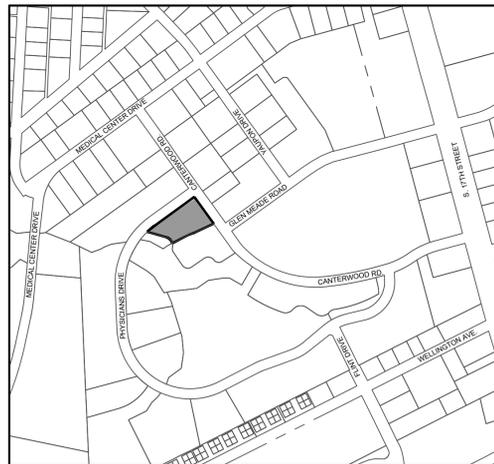


KIDDIE ACADEMY

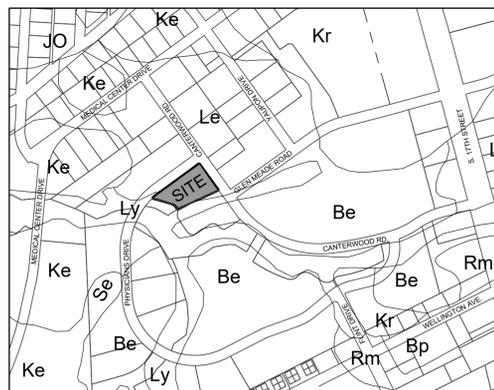
2310 CANTERWOOD DRIVE WILMINGTON, NORTH CAROLINA 28401

CIVIL DESIGN DRAWINGS

OCTOBER 2018



LOCATION MAP
SCALE: 1"=500'



SOILS MAP
SCALE: 1"=500'

NOTICE REQUIRED

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

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

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

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT THESE UTILITIES

CITY OF WILMINGTON PLANNING & DEVELOPMENT

ATTN: BRIAN CHAMBERS, PLANNER
PH: 910-342-2782

ATTN: ZONING INSPECTIONS
PH: 910-254-0900

PIEDMONT NATURAL GAS

ATTN: CATHY PLEASANT
PH: 910-251-2827

**EMERGENCY DIAL 911
POLICE - FIRE - RESCUE**

ATTN: CITY OF WILMINGTON FIRE & LIFE SAFETY
PH: 910-343-0696

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)

ENGINEERING/INSPECTIONS
PH: 910-332-6560

OPERATIONS/MAINTENANCE
PH: 910-322-6550

DUKE ENERGY
DISTRIBUTION CONSTRUCTION SERVICE
DEP CSC PH: 1-800-452-2777

TRANSMISSION AGENT
BILL WILDER
PH: 910-772-4903

AT&T/BELL SOUTH
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)
PH: 910-341-0741

ATTN: JAMES BATSON, ENGINEERING
PH: 910-341-1621

SPECTRUM
GENERAL PH: 800-892-4357



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

KIDDIE ACADEMY

PROJECT # 18291.PE

OCTOBER 2018

SHEET INDEX

SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0	GENERAL NOTES
C-1.1	SITE INVENTORY PLAN
C-2.0	SITE PLAN & TREE REMOVAL PLAN
C-3.0 - C-3.1	EROSION CONTROL PLAN
C-4.0	GRADING & DRAINAGE PLAN
C-5.0 - 5.5	DETAILS
L-1.0	LANDSCAPE PLAN

PROJECT CONSULTANTS

APPLICANT	ENGINEER/LAND PLANNER/LANDSCAPE ARCHITECT	SURVEYOR
ETOWLE LEARNING DEVELOPMENT, LLC 7407 DARIUS DRIVE WILMINGTON, NC 28411	PARAMOUNTE ENGINEERING, INC. 122 CINEMA DRIVE WILMINGTON, NC 28403 CONTACT: JEREMY BLAIR, PE (910) 791-6707	PARAMOUNTE ENGINEERING, INC. 122 CINEMA DRIVE WILMINGTON, NC 28403 CHRIS GAGNE, PLS (910) 791-6707

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

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)

Approved Construction Plan

Name _____ Date _____

Planning _____
Traffic _____
Fire _____

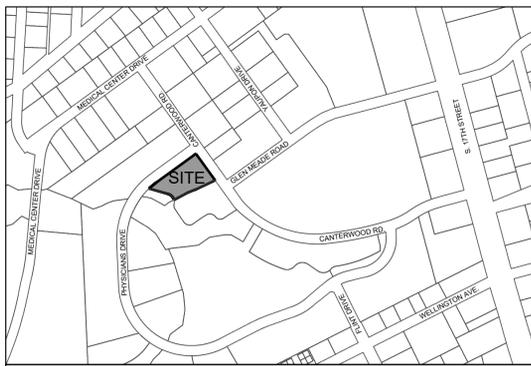
WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____
Signed: _____

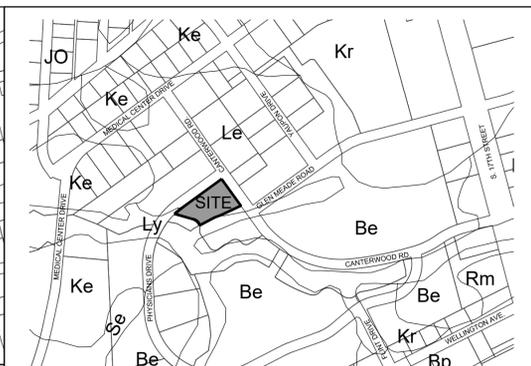
PREPARED BY:

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





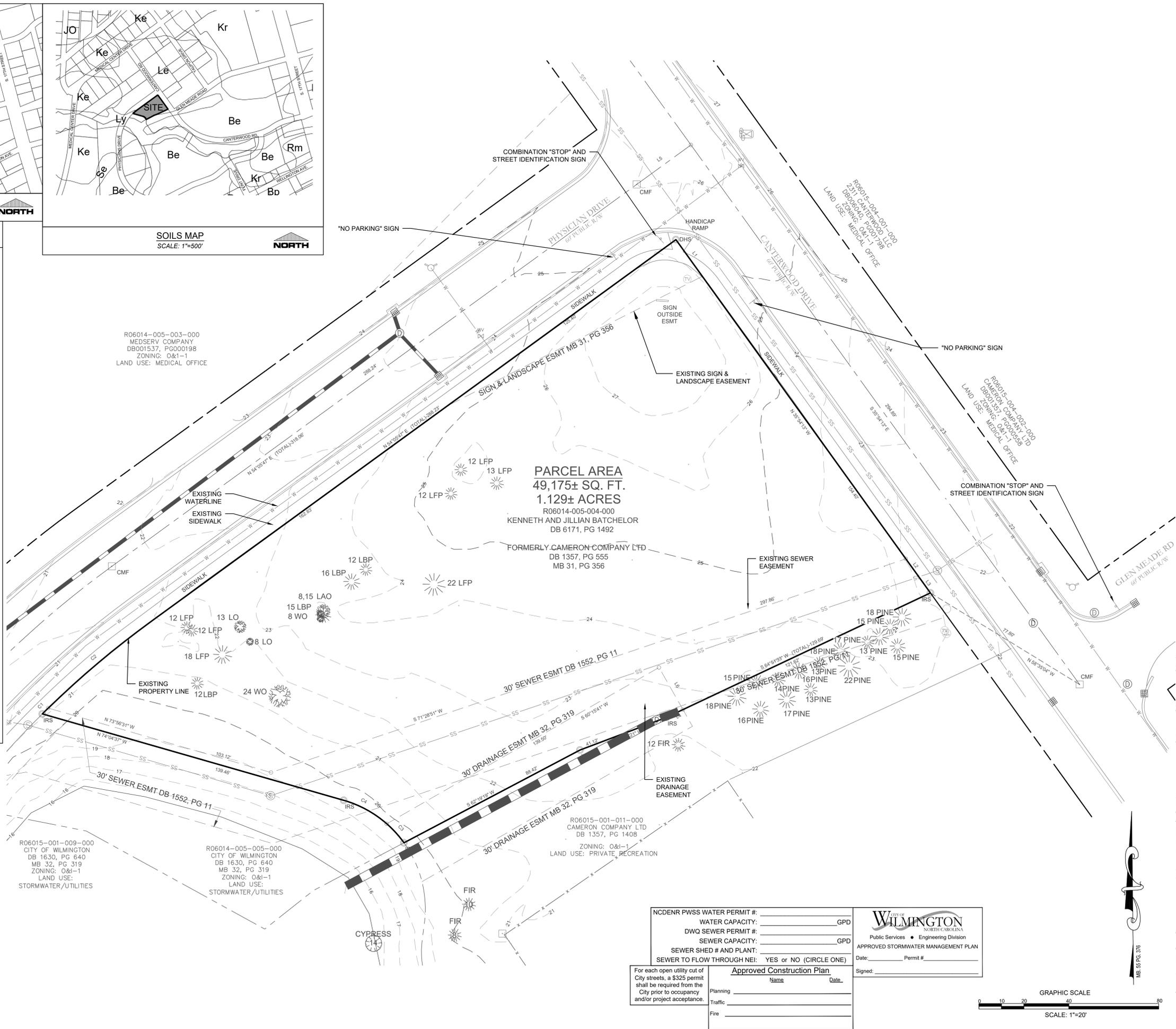
LOCATION MAP
SCALE: 1"=500'



SOILS MAP
SCALE: 1"=500'



SITE INVENTORY DATA	
1. PREPARER OF THE PLAN:	PARAMOUNTE ENGINEERING 122 CINEMA DRIVE WILMINGTON, NC 28403
2. APPLICANT NAME:	ETOILE LEARNING DEVELOPMENT, LLC 7407 DARIUS DRIVE WILMINGTON, NC 28411
3. SITE ADDRESS:	2310 CANTERWOOD DRIVE WILMINGTON, NC 28401
4. PROPERTY OWNER:	KENNETH & JILLIAN BATCHELOR FORMERLY CAMERON COMPANY, LTD.
5. DEVELOPER:	KIDDIE ACADEMY
6. PROPERTY BOUNDARY:	SEE PLAN
TAX PARCEL IDENTIFICATION #:	R06014-005-004-000
RECORDED DEED BOOK:	BK 006171 PG 001492
TOTAL SITE AREA:	1.129 ACRES OR 49175 SF
7. ZONING:	O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
CURRENT LAND USE:	VACANT, UNDEVELOPED LAND
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:	THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3125, MAP NUMBER 312600 J, DATED APRIL 3, 2006
12. LOCATION OF EXISTING DITCHES, CREEKS, AND STREAMS:	SEE PLAN
13. SOILS:	LEON SAND (LE) LYNN HAVEN FINE SAND (LY) (SEE SOILS MAP ABOVE)
14. CAMA AEC & ASSOCIATED SETBACKS:	N/A
15. CAMA LAND USE CLASSIFICATION:	URBAN
16. CONSERVATION RESOURCES:	NONE
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):	N/A
23. TREE INVENTORY	SEE C-2.0 SITE PLAN



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)

