

**LANDSCAPE CALCULATIONS**

REQUIRED FOUNDATION PLANTINGS ((BLDG LENGTH X BLDG HGHT) X 12%)

FRONT (SOUTH): (353 X 32) X 0.12 = 1,356 SF  
PROVIDED: 1,574 SF

REAR (NORTH): (110 X 32) X 0.12 = 422 SF  
PROVIDED: 467 SF

LEFT SIDE (WEST): (112 X 32) X 0.12 = 430 SF  
PROV'D/SPEC'D: 473 SF

REQUIRED: (1,314 - 80) X 12 = 14,808 SF  
14,808 SF/600 SF = 24.68 OR 25  
25 X 3 UNDERSTORY TREES = 75 UNDERSTORY TREES  
25 X 6 SHRUBS = 150 SHRUBS

PROVIDED: 16,038 SF  
27 UNDERSTORY TREES  
129 SHRUBS

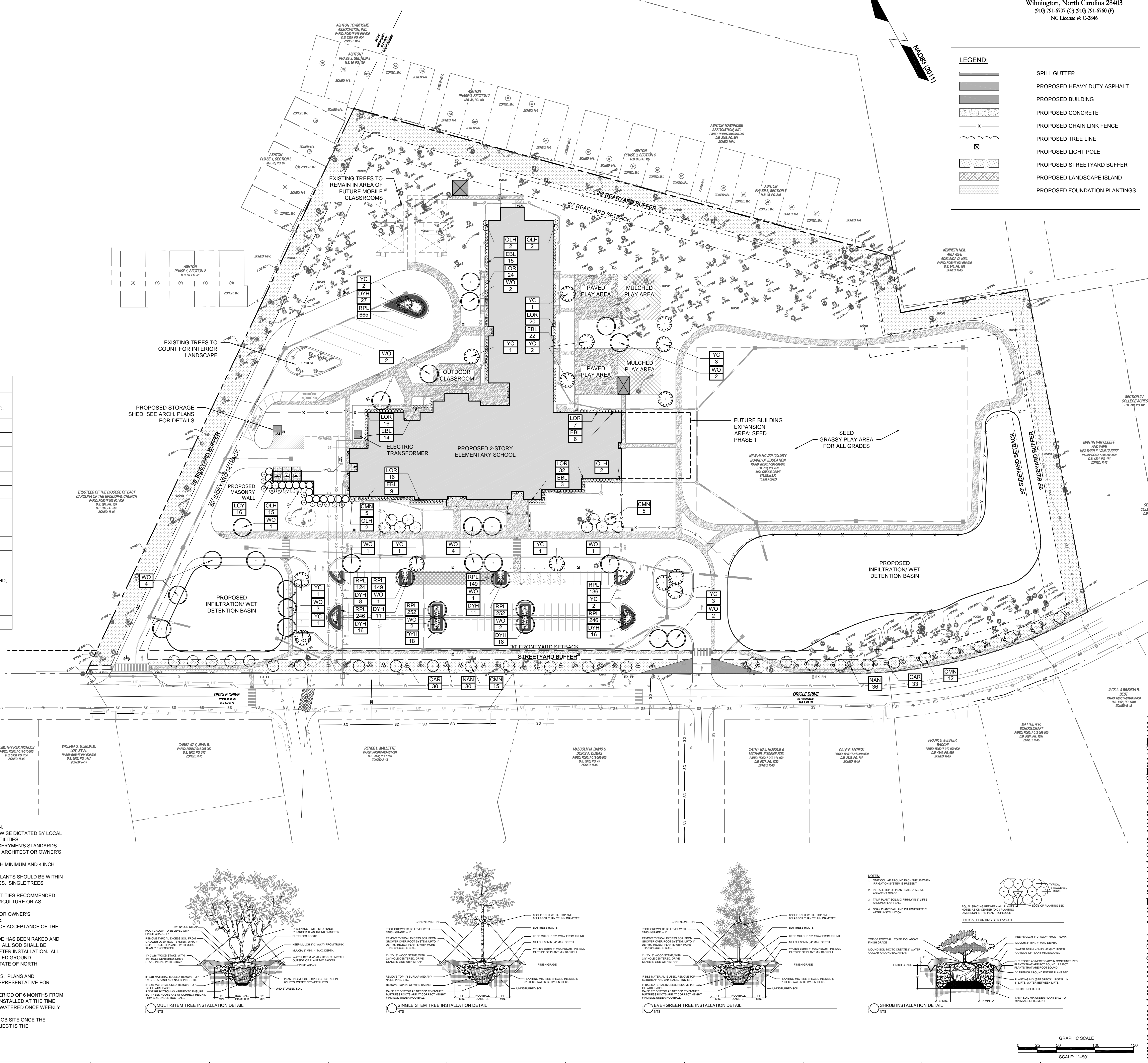
SHADING REQUIREMENTS:	2.62 AC x .20 = .52 AC REQUIRED
PROVIDED:	0.61 AC OR 24,350 SF
	33 LARGE CANOPY @ 707 SF = 23,331 SF
	OR 0.54 AC
	10 SMALL CANOPY @ 314 SF = 3,140 SF
	OR 0.07AC
PARKING REQUIREMENTS:	1 CANOPY TREE / ISLAND, GROUNDCOVER
	SHRUBS

BUFFER LANDSCAPE CALCULATIONS:

- LOCATED BETWEEN ANY RESIDENTIAL AND NON RESIDENTIAL USE
- 100% OPAQUE W/IN 3 YRS OF PLANTING
- EXISTING VEGETATION TO REMAIN UNDISTURBED WITHIN BUFFER AREAS. BUFFER AREAS TO BE AUGMENTED WHERE DEEMED UNSUITABLE BY CITY OF WILMINGTON PLANNING STAFF.
- BUFFER WIDTH = 50% OF BUILDING SETBACK, NOT LESS THAN 20'.
  - REAR (NORTH): 25' WIDE
  - LEFT (WEST): 25' WIDE
  - RIGHT (EAST): 25' WIDE

TREES	QTY	COMMON NAME	SIZE		REMARKS
LKY	16	LEYLANDII CYPRESS x Cupressocyparis leylandii	10' H		FULL TO GROUND: 8' O.C. MIN, 12' O.C. MAX.
WO	28	WILLOW OAK Quercus phellos	3' CAL.		
YC	18	YOSHINO CHERRY Prunus x yedoensis	3' CAL.		
ORNAMENTAL TREES	QTY	COMMON NAME	SIZE		REMARKS
CMN	37	CRAPE MYRTLE Lagerstroemia x Natchez'	8' HGT.		8' HGT.; MULTI-STEM
SHRUBS	QTY	COMMON NAME	CONT		REMARKS
CAR	63	CARISSA HOLLY Ilex cornuta 'Carissa'	3 GAL		3' O.C.
DYL	125	BORDEAUX HOLLY Ilex vomitoria 'Bordeaux'	3 GAL		3' O.C.
EBH	69	EAST BAY PRIVET Ligustrum japonicum 'East Bay'	7 GAL		4' O.C.
LOR	115	RUBY LOROPETALUM Loropetalum c. Ruby	3 GAL		4' O.C.
NAN	66	FIREPOWER NANDINA Nandina domestica 'Fire Power'	3 GAL		SPACED AS SHOWN ON PLAN
OLH	23	OAK LEAF HOLLY Ilex x 'Confal'	15 GAL		6' HGT.; FULL TO GROUND; EG. SPACING
GROUND COVERS	QTY	COMMON NAME	CONT	SPACING	REMARKS
RPL	2,219	ROYAL PURPLE LIRIOPE Liriope muscari 'Royal Purple'	4' POT	12" o.c.	

1. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM 5 FEET CLEARANCE FROM ALL EXISTING AND PROPOSED LOCAL, STATE AND FEDERAL HIGHWAYS AND ALL EXISTING AND PROPOSED UTILITIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY AGENCIES. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
4. ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSEMEYS STANDARDS.
5. NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
6. ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
7. ALL PLANTING SHALL BE CONNECTED TO THE EXISTING OR PROPOSED PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
8. CONTRACTOR SHALL APPLY MULCH, SOIL AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY. THIRD PARTY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
9. CONTRACTOR SHALL MAINTAIN ALL PLANTING MATERIAL SHALL BE PROTECTED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
10. THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE PROJECT.
11. THE CONTRACTOR SHALL PREPARE ALL SEEDED OR SODDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN RAKED AND ROLLED TO ACCEPT THE SOD/SEED. ALL SOD/SEEDED AREAS MUST BE IRRIGATED OR HAND WATERED. ALL SOD SHALL BE PLANTED WITHIN 14 DAYS OF DELIVERY. ALL SODS SHALL BE RETURNED TO THE SUPPLIER WITHIN 14 DAYS OF DELIVERY. ALL SEEDED AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELED GROUND.
12. IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
13. IRRIGATION IS REQUIRED AT THE BUILDING PERMIT, FRONT ENTRY, AND THE PLAYGROUND FIELDS. PLANS AND SPECIFICATIONS FOR THE IRRIGATION DESIGN SHALL BE SUBMITTED TO THE OWNER OR OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PURCHASE OR INSTALLATION OF THE MATERIALS.
14. THE CONTRACTOR SHALL MAINTAIN ALL PLANTING MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED AT THE TIME OF SUBSTANTIAL COMPLETION. ALL MATERIAL INCLUDING SOD AND SEEDED AREAS SHALL BE HAND WATERED ONCE WEEKLY AS NECESSARY TO ENSURE SURVIVAL.
15. CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
16. ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDED.



**COLLEGE PARK  
ELEMENTARY  
SCHOOL**

LS3P

**LS3P ASSOCIATES LTD.**  
528 INDEPENDENCE BLVD. SUITE 200  
WILMINGTON, NORTH CAROLINA 28412  
TEL. 910.790.9901 FAX 910.790.3111  
[WWW.LS3P.COM](http://WWW.LS3P.COM)

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REVISIONS:

