

BARCLAY WEST PHASE 1 INFRASTRUCTURE

Plans and Profiles

LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA
DATE: SEPTEMBER 2014
SCALE: 1"=200'

OWNER / DEVELOPER:
CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
Wilmington, NC 28406
910-762-2676

WATER:

12" pipe = 2,114 LF
8" pipe = 654 LF

TOTAL WATER MAINS:

Total pipe = 2,768 LF

SEWER:

Existing

STANDARD NOTES:

- 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.
- NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
- CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE AND CURB BOXES TO THE 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.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. ROADS SHALL BE WATERED TO CONTROL DUST WHEN ORDERED BY THE ENGINEER.
- 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.
- EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
- CONTRACTOR TO ENSURE THAT PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE CURB OUTLETS AND CATCH BASINS. ALL ROOF DRAIN DOWNSPOUTS TO BE DIRECTED TO THE STORM SEWER SYSTEM.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- THIS PLAN IS FOR SITE GRADING, ROADWORK, SEWER INSTALLATION ONLY.
- NO ENCUMBRANCES IN R/W EXCEPT AS SHOWN.
- AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT. AT THE MINIMUM THIS SHOULD INCLUDE BELL SOUTH AND DUKE ENERGY.
- TEMPORARY PROJECT AREA LIMITS ARE AS SHOWN.
- THIS PROPERTY IS ZONED RB, MF-M & O&I-1.
- SEWER AND WATER TO BE PROVIDED BY CPFWA.
- SITE WILL MEET ALL ZONING REQUIREMENTS.
- ANY REGULATED TREES ON SITE TO BE PRESERVED AS SHOWN.
- STRIPING AND LANES TO CITY STANDARDS (THERMOPLASTIC).
- NO VEHICULAR ACCESS TO SITE EXCEPT AS SHOWN.
- ALL UTILITIES UNDERGROUND.
- A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAN.
- ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30'-10'.

NOTE WELL:

- EQUIPMENT CLEARANCE MINIMUM 16' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)

LEGEND

- IRON IN EXIST. CONC. MON.
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING WATERLINE
- E.I.P. = EXISTING IRON PIPE
- E.I.R. = EXISTING IRON REBAR
- E.C.M. = EXISTING CONCRETE MONUMENT
- I.S. = IRON SET VALVE
- W.V. = WATER VALVE
- W.M. = WATER METER
- F.H. = FIRE HYDRANT
- P.P. = POWER POLE
- C.P. = CONCRETE POINT
- X 49.0 INDICATES SPOT ELEVATION

SITE DATA TABLE:
PARCEL IDENTIFICATION:
R06500-003-004-000
DB 5427 PG 622

SURVEY NOTES:

- AREA COMPUTED BY COORDINATE METHOD.
- ALL DISTANCES ARE HORIZONTAL GROUND.
- PROPERTY SUBJECT TO ALL EASEMENTS OF RECORD.
- THE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE LOCATED FROM FIELD SURVEY INFORMATION, AND EXISTING ASBUILT DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THE UTILITIES ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
- THIS MAP IS NOT FOR CONVEYANCE, RECORDATION, OR SALES.
- PORTIONS OF THIS PROPERTY ARE LOCATED WITHIN A 100 YEAR FLOOD HAZARD AREA ACCORDING TO FLOOD INSURANCE RATE MAP COMMUNITY ID#3700312500J, DATED APRIL 3, 2006, PANEL 3125J.
- THIS PROPERTY IS ZONED RB, MF-M & O&I-1.
- SURVEYED IN 2013, AND 2014.
- COMBINED GRID FACTOR = 1.00000.

STORM SEWER SUMMARY Forebay No.1

Line No.	Length (ft)	Incr. Total Area (sq ft)	Incr. Total C (ft)	Incr. Total S (ft)	Incr. Total T (ft)	Incr. Total V (ft)	Incr. Total H (ft)	Incr. Total L (ft)	Incr. Total R (ft)	Incr. Total G (ft)	Incr. Total B (ft)	Incr. Total O (ft)	Incr. Total P (ft)	Incr. Total Q (ft)	Incr. Total U (ft)	Incr. Total W (ft)	Incr. Total X (ft)	Incr. Total Y (ft)	Incr. Total Z (ft)
1	End	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1	447.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	2	35.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	3	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	4	252.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	5	85.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	6	38.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	7	105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	8	192.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	9	328.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	10	184.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	11	195.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	12	150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	13	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	14	159.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	15	36.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	16	34.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	17	24.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	18	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	19	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	20	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	21	150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	22	36.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	23	24.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	24	220.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	25	109.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	26	159.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	27	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	28	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	29	63.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	30	66.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

BENCHMARK LOCATIONS AND ELEVATIONS

LOCATION:	ELEVATION
1 EX. CONCRETE MONUMENT AT INTERSECTION OF S. 17th STREET & MUSEUM DRIVE.	42.58

REV. NO.	REVISIONS	DATE
3	REVISED AS PER CITY COMMENTS	3-30-15
2	REVISED AS PER CITY COMMENTS	3-12-15
1	Major Revision	1-30-15

COVER SHEET AND GENERAL NOTES
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

Drawn: GW
Checked: DSH
Project No: 12468

Sheet No: 1
of: 10

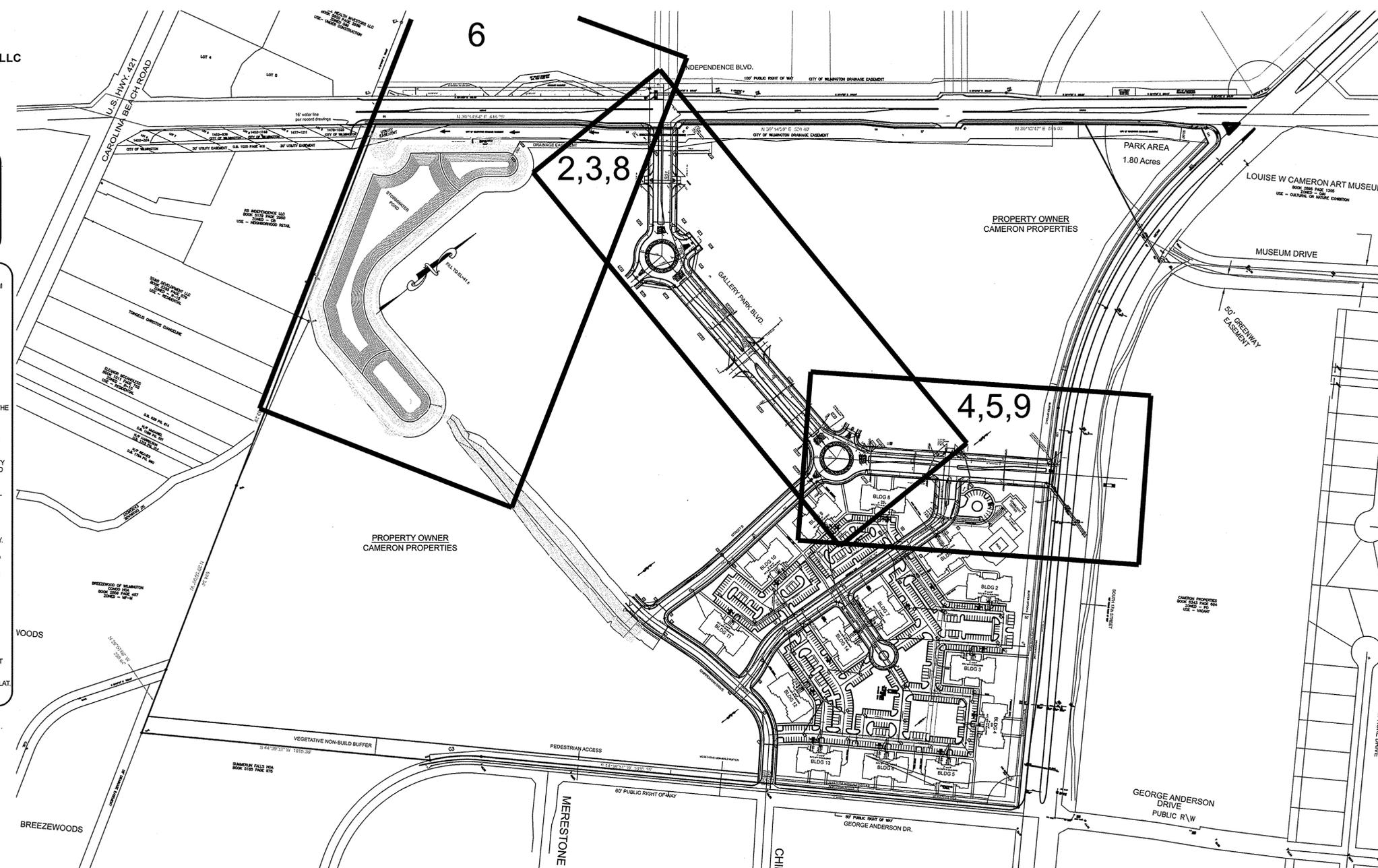
1123 FARM PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-0002
License # C-0597

