

LEGEND:

SYMBOLS	LINETYPES
○ EX. IRON PIPE/ROD OR NAIL	— X — FENCE
□ EX. CONCRETE MONUMENT	— OU — OVERHEAD UTILITY
● NEW IRON PIPE	— W — WATER
○ CALCULATED POINT	— SS — SANITARY SEWER
□ CABLE PEDESTAL	— SD — STORM DRAIN
□ TELEPHONE PEDESTAL	
□ ELECTRIC PEDESTAL	
□ FIBER-OPTIC MARKER	
□ TRAFFIC SIGNAL BOX	
□ WATER METER	
□ FIRE HYDRANT	
□ VALVE (WATER OR GAS)	
□ SANITARY SEWER MANHOLE	
□ SANITARY SEWER CLEANOUT	
□ STORM CURB INLET	
□ DRAINAGE INLET (W/ GRATE)	
□ STORM DRAIN MANHOLE	
□ UTILITY POLE	
□ SIGNAL POLE	
□ GUY WIRE	
□ SIGN POST	

LINE TABLE:

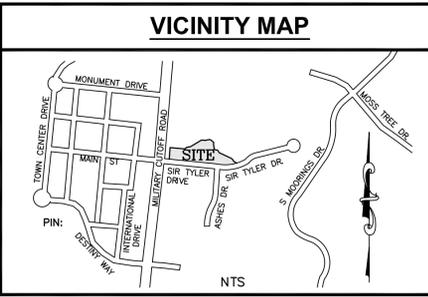
LINE	LENGTH	BEARING
L1	29.46	N50°38'16"E
L2	17.46	N81°38'11"E
L3	31.81	S81°28'11"E
L4	14.66	N80°31'40"E
L5	22.70	S64°30'06"E
L6	19.82	S47°09'00"E
L7	20.58	S50°56'47"E
L8	33.46	S01°17'28"W
L9	26.57	S09°36'37"E
L10(TOTAL)	30.53	S11°49'01"E
L11	15.40	S67°08'26"E
L12	24.49	S85°37'07"E
L13	22.98	S36°32'49"E
L14	15.32	S23°24'11"E
L15	18.02	S65°27'22"E
L16	31.41	S57°16'47"E
L17	17.95	S21°43'36"E
L18	26.92	S48°36'11"E
L19	12.04	S61°37'29"E
L20	13.15	S61°21'52"E

FEMA & WETLANDS NOTES:

1. THERE IS NO 100 YEAR FLOODPLAIN ON THIS PROPERTY PER FEMA MAP NO. 3720315800J, EFFECTIVE DATE APRIL 3, 2006.
2. WETLANDS SHOWN HEREON NOT FIELD LOCATED BY THIS OFFICE. WETLANDS WERE TAKEN FROM A WETLAND MAP BY SPANGLER ENVIRONMENTAL AND CERTIFIED BY ARNOLD CARSON, PLS. APPROVAL BY THE U.S. ARMY CORPS OF ENGINEERS STATED IN A "NOTIFICATION OF JURISDICTIONAL DETERMINATION" HAVING ACTION ID# 200400096, DATED DECEMBER 6, 2004.

SITE DATA NOTES:

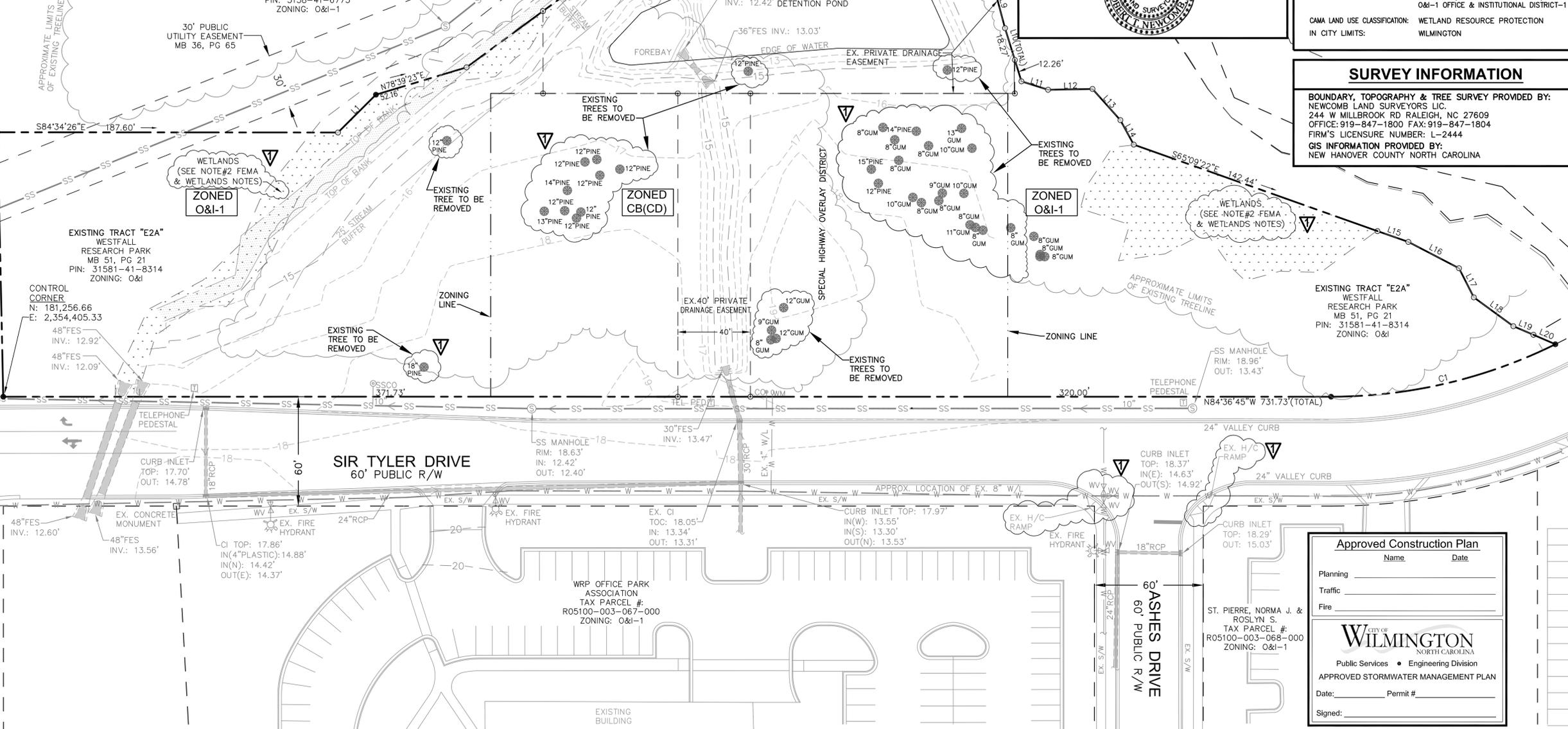
1. THE EXISTING STORMWATER POND WAS ORIGINALLY DESIGNED TO HANDLE THE RUN OFF FROM THIS SITE TO 80% IMPERVIOUS.
2. THERE IS NO 100 YEAR FLOODPLAIN ON THIS PROPERTY PER FEMA MAP NO. 3720315800J, EFFECTIVE DATE APRIL 3, 2006.
3. SOIL TYPE - Wr WRIGHTSBORO - PER MAP SHEET 16 OF THE NEW HANOVER COUNTY SOIL MAP.
4. THERE ARE NO CAMA AREAS OF CONCERN (AEC) ON THIS SITE.
5. CAMA LAND CLASSIFICATION - WATERSHED RESOURCE PROTECTION AREA.
6. SITE IS NOT RECOGNIZED AS A LOCAL, STATE OR FEDERALLY HISTORIC OR ARCHAEOLOGICAL SITE.
7. THERE ARE NO CEMETERIES, BURIAL SITES OR BURIAL GROUNDS ON THIS SITE.
8. THERE ARE NO EXISTING 8" AMERICAN HOLLIES OR FLOWERING TREES ON SITE PER TREE SURVEY.



CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING
C1	128.04	280.00	126.93	N82°17'15"E

TRACT "E2B"
WESTFALL
RESEARCH PARK
MB 51, PG 21
PIN: 3158-41-6775
ZONING: O&I-1



I, Robert T. Newcomb, III, certify that this plot was drawn under my supervision from an actual survey made under my supervision from references as noted on said plot; that the boundaries not surveyed are clearly indicated as drawn from information as indicated under references; that the ratio of precision as calculated is greater than 1:10,000; that this plot was prepared in accordance with NCGS 47-30 as amended.

Witness my original signature, registration number and seal this day of December, 2012.

Robert T. Newcomb, III
Professional Land Surveyor (L-2444)

PLAN SUMMARY

SITE ADDRESS : 1745 SIR TYLER DRIVE
WILMINGTON, NC 28405

PARCEL ID: R05100-003-094-000

MAP ID: 315818.41.8314.000

OWNER: WESTFALL RESEARCH PARK 36 ACRE
1202 EASTWOOD ROAD
WILMINGTON, NC 28403

BOOK OF MAPS: MB 51, PG 21

ACREAGE: 3.37 AC

CLASS: COM-COMMERCIAL

LAND USE CODE: 958-UNUSED LAND

ZONING: CB (CD) - COMMUNITY BUSINESS DISTRICT (CONDITIONAL DISTRICT) O&I-1 OFFICE & INSTITUTIONAL DISTRICT-1

CAMA LAND USE CLASSIFICATION: WETLAND RESOURCE PROTECTION

IN CITY LIMITS: WILMINGTON

SURVEY INFORMATION

BOUNDARY, TOPOGRAPHY & TREE SURVEY PROVIDED BY:
NEWCOMB LAND SURVEYORS LIC.
244 W MILLBROOK RD RALEIGH, NC 27609
OFFICE: 919-847-1800 FAX: 919-847-1804
FIRM'S LICENSURE NUMBER: L-2444

GIS INFORMATION PROVIDED BY:
NEW HANOVER COUNTY NORTH CAROLINA

Z:\PROJECTS\111164 GCF - Sir Tyler Dr. - Wilmington\DWG\DO_11-1-164_BM_SHEET 1-15.dwg, C2 EXISTING, 7/1/2013 11:08:38 AM, Bhan, STANDARD 26 BY 24 PDF SHEET.pcd, PostScript Custom Page Size, 1:1

REVISIONS

1.	07-01-13	REVISED LOT SIZES & CoW (1st REVIEW COMMENTS)
----	----------	---

GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE: 1"=30'
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

SITE INVENTORY & TREE REMOVAL PLAN



DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com

Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 2 OF 15

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPUA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

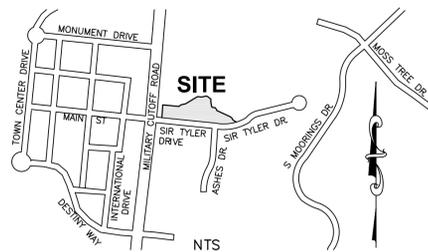
Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

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

Date: _____ Permit # _____
Signed: _____

VICINITY MAP



CONTRACTOR NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
2. THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
3. THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
4. PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
5. GC TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
6. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.

