CARROLL AT THE AVENUE
MIXED USE DEVELOPMENT

349 MILITARY CUTOFF ROAD
WILMINGTON, NORTH CAROLINA 28405

TRC SUBMITTAL #3
SEPTEMBER 15, 2023

OWNER:
347 MCO, LLC
201 NORTH ELM STREET, SUITE 201
GREENSBORO, NC 27401

DEVELOPER:
CIP CONSTRUCTION COMPANY / THE CARROLL COMPANIES
201 NORTH ELM STREET, SUITE 201
GREENSBORO, NC 27401
ATTN: CHARLES WORSHAM (336) 274-8531 x.112

ENGINEER (CIVIL), SURVEYOR, LANDSCAPE ARCHITECT:
PARAMOUNTE ENGINEERING, INC.
122 CINEMA DRIVE
WILMINGTON, NORTH CAROLINA 28403
ATTN: ROB BALLAND, P.E. (910) 791-6707
ATTN: JOSH TAYLOR, P.L.S. (910) 791-6707
ATTN: MIKE NICHOLS, R.L.A. (910) 791-6707

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Know what's below. Call before you dig.

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT THESE UTILITIES

CITY OF WILMINGTON PLANNING & DEVELOPMENT
ATTN: BRIAN CHAMBERS, PLANNER
PH: 910-342-2782

ATTN: ZONING INSPECTIONS
PH: 910-254-0900

PIEDMONT NATURAL GAS
ATTN: CATHY PLEASANT
PH: 910-251-2827

EMERGENCY DIAL 911
POLICE - FIRE - RESCUE
ATTN: CITY OF WILMINGTON FIRE & LIFE SAFETY
PH: 910-343-0696

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)
ENGINEERING/INSPECTIONS
PH: 910-332-6560

OPERATIONS/MAINTENANCE
PH: 910-322-6550

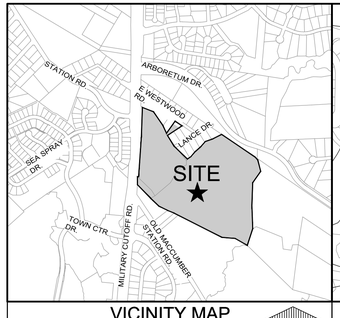
DUKE ENERGY
DISTRIBUTION CONSTRUCTION SERVICE
ATTN: ALEX WINSLOW (910) 899-8305
ATTN: SID LIVINGSTON (910) 256-7218

TRANSMISSION AGENT
BILL WILDER
PH: 910-772-4903

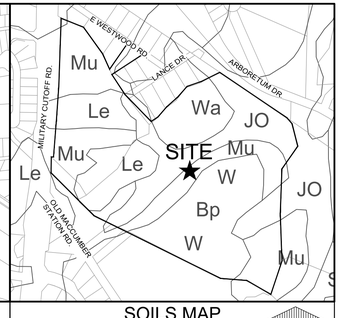
AT&T/BELL SOUTH
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)
PH: 910-341-0741

ATTN: JAMES BATSON, ENGINEERING
PH: 910-341-1621

SPECTRUM
GENERAL PH: 800-892-4357



VICINITY MAP
SCALE: 1" = 1,000'
NORTH



SOILS MAP
SCALE: 1" = 500'
NORTH

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

PREPARED BY:

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846
PROJECT # 18473.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

COORDINATION NOTES:

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND WITH THE CITY OF WILMINGTON, NEW HANOVER COUNTY, CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA), AND THE STATE OF NORTH CAROLINA.
3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.
5. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS BY OTHERS FOR ALL BUILDING DIMENSIONS AND DETAILS.

GENERAL NOTES:

1. TREE INVENTORY AND TOPOGRAPHIC SURVEY COMPLETED BY PARAMOUNTE ENGINEERING, INC. THE SURVEY SHALL BE FIELD VERIFIED BY CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE OWNER AND ENGINEER.
2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC.
3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE USDOT.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 811 AN ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
9. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
10. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
11. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
12. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
13. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
14. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
15. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
16. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW, NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER, THE CITY OF WILMINGTON, NEW HANOVER COUNTY, OR CFPUA, RESPECTIVELY.
17. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL" TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
18. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
19. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
20. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE REFLECTIVE MARKINGS AND SHALL CONFORM TO MUTCD. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
21. LANDSCAPE PLANTINGS AT ENTRANCE/ EXITS WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVERS IN THE PARKING AREA AND AT ENTRANCE/EXIT LOCATIONS PER LOCAL STANDARDS.
22. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.

TRAFFIC NOTES:

1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY & FOR DRIVEWAY(S) ARE TO BE THERMOPLASTIC & MEET CITY OF WILMINGTON AND/OR NCDOT STANDARDS.
2. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
3. ALL TRAFFIC CONTROL SIGNS AND MARKINGS NOT WITHIN THE PUBLIC RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
4. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
5. ANY OPEN CUTTING OF A CITY STREET REQUIRES A UTILITY CUT PERMIT. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES, AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
6. CONTACT TRAFFIC ENGINEERING, AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
7. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND/OR CURBING SHALL BE REPLACED.
8. TACTILE WARNING MATS TO BE INSTALLED AT ALL WHEELCHAIR RAMPS.

DEMOLITION NOTES:

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE CONSIDERED UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE GEOTECHNICAL ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL PRODUCE A PHOTOGRAPHIC RECORD (DIGITAL) OF DEVELOPMENT COMMENCING WITH A RECORD OF THE SITE AS IT APPEARS BEFORE DEMOLITION HAS BEGUN. AFTERWARDS, A PHOTOGRAPHIC RECORD SHALL BE MAINTAINED WEEKLY DURING CONSTRUCTION AND ENDING WITH A PHOTOGRAPHIC RECORD OF THE DEVELOPMENT AS IT APPEARS AFTER DEMOLITION. THIS RECORD SHALL BE DELIVERED TO THE OWNER.
7. EXISTING CURB AND GUTTER, LIGHTS, SIDEWALK, AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
8. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
9. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
10. CONTRACTOR SHALL MAINTAIN REQUIRED DISTANCES FROM HIGH VOLTAGE OVERHEAD LINES AND REMOVE TREES SO THEY DO NOT FALL TOWARDS OVERHEAD ELECTRICITY.
11. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
12. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
13. EXISTING FIRE HYDRANTS ON OR NEAR THE SITE ARE TO REMAIN IN SERVICE.
14. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. THE EROSION CONTROL PLAN SHALL INCLUDE PROVISIONS FOR GROUNDCOVER ON ALL EXPOSED PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY. GROUND COVER SHALL BE PROVIDED ON ALL OTHER DISTURBED AREAS WITHIN 14 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK. (NO SEPARATE PAYMENT).
3. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO FINAL INSPECTION.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
6. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NEW HANOVER COUNTY FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER THE REVIEWING AGENCY OR THE ENGINEER. (NO SEPARATE PAYMENT).
8. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
9. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SODDED OR SEEDED AS INDICATED AND STABILIZED.
10. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
11. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. (NO SEPARATE PAYMENT). NCDENR'S FINAL APPROVAL IS REQUIRED.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. (NO SEPARATE PAYMENT).
14. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK. THE CONTRACTOR SHALL INSTALL RIP-RAP WITH FABRIC ALONG DISTURBED BANKS AND CHANNEL AND RESTORE SLOPES TO ORIGINAL CONTOURS, BUT NOT STEEPER THAN 2:1 MAXIMUM. DISTURBED CREEK AREA SHALL BE STABILIZED IMMEDIATELY.

PERMANENT SEEDING

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
BERMUDA, HULLED BERMUDA, UNHULLED	10-20 35	MARCH - AUGUST SEPT. - FEB.	BY SOIL TEST
CENTIPEDE	10	MARCH - AUGUST	BY SOIL TEST (NO HIGH PH)
TALL FESCUE (COASTAL CULTIVAR RECOMMENDED)	50	MARCH - AUGUST	300 LB/AC 10-20-20 OR BY SOIL TEST
SLOPES >= 2:1 CENTIPEDE SERICEA LESPEDEZA	5 20	JAN - DEC	BY SOIL TEST

TEMPORARY SEEDING

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
RYE GRAIN	50	OCT. - APR.	400 LBS/AC. 10-20-20
SWEET SUDAN GRASS	50	JUNE - AUGUST	400 LBS/AC. 10-20-20
GERMAN or BROWNTOP MILLET	50	JUNE - AUGUST	400 LBS/AC. 10-20-20
STRAW MULCH AS NEEDED	4,000		

STABILIZATION TIME FRAMES:
*IN THE EVENT THAT THE GOVERNING AGENCIES TIMEFRAME FOR STABILIZATION VARY, CONTRACTOR SHALL MEET THE MORE STRINGENT REQUIREMENT.

EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES:

NOTE: THESE EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES ARE INTENDED FOR EACH "PHASE" OF CONSTRUCTION. THE ORDER AND STEPS TAKEN MUST BE IMPLEMENTED AS EACH PART OF THE PROJECT IS DEVELOPED; WHETHER AS A WHOLE OR IN PHASES. ANY EROSION CONTROL DEVICES/MEASURES MUST REMAIN IN PLACE UNTIL THE ENTIRE DISTURBANCE IS STABILIZED AND ALL IMPROVEMENTS WITHIN THE DISTURBANCE LIMITS ARE COMPLETE.

1. CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ENTRANCE(S), ESTABLISH THE LIMITS OF DISTURBANCE, TREE PROTECTION FENCING, AND TEMPORARY SILT FENCE.
2. CLEAR AND REMOVE FROM SITE TREES AS DESIGNATED, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN THE DESIGNATED CLEARING LIMITS.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN(S) AND ASSOCIATED SKIMMER, OUTLET PIPE, SPILLWAY, ETC.
4. INSTALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLANS WITHIN THE AREA DISTURBED. ALL EROSION CONTROL MEASURES MUST BE INSTALLED BEFORE COMMENCING CONSTRUCTION.
5. PLANT GRASS OVER ALL GRADED AREAS WITHIN 14 WORKING DAYS OF CEASE OF ANY GRADING ACTIVITY.
6. IMMEDIATELY UPON THE INSTALLATION OF ANY STORM DRAINAGE CATCH BASIN, DROP INLET, ETC., THE CONTRACTOR SHALL INSTALL INLET PROTECTION TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION CONTROL MEASURES.
8. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETE, THE CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL APPROVAL BY ENGINEER OR EROSION CONTROL INSPECTOR.
9. UPON RECEIVING FINAL APPROVAL, THE CONTRACTOR CAN REMOVE TEMPORARY EROSION CONTROL MEASURES.
10. THE CONTRACTOR SHALL CONTINUE TO WATER, FERTILIZE, MOW AND MAINTAIN GRASS & PLANTED AREAS UNTIL ALL CONSTRUCTION IS COMPLETE.

EROSION CONTROL MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF- PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
3. SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.
4. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. INLET PROTECTION - INSPECT WIRE AND ROCK INLET PROTECTION AT LEAST ONCE A WEEK AND AFTER EACH SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.
6. SEDIMENT BASIN/SEDIMENT TRAPS - REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO WITHIN ONE HALF OF THE DESIGN DEPTH. PLACE SEDIMENT IN AREA WITH SEDIMENT CONTROLS. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, PIPING, AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.
7. SEDIMENT BASIN BAFFLES - BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE FIRST BAFFLE.
8. SKIMMER - INSPECT SKIMMER AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL TO MAKE SURE THAT THE INTAKE MECHANISM, ORIFICE, OR DISCHARGE PIPE IS NOT CLOGGED WITH TRASH OR SEDIMENT. IF THE BASIN IS DRY, MAKE SURE THAT ANY VEGETATION GROWING ON THE BOTTOM IS NOT HOLDING THE SKIMMER DOWN. TAKE SPECIAL PRECAUTION IN WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.
9. OUTLET PROTECTION - INSPECT RIP RAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.
10. EMERGENCY SPILLWAY / FOREBAY PROTECTION - AFTER EVERY HIGH-WATER EVENT INSPECT THE INTEGRITY OF THE LINED SPILLWAY AND THE ADJACENT EARTHEN BANKS. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. REPAIR ANY VOIDS IN THE RIP RAP LINED APRONS, RE-ESTABLISH ANY LOOSE STONES, AND FIX GAPS IN THE ADJACENT VEGETATIVE COVER.
11. TEMPORARY DIVERSION DITCH - INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
12. CHECK DAMS - EXCELSIOR OR RIP-RAP - SEDIMENT SHALL BE REMOVED FROM THE DAM WHEN IT REACHES HALF-FILLED. CHECK DAMS SHALL BE REPAIRED OR REPLACED WHEN THEY NO LONGER DRAIN AS DESIGNED OR ARE DISLODGED, AND CHANNEL SHALL BE REPAIRED OF RUTS, PIPING, AND SETTLEMENT AROUND THE DAMS AS NEEDED.
13. SEDIMENT FILTER BAG ON TEMPORARY PUMP AROUND SYSTEM - INSPECT THE BAG AND ITS CONNECTION TO THE PUMPING APPARATUS TO ENSURE THERE IS NO LEAKAGE FOR THE DURATION OF DE-WATERING ACTIVITIES. IF THE SEDIMENT BAG TEARS OR IS DAMAGED IN ANY WAY DURING CONSTRUCTION OF THE CULVERT CROSSING OR DE-WATERING ACTIVITY, THE CONTRACTOR SHALL REPAIR OR REPLACE THE SEDIMENT BAG IMMEDIATELY.
14. WATTLE BARRIER - IT IS IMPORTANT THAT THE WATTLE BARRIERS BE KEPT CLEAN TO ALLOW WATER TO FLOW THROUGH THE NATURAL FIBERS. THE WATTLE BARRIERS CAN BECOME BLOCKED WITH DEBRIS, SEDIMENT, STRAW AND OTHER ITEMS.

    THE UP GRADIENT SIDE OF THE WATTLE BARRIER SHOULD BE MAINTAINED TO ALLOW THE WATER TO FLOW THROUGH, REDUCE VELOCITY AND ALLOW SEDIMENTATION TO OCCUR.

    IF THE NATURAL FIBERS OF THE WATTLE BARRIER BECOME TOO SATURATED WITH DEBRIS, SEDIMENT, ETC., AND REMOVAL OF THESE ITEMS IS NOT POSSIBLE, WATTLE BARRIERS SHOULD BE REPLACED.

    STAKES SHOULD BE USED TO ANCHOR THE WATTLE BARRIER ADEQUATELY TO THE GROUND TO PREVENT SCOURING AND WASHOUT DURING STORM EVENTS.
15. CHECK DAM - INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT ($\frac{1}{2}$ INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL (PRACTICE 6.31, RIPRAP-LINE AND PAVED CHANNELS). REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
16. COMPOST SOCK - INSPECT COMPOST SOCKS WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1/2 INCH OR GREATER). REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS. THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN. IF PONDING BECOMES EXCESSIVE, THE SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE. THE SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLODGED. THE COMPOST SOCK SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPLETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.
17. CONCRETE WASHOUTS - CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS. DAMAGES SHOULD BE REPAIRED PROMPTLY. IF FILLED TO OVER 75% CAPACITY WITH RAIN WATER IT SHOULD BE VACUUMED OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS. BEFORE HEAVY RAINS THE CONTAINERS LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER COVERED TO AVOID AN OVER FLOW DURING RAIN. WHEN SOLIDS HAVE HARDENED THEY SHOULD BE REMOVED AND RECYCLED.
18. DITCH PLUG - CONTRACTOR SHALL INSPECT EARTHEN BERM DAILY AND AFTER HEAVY RAINS FOR DAMAGE AND LEAKS. CONTRACTOR SHALL REMOVE IMPOUNDED TRASH AND SEDIMENT.

NC ACCESSIBILITY NOTES:

GENERAL NOTES:

1. SPECIAL ATTENTION SHALL BE GIVEN TO COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. IT IS ESSENTIAL THAT CONTRACTORS ARE AWARE OF THE SITE ACCESSIBILITY REQUIREMENTS. PARAMOUNTE ENGINEERING HAS DEVELOPED THESE NOTES AND DETAILS TO ASSURE THAT CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE POINT IN TIME WHEN THEY ARE BIDDING THE PROJECT. IN ADDITION, PARAMOUNTE ENGINEERING HAS MADE A POINT IN THESE NOTES AND DETAILS, AS WELL AS IN OUR DRAWINGS, TO PROVIDE SLOPES / GRADES AND DIMENSIONS THAT COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ANSI A117.1 AND APPLICABLE LOCAL LAWS & REGULATIONS. IF THESE SLOPES / GRADES AND DIMENSIONS ARE NOT ACHIEVABLE, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER IMMEDIATELY AND BEFORE MOVING FORWARD WITH THE WORK.
3. THE CONTRACTOR SHALL NOTIFY PARAMOUNTE ENGINEERING IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS AND OTHER PROJECT DRAWINGS, WHETHER BY PARAMOUNTE ENGINEERING OR OTHERS. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK FOR WHICH THE ALLEGED CONFLICT HAS BEEN DISCOVERED UNTIL SUCH ALLEGED CONFLICT HAS BEEN RESOLVED. NO CLAIM SHALL BE MADE BY THE CONTRACTOR FOR DELAY OR DAMAGES AS A RESULT OF RESOLUTION OF ANY SUCH CONFLICT(S).
4. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY. REFER TO SIDEWALK, CURBING, AND PAVEMENT DETAILS FOR ADDITIONAL INFORMATION.

ACCESSIBLE ROUTE NOTES:

1. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES; PUBLIC STREETS OR SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY ENTRANCE THEY SERVE.
2. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE.
3. WALKING SURFACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5.0% AND A MAXIMUM CROSS SLOPE OF 2.0%.
4. ANY WALKING SURFACE THAT IS PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5.0% IS A RAMP AND SHALL COMPLY WITH THE GUIDELINES FOR RAMPS OR CURB RAMPS.
5. TRANSITIONS BETWEEN RAMPS, WALKS, LANDINGS, GUTTERS OR STREETS SHALL BE FLUSHAND FREE OF ABRUPT VERTICAL CHANGES (1/4 INCH MAXIMUM VERTICAL CHANGE IN LEVEL PERMITTED).
6. FLOOR SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.
7. THE MINIMUM CLEAR WIDTH OF EXTERIOR ACCESSIBLE ROUTES SHALL BE FORTY-EIGHT (48) INCHES MINIMUM MEASURED BETWEEN HANDRAILS WHERE HANDRAILS ARE PROVIDED (NC BUILDING CODE 1104.1 & 1104.2).
8. WHERE AN ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN OBJECT THAT IS LESS THAN FORTY-EIGHT (48) INCHES IN WIDTH, CLEAR WIDTH SHALL BE FORTY-TWO (42) INCHES MINIMUM APPROACHING THE TURN, FORTY-EIGHT (48) INCHES MINIMUM DURING THE TURN, AND FORTY-TWO (42) INCHES MINIMUM LEAVING THE TURN. THE CLEAR WIDTH APPROACHING AND LEAVING THE TURN MAY BE THIRTY-SIX (36) INCHES MINIMUM WHEN THE CLEAR WIDTH AT THE TURN IS SIXTY (60) INCHES MINIMUM. .* SEE NOTE 7 ABOVE FOR NC CLEAR WIDTH OF EXTERIOR ACCESSIBLE ROUTES*
9. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN SIXTY (60) INCHES SHALLPROVIDE PASSING SPACES AT INTERVALS OF TWO HUNDRED (200) FEET MAXIMUM. PASSING SPACES SHALL BE EITHER A SIXTY (60) INCH MINIMUM BY SIXTY (60) INCH MINIMUM SPACE; OR AN INTERSECTION OF TWO (2) WALKING SURFACES THAT PROVIDE A COMPLIANT T-SHAPED TURNING SPACE, PROVIDED THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND FORTY-EIGHT (48) INCHES MINIMUM BEYOND THE INTERSECTION.
10. DOORS, DOORWAYS AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
11. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.
12. WHERE POSSIBLE, DRAINAGE INLETS SHALL NOT BE LOCATED ON AN ACCESSIBLE ROUTE. IN THE EVENT THAT A DRAINAGE INLET MUST BE LOCATED ON AN ACCESSIBLE ROUTE, THE GRATE SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), A117.1, THE NC BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS

RAMP NOTES:

1. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5% SHALL BE CONSIDERED A RAMP.
2. THE MAXIMUM RUNNING SLOPE FOR A RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.
3. THE CLEAR WIDTH OF AN EXTERIOR RAMP RUN SHALL BE FORTY EIGHT INCHES (NC BUILDING CODE 1104.1). WHERE HANDRAILS ARE PROVIDED ON THE RAMP RUN, THE CLEAR WIDTH SHALL BE MEASURED BETWEEN THE HANDRAILS.
4. THE RISE FOR ANY RAMP RUN SHALL BE THIRTY (30) INCHES MAXIMUM.
5. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF RAMPS. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2.0% IN ANY DIRECTION. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING. THE LANDING CLEAR LENGTH SHALL BE SIXTY (60) INCHES LONG MINIMUM. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING OF SIXTY (60) INCHES BY SIXTY (60) INCHES MINIMUM.
6. RAMP RUNS WITH A RISE GREATER THAN SIX (6) INCHES SHALL HAVE HANDRAILS ON BOTH SIDES COMPLYING WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
7. FLOOR SURFACES OF RAMPS AND LANDINGS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
8. EDGE PROTECTION COMPLYING WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.
9. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA. WHERE DOORS THAT ARE SUBJECT TO LOCKING ARE ADJACENT TO A RAMP LANDING, LANDINGS SHALL BE SIZED TO PROVIDE A COMPLIANT TURNING SPACE.

CURB RAMP NOTES:

1. THE MAXIMUM RUNNING SLOPE OF A CURB RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.
2. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5%. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.
3. THE CLEAR WIDTH OF A CURB RAMP SHALL BE 36 INCHES (36) MINIMUM, EXCLUSIVE OF FLARED SIDES, IF PROVIDED. *NOTE NC BUILDING CODE REQUIRES EXTERIOR ACCESSIBLE ROUTES TO BE 48 INCHES MINIMUM WIDE (1104.1 & 1104.2).*
4. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE THIRTY-SIX (36) INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2% IN ANY DIRECTION.
5. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.
6. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT EXCEED 10%.
7. CURB RAMPS AND THE FLARED SIDES OF CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES, PARKING SPACES OR PARKING ACCESS AISLES. CURBS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
8. CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.
9. IT IS RECOMMENDED TO PROVIDE CURB RAMPS WITH A TWENTY-FOUR (24) INCH DEEP DETECTABLE WARNING COMPLYING WITH 406.12 A117.1, EXTENDING THE FULL WIDTH OF THE RAMP. REFERTO DETECTABLE WARNING DETAILS AND NOTES FOR PLACEMENT, ORIENTATION AND NOTES. THE NC BUILDING CODE DOES NOT CURRENTLY REQUIRE DETECTABLE WARNINGS AT CURB RAMPS, NOR DO THE 2010 ADA STANDARDS - HOWEVER US DOT ADA REGULATIONS DO REQUIRE THESE.
10. FLOOR SURFACES OF CURB RAMPS SHALL BE DEEP GROOVED, ½ INCH WIDE BY ¼ INCH DEEP, ONE (1) INCH CENTERS TRANSVERSE TO THE RAMP.
11. WHERE PROVIDED, STOP LINES SHALL BE LOCATED IN ADVANCE OF CURB RAMP.
12. WHERE PROVIDED, PEDESTRIAN ACTIVATED SIGNALS SHALL BE LOCATED ADJACENT TO THE SIDEWALK AND NOT ON THE SIDEWALK.
13. WHERE PROVIDED, DRAINAGE INLETS SHALL BE LOCATED UPSTREAM OF CURB RAMPS AND NOT IN THE RAMP AREA.
14. CURB RAMP TYPE AND LOCATION ARE PER PLAN.

NC ACCESSIBILITY NOTES CONTD.

PARKING SPACE NOTES:

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.
2. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST NINETY-SIX (96) INCHES WIDE. ACCESS AISLES SHALL BE 60 INCHES WIDE. ONE OF SIX ACCESSIBLE SPACES SHOULD PROVIDE A VAN ACCESSIBLE AISLE. THE AISLE SHOULD BE 96 INCHES WIDE (OR ACCESSIBLE SPACE IS 11 FEET AND ACCESS AISLE IS FIVE FEET). WHERE PARKING SPACES AND ACCESS AISLES ARE MARKED WITH LINES, THE WIDTH MEASUREMENTS SHALL BE MADE FROM CENTERLINE OF THE MARKINGS. WHERE PARKING SPACES OR ACCESS AISLES ARE NOT ADJACENT TO ANOTHER PARKING SPACE OR ACCESS AISLES, MEASUREMENTS SHALL BE PERMITTED TO INCLUDE THE FULL WIDTH OF THE LINE DEFINING THE PARKING SPACE OR ACCESS AISLE.
3. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FORACCESSIBLE ROUTES. MARKED CROSSINGS SHALL BE PROVIDED WHERE THE ACCESSIBLE ROUTE MUST CROSS VEHICULAR TRAFFIC LANES. WHERE POSSIBLE, IT IS PREFERABLE THAT THE ACCESSIBLE ROUTE NOT PASS BEHIND PARKED VEHICLES.
4. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.
6. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING IN THEM.
7. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPTFOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES.
8. FLOOR SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED.
9. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
10. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.
11. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF NINETY-EIGHT (98) INCHES MINIMUM. SIGNS SHALL BE PROVIDED AT ENTRANCES TO PARKING FACILITIES INFORMING DRIVERS OF CLEARANCES AND THE LOCATION OF VAN ACCESSIBLE PARKING SPACES.
12. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS SHALL BE INSTALLED AT A MINIMUM CLEAR HEIGHT OF SIXTY (60) INCHES ABOVE GRADE AND SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE FROM AN ACCESS AISLE. SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED WITH BOLLARD PROTECTION.
13. SIGNAGE AT ACCESSIBLE PARKING SPACES REQUIRED BY THE NC BUILDING CODE SECTION 1106.1SHALL COMPLY WITH THE REQUIREMENTS OF NORTH CAROLINA GENERAL STATUTE 20-37.6 AND 136-30 AND THE NCDOT UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES. A SEPARATE SIGN IS REQUIRED FOR EACH SPACE. SIGNS TO INDICATE THE MAXIMUM PENALTY MUST BE PROVIDED AT EACH ACCESSIBLE SPACE.
14. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE (OR ANOTHER COLOR THAT CAN BE DISTINGUISHED FROM PAVEMENT).

PASSENGER LOADING ZONE NOTES:

1. PASSENGER LOADING ZONES SHALL PROVIDE VEHICULAR PULL-UP SPACE NINETY-SIX (96) INCHES WIDE MINIMUM AND TWENTY (20) FEET LONG MINIMUM.
2. PASSENGER LOADING ZONES SHALL PROVIDE A CLEARLY MARKED ACCESS AISLE THAT IS SIXTY (60) INCHES WIDE MINIMUM AND EXTENDS THE FULL LENGTH OF THE VEHICLE PULL-UP SPACE THEY SERVE.
3. ACCESS AISLE SHALL ADJOIN AN ACCESSIBLE ROUTE AND NOT OVERLAP THE VEHICULAR WAY.
4. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED.
5. FLOOR SURFACES OF VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.
6. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE, AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SERVING THEM, SHALL PROVIDE A VERTICAL CLEARANCE OF ONE HUNDRED FOURTEEN (114) INCHES MINIMUM.

ACCESSIBLE ENTRANCE NOTES:

1. ACCESSIBLE ENTRANCES SHALL BE PROVIDED AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) THE NC BUILDING CODE/ANSI A117.1 AND SHALL BE ON AN ACCESSIBLE ROUTE.

GENERAL STORM SEWER NOTES:

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF WILMINGTON REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS.
3. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

ROOF DRAIN NOTE:

1) PROPOSED BUILDING SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM.

EXISTING UTILITY NOTES:

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

WETLAND NOTES:

1) THERE ARE WETLANDS FLAGGED AND SURVEYED ON THE SUBJECT PROPERTY BY MICHAEL UNDERWOOD AND ASSOC. AND WETLANDS & WATERS, INC. THE USACE APPROVED THE JURISDICTIONAL DETERMINATION ON MARCH 16, 2018 AND EXPIRES ON MARCH 16, 2023.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GENERAL NOTES

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: N.T.S.
DESIGNED: RPB
DRAWN: RPB
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-1.0

PEI JOB#: 18473.PE

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_1 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

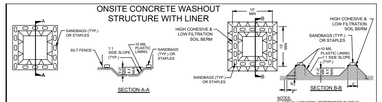
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled,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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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 of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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

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

2. Additional Documentation

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

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

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

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

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

(b) Anticipated bypasses and unanticipated bypasses.

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

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***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)(4)]	• ***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.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

GENERAL NOTES

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PERMITTING:
RELEASED FOR CONST:

DRAWING INFORMATION

DATE:	09/14/23
SCALE:	N.T.S.
DESIGNED:	RPB
DRAWN:	RPB
CHECKED:	RPB

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-1.1

PEI JOB#: 18473.PE

CD CONDITIONS (CD-24-518):

Ordinance

City Council
City of Wilmington
North Carolina

Introduced By: Sterling B. Cheatham, City Manager **Date:** 6/5/2018

Ordinance Amending The Official Zoning Map Of The City to Rezone Property Containing 44.5 Acres Of Land Located At 347, 349 & 565 Military Cutoff Road, 301 & 306 Lance Drive, & 128 East Westwood Drive From MHP, Manufactured Housing Park District and SHOD, Special Highway Overlay District to UMX (CD), Urban Mixed-Use District (Conditional District) Without the SHOD For a Large-Scale Mixed-use Development (CD-24-518)

LEGISLATIVE INTENT/PURPOSE:

WHEREAS, NCGS Section 160A-385 authorizes local governments to change or modify zoning boundaries within their jurisdiction; and

WHEREAS, the amendment set out below is made in accordance with NCGS Section 160A-364 and Article 3, Section 18-117 of the Land Development Code.

THEREFORE, BE IT ORDAINED:

SECTION 1: The Official Zoning Maps of the City of Wilmington are hereby amended by removing the hereinafter described tract of land from the present MHP, Manufactured Housing Park and SHOD (Special Highway Overlay District) and putting it in the UMX (CD), Urban Mixed-use District (Conditional District) classification without the SHOD (Special Highway Overlay District), said tract being more particularly described as follows:

CERTIFIED TO BE A TRUE COPY.
CITY CLERK

Legal Description

BEGINNING at an iron pin set in the eastern margin of the right-of-way of Military Cutoff Road (S.R. 1409, Public R/W varies) and also being a point in the southern property line of Lot 24, Westwood Heights Subdivision (Map Book 10, Page 37, New Hanover County Registry) THENCE with the following four (4) courses and distances: 1) THENCE South 67 degrees 54 minutes 27 seconds East 69.29 feet to an existing iron pin; 2) THENCE South 71 degrees 16 minutes 27 seconds East 103.74 feet to an existing iron pin; 3) THENCE South 36 degrees 16 minutes 27 seconds East 233.05 feet to an existing iron pin; and 4) THENCE South 24 degrees 03 minutes 27 seconds East 117.26 feet to a point being the southern property corner of Lot 22, Westwood Heights Subdivision ; THENCE with the eastern property line of said Lot 22 North 34 degrees 27 minutes 35 seconds East 205.46 feet to a point in the southern margin of the right-of-way of Westwood Drive East (S.R. 1889, Public 40' R/W);

THENCE with said southern margin of Westwood Drive East South 55 degrees 32 minutes 27 seconds East 125.00 feet to a point being the northern property corner of Lot 20, Westwood Heights Subdivision; THENCE leaving said southern margin of Westwood Drive East with the northern property lines of Lots 20, 19 and 18, Westwood Heights Subdivision South 57 degrees 27 minutes 30 seconds West 254.76 feet to the western property corner of said lot 18; THENCE with the western property line of said lot 18 South 31 degrees 55 minutes 27 seconds East 160.00 feet to an existing iron pin, being the southernmost property corner of Lot 18, Westwood Heights and at the terminus point in the northern right-of-way line of Lance Drive (S.R. 1890, Public 40' R/W); THENCE with the terminus of Lance Drive South 43 degrees 22 minutes 27 seconds East 40.73 feet to a point, being the southern terminus point of Lance Drive and the northwest property corner of Lot 17, Westwood Heights; THENCE along the southern margin of the right-of-way of Lance Drive the following two (2) courses and distances: 1) THENCE North 57 degrees 27 minutes 33 seconds East 99.00 feet to a point; and 2) THENCE North 57 degrees 27 minutes 33 seconds East 97.59 feet to a point, being the northwest property corner of Lot 15, Westwood Heights; THENCE leaving the southern margin of the right-of-way of Lance Drive with the western property line of Lot 15, South 32 degrees 25 minutes 49 seconds East 254.08 feet to point beyond the southernmost property corner of Lot 15; THENCE along an existing channel/pond North 40 degrees 40 minutes 57 seconds East 272.90 feet to a point in the southern property line of Lot 13R, Westwood Heights; 2) THENCE North 71 degrees 07 minutes 21 seconds East 26.34 feet to a point being the common property corner of Lot 13R and 12R, Westwood Heights; THENCE with the southern property line of Lot 12R, Westwood Heights the following two (2) courses and distances: 1) THENCE North 70 degrees 28 minutes 17 seconds East 8.12 feet to a point; and 2) THENCE North 63 degrees 46 minutes 10 seconds East 147.48 feet to a point in the southwest property line of The Frank H. Kenan Chapel at Landfall property (Deed Book 2642, Page 206); THENCE with said southwestern property line South 55 degrees 31 minutes 18 seconds East 590.16 feet to an existing stone; THENCE with the western property lines of Hemsdale Investors, LLC (Deed Book 4974, Page 2822) the following six (6) courses and distances: 1) THENCE South 42 degrees 21 minutes 40 seconds East 74.00 feet to an 1" iron rod set; 2) THENCE South 13 degrees 12 minutes 36 seconds East 164.91 feet to a point; 3) THENCE South 42 degrees 17 degrees 29 seconds West 144.13 feet to an angle iron; 4) THENCE South 08 degrees 02 minutes 24 seconds West 301.21 feet to an 1" iron pin set; 5) THENCE South 00 degrees 17 minutes 32 seconds West 361.28 feet to an axle; and 6) THENCE South 18 degrees 48 minutes 50 seconds West 165.30 feet to a point, being the northeast property corner of Hawthorne-Midway Wilmington, LLC (Deed Book 5668, Page 2976); THENCE with the northern property lines of said Hawthorne-Midway Wilmington, LLC, GKMJ Properties, LLC (Deed Book 5167, Page 1086) and McCumber Station Office Center Property Owners Association (Deed Book 4661, Page 145) the following five (5) courses and distances: 1) THENCE North 86 degrees 37 minutes 06 seconds West 372.00 feet to an ¾" iron pin found; 2) THENCE North 63 degrees 24 minutes 30 seconds West 996.85 feet to an 1" iron pin found; 3) THENCE North 46 degrees 06 minutes 53 seconds West 158.98 feet to an 1" iron pin found; 4) THENCE North 41 degrees 00 minutes 28 seconds West 49.48 feet to an 1" iron pin found; and 5) THENCE North 44 degrees 27 minutes 44 seconds West 215.03 feet to an 4" x 4" concrete monument, being located in the

eastern margin of the right-of-way of said Military Cutoff Road; THENCE with said eastern margin of the right-of-way of Military Cutoff Road the following six (6) courses and distances: 1) THENCE North 00 degrees 53 minutes 04 seconds East 97.26 feet to an existing iron pin; 2) THENCE North 00 degrees 39 minutes 09 seconds East 21.48 feet to a point; 3) THENCE South 86 degrees 33 minutes 46 seconds East 11.95 feet to a point; 4) THENCE North 08 degrees 54 minutes 00 seconds East 66.51 feet to a point; 5) THENCE North 04 degrees 03 minutes 47 seconds East 423.34 feet to a point; and 6) THENCE North 01 degrees 59 minutes 16 seconds East 480.48 feet to the POINT and PLACE of BEGINNING, containing 44.50 acres more or less and being located in the Wilmington Township, New Hanover County, City of Wilmington, North Carolina.

SECTION 2: The following rules, regulations, and conditions shall apply to the property described in this ordinance:

1. The property shall be subject to all of the specific requirements stated in the Land Development Code for the proposed use as well as any additional conditions stated below.
2. The use and development of the subject property shall comply with all other supplemental regulations and requirements imposed by the Land Development Code or any other applicable federal, state or local law, ordinance or regulation. In the event of a conflict, the more stringent requirement or higher standard shall apply.
3. If, for any reason, any condition for approval is found to be illegal or invalid or if the applicant should fail to accept any condition following approval, the approval of the site plan for the district shall be null and void and of no effect and proceedings shall be instituted to rezone the property to its previous zoning classification.
4. The use and development of the subject property shall be in accordance with the plans and architectural character as submitted and approved.
5. The proposed use shall not exceed 525 apartment units, a 231-room hotel, 140,700 square feet of office space, 115,000 square feet of retail space, and 16,000 square feet of restaurant space.
6. All building heights shall be in accordance with the plan as submitted and approved.
7. The design of all above-grade parking structures shall relate to the context of the area. Exterior walls of parking structures shall be designed with materials, colors, and architectural articulation in a manner that provides a visual compatibility with adjacent buildings and environment.
8. Pedestrian circulation shall be clearly defined with paving materials and/or landscaping and shall connect all uses. Sidewalks and crosswalks shall be provided within new developments. Bicycle and/or pedestrian connectivity to adjacent or nearby developments shall be required.
9. Pedestrian connections shall be provided to the north to Arboretum Drive and to the south to the adjacent apartment community along Old MacCumber Station Road.
10. The proposed stormwater shall be managed through low impact development such as underground infiltration, use of pervious pavements, and disconnection of impervious surfaces in the overall stormwater design. The stormwater management plan shall comply with all City of Wilmington and NC-DEMLR stormwater management rules and regulations.

11. The applicant shall work with WAVE Transit to make transit stop improvements, including but not limited to a bus shelter, at the existing transit stop located at East Westwood Drive and Military Cutoff Road or at a relocated stop at the subject site.
12. Exterior site lighting shall be installed so as not to shine directly onto adjacent residential parcels.
13. All existing protected trees not located within the building foot print or impacted by essential site improvements shall be preserved or mitigated.
14. Any freestanding sign(s) on the site shall be monument style with landscaping around the base of the sign; no pole signs shall be permitted.
15. The use of pine straw as ground cover shall be prohibited within ten (10) feet of any combustible exterior construction.
16. The creative standard shall not be used to satisfy the streetyard landscaping requirements.
17. Requirements of the approved Traffic Impact Analysis (TIA) must be completed prior to issuance of a certificate of occupancy.
18. Any necessary acquisition and/or dedication of land for rights-of-way for developer required improvements shall be made by the owners and at their expense.
19. The applicant shall provide a stub connection to the southern property line to allow for a future vehicular connection to Old MacCumber Station Road.
20. All city, state and federal regulations shall be followed.
21. A signalized pedestrian crossing shall be provided across the main entrance of the project to accommodate the multi-use path, subject to NC DOT approval.
22. The applicant will cooperate to add an access point to adjacent properties for at least one of the potential access points (as shown on the plan) at such time as an applicable applicant adjacent to one of the potential access points shown on the plan approves such access point (and any other necessary consents are obtained therefor, as well).
23. To the extent that the city's landscaping requirements require street trees, the applicant may landscape streets with variable spacing and species selection (including, without limitation, palm trees, whether as street trees or otherwise, consistent with the presently contemplated landscaping theme of the project), and to vary placement so that some street sections have trees only on one side, so long as the total number of street trees remains the same as otherwise required.
24. The following uses shall not be allowed with the Project, regardless of whether such uses may otherwise be permitted in UMX zoning under the Land Development Code:
    a. Adult establishments.
    b. Electronic gaming.
    c. Garbage collection, private.
    d. Gas companies.
    e. Manufactured homes sales.
    f. Motor freight companies.
    g. Movers, van lines, and storage.
    h. Nightclubs.
    i. Group home supportive, small, medium, large.
    j. Automobile renting and leasing.

    k. Contractor equipment or supply dealers and service.
    l. Contractor storage yard.
    m. Dormitories.
    n. Group day facility.
    o. Industrial and manufacturing uses greater than ten thousand (10,000) square feet.
    p. Motor vehicle dealers, including automobiles, boat dealers, motorcycles, recreational vehicles, and utility trailers.
    q. Group home residential.
    r. Dwellings single-family.
    s. Duplex, triplex, quadraplex.
    t. Townhomes.
    u. Family care home or group home supportive.
    v. Veterinary services with enclosed pens.
    w. Lawn and garden stores.
    x. High turnover sit down restaurants.
    y. Supermarket in excess of 10,000 square feet.
    z. Convenience store with gas pumps.
25. Reallocation of density between any two categories shall not exceed ten percent (10%) of the approved allocation. For purposes of reallocating density, one hotel room will be deemed equal to 1,000 square feet of another proposed use, and one apartment unit will be deemed equal to 1,500 square feet of another proposed use category. Categorical re-allocation of uses shall require TRC and SRB review and approval.

SECTION 3: The City Clerk and the Planning Director are hereby authorized and directed under the supervision of the City Manager to change the Zoning Maps on file in the office of the City Clerk and the Planning Division, to conform with this ordinance.

SECTION 4: That any person violating the provisions of this ordinance, including the approved site plan, shall be subject to the penalties set forth in Section 18-52 of the Land Development Code.

SECTION 5: Any prior rezoning related to this property that are in conflict with this ordinance are hereby repealed to the extent of such conflict.

SECTION 6: If any section, subsection, paragraph, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.

SECTION 7: That this ordinance shall be effective immediately upon its adoption.

Adopted at a regular meeting on June 5, 2018

Bill Saffo, Mayor

WITNESS: Penelope Spicer-Sidbury, City Clerk

APPROVED AS TO FORM: Attorney III

DAC CONDITIONS (DAC-3-722)

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

CITY OF WILMINGTON
DESIGN ADJUSTMENT COMMITTEE
FILE NO.: DAC-3-722

ORDER APPROVING A PRELIMINARY PLAN

This matter came before the Design Adjustment Committee (DAC) for an evidentiary hearing on July 27, 2022, to consider case number DAC-3-722 submitted by Rob Balland of Paramounte Engineering on behalf of The Carroll Companies for preliminary plan approval and design adjustments for a large-scale mixed-use development to include the construction of private streets and utility extensions located at 349 Military Cutoff Road. The property contains approximately 44.5 acres and is currently zoned UMX(CD). Urban Mixed-use (Conditional District).

The DAC having heard the evidence and arguments presented at the hearing makes the following findings of fact:

1. The site includes approximately 44.5 acres of land that is currently zoned UMX(CD), Urban Mixed-use (Conditional District).
2. The existing conditional district includes 525 apartment units, a 247-room hotel, 131,700 square-feet of office space, 115,000 square-feet of retail, and 16,000 square-feet of restaurant space.
3. The project requires several road improvements to the adjacent road network including but not limited to a new traffic signal and median break on Military Cutoff Road, a new travel lane and turn lanes on Military Cutoff Road, and a new three-lane cross-section on Station Road at the eastern approach to Military Cutoff Road.
4. A driveway connection is also being provided to Old MacCumber Station Road to the south.
5. The site has access to water and sewer mains located along Military Cutoff Road and along the rear of the site. The applicant proposes to extend water and sewer mains into the development within the proposed private rights-of-way.
6. The site is in a Watershed Resource Protection and Conservation area as identified in the 2006 CAMA Land Classification Map. Developments within these areas are limited to 25% impervious coverage unless the standards for exceptional design are met. The site must meet the standards for exceptional design for the proposed impervious coverage.
7. A stormwater management permit is required. Designs for on-site stormwater management would be reviewed for compliance with the city's stormwater management regulations.
8. The Technical Standards & Specifications Manual (TSSM) specifies a minimum 400-foot offset between intersections on the same side of the street. The applicant proposes offsets less than 400 feet and an adjustment is required.
9. The Technical Standards & Specifications Manual (TSSM) specifies a minimum 200-foot offset between intersections on the opposite side of the street. The applicant proposes offsets less than 400 feet and an adjustment is required.
10. The Technical Standards & Specifications Manual (TSSM) specifies the placement of a standard 10-foot wide non-municipal easement along both sides of the right-of-way. The applicant proposes to provide non-municipal easements as needed and an adjustment is required.

11. The Technical Standards & Specifications Manual (TSSM) specifies a standard right-of-way width for a non-residential collector street (Street A). The applicant proposes a non-standard width and an adjustment is required.
12. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for a local street (Street B). The applicant proposes a non-standard cross-section to include a median and an adjustment is required.
13. The Technical Standards & Specifications Manual (TSSM) specifies a minimum tangent length between horizontal curves of 100 feet. The applicant proposes tangent lengths less than 100 feet and an adjustment is required.
14. The Technical Standards & Specifications Manual (TSSM) specifies a minimum standard centerline curve radii of 100 feet for local streets. The applicant proposes curve radii less than 100 feet and an adjustment is required.
15. The Technical Standards & Specifications Manual (TSSM) specifies a minimum 13-foot width of a median on a collector street. The applicant proposes median widths less than 13-feet and an adjustment is required.
16. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for a local street. The applicant proposes a non-standard street cross-section to include on-street parking (Street C) and an adjustment is required.
17. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for a local street. The applicant proposes a non-standard street cross-section to include a non-standard bulb and drop-off area (Street C) and an adjustment is required.
18. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for a local street. The applicant proposes a non-standard street cross-section to include left-turn/straight thru drive lane and wider travel lanes (Street D) and an adjustment is required.
19. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for a local street. The applicant proposes a non-standard street cross-section to include a roundabout and on-street parking (Street E) and an adjustment is required.
20. The Technical Standards & Specifications Manual (TSSM) specifies a standard cross-section for an alley. The applicant proposes a non-standard alley (Alley F) and an adjustment is required.

THEREFORE, IT IS ORDERED that the preliminary plan for a large-scale mixed-use development to include the construction of private streets and utility extensions located at 349 Military Cutoff Road is approved subject to the following:

1. The use and development of the subject property shall comply with all regulations and requirements imposed by the Land Development Code, the City of Wilmington Technical Standards and Specifications Manual and any other applicable federal, state or local law, ordinance or regulation, as well as any condition stated below. In the event of a conflict, the more stringent requirement or higher standard shall apply.
2. Approval of this change of use plan does not constitute technical approval of a site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to release of the project for construction.
3. If, for any reason, any condition for approval is found to be illegal or invalid or if the applicant should fail to accept any condition following approval, the approval of the change of use plan shall be null and void.

4. The use and development of the subject property shall be in accordance with the change of use plan as submitted and approved by the Design Adjustment Committee on 7/27/22.
5. All City, State and Federal regulations shall be met.

It is further ordered that the following allowances and waivers from the city's technical standards (TSSM) and Land Development Code (LDC) requirements are granted:

1. Conditional approval of an adjustment to allow for a reduction in the minimum offset between intersections on the same side of the street with a condition that the right-of-way for Road C be eliminated and internal vehicle circulation will be evaluated by the Technical Review Committee dues to site constraints.
2. Conditional approval of an adjustment to allow for a reduction in the minimum offset between intersections on opposite sides of the street with a condition that the right-of-way for Road C be eliminated and internal vehicle circulation will be evaluated by the Technical Review Committee dues to site constraints.
3. Conditional approval of an adjustment to allow relief from providing the standard 10-foot non-municipal easements along proposed private rights-of-way with the condition that the applicant provide utility layout and allow the Technical Review Committee to resolve conflicts dues to the private rights-of-way and the urban design of the project.
4. Approval of an adjustment to allow for non-standard right-of-way widths on Street A due to the site design that includes on-street parking, landscaping, and other amenities along the right-of-way.
5. Approval of an adjustment to allow for non-standard street cross-section on Street B due to site layout, landscape medians, and variable width cross-sections.
6. Approval of an adjustment to allow for a reduction in the minimum tangent lengths between horizontal curves due to site constraints.
7. Conditional approval of an adjustment to allow a reduction in the minimum standard centerline curve radii for local streets with the condition that the applicant provide an auto-turn analysis to be reviewed by the Technical Review Committee due to the urban design of the project and site constraints.
8. Conditional approval of an adjustment to allow for a reduction in the minimum width of a median on a collector street with the condition that the applicant provide an auto-turn analysis for a delivery vehicle and fire truck to be reviewed by the Technical Review Committee due to the urban design of the project and site constraints.
9. Approval of an adjustment to allow for non-standard street cross-section on Street C due to site layout, landscape medians, and variable width cross-sections.
10. Withdrawal of a requested adjustment to allow for a non-standard cul-de-sac bulb and drop-off area on Street C.
11. Approval of an adjustment to allow for non-standard street cross-section on Street D due to site layout, landscape medians, and variable width cross-sections.
12. Approval of an adjustment to allow for non-standard street cross-section on Street E due to site layout, landscape medians, and variable width cross-sections.
13. Approval of an adjustment to allow for non-standard street cross-section on Alley F based on justification provided by applicant and the non-regular use of the alley for vehicles.

SIGNED this 5th day of August, 2022.

Rob Gordon, Chair
Design Adjustment Committee

ATTEST:

Amy Bradshaw
Designated Secretary to the Design Adjustment Committee

Date Order Filed with Planning Office: 8/5/22

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

CONDITIONS OF APPROVAL

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

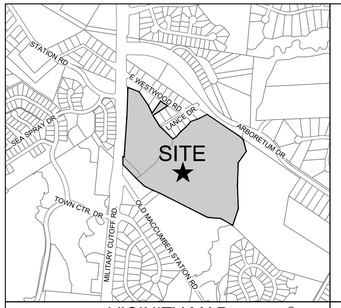
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PLANNING:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/2023
SCALE: N.T.S.
DESIGNED: RPB
DRAWN: RPB
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-1.2

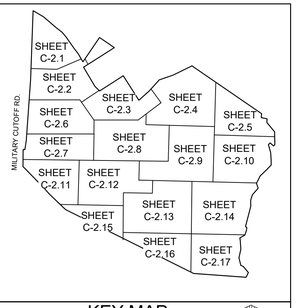
PEI JOB#: 18473.PE



VICINITY MAP

SCALE: 1" = 1,000'

NORTH



KEY MAP

SCALE: 1" = 500'

NORTH

SITE DATA TABULATION

APPLICANT: CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, SUITE 201
GREENSBORO, NC 27401

OWNER: 347 MCO, LLC
201 NORTH ELM STREET, SUITE 201
GREENSBORO, NC 27401

PROJECT ADDRESS: 347 MILITARY CUTOFF RD.
WILMINGTON, NC 28405

TAX PARCEL ID #: R05105-001-023-000
R05105-002-008-000
R05105-001-024-000
R05105-001-015-000
R05105-001-015-001
R05105-001-019-000

DEED REFERENCE: DB 1335 PG 019, DB 5619 PG 1573, DB 1220 PG 1622, DB 5949 PG 965, DB 2587 PG 146, DB 9901 PG 501

TOTAL SITE AREA: 44.5 +/- ACRES (1,938,420 SF)

CURRENT ZONING: UMX (CD)
THE SITE IS A DESIGNATED AREA OF HIGH INTENSITY FROM THE COMP PLAN

CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION AREA /CONSERVATION AREA

HISTORIC AND ARCHAEOLOGICAL SITES: NONE

MAXIMUM ALLOWABLE BUILDING HEIGHT: 55' (75' WITH SUP)
MAXIMUM BUILDING AREA: 1,750,000 SF
PROPOSED PHASE 1 BUILDING LOT COVERAGE: 336,486 SF (17.6%)
EXISTING LAND USE: MOBILE HOME PARK
COMMERCIAL SERVICE

PROPOSED LAND USE: MIXED USE

SETBACK STANDARDS

REQUIRED MINIMUM SETBACK FROM

SINGLE-FAMILY ZONING DISTRICT	MAXIMUM BUILDING HEIGHT
35 FEET	35 FEET
45 FEET	45 FEET
45 FEET	55 FEET
45 FEET	75 FEET

PROPOSED MINIMUM SETBACK FROM

SINGLE-FAMILY ZONING DISTRICT	MAXIMUM BUILDING HEIGHT
45 FEET	45 FEET
45 FEET	55 FEET
45 FEET	75 FEET

NOTE: IN NO CASE SHALL FRONT SETBACKS ADJACENT TO THE PRIMARY STREET(S) OR INTERNAL STREET(S) EXCEED TEN FEET.

FLOOD NOTE

PORTIONS OF THE SUBJECT PARCEL LIE WITHIN FLOOD ZONE X (MINIMAL FLOOD RISK) & FLOOD ZONE AE (12') AS INDICATED BY FEMA FLOOD ZONE PANEL 3158, MAP NUMBER 3720315800K, BEARING AN EFFECTIVE DATE OF AUGUST 28, 2018.

RECREATIONAL AREAS AND OPEN SPACE

NOT REQUIRED FOR THIS PROJECT

DISTURBED AREA

PHASE 1: +/- 28 ACRES

GENERAL NOTES

1. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
2. IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
3. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
4. SEE SHEET C-2.18 FOR TYPICAL ROADWAY CROSS SECTIONS.
5. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" - 10'.
6. CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON TRAFFIC ENGINEERING REGARDING UTILITIES FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY. 910-341-3258

FIRE & LIFE SAFETY NOTES

1. LANDSCAPING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A THREE (3) FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
2. HYDRANTS MUST BE LOCATED WITHIN EIGHT (8) FEET OF CURBS.
3. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF BUILDINGS.
4. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
5. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

STORMWATER NOTES

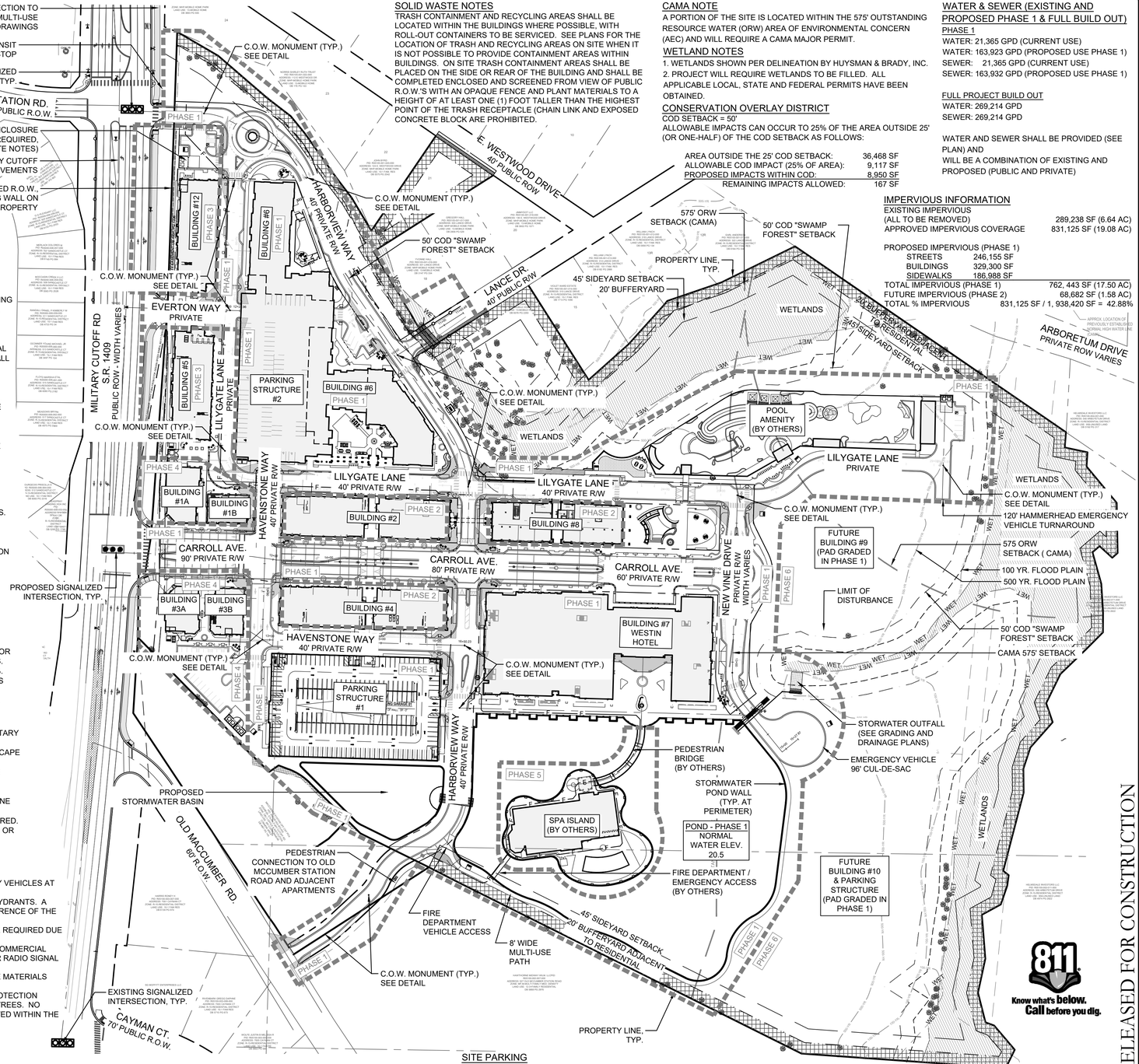
1. THE SITE DRAINS TO HOWE CREEK (STREAM INDEX 18-87-23; CLASSIFICATION SA; ORW). STORMWATER MANAGEMENT WILL BE IN ACCORDANCE WITH CITY OF WILMINGTON RULES AND REGULATIONS FOR HIGH DENSITY DEVELOPMENT (IMPERVIOUS > 12%) AND SA/ORW RULES.
2. MAXIMUM DENSITY ALLOWED WITH 575' OF THE ORW IS LIMITED TO 25%.
3. ALL IMPERVIOUS AREA WITHIN 50-FT SETBACK FROM SURFACE WATERS MUST BE COLLECTED AND TREATED ON SITE.
4. A WET DETENTION BASIN BMP WILL BE USED TO TREAT AND CONTROL STORMWATER RUNOFF.

UTILITY NOTES

1. WATER SERVICE WILL BE PROVIDED FROM EXISTING MAINLINE ON MILITARY CUTOFF RD. A MASTER METER AND BACKFLOW PREVENTER WILL BE LOCATED AT THE PROPERTY LINE OR IN AN EASEMENT DEDICATED TO CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA).
2. WATER DISTRIBUTION AND FIRE PROTECTION SYSTEM ONSITE WILL BE PRIVATE.
3. SEWER SERVICE WILL BE PROVIDED THROUGH NEW PRIVATE ONSITE COLLECTION SYSTEM THAT WILL CONNECT TO EXISTING CFPUA MAINLINE AT THE REAR OF THE PROPERTY.
4. WATER AND SEWER EXTENSION PERMITS WILL BE OBTAINED AS REQUIRED.
5. UNUSED EXISTING UTILITIES ONSITE SHALL BE PROPERLY ABANDONED OR REMOVED. EXISTING EASEMENTS SHALL BE ABANDONED.
6. ALL UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS, AND TELEPHONE SHALL BE INSTALLED UNDERGROUND.

CITY OF WILMINGTON SITE PLAN NOTES

- CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OF FIRE HYDRANTS. A THREE FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET SECTION 510 REQUIREMENTS OF THE 2018 NC FIRE CODE.
- NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE.
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.



SOLID WASTE NOTES

TRASH CONTAINMENT AND RECYCLING AREAS SHALL BE LOCATED WITHIN THE BUILDINGS WHERE POSSIBLE, WITH ROLL-OUT CONTAINERS TO BE SERVICED. SEE PLANS FOR THE LOCATION OF TRASH AND RECYCLING AREAS ON SITE WHEN IT IS NOT POSSIBLE TO PROVIDE CONTAINMENT AREAS WITHIN BUILDINGS. ON SITE TRASH CONTAINMENT AREAS SHALL BE PLACED ON THE SIDE OR REAR OF THE BUILDING AND SHALL BE COMPLETED ENCLOSED AND SCREENED FROM VIEW OF PUBLIC R.O.W.'S WITH AN OPAQUE FENCE AND PLANT MATERIALS TO A HEIGHT OF AT LEAST ONE (1) FOOT TALLER THAN THE HIGHEST POINT OF THE TRASH RECEPTACLE (CHAIN LINK AND EXPOSED CONCRETE BLOCK ARE PROHIBITED.

CAMA NOTE

A PORTION OF THE SITE IS LOCATED WITHIN THE 575' OUTSTANDING RESOURCE WATER (ORW) AREA OF ENVIRONMENTAL CONCERN (AEC) AND WILL REQUIRE A CAMA MAJOR PERMIT.

WETLAND NOTES

1. WETLANDS SHOWN PER DELINEATION BY HUYSMAN & BRADY, INC.
2. PROJECT WILL REQUIRE WETLANDS TO BE FILLED. ALL APPLICABLE LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN OBTAINED.