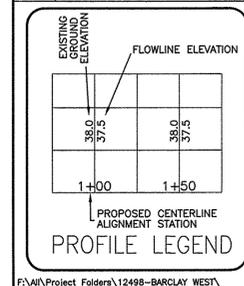
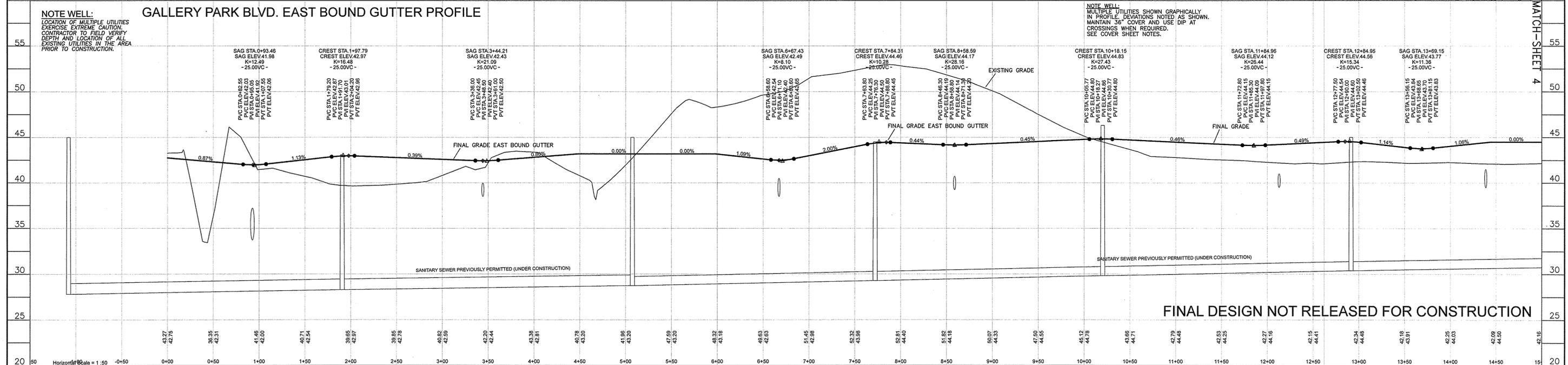
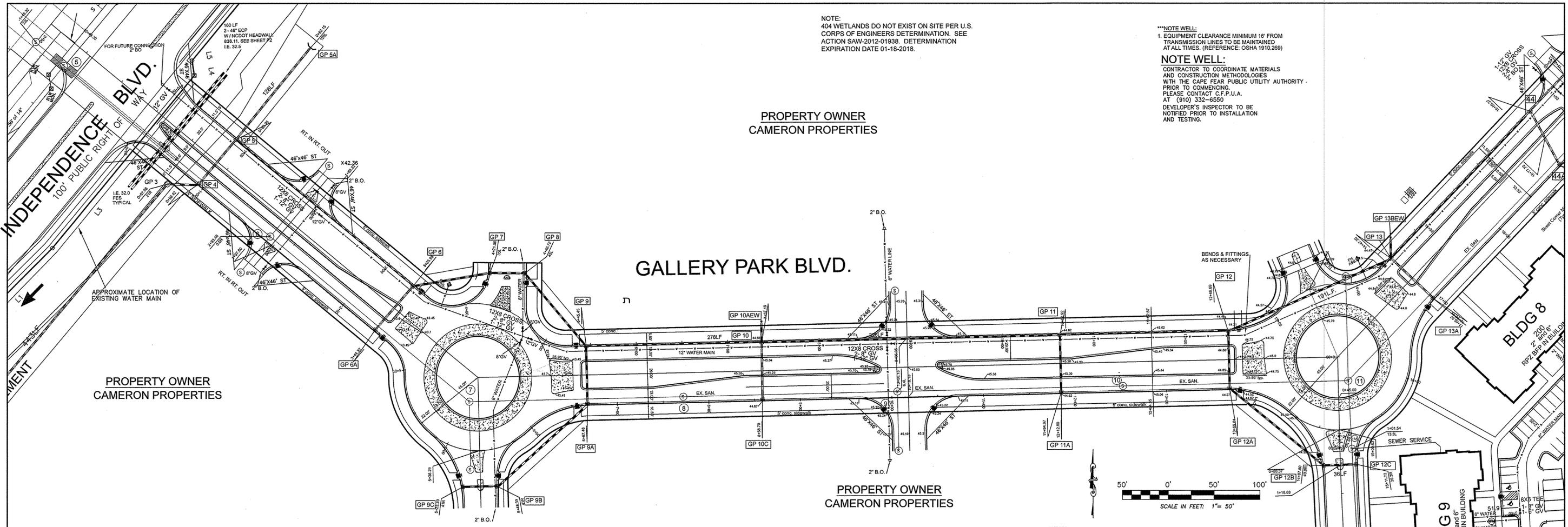
GENERAL NOTES:

- 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.
- ANY TREES AND / OR AREAS REQUESTED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
- NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- IT SHALL BE THE RESPONSIBILITY OF THE SUBMITTER 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 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.
- 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.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
- CALL TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKINGS PRIOR TO ACTUAL STRIPING.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE OWNER.
- STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
- TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
- ANY BROKEN OR MISSING SIDEWALK PANELS OR CURBS WILL BE REPAIRED.
- CONTACT THE CITY AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CPFWA) DETAILS AND SPECIFICATIONS.
- PROJECT SHALL COMPLY WITH CAPE FEAR PUBLIC UTILITY AUTHORITY CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS 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 CPFWA 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 CPFWA WATER SHALL COMPLY WITH CPFWA CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
- ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY CPFWA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFCPCORR OR ASSE.
- CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY DISCREPANCIES.
- CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- UNDERGROUND FIRE LINES 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 910-3666.
- NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 PRIOR TO ANY DIGGING, CLEARING OR GRADING.
- ANY PVC MAINS ARE TO BE MARKED WITH NO. 10 INSULATED COPPER WIRE INSTALLED THE ENTIRE LENGTH AND STAPPED TO THE PIPE WITH DUCT TAPE, AND STRIPPED TO BARE WIRE AND SECURED TO ALL VALVES AND FITTINGS, ACCESSIBLE IN ALL VALVE AND METER BOXES. ALL WATER MAINS ARE TO HAVE A MINIMUM OF 3' COVER.

MORE GENERAL NOTES:

- 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. ANY REGULATED TREES TO BE REMOVED ARE FOR ESSENTIAL SITE IMPROVEMENTS.
- MINIMUM UTILITIES SEPARATION SHALL BE MAINTAINED AS FOLLOWS:
a) HORIZONTAL CLEARANCE OF 10 FEET BETWEEN SANITARY SEWER OR STORM SEWERS AND ATER MAINS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10' LATER SPACING WHICH CASE:
1) THE WATER MAIN IS LAID IN A SEPARATE TRENCH WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
2) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
b) WHERE VERTICAL CLEARANCE IS LESS THAN 18" 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 12" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
- SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS.
- CONTRACTOR TO COORDINATE STAGING OF CONSTRUCTION ACTIVITIES WITH THE OWNER AND SUBJECT TO FACILITATE ONGOING ADJUTING BUSINESS ACTIVITIES.
- CONTRACTOR TO COORDINATE REMOVAL & RELOCATION OF LIGHTING & OTHER NON-MUNICIPAL UTILITIES SUCH AS ELECTRICAL & TELEPHONE CONNECTIONS WITH THE AFFECTED AGENCIES AND THE TRANSMISSION ARCHITECT.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.



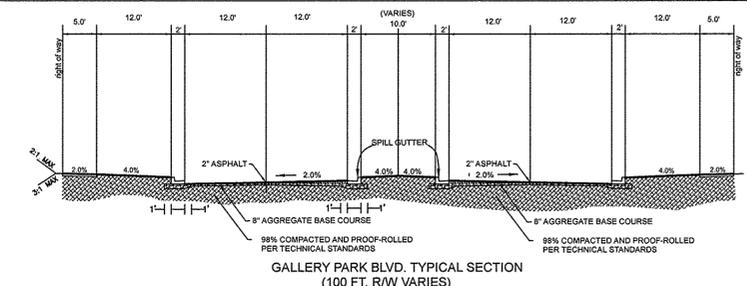


For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

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

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	



STATION 0+00 THROUGH 16+50
GALLERY PARK BLVD.

REV. NO.	REVISIONS	DATE
2	REVISED AS PER CITY COMMENTS	3-12-15
1	Major Revision	1-30-15

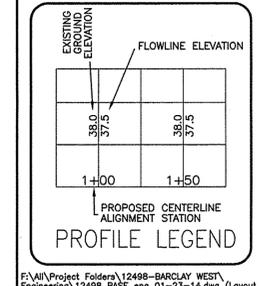
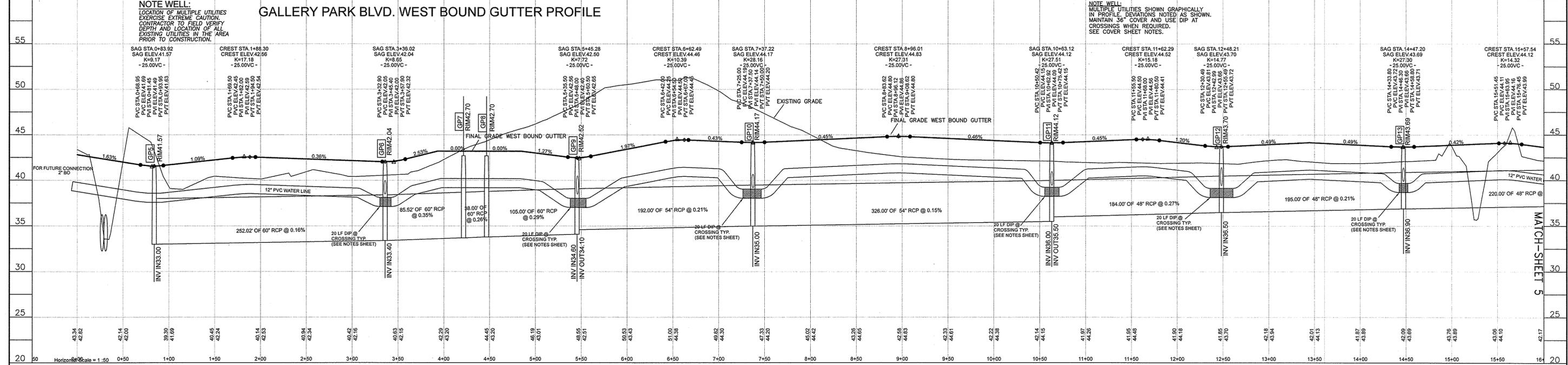
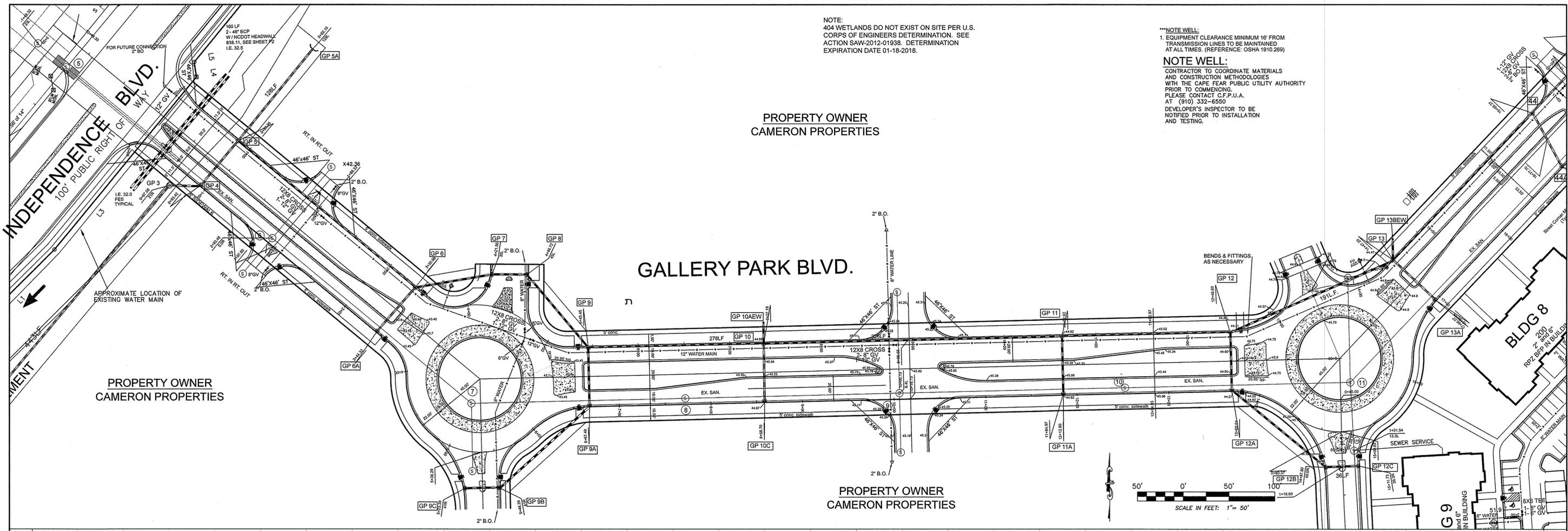
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PLANS & PROFILES
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
License # C-0597

Date: 10-3-14
Scale: HORZ. 1" = 50'
VERT. 1" = 5'-0"
Drawn: GW
Checked: DH
Project No: 12498
Sheet No: 2
Of: 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.

