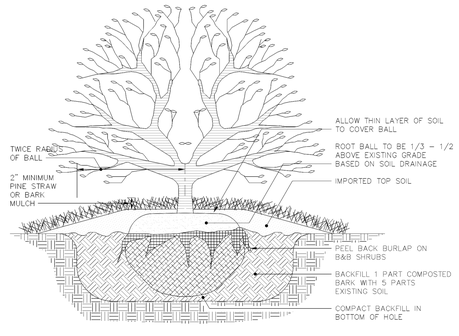
TOWN OF ZEBULON

TYPICAL SHRUB PLANTING DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

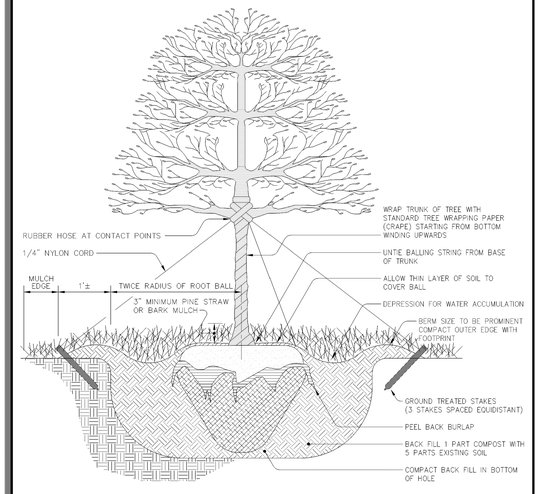
SCALE: NOT TO SCALE | DETAIL # 43

DATE: JULY 2010 | SHEET # 1 OF 1



SECTIONAL VIEW

NOTE:
PRUNE LOWER BRANCHES OF TREE BACK TO MAIN TRUNK SO THAT REMAINING HEAD IS APPROX. 1/2 OF TOTAL TREE HEIGHT



SECTIONAL VIEW

TOWN OF ZEBULON

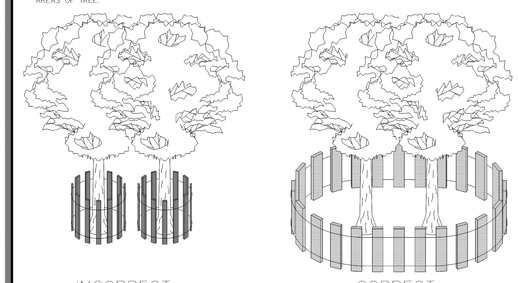
TYPICAL TREE STAKING and PLANTING DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

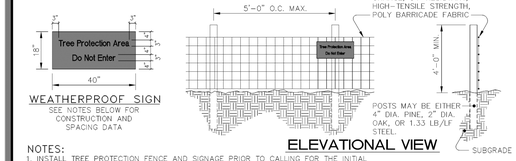
SCALE: NOT TO SCALE | DETAIL # 44

DATE: JULY 2010 | SHEET # 1 OF 1

NOTES:
IN SPITE OF PRECAUTIONS, SOME DAMAGE TO TREES MAY OCCUR.
IN SUCH CASES REPAIR ANY DAMAGE TO CROWN, TRUCK OR ROOT SYSTEM IMMEDIATELY.
- REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINT THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
- REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE DAMAGED AREA AS SHOWN IN DETAIL 45 TAPER THE CUT TO PROVIDE DRAINAGE AND PAINT WITH TREE PAINT.
- CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE THREE SEPARATE CUTS AS SHOWN IN DETAIL 45 TO AVOID PEELING BARK FROM HEALTHY AREAS OF TREE.



BARRIER SHOULD BE INSTALLED AT THE DRIP LINE OF TREE BRANCHES



ELEVATIONAL VIEW

NOTES:
1. INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR THE INITIAL ON SITE INSPECTION BY THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
3. LETTERS ARE TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
4. SIGNS ARE TO BE PLACED NO GREATER THAN 200' ON CENTER.
5. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AREAS AND 200' ON CENTER THEREAFTER.
6. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTED AREA.
7. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
8. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
9. ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF ZEBULON PUBLIC WORKS DEPT. BASED ON ACTUAL FIELD CONDITIONS.

TOWN OF ZEBULON

STANDARD TREE PROTECTION DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 46

DATE: JULY 2010 | SHEET # 1 OF 1

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 PATRICK N. HARTMAN 02/13/2026

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ZEBULON DETAILS

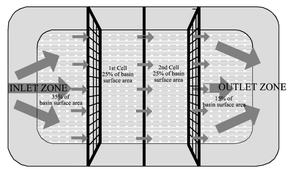
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

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DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

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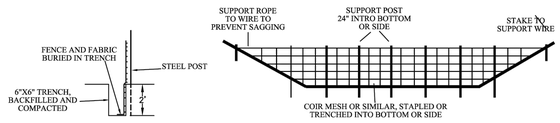


PLAN VIEW

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

MAINTENANCE NOTES:
1. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH 1" RAINFALL.
2. MAINTAIN ACCESS TO BAFFLES AND MAKE ANY REPAIRS IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
4. AVOID DAMAGING BAFFLES DURING CLEANOUT AND REPLACE IF DAMAGED.
5. REMOVE BAFFLES AND SEDIMENT DEPOSITS AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.

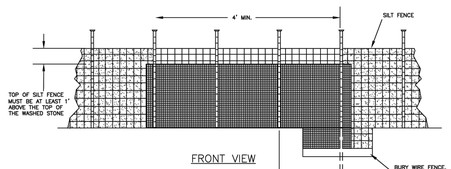
CROSS SECTION



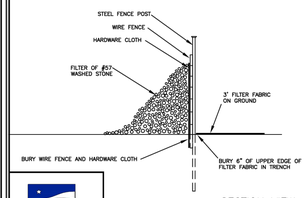
SECTION VIEW AT OPENING

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD BAFFLES DETAIL



FRONT VIEW



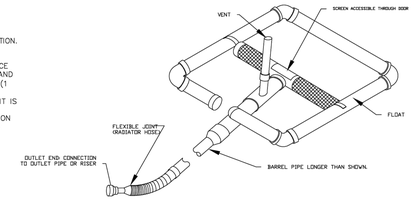
SECTION VIEW

MAINTENANCE NOTES:
1. INSPECT THE DEVICE PERIODICALLY AND AFTER 1 INCH RAINFALL OVER 24 HOUR PERIOD FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
2. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
3. REPLACE OR CLEAN THE SEDIMENT CONTROL STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. REPAIR AREAS WHERE OUTLET BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD SILT FENCE OUTLET

MAINTENANCE NOTES:
1. INSTALL A PAD FOR SKIMMER TO REST ON STONE OR WOOD PALLETS OR H-BEAM SECTION.
2. INSTALL SKIMMER AND PAD AWAY FROM BAFFLES.
3. ATTACH ROPE TO SKIMMER FOR MAINTENANCE
4. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
5. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
6. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.

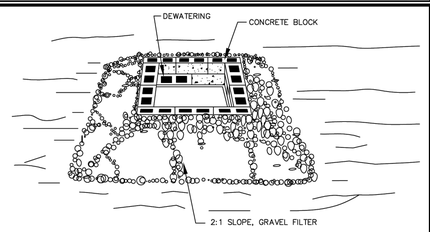


WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

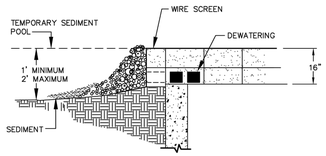
STANDARD SKIMMER DETAIL

CONSTRUCTION SPECIFICATIONS

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

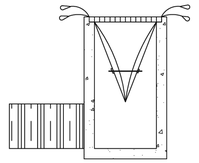


MAINTENANCE NOTES:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH 1" RAIN EVENT.
2. REMOVE SEDIMENT WHEN VOLUME OF THE BASIN IS REDUCED BY ONE-HALF.
3. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

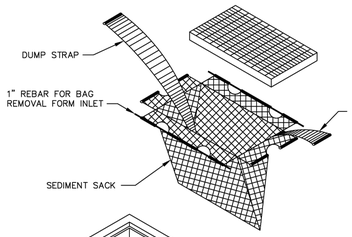


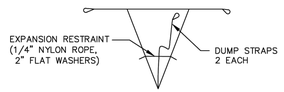
WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

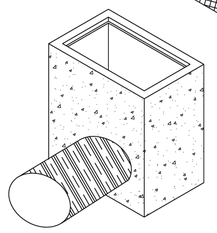


INSTALLATION DETAIL





BAG DETAIL



MAINTENANCE NOTES:
1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. FOLLOW ROAD SAFETY WHILE PERFORMING MAINTENANCE.
3. REPLACE BAG WHEN THEY BECOME CONTAMINATED WITH SEDIMENT AND CONSTRUCTION DEBRIS.
4. WHEN MAINTAINING AND REMOVING INLET PROTECTION DEVICES, EXERCISE CARE TO MINIMIZE SEDIMENT FALLING INTO THE INLET. IMMEDIATELY REMOVE ALL MATERIAL THAT HAS FALLEN INTO INLETS. DEPOSIT SEDIMENT REMOVED FROM THE DEVICE IN A SUITABLE AREA AND STABILIZE.

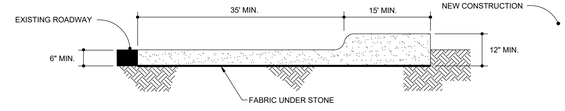
WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

PLAN VIEW

NOTES:
1. INSTALL SILT FENCE OR TREE PROTECTION FENCE TO ENSURE CONSTRUCTION ENTRANCE IS USED BY VEHICLES.
2. IF MUD IS NOT REMOVED FROM TIRES AFTER VEHICLE TRAVELS OVER STONE, THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROADS.

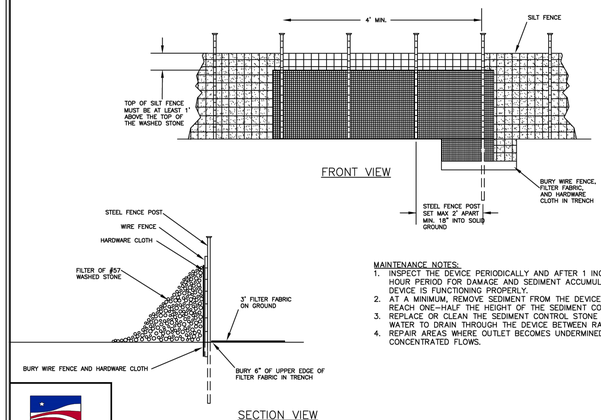
MAINTENANCE NOTES:
1. THE GRAVEL CONSTRUCTION ENTRANCE MUST BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT ROADWAYS.
2. REPLACEMENT OF STONE MAY BE NECESSARY TO ENSURE THE GRAVEL ENTRANCE FUNCTIONS PROPERLY.
3. REPLENISHMENT OF STONE MAY BE NECESSARY.
4. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE SHOULD BE COMPLETED.
5. ANY MATERIAL TRACKED ONTO THE ROADWAY SHALL BE CLEANED UP IMMEDIATELY.



