

CITY OF WILMINGTON  
 NEW HANOVER COUNTY, NORTH CAROLINA  
**WOODFIELD WILMINGTON**

**TRC SUBMITTAL**

NOVEMBER 16, 2016  
 NOT FOR CONSTRUCTION

**DEVELOPMENT INFORMATION**

**OWNER/DEVELOPER:**  
 WOODFIELD ACQUISITIONS, LLC  
 300 MOUNTAIN MAPLE DRIVE  
 CARY, NORTH CAROLINA 27519

**OWNER'S DESIGNATED REPRESENTATIVE:**  
 M. SCOTT UNDERWOOD  
 WOODFIELD ACQUISITIONS, LLC  
 sunderwood@woodfieldinvestments.com  
 (919)535-8947

**PROJECT LANDSCAPE ARCHITECT:**  
 D. BRENT STOUGH, PLA  
 DESIGN RESOURCE GROUP  
 2459 WILKINSON BLVD SUITE 200  
 CHARLOTTE, NC 28208  
 brent@drgrp.com  
 (704) 343-0608

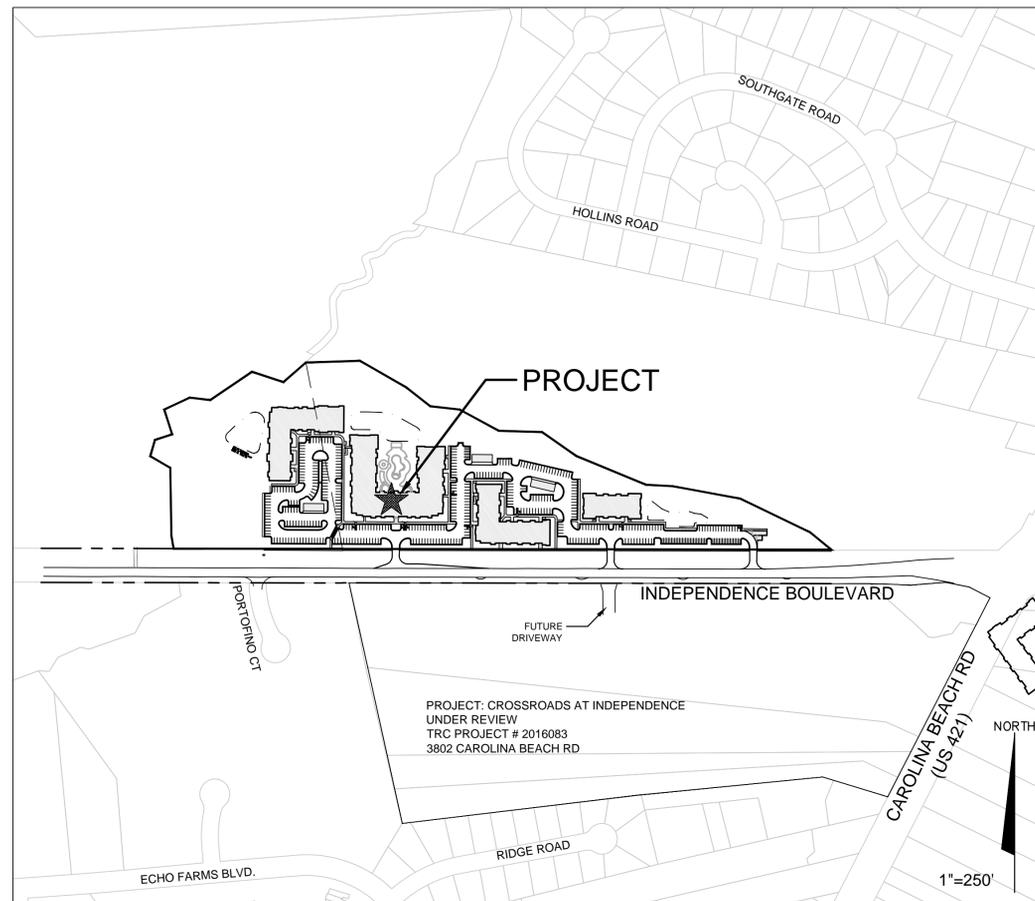
**PROJECT LAND PLANNER/ REPRESENTATIVE:**  
 TARA S. MURPHY, RLA, ASLA, LEED AP, PMP  
 MCKIM & CREED, INC.  
 243 NORTH FRONT STREET  
 WILMINGTON, NORTH CAROLINA 28401  
 tschwenzfeier@mckimcreed.com  
 (910) 343-1048

**PROJECT ENGINEER/REPRESENTATIVE:**  
 TAMARA MURPHY, PE  
 MCKIM & CREED, INC.  
 243 NORTH FRONT STREET  
 WILMINGTON, NORTH CAROLINA 28401  
 tmurphy@mckimcreed.com  
 (910) 343-1048

**PROJECT ADDRESS:**  
 3828 & 3970 INDEPENDENCE BLVD.  
 WILMINGTON, NC 28412

**TAX PARCEL IDENTIFICATION NUMBER:**  
 R06500-004-020-000  
 R06518-001-001-000

**PROPERTY ZONING:**  
 MF-M MULTI-FAMILY RESIDENTIAL  
 DISTRICT, MEDIUM DENSITY



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243 North Front Street  
 Wilmington, North Carolina 28401  
 Phone: (910)343-1048 , Fax: (910)251-8282  
 NC LICENSE NO. F-1222  
 www.mckimcreed.com



**PRELIMINARY PLANS  
 NOT FOR CONSTRUCTION**

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

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

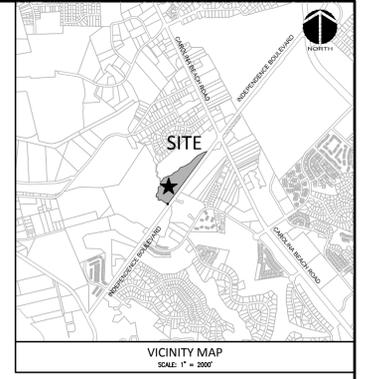
Approved Construction Plan	
Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



**SURVEY NOTES:**

- ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
- BEARINGS BASED ON NC GRID NAD 83(2011).
- REFERENCES: AS SHOWN ON PLAT
- SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
- UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE ABOVEGROUND SERVICES WERE VISIBLE.
- SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
- SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND OR ENCUMBRANCES THAT MAY EFFECT THIS PROPERTY.
- LANDS SHOWN HEREON ARE LOCATED IN FEDERAL FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AND FLOOD ZONE X (SHADED) (0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE), PER COMMUNITY PANEL NO. 370171 3125 J, DATED APRIL 3, 2006 BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP 3720312500J AND ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM 1988.
- UNABLE TO DETERMINE PIPE SIZES OF SANITARY LINE DUE TO DEPTH OF MANHOLES. FURTHER INVESTIGATION NEEDED PRIOR TO CONSTRUCTION.
- WETLANDS DELINEATION IS PRELIMINARY AND HAS NOT BEEN CONFIRMED BY THE US ARMY CORPS OF ENGINEERS. THE JURISDICTIONAL DETERMINATION IS IN-PROGRESS.

SITE DATA TABLE		WOODFIELD WILMINGTON APARTMENTS	
GENERAL INFORMATION			
APPLICANT NAME	WOODFIELD INVESTMENTS		
SITE ADDRESS	3828 & 3970 INDEPENDANCE BLVD		
PROPERTY OWNER/DEVELOPER	WOODFIELD INVESTMENTS		
MAP SCALE	1"=60'		
PROPERTY BOUNDARY			
TAX PARCEL IDENTIFICATION NUMBER	R06500-004-020-000		
	R06516-001-001-000		
ZONING DISTRICT	MF-M		
TOTAL ACREAGE	15.10 AC		
TOPOGRAPHY AND DRAINAGE			
DATE OF TOPOGRAPHY DATA	4/22/2014		
100-YR FLOODPLAIN LINE	NONE IDENTIFIED		
LOCATION OF NATURAL WATER FEATURES	LOCATION	CLASSIFICATION	
DITCHES, STREAMS, CREEKS	NORTH BOUNDARY	BLUE LINE	
FLOOD PRONE AREAS	NONE IDENTIFIED		
AREAS OF NATURALLY CONCENTRATED SURFACE DRAINAGE	N/A		
SOIL (USDA SOIL SURVEY)			
SOIL TYPE(S) AND BOUNDARIES	SEE PLAN		
NORTH CAROLINA COASTAL AREA MANAGEMENT ACT INFORMATION			
CAMA AREA OF ENVIRONMENTAL CONCERN	NONE IDENTIFIED		
SETBACKS	N/A		
CAMA LAND USE CLASSIFICATION(S)	URBAN		
CONSERVATION RESOURCE REGULATIONS			
PRESENCE OF CONSERVATION RESOURCE	FRESHWATER, NON-TIDAL WETLANDS		
SETBACKS	50'		
VEGETATED BUFFER	25'		
HISTORIC AND ARCHEOLOGICAL SITES			
LOCAL, STATE OR FEDERALLY RECOGNIZED HISTORIC STRUCTURE(S) OR ARCHEOLOGICAL RESOURCES	NONE IDENTIFIED		
LOCATION	N/A		
CEMETERIES			
CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS	NONE IDENTIFIED		
FORESTED AREAS			
BOUNDARIES OF FORESTED AREAS	SEE PLAN		
FOREST AREA	SEE PLAN		
HABITAT	NONE IDENTIFIED		
DOMINANT SPECIES	OAK, PINE		
WETLANDS			
404/SECTION 10 WETLAND LOCATION	SEE PLAN		
METHOD OF DETERMINATION	FIELD DETERMINATION		
IMPACTED WETLANDS	0.13 ac		
ENDANGERED SPECIES OR HABITAT			
ENDANGERED SPECIES OR HABITAT IN PROJECT AREA	NONE IDENTIFIED		
AUTOMOBILE, BICYCLE, PEDESTRIAN, OR TRANSIT FACILITIES			
EXISTING OR PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS, AND TRANSIT FACILITIES	INDEPENDENCE BLVD		



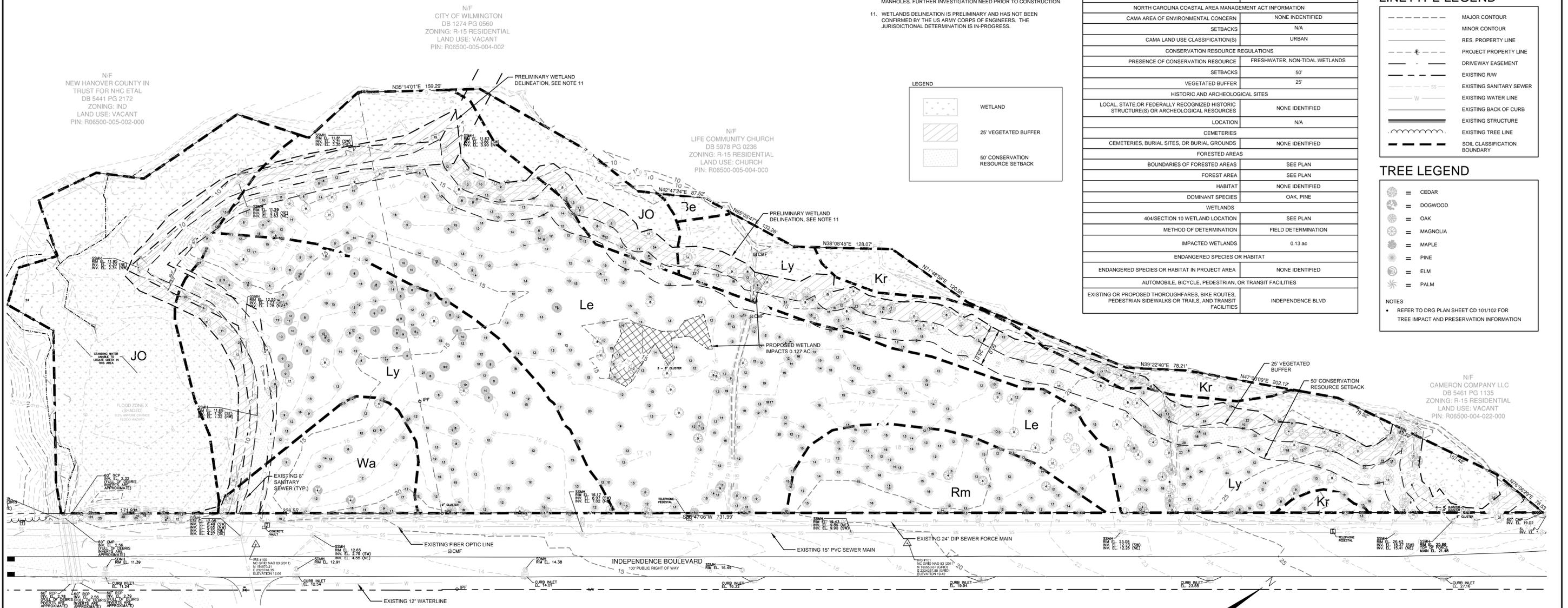
**LINETYPE LEGEND**

--- (dashed)	MAJOR CONTOUR
- - - - (long dashed)	MINOR CONTOUR
— (solid)	RES. PROPERTY LINE
- - - - (dashed)	PROJECT PROPERTY LINE
- - - - (dashed)	DRIVEWAY EASEMENT
- - - - (dashed)	EXISTING RW
- - - - (dashed)	EXISTING SANITARY SEWER
- - - - (dashed)	EXISTING WATER LINE
- - - - (dashed)	EXISTING BACK OF CURB
- - - - (dashed)	EXISTING STRUCTURE
- - - - (dashed)	EXISTING TREE LINE
- - - - (dashed)	SOIL CLASSIFICATION BOUNDARY

**TREE LEGEND**

(Symbol)	= CEDAR
(Symbol)	= DOGWOOD
(Symbol)	= OAK
(Symbol)	= MAGNOLIA
(Symbol)	= MAPLE
(Symbol)	= PINE
(Symbol)	= ELM
(Symbol)	= PALM

NOTES:  
 • REFER TO DRG PLAN SHEET CD 101102 FOR TREE IMPACT AND PRESERVATION INFORMATION



N/F  
 NEW HANOVER COUNTY IN  
 TRUST FOR NHC ETAL  
 DB 5441 PG 2172  
 ZONING: IND  
 LAND USE: VACANT  
 PIN: R06500-005-002-000

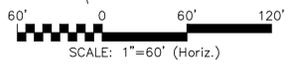
N/F  
 CITY OF WILMINGTON  
 DB 1274 PG 0560  
 ZONING: R-15 RESIDENTIAL  
 LAND USE: VACANT  
 PIN: R06500-005-004-002

N/F  
 LIFE COMMUNITY CHURCH  
 DB 5978 PG 0236  
 ZONING: R-15 RESIDENTIAL  
 LAND USE: CHURCH  
 PIN: R06500-005-004-000

N/F  
 CAMERON COMPANY LLC  
 DB 5461 PG 1135  
 ZONING: R-15 RESIDENTIAL  
 LAND USE: VACANT  
 PIN: R06500-004-022-000

\*NOTE: A REZONING APPLICATION HAS BEEN SUBMITTED FOR THE HALF OF THE RIGHT OF WAY THAT IS ADJACENT TO THE SUBJECT SITE. THE APPLICATION WAS SUBMITTED AND ACCEPTED ON OCTOBER 21, 2016. THE ITEM WILL BE PLACED ON THE DECEMBER 7, 2016 PLANNING COMMISSION AGENDA. THE REZONING OF THE OPPOSITE HALF OF THE RIGHT OF WAY WAS APPROVED BY THE PLANNING COMMISSION ON AUGUST 3, 2016 AND CITY COUNCIL ON OCTOBER 4, 2016.

N/F  
 TITANIUM ROAD PARTNERS LLC  
 DB 5479 PG 2451  
 ZONING: CB  
 LAND USE: PROPOSED SHOPPING CENTER  
 PIN: R06500-004-019-000



REV. NO.	DESCRIPTION	DATE

PRELIMINARY PLAN  
 NOT FOR  
 CONSTRUCTION



**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

**EXISTING CONDITIONS/SITE INVENTORY**

DATE:	16 NOV 2016	SCALE:	HORIZONTAL: 1" = 60'	MAC FILE NUMBER:	CX-101
MCE PROJ. #	07075-0002	VERTICAL:	N/A	DRAWING NUMBER:	3
DRAWN:	MAB	STATUS:	PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION:	A
DESIGNED:	MAB/TCM				
CHECKED:	RMC/TCM				
PROJ. MGR.:	RMC				



FOR REGULATED TREES, THE TOTAL NUMBER OF REPLACEMENT TREES SHALL BE DETERMINED BY MULTIPLYING THE TOTAL DBH OF THE REMOVED REGULATED TREE(S) BY THE PERCENTAGE OF THE TYPE OF TREE IN TABLE IV (SEC. 18-520) AND DIVIDING BY 3.

**REQUIRED MITIGATION TREES:**

PINES SHALL BE MITIGATED WITH LONG-LEAF PINE PLUWS AT 10' SPACING AS SPECIFIED IN SEC. 18-460.  
462 CALIPER INCHES OF PINES REMOVED  
x 100% MITIGATION / 3 (REGULATED TREE MULTIPLIER)  
= 154 REQUIRED MITIGATION PINE TREES  
\*FOR THE PURPOSE OF DETERMINING MITIGATION REQUIREMENT, IT IS ASSUMED THAT ALL EXISTING PINES ARE THE SPECIES PINUS TADA (LOBLOBBY PINE).

**HARDWOODS:**  
HARDWOODS SHALL BE MITIGATED WITH USING TREES OF EQUAL OR HIGHER VALUE ON TABLE IV (SEC. 18-520) AND BE A MINIMUM OF 2.5" CALIPER.  
119 CALIPER INCHES OF OAKS REMOVED  
x 100% MITIGATION / 3 (REGULATED TREE MULTIPLIER)  
= 40 REQUIRED MITIGATION TREES

13 CALIPER INCHES OF MAGNOLIAS REMOVED  
x 100% MITIGATION / 3 (REGULATED TREE MULTIPLIER)  
= 4 REQUIRED MITIGATION TREES  
MAGNOLIAS ARE THE SPECIES MAGNOLIA GRANDIFLORA (SOUTHERN MAGNOLIA).

93 CALIPER INCHES OF GUIMS REMOVED  
x 15% MITIGATION / 3 (REGULATED TREE MULTIPLIER)  
= 23 REQUIRED MITIGATION TREES  
\*FOR THE PURPOSE OF DETERMINING MITIGATION REQUIREMENT, IT IS ASSUMED THAT ALL EXISTING GUIMS ARE THE SPECIES LIQUIDAMBAR STRYDOMIA (AMERICAN SWEETGUM).

TOTAL HARDWOOD TREE MITIGATION = 67 TREES

**PROVIDED MITIGATION TREES:**

SEE SHEET CD-101

**MITIGATION TREE PLANTING REQUIREMENT (SEC. 18-460)**

SIGNIFICANT AND REGULATED TREES WITHIN THE STREET YARD AND BUFFER YARD SHALL BE RETAINED OR MITIGATED.

BUFFER YARD TREES TO BE REMOVED: 0 TREES

STREET YARD TREES TO BE REMOVED: 57 REGULATED TREES

- (1) 12" PINES
- (2) 13" PINES
- (3) 14" PINES
- (4) 15" PINES
- (5) 16" PINES
- (6) 17" PINES
- (7) 18" PINES
- (8) 19" PINES
- (9) 20" PINES
- (10) 21" PINES
- (11) 22" PINES
- (12) 23" PINES
- (13) 24" PINES
- (14) 25" PINES

TOTAL: 462 CALIPER INCHES

- (3) 8" OAK
- (3) 9" OAKS
- (5) 10" OAKS

TOTAL: 119 CALIPER INCHES

- (2) 4" MAGNOLIAS
- (1) 5" MAGNOLIA

TOTAL: 13 CALIPER INCHES

- (3) 8" GUIMS
- (3) 9" GUIMS
- (3) 10" GUIMS
- (1) 12" GUIMS

TOTAL: 93 CALIPER INCHES

**TREES TO BE SAVED:**

\* = SIGNIFICANT TREE

- (1) 12" PINES
- (4) 13" PINES
- (4) 14" PINES
- (4) 15" PINES
- (1) 16" PINE
- (8) 17" PINES
- (2) 18" PINES
- (2) 19" PINES
- (5) 20" PINES
- (1) 21" PINES
- (1) 22" PINES
- (1) 23" PINE\*
- (1) 25" PINE\*

TOTAL: 462 CALIPER INCHES

- (1) 9" MAGNOLIA\*
- (1) 9" MAGNOLIA\*
- (3) 8" OAKS
- (7) 10" OAKS
- (1) 11" OAK
- (1) 12" OAK
- (2) 13" OAKS
- (2) 16" OAKS

TOTAL: 119 CALIPER INCHES

- (1) 13" MISCELLANEOUS SPECIES
- (3) 8" OAKS
- (3) 9" OAKS
- (7) 10" OAKS
- (1) 11" OAK
- (1) 12" OAK
- (2) 13" OAKS
- (2) 16" OAKS

NOTE:  
ALL TREES TO BE REMOVED ARE FOR THE PURPOSE OF ESSENTIAL SITE IMPROVEMENTS.

**TREES TO BE REMOVED:**

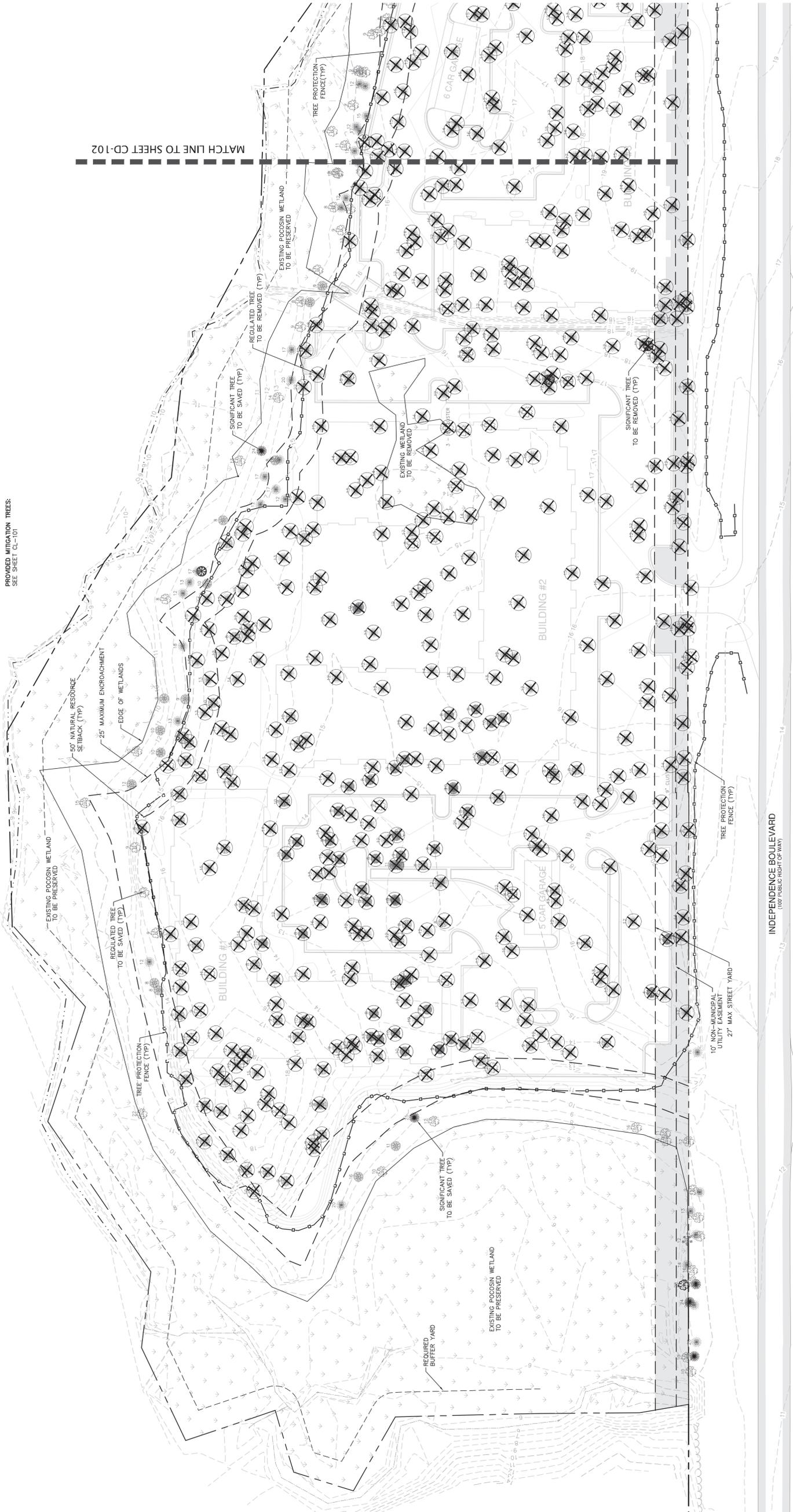
\* = SIGNIFICANT TREE

- (2) 4" DOGWOODS
- (36) 8" GUIMS
- (84) 13" PINES
- (63) 14" PINES
- (6) 15" PINES
- (19) 16" PINES
- (14) 17" PINES
- (7) 18" PINES
- (1) 19" PINES
- (1) 20" PINES
- (1) 21" PINE\*
- (1) 22" PINE\*
- (4) 24" PINES\*

TOTAL: 167 CALIPER INCHES

- (17) 8" MISCELLANEOUS SPECIES
- (12) 9" MISCELLANEOUS SPECIES
- (13) 10" MISCELLANEOUS SPECIES
- (2) 11" MISCELLANEOUS SPECIES
- (1) 13" OAKS
- (1) 14" OAKS
- (3) 11" OAKS
- (1) 12" OAK
- (1) 13" OAK
- (1) 15" OAK
- (1) 8" SPRUCE
- (1) 10" SPRUCE

TOTAL: 119 CALIPER INCHES





CONSTRUCTION  
 DOCUMENTS

**INDEPENDENCE WEST**  
**APARTMENTS**  
 WILMINGTON, NORTH CAROLINA  
 WOODFIELD INVESTMENTS, LLC  
 11425 HORSEMAN'S TRAIL  
 RALEIGH, NC 27613

**TREE**  
**PRESERVATION**  
**PLAN**

SCALE: 1" = 60'

PROJECT #:  
 217-039  
 DRAWN BY:  
 BMS  
 CHECKED BY:  
 BS

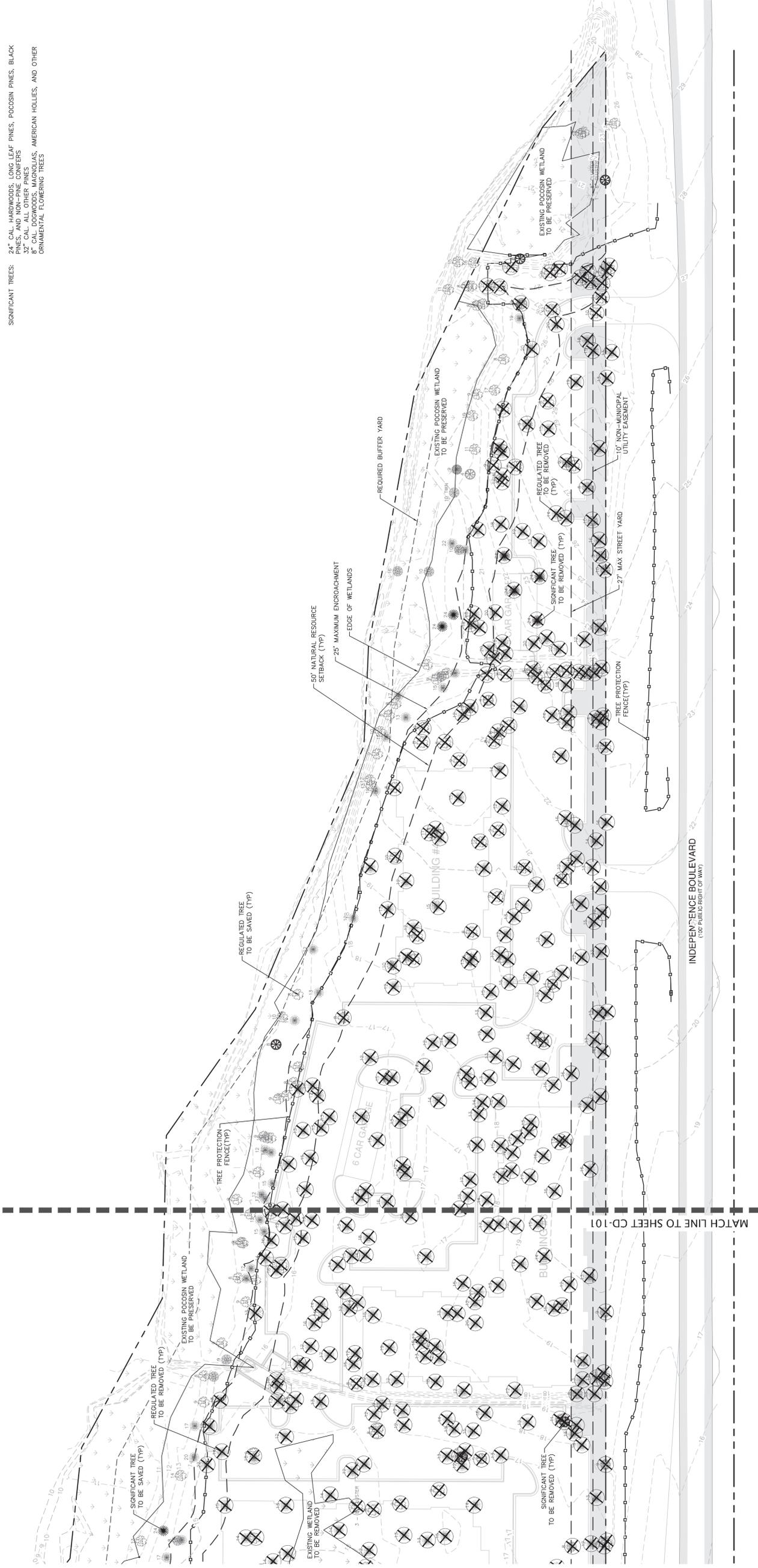
NOVEMBER 4, 2016

REVISIONS:

LEGEND		TREE LEGEND	
	WETLAND		DOGWOOD
	TREE PROTECTION FENCE		CJM
	TREE TO BE REMOVED		OAK
	PROPOSED STREET YARD		MAGNOLIA
			PINE
			MISCELLANEOUS

**REGULATED TREES:**  
 12" CAL. CONIFERS  
 6" CAL. HARDWOODS  
 4" CAL. DOGWOODS, MAGNOLIAS, AND OTHER ORNAMENTAL FLOWERING TREES

**SIGNIFICANT TREES:**  
 24" CAL. HARDWOODS, LONG LEAF PINES, POCCOSIN PINES, BLACK PINES, AND NON-PINE CONIFERS  
 8" CAL. DOGWOODS, MAGNOLIAS, AMERICAN HOLLES, AND OTHER ORNAMENTAL FLOWERING TREES



NOTE:  
 SEE SHEET CD-101 FOR LIST OF TREES TO BE REMOVED AND TREES TO BE SAVED

**SYMBOLS LEGEND**

	SILT FENCE
	LIMITS OF DISTURBANCE
	PROJECT PROPERTY LINE
	EXISTING WATER LINE
	EXISTING SEWER LINE
	TREE PROTECTION FENCING
	INLET PROTECTION
	EROSION CONTROL DRAINAGE AREA

**LEGEND**

	WETLAND
	25' VEGETATED BUFFER
	50' CONSERVATION RESOURCE SETBACK

**PHASE 1 CONSTRUCTION SEQUENCE:**

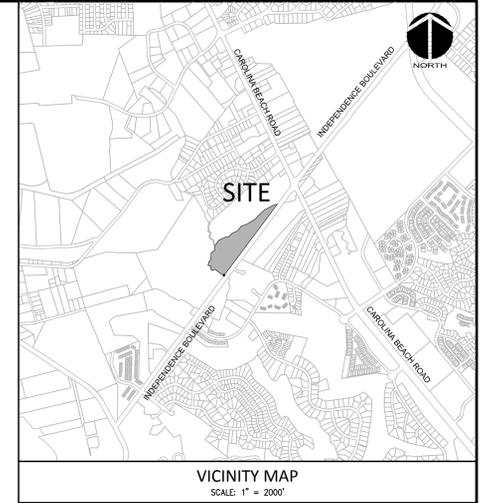
1. RECEIVE NEW HANOVER COUNTY GRADING & EROSION CONTROL PERMIT.
2. RECEIVE WETLANDS IMPACT (PCN) PERMIT.
3. RECEIVE CITY OF WILMINGTON EARLY GRADING RELEASE & TREE REMOVAL PERMIT.
4. ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
5. ATTEND NHC PRE-CONSTRUCTION CONFERENCE MUST BE HELD 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE EROSION CONTROL INSPECTOR, ENGINEER, AND CONTRACTOR SHALL BE PRESENT. A DETAILED EROSION CONTROL PHASING PLAN WILL BE FINALIZED PRIOR TO COMMENCEMENT OF WORK.
6. ATTEND CITY OF WILMINGTON PRE-CONSTRUCTION CONFERENCE PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE CITY INSPECTOR(S), ENGINEER, AND CONTRACTOR SHALL BE PRESENT.
7. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES AS SHOWN. CONTRACTOR SHALL MAINTAIN A SUFFICIENT GRAVEL ENTRANCE UNTIL FINAL SUBGRADE IS ESTABLISHED. IF DIRT/MUD GETS ON THE STREET, THEN A WASH RACK WILL NEED TO BE INSTALLED.
8. INSTALL TREE PROTECTION FENCING. SILT FENCING AS NOTED ON PLANS BEFORE COMMENCING ANY LAND DISTURBANCE ACTIVITY. TEMPORARY DIVERSION DITCHES, CHECK DAMS, AND TEMPORARY SEDIMENT TRAPS PRIOR TO ANY TREE REMOVAL OR MASS GRADING. MINOR TREE REMOVAL TO INSTALL STAGE 1 EROSION CONTROL MEASURES WILL BE PERMITTED. ADDITIONAL TREE PROTECTION FENCING AND SILT FENCE MAY BE REQUIRED.
9. CALL NEW HANOVER COUNTY EROSION CONTROL INSPECTION OF THE STAGE 1 MEASURES.
10. COMMENCE TREE REMOVAL, TOP SOIL STRIPPING, AND MASS CLEARING AND GRADING TO SUB-GRADE.
11. CONTRACTOR TO MAINTAIN EROSION CONTROL MEASURES IN GOOD WORKING ORDER PER MUNICOD SECTION 23-243. ALL DEVICES MUST BE CHECKED FOR SILTATION FOLLOWING ALL RAIN EVENTS.
12. AS GRADING PROGRESSES (SOUTH TO NORTH) EXISTING DITCH 1 & 2 WILL BE MUCKED OUT AND BACKFILLED WITH STRUCTURAL FILL TO SUBGRADE. TEMPORARY DIVERSION DITCHES AND CHECK DAMS WILL BE REMOVED AS THESE DITCHES ARE REMOVED & FILLED. TST-1 & TSB-2, & TSB-3 WILL REMAIN UNTIL EROSION CONTROL STAGE 2 MEASURES ARE APPROVED AND THE SITE IS STABILIZED TO SUBGRADE.
13. INSTALL STORM-WATER POND #1, 2, & 3. UPON ITS COMPLETION REMOVE TST-1, TSB-2, & TSB-3.
14. PROVIDE TEMPORARY SEEDING AS NECESSARY TO PREVENT EROSION.

