

INDEX OF SHEETS

CO:	OVERALL SITE PLAN
	SITE SURVEY
11:	INVENTORY PLAN
C1:	DEMOLITION PLAN
C2:	GRADING, DRAINAGE AND EROSION CONTROL PLAN
C2.1:	DRAINAGE AREA PLAN
C3:	UTILITY PLAN
C4:	LAYOUT PLAN
C5:	NOTES AND DETAILS
C6:	NOTES AND DETAILS
SD-1:	CFPUA WATER MAIN CONSTRUCTION DETAILS (1 OF 2)

R1	SYMBOL	DATE	DESCRIPTION	BY
		9.14.12	ADDED PARKING	NKS

REVISIONS
© 2011 NORRIS & TUNSTALL

OVERALL SITE PLAN
HARRIS TEETER EXPANSION STORE #162
3501 OLEANDER DR. SUITE #18
HANOVER CENTER SHOPPING CENTER
WILMINGTON, N. C.

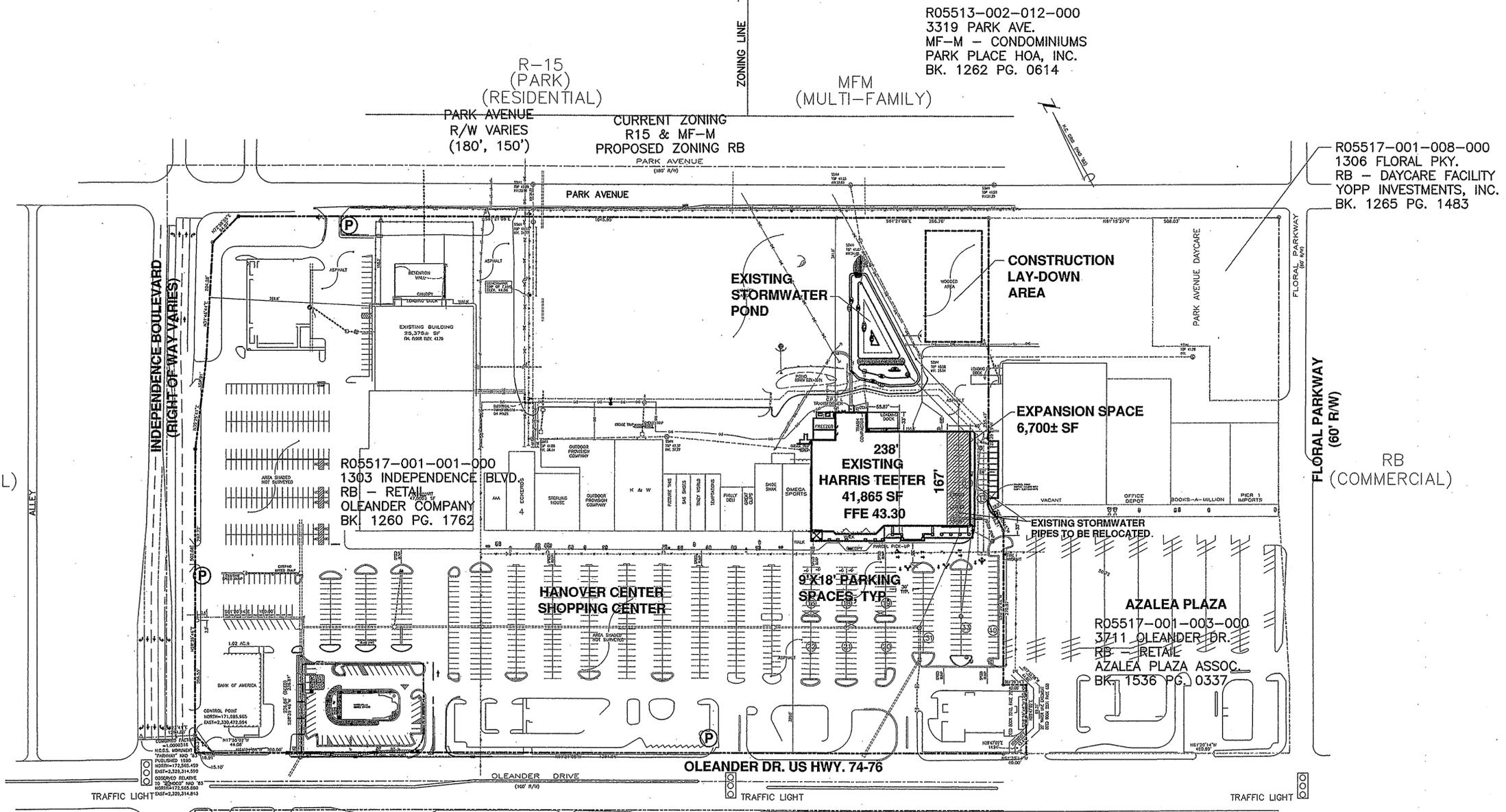
OWNER/DEVELOPER
THE OLEANDER COMPANY, INC.
NELSON MACRAE, PRESIDENT
P.O. BOX 3145
WILMINGTON, NC 28406
910-392-5500

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.
PHONE (910) 343-9853
1127 FLORAL PARKWAY
SUITES 300 & 400
WILMINGTON, NC 28411
FAX (910) 343-9804
office@nteng.com
license #C-3641