CROSS SECTION

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD CONSTRUCTION ENTRANCE



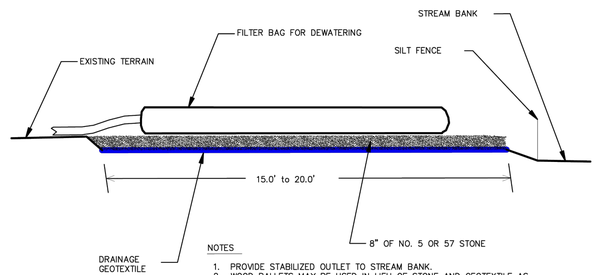
FRONT VIEW

SECTION VIEW

MAINTENANCE NOTES:
1. INSPECT THE DEVICE PERIODICALLY AND AFTER 1 INCH RAINFALL OVER 24 HOUR PERIOD FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
2. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
3. REPLACE OR CLEAN THE SEDIMENT CONTROL STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. REPAIR AREAS WHERE OUTLET BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD SILT FENCE OUTLET



NOTES
1. PROVIDE STABILIZED OUTLET TO STREAM BANK.
2. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

MAINTENANCE NOTES
1. REPLACE AND DISPOSE OF FILTER BAG(S) WHEN IT IS ¾ FULL OF SEDIMENT OR WHEN IT IS IMPRACTICAL FOR BAG TO FILTER SEDIMENT.
2. PROVIDE A SUFFICIENT QUANTITY OF FILTER BAGS TO CONTAIN SILT FROM PUMPED EFFLUENT.

NOT TO SCALE

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 057953 RICK N. HARTMAN 12/13/2026

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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

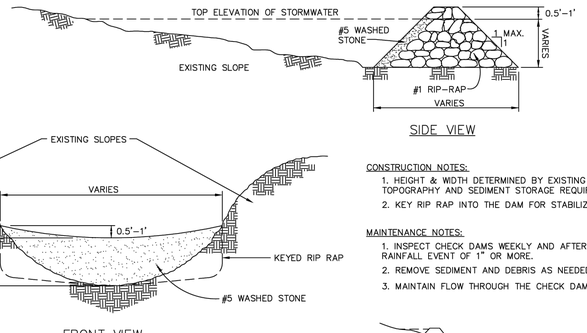
EROSION CONTROL DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	
PROJ. MGR.	PH

SCALE
HORIZONTAL: ###
VERTICAL: N/A

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DRAWING NUMBER
B
REVISION

STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION



CONSTRUCTION NOTES:

1. HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
2. KEY RIP RAP INTO THE DAM FOR STABILIZATION.

MAINTENANCE NOTES:

1. INSPECT CHECK DAMS WEEKLY AND AFTER EVERY RAINFALL EVENT OF 1" OR MORE.
2. REMOVE SEDIMENT AND DEBRIS AS NEEDED.
3. MAINTAIN FLOW THROUGH THE CHECK DAM.

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

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 10/15/2025

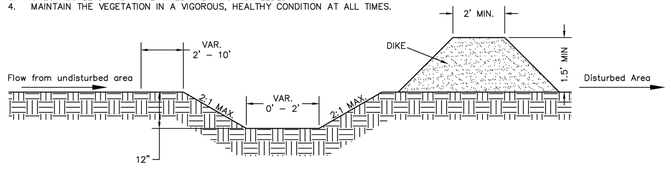
STANDARD CHECK DAM

NOTES:

1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 5 ACRES OR LESS.
4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.

MAINTENANCE NOTES:

1. INSPECT AFTER EVERY RAINFALL DURING THE CONSTRUCTION OPERATION.
2. IMMEDIATELY REMOVE ANY OBSTRUCTIONS FROM THE FLOW AREA, AND REPAIR DIVERSION RIDGE.
3. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
4. MAINTAIN THE VEGETATION IN A VIGOROUS, HEALTHY CONDITION AT ALL TIMES.



CROSS SECTIONAL VIEW

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 10/15/2025

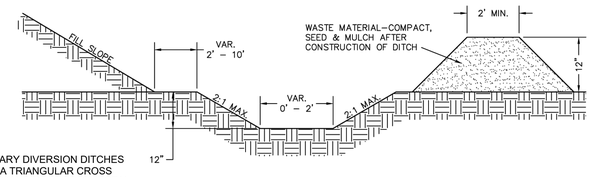
STANDARD CLEAN WATER DIVERSION

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

MAINTENANCE NOTES:

1. INSPECT ONCE A WEEK AND AFTER EVERY 1" RAINFALL.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE–HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
5. AFTER DRAINAGE AREA IS PERMANENTLY STABILIZED, PLACE WASTE MATERIAL IN DITCH TO BLEND WITH NATURAL GROUND AND STABILIZE.



ALL TEMPORARY DIVERSION DITCHES SHALL HAVE A TRIANGULAR CROSS SECTION AND 3:1 SIDE SLOPES. TOTAL DEPTH OF THE DITCH IS NOTED ON THE TABLE, BELOW.

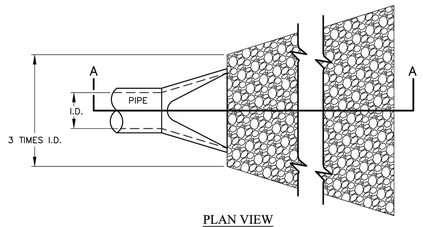
CROSS SECTIONAL VIEW

1. RECPs MUST MEET THE FOLLOWING MINIMUM PERMISSIBLE SHEAR SPECIFICATIONS:
   a. STRAW W/NET - 1.45 LB/FT²
   b. SYNTHETIC MATTING - 2.00 LB/FT²

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 10/15/2025

STANDARD TEMPORARY DIVERSION DITCH



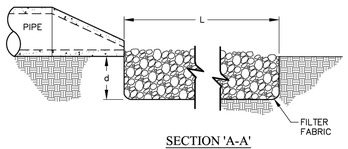
PLAN VIEW

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE NOTES:

1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.



SECTION 'A-A'

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 10/15/2025

STANDARD PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL

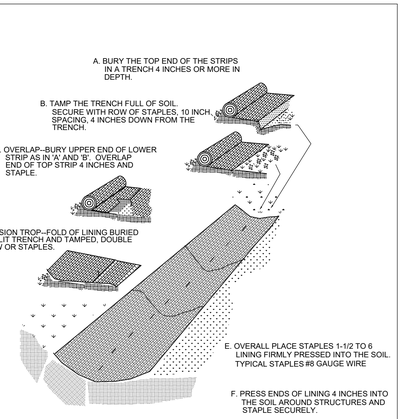
DITCH #	DRAINAGE AREA (AC)	LENGTH (FT)	DEPTH (FT)	BOTTOM WIDTH (FT)	TOP WIDTH (FT)	SIDE SLOPES (xH:1V)	FULL CAPACITY (CFS)	DESIGN FLOW (CFS)	DESIGN FLOW DEPTH (FT)	DESIGN FLOW VELOCITY (FPS)	SLOPE OF DITCH (FT/FT)	SHEAR STRESS (PSF)	# OF CHECK DAMS	CHANNEL LINING TYPE
TDD-1.1	3.34	406.00	2.00	1.00	13.00	3.00	111.06	9.73	0.72	4.30	0.030	1.34	9.00	STRAW WITH NET
TDD-1.2	3.38	422.00	2.00	1.00	13.00	3.00	45.34	9.84	1.06	2.21	0.005	0.33	2.00	STRAW WITH NET
TDD-2.1	9.62	254.00	2.00	3.00	11.00	2.00	49.61	23.09	1.38	2.90	0.028	2.41	5.00	RIPRAP D50=12"
TDD-2.2	9.62	115.00	2.00	3.00	11.00	2.00	58.64	23.09	1.27	3.28	0.007	0.56	1.00	STRAW WITH NET
TDD-2.3	9.62	222.00	1.50	1.00	7.00	2.00	15.57	1.26	0.47	1.36	0.018	0.53	3.00	STRAW WITH NET

TEMPORARY DIVERSION DITCH (TDD)
NOT TO SCALE

OUTLET NO.	Do (FT.)	La (FT.)	W (FT.)	DEPTH (IN.)	LINING CLASSIFICATION
OF-1	2.5	18	21	10.8	CLASS B
A1	3.5	22	26	14.4	CLASS B

OUTLET CHART

RIPRAP OUTLET PROTECTION
NOT TO SCALE



LINER INSTALLATION IN SWALES/DITCHES
NTS

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
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NORTH CAROLINA PROFESSIONAL 12/13/2026 SEAL 057953 ENGINEER NICK N. HARTMAN

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Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

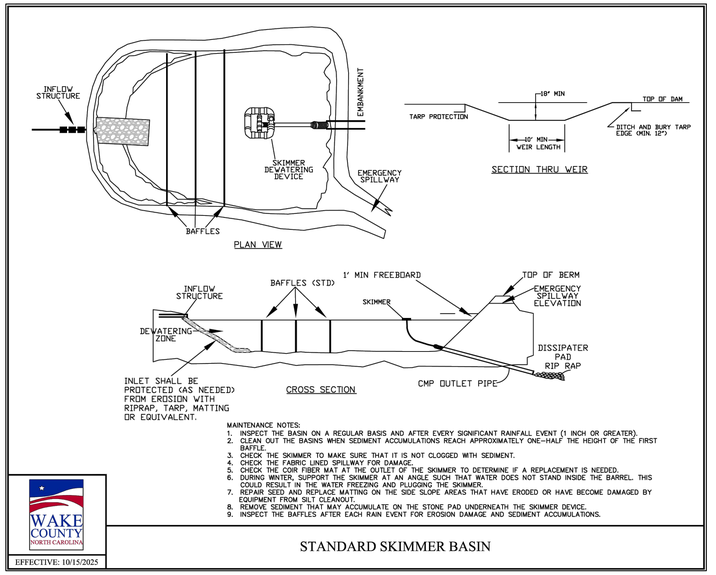
EROSION CONTROL DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C12.1
DRAWING NUMBER
B
REVISION