CONSERVATION OVERLAY DISTRICT

COD SETBACK = 50'
ALLOWABLE IMPACTS CAN OCCUR TO 25% OF THE AREA OUTSIDE 25' (OR ONE-HALF) OF THE COD SETBACK AS FOLLOWS:

AREA OUTSIDE THE 25' COD SETBACK:	36,468 SF
ALLOWABLE COD IMPACT (25% OF AREA):	9,117 SF
PROPOSED IMPACTS WITHIN COD:	8,950 SF
REMAINING IMPACTS ALLOWED:	167 SF

IMPERVIOUS INFORMATION

EXISTING IMPERVIOUS (ALL TO BE REMOVED)	289,238 SF (6.64 AC)
APPROVED IMPERVIOUS COVERAGE	831,125 SF (19.08 AC)

PROPOSED IMPERVIOUS (PHASE 1)

STREETS	246,155 SF
BUILDINGS	329,300 SF
SIDEWALKS	186,988 SF

TOTAL IMPERVIOUS (PHASE 1)	762, 443 SF (17.50 AC)
FUTURE IMPERVIOUS (PHASE 2)	68,682 SF (1.58 AC)
TOTAL % IMPERVIOUS	831,125 SF / 1, 938,420 SF = 42.88%

WATER & SEWER (EXISTING AND PROPOSED PHASE 1 & FULL BUILD OUT)

PHASE 1
WATER: 21,365 GPD (CURRENT USE)
WATER: 163,923 GPD (PROPOSED USE PHASE 1)
SEWER: 21,365 GPD (CURRENT USE)
SEWER: 163,932 GPD (PROPOSED USE PHASE 1)

FULL PROJECT BUILD OUT
WATER: 269,214 GPD
SEWER: 269,214 GPD

WATER AND SEWER SHALL BE PROVIDED (SEE PLAN) AND
WILL BE A COMBINATION OF EXISTING AND PROPOSED (PUBLIC AND PRIVATE)

BUILDING DATA TABLE

Building Data Table :

Building	Proposed Use*	Number of Floors	Max. Height	Number of Units	Number of Stories and SF per Floor						Total Building SF
					1	2	3	4	5	6	
1A	Restaurant / Retail	1.5	45'		5,823						5,823
1B	Retail / Residential	2	45'	3	3,595	3,638					7,233
2	Retail / Residential / Restaurant	6	75'	80	19,898	21,830	21,470	21,470	11,310	11,310	107,288
3A	Retail / Restaurant	1.5	45'		4,720						4,720
3B	Office / Retail	2	45'		4,540	4,617					9,157
4	Retail / Residential / Restaurant	6	75'	80	19,766	21,370	21,370	21,370	11,180	11,180	106,236
5	Retail / Residential	4	45'	39	13,757	13,929	13,929	13,929			55,544
6	Residential / Amenity	4	55'	142	46,610	47,520	47,520	47,520			189,170
7	Hotel & Accessory Uses	5	75'	234	64,432	62,224	41,270	40,054	37,309		245,289
8	Retail, Restaurant, Residential, Amenity	6	75'	73	15,575	18,007	16,769	16,769	16,769	16,769	100,658
12	Retail / Residential	4	45'	39	13,754	13,929	13,929	13,929			55,541
PS1	Parking	4	45'		55,905	55,905	42,773				154,583
PS-2	Parking	6	55'		39,513	37,515	37,515	37,515	37,515	6,050	195,623
Pool Amenity	Amenity (Multiple Structures)*	1	35'		2,500						3,250
Spa Island	Hotel Accessory Use	2	45'		22,500						22,500

*Pool Amenity will have at minimum an office, food & beverage service (bar), restrooms, mechanical & storage building and shade facilities

APPROVED PLAN (4/19/18) TOTAL GROUND COVERAGE SF	424,112
CURRENT BUILDING GROUND COVERAGE SF ALLOCATION	332,888
FUTURE BUILDING GROUND COVERAGE ALLOCATION	91,224

SUMMARY :

Total Building SF	1,262,615
Building Ground Coverage	332,888
Number of Residential Units	456
Number of Hotel Rooms (Keys)	234

Building Use Data Table

Use	Approved Site Plan	Proposed Phase 1	Difference / Overage	Reallocation of Density	Remaining Density for Phase 2	Total Project Build Out
Hotel - Rooms (Units)	231	234	Add 3		0	234
Apartments (Units)	525	456			69	525
Office (SF)	147,700	4,006		3,000	140,694	144,700
Retail (SF)	115,000	67,399			47,601	115,000
Restaurant (SF)	16,000	16,000			0	16,000

Notes:
1. Reallocation of Density: 1 Hotel Room = 1,000 SF & 1 Apt. = 1,500 SF of another use category
2. Reallocation of density between any two categories shall not exceed then percent (10%) of the approved allocation.
3. Reallocation of 16,000 SF Office use for an increase of 14 Hotel Units equals 9.4% of the approved office allocation.

ESTIMATED TRIP GENERATION

SEE APPROVED TIA (COPY ATTACHED TO SUBMITTAL)

BUILDING CONSTRUCTION TYPE

CONSTRUCTION TYPE: II-B (ALL BUILDINGS)
SPRINKLERS: YES (ALL BUILDING)

PHASING NOTE

THE SITE WORK PORTION OF THE PROJECT IMPROVEMENTS (TREE REMOVALS, SITE CLEARING, GRADING, UTILITIES AND OTHER INFRASTRUCTURE IS PROPOSED AS ONE MASTER PHASE. THE BUILDINGS ARE CURRENTLY PROPOSED IN 5 PHASES, SEE PLAN FOR PHASE LINES. PROJECT PHASING IS SUBJECT TO CHANGE BASE ON OWNER PREFERENCE OR OTHER FACTORS OUTSIDE THE OWNER'S CONTROL.

SITE PARKING

Maximum Allowable Parking - Full Build Out

Use	Proposed Project Build Out	Parking Ratio	Number of Spaces (Max.)
Hotel (Room Keys)	234	1 spc. / Room	234
Spa Island (Guest Use Only)	0	None Required	0
Water Park (Guest Use Only)	0	None Required	0
Apartments (Units)	525	2.5 spc. / Unit	1,313
Office (SF)	144,700	1 spc. / 200 SF	724
Retail (SF)	115,000	1 spc. / 200 SF	575
Restaurant (SF)	16,000	1 spc. / 65 SF	246
		Total Parking Not to Exced	**3,091**

Provided Parking

Surface & On-Street Spaces	97
Parking Structure #1	496
Parking Structure #2	541
Total Proposed Parking	**1,134**

ZONING NOTE

THE SUBJECT PARCEL IS NOT LOCATED WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR OTHER ZONING OVERLAY DISTRICT.

Required Bike Parking	Proposed	Full Build-Out
1 Bike Park per Residential Unit	456	525
1 Bike Park per 1,000 SF Retail	68	115
1 Bike Park per 5,0000 Office*	2	29
Totals	**526**	**669**

NOTE: BIKE PARKING PROVIDED IN BUILDINGS AND PARKING STRUCTURES TO BE SHOWN ON ARCHITECTURAL PLANS. QUANTITIES OF BIKE RACK PARKING SHALL BE PROVIDED AS NOTED

Bike Parking Provided

Bike Parking on Site	126	541
Bike Parking in Buildings / Garages	415	541
Totals		541 - THIS PHASE OF WORK

TRAFFIC SIGN AND PAVEMENT MARKING NOTE

1. ANY REQUIRED INSTALLATION OR RELOCATION OF TRAFFIC SIGNS/PAVEMENT MARKINGS IS THE RESPONSIBILITY OF THE PROJECT DEVELOPER. PLEASE COORDINATE WITH CITY TRAFFIC SIGNS AND PAVEMENT MARKINGS MANAGER/ SUPERVISOR PRIOR TO INSTALLATION/RELOCATION OF ANY TRAFFIC SIGNS OR MARKINGS IN EXISTING OR PROPOSED PUBLIC ROW.

GRAPHIC SCALE
0 50 100 200 400
SCALE: 1"=100'

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

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:	3/10/2022
APPROVED ADMINISTRATIVE MODIFICATION	

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

OVERALL SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

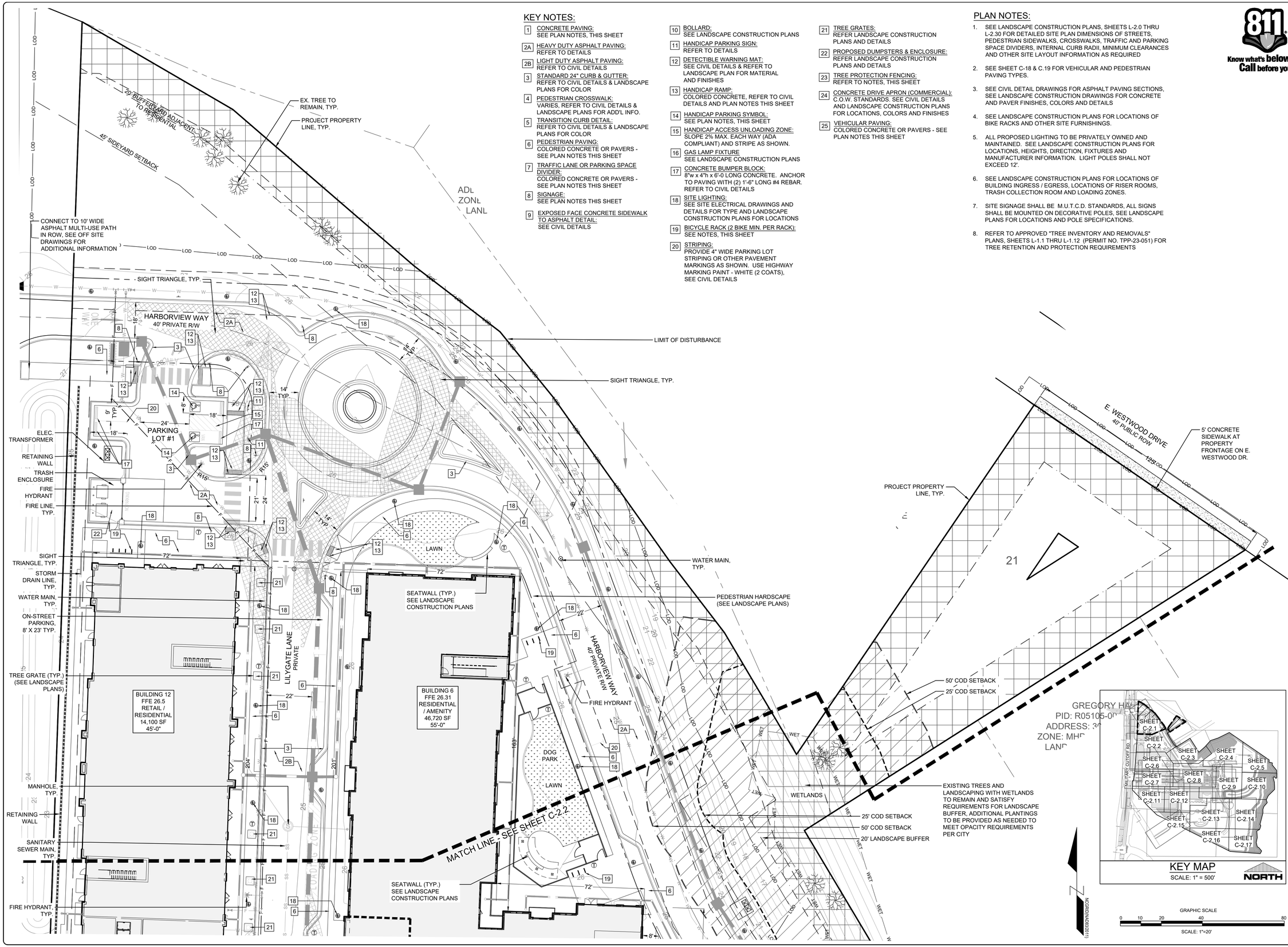
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
SUBMITTAL:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 03/15/2022
SCALE: 1" = 100'
DESIGNED: RPB
DRAWN: RPB
CHECKED:

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.0

PEI JOB#: 18473.PE



KEY NOTES:

1. CONCRETE PAVING: SEE PLAN NOTES, THIS SHEET
2A. HEAVY DUTY ASPHALT PAVING: REFER TO DETAILS
2B. LIGHT DUTY ASPHALT PAVING: REFER TO CIVIL DETAILS
3. STANDARD 24" CURB & GUTTER: REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR COLOR
4. PEDESTRIAN CROSSWALK: VARIES, REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR ADD'L INFO.
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8. SIGNAGE: SEE PLAN NOTES THIS SHEET
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10. BOLLARD: SEE LANDSCAPE CONSTRUCTION PLANS
11. HANDICAP PARKING SIGN: REFER TO DETAILS
12. DETECTIBLE WARNING MAT: SEE CIVIL DETAILS & REFER TO LANDSCAPE PLAN FOR MATERIAL AND FINISHES
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FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
3/10/2022 APPROVED ADMINISTRATIVE MODIFICATION

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
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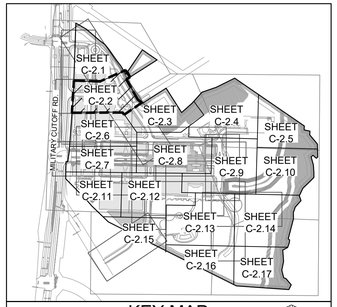
PERMIT SET:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/2023
SCALE: 1" = 20'
DESIGNED: RPB
DRAWN: MM
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.1

PEI JOB#: 18473.PE



KEY MAP

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26. GUARDRAIL: SEE DETAIL

MANHOLE, TYP.
UTILITY EASEMENT (DB 4934, PG 1336
RELOCATED 10' WIDE ASPHALT MULTI-USE PATH.
LOADING ZONE
STORM WATER AREA IN PUBLIC R.O.W., BY NC DOT
RETAINING WALL AT PROPERTY LINE
PROPOSED OFF-SITE TRANSPORTATION IMPROVEMENTS
MILITARY CUTOFF ROAD S.R. 1409 PUBLIC R/W - WIDTH VARIES
SIGHT TRIANGLE, TYP.
FIRE HYDRANT, TYP.
SANITARY SEWER MAIN, TYP.
WATER MAIN, TYP.
FIRE LINE, TYP.
RELOCATED 10' WIDE ASPHALT MULTI-USE PATH.
MATCH LINE - SEE SHEET C-2.1
MATCH LINE - SEE SHEET C-2.6
MATCH LINE - SEE SHEET C-2.3
UTILITY EASEMENT-DE
BUILDING 12 FFE 26.5 RETAIL / RESIDENTIAL 14,100 SF 45'-0"
BUILDING 6 FFE 26.31 RESIDENTIAL / AMENITY 46,720 SF 55'-0"
BUILDING 5 FFE 26.0 RESIDENTIAL 14,100 SF 45'-0"
BUILDING 6 FFE 26.31 RESIDENTIAL / AMENITY 46,720 SF 55'-0"
PROPOSED DOG PARK (SEE LANDSCAPE PLANS)
PARKING STRUCTURE #2 FFE 25.5 37,580 SF 598 SPACES 55'-0"
PARKING LOT #3
EVERTON WAY PRIVATE
LILYGATE LANE PRIVATE
HARBORVIEW WAY 40' PRIVATE R/W
LANCE DR. 40' PUBLIC ROW
SIGHT TRIANGLE, TYP.
DRIVE AISLE THROUGH PARKING STRUCTURE (SEE ARCH'S PLANS)
PEDESTRIAN HARDSCAPE (SEE LANDSCAPE PLANS)
ON STREET PARKING (8' X 23', TYP.)
FENCE / BARRIER (T.B.D.) AT PERIMETER OF DOG PARK AREA
LIMIT OF DISTURBANCE
SEATWALL (SEE LANDSCAPE PLANS)
EX. TREE TO REMAIN, TYP.
FIRE HYDRANT, TYP.
PROJECT PROPERTY LINE, TYP.
50' COD SETBACK
25' COD SETBACK
45' SIDEYARD SETBACK
20' BUFFERYARD ADJACENT TO RESIDENTIAL
5' CONCRETE SIDEWALK PER CITY OF WILMINGTON STD. DRAWINGS
LAWN
SEATWALL (SEE LANDSCAPE PLANS)
72'
106'
176'
294'
202'
22'
29'
ADD
ZONE: M
LAND US
DB

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NORTH

GRAPHIC SCALE
0 10 20 40 80
SCALE: 1"=20'

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

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CIP CONSTRUCTION COMPANY
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GREENSBORO, NC 27401

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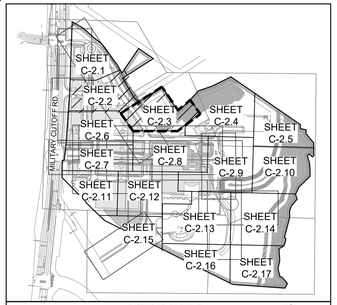
DRAWN: JMC
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.2

PEI JOB#: 18473.PE



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347 MCO LLC
PID: R05105-001-015-000
ADDRESS: 306 LANCE DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 6078 PG 2293

PROJECT PROPERTY LINE, TYP.

LANCE DR. 40' PUBLIC ROW

HARBORVIEW WAY 40' PRIVATE R/W

LILYGATE LANE 40' PRIVATE R/W

20' BUFFERYARD ADJACENT TO RESIDENTIAL

45' SIDEYARD SETBACK

50' COD SETBACK

25' COD SETBACK

LIMIT OF DISTURBANCE

RETAINING WALL

WETLANDS

EX. TREE TO REMAIN, TYP.

EX. WETLANDS DELINEATED BY WETLANDS & WATERS, INC. JURISDICTIONAL DETERMINATION APPROVED BY THE USACOE ON MARCH 16, 2018.

SEATWALL, SEE LANDSCAPE PLANS

BUILDING 6
FFE 25.31
RESIDENTIAL / AMENITY
46,720 SF
55'-0"

COVERED WALKWAY (SEE ARCH'S PLANS)

COURTYARD (SEE LANDSCAPE PLANS)

ON STREET PARKING (8' X 23', TYP.)

SEATWALLS (SEE LANDSCAPE PLANS)

PEDESTRIAN HARDSCAPE (SEE LANDSCAPE PLANS)

PEDESTRIAN BRIDGE OVER WETLANDS AND CONSERVATION AREAS

RETAINING WALL (LOCATED AT BACK OF CURB)

VEHICLE GUARD RAIL (SEE LANDSCAPE DWGS.)

RETAINING WALL

ELECTRICAL TRANSFORMER (TYP.)

LAWN

SANITARY SEWER MAIN, TYP.

STORM DRAIN LINE, TYP.

RAISED CROSSWALK (ALIGN ON-CENTER WITH WALKWAY THROUGH BUILDING)

MATCH LINE - SEE SHEET C-2.2

MATCH LINE - SEE SHEET C-2.6

MATCH LINE - SEE SHEET C-2.8

MATCH LINE - SEE SHEET C-2.4

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

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GRAPHIC SCALE
0 10 20 40 80
SCALE: 1"=20'

NCSRDNUM20211

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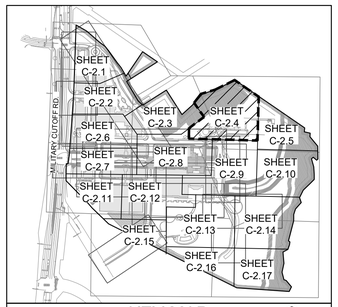
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.3

PEI JOB#: 18473.PE



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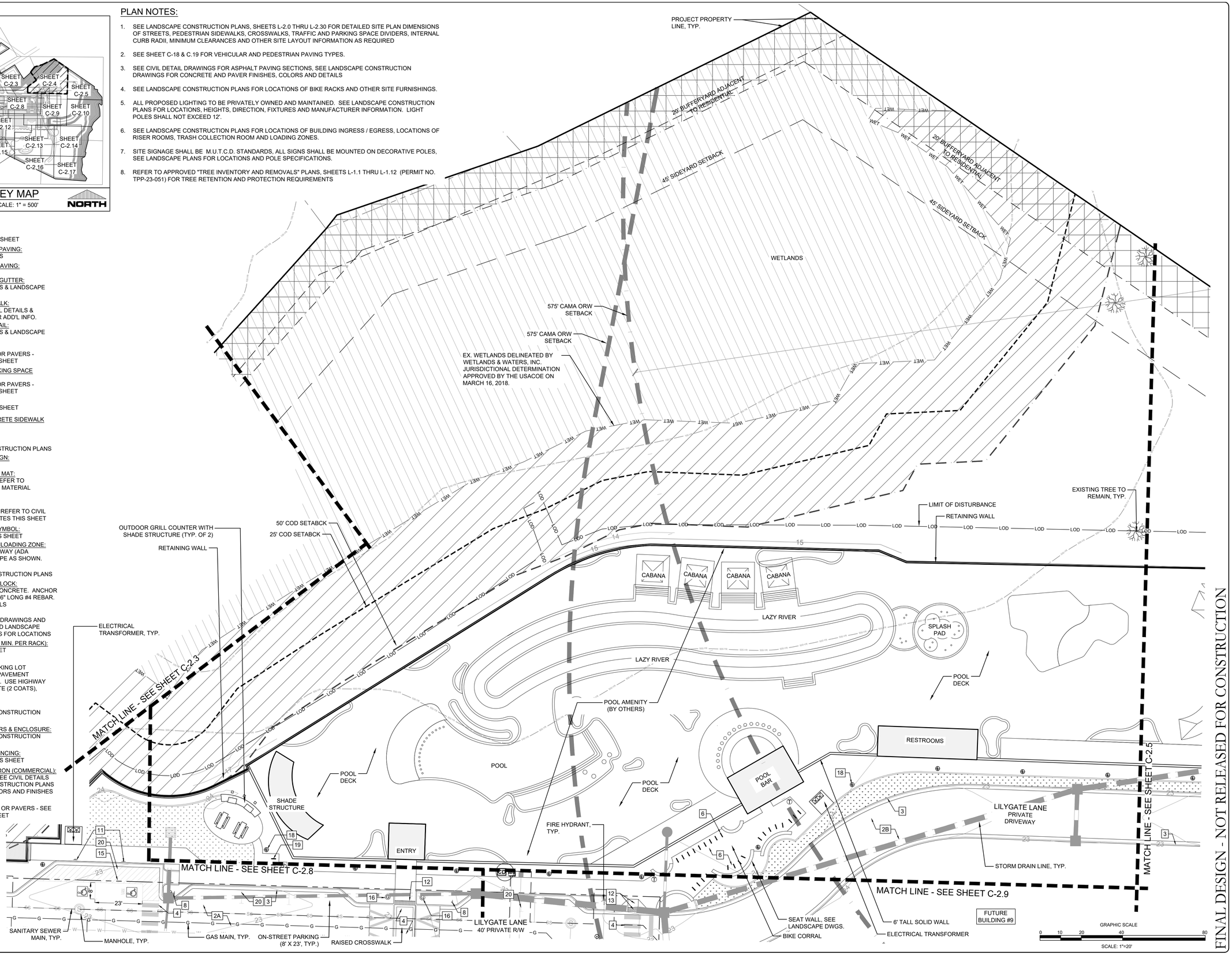

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FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
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WILMINGTON, NC 28405

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DATE: 1" = 20'
SCALE: RPB
DESIGNED: JLM
DRAWN: RPB
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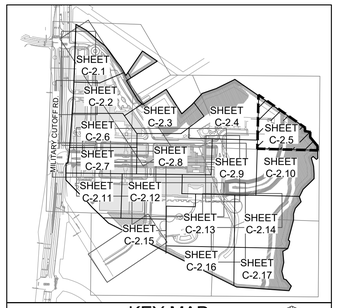
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.4

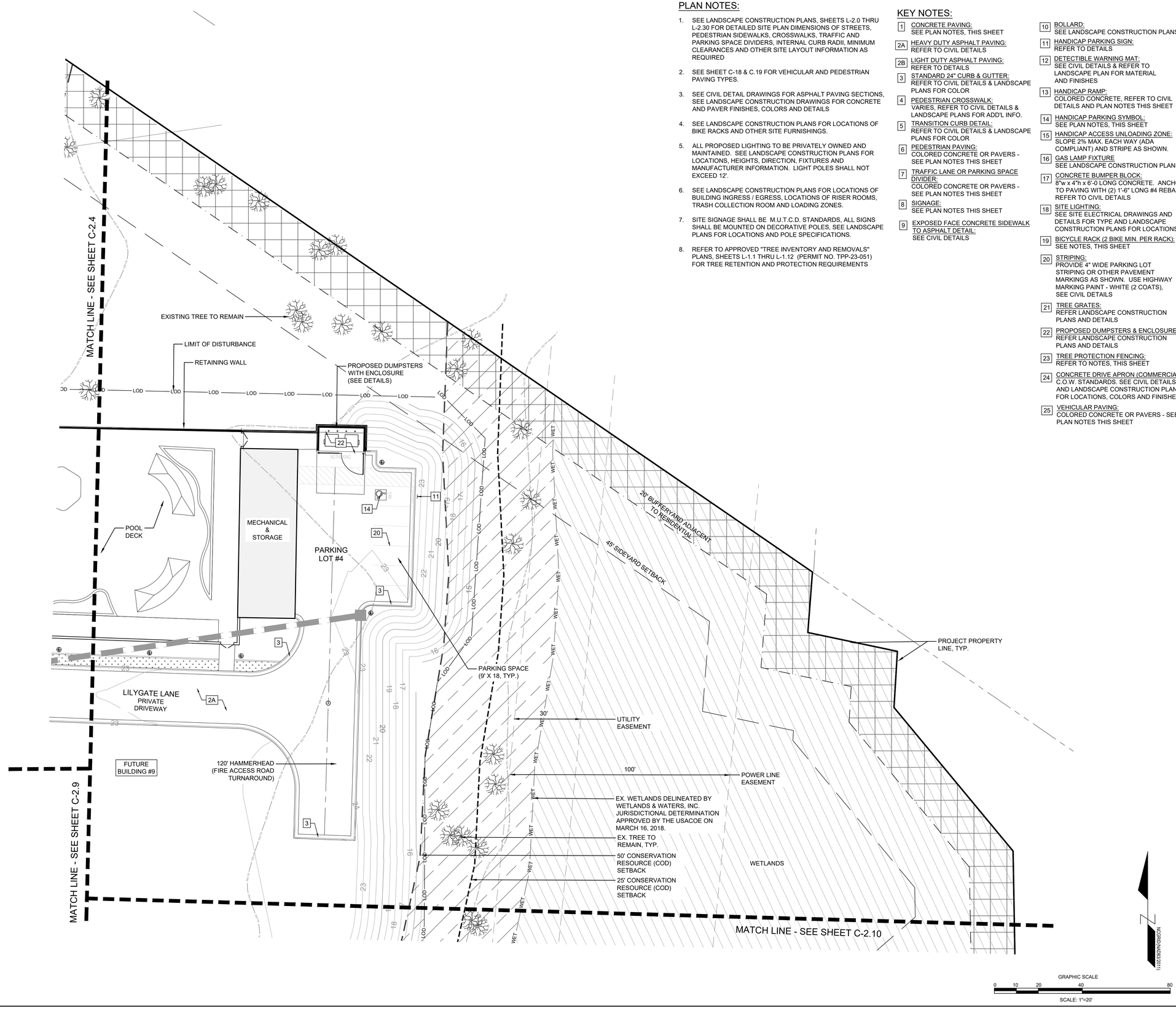
PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH



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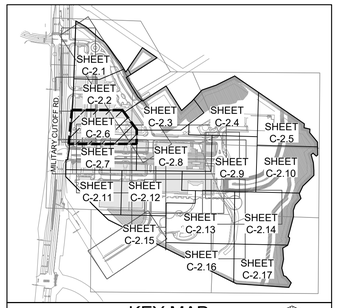
DRAWN: AM
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.5

PEI JOB#: 18473.PE



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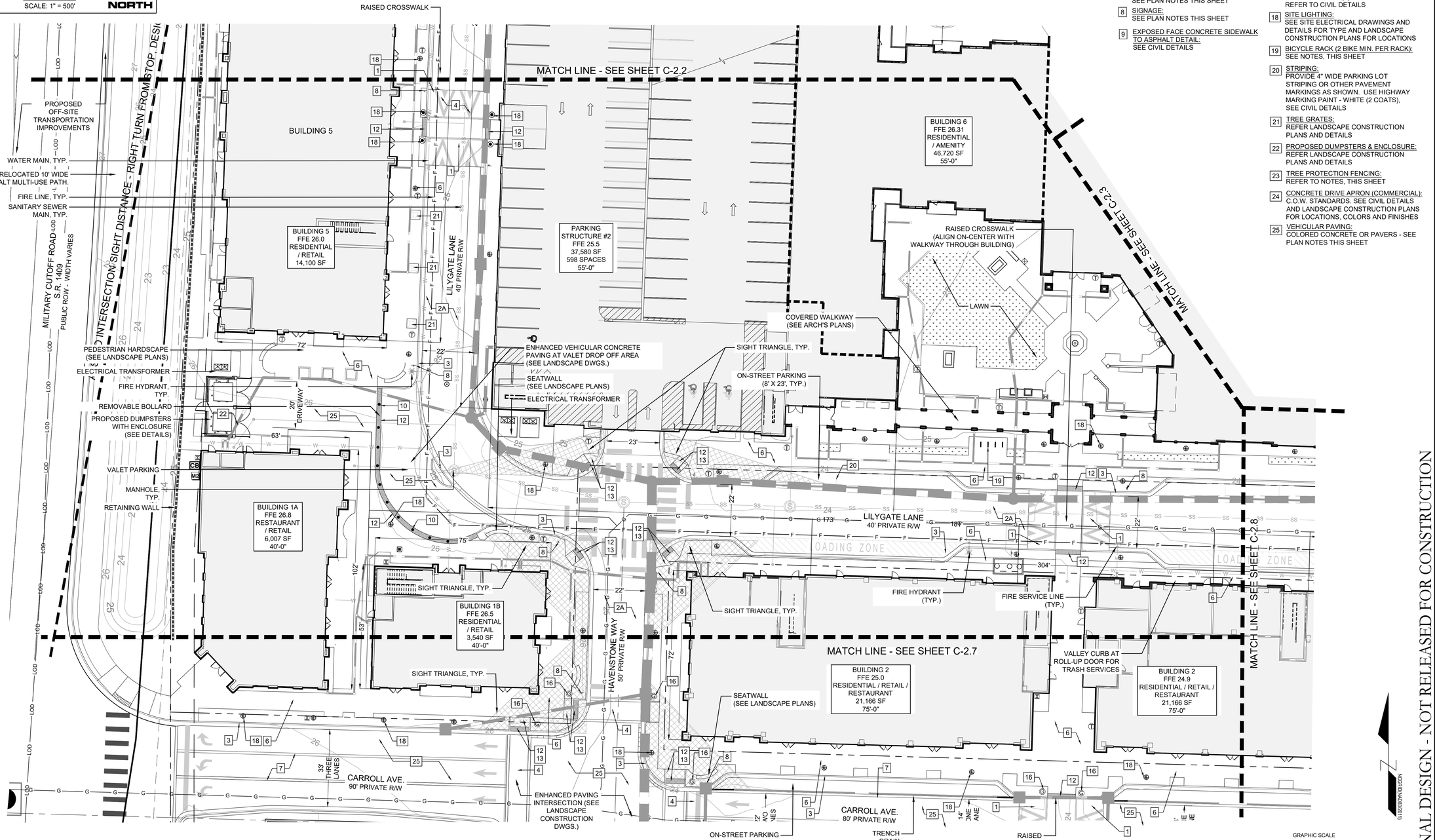

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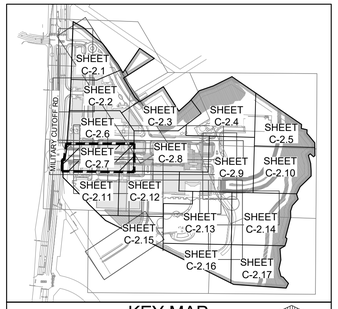
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P BALLARD
09/15/23

C-2.6

PEI JOB#: 18473.PE



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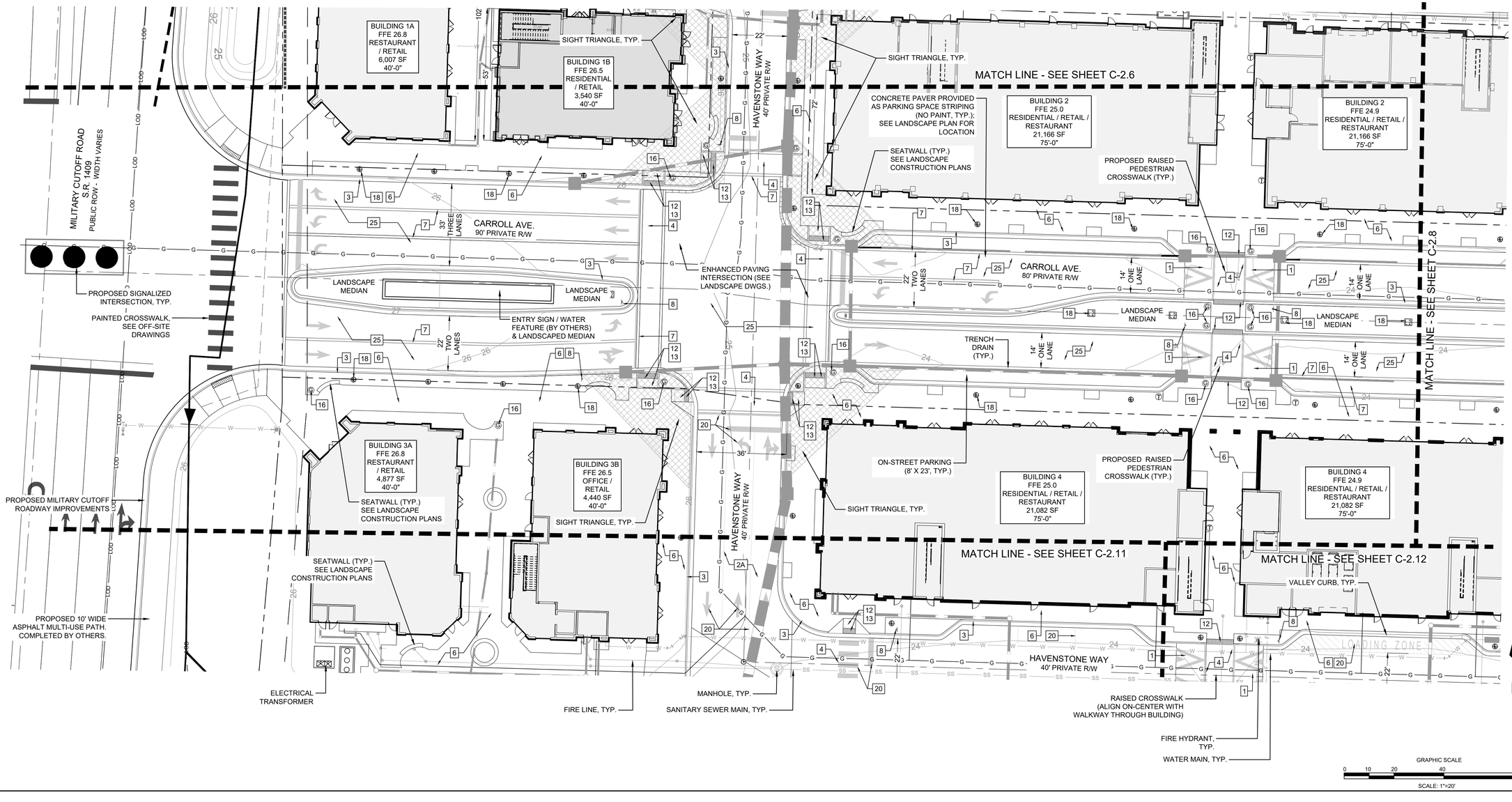

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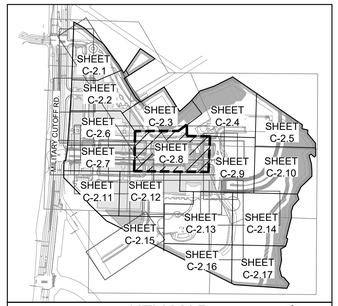

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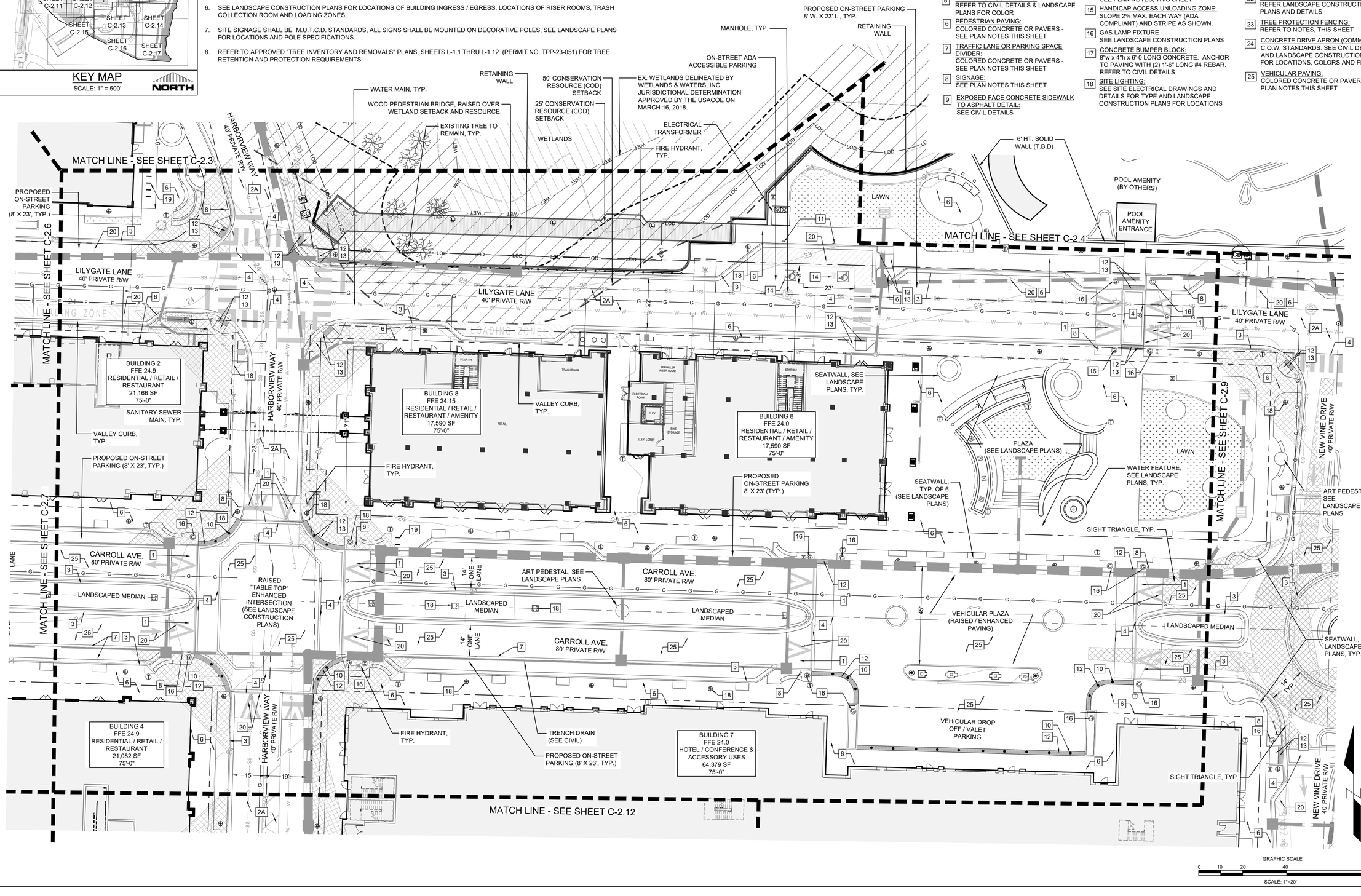
24. CONCRETE DRIVE APRON (COMMERCIAL): C.O.W. STANDARDS. SEE CIVIL DETAILS AND LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS, COLORS AND FINISHES
25. VEHICULAR PAVING: COLORED CONCRETE OR PAVERS - SEE PLAN NOTES THIS SHEET



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
- 3/10/2022 APPROVED ADMINISTRATIVE MODIFICATION

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

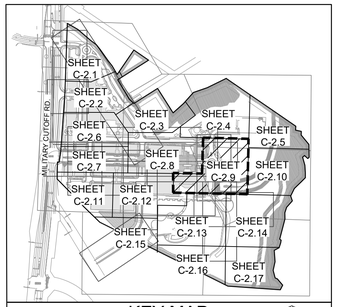
PROJECT STATUS
- CONCEPTUAL LAYOUT:
- PRELIMINARY LAYOUT:
- PERMIT:
- RELEASED FOR CONST:

DRAWING INFORMATION
- DATE: 09/15/2023
- SCALE: 1" = 20'
- DESIGNED: RPB
- DRAWN: RPB
- CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.8

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

1. SEE LANDSCAPE CONSTRUCTION PLANS, SHEETS L-2.0 THRU L-2.30 FOR DETAILED SITE PLAN DIMENSIONS OF STREETS, PEDESTRIAN SIDEWALKS, CROSSWALKS, TRAFFIC AND PARKING SPACE DIVIDERS, INTERNAL CURB RADII, MINIMUM CLEARANCES AND OTHER SITE LAYOUT INFORMATION AS REQUIRED
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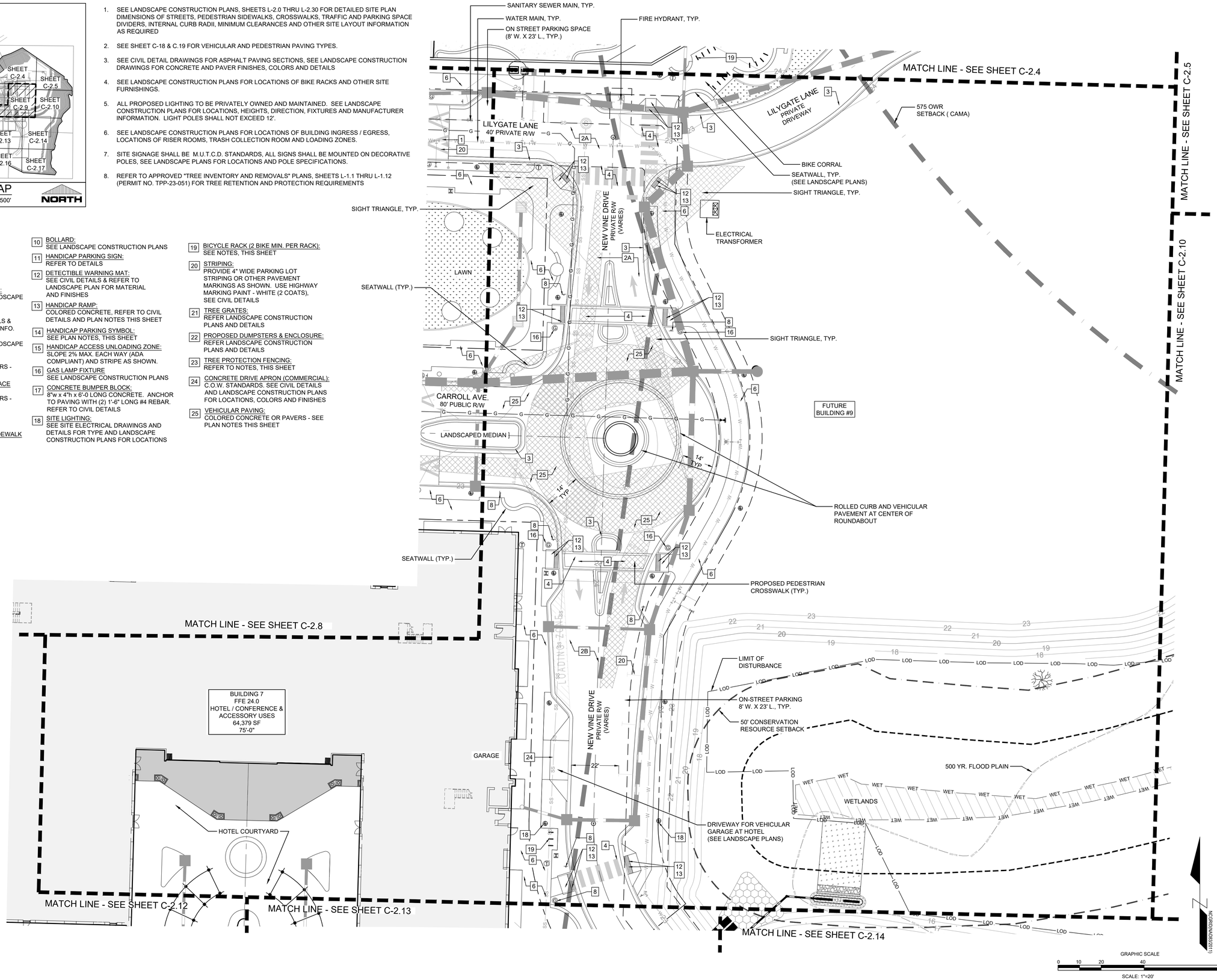

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DRAWN: MJ
CHECKED: RPB

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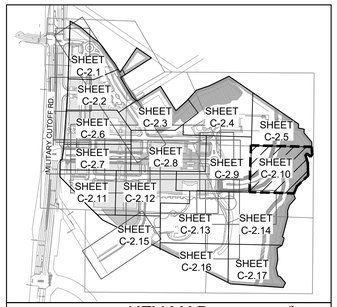
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.9

PEI JOB#: 18473.PE



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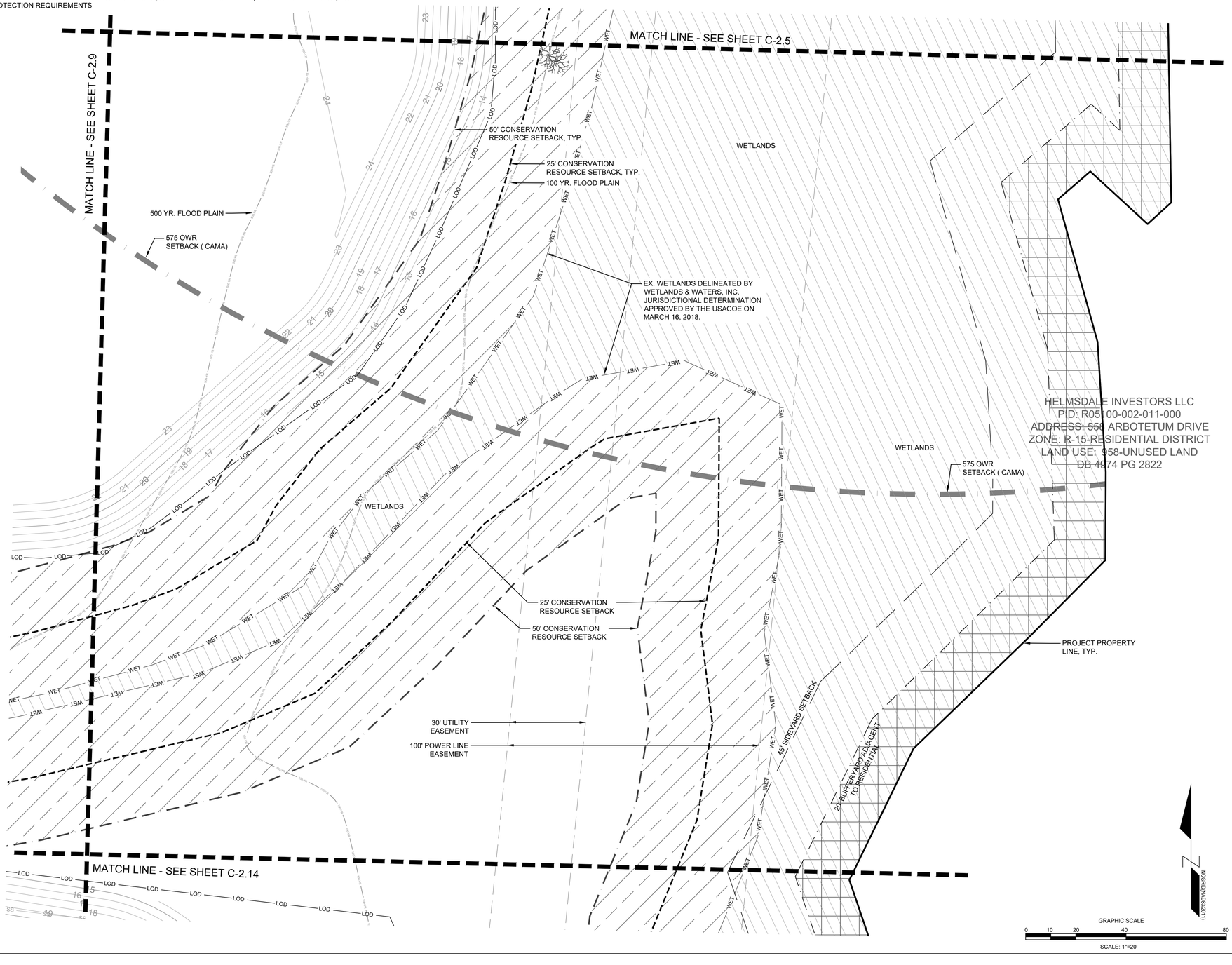

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REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:

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SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

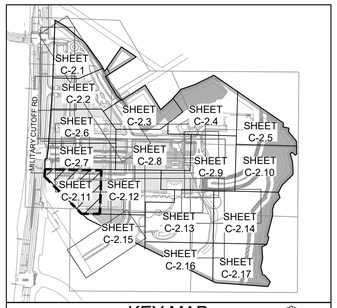
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/2023
SCALE: 1" = 20'
DESIGNED: RPB
DRAWN: MW
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.10

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

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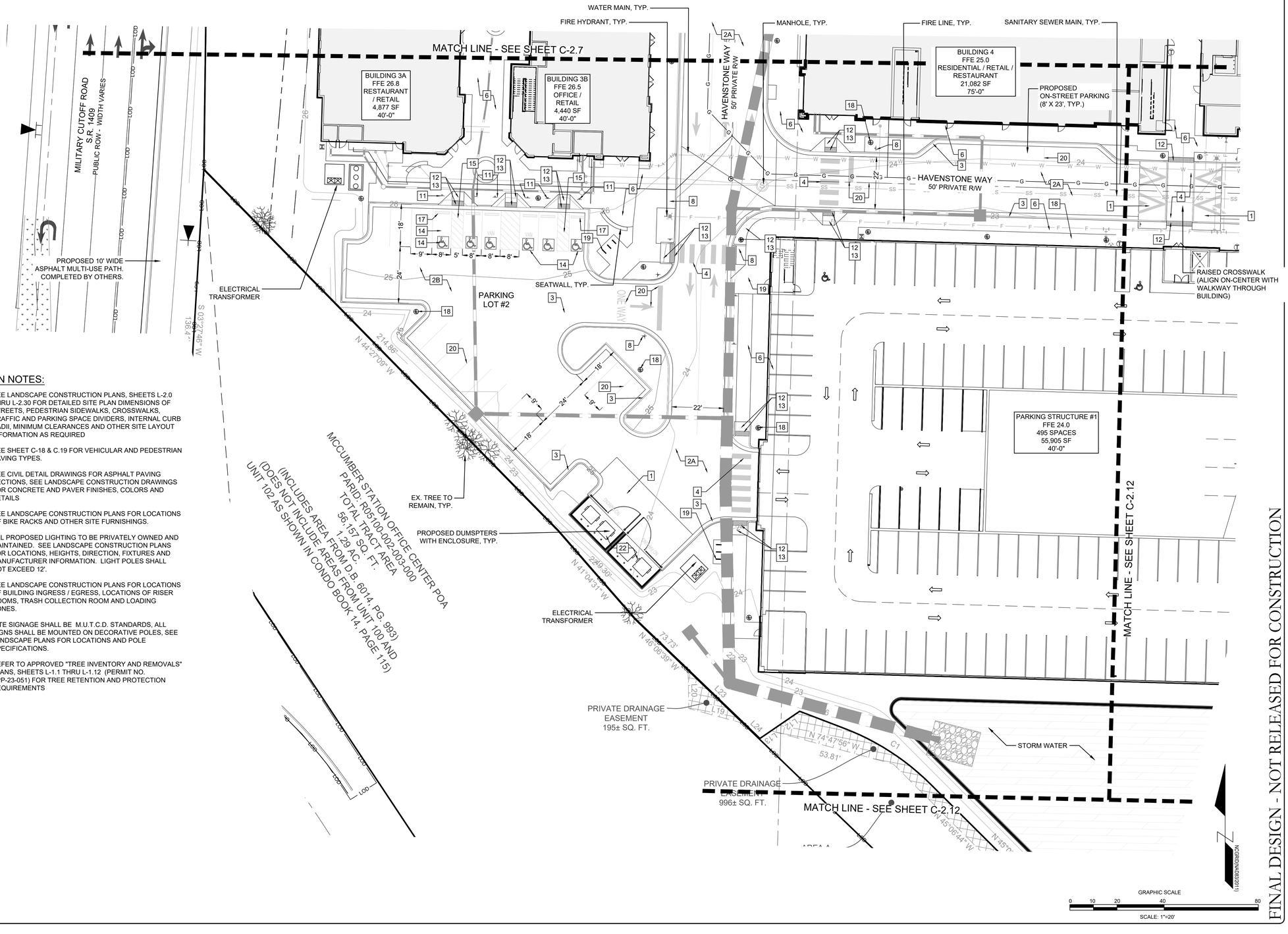

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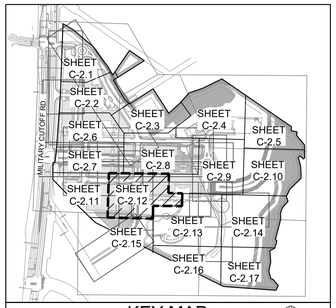
PRELIMINARY LAYOUT:
PHASE REVIEW:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/2023
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: MJ
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.11

PEI JOB#: 18473.PE



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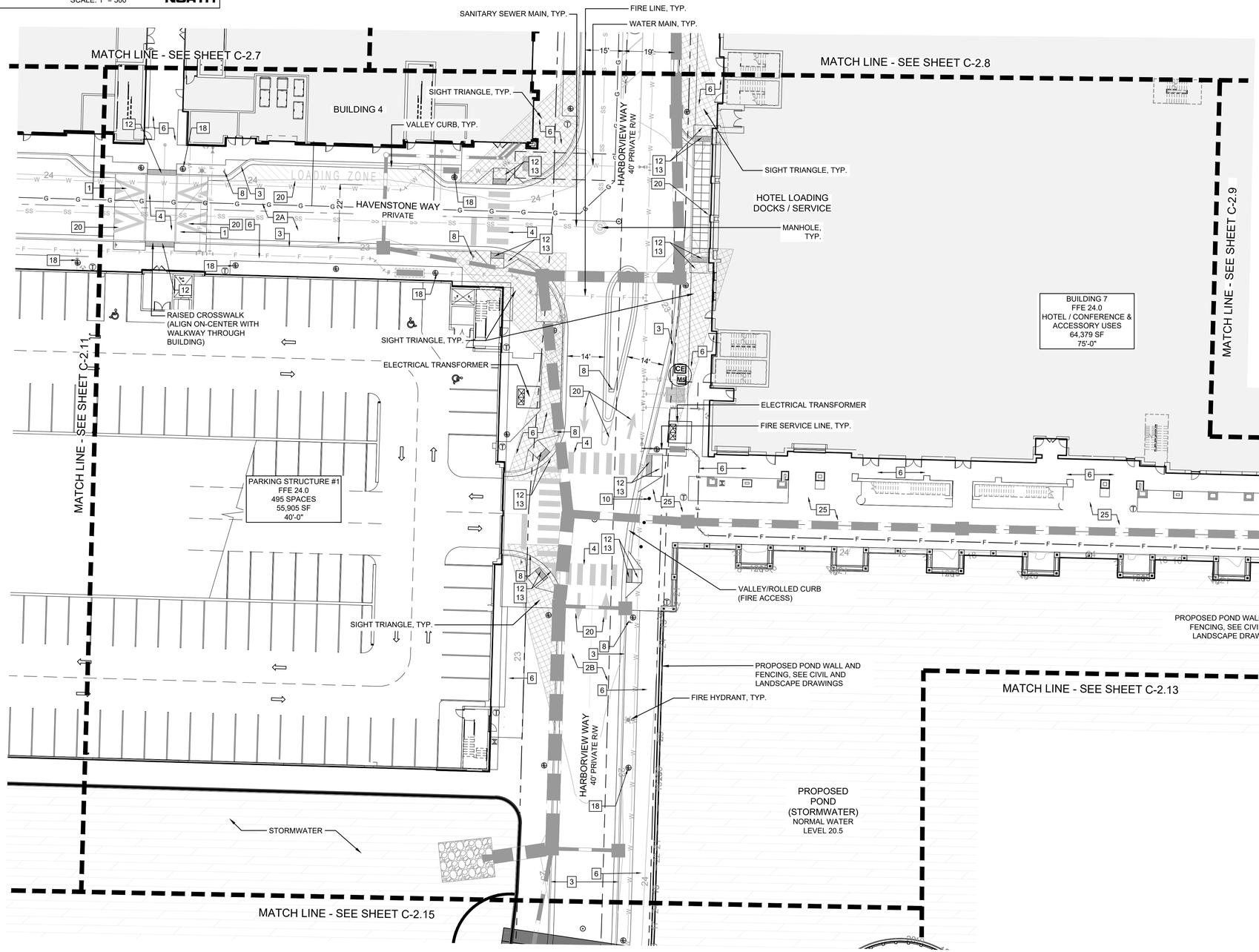

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NORTH

GRAPHIC SCALE

0 10 20 40 80

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FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-4707 (O) (910) 791-4760 (F)
NC License #: C-2846

SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

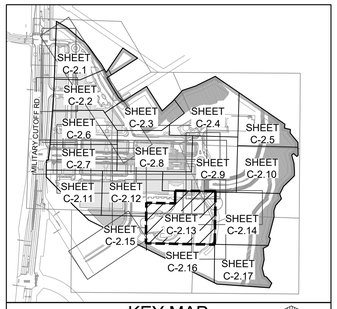
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PLANNING:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/2023
SCALE: 1"=20'
DESIGNED: RPB
DRAWN: MJ
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.12

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

PLAN NOTES:

1. SEE LANDSCAPE CONSTRUCTION PLANS, SHEETS L-2.0 THRU L-2.30 FOR DETAILED SITE PLAN DIMENSIONS OF STREETS, PEDESTRIAN SIDEWALKS, CROSSWALKS, TRAFFIC AND PARKING SPACE DIVIDERS, INTERNAL CURB RADII, MINIMUM CLEARANCES AND OTHER SITE LAYOUT INFORMATION AS REQUIRED
2. SEE SHEET C-18 & C.19 FOR VEHICULAR AND PEDESTRIAN PAVING TYPES.
3. SEE CIVIL DETAIL DRAWINGS FOR ASPHALT PAVING SECTIONS, SEE LANDSCAPE CONSTRUCTION DRAWINGS FOR CONCRETE AND PAVER FINISHES, COLORS AND DETAILS
4. SEE LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS OF BIKE RACKS AND OTHER SITE FURNISHINGS.
5. ALL PROPOSED LIGHTING TO BE PRIVATELY OWNED AND MAINTAINED. SEE LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS, HEIGHTS, DIRECTION, FIXTURES AND MANUFACTURER INFORMATION. LIGHT POLES SHALL NOT EXCEED 12'.
6. SEE LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS OF BUILDING INGRESS / EGRESS, LOCATIONS OF RISER ROOMS, TRASH COLLECTION ROOM AND LOADING ZONES.
7. SITE SIGNAGE SHALL BE M.U.T.C.D. STANDARDS, ALL SIGNS SHALL BE MOUNTED ON DECORATIVE POLES, SEE LANDSCAPE PLANS FOR LOCATIONS AND POLE SPECIFICATIONS.
8. REFER TO APPROVED "TREE INVENTORY AND REMOVALS" PLANS, SHEETS L-1.1 THRU L-1.12 (PERMIT NO. TPP-23-051) FOR TREE RETENTION AND PROTECTION REQUIREMENTS

KEY NOTES:

1. CONCRETE PAVING: SEE PLAN NOTES, THIS SHEET
2A. HEAVY DUTY ASPHALT PAVING: REFER TO CIVIL DETAILS
2B. LIGHT DUTY ASPHALT PAVING: REFER TO DETAILS
3. STANDARD 24" CURB & GUTTER: REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR COLOR
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12. DETECTIBLE WARNING MAT: SEE CIVIL DETAILS & REFER TO LANDSCAPE PLAN FOR MATERIAL AND FINISHES
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15. HANDICAP ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.
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17. CONCRETE BUMPER BLOCK: 8"w x 4"h x 6'-0 LONG CONCRETE. ANCHOR TO PAVING WITH (2) 1'-6" LONG #4 REBAR. REFER TO CIVIL DETAILS
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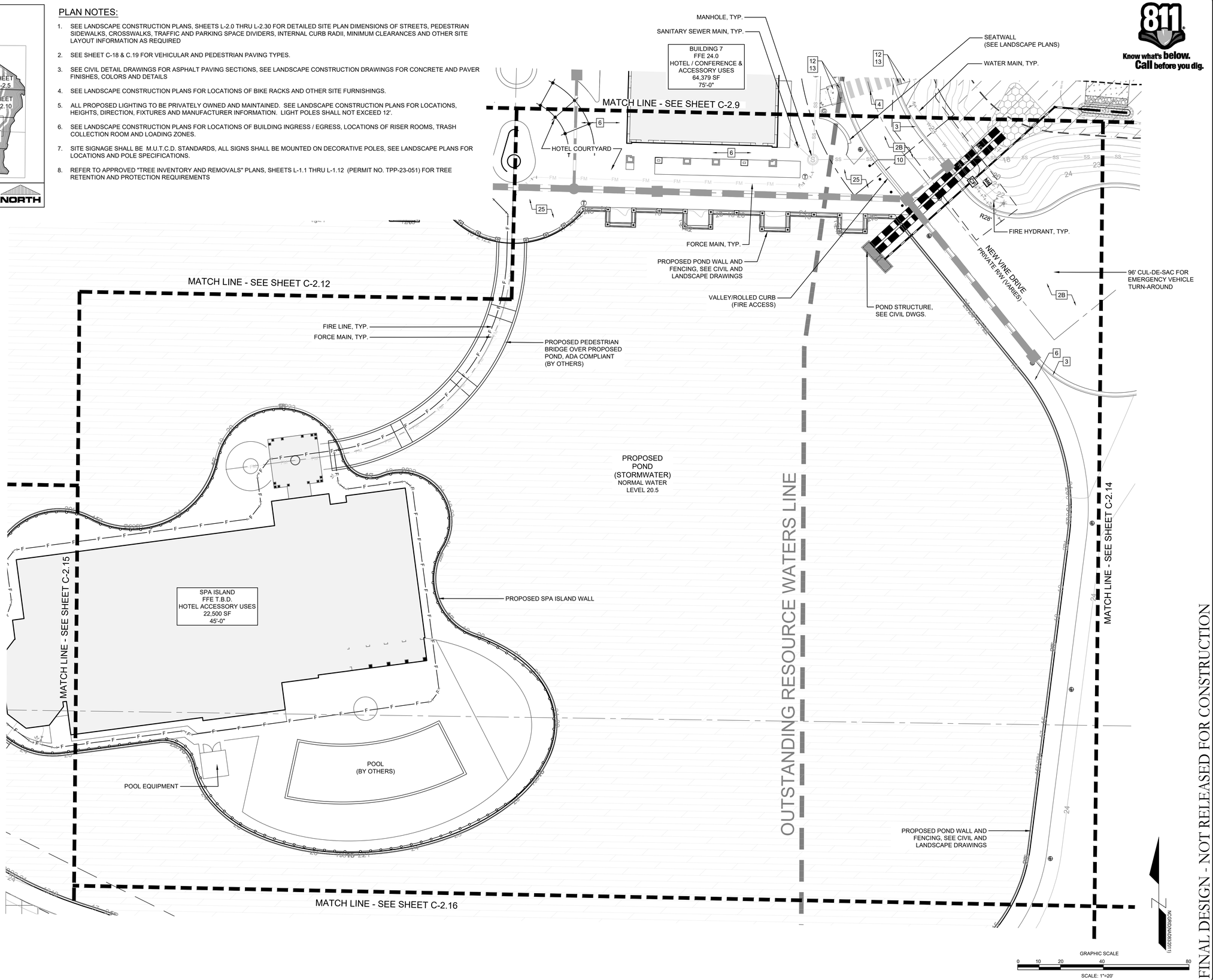

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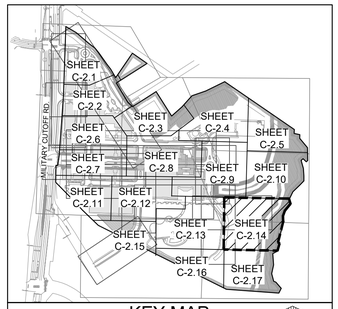
09/15/23

C-2.13

PEI JOB#: 18473.PE



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MATCH LINE - SEE SHEET C-2.9

MATCH LINE - SEE SHEET C-2.10

MATCH LINE - SEE SHEET C-2.13

MATCH LINE - SEE SHEET C-2.17

ELECTRICAL TRANSFORMER

500 YR. FLOOD PLAIN

96' CUL-DE-SAC FOR EMERGENCY VEHICLE TURN-AROUND

FUTURE BUILDING #10 & PARKING STRUCTURE

SEWER MANHOLE, TYP.

