

LAKESIDE RESERVE

2144 W. LAKE SHORE DRIVE
WILMINGTON, NORTH CAROLINA

CONSTRUCTION DOCUMENTS

APRIL 2016

FOR:
LAKESIDE PARTNERS OF WILMINGTON, INC.
811 MARTIN STREET
WILMINGTON, NC 28401

OWNER/DEVELOPER:
LAKESIDE PARTNERS OF WILMINGTON, INC.
811 MARTIN STREET
WILMINGTON, NC 28401
ATTN: W. WATSON BARNES

ENGINEER (CIVIL):
PARAMOUNTE ENGINEERING, INC.
5911 OLEANDER DRIVE, SUITE 201
WILMINGTON, NORTH CAROLINA 28403
ATTN: J. BRANCH SMITH, P.E. (910) 791-6707

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C-2.0	SITE & UTILITY PLAN
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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.

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

CONTACT THESE UTILITIES

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

ATTN: RICH CHRISTENSEN (ENGINEERING)
PH: 910-341-5856

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

EMERGENCY DIAL 911
POLICE - FIRE - RESCUE

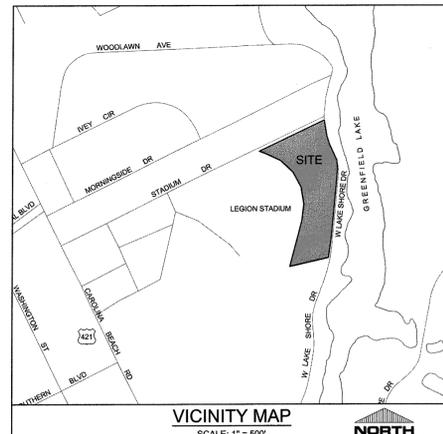
CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)
ENGINEERING/INSPECTIONS
ATTN: BERNICE JOHNSON OR KENT HARREL
PH: 910-332-6550

OPERATIONS/MAINTENANCE
PH: 910-332-6550

DUKE ENERGY PROGRESS
DISTRIBUTION CONSTRUCTION SERVICE
ATTN: ANDREW PARKS
PH: 910-258-7255
DEP CSC PH: 1-800-452-2777

AT&T/BELL SOUTH
ATTN: CHRISSEY COSTON OR STEVE DAYVAULT
PH: 910-341-7864

TIME WARNER CABLE
PH: 910-783-4838



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: 4-5-16 Permit # 2016014
Signed: *J. Branch Smith*

Approved Construction Plan

Name	Date
Planning: <i>[Signature]</i>	4/5/16
Traffic: <i>[Signature]</i>	4-4-16
Fire: <i>[Signature]</i>	4-5-16



PREPARED BY:
PARAMOUNTE
ENGINEERING, INC.

5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

PROJECT # 14304.PE

RELEASED FOR CONSTRUCTION



Know what's below.
Call before you dig.

COORDINATION NOTES

- 1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/all PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL WORK IS TO BE IN ACCORDANCE WITH CITY OF WILMINGTON, NEW HANOVER COUNTY, 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.
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.

GENERAL NOTES

- 1. EXISTING CONDITIONS WERE TAKEN FROM A SURVEY COMPLETED BY MICHAEL UNDERWOOD & ASSOCIATES. THE SURVEY SHALL BE FIELD VERIFIED BY CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE OWNER, OWNERS REPRESENTATIVE, AND/OR ENGINEER IMMEDIATELY.
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.
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.
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 PROPERTY 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 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.

WETLAND NOTES:

- 1) THERE ARE WETLANDS FLAGGED AND SURVEYED ON THE PROPERTY BY PARAMOUNT ENGINEERING AND LAND MANAGEMENT GROUP. THE USAGE JURISDICTIONAL APPROVAL MAP HAS BEEN SIGNED.

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.
3. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNERS REPRESENTATIVE IMMEDIATELY.
4. 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.
5. 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.
6. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SOODED OR SEEDED AS INDICATED AND STABILIZED.
7. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
8. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT.
9. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER.
10. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA.
11. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK.
12. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA.
13. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK.
14. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK.

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: [Signature] Date: 4/5/16
Planning: [Signature] Date: 4-9-16
Traffic: [Signature] Date: 4-9-16
Fire: [Signature] Date: 4-5-16

CITY OF WILMINGTON
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 4-5-16 Permit #: 2016014
Signed: [Signature]

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.
1. CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ENTRANCE(S), ESTABLISH THE LIMITS OF DISTURBANCE, AND TEMPORARY SILT FENCE.
2. CLEAR AND REMOVE FROM SITE ALL TREES (ONLY ONES TO BE REMOVED), ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN THE DESIGNATED CLEARING LIMITS.
3. INSTALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLANS WITHIN THE AREA DISTURBED.
4. PLANT GRASS OVER ALL GRADED AREAS WITHIN 15 WORKING DAYS FOR FLAT AREAS AND 21 CALENDAR DAYS FOR ALL SLOPES AT CEASE OF ANY GRADING ACTIVITY.
5. IMMEDIATELY UPON THE INSTALLATION OF ANY STORM DRAINAGE CATCH BASIN, DROP INLET, ETC., THE CONTRACTOR SHALL INSTALL INLET PROTECTION TO STOP ANY SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
6. IMMEDIATELY UPON THE INSTALLATION OF ANY STORM DRAINAGE SYSTEM, THE CONTRACTOR SHALL INSTALL OUTLET PROTECTION AS SHOWN ON THE PLANS AND DETAILS.
7. THE CONTRACTOR SHALL CONVERT THE SEDIMENT BASIN TO THE WET DETENTION POND ONCE THE ENTIRE DRAINAGE BASIN IS FULLY STABILIZED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INDIVIDUALLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION CONTROL MEASURES.
9. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, THE CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
10. UPON RECEIVING FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY, THE CONTRACTOR CAN REMOVE TEMPORARY EROSION CONTROL MEASURES.
11. THE CONTRACTOR SHALL CONTINUE TO WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SOODED, AND PLANTED AREAS UNTIL ALL CONSTRUCTION IS COMPLETE.

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.
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.
3. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.
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.
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.
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 SOODED 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.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA.
14. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK.

MAINTENANCE PLAN

- 1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH.
3. SEDIMENT FENCE - SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE.
4. ALL SEEDED AREAS WILL BE FERTILIZED, RESEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
5. INLET PROTECTION - INSPECT ROCK PIPE INLET PROTECTION AT LEAST ONCE A WEEK AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT.
6. SEDIMENT BASIN - REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO WITHIN ONE HALF OF THE DESIGN DEPTH.
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.
8. OUTLET PROTECTION - INSPECT RIP RAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS.
9. EMERGENCY SPILLWAY / FOREBAY PROTECTION - AFTER EVERY HIGH-WATER EVENT INSPECT THE INTEGRITY OF THE LINED SPILLWAY AND THE ADJACENT EARTHEN BANKS.

PERMANENT SEEDING table with columns: GRASS TYPE, LBS/ ACRE, TIME OF SEEDING, FERTILIZER LIMESTONE. Includes rows for Bermuda, Centipede, Coastal Cynodon, and Centipede/Sericea.

TEMPORARY SEEDING table with columns: GRASS TYPE, LBS/ ACRE, TIME OF SEEDING, FERTILIZER LIMESTONE. Includes rows for Rye Grain, Sweet Sudan Grass, German or Browntop Millet, and Straw Mulch.

STABILIZATION TIME FRAMES: IN THE EVENT THAT THE GOVERNING AGENCIES TIMEFRAME FOR STABILIZATION VARY, CONTRACTOR SHALL MEET THE MORE STRINGENT REQUIREMENT. NEW HANOVER COUNTY LAND QUALITY STABILIZATION TIME FRAME NOTE: DENuded AREAS MUST BE STABILIZED WITH FIFTEEN (15) WORKING DAYS OF CEASE OF ANY PHASE OF ACTIVITY.

NPDES WATER QUALITY STABILIZATION TIME FRAMES table with columns: SITE AREA DESCRIPTION, STABILIZATION, TIMEFRAME EXCEPTIONS. Includes rows for Perimeter Dikes, High Quality Water (HOW) Zones, Slopes Steeper Than 3:1, Slopes 3:1 or Flatter, and All Other Areas.

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. 3. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK FOR WHICH THE ALLEGED CONFLICT HAS BEEN DISCOVERED UNTIL SUCH ALLEGED CONFLICT HAS BEEN RESOLVED. 4. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY. 5. 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.

ACCESSIBLE ROUTE NOTES:

- 1. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES. 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 AND 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 FOURTY-EIGHT (48) INCHES MINIMUM MEASURED BETWEEN HANDRAILS WHERE HANDRAILS ARE PROVIDED. 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. 9. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN SIXTY (60) INCHES SHALL PROVIDE PASSING SPACES AT INTERVALS OF TWO HUNDRED (200) FEET MAXIMUM. 10. FLOOR SURFACES 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. 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. 13. WHERE PROVIDED, PEDESTRIAN ACTIVATED SIGNALS SHALL BE LOCATED ADJACENT TO THE SIDEWALK AND NOT ON THE SIDEWALK. 14. CURB RAMP TYPE AND LOCATION ARE PER PLAN.

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 MCD (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.
6. CONTACT TRAFFIC ENGINEERING, AT 341-7889 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
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.

SITE NOTES:

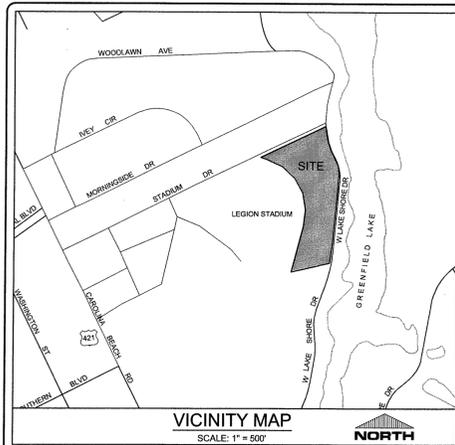
- 1. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION.
2. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
3. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
4. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
6. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
7. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
8. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
9. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES.
10. ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION.
11. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES.
12. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
13. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

NC ACCESSIBILITY NOTES (CONT.):

- 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.
3. PARKING ACCESSIBLE SPACES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES.
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.
8. FLOOR SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.
9. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SPACES 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.
12. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY.
13. SIGNAGE AT ACCESSIBLE PARKING SPACES REQUIRED BY THE NC BUILDING CODE SECTION 1106.1 SHALL COMPLY WITH THE REQUIREMENTS OF NORTH CAROLINA GENERAL STATUTE 20-37.6 AND 136-30 AND THE NCDOT UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES.
14. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE (OR ANOTHER COLOR THAT CAN BE DISTINGUISHED FROM PAVEMENT).
15. ACCESSIBLE ENTRANCES SHALL BE PROVIDED AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.
16. ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) THE NC BUILDING CODE/ANSI A117.1 AND SHALL BE ON AN ACCESSIBLE ROUTE.

