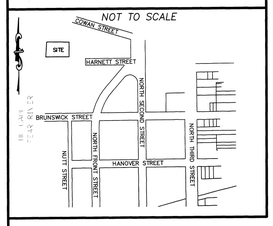
LOCATION MAP

NOT TO SCALE



Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____

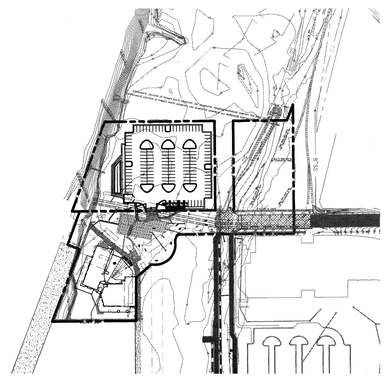
For each open utility cut of City streets, a $325 permit shall be required from the City prior to occupancy and/or project acceptance.

CONSTRUCTION DRAWINGS for

TR4 TEMPORARY PARKING LOT

UPPER DOWNTOWN FOOD & BEVERAGE COMPLEX

LOCATED IN CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA



200 100 0 200 400 600

SCALE IN FEET: 1"= 200'

NOTES:

1. BOUNDARY AND TOPOGRAPHIC (NAD 88) SURVEY PERFORMED BY HANOVER DESIGN SERVICES, PA 1123 FLORAL PARKWAY WILMINGTON NC 28403 910-343-8002, FIRM # C-0597
2. THIS MAP IS NOT FOR CONVEYANCE, RECORDATION, OR SALES.
3. THIS PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEMA MAPS.
4. THIS PROPERTY IS ZONED CBD
5. CFPUA WATER
6. CFPUA SEWER
7. ALL CONSTRUCTION TO CONFORM TO NEW HANOVER COUNTY STANDARDS AND APPLICABLE STATE & LOCAL CODES.
8. CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH CITY OF WILMINGTON AND OR NCDOT.
9. CARE SHALL BE TAKEN DURING FINAL GRADING TO ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND TO RECEIVING STRUCTURES. ROOF DRAIN DOWNSPOUTS TO BE CONNECTED TO STORM DRAINAGE STUBOUTS OR DIRECTED TO STREET/PARKING AREAS.
10. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, RE-ALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
11. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB, ASPHALT, INLETS, AND ANY OTHER STRUCTURES INCLUDING TREES, STUMPS AND DEBRIS EXISTING ON SITE. TREES NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE DIRECTED.
12. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
13. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
14. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
15. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. PARKING AREAS SHALL BE WATERED TO CONTROL DUST WHEN ORDERED BY THE ENGINEER.
16. NO GEOTECHNICAL TESTING HAS BEEN PERFORMED ON SITE. NO WARRANTY IS MADE FOR SUITABILITY OF SUBGRADE, AND UNDERCUT AND ANY REQUIRED REPLACEMENT WITH SUITABLE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSING.
18. CONTRACTOR TO ENSURE THAT PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE STREET INLETS AND CATCH BASINS. ALL FUTURE ROOF DRAIN DOWNSPOUTS TO BE DIRECTED TO THE STORM DRAINAGE STUBOUTS.
19. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
20. THIS PLAN IS FOR SITE GRADING, UTILITIES, SITING, AND DRAINAGE ONLY. SEE BUILDING PLANS FOR DETAILED HOOKUPS TO BUILDINGS, ETC.
21. CONTRACTOR AND BUILDER ARE RESPONSIBLE FOR COORDINATING FINISHED FLOOR ELEVATION OF ALL BUILDINGS WITH THE OWNER. ELEVATIONS GIVEN ARE MINIMUM GROUND ELEVATIONS AT THE BUILDING SITE AND DO NOT PURPORT TO BE FINISHED FLOOR. MINIMUM RECOMMENDED FF ELEVATIONS SHOWN ON PLANS.
22. AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT.
23. MINIMUM SEPARATION SHALL BE MAINTAINED AS FOLLOWS:
    a. HORIZONTAL CLEARANCE OF 10 FEET BETWEEN SANITARY SEWER AND WATER MAINS.
    b. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND WATER OR WHERE SEWER LINE CROSSES ABOVE WATER MAIN, BOTH PIPES SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
    c. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
    d. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
24. SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS.
25. ALL SANITARY SEWER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.
26. ALL WATER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.
27. TWO VALVES ARE REQUIRED AT "T" INTERSECTIONS AND ONE VALVE ON THE WATER LINE TO FIRE HYDRANTS.
28. A BLOW-OFF VALVE IS REQUIRED AT THE TERMINUS OF ALL "DEAD END" WATER LINES.
29. ALL STRUCTURES TO MEET MINIMUM NCDOT TRAFFIC RATED SPECIFICATIONS.