30' UTILITY EASEMENT

100' POWER LINE EASEMENT

LIMIT OF DISTURBANCE

SANITARY SEWER, TYP.

100 YR. FLOOD PLAIN

50' CONSERVATION RESOURCE SETBACK

25' CONSERVATION RESOURCE SETBACK

PROJECT PROPERTY LINE, TYP.

WETLANDS

45' SIDEYARD SETBACK

20' BUFFERYARD ADJACENT TO RESIDENTIAL

25' CONSERVATION RESOURCE SETBACK

50' CONSERVATION RESOURCE SETBACK

EXISTING TREE TO REMAIN, TYP.

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GRAPHIC SCALE

0 10 20 40 80

SCALE: 1"=20'

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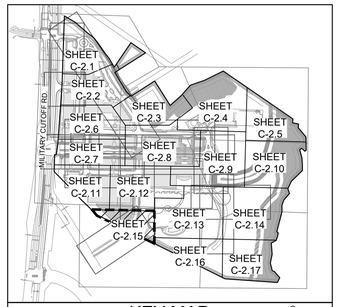
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P BALLARD
09/15/23

C-2.14

PEI JOB#: 18473.PE



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MATCH LINE - SEE SHEET C-2.11

MATCH LINE - SEE SHEET C-2.12

MATCH LINE - SEE SHEET C-2.13

MATCH LINE - SEE SHEET C-2.16

PRIVATE DRAINAGE EASEMENT 996± SQ. FT.

AREA A FROM D.B. 6014, PG. 993 4,411± SQ. FT.

PROJECT PROPERTY LINE

AREA B FROM D.B. 6014, PG. 993 190± SQ. FT.

PRIVATE DRAINAGE EASEMENT 133± SQ. FT.

MACCUMBER STATION OFF CNT POA
PID: R05100-002-003-000
ADDRESS: 575 MILITARY CUTOFF RD
ZONE: O&I-1-OFFICE & INSTITUTION
LAND USE: 961-CONDOMINIUM
COMMON AREA
DB 4661 PG 145

GKMJ PROPERTIES, LLC
PARID: R05100-002-005-000
D.B. 5167, PG. 1086
TOTAL TRACT AREA
34,914 SQ. FT.
0.80 AC.
(INCLUDES AREA FROM
D.B. 6014, PG. 993)

AREA C
PERMANENT EASEMENT AREA
0.19 AC.
8,119 SQ. FT.

HARBORVIEW WAY
40' PRIVATE R/W

HARBORVIEW WAY
40' PRIVATE EASEMENT

OLD MACCUMBER RD.
60' R.O.W.

STORMWATER

PROPOSED POND WALL AND FENCING, SEE CIVIL AND LANDSCAPE DRAWINGS

PROPOSED POND (STORMWATER) NORMAL WATER LEVEL 20.5

SPA ISLAND
FFE T.B.D.
HOTEL ACCESSORY USES
22,500 SF
45'-0"

FORCE MAIN, TYP.

PROPOSED SPA ISLAND WALL

PROPOSED EMERGENCY ACCESS BRIDGE OVER PROPOSED POND, ADA COMPLIANT (BY OTHERS)

TURFBLOCK PAVING FIRE LANE, TO MEET SPECIFICATIONS OF WILMINGTON FIRE DEPARTMENT

FIRE HYDRANT, TYP.

ELECTRICAL TRANSFORMER

45' SIDEYARD SETBACK

20' BUFFERYARD ADJACENT TO RESIDENTIAL

PROJECT PROPERTY LINE

EXISTING TREE TO REMAIN, TYP.

LIMIT OF DISTURBANCE

PLAN NOTES:

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NC GRID NAD83(2011)

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C-2.15

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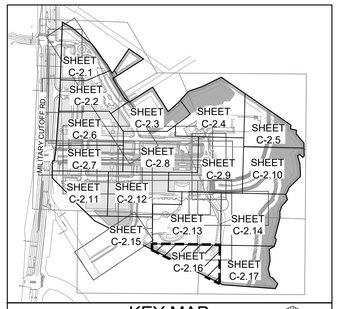

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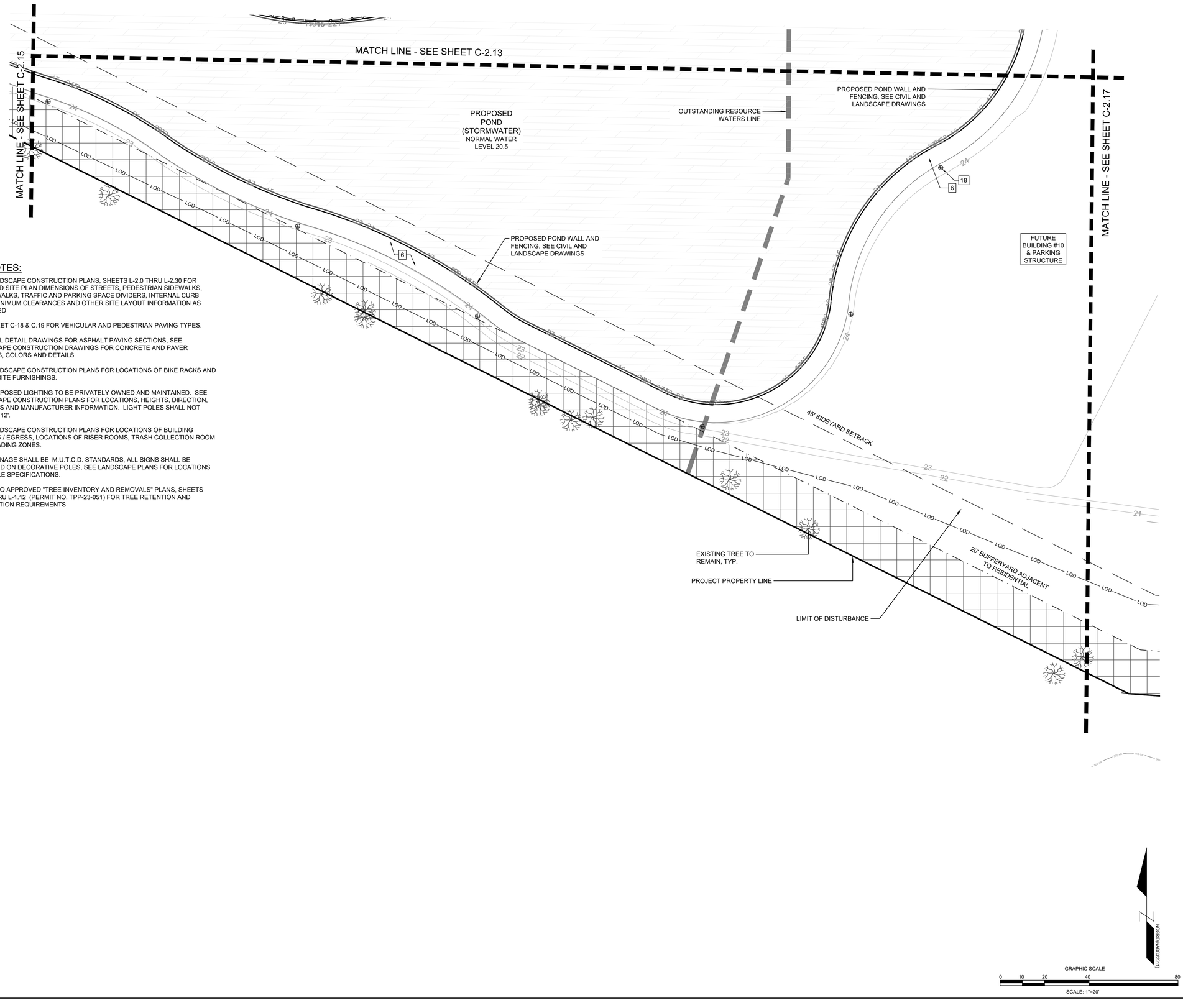
5. ALL PROPOSED LIGHTING TO BE PRIVATELY OWNED AND MAINTAINED. SEE LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS, HEIGHTS, DIRECTION, FIXTURES AND MANUFACTURER INFORMATION. LIGHT POLES SHALL NOT EXCEED 12'.
6. SEE LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS OF BUILDING INGRESS / EGRESS, LOCATIONS OF RISER ROOMS, TRASH COLLECTION ROOM AND LOADING ZONES.
7. SITE SIGNAGE SHALL BE M.U.T.C.D. STANDARDS, ALL SIGNS SHALL BE MOUNTED ON DECORATIVE POLES, SEE LANDSCAPE PLANS FOR LOCATIONS AND POLE SPECIFICATIONS.
8. REFER TO APPROVED "TREE INVENTORY AND REMOVALS" PLANS, SHEETS L-1.1 THRU L-1.12 (PERMIT NO. TPP-23-051) FOR TREE RETENTION AND PROTECTION REQUIREMENTS



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL:
RELEASED FOR CONST:

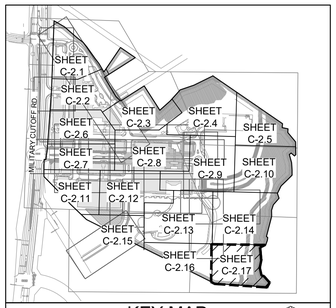
DRAWING INFORMATION

DATE:	09/15/2023
SCALE:	1" = 20'
DESIGNED:	RPB
DRAWN:	JM
CHECKED:	RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.16

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

KEY NOTES:

1. CONCRETE PAVING: SEE PLAN NOTES, THIS SHEET
2A. HEAVY DUTY ASPHALT PAVING: REFER TO CIVIL DETAILS
2B. LIGHT DUTY ASPHALT PAVING: REFER TO DETAILS
3. STANDARD 24" CURB & GUTTER: REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR COLOR
4. PEDESTRIAN CROSSWALK: VARIES, REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR ADD'L INFO.
5. TRANSITION CURB DETAIL: REFER TO CIVIL DETAILS & LANDSCAPE PLANS FOR COLOR
6. PEDESTRIAN PAVING: COLORED CONCRETE OR PAVERS - SEE PLAN NOTES THIS SHEET
7. TRAFFIC LANE OR PARKING SPACE DIVIDER: COLORED CONCRETE OR PAVERS - SEE PLAN NOTES THIS SHEET
8. SIGNAGE: SEE PLAN NOTES THIS SHEET
9. EXPOSED FACE CONCRETE SIDEWALK TO ASPHALT DETAIL: SEE CIVIL DETAILS
10. BOLLARD: SEE LANDSCAPE CONSTRUCTION PLANS
11. HANDICAP PARKING SIGN: REFER TO DETAILS
12. DETECTIBLE WARNING MAT: SEE CIVIL DETAILS & REFER TO LANDSCAPE PLAN FOR MATERIAL AND FINISHES
13. HANDICAP RAMP: COLORED CONCRETE, REFER TO CIVIL DETAILS AND PLAN NOTES THIS SHEET
14. HANDICAP PARKING SYMBOL: SEE PLAN NOTES, THIS SHEET
15. HANDICAP ACCESS UNLOADING ZONE: SLOPE 2% MAX. EACH WAY (ADA COMPLIANT) AND STRIPE AS SHOWN.
16. GAS LAMP FIXTURE SEE LANDSCAPE CONSTRUCTION PLANS
17. CONCRETE BUMPER BLOCK: 8"w x 4"h x 6'-0 LONG CONCRETE. ANCHOR TO PAVING WITH (2) 1'-6" LONG #4 REBAR. REFER TO CIVIL DETAILS
18. SITE LIGHTING: SEE SITE ELECTRICAL DRAWINGS AND DETAILS FOR TYPE AND LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS
19. BICYCLE RACK (2 BIKE MIN. PER RACK): SEE NOTES, THIS SHEET
20. STRIPING: PROVIDE 4" WIDE PARKING LOT STRIPING OR OTHER PAVEMENT MARKINGS AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS), SEE CIVIL DETAILS
21. TREE GRATES: REFER LANDSCAPE CONSTRUCTION PLANS AND DETAILS
22. PROPOSED DUMPSTERS & ENCLOSURE: REFER LANDSCAPE CONSTRUCTION PLANS AND DETAILS
23. TREE PROTECTION FENCING: REFER TO NOTES, THIS SHEET
24. CONCRETE DRIVE APRON (COMMERCIAL): C.O.W. STANDARDS. SEE CIVIL DETAILS AND LANDSCAPE CONSTRUCTION PLANS FOR LOCATIONS, COLORS AND FINISHES
25. VEHICULAR PAVING: COLORED CONCRETE OR PAVERS - SEE PLAN NOTES THIS SHEET

PLAN NOTES:

1. SEE LANDSCAPE CONSTRUCTION PLANS, SHEETS L-2.0 THRU L-2.30 FOR DETAILED SITE PLAN DIMENSIONS OF STREETS, PEDESTRIAN SIDEWALKS, CROSSWALKS, TRAFFIC AND PARKING SPACE DIVIDERS, INTERNAL CURB RADII, MINIMUM CLEARANCES AND OTHER SITE LAYOUT INFORMATION AS REQUIRED
2. SEE SHEET C-18 & C.19 FOR VEHICULAR AND PEDESTRIAN PAVING TYPES.
3. SEE CIVIL DETAIL DRAWINGS FOR ASPHALT PAVING SECTIONS, SEE LANDSCAPE CONSTRUCTION DRAWINGS FOR CONCRETE AND PAVER FINISHES, COLORS AND DETAILS
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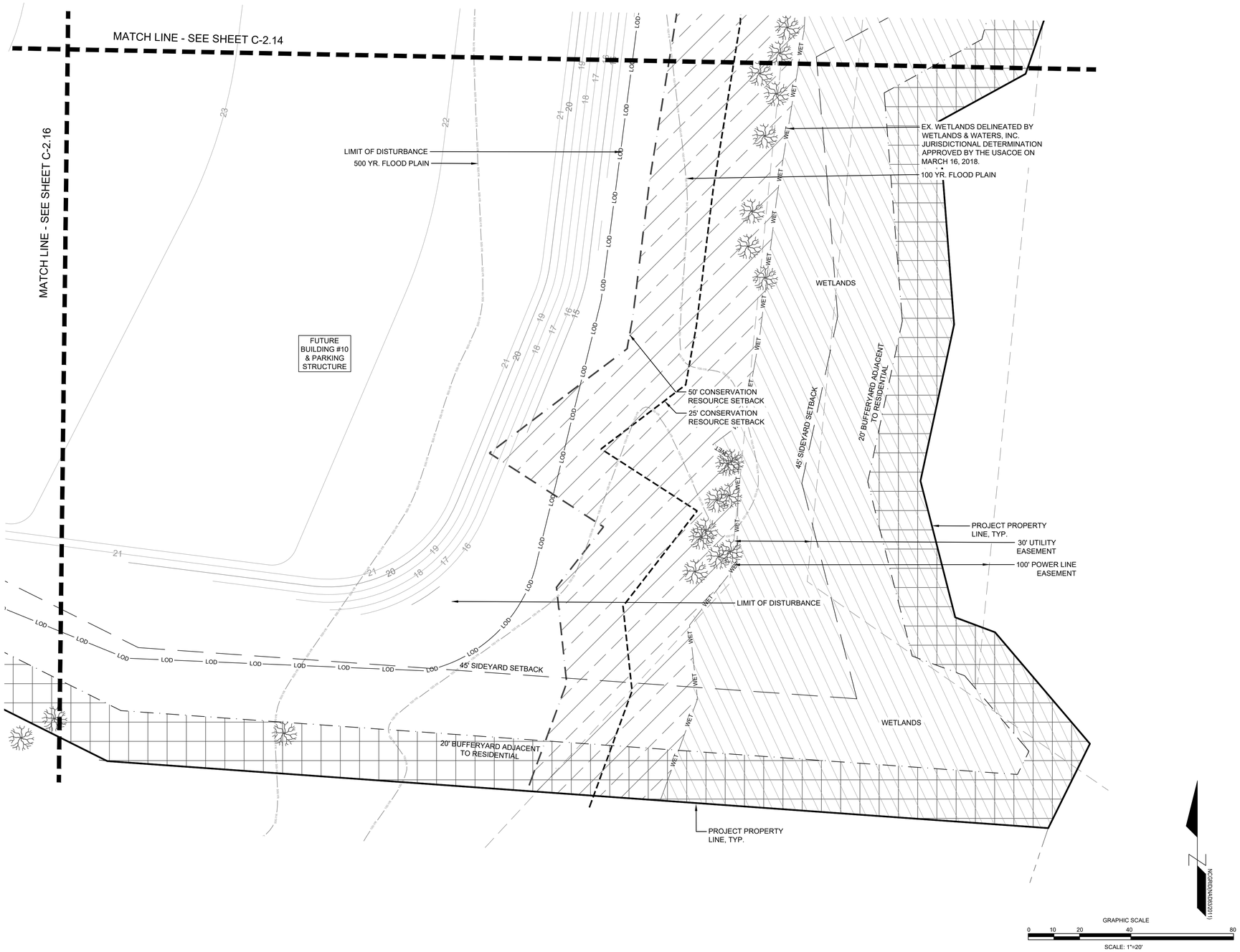
Know what's below. Call before you dig.



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REVISIONS:

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NC License #: C-2846

SITE PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
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PHASING:
RELEASED FOR CONST:

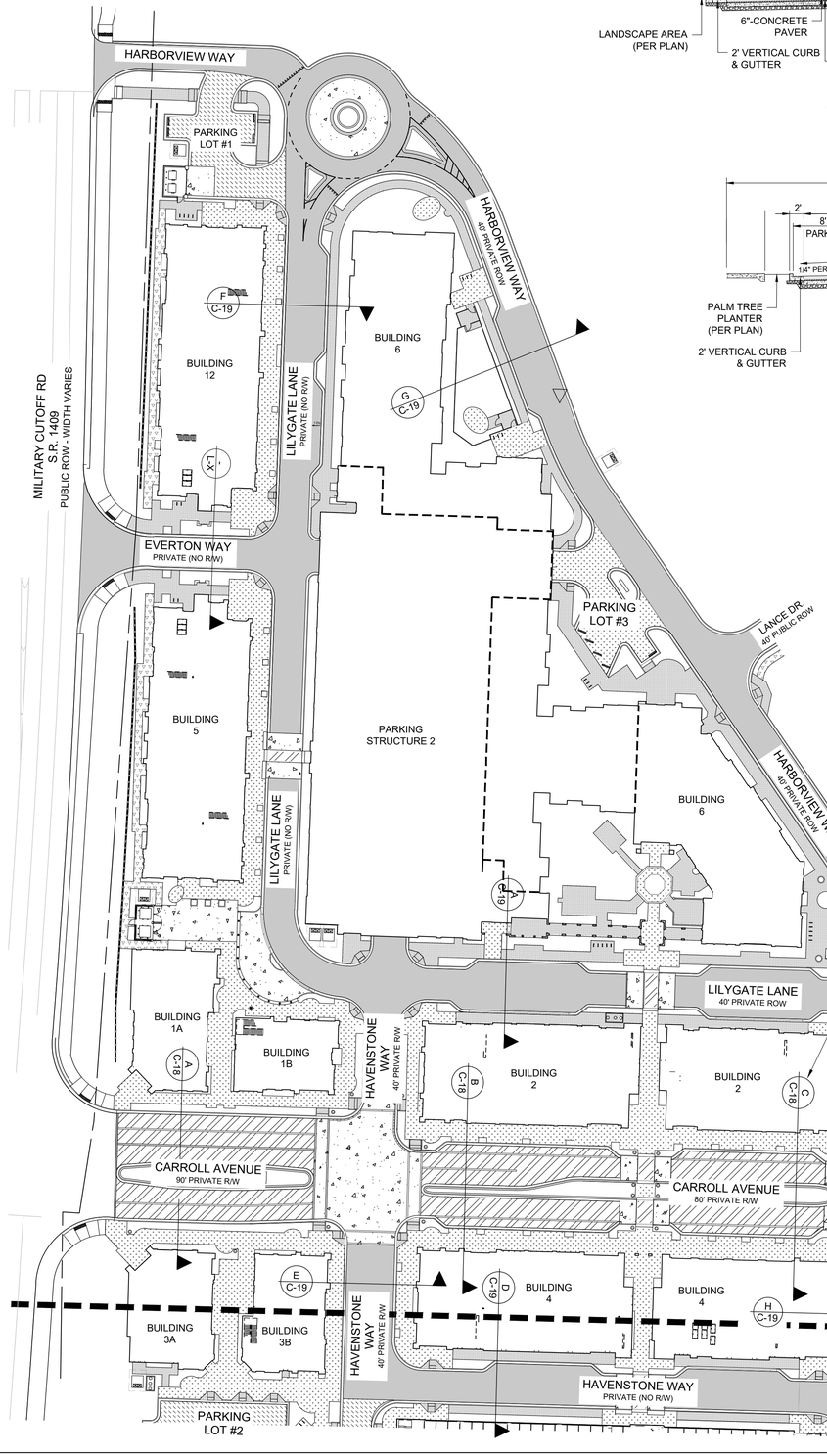
DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 20'
DESIGNED: RPB
DRAWN: MM
CHECKED: RPB

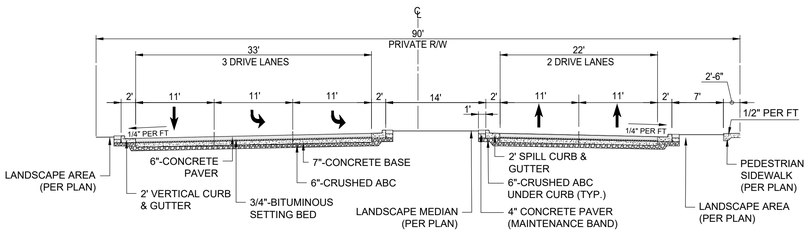
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

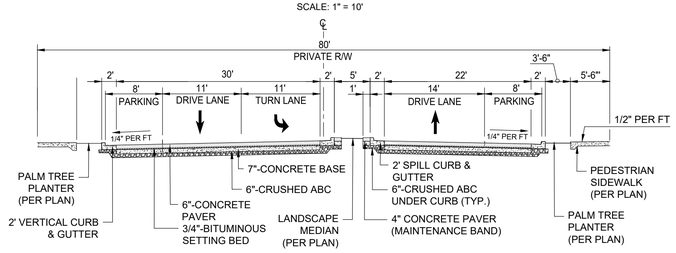
C-2.17

PEI JOB#: 18473.PE

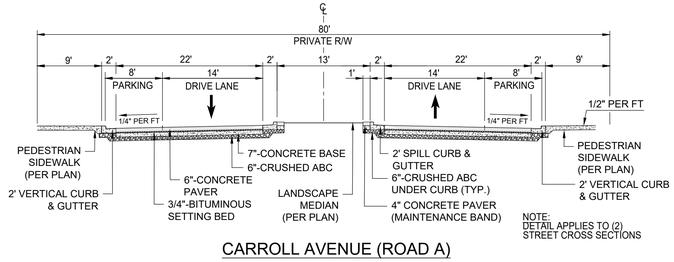




CARROLL AVENUE (ROAD A) - MAIN ENTRANCE
CROSS SECTION "A"
SCALE: 1" = 10'

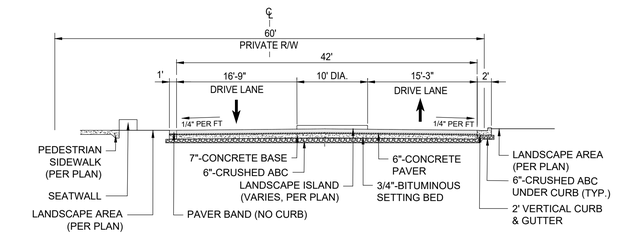


CARROLL AVENUE (ROAD A)
CROSS SECTION "B"
SCALE: 1" = 10'

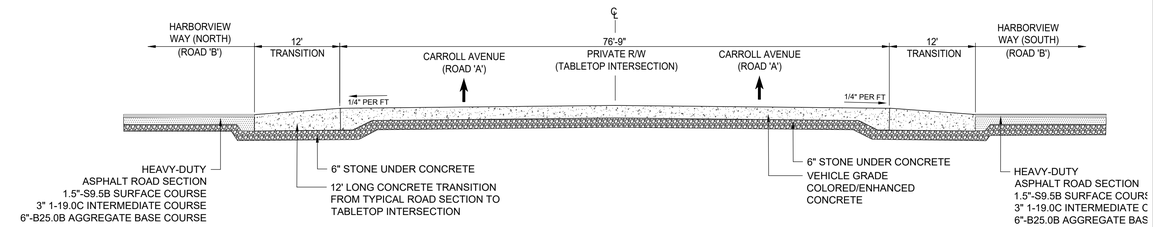


NOTE:
DETAIL APPLIES TO (2) STREET CROSS SECTIONS

CARROLL AVENUE (ROAD A)
CROSS SECTION "C"
SCALE: 1" = 10'



CARROLL AVENUE (ROAD A)
CROSS SECTION "D"
SCALE: 1" = 10'



CARROLL AVENUE (ROAD A) - INTERSECTION
WITH HARBORVIEW WAY (ROAD B)
CROSS SECTION "E"
SCALE: 1" = 10'

EXHIBIT ONLY
FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

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GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

TYP. ROAD SECTIONS & PAVING TYPES
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
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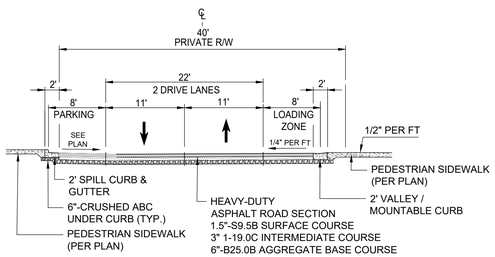
DESIGNED:
DRAWN:
CHECKED:

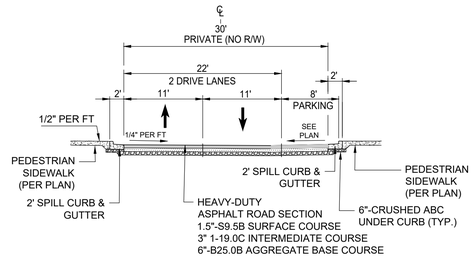
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.18

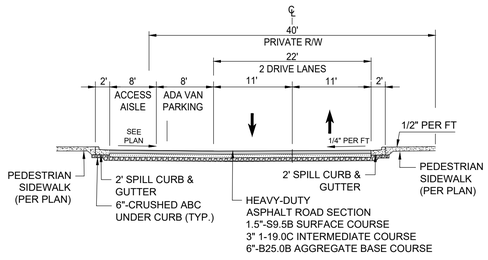
PEI JOB#: 18473.PE



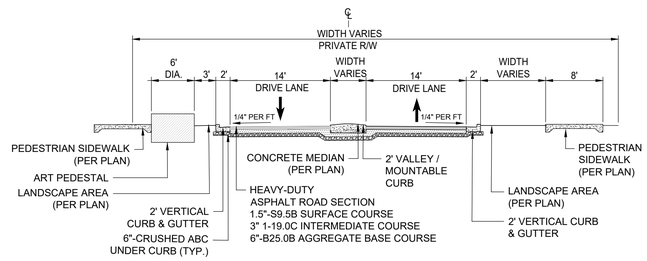
LILYGATE LANE (ROAD C)
CROSS SECTION "A"
SCALE: 1" = 10'



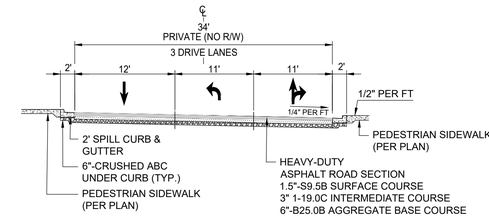
LILYGATE LANE (ROAD C)
CROSS SECTION "B"
SCALE: 1" = 10'



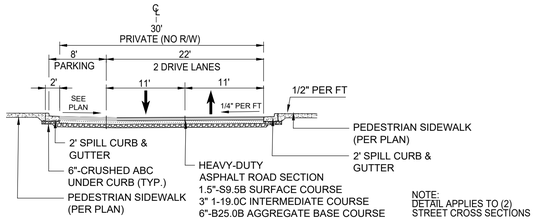
LILYGATE LANE (ROAD C)
CROSS SECTION "C"
SCALE: 1" = 10'



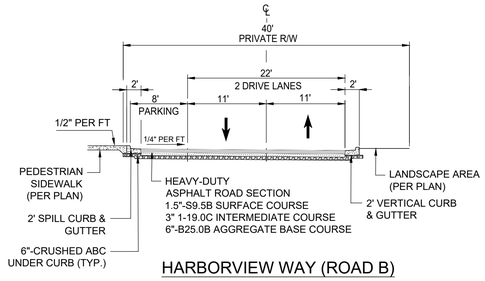
NEW VINE DRIVE (ROAD E)
CROSS SECTION "D"
SCALE: 1" = 10'



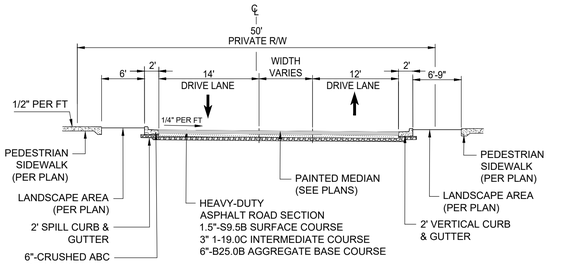
HAVENSTONE WAY (ROAD D)
CROSS SECTION "E"
SCALE: 1" = 10'



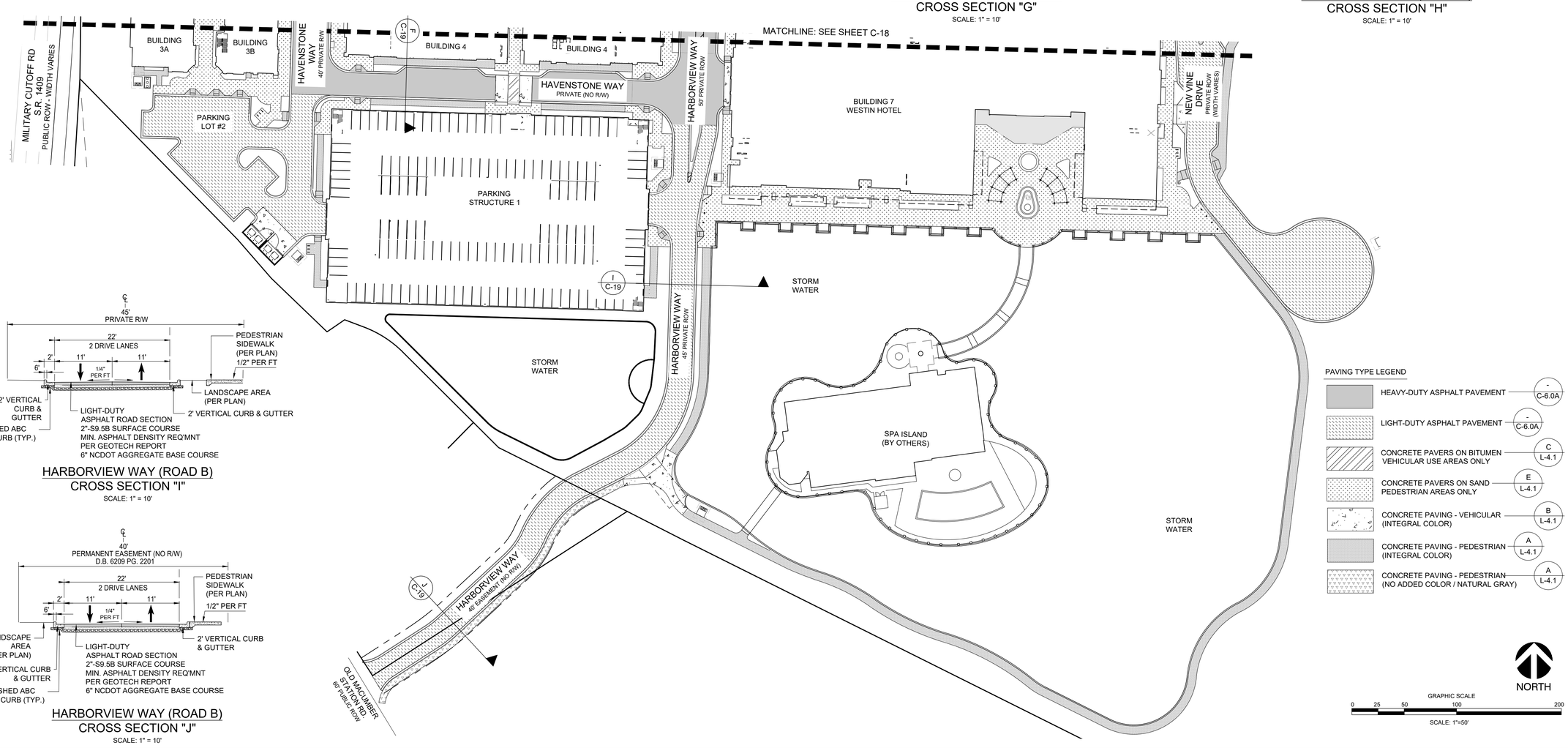
HAVENSTONE WAY (ROAD D) & LILIGATE LANE (ROAD C)
CROSS SECTION "F"
SCALE: 1" = 10'

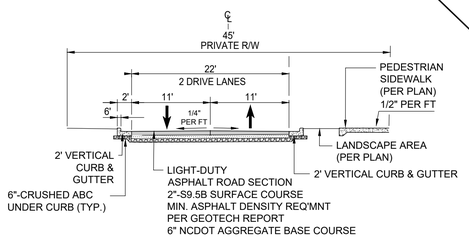


HARBORVIEW WAY (ROAD B)
CROSS SECTION "G"
SCALE: 1" = 10'

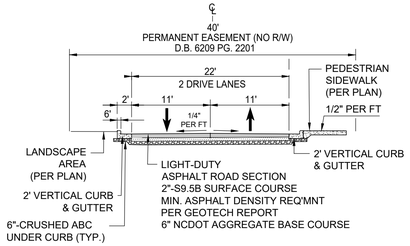


HARBORVIEW WAY (ROAD B)
CROSS SECTION "H"
SCALE: 1" = 10'





HARBORVIEW WAY (ROAD B)
CROSS SECTION "I"
SCALE: 1" = 10'



HARBORVIEW WAY (ROAD B)
CROSS SECTION "J"
SCALE: 1" = 10'

PAVING TYPE LEGEND

	HEAVY-DUTY ASPHALT PAVEMENT	C-6.0A
	LIGHT-DUTY ASPHALT PAVEMENT	C-6.0A
	CONCRETE PAVERS ON BITUMEN VEHICULAR USE AREAS ONLY	C L-4.1
	CONCRETE PAVERS ON SAND PEDESTRIAN AREAS ONLY	E L-4.1
	CONCRETE PAVING - VEHICULAR (INTEGRAL COLOR)	B L-4.1
	CONCRETE PAVING - PEDESTRIAN (INTEGRAL COLOR)	A L-4.1
	CONCRETE PAVING - PEDESTRIAN (NO ADDED COLOR / NATURAL GRAY)	A L-4.1

NORTH

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

EXHIBIT ONLY
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TYP. ROAD SECTIONS & PAVING TYPES

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-2.19

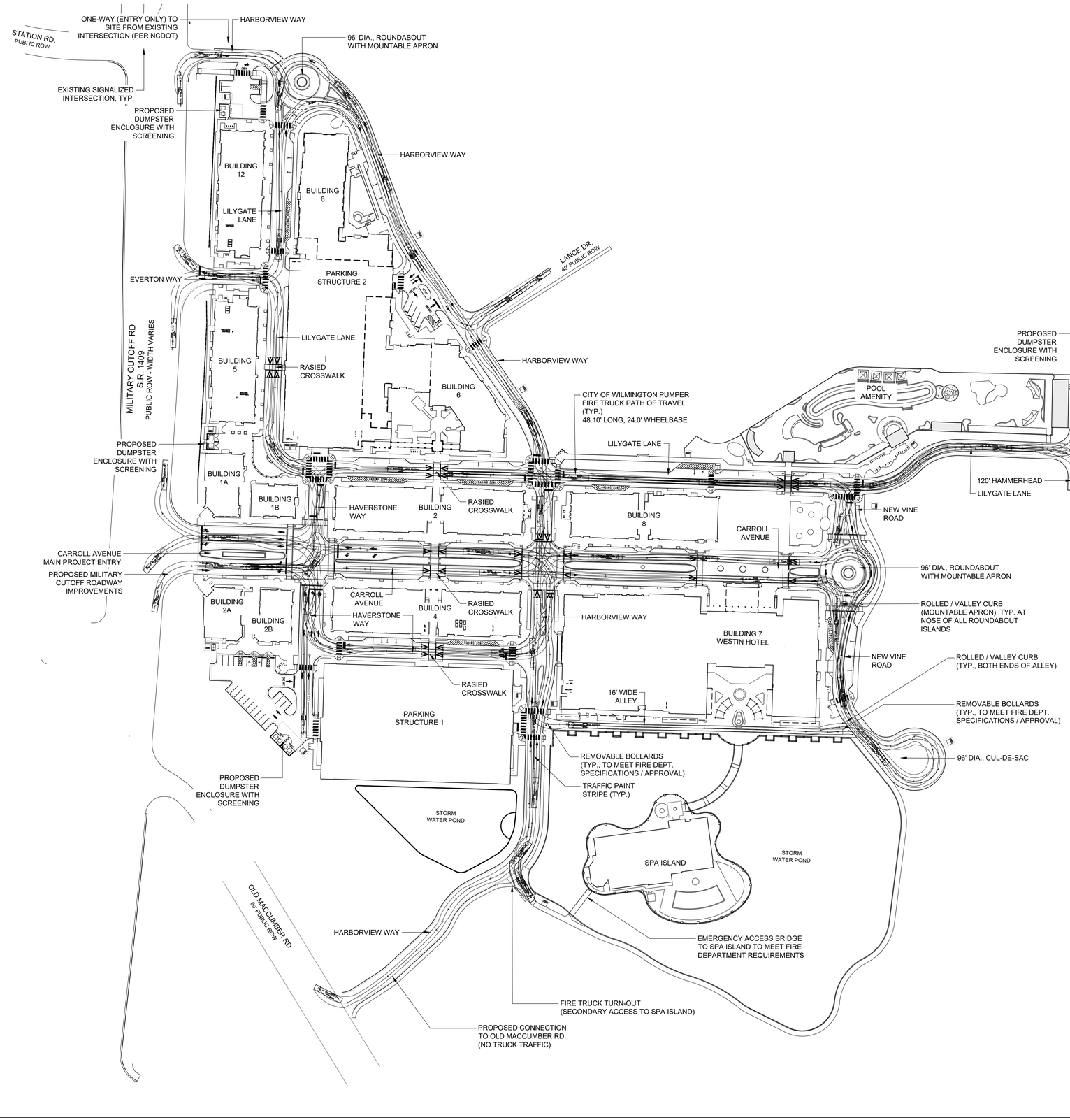
PEI JOB#: 18473.PE

PLAN NOTES:

1. CITY OF WILMINGTON FIRE TRUCK, PLANS ILLUSTRATES FIRE TRUCK ACCESSIBILITY TO ALL BUILDINGS ON SITE (TWO VEHICLES SHOWN):

   PUMPER TRUCK, 41.8' LONG, 24' WHEELBASE

   AERIAL PLATFORM FIRE TRUCK 46.58' LONG, 19.60 WHEELBASE



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TRUCK TURN EXHIBIT
C.O.W. FIRE TRUCK
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

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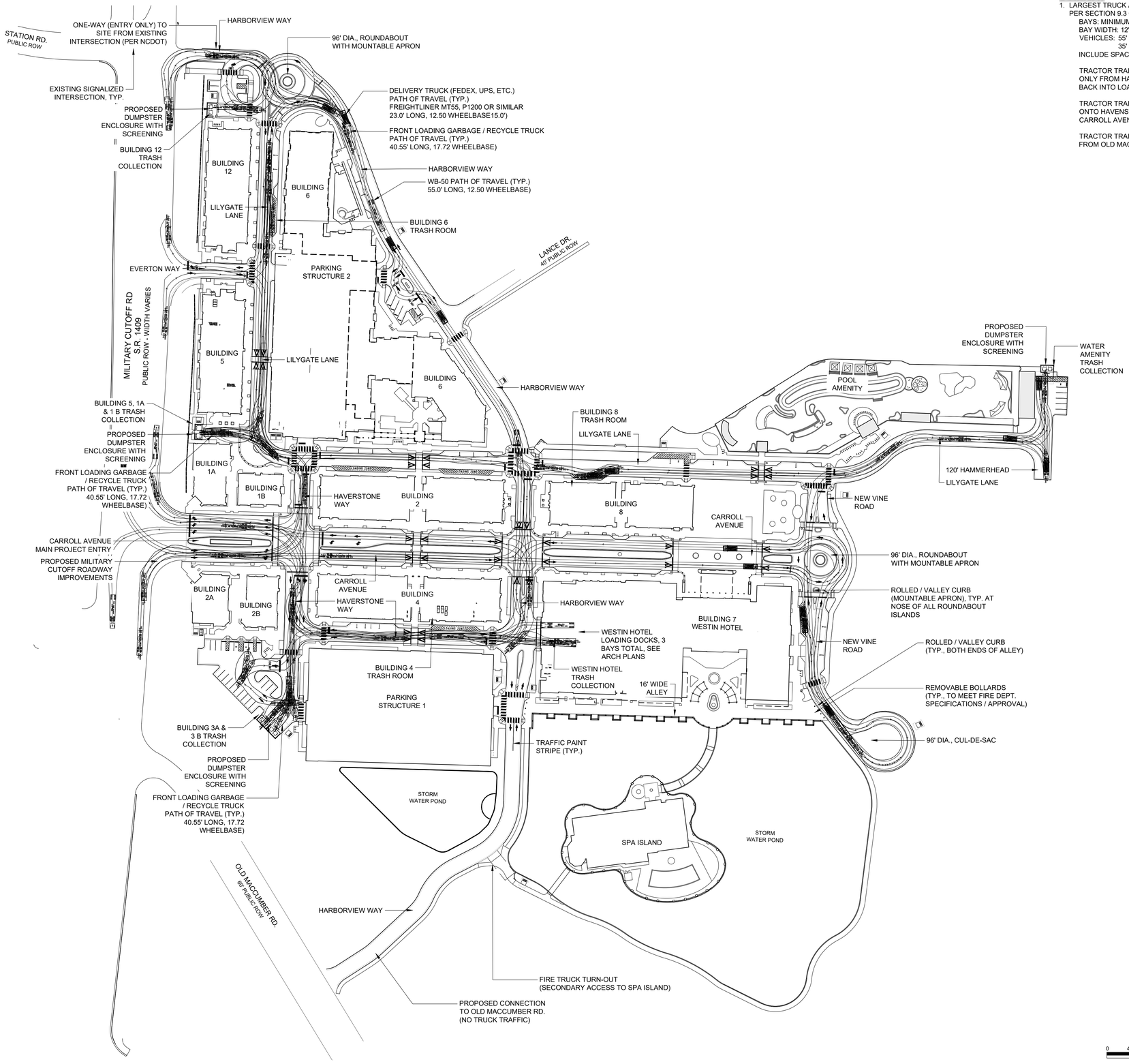
09/15/23

C-2.20

PEI JOB#: 18473.PE



PLAN NOTES:

1. LARGEST TRUCK AND DELIVERY REQUIREMENTS FOR WESTIN (BUILDING 7), PER SECTION 9.3 OF WESTON DESIGN STANDARDS 2019:
   BAYS: MINIMUM OF THREE BAYS.
   BAY WIDTH: 12' MINIMUM
   VEHICLES: 55' LONG (WB-50) TRACTOR TRAILER
   35' LONG DELIVERY TRUCK
   INCLUDE SPACE FOR SERVICE OF TRASH COMPACTOR AND RECYCLING.

   TRACTOR TRAILER DELIVERIES SHALL BE DIRECTED TO ENTER SITE ONLY FROM HARBORVIEW WAY , TO ACCESS HAVENSTONE WAY AND BACK INTO LOADING BAY(S).

   TRACTOR TRAILERS TO EXIT SITE FROM BAYS BY DRIVING FORWARD ONTO HAVENSTONE WAY, INTERSECTING WITH A LEFT TURN AT CARROLL AVENUE TO REACH MILITARY CUTOFF RD.

   TRACTOR TRAILERS ARE NOT PERMITTED TO ACCESS OR EXIT THE SITE FROM OLD MACCUMMBER RD., PER CITY OF WILMINGTON.

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TRUCK TURN EXHIBIT SERVICE / DELIVERIES

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

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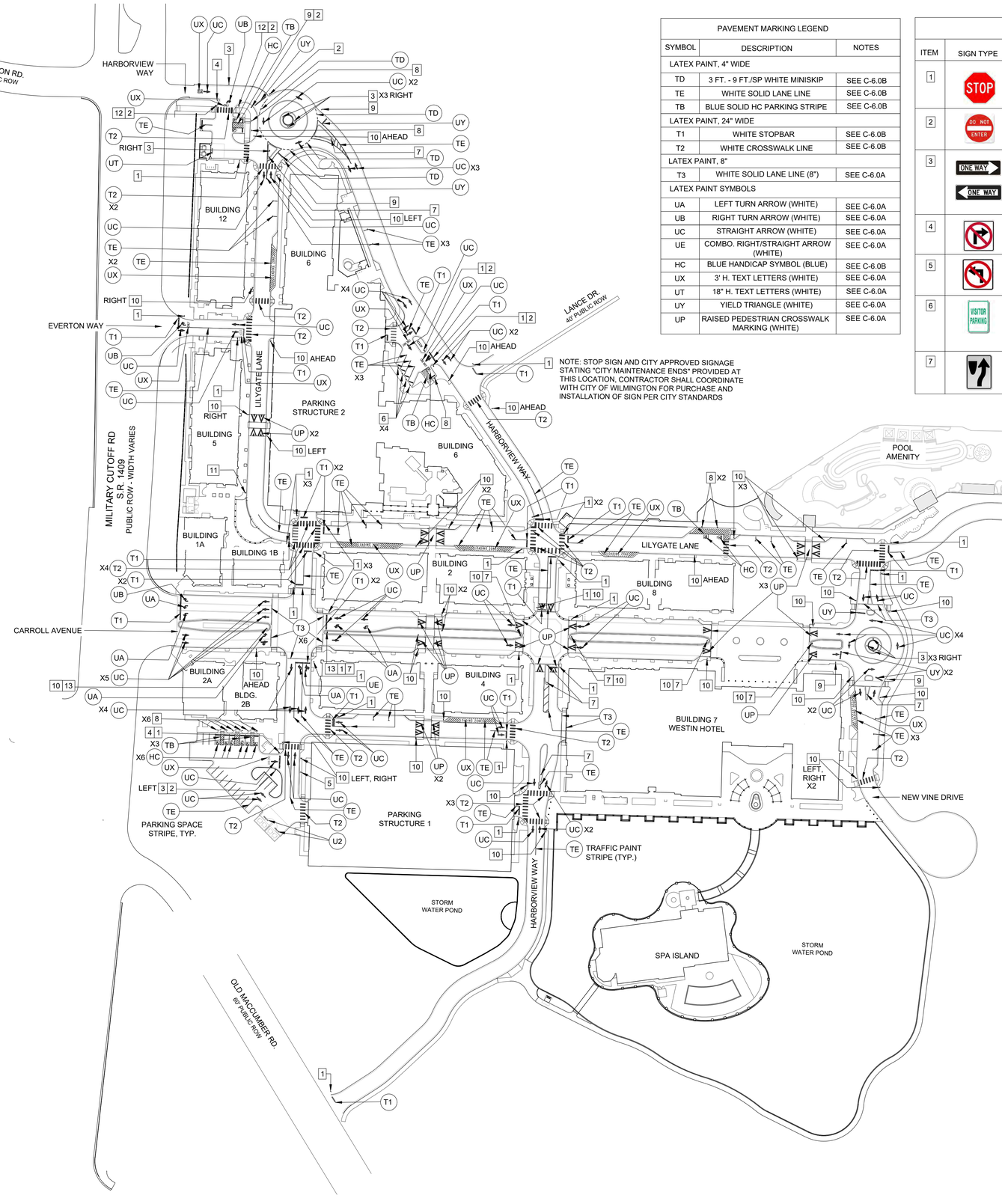
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-2.21

PEI JOB#: 18473.PE



PAVEMENT MARKING LEGEND		
SYMBOL	DESCRIPTION	NOTES
LATEX PAINT, 4" WIDE		
TD	3 FT. - 9 FT./SP WHITE MINISKIP	SEE C-6.0B
TE	WHITE SOLID LANE LINE	SEE C-6.0B
TB	BLUE SOLID HC PARKING STRIPE	SEE C-6.0B
LATEX PAINT, 24" WIDE		
T1	WHITE STOPBAR	SEE C-6.0B
T2	WHITE CROSSWALK LINE	SEE C-6.0B
LATEX PAINT, 8"		
T3	WHITE SOLID LANE LINE (8")	SEE C-6.0A
LATEX PAINT SYMBOLS		
UA	LEFT TURN ARROW (WHITE)	SEE C-6.0A
UB	RIGHT TURN ARROW (WHITE)	SEE C-6.0A
UC	STRAIGHT ARROW (WHITE)	SEE C-6.0A
UE	COMBO. RIGHT/STRAIGHT ARROW (WHITE)	SEE C-6.0A
HC	BLUE HANDICAP SYMBOL (BLUE)	SEE C-6.0B
UX	3' H. TEXT LETTERS (WHITE)	SEE C-6.0A
UT	18" H. TEXT LETTERS (WHITE)	SEE C-6.0A
UY	YIELD TRIANGLE (WHITE)	SEE C-6.0A
UP	RAISED PEDESTRIAN CROSSWALK MARKING (WHITE)	SEE C-6.0A

NOTE: STOP SIGN AND CITY APPROVED SIGNAGE STATING "CITY MAINTENANCE ENDS" PROVIDED AT THIS LOCATION, CONTRACTOR SHALL COORDINATE WITH CITY OF WILMINGTON FOR PURCHASE AND INSTALLATION OF SIGN PER CITY STANDARDS

TRAFFIC SIGN LEGEND			
ITEM	SIGN TYPE	MUTCD DESIGNATION	DESCRIPTION
1	STOP	R1-1-30	STOP SIGN 30" X 30"
2	DO NOT ENTER	R5-1-24	DO NOT ENTER 24" X 24"
3	ONE WAY ONE WAY	R6-1R R6-1L	ONE WAY (RIGHT ARROW) 12" H. X 36" W. ONE WAY (LEFT ARROW) 12" H. X 36" W.
4		R3-1-24	NO RIGHT TURN 24" X 24"
5		R3-2-24	NO LEFT TURN 24" X 24"
6	VISITOR PARKING	N/A	VISITOR PARKING 12" W. X 18" H. #L5953S09STDRAE BY SETON, OR EQ. COLOR: GREEN ON WHITE
7		R4-7	KEEP RIGHT 18" W. X 24" H.
8	RESERVED PARKING VAN ACCESSIBLE MAXIMUM PENALTY $ 250	SEE SHEET C-6.0A FOR SIGN AND STRIPING DETAILS	ADA ACCESSIBLE PARKING SIGNAGE AND STRIPING
9		R6-5P SEE SHEET C-6.0B	ROUNDABOUT CIRCULATION SIGN 30" X 30"
10		W11-2 W16-7R W16-7L W169P	PEDESTRIAN CROSSING SIGN 30" DIAMOND DIRECTIONAL ARROW RIGHT 12" H. X 24" L. DIRECTIONAL ARROW LEFT 12" H. X 24" L. PEDESTRIAN CROSSING AHEAD 12" H. X 24" L.
11	PASSENGER DROP-OFF AND PICK UP	N/A	PASSENGER DROP-DROP OFF SIGN 12" W. X 18" H. #657072 BY HD SUPPLY, OR EQ. COLOR: GREEN ON WHITE GREEN ARROW SIGN 12" W. X 6" H. (MATCH COLOR WITH ABOVE, TYP.)
12	ONLY	R3-5R	RIGHT TURN ONLY 24" W. X 30" H.
13	ONLY LEFT LANE	R3-5L R3-5B	LEFT TURN ONLY 24" W. X 30" H. SUPPLEMENTAL PLAQUE: "LEFT LANE" 24" W. X 6" H.

NOTES:

1. THIS EXHIBIT IS PROVIDED PER THE CITY OF WILMINGTON'S REQUEST TO CONSOLIDATE ALL SIGNAGE AND STRIPING ON ONE PLAN, THE CONTRACTOR SHALL REFER TO LANDSCAPE CONSTRUCTION SHEETS FOR ADDITIONAL INFORMATION AND DETAIL, SHEETS L-2.0 THRU L-2.30
2. SIGNS SHALL BE MOUNTED ON ORNAMENTAL POSTS, OR COMBINED ON LIGHT POLE.
3. PROVIDE SIGN FRAMES, SEE SITE FURNITURE LEGEND ON SHEET L-2.0. IF FRAME IS NOT AVAILABLE FOR STANDARD MUTCD SIGN SPECIFIED IN THE SIGN LEGEND, THE BACK SIDE OF EACH SIGN SHALL BE PAINTED MATTE BLACK.
4. ALL SIGNS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF MUTCD MANUAL.

NORTH

GRAPHIC SCALE
0 40 80 160 320
SCALE: 1"=80'

EXHIBIT ONLY - SEE LANDSCAPE CONSTRUCTION PLANS FOR DIMENSIONS
FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

PRIVATE ROADWAY SIGN AND STRIPING
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

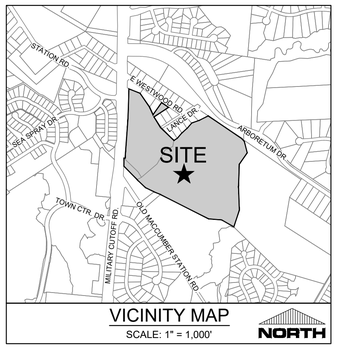
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
READY FOR CONST.:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 80'
DESIGNED:
DRAWN:
CHECKED:

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-2.22

PEI JOB#: 18473.PE



VICINITY MAP

SCALE: 1" = 1,000'

NORTH

PH-I EROSION CONTROL NOTES:

1.) SITE CONTRACTOR TO FOLLOW TYPICAL SEQUENCE OF EROSION CONTROL MEASURES ON GENERAL NOTES, SHEET C-1.0

2.) PROPOSED SEDIMENT BASINS WILL BE USED AS SEDIMENT STORAGE DEVICES WITH DIVERSION DITCHES CARRYING THE MAJORITY OF CLEARING DRAINAGE TO THE SEDIMENT BASINS.

3.) SILT FENCE SHALL REMAIN IN-PLACE DURING ALL CONSTRUCTION ACTIVITIES.

3.) PHASE II EROSION CONTROL CAN BE FOUND ON THE FINAL GRADING AND DRAINAGE SHEETS, C-4.0-4.9.