11048
DES. JST
CRD. JPN
DRWN. NKS
DATE 12/9/11



CO



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

Approved Construction Plan

Name: gaw Date: 11-2-12

Planning: gaw

Public Utilities: n/a

Traffic: ok per 10/30 email

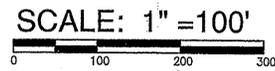
Fire: na

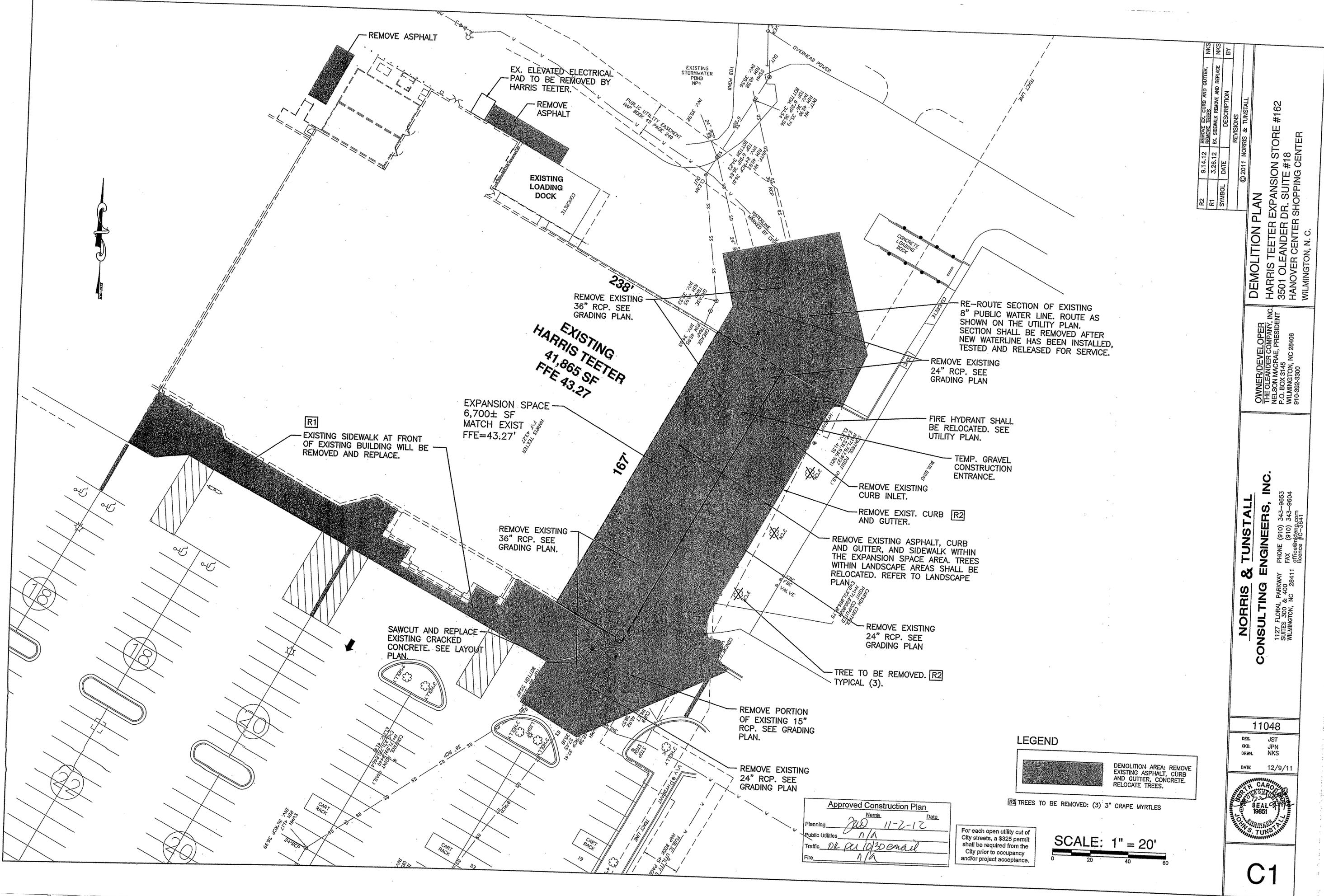
CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____





REVISIONS		
NO.	DATE	DESCRIPTION
R2	9.14.12	REMOVE EX. CURB AND GUTTER, REMOVE TREES
R1	3.26.12	EX. SIDEWALK REMOVE AND REPLACE
SYMBOL		

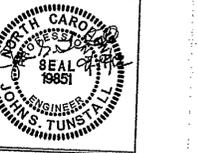
© 2011 NORRIS & TUNSTALL

DEMOLITION PLAN
HARRIS TEETER EXPANSION STORE #162
3501 OLEANDER DR. SUITE #18
HANOVER CENTER SHOPPING CENTER
WILMINGTON, N. C.

OWNER/DEVELOPER
THE OLEANDER COMPANY, INC.
NELSON MACRAE, PRESIDENT
P.O. BOX 3145
WILMINGTON, NC 28406
910-392-3300

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.
 1127 FLORAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28411
 PHONE (910) 343-6653
 FAX (910) 343-9604
 ntc@njcceng.com
 license # 3691

11048
 DES. JST
 CKD. JPN
 DRWN. NKS
 DATE 12/9/11



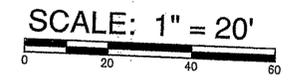
C1

LEGEND

DEMOLITION AREA: REMOVE EXISTING ASPHALT, CURB AND GUTTER, CONCRETE. RELOCATE TREES.

TREES TO BE REMOVED: (3) 3" CRAPE MYRTLES

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



Approved Construction Plan

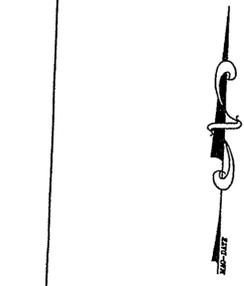
Name _____ Date _____

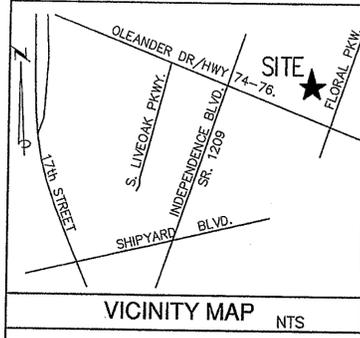
Planning JW 11-2-12

Public Utilities N/A

Traffic OK per 10/30 email

Fire N/A





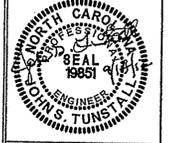
NO.	DATE	DESCRIPTION	BY
R2	9.14.12	ADDED PARKING, GRADES, DISTURBED AREA	NKS
R1	3.26.12	EX. STORMWATER REMOVE AND REPLACE PAVED DISTURBED AREA	NKS

GRADING, DRAINAGE AND EROSION CONTROL PLAN
HARRIS TEETER EXPANSION STORE #162
 3501 OLEANDER DR. SUITE #18
 HANOVER CENTER SHOPPING CENTER
 WILMINGTON, N. C.

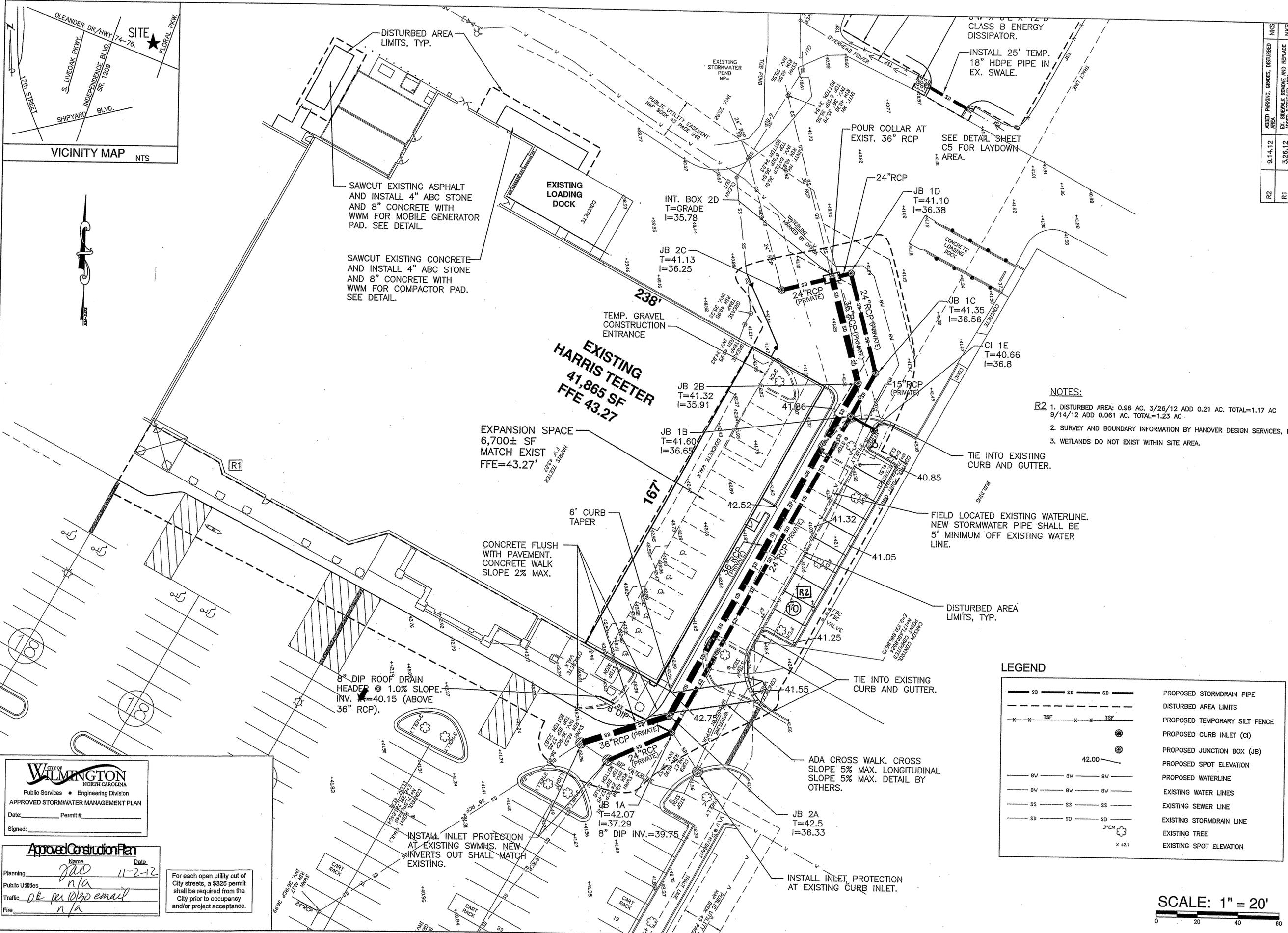
OWNER/DEVELOPER
 THE OLEANDER COMPANY, INC.
 NELSON MACRAE, PRESIDENT
 P.O. BOX 3145
 WILMINGTON, NC 28406
 910-392-3300

NORRIS & TUNSTALL CONSULTING ENGINEERS, INC.
 1127 FLORAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28411
 PHONE (910) 343-9653
 FAX (910) 343-9604
 office@nteng.com
 license #6-3641m

11048
 DES: JST
 CKD: JPN
 DRWN: NKS
 DATE: 12/9/11



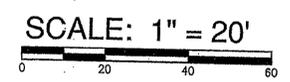
C2



NOTES:
 R2 1. DISTURBED AREA: 0.96 AC. 3/26/12 ADD 0.21 AC. TOTAL=1.17 AC
 9/14/12 ADD 0.061 AC. TOTAL=1.23 AC.
 2. SURVEY AND BOUNDARY INFORMATION BY HANOVER DESIGN SERVICES, P.A.
 3. WETLANDS DO NOT EXIST WITHIN SITE AREA.

LEGEND

SD	PROPOSED STORMDRAIN PIPE
---	DISTURBED AREA LIMITS
X X	PROPOSED TEMPORARY SILT FENCE
CI	PROPOSED CURB INLET (CI)
JB	PROPOSED JUNCTION BOX (JB)
42.00	PROPOSED SPOT ELEVATION
BV	PROPOSED WATERLINE
SS	EXISTING WATER LINES
SD	EXISTING SEWER LINE
SD	EXISTING STORMDRAIN LINE
Tree	EXISTING TREE
42.1	EXISTING SPOT ELEVATION

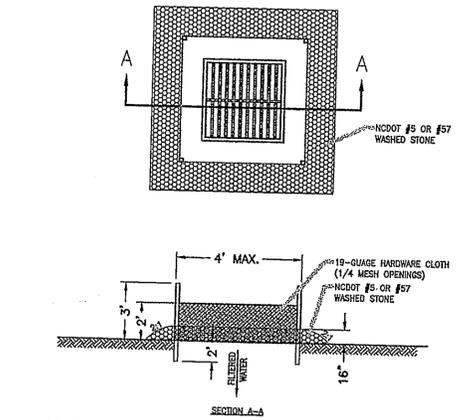


City of Wilmington
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan

Name	Date
Planning: <i>JMO</i>	11-2-12
Public Utilities: <i>n/a</i>	
Traffic: <i>ok per 10/30 email</i>	
Fire: <i>n/a</i>	

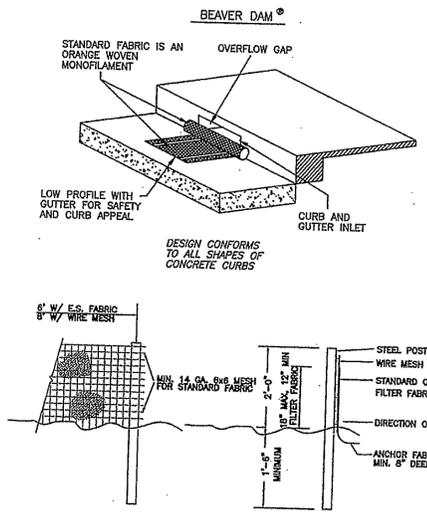
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



BEAVER DAM
Installation and Maintenance Guidelines

Installation: The empty Beaver Dam[®] should be placed over the grate as the grate stands on end. If using optional oil absorbent pillow, place absorbent pillow on top, on the bottom (below-grade side) of the unit. Attach absorbent pillow to tether loop. Tuck the enclosure flap inside to completely enclose the grate. Holding the lifting devices (do not rely on lifting devices its frame (street side flaps), place the grate into place. The Beaver Dam[®] should be partially blocking the curb hood when installed properly.

Maintenance: Remove all accumulated sediment and debris from surface and vicinity of unit after each storm event. Remove sediment that has accumulated within the containment area of the Beaver Dam[®] as needed. If using optional oil absorbent pillow, remove and replace absorbent pillow when near saturation.



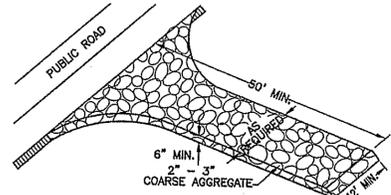
HARDWARE CLOTH & GRAVEL INLET PROTECTION

CONSTRUCTION SEQUENCE:

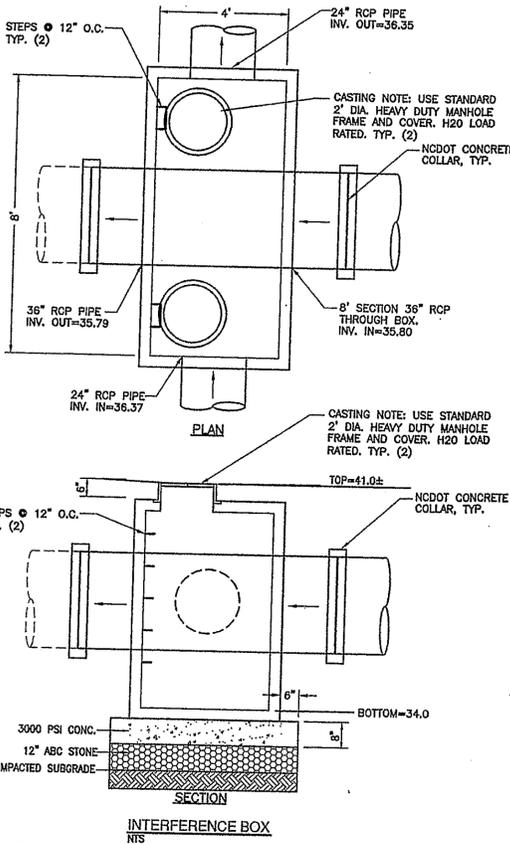
- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
- DIG A 6\"/>

MAINTENANCE:

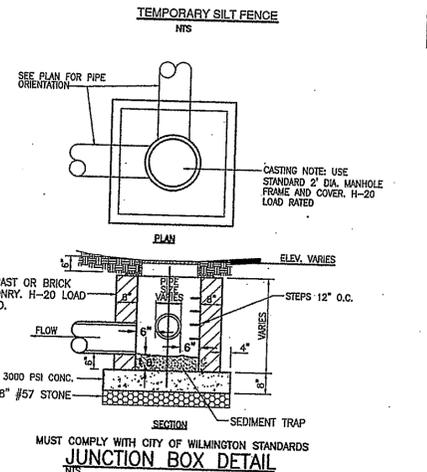
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RUNS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.



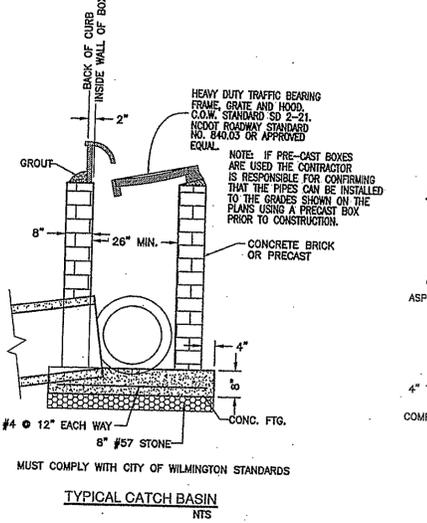
TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE



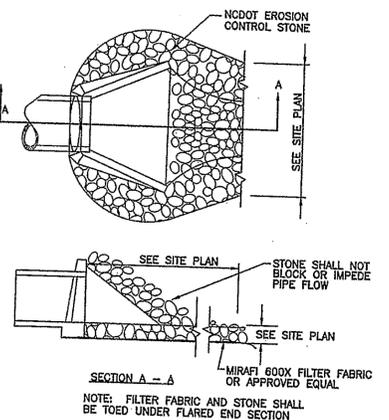
INTERFERENCE BOX



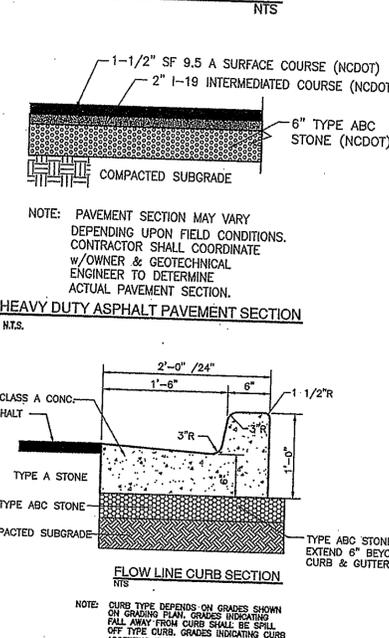
TEMPORARY SILT FENCE



JUNCTION BOX DETAIL



ENERGY DISSIPATOR



HEAVY DUTY ASPHALT PAVEMENT SECTION

FLOW LINE CURB SECTION

SPILL OFF CURB SECTION

TYPICAL CATCH BASIN

INTERFERENCE BOX

TEMPORARY SILT FENCE

ENERGY DISSIPATOR

HARDWARE CLOTH & GRAVEL INLET PROTECTION

BEAVER DAM

TEMPORARY GRAVELLED CONSTRUCTION ENTRANCE

CONSTRUCTION LAYDOWN AREA

CONSTRUCTION LAYDOWN AREA SCALE: 1\"/>

CONSTRUCTION LAYDOWN AREA

CONSTRUCTION LAYDOWN AREA</

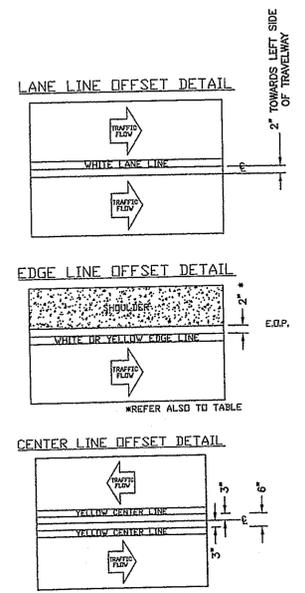
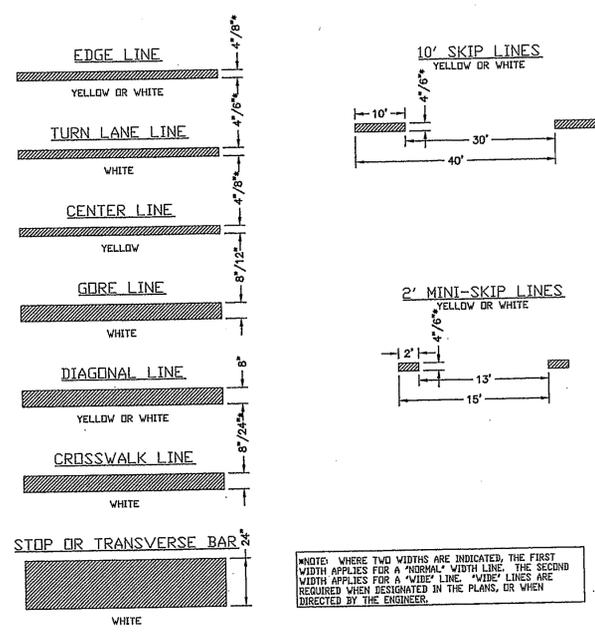
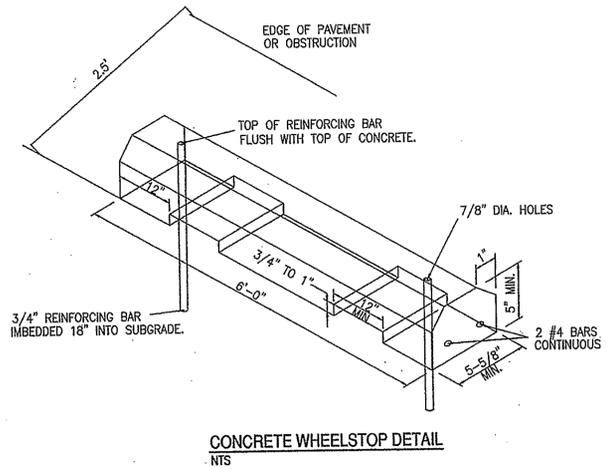
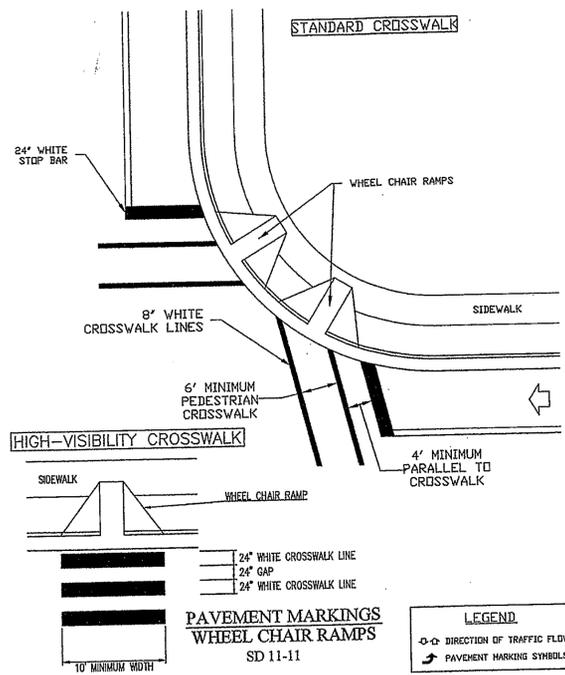


TABLE 1

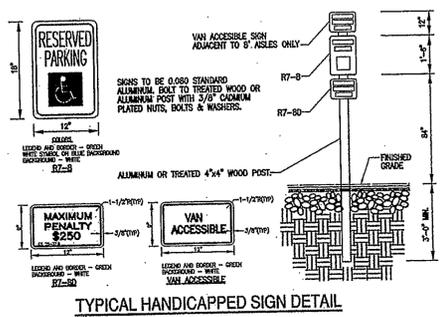
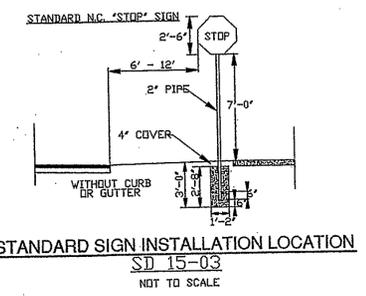
EDGE LINE OFFSETS FOR 2-LANE, 2-WAY ROADWAYS WITH UN-PAVED SHOULDERS

WIDTH OF TRAVEL PAVEMENT	MAX. EDGE LINE OFFSET FROM E. O. P.	MINIMUM LANE WIDTH
16' - 20'	2'	8' - 10'
22'	2'	11'
24'	1'	11'
26'	2'	11'
28'	2'	12'
30'	3'	12'
32'	4'	12'

PAVEMENT MARKINGS

OFFSETS

SD 11-02



FIRE LANE GUIDELINES—City of Wilmington, NC

When Required

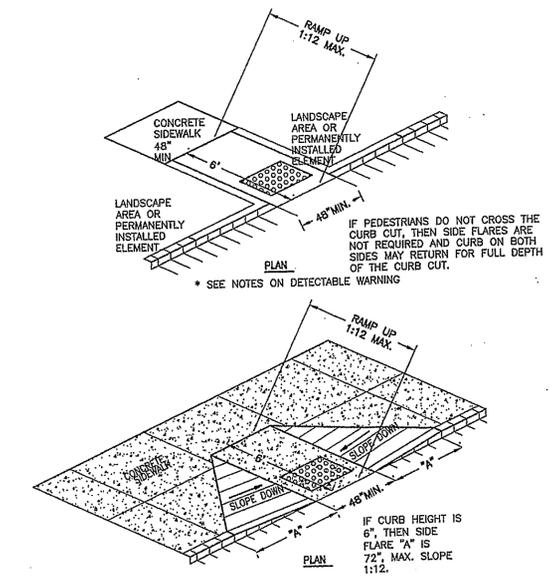
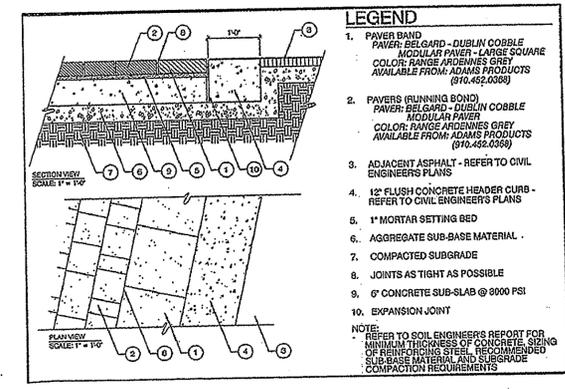
Fire lanes, when required, shall be designated on both sides of the road if the road is less than 26 feet in width. If the road is between 26 feet in width and 32 feet in width, one side of the road shall be designated as a fire lane.

Signs

- Required and must be spaced no further than 50' apart
- Must conform to the standards in the latest edition of the Manual On Uniform Traffic Control Devices (MUTCD) published by the Federal Highway Administration (FHWA)
- Minimum size is 12" wide by 18" tall, red on white
- MUTCD sign R7-9 with "FIRE LANE" wording (shown at right) is the recommended sign layout
- Other similar MUTCD standard signs may be acceptable
- Sign must be facing Fire Lane traffic
- Minimum mounting height of 7' measured to bottom of sign
- Lateral clearance of 1' to 5' from edge of fire lane to edge of sign

Pavement Markings

- Must conform to the standards in the latest edition of the MUTCD
- If used, all lane markings shall be white in color, except optional word message "FIRE LANE" can be used to supplement the white lane markings and shall be red or white letters 8" or larger
- Minimum line widths are 4" for longitudinal lines and 8" for diagonal cross-hatching
- If used, curb markings shall be white in color and shall include the word message "NO PARKING" and/or "FIRE LANE" in red letters 4" or larger
- Word markings shall conform to the Standard Alphabets for Highway Signs and Pavement Markings published by the FHWA



- GENERAL NOTES**
- IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMP FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURBS AND GUTTERS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
 - WHEELCHAIR RAMP SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- CONSTRUCTION NOTES:**
- NO SLOPE SHALL EXCEED 1"=1" (12:1) ON THE RAMP OR SIDEWALK.
 - IN NO CASE SHALL THE WIDTH OF WHEELCHAIR RAMP BE LESS THAN 40" (3'-4"). WIDTHS MAY EXCEED 40" IF NECESSARY.
 - USE CLASS "A" CONCRETE WITH THE SURFACE HAVING A ROUGH, NON-SKID TYPE FINISH.
 - 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE WHEELCHAIR RAMP JOINS ANY RIGID PAVEMENT OR STRUCTURE.
 - CONSTRUCTION METHODS SHALL CONFORM WITH THOSE OF THE GOVERNING BODY WHICH HAS JURISDICTION OF THE PARTICULAR STREET.
- ADDITIONAL NOTES:**
- THE INSIDE PEDESTRIAN CROSSWALK LINES SHALL BE ESTABLISHED BY BISECTING THE INTERSECTION RADIUS WHERE MARKED (SEE NOTE 6).
 - THE WHEELCHAIR RAMP SHALL BE LOCATED SO THAT THE BEGINNING OF THE WHEEL CHAIR RAMP WILL BE TWO FEET FROM THE INSIDE PEDESTRIAN CROSSWALK LINE.
 - THE WIDTH OF THE PEDESTRIAN CROSSWALK SHALL BE 10 FEET UNLESS A GREATER WIDTH IS REQUIRED TO ACCOMMODATE THE PEDESTRIAN TRAFFIC.
 - STOP BARS SHALL BE USED WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN, OR OTHER LEGAL REQUIREMENTS.
 - PARKING SHALL BE ELIMINATED A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
 - ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. THIS IS AVAILABLE FROM THE SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D.C. 20402.

GUIDELINES FOR WHEELCHAIR RAMP

CITY OF WILMINGTON SD 8-09

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

Approved Construction Plan

Name: JJD Date: 11-2-12

Planning: n/a

Public Utilities: n/a

Traffic: OK per 10/30 email

Fire: n/a

NOTES AND DETAILS

HARRIS TEETER EXPANSION STORE #162

3501 OLEANDER DR. SUITE #18

HANOVER CENTER SHOPPING CENTER

WILMINGTON, N. C.

OWNER/DEVELOPER: THE OLEANDER COMPANY, INC. NELSON MACRAE, PRESIDENT P.O. BOX 3145 WILMINGTON, NC 28406 910-392-3900

NORRIS & TUNSTALL

CONSULTING ENGINEERS, INC.

1127 FLORAL PARKWAY PHONE (910) 343-9663 SUITES 300 & 400 FAX (910) 343-9604 WILMINGTON, NC 28411 office@nrtun.com nrtun.com

11048

DES. JUST

KD. JPN

DRWN. NKS

DATE 12/9/11

Approved Construction Plan

Name: JJD Date: 11-2-12

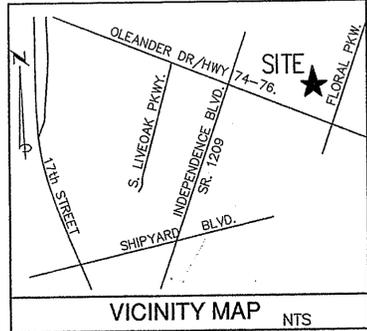
Planning: n/a

Public Utilities: n/a

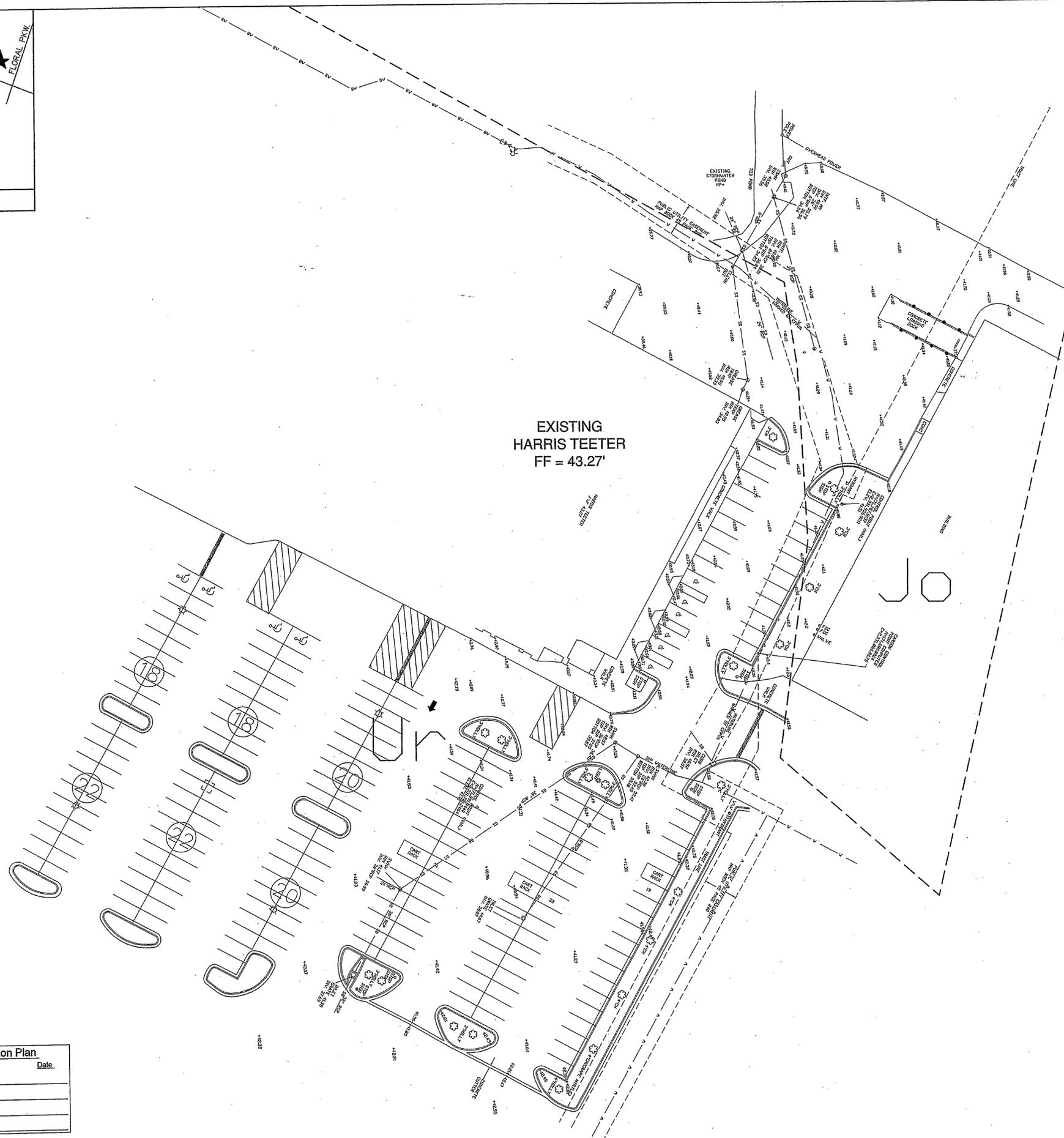
Traffic: OK per 10/30 email

Fire: n/a

C6



VICINITY MAP NTS



EXISTING
HARRIS TEETER
FF = 43.27'

Approved Const. Plan
 Name: JAD Date: 11-2-12
 Planning: n/a
 Public Utilities: ok per 10/30 email
 Traffic: n/a
 Fire: n/a

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

Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

SITE INVENTORY MAP DATA	
USE:	GROCERY STORE
HANOVER CENTER SITE AREA:	30.1 ACRES
PARCEL ID#:	RO5517-001-001-000
MAP ID#:	313717.12.2034.000
ADDRESS:	1403 INDEPENDENCE BLVD.
ZONING:	RB REGIONAL BUSINESS
CAMA LAND USE:	URBAN
BUILDING SETBACKS: (REQUIRED)	FRONT SETBACK: 25' INTERIOR SIDE SETBACK: 0' CORNER SIDE SETBACK: 25' REAR SETBACKS: 15'
PREPARER:	NORRIS & TUNSTALL ENGINEERS
SOIL TYPE:	Ur, Jc
100 YEAR FLOOD BOUNDARY:	OUTSIDE 100 YEAR FLOOD BOUNDARY
FLOOD ZONE:	THESE TRACTS ARE LOCATED IN ZONE "X" ACCORDING TO THE FEDERAL EMERGENCY AGENCY'S FLOOD INSURANCE RATE MAP
CONSERVATION OVERLAY DISTRICT:	NONE WITHIN SITE
HISTORICAL SITE:	NONE
CEMETERY:	NONE
VEGETATION/TREES:	LANDSCAPE ISLANDS ONLY. SEE PLAN
WETLANDS:	WETLANDS DO NOT EXIST WITHIN SITE AREA
ENDANGERED SPECIES/HABITAT:	NONE REPORTED

SCALE: 1" = 30'

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

© 2011 NORRIS & TUNSTALL

INVENTORY PLAN

HARRIS TEETER EXPANSION STORE #162
 3501 OLEANDER DR. SUITE #18
 HANOVER CENTER SHOPPING CENTER
 WILMINGTON, N. C.

OWNER/DEVELOPER
 THE OLEANDER COMPANY, INC.
 NELSON MACRAE, PRESIDENT
 P.O. BOX 3145
 WILMINGTON, NC 28406
 910-382-3300

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, INC.

1127 FLORIAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28411
 PHONE (910) 343-9653
 FAX (910) 343-9604
 office@njteng.com
 njteng.com

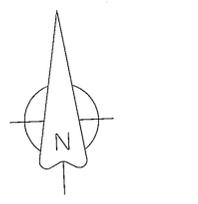
11048

DES. JST
 CDR. JPN
 DRWL. NKS

DATE 9/12/11

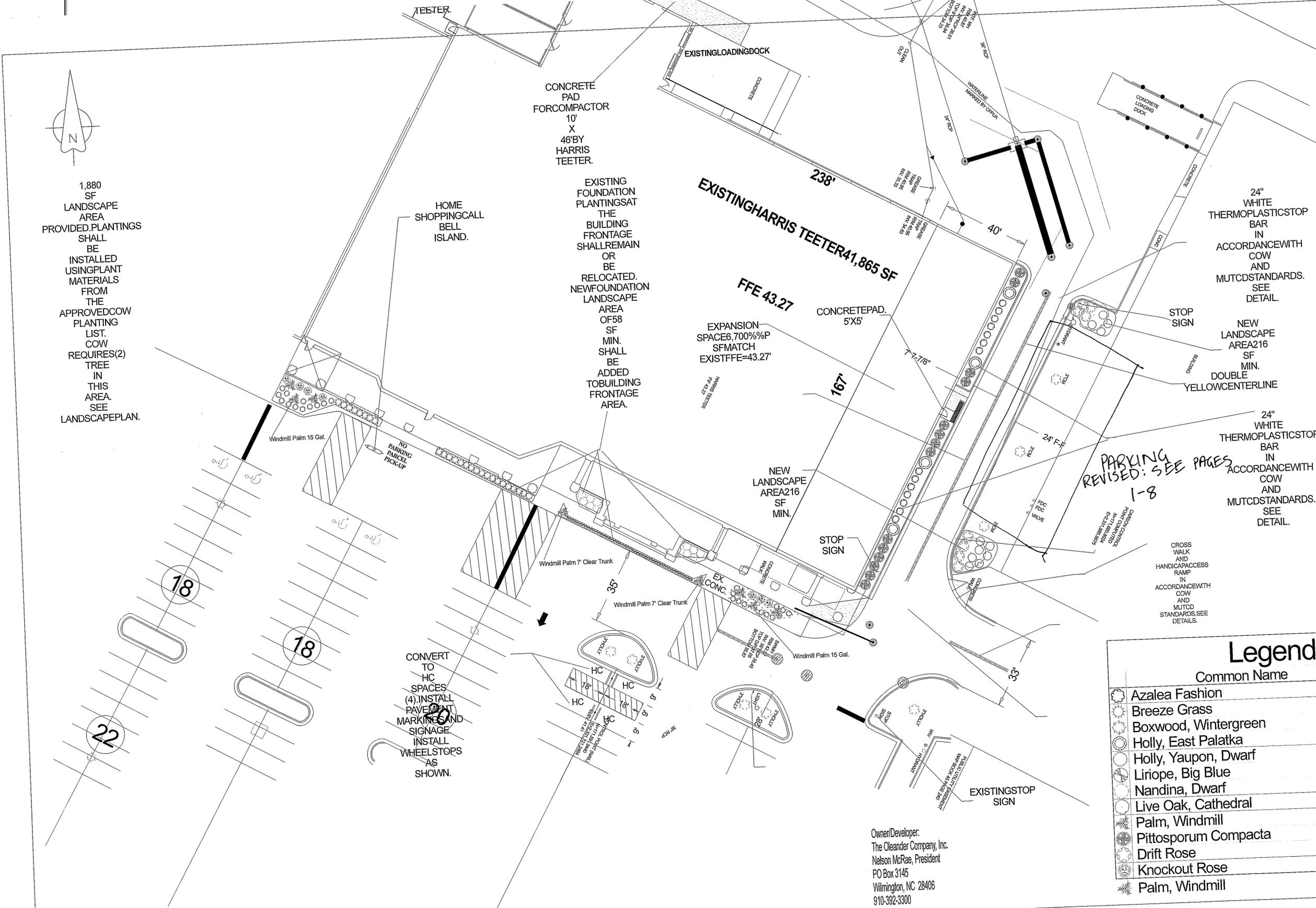


I:\Projects\2011\11048 Main\Total Expansion of Hanover Center\11048 Main\11048 Main.dwg, 9/12/11 1:35:45 PM



1,880 SF LANDSCAPE AREA PROVIDED. PLANTINGS SHALL BE INSTALLED USING PLANT MATERIALS FROM THE APPROVED COW PLANTING LIST. COW REQUIRES (2) TREE IN THIS AREA. SEE LANDSCAPE PLAN.

SITE DATA TABLE	
USE:	GROCERY STORE
HANDOVER CENTER SITE AREA:	30.10 ACRES
SITE DRAINAGE AREA:	0.305691 ACRES (13,308 SF)
PARCEL ID#:	R02617-001-001-000
MAP ID#:	513717.12.2034.000
ZONING:	URBAN
CAMA LAND USE:	RB REGIONAL BUSINESS
BUILDING SETBACKS (REQUIRED):	FRONT SETBACK: 25'
	INTERIOR SIDE SETBACK: 0'
	CORNER SIDE SETBACK: 25'
	REAR SETBACKS: 15'
	FRONT SETBACK: 300'
	SIDE SETBACK EAST: 32'
	REAR SETBACKS: 375'
BUILDING SETBACKS (PROPOSED):	
MAX. LOT COVERAGE:	40%
MAX. BUILDING HEIGHT:	35'
BUILDING CONSTRUCTION TYPE:	11B
BUILDING HEIGHT:	12 TO EAVES
BUILDING ADDITION SQUARE FOOTAGE:	8,700 SF
EXISTING BUILDING SQUARE FOOTAGE:	41,865 SF
TOTAL:	48,565 SF
PARKING REQUIREMENT:	200/SF MAX. 4,000/SF MIN.
PARKING REQ'D. RETAIL:	243 MAX / 122 MIN. REQUIRED
TOTAL PARKING REQUIRED:	
PARKING EXISTING:	223 (10 ARE HC)
PARKING LOST:	28 (6 ARE HC)
PARKING PROPOSED:	201 (8 ARE HC)
IMPERVIOUS AREA:	
PROJECT AREA: 13,308 SF	LANDSCAPE AREA (WITHIN PROJECT AREA):
EXISTING IMPERVIOUS AREA: 12,212 SF	INTERIOR LANDSCAPING EXISTING:
EXISTING LANDSCAPING: 1,096 SF	LANDSCAPING REMOVED:
NEW LANDSCAPING: 1,096 SF	LANDSCAPING PROPOSED:
TOTAL LANDSCAPING: 2,192 SF	TOTAL LANDSCAPING: 2,192 SF
ASPHALT: 1,563 SF	CONCRETE: 629 SF
CURB: 8,670 SF	GRASS: 1,005 SF
AND GUTTER: 8,670 SF	PERCENTAGE REQUIRED IN RB FOR EXPANSION:
PERCENTAGE REQUIRED IN RB FOR EXPANSION:	
ASPHALT: 1,563 SF	
CONCRETE: 629 SF	
CURB: 8,670 SF	
AND GUTTER: 8,670 SF	
TOTAL: 2,192 SF	
PROJECT AREA: 13,308 SF	LANDSCAPE AREA (OUTSIDE PROJECT AREA):
EXISTING IMPERVIOUS AREA: 12,212 SF	INTERIOR LANDSCAPING (2):
EXISTING LANDSCAPING: 1,096 SF	LANDSCAPING EXISTING:
NEW LANDSCAPING: 1,096 SF	LANDSCAPING PROPOSED:
TOTAL LANDSCAPING: 2,192 SF	TOTAL LANDSCAPING: 2,192 SF
ASPHALT: 1,563 SF	CONCRETE: 629 SF
CURB: 8,670 SF	GRASS: 1,005 SF
AND GUTTER: 8,670 SF	PERCENTAGE REQUIRED IN RB FOR EXPANSION:
PERCENTAGE REQUIRED IN RB FOR EXPANSION:	
ASPHALT: 1,563 SF	
CONCRETE: 629 SF	
CURB: 8,670 SF	
AND GUTTER: 8,670 SF	
TOTAL: 2,192 SF	



PARKING REVISED: SEE PAGES 1-8

Legend			
Common Name	Size	Qty	
Azalea Fashion	3 Gal.	14	Shrub, 15"ht
Breeze Grass	3 Gal.	24	Shrub, 12"ht
Boxwood, Wintergreen	3 Gal.	26	Shrub, 15"ht
Holly, East Palatka	2" Cal, 8'ht	4	Small Tree
Holly, Yaupon, Dwarf	3 Gal.	11	Shrub, 12"ht
Liriope, Big Blue	1 Gal.	48	Groundcover
Nandina, Dwarf	3 Gal.	10	Shrub, 15"ht
Live Oak, Cathedral	3" Cal, 12'ht	2	Large Tree
Palm, Windmill	15 Gal.	8	Small Tree, 3-4'ht.
Pittosporum Compacta	3 Gal.	14	Shrub, 15"ht
Drift Rose	3 Gal.	8	Groundcover
Knockout Rose	3 Gal.	7	Shrub, 15"ht
Palm, Windmill	2" Cal, 8'ht	2	Small Tree, 8'ht.

Approved Const. Plan
 Planning: JAB
 Public Utilities: n/a
 Traffic: OK per 10/30 email
 Date: 11-2-12

Owner/Developer:
 The Oleander Company, Inc.
 Nelson McRae, President
 PO Box 3145
 Wilmington, NC 28406
 910-392-3300

Revision #:
 Date: 11/18/2011

Scale:
 0' 1" = 20' 0"

Landscape Plan: 3501 Oleander Dr. Suite 18
 Harris Teeter Expansion

Landscape Design by: James Freeman - NCLC# 408
 Freeman Landscape, Inc.