LEGEND:

SYMBOLS	LINETYPES
○ EX. IRON PIPE/ROD OR NAIL	— X — FENCE
□ EX. CONCRETE MONUMENT	— OU — OVERHEAD UTILITY
● NEW IRON PIPE	— W — WATER
○ CALCULATED POINT	— SS — SANITARY SEWER
□ CABLE PEDESTAL	— SD — STORM DRAIN
□ TELEPHONE PEDESTAL	
□ ELECTRIC PEDESTAL	
□ FIBER-OPTIC MARKER	
□ TRAFFIC SIGNAL BOX	
□ WATER METER	
□ FIRE HYDRANT	
□ VALVE (WATER OR GAS)	
□ SANITARY SEWER MANHOLE	
□ SANITARY SEWER CLEANOUT	
□ STORM CURB INLET	
□ DRAINAGE INLET (W/ GRATE)	
□ STORM DRAIN MANHOLE	
○ UTILITY POLE	
□ EXISTING LAMP POST	
○ SIGNAL POLE	
○ GUY WIRE	
□ SIGN POST	

LINE TABLE:

LINE	LENGTH	BEARING
L1	29.46	N50°38'16"E
L2	17.46	N81°38'11"E
L3	31.81	S81°28'11"E
L4	14.66	N80°31'40"E
L5	22.70	S64°30'06"E
L6	19.82	S47°09'00"E
L7	20.58	S50°56'47"E
L8	33.46	S01°17'28"W
L9	26.57	S09°36'37"E
L10(TOTAL)	30.53	S11°49'01"E
L11	15.40	S67°08'26"E
L12	24.49	S85°37'07"E
L13	22.98	S36°32'49"E
L14	15.32	S23°24'11"E
L15	18.02	S65°27'22"E
L16	31.41	S57°16'47"E
L17	17.95	S21°43'36"E
L18	26.92	S48°36'11"E
L19	12.04	S61°37'29"E
L20	13.15	S61°21'52"E
L21	3.90'	N89°56'26"E
L22	18.37'	N 0°33'4"W

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING
C1	128.04	280.00	126.93	N82°17'15"E

TRACT "E2B"
WESTFALL RESEARCH PARK
MB 51, PG 21
PIN: 3158-41-6775
ZONING: O&I-1

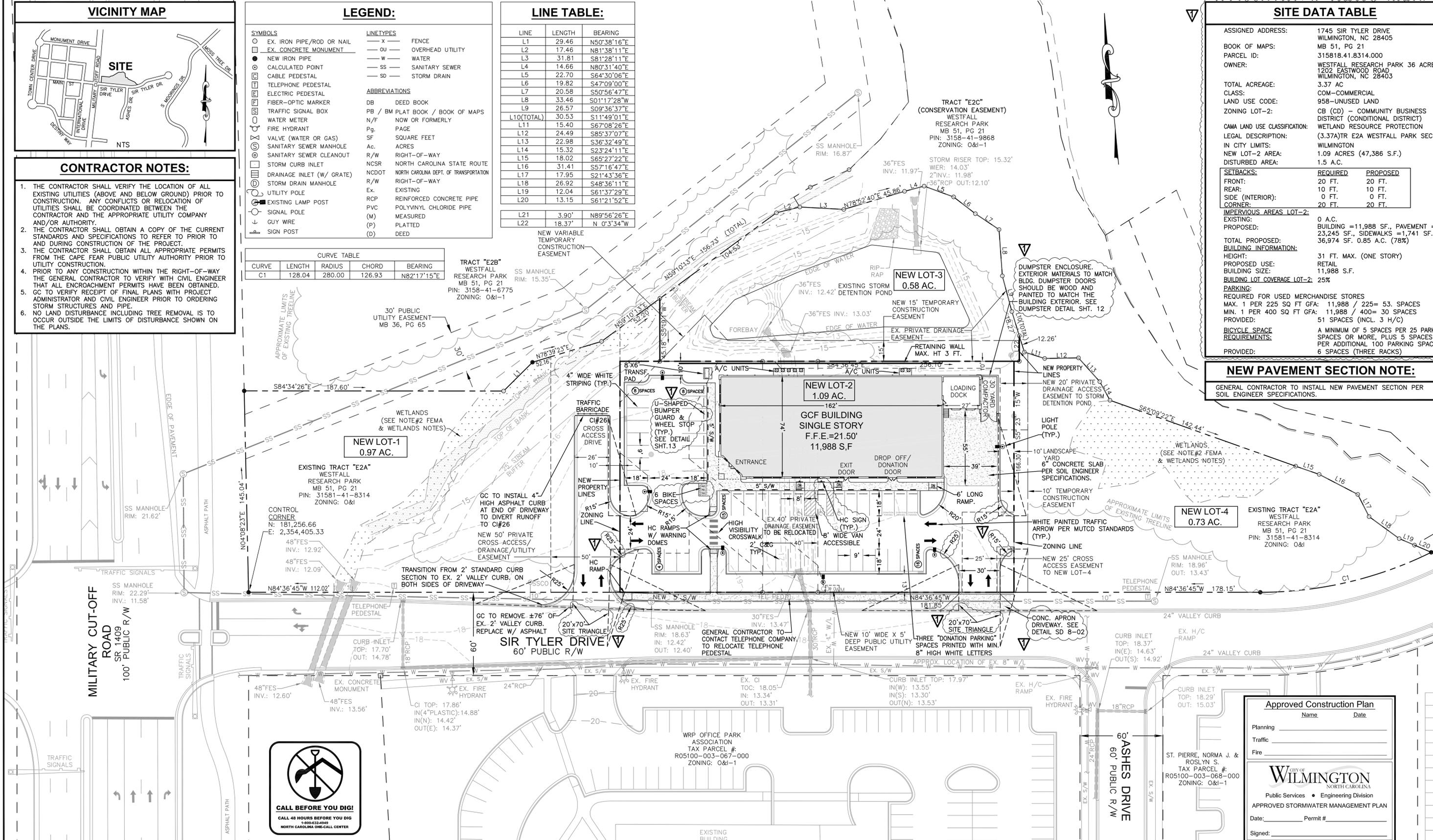
TRACT "E2C"
(CONSERVATION EASEMENT)
WESTFALL RESEARCH PARK
MB 51, PG 21
PIN: 3158-41-9868
ZONING: O&I-1

SITE DATA TABLE

ASSIGNED ADDRESS:	1745 SIR TYLER DRIVE
BOOK OF MAPS:	MB 51, PG 21
PARCEL ID:	315818.41.8314.000
OWNER:	WESTFALL RESEARCH PARK 36 ACRE 1202 EASTWOOD ROAD WILMINGTON, NC 28403
TOTAL ACREAGE:	3.37 AC
CLASS:	COM-COMMERCIAL
LAND USE CODE:	958-UNUSED LAND
ZONING LOT-2:	CB (CD) - COMMUNITY BUSINESS DISTRICT (CONDITIONAL DISTRICT)
CAMA LAND USE CLASSIFICATION:	WETLAND RESOURCE PROTECTION (3.37A)TR E2A WESTFALL PARK SEC 2
LEGAL DESCRIPTION:	WILMINGTON
IN CITY LIMITS:	1.09 ACRES (47,386 S.F.)
NEW LOT-2 AREA:	1.5 A.C.
DISTURBED AREA:	1.5 A.C.
SETBACKS:	REQUIRED PROPOSED
FRONT:	20 FT. 20 FT.
REAR:	10 FT. 10 FT.
SIDE (INTERIOR):	0 FT. 0 FT.
CORNER:	20 FT. 20 FT.
IMPERVIOUS AREAS LOT-2:	
EXISTING:	0 A.C.
PROPOSED:	BUILDING =11,988 SF., PAVEMENT = 23,245 SF., SIDEWALKS =1,741 SF. 36,974 SF. 0.85 A.C. (78%)
TOTAL PROPOSED:	31 FT. MAX. (ONE STORY)
BUILDING INFORMATION:	11,988 S.F.
HEIGHT:	
PROPOSED USE:	RETAIL
BUILDING SIZE:	
BUILDING LOT COVERAGE LOT-2:	25%
PARKING:	
REQUIRED FOR USED MERCHANDISE STORES	
MAX. 1 PER 225 SQ FT GFA:	11,988 / 225= 53. SPACES
MIN. 1 PER 400 SQ FT GFA:	11,988 / 400= 30 SPACES
PROVIDED:	51 SPACES (INCL. 3 H/C)
BICYCLE SPACE REQUIREMENTS:	A MINIMUM OF 5 SPACES PER 25 PARKING SPACES OR MORE, PLUS 5 SPACES PER ADDITIONAL 100 PARKING SPACES.
PROVIDED:	6 SPACES (THREE RACKS)

NEW PAVEMENT SECTION NOTE:

GENERAL CONTRACTOR TO INSTALL NEW PAVEMENT SECTION PER SOIL ENGINEER SPECIFICATIONS.



Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

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

Date: _____ Permit # _____
Signed: _____



ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS

1.	07-01-13	REVISED LOT SIZES & CorW 1st REVIEW COMMENTS.
----	----------	---



GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE: 1"=30'
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

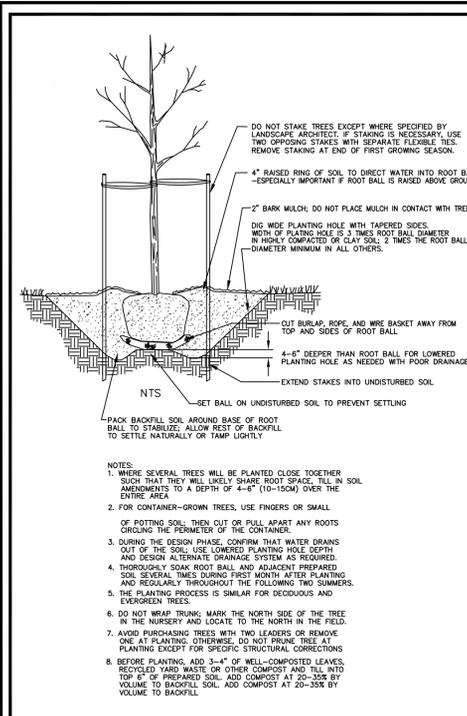
SITE PLAN



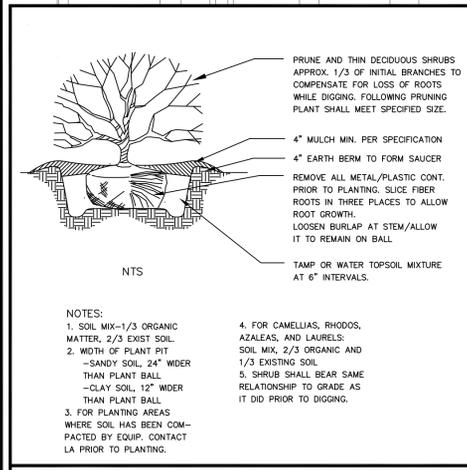
DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com
Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 4 OF 15

Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\11164 GCF - 11-164 BM_SHEET 1-15.dwg, C4 SITE LAYOUT, 7/1/2013 11:06:52 AM, Brian, STANDARD 26 BY 24 PDF SHEET, p3, PostScript, Custom Page Size, 11



TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

LANDSCAPE NOTES:

- NO PLANTINGS OVER THIRTY (30) INCHES IN HEIGHT ALLOWED IN VISION CLEARANCE.
- PROTECTION FROM VEHICULAR TRAFFIC PROVIDED AROUND ALL LANDSCAPING WITH A MINIMUM HEIGHT OF SIX (6) INCHES.
- OWNER IS RESPONSIBLE FOR MAINTENANCE TO ENSURE PLANT LIVES AND PROSPERS.
- PLANTING PLAN SHALL BE APPROVED BY LANDSCAPE DESIGNER PRIOR TO INSTALLATION.
- LANDSCAPING SHALL BE REQUIRED AT THE ENDS OF ALL PARKING SPACES.
- A LOW BUFFER SHALL BE REQUIRED WHERE PARKING IS WITHIN FIFTY (50) FEET OF A RIGHT-OF-WAY.
- LANDSCAPED ISLANDS SHALL BE MINIMUM WIDTH OF TWELVE (12) FEET (BACK OF CURB TO BACK OF CURB) AND MINIMUM OF TWO HUNDRED SIXTEEN (216) SQUARE FEET.
- A MINIMUM OF FIFTEEN (15) TREES 2 INCHES OR GREATER IN DIAMETER AS MEASURED 6 INCHES ABOVE GROUND PER DISTURBED ACRE.
- FOR RECOMMENDED PLANT LIST SEE CITY OF WILMINGTON TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL.
- ALL PLANT MATERIALS TO COMPLY WITH AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.
- PLANT LOCATIONS TO BE APPROVED IN FIELD PRIOR TO INSTALLATION.
- SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED CAN ONLY OCCUR WITH PRIOR APPROVAL BY LANDSCAPE ARCHITECT AND WAKE COUNTY.
- ESTABLISH PLANT BED CONFIGURATIONS. LANDSCAPE ARCHITECT TO APPROVE BED LAYOUT IN FIELD.
- PREPARE PLANT BEDS PER SPECIFICATIONS.
- INSTALL PLANTS AND MULCH BEDS WITH 3" OF TRIPLE SHREDDED HARDWOOD MULCH, SUBMIT + SAMPLE PRIOR TO INSTALLATION.
- ESTABLISH MULCH BEDS AROUND EXISTING TREES TO REMAIN.
- LAWN AREAS TO BE SEED, EXCEPT AS NOTED, REFER TO SPECS.
- LANDSCAPE CONTRACTOR TO GUARANTEE PLANT MATERIALS FOR A ONE YEAR PERIOD FOLLOWING SUBSTANTIAL COMPLETION PER SPECIFICATIONS.
- AREAS DAMAGED FROM ACTIVITIES OF LANDSCAPE CONTRACTOR TO BE RESEED AND ESTABLISHED AT NO ADDITIONAL COST TO THE OWNER.
- IRRIGATION SYSTEM TO BE EQUIPPED WITH A RAIN SENSOR.
- ALL PROPOSED VEGETATION WITHIN 20'x70' SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.