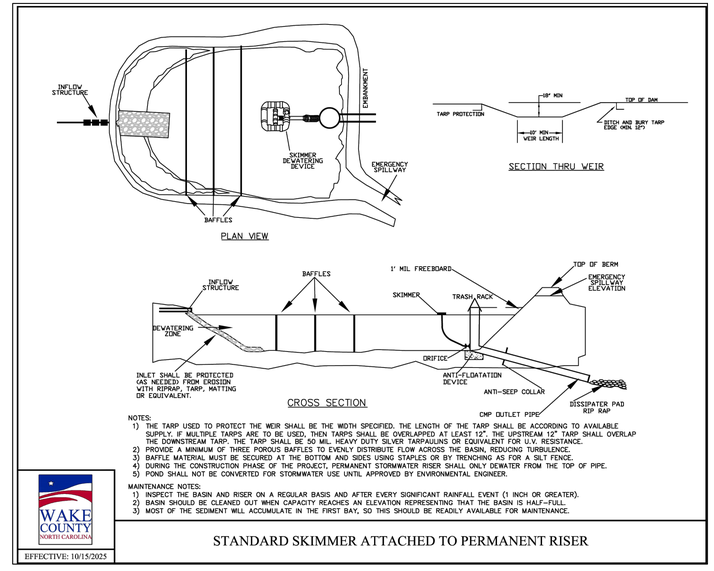
STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION



MAINTENANCE NOTES:
1. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2. CLEAN OUT THE BASINS WHEN SEDIMENT ACCUMULATIONS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE FIRST BAFFLE.
3. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
4. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE.
5. CHECK THE COIR FIBER MAT AT THE OUTLET OF THE SKIMMER TO DETERMINE IF A REPLACEMENT IS NEEDED.
6. DURING WINTER, SUPPORT THE SKIMMER AT AN ANGLE SUCH THAT WATER DOES NOT STAND INSIDE THE BARREL. THIS COULD RESULT IN THE WATER FREEZING AND PLUGGING THE SKIMMER.
7. REPAIR SEED AND REPLACE MATTING ON THE SIDE SLOPE AREAS THAT HAVE ERODED OR HAVE BECOME DAMAGED BY EQUIPMENT FROM SILT CLEANOUT.
8. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.
9. INSPECT THE BAFFLES AFTER EACH RAIN EVENT FOR EROSION DAMAGE AND SEDIMENT ACCUMULATIONS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD SKIMMER BASIN

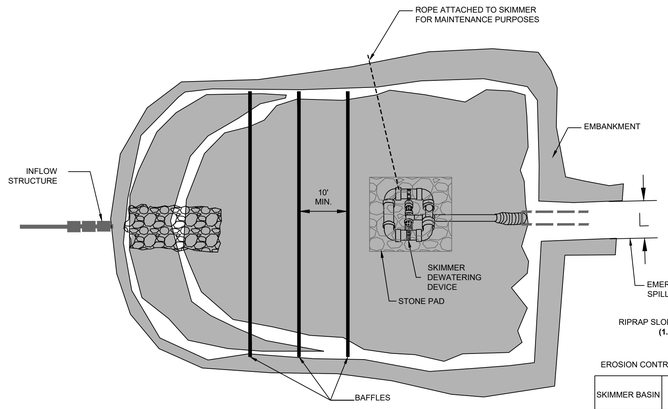


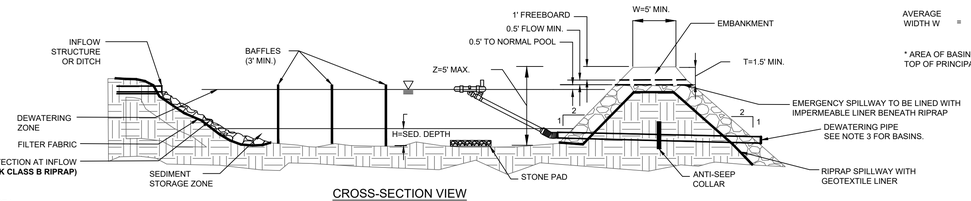
NOTES:
1) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
2) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
3) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
4) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
5) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

MAINTENANCE NOTES:
1) INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
3) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 10/15/2025

STANDARD SKIMMER ATTACHED TO PERMANENT RISER





CROSS-SECTION VIEW

AVERAGE WIDTH W = AREA* / L

* AREA OF BASIN WATER SURFACE AT TOP OF PRINCIPAL SPILLWAY

EROSION CONTROL PHASE I

SKIMMER BASIN	DRAINAGE AREA (ACRES)	DENUDED AREA (ACRES)	Q_{10} (CFS)	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	SKIMMER PIPE DIAMETER	SKIMMER ORIFICE DIAMETER	SKIMMER INVERT (MSL)	BOTTOM ELEVATION (MSL)	DEWATERING TIME (DAYS)	FLOW LENGTH TO WIDTH RATIO
				REQUIRED (CUBIC FT.)	PROVIDED (CUBIC FT.)	REQUIRED (SQ FT.)	PROVIDED (SQ FT.)												
SKIMMER BASIN 2	4.23	4.10	14.58	7380	8910	6344	6437	0.75	1.50	3.50	15	1.5	5	2.0 INCH	1.8 INCH	328.50	328.50	3.0	2.8:1

SKIMMER SEDIMENT BASIN #2
NOT TO SCALE
SEE EC REPORT FOR ADDITIONAL SEDIMENT BASIN INFORMATION

SKIMMER SEDIMENT BASIN DESIGN CRITERIA	
DRAINAGE AREA (ACRES)	< 10 AC.
MIN. LENGTH TO WIDTH RATIO	2:1
MAX. LENGTH TO WIDTH RATIO	6:1
MIN. VOLUME REQUIRED	2,250 (CU. FT. PER AC. DISTURBED)
SURFACE AREA REQUIRED	435 (SQ. FT. PER CFS Q10)

NOTES:

1. REFER TO NCESCPDM SECTION #6.64 FOR ADDITIONAL DESIGN SPECIFICATIONS REGARDING SKIMMER SEDIMENT BASINS.
2. REFER TO BAFFLE DETAIL FOR SPACING AND INSTALLATION OF BAFFLES. BAFFLES SHALL BE 3' MIN. IN HEIGHT AND 6" HIGHER THAN PRIMARY SPILLWAY ELEVATION.
3. ALL SKIMMER BASIN DEWATERING TIMES ARE 3 DAYS.
4. STABILIZE, SEED, AND MULCH BASIN SLOPES IMMEDIATELY AFTER CONSTRUCTION
5. SYNTHETIC MAT WILL BE REQUIRED ON ALL FILL BERMS AT SEDIMENT BASINS AND SHALL EXTEND 10' INTO VIRGIN SOIL AT EACH END OF THE BERM.
6. THE LOCATION OF THE EMERGENCY SPILLWAY IS SHOWN BELOW FOR REFERENCE ONLY. SEE PLAN FOR ACTUAL LOCATION IN POND.

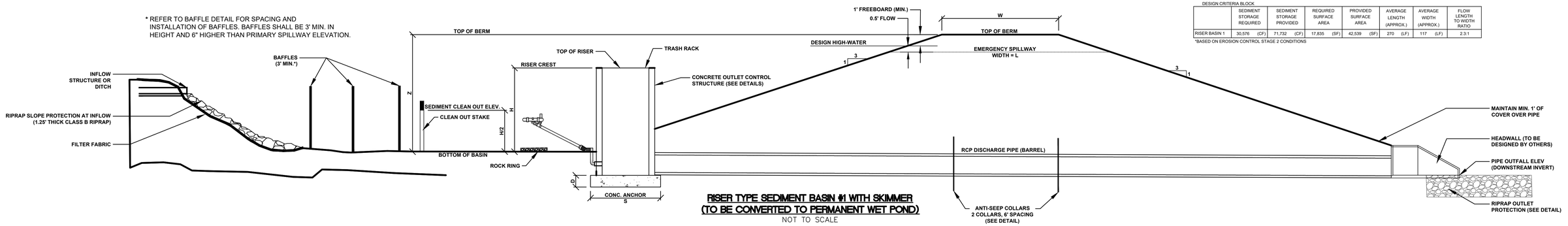
DATA BLOCK

BASIN	BOTTOM ELEVATION (FEET)	CLEANOUT DEPTH H/2 (FEET)	Z (FEET)	W (FEET)	S (FEET)	D (FEET)	H (FEET)	L (FEET)	SKIMMER PIPE DIAM. (IN)	SKIMMER ORIFICE DIAM. (IN)	RISER DIM. (FEET)	BARREL DIAM. (FEET)	BARREL LENGTH (FEET)	BARREL SLOPE (FT/FT)	BARREL UPSTREAM INVERT	BARREL DOWNSTREAM INVERT
RISER BASIN 1	317.0	1.75	6.0	10.0	5.5X5.5	1.0	3.5	20	6.0	5.6	4X4	2.5	78	0.0050	316.39	316.0

DESIGN CRITERIA BLOCK

	SEDIMENT STORAGE REQUIRED	SEDIMENT STORAGE PROVIDED	REQUIRED SURFACE AREA	PROVIDED SURFACE AREA	AVERAGE LENGTH (APPROX.)	AVERAGE WIDTH (APPROX.)	FLOW LENGTH TO WIDTH RATIO
RISER BASIN 1	30,576 (CF)	71,732 (CF)	17,835 (SF)	42,539 (SF)	270 (LF)	117 (LF)	2.3:1

*BASED ON EROSION CONTROL STAGE 2 CONDITIONS



RISER TYPE SEDIMENT BASIN #1 WITH SKIMMER (TO BE CONVERTED TO PERMANENT WET POND)

NOT TO SCALE

REV.NO.	DESCRIPTIONS	DATE
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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

EROSION CONTROL DETAILS

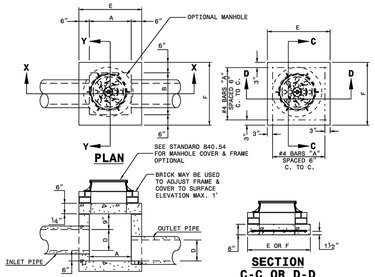
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

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DRAWING NUMBER
B
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STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C12.0 EROSION CONTROL_DETAILS.DWG ---- 02/12/2026 21:58:24



GENERAL NOTES:

CHAMFER ALL EXPOSED CORNERS 1".

USE CLASS "B" CONCRETE THROUGHOUT.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

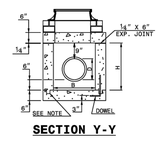
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.

PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.

ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)

MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12'-0". STANDARD DRAWING 840.45 OR 840.46 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.