Approved Construction Plan
 Name _____ Date _____

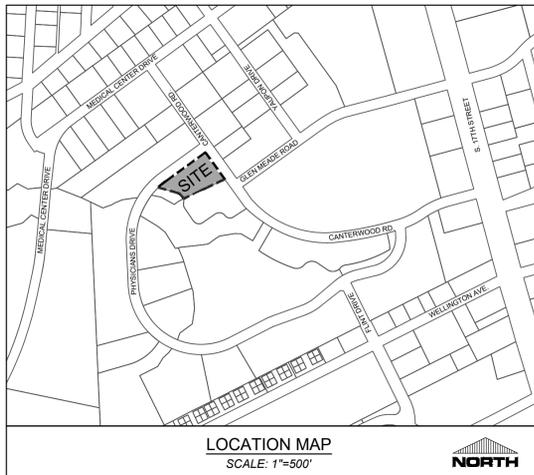
Planning _____
 Traffic _____
 Fire _____

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



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS: 1) REVISED PER CITY COMMENTS 10/16/18	CLIENT INFORMATION: Etoile Learning Development, LLC 7407 Darius Drive Wilmington, NC 28411
PARAMOUNTE ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846	
SITE INVENTORY PLAN KIDDIE ACADEMY 2310 Canterwood Drive Wilmington, North Carolina 28401	
PROJECT STATUS: CONCEPTUAL LAYOUT: FINAL DESIGN: RELEASED FOR CONSTRUCTION: DATE: 07/17/18 SCALE: 1"=20' DRAWING NO.: MB-55 PG. 376 CHECKED: JRB	DRAWING INFORMATION: DATE: 07/17/18 SCALE: 1"=20' DRAWING NO.: MB-55 PG. 376 CHECKED: JRB
SEAL PROFESSIONAL ENGINEER J. F. R. BLAIR 28852 10/16/2018	
C-1.1 PEI JOB#: 18291.PE	



LOCATION MAP
SCALE: 1"=500'

SITE INFORMATION
OWNER INFORMATION: ETOILE LEARNING DEVELOPMENT, LLC
PROJECT ADDRESS: 2310 CANTERWOOD DRIVE WILMINGTON, NC 28401
TAX PARCEL IDENTIFICATION #: R06014-005-004-000
RECORDED DEED BOOK: BK 001357 PG 000558
CURRENT ZONING: O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
EXISTING USE: VACANT LAND
PROPOSED USE: DAY CARE (CHILD)
TOTAL SITE AREA: 1.129 ACRES OR 49175 SF

FLOOD INFORMATION: THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3126, MAP NUMBER 3720312600 J, DATED APRIL 3, 2006

CAMA LAND USE CLASSIFICATION: URBAN
CONSERVATION DISTRICT: NONE

DIMENSIONAL REQUIREMENTS
O&I-1: OFFICE AND INSTITUTIONAL, DISTRICT 1
- MINIMUM LOT AREA: 1,500 SF
- MINIMUM LOT WIDTH: 80'
- MAXIMUM LOT COVERAGE: 40%
- MINIMUM FRONT SETBACK: 20'
- MINIMUM REAR SETBACK: 20'
- MINIMUM INTERIOR SIDE SETBACK: 10'
- MINIMUM CORNER LOT SIDE SETBACK: 20'
- MAXIMUM BUILDING HEIGHT: 45'

BUILDING SETBACKS:	REQUIRED	PROVIDED
FRONT SETBACK	20'	71'
SIDE SETBACK	20'	20'
INTERIOR SIDE YARD SETBACK	10'	45.84'
REAR SETBACK	20'	64.77'
CORNER SETBACK	20'	20'

IMPERVIOUS INFORMATION
EXISTING IMPERVIOUS AREA: 0 SF
PROPOSED IMPERVIOUS AREA:
TOTAL BUILDING (FOOTPRINT): 7,134 SF
ON-SITE PARKING & DRIVEWAYS: 15,521 SF
ON-SITE SIDEWALKS: 4,350 SF
MISC. IMPERVIOUS (PLAYGROUND): 3,272 SF
FUTURE IMPERVIOUS: 6,604 SF
TOTAL PROPOSED IMP. AREA: 36,881 SF

PROPOSED PERCENT IMPERVIOUS: 75%

BUILDING INFORMATION
CONSTRUCTION TYPE: V-B (OCCUPANCY TYPE B - BUSINESS)
NUMBER OF PROPOSED BUILDINGS: 1
PROPOSED BUILDING SF (FOOTPRINT): 7,134 SF
BLDG SF PER STORY: 7,134 SF
NUMBER OF STORIES: 2
TOTAL BUILDING SF: 14,268
MAX. HEIGHT: 45'
LOT COVERAGE: 14.5% (PROPOSED)

SITE PARKING
PARKING SPACES REQUIRED:
(1 PER 8 PARTICIPANTS MIN., NO MAX., DAY CARE)
231 PARTICIPANTS (CHILDREN) / 8 SPACES: 29 SPACES REQUIRED
PARKING SPACES PROVIDED: 35 SPACES PROVIDED

HANDICAP PARKING REQUIRED: 2 SPACES
HANDICAP PARKING PROVIDED: 2 SPACES

PLAYGROUND AREA
PLAYGROUND AREA REQUIRED:
(75 SF PER CHILD FOR AT LEAST ONE-HALF OF THE TOTAL NUMBER FOR WHICH THE CENTER IS LICENSED)
231 CHILDREN x 0.5 x 75 SF: 8,663 SF REQUIRED
9,557 SF PROVIDED

LANDSCAPE CALCULATIONS
SEE SHEET L-1.0 LANDSCAPE PLAN FOR CALCULATIONS

WATER AND SEWER DEMANDS
WATER: 0 GPD (CURRENT USE)
WATER: 6,800 GPD (PROPOSED USE)
SEWER: 0 GPD (CURRENT USE)
SEWER: 6,800 GPD (PROPOSED USE)

- FIRE AND LIFE SAFETY NOTES:**
- CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 - A HYDRANT MUST BE WITHIN 150' OF THE FDC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE).
 - FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
 - LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
 - ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
 - PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696.
 - ALL ISOLATION VALVES WITHIN THE "HOT BOX" MUST BE ELECTRICALLY SUPERVISED.

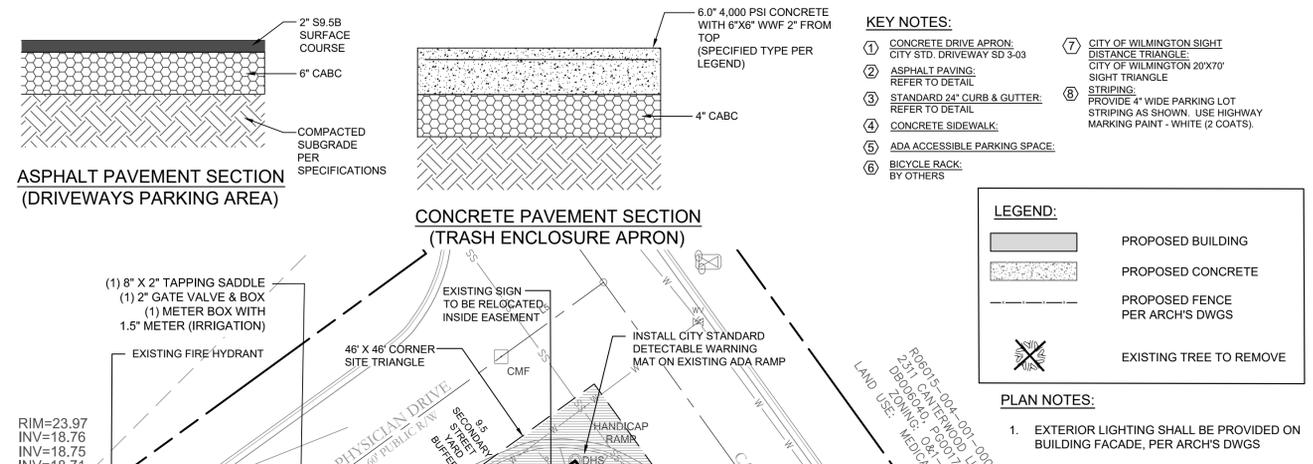
- GENERAL NOTES:**
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
 - ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
 - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
 - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
 - ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
 - CONTRACTOR SHALL REFER TO LANDSCAPE PLAN FOR SPECIFIC TREE REMOVAL AND OTHER LANDSCAPING DETAILS.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS.
 - CONTRACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.

Kiddie Academy Tree Removal & Required Mitigation

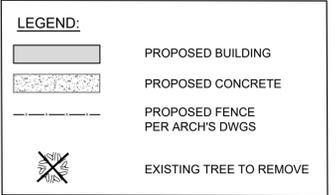
Qty of Trees	Caliper Inches*	Individual Trunk Calipers AND Individual Cluster	Tree Common Name	City Tree Type Classification	Total Cal. Inches to be Removed	% Mitigation	Significant	Essential Site Improvements	Total Qty. of Mitigation Trees Required
1	8		WO (WATER OAK)	hardwood	8	100%	yes		
1	24		WO (WATER OAK)	hardwood	24	100%	yes		16
1	23	8	LAO (LAUREL OAK)	hardwood	23	100%	yes		
1	8		LO (LIVE OAK)	hardwood	8	100%	yes		
1	13		LO (LIVE OAK)	hardwood	13	100%	yes		
4	12		LFP (LONGLEAF PINE)	conifer	48	100%	yes		
1	13		LFP (LONGLEAF PINE)	conifer	13	100%	yes		
1	18		LFP (LONGLEAF PINE)	conifer	18	100%	yes		
1	22		LFP (LONGLEAF PINE)	conifer	22	100%	yes		
Total Category 1 Significant Trees Mitigation Required:									16
Total Category 1 Regulated Trees To Be Removed with Essential Site Improvements:									12

Qty of Trees	Caliper Inches*	Individual Trunk Calipers AND Individual Cluster	Tree Common Name	City Tree Type Classification	Total Cal. Inches to be Removed	% Mitigation	Significant	Essential Site Improvements	Total Qty. of Mitigation Trees Required
1	12		LBP (LOBLOLLY)	conifer	12	50%	yes		
1	15		LBP (LOBLOLLY)	conifer	15	50%	yes		
1	16		LBP (LOBLOLLY)	conifer	16	50%	yes		
Total Category 3 Significant Trees									0
Total Category 3 Regulated Trees To Be Removed with Essential Site Improvements:									3