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

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

STATION 0+00 THROUGH 16+50
GALLERY PARK BLVD.

REV. NO.	REVISIONS	DATE
2	REVISED AS PER CITY COMMENTS	3-12-15
1	Major Revision	1-30-15

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PLANS & PROFILES
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

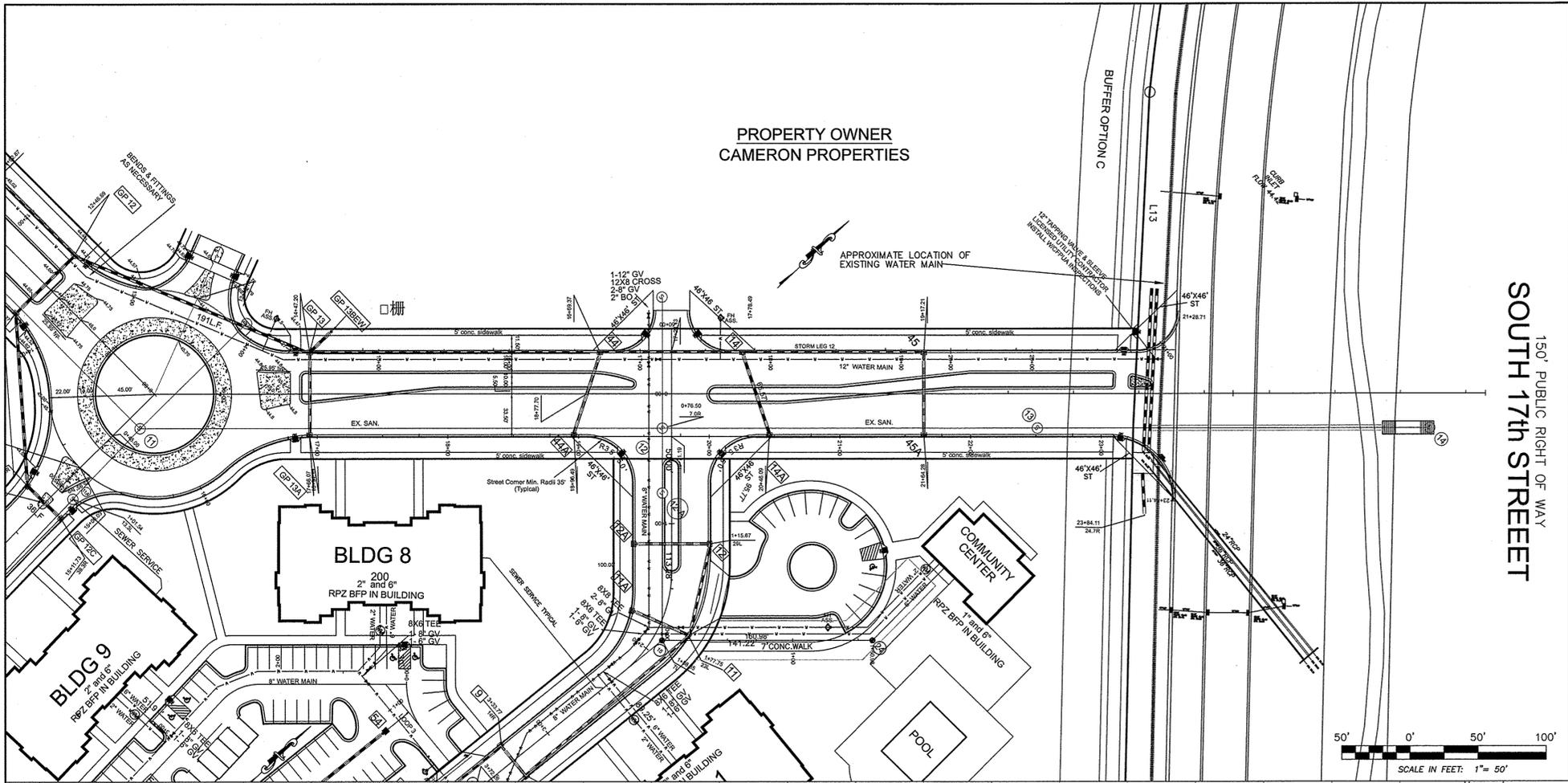
Checked: DH
Project No: 12498

Sheet No: 3
Of: 10

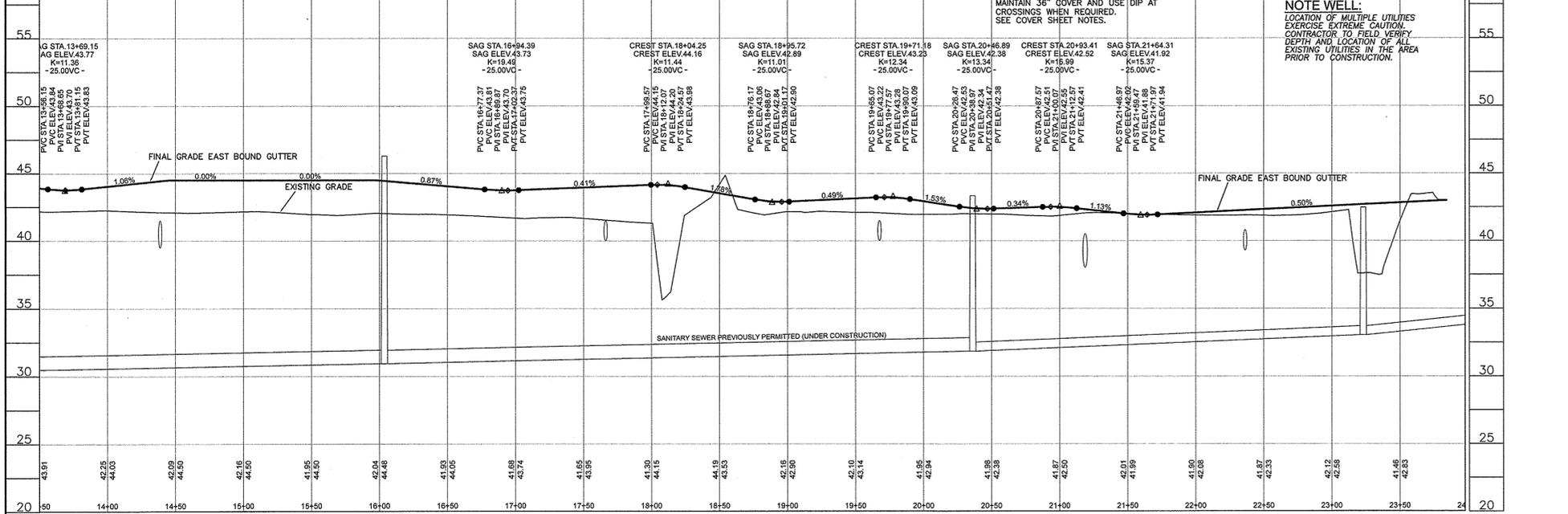
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
License # C-0597

DATE: 10-3-14
SCALE: HORIZ: 1"=50'
VERT: 1"=5'
DRAWN: GW
CHECKED: DH
PROJECT NO: 12498
SHEET NO: 3
OF: 10

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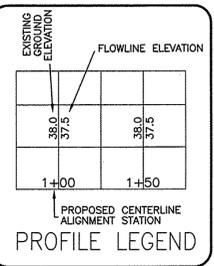
GALLERY PARK BLVD. EAST BOUND GUTTER PROFILE



NOTE WELL:
MULTIPLE UTILITIES SHOWN GRAPHICALLY IN PROFILE. DEVIATIONS NOTED AS SHOWN. MAINTAIN 36" COVER AND USE DIP AT CROSSINGS WHEN REQUIRED. SEE COVER SHEET NOTES.

NOTE WELL:
LOCATION OF MULTIPLE UTILITIES EXERCISE EXTREME CAUTION. CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES IN THE AREA PRIOR TO CONSTRUCTION.

FINAL DESIGN NOT RELEASED FOR CONSTRUCTION



NOTE WELL:
1. EQUIPMENT CLEARANCE MINIMUM 18' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)
CONTRACTOR TO COORDINATE MATERIALS AND CONSTRUCTION METHODOLOGIES WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO COMMENCING. PLEASE CONTACT C.F.P.U.A. AT (910) 332-6550
DEVELOPER'S INSPECTOR TO BE NOTIFIED PRIOR TO INSTALLATION AND TESTING.

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 _____

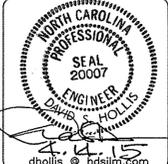
Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

NOTE:
404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.

STATION 15+00 THROUGH 26+00
GALLERY PARK BLVD.

REV. NO.	REVISIONS	DATE
3	REVISED AS PER CITY COMMENTS	3-12-15
2	Major Revision	1-30-15
1	REVISED AS PER CITY COMMENTS	12-3-14