BUILDING PAD NOTE:

1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

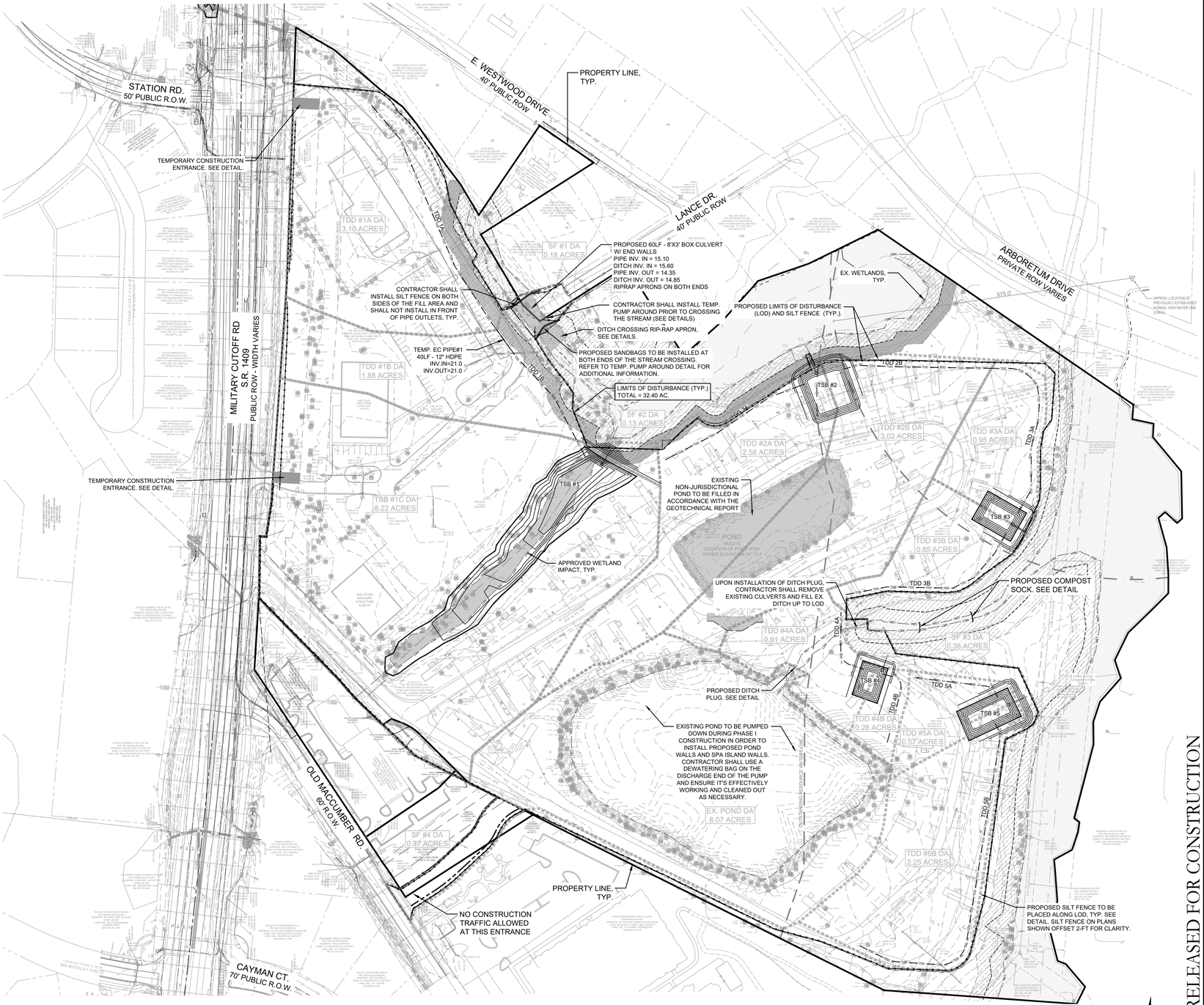
GENERAL NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, CITY OF WILMINGTON, AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL PAVING IS COMPLETE AND THE SITE IS STABILIZED.

3. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AND NEW ASPHALT AREAS TO MATCH PROPOSED GRADES.

4. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEERING REPORT FOR SITE CONSTRUCTION RECOMMENDATIONS AND WAS PREPARED BY S&ME, INC., S&ME PROJECT #: 219708, AND DATED 12/03/2021.



LEGEND:

- EXISTING CONTOUR (16)
- LIMITS OF DISTURBANCE (LOD)
- SILT FENCE
- CONSTRUCTION ENTRANCE
- EC DRAINAGE AREA
- RIP RAP APRON
- 404 WETLANDS
- TEMPORARY PIPE
- BAFFLES
- SKIMMER
- TEMPORARY DIVERSION DITCH (TDD)
- CHECK DAM

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

PH-I EROSION CONTROL PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

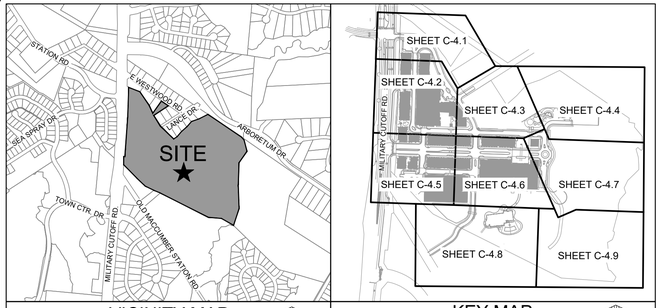
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
REVIEW:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 100'
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-3.0

PEI JOB#: 18473.PE



VICINITY MAP
SCALE: 1" = 1,000'
NORTH

KEY MAP
SCALE: 1" = 500'
NORTH

Impervious Calculations Within 575' CAMA Line

PROPOSED IMPERVIOUS		
Area Calculations		
Land Use	*SF*	*Acres (AC)*
Phase I Impervious	69,100	1.59
Future Phase II Impervious	119,456	2.74
TOTAL PROPOSED =	**188,556**	**4.33**

Area within 575' Line and East PL

Area =	**754,223**	**SF**
Allowed Impervious (25%) =	**188,556**	**SF**
Proposed Impervious =	69,100	SF
Future Allowable Impervious =	**119,456**	SF

Impervious Calculations within 575' ORW Line

PROPOSED IMPERVIOUS		
Area Calculations		
Land Use	*SF*	*Acres (AC)*
Ph-I Impervious	34,840	0.80
Future Ph-II Impervious	28,223	0.65
TOTAL PROPOSED =	**63,063**	**1.45**

Area within ORW Line

Area =	**252,251**	**SF**
Allowed Impervious (25%) =	**63,063**	**SF**
Proposed Impervious =	63,063	SF
Pervious Pavement or Green Roof Req'd. =	**0**	SF

GENERAL NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, CITY OF WILMINGTON, AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL PAVING IS COMPLETE AND THE SITE IS STABILIZED.
3. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AND NEW ASPHALT AREAS TO MATCH PROPOSED GRADES.
4. ALL PROPOSED SPOT ELEVATIONS SHOWN IN THE PARKING LOT ARE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB @ GUTTER FOR CURB SECTIONS, UNLESS NOTED OTHERWISE.
5. ALL ROOF DRAINS SHALL BE CONNECTED TO UNDERGOUND COLLECTION SYSTEM.
6. ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
7. THE CONTRACTOR SHALL USE EITHER RCP (CL. III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 WT STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.
8. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL EXPLORATION REPORT FOR SITE CONSTRUCTION RECOMMENDATIONS AND WAS PREPARED BY S&ME INC., S&ME PROJECT #: 219708, AND DATED DECEMBER 3, 2021 AND GEOTECHNICAL REPORT FOR PROPOSED POND ISLAND, S&ME PROJECT #: 219708B.

ASPHALT AREA NOTE:

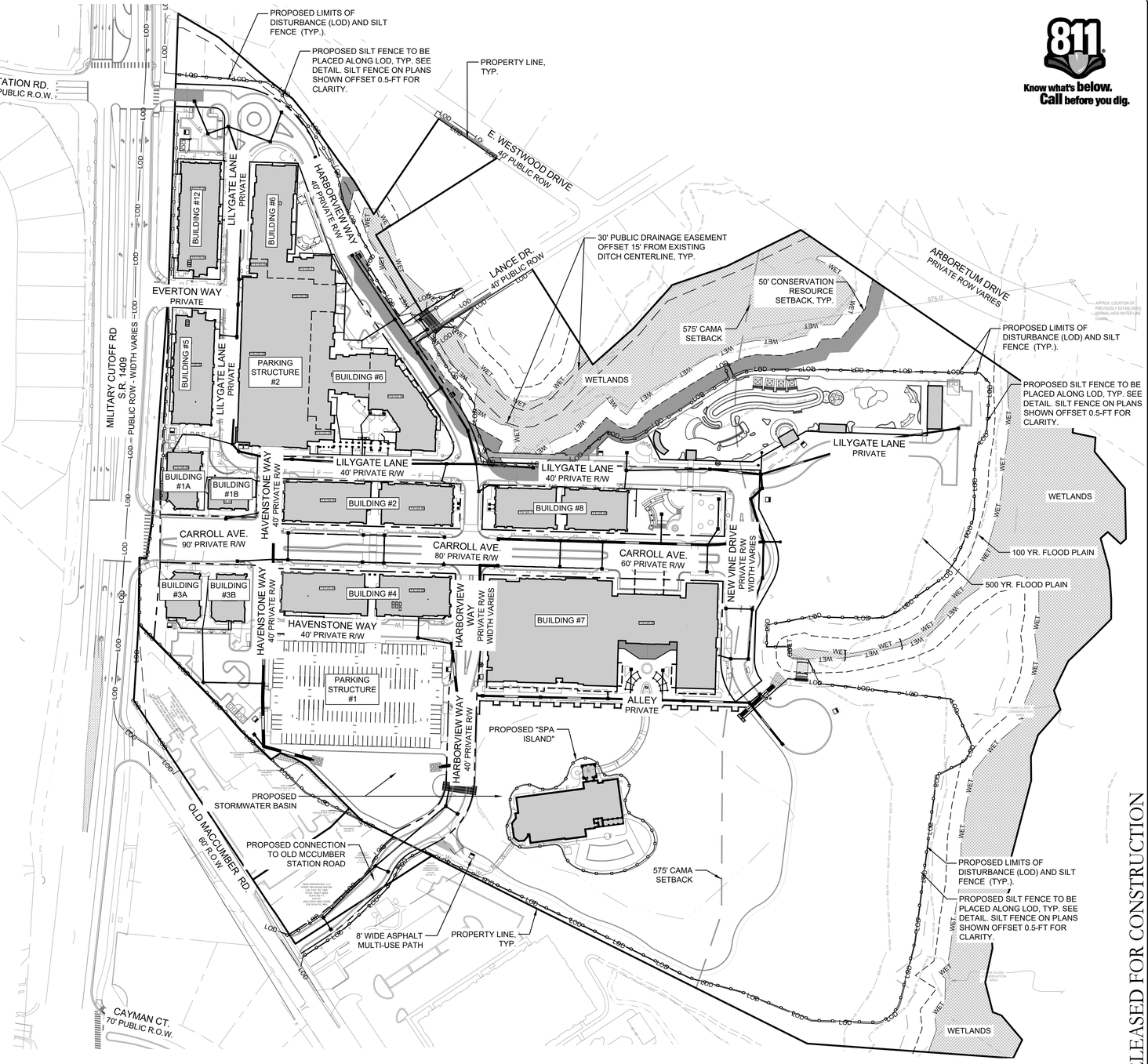
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITALBE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

BUILDING PAD NOTE:

1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITALBE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

STORMWATER NOTE:

1. THIS SITE IS UTILIZING A WET DETENTION BASIN AND PERVIOUS PAVERS TO TREAT THE WATER QUALITY VOLUME AND PRE/POST REQUIREMENTS PER THE CITY OF WILMINGTON STORMWATER ORDINANCE. THE DESIGN ALSO APPLIES CREDIT FOR EXISTING IMPERVIOUS AREAS IN THE SITE THAT WILL BE DEMOLISHED. THIS SITE DRAINS TO SA/ORW WATERS AND IS REQUIRED TO MEET ARTICLE 10 OF THE COW LAND DEVELOPMENT CODE.



NC2580/NC0620171

GRAPHIC SCALE
0 50 100 200 400
SCALE: 1"=100'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

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

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

OVERALL GRADING-DRAINAGE-PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 100'
DESIGNED: RPB
DRAWN: RPB
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.0

PEI JOB#: 18473.PE

STORM SEWER SCHEDULE

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert(ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
MH 101	FES 100	60	13.43	13.00	89	0.49	22.50	12.00	RCP III
DI-101-1	MH 101	18	16.50	16.23	27	1.00	22.50	22.50	RCP III
MH 102	MH 101	60	13.86	13.43	85	0.51	23.51	22.50	RCP III
CI 103	MH 102	60	14.00	13.86	28	0.50	23.20	23.51	RCP III
CI 104	CI 103	18	18.05	17.50	107	0.52	23.77	23.20	RCP III
MH 105	CI 104	15	18.53	18.05	95	0.50	25.41	23.77	RCP III
MH 106	CI 103	48	15.45	15.00	89	0.50	23.94	23.20	RCP III
CI 107	MH 106	15	18.35	17.83	105	0.50	22.78	23.94	RCP III
CI 108	MH 106	48	15.85	15.45	82	0.50	23.79	23.94	RCP III
MH 109	CI 108	48	16.11	15.85	52	0.50	24.15	23.79	RCP III
CI 115	MH 109	48	16.45	16.11	87	0.39	23.99	24.15	RCP III
CI 116	CI 115	15	20.46	20.02	87	0.50	25.24	23.99	RCP III
CI 117	CI 115	48	16.80	16.45	49	0.70	23.62	23.99	RCP III
MH 118	CI 117	48	17.01	16.80	41	0.50	24.08	23.62	RCP III
CI 150	MH 118	36	17.09	17.01	30	0.29	23.59	24.08	RCP III
MH 151	CI 150	36	17.55	17.09	124	0.37	23.76	23.59	RCP III
CI 153	MH 151	36	18.08	17.55	151	0.36	23.54	23.76	RCP III
MH 154	CI 153	36	18.24	18.08	53	0.29	23.79	23.54	RCP III
CI 157	MH 154	36	18.40	18.24	61	0.27	23.33	23.79	RCP III
CI 158	CI 157	30	18.63	18.40	90	0.25	23.78	23.33	RCP III
CI 159	CI 158	30	18.82	18.63	75	0.25	23.37	23.78	RCP III
MH 160A	CI 159	30	18.88	18.82	26	0.25	23.25	23.37	RCP III
CI 163	MH 160A	24	19.06	18.88	46	0.40	23.37	23.25	RCP III
CI 164	CI 163	18	19.61	19.06	138	0.40	24.16	23.37	RCP III
CI 165	CI 164	15	20.78	19.61	186	0.63	25.14	24.16	RCP III
CI 161	MH 160A	15	18.97	18.88	38	0.25	22.13	23.25	RCP III
CI 162	CI 161	15	19.03	18.97	22	0.25	22.13	22.13	RCP IV
CI 156	MH 154	24	18.70	18.24	101	0.45	22.69	23.79	RCP III
CI 155	MH 154	15	18.89	18.50	49	0.79	22.91	23.79	RCP III
MH 152	MH 151	15	17.96	17.85	15	0.75	24.50	23.76	RCP III
RD 152H	MH 152	12	19.28	19.00	28	1.00	24.99	24.50	DIP
YD 152O	RD 152H	12	20.60	19.28	26	5.00	24.00	24.99	HDPE
MH 152P	YD 152O	8	21.75	20.60	23	5.00	24.99	24.00	HDPE
RD 153E	MH 152P	8	22.33	21.75	29	2.00	25.00	24.99	HDPE
RD 153F	RD 153E	8	22.37	22.33	4	1.00	25.00	25.00	HDPE
RD 152Q	MH 152P	8	22.00	21.89	8	1.32	25.00	24.99	HDPE
RD 152N	RD 152H	8	19.49	19.28	4	5.00	24.97	24.99	HDPE
RD 152T	RD 152N	8	19.74	19.49	5	5.00	24.96	24.97	HDPE
RD 152G	RD 152N	8	21.57	19.49	42	5.00	24.95	24.97	HDPE
RD 152S	RD 152G	8	21.80	21.57	5	5.00	24.95	24.95	HDPE
RD 152R	RD 152H	8	20.16	19.28	18	5.00	25.08	24.99	HDPE
RD 152U	RD 152R	8	20.65	20.16	5	10.00	25.12	25.08	HDPE
RD 152I	RD 152R	8	21.25	20.16	22	5.00	25.27	25.08	HDPE
RD 152V	RD 152I	8	21.74	21.25	5	10.00	25.31	25.27	HDPE
RD 152J	RD 152I	8	23.08	21.25	43	4.27	26.40	25.27	HDPE
RD 152K	RD 152J	8	23.32	23.08	5	5.00	26.50	26.40	HDPE
RD 152L	RD 152J	8	23.40	23.08	32	1.00	26.50	26.40	HDPE
RD 152M	RD 152L	8	23.50	23.40	10	1.00	26.50	26.50	HDPE
RD 153A	MH 152	8	18.05	17.96	18	0.50	24.44	24.50	HDPE
RD 153B	RD 153A	8	18.70	18.05	13	5.00	25.13	24.44	HDPE
RD 153C	RD 153A	8	18.16	18.05	22	0.50	24.39	24.44	HDPE
RD 153D	RD 153C	8	18.82	18.16	13	5.00	25.32	24.39	HDPE
MH 152A	RD 153C	8	18.36	18.16	40	0.50	24.34	24.39	HDPE
MH 152B	MH 152A	8	18.43	18.36	14	0.50	24.41	24.34	HDPE
MH 152C	MH 152B	8	18.50	18.43	13	0.50	25.11	24.41	HDPE
RD 152D	MH 152A	8	19.00	18.36	13	5.00	24.93	24.34	HDPE
RD 152W	MH 152	8	21.06	21.02	4	1.00	24.50	24.50	HDPE
RD 152X	RD 152W	8	21.98	21.06	13	6.81	24.98	24.50	HDPE
RD 152Y	RD 152W	8	21.48	21.06	42	1.00	24.45	24.50	HDPE
RD 152Z	RD 152Y	8	21.93	21.48	13	3.47	24.93	24.45	HDPE
MH 152E	RD 152Y	8	21.89	21.48	41	1.00	24.37	24.45	HDPE
MH 152F	MH 152E	8	22.00	21.89	12	1.00	25.00	24.37	HDPE
CI 119	MH 118	36	17.29	17.01	66	0.43	23.78	24.08	RCP III
MH 120	CI 119	30	17.75	17.61	18	0.75	24.54	23.78	RCP III
MH 120B	MH 120	15	17.85	17.82	6	0.50	25.04	24.54	HDPE
MH 120C	MH 120B	15	17.99	17.85	28	0.50	25.54	25.04	HDPE
MH 120D	MH 120C	15	18.00	17.99	3	0.50	25.25	25.54	HDPE
CI 122	MH 120	30	17.96	17.75	66	0.33	25.40	24.54	RCP III
CI 123	CI 122	30	18.43	17.96	126	0.37	25.33	25.40	RCP III
CI 124	CI 123	30	18.64	18.43	57	0.37	24.41	25.33	RCP III
CI 125	CI 124	24	18.80	18.64	45	0.36	24.54	24.41	RCP III
DI 126	CI 125	24	19.20	18.80	105	0.38	24.98	24.54	RCP III
CI 127	DI 126	24	19.55	19.20	92	0.38	24.99	24.98	RCP III
CI 128	CI 127	24	19.82	19.55	75	0.37	25.05	24.99	RCP III
CI 129	CI 128	18	20.16	19.82	37	0.91	25.12	25.05	RCP III
CI 130	CI 129	18	21.00	20.72	52	0.54	26.43	25.12	RCP III
CI 131	CI 128	18	20.53	19.82	78	0.91	25.02	25.05	RCP III
CI 132	CI 131	18	21.01	20.53	56	0.86	25.96	25.02	RCP III
YD 152O	MH 152N	12	21.69	21.50	19	1.00	24.00	25.06	HDPE
CI 110	MH 109	18	17.70	17.58	26	0.43	23.53	24.15	RCP III
CI 111	CI 110	15	17.94	17.70	48	0.50	23.51	23.53	RCP III
CI 112A	CI 110	15	18.36	17.70	133	0.50	23.57	23.53	RCP III
CI 112	CI 112A	15	18.54	18.36	38	0.48	23.49	23.57	RCP III
CI 113	CI 112	15	18.78	18.54	50	0.48	23.49	23.49	RCP III
CI 113A	CI 113	15	19.66	19.47	38	0.50	23.66	23.49	RCP III
CI 114A	MH 109	15	20.50	20.18	64	0.50	25.02	24.15	RCP III

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert(ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
CI 301	CI 201	18	18.61	18.25	75	0.49	23.10	22.23	RCP III
CI 302	CI 301	18	19.27	18.61	165	0.40	23.81	23.10	RCP III
CI 303	CI 302	18	19.89	19.27	130	0.47	23.94	23.81	RCP III
CI 304	CI 303	15	19.98	19.89	25	0.38	23.94	23.94	RCP III
CI 305	CI 302	15	19.37	19.27	25	0.40	23.81	23.81	RCP III
CI 306	CI 301	15	18.71	18.61	25	0.40	23.09	23.10	RCP III

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert(ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
CI 201	FES 200	60	13.12	13.00	22	0.53	22.23	12.00	RCP III
CI 202	CI 201	15	18.74	18.62	25	0.50	22.23	22.23	RCP III
CI 203	CI 201	60	13.58	13.12	91	0.50	23.22	22.23	RCP III
MH 205	CI 203	60	13.72	13.58	35	0.41	23.65	23.22	RCP III
DI 205	MH 205	36	14.95	14.72	45	0.49	23.59	23.65	RCP III
DI 206	DI 205	36	15.46	14.95	103	0.49	23.57	23.59	RCP III
DI 207	DI 206	36	16.07	15.46	120	0.51	24.00	23.57	RCP III
RD N	DI 207	15	17.86	17.82	10	0.35	24.00	24.00	HDPE
MH 207	DI 207	36	16.20	16.07	40	0.33	24.00	24.00	RCP III
DI 207A	MH 207	15	18.48	17.95	53	1.00	23.50	24.00	RCP III
MH 209	MH 207	36	16.39	16.20	57	0.33	24.00	24.00	RCP III
DI 209	MH 209	15	18.67	18.14	53	1.00	23.50	24.00	RCP III
DI 210	MH 209	36	16.52	16.39	39	0.33	23.50	24.00	RCP III
CI 208A	DI 210	36	16.91	16.52	117	0.34	23.57	23.50	RCP III
CI 209	CI 208A	36	17.24	16.91	94	0.35	23.15	23.57	RCP III
CI 208B	CI 208A	15	17.33	16.91	25	1.71	22.05	23.57	RCP III
CI 210	MH 205	48	14.22	13.72	90	0.55	22.67	23.65	RCP III
CI 212	CI 210	48	14.45	14.22	52	0.45	22.82	22.67	RCP III
CI 213	CI 212	48	14.75	14.45	63	0.47	22.56	22.82	RCP III
MH 214	CI 213	48	15.15	14.75	78	0.51	23.48	22.56	RCP III
CI 215	MH 214	15	19.45	19.15	65	0.47	23.57	23.48	RCP III
CI 216	CI 215	15	19.69	19.45	50	0.48	23.57	23.57	RCP III
CI-217	MH 214	48	15.27	15.15	32	0.40	22.77	23.48	RCP III
CI 218	CI-217	48	15.51	15.27	48	0.50	22.84	22.77	RCP III
CI 219	CI 218	48	15.92	15.51	111	0.37	22.92	22.84	RCP III
CB 219A	CI 219	15	17.09	16.86	47	0.50	23.09	22.92	RCP III
CI 220	CI 219	48	16.2	15.92	75	0.37	22.93	22.92	RCP III
CI 221	CI 220	15	17.73	17.49	48	0.51	22.93	22.93	RCP III
MH-222	CI 220	48	16.56	16.2	104	0.35	23.46	22.93	RCP III
DI-223	MH-222	15	18.24	18	52	0.46	23.71	23.46	RCP III
CI 224	MH-222	48	16.86	16.56	83	0.35	22.51	23.46	RCP III
CI 225	CI 224	18	18.24	18	48	0.50	22.51	22.51	RCP III
CI 226	CI 224	48	17.2	16.86	100	0.35	22.96	22.51	RCP III
CI 232	CI 226	42	17.48	17.2	80	0.36	22.41	22.96	RCP III
CI 233	CI 232	42	17.7	17.48	28	0.78	22.74	22.41	RCP III
CI 236	CI 233	36	17.93	17.7	25	0.92	22.74	22.74	RCP III
CI 234	CI 236	36	18.21	17.93	91	0.31	22.33	22.74	RCP III
CI 235	CI 234	18	18.73	18.21	149	0.35	22.81	22.33	RCP III
DI 237-1	CI 235	18	19.3	19.2	32	0.34	22.75	22.81	RCP III
CI 238	CI 236	30	18.54	17.93	209	0.29	22.38	22.74	RCP III
CI 239	CI 238	24	18.74	18.54	25	0.80	22.38	22.38	RCP III
CI 240	CI 238	30	18.99	18.54	154	0.29	22.65	22.38	RCP III
MH 237	CI 236	15	18.05	17.93	39	0.31	23.34	22.74	RCP III
CI 227	CI 226	30	17.52	17.2	65	0.50	22.96	22.96	RCP III
CI 228	CI 227	24	17.81	17.52	58	0.50	23.13	22.96	RCP III
CI 230	CI 228	24	18.26	17.81	89	0.50	23.09	23.13	RCP III
CI-231	CI 230	18	18.42	18.26	32	0.50	23.17	23.09	RCP III
CI 229	CI 228	15	19.16	18.81	47	0.75	23.16	23.13	RCP III
MH 231	CI 226	24	19.35	19.2	30	0.50	24.00	22.96	RCP III
DI-224-1	CI 224	18	19.17	19	34	0.50	23.00	22.51	RCP III
DI-224-2	DI-224-1	18	19.44	19.17	53	0.50	23.00	23.00	RCP III
CI 211	CI 210	18	18.33	18	61	0.54	22.78	22.67	RCP III
CI 204	CI 203	15	18.7	18.58	25	0.50	23.22	23.22	RCP III

ROOF DRAIN SCHEDULE

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert(ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
RD A	MH 105	8	22.17	21.79	38	1.00	25.72	25.41	HDPE
RD A2	RD A	8	22.33	22.17	16	1.00	26.50	25.72	HDPE
RD A5	RD A2	8	23.50	23.47	3	1.00	26.50	26.50	HDPE
RD A3	RD A2	8	22.47	22.33	14	1.00	26.50	26.50	HDPE
RD A4	RD A3	8	22.50	22.47	3	1.00	26.50	26.50	HDPE
RD B	MH 105	8	23.31	22.85	46	1.00	25.14	25.41	HDPE
RD B3	RD B	8	23.36	23.31	5	1.00	25.65	25.14	HDPE
RD B2	RD B3	8	23.50	23.36	14	1.00	25.88	25.65	HDPE
RD B4	RD B	8	24.50	24.34	16	1.00	25.91	25.14	HDPE
YD B5	MH 105	8	21.22	20.41	41	2.00	26.24	25.41	HDPE
YD B6	YD B5	8	22.29	21.22	54	2.00	26.29	26.24	HDPE
RD C	CI 107	12	18.51	18.35	33	0.50	24.45	22.78	RCP III
RD C2	RD C	12	19.90	19.21	69	1.00	24.40	24.45	HDPE
RD C3	RD C2	8	23.00	22.92	8	1.00	24.53	24.40	HDPE
RD C4	RD C2	12	19.92	19.90	2	1.00	24.42	24.40	HDPE
RD C5	RD C4	12	20.00	19.92	8	1.00	24.53	24.42	HDPE
RD D	CI 117	12	17.04	16.87	34	0.50	25.18	23.62	HDPE
RD D1	RD D	8	22.87	22.58	29	1.00	25.36	25.18	HDPE
RD D2	RD D1	8	23.00	22.87	13	1.00	26.00	25.36	HDPE
RD D3	RD D	8	22.02	21.92	10	1.00	25.53	25.18	HDPE
RD D4	RD D3	8	22.14	22.02	12	1.00	25.59	25.53	HDPE
RD D5	RD D4	8	23.81	23.77	4	1.00	25.81	25.59	HDPE
RD D6	RD D4	8	22.15	22.14	1	1.00	25.59	25.59	HDPE
RD D7	RD D6	8	22.81	22.77	4	1.00	25.81	25.59	HDPE
RD D8	RD D6	8	22.22	22.15	7	1.00	25.84	25.59	HDPE
RD D9	RD D8	8	22.91	22.87	4	1.00	25.91	25.84	HDPE
RD D11	RD D8	8	22.83	22.22	58	1.05	26.35	25.84	HDPE
RD D12	RD D11	8	23.09	22.85	26	0.94	26.39	26.35	HDPE
RD D13	RD D12	8	23.14	23.09	7	0.74	26.14	26.39	HDPE
RD F7	RD D12	8	23.68	23.09	34	1.76	26.37	26.39	HDPE
RD F8	RD F7	8	23.78	23.68	11	0.88	26.80	26.37	HDPE
RD F9	RD F8	8	23.80	23.78	2	1.00	26.80	26.80	HDPE
RD E	CI 117	12	19.73	19.62	11	1.00	24.46	23.62	HDPE
RD E2	RD E	12	19.81	19.73	8	1.00	24.27	24.46	HDPE
RD E3	RD E2	12	19.91	19.81	10	1.00	24.52	24.27	HDPE
RD E6	RD E3	8	21.00	20.94	6	1.00	24.59	24.52	HDPE
RD E4	RD E3	8	19.94	19.91	3	1.00	24.56	24.52	HDPE
RD E5	RD E4	8	20.00	19.94	6	1.00	24.59	24.56	HDPE
YD 121	MH 120	12	21.61	17.75	63	6.09	25.35	24.54	HDPE
YD 121A	YD 121	12	22.99	21.61	28	5.00	25.62	25.35	HDPE
RD F2	YD 121A	12	23.61	22.99	31	2.00	26.52	25.62	HDPE
RD F5	RD F2	8	23.65	23.62	3	1.00	26.65	26.52	HDPE
RD F3	RD F2	8	23.63	23.61	2	1.00	26.52	26.52	HDPE
RD F4	RD F3	8	23.66	23.63	3	1.00	26.66	26.52	HDPE
RD G	CI 123	12	20.57	20.43	29	0.49	26.07	25.33	HDPE
RD G1	RD G	12	22.10	22.08	2	1.00	26.23	26.07	HDPE
RD G13	RD G1	12	22.63	22.10	53	1.00	26.69	26.23	HDPE
RD G20	RD G13	8	23.90	23.82	8	1.00	26.90	26.69	HDPE
RD G14	RD G13	8	22.82	22.63	19	1.00	26.74	26.69	HDPE
RD G19	RD G14	8	22.90	22.82	8	1.00	26.90	26.74	HDPE
RD G15	RD G14	8	23.37	23.20	17	1.00	26.46	26.74	HDPE
RD G18	RD G15	8	23.90	23.82	8	1.00	26.90	26.46	HDPE
RD G16	RD G15	8	23.81	23.37	44	1.00	26.64	26.46	HDPE
RD G17	RD G16	8	23.88	23.81	7	1.00	26.88	26.64	HDPE
RD G2	RD G1	12	22.96	22.86	10	1.00	26.26	26.23	HDPE
RD G11	RD G2	8	23.88	23.80	8	1.00	26.88	26.26	HDPE
RD G4	RD G2	8	23.31	22.96	36	1.00	25.80	26.26	HDPE
RD G5	RD G4	8	23.78	23.31	50	0.93	26.78	25.80	HDPE
RD G21	RD G5	8	23.90	23.78	12	1.00	26.90	26.78	HDPE
RD G7	RD G5	8	21.14	20.79	35	1.00	26.73	26.78	HDPE
RD G8	RD G7	8	21.56	21.14	47	0.89	26.82	26.73	HDPE
RD G23	RD G8	8	22.50	22.46	4	1.00	25.50	26.82	HDPE
RD G12	RD G8	8	23.89	23.83	6	1.00	26.89	26.82	HDPE
RD G24	RD G8	8	22.15	21.56	60	1.00	26.85	26.82	HDPE
RD G22	RD G24	8	22.20	22.15	5	1.00	25.00	26.85	HDPE
RD G9	RD G24	8	22.93	22.15	78	1.00	26.79	26.85	HDPE
RD G10	RD G9	8	23.90	23.84	6	1.00	26.90	26.79	HDPE

Upstream Node	Downstream Node	Diameter (in)	Upstream Pipe Invert (ft)	Downstream Pipe Invert(ft)	Pipe Length (ft)	Slope (%)	Upstream Rim Elev (ft)	Downstream Rim Elev (ft)	Pipe Material
RD H2	DI 126	15	19.80	19.73	12	0.67	25.62	24.98	HDPE
RD H3	RD H2	12	20.33	19.80	104	0.51	25.84	25.62	HDPE
RD H4	RD H3	12	20.53	20.33	41	0.50	26.39	25.84	HDPE
RD H5	RD H6	8	19.50	19.34	16	1.00	25.25	25.20	HDPE
RD H6	RD H7	8	19.34	19.28	6	1.00	25.20	25.27	HDPE
RD H7	CI 125	8	19.28	19.23	5	1.00	25.27	24.54	HDPE
RD H8	RD H4	12	20.76	20.53	46	0.50	26.34	26.39	HDPE
RD H9	RD H8	12	21.09	20.76	33	1.00	26.42	26.34	HDPE
RD H10	RD H9	12	21.31	21.09	22	1.00	26.36	26.42	HDPE
RD H11	RD H10	8	21.81	21.31	50	1.00	26.41	26.36	HDPE
RD H12	RD H11	8	22.04	21.81	23	1.00	26.41	26.41	HDPE
RD H13	RD H12	8	22.39	22.04	35	1.00	26.50	26.41	HDPE
RD H14	RD H13	8	23.50	23.39	11	1.00	26.50	26.50	HDPE
RD H15	RD H12	8	23.50	23.43	7	1.00	26.50	26.41	HDPE
RD H16	RD H11	8	23.50	23.43	7	1.00	26.50	26.41	HDPE
RD H17	RD H10	8	22.50	22.45	5	1.00	26.48	26.36	HDPE
RD H18	RD H9	8	23.50	23.47	3	1.00	26.48	26.42	HDPE
RD H19	RD H4	12	23.50	23.46	4	1.00	26.49	26.39	HDPE
RD I	DI 126	15	19.88	19.73	34	0.45	26.40	24.98	HDPE
RD I1	RD I	12	20.64	20.57	7	1.00	26.40	26.40	HDPE
RD I2	RD I1	8	20.85	20.64	21	1.00	26.40	26.40	HDPE
RD I3	RD I2	8	21.30	20.85	45	1.00	26.36	26.40	HDPE
RD I4	RD I3	8	21.63	21.30	33	1.00	26.26	26.36	HDPE
RD I7	RD I4	8	22.44	21.63	83	0.98	26.44	26.26	HDPE
RD I8	RD I7	8	22.69	22.44	27	0.92	26.35	26.44	HDPE
RD I9	RD I8	8	23.50	23.44	6	1.00	26.50	26.35	HDPE
YD I10	RD I8	8	22.75	22.69	6	1.00	25.50	26.35	HDPE
RD I11	RD I3	8	23.50	23.45	5	1.00	26.50	26.36	HDPE
RD I12	RD I2	8	23.50	23.45	5	1.00	26.50	26.40	HDPE
CL I13	RD I1	8	23.50	23.45	5	1.00	26.50	26.40	HDPE
RD I14	RD I	12	20.60	20.53	7	1.00	26.40	26.40	HDPE
RD I15	RD I14	8	23.50	23.45	5	1.00	26.50	26.40	HDPE
RD I16	RD I14	8	21.23	20.60	63	1.00	26.38	26.40	HDPE
RD I17	RD I16	8	23.50	23.45	5	1.00	26.50	26.38	HDPE
RD I18	RD I16	8	21.59	21.23	36	1.00	26.04	26.38	HDPE
RD I20	RD I18	8	22.04	21.59	48	0.93	26.44	26.04	HDPE
RD I23	RD I20	8	22.38	22.04	35	1.00	26.39	26.44	HDPE
RD I24	RD I23	8	22.70	22.38	36	0.88	26.14	26.39	HDPE
RD I25	RD I24	8	23.50	23.43	7	1.00	26.50	26.14	HDPE
RD I26	RD I24	8	22.75	22.70	5	1.00	25.50	26.14	HDPE
RD I21	RD I20	8	23.50	23.37	13	1.00	26.50	26.44	HDPE
RD J	CI 153	12	18.75	18.61	31	0.43	24.43	23.54	HDPE
RD J2	RD J	12	19.79	19.60	9	2.04	24.40	24.43	HDPE
RD J3	RD J2	12	19.85	19.79	6	1.00	24.43	24.40	HDPE
RD J6	RD J3	8	19.90	19.85	5	1.00	24.55	24.43	HDPE
RD J4	RD J3	12	20.84	20.81	3	1.00	24.40	24.43	HDPE
RD J5	RD J4	12	20.90	20.85	5	1.00	24.55	24.40	HDPE
RD K	CI 155	15	19.00	18.89	19	0.56	23.79	22.91	HDPE
RD K4	RD K	12	19.13	19.00	17	0.77	23.87	23.79	HDPE
RD K2	RD K4	8	20.11	20.08	3	1.00	23.86	23.87	HDPE
RD K3	RD K2	8	20.15	20.11	4	1.00	24.00	23.86	HDPE
RD K5	RD K4	8	19.15	19.13	4	0.50	24.00	23.87	HDPE
RD L	CI 158	15	18.83	18.68	30	0.50	24.86	23.78	HDPE
RD L10	RD L	8	21.50	21.27	23	1.00	24.95	24.86	HDPE
RD L14	RD L10	8	22.00	21.92	8	1.00	25.00	24.95	HDPE
RD L11	RD L10	8	21.68	21.50	18	1.00	24.99	24.95	HDPE
RD L12	RD L11	8	21.93	21.68	25	1.00	24.87	24.99	HDPE
RD L13	RD L12	8	22.00	21.93	7	1.00	25.00	24.87	HDPE
RD L2	RD L	8	21.18	21.05	13	1.00	24.89	24.86	HDPE
RD L9	RD L2	8	22.00	21.94	6	1.00	24.97	24.89	HDPE
RD L3	RD L2	8	21.45	21.18	27	1.00	24.91	24.89	HDPE
RD L8	RD L3	8	22.00	21.92	8	1.00	25.00	24.91	HDPE
RD L4	RD L3	8	21.69	21.45	24	1.00	24.70	24.91	HDPE
RD L7	RD L4	8	22.00	21.91	9	1.00	24.90	24.70	HDPE
RD L5	RD L4	8	21.91	21.69	22	1.00	24.45	24.70	HDPE
RD L6	RD L5	8	22.00	21.91	9	1.00	24.96	24.45	HDPE
RD M	CI 163	15	19.91	19.06	69	1.22	24.89	23.37	RCP III
RD M2	RD M	8	21.96	21.83	13	1.00	24.90	24.89	HDPE
RD M18	RD M2	8	22.13	21.96	17	1.00	24.87	24.90	HDPE
RD M19	RD M18	8	22.17	22.13	4	1.00	24.92	24.87	HDPE
RD M3	RD M18	8	22.42	22.13	29	1.00	24.74	24.87	HDPE
RD M4	RD M3	8	22.50	22.42	8	1.00	24.98	24.74	HDPE
RD M5	RD M	12	20.24	19.91	33	1.00	25.09	24.89	HDPE
RD M6	RD M5	12	20.37	20.24	13	1.00	25.09	25.09	HDPE
RD M7	RD M6	12	20.71	20.37	34	1.00	24.70	25.09	HDPE
RD M8	RD M7	8	21.25	20.71	54	1.00	25.25	24.70	HDPE
RD M9	RD M8	8	21.35	21.25	10	1.00	25.21	25.25	HDPE
RD M10	RD M9	8	21.83	21.35	48	1.00	25.33	25.21	HDPE
RD M11	RD M10	8	21.88	21.83	5	1.00	25.35	25.33	HDPE
RD M12	RD M11	8	22.44	21.88	56	1.00	26.33	25.35	HDPE
RD M13	RD M12	8	22.50	22.44	6	1.00	26.50	26.33	HDPE
RD M14	RD M11	8	22.50	22.48	2	1.00	25.28	25.35	HDPE
RD M15	RD M8	8	22.50	22.32	18	1.00	25.25	25.25	HDPE
RD M16	RD M7	8	22.50	22.32	18	1.00	25.24	24.70	HDPE
RD M17	RD M6	8	22.50	22.35	15	1.00	25.24	25.09	HDPE
RD Q	CI 235	12	18.92	18.73	33	0.58	23.91	22.81	HDPE
RD Q6	RD Q	8	19.34	18.92	21	2.00	23.92	23.91	HDPE
RD Q7	RD Q6	8	19.76	19.34	21	2.00	23.97	23.92	HDPE
RD Q9	RD Q7	8	21.14	19.76	28	5.00	23.93	23.97	HDPE
RD Q8	RD Q7	8	19.90	19.76	3	5.00	23.98	23.97	HDPE
RD Q2	RD Q	12	18.98	18.92	11	0.50	23.90	23.91	HDPE
RD Q3	RD Q2	8	19.95	19.92	3	1.00	23.90	23.90	HDPE
RD Q5	RD Q3	8	20.00	19.95	5	1.00	24.00	23.90	HDPE
RD Q4	RD Q2	8	19.00	18.98	5	0.50	24.00	23.90	HDPE
RD P	CI-231	15	18.64	18.42	22	1.00	23.88	23.17	HDPE
RD O	CI 211	15	19.00	18.83	35	0.49	24.49	22.78	HDPE
RD O2	RD O	12	19.82	19.00	48	1.71	24.46	24.49	HDPE
RD O4	RD O2	12	19.84	19.82	3	1.00	24.42	24.46	HDPE
RD O5	RD O4	12	19.90	19.84	6	1.00	24.55	24.42	HDPE
RD O3	RD O2	8	20.90	20.84	6	1.00	24.55	24.46	HDPE
RD 152D	MH 152A	8	21.93	21.80	13	1.00	24.93	24.34	HDPE
RD 152H	MH 152G	12	21.38	21.26	12	1.00	25.05	24.99	HDPE
RD 152I	RD 152H	8	22.64	22.28	36	1.00	25.37	25.05	HDPE
RD 152J	RD 152I	8	23.08	22.64	44	1.00	26.40	25.37	HDPE
RD 152K	RD 152J	8	23.50	23.45	5	1.00	26.50	26.40	HDPE
RD 152L	RD 152J	8	23.40	23.08	32	1.00	26.50	26.40	HDPE
RD 152M	RD 152L	8	23.50	23.40	10	1.00	26.50	26.50	HDPE
MH 152N	RD 152H	12	21.50	21.38	12	1.00	25.06	25.05	HDPE
MH 152P	YD 152O	8	21.95	21.69	26	1.00	24.99	24.00	HDPE
RD 152Q	MH 152P	8	22.00	21.95	5	1.00	25.00	24.99	HDPE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

STORM SEWER SCHEDULES

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 100'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-4.0B

PEI JOB#: 18473.PE

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

NOTE: ALL PROPERTY LINES, EASEMENTS, AND RIGHT-OF-WAY INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM GUILFORD COUNTY GIS DATA.

HALL W GREGORY SARAH F
PID: R05105-001-021-000
ADDRESS: 123 E WESTWOOD DR
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 3693 PG 935

HALL W GREGORY SARAH
PID: R05105-001-004-000
ADDRESS: 113 E WESTWOOD DR
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 2884 PG 791

E. WESTWOOD DRIVE
PUBLIC 40' R/W

NORRIS SHIRLEY RUTH TRUST
PID: R05105-001-022-000
ADDRESS: 112 E WESTWOOD DR
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 17E PG 143

PROPOSED OFF-SITE TRANSPORTATION IMPROVEMENTS (REFER TO PLANS PREPARED BY DAVENPORT)

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED PUBLIC UTILITY EASEMENT, TYP.

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

HARBORVIEW WAY
40' PRIVATE R/W

STATION RD.
50' PUBLIC R.O.W.

REMANT PARCEL
ARMSTRONG DEVELOPERS, LLC
DB 753, PG 95

CONTRACTOR SHALL LINE BANK WITH EROSION CONTROL MATTING ONCE FINE GRADING IS COMPLETED

30' PUBLIC DRAINAGE EASEMENT OFFSET 15' FROM EXISTING DITCH CENTERLINE, TYP.

PROJECT PROPERTY LINE, TYP.

UTILITY EASEMENT (DB 4934, PG 1336

PROPOSED RETAINING WALL TYP. (DESIGN BY OTHERS)

MILITARY CUTOFF S.R. 1409
PUBLIC ROW - WIDTH VARIES

RANDOLPH JANE A PEYTON
PID: R05000-006-055-000
ADDRESS: 503 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 5681 PG 902

G G PLEASANT LLC
PID: R05000-006-056-000
ADDRESS: 505 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 6153 PG 2433

JOHN BYRD
PID: R05105-001-020-000
ADDRESS: 124 E. WESTWOOD DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 10-1 FAM. RES
DB 5575 PG 2542

347 MCO LLC
PID: R05105-001-019-000
ADDRESS: 128 E. WESTWOOD DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 6078 PG 2289

GREGORY HALL
PID: R05105-001-017-000
ADDRESS: 303 LANCE DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 2856 PG 529

JIMMYDOT LLC
PID: R05105-001-018-0
ADDRESS: 136 E. WESTWOO
ZONE: MHP-MOBILE HOME
LAND USE: 13-MOBILE H
DB 5602 PG/1071

YVONNE HALL
PID: R05105-001-016-000
ADDRESS: 301 LANCE DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME22
DB 3147 PG 334

347 MCO LLC
PID: R05105-001-015-000
ADDRESS: 306 LANCE DRIVE
ZONE: MHP-MOBILE HOME PAI
LAND USE: 13-MOBILE HOME
DB 6078 PG 2293

LANCE DRIVE
PUBLIC 40' ROW

50' CONSERVATION RESOURCE SETBACK, TYP.

EX. TREE TO REMAIN, TYP.

BUILDING #12
FFE=26.50

BUILDING #6
FFE=26.31

PARKING STRUCTURE #2
FFE=25.50

LILYGATE LANE
PRIVATE

MATCH LINE - SEE SHEET C-4.2

MATCH LINE - SEE SHEET C-4.3

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
SW 25.05	PROPOSED SIDEWALK ELEVATION
PG 25.05	PROPOSED GRADE
TW 25.05	PROPOSED TOP OF WALL
TC 25.05	PROPOSED TOP OF CONCRETE
TS 25.05	TOP OF SLAB
	INLET PROTECTION
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
	TREE PROTECTION FENCING
	DRAINAGE FLOW PATH
CB-202	DRAINAGE INLET LABEL
	EROSION CONTROL MATTING

KEY MAP
SCALE: 1" = 500'
NORTH

SHEET C-4.1
SHEET C-4.2
SHEET C-4.3
SHEET C-4.4
SHEET C-4.5
SHEET C-4.6
SHEET C-4.7
SHEET C-4.8
SHEET C-4.9

GRAPHIC SCALE
0 15 30 60 120
SCALE: 1"=30'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.1

PEI JOB#: 18473.PE

SHEET C-4.1

SHEET C-4.2

SHEET C-4.3 SHEET C-4.4

MILITARY CUTOFF RD

SHEET C-4.5 SHEET C-4.6 SHEET C-4.7

SHEET C-4.8 SHEET C-4.9

KEY MAP

SCALE: 1" = 500'

NORTH

LEGEND:

- EXISTING CONTOUR (16)
- PROPOSED CONTOUR (29)
- EXISTING SPOT ELEVATION (EG 25.05)
- PROPOSED EDGE OF PAVEMENT (EP 25.05)
- PROPOSED CENTERLINE OF SWALE (CL 25.05)
- PROPOSED SIDEWALK ELEVATION (SW 25.05)
- PROPOSED GRADE (PG 25.05)
- PROPOSED TOP OF WALL (TW 25.05)
- PROPOSED TOP OF CONCRETE (TC 25.05)
- TOP OF SLAB (TS 25.05)
- INLET PROTECTION
- LIMITS OF DISTURBANCE (LOD)
- SILT FENCE (SF)
- TREE PROTECTION FENCING
- DRAINAGE FLOW PATH
- DRAINAGE INLET LABEL (CB-202)
- EROSION CONTROL MATTING

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

Know what's below. Call before you dig.

G G PLEASANT LLC
PID: R05000-006-056-000
ADDRESS: 505 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 6153 PG 2433

MERLACK DOLORES M
PID: R05000-006-057-000
ADDRESS: 507 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 6149 PG 984

MOCCASIN CREEK II LLC
PID: R05000-006-058-000
ADDRESS: 509 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 5563 PG 2528

RANDALL DANIEL P KIMBERLY M
PID: R05000-006-059-000
ADDRESS: 511 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 4733 PG 34

OCONNER YOUNG MICHAEL JR
PID: R05000-006-060-000
ADDRESS: 513 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 3497 PG 104

FLOYD MARSHA ETAL
PID: R05000-006-061-000
ADDRESS: 515 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 6093 PG 2182

MEADOWS BRYAN
PID: R05000-006-062-000
ADDRESS: 517 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 4975 PG 2969

BOURGEOIS PRISCILLA E
PID: R05000-006-064-000
ADDRESS: 512 SANDCASTLE CT
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM RES
DB 6083 PG 2316

SEASPRAY LANDING HOA INC
PID: R05000-006-053-000
ADDRESS: 914 SEA SPRAY DR
ZONE:

NCDOT R/W DISK

GUARD RAIL

FENCE LINE

DITCH

MILITARY CUTOFF ROAD
S.R. 1409
PUBLIC ROW - WIDTH VARIES

EVERTON WAY
PRIVATE

LILYGATE LANE
PRIVATE

HARBORVIEW WAY
40' PRIVATE R/W

EASEMENT DB 4984, PG 1336

BUILDING #12
BUILDING #6
BUILDING #5
BUILDING #1A
BUILDING #1B
BUILDING #2B
BUILDING #2A
PARKING STRUCTURE #2

FFE=26.50
FFE=26.31
FFE=25.50
FFE=26.00
FFE=26.80
FFE=25.00

MATCH LINE - SEE SHEET C-4.1
MATCH LINE - SEE SHEET C-4.3
MATCH LINE - SEE SHEET C-4.5

PROPOSED OFF-SITE TRANSPORTATION IMPROVEMENTS

PROPOSED RETAINING WALL, TYP. (DESIGN BY OTHERS)

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

34 LF ACO KLASSIKDRAIN

113 LF ACO KLASSIKDRAIN

69 LF ACO KLASSIKDRAIN

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

CONTRACTOR SHALL LINE WE BANK WITH EROSION CONTROL MATTING ONCE FINE GRADING IS COMPLETED

30' PUBLIC DRAINAGE EASEMENT OFFSET 15' FROM EXISTING DITCH CENTERLINE, TYP.

PROJECT PROPERTY LINE, TYP.

50' CONSERVATION RESOURCE SETBACK, TYP.

PROPOSED PUBLIC UTILITY EASEMENT, TYP.

GRAPHIC SCALE
0 15 30 60 120
SCALE: 1"=30'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

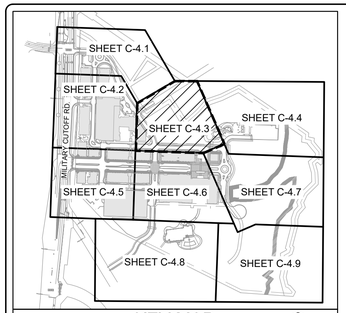
PROJECT STATUS:
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 06/23/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.2

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
SW 25.05	PROPOSED SIDEWALK ELEVATION
PG 25.05	PROPOSED GRADE
TW 25.05	PROPOSED TOP OF WALL
TC 25.05	PROPOSED TOP OF CONCRETE
TS 25.05	TOP OF SLAB
	INLET PROTECTION
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
	TREE PROTECTION FENCING
	DRAINAGE FLOW PATH
CB-202	DRAINAGE INLET LABEL
	EROSION CONTROL MATTING

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

PROPOSED 45LF - (3) 5'X4' REINFORCED CONCRETE BOX CULVERT W/ END WALLS
PIPE INV. IN = 15.60
DITCH INV. IN = 16.10
PIPE INV. OUT = 15.29
DITCH INV. OUT = 15.79

MATCH LINE - SEE SHEET C-4.1

LANCE DR.
40' PUBLIC ROW

VIOLET WARD ESTATE
PID: R05105-001-014-000
ADDRESS: 310 LANCE DRIVE
ZONE: R-15-RESIDENTIAL DISTRICT
LAND USE: 10-1 FAM. RES
DB 1713 PG 1090

347 MCO LLC
PID: R05105-001-015-000
ADDRESS: 306 LANCE DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 13-MOBILE HOME
DB 6078 PG 2293

CONTRACTOR SHALL LINE BANK WITH EROSION CONTROL MATTING ONCE FINE GRADING IS COMPLETED

PROJECT PROPERTY LINE, TYP.

REMANT PARCEL
ARMSTRONG DEVELOPERS, LLC
DB 753, PG 95

IMPACTS PERMITTED WITH USACOE ACTION ID: SAW-2017-02531
NWP 39
70LF STREAM IMPACT AND 0.03AC WETLAND IMPACT

MATCH LINE - SEE SHEET C-4.4

EX. POND
(WATERS OF THE U.S.)

22 SKY MOD II LLC
PID: R05105-001-015-001
ADDRESS: 302 LANCE DRIVE
ZONE: MHP-MOBILE HOME PARK
LAND USE: 1258-UNUSED LAND
DB 6078 PG 769

30' PUBLIC DRAINAGE EASEMENT OFFSET 15' FROM EXISTING DITCH CENTERLINE, TYP.

HARBORBIEW WAY
40' PRIVATE ROW

CONTRACTOR SHALL LINE BANK WITH EROSION CONTROL MATTING ONCE FINE GRADING IS COMPLETED

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

50' CONSERVATION RESOURCE SETBACK, TYP.

MATCH LINE - SEE SHEET C-4.2

BUILDING #6
FFE=25.00

MATCH LINE - SEE SHEET C-4.5

69 LF ACO KLASSIKDRAIN

LILYGATE LANE
40' PRIVATE ROW

BUILDING #2A

BUILDING #2B
FFE=24.90

39 LF ACO KLASSIKDRAIN

PROPOSED PUBLIC UTILITY EASEMENT, TYP.