LEGEND

- EXISTING BOUNDARY
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING WATERLINE
- EXISTING STORM
- PROP STORM
- PROP SANITARY SEWER
- PROP WATER
- PROP FIRE LINE
- PROP LANDSCAPE PLANTER
- PROP LIGHT
- PROP ASPHALT
- EXISTING SIDEWALK

INDEX TO DRAWINGS

SHEET No.	DESCRIPTION	DRAWING No.
1 OF 5	COVER SHEET	COV
2 OF 5	SITE PLAN	SP1
3 OF 5	SITE DETAILS	SP2
4 OF 5	GRADING & STORMWATER	TR4 SANDFILTER
5 OF 5	LANDSCAPING PLAN	LP1

OWNER: RIVERFRONT HOLDINGS II LLC
720 NORTH 3RD ST. SUITE 301
WILMINGTON, NC 28401

LICENSE # C-2710
COASTAL SITE DESIGN, PC
ENGINEERING
LAND PLANNING
COMMERCIAL / RESIDENTIAL
P.O. Box 4041
Wilmington, NC 28406
(910) 791-4441

SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX

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SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX
LOCATED IN HARNETT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: RIVERFRONT HOLDINGS II LLC
720 NORTH 3RD ST.
SUITE 301
WILMINGTON, NC 28401

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 025483 JOHN W. SIMS
FINAL PLAN NOT FOR CONSTRUCTION
FOR REVIEW ONLY
3/2/16

REV. NO.	REMARKS	BY	DATE

DATE: 3-02-16

HORZ. SCALE: 1" = 200'
VERT. SCALE: N/A

DRAWN BY: JSM

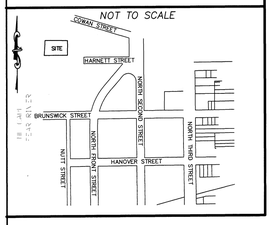
CHECKED BY: HSR

PROJECT NO.: 07-0152

Sheet No. 1 Of 5

LOCATION MAP

NOT TO SCALE



Approved Construction Plan

Name _____ Date _____

Planning _____

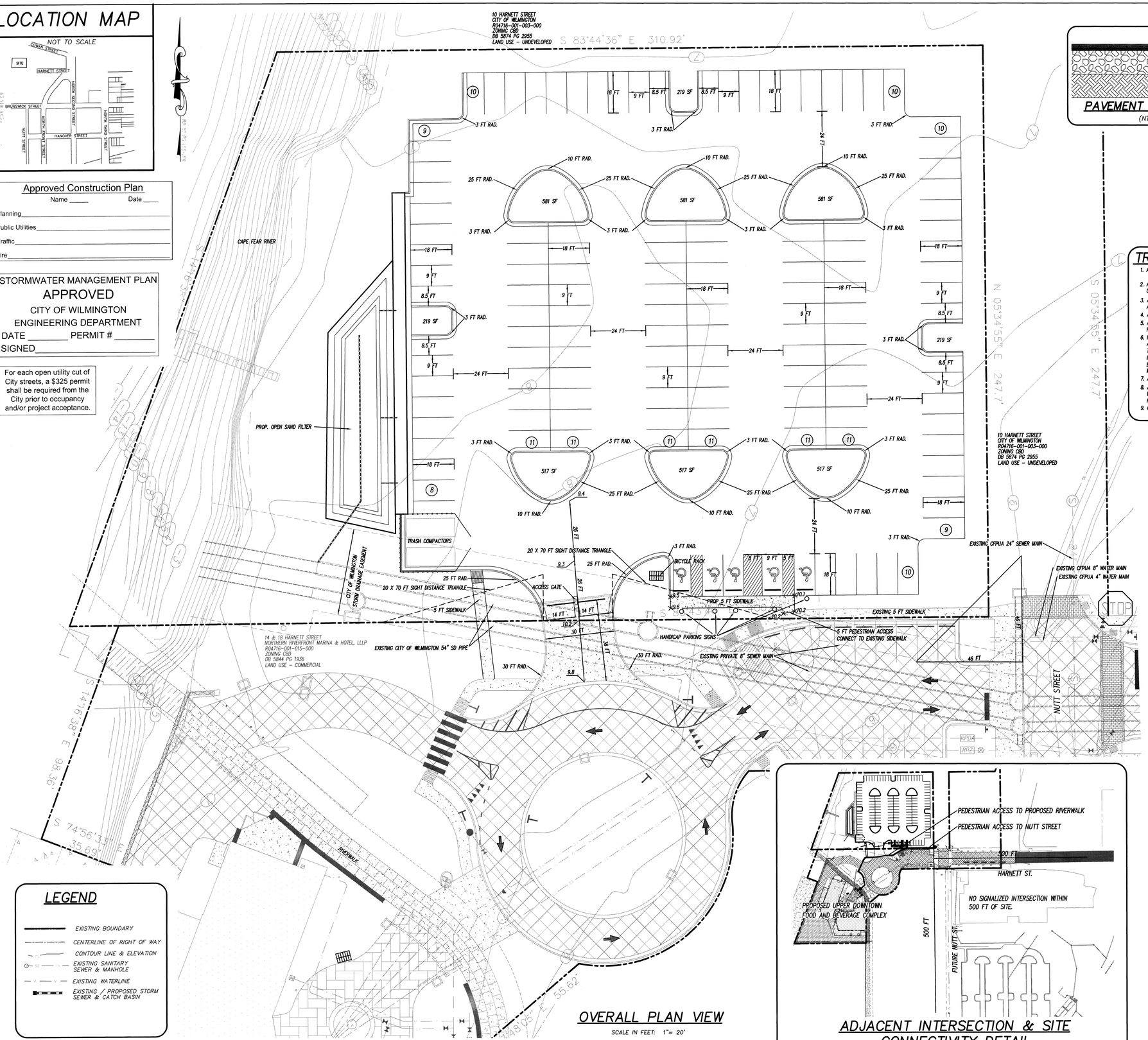
Public Utilities _____

Traffic _____

Fire _____

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
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.