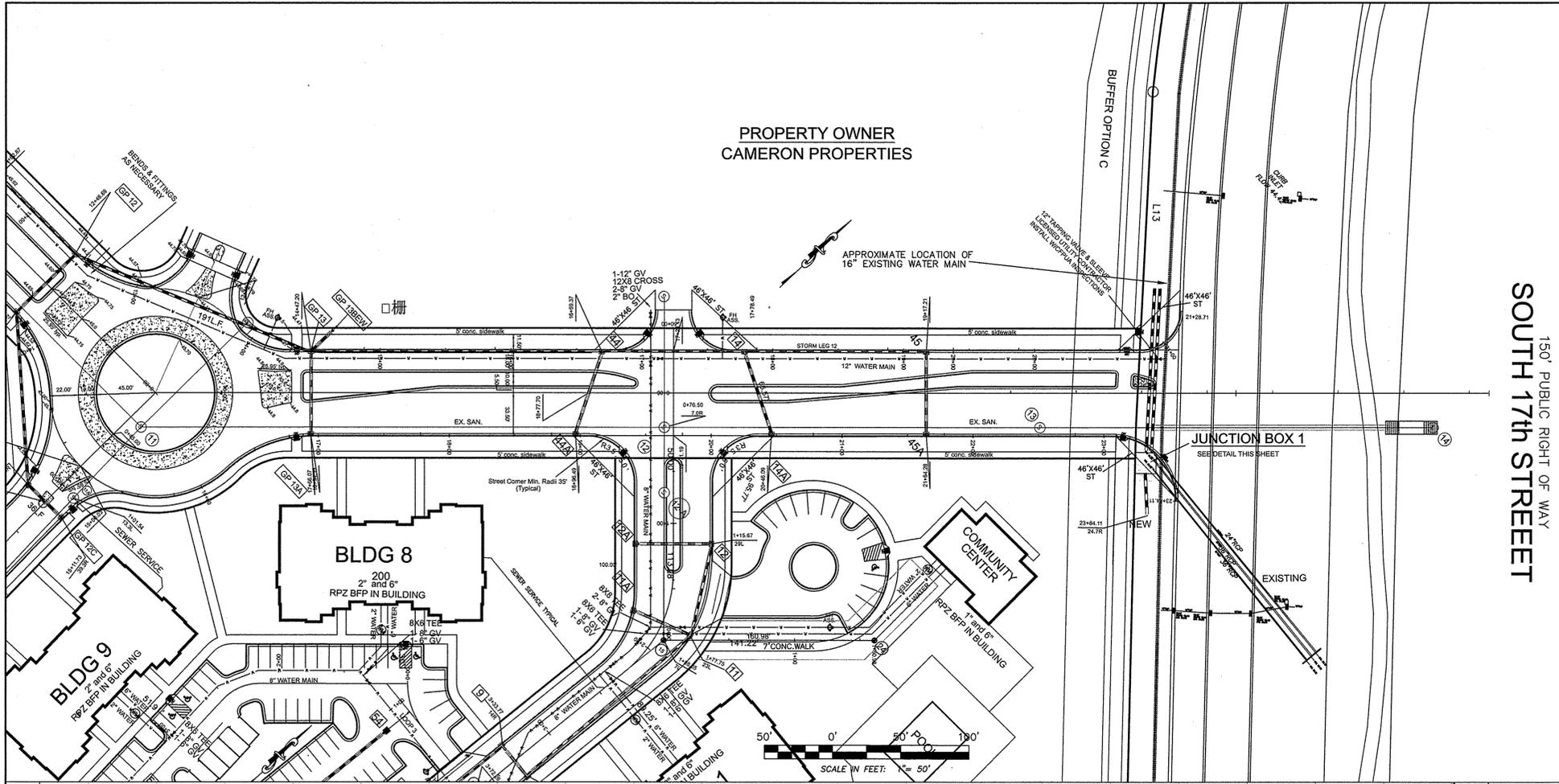
PLANS & PROFILES
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA



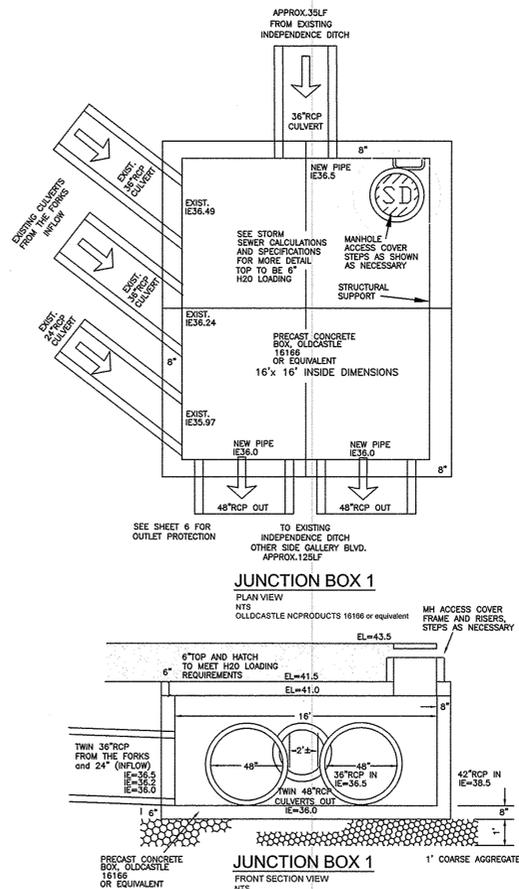
OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE (910) 343-8002
License # C-0597

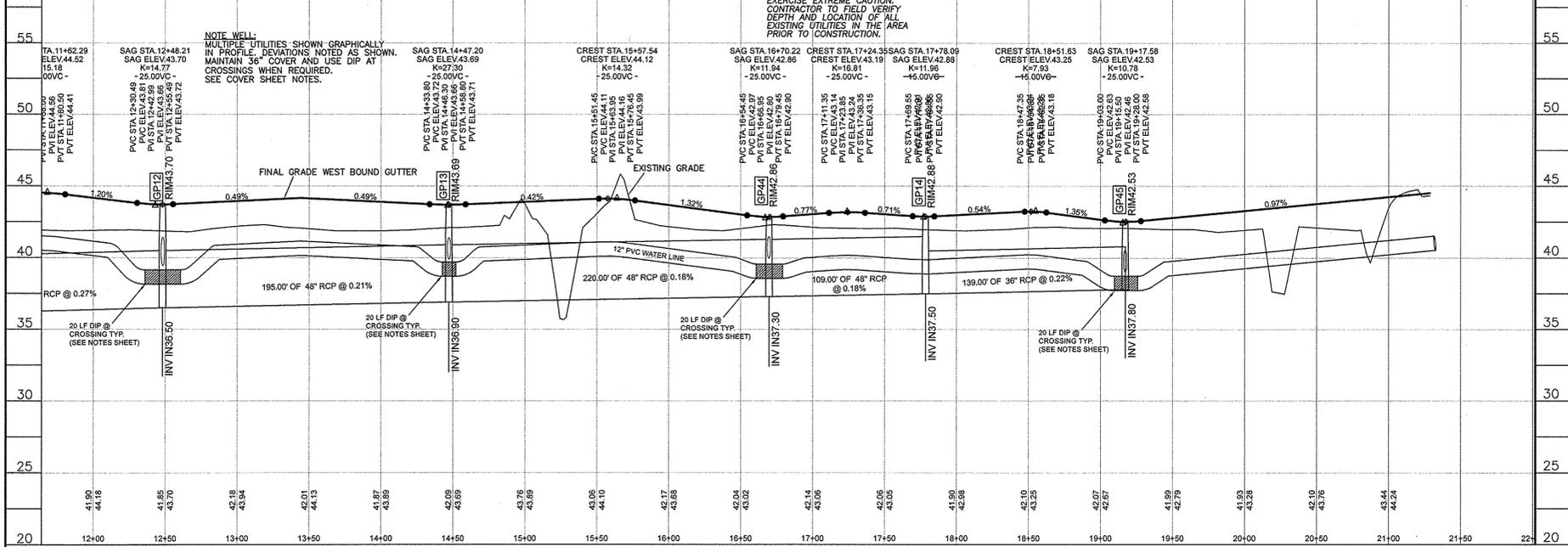
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Scale: HORIZ: 1"=50'
VERT: 1"=5'
Drawn: GW
Checked: DH
Project No: 12488
Sheet No: 4
Of: 10



150' PUBLIC RIGHT OF WAY
SOUTH 17TH STREET

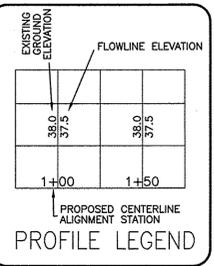


GALLERY PARK BLVD. WEST BOUND GUTTER PROFILE



NOTE WELL:
LOCATION OF MULTIPLE UTILITIES EXERCISE EXTREME CAUTION. CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES IN THE AREA PRIOR TO CONSTRUCTION.

CONTRACTOR TO VERIFY DEPTH & LOCATION TAPPING TO BE PERFORMED BY LICENSED UTILITY CONTRACTOR & OBSERVED BY CFPWA



NOTE WELL:
1. EQUIPMENT CLEARANCE MINIMUM 18' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)
NOTE WELL:
CONTRACTOR TO COORDINATE MATERIALS AND CONSTRUCTION METHODOLOGIES WITH THE CAPE FEAR PUBLIC UTILITY AUTHORITY PRIOR TO COMMENCING. PLEASE CONTACT CFPWA AT (910) 332-6550
DEVELOPER'S INSPECTOR TO BE NOTIFIED PRIOR TO INSTALLATION AND TESTING.

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 _____

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

NOTE:
404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.

STATION 12+50 THROUGH 22+00
GALLERY PARK BLVD.

REV. NO.	REVISIONS	DATE
3	REVISED AS PER CITY COMMENTS	3-12-15
2	Major Revision	1-30-15
1	REVISED AS PER CITY COMMENTS	12-3-14

FINAL DESIGN NOT RELEASED FOR CONSTRUCTION

PLANS & PROFILES
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA



OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

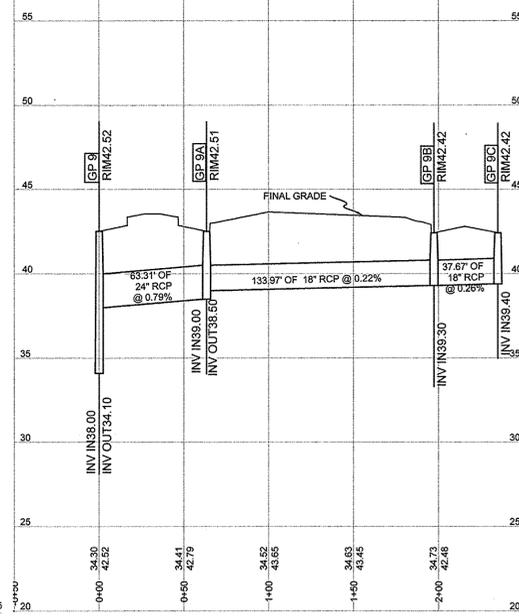
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
License # C-0597

Date: 10-3-14
Scale: HORIZ: 1"=50'
VERT: 1"=5'
Drawn: GW
Checked: DH
Project No: 12498
Sheet No: 5
Of: 10

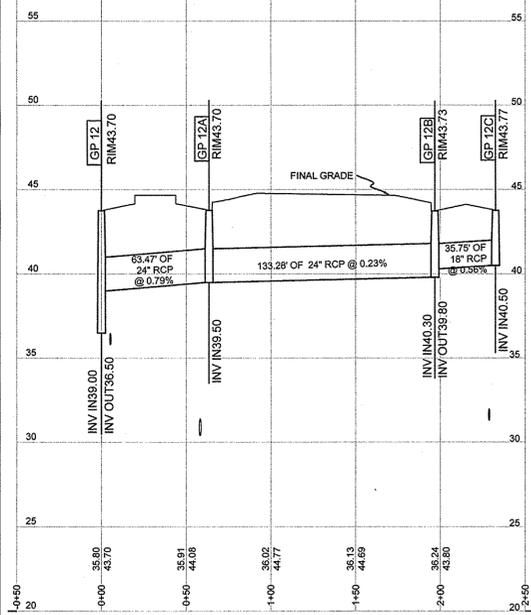
GP STORM LEG 1 (OUTFALL PIPE 1)