No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: AHE  
CHECKED BY: RPB

LANDSCAPE  
PLAN

# C-5.0

## SOLUTIONS THROUGH LISTENING

## SERVICE BY DESIGN

## DESIGN DEVELOPMENT



# COLLEGE PARK ELEMENTARY SCHOOL

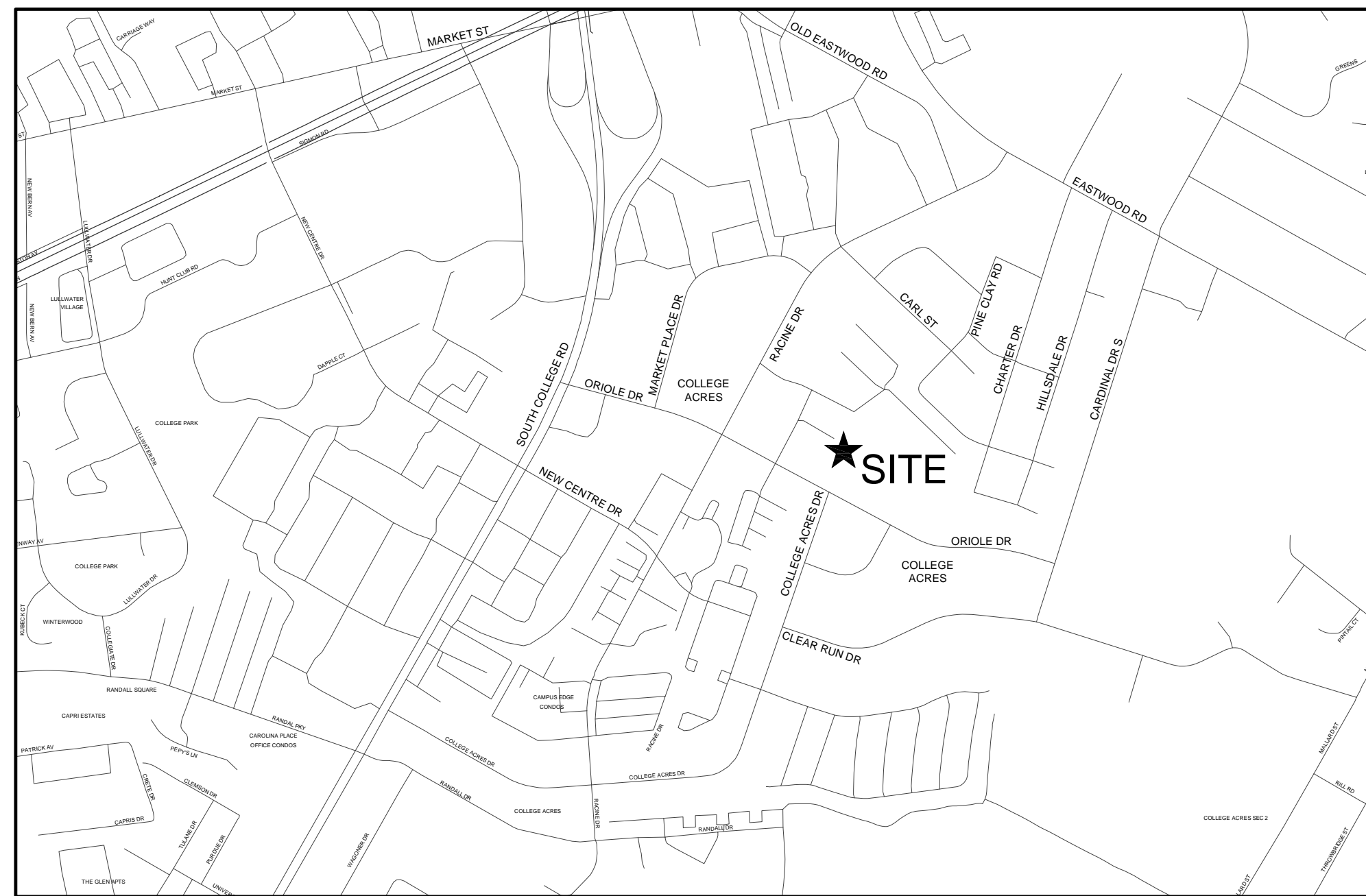
## 5001 ORIOLE DRIVE

### WILMINGTON, NORTH CAROLINA 28403

## MAJOR SITE PLAN SUBMITTAL

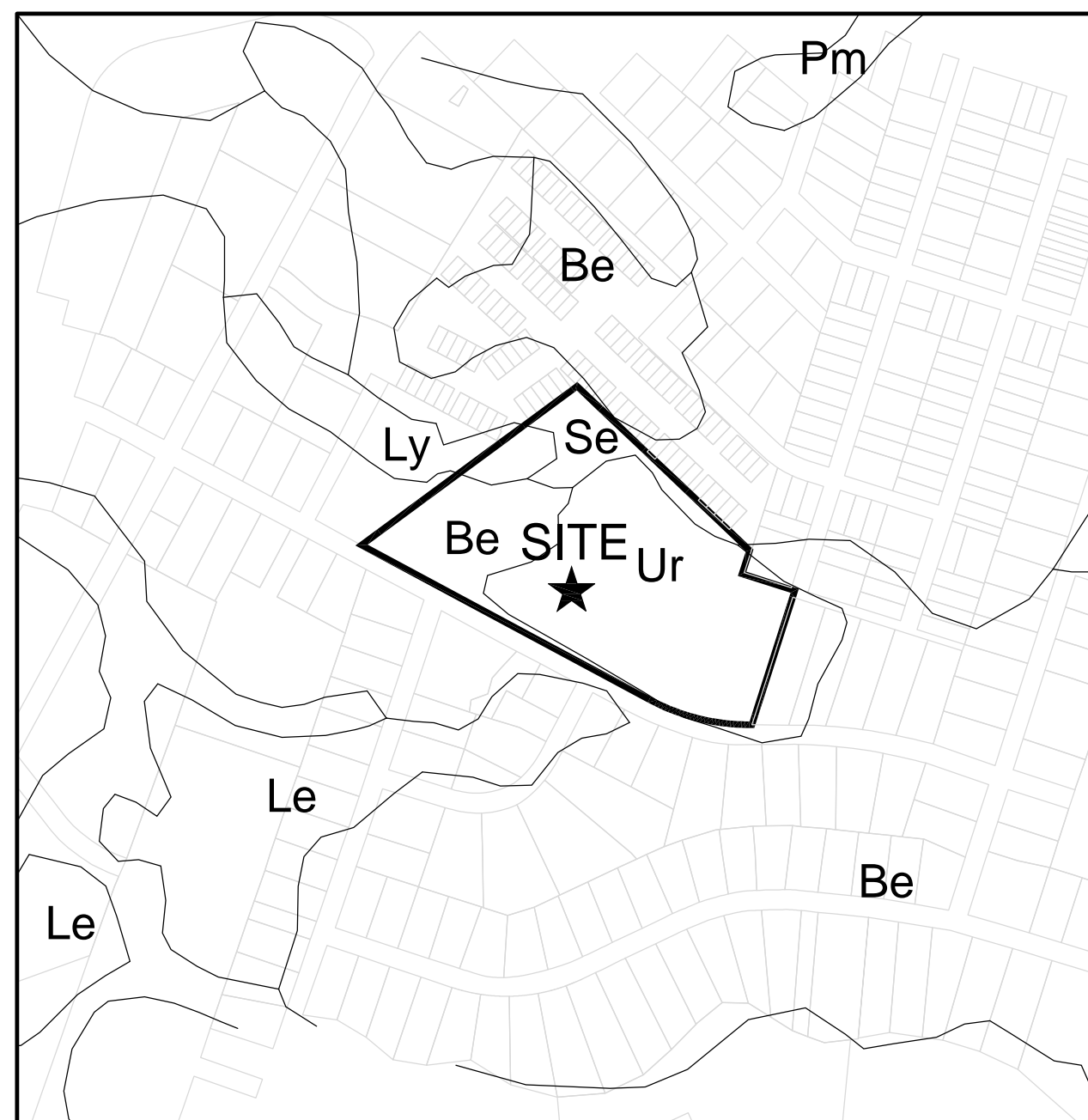
### OCTOBER 2016

PROJECT ADDRESS:  
5001 ORIOLE DRIVE  
WILMINGTON, NC 28403



**VICINITY MAP**

SCALE: 1"=1000'



**SOILS MAP**

SCALE: 1"=500'

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST NEW HANOVER COUNTY ORDINANCES AND STORM WATER DESIGN MANUAL.

SIGNATURE: \_\_\_\_\_  
PRINTED NAME AND TITLE: ROBERT P. BALLAND, P.E.  
DATE: \_\_\_\_\_  
REGISTRATION NUMBER: 031591

WE HEREBY CERTIFY THAT WE ARE THE CURRENT DEVELOPER OF THE PROPERTY AND THAT UPON RECEIPT OF "AUTHORIZATION TO CONSTRUCT" ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE PERFORMED IN ACCORDANCE WITH THIS PLAN AND THE APPLICABLE ORDINANCES AND RULES OF NEW HANOVER COUNTY, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE DEVELOPER, WE ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. WE WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF NEW HANOVER COUNTY.

SIGNATURE: \_\_\_\_\_  
PRINTED NAME AND TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

#### NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

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

#### CONTACT THESE UTILITIES

NEW HANOVER COUNTY, DEVELOPMENT SERVICES ATTN: BEN ANDREA PH: 910-788-7571 PIEDMONT NATURAL GAS ATTN: CARL PAQUET PH: 910-350-2242 EMERGENCY DIAL 911 POLICE - FIRE - RESCUE	CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER) ATTN: KENT HARRELL PH: 910-332-6674 DUKE ENERGY PROGRESS ATTN: KEVIN LEATHERWOOD PH: 910-602-4304 BELL SOUTH ATTN: STEVE DAYVAULT PH: 910-382-8712 TIME WARNER CABLE PH: 910-763-4638
---	--

**OWNER:**  
NEW HANOVER COUNTY SCHOOLS  
6410 CAROLINA BEACH ROAD  
WILMINGTON, NORTH CAROLINA 28412  
ATTN: LEANNE LAWRENCE (910) 254-4281

**ENGINEER (CIVIL):**  
PARAMOUNTE ENGINEERING, INC.  
122 CINEMA DRIVE  
WILMINGTON, NORTH CAROLINA 28403  
ATTN: ROB BALLAND, P.E. (910) 791-6707

**ARCHITECT:**  
LS3P & ASSOCIATES LTD.  
2528 INDEPENDENCE BLVD., SUITE 200  
WILMINGTON, NORTH CAROLINA 28412  
ATTN: CHARLES BONEY, JR., FAIA (910) 397-3627

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0	GENERAL NOTES
C-2.0	DEMO PLAN
C-2.1	SITE LAYOUT
C-2.2	TREE REMOVAL PLAN
C-2.3	SITE INVENTORY MAP
C-3.0	PH-I EROSION CONTROL PLAN
C-3.1	PH-II EROSION CONTROL PLAN
C-4.0	UTILITY PLAN
C-5.0	LANDSCAPE PLAN
C-6.0 - C-6.7	DETAILS

PREPARED BY:  
**PARAMOUNTE**  
ENGINEERING, INC.  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846  
PROJECT # 15185.PE



COLLEGE PARK  
ELEMENTARY  
SCHOOL

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REVISIONS:		
No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

COVER SHEET

# C-0.0

SOLUTIONS THROUGH LISTENING

SERVICE BY DESIGN

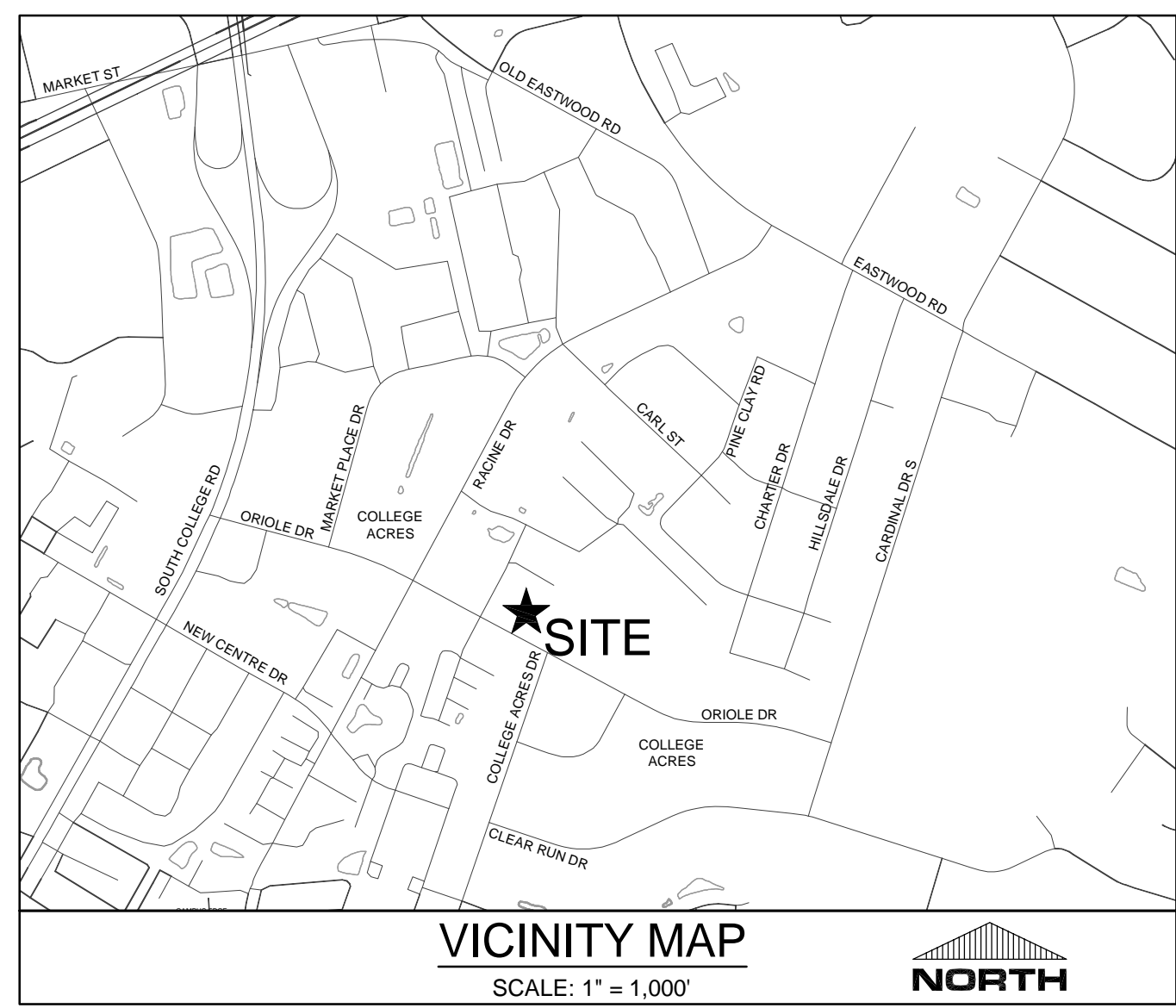
DESIGN DEVELOPMENT

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION









SITE DATA TABULATION

OWNER: NHC BOARD OF EDUCATION  
PROJECT ADDRESS: 5001 ORIOLE DRIVE  
WILMINGTON, NC 28403  
TAX PARCEL IDENTIFICATION #: R05017-003-002-001 (15.45 AC)  
RECORDED DEED BOOK: BK 763 PG 428  
CURRENT ZONING: R-15  
CAMA LAND USE CLASSIFICATION: URBAN  
MAXIMUM ALLOWABLE BUILDING HEIGHT: 35'  
EXISTING LAND USE: ELEMENTARY SCHOOL  
PROPOSED LAND USE: ELEMENTARY SCHOOL

SETBACK STANDARDS

	PROVIDED	REQUIRED
MINIMUM FRONT SETBACK	206 FT. (SOUTH)	30 FT.
MINIMUM SIDE SETBACK	547 FT. (EAST)	50 FT.
MINIMUM SIDE SETBACK	184 FT. (WEST)	50 FT.
MINIMUM REAR SETBACK	64 FT. (NORTH)	50 FT.

