

The Lofts at Randall

4810 Randall Parkway & 4629 Patrick Avenue

City of Wilmington, New Hanover County, North Carolina
Major Site Plan Submittal

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4810 Randall Parkway & 4629 Patrick Avenue
 City of Wilmington, New Hanover County, North Carolina
 Major Site Plan Submittal

DEVELOPMENT DATA

PROJECT:	THE LOFTS AT RANDALL
PLAN TYPE:	MAJOR SITE PLAN
ENGINEER:	CHANDLER ENGINEERING, PA JIM CHANDLER, PE 309 S. FUQUAY AVENUE FUQUAY-VARINA, NC 27526 PHONE: 919-552-4845 FAX: 919-552-6962 EMAIL: jim@chandlerengineeringpa.com
OWNER/DEVELOPER:	THE LOFTS AT RANDALL LLC CATHERINE CONNORS - MANAGER 106 MUIR WOODS DRIVE CARY, NC 27513 PHONE: 919-380-0446 EMAIL: cathy.connors@solsticepartners.net
ARCHITECT:	ANEGRAM STUDIOS, PA TAMMY KAHM, AIA PO BOX 10488 RALEIGH, NC 27605 PHONE: 919-377-2366 EMAIL: tammy@anegramstudio.com
PROPERTY ADDRESS:	4810 RANDALL PARKWAY 4629 PATRICK AVENUE
PARCEL NUMBER:	313711-67-9382.000 313711-77-1253.000
REFERENCE:	DB 4073, PG 784 DB 5503, PG 1266
ZONING:	MF-L (CD)
PROPOSED USE:	MULTI-FAMILY
EXISTING TRACT AREA:	1.750 ACRES



VICINITY MAP - 1"=1000'

SHEET INDEX

C1.01 -	SITE INVENTORY/TREE PRESERVATION/DEMOLITION PLAN
C2.01 -	SITE LAYOUT PLAN
C3.01 -	SITE GRADING PLAN
C4.01 -	SITE SEDIMENTATION AND EROSION CONTROL PLAN
C5.01 -	SITE UTILITY PLAN
C6.01 -	SITE PLANTING PLAN
C6.02 -	PLANTING DETAILS
C7.01 -	SITE DETAILS
C7.02 -	SITE DETAILS
SS-2 -	SANITARY SEWER STANDARD DETAILS
WSD-1 -	WATER STANDARD DETAILS
WSD-2 -	WATER STANDARD DETAILS
AA201 -	NORTH AND EAST ELEVATIONS
AA202 -	SOUTH AND WEST ELEVATIONS
AA701 -	PICNIC SHELTER AND SITE SIGN


 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____

chandler engineering pa
 309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
 Phone: 919-552-4845 Fax: 919-552-6962



CALL 48 HOURS BEFORE YOU DIG
1-800 632-4949
 NORTH CAROLINA ONE-CALL CENTER

ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

CURVE TABLE				
CURVE	RADIUS	LENGTH	BEARING	CHORD DELTA
C1	2694.48	274.56	137.40	S87°52'32"W 274.44 53°01'27"

LINE TABLE		
LINE	BEARING	LENGTH
L1	S79°51'52"W	2.58
L2	S17°13'56"W	12.27

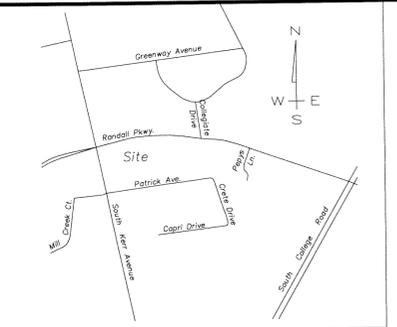
OWNER INFORMATION
 BU CONSTRUCTION CO.
 6317 OLD FORT ROAD
 WILMINGTON, NC 28411

PROPERTY INFORMATION
 4810 RANDALL PARKWAY
 4629 PATRICK AVENUE
 WILMINGTON, NC 28405

PIN 313711-67-9382.000
 PIN 313711-77-1253.000

DEED BOOK 4073, PAGE 784
 DEED BOOK 5503, PAGE 1266

1.750 ACRES
 76,236 SQ FEET



Vicinity Map (No Scale)



SANITARY SEWER INVERTS

SSMH#1	RM=40.45'	TOP=39.79'	INV IN(S)=33.49'	INV OUT(S)=35.25'
SSMH#2	RM=40.16'	TOP=38.56'	INV IN(S)=34.96'	INV OUT(S)=34.86'
SSMH#3	RM=40.11'	TOP=38.11'	INV IN(S)=34.51'	INV OUT(S)=34.51'
SSMH#4	RM=40.45'	TOP=39.81'	INV IN(S)=33.25'	INV OUT(S)=33.25'
SSMH#5	RM=38.51'	TOP=37.87'	INV IN(S)=26.53'	INV OUT(S)=26.53'
SSMH#6	RM=38.41'	TOP=37.81'	INV IN(S)=34.01'	INV OUT(S)=34.01'
SSMH#7	RM=39.59'	TOP=38.29'	INV IN(S)=34.29'	INV OUT(S)=34.29'

STORM DRAINAGE INVERTS

CM#1	TOP=38.56'	INV IN(S)=33.36'	INV OUT(S)=33.24'
CM#2	TOP=39.74'	INV IN(S)=34.34'	INV OUT(S)=33.94'
CM#3	TOP=39.81'	INV IN(S)=35.81'	INV OUT(S)=33.25'
CM#4	TOP=39.64'	INV IN(S)=35.84'	INV OUT(S)=35.84'
CM#5	TOP=39.97'	INV IN(S)=34.07'	INV OUT(S)=34.07'
CM#6	TOP=40.02'	INV IN(S)=36.42'	INV OUT(S)=36.42'
CM#7	TOP=35.89'	INV IN(S)=33.47'	INV OUT(S)=33.47'
CM#8	TOP=36.57'	INV IN(S)=34.29'	INV OUT(S)=34.29'

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

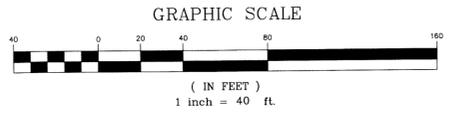
Signed: _____

Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____



- SITE INVENTORY NOTES:**
- SOILS TYPE: S6 (SEAGATE FINE SAND)
 - THIS PROPERTY IS NOT IMPACTED BY ANY AEC.
 - THERE ARE NO CONSERVATION OVERLAY BOUNDARIES AFFECTING THIS PROPERTY.
 - THIS SITE IS NOT IMPACTED BY ANY RECOGNIZED HISTORIC OR ARCHEOLOGICAL SIGNIFICANCE.
 - NO CEMETERIES WERE EVIDENCED ON THE SITE.
 - EXISTING VEGETATION HAS BEEN LOCATED AND IS LABELED.
 - THERE IS NO EVIDENCE OF JURISDICTION WETLANDS OR SECTION 10 WATERS ON THE SITE.
 - THERE IS NO EVIDENCE OF ENDANGERED SPECIES OR HABITAT ISSUES ON THE SITE.
 - THE PROPERTY IS NOT WITHIN ANY FLOOD HAZARD AREA AS EVIDENCED ON NC FLOOD MAP 3720313700J.
 - THE SITE DRAINAGE FLOWS INTO THE SMITH CREEK DRAINAGE BASIN. CLASSIFICATION C5W.
 - THERE ARE NO FORESTED AREAS ON THIS PROPERTY.



DEMOLITION LEGEND

STRUCT. / UTILITY	TO REMAIN	TO BE REMOVED	STRUCT. / UTILITY	TO REMAIN	TO BE REMOVED
ELECTRICAL (OVERHEAD)	E	E	LIGHT POLE	LP	LP
ELECTRICAL (UNDERGROUND)	UE	UE	UTILITY POLE	UP	UP
FIBER OPTIC	FO	FO	GUY WIRE	GW	GW
FORCE MAIN	FM	FM	MANHOLE	MH	MH
NATURAL GAS	G	G	CLEAN OUT	CO	CO
SANITARY SEWER	SS	SS	DROP INLET OR CATCH BASIN	DI, CB	DI, CB
TELE. / COMM.	T	T	FIRE HYDRANT	FH	FH
TELE. / COMM. (UNDERGROUND)	UT	UT	WATER VALVE	WV	WV
WATER	W	W	EXISTING ASPHALT TO BE REMOVED AND PATCHED AS REQUIRED		
STORM DRAIN			EXISTING GRAVEL DRIVE TO BE REMOVED		
TELEPHONE PEDISTAL	TP	TP			
UTILITY POLE	UP	UP			
WOOD POLE	WP	WP			
WATER WELL	WH	WH			

NOTE: DEMOLITION AND PATCHING OF PAVEMENT AND OTHER EXISTING IMPROVEMENTS IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS NECESSARY TO CONSTRUCT AND/OR INSTALL THE NEW WORK. ALL SUCH DEMOLITION AND PATCHING SHALL BE INCLUDED IN THE BASE BID SCOPE OF WORK.

DEVELOPMENT DATA

PROJECT:	THE LOFTS AT RANDALL
PLAN TYPE:	MAJOR SITE PLAN
ENGINEER:	CHANDLER ENGINEERING, PA 309 S. FULQUAY AVENUE FULQUAY-VARINA, NC 27526 PHONE: 919-552-4845 FAX: 919-552-6962 EMAIL: jim@chandlerengineeringpa.com
OWNER/DEVELOPER:	THE LOFTS AT RANDALL LLC CATHERINE CONNORS - MANAGER 106 MUIR WOODS DRIVE CARY, NC 27513 PHONE: 919-350-0446 EMAIL: cathy.connors@staticepartners.net
ARCHITECT:	ANEGRAM STUDIOS, PA TAMMY KAHM, AIA PO BOX 13488 RALEIGH, NC 27605 PHONE: 919-377-2366 EMAIL: tammy@anegramstudio.com
PROPERTY ADDRESS:	4810 RANDALL PARKWAY 4629 PATRICK AVENUE
PARCEL NUMBER:	313711-67-9382.000 313711-77-1253.000
REFERENCE:	DB 4073, PG 784 DB 5503, PG 1266
ZONING:	MF-L (CD)
PROPOSED USE:	MULTI-FAMILY
EXISTING TRACT AREA:	1.750 ACRES
CAMA LAND CLASSIFICATION:	URBAN
DISTURBED AREA:	ON-SITE: 1.35 AC / OFF-SITE: 0.25 AC

GENERAL NOTES

- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
- ALL WASTE MATERIAL GENERATED FROM CLEARING AND DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
- REMOVE TOPSOIL AND STOCKPILE APPROPRIATELY ON-SITE. ON-SITE TEMP. STOCKPILES SHALL LOCATED WITHIN CONSTRUCTION LIMITS.
- ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW CONSTRUCTION. ANY EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH EXISTING CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED). UTILITY INSTALLATIONS MAY UTILIZE OPEN CUT OF PAVEMENTS UNLESS INDICATED OTHERWISE. TRENCH IN EXISTING ASPHALT SHALL BE PATCHED PER PAVEMENT REPAIR DETAIL.
- PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, NOTIFY ARCHITECT IMMEDIATELY.
- THE CONTRACTOR SHALL EMPLOY A QUALIFIED UTILITY LOCATOR SERVICE TO LOCATE ALL UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO ELECTRICAL, TELEPHONE, GAS, CABLE, FIBER OPTIC) WITHIN THE LIMITS OF CONSTRUCTION.
- VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ARCHITECT IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
- EXISTING MANHOLES, VALVE BOXES, VAULTS, CLEANOUTS, UTILITY POLES ETC. TO REMAIN WITHIN THE GRADING LIMITS SHALL BE ADJUSTED AS NEEDED TO FUNCTION PROPERLY WITH THE PROPOSED FINISHED GRADES (WHETHER OR NOT INDICATED TO BE MODIFIED).
- GENERAL CONTRACTOR TO COORDINATE ALL PEDESTRIAN ACCESS PATHS, LOCATIONS, LIGHTING ETC. W/OWNER.

chandler engineering pa
 309 S. Fulquay Avenue, Fulquay-Varina, NC 27526
 Phone: 919-552-4845 Fax: 919-552-6962



REVISIONS

DATE	COMMENTS	REVISED PER AGENCY COMMENTS
12-7-12		

MAJOR SITE PLAN

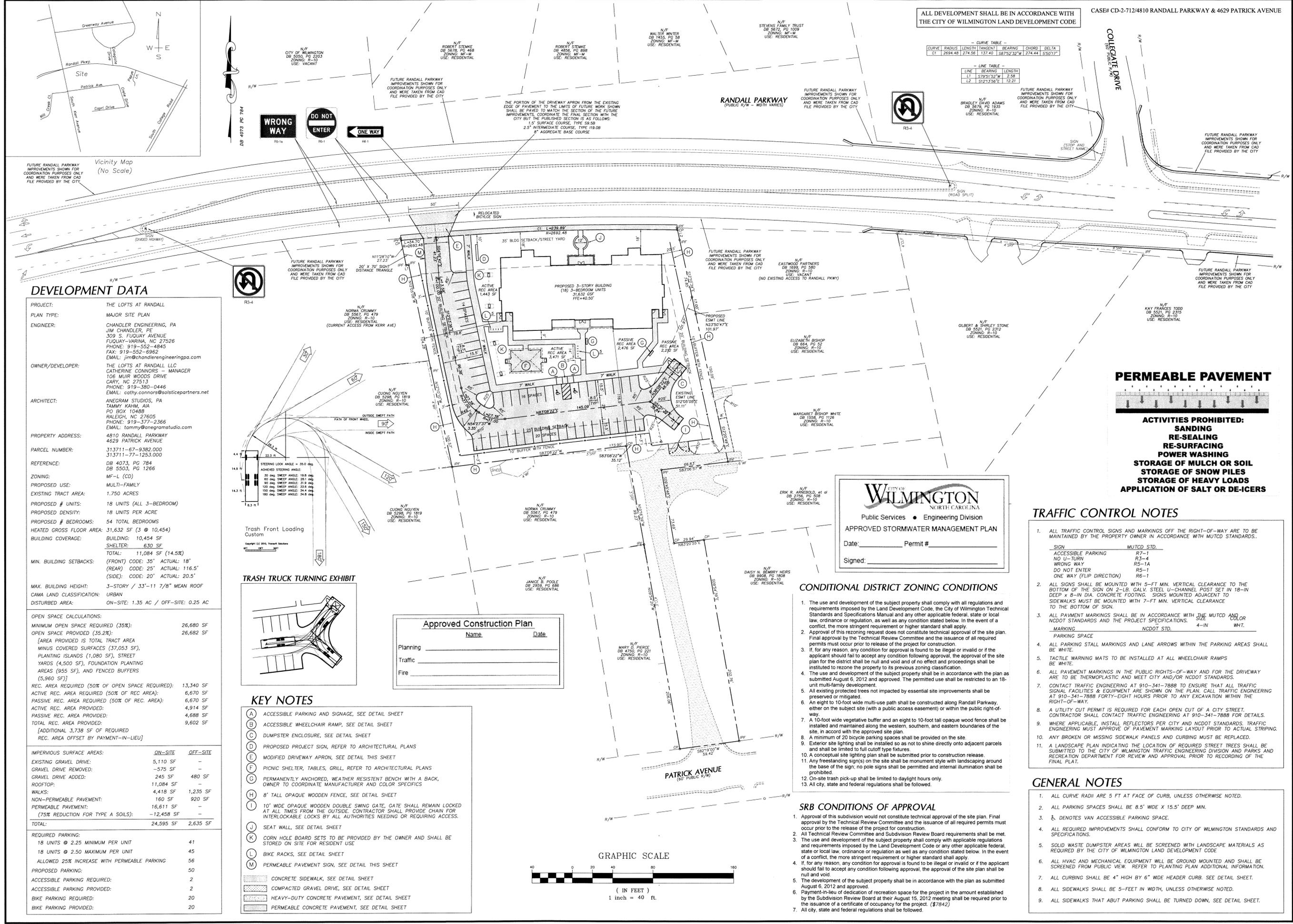
The Lofts at Randall
 4810 Randall Parkway, 4629 Patrick Avenue
 Wilmington, North Carolina

