

# WILMINGTON THREE PHASE A

## WILMINGTON, NORTH CAROLINA

### DESIGN DOCUMENTS JANUARY 2021

**DEVELOPER:**

CK WILMINGTON THREE PHASE A, LLC  
301 SOUTH COLLEGE STREET, SUITE 2800  
CHARLOTTE, NORTH CAROLINA 28202

**OWNER:**

CAMERON PROPERTIES LAND CO, LLC  
1201 GLEN MADE RD.  
WILMINGTON, NORTH CAROLINA 28401

**ARCHITECT**

HOUSING STUDIO  
333 WEST TRADE STREET, SUITE 300  
CHARLOTTE, NORTH CAROLINA 28202  
704.333.7862  
ARCHITECT - ATTN: CARL NALLS

**CIVIL ENGINEER**

PARAMOUNTE ENGINEERING, INC.  
122 CINEMA DRIVE  
WILMINGTON, NORTH CAROLINA 28403  
910.791.6707  
CIVIL ENGINEER - ATTN: DAN FISK, PE LANDSCAPE ARCHITECT - ATTN: MIKE NICHOLS, RLA

**LANDSCAPE ARCHITECT**

MIHALY LAND DESIGN  
330 MILITARY CUTOFF ROAD #3  
WILMINGTON, NORTH CAROLINA 28405  
910.392.4355  
LANDSCAPE ARCHITECT - ATTN: JOSH MIHALY, RLA, LEED AP

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**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.

CONTACT "CAROLINA ONE CALL" AT  
1-800-632-4949

**CONTACT THESE UTILITIES**

CITY OF WILMINGTON, DEVELOPMENT SERVICES  
ATTN: BRIAN CHAMBERS  
PH: 910-341-2782

PIEDMONT NATURAL GAS  
ATTN: PAUL GONKA  
PH: 910-251-2810

EMERGENCY DIAL 911  
POLICE - FIRE - RESCUE

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)  
ATTN: FRANK STYERS  
PH: 910-332-6670

DUKE ENERGY PROGRESS  
ATTN: MARK A. HATFIELD  
PH: 910-550-3428

AT&T  
ATTN: STEVE DAYVALLT  
PH: 910-341-0741  
EMAIL: s99094@att.com

TIME WARNER CABLE  
PH: 910-763-4638

PREPARED BY:  
**PARAMOUNTE**  
ENGINEERING, INC.  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6700 (F)  
NC License #: C-2846  
PROJECT # 20195.PE

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

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

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

**PARAMOUNTE**  
ENGINEERING, INC.  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6700 (F)  
NC License #: C-2846

**COVER SHEET**  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

PROJECT STATUS:  
CONCEPTUAL LAYOUT: \_\_\_\_\_  
FINAL DESIGN: \_\_\_\_\_  
RELEASED FOR CONSTRUCTION: \_\_\_\_\_

DRAWING INFORMATION: 01/13/21

DATE: \_\_\_\_\_  
SCALE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED: \_\_\_\_\_

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-0.0**

PEI JOB#: 20195.PE



**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 PARAMOUNT 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 REVENUE. 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, CURBS 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 OR 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 RADI 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 311-5888 FOR MORE DETAILS. IN CERTAIN CASES, AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
6. CONTACT TRAFFIC ENGINEERING AT 341-7889 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.

**FIRE AND LIFE SAFETY NOTES:**

- 1. CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
2. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE. HYDRANT MUST BE WITHIN 150' OF THE FOC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE).
3. LANDSCAPING OR PARKING CANNOT BLOCK OR OBSCURE THE FOC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FOC.
4. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION (311-5888). FOC MUST BE WITHIN 4' OF FIRE APPARATUS PLACEMENT.
5. ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
6. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM, MUST BE ELECTRICALLY SUPERSEDED. CONTRACTOR SHALL SUBMIT A RADI SIGNAL 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.

**GENERAL EROSION AND SEDIMENT CONTROL NOTES:**

- 1. THE EROSION CONTROL PLAN SHALL INCLUDE PROVISIONS FOR GROUND COVER 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 SODED 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 AND 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.

**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, BARRIERS, 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 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 NO WETLANDS ON THE PROPERTY. THIS DETERMINATION HAS BEEN AGREED TO BY THE ACOE (SAW-2005-00627).

**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 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 FIRM 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 AREA 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 1/2-INCH OR GREATER 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 FENCE / SEDIMENT FENCE OUTLETS - SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF-FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL, AND SPACED 6 FEET WITH EXTRA STRENGTH FABRIC AND NO WIRE BACKING. STAKE SPACING CAN BE 8 FEET WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS (OR EXCELOR WATLES) ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE THE ROCK OR WATTLE WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT. NO LONGER DRAINS, OR IS DAMAGED.
4. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS ON THESE PLANS AND CONTRACT SPECIFICATIONS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. INLET PROTECTION - SEDIMENT SHALL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL, BLOCK AND GRAVEL, OR ROCK-PIPE INLETS, WHEN IT REACHES HALF-FILLED, ROCK WILL BE CLEANED OR REPLACED WHEN NO LONGER DRAINS. SILT SACKS, BEAVER DAMS, SANDY SACKS, AND SOAKS NEED CHECKING EVERY WEEK AND AFTER RAIN.
6. SEDIMENT BASIN/SEDIMENT TRAPS - REMOVE SEDIMENT AND RESTORE 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 STRUCTURES, ABANDONED UTILITIES, BARRIERS, 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.
7. 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.
8. OUTLET PROTECTION - INSPECT RIP RAP OUTLET STRUCTURES WEEKLY AND AFTER 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 OFFSITE SEDIMENTATION.
9. 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.
10. DIVERSION DITCHES / GRASS SWALES - INSPECT THE CHANNEL OUTLET AND ALL ROAD CROSSINGS FOR BANK STABILITY AND EVIDENCE OF PIPING OR SCOUR HOLES. REMOVE ALL SIGNIFICANT SEDIMENT ACCUMULATIONS TO MAINTAIN THE DESIGNED CARRYING CAPACITY. DIVERSIONS SHALL BE LINED OR STABILIZED AS NOTED ON THE PLANS. IF THE DIVERSION WILL BECOME PERMANENT GRASS SWALES, THEN GROW GRASS INTO A HEALTHY, VIGOROUS CONDITION.
11. CHECK DAMS - EXCELISOR OR RIP-RAP - SEDIMENT SHALL BE REMOVED FROM THE DAM WHEN IT REACHES HALF-FILLED. CHECK DAMS SHALL BE REPAIRED OR REPLACED, AND CHANNEL SHALL BE REPAIRED OF RUTS, PIPING, AND SETTLEMENT AROUND THE DAMS AS NEEDED.
12. 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.

- 13. 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 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.

**PERMANENT SEEDING**

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
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BERMUDA, HULLED	10-20	MARCH - AUGUST	
BERMUDA, UNHULLED	35	SEPT. - FEB.	BY SOIL TEST
CENTPEDE	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 CENTPEDE OR GERMANA LESPEDEZA	5	JAN - DEC	BY SOIL TEST

**TEMPORARY SEEDING**

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
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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		

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_ Public Services • Engineering Division

Traffic \_\_\_\_\_ APPROVED STORMWATER MANAGEMENT PLAN

Fire \_\_\_\_\_ Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_



APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**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. PARAMOUNT ENGINEERING HAS DEVELOPED THESE NOTES AND DETAILS TO ASSURE THAT THE CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE POINT IN TIME WHEN THEY ARE BIDDING THE PROJECT. IN ADDITION, PARAMOUNT ENGINEERING HAS MADE A POINT IN THESE NOTES AND DETAILS AS TO HOW 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 PARAMOUNT ENGINEERING IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS AND OTHER PROJECT DRAWINGS, WHETHER BY PARAMOUNT 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 FLUSH/NO 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 SIXTY (60) 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 SHALL PROVIDE PASSING SPACES AT 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 ANGLE 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.
13. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.

**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 RAMP 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. REFER TO 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, 1/2 INCH WIDE BY 1/4 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 FOR ACCESSIBLE 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 EXCEPT FOR 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



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

**SECTION E: GROUND STABILIZATION**

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

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

**GROUND STABILIZATION SPECIFICATION**

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

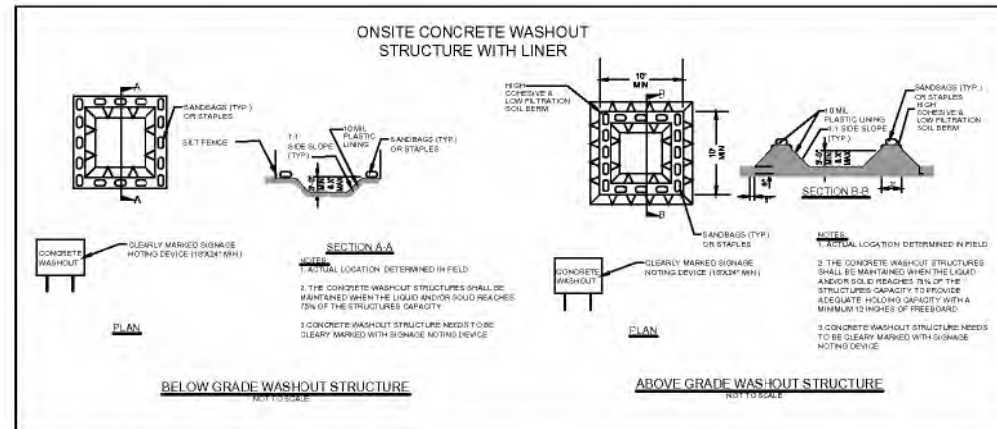
Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Roll-on erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other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

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

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

**EQUIPMENT AND VEHICLE MAINTENANCE**

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



**CONCRETE WASHOUTS**

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

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

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

**PAINT AND OTHER LIQUID WASTE**

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

**PORTABLE TOILETS**

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

**EARTHEN STOCKPILE MANAGEMENT**

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

**HERBICIDES, PESTICIDES AND RODENTICIDES**

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

**HAZARDOUS AND TOXIC WASTE**

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

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**

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 unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands on-site or off-site (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 discharge of 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&S measures, clearing and grubbing, installation of storm drainage facilities, completion of 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&S Plan Documentation**  
 The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be documented in the manner described:

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

**2. Additional Documentation**  
 In addition to the E&S 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:

- This general permit as well as the certificate of coverage, after it is received.
- 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.
- 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:
- Visible sediment deposition in a stream or wetland.
  - 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).
  - 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.
  - Anticipated bypasses and unanticipated bypasses.
  - Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

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

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, 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.</li> <li>If the stream is named on the <a href="#">NC 303(a) list</a> 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.</li> </ul>
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)].</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

REVISIONS:

CLIENT INFORMATION:

**PARAMOUNT ENGINEERING**

CK WILMINGTON  
 THREE PHASE A, LLC  
 CHARLOTTE, NC

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

NPDES NOTES

WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

PROJECT STATUS:  
 CONCEPTUAL LAYOUT:  
 PRELIMINARY LAYOUT:  
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION  
 DATE: 07/13/17  
 DESIGNED: JDF  
 DRAWN: JDF  
 CHECKED: JDF

Professional Seal redacted on electronic copy per City of Wilmington Policy

C-1.1

PEI JOB#: 20195.PE



Know what's below. Call before you dig.

**NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING**

EFFECTIVE: 04/01/19

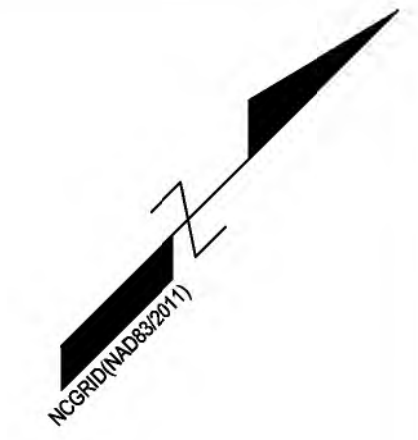
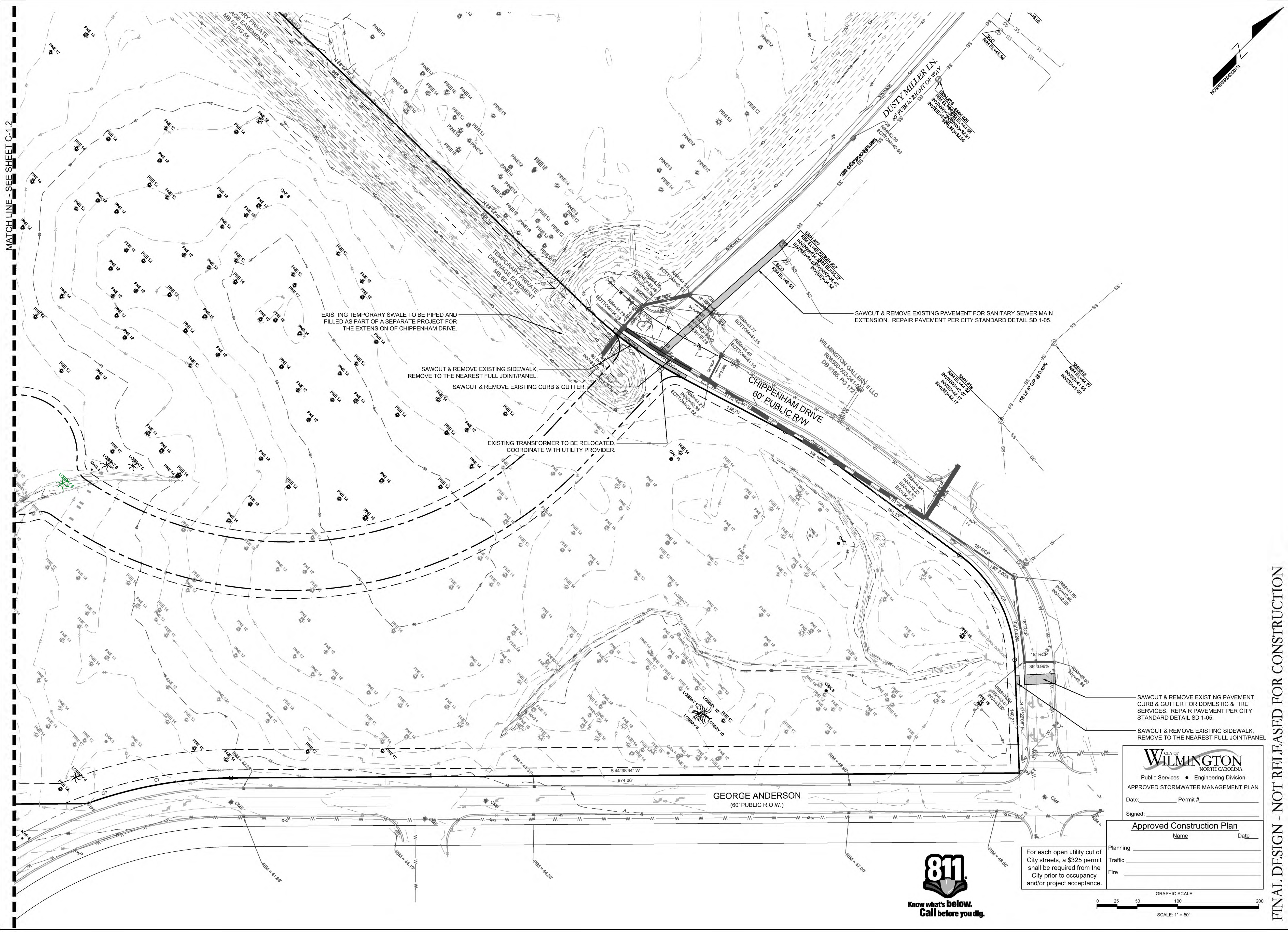
FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION







MATCH LINE - SEE SHEET C-12



REVISIONS:

CLIENT INFORMATION:  
**CK WILMINGTON**  
**THREE PHASE A, LLC**  
**CHARLOTTE, NC**

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

**SITE INVENTORY PLAN**  
**WILMINGTON THREE PHASE A**  
**CITY OF WILMINGTON**  
**NORTH CAROLINA**

PROJECT STATUS:  
 CONCEPTUAL LAYOUT:  
 PRELIMINARY LAYOUT:  
 FINAL DESIGN LAYOUT:  
 RELEASED FOR CONSTRUCTION:  
 DATE: 01/31/21  
 SCALE: 1" = 50'  
 DRAWING NO.:  
 CHECKED:

Professional Seal  
 redacted on electronic  
 copy per City of  
 Wilmington Policy

**C-1.3**

PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

SAWCUT & REMOVE EXISTING PAVEMENT, CURB & GUTTER FOR DOMESTIC & FIRE SERVICES. REPAIR PAVEMENT PER CITY STANDARD DETAIL SD 1-05.

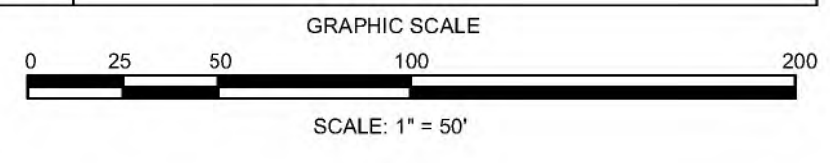
SAWCUT & REMOVE EXISTING SIDEWALK, REMOVE TO THE NEAREST FULL JOINT/PANEL.

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

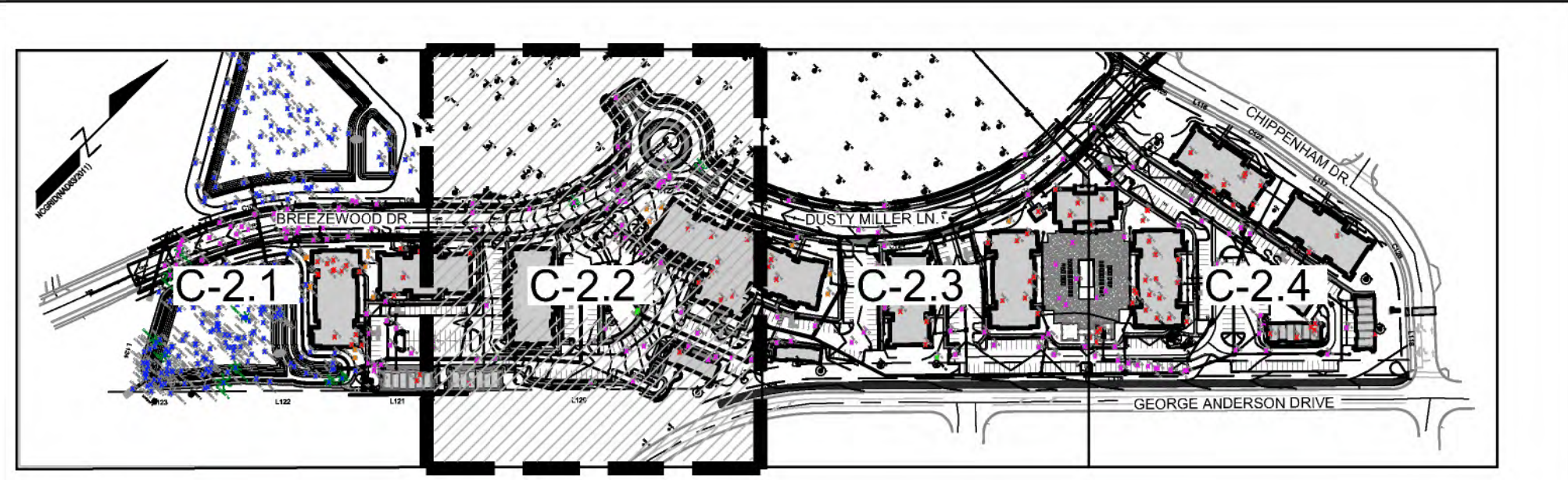
**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

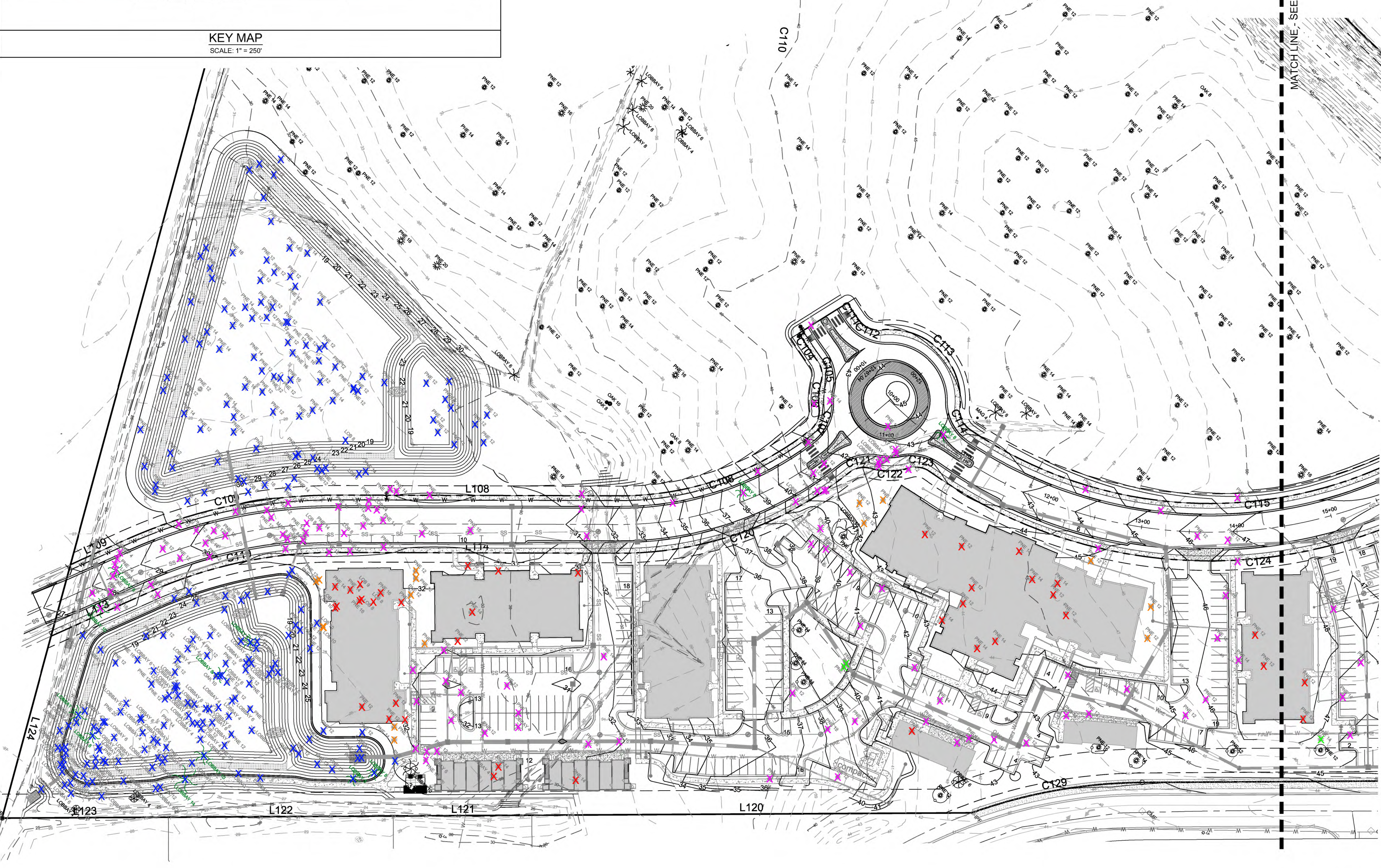
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



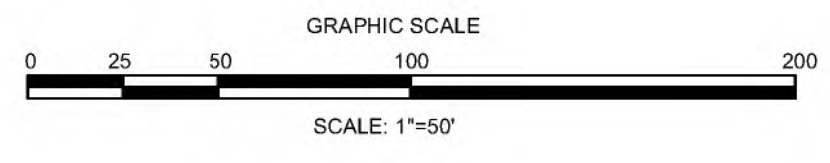
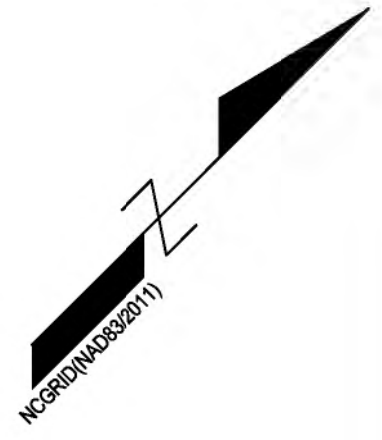




KEY MAP  
SCALE: 1" = 250'



MATCH LINE - SEE SHEET C-1.5



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

CK WILMINGTON  
THREE PHASE A, LLC  
CHARLOTTE, NC

**PARAMOUNTE**  
ENGINEERING, INC.

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

TREE REMOVAL PLAN  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

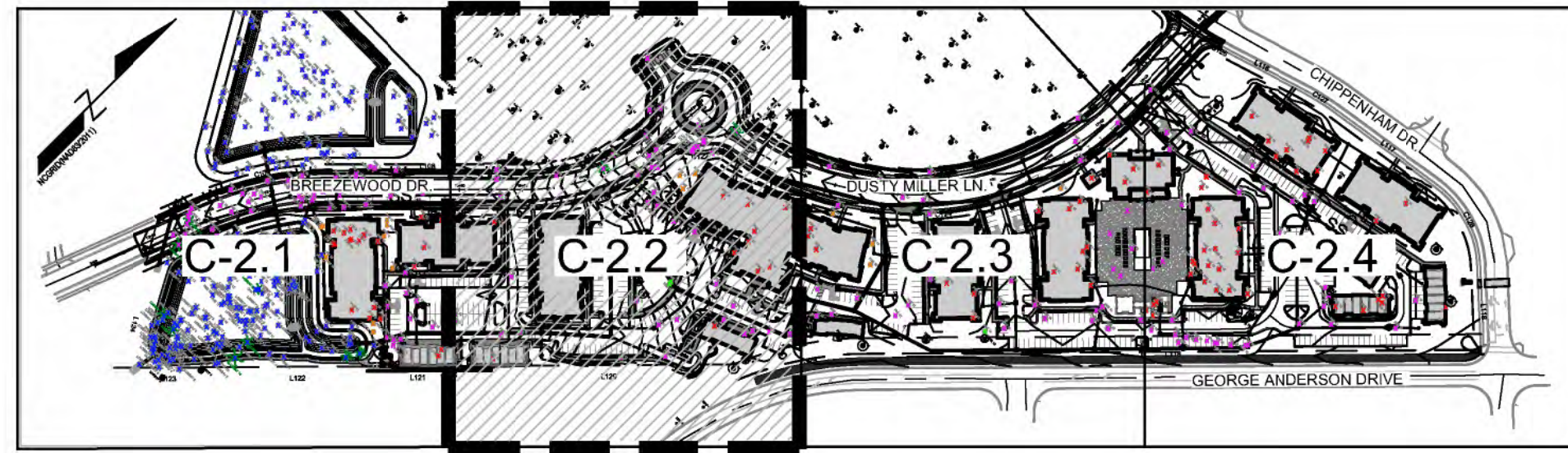
PROJECT STATUS:  
CONCEPTUAL LAYOUT:  
FINAL DESIGN LAYOUT:  
RELEASED FOR CONSTRUCTION:  
DRAWING INFORMATION:  
DATE: 01/31/21  
SCALE: 1"=50'  
DRAWN BY: [Redacted]  
CHECKED BY: [Redacted]

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-1.4**

PEI JOB#: 20195.PE





**KEY MAP**  
SCALE: 1" = 250'

**Wilmington Three Phase A Tree Removal & Required Mitigation**

Qty of Trees	Caliper Inches*	Individual Trunk Calipers AND Individual Cluster Trunks	Tree Common Name	City Tree Type Classification	Total Cal. Inches to be Removed	% Mitigation	Significant	Location	Essential Site Improvements	Total Qty. of Mitigation Trees Required
--------------	-----------------	---	------------------	-------------------------------	---------------------------------	--------------	-------------	----------	-----------------------------	---

Note: \* All listed as total caliper inches for entire tree cluster or single tree trunk caliper in compliance with City of Wilmington Land Development Code definition for "diameter at breast height"  
Essential Site Improvements: It is anticipated that all trees will be removed for essential site improvements, so only significant trees require mitigation

REGULATED & SIGNIFICANT TREES										
Category 1 (100% Mitigation)										
2	4		LOBBAY (LOBLOLLY BAY)	flowering	8	100%		Building	yes	
4	8		OAK (WATER OR LIVE OAK)	hardwood	32	100%		Building	yes	
1	9		OAK (WATER OR LIVE OAK)	hardwood	9	100%		Building	yes	
3	10		OAK (WATER OR LIVE OAK)	hardwood	30	100%		Building	yes	
1	6		AH (AMERICAN HOLLY)	hardwood	6	100%		Roadway/Parking	yes	
11	4		LOBBAY (LOBLOLLY BAY)	flowering	44	100%		Roadway/Parking	yes	
5	6		LOBBAY (LOBLOLLY BAY)	flowering	30	100%		Roadway/Parking	yes	
3	8		LOBBAY (LOBLOLLY BAY)	flowering	24	100%		Roadway/Parking	yes	16
1	10		LOBBAY (LOBLOLLY BAY)	flowering	10	100%	yes	Roadway/Parking	yes	7
1	4		MAG (SOUTHERN MAGNOLIA)	flowering	4	100%		Roadway/Parking	yes	
1	8		MAP (RED MAPLE)	hardwood	8	100%		Roadway/Parking	yes	
4	8		OAK (WATER OR LIVE OAK)	hardwood	32	100%		Roadway/Parking	yes	
1	10		OAK (WATER OR LIVE OAK)	hardwood	10	100%		Roadway/Parking	yes	
1	14		OAK (WATER OR LIVE OAK)	hardwood	14	100%		Roadway/Parking	yes	
2	10		OAK (WATER OR LIVE OAK)	hardwood	20	100%		Grading	yes	
44	4		LOBBAY (LOBLOLLY BAY)	flowering	176	100%		Stormwater	yes	
33	6		LOBBAY (LOBLOLLY BAY)	flowering	198	100%		Stormwater	yes	
5	8		LOBBAY (LOBLOLLY BAY)	flowering	40	100%	yes	Stormwater	yes	27
2	10		LOBBAY (LOBLOLLY BAY)	flowering	20	100%	yes	Stormwater	yes	13
1	14		LOBBAY (LOBLOLLY BAY)	flowering	14	100%	yes	Stormwater	yes	9
6	8		OAK (WATER OR LIVE OAK)	hardwood	48	100%		Stormwater	yes	
2	10		OAK (WATER OR LIVE OAK)	hardwood	20	100%		Stormwater	yes	
2	12		OAK (WATER OR LIVE OAK)	hardwood	24	100%		Stormwater	yes	
Total Category 1 Significant & Regulated Mitigation Trees Required:										72
Total Category 1 Regulated Trees To Be Removed with Essential Site Improvements:										126

Category 3 (50% Mitigation)										
50	12		PNE (LOBLOLLY)	conifer	600	50%		Building	yes	
26	14		PNE (LOBLOLLY)	conifer	364	50%		Building	yes	
5	16		PNE (LOBLOLLY)	conifer	80	50%		Building	yes	
2	18		PNE (LOBLOLLY)	conifer	36	50%		Building	yes	
84	12		PNE (LOBLOLLY)	conifer	1008	50%		Roadway/Parking	yes	
40	14		PNE (LOBLOLLY)	conifer	560	50%		Roadway/Parking	yes	
2	15		PNE (LOBLOLLY)	conifer	30	50%		Roadway/Parking	yes	
16	16		PNE (LOBLOLLY)	conifer	256	50%		Roadway/Parking	yes	
5	18		PNE (LOBLOLLY)	conifer	90	50%		Roadway/Parking	yes	
2	20		PNE (LOBLOLLY)	conifer	40	50%		Roadway/Parking	yes	
11	12		PNE (LOBLOLLY)	conifer	132	50%		Grading	yes	
4	14		PNE (LOBLOLLY)	conifer	56	50%		Grading	yes	
95	12		PNE (LOBLOLLY)	conifer	1140	50%		Stormwater	yes	
37	14		PNE (LOBLOLLY)	conifer	518	50%		Stormwater	yes	
13	16		PNE (LOBLOLLY)	conifer	208	50%		Stormwater	yes	
4	18		PNE (LOBLOLLY)	conifer	72	50%		Stormwater	yes	
3	20		PNE (LOBLOLLY)	conifer	60	50%		Stormwater	yes	
2	12		PNE (LOBLOLLY)	conifer	24	50%		Utility Extension	yes	
1	14		PNE (LOBLOLLY)	conifer	14	50%		Utility Extension	yes	
Total Category 3 Significant & Regulated Mitigation Trees Required:										0
Total Category 3 Regulated Trees To Be Removed with Essential Site Improvements:										319

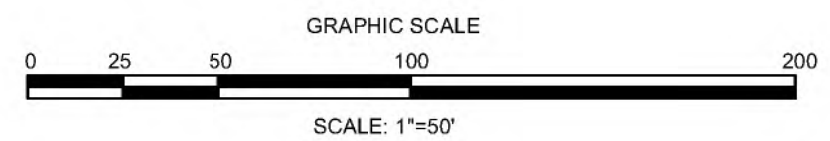
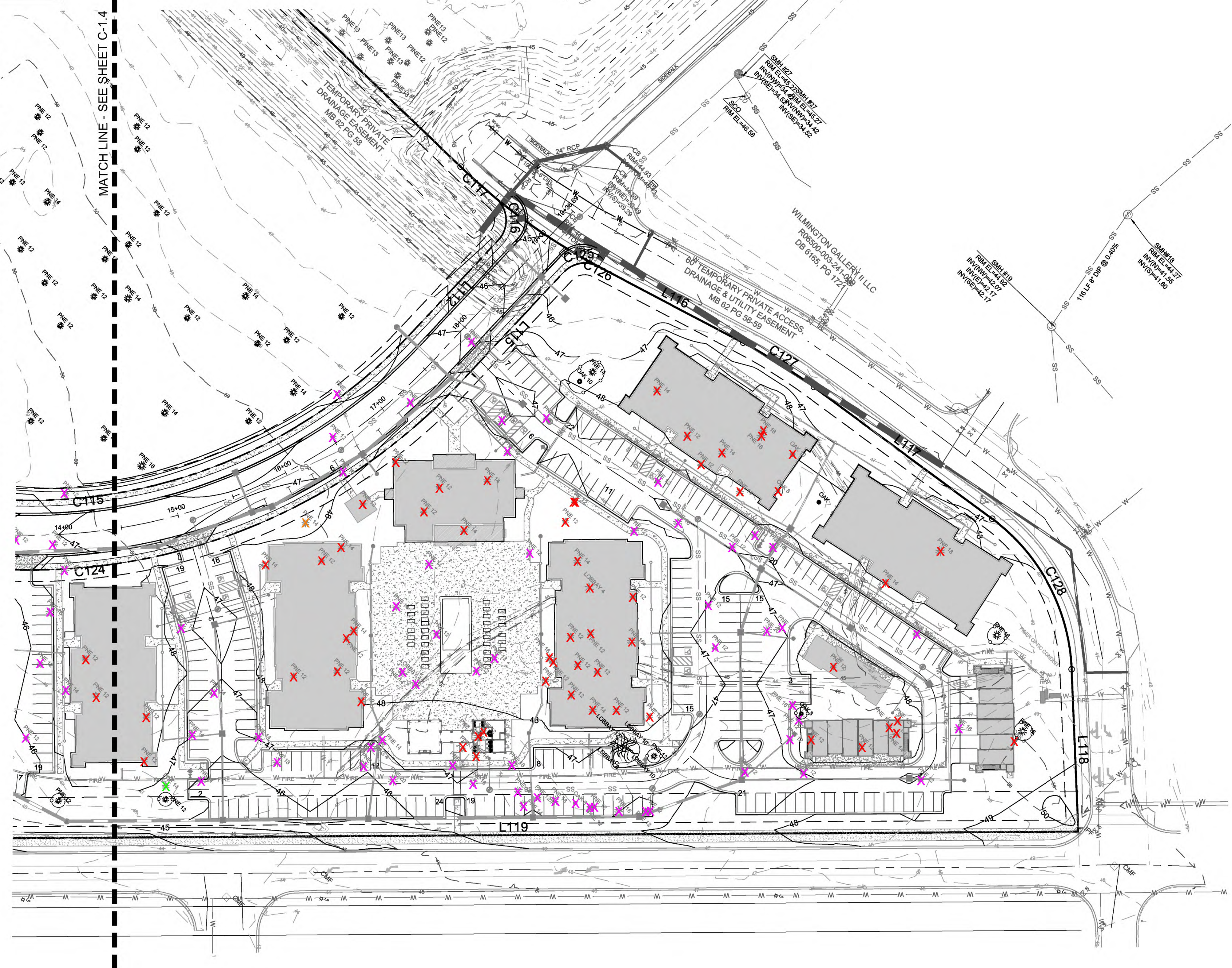
Total Qty. of Trees to be Removed (essential site improvements):										445
Total Qty. of Significant & Regulated Tree Mitigation:										72
Total Tree Credits:										45
Total Qty. of Mitigation Trees Required on Site (or Pay in Lieu Equivalent):										27

**Wilmington Three Phase A Tree Preservation Credit**

Qty of Trees	Caliper Inches*	Tree Common Name	Total Tree Caliper Inches to be Preserved
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Note: \* All listed as total caliper inches for entire tree cluster or single tree trunk caliper in compliance with City of Wilmington Land Development Code definition for "diameter at breast height"

2	4	LOBLOLLY BAY	8
1	6	LOBLOLLY BAY	6
1	8	LOBLOLLY BAY	8
4	10	LOBLOLLY BAY	40
1	12	LOBLOLLY BAY	12
1	8	OAK	8
1	10	OAK	10
5	12	PINE	60
6	14	PINE	84
2	16	PINE	32
TOTAL CALIPER INCHES RETAINED ON SITE			268
TOTAL TREE CREDITS			45



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION

CLIENT INFORMATION:  
**CK WILMINGTON**  
THREE PHASE A, LLC  
CHARLOTTE, NC

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

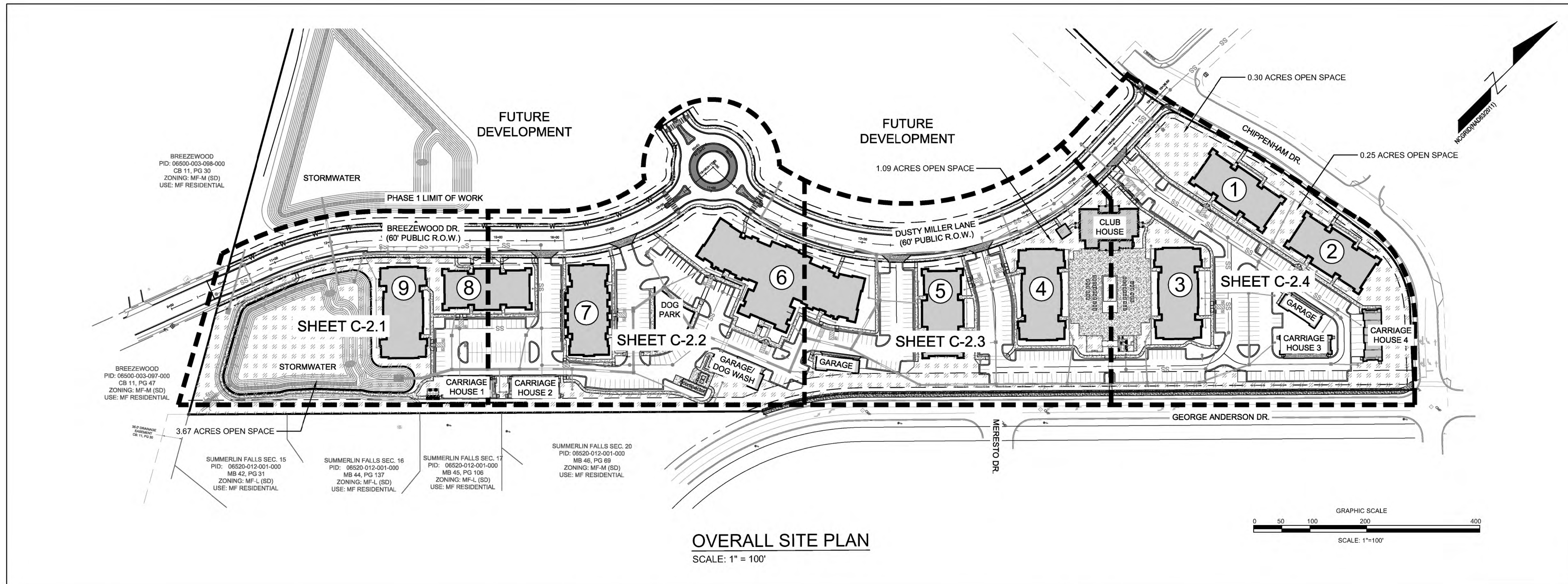
**TREE REMOVAL PLAN**  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

PROJECT STATUS:  
CONCEPTUAL LAYOUT:  
PRELIMINARY DESIGN:  
FINAL DESIGN:  
RELEASED FOR CONSTRUCTION:  
DATE: 01/31/21  
SCALE: 1"=50'  
DRAWN BY: [Signature]  
CHECKED BY: [Signature]

