



ABBREVIATIONS & DESCRIPTIONS

&	AND	HWY	HIGHWAY
@	AT	HYD	HYDRANT
±	PLUS OR MINUS	I.E.	THAT IS
A/C	AIR CONDITIONER	ID	INSIDE DIAMETER
AC	ACRE	INV IN	INVERT IN
ADJ	ADJACENT	INV OUT	INVERT OUT
APPROX	APPROXIMATE	IP	IRON PIN
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	JB	JUNCTION BOX
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LF	LINEAR FEET
AVG	AVERAGE	MAX	MAXIMUM
AVE	AVENUE	MH	MANHOLE
B-B	BACK-TO-BACK	MHW	MEAN HIGH WATER
BUA	BUILT-UPON-AREA	MI	MILE
BDRY	BOUNDARY	MIN	MINIMUM
BLDG	BUILDING	MLW	MEAN LOW WATER
BLVD	BOULEVARD	NO	NUMBER
BM	BENCHMARK	NTS	NOT TO SCALE
BC	BOTTOM OF CURB	OC	ON CENTER
BW	BOTTOM OF WALL	OD	OUTSIDE DIAMETER
BS	BOTTOM OF SLOPE	POC	POINT ON CURVE
¢	CENTER LINE	PROP	PROPOSED
CA	CABLE	PRCST	PRECAST
CB	CATCH BASIN	PT	POINT OF TANGENCY
CIP	CAST IN PLACE	PVC	POLYVINYL CHLORIDE
CO	CLEANOUT	PVMT	PAVEMENT
COL	COLUMN	R/W	RIGHT-OF-WAY
CONC	CONCRETE	RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE	REBAR	REINFORCED BAR
CPP	CORRUGATED PLASTIC PIPE	REF	REFERENCE
CTR	CENTER	REIN	REINFORCED
CTY	COUNTY	REQ	REQUIRED
CF	CUBIC FEET	RET WALL	RETAINING WALL
CY	CUBIC YARDS	RR	RAILROAD
°	DEGREE	ROW	RIGHT-OF-WAY
∅	DIAMETER	SF	SQUARE FEET
DIST	DISTANCE	SI	SQUARE INCHES
DR	DRIVE	ST	STREET
DIP	DUCTILE IRON PIPE	STA	STATION
E.G	FOR EXAMPLE	STD	STANDARD
ELEC	ELECTRICAL	STRUCT	STRUCTURAL
ELEV	ELEVATION	SY	SQUARE YARD
EQUIP	EQUIPMENT	TEL	TELEPHONE
EOP	EDGE OF PAVEMENT	TC	TOP OF CURB
EX	EXISTING	TW	TOP OF WALL
FES	FLARED END SECTION	TRV	TRANSVERSE
FFE	FINISHED FLOOR ELEVATION	TS	TOP OF SLOPE
¢	FLOW LINE	TWP	TOWNSHIP
FT	FEET OR FOOT	TYP	TYPICAL
GA	GAUGE	USCE	UNITED STATES CORPS OF ENGINEERS
GW	GROUND WATER	USGS	UNITED STATES GEOLOGICAL SURVEY
GWT	GROUND WATER TABLE	VERT	VERTICAL
HDPE	HIGH DENSITY POLYETHYLENE	WSE	WATER SURFACE ELEVATION
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	X-SEC	CROSS SECTION
HW	HEAD WALL	YD	YARD

SYMBOLS & DESCRIPTIONS

	ADA RAMP		DOUBLE SWING GATE		SIGN WITH ONE POST
	BENCHMARK		SINGLE SWING GATE		SIGN WITH TWO POSTS
	BOLLARD		GENERATOR		SILT FENCE OUTLET
	CLEANOUT		GPS STATION		SOIL BORING
	CURB INLET - RECTANGULAR		GRAVEL CONSTRUCTION ENTRANCE		STUMP
	CURB INLET - SQUARE		GUY WIRE		TEST PIT
	DROP INLET - RECTANGULAR		HANDI-CAPPED SYMBOL		TRAFFIC SIGNAL
	DROP INLET - SQUARE		HYDRANT		TRANSFORMER PAD
	ELECTRIC METER		INLET PROTECTION		TRANSFORMER POLE
	FENCE POST		DOUBLE LIGHT POLE		TRASH CAN
	FLAG POLE		SINGLE LIGHT POLE		UTILITY POLE
	FLARED END SECTION		LIGHT POST		WATER LEVEL
	FLOOD LIGHT		MAILBOX		WATER METER
	FUEL METER		MANHOLE		WATER VALVE
	FUEL VALVE		OBSERVATION WELL		WELL
	GAS METER		PARKING METER		WHEEL STOP
	GAS VALVE		ROCK CHECK DAM		
	SLIDE GATE		SATELLITE DISH		

ALDI WILMINGTON (COLLEGE ROAD) STORM DRAINAGE COMPUTATIONS

DRAINAGE FROM	DRAINAGE TO	DRAINAGE AREA (ac)	tc TIME OF CONC. (min)	I INTENSITY (in/hr)	RUNOFF COEFFICIENT, C	Q FLOW (cfs)	Q TOTAL FLOW (cfs)	SLOPE (ft/ft)	Dtheo (in)	SIZE (in)	Vfull (ft/sec)	LENGTH (ft)	UPPER INVERT (ft)	LOWER INVERT (ft)	TOP EL (ft)	10-YEAR HGL	50-YEAR HGL	PIPE MATERIAL
CB-2	CB-3	0.21	5.0	9.79	0.92	1.9	1.9	0.0099	9.5	12	4.5	81.00	40.00	39.20	44.00	40.85	40.99	RCP
RD-1	JB-2	0.04	5.0	9.79	0.95	0.3	0.3	0.0206	3.8	8	7.2	97.00	43.92	41.92	-	-	-	PVC
RD-2	JB-2	0.04	5.0	9.79	0.95	0.3	0.3	0.0322	3.4	8	9.0	18.00	42.50	41.92	-	-	-	PVC
JB-2	CB-3	0.00	5.0	9.79	0.95	0.0	0.7	0.0186	5.7	12	6.2	114.00	41.92	39.80	46.92	42.39	42.43	RCP
CB-3	JB-1	0.11	5.0	9.79	0.92	1.0	3.6	0.0105	11.9	12	4.6	19.00	39.20	39.00	45.80	40.55	40.88	RCP
JB-1	JB-3	0.00	5.0	9.79	0.92	0.0	3.6	PUMPED	13.5	15	3.8	307.00	41.56	39.00	43.20	41.18	41.73	RCP
**JB-1	**CB-1	0.00	5.0	9.79	0.92	0.0	3.6	0.0756	8.2	15	14.5	43.00	41.00	37.75	43.20	42.08	42.24	RCP
JB-3	FES-1	0.00	5.0	9.79	0.92	0.0	3.6	0.0052	13.5	15	3.8	11.50	41.56	41.50	45.00	42.69	42.85	RCP
YI-1	SUMP PUMP	0.06	5.0	9.79	0.95	0.6	0.6	0.0100	6.2	8	3.2	23.00	40.70	40.47	42.70	40.21	40.27	CPP
SUMP PUMP	JB-4	0.00	5.0	9.79	0.95	0.0	0.6	PUMPED	6.0	8	3.5	7.00	42.83	42.47	-	-	-	PVC
RD-3	JB-4	0.38	5.0	9.79	0.95	3.6	3.6	0.0131	9.9	12	7.5	13.00	43.00	42.83	-	-	-	PVC
JB-4	FES-2	0.00	5.0	9.79	0.65	0.0	4.1	0.0065	13.8	15	4.2	206.00	42.83	41.50	45.25	44.07	44.27	RCP
FES-4	FES-5	0.78	5.0	9.79	0.74	5.6	5.6	0.0071	15.2	18	5.0	70.00	42.00	41.50	44.00	43.34	43.54	RCP
CB-1	EX. MH	0.39	5.0	9.79	0.65	2.5	6.0	0.0175	13.2	15	7.0	20.00	37.75	37.40	41.00	39.36	39.76	RCP

\*STORMWATER COMPUTATIONS REPRESENT RUNOFF FROM THE 10-YEAR, 24-HOUR STORM  
 \*\* PROPOSED PIPE TO MATCH SIZE OF EXISTING PIPE, AND TO HAVE SLOPE GREATER THAN OR EQUAL TO EXISTING PIPE

EMERGENCY SPILLWAY DESIGN AND LINING

UPPER INVERT	(ft)	44.25
LOWER INVERT	(ft)	44.13
LENGTH	(ft)	15.00
CHANNEL SLOPE	(ft/ft)	0.008
CHANNEL SECTION	-	TRAPEZOIDAL
AVG SIDE SLOPE	(Z:1)	3.00
BOTTOM WIDTH	(ft)	10.50
TOTAL DEPTH	(ft)	0.75
WETTED PERIMETER	(ft)	13.79
CROSS SECTIONAL AREA	(sf)	6.27
100-YEAR/24-HOUR DESIGN FLOW	(cfs)	7.11
NORMAL DEPTH	(ft)	0.52
AVG VELOCITY	(fps)	1.13
SHEAR STRESS	(lb/ft <sup>2</sup> )	0.26
LINER	-	6-IN RIP RAP
PERMISSIBLE VELOCITY	(fps)	2.00
MANNING COEFFICIENT	n	0.069

FOREBAY WEIR DESIGN AND LINING

UPPER INVERT	(ft)	41.50
LOWER INVERT	(ft)	41.00
LENGTH	(ft)	11.00
CHANNEL SLOPE	(ft/ft)	0.045
CHANNEL SECTION	-	TRAPEZOIDAL
AVG SIDE SLOPE	(Z:1)	2.00
BOTTOM WIDTH	(ft)	19.00
TOTAL DEPTH	(ft)	3.50
WETTED PERIMETER	(ft)	21.01
CROSS SECTIONAL AREA	(sf)	8.96
100-YEAR/24-HOUR DESIGN FLOW	(cfs)	22.86
NORMAL DEPTH	(ft)	0.45
AVG VELOCITY	(fps)	2.55
SHEAR STRESS	(lb/ft <sup>2</sup> )	1.28
LINER	-	6-IN RIP RAP
PERMISSIBLE SHEAR STRESS	(lb/ft <sup>2</sup> )	2.00
MANNING COEFFICIENT	n	0.069



3500 GATEWAY CENTRE BLVD., SUITE 200  
 MORRISVILLE, NC 27560  
 PHONE: 919-755-5011  
 NC LICENSE # F-1143

REVISIONS

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	RAP	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	RAP	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
 NOT FOR CONSTRUCTION

SCALE VERIFICATION

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 24 x 36

GENERAL NOTES

ALDI #98 WILMINGTON, NC  
 3701 SOUTH COLLEGE ROAD  
 WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION  
 1985 OLD UNION CHURCH ROAD  
 SALISBURY, NORTH CAROLINA 28146  
 (919) 714-8111

SITE PLANS

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

PROPERTY OWNER CERTIFICATION:

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER 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 THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE CITY OF WILMINGTON."

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

DESIGNER'S PLAN CERTIFICATION:

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
 PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
 DATE: *July 22, 2016*  
 REGISTRATION NUMBER: *042102*



CAD FILE: W:\Cadd\2017\2421\_001A\_Wilmington\_College\_Road\CAD\Drawings\Aldi\_Wilmington\_College\_Road.dwg  
 PLOTTED: 7/22/2016 2:55 PM BY: jgaha:itp  
 LAYOUT: 2 GENERAL NOTES

PAVEMENT NOTES

1. ASPHALT NOTES

- 1.1. ASPHALT SHALL BE THE TYPE OR TYPES SPECIFIED ON THE DRAWINGS. IF NO TYPE IS INDICATED THE CONTRACTOR SHALL USE A MIX SPECIFIED BY NCDOT FOR TOP AND BINDER. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.
1.2. ASPHALT WILL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45° FAHRENHEIT AND RISING. ASPHALT WILL NEVER BE PLACED ON FROZEN MATERIAL, DURING MEDIUM OR HEAVY PRECIPITATION OR WHEN PRECEDING PRECIPITATION HAS SATURATED THE SUBBASE AND/OR SUBGRADE.
1.3. SURFACES THAT WILL ABUT THE NEW ASPHALT SHALL BE TACK COATED PRIOR TO PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTER, EXISTING ASPHALT AND STRUCTURES. TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF .05 TO .15 GALLONS PER SQUARE YARD.
1.4. ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 1/4 INCH FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER, FROM THOSE SPECIFIED ON THE DRAWINGS. IF MORE THAN 60% OF TEST CORES SAMPLED FAIL TO EQUAL OR EXCEED THE REQUIRED DEPTH, THE PAVEMENT SHALL BE CONSIDERED FAILED AND BE SUBJECT TO REPAIRS, REPLACEMENT OR REASONABLE COMPENSATION OF WHICH THE CONTRACTOR WILL BEAR ALL COSTS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INCH IN ANY DIRECTION.
1.5. PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY NCDOT. THE ROLLING SHALL BE DONE IN SUCH A MANNER THAT WILL MATCH JOINTS AND LEAVE A SMOOTH UNIFORM SURFACE, WHILE PROVIDING THE PROPER COMPACTION, WHICH WILL BE 95% OF LABORATORY DENSITY.
1.6. WHEN MATCHING INTO EXISTING PAVEMENT ALL MATCH JOINTS SHALL BE SAW CUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PROPOSED OR EXISTING WHICH EVER IS GREATER.
1.7. PAVING EQUIPMENT SHALL BE OF GOOD CONDITION AND QUALITY. ASPHALT SHALL BE PLACED BY MECHANICAL EQUIPMENT EXCEPT IN SMALL AREAS THAT ARE INACCESSIBLE TO A PAVER. ASPHALT SHALL BE TRANSPORTED IN COVERED TRUCKS AND SCHEDULED IN SUCH A MANNER THAT WILL MAINTAIN ASPHALT TEMPERATURE. ASPHALT SHALL BE REJECTED WHEN TEMPERATURES FALL BELOW 250° FAHRENHEIT OR THE MINIMUM TEMPERATURES SPECIFIED BY NCDOT.

2. CONCRETE NOTES

- 2.1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING NCDOT REQUIREMENTS. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/- 1/2 INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH +/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 1/2% FOR SLIP FORM WORK AND 6% +/- 1 1/2% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.
2.2. SIDEWALKS, GUTTERS AND CURBS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: SIDEWALKS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF COMPACTED SUBBASE AND CURBS SHALL BE PLACED ON A MINIMUM OF 4 INCHES OF COMPACTED SUBBASE.
2.3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR NCDOT REQUIREMENTS.
2.4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED, WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
2.5. SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH, BUT CONSISTENT THROUGH OUT THE PROJECT.
2.6. EXPANSION JOINTS SHALL BE PLACED EVERY 50 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED, 1/2 INCH MATERIAL WITH 1/2 INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOL JOINTED TO 1/3 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

3. PAVEMENT & STRUCTURAL SUBBASE

- 3.1. THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS. IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY NCDOT. THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M 147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSH STONE WHEN APPROVED IN WRITING BY THE OWNER AND ENGINEER. MATERIAL SUPPLIED FOR USE AS SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.
3.2. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED, THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).
3.3. FINAL GRADING OF SUBBASE SHALL BE TO +/- 1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND +/- 1 INCH OF THE REQUIRED THICKNESS FOR THICKNESS OF 8 INCHES OR GREATER AND +/- 1/2 INCH FOR THICKNESS LESS THAN 8 INCHES.
3.4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTION AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER THE EARTHWORK NOTES ON THE GRADING AND DRAINAGE PLAN.
3.5. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER THE EARTHWORK NOTES ON THE GRADING AND DRAINAGE PLAN.
3.6. IF REQUIRED, STABILIZING FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "MODULUS (LOAD AT 10% ELONGATION) =115LB PER ASTM D1682-64", "GRAB TENSILE STRENGTH 200LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 400PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 115LB PER ASTM D1117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .015 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF= 60 PER ASTM D 4491-85". WHEN STABILIZATION FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3.7. IF REQUIRED, FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS "GRAB TENSILE ELONGATION =50% PER ASTM D1682-64", "GRAB TENSILE STRENGTH 70LB PER ASTM D 1682-64", "MULLEN BURST STRENGTH = 200PSI PER ASTM D 3786-87", "TRAPEZOID TEAR STRENGTH WHEN APPLICABLE = 35LB PER ASTM D1117-80", "COEFFICIENT OF PERMEABILITY K CM/SEC = .2 PER ASTM D 4491-85", "WATER FLOW RATE GPM/SF= 180 PER ASTM D 4491-85". WHEN FILTER FABRIC IS USED IT SHALL BE PULLED TIGHT AND ALL WRINKLES REMOVED. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.

4. TRAFFIC SIGNAGE & PAVEMENT MARKINGS

- 4.1. PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THIS USE THE FOLLOWING. PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (WHITE- PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP LETTERING).
4.2. THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER.
4.3. THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND NCDOT. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO: M268.
4.4. POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
4.5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.
4.6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR 3/4 STRENGTH IS ACHIEVED.
4.7. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING INSPECTOR AND FIRE DEPARTMENT.

GENERAL CONSTRUCTION NOTES

- 1. THE TERM OF OWNER AS USED IN THESE SPECIFICATIONS AND NOTES SHALL INCLUDE THE OWNER OF THE PROPERTY, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR, THE COMPANY OR PARTY THAT SIGNED THE CONTRACT FOR THIS WORK AND THE AGENTS OF EACH. THE OWNER'S REPRESENTATIVE SHALL BE THE INDIVIDUAL OR PARTY ASSIGNED BY THE OWNER TO BE THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PERMITS, CONNECTION PERMITS, FEES, INSPECTIONS AND RECORD KEEPING REQUIRED BY ALL MUNICIPAL, UTILITY, HEALTH, ENVIRONMENTAL, STATE OR FEDERAL AGENCIES THAT MAY HAVE JURISDICTION. FURTHERMORE, THE CONTRACTOR SHALL BE RESPONSIBLE TO MEET OR EXCEED ALL REQUIREMENTS OF THE AGENCIES OR AUTHORITIES HAVING JURISDICTION OVER HIS WORK. ALL CONFLICTS IN REQUIREMENTS OF DIFFERENT AGENCIES, AUTHORITIES AND/OR THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAINTAIN THE PROPERTY AND PROJECT LIMITS THROUGHOUT THE PROJECT. ALL CONFLICTS BETWEEN THE DESIGN AND THE PROJECT/PROPERTY LIMITS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. UNLESS DESCRIBED IN THE CONTRACT DOCUMENTS OR SHOWN ON THE DRAWINGS THE OWNER HAS NOT SECURED ANY RIGHT-OF-WAYS, EASEMENTS OR AGREEMENTS WITH OTHER PROPERTY OWNERS OR PROPERTY USERS. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND MAINTAIN ANY TEMPORARY RIGHT-OF-WAYS, EASEMENTS, PERMITS OR AGREEMENTS HE MAY NEED TO PERFORM HIS WORK. ALL SUCH AGREEMENTS SHALL HOLD THE OWNER, ENGINEER AND HIS AGENTS HARMLESS AND THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ALL COSTS. THE CONTRACTOR SHALL COPY THE OWNER ON RELEASES OF ALL AGREEMENTS PRIOR TO FINAL PAYMENT BY THE OWNER TO THE CONTRACTOR.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY, LAYOUT AND RECORD DRAWINGS FOR THIS CONTRACT. ANY CONFLICTS IN SURVEY/LAYOUT AND THE DESIGN OR AGENCIES REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROTECT AND SAFEGUARD ALL EXISTING SURVEY MONUMENTS, CONTROL AND TIE-DOWNS. THE CONTRACTOR SHALL PAY ALL COSTS TO REPAIR OR REPLACED DAMAGED SURVEY MONUMENTS, CONTROL AND TIE-DOWNS.
5. NO CHANGES TO THE DESIGN OR MATERIALS SPECIFIED MAY BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER OR IN THE CASE OF UTILITIES OR ROAD WORK TO BE DEDICATED, THE AUTHORITY RECEIVING DEDICATION. AT THE END OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TO THE OWNER A RECORD SET OF DRAWING REFLECTING ALL CHANGES MADE BY THE CONTRACTOR DURING CONSTRUCTION.
6. EROSION CONTROL IS NECESSARY WHENEVER SEDIMENT, DUST, EROSION, OR CONTAMINATED RUN-OFF MAY OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PLACE AND MAINTAIN WHATEVER EROSION CONTROL OR RUN-OFF PROTECTION IS REQUIRED TO PROTECT HIS WORK, THE WORK OF OTHERS, THE PROJECT, ADJACENT PROPERTIES AND THE HEALTH AND WELL BEING OF THE WORKERS, PUBLIC AND SURROUNDING NATURAL RESOURCES. THEY SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING EROSION AND RUN-OFF CONTROL.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE AND ALL ADJACENT PEDESTRIAN, TRAFFIC AND BUSINESS USES. THE CONTRACTOR SHALL TAKE WHATEVER PRECAUTIONS AND STEPS NECESSARY TO MAINTAIN SAFETY AND OPERATION OF THESE USES IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DAMAGES CAUSED FROM HIS FAILURE TO TAKE PROPER AND ADEQUATE PRECAUTIONS. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THESE USES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS ASSOCIATED WITH WEATHER, GROUNDWATER, AND OTHER OCCURRENCES THAT COULD BE EXPECTED OR ARE COMMON WITH THIS TYPE WORK. THE CONTRACTOR SHALL REVIEW ALL PERTINENT DOCUMENTS INCLUDING SOILS REPORTS, SOILS BORINGS AND OTHER SOIL OR SITE DATA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT HIS WORK THROUGH OUT THE CONTRACT. ANY DAMAGES REQUIRING REPAIRS OR REPLACEMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
10. WHEN WORK IS DONE WITHIN A ROAD, UTILITY OR PRIVATE EASEMENT, RIGHT-OF-WAY OR OTHER PROPERTY AGREEMENT THE CONTRACTOR SHALL DO ALL WORK WITHIN THAT AREA PER THE AUTHORITY HAVING JURISDICTION.
11. WHEN SEPARATE SITE AND BUILDING CONTRACTS ARE PERFORMED THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO BRING UTILITIES TO WITHIN 5 FEET OF BUILDING FACE UNLESS NOTED OTHERWISE ON DRAWINGS OR CONTRACT DOCUMENTS.
12. ALL UTILITIES ARE SHOWN PER SURFACE SURVEYS AND/OR RECORD MAPS AND MAY VARY FROM ACTUAL IN FIELD LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY STAKE OUTS AND LOCATING UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL-CENTER AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. ANY DAMAGE TO UTILITIES DUE TO IMPROPER STAKE OUT, LACK OF STAKE OUT OR THE FAILURE TO VERIFY DIFFERENCES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REPLACE OR PAY DAMAGES AT NO EXPENSE TO THE CONTRACTOR.

TERMITE CONTROL NOTES

- 1. SUBMIT MANUFACTURER'S STANDARD WARRANTY. INCLUDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE MATERIALS. WARRANTY PERIOD SHALL BE 5 YEARS.
2. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. SOIL TREATMENT MATERIALS SHALL BEAR FEDERAL REGISTRATION NUMBER OF U.S. ENVIRONMENTAL PROTECTION AGENCY AND ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. IF ACCEPTABLE, PRODUCTS MAY INCLUDE CHLOROPYRIFOS, PERMATHRIN, CYPERMETHRINE, FENVALERATE, ISOFENPHOSE.
4. TREAT SOIL IN STRICT COMPLIANCE WITH NATIONAL PEST CONTROL ASSOCIATION STANDARDS AND WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND RECOMMENDATIONS.
5. TREAT AREAS UNDER FLOOR SLABS PRIOR TO PLACEMENT OF CONCRETE IF POSSIBLE TO AVOID DRILLING. TREAT AREAS OUTSIDE FOUNDATION WALLS AFTER EXCAVATION, FILLING AND GRADING ARE COMPLETE. DO NOT APPLY TREATMENT TO FROZEN OR EXCESSIVELY WET SOILS.
6. POST SIGNS AND OTHER WARNINGS INDICATING THAT SOIL POISONING HAS BEEN APPLIED. PROTECT PERSONS AND PROPERTY FROM INJURY OR DAMAGE FROM SOIL TREATMENT WORK.



3500 GATEWAY CENTRE BLVD., SUITE 200
MORRISVILLE, NC 27660
PHONE: 919-755-5011
NC LICENSE # F-1143

REVISIONS

Table with 5 columns: REV, DESCRIPTION, DSN DWN, CHK APP, DATE. Contains 3 revision entries for CFPWA COMMENTS, ARCHITECT, CFPWA & NCDOT COMMENTS, and TRC COMMENTS.

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

SCALE VERIFICATION

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING
0 1"
IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

PROPERTY OWNER CERTIFICATION:

I HEREBY CERTIFY THAT I AM THE CURRENT OWNER 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 THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE CITY OF WILMINGTON.

SIGNATURE:
PRINT NAME AND TITLE:
DATE:

DESIGNER'S PLAN CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL.

SIGNATURE: Ryan Parker
PRINT NAME AND TITLE: Ryan Parker, Staff Professional II
DATE: July 22, 2016
REGISTRATION NUMBER: 042102



ORIGINAL DRAWING SIZE IS 24 x 36

GENERAL NOTES

ALDI #98 WILMINGTON, NC
3701 SOUTH COLLEGE ROAD
WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION
1985 OLD UNION CHURCH ROAD
SALISBURY, NORTH CAROLINA 28146
(919) 714-8111

SITE PLANS

Table with 2 columns: Field Name, Value. Fields include PROJECT NO., ISSUE DATE, CURRENT REVISION, DESIGNED BY, DRAWN BY, CHECKED BY, APPROVED BY, SHEET, and 3 of 27.

C-3

CAD FILE: W:\Cadd\2016\172421\_001A\_Wilmington\_College\_Road\CAD Drawings\172421\_001A\_Wilmington\_College\_Road\General Notes.dwg
LAYOUT: 3 GENERAL NOTES
PLOTTED: 7/22/2016 2:55 PM BY: rlp@kleinfelder.com





**LEGEND**

- EXISTING PROPERTY LINE
- EXISTING ABUTTING PROPERTY LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- EXISTING WATER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- PROPOSED TREE PROTECTION FENCE

● EXISTING PROTECTED TREE TO REMAIN

○ EXISTING PROTECTED TREE TO BE REMOVED

○ EXISTING SIGNIFICANT DOGWOOD, MAGNOLIA, AMERICAN HOLLY OR FLOWERING TREE >8" DBH TO BE REMOVED

- NOTES**
- EXISTING TREES TO REMAIN ON SITE SHALL BE PROTECTED AT ALL TIMES THROUGHOUT CONSTRUCTION. NO CLEARING OR GRUBBING SHALL TAKE PLACE WITHIN TREE PROTECTION FENCING.
  - TREE PROTECTION FENCING SHALL, AT MINIMUM, EXTEND TO THE DRIP LINE OF THE PROTECTED TREE.

**PROTECTED TREE REMOVAL SUMMARY**

TREE TYPE	AMOUNT REMOVED
8" MAGNOLIA	1
12" LONGLEAF PINE	8
13" LONGLEAF PINE	2
14" LONGLEAF PINE	4
15" LONGLEAF PINE	1
16" LONGLEAF PINE	2
17" LONGLEAF PINE	6
19" LONGLEAF PINE	1
8" OAK	5
10" OAK	1
11" OAK	1
7" GALLBERRY	1
9" GALLBERRY	3
6" DOGWOOD	1

**PROTECTED TREE PRESERVATION SUMMARY**

TREE TYPE	AMOUNT PRESERVED
8" OAK	3
10" OAK	1
12" LONGLEAF PINE	3
14" LONGLEAF PINE	1
17" LONGLEAF PINE	1

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

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL



**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**

THIS BAR IS 1" IN LENGTH ON ORIGINAL DRAWING



SCALE: 1" = 30'  
SCALE IN FEET

ORIGINAL DRAWING SIZE IS 24 x 36

**TREE CLEARING PLAN**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

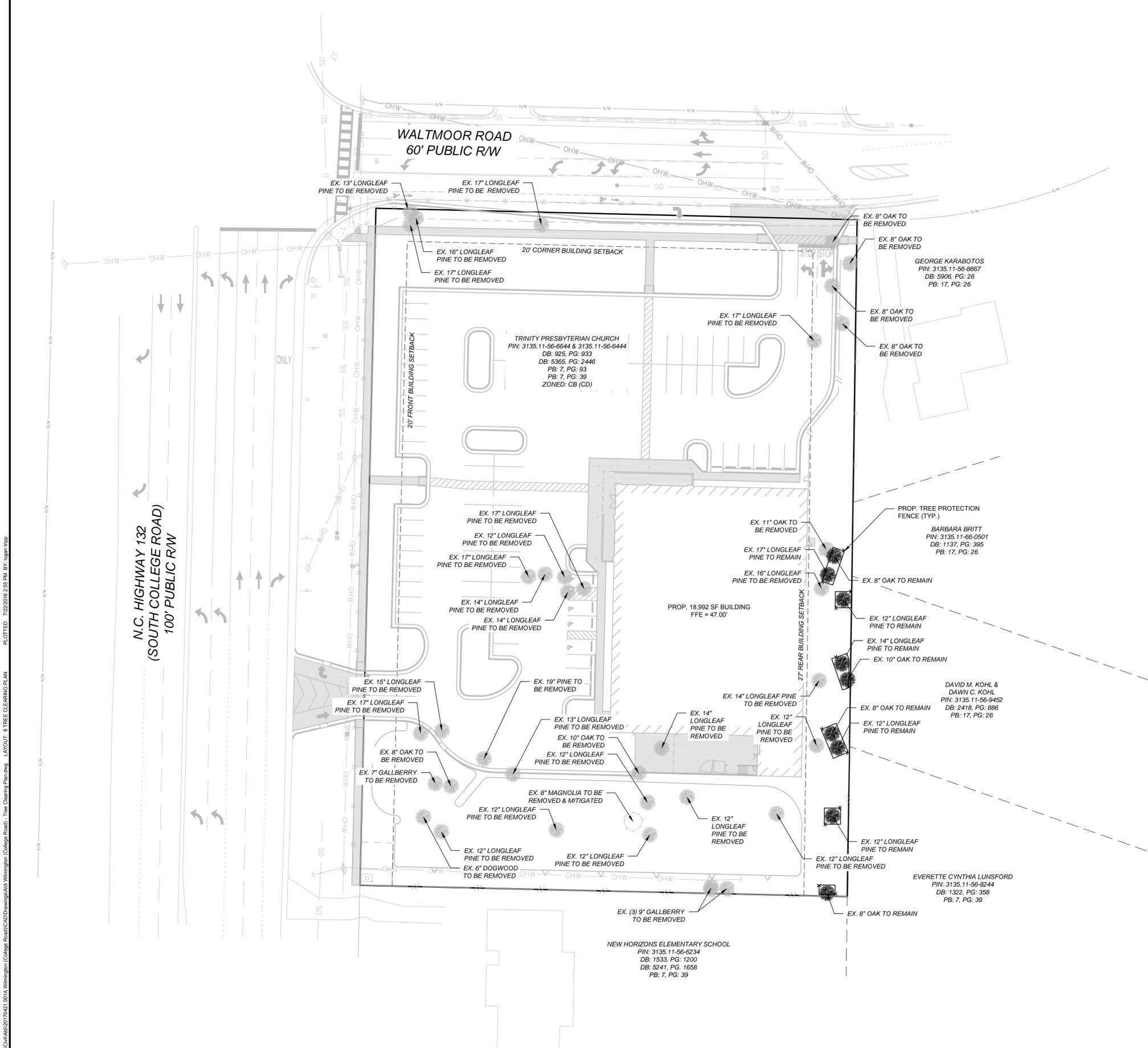


ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

SHEET 6 of 27



CAD FILE: W:\Cadd\2017\0421\_001A\_Wilmington\_College\_Road\CAD\Drawings\Trees\Tree\_Clearing\_Plan.dwg  
 PLOTTED: 7/22/2016 2:55 PM BY: jbc:mhp  
 LAYOUT: 8 TREE CLEARING PLAN

**SUMMARY INFORMATION**

DEVELOPMENT NAME: ALDI #98 WILMINGTON NC  
SITE ADDRESS: 3701 SOUTH COLLEGE ROAD  
PIN NUMBER: 3135.11.56.6444 & 3135.11.56.6444  
TOTAL ACREAGE: 2.89  
TOTAL ACREAGE - 15' ROW DEDICATION: 2.79

JURISDICTION: CITY OF WILMINGTON  
CURRENT ZONING DISTRICT: CB (CD)  
CAMA LAND USE CLASSIFICATION: TRANSITION

EXISTING USE: CHURCH  
PROPOSED USE: RETAIL

MINIMUM SETBACKS: FRONT: 20'  
LEFT SIDE: 0'  
CORNER: 20'  
REAR (TO RES. DIST.): 25'

ADDITIONAL SETBACKS DUE TO BUILDING HEIGHT > 20':  
REAR (TO RES. DIST.): 8'

SETBACK REDUCTION DUE TO LANDSCAPE BUFFER INCREASE:  
REAR: 6'

TOTAL SETBACK: REAR: 27'

WATERSHED: WHITE OAK RIVER BASIN  
DOWNSTREAM STREAM: HEWLETTS CREEK  
CLASSIFICATION: SA; HQW

PROPOSED BUILDING USE: RETAIL  
PROPOSED BUILDING AREA: 18,992 SF  
PROPOSED BUILDING LOT COVERAGE: 15.6%  
PROPOSED BUILDING HEIGHT (MAXIMUM): 28'-0"  
PROPOSED BUILDING NUMBER OF STORIES: 1  
PROPOSED BUILDING CONSTRUCTION TYPE: VB

PRE DEVELOPMENT IMPERVIOUS AREA (SF): 44,258 SF  
BUILDING (SF): 4,379 SF  
PAVEMENT (SF): 19,041 SF  
SIDEWALKS (SF): 137 SF  
MISC. (SF): 20,701 SF (GRAVEL PARKING AREAS)

POST DEVELOPMENT IMPERVIOUS AREA (%): 36.4%  
BUILDING (SF): 18,992 SF  
PAVEMENT (SF): 51,621 SF  
SIDEWALKS (SF): 3,010 SF  
POST DEVELOPMENT IMPERVIOUS AREA (%): 60.7%

EXISTING PARKING (TO BE REMOVED):  
27 TOTAL PARKING SPACES (2 ADA ACCESSIBLE, 0 VAN ACCESSIBLE)

REQUIRED PARKING:  
19,054 SF @ 1 SPACE PER 400 SF = 48 SPACES (2 ADA ACCESSIBLE)

MAXIMUM ALLOWABLE PARKING:  
19,054 SF @ 1 SPACE PER 200 SF = 96 SPACES (4 ADA ACCESSIBLE)

PROPOSED PARKING:  
88 TOTAL PARKING SPACES (4 ADA ACCESSIBLE, 1 VAN ACCESSIBLE)

REQUIRED BICYCLE PARKING:  
5 SPACES PER 100 AUTO SPACES = 5 SPACES

PROPOSED BICYCLE PARKING:  
5 TOTAL BICYCLE PARKING SPACES

DEVELOPER:  
ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NC 28146  
(919) 714-8111

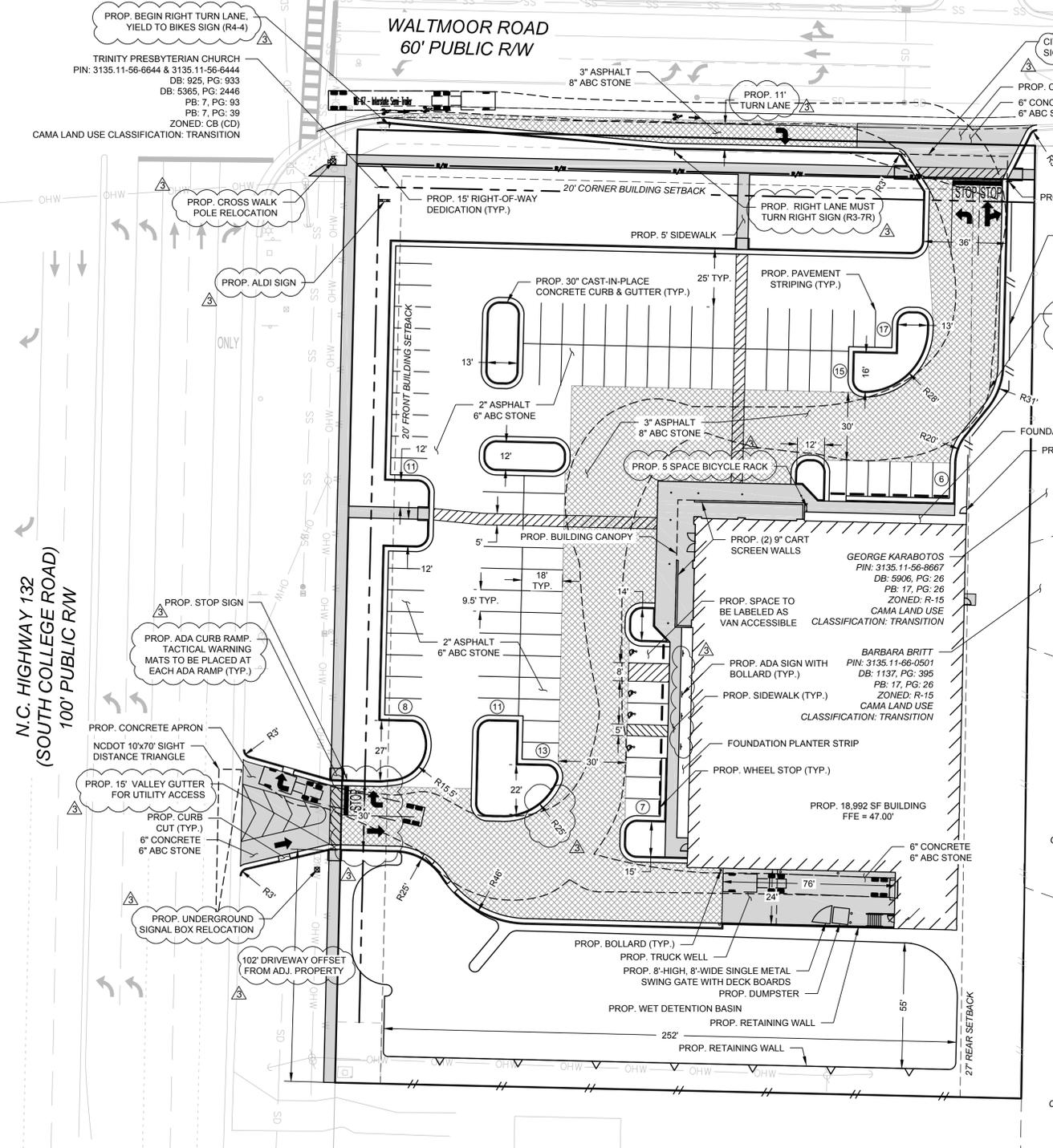
ENGINEER:  
KLEINFELDER, INC.  
3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27560  
(919) 755-5011

**LEGEND**

- EXISTING PROPERTY LINE
- - - EXISTING ABUTTING PROPERTY LINE
- - - EXISTING SETBACK LINE
- - - EXISTING EASEMENT
- - - EXISTING BARBED WIRE FENCE
- W W W EXISTING WATER LINE
- OHW OHW EXISTING OVERHEAD POWER LINE
- SS SS EXISTING SANITARY SEWER LINE
- SD SD EXISTING STORM SEWER LINE
- - - PROPOSED EASEMENT
- PROPOSED RIGHT-OF-WAY
- PROPOSED WOOD FENCE
- PROPOSED RETAINING WALL
- PROPOSED OVERHEAD POWER LINE
- PROPOSED HEAVY DUTY PAVEMENT

**SITE NOTES**

1. ALL DIMENSIONS AND RADII ARE FROM BACK OF CURB.
2. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
3. PROPOSED ADA PARKING AND STALL STRIPING SHALL HAVE SLOPES NO STEEPER THAN 1:48 (2%).
4. PROPOSED ACCESSIBLE ROUTE TO RIGHT-OF-WAY AND PROPOSED SIDEWALKS SHALL HAVE A RUNNING SLOPE NO STEEPER THAN 1:20 (5%) AND CROSS SLOPES NO STEEPER THAN 1:48 (2%).
5. NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE.
6. PARKING LOT STRIPING LINES SHALL BE 4" WIDE WITH MEASUREMENTS ALWAYS TO THE STRIPES CENTERLINE.
7. ALL PAVEMENT MARKINGS IN PUBLIC RIGHT-OF-WAYS AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS
8. PARKING SIGNAGE SHALL HAVE A 7' CLEAR HEIGHT.
9. ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING REGARDING THE INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
10. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
11. CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
12. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
13. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
14. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
15. STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
16. INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
17. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND/OR CURBING WILL BE REPLACED.
18. SEE SHEET C-3 FOR ADDITIONAL SITE NOTES.



TRINITY PRESBYTERIAN CHURCH  
PIN: 3135.11.56.6444 & 3135.11.56.6444  
DB: 925, PG: 933  
PB: 7, PG: 93  
ZONED: CB (CD)  
CAMA LAND USE CLASSIFICATION: TRANSITION

NEW HORIZONS ELEMENTARY SCHOOL  
PIN: 3135.11.56.6234  
DB: 1533, PG: 1200  
DB: 5241, PG: 1658  
PB: 7, PG: 39  
ZONED: O&I-1  
CAMA LAND USE CLASSIFICATION: TRANSITION

DAVID M. KOHL & DAWN C. KOHL  
PIN: 3135.11.56.9452  
DB: 2418, PG: 886  
PB: 17, PG: 26  
ZONED: R-15  
CAMA LAND USE CLASSIFICATION: TRANSITION

EVERETTE CYNTHIA LUNSFORD  
PIN: 3135.11.56.8244  
DB: 1322, PG: 358  
PB: 7, PG: 39  
ZONED: R-15  
CAMA LAND USE CLASSIFICATION: TRANSITION

GEORGE KARABOTOS  
PIN: 3135.11.56.8667  
DB: 5906, PG: 26  
PB: 17, PG: 26  
ZONED: R-15  
CAMA LAND USE CLASSIFICATION: TRANSITION

BARBARA BRITT  
PIN: 3135.11.68.0501  
DB: 1137, PG: 395  
PB: 17, PG: 26  
ZONED: R-15  
CAMA LAND USE CLASSIFICATION: TRANSITION

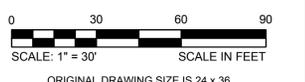
**REVISIONS**

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING  
IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY



**PROPERTY OWNER CERTIFICATION:**

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER 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 THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE CITY OF WILMINGTON."

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

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL



**SITE PLAN**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

REVISIONS

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	GLT	RAP	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	RAP	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**  
THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

SCALE: 1" = 30'  
SCALE IN FEET

ORIGINAL DRAWING SIZE IS 24 x 36

**UTILITY PLAN**  
ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-8  
8 of 27

**LEGEND**

- EXISTING PROPERTY LINE
- - - EXISTING ABUTTING PROPERTY LINE
- - - EXISTING SETBACK LINE
- - - EXISTING EASEMENT
- - - EXISTING CHAINLINK FENCE
- - - EXISTING WOOD FENCE
- - - EXISTING WATER LINE
- - - EXISTING OVERHEAD POWER LINE
- - - EXISTING SANITARY SEWER LINE
- - - EXISTING STORM SEWER LINE
- - - PROPOSED EASEMENT
- - - PROPOSED RIGHT-OF-WAY
- - - PROPOSED TELEPHONE LINE
- - - PROPOSED WATER LINE
- - - PROPOSED FIRE PROTECTION LINE
- - - PROPOSED NATURAL GAS LINE
- - - PROPOSED OVERHEAD POWER LINE
- - - PROPOSED UNDERGROUND POWER LINE
- - - PROPOSED SANITARY SEWER LINE
- - - PROPOSED STORM SEWER LINE
- - - PROPOSED WOOD FENCE
- - - PROPOSED RETAINING WALL

**UTILITY NOTES**

- DOMESTIC WATER SERVICE SHALL BE 2" SOFT "K" COPPER. FIRE LINE SHALL BE 6" DIP.
- SANITARY SEWER SERVICES SHALL BE 4" SDR 35 PVC.
- NATURAL GAS SERVICE SHALL BE 2" PLASTIC PIPE.
- WATER AND SANITARY SEWER SERVICES TO BE COORDINATED WITH THE PLUMBING PLANS.
- UNDERGROUND POWER LINE AND TELEPHONE LINE SHALL BE PLACED IN A CONDUIT. IT IS ULTIMATELY THE CONTRACTOR'S RESPONSIBILITY FOR THE CONDUIT INSTALLATION AND TRENCHING AND THEY SHALL COORDINATE WITH THE LOCAL UTILITY SUPPLIER FOR FEES AND REQUIREMENTS.
- 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.
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING.
- CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTRACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0896 FOR ADDITIONAL INFORMATION.
- A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
- A HYDRANT MUST BE WITHIN 150' OF THE FDC.
- THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
- WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) DETAILS AND SPECIFICATIONS.
- PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-332-6558 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- ANY IRRIGATION SYSTEM SUPPLIED BY CFPUA WATER SHALL COMPLY WITH THE CFPUA CROSS CONNECTION CONTROL REGULATIONS. CALL 910-332-6558 FOR INFORMATION.
- ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCHH OR ASSE.
- CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES, AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED ON ANY CONFLICTS.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.
- ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
- NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIAL BEING DELIVERED TO THE JOB SITE.
- REFER TO CFPUA SPECIFICATIONS AND DETAILS FOR ADDITIONAL UTILITY NOTES.

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

**DESIGNER'S PLAN CERTIFICATION:**

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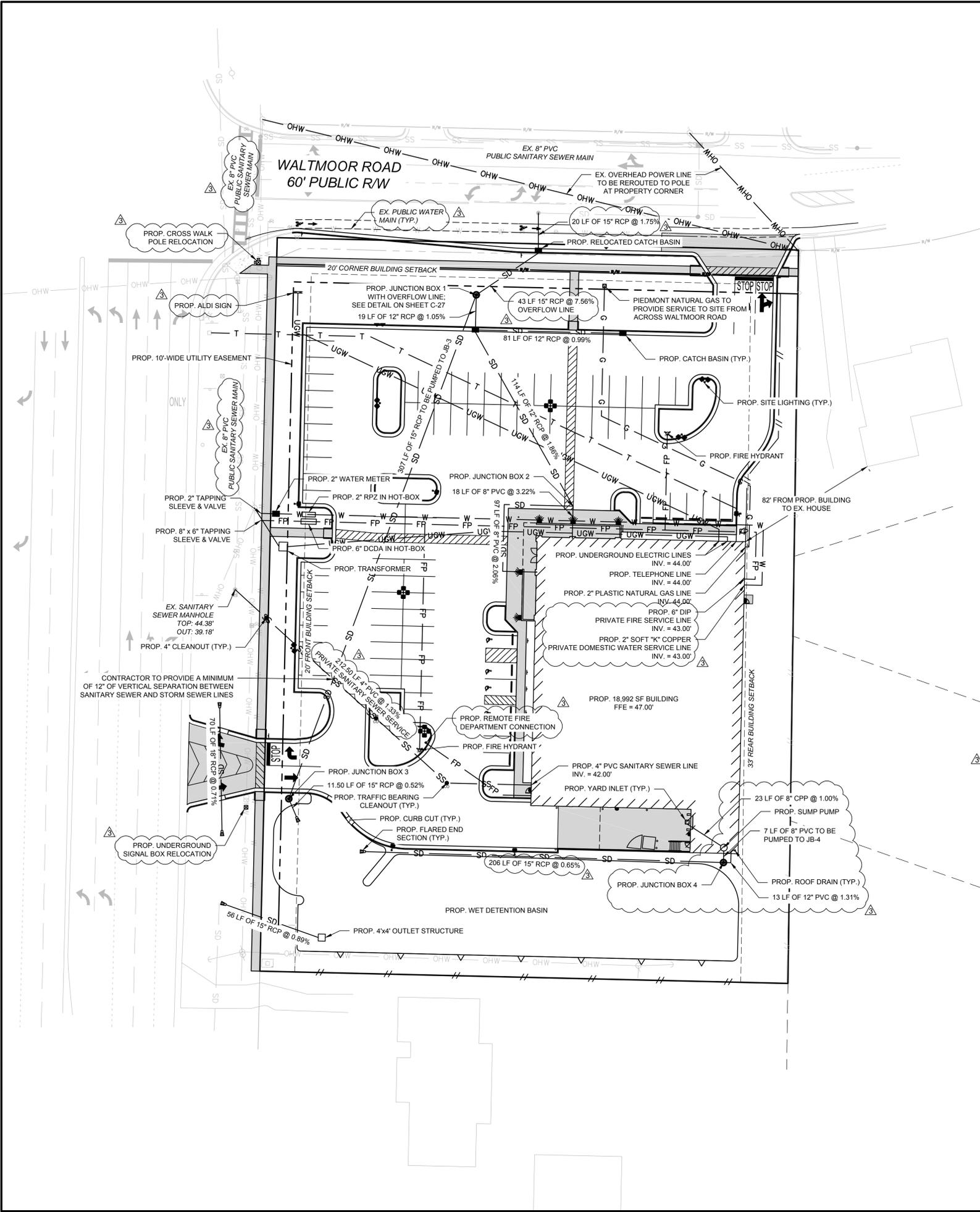
SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL

CALL 72 HOURS  
BEFORE YOU DIG

Know what's below.  
Call before you dig.

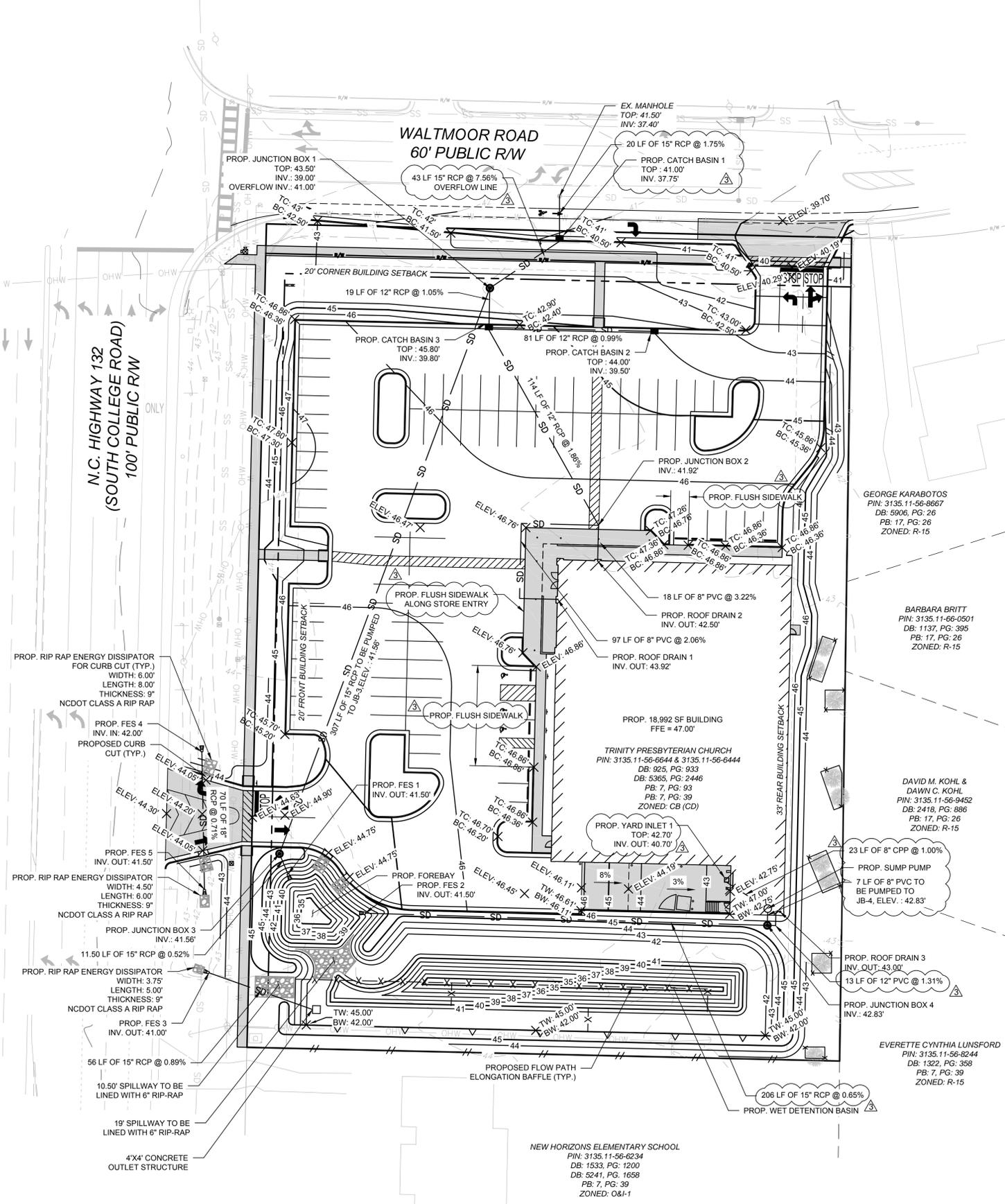
NORTH CAROLINA  
ONE-CALL CENTER  
1-800-632-4949



CAD FILE: W:\Cadd\2017\0421\_001A\_Wilmington\_College\_Road\3701\_South\_College\_Road\Utility\_Plan.dwg  
 PLOTTED: 7/22/2016 2:55 PM BY: jagan@kfp  
 LAYOUT: & UTILITY PLAN

**EARTHWORK NOTES**

- PRIOR TO STARTING ANY CUTS OR FILLS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL.
- UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS.
- THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT WILL INDICATE LOCATION AND AMOUNT OF CUT OR FILL REMAINING. AT SUBGRADE THIS GRID SHALL BE 5' X 5' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS +/- 0.1 FEET OF REQUIRED SUBGRADE.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQ. FT. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST EVERY 100 LF.
- COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE SOILS REPORT. IF THE SOILS REPORT IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING WILL BE USED: UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). UNDER PROPOSED OR FUTURE PAVEMENT AREAS, INCLUDING 10 FEET OUTSIDE SUCH AREAS, THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE WITH ASTM D2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
- UNLESS OTHERWISE NOTED IN THE SOILS REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIAL, CONTAMINATED MATERIAL, DEBRIS AND OTHER MATERIALS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH DRYING, SEGREGATING OR REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
- FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 1 FOOT IN MASS FILLS AND 8 INCHES IN TRENCH OR RESTRICTED AREAS.
- IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY ALDI AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE SOILS REPORT.
- THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERT DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.
- PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL FILL DEPTH WILL BE LESS THAN 4 FEET, SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED TO WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RE-TEST BY PROOF ROLL AS NECESSARY.
- ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFYING OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE SHALL BE SCARIFIED, DRIED AND RE-COMPACTED. RE-TEST BY PROOF ROLL AS NECESSARY.
- TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE WILL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.
- TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO THE FOLLOWING WIDTHS: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET). (FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET). ADDITIONAL WIDTH WILL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL/BEDDING BY HAND, USING HAND OPERATED PLATE TAMPERS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURES RECOMMEND DEPTH, WHICH EVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE. IF CLEAN STONE IS USED AS A BEDDING OR ENCASMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL SOILS AND BACKFILL AND THE STONE TO PREVENT MIGRATION OF FINES.
- IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR SOILS REPORT, THE AREA FOR REMOVAL SHOULD BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH CONVENTIONAL EARTH WORKING EQUIPMENT.
- WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY, THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE.
- NO EXPLOSIVES WILL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS MUST BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST MUST RECEIVE A PRE-BLAST SURVEY. ALL BLASTING MUST BE PERFORMED BY A LICENSED BLASTER.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.



**LEGEND**

	EXISTING MAJOR CONTOUR (5')
	EXISTING MINOR CONTOUR (1')
	EXISTING PROPERTY LINE
	EXISTING ABUTTING PROPERTY LINE
	EXISTING SETBACK LINE
	EXISTING EASEMENT
	EXISTING CHAINLINK FENCE
	EXISTING WOOD FENCE
	EX. WATER LINE
	EXISTING OVERHEAD POWER LINE
	EXISTING SANITARY SEWER LINE
	EXISTING STORM SEWER LINE
	PROPOSED EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED TREE PROTECTION FENCE
	PROPOSED RETAINING WALL
	PROPOSED WOOD FENCE
	PROPOSED MAJOR CONTOUR (5')
	PROPOSED MINOR CONTOUR (1')
	PROPOSED OVERHEAD POWER LINE
	PROPOSED STORM SEWER LINE
	PROPOSED BAFFLE
	TOP OF CURB ELEVATION
	TOP OF WALL ELEVATION
	BOTTOM OF WALL ELEVATION
	SPOT ELEVATION

- GRADING AND DRAINAGE NOTES**
- PROPOSED DISTURBED AREA = 137,336 SF = 3.2 AC.
  - PROPOSED IMPERVIOUS SURFACE AREA INCREASE = 29,365 SF.
  - ALL GRADES SHOWN ARE FINISH GRADE ELEVATIONS.
  - STORM DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) ASTM C76. STORM ROOF DRAINAGE PIPE SHALL BE PVC PIPE ASTM D3034, APPROVED EQUALS ACCEPTED. SEE STORM DRAINAGE COMPUTATIONS ON SHEET C-2.
  - PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
  - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
  - NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
  - CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
  - TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
  - ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.

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3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27660  
PHONE: 919-755-0011  
NC LICENSE # F-1143

**REVISIONS**

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

SCALE: 1" = 30'

ORIGINAL DRAWING SIZE IS 24 x 36

**PROPERTY OWNER CERTIFICATION:**

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

**DESIGNER'S PLAN CERTIFICATION:**

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL.

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL



**GRADING AND DRAINAGE PLAN**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

SHEET 9 of 27

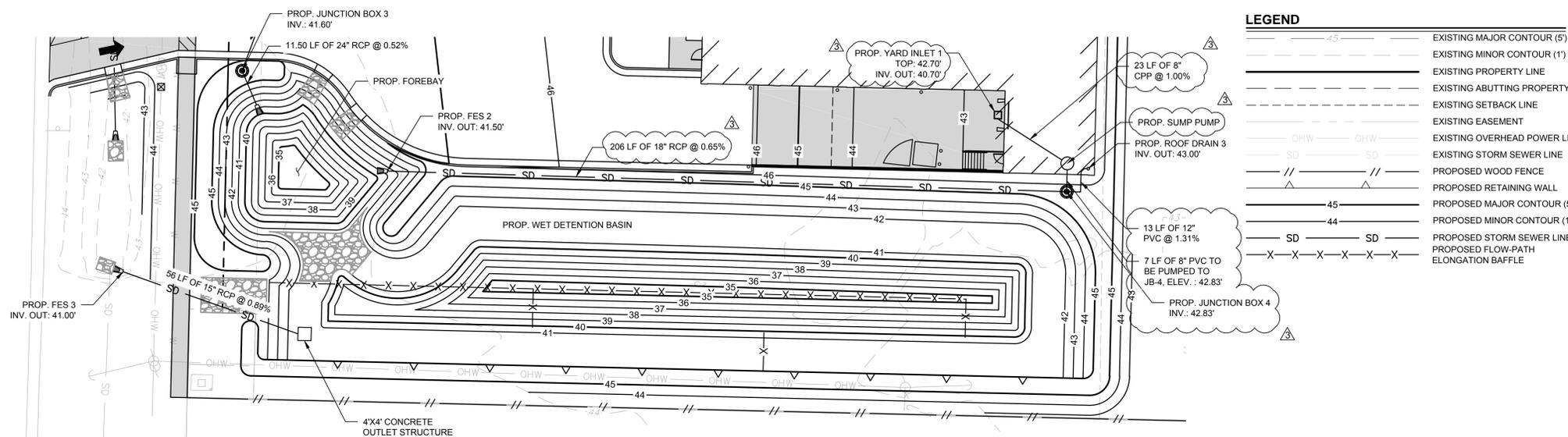
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 LAYOUT: GRADING AND DRAINAGE PLAN  
 PLOTTED: 7/22/2016 2:55 PM BY: jbrun@kfp.com

**WET DETENTION BASIN CONSTRUCTION SEQUENCE**

1. THE WET DETENTION BASIN AREA SHALL NOT BE CONSTRUCTED UNTIL ALL SITE GRADING IS COMPLETE AND STABILIZED.
2. INSTALLATION OF ANY PART OF THE BASIN SHALL NOT OCCUR UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED TO ELIMINATE SEDIMENT TRANSPORT TO THE SYSTEM.
3. CONSTRUCT FOREBAY, FOREBAY SPILLWAY, AND PIPE RIP RAP ENERGY DISSIPATORS. FOREBAY SPILLWAY SHALL BE COMPACTED, LINED WITH 6" RIP RAP. SEE SPILLWAY SIZING CALCULATIONS ON SHEET C-2.
4. EXCAVATE BASIN AREAS AS SHOWN ON PLANS AND CROSS-SECTION.
5. CONSTRUCT EMERGENCY SPILLWAY. EMERGENCY SPILLWAY SHALL BE COMPACTED, LINED WITH 6" RIP RAP. SEE SPILLWAY SIZING CALCULATIONS ON SHEET C-2.
6. CONTRACTOR TO CONSTRUCT SPILLWAY WITH A LASER AND GRADE ROD TO ENSURE A LEVEL SPILLWAY ELEVATION AT 44.25'.
7. THE WET DETENTION BASIN AND SIDE SLOPES SHALL BE PLANTED WITH GRASS. HYBRID BERMUDA, CENTIPEDE, OR FESCUE/BLUEGRASS ARE RECOMMENDED.
8. ALL CONSTRUCTION, MONITORING, AND MAINTENANCE GUIDELINES IN THE NC DEP STORMWATER BMP MANUAL SHALL BE FOLLOWED.

**WET DETENTION BASIN OPERATION AND MAINTENANCE**

1. THE OWNER SHALL KEEP RECORDS OF INSPECTIONS, MAINTENANCE AND REPAIRS AND SHALL SUBMIT THE SAME UPON REASONABLE REQUEST TO THE STORMWATER ADMINISTRATOR.
2. EROSION CONTROL: INSPECT FLOW ENTRANCES, PONDING AREA, AND SURFACE OVERFLOW AREAS PERIODICALLY. REPLACE MATERIAL WHERE EROSION HAS OCCURRED. IF SEDIMENT IS DEPOSITED, DETERMINE THE SOURCE, REMOVE EXCESS DEPOSITS, AND CORRECT THE PROBLEM.
3. VEGETATION: ROUTINE MAINTENANCE WILL BE NECESSARY TO ACHIEVE ADDITIONAL POLLUTANT REMOVAL AND IN ORDER TO PREVENT BANK EROSION.
4. SEDIMENT ACCUMULATION: VISUALLY INSPECT BASIN BOTTOMS AND THE SEDIMENT ACCUMULATION DEPTH MARKER PERIODICALLY. IF SPECIFIED DEPTH OF SEDIMENT HAS BEEN REACHED IN EITHER THE FOREBAY OR MAIN BASIN, THE SEDIMENT SHOULD BE REMOVED AND DISPOSED OF PROPERLY AND THE FOREBAY OR MAIN POND REPAIRED AS DESIGNED.

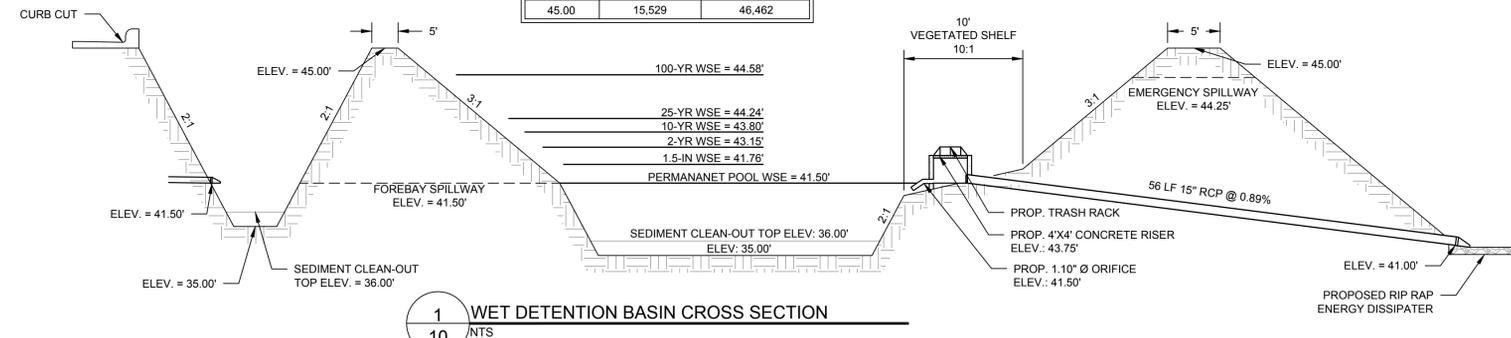


**LEGEND**

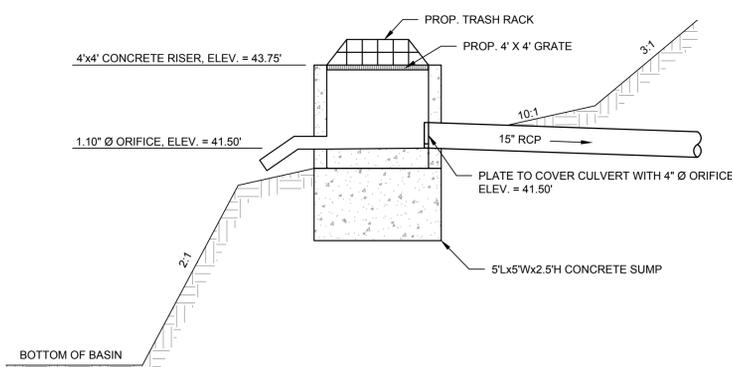
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---	EXISTING MINOR CONTOUR (1')
---	EXISTING PROPERTY LINE
---	EXISTING ABUTTING PROPERTY LINE
---	EXISTING SETBACK LINE
---	EXISTING EASEMENT
---	EXISTING OVERHEAD POWER LINE
---	EXISTING STORM SEWER LINE
---	PROPOSED WOOD FENCE
---	PROPOSED RETAINING WALL
---	PROPOSED MAJOR CONTOUR (5')
---	PROPOSED MINOR CONTOUR (1')
---	PROPOSED STORM SEWER LINE
---	PROPOSED FLOW-PATH ELONGATION BAFFLE

**WET DETENTION BASIN CAPACITY SUMMARY**

ELEVATION	SURFACE AREA (SF)	TOTAL STORAGE (CF)
41.50	9,168	0
42.00	11,974	5,270
43.00	13,134	17,819
44.00	14,319	31,542
45.00	15,529	46,462



**1 WET DETENTION BASIN CROSS SECTION**  
10 NTS



**2 WET DETENTION BASIN OUTLET STRUCTURE**  
10 NTS

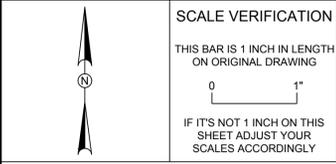


3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27660  
PHONE: 919-755-5011  
NC LICENSE # F-1143

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**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION



SCALE VERIFICATION  
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SCALE: 1" = 20'  
SCALE IN FEET  
ORIGINAL DRAWING SIZE IS 24 x 36

**STORMWATER MANAGEMENT PLAN**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-10

SHEET 10 of 27

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

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL

CAD FILE: W:\Cadd\20170421\_001A\_Wilmington\_College\_Road\CADD\StormwaterManagementPlan.dwg LAYOUT: 10 STORMWATER MANAGEMENT PLAN PLOTTED: 7/22/2016 2:38 PM BY: jsp@kleinfelder.com

**EROSION CONTROL NOTES**

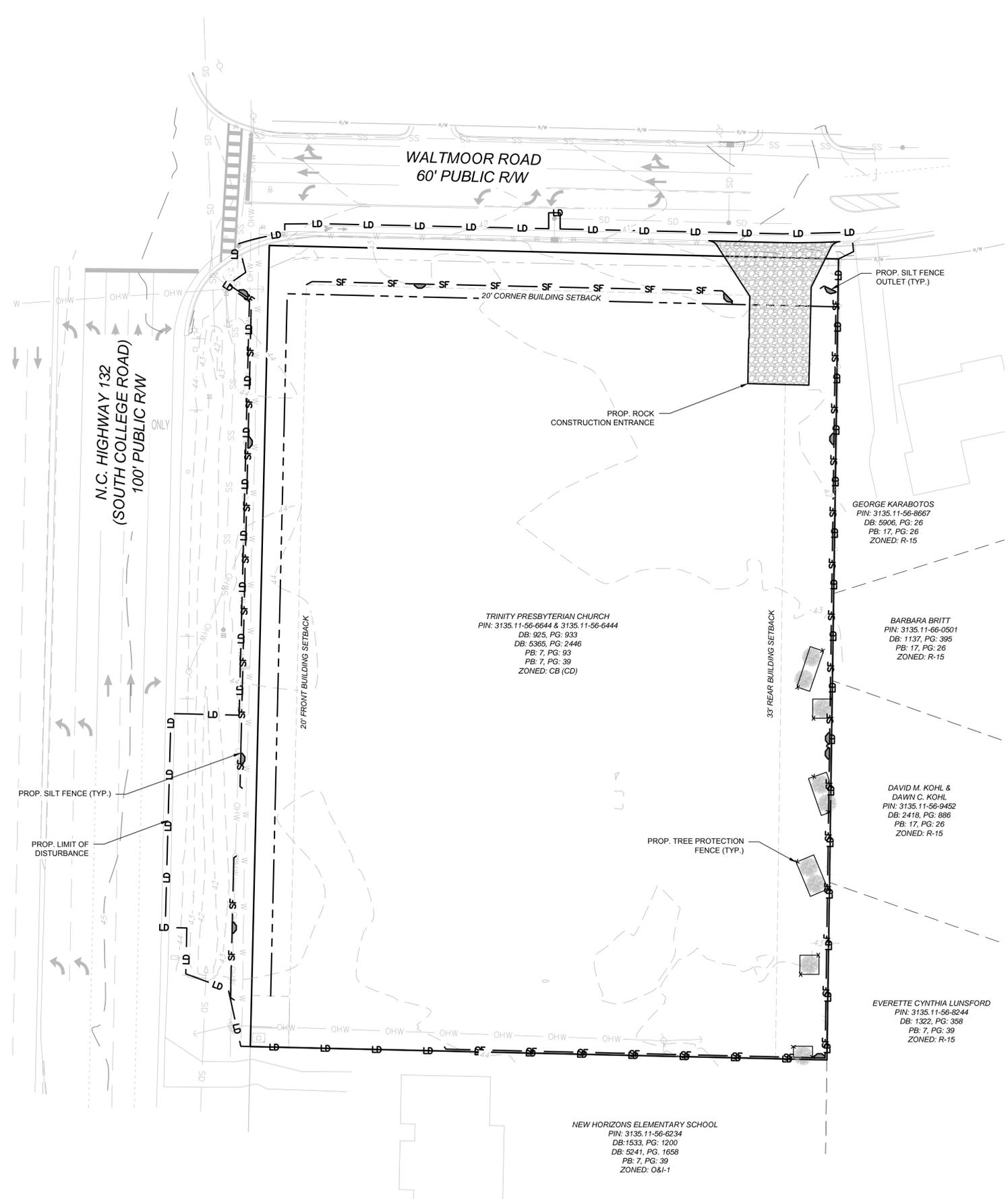
- PRIOR TO CONSTRUCTION EQUIPMENT ENTERING OR EXITING THE SITE, A CONSTRUCTION ENTRANCE SHALL BE BUILT UNLESS EXISTING CONDITIONS PREVENT ANY TRACKING OF DIRT, MUD, OR DEBRIS OFF THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO KEEP ALL ROADS, PARKING LOTS, SIDEWALKS AND ADJACENT PROPERTIES FREE OF DIRT, MUD OR OTHER DEBRIS. THIS WILL INCLUDE BUILDING THE CONSTRUCTION ENTRANCE, SWEEPING, SCRAPING AND WASHING THE PAVEMENT SURFACES WHEN EVER NEEDED. THE CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. IF A DETAIL IS NOT PROVIDED, CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STONE, 6 INCHES THICK, OVER STABILIZING FABRIC TO THE DIMENSIONS OF 12 FEET WIDE AND 50 LONG. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
- ALL EROSION CONTROL DEVICES SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH FEDERAL, STATE, LOCAL AND MANUFACTURES RECOMMENDATIONS. THE PLANS AND DETAILS ARE BASED ON THE NC EROSION AND SEDIMENT PLANNING AND DESIGN MANUAL, AND RECOGNIZED BEST MANAGEMENT PRACTICES (BMP'S).
- THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL EROSION CONTROL DEVICES AS NEEDED THROUGH OUT THE PROJECT. SILT FENCE IS TO BE CLEANED WHEN HALF THE FENCE IS OVERWHELMED BY SEDIMENT.
- SILT FENCE SHALL HAVE METAL STAKES; NO WOODEN STAKES WILL BE ALLOWED. THE BASE OF THE SILT FENCE SHALL BE EXCAVATED SO AS TO PROVIDE AN AREA TO BURY THE BOTTOM OF THE FABRIC AT LEAST 6 INCHES INTO THE GROUND. THE STAKES SHALL BE DRIVEN TO A DEPTH THAT WILL PLACE THE BOTTOM FABRIC AT THE BOTTOM OF THE TRENCH. THEN BACKFILL THE BOTTOM FABRIC ON THE UPSTREAM SIDE WITH THE MATERIAL THAT WAS EXCAVATED.
- SILT FENCE SHALL BE PLACED WHERE EVER SURFACE DRAINAGE CAN LEAVE THE SITE.
- PLACE SILT FENCE OUTLETS AT LOW POINTS ALONG SILT FENCE AS NECESSARY.
- STONE FILTERS SHALL BE PLACED IN ALL DRAINAGE WAYS BUT NOT IN STREAMS, CREEKS OR RIVERS. STONE FILTERS SHALL CONSIST OF A UNIFORM MIX OF 1/4 TO 3/4 INCH CLEAN STONE WRAPPED IN FILTER FABRIC AND COVERED WITH 4 INCH STONE.
- TEMPORARY SEEDING SHALL CONSIST OF LIME @ 1/2 TON PER ACRE, FERTILIZER 6-10-10 @ 600 POUNDS PER ACRE, RYEGRASS (ANNUAL OR PERENNIAL) @ 40 POUNDS PER ACRE AND STRAW MULCH @ 2 TON PER ACRE. JUTE MESH SHALL BE PLACED OVER MULCH AND STAKED WHENEVER WINDS OR SLOPE WILL CAUSE THE MULCH AND SEED TO BECOME DEPLETED OR ERODED. AREAS SHALL BE TEMPORARY SEEDED WHEN THEY ARE SUBJECT TO EROSION AND WILL LIE DORMANT FOR A MONTH OR MORE.
- ADDITIONAL EROSION CONTROL MEASURES AND/OR MODIFICATIONS TO PROPOSED MEASURES MAY BE NECESSARY DEPENDING ON ACTUAL SITE CONDITIONS.
- A RAIN GAUGE SHALL BE KEPT ON-SITE. THE CONTRACTOR SHALL INSPECT ALL E&SC MEASURES AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH DURING A 24-HOUR. REPAIRS SHALL BE MADE TO E&SC MEASURES IMMEDIATELY. RECORD OF INSPECTIONS AND ANY CORRECTIVE ACTIONS SHALL BE KEPT ON SITE.
- DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50' FROM STORM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
- THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTOR. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE EROSION CONTROL INSPECTOR THAT ARE NOT INDICATED ON THE PLANS. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN EROSION ONSITE, REGARDLESS OF THE MEASURES REQUIRED. ANY CHANGE IN THE EROSION CONTROL MEASURES AND/OR GRADING SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND THE EROSION CONTROL INSPECTOR.
- IF CONTRACTOR OBSERVES SEDIMENT THAT HAS DEPOSITED IN A STREAM OR WETLAND, CONTRACTOR MUST NOTIFY THE DEMLR REGIONAL OFFICE WITHIN 24 HOURS AND PROVIDE WRITTEN NOTICE WITHIN FIVE DAYS.
- WEATHER FORECAST SHALL BE MONITORED. THE CONTRACTOR SHALL PREPARE FOR RAIN EVENTS BY RE-EXAMINING ALL EROSION CONTROL MEASURES PRIOR TO START OF PRECIPITATION. ANY RE-ENFORCEMENT OR CORRECTIONS SHOULD BE PERFORMED AND DOCUMENTED.
- IF FILL MATERIAL IS TO BE BROUGHT ONTO THE PROJECT OR WASTE MATERIALS ARE TO BE TAKEN FROM THIS PROJECT, THIS INFORMATION MUST BE DISCLOSED AND SHOWN ON THE EROSION CONTROL AND GRADING PLAN. BORROW AREAS AND DUMP SITES ARE CONSIDERED TO BE PART OF THIS PROJECT AND THE OWNER IS RESPONSIBLE FOR STABILIZATION AND EROSION CONTROL MEASURES AT THESE SITES.

**CLEARING & GRUBBING NOTES**

- THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
- ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
- THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
- ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- NO BURNING WILL BE ALLOWED ON SITE.

NCEM Stormwater Discharge Permit for Construction Activities (NCEM07) NCDENR/Division of Energy, Mineral and Land Resources

STABILIZATION TIMEFRAMES		
(Effective Aug. 3, 2011)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.



**LEGEND**

- EXISTING MAJOR CONTOUR (5')
- EXISTING MINOR CONTOUR (1')
- EXISTING PROPERTY LINE
- EXISTING ABUTTING PROPERTY LINE
- EXISTING SETBACK LINE
- EXISTING EASEMENT
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- EX. WATER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- PROPOSED TREE PROTECTION FENCE
- PROPOSED SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED RIGHT-OF-WAY

**TOTAL DISTURBED AREA = 3.2 AC**

**CONSTRUCTION SEQUENCE**

- PHASE I**
- OBTAIN NEW HANOVER COUNTY LAND DISTURBANCE PERMIT AND SCHEDULE A PRE-CONSTRUCTION MEETING WITH NEW HANOVER COUNTY.
  - INSTALL GRAVEL CONSTRUCTION ENTRANCE, SILT FENCE, SILT FENCE OUTLETS, AND TREE PROTECTION FENCE AS SHOWN ON APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
  - CALL NEW HANOVER COUNTY FOR AN INITIAL INSPECTION.
  - UPON COUNTY APPROVAL, BEGIN CLEARING, GRUBBING AND DEMOLITION OF REMAINDER OF SITE. MAINTAIN DEVICES AS NEEDED.
- PHASE II**
- PERFORM ROUGH GRADING, FILLING AND COMPACTION OF SITE.
  - INSTALL ROOF DRAINS, STORM SEWER PIPES, YARD AND CURB INLETS AND FILTER SOCK INLET PROTECTION AS SHOWN ON THE PLANS.
  - PERFORM FINE GRADING, PAVING AND OTHER FINAL STABILIZATION ACTIVITIES.
  - ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED, IF NEEDED, AT LEAST ONCE PER WEEK AND AFTER EVERY RAINFALL EVENT.
  - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION AND PAVING. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
  - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, REMOVE SILT FENCE AND SILT FENCE OUTLETS AND SEED OR STABILIZE ANY RESULTING BARE AREAS.

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3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27660  
PHONE: 919-755-5011  
NC LICENSE # F-1143

REVISIONS

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

SCALE: 1" = 30'  
SCALE IN FEET

ORIGINAL DRAWING SIZE IS 24 x 36

**PROPERTY OWNER CERTIFICATION:**

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER 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 THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE CITY OF WILMINGTON."

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

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL



**EROSION CONTROL PLAN PHASE I**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

SHEET 11 of 27

CAD FILE: W:\Cadd\2016\2016-0614-Wilmington-Collage-Road\CAD\Drawings\K&K\Wilmington-Collage-Road-Erosion-Control-Plan.dwg PLOTTED: 7/22/2016 2:55 PM BY: jgamm/1616

**EROSION CONTROL NOTES**

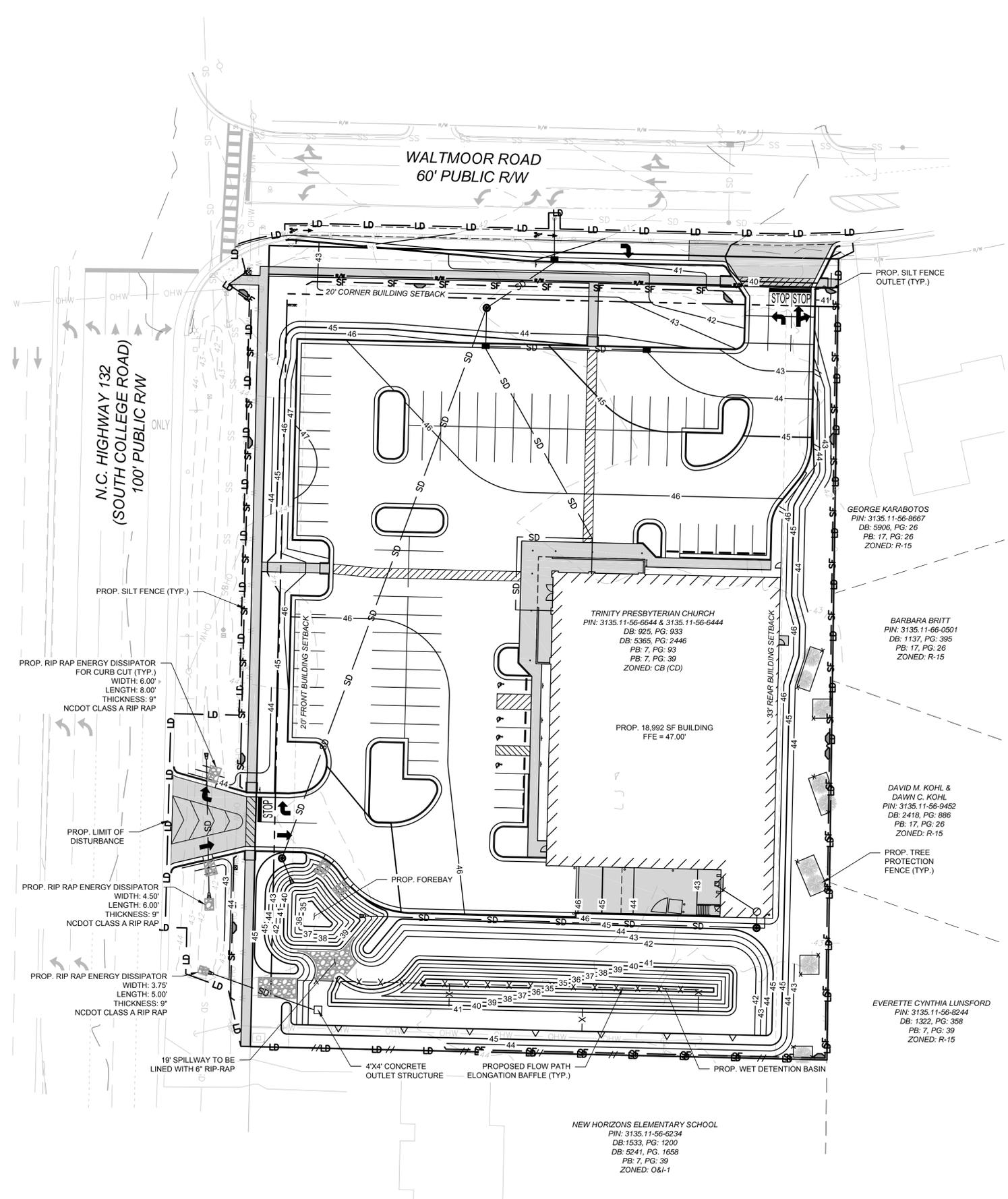
- PRIOR TO CONSTRUCTION EQUIPMENT ENTERING OR EXITING THE SITE, A CONSTRUCTION ENTRANCE SHALL BE BUILT UNLESS EXISTING CONDITIONS PREVENT ANY TRACKING OF DIRT, MUD, OR DEBRIS OFF THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO KEEP ALL ROADS, PARKING LOTS, SIDEWALKS AND ADJACENT PROPERTIES FREE OF DIRT, MUD OR OTHER DEBRIS. THIS WILL INCLUDE BUILDING THE CONSTRUCTION ENTRANCE, SWEEPING, SCRAPING AND WASHING THE PAVEMENT SURFACES WHEN EVER NEEDED. THE CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. IF A DETAIL IS NOT PROVIDED, CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STONE, 6 INCHES THICK, OVER STABILIZING FABRIC TO THE DIMENSIONS OF 12 FEET WIDE AND 50 LONG. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.
- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
- ALL EROSION CONTROL DEVICES SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH FEDERAL, STATE, LOCAL AND MANUFACTURES RECOMMENDATIONS. THE PLANS AND DETAILS ARE BASED ON THE NC EROSION AND SEDIMENT PLANNING AND DESIGN MANUAL, AND RECOGNIZED BEST MANAGEMENT PRACTICES (BMP'S).
- THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL EROSION CONTROL DEVICES AS NEEDED THROUGH OUT THE PROJECT. SILT FENCE IS TO BE CLEANED WHEN HALF THE FENCE IS OVERWHELMED BY SEDIMENT.
- SILT FENCE SHALL HAVE METAL STAKES; NO WOODEN STAKES WILL BE ALLOWED. THE BASE OF THE SILT FENCE SHALL BE EXCAVATED SO AS TO PROVIDE AN AREA TO BURY THE BOTTOM OF THE FABRIC AT LEAST 6 INCHES INTO THE GROUND. THE STAKES SHALL BE DRIVEN TO A DEPTH THAT WILL PLACE THE BOTTOM FABRIC AT THE BOTTOM OF THE TRENCH. THEN BACKFILL THE BOTTOM FABRIC ON THE UPSTREAM SIDE WITH THE MATERIAL THAT WAS EXCAVATED.
- SILT FENCE SHALL BE PLACED WHERE EVER SURFACE DRAINAGE CAN LEAVE THE SITE.
- PLACE SILT FENCE OUTLETS AT LOW POINTS ALONG SILT FENCE AS NECESSARY.
- STONE FILTERS SHALL BE PLACED IN ALL DRAINAGE WAYS BUT NOT IN STREAMS, CREEKS OR RIVERS. STONE FILTERS SHALL CONSIST OF A UNIFORM MIX OF 1/4 TO 3/4 INCH CLEAN STONE WRAPPED IN FILTER FABRIC AND COVERED WITH 4 INCH STONE.
- TEMPORARY SEEDING SHALL CONSIST OF LIME @ 1/2 TON PER ACRE, FERTILIZER 5-10-10 @ 600 POUNDS PER ACRE, RYEGRASS (ANNUAL OR PERENNIAL) @ 40 POUNDS PER ACRE AND STRAW MULCH @ 2 TON PER ACRE. JUTE MESH SHALL BE PLACED OVER MULCH AND STAKED WHENEVER WINDS OR SLOPE WILL CAUSE THE MULCH AND SEED TO BECOME DEPLETED OR ERODED. AREAS SHALL BE TEMPORARY SEEDED WHEN THEY ARE SUBJECT TO EROSION AND WILL LIE DORMANT FOR A MONTH OR MORE.
- ADDITIONAL EROSION CONTROL MEASURES AND/OR MODIFICATIONS TO PROPOSED MEASURES MAY BE NECESSARY DEPENDING ON ACTUAL SITE CONDITIONS.
- A RAIN GAUGE SHALL BE KEPT ON-SITE. THE CONTRACTOR SHALL INSPECT ALL EASC MEASURES AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH DURING A 24-HOUR. REPAIRS SHALL BE MADE TO EASC MEASURES IMMEDIATELY. RECORD OF INSPECTIONS AND ANY CORRECTIVE ACTIONS SHALL BE KEPT ON SITE.
- DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50' FROM STORM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
- THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTOR. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE EROSION CONTROL INSPECTOR THAT ARE NOT INDICATED ON THE PLANS. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN EROSION ONSITE, REGARDLESS OF THE MEASURES REQUIRED. ANY CHANGE IN THE EROSION CONTROL MEASURES AND/OR GRADING SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND THE EROSION CONTROL INSPECTOR.
- IF CONTRACTOR OBSERVES SEDIMENT THAT HAS DEPOSITED IN A STREAM OR WETLAND, CONTRACTOR MUST NOTIFY THE DEMLR REGIONAL OFFICE WITHIN 24 HOURS AND PROVIDE WRITTEN NOTICE WITHIN FIVE DAYS.
- WEATHER FORECAST SHALL BE MONITORED. THE CONTRACTOR SHALL PREPARE FOR RAIN EVENTS BY RE-EXAMINING ALL EROSION CONTROL MEASURES PRIOR TO START OF PRECIPITATION. ANY RE-ENFORCEMENT OR CORRECTIONS SHOULD BE PERFORMED AND DOCUMENTED.
- IF FILL MATERIAL IS TO BE BROUGHT ONTO THE PROJECT OR WASTE MATERIALS ARE TO BE TAKEN FROM THIS PROJECT, THIS INFORMATION MUST BE DISCLOSED AND SHOWN ON THE EROSION CONTROL AND GRADING PLAN. BORROW AREAS AND DUMP SITES ARE CONSIDERED TO BE PART OF THIS PROJECT AND THE OWNER IS RESPONSIBLE FOR STABILIZATION AND EROSION CONTROL MEASURES AT THESE SITES.

**CLEARING & GRUBBING NOTES**

- THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGH OUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
- ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
- THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
- ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- NO BURNING WILL BE ALLOWED ON SITE.

MSDC Stormwater Discharge Permit for Construction Activities (MSDC07) NCDENR/Division of Energy, Mineral and Land Resources

STABILIZATION TIMEFRAMES		
(Effective Aug. 3, 2011)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.



**LEGEND**

	EXISTING MAJOR CONTOUR (5')
	EXISTING MINOR CONTOUR (1')
	EXISTING PROPERTY LINE
	EXISTING ABUTTING PROPERTY LINE
	EXISTING SETBACK LINE
	EXISTING EASEMENT
	EXISTING CHAINLINK FENCE
	EXISTING WOOD FENCE
	EX. WATER LINE
	EXISTING OVERHEAD POWER LINE
	EXISTING SANITARY SEWER LINE
	EXISTING STORM SEWER LINE
	PROPOSED TREE PROTECTION FENCE
	PROPOSED WOOD FENCE
	PROPOSED MAJOR CONTOUR (5')
	PROPOSED MINOR CONTOUR (1')
	PROPOSED STORM SEWER LINE
	PROPOSED BAFFLE
	PROPOSED SILT FENCE
	PROPOSED LIMIT OF DISTURBANCE

**TOTAL DISTURBED AREA = 3.2 AC**

**CONSTRUCTION SEQUENCE**

- PHASE I**
- OBTAIN NEW HANOVER COUNTY LAND DISTURBANCE PERMIT AND SCHEDULE A PRE-CONSTRUCTION MEETING WITH NEW HANOVER COUNTY.
  - INSTALL GRAVEL CONSTRUCTION ENTRANCE, SILT FENCE, SILT FENCE OUTLETS, AND TREE PROTECTION FENCE AS SHOWN ON APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
  - CALL NEW HANOVER COUNTY FOR AN INITIAL INSPECTION.
  - UPON COUNTY APPROVAL, BEGIN CLEARING, GRUBBING AND DEMOLITION OF REMAINDER OF SITE. MAINTAIN DEVICES AS NEEDED.
- PHASE II**
- PERFORM ROUGH GRADING, FILLING AND COMPACTION OF SITE.
  - INSTALL ROOF DRAINS, STORM SEWER PIPES, YARD AND CURB INLETS AND FILTER SOCK INLET PROTECTION AS SHOWN ON THE PLANS.
  - PERFORM FINE GRADING, PAVING AND OTHER FINAL STABILIZATION ACTIVITIES.
  - ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED, IF NEEDED, AT LEAST ONCE PER WEEK AND AFTER EVERY RAINFALL EVENT.
  - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION AND PAVING. SEED AND MULCH DENUEDED AREAS PER GROUND STABILIZATION TIME FRAMES.
  - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, REMOVE SILT FENCE AND SILT FENCE OUTLETS AND SEED OR STABILIZE ANY RESULTING BARE AREAS.

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3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27660  
PHONE: 919-755-5011  
NC LICENSE # F-1143

**REVISIONS**

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	RAP	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	GLT	JBC	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

SCALE: 1" = 30'

ORIGINAL DRAWING SIZE IS 24 x 36

**PROPERTY OWNER CERTIFICATION:**

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER 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 THE CITY OF WILMINGTON, THE STATE OF NORTH CAROLINA, AND THE FEDERAL GOVERNMENT AND ITS AGENCIES WHICH ARE HEREBY MADE PART OF THIS PLAN. AS THE OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF THE CITY OF WILMINGTON."

SIGNATURE: \_\_\_\_\_

PRINT NAME AND TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*

PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*

DATE: *July 22, 2016*

REGISTRATION NUMBER: *042102*

SEAL



**EROSION CONTROL PLAN PHASE II**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

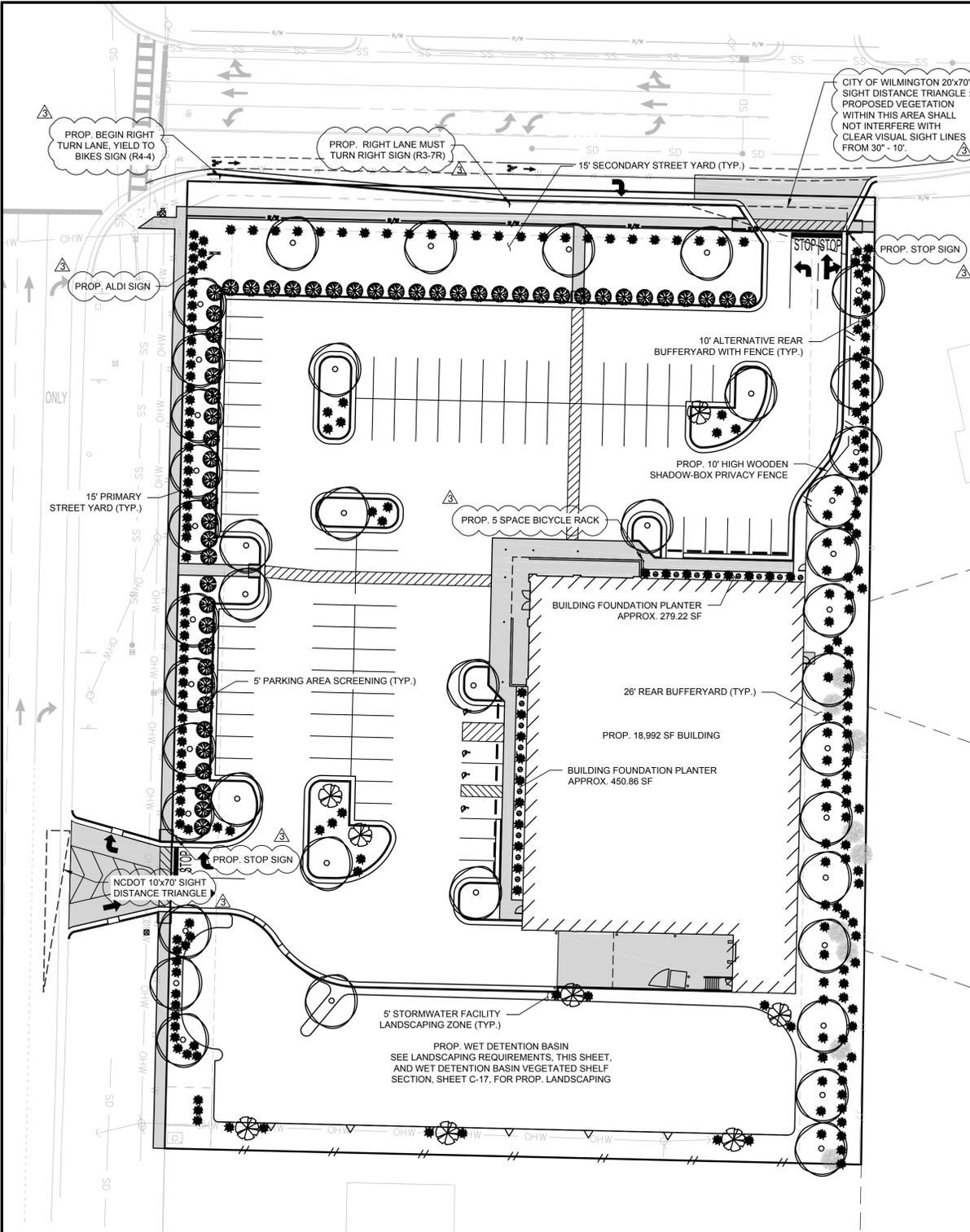
**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

SHEET 12 of 27

CAD FILE: W:\Cadd\2016\2016-08-14\Wilmington\College Road\EROSION CONTROL PLAN PHASE II LAYOUT.dwg Erosion Control Plan.dwg PLOTTED: 7/22/2016 2:55 PM BY: jgsm1103

CAD FILE: W:\CADD\2017\2421\_001A\_Wilmington\_College\_Road\_Landscaping\_Planing\_LAYOUT\_13\_LANDSCAPING PLAN PLOTTED: 7/22/2016 2:55 PM BY: kspann



**LANDSCAPING NOTES**

- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES SHALL BE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- A MINIMUM OF FOUR INDIVIDUAL SOIL SAMPLES SHALL BE TAKEN THROUGHOUT THE SITE FOR OVERALL SOIL ANALYSIS.
- THE MINIMUM DEPTH OF TOPSOIL SHALL BE 4 INCHES IN LAWN AREAS AND A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS.
- AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2 INCH SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 3/8 INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
- CONTRACTOR TO UTILIZE ALL ON SITE TOPSOIL. CONTRACTOR SHALL SUPPLY ADDITIONAL TOPSOIL AT NO ADDITIONAL COST TO OWNER IF EXISTING TOPSOIL IS NOT SUFFICIENT TO MEET THE NEEDS OF THIS PROJECT.
- LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
- LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
- LAWN SEED SHALL BE "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE", "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS".
- WHEN PLACING BY HYDROSEEDING APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
- WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE.
- CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES BEFORE BEGINNING OF GRADING AND LANDSCAPE INSTALLATION.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
- PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
- PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
- WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACED UNDER ALL PLANTING BEDS PRIOR MULCHING.
- ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
- MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, 3/4 TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN.
- ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.
- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN.
- ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10'.

**LANDSCAPING REQUIREMENTS**

- STREET YARD:**  
**PRIMARY:**  
 1 CANOPY TREE, 2 - 2" CALIPER PER 600 SF.  
 6 SHRUBS, 12" IN HEIGHT PER 600 SF.  
 FRONTAGE = 404 LF - 32 LF (DRIVEWAY) = 372 LF  
 AREA = 372 LF x 15 (MULTIPLIER) = 6,096 SF  
 6,096 SF / 600 SF = 12 TREES  
 12 x 6 SHRUBS = 72 SHRUBS
- CANOPY TREES:** REQUIRED 12 PROVIDED 12
- SHRUBS:** REQUIRED 72 PROVIDED 72
- SECONDARY:**  
 1 CANOPY TREE, 2 - 2" CALIPER PER 1200 SF.  
 6 SHRUBS, 12" IN HEIGHT PER 1200 SF.  
 FRONTAGE = 298 LF - 46 LF (DRIVEWAY) = 253 LF  
 AREA = 253 LF x 9 (MULTIPLIER) = 2,277 SF  
 2,277 SF / 600 SF = 4 TREES  
 4 x 6 SHRUBS = 24 SHRUBS
- CANOPY TREES:** REQUIRED 4 PROVIDED 4
- SHRUBS:** REQUIRED 24 PROVIDED 24
- PARKING ISLANDS & PLANTING AREAS:**  
 1 TREE PER 12'x18' ISLAND.  
 2 SMALL SHADE TREES OR 1 CANOPY TREE PER 12'x36' ISLAND.  
 LARGER ISLANDS: 1 SMALL SHADE TREE PER 200 SF OR 1 CANOPY TREE PER 400 SF  
 75% OF TREES SHALL BE CANOPY TREES, 12" DBH AT MATURITY.  
 ALL PLANTING ISLANDS SHALL HAVE ADDITIONAL GROUND COVER OR SHRUBBERY TO COVER ENTIRE ISLAND.
- 593 SF ISLAND = 1 SHADE TREE & 1 CANOPY TREE  
 440 SF ISLAND = 1 CANOPY TREE  
 399 SF ISLAND = 1 CANOPY TREE  
 990 SF ISLAND = 2 SHADE TREES & 1 CANOPY TREE  
 476 SF ISLAND = 1 CANOPY TREE  
 258 SF ISLAND = 1 CANOPY TREE  
 220 SF ISLAND = 1 CANOPY TREE  
 220 SF ISLAND = 1 CANOPY TREE  
 149 SF ISLAND = 1 CANOPY TREE  
 150 SF ISLAND = 1 CANOPY TREE
- 13 TREES x 75% = 10 CANOPY TREES
- CANOPY TREES:** REQUIRED 10 PROVIDED 10
- SHADE TREE:** REQUIRED 3 PROVIDED 3
- SHRUBS:** PROVIDED 17
- INTERIOR PLANTING ISLANDS SHALL BE SHADED TO PROVIDED 20% OR GREATER CANOPY COVER AT MATURITY. PERIMETER TREES SHALL BE GIVEN CREDIT FOR THAT PORTION OF THE AREA OF THE CANOPY THAT OVERLAPS THE PARKING AREA.  
 1 CANOPY TREE = 707 SF  
 1 SHADE TREE = 314 SF  
 20% x 50,022 SF PARKING LOT = 10,005 SF OF SHADE COVER
- 3 SHADE TREES PROVIDED IN PLANTING ISLANDS x 314 SF = 942 SF  
 10 CANOPY TREES PROVIDED IN PLANTING ISLANDS x 707 SF = 7,070 SF  
 (9 CANOPY TREES FROM S. COLLEGE RD STREET YARD X 707 SF) / 2 = 3,182 SF  
 (1 CANOPY TREE FROM POND PERIMETER LANDSCAPE X 707 SF) / 2 = 354 SF  
 (6 CANOPY TREES FROM BUFFERYARD X 707 SF) / 2 = 2,142 SF
- TOTAL SHADING SF PROVIDED = 13,316 SF = 10,005 SF REQUIRED
- INTERIOR PLANTING ISLANDS SHALL NOT BE LESS THAN 12 FEET IN WIDTH AND SHALL INCLUDE A MINIMUM OF 144 SF OF OPEN PLANTING AREA FOR TREES.
- STORMWATER FACILITY LANDSCAPE ZONE**  
 OPEN BASINS SHALL BE PROVIDED WITH A MINIMUM 5-FOOT LANDSCAPED ZONE AROUND THE PERIPHERY OF THE PONDS WHICH HAVE A SURFACE AREA UP TO 0.5 ACRES. VEGETATION MUST BE EVENLY DISTRIBUTED AT APPROXIMATELY 100' INTERVALS AROUND THE POND. SEE DETAIL ON SHEET C-19.
- CANOPY TREE:** PROVIDED 1  
**SHADE TREE:** PROVIDED 5  
**SHRUBS:** PROVIDED 10
- PARKING AREA SCREENING:**  
 A LOW BUFFER INCORPORATED INTO THE STREET YARD TO PROVIDE PROTECTION FROM VEHICLE HEADLIGHTS WITHIN THE PARKING LOT.  
 5' WIDE AND 3' IN HEIGHT.
- SHRUBS:** PROVIDED 52
- FOUNDATION PLANTINGS:**  
 THE AREA OF THE BUILDING FACE ADJACENT TO THE PARKING AREA OR INTERNAL DRIVE ISLE SHALL BE COMPUTED AND MULTIPLIED BY A MINIMUM OF 12%. THE RESULTANT TOTAL SQUARE FOOTAGE SHALL BE PLANTED AS LANDSCAPED AREAS OF SUFFICIENT VARIETY, HEIGHT AND SIZE.
- REQUIRED:**  
 274' BLDG. FRONTAGE x 20.25' BLDG. HT. x 12% = 665.82 SF
- PROVIDED:**  
 PLANTER SQUARE FOOTAGE: 279.22 SF + 450.86 SF = 730.08 SF
- REAR BUFFERYARD:**  
 1 CANOPY TREE, 2 - 2" CALIPER PER 30 LF OF SCREEN  
 SCREEN = 292 LF  
 292 LF / 30 LF = 9 TREES
- CANOPY TREES:** REQUIRED 9 PROVIDED 9
- SHRUBS:** REQUIRED 63 PROVIDED 63
- ALTERNATIVE BUFFERYARD WITH FENCE:**  
 THE BUFFER YARD MAY BE ALTERED TO NO LESS THAN TEN (10) FEET WITH A SOLID EIGHT (8) TO TEN (10) FOOT FENCE.  
 1 CANOPY TREE, 2 - 2" CALIPER PER 30 LF OF SCREEN  
 SCREEN = 145 LF  
 145 LF / 30 LF = 5 TREES
- CANOPY TREES:** REQUIRED 5 PROVIDED 5
- SHRUBS:** REQUIRED 37 PROVIDED 37
- WET DETENTION BASIN VEGETATED SHELF:**  
 50 PLANTS PER 200 SF OF SHELF AREA  
 SHELF AREA = 5,116 SF  
 PLANTINGS SHALL INCLUDE A MINIMUM OF 3 DIVERSE SPECIES OF SHALLOW WATER EMERGENT AND SHALLOW LAND HERBACEOUS VEGETATION
- SHALLOW WATER PLANTS:** REQUIRED 640 PROVIDED 640 (2 DIVERSE SPECIES PROVIDED)
- SHALLOW LAND PLANTS:** REQUIRED 640 PROVIDED 640 (2 DIVERSE SPECIES PROVIDED)
- SIGNIFICANT TREE MITIGATION**  
 THE TOTAL NUMBER OF REPLACEMENT TREES SHALL BE DETERMINED BY MULTIPLYING THE TOTAL DBH OF THE REMOVED SIGNIFICANT TREES BY TWO (2) TIMES THE PERCENTAGE FOR THE TYPE OF TREE IN TABLE IV OF THE LANDSCAPING AND TREE PRESERVATION CODE AND DIVIDING BY THREE (3).  
 8" MAGNOLIA = 100% MITIGATION PERCENTAGE  
 [8" (2' x 1.00)] / 3 = 6 TREES
- CREDIT FOR PRESERVED TREES**  
 6-11 DBH = 1 CREDIT TOWARDS REQUIRED TREES  
 12-17 DBH = 2 CREDIT TOWARDS REQUIRED TREES
- 4 TREES BETWEEN 6-11 DBH = 4 CREDITS  
 5 TREES BETWEEN 12-17 DBH = 10 CREDITS
- 14 CREDITS > MITIGATION REQUIREMENT OF 6 TREES
- PLANTING REQUIREMENT**  
 15 TREES PER ACRE DISTURBED, TWO (2) DBH OR GREATER MUST BE RETAINED OR PLANTED ON THE DISTURBED PORTION OF THE SITE, INCLUDING TREES LOCATED IN THE STREET YARD AND BUFFERYARD.  
 DISTURBED AREA = 3.2 ACRES
- CANOPY & SHADE TREES** REQUIRED 48 PROVIDED 55 (9 EXISTING, 46 PROPOSED)

**LEGEND**

---	EXISTING PROPERTY LINE
- - - - -	EXISTING SUBSETTLE PROPERTY LINE
- - - - -	EXISTING SETBACK LINE
- - - - -	EXISTING EASEMENT
- - - - -	EXISTING CHAINLINK FENCE
- - - - -	EXISTING WOOD FENCE
- - - - -	EXISTING WATER LINE
- - - - -	EXISTING OVERHEAD POWER LINE
- - - - -	EXISTING SANITARY SEWER LINE
- - - - -	EXISTING STORM SEWER LINE
- - - - -	PROPOSED WOOD FENCE
- - - - -	PROPOSED RETAINING WALL
- - - - -	PROPOSED OVERHEAD POWER LINE

**PROTECTED TREE REMOVAL SUMMARY**

TREE TYPE	AMOUNT REMOVED
8" MAGNOLIA	1
12" LONGLEAF PINE	8
13" LONGLEAF PINE	2
14" LONGLEAF PINE	4
15" LONGLEAF PINE	1
16" LONGLEAF PINE	2
17" LONGLEAF PINE	6
19" LONGLEAF PINE	1
8" OAK	5
10" OAK	1
11" OAK	1
7" GALLBERRY	1
9" GALLBERRY	3
6" DOGWOOD	1

**PROTECTED TREE PRESERVATION SUMMARY**

TREE TYPE	AMOUNT PRESERVED
8" OAK	3
10" OAK	1
12" LONGLEAF PINE	3
14" LONGLEAF PINE	1
17" LONGLEAF PINE	1

**KLEINFELDER**  
 Bright People. Right Solutions.  
 WWW.KLEINFELDER.COM

3500 GATEWAY CENTRE BLVD., SUITE 200  
 MORRISVILLE, NC 27660  
 PHONE: 919-755-5011  
 NC LICENSE # F-1143

**REVISIONS**

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
 NOT FOR CONSTRUCTION

KEY	QUA.	BOTANICAL NAME	COMMON NAME	HEIGHT	SPREAD	ROOT	CALIPER
<b>CANOPY TREES</b>							
LO	39	QUERCUS VIRGINIANA	LIVE OAK	8'		B&B	3"
<b>SHADE TREES</b>							
FD	7	CORNUS FLORIDA	FLOWERING DOGWOOD	6'		B&B	1.5"
<b>SHRUBS</b>							
JH	52	ILEX CRENATA	JAPANESE HOLLY	3'		B&B	
JC	241	CLEYERA JAPONICA	JAPANESE CLEYERA	18"		5 GAL	
SP	320	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	18"		5 GAL	
<b>HERBACEOUS PLANTS</b>							
DP	320	SAGITTARIA LATIFOLIA	DUCK POTATO	6"	2'		
GC	320	ZIZANIOPSIS MILIACEA	GIANT CUTGRASS	6"	2'		
LL	320	LOBELIA ELONGATA	LONGLEAF LOBELIA	6"	2'		
<b>GROUND COVERS</b>							
CJ	17	JUNIPERUS HORIZONTALIS	CREeping JUNIPERS	6"	2'		

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

**DESIGNER'S PLAN CERTIFICATION:**

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF WILMINGTON ORDINANCES AND STORMWATER DESIGN MANUAL."

SIGNATURE: *Ryan Parker*  
 PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
 DATE: *July 22, 2016*

REGISTRATION NUMBER: *042102*

SEAL

**PROFESSIONAL SEAL**  
 NORTH CAROLINA  
 RYAN PARKER  
 042102  
 7/22/16  
 ENGINEER  
 PLANNING

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

0 30 60 90  
 SCALE: 1" = 30'  
 SCALE IN FEET

ORIGINAL DRAWING SIZE IS 24 x 36

**LANDSCAPING PLAN**

ALDI #98 WILMINGTON, NC  
 3701 SOUTH COLLEGE ROAD  
 WILMINGTON, NC 28412

**ALDI**

ALDI, INC. SALISBURY DIVISION  
 1985 OLD UNION CHURCH ROAD  
 SALISBURY, NORTH CAROLINA 28146  
 (919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-13

SHEET 13 of 27

**LEGEND**

---	EXISTING PROPERTY LINE
- - - -	EXISTING ABUTTING PROPERTY LINE
- - - -	EXISTING EASEMENT
W W W	EXISTING WATER LINE
OHV OHV	EXISTING OVERHEAD POWER LINE
SS SS	EXISTING SANITARY SEWER LINE
SD SD	EXISTING STORM SEWER LINE
○ ○	PROPOSED CHAINLINK FENCE
// //	PROPOSED WOOD FENCE
△ △	PROPOSED RETAINING WALL
○ ○	FOOT CANDLES

- LIGHTING NOTES**
- ALL PARKING SPACES SHALL HAVE A MINIMUM LIGHT LEVEL OF 0.2 FOOT CANDLE.
  - THE MAXIMUM LIGHT LEVEL SHALL BE 0.5 FOOT CANDLE AT ANY PROPERTY LINE IN A RESIDENTIAL DISTRICT AND 2 FOOT CANDLES AT ANY PUBLIC STREET RIGHT OF WAY.
  - PARKING AREA LIGHT FIXTURES SHALL NOT BE MOUNTED AT A HEIGHT GREATER THAN 41 FEET ABOVE FINISH GRADE.
  - THE INTENT OF THE DRAWING IS TO SHOW FOOT CANDLE LEVELS BASED ON FIXTURES SHOWN. ACTUAL LEVELS MAY VARY BASED ON ACTUAL FIXTURE INSTALLED.
  - CONTACT KAREN DIXON AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.

**ELECTRICAL CONNECTION NOTE**

THIS IS A SITE LIGHTING CALCULATION PLAN ONLY AND DOES NOT PROVIDE ELECTRICAL CONNECTIONS FOR FIXTURES SHOWN. SITE DEVELOPERS (OWNERS, BUILDERS, AND GENERAL CONTRACTORS) ARE RESPONSIBLE FOR COORDINATING WITH BUILDING ELECTRICAL CONTRACTOR OR POWER COMPANY FOR POWER CONNECTIONS FOR ALL FIXTURES.

**LUMINAIRE SCHEDULE**

SYMBOL	DESCRIPTION	LAMP	LUMENS	LLF	HEIGHT (FT)	QUANTITY
■	CREE* (1) XSPW-A-0-3-M-C-U-CS-P	(1) LU250	4505	1.00	12	4
☀	CREE* (1) AL-42WLED-UD-CG-120		2495		7.5	5
■	CREE* (1) OSQ-A-NM-4ME-A-57K-UL-CS W/ OSQ-DA-CS	(1) CL-SSP-5011-2 6-D6-FS-ABL	10739	1.00	26	5
■	CREE* (2) OSQ-A-NM-4ME-A-57K-UL-CS W/ OSQ-DA-CS	(2) CL-SSP-5011-2 6-D6-FS-ABL	10739	1.00	26	5
■	CREE* (4) OSQ-A-NM-4ME-A-57K-UL-CS W/ OSQ-DA-CS	(4) CL-SSP-5011-2 6-D6-FS-ABL	10739	1.00	26	3

\*SEE SHEET 18 FOR SPECIFICATION

**CALCULATION SUMMARY**

	AVERAGE	MAX	MIN	AVG/MIN
PROPERTY	2.48	10.51	0.00	0.00
PARKING AREAS	4.43	10.06	1.00	4.43

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2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	RAP	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

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SCALE: 1" = 30'

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PRINT NAME AND TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

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SIGNATURE: *Ryan Parker*

PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*

DATE: *July 22, 2016*

REGISTRATION NUMBER: *042102*

SEAL



**LIGHTING PLAN**

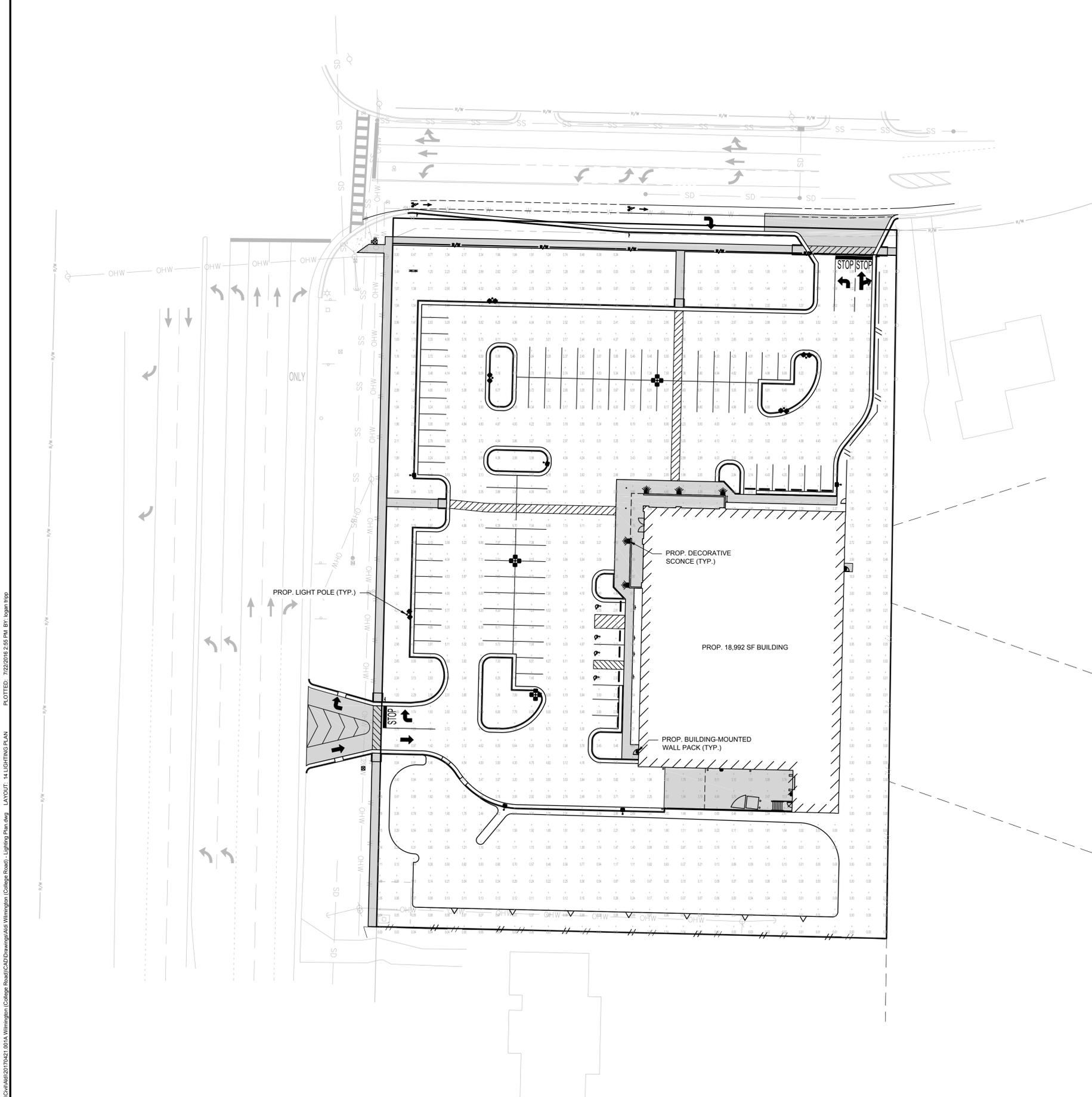
ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
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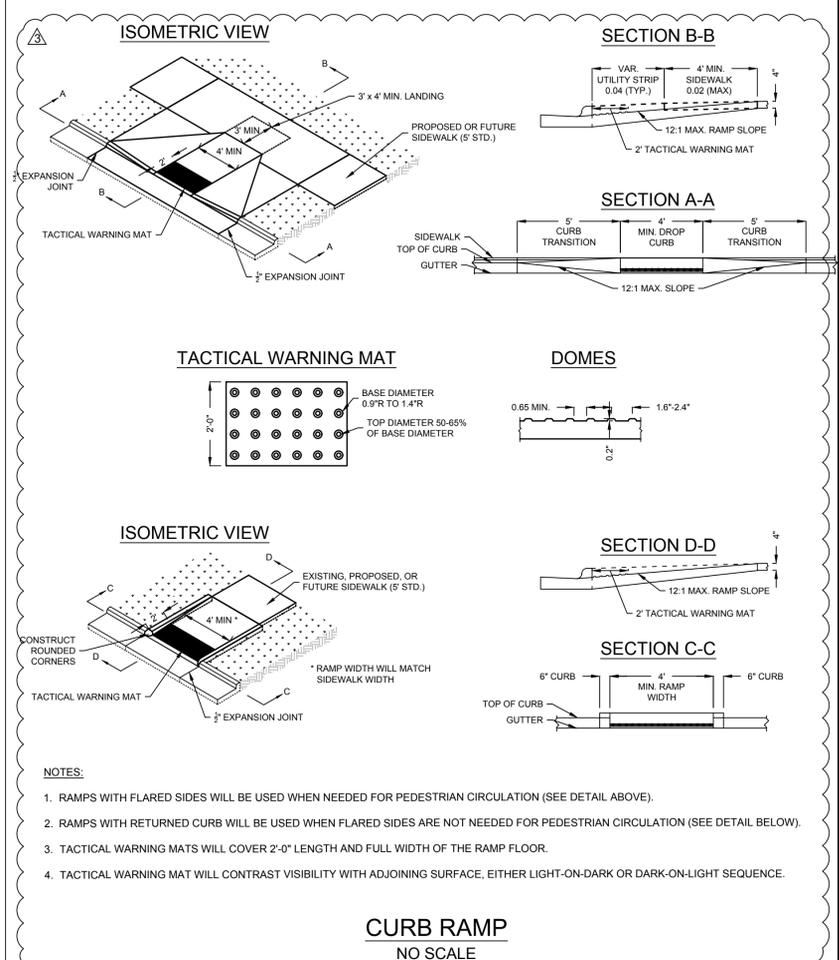
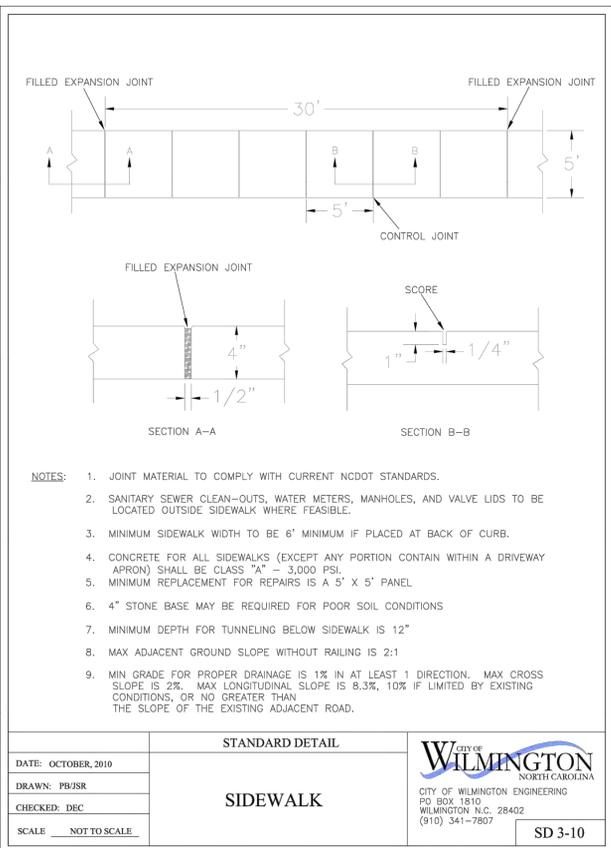
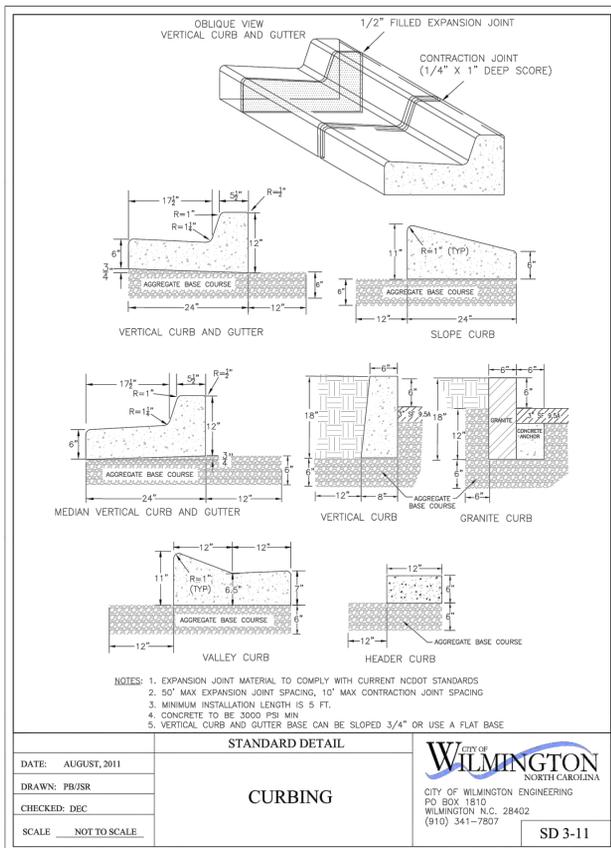
**SITE PLANS**

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SHEET 14 of 27



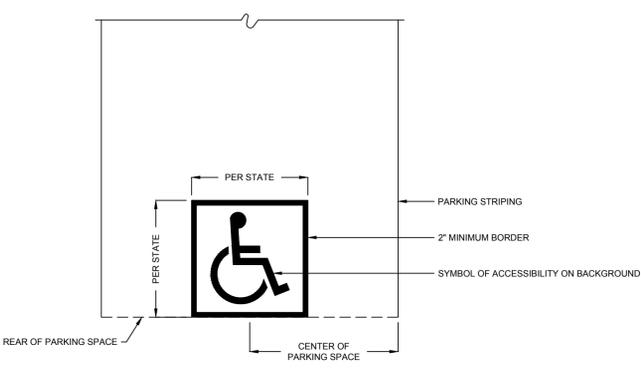
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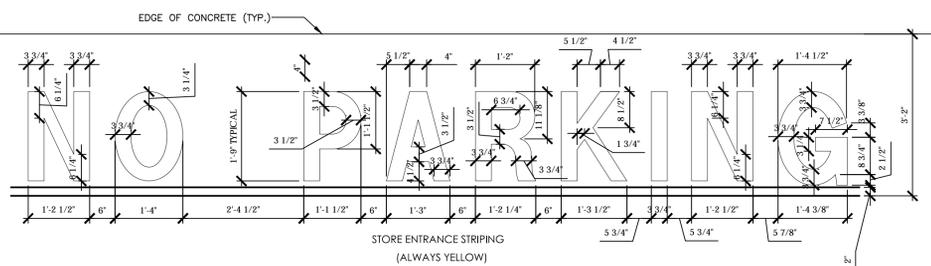
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**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION



- NOTES:**
- PAVEMENT MARKING SHALL BE LOCATED AT REAR OF EACH ACCESSIBLE PARKING SPACE.
  - PAVEMENT MARKING STROKE WIDTH SHALL BE 4" MINIMUM.
  - PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION.
  - ADA PARKING AND CHARACTERS SHALL BE PAINTED YELLOW IN COLOR.



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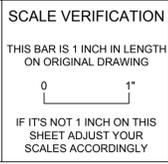
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DATE: \_\_\_\_\_

**DESIGNER'S PLAN CERTIFICATION:**

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SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL



ORIGINAL DRAWING SIZE IS 24 x 36

**CONSTRUCTION DETAILS**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
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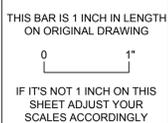


REVISIONS

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	RAP	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	RAP	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

SCALE VERIFICATION



ORIGINAL DRAWING SIZE IS 24 x 36

CONSTRUCTION DETAILS

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

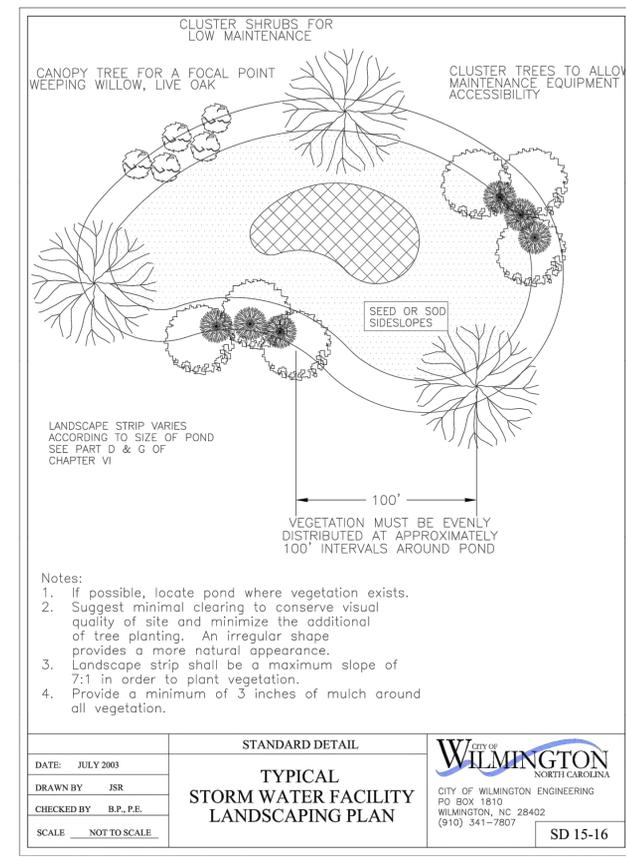


ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

SITE PLANS

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-19

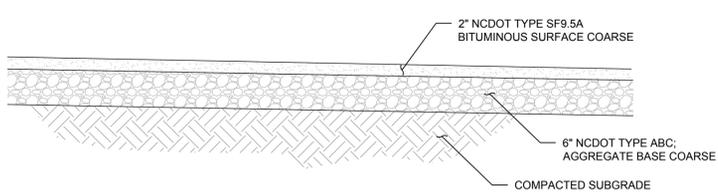
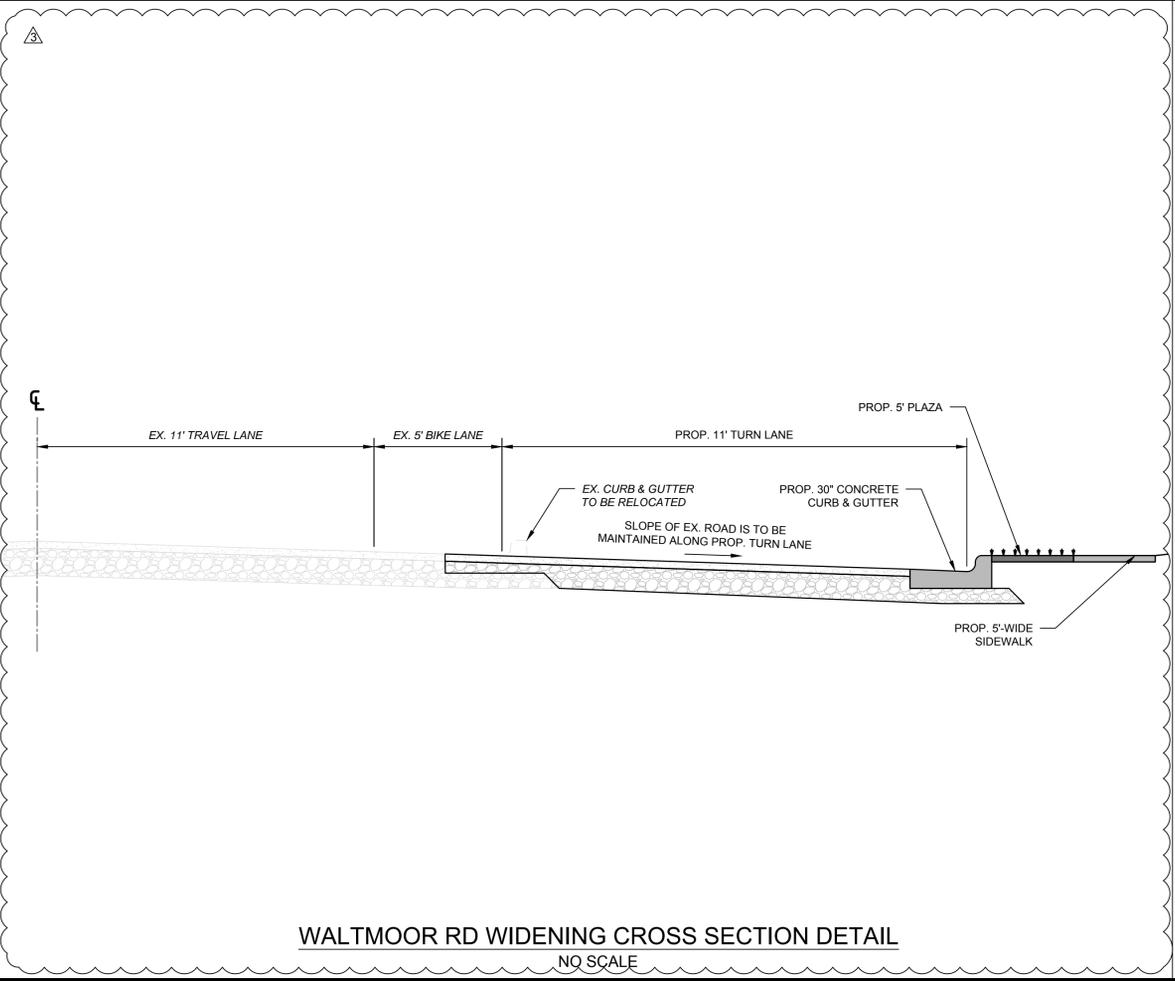
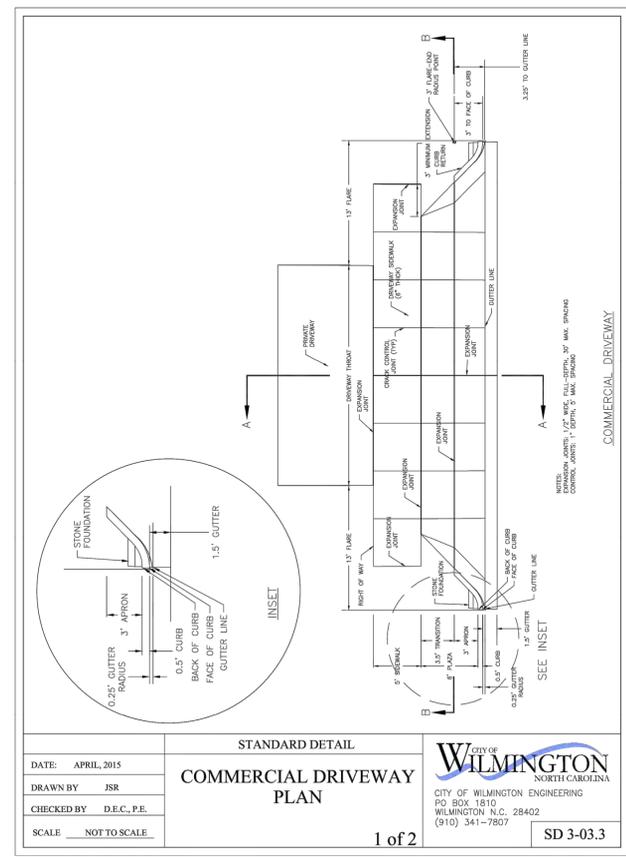
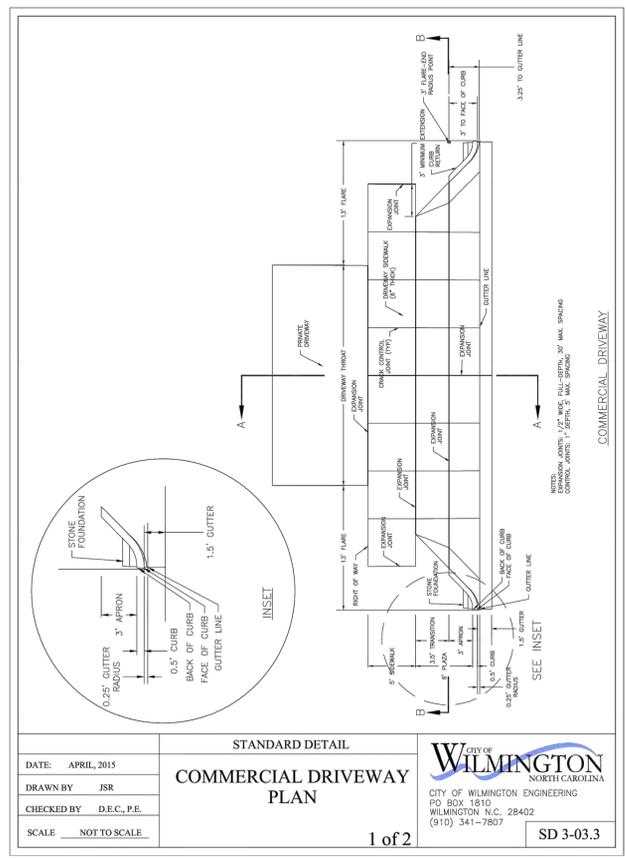


DATE: JULY 2003  
DRAWN BY: JSR  
CHECKED BY: B.P., P.E.  
SCALE: NOT TO SCALE

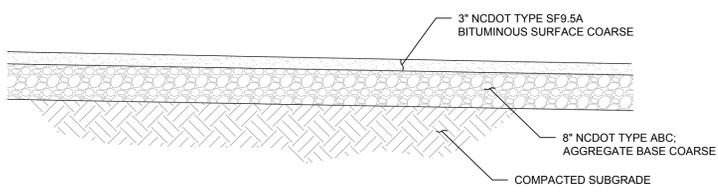
STANDARD DETAIL  
**TYPICAL STORM WATER FACILITY LANDSCAPING PLAN**

CITY OF WILMINGTON NORTH CAROLINA  
CITY OF WILMINGTON ENGINEERING  
PO BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807

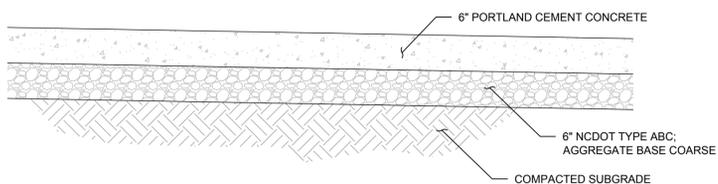
SD 15-16



**STANDARD DUTY PAVEMENT**  
NO SCALE



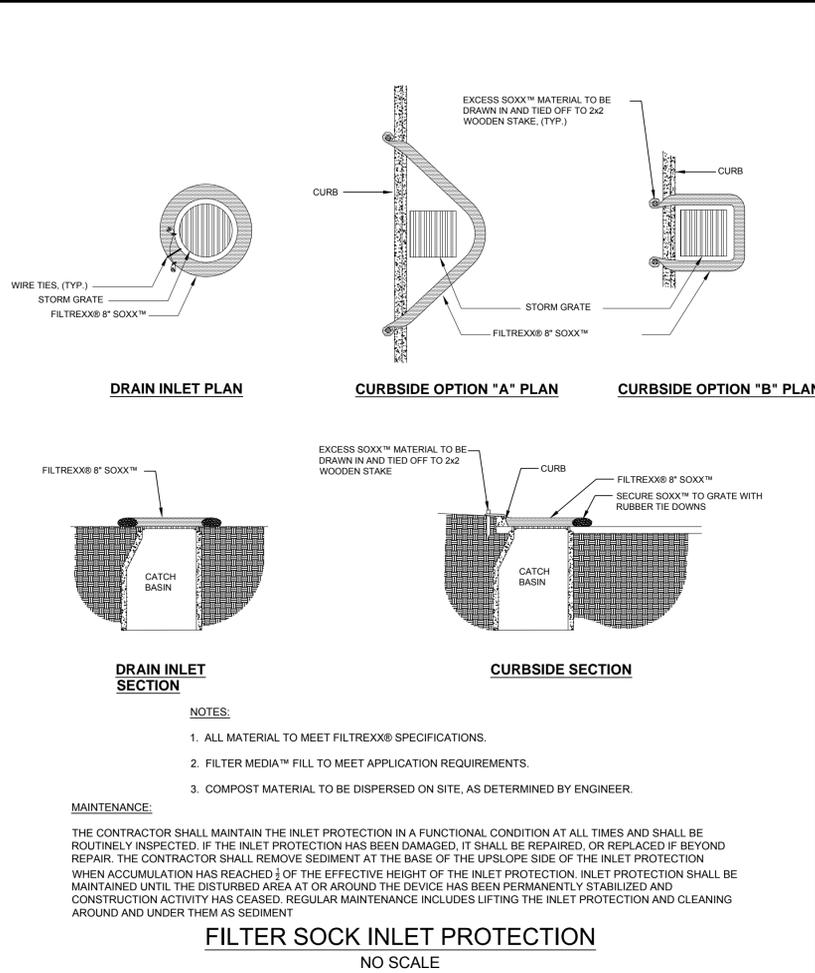
**HEAVY DUTY PAVEMENT**  
NO SCALE



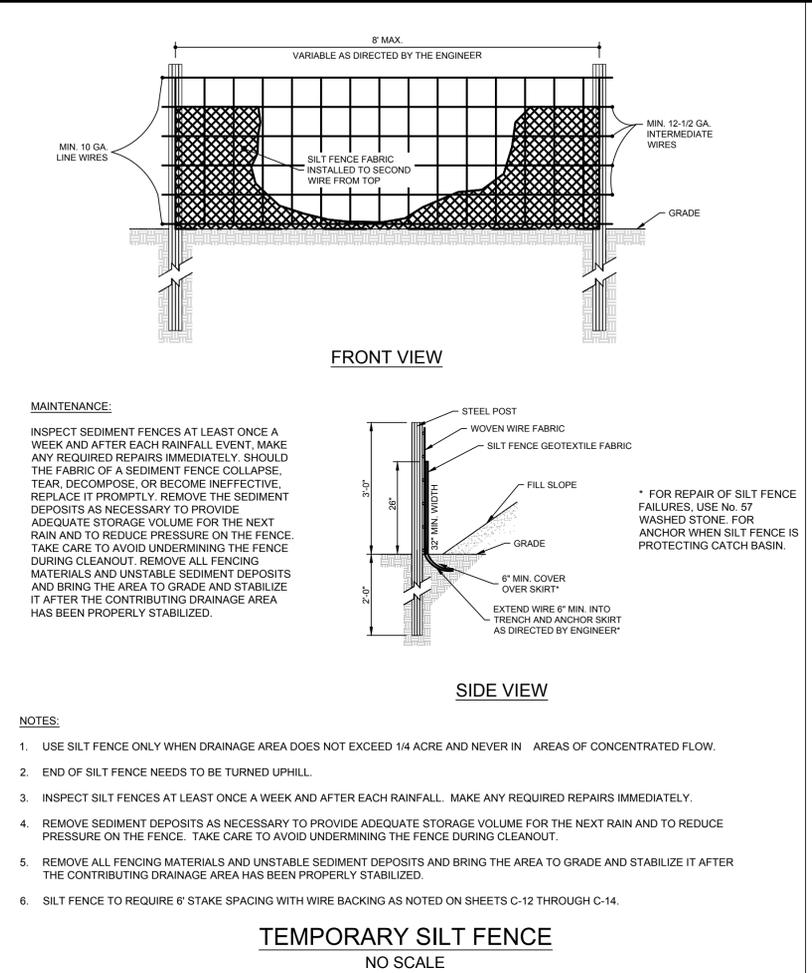
**CONCRETE PAVEMENT**  
NO SCALE

CAD FILE: W:\Cadd\2017\0421\_001A\_Wilmington\_College\_Road\Road\CAD\Drawings\K&K\Wilmington\_College\_Road - Details.dwg LAYOUT: 19 CONSTRUCTION DETAILS PLOTTED: 7/22/2016 2:55 PM BY: jspatt@kpf.com

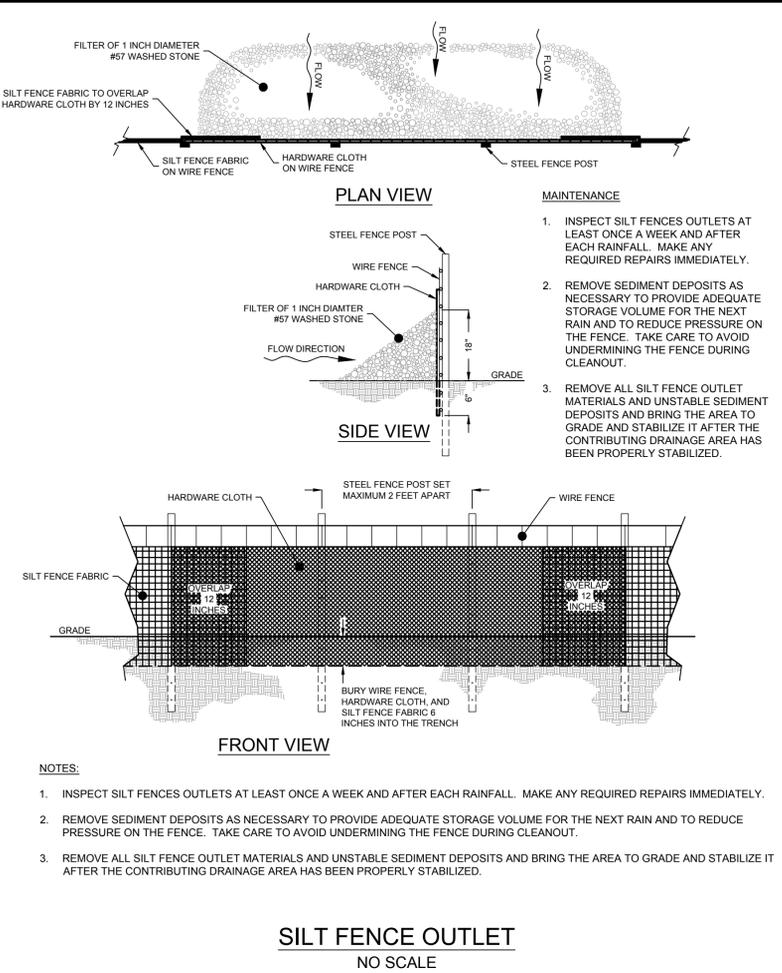
CAD FILE: W:\CADD\2017\2017-001A Wilmington (College Road) - Details.dwg  
 PLOTTED: 7/22/2016 2:55 PM BY: jganter  
 LAYOUT: 20 EROSION CONTROL DETAILS



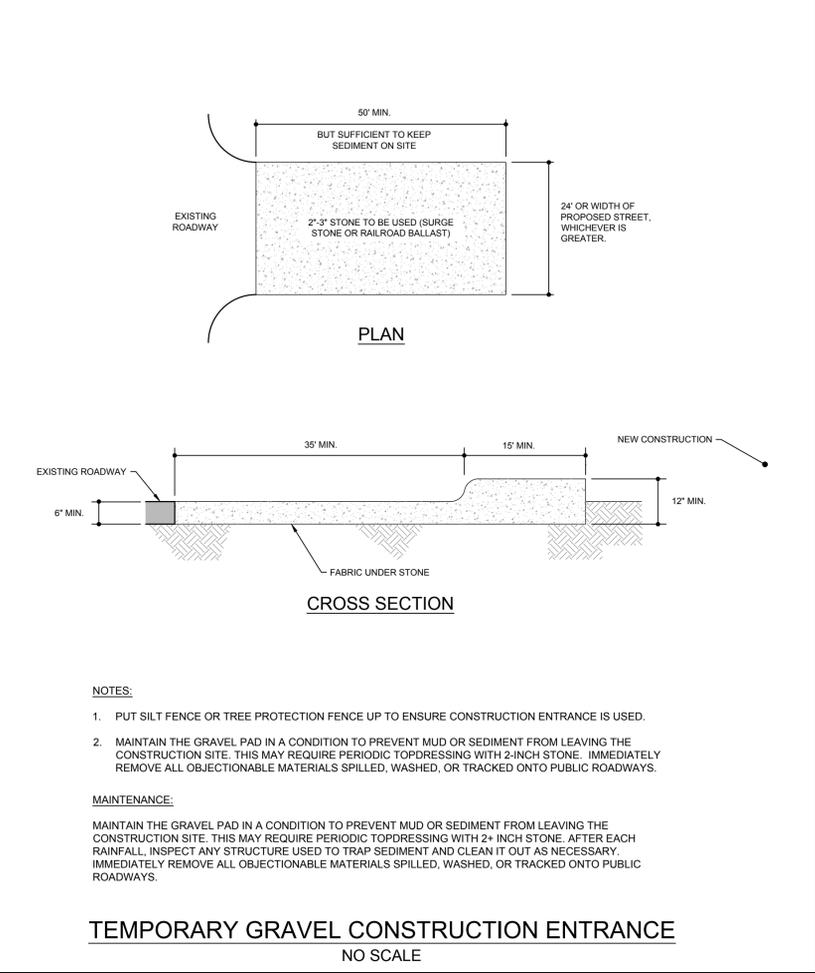
**FILTER SOCK INLET PROTECTION**  
NO SCALE



**TEMPORARY SILT FENCE**  
NO SCALE



**SILT FENCE OUTLET**  
NO SCALE



**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE**  
NO SCALE

**TEMPORARY SEEDING**

**LATE WINTER & EARLY SPRING**

Seeding mixture Species	Rate (lb/acre)
Tall fescue	60
Pennisetum Bahiagrass	60
Sericea lespedeza	30
Koeleria lespedeza	10

**SEEDING NOTES:**

- From Sept. 1 - Mar. 1, use unscarified sericea seed.
- On poorly drained sites, omit sericea and increase Kober to 30 lb/acre.
- Where a neat appearance is desired, omit sericea and increase Kober to 40 lb/acre.

**SEEDING DATES:**

Best	Possible
Early spring: Feb. 15 - Mar. 20	Feb. 15 - Apr. 30
Fall: Sept. 1 - Sept. 30	Sept. 1 - Oct. 31

**PERMANENT SEEDING**

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

**SEEDING SCHEDULE**  
NO SCALE

**Bright People. Right Solutions.**  
WWW.KLEINFELDER.COM

3500 GATEWAY CENTRE BLVD., SUITE 200  
MORRISVILLE, NC 27660  
PHONE: 919-755-5011  
NC LICENSE # F-1143

REVISIONS				
REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

SCALE VERIFICATION

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 24 x 36

**EROSION CONTROL DETAILS**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

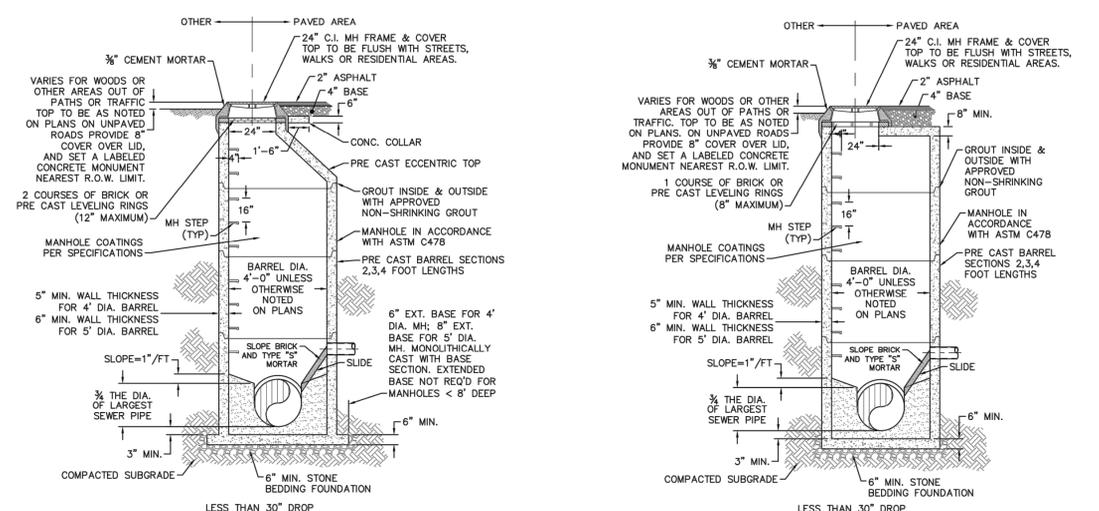
ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

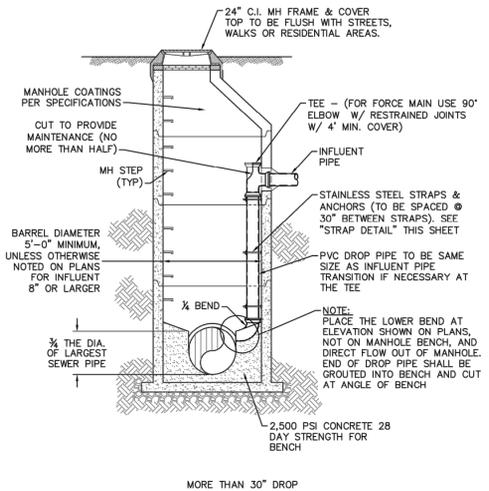
C-20

SHEET 20 of 27

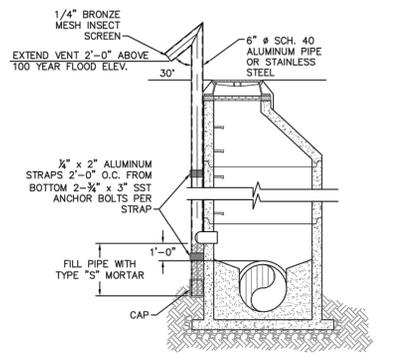


**SD-1 PRECAST CONCRETE OFFSET MANHOLE TYPICAL**  
NOT TO SCALE

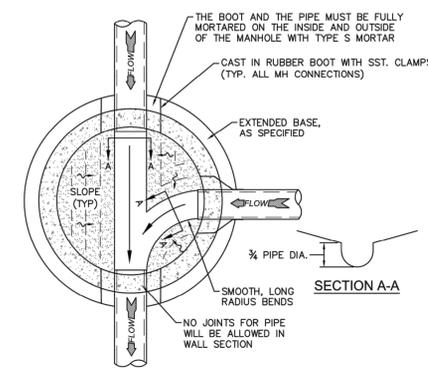
**SD-2 PRECAST CONCRETE FLAT TOP MANHOLE TYPICAL**  
NOT TO SCALE



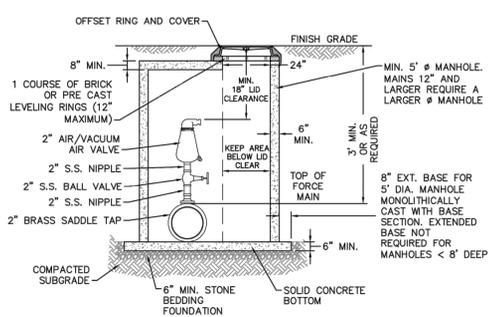
**SD-3 DROP MANHOLE**  
NOT TO SCALE



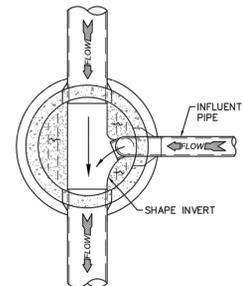
**SD-4 STANDARD VENT MANHOLE**  
NOT TO SCALE



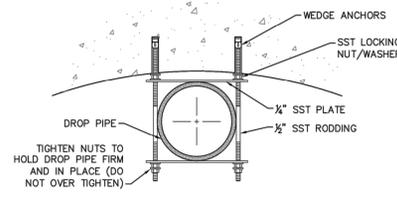
**SD-5 MANHOLE FLOOR PLAN**  
NOT TO SCALE



**SD-6 AIR/VACUUM AND AIR RELEASE COMBINATION VALVE**  
NOT TO SCALE



**SD-7 DROP MANHOLE FLOOR PLAN**  
NOT TO SCALE



**SD-8 STRAP DETAIL**  
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.

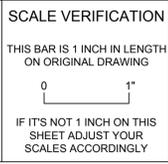
**SD-9 STANDARD NOTES**  
(REQUIRED ON ALL PLAN AND PROFILE SHEETS)

**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**

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION



REV:	DESCRIPTION:	DATE:
1	AIR / VACUUM AND AIR RELEASE COMBINATION VALVE REVISED	10/28/12
2	STANDARD SEWER NOTE #6 REVISED	12/10/12
3	REVISED STANDARD VENT MANHOLE TO EXTEND VENT 2'-0" ABOVE 100 YR FLOOD	11/20/14
4	Revised Multiple Details	02/15/16

**CFPUA SANITARY SEWER**

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

**STANDARD DETAILS**

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

**SHEET NO.:**  
**SSD-1**

**DESIGNER'S PLAN CERTIFICATION:**

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

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*  
SEAL



**PROPERTY OWNER CERTIFICATION:**

\* I HEREBY CERTIFY THAT I AM THE CURRENT OWNER OF THE PROPERTY AND THAT UPON RECEIPT OF "AUTORIZATION-TO-CONSTRUCT," ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, WILL BE PERFORMED IN ACCORDANCE WITH THIS PLAN AND THAT 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 OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER OF THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF NEW HANOVER COUNTY.\*

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

ORIGINAL DRAWING SIZE IS 24 x 36

**UTILITY DETAILS**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



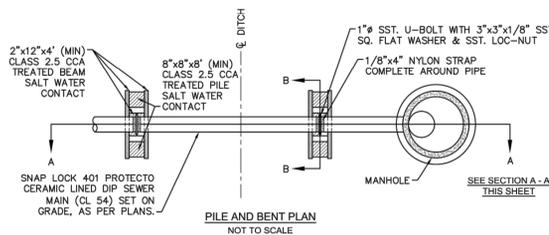
ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

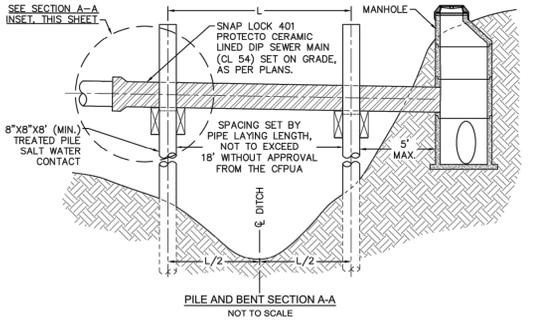
PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-21

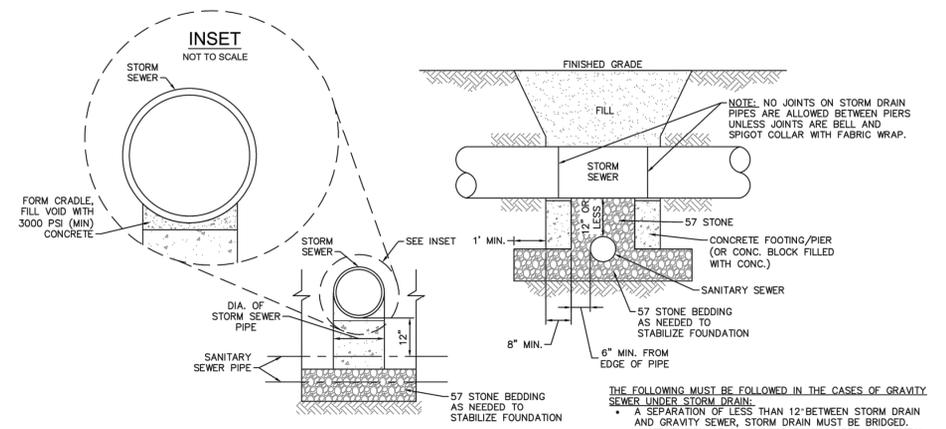
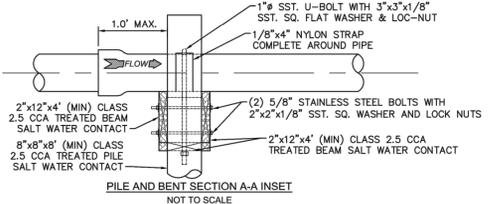
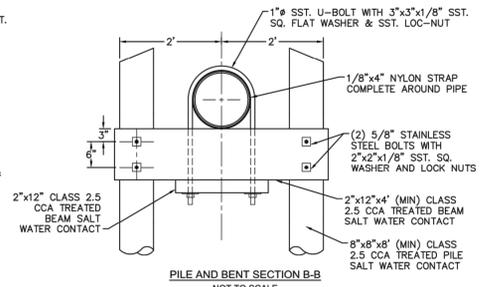




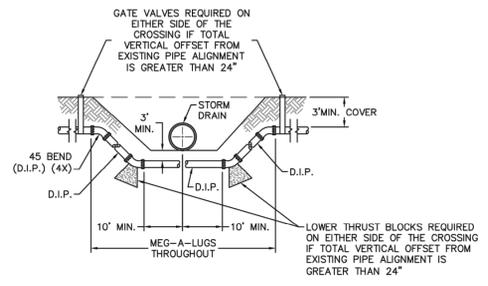
- NOTES:**
- PILES AND PILE DRIVING SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, JANUARY 2002, SECTIONS 445, 450, 1082-2 & 1084-2.
  - CENTERLINE OF BOLTS TO BE A MINIMUM OF 3" FROM OUTSIDE EDGE OF TIMBER. BOLTS TO BE A MINIMUM OF 3" CENTERLINE TO CENTERLINE.
  - ALL STAINLESS STEEL SHALL BE 316. STAINLESS STRAP TO BE COLD FORMED.
  - PILE SHALL NOT OBSTRUCT FLOW OR CAUSE EROSION OF DITCH/STREAM BANK.
  - MIN. CLASS 54 DIP-ENGINEER MUST DESIGN LOADING.
  - DESIGN SHALL BE APPROVED BY CFPWA.



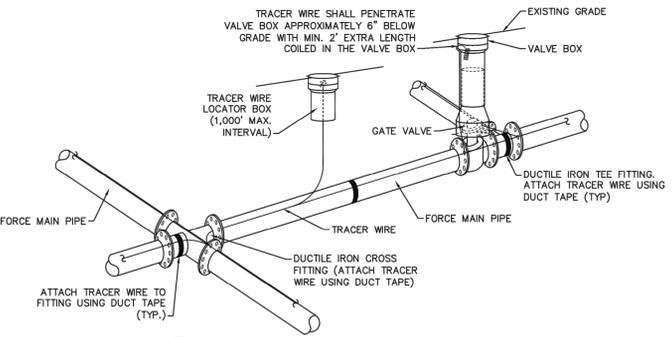
**SD-20 PILE AND BENT DETAIL**  
NOT TO SCALE



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



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



**SD-21 TRACER WIRE DETAIL**  
NOT TO SCALE

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

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

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

**CFPUA SANITARY SEWER**

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

**STANDARD DETAILS**

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

**SHEET NO:**  
**SSD-3**

**SCALE VERIFICATION**  
THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING  
0 1"  
IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 24 x 36

**UTILITY DETAILS**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-23

**PROPERTY OWNER CERTIFICATION:**

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER OF THE PROPERTY AND THAT UPON RECEIPT OF "AUTORIZATION-TO-CONSTRUCT," ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, WILL BE PERFORMED IN ACCORDANCE WITH THIS PLAN AND THAT 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 OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER OF THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF NEW HANOVER COUNTY."

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

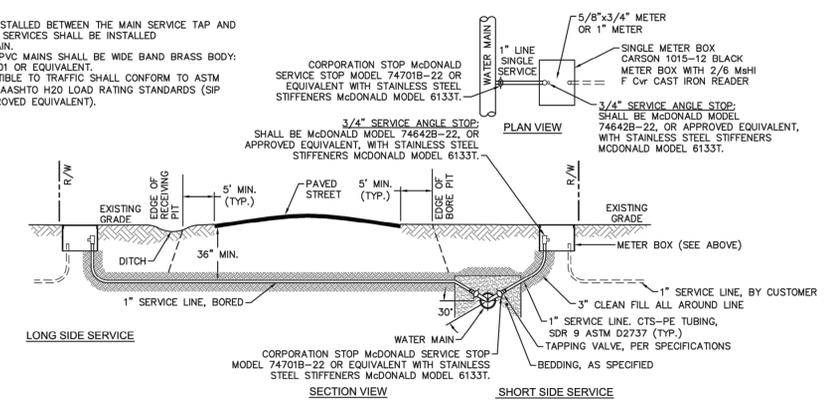
**DESIGNER'S PLAN CERTIFICATION:**

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

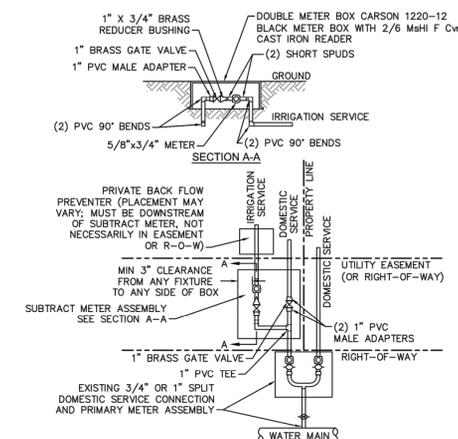
SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL

- 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).

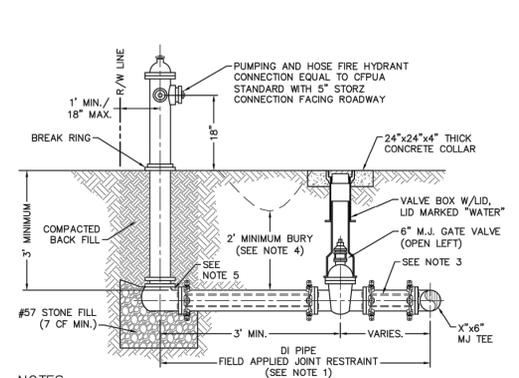


**WD-18 SINGLE SERVICE CONNECTION**  
NOT TO SCALE



- NOTES:**
- BEYOND THE PRIMARY DOMESTIC METER ASSEMBLY, CFPUA IS ONLY RESPONSIBLE FOR METER AND WASHERS OF SUBTRACT METER ASSEMBLY.
  - ALL PIPE AND FITTINGS UP TO FINAL SERVICE LINE TO BE 1" EXCLUDING METERS.

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

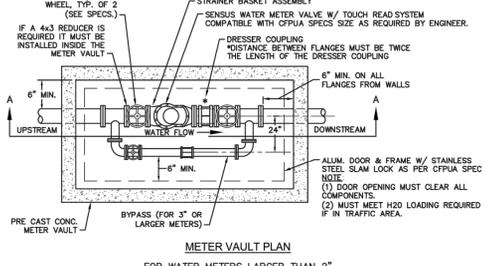
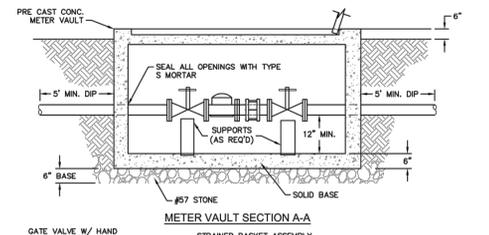


- NOTES:**
- JOINT RESTRAINT SYSTEMS SHALL BE WEDGE ACTION STYLE FOR DI PIPE AS MANUFACTURED BY EBAA IRON, SIGMA, STAR PIPE PRODUCTS OR APPROVED EQUAL.
  - WHEN HYDRANT LEGS REQUIRE FULL LENGTH PIPE SECTIONS, OVER BELL RESTRAINT SYSTEM SHALL HAVE 316 STAINLESS STEEL HARNESS AND FASTENERS.
  - CONTINUOUS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

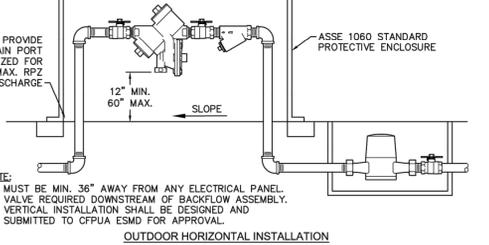
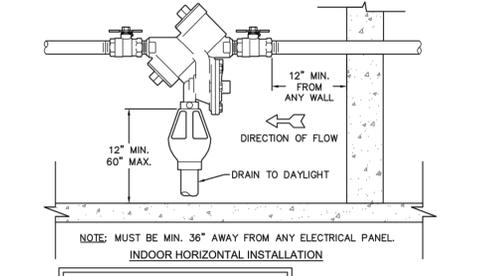
**WD-10 FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE

- 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.

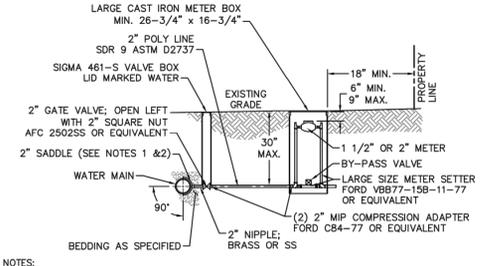
**WD-19 STANDARD NOTES**  
(REQUIRED ON ALL PLAN AND PROFILE SHEETS)



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

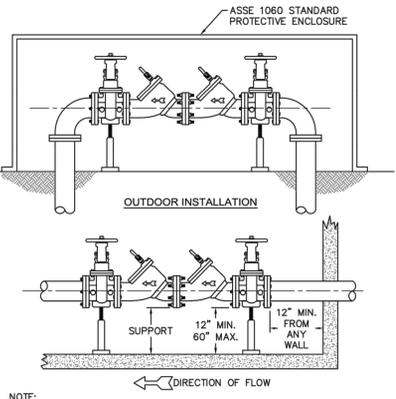


**WD-12 REDUCED PRESSURE PRINCIPLE ASSEMBLY**  
NOT TO SCALE



- 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 (SYNTECH MODEL DUO 17A30 OR APPROVED EQUIVALENT).
  - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB203 OR APPROVED EQUIVALENT.
  - 3" CLEAN FILL REQUIRED ALL AROUND 2" POLY SERVICE LINE.

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



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

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

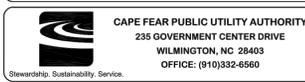
- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
  - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION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

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

**CFPUA WATER DISTRIBUTION SYSTEM**

**STANDARD DETAILS**



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

**SCALE VERIFICATION**

THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING

IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 24 x 36

**UTILITY DETAILS**

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

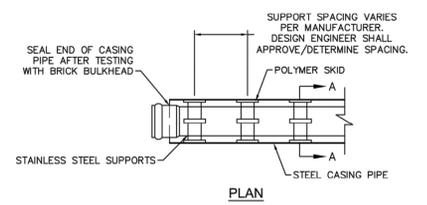


ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

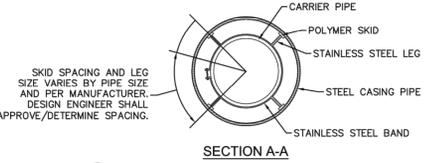
**SITE PLANS**

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

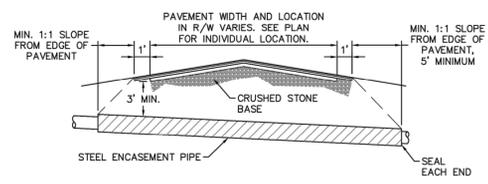
C-24



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

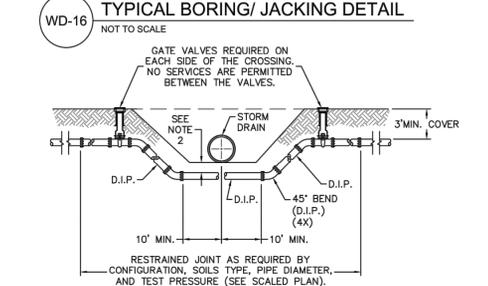


WD-15 PIPE CASING SUPPORT DETAIL  
NOT TO SCALE



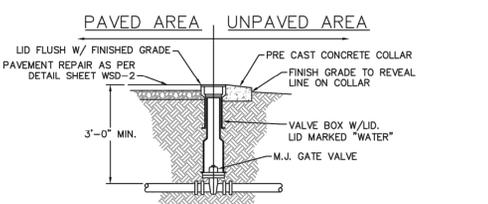
NOTE: BASED ON 160 PSI TEST PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.  
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.  
3. USE MEC-A-LUG (PREFERRED) IN LIEU OF BLOCKING AND ROODING.

WD-4 THRUST BLOCK DETAIL  
NOT TO SCALE



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

WD-16 TYPICAL BORING/JACKING DETAIL  
NOT TO SCALE

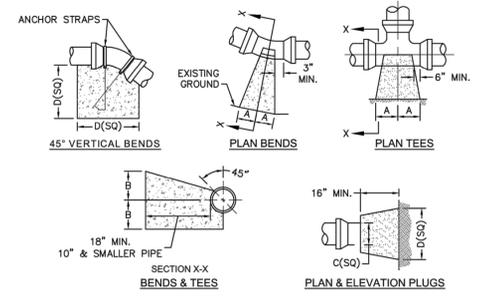


NOTE: 1. USE PRESSURE CLASS 350 DIP, UNLESS SPECIFIED OTHERWISE.  
2. MINIMUM DEPTH REQUIRED, UNLESS SPECIFIED OTHERWISE BY CFPWA:  
a. IN DOT R/W, 36" MIN. TYPICAL, OR 24" MIN. WHEN CROSSING A DITCH LINE.  
b. ALL OTHER LOCATIONS, 30" MIN.  
c. WHEN STORM DRAIN INVERT IS BURIED AT OR BELOW ABOVE DEPTHS,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

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



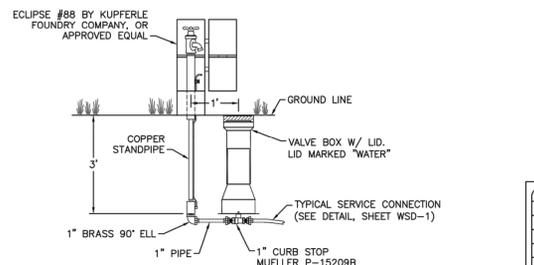
WD-3 VALVE DETAIL  
NOT TO SCALE



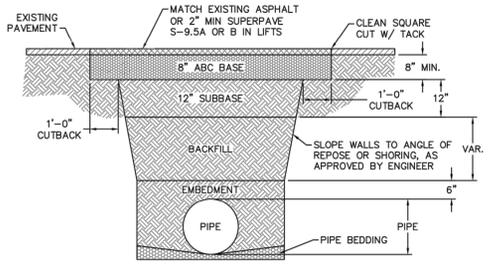
SIZE	90 BENDS		45 BENDS		22-1/2 BENDS		TEES/PLUGS		45 VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"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

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

WD-17 TRACER WIRE DETAIL  
NOT TO SCALE

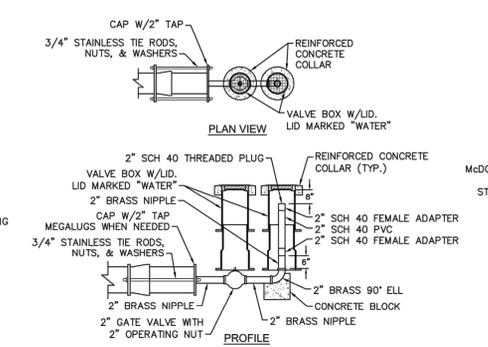


WD-6 SAMPLING STATION  
NOT TO SCALE

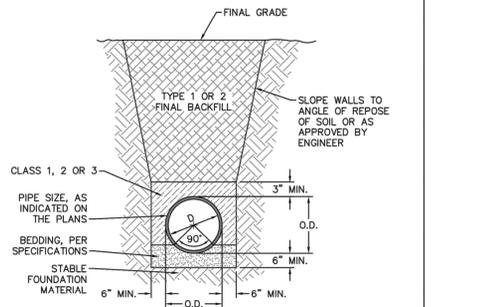


NOTE: 1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.  
2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED Limestone, CLEAN SAND, FLOWABLE FILL, ETC).  
3. 8-INCH OF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

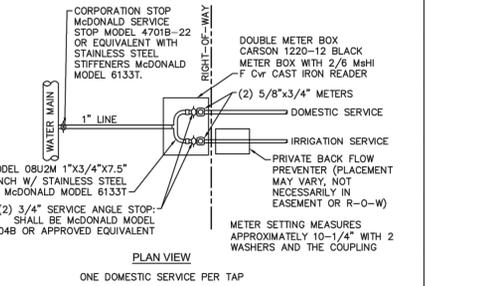
WD-14 PAVEMENT REPAIR WHERE PIPE INSTALLED  
NOT TO SCALE



WD-5 2" BLOW-OFF  
NOT TO SCALE



WD-13 TYPICAL TRENCH DETAIL  
NOT TO SCALE



WD-9 DOUBLE SERVICE CONNECTION  
NOT TO SCALE

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

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

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

**CFPWA WATER DISTRIBUTION SYSTEM**

**STANDARD DETAILS**

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

DATE: 1/9/12  
SCALE: N/A  
DRAWN BY: CFPWA  
CHECKED BY: CFPWA  
PROJECT NO.:  
SHEET NO.: WSD-2

REVISIONS				
REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	RAP	6/17/2016
2	ARCHITECT, CFPWA & NCDOT COMMENTS	RAP	RAP	6/29/2016
3	TRC COMMENTS	RAP	RAP	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

SCALE VERIFICATION  
THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING  
IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

ORIGINAL DRAWING SIZE IS 24 x 36

UTILITY DETAILS

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412

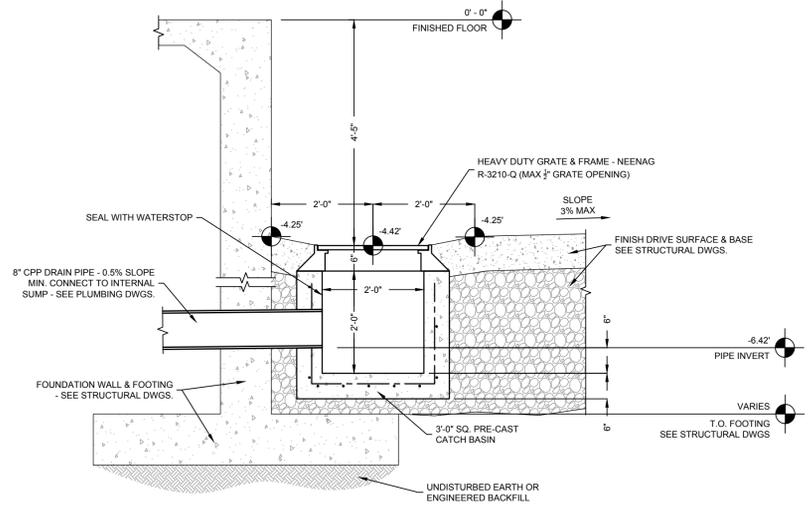


ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

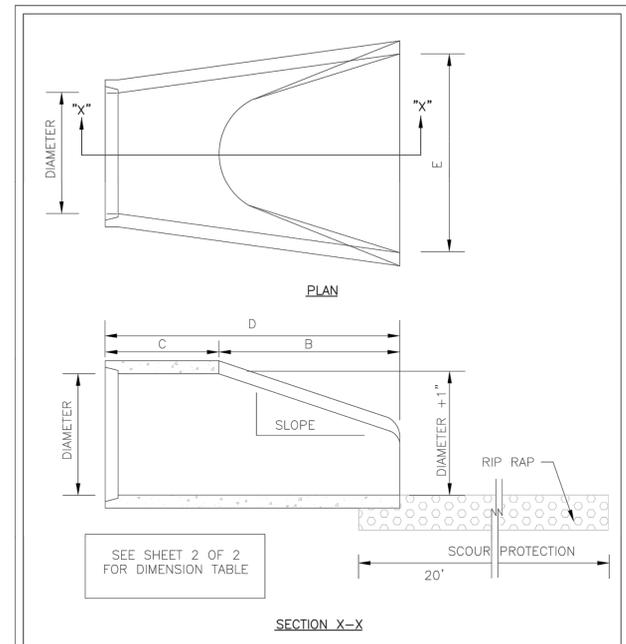
SITE PLANS

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

C-25



**TRUCK WELL CATCH BASIN DETAIL WITH SUMP PIT**  
NO SCALE



STANDARD DETAIL  
**FLARED END SECTION OUTLET**

DATE: 2001  
DRAWN BY: JSR/CMR  
CHECKED BY: B.P., P.E.  
SCALE: NOT TO SCALE

CITY OF WILMINGTON  
ENGINEERING OFFICE  
305 CHESTNUT STREET  
PO. BOX 1810  
WILMINGTON N.C. 28402  
(910) 341-7807

SD 1-17

NOTE:  
1. STRUCTURAL DESIGN OF END SECTION SHALL CONFORM WITH THAT OF STANDARD REINFORCED CONCRETE.

PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
33	3 3/4	3:1	60	36	96	66	3870
36	4	3:1	63	34 3/4	97 3/4	72	5320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	26	98	84	7470
54	5 1/2	2.4:1	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13980

DIMENSIONS IN INCHES WEIGHTS IN POUNDS

STANDARD DETAIL  
**FLARED END SECTION OUTLET DIMENSION TABLE**

DATE: 2001  
DRAWN BY: JSR/CMR  
CHECKED BY: B.P., P.E.  
SCALE: NOT TO SCALE

CITY OF WILMINGTON  
ENGINEERING OFFICE  
PO. BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807

SD 1-17

REVISIONS

REV	DESCRIPTION	DSN	CHK	DATE
1	CFPUA COMMENTS	RAP	JBC	6/17/2016
2	ARCHITECT, CFPUA & NCDOT COMMENTS	RAP	JBC	6/29/2016
3	TRC COMMENTS	RAP	JBC	7/22/2016

**PRELIMINARY PLANS**  
NOT FOR CONSTRUCTION

SCALE VERIFICATION  
THIS BAR IS 1 INCH IN LENGTH ON ORIGINAL DRAWING  
0 1"  
IF IT'S NOT 1 INCH ON THIS SHEET ADJUST YOUR SCALES ACCORDINGLY

**PROPERTY OWNER CERTIFICATION:**

"I HEREBY CERTIFY THAT I AM THE CURRENT OWNER OF THE PROPERTY AND THAT UPON RECEIPT OF "AUTORIZATION-TO-CONSTRUCT," ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, WILL BE PERFORMED IN ACCORDANCE WITH THIS PLAN AND THAT 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 OWNER, I (WE) ACCEPT FULL RESPONSIBILITY FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF THE PROPOSED FACILITIES. I (WE) WILL NOT ATTEMPT TO TRANSFER OF THIS RESPONSIBILITY WITHOUT THE WRITTEN AUTHORIZATION OF NEW HANOVER COUNTY."

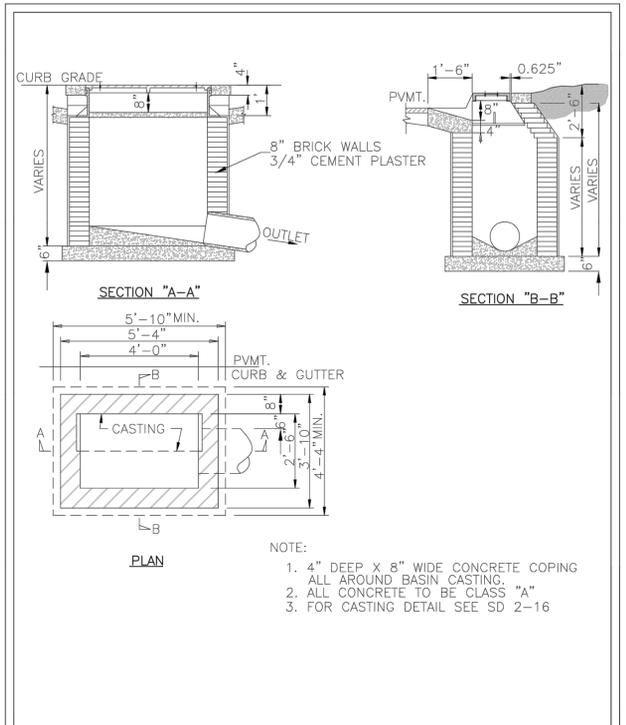
SIGNATURE: \_\_\_\_\_  
PRINT NAME AND TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_

**DESIGNER'S PLAN CERTIFICATION:**

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

SIGNATURE: *Ryan Parker*  
PRINT NAME AND TITLE: *Ryan Parker, Staff Professional II*  
DATE: *July 22, 2016*  
REGISTRATION NUMBER: *042102*

SEAL

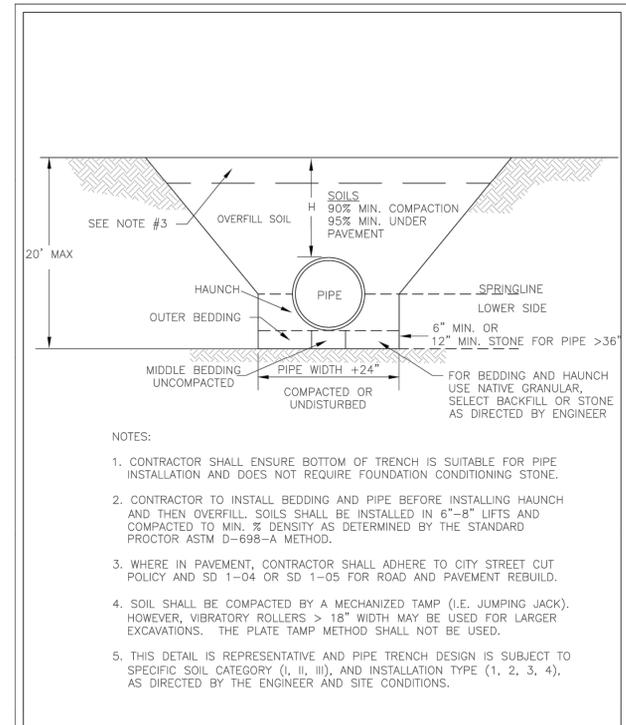


STANDARD DETAIL  
**CATCH BASIN**

DATE: 2006  
DRAWN BY: JSR/CMR  
CHECKED BY: B.P., P.E.  
SCALE: NOT TO SCALE

CITY OF WILMINGTON  
ENGINEERING OFFICE  
PO. BOX 1810  
WILMINGTON, NC 28402  
(910) 341-7807

SD 2-01



STANDARD DETAIL  
**PIPE TRENCH TYPICAL**

DATE: MAY, 2013  
DRAWN: JSR  
CHECKED: BDR, P.E.  
SCALE: NOT TO SCALE

CITY OF WILMINGTON  
ENGINEERING OFFICE  
212 OPERATIONS CENTER DRIVE  
WILMINGTON N.C. 28412  
(910) 341-7807

SD 1-07

ORIGINAL DRAWING SIZE IS 24 x 36

UTILITY DETAILS

ALDI #98 WILMINGTON, NC  
3701 SOUTH COLLEGE ROAD  
WILMINGTON, NC 28412



ALDI, INC. SALISBURY DIVISION  
1985 OLD UNION CHURCH ROAD  
SALISBURY, NORTH CAROLINA 28146  
(919) 714-8111

SITE PLANS

PROJECT NO.	20170421
ISSUE DATE	06-14-2016
CURRENT REVISION	3
DESIGNED BY	RAP
DRAWN BY	GLT
CHECKED BY	RAP
APPROVED BY	JBC

SHEET 26 of 27

C-26

