

CIVIL CONSTRUCTION PLANS FOR: SPLASH N DASH CARWASH

5044 MARKET STREET

PID: R04915-002-005-001

DEED BOOK: 2375, PAGE 674

DEED BOOK: 5023, PAGE 1229

DEED BOOK: 5130, PAGE 142

LOT1, MAP BOOK: 38, PAGE 337

CITY OF WILMINGTON

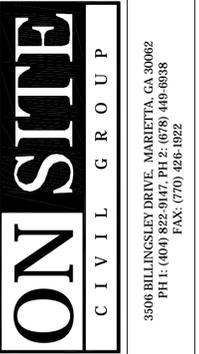
NEW HANOVER COUNTY, NC



CAUTION!!!

The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness of accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction.

**24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994**



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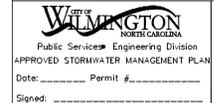
REVISIONS		
No.	DATE	DESCRIPTION

BUA CALCULATIONS:
0.58 acres Impervious added
0.58 / 1.422 = 40.8%.

CAMA MAP CLASSIFICATION:
DEVELOPED

BUILDING LOT COVERAGE CALCULATIONS (SF):
EXISTING: 6,647/(61,940)*100=11%
PROPOSED: (5,295+1,849+694)/(61,940)*100=12.65%

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



PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7935

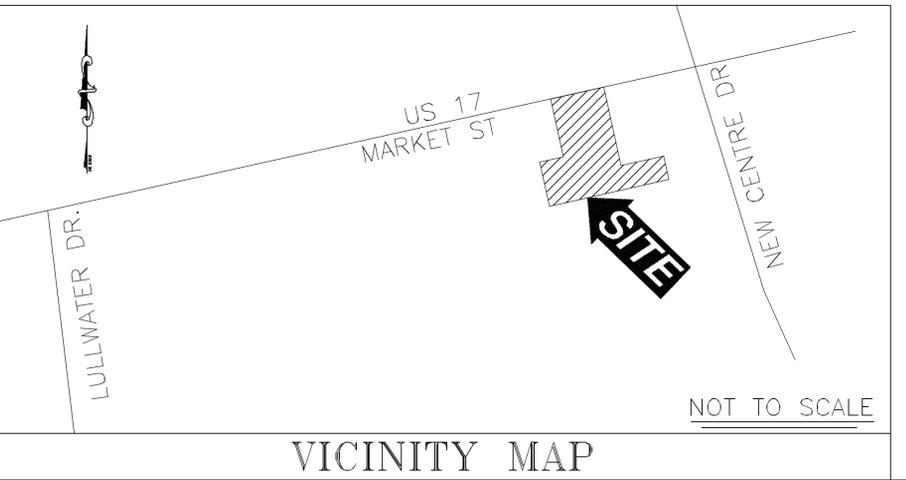
SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

COVER SHEET

DATE: JULY 24, 2013
PROJECT: 13-012

SHEET: C 1.0

ZONING:
RB - REGIONAL BUSINESS
OVERALL SITE AREA: 1.422 ACRES
TOTAL DISTURBED AREA: 0.87 ACRES
EXISTING IMPERVIOUS AREA: 1.234 ACRES
EXISTING IMPERVIOUS AREA TO BE REMOVED: 0.80 ACRES
PROPOSED NEWLY FORMED IMPERVIOUS AREA: 0.58 ACRES
NEW NET IMPERVIOUS AREA: 1.01 ACRES



SHEET INDEX	
SHEET #	TITLE
C 1.0	COVER SHEET
C 2.0	GENERAL NOTES
C 3.1	EXISTING CONDITIONS
C 3.2	DEMOLITION PLAN
C 4.1	SITE AND STAKING PLAN
C 5.1	PAVING, GRADING, AND DRAINAGE PLAN
C 5.2-5.4	STORMWATER BMP PLAN AND DETAILS
C 5.5	STORM SCHEDULE AND PROFILES
C 6.1-6.2	UTILITY PLAN AND DETAILS
C 7.1-7.3	EROSION CONTROL PLANS
C 8.1-8.4	CONSTRUCTION DETAILS
C 9.1-9.5	NCDOT PLANS
L 1.00	LANDSCAPE PLAN

ISSUE DATES		
NUMBER	DATE	DESCRIPTION
1	6/10/13	INITIAL SUBMITTAL
2	7/24/13	SUBMITTAL #2/ ADDRESS C.O.W. & NCDOT COMMENTS
-	-	-
-	-	-
-	-	-

PROJECT CONTACTS:

APPLICANT: SPLASH N DASH CARWASH
609 BRAE BURN DRIVE
MARTINEZ, GA 30907
CONTACT: ED UMSTEAD
706-840-4988

CIVIL ENGINEER: ONSITE CIVIL GROUP
3506 BILLINGSLEY DRIVE
MARIETTA, GA 30062
CONTACT: JARRETT SENKBEIL, PE, LEED AP
404-822-9147

LANDSCAPE ARCHITECT: DENNIS TERRY DESIGN INC, PA
CONTACT: DENNIS C. TERRY, RLA, LEED
704-202-8160

CITY OF WILMINGTON GENERAL NOTES:

- PRIOR TO ANY CLEARING, GRADING OR ANY CONSTRUCTION ACTIVITY, TREE PROTECTION FENCE WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCE.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF STREET NAME SIGNS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. ADD A NOTE TO CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
- ANY MISSING OR BROKEN SIDEWALK PANELS, DRIVEWAY PANELS, OR CURB PANELS WILL BE REPLACED.
- CONTACT KAREN DIXON AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- PROJECT WILL COMPLY WITH CITY OF WILMINGTON CROSS CONNECTION CONTROL REQUIREMENTS.
- IF THE CONTRACTOR DESIRES CITY 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 CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
- ANY BACKFLOW DEVICES REQUIRED BY THE CITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOCHR OR ASSE.

GENERAL NOTES:

- ALL CONSTRUCTION WORK AND MATERIALS SHALL CONFORM TO NCDOT STANDARD SPECIFICATIONS AND DETAILS ASSOCIATED WITH THESE PLANS. IF THERE IS A CONFLICT THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- PRIOR TO INSTALLATION OF ANY UTILITY LINES, THE CONTRACTOR SHALL GIVE THE UTILITY COMPANIES THREE (3) WORKING DAYS NOTICE TO ALLOW TIME FOR EXISTING UTILITIES TO BE STAKED. BEFORE CALLING (1-800-632-4949) THE CONTRACTOR SHALL HAVE THE FOLLOWING INFORMATION READY: COUNTY, TOWN, LOCATION, NEAREST STREET INTERSECTIONS, TYPE OF WORK (SEWER, WATER, PAVING, ETC.), YOUR COMPANY NAME, TELEPHONE NUMBER, OWNER'S NAME, DATE AND TIME YOU EXPECT TO COMMENCE CONSTRUCTION, AND WHERE AND HOW YOU CAN BE REACHED AND THE BEST TIME TO CONTACT YOU. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES, AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY VARIANCES PRIOR TO COMMENCEMENT OF WORK OR PURCHASING ANY MATERIALS.
- ALL KNOWN UTILITY FACILITIES ARE SHOWN SCHEMATICALLY ON THE PLANS AND ARE NOT NECESSARILY ACCURATE AS TO PLAN OR ELEVATION. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UTILITY FACILITIES OTHER THAN SERVICE LINES FROM STREET MAINS TO ABUTTING PROPERTY WHEN SUCH FACILITIES ARE NOT SHOWN ON THE PLANS AND THEIR EXISTENCE IS UNKNOWN TO THE CONTRACTOR PRIOR TO THE DAMAGES OCCURRING PROVIDING THE ENGINEER DETERMINES THE CONTRACTOR HAS OTHERWISE FULLY COMPLIED WITH THE SPECIFICATIONS.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE HIS OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA THAT IS AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED AND WASTED, AND/OR GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS AND SPECIFICATIONS DOES NOT IN ANY WAY GUARANTEE THE AMOUNT OR NATURE OF THE MATERIAL WHICH MAY BE ENCOUNTERED.
- ALL STORM DRAIN PIPES SHALL BE **WATER TIGHT HDPE** UNLESS OTHERWISE SHOWN ON PLANS. ALL PIPE WITHIN CDOT SHALL BE RCP.
- FILL MATERIAL SHALL BE CLEAN AND FREE OF ALL DEBRIS AND ORGANIC MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND FURNISHING THE BORROW MATERIAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.
- ALL EXCESS MATERIALS, IF ANY, SHALL BE HAULED OFF-SITE AND DISPOSED OF BY THE CONTRACTOR. THE OWNER SHALL HAVE THE RIGHT TO KEEP AND STOCKPILE THE MATERIAL AT A LOCATION DETERMINED BY THE OWNER IF DESIRED.
- ALL DISTURBED EARTH AREAS, NOT DESIGNATED TO BE PAVED, SHALL BE GRASSED WITH TEMPORARY SEEDING OR PLANTED WITH PERMANENT VEGETATION.
- ALL SANITARY SEWER PIPE SHALL MEET THE REQUIREMENTS OF ASTM D-3034, SDR 35 AND HAVE A MINIMUM COVER OF 48" FROM FINISHED GRADE.
- PRIOR TO CONNECTING TO ANY EXISTING CITY OF WILMINGTON/CAPE FEAR PUBLIC UTILITY AUTHORITY UTILITIES AND PRIOR TO DIGGING FOR ANY PROPOSED CONSTRUCTION OF CITY OF WILMINGTON/CAPE FEAR PUBLIC UTILITY AUTHORITY'S WATER MAINS, SANITARY SEWER LINES, OR STORM SEWER SYSTEMS, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE DEPARTMENT HEADS A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO DIGGING.
- ALL PERMANENT VEGETATION SHALL BE PLANTED AS SHOWN ON THE LANDSCAPE PLAN.
- ALL PROPOSED PAVEMENT ELEVATIONS SHOWN + 99.43' ARE PROPOSED GROUND OR CONCRETE SIDEWALK SPOT ELEVATIONS AND NOT TOP OF CURB ELEVATIONS UNLESS NOTED.

CONSTRUCTION SEQUENCE NOTES:

- OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE CITY OF WILMINGTON ENGINEERING DEPARTMENT.
- SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE CITY ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 17 OF THE CITY CODE AND IS SUBJECT TO FINE.
- INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, DIVERSION DITCHES, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
- CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
- FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
- STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
- COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
- REMOVE ANY FINAL SILT FROM SILT DITCH AT REAR OF PROPERTY AND FALL AREA TO RESTORE NATURAL 5:6:1 CROSS SLOPE
- SKIMMER BASIN MUST REMAIN IN PLACE UNTIL PARKING LOT SUBGRADE HAS BEEN INSTALLED.
- UNDERGROUND DETENTION WILL BE CLEANED OUT WHEN SITE WORK AND PAVING ARE COMPLETED AND A FINAL PERMANENT GROUND COVER IS ESTABLISHED.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, US DEPT OF AGRICULTURE, CITY OF WILMINGTON EROSION CONTROL ORDINANCE, AND THE WILMINGTON LAND DEVELOPMENT STANDARDS MANUAL.

NOTE:
EXISTING CONDITIONS PROVIDED BY **GRIFFIN SURVEYING**. ONSITE CIVIL GROUP LLC TAKES NO LIABILITY FOR THE ACCURACY OF THE SURVEY. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS

CHECK INDIVIDUAL PLAN SHEETS FOR ADDITIONAL NOTES AS REQUIRED BY CITY OF WILMINGTON

STORM DRAINAGE NOTES:

- ENGINEER:
ONSITE CIVIL GROUP, LLC
3506 MARIETTA, GA 30062
PHONE: (404) 822-9147
CONTACT: JARRETT SENKBEIL, P.E., LEED AP
- TOTAL SITE AREA: **1.422** ACRES
DENUDE AREA: **0.87** ACRES
PRE-DEVELOPMENT IMPERVIOUS SITE AREA: **1.234** ACRES
PRE-DEVELOPED IMPERVIOUS AREA TO BE REMOVED: **0.80** ACRES
PROPOSED IMPERVIOUS AREA: **0.58** ACRES
TOTAL POST-DEVELOPMENT IMPERVIOUS SITE AREA: **1.01** ACRES
- ALL STORMWATER INFRASTRUCTURES ON THIS SITE ARE PRIVATELY OWNED, AND ANY MAINTENANCE OR REPLACEMENT IS THE OWNER'S RESPONSIBILITY.
- ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY NO. 3720313800J DATED APRIL 3, 2006 THIS PROPERTY IS LOCATED WITHIN ZONE X (NOT A SPECIAL FLOOD HAZARD AREA).
- CAMA MAP CLASSIFICATION: DEVELOPED

SURVEY NOTES:
PROPERTY OWNER(S): UMSTEAD PROPERTIES, LLC
ZONING: RB

SETBACKS REQUIRED PER CODE

- FRONT: 25'
- SIDE: NONE
- REAR: 15'
- LANDSCAPE BUFFER(S): 10' TOTAL BETWEEN SITES

- ALL DISTANCES ARE SURFACE HORIZONTAL DISTANCES.
- AREA CALCULATED BY COORDINATE METHOD.
- THIS AREA DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FEMA MAP 3720313800J DATED APRIL 3, 2006

UTILITY NOTES:

- CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES AND THEIR ELEVATIONS PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT PUBLIC UTILITIES INSPECTIONS AT LEAST 24 HOURS IN ADVANCE PRIOR TO ANY ACTIVITY.
- CONTRACTOR TO COORDINATE TYPE AND INSTALLATION OF DOMESTIC AND IRRIGATION WATER METERS, BACKFLOW PREVENTORS, AND DETECTOR CHECK VALVES WITH UTILITY COMPANY.
- ONSITE CIVIL GROUP WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH LOCAL GOVERNING CODES.
- A MINIMUM OF 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN SEWER LINES AND WATER LINES AT ALL TIMES. SEE SPECIFICATIONS FOR MORE DETAIL.

ABBREVIATIONS

AC	ACRES	IN	INCHES
AGGR	AGGREGATE	IPF	IRON PIN FOUND
ASPH	ASPHALT	IPS	IRON PIN SET
CB	CATCH BASIN	JB	JUNCTION BOX
CL	CENTERLINE	LF	LINEAR FEET
CF	CUBIC FEET	LP	LIGHT POLE
CO	CLEAN OUT	MIN	MINIMUM
CONC	CONCRETE	MH	MANHOLE
CMP	CORRUGATED METAL PIPE	N/A	NOT APPLICABLE
DBH	DIAMETER AT BREST HEIGHT	N/F	NOW OR FORMERLY
DE	DRAINAGE EASEMENT	NTS	NOT TO SCALE
DIA	DIAMETER	OD	OUTSIDE DIAMETER
DI	DROP INLET	OHPL	OVERHEAD POWER LINE
DIP	DUCTILE IRON PIPE	PIV	POST INDICATOR VALVE
DWCB	DOUBLE WING CATCH BASIN	PVC	POLY VINYL CHLORIDE
E	ELECTRICAL	R	RADIUS
ELEV	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EXIST	EXISTING	R/W	RIGHT OF WAY
FES	FLARED END SECTION	REQ'D	REQUIRED
FFE	FINISHED FLOOR ELEVATION	SSE	SANITARY SEWER EASEMENT
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
G	NATURAL GAS	S/W	SIDEWALK
GI	GRATE INLET	SWCB	PROPOSED
GV	GAS VALVE	T	TELEPHONE
GM	GAS METER	TW	TOP OF WALL ELEVATION
HW	HEADWALL	TYP	TYPICAL
ID	INSIDE DIAMETER	UGPL	UNDERGROUND POWER LINE
IE	INVERT ELEVATION	W	DOMESTIC WATER

LEGEND

	EXISTING	PROPOSED
BENCHMARK		N/A
BUILDING		
CENTERLINE		
CONCRETE		
CONTOUR (MAJOR)		
CONTOUR (MINOR)		
DEMOLITION AREA	N/A	
ELECTRIC TRANSFORMER		
FENCE		
FDC		
FIRE HYDRANT		
GAS LINE		N/A
GAS METER		N/A
GRAVEL AREA		
GUARDRAIL		
GUY WIRE		N/A
IRON PIN FOUND		N/A
IRON PIN SET		N/A
LIGHT POLE		N/A
LIMITS OF DISTURBANCE	N/A	
OVERHEAD POWER		N/A
POST INDICATOR VALVE		
POWER POLE		N/A
PROPERTY LINE		
RETAINING WALL		
SANITARY SEWER		
SANITARY MANHOLE		
SEWER CLEANOUT		
SILT FENCE	N/A	
SPOT ELEVATION		
STORM GRATE INLET		
STORM JUNCTION BOX		
STORM PIPE		
TREE		N/A
TREE PROTECTION		
VALVE		
WATER LINE		
WATER METER		
WATER VALVE		

ONSITE CIVIL GROUP
3506 BILLINGSLEY DRIVE, MARIETTA, GA 30062
PH 1: (404) 822-9147, PH 2: (678) 449-6938
FAX: (770) 426-1922

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REVISIONS

No.	DATE	DESCRIPTION

PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7935

SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

GENERAL NOTES AND LEGEND

DATE: JULY 24, 2013
PROJECT: 13-012

SHEET: **C 2.0**



CAUTION!!!
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24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994

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

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



- LEGEND**
- = BOUNDARY CORNER
 - (S)IRON = SET IRON REBAR
 - (F)IRON = FOUND IRON REBAR
 - C.P. = COMPUTED POINT
 - CM = CONCRETE MONUMENT
 - ⊙ = POWER POLE (P.P.)
 - ⊙ = LIGHT POLE (L.P.)
 - = CATCH BASIN (CB)
 - ⊙ = DRAINAGE INLET (DI)
 - = STORM MANHOLE (SMH)
 - = WATER METER (WM)
 - ⊕ = WATER VALVE (WV)
 - ⊕ = FIRE HYDRANT (FH)
 - ⊙ = WATER MANHOLE
 - W — = EXISTING WATER LINE
 - S — = SEWER MANHOLE
 - S — = EXISTING SEWER LINE
 - E — = OVERHEAD ELECTRIC LINES
 - U — = UNDERGROUND ELECTRIC LINES
 - G — = GUY WIRE

ONSITE CIVIL GROUP

3506 BILKINSLEY DRIVE, MARLBETTA, CA 90082
 PH: (404) 882-9147, PH: (770) 449-6838
 FAX: (770) 627-9241

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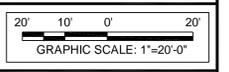
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File: _____

WILMINGTON
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 CONTACT: ED UMSTEAD
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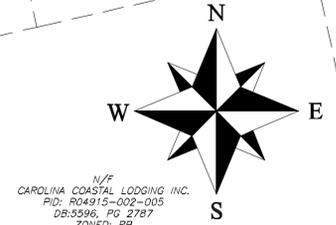
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 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

EXISTING CONDITIONS

DATE: JULY 24, 2013
 PROJECT: 13-012

C 3.1

EXISTING TREE NOTE:
 THERE ARE NO EXISTING TREES
 ON THE SITE TO BE SAVED



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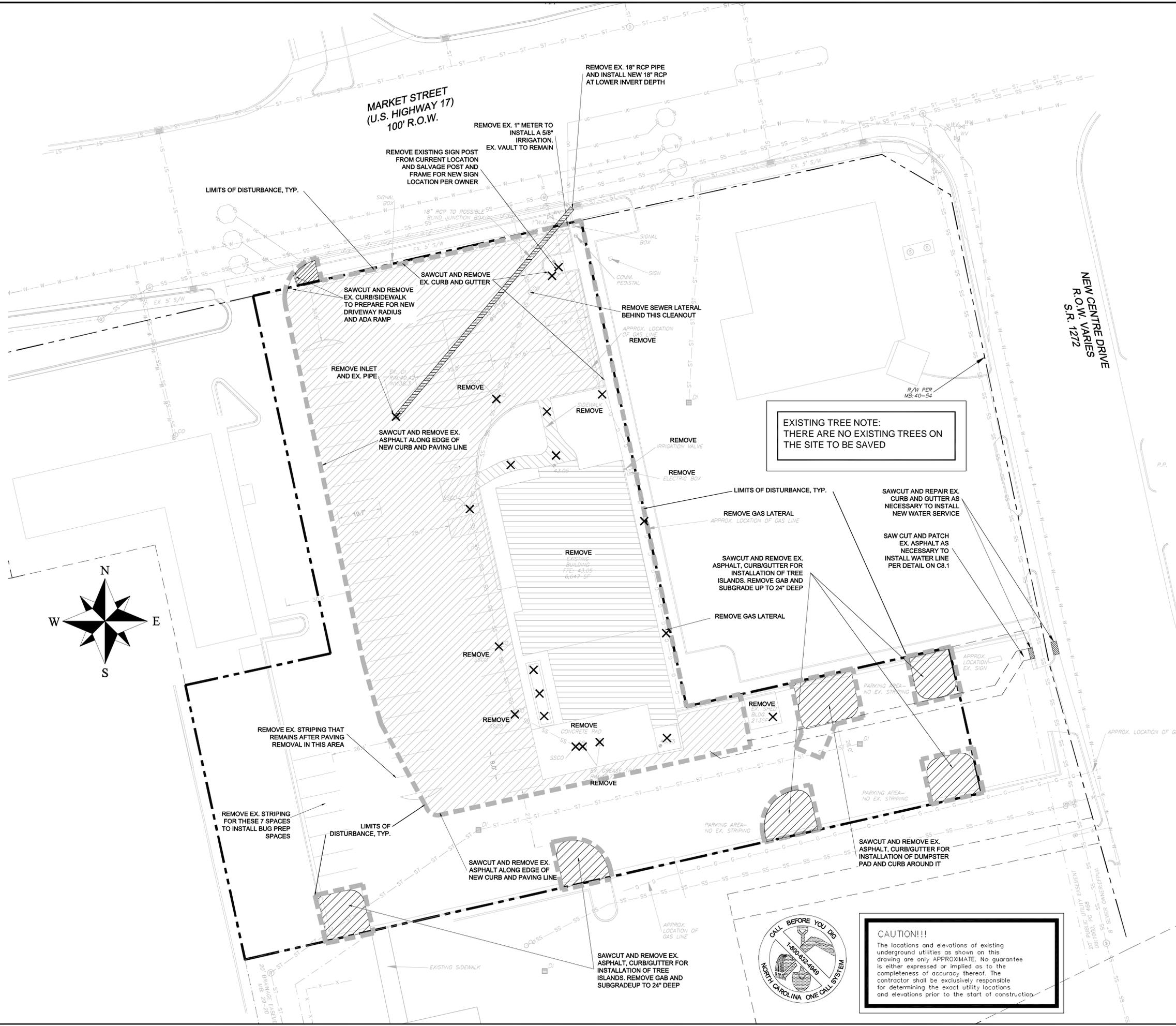
LITTLE FRIENDS PROPERTIES OF WILMINGTON, LLC
 PID: R04915-002-005-003
 DB: 5492, PG. 2966
 LOT 2
 MB: 29-20
 ZONED: RB
 DAYCARE

M.G. WATTS
 PID: R04915-002-005-002
 DB: 1214, PG. 1965
 ZONED: RB

CHARLES D. WARD
 PID: R04915-002-004-002
 DB: 1502, PG. 1767
 INSURANCE OFFICE

JAQUELINE N. DAL
 PID: R04915-002-017-000
 TRACT 1A
 MB: 38-337
 ZONED: RB
 COMMERCIAL

CAROLINA COASTAL LODGING INC.
 PID: R04915-002-005-005
 DB: 5596, PG. 2787
 ZONED: RB
 HOTEL



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ONSITE
 CIVIL GROUP

3506 BILINGSLEY DRIVE, MARLBETTA, GA 30082
 P.H. (404) 882-9147 P.F. (678) 449-8838
 FAX: (770) 827-5214

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REVISIONS

No.	DATE	DESCRIPTION

20' 10' 0'
 GRAPHIC SCALE: 1"=20'-0"

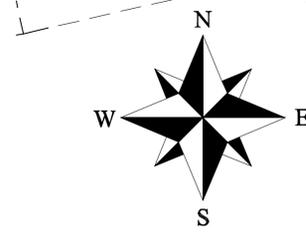
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SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

DEMOLITION PLAN

DATE: JULY 24, 2013
 PROJECT: 13-012

C 3.2



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 678-574-4994

- NOTES:**
1. ALL DISTURBED AREAS SHALL BE SEEDED IN ACCORDANCE WITH THE LANDSCAPE PLAN
 2. TOTAL SITE ACREAGE: **1.422 ACRES** DISTURBED AREA: **0.87 ACRES**
 3. ACCORDING TO SOIL SURVEY OF **NEW HAVOVER COUNTY, NORTH CAROLINA** THE SITE CONSISTS OF:
 - Le LEON SAND, 2-8% SLOPES, HYDROLOGIC SOIL GROUP **A**
 - Mu MURVILLE FINE SAND, HYDROLOGIC SOIL GROUP **A**
 4. ALL STORMWATER INFRASTRUCTURES ON THIS SITE ARE PRIVATELY OWNED, AND ANY MAINTENANCE OR REPLACEMENT IS THE OWNER'S RESPONSIBILITY.
 5. ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY NO. 3720313800J DATED APRIL 3, 2006 THIS PROPERTY IS LOCATED WITHIN ZONE X (NOT A SPECIAL FLOOD HAZARD AREA)

PAVING, GRADING, AND DRAINAGE NOTES:

1. ALL STORM STRUCTURES SHALL BE STANDARD NCDOT TRAFFIC RATED STRUCTURES AND LIDS
2. UNDERGROUND BMP TO BE FLUSHED OUT AFTER SITE IS STABILIZED AS FINAL ITEM BEFORE CO ISSUED
3. GRADE ALL PAVING TO DRAIN TO INLETS WITH A MINIMUM FINAL INSTALLED SLOPE OF 1.0% MINIMUM

Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____
 City of Wilmington
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

ONSITE CIVIL GROUP
 3506 BILLINGSLEY DRIVE, MARLBETTA, CA 90082
 PH: (404) 852-9147, PH: (708) 449-6838
 FAX: (770) 627-5214

THESE DRAWINGS ARE THE PROPERTY OF ONSITE CIVIL GROUP, LLC AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF ONSITE CIVIL GROUP, LLC.



REVISIONS

No.	DATE	DESCRIPTION

20' 10' 0' 20'
 GRAPHIC SCALE: 1"=20'-0"

PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
 FAX: 706-863-7935

SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

GRADING DRAINAGE PLAN

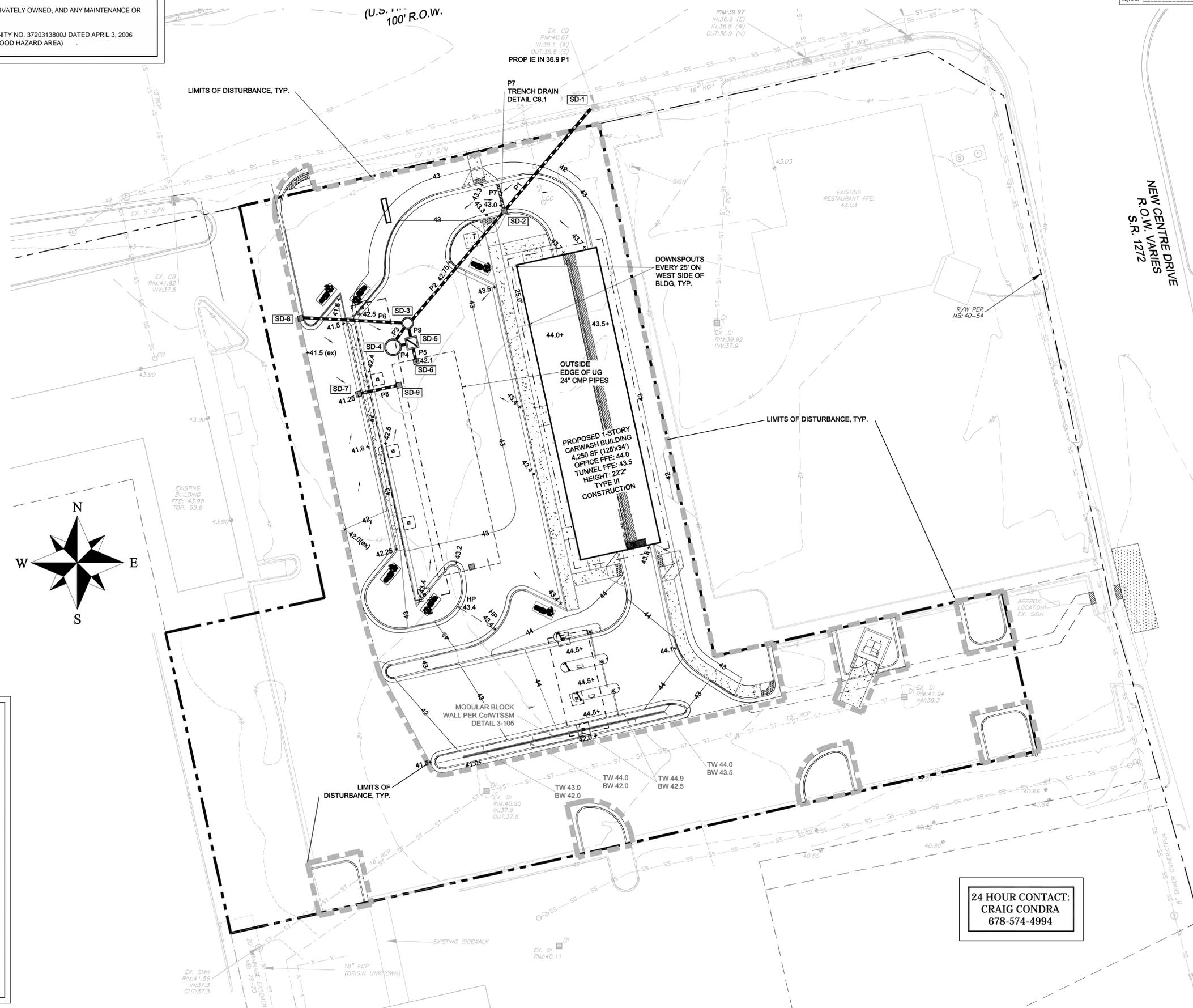
DATE: JULY 24, 2013
 PROJECT: 13-012

C 5.1

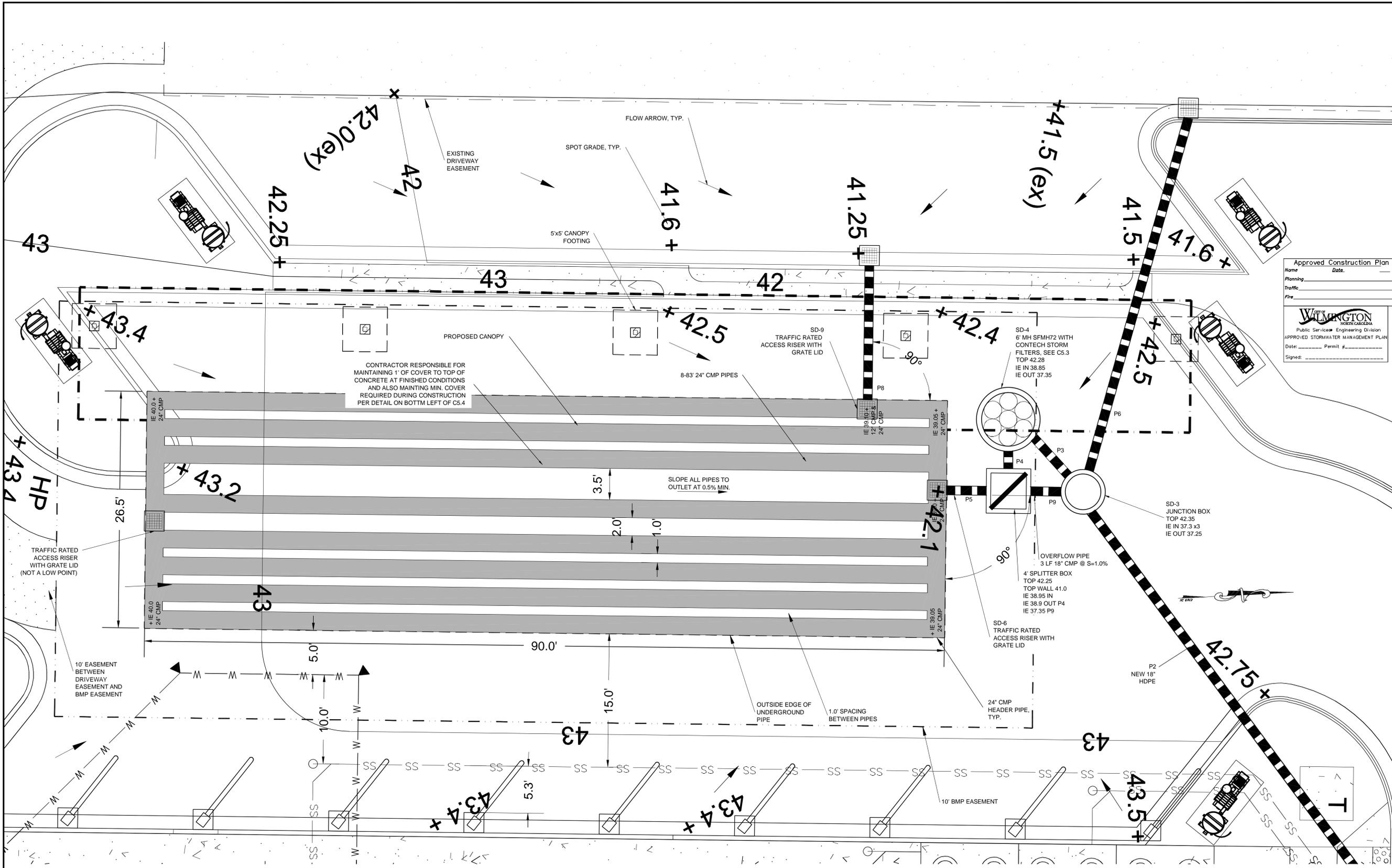


CAUTION!!!
 The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness of accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction

- CONSTRUCTION SEQUENCE NOTES:**
1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE CITY OF CHARLOTTE ENGINEERING DEPARTMENT.
 2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE CITY ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF CHAPTER 17 OF THE CITY CODE AND IS SUBJECT TO FINE.
 3. INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, DIVERSION DITCHES, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
 4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
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 6. FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
 7. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
 8. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
 9. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, US DEPT OF AGRICULTURE, CITY OF CHARLOTTE EROSION CONTROL ORDINANCE, AND THE CHARLOTTE LAND DEVELOPMENT STANDARDS MANUAL.



**24 HOUR CONTACT:
 CRAIG CONDRA
 678-574-4994**



**STORMWATER BMP'S
DETAILED PLAN VIEW**
GRAPHIC SCALE: 1"=5'-0"

PROPOSED NEW IMPERVIOUS AREA: **25,238 SF**
 - BUILDING: 5,295 SF (W/ OVERHANG)
 - CANOPY: 2,543 SF
 - PAVING: 15,312 SF
 - SIDEWALK: 2,088 SF

TO BE TREATED BY BMP:
 25,238 SF NEWLY FORMED IMPERVIOUS
 - 4,674 SF NEWLY FORMED IMPERVIOUS BYPASS AT PAYSTATIONS
 +6,074 SF EXISTING IMPERVIOUS
 - 1,400 SF NEWLY FORMED IMPERVIOUS BYPASS AT SD-6
 25,238 SF

SEE C5.4 FOR DETENTION DETAILS

**24 HOUR CONTACT:
CRAIG CONDR
678-574-4994**

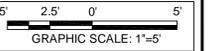
ONSITE CIVIL GROUP
 3506 BILLINGSLEY DRIVE, MARLBETTA, CA 92002
 PH: (604) 822-9147, PH 2: (678) 446-6838
 FAX: (770) 627-5214

THESE DRAWINGS ARE THE PROPERTY OF ONSITE CIVIL GROUP, LLC AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF ONSITE CIVIL GROUP, LLC.

WILMINGTON NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____
 MICHAEL PERMY
 REGISTERED PROFESSIONAL ENGINEER
 7/24/13

REVISIONS

No.	DATE	DESCRIPTION



PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
 FAX: 706-863-7935

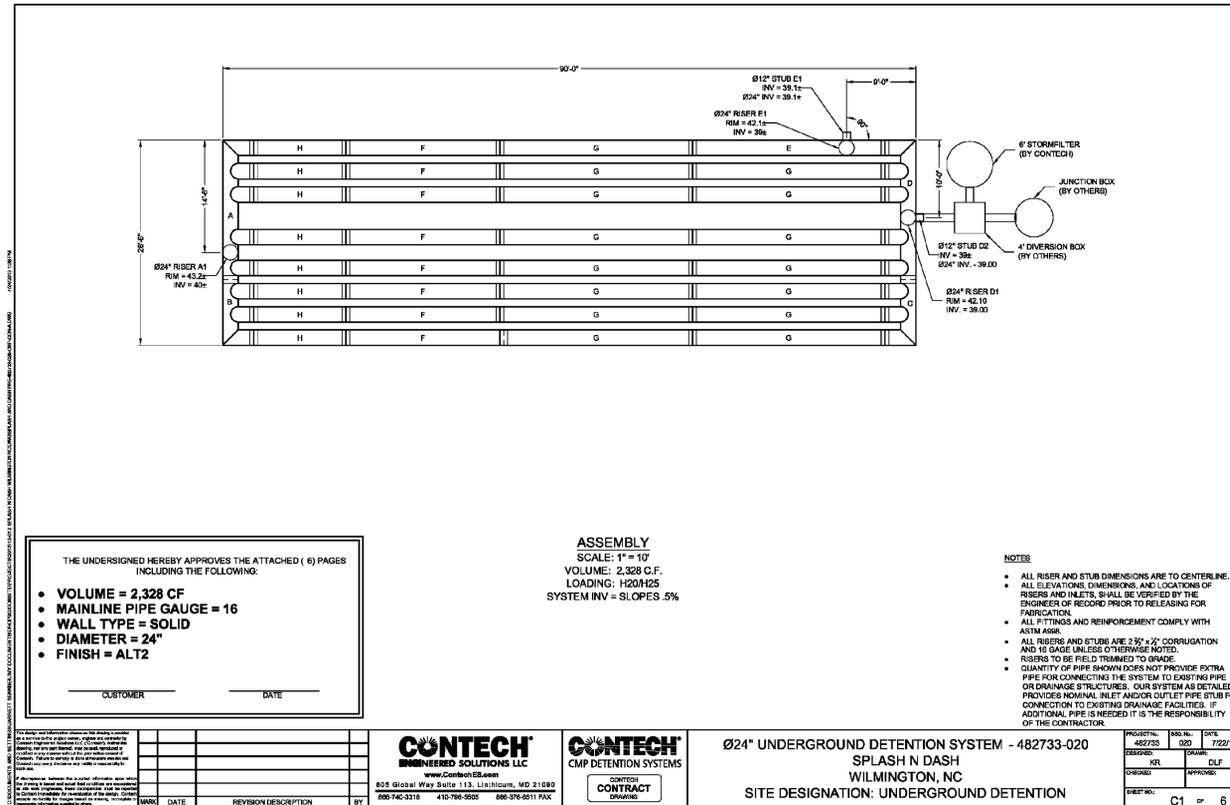
SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

**STORMWATER
BMP PLAN**

DATE: JULY 24, 2013
 PROJECT: 13-012

C 5.2

24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994



THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (6) PAGES INCLUDING THE FOLLOWING:

- VOLUME = 2,328 CF
- MAINLINE PIPE GAUGE = 16
- WALL TYPE = SOLID
- DIAMETER = 24"
- FINISH = ALT2

CUSTOMER _____ DATE _____

ASSEMBLY
SCALE: 1" = 10'
VOLUME: 2,328 C.F.
LOADING: H20/H25
SYSTEM INV = SLOPES .5%

- NOTE:
- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
 - ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
 - ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A508.
 - ALL RISERS AND STUBS ARE 2 1/2" x 1/2" CORRUGATION AND 1/2" GAGE UNLESS OTHERWISE NOTED.
 - RISERS TO BE FIELD TRIMMED TO GRADE.
 - QUANTITY OF PIPE SHOWN DOES NOT PRECLUDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NORMAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONTECH
ENGINEERED SOLUTIONS LLC
805 Global Way Suite 113, Linthicum, MD 21090
888-740-3316 410-788-8002 888-376-8011 FAX

CONTECH
CMP DETENTION SYSTEMS
CONTRACT DRAWING

Ø24" UNDERGROUND DETENTION SYSTEM - 482733-020
SPLASH N DASH
WILMINGTON, NC
SITE DESIGNATION: UNDERGROUND DETENTION

PROJECT NO.	482733	REV. NO.	000	DATE	7/22/13
DESIGNED BY	KRL	DRAWN BY	CLF	CHECKED BY	APPROVED BY
DRAWN BY	KRL	DATE			
CHECKED BY					
APPROVED BY					
SHEET: C1 OF 6					

PROPOSED NEW IMPERVIOUS AREA: 25,238 SF
- BUILDING: 5,295 SF (W/ OVERHANG)
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ONSITE
CIVIL GROUP
3508 BILLINGSLEY DRIVE MARLETTA, GA 30082
PH: (404) 822-9147, PH2: (678) 449-6838
FAX: (770) 627-3214

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

City of Wilmington
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

REVISIONS

No.	DATE	DESCRIPTION

CONTECH ENGINEERED SOLUTIONS
Design Engineer: JDP 7/24/2013
Blue Cells = Input
Black Cells = Calculation

Site Information

Project Name	Splash and Dash 5044 Market Street	
Project State	North Carolina	
Project Location	Jacksonville	
Drainage Area, Ad	0.63 ac	
Impervious Area, Ai	0.57 ac	
Pervious Area, Ap	0.06	
% Impervious	90%	
Runoff Coefficient, Rv	0.86	=0.05+0.9*(Ai/Ad)

Water Quality Volume Calculations

Design storm rainfall depth, Rd	1.5 in	
Water quality volume, WQV	2964.8 ft ³	=Ad*Rv*Rd*(43560/12)

Storage Component Calculations

Capture 75% of WQV	2233.6 ft ³	=0.75*WQV
Pretreatment credit (estimated or calculated), %pre	30%	

Mass loading calculations

Mean Annual Rainfall, P	57 in	
Agency required % removal	85%	
Percent Runoff Capture (% capture)	90%	
Mean Annual Runoff, V _r	101,396 ft ³	=P*Ad*Rv*(43560/12)*%capture
Event Mean Concentration of Pollutant, EMC	70.0 mg/l	(Typical for Residential/Office, 70 - Commercial, 100 - Industrial)
Annual Mass Load, M _{total}	442.83 lbs	=EMC*V _r *(2.83)*(0.00001)*(2.2046)

Filter System

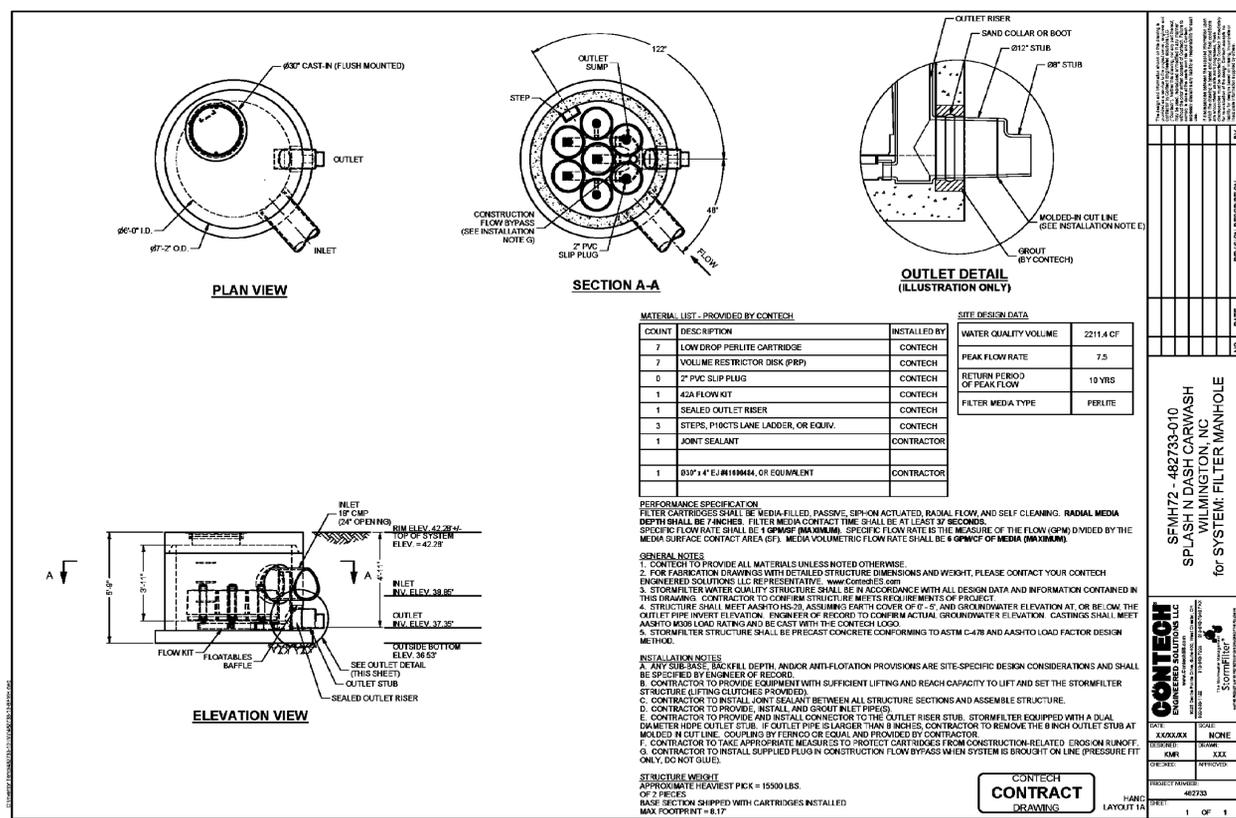
Filteration brand	StormFilter	
Cartridge height	LD 18 in	

Cartridge Quantity Calculation

Mass removed by pretreatment system, M _{pre}	133 lbs	=Mtotal * %removal
Mass load to filters after pretreatment, M _{mass1}	310 lbs	=Mtotal - Mpre
Estimate the required filter efficiency, E _{req}	79%	=1+(%removal - 1)/(1 - %pre)
Mass to be captured by filters, M _{filter}	244 lbs	=Mmass1 * Efilter
Maximum Cartridge Flow rate, Q _{car1}	7.5 gpm	=q * (7.5 ft ² /cartridge)
Mass load per cartridge, M _{car1} (lbs)	36 lbs	=lookup mass load per cartridge
Number of Cartridges required, N _{mass}	7	=ROUNDUP(Mfilter/Mcart.0)
Maximum Treatment Capacity	0.12	=Nmass*(Qcar1/448)

SUMMARY

Maximum Treatment Flow Rate, cfs	0.12
Cartridge Flow Rate, gpm	7.5
Number of Cartridges	7



PAYNE UMSTEAD PROPERTIES, LLC
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609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
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SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

STORMWATER
BMP DETAILS

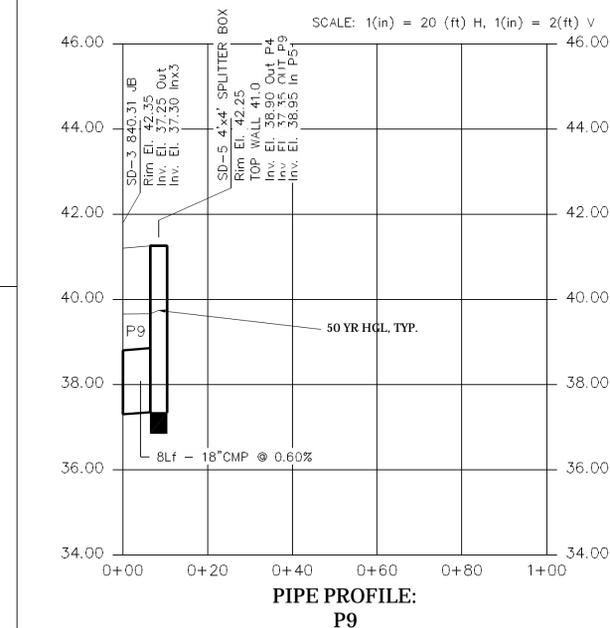
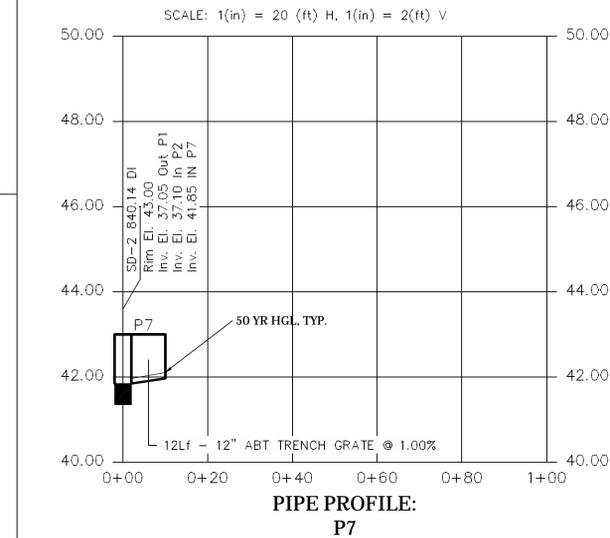
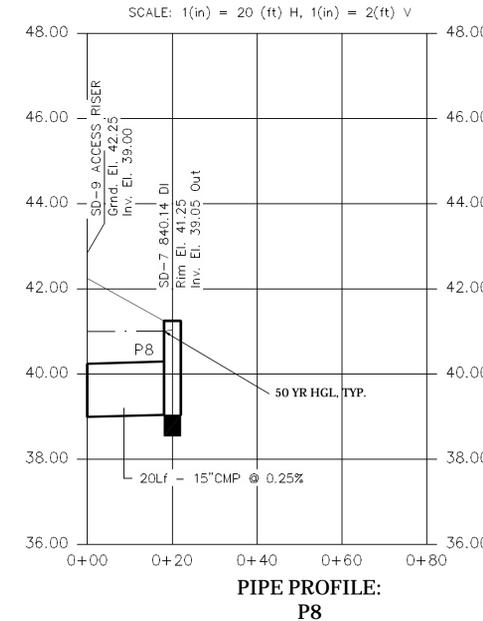
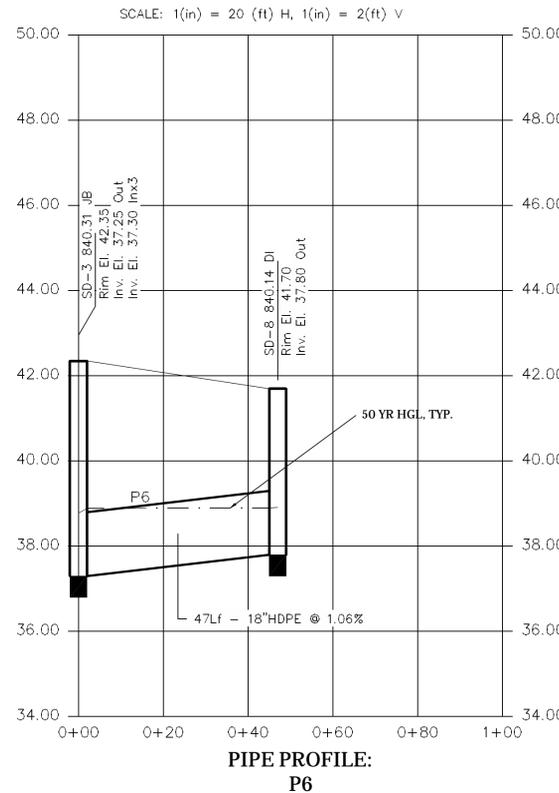
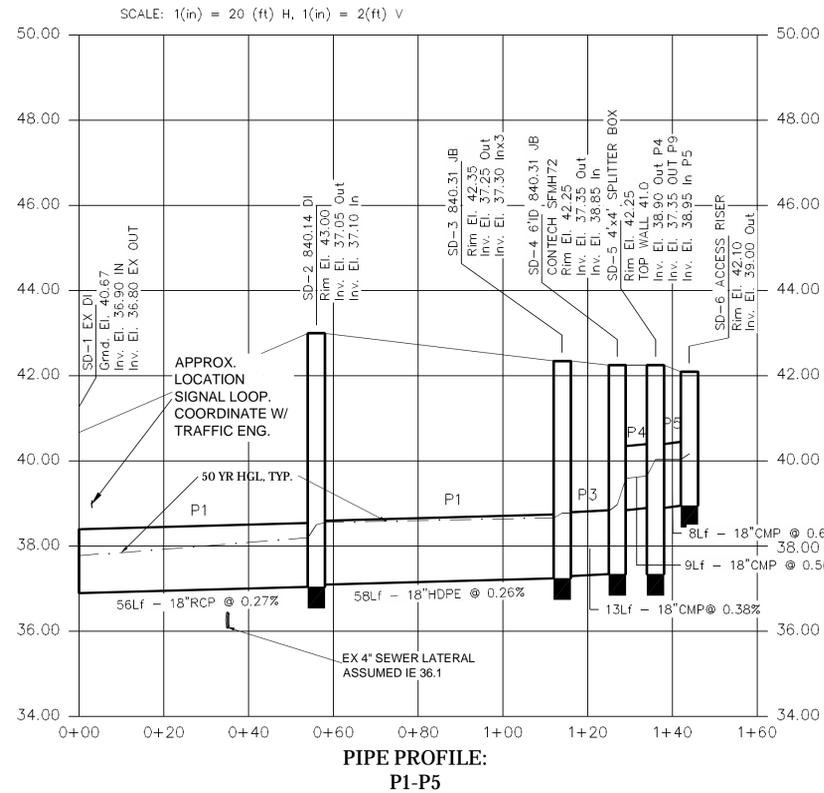
DATE: JULY 24, 2013
PROJECT: 13-012

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Line	To Line	Line Length (ft)	Incr. Area (ac)	Total Area (ac)	Runoff Coeff. (C)	Incr C x A	Total C x A	Inlet Time (min)	Time Conc (min)	Rnfall Int (in/hr)	Total Runoff (cfs)	Adnl Flow (cfs)	Total Flow (cfs)	Capac Full (cfs)	Veloc (ft/s)	Pipe Size (in)	Pipe Slope (%)	Inv Elev Dn (ft)	Inv Elev Up (ft)	HGL Dn (ft)	HGL Up (ft)	Grnd/Rim Dn (ft)	Grnd/Rim Up (ft)	Line ID
1	Outfall	56	0.00	0.64	0.00	0.00	0.61	5.0	5.6	8.7	5.31	0.00	5.31	5.43	4.28	18	0.27	36.90	37.05	37.78	38.20	40.67	43.00	
2	1	58	0.00	0.61	0.00	0.00	0.58	0.0	5.3	8.8	5.10	0.00	5.10	5.34	2.93	18	0.26	37.10	37.25	38.56	38.68	43.00	42.35	
3	2	13	0.00	0.46	0.00	0.00	0.44	0.0	5.1	8.8	3.86	0.00	3.86	4.00	3.15	15	0.38	37.30	37.35	38.78	38.83	42.35	42.25	
4	3	9	0.00	0.46	0.00	0.00	0.44	0.0	5.0	8.9	3.87	0.00	3.87	7.83	4.38	18	0.56	38.85	38.90	39.60	39.65	42.25	42.25	
5	4	8	0.46	0.46	0.95	0.44	0.44	5.0	5.0	8.9	3.87	0.00	3.87	8.30	2.75	18	0.62	38.90	38.95	40.04	40.04	42.25	42.10	
6	2	47	0.15	0.15	0.95	0.14	0.14	5.0	5.0	8.9	1.26	0.00	1.26	10.83	0.81	18	1.06	37.30	37.80	38.89	38.90	42.35	41.70	
7	1	12	0.03	0.03	0.95	0.03	0.03	5.0	5.0	8.9	0.25	0.00	0.25	4.53	1.98	12 X 12	1.00	41.85	41.97	41.97	42.11	43.00	43.00	
8	Outfall	20	0.20	0.20	0.95	0.19	0.19	5.0	5.0	8.9	1.68	0.00	1.68	3.23	1.37	15	0.25	39.00	39.05	41.97	41.98	0.00	41.25	
9	Outfall	8	0.46	0.46	0.95	0.44	0.44	5.0	5.0	8.9	3.87	0.00	3.87	8.10	2.19	18	0.60	37.30	37.35	39.65	39.66	41.20	41.25	

**NOTE: THE ABOVE TABLE IS FOR REVIEWER INFORMATION ONLY. DO NOT USE THE ABOVE INFORMATION FOR CONSTRUCTION

STORM SCHEDULE



**NOTE:
 1. ALL PIPE LENGTHS ARE CENTER-CENTER OF STRUCTURES
 2. ALL GRATE INLETS ELEVATIONS ARE TO THROAT OF INLET AT GUTTER, NOT TOP OF CURB. NO INLETS ARE TO HAVE HOODED GRATES



CAUTION!!!
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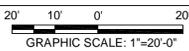
**24 HOUR CONTACT:
 CRAIG CONDRA
 678-574-4994**



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REVISIONS		
No.	DATE	DESCRIPTION



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SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

UTILITY PROFILES & SCHEDULE

DATE: JULY 24, 2013
 PROJECT: 13-012

C 5.5

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

UTILITY NOTES:

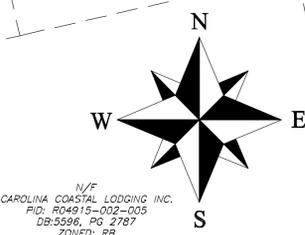
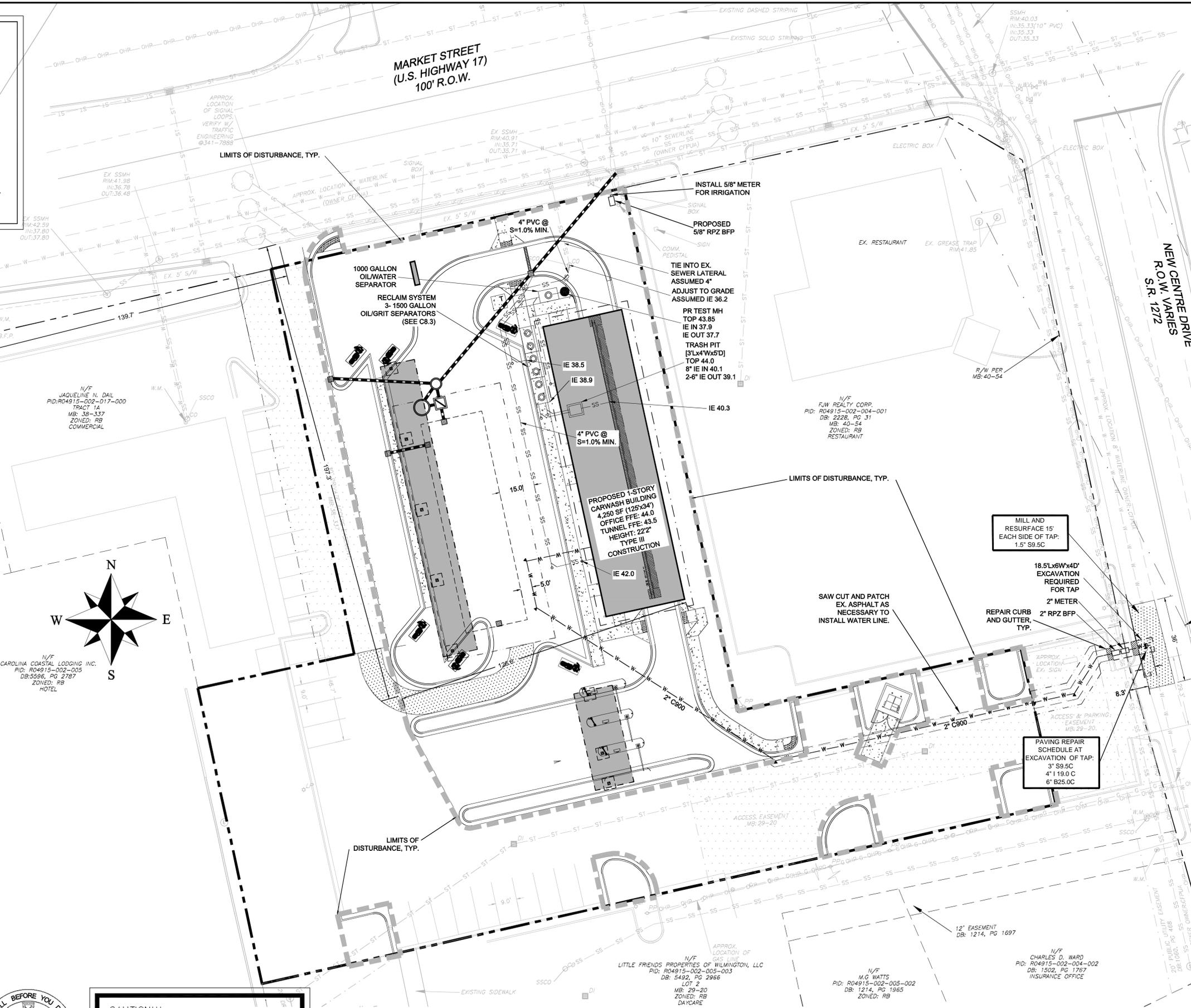
1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES AND THEIR ELEVATIONS PRIOR TO STARTING CONSTRUCTION.
2. THE CONTRACTOR SHALL CONTACT PUBLIC UTILITIES INSPECTIONS AT LEAST 24 HOURS IN ADVANCE PRIOR TO ANY ACTIVITY.
3. CONTRACTOR TO COORDINATE TYPE AND INSTALLATION OF DOMESTIC AND IRRIGATION WATER METERS, BACKFLOW PREVENTORS, AND DETECTOR CHECK VALVES WITH UTILITY COMPANY.
4. ON-SITE CIVIL GROUP WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
5. ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH LOCAL GOVERNING CODES.
6. A MINIMUM OF 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN SEWER LINES AND WATER LINES AT ALL TIMES. SEE SPECIFICATIONS FOR MORE DETAIL.
7. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
8. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.

CITY OF WILMINGTON GENERAL NOTES:

1. PRIOR TO ANY CLEARING, GRADING OR ANY CONSTRUCTION ACTIVITY, TREE PROTECTION FENCE WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCE.
2. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
3. ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF STREET NAME SIGNS.
4. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
5. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. ADD A NOTE TO CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
6. ANY MISSING OR BROKEN SIDEWALK PANELS, DRIVEWAY PANELS, OR CURB PANELS WILL BE REPLACED.
7. CONTACT KAREN DIXON AT 910 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
8. PROJECT WILL COMPLY WITH CITY OF WILMINGTON CROSS CONNECTION CONTROL REQUIREMENTS.
9. IF THE CONTRACTOR DESIRES CITY 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.
10. ANY IRRIGATION SYSTEM SUPPLIED BY CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
11. ANY BACKFLOW DEVICES REQUIRED BY THE CITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOCHR OR ASSE.

CONSTRUCTION SEQUENCE NOTES:

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE CITY OF WILMINGTON ENGINEERING DEPARTMENT.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE CITY ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF THE CITY CODE AND IS SUBJECT TO FINE.
3. INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
6. FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
7. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
8. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
9. UNDERGROUND BMP PIPES WILL BE CLEANED OUT WHEN SITE WORK AND PAVING ARE COMPLETED AND A FINAL PERMANENT GROUND COVER IS ESTABLISHED. THEN BMP CARTRIDGES WILL BE INSTALLED.
10. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, US DEPT OF AGRICULTURE, CITY OF WILMINGTON EROSION CONTROL ORDINANCE, AND THE WILMINGTON LAND DEVELOPMENT STANDARDS MANUAL.



CAUTION!!!

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UTILITY CAPACITY NOTES:

1. CURRENT WATER USAGE: _____ GPD (EX. 1" METER)
2. PROPOSED WATER NEED: **2590** GPD
3. CURRENT SEWAGE USAGE: _____ GPD
4. PROPOSED SEWAGE NEED: **1840** GPD

TRAFFIC ENGINEERING NOTE:
CALL TRAFFIC ENGINEERING AT 919-341-7888 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION IN THE R/W

ONSITE CIVIL GROUP
3506 BILLINGSLEY DRIVE, MARIETTA, GA 30062
CONTACT: JARRETT SENKBEIL, PE, LEED AP
404-822-9147

24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

Signed: _____

ONSITE CIVIL GROUP

3506 BILLINGSLEY DRIVE, MARIETTA, GA 30062
PH: (404) 822-9147, PH: (678) 449-8838
FAX: (770) 627-5241

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REVISIONS

No.	DATE	DESCRIPTION

20' 10' 0' 20'

GRAPHIC SCALE: 1"=20'-0"

PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7935

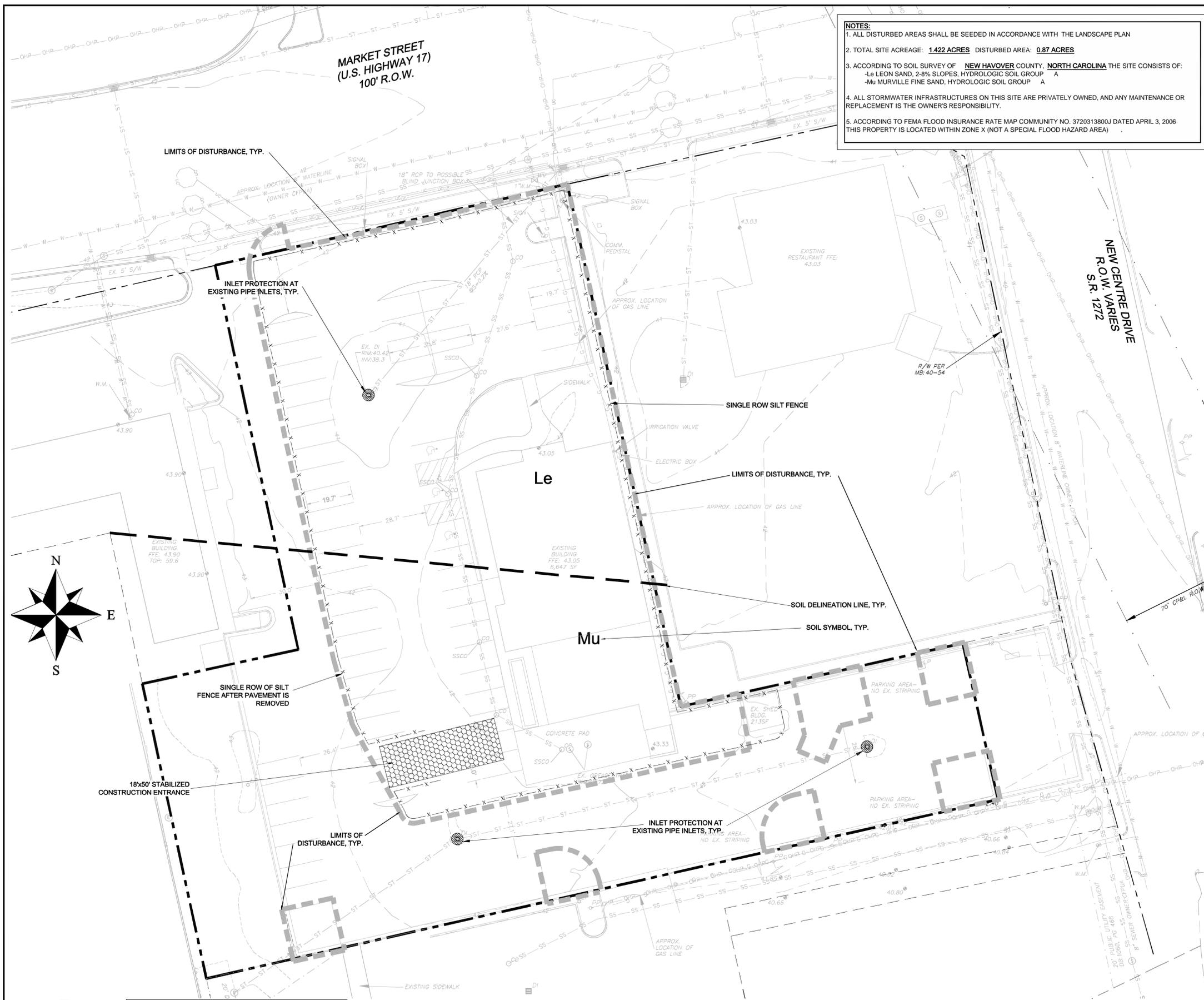
SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

UTILITY PLAN

DATE: JULY 24, 2013

PROJECT: 13-012

C 6.1



NOTES:

1. ALL DISTURBED AREAS SHALL BE SEEDDED IN ACCORDANCE WITH THE LANDSCAPE PLAN
2. TOTAL SITE ACREAGE: **1.422 ACRES** DISTURBED AREA: **0.87 ACRES**
3. ACCORDING TO SOIL SURVEY OF **NEW HAVOVER COUNTY, NORTH CAROLINA** THE SITE CONSISTS OF:
 - Le LEON SAND, 2-8% SLOPES, HYDROLOGIC SOIL GROUP A
 - Mu MURVILLE FINE SAND, HYDROLOGIC SOIL GROUP A
4. ALL STORMWATER INFRASTRUCTURES ON THIS SITE ARE PRIVATELY OWNED, AND ANY MAINTENANCE OR REPLACEMENT IS THE OWNER'S RESPONSIBILITY.
5. ACCORDING TO FEMA FLOOD INSURANCE RATE MAP COMMUNITY NO. 3720313800J DATED APRIL 3, 2006 THIS PROPERTY IS LOCATED WITHIN ZONE X (NOT A SPECIAL FLOOD HAZARD AREA)

EROSION CONTROL NOTES:

1. ALL 'STD' NUMBERS REFER TO THE WILMINGTON LAND DEVELOPMENT STANDARDS MANUAL.
2. ON-SITE BURNING PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
3. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
4. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
5. ALL SLOPES AND PERIMETER AREAS MUST BE SEEDDED OR MULCHED WITHIN 7 CALENDAR DAYS, 14 DAYS FOR ALL OTHER AREAS. REFER TO EROSION CONTROL ORDINANCE FOR ADDITIONAL REQUIREMENTS.
6. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPT.
7. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1.
8. A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.
9. DRIVEWAY PERMIT FOR CONSTRUCTION ENTRANCES IN NCDOT RIGHT OF WAY MUST BE PRESENTED AT PRE CONSTRUCTION MEETING.
10. SELF INSPECTION AND DOCUMENTATION OF EROSION AND SEDIMENT CONTROL MEASURES IS REQUIRED ONCE PER WEEK AND AFTER EVERY 1/2" RAINFALL EVENT AS MEASURED BY AN ON-SITE RAIN GAUGE.

CONSTRUCTION SEQUENCE NOTES:

1. OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM THE CITY OF WILMINGTON ENGINEERING DEPARTMENT.
2. SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF THE CITY ENGINEERING DEPARTMENT TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF THE CITY CODE AND IS SUBJECT TO A FINE.
3. INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
4. CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, INSPECTOR ISSUES GRADING PERMIT AND CLEARING AND GRUBBING MAY BEGIN.
5. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
6. FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
7. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
8. COORDINATE WITH EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURE.
9. UNDERGROUND BMP PIPES WILL BE CLEANED OUT WHEN SITE WORK AND PAVING ARE COMPLETED AND A FINAL PERMANENT GROUND COVER IS ESTABLISHED. THEN BMP CARTRIDGES WILL BE INSTALLED
10. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, US DEPT OF AGRICULTURE, CITY OF WILMINGTON EROSION CONTROL ORDINANCE, AND THE WILMINGTON LAND DEVELOPMENT STANDARDS MANUAL.

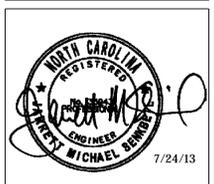
CITY OF WILMINGTON GENERAL NOTES:

1. PRIOR TO ANY CLEARING, GRADING OR ANY CONSTRUCTION ACTIVITY, TREE PROTECTION FENCE WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCE.
2. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
3. ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING (RICHE BROWN) TO REQUEST INSTALLATION OF STREET NAME SIGNS.
4. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
5. CONTACT TOM PLATT WITH TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AN EQUIPMENT ARE SHOWN ON THE PLAN. ADD A NOTE TO CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
6. ANY MISSING OR BROKEN SIDEWALK PANELS WILL BE REPLACED.
7. CONTACT KAREN DIXON AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
8. PROJECT WILL COMPLY WITH CITY OF WILMINGTON CROSS CONNECTION CONTROL REQUIREMENTS.
9. IF THE CONTRACTOR DESIRES CITY 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.
10. ANY IRRIGATION SYSTEM SUPPLIED BY CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
11. ANY BACKFLOW DEVICES REQUIRED BY THE CITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCHOR OR ASSE.

ON SITE CIVIL GROUP

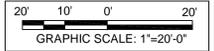
3508 BILLINGSLEY DRIVE MARIETTA, GA 30062
 PH: (404) 822-9147, PH 2: (678) 449-6838
 FAX: (770) 627-3214

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REVISIONS

No.	DATE	DESCRIPTION



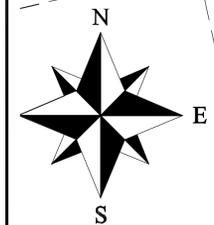
PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
 FAX: 706-863-7935

SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HAVOVER COUNTY,
 NORTH CAROLINA

INITIAL EROSION CONTROL PLAN

DATE: JULY 24, 2013
 PROJECT: 13-012

C 7.1



CAUTION!!!
 The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness of accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction

EROSION CONTROL CALCULATIONS:
 SILT FENCE REQUIRED: 100 LF PER 1/4 ACRE DISTURBED = 100 LF * 0.87 DISTURBED ACRES / 0.25 = 348.0 LF.
 SILT FENCE PROVIDED: 846 LF > 348 LF

24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994

Approved Construction Plan

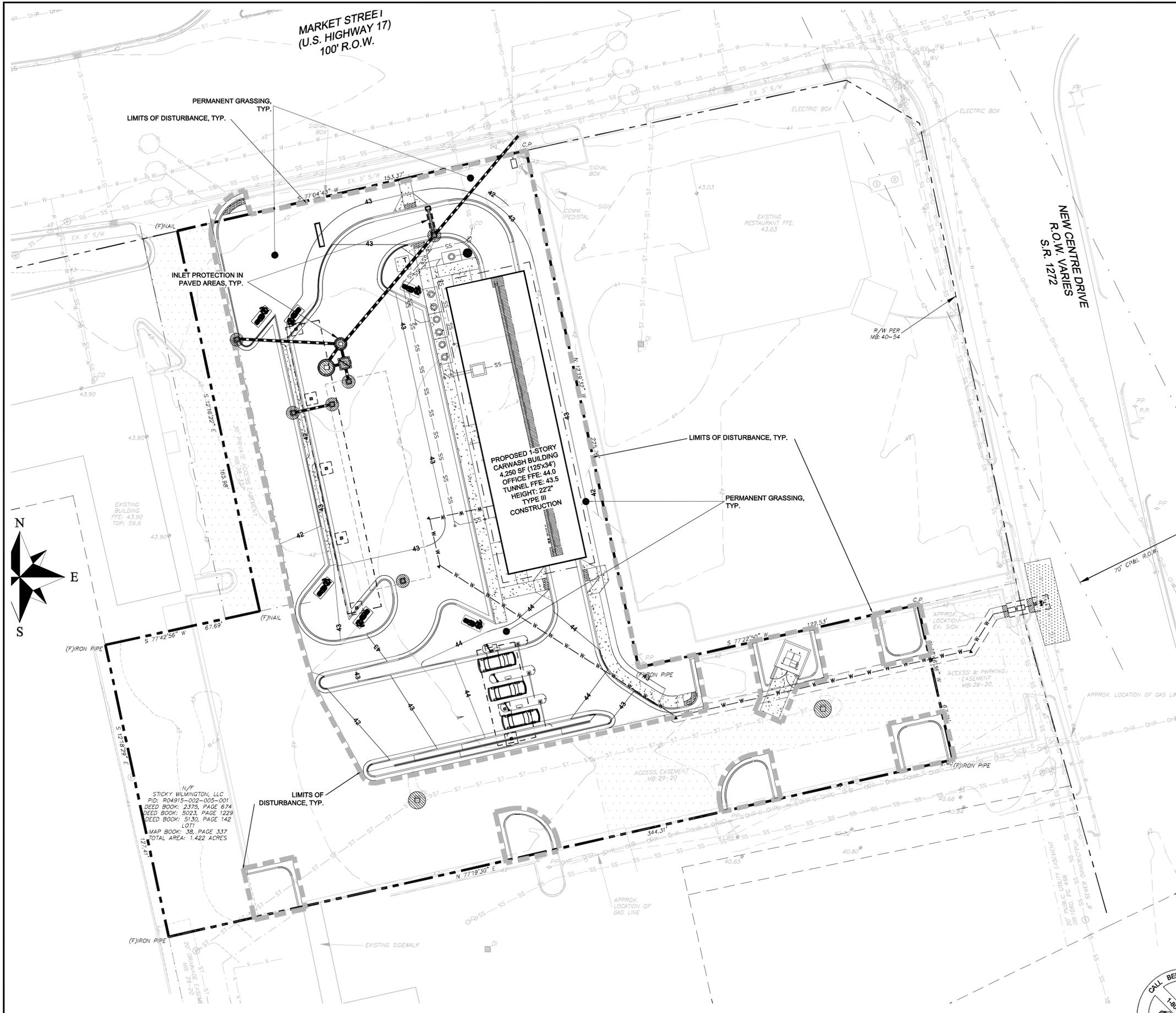
Name _____ Date _____

Planning _____

Traffic _____

Fire _____





MARKET STREET I
(U.S. HIGHWAY 17)
100' R.O.W.

NEW CENTRE DRIVE
R.O.W. VARIES
S.R. 1272

PROPOSED 1-STORY
CARWASH BUILDING
4,250 SF (125'x34')
OFFICE FFE: 44.0
TUNNEL FFE: 43.5
HEIGHT: 22'2"
TYPE III
CONSTRUCTION

N/F
STICKY WILMINGTON, LLC
PID: R04915-002-005-001
DEED BOOK: 2375, PAGE 674
DEED BOOK: 5023, PAGE 1229
DEED BOOK: 5130, PAGE 142
LOT 1
MAP BOOK: 3B, PAGE 337
TOTAL AREA: 1.422 ACRES

- EROSION CONTROL NOTES:**
1. ALL 'STD' NUMBERS REFER TO THE WILMINGTON LAND DEVELOPMENT STANDARDS MANUAL.
 2. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
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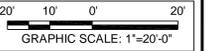
ONSITE CIVIL GROUP
3506 BILLINGSLEY DRIVE, MARLBETTA, CA 90062
PH: (404) 832-9147, PH: (678) 449-6838
FAX: (770) 697-9214

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REVISIONS

No.	DATE	DESCRIPTION



PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7955

24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fee: _____

City of Wilmington
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

CAUTION!!!
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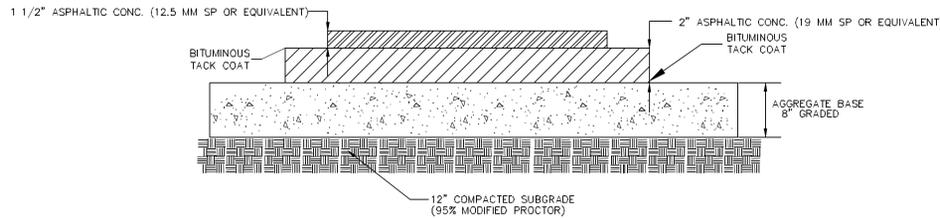


SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

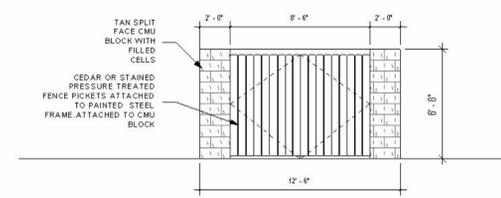
FINAL EROSION CONTROL PLAN

DATE: JULY 24, 2013
PROJECT: 13-012

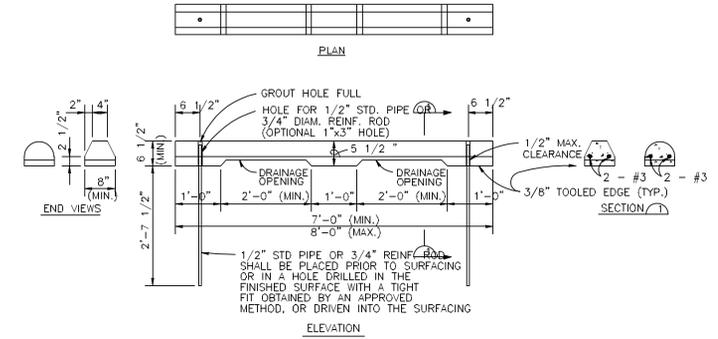
C 7.3



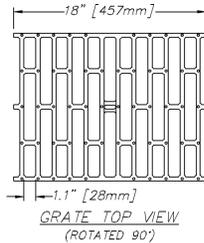
ASPHALT CROSS SECTION
NOT TO SCALE



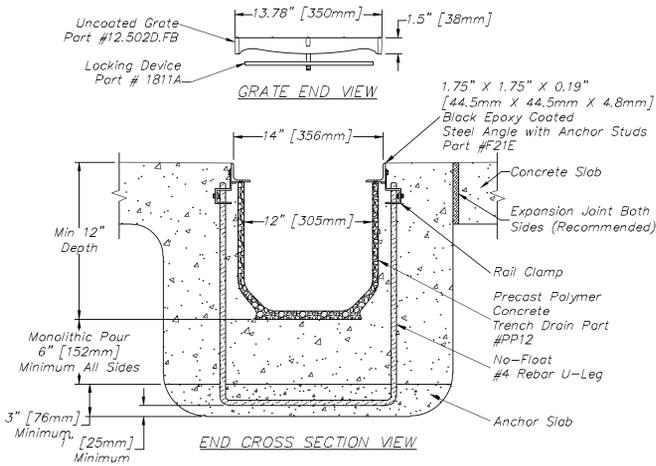
DUMPSTER ENCLOSURE ELEVATION
1/4" = 1'-0"



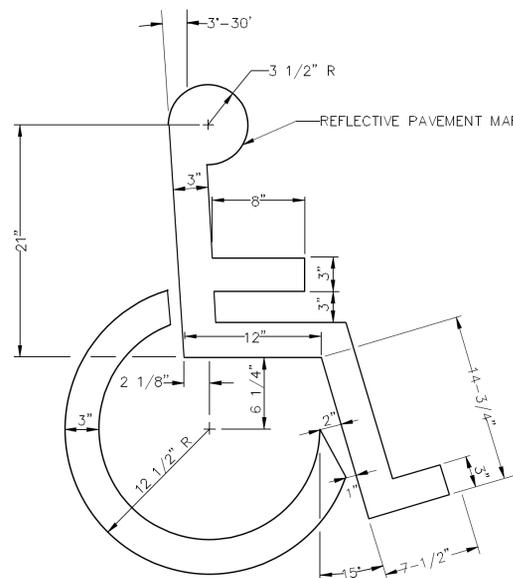
CONCRETE WHEEL STOP DETAIL
NOT TO SCALE



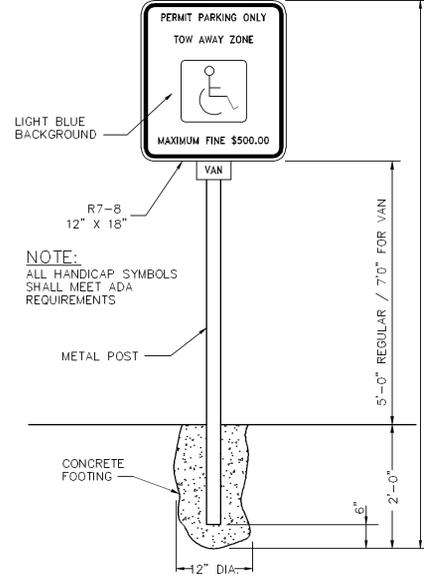
Plan Notes
Series Number: PP12-12.502D.FB-F21E
1. Grates:
• Ductile Iron per ASTM A536-84 Grade 80-55-06 (Uncoated)
• Open Area: 0.76 FT² per Lineal Foot [0.23 M² per Lineal Meter]
• Load Rating: 494 PSI (AASHTO M-306 Test Method)
• Made in the USA
2. Concrete: Concrete Thickness and Reinforcement per Structural Engineer's Specification for the Application.



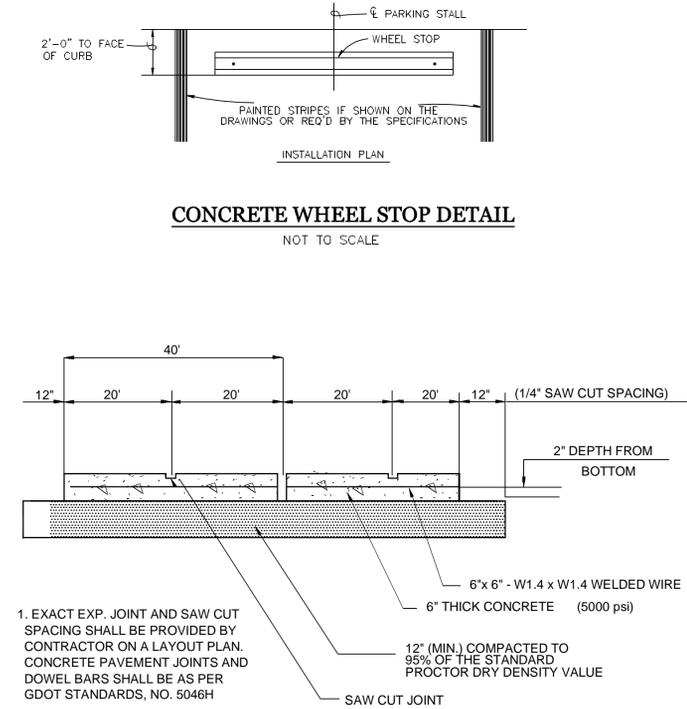
ABT TRENCH DRAIN GRATE DETAIL
NOT TO SCALE



WHEELCHAIR SYMBOL DESIGN
NOT TO SCALE



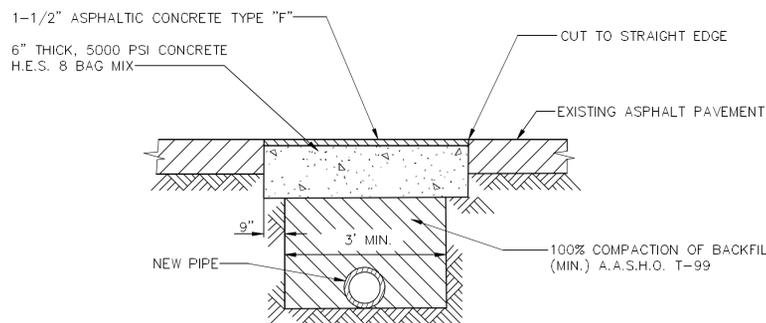
HANDICAPPED PARKING SIGN
NOT TO SCALE



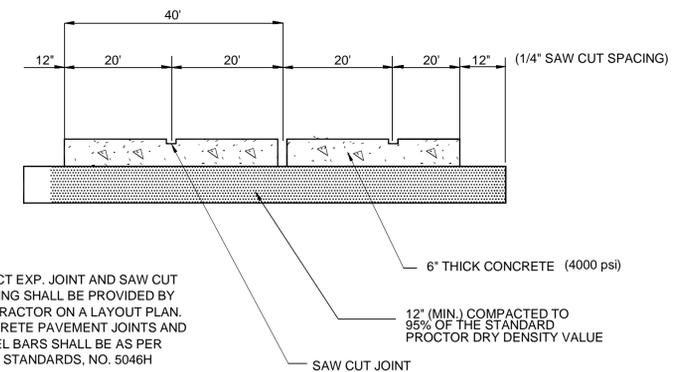
HEAVY DUTY CONCRETE PAVEMENT SECTION
NOT TO SCALE

NOTES:

- ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICEABLE DEFLECTION. THESE PLATES SHALL REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOUR MINIMUM).
- FOR LONGITUDINAL CUTS EXCEEDING 150 FT. IN LENGTH, THE CONCRETE IN THE TRENCH SHALL BE BROUGHT FLUSH WITH THE EXISTING PAVEMENT AND THE ENTIRE WIDTH OF ROADWAY SHALL BE RESURFACED WITH A MINIMUM OF 1" OF TYPE "F" ASPHALT TOPPING OR SURFACE COURSE.

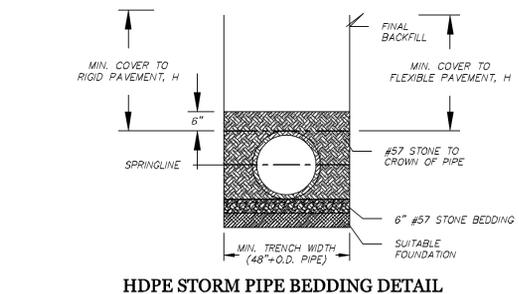


CUT AND PATCH
NOT TO SCALE



CONCRETE PAVEMENT SECTION
NOT TO SCALE

Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____
WILMINGTON
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____



HDPE STORM PIPE BEDDING DETAIL

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

MINIMUM RECOMMENDED COVER BASED ON LOADING CONDITIONS

PIPE DIAM.	H-25 SURFACE LIVE LOADING CONDITION	HEAVY CONSTRUCTION (75T AXLE LOAD)*
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

NO.	DESCRIPTION	DATE	BY	CHKD.	APP'D.
1	UPDATED DRAWING	02/16/07	JTB	ALL DIMENSIONS ARE ± 1/2 FOOT.	

DRAWING NUMBER: STD-101

ADVANCED DRAINAGE SYSTEMS, INC. (ADS) HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO BE USED FOR THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT. ADS HAS ASSUMED NO RESPONSIBILITY FOR THE INFORMATION SUBMITTED TO ADS. THE INFORMATION SUBMITTED BY THE CLIENT IS THE PROPERTY OF THE CLIENT AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. ADS IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. ADS IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. ADS IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT.

ON SITE
CIVIL GROUP
5506 BILLINGSLEY DRIVE, MARIETTA, GA 30067
PH: (404) 434-8888 FAX: (770) 449-6938

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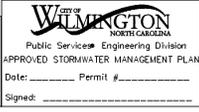
REVISIONS

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SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

CONSTRUCTION DETAILS
DATE: JULY 24, 2013
PROJECT: 13-012



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SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA

CONSTRUCTION DETAILS

DATE: JULY 24, 2013
 PROJECT: 13-012

C 8.2

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

7-06 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 1 OF 2 840.02

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
 FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 15'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CORNERS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

FRAME, GRATE AND HOOD SEE STD. NO. 840.03

BACK OF CURB

TOP ELEVATION

SECTION X-X

SECTION Y-Y

RISE R HT. VARIES

WHERE 30" TO 36" PIPE IS USED

WHERE 42" TO 54" PIPE IS USED

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

FRAME, GRATE AND HOOD SEE STD. NO. 840.03

STEPS - STD. NO. 840.66

TOP ELEVATION

SECTION J-J

WHERE 30" TO 36" PIPE IS USED

SECTION M-M

WHERE 42" TO 54" PIPE IS USED

PLAN

PLAN

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

7-06 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 2 OF 2 840.02

EXPANSION JOINTS

4'-6" 4'-6"

STD. 840.03 FRAME, GRATE & HOOD

PLAN

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

TOP ELEVATION

EXPANSION JOINT

USE ON FLAT GRADES 2% AND UNDER

EXPANSION JOINT

6"

DEPRESSED GUTTER LINE

ELEVATION

NORMAL CURB AND GUTTER ON LIGHT GRADES

EXPANSION JOINT

8"

TOP ELEVATION

USE ON GRADES OVER 2%

EXPANSION JOINT

10" MAX.

DEPRESSED GUTTER LINE

ELEVATION

NORMAL CURB AND GUTTER ON STEEP GRADES

PLAN OF TOP SLAB

SECTION S-S

SECTION R-R

DOWEL

PIPE	DIMENSIONS OF BOX AND PIPE				COVER DIMENSION		BARS-U			BARS-V			BARS-W			TOTAL SLAB	CU. YDS. CONC. IN BOX		DEDUCTIONS	
	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	LBS.	TOP		BOTTOM	FOR MIN. HEIGHT	C.M.	R.C.
12"	3'-0"	2'-2"	-	-	2'-9"	-	-	-	-	-	-	-	-	-	-	-	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"	-	-	3'-0"	-	-	-	-	-	-	-	-	-	-	-	0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"	-	-	3'-3"	-	-	-	-	-	-	-	-	-	-	-	0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"	-	-	3'-9"	-	-	-	-	-	-	-	-	-	-	-	0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"	-	4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127	
36"	3'-0"	2'-2"	3'-10"	-	4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178	
42"	3'-0"	2'-2"	-	4'-5"	5'-3"	1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243	
48"	3'-0"	2'-2"	-	5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	36	0.145	0.362	2.052	0.235	0.317	
54"	3'-0"	2'-2"	-	5'-7"	6'-3"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.160	0.386	2.387	0.297	0.401	

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

1-12 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2 840.03

NOTE: USE TYPE "E", "F" AND "G" GRATE UNLESS OTHERWISE NOTED.

FRAME, GRATE, & HOOD ASS'Y

SECTION - AA

SECTION - BB

SECTION - LL

SECTION - MM

SECTION - NN

SECTION - PP

SECTION - RR

SECTION - KK

SECTION - JJ

SECTION - HH

SECTION - GG

SECTION - FF

SECTION - EE

SECTION - DD

SECTION - CC

SECTION - BB

SECTION - AA

SECTION - XX

SECTION - YY

SECTION - ZZ

SECTION - AA

SECTION - BB

SECTION - CC

SECTION - DD

SECTION - EE

SECTION - FF

SECTION - GG

SECTION - HH

SECTION - II

SECTION - JJ

SECTION - KK

SECTION - LL

SECTION - MM

SECTION - NN

SECTION - OO

SECTION - PP

SECTION - QQ

SECTION - RR

SECTION - SS

SECTION - TT

SECTION - UU

SECTION - VV

SECTION - WW

SECTION - XX

SECTION - YY

SECTION - ZZ

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

1-12 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2 840.03

DETAIL SHOWING TYPES OF GRATES USE ACCORDING TO WATER FLOW.

TYPE "G"

TYPE "E"

TYPE "F"

WATER FLOW

SAG

WATER FLOW

SECTION A-A

SECTION B-B

SECTION C-C

TYPE - E

TYPE G

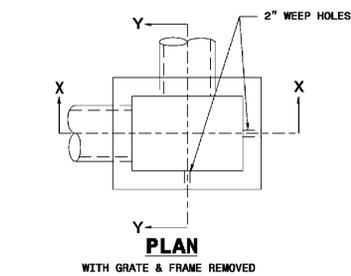
SECTION A-A

SECTION A-A

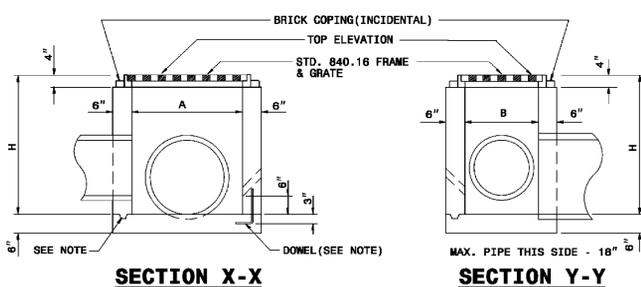
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14



GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING B40.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE GROUNTS MATCHING.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 70M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.



DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)									
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE		
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL FT. HT.	PER. REINFT. H	TOTAL CONCRETE FOR BOTTOM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026	
15"	3'-0"	2'-3"	2'-3"	0.648	0.023	0.036			
18"	3'-0"	2'-6"	2'-6"	0.703	0.033	0.049			
24"	3'-0"	3'-0"	3'-0"	0.814	0.059	0.085			
30"	3'-0"	3'-6"	3'-6"	0.222	0.222	0.925	0.092	0.127	

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

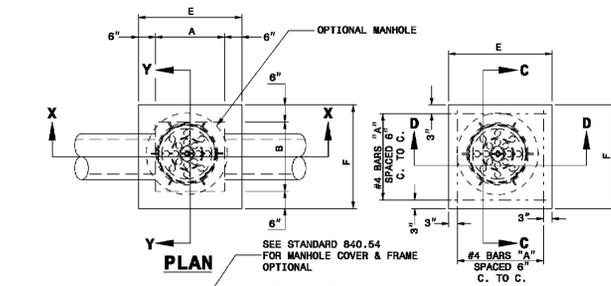
ENGLISH STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14

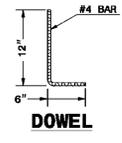
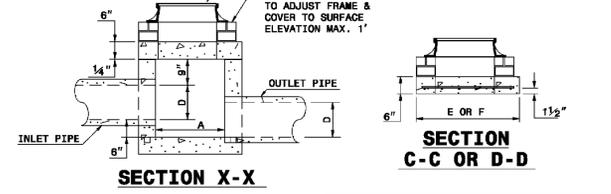
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31



GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1".
USE CLASS "B" CONCRETE THROUGHOUT.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.



DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES														
DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX		TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.		
PIPE	SPAN	WIDTH	HEIGHT	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL FT. OF HT.	LBS. REINF.	CU. YDS. MIN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.085	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.299	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.678	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.287	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31

ONSITE
CIVIL GROUP
3506 BILLINGSLEY DRIVE, MARLBETTA, GA 30082
PH: (404) 878-4478 FAX: (404) 878-4938
FAX: (770) 627-5214

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL BERNARD
7/24/13

REVISIONS

No.	DATE	DESCRIPTION

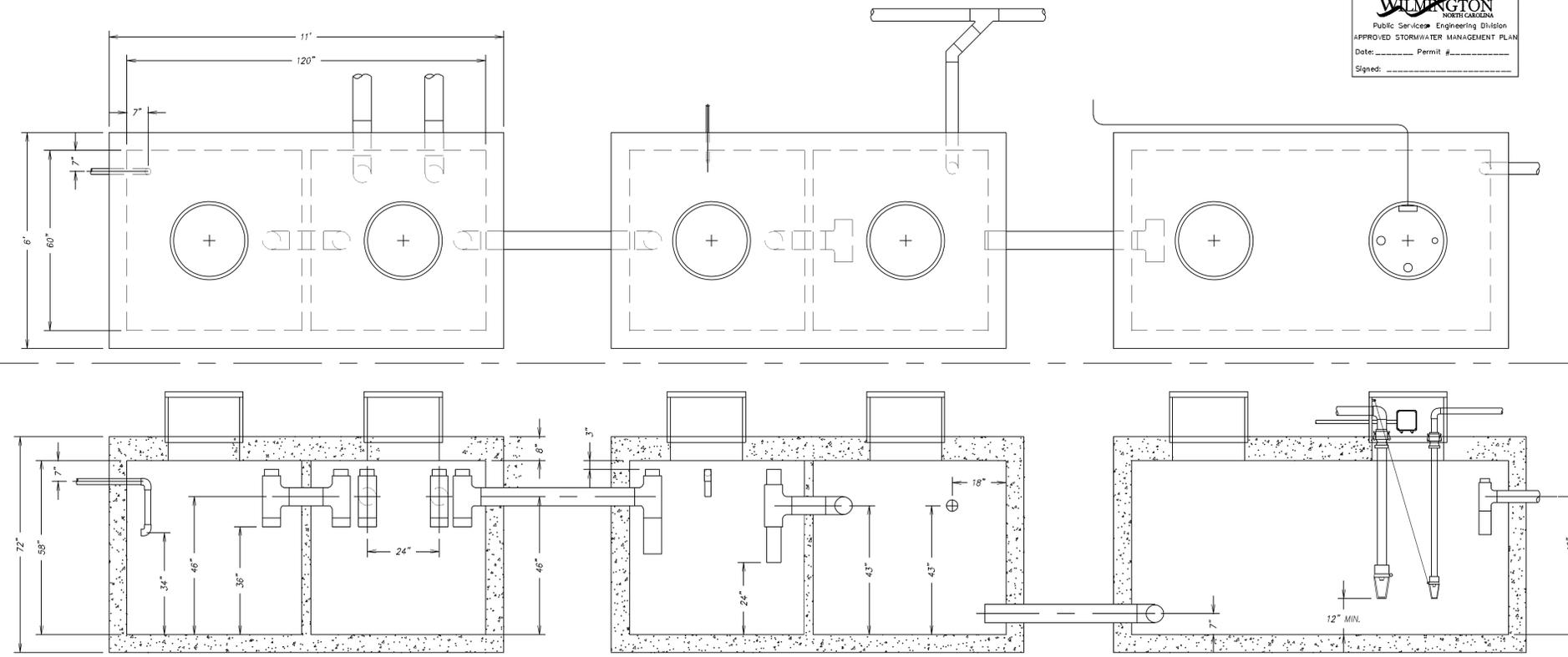
PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7935

SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

CONSTRUCTION DETAILS

DATE: JULY 24, 2013
PROJECT: 13-012

C 8.3



CARWASH RECLAIM SYSTEM

Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____
Wilmington
Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____
 City of WILMINGTON
 NORTH CAROLINA
 Public Services Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

ONSITE
 CIVIL GROUP
 3506 BILLINGSLEY DRIVE, MARLBETTA, GA 30002
 PH: (770) 498-7824 FAX: (770) 627-3214

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REVISIONS

No.	DATE	DESCRIPTION

PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
 FAX: 706-863-7935

SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON,
 NEW HANOVER COUNTY,
 NORTH CAROLINA

CONSTRUCTION DETAILS

DATE: JULY 24, 2013
 PROJECT: 13-012

C 8.4

STANDARD DETAIL
SIDEWALK
 DATE: OCTOBER, 2010
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 3-10

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

STANDARD DETAIL
CURBING
 DATE: AUGUST, 2011
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 3-11

NOTES:
 1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
 2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
 3. MINIMUM INSTALLATION LENGTH IS 9 FT.
 4. CONCRETE TO BE 3000 PSI MIN.
 5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

STANDARD DETAIL
GUIDELINES FOR SEDIMENT CONTROL BMPs
 SHEET 1 OF 2
 DATE: SEPTEMBER, 2012
 DRAWN BY: JSR
 CHECKED BY: BDR, P.E.
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, NC 28402
 (910) 341-7807
 SD 3-104

LAND DISTURBING ACTIVITIES MUST BE MANAGED TO AVOID SEDIMENT RUN-OFF AND POLLUTION FROM CONSTRUCTION SITES. WHERE PERMITTED LOCALLY BY NEW HANOVER COUNTY, AN EROSION AND SEDIMENT CONTROL (ES&S) PLAN WILL CONTAIN DETAILS AND GUIDANCE. ES&S PLANS ARE PERFORMANCE BASED AND OFTEN REQUIRE ADJUSTMENTS OR REPAIRS. AS PERMITTED BY ADEQ, DIVISIONS OF WATER QUALITY AND LAND RESOURCES, A STORMWATER PERMIT WILL REQUIRE SELF-MONITORING REPORTS (WEEKLY, >1" RAIN EVENT) OR SELF-INSPECTION REPORTS AFTER EACH CONSTRUCTION PHASE, BASED ON ELEMENTS OF THE ES&S PLAN.

STANDARD DETAIL
GUIDELINES FOR SEDIMENT CONTROL BMPs
 SHEET 2 OF 2
 DATE: SEPTEMBER, 2012
 DRAWN BY: JSR
 CHECKED BY: BDR, P.E.
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, NC 28402
 (910) 341-7807
 SD 3-104

STANDARD DETAIL
PERPENDICULAR CURB RAMP ADJACENT TO WALKING SURFACE
 DATE: DECEMBER, 2010
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 3-07

WARNING DOME NOTES:
 1. USE CONTRASTING COLORS. RED OR BE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION. BLACK ON WHITE PAVEMENT RUBBER MATS ARE PERMITTED FOR RETROFITS.
 2. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

STANDARD DETAIL
PERPENDICULAR CURB RAMP ADJACENT TO PLAZA
 DATE: DECEMBER, 2010
 DRAWN: PB/JSR
 CHECKED: DEC
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD3-08

WARNING DOME NOTES:
 1. USE CONTRASTING COLORS. RED OR BE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION. BLACK ON WHITE PAVEMENT RUBBER MATS ARE PERMITTED FOR RETROFITS.
 2. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

STANDARD DETAIL
GUIDELINES FOR WHEELCHAIR RAMPS & DEPRESSED CURBS
 SHEET 2 OF 2
 DATE: 2/29/2008
 DRAWN BY: J. KYNE
 CHECKED BY: AMS, P.E.
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 8-10

STANDARD DETAIL
TYPICAL RETAINING WALL ≤ 4'
 DATE: OCTOBER, 2012
 DRAWN BY: JSR
 CHECKED BY: B.D.R., P.E.
 SCALE: NOT TO SCALE
 CITY OF WILMINGTON
 NORTH CAROLINA
 CITY OF WILMINGTON ENGINEERING
 PO BOX 1810
 WILMINGTON, N.C. 28402
 (910) 341-7807
 SD 3-105

1. ALL RETAINING WALL DESIGNS (GRAVITY AND REINFORCED) ARE SUBJECT TO REVIEW AND APPROVAL BY CITY ENGINEER.
 2. RETAINING WALLS GREATER THAN 4' SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.

SITE PLAN NOTES:

1. THE PROPOSED USAGE OF THE SITE WILL COMMERCIAL USES WITH A SHARED DRIVEWAY. THE USES INCLUDE A TUNNEL CARWASH WITH ASSOCIATED DRIVE AISLES AND COVERED VACUUM SPACES AS WELL AN EXISTING COMMERCIAL STRIP CENTER WITH ASSOCIATED PARKING. THE EXISTING CURB CUT TO THE SITE WILL REMAIN IN THE SAME LOCATION FOR THE PROPOSED IMPROVEMENTS. THE ONLY MODIFICATION WILL BE A RADIUS CHANGE ON THE EAST SIDE OF THE DRIVEWAY SINCE THE INTERNAL PARKING THAT WAS THERE IS BEING REMOVED.

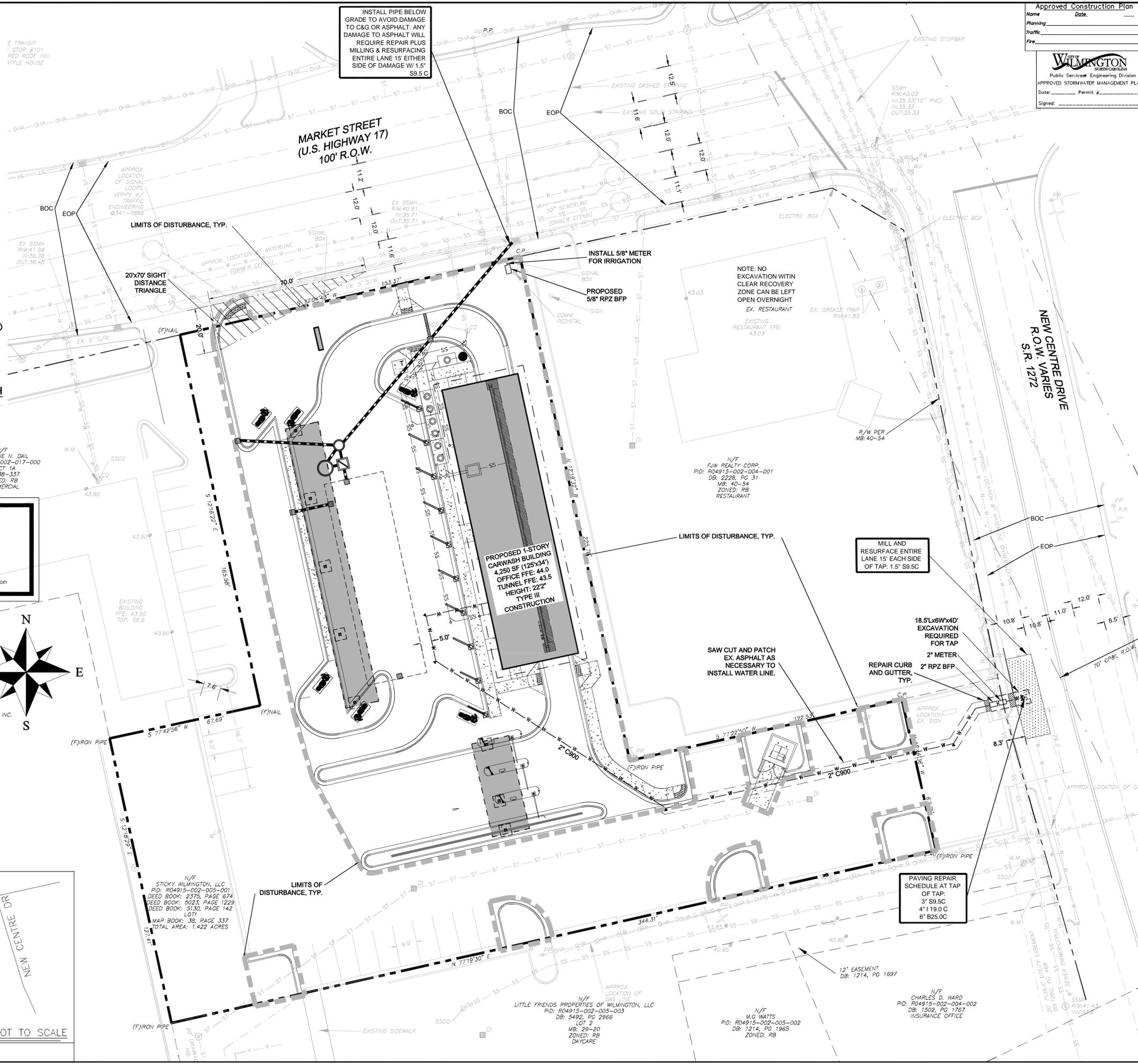
2. GROSS SQUARE FOOTAGE OF PROPOSED BUILDINGS:
CARWASH: 4,250 SF

3. MARKET ST IS PAVED WITH ASPHALT

4. EXISTING RIGHT OF WAY ALONG HWY 17 /MARKET ST IS 100'.

5. DISTANCE FROM EXISTING EDGE OF PAVEMENT TO RIGHT OF WAY = 8.5'
DISTANCE FROM EX. EOP TO PROPOSED R/W FOR BLUE LINE EXTENSION = 58'

6. POSTED SPEED LIMIT ALONG MARKET ST = 45 MPH



INSTALL PIPE BELOW GRADE TO AVOID DAMAGE TO C&G OR ASPHALT. ANY DAMAGE TO ASPHALT WILL REQUIRE REPAIR PLUS MILLING & RESURFACING ENTIRE LANE 15' EITHER SIDE OF DAMAGE W/ 1.5\"/>

NOTE: NO EXCAVATION WITHIN CLEAR RECOVERY ZONE CAN BE LEFT OPEN OVERNIGHT
EX. RESTAURANT
EXISTING RESTAURANT FFE: 43.03

CAUTION!!!
The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness of accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction

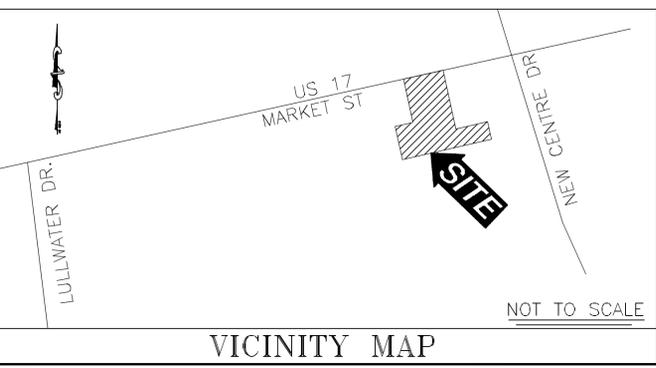


ONSITE CIVIL GROUP
3506 BILLINGSLEY DRIVE
MARIETTA, GA 30062
CONTACT: JARRETT SENKBEIL, PE, LEED AP
404-822-9147

24 HOUR CONTACT:
CRAIG CONDRA
678-574-4994

TRAFFIC ENGINEERING NOTE:
CALL TRAFFIC ENGINEERING AT 910-341-7888 A MIN. OF 48 HOURS PRIOR TO ANY EXCAVATION IN THE R/W

ACCORDING TO SOIL SURVEY OF **NEW HAVOVER COUNTY, NORTH CAROLINA** THE SITE CONSISTS OF:
-Le LEON SAND, 2-8% SLOPES, HYDROLOGIC SOIL GROUP A
-Mu MURVILLE FINE SAND, HYDROLOGIC SOIL GROUP A



Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____
WILMINGTON
Public Service Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

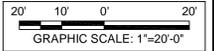
ONSITE
CIVIL GROUP
3506 BILLINGSLEY DRIVE, MARIETTA, GA 30062
PH 1: (404) 822-9147, PH 2: (678) 449-6938
FAX: (770) 627-3214

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REVISIONS

No.	DATE	DESCRIPTION



PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
FAX: 706-863-7935

SPLASH N DASH CARWASH
5044 MARKET STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY,
NORTH CAROLINA

NCDOT UTILITY ENCROACHMENT PLAN

DATE: JULY 24, 2013
PROJECT: 13-012

C 9.1

SITE PLAN NOTES:

1. THE PROPOSED USAGE OF THE SITE WILL COMMERCIAL USES WITH A SHARED DRIVEWAY. THE USES INCLUDE A TUNNEL CARWASH WITH ASSOCIATED DRIVE AISLES AND COVERED VACUUM SPACES AS WELL AN EXISTING COMMERCIAL STRIP CENTER WITH ASSOCIATED PARKING. THE EXISTING CURB CUT TO THE SITE WILL REMAIN IN THE SAME LOCATION FOR THE PROPOSED IMPROVEMENTS. THE ONLY MODIFICATION WILL BE A RADIUS CHANGE ON THE EAST SIDE OF THE DRIVEWAY SINCE THE INTERNAL PARKING THAT WAS THERE IS BEING REMOVED.

2. GROSS SQUARE FOOTAGE OF PROPOSED BUILDINGS:
CARWASH: 4,250 SF

3. MARKET ST IS PAVED WITH ASPHALT. NEW CENTRE DR IS PAVED WITH ASPHALT

4. EXISTING R/W ALONG HWY 17 /MARKET ST IS 100', EXISTING R/W ALONG NEW CENTRE DR VARIES

5. DISTANCE FROM EXISTING EDGE OF PAVEMENT TO MARKET ST R/W = 8.5'
DISTANCE FROM EXISTING EDGE OF PAVEMENT TO NEW CENTRE DR R/W = 5.0'

6. POSTED SPEED LIMIT ALONG MARKET ST= 45 MPH,
POSTED SPEED LIMIT ALONG NEW CENTRE DR = 35 MPH



Approved Construction Plan
 Name: _____ Date: _____
 Planning: _____
 Traffic: _____
 File: _____
 Signed: _____ Permit #: _____

ON SITE
 CIVIL GROUP
 3506 BILLINGSLEY DRIVE, MARIETTA, GA 30062
 PH: (404) 822-9147, PH 2: (678) 449-8938
 FAX: (770) 657-5214

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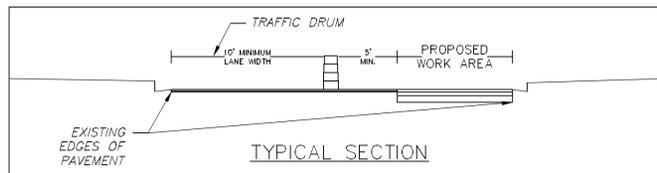
REVISIONS

No.	DATE	DESCRIPTION



PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
 FAX: 706-863-7935

SPLASH N DASH CARWASH
 5044 MARKET STREET
 CITY OF WILMINGTON
 NEW HANOVER COUNTY,
 NORTH CAROLINA



- NOTE:**
- POSTED SPEED LIMIT ALONG MARKET ST IS 45 MPH, 35MPH ON NEW CENTRE DR
 - WHEN WORKING WITHIN 5' OF A TRAVEL LANE, THAT LANE WILL BE CLOSED TO TRAFFIC.



CAUTION!!!

The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness of accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction

ACCORDING TO SOIL SURVEY OF **NEW HAVOVER COUNTY, NORTH CAROLINA** THE SITE CONSISTS OF:
 -L LEON SAND, 2-8% SLOPES, HYDROLOGIC SOIL GROUP A
 -M MURVILLE FINE SAND, HYDROLOGIC SOIL GROUP A

24 HOUR CONTACT:
 CRAIG CONDR
 678-574-4994

ONSITE CIVIL GROUP
 3506 BILLINGSLEY DRIVE
 MARIETTA, GA 30062
 CONTACT: JARRETT SENKBEIL, PE, LEED AP
 404-822-9147

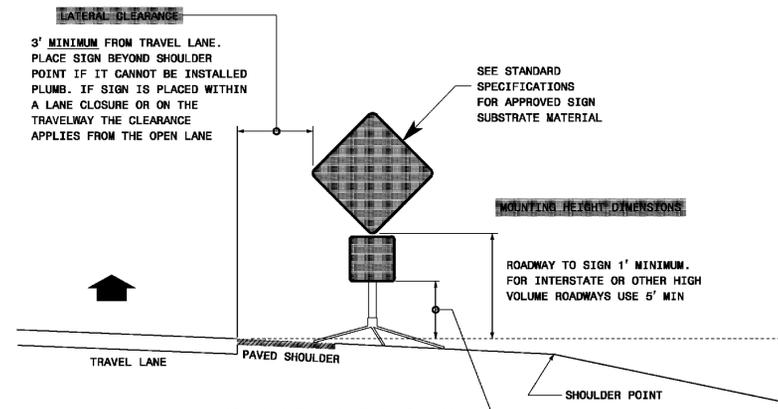
NCDOT TRAFFIC CONTROL PLAN

DATE: JULY 24, 2013
 PROJECT: 13-012

C 9.2

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR PORTABLE WORK ZONE SIGNS MOUNTING HEIGHT & LATERAL CLEARANCE



GENERAL NOTES

- 1-DIMENSIONS SHOWN ARE MINIMUM VALUES. MOUNT SIGNS SO THEY WILL BE CLEARLY VISIBLE TO APPROACHING TRAFFIC EVEN WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS.
- 2-ALL PORTABLE SIGNS AND STANDS MUST MEET OR EXCEED THE REQUIREMENTS OF NCHRP 350 FOR WORK ZONE CATEGORY II DEVICES. USE PORTABLE WORK ZONE SIGNS AND STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER.
- 3-ALL PORTABLE WORK ZONE SIGNS AND STANDS MUST BE LISTED ON NORTH CAROLINA'S APPROVED PRODUCTS LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE WORK ZONE TRAFFIC CONTROL UNIT.

SHEET 1 OF 1
1110.02

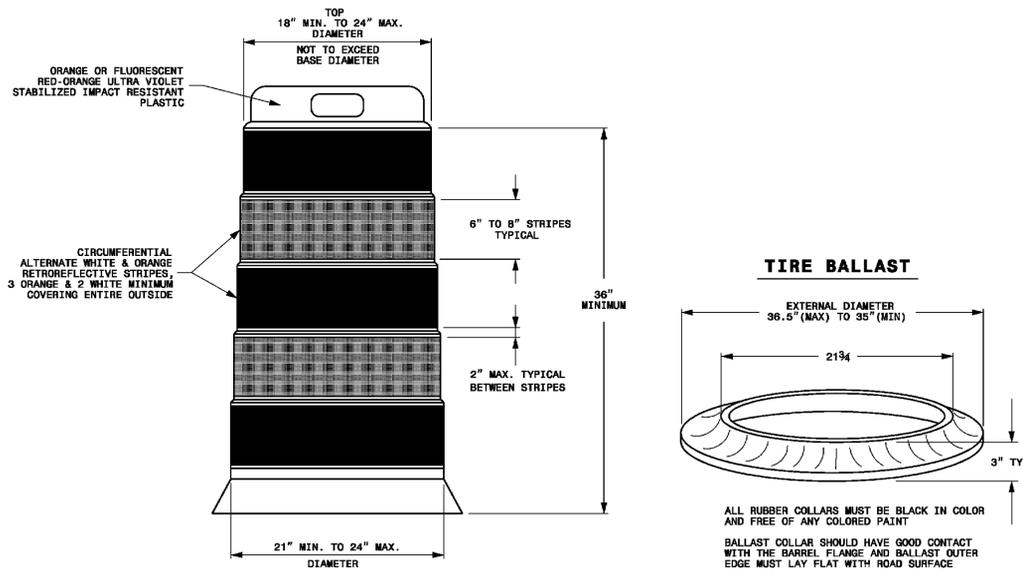
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR PORTABLE WORK ZONE SIGNS MOUNTING HEIGHT & LATERAL CLEARANCE

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR DRUM

SHEET 1 OF 1
1110.02



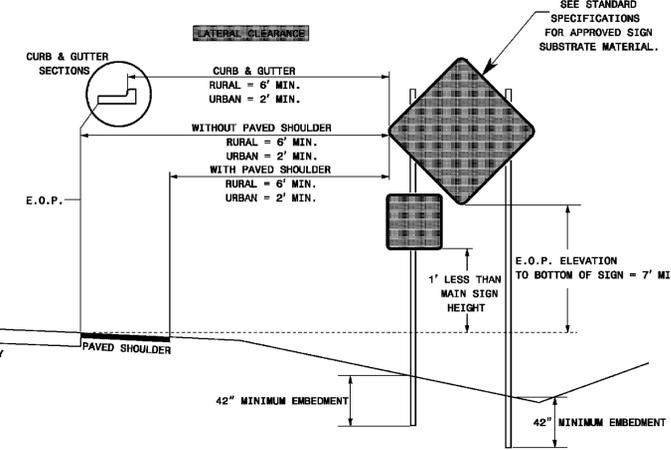
GENERAL NOTES

- 1-BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM. USE THE TIRE BALLAST AS SPECIFIED BY THE MANUFACTURER.
- 2-IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.

SHEET 1 OF 1
1130.01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

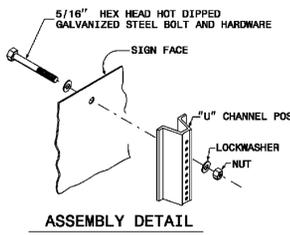
ENGLISH STANDARD DRAWING FOR STATIONARY WORK ZONE SIGNS MOUNTING HEIGHT & LATERAL CLEARANCE



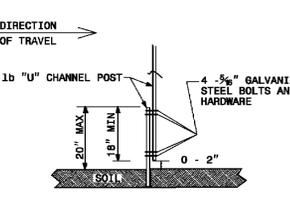
GENERAL NOTES

- 1-DIMENSIONS SHOWN ARE MINIMUM VALUES. WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS THAT DETRACT FROM THEIR VISIBILITY, MOUNT THE SIGNS AT AN APPROPRIATE HEIGHT SUCH THAT THEY ARE CLEARLY VISIBLE TO APPROACHING TRAFFIC.
- 2-MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE SUPPORTS.
- 3-SEE STANDARD SPECIFICATION 1089-1 FOR WORK ZONE SIGNS.
- 4-SEE STANDARD SPECIFICATION 1089-2 FOR WORK ZONE SIGN SUPPORTS.
- 5-SEE ROADWAY STANDARD DRAWING 903.20 FOR WOOD POSTS.
- 6-SEE STANDARD SPECIFICATION 903-1 FOR WOOD SUPPORTS.

SHEET 1 OF 1
1110.01



ASSEMBLY DETAIL



DETAIL FOR SPLICING STEEL U-CHANNEL POST ON SMALL SIGN SUPPORT

* DO NOT BURY SPLICE

SHEET 1 OF 1
1110.01

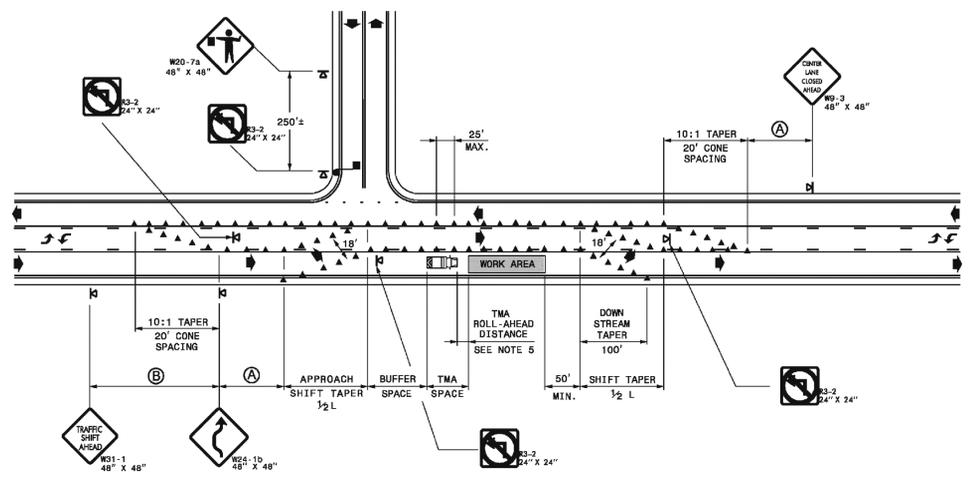
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 7-06

ENGLISH STANDARD DRAWING FOR STATIONARY WORK ZONE SIGNS MOUNTING HEIGHT & LATERAL CLEARANCE

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR TEMPORARY LANE CLOSURES 2-LANE, 2-WAY ROADWAY WITH 2-WAY TURN LANE 1 THRU LANE CLOSED

SHEET 2 OF 12
1101.02



GENERAL NOTES

- 1- REFER TO STD. 1101.11 SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- 2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 3- PLACE CONES ADJACENT TO THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. PLACE CONES SEPARATING OPPOSING TRAFFIC AT THE MAXIMUM SPACING OF 25 FEET.
- 4- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE BEGINNING OF THE APPROACH SHIFT TAPER. (REFER TO STD. 1101.11 SHEET 2)
- 5- TMA'S ARE REQUIRED WHEN A BUFFER SPACE CANNOT BE ATTAINED, OR WHEN DIRECTED BY THE ENGINEER OR AS SHOWN IN THE PLANS. WHEN USED, POSITION TMA'S TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER.
- 6- DRUMS OR SKINNY-DRUMS MAY BE USED IN LIEU OF CONES. REFER TO ROADWAY STANDARD DRAWING 1180.01 FOR SKINNY-DRUM REQUIREMENTS.

LEGEND

- TMA
- CONE
- FLAGGER
- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

SHEET 2 OF 12
1101.02

ONSITE CIVIL GROUP

3506 BILLINGSLEY DRIVE, MARLETTA, GA 30062
 PH: (404) 845-4400
 FAX: (770) 627-9214

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7/24/13

REVISIONS

No.	DATE	DESCRIPTION

PAYNE UMSTEAD PROPERTIES, LLC
 CONTACT: ED UMSTEAD
 609 BRAE BURN DR.
 MARTINEZ, GEORGIA 30907
 PHONE: 706-840-4988
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NCDOT ENCROACHMENT DETAILS

DATE: JULY 24, 2013
 PROJECT: 13-012

C 9.3

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06
ENGLISH STANDARD DRAWING FOR
WORK ZONE ADVANCE WARNING SIGNS

SHEET 1 OF 1
1101.01

FOR WORK ZONE ADVANCE WARNING SIGNS
CONTACT THE WORK ZONE TRAFFIC CONTROL
UNIT AT CENTURY CENTER BUILDING B,
1020 BIRCH RIDGE DR., RALEIGH, NC 27610

PHONE: (919)250-4159
FAX: (919)250-5948

THE WORK ZONE ADVANCE WARNING SIGNS STANDARD DRAWINGS CAN BE OBTAINED ON THE TRAFFIC CONTROL WEBSITE AS FOLLOWS:
http://www.doh.dot.state.nc.us/construction/ps/std_draw/

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

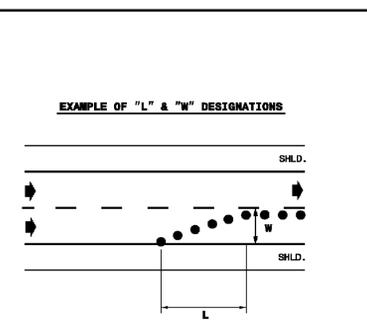
7-06
ENGLISH STANDARD DRAWING FOR
WORK ZONE ADVANCE WARNING SIGNS

SHEET 1 OF 1
1101.01

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06
ENGLISH STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
DEVICE TAPER CRITERIA

SHEET 1 OF 4
1101.11



LATERAL WIDTH (W) IN FEET	QUICK REFERENCE - "L" DISTANCE TABLE											
	1	2	3	4	5	6	7	8	9	10	11	12
POSTED SPEED (S) MPH	MINIMUM LONGITUDINAL DISTANCE "L" (FEET) (ROUNDED VALUES)											
20	10	15	20	30	35	40	50	55	60	70	75	80
25	15	20	25	35	40	45	55	60	70	80	90	100
30	20	30	40	50	60	70	85	95	105	120	135	150
35	25	35	45	55	65	75	90	100	110	125	140	155
40	30	40	50	60	70	80	95	105	115	130	145	160
45	35	45	55	65	75	85	100	110	120	135	150	165
50	40	50	60	70	80	90	105	115	125	140	155	170
55	45	55	65	75	85	95	110	120	130	145	160	175
60	50	60	70	80	90	100	115	125	135	150	165	180
65	55	65	75	85	95	105	120	130	140	155	170	185
70	60	70	80	90	100	110	125	135	145	160	175	190

TAPER LENGTH CRITERIA FOR CHANNELIZING DEVICES IN WORK ZONES

TYPES OF TAPERS	TAPER LENGTH
UPSTREAM TAPER	
MERGING TAPER	----- L MINIMUM
SHIFTING TAPER	----- 1/2 L MINIMUM
SHOULDER TAPER	----- 1/3 L MINIMUM
TWO-WAY TRAFFIC TAPER	----- 100 FEET MAXIMUM
DOWNSTREAM TAPER	----- 100 FEET PER LANE

GENERAL NOTES

1-TABLE FOR "L" DISTANCE IS BASED ON CHANNELIZATION TAPER FORMULA FROM THE M.U.T.C.D. WHERE:

SPEED LIMIT	FORMULA
40 MPH OR LESS	$L = \frac{W \times S^2}{MIN 60}$
45 MPH OR GREATER	$L = W \times S$

L = MINIMUM TAPER LENGTH IN FEET (LONGITUDINAL DISTANCE)
W = WIDTH OF OFFSET IN FEET (LATERAL DISTANCE)
S = POSTED SPEED LIMIT, OR OFF-PEAK 85 PERCENTILE SPEED IN MPH PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

2-"L" DISTANCE IS FOR APPLICATION WITH CHANNELIZING DEVICE AND PAVEMENT MARKING TAPERS AND TRANSITIONS. CHANNELIZING DEVICES INCLUDE DRUMS, CONES, TUBULAR MARKERS, BARRICADES, RAISED ASPHALT ISLANDS, AND VERTICAL PANELS.

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

7-06
ENGLISH STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
DEVICE TAPER CRITERIA

SHEET 1 OF 4
1101.11

ONSITE CIVIL GROUP

3508 BILLINGSLEY DRIVE, MARIETTA, GA 30062
PH: (404) 822-9147, PH: (678) 449-6838
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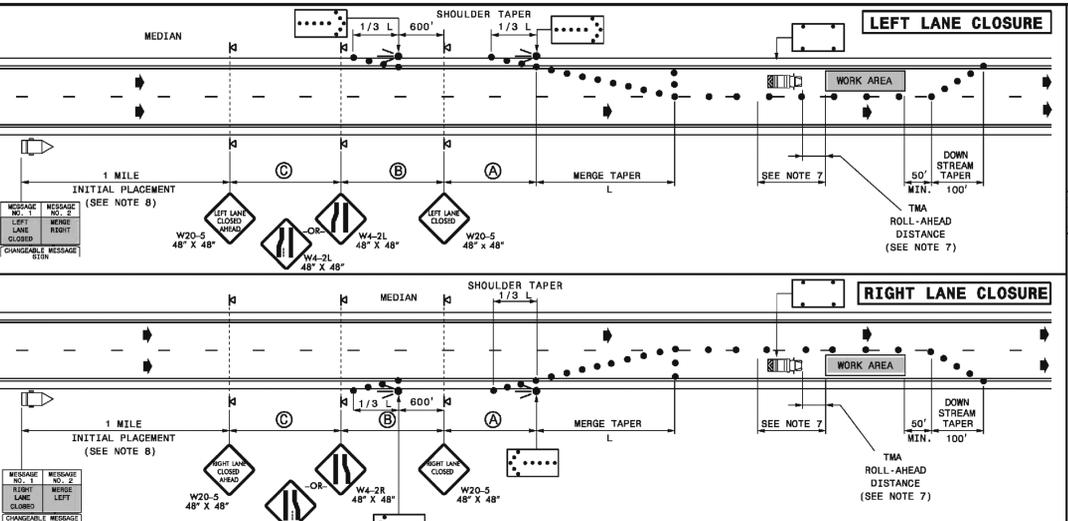
REVISIONS

No.	DATE	DESCRIPTION

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12
ENGLISH STANDARD DRAWING FOR
TEMPORARY LANE CLOSURES
DIVIDED MULTI-LANE ROADWAY-1 LANE CLOSED
(FOR ROADWAYS 65 MPH OR GREATER)

SHEET 3 OF 12
1101.02



- GENERAL NOTES**
- IF NECESSARY USE THIS STD. FOR ONE-WAY CITY TYPE STREETS WHERE SIGNS MAY BE MOUNTED ON BOTH SIDES OF THE ROADWAY.
 - PLACE ARROW BOARDS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW BOARDS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW BOARD LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW BOARD IS MET. (SEE STD. 1101.11 SHEET 2)
 - PLACE DRUMS IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE DRUMS ALONG THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
 - REFER TO STD. 1101.11 SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
 - REFER TO STD. 1101.02 SHEETS 6 AND 7 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
 - INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
 - POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER AND CONTINUOUSLY ADVANCE TMA'S AS WORK PROGRESSES.
 - PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC, MOVE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF ANTICIPATED BACKUP.
 - MESSAGES MAY READ "LEFT LANE CLOSED" OR "RIGHT LANE CLOSED", "MERGE RIGHT" OR "MERGE LEFT" DEPENDING ON LANE BEING CLOSED.

LEGEND

	FLASHING ARROW BOARD (TYPE C)
	TRUCK MOUNTED ATTENUATOR (TMA)
	CHANGEABLE MESSAGE SIGN (CMS)
	DRUM
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12
ENGLISH STANDARD DRAWING FOR
TEMPORARY LANE CLOSURES
DIVIDED MULTI-LANE ROADWAY-1 LANE CLOSED
(FOR ROADWAYS 65 MPH OR GREATER)

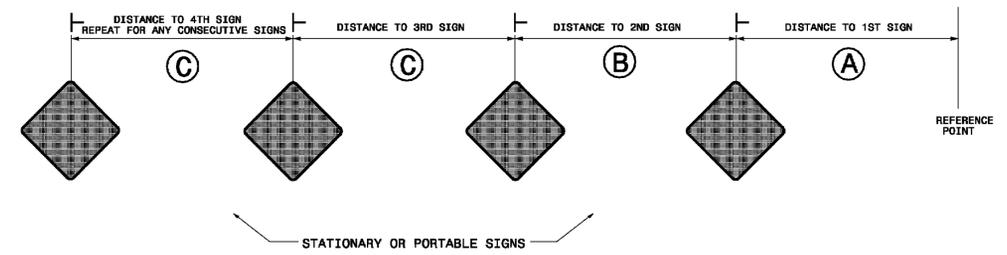
SHEET 3 OF 12
1101.02

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

7-06
ENGLISH STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
SPACING OF TEMPORARY SIGNS IN SERIES

SHEET 4 OF 4
1101.11

- GENERAL NOTES**
- USE THIS STANDARD DRAWING IN CONJUNCTION WITH OTHER TRAFFIC CONTROL ROADWAY STANDARD DRAWINGS WHERE SIGN SPACING DISTANCES A, B, C, ARE SPECIFIED.
 - APPLY THE ADVANCE WARNING SIGN SPACING CHART WHERE A SERIES OF 2 OR MORE SIGNS ARE USED. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS VARIOUS CONDITIONS OCCUR, SUCH AS LIMITED SIGHT DISTANCE, OBSTRUCTION INTERFERENCE, ETC.



ADVANCE WARNING SIGN SPACING CHART

POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS (FEET) ±		
	A	B	C
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500
CONTROLLED ACCESS ROADS (≥ 55)	1000	1500	2700

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

7-06
ENGLISH STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
SPACING OF TEMPORARY SIGNS IN SERIES

SHEET 4 OF 4
1101.11

PAYNE UMSTEAD PROPERTIES, LLC
CONTACT: ED UMSTEAD
609 BRAE BURN DR.
MARTINEZ, GEORGIA 30907
PHONE: 706-840-4988
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SPLASH N DASH CARWASH
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NC DOT
ENCROACHMENT
DETAILS

DATE: JULY 24, 2013
PROJECT: 13-012

C 9.4

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
Plant List						
CERC	6	CIRCIS CANADENSIS 'ACE OF HEART'	RED BUD	2 1/2 - 3" CAL.	B & B	3-5 STEMS
ACRO	14	ACER RUBRUM 'OCTOBER GLORY'	RED OAK	2 1/2 - 3" CAL.	B & B	MATCHED SPECIMEN
ACPB	1	ACER PALMATUM 'BLOODGOOD'	BLOODGOOD JAPANESE MAP	2 1/2 - 3" CAL.	B & B	MATCHED SPECIMEN
LIGJ	53	LIGUSTRUM JAPONICUM	JAPANESE LIGUSTRUM	30" HT/24" SPRD	5 GAL.	MATCHED SPECIMEN
JHBH	49	JUNIPEROUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	18" HT/18" SPRD	CONT.	MATCHED SPECIMEN
LIRM	500 SF	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LIRIOPE	PINTS	CONT.	MATCHED SPECIMEN
NERO	8	NERIUM OLEANDER	OLEANDER	6' HEIGHT MIN.	CONT.	MATCHED SPECIMEN
PITT	26	PITTOSPORUM TOBIRA	PITTOSPORUM	18" HT/18" SPRD	CONT.	MATCHED SPECIMEN

STREET YARD CALCULATIONS:

STREET FRONTAGE	131.57 L.F.
ZONING (RB) MULTIPLIER	25
TOTAL STREET YARD REQUIRED	3,289.25 S.F.
TOTAL STREET YARD PROVIDED	3,299.00 S.F.
MAXIMUM WIDTH	37.5'
MINIMUM WIDTH	12.5'
REQ. SHADE TREES (1/600 S.F.)	5.63
REQ. SHRUBS (6/600 S.F.)	31.64
PROVIDED SHADE TREES	6
PROVIDED SHRUBS	48

FOUNDATION YARD CALCULATIONS:

BUILDING HEIGHT	22.16'
BUILDING WIDTH	125.00'
BUILDING FACE AREA	2,770 S.F.
12% OF BUILDING FACE AREA	332.40 S.F.
REQ. FOUNDATION PLANTING AREA	332.40 S.F.
PROVIDED FOUNDATION PLANTING AREA	650 S.F.

INTERNAL SHADING CALCULATIONS:

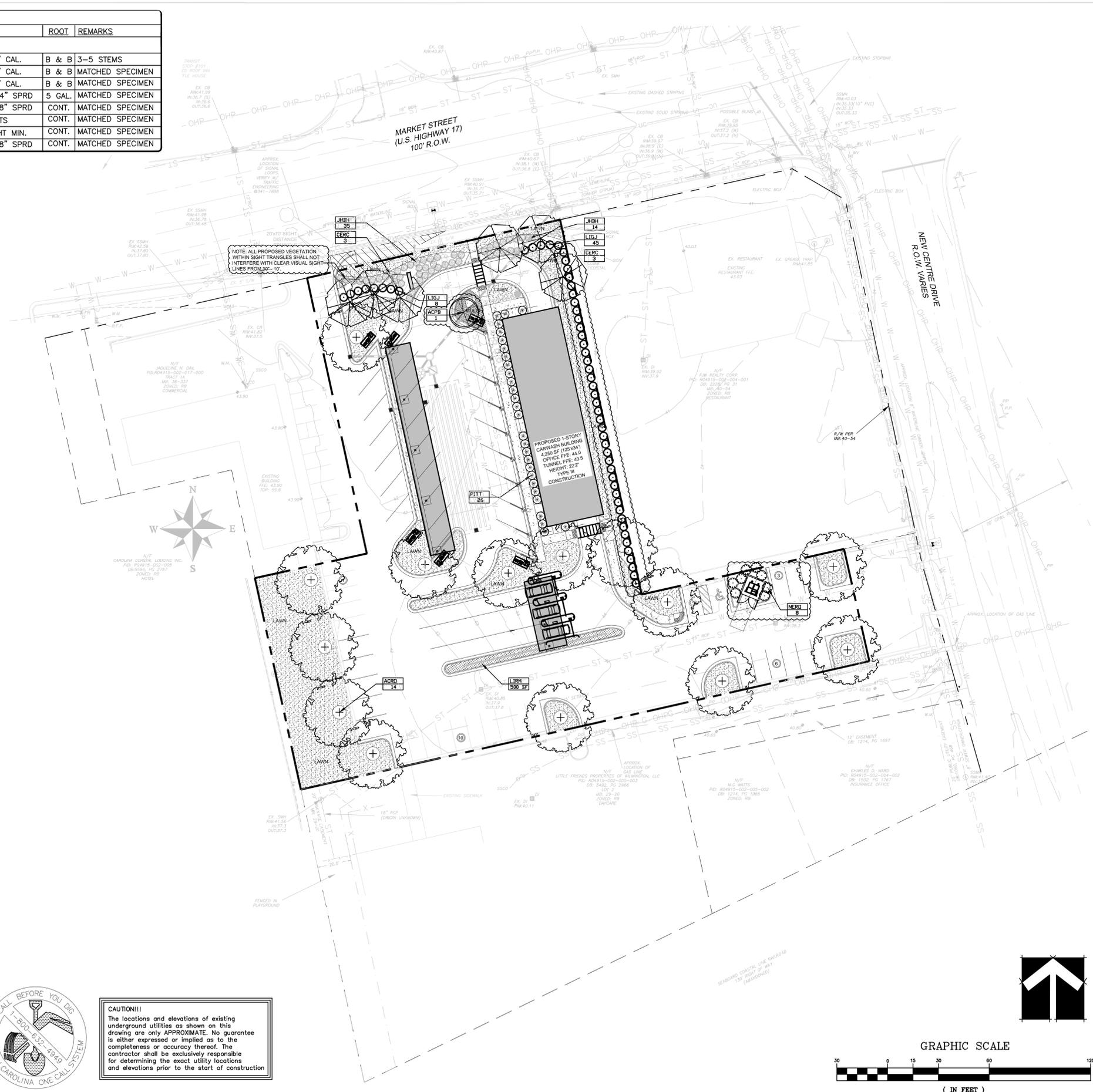
INTERIOR VEHICLE USE AREA	41,100 S.F.
REQUIRED INTERIOR SHADING PERCENTAGE	20%
REQUIRED INTERIOR SHADING AREA	8,220 S.F.
SHADE TREE COVERAGE AREA	707 S.F.
SMALL TREE COVERAGE AREA	354 S.F.
REQUIRED SHADE TREES	11.62
REQUIRED SMALL TREES	23.22
PROVIDED SHADE TREES	16 (8 @ 707 S.F. AND 8 354 S.F.)
PROVIDED SMALL TREES	1 (1 @ 354 S.F.)
SHADE TREE SHADING AREA	8,488 S.F.
SMALL TREE SHADING AREA	354 S.F.
TOTAL PROVIDED SHADING AREA	8,842 S.F.

GENERAL PLANTING NOTES

- PRIOR TO PLANTING OR ORDERING PLANTING MATERIAL THE CONTRACTOR IS TO CONTACT URBAN FORESTER AT 704-407-6987 TO SCHEDULE A SITE MEETING TO VERIFY EXISTING TREES AND THEIR CONDITIONS.
- SEE THIS SHEET FOR PLANTING DETAILS.
- ANY DEVIATION FROM THESE PLANS MUST BE SPECIFICALLY APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- NOTIFY LANDSCAPE ARCHITECT OF ANY SITE CONDITIONS WHICH MAY NECESSITATE MODIFICATION TO THE PLAN. LANDSCAPE ARCHITECT SHALL, IF NECESSARY, MAKE "IN-FIELD MODIFICATIONS".
- FINE GRADING SHALL CONSIST OF HAND RAKED SMOOTH, FREE OF DEBRIS, ALL AREAS TO RECEIVE LANDSCAPE PLANTING AND/OR PINESTRAW MULCH.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF EXISTING CONDITIONS AND PROMPTLY REPORTING ANY DISCREPANCIES. CONTRACTOR TO PERFORM SOIL TESTS AS NECESSARY TO CONFORM TO SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND ANY DAMAGE HE IS RESPONSIBLE FOR THAT MAY OCCUR TO EXISTING UTILITIES.
- MULCH ALL PLANTING BEDS WITH SHREDDED PINE BARK MULCH TO A 3" DEPTH OVER A 10 MIL NEEMAT EQUAL TO "WEEDBLOCK" BY EASY GARDNER OR DEWITT BEE BARRIER.
- CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS DETERMINED AVAILABLE AS SPECIFIED WHEN BID/PROPOSAL IS SUBMITTED.
- PLANT SCHEDULE WAS PREPARED FOR ESTIMATING PURPOSES. CONTRACTOR SHALL MAKE OWN QUANTITIES TAKEOFF USING DRAWINGS TO DETERMINE QUANTITIES TO HIS SATISFACTION. REPORTING PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING. GRAPHIC REPRESENTATION OF PLANTS SHALL SUPERCEDE QUANTITIES LISTED IN THE PLANT SCHEDULE.
- ROOT TYPE MAY BE FREELY SUBSTITUTED IN CASE OF BALLED AND BURLAPPED OR CONTAINER GROWN, OTHER SPECIFICATIONS REMAINING UNCHANGED, EXCEPT IN THE CASE OF CONTAINER GROWN SPECIMEN TREES AS INDICATED IN THE TREE PLANTING SCHEDULE.
- ALL PLANTING BEDS TO RECEIVE AN AMENDED SOIL MIXTURE. SOIL MIX SHALL BE COMPOSED OF 75% EXISTING SOIL AND 15% ORGANIC MATERIAL (OR APPROVED EQUAL) AND 10% SAND. SUPPLEMENT SOIL MIX WITH HIGHER CONCENTRATION OF NITROGEN.
- LANDSCAPE CONTRACTOR TO APPLY A PRE-EMERGENT HERBICIDE, "PREEN" OR EQUAL TO ALL PLANT BED AREAS.
- IN ADDITION TO THE SOIL MIXTURE, LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ANY NECESSARY SOIL AMENDMENTS, AS INDICATED BY SOIL TESTS, AS WELL AS AN ADEQUATE DRAINAGE SYSTEM FOR PLANTING BEDS. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN ENVIRONMENT SUITABLE FOR THE GROWTH OF HEALTHY PLANT MATERIAL. REFER TO PLANTING DETAILS FOR INFORMATION ON PLANTING BED PREPARATIONS.
- ALL AREAS NOT DESIGNATED AS PLANTING BEDS OR SOIL ARE TO BE SEEDDED WITH GRASS SEED WITH THE INTENT AND PURPOSE OF ESTABLISHING A PERMANENT STAND OF GRASS.
- ALL PLANT MATERIAL MUST BE PLANTED IN CORRELATION WITH THE APPROPRIATE GROWING SEASON OF INDIVIDUAL PLANT REQUIREMENTS. SOME PERENNIALS MAY REQUIRE A SPRING PLANTING IN ORDER TO SURVIVE A FULL WINTER DORMANCY.
- PROVIDE QUALITY, SIZE, GENUS, SPECIES AND VARIETY OF EXTERIOR PLANTS INDICATED, COMPLYING WITH APPLICABLE REQUIREMENTS IN ANS 260.1, "AMERICAN STANDARD FOR NURSERY STOCK"
- ALL PLANT MATERIAL AND WORKMANSHIP TO BE GUARANTEED FOR ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. PLANT REPLACEMENT TO OCCUR ONLY ONCE, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH REQUIREMENTS. REPLACEMENT PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DOCUMENT. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DEFECTS RESULTING FROM NEGLIGENCE BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL, WHICH RESULT FROM NATURAL CAUSES.
- MINIMUM TREE SIZE AT PLANTING IS 2-INCH CALIPER (FOR SINGLE STEM TREES).
- ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING, PLANTING PIT. REMOVE ALL PAVEMENT, GRAVEL, SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL OR UNCOMPACT AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 274 SQUARE FEET PER TREE), CALL 704-336-6769 FOR AN INSPECTION OF SOIL BEFORE PLANTING.
- LARGE MATURING TREES MAY NOT BE PLANTED WHERE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES EXIST. IF TREES CONFLICT WITH POWER LINES OR SIGNALS, CALL 704-336-4330 BEFORE PLANTING.
- ADJUST PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT MIN. 10' OFF SEWER AND STORM DRAINAGE LINES; MIN. 15' OFF GAS, WATER TELEPHONE AND ELECTRICAL LINES. NO LIGHTS OR POLES IN PARKING LOT ISLANDS WITH TREES.



CAUTION!!!
The locations and elevations of existing underground utilities as shown on this drawing are only APPROXIMATE. No guarantee is either expressed or implied as to the completeness or accuracy thereof. The contractor shall be exclusively responsible for determining the exact utility locations and elevations prior to the start of construction

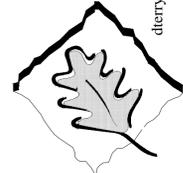


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DENNIS TERRY
DESIGN, INC. P.A.
LANDSCAPE ARCHITECTURE

Site Planning ♦ Rezoning ♦ Permitting ♦ Residential ♦ Commercial

dterry@dttdesigninc.com 704-202-8160 160 Wesleyan Dr. McAdenville, NC 28101 www.dttdesigninc.com



Landscape Plan

Splash & Dash Carwash
Wilmington, NC

CONSTRUCTION DOCUMENTS

North Carolina Seal: No. 1053, DENNIS TERRY, LANDSCAPE ARCHITECT

2013 May 30

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