SECTION Y-Y

DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. WTN. "H"	C.S.	R.C.
D	A	B	H	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. WTN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.222	0.222	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.588

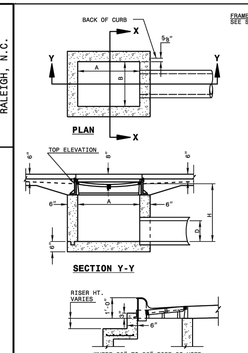
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-24

ROADWAY STANDARD DRAWING FOR **CONCRETE JUNCTION BOX** 12" THRU 66" PIPE

SHEET 1 OF 1

840.31



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

MAXIMUM DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 16'-0". STD. NO. 840.45 CONTROLS MAXIMUM DEPTH IF PRECAST BOX IS USED.

CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

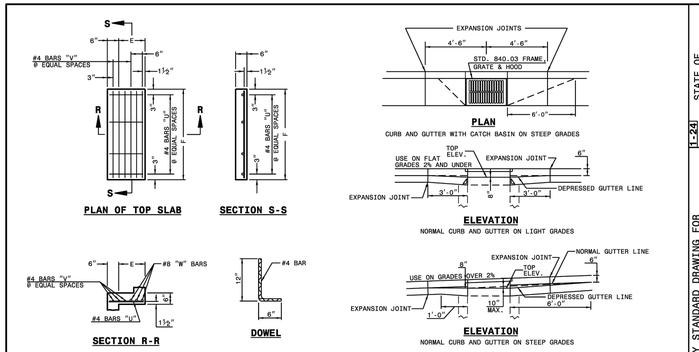
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1-24

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

SHEET 1 OF 2

840.02



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

DIMENSIONS OF BOX AND PIPE							COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX		DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT											TOP SLAB	BOTTOM SLAB (AT MIN. HEIGHT, H)		
D	A	B	C	G	H		E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	LBS.			C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"		--	--	--	--	--	--	--	--	--	--	--	0.015	0.026
15"	3'-0"	2'-2"			3'-0"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			3'-3"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-9"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"		1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"		4'-9"		1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178
42"	3'-0"	2'-2"		4'-5"	5'-3"		1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"		5'-0"	5'-9"		2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"		5'-7"	6'-3"		2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

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

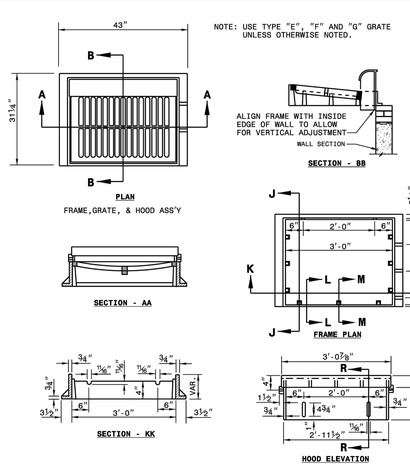
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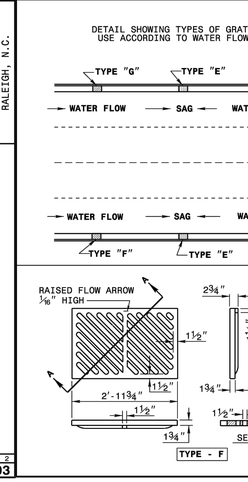
1-24

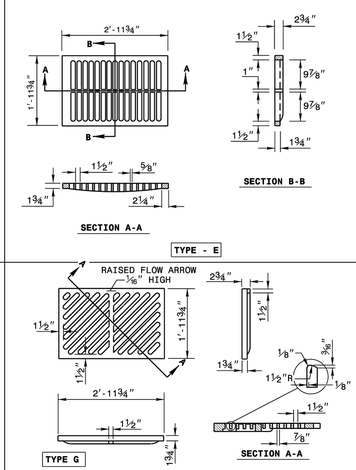
ROADWAY STANDARD DRAWING FOR **CONCRETE CATCH BASIN** 12" THRU 54" PIPE

SHEET 2 OF 2

840.02







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

1-24

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

SHEET 1 OF 2

840.03

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

SHEET 2 OF 2

840.03

REV.NO.	DESCRIPTIONS	DATE
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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

DRAINAGE DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	ZMG
DESIGNED	ZMG
CHECKED	PEH
PROJ. MGR.	PH

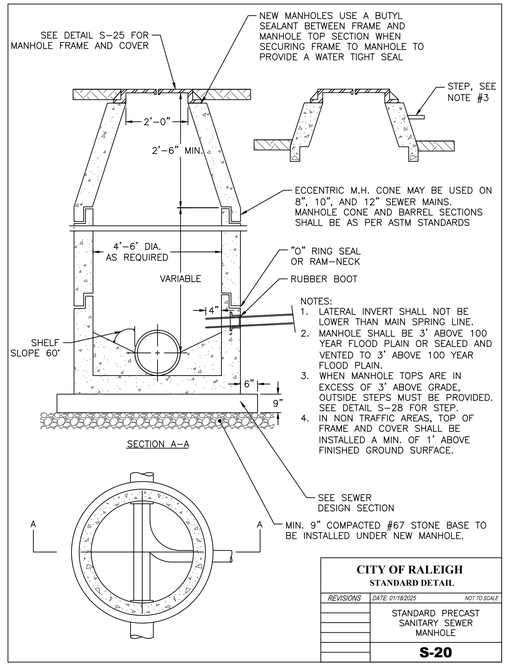
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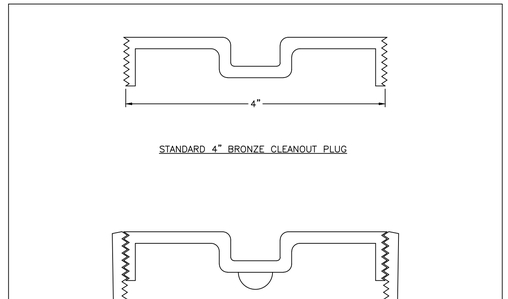
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NOTES:
1. LATERAL INVERT SHALL NOT BE LOWER THAN MAIN SPRING LINE.
2. MANHOLE SHALL BE 3' ABOVE 100 YEAR FLOOD PLAIN OR SEALED AND VENTED TO 3' ABOVE 100 YEAR FLOOD PLAIN.
3. WHEN MANHOLE TOPS ARE IN EXCESS OF 3' ABOVE GRADE, OUTSIDE STEPS MUST BE PROVIDED. SEE DETAIL S-28 FOR STEP.
4. IN NON TRAFFIC AREAS, TOP OF FRAME AND COVER SHALL BE INSTALLED A MIN. OF 1' ABOVE FINISHED GROUND SURFACE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025 NOT TO SCALE
	STANDARD PRECAST SANITARY SEWER MANHOLE
	S-20

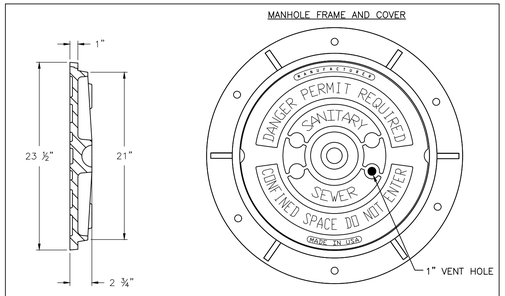


STYLES ACCEPTED:
INVERTED NUT
RAISED NUT

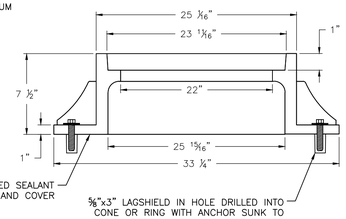
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025 NOT TO SCALE
	4" CLEANOUT PLUG
	S-34

MANHOLE FRAME AND COVER



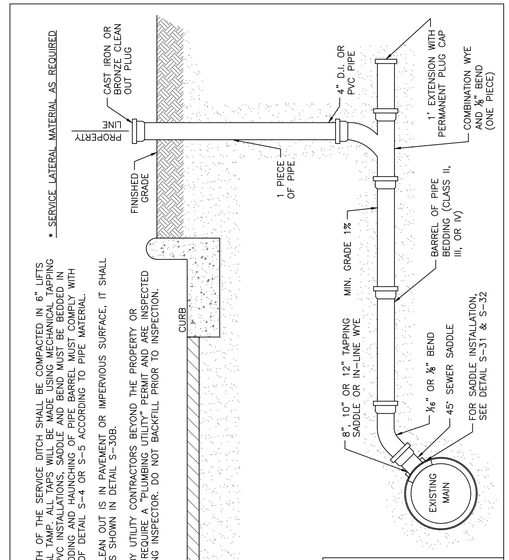
COVER 120 LBS. MINIMUM



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

CITY OF RALEIGH
STANDARD DETAIL

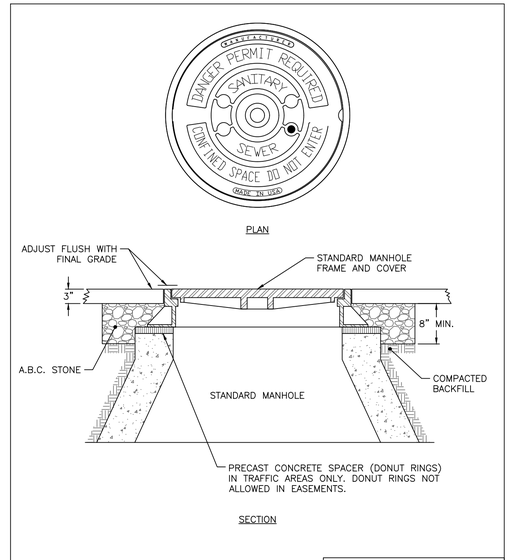
REVISIONS	DATE: 01/19/2025 NOT TO SCALE
	STANDARD MANHOLE COVER
	S-25



NOTES:
1. THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LIFTS WITH MECHANICAL TAMPERS. WHERE TRENCHING OR 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: 01/19/2025 NOT TO SCALE
	TYPICAL SANITARY SEWER LATERAL CONNECTION
	S-30



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025 NOT TO SCALE
	STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN FRAME SURFACE
	S-29

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B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL SEAL 057953 ENGINEER PATRICK N. HARTMAN
02/13/2026