BUILDING #8
FFE=24.15

FFE=24.00

CARROLL AVE.
80' PRIVATE R/W

38 LF ACO KLASSIKDRAIN

89 LF ACO KLASSIKDRAIN

40 LF ACO KLASSIKDRAIN

MATCH LINE - SEE SHEET C-4.6

45 LF ACO KLASSIKDRAIN

45 LF ACO KLASSIKDRAIN

105 LF ACO KLASSIKDRAIN

57 LF ACO KLASSIKDRAIN

BUILDING #7

LILYGATE LANE
40' PRIVATE ROW

END OF PUBLIC RIGHT OF WAY

MATCH LINE - SEE SHEET C-4

NEW VINE DRIVE
PRIVATE ROW
WIDTH VARIES

GRAPHIC SCALE
0 15 30 60 120
SCALE: 1"=30'

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

NO SCALE (NOR 2011)

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

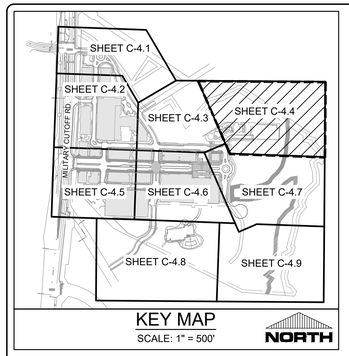
DRAWING INFORMATION

DATE:	06/23/23
SCALE:	1"=30'
DESIGNED:	PPB
DRAWN:	ASR
CHECKED:	RPB

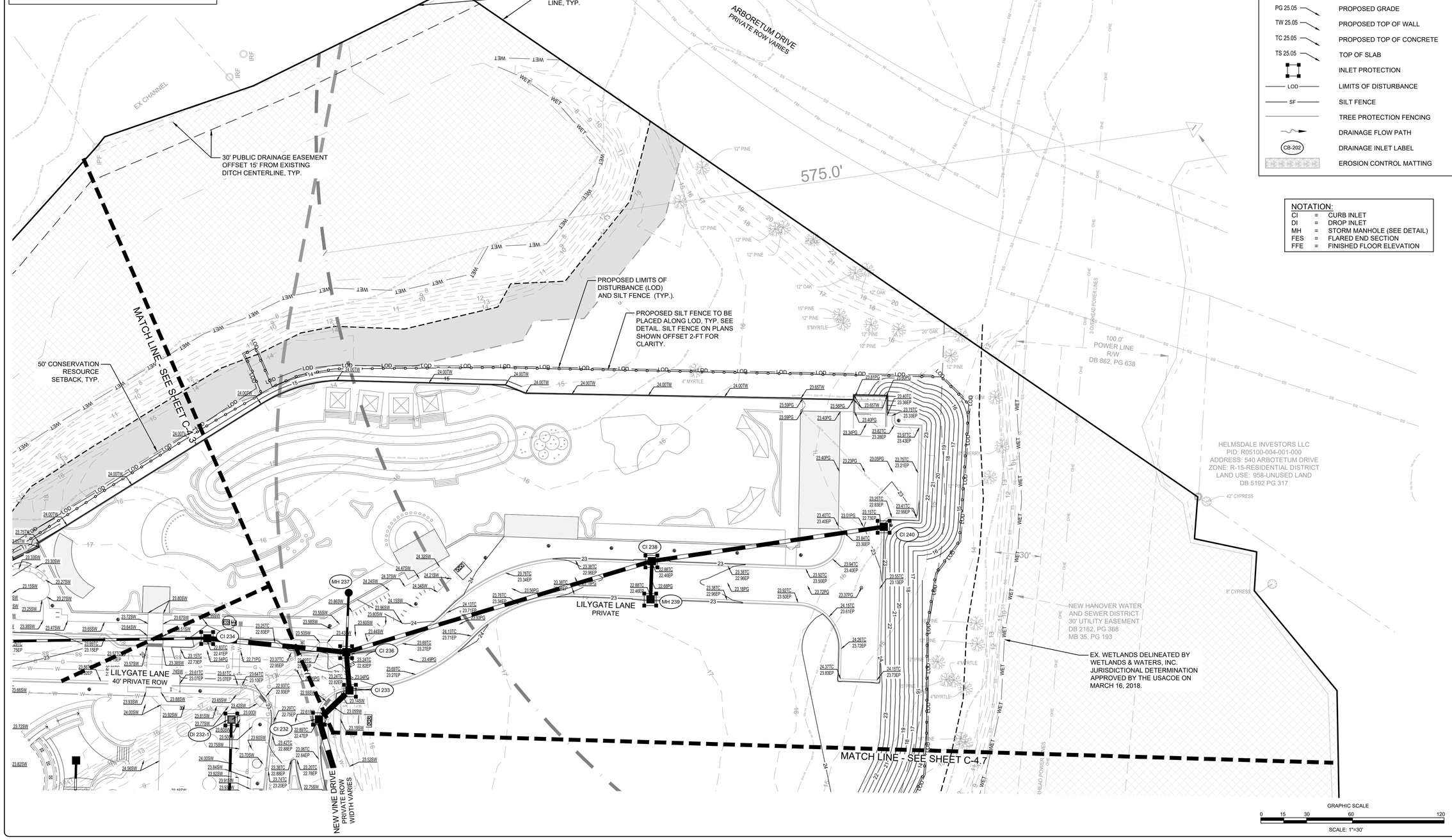
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.3

PEI JOB#: 18473.PE



KEY MAP
SCALE: 1" = 500'
NORTH



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

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
SW 25.05	PROPOSED SIDEWALK ELEVATION
PG 25.05	PROPOSED GRADE
TW 25.05	PROPOSED TOP OF WALL
TC 25.05	PROPOSED TOP OF CONCRETE
TS 25.05	TOP OF SLAB
	INLET PROTECTION
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
	TREE PROTECTION FENCING
	DRAINAGE FLOW PATH
CB-202	DRAINAGE INLET LABEL
	EROSION CONTROL MATTING

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
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GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

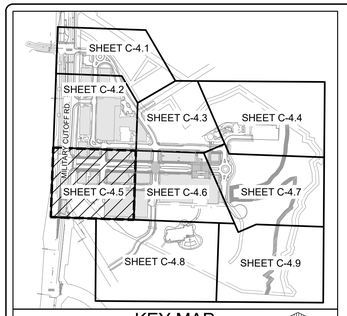
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-4.4

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
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PG 25.05	PROPOSED GRADE
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	INLET PROTECTION
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CB-202	DRAINAGE INLET LABEL
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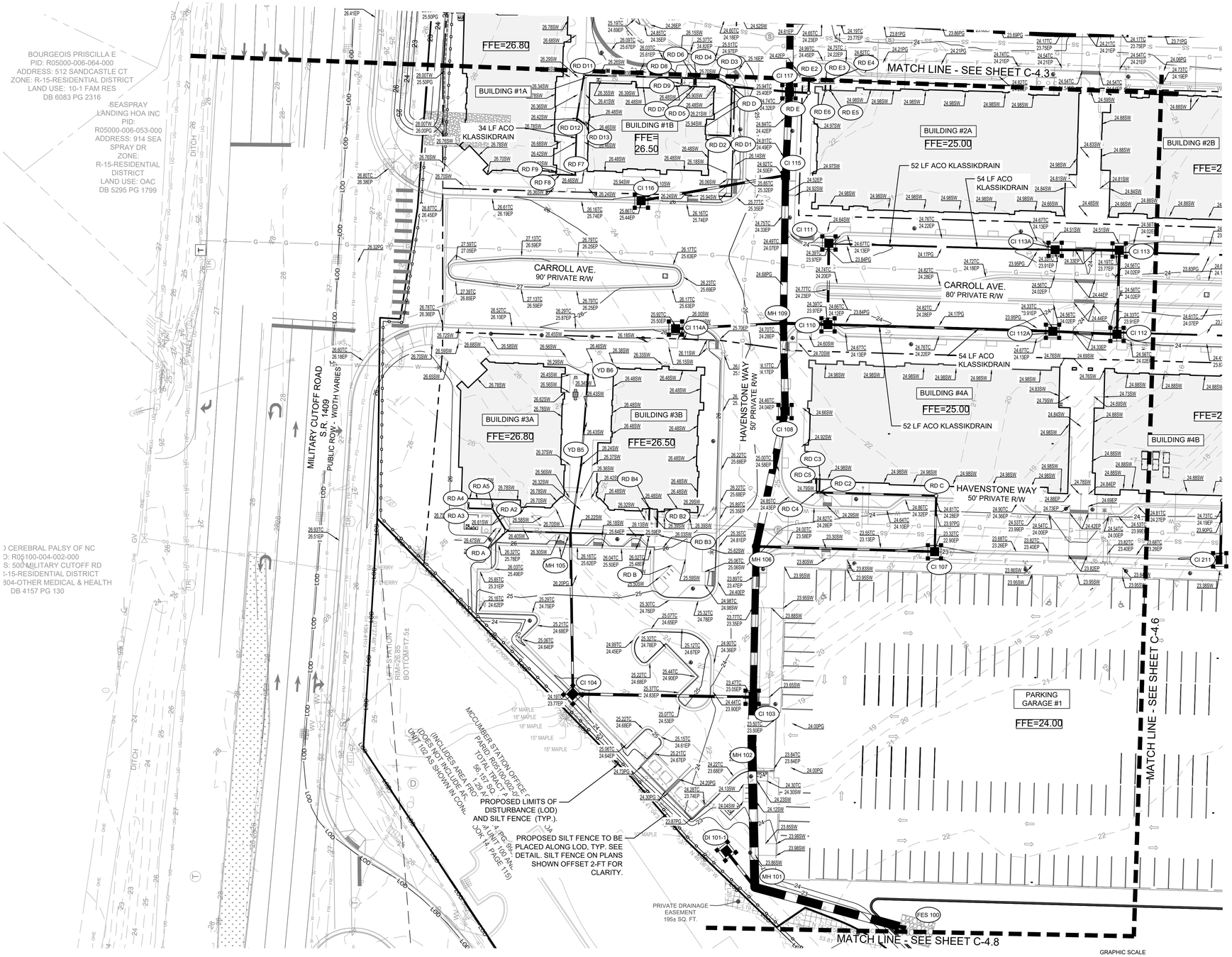
FFE	=	FINISHED FLOOR ELEVATION



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

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

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PERMIT SET:
RELEASED FOR CONST:

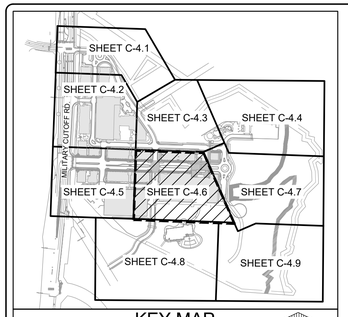
DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: RPB
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.5

PEI JOB#: 18473.PE

GRAPHIC SCALE
0 15 30 60 120
SCALE: 1"=30'



KEY MAP

SCALE: 1" = 500'

NORTH

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

MCGRONUM#20211

LEGEND:

- 16 — EXISTING CONTOUR
- 29 — PROPOSED CONTOUR
- EG 25.05 — EXISTING SPOT ELEVATION
- EP 25.05 — PROPOSED EDGE OF PAVEMENT
- CL 25.05 — PROPOSED CENTERLINE OF SWALE
- SW 25.05 — PROPOSED SIDEWALK ELEVATION
- PG 25.05 — PROPOSED GRADE
- TW 25.05 — PROPOSED TOP OF WALL
- TC 25.05 — PROPOSED TOP OF CONCRETE
- TS 25.05 — TOP OF SLAB
- INLET PROTECTION
- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- TREE PROTECTION FENCING
- DRAINAGE FLOW PATH
- CB-202 — DRAINAGE INLET LABEL
- EROSION CONTROL MATTING

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

MATCH LINE - SEE SHEET C-4.3

MATCH LINE - SEE SHEET C-4.7

MATCH LINE - SEE SHEET C-4.5

MATCH LINE - SEE SHEET C-4.8

MATCH LINE - SEE SHEET C-4.9

BUILDING #2A — FFE=25.00

BUILDING #2B — FFE=24.90

BUILDING #8 — FFE=24.15

BUILDING #7 — FFE=24.00

BUILDING #4A — FFE=25.00

BUILDING #4B — FFE=24.90

PARKING GARAGE #1 — FFE=24.00

CARROLL AVE. 80' PUBLIC ROW

HARBORVIEW WAY PRIVATE R/W WIDTH VARIES

HAVENSTONE WAY PRIVATE

NEW VINE DRIVE PRIVATE ROW WIDTH VARIES

ALLEY PRIVATE

39 LF ACO KLASSIKDRAIN

38 LF ACO KLASSIKDRAIN

66 LF ACO KLASSIKDRAIN

40 LF ACO KLASSIKDRAIN

30 LF ACO KLASSIKDRAIN

158 LF ACO KLASSIKDRAIN

45 LF ACO KLASSIKDRAIN

45 LF ACO KLASSIKDRAIN

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

PROPOSED STORMWATER BASIN (0.53+/- ACRES)

PROPOSED STORMWATER BASIN AND TEMPORARY SEDIMENT BASIN #6 (4.66+/- ACRES)

PROPOSED RETAINING WALL DESIGN BY OTHERS (TOP EL.=24.0)

PROPOSED WET DETENTION BASIN OUTLET STRUCTURE (SEE DETAILS)

GRAPHIC SCALE

0 15 30 60 120

SCALE: 1"=30'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

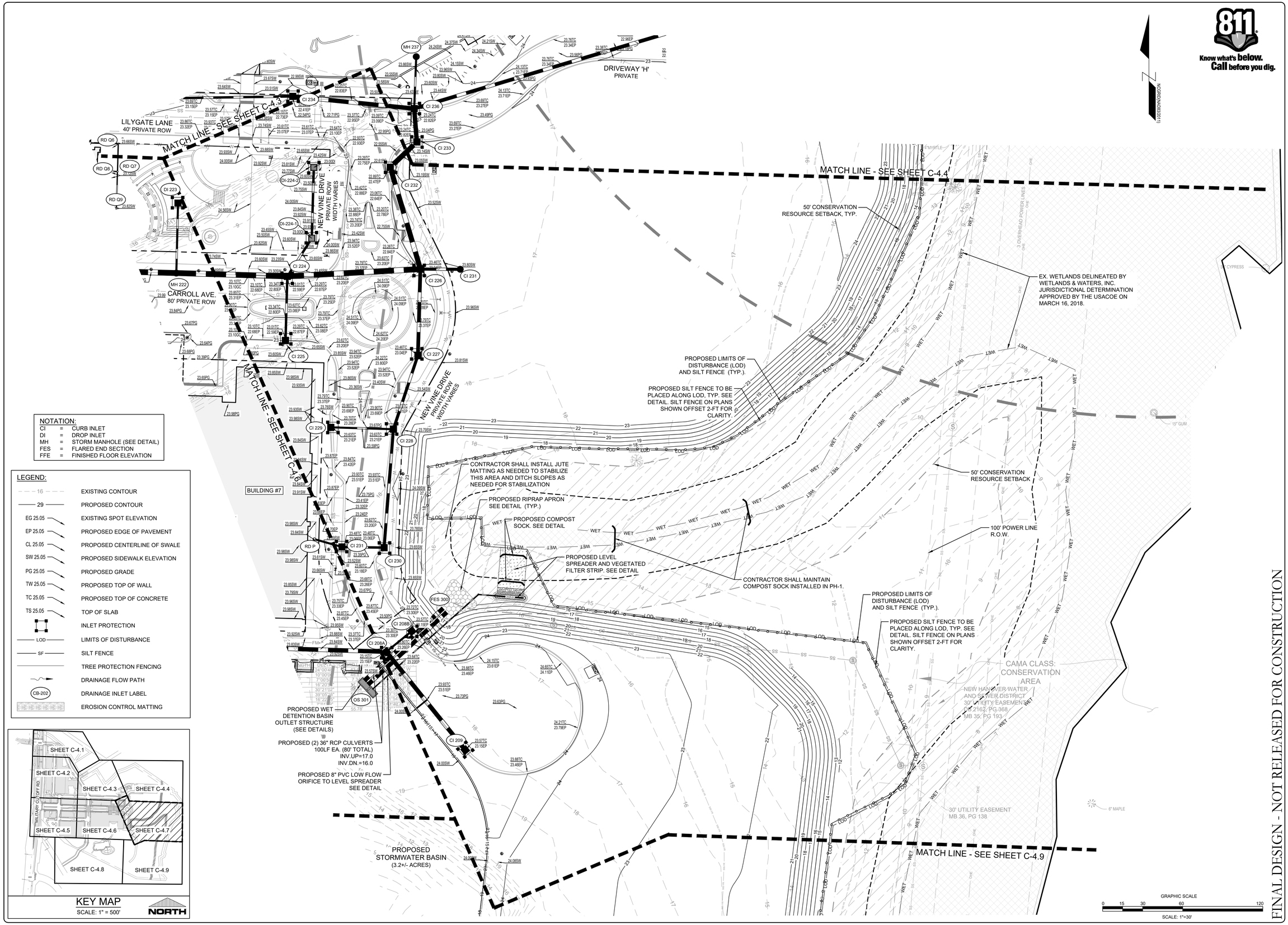
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PERMIT:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: AJS
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.6

PEI JOB#: 18473.PE



NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
SW 25.05	PROPOSED SIDEWALK ELEVATION
PG 25.05	PROPOSED GRADE
TW 25.05	PROPOSED TOP OF WALL
TC 25.05	PROPOSED TOP OF CONCRETE
TS 25.05	TOP OF SLAB
	INLET PROTECTION
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
	TREE PROTECTION FENCING
	DRAINAGE FLOW PATH
CB-202	DRAINAGE INLET LABEL
	EROSION CONTROL MATTING

KEY MAP
SCALE: 1" = 500'
NORTH

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

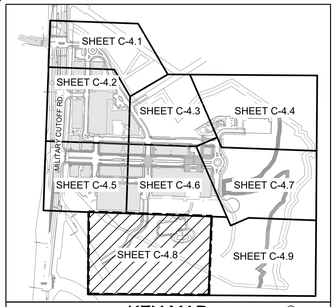
DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

C-4.7

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

Know what's below. Call before you dig.

LEGEND:

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EG 25.05 EXISTING SPOT ELEVATION
- EP 25.05 PROPOSED EDGE OF PAVEMENT
- CL 25.05 PROPOSED CENTERLINE OF SWALE
- SW 25.05 PROPOSED SIDEWALK ELEVATION
- PG 25.05 PROPOSED GRADE
- TW 25.05 PROPOSED TOP OF WALL
- TC 25.05 PROPOSED TOP OF CONCRETE
- TS 25.05 TOP OF SLAB
- INLET PROTECTION
- LOD LIMITS OF DISTURBANCE
- SF SILT FENCE
- TREE PROTECTION FENCING
- DRAINAGE FLOW PATH
- CB-202 DRAINAGE INLET LABEL
- EROSION CONTROL MATTING

NOTATION:

CI	=	CURB INLET
DI	=	DROP INLET
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

MATCH LINE - SEE SHEET C-4.5

MATCH LINE - SEE SHEET C-4.6

MATCH LINE - SEE SHEET C-4.9

HARBORVIEW WAY
40' PRIVATE R/W

OUTSTANDING RESOURCE WATERS LINE

DI-101-1 · MH 101 · FES 100 · FES 200 · CI 201 · CI 202 · CI 301 · CI 302 · CI 303 · CI 304 · CI 305 · CI 306

PROPOSED RETAINING WALL DESIGN BY OTHERS (TOP EL.=24.0)

PROPOSED STORMWATER BASIN (0.53+/- ACRES)

PROPOSED RETAINING WALL EL.=20.00

PROPOSED (3) 4'W X 3'H CONCRETE BOX CULVERTS INV. EL.=14.00 TOP EL.=17.75

PROPOSED INLET PROTECTION (TYP.)

PROPOSED RETAINING WALL DESIGN BY OTHERS (TOP EL.=24.0)

PROPOSED STORMWATER BASIN AND TEMPORARY SEDIMENT BASIN #6 (4.67+/- ACRES)

PROPOSED SILT FENCE TO BE PLACED ALONG INSIDE OF RETAINING WALL. SEE DETAIL.

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.).

PROPOSED SILT FENCE TO BE PLACED ALONG LOD, TYP. SEE DETAIL. SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY.

PROPOSED LIMITS OF DISTURBANCE (LOD) AND SILT FENCE (TYP.). SILT FENCE ON PLANS SHOWN OFFSET 2-FT FOR CLARITY. D.B. 5167, PG. 1686 TOTAL TRACT AREA 34,914 SQ. FT. 0.80 AC. (INCLUDES AREA FROM D.B. 6014, PG. 993)

10' TEMPORARY CONSTRUCTION EASEMENT

PROPOSED 40' ACCESS & UTILITY EASEMENT

PROJECT PROPERTY LINE, TYP.

PROPOSED DRAINAGE EASEMENT, WIDTH VARIES

PRIVATE DRAINAGE EASEMENT 996± SQ. FT.

PRIVATE DRAINAGE EASEMENT 133± SQ. FT.

AREA A FROM D.B. 6014, PG. 993 4,411± SQ. FT.

AREA B FROM D.B. 6014, PG. 993 190± SQ. FT.

AREA C PERMANENT EASEMENT AREA 0.19 AC. 8,119

10 FOOT TEMPORARY CONSTRUCTION EASEMENT AREA 0.02 AC. 822 SQ. FT.

HAWTHORNE MIDWAY WILM. LLC PID: R05100-002-007-000 ADDRESS: 527 OLD MCCUMBER STATION ROAD ZONE: MF-M-MULTI FAMILY MED. DENSITY LAND USE: 12-3+FAMILY RESIDENTIAL DB 5668 PG 2976

MACCUMBER STATION, OFF. CNT POA PID: R05100-002-005-000 ADDRESS: 575 MILITARY CUTOFF RD ZONE: O&I-1-OFFICE & INSTITUTION LAND USE: 961-CONDOMINIUM COMMON AREA DB 4087 PG 145

OLD MACCUMBER RD. 60' R/W

GRAPHIC SCALE

0 15 30 60 120

SCALE: 1"=30'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-
PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION

DATE:	09.15'23
SCALE:	1" = 30'
DESIGNED:	RPB
DRAWN:	RPB
CHECKED:	RPB

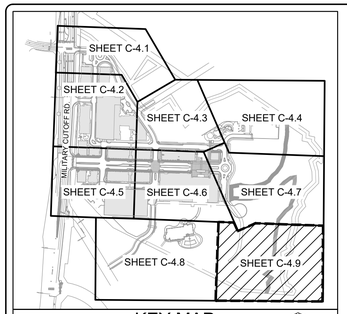
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD

09/15/23

C-4.8

PEI JOB#: 18473.PE



KEY MAP
SCALE: 1" = 500'
NORTH

LEGEND:

16	EXISTING CONTOUR
29	PROPOSED CONTOUR
EG 25.05	EXISTING SPOT ELEVATION
EP 25.05	PROPOSED EDGE OF PAVEMENT
CL 25.05	PROPOSED CENTERLINE OF SWALE
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PG 25.05	PROPOSED GRADE
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TS 25.05	TOP OF SLAB
	INLET PROTECTION
LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
	TREE PROTECTION FENCING
	DRAINAGE FLOW PATH
CB-202	DRAINAGE INLET LABEL
	EROSION CONTROL MATTING

NOTATION:

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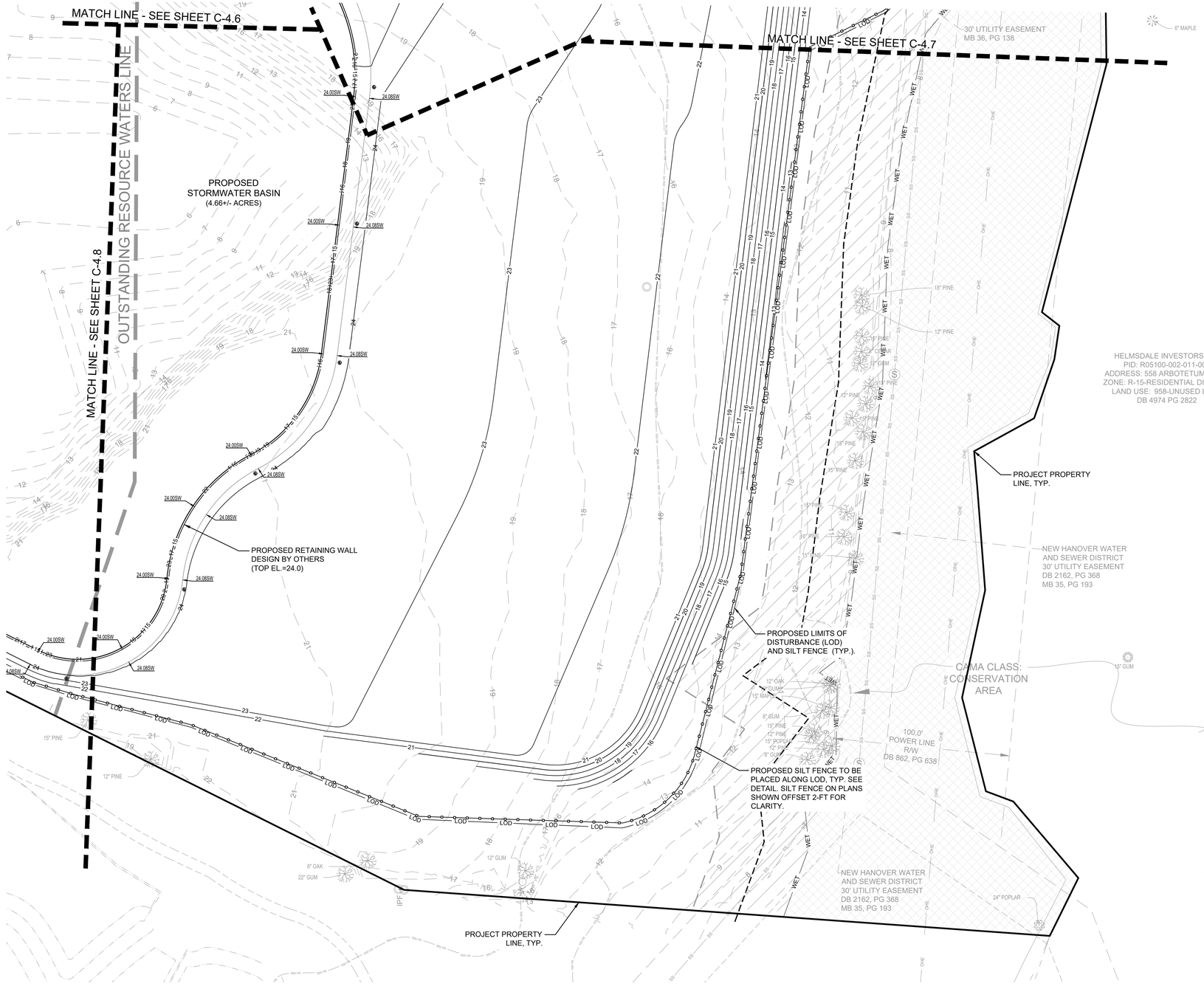
MH	=	STORM MANHOLE (SEE DETAIL)
FES	=	FLARED END SECTION
FFE	=	FINISHED FLOOR ELEVATION

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



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING-DRAINAGE-PH-II EROSION CONTROL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

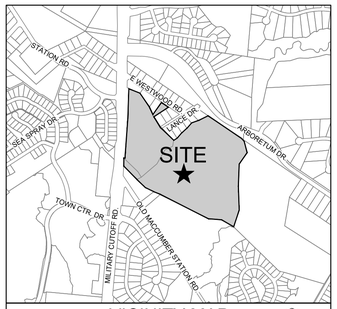
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 30'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-4.9

PEI JOB#: 18473.PE



VICINITY MAP

SCALE: 1" = 1,000'

NORTH

STATION RD.
50' PUBLIC R.O.W.

MILITARY CUTOFF RD
S.R. 1409
PUBLIC ROW - WIDTH VARIES

E. WESTWOOD DRIVE
40' PUBLIC ROW

LANCE DR.
40' PUBLIC ROW

ARBORETUM DRIVE
PRIVATE ROW VARIES

POINT OF CONVERGENCE

POINT OF INTEREST

POINT OF INTEREST

EXISTING DA #1
23.36 ACRES

EXISTING DA #2
19.77 ACRES

OLD MACCUMBER RD.
60' R.O.W.

CAYMAN CT.
70' PUBLIC R.O.W.

WETLANDS

WET

500 YR

CAMA CLASS CONCENTRATION AREA

GRAPHIC SCALE

0 50 100 200 400

SCALE: 1"=100'

NORTH

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

PRE-DEVELOPMENT
DRAINAGE AREA MAP
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION

DATE:	09/15/23
SCALE:	1" = 100'
DESIGNED:	RPB
DRAWN:	ASG
CHECKED:	RPB

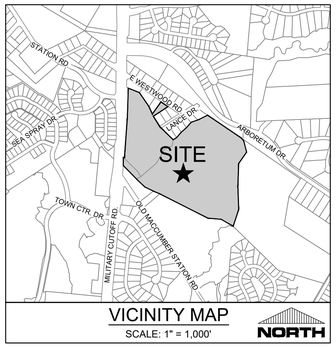
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND

09/15/23

C-4.10

PEI JOB#: 18473.PE



VICINITY MAP

SCALE: 1" = 1,000'

NORTH

STATION RD.
50' PUBLIC R.O.W.

OFF-SITE
A=0.12 AC.
TOTAL
FRONT

MILITARY CUTOFF RD
S.R. 1409
PUBLIC ROW - WIDTH VARIES

E. WESTWOOD DRIVE
40' PUBLIC ROW

R.A.
A=1.19 AC.

LANCE DR.
40' PUBLIC ROW

POINT OF
CONVERGENCE

POINT OF
INTEREST

R.A.
A=12.65 AC.

ARBORETUM DRIVE
PRIVATE ROW VARIES

POINT OF
INTEREST

D.A. #1
29.29 AC.

POND #1

OLD MACCUMBER RD.
60' R.O.W.

CAYMAN CT.
70' PUBLIC R.O.W.

WETLANDS

WET

GRAPHIC SCALE
0 50 100 200 400
SCALE: 1"=100'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6760 (O) (910) 791-6766 (F)
NC License #: C-2846

POST-DEVELOPMENT
DRAINAGE AREA MAP
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

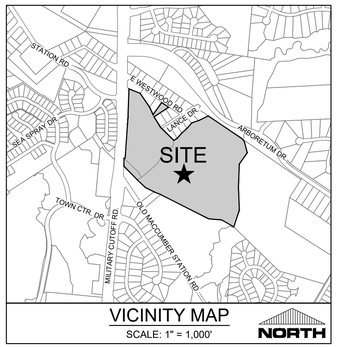
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
DRAFT:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/22/23
SCALE: 1" = 100'
DESIGNED: RPB
DRAWN BY: AJS
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.11

PEI JOB#: 18473.PE



VICINITY MAP

SCALE: 1" = 1,000'

NORTH

Inlet Drainage Areas

UPSTREAM STRUCTURE	SUB DA (AC)	RUNOFF COEF.
DI-101-1	0.18	0.35
CI 103	0.31	0.63
CI 104	0.50	0.62
RD A	0.11	0.95
RD B	0.11	0.95
YD B6	0.03	0.95
YD B5	0.01	0.95
CI 107	0.26	0.90
RD C	0.26	0.95
CI 108	0.13	0.86
CI 115	0.12	0.89
CI 116	0.28	0.84
CI 150	0.26	0.83
CI 153	0.20	0.84
CI 157	0.09	0.76
CI 158	0.09	0.76
RD L	0.13	0.95
CI 159	0.04	0.95
CI 163	0.11	0.74
RD M	0.32	0.95
CI 164	0.39	0.76
CI 165	0.12	0.76
CI 161	0.05	0.76
CI 162	0.10	0.80
CI 156	0.18	0.75
CI 155	0.18	0.83
RD K	0.19	0.95
RD J	0.21	0.95
MH 152	0.32	0.95
YD 152O	0.14	0.75
CI 119	0.27	0.78
MH 120D	0.44	0.95
YD 121	0.05	0.95
YD 121A	0.07	0.50
CI 122	0.04	0.82
CI 123	0.10	0.85
CI 124	0.18	0.80
CI 125	0.21	0.73
DI 126	0.20	0.85
CI 127	0.06	0.82
CI 128	0.18	0.75
CI 129	0.23	0.75
CI 130	0.11	0.75
CI 131	0.10	0.70
CI 132	0.10	0.70
RD H2	0.33	0.95
RD I	0.33	0.95
YD I10	0.03	0.50
RD I26	0.03	0.50
RD H5	0.42	0.95
RD G	0.33	0.95
RD G23	0.03	0.50
RD G22	0.03	0.50
RD F	0.14	0.95
YD 121	0.01	0.95
RD D	0.08	0.95
RD E	0.21	0.95
CI 110	0.13	0.88
CI 111	0.14	0.91
CI 112A	0.10	0.85
CI 112	0.09	0.85
CI 113	0.08	0.85
CI 113A	0.09	0.85
CI 114A	0.26	0.80
CI 201	0.30	0.65
CI 202	0.31	0.93
CI 203	0.03	0.69
DI 205	0.05	0.95
DI 206	0.09	0.65
DI 207	0.11	0.90
RD N	1.03	0.95
DI 207A	0.07	0.95
DI 209	0.07	0.95
DI 210	0.11	0.95
CI 208A	0.07	0.85
CI 209	2.29	0.80
CI 208B	0.10	0.80
CI 210	0.12	0.83
CI 212	0.10	0.82
CI 213	0.15	0.70
CI 215	0.08	0.83
CI 216	0.08	0.83
CI-217	0.24	0.75
CI 218	0.16	0.76
CI 219	0.08	0.81
CB 219A	0.10	0.50
CI 220	0.10	0.80
CI 221	0.14	0.70
DI-223	0.18	0.70
CI 224	0.17	0.75
CI 225	0.21	0.76
CI 226	0.07	0.72
CI 232	0.13	0.70
CI 233	0.04	0.76
CI 236	0.09	0.56
CI 234	0.17	0.74
CI 235	0.23	0.75
RD Q	0.19	0.95
DI 237-1	0.08	0.50
CI 238	0.16	0.56
CI 239	0.08	0.60
CI 240	0.23	0.65
MH 237	1.20	0.71
CI 227	0.07	0.65
CI 228	0.06	0.65
CI 230	0.05	0.65
CI-231	0.10	0.65
RD P	0.56	0.95
CI 229	0.08	0.75
MH 231	0.65	0.52
DI-224-1	0.04	0.50
CI 211	0.16	0.90
RD O	0.23	0.95
CI 204	0.02	0.95
CI 301	0.06	0.65
CI 302	0.04	0.95
CI 303	0.04	0.95
CI 304	0.06	0.95
CI 305	0.06	0.95
CI 306	0.06	0.95

GRAPHIC SCALE

0 50 100 200 400

SCALE: 1"=100'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

INLET DRAINAGE AREAS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

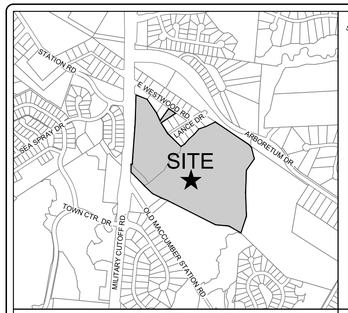
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DW: 1923
FB: 1923
SCALE: 1" = 100'
DESIGNED: RPB
DRAWN: AS
CHECKED: RPB

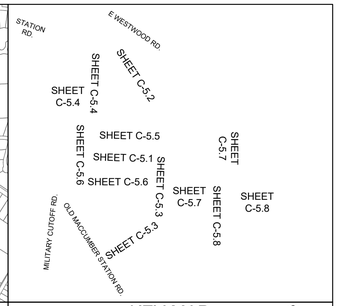
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-4.12

PEI JOB#: 18473.PE



VICINITY MAP
SCALE: 1" = 1,000'
NORTH



KEY MAP
SCALE: 1" = 500'
NORTH

SITE DATA TABULATION

PROJECT NAME & ADDRESS:	THE AVENUE MILITARY CUTOFF ROAD WILMINGTON NC, 28405
PROPERTY OWNER:	347 MCO, LLC 201 NORTH ELM STREET, SUITE 201 GREENSBORO, NC 27401
TAX PARCEL IDENTIFICATION #:	R05105-001-023-000, R05100-002-008-000
TOTAL SITE AREA:	42.19 ACRES (1,837,796 SF)
CURRENT ZONING: CAMA LAND USE CLASSIFICATION:	UMX (URBAN MIXED USE) WATERSHED RESOURCE PROTECTION

UTILITY INFORMATION

CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH CFPUA STANDARD DETAILS AND SPECIFICATIONS.

SANITARY SEWER

THIS PROJECT WILL CONNECT TO EXISTING 8" PVC SANITARY SEWER MAIN LOCATED ALONG THE REAR OF THE PROJECT. THIS PROJECT IS CONSTRUCTING PUBLIC AND PRIVATE GRAVITY SANITARY SEWER MAINS AND SERVICES TO EACH BUILDING. ALL SANITARY SEWER ALLOCATION IS PROVIDED BY THE CFPUA.

WATER

THIS PROJECT WILL CONNECT TO AN EXISTING 8" CI WATER MAIN LOCATED IN MILITARY CUTOFF ROAD AND OLD MACCUMBER STATION ROAD. THIS PROJECT IS CONSTRUCTING PUBLIC AND PRIVATE WATER MAINS AND SERVICES. THIS PROJECT IS ALSO CONSTRUCTING A PRIVATE FIRE SERVICE. ALL DOMESTIC WATER ALLOCATION IS PROVIDED BY CFPUA.

GRAVITY SEWER NOTES:

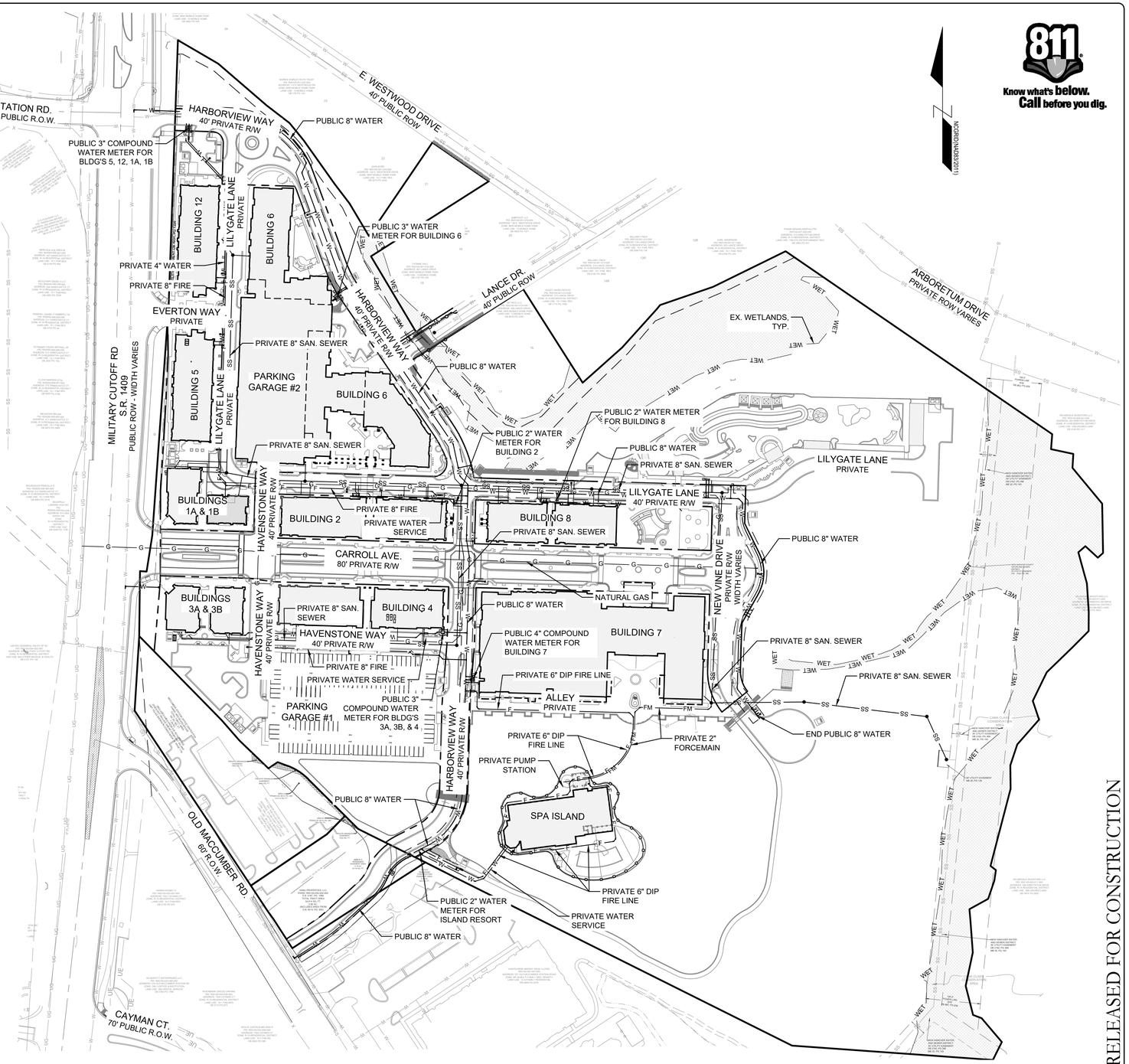
1. ALL MANHOLES LOCATED WITHIN 50' OF NORMAL HIGH WATER OR TIDE ELEVATION OF WATERS CLASSIFIED WS-II, WS-III, WS-IV, B, SA, ORW, HQW OR SB, AND WETLANDS DIRECTLY ABUTTING THESE WATERS, AND WETLANDS CLASSIFIED AS UWL OR SWL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS. ALL MANHOLES LOCATED WITHIN 10' OF ANY OTHER STREAM, LAKE, IMPOUNDMENT, WETLANDS CLASSIFIED AS WL, WATERS CLASSIFIED AS C, SC, OR WS-V, OR GROUND WATER LOWERING AND SURFACE DRAINAGE DITCHES SHALL CONFORM TO THE FOLLOWING:
   - 1.1. SEAMS SHALL BE EXTERNALLY TAPED / SEALED WITH WATERTIGHT MATERIAL.
   - 1.2. ALL MANHOLE INTERIORS SHALL BE FULLY LINED WITH WATERPROOF COATING.
   - 1.3. MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE AIR PRESSURE (VACUUM) TEST PRIOR TO BACKFILL.
2. ALL SEWER PIPE MATERIALS, INSTALLATION, AND TESTING SHALL MEET WATER MAIN STANDARDS WHEN LOCATED WITHIN 50' OF WETLANDS.
3. MANHOLES LOCATED WITHIN THE 100-YEAR FLOOD PLAIN WHERE THE DESIGN RIM ELEVATION IS NOT 24 INCHES (2 FOOT) ABOVE THE 100-YEAR FLOOD ELEVATION SHALL CONFORM TO THE FOLLOWING:
   - 3.1. MANHOLES SHALL BE WATERTIGHT AND VENTED 24 INCHES (2 FOOT) ABOVE THE 100-YEAR FLOOD ELEVATION. MANHOLES SHALL BE VENTED EVERY 1,000 FEET OR EVERY OTHER MANHOLE, WHICHEVER IS GREATER.
   - 3.2. PROVIDE WATERTIGHT, BOLTED RIM AND COVER.

UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)

1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
4. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
5. WHERE VERTICAL CLEARANCE IS LESS THAT 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
6. REFER TO CFPUA STANDARD NOTES WS-14 LOCATED ON THE DETAIL SHEETS.

FIRE & LIFE SAFETY NOTES:

1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN THE DEVELOPMENT AND PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE.
2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION
4. THE BUILDINGS CONSTRUCTION TYPE IS IIB AND MEETS NFPA.
5. LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.
6. HYDRANTS MUST BE WITHIN 150' OF THE FDC. THE FDC MUST BE WITHIN 40' OF THE FIRE APPARATUS PLACEMENT.
7. ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
8. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION (910-343-0696).
9. ALL ISOLATION VALVES WITHIN THE "HOT BOX" SHALL BE ELECTRICALLY SUPERVISED. FIRE SPRINKLER AND ALARM CONTRACTORS/INSTALLERS SHALL COORDINATE TO RUN WIRING FOR TAMPER SWITCH.
10. ALL HYDRANTS TO BE INSTALLED PER CITY OF WILMINGTON ORDINANCES AND CFPUA STANDARDS.
11. CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SECTION 510 OF THE 2018 NC FIRE CODE.



EX. SERVICES NOTE:
ANY EXISTING SERVICES NOT USED WILL NEED TO BE PROPERLY ABANDONED IN ACCORDANCE WITH CFPUA STANDARDS AND SPECIFICATIONS

FIRE LINE NOTE:
SITE CONTRACTOR SHALL COORDINATE WITH FIRE SUPPRESSION DESIGN BUILD TO CONFIRM FIRE SERVICE SIZE PRIOR TO ORDERING ANY MATERIAL OR INSTALLATION. SITE CONTRACTOR SHALL INSTALL FIRE LINE INSIDE RISER ROOM AND TERMINATE 12" AFF.

GRAPHIC SCALE
0 50 100 200 400
SCALE: 1"=100'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (f)
NC License #: C-2846

OVERALL UTILITY PLAN

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

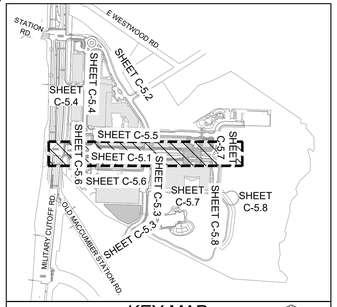
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-5.0

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

EX. SERVICES NOTE:
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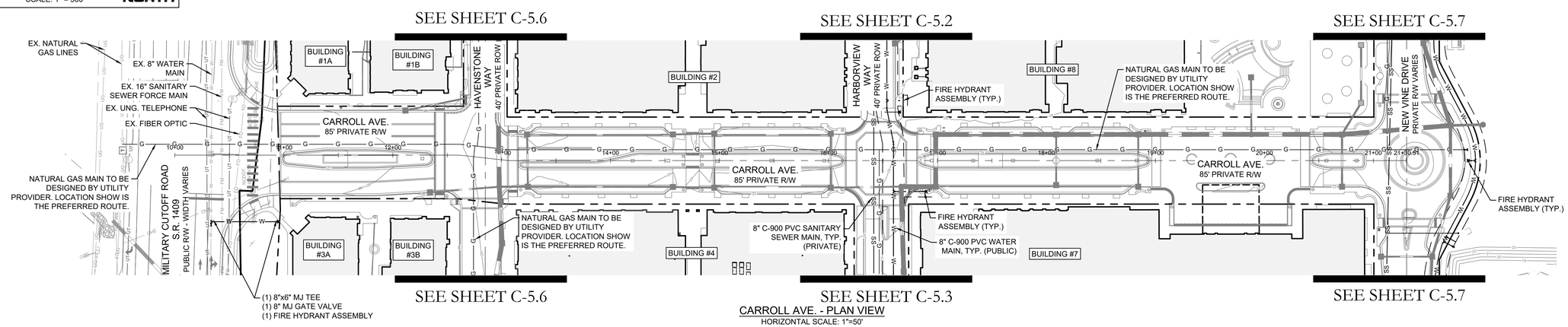
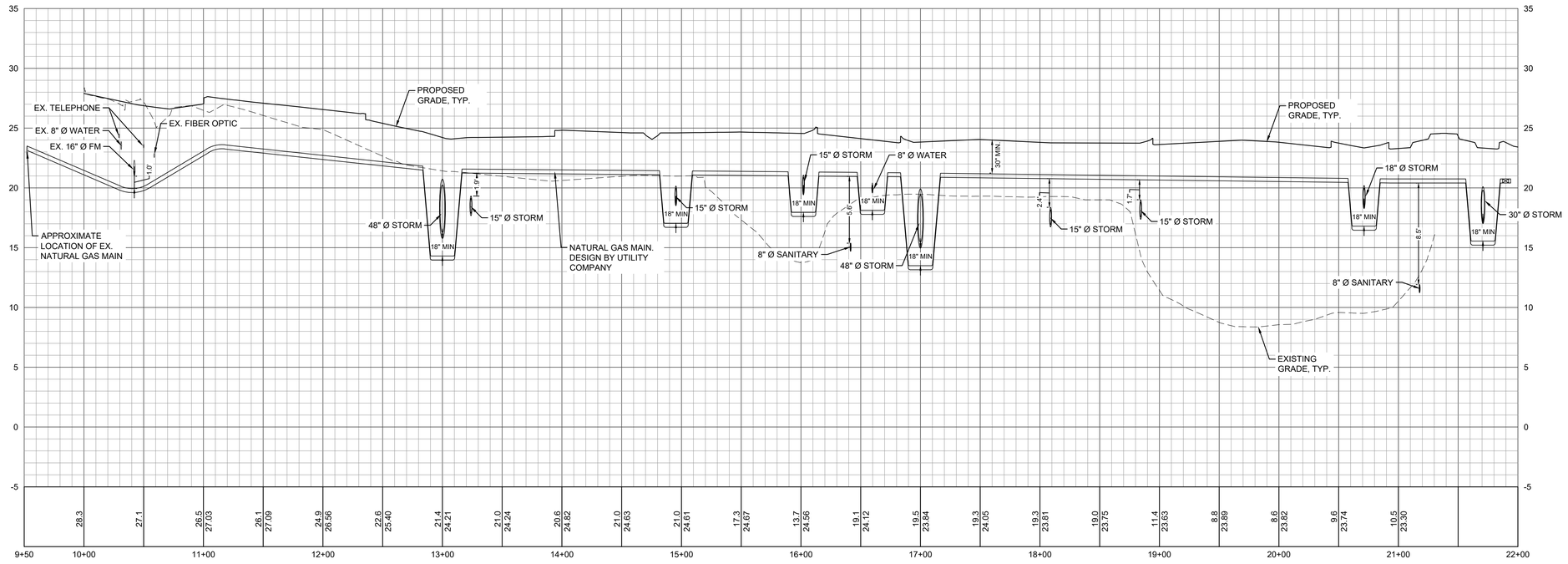
811 Know what's below. Call before you dig.



CARROLL AVE. - PLAN VIEW

HORIZONTAL SCALE: 1"=50'



CARROLL AVE. - PROFILE VIEW

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'

GRAPHIC SCALE

0 25 50 100 200

SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

UTILITY PLAN & PROFILE
CARROLL AVE.
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

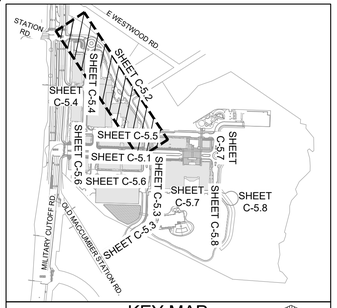
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-5.1

PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

NORTH

EX. SERVICES NOTE:
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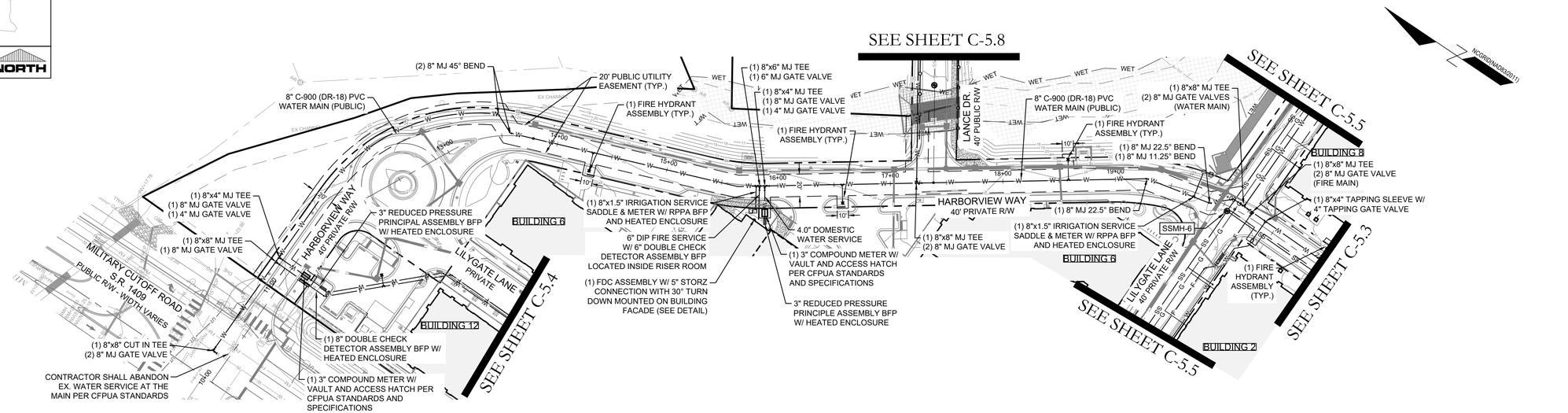
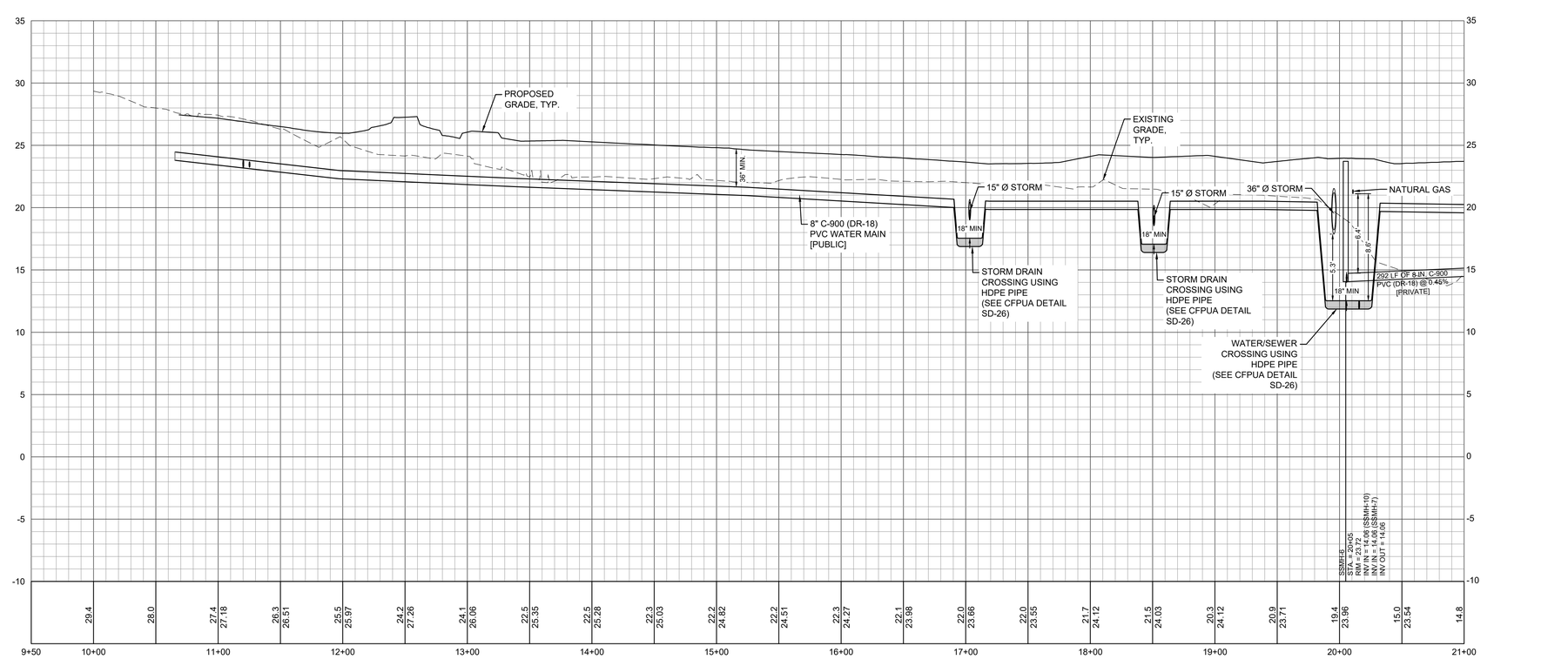


HARBORVIEW WAY - PLAN VIEW (STA. 10+00 - 21+00)

HORIZONTAL SCALE: 1"=50'



HARBORVIEW WAY - PROFILE VIEW (STA. 10+00 - 21+00)

HORIZONTAL SCALE: 1"=50' VERTICAL SCALE: 1"=5'

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNT ENGINEERING, INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

UTILITY PLAN & PROFILE
HARBORVIEW WAY
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

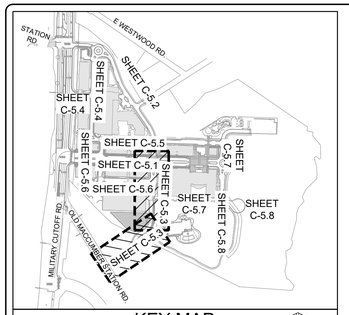
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL LAYOUT:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1"=50'
DESIGNED: RPR/ASR
DRAWN: ASR
CHECKED: RPR

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P BALLARD
09/15/23

C-5.2

PEI JOB#: 18473.PE

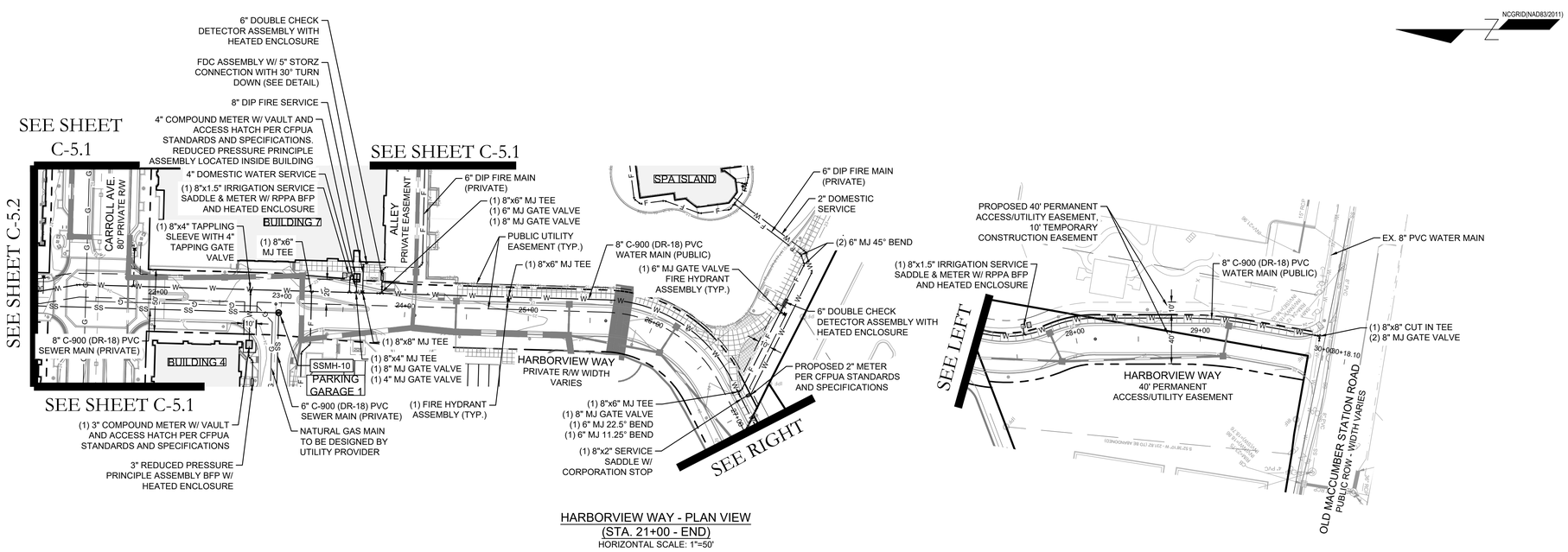


KEY MAP

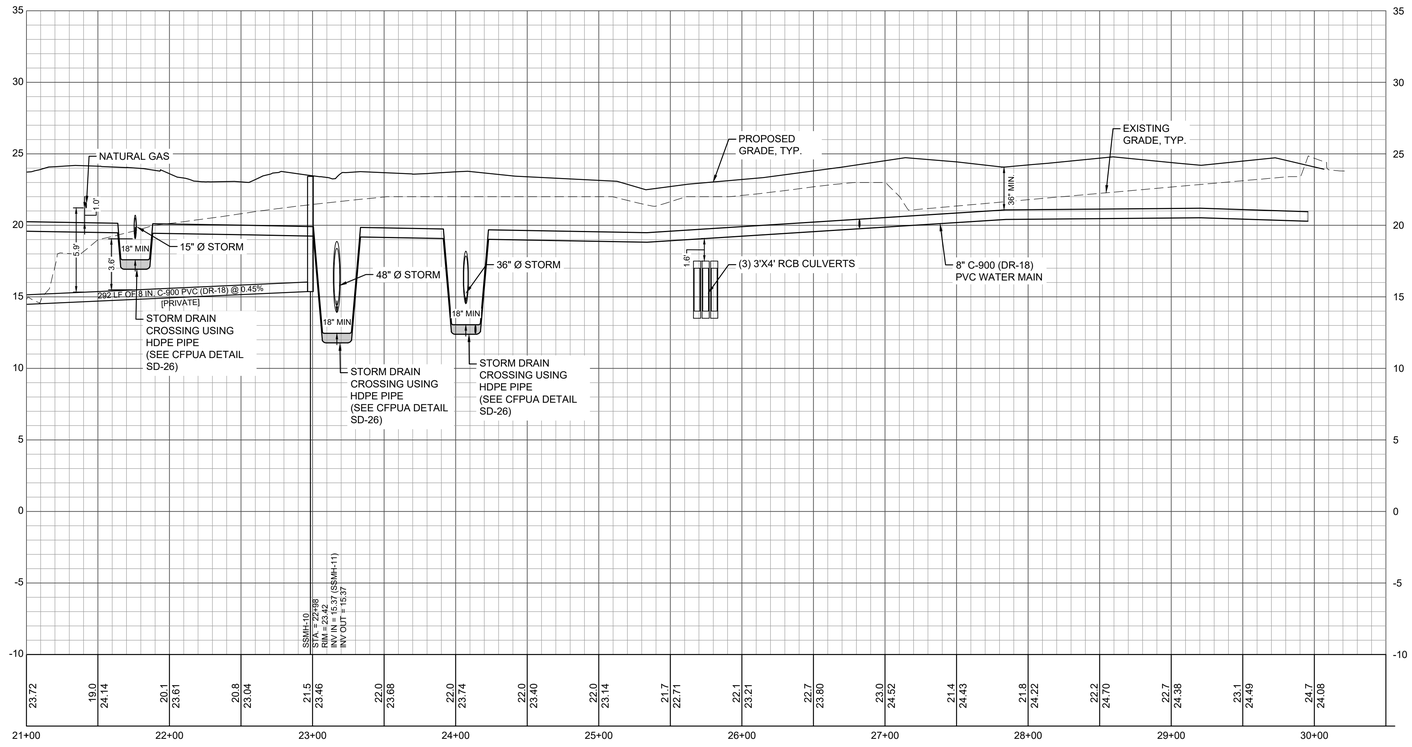
SCALE: 1" = 500'

NORTH

NCGRID(NAD83/2011)



HARBORVIEW WAY - PLAN VIEW
(STA. 21+00 - END)
HORIZONTAL SCALE: 1"=50'



HARBORVIEW WAY - PROFILE VIEW
(STA. 21+00 - END)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

Know what's below. Call before you dig.

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

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201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

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UTILITY PLAN & PROFILE
HARBORVIEW WAY
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

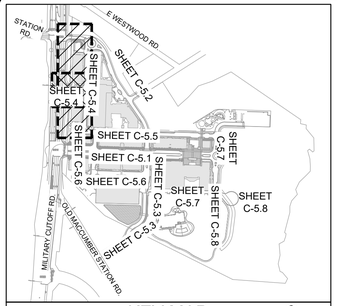
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN LAYOUT:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-5.3

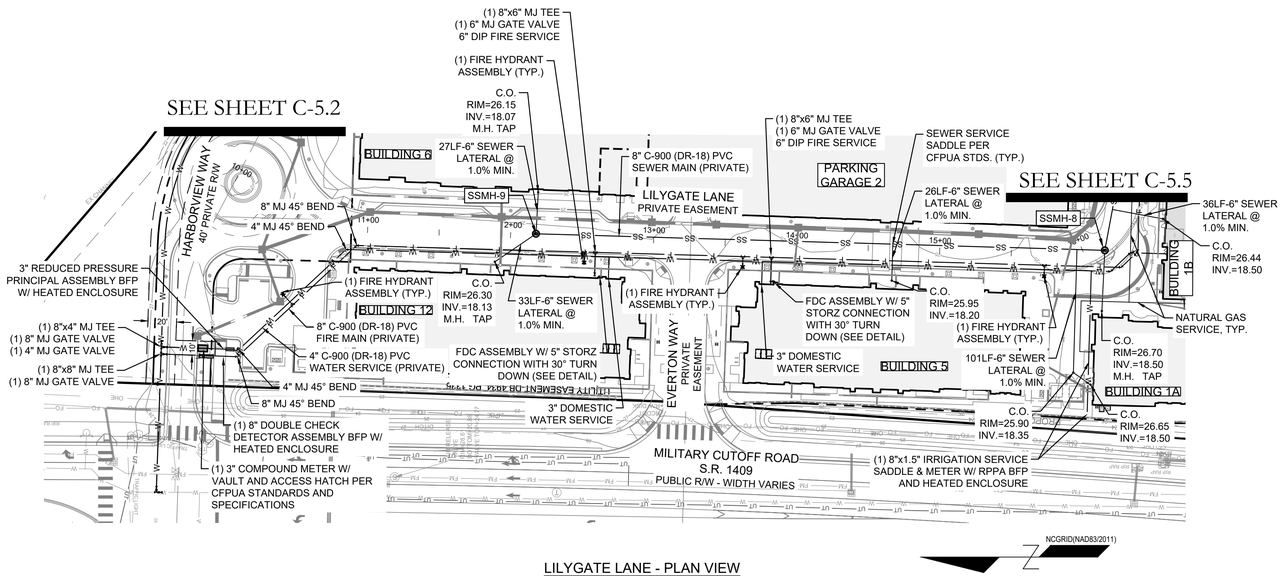
PEI JOB#: 18473.PE



KEY MAP

SCALE: 1" = 500'

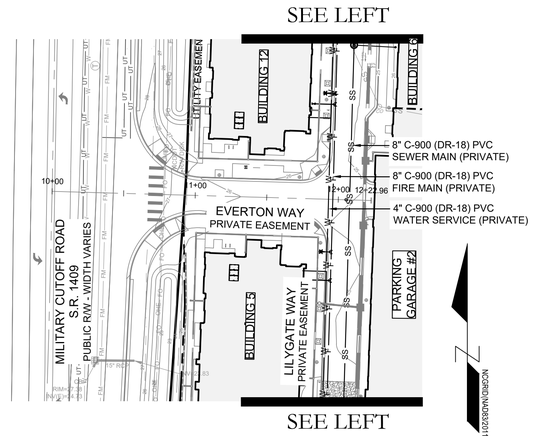
NORTH



LILYGATE LANE - PLAN VIEW

(STA. 10+00 - 16+50)

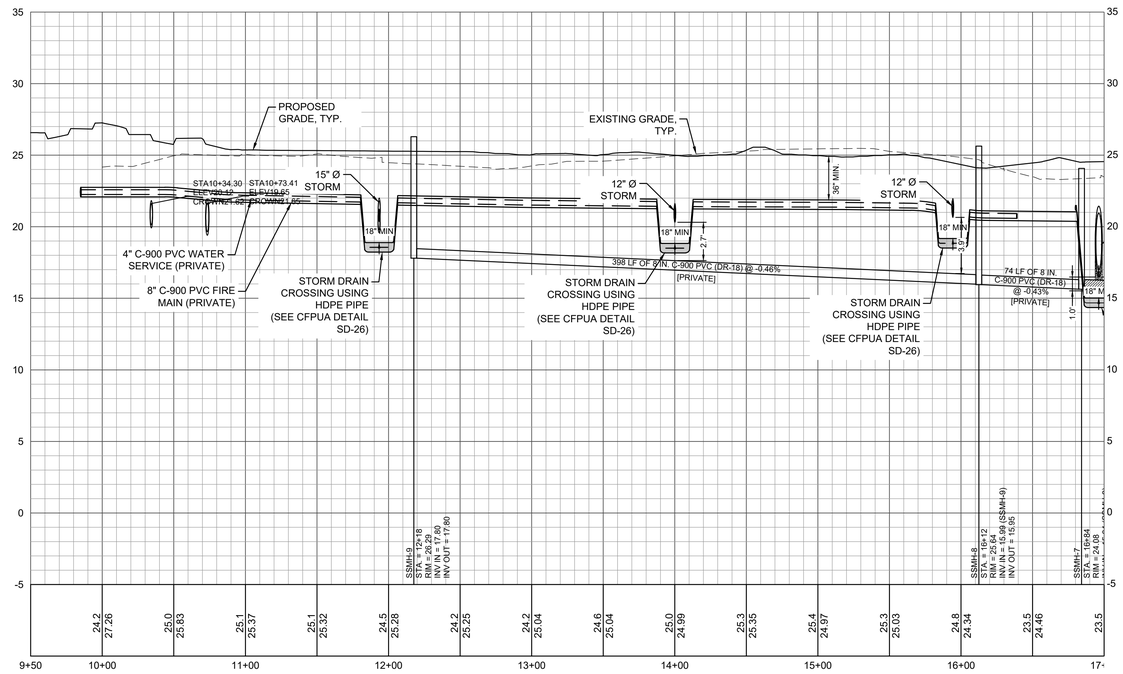
HORIZONTAL SCALE: 1"=50'



EVERTON WAY - PLAN VIEW

(STA. 10+00 - END)

HORIZONTAL SCALE: 1"=50'

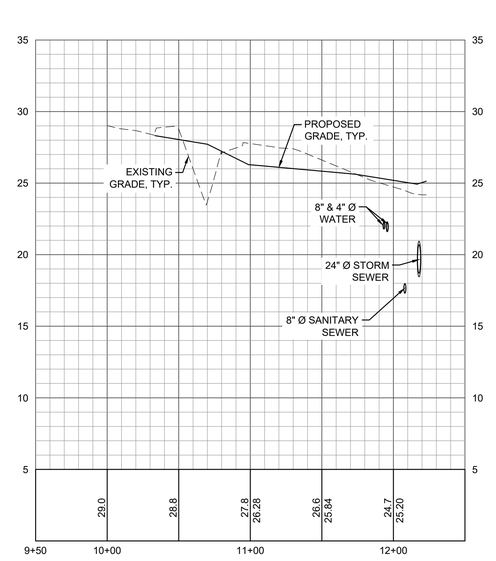


LILYGATE LANE - PROFILE VIEW

(STA. 10+00 - 16+50)

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'



EVERTON WAY - PROFILE VIEW

(STA. 10+00 - END)

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'

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

GRAPHIC SCALE

0 25 50 100 200

SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNT ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

UTILITY PLAN & PROFILE
LILYGATE LANE
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

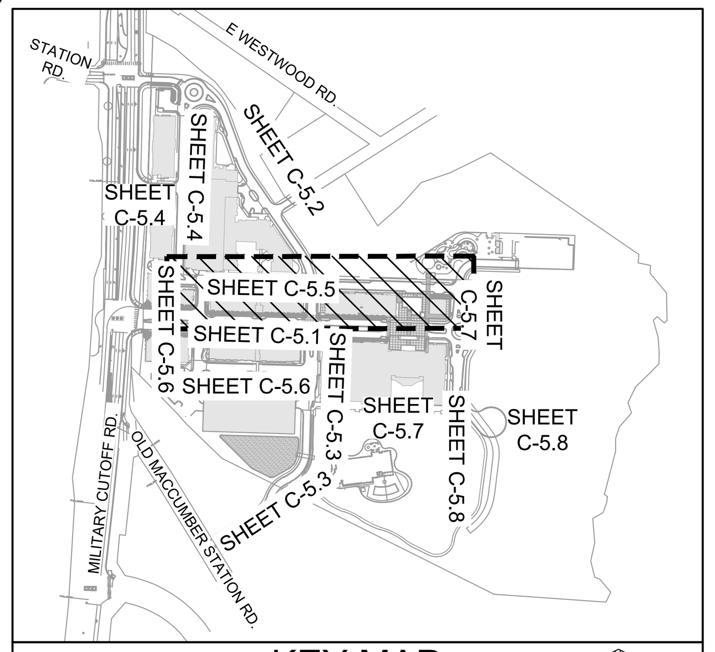
PROJECT STATUS
CONCEPTUAL LAYOUT
PRELIMINARY LAYOUT
PLAT/DESIGN
RELEASED FOR CONST.