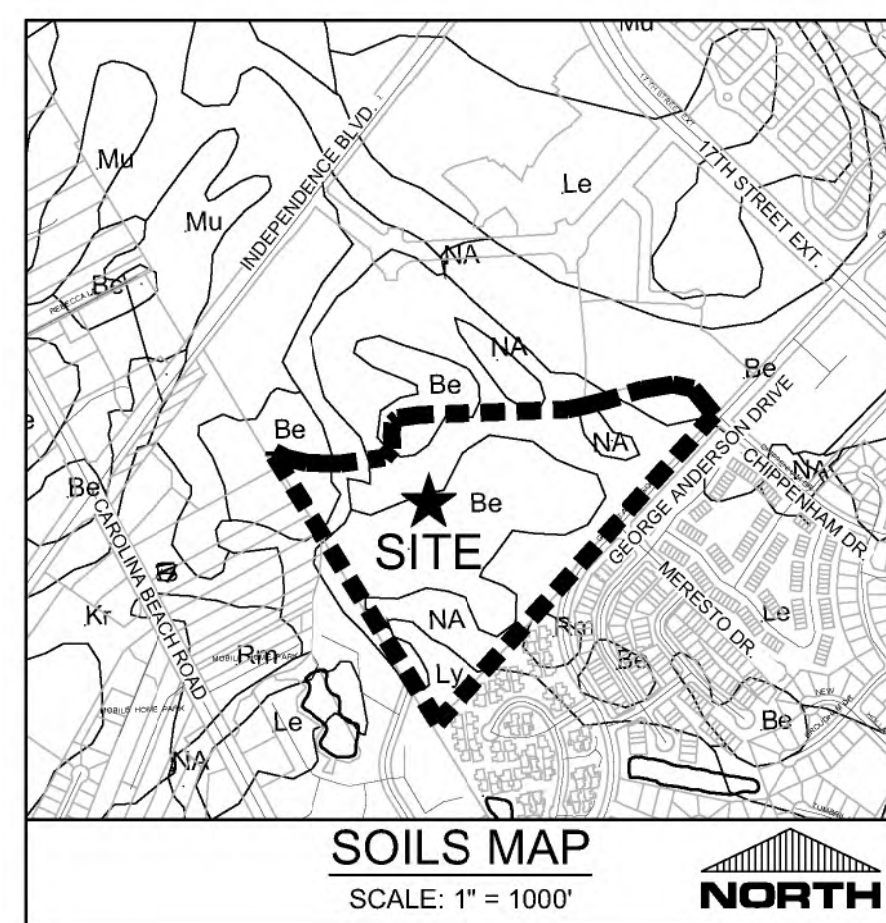
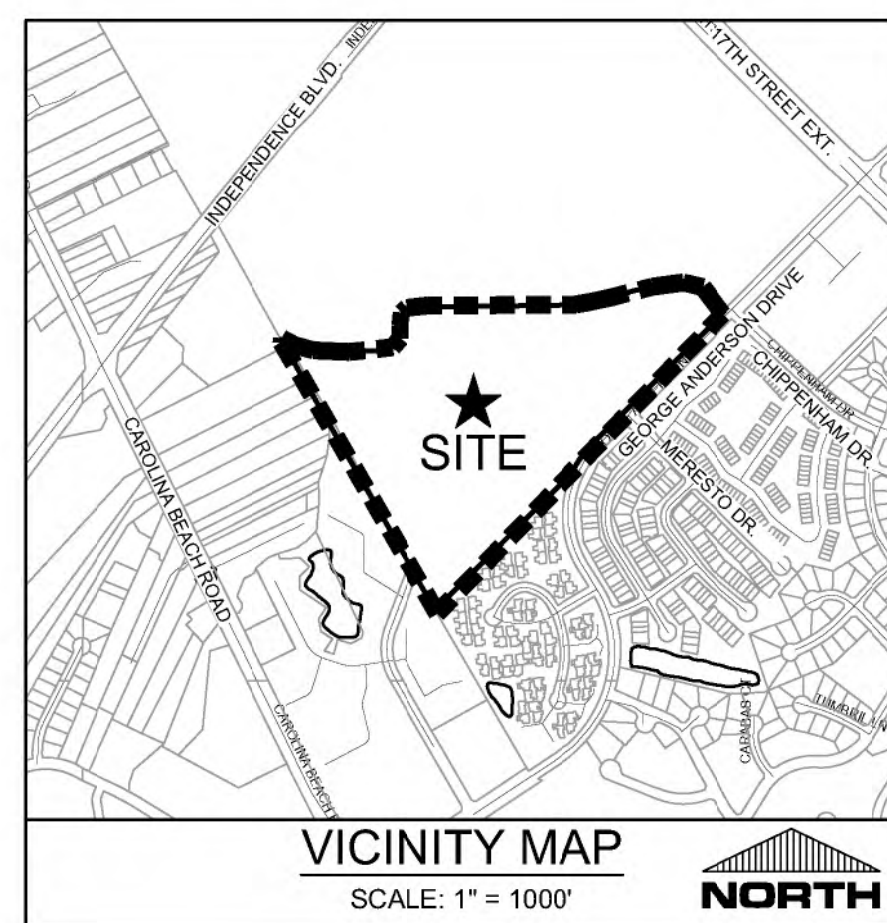
Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-1.5**  
PEI JOB#: 20195.PE





**OVERALL SITE PLAN**  
SCALE: 1" = 100'



**SITE DATA INFORMATION**

**OWNER INFORMATION:**  
CAMERON PROPERTIES LAND CO LLC  
1201 GLEN MEADE RD.  
WILMINGTON, NC 28401

**PROJECT ADDRESSES:**  
3743 INDEPENDENCE BLVD.  
WILMINGTON, NC 28403

**PARCEL IDENTIFICATION #:**  
R08500-003-031-000  
3125-67-8501.000  
RECORDED DEED BOOK:  
DB 006256 PG001725

**ZONING:**  
EXISTING USE:  
PROPOSED USE:  
MULTIFAMILY RESIDENTIAL

**TOTAL SITE AREA:**  
41.85 +/- ACRES  
**SITE AREA FOR PROPOSED PHASE (WITH ROW):**  
17.61 +/- ACRES  
**SITE AREA FOR LOT A:**  
14.85 +/- ACRES

**FLOOD INFORMATION:**  
PARCELS LOCATED IN FLOOD ZONE X,  
WHICH IS NOT A SPECIAL FLOOD  
HAZARD AREA AS DETERMINED  
BY FEMA FLOOD PANEL 3125 MAP NUMBER  
33720312500K, DATED 8/28/2018

**FEMA FLOODPLAIN NOTE:**  
CONSERVATION RESOURCES DISTRICT:  
OVERLAY ZONE:  
CAMA AREAS OF ENVIRONMENTAL CONCERNS:  
CAMA FUTURE LAND USE:

**EXISTING HISTORIC AND ARCHAEOLOGICAL SITES:**  
NONE  
**EXISTING WETLANDS:**  
NONE  
**EXISTING SURFACE WATERS:**  
NONE

**DIMENSIONAL REQUIREMENTS**

REQUIREMENTS	PROVIDED
MINIMUM LOT AREA:	20,000 SF
MINIMUM LOT WIDTH:	150'
MAXIMUM LOT COVERAGE:	30%
MINIMUM FRONT SETBACK:	35'
MINIMUM REAR SETBACK:	25'
MINIMUM SIDE SETBACK:	20'
MAXIMUM BUILDING HEIGHT:	35'
	35' (MAX.) - SEE PLAN

**DISTURBED AREA (PHASE 1)**  
PROPOSED DISTURBED AREA: 21.75 +/- ACRES

**BUILDING LOT COVERAGE (PHASE 1)**  
TOTAL PROPOSED BUILDING SF: 144,346 SF  
LOT COVERAGE PERCENTAGE: 22.3%

**OPEN SPACE (PHASE 1) | TRACT A)**  
REQUIRED OPEN SPACE (35%): 5.20 ACRES  
TOTAL PROPOSED OPEN SPACE: 5.31 ACRES

**IMPERVIOUS CALCULATIONS**

EXISTING IMPERVIOUS:	
BUILDINGS:	0 SF
PAVED AREAS:	0 SF
SIDEWALKS:	0 SF
TOTAL EXISTING IMPERVIOUS:	0 SF

PROPOSED IMPERVIOUS:	
BUILDING:	144,346 SF
ROADS:	81,770 SF
PARKING:	172,532 SF
SIDEWALKS:	76,230 SF
FUTURE / MISC:	709,862 SF
TOTAL PROPOSED IMPERVIOUS:	1,184,740 SF

PERCENT OF PROPOSED IMPERVIOUS: 65%

**PARKING CALCULATIONS**

**RESIDENTIAL PARKING REQUIREMENTS**  
MINIMUM PARKING SPACES REQUIRED:  
0-1 BEDROOMS = 1.5 SPACES PER UNIT  
2 BEDROOMS = 2 SPACES PER UNIT  
3+ BEDROOMS = 2.5 SPACES PER UNIT

MAXIMUM PARKING SPACES ALLOWED:  
2.5 PARKING SPACES PER UNIT

**REQUIRED MINIMUM PARKING**  
0-1 BEDROOMS = 120 X 1.5 = 180 SPACES  
2 BEDROOMS = 150 X 2 = 300 SPACES  
3+ BEDROOMS = 16 X 2.5 = 40 SPACES  
TOTAL MINIMUM PARKING SPACES REQUIRED = 520 SPACES

MAXIMUM PARKING SPACES ALLOWED:  
2.5 PARKING SPACES PER UNIT  
286 UNITS X 2.5 = 715 MAX. ALLOWABLE PARKING SPACES

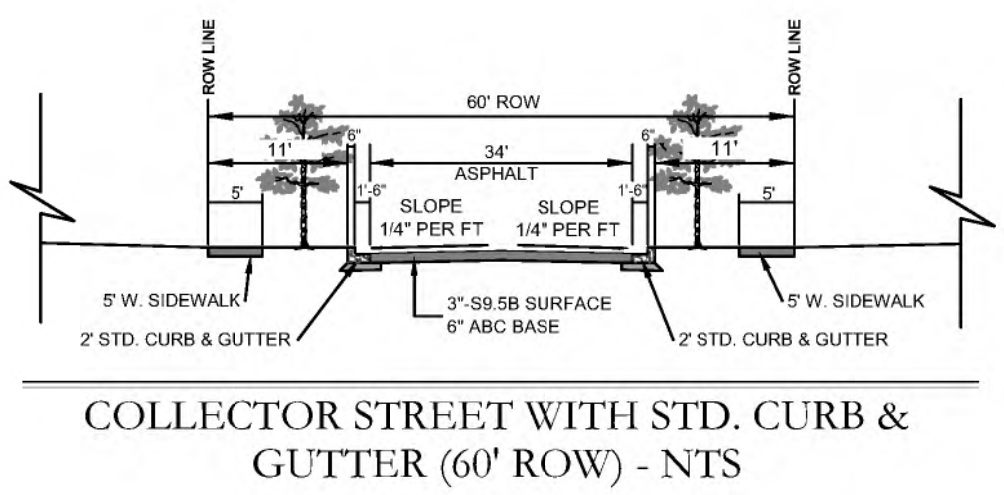
TOTAL PARKING PROVIDED = 523 SPACES

**SITE TRIP GENERATION:**

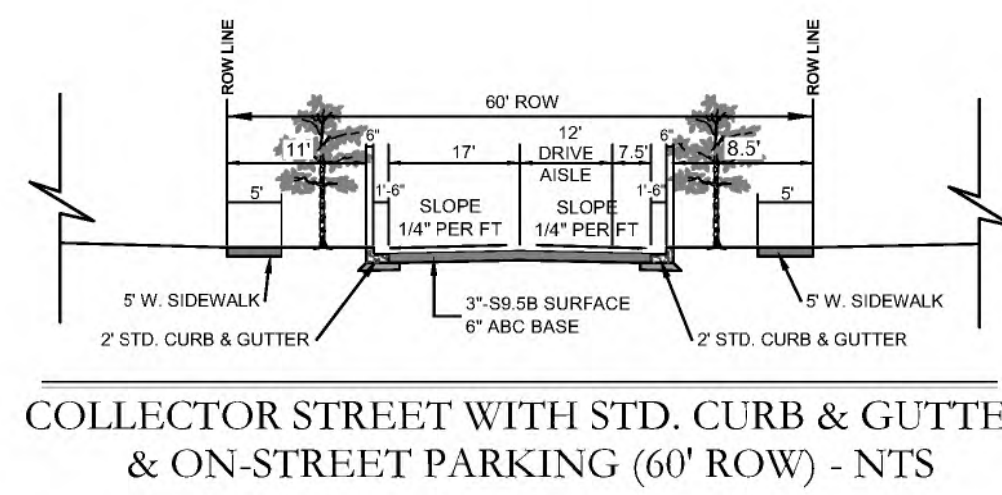
LAND USE:	APARTMENTS
ITE CODE:	220
24 HR VOLUMES:	2,116
AM PEAK HOUR TRIPS:	30 ENTER   99 EXIT
PM PEAK HOUR TRIPS:	95 ENTER   55 EXIT

**PROPOSED USES:**

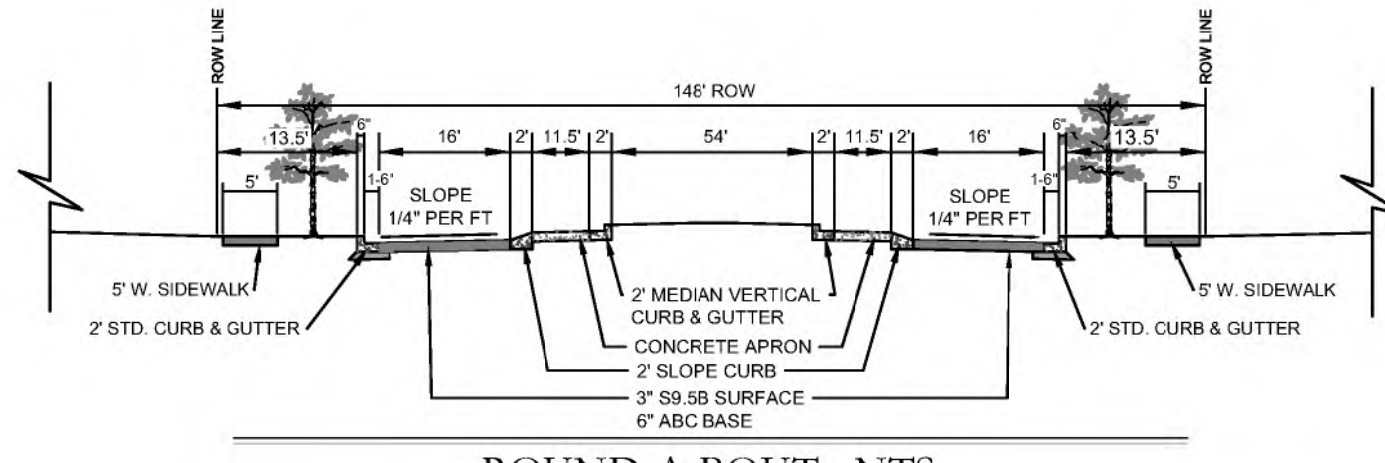
BUILDING 1:	(12) 1-BEDROOM	BUILDING 6:	(48) 1-BEDROOM
3- STORY	(12) 2-BEDROOM	4- STORY	(16) 2-BEDROOM
(TYPE-A CONSTRUCTION)	24 UNITS TOTAL	(TYPE-D CONSTRUCTION)	(16) 3-BEDROOM
10,155 SF		26,426 SF	(80) UNITS TOTAL
<b>BUILDING 2:</b>	(12) 1-BEDROOM	<b>BUILDING 7:</b>	(24) 1-BEDROOM
3- STORY	(12) 2-BEDROOM	3- STORY	(6) 2-BEDROOM
(TYPE-A CONSTRUCTION)	24 UNITS TOTAL	(TYPE-C CONSTRUCTION)	30 UNITS TOTAL
10,155 SF		11,050 SF	
<b>BUILDING 3:</b>	(24) 2-BEDROOM	<b>BUILDING 8:</b>	(12) 1-BEDROOM
3- STORY	24 UNITS TOTAL	3- STORY	(12) 2-BEDROOM
(TYPE-B CONSTRUCTION)		(TYPE-A CONSTRUCTION)	24 UNITS TOTAL
11,250 SF		10,155 SF	
<b>BUILDING 4:</b>	(24) 2-BEDROOM	<b>BUILDING 9:</b>	(24) 2-BEDROOM
3- STORY	24 UNITS TOTAL	3- STORY	24 UNITS TOTAL
(TYPE-B CONSTRUCTION)		(TYPE-B CONSTRUCTION)	
11,250 SF		11,250 SF	
<b>BUILDING 5:</b>	(12) 1-BEDROOM	CARRIAGE HOUSES #1 - #4:	(2) 2-BEDROOM
3- STORY	(12) 2-BEDROOM	EACH (8 TOTAL)	
(TYPE-A CONSTRUCTION)	24 UNITS TOTAL	(TYPE-E CONSTRUCTION)	
10,155 SF		1,641 SF EACH	



COLLECTOR STREET WITH STD. CURB & GUTTER (60' ROW) - NTS



COLLECTOR STREET WITH STD. CURB & GUTTER & ON-STREET PARKING (60' ROW) - NTS



ROUND-A-BOUT - NTS

REVISIONS:

CLIENT INFORMATION:

**PARAMOUNT ENGINEERING**

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

**OVERALL SITE PLAN AND SITE DATA INFORMATION**  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

**PROJECT STATUS:**  
CONCEPTUAL LAYOUT:  
FINAL DESIGN:  
RELEASED FOR CONSTRUCTION:  
**DRAWING INFORMATION:**  
DATE: 01/13/21  
SCALE: AS NOTED  
DRAWN BY: [Name]  
CHECKED BY: [Name]

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-2.0**

PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON NORTH CAROLINA**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

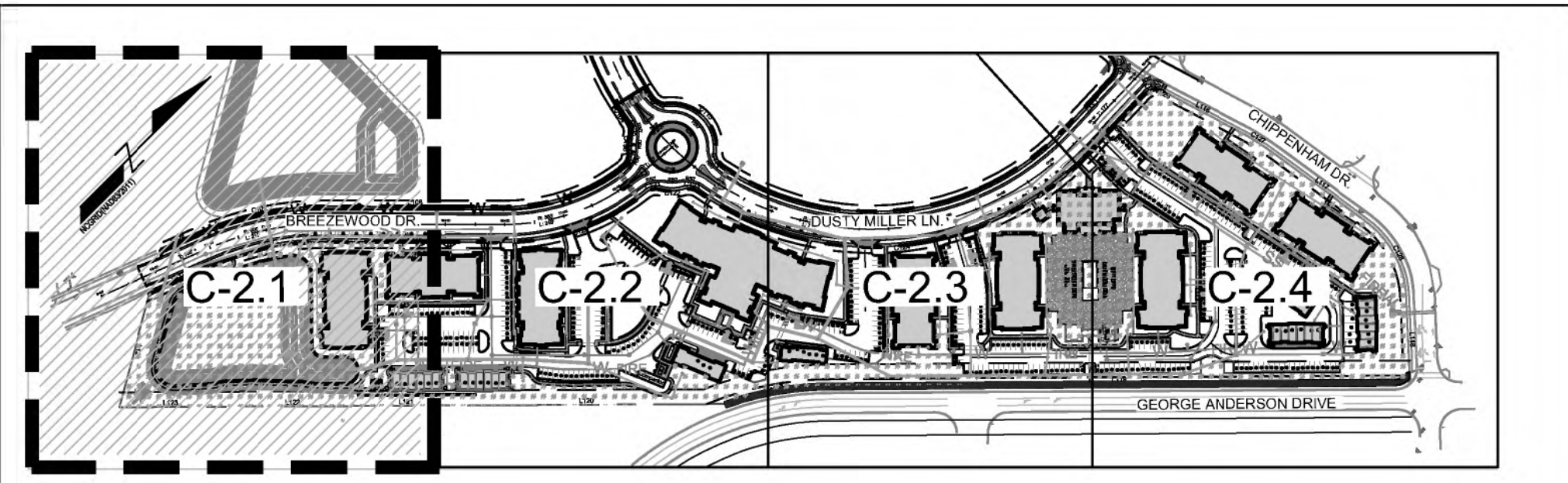
Signature: \_\_\_\_\_

**Approved Construction Plan**

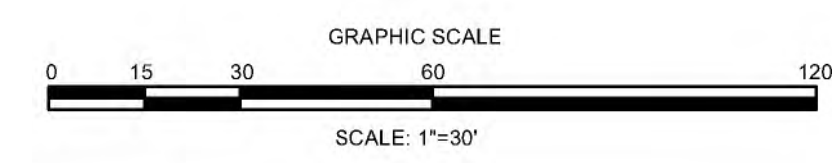
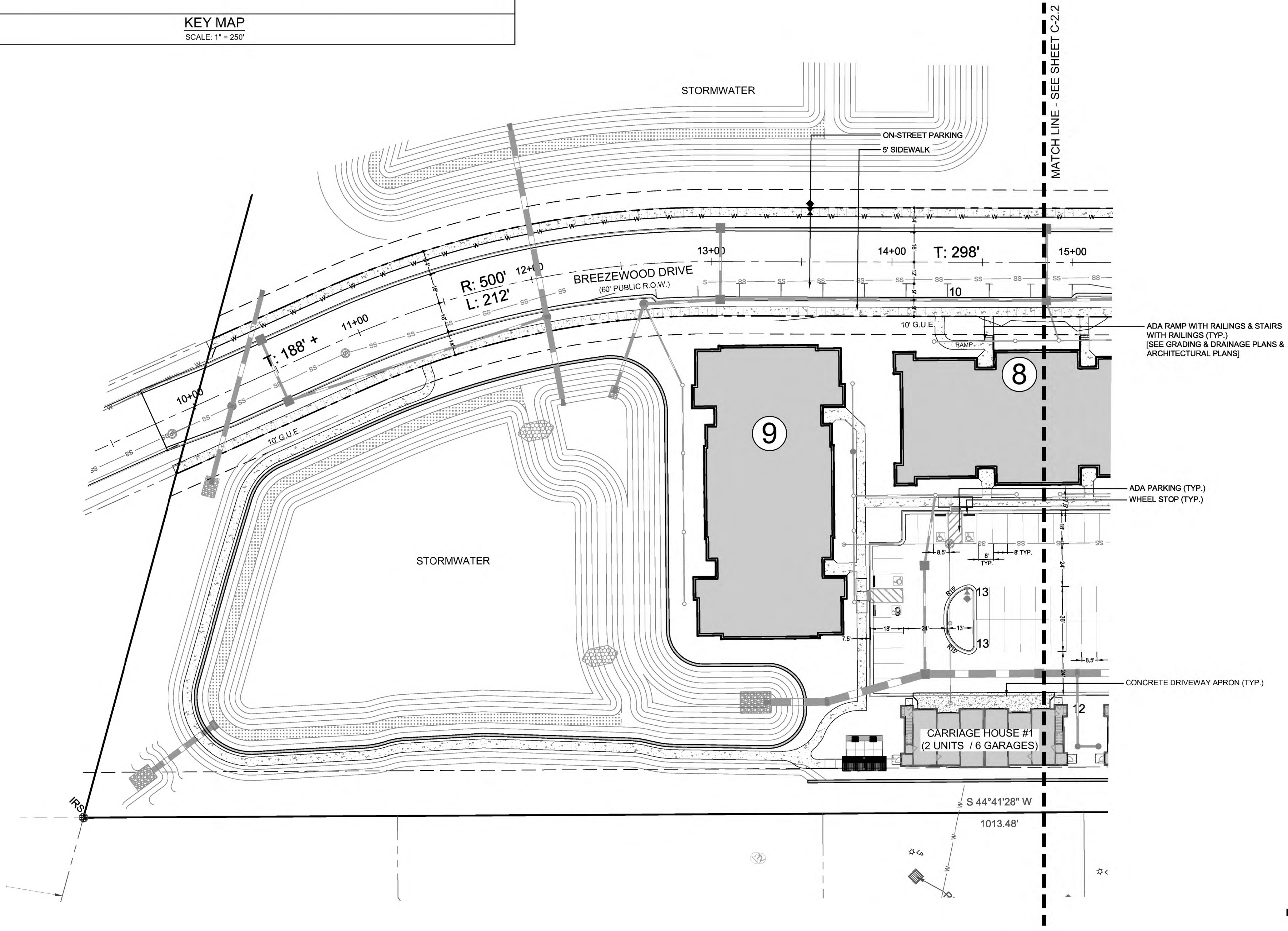
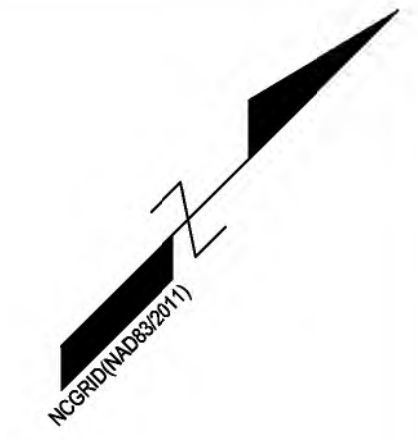
Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_





KEY MAP  
SCALE: 1" = 250'



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Public Services • Engineering Division
   
 APPROVED STORMWATER MANAGEMENT PLAN
   
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_
   
 Signed: \_\_\_\_\_
   
**Approved Construction Plan**
  
 Name \_\_\_\_\_ Date \_\_\_\_\_
   
 Planning \_\_\_\_\_
   
 Traffic \_\_\_\_\_
   
 Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:  
 CK WILMINGTON  
 THREE PHASE A, LLC  
 CHARLOTTE, NC

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

**SITE PLAN**  
 WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

PROJECT STATUS:	01/31/21
CONCEPTUAL LAYOUT:	11'-30" DT
FINAL DESIGN:	11'-30" DT
RELEASED FOR CONSTRUCTION:	11'-30" DT
DRAWING INFORMATION:	01/31/21
DATE:	11'-30" DT
SCALE:	11'-30" DT
DRAWN BY:	11'-30" DT
CHECKED:	11'-30" DT

Professional Seal redacted on electronic copy per City of Wilmington Policy

**C-2.1**  
PEI JOB#: 20195.PE

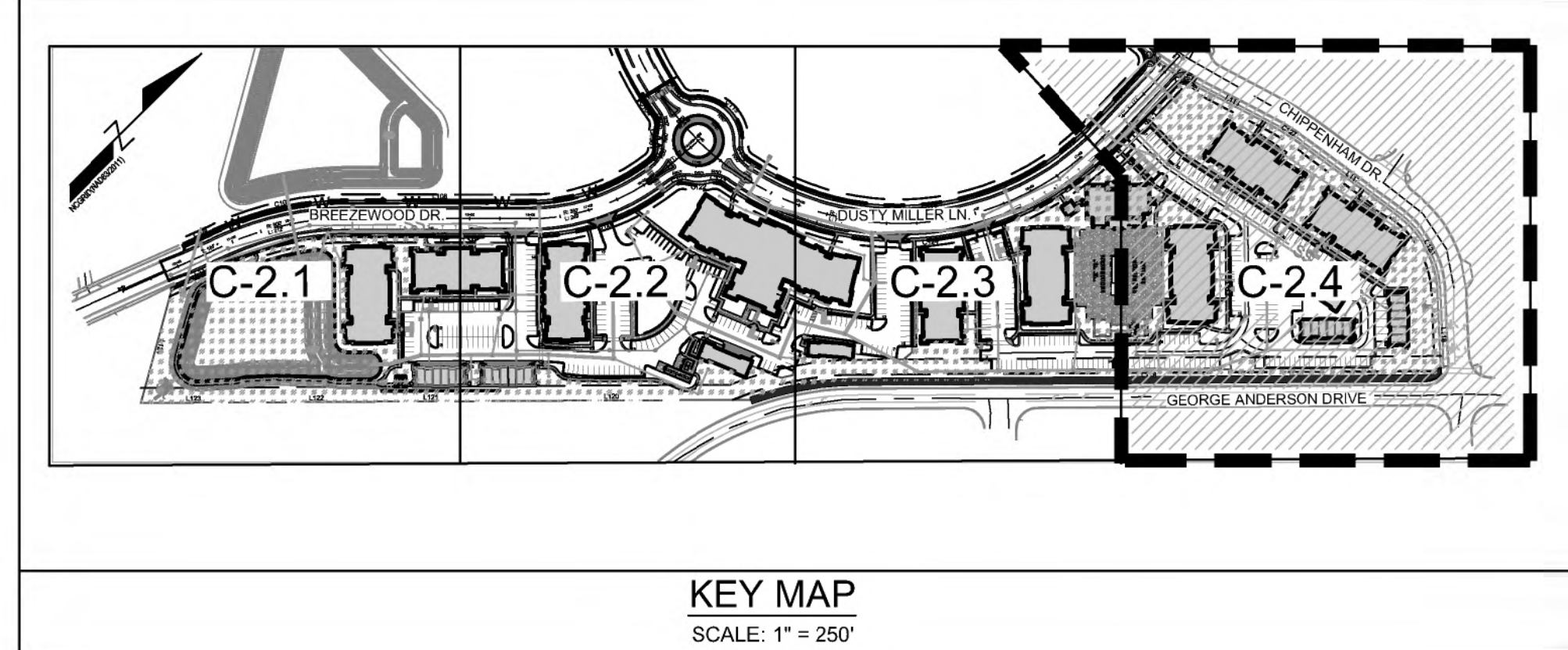
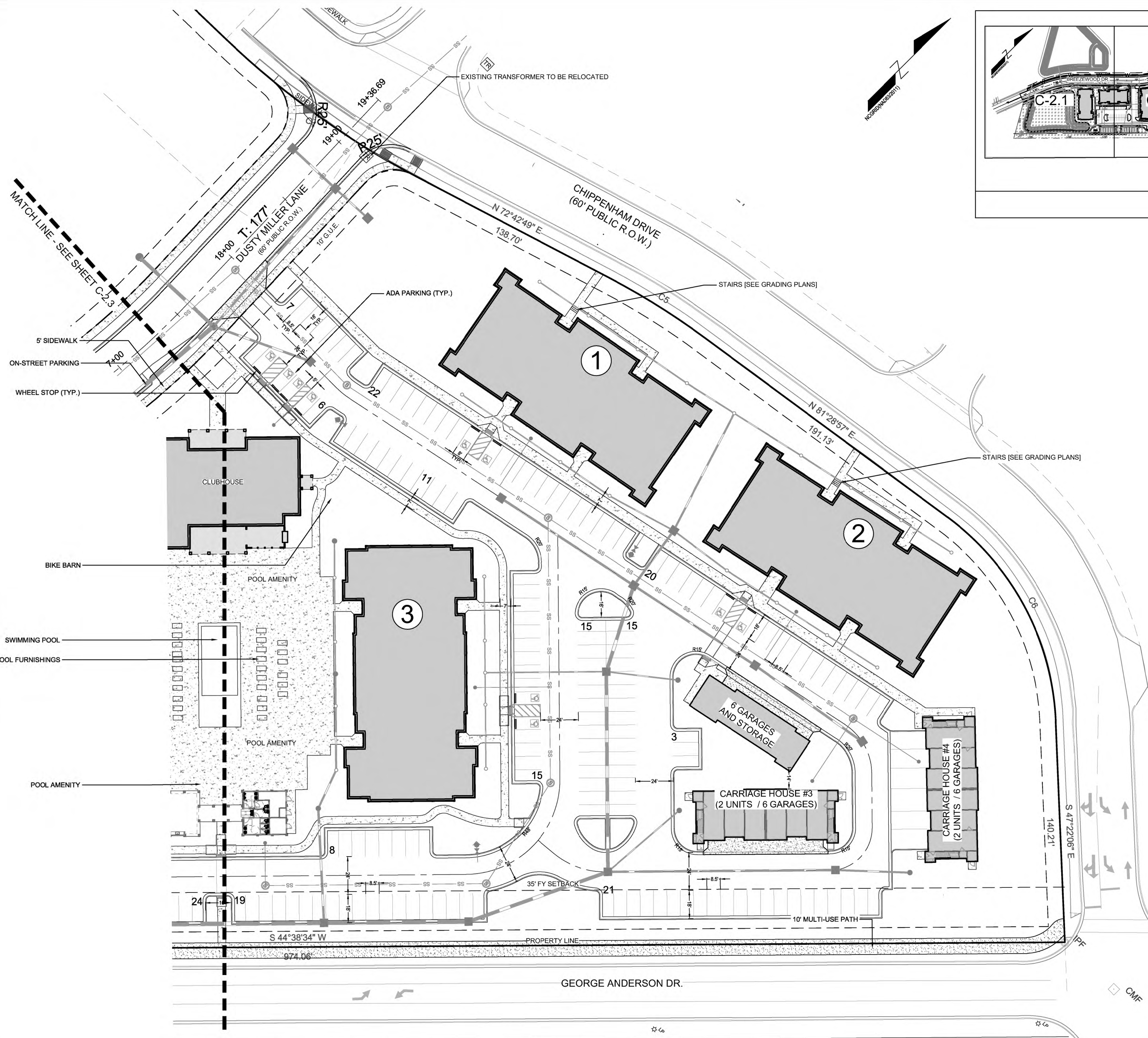












MATCH LINE - SEE SHEET C-2.3

5' SIDEWALK

ON-STREET PARKING

WHEEL STOP (TYP.)



**CITY OF WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

Approved Construction Plan

Name \_\_\_\_\_ Date \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:


CLIENT INFORMATION:

CK WILMINGTON  
THREE PHASE A, LLC  
CHARLOTTE, NC

**PARAMOUNTE**  
ENGINEERING INC.

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

SITE PLAN

WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

PROJECT STATUS

CONCEPTUAL LAYOUT:	01/13/21
PRELIMINARY DESIGN:	11-13-20
FINAL DESIGN:	05-15-21
RELEASED FOR CONSTRUCTION:	05-15-21

DRAWING INFORMATION

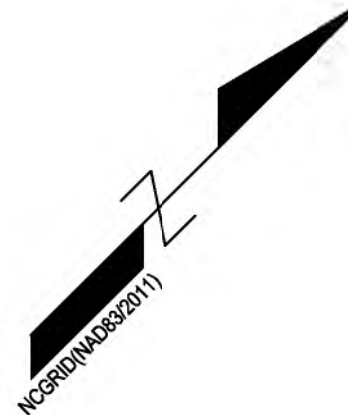
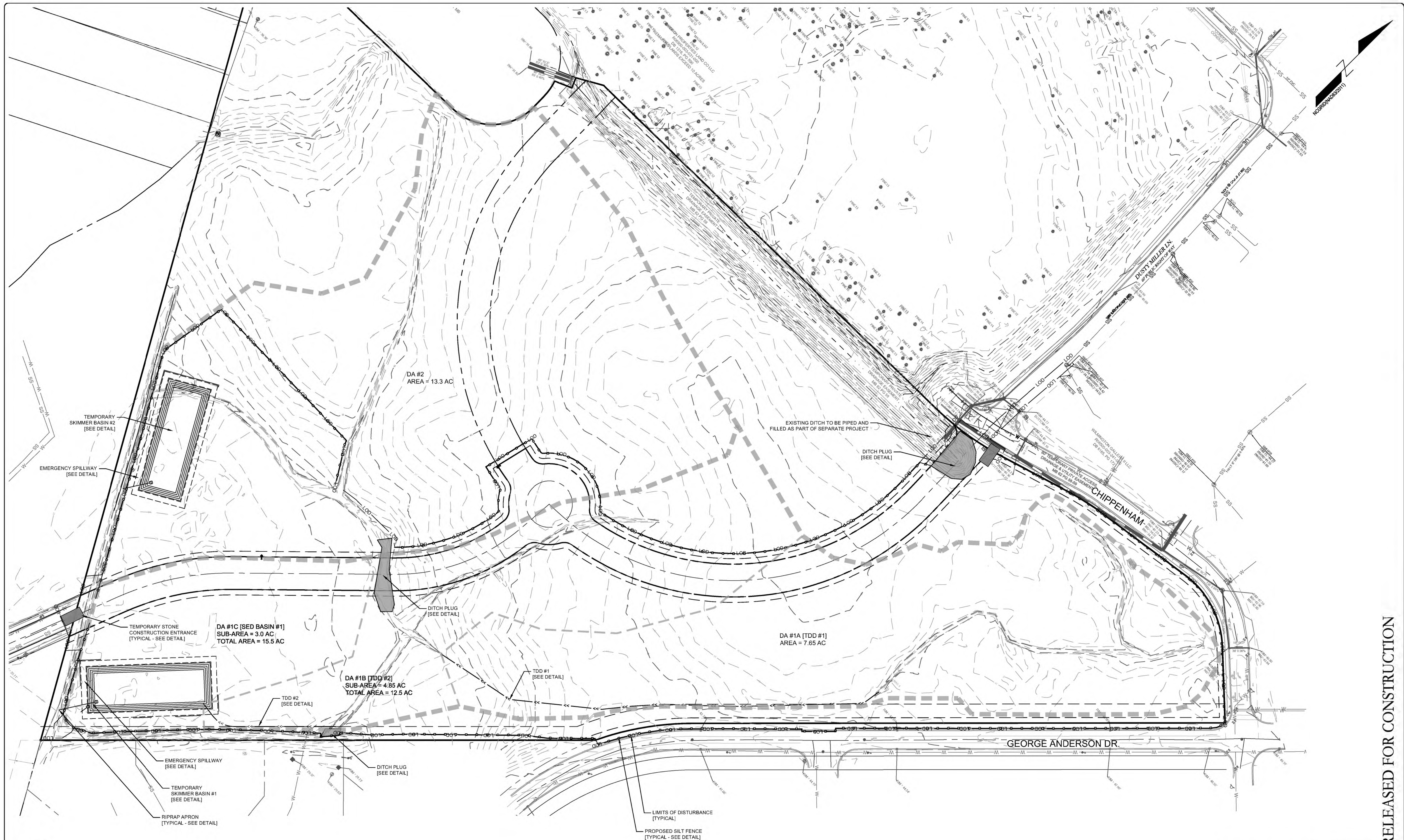
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SCALE:	1" = 30'
DRAWN BY:	BT
CHECKED:	BT

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

C-2.4

PEI JOB#: 20195.PE





**LEGEND**

EXISTING CONTOUR	---
PROPOSED CONTOUR	—
LIMITS OF DISTURBANCE	---
PROPERTY BOUNDARY	---
WETLANDS	WET
CONSTRUCTION ENTRANCE	---
RIP RAP APRON	---
SANITARY SEWER	SS
TEMPORARY DIVERSION DITCH	---
WATTLE OR CHECK DAM	---
DRAINAGE AREA	---
SILT FENCE	---

**EROSION CONTROL NOTES:**

LIMITS OF DISTURBANCE = 21.75 ACRES

**NOTES:**

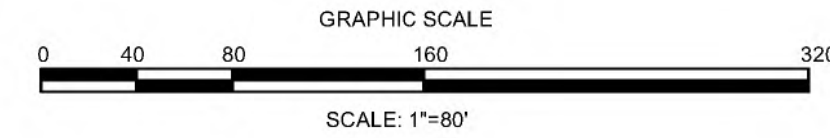
- SEE GENERAL NOTES SHEET (C-1.0) FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES AND DETAILS FOR MORE INFORMATION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF WILMINGTON AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
- GEOTECHNICAL TESTING HAS BEEN PERFORMED ON-SITE BY ECS CAROLINAS, LLP (REFER TO REPORT). A GEOTECHNICAL ENGINEER SHALL BE CONSULTED TO CONFIRM SUITABILITY OF SUBGRADE MATERIAL AND PROPER COMPACTION IN FILL AREAS.

**ASPHALT AREA NOTE:**

- SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE 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:**

- 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.