LANDSCAPE CALCULATIONS:

STREET YARD PLANTING CALCULATIONS:

MINIMUM STANDARD:
FOR EVERY SIX HUNDRED (600) SQUARE FEET OF STREET YARD AREA, THE STREET YARD SHALL CONTAIN:
A. ONE (1) CANOPY/SHADE TREE, TWO (2) INCHES MIN. CALIPER. 50' MN. O.C.
B. SIX (6) SHRUBS, TWELVE (12) INCHES IN HEIGHT AT PLANTING. 4' MIN. O.C.

THE STREET YARD IS CALCULATED BY MULTIPLYING THE DESIGNATED STREET YARD FACTOR IN ACCORDANCE WITH THE ZONING DESIGNATION OF THE PROPERTY BY THE LINEAR STREET FRONTAGE OF THE SUBJECT PROPERTY MINUS THE WIDTH OF ALL APPROVED DRIVEWAYS.

ZONING DISTRICTS: CB AND O&I
STREET YARD FACTOR = 18'
LINEAR STREET FRONTAGE = 284.94'
MINUS DRIVEWAY WIDTHS = 30'
18' X (284.94 - 30) = 4,589 S.F.
4,589 / 600 = 7.64 = 8

TREES REQUIRED: 8 TREES
TREES PROVIDED: 8 TREES

SHRUBS REQUIRED: 8 X 6 = 48 SHRUBS
SHRUBS PROVIDED: 64 SHRUBS

FOUNDATION PLANTING CALCULATIONS:

MINIMUM STANDARD:
THE AREA OF THE BUILDING FACADE ADJACENT TO THE PARKING AREA OR INTERNAL DRIVE ISLE SHALL BE COMPUTED AND MULTIPLIED BY A MINIMUM OF TWELVE (12) PERCENT.

BUILDING FACADE AREAS:
SOUTH (FRONT) BUILDING FACADE AREA = 3,188 S.F.
EAST BUILDING FACADE AREA = 1,466 S.F.

REQUIRED (12%) FOUNDATION PLANTING AREAS:
REQUIRED SOUTH (FRONT) PLANTING FACADE AREA = 3,188 S.F. X 0.12% = 383 S.F.
PROVIDED = 422 S.F. - 34 SHRUBS, 4' O.C.

REQUIRED WEST PLANTING FACADE AREA = 1,466 S.F. X 0.12% = 176 S.F.
PROVIDED = 182 S.F. - 13 SHRUBS, 4' O.C.

INTERIOR PARKING & PERIMETER LANDSCAPE CALCULATIONS:

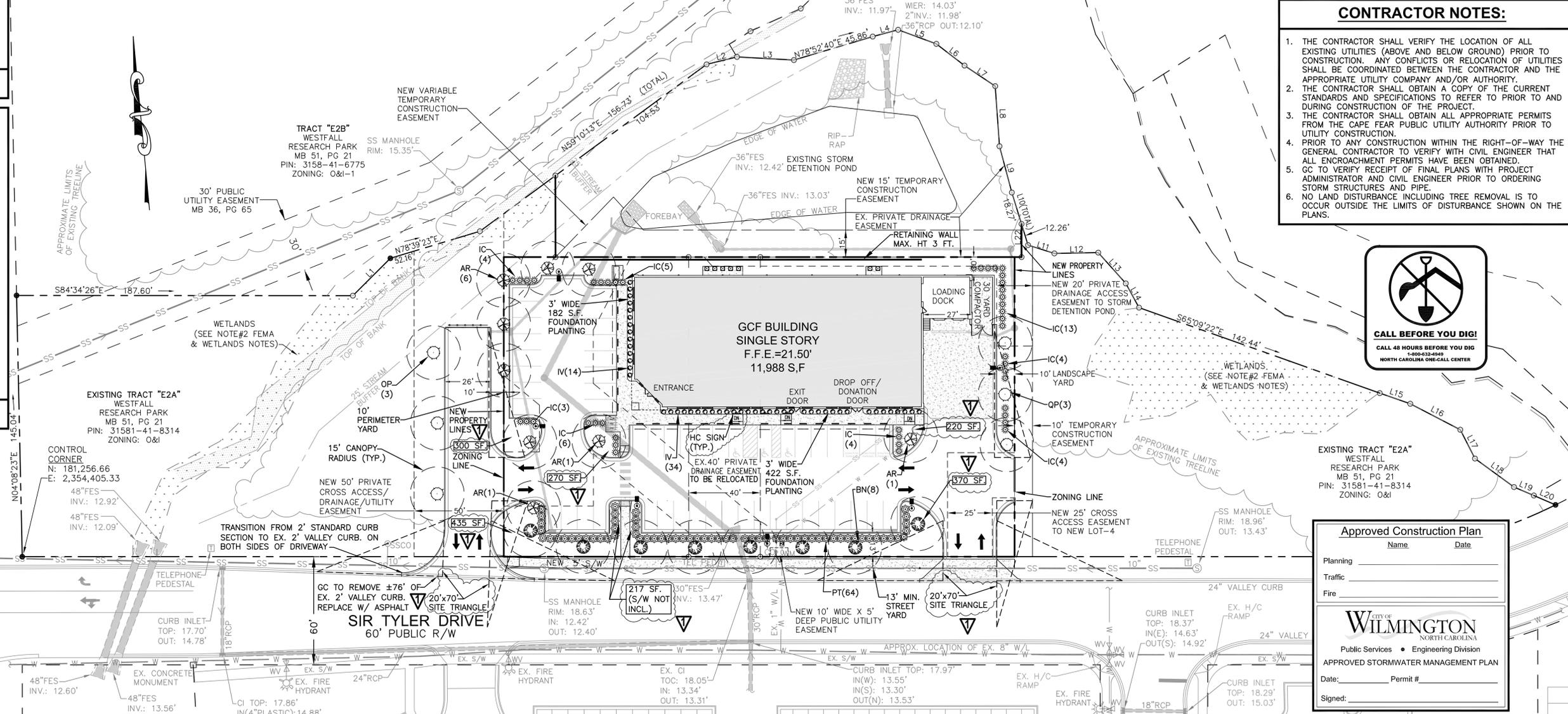
MINIMUM STANDARD:
THE INTERIOR AREA OF A PARKING FACILITY SHALL BE SHADED BY CANOPY TREES EITHER PLANTED OR RETAINED TO PROVIDE TWENTY (20) PERCENT OR GREATER CANOPY COVERAGE AT MATURITY.
PROPOSED VEHICULAR USE AREA = 23,866 S.F.
REQUIRED CANOPY COVERAGE AREA = 23,866 S.F. X 0.20% = 4,773 S.F.
PROVIDED CANOPY COVERAGE AREA = 5,010 S.F.

TREE AND SHRUB PLANTING LIST:

TREES						
SYMBOL	ABBREV.	QUANTITY	BOTANICAL NAME	COMMON NAME	CLASSIFICATION	LOCATION
	BN	8	BETULA NIGRA	RIVER BIRCH	DECIDUOUS TREE	STREET TREES
	AR	9	ACER RUBRUM	RED MAPLE	DECIDUOUS TREE	PARKING SHADE TREES
	QP	6	QUERCUS PHELLOS	WILLOW OAK	DECIDUOUS TREE	PERIMETER TREES
SHRUBS						
SYMBOL	ABBREV.	QUANTITY	BOTANICAL NAME	COMMON NAME	CLASSIFICATION	LOCATION
	IC	43	ILEX CORNUTA BURFORDI NANA	DWARF BUFORD HOLLY	EVERGREEN SHRUB	PARKING SCREEN 4' O.C.
	IV	48	ILEX VOMITORIA NANA	DWARF YAUPON HOLLY	EVERGREEN SHRUB	FOUNDATION 4' O.C.
	PT	64	PITTIOSPORUM TOBIRA	WHEELER'S DWARF	EVERGREEN SHRUB	STREET/PARKING SCREEN 4' O.C.

CONTRACTOR NOTES:

- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
- PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
- GO TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

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

Date: _____ Permit # _____

Signed: _____

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS
1. 07-01-13 REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
NEW HANOVER COUNTY WILMINGTON, NC

SCALE: 1"=30'
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

LANDSCAPE PLAN

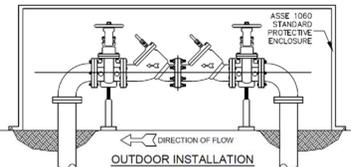


DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com
Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 5 OF 15

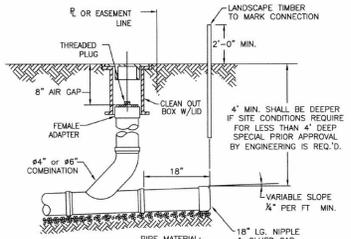
Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\DD_11-164_BN_SHEET_1-15.dwg, CS LANDSCAPE, 7/1/2013 11:06:34 AM, Brian, STANDARD 26 BY 24 PDF SHEET.pd3, PostScript Custom Page Size, 11

UTILITY DETAILS

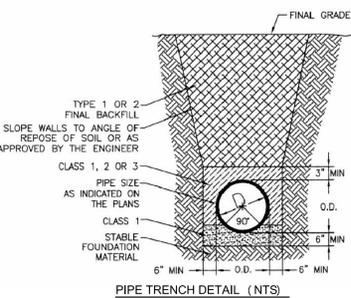


DOUBLE CHECK VALVE ASSEMBLY (NTS)

NOTE:
 1. MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL
 2. VALVE REQ'D DOWNSTREAM OF BACKFLOW ASSEMBLY
 3. VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CPFWA ESDM FOR APPROVAL



SEWER SERVICE CONNECTION & CLEANOUT (NTS)



PIPE TRENCH DETAIL (NTS)

LEGEND:

SYMBOLS	LINETYPES
○ EX. IRON PIPE/ROD OR NAIL	X FENCE
□ EX. CONCRETE MONUMENT	—OU— OVERHEAD UTILITY
● NEW IRON PIPE	—W— WATER
○ CALCULATED POINT	—SS— SANITARY SEWER
□ CABLE PEDESTAL	—SD— STORM DRAIN
○ TELEPHONE PEDESTAL	
○ ELECTRIC PEDESTAL	
○ FIBER-OPTIC MARKER	
○ TRAFFIC SIGNAL BOX	
○ WATER METER	
○ FIRE HYDRANT	
○ VALVE (WATER OR GAS)	
○ SANITARY SEWER MANHOLE	
○ SANITARY SEWER CLEANOUT	
○ STORM CURB INLET	
○ DRAINAGE INLET (W/ GRATE)	
○ STORM DRAIN MANHOLE	
○ UTILITY POLE	
○ EXISTING LAMP POST	
○ SIGNAL POLE	
○ GUY WIRE	
○ SIGN POST	