DRAWING INFORMATION
DATE: 09/15/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

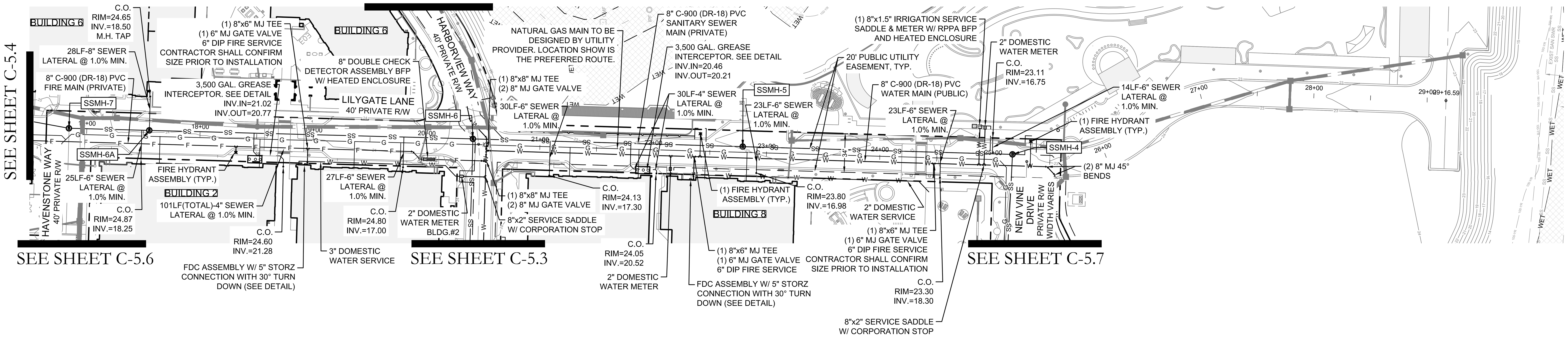
C-5.4

PEI JOB#: 18473.PE

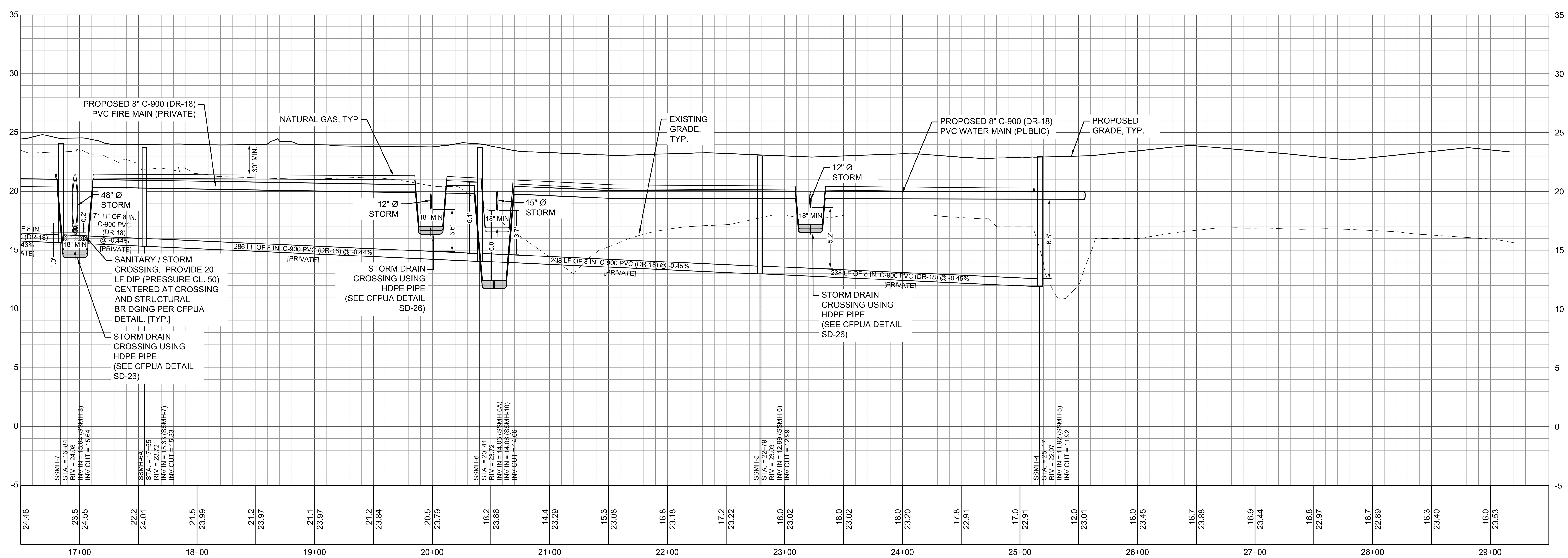


KEY MAP
SCALE: 1" = 500'

NCGRID(NAD83/2011)



LILYGATE LANE - PLAN VIEW
(STA. 16+50 - END)
HORIZONTAL SCALE: 1"=50'



LILYGATE LANE - PROFILE VIEW
(STA. 16+50 - END)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

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

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING, INC
122 Cinema Drive
Wilmington, North Carolina 28403
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NC License #: C-2846

UTILITY PLAN & PROFILE
LILYGATE LANE
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

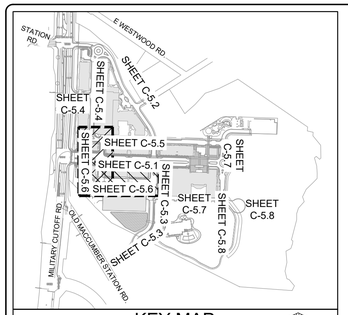
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-5.5

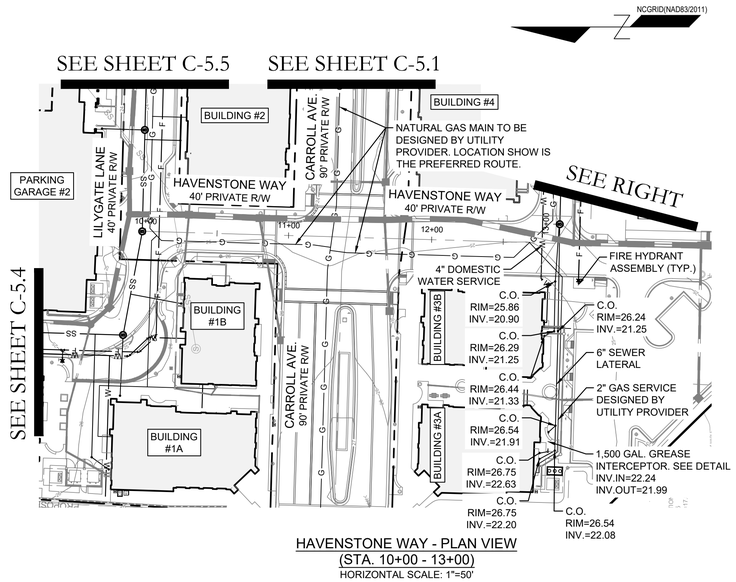
PEI JOB#: 18473.PE



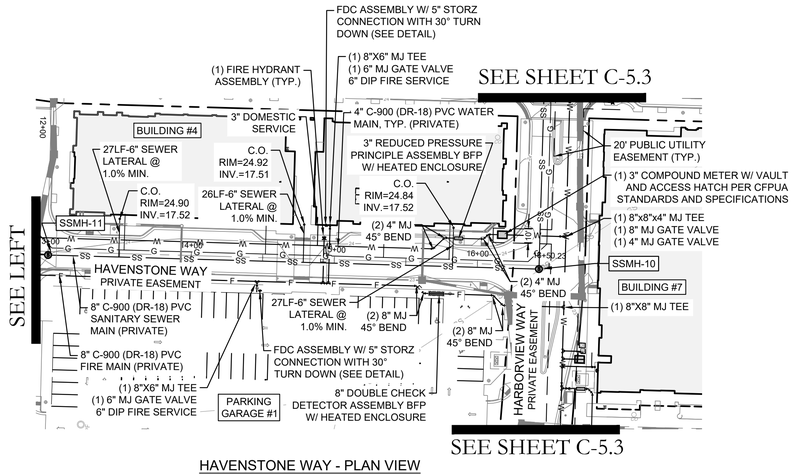
KEY MAP

SCALE: 1" = 500'

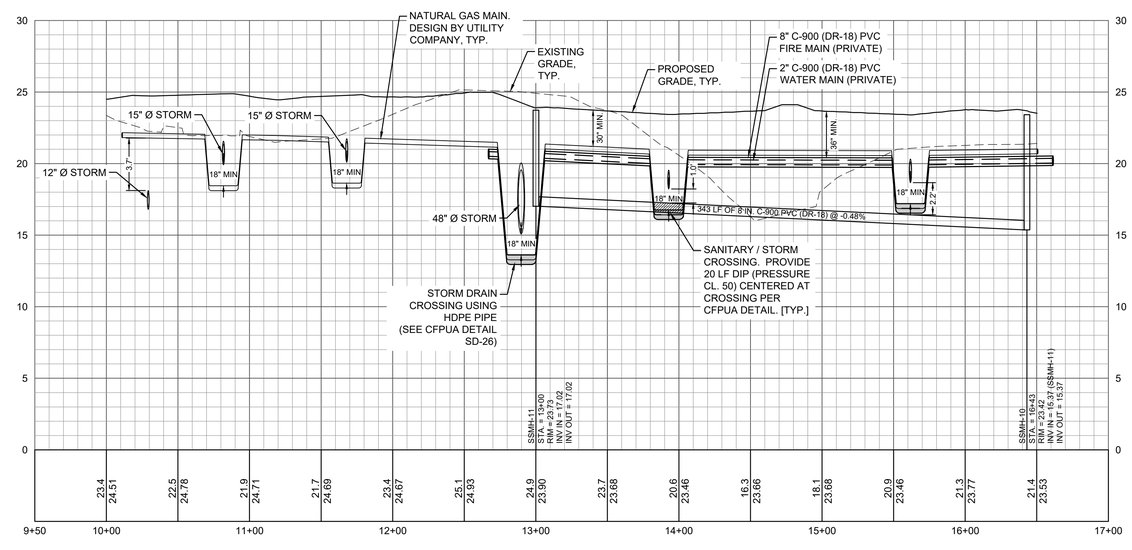
NORTH



HAVENSTONE WAY - PLAN VIEW
(STA. 10+00 - 13+00)
HORIZONTAL SCALE: 1"=50'



HAVENSTONE WAY - PLAN VIEW
(STA. 13+00 - END)
HORIZONTAL SCALE: 1"=50'



HAVENSTONE WAY - PROFILE VIEW
(STA. 10+00 - 15+43)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

Know what's below. Call before you dig.

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNT ENGINEERING, INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

UTILITY PLAN & PROFILE
HAVENSTONE WAY
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

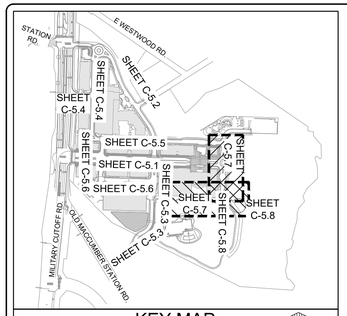
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-5.6

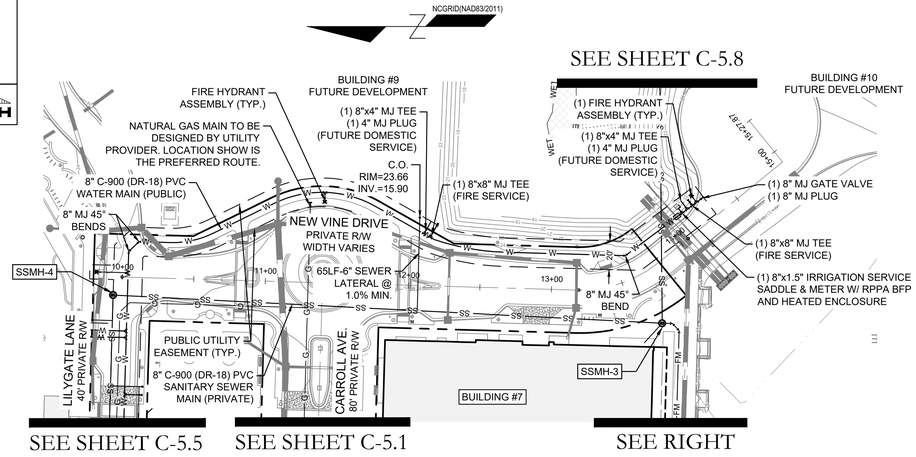
PEI JOB#: 18473.PE



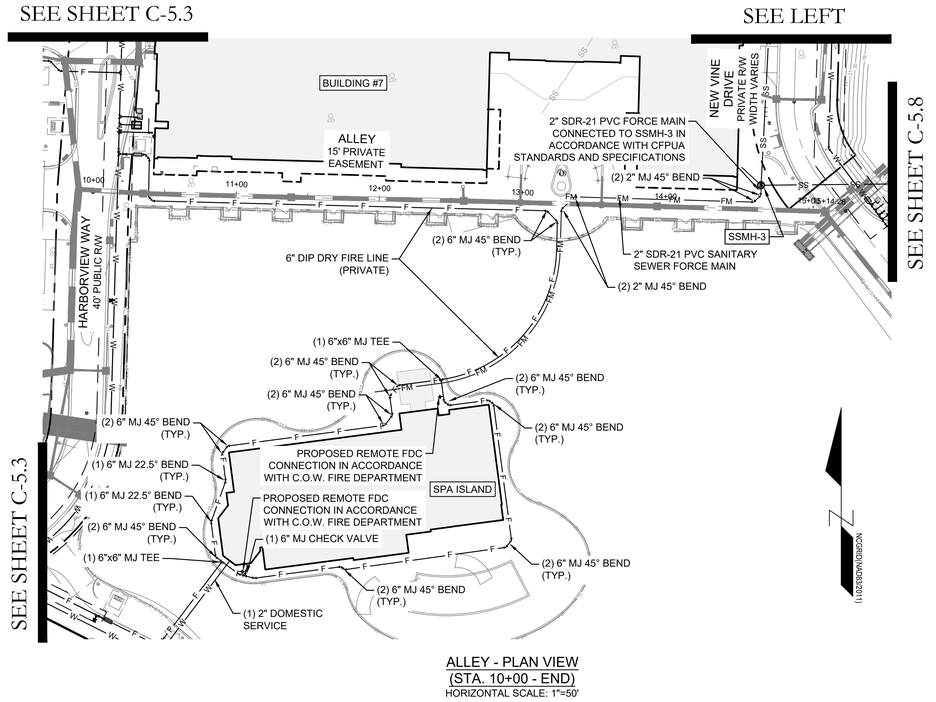
KEY MAP

SCALE: 1" = 500'

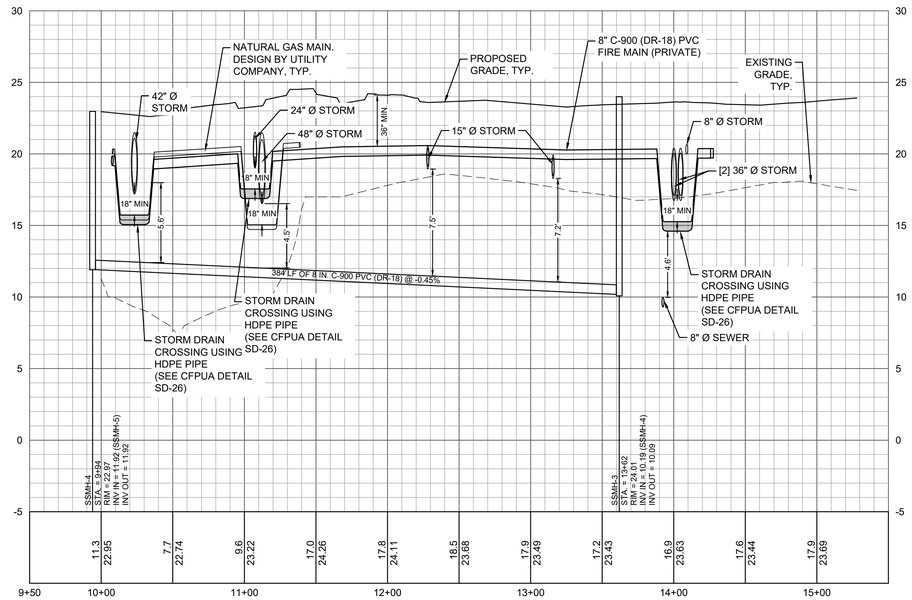
NORTH



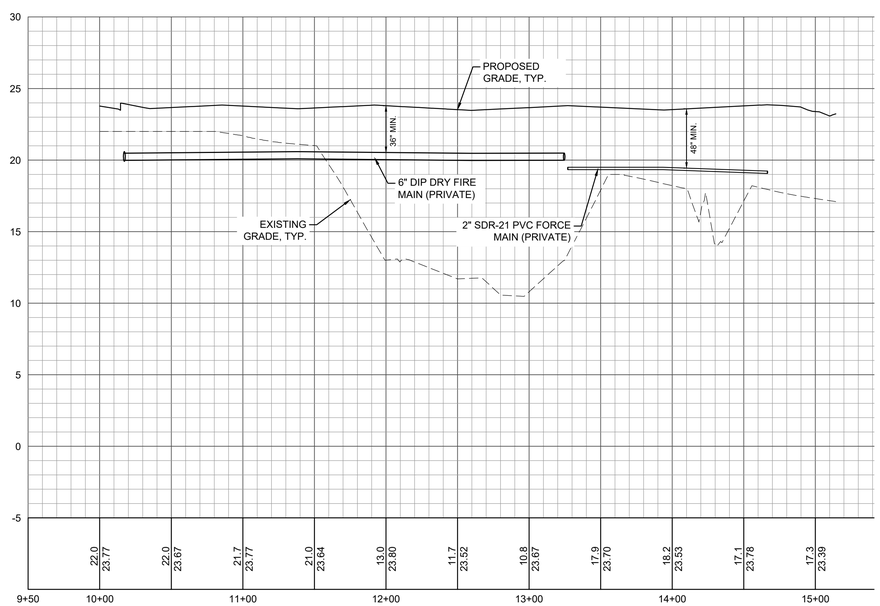
NEW VINE DRIVE - PLAN VIEW
(STA. 10+00 - END)
HORIZONTAL SCALE: 1"=50'



ALLEY - PLAN VIEW
(STA. 10+00 - END)
HORIZONTAL SCALE: 1"=50'



NEW VINE DRIVE - PROFILE VIEW
(STA. 10+00 - END)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



ALLEY - PROFILE VIEW
(STA. 10+00 - END)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

Know what's below. Call before you dig.

GRAPHIC SCALE
0 25 50 100 200
SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE
ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

UTILITY PLAN & PROFILE
NEW VINE DRIVE & ALLEY
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

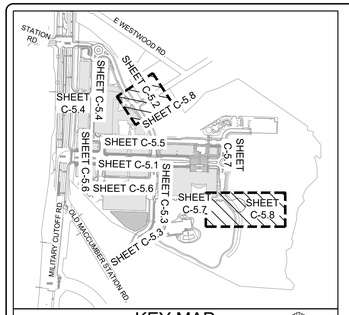
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: 1" = 50'
DESIGNED: RPB
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-5.7

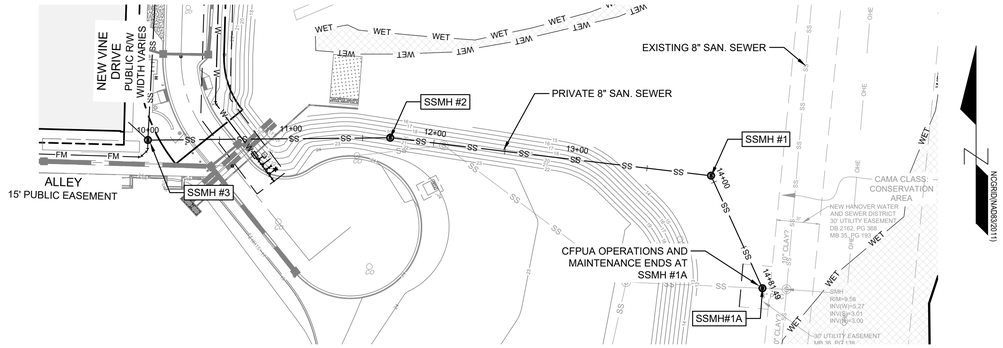
PEI JOB#: 18473.PE



KEY MAP

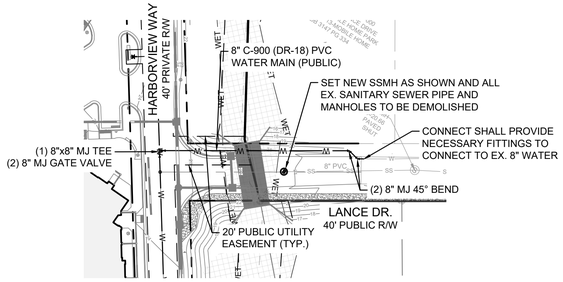
SCALE: 1" = 500'

NORTH



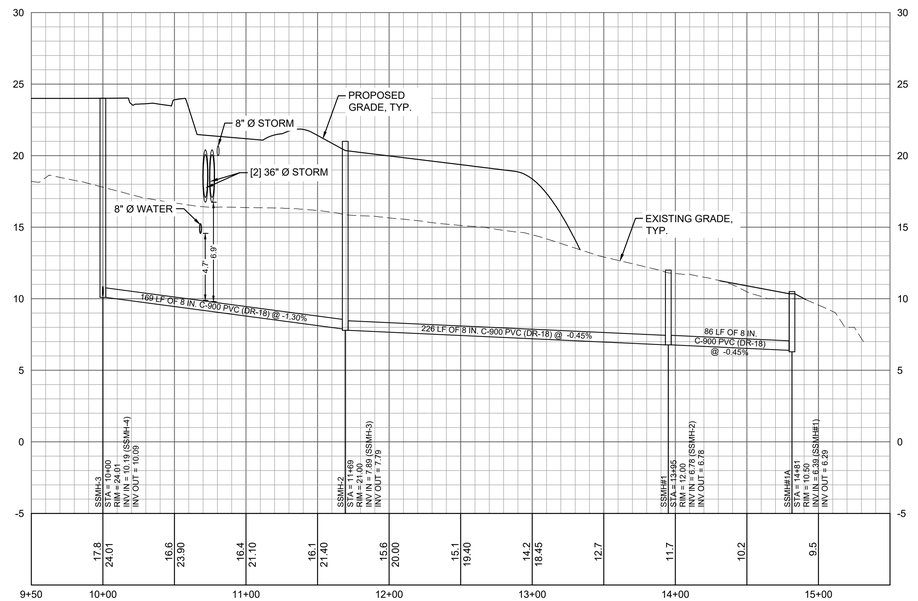
SANITARY SEWER OUTFALL - PLAN VIEW

HORIZONTAL SCALE: 1"=50'



LANCE DRIVE - PLAN VIEW

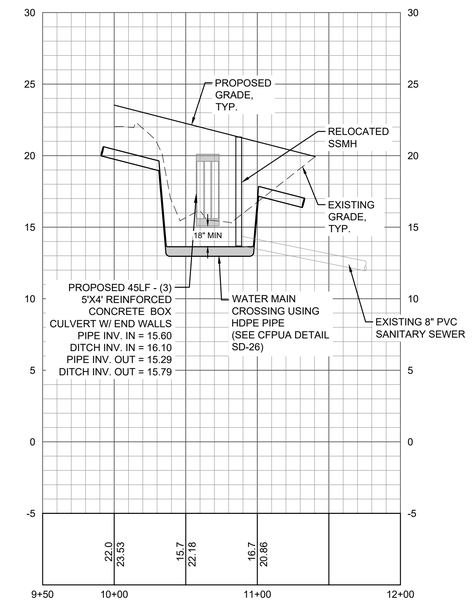
HORIZONTAL SCALE: 1"=50'



SANITARY SEWER OUTFALL - PROFILE VIEW

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'



LANCE DRIVE - PROFILE VIEW

HORIZONTAL SCALE: 1"=50'

VERTICAL SCALE: 1"=5'

Know what's below. Call before you dig.

GRAPHIC SCALE

0 25 50 100 200

SCALE: 1"=50'

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
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NC License #: C-2846

UTILITY PLAN & PROFILE
LANCE DRIVE
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/22/23
SCALE: 1" = 50'
DESIGNED: RPB/ASR
DRAWN: ASR
CHECKED: RPB

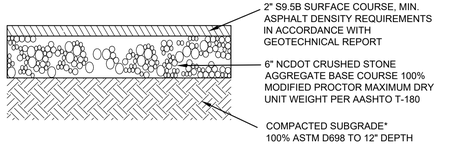
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD

09/15/23

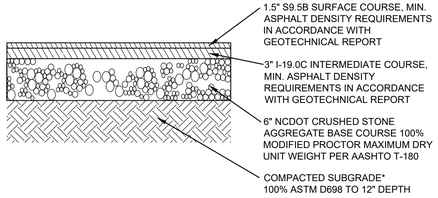
C-5.8

PEI JOB#: 18473.PE



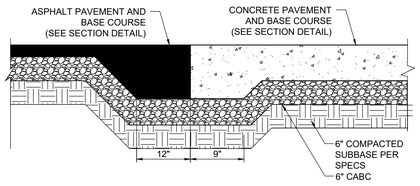
LIGHT DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE

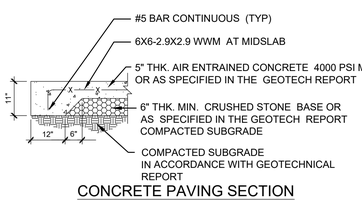


HEAVY DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE

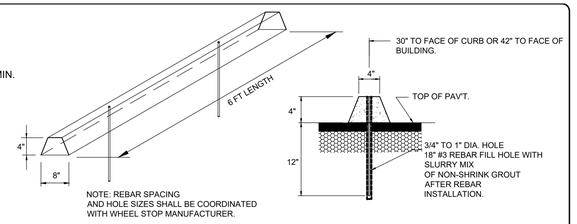


ASPHALT TO CONCRETE TRANSITION (TYPICAL)



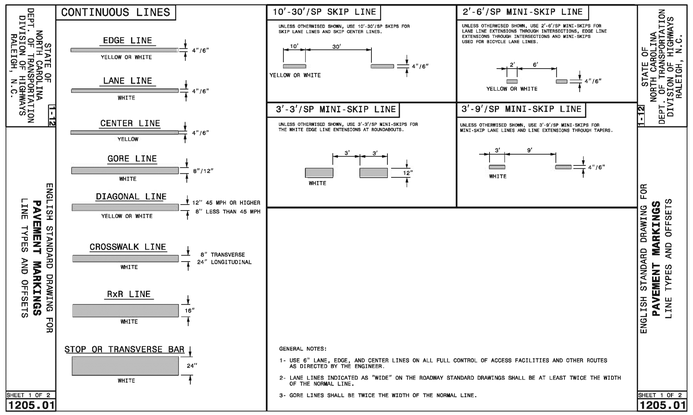
CONCRETE PAVING SECTION

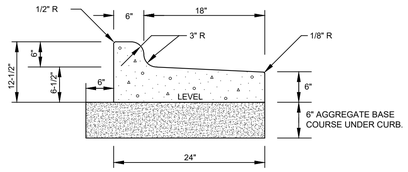
NOT TO SCALE



CONCRETE WHEEL STOP DETAIL

NOT TO SCALE



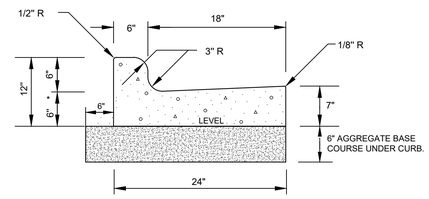


24" CURB AND GUTTER (REVERSE SLOPE)

NOT TO SCALE

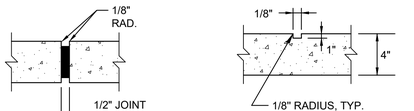
GENERAL NOTES:

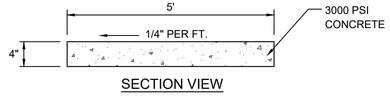
CONTRACTION JOINTS SHALL BE SPACED AT MAX. 10' INTERVALS, EXCEPT THAT A 15 FOOT SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10 FOOT INTERVALS. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED. ALL CONTRACTION JOINTS EXCEPT IN 5" X 6" MEDIAN CURB SHALL BE FILLED WITH JOINT SEALER. EXPANSION JOINTS SHALL BE SPACED AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



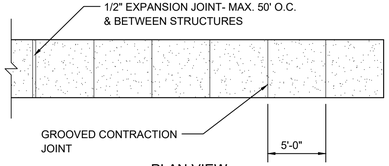
24" CURB AND GUTTER

NOT TO SCALE





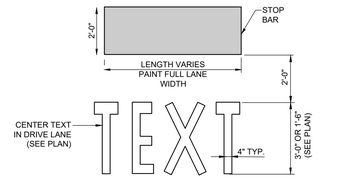
SECTION VIEW



PLAN VIEW

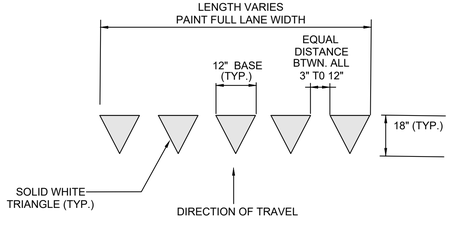
ON-SITE SIDEWALK DETAIL

NOT TO SCALE



TRAFFIC TEXT GRAPHIC AT STOP BAR

NOT TO SCALE

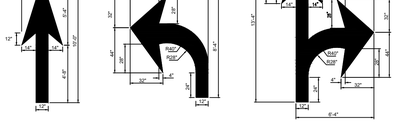


PLAN VIEW

YEILD TRIANGLE PAINT DETAIL

NOT TO SCALE

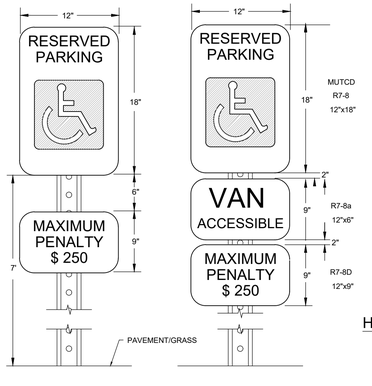
COMBINATION STRAIGHT AND LEFT OR RIGHT TURN ARROW

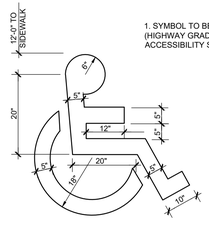


GENERAL NOTES
-ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR
-PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENCROACH INTO INTERSECTION AREAS.
-ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS UNLESS APPROVED BY THE ENGINEER.

PAVEMENT MARKINGS ARROW SYMBOLS

NOT TO SCALE





1. SYMBOL TO BE PAINTED (HIGHWAY GRADE) BLUE PER ACCESSIBILITY STANDARDS.

HANDICAPPED PARKING SYMBOL

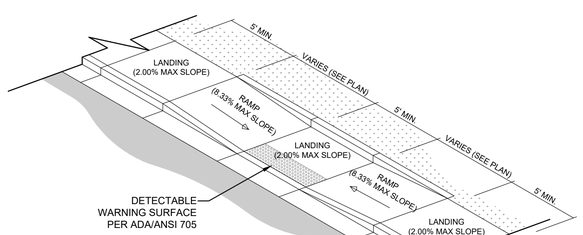
NOT TO SCALE

NOTES:

1. METAL POST AND ALL HARDWARE SHALL BE GALVANIZED STEEL, ASTM A307-90.
2. POST HOLES SHALL BE FILLED WITH GRANULAR BACKFILL IN 3-INCH TO 4-INCH LIFTS. THOROUGHLY HAND TAMP EACH LIFT AND CROWN BACKFILL AT TOP TO SHED WATER.
3. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
4. SIGNS SHALL BE CONSTRUCTED OF ALUMINUM, TYPE 6061-T6 AND IN CONFORMANCE WITH ASTM STD B-209. THICKNESS SHALL BE 0.80 INCHES.
5. TOP EDGE TREATMENT FILM SHALL BE 3" WIDE, CLEAR AND TRANSPARENT WITH A SUB-RESISTANT PRESSURE SENSITIVE NON-YELLOWING ADHESIVE, "SKOTCHCAL" TRANSPARENT FILE #639.
6. REFLECTIVE FACING MATERIAL SHALL BE SCOTCHLITE HIGH INTENSITY, MANUFACTURED BY 3M COMPANY.
7. SIGN LETTERING SHALL BE NPS MODIFIED CLARENDON TYPEFACE. UPPERCASE LETTERS SHALL BE 3.75" HEIGHT AND LOWERCASE LETTERS SHALL BE 2.5" HEIGHT WITH 3.75" SPACING BETWEEN LINES.
8. CORNER RADIUS OF SIGNS SHALL BE 2.5" ARROWS SHALL BE 5.625" LONG BY 3.75" HIGH.
9. MOUNT ON BUILDING OR METAL POST AS DIRECTED.

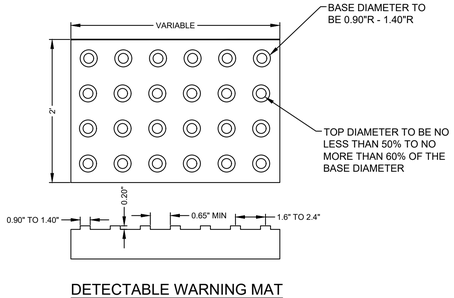
HANDICAP SIGN DETAIL

NOT TO SCALE



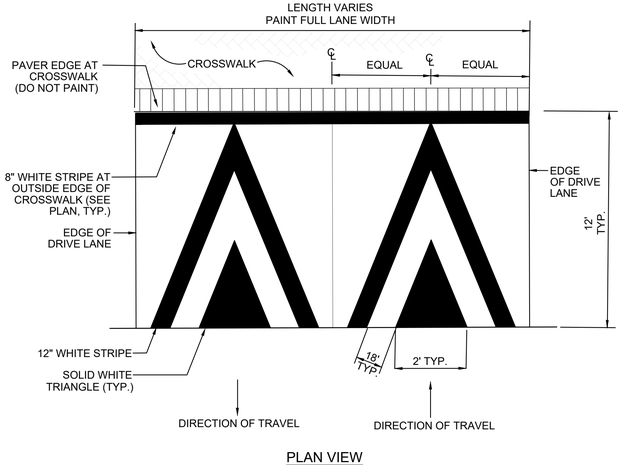
WHEELCHAIR RAMP - TYPE 1

NOT TO SCALE



DETECTABLE WARNING MAT

NOT TO SCALE



PLAN VIEW

RAISED PEDESTRIAN CROSSWALK MARKING

NOT TO SCALE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

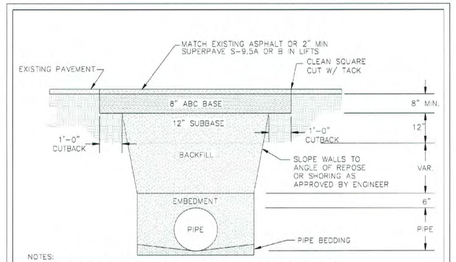
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PERMITTING:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: N.T.S.
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-6.0A

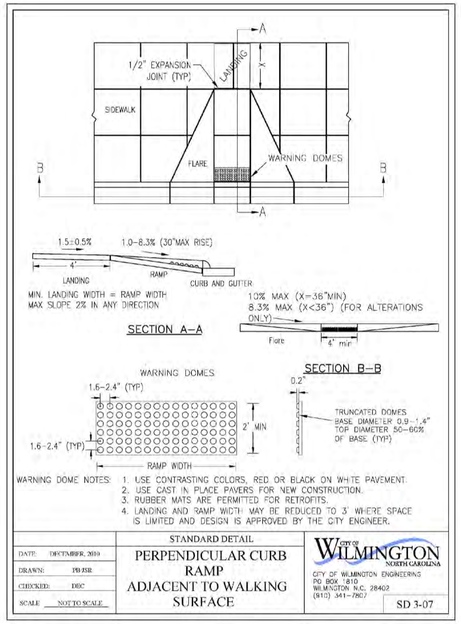
PEI JOB#: 18473.PE



NOTES:

1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
3. 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
4. BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS
5. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
7. ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
8. 1'-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%

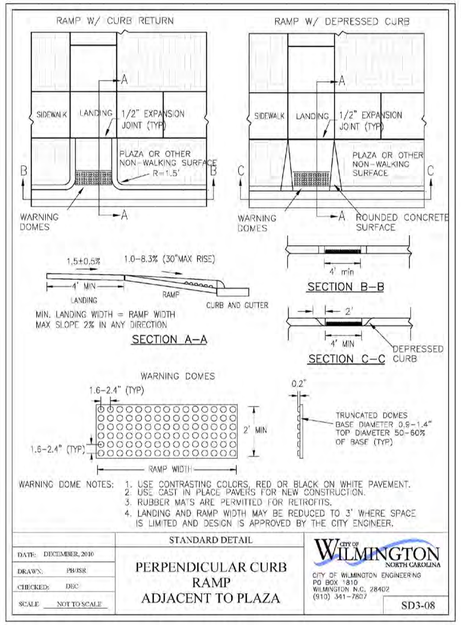
DATE: September 18, 2008	STANDARD DETAIL
DRAWN BY JSR	PAVEMENT REPAIRS DETAIL
CHECKED BY D.E.C., P.E.	CITY OF WILMINGTON ENGINEERING OFFICE 414 CHESTNUT STREET WILMINGTON, N.C. 28401 (910) 341-7807
SCALE NOT TO SCALE	SD 1-05



WARNING DOME NOTES:

1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

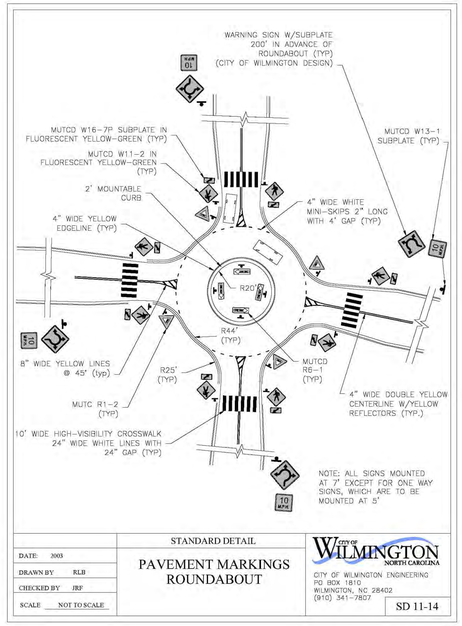
DATE: DECEMBER, 2010	STANDARD DETAIL
DRAWN: PB/JSR	PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE
CHECKED: DEC	CITY OF WILMINGTON ENGINEERS PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
SCALE NOT TO SCALE	SD 3-07



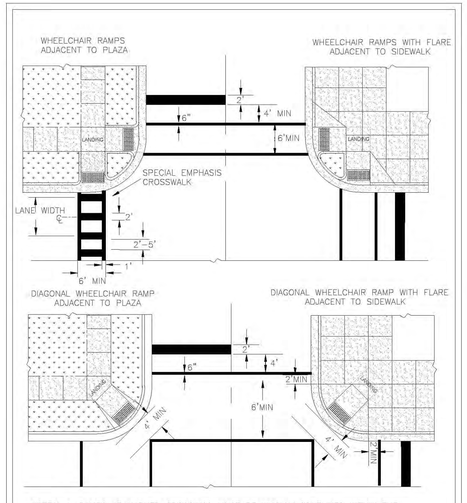
WARNING DOME NOTES:

1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

DATE: DECEMBER, 2010	STANDARD DETAIL
DRAWN: PB/JSR	PERPENDICULAR CURB RAMP ADJACENT TO PLAZA
CHECKED: DEC	CITY OF WILMINGTON ENGINEERS PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
SCALE NOT TO SCALE	SD3-08



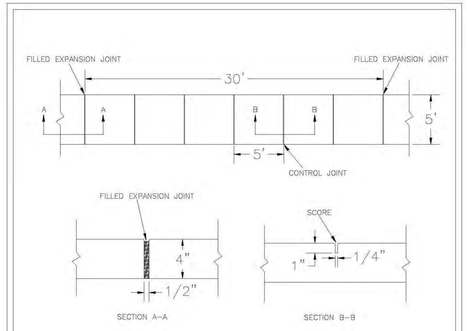
DATE: 2003	STANDARD DETAIL
DRAWN BY RLB	PAVEMENT MARKINGS ROUNDABOUT
CHECKED BY JRF	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, NC 28402 (910) 341-7807
SCALE NOT TO SCALE	SD 11-14



NOTES:

1. RAMPS AT MARKED CROSSINGS MUST BE WHOLLY CONTAINED WITHIN THE MARKINGS.
2. RAMPS AND LANDINGS MUST MEET CURRENT ACCESSIBILITY STANDARDS.

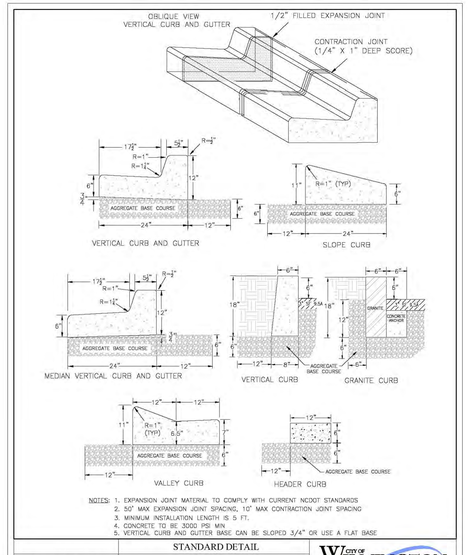
DATE: AUGUST, 2011	STANDARD DETAIL
DRAWN: PB/JSR	INTERSECTION LAYOUT
CHECKED: DEC	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
SCALE NOT TO SCALE	SD 3-09



NOTES:

1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL
6. 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS
7. MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
8. MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
9. MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

DATE: OCTOBER, 2010	STANDARD DETAIL
DRAWN: PB/JSR	SIDEWALK
CHECKED: DEC	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
SCALE NOT TO SCALE	SD 3-10



NOTES:

1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

DATE: AUGUST, 2011	STANDARD DETAIL
DRAWN: PB/JSR	CURBING
CHECKED: DEC	CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
SCALE NOT TO SCALE	SD 3-11

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
3/10/2022 APPROVED ADMINISTRATIVE MODIFICATION

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.

DRAWING INFORMATION
DATE: 09/15/23
SCALE: N.T.S.
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P BALLARD
09/15/23

C-6.0B

PEI JOB#: 18473.PE

SEDIMENT BASIN #1 CALCULATIONS

Drainage Area (100 Ac. Max.) = 13.20 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 37.7 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 16,379 sf

Min. Volume (1,800 cf/Ac.) = 23,760 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
14.00	5,438	0	0	
15.00	9,175	7,307	7,307	
16.00	15,501	12,338	19,645	
16.30	16,400	4,785	24,430	Skimmer Elevation (16.30)
17.00	22,238	13,523	37,953	
18.00	32,501	27,370	65,322	Emergency Spillway Elev. (18.0)
19.00	45,036	38,769	104,091	

Spillway Info.:

Emergency Spillway. = 18.00

Proposed Sediment Storage EL. = 16.30

Volume at Proposed EL. = 24,430 cf

Surface Area at Proposed EL. = 16,400 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 207 ft

Width = 70 ft

L to W Ratio = 3:1

Skimmer Design:

Volume = 40,893 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 4.0 inches

Orifice Size: 3.3 inches

SEDIMENT BASIN #2 CALCULATIONS

Drainage Area (100 Ac. Max.) = 5.60 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 16.0 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 6,949 sf

Min. Volume (1,800 cf/Ac.) = 10,080 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
11.00	4,579	0	0	
12.00	5,412	4,996	4,996	
13.00	6,313	5,863	10,858	
13.75	7,027	5,003	15,861	Skimmer Elevation (13.75)
14.00	7,272	1,787	17,648	
15.00	8,288	7,780	25,428	
15.25	8,551	2,105	27,533	Emergency Spillway Elev. (15.25)
16.00	9,361	8,825	34,252	

Spillway Info.:

Emergency Spillway. = 15.25

Proposed Sediment Storage EL. = 13.75

Volume at Proposed EL. = 15,861 cf

Surface Area at Proposed EL. = 7,027 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 88 ft

Width = 80 ft

L to W Ratio = 1:1

Skimmer Design:

Volume = 11,672 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 2.5 inches

Orifice Size: 2.0 inches

SEDIMENT BASIN #3 CALCULATIONS

Drainage Area (100 Ac. Max.) = 1.80 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 5.1 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 2,234 sf

Min. Volume (1,800 cf/Ac.) = 3,240 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
11.00	1,723	0	0	
12.00	2,275	1,999	1,999	
13.00	2,899	2,587	4,586	Skimmer Elevation (13.75)
14.00	3,595	3,247	7,833	
15.00	4,364	3,980	11,813	Emergency Spillway Elev. (15.00)
16.00	5,204	4,784	16,597	

Spillway Info.:

Emergency Spillway. = 15.00

Proposed Sediment Storage EL. = 13.00

Volume at Proposed EL. = 4,586 cf

Surface Area at Proposed EL. = 2,899 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 80 ft

Width = 55 ft

L to W Ratio = 1:1

Skimmer Design:

Volume = 7,227 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 2.0 inches

Orifice Size: 1.7 inches

SEDIMENT BASIN #4 CALCULATIONS

Drainage Area (100 Ac. Max.) = 1.19 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 3.4 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 1,477 sf

Min. Volume (1,800 cf/Ac.) = 2,142 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
13.00	759	0	0	
14.00	1,143	951	951	
15.00	1,600	1,372	2,323	Skimmer Elevation (15.0)
16.00	2,128	1,864	4,187	
17.00	2,728	2,428	6,615	Emergency Spillway Elev. (17.0)
18.00	3,400	3,064	9,679	

Spillway Info.:

Emergency Spillway. = 17.00

Proposed Sediment Storage EL. = 15.00

Volume at Proposed EL. = 2,323 cf

Surface Area at Proposed EL. = 1,600 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 70 ft

Width = 50 ft

L to W Ratio = 1:1

Skimmer Design:

Volume = 4,292 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 1.5 inches

Orifice Size: 1.4 inches

SEDIMENT BASIN #5 CALCULATIONS

Drainage Area (100 Ac. Max.) = 2.82 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 8.0 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 3,499 sf

Min. Volume (1,800 cf/Ac.) = 5,076 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
10.00	2,340	0	0	
11.00	3,025	2,683	2,683	
12.00	3,782	3,404	6,086	Skimmer Elevation (12.0)
13.00	4,611	4,197	10,283	
14.00	5,512	5,062	15,344	Emergency Spillway Elev. (14.0)
15.00	6,486	5,999	21,343	

Spillway Info.:

Emergency Spillway. = 14.00

Proposed Sediment Storage EL. = 12.00

Volume at Proposed EL. = 6,086 cf

Surface Area at Proposed EL. = 3,782 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 108 ft

Width = 60 ft

L to W Ratio = 2:1

Skimmer Design:

Volume = 9,258 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 2.0 inches

Orifice Size: 1.9 inches

SEDIMENT BASIN #6 CALCULATIONS - WET POND #1

Drainage Area (100 Ac. Max.) = 30.12 Ac. I_{25} = 8.15

$Q_{25yr.\ [Q=CIA]}$ = 85.9 cfs [C=0.35, I_{25} = 8.15, tc=10]

Requirements:

Min. Surface Area (435 sf/cfs) = 37,374 sf

Min. Volume (1,800 cf/Ac.) = 54,216 cf

Provided:

Basin Volume:

Contour	Contour Area (SF)	Incremental Volume (CF)	Cumulative Volume (CF)	
20.00	193,986	0	0	Skimmer Elevation (20.00)
21.00	193,986	193,986	193,986	
22.00	193,986	193,986	387,972	
22.50	193,986	96,993	484,965	Riser Elev. (22.50)
23.00	193,986	96,993	581,958	
24.00	193,986	193,986	775,944	

Spillway Info.:

Emergency Spillway. = 22.50

Proposed Sediment Storage EL. = 21.00

Volume at Proposed EL. = 193,986 cf

Surface Area at Proposed EL. = 193,986 sf

Pond Dimensions: (@ Principal Spillway El.)

Length = 108 ft

Width = 60 ft

L to W Ratio = 2:1

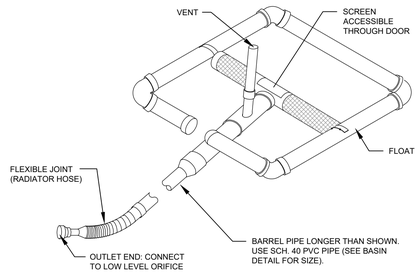
Skimmer Design:

Volume = 484,965 cf

Days to Drain = 3 days

Skimmer Size (Faircloth Guidelines): 8.0 inches

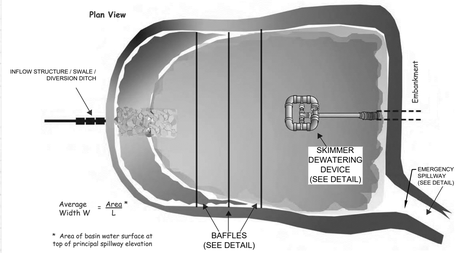
Orifice Size: 6.4 inches



BASIN #	SKIMMER SIZE (IN.)	SKIMMER ORIFICE (IN.)
SSB 1	4.0	3.3
SSB 2	2.5	3.0
SSB 3	2.0	1.7
SSB 4	1.5	1.4
SSB 5	2.0	1.9
SSB 6	8.0	6.4

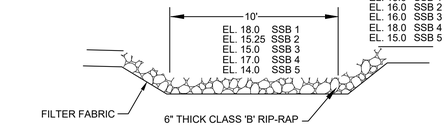
FAIRCLOTH SKIMMER DETAIL

NOT TO SCALE



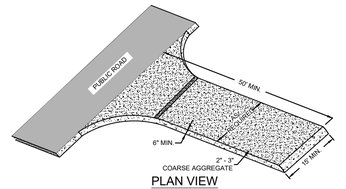
SKIMMER BASIN DETAIL

NOT TO SCALE



EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

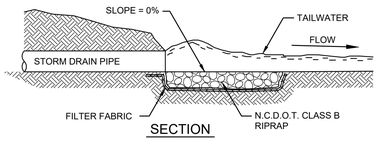


PLAN VIEW

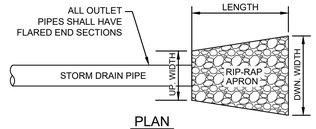
SECTION VIEW

TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



SECTION



PLAN

RIP-RAP APRON

NOT TO SCALE

RIP-RAP SCHEDULE					
APRON #	PIPE DIA. (IN.)	LENGTH (FT.)	UP.WIDTH (FT.)	DWN.WIDTH (FT.)	THICKNESS (IN.)
SSB 1	24	22	6	24	18
SSB 2	18	14	4.5	15.5	18
SSB 3	18	9	4.5	10.5	18
SSB 4	18	9	4.5	10.5	18
SSB 5	18	9	4.5	10.5	18
WET POND	(2) 36	26	12	30	18
FES-100	60	20	15	13	18
FES-200	60	20	15	13	18
EC PIPE	12	6	3	7	18
DITCH	8'X3'	51	24	59	18

BAFFLES

CONSTRUCTION SPECIFICATION

1. Grade the basin so that the bottom is level front to back and side to side.
2. Install posts or saw horses across the width of the sediment trap (Practice 6.62, *Sediment Fence*).
3. Steel posts should be driven to a depth of 24 inches, spaced a maximum of 4 feet apart, and installed up the side of the basin as well. The top of the fabric should be 6 inches higher than the invert of the spillway. Tops of baffles should be 2 inches lower than the top of the berms.
4. Install at least three rows of baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 baffles.
5. When using posts, add a support wire or rope across the top of the measure to prevent sagging.
6. Wrap jute, backed by coir material, over a sawhorse or the top wire. Hammer rebar into the sawhorse legs for anchoring. The fabric should have five to ten percent openings in the weave. Attach fabric to a rope and a support structure with zip ties, wire or staples.
7. The bottom and sides of the fabric should be anchored in a trench or pinned with 8-inch erosion control matting staples.
8. Do not splice the fabric, but use a continuous piece across the basin.

MAINTENANCE

Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.

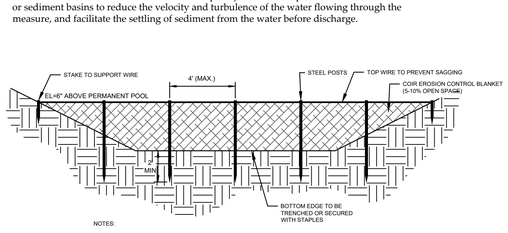
Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits when it reaches half full to provide adequate storage volume for the next rain and to reduce pressure on the baffles. Take care to avoid damaging the baffles during cleanout. Sediment depth should never exceed half the designed storage depth.

After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

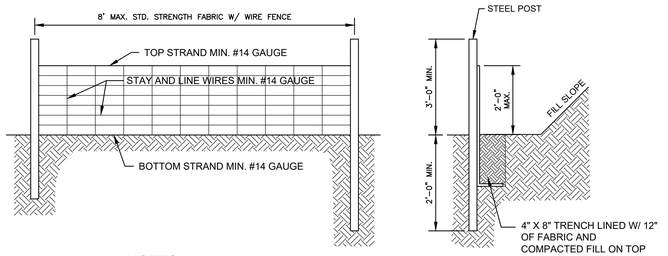
NOTE:

Porous baffles shall be installed inside all temporary sediment traps, rock dams, skimmer basin or sediment basins to reduce the velocity and turbulence of the water flowing through the measure, and facilitate the settling of sediment from the water before discharge.



BAFFLE DETAIL

NOT TO SCALE



NOTES:

1. WIRE FENCE SHALL BE USED ON ALL ON-SITE SILT FENCE AND SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
2. SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN'S OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
3. SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

THE AVENUE

Temporary Sediment Fence

Requirement = 100 ft per 0.25 acres disturbed

DA #	Disturbed area (ac)	Total drainage area (ac)	Silt Fence Required (ft)	Silt Fence Provided (ft)
1	0.18 ac	0.18 ac	72	275
2	0.13 ac	0.13 ac	52	149
3	0.23 ac	0.23 ac	92	407
4	0.37 ac	0.37 ac	148	596

TEMPORARY SILT FENCE

NOT TO SCALE

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.

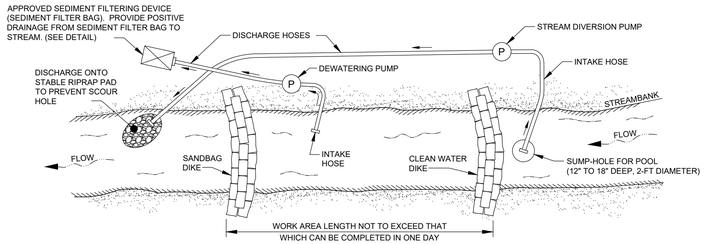
DRAWING INFORMATION
DATE: 09/01/23
SCALE: N.T.S
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-6.1

PEI JOB#: 18473.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



TEMPORARY PUMP AROUND SEQUENCE

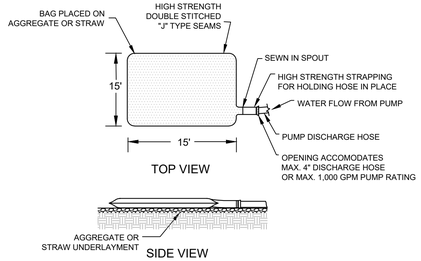
1. SET UP PUMP WITH SUCTION AND DISCHARGE HOSE.
2. INSTALL UP-STREAM SANDBAG DAM.
3. INSTALL DOWN-STREAM SANDBAG DAM.
4. THE PUMP MUST RUN CONTINUOUSLY WHILE WORKING IN THE STREAM.
5. STREAMBANKS MUST BE STABILIZED AT THE END OF EACH DAY.

NOTES:

1. SANDBAG DIKES SHALL BE SITUATED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE WORK AREA, AND STREAM FLOW SHALL BE PUMPED AROUND THE WORK AREA. THE PUMP SHOULD DISCHARGE ONTO A STABLE VELOCITY DISSIPATER CONSTRUCTED OF RIPRAP OR SANDBAGS.
2. WATER FROM THE WORK AREA SHALL BE PUMPED TO A SEDIMENT FILTERING MEASURE SUCH AS A SEDIMENT BAG OR OTHER APPROVED DEVICE. THE MEASURE SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE CHANNEL BELOW THE DOWNSTREAM SANDBAG DIKE WITHOUT CAUSING FURTHER EROSION BETWEEN THE SEDIMENT FILTER BAG AND THE STREAMBANK.