SITE INFORMATION

	PROVIDED	REQUIRED
MINIMUM LOT SIZE	673,021 SF (15.45 AC)	15,000 SF (0.34 AC)
DRAINAGE AREA	673,021 SF (15.45 AC)	

	PROVIDED	REQUIRED
PROPOSED IMPERVIOUS AREA	57,772 SF	
TOTAL BUILDING (PROPOSED FOOTPRINT)	7,600 SF	
ON-SITE PARKING & DRIVEWAYS	111,823 SF	
ON-SITE SIDEWALKS	44,094 SF	
FUTURE MOBILE CLASSROOMS & SIDEWALKS	5,695 SF	
PROPOSED PAVED PLAY AREA, SHELTERS	7,115 SF	
FUTURE IMPERVIOUS	5,481 SF	
TOTAL PROPOSED IMP. AREA	239,580 SF (5.50 AC)	

	PROVIDED	REQUIRED
PROPOSED PERCENT IMPERVIOUS	239,580 / 673,021 = 35.7%	
EXISTING PERCENT IMPERVIOUS	145,580 / 673,021 = 21.6%	

BUILDING INFORMATION

	PROVIDED	REQUIRED
CONSTRUCTION TYPE	11B	
NUMBER OF PROPOSED BUILDINGS	1	
PROPOSED BUILDING SF		
1st FLOOR	58,304 SF	
2nd FLOOR	22,897 SF	
TOTAL	81,201 SF	

	PROVIDED	REQUIRED
HEIGHT AT TOP OF 2nd FLOOR	32'-0"	
LOT COVERAGE	8.58% (PROPOSED)	

SITE PARKING

	PROVIDED	REQUIRED
MINIMUM PARKING REQUIRED:	87	
(1 PER TEACHER AND STAFF PERSON, 34 CLASSROOMS, 9 ADMIN OFFICES + 10)		

	PROVIDED	REQUIRED
MAXIMUM PARKING ALLOWABLE:	131 SPACES	
TOTAL PARKING PROVIDED:	120 SPACES	
HANDICAP PARKING REQUIRED:	5 SPACES	
HANDICAP PARKING PROVIDED:	6 SPACES	
BICYCLE PARKING REQUIRED:	15 SPACES	
BICYCLE PARKING PROVIDED:	15 SPACES	

LANDSCAPE CALCULATIONS

	PROVIDED	REQUIRED
REQUIRED FOUNDATION PLANTINGS ((BLDG LENGTH X BLDG HGT) X 12%)		
FRONT (SOUTH):	(263 X 32) X 0.12 = 1,356 SF	
PROVIDED:	1,574 SF	

	PROVIDED	REQUIRED
REAR (NORTH):	(110 X 32) X 0.12 = 422 SF	
PROVIDED:	467 SF	

	PROVIDED	REQUIRED
LEFT SIDE (WEST):	(112 X 32) X 0.12 = 430 SF	
PROVIDED:	447 SF	

	PROVIDED	REQUIRED
REQUIRED STREETYARD BUFFER ((LENGTH OF FRONTAGE - DRIVEWAY) X 12)		
REQUIRED:	(1,314 - 80) X 12 = 14,808 SF	
PROVIDED:	16,038 SF	

UTILITY INFORMATION

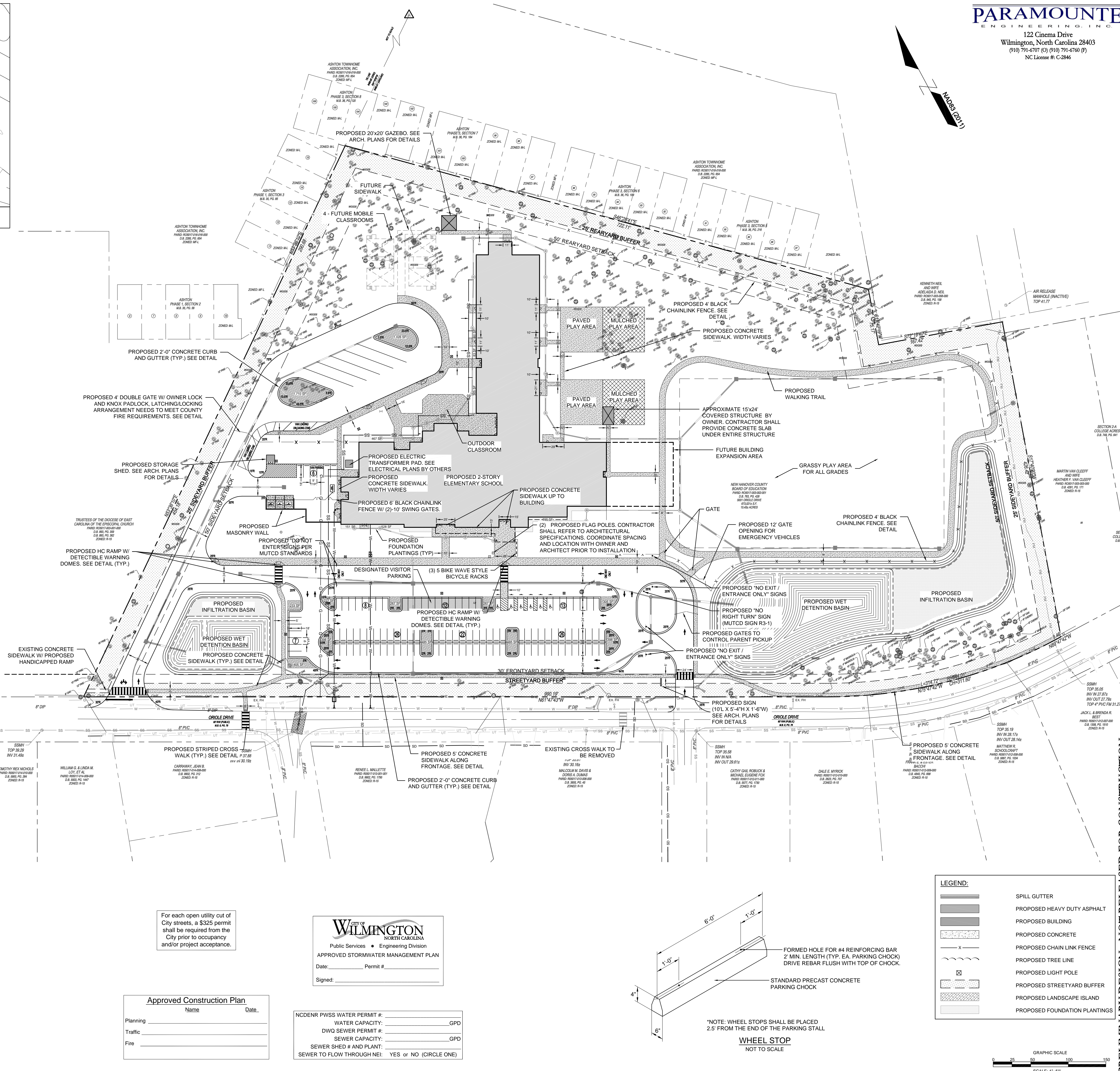
**SANITARY SEWER**  
THIS PROJECT IS PROVIDING A NEW SEWER SERVICE TO AN EXISTING 8-INCH GRAVITY MAIN LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. THIS PROJECT IS PROPOSING A 6-INCH SERVICE AND SANITARY SEWER ALLOCATION IS PROVIDED BY CFPWA.

**WATER**  
A 8-INCH WATER MAIN IS LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. THE PROPOSED BUILDING WILL HAVE A 8-INCH FIRE SERVICE AND A 4-INCH DOMESTIC SERVICE WILL BE CONNECTED TO THE EXISTING 8-INCH WATER MAIN. DOMESTIC WATER ALLOCATION PROVIDED BY CFPWA.

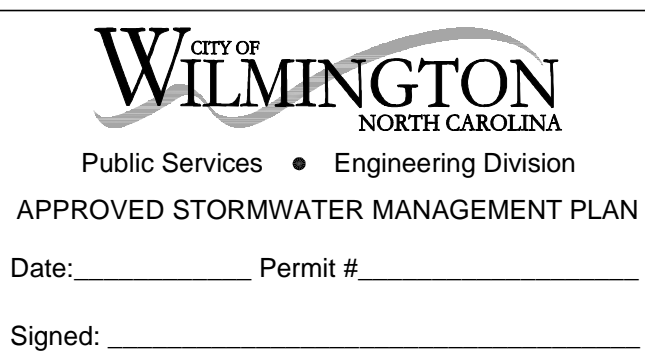
**NATURAL GAS**  
THERE IS AN EXISTING GAS MAIN LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. GAS IS PROVIDED BY PIEDMONT NATURAL GAS.

**FLOOD NOTE**  
THIS TRACT IS LOCATED IN FLOOD ZONE X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO FEMA FLOOD INSURANCE RATE MAP NUMBER 37203114700J. MAP REVISED 04/03/06.

**GATE LOCK NOTE:**  
CONTRACTOR SHALL COORDINATE WITH OWNER TO ENSURE THE PROPOSED GATE CAN RECEIVE THE OWNER PROVIDED PAD LOCK AT ALL LOCATIONS INDICATED ON THE PLAN.



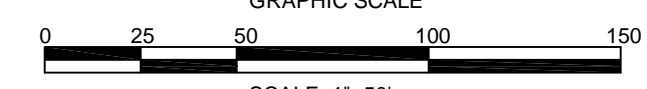
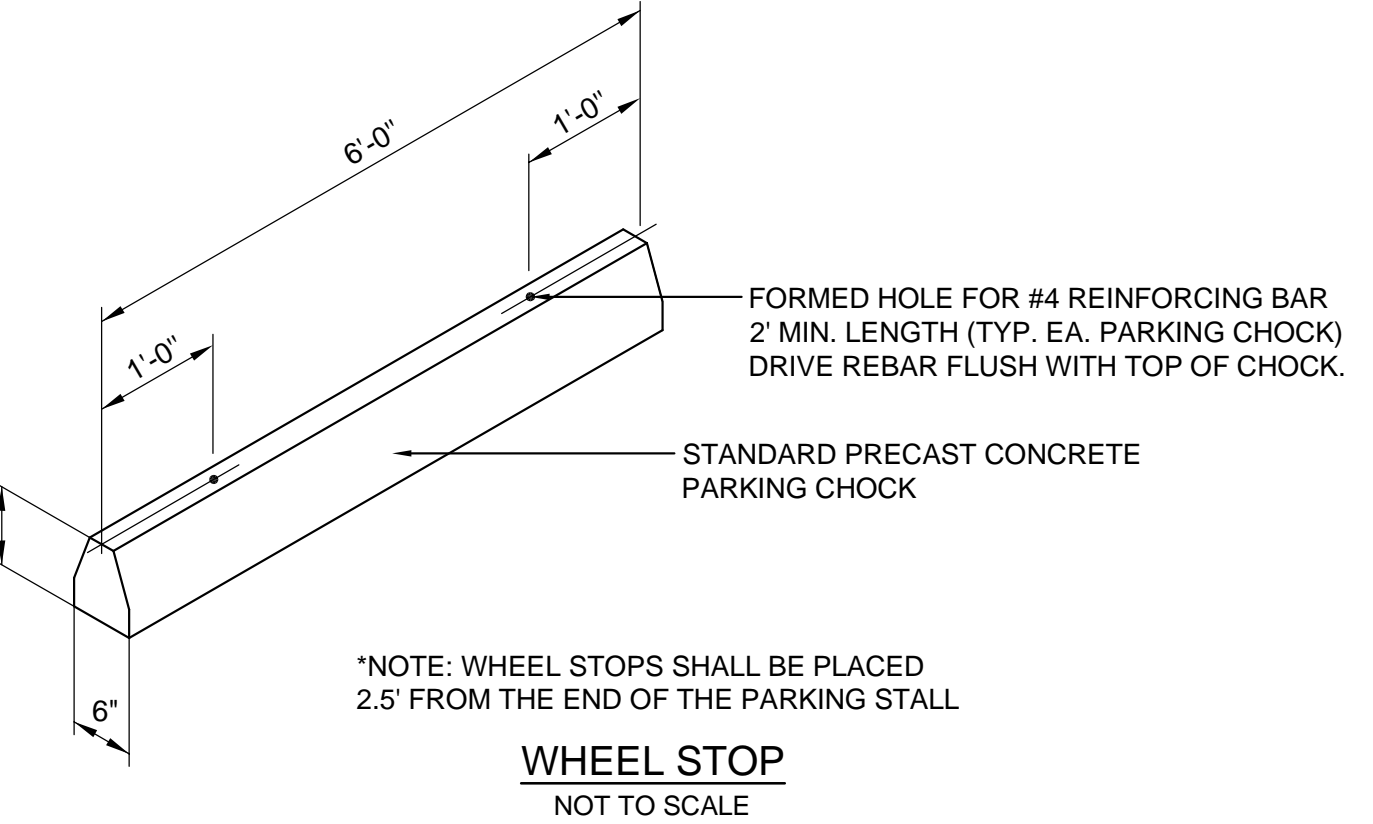
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	

NC DENR PWSS WATER PERMIT #:	
WATER CAPACITY:	_____ GPD
DWQ SEWER PERMIT #:	
SEWER CAPACITY:	_____ GPD
SEWER SHED # AND PLANT:	
SEWER TO FLOW THROUGH NEI:	YES or NO (CIRCLE ONE)