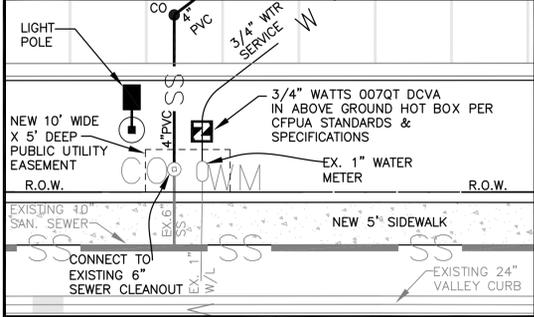
ABBREVIATIONS

DB	DEED BOOK
PB / BM	PLAT BOOK / BOOK OF MAPS
N/F	NOW OR FORMERLY
Pg.	PAGE
SF	SQUARE FEET
Ac.	ACRES
R/W	RIGHT-OF-WAY
NCSR	NORTH CAROLINA STATE ROUTE
NCDDOT	NORTH CAROLINA DEPT. OF TRANSPORTATION
R/W	RIGHT-OF-WAY
Ex.	EXISTING
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE PIPE
(M)	MEASURED
(P)	PLATTED
(D)	DEED

LINE TABLE:

LINE	LENGTH	BEARING
L1	29.46	N50°38'16"E
L2	17.46	N81°38'11"E
L3	31.81	S81°28'11"E
L4	14.66	N80°31'40"E
L5	22.70	S64°30'06"E
L6	19.82	S47°09'00"E
L7	20.58	S50°56'47"E
L8	33.46	S01°17'28"W
L9	26.57	S09°36'37"E
L10(TOTAL)	30.53	S11°49'01"E
L11	15.40	S67°08'26"E
L12	24.49	S85°37'07"E
L13	22.98	S36°32'49"E
L14	15.32	S23°24'11"E
L15	18.02	S65°27'22"E
L16	31.41	S57°16'47"E
L17	17.95	S21°43'36"E
L18	26.92	S48°36'11"E
L19	12.04	S61°37'29"E
L20	13.15	S61°21'52"E
L21	3.90'	N89°56'26"E
L22	18.37'	N 0°3'34"W

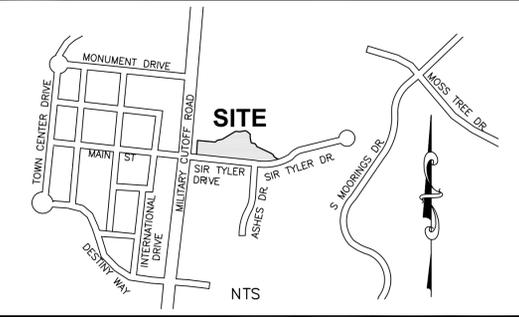
UTILITY CONNECTION DETAIL



CAPE FEAR PUBLIC UTILITY AUTHORITY NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARDS AND SPECIFICATIONS.
- THE EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION, BUT CAN BE CONSIDERED APPROXIMATE. ANY POTENTIAL CONFLICTS WITH PROPOSED CONSTRUCTION SHALL BE REPORTED TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO BEGINNING CONSTRUCTION.
- WATER SERVICES LINES SHALL BE LAID A MINIMUM OF 10 FEET LATERALLY FROM SANITARY SEWER SERVICE LINES.
- 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 ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

VICINITY MAP



GENERAL NOTES:

- PROPOSED GCF BUILDING WILL NOT HAVE A SPRINKLER SYSTEM.
- IRRIGATION SYSTEM TO BE EQUIPPED WITH A RAIN SENSOR.

CONTRACTOR NOTES:

- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
- PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
- GC TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.

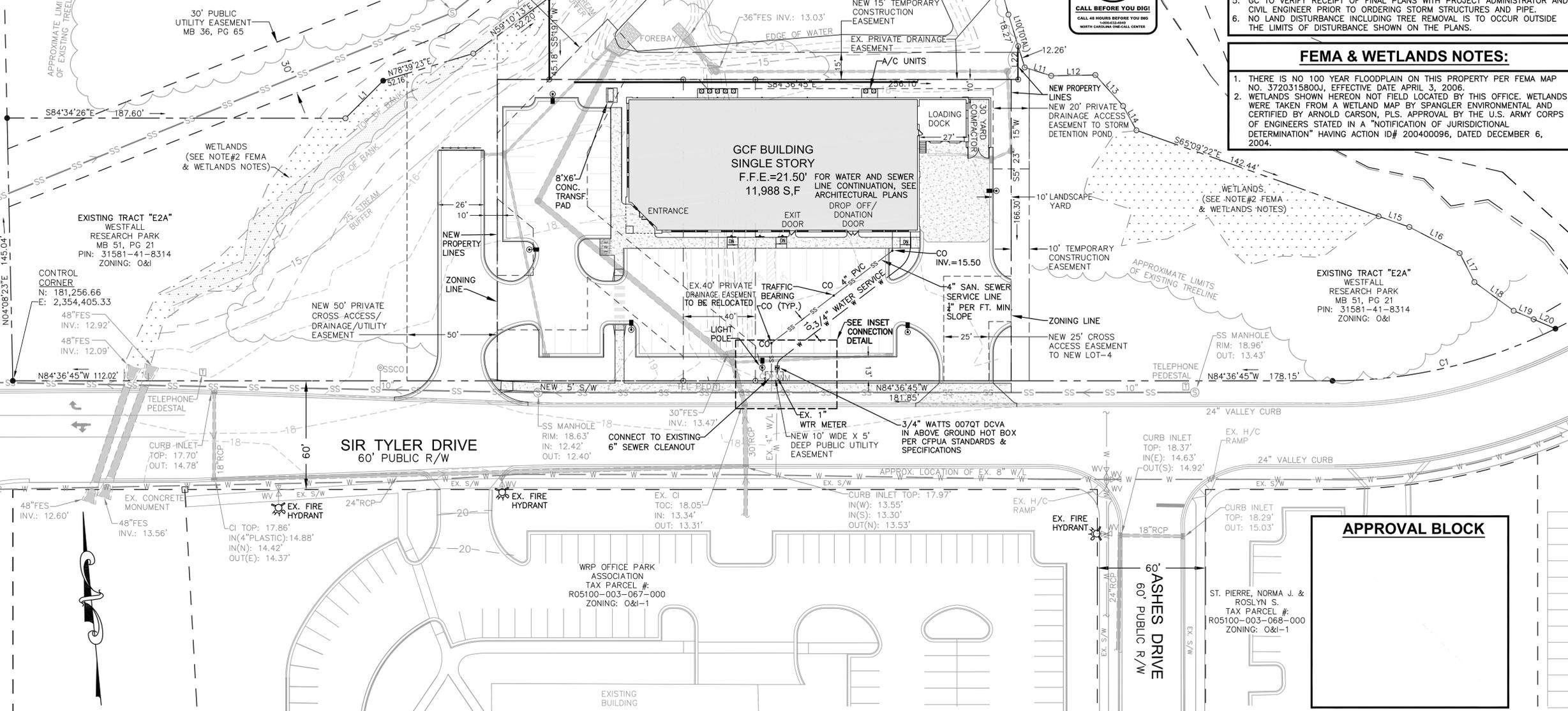
FEMA & WETLANDS NOTES:

- THERE IS NO 100 YEAR FLOODPLAIN ON THIS PROPERTY PER FEMA MAP NO. 3720315800J, EFFECTIVE DATE APRIL 3, 2006.
- WETLANDS SHOWN HEREON NOT FIELD LOCATED BY THIS OFFICE. WETLANDS WERE TAKEN FROM A WETLAND MAP BY SPANGLER ENVIRONMENTAL AND CERTIFIED BY ARNOLD CARSON, PLS. APPROVAL BY THE U.S. ARMY CORPS OF ENGINEERS STATED IN A "NOTIFICATION OF JURISDICTIONAL DETERMINATION" HAVING ACTION ID# 200400096, DATED DECEMBER 6, 2004.

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING
C1	128.04	280.00	126.93	N82°17'15"E

TRACT "E2B"
 WESTFALL RESEARCH PARK
 MB 51, PG 21
 PIN: 31581-41-6775
 ZONING: O&I-1



APPROVAL BLOCK

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION
1	07-01-13	REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS



GOODWILL COMMUNITY FOUNDATION®
 1745 SIR TYLER DRIVE
 WILMINGTON, NC

SCALE: 1"=30'
 ORIGINAL DATE: 05-09-13
 LATEST REVISION DATE: 07-01-13
 PROJECT NO.: 11-164

UTILITY PLAN

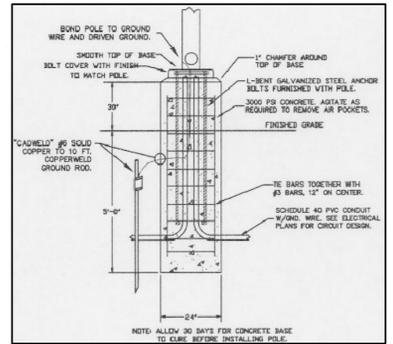


DEVELOPMENT ENGINEERING, INC.
 Professional Engineering Consultants
 244 West Millbrook Road, Raleigh, NC 27609
 P. O. Box 17705, Raleigh, NC 27619
 Phone: 919-847-8300
 Fax: 919-847-2130
 E-mail: Office@d-e-inc.com

SHEET NO. 7 OF 15



FIXTURE "A" FULL-CUTOFF:
 FIXTURE SHALL BE DARK BRONZE, 400W METAL HALIDE, IES TYPE RAW FULL CUTOFF, 38,000 LUMENS MAX. MANUFACTURED BY LITHONIA



TYPICAL POLE FOR TYPE "A" FIXTURE

- POLE SHALL BE 30' TALL, 4" SQUARE WITH DARK BRONZE FINISH.
- POLE SHALL BE MANUFACTURED BY LITHONIA.

POLE BASE DETAIL:
NTS

LINE TABLE:

LINE	LENGTH	BEARING
L1	29.46	N50°38'16"E
L2	17.46	N81°38'11"E
L3	31.81	S81°28'11"E
L4	14.66	N80°31'40"E
L5	22.70	S64°30'06"E
L6	19.82	S47°09'00"E
L7	20.58	S50°56'47"E
L8	33.46	S01°17'28"W
L9	26.57	S09°36'37"E
L10(TOTAL)	30.53	S11°49'01"E
L11	15.40	S67°08'26"E
L12	24.49	S85°37'07"E
L13	22.98	S36°32'49"E
L14	15.32	S23°24'11"E
L15	18.02	S65°27'22"E
L16	31.41	S57°16'47"E
L17	17.95	S21°43'36"E
L18	26.92	S48°36'11"E
L19	12.04	S61°21'29"E
L20	13.15	S61°21'52"E
L21	3.90'	N89°56'26"E
L22	18.37'	N 0°3'34"W

STATISTICS:

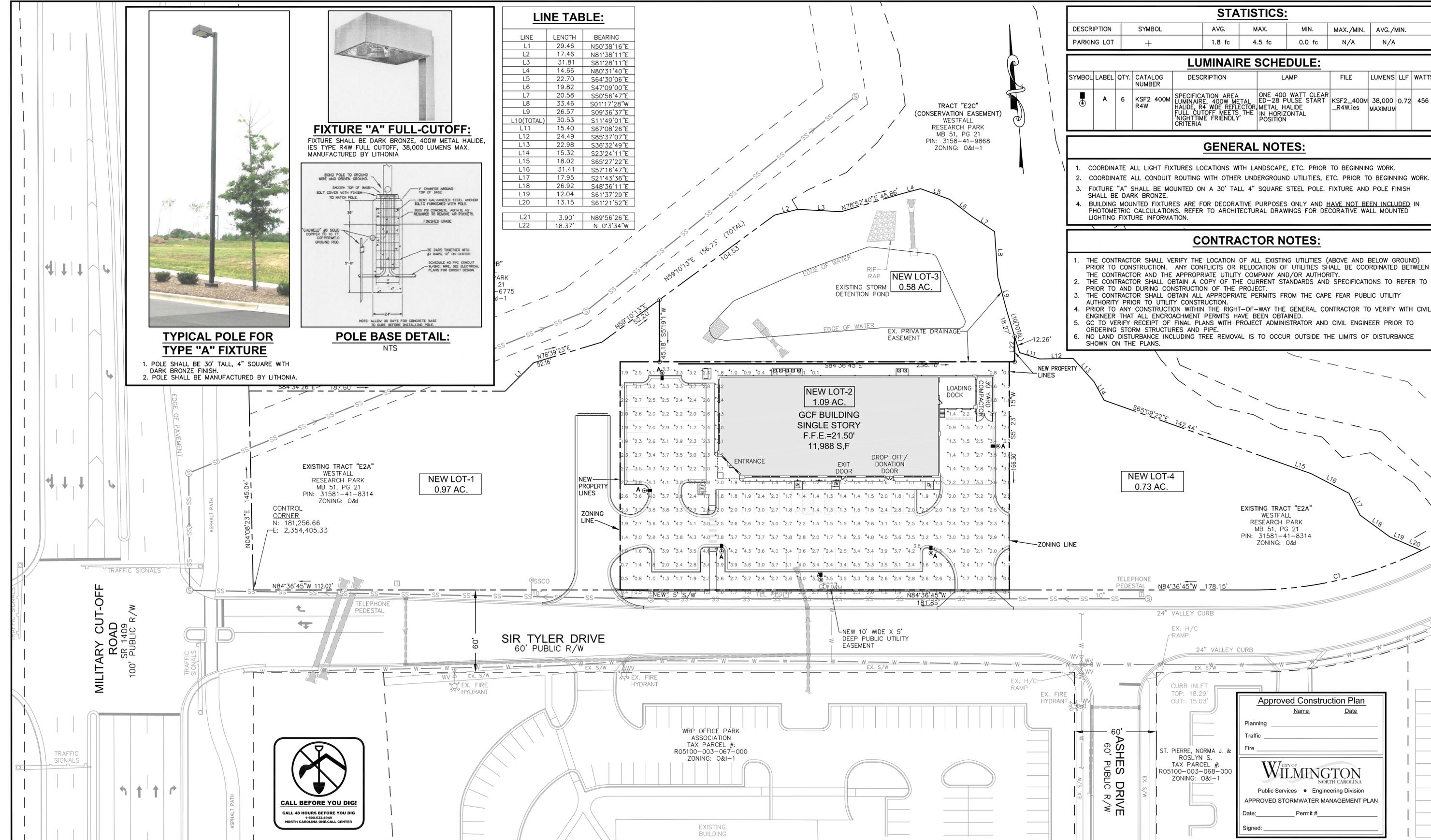
DESCRIPTION	SYMBOL	AVG.	MAX.	MIN.	MAX./MIN.	AVG./MIN.
PARKING LOT	+	1.8 fc	4.5 fc	0.0 fc	N/A	N/A

LUMINAIRE SCHEDULE:

SYMBOL	LABEL	QTY.	CATALOG NUMBER	DESCRIPTION	LAMP	FILE	LUMENS	LLF	WATTS
ⓐ	A	6	KSF2 400M RAW	SPECIFICATION AREA LUMINAIRE, 400W METAL HALIDE, R4 WIDE REFLECTOR, FULL CUTOFF MEETS THE NIGHTTIME FRIENDLY CRITERIA	ONE 400 WATT CLEAR ED-28 PULSE START METAL HALIDE IN HORIZONTAL POSITION	KSF2_400M_RAW.ies	38,000 MAXIMUM	0.72	456

- GENERAL NOTES:**
- COORDINATE ALL LIGHT FIXTURES LOCATIONS WITH LANDSCAPE, ETC. PRIOR TO BEGINNING WORK.
 - COORDINATE ALL CONDUIT ROUTING WITH OTHER UNDERGROUND UTILITIES, ETC. PRIOR TO BEGINNING WORK.
 - FIXTURE "A" SHALL BE MOUNTED ON A 30' TALL 4" SQUARE STEEL POLE. FIXTURE AND POLE FINISH SHALL BE DARK BRONZE.
 - BUILDING MOUNTED FIXTURES ARE FOR DECORATIVE PURPOSES ONLY AND HAVE NOT BEEN INCLUDED IN PHOTOMETRIC CALCULATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR DECORATIVE WALL MOUNTED LIGHTING FIXTURE INFORMATION.

- CONTRACTOR NOTES:**
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
 - THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
 - THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
 - PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
 - GC TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
 - NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.



ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS
 1. 07-01-13 REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
 1745 SIR TYLER DRIVE
 WILMINGTON, NC

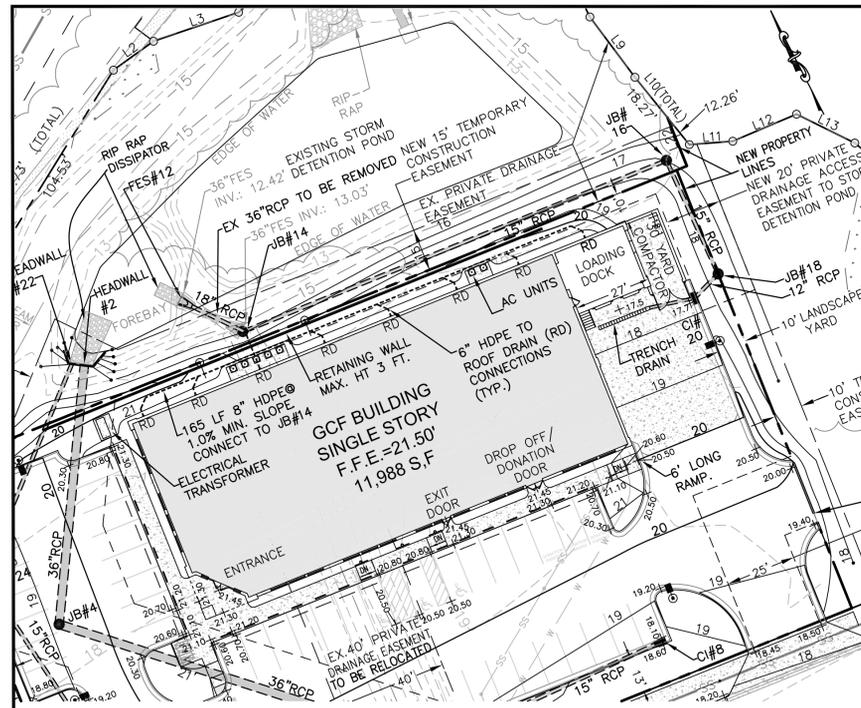
SCALE: 1"=30'
 ORIGINAL DATE: 05-09-13
 LATEST REVISION DATE: 07-01-13
 PROJECT NO.: 11-164

SITE LIGHTING PLAN

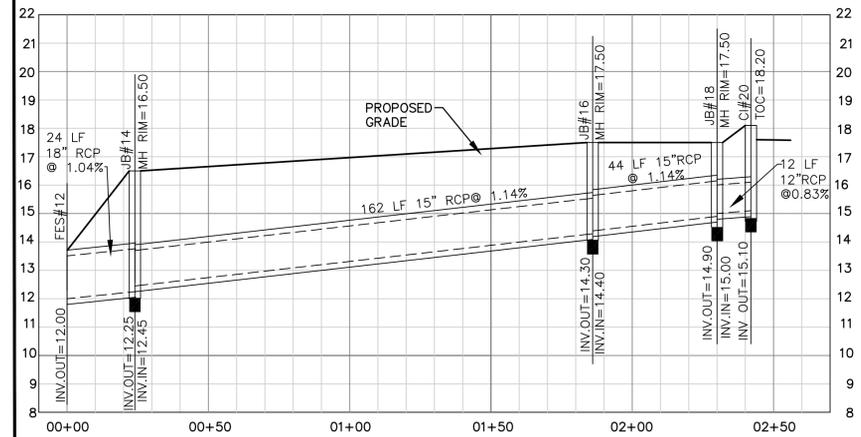


DEVELOPMENT ENGINEERING, INC.
 Professional Engineering Consultants
 244 West Millbrook Road, Raleigh, NC 27609
 P. O. Box 17705, Raleigh, NC 27619
 Phone: 919-847-8300
 Fax: 919-847-2130
 E-mail: Office@d-e-inc.com