REVIEWED BY: JFC
 DATE: 11-2-12
 PROJECT NUMBER: 12-013
 COUNTY: NEW HANOVER
 PIN(S): 313711-67-9382.000
 313711-77-1253.000
 DEED: DB 4073, PG 784
 DB 5503, PG 1266
 ZONING: MF-L(CD)
 TOWNSHIP: WILMINGTON

SITE INVENTORY/ TREE PRESERVATION/ DEMOLITION PLAN

C1.01

NOVEMBER 2012



ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

CASE# CD-2-712/4810 RANDALL PARKWAY & 4629 PATRICK AVENUE

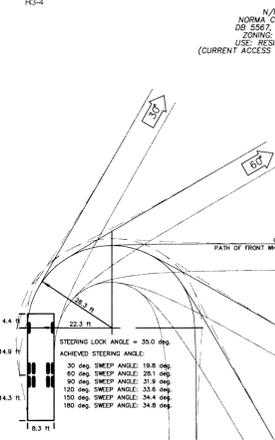
CURVE TABLE				
CURVE	RADIUS	LENGTH	BEARING	CHORD DELTA
CT	2694.48	274.58	137.40	S87°52'32"W 274.44 1.550177

LINE TABLE		
LINE	BEARING	LENGTH
L1	S78°15'27"W	2.98
L2	S21°13'56"E	12.27

DEVELOPMENT DATA

PROJECT: THE LOFTS AT RANDALL
PLAN TYPE: MAJOR SITE PLAN
ENGINEER: CHANDLER ENGINEERING, PA
 309 S. FLOUQUAY AVENUE
 FLOUQUAY-VARINA, NC 27526
 PHONE: 919-552-4845
 FAX: 919-552-6962
 EMAIL: jim@chandlerengineeringpa.com
OWNER/DEVELOPER: THE LOFTS AT RANDALL LLC
 CATHERINE CONNORS - MANAGER
 106 MUIR WOODS DRIVE
 CARY, NC 27513
 PHONE: 919-380-0446
 EMAIL: cathy.connors@solsticepartners.net
ARCHITECT: ANEGRAM STUDIOS, PA
 TAMMY KAHM, AIA
 PO BOX 10488
 RALEIGH, NC 27605
 PHONE: 919-377-2366
 EMAIL: tammy@anegramstudio.com
PROPERTY ADDRESS: 4810 RANDALL PARKWAY
 4629 PATRICK AVENUE
PARCEL NUMBER: 313711-67-9382.000
 313711-77-1283.000
REFERENCE: DB 4073, PG 784
 DB 5503, PG 1266
ZONING: MF-L (CO)
PROPOSED USE: MULTI-FAMILY
EXISTING TRACT AREA: 1.750 ACRES
PROPOSED # UNITS: 18 UNITS (ALL 3-BEDROOM)
PROPOSED DENSITY: 18 UNITS PER ACRE
PROPOSED # BEDROOMS: 54 TOTAL BEDROOMS
HEATED GROSS FLOOR AREA: 31,632 SF (3 @ 10,454)
BUILDING COVERAGE: BUILDING: 10,454 SF
 SHELTER: 630 SF
 TOTAL: 11,084 SF (14.5%)
MIN. BUILDING SETBACKS: (FRONT) CODE: 35' ACTUAL: 18'
 (REAR) CODE: 25' ACTUAL: 116.5'
 (SIDE) CODE: 20' ACTUAL: 20.5'
MAX. BUILDING HEIGHT: 3-STORY / 33'-11 7/8" MEAN ROOF
CAMA LAND CLASSIFICATION: URBAN
DISTURBED AREA: ON-SITE: 1.35 AC / OFF-SITE: 0.25 AC

TRASH TRUCK TURNING EXHIBIT

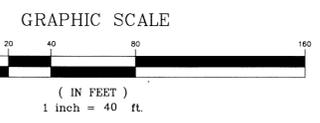


KEY NOTES

- (A) ACCESSIBLE PARKING AND SIGNAGE, SEE DETAIL SHEET
 - (B) ACCESSIBLE WHEELCHAIR RAMP, SEE DETAIL SHEET
 - (C) DUMPSTER ENCLOSURE, SEE DETAIL SHEET
 - (D) PROPOSED PROJECT SIGN, REFER TO ARCHITECTURAL PLANS
 - (E) MODIFIED DRIVEWAY APRON, SEE DETAIL THIS SHEET
 - (F) PICNIC SHELTER, TABLES, GRILL, REFER TO ARCHITECTURAL PLANS
 - (G) PERMANENTLY ANCHORED, WEATHER RESISTANT BENCH WITH A BACK, OWNER TO COORDINATE MANUFACTURER AND COLOR SPECIFICS
 - (H) 8' TALL OPAQUE WOODEN FENCE, SEE DETAIL SHEET
 - (I) 10' WIDE OPAQUE WOODEN DOUBLE SWING GATE, GATE SHALL REMAIN LOCKED AT ALL TIMES FROM THE OUTSIDE CONTRACTOR SHALL PROVIDE CHAIN FOR INTERLOCKABLE LOCKS BY ALL AUTHORITIES NEEDING OR REQUIRING ACCESS.
 - (J) SEAT WALL, SEE DETAIL SHEET
 - (K) CORN HOLE BOARD SETS TO BE PROVIDED BY THE OWNER AND SHALL BE STORED ON SITE FOR RESIDENT USE
 - (L) BIKE RACKS, SEE DETAIL SHEET
 - (M) PERMEABLE PAVEMENT SIGN, SEE DETAIL THIS SHEET
- CONCRETE SIDEWALK, SEE DETAIL SHEET
 COMPACTED GRAVEL DRIVE, SEE DETAIL SHEET
 HEAVY-DUTY CONCRETE PAVEMENT, SEE DETAIL SHEET
 PERMEABLE CONCRETE PAVEMENT, SEE DETAIL SHEET

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	



PERMEABLE PAVEMENT



TRAFFIC CONTROL NOTES

- 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 SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2-LB. GALV. STEEL U-CHANNEL POST SET IN 18-IN DEEP x 8-IN DIA. CONCRETE FOOTING. SIGNS MOUNTED ADJACENT TO SIDEWALKS MUST BE MOUNTED WITH 7-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF SIGN.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- TACTILE WARNING MATS TO BE INSTALLED AT ALL WHEELCHAIR RAMPS BE WHITE.
- ALL PAVEMENT MARKINGS IN THE PUBLIC RIGHTS-OF-WAY AND FOR THE DRIVEWAY ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES & EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION WITHIN THE RIGHT-OF-WAY.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTRACTOR SHALL CONTACT TRAFFIC ENGINEERING AT 910-341-7888 FOR DETAILS.
- WHERE APPLICABLE, INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
- ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING MUST BE REPLACED.
- A LANDSCAPE PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO RECORDING OF THE FINAL PLAN.

GENERAL NOTES

- ALL CURVE RADII ARE 5 FT AT FACE OF CURB, UNLESS OTHERWISE NOTED.
- ALL PARKING SPACES SHALL BE 8.5' WIDE X 15.5' DEEP MIN.
- ☐ DENOTES VAN ACCESSIBLE PARKING SPACE.
- ALL REQUIRED IMPROVEMENTS SHALL CONFORM TO CITY OF WILMINGTON STANDARDS AND SPECIFICATIONS.
- SOLID WASTE DUMPSTER AREAS WILL BE SCREENED WITH LANDSCAPE MATERIALS AS REQUIRED BY THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.
- ALL HVAC AND MECHANICAL EQUIPMENT WILL BE GROUND MOUNTED AND SHALL BE SCREENED FROM PUBLIC VIEW. REFER TO PLANTING PLAN ADDITIONAL INFORMATION.
- ALL CURBING SHALL BE 4" HIGH BY 6" WIDE HEADER CURB. SEE DETAIL SHEET.
- ALL SIDEWALKS SHALL BE 5-FEET IN WIDTH, UNLESS OTHERWISE NOTED.
- ALL SIDEWALKS THAT ABUT PARKING SHALL BE TURNED DOWN. SEE DETAIL SHEET.

CONDITIONAL DISTRICT ZONING 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 zoning request does not constitute technical approval of the site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to release of the project for construction.
- 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 August 6, 2012 and approved. The permitted use shall be restricted to an 18-unit multi-family development.
- All existing protected trees not impacted by essential site improvements shall be preserved or mitigated.
- An eight-to-10-foot wide multi-use path shall be constructed along Randall Parkway, either on the subject site (with a public easement) or within the public right-of-way.
- A 10-foot wide vegetative buffer and an eight-to-10-foot tall opaque wood fence shall be installed and maintained along the western, southern, and eastern boundaries of the site, in accord with the approved site plan.
- A minimum of 20 bicycle parking spaces shall be provided on the site.
- Exterior site lighting shall be installed so as not to shine directly onto adjacent parcels and shall be limited to full cutoff type fixtures.
- A conceptual site lighting plan shall be submitted prior to construction release.
- 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.
- On-site trash pick-up shall be limited to daylight hours only.
- All city, state and federal regulations shall be followed.

SRB CONDITIONS OF APPROVAL

- Approval of this subdivision would not constitute technical approval of the site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to the release of the project for construction.
- All Technical Review Committee and Subdivision Review Board requirements shall be met.
- The use and development of the subject property shall comply with applicable regulations and requirements imposed by the Land Development Code or 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.
- 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 shall be null and void.
- The development of the subject property shall be in accordance with the plan as submitted August 6, 2012 and approved.
- Payment-in-lieu of dedication of recreation space for the project in the amount established by the Subdivision Review Board at their August 15, 2012 meeting shall be required prior to the issuance of a certificate of occupancy for the project. (\$7842)
- All city, state and federal regulations shall be followed.

chandler engineering pa
 309 S. FLOUQUAY AVENUE, FLOUQUAY-VARINA, NC 27526
 Phone: 919-552-4845 Fax: 919-552-6962



REVISIONS

DATE	REVISION
12-12-12	MAJOR SITE PLAN

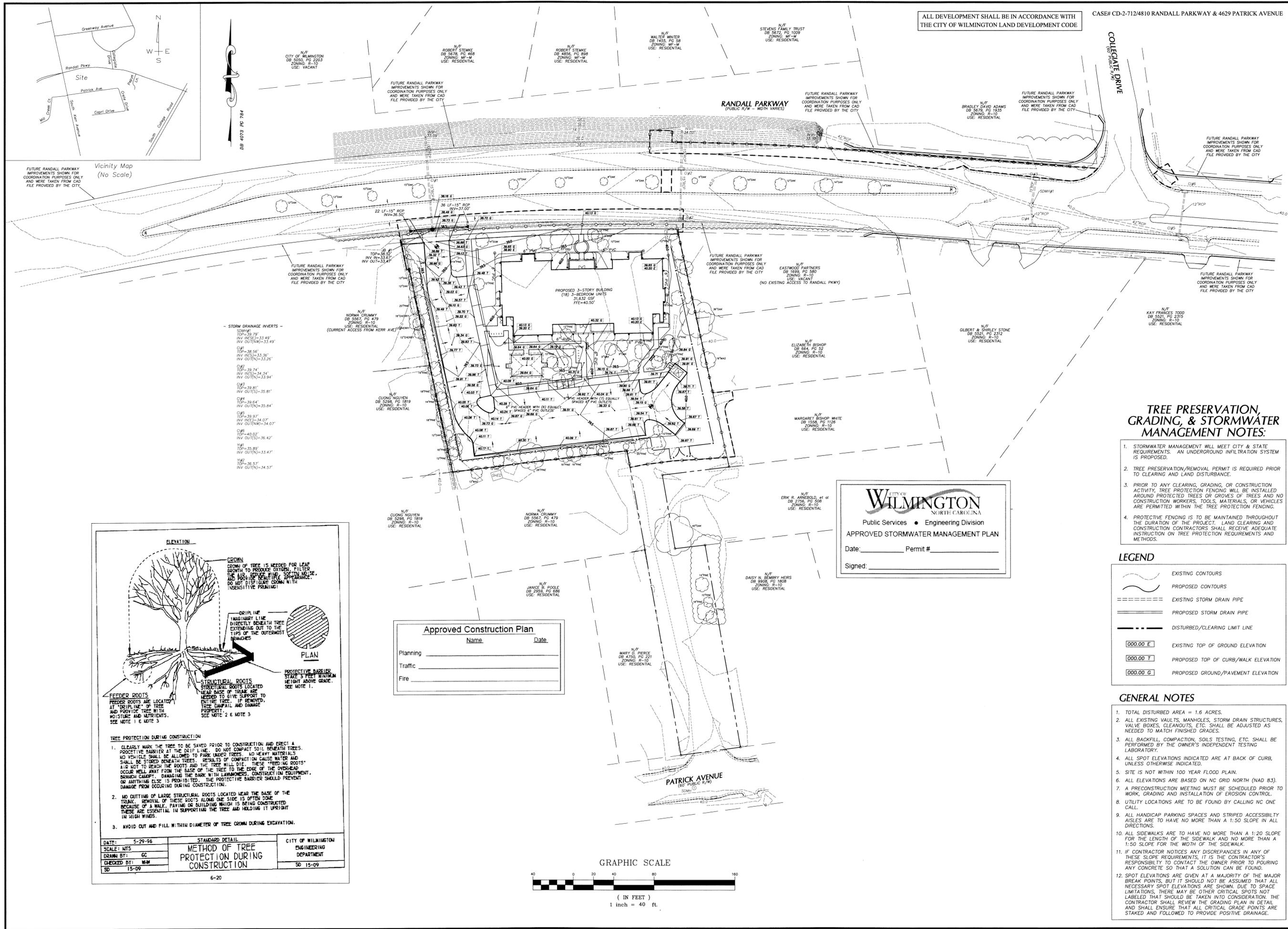
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 ZONING: MF-L (CO)
 TOWNSHIP: WILMINGTON