**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

REVISIONS:


CLIENT INFORMATION:  
**CK WILMINGTON**  
THREE PHASE A, LLC  
CHARLOTTE, NC

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

**EROSION CONTROL PLAN**  
PHASE I  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

PROJECT STATUS

CONCEPTUAL LAYOUT:	01/13/21
PRELIMINARY LAYOUT:	11/17/21
RELEASED FOR CONST.:	01/13/22

DRAWING INFORMATION

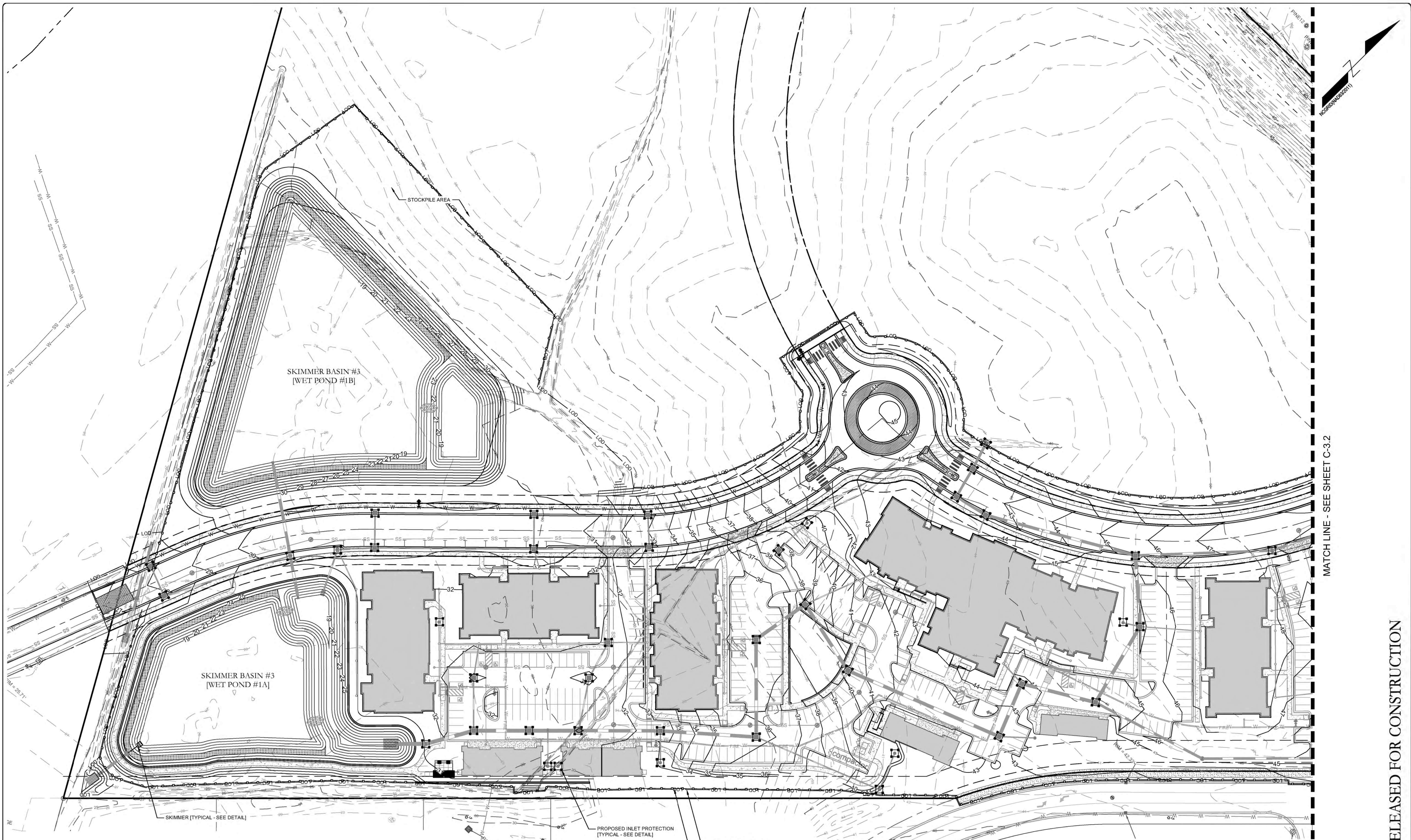
DATE:	01/13/22
DESIGNED:	DF
DRAWN:	DF
CHECKED:	DF

Professional Seal redacted on electronic copy per City of Wilmington Policy

**C-3.0**  
PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

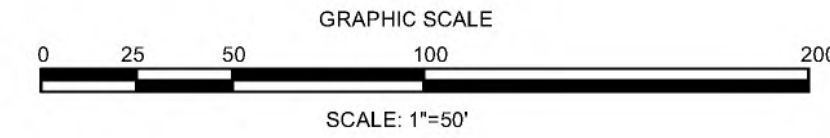




MATCH LINE - SEE SHEET C-3.2



CITY OF WILMINGTON  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_  
**Approved Construction Plan**  
 Name \_\_\_\_\_ Date \_\_\_\_\_



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:


CLIENT INFORMATION:  
 CK WILMINGTON  
 THREE PHASE A, LLC  
 CHARLOTTE, NC

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

EROSION CONTROL PLAN  
 PHASE II  
 WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

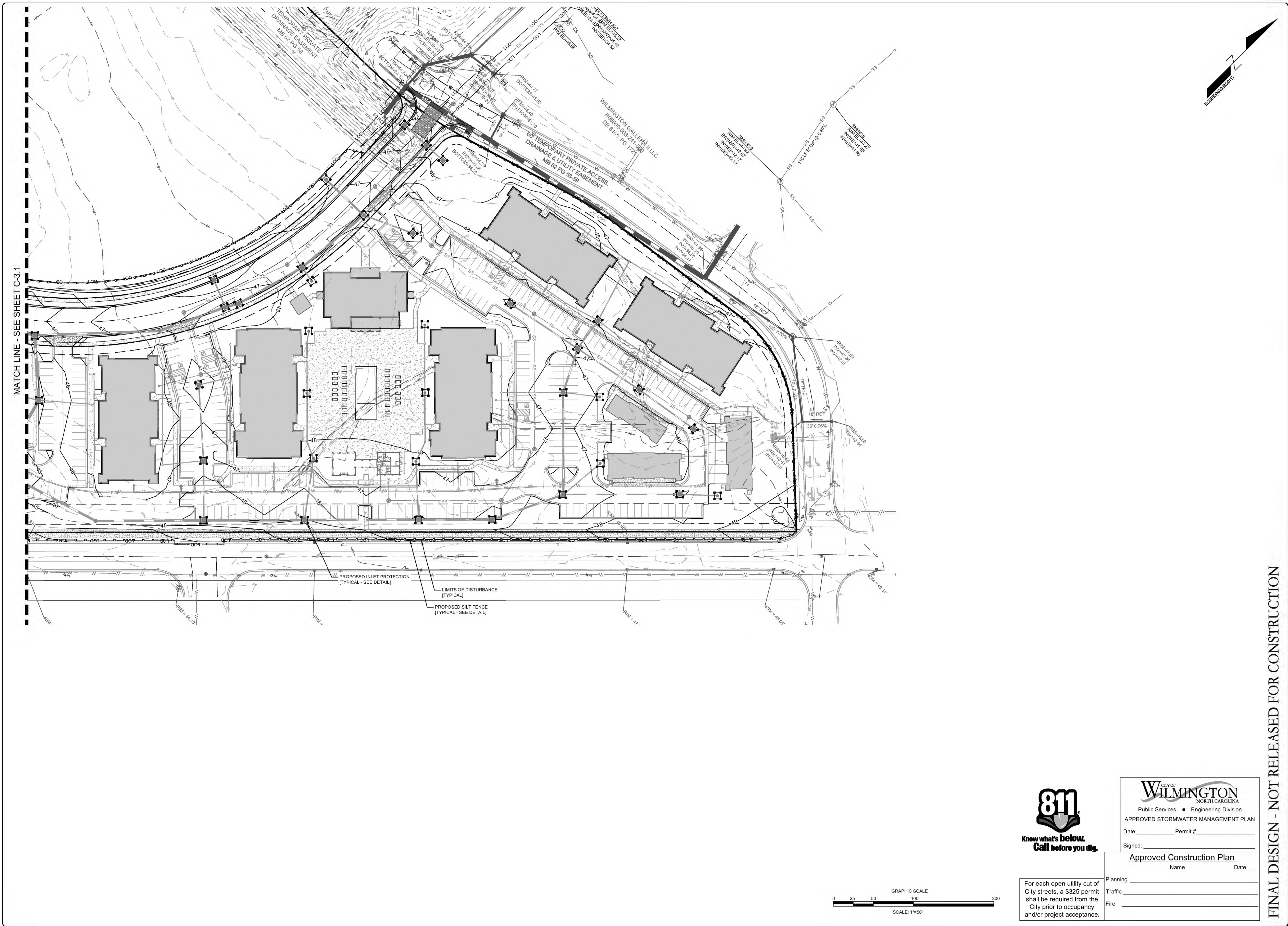
PROJECT STATUS

CONCEPTUAL LAYOUT:	01/13/21
PRELIMINARY LAYOUT:	11/17/21
RELEASED FOR CONST.:	11/17/21
DRAWING INFORMATION:	01/13/21
DATE:	11/17/21
DESIGNED:	DF
DRAWN:	DF
CHECKED:	DF

Professional Seal  
 redacted on electronic  
 copy per City of  
 Wilmington Policy

**C-3.1**  
 PEI JOB#: 20195.PE





MATCH LINE - SEE SHEET C-3.1

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Public Services • Engineering Division
   
 APPROVED STORMWATER MANAGEMENT PLAN
   
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_
   
 Signed: \_\_\_\_\_
   
**Approved Construction Plan**
  
 Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_
   
 Traffic \_\_\_\_\_
   
 Fire \_\_\_\_\_

REVISIONS:


CLIENT INFORMATION:

**CK WILMINGTON  
THREE PHASE A, LLC  
CHARLOTTE, NC**

**PARAMOUNT**  
ENGINEERING, INC.

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

**EROSION CONTROL PLAN  
PHASE II  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA**

PROJECT STATUS

CONCEPTUAL LAYOUT:	
PRELIMINARY LAYOUT:	
RELEASED FOR CONST.:	
DRAWING INFORMATION:	01/13/21
DATE:	DF
DESIGNED:	DF
DRAWN:	DF
CHECKED:	DF

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-3.2**

PEI JOB#: 20195.PE



**DRAINAGE NOTES:**

- 1.) DRAINAGE EASEMENT AND STORMWATER SYSTEM MAINTENANCE IS THE RESPONSIBILITY OF THE DEVELOPER OR HOA, INCLUDING PONDS, PIPES, AND INFILTRATION BASINS AND TRENCHES.
- 2.) ALL IMPERVIOUS MUST DRAIN TO THE DESIGNED STORMWATER SYSTEM PER THE APPROVED PLANS. LOTS / BUILDING PADS SHALL BE FILLED AS NECESSARY TO FACILITATE IMPERVIOUS DRAINAGE TO THE STORM CONVEYANCE SYSTEM AND SCM (STORMWATER CONTROL MEASURE).
- 3.) NO OBSTRUCTIONS ARE ALLOWED IN DRAINAGE EASEMENTS, INCLUDING FENCES.
- 4.) ALL STORM DRAINAGE STRUCTURES SHALL MEET NCDOT STANDARDS AND SPECIFICATIONS AND SHALL BE TRAFFIC RATED FOR H-20 LOADS AT A MINIMUM.
- 5.) ALL CATCH BASIN (CB) RIM ELEVATIONS AND YARD INLET (YI) THROAT ELEVATIONS ARE LISTED AS THE 'GUTTER OF FLOWLINE ELEVATION' WITHIN THE CURB SECTION. THE CONTRACTOR SHALL MAINTAIN A UNIFORM EDGE OF PAVEMENT (EOP) WHEN PLACING THE STORM INLETS WITHIN THE CURB-LINE (SEE 'CURB TRANSITION' DETAIL). FOR CATCH BASINS WITHIN A TRANSITION FROM 24" STANDARD CURB & GUTTER, THE RIM ELEVATION GIVEN IS 1" INCH BELOW EOP. FOR MODIFIED VALLEY, THE RIM ELEVATION GIVEN IS 1/2 INCH BELOW EOP.
- 6.) MANHOLE RIM ELEVATION SHOWN ABOVE IS FLUSH WITH PROPOSED GRADE. CONTRACTOR SHALL PROVIDE 6" CLEARANCE ABOVE PROPOSED GRADE WHEN PLACED IN A GRASS/PERVIOUS AREA, AND A FLUSH CONDITION WITH PROPOSED PAVEMENT OR IMPERVIOUS COVER.
- 7.) PROPOSED BUILDINGS SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM.
- 8.) CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AREAS TO MATCH PROPOSED GRADES.
- 9.) ALL EXISTING DITCHES AND OUTFALLS SHALL BE PROPERLY MAINTAINED AND FREE OF ALL VEGETATIVE DEBRIS OR ENCUMBRANCES.

**BUILDING PAD NOTES:**

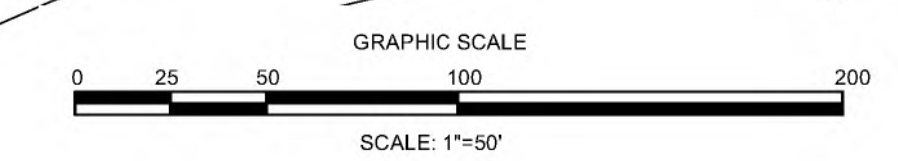
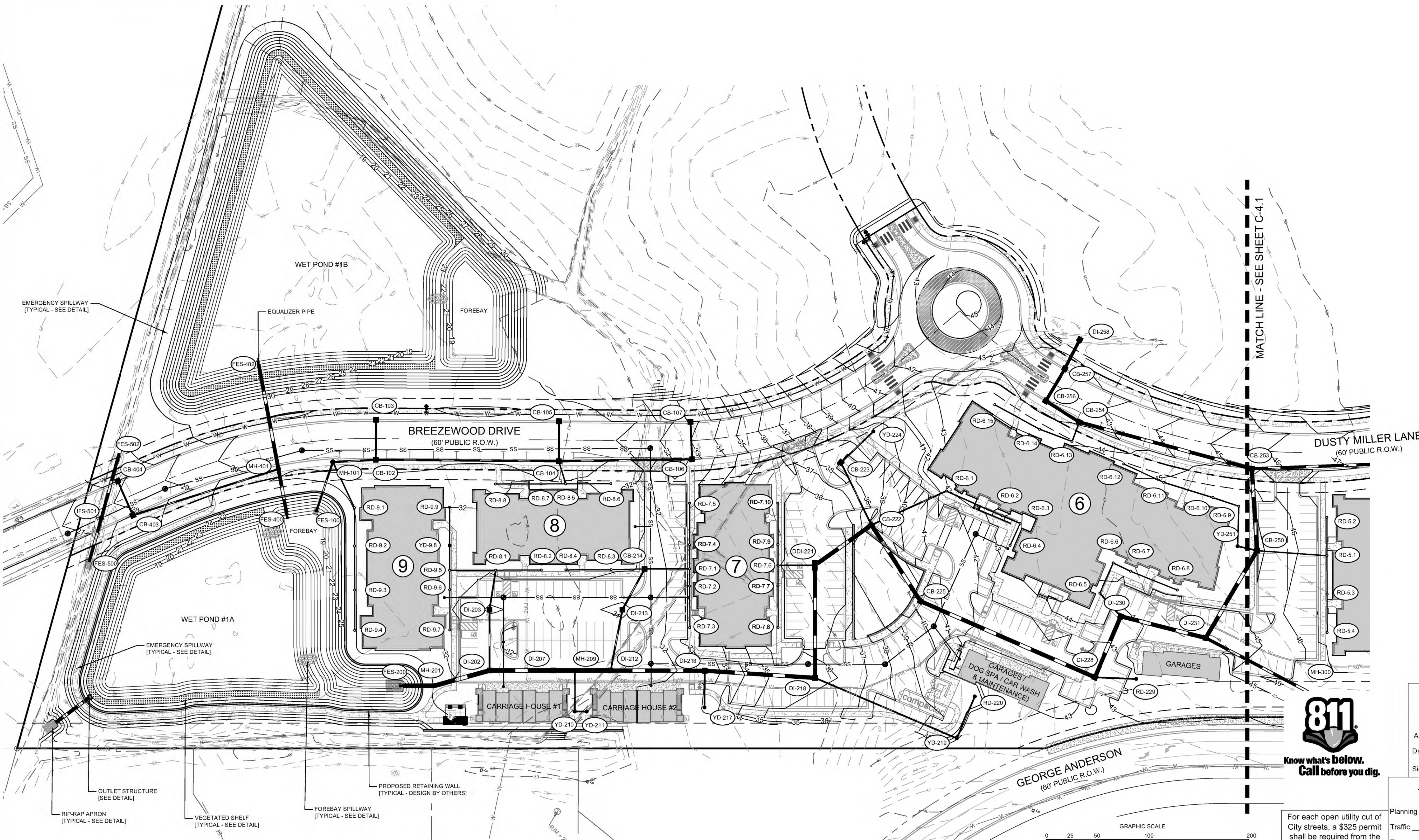
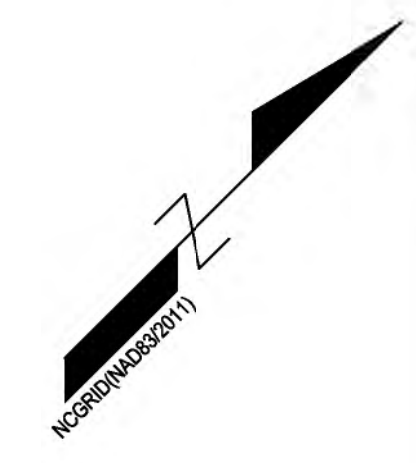
- 1.) SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.
- 2.) FUTURE MINIMUM BUILDING PAD REFERENCED PER TYPICAL LOT GRADING DETAIL ON SHEET C-4.0. MINIMUM BUILDING PAD ELEVATION SHOWN DOES NOT REFERENCE FFE. 100-YEAR FLOOD ELEVATION AND DRAINAGE AROUND BUILDING PAD SHALL BE USED IN SETTING FFE.

**ASPHALT AREA NOTE:**

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

**NOTATION:**

CB	=	CATCH BASIN	[NCDOT STD. 840.02   840.03]
DCB	=	DOUBLE CATCH BASIN	
DI	=	DROP INLET	[NCDOT STD. 840.16   840.46]
DDI	=	DOUBLE DROP INLET	[NCDOT STD. 840.35]
EW	=	ENDWALL	[NCDOT STD. 838.80]
FES	=	FLARED END SECTION	
HW	=	HEADWALL	
IFS	=	INTERFERENCE STRUCTURE	
MH	=	STORM MANHOLE	[C&W SD 2-03]
OS	=	OUTLET STRUCTURE	[SEE DETAILS SHEET]
YD	=	YARD DRAIN	[ADS NYLOPLAST]
YI	=	YARD INLET (2-SIDE OPEN THROAT)	[NCDOT STD. 840.04]
BC	=	BOTTOM OF CURB (GUTTER/FLOWLINE) ELEVATION	
BEE	=	BREEZEWAY ENTRANCE ELEVATION	
BW	=	BOTTOM OF WALL (BOTTOM OF EXPOSED WALL FACE AT GRADE TIE-IN ELEVATION)	
FFE	=	FINISHED FLOOR ELEVATION	
FLUME	=	CONCRETE DRAINAGE FLUME FLOWLINE ELEVATION	
GFE	=	GARAGE FLOOR ELEVATION	
HP	=	HIGH POINT ELEVATION	
LP	=	LOW POINT ELEVATION	
PAD	=	DUMPSTER PAD ELEVATION	
PG	=	PROPOSED GRADE	
RP	=	RAMP ELEVATION	
SW	=	SIDEWALK ELEVATION	
TC	=	TOP OF CURB ELEVATION	
TW	=	TOP OF WALL	



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

- Planning \_\_\_\_\_
- Traffic \_\_\_\_\_
- Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>																															<p>CLIENT INFORMATION:</p> <p><b>CK WILMINGTON</b> THREE PHASE A, LLC CHARLOTTE, NC</p>	<p>PROJECT STATUS:</p> <p>CONCEPTUAL LAYOUT: _____ PRELIMINARY LAYOUT: _____ RELEASED FOR CONST: _____</p> <p>DRAWING INFORMATION:</p> <p>DATE: 01/13/21 DESIGNED BY: JDF DRAWN BY: JDF CHECKED BY: JDF</p>
<p><b>PARAMOUNT ENGINEERING</b></p> <p>122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6766 (F) NC License #: C-2846</p>																																
<p><b>OVERALL GRADING AND DRAINAGE PLAN</b> WILMINGTON THREE PHASE A CITY OF WILMINGTON NORTH CAROLINA</p>																																
<p>Professional Seal redacted on electronic copy per City of Wilmington Policy</p>																																
<p><b>C-4.0</b></p>																																
<p>PEI JOB#: 20195.PE</p>																																



STORM SCHEDULE:

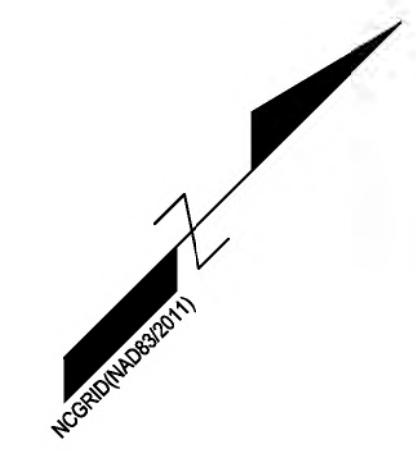
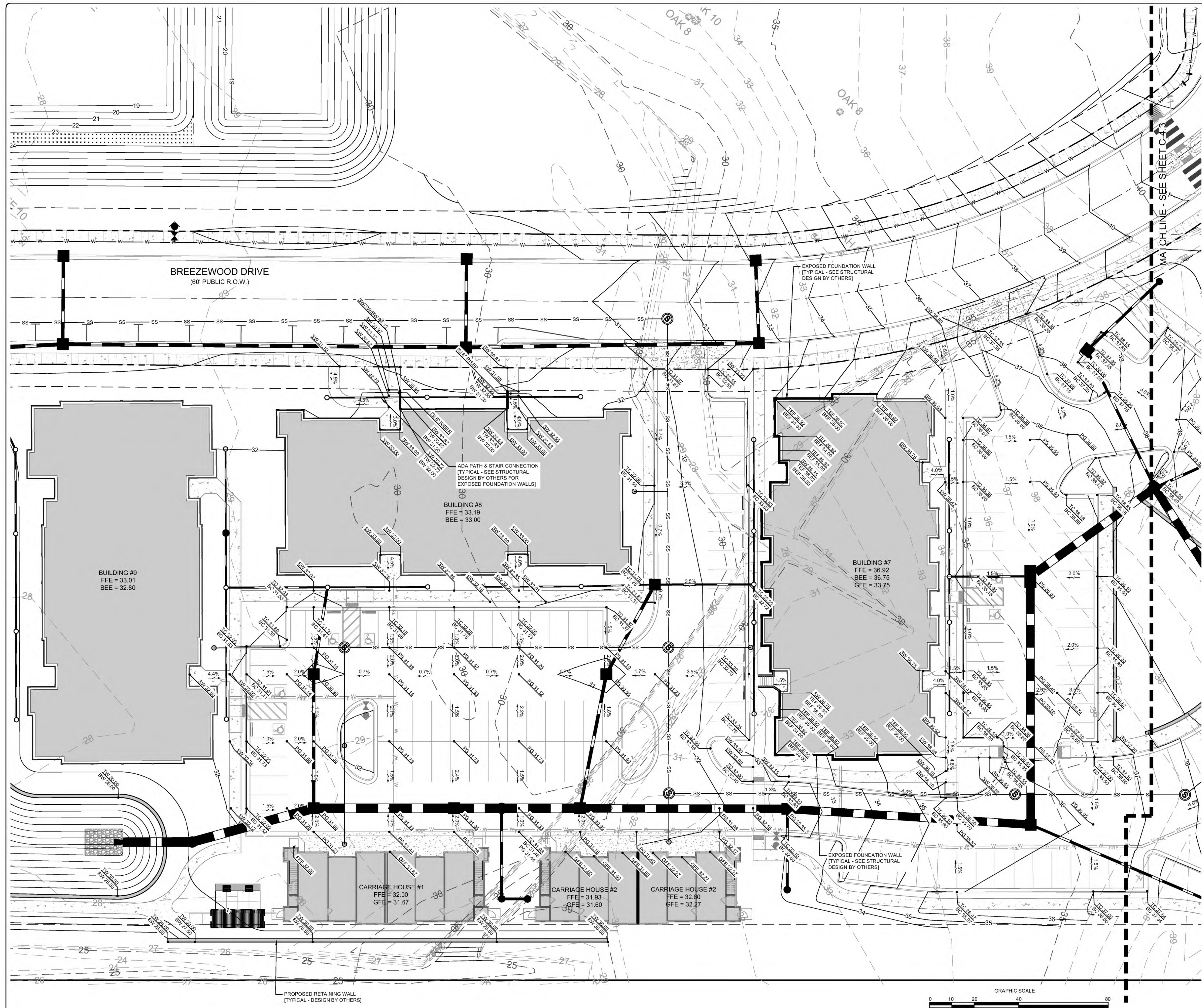
Upstream Node	Downstream Node	Diameter (In)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
MH-101	FES-100	18	21.89	21.00	48	1.85	30.77		RCP III
CB-102	MH-101	18	21.89	21.46	42	1.00	30.01	30.77	RCP III
CB-103	CB-102	15	26.50	26.11	40	1.00	30.06	30.01	RCP III
CB-104	CB-102	18	25.36	23.56	180	1.00	30.06	30.01	RCP III
CB-105	CB-104	15	27.00	26.61	40	0.99	30.12	30.06	RCP IV
CB-106	CB-104	18	27.98	25.36	131	2.00	32.62	30.06	RCP III
CB-107	CB-106	15	29.00	28.76	37	1.99	32.62	32.62	RCP III
MH-201	FES-200	48	21.62	21.00	31	2.00	31.00		RCP III
DI-202	MH-201	48	22.75	21.62	56	2.00	31.00	31.00	RCP III
DI-203	DI-202	15	26.40	25.80	60	1.01	31.00	31.00	RCP III
DI-207	DI-202	48	23.63	22.75	63	1.40	31.05	31.00	RCP III
MH-209	DI-207	48	23.93	23.63	21	1.40	31.26	31.05	RCP III
YD-210	MH-209	12	25.88	25.48	41	1.00	31.00	31.26	RCP III
YD-211	YD-210	12	26.00	25.88	12	1.04	31.00	31.00	RCP III
DI-212	MH-209	48	24.42	23.93	35	1.40	30.95	31.26	RCP III
DI-213	DI-212	15	27.29	26.59	61	0.99	30.95	30.95	RCP III
CB-214	DI-213	15	27.75	27.29	46	1.01	31.25	30.85	RCP III
DI-216	DI-212	42	25.72	24.42	93	1.40	31.90	30.95	RCP III
YD-217	DI-216	12	27.35	26.99	36	1.01	31.00	31.90	RCP III
DI-218	DI-216	42	27.24	25.72	109	1.40	35.81	31.90	RCP III
YD-219	DI-218	12	34.10	31.06	152	2.00	39.00	35.81	RCP III
RD-220	YD-219	12	35.00	34.10	45	2.00	39.00	39.00	RCP III
DDI-221	DI-218	42	28.80	27.24	111	1.40	35.00	35.81	RCP III
CB-222	DDI-221	42	29.76	28.80	68	1.40	38.40	35.00	RCP III
CB-223	CB-222	12	33.61	32.24	69	2.00	37.45	38.40	RCP III
YD-224	CB-223	12	34.50	33.61	44	2.00	38.00	37.45	RCP III
CB-225	CB-222	42	31.01	29.76	89	1.40	40.40	38.40	RCP III
DI-228	CB-225	42	33.64	31.01	188	1.40	42.00	40.40	RCP III
RD-229	DI-228	12	37.00	36.19	41	2.00	43.00	42.00	RCP III
DI-230	DI-228	42	34.29	33.64	65	1.00	43.75	42.00	RCP III
DI-231	DI-230	42	35.15	34.29	86	1.00	44.12	43.75	RCP III
CB-250	DI-231	42	36.05	35.15	100	0.90	44.78	44.12	RCP III
YD-251	CB-250	12	39.00	38.80	20	1.01	45.25	44.78	HDPE
CB-253	CB-250	42	36.78	36.05	81	0.90	45.36	44.78	RCP III
CB-254	CB-253	36	37.66	36.78	176	0.50	42.39	45.36	RCP III
CB-256	CB-254	30	37.86	37.66	39	0.50	42.26	42.39	RCP III
CB-257	CB-254	30	38.04	37.86	37	0.50	42.26	42.26	RCP III
DI-258	CB-257	30	38.20	38.04	32	0.50	42.00	42.26	RCP III
MH-259	CB-253	30	37.84	37.06	156	0.50	47.66	45.36	RCP III
CB-260	MH-259	30	38.27	37.84	87	0.50	46.68	47.66	RCP III
CB-261	CB-260	15	43.00	42.63	37	0.99	46.68	46.68	RCP III
CB-262	CB-260	30	38.36	38.27	38	0.50	46.65	46.68	RCP III
CB-263	CB-260	30	38.62	38.36	31	0.50	47.22	46.65	RCP III
RD-264	CB-263	12	43.00	42.80	21	0.98	48.50	47.22	RCP III
MH-265	CB-263	30	39.32	38.82	101	0.50	47.73	47.22	RCP III
MH-266	MH-265	24	41.72	41.40	64	0.50	47.00	47.73	RCP III
DI-267	MH-265	15	42.70	42.05	65	1.00	46.70	47.73	RCP III
CB-268	MH-265	15	41.82	41.24	117	0.50	45.12	47.73	RCP III
CB-269	CB-268	15	42.00	41.82	37	0.50	45.12	45.12	RCP III
DI-270	CB-268	12	41.96	41.82	28	0.50	45.00	45.12	RCP III

Upstream Node	Downstream Node	Diameter (In)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
MH-300	DI-231	30	36.08	35.25	137	0.60	44.28	44.12	RCP III
CB-301	MH-300	30	36.87	36.08	135	0.59	45.15	44.28	RCP III
DI-303	CB-301	15	42.21	41.46	75	1.01	46.28	45.15	RCP III
DI-304	DI-303	15	43.00	42.06	94	1.00	46.71	46.28	RCP III
CB-307	CB-301	30	37.62	36.87	125	0.60	45.40	45.15	RCP III
YD-308	CB-307	15	42.00	41.61	78	0.50	47.65	45.40	HDPE
CB-309	CB-307	30	38.47	37.62	142	0.60	45.90	45.40	RCP III
YD-310	CB-309	15	41.00	40.64	73	0.50	47.00	45.90	HDPE
CB-311	CB-309	30	39.02	38.47	92	0.60	45.83	45.90	RCP III
DI-312	CB-311	24	39.58	39.02	94	0.60	46.20	45.83	RCP III
DI-314	DI-312	24	41.36	40.59	127	0.60	46.35	46.20	RCP III
DI-316	DI-314	24	41.70	41.36	57	0.60	46.75	46.35	RCP III
DI-317	DI-316	15	43.25	42.64	101	0.60	46.90	46.75	RCP III
DI-318	DI-316	15	43.00	42.78	43	0.51	47.00	46.75	RCP III
DI-319	DI-316	15	43.00	42.45	92	0.60	47.05	46.75	RCP III
DI-320	DI-319	15	43.50	43.00	83	0.60	47.05	47.05	RCP III
DI-321	DI-312	15	42.72	41.85	145	0.60	46.90	46.20	RCP III
RD-322	DI-321	12	43.00	42.72	47	0.60	48.00	46.90	RCP III
RD-323	DI-312	8	42.50	40.59	60	3.19	47.74	46.20	HDPE
RD-324	DI-314	8	43.00	42.54	46	1.00	47.61	46.35	HDPE
MH-401	FES-400	36	20.00	20.00	46	0.00	30.86	20.00	RCP III
FES-402	MH-401	36	20.00	20.00	105	0.00	24.00	30.86	RCP III
CB-403	MH-401	15	24.13	23.38	150	0.50	27.81	30.86	RCP III
CB-404	CB-403	15	24.81	24.63	37	0.49	27.81	27.81	RCP IV
FES-501	FES-500	30	23.70	23.50	41	0.49	27.52	26.00	RCP IV
FES-502	FES-501	30	24.00	23.70	62	0.48	26.50	27.52	RCP IV
RD-1.1	DI-318	8	44.86	44.40	46	0.99	48.34	47.00	HDPE
RD-1.2	RD-1.1	8	45.24	44.86	38	1.00	48.42	48.34	HDPE
RD-1.3	RD-1.2	6	45.62	45.24	38	1.00	48.46	48.42	HDPE
RD-1.4	RD-1.3	6	46.00	45.62	38	1.00	48.57	48.46	HDPE
RD-1.5	DI-318	12	43.86	43.44	84	0.50	48.20	47.00	HDPE
RD-1.6	RD-1.5	8	44.36	44.00	36	1.01	48.41	48.20	HDPE
RD-1.7	RD-1.6	8	44.74	44.36	38	1.00	48.17	48.41	HDPE
RD-1.8	RD-1.7	6	45.12	44.74	38	1.00	48.18	48.17	HDPE
RD-1.9	RD-1.8	6	45.50	45.12	38	1.00	47.50	48.18	HDPE

Upstream Node	Downstream Node	Diameter (In)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
RD-2.1	DI-318	8	44.76	44.34	42	1.00	48.35	47.00	HDPE
RD-2.2	RD-2.1	8	45.14	44.76	38	1.00	48.51	48.35	HDPE
RD-2.3	RD-2.2	6	45.52	45.14	38	1.00	48.63	48.51	HDPE
RD-2.4	RD-2.3	6	45.90	45.52	38	1.00	48.79	48.63	HDPE
RD-2.5	RD-1.5	8	44.36	43.86	50	1.00	48.42	48.20	HDPE
RD-2.6	RD-2.5	8	44.74	44.36	38	1.00	47.99	48.42	HDPE
RD-2.7	RD-2.6	6	45.12	44.74	38	1.00	47.98	47.99	HDPE
RD-2.8	RD-2.7	6	45.50	45.12	38	1.00	47.98	47.98	HDPE
RD-3.1	YD-310	12	43.45	43.32	27	0.48	48.73	47.00	HDPE
RD-3.2	RD-3.1	12	43.65	43.45	41	0.50	48.97	48.73	HDPE
RD-3.3	RD-3.2	12	43.75	43.65	20	0.50	47.65	48.97	HDPE
RD-3.4	YD-3.3	8	44.18	44.08	20	0.49	49.02	47.65	HDPE
RD-3.5	RD-3.4	8	44.58	44.18	41	0.50	49.03	49.02	HDPE
YD-3.6	RD-3.5	8	44.50	44.38	23	0.51	47.65	49.03	HDPE
RD-3.7	DI-314	8	44.07	43.30	77	1.00	48.37	46.35	HDPE
RD-3.8	RD-3.7	6	45.69	45.49	20	0.99	48.48	48.37	HDPE
RD-3.9	RD-3.8	6	46.10	45.69	41	1.01	48.69	48.48	HDPE
RD-3.10	RD-3.7	6	45.69	45.49	20	0.99	48.48	48.37	HDPE
RD-3.11	RD-3.10	6	46.10	45.69	41	1.01	48.81	48.48	HDPE
RD-4.1	DI-304	8	44.28	43.47	41	2.00	47.93	46.71	HDPE
RD-4.2	RD-4.1	6	45.10	44.69	41	1.01	48.41	47.93	HDPE
RD-4.3	RD-4.1	6	44.69	44.28	41	1.01	47.99	47.93	HDPE
RD-4.4	RD-4.3	6	45.10	44.69	41	1.01	47.62	47.99	HDPE
RD-4.5	YD-308	12	43.49	43.38	21	0.52	48.29	47.65	HDPE
RD-4.6	RD-4.5	12	43.69	43.49	41	0.50	48.53	48.29	HDPE
YD-4.7	RD-4.6	12	43.79	43.69	20	0.50	47.65	48.53	HDPE
RD-4.8	YD-4.7	8	44.22	44.12	20	0.49	48.62	47.65	HDPE
RD-4.9	RD-4.8	8	44.42	44.22	41	0.50	48.60	48.62	HDPE
YD-4.10	RD-4.9	8	44.50	44.42	16	0.50	47.65	48.60	HDPE
RD-5.1	CB-250	8	42.88	41.50	69	2.00	47.90	44.78	HDPE
RD-5.2	RD-5.1	6	44.87	44.49	38	1.00	47.82	47.90	HDPE
RD-5.3	RD-5.1	6	44.87	44.49	38	1.00	48.00	47.90	HDPE
RD-5.4	RD-5.3	6	45.25	44.87	38	1.00	47.76	48.00	HDPE
RD-5.5	DI-303	8	44.36	43.34	51	1.99	47.94	46.28	HDPE
RD-5.6	RD-5.5	8	44.74	44.36	38	1.00	48.24	47.94	HDPE
RD-5.7	RD-5.6	6	45.12	44.74	38	1.00	48.24	48.24	HDPE
RD-5.8	RD-5.7	6	45.50	45.12	38	1.00	48.08	48.24	HDPE

Upstream Node	Downstream Node	Diameter (In)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
RD-6.1	CB-222	12	38.62	37.00	81	2.00	42.61	38.40	HDPE
RD-6.2	RD-6.1	8	40.57	39.97	60	1.00</			





For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

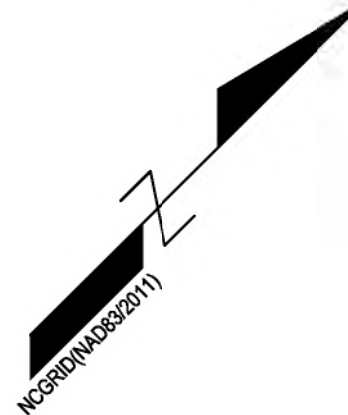
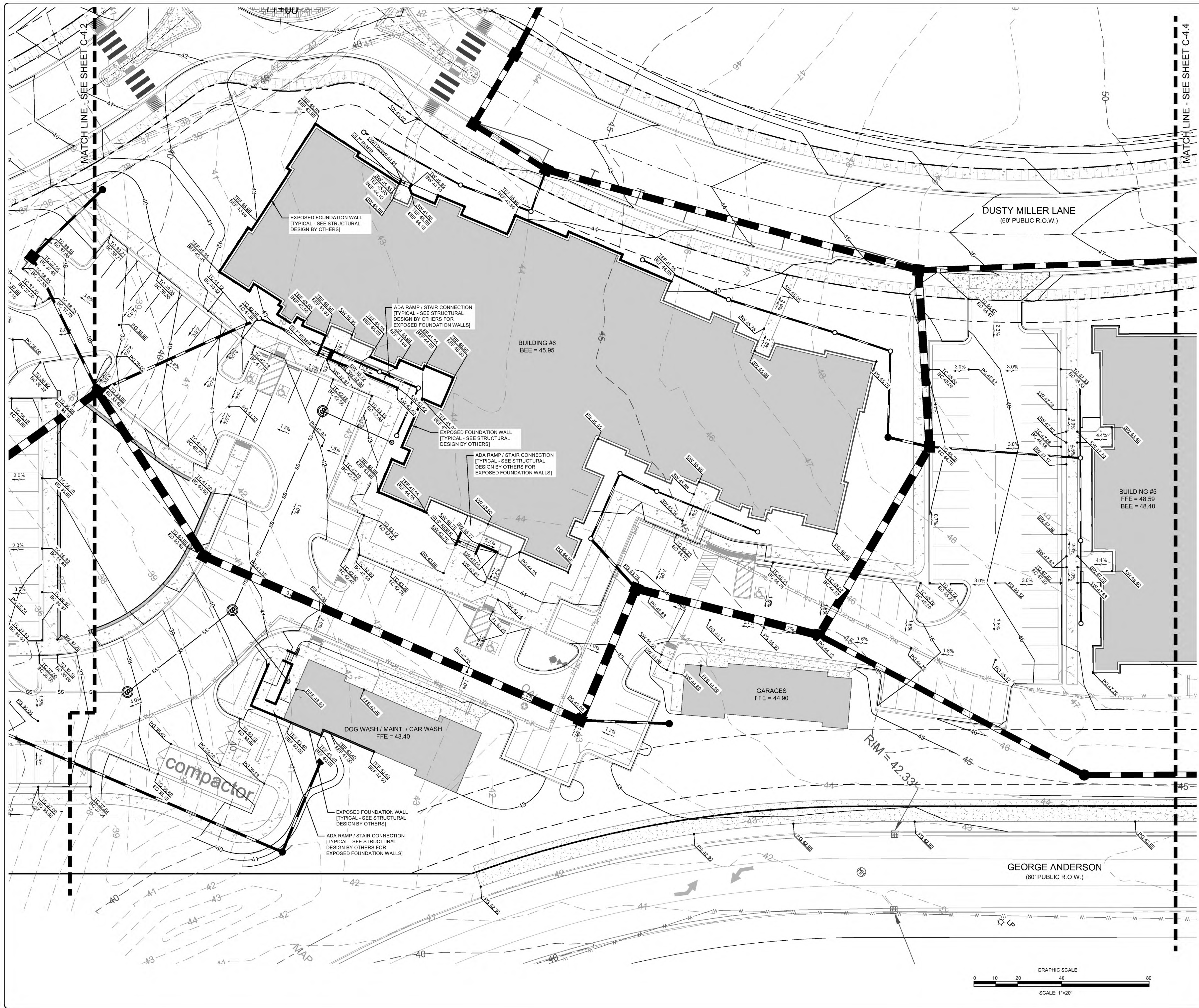
Traffic \_\_\_\_\_

Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p>	
<p>CLIENT INFORMATION:</p> <p><b>CK WILMINGTON</b> THREE PHASE A, LLC CHARLOTTE, NC</p>	
<p><b>PARAMOUNT ENGINEERING</b> 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6766 (F) NC License #: C-2846</p>	
<p><b>FINE GRADING PLAN</b></p> <p><b>WILMINGTON THREE PHASE A</b> CITY OF WILMINGTON NORTH CAROLINA</p>	
<p>PROJECT STATUS:</p> <p>CONCEPTUAL LAYOUT: _____</p> <p>PRELIMINARY LAYOUT: _____</p> <p>RELEASED FOR CONST: _____</p>	<p>DRAWING INFORMATION:</p> <p>DATE: 01/13/21</p> <p>DESIGNED: JDF</p> <p>DRAWN: JDF</p> <p>CHECKED: JDF</p>
<p>Professional Seal redacted on electronic copy per City of Wilmington Policy</p>	
<p><b>C-4.2</b></p>	
<p>PEI JOB#: 20195.PE</p>	

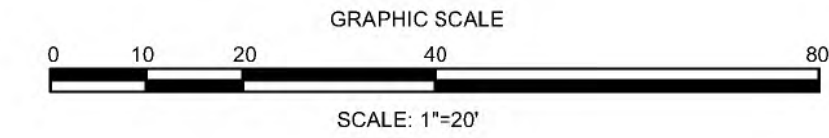




For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Public Services • Engineering Division
   
**APPROVED STORMWATER MANAGEMENT PLAN**
  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_
   
 Signed: \_\_\_\_\_
   
**Approved Construction Plan**
  
 Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_
   
 Traffic \_\_\_\_\_
   
 Fire \_\_\_\_\_



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

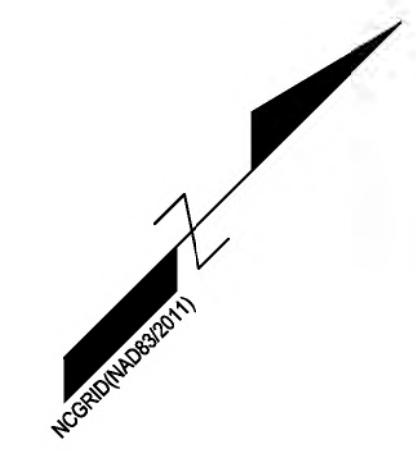
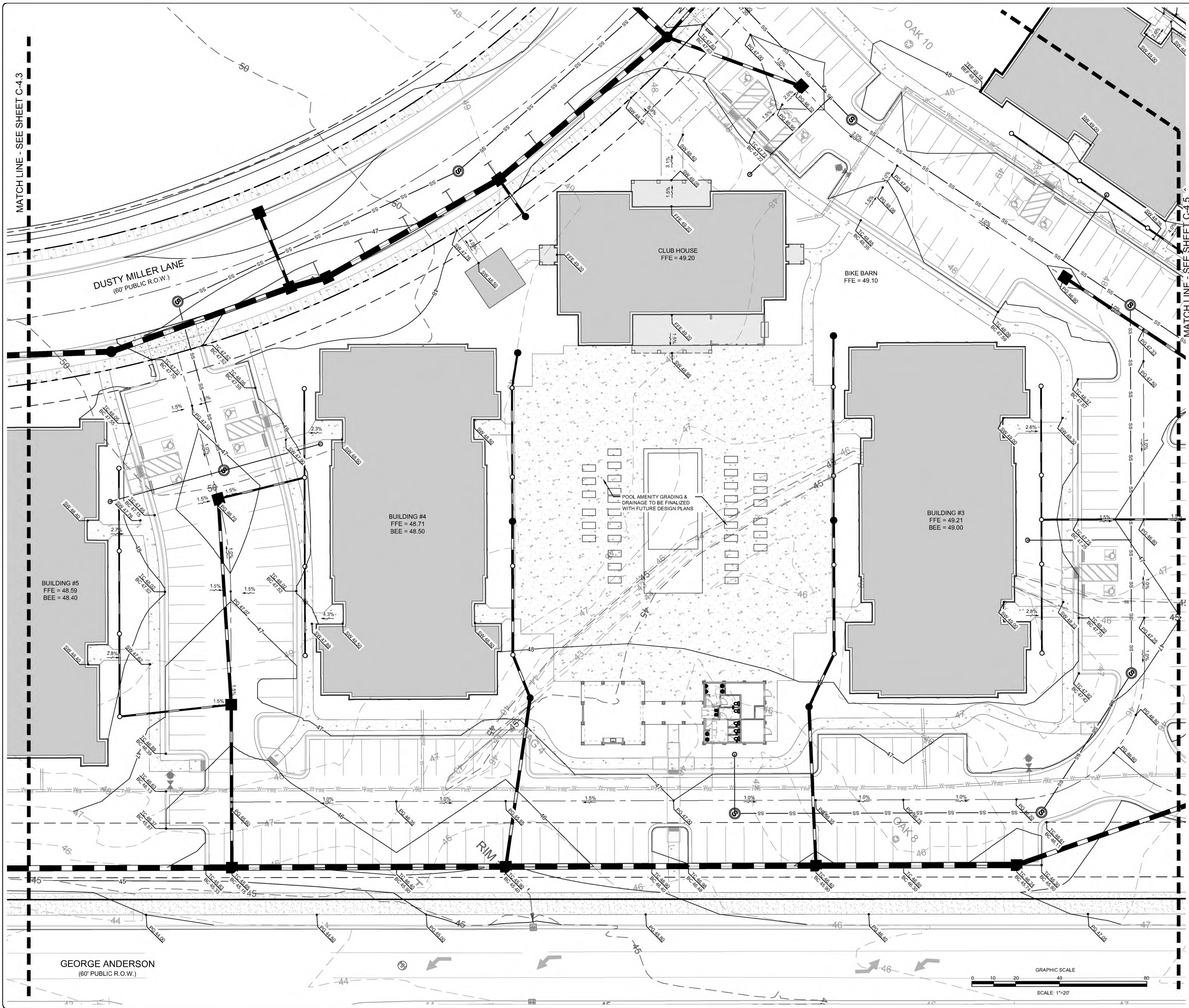
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FINE GRADING PLAN  
 DRAINAGE PLAN  
 WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

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

CLIENT INFORMATION:





For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_  
**Approved Construction Plan**  
Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

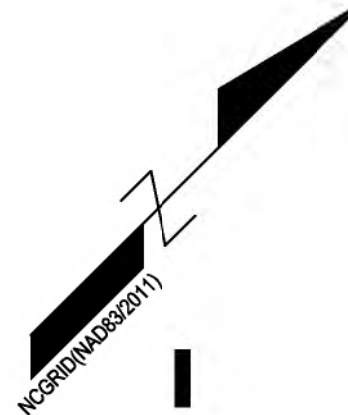
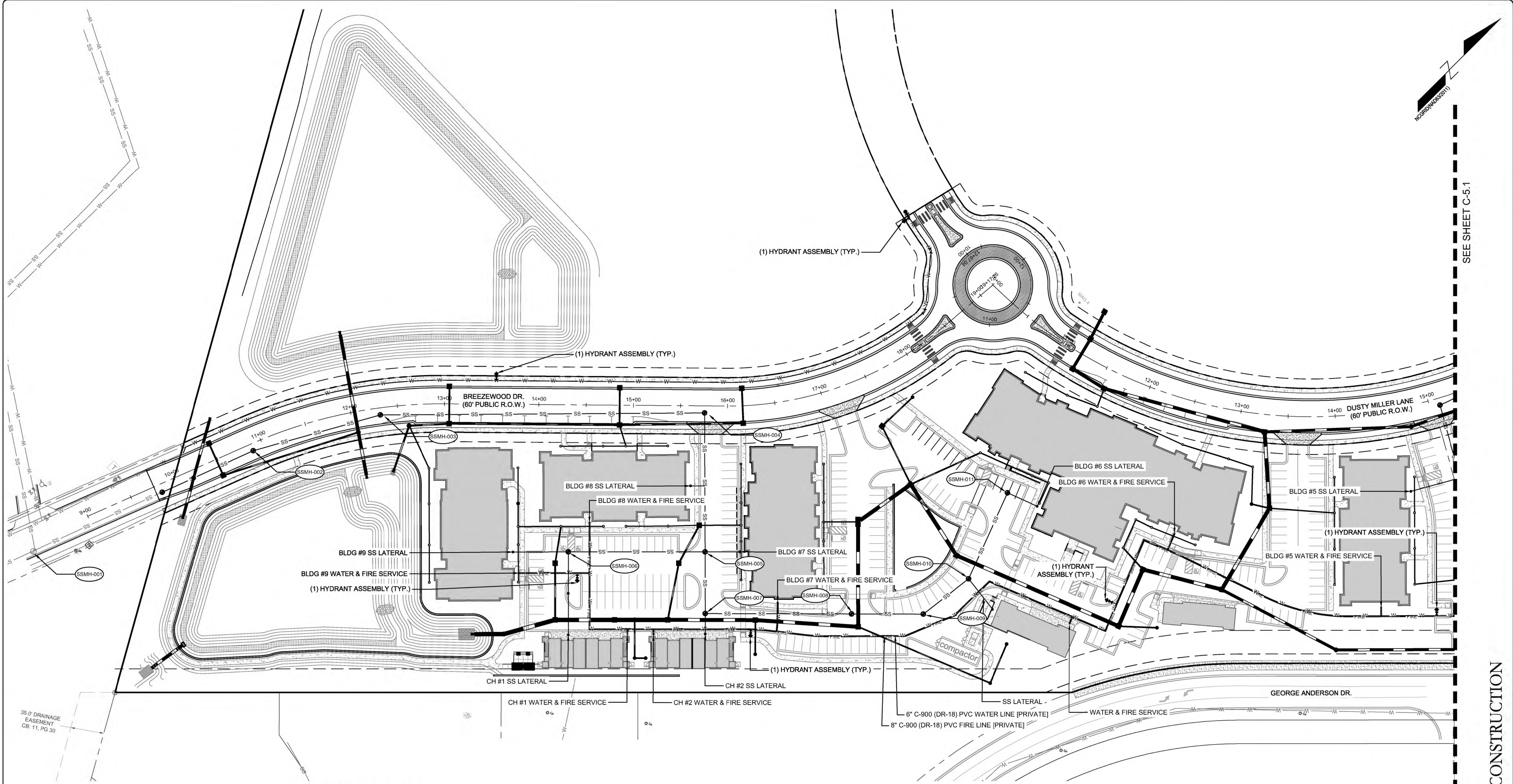
FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p>	
<p>CLIENT INFORMATION: <b>CK WILMINGTON</b> THREE PHASE A, LLC CHARLOTTE, NC</p>	
<p><b>PARAMOUNT</b> ENGINEERING 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6766 (F) NC License #: C-2846</p>	
<p><b>FINE GRADING PLAN</b> <b>DRAINAGE PLAN</b> <b>WILMINGTON THREE PHASE A</b> <b>CITY OF WILMINGTON</b> <b>NORTH CAROLINA</b></p>	
<p>PROJECT STATUS: CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: RELEASED FOR CONST.:</p>	<p>DRAWING INFORMATION: DATE: 01/13/21 DESIGNED BY: JDF DRAWN BY: JDF CHECKED BY: JDF</p>
<p>Professional Seal redacted on electronic copy per City of Wilmington Policy</p>	
<p><b>C-4.4</b></p>	
<p>PEI JOB#: 20195.PE</p>	









SEE SHEET C-5.1

**UTILITY INFORMATION**  
**SANITARY SEWER**  
 THIS PROJECT IS CONSTRUCTING A SANITARY SEWER GRAVITY SYSTEM THAT WILL CONNECT TO AN EXISTING GRAVITY LINE IN BREEZEWOOD DRIVE AND DUSTY MILLER LANE. SANITARY SEWER ALLOCATION IS PROVIDED BY CFPUA.