GP STORM LEG 3



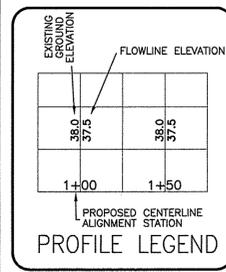
GP STORM LEG 5



STORM SEWER SUMMARY
Forebay No.1

Line No.	To Line	Length (ft)	Incr Area (ac)	Total Area (ac)	Incr Cx (C)	Total Cx (CxA)	Inlet Time (min)	Rain Syst (min)	Total Runoff (in/hr)	Total Flow (cfs)	Capac. Full (cfs)	Velocity (fps)	Pipe Size (in)	Pipe Slope (%)	Inv Up (ft)	Inv Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Gr/Rim (ft)	Gr/Rim (ft)	Line ID		
1	End	57.0	0.00	42.46	0.60	0.00	33.97	0.0	41.5	3.6	122.57	180.10	340.77	7.73	66	0.88	32.00	31.50	37.06	37.00	41.39	38.00	1 TO 2
2	1	447.0	0.00	42.46	0.60	0.00	33.97	0.0	39.0	3.7	126.66	180.10	121.69	7.58	66	0.11	32.50	32.00	38.60	37.50	43.00	41.39	2 TO 3
3	2	35.0	0.60	42.46	0.80	0.48	33.97	5.0	38.8	3.7	127.00	180.10	275.04	7.58	66	0.57	32.70	32.50	38.77	38.69	42.01	43.00	3 TO 4
4	3	63.0	0.68	41.86	0.80	0.54	33.49	5.0	38.4	3.8	125.80	176.63	194.72	9.00	60	0.48	33.00	32.70	39.11	38.86	41.57	42.01	4 TO 5
5	4	252.0	0.57	24.99	0.80	0.46	19.99	5.0	37.0	3.8	76.56	117.66	112.42	5.99	60	0.16	33.40	33.00	39.67	39.23	42.04	41.57	5 TO 6
6	5	85.0	0.22	23.43	0.80	0.18	18.74	5.0	36.6	3.9	72.26	108.64	167.64	5.53	60	0.35	33.70	33.40	39.85	39.73	42.70	42.04	6 TO 7
7	6	38.0	0.28	23.21	0.80	0.22	18.57	5.0	36.3	3.9	71.79	107.36	144.75	5.47	60	0.26	33.80	33.70	39.96	39.90	42.70	42.70	7 TO 8
8	7	105.0	0.49	22.93	0.80	0.39	18.34	5.0	35.8	3.9	71.52	105.74	150.83	5.39	60	0.29	34.10	33.80	40.15	40.00	42.52	42.70	8 TO 9
9	8	192.0	0.52	21.18	0.80	0.42	16.94	5.0	34.7	4.0	67.08	95.63	97.24	6.01	54	0.21	35.00	34.60	40.58	40.20	44.17	42.52	9 TO 10
10	9	326.0	0.58	19.15	0.80	0.46	15.32	5.0	32.9	4.1	62.29	84.78	83.44	5.33	54	0.15	35.50	35.00	41.18	40.66	44.12	44.17	10 TO 11
11	10	184.0	0.66	17.36	0.80	0.53	13.89	5.0	31.9	4.1	57.34	75.32	81.12	5.99	48	0.27	36.50	36.00	41.65	41.22	43.70	44.12	11 TO 12
12	11	195.0	0.72	14.83	0.80	0.58	11.86	5.0	30.8	4.2	49.81	60.69	70.48	4.83	48	0.21	36.90	36.50	42.01	41.71	43.69	43.70	12 TO 13
13	4	129.0	16.19	16.19	0.80	12.95	12.95	30.0	30.0	4.3	55.05	55.05	52.56	5.72	42	0.23	34.20	33.90	39.56	39.23	45.00	41.57	5 TO 5A
14	5	63.0	0.99	0.99	0.80	0.79	0.79	5.0	5.0	7.2	5.72	5.72	10.13	3.32	18	0.79	38.50	38.00	39.86	39.73	42.04	42.04	6 TO 6A
15	8	63.0	0.52	1.26	0.80	0.42	1.01	5.0	5.0	7.0	7.09	7.29	21.83	2.42	24	0.79	38.50	38.00	40.24	40.20	42.51	42.52	9 TO 9A
16	15	134.0	0.40	0.74	0.80	0.32	0.59	5.0	5.2	7.2	4.25	4.28	5.38	2.47	18	0.22	39.30	39.00	40.67	40.50	42.42	42.51	9A TO 9B
17	16	38.0	0.34	0.34	0.80	0.27	0.27	5.0	5.0	7.2	1.97	1.97	5.84	1.13	18	0.26	39.40	39.30	40.81	40.80	42.42	42.42	9B TO 9C
18	9	24.0	0.69	0.69	0.80	0.55	0.55	15.0	15.0	5.6	3.10	3.10	12.72	1.76	18	1.25	39.30	39.00	40.68	40.66	44.28	44.17	10 TO 10AEW
19	9	63.0	0.82	0.82	0.80	0.66	0.66	5.0	5.0	7.2	4.74	4.74	10.13	3.15	18	0.79	40.00	39.50	41.04	41.00	44.17	44.17	10 TO 10C
20	10	63.0	1.21	1.21	0.80	0.97	0.97	10.0	10.0	6.3	6.10	6.10	10.13	3.52	18	0.79	40.00	39.50	41.38	41.22	44.12	44.12	11 TO 11A
21	11	63.0	0.53	1.87	0.80	0.42	1.50	5.0	5.9	7.0	10.52	10.81	21.83	3.44	24	0.79	39.50	39.00	41.83	41.71	43.70	43.70	12 TO 12A
22	21	133.0	0.76	1.34	0.80	0.61	1.07	5.0	5.2	7.2	7.70	7.75	11.64	2.47	24	0.23	39.80	39.50	41.98	41.85	43.73	43.70	12A TO 12B
23	22	36.0	0.58	0.58	0.80	0.46	0.46	5.0	5.0	7.2	3.35	3.35	8.48	1.90	18	0.56	40.50	40.30	42.00	41.99	43.77	43.73	12B TO 12C
24	12	63.0	0.77	0.77	0.80	0.62	0.62	5.0	5.0	7.2	4.45	4.45	10.13	2.52	18	0.79	40.50	40.00	42.14	42.04	43.69	43.69	13 TO 13A
25	12	24.0	10.06	10.06	0.80	8.05	8.05	30.0	30.0	4.3	34.20	34.20	104.3	4.84	36	2.08	37.50	37.00	42.10	42.04	44.58	43.69	13 TO 13BEW
26	12	220.0	0.58	3.28	0.80	0.46	2.62	10.0	11.4	6.1	16.00	17.87	66.36	1.42	48	0.18	37.30	36.90	42.07	42.04	42.86	43.69	13 TO 44
27	26	109.0	0.43	2.54	0.80	0.34	2.03	5.0	10.8	6.2	12.57	14.02	66.66	1.12	48	0.18	37.50	37.30	42.08	42.08	42.88	42.86	44 TO 14
28	27	139.0	0.90	1.39	0.80	0.72	1.11	10.0	10.0	6.3	7.01	7.37	33.57	1.04	36	0.22	37.80	37.50	42.10	42.09	42.53	42.88	14 TO 45
29	28	63.0	0.49	0.49	0.80	0.39	0.39	5.0	5.0	7.2	2.83	2.83	7.85	1.60	18	0.48	38.70	38.40	42.14	42.10	41.92	42.53	45 TO 45A
30	27	67.0	0.72	0.72	0.80	0.58	0.58	5.0	5.0	7.2	4.16	4.16	9.83	2.36	18	0.75	40.00	39.50	42.18	42.09	42.38	42.88	14 TO 14A
31	26	66.0	0.16	0.16	0.80	0.13	0.13	5.0	5.0	7.2	0.93	0.93	9.90	0.52	18	0.76	40.00	39.50	42.08	42.08	42.89	42.86	44 TO 44A

Return period = 10 Yrs.



NOTE WELL:
1. EQUIPMENT CLEARANCE MINIMUM 16' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)

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 _____

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

NOTE:
404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.



FINAL DESIGN NOT RELEASED FOR CONSTRUCTION

REV. NO.	REVISIONS	DATE
2	REVISED AS PER CITY COMMENTS	3-12-15
1	Major Revision	1-30-15

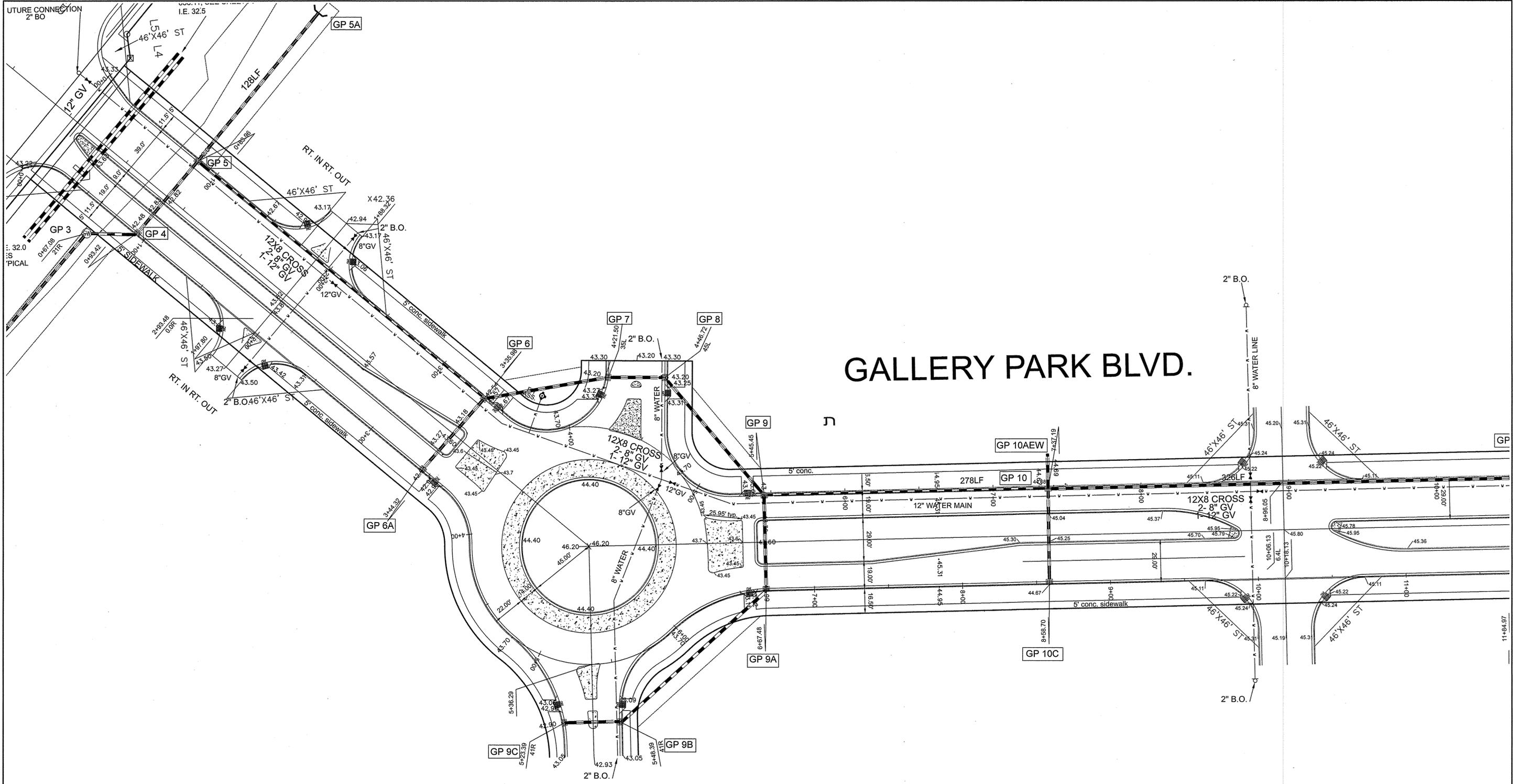
PLAN
BARCLAY WEST
PHASE 1 INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-782-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORA PARKWAY
WILMINGTON, N.C. 28403
PHONE (910) 343-8002
License # C-0597

SEAL
2007
NORTH CAROLINA PROFESSIONAL ENGINEER
DAVID S. HOLLIS
dhollis@hdsim.com

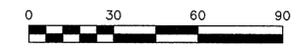
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Scale: HORIZ: 1"=50'
VERT: 1"=2'
Drawn: GW
Checked: DH
Project No: 12498
Sheet No: 7
10



GALLERY PARK BLVD.