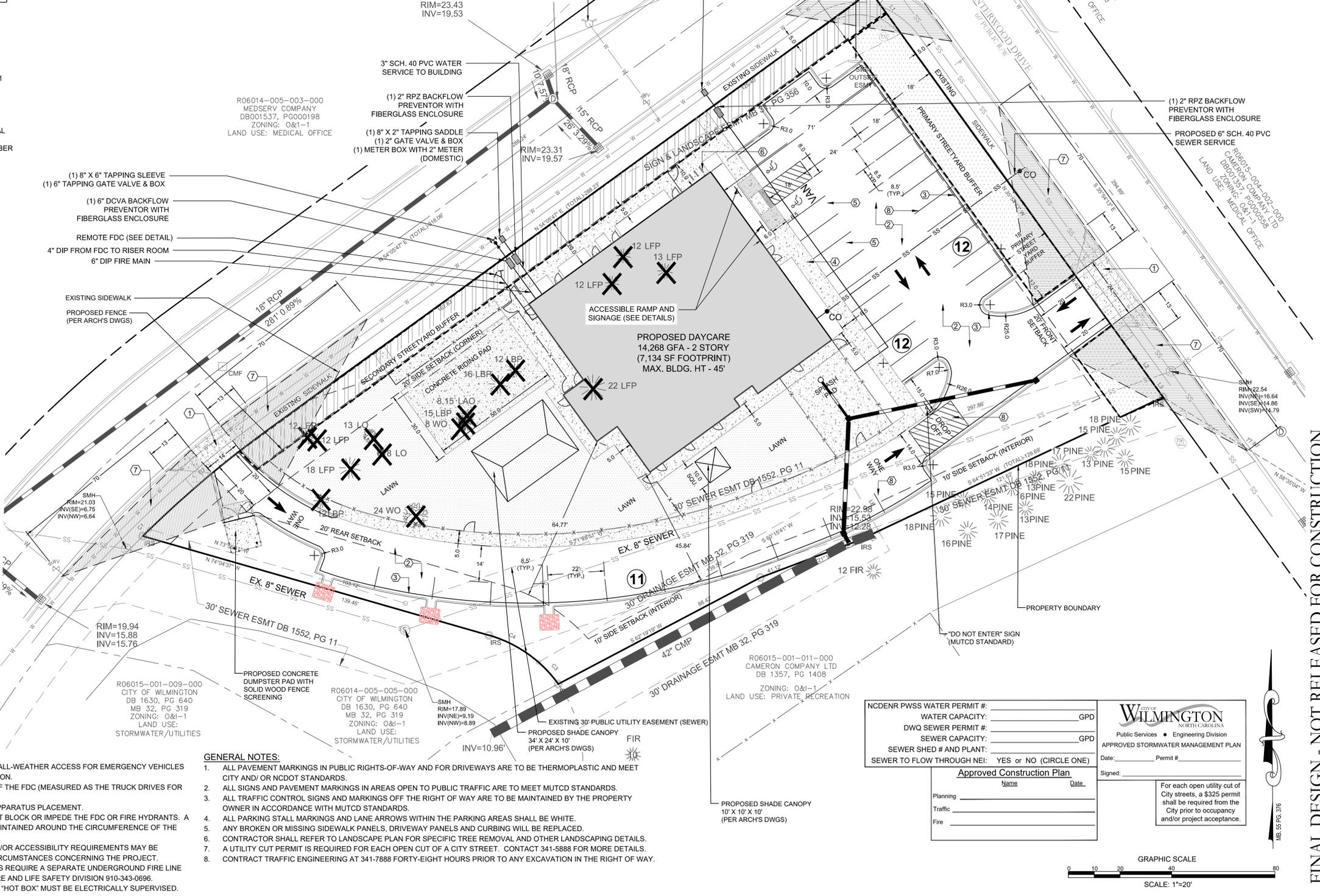
Total Qty. of Trees to be Removed (essential site improvements):	Total Qty. of Significant Tree Mitigation (essential site improvements):	Total Tree Credits:	Total Qty. of Mitigation Trees Required on Site (or Pay in Lieu Equivalent):
15	16	0	16



- KEY NOTES:**
- CONCRETE DRIVE APRON: CITY STD. DRIVEWAY SD-3-03
 - ASPHALT PAVING: REFER TO DETAIL
 - STANDARD 24" CURB & GUTTER: REFER TO DETAIL
 - CONCRETE SIDEWALK:
 - ADA ACCESSIBLE PARKING SPACE:
 - BICYCLE RACK: BY OTHERS
 - CITY OF WILMINGTON SIGHT DISTANCE TRIANGLE: CITY OF WILMINGTON 20'X70' SIGHT TRIANGLE
 - PROVIDE 4" WIDE PARKING LOT STRIPING AS SHOWN. USE HIGHWAY MARKING PAINT - WHITE (2 COATS).



- PLAN NOTES:**
- EXTERIOR LIGHTING SHALL BE PROVIDED ON BUILDING FACADE, PER ARCH'S DWGS



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

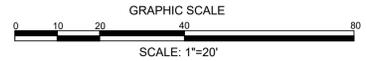
Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

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

Date: _____ Permit # _____
 Signed: _____

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



REVISIONS: 1) REVISED PER CITY COMMENTS 10/16/2018

CLIENT INFORMATION: Eroile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNT ENGINEERING & PLANNING
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License # C-2846

SITE PLAN & TREE REMOVAL PLAN
KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

PROJECT STATUS:
CONCEPTUAL LAYOUT: _____
FINAL DESIGN LAYOUT: _____
RELEASED FOR CONSTRUCTION: _____

DRAWING INFORMATION:
DATE: 11/11/2018
SCALE: 1"=20'
DRAWN BY: JBA/AMW
CHECKED: _____

SEAL: [Professional Engineer Seal] 28852
10/16/2018

PEI JOB#: 18291.PE

C-2.0

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

STORM SCHEDULE:

Upstream Node	Downstream Node	Diameter (In)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
CB-101	EX MH	18	18.03	18.00	6	0.50	23.48	22.98	RCP III
DI-101	CB-101	18	18.24	18.03	42	0.50	24.93	23.48	RCP III
CB-102	DI-101	15	18.61	18.24	74	0.50	22.80	24.93	RCP III
RD-103	DI-101	10	20.00	19.81	18	1.01	25.25	24.93	HDPE

ROOF DRAIN NOTE:

- ALL BUILDING ROOF DRAINS SHALL BE COLLECTED BY HEADER PIPES AND ROUTED TO STRUCTURE RD-103 FOR FURTHER CONVEYANCE TO THE EXISTING OFFSITE STORMWATER POND.

NOTES:

- SEE GENERAL NOTES SHEET (C-1.0) FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES AND DETAILS FOR MORE INFORMATION.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF WILMINGTON AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
- GEOTECHNICAL TESTING SHALL BE PERFORMED ON-SITE. A GEOTECHNICAL ENGINEER SHALL BE CONSULTED TO CONFIRM SUITABILITY OF SUBGRADE MATERIAL AND PROPER COMPACTION IN FILL AREAS.

ASPHALT AREA NOTE:

- 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:

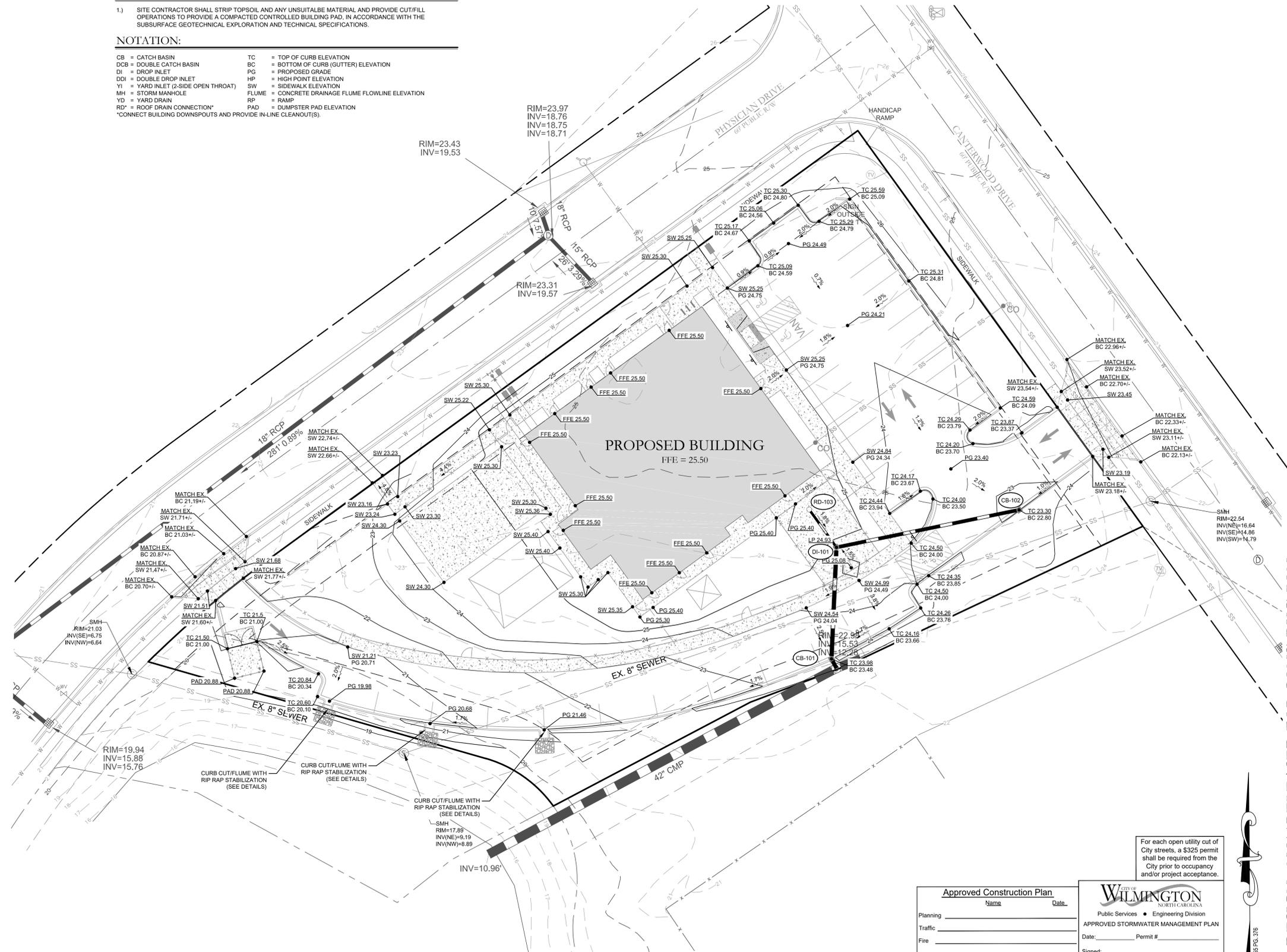
- SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

NOTATION:

- | | |
|---|--|
| CB = CATCH BASIN | TC = TOP OF CURB ELEVATION |
| DCB = DOUBLE CATCH BASIN | BC = BOTTOM OF CURB (GUTTER) ELEVATION |
| DI = DROP INLET | PG = PROPOSED GRADE |
| DDI = DOUBLE DROP INLET | HP = HIGH POINT ELEVATION |
| YI = YARD INLET (2-SIDE OPEN THROAT) | SW = SIDEWALK ELEVATION |
| MH = STORM MANHOLE | FLUME = CONCRETE DRAINAGE FLUME FLOWLINE ELEVATION |
| YD = YARD DRAIN | RP = RAMP |
| RD* = ROOF DRAIN CONNECTION* | PAD = DUMPSTER PAD ELEVATION |
| *CONNECT BUILDING DOWNSPOUTS AND PROVIDE IN-LINE CLEANOUT(S). | |

DRAINAGE NOTES:

- DRAINAGE EASEMENT AND STORMWATER SYSTEM MAINTENANCE IS THE RESPONSIBILITY OF THE DEVELOPER OR HOA, INCLUDING PONDS, PIPES, AND INFILTRATION BASINS AND TRENCHES.
- ALL IMPERVIOUS MUST DRAIN TO THE DESIGNED STORMWATER SYSTEM, PER THE APPROVED PLANS.
- NO OBSTRUCTIONS ARE ALLOWED IN DRAINAGE EASEMENTS, INCLUDING FENCES.
- ALL STORM DRAINAGE STRUCTURES SHALL MEET NCDOT STANDARDS AND SPECIFICATIONS AND SHALL BE TRAFFIC RATED FOR H-20 LOADS AT A MINIMUM.
- ALL CATCH BASIN (CB) RIM ELEVATIONS AND YARD INLET (YI) THROAT ELEVATIONS ARE LISTED AS THE "GUTTER OF FLOWLINE ELEVATION" WITHIN THE CURB SECTION. THE CONTRACTOR SHALL MAINTAIN A UNIFORM EDGE OF PAVEMENT (EOP) WHEN PLACING THE STORM INLETS WITHIN THE CURB-LINE (SEE "CURB TRANSITION" DETAIL). FOR CATCH BASINS WITHIN A TRANSITION FROM 24" STANDARD CURB & GUTTER, THE RIM ELEVATION GIVEN IS 1 INCH BELOW EOP.
- MANHOLE RIM ELEVATION SHOWN ABOVE IS FLUSH WITH PROPOSED GRADE. CONTRACTOR SHALL PROVIDE 6" CLEARANCE ABOVE PROPOSED GRADE WHEN PLACED IN A GRASS/PERVIOUS AREA; AND A FLUSH CONDITION WITH PROPOSED PAVEMENT OR IMPERVIOUS COVER.
- PROPOSED BUILDINGS SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM.
- CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AREAS TO MATCH PROPOSED GRADES.
- THE CONTRACTOR SHALL USE EITHER RCP (CL. III UNLESS OTHERWISE NOTED) 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.