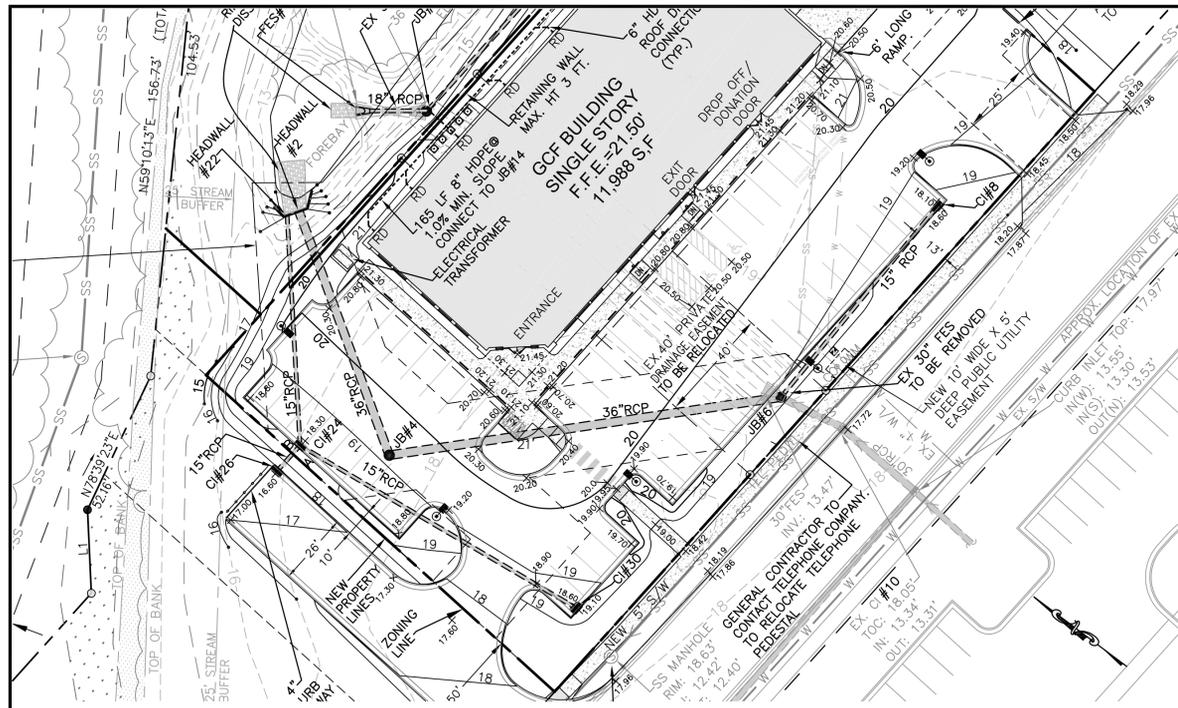
SHEET NO. 9 OF 15



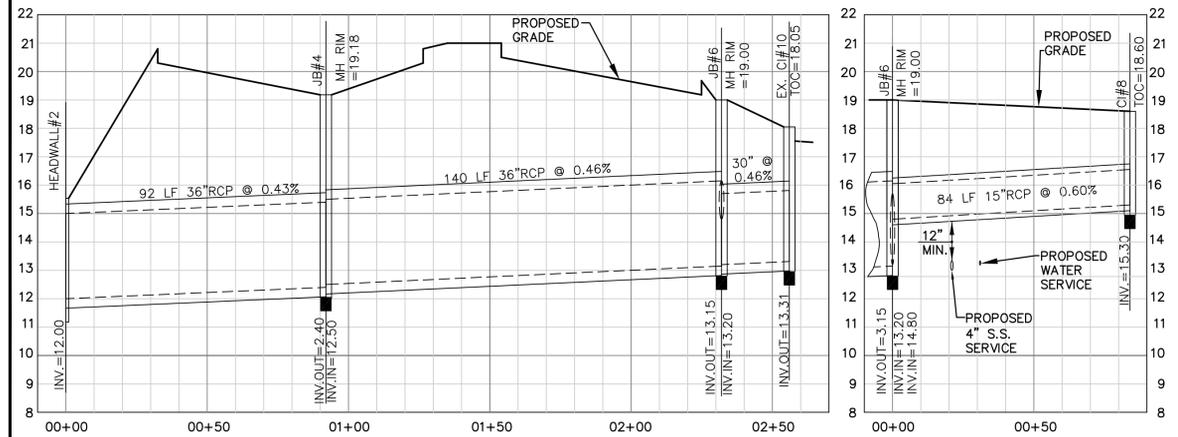
S.D. PLAN FES #12 - CI#20



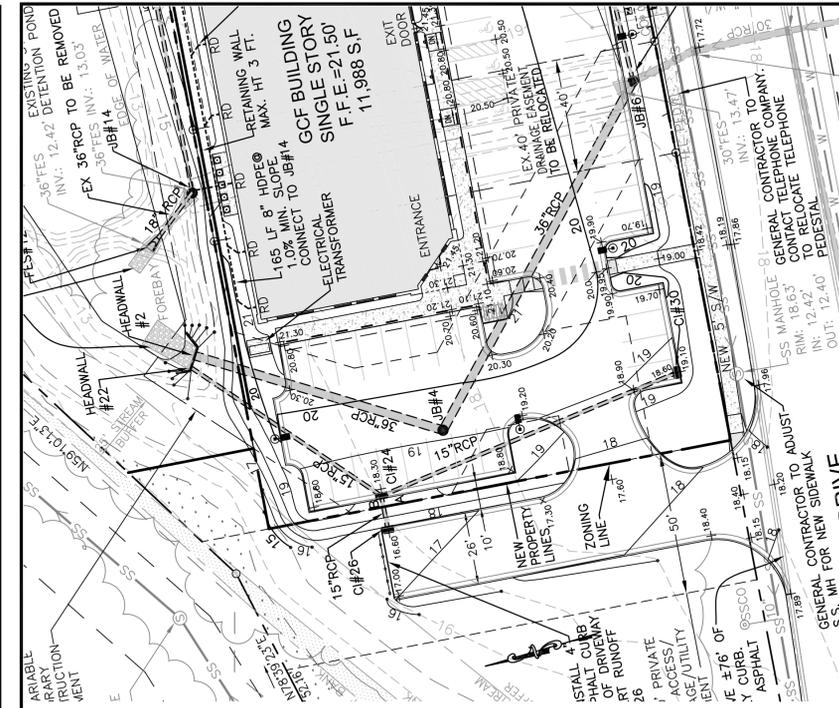
S.D. PROFILE FES #12 - CI#20



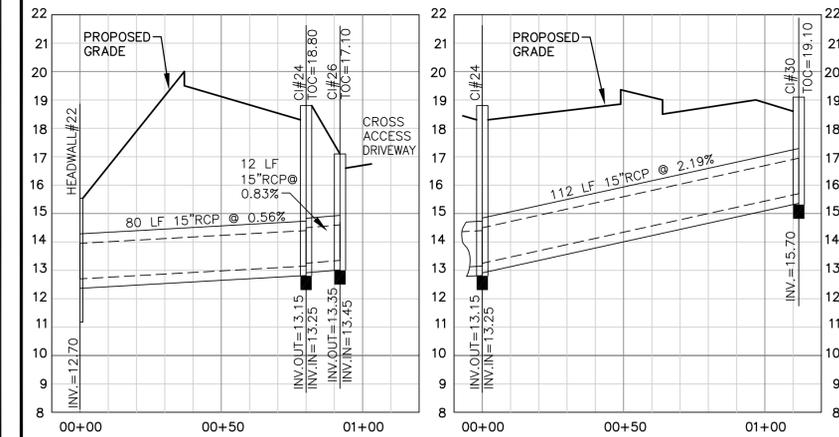
S.D. PLAN HEADWALL #2 - EX. CI#10



S.D. PROFILE HEADWALL #2 - EX. CI#10



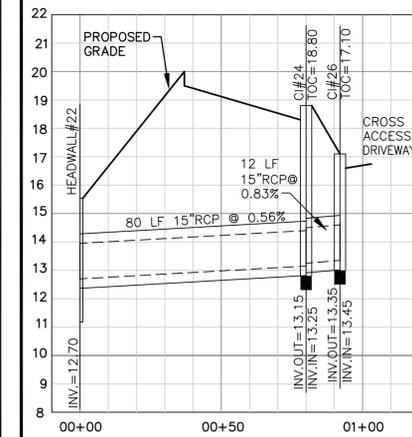
S.D. PLAN JB #6 - EX. CI#8



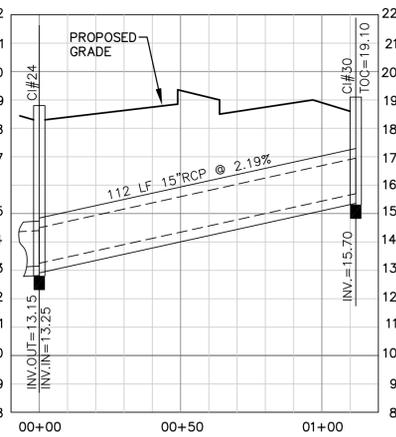
S.D. PROFILE JB #6 - EX. CI#8

S.D. PLAN HEADWALL #22 - CI#26

S.D. PLAN CI #24 - CI #30



S.D. PROFILE HEADWALL #22 - CI #26

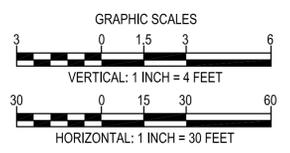


S.D. PROFILE CI #24 - CI #30



- CONTRACTOR NOTES:**
1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
 2. THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
 3. THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
 4. PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
 5. GC TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
 6. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.

- ABBREVIATIONS:**
- CI = CURB INLET
 - JB = JUNCTION BOX
 - TOC = TOP OF CURB
 - MH = TOP OF MANHOLE
 - FES = FLARED END SECTION



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS
1. 07-01-13 REVISED LOT SIZES & CofW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE: HORZ: 1"=30', VERT: 1"=3'
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

STORM DRAINAGE PLAN & PROFILE



DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 10 OF 15

Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\DD_11-164-BN_SHEET_1-15.dwg, C10 SD P&P, 7/1/2013 11:04:47 AM, Bham, STANDARD 26 BY 24 PDF SHEET.pc3, PostScript Custom Page Size, 11

CONTRACTOR NOTES:

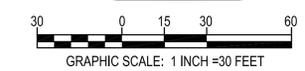
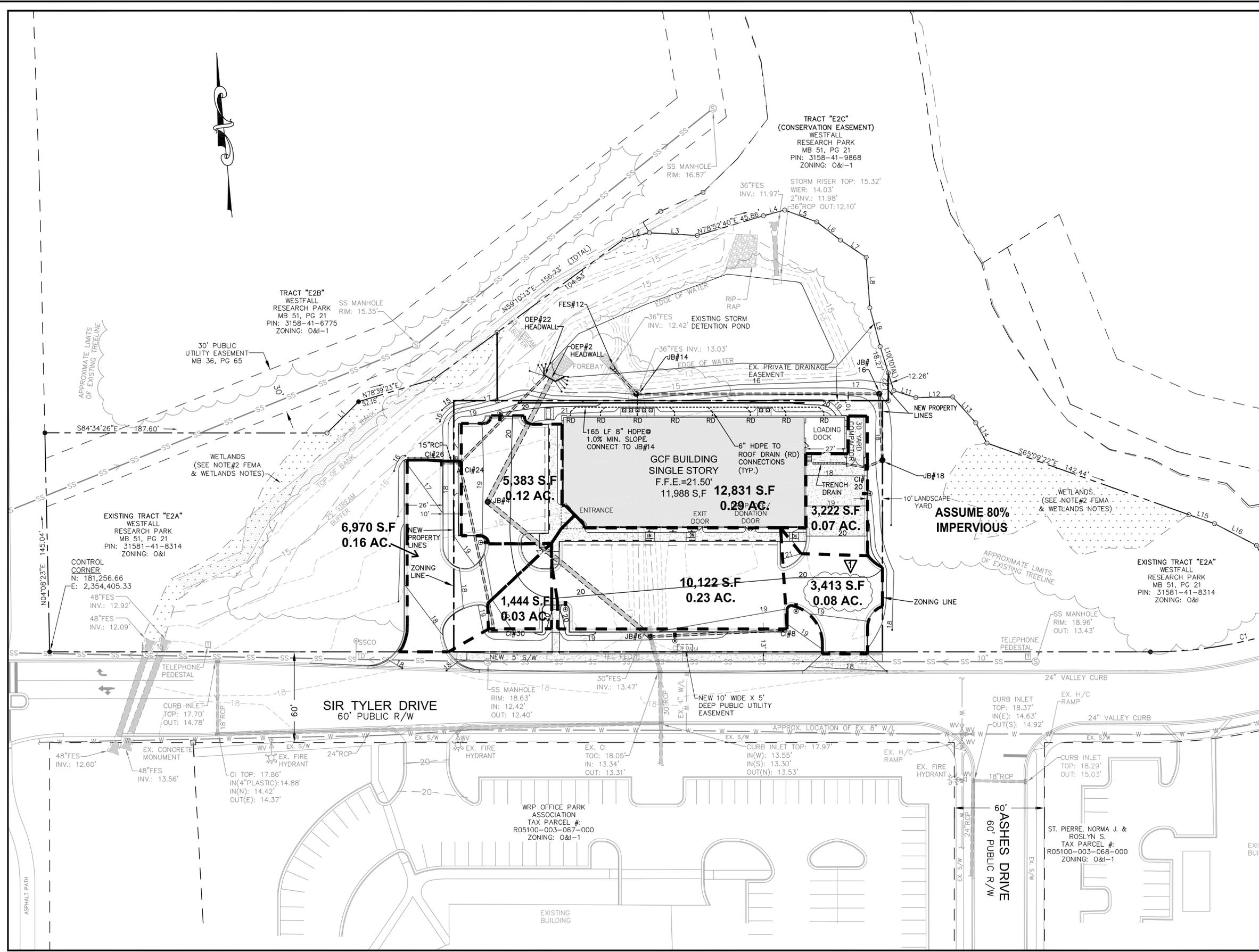
1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES (ABOVE AND BELOW GROUND) PRIOR TO CONSTRUCTION. ANY CONFLICTS OR RELOCATION OF UTILITIES SHALL BE COORDINATED BETWEEN THE CONTRACTOR AND THE APPROPRIATE UTILITY COMPANY AND/OR AUTHORITY.
2. THE CONTRACTOR SHALL OBTAIN A COPY OF THE CURRENT STANDARDS AND SPECIFICATIONS TO REFER TO PRIOR TO AND DURING CONSTRUCTION OF THE PROJECT.
3. THE CONTRACTOR SHALL OBTAIN ALL APPROPRIATE PERMITS FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO UTILITY CONSTRUCTION.
4. PRIOR TO ANY CONSTRUCTION WITHIN THE RIGHT-OF-WAY THE GENERAL CONTRACTOR TO VERIFY WITH CIVIL ENGINEER THAT ALL ENCROACHMENT PERMITS HAVE BEEN OBTAINED.
5. GC TO VERIFY RECEIPT OF FINAL PLANS WITH PROJECT ADMINISTRATOR AND CIVIL ENGINEER PRIOR TO ORDERING STORM STRUCTURES AND PIPE.
6. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.

FEMA & WETLANDS NOTES:

1. THERE IS NO 100 YEAR FLOODPLAIN ON THIS PROPERTY PER FEMA MAP NO. 3720315800J, EFFECTIVE DATE APRIL 3, 2006.
2. WETLANDS SHOWN HEREON NOT FIELD LOCATED BY THIS OFFICE. WETLANDS WERE TAKEN FROM A WETLAND MAP BY SPANGLER ENVIRONMENTAL AND CERTIFIED BY ARNOLD CARSON, PLS. APPROVAL BY THE U.S. ARMY CORPS OF ENGINEERS STATED IN A "NOTIFICATION OF JURISDICTIONAL DETERMINATION" HAVING ACTION ID# 200400096, DATED DECEMBER 6, 2004.

STORMWATER NOTES:

1. THE EXISTING STORMWATER POND WAS ORIGINALLY DESIGNED TO HANDLE THE RUN OFF FROM THIS SITE TO 80% IMPERVIOUS.
2. THERE IS NO 100 YEAR FLOODPLAIN ON THIS PROPERTY PER FEMA MAP NO. 3720315800J, EFFECTIVE DATE APRIL 3, 2006.
3. SOIL TYPE - W WRIGHTSBORO - PER MAP SHEET 16 OF THE NEW HANOVER COUNTY SOIL MAP.
4. THERE ARE NO CAMA AREAS OF CONCERN (AEC) ON THIS SITE.
5. CAMA LAND CLASSIFICATION - WATERSHED RESOURCE PROTECTION AREA.