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

NOTE WELL: ALL SPOT ELEVATIONS AS SHOWN ARE PROPOSED BACK OF CURB.



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

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

LAY-OUT SHEET		
1	Major Revision	1-30-15
REV. NO.	REVISIONS	DATE

BARCLAY WEST
 PHASE 1 INFRASTRUCTURE
 LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
 P.O. BOX 3649
 WILMINGTON, N.C. 28406 PH 910-762-2676

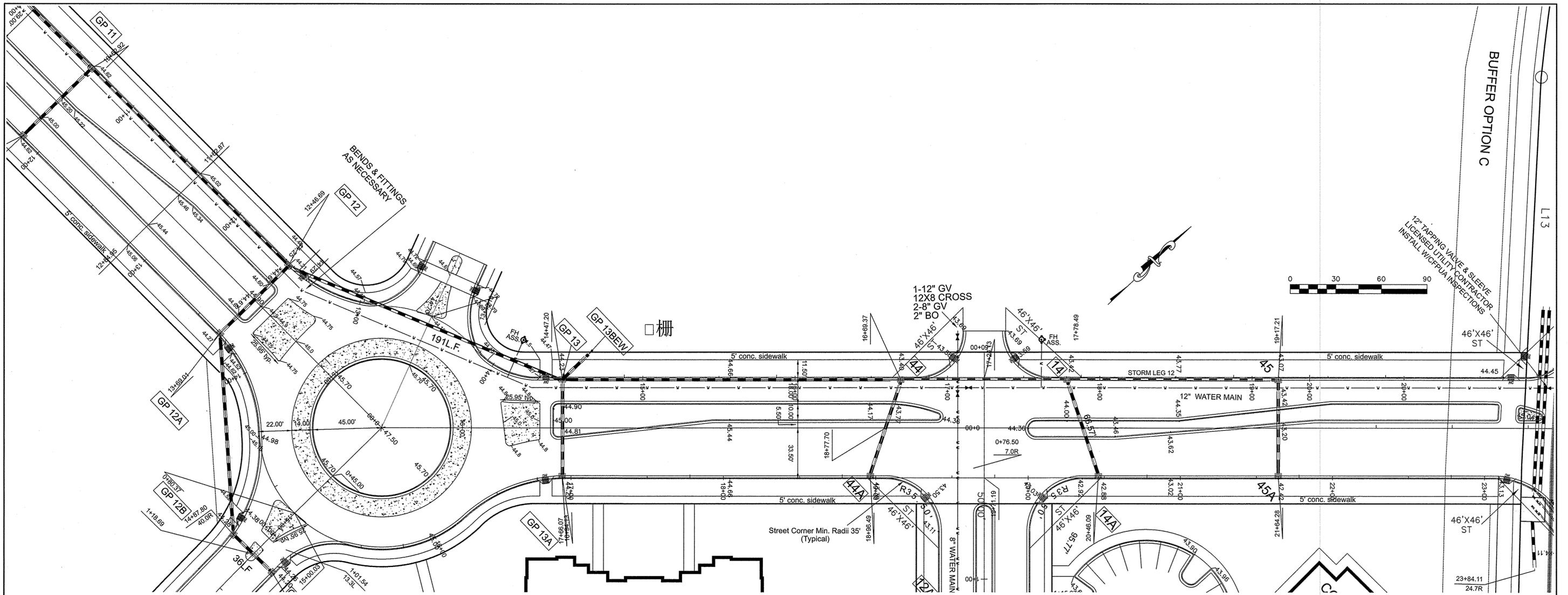
HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORAL PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-8002
 License # C-0597

Date: 10-3-14
 Scale: HORZ.: 1" = 30'
 Drawn: GW
 Checked: DH
 Project No: 1249B
 Sheet No: 8 of 10

FINAL DESIGN NOT RELEASED FOR CONSTRUCTION



4.14.15



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 _____

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

FINAL DESIGN NOT RELEASED FOR CONSTRUCTION

NOTE WELL: ALL SPOT ELEVATIONS AS SHOWN ARE PROPOSED BACK OF CURB.



LAY-OUT SHEET

REV. NO.	REVISIONS	DATE
2	Major Revision	1-30-15
1	REVISED AS PER CITY COMMENTS	12-3-14

BARCLAY WEST
 PHASE 1 INFRASTRUCTURE
 LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

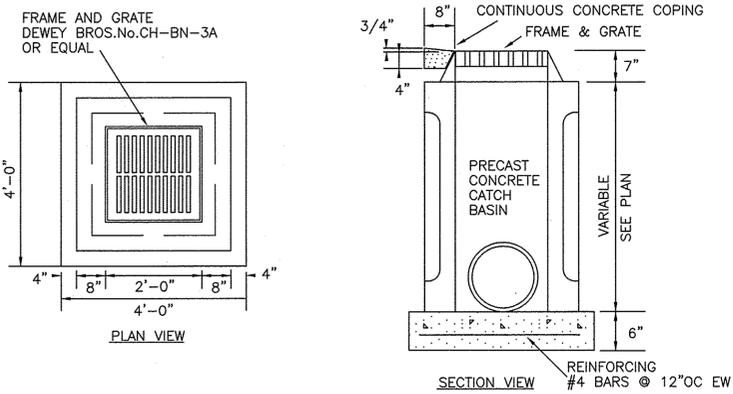


OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
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 PHONE: (910) 343-8002
 License # C-0597

Date: 10-3-14
 Scale: HORIZ.: 1" = 30'
 Drawn: GW
 Checked: DH
 Project No: 1249B
 Sheet No: 9
 Of: 10

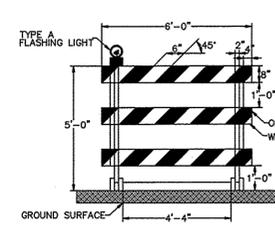
4.14.15



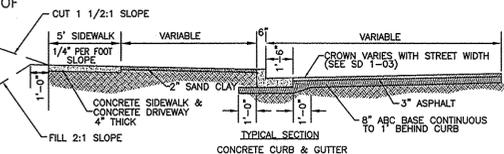
CATCH BASIN DETAIL

NTS

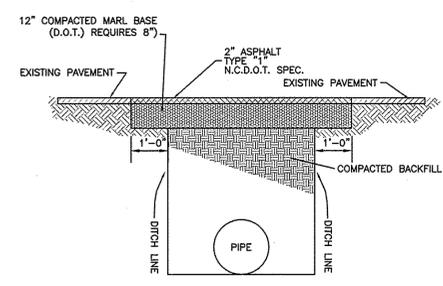
NOTE:
PRECAST CONCRETE CATCH BASIN TO BE SIZED AS NECESSARY,
OR MAY BE CONSTRUCTED OF
BLOCK OR BRICK



TYPE III BARRICADE
SD 15-07
NOT TO SCALE

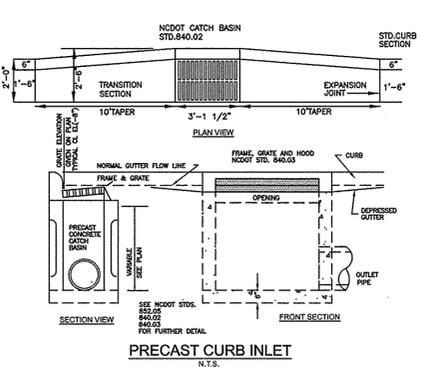


NOTES:
*COMBINED CONCRETE CURB & GUTTER, CONCRETE SIDEWALK AND DRIVEWAYS TO BE 3000 POUNDS STRENGTH CONCRETE.
*EXPANSION JOINTS TO BE PLACED EVERY 5' ACROSS SIDEWALK, IN SIDEWALK AREA OF DRIVEWAYS.
*EXPANSION JOINTS TO BE PLACED ACROSS SIDEWALK EVERY 30'.
*EXPANSION JOINTS TO BE PLACED BETWEEN SIDEWALK AND CURB, SIDEWALK AND DRIVEWAY, AND DRIVEWAY AND CURB RETURN WHERE THEY ADJOIN.



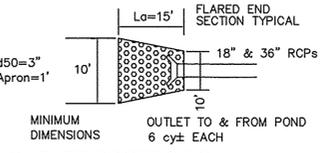
NOTES:
* BACKFILL TO BE INSTALLED IN 6" LIFTS (MAXIMUM) AND COMPACTED TO A MINIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED A.A.S.H.T.O. STANDARD METHOD T-99
* CUT - BACK TO BE PREPARED AFTER TRENCH BACKFILLING AND COMPACTION

STANDARD SHOWING METHOD MAKING PAVEMENT REPAIRS WHERE PIPE IS INSTALLED
PAVEMENT REPAIRS
SD 1-05

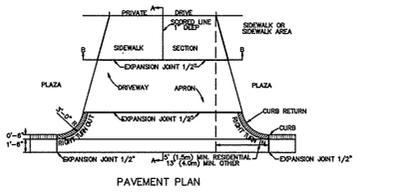


PRECAST CURB INLET
N.T.S.

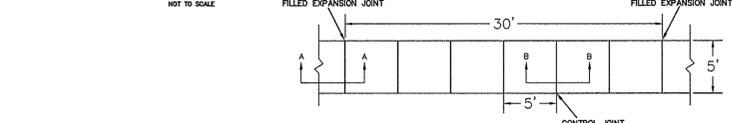
NOTE WELL:
1) OUTLET PROTECTION & ROCK STABILIZATION APRONS REQUIRED AS SHOWN ON PLAN.
2) SLOPE IS FLAT (0%) FOR A MINIMUM OF 2LF 2' MIN. BOTTOM WIDTH.