**WATER**  
 THIS PROJECT WILL EXTEND AN EXISTING 8-INCH PUBLIC WATER MAIN ON BREEZEWOOD DRIVE TO THE ROUND-A-BOUT FOR FUTURE EXTENSION TO STONE CROP. THIS PROJECT'S DOMESTIC AND FIRE SERVICE WILL CONNECT TO EXISTING 8-INCH MAIN IN CHIPPENHAM DR. RIGHT OF WAY, CONSTRUCTING PRIVATE WATER LINES THAT WILL PROVIDE FIRE FLOW AND DOMESTIC WATER FOR THE TRACT. DOMESTIC WATER ALLOCATION PROVIDED BY CFPUA.

**WATER & SEWER SERVICE NOTE:**  
 1. CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH CFPUA STANDARD DETAILS AND SPECIFICATIONS.

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES:**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
  - WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RW LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
  - ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
  - MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
  - NO FLEXIBLE COUPLINGS SHALL BE USED.
  - ALL STAINLESS STEEL FASTENERS SHALL BE 316.
  - CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

- UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)**
- 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.
  - 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.
  - 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.
  - WHERE VERTICAL CLEARANCE IS LESS THAN 24" 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.
  - WHERE VERTICAL CLEARANCE IS LESS THAN 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.

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

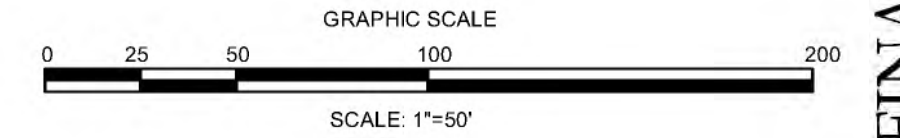
Fire \_\_\_\_\_

**City of WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



**REVISIONS:**


**CLIENT INFORMATION:**  
 CK WILMINGTON  
 THREE PHASE A, LLC  
 CHARLOTTE, NC

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

**OVERALL UTILITY PLAN**  
 WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT: \_\_\_\_\_  
 PRELIMINARY LAYOUT: \_\_\_\_\_  
 RELEASED FOR CONSTRUCTION: \_\_\_\_\_

**DRAWING INFORMATION:**  
 DATE: 01/13/21  
 DESIGNED: [Signature]  
 DRAWN: [Signature]  
 CHECKED: [Signature]

Professional Seal redacted on electronic copy per City of Wilmington Policy

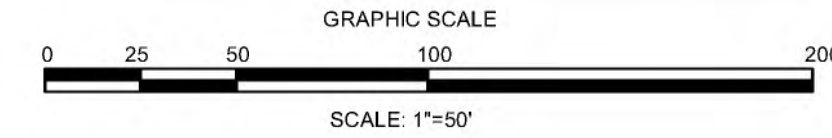
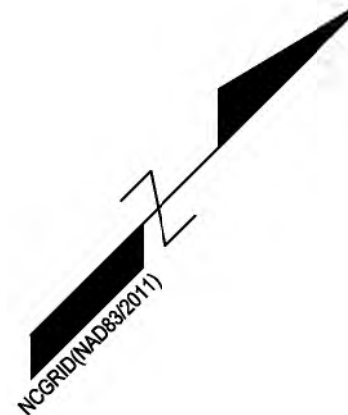
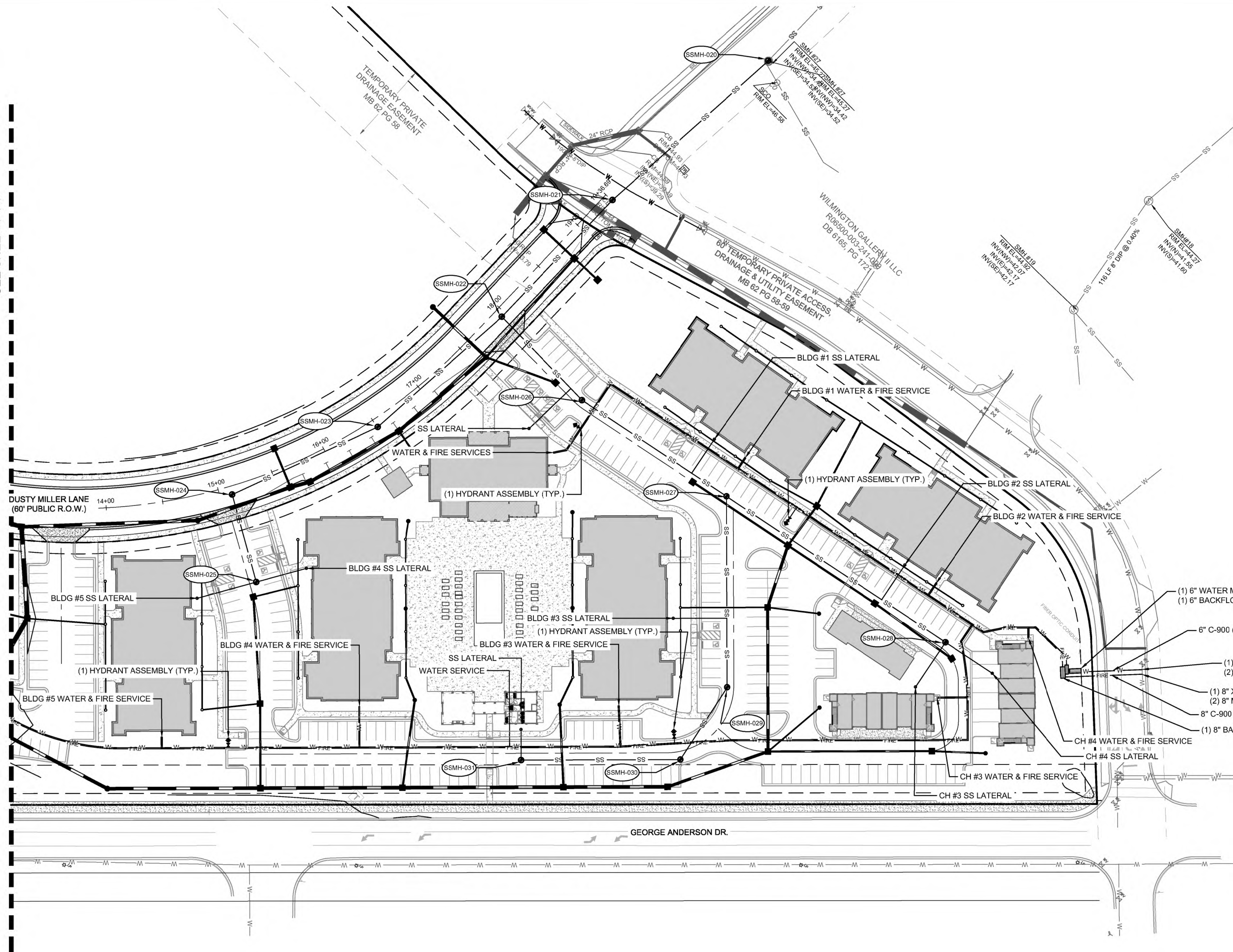
**C-5.0**

PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



SEE SHEET C-5.0



For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<b>PARAMOUNT ENGINEERING</b> 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6766 (F) NC License #: C-2846	
<b>OVERALL UTILITY PLAN</b> <b>WILMINGTON THREE PHASE A</b> <b>CITY OF WILMINGTON</b> <b>NORTH CAROLINA</b>	
PROJECT STATUS CONCEPTUAL LAYOUT: _____ PRELIMINARY LAYOUT: _____ RELEASED FOR CONST: _____	DRAWING INFORMATION DATE: 01/13/21 DESIGNED: JDF DRAWN: JDF CHECKED: JDF
Professional Seal redacted on electronic copy per City of Wilmington Policy	
<b>C-5.1</b>	
PEI JOB#: 20195.PE	

REVISIONS:

CLIENT INFORMATION:

**PARAMOUNT ENGINEERING**

OVERALL UTILITY PLAN

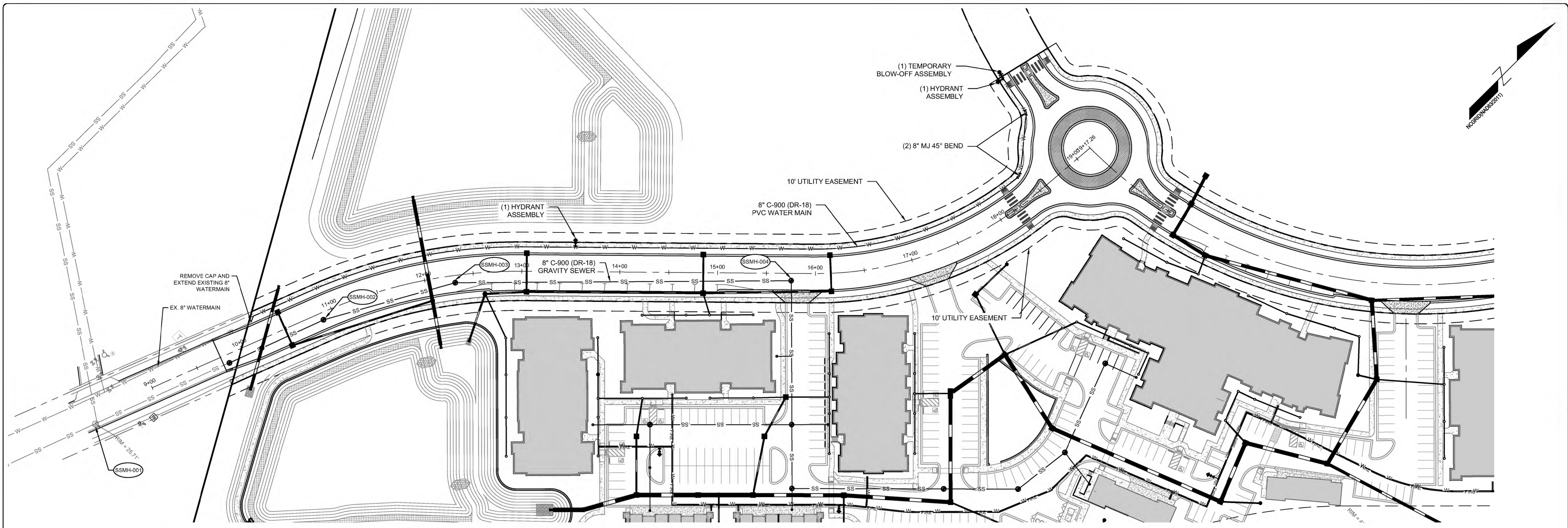
PROJECT STATUS

Professional Seal

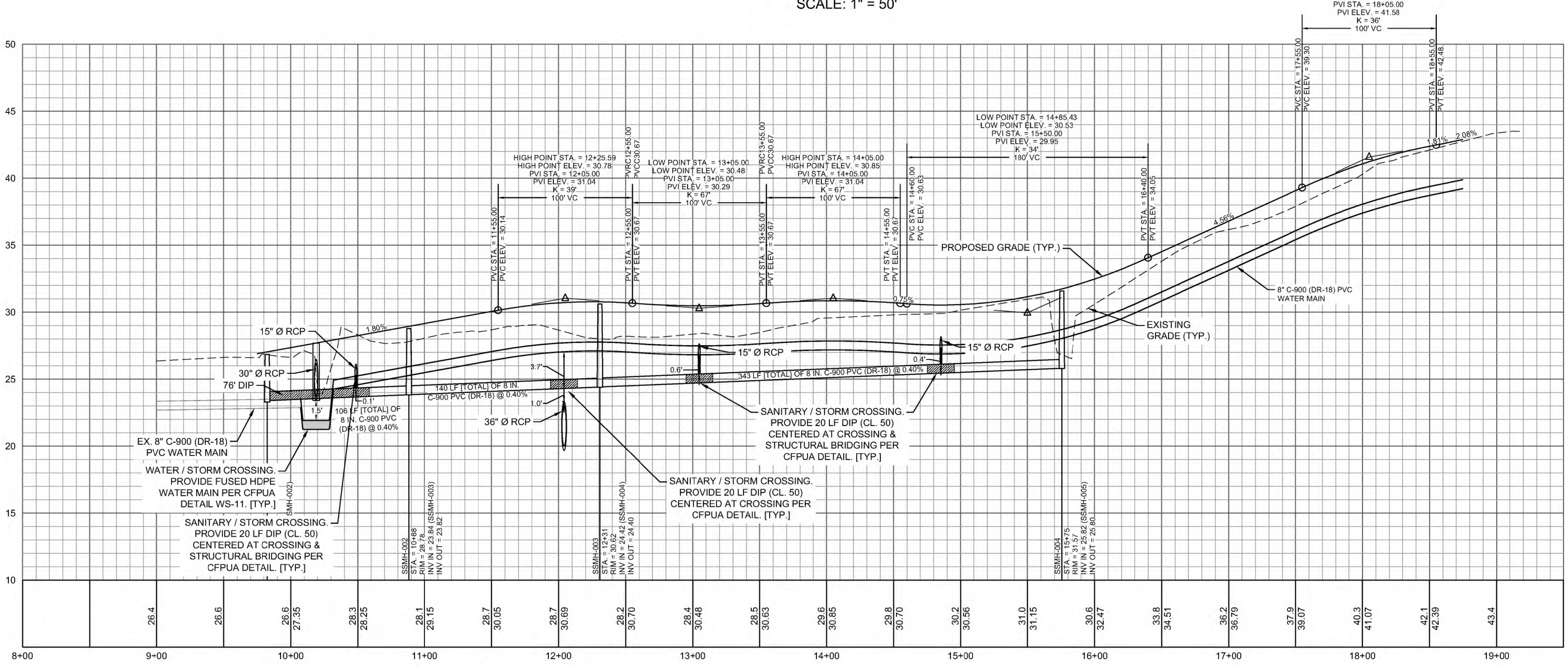
C-5.1

PEI JOB#: 20195.PE





**BREEZEWOOD - PLAN VIEW**  
SCALE: 1" = 50'



**BREEZEWOOD - PROFILE VIEW**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

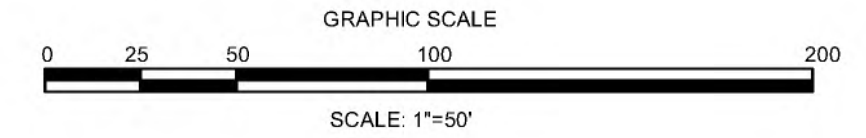
**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



REVISIONS:

CLIENT INFORMATION:  
**CK WILMINGTON**  
THREE PHASE A, LLC  
CHARLOTTE, NC

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

**PLAN & PROFILE**  
WILMINGTON THREE PHASE A  
CITY OF WILMINGTON  
NORTH CAROLINA

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

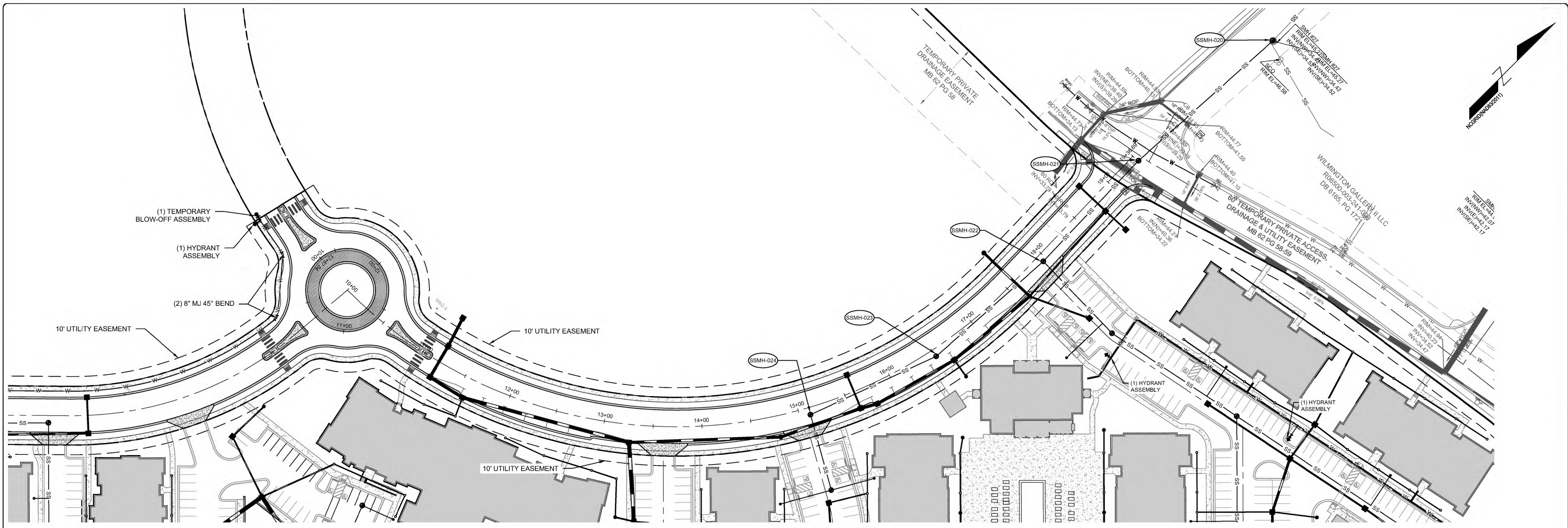
DRAWING INFORMATION:  
DATE: 01/13/21  
DESIGNED: AD  
DRAWN: DF  
CHECKED: DF

Professional Seal redacted on electronic copy per City of Wilmington Policy

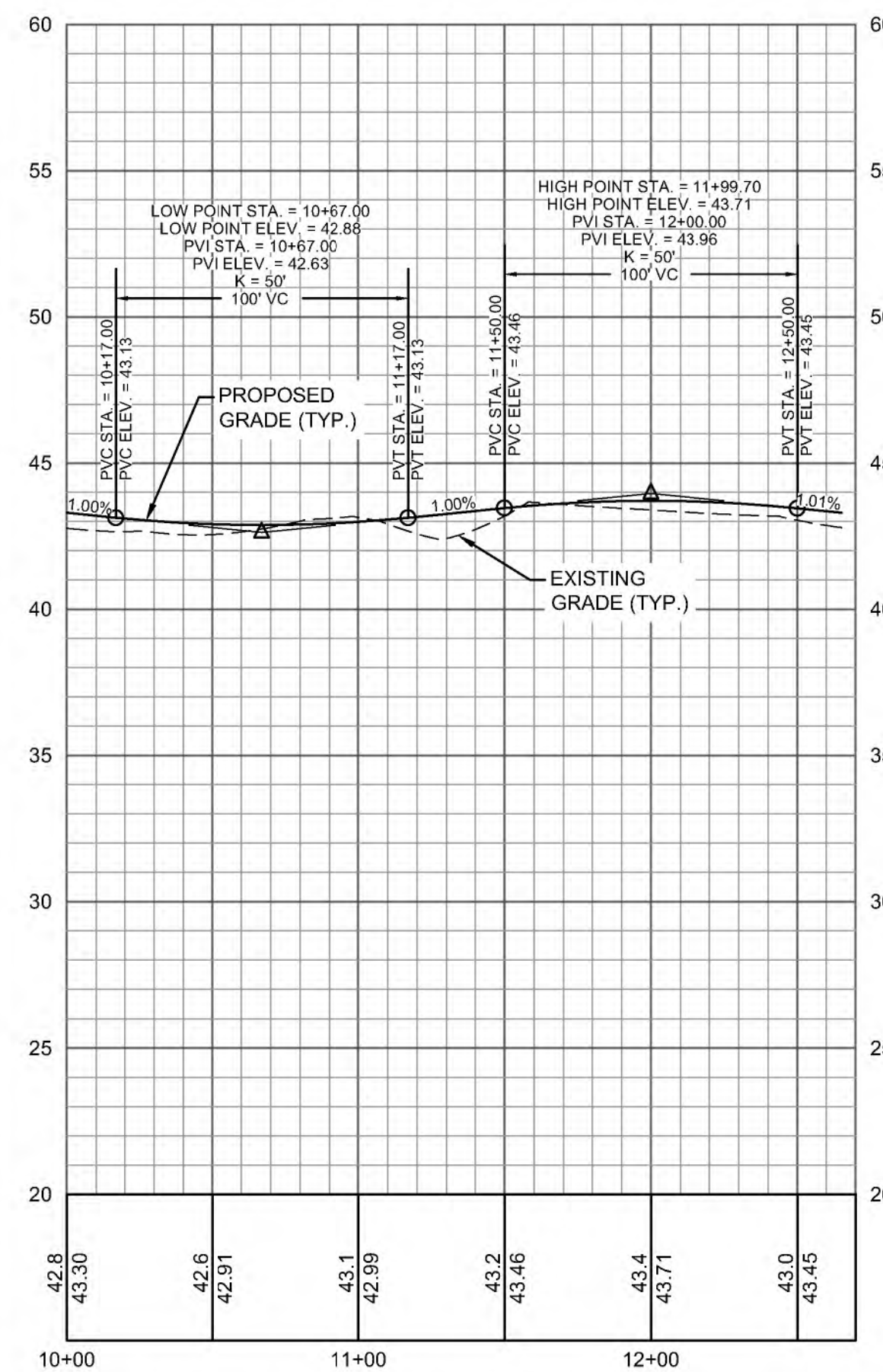
**C-5.2**  
PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

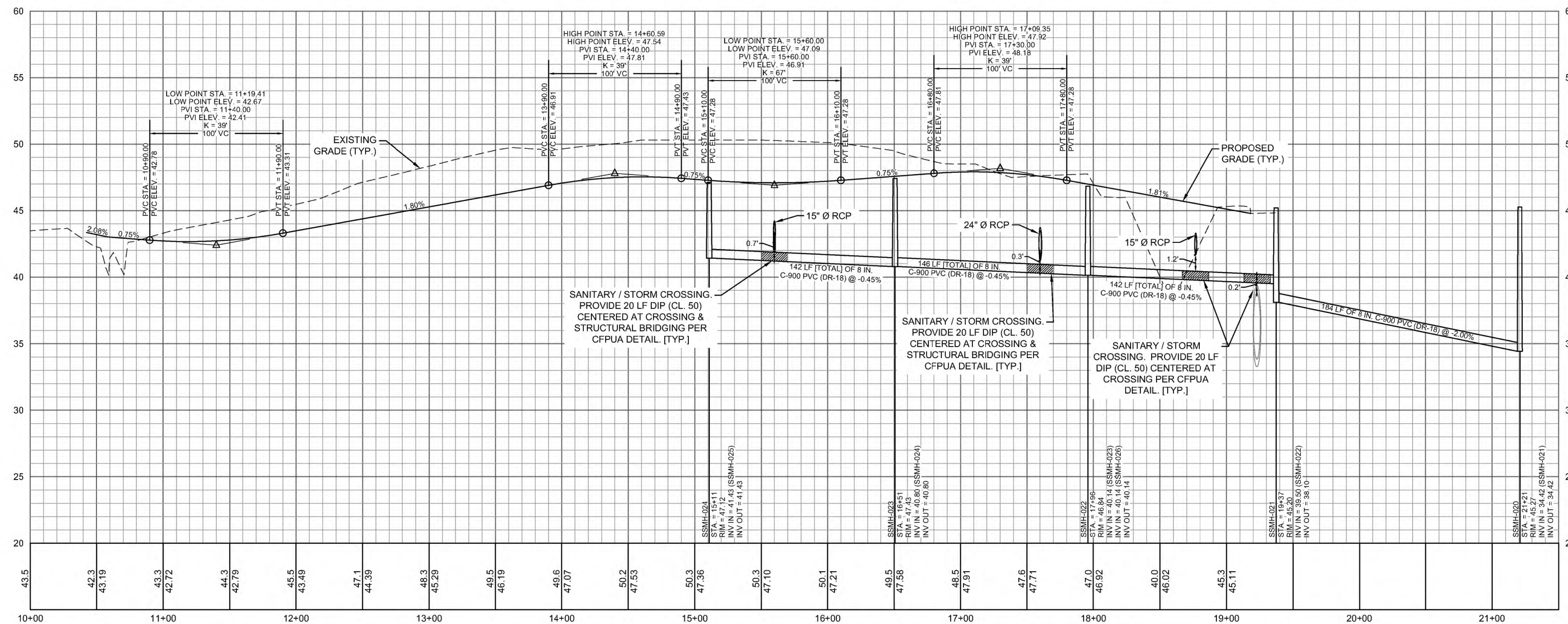




**ROUND-A-BOUT + DUSTY MILLER - PLAN VIEW**  
SCALE: 1" = 50'



**ROUND-A-BOUT - PROFILE VIEW**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



**DUSTY MILLER - PROFILE VIEW**  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

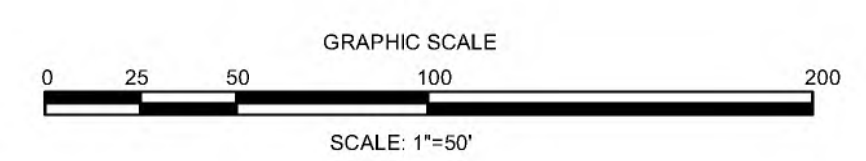
Traffic \_\_\_\_\_

Fire \_\_\_\_\_

**WILMINGTON NORTH CAROLINA**  
Public Services • Engineering Division  
**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

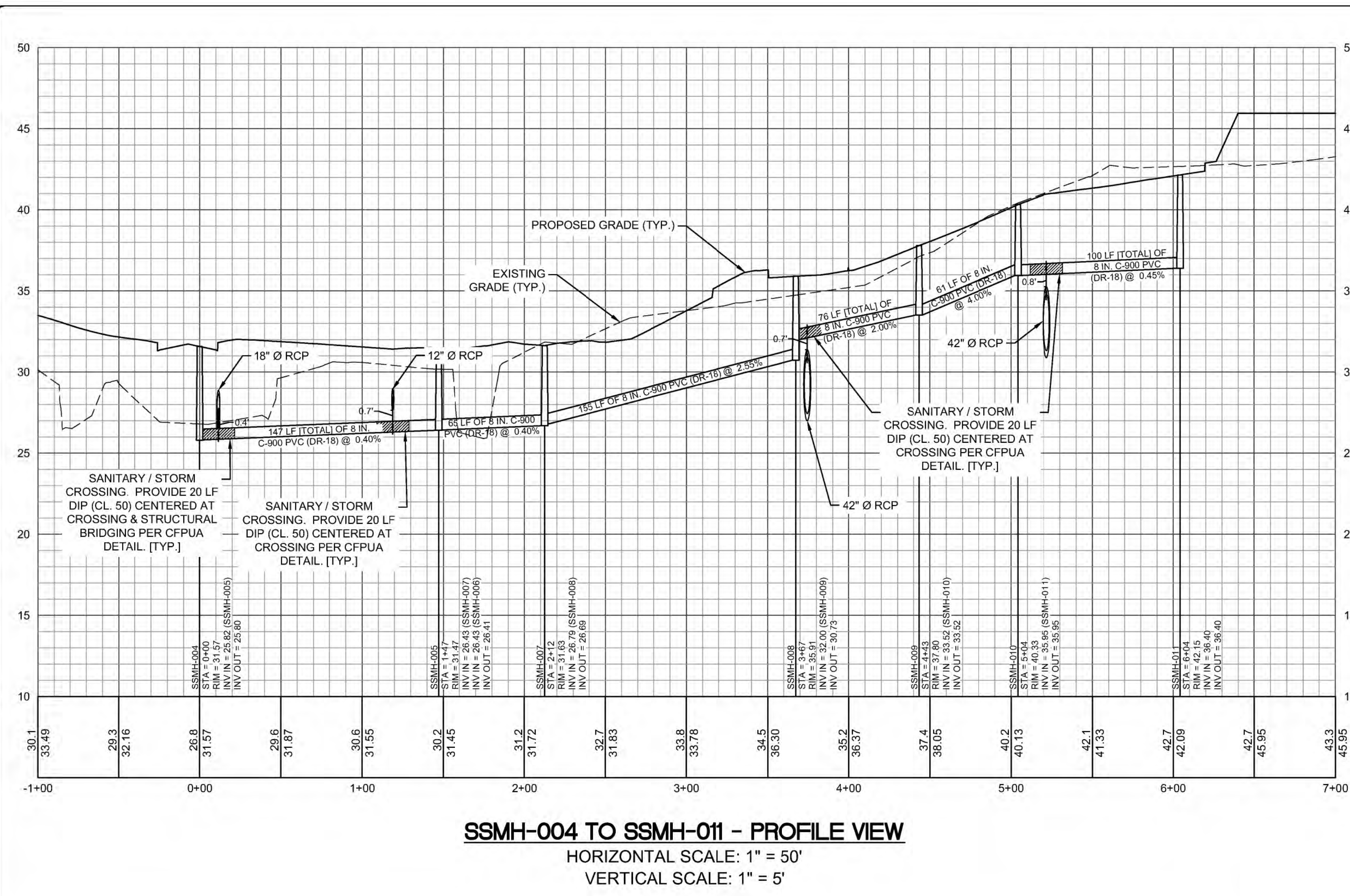
Signed: \_\_\_\_\_



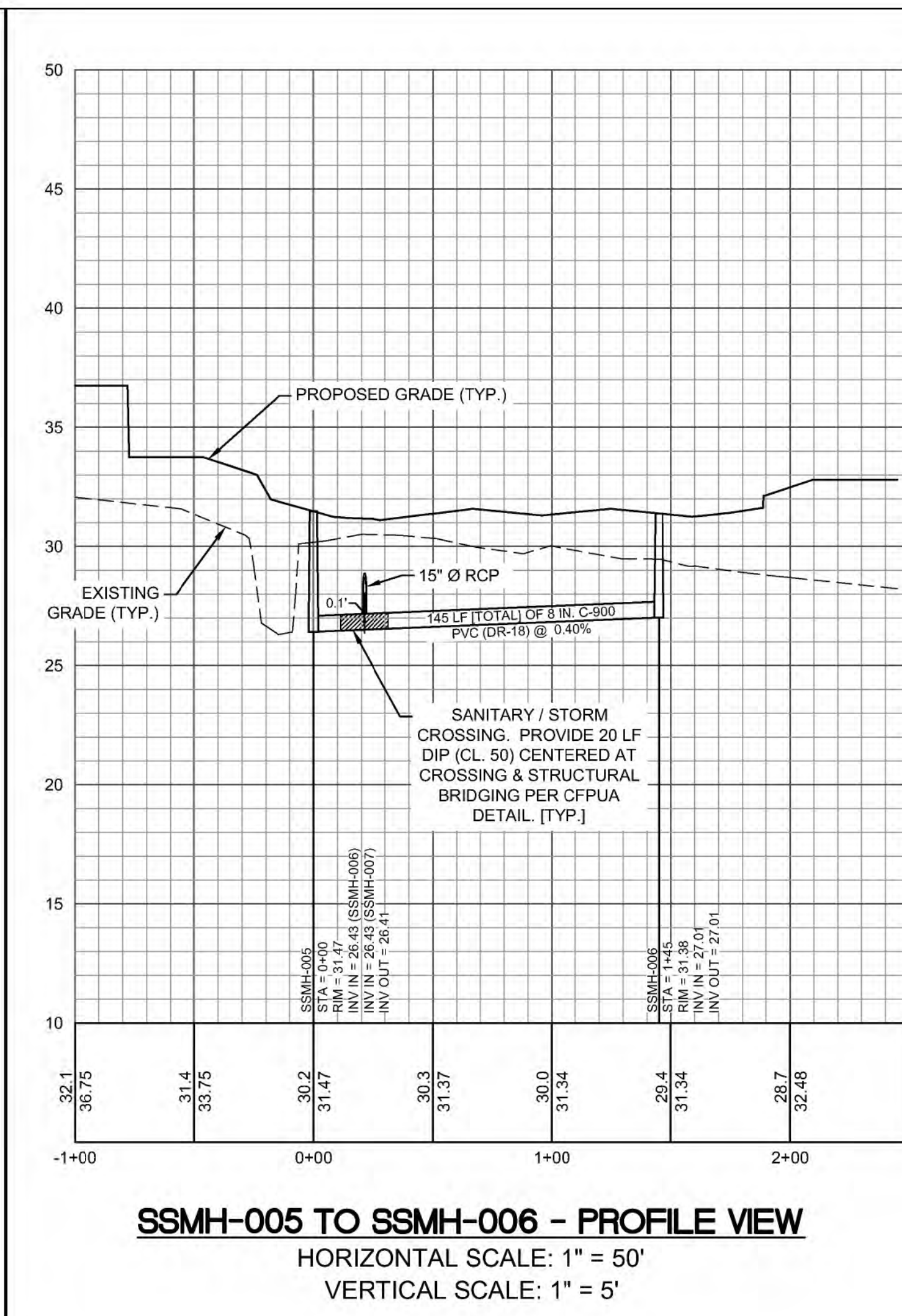
**FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION**

<p>REVISIONS:</p>	<p>CLIENT INFORMATION:</p> <p><b>CK WILMINGTON</b> THREE PHASE A, LLC CHARLOTTE, NC</p>
<p>PROJECT STATUS:</p> <p>CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: RELEASED FOR CONST:</p>	<p><b>PARAMOUNT ENGINEERING</b></p> <p>122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6766 (F) NC License #: C-2846</p>
<p>DRAWING INFORMATION:</p> <p>DATE: 01/13/21 DESIGNED: AD DRAWN: DF CHECKED: DF</p>	<p><b>PLAN &amp; PROFILE</b></p> <p>WILMINGTON THREE PHASE A CITY OF WILMINGTON NORTH CAROLINA</p>
<p>Professional Seal redacted on electronic copy per City of Wilmington Policy</p>	<p><b>C-5.3</b></p> <p>PEI JOB#: 20195.PE</p>