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS
1. 07-01-13 REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE: 1"=30'
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

STORM PIPE DRAINAGE AREAS PLAN

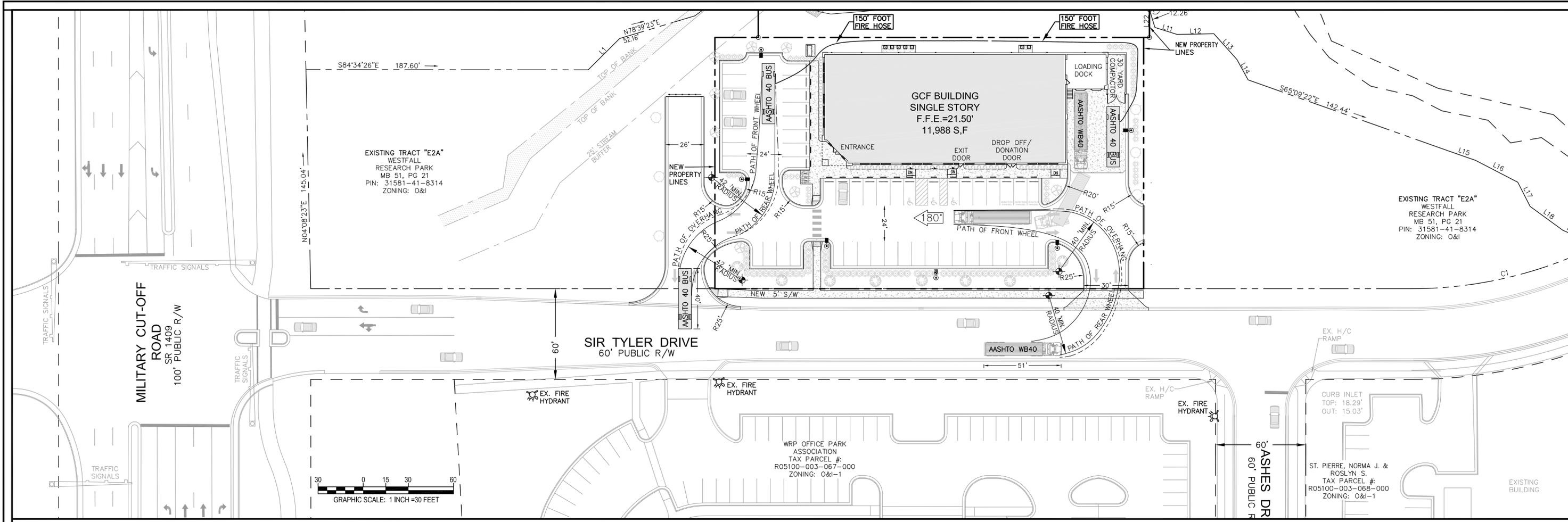


DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com

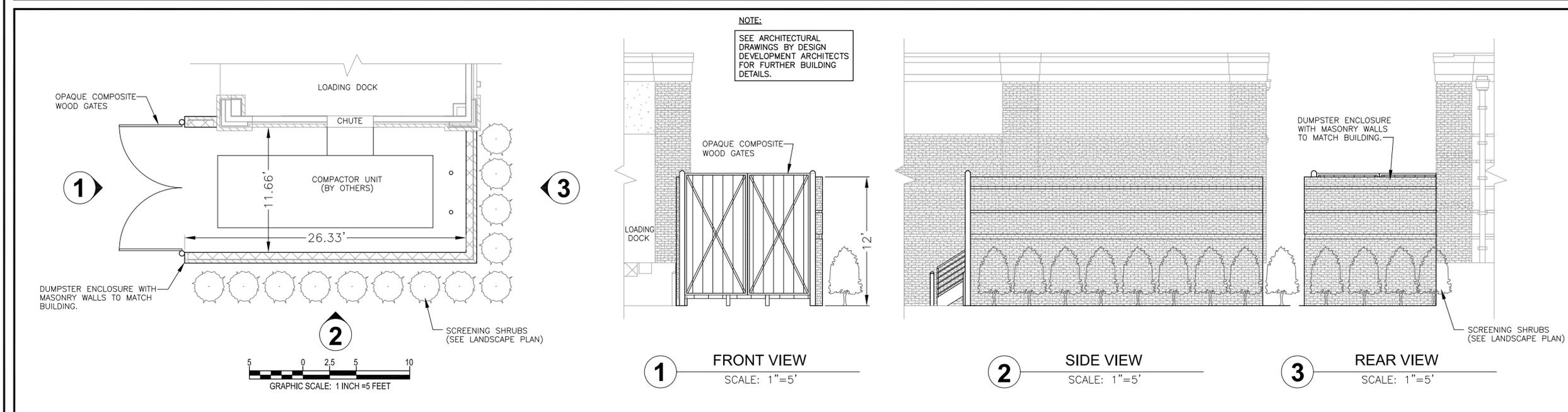
Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 11 OF 15

Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\DO_11-164_BM_SHEET_1-15.dwg, C11.DRN AREAS, 7/1/2013 11:04:26 AM, Bhan, STANDARD 26 BY 24 PDF SHEET.pc3, PostScript, Custom Page Size, 1:1



PROPOSED TRUCK & FIRE APPARATUS CIRCULATION AND TURNING ABILITY



DUMPSTER DETAILS AND LANDSCAPE SCREENING

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPUA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS

1	07-01-13	REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE:

ORIGINAL DATE: 05-09-13

LATEST REVISION DATE: 07-01-13

PROJECT NO.: 11-164

TRUCK TURNING ABILITY & DUMPSTER DETAILS



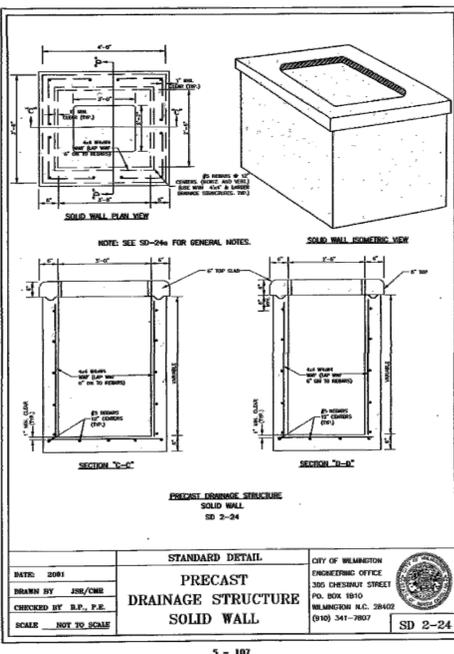
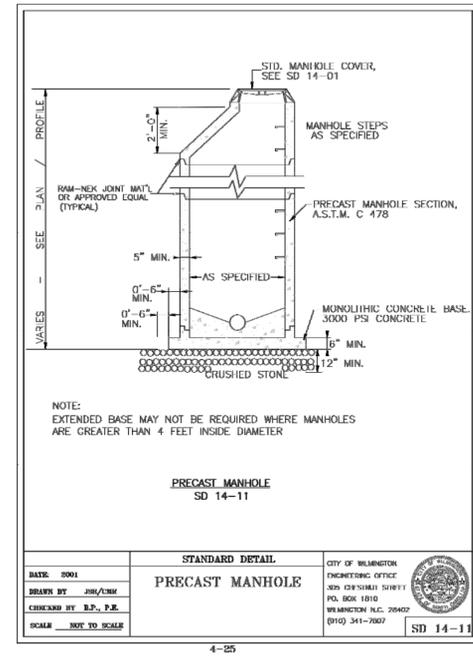
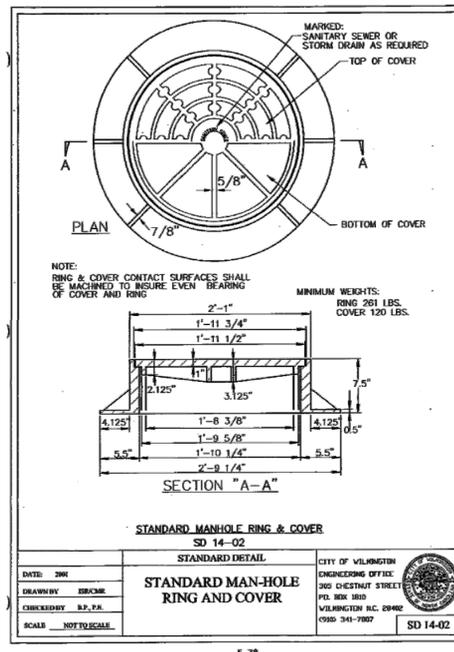
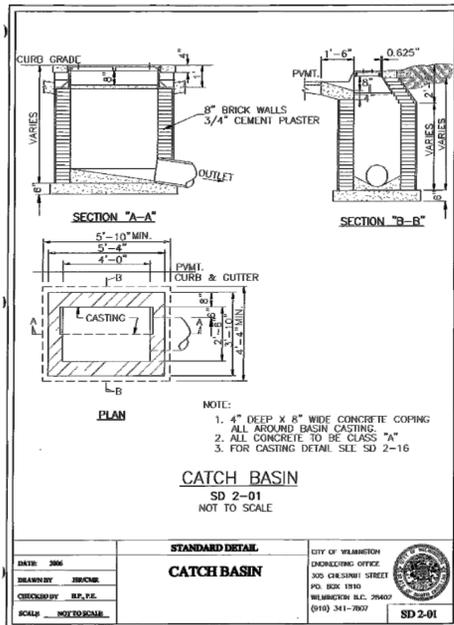
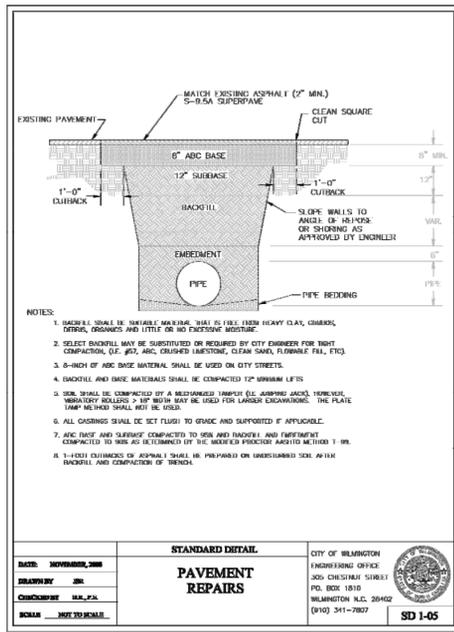
DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants

244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com

Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 12 OF 15

Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\DO_11-164-BN_SHEET_1-15.dwg, C12 TRUCK & DUMPSTER, 7/1/2013 11:04:01 AM, Brian, STANDARD 26 BY 24 PDF SHEET.ppc3, PostScript Custom Page Size, 1:1



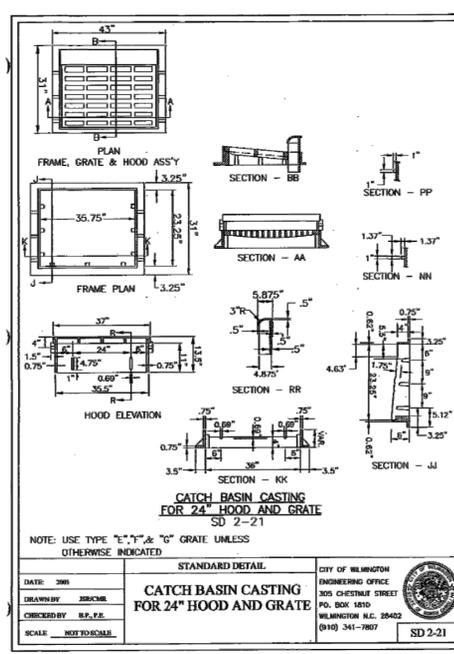
GENERAL NOTES:

- USE 4000 PSI CONCRETE, PROVIDE FOR H-20 TRAFFIC LOADING.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185.
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704
- PROVIDE FORMED OPENINGS, FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. SEAL OPENINGS WITH HYDRAULIC CEMENT.
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- SET ON 6" WASHED STONE.
- FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH BRICK.
- PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS/LADDER INSTALLED IN ACCORDANCE WITH OSHA STANDARD 1910.27 AND AS FIELD CONDITIONS DICTATE.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-5-21A, ANSITO M-108, TYPE B - BUTYL RUBBER.
- USE FRAME AND GRATE AS PER SD-19.
- GROUT INVERT TO PROVIDE SMOOTH FLOW.