LEGEND

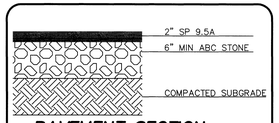
- EXISTING BOUNDARY
- CENTERLINE OF RIGHT OF WAY
- CONTOUR LINE & ELEVATION
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING WATERLINE
- EXISTING / PROPOSED STORM SEWER & CATCH BASIN

OVERALL PLAN VIEW

SCALE IN FEET: 1"= 20'

ADJACENT INTERSECTION & SITE CONNECTIVITY DETAIL

SCALE IN FEET: 1"= 150'



PAVEMENT SECTION

(NTS)

SITE & BUILDING DATA:

TOTAL LOT AREA = 88,157 SF (2.02 AC.)
PROPERTY ADDRESS IS 19 HARNETT STREET

PID = R04716-001-026-000

EXISTING DATA:
- EXISTING BUILDINGS ON SITE = N/A
- EXISTING PARKING = N/A
- EXISTING FOUNDATIONS = N/A
- EXISTING SIDEWALK = N/A

0 SF / 88,157 SF
EXISTING 0.0% IMPERVIOUS

PROPOSED ONSITE DATA:
- PROPOSED PARKING AREA: 48,925 SF
- PROPOSED SIDEWALK AREA: 283 SF
- TOTAL ONSITE IMPERVIOUS AREA: 49,208 SF

49,208 SF / 88,157 SF = 55.8% IMPERVIOUS

PARKING DATA:
- PARKING REQUIRED = N/A
- PARKING PROVIDED = 132 SPACES
- 5 HANDICAP SPACE REQUIRED
- 5 HANDICAP SPACES PROVIDED

BUILDING SETBACKS:
N/A

TRAFFIC ENGINEERING NOTES:

1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. SEE DETAIL SD-13
2. ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (Manual on Uniform Traffic Control Devices) STANDARDS. SEE DETAIL SD 15-13
3. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
4. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
5. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5888 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
6. 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. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
7. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
8. A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT. SEE DETAIL SD 15-14
9. CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.

GENERAL NOTES:

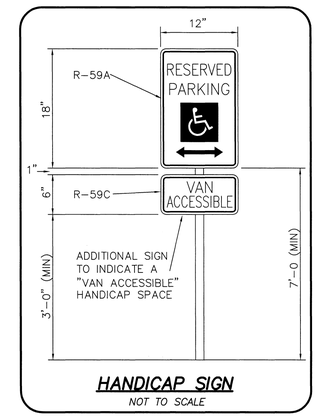
1. NEW HANOVER COUNTY PARCEL NUMBERS.:
   PID = R04716-001-026-000
2. TOTAL PROJECT AREA: 88,157 s.f. (2.02 ac.±)
3. EXISTING ZONING DISTRICT: CBD
4. LAND CLASSIFICATION: CONSERVATION RESOURCE
5. THIS ENTIRE SITE IS LOCATED IN ZONE AE (EL 9) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER: 3720311800 K, DATED: 6/2/06.
6. BASE FLOOD ELEV. = 9 + 2 FT FREEBOARD = MIN FF OF 11.0
7. SITE ADDRESS IS 19 HARNETT STREET
8. EXISTING IMPERVIOUS ONSITE = 0 SF
9. ASBUILT BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED AND PROVIDED TO COASTAL SITE DESIGN, PC BY MICHAEL UNDERWOOD AND ASSOCIATES
10. STORMWATER DRAINS TO CAPE FEAR RIVER, SC 18-71
11. SITE IS UNDER CBD CODE DESIGN APPLIED PRIOR TO THE ADOPTED REVISION OF AUGUST 2008 SUBJECT TO THE DEVELOPERS AGREEMENT.
12. THIS PROJECT IS LOCATED IN AN URBAN WATERFRONT AREA

PARKING NOTES:

1. NO PARKING REQUIRED IN CBD ZONING
   MINIMUM PARKING REQUIRED; 0 SPACES; TOTAL PROVIDED; 132 SPACES
2. NO LOADING SPACES REQUIRED IN CBD ZONING
   MINIMUM LOADING SPACES REQUIRED; 0 SPACES; TOTAL PROVIDED; 0 SPACES
3. WHEEL STOPS MUST BE PLACED PER CITY OF WILMINGTON STANDARD DETAIL SD15-13.
4. 5 HANDICAP SPACES REQUIRED (ONE BEING VAN ACCESSIBLE)
   5 HANDICAP SPACES PROVIDED (TWO VAN ACCESSIBLE SPACES PROVIDED)

WATER & SEWER NOTES:

CURRENT WATER USAGE 0 GPD — PROPOSED WATER USAGE 0 GPD
CURRENT SEWER USAGE 0 GPD — PROPOSED SEWER USAGE 0 GPD



HANDICAP SIGN

NOT TO SCALE

20 10 0 20 40 60

SCALE IN FEET: 1"= 20'

CSD
LICENSE # C-2710
COASTAL SITE DESIGN, PC
ENGINEERING
LAND PLANNING
COMMERCIAL / RESIDENTIAL
P.O. Box 4041
Wilmington, NC 28406
(910) 791-4441

SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX

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SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX
LOCATED IN HARNETT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA

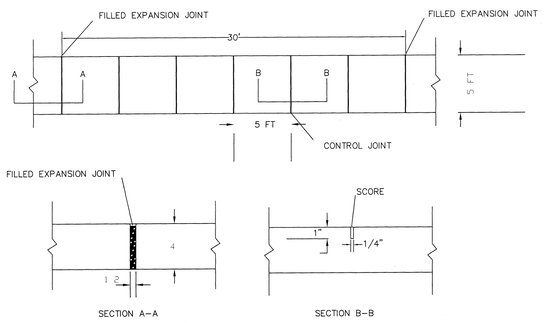
OWNER: RIVERFRONT HOLDINGS II LLC
720 NORTH 3RD ST.
SUITE 301
WILMINGTON, NC 28401