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

UTILITY DETAILS

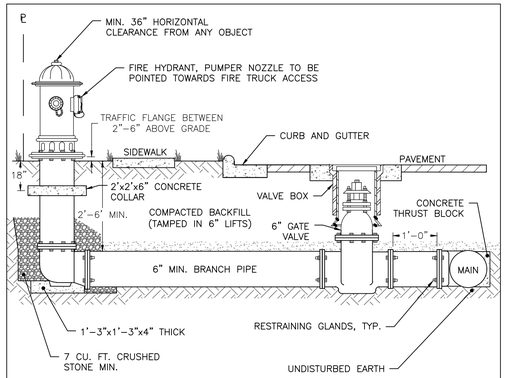
DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	JCB
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C14.1
DRAWING NUMBER
B
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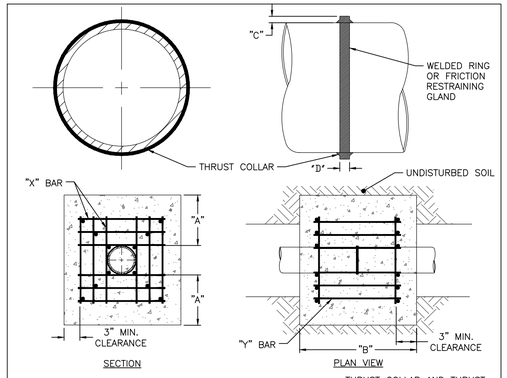
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NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY OR CLOW.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150.
3. 6" GATE VALVE SHALL BE AWWA C500 OPEN LEFT.
4. RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
6. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2.5 FOOT EASEMENT (ON ALL SIDES OF HYDRANT) FOOT EASEMENT ADJACENT TO ROW.
8. ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	STANDARD FIRE HYDRANT INSTALLATION (RESTRAINT GLANDS)	
	W-4	



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6"–36"	#5	2'–2"+ O.D. PIPE	1.043 LBS/FT	1'–1"	1.1 LBS. EACH	X–24 Y–12
≥48"	#6	3'–0"+ O.D. PIPE	1.502 LBS/FT	1'–3"	1.9 LBS. EACH	X–24 Y–12

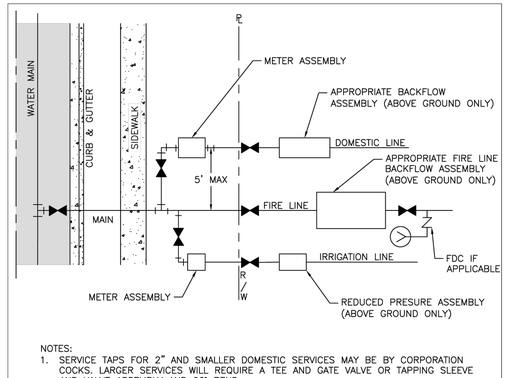
THRUST COLLAR AND THRUST SCHEDULE

I.D. PIPE	"A"	"B"	"C"	"D"
6"–16"	1'–4"	1'–7"	2"	⅜"
20"–24"	1'–4"	1'–7"	3"	½"
30"–36"	1'–4"	1'–7"	4"	⅝"
≥48"	1'–8"	1'–9"	6"	⅞"

NOTES:
1. SEE DETAIL W–9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3,000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON DETAIL W–3.
5. BACKFILL TAMPED IN 6" LIFTS, SEE DETAIL W–3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
STANDARD DETAIL

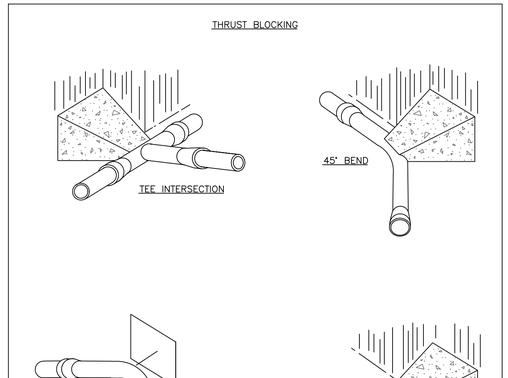
REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	THRUST BLOCKING DESIGN DATA FOR WATER MAINS	
	W-7	



NOTES:
1. SERVICE TAPS FOR 2" AND SMALLER DOMESTIC SERVICES MAY BE BY CORPORATION COCKS. LARGER SERVICES WILL REQUIRE A TEE AND GATE VALVE OR TAPPING SLEEVE AND VALVE ASSEMBLY AND 90° BEND.
2. DOMESTIC SERVICE TAPS SHALL BE ALLOWED ONLY ON 6" OR LARGER FIRE LINES BEFORE THE BACKFLOW ASSEMBLY.
3. ONE DOMESTIC TAP PER FIRE LINE ON STREET SIDE OF BACKFLOW.
4. FIRE LINE SHALL HAVE A FIRE HYDRANT OR BLOW OFF ASSEMBLY AT ITS END TO FACILITATE FLUSHING WHEN NEEDED.
5. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.
6. THE CONTAINMENT BACKFLOW ASSEMBLY SHALL BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT–OF–WAY FOR FIRE SERVICE LINES.
7. DOMESTIC/IRRIGATION BACKFLOW RISER/STANDPIPE SHALL BE OF APPROVED MATERIALS AS LISTED IN NC PLUMBING CODE.
8. THE RP RELIEF VALVE SHALL BE A MINIMUM OF 12" ABOVE ANY MATERIAL (MULCH INCLUDED) OR GRADE.
9. A SERVICE VALVE IS REQUIRED AFTER THE METER BUT BEFORE THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.
10. THE INSTALLATION MUST ALSO MEET ALL CODE REQUIREMENTS PER THE NC PLUMBING CODE.

CITY OF RALEIGH
STANDARD DETAIL

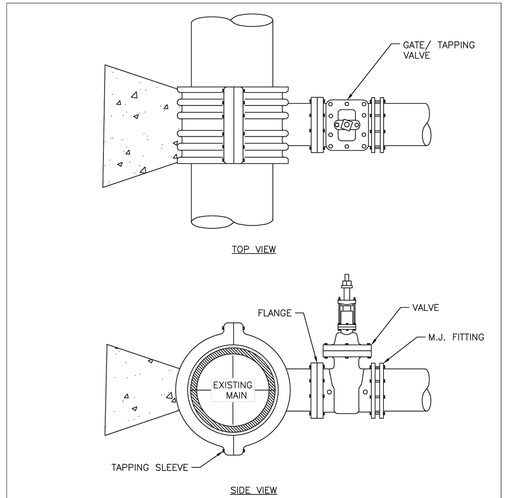
REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	FIRE, DOMESTIC & IRRIGATION OPTIONS SCHEMATIC	
	W-34	



NOTES:
1. CONCRETE SHALL BE 3,000 PSI.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO DETAIL W–3.
4. SEE DETAIL W–10 & W–11 (THRUST BLOCK TABLES) FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
STANDARD DETAIL

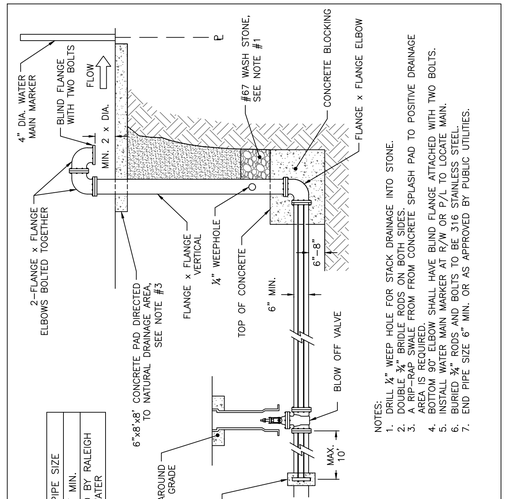
REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	THRUST BLOCKING VIEWS	
	W-9	



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE DETAIL W–10 & W–11 (REACTION BLOCK TABLES) FOR AREA OF CONCRETE REQUIRED.
3. 3,000 PSI SOLID CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.
4. FULL CIRCUMFERENCE SLEEVE, STAINLESS STEEL MATERIAL REQUIRED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	4"–24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY	
	W-14	

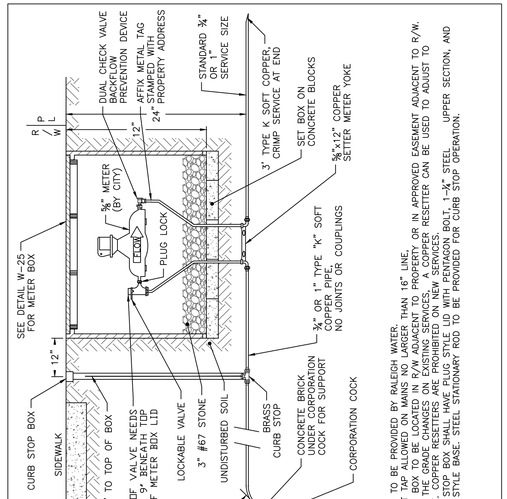


MAIN SIZE	END PIPE SIZE
6"–12"	6" MIN.
≥16"	APPROVED BY RALEIGH WATER

NOTES:
1. DRILL ¼" WEEP HOLE FOR STACK DRAINAGE INTO STONE.
2. DOUBLE ½" BRIDLE RODS ON BOTH SIDES.
3. 4' REBAR SHALL EXTEND FROM CONCRETE SPLASH PAD TO POSITIVE DRAINAGE AREA IS REQUIRED.
4. BOTTOM 90° ELBOW SHALL HAVE BLIND FLANGE ATTACHED WITH TWO BOLTS.
5. INSTALL WATER MAIN MARKER AT R/W OR P/L TO LOCATE MAIN.
6. ANCHORED VALVES SHALL BE USED TO ISOLATE SYSTEM.
7. END PIPE SIZE 6" MIN. OR AS APPROVED BY PUBLIC UTILITIES.