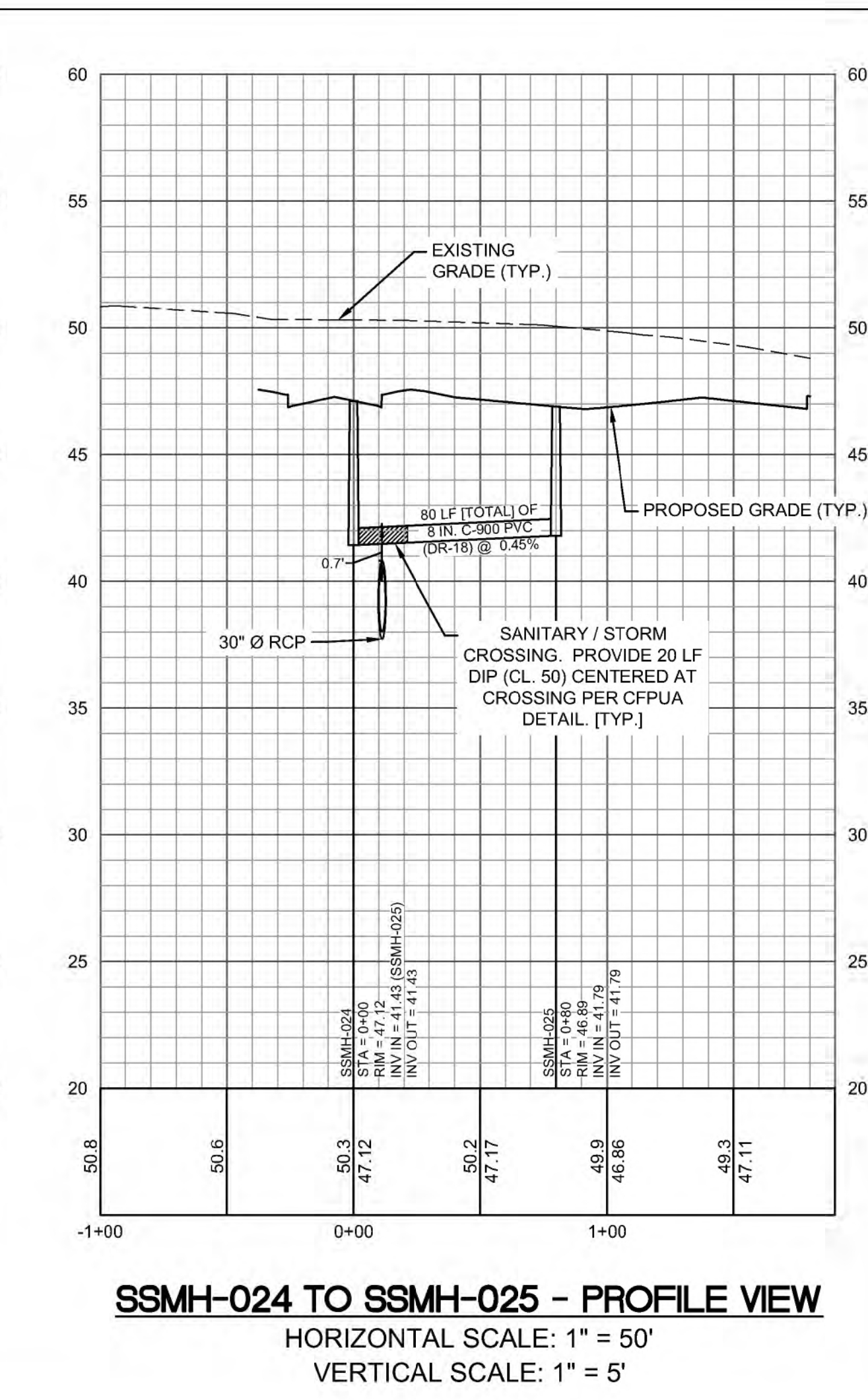




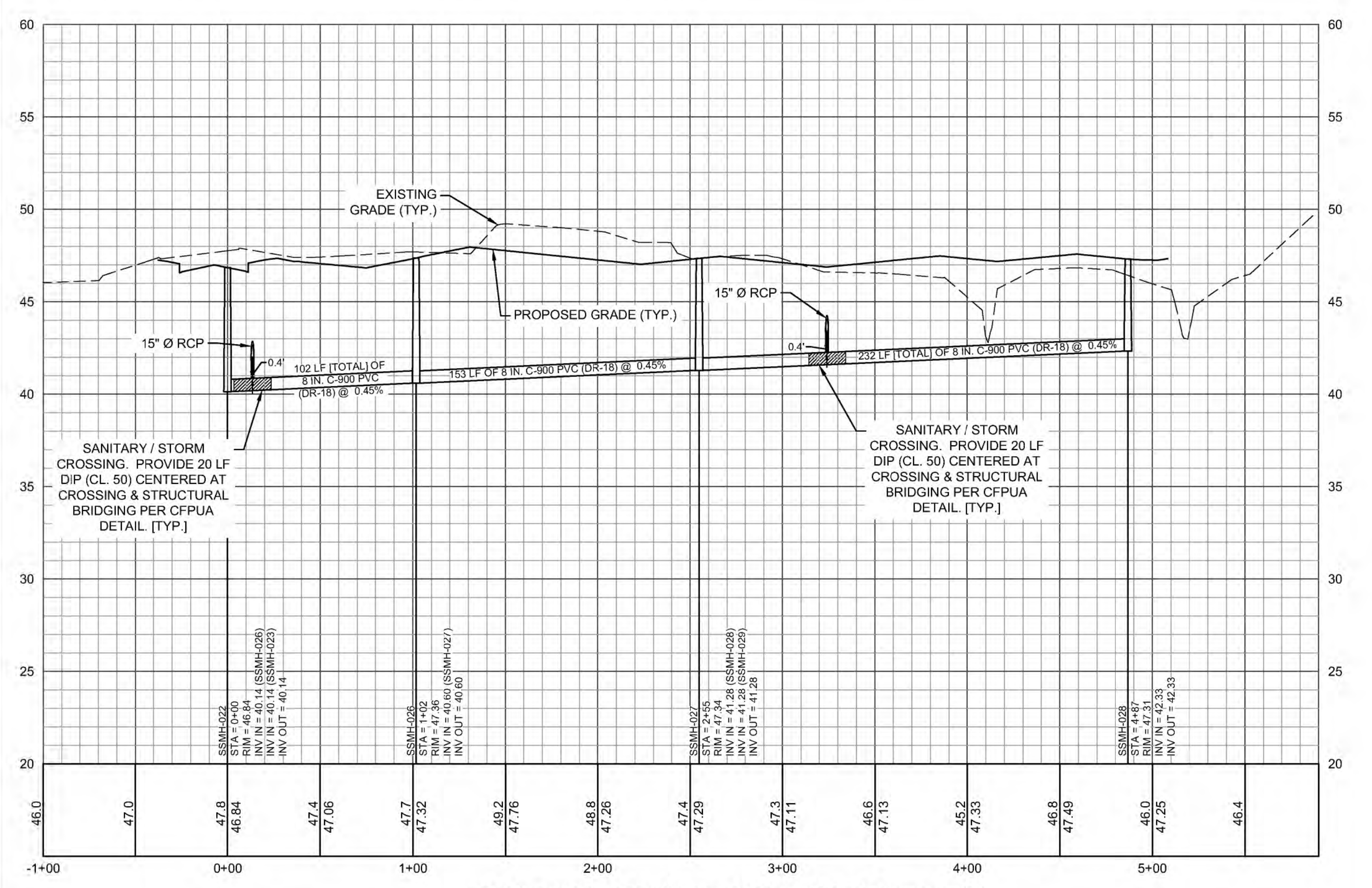
**SSMH-004 TO SSMH-011 - PROFILE VIEW**  
 HORIZONTAL SCALE: 1" = 50'  
 VERTICAL SCALE: 1" = 5'



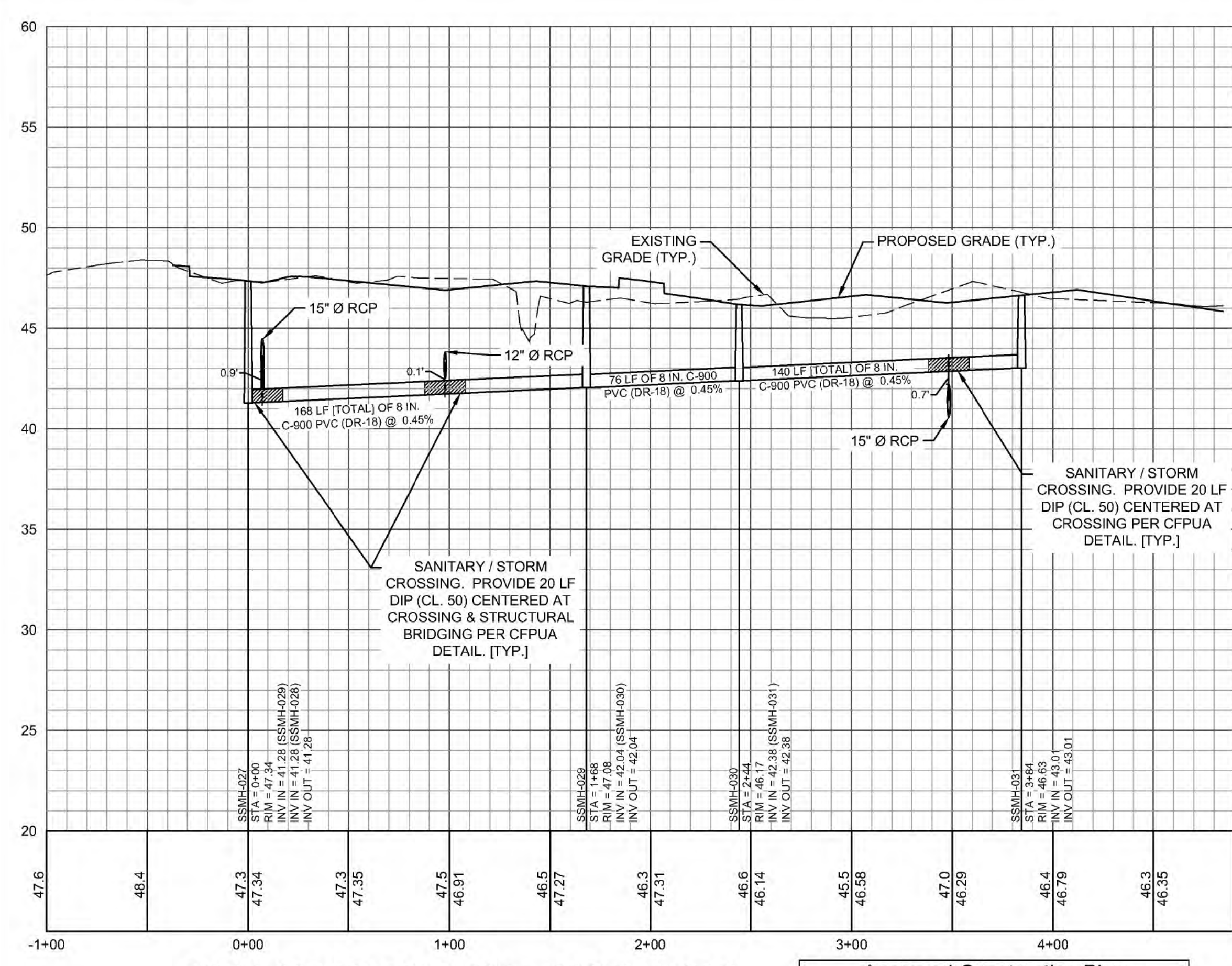
**SSMH-005 TO SSMH-006 - PROFILE VIEW**  
 HORIZONTAL SCALE: 1" = 50'  
 VERTICAL SCALE: 1" = 5'



**SSMH-024 TO SSMH-025 - PROFILE VIEW**  
 HORIZONTAL SCALE: 1" = 50'  
 VERTICAL SCALE: 1" = 5'



**SSMH-022 TO SSMH-028 - PROFILE VIEW**  
 HORIZONTAL SCALE: 1" = 50'  
 VERTICAL SCALE: 1" = 5'



**SSMH-027 TO SSMH-031 - PROFILE VIEW**  
 HORIZONTAL SCALE: 1" = 50'  
 VERTICAL SCALE: 1" = 5'



Know what's below.  
 Call before you dig.

For each open utility cut of City streets, a \$325 permit must be required from the City prior to occupancy and/or project acceptance.



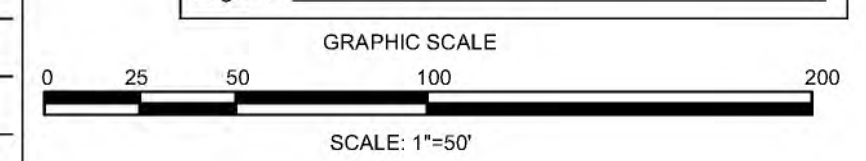
**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_



REVISIONS:

CLIENT INFORMATION:

**PARAMOUNT ENGINEERING**

CK WILMINGTON  
 THREE PHASE A, LLC  
 CHARLOTTE, NC

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

SEWER PROFILE

WILMINGTON THREE PHASE A  
 CITY OF WILMINGTON  
 NORTH CAROLINA

PROJECT STATUS:  
 CONCEPTUAL LAYOUT:  
 PRELIMINARY LAYOUT:  
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:  
 DATE: 01/13/21  
 ADW: JDF  
 DESIGNED: JDF  
 DRAWN: JDF  
 CHECKED: JDF

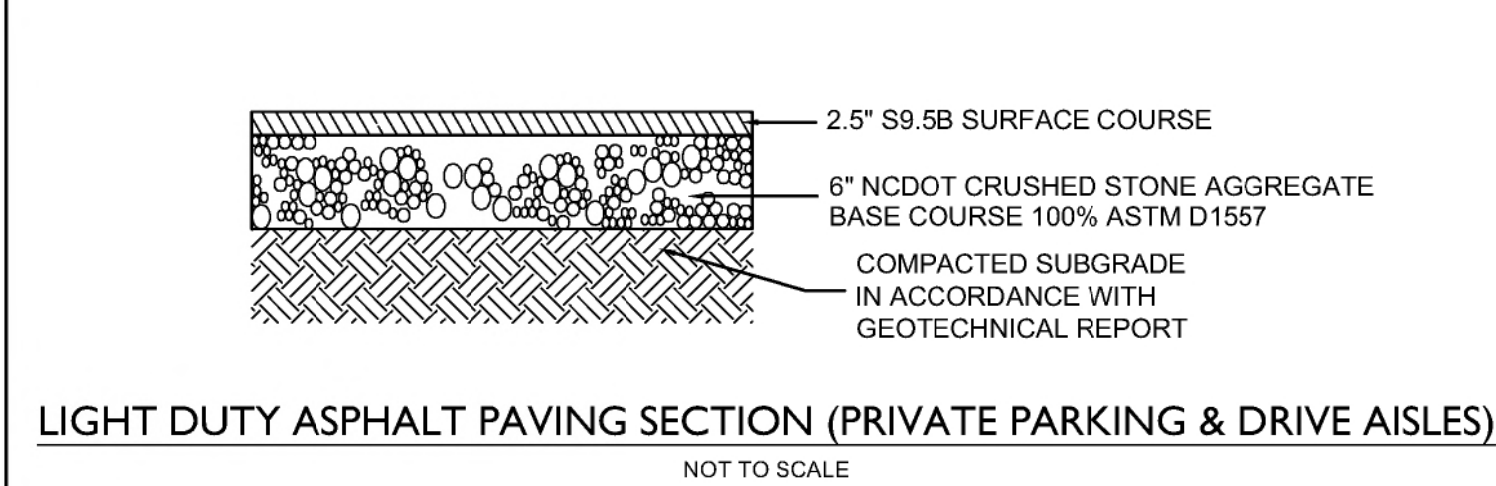
Professional Seal  
 redacted on electronic  
 copy per City of  
 Wilmington Policy

C-5.4

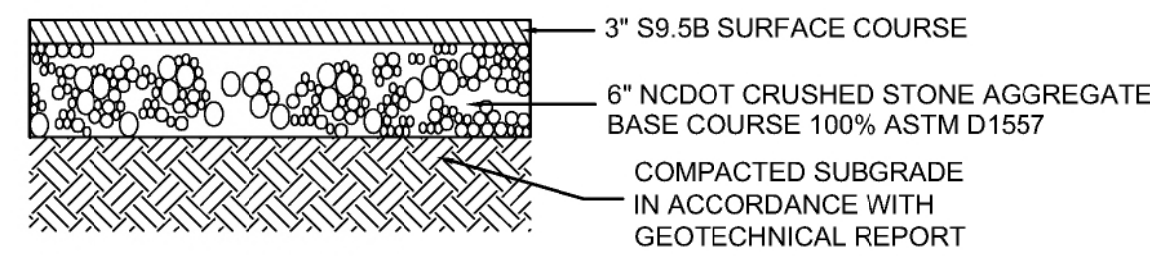
PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

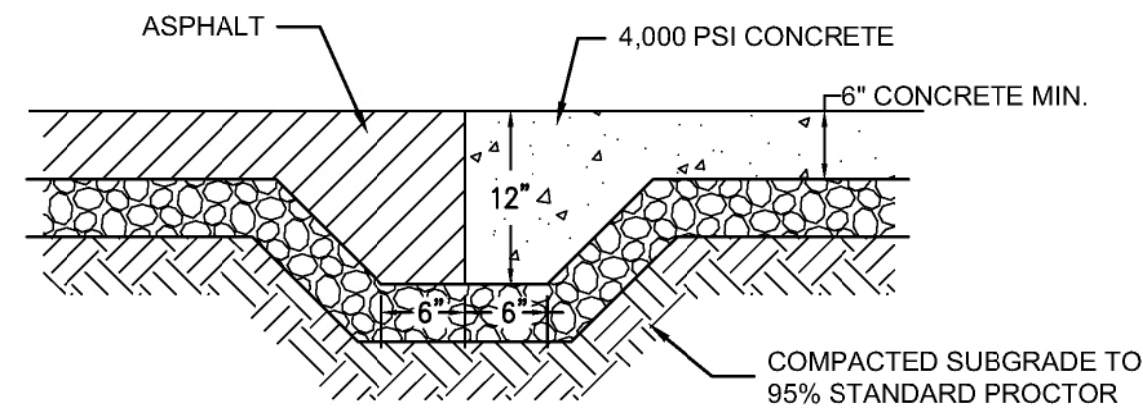




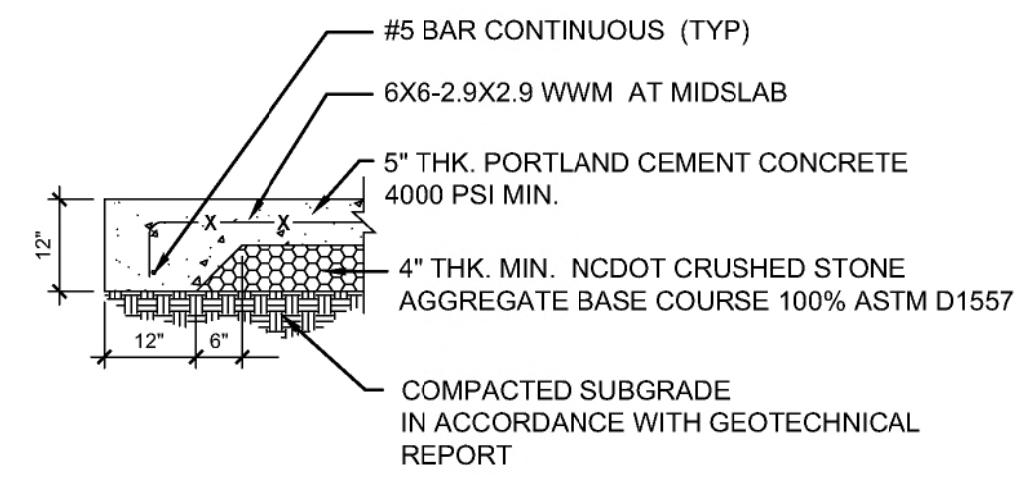
**LIGHT DUTY ASPHALT PAVING SECTION (PRIVATE PARKING & DRIVE AISLES)**  
NOT TO SCALE



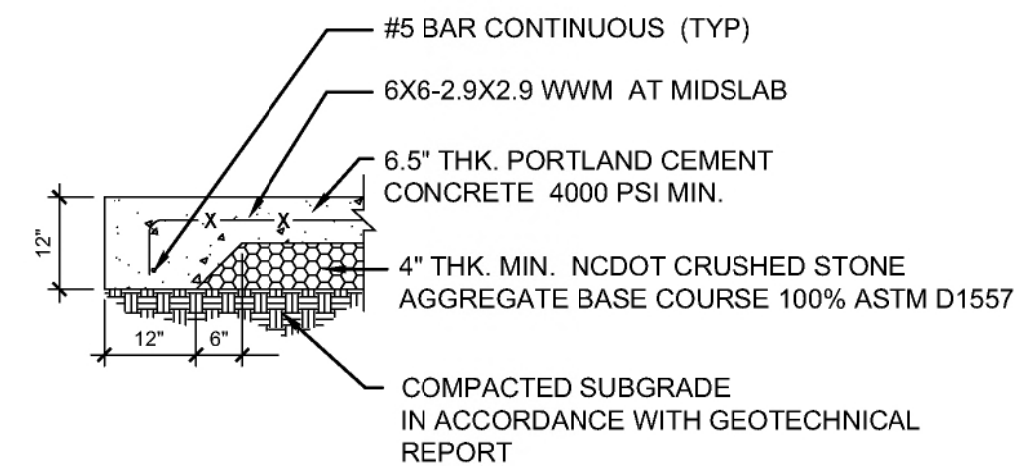
**HEAVY DUTY ASPHALT PAVING SECTION (PUBLIC R.O.W.)**  
NOT TO SCALE



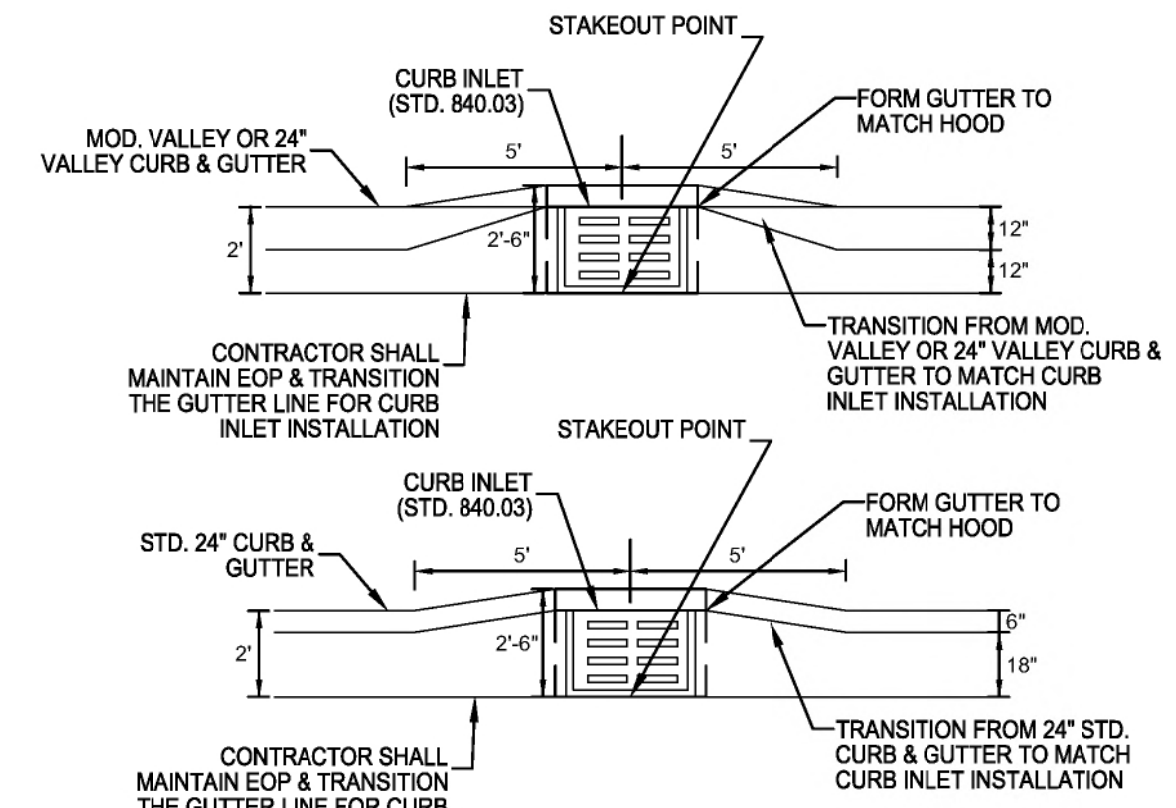
**ASPHALT TO CONCRETE PAVEMENT TRANSITION**  
NOT TO SCALE



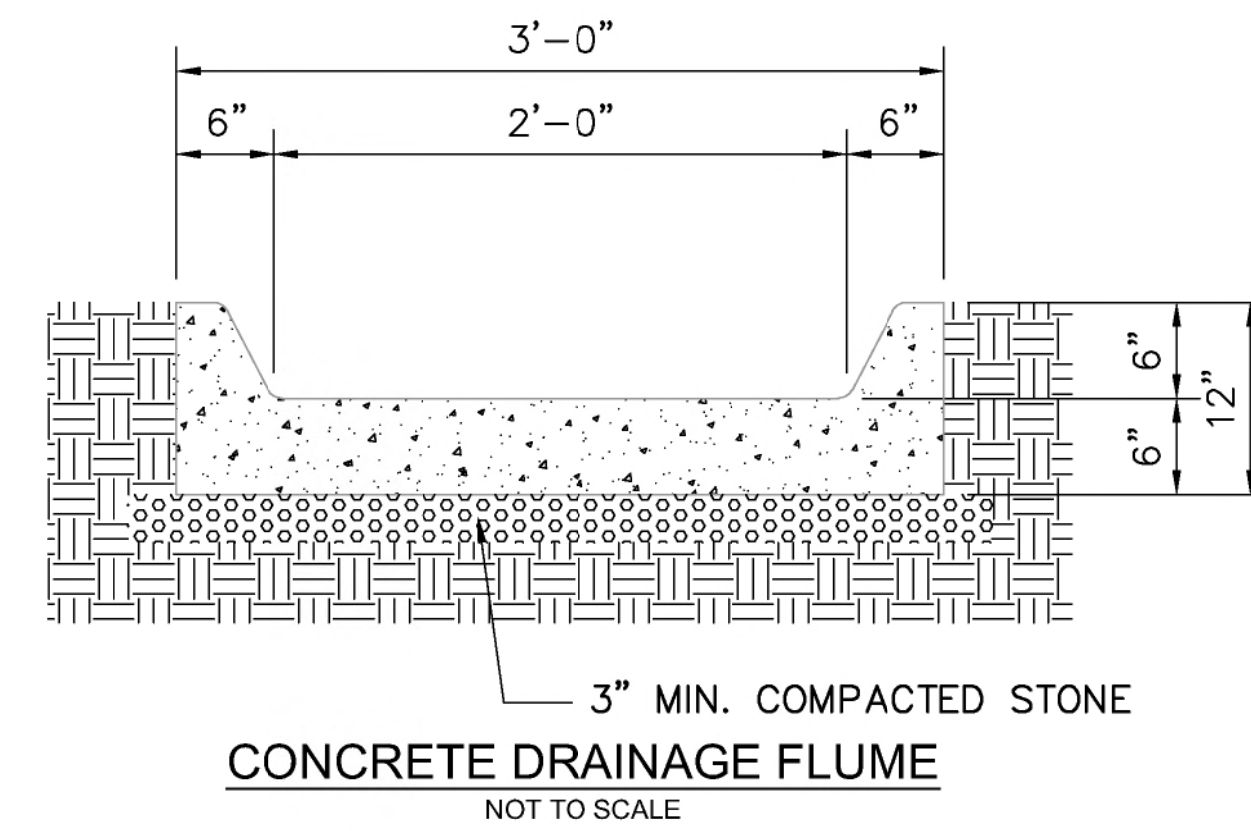
**CONCRETE PAVING SECTION**  
NOT TO SCALE



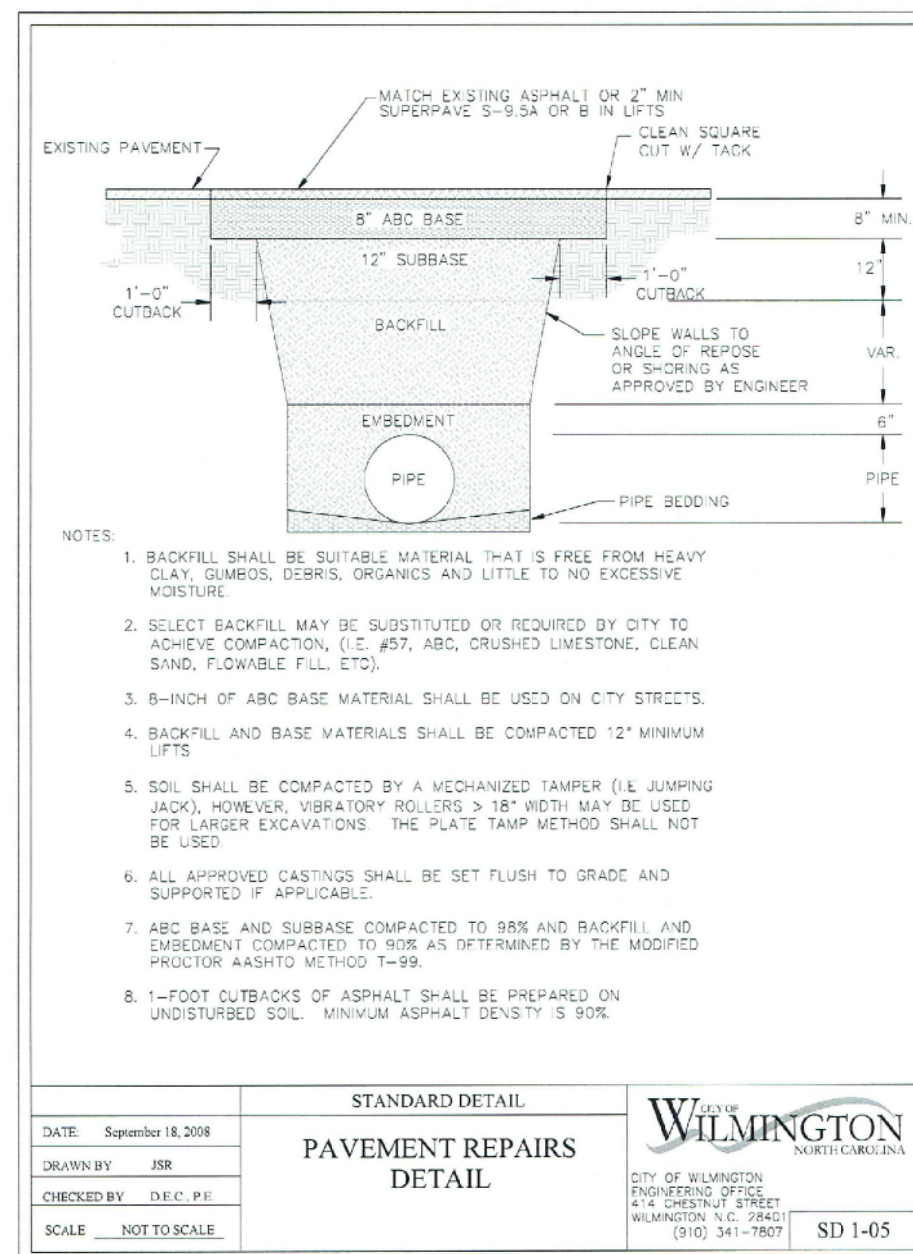
**HEAVY DUTY CONCRETE PAVING SECTION**  
NOT TO SCALE



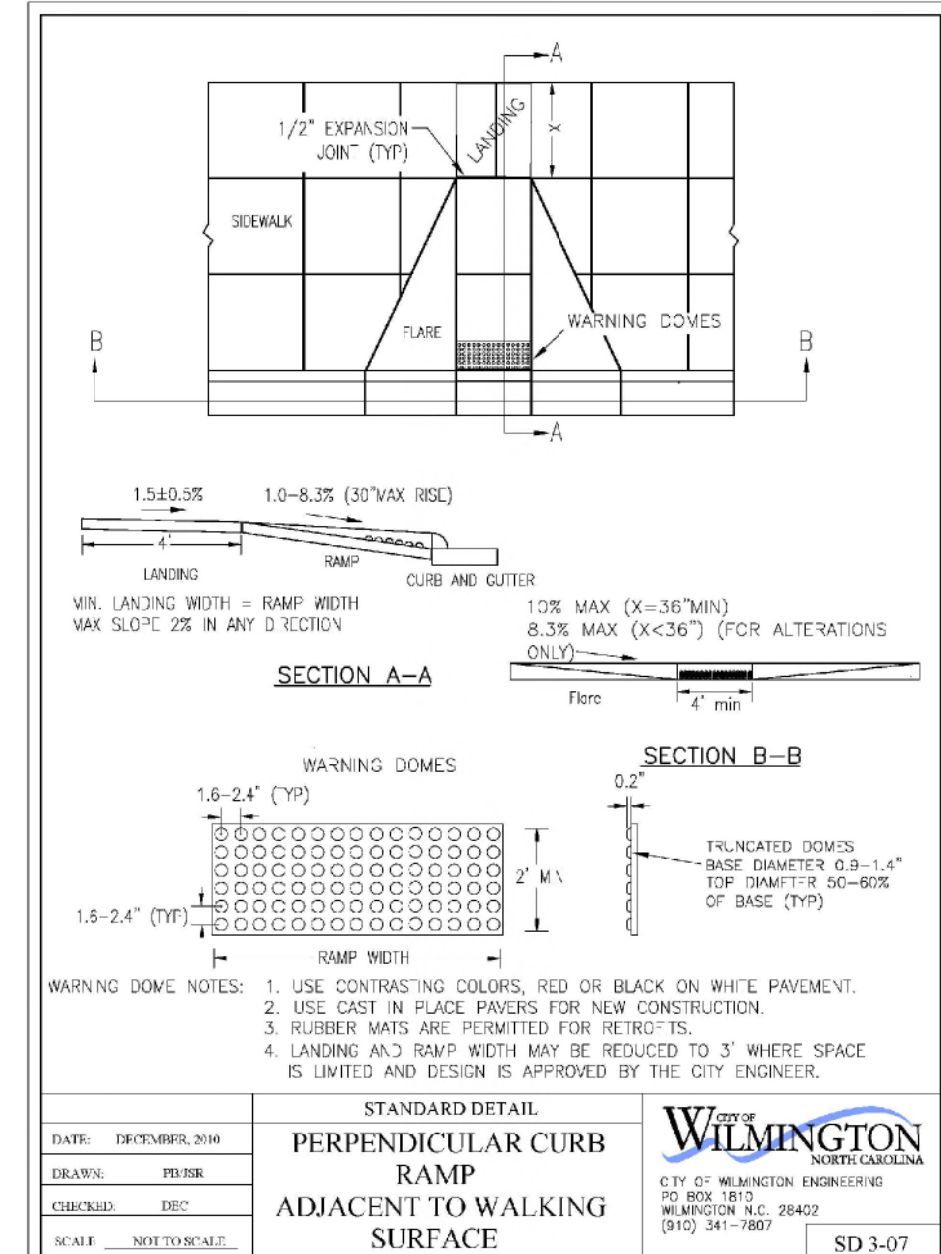
**CURB TRANSITION DETAIL**  
NOT TO SCALE



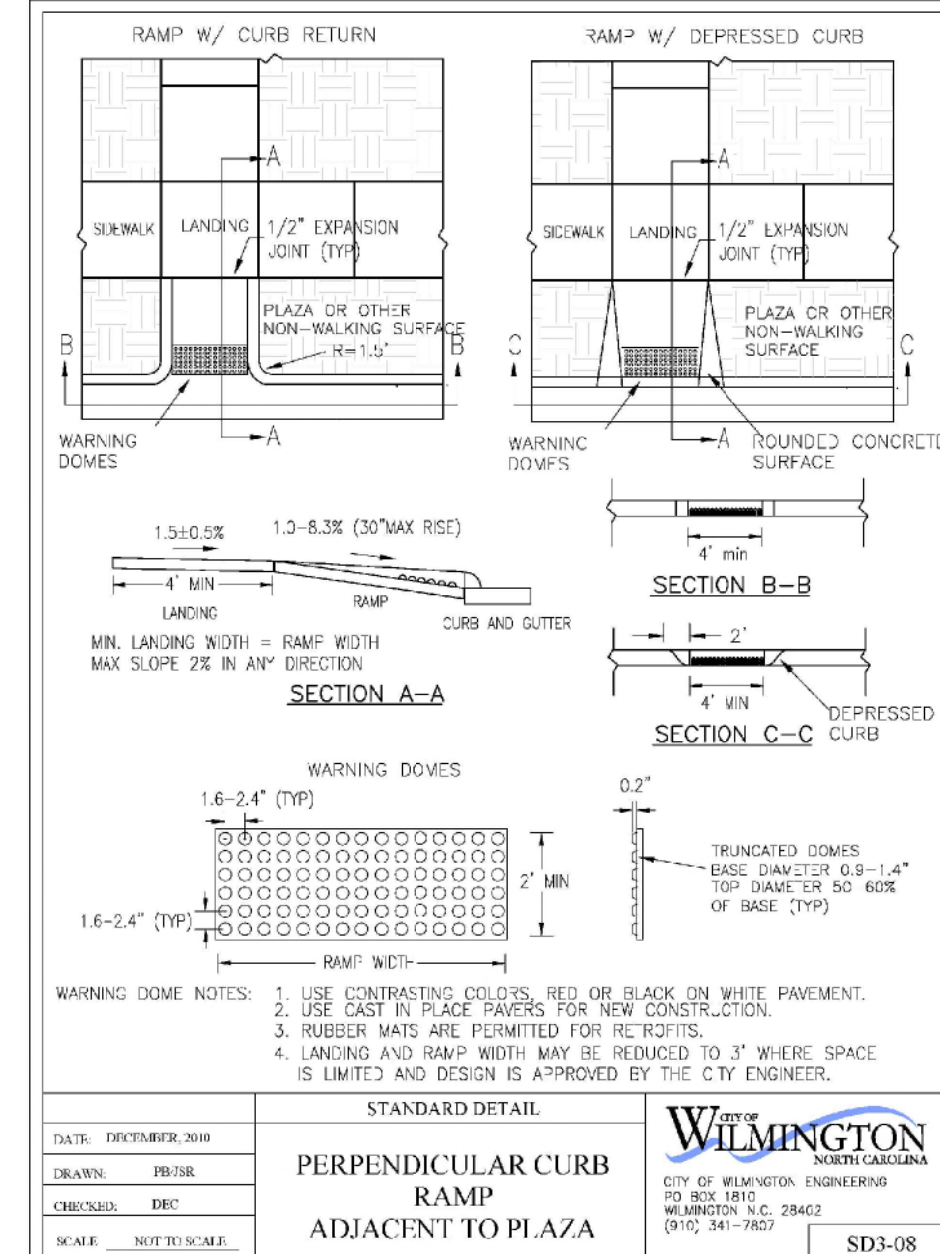
**CONCRETE DRAINAGE FLUME**  
NOT TO SCALE



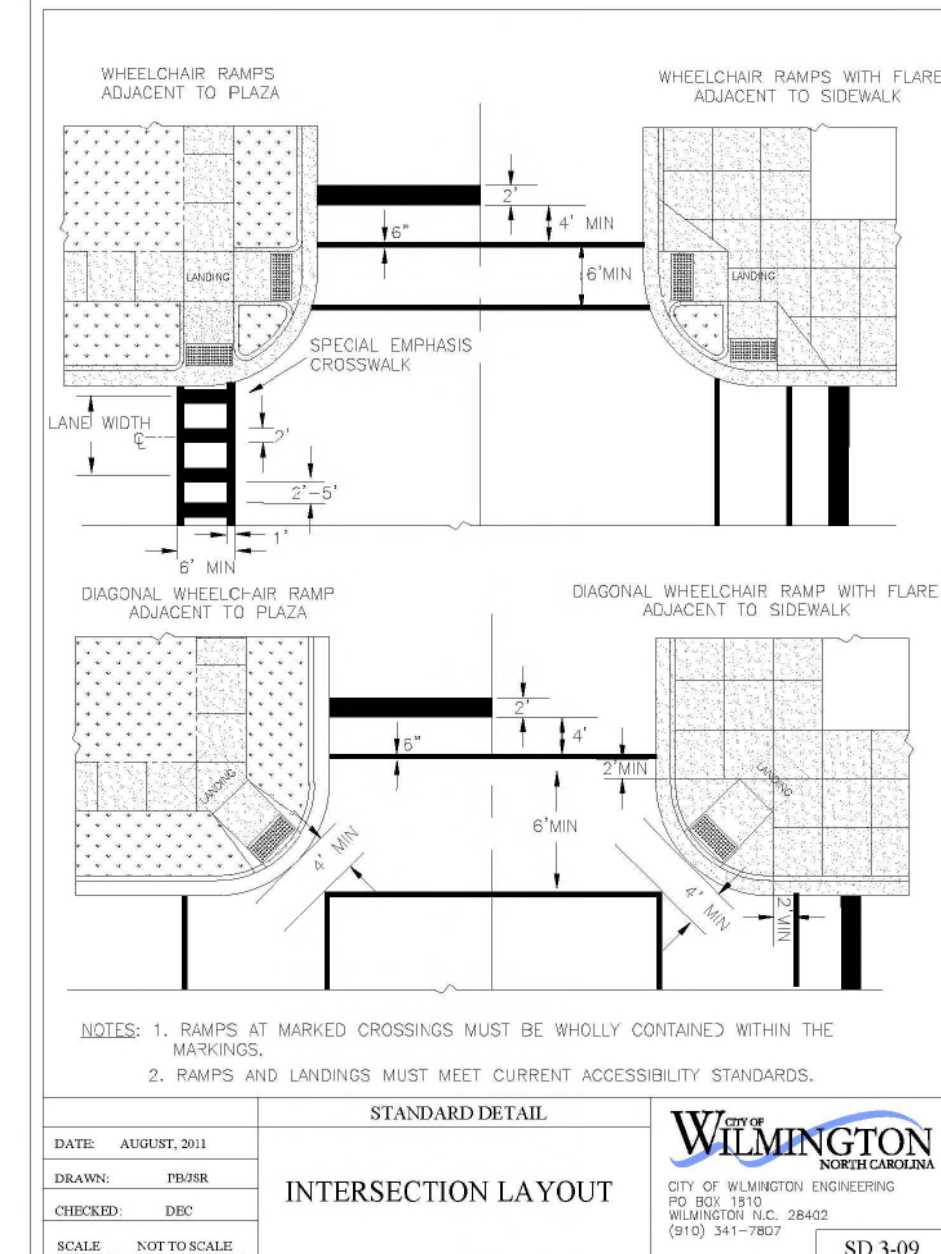
**STANDARD DETAIL: PAVEMENT REPAIRS DETAIL**  
DATE: SEPTEMBER 18, 2009  
DRAWN BY: JRM  
CHECKED BY: JRM, P.E.  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 1-05



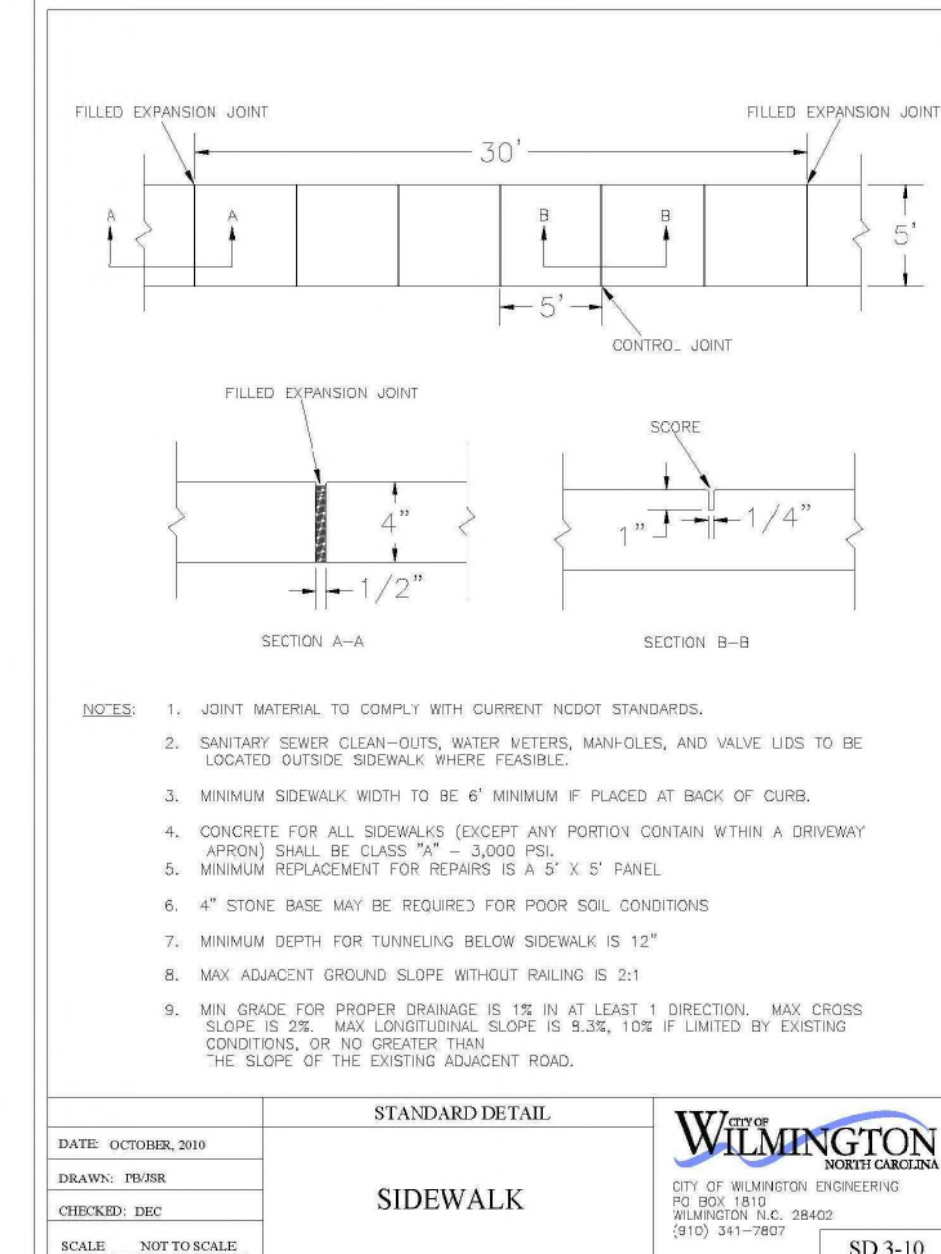
**STANDARD DETAIL: PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE**  
DATE: DECEMBER, 2014  
DRAWN: PRB  
CHECKED: DBC  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 3-07