NORTH CAROLINA PROFESSIONAL SEAL 025483 ENGINEER HOWARD S. RESNIK
FINAL PLAN - NOT FOR CONSTRUCTION
3/2/16

REV. NO.	REMARKS	BY	DATE
1	REVISED PER CITY TRC COMMENTS	KSM	1/14/16
2	REVISED SHEET NUMBER	KSM	3/02/16

DATE: 7-21-15
HORZ. SCALE: 1" = 20'
VERT. SCALE: N/A
DRAWN BY: RLW
CHECKED BY: HSR
PROJECT NO.: 07-0152

Sheet No. 2 Of 5



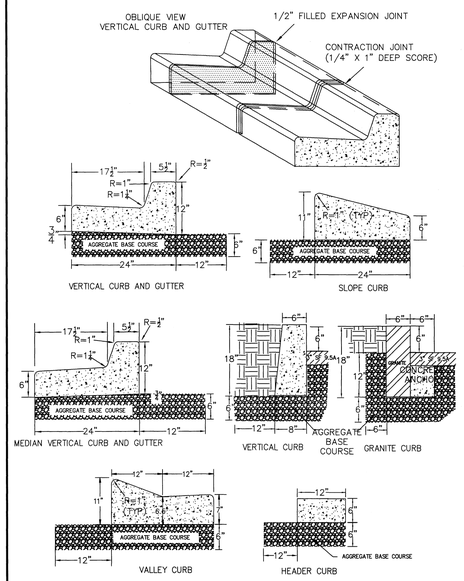
NOTES:

1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN–OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE 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 APRON) SHALL BE CLASS "A" – 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 2%. MAX LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

STANDARD SIDEWALK DETAIL

SD 3–10

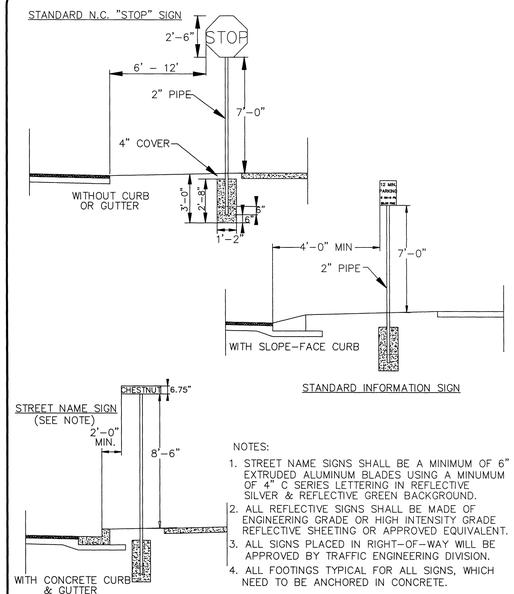
NTS



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 5 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 CURBING

NOT TO SCALE
SD 3–11

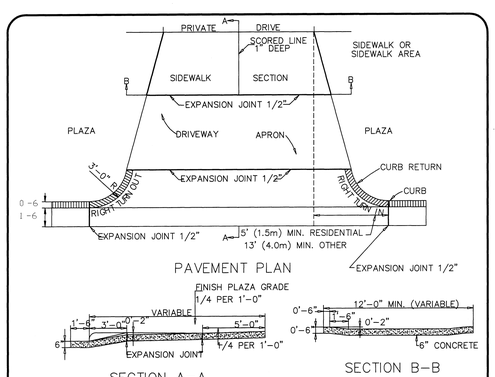


NOTES:
1. STREET NAME SIGNS SHALL BE A MINIMUM OF 6" EXTRUDED ALUMINUM BLADES USING A MINUMUM OF 4" C SERIES LETTERING IN REFLECTIVE SILVER & REFLECTIVE GREEN BACKGROUND.
2. ALL REFLECTIVE SIGNS SHALL BE MADE OF ENGINEERING GRADE OR HIGH INTENSITY GRADE REFLECTIVE SHEETING OR APPROVED EQUIVALENT.
3. ALL SIGNS PLACED IN RIGHT–OF–WAY WILL BE APPROVED BY TRAFFIC ENGINEERING DIVISION.
4. ALL FOOTINGS TYPICAL FOR ALL SIGNS, WHICH NEED TO BE ANCHORED IN CONCRETE.

STANDARD SIGN INSTALLATION LOCATION

SD 15–03

NOT TO SCALE



STANDARD DRIVEWAY DETAIL

NOT TO SCALE
SD 8–02

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 _____

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED _____

CSD
LICENSE # C–2710
COASTAL SITE DESIGN, PC
ENGINEERING
LAND PLANNING
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P.O. Box 4041
Wilmington, NC 28406
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SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX

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SITE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX
LOCATED IN HARNETT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: RIVERFRONT HOLDINGS II LLC
2701 NORTH 3RD ST.
SUITE 301
WILMINGTON, NC 28401

NORTH CAROLINA PROFESSIONAL SEAL 025483 ENGINEER HOWARD S. RESNIK
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
3/2/16