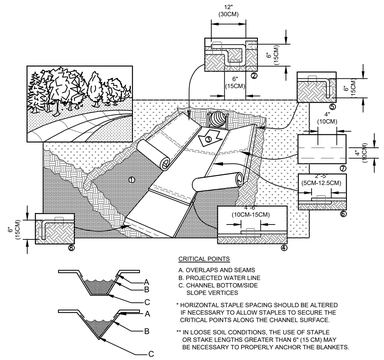
TEMPORARY STREAM PUMP AROUND DETAILS

NOT TO SCALE



SEDIMENT FILTER BAG DETAIL

NOT TO SCALE

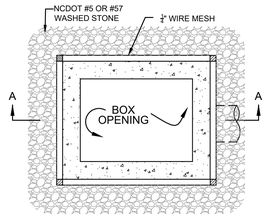


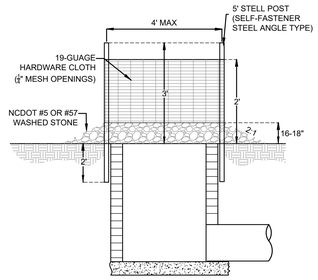
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.

ROLLED EROSION CONTROL LINING

NOT TO SCALE





SECTION A - A

NOTE:

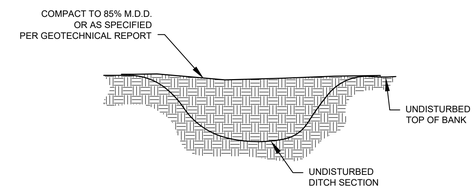
FOR CURB INLETS AND DROP INLETS

INLET PROTECTION

NOT TO SCALE

NOTE:

1. SANDBAG DIKES SHOULD BE SITUATED AT THE ENDS OF THE WORK AREA AS SHOWN ON THE PLANS, AND PONDED WATER SHOULD BE DE-WATERED AROUND THE WORK AREA.
2. WATER FROM THE WORK AREA SHOULD BE PUMPED TO A SEDIMENT FILTERING MEASURE SUCH AS A SEDIMENT-STORAGE BAG, OR OTHER ENGINEER-APPROVED MEASURE. THE MEASURE SHOULD BE LOCATED SUCH THAT THE WATER DRAINS DOWNSTREAM OF THE AREA.
4. SEDIMENT BAG SHALL CONFORM TO SPECIFICATIONS. PUMP SHALL BE RATED TO A MAX. 1,000 GPM, WITH A FILTER ON THE SUCTION END OF THE HOSE.
5. PAMS / FLOCCULANTS SHALL BE USED PRIOR TO FLOW ENTERING SEDIMENT BAG. PAMS SHALL FOLLOW THE NCDWR APPROVED LIST.

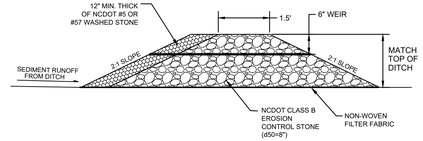


SECTION

NOTES:

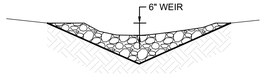
1. ALL BACKFILL MUST BE IMMEDIATELY POURED PRIOR TO ANY RAIN EVENT
2. REMOVE ALL BRANCHES AND DEBRIS FROM LOCATION OF DITCH PLUG.
3. DO NOT EXCAVATE THE EXISTING CHANNEL OR BANKS.
4. BACKFILL ON TOP OF THE BOTTOM IN 8-INCH LIFTS.
5. INSPECT PLUG DURING CONSTRUCTION FOR DAMAGE OR BREACH.
6. REPLANT PLUG PER STREAMBANK STABILIZATION DETAILS.

PERMANENT DITCH PLUG



TEMPORARY CHECK DAM DETAIL

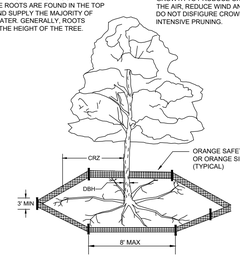
NOT TO SCALE



STONE SECTION WITH A WEIR

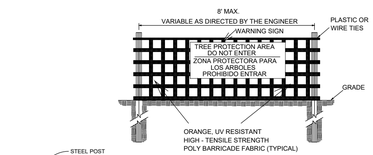
NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.

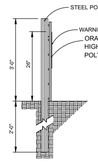


NOTES:

1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF $500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.



FRONT VIEW



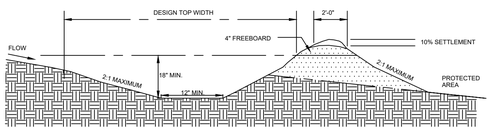
SIDE VIEW

WARNING SIGN DETAIL

NOTES:

1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

TREE PROTECTION FENCE DETAILS



NOTES:
BUILD RIDGE HIGHER THAN DESIGN AND COMPACT WITH WHEELS OF CONSTRUCTION EQUIPMENT. COMPACTED RIDGE MUST BE AT OR ABOVE DESIGN GRADE AT ALL POINTS. CHANNEL MUST BE CONSTRUCTED ON DESIGN GRADE. LEAVE SUFFICIENT AREA ALONG DITCH FOR MAINTENANCE AND RE-GRADING.

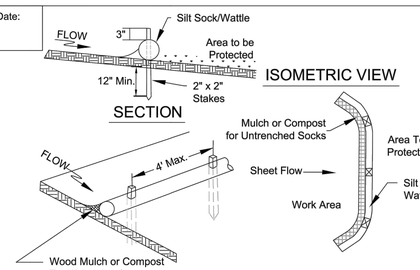
TEMPORARY DIVERSION DITCH CALCULATIONS:

TDD #	RUNOFF					CHANNEL									
	A_d	C	Q_{design}	Length	Inv In	Inv Out	S	d	A_c	P	R	V_{actual}	Q_{actual}	Adequate Capacity?	Lining Required?	No. Check Dams?
	(acres)		(cfs)	(ft)	(ft)	(ft)	(ft/ft)	(ft)	(sf)	(ft)	(ft)	(fps)	(cfs)	(Y/N)	(Y/N)	
1A	3.17	0.35	9.04	494	24.00	21.00	0.0061	0.75	2.63	5.35	0.49	3.61	9.47	Y	Y	1.5
1B	1.96	0.35	5.59	109	21.00	20.00	0.0092	0.55	1.71	4.46	0.38	3.76	6.41	Y	Y	0.0
2A	2.58	0.35	7.36	303	16.00	13.00	0.0099	0.60	1.92	4.68	0.41	4.09	7.85	Y	Y	1.5
2B	3.02	0.35	8.61	285	15.00	13.00	0.0070	0.70	2.38	5.13	0.46	3.74	8.90	Y	Y	1.0
3A	0.95	0.35	2.71	351	15.00	13.00	0.0057	0.40	1.12	3.79	0.30	2.49	2.79	Y	N	1.0
3B	0.85	0.35	2.42	355	17.00	13.00	0.0113	0.31	0.81	3.39	0.24	3.05	2.48	Y	Y	2.0
4A	0.91	0.35	2.60	135	16.00	15.00	0.0074	0.36	0.98	3.61	0.27	2.69	2.63	Y	Y	0.0
4B	0.28	0.35	0.80	156	18.00	15.00	0.0192	0.15	0.35	2.67	0.13	2.64	0.91	Y	Y	1.5
5A	0.57	0.35	1.63	169	15.00	12.00	0.0178	0.22	0.54	2.98	0.18	3.16	1.70	Y	Y	1.5
5B	2.25	0.35	6.42	657	20.00	12.00	0.0122	0.52	1.58	4.33	0.37	4.20	6.64	Y	Y	4.0

TEMPORARY DIVERSION DITCH

NOT TO SCALE

Date: Page:



*THIS APPLICATION MAY NOT BE USED WITH COMPOST SOCKS SMALLER THAN 12".

COMPOST SOCK INITIAL FLOW RATES					
Compost Sock Design Diameter	8 Inch (200 nm)	12 Inch (300 nm)	18 Inch (450 nm)	24 Inch (600 nm)	32 Inch (750 nm)
Maximum Slope Length (<2%)	600 Feet (183 m)	750 Feet (229 m)	1,00 Feet (305 m)	1,300 Feet (305 m)	1,650 Feet (500 m)
Hydraulic Flow Through Rate	7.5 gpm/ft (941 l/m/m)	11.3 gpm/ft (141 l/m/m)	15.0 gpm/ft (188 l/m/m)	22.5 gpm/ft (281 l/m/m)	30.0 gpm/ft (374 l/m/m)

NOTE:

1. Other materials providing equivalent protection against erosive velocities may be substituted for use in silt socks or wattles.
2. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
3. Silt sock/ Wattle should be installed parallel to and a minimum of 10 feet beyond the toe of a graded slope. Silt sock/Wattles located below flat areas should be located at the edge of the land disturbance. The ends of the silt sock/wattles should be turned slightly upslope to prevent runoff from going around the ends of the silt sock/wattles.
4. Oak or other durable hardwood stakes with a 2 inch x 2 inch cross section should be driven vertically plumb, through the center of the silt sock/wattle. Stakes should be placed at a maximum interval of 4 feet or a maximum interval of 8 feet if the silt sock/wattle is placed in a 4 inch trench.
5. In the event staking is not possible (ie. when silt socks/wattles are used on pavement) heavy concrete blocks shall be used behind the silt sock/wattle to hold it in place during runoff events.

MAINTENANCE:

1. Inspect Silt sock/wattle weekly and after each rain of 1 inch or greater. Remove accumulated sediment and any debris as needed to allow for adequate flow.
2. Silt sock/Wattle must be replaced if clogged or torn.
3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
4. Reinstall if damaged or dislodged.
5. Silt socks/Wattles shall be inspected until land disturbance is compete and the area above the measure has been permanently stabilized.

NORTH CAROLINA *Environmental Quality*

EFFECTIVE DATE: 11/12/2020

SILT SOCK / WATTLE FOR PERIMETER AND INLET PROTECTION

SILT SOCK/WATTLE FOR PERIMETER AND INLET PROTECTION

NOT TO SCALE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
3/10/2022 APPROVED ADMINISTRATIVE MODIFICATION

CLIENT INFORMATION:

CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNT ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

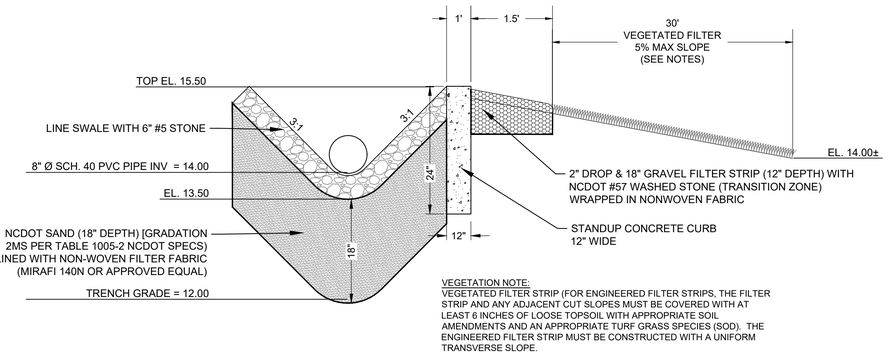
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/19/23
SCALE: N.T.S
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P BALLARD
09/15/23

C-6.2

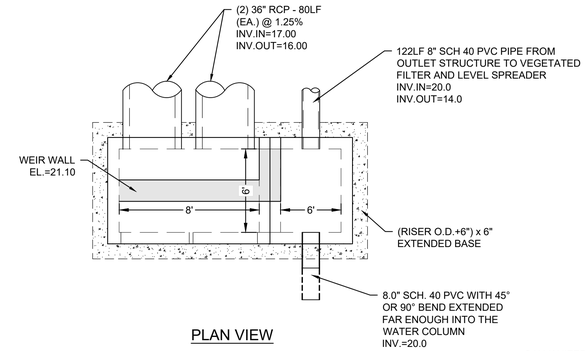
PEI JOB#: 18473.PE



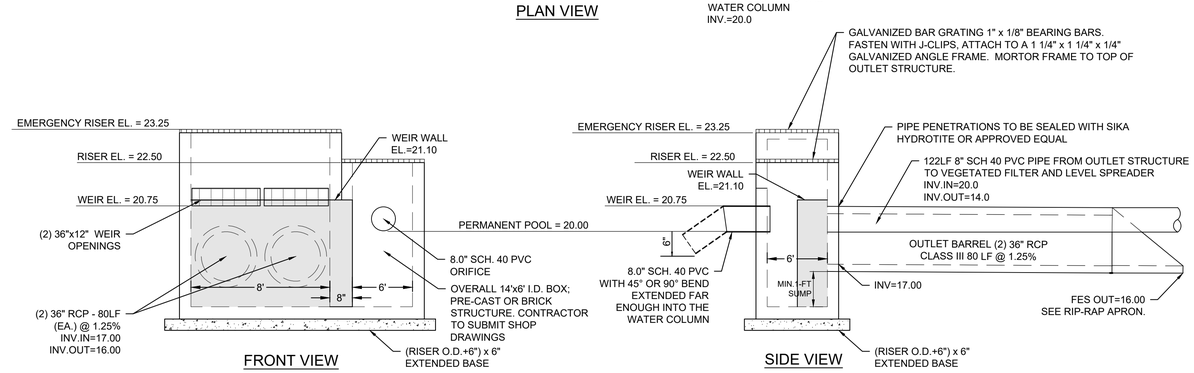
VEGETATION NOTE:
VEGETATED FILTER STRIP (FOR ENGINEERED FILTER STRIPS, THE FILTER STRIP AND ANY ADJACENT CUT SLOPES MUST BE COVERED WITH AT LEAST 6 INCHES OF LOOSE TOPSOIL WITH APPROPRIATE SOIL AMENDMENTS AND AN APPROPRIATE TURF GRASS SPECIES (SOD). THE ENGINEERED FILTER STRIP MUST BE CONSTRUCTED WITH A UNIFORM TRANSVERSE SLOPE.

VEGETATED FILTER AND LEVEL SPREADER DETAIL

NOT TO SCALE



PLAN VIEW



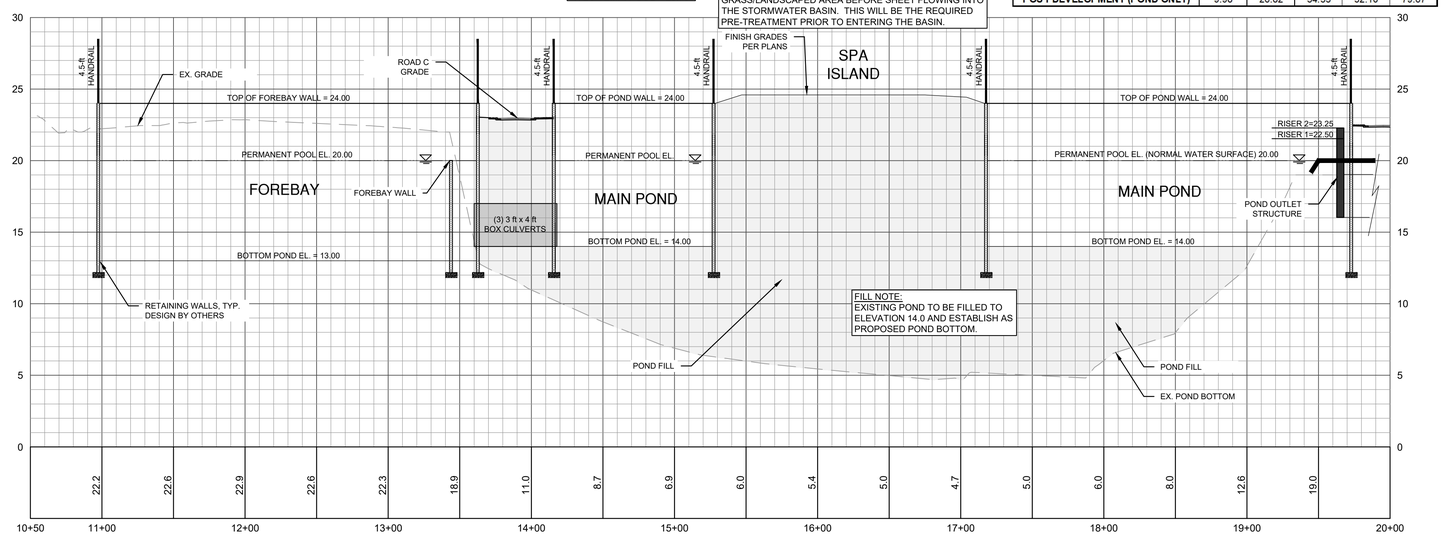
POND OUTLET STRUCTURE DETAIL

NOT TO SCALE

PRE-POST ATTENUATION SUMMARY					
	2-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)	100-year (cfs)
PRE-DEVELOPMENT (ENTIRE SITE)	17.22	44.23	66.23	86.88	110.86
POST DEVELOPMENT (ENTIRE SITE)	14.46	39.91	54.92	77.09	104.54
PRE-DEVELOPMENT (OUTFALL ONLY)	12.36	31.51	47.07	61.78	78.73
PRE-DEVELOPMENT (10% INCREASE)	13.60	34.66	51.78	67.96	86.60
POST DEVELOPMENT (POND ONLY)	9.98	26.82	34.53	52.10	79.67

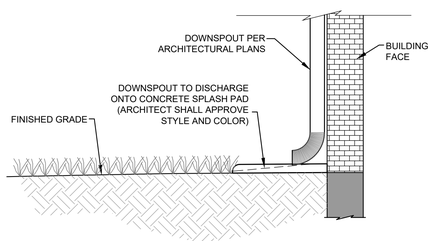
WET BASIN WSEL:
100-YR. WSEL = 23.23
50-YR. WSEL = 22.86
25-YR. WSEL = 22.50
10-YR. WSEL = 22.00
2-YR. WSEL = 21.32
1-YR. WSEL = 21.09
WQV TEMP. POOL = 20.75

SPA ISLAND DOWNSPOUT NOTE:
ALL DOWNSPOUTS INSTALLED ON SPA ISLAND SHALL DISCHARGE TO CONCRETE SPLASH PADS (SEE DETAIL ON THIS SHEET) AND RUNOFF SHALL TRAVEL OVER GRASS/LANDSCAPED AREA BEFORE SHEET FLOWING INTO THE STORMWATER BASIN. THIS WILL BE THE REQUIRED PRE-TREATMENT PRIOR TO ENTERING THE BASIN.



POND CROSS-SECTION

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



ROOF DRAIN DETAIL ON SPA ISLAND

NOT TO SCALE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

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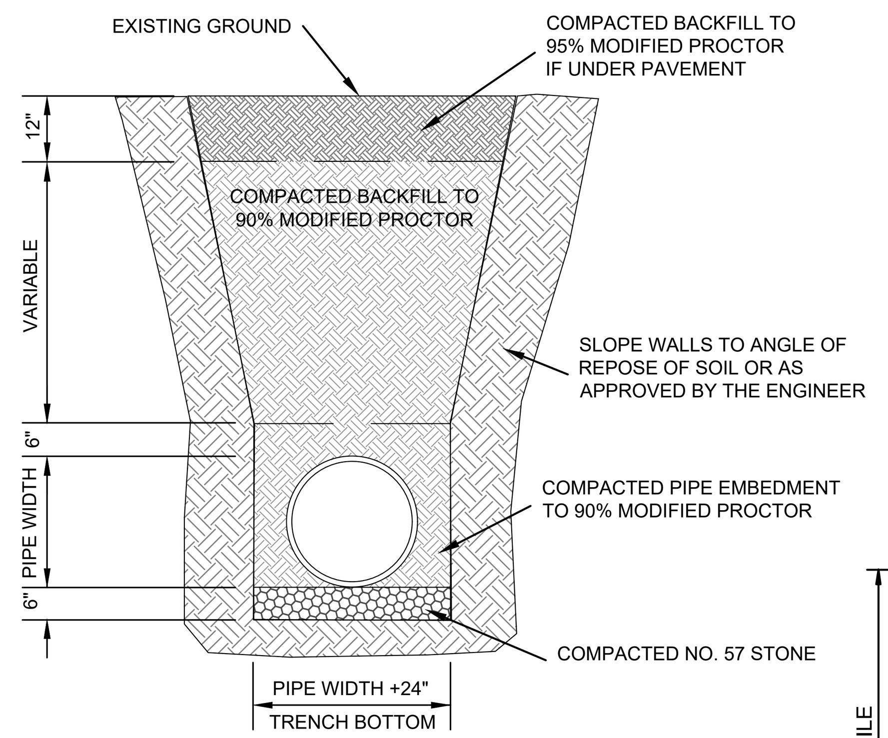
PAA SUBMITTAL:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/15/23
SCALE: N.T.S.
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

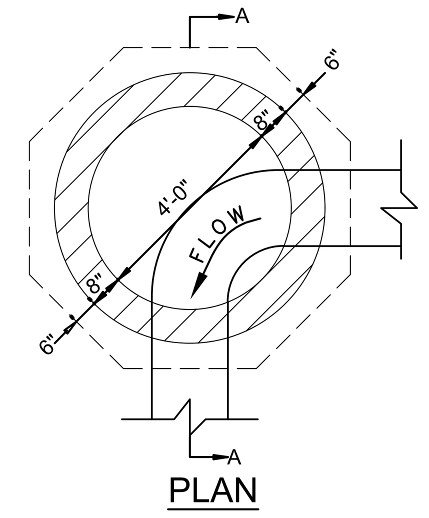
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD
09/15/23

C-6.3

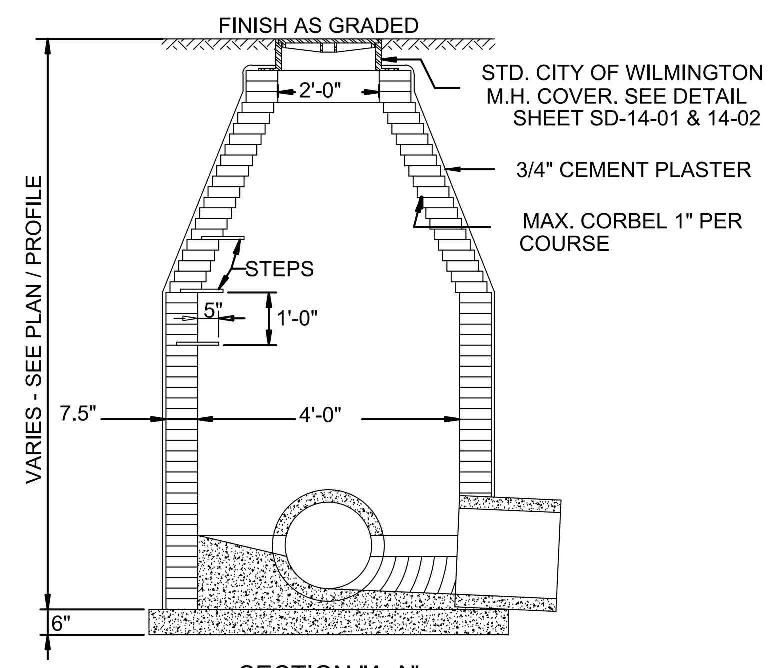
PEI JOB#: 18473.PE



STANDARD PIPE TRENCH DETAIL
SD 1-07
NOT TO SCALE

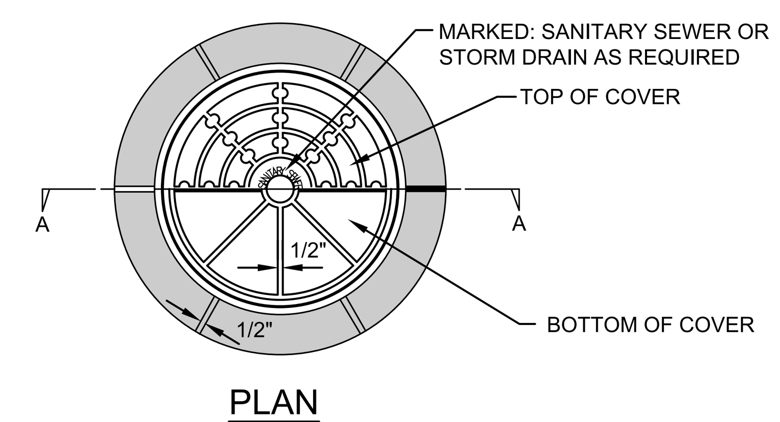


PLAN



SECTION "A-A"

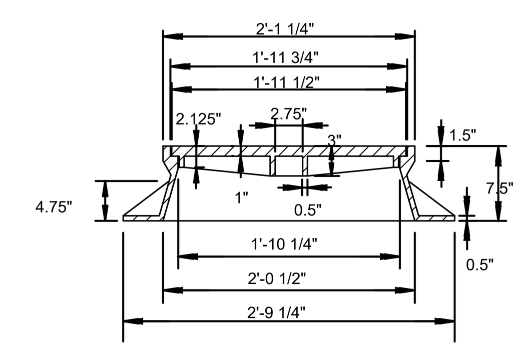
GUIDELINES FOR STORM DRAIN MANHOLE
SD 2 -03



PLAN

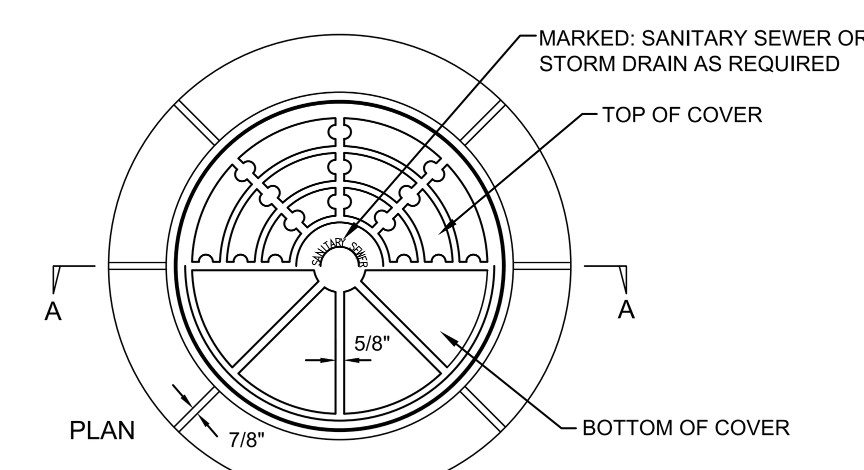
RING & COVER CONTACT SURFACES SHALL BE MACHINED TO INSURE EVEN BEARING OF COVER AND RING

MINIMUM WEIGHTS:
RING 190 LBS.
COVER 120 LBS.



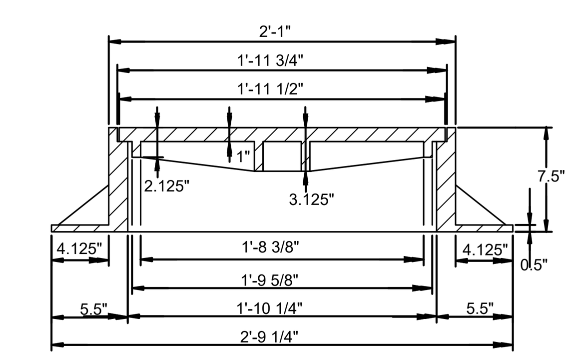
SECTION "A-A"

STANDARD MANHOLE RING AND COVER
SD 14-01
NOT TO SCALE



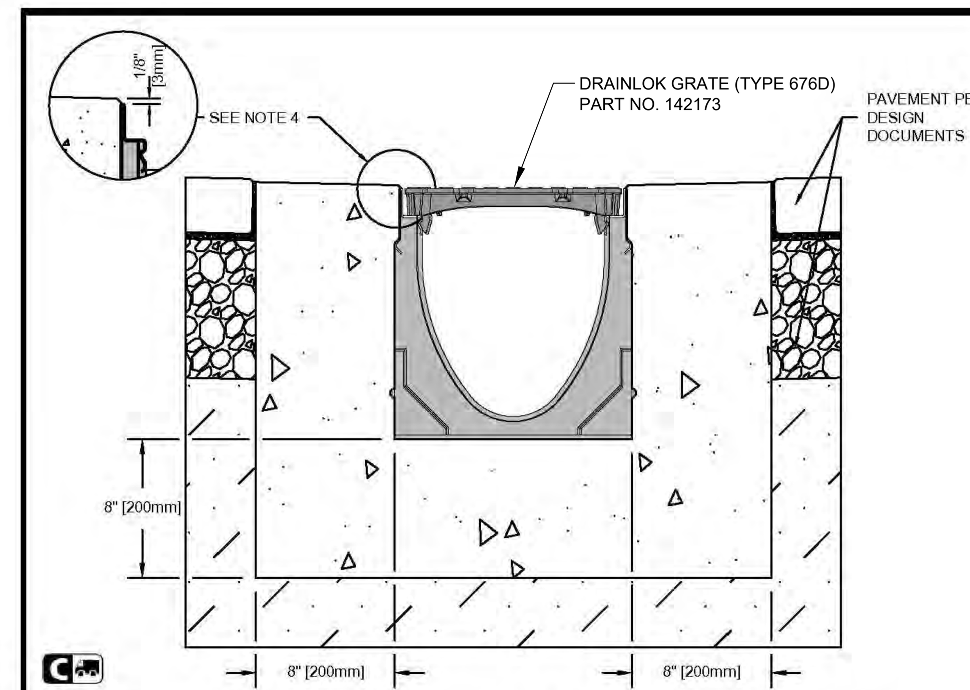
NOTE:
RING & COVER CONTACT SURFACES SHALL BE MACHINED TO INSURE EVEN BEARING OF COVER AND RING

MINIMUM WEIGHTS:
RING 261 LBS.
COVER 120 LBS.



SECTION "A-A"

STANDARD MANHOLE RING & COVER
SD 14-02
NOT TO SCALE



NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

K200 KLASSIKDRAIN 'DRAINLOK' LOAD CLASS C

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K200 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF:	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'DRAINLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

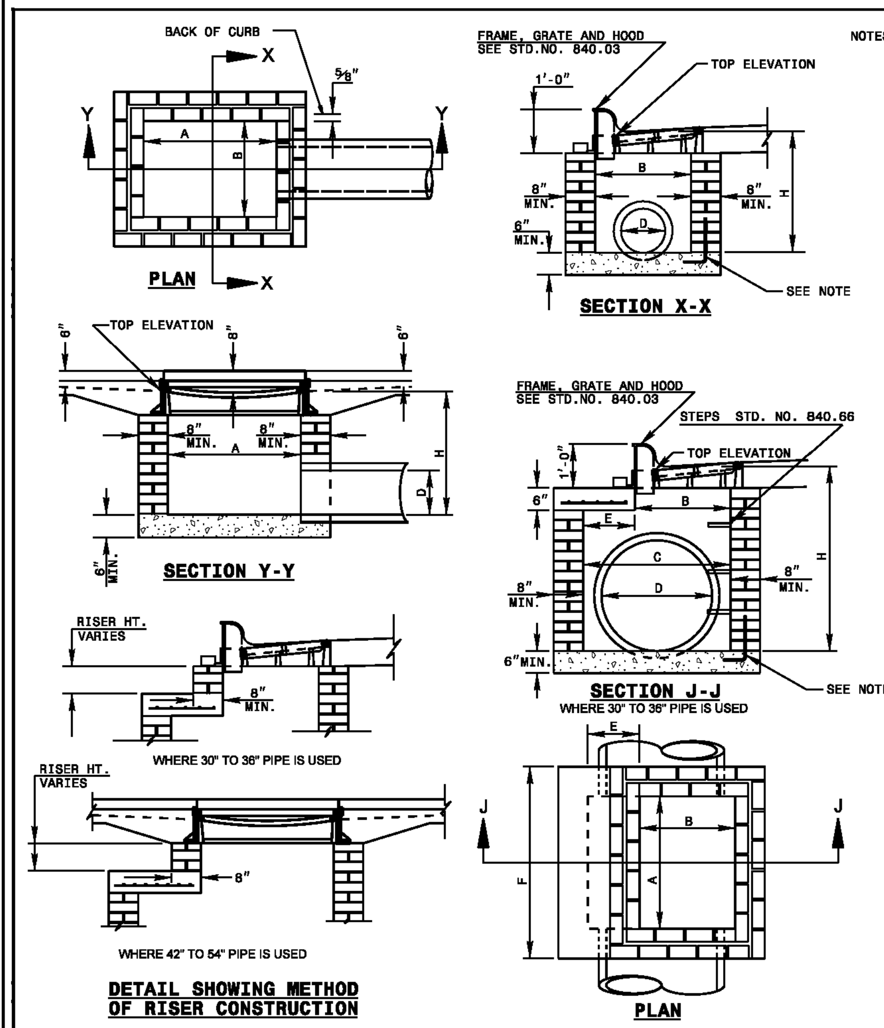
K2D-C-EPP
ACO
DATE: 08/17/16

K200 - KLASSIKDRAIN - LOAD CLASS: C
Exposed Paver Pavement
INSTALLATION DRAWING - ACO DRAIN

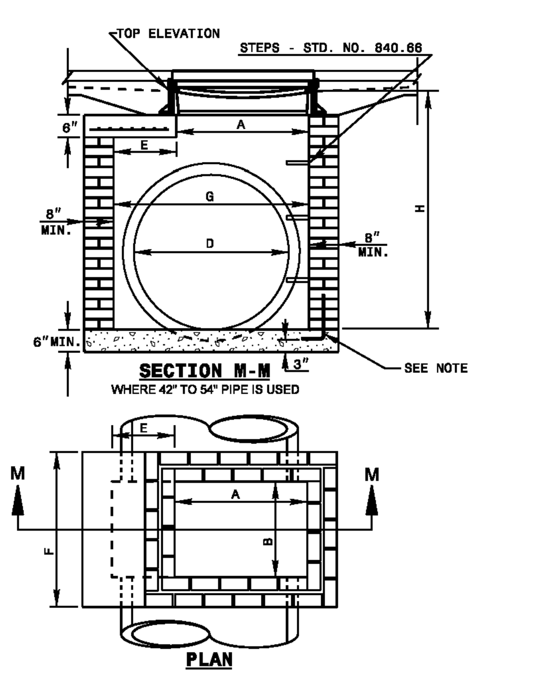
ACO Polymer Products, Inc.

825 W. Beechcraft St Casa Grande, AZ 85122 Tel: 520-421-9988 Fax: 520-421-9899	9470 Pinecone Dr. Mentor, OH 44060 Tel: 440-639-7230 Fax: 440-639-7235	4211 Pleasant Rd. Fort Mill, SC 29708 Tel: 440-639-7230 Fax: 803-802-1063

Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764



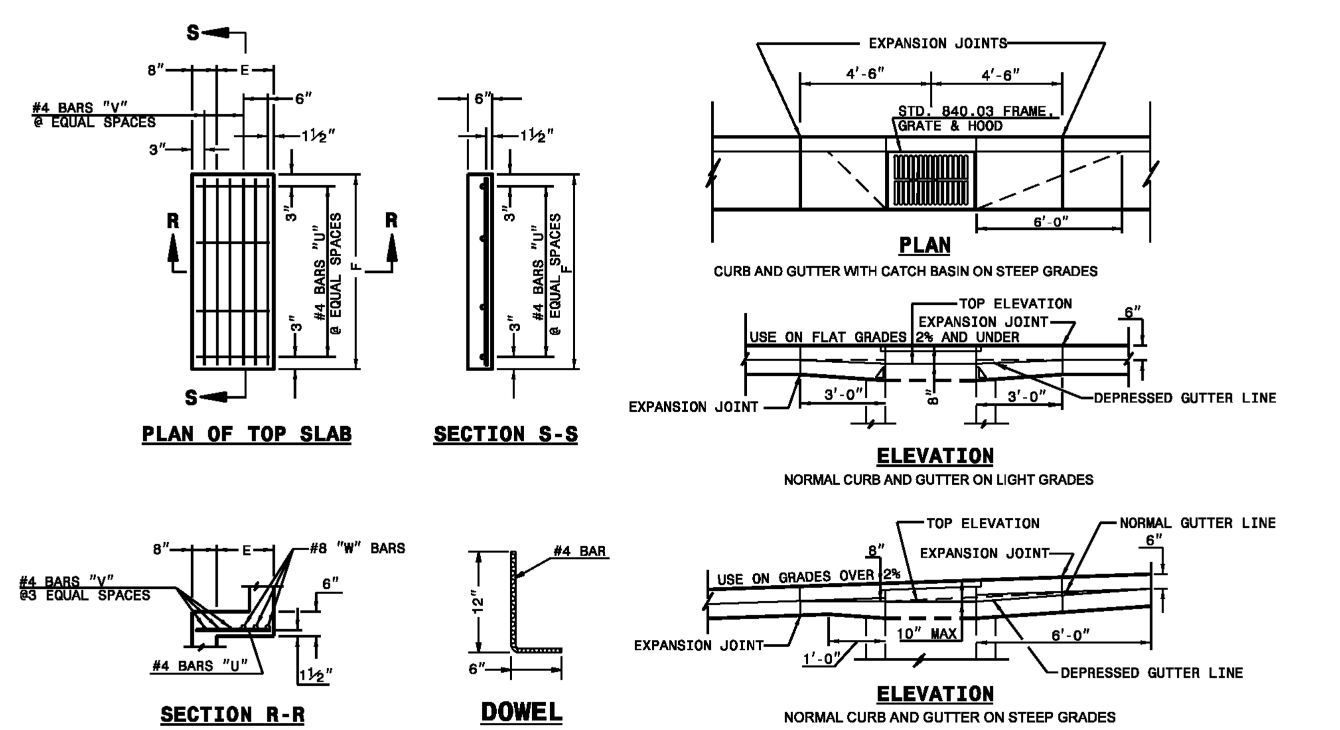
NOTES: MORTAR JOINTS ½" +/- ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
USE #4 BAR DOWELS AT 12" CENTERS FOR ALL PIPE SIZES.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 1 OF 2
840.01



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

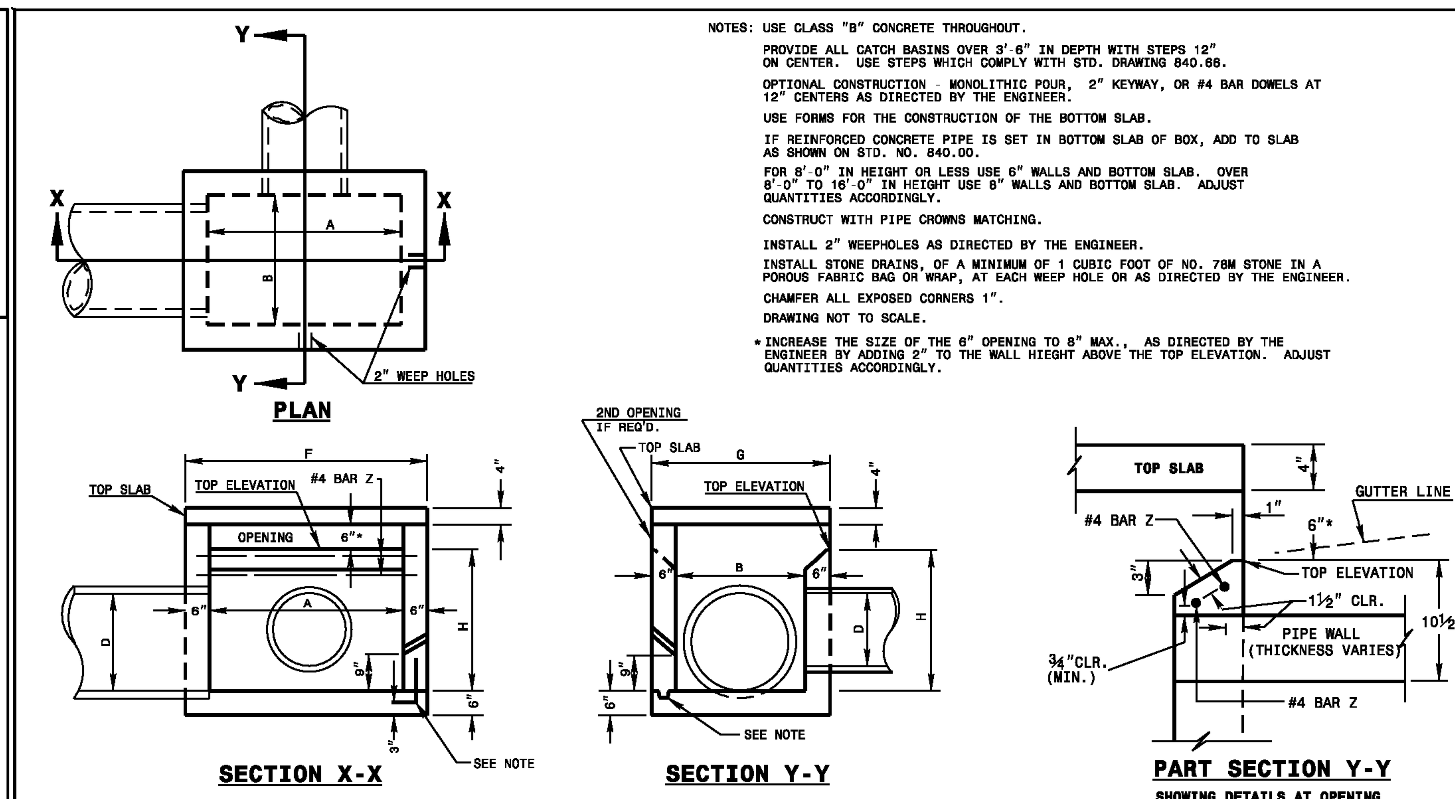
DIMENSIONS OF BOX AND PIPE						TOP SLAB DIMENSIONS		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX			BRICK MASONRY		DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		TOP SLAB	BOTTOM SLAB	TOTAL CONC.	BRICK MSNR. IN WALLS	TOTAL BRICK AND CONCRETE	C.M.	R.C.
D	A	B	C	G	H	E	F														
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.281	0.281	0.883	1.164	0.020	0.042
15"	3'-0"	2'-2"			3'-0"											0.281	0.281	0.963	1.244	0.031	0.047
18"	3'-0"	2'-2"			3'-3"											0.281	0.281	1.043	1.324	0.044	0.065
24"	3'-0"	2'-2"			3'-9"											0.281	0.281	1.204	1.485	0.078	0.121
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.521	1.606	2.217	0.122	0.184
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.914	2.516	0.176	0.261
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.373	0.508	2.152	2.660	0.240	0.371
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-6"	4	2'-6"	4	3'-3"	3	3'-3"	41	0.173	0.410	0.583	2.415	2.998	0.313	0.477
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	47	0.211	0.448	0.659	2.806	3.465	0.396	0.595

* RISER HAS .321 CUBIC YARDS OF BRICK MASONRY PER FOOT HEIGHT

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 2 OF 2
840.01



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.
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.
CONSTRUCT WITH PIPE CROWNS MATCHING.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.
* INCREASE THE SIZE OF THE 6" OPENING TO 8" MAX., AS DIRECTED BY THE ENGINEER BY ADDING 2" TO THE WALL HIEGHT ABOVE THE TOP ELEVATION. ADJUST QUANTITIES ACCORDINGLY.

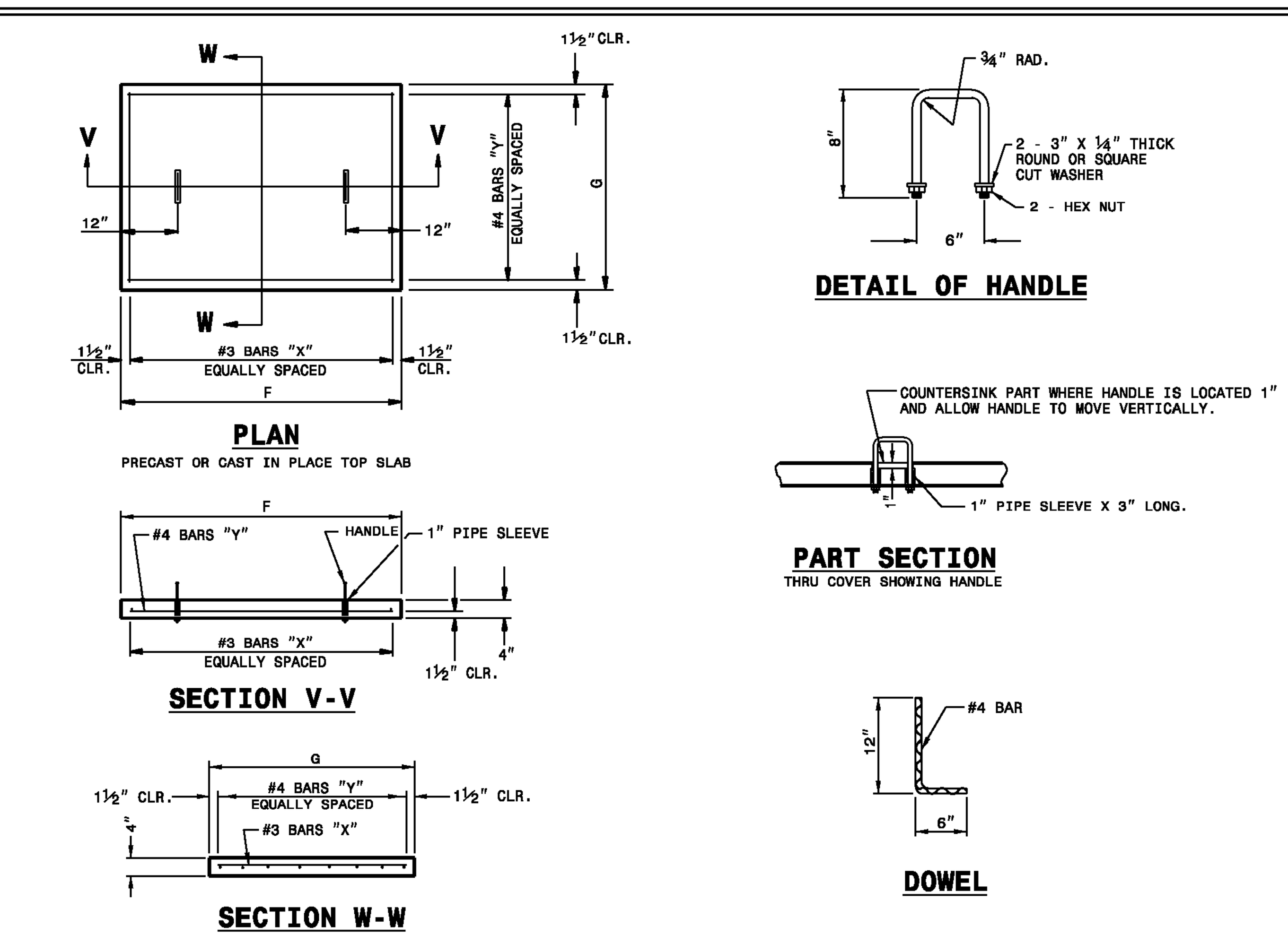
MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)

DIM'S OF BOX & PIPE				REINFORCING						TOP & BOT. SLAB DIMENSIONS		CU. YDS. CONC. IN BOX			TOTAL QUANTITIES BOX & SLABS		DEDUCTION ONE PIPE		DED. ONE 6" THROAT OPENING
PIPE	SPAN	WIDTH	HEIGHT	BARS - X		BARS - Y		BARS - Z											
D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	F	G	TOP SLAB	BOT. SLAB	WALL/FT. HT.	LBS. REINF.	YD³ (MIN H)	C.S.	R.C.	YD³
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.108	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.226	0.340	0.284	35	1.379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.226	0.340	0.284	35	1.521	0.059	0.085	0.053
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	2	4'-9"	5'-0"	4'-6"	0.278	0.417	0.315	43	1.916	0.092	0.127	0.053
36"	4'-6"	4'-0"	3'-10"	5	4'-9"	10	5'-3"	2	5'-3"	5'-6"	5'-0"	0.340	0.510	0.352	51	2.390	0.132	0.178	0.059
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	2	5'-9"	6'-0"	5'-6"	0.407	0.611	0.389	64	2.914	0.180	0.243	0.066
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	2	5'-9"	6'-0"	6'-0"	0.444	0.666	0.407	68	3.298	0.235	0.317	0.066

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

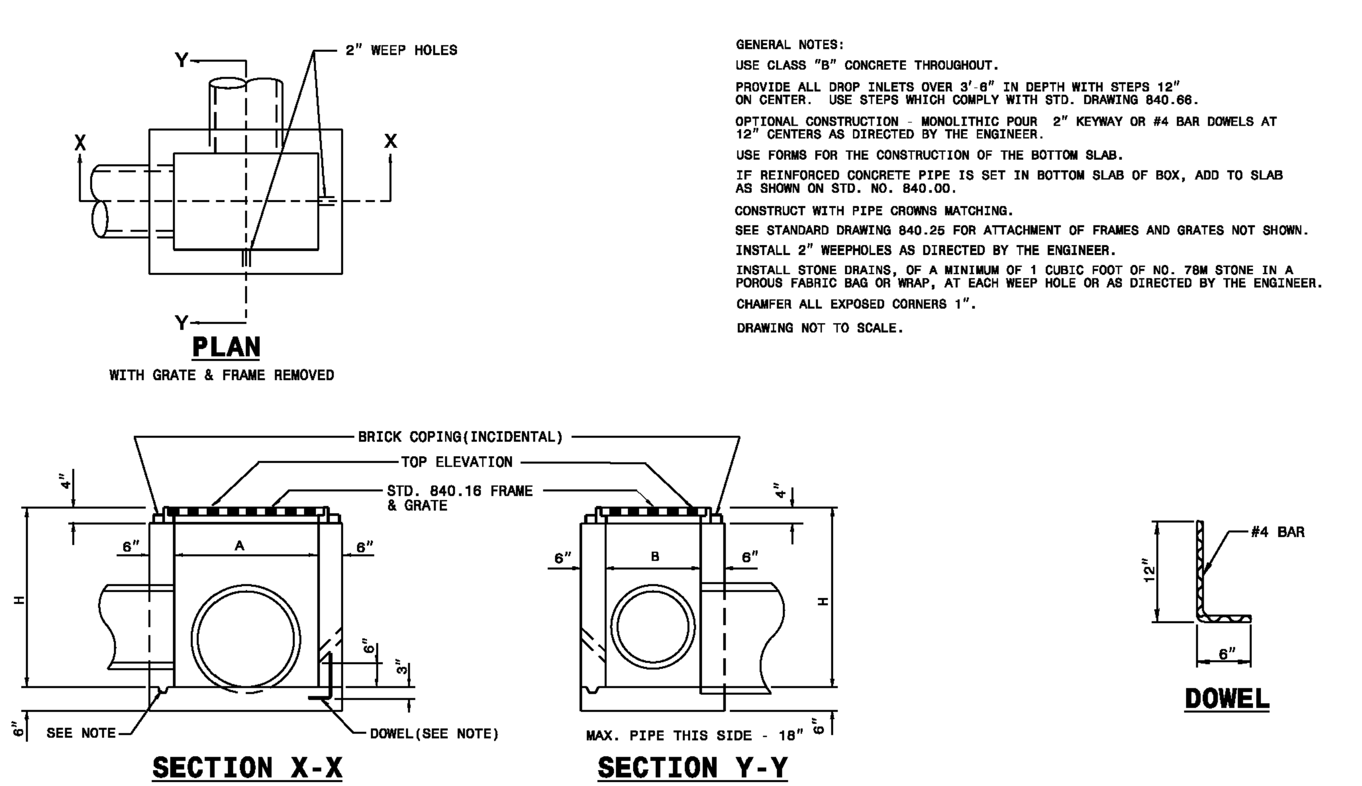
SHEET 1 OF 2
840.04



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 2 OF 2
840.04



GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

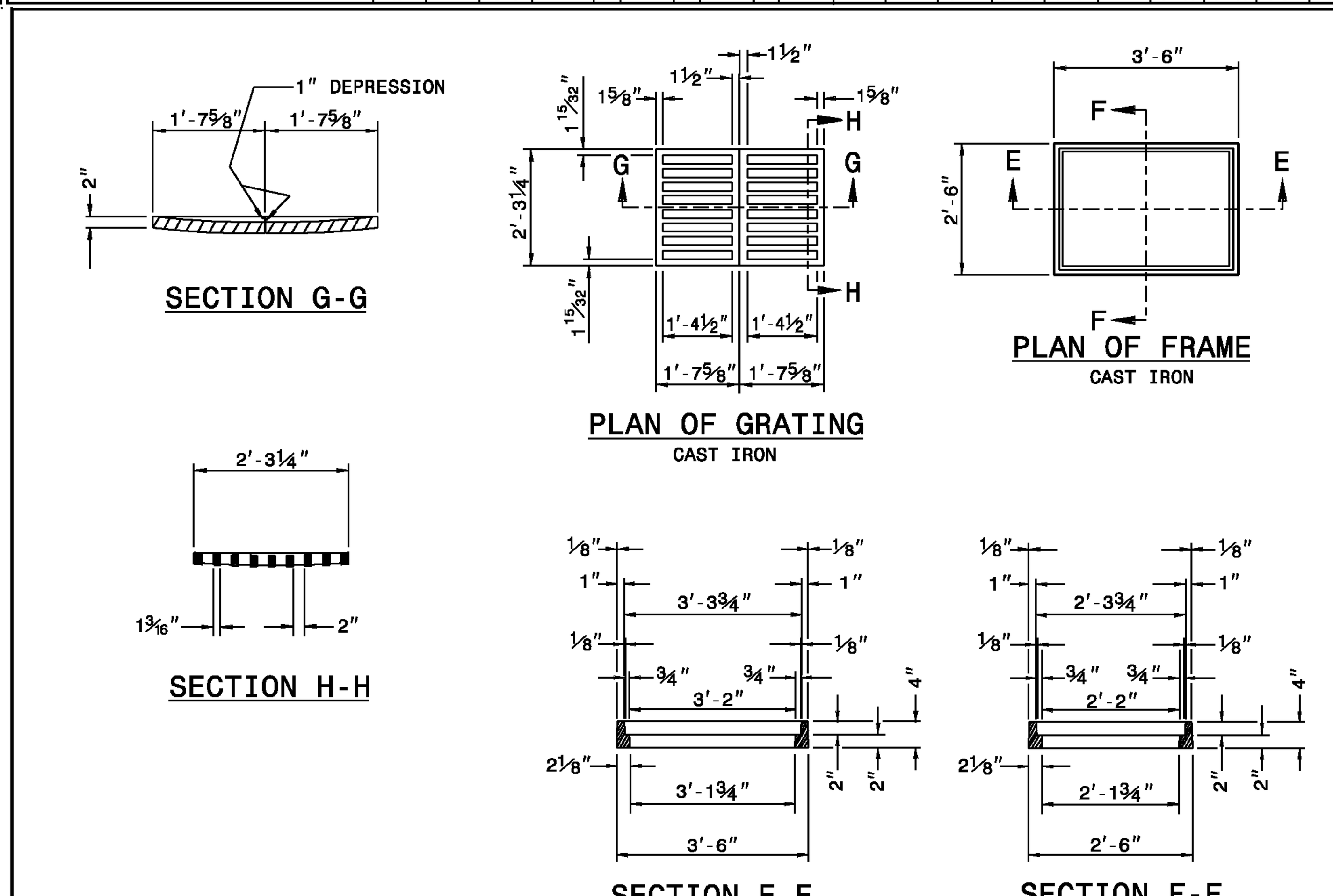
DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"			2'-3"			0.648	0.023	0.036
18"			2'-6"			0.703	0.033	0.049
24"			3'-0"			0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 1 OF 1
840.14



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR **DROP INLET FRAME AND GRATES** FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

APPROVED ADMINISTRATIVE MODIFICATION	3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

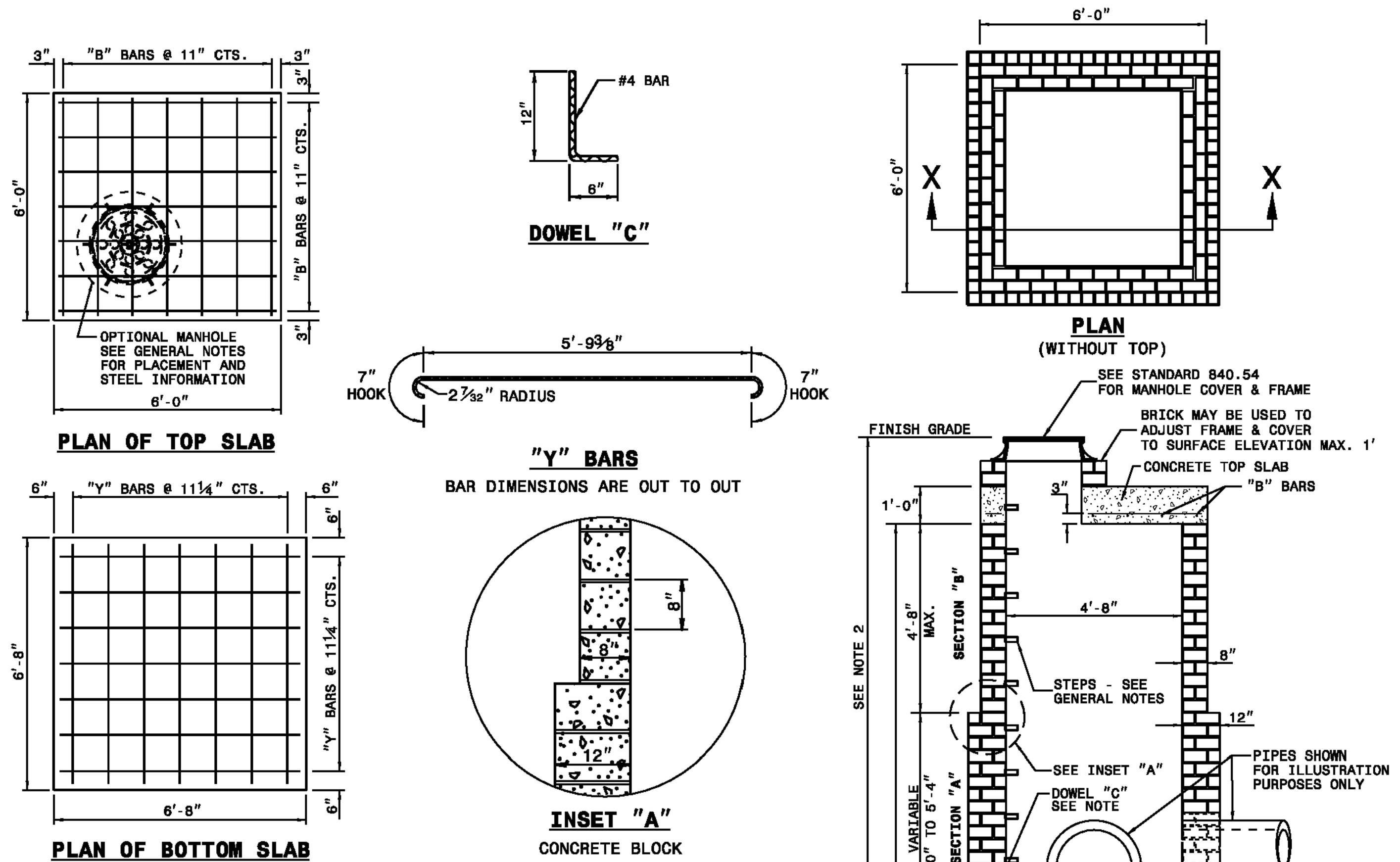
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST.:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: N.T.S.
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-6.4

PEI JOB#: 18473.PE



NOTE 1: CONSTRUCT SECTION "B" OF THE PROPOSED WALL 8" THICK. AND SECTION "A" 12" THICK.
NOTE 2: IF PROPOSED STRUCTURE EXCEEDS 12'-0" VERTICAL HEIGHT A DESIGN WILL BE REQUIRED FOR APPROVAL.
NOTE 3: USE SINGLE MAT REINFORCING STEEL; EXCEPT DOUBLE MAT STEEL MAY BE USED IN LIEU OF HOOK BARS IN BASE SLAB.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR **TRAFFIC BEARING JUNCTION BOX** FOR USE WITH PIPES 42" AND UNDER

SHEET 1 OF 2 **840.34**

GENERAL NOTES:

USE STANDARD OR JUMBO BRICK FOR WALL CONSTRUCTION. SOLID CONCRETE BRICK OR BLOCK ARE OPTIONAL WALL CONSTRUCTION MATERIAL

INCLUDE ALL ADJUSTMENTS TO WALLS, SLABS OR REINFORCING MATERIAL IN THE UNIT PRICE BID FOR EACH UNIT.

INSTALL OPTIONAL MANHOLE IN POSITION AS DIRECTED BY THE ENGINEER. CUT OR BEND ALL REBAR CROSSING THIS OPENING TO ALLOW 2" MINIMUM CONCRETE COVERAGE. ENCLOSE THE OPENING WITH 8 "A" BARS TIED TO TO THE REBAR MAT AND SET SO A MINIMUM OF 3" CONCRETE COVER IS ATTAINED. REFERENCE STD. NO. 840.54 FOR MANHOLE INFORMATION.

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

SPACE DOWEL "C" BARS AT A MAXIMUM OF 12" CENTERS.