- LEGEND:**
- SPILL GUTTER
  - PROPOSED HEAVY DUTY ASPHALT
  - PROPOSED BUILDING
  - PROPOSED CONCRETE
  - PROPOSED CHAIN LINK FENCE
  - PROPOSED TREE LINE
  - PROPOSED LIGHT POLE
  - PROPOSED STREETYARD BUFFER
  - PROPOSED LANDSCAPE ISLAND
  - PROPOSED FOUNDATION PLANTINGS



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REVISIONS:		
No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

**SITE LAYOUT**

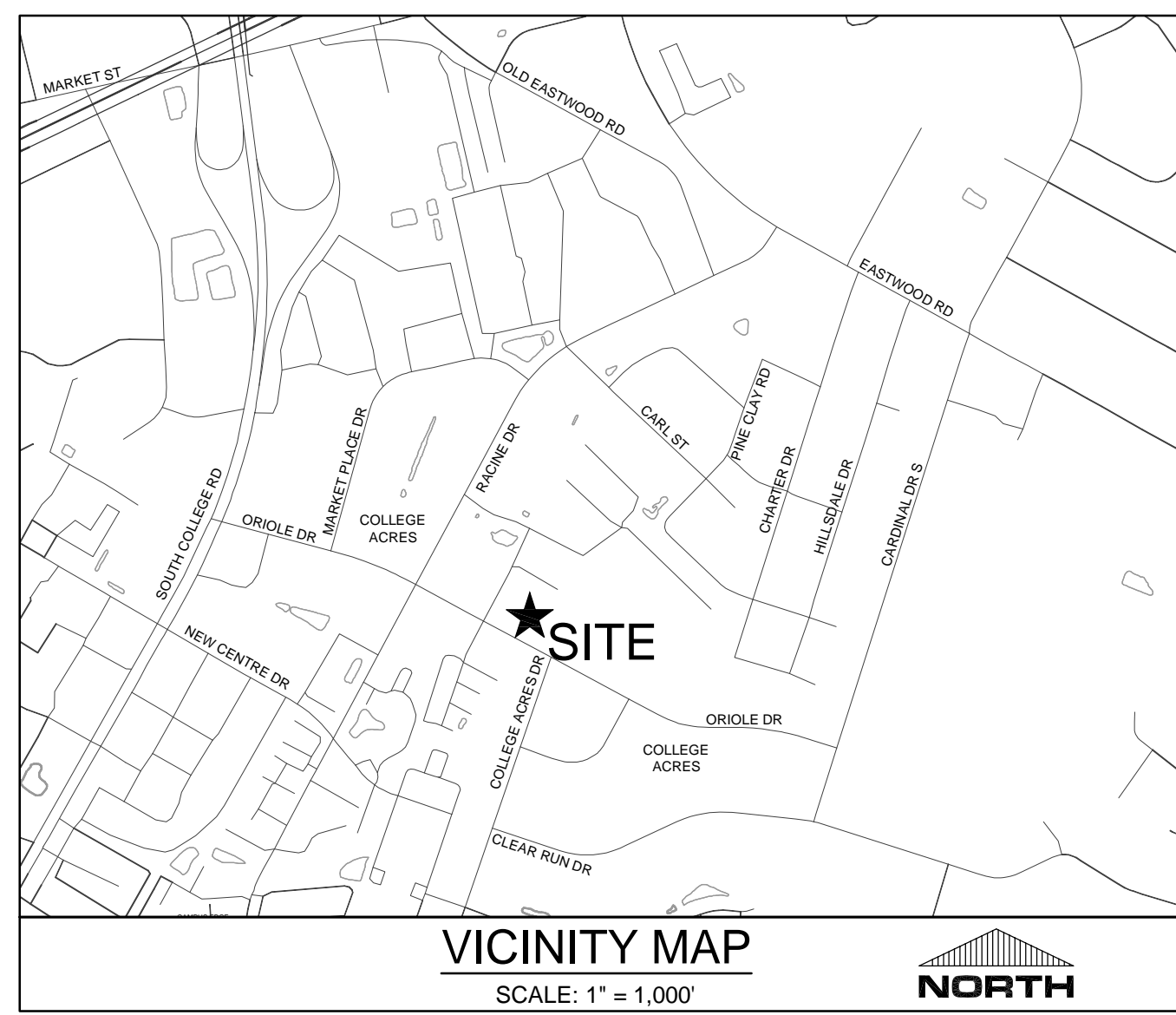
**C-2.1**

SOLUTIONS THROUGH LISTENING

SERVICE BY DESIGN

DESIGN DEVELOPMENT





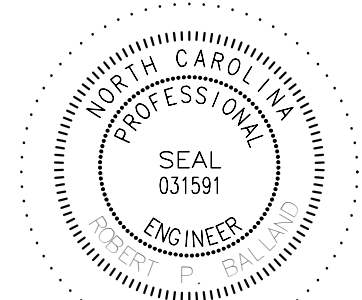
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Wilmington, North Carolina 28403  
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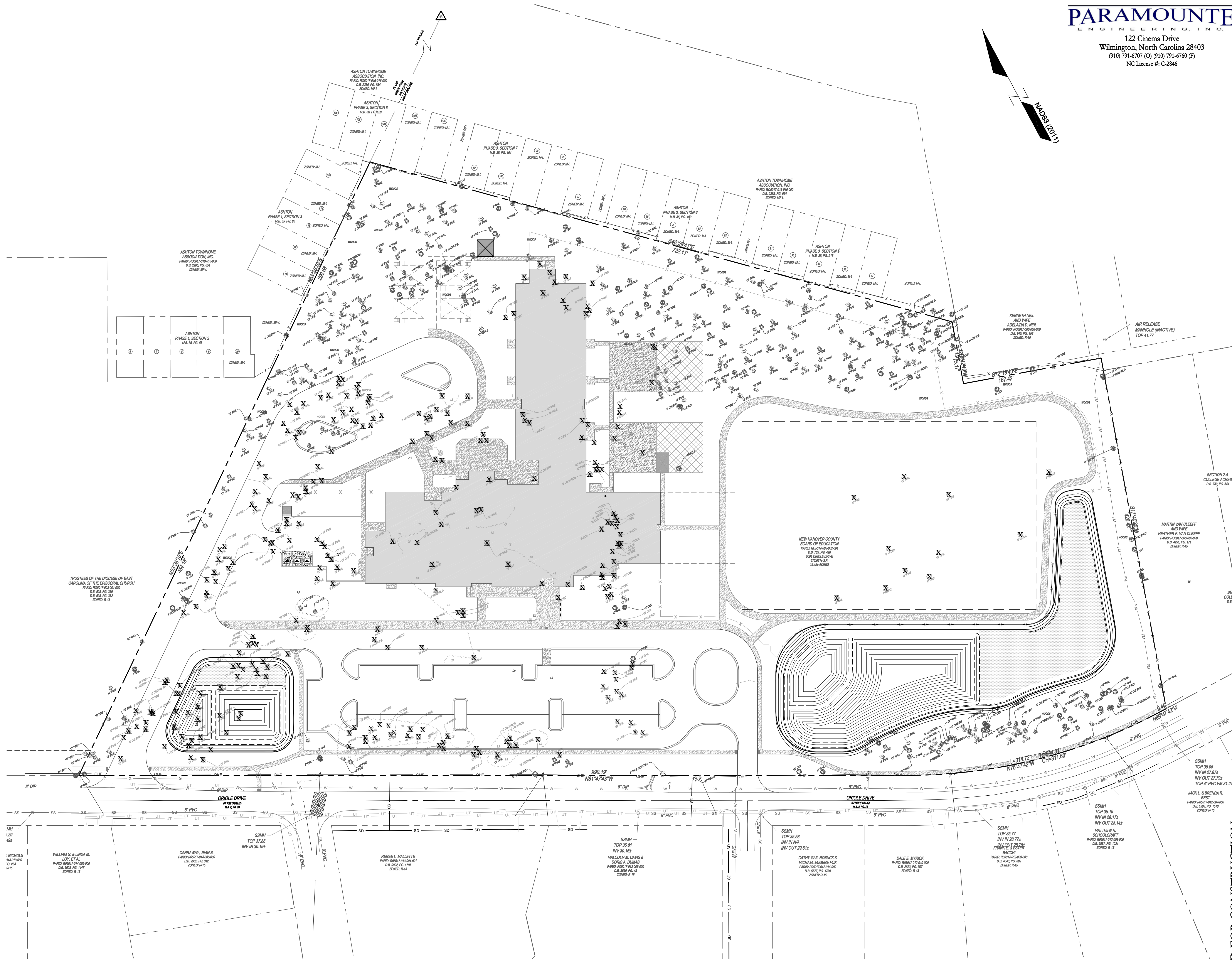
No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

TREE REMOVAL  
PLAN

C-2.2

SOLUTIONS THROUGH LISTENING  
SERVICE BY DESIGN  
DESIGN DEVELOPMENT



Regulated Trees to be Removed				
Size (in.)	Type	Number	Location	Total Caliper Inches
12	Birch	1	In or Near Building Footprint	12
4	Cedar	1	Sidewalk	4
4	Cedar	1	Playground	4
6	Cedar	2	Playground	12
8	Cedar	1	In or Near Building Footprint	8
8	Cedar	2	Playground	16
10	Cedar	1	Playground	10
18	Cedar	1	In or Near Building Footprint	18
2	Cherry	1	Parking Area	2
4	Cherry	1	Parking Area	4
4	Cherry	2	In or Near Building Footprint	8
5	Cherry	2	Parking Area	10
6	Cherry	1	Parking Area	6
6	Cherry	1	Sidewalk	6
4	Dogwood	5	Parking Area	20
4	Dogwood	1	Stormwater Pond	4
6	Dogwood	1	Sidewalk	6
6	Dogwood	2	In or Near Building Footprint	12
4	Magnolia	1	Parking Area	4
5	Magnolia	1	Parking Area	5
2	Maple	2	Parking Area	4
4	Maple	1	Parking Area	4
4	Maple	1	Playground	4
5	Maple	1	Parking Area	5
10	Maple	1	In or Near Building Footprint	10
12	Maple	1	In or Near Building Footprint	12
Myrtle	11	Parking Area	0	
Myrtle	11	In or Near Building Footprint	0	
Myrtle	7	Sidewalk	0	
8	Oak	3	Parking Area	24
8	Oak	2	Stormwater Pond	16
8	Oak	1	In or Near Building Footprint	8
9	Oak	1	Parking Area	9
9	Oak	1	In or Near Building Footprint	9
10	Oak	3	Parking Area	30
10	Oak	1	Sidewalk	10
10	Oak	1	Stormwater Pond	10
12	Oak	2	Parking Area	24
12	Oak	4	In or Near Building Footprint	48
12	Oak	1	Playground	12
18	Oak	1	In or Near Building Footprint	18
12	Pine	66	Parking Area	792
12	Pine	23	Stormwater Pond	276
12	Pine	7	In or Near Building Footprint	84
12	Pine	1	Sidewalk	12
12	Pine	1	Playground	12
13	Pine	1	Parking Area	13
14	Pine	6	Parking Area	84
14	Pine	1	Stormwater Pond	14
14	Pine	2	In or Near Building Footprint	28
15	Pine	15	Parking Area	225
15	Pine	4	Stormwater Pond	60
15	Pine	4	In or Near Building Footprint	60
15	Pine	2	Playground	30
15	Pine	1	Sidewalk	15
16	Pine	6	Parking Area	96
16	Pine	1	Stormwater Pond	16
16	Pine	2	In or Near Building Footprint	32
17	Pine	3	Parking Area	51
17	Pine	1	In or Near Building Footprint	17
18	Pine	2	Parking Area	36
18	Pine	4	In or Near Building Footprint	72
18	Pine	2	Playground	36
20	Pine	3	Parking Area	60
6	Poplar	1	Parking Area	6
4	Tree	1	In or Near Building Footprint	4
4	Tree	1	Playground	4
5	Tree	2	In or Near Building Footprint	10
6	Tree	1	In or Near Building Footprint	6
15	Tree	1	Sidewalk	15
Yucca	8	In or Near Building Footprint	0	
Yucca	2	Parking Area	0	
Total # of Trees:	262	Total Caliper Inches:	2606	

Significant Trees to be Removed				
Size (in.)	Type	Number	Location	Total Caliper Inches
8	Cherry	3	Parking Area	24
10	Cherry	1	In or Near Building Footprint	10
8	Dogwood	3	Parking Area	24
8	Dogwood	4	In or Near Building Footprint	32
10	Dogwood	1	Parking Area	10
15	Dogwood	1	In or Near Building Footprint	15
30	Holly	1	Parking Area	30
8	Magnolia	1	In or Near Building Footprint	8
15	Magnolia	1	In or Near Building Footprint	15
24	Oak	1	In or Near Building Footprint	24
24	Pine	1	Parking Area	24
24	Pine	1	Playground	24
Total # of Trees:	19	Total Caliper Inches:	240	