CITY OF RALEIGH
STANDARD DETAIL

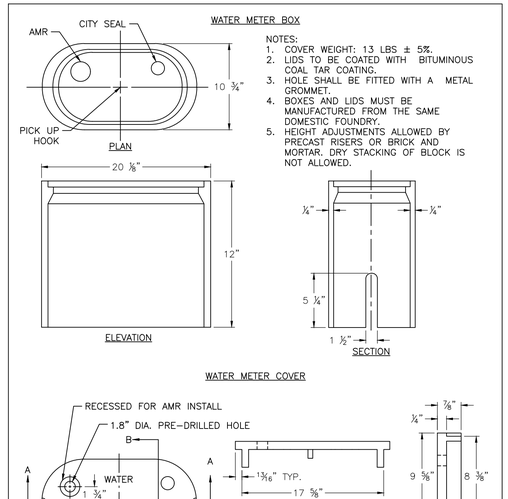
REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	PERMANENT WATER MAIN BLOW OFF ASSEMBLY	
	W-22	



NOTES:
1. METER TO BE PROVIDED BY RALEIGH WATER.
2. DIRECT TAP ALLOWED ON MAINS NO LARGER THAN 16" LINE.
3. METER BOX LOCATED IN R/W ADJACENT TO PROPERTY OR IN APPROVED EASEMENT ADJACENT TO R/W.
4. WHERE THE GRADE CHANGES DO NOT ADJUST COPPER RESETTER CAN BE USED TO ADJUST TO GRADE. COPPER RESETTERS ARE PROHIBITED ON NEW SERVICES.
5. CURB STOP BOX SHALL HAVE PLUG STYLE LID WITH PENTAGON BOLT, 1–¼" STEEL ARCH STYLE BASE. STEEL STATIONARY ROD TO BE PROVIDED FOR CURB STOP OPERATION.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	STANDARD ¾" & 1" WATER SERVICE INSTALLATION	
	W-23	



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: 01/19/2023	NOT TO SCALE
	WATER METER BOX	
	W-25	

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NORTH CAROLINA PROFESSIONAL SEAL 057953 ENGINEER PATRICK N. HARTMAN 02/13/2026

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GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

UTILITY DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	DJS/JLM
DESIGNED	ZMG
CHECKED	JCB
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

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CONTINUOUS LINES

EDGE LINE — YELLOW OR WHITE — 4"/6"

LANE LINE — WHITE — 4"/6"

CENTER LINE — YELLOW — 4"/6"

GORE LINE — WHITE — 8"/12"

DIAGONAL LINE — YELLOW OR WHITE — 12" 45 MPH OR HIGHER; 8" LESS THAN 45 MPH

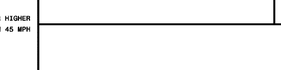
CROSSWALK LINE — WHITE — 8" TRANSVERSE; 24" LONGITUDINAL

RxR LINE — WHITE — 16"

STOP OR TRANSVERSE BAR — WHITE — 24"

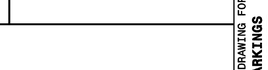
10'-30'/SP SKIP LINE

UNLESS OTHERWISED SHOWN, USE 10'-30'/SP SKIPS FOR SKIP LANE LINES AND SKIP CENTER LINES.



2'-6'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 2'-6'/SP MINI-SKIPS FOR LANE LINE EXTENSIONS THROUGH INTERSECTIONS, EDGE LINE EXTENSIONS THROUGH INTERSECTIONS AND BICYCLE LANE EXTENSIONS.



3'-3'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3'-3'/SP MINI-SKIPS FOR THE WHITE EDGE LINE EXTENDING AT ROUNDABOUTS.

3'-9'/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3'-9'/SP MINI-SKIPS FOR MINI-SKIP LANE LINES, LINE EXTENSIONS THROUGH TAPERS, AND MINI-SKIPS USED FOR BICYCLE LANE LINES.



GENERAL NOTES:

1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.

2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

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

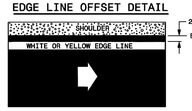
1-24

ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** LINE TYPES AND OFFSETS

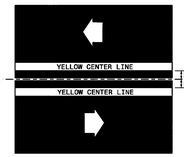
SHEET 1 OF 2

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EDGE LINE OFFSET DETAIL



CENTER LINE OFFSET DETAIL



LANE LINE OFFSET DETAIL

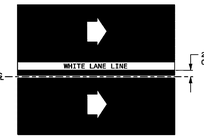


TABLE 1

EDGE LINE OFFSETS FOR 2-LANE, 2-WAY ROADWAYS WITH UN-PAVED SHOULDERS

WIDTH (W) OF TRAVEL PAVEMENT	MAX. EDGE LINE OFFSET FROM E.O.T.	MINIMUM LANE WIDTH (W)
16' - 18'	2"	8' - 9'
19'	4"	9'
20'	6"	9.5'
21'	8"	10'
22'	10"	10'
23'	10"	10.5'
24'	1'	11'
26'	2'	11'
28'	2'	12'
30'	3'	12'
32'	4'	12'

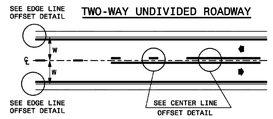
LEGEND

W = WIDTH OF TRAVEL LANE

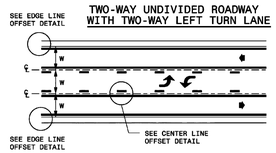
E.O.T.= EDGE OF TRAVEL

DIRECTION OF TRAFFIC FLOW

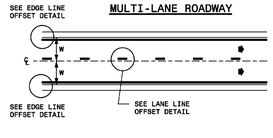
TWO-WAY UNDIVIDED ROADWAY



TWO-WAY UNDIVIDED ROADWAY WITH TWO-WAY LEFT TURN LANE



MULTI-LANE ROADWAY



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

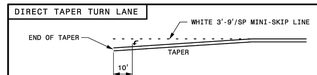
1-24

ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** LINE TYPES AND OFFSETS

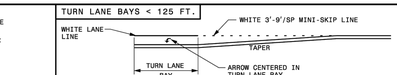
SHEET 2 OF 2

1205.01

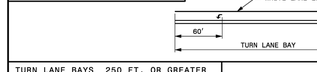
DIRECT TAPER TURN LANE



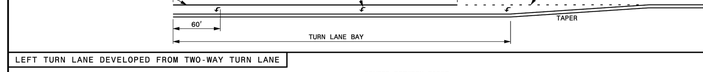
TURN LANE BAYS < 125 FT.



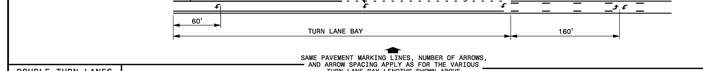
TURN LANE BAYS 125 - 250 FT.



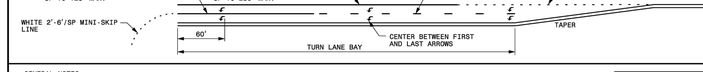
TURN LANE BAYS 250 FT. OR GREATER



LEFT TURN LANE DEVELOPED FROM TWO-WAY TURN LANE



DOUBLE TURN LANES



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ABOVE IN CONJUNCTION WITH THE INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

2- THE NUMBER OF ARROWS SHOWN IS THE MINIMUM REQUIRED. USE ADDITIONAL ARROWS AS DIRECTED BY THE ENGINEER.

LEGEND

PAVEMENT MARKING SYMBOL

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

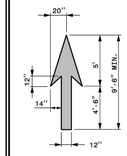
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ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** TURN LANES

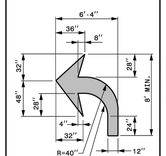
SHEET 1 OF 1

1205.05

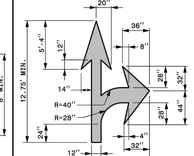
STRAIGHT ARROW



RIGHT OR LEFT TURN ARROW



COMBINATION STRAIGHT AND LEFT OR RIGHT TURN ARROW

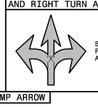


COMBINATION LEFT AND RIGHT TURN ARROW



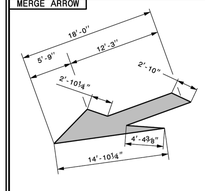
SAME DIMENSIONS APPLY AS FOR THE LEFT/RIGHT TURN ARROW

COMBINATION LEFT AND STRAIGHT AND RIGHT TURN ARROW

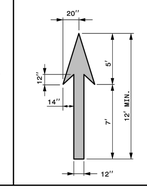


SAME DIMENSIONS APPLY AS FOR THE COMBINATION STRAIGHT AND LEFT/RIGHT TURN ARROW

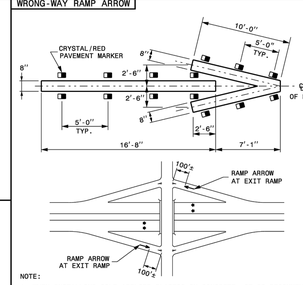
MERGE ARROW



ELONGATED STRAIGHT ARROW



WRONG-WAY RAMP ARROW



GENERAL NOTES:

1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.

2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.

3- DO NOT PLACE SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.

4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD HIGHWAY SIGNS" MANUAL WHICH INCLUDES PAVEMENT MARKINGS AND STANDARD ALPHABETS (REFER TO SHEETS 6 THRU 9). DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

NOTE:

1- WHEN INSTALLING COLD APPLIED PLASTIC ON CONCRETE, IT IS RECOMMENDED TO USE COLD APPLIED PLASTIC WITH A BLACK CONTRASTING BOLDER.

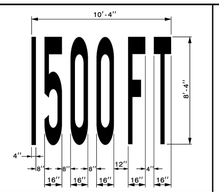
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

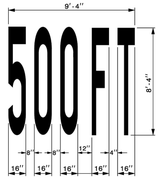
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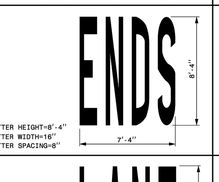
ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** SYMBOLS AND WORD MESSAGES

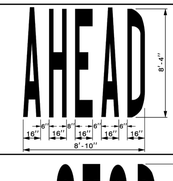
SHEET 1 OF 9

1205.08

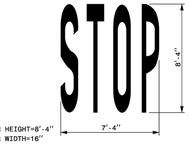


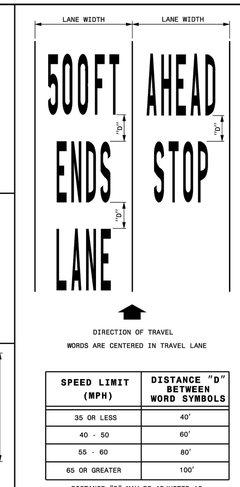












SPEED LIMIT (MPH)	DISTANCE "D" BETWEEN WORD SYMBOLS
35 OR LESS	40'
40 - 50	60'
55 - 60	80'
65 OR GREATER	100'

DISTANCE "D" MAY BE ADJUSTED AS NECESSARY FOR OPTICAL SPACING

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

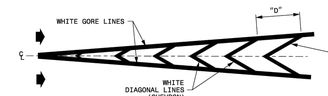
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ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** SYMBOLS AND WORD MESSAGES

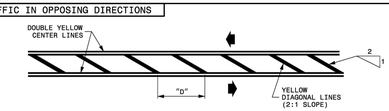
SHEET 5 OF 9

1205.08

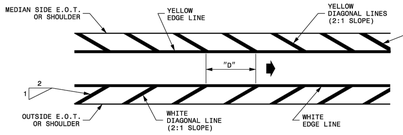
CHANNELIZING ISLAND SEPARATING TRAFFIC IN SAME DIRECTION



MEDIAN ISLAND SEPARATING TRAFFIC IN OPPOSING DIRECTIONS



EDGE OF PAVEMENT OR SHOULDER ISLAND



GENERAL NOTES:

1- "D" = SPACING OF DIAGONAL LINES (TYPICALLY EQUAL IN FEET TO THE POSTED SPEED LIMIT).

2- INCREASE SPACING OF DIAGONALS TO 200' OR MORE ON INTERSTATE ROADWAYS.