REV. NO.	REMARKS	BY	DATE
2	REVISED PER CITY TRC COMMENTS	JSM	3/02/16
1	REVISED SHEET NUMBER	JSM	1/14/16

DATE: 9–05–12

HORZ. SCALE: AS SHOWN
VERT. SCALE: N/A

DRAWN BY: RLW

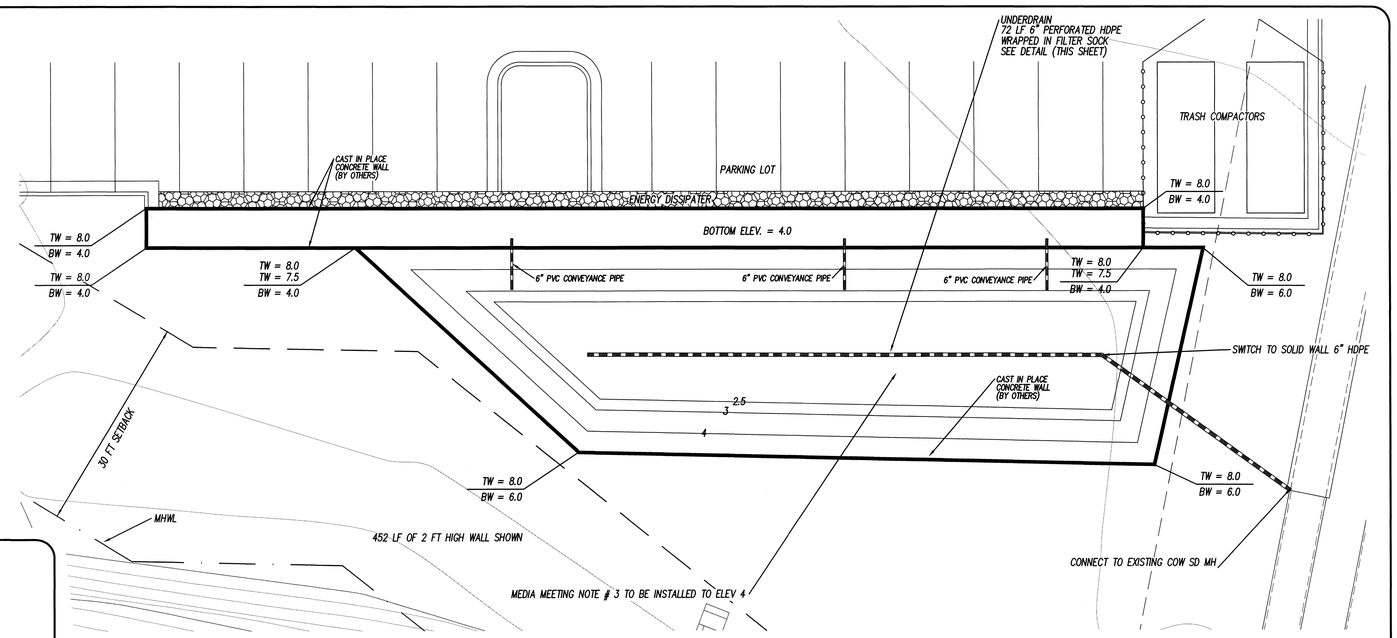
CHECKED BY: HSR

PROJECT NO.: 07–0152

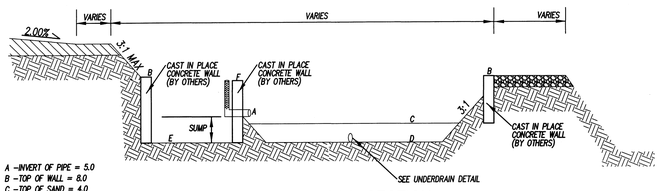
Sheet No. 3 of 5

NOTE WELL:
1. SEDIMENT TO BE CLEANED OUT OF SEDIMENTATION CHAMBER WHEN SEDIMENT REACHES A DEPTH OF 6" OR GREATER.
2. SAND FILTER TO BE LOCATED IN A RECORDED EASEMENT.
3. MEDIA IN SAND FILTER SHALL BE CLEAN, WASHED, COURSE MASONRY SAND SUCH AS ASTM C33. SAND PARTICLES SHALL BE LESS THAN 2mm AVG. DIAMETER.
4. IF PONDING OF WATER ON SAND FILTER CHAMBER IS LASTING MORE THAN 40 HOURS REMEDIAL ACTIONS MUST BE TAKEN.
   EX. – REPLACE SAND MEDIA
   FLUSH UNDERDRAIN
5. ONCE A YEAR SAND MEDIA SHALL BE SKIMMED AND UNDERDRAIN FLUSHED.