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

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

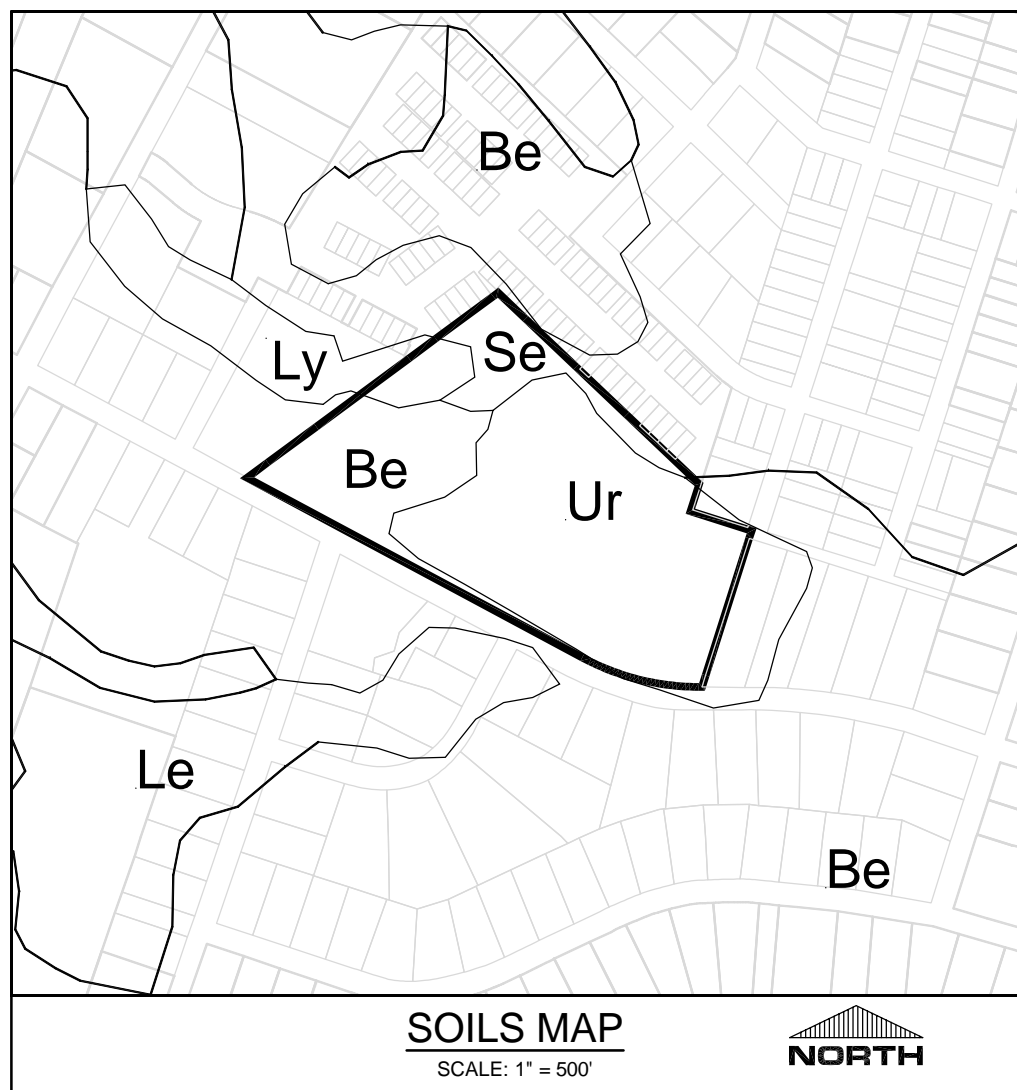
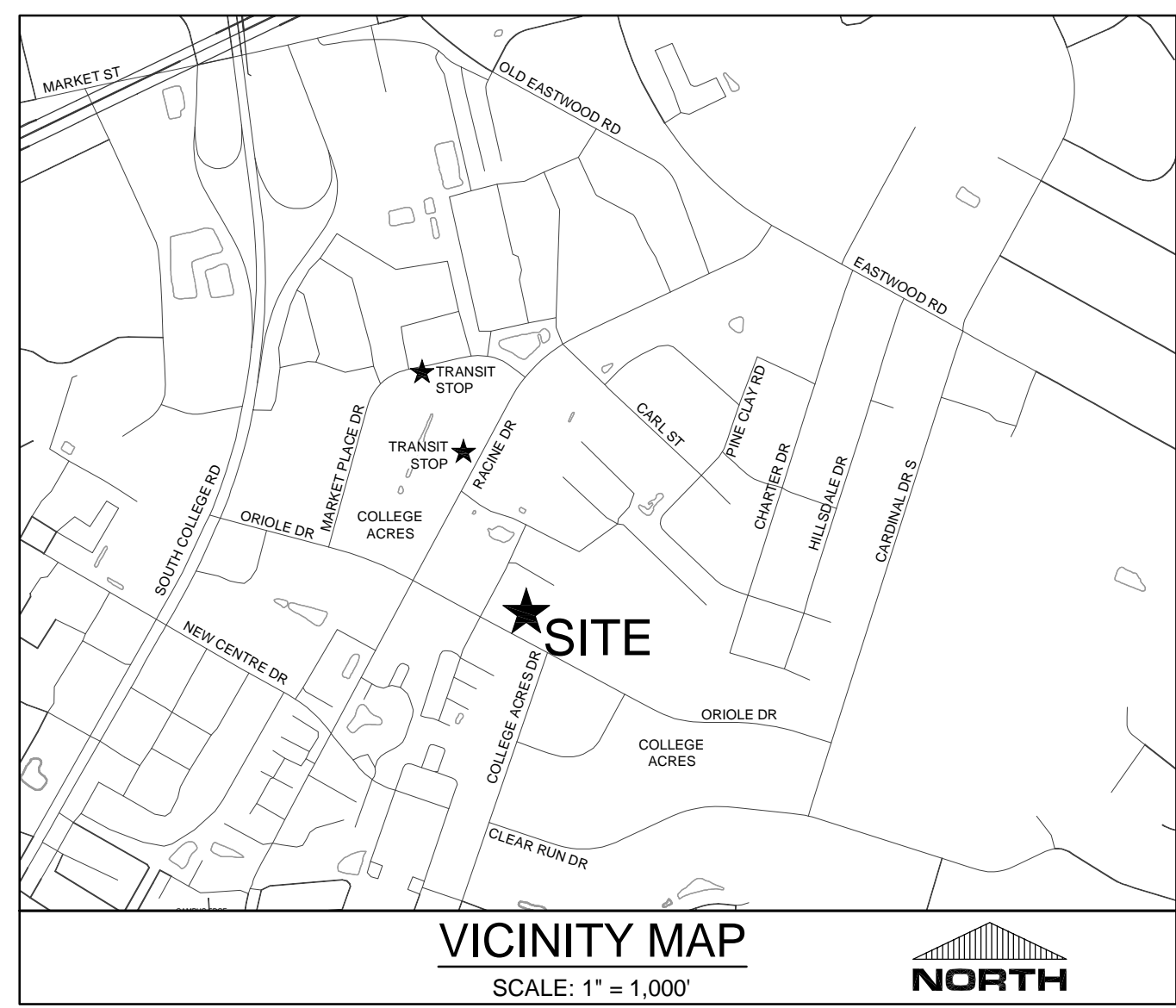
Approved Construction Plan  
Name Date  
Planning  
Traffic  
Fire

NC DENR PWSS WATER PERMIT #:  
WATER CAPACITY: GPD  
DWQ SEWER PERMIT #:  
SEWER CAPACITY: GPD  
SEWER SHED # AND PLANT:  
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

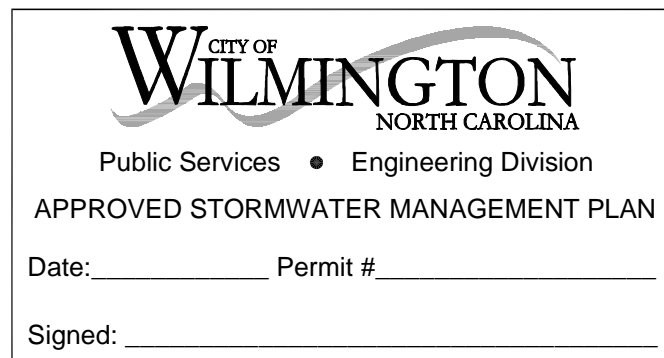
LEGEND:  
X TREE PROTECTION FENCING  
X EXISTING TREE TO BE REMOVED

GRAPHIC SCALE  
SCALE: 1" = 50'





SITE INVENTORY DATA	
1. PREPARER OF THE PLAN:	PARAMOUNTE ENGINEERING 5911 CLEANDER DRIVE, SUITE 201 WILMINGTON, NC 28403
2. APPLICANT NAME:	NHC BOARD OF EDUCATION
3. SITE ADDRESS:	5001 ORIOLE DRIVE WILMINGTON, NC 28403
4. PROPERTY OWNER:	CITY OF WILMINGTON
5. DEVELOPER:	NHC BOARD OF EDUCATION
6. PROPERTY BOUNDARY:	SEE PLAN
7. ZONING:	R-15
8. ADJACENT PROPERTY INFORMATION (OWNER AND ZONING):	SEE PLAN
9. VICINITY MAP:	SEE MAP ABOVE
10. TOPOGRAPHY:	SEE PLAN
11. 100 YEAR FLOOD PLAIN BOUNDARY:	SITE IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN
12. LOCATION OF EXISTING DITCHES, CREEKS, AND STREAMS:	SEE PLAN
13. SOILS:	BAYMEADE (BE) LYNN HAVEN (LY) SEAGATE (SE) URBAN (UR) (SEE SOILS MAP ABOVE)
14. CAMA AEC & ASSOCIATED SETBACKS:	N/A
15. CAMA LAND CLASSIFICATION:	URBAN
16. CONSERVATION RESOURCES:	N/A
17. LOCAL, STATE, OR FEDERAL HISTORIC OR ARCHAEOLOGICAL SITE:	N/A
18. LOCATION OF CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS:	N/A
19. SQUARE FOOTAGE OF FORESTED AREA, HABITAT, AND DOMINANT SPECIES:	N/A
20. SECTION 404 WETLANDS AND SECTION 10 WATERS:	N/A
21. PROTECTED SPECIES OR HABITAT:	N/A
22. THOROUGHFARES, BIKE ROUTES, SIDEWALKS, TRANSIT FACILITIES (EXISTING OR PROPOSED):	SEE PLAN & VICINITY MAP



Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

NCDENR PWSS WATER PERMIT #:

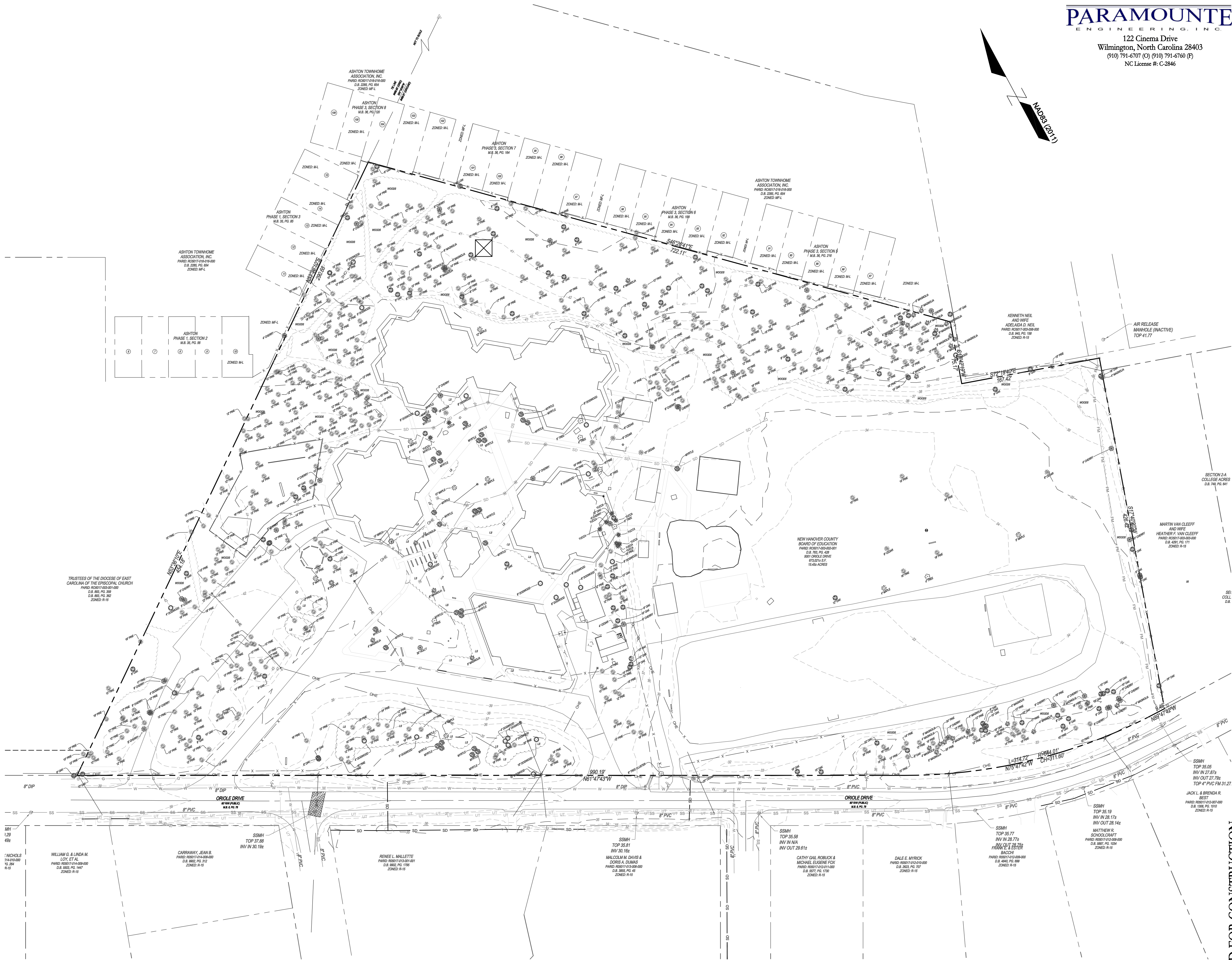
WATER CAPACITY: GPD

DWQ SEWER PERMIT #:

SEWER CAPACITY: GPD

SEWER SHED # AND PLANT:

SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)



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



COLLEGE PARK  
ELEMENTARY  
SCHOOL

LS3P

LS3P ASSOCIATES LTD.  
2528 INDEPENDENCE BLVD., SUITE 200  
WILMINGTON, NORTH CAROLINA 28412  
TEL. 910.790.9901 FAX 910.790.3111  
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REVISIONS:

No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

SITE INVENTORY  
MAP

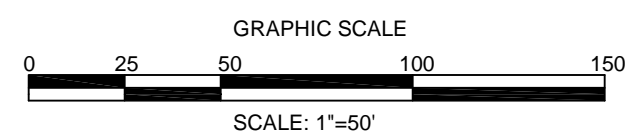
C-2.3

SOLUTIONS THROUGH LISTENING

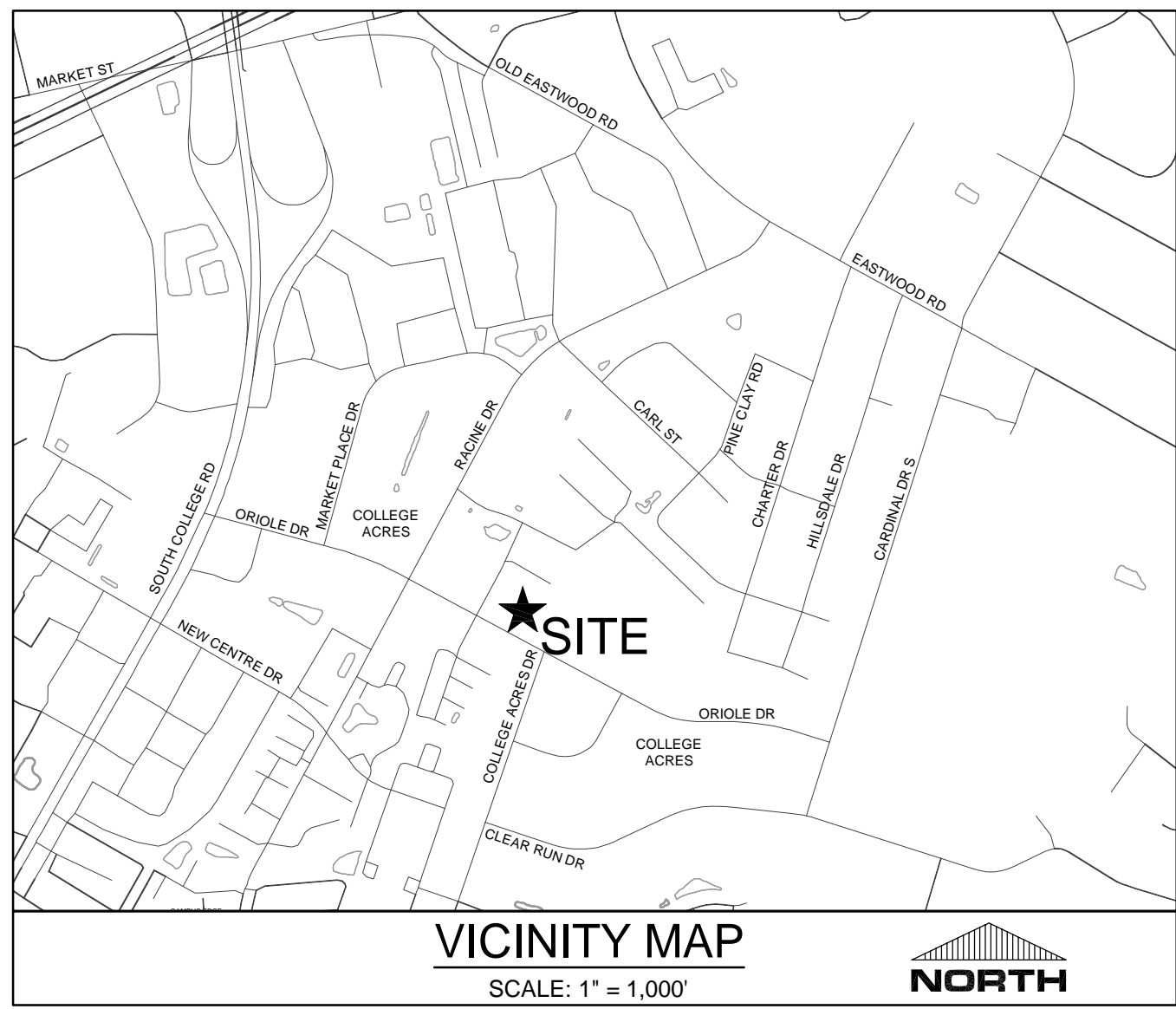
SERVICE BY DESIGN

DESIGN DEVELOPMENT

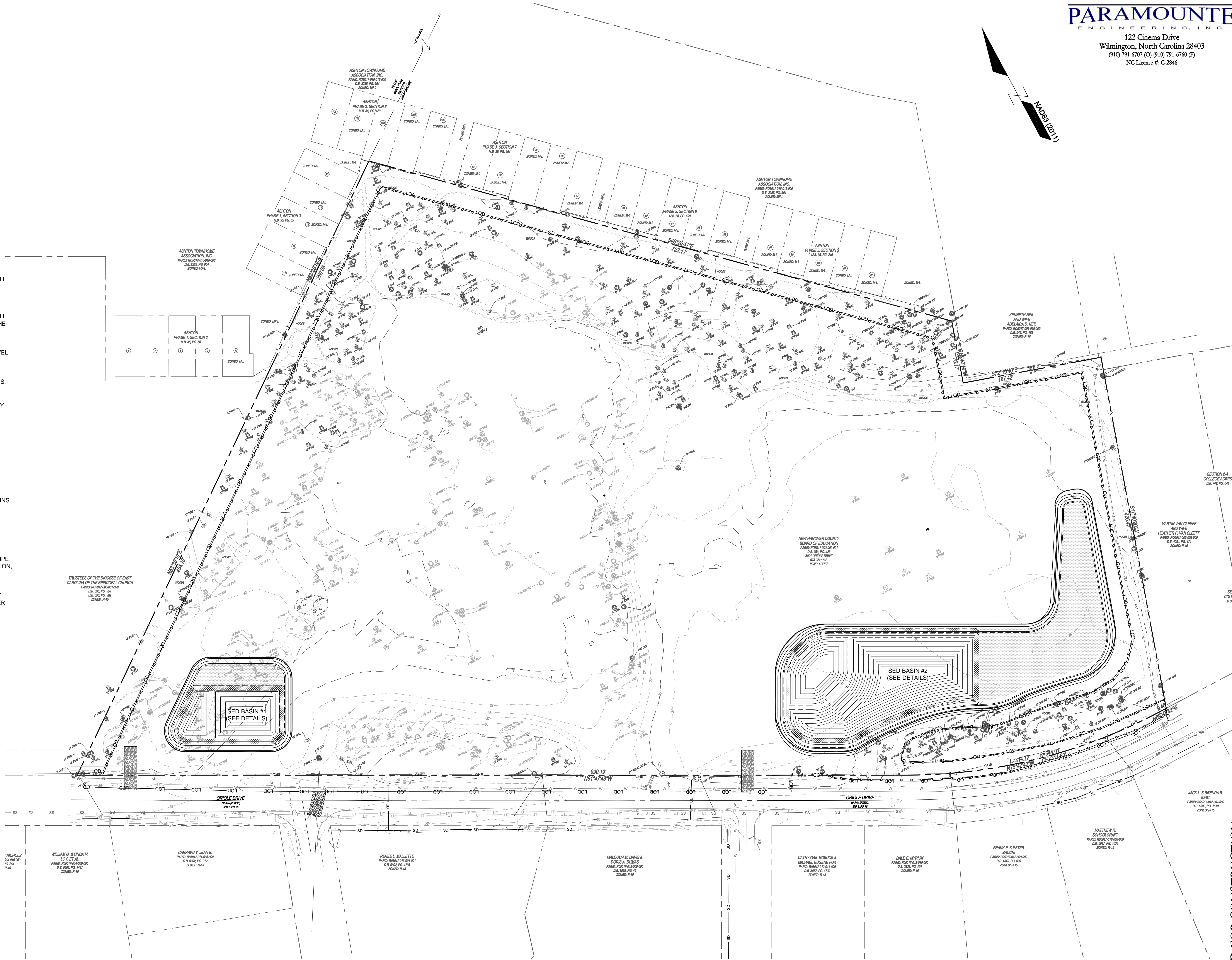
PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION





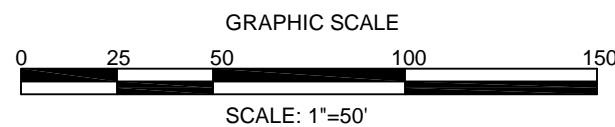


- ASPHALT AREA NOTE:**
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.
- BUILDING PAD NOTE:**
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.
- STORMWATER NOTE:**
1. THIS PROJECT DRAINS TO A PROPOSED ON-SITE STORM WATER DETENTION SYSTEM WITH A LEVEL SPREADER AND VEGETATED FILTER STRIP AND A SECONDARY INFILTRATION SYSTEM.
  2. ONCE SITE IS STABILIZED AND SEDIMENT BASIN IS CONVERTED TO WET DETENTION BASIN, CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM BASIN AND RESTORE TO DESIGN ELEVATIONS.
- GENERAL NOTES:**
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
  2. THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE PARKING LOT IS PAVED.
  3. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AND NEW ASPHALT AREAS TO MATCH PROPOSED GRADES.
  4. ALL PROPOSED SPOT ELEVATIONS SHOWN IN THE PARKING LOT ARE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB @ GUTTER FOR CURB SECTIONS, UNLESS NOTED OTHERWISE.
  5. ALL ROOF DRAINS SHALL BE DIRECTED TOWARDS ON-SITE COLLECTION SYSTEM. NO ROOF DRAINS SHALL BE DIRECTED OFF-SITE WITHOUT ENTERING THE ON-SITE COLLECTION FIRST.
  6. ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
  7. THE CONTRACTOR SHALL USE EITHER RCP (CL. III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 HP STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.
  8. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEERING REPORT OF THE NORTHEAST ELEMENTARY SCHOOL PREPARED BY S&ME, PROJECT NUMBER 1306-14-044, AND DATED OCTOBER 29, 2014 FOR SITE CONSTRUCTION RECOMMENDATIONS WHICH IS INCLUDED IN THE TECHNICAL SPECIFICATIONS.
- NCDOT SEDIMENT BASIN NOTES:**
1. SITE CONTRACTOR SHALL INSTALL SEDIMENT BASIN #2 AS SHOWN ON THE PHASE I EROSION CONTROL PLAN.
  2. SITE CONTRACTOR SHALL EXTEND ROADWAY CULVERT INTO SEDIMENT BASIN.
  3. SITE CONTRACTOR SHALL PUMP WATER FROM SEDIMENT BASIN #2 TO PROPOSED DITCH ALONG WESTERN PROPERTY LINE UNTIL OUTLET STRUCTURE AND STORM SEWER ARE INSTALLED PER SHEET C-3.1.
  4. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING WATER FROM BACKING UP OUT OF THE DITCHES AND INTO EXISTING PROPERTY ACROSS EDGEWATER CLUB ROAD DURING CONSTRUCTION AND UNTIL #3 IS COMPLETED ABOVE.