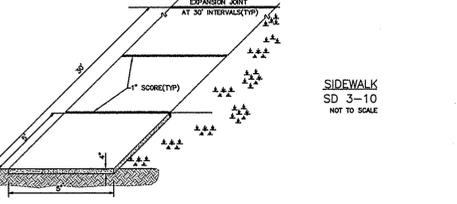
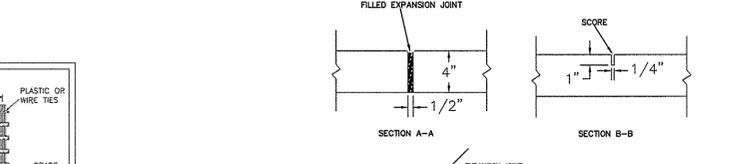
OUTLET PROTECTION AND ROCK STABILIZATION APRON
NOT TO SCALE



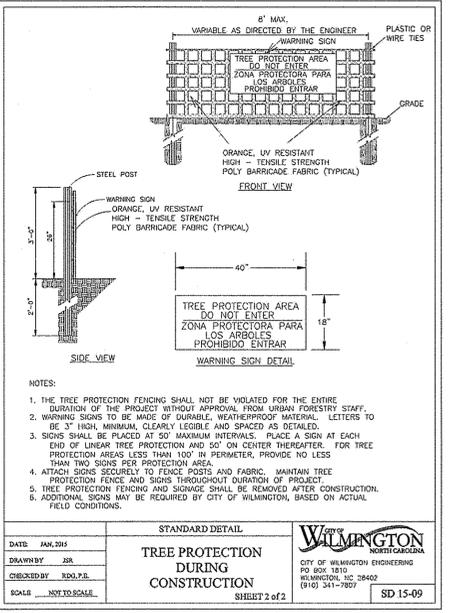
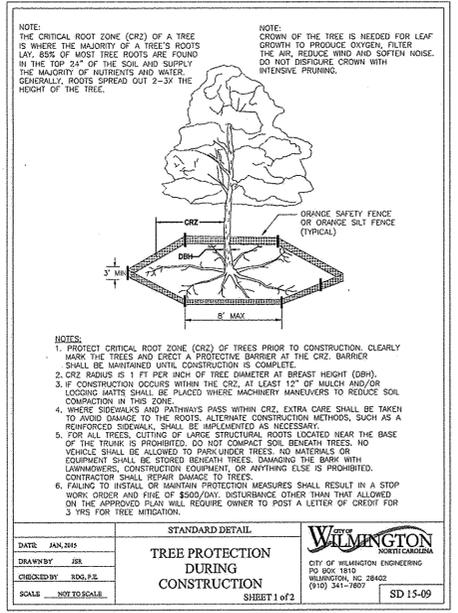
STANDARD DRIVEWAY DETAIL
SD 8-02
NOT TO SCALE



GUIDELINES FOR WHEELCHAIR RAMPS
SD 8-10
NOT TO SCALE



MULTIUSE PATH DETAIL
NOT TO SCALE



GUIDELINES FOR Sidewalks
SD 3-10

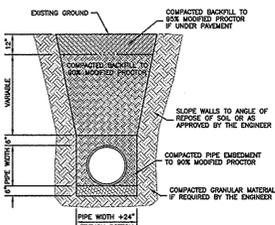
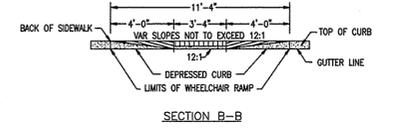
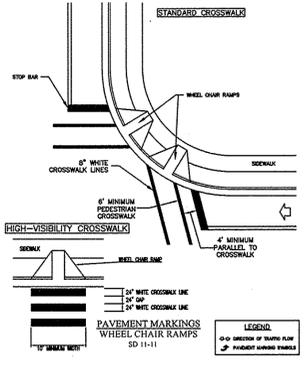
1. JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A 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.

SEE SHEET P2 FOR OUTLET PROTECTION

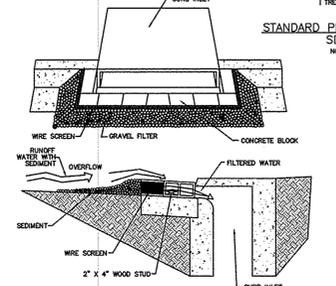
NOTE:
1. STRUCTURAL DESIGN OF END SECTION SHALL CONFORM WITH THAT OF STANDARD REINFORCED CONCRETE.

PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
33	3 3/4	3:1	60	36	96	66	3670
36	4	3:1	63	34 3/4	97 3/4	72	5320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	28	98	84	7470
54	5 1/2	2.4:1	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13990

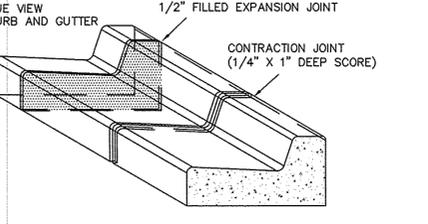
DIMENSIONS IN INCHES WEIGHTS IN POUNDS



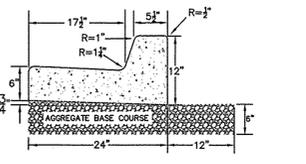
STANDARD PIPE TRENCH DETAIL
SD 1-07
NOT TO SCALE



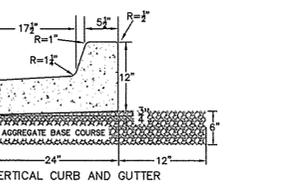
CURB INLET PROTECTION
SD 13-02
NOT TO SCALE



OBLOQUE VIEW VERTICAL CURB AND GUTTER
SD 13-02
NOT TO SCALE



VERTICAL CURB AND GUTTER



MEDIAN VERTICAL CURB AND GUTTER

FINAL DESIGN NOT RELEASED FOR CONSTRUCTION

TYPICAL DETAILS

REV. NO.	REVISIONS	DATE
3	REVISED AS PER CITY COMMENTS	3-12-15
2	Major Revision	1-30-15
1	REVISED AS PER CITY COMMENTS	12-3-14

BARCLAY WEST
LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: BARCLAY WEST APARTMENTS, LLC
P.O. BOX 2562
MOUNT PLEASANT, SC 29465 PH 843-324-5424

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

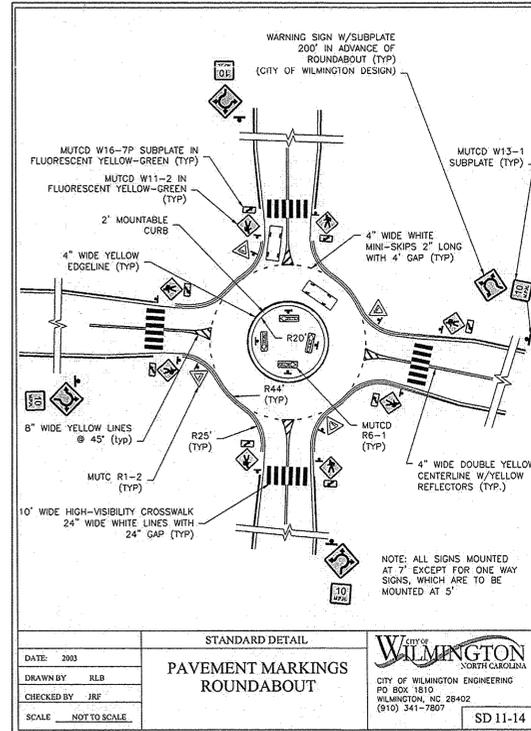
Date: 10-3-14
Scale: N/A
Drawn: [Signature]
Checked: [Signature]
Project No: [Blank]
Sheet No: 10 of 10

Barclay West Gallery Park Boulevard

Striping Plan

SCALE: 1"= 40'

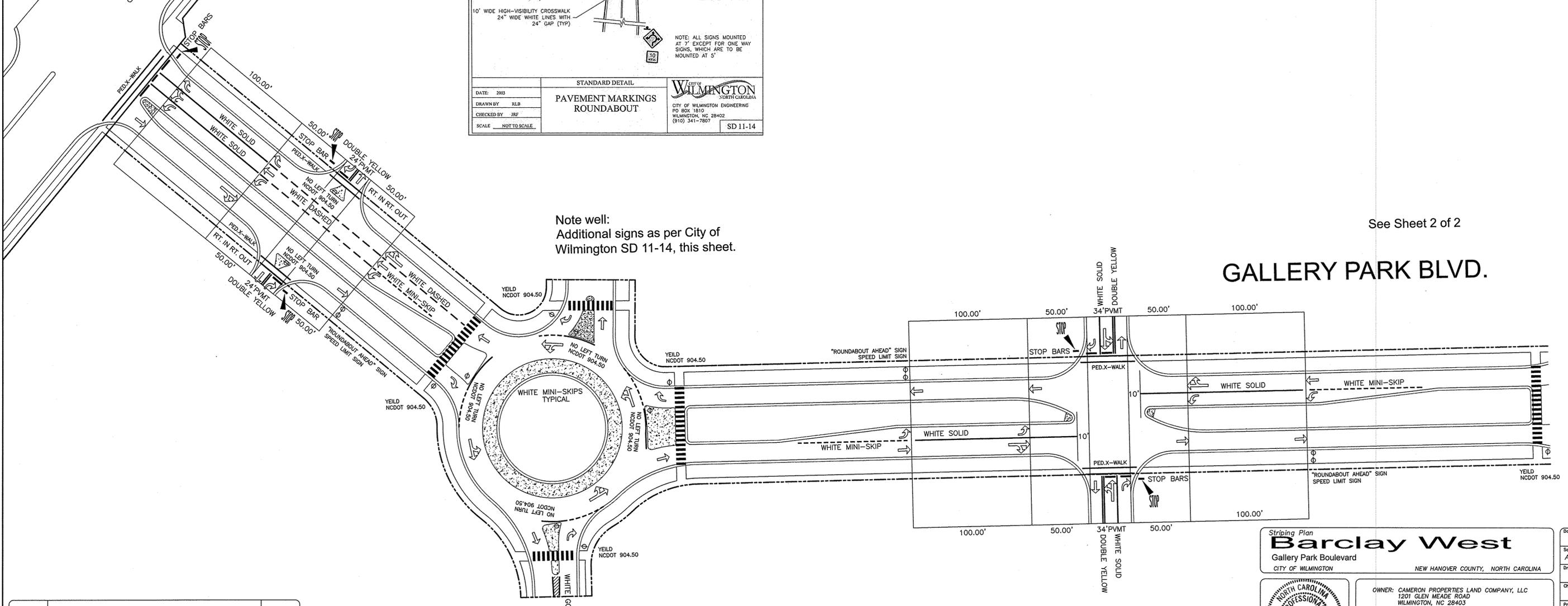
INDEPENDENCE BLVD.



Note well:
Additional signs as per City of
Wilmington SD 11-14, this sheet.

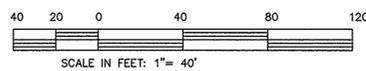
See Sheet 2 of 2

GALLERY PARK BLVD.