**EROSION CONTROL MAINTENANCE:**

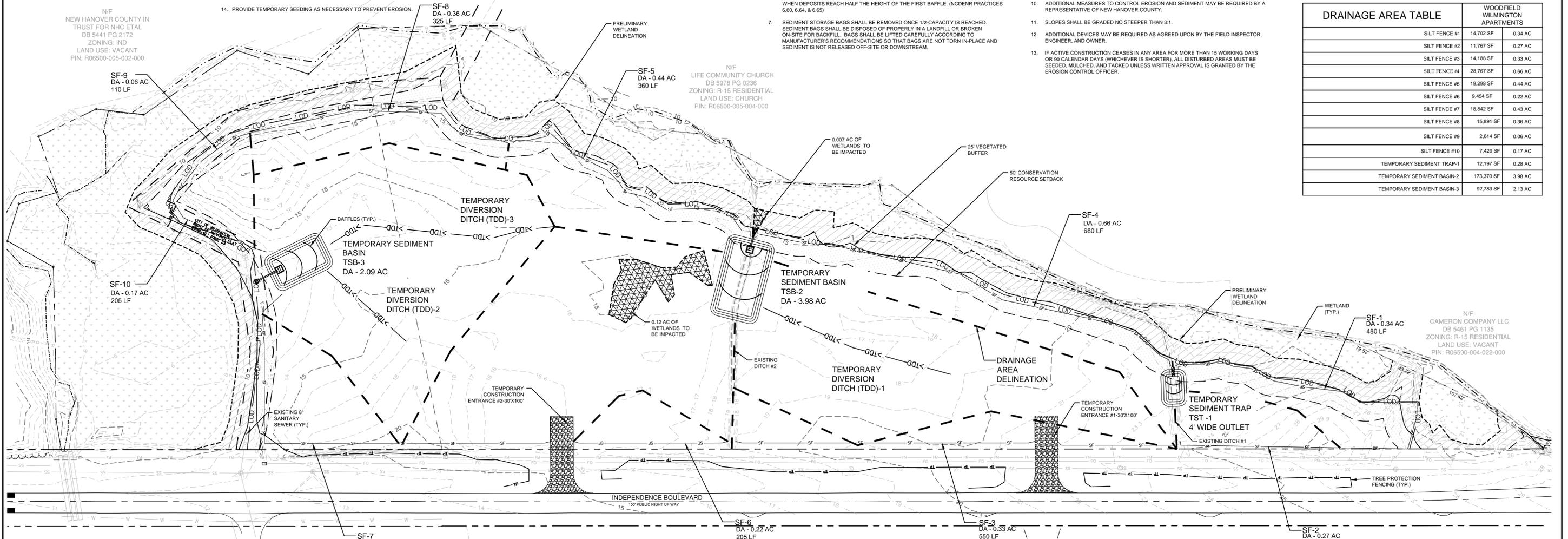
1. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.
2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES/EXITS THAT WILL BE PERIODICALLY TOP-DRESSED WITH 2-3" COARSE STONE TO MAINTAIN 6" THICKNESS. ENTRANCES/EXITS 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/EXIT OR PUBLIC ROADWAYS. (NCDENR PRACTICE 6.06)
3. 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. (NCDENR PRACTICE 6.62)
4. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTIONS WHEN THE SEDIMENT REACHES HALF OF THE DEPTH TO THE TOP OF THE ROCK. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT CONTROL MEASURE NO LONGER DRAINS AS INTENDED. REMOVE DEBRIS FROM THE ROCK AS NECESSARY TO ALLOW FOR PROPER DRAINAGE. (NCDENR PRACTICES 6.51)
5. ALL SEEDING AREAS WILL BE FERTILIZED, RE-SEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SHORT, FLAT SLOPES (FLATTER THAN 3:1 AND LESS THAN 50') LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. ALL OTHER AREAS SHOULD BE STABILIZED WITHIN 7 DAYS AFTER ANY PHASE OF ACTIVITY.
6. SEDIMENT WILL BE REMOVED FROM SEDIMENT BASINS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF-FILLED WITH SEDIMENT. PULL SKIMMER TO ONE SIDE SO THAT SEDIMENT UNDERNEATH CAN BE REMOVED. SKIMMERS MUST BE CHECKED FOR BLOCKAGES AND DEBRIS REMOVAL AND MAY BE FLUSHED IF NECESSARY. Baffles will be repaired or replaced if they collapse, tear, decompose, or become ineffective. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE FIRST Baffle. (NCDENR PRACTICES 6.60, 6.64, & 6.65)
7. SEDIMENT STORAGE BAGS SHALL BE REMOVED ONCE 1/2-CAPACITY IS REACHED. SEDIMENT BAGS SHALL BE DISPOSED OF PROPERLY IN A LANDFILL OR BROKEN ON-SITE FOR BACKFILL. BAGS SHALL BE LIFTED CAREFULLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS SO THAT BAGS ARE NOT TORN IN-PLACE AND SEDIMENT IS NOT RELEASED OFF-SITE OR DOWNSTREAM.

**EROSION CONTROL NOTES:**

1. CLEAR AND REMOVE FROM SITE ALL TREES, SHRUBS, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS. DO NOT DISTURB INSIDE TREE PROTECTION FENCING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED.
3. CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY ENGINEERING, IF REQUIRED.
4. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO TOOLS, STOCKPILES, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
5. IF THE SAME PERSON CONDUCTS THE LAND-DISTURBING ACTIVITY & ANY RELATED BORROW OR WASTE ACTIVITY, THE RELATED BORROW OR WASTE ACTIVITY SHALL CONSTITUTE PART OF THE LAND-DISTURBING ACTIVITY UNLESS THE BORROW OR WASTE ACTIVITY IS REGULATED UNDER THE MINING ACT OF 1971, OR IS A LANDFILL REGULATED BY THE DIVISION OF WASTE MANAGEMENT. IF THE LAND-DISTURBING ACTIVITY AND ANY RELATED BORROW OR WASTE ACTIVITY ARE NOT CONDUCTED BY THE SAME PERSON, THEY SHALL BE CONSIDERED SEPARATE LAND-DISTURBING ACTIVITIES AND MUST BE PERMITTED EITHER THROUGH THE SEDIMENTATION POLLUTION CONTROL ACT AS A ONE-USE BORROW SITE OR THROUGH THE MINING ACT.
6. CONTACT PERSON SHOULD ISSUES ARISE DURING EROSION AND SEDIMENT CONTROL OPERATION: VERNON POWELL.
7. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
8. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE.
9. A GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 15 WORKING DAYS OR 21 CALENDAR DAYS (WHICHEVER IS SHORTER), FOLLOWING COMPLETION OF ANY PHASE OF GRADING, AND A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 10 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
10. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NEW HANOVER COUNTY.
11. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
12. ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
13. IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEED, MULCHED, AND TACKED UNLESS WRITTEN APPROVAL IS GRANTED BY THE EROSION CONTROL OFFICER.



DRAINAGE AREA TABLE		WOODFIELD WILMINGTON APARTMENTS	
SILT FENCE #1	14,702 SF	0.34 AC	
SILT FENCE #2	11,767 SF	0.27 AC	
SILT FENCE #3	14,188 SF	0.33 AC	
SILT FENCE #4	28,767 SF	0.66 AC	
SILT FENCE #5	19,298 SF	0.44 AC	
SILT FENCE #6	9,454 SF	0.22 AC	
SILT FENCE #7	18,842 SF	0.43 AC	
SILT FENCE #8	15,891 SF	0.36 AC	
SILT FENCE #9	2,614 SF	0.06 AC	
SILT FENCE #10	7,420 SF	0.17 AC	
TEMPORARY SEDIMENT TRAP-1	12,197 SF	0.28 AC	
TEMPORARY SEDIMENT BASIN-2	173,370 SF	3.98 AC	
TEMPORARY SEDIMENT BASIN-3	92,783 SF	2.13 AC	



N/F  
NEW HANOVER COUNTY IN  
TRUST FOR NHC ETAL  
DB 5441 PG 2172  
ZONING: IND  
LAND USE: VACANT  
PIN: R06500-005-002-000

N/F  
LIFE COMMUNITY CHURCH  
DB 5978 PG 0236  
ZONING: R-15 RESIDENTIAL  
LAND USE: CHURCH  
PIN: R06500-005-004-000

N/F  
CAMERON COMPANY LLC  
DB 5461 PG 1135  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-004-022-000

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

**Approved Construction Plan**

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

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

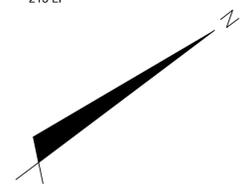
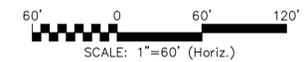
Fire \_\_\_\_\_

**STORMWATER MANAGEMENT PLAN APPROVED**

CITY OF WILMINGTON  
ENGINEERING DEPARTMENT

DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_

SIGNED \_\_\_\_\_



REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

**PRELIMINARY PLAN NOT FOR CONSTRUCTION**



**MCKIM & CREED**

243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA

**SEDIMENT AND EROSION CONTROL PLAN - PHASE 1**

DATE: 16 NOV 2016  
MCE PROJ. #: 07075-0002  
DRAWN: MAB  
DESIGNED: MAB/TCM  
CHECKED: RMC/TCM  
PROJ. MGR.: RMC

SCALE: HORIZONTAL: 1" = 60' VERTICAL: N/A

MAC FILE NUMBER: CE-101  
DRAWING NUMBER: 6

STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION  
REVISION: A

**SYMBOLS LEGEND**

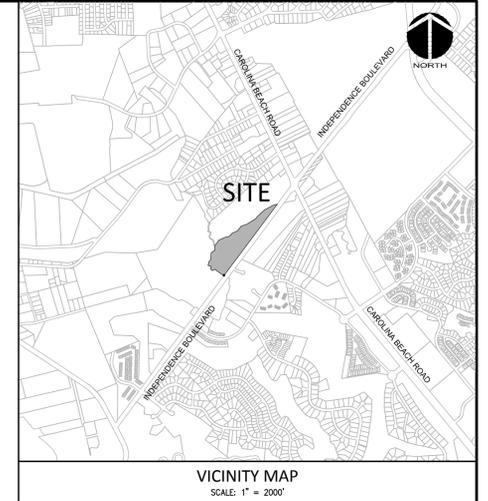
	SILT FENCE
	LIMITS OF DISTURBANCE
	PROJECT PROPERTY LINE
	EXISTING WATER LINE
	EXISTING SEWER LINE
	TREE PROTECTION FENCING
	INLET PROTECTION

**EROSION CONTROL MAINTENANCE:**

- 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.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES/EXITS THAT WILL BE PERIODICALLY TOP-DRESSED WITH 2-3" COARSE STONE TO MAINTAIN 6" THICKNESS. ENTRANCES/EXITS 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/EXIT OR PUBLIC ROADWAYS. (NC DENR PRACTICE 6.06)
- 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. (NC DENR PRACTICE 6.62)
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- ALL SEEDED AREAS WILL BE FERTILIZED, RE-SEEDED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SHORT, FLAT SLOPES (FLATTER THAN 3:1 AND LESS THAN 50') LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. ALL OTHER AREAS SHOULD BE STABILIZED WITHIN 7 DAYS AFTER ANY PHASE OF ACTIVITY.
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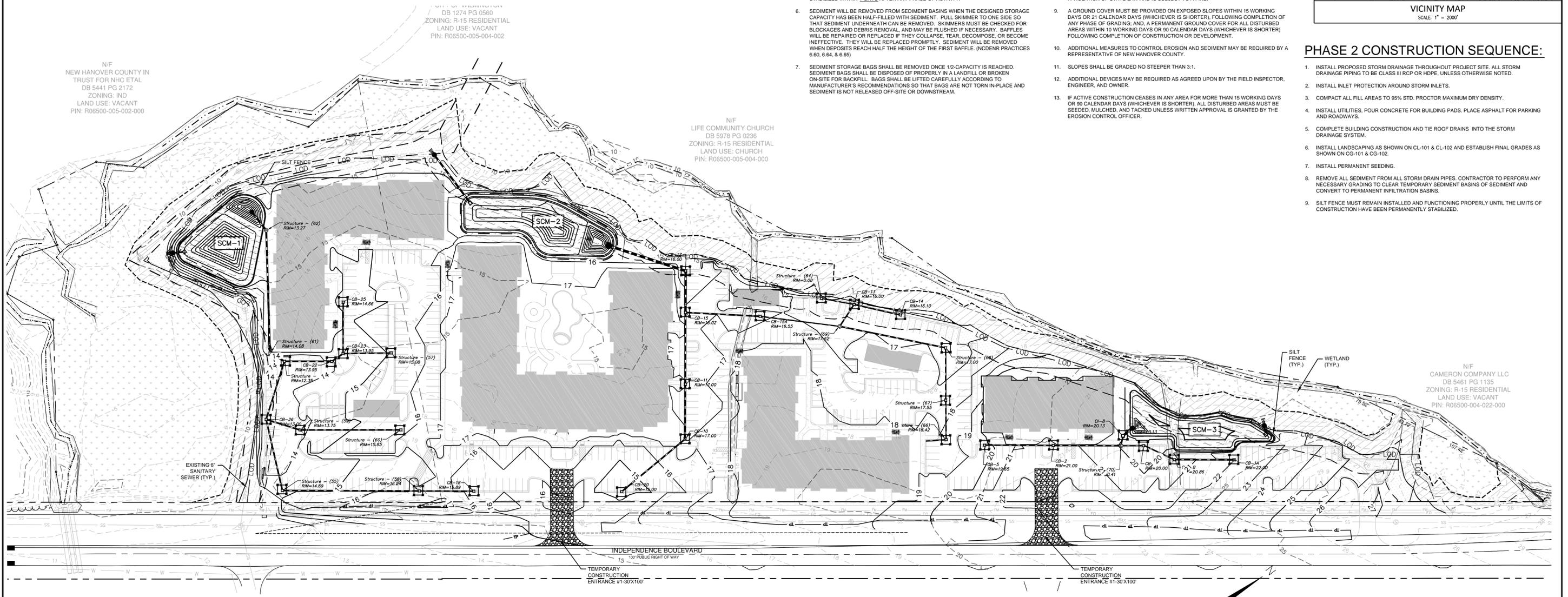
**EROSION CONTROL NOTES:**

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- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED.
- CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY ENGINEERING, IF REQUIRED.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO TOOLS, STOCKPILES, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- IF THE SAME PERSON CONDUCTS THE LAND-DISTURBING ACTIVITY & ANY RELATED BORROW OR WASTE ACTIVITY, THE RELATED BORROW OR WASTE ACTIVITY SHALL CONSTITUTE PART OF THE LAND-DISTURBING ACTIVITY UNLESS THE BORROW OR WASTE ACTIVITY IS REGULATED UNDER THE MINING ACT OF 1971, OR IS A LANDFILL REGULATED BY THE DIVISION OF WASTE MANAGEMENT. IF THE LAND-DISTURBING ACTIVITY AND ANY RELATED BORROW OR WASTE ACTIVITY ARE NOT CONDUCTED BY THE SAME PERSON, THEY SHALL BE CONSIDERED SEPARATE LAND-DISTURBING ACTIVITIES AND MUST BE PERMITTED EITHER THROUGH THE SEDIMENTATION POLLUTION CONTROL ACT AS A ONE-USE BORROW SITE OR THROUGH THE MINING ACT.
- CONTACT PERSON SHOULD ISSUES ARISE DURING EROSION AND SEDIMENT CONTROL OPERATION: VERNON POWELL
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE.
- A GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 15 WORKING DAYS OR 21 CALENDAR DAYS (WHICHEVER IS SHORTER), FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 10 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NEW HANOVER COUNTY.
- SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
- ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
- IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED UNLESS WRITTEN APPROVAL IS GRANTED BY THE EROSION CONTROL OFFICER.



**PHASE 2 CONSTRUCTION SEQUENCE:**

- INSTALL PROPOSED STORM DRAINAGE THROUGHOUT PROJECT SITE. ALL STORM DRAINAGE PIPING TO BE CLASS III RCP OR HDPE, UNLESS OTHERWISE NOTED.
- INSTALL INLET PROTECTION AROUND STORM INLETS.
- COMPACT ALL FILL AREAS TO 95% STD. PROCTOR MAXIMUM DRY DENSITY.
- INSTALL UTILITIES, POUR CONCRETE FOR BUILDING PADS, PLACE ASPHALT FOR PARKING AND ROADWAYS.
- COMPLETE BUILDING CONSTRUCTION AND TIE ROOF DRAINS INTO THE STORM DRAINAGE SYSTEM.
- INSTALL LANDSCAPING AS SHOWN ON CL-101 & CL-102 AND ESTABLISH FINAL GRADES AS SHOWN ON CG-101 & CG-102.
- INSTALL PERMANENT SEEDING.
- REMOVE ALL SEDIMENT FROM ALL STORM DRAIN PIPES. CONTRACTOR TO PERFORM ANY NECESSARY GRADING TO CLEAR TEMPORARY SEDIMENT BASINS OF SEDIMENT AND CONVERT TO PERMANENT INFILTRATION BASINS.
- SILT FENCE MUST REMAIN INSTALLED AND FUNCTIONING PROPERLY UNTIL THE LIMITS OF CONSTRUCTION HAVE BEEN PERMANENTLY STABILIZED.



N/F  
NEW HANOVER COUNTY IN  
TRUST FOR NHC ETAL  
DB 5441 PG 2172  
ZONING: IND  
LAND USE: VACANT  
PIN: R06500-005-002-000

DB 1274 PG 0560  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-005-004-002

N/F  
LIFE COMMUNITY CHURCH  
DB 5978 PG 0236  
ZONING: R-15 RESIDENTIAL  
LAND USE: CHURCH  
PIN: R06500-005-004-000

N/F  
CAMERON COMPANY LLC  
DB 5461 PG 1135  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-004-022-000

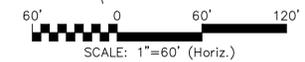
1 inch

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

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
SIGNED \_\_\_\_\_



REV.	DESCRIPTION	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



**MCKIM & CREED**  
243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**SEDIMENT AND EROSION CONTROL PLAN - PHASE 2**

DATE: 16 NOV 2016	SCALE: HORIZONTAL: 1"=60'	MAC FILE NUMBER: CE-102
MCE PROJ. #: 07075-0002	VERTICAL: N/A	DRAWING NUMBER: 7
DRAWN: MAB		
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR.: RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION: A	

N/F  
CITY OF WILMINGTON  
DB 1274 PG 0560  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-005-004-002

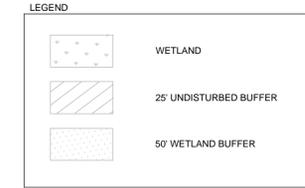
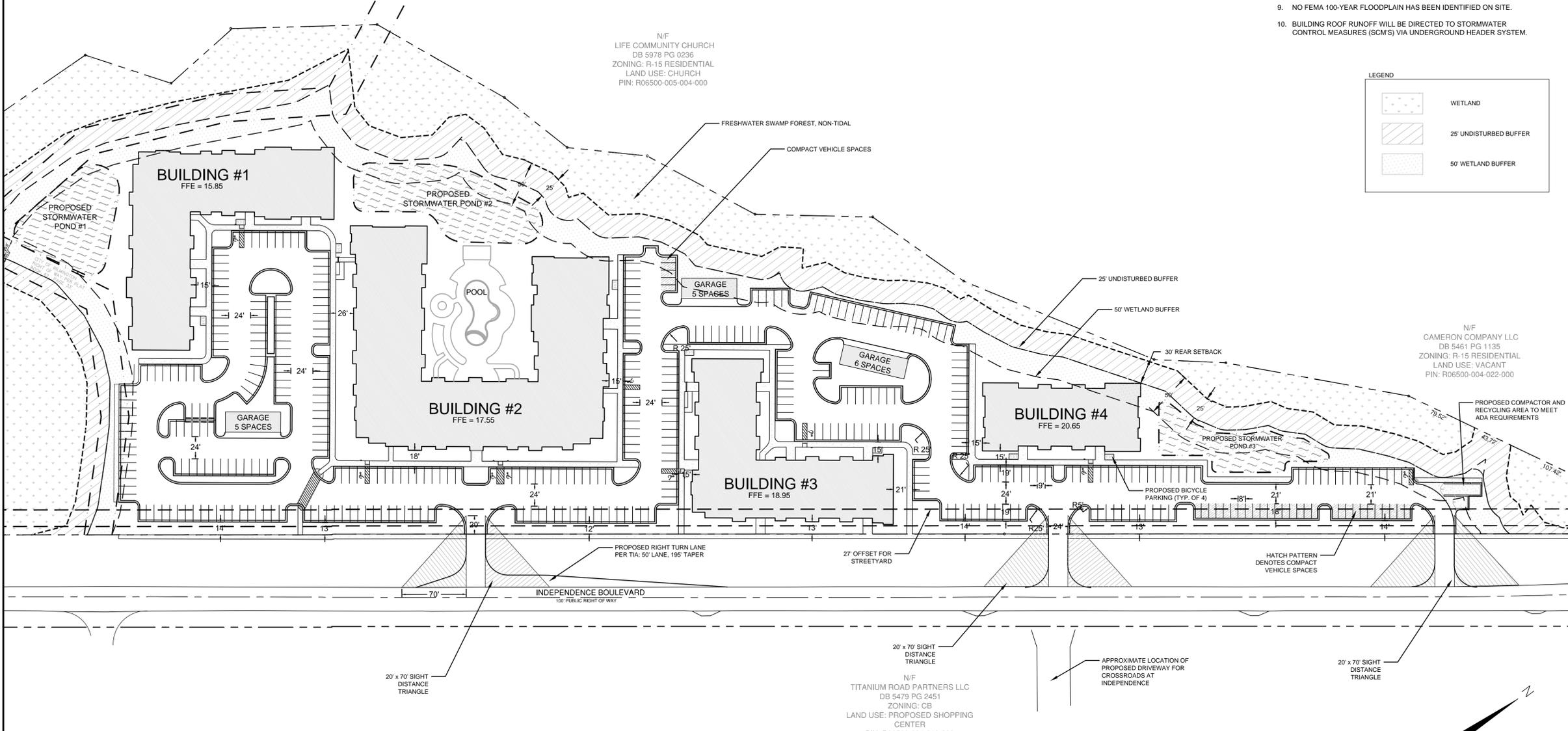
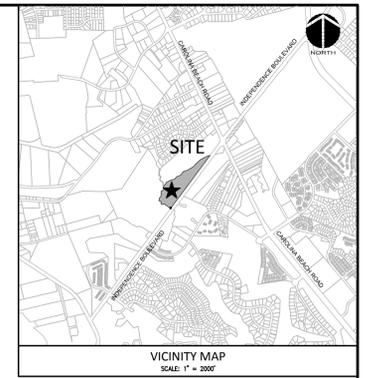
N/F  
LIFE COMMUNITY CHURCH  
DB 5978 PG 0236  
ZONING: R-15 RESIDENTIAL  
LAND USE: CHURCH  
PIN: R06500-005-004-000

N/F  
CAMERON COMPANY LLC  
DB 5461 PG 1135  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-004-022-000

N/F  
TITANIUM ROAD PARTNERS LLC  
DB 5479 PG 2451  
ZONING: CIB  
LAND USE: PROPOSED SHOPPING  
CENTER  
PIN: R06500-004-019-000

**GENERAL NOTES:**

- PROJECT IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT.
- PROJECT IS NOT WITHIN ANY CORRIDOR OVERLAY DISTRICT.
- PRELIMINARY WETLAND DELINEATION IS AS SHOWN, JURISDICTIONAL DETERMINATION FROM THE US ARMY CORPS OF ENGINEERS IS IN PROCESS.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING. 1-800-632-4949.
- THE AT&T CONTACT IS JAMES BATSON - BUILDING INDUSTRY CONSULTANT - (910) 382-8712. 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 AT APPROXIMATELY 3 FT DEEP.
  - BELLSOUTH/CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2 FEET DEEP.
- SITE DIMENSIONS FOR PARKING AREAS ARE TO THE FACE OF CURB.
- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'.
- NO FEMA 100-YEAR FLOODPLAIN HAS BEEN IDENTIFIED ON SITE.
- BUILDING ROOF RUNOFF WILL BE DIRECTED TO STORMWATER CONTROL MEASURES (SCMS) VIA UNDERGROUND HEADER SYSTEM.