**LEGEND:**

- 16 — EXISTING CONTOUR
- 29 — PROPOSED CONTOUR
- INLET PROTECTION
- LOD — LIMITS OF DISTURBANCE
- S — SILT FENCE



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

PHASE I  
EROSION  
CONTROL  
PLAN

C-3.0

SOLUTIONS THROUGH LISTENING  
SERVICE BY DESIGN  
DESIGN DEVELOPMENT

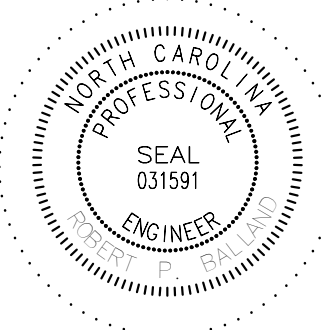
**PARAMOUNTE**  
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(910) 791-6707 (F) (910) 791-6760 (F)  
NC License #: C-2846



COLLEGE PARK  
ELEMENTARY  
SCHOOL

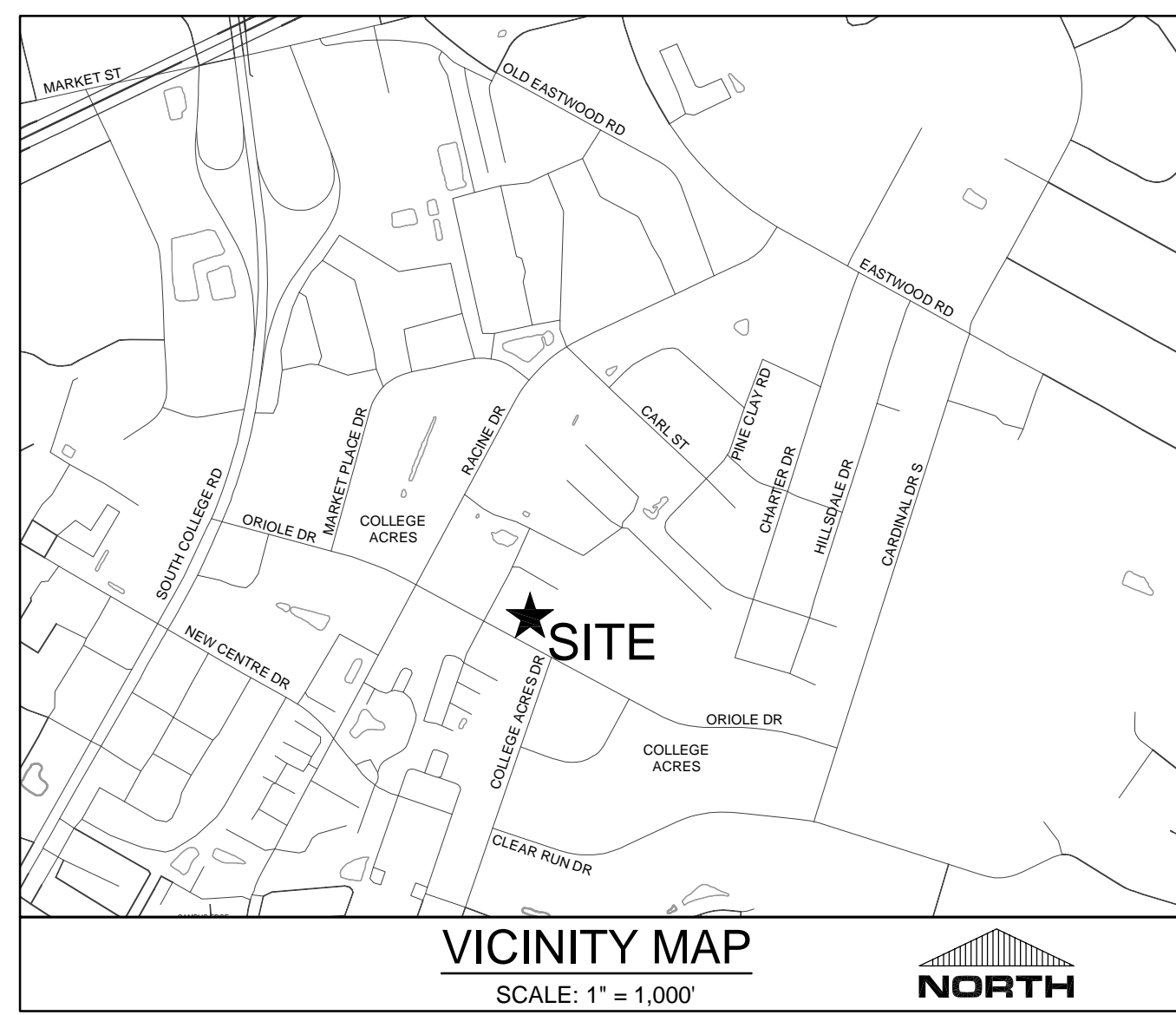
**LS3P**

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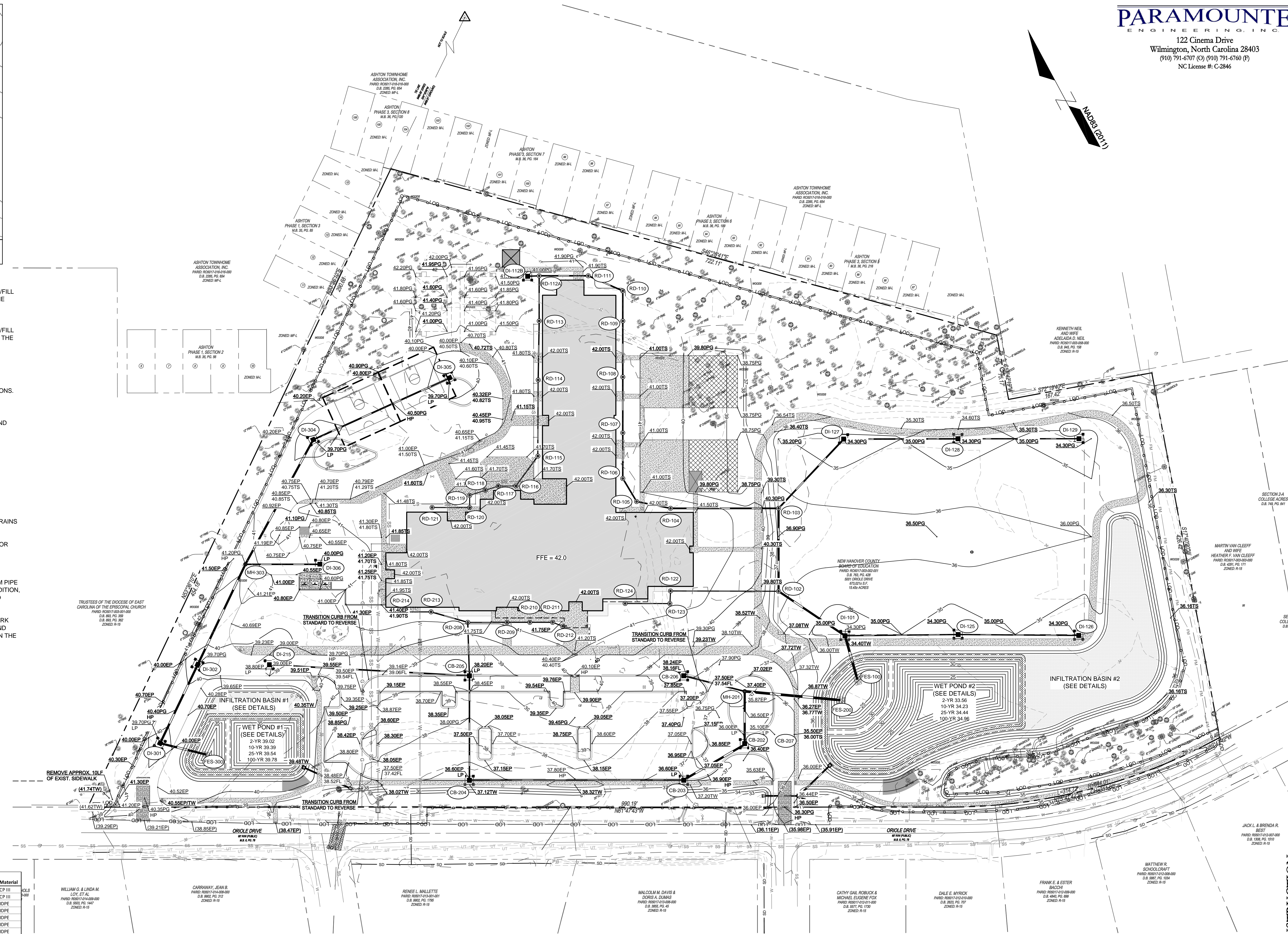


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- ASPHALT AREA NOTE:**
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- BUILDING PAD NOTE:**
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.
- STORMWATER NOTE:**
1. THIS PROJECT DRAINS TO A PROPOSED ON-SITE STORM WET DETENTION BASIN.
  2. ONCE SITE IS STABILIZED AND SEDIMENT BASIN IS CONVERTED TO WET DETENTION BASIN, CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM BASIN AND RESTORE TO DESIGN ELEVATIONS.
- GENERAL NOTES:**
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  7. THE CONTRACTOR SHALL USE EITHER RCP (CL. III) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 WT STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.
  8. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEERING REPORT FOR COLLEGE PARK ELEMENTARY SCHOOL REPLACEMENT PREPARED BY S&ME, PROJECT NUMBER 1306-15-028, AND DATED AUGUST 25, 2015 FOR SITE CONSTRUCTION RECOMMENDATIONS WHICH IS INCLUDED IN THE TECHNICAL SPECIFICATIONS.



**STORM SCHEDULE**

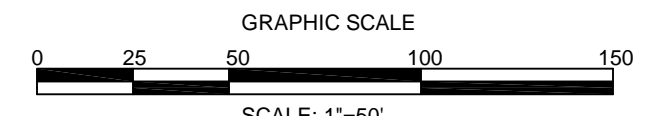
Upstream Node	Downstream Node	Diameter (in)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
DI-101	FES-100	30	27.85	27.50	48	0.72	34.95	34.95	RCP III
RD-102	DI-101	24	28.99	28.35	92	0.70	36.29	34.95	RCP III
RD-103	RD-102	24	29.66	28.99	95	0.70	36.40	36.29	HDPE
RD-104	RD-103	18	32.57	31.64	124	0.75	41.80	36.40	HDPE
RD-105	RD-104	15	33.11	32.82	40	0.74	41.47	41.80	HDPE
RD-106	RD-105	15	33.35	33.11	31	0.75	41.71	41.47	HDPE
RD-107	RD-106	15	33.74	33.35	52	0.75	41.71	41.71	HDPE
RD-108	RD-107	15	34.22	33.74	64	0.75	41.78	41.71	HDPE
RD-109	RD-108	15	34.70	34.22	64	0.74	41.84	41.78	HDPE
RD-110	RD-109	15	34.96	34.70	35	0.75	41.84	41.84	HDPE
RD-111	RD-110	15	35.28	34.96	43	0.75	41.88	41.84	HDPE
RD-112A	RD-111	15	35.71	35.28	56	0.75	41.42	41.88	HDPE
DI-112B	RD-112A	12	36.06	35.96	13	0.75	41.30	41.42	HDPE
RD-113	RD-112A	12	36.35	35.96	52	0.75	41.90	41.42	HDPE
RD-114	RD-113	12	36.85	36.35	68	0.75	41.97	41.90	HDPE
RD-115	RD-114	12	37.51	36.85	87	0.75	41.90	41.87	HDPE
RD-116	RD-115	12	37.83	37.51	43	0.75	41.93	41.90	HDPE
RD-117	RD-116	8	38.31	38.16	20	0.74	41.93	41.93	HDPE
RD-118	RD-117	8	38.43	38.31	16	0.75	41.93	41.93	HDPE
RD-119	RD-118	8	38.57	38.43	19	0.75	41.90	41.92	HDPE
RD-120	RD-119	8	38.68	38.57	14	0.75	41.99	41.90	HDPE
RD-121	RD-120	8	39.00	38.68	43	0.75	41.94	41.99	HDPE
RD-122	RD-121	8	37.68	35.20	124	1.99	42.00	36.29	HDPE
RD-123	RD-122	8	37.97	37.68	15	2.01	41.50	42.00	HDPE
RD-124	RD-123	8	39.00	37.97	51	2.00	42.00	41.50	HDPE
DI-125	DI-101	12	30.41	29.76	130	0.50	34.30	34.95	HDPE
DI-126	DI-125	12	31.10	30.41	139	0.50	34.37	34.30	HDPE
RD-127	DI-103	18	30.49	30.16	109	0.30	34.30	36.40	HDPE
DI-128	DI-127	15	31.18	30.74	131	0.30	34.30	34.30	HDPE
DI-129	DI-128	12	31.80	31.38	139	0.30	34.41	34.30	HDPE
MH-201	FES-200	30	29.83	28.00	106	1.72	37.28		RCP III
CB-202	MH-201	24	30.58	30.33	50	0.51	36.52	37.28	RCP III
CB-203	CB-202	24	31.02	30.58	87	0.50	36.52	35.92	RCP III
CB-204	CB-203	18	32.75	31.52	246	0.50	36.52	36.52	RCP III
CB-205	CB-204	15	33.60	33.00	120	0.50	38.12	36.52	RCP III
CB-206	MH-201	15	33.00	32.64	72	0.50	38.20	37.28	RCP III
CB-207	CB-205	15	31.50	31.33	34	0.50	35.10	35.92	RCP III
RD-208	CB-205	12	34.81	34.50	61	0.50	41.12	38.12	HDPE
RD-209	RD-208	8	35.36	35.14	45	0.50	41.21	41.12	HDPE
RD-210	RD-209	8	35.49	35.36	26	0.50	41.62	41.21	HDPE
RD-211	RD-210	8	35.63	35.49	26	0.50	41.74	41.62	HDPE
RD-212	RD-211	8	35.69	35.63	12	0.50	41.65	41.74	HDPE
RD-213	RD-212	12	35.03	34.81	44	0.50	41.81	41.12	HDPE
RD-214	RD-213	8	35.53	35.36	34	0.50	41.71	41.81	HDPE
DI-215	CB-205	15	34.75	33.60	230	0.50	38.80	38.12	RCP III
DI-301	FES-300	24	33.75	33.50	50	0.50	39.71		RCP III
DI-302	DI-301	24	34.05	33.75	100	0.30	39.70	39.71	RCP III
MH-303	DI-302	24	34.44	34.05	128	0.30	41.20	39.70	RCP III
DI-304	MH-303	24	34.92	34.44	163	0.30	39.70	41.20	RCP III
DI-305	DI-304	18	35.94	35.42	172	0.30	39.71	39.70	RCP III
DI-306	MH-303	15	36.00	35.75	86	0.30	40.00	41.20	RCP III