RELEASED FOR CONSTRUCTION

REVISIONS table, CLIENT INFORMATION (LAKESIDE PARTNERS OF WILMINGTON, INC.), GENERAL NOTES (PARAMOUNT ENGINEERING), DRAWING INFORMATION (DATE: 4/1/16, DESIGNED: [Signature], CHECKED: [Signature]), PROJECT STATUS (CONCEPTUAL LAYOUT, PRELIMINARY LAYOUT, RELEASED FOR CONSTRUCTION), SEAL (PROFESSIONAL ENGINEER, STATE OF NORTH CAROLINA, NO. 034354, DATE: 4/1/16), and C-1.0 PEI JOB#: 14304.PE



SITE DATA
 PROJECT NAME: LAKESIDE RESERVE / GOOD SHEPHERD CENTER
 SITE ADDRESS: 2144 W. LAKE SHORE DRIVE
 NHC PIN: R06013-018-008-000
 PROPERTY OWNER: CITY OF WILMINGTON
 SOURCE DEED: DEED BOOK 5677, PAGE 2543
 AREA: 185,790± SF OR 4.26± ACRES
 ZONING: MF-L (CD)
 PROPOSED USE: MULTI-FAMILY
 CAMA LAND USE: URBAN
 EXISTING EASEMENTS: NONE KNOWN

DIMENSION REQUIREMENTS

SETBACKS:	REQUIRED	PROVIDED
FRONT:	N/A*	30'
SIDE:	N/A*	13.5'
REAR:	20'	110.1'
	8.5'	69.3'

*PER SECTION 18-184(g)(12), FRONT AND CORNER SIDE SETBACKS DO NOT APPLY AS LONG AS THE FOLLOWING CRITERIA ARE MET:
 1. THE STREET IS NOT ZONED R-20, R-15, R-7, R-5, OR R-3
 2. BUILDINGS MUST HAVE AN ENTRANCE FROM THE SIDEWALK
 3. HVAC EQUIPMENT, AIR CONDITIONING WINDOW UNITS, ELECTRICAL EQUIPMENT, FIRE ESCAPES, SOLID WASTE FACILITIES, AND OTHER UTILITY EQUIPMENT SHALL NOT BE LOCATED ALONG FACADES WITH STREET FRONTAGE
 4. ARCHITECTURAL FEATURES, INCLUDING FENESTRATION, MATERIAL CHANGES OR OTHER DESIGN FEATURES MUST BE PROVIDED ALONG THE STREET SUCH THAT BLANK WALL SPACE DOES NOT EXCEED FIFTEEN (15) FEET IN LENGTH

MAXIMUM HEIGHT 35' (24'-2" PROPOSED)

BUILDING INFORMATION
 PHASE I: (1) 16-UNIT APARTMENT BUILDING (16,704 SF) [1 STORY]
 PHASE II: (6) 4-UNIT APARTMENTS BUILDING (2,853 SF EACH) [1 STORY]
 TOTAL BUILDINGS: 7 (40 1-BR UNITS; 33,821 SF)
 BUILDING COVERAGE: 18.2%
 CONSTRUCTION TYPE: V-A (16 UNIT BUILDING) & V-B (4-UNIT BUILDINGS)

PARKING INFORMATION
 PARKING:
 MINIMUM REQUIRED 1 SPACE PER BEDROOM = 40 * 1 = 40 SPACES
 PROVIDED 48 SPACES
 HC SPACES REQ'D. 2 SPACES
 HC SPACES PROVIDED 8 SPACES

IMPERVIOUS CALCULATIONS (PH I and PH 2)
 EX. PAVEMENT/CONC. 38,637 SF (20.8%)

WITHIN SUBJECT PARCEL:
 PROPOSED BUILDING 33,821 SF
 PROPOSED PAVEMENT 28,398 SF
 PROPOSED SIDEWALK 7,465 SF
 TOTAL 69,684 SF

WITHIN CITY ROW:
 PROPOSED PAVEMENT 740 SF
 PROPOSED SIDEWALKS 5,854 SF
 TOTAL 6,594 SF

NET INCREASE 37,641 SF

TREE PRESERVATION NOTES:

- TREE PRESERVATION / REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING & LAND DISTURBANCE.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.

FIRE & LIFE SAFETY NOTES:

- CONSTRUCTION TYPE (16 UNIT BUILDING): V-A
 CONSTRUCTION TYPE (4-UNIT BUILDINGS): V-B
- ALL BUILDINGS WILL BE SPRINKLED.
- PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS OR FDC'S.
- FDC'S CAN BE NO FURTHER THAN 40' FROM FIRE DEPARTMENT VEHICLE PLACEMENT AND NO FURTHER THAN 150' FROM A FIRE HYDRANT.
- ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.

UTILITY NOTES:

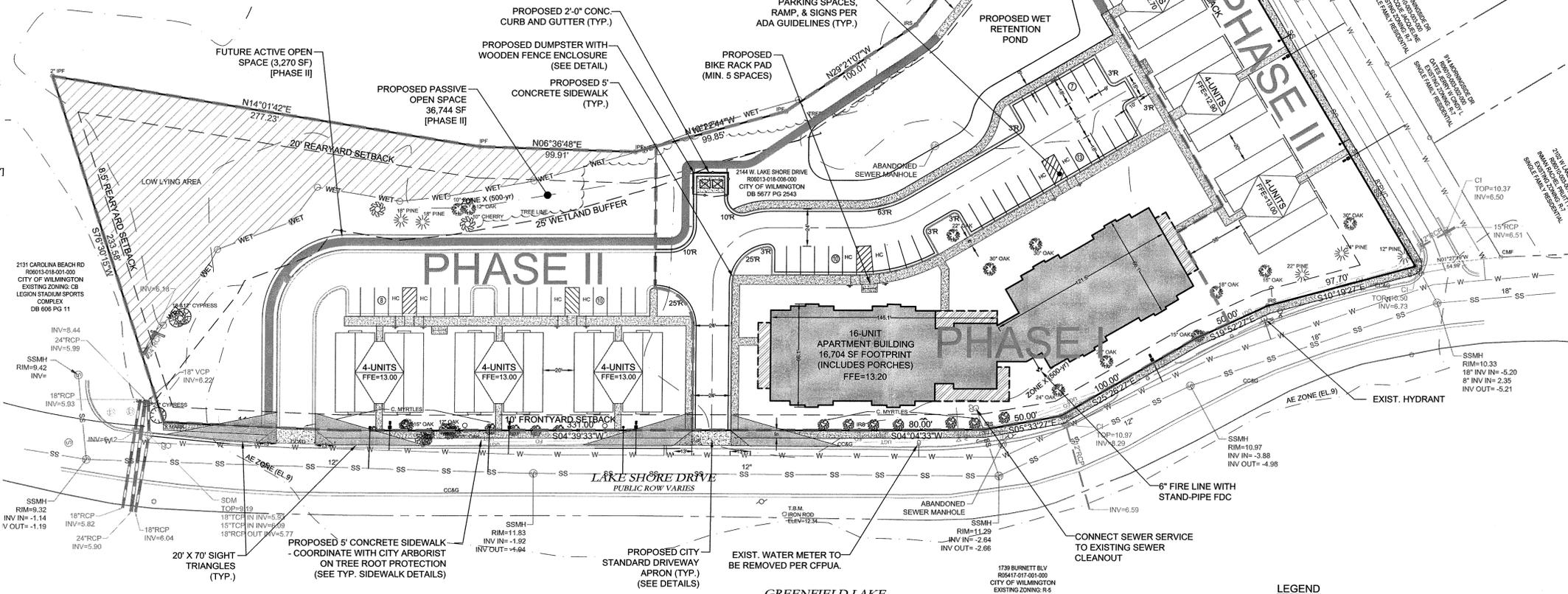
- EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS.
- SOLID WASTE DISPOSAL WILL BE HANDLED BY A DUMPSTER.
- HVAC UNITS WILL BE PLACED ON THE ROOF.

CD-6-1214 CONDITIONS:

- THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHALL COMPLY WITH ALL REGULATIONS AND REQUIREMENTS IMPOSED BY THE LAND DEVELOPMENT CODE, THE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL, AND ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL LAW, ORDINANCE OR REGULATION, AS WELL AS ANY CONDITION STATED BELOW. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENT OR HIGHER STANDARD SHALL APPLY.
- APPROVAL OF THIS REZONING REQUEST DOES NOT CONSTITUTE TECHNICAL APPROVAL OF THE SITE PLAN. FINAL APPROVAL OF THE TECHNICAL REVIEW COMMITTEE AND THE ISSUANCE OF ALL REQUIRED PERMITS MUST OCCUR PRIOR TO RELEASE OF THE PROJECT FOR CONSTRUCTION.
- IF, FOR ANY REASON, ANY CONDITION FOR APPROVAL IS FOUND TO BE ILLEGAL OR INVALID OR IF THE APPLICANT SHOULD FAIL TO ACCEPT ANY CONDITION FOLLOWING APPROVAL, THE APPROVAL OF THE SITE PLAN FOR THE DISTRICT SHALL BE NULL AND VOID AND OF NO EFFECT AND PROCEEDINGS SHALL BE INSTITUTED TO REZONE THE PROPERTY TO ITS PREVIOUS ZONING CLASSIFICATION.
- THE USE AND DEVELOPMENT OF THE SUBJECT PROPERTY SHALL BE IN ACCORDANCE WITH THE PLAN AS SUBMITTED ON 11/20/14 AND AS SPECIFIED IN THE LBA AS AMENDED AUGUST 14, 2014. THE PERMITTED USE SHALL BE RESTRICTED TO A 16-UNIT CONGREGATE FACILITY, INCLUDING A COMMON SPACE, AND SIX 1-STORY QUADRAPLEXES FOR A MAXIMUM OF 40 MULTI-FAMILY RESIDENTIAL UNITS WITH NO MORE THAN 40 BEDROOMS.
- THE APPLICANT SHALL MAKE ALL REASONABLE EFFORT TO SHIFT THE EASTERN WING OF THE 16-UNIT CONGREGATE BUILDING SUCH THAT THE SIX (6) TREES PROPOSED FOR REMOVAL IN THAT AREA MAY BE PRESERVED.
- INGRESS AND EGRESS TO THE SITE SHALL BE PROVIDED BY TWO 2-WAY DRIVEWAYS FROM WEST LAKE SHORE DRIVE.
- ALL EXISTING PROTECTED TREES NOT IMPACTED BY ESSENTIAL SITE IMPROVEMENTS SHALL BE PRESERVED OR MITIGATED.
- A 5-FOOT WIDE SIDEWALK SHALL BE PROVIDED ALONG THE DEVELOPMENT'S FRONTAGE ALONG WEST LAKE SHORE DRIVE AND STADIUM DRIVE.
- A MINIMUM OF 5 BICYCLE PARKING SPACES SHALL BE PROVIDED ON THE SITE.
- EXTERIOR SITE LIGHTING SHALL BE INSTALLED SO AS NOT TO SHINE DIRECTLY ON ADJACENT RESIDENTIAL PARCELS.
- ANY FREESTANDING SIGN(S) ON THE SITE SHALL BE MONUMENT STYLE WITH LANDSCAPING AROUND THE BASE OF THE SIGN; NO POLE SIGNS SHALL BE PERMITTED AND INTERNAL ILLUMINATION SHALL BE PROHIBITED.
- THE USE OF PINE STRAW AS GROUND COVER SHALL BE PROHIBITED WITHIN TEN (10) FEET OF ANY COMBUSTIBLE EXTERIOR CONSTRUCTION.
- BUILDING FACADES ORIENTED TOWARDS THE RIGHT-OF-WAY MUST HAVE AN ENTRANCE FROM THE SIDEWALK.
- ARCHITECTURAL FEATURES, INCLUDING FENESTRATION, MATERIAL CHANGES, OR OTHER DESIGN FEATURES, MUST BE PROVIDED ALONG ALL ELEVATIONS FRONTING ON A RIGHT-OF-WAY SUCH THAT BLANK WALL SPACE DOES NOT EXCEED 15 FEET IN LENGTH.
- HVAC EQUIPMENT, AIR CONDITIONING WINDOW UNITS, ELECTRICAL EQUIPMENT, FIRE ESCAPES, SOLID WASTE FACILITIES AND OTHER UTILITY EQUIPMENT SHALL NOT BE LOCATED ALONG FACADES WITH STREET FRONTAGE.
- TREE PROTECTION FENCING SHALL BE INSTALLED ALONG ALL PROTECTED TREES WITH SIGNAGE OF NO MATERIAL STORAGE IN ENGLISH AND SPANISH THROUGHOUT CONSTRUCTION
- ALL APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS MUST BE FOLLOWED.

GENERAL NOTES:

- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
- ALL LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT PRIOR TO THE RECORDING OF THE FINAL PLAN.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 48 HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.



WATER SERVICES NOTES:

- 2" DOMESTIC WATER SERVICES
- 2" WATER METER WITH CAST IRON BOX
- 2" DCVA OR RFPs WITH ABOVE GROUND ENCLOSURE
- REF. CFPUA WATER STANDARD DETAILS.

SEWER SERVICES NOTES:

- 4" SEWER SERVICES
- WITH 4" CLEANOUTS IN CAST IRON COVERS
- REF. CFPUA SEWER STANDARD DETAILS.