SITE DATA TABLE		WOODFIELD WILMINGTON APARTMENTS	
PARCEL ADDRESS	3828 & 3970 INDEPENDENCE BOULEVARD		
BUILDING SETBACKS	REQUIRED	PROPOSED	
FRONT	0'	0'	
REAR	25'	25'	
SIDE (INTERIOR)	20'	20'	
SIDE (CORNER)	0'	0'	
TAX PARCEL IDENTIFICATION NUMBER(S):	R06500-004-020-000 R06518-001-001-000		
CURRENT ZONING:	MF-M: MULTIFAMILY, MEDIUM DENSITY		
TOTAL ACREAGE WITHIN THE PROJECT BOUNDARIES	15.1 ACRES (657,756 SF)		
GROSS BUILDING AREA - BUILDING 1	75,198 SF	3 STORIES	
GROSS BUILDING AREA - BUILDING 2	170,308 SF	4 STORIES	
GROSS BUILDING AREA - BUILDING 3	64,833 SF	3 STORIES	
GROSS BUILDING AREA - BUILDING 4	35,655 SF	3 STORIES	
NC BUILDING CODE CONSTRUCTION TYPE	VA		
BUILDING LOT COVERAGE	0.00%	16.00%	
NUMBER OF UNITS	254		
NUMBER OF BUILDINGS	4		
BUILDING HEIGHT	50' MAX.		
NUMBER OF STORIES & SQUARE FEET PER FLOOR	SEE ARCHITECTURAL PLANS FOR DETAILED INFORMATION		
TOTAL AMOUNT OF DISTURBED AREA	9.49 ACRES (413,384 SF)		
CAMA LAND USE CLASSIFICATION	URBAN		
EXISTING IMPERVIOUS AREA	0 SF (0%)		
IMPERVIOUS AREA (PROPOSED)			
ROOF TOPS	108,888	SF	
PARKING & DRIVE ISLES	170,187	SF	
SIDEWALKS	15,847	SF	
OFF-SITE IMPERVIOUS (WITHIN PROPOSED PUBLIC R/W)	7,023	SF	
TOTAL S.F. (ONSITE IMPERVIOUS AREA)	294,973	SF	
PERCENTAGE (ONSITE IMPERVIOUS AREA/ONSITE AREA)	44.84	%	
OPEN SPACE CALCULATIONS			
TRACT AREA	657,756 SF	15.10 AC	
GROSS AREA OF TRACT (TRACT AREA MINUS SW PONDS)	637,101 SF	14.63 AC	
REQUIRED OPEN SPACE (35% OF TRACT AREA)	222,985 SF	5.12 AC	
REQUIRED ACTIVE OPEN SPACE	111,493 SF	2.56 AC	
REQUIRED PASSIVE OPEN SPACE	111,493 SF	2.56 AC	
TOTAL OPEN SPACE PROVIDED	246,264 SF (42.7%)	5.65 AC	
PARKING CALCULATIONS			
PROPOSED USE:	MULTI-FAMILY		
NUMBER OF SPACES REQUIRED	449		
	1.8 SPACES PER UNIT		
TOTAL SPACES PROVIDED	449 (1.8 SPACES PER UNIT)		
ACCESSIBLE SPACES REQUIRED	9		
ACCESSIBLE SPACES PROVIDED	9 (4 VAN)		
COMPACT PARKING SPACES	36 (8%)		
GARAGE PARKING SPACES	16		
BICYCLE SPACES PROVIDED (5 PER 100 SPACES)	24		

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

Approved Construction Plan

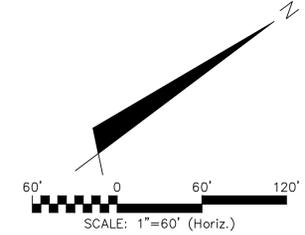
Name \_\_\_\_\_ Date \_\_\_\_\_

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
SIGNED \_\_\_\_\_



REV.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

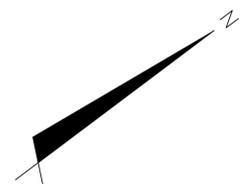
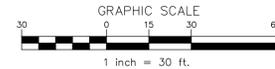


243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

WOODFIELD WILMINGTON APARTMENTS  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**OVERALL SITE PLAN**

DATE:	16 NOV 2016	SCALE:	1" = 60'	MAC FILE NUMBER:	CS-101
MCE PROJ. #	07075-0002	HORIZONTAL:	1" = 60'	DRAWING NUMBER:	8
DRAWN:	MAB	VERTICAL:	N/A		
DESIGNED:	MAB/TCM				
CHECKED:	RMC/TCM				
PROJ. MGR.:	RMC				
STATUS:	PRELIMINARY PLANS NOT FOR CONSTRUCTION		REVISION:	A	





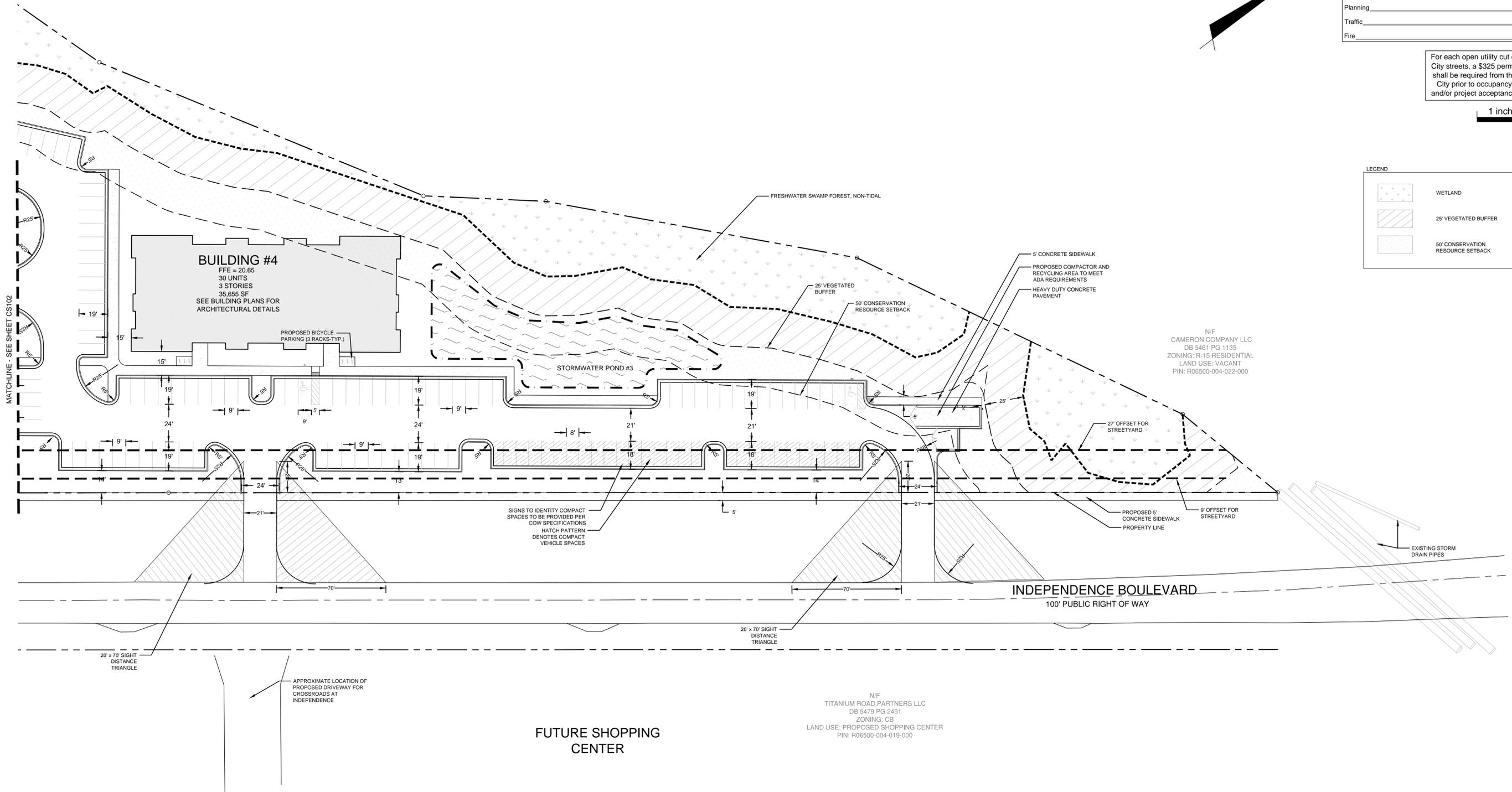
**STORMWATER MANAGEMENT PLAN**  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	

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

1 inch

LEGEND	
	WETLAND
	25' VEGETATED BUFFER
	50' CONSERVATION RESOURCE SETBACK



REV.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
 NOT FOR CONSTRUCTION



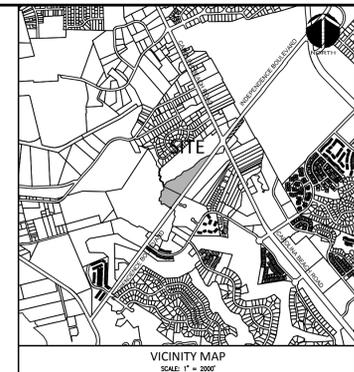
**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA  
**ENLARGED SITE PLAN**

DATE: 16 NOV 2016	SCALE: HORIZONTAL: 1" = 30'	MAC FILE NUMBER: CS103
MCE PROJ. #: 07075-0002	VERTICAL: N/A	DRAWING NUMBER: 10
DRAWN: MAB		
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR.: RMC		
STATUS: PRELIMINARY PLANS	REVISION: A	
NOT FOR CONSTRUCTION		

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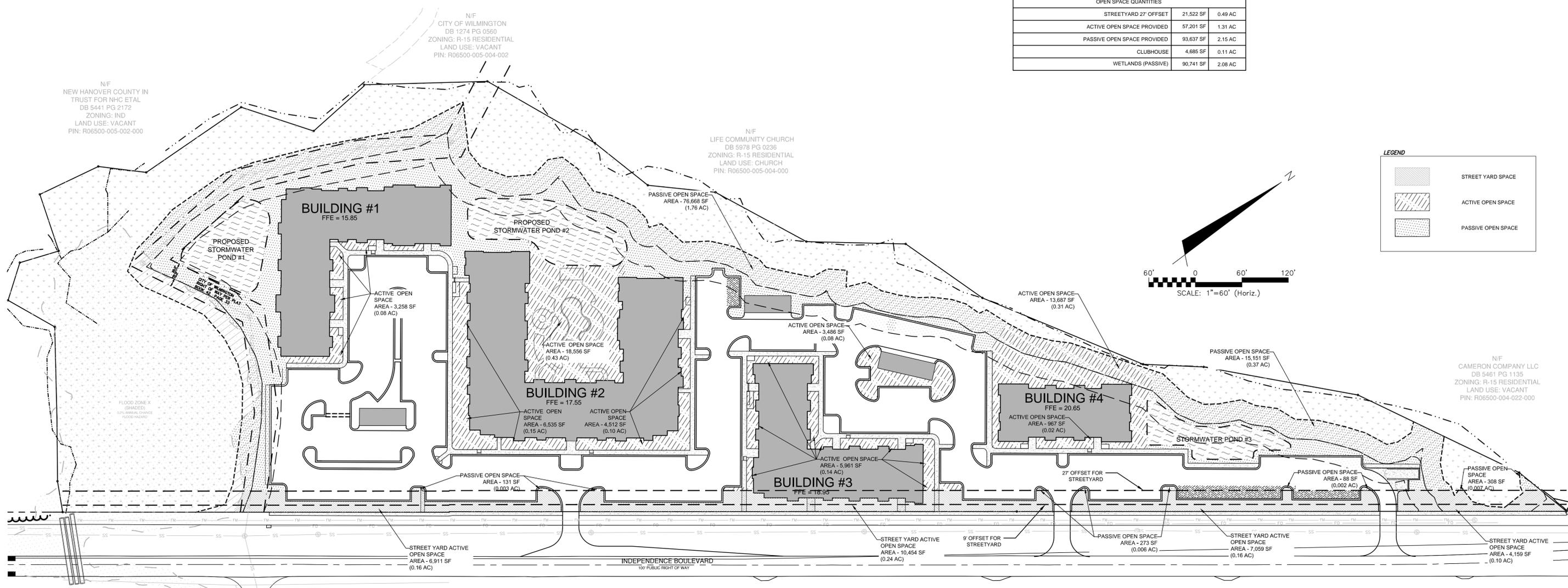
OPEN SPACE CALCULATIONS		
TRACT AREA	657,756	SF
TOTAL PROPOSED STORMWATER PONDS	27,497	SF
AREA OF PROPOSED PUBLIC RIGHT OF WAY	0	SF
GROSS TRACT AREA (TRACT AREA - SW PONDS)	630,259	SF
REQUIRED OPEN SPACE (35% OF TRACT AREA)	220,591	SF
PROPOSED ACTIVE SPACE	61,886	SF
PROPOSED PASSIVE SPACE	184,378	SF
TOTAL OPEN SPACE (ACTIVE + PASSIVE) PROVIDED	246,264	SF (42.7%)
OPEN SPACE QUANTITIES		
STREETYARD 27' OFFSET	21,522	SF 0.49 AC
ACTIVE OPEN SPACE PROVIDED	57,201	SF 1.31 AC
PASSIVE OPEN SPACE PROVIDED	93,637	SF 2.15 AC
CLUBHOUSE	4,685	SF 0.11 AC
WETLANDS (PASSIVE)	90,741	SF 2.08 AC

N/F  
NEW HANOVER COUNTY IN  
TRUST FOR NHC ETAL  
DB 5441 PG 2172  
ZONING: IND  
LAND USE: VACANT  
PIN: R06500-005-002-000

N/F  
CITY OF WILMINGTON  
DB 1274 PG 0560  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-005-004-002

N/F  
LIFE COMMUNITY CHURCH  
DB 5978 PG 0236  
ZONING: R-15 RESIDENTIAL  
LAND USE: CHURCH  
PIN: R06500-005-004-000

N/F  
CAMERON COMPANY LLC  
DB 5461 PG 1135  
ZONING: R-15 RESIDENTIAL  
LAND USE: VACANT  
PIN: R06500-004-022-000



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

Approved Construction Plan

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

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
SIGNED \_\_\_\_\_

NOTE: ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SITE LINES FROM 30' - 10'.

1 inch

REV.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



**MCKIM & CREED**

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**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**OPEN SPACE PLAN**

DATE: 16 NOV 2016	SCALE: HORIZONTAL: 1"=60'	MAC/FILE NUMBER: CS-104
MCE PROJ. #: 07075-0002	VERTICAL: N/A	DRAWING NUMBER: 11
DRAWN: MAB		
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR.: RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION: A	



CONSTRUCTION  
 DOCUMENTS

**INDEPENDENCE WEST**  
**APARTMENTS**  
 WILMINGTON, NORTH CAROLINA

**WOODFIELD INVESTMENTS, LLC**  
 11425 HORSEMAN'S TRAIL  
 RALEIGH, NC 27613

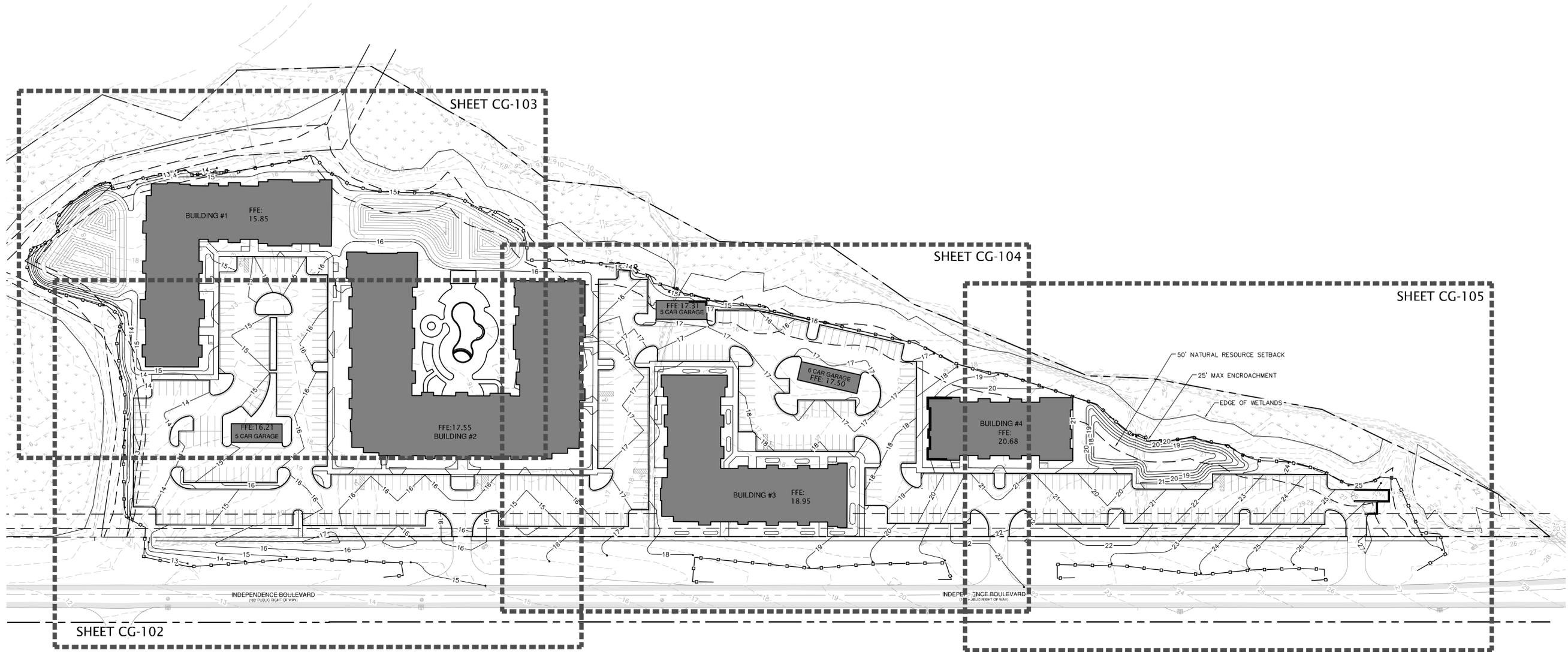
**OVERALL**  
**GRADING PLAN**

SCALE: 1" = 60'

PROJECT #: 217-039  
 DRAWN BY: BMS  
 CHECKED BY: BS

NOVEMBER 16, 2016

REVISIONS:



**SITE ACCESSIBILITY NOTES**

1. ALL BUILDINGS WITHIN THE BOUNDARY OF THIS SITE, UNLESS OTHERWISE STATED AS EXEMPT, SHALL HAVE "ACCESSIBLE ROUTES" AS REQUIRED THAT CONFORM TO THE REQUIREMENTS OF "THE AMERICANS WITH DISABILITIES ACT," "FAIR HOUSING STANDARDS," ICC ANS A 117.1-209 AND GOVERNING STATE HANDICAP CODE STANDARDS.

THESE STANDARDS FOR ACCESSIBILITY INCLUDE, BUT ARE NOT LIMITED TO:

- MAXIMUM WALK SLOPE = 1:20
- MAXIMUM RAMP SLOPE = 1:12 WITH RAILING
- MAXIMUM CROSS SLOPE = 1/4" PER FOOT (2%)
- ALL WALKS TO BE BROOM FINISHED CONCRETE UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS
- MAXIMUM ACCESSIBLE ROUTE LENGTH (NC) = 200'

2. THE PAVEMENT SLOPE WITHIN ACCESSIBLE PARKING SPACES SHALL NOT EXCEED 2% IN ALL DIRECTIONS.
3. CONTRACTOR TO CONTACT DESIGN RESOURCE GROUP FOR ANY VARYING SITE CONDITIONS OR DISCREPANCIES AFFECTING SITE ACCESSIBILITY REQUIREMENTS.

ADDITIONAL ACCESSIBLE ROUTE NOTES FOR ACCESSIBILITY COMPLIANCE WITH ICC/ANSI A117.1-2009, AND 2010 ADA STANDARDS.

1. PROTRUDING OBJECTS ON CIRCULATION PATHS WITHIN COMMON USE AREAS TO COMPLY WITH ANS 2009 SECTION 307, INCLUDING:
  - a. PROTRUSION LIMITS: OBJECTS WITH LEADING EDGES MORE THAN 27" AND NOT MORE THAN 80" ABOVE THE FLOOR SHALL PROTRUDE 4" MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH. EXCEPTIONS INCLUDE HANDRAILS, DOOR CLOSERS, AND DOOR STOPS.
  - b. POST MOUNTED OBJECTS: OBJECTS ON POSTS OR PYLONS SHALL BE PERMITTED TO OVERHANG 4" MAXIMUM WHERE MORE THAN 27" AND NOT MORE THAN 80" ABOVE THE FLOOR. OBJECTS ON MULTIPLE POSTS OR PYLONS WHERE THE CLEAR DISTANCE BETWEEN THE POSTS OR PYLONS IS GREATER THAN 12" SHALL HAVE THE LOWEST EDGE OF SUCH OBJECT EITHER 27" MAXIMUM OR 80" MINIMUM ABOVE THE FLOOR.
  - c. REDUCED VERTICAL CLEARANCE: GUARDRAILS OR OTHER BARRIERS SHALL BE PROVIDED WHERE OBJECT PROTRUSION IS BEYOND THE LIMITS ALLOWED BY SECTIONS 307.2 AND 307.3, AND WHERE THE VERTICAL CLEARANCE IS LESS THAN 80" ABOVE THE FLOOR. THE LEADING EDGE OF SUCH GUARDRAIL OR BARRIER SHALL BE 27" MAXIMUM ABOVE THE FLOOR.
2. PROTRUDING OBJECTS ON CIRCULATION PATHS WITHIN PUBLIC USE AREAS TO COMPLY WITH 2010 ADA SECTION 307, INCLUDING:
  - a. 2010 ADA SECTION 307.2: OBJECTS PROJECTING FROM WALLS
  - b. 2010 ADA SECTION 307.4: MINIMUM CLEAR HEADROOM
3. FLOOR AND GROUND SURFACES IN COMMON USE AREAS SHALL BE STABLE, FIRM, AND SLIP RESISTANT AND SHALL COMPLY WITH ANS 2009 SECTIONS 302.

4. FLOOR AND GROUND SURFACES ALONG ACCESSIBLE ROUTES AND IN ACCESSIBLE ROOMS AND SPACES WITH PUBLIC USE AREAS SHALL BE STABLE, FIRM, AND SLIP-RESISTANT AND SHALL COMPLY WITH 2010 ADA SECTION 302.
5. CHANGES IN LEVEL IN COMMON USE AREAS SHALL COMPLY WITH ANS 2009 SECTION 303, INCLUDING:
  - a. ANS 2009 SECTION 303.2: VERTICAL
  - b. ANS 2009 SECTION 303.3: BEVELED
  - c. ANS 2009 SECTION 303.4: RAMPS
6. CHANGES IN LEVEL ALONG ACCESSIBLE ROUTES AND IN ACCESSIBLE ROOMS AND SPACES WITH PUBLIC USE AREAS SHALL COMPLY WITH 2010 ADA SECTION 303, INCLUDING:
  - a. 2010 ADA SECTION 303.2: VERTICAL
  - b. 2010 ADA SECTION 303.3: BEVELED
  - c. 2010 ADA SECTION 303.4: RAMPS
7. IF TREES OR OTHER PLANTING OVERHANG ALONG THE CIRCULATION ROUTES AT THE SIDEWALK WITHOUT PROTECTION AT 27" A.F.F. OR LOWER, ASSURE THEY DO NOT EXTEND GREATER THAN 4" INTO CIRCULATION ROUTE AT A HEIGHT OF 80" ABOVE GRADE OR LOWER. (1986 ANS, SECTION 4.4.1)
8. THE CONTROLS AT ANY ADDITIONAL COMMON USE ELEMENT SUCH AS THE GATE HARDWARE, FIRE PIT, POOL SHOWER, ETC. WHICH ARE INTENDED TO BE USED BY THE RESIDENTS AND THEIR GUESTS ARE LOCATED ON AN ACCESSIBLE ROUTE, WITHIN THE REQUIRED REACH RANGE OF 15"-48" A.F.F. AND ARE OPERABLE WITH ONE HAND USING 5LB MAXIMUM PRESSURE WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST (1986 ANS, SECTION 4.25 & ANS 2009, SECTION 308)

NOTES:  
 1) SEE SHEETS CG-102 THRU CG-105 FOR FINE GRADING.  
 2) SEE SHEETS CG-501 AND CG-502 FOR STORM DRAINAGE PLANS



CONSTRUCTION  
DOCUMENTS

**INDEPENDENCE WEST  
APARTMENTS**  
WILMINGTON, NORTH CAROLINA

WOODFIELD INVESTMENTS, LLC  
11425 HORSEMAN'S TRAIL  
RALEIGH, NC 27613

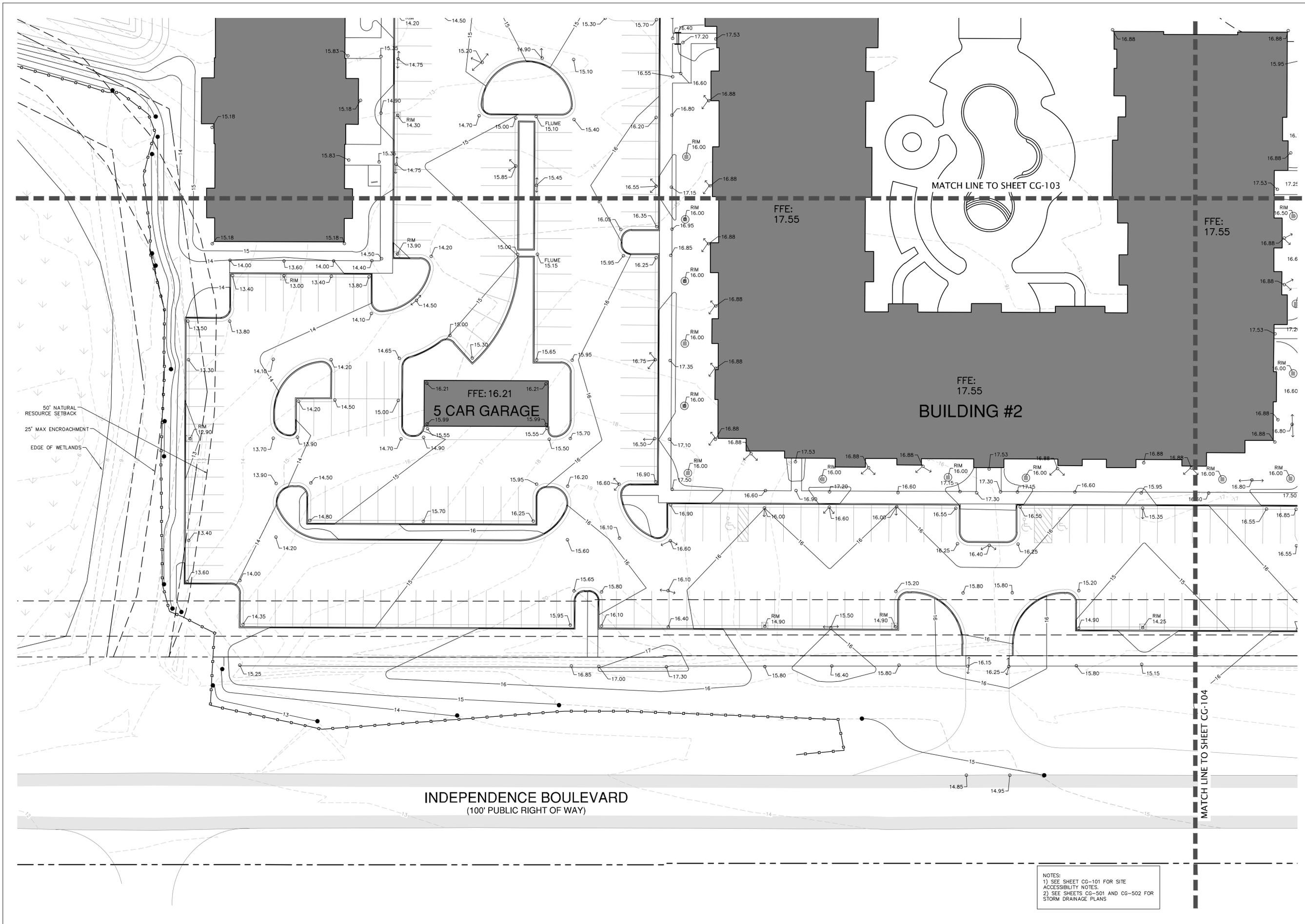
GRADING  
PLAN

SCALE: 1" = 20'

PROJECT #: 217-039  
DRAWN BY: BMS  
CHECKED BY: BS

NOVEMBER 16, 2016

REVISIONS:



**INDEPENDENCE BOULEVARD**  
(100' PUBLIC RIGHT OF WAY)

NOTES:  
1) SEE SHEET CG-101 FOR SITE ACCESSIBILITY NOTES.  
2) SEE SHEETS CG-501 AND CG-502 FOR STORM DRAINAGE PLANS





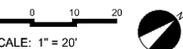
CONSTRUCTION  
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INDEPENDENCE WEST  
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WOODFIELD INVESTMENTS, LLC  
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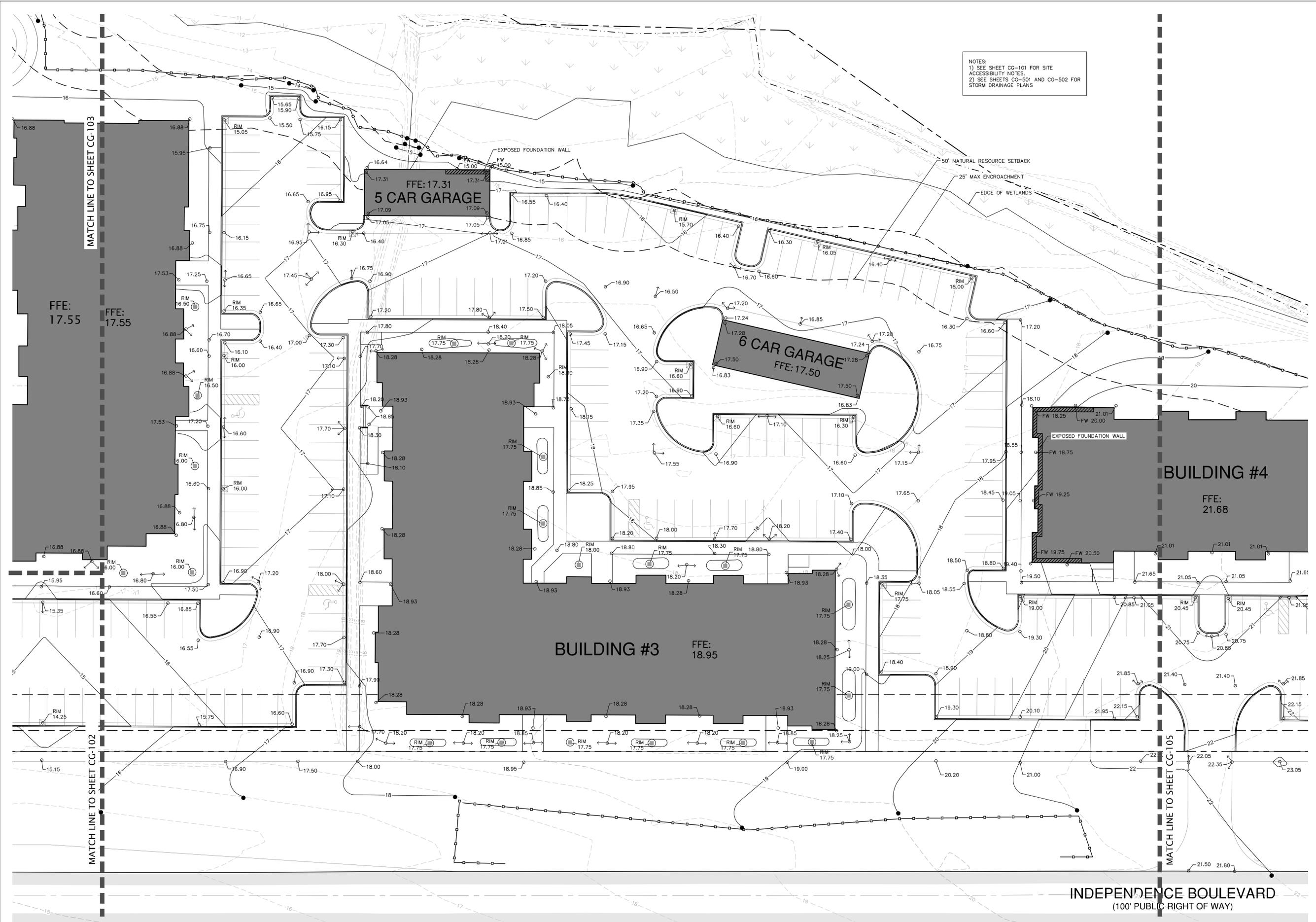
GRADING  
 PLAN



PROJECT #: 217-039  
 DRAWN BY: BMS  
 CHECKED BY: BS

NOVEMBER 16, 2016

REVISIONS:



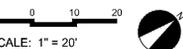


CONSTRUCTION  
 DOCUMENTS

**INDEPENDENCE WEST  
 APARTMENTS**

WILMINGTON, NORTH CAROLINA  
 WOODFIELD INVESTMENTS, LLC  
 11425 HORSEMAN'S TRAIL  
 RALEIGH, NC 27613

**GRADING  
 PLAN**



PROJECT #: 217-039  
 DRAWN BY: BMS  
 CHECKED BY: BS

NOVEMBER 16, 2016

REVISIONS:

NOTES:  
 1) SEE SHEET CG-101 FOR SITE ACCESSIBILITY NOTES.  
 2) SEE SHEETS CG-501 AND CG-502 FOR STORM DRAINAGE PLANS

**BUILDING #4**  
 FFE:  
 21.68

MATCH LINE TO SHEET CG-104







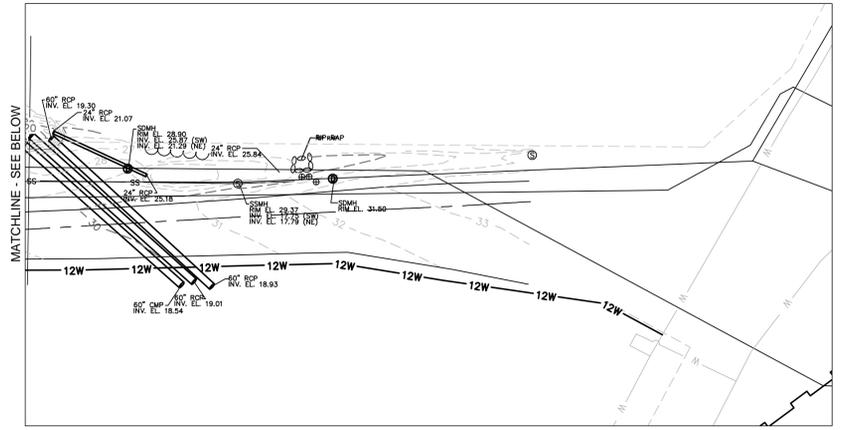
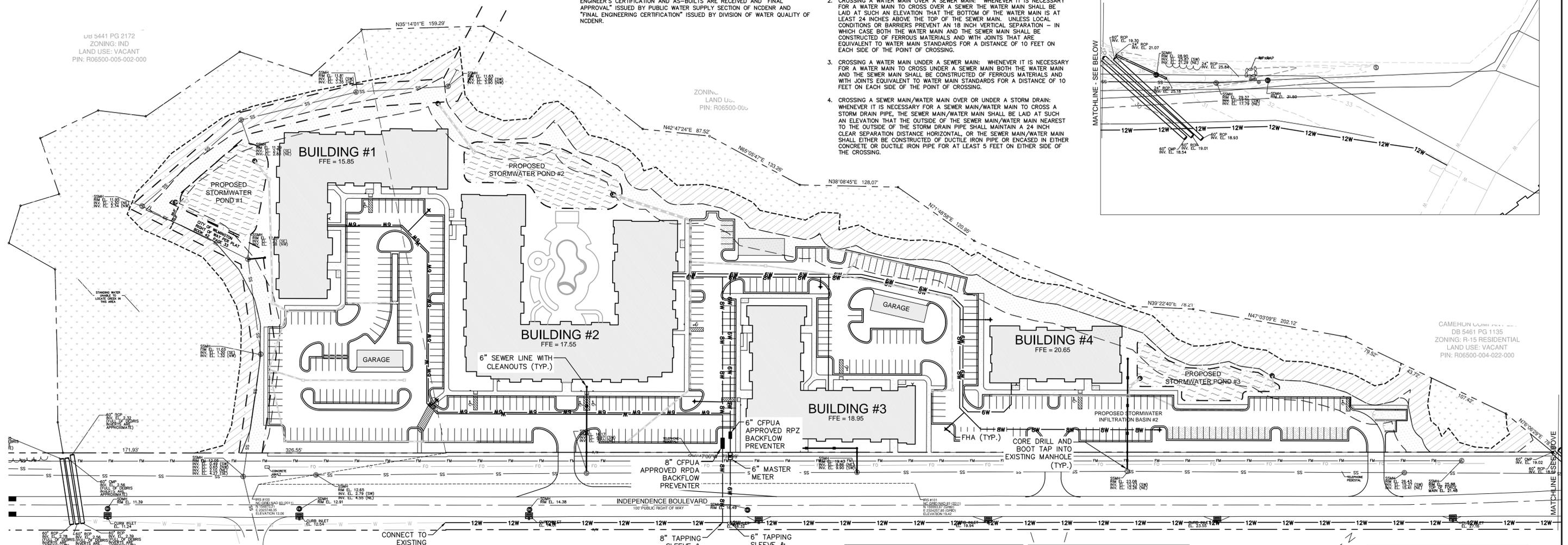
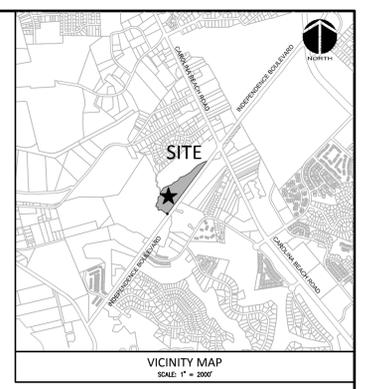
- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD SEWER NOTES**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
  - SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR,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

- UTILITY COMPANY CONTACTS**
- DUKE/PROGRESS ENERGY: SID LIVINGSTON/MARK HATFIELD (910) 452-2777  
 DUKE ENERGY (TRANSMISSION): BILL WILDER (910) 772-4903  
 AT&T (BELLSOUTH): JAMES BATSON (910) 452-5300  
 TIME WARNER CABLE: ROBERT JOHN (910) 216-4494  
 PIEDMONT NATURAL GAS: PAUL GONKA (910) 512-2841  
 DJ MEDEIROS (910) 431-3233  
 CAPE FEAR PUBLIC UTILITY AUTHORITY (910) 332-6550

- FIRE PROTECTION NOTES:**
- HYDRANT MUST BE WITHIN 150' OF THE FDC.
  - THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
  - LANDSCAPING OR PARKING CANNOT BLOCK OR IMPED THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
  - HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
  - COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERECTED ON SITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
  - NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
  - UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
  - A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES.
  - CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  - TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

- UTILITY NOTES**
- SCHEDULE A PRECONSTRUCTION MEETING WITH CAPE FEAR PUBLIC UTILITY AUTHORITY 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
  - WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
  - THIS PROJECT SHALL COMPLY WITH THE CFPWA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDENR HAS ISSUED THE "FINAL APPROVAL".
  - ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY CFPWA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO CFPWA AND APPROVED BY USGFCO/CHR OR ASSE.
  - BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPDA) AND DOMESTIC SERVICE (RPZ). FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT CFPWA PRIOR TO INSTALLING UNITS TO GIVE CFPWA THE OPTION TO VERIFY INSTALLATION PROCEDURES.
    - REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
    - REDUCE PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
  - IF THE CONTRACTOR DESIRES CFPWA 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.
  - WATER: 2.5" PVC SERVICES SHALL BE CONSTRUCTED USING ASTM D2241, IPS, GASKETED PIPE, SDR 21. 4"-12" PVC MAINS AND SERVICES SHALL BE CONSTRUCTED USING AWWA C-900 PVC, CL235 (DR-18).
  - SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2672. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3139.
  - WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDENR AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY OF NCDENR.

- PVC WATER MAINS AND POLYETHYLENE SERVICES ARE TO BE MARKED WITH NO. 10 SINGLE STRAND INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STRAPPED TO THE PIPES WITH DUCT TAPE. THE INSULATED WIRE IS TO BE STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
  - SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
  - MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 380' (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
  - UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
  - MINIMUM OF 36" COVERAGE ABOVE ALL WATERMAINS.
  - MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.
  - A VARIANCE IS NOT ANTICIPATED FROM ANY NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ) REQUIREMENT.
  - PLANS ARE IN COMPLIANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY TECHNICAL STANDARDS AND SPECIFICATIONS.
- RELATION OF WATER MAINS TO SANITARY SEWERS:**
- LATERAL SEPARATION OF SANITARY SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
    - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
    - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
  - CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 24 INCHES ABOVE THE TOP OF THE SEWER MAIN, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
  - CROSSING A WATER MAIN UNDER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
  - CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE HORIZONTAL, OR THE SEWER MAIN/WATER MAIN SHALL EITHER BE CONSTRUCTED OF DUCTILE IRON PIPE OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.



**ESTIMATED WATER & SANITARY DEMAND**

PROPOSED USE	PROPOSED FLOW (GPD)	REQUIREMENT	FLOW (GAL)
RESIDENTIAL - 129 UNITS	240 (1-BEDROOM)	240 GALLONS/DAY/UNIT	30,960
RESIDENTIAL - 103 UNITS	240 (2-BEDROOM)	240 GALLONS/DAY/UNIT	24,720
RESIDENTIAL - 22 UNITS	360 (3-BEDROOM)	360 GALLONS/DAY/UNIT	7,920
<b>TOTAL</b>			<b>63,600</b>

**EXISTING WATER & SANITARY DEMAND**

EXISTING USE	EXISTING FLOW (GPD)	REQUIREMENT	FLOW (GAL)
VACANT	0	0	0
<b>TOTAL</b>			<b>0</b>

**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	

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

**STORMWATER MANAGEMENT PLAN APPROVED**

CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

NOTE: STATE REGULATED WATER BODY SERVING THE WATERSHED: BARNARDS CREEK (C, Sw).

CALL NC ONE CALL BEFORE YOU DIG  
**STOP**  
 1-800-632-4949  
 AVOID UTILITY DAMAGE

PHONE # 1-800-632-4949

SCALE: 1"=60' (Horiz.)

REVNO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
 NOT FOR CONSTRUCTION



**MCKIM & CREED**

243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**WOODFIELD INVESTMENTS**

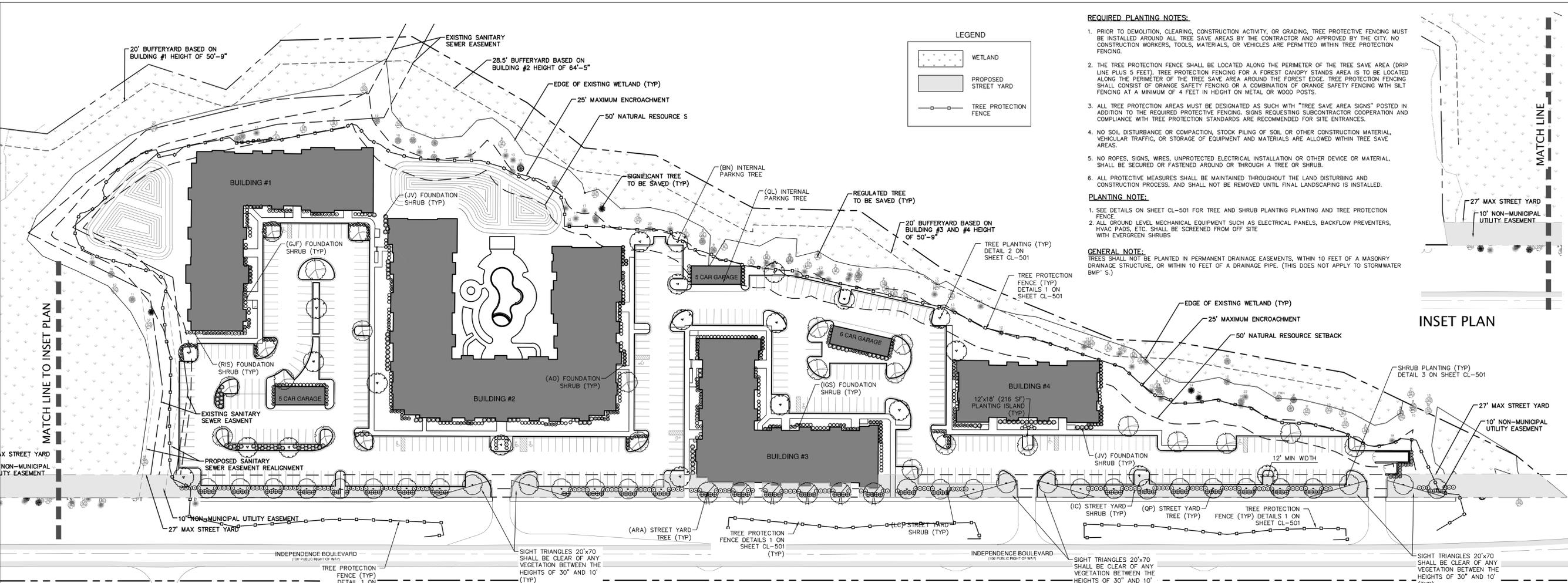
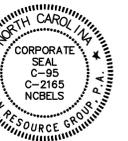
**WOODFIELD WILMINGTON APARTMENTS**  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

**OVERALL UTILITY PLAN**

DATE:	16 NOV 2016	SCALE:	HORIZONTAL:	1"=60'	VERTICAL:	N/A
MCE PROJ. #	07075-0002	SCALE	CURVED	20		
DRAWN	MAB					
DESIGNED	MAB/TCM					
CHECKED	RMC/TCM					
PROJ. MGR.	RMC					

STATUS: PRELIMINARY PLANS  
 NOT FOR CONSTRUCTION

REVISION: A



INSET PLAN

**REQUIRED PLANTING NOTES:**

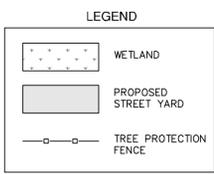
- PRIOR TO DEMOLITION, CLEARING, CONSTRUCTION ACTIVITY, OR GRADING, TREE PROTECTIVE FENCING MUST BE INSTALLED AROUND ALL TREE SAVE AREAS BY THE CONTRACTOR AND APPROVED BY THE CITY. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.
- THE TREE PROTECTION FENCE SHALL BE LOCATED ALONG THE PERIMETER OF THE TREE SAVE AREA (DRIP LINE PLUS 5 FEET). TREE PROTECTION FENCING FOR A FOREST CANOPY STANDS AREA IS TO BE LOCATED ALONG THE PERIMETER OF THE TREE SAVE AREA AROUND THE FOREST EDGE. TREE PROTECTION FENCING SHALL CONSIST OF ORANGE SAFETY FENCING OR A COMBINATION OF ORANGE SAFETY FENCING WITH SILT FENCING AT A MINIMUM OF 4 FEET IN HEIGHT ON METAL OR WOOD POSTS.
- ALL TREE PROTECTION AREAS MUST BE DESIGNATED AS SUCH WITH "TREE SAVE AREA SIGNS" POSTED IN ADDITION TO THE REQUIRED PROTECTIVE FENCING. SIGNS REQUESTING SUBCONTRACTOR COOPERATION AND COMPLIANCE WITH TREE PROTECTION STANDARDS ARE RECOMMENDED FOR SITE ENTRANCES.
- NO SOIL DISTURBANCE OR COMPACTION, STOCK PILING OF SOIL OR OTHER CONSTRUCTION MATERIAL, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT AND MATERIALS ARE ALLOWED WITHIN TREE SAVE AREAS.
- NO ROPES, SIGNS, WIRES, UNPROTECTED ELECTRICAL INSTALLATION OR OTHER DEVICE OR MATERIAL SHALL BE SECURED OR FASTENED AROUND OR THROUGH A TREE OR SHRUB.
- ALL PROTECTIVE MEASURES SHALL BE MAINTAINED THROUGHOUT THE LAND DISTURBING AND CONSTRUCTION PROCESS, AND SHALL NOT BE REMOVED UNTIL FINAL LANDSCAPING IS INSTALLED.

**PLANTING NOTE:**

- SEE DETAILS ON SHEET CL-501 FOR TREE AND SHRUB PLANTING AND TREE PROTECTION FENCE.
- ALL GROUND LEVEL MECHANICAL EQUIPMENT SUCH AS ELECTRICAL PANELS, BACKFLOW PREVENTERS, HVAC PADS, ETC. SHALL BE SCREENED FROM OFF SITE WITH EVERGREEN SHRUBS.

**GENERAL NOTE:**

TREES SHALL NOT BE PLANTED IN PERMANENT DRAINAGE EASEMENTS, WITHIN 10 FEET OF A MASONRY DRAINAGE STRUCTURE, OR WITHIN 10 FEET OF A DRAINAGE PIPE. (THIS DOES NOT APPLY TO STORMWATER BMP'S.)



**STREET YARD LANDSCAPING REQUIREMENTS (SEC. 18-477)**

REQUIRED:  
1939 LF STREET FRONTAGE (INDEPENDENCE BLVD)  
- 72 LF DRIVEWAYS (3 DRIVEWAYS @ 24' WIDTH)  
1867 LF  
x .18 (MULTIPLIER FOR MF ZONING)  
33,606 SF REQUIRED STREET YARD BUFFER

PROVIDED:  
11,900 SF TREE SAVE  
23,500 SF PLANTED STREET YARD  
35,400 SF TOTAL STREET YARD

REQUIRED: 1 SHADE TREE PER 600 SF = 39 CANOPY/SHADE TREES  
6 SHRUBS PER 600 SF = 235 SHRUBS

PROVIDED: 40 CANOPY/SHADE TREES  
239 SHRUBS

**INTERIOR PARKING LOT REQUIREMENTS (SEC. 18-481)**

THE INTERIOR AREA OF A PARKING FACILITY SHALL BE SHADED BY CANOPY TREES EITHER PLANTED OR RETAINED TO PROVIDE TWENTY (20) PERCENT OR GREATER COVERAGE AT MATURITY. NO PARKING SPACE SHALL BE MORE THAN 120 FEET FROM A PLANTING ISLAND OR PENINSULA. ALL ISLANDS SHALL BE 216 SF MINIMUM.

REQUIRED:  
149,726 SF IMPERVIOUS AREA  
x .20% REQUIRED SHADING  
29,945 SF REQUIRED PARKING LOT SHADING

1 INTERIOR CANOPY/SHADE TREE = 707 SF SHADE

PROVIDED:  
12 SHADE TREES (@ 100% SHADING) = 8,484 SF  
21 SHADE TREES (@ 75% SHADING) = 11,135 SF  
36 SHADE TREES (@ 50% SHADING) = 12,726 SF  
TOTAL SHADING = 32,345 SF

ALL LANDSCAPE ISLANDS SHALL BE PLANTED WITH BERMUDA GRASS.

**PERIMETER PARKING LOT REQUIREMENTS (SEC. 18-482)**

REQUIRED:  
A LANDSCAPE YARD OF TEN (10) FEET IN WIDTH SHALL BE REQUIRED ALONG ANY SIDE OF A PARKING LOT ABUTTING A SEPARATE PARKING LOT, DRIVEWAY, OR RESIDENTIALLY ZONED PROPERTY.

PROVIDED:  
PRESERVED WETLAND AND TREE SAVE AREAS TO MEET REQUIRED PERIMETER LANDSCAPE REQUIREMENTS

**FOUNDATION PLANTING REQUIREMENTS (SEC. 18-490)**

**BUILDING #1**  
REQUIRED:  
380 LF BUILDING FRONTAGE FACING PARKING LOT  
x .30 LF BUILDING HEIGHT  
11,400 SF BUILDING FRONTAGE FACING PARKING LOT  
x .12% MULTIPLIER  
1,368 SF REQUIRED FOUNDATION PLANTING

PROVIDED: 1,550 SF

**BUILDING #2**  
REQUIRED:  
701 LF BUILDING FRONTAGE FACING PARKING LOT  
x .40 LF BUILDING HEIGHT  
28,040 SF BUILDING FRONTAGE FACING PARKING LOT  
x .12% MULTIPLIER  
3,365 SF REQUIRED FOUNDATION PLANTING

PROVIDED: 3,483 SF

**BUILDING #3**  
REQUIRED:  
589 LF BUILDING FRONTAGE FACING PARKING LOT  
x .30 LF BUILDING HEIGHT  
17,670 SF BUILDING FRONTAGE FACING PARKING LOT  
x .12% MULTIPLIER  
2,120 SF REQUIRED FOUNDATION PLANTING

PROVIDED: 2,778 SF

**BUILDING #4**  
REQUIRED:  
311 LF BUILDING FRONTAGE FACING PARKING LOT  
x .30 LF BUILDING HEIGHT  
9,330 SF BUILDING FRONTAGE FACING PARKING LOT  
x .12% MULTIPLIER  
1,120 SF REQUIRED FOUNDATION PLANTING

PROVIDED: 1,854 SF

**BUFFER YARD REQUIREMENTS (SEC. 18-496)**

BUFFER YARD SHALL BE EQUAL TO 50% OF BUILDING SETBACK OR 20', WHICHEVER IS GREATER.

BUILDING #1 BUFFERYARD = 20' (35' SETBACK / 2 = 17.5 < 20)  
BUILDING #2 BUFFERYARD = 28.5' (57' SETBACK / 2 = 28.5 > 20)  
BUILDING #3 BUFFERYARD = 20' (35' SETBACK / 2 = 17.5 < 20)  
BUILDING #4 BUFFERYARD = 20' (35' SETBACK / 2 = 17.5 < 20)

REQUIRED: 1 SHADE / CANOPY TREE PER 30 LF OF SCREEN.  
SHRUBS SHALL BE PLANTED TO ACHIEVE 100% OPACITY TO A HEIGHT OF 6 FEET.

PROVIDED: PRESERVED WETLANDS AND TREE SAVE TO SATISFY BUFFER REQUIREMENTS

**GENERAL PLANTING REQUIREMENT (SEC. 18-448)**

15 TREES PER DISTURBED ACRE  
TOTAL DISTURBED AREA: 9.34 ACRES

REQUIRED:  
9.34 x (15 TREES PER ACRE) = 141 TREES (MIN 2" CAL.)

PROVIDED:  
77 PROPOSED CANOPY/SHADE TREES (2 1/2" CAL.)  
112 EXISTING REGULATED TREES  
11 EXISTING SIGNIFICANT TREES  
200 TOTAL TREES

**GENERAL NOTES:**

- MINIMUM TREE SIZE AT PLANTING IS 2 1/2-INCH CALIPER (FOR SINGLE STEM TREES). TREES MUST MEET ANSI STANDARDS AND HAVE SINGLE LEADER ALL THE WAY TO THE TOP. ALL MULTI-STEM PLANTS MUST BE TREE FORM, MINIMUM 8 FEET, AND HAVE A MAXIMUM OF 3 TO 5 TRUNKS.
- ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL, OR TILL AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 200 SQUARE FEET PER TREE FOR RENOVATED SITES).
- LARGE MATURING TREES MUST BE A MINIMUM 25 TO 30 FEET FROM THE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
- SITE LIGHTING MUST BE A MINIMUM THIRTY (30) FEET AWAY FROM A TREE. IF PEDESTRIAN SCALE LIGHTING IS BEING USED, THEN LIGHTING MUST BE A MINIMUM OF FIFTEEN (15) FEET AWAY FROM A TREE, UNLESS APPROVED OTHERWISE BY THE CITY. SHOW SITE LIGHTING PLAN. NO LIGHT POLES IN TREE ISLANDS.
- ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (GAS, WATER, PHONE, AND ELECTRICAL LINES.)
- UNLESS APPROVED BY URBAN FORESTRY STAFF ALL REQUIRED TREES MUST HAVE SINGLE STEM TRUNKS WITH NO CO-DOMINANT TRUNKS OR BRANCHES. TREE TRUNKS SHALL BE STRAIGHT IN FORM AND FREE OF DAMAGE OR CRACKS. PRUNING SHALL BE CALLED OVER. BRANCH LENGTH SHALL BE TYPICAL FOR THE TREES AGE AND NOT BE BROKEN, DISEASED, OR INJURED. ROOT FLARE SHALL BE LOCATED AT GRADE AND BE FREE OF ADVENTITIOUS ROOT GROWTH.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES, HEIGHT AND WIDTH SIZES SHALL BE MET REGARDLESS OF CONTAINER OR CONDITION SHOWN.
- ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM STANDARDS SET BY THE U.S.D.A. STANDARD FOR NURSERY STOCK SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERMEN, INC., WASHINGTON, D.C.
- CONTRACTOR TO REVIEW PLANT SELECTION WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION AND DURING PROPOSAL PREPARATION FOR QUALITY CONTROL AND VALUE ENGINEERING.
- LANDSCAPE CONTRACTOR SHALL VERIFY UTILITY AND STORM DRAINAGE LOCATION IN THE FIELD, PRIOR TO BEGINNING CONSTRUCTION.
- ANY CONFLICT BETWEEN TREES AND UTILITIES SHALL BE RESOLVED IN THE FIELD WITH FINAL TREE LOCATIONS APPROVED BY THE LANDSCAPE ARCHITECT AND THE PLANNING DEPARTMENT.
- PLEASE CALL THE CITY OF WILMINGTON URBAN FORESTER FOR AN INSPECTION OF TREE PROTECTION AND/ OR TREE PLANTING AREAS, 7 TO 10 DAYS BEFORE THE TEMPORARY OR FINAL CERTIFICATE OF OCCUPANCY IS NEEDED.
- ATTENTION CONTRACTOR/LANDSCAPER: IT IS THE RESPONSIBILITY OF THE CONTRACTOR/LANDSCAPER TO NOTIFY THE URBAN FORESTER OF ANY SITE CONFLICTS THAT AFFECT TREE SPECIES OR LOCATIONS PRIOR TO PLANTING TREES. CALL THE URBAN FORESTER NAMED ON THE APPROVED PLAN FOR ANY CONFLICTS REGARDING SIGN, OVERHEAD POWERLINES OR OTHER UTILITIES.
- VIOLATIONS OF TREE PROTECTION REQUIREMENTS ARE SUBJECT TO FINES AND/ OR IMMEDIATE CORRECTIVE ACTION/ MITIGATION.
- MULCH ALL PLANTING BEDS WITH 4" OF DOUBLE HAMMERED HARDWOOD MULCH.
- APPLY PRE-EMERGENT HERBICIDE TO PLANTING BEDS PRIOR TO MULCHING.
- SEED ALL DISTURBED AREAS EXCEPT PLANTING BEDS AS NOTED.
- ALL PLANT BEDS AND LAWN AREAS SHALL HAVE 2" - 4" TRENCH EDGE.

**TOPSOIL / PLANTING MIX REQUIREMENTS**

- EXISTING COMPACTED SOIL MUST BE REMOVED AND REPLACED WITH 24" OF TOPSOIL / PLANTING MIX - OR - EXISTING SOIL MAY BE UNCOMPACTED TO A DEPTH OF 24" AND AMENDED TO MEET TOPSOIL STANDARDS FOR THE ENTIRE PLANTING AREA.
- SOIL IN ALL PLANTING STRIPS OR ISLANDS, WHETHER EXISTING OR NEW (ON NEW OR RENOVATED SITES), MUST MEET THE MINIMUM TOPSOIL/PLANTING MIX SPECIFICATIONS. SOIL AMENDMENTS OR FRESH TOPSOIL / PLANTING MIX AREA OFTEN NEEDED FOR PLANTING AREAS AT SITES WHERE ORIGINAL TOPSOIL IS OF POOR QUALITY, HEAVILY COMPACTED OR WHERE TOPSOIL HAS BEEN COMPLETELY REMOVED DURING GRADING.
- TOPSOIL / PLANTING MIX SHOULD BE NATURAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING MOOROUS PLANT GROWTH. IT SHOULD BE UNIFORM COMPOSITION THROUGHOUT, WITH ADMIXTURE OF SUBSOIL. IT SHOULD BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS AND OTHER EXTRANEIOUS MATTER. TOPSOIL SHOULD NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
- TOPSOIL / PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF PH 5.5-7.0 AND THE FOLLOWING COMPOSITION:  
CLAY (RED CLAY, WELL PULVERIZED) MINIMUM 10%; MAXIMUM 35%  
COMPOST\* / ORGANIC MINIMUM 5%; MAXIMUM 10%  
SILT MINIMUM 30%; MAXIMUM 50%  
COARSE SAND (FREE OF ROCKS, 0.5 TO 1.0 MM F) MINIMUM 30%; MAXIMUM 45%  
\*ORGANIC MATERIAL SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPOSITION PROCESS

**MITIGATION TREE PLANTING REQUIREMENT (SEC. 18-462)**

SEE TREE PRESERVATION PLAN ON SHEET CL-101 FOR MITIGATION CALCULATIONS.

REQUIRED MITIGATION TREES:  
77 LONG-LEAF PINE PLUGS @ 10" SPACING  
59 HARDWOOD TREES, 2.5" CALIPER MINIMUM

PROVIDED MITIGATION TREES:

**REQUIRED TREE SCHEDULE**

KEY	Count	SCIENTIFIC NAME	COMMON NAME	CAL.	NOTE
ARA	6	ACER RUBRUM 'ARMSTRONG'	'ARMSTRONG' RED MAPLE	2.5" MIN	STREET TREE - INDEPENDENCE BOULEVARD
BN	22	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	2.5" MIN	INTERNAL PARKING LOT TREE - MULTI-STEMMED
QL	24	QUERCUS LAURIFOLIA	LAUREL OAK	2.5" MIN	INTERNAL PARKING LOT TREE
QP	30	QUERCUS PHELLOS	WILLOW OAK	2.5" MIN	STREET TREE - INDEPENDENCE BOULEVARD

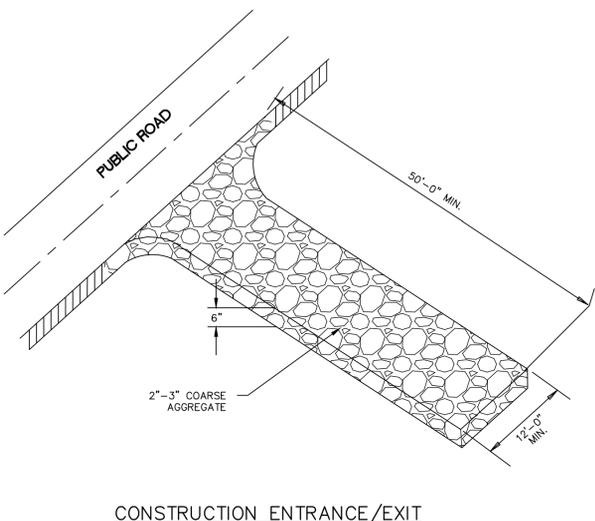
**REQUIRED SHRUB SCHEDULE**

KEY	Count	SCIENTIFIC NAME	COMMON NAME	HT.	SPD.	NOTE
AG	53	ABELIA X GRANDIFLORA 'EDWARD GOUCHER'	EDWARD GOUCHER ABELIA	24" MIN	24" MIN	PARKING LOT SHRUB
AO	77	AZALEA OBTUSUM	KURUME AZALEA	24" MIN	24" MIN	FOUNDATION SHRUB
GJF	154	GARDENIA JASMINOIDES 'FROSTPROOF'	FROSTPROOF GARDENIA	24" MIN	24" MIN	FOUNDATION SHRUB
IC	140	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	36" MIN	36" MIN	STREET YARD SHRUB
IGS	155	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	24" MIN	24" MIN	FOUNDATION SHRUB
IV	10	ILEX VOMITORIA 'NANA'	DWARF YAUPON HOLLY	24" MIN	24" MIN	PARKING LOT SHRUB
JCH	16	JUNIPERUS CHINENSIS 'HETZ'	HETZ CHINESE JUNIPER	48" MIN	24" MIN	TRASH COLLECTION SCREENING SHRUB
JV	114	JUNIPERUS VIRGINIANA 'GREY OWL'	GREY OWL JUNIPER	24" MIN	24" MIN	FOUNDATION & PARKING LOT SHRUB
LC	109	LOROPETALUM CHINENSIS 'PURPLE DIAMOND'	PURPLE DIAMOND LAUROPETALUM	36" MIN	36" MIN	STREET YARD SHRUB
RIS	46	RAPHIOLEPIS INDICA 'SNOW WHITE'	SNOW WHITE INDIAN HAWTHORNE	24" MIN	24" MIN	FOUNDATION SHRUB

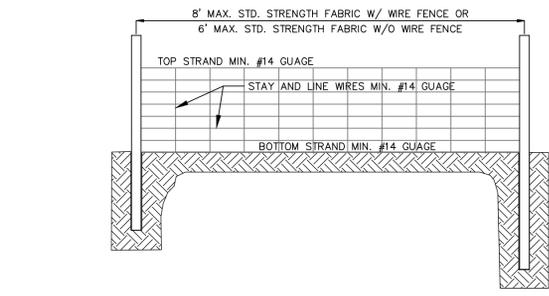
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

Approved Construction Plan		
Name	Date	
Planning		
Traffic		
Fire		



**CONSTRUCTION ENTRANCE/EXIT**  
SD 13-03  
NOT TO SCALE

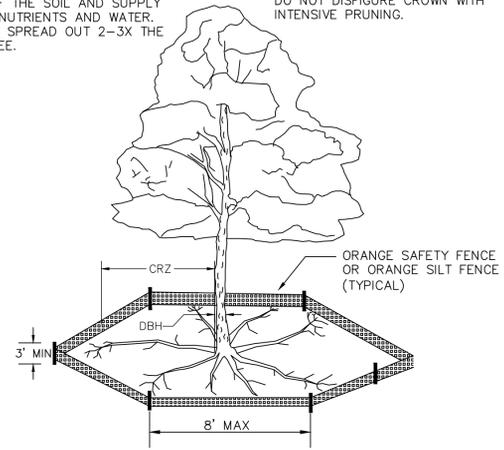


- NOTES:**
1. WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
  2. SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYPROPYLENE OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD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

**TEMPORARY SILT FENCE**  
NOT TO SCALE

SILT FENCE	DRAINAGE AREA		LENGTH (LF)	AC per 100 LF	1/4-AC per 100 LF "yes" or no"
	SF	AC			
SF 1	14810	0.34	480	0.07	yes
SF 2	11326	0.26	215	0.12	yes
SF 3	13504	0.31	550	0.06	yes
SF 4	29185	0.67	680	0.10	yes
SF 5	19602	0.45	360	0.13	yes
SF 6	7841	0.18	205	0.09	yes
SF 7	17424	0.40	580	0.07	yes
SF 8	15682	0.36	325	0.11	yes
SF 9	2614	0.06	110	0.05	yes
SF 10	7405	0.17	205	0.08	yes

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



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

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

**METHOD OF TREE PROTECTION DURING CONSTRUCTION**  
SD 15-09  
NOT TO SCALE

**SEEDBED PREPARATION:**

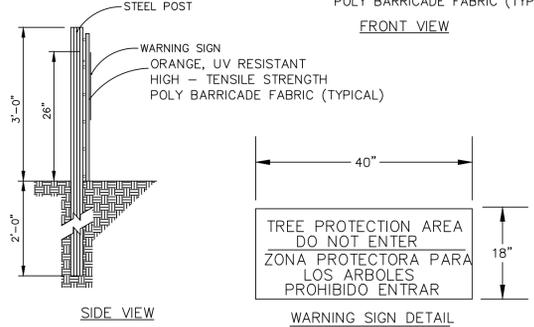
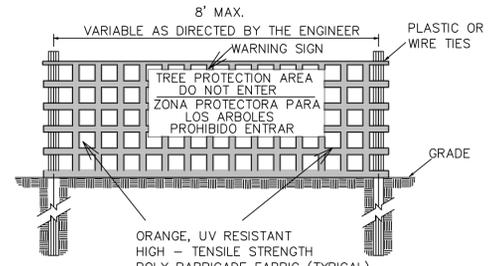
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE 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.
8. INSPECT ALL SEEDED 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.
10. APPLY:  
AGRICULTURAL LIMESTONE - 2 TONS/ACRE  
FERTILIZER - 1000 LBS/ACRE (10-10-10)  
SUPERPHOSPHATE - 500 LBS/ACRE (20%)  
MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)  
ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE

**TREE PROTECTION NOTES:**

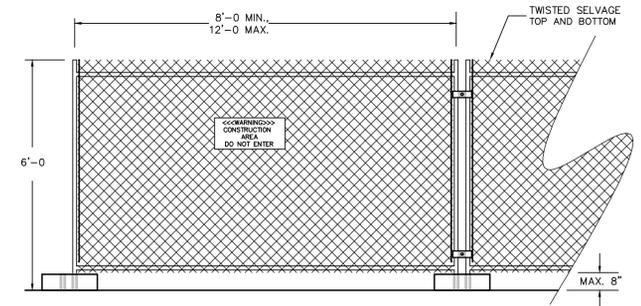
1. NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. [18-457(b)]
2. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. [18-458]
3. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS. [18-457(d)]
4. ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS. [18-458]
5. NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. [18-458]
6. REGULATED AND SIGNIFICANT TREES IN THE STREET YARD [18-456(c)] AND ANY TREES IN ANY REQUIRED BUFFERS [18-456(b)] ARE REQUIRED TO BE RETAINED.