3- ADJUST SPACING OF DIAGONALS DEPENDING ON THE LENGTH OF THE ISLAND. SPACING MAY BE ADJUSTED AS DETERMINED BY THE ENGINEER.

LEGEND

E.O.T.= EDGE OF TRAVEL

DIRECTION OF TRAFFIC FLOW

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

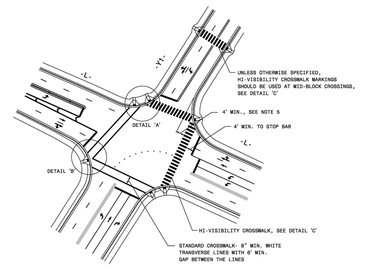
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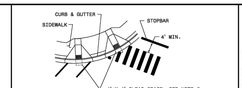
ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** PAINTED ISLANDS

SHEET 1 OF 1

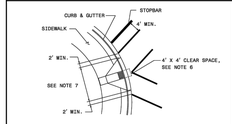
1205.09

CROSSWALK PLACEMENT GUIDANCE





DETAIL 'A'- DUAL CURB RAMPS



DETAIL 'B'- SINGLE DIAGONAL CURB RAMP



DETAIL 'C'- HI-VISIBILITY CROSSWALK

GENERAL NOTES:

1- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.

2- THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.

3- THE STANDARD CROSSWALK IS TWO WHITE 6" MIN. TRANSVERSE LINES WITH A 6' MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" WAX. WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES, SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE. CURB RAMPS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.

4- STOP BARS SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.

5- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.

6- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.

7- SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.

8- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR DETAILS ON A SPECIAL DESIGN.

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

1-24

ROADWAY STANDARD DRAWING FOR **PAVEMENT MARKINGS** PEDESTRIAN CROSSWALKS

SHEET 1 OF 2

1205.07

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL SEAL 057953 ENGINEER PATRICK N. HARTMAN 02/13/2026

McKIM & CREED

8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ROADWAY DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	ZMG
DESIGNED	ZMG
CHECKED	PEH
PROJ. MGR.	PH

SCALE

HORIZONTAL: N/A

VERTICAL: N/A

C15.1

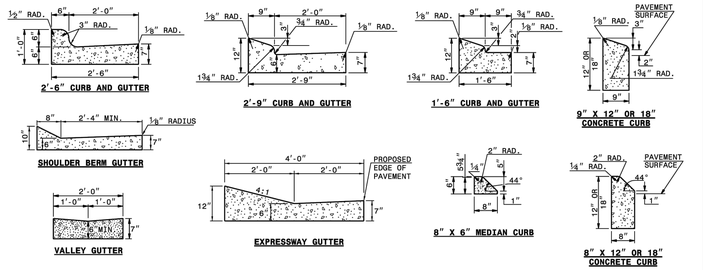
DRAWING NUMBER

B

REVISION

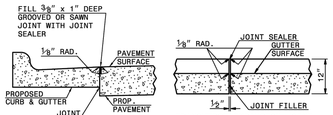
STATUS: REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION

I:\09572\0002\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWGS\C15.0 ROADWAY DETAILS.DWG ---- 02/12/2026 21:59:18



SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
- JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
- CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
- FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
- SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



LONGITUDINAL JOINT

TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER

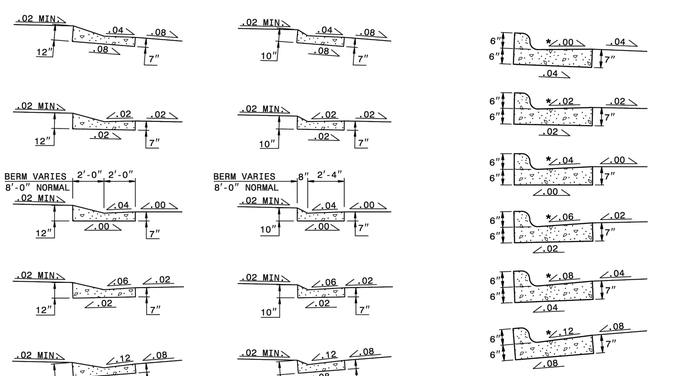
SECTION VIEW OF JOINTS

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

1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 1 OF 3
846.01



SECTION VIEWS OF EXPRESSWAY GUTTER AND SHOULDER BERM GUTTER SUPERELEVATION RATES

* THE GUTTER SLOPE FOR 1'-6" CURB AND GUTTER SHALL MATCH THE SLOPE OF THE ADJOINING PAVEMENT.

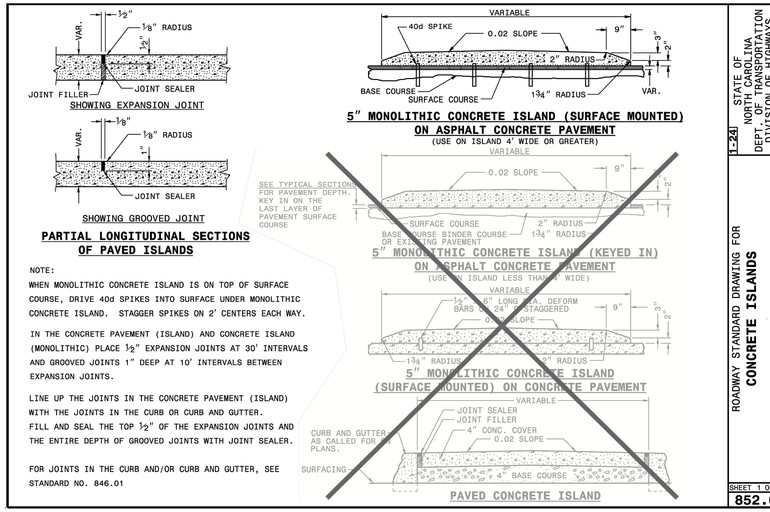
SECTION VIEWS OF 1'-6", 2'-6" (DEPICTED) AND 2'-9" CURB AND GUTTER SUPERELEVATION RATES

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

1-24

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 2 OF 3
846.01



PARTIAL LONGITUDINAL SECTIONS OF PAVED ISLANDS

NOTE:
WHEN MONOLITHIC CONCRETE ISLAND IS ON TOP OF SURFACE COURSE, DRIVE 40d SPIKES INTO SURFACE UNDER MONOLITHIC CONCRETE ISLAND. STAGGER SPIKES ON 2' CENTERS EACH WAY.

IN THE CONCRETE PAVEMENT (ISLAND) AND CONCRETE ISLAND (MONOLITHIC) PLACE ½" EXPANSION JOINTS AT 30' INTERVALS AND GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS.

LINE UP THE JOINTS IN THE CONCRETE PAVEMENT (ISLAND) WITH THE JOINTS IN THE CURB OR CURB AND GUTTER. FILL AND SEAL THE TOP ½" OF THE EXPANSION JOINTS AND THE ENTIRE DEPTH OF GROOVED JOINTS WITH JOINT SEALER.

FOR JOINTS IN THE CURB AND/OR CURB AND GUTTER, SEE STANDARD NO. 846.01

5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON ASPHALT CONCRETE PAVEMENT
(USE ON ISLAND 4' WIDE OR GREATER)

5" MONOLITHIC CONCRETE ISLAND (KEYED IN) ON ASPHALT CONCRETE PAVEMENT
(USE ON ISLAND LESS THAN 4' WIDE)

5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) ON CONCRETE PAVEMENT

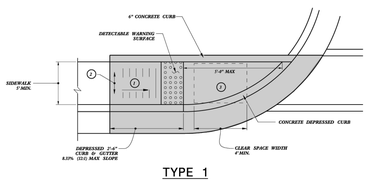
PAVED CONCRETE ISLAND

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

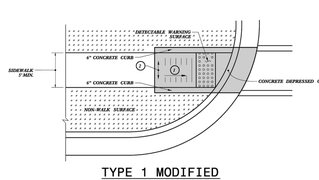
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ROADWAY STANDARD DRAWING FOR
CONCRETE ISLANDS

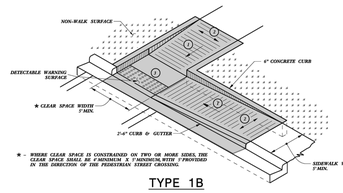
SHEET 1 OF 1
852.01



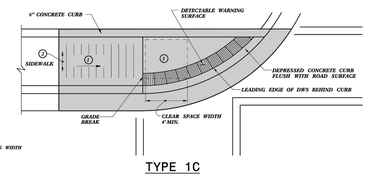
TYPE 1



TYPE 1 MODIFIED



TYPE 1B

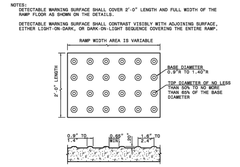


TYPE 1C

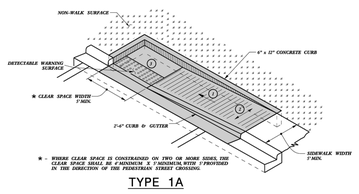
1. 8.3% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.0%
3. MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0%.

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE



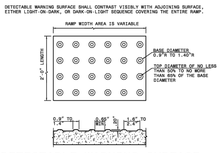
TYPE 1A

PAY LIMITS FOR 1 CURB RAMP

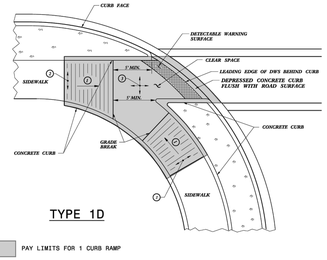
1. 8.3% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.0%
3. MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.0%.