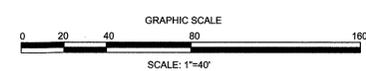
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 4-5-16 Permit #: 2016014
 Signed: *[Signature]*

Approved Construction Plan
 Name: *[Signature]* Date: 4/5/16
 Planning: *[Signature]*
 Traffic: *[Signature]*
 Fire: *[Signature]*

LEGEND

	= EXISTING PROPERTY LINE
	= PROPOSED PHASE LINE
	= 25' CONSERV. RESOURCE SETBACK
	= EXISTING WATER MAIN
	= EXISTING FIRE HYDRANT
	= EXISTING SANITARY SEWER MAIN
	= EXISTING OVERHEAD ELECTRIC
	= WETLAND AREA AREA
	= PROPOSED CONCRETE
	= PROPOSED BUILDING FOOTPRINT
	= PROPOSED SANITARY SEWER SERVICE
	= PROPOSED WATER SERVICE



RELEASED FOR CONSTRUCTION

CLIENT INFORMATION:
 LAKESIDE PARTNERS OF WILMINGTON, INC.
 811 MARTIN STREET
 WILMINGTON, NC 28401

PARAMOUNT ENGINEERING
 5911 Oleander Drive, Suite 201
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) / (910) 791-6766 (F)
 NC License #: C-2846

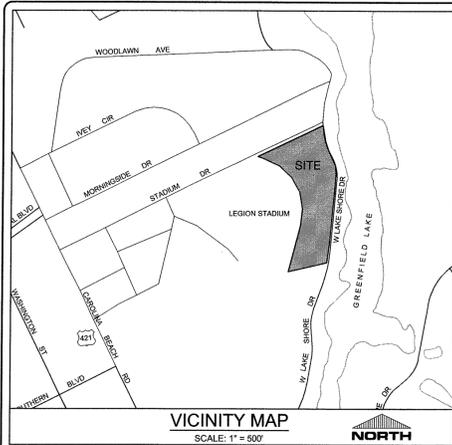
SITE & UTILITY PLAN
 LAKESIDE RESERVE
 CITY OF WILMINGTON
 NORTH CAROLINA

PROJECT STATUS:
 CONCEPTUAL LAYOUT: 4/1/16
 FINAL DESIGN: 4/1/16
 RELEASED FOR CONSTRUCTION: 4/1/16

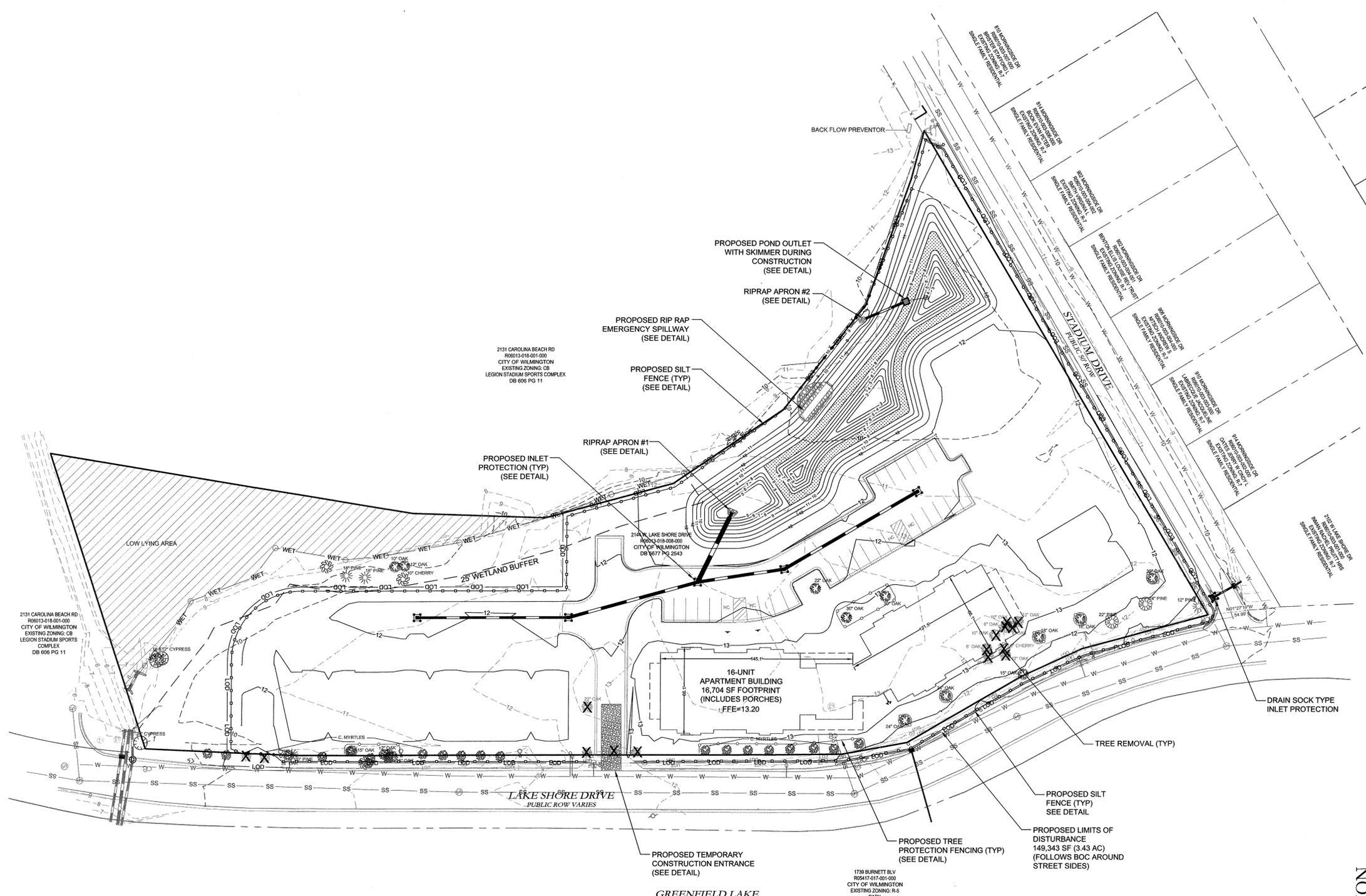
DRAWING INFORMATION:
 SCALE: 1" = 40'
 DESIGNED: [Signature]
 CHECKED: [Signature]

SEAL:
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 034354
 BRANCH 08
 DATE 4/1/16

C-2.0
 PEI JOB#: 14304.PE



NAD 83 (2011)
(NC GRID)



LEGEND:

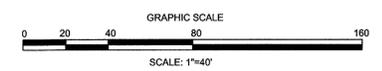
--- 16 ---	EXISTING CONTOUR
--- 29 ---	PROPOSED CONTOUR
EG=25.05	EXISTING SPOT ELEVATION
PG=25.05	PROPOSED EDGE OF PAVEMENT
TW=25.05	PROPOSED SIDEWALK ELEVATION
TC=25.05	PROPOSED TOP OF CURB ELEVATION
[Symbol]	INLET PROTECTION
[Symbol]	LIMITS OF DISTURBANCE
[Symbol]	SILT FENCE
[Symbol]	DRAINAGE FLOW PATH
[Symbol]	PROPOSED STORM SEWER
[Symbol]	PROPOSED DROP INLET

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: 4-5-16 Permit # 2016014
Signed: *[Signature]*

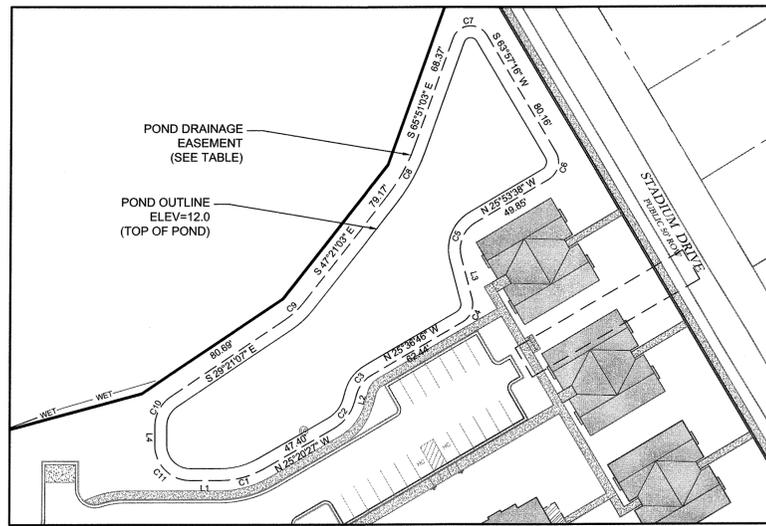
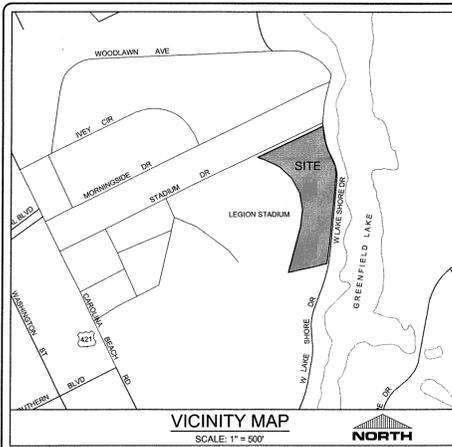
Approved Construction Plan

Name	Date
Planning	4/5/16
Traffic	4/4/16
Fire	4/5/16



RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p>	
<p>CLIENT INFORMATION: LAKESIDE PARTNERS OF WILMINGTON, INC. 811 MARTIN STREET WILMINGTON, NC 28401</p>	
<p>PARAMOUNT ENGINEERING 5911 Oleander Drive, Suite 201 Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846</p>	
<p>EROSION CONTROL PLAN LAKESIDE RESERVE 2144 W. LAKE SHORE DRIVE WILMINGTON, NORTH CAROLINA</p>	
<p>PROJECT STATUS: CONCEPTUAL LAYOUT: 4/1/16 PRELIMINARY LAYOUT: 4/1/16 RELEASED FOR CONST: 3/31/16</p>	<p>DRAWING INFORMATION: SCALE: 1"=40' DESIGNED: JRS CHECKED: GBS</p>
<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034354 JAMES BRANNING 3/31/16</p>	
<p>C-3.0 PEI JOB#: 14304.PE</p>	



POND EASEMENT LINE/CURVE TABLE (SEE INSET "A")

LINE	BEARING	DISTANCE
L1	N 04°39'33" E	17.80'
L2	N 70°20'27" W	4.45'
L3	S 60°01'33" W	25.88'
L4	S 65°20'27" E	10.83'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	51.50'	26.97'	26.66'	N 10°20'27" W
C2	26.00'	20.42'	19.90'	N 47°50'27" W
C3	18.00'	14.05'	13.70'	N 47°58'37" W
C4	12.00'	15.64'	14.56'	N 62°56'53" W
C5	18.00'	23.27'	21.69'	N 62°56'03" W
C6	12.00'	18.84'	16.96'	N 71°04'00" W
C7	11.00'	24.92'	19.92'	S 00°56'54" E
C8	101.00'	32.61'	32.47'	S 56°36'03" E
C9	50.00'	15.71'	15.64'	S 38°21'05" E
C10	21.00'	20.52'	19.71'	S 57°20'47" E
C11	21.00'	32.99'	29.70'	N 49°39'33" E



ASPHALT/CONCRETE 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 TECHNICAL SPECIFICATIONS.