TEMPORARY SEEDING				
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL	
RYE GRAIN	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10	
BROWNTOP MILLET	1-2 LBS	JUNE - AUGUST	25 LBS 10-10-10	

PERMANENT SEEDING				
GRASS TYPE	AMOUNT/1000 S.F.	TIME OF SEEDING	INITIAL	
BERMUDA, COMMON	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10	
FESCUE, TALL (KENTUCKY 31)	5-7 LBS	JUNE - AUGUST FEB. - OCT.	25 LBS 10-10-10	
SERICEA LESPEDEZA (SLOPES)	1-2 LBS	MARCH - APRIL	25 LBS 10-10-10	



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



- NOTES:**
1. CHAIN LINK FABRIC TO BE MIN. 11 GAUGE, GALVANIZED. NO RUSTED OR EXCESSIVELY MALFORMED FABRIC.
  2. FENCE BASES SHALL BE OF SUFFICIENT WEIGHT and/or SPREAD TO ADEQUATELY SUPPORT EACH PANEL.
  3. PANEL-TO-PANEL CONNECTIONS SHALL BE MADE AT A MIN. TWO LOCATIONS PER CONNECTION UNLESS OTHERWISE APPROVED.
  4. PROVIDE CONSTRUCTION WARNING SIGNAGE 50' O.C. ALONG FENCING INSTALLATION.

**TEMPORARY CONSTRUCTION FENCING**  
NOT TO SCALE

REV.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16
	REVISIONS	

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



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**WOODFIELD INVESTMENTS**

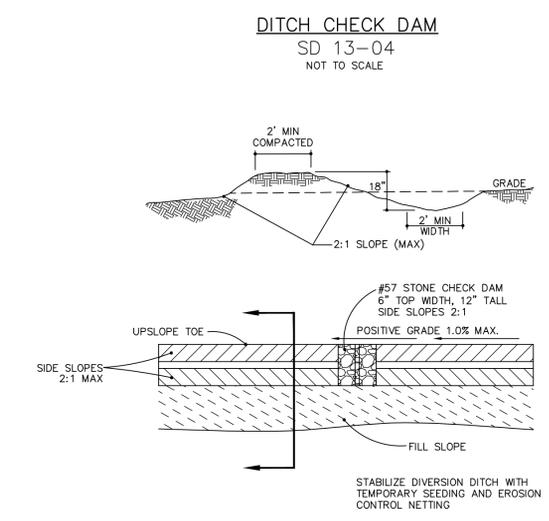
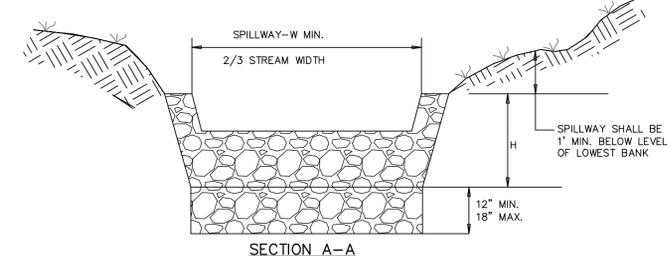
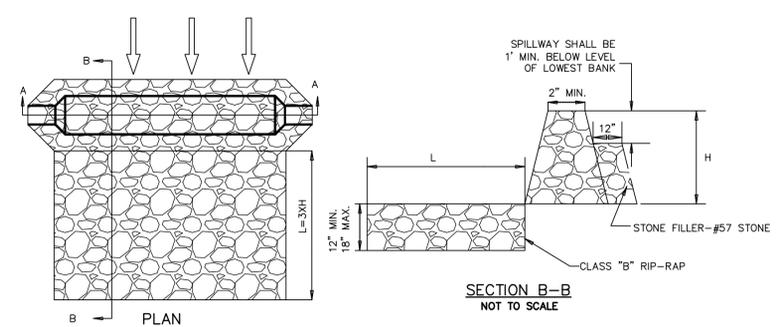
**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**SEDIMENT & EROSION CONTROL DETAILS**

DATE: 16 NOV 2016	SCALE: 1"=60'	FILE NUMBER: CE-501
MCE PROJ. # 07075-0002	HORIZONTAL: 1"=60'	DRAWING NUMBER: 22
DRAWN: MAB	VERTICAL: N/A	
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR. RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION: A	

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

**Approved Construction Plan**  
Name \_\_\_\_\_ Date \_\_\_\_\_  
Planning \_\_\_\_\_  
Traffic \_\_\_\_\_  
Fire \_\_\_\_\_

1 inch



**TEMPORARY DIVERSION DITCH**  
NOT TO SCALE

**TEMPORARY DIVERSION DITCH CALCULATION TABLE**

TDD NUMBER	DA (AC)	Q10 (CFS)	LENGTH (FT)	HIGH (FT)	LOW (FT)	ELEVATION DIFF. (FT)	SLOPE (%)	INITIAL LINING	MANNING n	VELOCITY (FPS)	COMMENT
TDD1	1.75	3.8	260	19.00	16.00	3.00	1.15	BARE EARTH	0.020	4.77	LINING REQ
TDD2	0.82	1.8	140	17.00	14.00	3.00	2.14	BARE EARTH	0.020	6.42	LINING REQ
TDD3	1.30	2.8	305	16.00	14.00	2.00	0.66	BARE EARTH	0.020	2.06	LINING REQ

TDD NUMBER	SECONDARY LINING	MANNING n	VELOCITY (FPS)	COMMENT	DEPTH in	MIN. DEPTH in	CHECK DAM SPACING (FT)	NUMBER REQUIRED	NUMBER PROVIDED
TDD1	EXCELSIOR	0.035	4.86	EXCELSIOR OK	4.4	18	173	2	2
TDD2	EXCELSIOR	0.035	6.42	NEW LINING REQ	2.2	18	93	2	2
TDD3	EXCELSIOR	0.035	1.40	EXCELSIOR OK	8.0	18	305	1	1

- Notes:
- Q10 taken from Rational Method.
  - Manning n value for bare earth = 0.020 per NC ESC Manual Table 8.05f
  - Manning n value for excelsior (curled wood) matting = 0.035 per NC ESC Manual Table 8.05f
  - Tractive Force (Shear Stress) was also evaluated and found to be sufficient for the proposed lining.

**SKIMMER BASIN CALCULATION TABLE (PHASE I)**

Skimmer No.	Drainage Area ac	Rational C	I10 Intensity in/hr	Q10 Peak Flow cfs	Required SA (325 x Q10) sf	Provided SA sf	Required Vol (1800 cft/ac x DA) cf	Provided Vol cf	Storage Depth ft	Storage Vol Drained cf	Weir Width ft
SB-2	3.98	0.30	7.23	8.63	2,806	6,804	7,164	16,281	3.00	16,038	8.0
SB-3	2.13	0.30	7.23	4.62	1,501	4,100	3,834	9,222	3.00	8,979	8.0

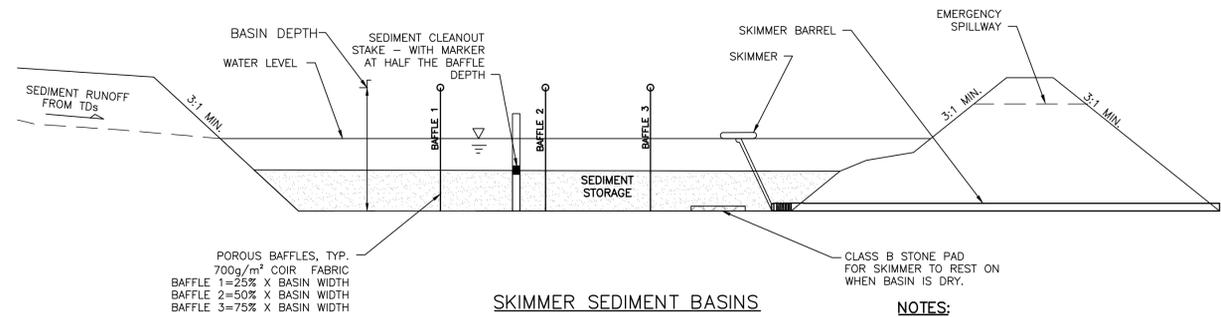
**FAIRCLOTH SKIMMER SIZE CALCULATION**

Skimmer No.	Dewatering Time (days)	Skimmer Outflow cf/day	Skimmer Size in	Orifice Diameter in	Orifice Radius in	Barrel Outflow gpm	Barrel Pipe in
SB-2	3	5,346	2.5	2.3	1.2	27.8	3.0
SB-3	3	2,993	2.0	1.9	0.9	15.5	3.0

**Faircloth Skimmer Selection Table**

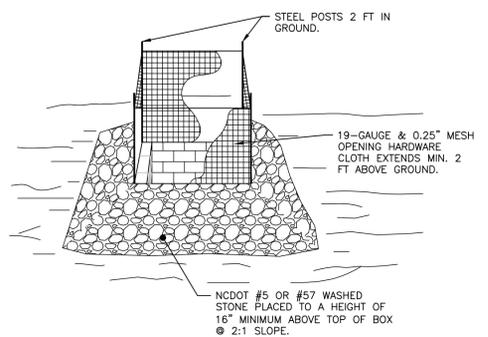
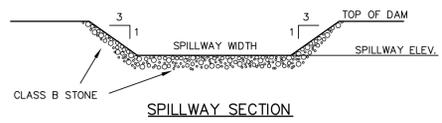
Skimmer Size in	Outflow Qmax cf/day	Head ft
1.5	1,728	0.125
2	3,283	0.167
2.5	6,234	0.208
3	9,774	0.250
4	20,109	0.333

- NOTES:
- Q10 Peak Flow were taken from Rational Method.
  - Required Surface Areas and Volumes were taken from NCDENR ESC Manual.
  - Faircloth Skimmer Selection Table taken from Table 4-2. NCDOT Level III-A Design of Sediment & Erosion Control Plans Manual
  - Emergency Weir Width taken from Skimmer Basin Criteria Section of NCDENR ESC Manual Table and/or Hydraulic Routing of the basin to ensure non-erosive velocity.
  - Minimum Barrel Pipe on the Skimmer is 4-inches. (On a 1% slope the capacity is 100 GPM)
  - Skimmer Orifice Diameter / Radius were obtained using the Faircloth Skimmer sizing spreadsheet (obtained from their website: <http://www.fairclothskimmer.com/skimmer-sizing>)



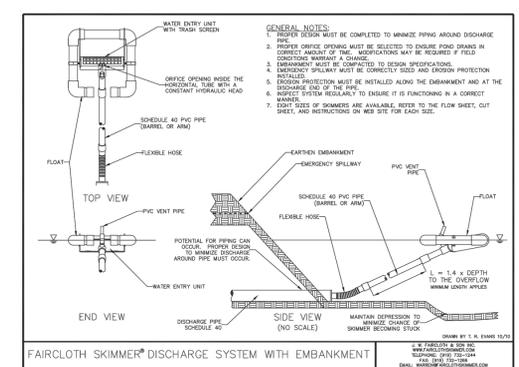
**SKIMMER SEDIMENT BASINS**

- NOTES:
- BAFFLE MATERIAL SHALL BE MATERIALS SUCH AS 700 G/M COIR EROSION BLANKET OR COIR MESH
  - THE BAFFLE MATERIAL NEEDS TO BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
  - LOCATE THE EMERGENCY SPILLWAY ON NATURAL SOILS. AVOID PLACING IT THROUGH FILL MATERIAL WHEREVER POSSIBLE.
  - ALL RUNOFF MUST DISCHARGE TO THE INLET SIDE OF THE BASIN. DISCHARGE RUNOFF INTO THE BASIN IN A MANNER THAT MINIMIZES EROSION.



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

**TEMP. STORM DRAIN INLET PROTECTION**  
NOT TO SCALE



**SKIMMER DETAIL WITH EMBANKMENT**  
NOT TO SCALE

REV. NO.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

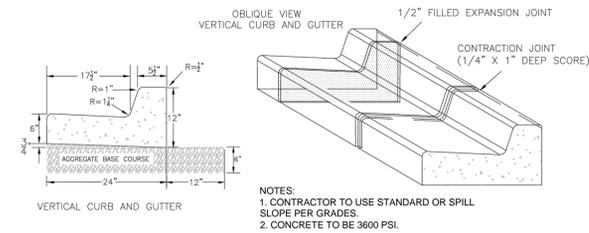
SEAL  
TAMARA C. MURPHY  
ENGINEER  
11/16/16

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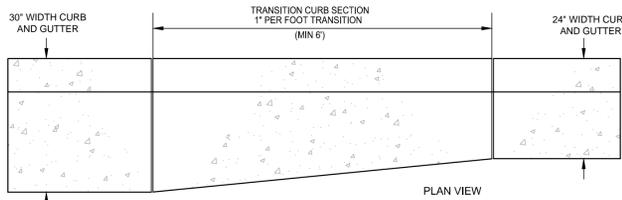
**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**SEDIMENT & EROSION CONTROL DETAILS**

DATE: 16 NOV 2016	SCALE: HORIZONTAL: 1"=60'	FILE NUMBER: CE-502
MCE PROJ. #: 07075-0002	VERTICAL: N/A	DRAWING NUMBER: 23
DRAWN: MAB	DESIGNED: MAB/TCM	CHECKED: RMC/TCM
PROJ. MGR: RMC	STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION: A

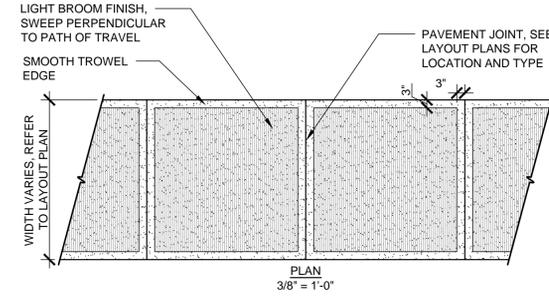


**11** STANDARD 24" VERTICAL CURB & GUTTER  
CS501 NOT TO SCALE (COW SD 3-11)

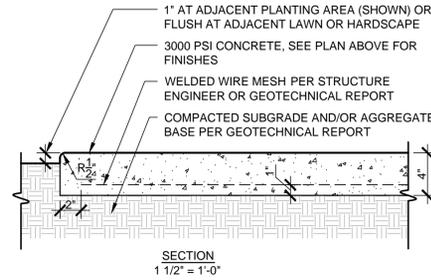


**10** TRANSITION CURB DETAILS  
CS501 NOT TO SCALE

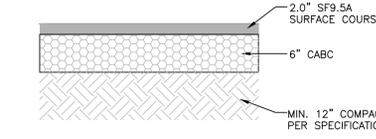
- NOTES:**
1. ALL WALKWAYS SHALL MEET GOVERNING MUNICIPALITIES REQUIREMENTS.
  2. SUBGRADE SHALL NOT CONTAIN ANY ORGANIC MATTER.
  3. REFER TO LAYOUT PLAN FOR PAVEMENT JOINT TYPES AND LOCATIONS
  4. PER ADA REQUIREMENTS: MAXIMUM CROSS SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48, MAXIMUM RUNNING SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:20, WALKING SURFACES ALONG AN ACCESSIBLE ROUTE STEEPER THAN 1:20 REQUIRE RAMP RUNS WITH A RISE GREATER THAN 6" SHALL HAVE HANDRAILS, RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12, MAXIMUM RISE PER RAMP IS 30", LANDINGS MUST BE PROVIDED WHERE NECESSARY. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.



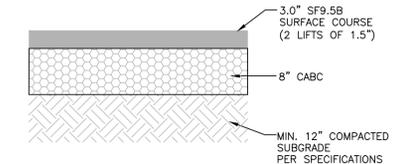
**7** INTERNAL CONCRETE SIDEWALK  
CS501 NOT TO SCALE



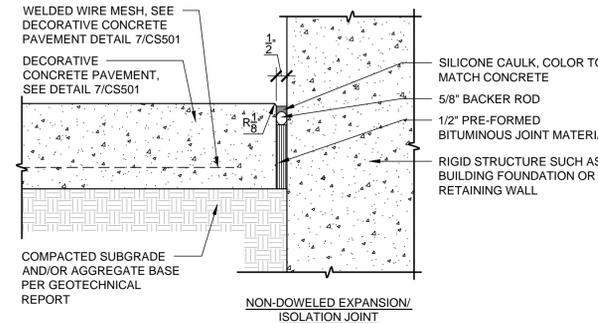
**4** NCDOT TURN LANE PAVEMENT  
CS501 NOT TO SCALE



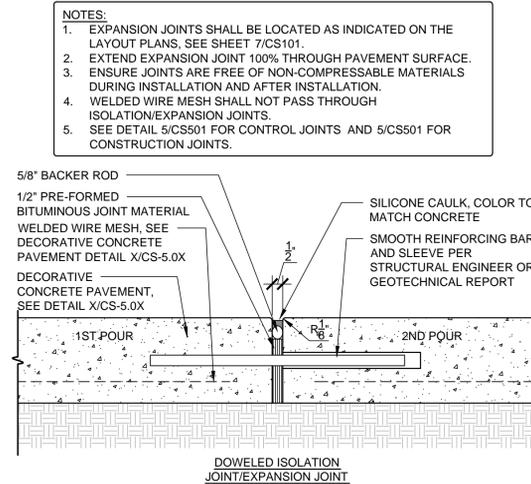
**3** PARKING AREA PAVEMENT SECTION  
CS501 NOT TO SCALE



**2** STREET 'A' PAVEMENT SECTION (RW)  
CS501 NOT TO SCALE

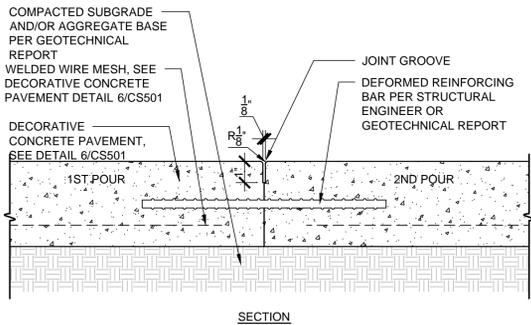


**6** INTERNAL CONCRETE SIDEWALK EXPANSION/ISOLATION JOINTS  
CS501 NOT TO SCALE (COW SD 8-15)

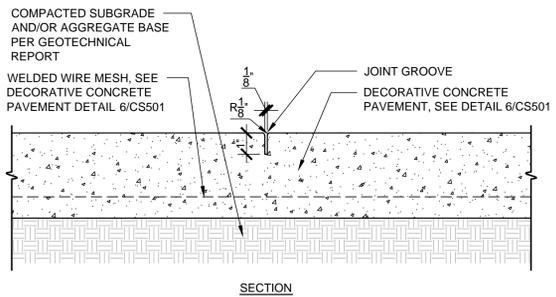


- NOTES:**
1. EXPANSION JOINTS SHALL BE LOCATED AS INDICATED ON THE LAYOUT PLANS. SEE SHEET 7/CS101.
  2. EXTEND EXPANSION JOINT 100% THROUGH PAVEMENT SURFACE.
  3. ENSURE JOINTS ARE FREE OF NON-COMPRESSIBLE MATERIALS DURING INSTALLATION AND AFTER INSTALLATION.
  4. WELDED WIRE MESH SHALL NOT PASS THROUGH ISOLATION/EXPANSION JOINTS.
  5. SEE DETAIL 5/CS501 FOR CONTROL JOINTS AND 5/CS501 FOR CONSTRUCTION JOINTS.

- NOTES:**
1. CONSTRUCTION JOINTS AS NEEDED AT CONTROL JOINT LOCATIONS AS INDICATED ON THE LAYOUT PLAN, SEE SHEET 7/CS101.
  2. EXTEND JOINT GROOVE 1" BELOW FINISH GRADE OR 25% OF PAVEMENT THICKNESS WHICHEVER IS GREATER
  3. SEE DETAIL 6/CS501 FOR EXPANSION/ISOLATION JOINTS AND 6/CS501 FOR CONTROL JOINTS.



**8** PARKING TO CONCRETE TO BUILDING TRANSITION SECTION  
CS501 NOT TO SCALE



**1** HANDICAP CURB ACCESS DETAILS  
CS501 NOT TO SCALE

1 inch

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

Approved Construction Plan

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

Planning \_\_\_\_\_

Traffic \_\_\_\_\_

Fire \_\_\_\_\_

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
CITY OF WILMINGTON  
ENGINEERING DEPARTMENT  
DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
SIGNED \_\_\_\_\_

REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



**MCKIM & CREED**

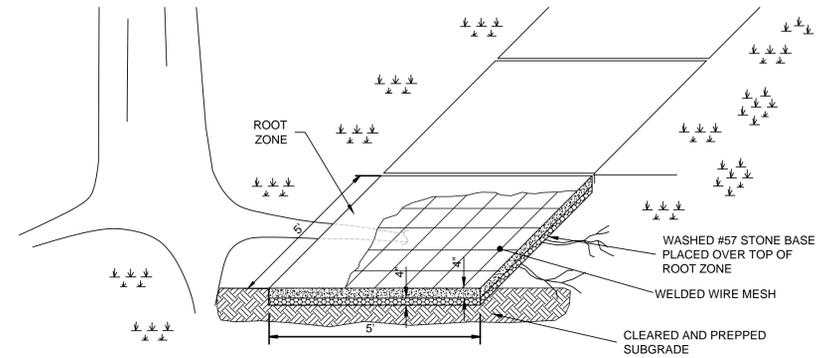
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**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA

**SITE DETAILS**

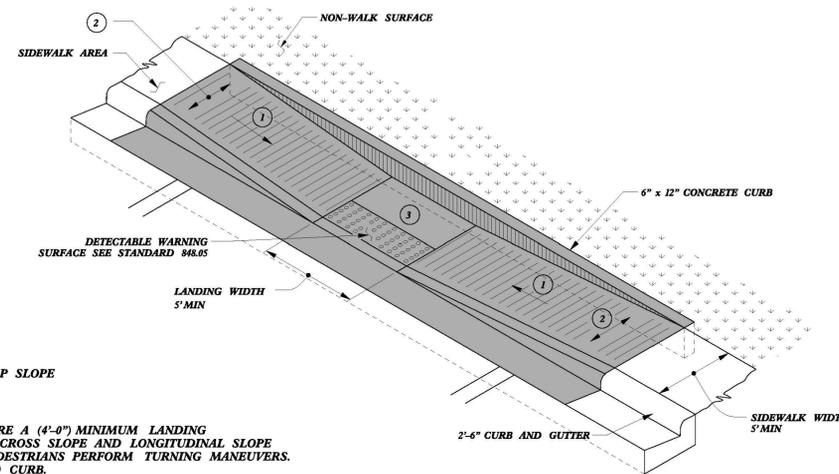
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MCE PROJ. #: 07075-0002	DRAWN: MAB	DRAWING NUMBER: 24
DESIGNED: MAB/TCM	CHECKED: RMC/TCM	
PROJ. MGR.: RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION		
REVISION: A		



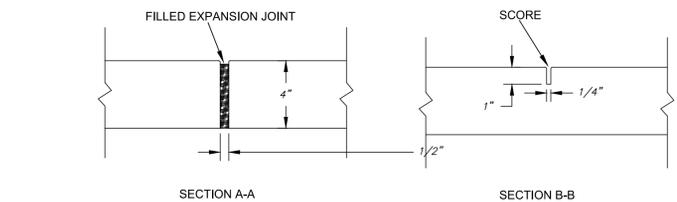
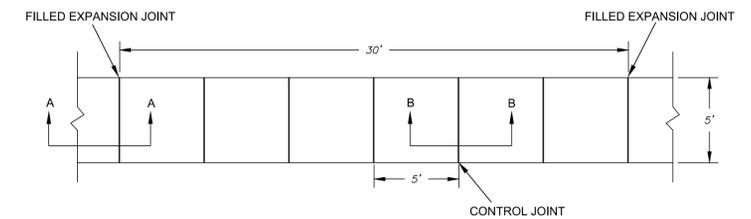
NOTES:  
 1-REINFORCED SIDEWALK LOCATED BY ENGINEER.  
 2-ALL OTHER CITY OF WILMINGTON STANDARD SIDEWALK DETAILS APPLY.  
 3-WELDED WIRE MESH SHALL BE 6x6 W 4.0/4.0 AND FREE OF OIL, DIRT AND DEFECTS AND PROTECTED FROM DAMAGE. WIRE SPLICES SHALL OVERLAP 12 INCHES AND BE TIED TOGETHER AND SUPPORTED IN POSITION.