Approved Construction Plan

Name: _____ Date: _____

Planning _____

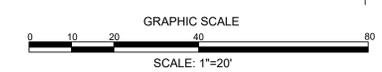
Traffic _____

Fire _____

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

Date: _____ Permit # _____

Signed: _____



REVISIONS:

NO.	DATE	DESCRIPTION
1)	8/23/18	REVISED PER NCDOT SWM COMMENTS
2)	10/16/18	REVISED PER CITY COMMENTS

CLIENT INFORMATION:

Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
N.C. License #: C-2846

GRADING & DRAINAGE PLAN

KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

PROJECT STATUS

DATE: 8/23/18
SCALE: 1"=20'
DRAWN: JRM
CHECKED: JRM

SEAL

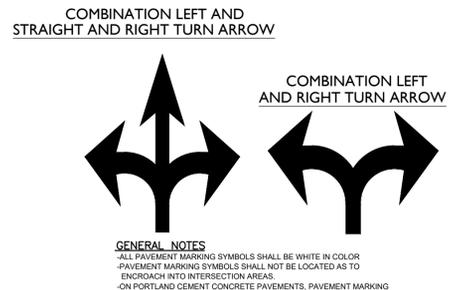
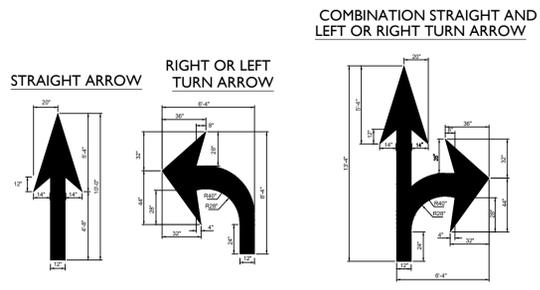
J. R. MURPHY, P.E.
Professional Engineer
No. 28852
10/16/18

C-4.0

PEI JOB#: 18291.PE

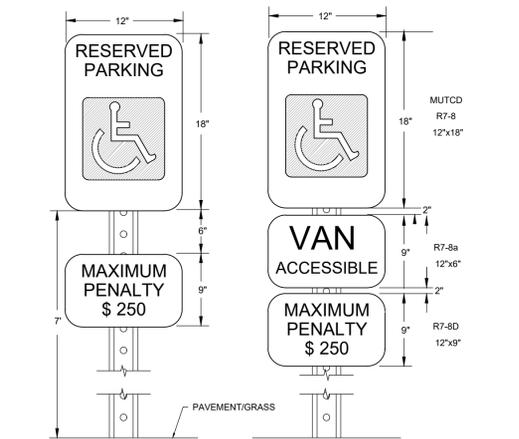
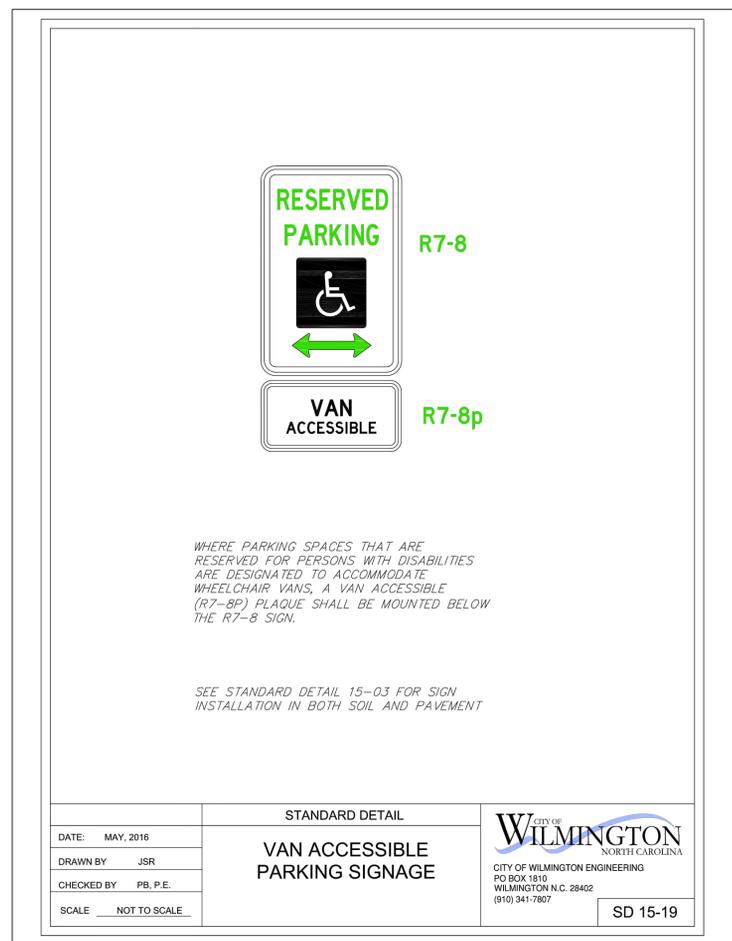
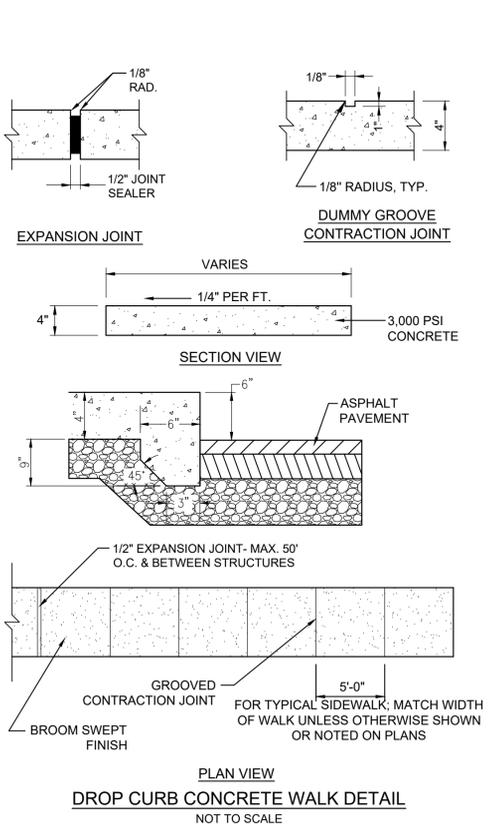
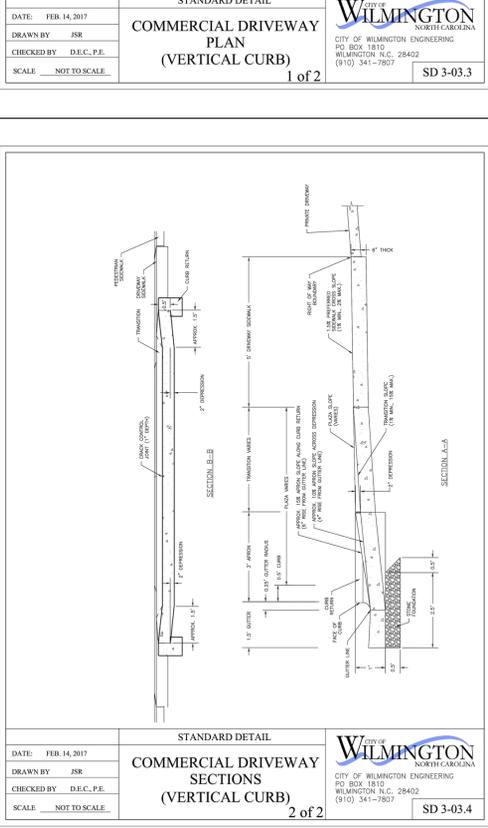
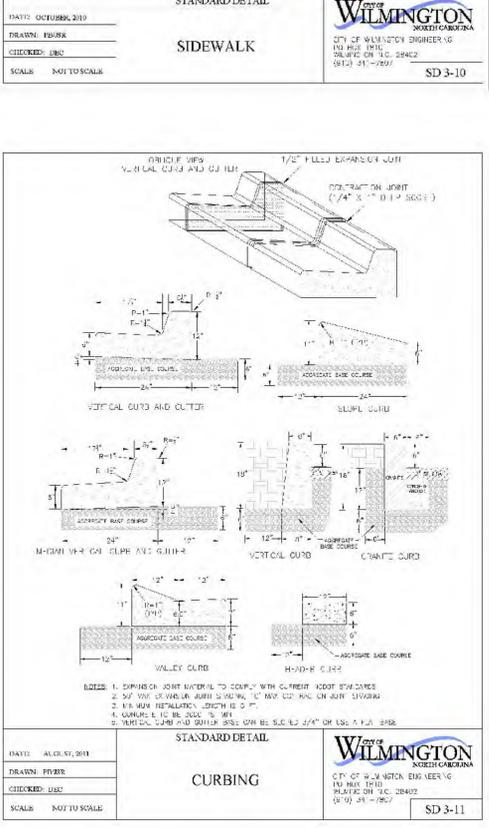
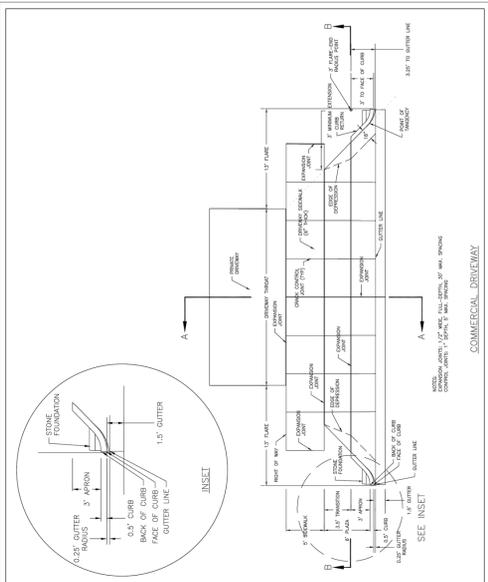
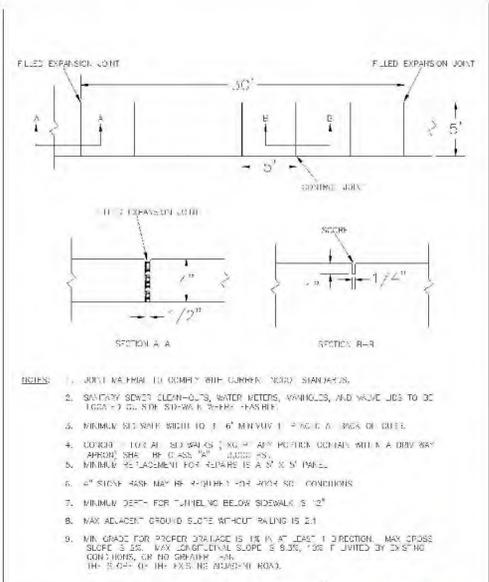


FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

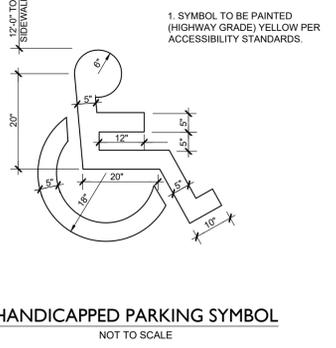
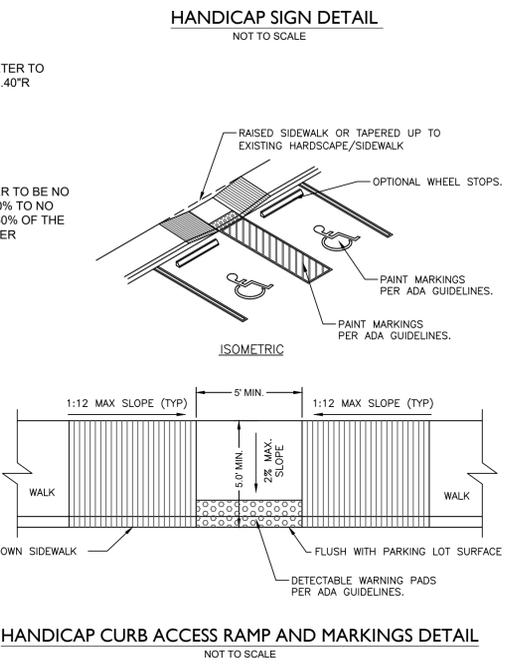
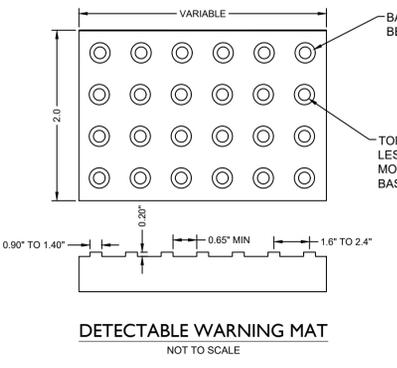


GENERAL NOTES
 ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR.
 PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENCRUSH INTO INTERSECTION AREAS.
 ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS UNLESS APPROVED BY THE ENGINEER.

**PAVEMENT MARKINGS
 ARROW SYMBOLS**
 NOT TO SCALE



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



Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

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

Date: _____ Permit #: _____

Signed: _____

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
 1) REVISED PER CITY COMMENTS 10/16/18

CLIENT INFORMATION:
 Etiole Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

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

DETAILS
 KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

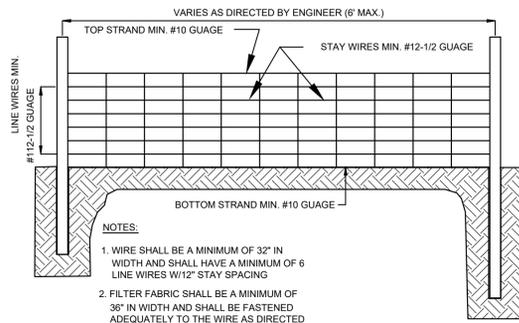
PROJECT STATUS:
 PRELIMINARY LAYOUT
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
 DATE: 8/20/18
 SCALE: AS NOTED
 DRAWN: JRM
 CHECKED: JRM

SEAL:
 J. FREEMAN, P.E.
 28852
 10/16/2018

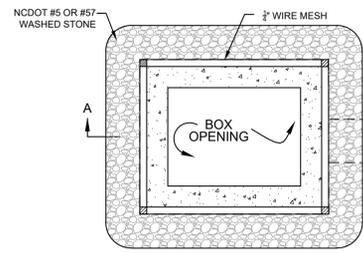
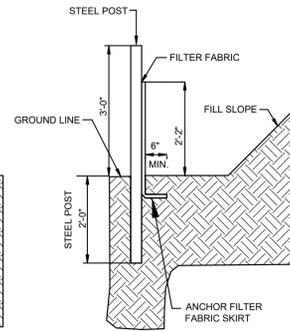
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PEI JOB#: 18291.PE



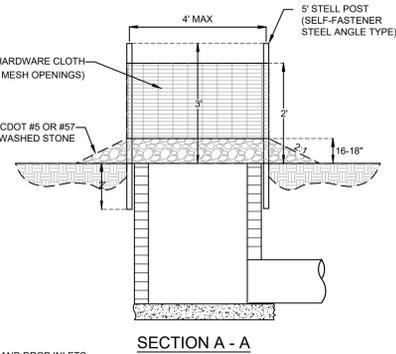
GUIDELINES FOR TEMPORARY SILT FENCE DETAIL

NOT TO SCALE

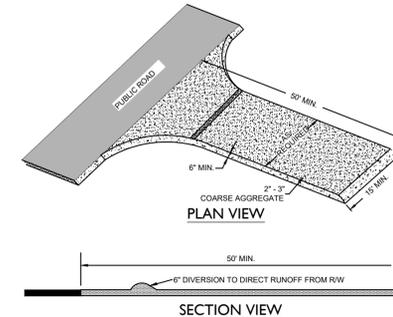


INLET PROTECTION

NOT TO SCALE



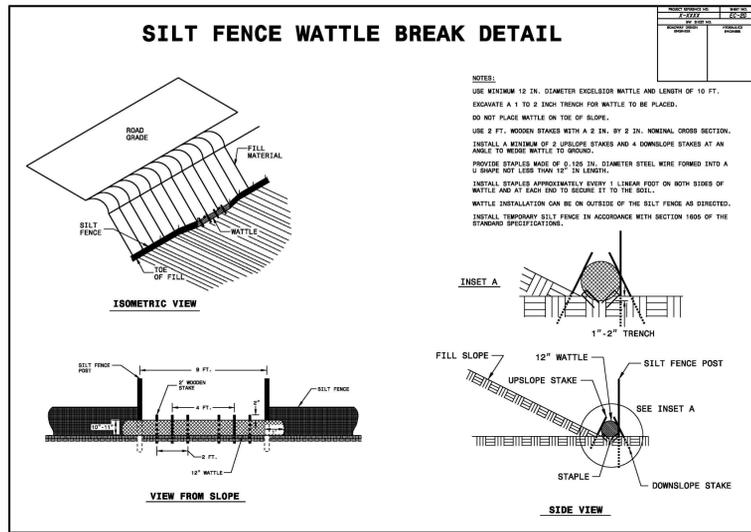
SECTION A - A



SECTION VIEW

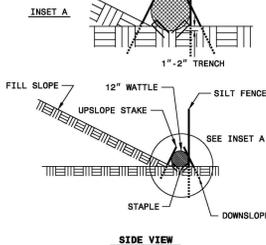
TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

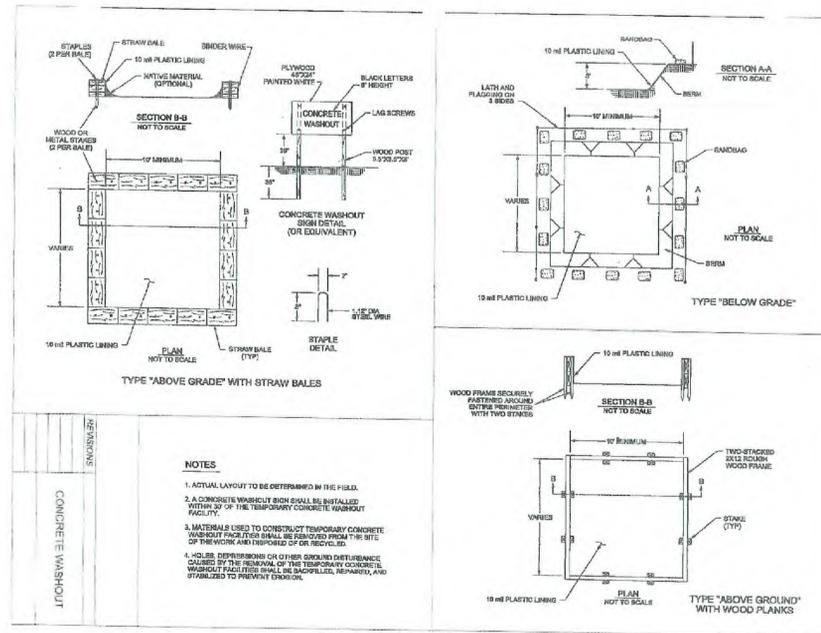


SILT FENCE WATTLE BREAK DETAIL

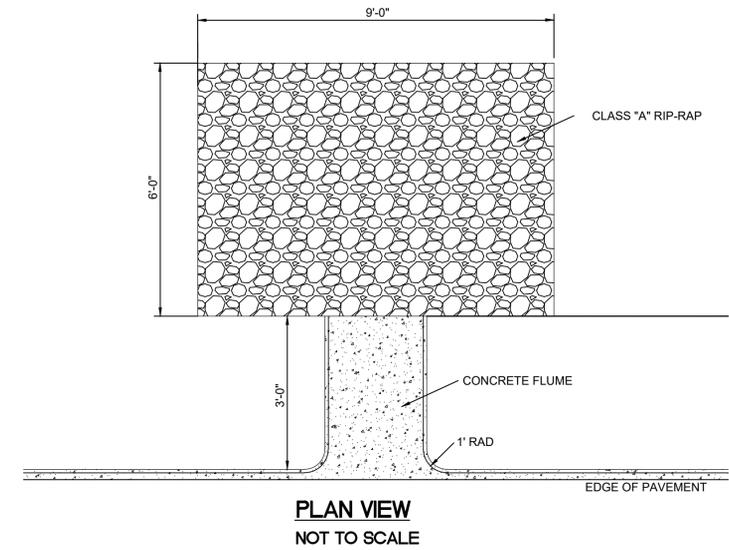
NOTES:
 1. USE MINIMUM 12 IN. DIAMETER EXCELSION WATTLE AND LENGTH OF 10 FT. EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
 2. DO NOT PLACE WATTLE ON TOP OF SLOPE.
 3. USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 4. INSTALL A MINIMUM OF 2 UPRIGHT STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
 5. PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPED NOT LESS THAN 12 IN LENGTH.
 6. INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
 7. WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
 8. INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1606 OF THE STANDARD SPECIFICATIONS.



SIDE VIEW

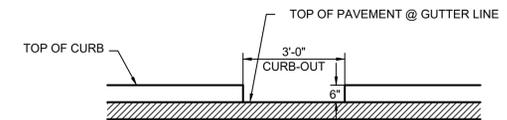


NOTES:
 1. ACTUAL LANDSCAPE TO BE DETERMINED BY THE FIELD.
 2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 50' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITY SHALL BE IDENTIFIED FROM THE SITE OF THE WORK AND REPOSED OF OR RECYCLED.
 4. HOLE DEPRESSIONS OR OTHER GROUND DEGRADATION CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITY SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.