BUILDING PAD NOTE:

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

STORMWATER NOTE:

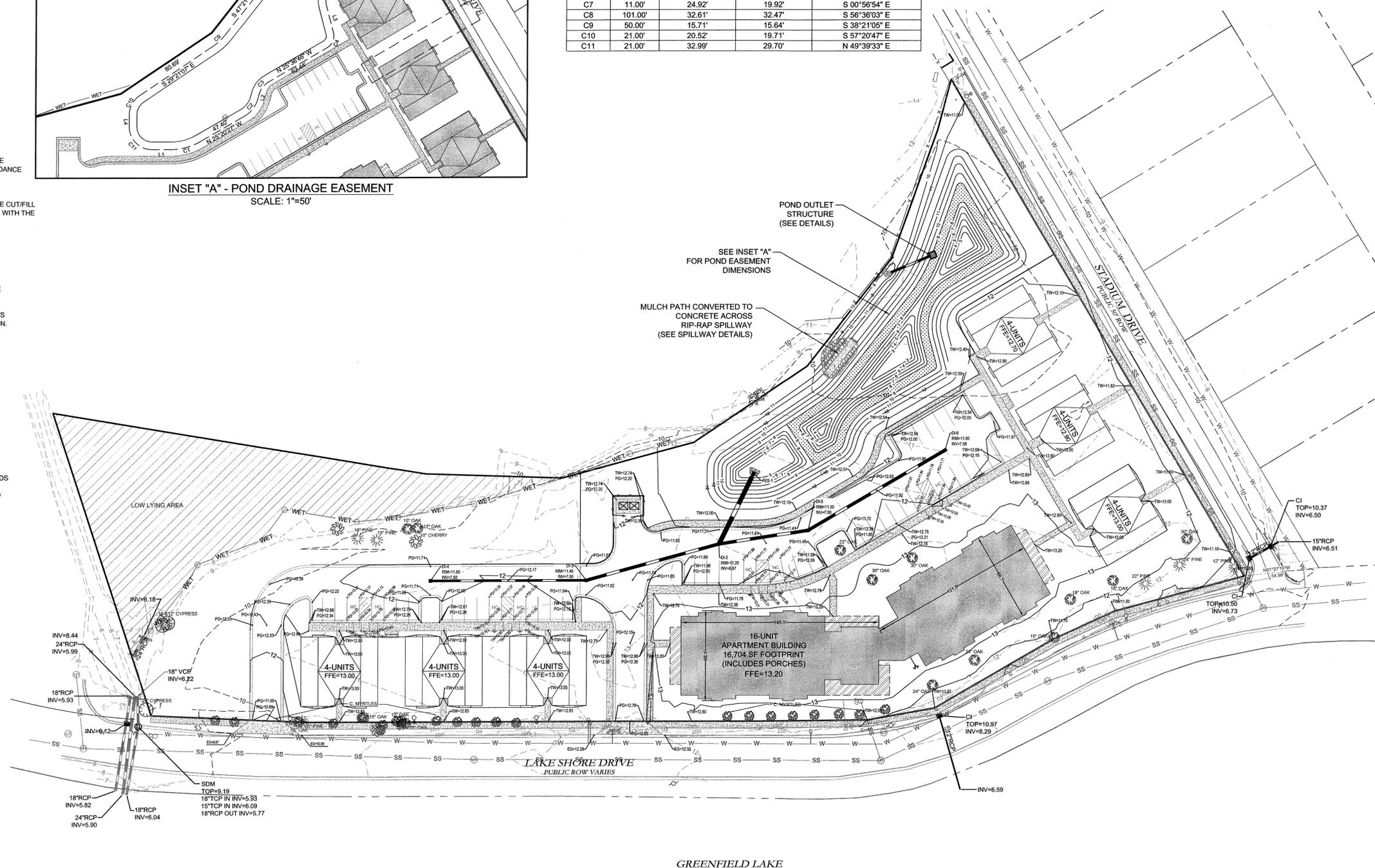
1. THIS PROJECT DRAINS TO A PROPOSED WET DETENTION BASIN THAT IS DESIGNED TO CONTROL THE FIRST 1.5" OF RUNOFF AND THE PREVS POST FOR THE 2, 10 & 25 YEAR EVENTS.

GENERAL NOTES:

- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH NEW HANOVER COUNTY AND STATE STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE PARKING LOT IS PAVED.
- CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT AND/OR CONCRETE AREAS TO MATCH PROPOSED GRADES.
- ALL PROPOSED SPOT ELEVATIONS SHOWN IN THE PARKING LOT ARE PROPOSED EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.
- ALL ROOF DRAINS SHALL BE DIRECTED TOWARDS ON-SITE COLLECTION SYSTEM. NO ROOF DRAINS SHALL BE DIRECTED OFF-SITE WITHOUT ENTERING THE ON-SITE COLLECTION FIRST.
- ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
- THE CONTRACTOR SHALL USE EITHER RCP (CL III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 HP STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.

WET DETENTION / SEDIMENT BASIN NOTES:

- THE PROPOSED WET DETENTION POND SHALL BE USED DURING CONSTRUCTION AS A SEDIMENT BASIN UNTIL THE SITE IS FULLY STABILIZED.
- THE CONTRACTOR SHALL CONSTRUCT THE SEDIMENT BASIN TO THE PROPOSED DEPTHS OF THE WET DETENTION POND AS ILLUSTRATED ON THE PLANS AND INSTALL THE PROPOSED OUTLET STRUCTURE. ONCE THE OUTLET STRUCTURE IS IN PLACE, THE CONTRACTOR SHALL IMMEDIATELY INSTALL THE SKIMMER TO THE PERMANENT POOL DRAWDOWN ORIFICE.
- ONCE THE SITE IS STABILIZED THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM THE BASIN AND ESTABLISH THE FINISHED GRADES OF THE PROPOSED WET DETENTION POND.
- REFER TO THE SEDIMENT BASIN DETAIL FOR THE REQUIRED SEDIMENT REMOVAL ELEVATIONS DURING CONSTRUCTION.



LEGEND:

- 16 --- EXISTING CONTOUR
- 29 --- PROPOSED CONTOUR
- EG=25.05 EXISTING SPOT ELEVATION
- PG=25.05 PROPOSED EDGE OF PAVEMENT
- TW=25.05 PROPOSED SIDEWALK ELEVATION
- TC=25.05 PROPOSED TOP OF CURB ELEVATION
- PROPOSED STORM SEWER
- PROPOSED DROP INLET

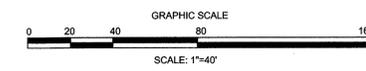
STORM SCHEDULE

UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	UPSTREAM INVERT	DOWNSTREAM INVERT	LENGTH (FT)	DIAMETER (IN)	SLOPE (%)
DI-2	FES-1	6.67	6.00	55	36	1.23%
DI-3	DI-2	7.00	6.67	101	24	0.33%
DI-5	DI-2	7.00	6.67	66	24	0.50%
DI-6	DI-5	7.58	7.00	116	24	0.50%
DI-4	DI-3	7.50	7.00	114	18	0.44%

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WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 4-5-16 Permit #: 2016014
Signed: *[Signature]*

Approved Construction Plan
Name: _____ Date: 4/5/16
Planning: *[Signature]*
Traffic: *[Signature]* 4-5-16
Fire: *[Signature]* 4-5-16



REVISIONS:

CLIENT INFORMATION:
LAKESIDE PARTNERS OF WILMINGTON, INC.
811 MARTIN STREET
WILMINGTON, NC 28401

PARAMOUNT ENGINEERING
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

GRADING AND DRAINAGE PLAN
LAKESIDE RESERVE
2144 W. SHORE DRIVE
WILMINGTON, NORTH CAROLINA

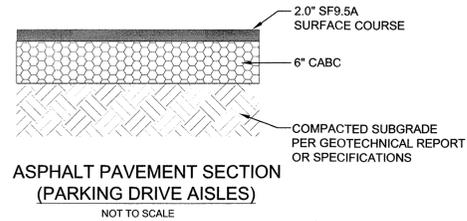
PROJECT STATUS:
CONCEPTUAL LAYOUT: 4/1/16
PRELIMINARY LAYOUT: 4/1/16
RELEASED FOR CONSET: 4/1/16

DRAWING INFORMATION:
DATE: 4/5/16
DESIGNED: *[Signature]*
DRAWN: *[Signature]*
CHECKED: *[Signature]*

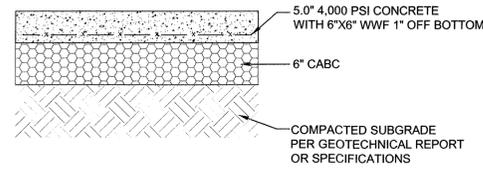
SEALED: *[Professional Seal]*
3/31/16

C-3.1
PEI JOB#: 14304.PE

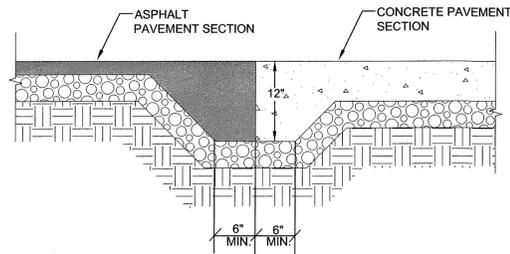
RELEASED FOR CONSTRUCTION



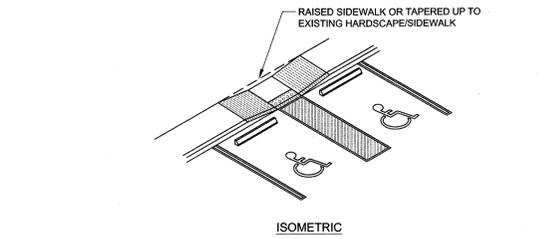
ASPHALT PAVEMENT SECTION (PARKING DRIVE AISLES)
NOT TO SCALE



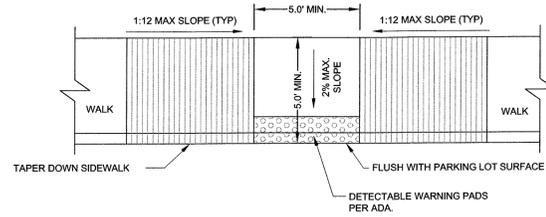
CONCRETE PAVEMENT SECTION (DUMPSTER PAD)
NOT TO SCALE



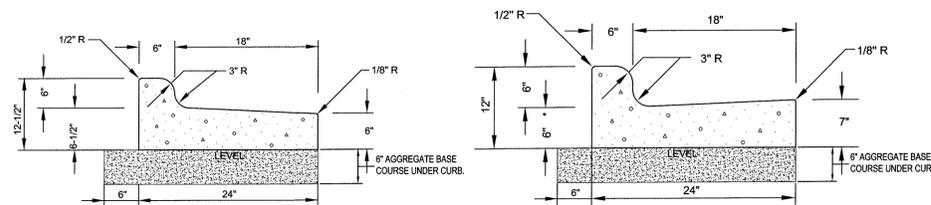
ASPHALT TO CONCRETE TRANSITION SECTION
NOT TO SCALE



ISOMETRIC



HANDICAP CURB ACCESS
NOT TO SCALE

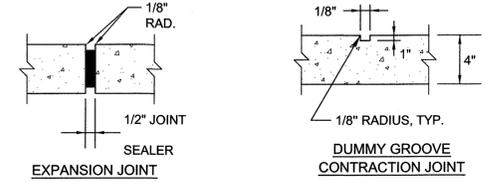


24\"/>

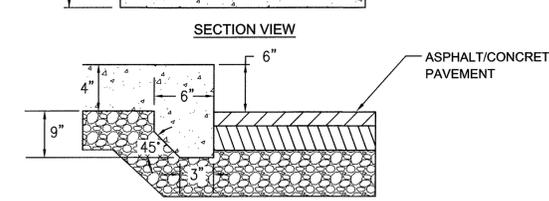
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GENERAL NOTES:

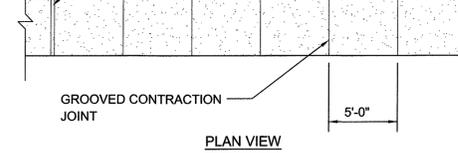
CONTRACTION JOINTS SHALL BE SPACED AT MAX. 10' INTERVALS, EXCEPT THAT A 15 FOOT SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10 FOOT INTERVALS. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED. ALL CONTRACTION JOINTS EXCEPT IN 8" X 6" MEDIAN CURB SHALL BE FILLED WITH JOINT SEALER. EXPANSION JOINTS SHALL BE SPACED AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



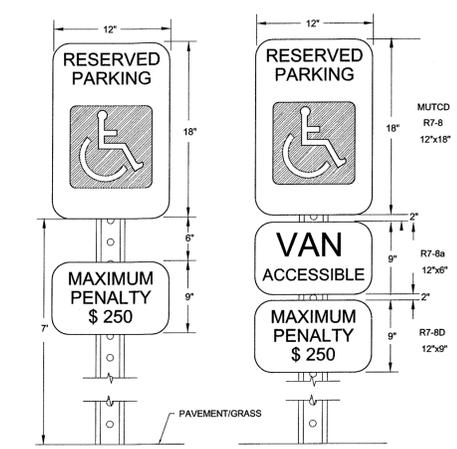
EXPANSION JOINT
DUMMY GROOVE CONTRACTION JOINT



CONCRETE WALK DETAIL
NOT TO SCALE

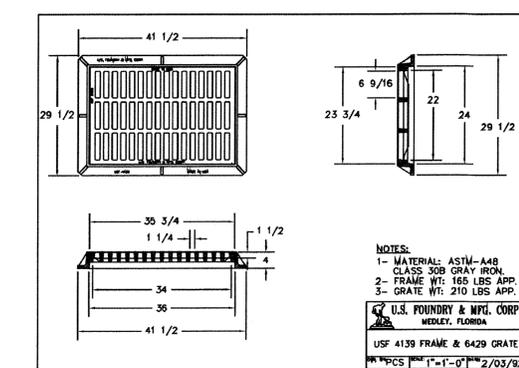


CONCRETE WALK DETAIL
NOT TO SCALE



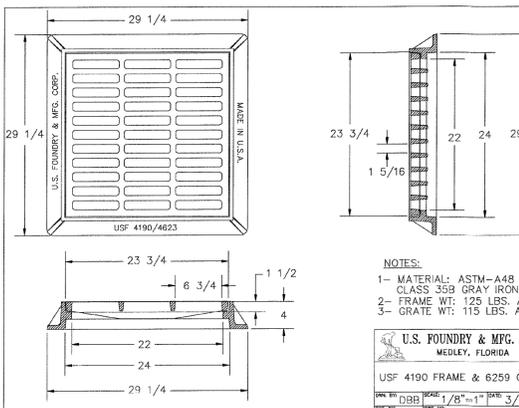
HANDICAP SIGN DETAIL
NOT TO SCALE

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



NOTES:
1- MATERIAL: ASTM-A48 CLASS 30B GRAY IRON.
2- FRAME WT: 165 LBS APP.
3- GRATE WT: 210 LBS APP.