8 NOT USED  
 CS502 NOT TO SCALE

2 C.O.W. REINFORCED SIDEWALK (SD 3-100)  
 CS502 NOT TO SCALE



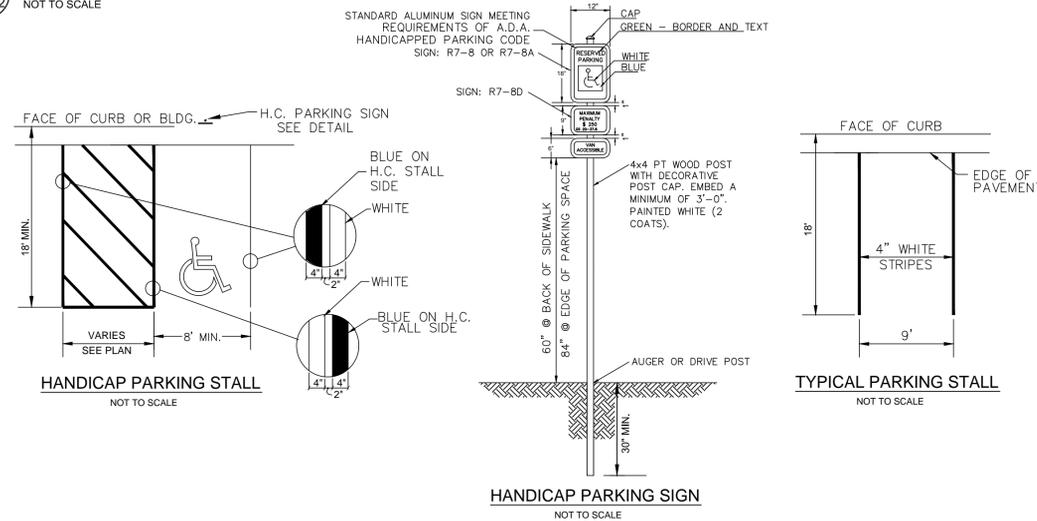
- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMP REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



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

7 NOT USED  
 CS502 NOT TO SCALE

4 NCDOT PARALLEL CURB RAMP TYPE 2  
 CS502 NOT TO SCALE



6 NOT USED  
 CS502 NOT TO SCALE

1 C.O.W. SIDEWALK (SD 3-10)  
 CS502 NOT TO SCALE

7 NOT USED  
 CS502 NOT TO SCALE

3 PARKING STRIPING & HANDICAP DETAILS  
 CS502 NOT TO SCALE

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

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_

STORMWATER MANAGEMENT PLAN  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

REV. NO.	DESCRIPTIONS / REVISIONS	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITTAL	11/16/16

PRELIMINARY PLAN  
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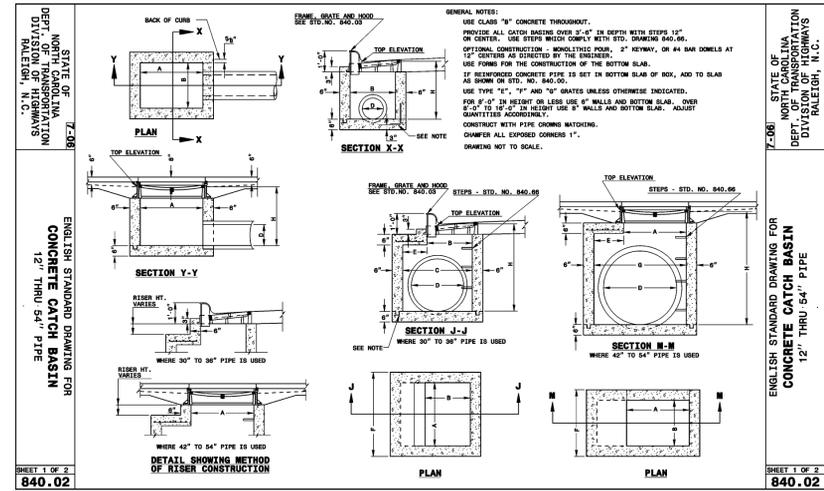
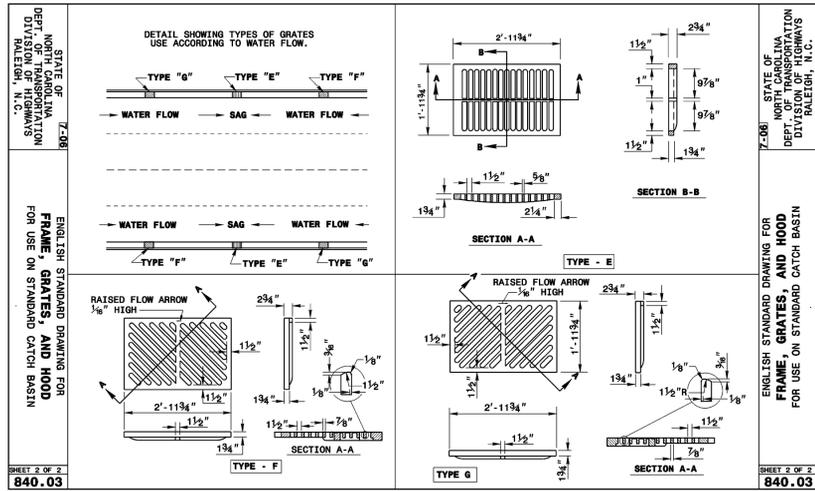
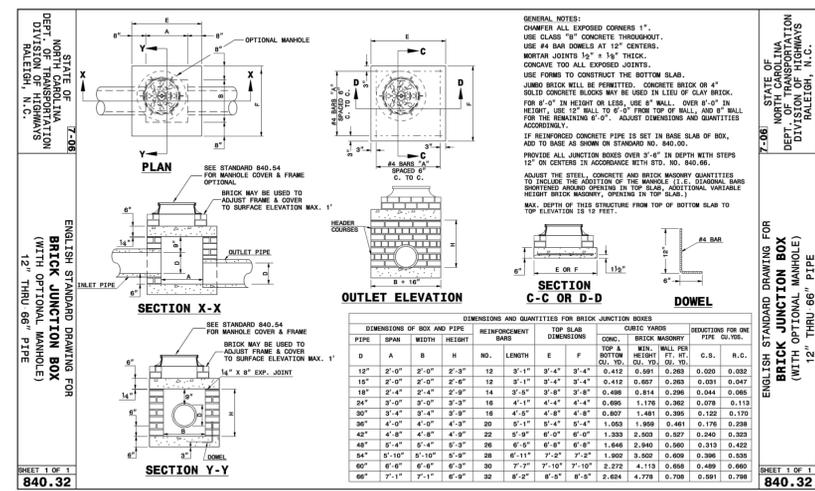
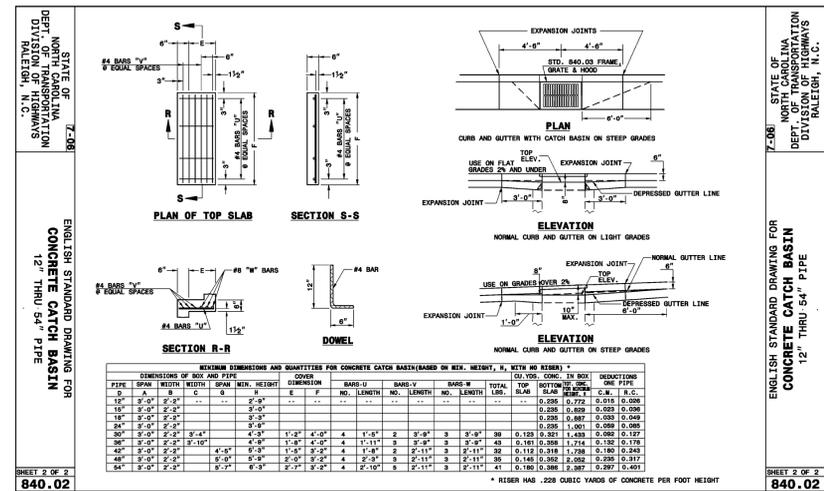
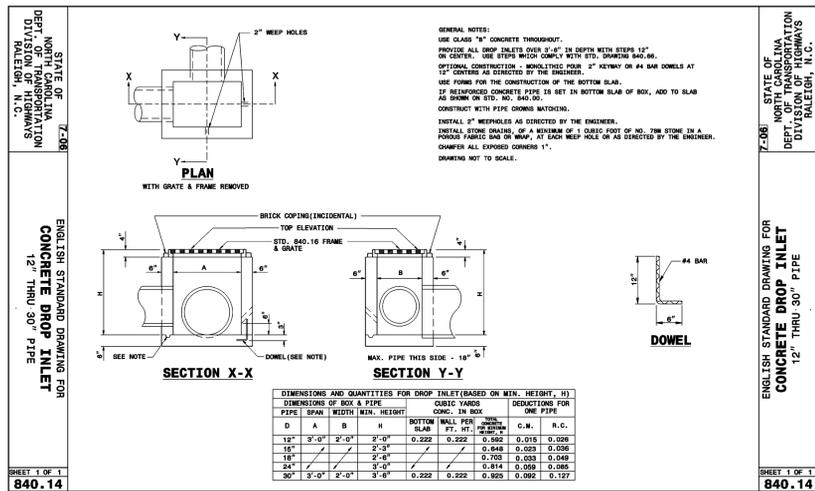
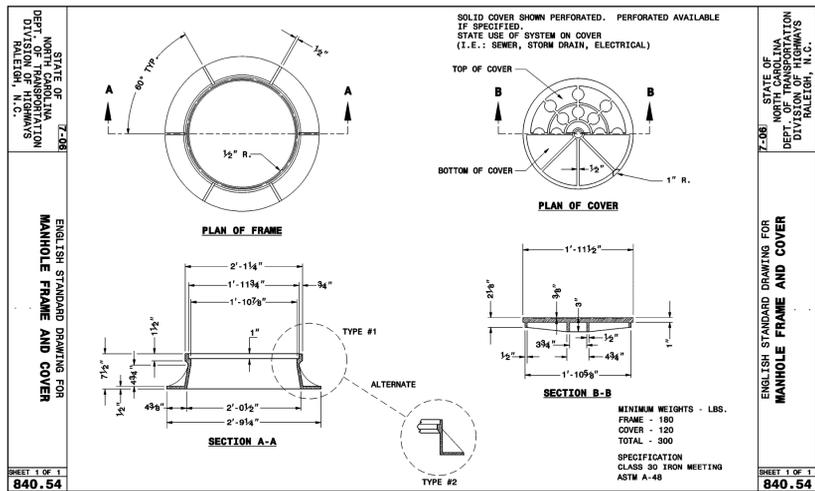
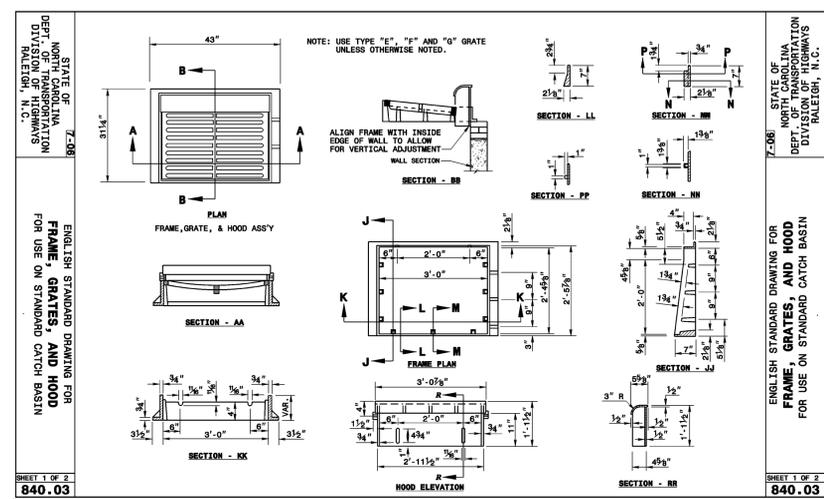
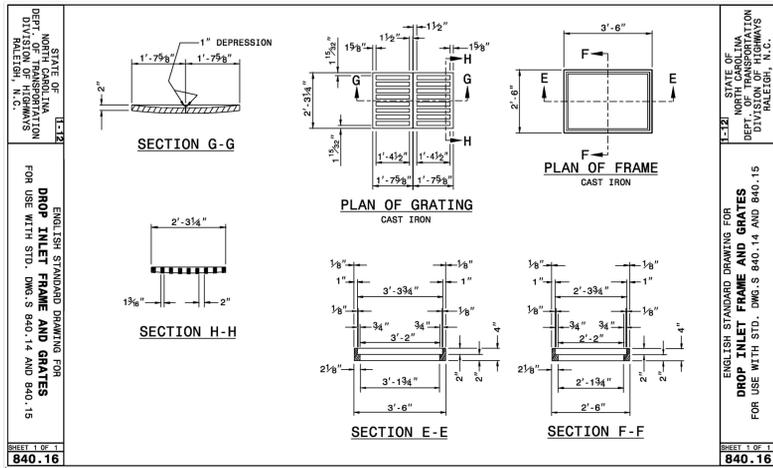
**SITE DETAILS**

DATE: 16 NOV 2016	SCALE: N/A	M&C FILE NUMBER: CS-502
M&C PROJ. #: 07075-0002	HORIZONTAL: N/A	DRAWING NUMBER: 25
DRAWN: MAB	VERTICAL: N/A	
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR.: RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION: A	

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

**STORMWATER MANAGEMENT PLAN**  
**APPROVED**  
 CITY OF WILMINGTON  
 ENGINEERING DEPARTMENT  
 DATE \_\_\_\_\_ PERMIT # \_\_\_\_\_  
 SIGNED \_\_\_\_\_

Approved Construction Plan  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Planning \_\_\_\_\_  
 Traffic \_\_\_\_\_  
 Fire \_\_\_\_\_



REV. NO.	DESCRIPTION	DATE



**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

DATE: 16 NOV 2016  
 MCE PROJ. #: 07075-0002  
 DRAWN: MAB  
 DESIGNED: MAB/TCM  
 CHECKED: RMC/TCM  
 PROJ. MGR: RMC

SCALE: HORIZONTAL: CG-501  
 VERTICAL: 26

STATUS: PRELIMINARY PLANS  
 NOT FOR CONSTRUCTION

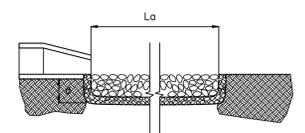
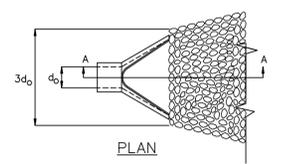
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For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

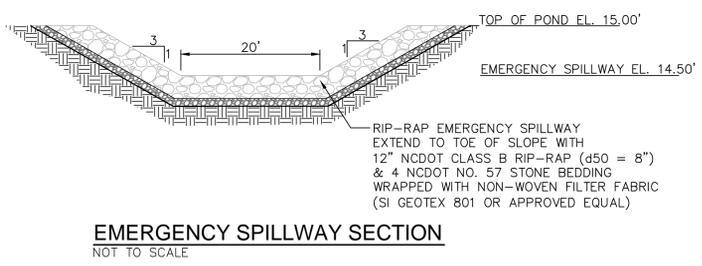
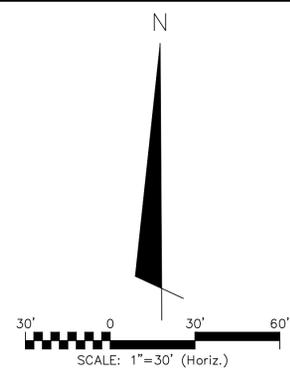
Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	

- NOTES:
1.  $L_o$  IS THE LENGTH OF THE RIPRAP APRON.
  2.  $d = 1.5$  TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
  3. IN A WELL - DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
  4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

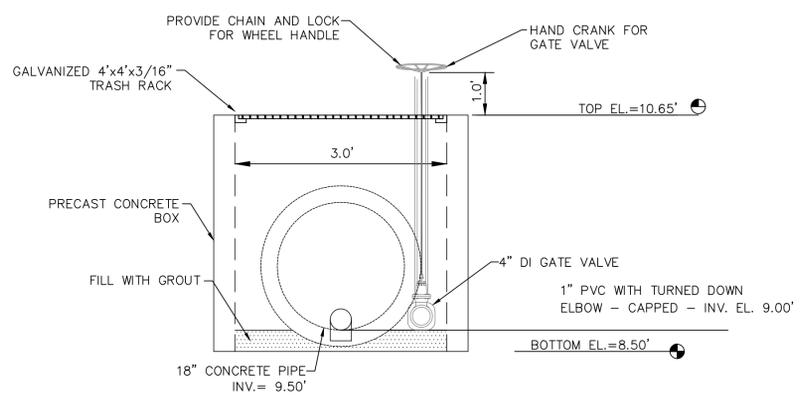


OUTLET PROTECTION	
OUTLET PIPE DIA.	18"
OUTLET FLOW RATE	6.49 CFS
OUTLET VELOCITY	13.03 FT/S
MATERIAL	CLASS 1
LENGTH	12'
WIDTH	4.5'
STONE DIA.	13"
THICKNESS	22"

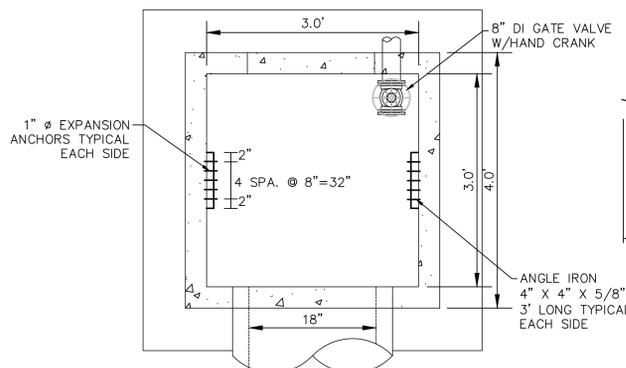
PIPE OUTLET PROTECTION  
NOT TO SCALE



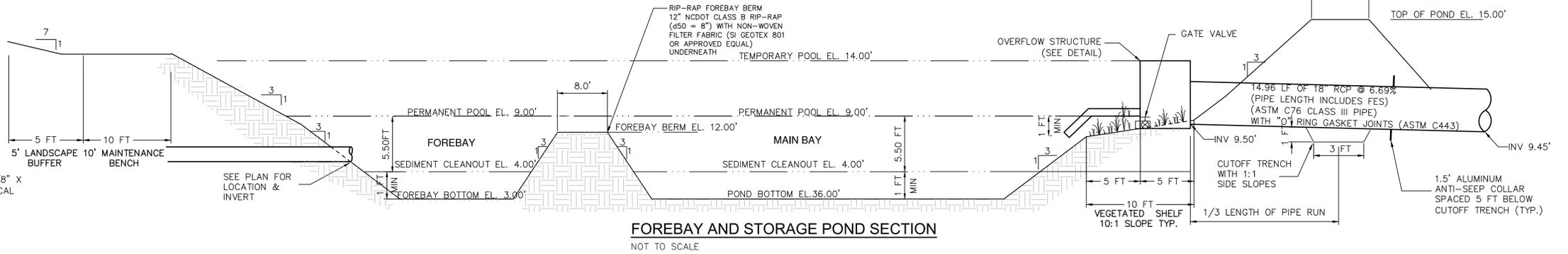
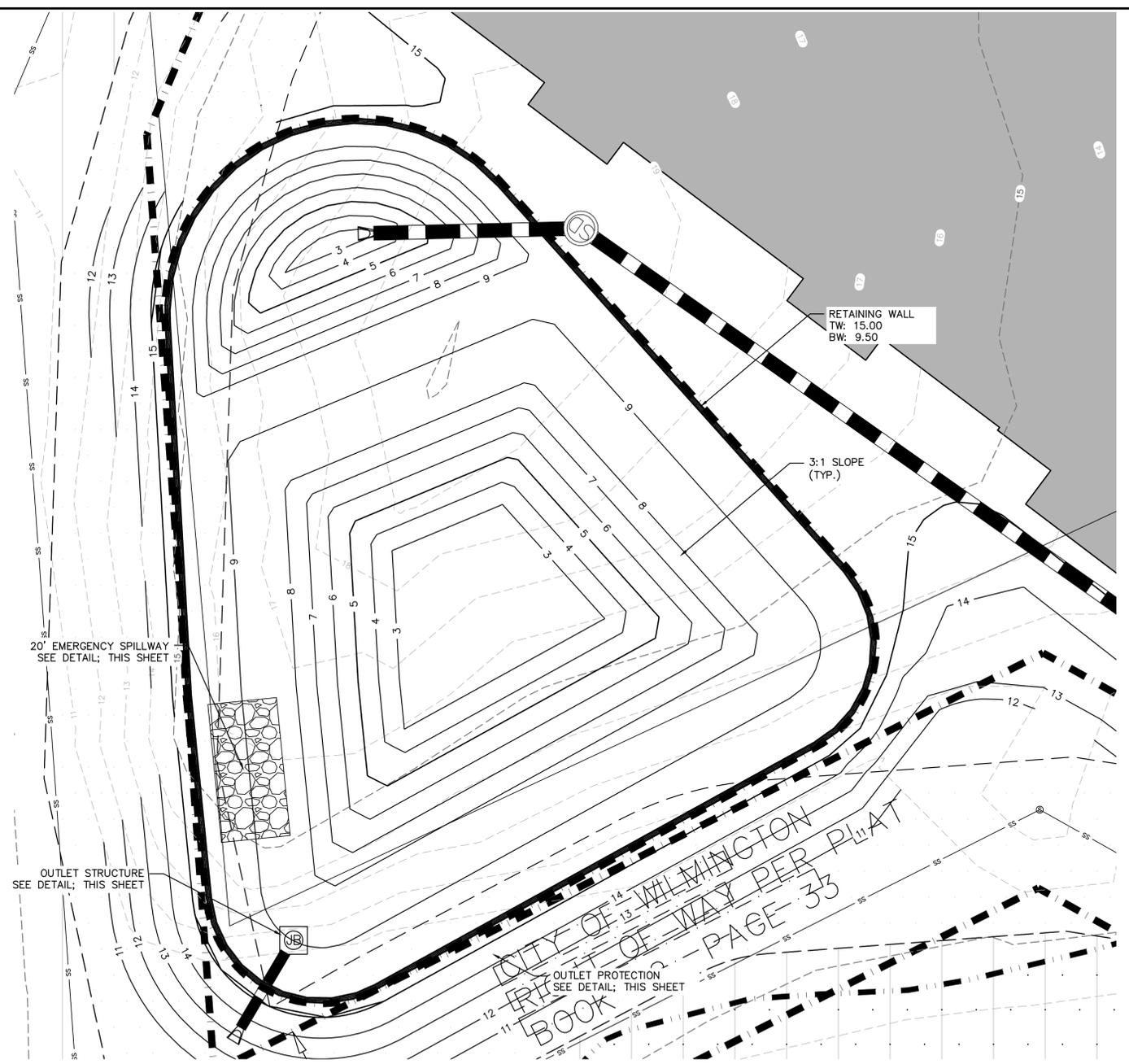
EMERGENCY SPILLWAY SECTION  
NOT TO SCALE



SECTION VIEW



PLAN VIEW  
WET POND OUTLET STRUCTURE  
NOT TO SCALE



FOREBAY AND STORAGE POND SECTION  
NOT TO SCALE

REV. NO.	DESCRIPTIONS / REVISIONS	DATE

PRELIMINARY PLAN  
 NOT FOR CONSTRUCTION




  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com


  
 WOODFIELD  
 INVESTMENTS

WOODFIELD WILMINGTON APARTMENTS  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

---

STORMWATER MANAGEMENT DETAILS

DATE:	16 NOV 2016	SCALE:	1"=60'	MAC FILE NUMBER:	CN-501
MCE PROJ. #	07075-0002	HORIZONTAL:	1"=60'	DRAWING NUMBER:	27
DRAWN:	MAB	VERTICAL:	N/A		
DESIGNED:	MAB/TCM				
CHECKED:	RMC/TCM				
PROJ. MGR.	RMC				
STATUS:		PRELIMINARY PLANS NOT FOR CONSTRUCTION		REVISION:	A

S:\07075\0002\000\Drawings\CN501-070750002.dwg, 11/16/2016 12:28:30 PM, tmurphy

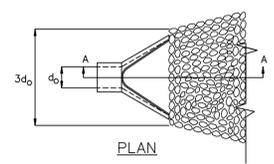
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

1 inch

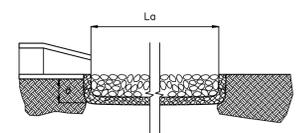
**Approved Construction Plan**

Name	Date
Planning	
Traffic	
Fire	

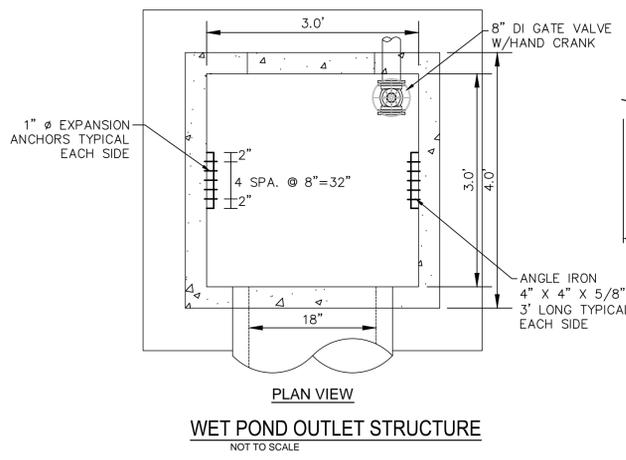
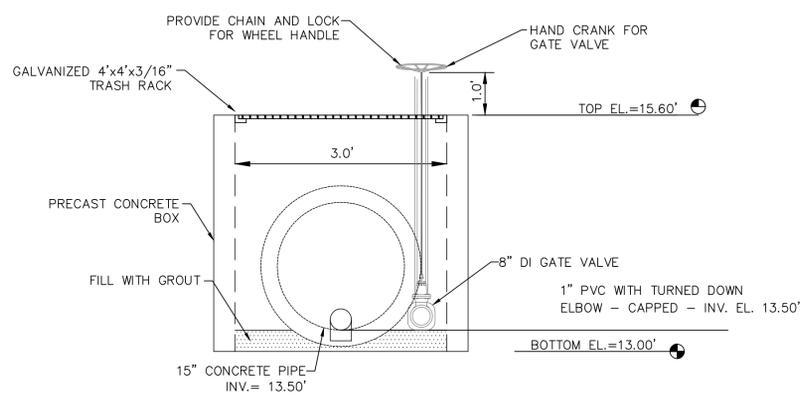
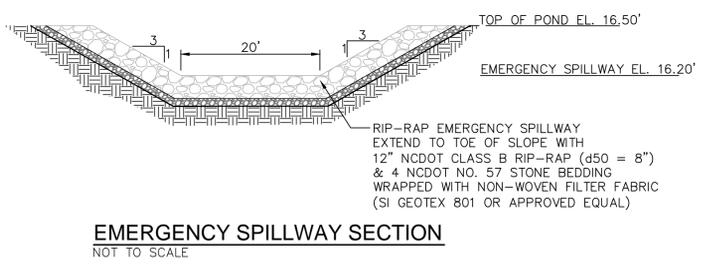
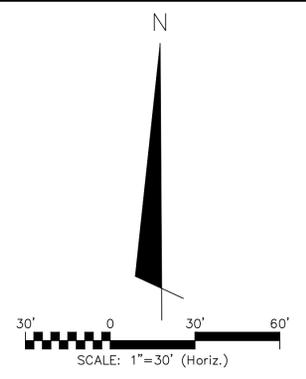
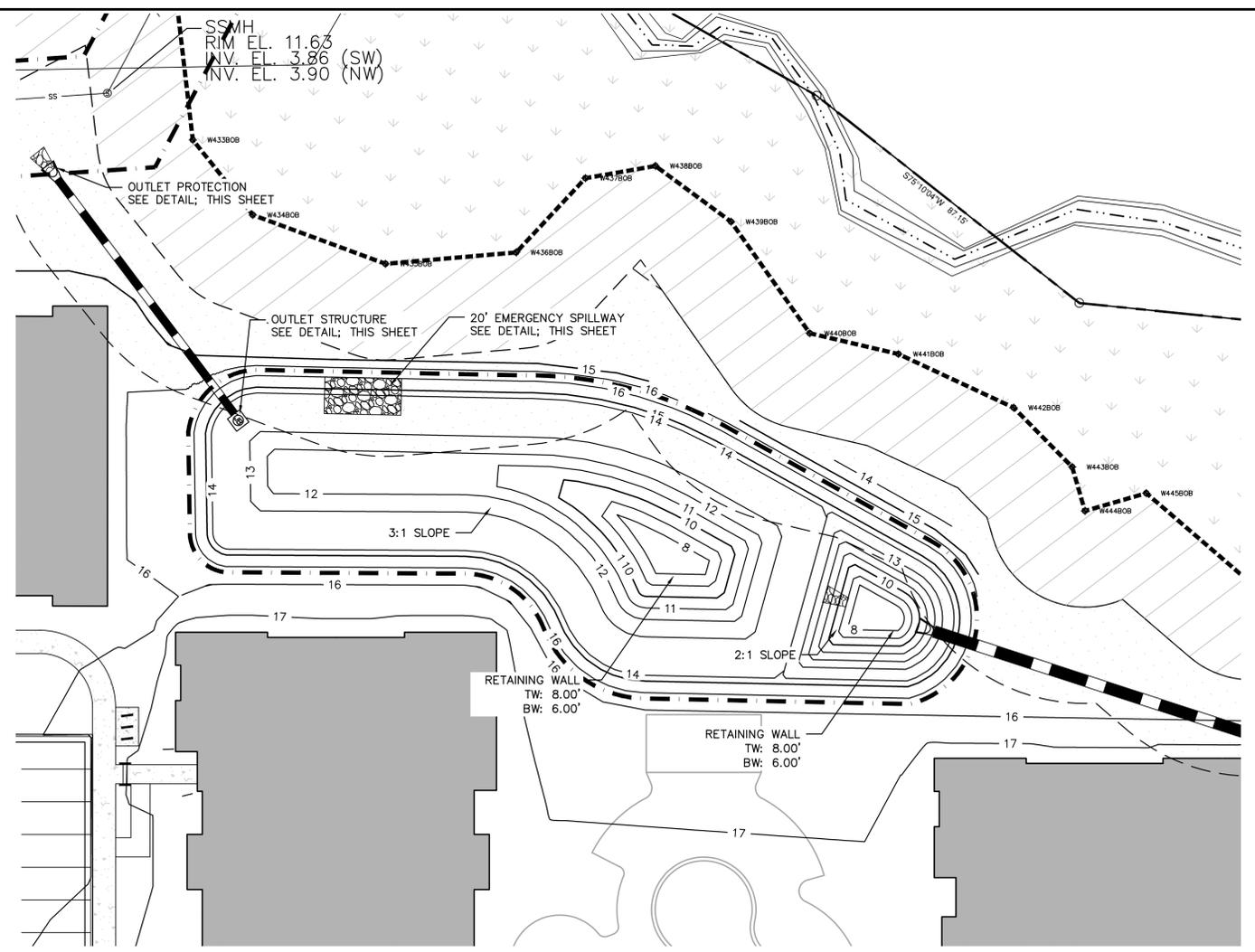
- NOTES:
1.  $L_o$  IS THE LENGTH OF THE RIPRAP APRON.
  2.  $d = 1.5$  TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
  3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
  4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



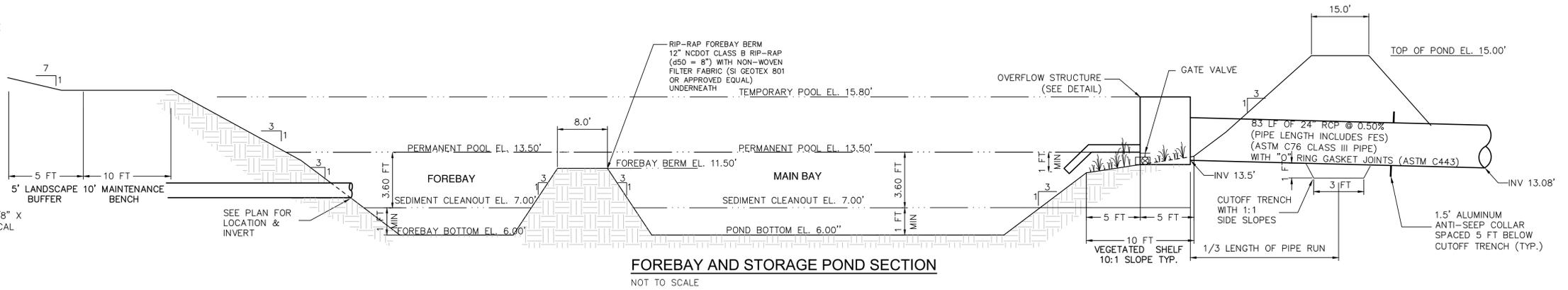
OUTLET PROTECTION	
OUTLET PIPE DIA.	24"
OUTLET FLOW RATE	12.59 CFS
OUTLET VELOCITY	5.69 FT/S
MATERIAL	CLASS B
LENGTH	12'
WIDTH	6'
STONE DIA.	6"
THICKNESS	22"



**PIPE OUTLET PROTECTION**  
NOT TO SCALE



**WET POND OUTLET STRUCTURE**  
NOT TO SCALE



REV. NO.	DESCRIPTIONS / REVISIONS	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



**MCKIM & CREED**  
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Wilmington, NC 28401  
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NC LICENSE F-1222  
www.mckimcreed.com

**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
**STORMWATER MANAGEMENT DETAILS**

DATE:	16 NOV 2016	SCALE:	1"=60'	MAC FILE NUMBER:	CN-502
MCE PROJ. #	07075-0002	HORIZONTAL:	1"=60'	DRAWING NUMBER:	28
DRAWN:	MAB	VERTICAL:	N/A		
DESIGNED:	MAB/TCM				
CHECKED:	RMC/TCM				
PROJ. MGR.	RMC				
STATUS:	PRELIMINARY PLANS NOT FOR CONSTRUCTION		REVISION:	-A-	

S:\07075\0002\0002\Drawings\CN502-070750002.dwg, 11/16/2016 12:54:06 PM, tmurphy

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

1 inch

**Approved Construction Plan**

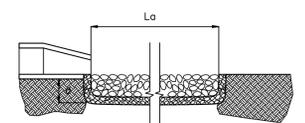
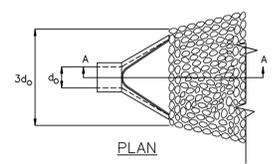
Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: \_\_\_\_\_