SITE STAKING PLAN

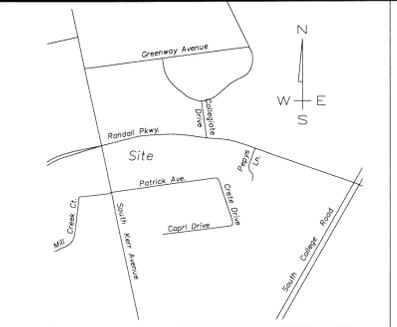
C2.01

NOVEMBER 2012



ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

CASE# CD-2-712/4810 RANDALL PARKWAY & 4629 PATRICK AVENUE



Vicinity Map (No Scale)

STORM DRAINAGE INVERTS

SCM#1	TOP=59.79'
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SCM#6	TOP=59.79'
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SCM#9	TOP=59.79'
SCM#10	TOP=59.79'
SCM#11	TOP=59.79'
SCM#12	TOP=59.79'
SCM#13	TOP=59.79'
SCM#14	TOP=59.79'
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SCM#30	TOP=59.79'
SCM#31	TOP=59.79'
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SCM#33	TOP=59.79'
SCM#34	TOP=59.79'
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SCM#36	TOP=59.79'
SCM#37	TOP=59.79'
SCM#38	TOP=59.79'
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SCM#95	TOP=59.79'
SCM#96	TOP=59.79'
SCM#97	TOP=59.79'
SCM#98	TOP=59.79'
SCM#99	TOP=59.79'
SCM#100	TOP=59.79'

TREE PRESERVATION, GRADING, & STORMWATER MANAGEMENT NOTES:

- STORMWATER MANAGEMENT WILL MEET CITY & STATE REQUIREMENTS. AN UNDERGROUND INFILTRATION SYSTEM IS PROPOSED.
- TREE PRESERVATION/REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND 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.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	DISTURBED/CLEARING LIMIT LINE
	EXISTING TOP OF GROUND ELEVATION
	PROPOSED TOP OF CURB/WALK ELEVATION
	PROPOSED GROUND/PAVEMENT ELEVATION

- GENERAL NOTES**
- TOTAL DISTURBED AREA = 1.6 ACRES.
 - ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADES.
 - ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
 - ALL SPOT ELEVATIONS INDICATED ARE AT BACK OF CURB, UNLESS OTHERWISE INDICATED.
 - SITE IS NOT WITHIN 100 YEAR FLOOD PLAIN.
 - ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83).
 - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING AND INSTALLATION OF EROSION CONTROL.
 - UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
 - ALL HANDICAP PARKING SPACES AND STRIPED ACCESSIBILITY AISLES ARE TO HAVE NO MORE THAN A 1:50 SLOPE IN ALL DIRECTIONS.
 - ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 SLOPE FOR THE WIDTH OF THE SIDEWALK.
 - IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER PRIOR TO POURING ANY CONCRETE SO THAT A SOLUTION CAN BE FOUND.
 - SPOT ELEVATIONS ARE GIVEN AT A MAJORITY OF THE MAJOR BREAK POINTS, BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.

ELEVATION

PLAN

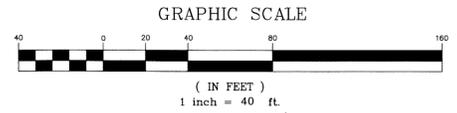
APPROVED CONSTRUCTION PLAN

Name	Date
Planning	_____
Traffic	_____
Fire	_____

METHOD OF TREE PROTECTION DURING CONSTRUCTION

- CLEARLY MARK THE TREE TO BE SAVED PRIOR TO CONSTRUCTION AND ERECT A PROTECTIVE BARRIER AT THE DRIP LINE. DO NOT COMPACT SOILS BENEATH TREES. NO VEHICLES SHALL BE ALLOWED TO PARK UNDER TREES. NO HEAVY MATERIALS SHALL BE STORED BENEATH TREES. RESULTS OF COMPACTION CAUSE WATER AND AIR NOT TO REACH THE ROOTS AND THE TREE WILL DIE. THESE "FEEDER ROOTS" OCCUR WELL AWAY FROM THE BASE OF THE TREE TO THE EDGE OF THE OVERHEAD BRANCH CANOPY. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. THE PROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURRING DURING CONSTRUCTION.
- NO CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK. REMOVAL OF THESE ROOTS ALONG ONE SIDE IS OFTEN DONE BECAUSE OF A WALK, PAVING OR BUILDING WHICH IS BEING CONSTRUCTED. THESE ARE ESSENTIAL IN SUPPORTING THE TREE AND HOLDING IT UPRIGHT IN WINDS.
- AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.

STANDARD DETAIL
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
SD 15-09



chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27506
Phone: 919-552-4845 Fax: 919-552-6962

SEALS

REVISIONS

DATE	COMMENTS
12-7-12	REVISED PER AGENCY COMMENTS

MAJOR SITE PLAN

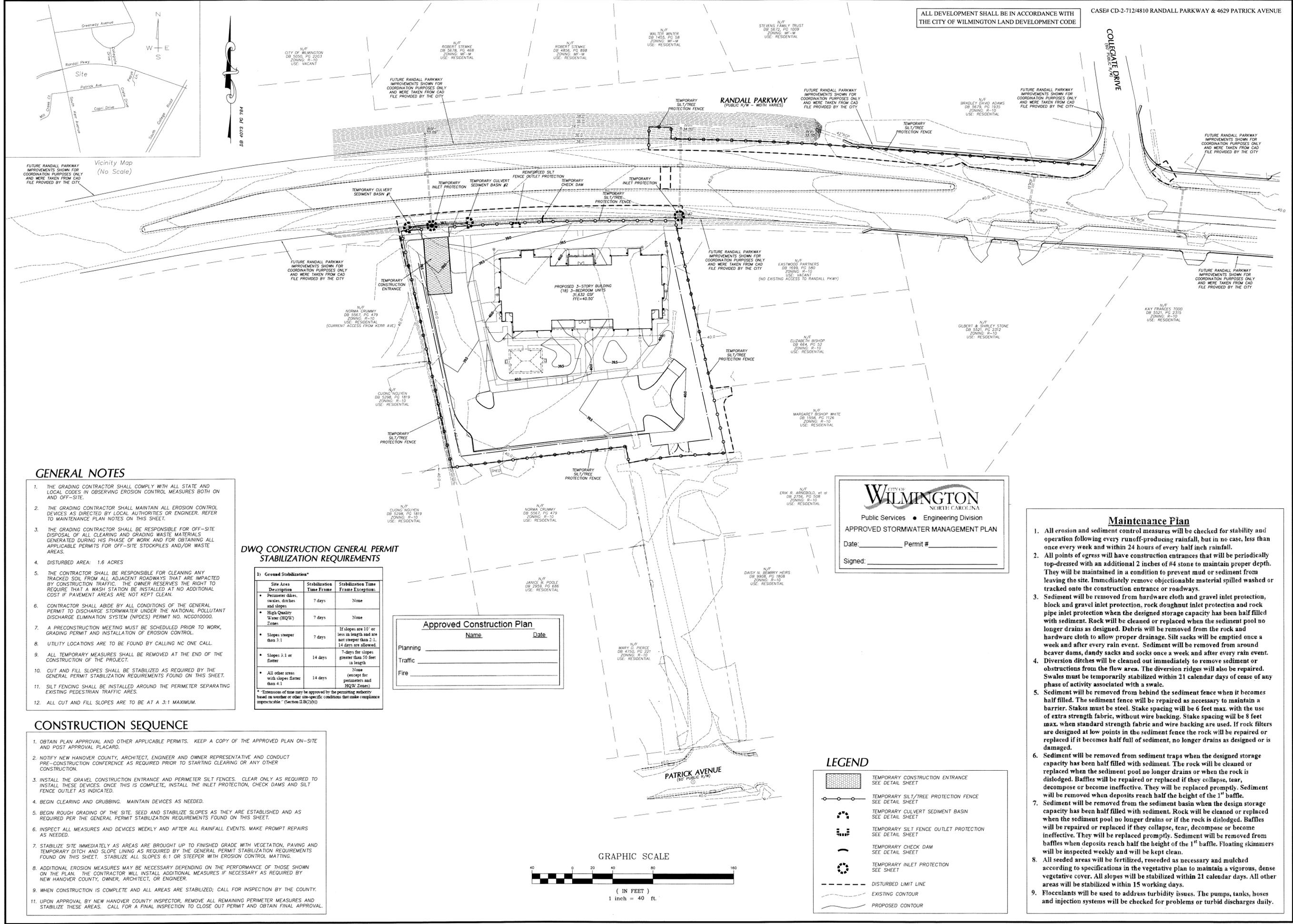
The Lofts at Randall
4810 Randall Parkway, 4629 Patrick Avenue
Wilmington, North Carolina

REVIEWED BY: JFC
DATE: 11-2-12
PROJECT NUMBER: 12-013
COUNTY: NEW HANOVER
PIN(S): 313711-67-9182-000
313711-77-1251-000
DEED: DB 4073, PG 784
DB 5503, PG 1266
ZONING: MF-1(CD)
TOWNSHIP: WILMINGTON

SITE GRADING PLAN

C3.01

NOVEMBER 2012



ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

CASE# CD-2-712/4810 RANDALL PARKWAY & 4629 PATRICK AVENUE

GENERAL NOTES

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER. REFER TO MAINTENANCE PLAN NOTES ON THIS SHEET.
3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
4. DISTURBED AREA: 1.6 ACRES
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
6. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
7. A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
8. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
9. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
10. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
11. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
12. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.

DWQ CONSTRUCTION GENERAL PERMIT STABILIZATION REQUIREMENTS

1) Ground Stabilization*		
Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exception:
• Perimeter dikes, swales, ditches and slopes	7 days	None
• High Quality Water (HQW) Zones	7 days	None
• Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
• Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50 feet in length
• All other areas with slopes flatter than 4:1	14 days	None (except for perimeters and HQW Zones)

* Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable. (Section II.B.(3)(b))

Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	

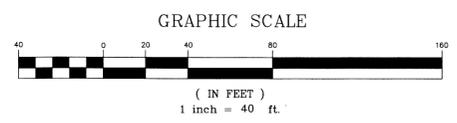
CONSTRUCTION SEQUENCE

1. OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS. KEEP A COPY OF THE APPROVED PLAN ON-SITE AND POST APPROVAL PLACARD.
2. NOTIFY NEW HANOVER COUNTY, ARCHITECT, ENGINEER AND OWNER REPRESENTATIVE AND CONDUCT PRE-CONSTRUCTION CONFERENCE AS REQUIRED PRIOR TO STARTING CLEARING OR ANY OTHER CONSTRUCTION.
3. INSTALL THE GRAVEL CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCES. CLEAR ONLY AS REQUIRED TO INSTALL THESE DEVICES. ONCE THIS IS COMPLETE, INSTALL THE INLET PROTECTION, CHECK DAMS AND SILT FENCE OUTLET AS INDICATED.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED.
5. BEGIN ROUGH GRADING OF THE SITE. SEED AND STABILIZE SLOPES AS THEY ARE ESTABLISHED AND AS REQUIRED PER THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
6. INSPECT ALL MEASURES AND DEVICES WEEKLY AND AFTER ALL RAINFALL EVENTS. MAKE PROMPT REPAIRS AS NEEDED.
7. STABILIZE SITE IMMEDIATELY AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING AND TEMPORARY DITCH AND SLOPE LINING AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET. STABILIZE ALL SLOPES 6:1 OR STEEPER WITH EROSION CONTROL MATTING.
8. ADDITIONAL EROSION MEASURES MAY BE NECESSARY DEPENDING ON THE PERFORMANCE OF THOSE SHOWN ON THE PLAN. THE CONTRACTOR WILL INSTALL ADDITIONAL MEASURES IF NECESSARY AS REQUIRED BY NEW HANOVER COUNTY, OWNER, ARCHITECT, OR ENGINEER.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED; CALL FOR INSPECTION BY THE COUNTY.
11. UPON APPROVAL BY NEW HANOVER COUNTY INSPECTOR, REMOVE ALL REMAINING PERIMETER MEASURES AND STABILIZE THESE AREAS. CALL FOR A FINAL INSPECTION TO CLOSE OUT PERMIT AND OBTAIN FINAL APPROVAL.

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

LEGEND

- TEMPORARY CONSTRUCTION ENTRANCE SEE DETAIL SHEET
- TEMPORARY SILT/TREE PROTECTION FENCE SEE DETAIL SHEET
- TEMPORARY CULVERT SEDIMENT BASIN SEE DETAIL SHEET
- TEMPORARY SILT FENCE OUTLET PROTECTION SEE DETAIL SHEET
- TEMPORARY CHECK DAM SEE DETAIL SHEET
- TEMPORARY INLET PROTECTION SEE SHEET
- DISTURBED LIMIT LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR



Maintenance Plan

1. All erosion and sediment control measures will be checked for stability and operation following every runoff-producing rainfall, but in no case, less than once every week and within 24 hours of every half inch rainfall.
2. All points of egress will have construction entrances that will be periodically top-dressed with an additional 2 inches of #4 stone to maintain proper depth. They will be maintained in a condition to prevent mud or sediment from leaving the site. Immediately remove objectionable material spilled washed or tracked onto the construction entrance or roadways.
3. Sediment will be removed from hardware cloth and gravel inlet protection, block and gravel inlet protection, rock doughnut inlet protection and rock pipe inlet protection when the designed storage capacity has been half filled with sediment. Rock will be cleaned or replaced when the sediment pool no longer drains as designed. Debris will be removed from the rock and hardware cloth to allow proper drainage. Silt sacks will be emptied once a week and after every rain event. Sediment will be removed from around beaver dams, dandy sacks and socks once a week and after every rain event.
4. Diversion ditches will be cleaned out immediately to remove sediment or obstructions from the flow area. The diversion ridges will also be repaired. Swales must be temporarily stabilized within 21 calendar days of cease of any phase of activity associated with a swale.
5. Sediment will be removed from 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. Stake spacing will be 6 feet max. with the use of extra strength fabric, without wire backing. Stake spacing will be 8 feet max. when standard strength fabric and wire backing are used. If rock filters are designed at low points in the sediment fence the rock will be repaired or replaced if it becomes half full of sediment, no longer drains as designed or is damaged.
6. Sediment will be removed from sediment traps when the designed storage capacity has been half filled with sediment. The rock will be cleaned or replaced when the sediment pool no longer drains or when the rock is dislodged. Baffles will be repaired or replaced if they collapse, tear, decompose or become ineffective. They will be replaced promptly. Sediment will be removed when deposits reach half the height of the 1st baffle.
7. Sediment will be removed from the sediment basin when the design storage capacity has been half filled with sediment. Rock will be cleaned or replaced when the sediment pool no longer drains or if the rock is dislodged. Baffles will be repaired or replaced if they collapse, tear, decompose or become ineffective. They will be replaced promptly. Sediment will be removed from baffles when deposits reach half the height of the 1st baffle. Floating skimmers will be inspected weekly and will be kept clean.
8. All seeded areas will be fertilized, reseeded as necessary and mulched according to specifications in the vegetative plan to maintain a vigorous, dense vegetative cover. All slopes will be stabilized within 21 calendar days. All other areas will be stabilized within 15 working days.
9. Flocculants will be used to address turbidity issues. The pumps, tanks, hoses and injection systems will be checked for problems or turbid discharges daily.