UNDERDRAIN DETAIL
NOT TO SCALE

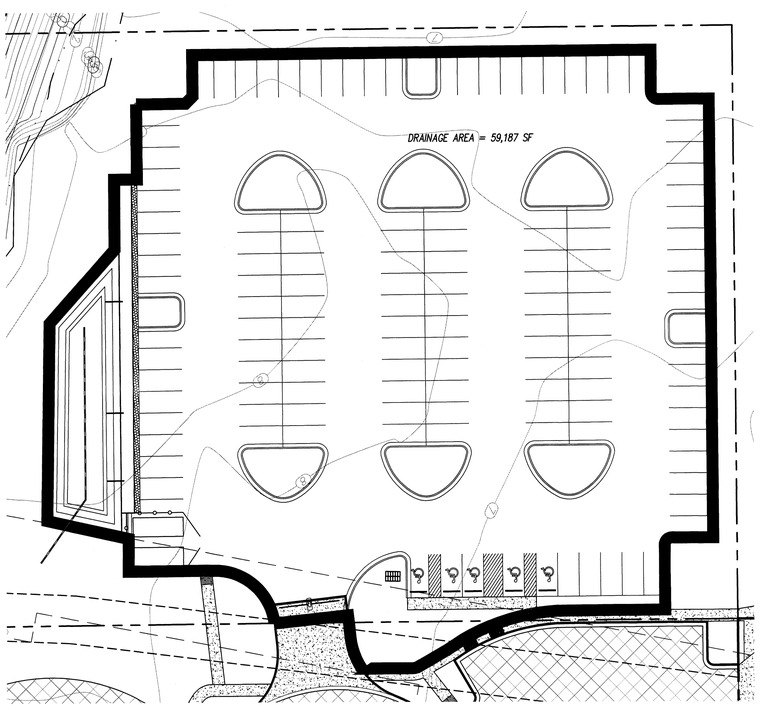


SAND FILTER DETAIL
1" = 10'

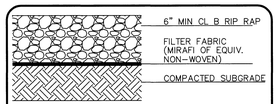


A –INVERT OF PIPE = 5.0
B –TOP OF WALL = 8.0
C –TOP OF SAND = 4.0
D –BOTTOM OF SAND = 2.5
E –SUMP BOTTOM = 4.0
F –WEIR CUT = 7.5

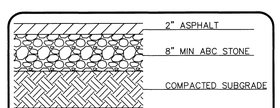
SAND FILTER CROSS SECTION
NOT TO SCALE



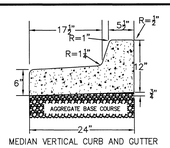
DRAINAGE AREA
1" = 30'



ENERGRY DISSIPATOR
(NTS)



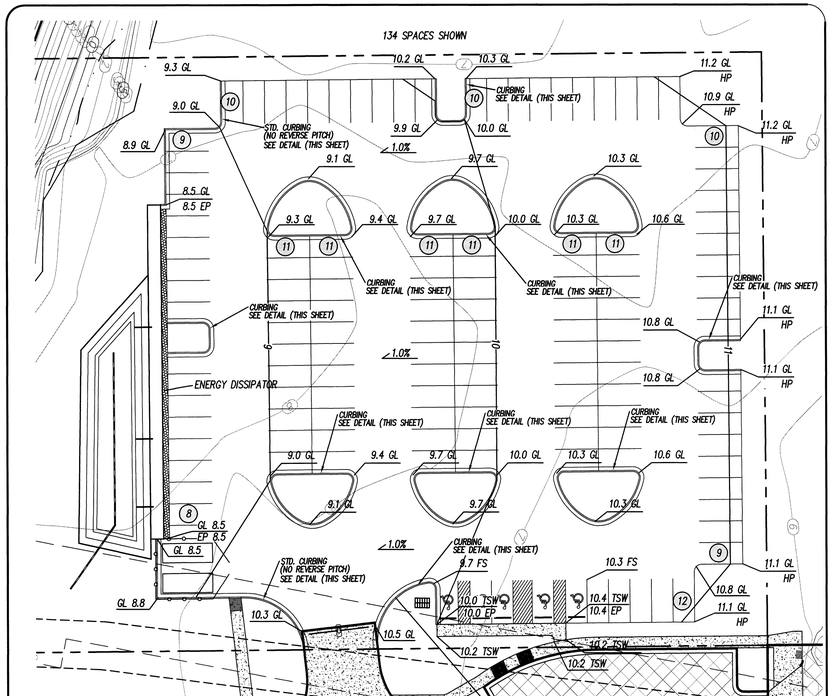
PARKING AREA
(NTS)



MEDIAN VERTICAL CURB AND GUTTER

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 5 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 CURBING
NOT TO SCALE
SD 3-11



GL = GUTTER LINE
TSW = TOP OF SIDEWALK
EP = EDGE OF PAVEMENT
FS = FINISHED SURFACE
HP = HIGH POINT

GRADING DETAIL
1" = 30'

LICENSE # C-2710
COASTAL SITE DESIGN, PC
ENGINEERING
LAND PLANNING
COMMERCIAL / RESIDENTIAL
P.O. Box 4041
Wilmington, NC 28406
(910) 791-4441

GRADING AND STORMWATER FOR
TR4 TEMP. PARKING LOT

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GRADING AND STORMWATER FOR
TR4 TEMP. PARKING LOT
LOCATED IN HARNETT TOWNSHIP
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER:
NORTHERN RIVERFRONT MARINA AND HOTEL, LLP
2202 NORTH 3RD ST.
SUITE 301
WILMINGTON, NC 28401

NORTH CAROLINA PROFESSIONAL SEAL 025483 ENGINEER HOWARD SCHAFER
3/7/16
FINAL PLAN NOT FOR CONSTRUCTION
FOR REVIEW ONLY

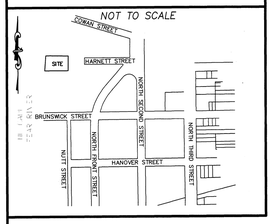
REV. NO.	REMARKS	BY	DATE
2	GRADING REVISED	GSN	3/02/16
1	REVISED SHEET NUMBER	GSN	1/14/16