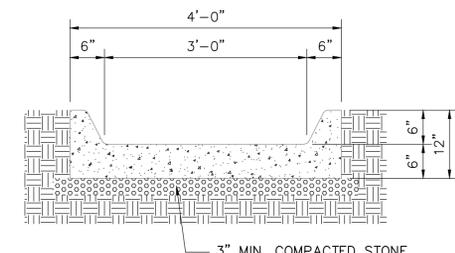
PLAN VIEW

NOT TO SCALE



CURB CUT DETAIL

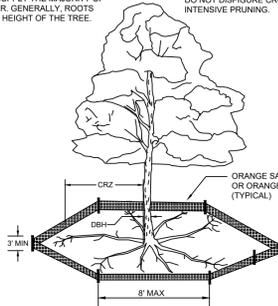
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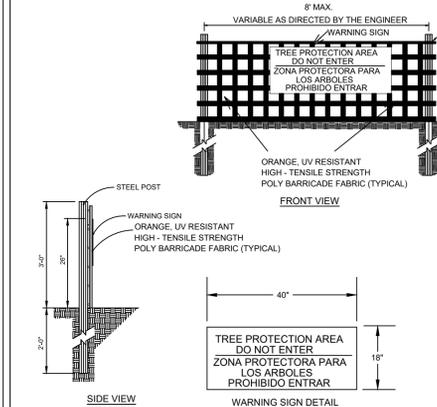
CURB CUT FLUME SECTION

NOT TO SCALE

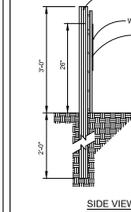
NOTE:
 1. THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24\"/>



NOTE:
 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\"/>



FRONT VIEW



SIDE VIEW

WARNING SIGN DETAIL

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\"/>

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

STANDARD DETAIL
 TREE PROTECTION DURING CONSTRUCTION

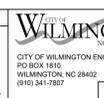
SHEET 1 of 2



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

STANDARD DETAIL
 TREE PROTECTION DURING CONSTRUCTION

SHEET 2 of 2



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:	8/23/18
1) REVISED PER NCDOT SWM COMMENTS	10/16/18
2) REVISED PER CITY COMMENTS	

CLIENT INFORMATION:
 Eroile Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

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

DETAILS
 KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

PROJECT STATUS	8/23/2018
PRELIMINARY LAYOUT	AS NOTED
RELEASED FOR CONSTRUCTION	AS NOTED
DRAWING INFORMATION	8/23/2018
DATE:	8/23/2018
SCALE:	AS NOTED
DRAWN BY:	JSR
CHECKED BY:	RDG



Approved Construction Plan

Name: _____ Date: _____

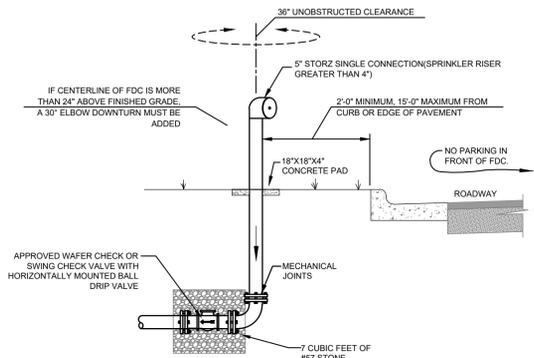
Planning: _____

Traffic: _____

Fire: _____

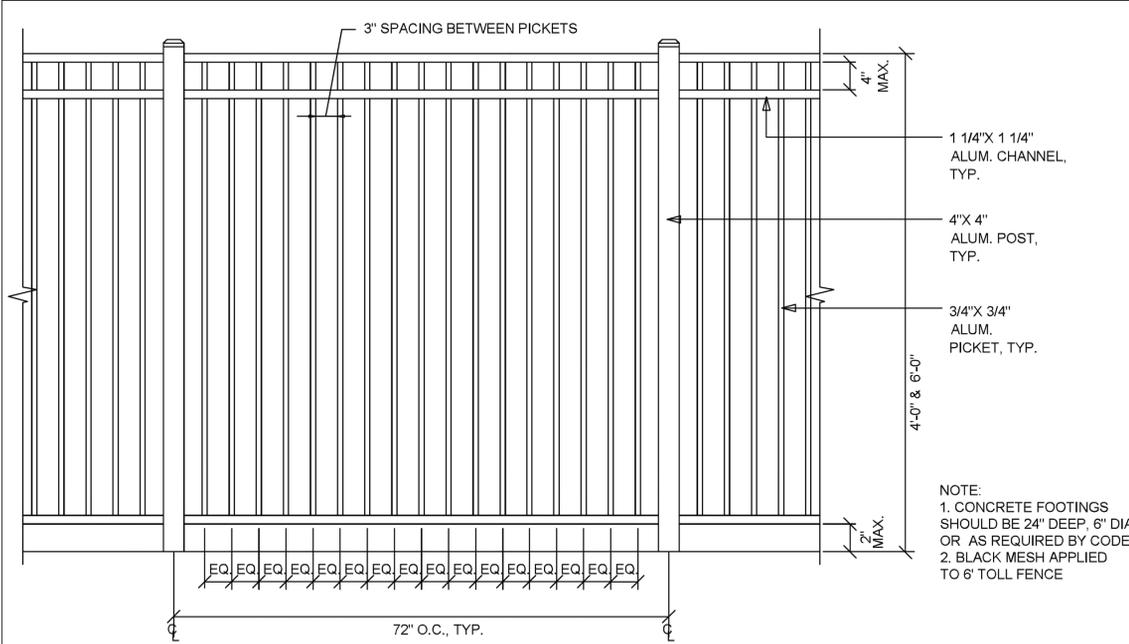
Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

C-5.1
 PEI JOB#: 18291.PE



- NOTES:**
1. THE VALVE PIT SHALL BE SIZED TO ACCOMMODATE ALL PROPOSED EQUIPMENT.
 2. THERE SHALL BE NO SHUTOFF VALVE IN THE FIRE DEPT. CONNECTION PIPING (PER NFPA 13).
 3. ALL FITTINGS SHALL BE FLANGED.
 4. ALL PIPING SHALL BE STEEL OR DUCTILE IRON.
 5. SEE SITE PLANS FOR SIZES OF PIPES AND FITTINGS. SIAMASE CONNECTION TO BE IN ACCORDANCE WITH NFPA 13.
 6. PROVIDE DRAINAGE AWAY FROM STRUCTURE.
 7. A 2" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE VAULT LID AND THE RISING STEM OF THE OSGY VALVE IN THE FULLY OPEN POSITION.
 8. KNOX LOCKING PLUG SHALL BE PROVIDED ON THE FDC INLET.
 9. APPROVED WAFER CHECK OR SWING CHECK VALVE WITH HORIZONTALLY MOUNTED BALL DRIP VALVE.
 10. THE FDC SHALL BE CONNECTED TO THE PIPING SYSTEM LOCATED DOWNSTREAM OF THE POST INDICATOR VALVE.

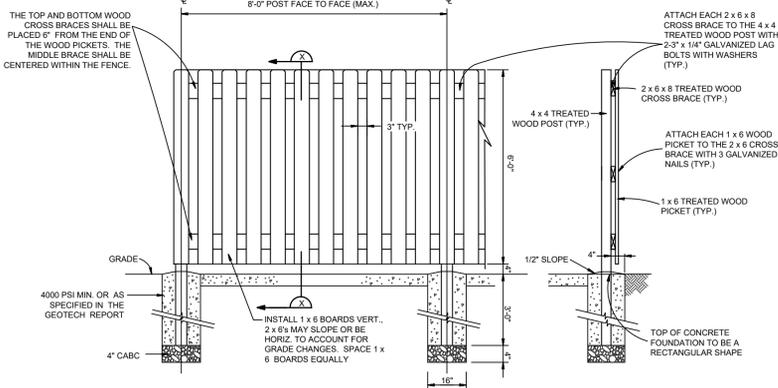
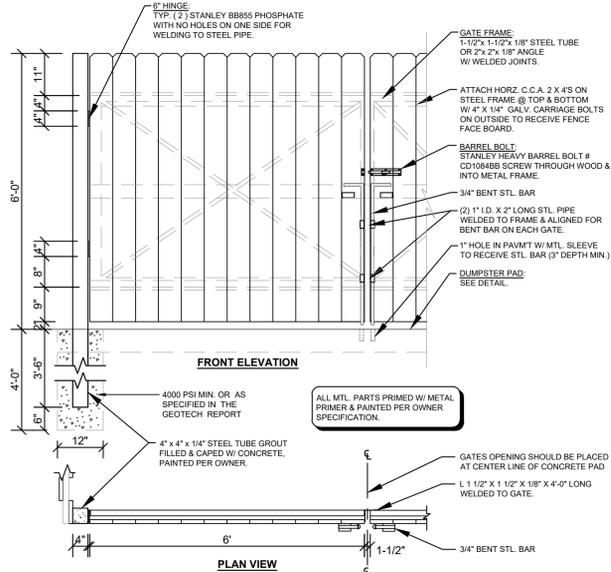
FREE STANDING FIRE DEPARTMENT CONNECTION
NOT TO SCALE



- NOTE:**
1. CONCRETE FOOTINGS SHOULD BE 24" DEEP, 6" DIA. OR AS REQUIRED BY CODE.
 2. BLACK MESH APPLIED TO 6' TOLL FENCE