MAXIMUM DEPTH OF THIS UNIT AS SHOWN IS 12'.

CONSTRUCT THE JUNCTION BOX IN ACCORDANCE WITH SECTIONS 830, 832, 834 AND 840 OF THE STANDARD SPECIFICATIONS.

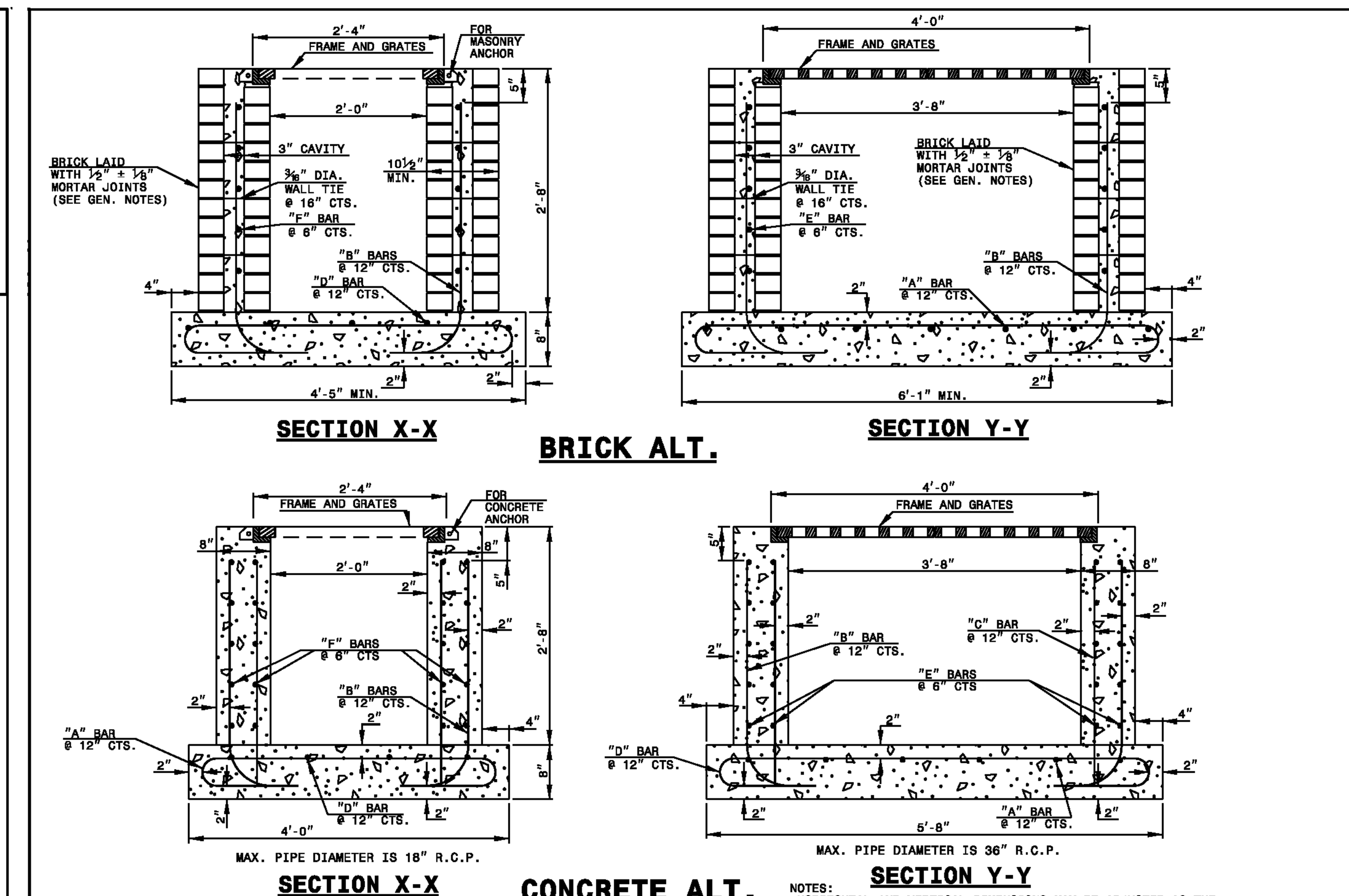
BILL OF MATERIAL

BAR	QTY.	SIZE	LENGTH	WEIGHT
A	8	#5	1'-2"	9.7
B	14	#5	5'-6"	80.3
C	26	#4	1'-6"	26.1
Y	14	#5	6'-11⅜"	101.5
STEEL TOTAL WEIGHT				217.6
CU. YDS. CLASS "AA" CONC.				2.6
CU. YDS. BRICK/FT. HT. (8")				0.53
CU. YDS. BRICK/FT. HT. (12")				0.84

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR **TRAFFIC BEARING JUNCTION BOX** FOR USE WITH PIPES 42" AND UNDER

SHEET 2 OF 2 **840.34**

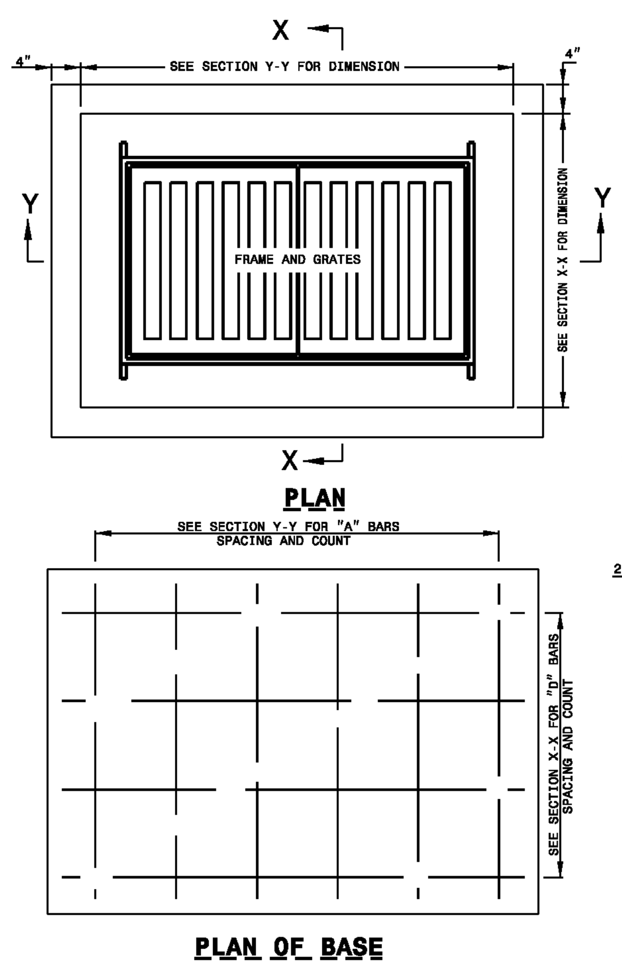


NOTES:
-HORIZONTAL AND VERTICAL DIMENSIONS MAY BE ADJUSTED AS THE FIELD CONDITIONS AND/OR ALTERNATE DESIGN REQUIRE.
-MAXIMUM HEIGHT FOR THIS STRUCTURE IS 14'-0".
-MAKE ALL ADJUSTMENTS AS DIRECTED BY THE ENGINEER.
-DEPTH OF STEEL GRATE WILL REQUIRE DEEPER SEAT ALONG SHORT WALLS.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

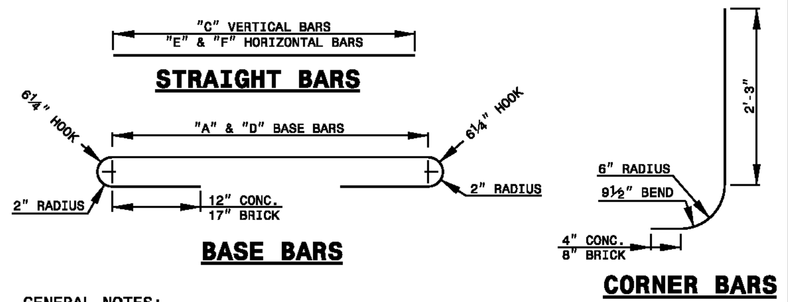
ROADWAY STANDARD DRAWING FOR **TRAFFIC BEARING GRATED DROP INLET** FOR CAST IRON DOUBLE FRAME AND GRATES

SHEET 1 OF 2 **840.35**



BILL OF MATERIALS

COMMON		CONCRETE ALT.			BRICK ALT.		
BAR	SIZE	LENGTH	QUANTITY	WEIGHT	LENGTH	QUANTITY	WEIGHT
A	#5	6'-4½"	6	39.9	7'-7½"	6	47.7
B	#5	3'-4½"	16	56.3	3'-4½"	16	56.3
C	#5	2'-8"	14	38.9	-0-	-0-	-0-
D	#5	8'-0½"	4	33.6	9'-3½"	4	38.8
E	#5	3'-0"	20	62.6	3'-0"	10	31.3
F	#5	4'-8"	20	97.3	4'-8"	10	48.7
REINF. STEEL (TOTAL WEIGHT LBS.)				328.6			222.8
CONCRETE IN BASE CLASS 'AA' (CUBIC YARDS)				0.56			0.66
CONCRETE IN WALLS CLASS 'AA' (CUBIC YARDS)				0.92			-0-
CONCRETE IN WALLS CLASS 'B' (CUBIC YARDS)				-0-			0.36
BRICK IN WALLS (CUBIC YARDS)				-0-			0.91
CONCRETE TOTAL (CUBIC YARDS)				1.48			1.02
BRICK & CONCRETE TOTAL (CUBIC YARDS)				1.48			1.93
CONC. CUBIC YARDS IN WALL/FOOT OF HEIGHT				0.35			0.14
BRICK CUBIC YARDS IN WALL/FOOT OF HEIGHT				-0-			0.34
LBS. OF REINF. STEEL IN WALL/FOOT OF HEIGHT				94.9			47.6

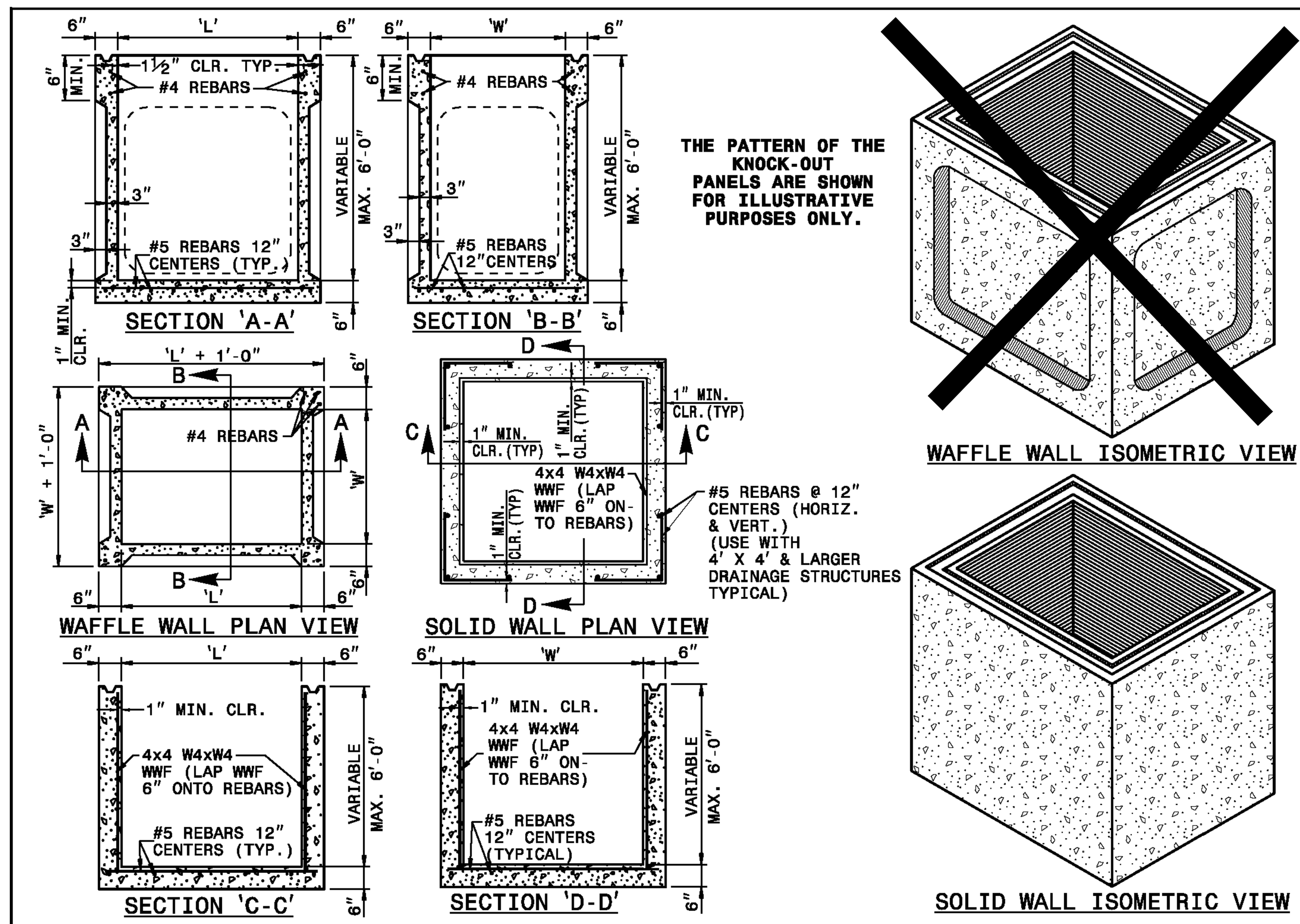


GENERAL NOTES:
-USE CLASS 'AA' CONCRETE FOR CAST IN PLACE CONCRETE BOX.
-USE CLASS 'B' CONCRETE IN THE WALL CAVITY FOR REINFORCED BRICK CONSTRUCTION AND CLASS 'AA' FOR THE FOOTING BASE.
-CHAMFER ALL EXPOSED CONCRETE CORNERS 1".
-USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
-IF PIPES ARE SET IN THE BASE FOLLOW CONSTRUCTION PROCEDURES SHOWN BY STD. DWG. 840.00.
-PRECAST UNITS MADE OF CLASS 'AA' CONCRETE MAY BE USED IN LIEU OF BRICK MASONRY CONSTRUCTION.
-INCLUDE REINFORCING STEEL COST IN THE UNIT OR LINEAR FOOT BID PRICE FOR "MASONRY DRAINAGE STRUCTURE".
-REFERENCE STD. DWG. 840.25 FOR FRAME ANCHORAGE.
-CONCRETE BRICK, JUMBO BRICK AND 4" SOLID CONCRETE BLOCK WILL BE PERMITTED.
-CONCRETE FOR BRICK BOX REFER TO SECTION 832 OF THE STANDARD SPECIFICATIONS.
-PROVIDE GRATED DROP INLETS OVER 3'-6" DEEP WITH STEPS SPACED 12" ON CENTER AS DIRECTED BY STD. DWG. 840.66.
-FRAME AND GRATES ARE SEPARATE CONTRACT ITEMS.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR **TRAFFIC BEARING GRATED DROP INLET** FOR CAST IRON DOUBLE FRAME AND GRATES

SHEET 2 OF 2 **840.35**



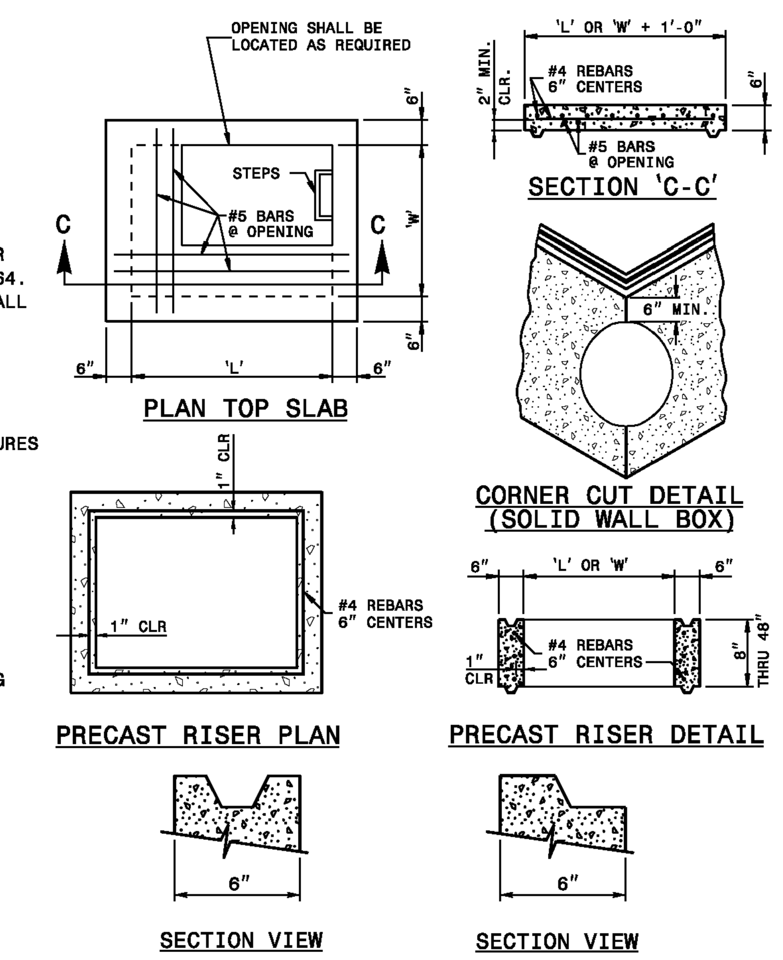
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

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

SHEET 1 OF 2 **840.45**

GENERAL NOTES:

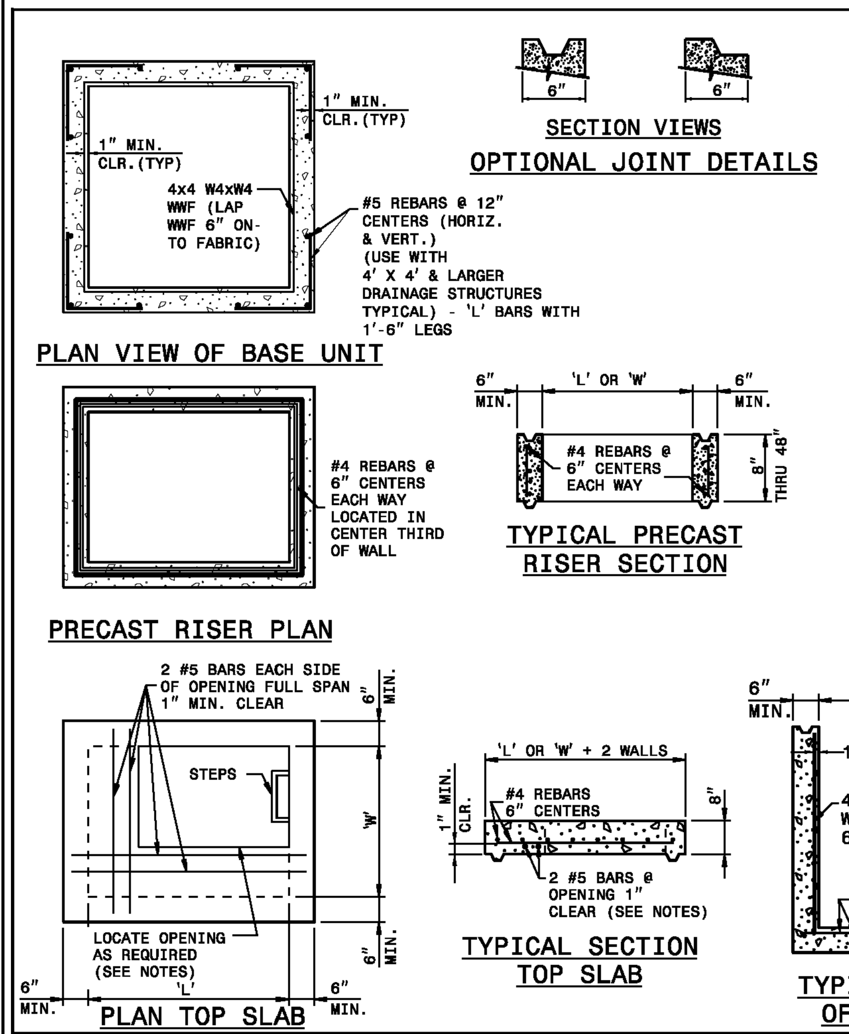
* THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.13, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
* INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
* DO NOT PLACE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



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

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

SHEET 2 OF 2 **840.45**



GENERAL NOTES:

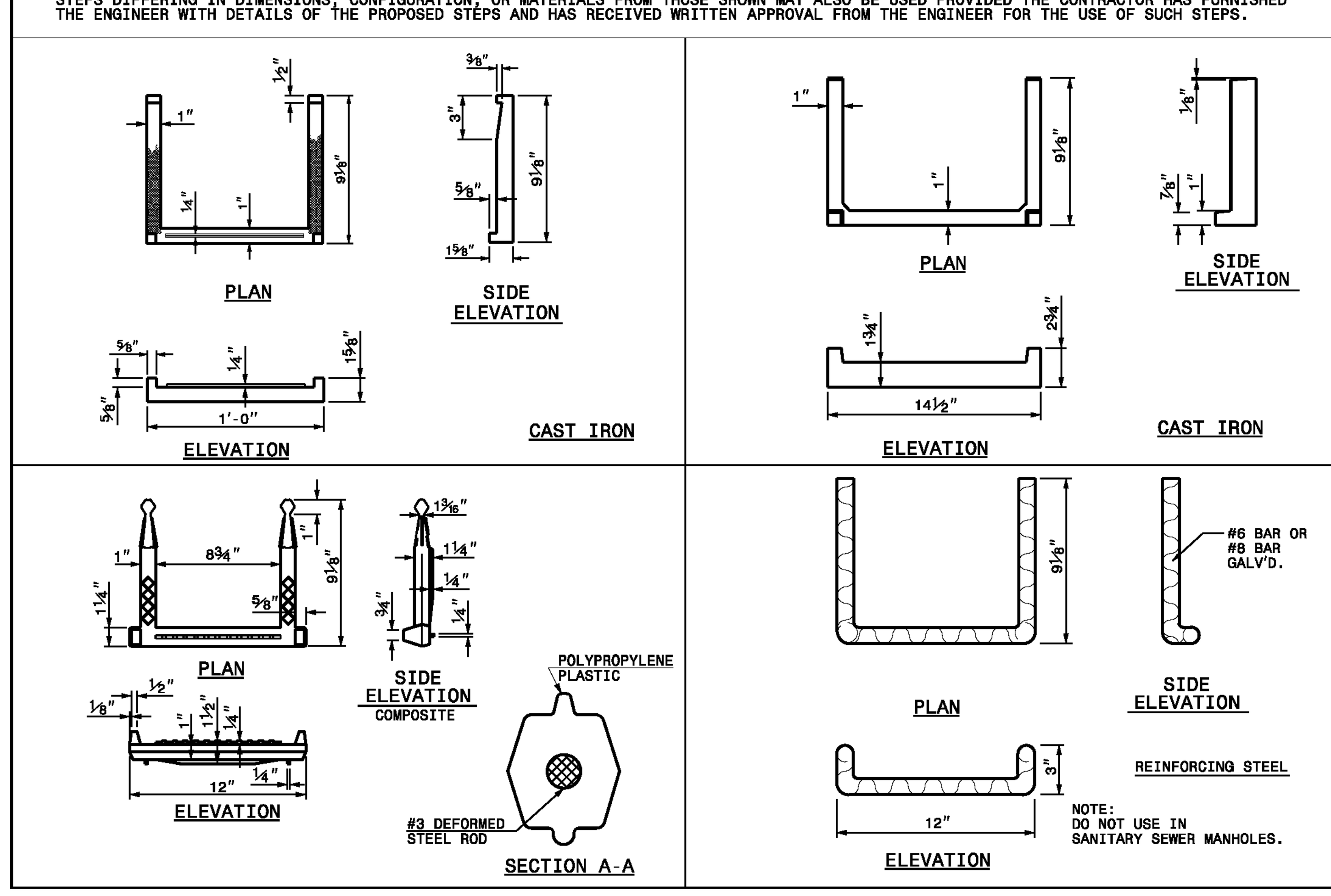
* THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.04, 840.05, 840.14, 840.15, 840.31, 840.32, 840.34, 840.35, 840.36 AND 840.41.
* INSTALL AND PAY FOR PRECAST DRAINAGE STRUCTURES IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATION SECTION 840.
* USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
* USE ASTM A615 GRADE 60 REINFORCING STEEL. USE ASTM A1064 WELDED WIRE FABRIC (WWF).
* LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB TO 15'-0".
* PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
* ORIENT STRUCTURES SO THAT CORNERS WILL NOT BE CUT OR MODIFIED UNLESS ALLOWED BY DETAIL IN PLANS.
* PRECAST ALL ELEMENTS TO MEET ASTM C913.
* FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
* PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
* WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR IF THE SAME MIN. AREA OF STEEL IS PROVIDED.
* SEAL JOINTS WITH AN APPROVED SEALANT (SEE SECTION 840 OF NCDOT STANDARD SPECIFICATIONS.
* LIMIT MAXIMUM STRUCTURE SIZE INSIDE CLEAR DIMENSIONS TO 6'-0" X 6'-0".
* THE OUTSIDE PIPE DIAMETER PLUS 2" IS THE MINIMUM STRUCTURE SIZE OR THE OPENING REQUIRED FOR GRATE AND FRAME WHICHEVER IS GREATER.
* ROUND MANHOLE MAY BE USED IN LIEU OF SQUARE PROVIDED 2 EXTRA #5'S ARE PLACED ON EVERY SIDE NOT ADJACENT TO A WALL. SEE STD. DWG. 840.34 FOR MANHOLE INSTALLATION.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR **TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE**

SHEET 1 OF 1 **840.46**

NOTES:
INSTALL ALL STEPS PROTRUDING 4" FROM INSIDE FACE OF STRUCTURE WALL.
STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SUCH STEPS.

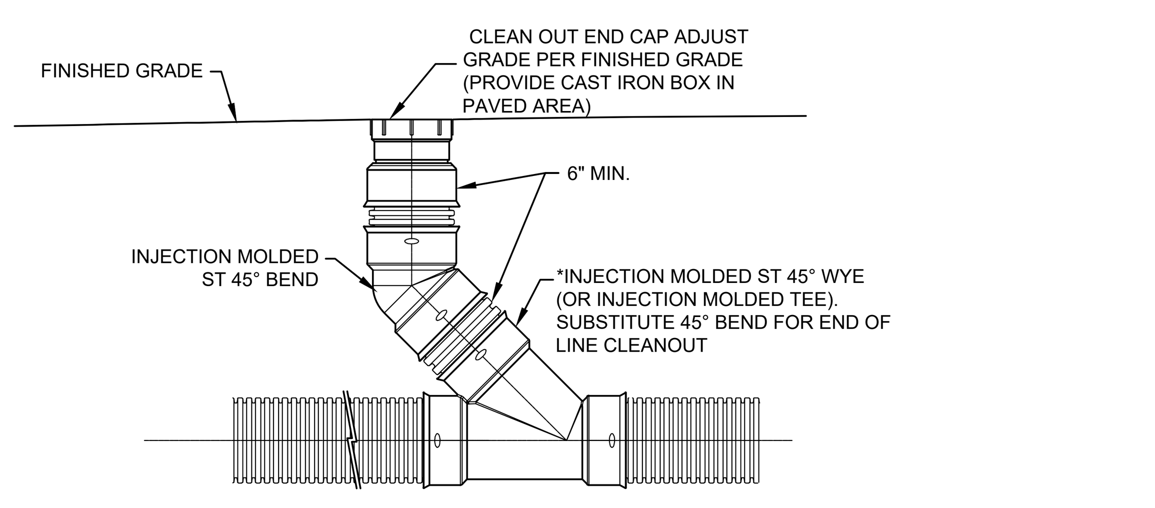


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

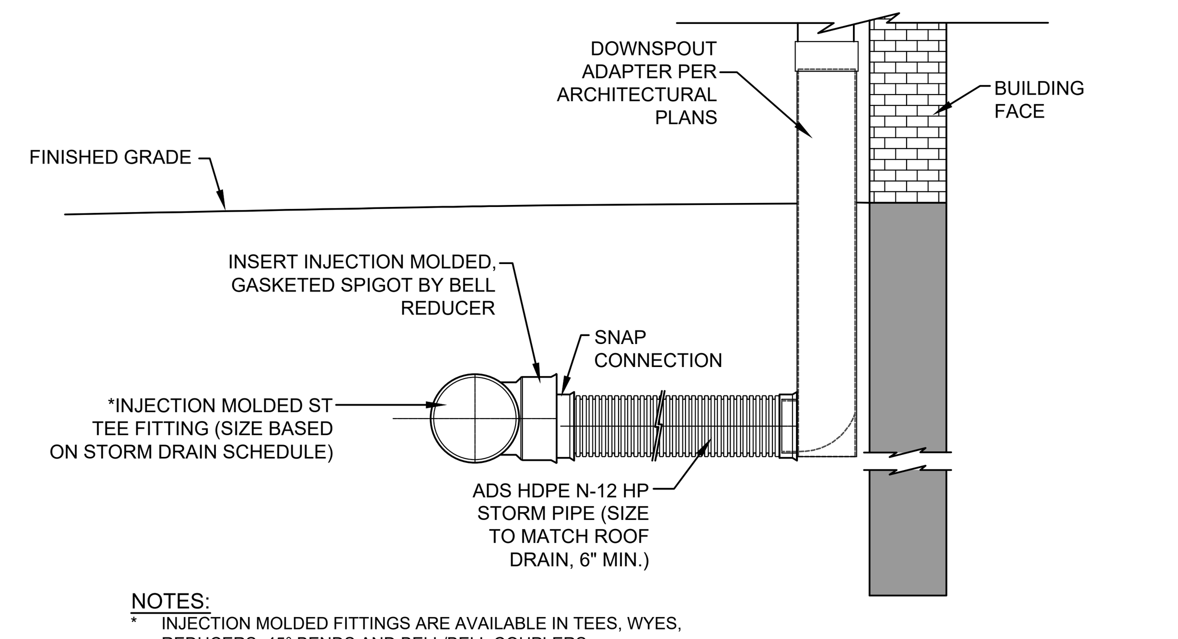
ROADWAY STANDARD DRAWING FOR **DRAINAGE STRUCTURE STEPS**

SHEET 1 OF 1 **840.66**

CERTIFICATION NOTE:
CONTRACTOR SHALL PROVIDE CERTIFICATION FROM A LICENSED NORTH CAROLINA STRUCTURAL ENGINEER THAT PRECAST STRUCTURES PROVIDED MEET REQUIREMENTS FOR H20 LOADING



IN-LINE CLEANOUT
NOT TO SCALE



NOTES:
* INJECTION MOLDED FITTINGS ARE AVAILABLE IN TEES, WYES, REDUCERS, 45° BENDS AND BELL/BELL COUPLERS.

ROOF DRAIN DETAIL WITH CLEANOUTS
NOT TO SCALE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING INC
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

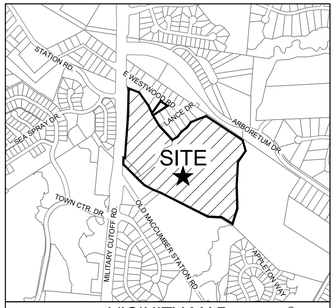
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/13/23
SCALE: N.T.S.
DESIGNED: ASR
DRAWN: ASR
CHECKED: RPB

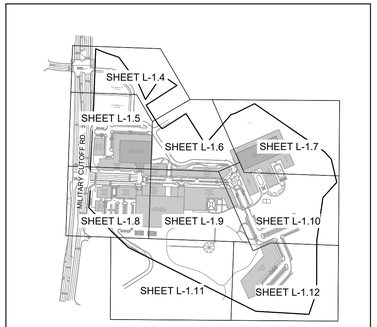
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLAND
09/15/23

C-6.5

PEI JOB#: 18473.PE



VICINITY MAP
SCALE: 1" = 1,000'
NORTH



KEY MAP
SCALE: 1" = 500'
NORTH

SITE DATA TABULATION

APPLICANT: DENNIS H. BURTON, PE
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, SUITE 201
GREENSBORO, NC 27401

PROJECT ADDRESS: 347 MILITARY CUTOFF RD.
349 MILITARY CUTOFF RD.
565 MILITARY CUTOFF RD.
302 LANCE DRIVE
306 LANCE DRIVE
128. E. WESTWOOD DR.
WILMINGTON, NC 28405

TAX PARCEL ID #: R05105-001-023-000
R05105-002-008-000
R05105-001-024-000
R05105-001-015-000
R05105-001-015-001
R05105-001-019-000

DEED REFERENCE: DB 1335 PG 019, DB 5619 PG 1573, DB 1220 PG 1622, DB 5949 PG 965, DB 2587 PG 146, DB 9901 PG 501

TOTAL SITE AREA: 44.5 +/- ACRES (1,938,420 SF)
CURRENT ZONING: UMX (CD)
THE SITE IS A DESIGNATED AREA OF HIGH INTENSITY FROM THE COMP PLAN

CAMA LAND USE CLASSIFICATION: WATERSHED RESOURCE PROTECTION AREA /CONSERVATION AREA

TREE REMOVAL NOTES:

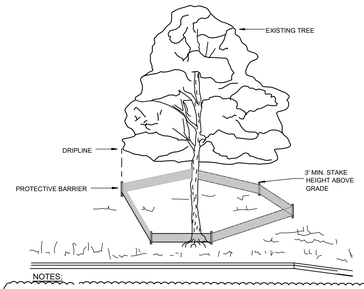
1. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.

PLAN NOTES:

1. REFER TO SHEETS L-1.2 AND L-1.3 FOR EXISTING TREE INVENTORY AND TREE REMOVAL LEGEND.
2. REFER TO SHEETS L-1.4 THRU L-1.12 FOR DETAIL PLANS FOR EXISTING TREE INVENTORY AND TREE REMOVALS AT 1" = 30', OVERLAY ON PROPOSED SITE PLAN IMPROVEMENTS

TREE SPECIES NOTES:

1. FOR THE PURPOSES OF MITIGATION, WHERE REQUIRED, ASSUME ALL "OAK" TREES ARE LIVE OAK SPECIES AND WILL BE MITIGATED AT THE QUANTITY / RATE COMMENSURATE AS REQUIRED.
2. "LONG LEAF PINE" IS DIFFERENTIATED IN IT REQUIRED MITIGATION AND IS IDENTIFIED AS A SPECIFIC SPECIES IN THE TREE LEGEND, ALL OTHER PINES ARE CONSIDERED DIFFERENTLY BY THE ORDINANCE AND ARE CONSIDERED "PINE" AS A WHOLE AND SEPARATED FROM "LONG LEAF" VARIETY.
3. THIS PLAN SHALL BE REVIEWED UNDER THE OLD CITY ORDINANCE, FROM THE DATE OF PLAN APPROVAL. THE PLAN WAS APPROVED IN JUNE 2018.



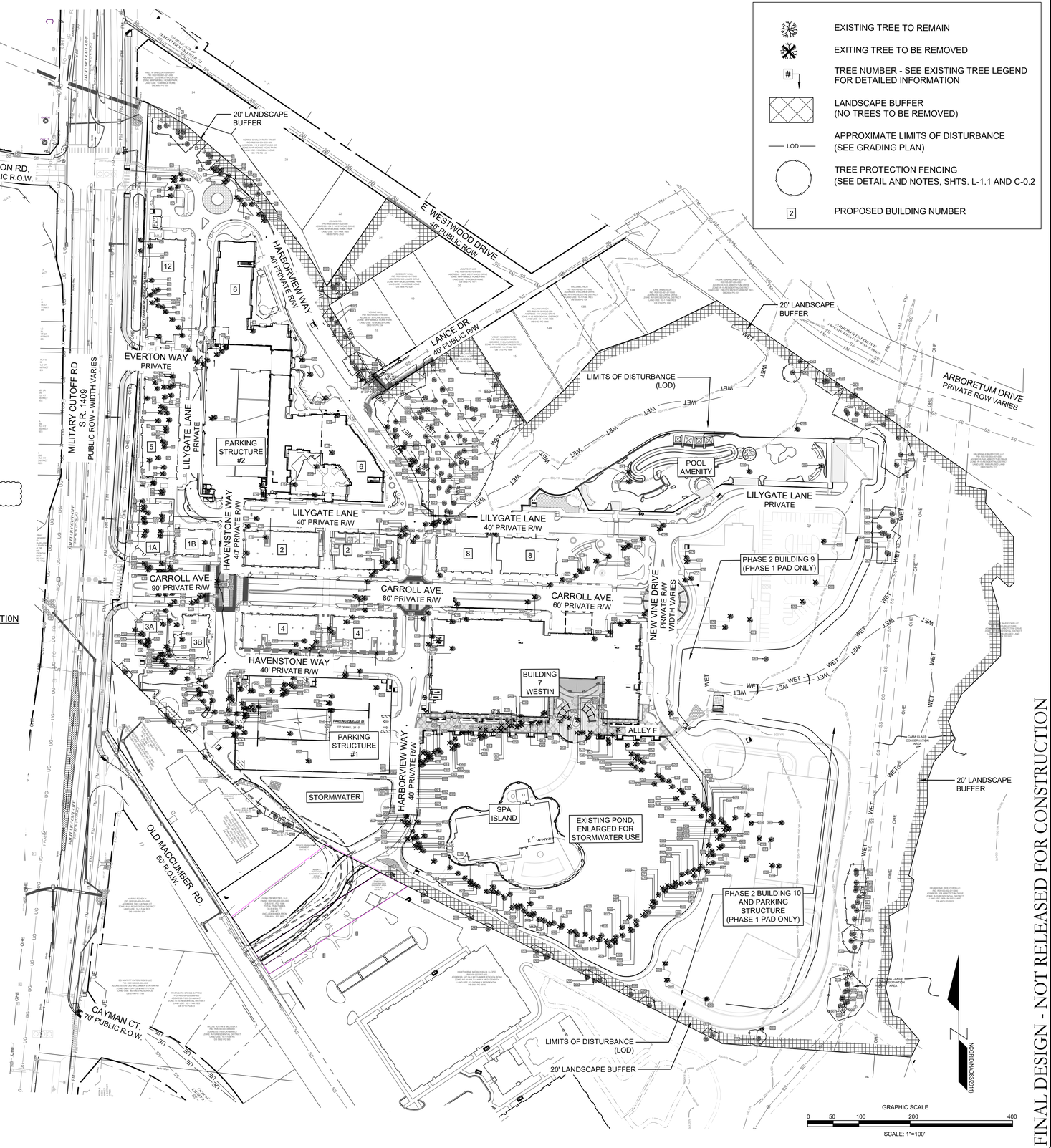
NOTES:
TREE PROTECTION FENCING ILLUSTRATED ON PLANS IS DIAGRAMMATIC.
SEE BELOW FOR SPECIFIC REQUIREMETNS

- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
- NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING AREA.
- INSTALLATION OF PROTECTION FENCING IS REQUIRED PRIOR TO LAND DISTURBING ACTIVITY AND IS TO BE MAINTAINED UNTIL AFTER FINAL SITE INSPECTION
- FENCING SHALL BE INSTALLED AT THE DRIPLINE OR AT THE BOUNDARY OF THE CRITICAL ROOT ZONE, WHICHEVER IS GREATER
  DRIP LINE - THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.
  CRITICAL ROOT ZONE - 1' RADIUS FROM THE TREE TRUNK PER 1" CALIPER

A METHOD OF TREE PROTECTION DURING CONSTRUCTION
NTS

LEGEND

- EXISTING TREE TO REMAIN
- EXITING TREE TO BE REMOVED
- TREE NUMBER - SEE EXISTING TREE LEGEND FOR DETAILED INFORMATION
- LANDSCAPE BUFFER (NO TREES TO BE REMOVED)
- LOD — APPROXIMATE LIMITS OF DISTURBANCE (SEE GRADING PLAN)
- TREE PROTECTION FENCING (SEE DETAIL AND NOTES, SHTS. L-1.1 AND C-0.2
- 2 PROPOSED BUILDING NUMBER



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
3/10/2022 APPROVED ADMINISTRATIVE MODIFICATION

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

TREE INVENTORY & REMOVALS
OVERALL PLAN
CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
PERMIT SET:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 09/27/2021
SCALE: 1" = 100'
DESIGNED: MN
DRAWN: MN
CHECKED: RPB

SEAL
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT MICHAEL E. NICHOLS 1990
06/23/2022

L-1.1

PEI JOB#: 18473.PE

TREE NUMBER ON PLAN	SIZE (D.B.H.) INCHES	TREE COMMON NAME	REMOVE TREE	SIGNIFICANT TREE	TREE TO BE REMOVED FOR AN ESSENTIAL SITE IMPROVEMENT	LOCATION OF TREE TO BE REMOVED FOR ESSENTIAL SITE IMPROVEMENT	TYPE OF TREE	TREE CATEGORY	% TREE MITIGATION MULTIPLIER (X2)	MITIGATION REQUIRED (REMOVALS)	PRESERVED TREE CREDIT (SAVES)
1	18	OAK	NO	NO			HARDWOOD	1			
2	15	PINE	NO	NO			CONIFER	3			
3	14	PINE	NO	NO			CONIFER	3			
4	16	LONGLEAF PINE	NO	NO			CONIFER	1			
5	14	LONGLEAF PINE	NO	NO			CONIFER	1			
6	19	PINE	NO	NO			CONIFER	3			
7	13	LONGLEAF PINE	NO	NO			CONIFER	1			
8	15	LONGLEAF PINE	NO	NO			CONIFER	1			
9	6	MIMOSA	NO	NO			FLOWERING	4			
10	16	PINE	NO	NO			CONIFER	3			
11	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
12	13	PINE	NO	NO			CONIFER	3			
13	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
14	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
15	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
16	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
17	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
18	20	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
19	15	PINE	NO	NO			CONIFER	3			
20	13	PINE	NO	NO			CONIFER	3			
21	30	OAK, MULTI (14, 16)	NO	YES			HARDWOOD	1			
22	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
23	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
24	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
25	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
26	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
27	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
28	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
29	10	OAK	YES	NO	YES	GRADING / ROAD	HARDWOOD	1			
30	18	PINE	YES	NO	YES	GRADING / ROAD	CONIFER	3			
31	16	HOLLY, MULTI (5,5,6)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
32	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
33	19	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
34	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
35	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
36	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
37	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
38	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
39	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
40	10	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
41	10	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
42	10	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
43	8	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
44	6	HOLLY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
45	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
46	18	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
47	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
48	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
49	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
50	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
51	11	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
52	14	LONGLEAF PINE	YES	NO	YES	NC DOT PROJECT	CONIFER	1			
53	8	CRAPE MYRTLE	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
54	12	PINE	YES	NO	YES	NC DOT PROJECT	CONIFER	3			
55	8	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
56	12	LONGLEAF PINE	YES	NO	YES	GRADING / ROAD	CONIFER	1			
57	19	PINE	YES	NO	YES	GRADING / ROAD	CONIFER	3			
58	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
59	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
60	8	HOLLY	YES	YES	YES	ROADWAY	FLOWERING	1	200	5.3	
61	7	HOLLY	YES	YES	YES	ROADWAY	FLOWERING	1	200	4.7	
62	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
63	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
64	17	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
65	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
66	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
67	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
68	14	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
69	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
70	10	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
71	13	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
72	12	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
73	19	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
74	13	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
75	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
76	20	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
77	14	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
78	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
79	14	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
80	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
81	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
82	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
83	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
84	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
85	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
86	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
87	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
88	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
89	16	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
90	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
91	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
92	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
93	14	LONGLEAF PINE	YES	NO	YES	SERVICE DRIVEWAY	CONIFER	1			
94	14	PINE	YES	NO	YES	SERVICE DRIVEWAY	CONIFER	3			
95	14	LONGLEAF PINE	YES	NO	YES	PEDESTRIAN AREA	CONIFER	1			
96	12	LONGLEAF PINE	YES	NO	YES	PEDESTRIAN AREA	CONIFER	1			
97	12	OAK	YES	NO	YES	PEDESTRIAN AREA	HARDWOOD	1			
98	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
99	13	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
100	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
101	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
102	6	CHERRY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	3			
103	16	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
104	12	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
105	16	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
106	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
107	6	HOLLY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
108	6	HOLLY	YES	NO	YES	ROADWAY	FLOWERING	1			
109	6	HOLLY	YES	NO	YES	PARKING	FLOWERING	1			
110	6	HOLLY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
111	16	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
112	12	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
113	8	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
114	20	OAK MULTI (6,6,8)	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
115	9	HOLLY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
116	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
117	6	HOLLY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
118	7	HOLLY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
119	20	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
120	16	HOLLY MULTI (8,8)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
121	8	HOLLY	YES	YES	YES	GRADING / ROAD	FLOWERING	1	200	5.3	
122	16	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
123	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
124	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
125	8	OAK	YES	NO	YES	ROADWAY	HARDWOOD	1			
126	6	MAGNOLIA	YES	NO	YES	ROADWAY	FLOWERING	1			
127	18	OAK	YES	NO	YES	ROADWAY	HARDWOOD	1			
128	16	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
129	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
130	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
131	11	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
132	12	OAK	YES	NO	YES	ROADWAY	HARDWOOD	1			
133	12	OAK	YES	NO	YES	ROADWAY	HARDWOOD	1			
134	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
135	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
136	16	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
137	8	OAK	YES	NO	YES	ROADWAY	HARDWOOD	1			
138	16	LONGLEAF PINE	YES	NO	YES	ROADWAY	CONIFER	1			
139	12	LONGLEAF PINE	YES	NO	YES	ROADWAY	CONIFER	1			
140	18	LONGLEAF PINE	YES	NO	YES	ROADWAY	CONIFER	1			
141	16	LONGLEAF PINE	YES	NO	YES	ROADWAY	CONIFER	1			
142	18	LONGLEAF PINE	YES	NO	YES	ROADWAY	CONIFER	1			
143	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
144	12	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
145	12	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
146	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
147	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
148	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
149	13	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
150	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
151	14	BAY	YES	NO	YES	ROADWAY	FLOWERING	1			
152	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
153	14	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
154	15	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
155	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
156	22	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
157	10	MAPLE	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
158	12	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
159	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
160	4	MAGNOLIA	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
161	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
162	8	MAPLE	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
163	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
164	18	LONGLEAF PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	1			
165	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
166	14	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
167	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
168	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
169	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
170	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
171	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
172	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
173	12	LONGLEAF PINE	YES	NO	YES	PARKING	CONIFER	1			
174	15	LONGLEAF PINE	YES	NO	YES	PARKING	CONIFER	1			
175	16	LONGLEAF PINE	YES	NO	YES	PARKING	CONIFER	1			
176	12	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
177	14	PINE	YES	NO	YES	PARKING	CONIFER	3			
178	18	PINE	YES	NO	YES	PARKING	CONIFER	3			
179	10	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
180	30	PINE	YES	YES	YES	PARKING	CONIFER	3	100	10.0	
181	8	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
182	14	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
183	10	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
184	8	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
185	28	PINE	YES	YES	YES	PARKING	CONIFER	3	100	9.3	
186	12	GUM	YES	NO	YES	PARKING	HARDWOOD	2			
187	12	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
188	20	POPLAR	YES	NO	YES	PARKING	HARDWOOD	4			
189	15	POPLAR	YES	NO	YES	PARKING	HARDWOOD	4			
190	12	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
191	10	MAPLE	YES	NO	YES	PARKING	HARDWOOD	1			
192	15	POPLAR	YES	NO	YES	PARKING	HARDWOOD	4			
193	10	MAPLE	NO	NO			HARDWOOD	1			
194	15	MAPLE	NO	NO			HARDWOOD	1			
195	18	MAPLE	NO	NO			HARDWOOD	1			
196	18	MAPLE	NO	NO			HARDWOOD	1			
197	15	MAPLE	NO	NO			HARDWOOD	1			
198	10	MAPLE	NO	NO			HARDWOOD	1			
199	6	CHINABERRY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	2			
200	8	POPLAR	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	4			
201	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
202	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
203	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
204	22	CEDAR	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
205	18, 16	MAPLE (DOUBLE TRUNK)	YES	NO	YES	GRADING / ROAD	HARDWOOD	1			
206	10	CHERRY	YES	YES	YES	ROADWAY	FLOWERING	3	100	3.3	
207	10	PECAN	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	2			
208	8	CEDAR	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
209	10	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
210	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
211	12	CEDAR	YES	NO	YES	ROADWAY	CONIFER	2			
212	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
213	8	OAK	YES	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
214	4	DOGWOOD	YES	NO	YES	ROADWAY	FLOWERING	1			
215	8	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
216	10	CEDAR	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
217	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
218	15	PINE	YES	NO	YES	GRADING / ROAD	CONIFER	3			
219	15	MAGNOLIA	YES	YES	YES	GRADING / ROAD	FLOWERING	1	200	10.0	
220	22	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
221	18	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
222	24	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
223	12	CHERRY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	3	NONE		
224	15	CHERRY	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	3	NONE		
225	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
226	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
227	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
228	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
229	15	PINE	YES	NO	YES	PARKING	CONIFER	3			
230	15	PINE	YES	NO	YES	PARKING	CONIFER	3			
231	12	PINE	YES	NO	YES	PARKING	CONIFER	3			
232	6	CHERRY	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	3			
233	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
234	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
235	15	PINE	YES	NO	YES	GRADING / ROAD	CONIFER	3			
236	18	PINE	YES	NO	YES	GRADING / ROAD	CONIFER	3			
237	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
238	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
239	15	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
240	8	MAPLE	YES	NO	YES	AMENITY FOOTPRINT	HARDWOOD	1			
241	18	PINE	YES	NO	YES	AMENITY FOOTPRINT	CONIFER	3			
242	12	PINE	NO	NO			CONIFER	3			
243	12	PINE	NO	NO			CONIFER	3			
244	12	PINE	NO	NO			CONIFER	3			
245	12	PINE	NO	NO			CONIFER	3			
246	8	OAK	NO	NO			HARDWOOD	1			
247	12	OAK	NO	NO			HARDWOOD	1			
248	12	OAK	NO	NO			HARDWOOD	1			
249	15	PINE	NO	NO			CONIFER	3			
250	5	CRAPE MYRTLE	NO	NO			FLOWERING	1			
251	12	PINE	NO	NO			CONIFER	3			
252	12	PINE	NO	NO			CONIFER	3			
253	20	OAK	NO	NO			HARDWOOD	1			
254	12	PINE	NO	NO			CONIFER	3			
255	15	GUM	NO	NO			HARDWOOD	2			
256	8	CHERRY	NO	YES			FLOWERING	3			
257	12	PINE	NO	NO			CONIFER	3			
258	4	CRAPE MYRTLE	NO	NO			FLOWERING	1			
259	6	CHERRY	YES	NO			FLOWERING	3			
260	18	PINE	NO	NO			CONIFER	3			
261	12	PINE	NO	NO			CONIFER	3			
262	12	PINE	NO	NO			CONIFER	3			
263	15	PINE	NO	NO			CONIFER	3			
264	4	CRAPE MYRTLE	NO	NO			FLOWERING	1			
265	4	CRAPE MYRTLE	NO	NO			FLOWERING	1			
266	18	PINE	NO	NO			CONIFER	3			
267	15	PINE	NO	NO			CONIFER	3			
268	5	MAGNOLIA	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
269	15	OAK	YES	NO	YES	PARKING	HARDWOOD	1			
270	14	MIMOSA (MT 6,8)	YES	NO	YES	INVASIVE SPECIES	FLOWERING	4			
271	9	CRAPE MYRTLE (MT 3,3,3,3,3,3)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
272	4	DOGWOOD	YES	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
273	24	CRAPE MYRTLE (MT 2,2,2,2,2,2,2,2,2,2,2,2)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
274	18	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
275	24	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
276	12	MAPLE	YES	NO	YES	PEDESTRIAN AREA	HARDWOOD	1			
277	24	PINE	YES	NO	YES	PEDESTRIAN AREA	CONIFER	3			
278	30	PINE	YES	YES	YES	ROADWAY	CONIFER	3	100	10.0	
279	16	CHERRY	YES	YES	YES	ROADWAY	FLOWERING	3			
280	22	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
281	10	CHERRY	YES	YES	YES	ROADWAY	FLOWERING	3	100	3.3	
282	10	CEDAR	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
283	15	PINE	NO	NO			CONIFER	3			
284	*10*	*MAPLE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*HARDWOOD*	*1*			
285	*15*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
286	*15*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
287	12	PINE	NO	NO			CONIFER	3			
288	12	PINE	NO	NO			CONIFER	3			
289	*8*	*MAPLE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*HARDWOOD*	*1*			
290	*12*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
291	*22*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
292	*12*	*GUM*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*HARDWOOD*	*2*			
293	*5*	*MAGNOLIA*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*FLOWERING*	*1*			
294	*8*	*GUM*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*HARDWOOD*	*2*			
295	*15*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
296	*12*	*PINE*	*NO*	*NO*		*ON ADJACENT PROPERTY*	*CONIFER*	*3*			
297	12	PINE	NO	NO			CONIFER	3			
298	15	PINE	NO	NO			CONIFER	3			
299	12	PINE	NO	NO			CONIFER	3			
300	12	PINE	NO	NO			CONIFER	3			
301	8	OAK	NO	NO			HARDWOOD	1			
302	12	GUM	NO	NO			HARDWOOD	2			
303	12	GUM	YES	NO	YES	RETAINING WALL/GRADING	HARDWOOD	2			
304	35	CRAPE MYRTLE (MT 4,5,6,6,6,8)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
305	24	CRAPE MYRTLE (MT 2,2,2,2,2,2,2,2,2,2,2,2)	YES	YES	YES	BUILDING FOOTPRINT	FLOWERING	1	NONE		
306	12	PINE	YES	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
307	8	GUM	NO	NO			HARDWOOD	2			
308	15	POPLAR	NO	NO			HARDWOOD	4			
309	12	PINE	NO	NO			CONIFER	3			
310	15	PINE	NO	NO			CONIFER	3			
311	8	GUM	NO	NO			HARDWOOD	2			
312	15	MAPLE	NO	NO			HARDWOOD	1			
313	10	GUM	NO	NO			HARDWOOD	2			
314	12	OAK	NO	NO			HARDWOOD	1			
315	15	PINE	NO	NO			CONIFER	3			
316	16	PINE	NO	NO			CONIFER	3			
317	15	PINE	NO	NO			CONIFER	3			
318	15	PINE	NO	NO			CONIFER	3			
319	15	PINE	NO	NO			CONIFER	3			
320	15	PINE	NO	NO			CONIFER	3			
321	12	PINE	NO	NO			CONIFER	3			
322	15	PINE	NO	NO			CONIFER	3			
323	12	GUM	NO	NO			HARDWOOD	2			
324	8	CEDAR	NO	NO			CONIFER	2			
325	15	PINE	NO	NO			CONIFER	3			
326	12	PINE	NO	NO			CONIFER	3			
327	18	PINE	NO	NO			CONIFER	3			
328	10	CEDAR	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
329	12	MAPLE	NO	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
330	18	MAPLE	NO	NO	YES	BUILDING FOOTPRINT	HARDWOOD	1			
331	6	MIMOSA	NO	NO	YES	INVASIVE SPECIES	FLOWERING	4			
332	12	GUM	NO	NO	YES	BUILDING FOOTPRINT	HARDWOOD	2			
333	6	DOGWOOD	NO	NO	YES	BUILDING FOOTPRINT	FLOWERING	1			
334	8	CEDAR	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	2			
335	18	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
336	15	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
337	15	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
338	15	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
339	15	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
340	24	PINE	NO	NO	YES	GRADING / FOUNDATION	CONIFER	3			
341	15	PINE	NO	NO	YES	GRADING / FOUNDATION	CONIFER	3			
342	15	PINE	NO	NO	YES	GRADING / FOUNDATION	CONIFER	3			
343	18	PINE	NO	NO	YES	GRADING / ROAD	CONIFER	3			
344	20	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
345	12	PINE	NO	NO	YES	BUILDING FOOTPRINT	CONIFER	3			
346	18	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
347	12	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
348	15	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
349	16	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
350	24	PINE	NO	NO	YES	ROADWAY	CONIFER	3	100	8.0	
351	18	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
352	12	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
353	15	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
354	16	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
355	8	GUM	NO	NO	YES	ROADWAY	HARDWOOD	2			
356	12	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
357	12	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
358	30	PINE	NO	NO	YES	ROADWAY	CONIFER	3			
359	15	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
360	15	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
361	18	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
362	18	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
363	28	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
364	16	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
365	12	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
366	18	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
367	12	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
368	16	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
369	18	PINE	NO	NO	YES	STORMWATER	CONIFER	3			
370	6	DOGWOOD	YES	NO	YES	GRADING / FOUNDATION	FLOWERING	1			
371	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
372	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
373	12	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
374	4	MAGNOLIA	YES	NO	YES	STORMWATER	FLOWERING	1			
375	15	GUM	YES	NO	YES	GRADING / ROAD	HARDWOOD	2			
376	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
377	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
378	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
379	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
380	28	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
381	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
382	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
383	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
384	20	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
385	24	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
386	12	POPLAR	YES	NO	YES	ROADWAY	HARDWOOD	4			
387	28	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
388	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
389	18	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
390	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
391	15	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
392	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
393	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
394	12	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
395	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
396	24	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
397	10	POPLAR	YES	NO	YES	ROADWAY	HARDWOOD	4			
398	28	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
399	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
400	16	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
401	8	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
402	10	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
403	12	GUM	YES	NO	YES	ROADWAY	HARDWOOD	2			
404	8	POPLAR	YES	NO	YES	STORMWATER	HARDWOOD	4			
405	12	WILLOW	YES	NO	YES	STORMWATER	HARDWOOD	4			
406	12	PINE	YES	NO	YES	ROADWAY	CONIFER	3			
407	36	PINE	YES	YES	YES	STORMWATER	CONIFER	3	100	12.0	
408	8	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
409	6	CEDAR	YES	NO	YES	STORMWATER	CONIFER	2			
410	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
411	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
412	10	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
413	24	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
414	8	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
415	8	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
416	10	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
417	24	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
418	36	PINE	YES	YES	YES	STORMWATER	CONIFER	3	100	12.0	
419	30	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
420	24	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
421	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
422	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
423	10	MAGNOLIA	YES	YES	YES	STORMWATER	FLOWERING	1	200	6.7	
424	20	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
425	6	MAGNOLIA	YES	NO	YES	STORMWATER	FLOWERING	1			
426	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
427	16	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
428	10	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
429	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
430	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
431	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
432	10	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
433	20	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
434	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
435	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
436	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
437	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
438	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
439	16	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
440	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
441	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
442	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
443	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
444	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
445	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
446	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
447	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
448	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
449	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
450	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
451	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
452	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
453	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
454	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
455	4	CHERRY	YES	NO	YES	STORMWATER	FLOWERING	3			
456	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
457	5	CHERRY	YES	NO	YES	STORMWATER	FLOWERING	3			
458	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
459	12	POPLAR	YES	NO	YES	STORMWATER	HARDWOOD	4			
460	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
461	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
462	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
463	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
464	7	DOGWOOD	YES	NO	YES	STORMWATER	FLOWERING	1			
465	4	CHERRY	YES	NO	YES	STORMWATER	FLOWERING	3			
466	16	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
467	18	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
468	24	OAK	YES	YES	YES	STORMWATER	HARDWOOD	1	200	16.0	
469	8	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
470	8	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
471	15	GUM	YES	NO	YES	STORMWATER	HARDWOOD	2			
472	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
473	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
474	5	DOGWOOD	YES	NO	YES	STORMWATER	FLOWERING	1			
475	8	POPLAR	YES	NO	YES	STORMWATER	HARDWOOD	4			
476	15	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
477	12	PINE	YES	NO	YES	STORMWATER	CONIFER	3			
478	8	POPLAR	YES	NO	YES	STORMWATER	HARDWOOD	4			

NOTES:

1. TREES SHOWN WITH SHADED BACKGROUND ARE DESIGNATED REMOVALS FOR ESSENTIAL SITE IMPROVEMENTS - NO MITIGATION REQUIRED (PER SECTION 18-457)
2. TREES WITH BLACKENED BACKGROUNDS ARE SIGNIFICANT AND REQUIRE MITIGATION.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
APPROVED ADMINISTRATIVE MODIFICATION 3/10/2022

CLIENT INFORMATION:
CIP CONSTRUCTION COMPANY
201 NORTH ELM STREET, STE. 201
GREENSBORO, NC 27401

PARAMOUNTE ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

TREE INVENTORY & REMOVALS
TREE LEGEND

CARROLL AT THE AVENUE
MILITARY CUTOFF RD.
WILMINGTON, NC 28405

PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 06/23/2023
SCALE: NO SCALE
DESIGNED: MN
DRAWN: MN
CHECKED: RPB

SEAL
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1990 06/23/23 MICHAEL E. NICHOLS

L-1.2

PEI JOB#: 18473.PE