chandler engineering pa
309 S. Fiquay Avenue, Fuquay-Varina, NC 27596
Phone: 919-552-4845 Fax: 919-552-6962

SEALS

REVISIONS

DATE	COMMENTS
12-7-12	REVISED PER AGENCY COMMENTS

MAJOR SITE PLAN

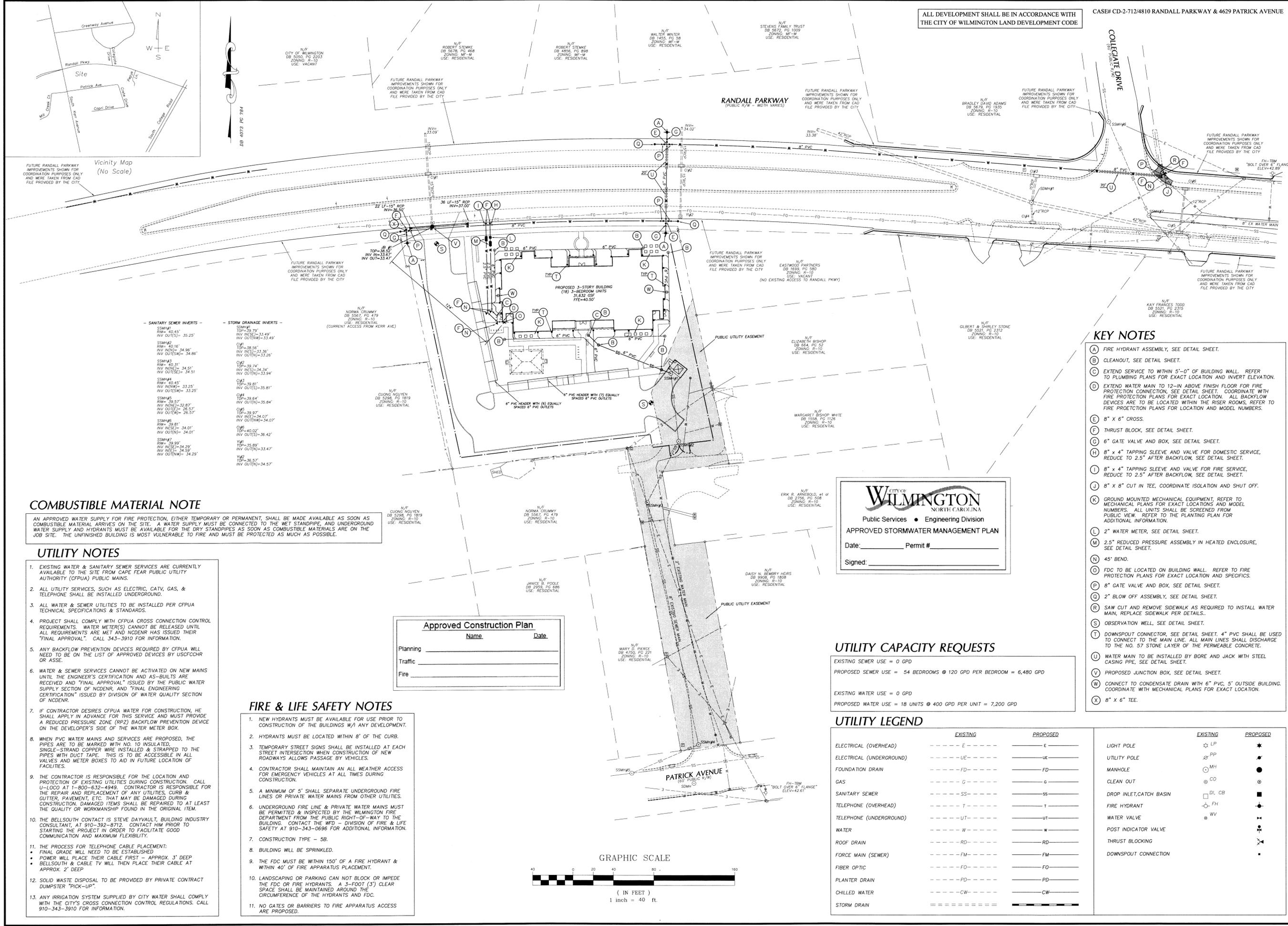
The Lofts at Randall
4810 Randall Parkway, 4629 Patrick Avenue
Wilmington, North Carolina

REVIEWED BY: JFC
DATE: 11-2-12
PROJECT NUMBER: 12-013
COUNTY: NEW HANOVER
PIN(S): 313711-67-9382-000
DEED: DB 4073, PG 784
DB 5503, PG 1266
ZONING: MF-L (CD)
TOWNSHIP: WILMINGTON

SITE SEDIMENTATION AND EROSION CONTROL PLAN

C4.01

NOVEMBER 2012



ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE

CASE# CD-2-712/4810 RANDALL PARKWAY & 4629 PATRICK AVENUE

Vicinity Map (No Scale)

- SANITARY SEWER INVERTS -

SSM#1	RM= 40.45'	INV. OUT(S)= 35.25'
SSM#2	RM= 40.16'	INV. IN(S)= 34.96'
SSM#3	RM= 40.11'	INV. IN(S)= 34.51'
SSM#4	RM= 40.45'	INV. OUT(S)= 33.25'
SSM#5	RM= 39.53'	INV. IN(S)= 32.87'
SSM#6	RM= 39.81'	INV. OUT(S)= 33.81'
SSM#7	RM= 39.99'	INV. IN(S)= 34.01'
SSM#8	RM= 39.99'	INV. IN(S)= 34.29'
SSM#9	RM= 36.57'	INV. OUT(N)= 34.23'

- STORM DRAINAGE INVERTS -

SDM#1	TOP= 49.79'	INV. IN(S)= 33.49'
SDM#2	TOP= 38.56'	INV. IN(S)= 33.36'
SDM#3	TOP= 39.74'	INV. IN(S)= 33.94'
SDM#4	TOP= 39.64'	INV. OUT(S)= 35.84'
SDM#5	TOP= 39.57'	INV. IN(S)= 34.07'
SDM#6	TOP= 40.02'	INV. OUT(S)= 36.42'
SDM#7	TOP= 35.89'	INV. OUT(N)= 33.47'
SDM#8	TOP= 36.57'	INV. OUT(N)= 34.57'

COMBUSTIBLE MATERIAL NOTE

AN APPROVED WATER SUPPLY FOR FIRE PROTECTION, EITHER TEMPORARY OR PERMANENT, SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE. A WATER SUPPLY MUST BE CONNECTED TO THE WET STANDPIPE, AND UNDERGROUND WATER SUPPLY AND HYDRANTS MUST BE AVAILABLE FOR THE DRY STANDPIPES AS SOON AS COMBUSTIBLE MATERIALS ARE ON THE JOB SITE. THE UNFINISHED BUILDING IS MOST VULNERABLE TO FIRE AND MUST BE PROTECTED AS MUCH AS POSSIBLE.

UTILITY NOTES

- EXISTING WATER & SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) PUBLIC MAINS.
- ALL UTILITY SERVICES, SUCH AS ELECTRIC, CATV, GAS, & TELEPHONE SHALL BE INSTALLED UNDERGROUND.
- ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CFPUA TECHNICAL SPECIFICATIONS & STANDARDS.
- PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THEIR "FINAL APPROVAL." CALL 343-3910 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCOHR OR ASSE.
- WATER & SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL THE ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY THE PUBLIC WATER SUPPLY SECTION OF NCDENR, AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY SECTION OF NCDENR.
- IF CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. CALL U-LOCO AT 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT MAY BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
- THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT, AT 910-392-8712. CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.
- THE PROCESS FOR TELEPHONE CABLE PLACEMENT:
 - FINAL GRADE WILL NEED TO BE ESTABLISHED
 - POWER WILL PLACE THEIR CABLE FIRST - APPROX. 3' DEEP
 - BELLSOUTH & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROX. 2' DEEP
- SOLID WASTE DISPOSAL TO BE PROVIDED BY PRIVATE CONTRACT DUMPSTER "PICK-UP".
- ANY IRRIGATION SYSTEM SUPPLIED BY CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 910-343-3910 FOR INFORMATION.

FIRE & LIFE SAFETY NOTES

- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS W/ ANY DEVELOPMENT.
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
- TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.
- CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UTILITIES.
- UNDERGROUND FIRE LINE & PRIVATE WATER MAINS MUST BE PERMITTED & INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WFD - DIVISION OF FIRE & LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
- CONSTRUCTION TYPE - 5B.
- BUILDING WILL BE SPRINKLED.
- THE FDC MUST BE WITHIN 150' OF A FIRE HYDRANT & WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANTS AND FDC.
- NO GATES OR BARRIERS TO FIRE APPARATUS ACCESS ARE PROPOSED.

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

UTILITY CAPACITY REQUESTS

EXISTING SEWER USE = 0 GPD
 PROPOSED SEWER USE = 54 BEDROOMS @ 120 GPD PER BEDROOM = 6,480 GPD

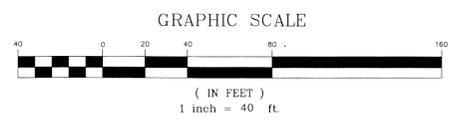
EXISTING WATER USE = 0 GPD
 PROPOSED WATER USE = 18 UNITS @ 400 GPD PER UNIT = 7,200 GPD

UTILITY LEGEND

	EXISTING	PROPOSED	EXISTING	PROPOSED
ELECTRICAL (OVERHEAD)	---	E	☆ LP	★
ELECTRICAL (UNDERGROUND)	---	UE	⊗ PP	●
FOUNDATION DRAIN	---	FD	⊙ MH	●
GAS	---	G	⊙ CO	●
SANITARY SEWER	---	SS	□ DI, CB	■
TELEPHONE (OVERHEAD)	---	T	⊙ FH	●
TELEPHONE (UNDERGROUND)	---	UT	⊙ WV	●
WATER	---	W	⊙	●
ROOF DRAIN	---	RD	⊙	●
FORCE MAIN (SEWER)	---	FM	⊙	●
FIBER OPTIC	---	FO	⊙	●
PLANTER DRAIN	---	PD	⊙	●
CHILLED WATER	---	CW	⊙	●
STORM DRAIN	---	SD	⊙	●
			⊙	●

KEY NOTES

- FIRE HYDRANT ASSEMBLY, SEE DETAIL SHEET.
- CLEANOUT, SEE DETAIL SHEET.
- EXTEND SERVICE TO WITHIN 5'-0" OF BUILDING WALL. REFER TO PLUMBING PLANS FOR EXACT LOCATION AND INVERT ELEVATION.
- EXTEND WATER MAIN TO 12-IN ABOVE FINISH FLOOR FOR FIRE PROTECTION CONNECTION, SEE DETAIL SHEET. COORDINATE WITH FIRE PROTECTION PLANS FOR EXACT LOCATION. ALL BACKFLOW DEVICES ARE TO BE LOCATED WITHIN THE RISER ROOMS. REFER TO FIRE PROTECTION PLANS FOR LOCATION AND MODEL NUMBERS.
- 8" x 6" CROSS.
- THRUST BLOCK, SEE DETAIL SHEET.
- 6" GATE VALVE AND BOX, SEE DETAIL SHEET.
- 8" x 4" TAPPING SLEEVE AND VALVE FOR DOMESTIC SERVICE, REDUCE TO 2.5" AFTER BACKFLOW, SEE DETAIL SHEET.
- 8" x 4" TAPPING SLEEVE AND VALVE FOR FIRE SERVICE, REDUCE TO 2.5" AFTER BACKFLOW, SEE DETAIL SHEET.
- 8" x 8" CUT IN TEE, COORDINATE ISOLATION AND SHUT OFF.
- GROUND MOUNTED MECHANICAL EQUIPMENT, REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS AND MODEL NUMBERS. ALL UNITS SHALL BE SCREENED FROM PUBLIC VIEW. REFER TO THE PLANTING PLAN FOR ADDITIONAL INFORMATION.
- 2" WATER METER, SEE DETAIL SHEET.
- 2.5" REDUCED PRESSURE ASSEMBLY IN HEATED ENCLOSURE, SEE DETAIL SHEET.
- 45° BEND.
- FDC TO BE LOCATED ON BUILDING WALL. REFER TO FIRE PROTECTION PLANS FOR EXACT LOCATION AND SPECIFICS.
- 6" GATE VALVE AND BOX, SEE DETAIL SHEET.
- 2" BLOW OFF ASSEMBLY, SEE DETAIL SHEET.
- SAW CUT AND REMOVE SIDEWALK AS REQUIRED TO INSTALL WATER MAIN, REPLACE SIDEWALK PER DETAILS.
- OBSERVATION WELL, SEE DETAIL SHEET.
- DOWNSPOUT CONNECTOR, SEE DETAIL SHEET. 4" PVC SHALL BE USED TO CONNECT TO THE MAIN LINE. ALL MAIN LINES SHALL DISCHARGE TO THE NO. 57 STONE LAYER OF THE PERMEABLE CONCRETE.
- WATER MAIN TO BE INSTALLED BY BORE AND JACK WITH STEEL CASING PIPE, SEE DETAIL SHEET.
- PROPOSED JUNCTION BOX, SEE DETAIL SHEET.
- CONNECT TO CONDENSATE DRAIN WITH 6" PVC, 5' OUTSIDE BUILDING. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATION.
- 8" x 6" TEE.



chandler engineering pa
309 S. Fiquay Avenue, Fiquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962



REVISIONS

DATE	COMMENTS
12-1-12	REVISED PER AGENCY COMMENTS

MAJOR SITE PLAN

The Lofts at Randall
4810 Randall Parkway, 4629 Patrick Avenue
Wilmington, North Carolina

REVIEWED BY: JRC
 DATE: 11-3-12
 PROJECT NUMBER: 12-013
 COUNTY: NEW HANOVER
 PINS: 313711-67-0382-000
 313711-77-1253-000

DEED: DB 4073, PG 784
 DB 5503, PG 1266

ZONING: MF-L (CD)
 TOWNSHIP: WILMINGTON

SITE UTILITY PLAN

C5.01

NOVEMBER 2012

chandler engineering pa
 308 S. Fuquay Avenue, Fuquay-Varina, NC 27526
 Phone: 919-552-4845 Fax: 919-552-6862