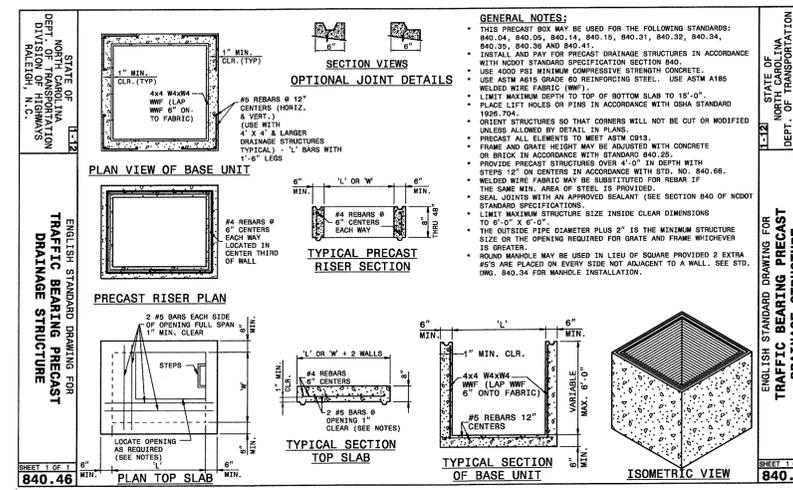
U.S. FOUNDRY & MFG. CORP.
MEDLEY, FLORIDA
USF 4139 FRAME & 6429 GRATE
REVISED 11/11/01 2/03/92
A2691



NOTES:
1- MATERIAL: ASTM-A48 CLASS 35B GRAY IRON.
2- FRAME WT: 125 LBS. APP.
3- GRATE WT: 115 LBS. APP.

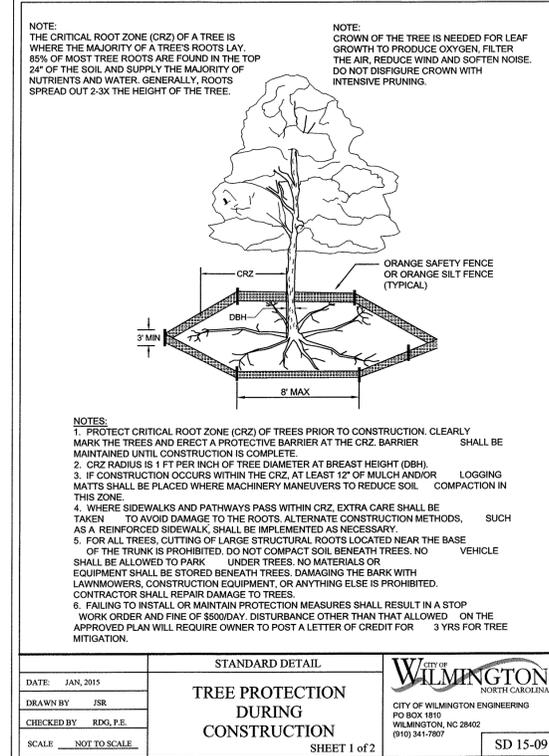
U.S. FOUNDRY & MFG. CORP.
MEDLEY, FLORIDA
USF 4190 FRAME & 6259 GRATE
REVISED 11/11/01 3/9/98
A4030

DROP INLET FRAME & GRATE DETAILS
NOT TO SCALE



CERTIFICATION NOTE:
CONTRACTOR SHALL PROVIDE CERTIFICATION FROM A LICENSED NORTH CAROLINA STRUCTURAL ENGINEER THAT PRECAST STRUCTURES PROVIDED MEET REQUIREMENTS FOR H2O LOADING

DROP INLET DETAIL
NOT TO SCALE

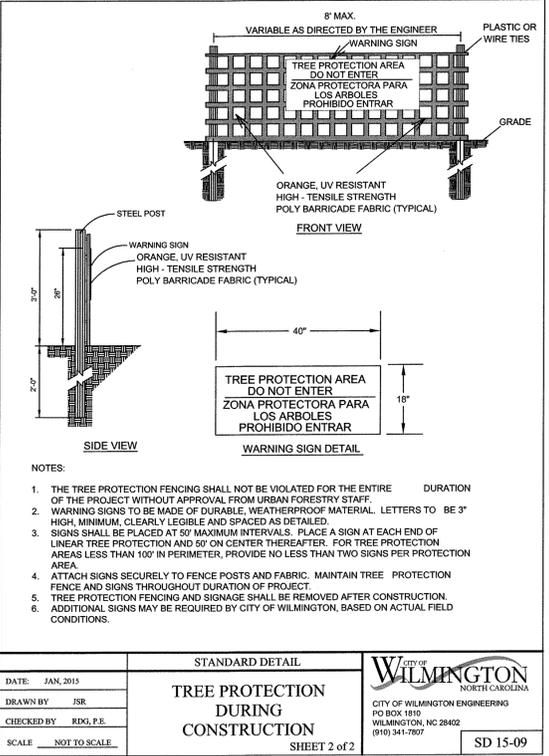


STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 1 of 2

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 15-09



STANDARD DETAIL
TREE PROTECTION DURING CONSTRUCTION
SHEET 2 of 2

DATE: JAN, 2015
DRAWN BY: JSR
CHECKED BY: RDG, P.E.
SCALE: NOT TO SCALE

CITY OF WILMINGTON
NORTH CAROLINA
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807

SD 15-09

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 STORMWATER MANAGEMENT PLAN
Date: 4-5-16 Permit # 2016014
Signed: [Signature]

Approved Construction Plan
Name: [Signature] Date: 4/5/16
Planning: [Signature] 4-5-16
Traffic: [Signature] 4-5-16
Fire: [Signature] 4-5-16

CLIENT INFORMATION:
LAKESIDE PARTNERS OF WILMINGTON, INC.
811 MARTIN STREET
WILMINGTON, NC 28401

PARAMOUNT ENGINEERING
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6760 (F)
NC License #: C-2846

DETAILS
LAKESIDE RESERVE
2144 W. LAKE SHORE DRIVE
WILMINGTON, NORTH CAROLINA

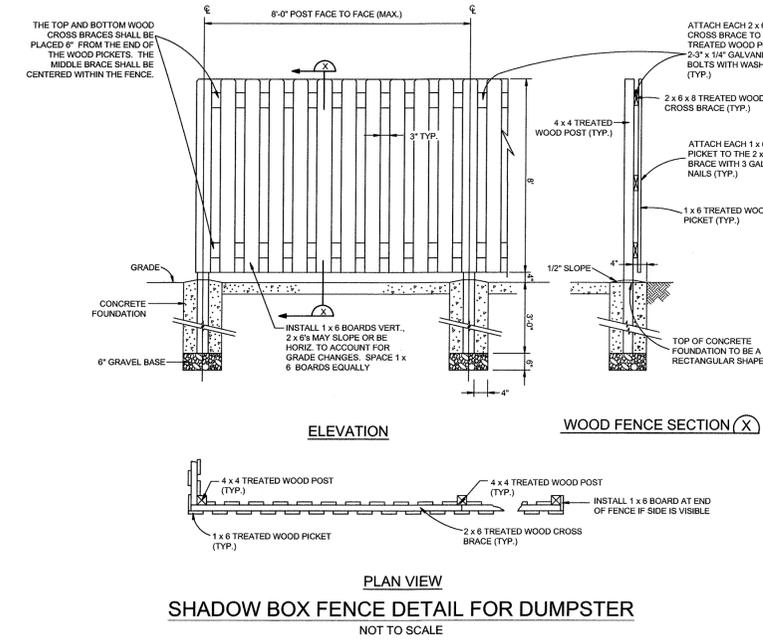
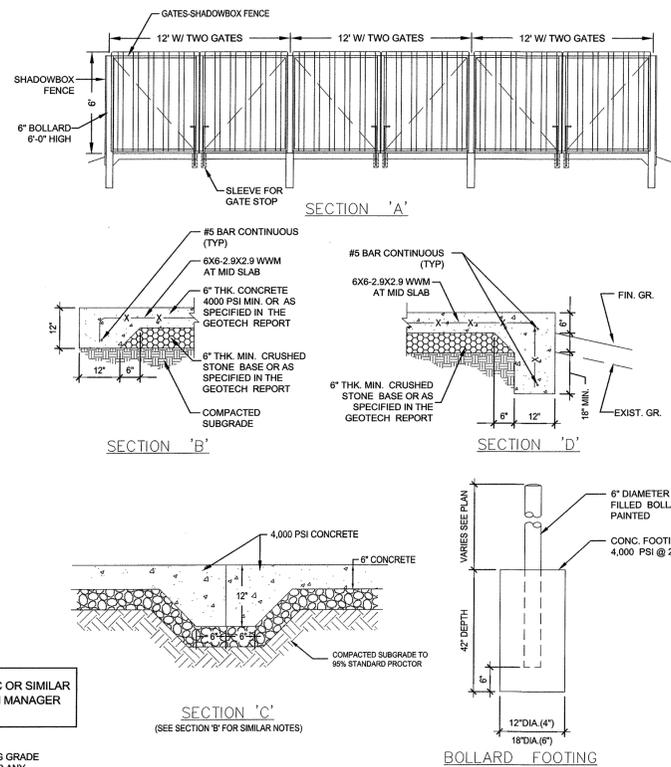
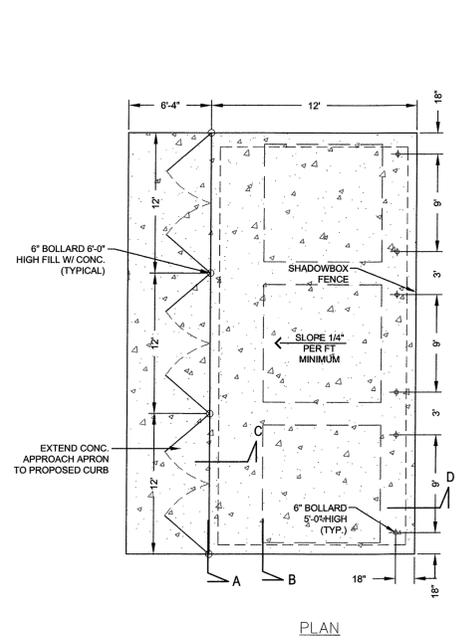
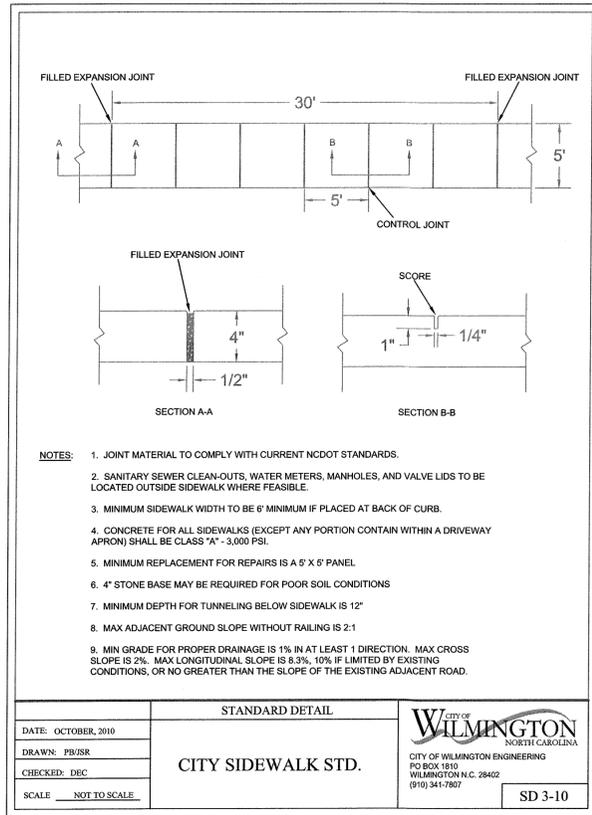
RELEASED FOR CONSTRUCTION