Traffic: \_\_\_\_\_

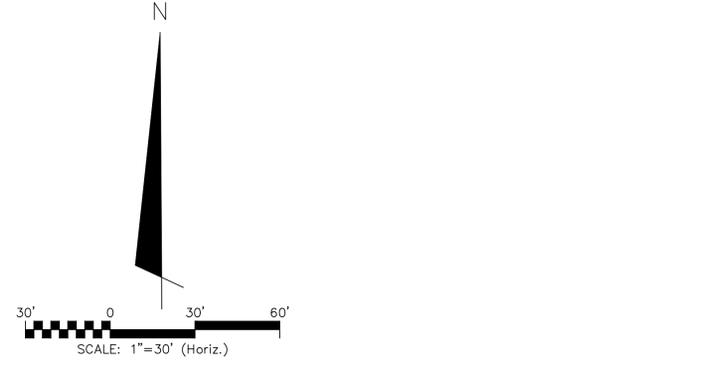
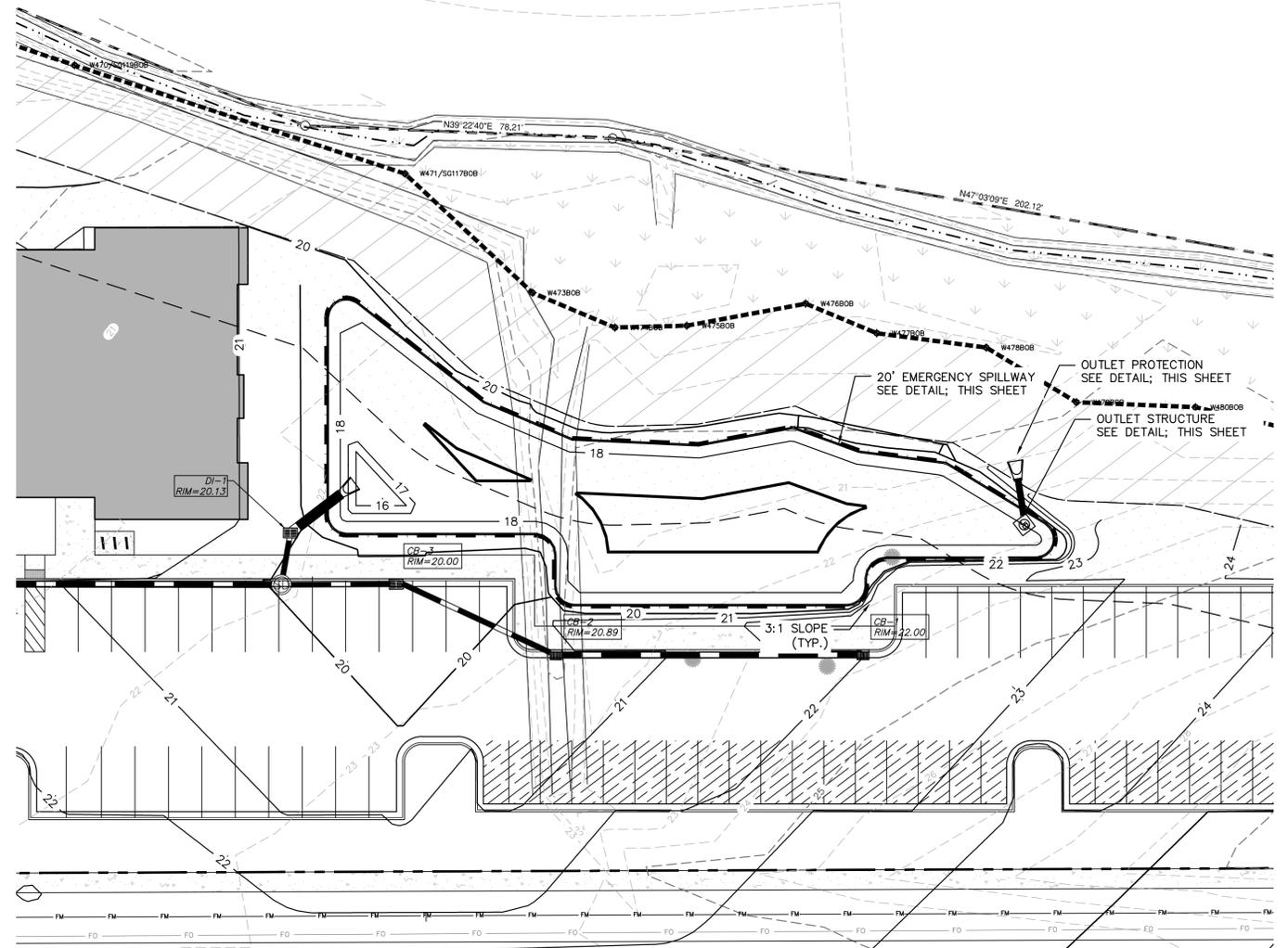
Fire: \_\_\_\_\_

- NOTES:
1.  $L_o$  IS THE LENGTH OF THE RIPRAP APRON.
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OUTLET PROTECTION	
OUTLET PIPE DIA.	18"
OUTLET FLOW RATE	2.138 CFS
OUTLET VELOCITY	XXX FT/S
MATERIAL	CLASS A
LENGTH	6'
WIDTH	4.5'
STONE DIA.	3"
THICKNESS	9"

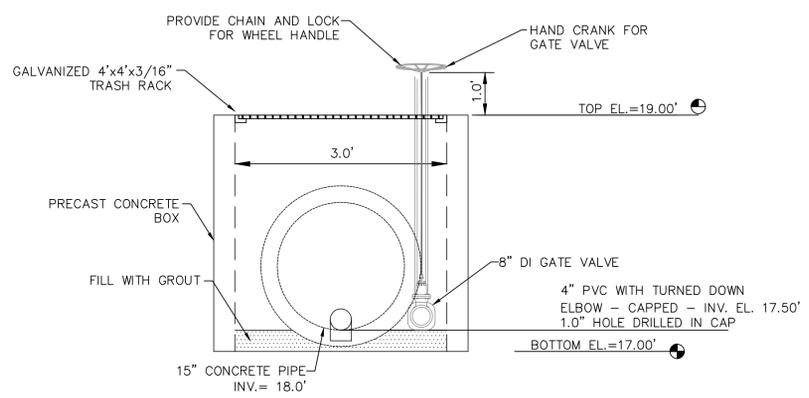
**PIPE OUTLET PROTECTION**  
NOT TO SCALE



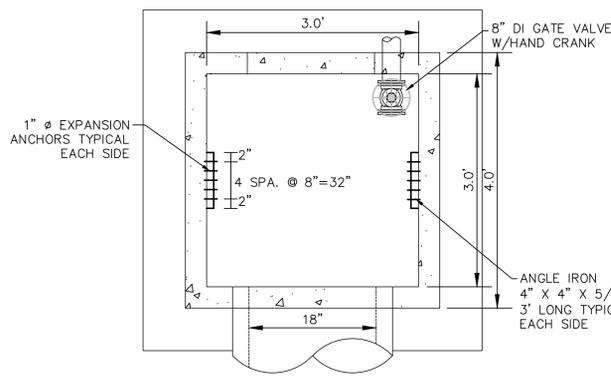
TOP OF POND EL. 20.50'  
EMERGENCY SPILLWAY EL. 19.50'

RIP-RAP EMERGENCY SPILLWAY EXTEND TO TOE OF SLOPE WITH 12" NCDOT CLASS B RIP-RAP (d50 = 8") & 4 NCDOT NO. 57 STONE BEDDING WRAPPED WITH NON-WOVEN FILTER FABRIC (SI GEOTEX 801 OR APPROVED EQUAL)

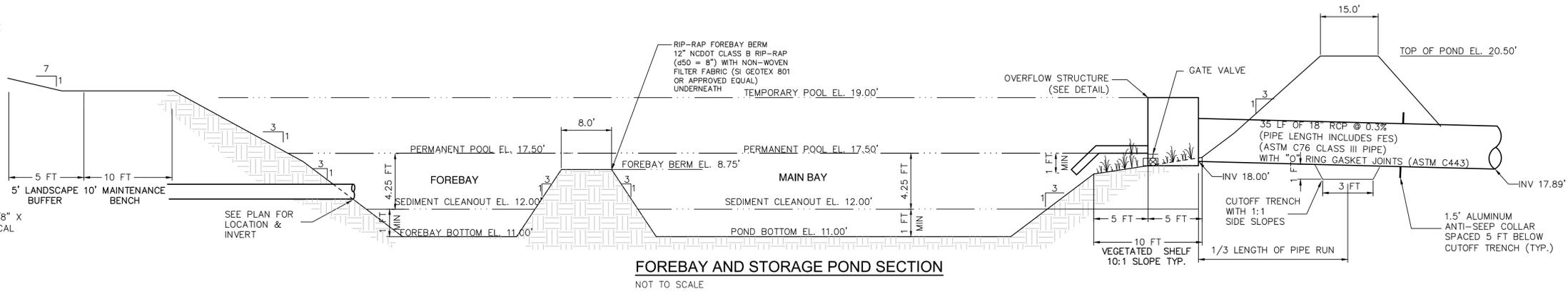
**EMERGENCY SPILLWAY SECTION**  
NOT TO SCALE



**SECTION VIEW**



**WET POND OUTLET STRUCTURE**  
NOT TO SCALE



**FOREBAY AND STORAGE POND SECTION**  
NOT TO SCALE

REV. NO.	DESCRIPTIONS	DATE

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION



**MCKIM & CREED**

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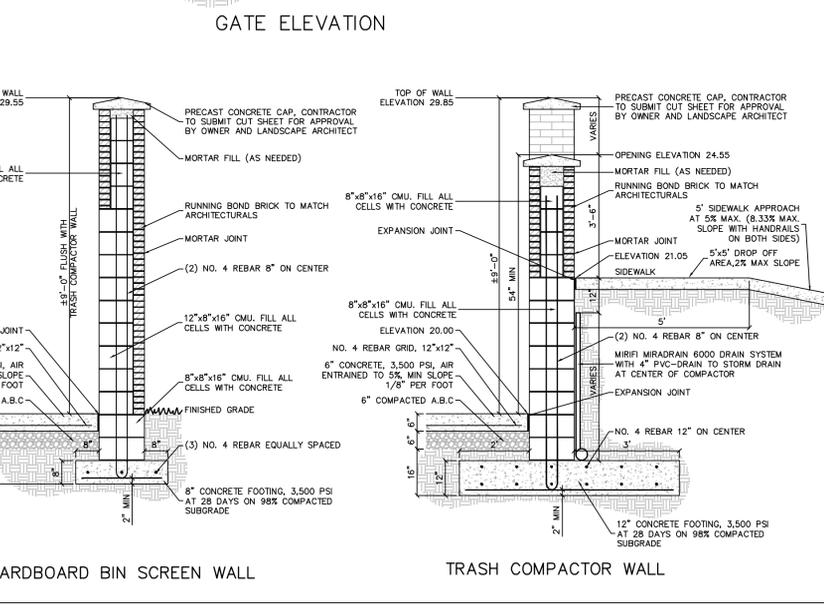
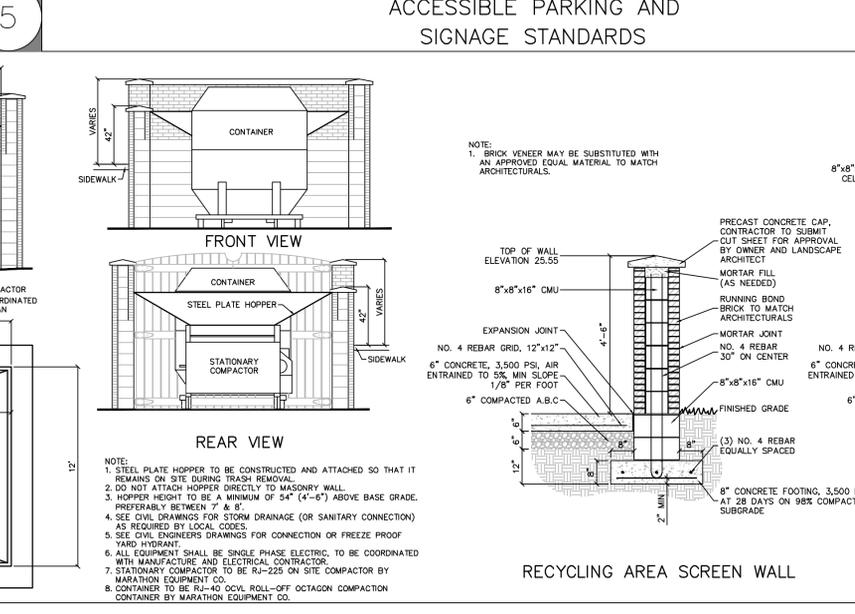
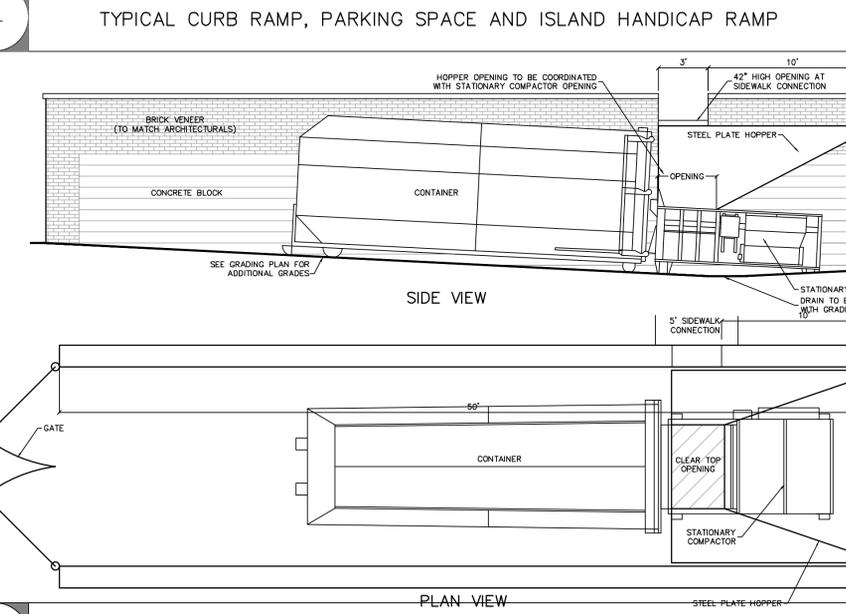
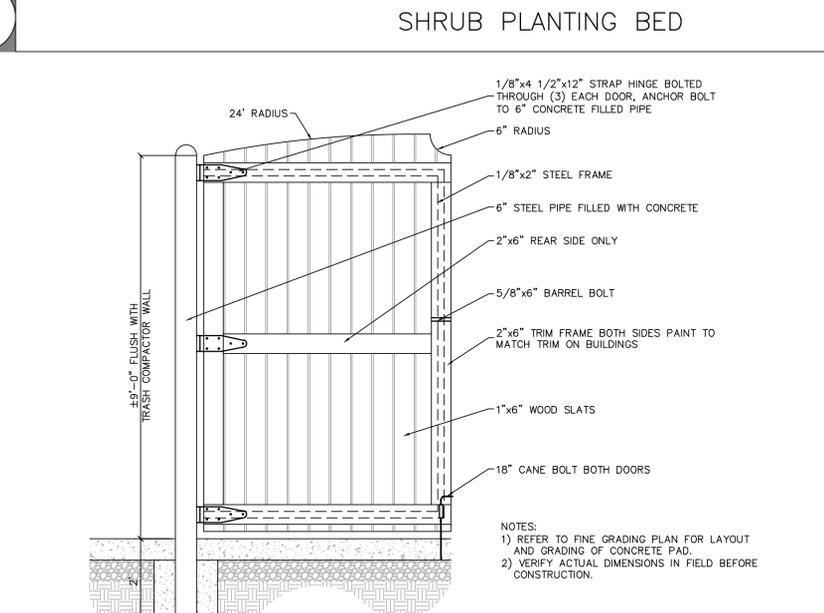
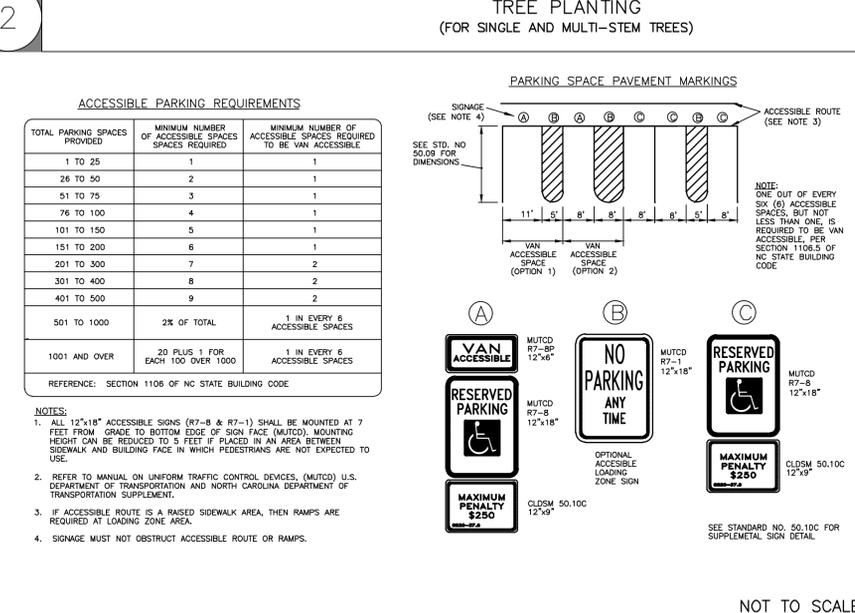
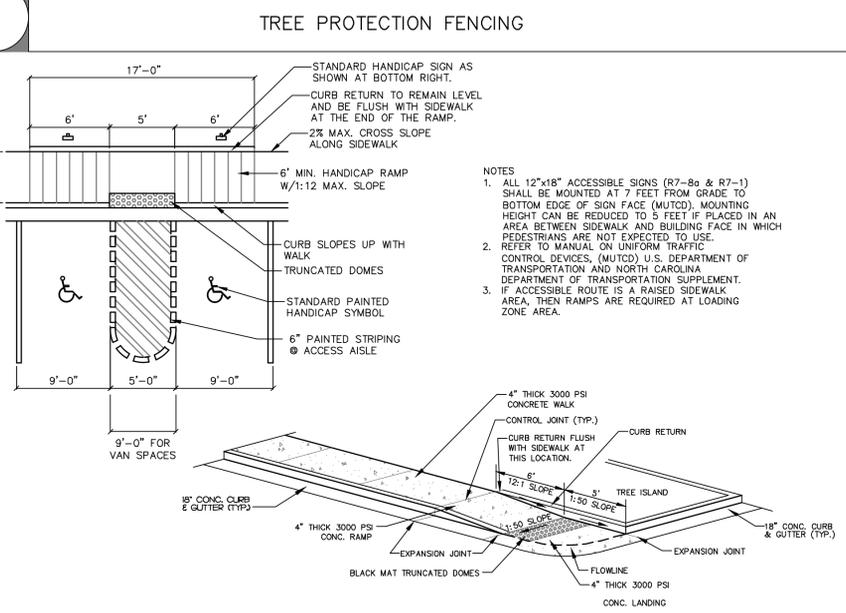
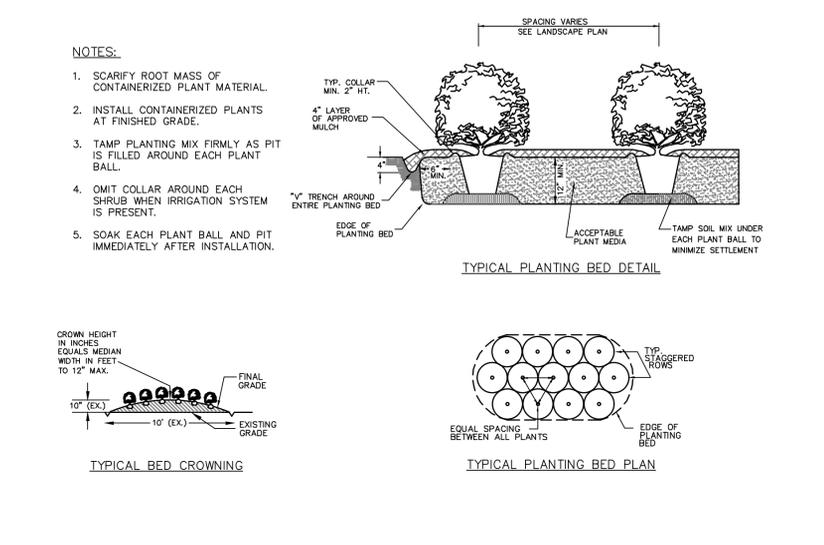
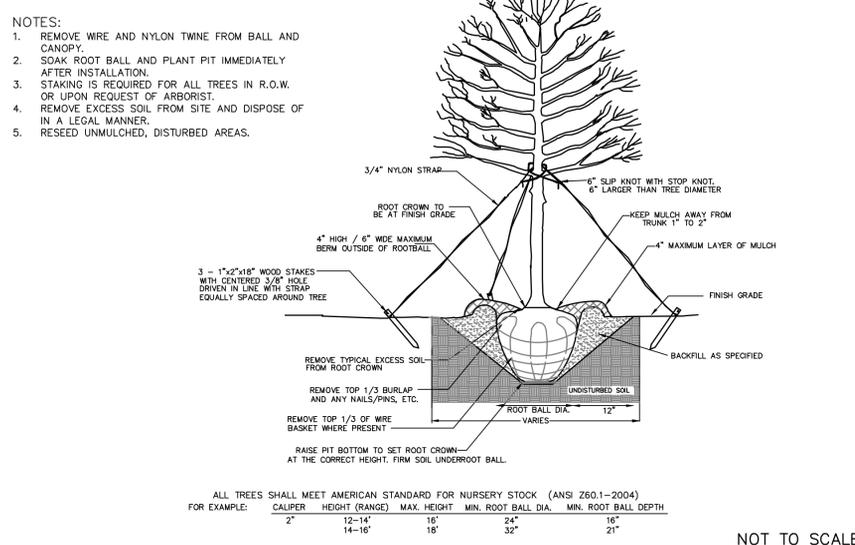
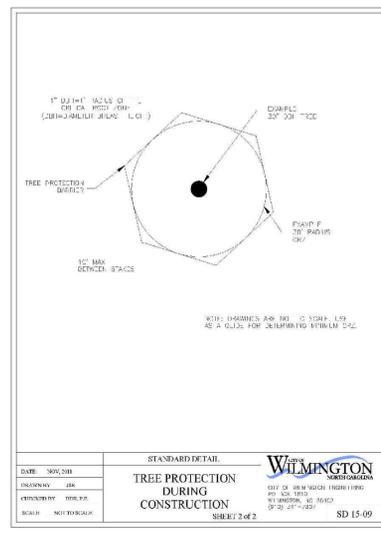
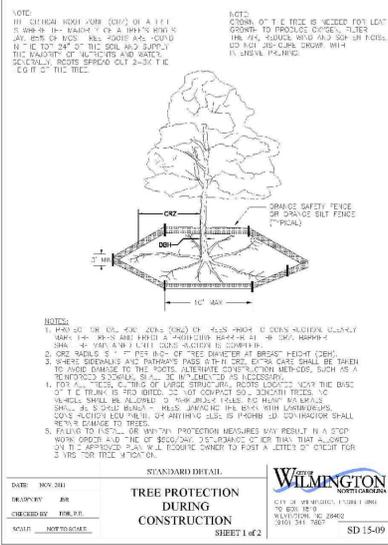
**WOODFIELD INVESTMENTS**

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA

**STORMWATER MANAGEMENT DETAILS**

DATE:	16 NOV 2016	SCALE:	1"=60'	MAC FILE NUMBER:	CN-503
MCE PROJ. #	07075-0002	HORIZONTAL:	1"=60'	DRAWING NUMBER:	29
DRAWN:	MAB	VERTICAL:	N/A		
DESIGNED:	MAB/TCM				
CHECKED:	RMC/TCM				
PROJ. MGR.	RMC				
STATUS:	PRELIMINARY PLANS NOT FOR CONSTRUCTION	REVISION:	A-		

S:\07075\0002\0002\Drawings\CN-503-070750002.dwg, 11/16/2016 12:52:29 PM, tmurphy



CONSTRUCTION  
DOCUMENTS

INDEPENDENCE WEST  
APARTMENTS  
WILMINGTON, NORTH CAROLINA

WOODFIELD INVESTMENTS, LLC  
11425 HORSEMAN'S TRAIL  
RALEIGH, NC 27613

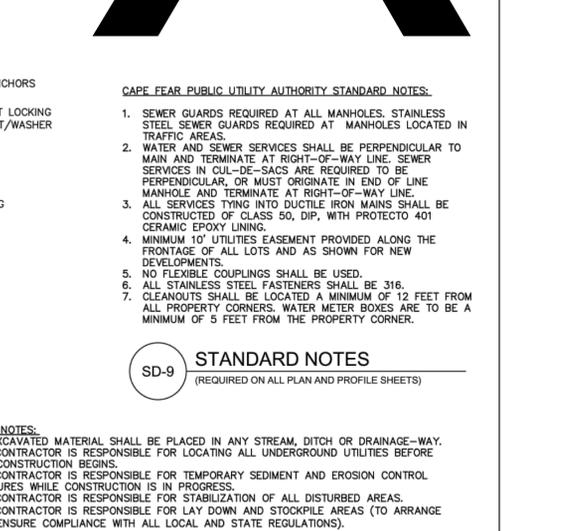
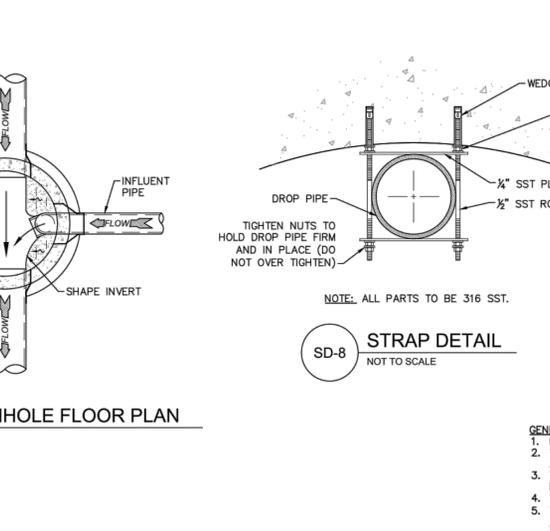
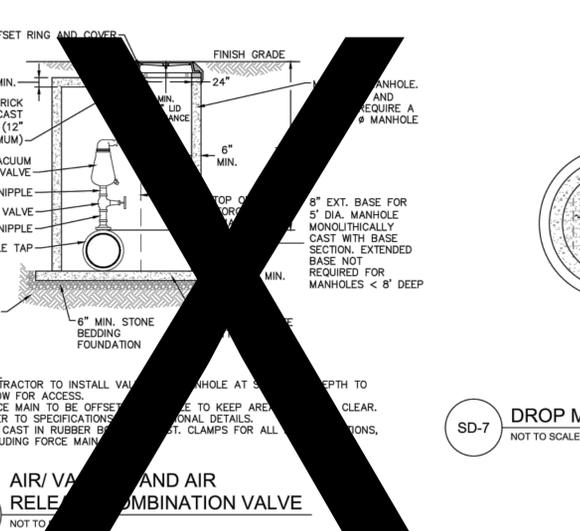
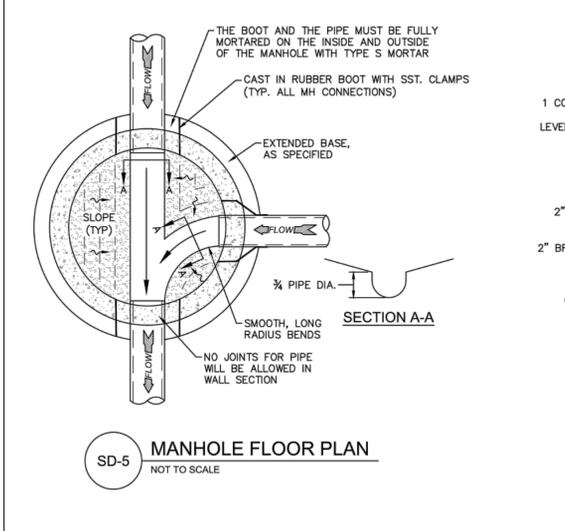
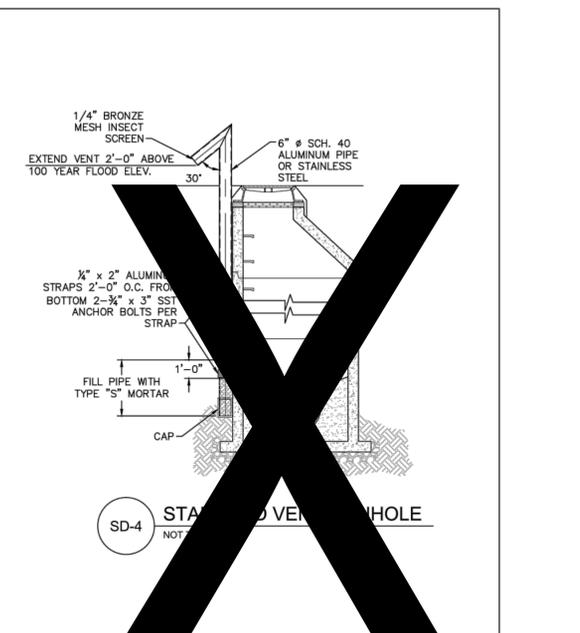
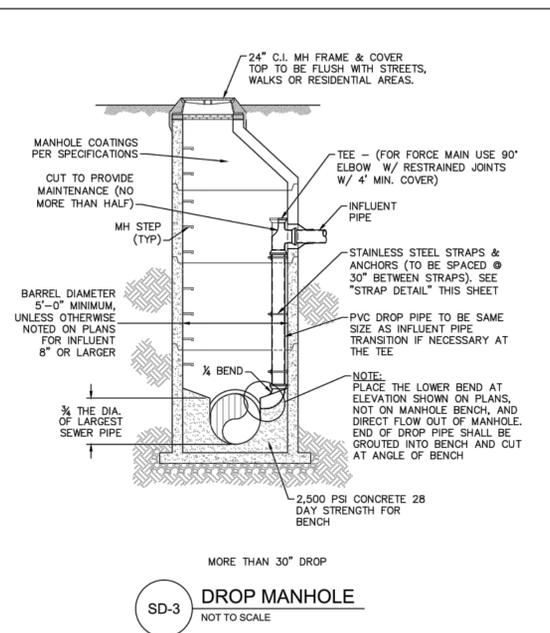
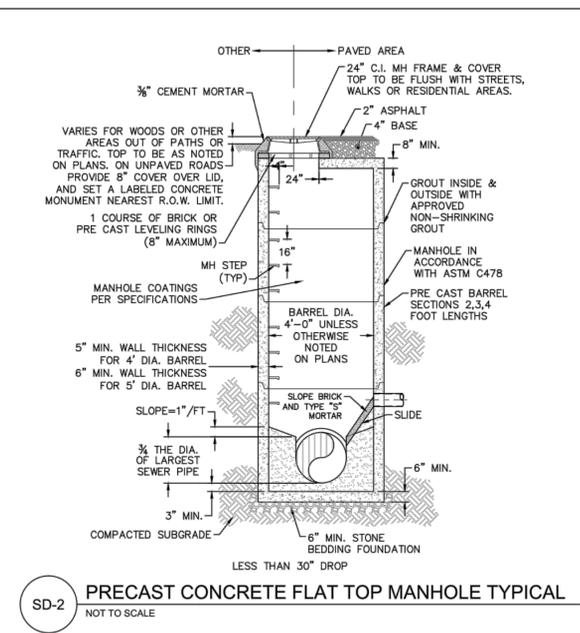
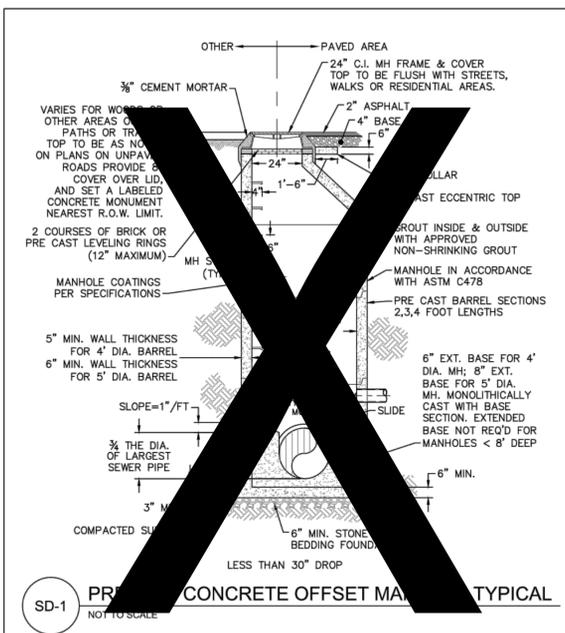
SITE  
DETAILS

SCALE:

PROJECT #: 217-039  
DRAWN BY:  
CHECKED BY:

NOVEMBER 16, 2016

REVISIONS:



- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
  - WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
  - ALL SERVICES TYPING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF GLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
  - MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
  - NO FLEXIBLE COUPLINGS SHALL BE USED.
  - ALL STAINLESS STEEL FASTENERS SHALL BE 316.
  - CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.
- 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 AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).
- THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