DATE: 12-9-15
HORZ. SCALE: as noted
VERT. SCALE: N/A
DRAWN BY: RLW
CHECKED BY: HSR
PROJECT NO.: 07-0152

Sheet No. 4 Of 5

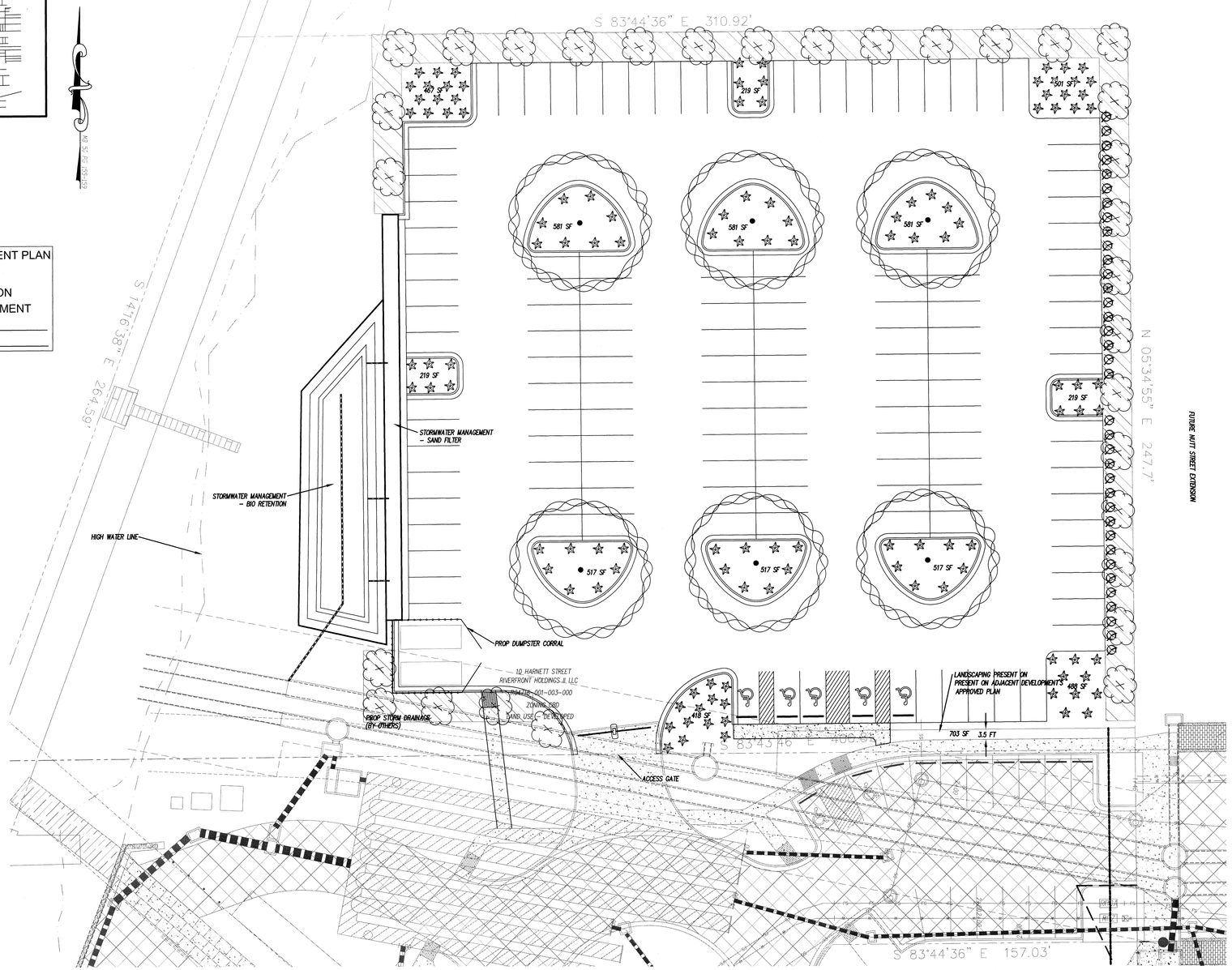
LOCATION MAP

NOT TO SCALE



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

STORMWATER MANAGEMENT PLAN
APPROVED
CITY OF WILMINGTON
ENGINEERING DEPARTMENT
DATE _____ PERMIT # _____
SIGNED_____



Proposed Plant Table

PARKING – INTERIOR ISLANDS

Quantity	Symbol	Scientific Name	Common Name	Planting Size	Planting Remarks
118		ILEX CRENATA	JAPANESE HOLLY	36" MIN.	8' O.C.
6		Quercus virginiana	Southern Live Oak	3"-CAL. MIN.	

PARKING – PERIMETER

Quantity	Symbol	Scientific Name	Common Name	Planting Size	Planting Remarks
31		PRUNUS X 'OKAME'	FLOWERING CHERRY	6-8', 3"-CAL.	
36		ABELIA GRANDIFOLIA	GLOSSY ABELIA	15-18" MIN.	4' O.C.

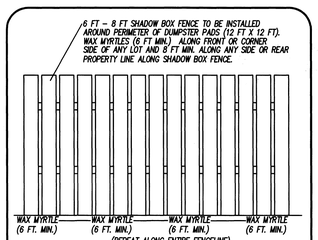
O.C. – "ON CENTER" CAL. – "CALIPER AT 6" ABOVE GRADE" GAL. – "GALLON CONTAINER"

LANDSCAPE CALCULATIONS:

3. PARKING – INTERIOR AREA LANDSCAPING (SEC. 18-481):
   1 CANOPY TREE AND SHRUBBERY * 6 INTERIOR PARKING ISLANDS
   6 CANOPY TREES AND SHRUBS REQ'D;
   CANOPY TREES / SHADE TREES PLACED THROUGHOUT PARKING AREA TO AVOID CONFLICT WITH DESIGNED UTILITIES.
   SHADING CALCULATION – 20% SHADING REQ'D FOR PARKING AREAS.
   48,744 PARKING AREA X 20% ; 48,744 X .2 = 9749 SF REQ'D CANOPY
   – SOUTHERN LIVE OAK HAS ESTIMATED 50 FT DIA. CANOPY AT MATURITY; ±1962.5 SF CANOPY
   9749 / 1962.5 = 4.96 OR 5 CANOPY TREES; 6 CANOPY TREES PROVIDED.
3. PARKING – PERIMETER LANDSCAPING (SEC. 18-482):
   1 TREE EVERY 18 TO 27; 583 LF = 22 TO 32 TREES
   22 TO 32 TREES REQ'D; 31 TREES PROVIDED
4. TREES & SHRUBS IN THE SETBACK AREA SHALL BE MAINTAINED BY THE OWNER TO ENSURE THAT THE MATERIAL LIVES & PROSPERS.
5. PARKING AREA SCREENING:
   SHRUBBERY PROVIDE FOR MAXIMUM OPACITY OF VEHICLE HEADLIGHTS.
6. SEC. 18-258 (E) CALCULATIONS AS FOLLOWS:
   TOTAL PROJECT LIMITS = 88,157 SF, TOTAL LANDSCAPED AREA = 11,960 SF
   11,960 / 88,157 = 0.1357 OR 14%
   14% > 6% (MINIMUM LANDSCAPED AREA)
   –ONE (1) TREE AND SIX SHRUBS REQ'D FOR EVERY FIFTEEN (15) PARKING SPACES.
   1 / 15 = 0.0667 TREES PER PARKING SPACE. 6 / 15 = 0.4 SHRUBS PER PARKING SPACE.
   132 PARKING SPACES PROVIDED; 132 X 0.0667 = 8.8 TREES REQ'D, 6 SHADE TREES & 30 UNDERSTORY TREES PROVIDED.
   132 X 0.4 = 52.8 SHRUBS REQ'D, 154 VARIOUS SHRUBS PROVIDED

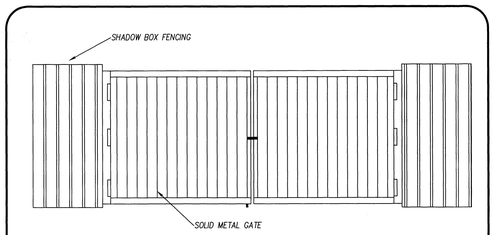
LANDSCAPE NOTES:

1. APPLICABLE STREET FRONTAGES SHALL HAVE NATURAL VEGETATIVE SCREENING MEETING CITY REQUIREMENTS.
2. HVAC EQUIPMENT SHALL BE PLACED IN THE INTERIOR YARDS AND SCREENED FROM THE RIGHT-OF-WAY. THE UNITS WILL BE SCREENED FROM PUBLIC VIEW FROM ALL SIDES OF THE BUILDING.
3. NO IRRIGATION CURRENTLY SPECIFIED, IF SO DESIRED THE IRRIGATION CONTROL MODULE MUST BE OUTFITTED W/ A RAIN SENSOR.
4. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE FIRE HYDRANTS OR FDC'S. A 3FT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT.
5. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
6. ALL OTHER AREAS TO BE SODED.
7. ALL DUMPSTER AREAS TO BE SCEENED ON ALL SIDES.
8. EXISTING SIGNIFICANT TREES HAVE BEEN LOCATED BY A FIELD SURVEY.
9. PLANTINGS TO BE MATCHED AS CLOSELY AS POSSIBLE. ANY SUBSTITUTIONS AND ALTERATIONS TO THIS PLAN ARE TO BE APPROVED BY THE CITY OF WILMINGTON.
10. LIGHTING PLAN BY OTHERS.
11. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" – 10'.
12. TREES & SHRUBS IN THE SETBACK AREA SHALL BE MAINTAINED BY THE OWNER TO ENSURE THAT THE MATERIAL LIVES & PROSPERS.



DUMPSTER SCREENING (TYPICAL)

N.T.S.



DUMPSTER ENCLOSURE AT ROUNDABOUT

N.T.S.

Approved Construction Plan

Name _____ Date _____

Planning _____

Public Utilities _____

Traffic _____

Fire _____

20 10 0 20 40 60

SCALE IN FEET: 1"= 20'

LICENSE # C-2710
COASTAL SITE DESIGN, PC
ENGINEERING
LAND PLANNING
COMMERCIAL / RESIDENTIAL
P.O. Box 4041
Wilmington, NC 28406
(910) 791-4441

LANDSCAPE PLAN for
TR4 TEMP. PARKING LOT
FOOD & BEVERAGE COMPLEX

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SITE PLAN for
TR4 TEMP. PARKING
FOOD & BEVERAGE COMPLEX
LOCATED ON HARNETT, TOWNSIDE & HANOVER COUNTY, NORTH CAROLINA

OWNER: RIVERFRONT HOLDINGS II LLC
720 NORTH 3RD ST.
SUITE 301
WILMINGTON, NC 28412

FINAL APPROVAL PENDING
NOT FOR CONSTRUCTION
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 025483 HOWARD'S RESINI
3/2/16

REV. NO.	REMARKS	BY	DATE

DATE: 3-02-16
HORZ. SCALE: 1" = 20'
VERT. SCALE: N/A
DRAWN BY: JSM
CHECKED BY: HSR
PROJECT NO.: 07-0152

Sheet No. 5 of 5