SEALS



REVISIONS

DATE	COMMENTS
12-7-12	REVISED PER AGENCY COMMENTS

SITE PLAN

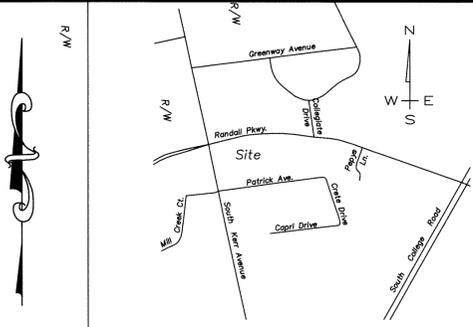
The Lofts at Randall
 4810 Randall Parkway, 4629 Patrick Avenue
 Wilmington, North Carolina

REVIEWED BY:	JFC
DATE:	11-2-12
PROJECT NUMBER:	12-013
COUNTY:	WAKE
PINS:	313711-67502.000 313711-77-1253.000
DEED:	DB 4073, PG 784 DB 5503, PG 1266
ZONING:	MF-L (CD)
TOWNSHIP:	WILMINGTON

SITE PLANTING PLAN

C6.01

OCTOBER 2012



STEPHEN PEASE
 LANDSCAPE ARCHITECTURAL SERVICES

1609 Phelps West Road (919) 612-6851
 Fuquay - Varina
 North Carolina 27526 twpease@earthlink.net

OWNER / DEVELOPER:

THE LOFTS AT RANDALL, LLC
 CATHERINE CONNORS - MANAGER
 106 MUIR WOODS DRIVE
 CARY, NC 27513
 PHONE: 919-380-0446
 EMAIL: cathy.connors@solisticepartners.net

LANDSCAPE CALCULATIONS

RANDALL PKWY VARIABLE WIDTH STREETYARD
 LENGTH: 250 LF (EXCL. 24' DRIVE)
 MF DISTRICT FACTOR: 18
 SQUARE FOOTAGE REQ'D: 4,500 SF
 SQUARE FOOTAGE PROV'D: 4,500 SF
 REQ'D CANOPY TREES: 1 / 600 SF = 8
 EXIST CANOPY TREES: 3 FOR CREDIT MARKED WITH 'A':
 (14" pine, 10" oak, 16" pine)
 PROP NEW CANOPY TREES: 5 MARKED WITH 'A':
 (5 Overcup oak)
 REOD SHRUBS: 6 / 600 SF = 45
 SHRUBS PROV'D: 45+ (BLDG FRONT FOUNDATION PLANTINGS)

PARKING - INTERNAL AREA
 DRIVE AREA: 915 SF (INCLUDES CURB AND GUTTER)
 PARKING AREA: 16,025 SF (INCLUDES CURB AND GUTTER)
 TOTAL AREA: 16,940 SF
 SHADING AREA REQ'D (20%): 3,388 SF
 REQ'D CANOPY TREES: 1 / 707 SF = 5 MIN
 (1) LO @ 100% = 707
 (3) HWO @ 50% = 1060.5
 (2) LO @ 50% = 707
 (1) OAK, 10" @ 50% = 353.5
 (2) PINE, 14" @ 50% = 707
 3535 SF

PARKING - PERIMETER AREA
 N/A

FOUNDATION PLANTINGS
WEST FACADE:
 LENGTH: 73 LF
 FACADE HEIGHT: 34'
 REQ'D SF (12%): 298 SF
 PROV'D SF: 300 SF
SOUTH FACADE:
 LENGTH: 160 LF
 FACADE HEIGHT: 34'
 REQ'D SF (12%): 653 SF
 PROV'D SF: 655 SF

BUFFERYARD
 LENGTH: 596 LF
 WIDTH: 10' WITH SOLID FENCE
 3 / 100 LF = 18
 REQ'D CANOPY TREES: 18 FOR CREDIT MARKED WITH 'B':
 (14" pine, 38" oak, 20" pine, 10" pine, 5" magnolia, 5" magnolia, 14" pine, 8" magnolia, 16" pine, 16" pine, 10" oak, 12" pine, 12" pine, 12" oak, 18" pine, 14" pine, 14" pine and 20" pine)
 PROP NEW CANOPY TREES: 11 MAX. (To achieve 50% opacity)
 (11 Loblolly pine)
 REQ'D SHRUBS: 2 EVERGREEN SHRUB ROWS
 SHRUBS PROV'D: 92 MAX. (To achieve 50% opacity)
 EVERGREEN SHRUBS 3' HT MIN
 (92 Wax myrtle)

NOTE:
 EXIST VEGETATION WILL BE SUPPLEMENTED AS NECESSARY FROM THE QUANTITIES ABOVE TO ACHIEVE 50% OPACITY. (Prior to planting, stake tree and shrub locations for site review by Inspectors Dept. to determine whether 50% opacity will be achieved by the proposed locations)

REQUIRED TREE RETENTION
 DISTURBED AREA: 1.35 AC
 15 / AC = 21
 16 FOR CREDIT SHOWN WITH 'C':
 (12" oak, 12" oak, 18" pine, 16" pine, 14" pine, 12" pine, 14" pine, 10" pine, 12" pine, 12" pine, 16" pine, 9" oak, 9" oak, 9" oak, 12" pine and 12" pine)
 EXIST TREES: 5 CANOPY MARKED WITH 'C':
 (5 Loblolly pine)

PROV'D NEW TREES:

SIGNIFICANT TREE MITIGATION
 10" MAGNOLIA @ 100%:
 7 CANOPY MARKED WITH 'D':
 (3 Live oak and 4 Loblolly pine)

PLANT LIST (THIS SHEET)

KEY	QTY	PLANT NAME	SIZE
CH	11	CARISSA HOLLY ILEX CORNUTA 'CARISSA'	12-15' HT 3 GAL
CLL	6	CURLYLEAF LIGUSTRUM LIGUSTRUM RECURVIFOLIUM	36-42" HT 7 GAL
EGA	12	EDWARD GOUCHER ABELIA ABELIA x GRANDIFLORA 'EDWARD GOUCHER'	12-15' HT 3 GAL
EI	50	ENGLISH IVY HEDERA HELIX	12-15" SPR 4" POT
ETH	15	ELEANOR TABOR INDIAN HAWTHORNE RAPHIOLEPSIS INDICA 'ELEANOR TABOR'	12-15' HT 3 GAL
HWO	3	HIGHTOWER WILLOW OAK QUERCUS PHELLOS 'HIGHTOWER'	3-3.5' CAL 14-16" HT
LP	23	LOBLOLLY PINE PINUS TAEDA	2.5-3.0' CAL 10-12" HT
LO	6	LIVE OAK QUERCUS VIRGINIANA	3-3.5' CAL 12-14" HT
MCM	3	MUSKOGEE CRAPEMYRTLE (MULTISTEM) LAGERSTROEMIA x MUSKOGEE	8-10' HT 25 GAL
NCM	2	NATCHEZ CRAPEMYRTLE (MULTISTEM) LAGERSTROEMIA x NATCHEZ	8-10' HT 25 GAL
NPH	5	NEEDLEPOINT HOLLY ILEX CORNUTA 'NEEDLEPOINT'	30-36" HT 7 GAL
NSH	5	NELLIE STEVENS HOLLY ILEX x NELLIE R. STEVENS	8-9' HT 65 GAL
OO	5	OVERCUP OAK QUERCUS LYRATA	3-3.5' CAL 12-14" HT
RL	11	RUBY LOROPETALUM LOROPETALUM CHINENSIS 'RUBY'	15-18" HT 3 GAL
WM	92	WAX MYRTLE MYRICA CERIFERA	36-42" HT 7 GAL

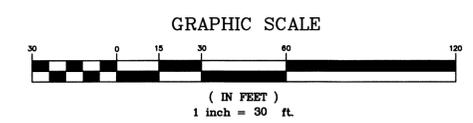
- NOTES:**
- ALL DISTURBED AREAS OF THE SITE WILL BE MULCHED OR PLANTED.
 - LAWN TURF SHALL BE HYBRID BERMUDA, SPRIGGED OR SODDED, OR HYBRID FESCUE SEEDED OR SODDED. AREAS RECOMMENDED FOR TURF ARE SHADED. LIMITS SUBJECT TO ACTUAL FINISHED GRADE CONDITIONS.
 - MULCH ALL PLANT BEDS AND TREE RINGS WITH 3" OF CLEAN PINE STRAW.

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

ALL PLANTED AND RETAINED LIVING MATERIAL, REQUIRED TO MEET THE PROVISIONS OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE, SHALL BE PERPETUALLY PROTECTED AND MAINTAINED TO PROFESSIONALLY ACCEPTED STANDARDS BY JOINT AND SEVERAL RESPONSIBILITY OF THE OWNER, OCCUPANT, TENANT, AND RESPECTIVE AGENTS OF THE PROPERTY ON WHICH THE MATERIAL IS LOCATED.

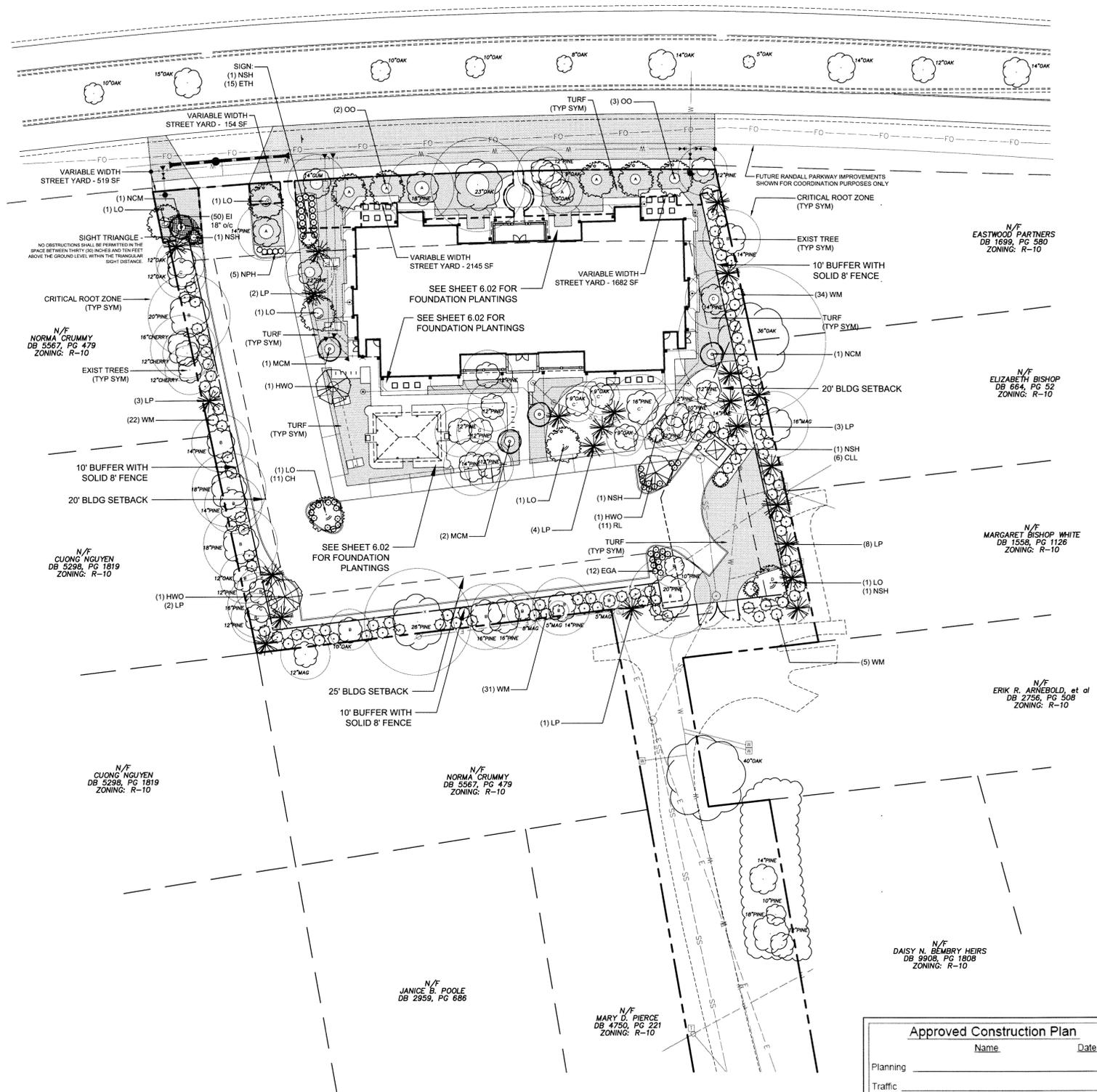
A RAIN / FREEZE SENSOR SHALL BE INSTALLED AS PART OF ANY IRRIGATION SYSTEM USED ON THIS SITE.

ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE



CASE# CD-2-712/4810 RANDALL PARKWAY & 4629 PATRICK AVENUE

RANDALL PARKWAY

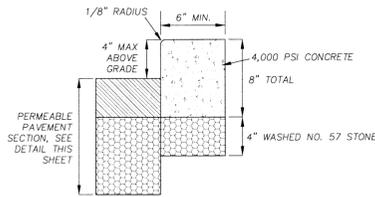
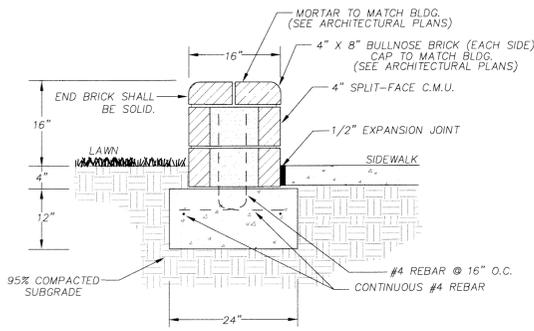


Approved Construction Plan

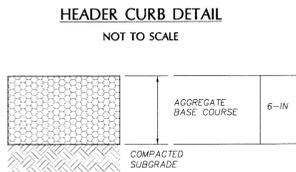
Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____

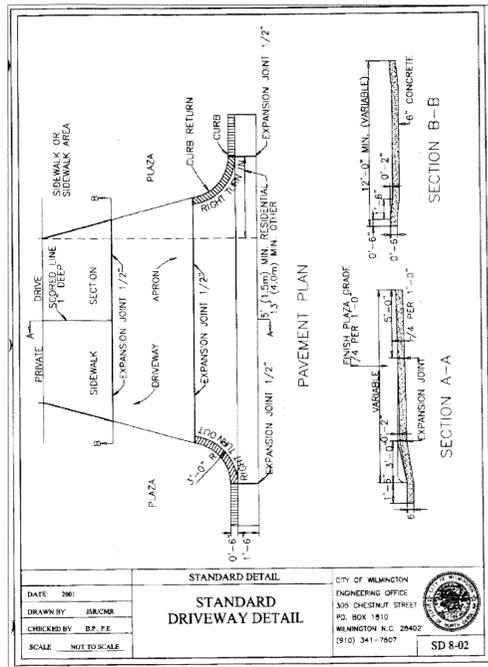
WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____



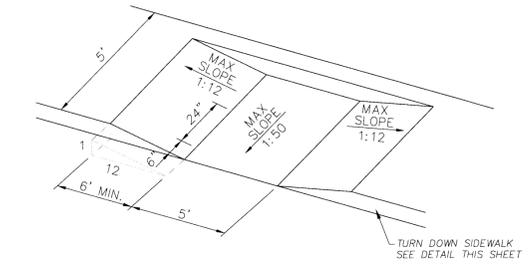
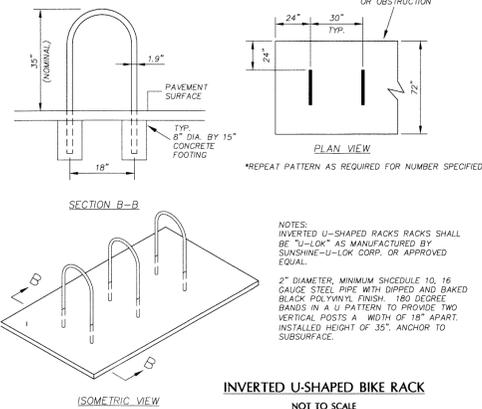
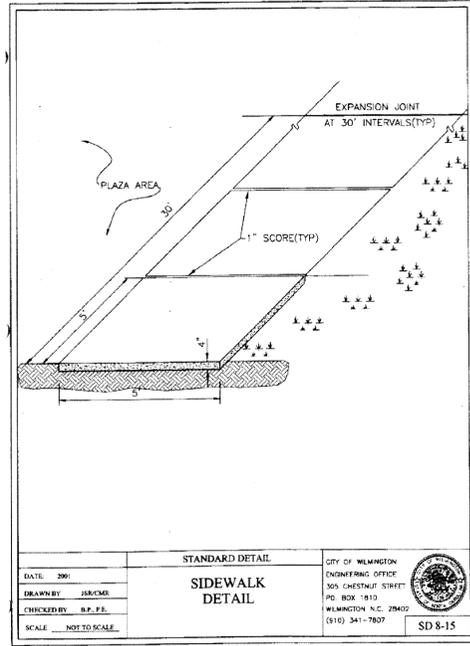
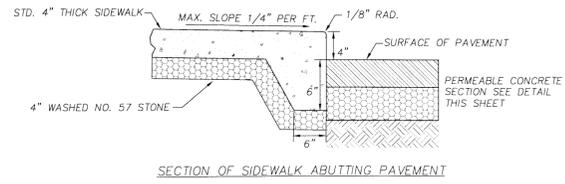
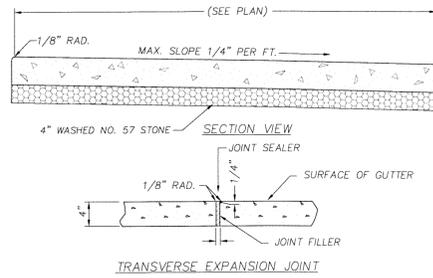
- NOTES:**
- ALL CONCRETE SHALL BE 4,000 P.S.I.
 - CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS, SPACING MAY BE INCREASED TO 15' IF MACHINE IS USED.
 - CONTRACTION JOINTS SHALL BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS, WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
 - EXPANSION JOINTS SHALL BE SPACED AT 50' MAX INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS.
 - ALL JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER.



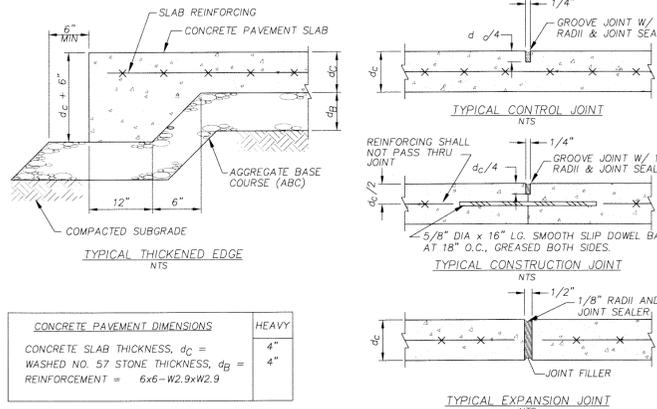
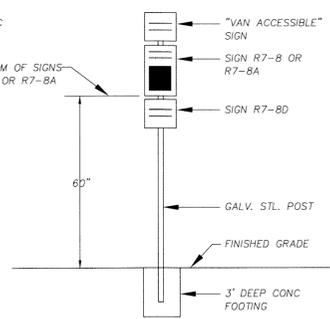
- NOTES:**
- PREPARING, GRADING, SHAPING, AND COMPACTION OF SUBGRADE SOILS SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 501 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PREPARING, GRADING, SHAPING, AND COMPACTION OF AGGREGATE BASE COURSE (ABC) STONE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 520 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006).
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.



- GENERAL NOTES:**
- A GROOVE JOINT 1" DEEP WITH 1/8" RADIUS SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS UNLESS INDICATED OTHERWISE. SEE SPECS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.
 - ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS.
 - A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
 - ALL CONCRETE SHALL BE 4,000 P.S.I.

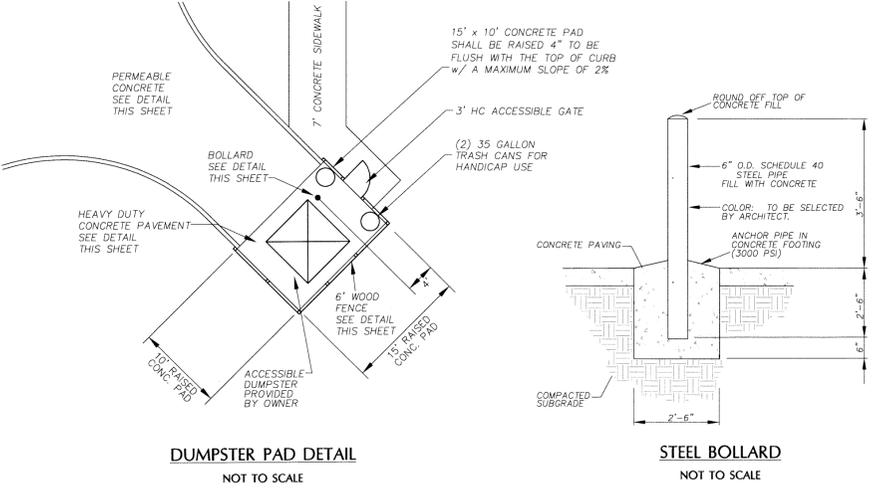


ALL SIGNS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, NCSBC AND ADA SPECIFICATIONS AND REQUIREMENTS.

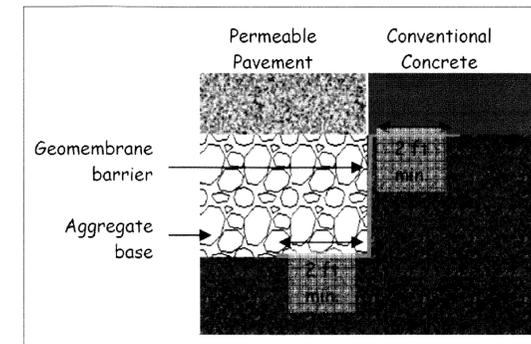


CONCRETE PAVEMENT DIMENSIONS	
CONCRETE SLAB THICKNESS, d_c =	HEAVY 4"
WASHED NO. 57 STONE THICKNESS, d_g =	4"
REINFORCEMENT =	6x6-W2.9x2.9

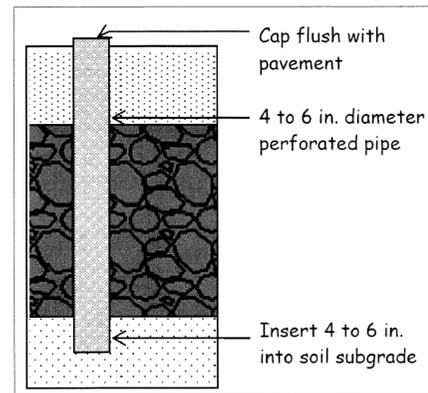
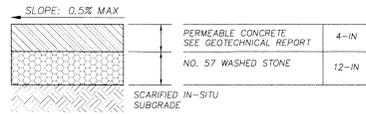
- NOTES:**
- ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI (ASTM C39) WITH ENTRAINED AIR BETWEEN 4% AND 6%.
 - CONTRACTION JOINTS SHALL BE SPACED AT 15 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN.
 - EXPANSION JOINTS SHALL BE SPACED AT 50 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN AND WHERE CONCRETE PAVEMENT ABUTS ANY RIGID OBJECT.



STEEL BOLLARD
NOT TO SCALE



- NOTES:**
- GEOMEMBRANE TYPE SHALL BE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
 - CONTRACTOR SHALL INSTALL AGAINST DRIVEWAY APRON, CONCRETE SIDEWALKS AND DUMPSTER PAD AS REQUIRED.

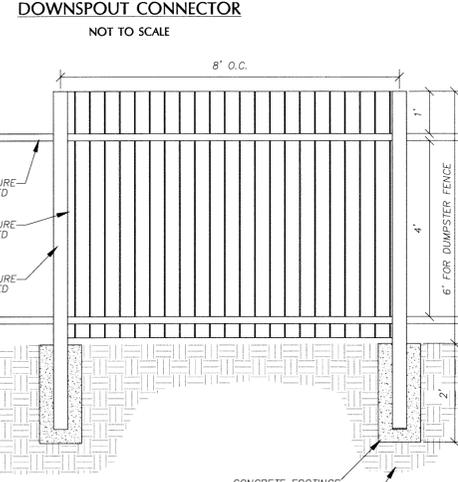


- NOTES:**
- SEE SHEET C3.01 FOR LOCATIONS. CONTRACTOR SHALL USE 4", SCH. 40 PVC.
 - CONTRACTOR SHALL INSTALL A CONCRETE COLLAR AROUND TOP CAP, FLUSH WITH TOP OF PAVEMENT GRADE.

- CONSTRUCTION NOTES:**
- A PRE-CONSTRUCTION MEETING SHALL BE HELD ON SITE WITH ALL REQUIRED PARTIES PRIOR TO ANY CONSTRUCTION STARTING. THE CONTRACTOR SHALL INSTALL THE PERMEABLE PAVEMENT AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND AS OUTLINED IN THE NC DIVISION OF WATER QUALITY BMP MANUAL, CONSTRUCTION STEPS 1 THROUGH 11, IN CHAPTER 19 FOR PERMEABLE PAVEMENT AS REVISED OCTOBER 6, 2012.



- NOTES:**
- SPECIFIC PRODUCT SHOWN FOR REFERENCE ONLY. CONTRACTOR MAY SUBMIT EQUIVALENT PRODUCT FOR SUBSTITUTION APPROVAL. MODEL AND SIZE SHALL BE AS REQUIRED BASED ON DOWNSPOUT SIZE SPECIFIED BY THE ARCHITECT, REFER TO ARCHITECTURAL PLANS.



- NOTES:**
- USE HOT DIPPED GALVANIZED RING SHANK NAILS TO FASTEN 1X4 VERTICALS TO HORIZONTAL RAILS.
 - PROVIDE 1/2" MAX. GAP BETWEEN 1/2" VERTICALS.
 - PROVIDE 2" GAP BETWEEN BOTTOM OF 1X4 AND FINISH GRADE.
 - ALL MATERIALS TO BE PRESSURE-TREATED TO GOOD CONTACT QUALITY.

OPAQUE WOODEN FENCE
NOT TO SCALE

chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962

SEALS



REVISIONS

DATE	REVISION	COMMENTS
12-21-12		

MAJOR SITE PLAN

The Lofts at Randall
4810 Randall Parkway
Wilmington, North Carolina

REVIEWED BY:	JFC
DATE:	11-3-12
PROJECT NUMBER:	12-013
COUNTY:	NEW HANOVER
PIN(S):	313711-67-9182.000 313711-77-1253.000
DEED:	DB 4073, PG 784 DB 5503, PG 1266
ZONING:	MF-L (CD)
TOWNSHIP:	WILMINGTON

SITE DETAILS

C7.01
NOVEMBER 2012

Temporary Seeding Recommendations for Late Winter and Early Spring

Seeding mixture Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1 - May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refer to Appendix 6.02 for botanical names.

Temporary Seeding Recommendations for Summer

Seeding mixture Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refer to Appendix 6.02 for botanical names.

Temporary Seeding Recommendations for Fall

Seeding mixture Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refer to Appendix 6.02 for botanical names.

Specifications

Complete grading before preparing seedbeds, and install all necessary erosion control practices such as dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion hazard. If soils become compacted during grading, loosen them to a depth of 6-8 inches using a ripper, harrow, or chisel plow.

SEEDBED PREPARATION

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well-pulverized, loose, and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

Liming—Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 1/2 tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

Fertilizer—Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

Surface roughening—If recent tillage operations have resulted in a loose surface, additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Groove or furrow slopes steeper than 3:1 on the contour before seeding (Practice 6.03, *Surface Roughening*).

PLANT SELECTION

Select an appropriate species or species mixture from Table 6.10a for seeding in late winter and early spring, Table 6.10b for summer, and Table 6.10c for fall.

SEEDING

Evenly apply seed using a cyclone seeder (broadcast), drill, cultipacker seeder, or hydroseeder. Use seeding rates given in Tables 6.10a-6.10c. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot be driven. Hand broadcasting is not recommended because of the difficulty in achieving a uniform distribution.

Small grains should be planted no more than 1 inch deep, and grasses and legumes no more than 1/2 inch. Broadcast seed must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker. Hydroseeded mixtures should include a wood fiber (cellulose) mulch.

MULCHING

The use of an appropriate mulch will help ensure establishment under normal conditions, and is essential to seeding success under harsh site conditions (Practice 6.14, *Mulching*). Harsh site conditions include:

- seeding in fall for winter cover (wood fiber mulches are not considered adequate for this use);
- slopes steeper than 3:1;
- excessively hot or dry weather;
- adverse soils (shallow, rocky, or high in clay or sand), and
- areas receiving concentrated flow.

If the area to be mulched is subject to concentrated waterflow, as in channels, anchor mulch with netting (Practice 6.14, *Mulching*).

Maintenance

Reseed and mulch areas where seedling emergence is poor, or where erosion occurs, as soon as possible. Do not mow. Protect from traffic as much as possible.

* TEMPORARY SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SEE MANUAL FOR ADDITIONAL INFORMATION.