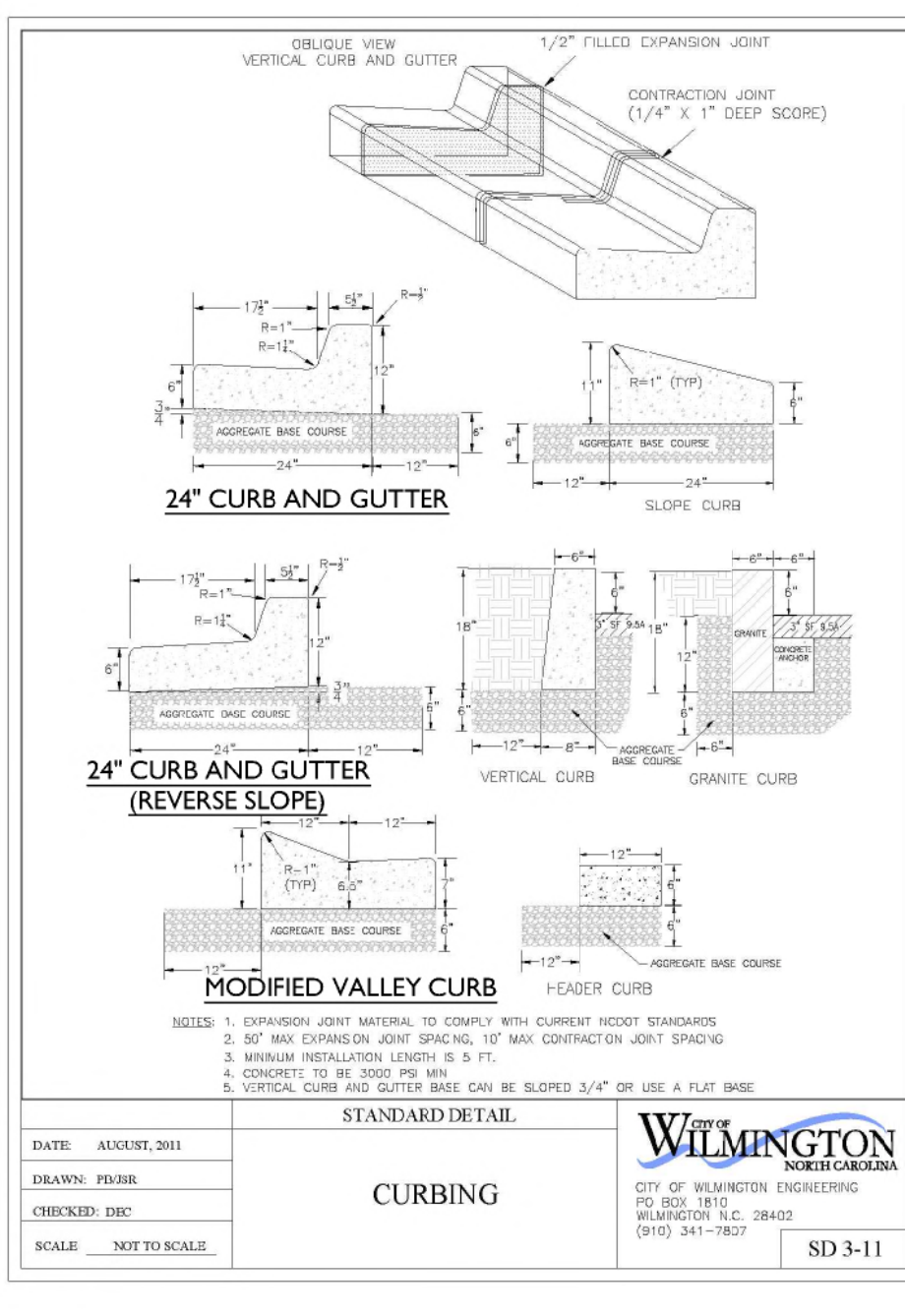
**STANDARD DETAIL: PERPENDICULAR CURB RAMP ADJACENT TO PLAZA**  
DATE: DECEMBER, 2014  
DRAWN: PRB  
CHECKED: DBC  
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CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 3-08



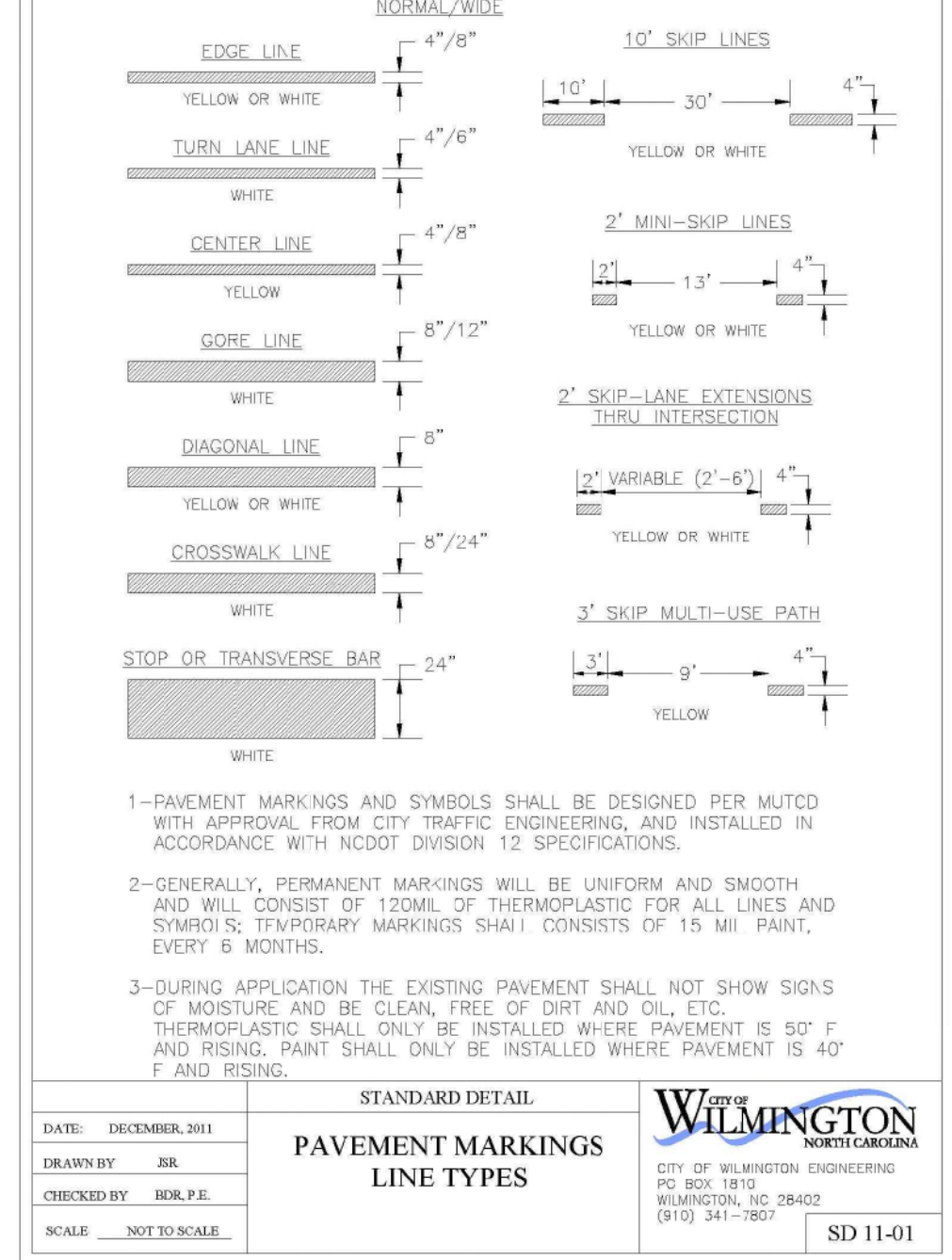
**STANDARD DETAIL: INTERSECTION LAYOUT**  
DATE: AUGUST, 2013  
DRAWN: PRB  
CHECKED: DBC  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 3-09



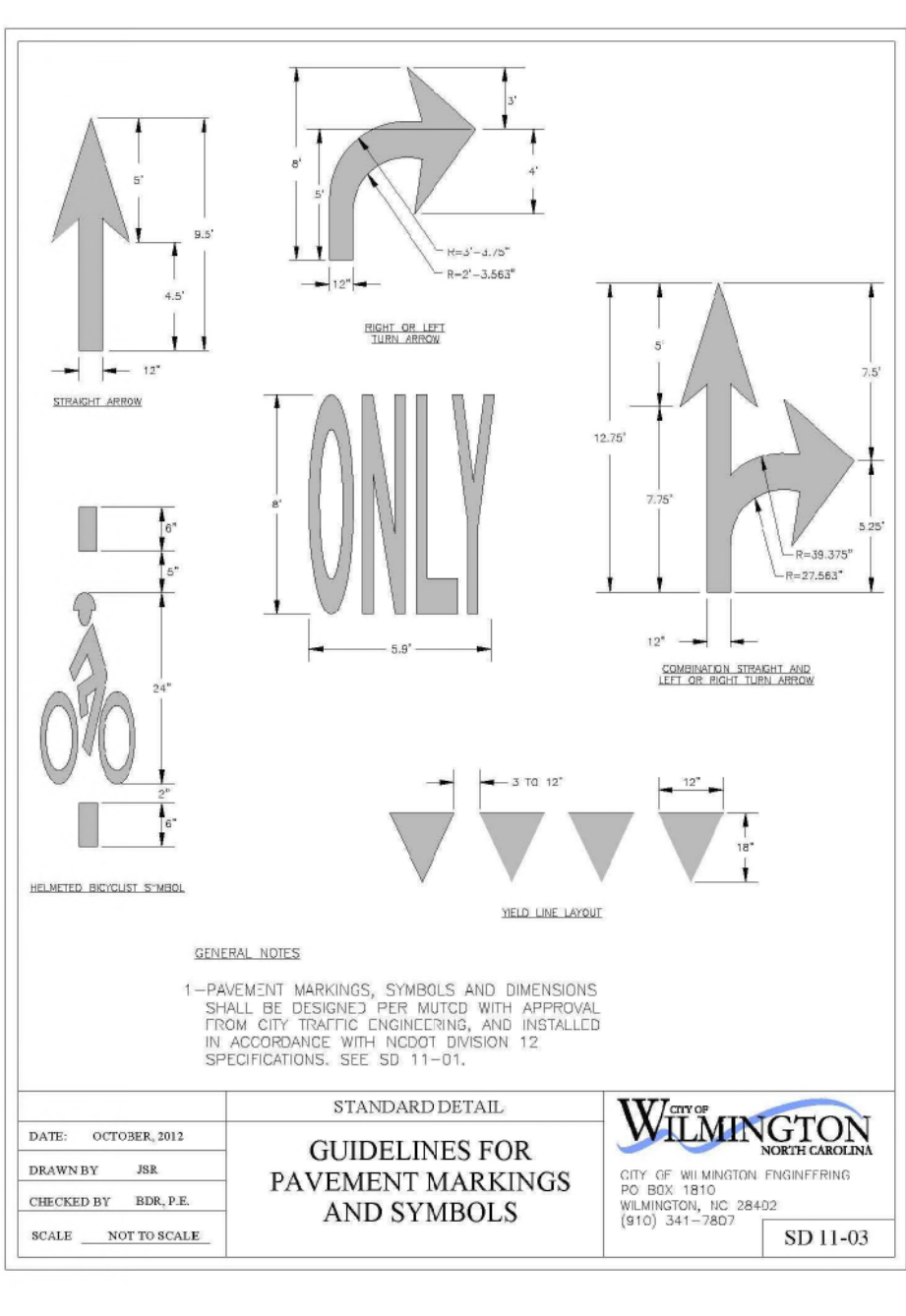
**STANDARD DETAIL: SIDEWALK**  
DATE: OCTOBER, 2009  
DRAWN: PRB  
CHECKED: DBC  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 3-10



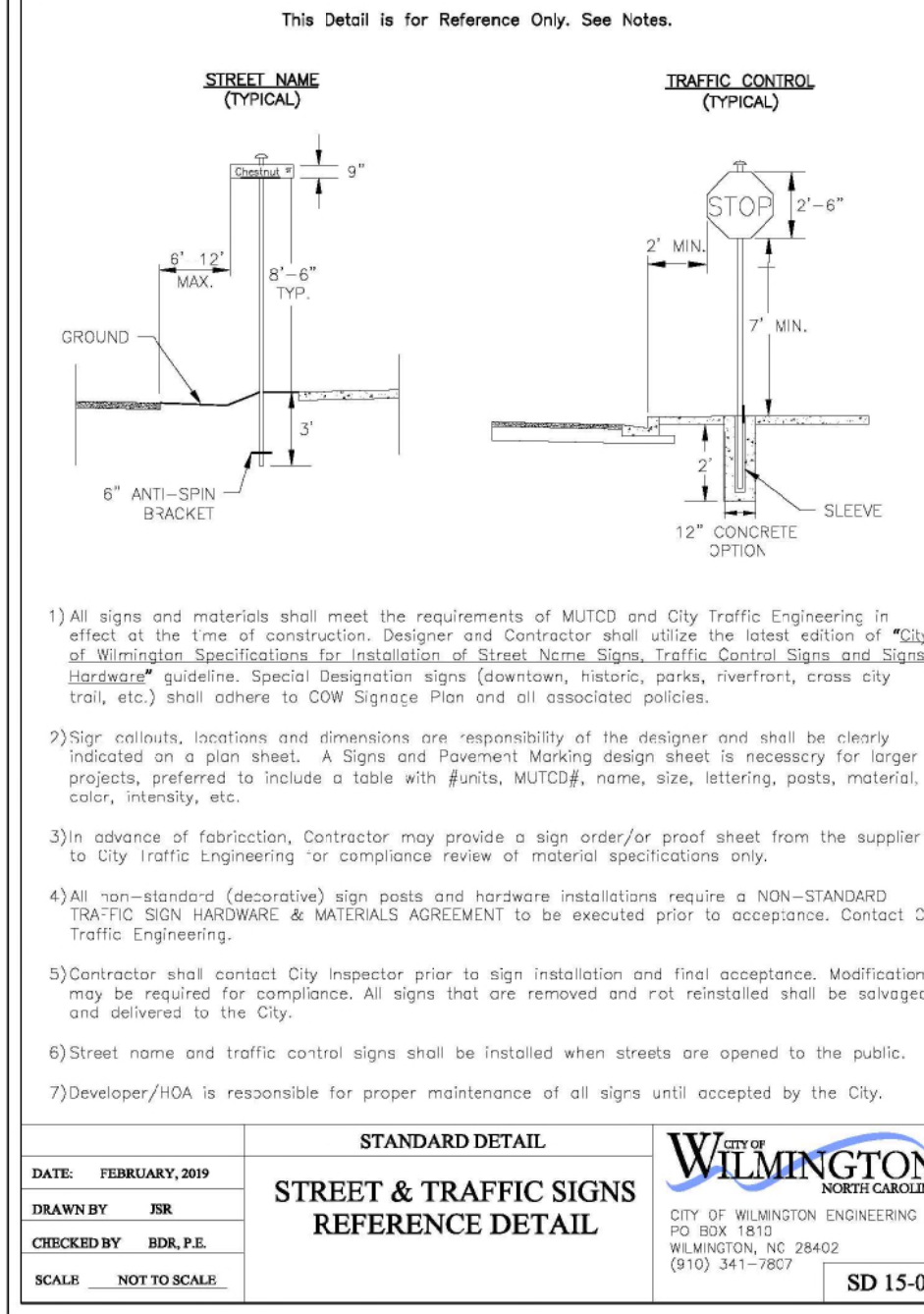
**STANDARD DETAIL: CURBING**  
DATE: AUGUST, 2011  
DRAWN: PRB  
CHECKED: DBC  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 3-11



**STANDARD DETAIL: PAVEMENT MARKING LINE TYPES**  
DATE: DECEMBER, 2011  
DRAWN BY: JRM  
CHECKED BY: JRM, P.E.  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 11-01



**STANDARD DETAIL: GUIDELINES FOR PAVEMENT MARKINGS AND SYMBOLS**  
DATE: OCTOBER, 2013  
DRAWN BY: JRM  
CHECKED BY: JRM, P.E.  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 11-03



**STANDARD DETAIL: STREET & TRAFFIC SIGNS REFERENCE DETAIL**  
DATE: FEBRUARY, 2009  
DRAWN BY: JRM  
CHECKED BY: JRM, P.E.  
SCALE: NOT TO SCALE  
CITY OF WILMINGTON  
PC BOX 1810  
WILMINGTON, NC 28402  
PH: 341-1801  
SD 15-03

REVISIONS:

CLIENT INFORMATION:  
**CK WILMINGTON**  
THREE PHASE A, LLC  
CHARLOTTE, NC

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

PROJECT STATUS:  
CONCEPTUAL LAYOUT:  
PRELIMINARY LAYOUT:  
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:  
DATE: 07/13/21  
DRAWN: JRM  
DESIGNED: JRM  
CHECKED: DBC

Professional Seal redacted on electronic copy per City of Wilmington Policy

PEI JOB#: 20195.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

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**WILMINGTON NORTH CAROLINA**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

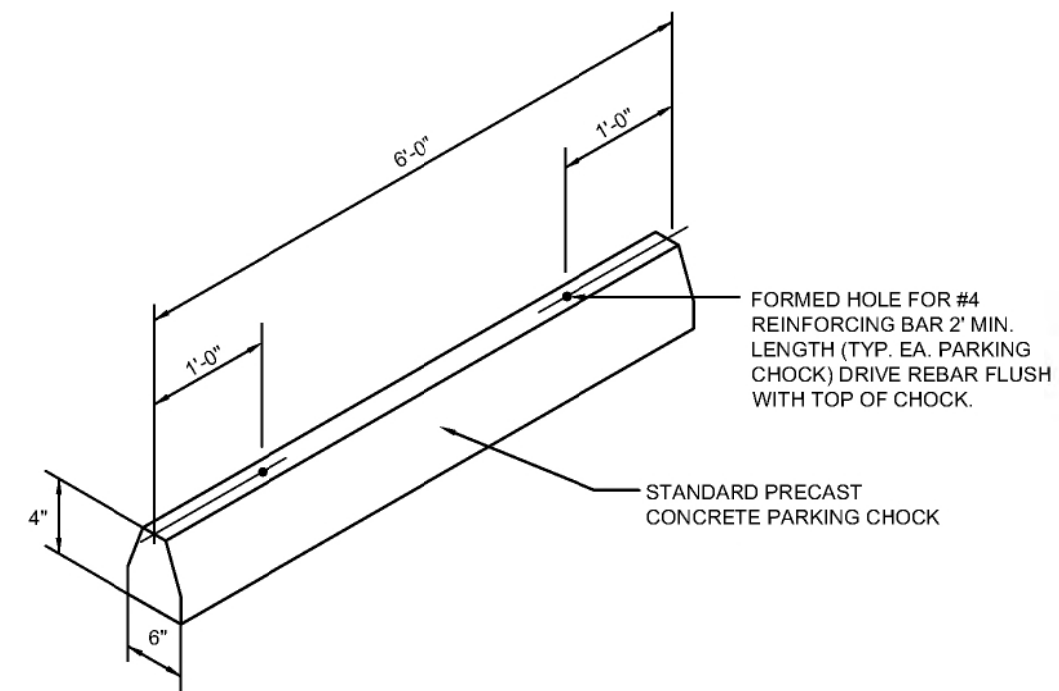
Signed: \_\_\_\_\_

**Approved Construction Plan**

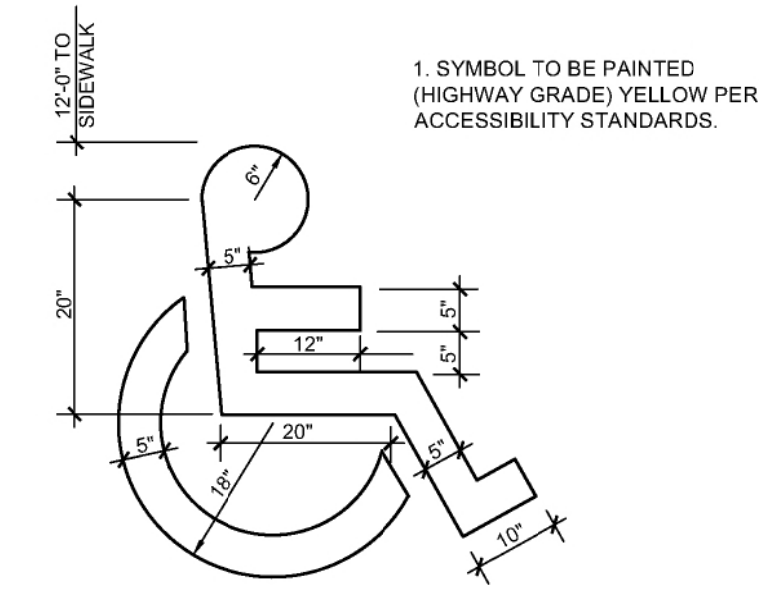
Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

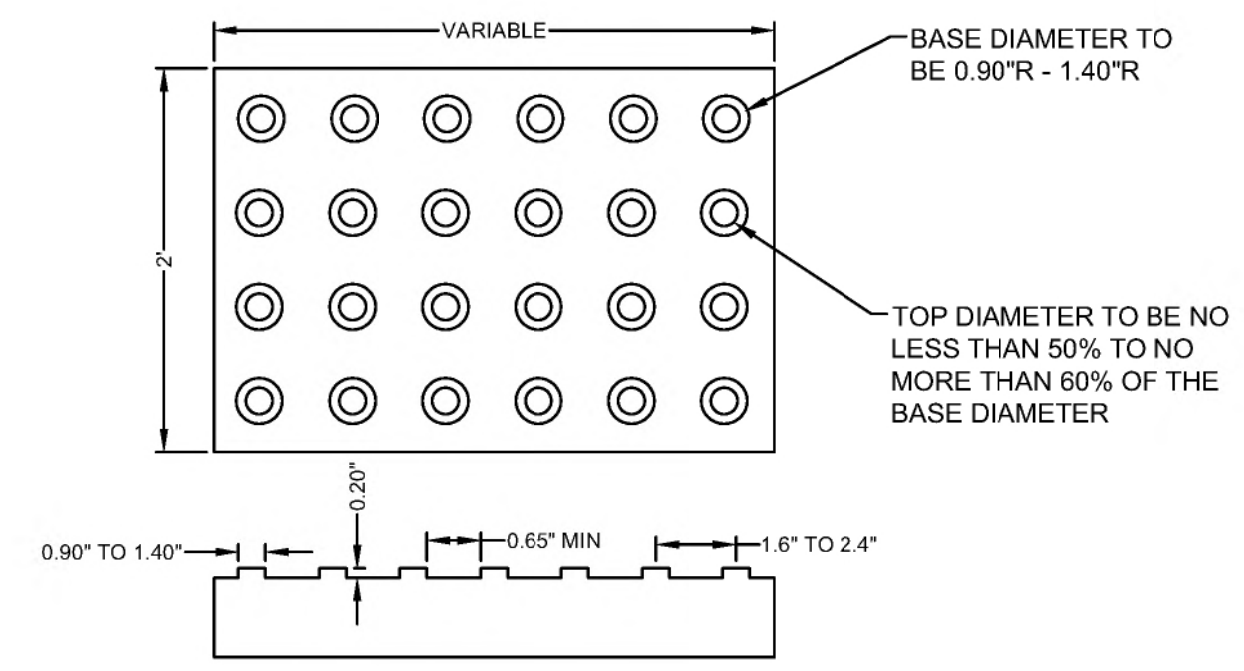




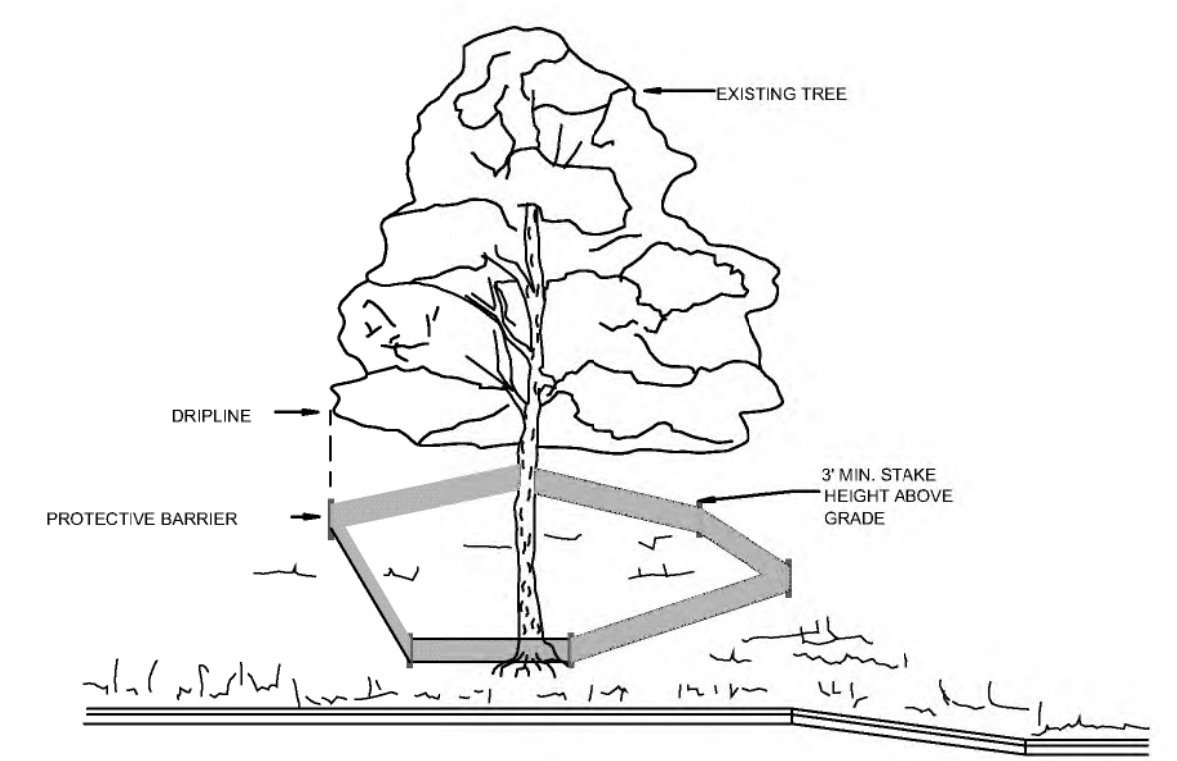
**WHEEL STOP**  
NOT TO SCALE



**HANDICAPPED PARKING SYMBOL**  
NOT TO SCALE

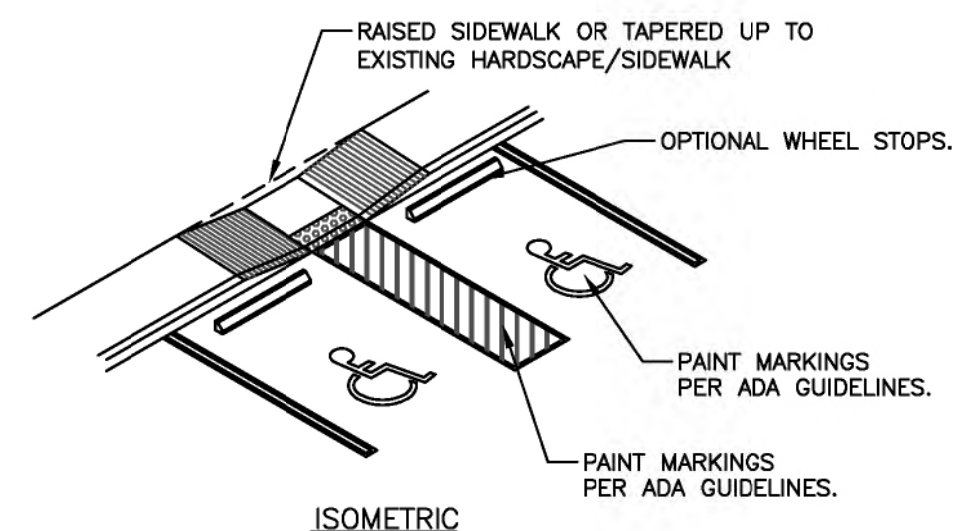


**DETECTABLE WARNING MAT**  
NOT TO SCALE

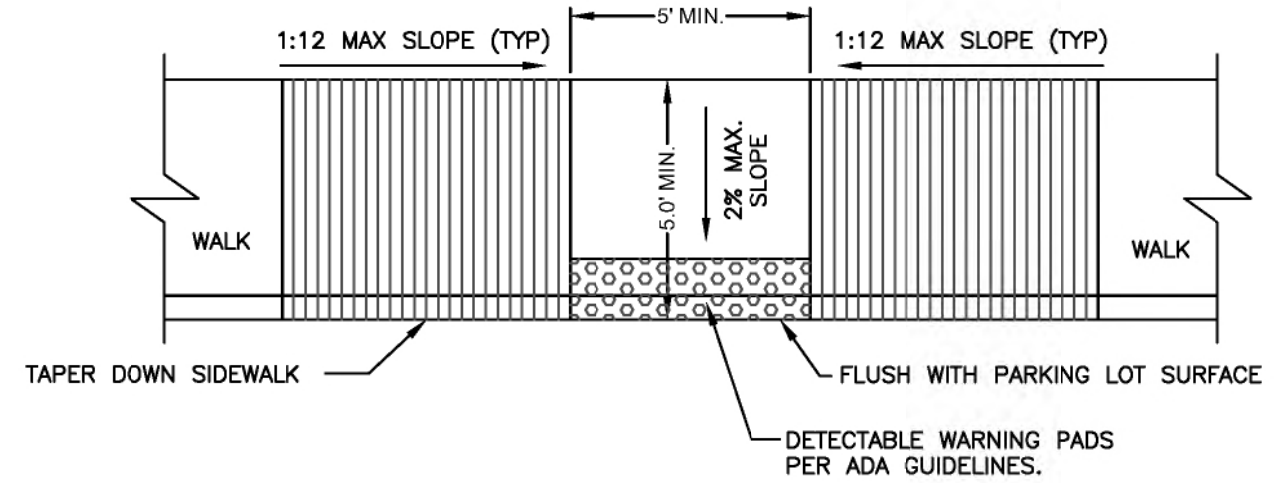


**NOTE:**  
TREES TO BE SAVED WILL BE CLEARLY MARKED PRIOR TO CONSTRUCTION AND A PROTECTIVE BARRIER IS TO BE INSTALLED AT THE DRIP LINE.  
DRIP LINE - THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.

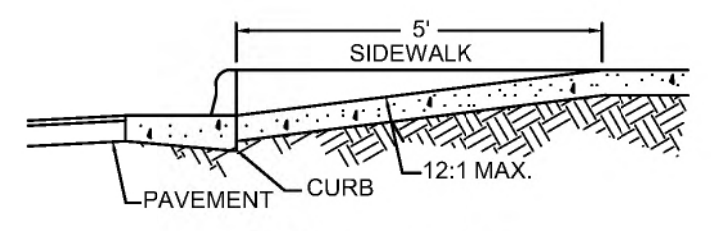
**METHOD OF TREE PROTECTION DURING CONSTRUCTION**  
NOT TO SCALE



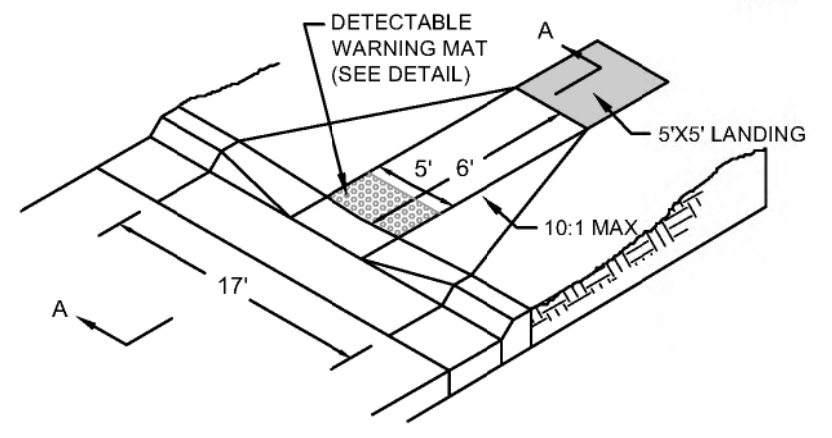
**ISOMETRIC**



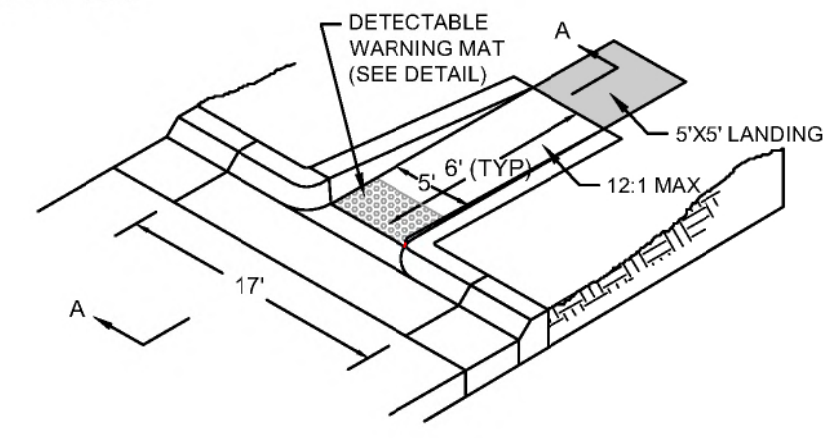
**WHEELCHAIR RAMP - TYPE 1**



**SECTION A-A**



**TYPE 2 - WHEELCHAIR RAMP (DROP CURB)**  
NOT TO SCALE



**TYPE 3 - WHEELCHAIR RAMP (CURB RETURN)**  
NOT TO SCALE

**RESERVED PARKING** (R7-8a SIGN, NO ARROW(S))  
NORTH CAROLINA R7-8a SIGN, A COMBINATION OF THE R7-8a SIGN AND THE NORTH CAROLINA R7-8d PENALTY SIGN.

**MAXIMUM PENALTY \$250** (R7-8d SIGN)  
NORTH CAROLINA PENALTY R7-8d SIGN.

**RESERVED PARKING** (R7-8e SIGN)  
NORTH CAROLINA R7-8e SIGN, A COMBINATION OF THE R7-8a SIGN AND THE NORTH CAROLINA R7-8d PENALTY SIGN.

**MAXIMUM PENALTY \$250** (R7-8d SIGN)  
NORTH CAROLINA PENALTY R7-8d SIGN.

**VAN ACCESSIBLE** (R7-8P SIGN)  
WHERE VAN ACCESSIBLE PARKING IS PROVIDED, THE VAN ACCESSIBLE (R7-8P) SIGN SHALL BE MOUNTED BELOW THE OTHER ACCESSIBLE PARKING SIGNS.

**FOR DESIGN OF ACCESSIBLE SIGNS, SEE THE FOLLOWING:**

- 2009 MUTCD OR LATEST EDITION.
- 2004 EDITION OF THE STANDARD HIGHWAY SIGNS AND THE 2012 SUPPLEMENT OR LATEST EDITION.
- NORTH CAROLINA 2009 SUPPLEMENT TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES OR LATEST EDITION.
- NCOT DRAWING H-1.5 FOR SIGNS SP00075, SP00076, AND SP00077.