STANDARD DETAIL
PRECAST DRAINAGE STRUCTURE SOLID WALL
 SD 2-24

DATE: 2008
 DRAWN BY: JRM/CMB
 CHECKED BY: B.P., P.E.
 SCALE: NOT TO SCALE

CITY OF WILMINGTON
 ENGINEERING OFFICE
 305 CHESTNUT STREET
 P.O. BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 2-24



Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

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

Date: _____ Permit # _____

Signed: _____

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

REVISIONS
 1. 07-01-13 REVISED LOT SIZES & CoRW 1st REVIEW COMMENTS.

GOODWILL COMMUNITY FOUNDATION®
 1745 SIR TYLER DRIVE
 WILMINGTON, NC

SCALE:
 ORIGINAL DATE: 05-09-13
 LATEST REVISION DATE: 07-01-13
 PROJECT NO.: 11-164

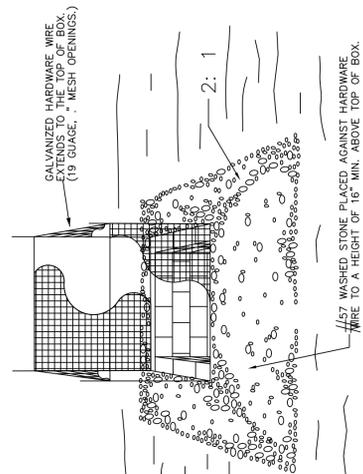
STORMWATER DETAILS



DEVELOPMENT ENGINEERING, INC.
 Professional Engineering Consultants
 244 West Millbrook Road, Raleigh, NC 27609
 Phone: 919-847-8300
 P. O. Box 17705, Raleigh, NC 27619
 Fax: 919-847-2130
 E-mail: Office@d-e-inc.com

SHEET NO. 14 OF 15

Z:\PROJECTS\11164 GCF - Sir Tyler Dr - Wilmington\DWG\DDO_11-164 BM_SHEET_1-15.dwg, C14 SD DETAILS, 7/1/2013 10:58:06 AM, Brian, STANDARD 26 BY 24 PDF SHEET.pc3, PostScript, Custom Page Size, 11



CITY OF RALEIGH
PUBLIC WORKS DEPARTMENT

REVISIONS	DATE	7/3/00	DRAWN BY:	JTB
WDP 8/09/04				
WDP 7/12/07				
WDP 1-9-2012				

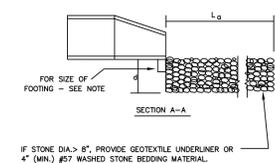
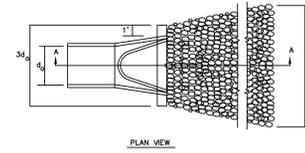
STANDARD CATCH BASIN
YARD INLET PROTECTION

STD. # 40.33

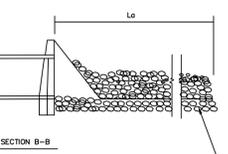
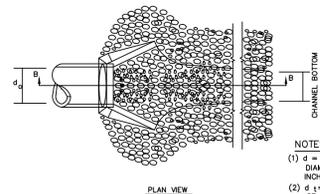
SEE N.C. EROSION CONTROL MANUAL FOR CONDITIONS WHERE PRACTICE APPLIES. PLANNING CONSIDERATION & DESIGN CRITERIA.

DRAINAGE AREA = 1 ACRE (MAXIMUM).

TYPE A
PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL



TYPE B
PIPE OUTLET TO WELL-DEFINED CHANNEL



- NOTES:
- (1) $d = 1.5$ TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 9 INCHES.
 - (2) $d = 1'$ ABOVE MAXIMUM TAILWATER OR TOP OF CHANNEL BANK (WHICHEVER IS LESS).
 - (3) $L =$ LENGTH OF RIPRAP APRON.

NOTES: FOOTING SIZE

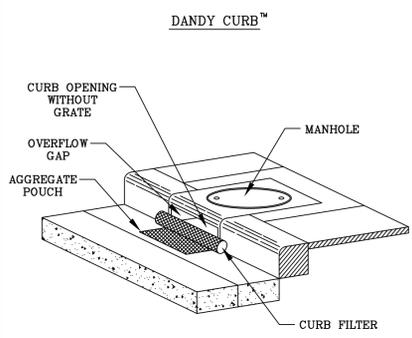
PIPE SIZE	WIDTH	DEPTH
15" - 24"	8"	12"
24" - 36"	12"	24"
36" - 54"	18"	36"

CITY OF RALEIGH
CENTRAL ENGINEERING DEPARTMENT

REVISIONS	DATE	7/3/00	DRAWN BY:	JTB
-----------	------	--------	-----------	-----

CULVERT
OUTLET
PROTECTION

STD. # 40.27



PROJECT: _____ DATE: _____ DR. BY: _____

CITY/STATE: _____ DATE: _____ DR. NO: _____

DANDY CURB™ SPECIFICATIONS

NOTE: THE DANDY CURB™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOPLYMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4832	kN (kips)	1.62 (365) x 0.89 (200)
Grab Tensile Elongation	ASTM D 4832	%	24 x 10
Puncture Strength	ASTM D 4833	kN (kips)	0.40 (90)
Mullen Burst Strength	ASTM D 3769	kPa (psi)	3057 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (kips)	0.51 (115) x 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	mm (US Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m (gpm/ft²)	9907 (145)
Permeability	ASTM D 4491	sec	2.1

*Note: All Dandy Curbs™ can be ordered with our optional oil absorbents



- 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 SUPER PHOSPHATE 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 LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
 7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
 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 CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- * APPLY: AGRICULTURAL LIMESTONE - 2 TONS/ACRE
FERTILIZER - 10-10-10 ANALYSIS AT 800-1,000 LBS./ACRE
SUPER PHOSPHATE - 500 LBS./ACRE OF 20% ANALYSIS SUPER PHOSPHATE
MULCH - 2 TONS (APPROX. 80 BALES) SMALL GRAIN STRAW/ACRE
ANCHOR - TACK WITH LIQUID ASPHALT AT 400 GALLONS/ACRE OR EMULSIFIED ASPHALT AT 300 GALLONS/ACRE

SEEDING SCHEDULE

PERMANENT SEEDING - SHOULDERS, SIDE DITCHES, SLOPES (MAX. 3:1)

DATE	TYPE	PLANTING RATE
AUG. 15 - NOV. 1	TALL FESCUE	200 LBS./ACRE
NOV. 1 - MAR. 1	TALL FESCUE AND ABRUZZI RYE *(NURSE CROP)	200 LBS./ACRE 25 LBS./ACRE
MAR. 1 - APR. 15	TALL FESCUE	200 LBS./ACRE
APR. 15 - JUN. 30	HULLED COMMON BERMUDAGRASS	15 LBS./ACRE

PERMANENT SEEDING - SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING RATE
AUG. 15 - NOV. 1	TALL FESCUE AND SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED)	200 LBS./ACRE 60 TO 70 LBS./ACRE
NOV. 1 - MAR. 1	TALL FESCUE AND SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED) AND ABRUZZI RYE	200 LBS./ACRE 60 TO 70 LBS./ACRE 25 LBS./ACRE
MAR. 1 - JUNE 1	TALL FESCUE AND SERICEA LESPEDEZA (SCARIFIED)	200 LBS./ACRE 40 TO 50 LBS./ACRE
MAR. 15 - JUNE 30	WEeping LOVEGRASS AND SERICEA LESPEDEZA (SCARIFIED)	10 LBS./ACRE 40 TO 50 LBS./ACRE
MAR. 15 - JUNE 30	HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA (SCARIFIED)	15 LBS./ACRE 40 TO 50 LBS./ACRE

TEMPORARY SEEDING

DATE	TYPE	PLANTING RATE
JUNE 1 - SEPT. 1	TALL FESCUE AND BROWNTOP MILLET *(NURSE CROP) OR SORGHUM-SUDAN HYBRIDS *(NURSE CROP)	200 LBS./ACRE 35 LBS./ACRE 30 LBS./ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUEDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

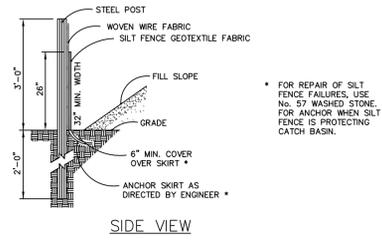
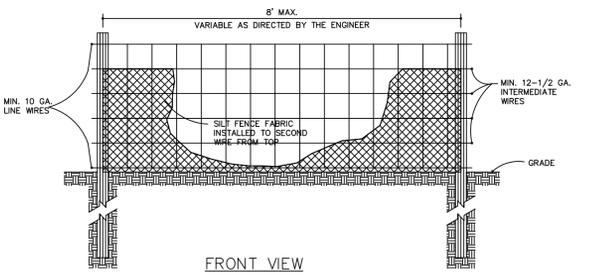
*NURSE CROP/TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

VEGETATIVE STABILIZATION NOTES

APPROVAL BLOCK

ALL CONSTRUCTION TO CITY OF WILMINGTON, CFPWA & NEW HANOVER COUNTY STANDARDS & SPECIFICATIONS

FINAL PLAN - NOT RELEASED FOR CONSTRUCTION

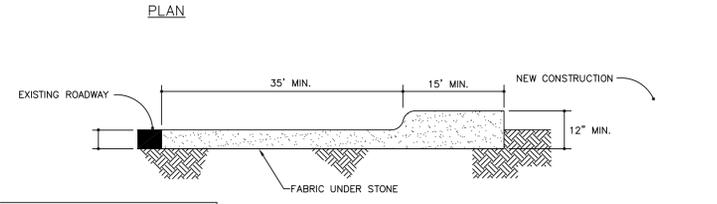
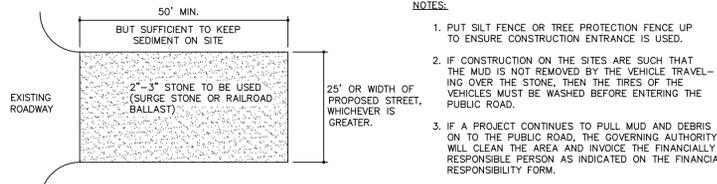


CITY OF RALEIGH
CENTRAL ENGINEERING DEPARTMENT

REVISIONS	DATE	7/3/00	DRAWN BY:	JTB
-----------	------	--------	-----------	-----

TEMPORARY SILT FENCE

STD. # 40.04



CITY OF RALEIGH
CENTRAL ENGINEERING DEPARTMENT

REVISIONS	DATE	7/3/00	DRAWN BY:	JTB
-----------	------	--------	-----------	-----

CONSTRUCTION ENTRANCE

STD. #

- NOTES:
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
 2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
 3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.

REVISIONS
1. 07-01-13 REVISED LOT SIZES & CoFw 1st REVIEW COMMENTS.



GOODWILL COMMUNITY FOUNDATION®
1745 SIR TYLER DRIVE
WILMINGTON, NC

SCALE:
ORIGINAL DATE: 05-09-13
LATEST REVISION DATE: 07-01-13
PROJECT NO.: 11-164

EROSION CONTROL DETAILS



DEVELOPMENT ENGINEERING, INC.
Professional Engineering Consultants
244 West Millbrook Road, Raleigh, NC 27609
P. O. Box 17705, Raleigh, NC 27619
www.d-e-inc.com
Phone: 919-847-8300
Fax: 919-847-2130
E-mail: Office@d-e-inc.com

SHEET NO. 15 OF 15