Well-Drained Sandy Loams to Dry Sands, Coastal Plain and Eastern Edge of Piedmont; Low- to Medium-Care Lawns

Seeding mixture Species	Rate
Centipedegrass	10-20 lb/acre (seed) or 33 lb/acre (sprigs)

Seeding dates
Mar. - June
(Sprigging can be done through July where water is available for irrigation.)

Soil amendments
Apply lime and fertilizer according to soil tests, or apply 300 lb/acre 10-10-10 fertilizer.

Sprigging
Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.

Furrows should be 4-6 inches deep and 2 feet apart. Place sprigs about 2 feet apart in the row with one end at or above ground level (Figure 6.11d).

Broadcast at rates shown above, and press sprigs into the top 1/2-2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.

Mulch
Do not mulch.

Maintenance
Fertilize very sparingly—20 lb/acre nitrogen in spring with no phosphorus. Centipedegrass cannot tolerate high pH or excess fertilizer.

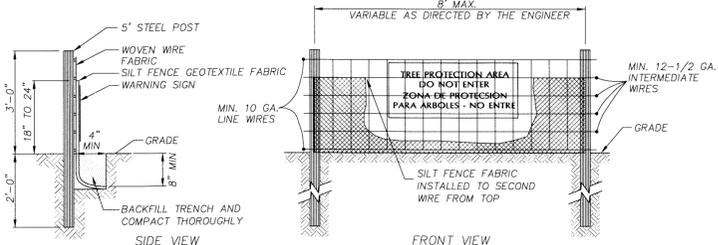
* Refer to Appendix 6.02 for botanical names.
* PERMANENT SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SEE MANUAL FOR ADDITIONAL INFORMATION.

SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH IF SPECIFIED.
8. INSPECT ALL SEEDBED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT SAEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
10. SEE SECTION 6.11 OF "NCDENR EROSION CONTROL PLANNING AND DESIGN MANUAL" FOR ADDITIONAL INFORMATION REGARDING MATERIALS, CONSTRUCTION AND SPECIFICATIONS.

* APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER - 1,000 LBS./ACRE - 10-10-10
SUPERPHOSPHATE - 500 LBS./ACRE - 20%
IF SPECIFIED
MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW
ANCHOR - ASPHALT EMULSION @ 300 GALS./ACRE

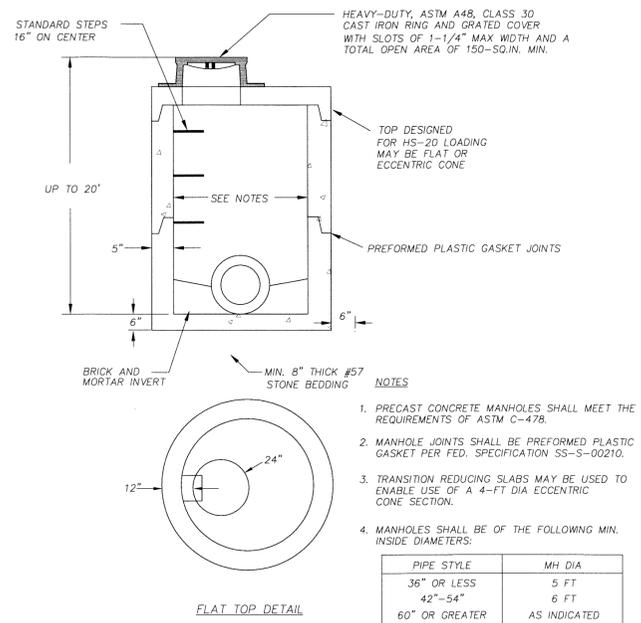
PERMANENT SEEDING SCHEDULE



- NOTES:**
1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
 2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.
 4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
 5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
 6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
 7. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
 8. ADDITIONAL SIGNS MAY BE REQUIRED BY THE CITY OF WILMINGTON INSPECTION DEPARTMENT BASED ON ACTUAL FIELD CONDITIONS.
 9. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
 10. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
 11. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

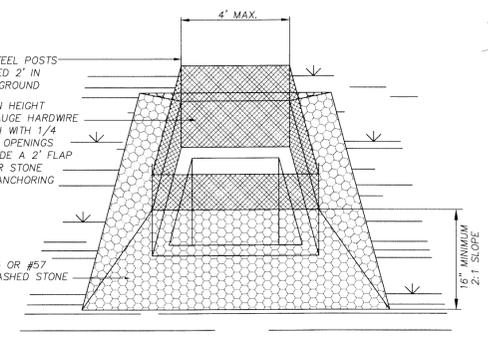
STANDARD TEMPORARY SILT / TREE PROTECTION FENCE

NOT TO SCALE



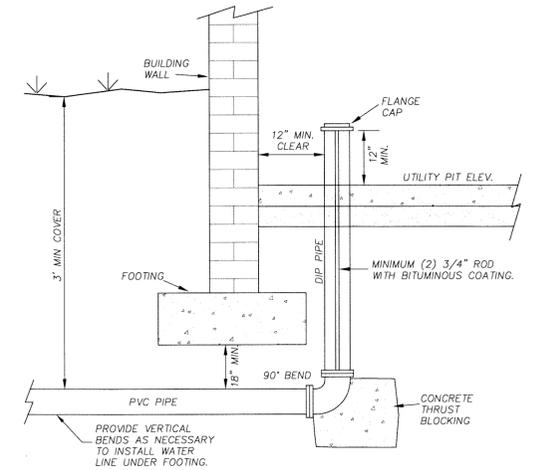
STANDARD STORM DRAINAGE JUNCTION BOX

NOT TO SCALE



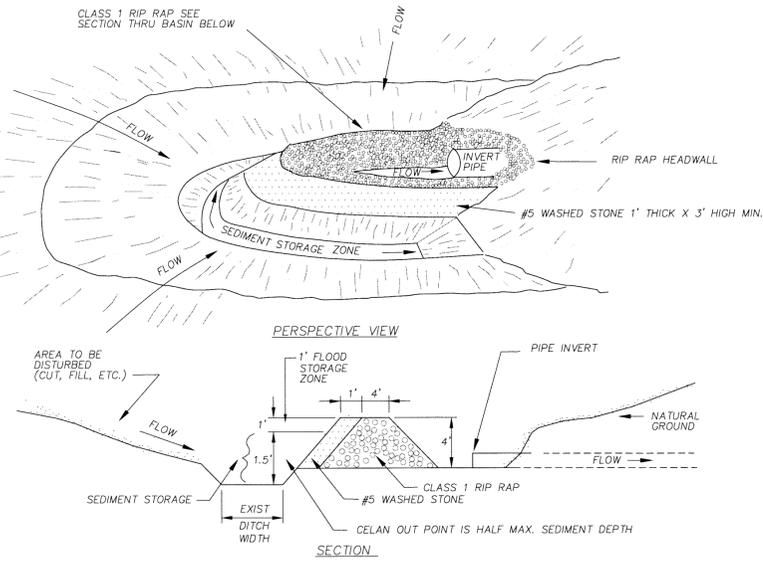
TEMPORARY INLET PROTECTION

NOT TO SCALE



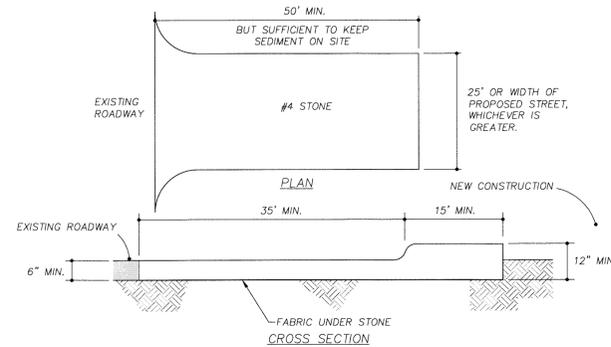
STANDARD FIRE SERVICE INSTALLATION AT BUILDING

NOT TO SCALE



TEMPORARY CULVERT SEDIMENT BASIN

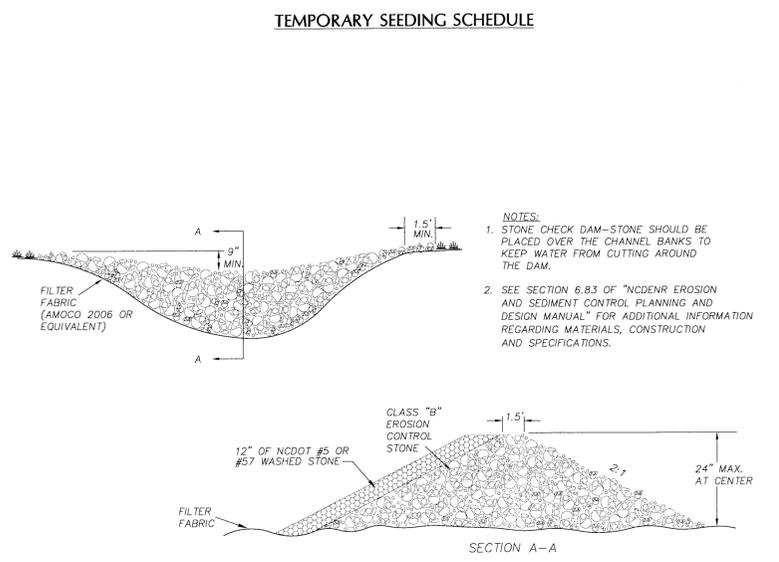
NOT TO SCALE



- NOTES:**
1. ENTRANCE(S) SHALL BE LOCATED TO PROVIDE MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
 2. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
 3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY. CONTRACTOR SHALL MAINTAIN AS NECESSARY.
 4. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.
 5. FREQUENT CHECKS OF THE ENTRANCE(S) AND TIMELY MAINTENANCE SHALL BE PROVIDED.
 6. NOTES ARE APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED.
 7. SEE SECTION 6.06 OF "NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL" FOR ADDITIONAL INFORMATION REGARDING MATERIALS, CONSTRUCTION AND SPECIFICATIONS.

TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



TEMPORARY CHECK DAM

NOT TO SCALE

chandler engineering pa
308 S. Fugate Avenue, Fugate/Virginia, NC 27576
Phone: 919-552-4845 Fax: 919-552-6962

SEALS

REVISIONS

NO.	DATE	REVISION

MAJOR SITE PLAN

COMMENTS

DATE: 12-21-12

REVISOR: AGENCY COMMENTS

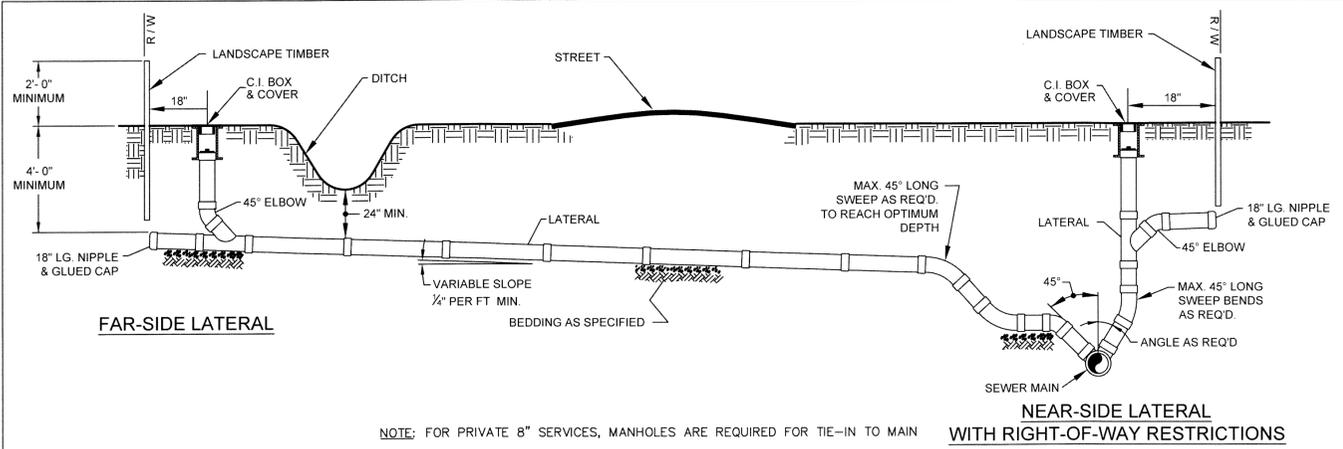
REVIEWED BY: JFC
DATE: 11-2-12
PROJECT NUMBER: 12-011
COUNTY: NEW HANOVER
PINS: 313711-67-9382-000
313711-77-1253-000
DEED: DB 4073, PG 784
DB 5503, PG 1266
ZONING: MF-1(CD)
TOWNSHIP: WILMINGTON

SITE DETAILS

C7.02

NOVEMBER 2012

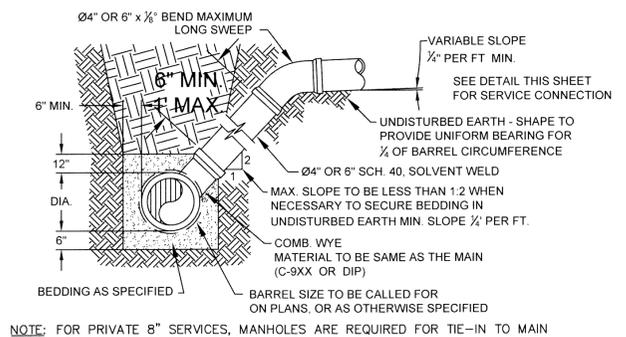
The Lofts at Randall
4810 Randall Parkway
Wilmington, North Carolina



NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN

STANDARD SERVICE CONNECTION TO SANITARY SEWER

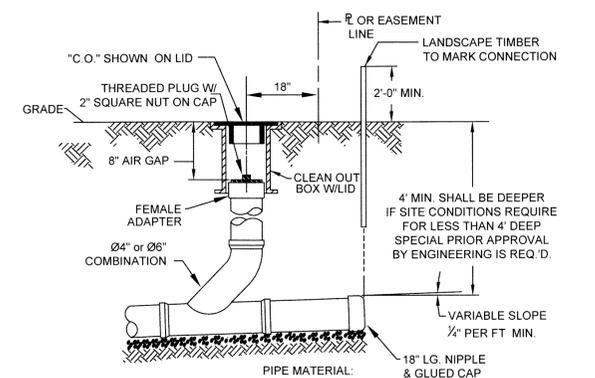
NOT TO SCALE



NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN

STANDARD SERVICE LATERAL

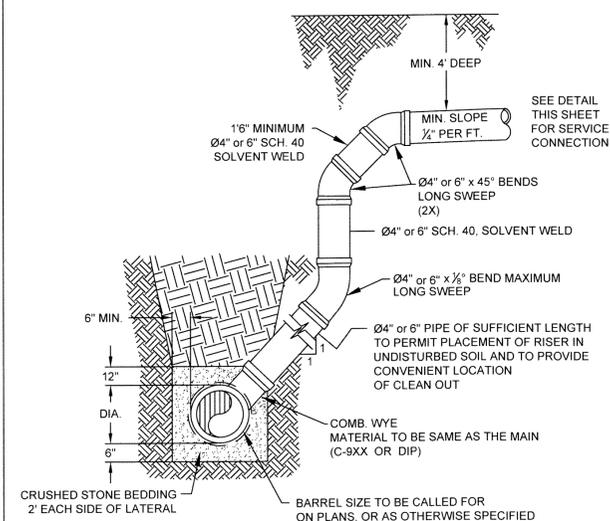
(MAIN DEPTH LESS THAN 8ft)
NOT TO SCALE



NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN

SERVICE CONNECTION & CLEAN-OUT

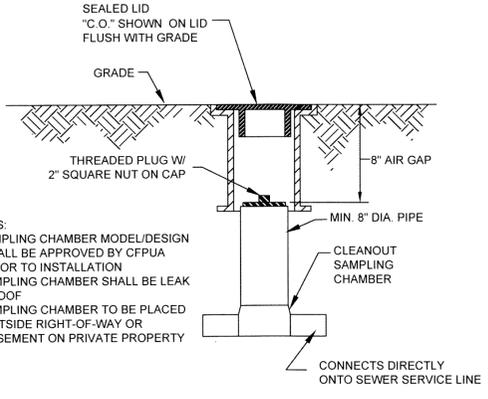
NOT TO SCALE



NOTE: SPECIAL CARE SHALL BE TAKEN DURING BACKFILL OPERATIONS. THE RISER SHALL BE PLUMB AND TRUE AT ALL TIMES, AND REST ON FIRM, STABLE FOUNDATION. FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN

DEEP SERVICE LATERAL

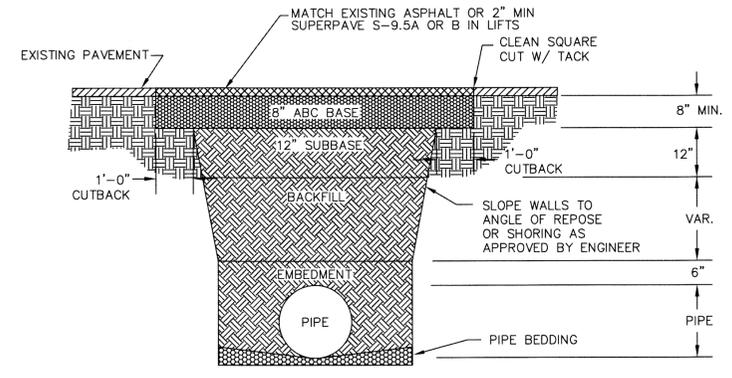
(MAIN DEPTH GREATER THAN 8ft)
NOT TO SCALE



NOTES:
1. SAMPLING CHAMBER MODEL/DESIGN SHALL BE APPROVED BY CFPUA PRIOR TO INSTALLATION
2. SAMPLING CHAMBER SHALL BE LEAK PROOF
3. SAMPLING CHAMBER TO BE PLACED OUTSIDE RIGHT-OF-WAY OR EASEMENT ON PRIVATE PROPERTY

SAMPLING CHAMBER

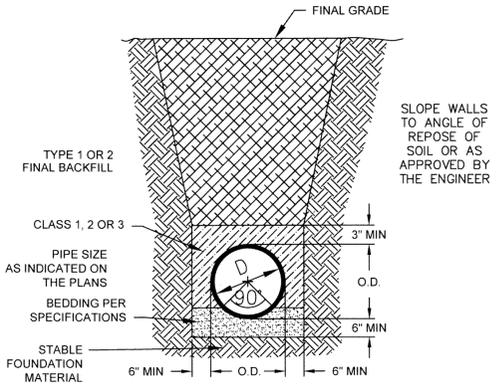
NOT TO SCALE



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

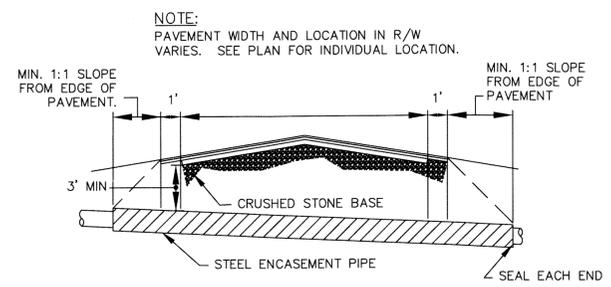
PAVEMENT REPAIR WHERE PIPE INSTALLED

(FOR PRIVATE ROADS AND PAVED AREAS. CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)
NOT TO SCALE



CL 50 DUCTILE IRON DR 18 PVC PIPE TRENCH DETAIL

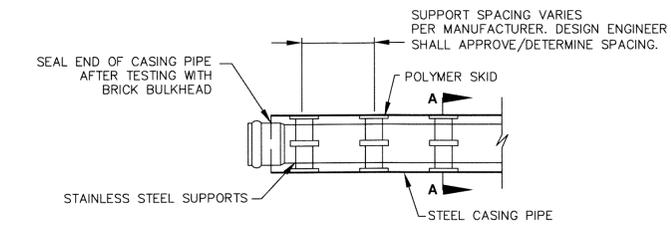
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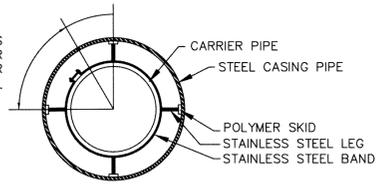
NOTES:
1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING

TYPICAL BORING/JACKING DETAIL

NOT TO SCALE



NOTE: PIPE SUPPORT TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SUPPORTS MAY BE USED AS ALTERNATIVE. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.



PIPE CASING SUPPORT DETAIL

NOT TO SCALE

GENERAL NOTES:

- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
- THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND INSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962

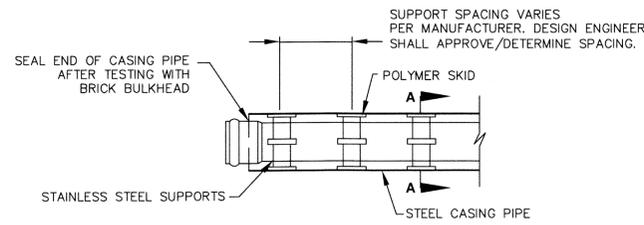
REV:	DESCRIPTION:	DATE:

SANITARY SEWER STANDARD DETAILS

SANITARY SEWER STANDARD DETAILS SS-2

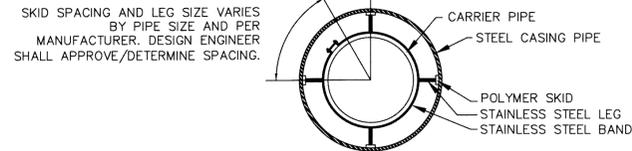
CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DATE:	1/9/12
SCALE:	N/A
DRAWN BY:	CFPUA
CHECKED BY:	CFPUA
PROJECT NO.:	
SHEET NO.:	2 / 4



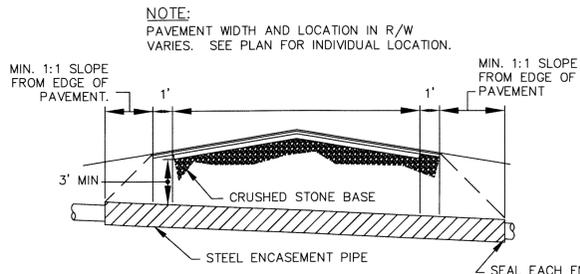
SUPPORT SPACING VARIES PER MANUFACTURER. DESIGN ENGINEER SHALL APPROVE/DETERMINE SPACING.

NOTE: PIPE SUPPORT TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SUPPORTS MAY BE USED AS ALTERNATIVE. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.



SECTION A-A
NOT TO SCALE

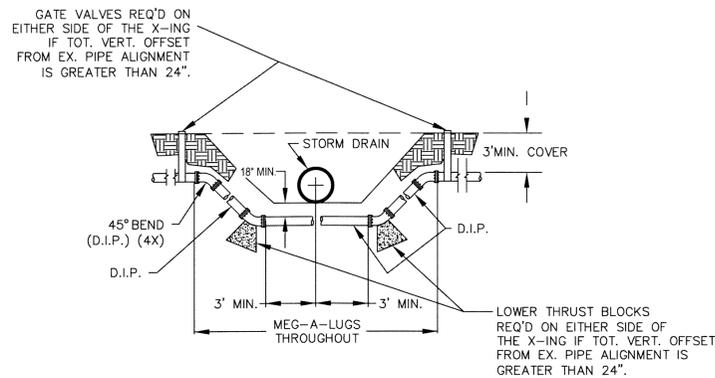
PIPE CASING SUPPORT DETAIL
NOT TO SCALE



NOTE: PAVEMENT WIDTH AND LOCATION IN R/W VARIES. SEE PLAN FOR INDIVIDUAL LOCATION.

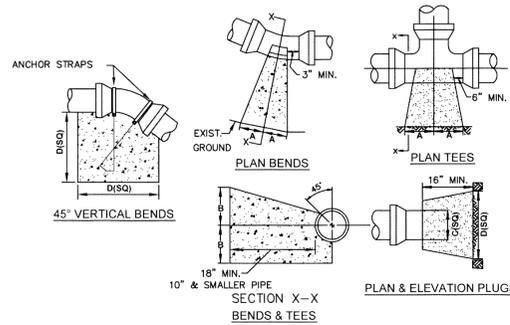
NOTE: 1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING, BORING/JACKING TO LINE AND GRADE IS REQUIRED.
2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING

TYPICAL BORING/JACKING DETAIL
NOT TO SCALE



NOTE: USE D.I.P. (CL50 OR BETTER)

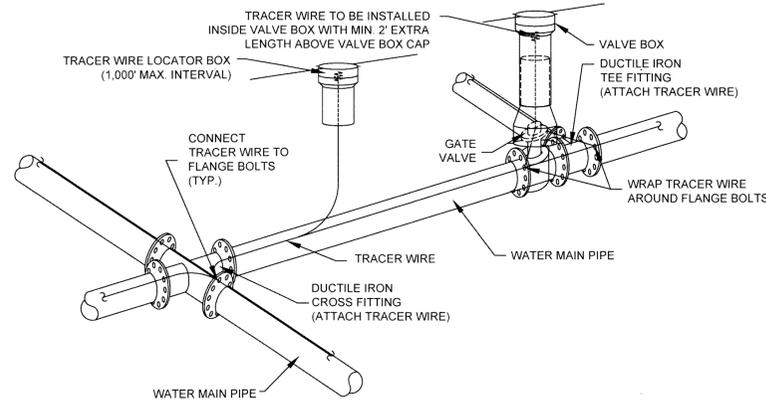
WATER MAIN DITCH & STORM DRAIN CROSSING
NOT TO SCALE



SIZE	90° BENDS		45° BENDS		22 1/2° BENDS		TEES/PLUGS		45° VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

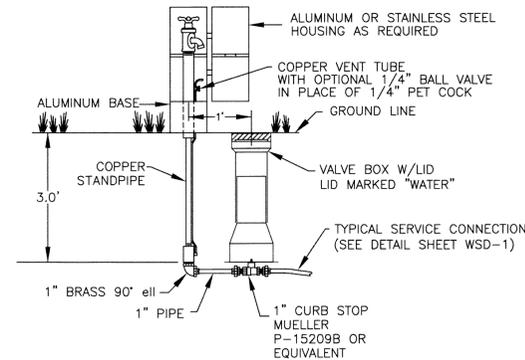
NOTES: 1. BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
3. USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

THRUST BLOCK DETAIL
NOT TO SCALE

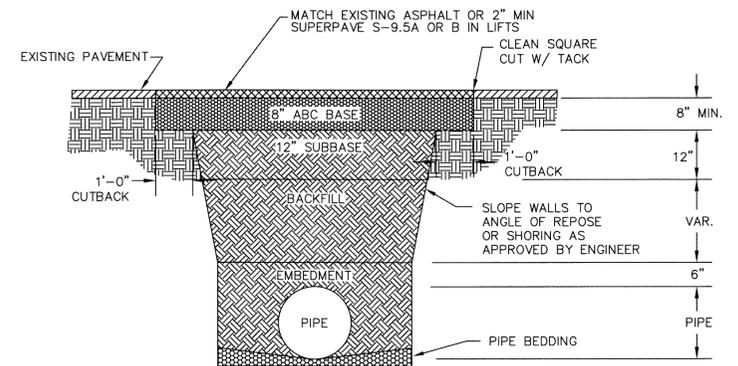


NOTES: 1. TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION.
2. WIRE SHALL BE STRAPPED TO ALL PVC WATER MAIN PIPING WITH DUCT TAPE AT 12-FT. INTERVALS.
3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS.
4. ALL WIRE SPLICES SHALL HAVE WATER PROOF WIRE CONNECTIONS.

TRACER WIRE DETAIL

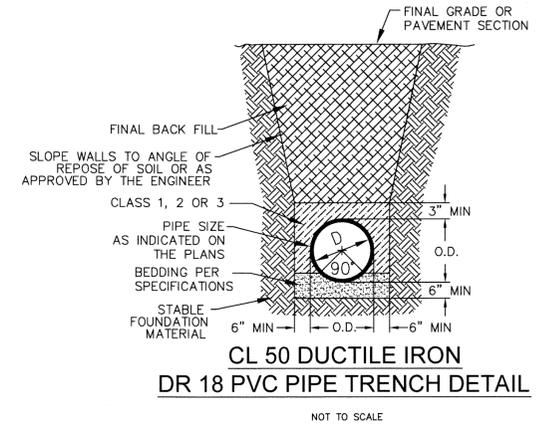


SAMPLING STATION
NOT TO SCALE



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

PAVEMENT REPAIR WHERE PIPE INSTALLED
(FOR PRIVATE ROADS AND PAVED AREAS:
CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY
RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)
NOT TO SCALE



**CL 50 DUCTILE IRON
DR 18 PVC PIPE TRENCH DETAIL**
NOT TO SCALE

GENERAL NOTES:

1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
4. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
5. THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN & STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

**THE DETAILS SHOWN HEREON SUPERCEDE CFPWA
WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

chandler engineering pa
309 S. Fuquay Avenue, Fuquay-Varina, NC 27526
Phone: 919-552-4845 Fax: 919-552-6962

REV:	DESCRIPTION:	DATE:

WATER DISTRIBUTION SYSTEM STANDARD DETAILS		DATE: 1/9/12
WATER STANDARD DETAILS WSD-2		SCALE: N/A
CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560		DRAWN BY: CFPUA
		CHECKED BY: CFPUA
SEAL 026466 ENGINEER JAMES S. FLAMORE NORTH CAROLINA PROFESSIONAL SEAL		PROJECT NO.:
SHEET NO: 2 / 2		