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE



TYPE 1D

PAY LIMITS FOR 1 CURB RAMP

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

1-24

ROADWAY STANDARD DRAWING FOR
CURB RAMP
DIRECTIONAL RAMP

SHEET 6 OF 13
848.06

SHEET 7 OF 13
848.06

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' FROM THE BACK OF PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT CLEAR SPACES FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT CLEAR SPACES FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. IF CONSTRAINED ON TWO OR MORE SIDES, THE THE CLEAR SPACE SHALL BE 4' MINIMUM X 5' MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'X5' CLEAR SPACE AT THE TOP OF RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, WHERE THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE, OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01.
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. DETECTABLE WARNING SURFACES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
19. DETECTABLE WARNING SURFACES WILL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

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

1-24

ROADWAY STANDARD DRAWING FOR
CURB RAMP
NOTES

SHEET 13 OF 13
848.06

REV.NO.	DESCRIPTIONS	DATE
B	ADDRESSED TOWN & NCDOT COMMENTS	02/12/2026
A	ADDRESSED TOWN COMMENTS	12/23/2025

REVISIONS

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NORTH CAROLINA PROFESSIONAL SEAL 057953 ENGINEER PATRICK N. HARTMAN 02/13/2026

McKIM&CREED
8020 Tower Point Drive
Charlotte, North Carolina 28227
Phone: (704) 841-2588

NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

ROADWAY DETAILS

DATE:	FEBRUARY 2026
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DRAWN	ZMG
DESIGNED	ZMG
CHECKED	PEH
PROJ. MGR.	PH

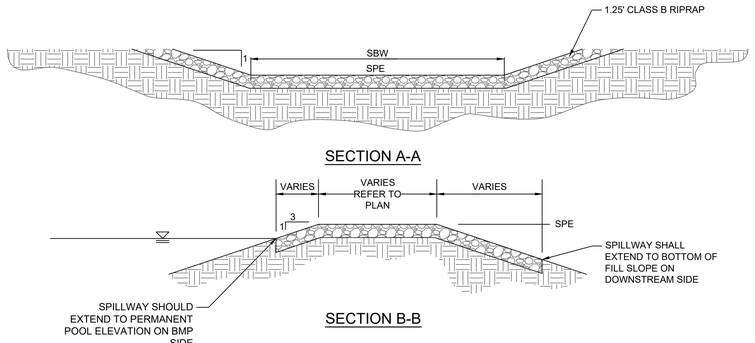
SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C15.2
DRAWING NUMBER

B
REVISION

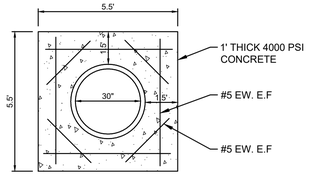
STATUS: **REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION**

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EMERGENCY SPILLWAY DETAIL

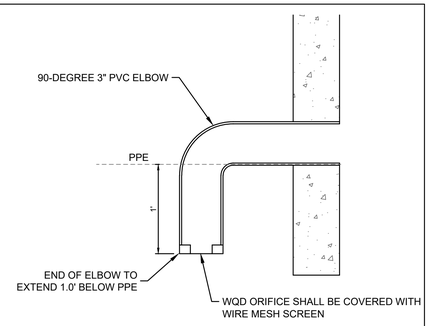
N.T.S.



NOTE: COLLAR MUST PROJECT 1.5' MIN. FROM BARREL

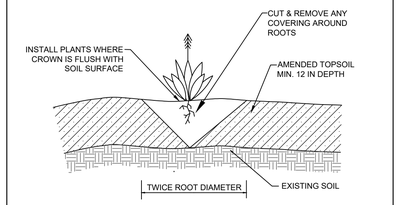
ANTI-SEEP COLLAR DETAIL

N.T.S.



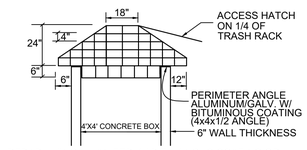
WET POND #1 - WATER QUALITY ORIFICE

NTS



GENERAL PLANTING DETAIL

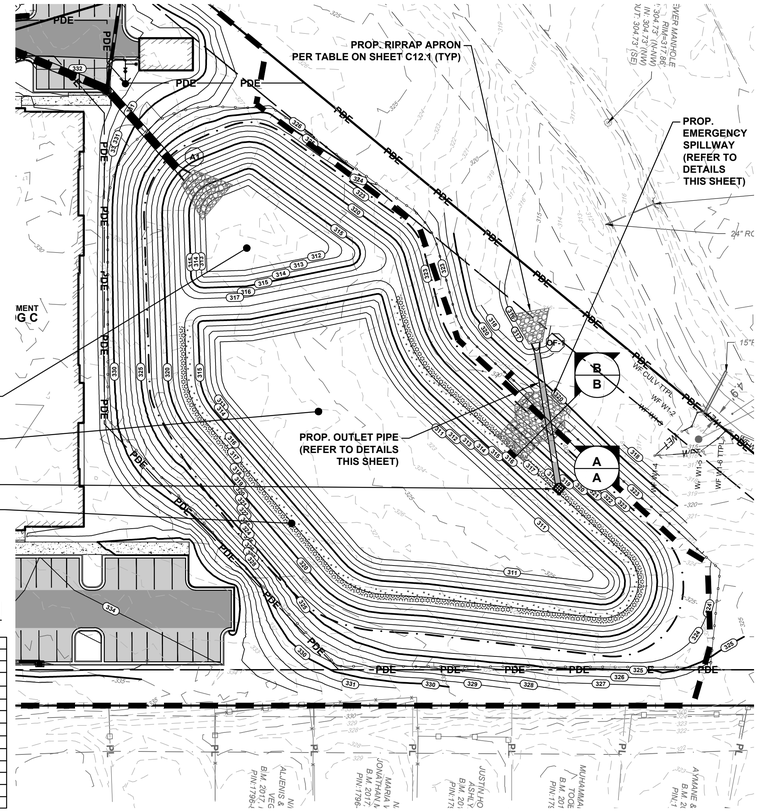
NTS



REBAR = #4 GALVANIZED W/ BITUMINOUS COATING OR 1/2" ALUMINUM BAR

TRASH RACK

NTS



WET POND #1 ELEVATION INFORMATION

PERMANENT POOL ELEVATION	PPE	317.00'
BOTTOM OF MAIN POOL ELEVATION	BPE	311.00'
BOTTOM OF SEDIMENT STORAGE ZONE	SSE	310.50'
TOP OF DAM ELEVATION	TOD	323.00'
EMERGENCY SPILLWAY BOTTOM WIDTH	SBW	20'
EMERGENCY SPILLWAY BOTTOM ELEVATION	SPE	321.50'
OUTLET PIPE UPSTREAM INVERT ELEVATION	OPE-1	316.39'
OUTLET PIPE DOWNSTREAM INVERT ELEVATION	OPE-2	316.00'
OUTLET PIPE LENGTH	OPL	78'
OUTLET PIPE SLOPE	OPS	0.50%
WATER QUALITY ORIFICE DIAMETER	WQD	3.0"
WATER QUALITY ORIFICE INVERT ELEVATION	WQE	317.00'
WEIR ELEVATION	WE	318.50'
TOP OF OUTLET CONTROL STRUCTURE ELEVATION	TE	320.50'

WET POND #1 PLANTING SCHEDULE

SPECIES	LOCATION	QUANTITY	COMMON NAME	SPACING	CONT. SIZE
QS	SHALLOW WATER	140	QUILL SEDGE	1.5' O.C.	4 CU-IN
LL	SHALLOW WATER	141	LONGLEAF LOBELIA	1.5' O.C.	4 CU-IN
SM	SHALLOW WATER	141	SEASHORE MALLOW	1.5' O.C.	4 CU-IN
SW	SHALLOW LAND	143	SWAMP MILKWEED	1.5' O.C.	4 CU-IN
WT	SHALLOW LAND	143	WHITE TURTLEHEAD	1.5' O.C.	4 CU-IN
ST	SHALLOW LAND	143	STARRUSH WHITETOP	1.5' O.C.	4 CU-IN

PLANTING LEGEND

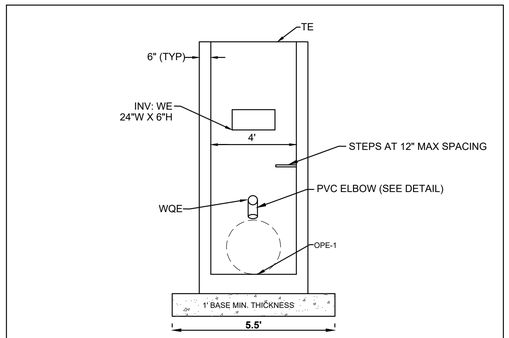
SHALLOW WATER

SHALLOW LAND

PLANTING NOTES:

SHALLOW WATER PLANTING REQUIREMENTS
1686 SF PLANTED AT 50 PLANTS PER 200 SF = 422 PLANTS REQUIRED

SHALLOW LAND PLANTING REQUIREMENTS
1715 SF PLANTED AT 50 PLANTS PER 200 SF = 429 PLANTS REQUIRED



WET POND #1 - OUTLET CONTROL STRUCTURE

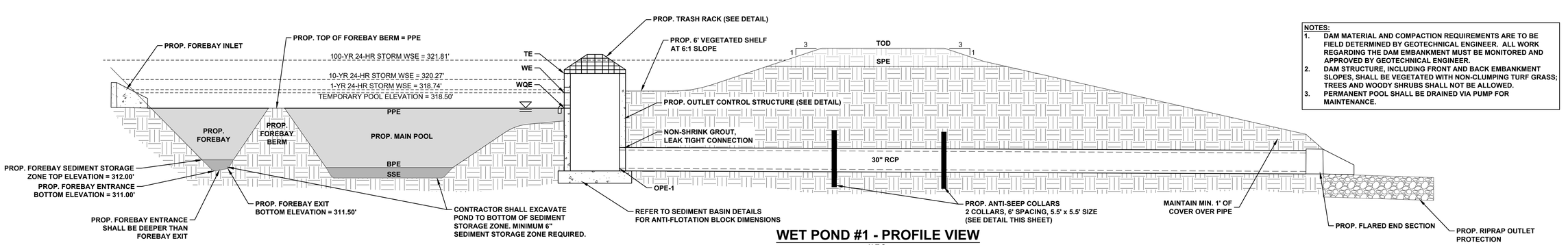
NTS

WET POND #1 PLAN VIEW

SCALE: 1" = 40'

DA = 16.99 AC

1"=40' 40' 20' 0 40' 80'



NOTES:

1. **DAM MATERIAL AND COMPACTION REQUIREMENTS ARE TO BE FIELD DETERMINED BY GEOTECHNICAL ENGINEER. ALL WORK REGARDING THE DAM EMBANKMENT MUST BE MONITORED AND APPROVED BY GEOTECHNICAL ENGINEER.**
2. **DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS; TREES AND WOODY SHRUBS SHALL NOT BE ALLOWED.**
3. **PERMANENT POOL SHALL BE DRAINED VIA PUMP FOR MAINTENANCE.**

WET POND #1 - PROFILE VIEW

N.T.S.

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NC License# F-1222

GATEWAY ZEBULON MIXED-USE
ZEBULON, NC
WAKE COUNTY

SCM DETAILS

DATE:	FEBRUARY 2026
MCE PROJ. #	09572-0002
DRAWN	ZMG
DESIGNED	ZMG
CHECKED	PH
PROJ. MGR.	PH

SCALE
HORIZONTAL: N/A
VERTICAL: N/A

C16.0
DRAWING NUMBER
B
REVISION

STATUS: **REVIEW DRAWINGS ONLY NOT FOR CONSTRUCTION**

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