**DATE:** NOVEMBER 8, 2016  
**DRAWN BY:** DALE THOMPSON  
**CHECKED BY:** RANDALL GLAZIER  
**SCALE:** NOT TO SCALE

**ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS**  
SHEET A1 OF 5

**WILMINGTON**  
NORTH CAROLINA  
ENGINEERING

**64" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE NOT LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE ASILE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.**

**60" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE ASILE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.**

**64" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE NOT LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE ASILE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.**

**60" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE ASILE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.**

**Signage Height**  
Figure A2.1

**DATE:** NOVEMBER 8, 2016  
**DRAWN BY:** DALE THOMPSON  
**CHECKED BY:** RANDALL GLAZIER  
**SCALE:** NOT TO SCALE

**ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS**  
SHEET A2 OF 5

**WILMINGTON**  
NORTH CAROLINA  
ENGINEERING

**STANDARD DETAIL**  
**COMMERCIAL DRIVEWAY PLAN (VERTICAL CURB)**

**DATE:** FEB. 14, 2017  
**DRAWN BY:** RSR  
**CHECKED BY:** D.E.C. P.E.  
**SCALE:** NOT TO SCALE

**WILMINGTON**  
NORTH CAROLINA  
ENGINEERING  
CITY OF WILMINGTON  
90 BOX 1810  
WILMINGTON, N.C. 28402  
(910) 341-7807

**SD 3-03.3**

**STANDARD DETAIL**  
**COMMERCIAL DRIVEWAY SECTIONS (VERTICAL CURB)**

**DATE:** FEB. 14, 2017  
**DRAWN BY:** RSR  
**CHECKED BY:** D.E.C. P.E.  
**SCALE:** NOT TO SCALE

**WILMINGTON**  
NORTH CAROLINA  
ENGINEERING  
CITY OF WILMINGTON  
90 BOX 1810  
WILMINGTON, N.C. 28402  
(910) 341-7807

**SD 3-03.4**

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

**APPROVED STORMWATER MANAGEMENT PLAN**

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

**REVISIONS:**


**CLIENT INFORMATION:**

**CK WILMINGTON**  
**THREE PHASE A, LLC**  
**CHARLOTTE, NC**

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

**SITE DETAILS**

**WILMINGTON THREE PHASE A**  
**CITY OF WILMINGTON**  
**NORTH CAROLINA**

**PROJECT STATUS**

CONCEPTUAL LAYOUT: \_\_\_\_\_  
PRELIMINARY LAYOUT: \_\_\_\_\_  
RELEASED FOR CONST: \_\_\_\_\_

**DRAWING INFORMATION**

DATE: 01/13/17  
DESIGNED: ADP  
DRAWN: DJF  
CHECKED: DJF

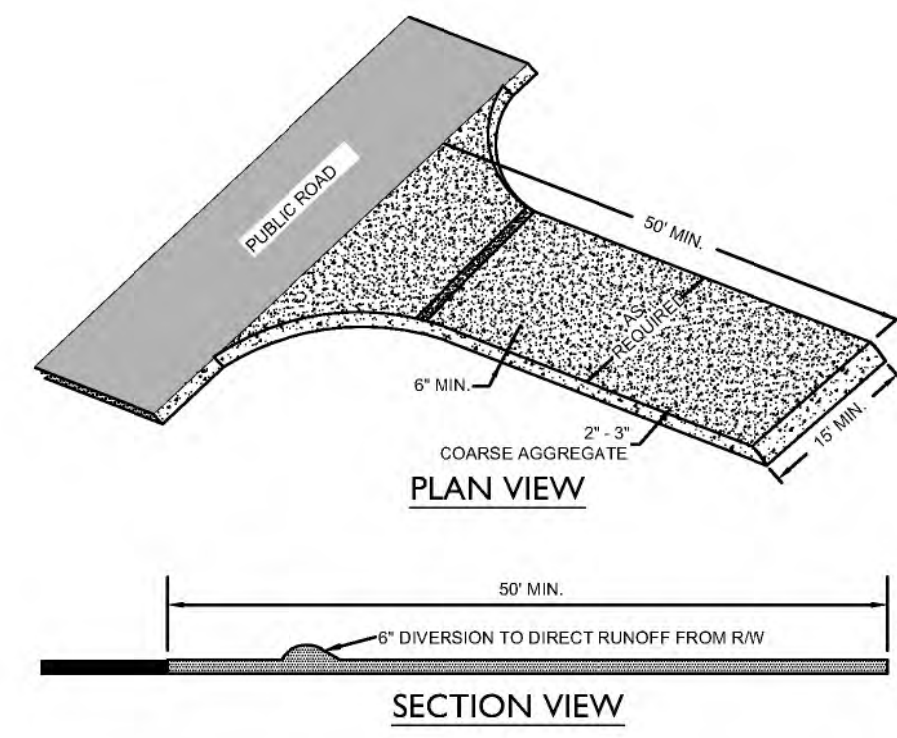
Professional Seal redacted on electronic copy per City of Wilmington Policy

**C-6.01**

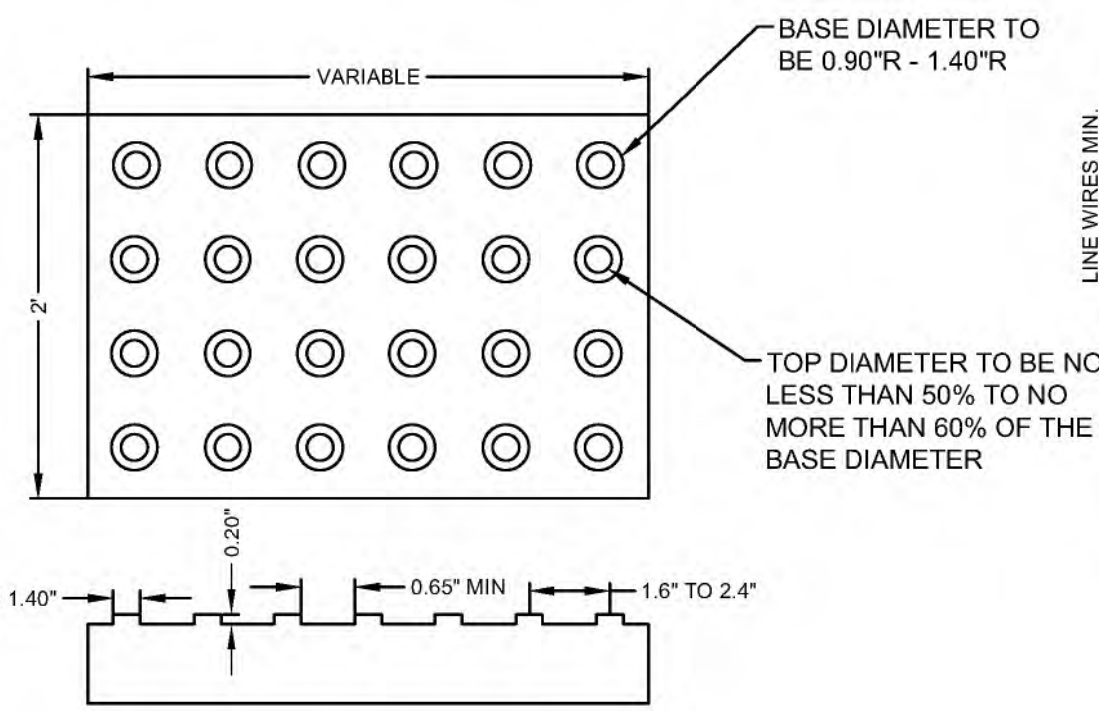
PEI JOB#: 20195.PE

**FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION**

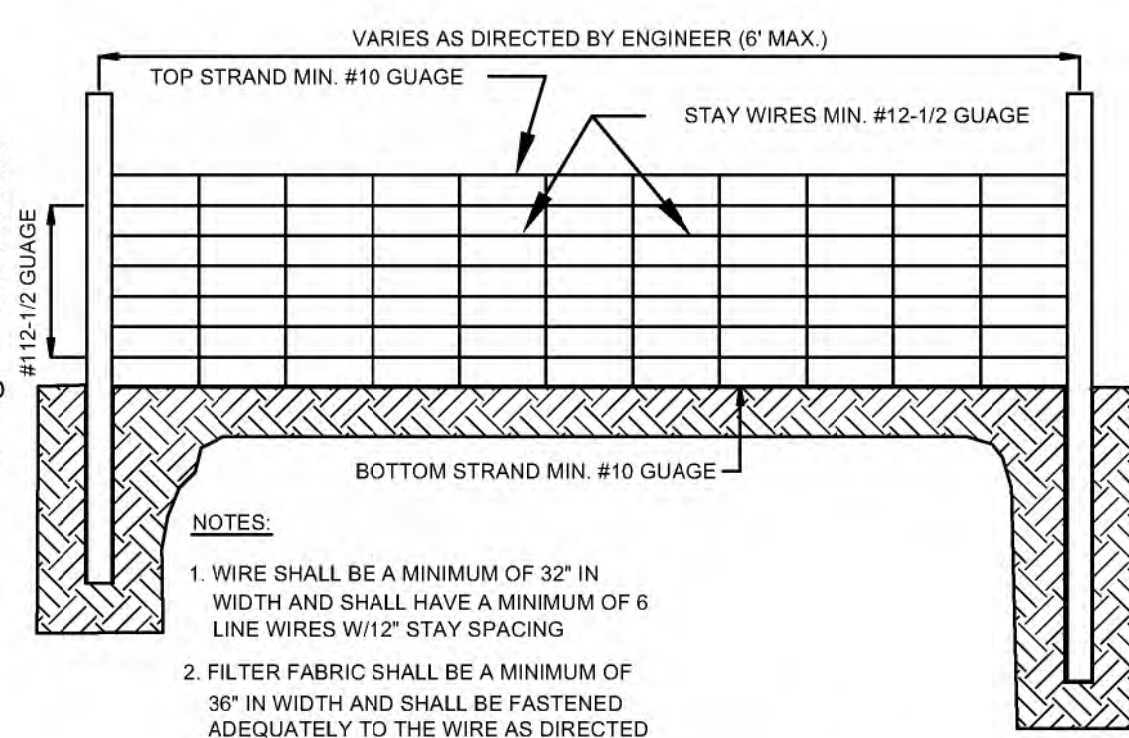




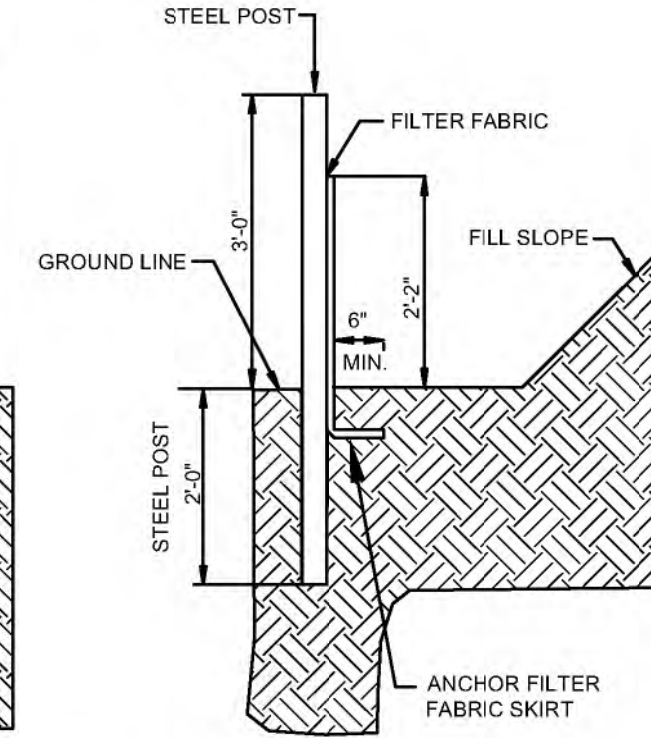
TEMPORARY CONSTRUCTION ENTRANCE  
NOT TO SCALE



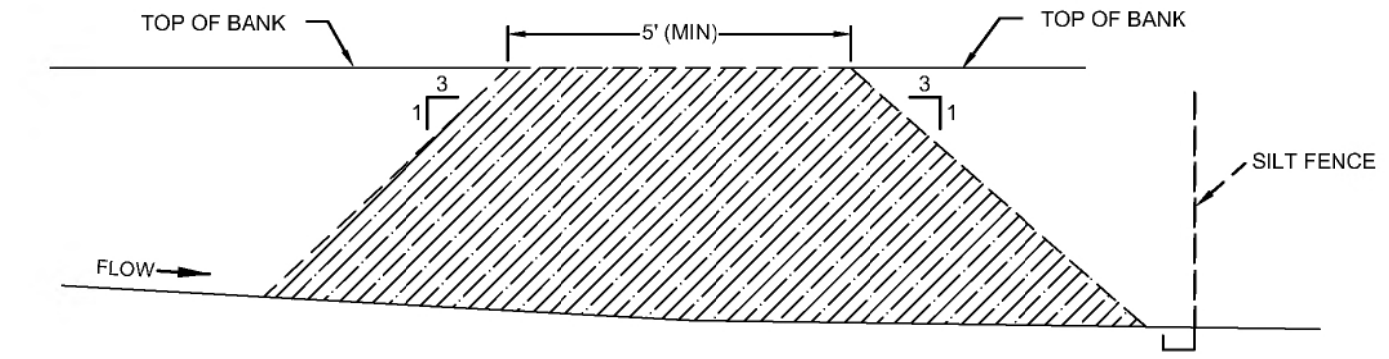
DETECTABLE WARNING MAT  
NOT TO SCALE



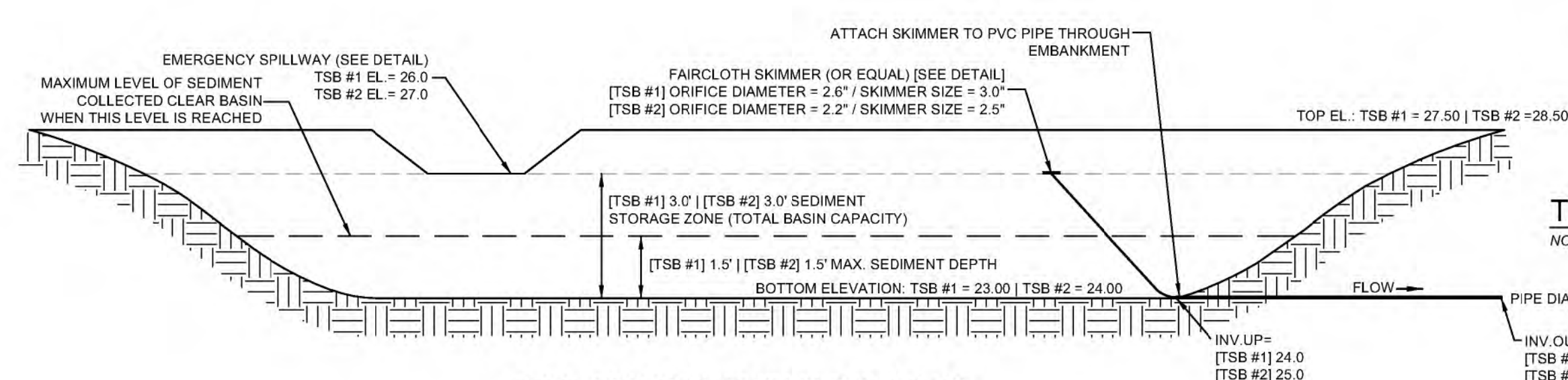
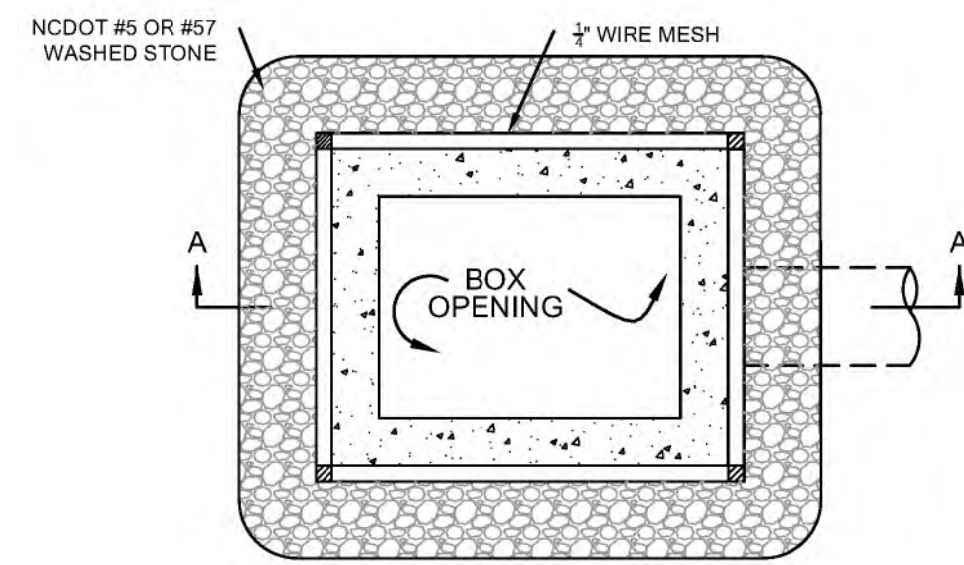
GUIDELINES FOR TEMPORARY SILT FENCE DETAIL  
NOT TO SCALE



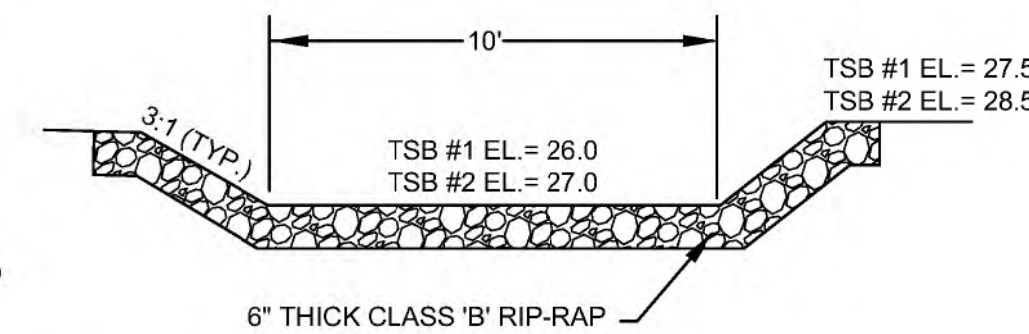
NOT TO SCALE



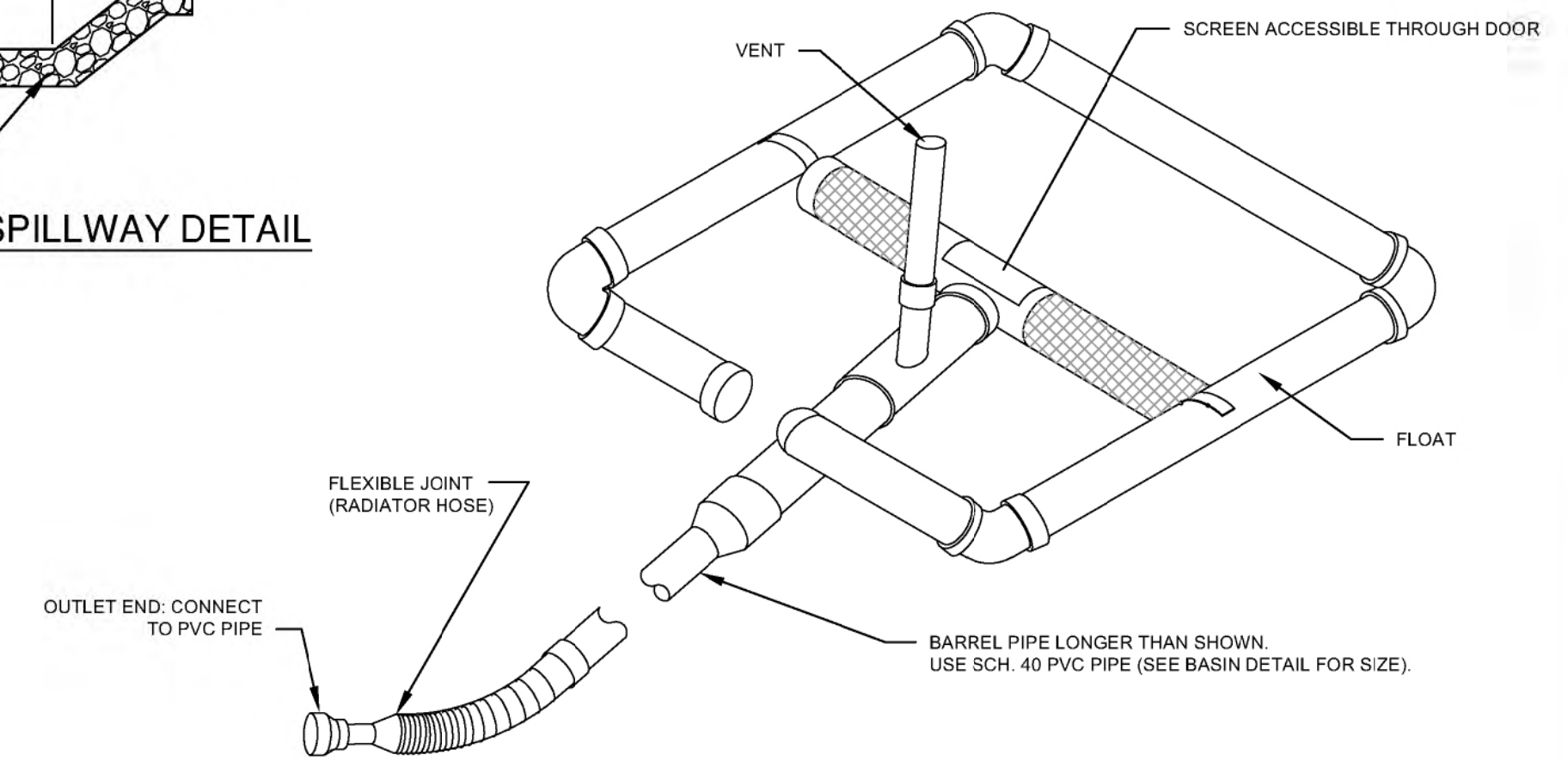
DITCH PLUG  
NOT TO SCALE



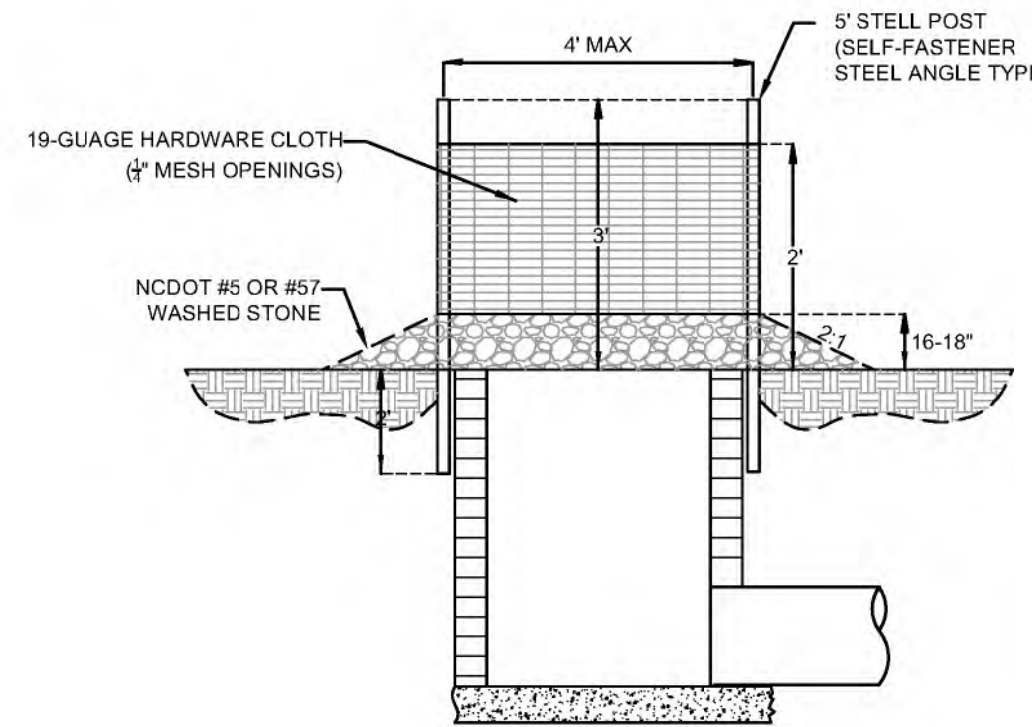
TEMP. SKIMMER BASIN #1 & #2 DETAIL  
NOT TO SCALE



TEMP SKIMMER BASIN #1 & #2 SPILLWAY DETAIL  
NOT TO SCALE



FAIRCLOTH SKIMMER DETAIL  
NOT TO SCALE



SECTION A - A

NOTE:  
FOR CURB INLETS AND DROP INLETS  
INLET PROTECTION

**BAFFLES**

**CONSTRUCTION SPECIFICATION**

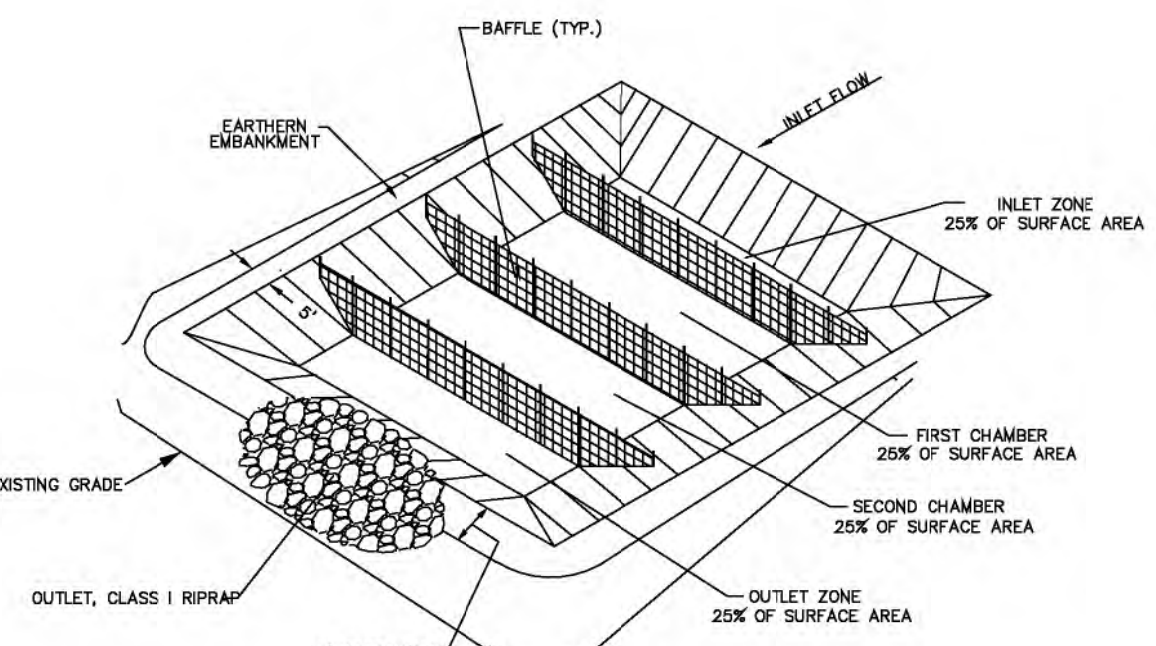
- Grade the basin so that the bottom is level front to back and side to side.
- Install posts or saw horses across the width of the sediment trap (Practice 6.62, *Sediment Fence*).
- Steel posts should be driven to a depth of 24 inches, spaced a maximum of 4 feet apart, and installed up the side of the 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.
- 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.
- When using posts, add a support wire or rope across the top of the measure to prevent sagging.
- Wrap joints 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.
- The bottom and sides of the fabric should be anchored in a trench or pinned with 8-inch erosion control matting staples.
- Do not splice the fabric, but use a continuous piece across the basin.

**MAINTENANCE**

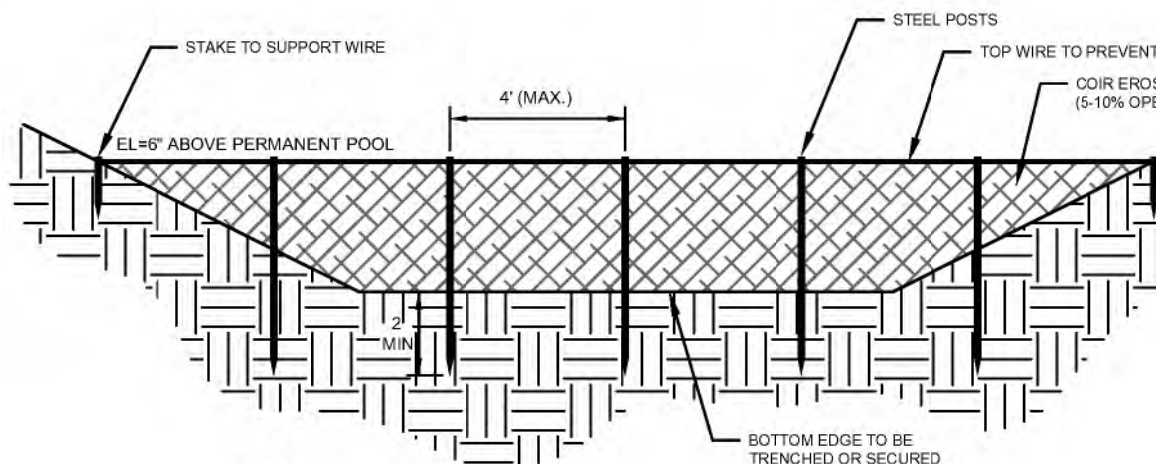
Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately. Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

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.



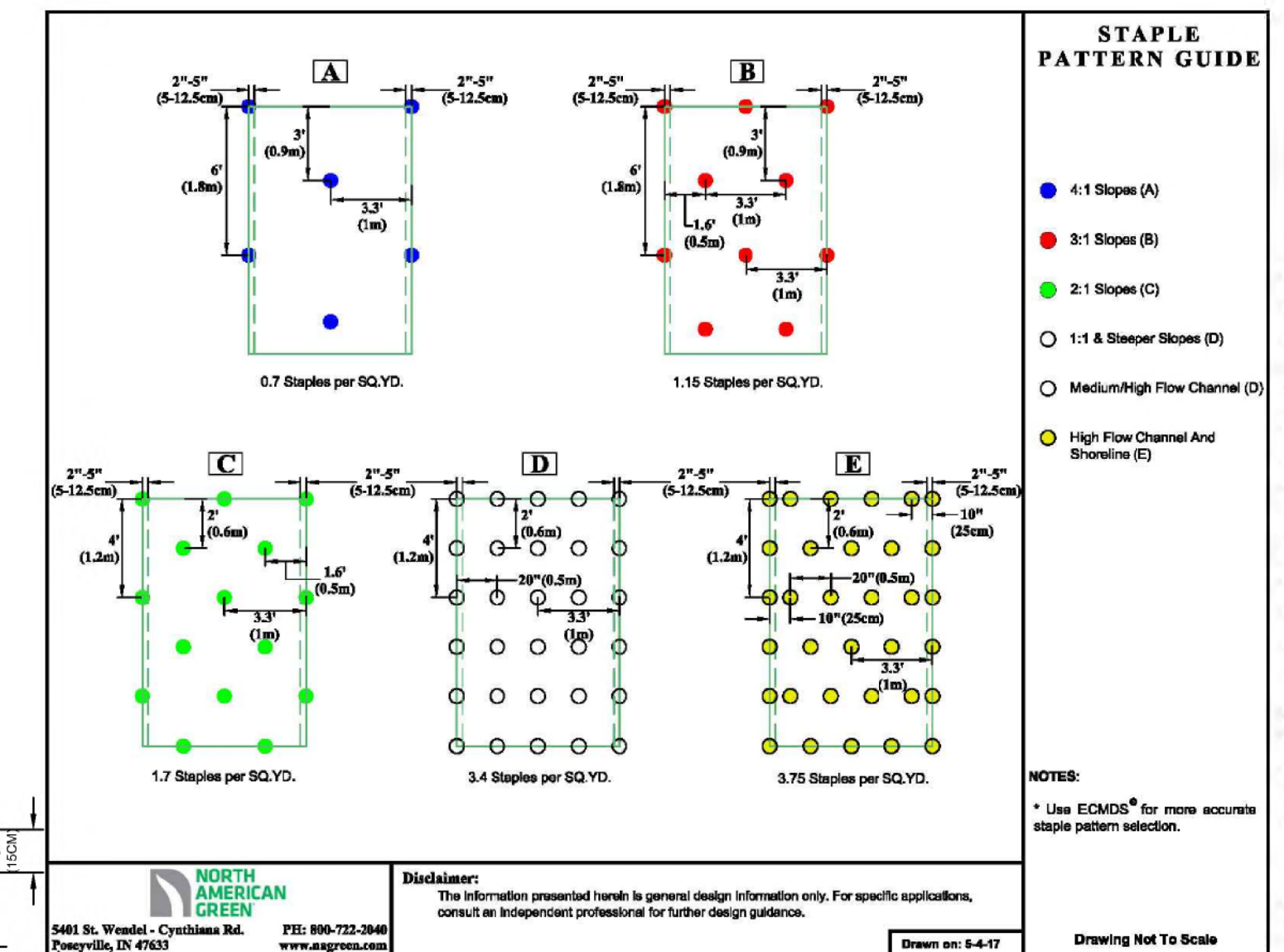
BAFFLE DETAIL  
NOT TO SCALE



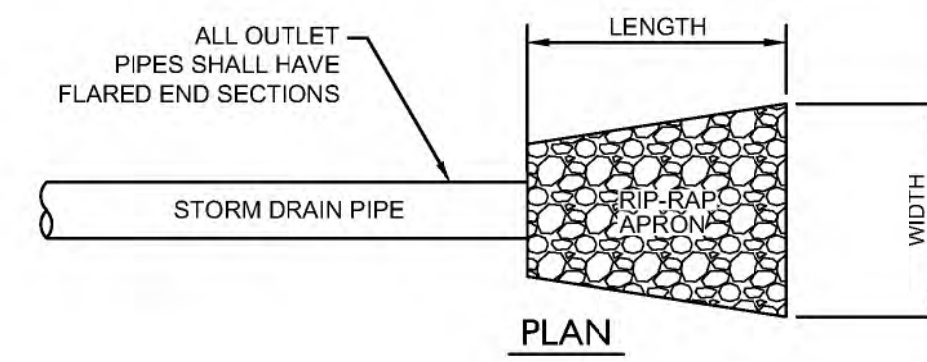
TEMPORARY DIVERSION DITCH  
NOT TO SCALE

TDD #	LENGTH (FT)	INV UP	INV DN	SLOPE (FT/FT)	WIDTH (FT)	DEPTH (FT)
1	835	42.00	30.00	0.0144	4.0	1.5
2	260	25.00	24.00	0.0038	4.0	2.0

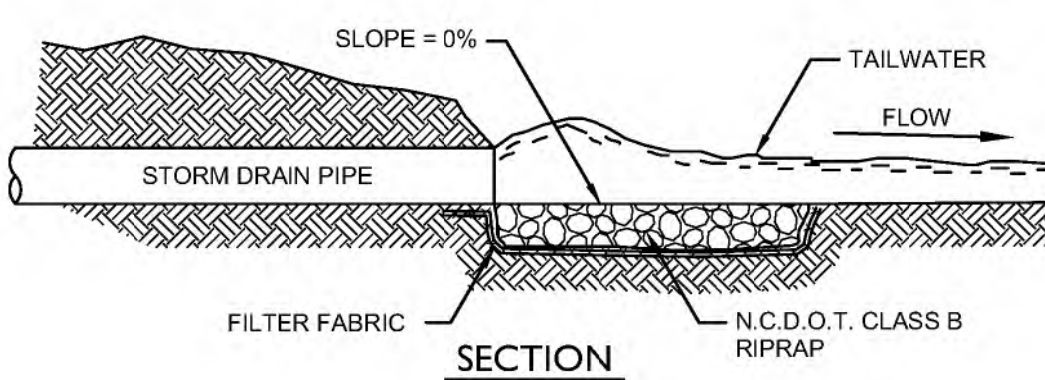
PROVIDE TEMPORARY LINING (NA GREEN S75 OR APPROVED EQUAL FOR TDD #1 & #2)



STAPLE PATTERN GUIDE



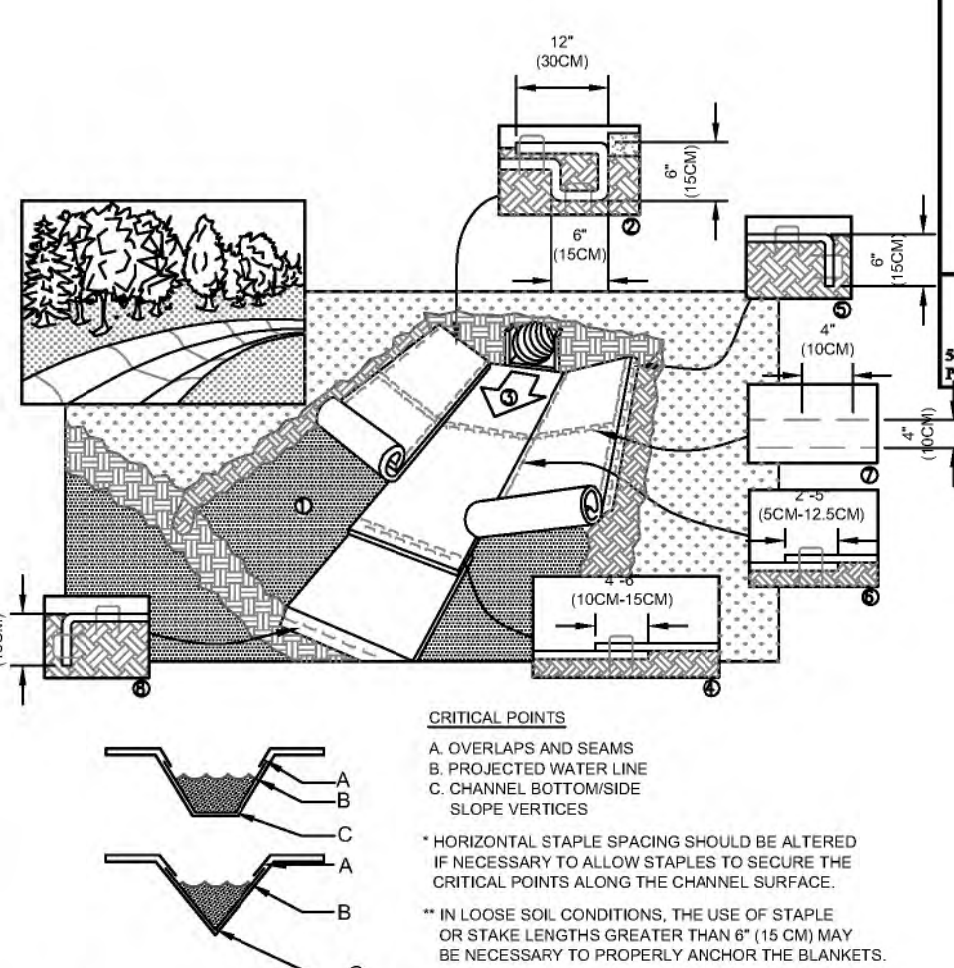
PLAN



SECTION

APRON #	PIPE DIA. (IN.)	LENGTH (FT.)	UP WIDTH (FT.)	DWN WIDTH (FT.)	THICKNESS (IN.)
FES-100	18	7	4.5	4.5	18
FES-200	48	17	12	12	18
FES-500	30	11	7.5	7.5	18
POND#1	36	13	9	9	18

RIP-RAP APRON  
NTS



ROLLED EROSION CONTROL LINING  
NOT TO SCALE

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

**CITY OF WILMINGTON**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signature: \_\_\_\_\_

**Approved Construction Plan**

Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

FINAL DESIGN - NOT RELEASABLE FOR CONSTRUCTION

**REVISIONS:**


**CLIENT INFORMATION:**  
CK WILMINGTON  
THREE PHASE A, LLC  
CHARLOTTE, NC

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

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

**DRAWING INFORMATION:**  
DATE: 07/13/21  
DESIGNED: AD/ND/DJF  
DRAWN: DLF  
CHECKED: DLF

**WILMINGTON THREE PHASE A**  
CITY OF WILMINGTON  
NORTH CAROLINA

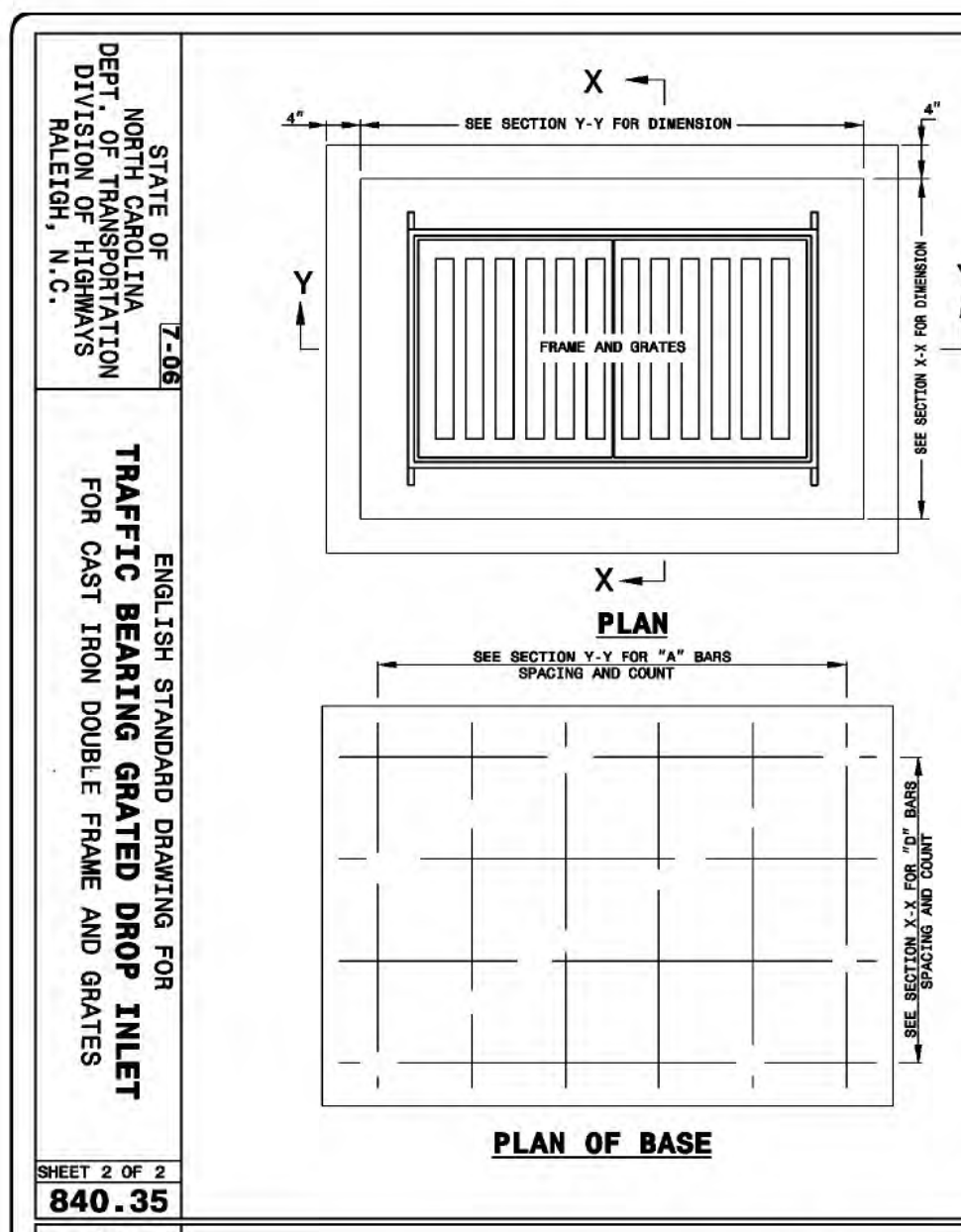
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copy per City of  
Wilmington Policy