**NOTATION:**

- CI = CURB INLET
- DI = DROP INLET
- CO = CLEANOUT
- DDI = DOUBLE DROP INLET
- MH = STORM DRAIN MANHOLE
- RD = ROAD DRAIN CLEANOUT
- FEE = FINISHED FLOOR ELEVATION
- BPE = BUILDING PAD ELEVATION

**LEGEND:**

- 16 = EXISTING CONTOUR
- 29 = PROPOSED CONTOUR
- EG-25.05 = EXISTING SPOT ELEVATION
- PG-25.05 = PROPOSED EDGE OF PAVEMENT
- EP-25.05 = PROPOSED EDGE OF PAVEMENT
- SW-25.05 = PROPOSED SIDEWALK ELEVATION
- TC-25.05 = PROPOSED TOP OF CURB ELEVATION
- INLET PROTECTION
- LIMITS OF DISTURBANCE
- SILT FENCE
- DRAINAGE FLOW PATH
- DRAINAGE INLET LABEL
- SPILL GUTTER



**PARAMOUNTE ENGINEERING, INC.**  
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**NHCS**  
Reach, Equip, Achieve

**COLLEGE PARK ELEMENTARY SCHOOL**

**LS3P**

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WILMINGTON, NORTH CAROLINA 28412  
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**REVISIONS:**

No.	Description	Date

**PROJECT:** 15185.PE  
**DATE:** OCTOBER 19, 2016  
**DRAWN BY:** RPB  
**CHECKED BY:** RPB

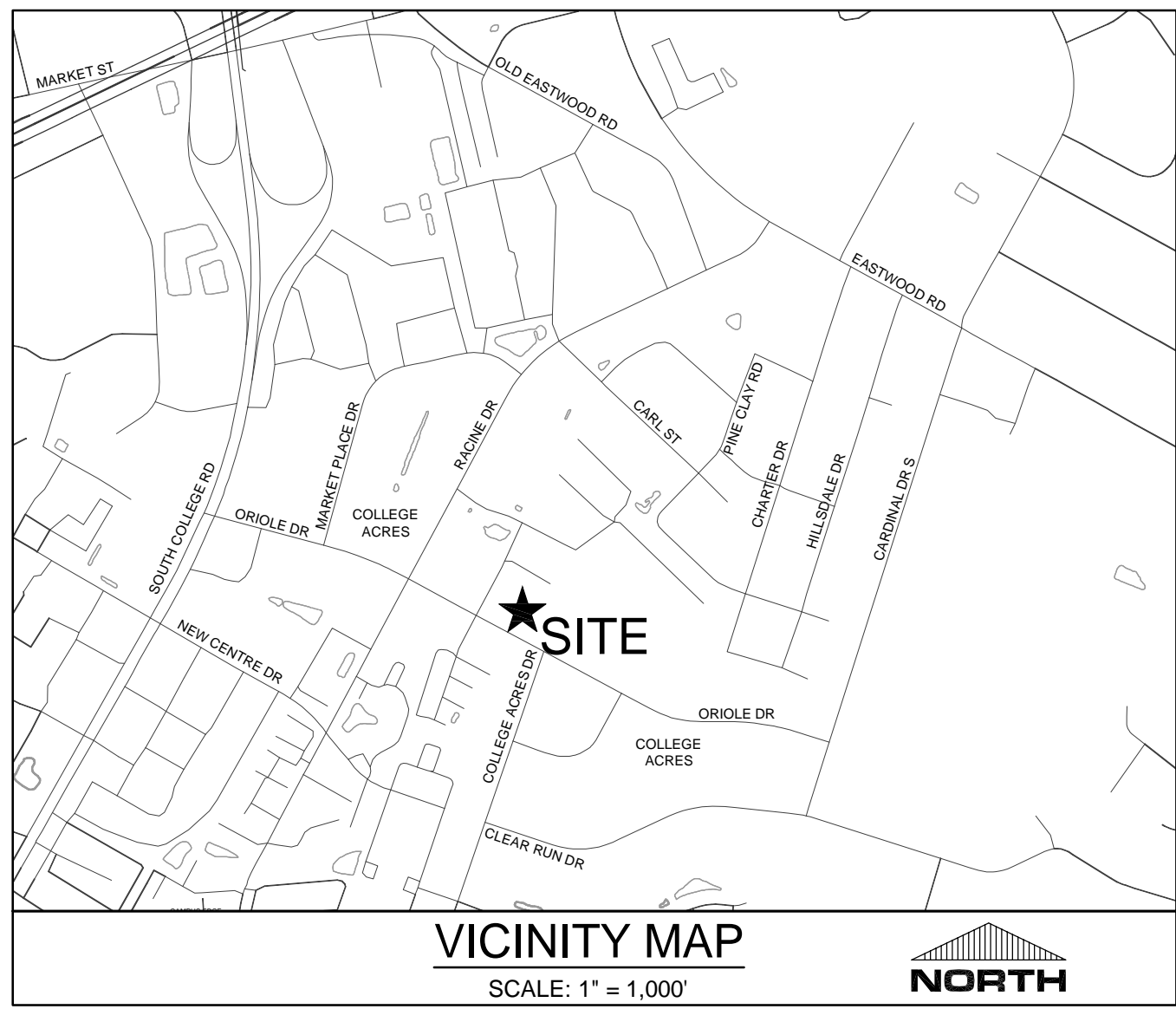
**GRADING, DRAINAGE & PHASE II EROSION CONTROL PLAN**

**C-3.1**

SOLUTIONS THROUGH LISTENING  
SERVICE BY DESIGN

**DESIGN DEVELOPMENT**





SITE DATA TABULATION

OWNER: NHC BOARD OF EDUCATION  
PROJECT ADDRESS: 5001 ORIOLE DRIVE  
WILMINGTON, NC 28403  
TAX PARCEL IDENTIFICATION #: R05017-003-002-001 (15.42 AC)  
RECORDED DEED BOOK: BK. PG.  
CURRENT ZONING: R-15  
CAMA LAND USE CLASSIFICATION: URBAN  
MAXIMUM ALLOWABLE BUILDING HEIGHT: 35'  
EXISTING LAND USE: ELEMENTARY SCHOOL  
PROPOSED LAND USE: ELEMENTARY SCHOOL

UTILITY INFORMATION

SANITARY SEWER  
THIS PROJECT IS PROVIDING A NEW SEWER SERVICE TO AN EXISTING 8-INCH GRAVITY MAIN LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. THIS PROJECT IS PROPOSING A 6-INCH SERVICE AND SANITARY SEWER ALLOCATION IS PROVIDED BY CFPUA.

WATER  
A 8-INCH WATER MAIN IS LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. THE PROPOSED BUILDING WILL HAVE A 8-INCH FIRE SERVICE AND A 4-INCH DOMESTIC SERVICE WILL BE CONNECTED TO THE EXISTING 8-INCH WATER MAIN. DOMESTIC WATER ALLOCATION PROVIDED BY CFPUA.

NATURAL GAS  
THERE IS AN EXISTING GAS MAIN LOCATED WITHIN THE ORIOLE DRIVE RIGHT OF WAY. GAS IS PROVIDED BY PIEDMONT NATURAL GAS.

FLOOD NOTE  
THIS TRACT IS LOCATED IN FLOOD ZONE X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO FEMA FLOOD INSURANCE RATE MAP NUMBER 37203114700J, MAP REVISED 04/03/06.

SURVEY DATUM

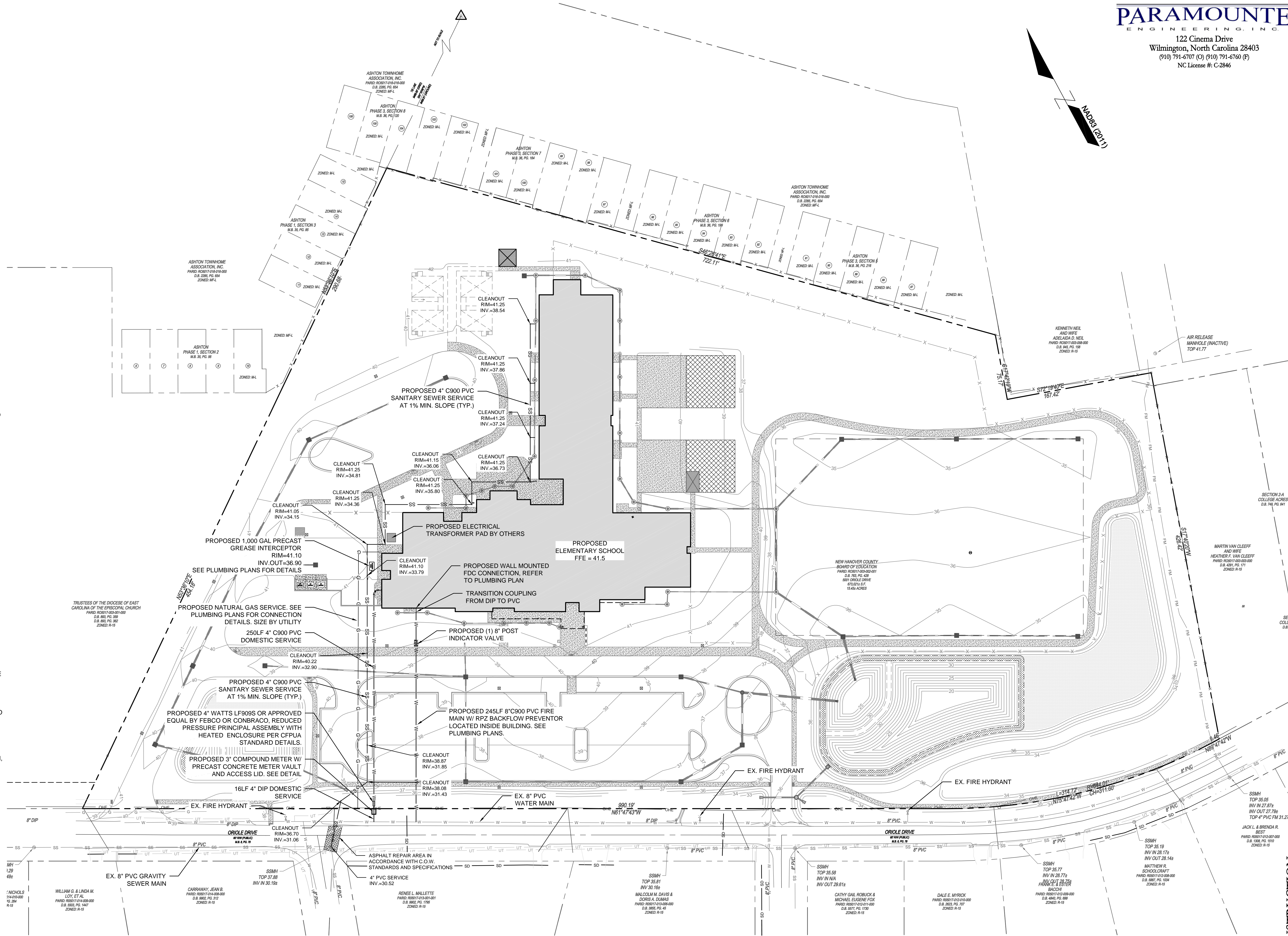
HORIZONTAL CONTROL: NAD 83-2011  
VERTICAL CONTROL: NAVD 88

UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)

1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
3. CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
4. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
5. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.

FIRE & LIFE SAFETY NOTES:

1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION
4. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
5. UNDERGROUND FIRE LINE & PRIVATE WATER MAINS MUST BE PERMITTED & INSPECTED BY NEW HANOVER COUNTY FIRE SERVICES FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING.
6. CONSTRUCTION TYPE - IIB ELEMENTARY SCHOOL (SPRINKLED), BUILDING WILL BE SPRINKLED.
7. ANY FDC MUST BE WITHIN 150' OF A FIRE HYDRANT & WITHIN 40' OF FIRE APPARATUS PLACEMENT.
8. LANDSCAPING OR PARKING CAN NOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.



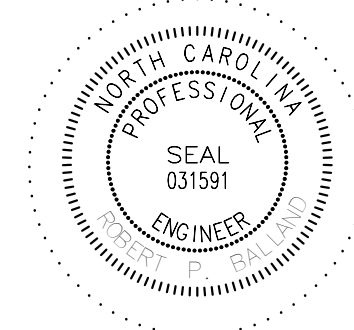
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COLLEGE PARK  
ELEMENTARY  
SCHOOL

LS3P

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REVISIONS:

No.	Description	Date

PROJECT: 15185.PE  
DATE: OCTOBER 19, 2016  
DRAWN BY: RPB  
CHECKED BY: RPB

UTILITY PLAN

C-4.0

SOLUTIONS THROUGH LISTENING  
SERVICE BY DESIGN  
DESIGN DEVELOPMENT

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