PROJECT STATUS:
CONCEPT LAYOUT: []
PRELIMINARY LAYOUT: []
RELEASED FOR CONST: []

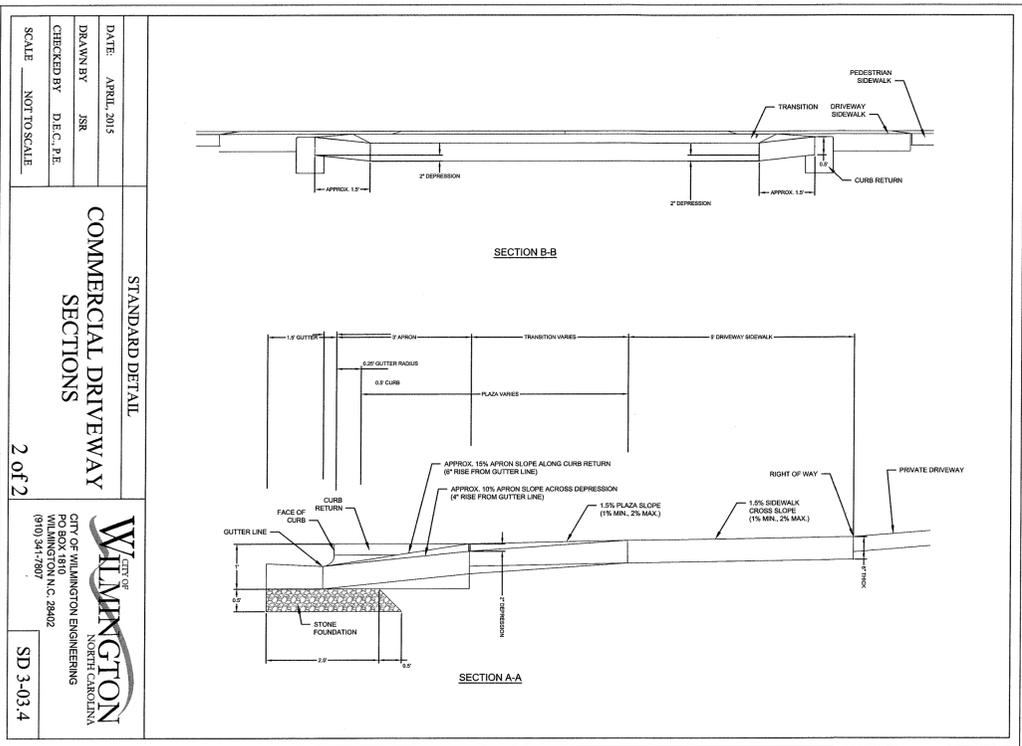
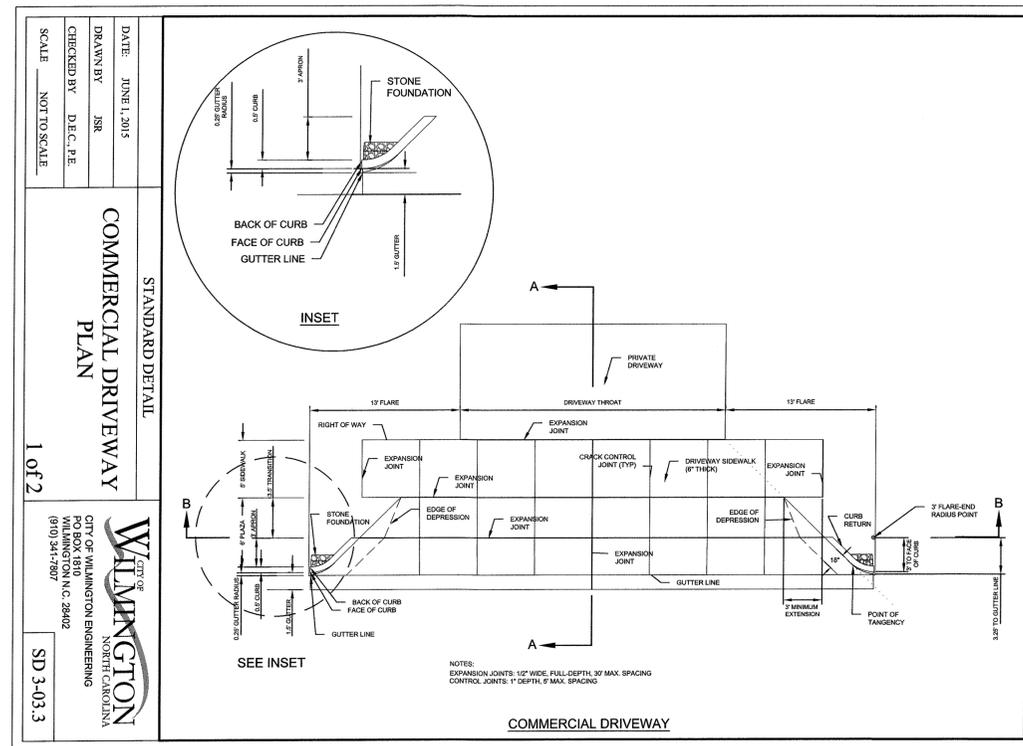
DRAWING INFORMATION:
DATE: 4/1/16
JOB: 15-09
DESIGNED: []
DRAWN: []
CHECKED: []

SEAL:
Professional Engineer
No. 354
State of North Carolina
Branch 001
4/1/16

C-4.0
PEI JOB#: 14304.PE



DUMPSTER PAD DETAIL
NOT TO SCALE



COMMERCIAL DRIVEWAY SECTIONS

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 4-5-16 Permit #: 2016014

Signed: *[Signature]*

Approved Construction Plan

Name: *[Signature]* Date: 4/5/16

Planning: *[Signature]*

Traffic: *[Signature]*

Fire: *[Signature]*

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

RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
PARAMOUNT ENGINEERING
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-0707 (O) (910) 791-6760 (F)
N.C. License #: C-2846

DETAILS
LAKESIDE RESERVE
2144 W. LAKE SHORE DRIVE
WILMINGTON, NORTH CAROLINA

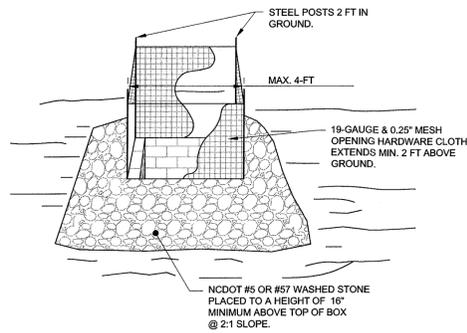
PROJECT STATUS
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
RELEASED FOR CONST:

DRAWING INFORMATION
DATE: 4/1/16
DESIGNED: JSR
DRAWN: JSR
CHECKED: JSR

SEAL
NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL 034354
BRANCH 001
4/1/16

C-4.1

PEI JOB#: 14304.PE



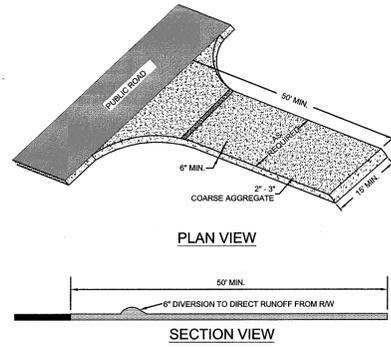
NOTES:

1. DRIVE 5-FOOT STEEL POSTS (1.25 lb/ft steel) 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
2. SURROUND THE POSTS WITH AT LEAST 19-GAUGE HARDWARE CLOTH WITH A 1/4-INCH MESH OPENING. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM FOR A MIN. 2 FEET ABOVE THE GROUND. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING AND REMOVAL IS RECOMMENDED.
3. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET. THE TOP ELEVATION OF THE STRUCTURE MUST BE AT LEAST 12-INCHES LOWER THAN THE SURROUNDING GROUND ELEVATION DOWNSLOPE FROM THE INLET TO ENSURE THAT STORM FLOWS GET INTO THE INTENDED INLET, UNLESS OTHER SEDIMENT-CONTROL DEVICES ARE INSTALLED TO PREVENT OFF-SITE SEDIMENT-RUNOFF.

ALTERNATE MEASURE:
THE USE OF A PYRAMID SHAPED STEEL STRUCTURE OR PID CAN BE USED AS AN ALTERNATE MEASURE DEVICE. CONTACT TRIANGLE STORMWATER SOLUTIONS OR OTHER MANUFACTURERS.

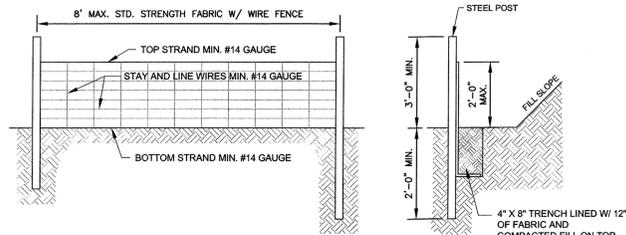
TEMPORARY INLET PROTECTION

NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

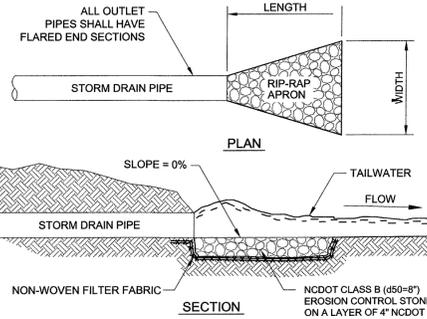


NOTES:

1. WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
2. SYNTHETIC FILTER FABRIC OF AT LEAST 80% BY WEIGHT OF POLYOLEFIN'S OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
3. SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

TEMPORARY SILT FENCE

NOT TO SCALE

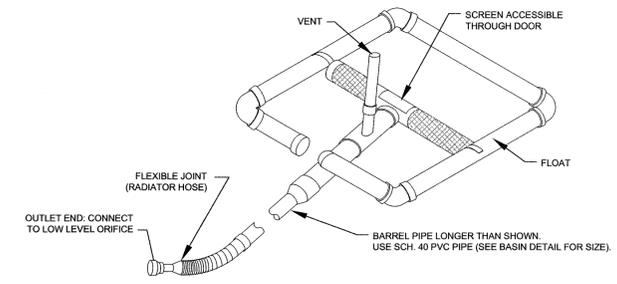


RIP-RAP APRON DETAIL

NOT TO SCALE

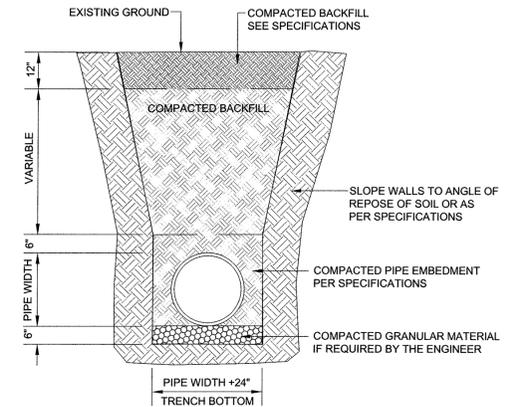
RIP-RAP APRON SCHEDULE					
RIPRAP LOCATIONS	PIPE DIA. (IN.)	LENGTH, L _a (FT)	UPSTREAM WIDTH 3xDIA (FT.)	DOWNSREAM WIDTH, W (FT.)	STONE THICKNESS 1 (IN.)
RRA-1 (INLET)	36	*5 MIN.	9.00	5.00	10"
RRA-2 (OUTFALL)	15	5 MIN.	4.00	3.50	14"