**C-6.02**  
PEI JOB#: 20195.PE







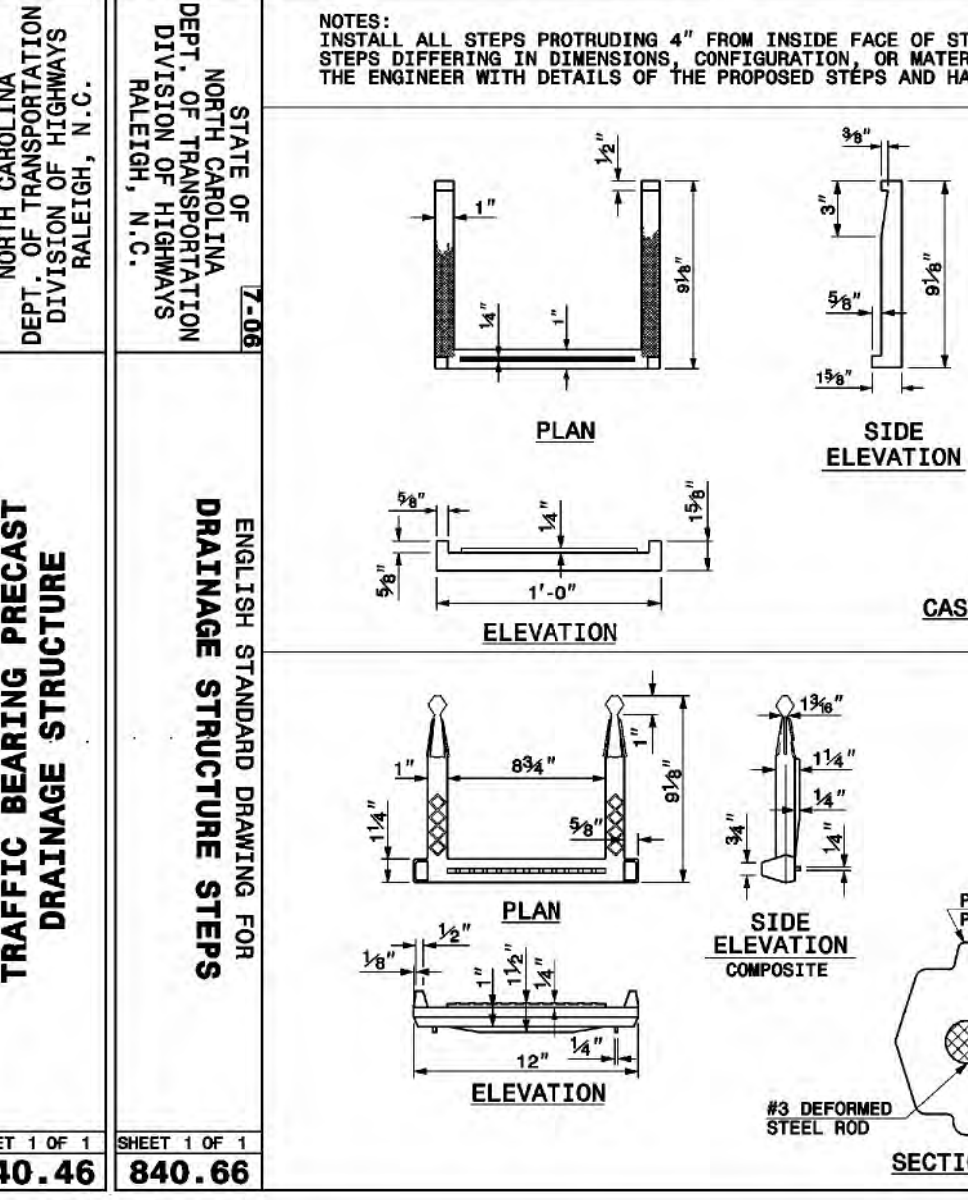
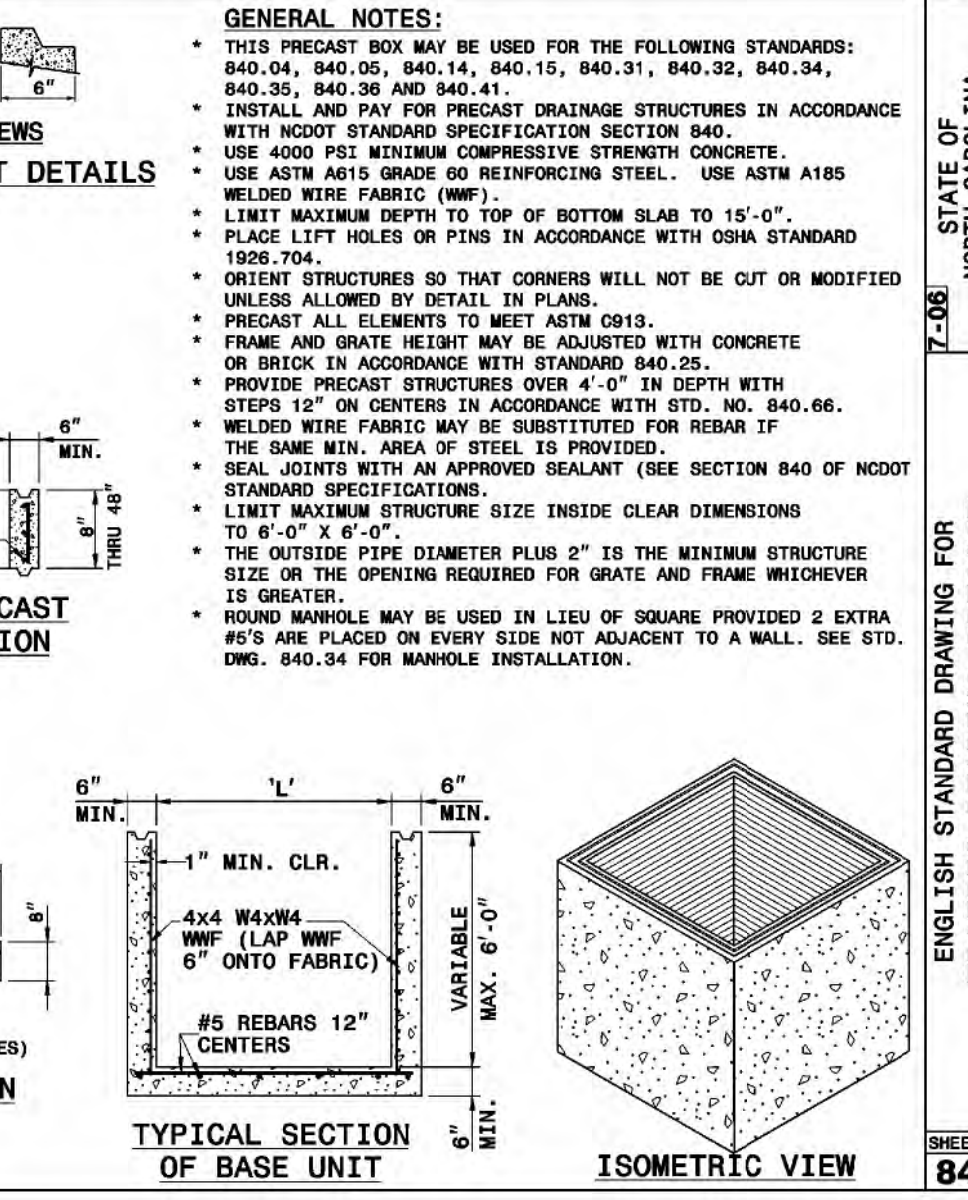
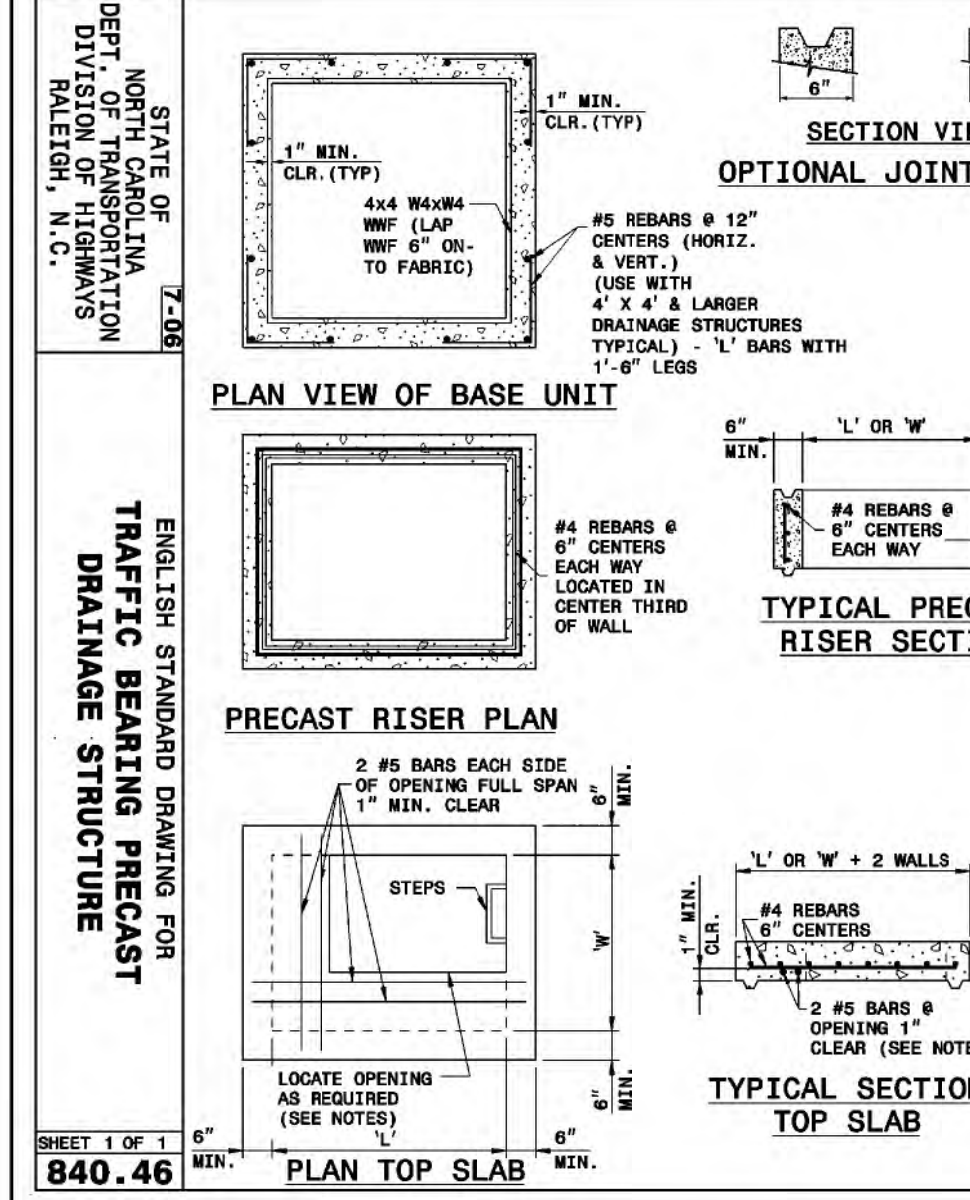
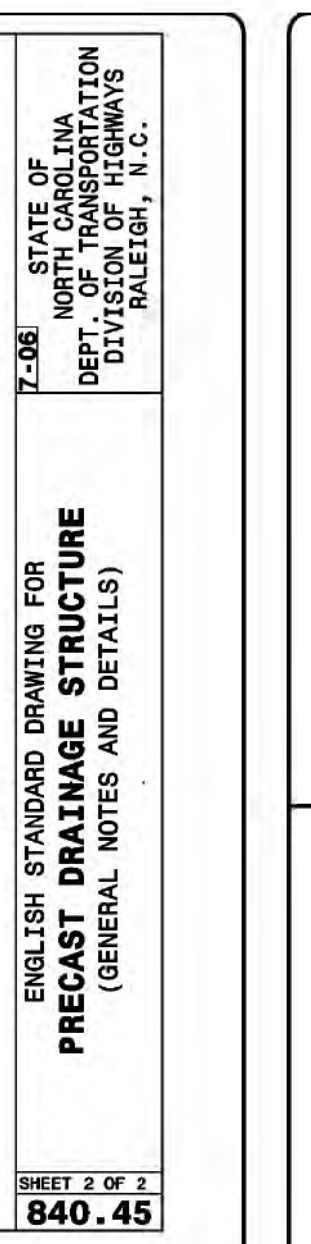
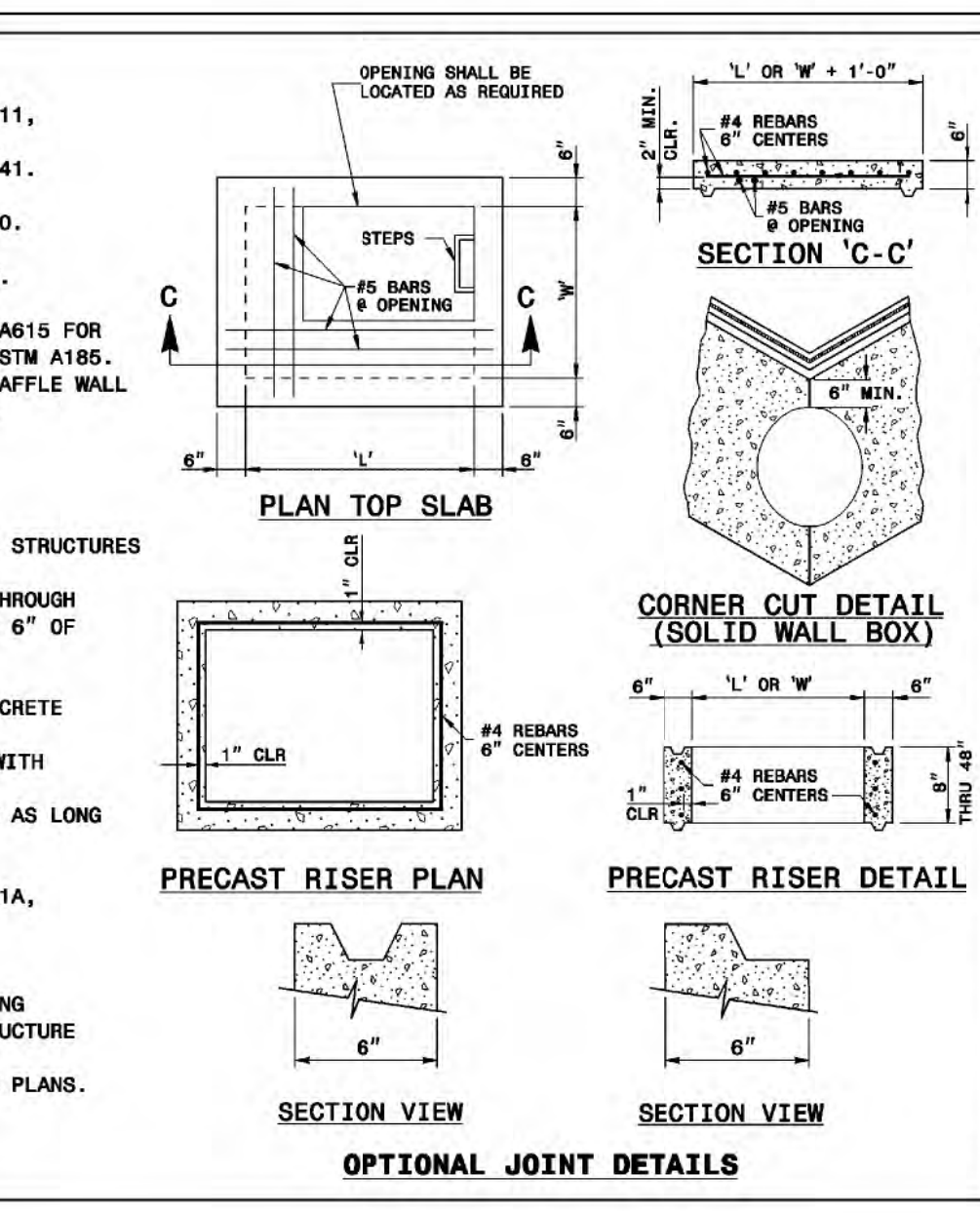
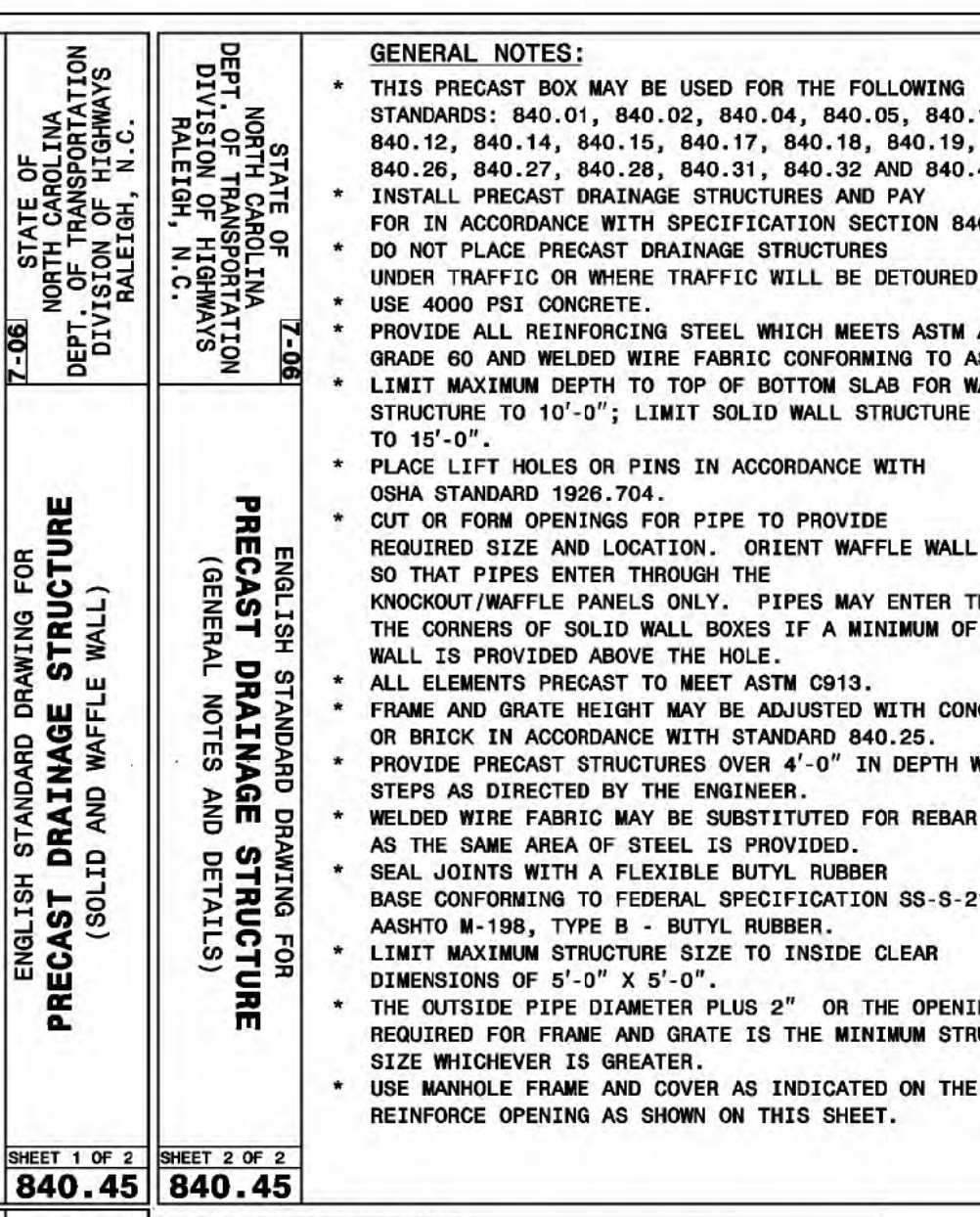
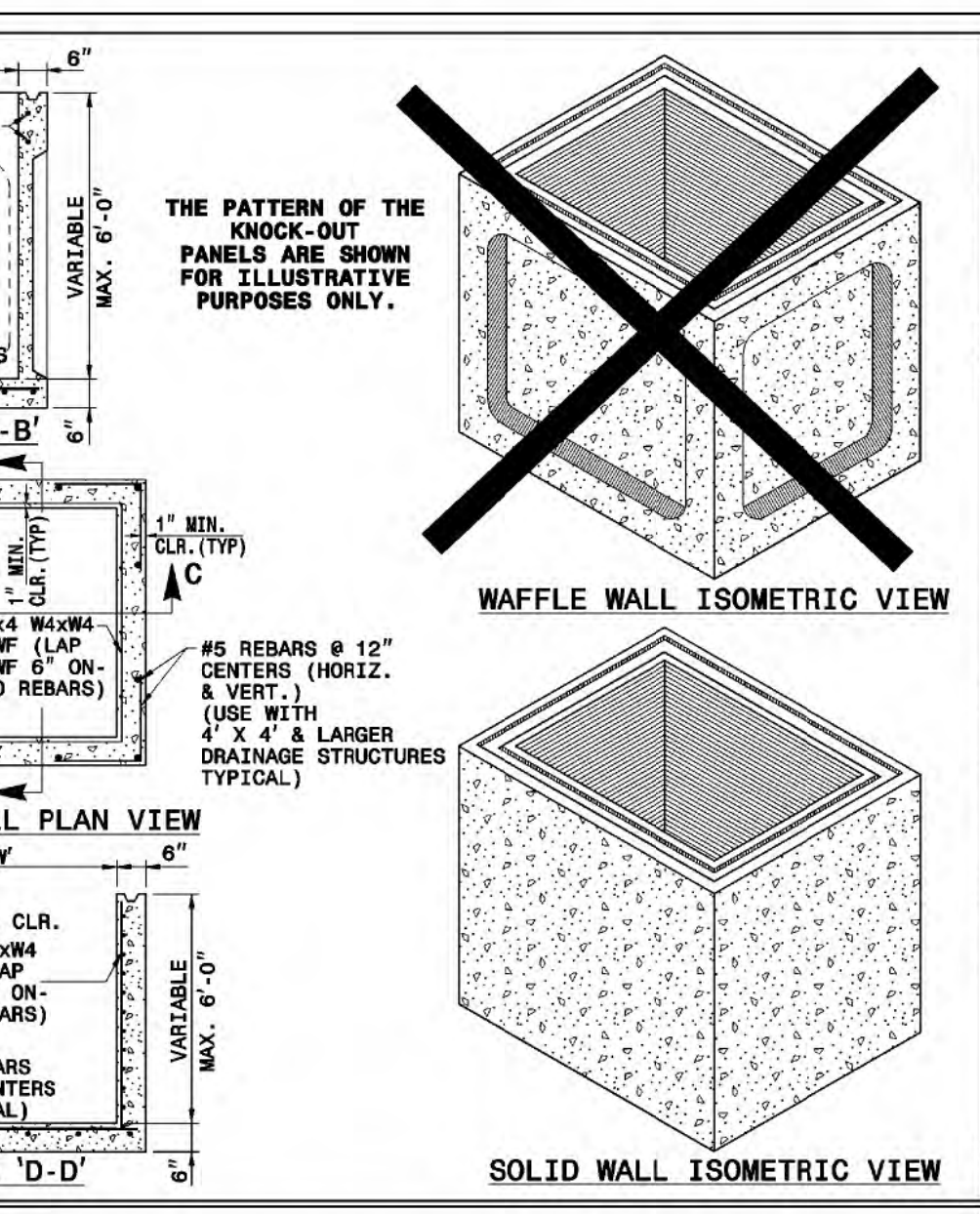
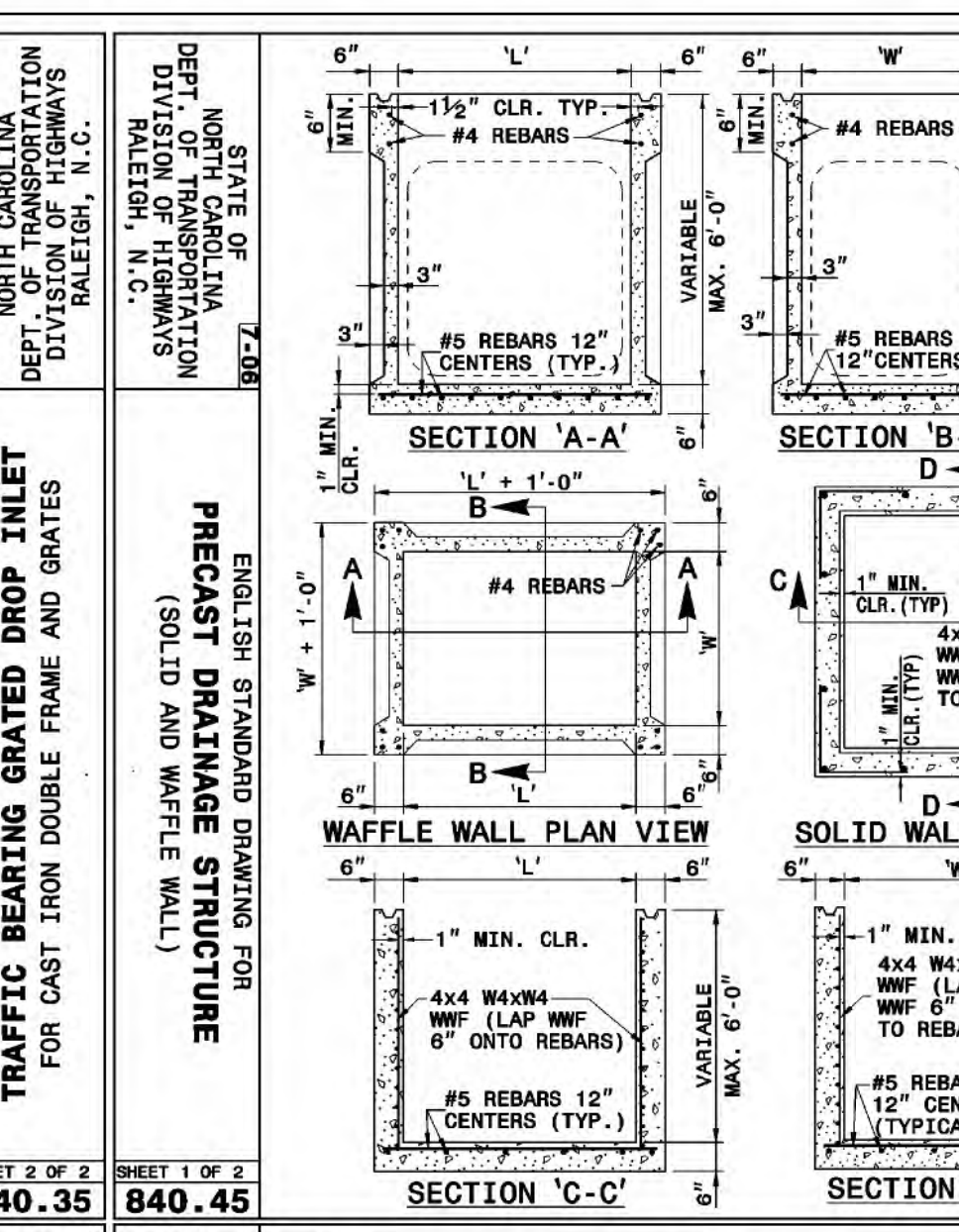


**BILL OF MATERIALS**

BAR	SIZE	LENGTH	QUANTITY	WEIGHT	BRICK ALT.
1	#4	16	16	86.3	16
2	#4	16	16	86.3	16
3	#4	16	16	86.3	16
4	#4	16	16	86.3	16
5	#4	16	16	86.3	16
6	#4	16	16	86.3	16
7	#4	16	16	86.3	16
8	#4	16	16	86.3	16
9	#4	16	16	86.3	16
10	#4	16	16	86.3	16
11	#4	16	16	86.3	16
12	#4	16	16	86.3	16
13	#4	16	16	86.3	16
14	#4	16	16	86.3	16
15	#4	16	16	86.3	16
16	#4	16	16	86.3	16
17	#4	16	16	86.3	16
18	#4	16	16	86.3	16
19	#4	16	16	86.3	16
20	#4	16	16	86.3	16
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22	#4	16	16	86.3	16
23	#4	16	16	86.3	16
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26	#4	16	16	86.3	16
27	#4	16	16	86.3	16
28	#4	16	16	86.3	16
29	#4	16	16	86.3	16
30	#4	16	16	86.3	16
31	#4	16	16	86.3	16
32	#4	16	16	86.3	16
33	#4	16	16	86.3	16
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35	#4	16	16	86.3	16
36	#4	16	16	86.3	16
37	#4	16	16	86.3	16
38	#4	16	16	86.3	16
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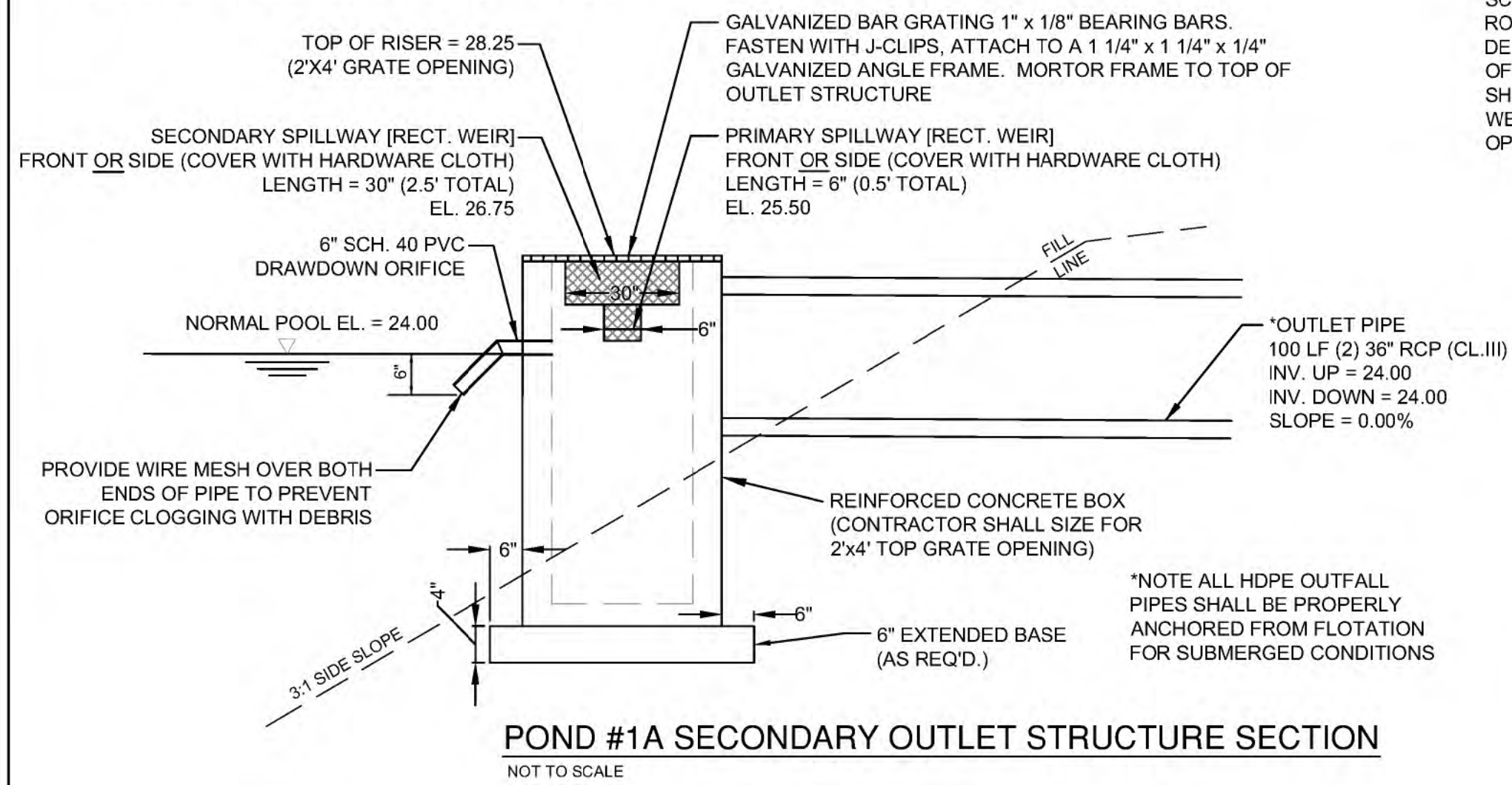
NET WGT. STEEL (TYPICAL WEIGHTS)  
CONCRETE IN BASE CLASS "AA" (CUBIC YARDS)  
CONCRETE IN WALLS CLASS "AA" (CUBIC YARDS)  
CONCRETE TOTAL (CUBIC YARDS)  
BRICK & CONCRETE TOTAL (CUBIC YARDS)  
CONC. CORNER VOLUME IN WALL FOOT OF HEIGHT  
LBS. OF REIN. STEEL IN WALL FOOT OF HEIGHT

GENERAL NOTES:  
- USE CLASS "AA" CONCRETE FOR CAST IN PLACE CONCRETE BOX.  
- USE CLASS "W" 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 ON SHEET 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 852 OF THE STANDARD SPECIFICATIONS.  
- PROVIDE GRATED DROP INLETS OVER 3'-6" DEPTH WITH STEPS SPACED 12" ON CENTER AS INDICATED BY STD. DWS. 840.66.  
- FRAME AND GRATES ARE SEPARATE CONTRACT ITEMS.

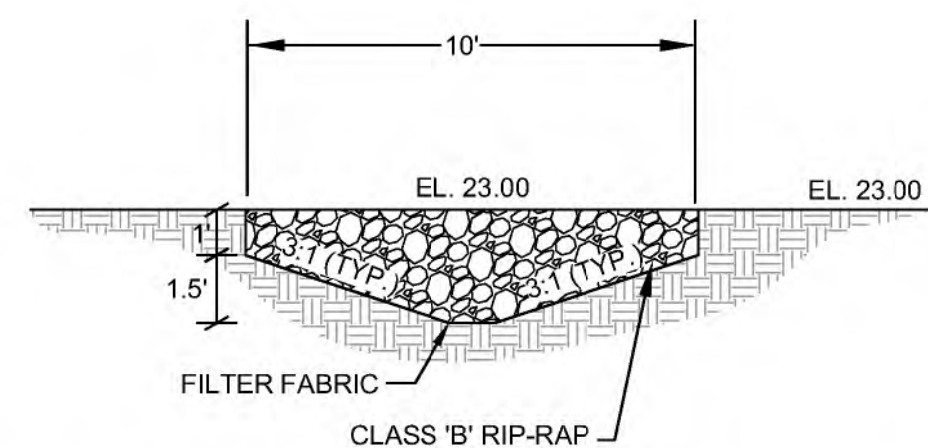




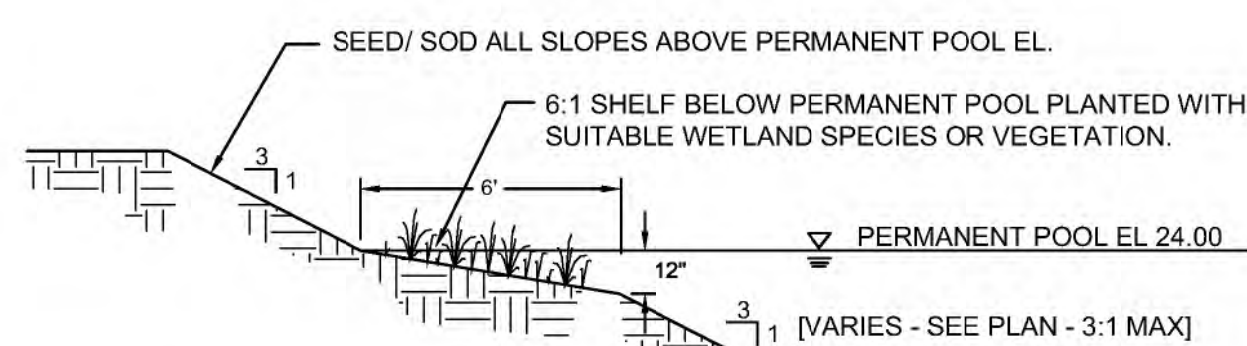
**\*NOTE:**  
THE CONTRACTOR SHALL CUT IN AN ORIFICE AT THE PROPOSED SEDIMENT STORAGE ELEVATION TO ATTACH THE SKIMMER. ONCE THE AREA DRAINING TO THE BASIN IS STABILIZED, THE CONTRACTOR CAN ESTABLISH THE FINAL WET POND, REMOVE THE SKIMMER, AND CUT IN THE PRIMARY WEIR.



**STRUCTURAL BERM FILL SATISFACTORY SOILS:**  
SOILS WITH ORGANICS LESS THAN 2% WITH BETWEEN 30% AND 60% PASSING THE NO. 200 SIEVE WITH A PLASTICITY INDEX AND LIQUID LIMIT OF LESS THAN 20 AND 50 PERCENT, RESPECTIVELY WITH A UNIFIED SOIL CLASSIFICATION OF SC OR CL; FREE OF ROCK OR GRAVEL LARGER THAN 2\"/>



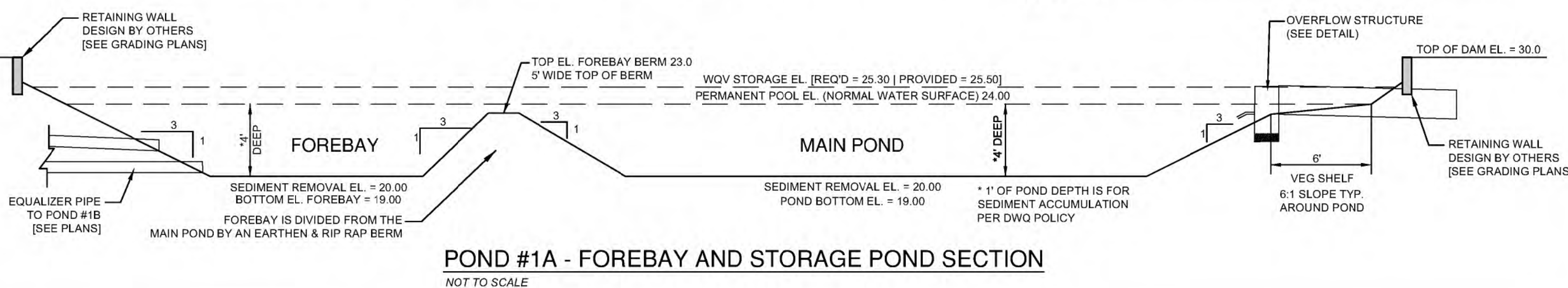
**POND #1A FOREBAY SPILLWAY DETAIL**  
NOT TO SCALE



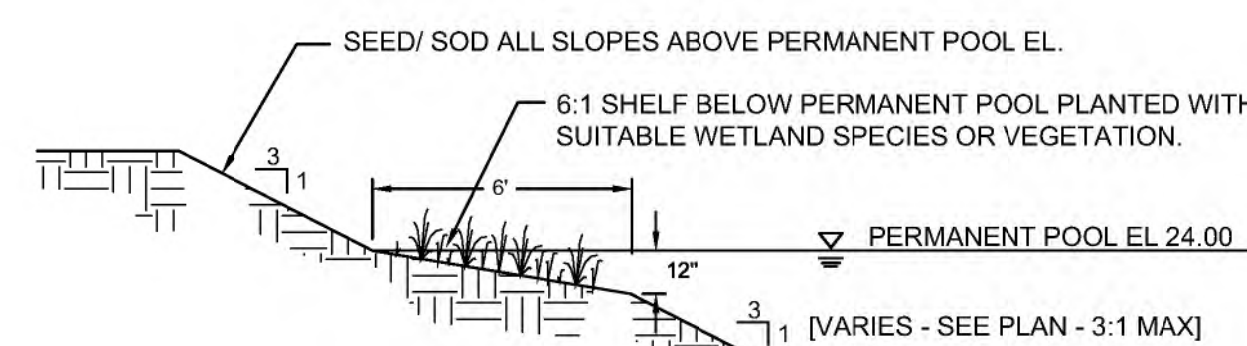
**POND #1A SECTION**  
NOT TO SCALE

**SUITABLE PLANTS**  
PICKERELWEED (PONTEDERIA CORDATA)  
DUCK POTATO (SAGGITARIA LATIFOLIA AND SAGGITARIA CARDINALIS)  
SWAMP ROSE (HIBISCUS MOSHEUTOS)  
BLUE FLAG (IRIS VIRGINICA)  
CARDINAL FLOWER (LOBELIA CARDINALIS)

**WET DETENTION POND PLANTING**  
CONTRACTOR TO INSTALL ON THE 6:1 SLOPED SHELF, EQUAL NUMBERS OF EACH OF THE LISTED SUITABLE PLANTS. DURING INSTALLATION, GROUP SIMILAR SPECIES OF PLANTS TOGETHER. INSTALL PLANTS 24\"/>



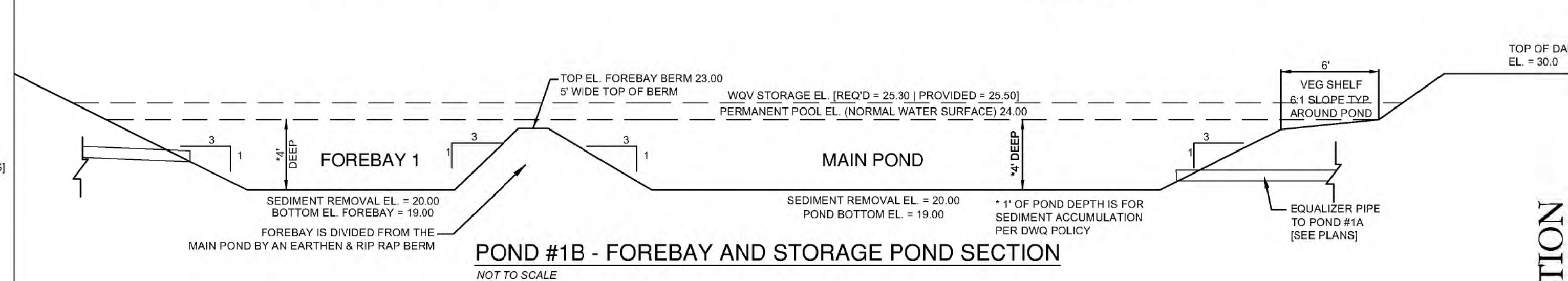
**POND #1A - FOREBAY AND STORAGE POND SECTION**  
NOT TO SCALE



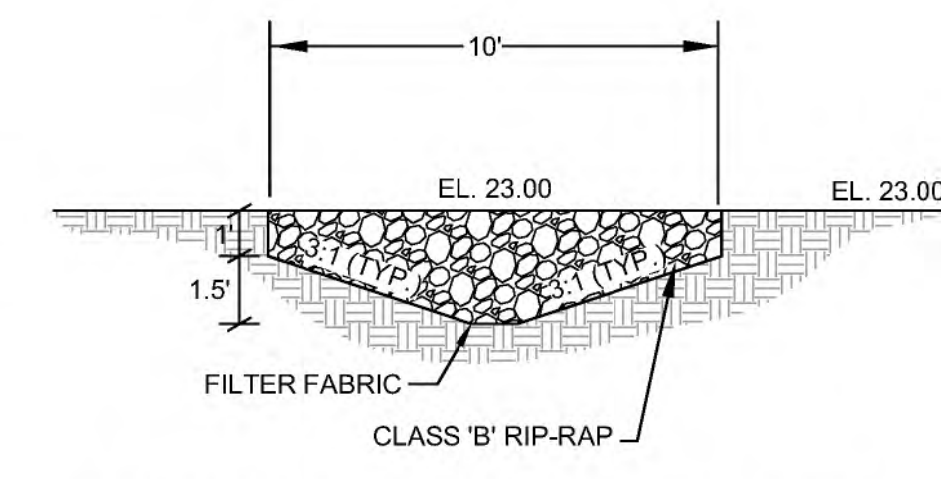
**POND #1B SECTION**  
NOT TO SCALE

**SUITABLE PLANTS**  
PICKERELWEED (PONTEDERIA CORDATA)  
DUCK POTATO (SAGGITARIA LATIFOLIA AND SAGGITARIA CARDINALIS)  
SWAMP ROSE (HIBISCUS MOSHEUTOS)  
BLUE FLAG (IRIS VIRGINICA)  
CARDINAL FLOWER (LOBELIA CARDINALIS)

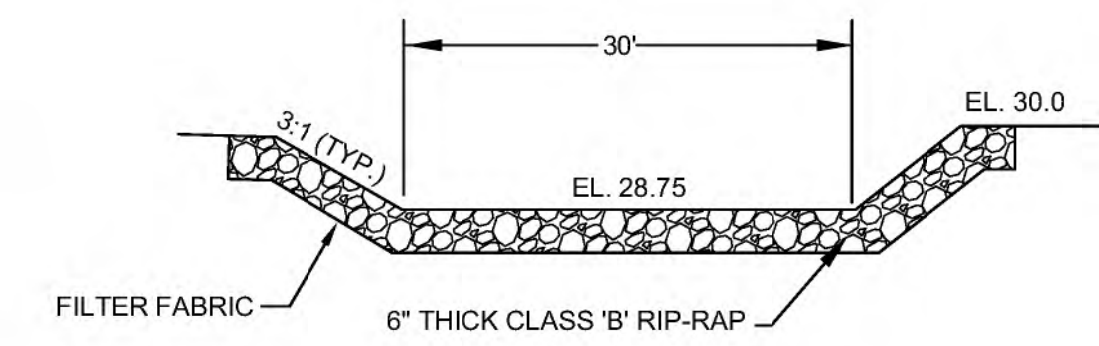
**WET DETENTION POND PLANTING**  
CONTRACTOR TO INSTALL ON THE 6:1 SLOPED SHELF, EQUAL NUMBERS OF EACH OF THE LISTED SUITABLE PLANTS. DURING INSTALLATION, GROUP SIMILAR SPECIES OF PLANTS TOGETHER. INSTALL PLANTS 24\"/>



**POND #1B - FOREBAY AND STORAGE POND SECTION**  
NOT TO SCALE



**POND #1B FOREBAY SPILLWAY DETAIL**  
NOT TO SCALE



**POND #1B EMERGENCY SPILLWAY DETAIL**  
NOT TO SCALE

REVISIONS:

CLIENT INFORMATION:  
**CK WILMINGTON**  
**THREE PHASE A, LLC**  
**CHARLOTTE, NC**

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

**EC & STORM DETAILS**  
**WILMINGTON THREE PHASE A**  
**CITY OF WILMINGTON**  
**NORTH CAROLINA**

PROJECT STATUS:  
CONCEPTUAL LAYOUT:  
PRELIMINARY LAYOUT:  
RELEASED FOR CONST.  
DRAWING INFORMATION:  
DATE: 07/13/21  
DESIGNED: ADH/DF  
DRAWN: DDF  
CHECKED: DDF

Professional Seal  
redacted on electronic  
copy per City of  
Wilmington Policy

**C-6.05**  
PEI JOB#: 20195.FE

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_  
**Approved Construction Plan**  
Name \_\_\_\_\_ Date \_\_\_\_\_

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

**FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION**