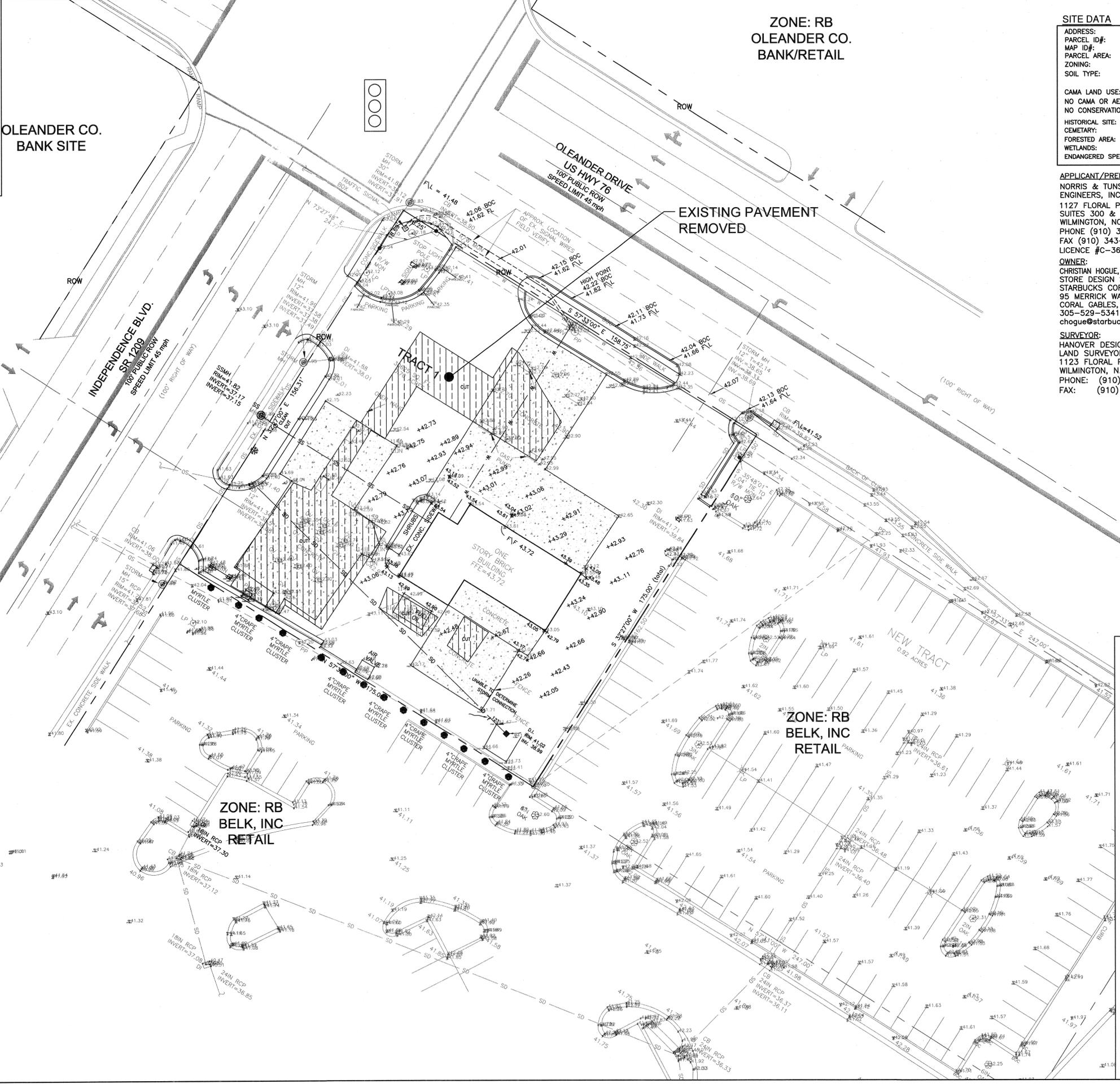


ZONES FOR PARCEL
#R05420-003-003-000
O&I-1(SD), MF-H, R-15



SITE DATA

ADDRESS:	3502 OLEANDER DRIVE
PARCEL ID#:	R05517-008-008-000
MAP ID#:	313717.01.4745.000
PARCEL AREA:	0.70 AC
ZONING:	RB
SOIL TYPE:	Le: LEON SAND Mu: MURVILLE FINE SAND
CAMA LAND USE:	URBAN
NO CAMA OR AEC SETBACKS:	NONE
NO CONSERVATION RESOURCES OR SETBACKS:	NONE
HISTORICAL SITE:	NONE
CEMETARY:	NONE
FORESTED AREA:	NONE
WETLANDS:	NONE WITHIN SITE AREA
ENDANGERED SPECIES/HABITAT:	NONE REPORTED

APPLICANT/PREPARER OF PLAN:
NORRIS & TUNSTALL CONSULTING ENGINEERS, INC.
1127 FLORAL PARKWAY
SUITES 300 & 400
WILMINGTON, NC, 28403
PHONE (910) 343-9653
FAX (910) 343-9604
LICENCE #C-3641

OWNER:
CHRISTIAN HOGUE, DESIGN MANAGER
STORE DESIGN SOUTHEAST
STARBUCKS COFFEE COMPANY
95 MERRICK WAY, SUITE 650
CORAL GABLES, FL 33134
305-529-5341
chogue@starbucks.com

SURVEYOR:
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS, LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
FAX: (910) 343-9941

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	
		© 2012 NORRIS & TUNSTALL	

INVENTORY SITE PLAN
STARBUCKS - STORE #18295
3502 OLEANDER DR.
WILMINGTON, N. C.

OWNER/DEVELOPER:
MR. NELSON MAGRAE, PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC, 28406
910 392-3300
910 392-5123

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.
1127 FLORAL PARKWAY
SUITES 300 & 400
WILMINGTON, NC 28403
PHONE (910) 343-9653
FAX (910) 343-9604
office@nkteng.com
licence #C-3641

- NOTES**
1. AREA COMPUTED BY COORDINATE METHOD
 2. ALL DISTANCES ARE HORIZONTAL
 3. FOR REFERENCE SEE DEED BOOK 1608 PAGE 354
 4. SURVEYED AUGUST 13, 2007
 5. 0.70 ACRES TOTAL AREA
 6. THIS PROPERTY IS NOT LOCATED WITHIN 2000' OF AN EXISTING N.C. GRID MONUMENT
 7. ELEVATIONS BASED ON NAVD 88.
- LEGEND**
- E.I.P. = EXISTING IRON PIPE
 - MH = MAN HOLE
 - GV = GAS VALVE
 - CB = CATCH BASIN
 - PP = POWER POLE
 - LP = LIGHT POLE
 - FH = FIRE HYDRANT
 - R/W = RIGHT OF WAY
 - WM = WATER MAIN
 - WV = WATER VALVE
 - = OVER HEAD POWER
 - + = SPOT ELEVATION

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 _____

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

Date: _____ Permit # _____

Signed: _____

NODENR PWSS WATER PERMIT #: _____ GPD

WATER CAPACITY: _____ GPD

DWQ SEWER PERMIT #: _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

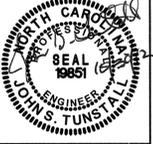
SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

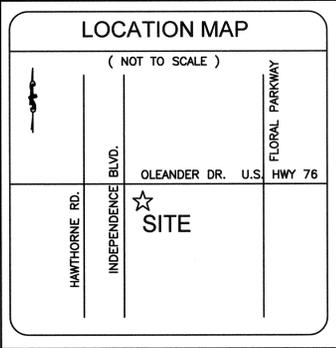


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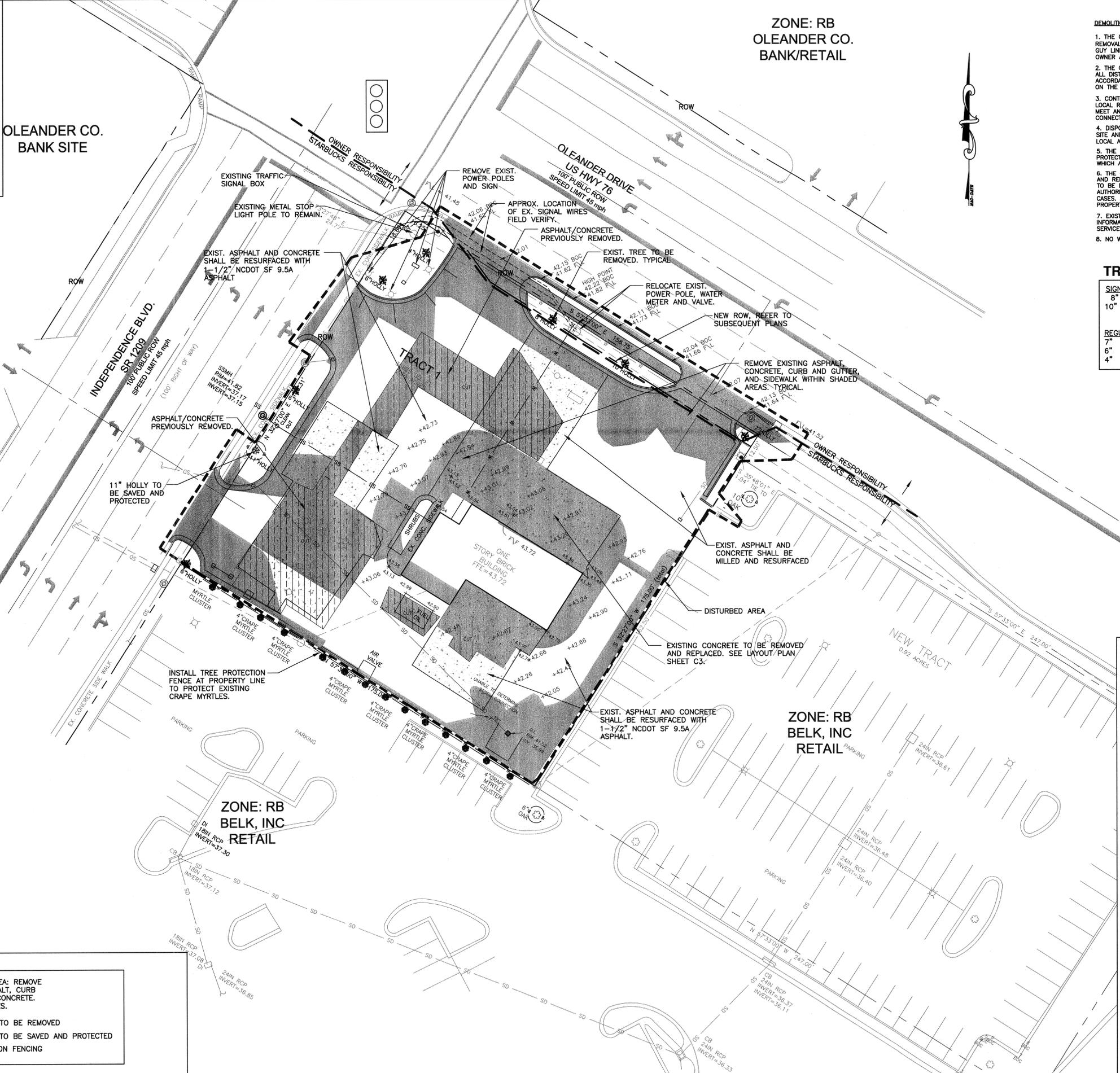
DES. JST
CHK. JPN
DRWN. NKS

DATE 10/30/12





ZONES FOR PARCEL #R05420-003-003-000 O&I-1(SD), MF-H, R-15



- DEMOLITION NOTES:**
1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REMOVAL OR RELOCATION OF ANY EXISTING UTILITY POLES / GUY LINES, LIGHT POLES, TELEPHONE PEDESTALS WITH THE OWNER AND THE APPLICABLE UTILITY COMPANY AS REQUIRED.
 2. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS AND SLOPES ON AND OFF SITE IN ACCORDANCE WITH THE EROSION CONTROL MEASURES SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS.
 3. CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.
 4. DISPOSAL: DEMOLISHED MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.
 5. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION WHICH ARE TO REMAIN IN SERVICE.
 6. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES TO BE DEMOLISHED WITH APPLICABLE AGENCIES AND AUTHORITIES. AGENCY PROCEDURES SHALL BE FOLLOWED IN ALL CASES. AT A MINIMUM UTILITIES SHALL BE CAPPED AT THE PROPERTY LINE.
 7. EXISTING BOUNDARY, TOPOGRAPHIC AND TREE SURVEY INFORMATION FROM SURVEY BY HANOVER DESIGN SERVICES AND PROVIDED BY THE OWNER.
 8. NO WETLANDS EXIST WITHIN THE SITE AREA.

TREE REMOVAL TABLE

SIGNIFICANT HOLLIES	
8"	(1)
10"	(1)

REGULATED HOLLIES	
7"	(3)
6"	(3)
4"	(1)

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: _____

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

Date: _____ Permit #: _____

Signed: _____

NCDENR PWSS WATER PERMIT #: _____

WATER CAPACITY: _____ GPD

DWQ SEWER PERMIT #: _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

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



LEGEND

	DEMOLITION AREA: REMOVE EXISTING ASPHALT, CURB AND GUTTER, CONCRETE. RELOCATE TREES.
	EXISTING TREE TO BE REMOVED
	EXISTING TREE TO BE SAVED AND PROTECTED
	TREE PROTECTION FENCING

BY	DESCRIPTION	DATE	REVISIONS

DEMOLITION AND TREE PLAN
STARBUCKS - STORE #18295
3502 OLEANDER DR.
WILMINGTON, N. C.

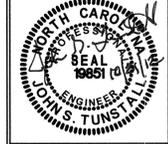
OWNER/DEVELOPER
MR. NELSON MACRAE, PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC. 28406
910.392.3300
910.392.5123

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.
1127 FLORAL PARKWAY
SUITES 300 & 400
WILMINGTON, NC 28403
PHONE (910) 343-9653
FAX (910) 343-9604
office@nrteng.com
license #C-3641

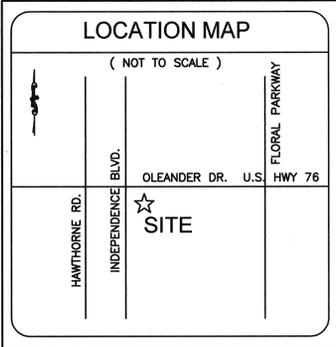
12040

DES. JST
CHK. JPN
DRWN. NKS

DATE 10/31/12



C1



ZONES FOR PARCEL
#R05420-003-003-000
O&I-1(SD), MF-H, R-15

ZONE: RB
OLEANDER CO.
BANK/RETAIL

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 _____



Public Services • Engineering Division
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____
 Signed: _____

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

SYMBOL	DATE	DESCRIPTION	BY

GRADING, DRAINAGE AND EROSION
CONTROL PLAN
STARBUCKS - STORE #18295
3502 OLEANDER DR.
WILMINGTON, N. C.

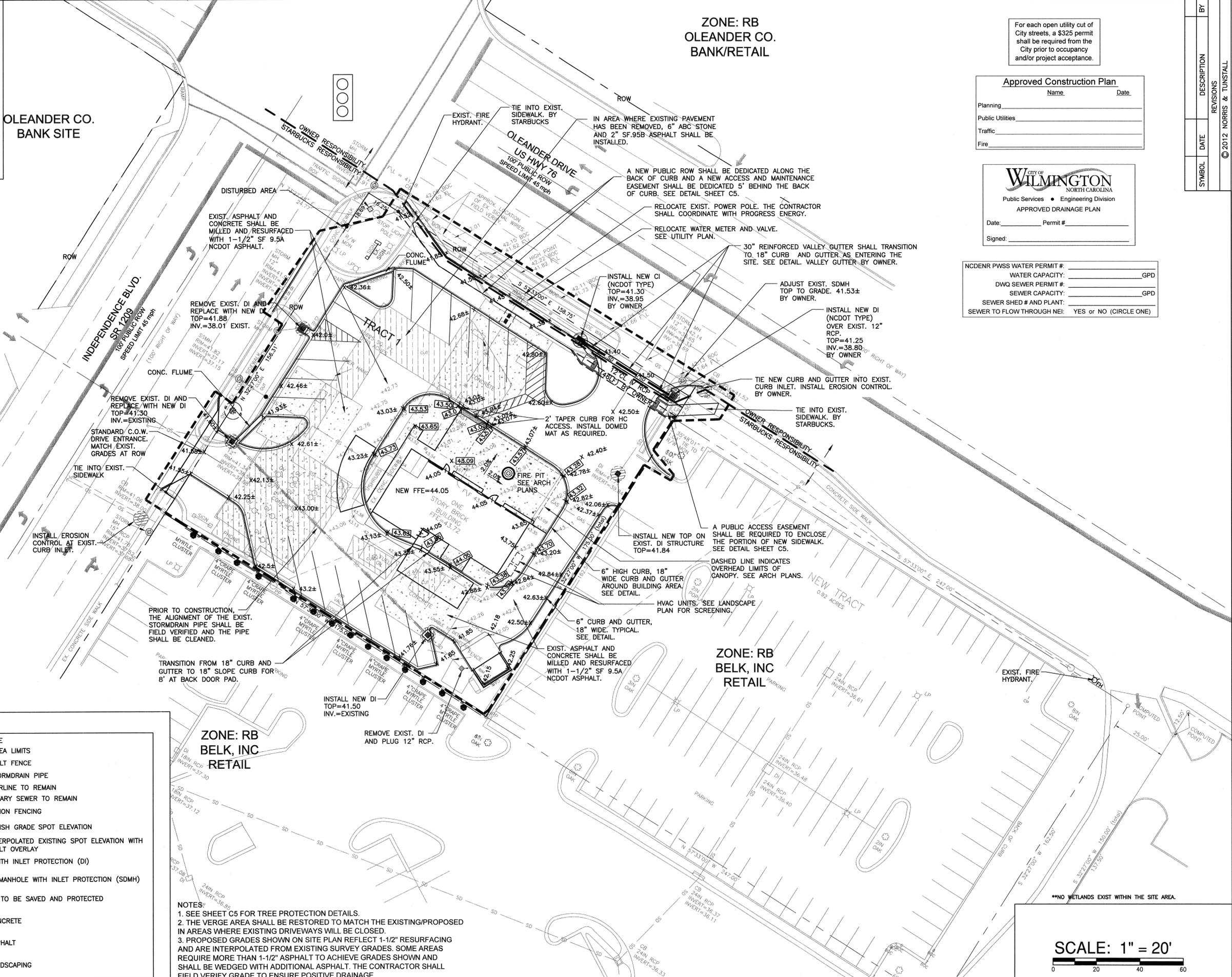
OWNER/DEVELOPER
MR. NELSON MAGRAE, PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC, 28406
910 392-3300
910 392-5123

NORRIS & TUNSTALL
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1127 FLORAL PARKWAY
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WILMINGTON, NC 28403
PHONE (910) 343-9653
FAX (910) 343-9604
office@nteng.com
license #0-5941

12040
DES. JST
CHK. JPN
DRWL. NKS
DATE 11/20/12



C2



OLEANDER CO.
BANK SITE

INDEPENDENCE BLVD.
SR 120B
100' PUBLIC ROW
SPEED LIMIT 45 mph

OLEANDER DRIVE
US HWY 76
100' PUBLIC ROW
SPEED LIMIT 45 mph

ZONE: RB
BELK, INC
RETAIL

ZONE: RB
BELK, INC
RETAIL

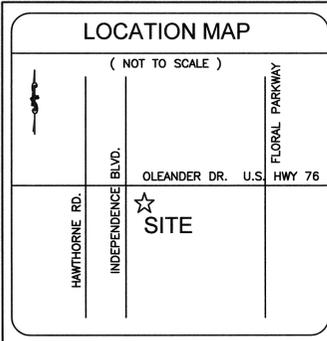
LEGEND

- PROPERTY LINE
- DISTURBED AREA LIMITS
- TEMPORARY SILT FENCE
- PROPOSED STORMDRAIN PIPE
- EXISTING WATERLINE TO REMAIN
- EXISTING SANITARY SEWER TO REMAIN
- TREE PROTECTION FENCING
- PROPOSED FINISH GRADE SPOT ELEVATION
- PROPOSED INTERPOLATED EXISTING SPOT ELEVATION WITH 1-1/2" ASPHALT OVERLAY
- DROP INLET WITH INLET PROTECTION (DI)
- STORM DRAIN MANHOLE WITH INLET PROTECTION (SDMH)
- EXISTING TREE TO BE SAVED AND PROTECTED
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED LANDSCAPING

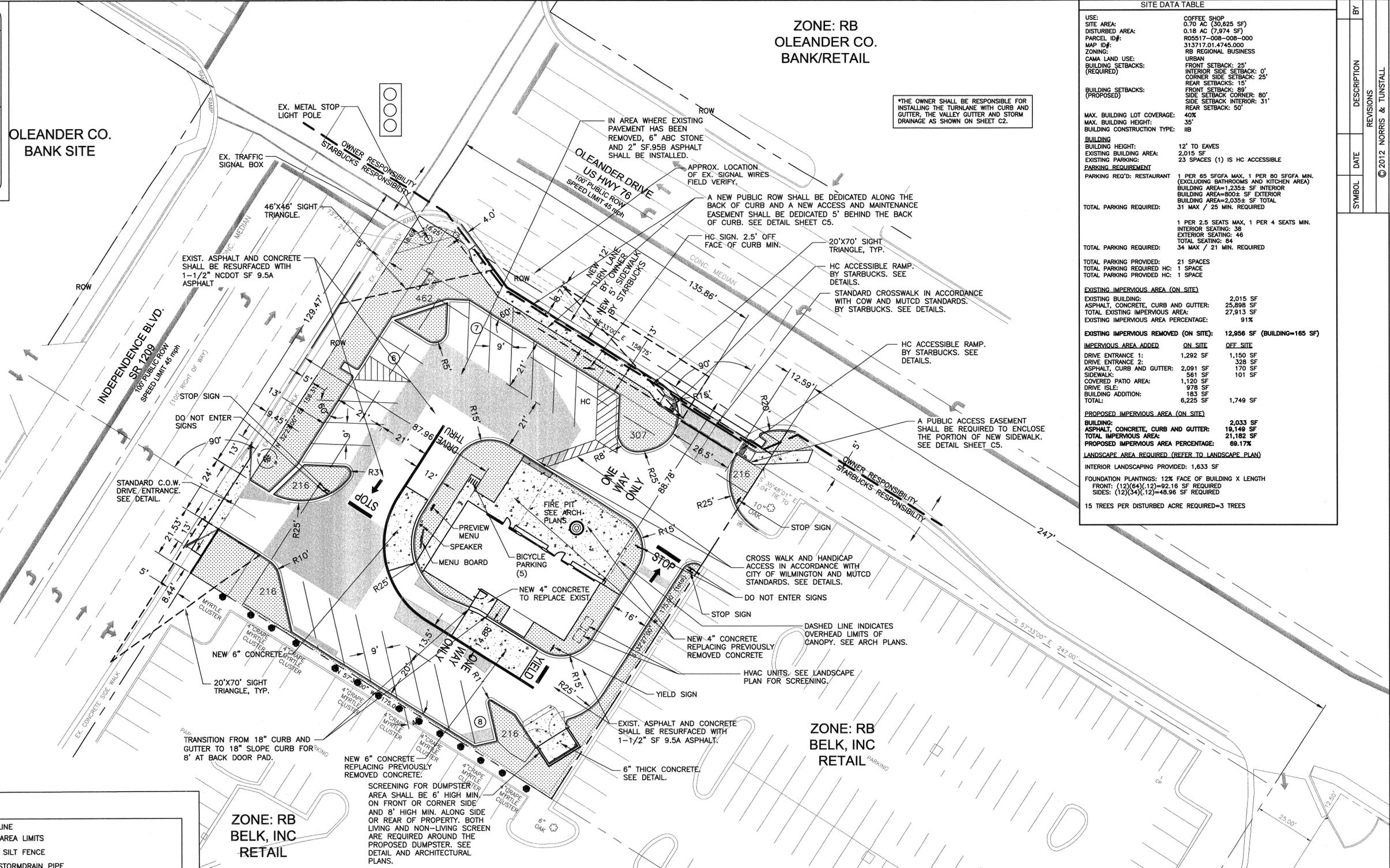
NOTES:
 1. SEE SHEET C5 FOR TREE PROTECTION DETAILS.
 2. THE VERGE AREA SHALL BE RESTORED TO MATCH THE EXISTING/PROPOSED IN AREAS WHERE EXISTING DRIVEWAYS WILL BE CLOSED.
 3. PROPOSED GRADES SHOWN ON SITE PLAN REFLECT 1-1/2" RESURFACING AND ARE INTERPOLATED FROM EXISTING SURVEY GRADES. SOME AREAS REQUIRE MORE THAN 1-1/2" ASPHALT TO ACHIEVE GRADES SHOWN AND SHALL BE WEDGED WITH ADDITIONAL ASPHALT. THE CONTRACTOR SHALL FIELD VERIFY GRADE TO ENSURE POSITIVE DRAINAGE.



**NO WETLANDS EXIST WITHIN THE SITE AREA.



ZONES FOR PARCEL
#R05420-003-003-000
O&I-1(SD), MF-H, R-15



SITE DATA TABLE

USE:	COFFEE SHOP
SITE AREA:	0.70 AC (30,625 SF)
DISTURBED AREA:	0.18 AC (7,974 SF)
PARCEL ID#:	R05517-008-008-000
MAP ID#:	313717.01.4745.000
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'
BUILDING SETBACKS: (PROPOSED)	FRONT SETBACK: 89' SIDE SETBACK CORNER: 80' SIDE SETBACK INTERIOR: 31' REAR SETBACK: 50'
MAX. BUILDING LOT COVERAGE:	40%
MAX. BUILDING HEIGHT:	35'
BUILDING CONSTRUCTION TYPE:	II-B
BUILDING HEIGHT:	12' TO EAVES
EXISTING BUILDING AREA:	2,015 SF
EXISTING PARKING:	23 SPACES (1) IS HC ACCESSIBLE
PARKING REQUIREMENT	
PARKING REQ'D: RESTAURANT	1 PER 85 SF GFA MAX. 1 PER 80 SF GFA MIN. (EXCLUDING BATHROOMS AND KITCHEN AREA)
TOTAL PARKING REQUIRED:	BUILDING AREA=1,235± SF INTERIOR BUILDING AREA=800± SF EXTERIOR BUILDING AREA=2,035± SF TOTAL 31 MAX / 25 MIN. REQUIRED
TOTAL PARKING PROVIDED:	21 SPACES
TOTAL PARKING REQUIRED HC:	1 SPACE
TOTAL PARKING PROVIDED HC:	1 SPACE
EXISTING IMPERVIOUS AREA (ON SITE):	
EXISTING BUILDING:	2,015 SF
ASPHALT, CONCRETE, CURB AND GUTTER:	25,898 SF
TOTAL EXISTING IMPERVIOUS AREA:	27,913 SF
EXISTING IMPERVIOUS AREA PERCENTAGE:	91%
EXISTING IMPERVIOUS AREA (ON SITE):	12,956 SF (BUILDING=165 SF)
IMPERVIOUS AREA ADDED	ON SITE OFF SITE
DRIVE ENTRANCE 1:	1,292 SF 1,150 SF
DRIVE ENTRANCE 2:	328 SF 328 SF
ASPHALT, CURB AND GUTTER:	2,091 SF 170 SF
SIDEWALK:	581 SF 101 SF
COVERED PATIO AREA:	1,120 SF
DRIVE ISLE:	978 SF
BUILDING ADDITION:	183 SF
TOTAL:	6,225 SF 1,749 SF
PROPOSED IMPERVIOUS AREA (ON SITE):	
BUILDING:	2,033 SF
ASPHALT, CONCRETE, CURB AND GUTTER:	18,149 SF
TOTAL IMPERVIOUS AREA:	21,182 SF
PROPOSED IMPERVIOUS AREA PERCENTAGE:	69.17%
LANDSCAPE AREA REQUIRED (REFER TO LANDSCAPE PLAN)	
INTERIOR LANDSCAPING PROVIDED:	1,633 SF
FOUNDATION PLANTINGS: 12% FACE OF BUILDING X LENGTH	
FRONT: (12)(64)(12)=92.16 SF REQUIRED	
SIDES: (12)(34)(12)=48.96 SF REQUIRED	
15 TREES PER DISTURBED ACRE REQUIRED=3 TREES	

LAYOUT PLAN
STARBUCKS - STORE #18295
3502 OLEANDER DR.
WILMINGTON, N. C.

OWNER/DEVELOPER
MR. NELSON MACRAE, PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC. 28406
910 392-3300
910 392-5123

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.

1127 FLORAL PARKWAY
SUITE 300 & 400
WILMINGTON, NC 28403
PHONE (910) 343-9653
FAX (910) 343-9604
enr@nrt.com
enrce@nrt.com

12040

DES. JST
CHK. JPN
DRWN. NKS

DATE 11/20/12

SEAL
11/20/12
NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NORRIS & TUNSTALL

C3

LEGEND

---	PROPERTY LINE
- - - -	DISTURBED AREA LIMITS
X X X X	TSF
SD SD	PROPOSED STORM DRAIN PIPE
W W	EXISTING WATERLINE TO REMAIN
SS SS	EXISTING SANITARY SEWER TO REMAIN
---	TREE PROTECTION FENCING
X 22.50	PROPOSED FINISH GRADE SPOT ELEVATION
X 22.50±	PROPOSED INTERPOLATED EXISTING SPOT ELEVATION WITH 1-1/2" ASPHALT OVERLAY
⊠	DROP INLET WITH INLET PROTECTION (DI)
⊠	STORM DRAIN MANHOLE WITH INLET PROTECTION (SDMH)
⊠	EXISTING TREE TO BE SAVED AND PROTECTED
▒	PROPOSED CONCRETE
▒	PROPOSED ASPHALT
▒	PROPOSED LANDSCAPING

ZONE: RB BELK, INC RETAIL

NOTES:

1. TACTILE WARNING MATS ARE TO BE INSTALLED ON ALL WHEELCHAIR RAMPS.
2. A LANDSCAPE PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN.
3. ALL PAVEMENT MARKING ARROWS SHALL BE THERMOPLASTIC.
4. THE VERGE AREA SHALL BE RESTORED TO MATCH THE EXISTING/PROPOSED IN AREAS WHERE EXISTING DRIVEWAYS WILL BE CLOSED.
5. ALL PROPOSED VEGETATION WITHIN ALL THE SIGHT TRIANGLES SHALL NOT INTERFERE WITH VISUAL SIGHT LINES FROM 30' - 10'.

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 DRAINAGE PLAN

City of WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED DRAINAGE PLAN

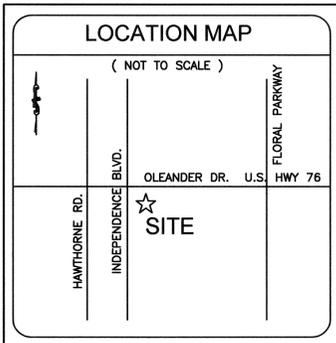
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan

Name	Date
Planning	
Public Utilities	
Traffic	
Fire	

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





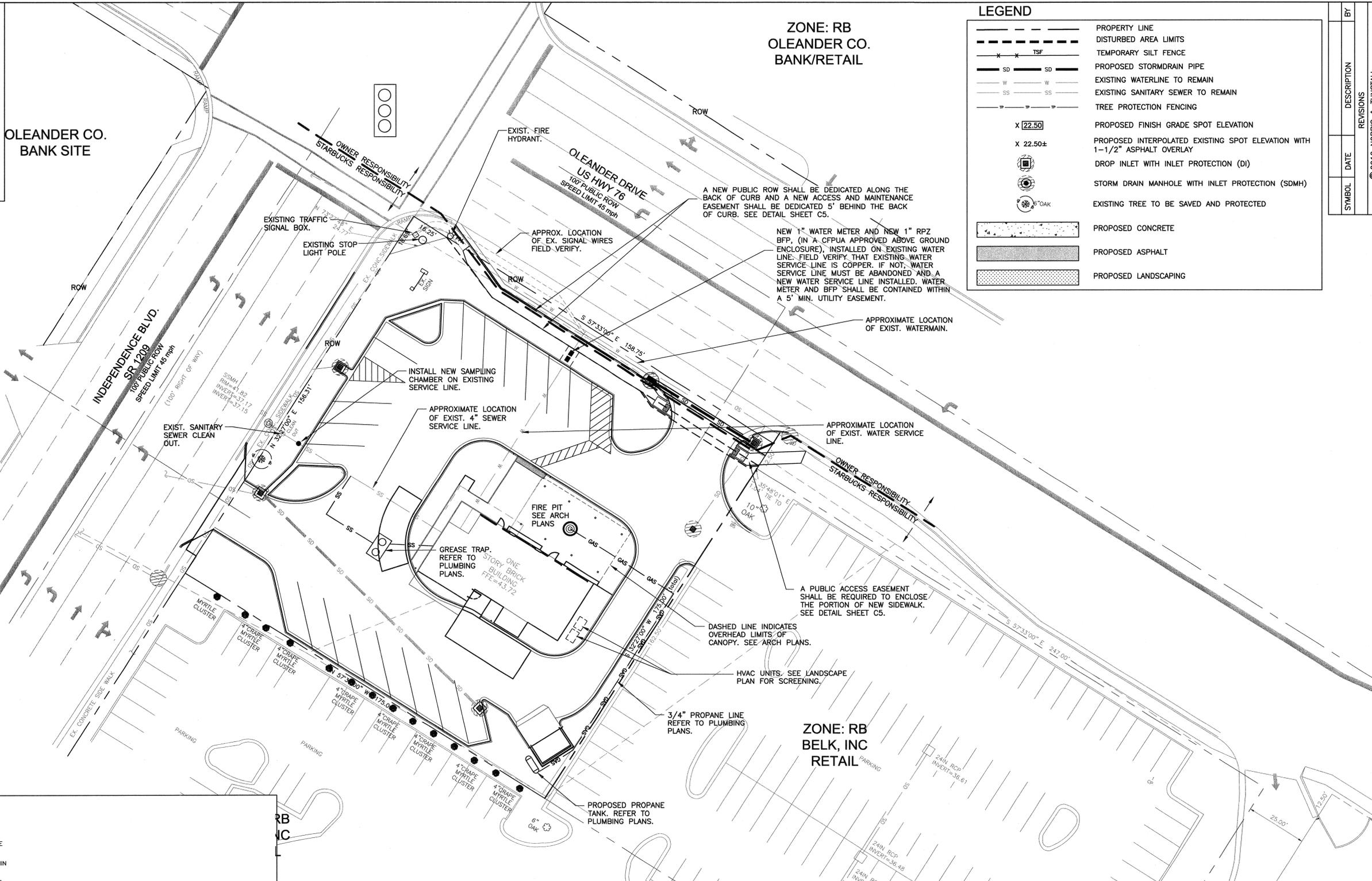
ZONES FOR PARCEL
#R05420-003-003-000
O&I-1(SD), MF-H, R-15

OLEANDER CO.
BANK SITE

ZONE: RB
OLEANDER CO.
BANK/RETAIL

LEGEND

	PROPERTY LINE
	DISTURBED AREA LIMITS
	TEMPORARY SILT FENCE
	PROPOSED STORMDRAIN PIPE
	EXISTING WATERLINE TO REMAIN
	EXISTING SANITARY SEWER TO REMAIN
	TREE PROTECTION FENCING
	PROPOSED FINISH GRADE SPOT ELEVATION
	PROPOSED INTERPOLATED EXISTING SPOT ELEVATION WITH 1-1/2" ASPHALT OVERLAY
	DROP INLET WITH INLET PROTECTION (DI)
	STORM DRAIN MANHOLE WITH INLET PROTECTION (SDMH)
	EXISTING TREE TO BE SAVED AND PROTECTED
	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPOSED LANDSCAPING



SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	
		© 2012 NORRIS & TUNSTALL	

UTILITY PLAN
OWNER/DEVELOPER
MR. NELSON MACRAE - PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC. 28406
910 992-3300
910 992-5123

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.
1127 FLORAL PARKWAY
SUITE 200 & 400
WILMINGTON, NC 28403
PHONE (910) 343-8653
FAX (910) 343-9604
office@njcceng.com
license # 9-3691

12040

DES. JST
CHK. JPN
DRAW. NKS

DATE 11/20/12

C4

- UTILITY NOTES FOR FIRE HYDRANTS
1. FIRE HYDRANTS MUST BE WITHIN 150' OF THE FIRE DEPARTMENT CONNECTION.
 2. THE FIRE DEPARTMENT CONNECTION MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
 3. LANDSCAPING CANNOT BLOCK OR IMPEDE THE FIRE DEPARTMENT CONNECTIONS OR FIRE HYDRANTS. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT CONNECTION AND THE FIRE HYDRANT.
 4. FIRE HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
 5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS.
 6. THE CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
 7. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.
 8. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.
 9. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.

- UTILITY NOTES:
1. BACKFLOW DEVICES SHALL USE A USC APPROVED WATTS 909 REDUCED PRESSURE ZONE BACKFLOW PREVENTOR OR APPROVED EQUAL. FIRE LINE SHALL USE A USC APPROVED WATTS 909 DOUBLE DETECTOR CHECK ASSY. OR APPROVED EQUAL.
 2. BUILDING CONSTRUCTION TYPE IS IIB.
 3. EXISTING PUBLIC SEWER SERVICE TO SERVE PROPOSED STARBUCKS.
 4. EXISTING PUBLIC WATER SERVICE TO SERVE PROPOSED STARBUCKS.
 5. PROPOSED WATER/SEWER USAGE:
 6. SURVEY AND BOUNDARY INFORMATION BY HANOVER DESIGN SERVICES, P.A.
 7. WETLANDS DO NOT EXIST WITHIN SITE AREA.
 8. WATER: 885 GPD/EMP.
SEWER: 885 GPD/EMP.
 9. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT SKEET CARR AT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.

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	

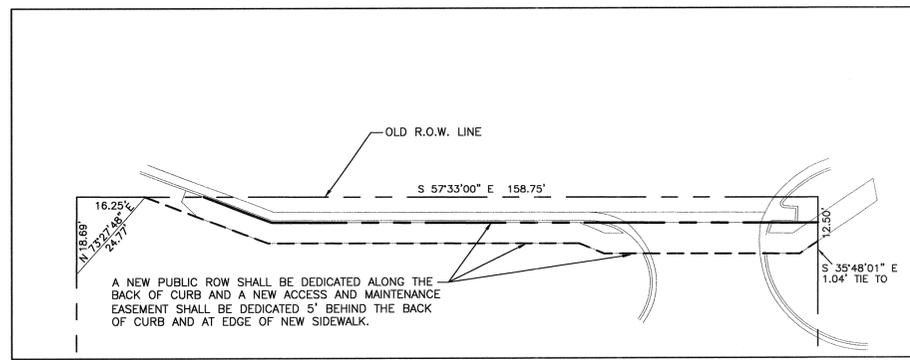
APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

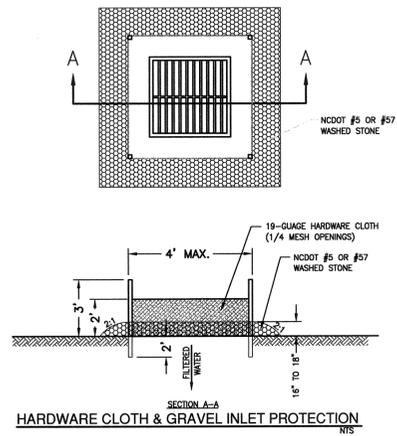
Signed: _____

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

SCALE: 1" = 20'



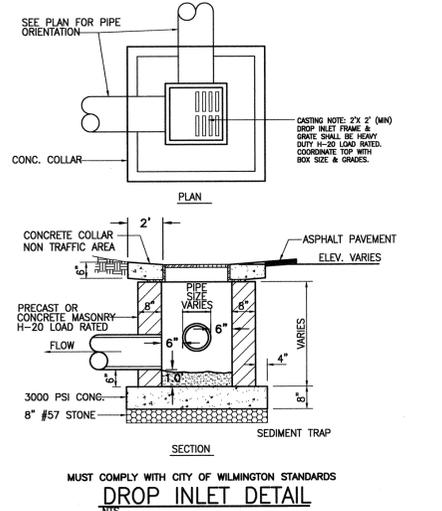
ACCESS EASEMENT AND R.O.W. DEDICATION DETAIL
SCALE: 1"=20'



HARDWARE CLOTH & GRAVEL INLET PROTECTION
NTS

CONSTRUCTION SEQUENCE:
 1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
 2. DRIVE 2\"/>

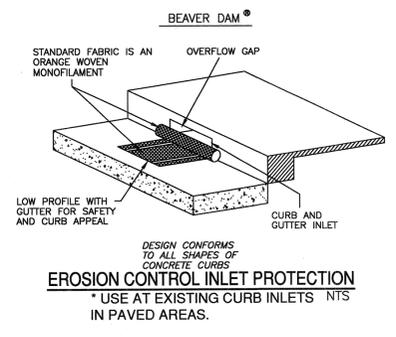
MAINTENANCE:
 INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL. CLEAR THE WIRE MESH OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.



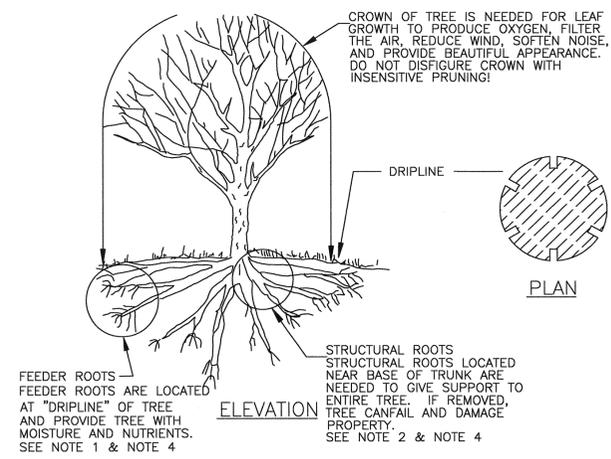
DROP INLET DETAIL
NTS
MUST COMPLY WITH CITY OF WILMINGTON STANDARDS

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 absorbents; place absorbent pillow on pouch, 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 to support the entire weight of the grate), place the grate into its frame (street side first), then lower back edge with dam 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 absorbents; remove and replace absorbent pillow when near saturation.

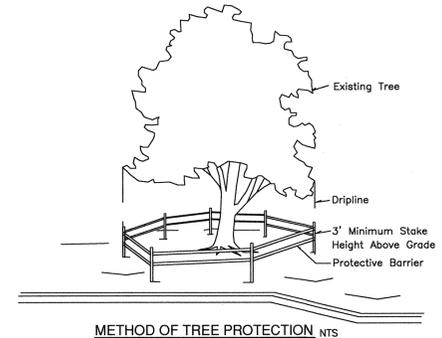


EROSION CONTROL INLET PROTECTION
* USE AT EXISTING CURB INLETS IN PAVED AREAS.



- TREE PROTECTION DURING CONSTRUCTION**
- DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO HEAVY MATERIALS SHALL BE STORED BENEATH TREES. RESULTS OF COMPACTION CAUSE WATER AND AIR NOT TO REACH THE ROOTS AND THE TREE WILL DIE. THESE \"FEEDING ROOTS\" OCCUR WELL AWAY FROM THE BASE OF THE TREE TO THE EDGE OF THE OVERHEAD BRANCH CANOPY. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. A PROTECTIVE BARRIER SHOULD PREVENT DAMAGE FROM OCCURRING DURING CONSTRUCTION.
 - NO CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK. THESE ARE ESSENTIAL IN SUPPORTING THE TREE AND HOLDING IT UPRIGHT IN HIGH WINDS. REMOVAL OF THESE ROOTS ALONG ONE SIDE IS OFTEN DONE BECAUSE OF A WALK, PAVING OR BUILDING WHICH IS BEING CONSTRUCTED.
 - AVOID CUT AND FILL WITHIN DIAMETER OF TREE CROWN DURING EXCAVATION.

METHOD OF TREE PROTECTION DURING CONSTRUCTION
SD 15-09
nts



METHOD OF TREE PROTECTION
NTS

CLEARLY mark the trees to be saved prior to construction and erect a protective barrier at the dripline.
 Dripline-The area of soil directly beneath the tree extending out to the tips of the outermost branches.

EROSION CONTROL NOTES AND MAINTENANCE PLAN

- ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF-INCH RAINFALL.
- ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.
- SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN WEEKLY.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX. WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE, THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF-FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED OR IS DAMAGED.
- SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
- SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.
- LAND QUALITY REQUIRES:**
 ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED, ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN, TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.
WATER QUALITY REQUIRES:
 ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND ALL HIGH QUALITY WATER (HQW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN FOURTEEN (14) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECT SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.
- BASIN OUTLET STRUCTURES AND SKIMMERS SHALL WITHDRAW WATER FROM THE SURFACE.

TREE PROTECTION NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING TREE PROTECTION FENCING AROUND THE EXISTING TREES BEING SAVED PRIOR TO BEGINNING ANY CONSTRUCTION WORK. THE CONTRACTOR SHALL SAWCUT ANY PERIMETER TREE ROOTS THAT CONFLICT WITH GRADING OPERATIONS. EXISTING TREES WILL BE REMOVED FROM THE SITE AS REQUIRED FOR CONSTRUCTION OF PONDS, ROADWAYS, ROAD IMPROVEMENTS, AND UTILITY INSTALLATION. ALL THE EXISTING VEGETATION AND TREES WILL REMAIN OUTSIDE THE DISTURBED AREA/CONSTRUCTION LIMITS.
- PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
- LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
- ANY TREES AND / OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
- NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.

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	

CITY OF WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
APPROVED DRAINAGE PLAN
 Date: _____ Permit # _____
 Signed: _____

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

BY	DESCRIPTION	DATE	SYMBOL
	REVISIONS		

NOTES AND DETAILS

OWNER/DEVELOPER
 MR. NELSON MAORAE, PRESIDENT
 THE OLEANDER COMPANY, INC.
 P.O. BOX 3145
 WILMINGTON, NC 28406
 910 392-3300
 910 392-5123

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, INC.

1127 FLORAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28403
 PHONE (910) 343-9653
 FAX (910) 343-9604
 office@nkteng.com
 license #0-3641

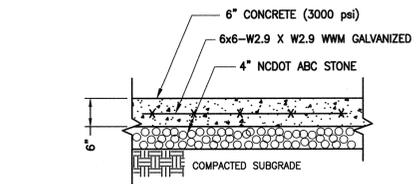
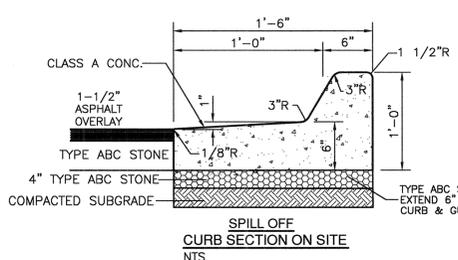
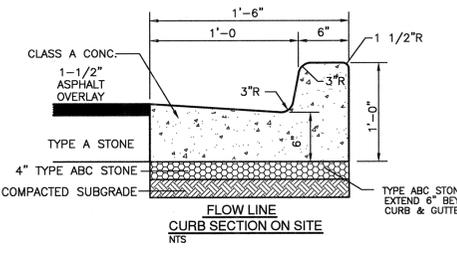
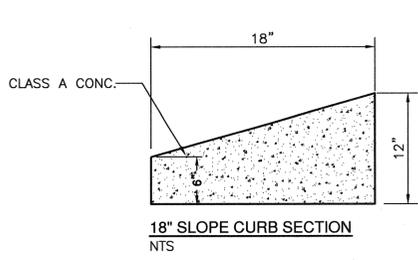
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 DRWN. NKS

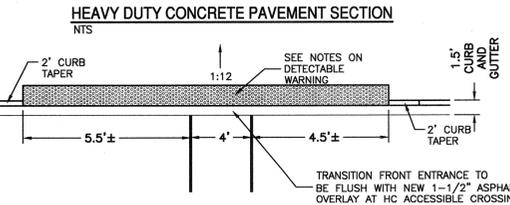
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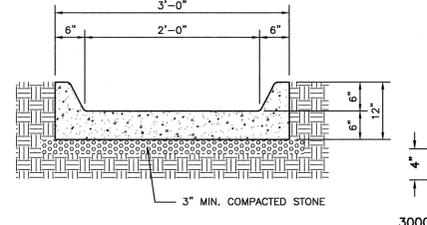


NOTES:
 1. CONTROL JOINTS SHALL BE EVERY 15 FT. (MAX.) AND EXPANSION JOINTS SHALL BE EVERY 50 FT. (MAX.)
 2. PAVEMENT SECTION MAY VARY DEPENDING UPON FIELD CONDITIONS. THE PAVING CONTRACTOR SHALL COORDINATE WITH OWNER REPRESENTATIVE AND GEOTECHNICAL ENGINEER TO DETERMINE ACTUAL PAVEMENT SECTION.

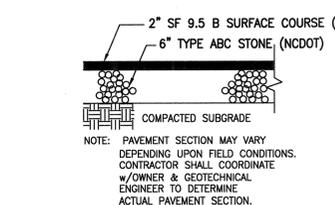
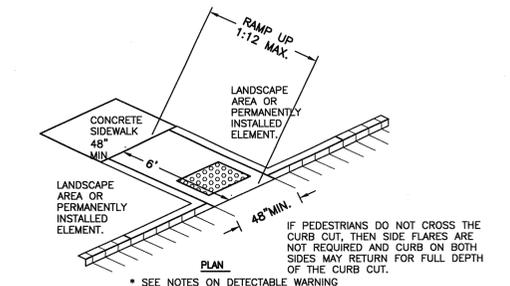


NOTE: CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.

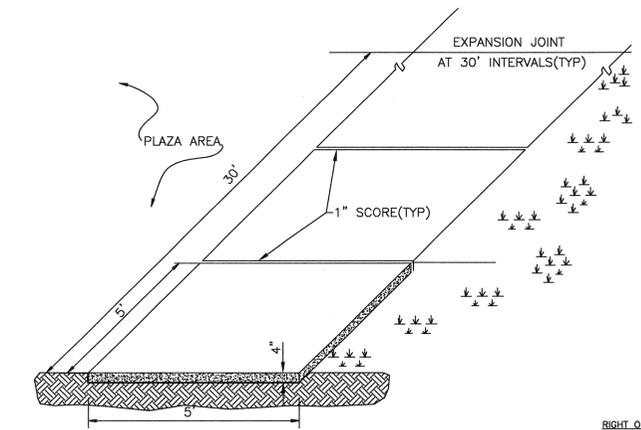
NOTE: CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.



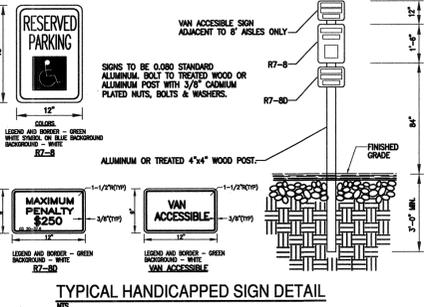
CONCRETE FLUME NTS
 REINFORCED VALLEY GUTTER DETAIL NTS



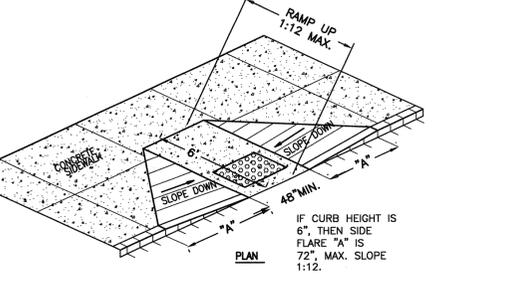
ASPHALT REPAIR PAVEMENT SECTION NTS



STANDARD SIDEWALK DETAIL SD 8-15 NOT TO SCALE



TYPICAL HANDICAPPED SIGN DETAIL NTS



TYPICAL SIDEWALK AND WHEEL CHAIR RAMP DETAIL NTS

- GENERAL NOTES**
- LOCATION OF WHEELCHAIR RAMPS:
 - 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 RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTERS AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
 - WHEELCHAIR RAMPS 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 RAMPS 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 RADI 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 RAMPS CITY OF WILMINGTON SD 8-09

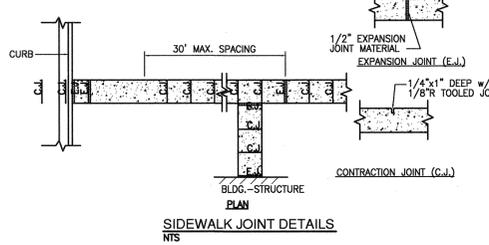
CITY OF WILMINGTON STANDARD NOTES

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-832-4849.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE TRAFFIC ENGINEER IN ACCORDANCE WITH MUTCD STANDARDS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBDIVIDER TO ERECT OFFICIAL STREET NAME SIGNS AT ALL INTERSECTIONS ASSOCIATED WITH THE SUBDIVISION IN ACCORDANCE WITH THE TECHNICAL STANDARDS AND SPECIFICATIONS MANUAL. THE SUBDIVIDER MAY ACQUIRE AND ERECT OFFICIAL STREET NAME SIGNS OR MAY CHOOSE TO CONTRACT WITH THE CITY TO INSTALL THE STREET SIGNS AND THE SUBDIVIDER SHALL PAY THE COST OF SUCH INSTALLATION. CONTACT TRAFFIC ENGINEERING AT 341-7888 TO DISCUSS INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. POSTED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 FOURTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
- ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING WILL BE REPLACED.
- CONTACT KAREN DIXON AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- PROJECT SHALL COMPLY WITH CFFPA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 343-3910 FOR INFORMATION.
- 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 CFFPA WATER SHALL COMPLY WITH CFFPA CROSS CONNECTION CONTROL REGULATIONS. CALL 332-6558 FOR INFORMATION.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CFFPA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCOCHR OR ASSE.
- WHEN PVC WATER MAINS AND/OR POLYETHYLENE SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED SINGLE STRAND COPPER WIRE INSTALLED THE ENTIRE LENGTH AND SECURED TO ALL VALVES. THIS WIRE IS TO BE ACCESSIBLE AT ALL FIRE HYDRANTS AND WATER METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
- THE NUMBER AND SPACING OF DRIVEWAYS FOR ALL INTERCONNECTED SITES WILL BE DETERMINED BY THE COMBINED FRONTAGE OF THE INTERCONNECTED PROPERTIES.
- UNDERGROUND FIRE LINE MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC ROW TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0898 FOR ADDITIONAL INFORMATION.

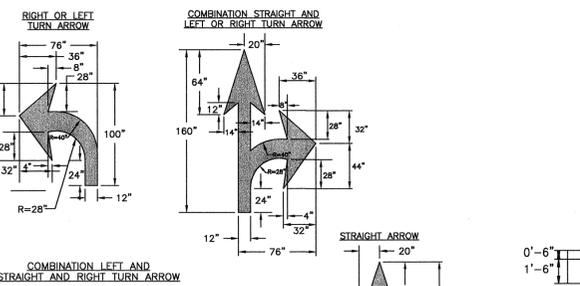
SITE WORK NOTES:

- THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.
- CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.
- CLEARING AND GRUBBING: REMOVE ALL TREES AS REQUIRED UNLESS OTHERWISE NOTED TO REMAIN, STUMPS, ROOTS, SHRUBBERY, ASPHALT, CONCRETE, STRUCTURES, BURIED UTILITIES, STORAGE TANKS, ETC. WITHIN LIMITS OF CONSTRUCTION.
- STRIPPING: BEFORE EXCAVATING OR FILLING, REMOVE ALL TOPSOIL, WOOD, LEAVES, AND ANY OTHER UNSUITABLE MATERIAL.
- MUCKING: REMOVE ANY SOFT, ORGANIC SILT MATERIALS AND EXISTING BURIED CONSTRUCTION DEBRIS AS REQUIRED AND FILL TO SUBGRADE ELEVATIONS WITH A CLEAN SELECT-FILL COMPACTED AS SPECIFIED.
- DISPOSAL: CLEARED, GRUBBED, STRIPPED OR EXCAVATED SPOIL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.
- BORROW MATERIAL: THE CONTRACTOR SHALL FURNISH BORROW MATERIAL REQUIRED FROM OFF SITE AND OBTAIN ALL REQUIRED PERMITS ASSOCIATED WITH BORROW OPERATIONS.
- FILL AND COMPACTATION: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROFFEROLLED. THE TOP 8" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ANY AREA WHICH PUMPS OR RUNS EXCESSIVELY SHOULD BE UNDERCUT AND REPLACED WITH A CLEAN, SILTY OR CLAYEY SAND HAVING A UNIFIED SOIL CLASSIFICATION OF SP, SM, OR SC. FILL MATERIAL 5" OUTSIDE OF BUILDING AREAS SHALL THEN BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IN AREAS WHERE NO STRUCTURAL FILL IS TO BE PLACED THE UPPER 12 INCHES OF IN-PLACE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IF THE MATERIAL IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTOR REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTION, IT SHALL BE HARROWED REPEATEDLY OR OTHERWISE AERATED WITH SUITABLE MATERIAL UNTIL OPTIMUM MOISTURE CONTENT IS OBTAINED. FILL SHALL BE PLACED IN SUCH A MANNER THAT THE SURFACE WILL DRAIN READILY AT ALL TIMES. SEE STRUCTURAL NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
- LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.
- EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY HANOVER DESIGN SERVICES AND PROVIDED BY OWNER.
- THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.
- ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.
- WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.
- SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.
- REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK". INSTALL PER MANUFACTURER'S REQUIREMENTS.
- USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.
- REFER TO THE PLUMBING DRAWINGS FOR LOCATION AND INVERTS OF NEW WASTE AND WATER LINES.

- NOTES:**
- SIDEWALK THICKNESS SHALL BE 4" UNLESS NOTED OTHERWISE.
 - CONSTRUCTION JOINTS (C.J.) SPACE SHALL BE AS SHOWN.
 - THICKEN SIDEWALK TO 6" AT DRIVEWAYS.
 - EXPANSION JOINTS (E.J.) SHALL BE USED WHERE IT ABUTS PAVEMENT WITH NO CURB.
 - 1/2" EXPANSION JOINT (E.J.) AND SNAP GAP EXPANSION JOINT COVERS ARE REQUIRED AT 50' MAX. AT SIDEWALK JUNCTIONS, IN STRUCTURES, AND NOTED ON PLANS.
 - PROVIDE A LAYER OF 1/2" FILL BETWEEN WALK AND ADJACENT PARALLEL CURB OR STRUCTURE.



SIDEWALK JOINT DETAILS NTS



PAVEMENT MARKINGS ARROW SYMBOLS SD 11-03

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

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Public Utilities _____

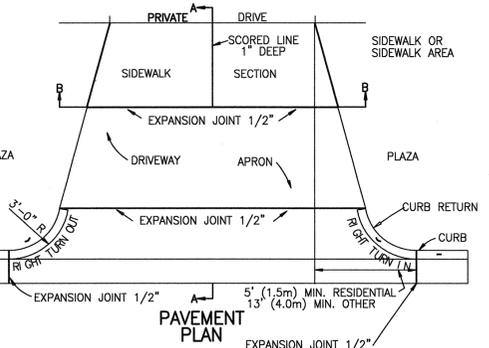
Traffic _____

Fire _____

Signed: _____

Public Services • Engineering Division
 APPROVED DRAINAGE PLAN

Date: _____ Permit # _____



STANDARD DRIVEWAY DETAIL NTS

NCDEN PWSS WATER PERMIT # _____

WATER CAPACITY: _____ GPD

DWO SEWER PERMIT # _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

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

BY	DESCRIPTION
SYMBOL	DATE

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 CONSULTING ENGINEERS, INC.
 1127 FLORAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28403

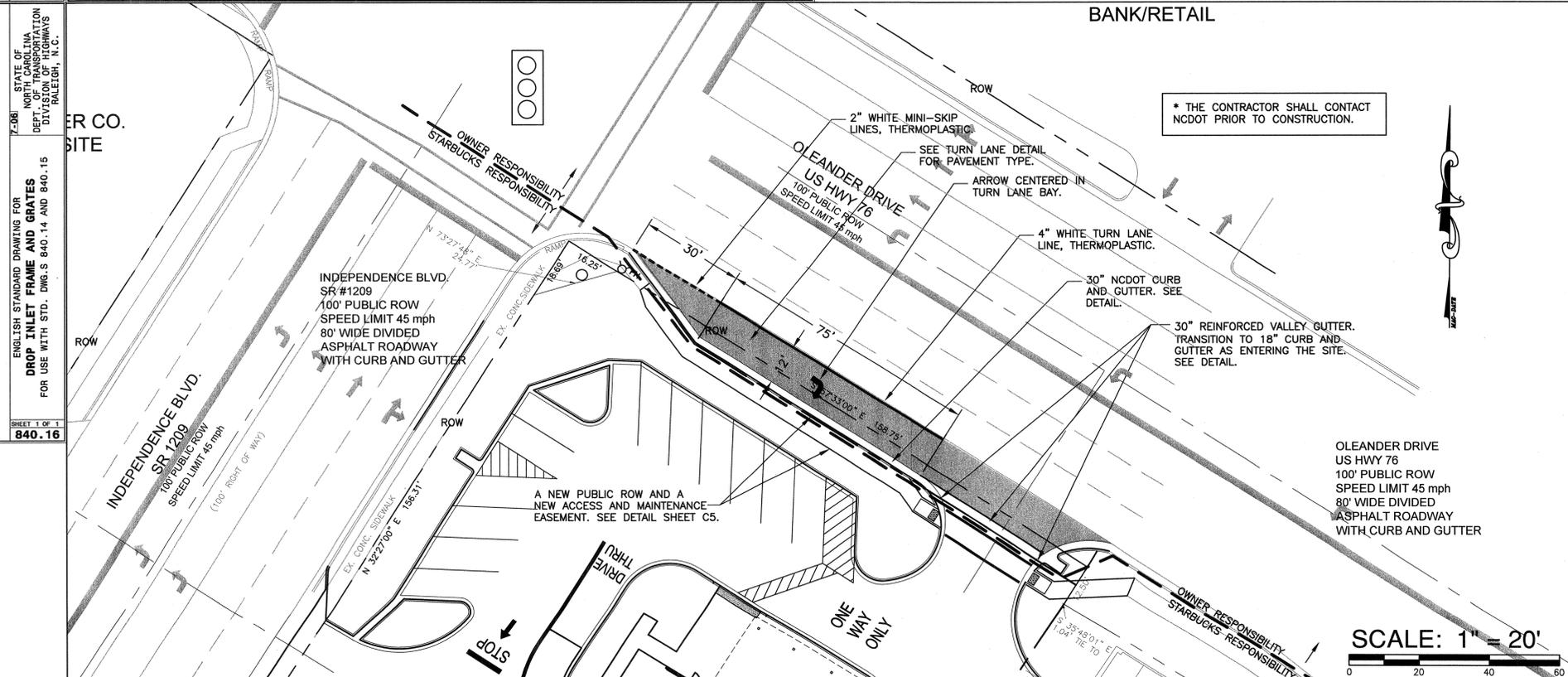
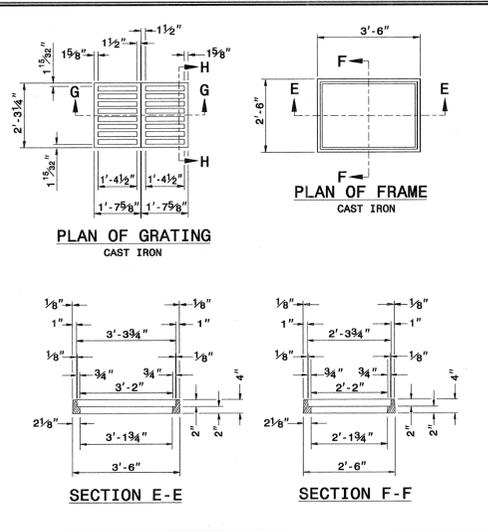
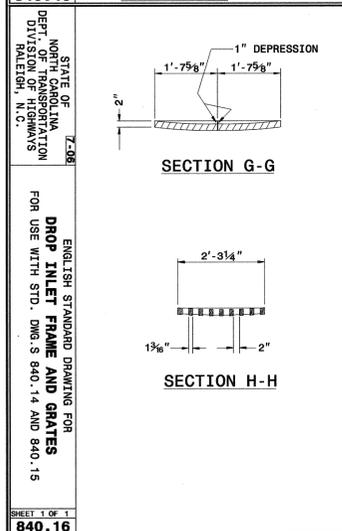
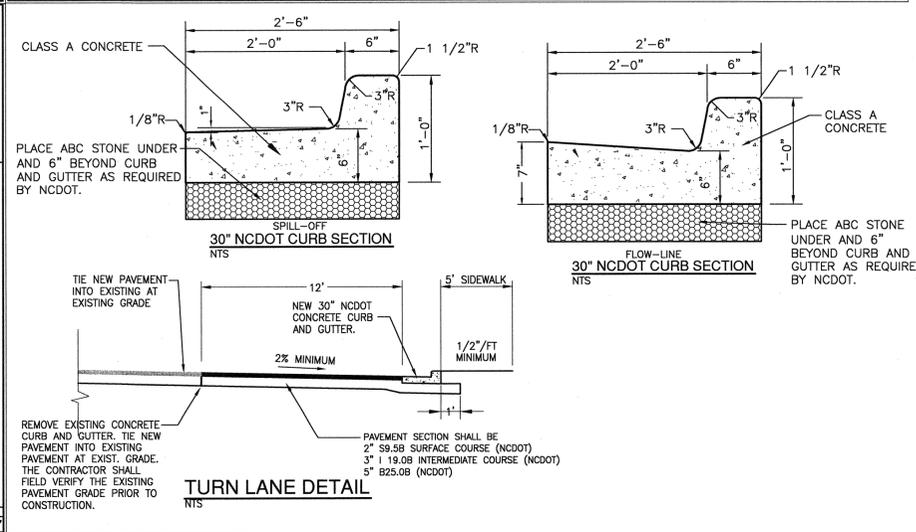
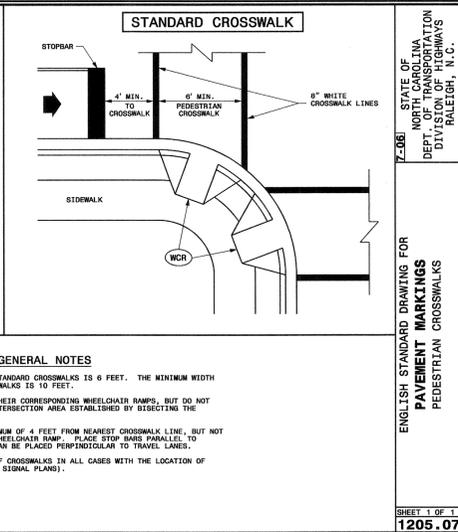
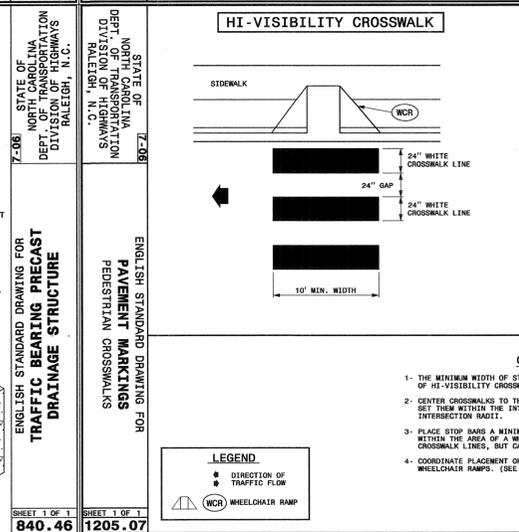
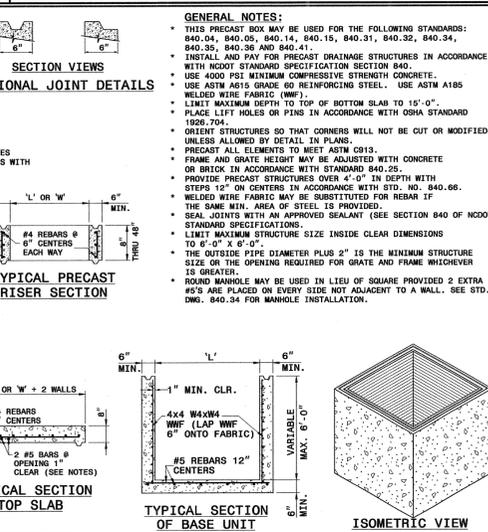
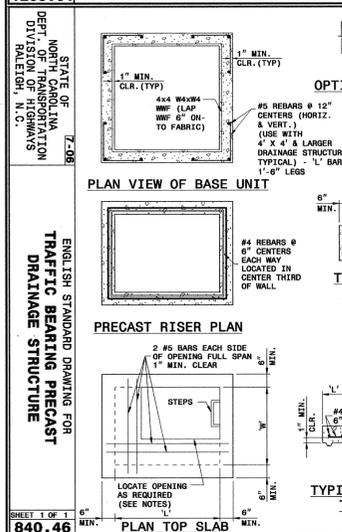
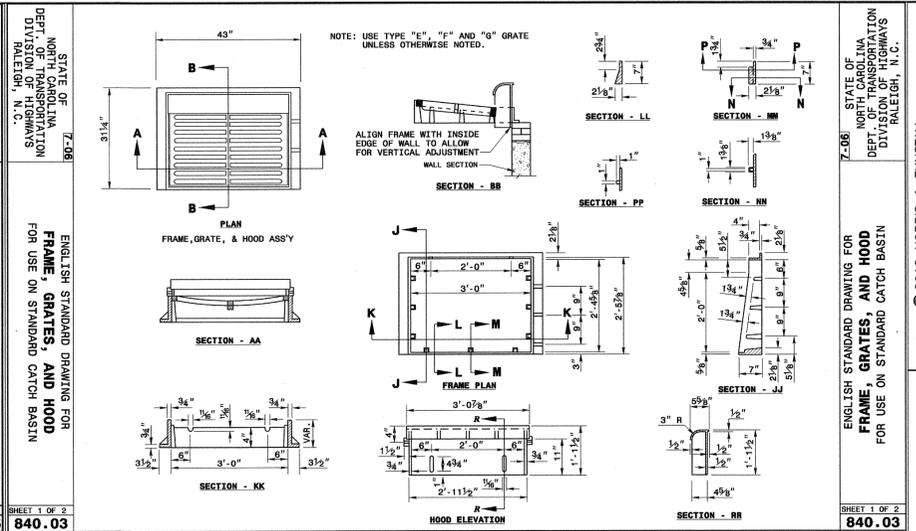
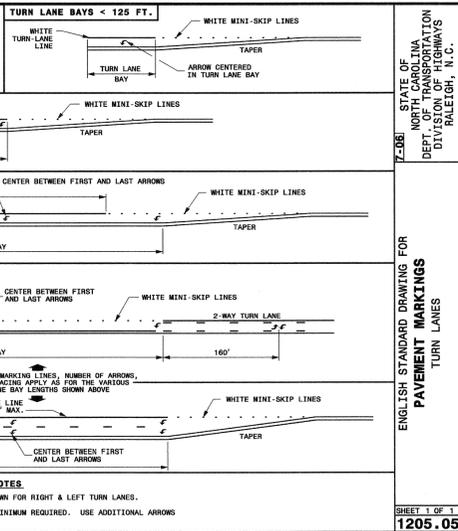
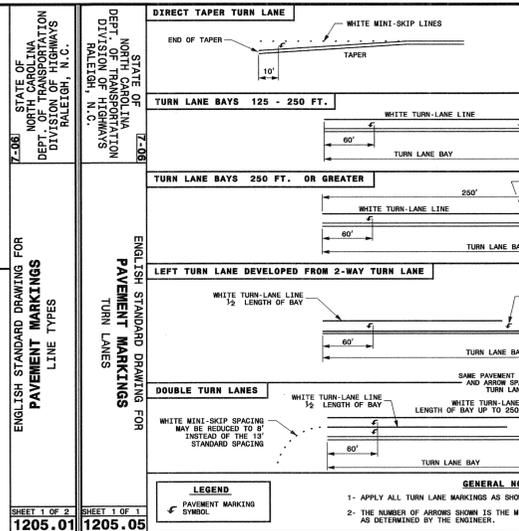
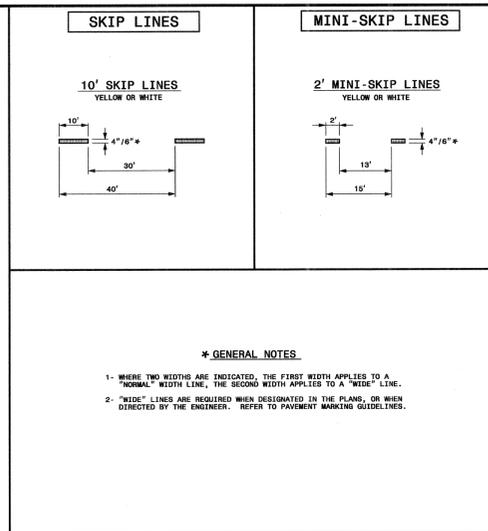
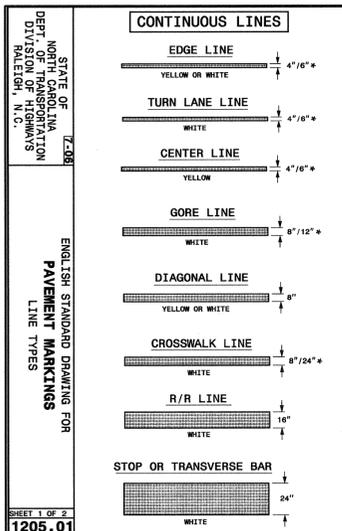
OWNER/DEVELOPER
 MR. NELSON MACRAE - PRESIDENT
 THE OLEANDER COMPANY, INC.
 P.O. BOX 3145
 WILMINGTON, NC 28406
 910 392-3300
 910 392-5123

NORRIS & TUNSTALL
 CONSULTING ENGINEERS, INC.
 1127 FLORAL PARKWAY
 SUITES 300 & 400
 WILMINGTON, NC 28403
 PHONE (910) 343-9653
 FAX (910) 343-9604
 office@nkteng.com
 license #02-3641

12040
 DES. JST
 CKD. JPN
 DRWL. NKS
 DATE 10/30/12



C6



CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED DRAINAGE PLAN

Date: _____ Permit # _____

Signed: _____

NCDDEN PWSS WATER PERMIT # _____
WATER CAPACITY: _____ GPD

DWQ SEWER PERMIT # _____
SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)

Approved Construction Plan

Name _____ Date _____

Planning _____
Public Utilities _____
Traffic _____
Fire _____

NOTES AND DETAILS

STARBUCKS - STORE #18295
3502 OLEANDER DR.
WILMINGTON, N.C.

NORRIS & TUNSTALL
CONSULTING ENGINEERS, INC.

OWNER/DEVELOPER
MR. NELSON MACRAE, PRESIDENT
THE OLEANDER COMPANY, INC.
P.O. BOX 3145
WILMINGTON, NC 28406
910 392-3300
910 392-5123

12040

DES. JST
CHK. JPN
DRWN. NKS

DATE 10/31/12

C7

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

NC DENR PWSS WATER PERMIT # _____ GPD

WATER CAPACITY: _____ GPD

DWQ SEWER PERMIT # _____

SEWER CAPACITY: _____ GPD

SEWER SHED # AND PLANT: _____

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

CITY OF WILMINGTON
NORTH CAROLINA

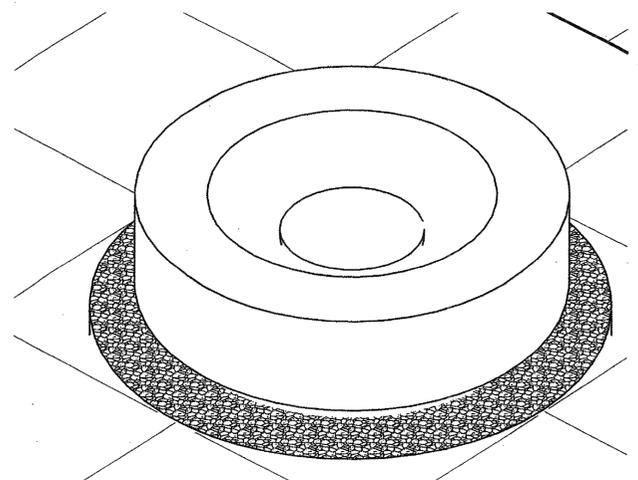
Public Services • Engineering Division

APPROVED DRAINAGE PLAN

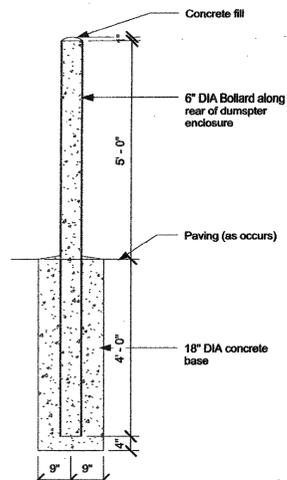
Date: _____ Permit # _____

Signed: _____

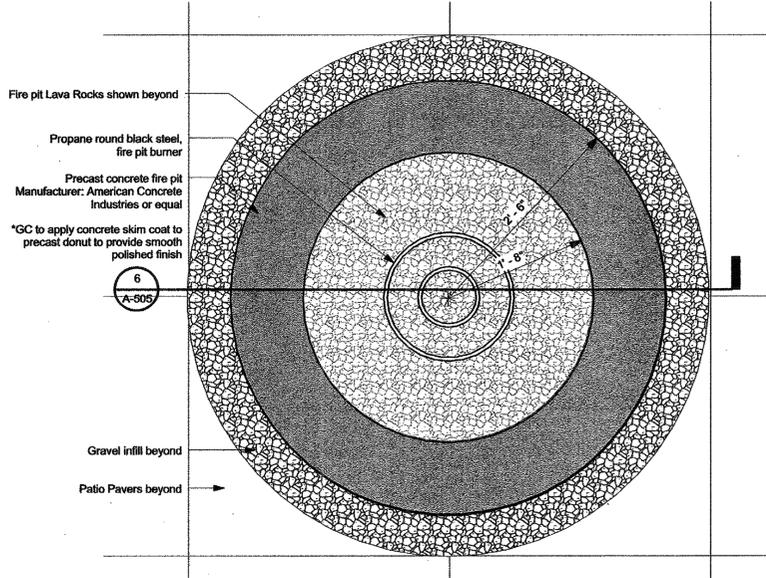
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



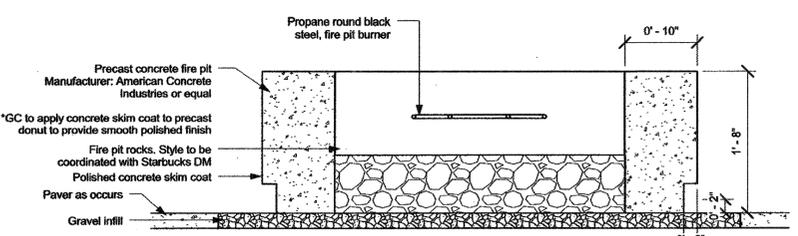
7 Axon @ Fire Pit
Scale: 1/2" = 1'-0"



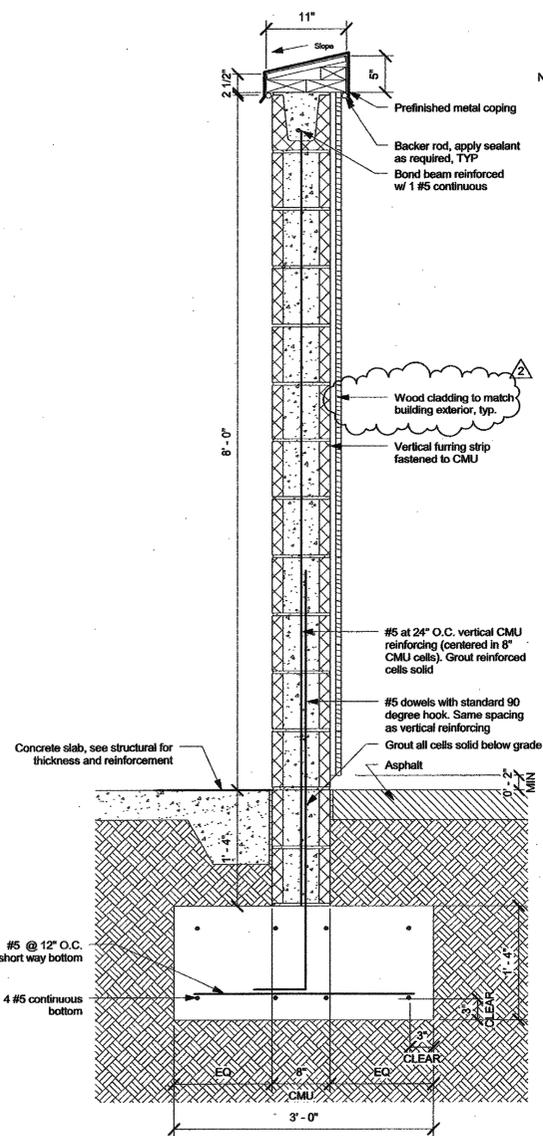
4 Bollard Detail
Scale: 1/2" = 1'-0"



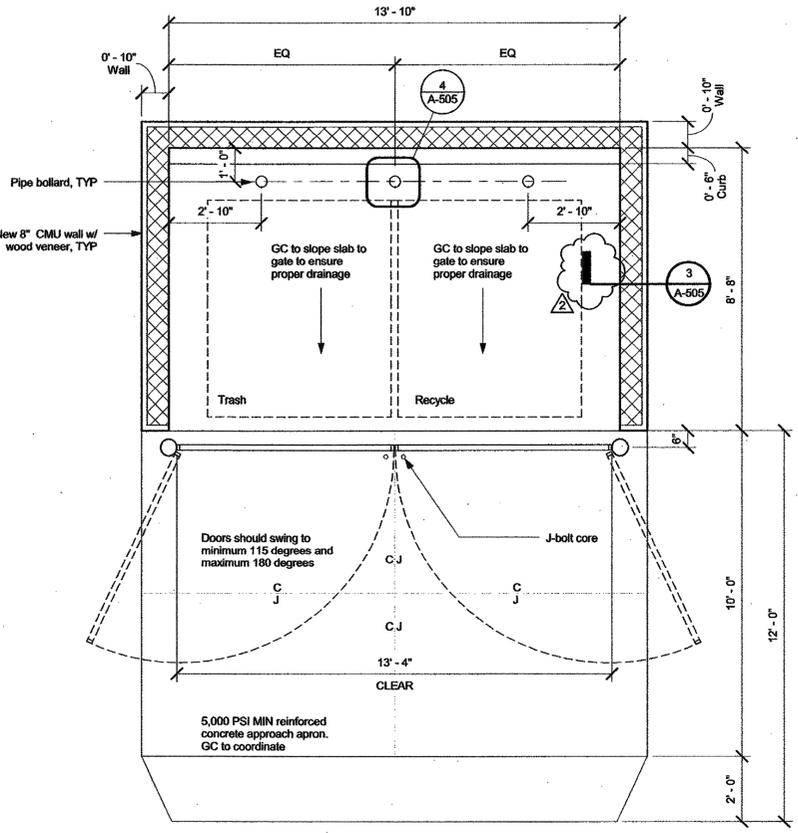
5 Enlarged Plan @ Fire Pit
Scale: 1" = 1'-0"



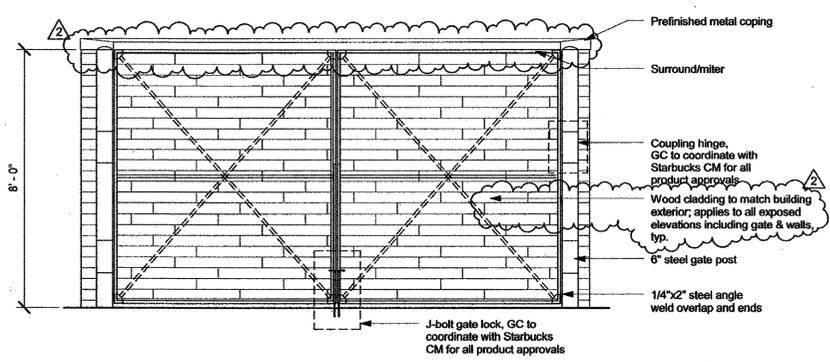
6 Section @ Fire Pit
Scale: 1" = 1'-0"



3 Trash Enclosure Section Detail
Scale: 1" = 1'-0"



2 Trash Enclosure Details
Scale: 3/8" = 1'-0"



11/19/2012 2:49:58 PM S:\13.7664.000\BIM\Building Model\User Model Files\Justin Jones_SBUX_Independence & Oleander_13.7664.000.rvt

Issued For Construction



Starbucks Coffee Company
2401 Utah Avenue South
Seattle, Washington 98134
(206) 318-1575

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Architect of Record
Gensler
Gensler Project #: 13.7664.000

Rev	Date	By	Description
A	07/27/12	JR	Client Review Progress
B	08/13/12	JR	Client Review Set
C	08/14/12	JR	Issued for Bid
1	09/18/12	JR	Issued for Permit
1	11/13/12	JBJ	Permit Comments & Client Coordination
2	11/19/12	JBJ	City of Wilmington Comments



Project Name: **OLEANDER & INDEPENDENCE**
Project Address: **3502 OLEANDER DRIVE WILMINGTON, NC 28403**

Store #: 18295
Project #: 36025-001
Concept: NCS
Palette: REGIONAL MODERN
Issue Date: 11.13.2012
Design Manager: C. HOGUE
LEED® AP: M. Garcia Uribe
Production Designer: GENSLER
Checked by: C. HOGUE

Sheet Title: **Site Details**

Scale: As indicated

Sheet Number: **A-505**