*CARRY RIP-RAP TO BOTTOM OF THE FOREBAY



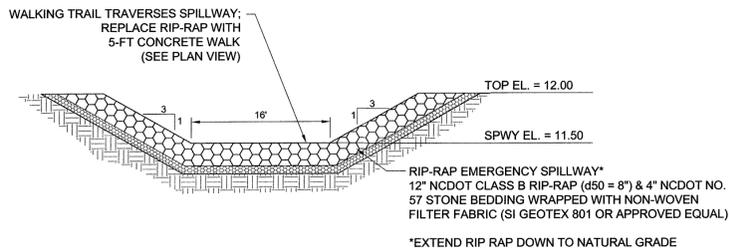
FAIRCLOTH SKIMMER DETAIL

NOT TO SCALE



PIPE TRENCH DETAIL

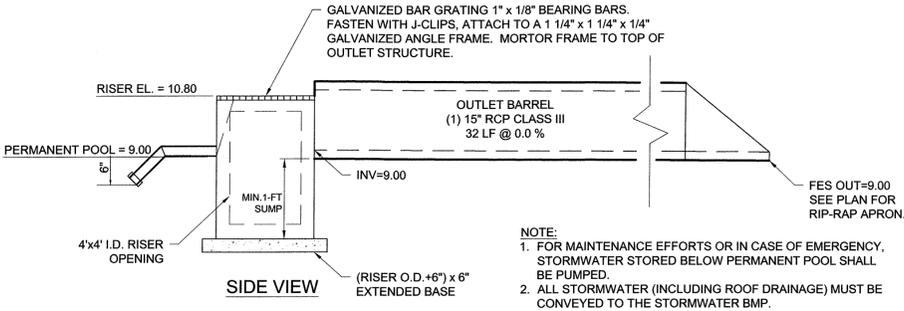
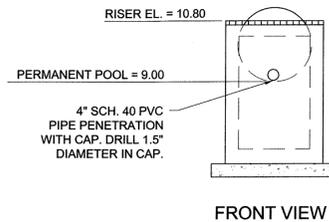
NOT TO SCALE



POND EMERGENCY SPILLWAY

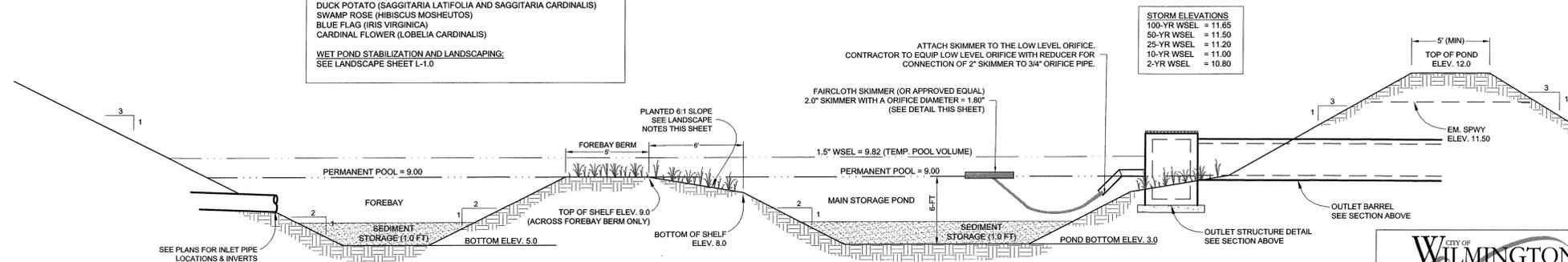
NOT TO SCALE

WET POND SHELF PLANTING NOTES:
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" O.C. IN A CHECKERBOARD PATTERN.
SHELF 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 POND STABILIZATION AND LANDSCAPING:
SEE LANDSCAPE SHEET L-1.0



OUTLET STRUCTURE DETAIL

NOT TO SCALE



WET RETENTION POND DETAIL (AND SEDIMENT BASIN)

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.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: 4-5-16 Permit #: 2016014
Signed: [Signature]

Approved Construction Plan
Name: [Signature] Date: 4/5/16
Planning: [Signature] 4/4/16
Traffic: [Signature] 4/5/16
Fire: [Signature] 4/5/16

RELEASED FOR CONSTRUCTION

PARAMOUNT ENGINEERING INC.
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
NC License #: C-2846

CLIENT INFORMATION:
LAKESIDE PARTNERS OF WILMINGTON, INC.
811 MARTIN STREET
WILMINGTON, NC 28401

DETAILS
LAKESIDE RESERVE
2144 W. LAKE SHORE DRIVE
WILMINGTON, NORTH CAROLINA

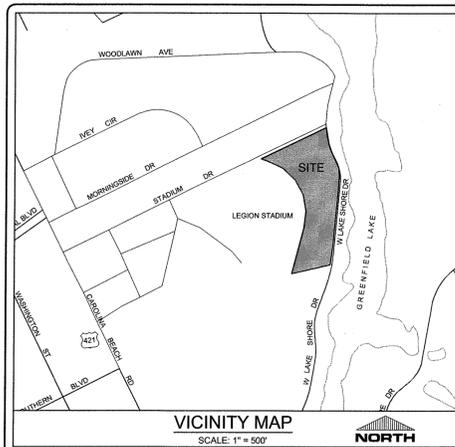
PROJECT STATUS:
CONTRACT: []
PRELIMINARY LAYOUT: []
FINAL DESIGN: []
RELEASED FOR CONSTRUCTION: []

DRAWING INFORMATION:
DATE: 4/17/16
SCALE: N/A
DRAWN: JRS
CHECKED: JRS

SEAL:
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL NO. 034354
BRANCH: []
4/1/16

C-4.2
PEI JOB#: 14304.PE





LANDSCAPE CALCULATIONS:

RE'QD	PROV
13,950 SF	14,100 SF
23	23 + WITH CREDITS FOR EXISTING TREES SAVED
138	150

STADIUM DRIVE SECONDARY STREETYARD
 (424 LF - 0 LF OF DRIVEWAYS) * 18 * 0.5
 @ 1 CANOPY / 600 SF OR
 @ 6 SHRUBS / 600 SF

RE'QD	PROV
3,816 SF	3,960 SF
6	6 (1 EXISTING, 5 PROPOSED)
36	36

PARKING AREA INTERIOR
 30,440 SF * 20% SHADING
 LARGE SHADE / CANOPY TREES @ 707 SF

RE'QD	PROV
6,088 SF	6,363 SF
9	9

PARKING AREA PERIMETER - N/A

FOUNDATION PLANTINGS

RE'QD	PROV
771 SF	771 SF
490 SF	490 SF
490 SF	490 SF

PHASE 1 BLDGS - WEST FACING WALL ADJACENT TO PARKING AREA
 265.84 LF * 24' 2" (24.167) FT HGT * 0.12

PHASE 2 BLDGS - WEST FACING WALL ADJACENT TO PARKING AREA
 169 LF * 24' 2" (24.167) FT HGT * 0.12

PHASE 2 BLDGS - SOUTH FACING WALL ADJACENT TO PARKING AREA
 169 LF * 24' 2" (24.167) FT HGT * 0.12

SITE DATA

PROJECT NAME: GOOD SHEPHERD CENTER
 SITE ADDRESS: 2144 W. LAKE SHORE DRIVE
 NHC PIN: R06013-018-008-000
 PROPERTY OWNER: CITY OF WILMINGTON
 SOURCE DEED: DEED BOOK 5677, PAGE 2543
 AREA: 185,790± SF OR 4.26± ACRES
 ZONING: MF-L (CD)
 PROPOSED USE: MULTI-FAMILY
 CAMA LAND USE: URBAN
 EXISTING EASEMENTS: NONE KNOWN

DIMENSION REQUIREMENTS

SETBACKS:	REQUIRED	PROVIDED
FRONT	N/A*	30'
SIDE	20'	110.1'
REAR	8.5'	69.3'

- *PER SECTION 18-184(g)(12), FRONT AND CORNER SIDE SETBACKS DO NOT APPLY AS LONG AS THE FOLLOWING CRITERIA ARE MET:
- THE STREET IS NOT ZONED R-20, R-15, R-7, R-5, OR R-3
 - BUILDINGS MUST HAVE AN ENTRANCE FROM THE SIDEWALK
 - HVAC EQUIPMENT, AIR CONDITIONING WINDOW UNITS, ELECTRICAL EQUIPMENT, FIRE ESCAPES, SOLID WASTE FACILITIES, AND OTHER UTILITY EQUIPMENT SHALL NOT BE LOCATED ALONG FACADES WITH STREET FRONTAGE
 - ARCHITECTURAL FEATURES, INCLUDING FENESTRATION, MATERIAL CHANGES OR OTHER DESIGN FEATURES MUST BE PROVIDED ALONG THE STREET SUCH THAT BLANK WALL SPACE DOES NOT EXCEED FIFTEEN (15) FEET IN LENGTH

MAXIMUM HEIGHT 35' (24'-2" PROPOSED)

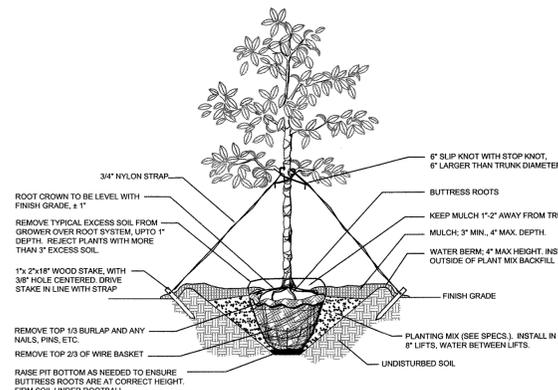
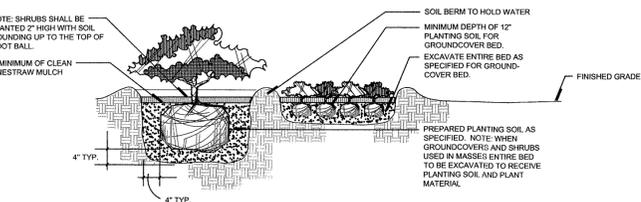
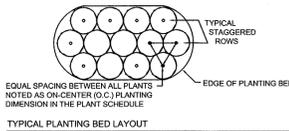
BUILDING INFORMATION

PHASE I: (1) 16-UNIT APARTMENT BUILDING (16,704 SF) [1 STORY]
 PHASE II: (6) 4-UNIT APARTMENTS BUILDING (2,853 SF EACH) [1 STORY]
 TOTAL BUILDINGS: 7 (40 1-BR UNITS; 33,822 SF)
 BUILDING COVERAGE: 18.2%
 CONSTRUCTION TYPE: V-B

- LANDSCAPE NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
 - ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
 - NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
 - ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
 - ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
 - PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
 - ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
 - THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
 - IF IRRIGATION IS NEEDED, IT SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
 - THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED. ALL MATERIAL INCLUDING SOD AND SEEDED AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
 - ALL DISTURBED AREAS SHALL BE SEEDED.