REV.	DESCRIPTION:	DATE:
1	AIR / VACUUM AND AIR RELEASE COMBINATION VALVE REVISED	10/26/12
2	STANDARD SEWER NOTE # REVISED	12/10/12
3	REVISED STANDARD VENT MANHOLE TO EXTEND VENT 2'-0" ABOVE 100 YR FLOOD	11/20/14
4	Revised Multiple Details	02/15/16

**CFPUA SANITARY SEWER**

**STANDARD DETAILS**

**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: **SSD-1**

REV. NO.	DESCRIPTION	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITAL	1/16/16
	REVISIONS	

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

TAMARA C. MURRAY  
 ENGINEER  
 11/16/16

**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
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**WOODFIELD**  
 INVESTMENTS

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 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

**UTILITY DETAILS**

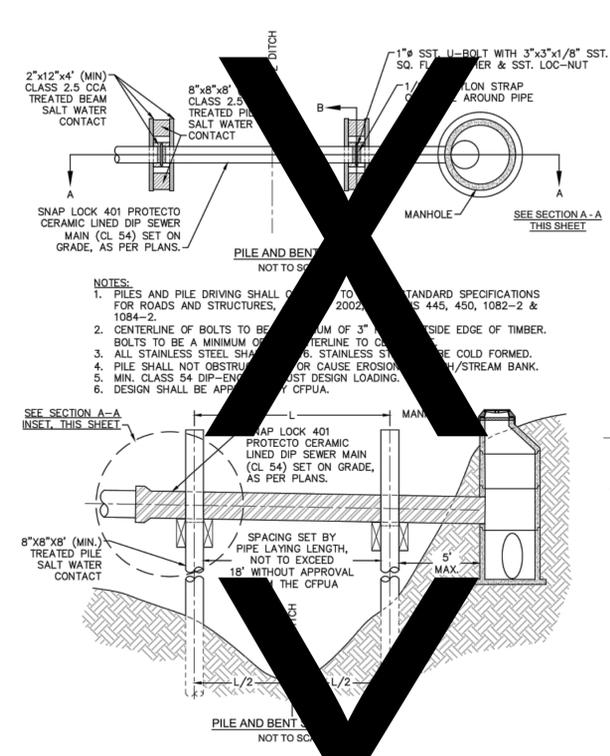
DATE: 16 NOV 2016  
 MCE PROJ. # 07075-0002  
 DRAWN: MAB  
 DESIGNED: MAB/TCM  
 CHECKED: RMC/TCM  
 PROJ. MGR: RMC

SCALE: N/A  
 HORIZONTAL: N/A  
 VERTICAL: N/A

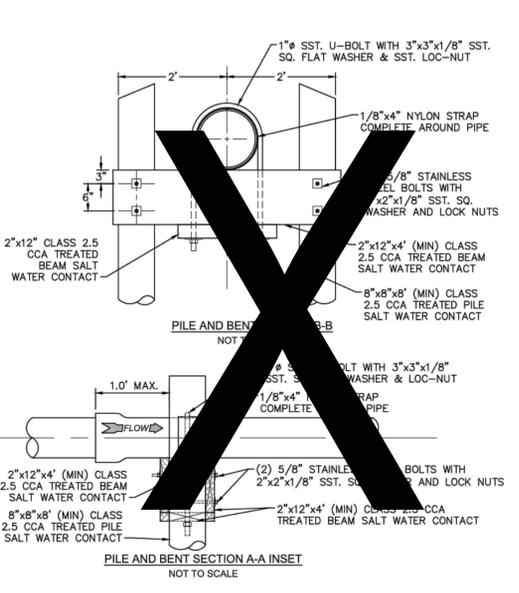
SHEET NUMBER: **CU-501**  
 DRAWING NUMBER: **31**

STATUS: **PRELIMINARY PLANS**  
 NOT FOR CONSTRUCTION

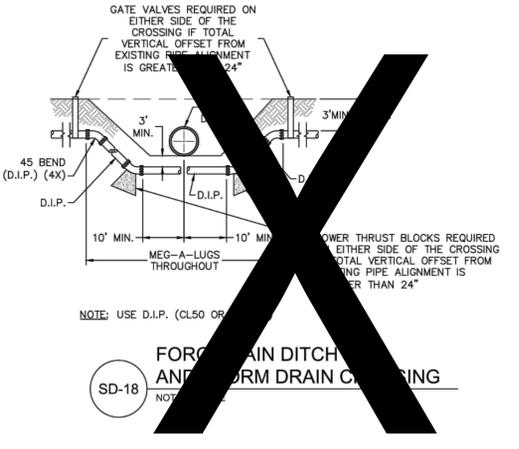




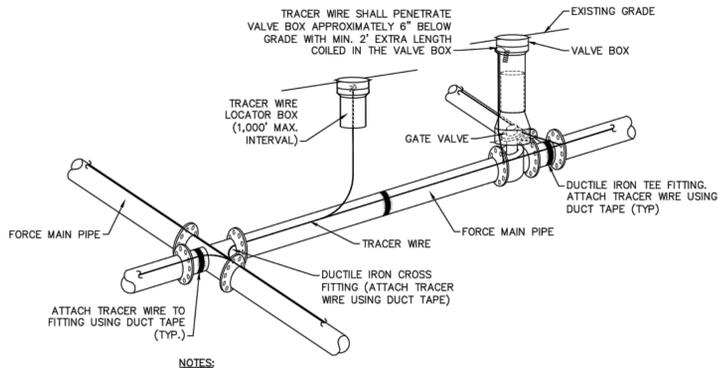
SD-20 PILE AND BENT DETAIL  
NOT TO SCALE



SD-24 STRUCTURAL BRIDGING DETAIL FOR STORMWATER OVER GRAVITY SEWER INSTALLATIONS WITH LESS THAN 12" SEPARATION  
NOT TO SCALE



SD-18 FORCE MAIN DITCH AND STORM DRAIN CROSSING  
NOT TO SCALE



SD-21 TRACER WIRE 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 AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

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

REV.	DESCRIPTION:	DATE:
1	ADDED NOTES TO THE STRUCTURAL BRIDGING DETAIL	03/11/15
2	Revised Tracer Wire Detail	10/20/15
3	Revised Force Main Ditch and Storm Drain Crossing Detail	02/15/16

**CFPUA SANITARY SEWER**

**STANDARD DETAILS**

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:**  
SSD-3

REV. NO.	DESCRIPTIONS	DATE

PRELIMINARY PLAN  
 NOT FOR  
 CONSTRUCTION



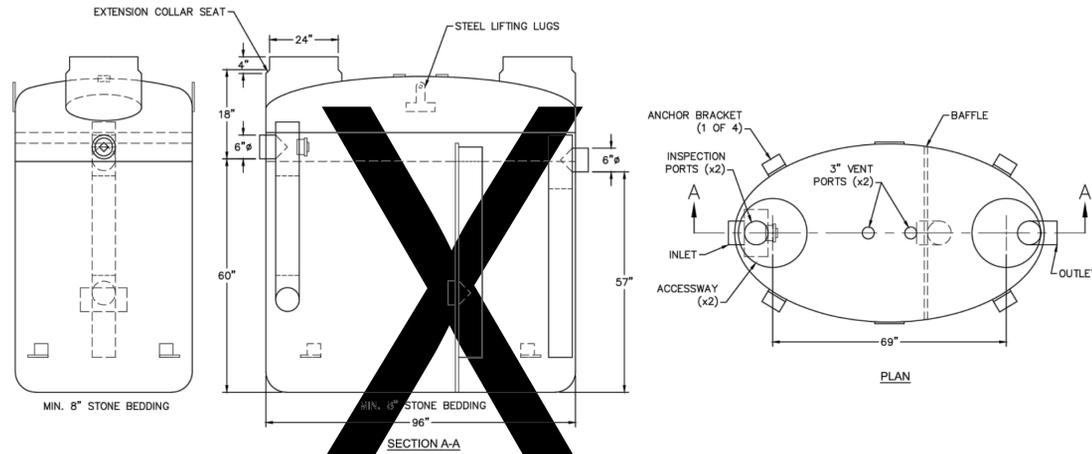
**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
 www.mckimcreed.com

**WOODFIELD**  
 INVESTMENTS

**WOODFIELD WILMINGTON APARTMENTS**  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA  
  
**UTILITY DETAILS**

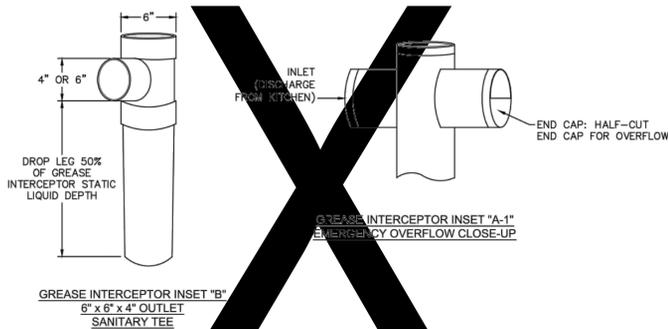
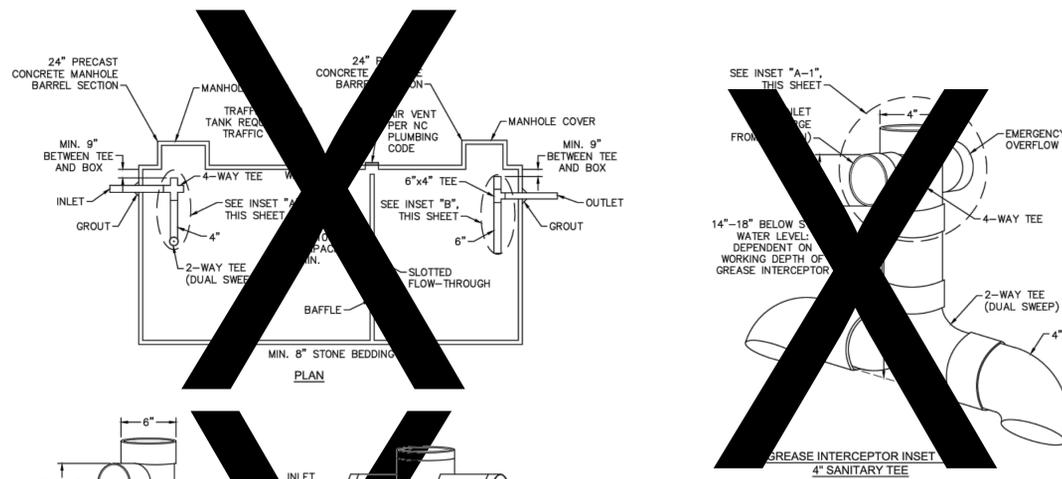
DATE: 16 NOV 2016 MCE PROJ. #: 07075-0002 DRAWN: MAB DESIGNED: MAB/TCM CHECKED: RMC/TCM PROJ. MGR: RMC	SCALE: HORIZONTAL: N/A VERTICAL: N/A	SHEET NUMBER: <b>CU-503</b> DRAWING NUMBER: <b>33</b> REVISION: PRELIMINARY PLANS NOT FOR CONSTRUCTION A
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- NOTES:
1. GRAVITY APPLICATIONS ONLY.
  2. WALL THICKNESS: 1/4" WALL AND 3/8" TOP AND BOTTOM BOWLS.
  3. STANDARD PIPE STUBS ARE SOCKET SDR 35 PVC.
  4. EXTENSION COLLARS SHALL BE CAULKED WITH SIKAFLEX OR EQUIVALENT FOR WATERTIGHT SEAL.
  5. FOLLOW MANUFACTURE'S SPECS FOR TRAFFIC OR PEDESTRIAN LOADING.

SD-22 FIBERGLASS GREASE INTERCEPTOR  
NOT TO SCALE



SD-23 CONCRETE GREASE INTERCEPTOR  
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.
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THE DETAILS SHOWN HEREON SUPERCEDE CFPUA  
WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

REV:	DESCRIPTION:	DATE:

<b>CFPUA SANITARY SEWER</b>		DATE: 1/9/12
		SCALE: N/A
		DRAWN BY: CFPUA
		CHECKED BY: CFPUA
		PROJECT NO.:
<b>STANDARD DETAILS</b>		DATE:
 CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910)332-6560		SHEET NO: <b>SSD-4</b>

REV. NO.	DESCRIPTIONS	DATE

PRELIMINARY PLAN  
NOT FOR  
CONSTRUCTION



**MCKIM & CREED**  
 243 North Front Street  
 Wilmington, NC 28401  
 Phone: (910)343-1048, Fax: (910)251-8282  
 NC LICENSE F-1222  
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**WOODFIELD**  
INVESTMENTS

WOODFIELD WILMINGTON APARTMENTS  
 3950 INDEPENDENCE BOULEVARD  
 WILMINGTON, NORTH CAROLINA

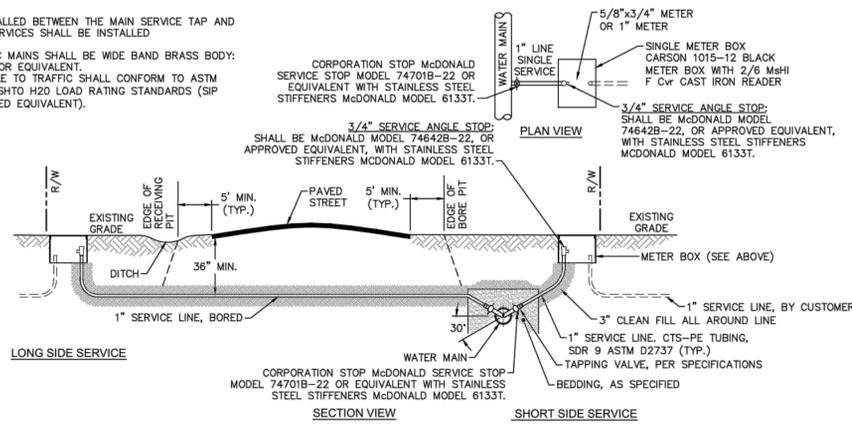
UTILITY DETAILS

DATE: 16 NOV 2016	SCALE: N/A	PROJECT NUMBER: CU-504
MCE PROJ. # 07075-0002	HORIZONTAL: N/A	DRAWING NUMBER: 34
DRAWN: MAB	VERTICAL: N/A	
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR. RMC		
STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION		
REVISION: A		

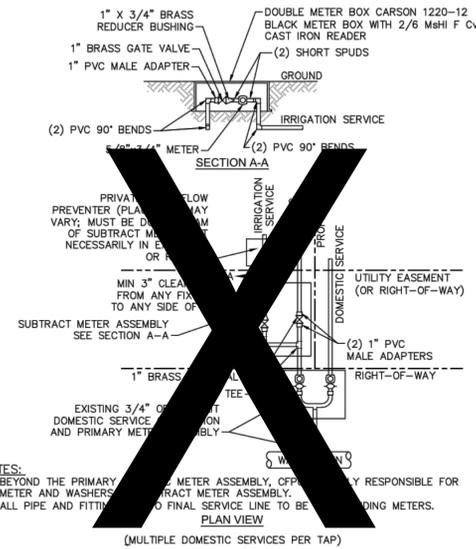
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**NOTES:**

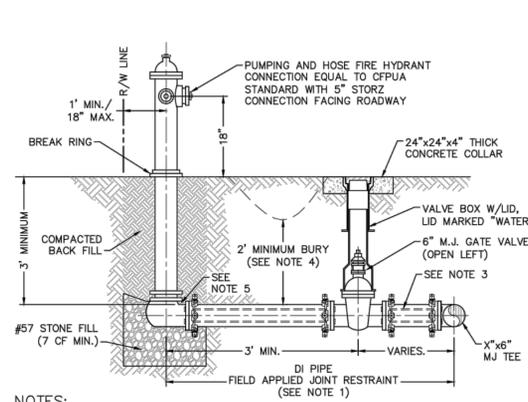
1. NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4242, OR APPROVED EQUIVALENT).



**WD-18 SINGLE SERVICE CONNECTION**  
NOT TO SCALE



**WD-8 DOUBLE SERVICE CONNECTION USING SUBTRACT METER**  
NOT TO SCALE



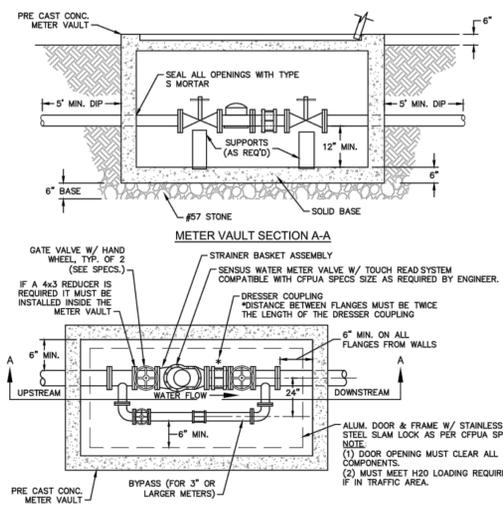
- NOTES:**
1. JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
  2. WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
  3. CONTINUOUS 316 STAINLESS STEEL RODS (TEE TO VALVE AND VALVE TO HYDRANT) MAY BE USED WITH COR-BLUE MJ T-BOLT AND GASKET KITS, AS AN ALTERNATIVE.
  4. HYDRANT AND VALVE SHALL BE PLACED OUTSIDE DITCH LIMITS.
  5. WEEP HOLES OPEN AND UNBLOCKED TO DRAIN.

**WD-10 FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE

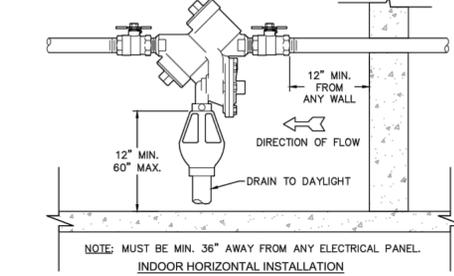
**CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:**

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

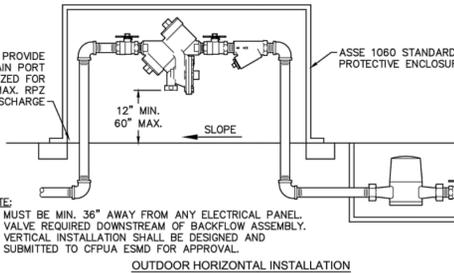
**WD-19 STANDARD NOTES**  
(REQUIRED ON ALL PLAN AND PROFILE SHEETS)



**WD-1 WATER METER VAULT**  
NOT TO SCALE

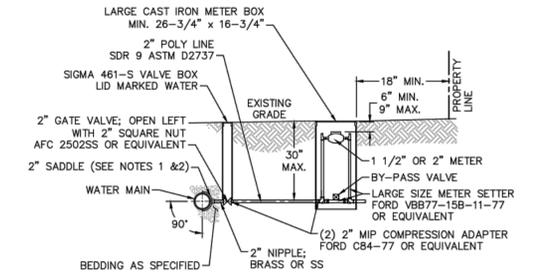


NOTE: MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.



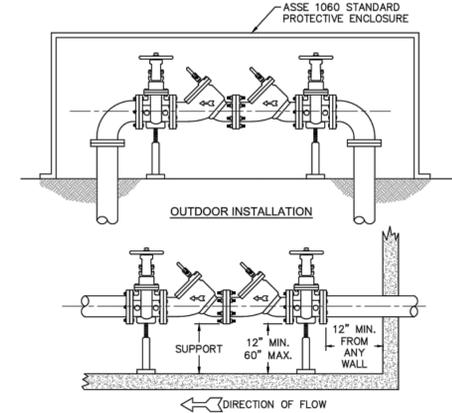
- NOTE:**
1. MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
  2. VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
  3. VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA ESDM FOR APPROVAL.

**WD-12 REDUCED PRESSURE PRINCIPLE ASSEMBLY**  
NOT TO SCALE



- NOTES:**
1. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
  2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
  3. METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
  4. METER BOXES SUSCEPTIBLE TO INCIDENTAL, NON-DELIBERATE TRAFFIC SHALL CONFORM TO ANSI/SCTE 77 TIER 15 LOAD RATING STANDARDS (SYNERTECH MODEL DUO 17x30 OR APPROVED EQUIVALENT).
  5. NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
  6. 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

**WD-11 LARGE METER**  
NOT TO SCALE



- NOTE:**
1. MUST BE MIN. 36" AWAY FROM ANY ELECTRICAL PANEL.
  2. VALVE REQUIRED DOWNSTREAM OF BACKFLOW ASSEMBLY.
  3. VERTICAL INSTALLATION SHALL BE DESIGNED AND SUBMITTED TO CFPUA ESDM FOR APPROVAL.

**WD-7 DOUBLE CHECK VALVE ASSEMBLY**  
NOT TO SCALE

- GENERAL NOTES:**
1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
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**THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

REV.	DESCRIPTION	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/28/12
2	Single Service Connection and Fire Hydrant Details Revised	7/23/13
3	Fire Hydrant Detail Revised	01/03/14
4	Revised Fire Hydrant Assembly To Show 5" STORZ Connection	04/10/15
5	Revised Fire Hydrant Assembly To Show Full Dip Hydrant Leg	01/19/16
6	Revised Water Meter Vault and Large Meter Details, Added Standard Notes	02/15/16

**CFPUA WATER DISTRIBUTION SYSTEM**

**STANDARD DETAILS**

DATE: 1/9/12

SCALE: N/A

DRAWN BY: CFPUA

CHECKED BY: CFPUA

PROJECT NO.:

**SHEET NO.:**  
**WSD-1**

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

Stewardship. Sustainability. Service.

REV. NO.	DESCRIPTIONS	DATE

PRELIMINARY PLAN  
NOT FOR  
CONSTRUCTION

TAMARA C. MURRY  
 ENGINEER  
 11/10/10

243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
NC LICENSE F-1222  
www.mckimcreed.com

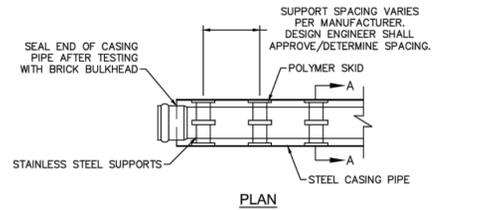
**WOODFIELD**  
INVESTMENTS

**WOODFIELD WILMINGTON APARTMENTS**  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA

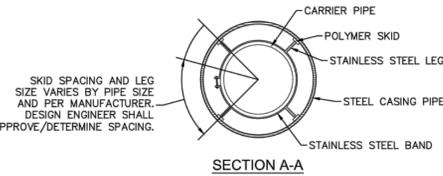
**UTILITY DETAILS**

DATE:	SCALE:	PROJECT NO.:
16 NOV 2016	HORIZONTAL:	
MCE PROJ. # 07075-0002	VERTICAL:	
DRAWN: MAB		
DESIGNED: MAB/TCM		
CHECKED: RMC/TCM		
PROJ. MGR: RMC		

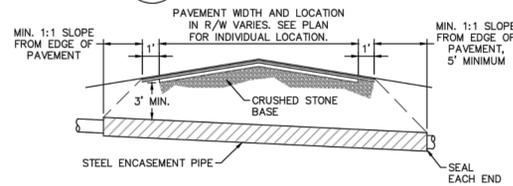
SHEET NO. WSD-1  
 REVISION A  
 STATUS: PRELIMINARY PLANS NOT FOR CONSTRUCTION



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.

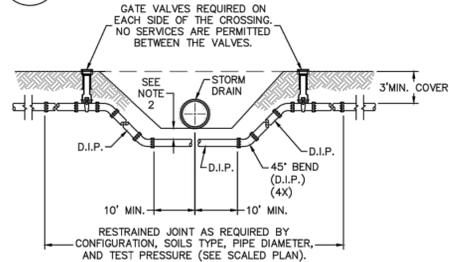


WD-15 PIPE CASING SUPPORT DETAIL  
NOT TO SCALE



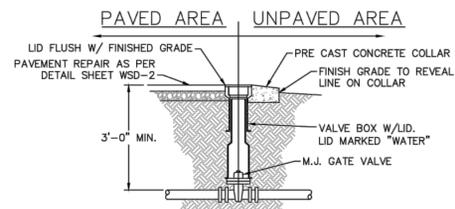
NOTES:  
1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PLAN FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.  
2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING.

WD-16 TYPICAL BORING/ JACKING DETAIL  
NOT TO SCALE

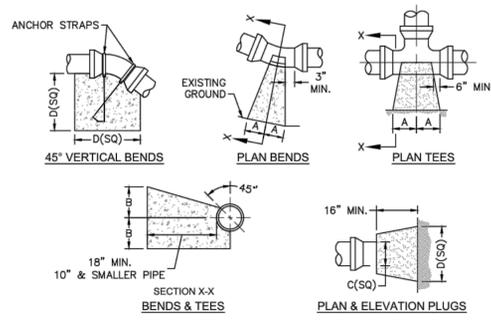


NOTES:  
1. USE PRESSURE CLASS 350 DIP, UNLESS SPECIFIED OTHERWISE.  
2. MINIMUM DEPTH REQUIRED, UNLESS SPECIFIED OTHERWISE BY CFPUA:  
a. IN DOT R/W, 36" MIN. TYPICAL, OR 24" MIN. WHEN CROSSING A DITCH LINE.  
b. ALL OTHER LOCATIONS, 30" MIN.  
c. WHEN STORM DRAIN INVERT IS BURIED AT OR BELOW ABOVE DEPTHS, 18" MIN. CLEARANCE IS REQUIRED.

WD-2 WATER MAIN DITCH AND STORM DRAIN CROSSING  
NOT TO SCALE



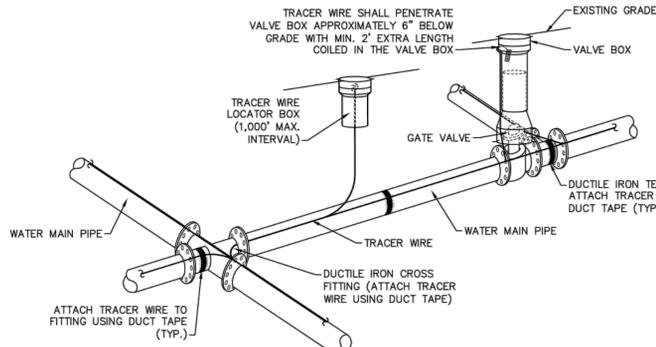
WD-3 VALVE DETAIL  
NOT TO SCALE



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"

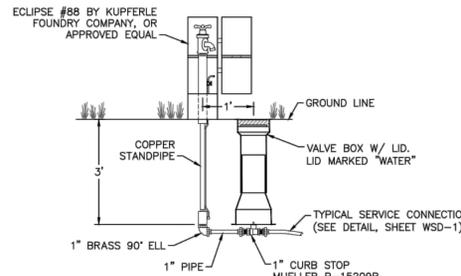
NOTES:  
1. BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.  
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.  
3. USE MEG-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND RODDING.

WD-4 THRUST BLOCK DETAIL  
NOT TO SCALE

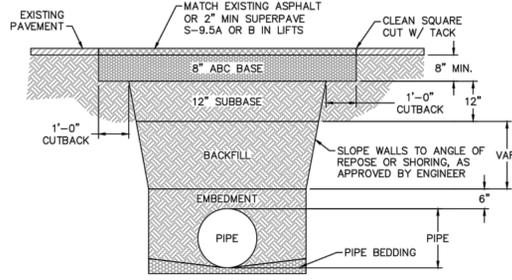


NOTES:  
1. TRACER WIRE SHALL BE #10 COPPER SOLID CORE COPPER WIRE WITH GAS AND OIL RESISTANT INSULATION.  
2. WIRE SHALL BE STRAPPED TO ALL PVC WATER MAIN PIPING WITH DUCT TAPE AT 12 FOOT INTERVALS ALONG THE PIPE.  
3. SECURE WIRE TO ALL TEE AND CROSS FITTINGS WITH DUCT TAPE.  
4. ALL SPLICES IN THE WIRE SHALL BE MADE WITH 3M DBR DIRECT BURY SPLICE KIT AN UNDERGROUND RATED, WATER TIGHT, AND APPROVED SPLICE CONNECTOR OR APPROVED EQUAL.

WD-17 TRACER WIRE DETAIL  
NOT TO SCALE

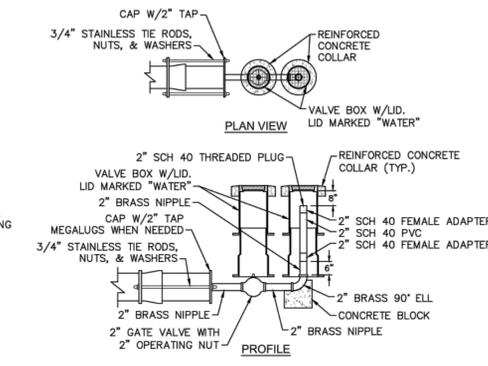


WD-6 SAMPLING STATION  
NOT TO SCALE

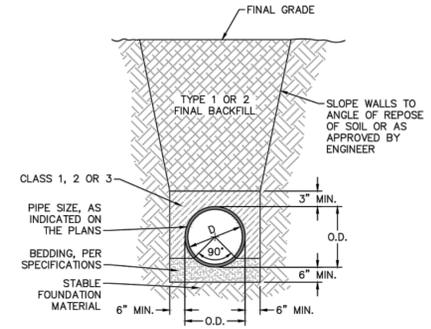


NOTES:  
1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.  
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).  
3. 8-INCH 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 > 16" 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%.

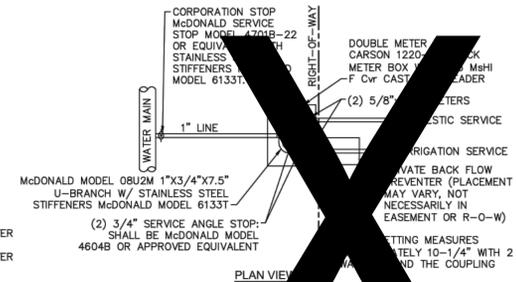
WD-14 PAVEMENT REPAIR WHERE PIPE INSTALLED  
NOT TO SCALE



WD-5 2" BLOW-OFF  
NOT TO SCALE



WD-13 TYPICAL TRENCH DETAIL  
NOT TO SCALE



WD-9 DOUBLE SERVICE CONNECTION  
NOT TO SCALE

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

CFPUA WATER DISTRIBUTION SYSTEM

STANDARD DETAILS

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: WSD-2

REV.	DESCRIPTION:	DATE:
1	Revised Water Main Ditch and Storm Crossing Detail	11/12/13
2	Revised Water Main Ditch and Storm Crossing Detail	05/05/14
3	Revised Tracer Wire Detail	10/20/15
4	Added Backflow Preventer to Double Service Connection Detail	02/01/16
5	Revised Sampling Station Detail	02/15/16

REV. NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON TECHNICAL REVIEW COMMITTEE SUBMITAL	11/16/16
	REVISIONS	

PRELIMINARY PLAN  
NOT FOR CONSTRUCTION

SEAL  
TAMARA C. MURPHY  
REGISTERED PROFESSIONAL ENGINEER  
038675  
11/16/16

MCKIM & CREED  
243 North Front Street  
Wilmington, NC 28401  
Phone: (910)343-1048, Fax: (910)251-8282  
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www.mckimcreed.com

WOODFIELD INVESTMENTS

WOODFIELD WILMINGTON APARTMENTS  
3950 INDEPENDENCE BOULEVARD  
WILMINGTON, NORTH CAROLINA  
UTILITY DETAILS

DATE: 16 NOV 2016  
MCE PROJ. #: 07075-0002  
DRAWN: MAB  
DESIGNED: MAB/TCM  
CHECKED: RMC/TCM  
PROJ. MGR: RMC  
SCALE: HORIZONTAL: N/A, VERTICAL: N/A  
SHEET NUMBER: CU-506, DRAWING NUMBER: 36  
STATUS: PRELIMINARY PLANS, NOT FOR CONSTRUCTION, REVISION: A