THIS FENCING TAKEN FROM ARCHITECTURAL DETAILS FOR USE AROUND PLAYGROUND AND BUILDING

D5
3
FENCING
SCALE: NONE

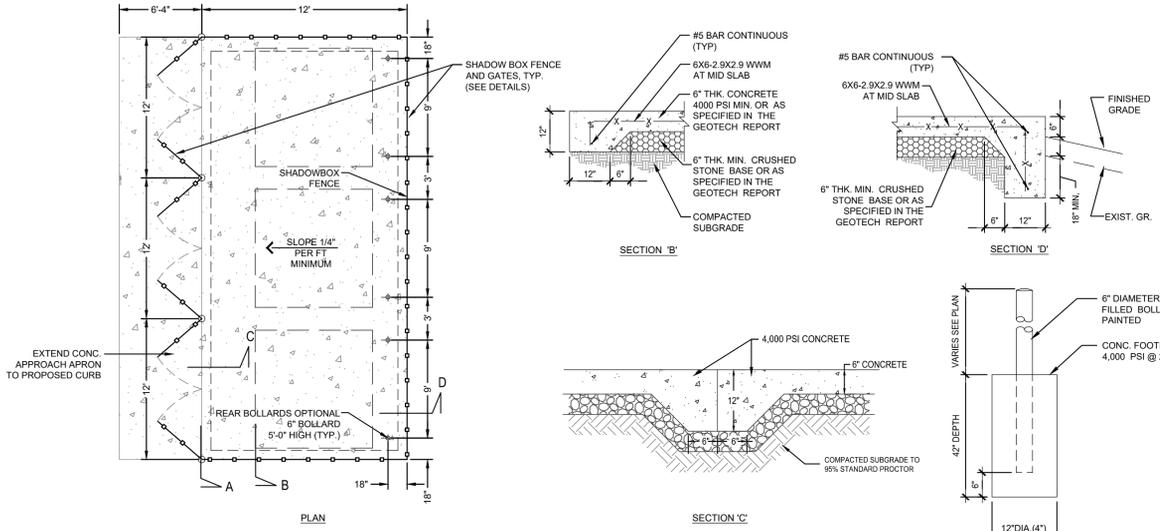


ELEVATION
WOOD FENCE SECTION (X)
PLAN VIEW

- FENCING NOTES AND SPECIFICATIONS**
1. SPECIFICATIONS FOR WOOD FENCES - THE FOLLOWING SPECIFICATIONS, DERIVED FROM ASTM F 537 AND STANDARD PRACTICE IN THE FENCE INDUSTRY, SHALL APPLY TO THE MATERIALS AND CONSTRUCTION OF WOOD FENCES:
 - (A) POSTS AND FRAMING - POST SPACING SHALL NOT EXCEED EIGHT FEET (8')
 - (B) ALL POST HOLES SHOULD BE A MINIMUM OF THIRTY INCHES (30") DEEP FOR FOUR FEET (4') HIGH FENCES AND THIRTY-SIX INCHES (36") DEEP FOR FENCES HIGHER THAN FOUR FEET (4') UP TO SIX FEET (6'). ALL TERMINAL, CORNER AND GATE POSTS SHOULD BE SET TO THIRTY-SIX INCHES (36") DEEP.
 - (C) POST HOLES SHOULD BE AT LEAST FOUR INCHES (4") LARGER IN DIAMETER THAN THE LARGEST DIMENSION OF THE POST. ALL TERMINAL, CORNER AND GATE POSTS SHOULD BE SET IN CONCRETE.
 - (D) FENCES UP TO FIVE FEET (5') SHALL HAVE A MINIMUM OF TWO RAILS (STRINGERS) TOP AND BOTTOM. FENCES OVER FIVE FEET (5') SHALL HAVE A THIRD RAIL AT CENTER HEIGHT. STRINGERS SHALL BE 2X6 MINIMUM (NOMINAL).
 - (E) MATERIALS - ALL MATERIALS USED IN WOOD FENCING SHOULD BE EITHER (1) NATURALLY ROT-RESISTANT WOOD (SUCH AS CEDAR), (2) A WOOD PRESURE TREATED FOR ROT-RESISTANCE, OR (3) BE COATED THOROUGHLY WITH A PAINT OR PROTECTIVE COATING IMMEDIATELY ON ERECTION.
 - (F) FASTENERS - FASTENERS SHALL BE MADE OF A NON-RUSTING, NON-CORROSIVE MATERIAL, OR COATED TO RESIST RUSTING. NAILS SHALL BE LONG ENOUGH TO PENETRATE THE RECEIVING MEMBER TWICE THE THICKNESS OF THE THINNER MEMBER BUT NOT LESS THAN ONE AND ONE-HALF INCHES (1 1/2").
 - (G) COVER BOARDS SHALL BE 1/2" MINIMUM THICKNESS.
 - (H) SOLID WOOD FENCES SHOULD ALLOW FOR EXPANSION TO AVOID BUCKLING AS FOLLOWS: FOR WIDTHS 2 TO 4 INCHES, A ONE SIXTEENTH INCH (1/16") SPACE SHOULD BE PROVIDED; FOR WIDTHS 6 TO 8 INCHES, A MINIMUM SPACE OF ONE EIGHTH INCH (1/8") SHOULD BE PROVIDED.
 - (I) THE TOPS OF THE COVER BOARDS SHALL BE CUT AS DOG EAR (CORNERS CUT OFF AT 45 DEGREE ANGLES).

- NOTES:**
1. SEE FENCING NOTES, THIS SHEET.

SHADOW BOX FENCE AND GATE DETAILS
NOT TO SCALE



- NOTES:**
1. DIMENSIONS ARE SHOWN FOR A 3-STALL DUMPSTER; HOWEVER THE DIMENSIONS CAN BE REDUCED TO A SINGLE OR DOUBLE DUMPSTER.
 2. BOLLARDS ARE OPTIONAL DEPENDING ON OWNER'S PREFERENCE.
 3. ENCLOSURE SHALL BE SHADOWBOX FENCE. SEE DETAILS THIS SHEET.

DUMPSTER PAD AND ENCLOSURE DETAIL
NOT TO SCALE

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

Signed: _____

Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

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

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
1) REVISED PER CITY COMMENTS

CLIENT INFORMATION:
Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

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

PROJECT STATUS:
PRELIMINARY LAYOUT
FINAL DESIGN
RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
DATE: 8/22/2018
SCALE: AS NOTED
DRAWN: JTB
CHECKED: JTB

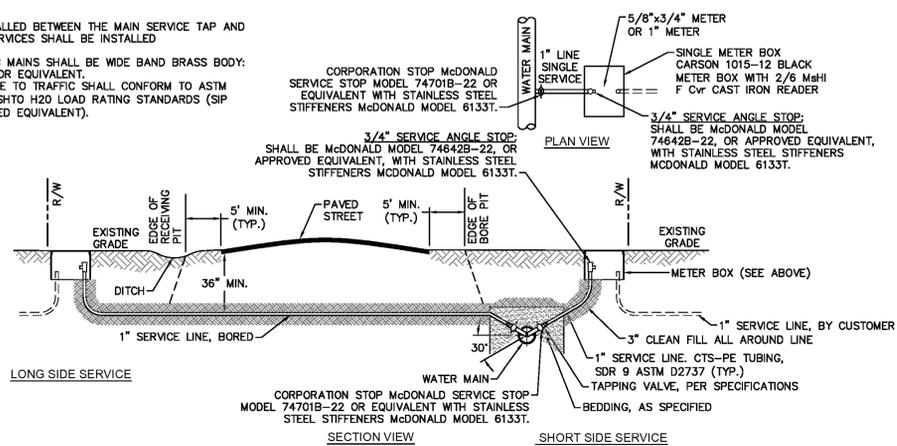
SEAL:
Professional Engineer
J. T. BRYANT, P.E.
No. 28852
10/16/2018

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

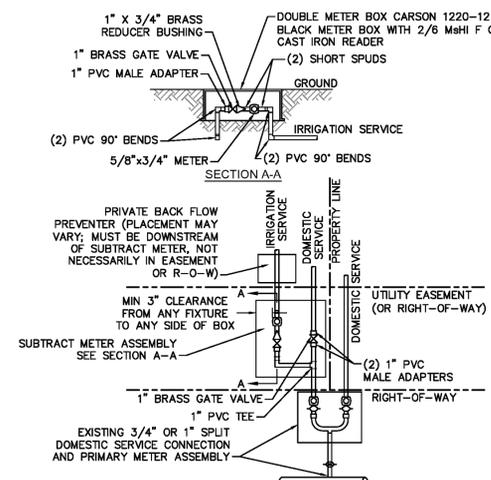
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PEI JOB#: 18291.PE

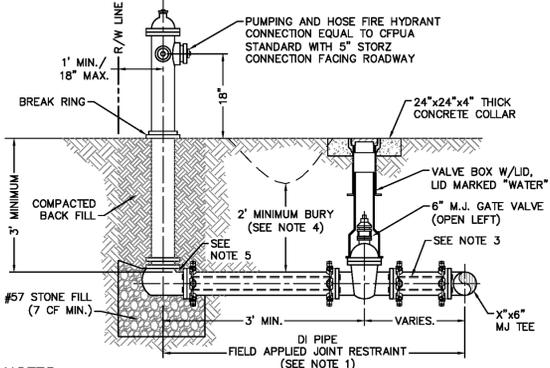
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM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



WD-18 SINGLE SERVICE CONNECTION
NOT TO SCALE



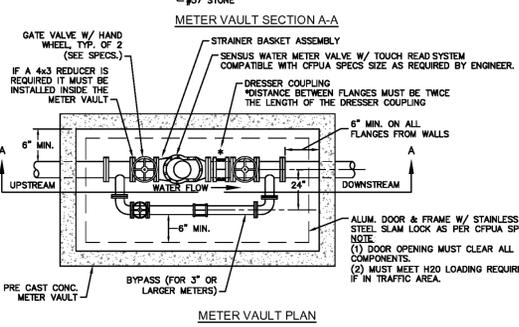
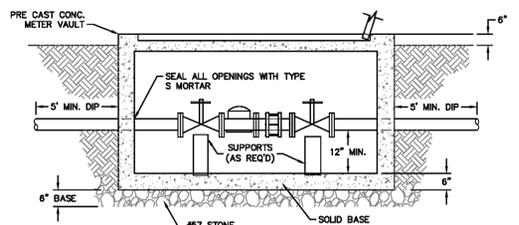
WD-8 DOUBLE SERVICE CONNECTION USING SUBTRACT METER
NOT TO SCALE



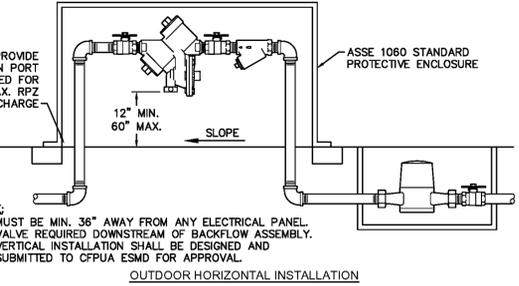
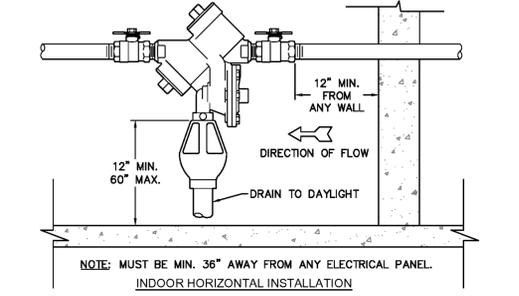
WD-10 FIRE HYDRANT ASSEMBLY
NOT TO SCALE

- 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 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.
 - 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.

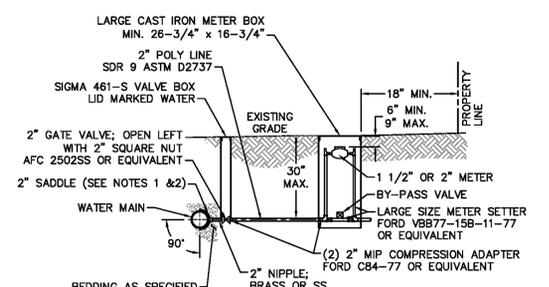
WD-19 STANDARD NOTES
(REQUIRED ON ALL PLAN AND PROFILE SHEETS)



WD-1 WATER METER VAULT
NOT TO SCALE

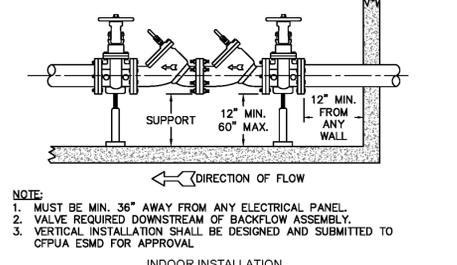
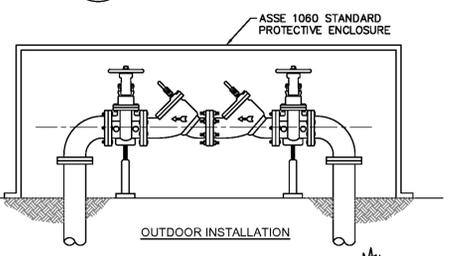


WD-12 REDUCED PRESSURE PRINCIPLE ASSEMBLY
NOT TO SCALE



- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
 - 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).
 - 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).
 - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
 - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

WD-11 LARGE METER
NOT TO SCALE



WD-7 DOUBLE CHECK VALVE ASSEMBLY
NOT TO SCALE

- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
 - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
 - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
 - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN 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**

CFPUA WATER DISTRIBUTION SYSTEM

DATE: 1/8/12	SCALE: N/A	DRAWN BY: CFPUA	CHECKED BY: CFPUA	PROJECT NO.:
STANDARD DETAILS				
WSD-1				

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

REV:	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/26/12
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

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.

Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

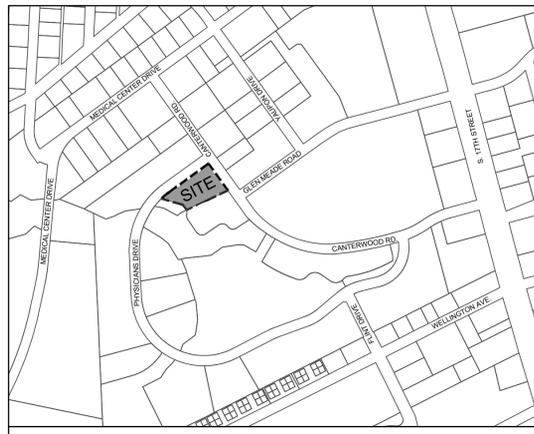
PARAMOUNT ENGINEERING, INC.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
NC License #: C-2846

KIDDIE ACADEMY
2310 Canterbury Drive
Wilmington, North Carolina 28401

SEAL
Professional Engineer
No. 28852
J. TREMPER, B.L.A.
08/22/2018

C-5.4
PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



SITE INFORMATION
OWNER INFORMATION: KIDDIE ACADEMY
 3415 BOX HILL CORPORATE CENTER DR.
 ABINGDON, MD 21009

PROJECT ADDRESS: 2310 CANTERWOOD DRIVE
 WILMINGTON, NC 28401

TAX PARCEL IDENTIFICATION #: R06014-005-004-000
RECORDED DEED BOOK: BK 001357 PG 000558
CURRENT ZONING: O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
VACANT LAND: DAY CARE (CHILD)
PROPOSED USE: 1.129 ACRES OR 49175 SF

FLOOD INFORMATION: THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3126, MAP NUMBER 3720312600 J, DATED APRIL 3, 2006

CAMA LAND USE CLASSIFICATION: URBAN
CONSERVATION DISTRICT: POCOSIN

LANDSCAPE CALCULATIONS:

STREET YARD LANDSCAPING - Sec. 18-477

Caterwood Drive (Primary)
 163.52 LF - 24' Drive = 139.52 LF * 18 = 2,511.36 SF
 REQ'D 2,511.36 SF PROV 2845.17 SF

2,682.36 SF * 15% = 402.35 SF Allowable Sidewalk
 Total Sidewalk in Provided Street Yard Area* = 17.65 SF (0.6%)
 *17.65 sf of sidewalk in Primary Street Yard is existing City sidewalk

2,511.36 SF / 600 SF = 4.18
 1 CANOPY / 600 SF 4.18 5
 6 SHRUBS / 600 SF 25.11 26

Physicians Drive (Secondary)
 351.70 LF - 12' Drive = 339.7 LF * 9 = 3,057.3 SF
 3,235.05 SF * 15% = 485.25 SF Allowable Sidewalk
 Total Sidewalk in Provided Street Yard Area* = 139.09 SF (4.5%)
 *87.91 sf of sidewalk in Secondary Street Yard is existing City sidewalk

3,057.3 SF / 600 SF = 5.09
 1 CANOPY / 600 SF 5.09 6
 6 SHRUBS / 600 SF 30.57 31

PARKING LOT LANDSCAPING
Interior Area Landscaping - Sec. 18-481
 15,108 SF * 20% SHADING
 (See Plan for Tree Shade and SF Calculations)
 REQ'D 3,021.6 SF PROV 4,949.0 SF

PARKING AREA SCREENING - Sec. 18-483
 3' H x 5' W Buffer Provided as Required

FOUNDATION PLANTINGS - Sec. 18-490
 80 LF * 28.6 FT HGT = 2,288 SF * 0.12
 REQ'D 274.6 SF PROV 446.3 SF

BUFFER YARDS - Sec. 18. 18-503
 None Required - Project not adjacent to Residential Use
 REQ'D 0 SF PROV 0 SF

OVERALL SITE TREE PLANTING REQUIREMENTS
 1.129 AC * (15) 2.5" TREES / AC = 16.94
 REQ'D 17 PROV 17

LEGEND:

- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED FENCE PER ARCH'S DWGS
- EXISTING TREE TO REMOVE
- 353.5 SF TREE SHADE SF CALCULATION (PER TREE)
- 236.3 SF FOUNDATION PLANTING SF CALCULATION (PER PLANTER AREA)

LANDSCAPE NOTES:

- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
- ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
- NO TREE, OTHER THAN THOSE SHOWN ON APPROVED PLANS FOR REMOVAL WITH THESE PLANS AND/OR TREE REMOVAL PERMIT PLANS, SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
- ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
- PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY, RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
- THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.

- 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/SEED AREAS MUST BE IRRIGATED OR HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDED AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELLED GROUND.
- IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
- THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED AT THE TIME OF SUBSTANTIAL COMPLETION. ALL MATERIAL INCLUDING SOD AND SEEDS AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
- ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDDED.
- ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT DISTANCE FROM 30' TO 10'.
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.

PLAN NOTES:

- EXTERIOR LIGHTING SHALL BE PROVIDED ON BUILDING FACADE, PER ARCH'S DWGS

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

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

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

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

PLANT SCHEDULE

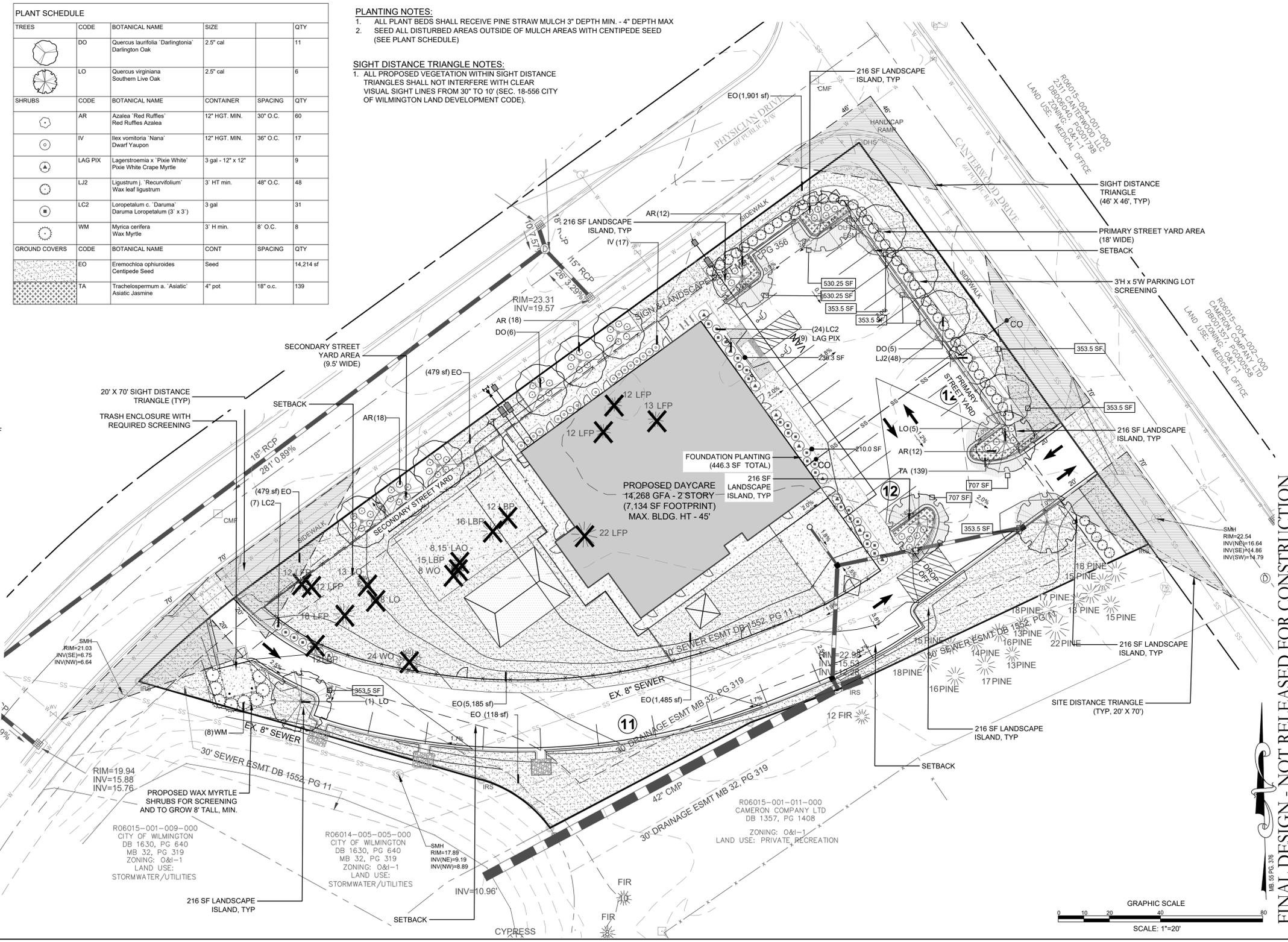
TREES	CODE	BOTANICAL NAME	SIZE	QTY	
DO	DO	Quercus laurifolia 'Darlingtonia'	2.5" cal	11	
LO	LO	Quercus virginiana	2.5" cal	6	
SHRUBS	CODE	BOTANICAL NAME	CONTAINER	SPACING	QTY
AR	AR	Azalea 'Red Ruffles'	12" HGT. MIN.	30" O.C.	60
IV	IV	Ilex vomitoria 'Nana'	12" HGT. MIN.	36" O.C.	17
LAG PIX	LAG PIX	Lagerstroemia 'Pixie White'	3 gal - 12" x 12"		9
LJ2	LJ2	Ligustrum 'Recurvifolium'	3" HT min.	48" O.C.	48
LC2	LC2	Loropetalum c. 'Daruma'	3 gal		31
WM	WM	Myrica cerifera	3" H min.	8" O.C.	8
GROUND COVERS	CODE	BOTANICAL NAME	CONT	SPACING	QTY
EO	EO	Eremochloa ophiuroides	Seed		14,214 sf
TA	TA	Trachelospermum a. 'Asiatic'	4" pot	18" o.c.	139

PLANTING NOTES:

- ALL PLANT BEDS SHALL RECEIVE PINE STRAW MULCH 3" DEPTH MIN. - 4" DEPTH MAX
- SEED ALL DISTURBED AREAS OUTSIDE OF MULCH AREAS WITH CENTIPEDE SEED (SEE PLANT SCHEDULE)

SIGHT DISTANCE TRIANGLE NOTES:

- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' (SEC. 18-556 CITY OF WILMINGTON LAND DEVELOPMENT CODE).



REVISIONS:

CLIENT INFORMATION:
 Eroile Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

PARAMOUNTE ENGINEERING, INC.
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (F) (910) 791-6700 (F)
 NC License #: C-2846

LANDSCAPE PLAN
 KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

PROJECT STATUS:
 PRELIMINARY LAYOUT
 FINAL DESIGN
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
 DATE: 7/11/18
 SCALE: 1"=20'
 DRAWN: [Signature]
 CHECKED: [Signature]

SEAL:
 NORTH CAROLINA
 1823
 07/11/18
 LEON H. EMBREBER, P.E.
 PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