NOTES:

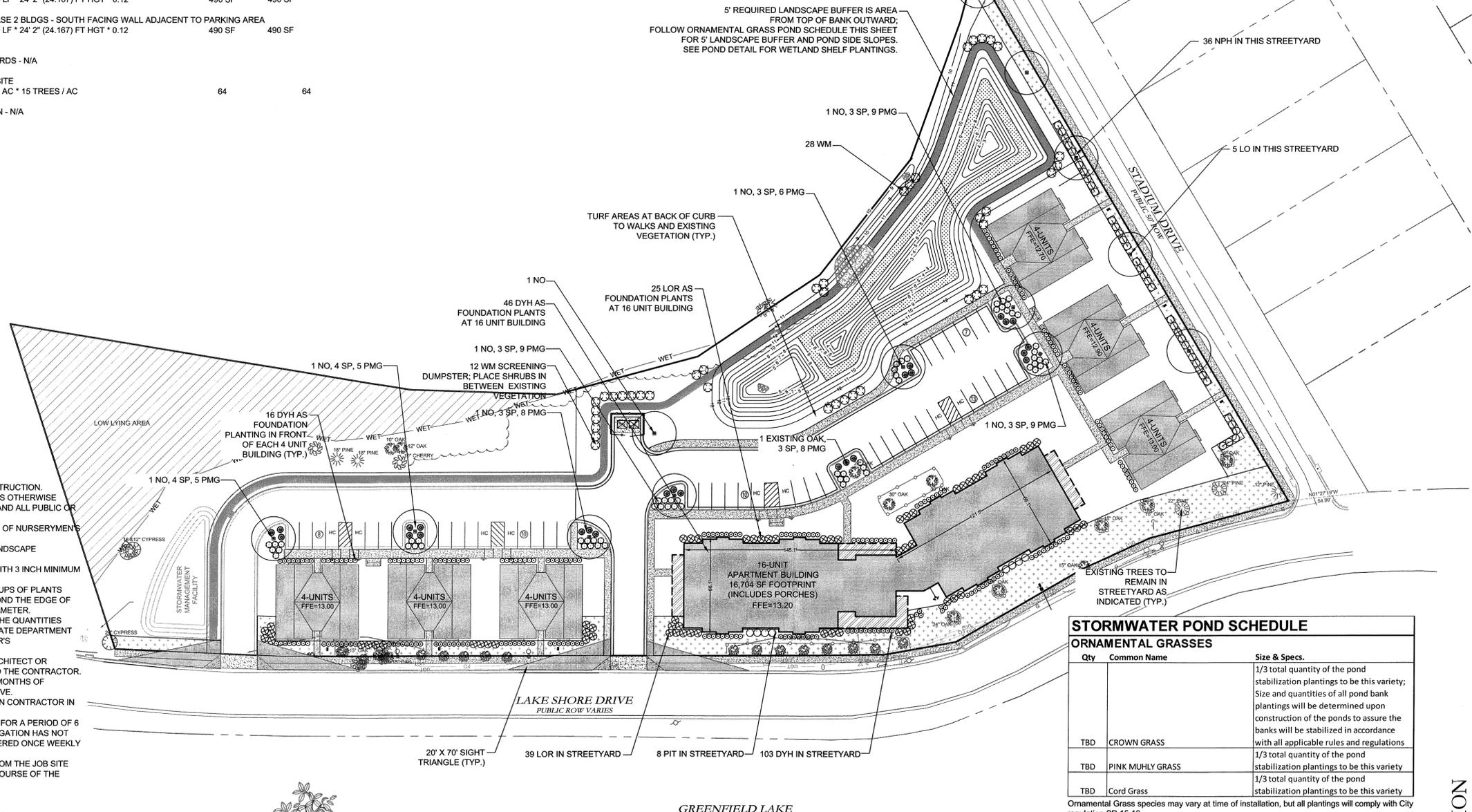
- OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
- INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE.
- TAMP PLANT SOIL MIX FIRMLY IN 8" LIFTS AROUND PLANT BALL.
- SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



Plant Schedule

Key	Qty	Common Name	Size & Specs.
Trees			
LO	5	Live Oak 'High Rise'	specimen, 3" cal.
NO	8	Nuttall Oak	3" cal.
Shrubs			
DYH	244	Dwarf Yaupon Holly	12" hgt. min.
LOR	64	Loropetalum 'Ruby'	12" hgt. min.
NPH	36	Needlepoint Holly	12" hgt. min.
PIT	8	Variagated Pittosporum	12" hgt. min.
WM	40	Wax Myrtle	4' hgt. min.; full to ground
Ground Cover and Ornamental Grasses			
PMG	60	Pink Muhly Grass	3 gal. spaced 4' o.c.
SP	25	Saw Palmetto	3 gal. spaced 4' o.c.
Seed & Mulch			
		Bermuda 'Blackjack'	Seed all disturbed areas
		Double Shredded Hardwood Mulch	All plant beds; 3" Depth Min.

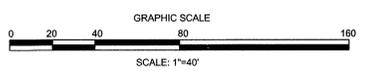
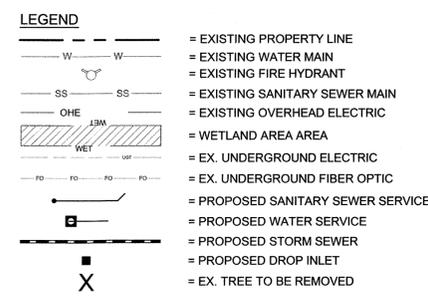
NAD 83 (2011)
(NC GRID)



STORMWATER POND SCHEDULE

Qty	Common Name	Size & Specs.
TBD	CROWN GRASS	1/3 total quantity of the pond stabilization plantings to be this variety; Size and quantities of all pond bank plantings will be determined upon construction of the ponds to assure the banks will be stabilized in accordance with all applicable rules and regulations
TBD	PINK MUHLY GRASS	1/3 total quantity of the pond stabilization plantings to be this variety
TBD	Cord Grass	1/3 total quantity of the pond stabilization plantings to be this variety

Ornamental Grass species may vary at time of installation, but all plantings will comply with City regulation SD 15-16.



Approved Construction Plan

City of Wilmington, North Carolina
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN

Date: 4-5-16 Permit # 2016014
 Signed: [Signature]

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:

Rev. 1: [Details]

CLIENT INFORMATION:

LAKESIDE PARTNERS, LLC
 811 MARTIN STREET
 WILMINGTON, NC 28401

PARAMOUNT ENGINEERING

5911 Olander Drive, Suite 201
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6760 (F)
 NC License #: C-2846

LANDSCAPE PLAN

LAKESIDE RESERVE
 2144 W. LAKE SHORE DR.
 WILMINGTON, NORTH CAROLINA

RELEASED FOR CONSTRUCTION

PROJECT STATUS: CONCEPTUAL LAYOUT, PRELIMINARY LAYOUT, RELEASED FOR CONST. 4/11/16

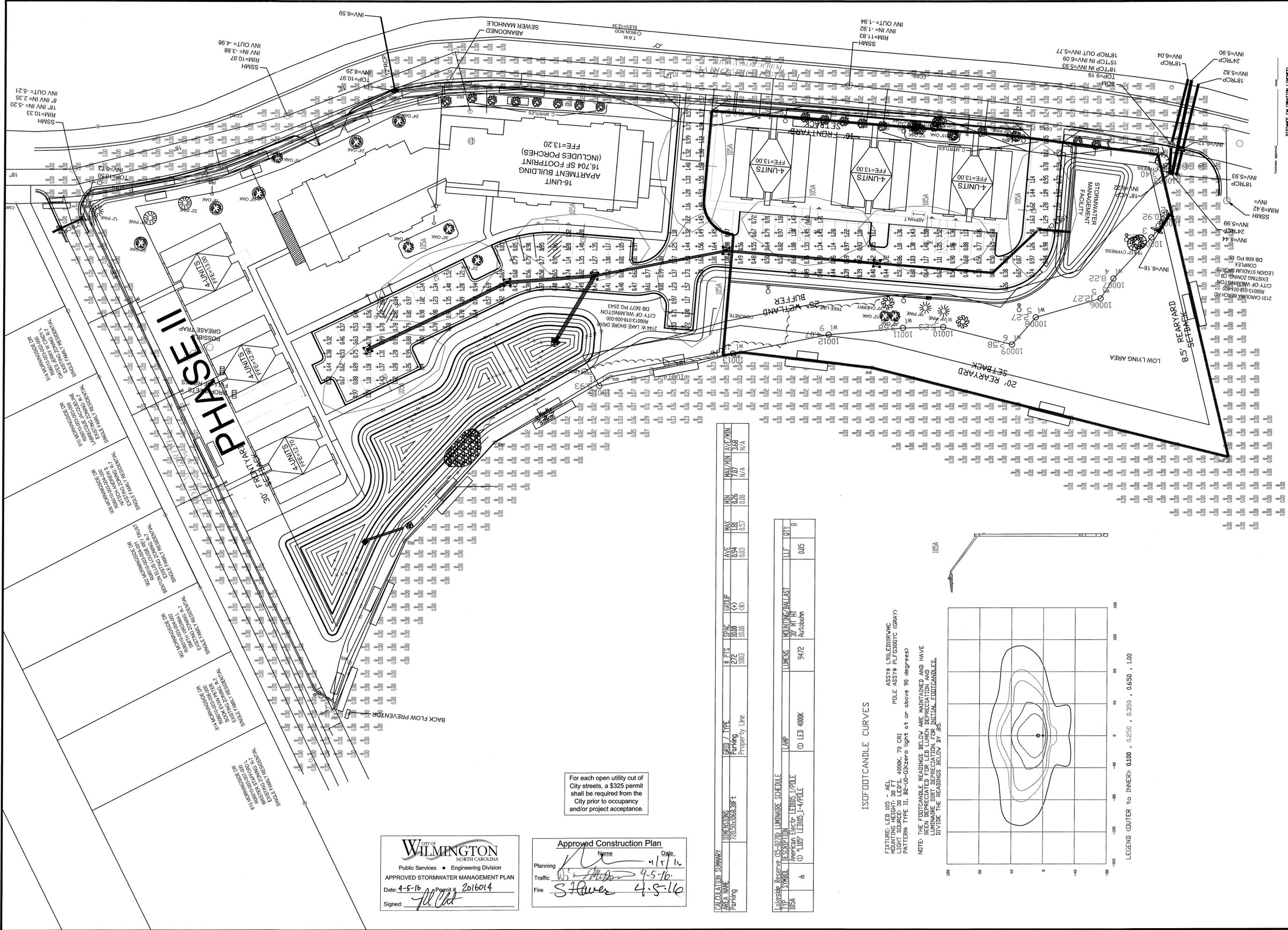
DRAWING INFORMATION

DATE: 4/11/16
 DRAWN BY: [Name]
 CHECKED BY: [Name]

SEAL: [Professional Seal]

L-1.0

PEI JOB#: 14304.PE



PHASE II

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: 4-5-16 Permit # 2016014
 Signed: *[Signature]*

Approved Construction Plan
 Name: *[Signature]* Date: 4/5/16
 Planning: *[Signature]*
 Traffic: *[Signature]* 4-5-16
 Fire: *[Signature]* 4-5-16

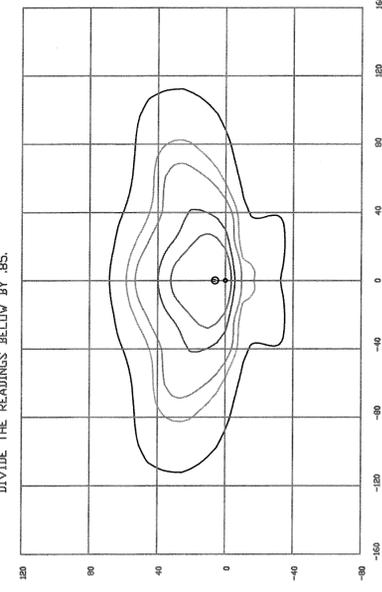
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	SPAC	GROUP	AVE	MAX	MIN	MAX/MIN AVE/MIN
Parking	720x60x088-30ft	Parking	272	1000	(+)	0.94	1.81	0.26	7.07
Property Line		Property Line	1003	1000	(#)	0.03	0.57	0.00	N/A

SYMBOL	DESCRIPTION	LUMENS	MOUNTING/BALLAST	ILLF	QTY
105A	(C) LED 4000K	9472	30' HI HI Autobalast	0.85	8

ISOFOTOCANDLE CURVES

FIXTURE LED 105 - AEL
 MOUNTING HEIGHT: 30 FT
 LIGHT SOURCE: 30 LEDS, 4000K, 70 CRT
 PATTERN: TYPE II, B2-U0-G3zero light at or above 90 degrees)
 ASSY# L9LED0R0VNC
 POLE ASSY# PLFG30GYC (GRAY)



LEGEND (OUTER to INNER): 0.100 , 0.250 , 0.350 , 0.650 , 1.000

LIGHTING DESIGN TOLERANCE
 The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy Progress. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective surfaces, obstructions (trees or other objects) in the area, or lighting from sources other than those specified in the drawing, may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.



PROPRIETARY & CONFIDENTIAL
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