REV. NO.	REVISIONS	DATE
1	REVISED AS PER CITY COMMENTS	3-30-15

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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 _____

Approved Construction Plan

Name _____ Date _____

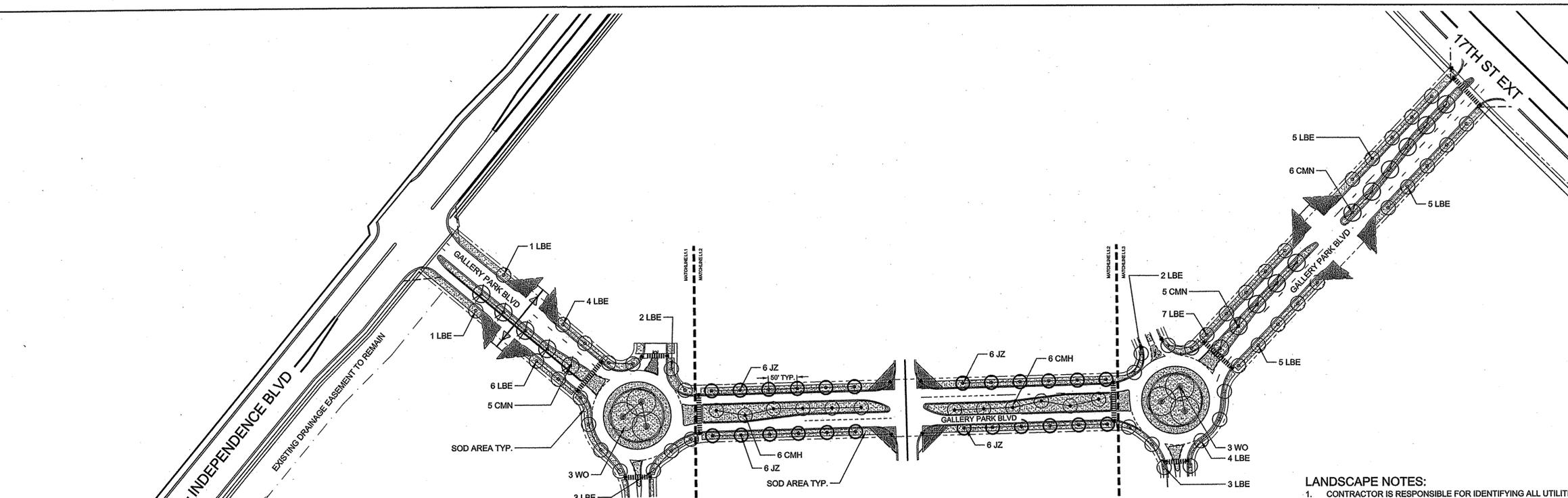
Planning _____
Traffic _____
Fire _____

Striping Plan
Barclay West
Gallery Park Boulevard
CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
1201 GLEN MEADE ROAD
WILMINGTON, NC 28403
910-762-2679

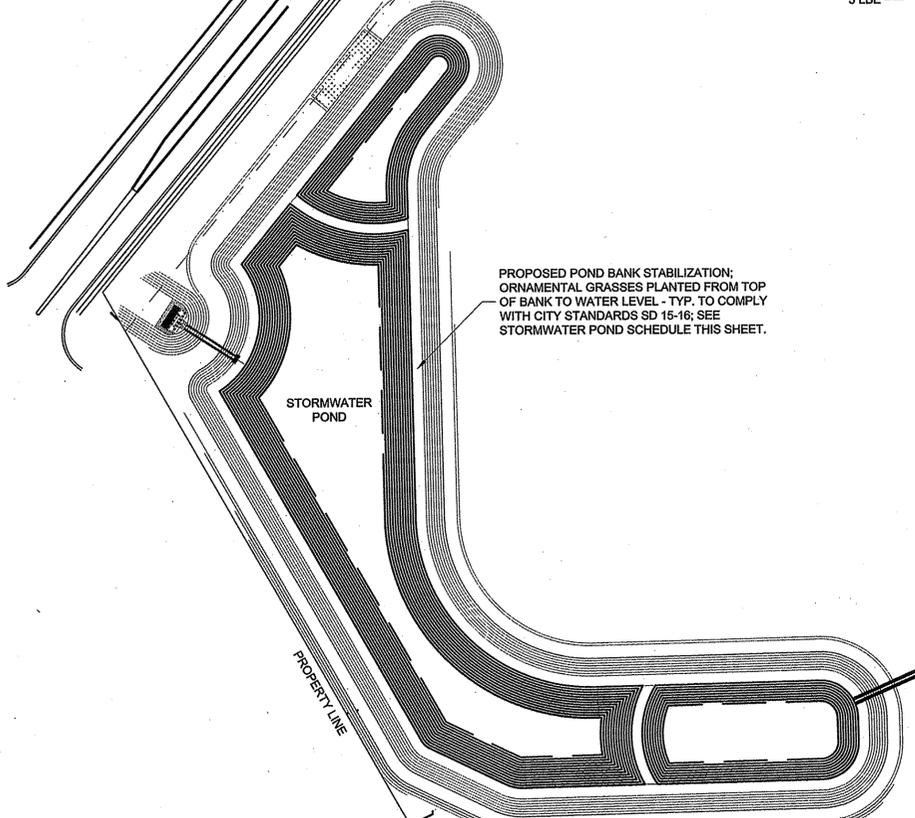
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002 LICENSE No. :C-0582

Date: 1-30-15
Scale: AS SHOWN
Drawn: DSH
Checked: GAW
Project No: 12498
Sheet No: 1 of 2

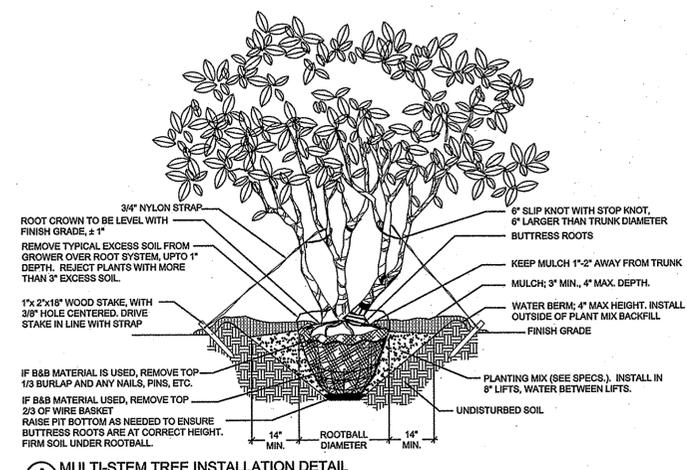


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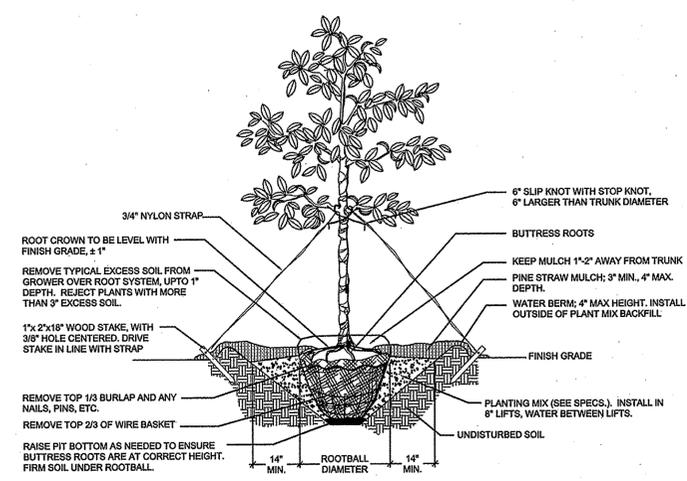
- SOD AREA
- 46' x 46' SIGHT TRIANGLE
- RIGHT OF WAY



- LANDSCAPE NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
 - STAKE ALL TREES AS SHOWN IN DETAIL OR AS OTHERWISE DIRECTED BY OWNER OR OWNER'S REPRESENTATIVE.
 - ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
 - NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
 - SET ALL TREES IN 5' MINIMUM DIAMETER PINE STRAW MULCH BED.
 - ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
 - PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
 - ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
 - THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
 - THE CONTRACTOR SHALL PREPARE ALL SEEDED OR SODDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN RAKED AND ROLLED TO ACCEPT THE SOD/SEED. ALL SOD/SEED AREAS MUST BE IRRIGATED OR HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDED AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVEL GROUND.
 - IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
 - THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED. ALL MATERIAL INCLUDING SOD AND SEEDED AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
 - STREET TREES WILL BE PLANTED AS CLOSE TO CITY REGULATIONS AS POSSIBLE; HOWEVER, SITE CONDITIONS INCLUDING THE LOCATIONS OF DRIVEWAYS, SIGNS, ETC. MAY REQUIRE ADJUSTMENT FROM PROPOSED PLAN. PROPOSED POND BANK STABILIZATION WILL INCLUDE ORNAMENTAL GRASSES FROM TOP OF BANK TO WATER LEVEL AND WILL COMPLY WITH CITY STANDARD SD 15-16.
 - ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' - 10' IN ACCORDANCE WITH SECTION 18-556 OF THE CITY OF WILMINGTON LAND DEVELOPMENT CODE.



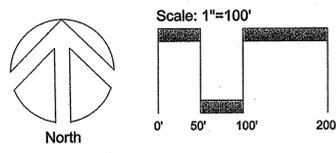
A MULTI-STEM TREE INSTALLATION DETAIL
NTS



B SINGLE STEM TREE INSTALLATION DETAIL
NTS

PLANT SCHEDULE			
Trees, Shrubs & Groundcover			
Key	Qty	Common Name	Size & Specs.
CMH	12	Crape Myrtle 'Hopli'	7' ht. min., single-stem
CMN	16	Crape Myrtle 'Natchez'	12' ht. min., single-stem
JZ	24	Japanese Zelkova 'Green Vase'	2.5" cal., full and consistent quality
LBE	48	Lace Bark Elm	2.5" cal.
WO	6	Willow Oak	specimen, 100 gal.
Turf			
		Centepede Seed	Seed all disturbed areas except sod and pond bank
	79,200 sf	Zoysia 'Emerald' Sod	As shown on plan
Mulch			
	2,150 sf	Pine Straw Mulch	Apply at 3" depth min. and 4" depth max

STORMWATER POND SCHEDULE		
ORNAMENTAL GRASSES		
Qty	Common Name	Size & Specs.
1,349	Cord Grass	plugs, triangular spacing, 5' o.c.
945	Crown Grass	plugs, triangular spacing, 6' o.c.
2,108	Pink Muhly Grass	1 gal., triangular spacing, 4' o.c.
Turf		
		Seed Blend for Stabilization
		Seed between ornamental grass plantings for temporary stabilization; Select non-invasive seed mix that will die when shaded out by grasses; Contractor to submit seed blend prior to order or installation



REVISIONS:

2/13/15	Rev. 1: Landscaper Adjusted to new Property Layout
4/10/15	Rev. 2: sheet layout revised per CIVIL comment

CLIENT INFORMATION:

PARAMOUNT ENGINEERING
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

GALLERY PARK BLVD & POND LANDSCAPE PLAN

WILMINGTON NORTH CAROLINA

PROJECT STATUS:
CONCEPTUAL LAYOUT:
PRELIMINARY LAYOUT:
RELEASED FOR CONST:

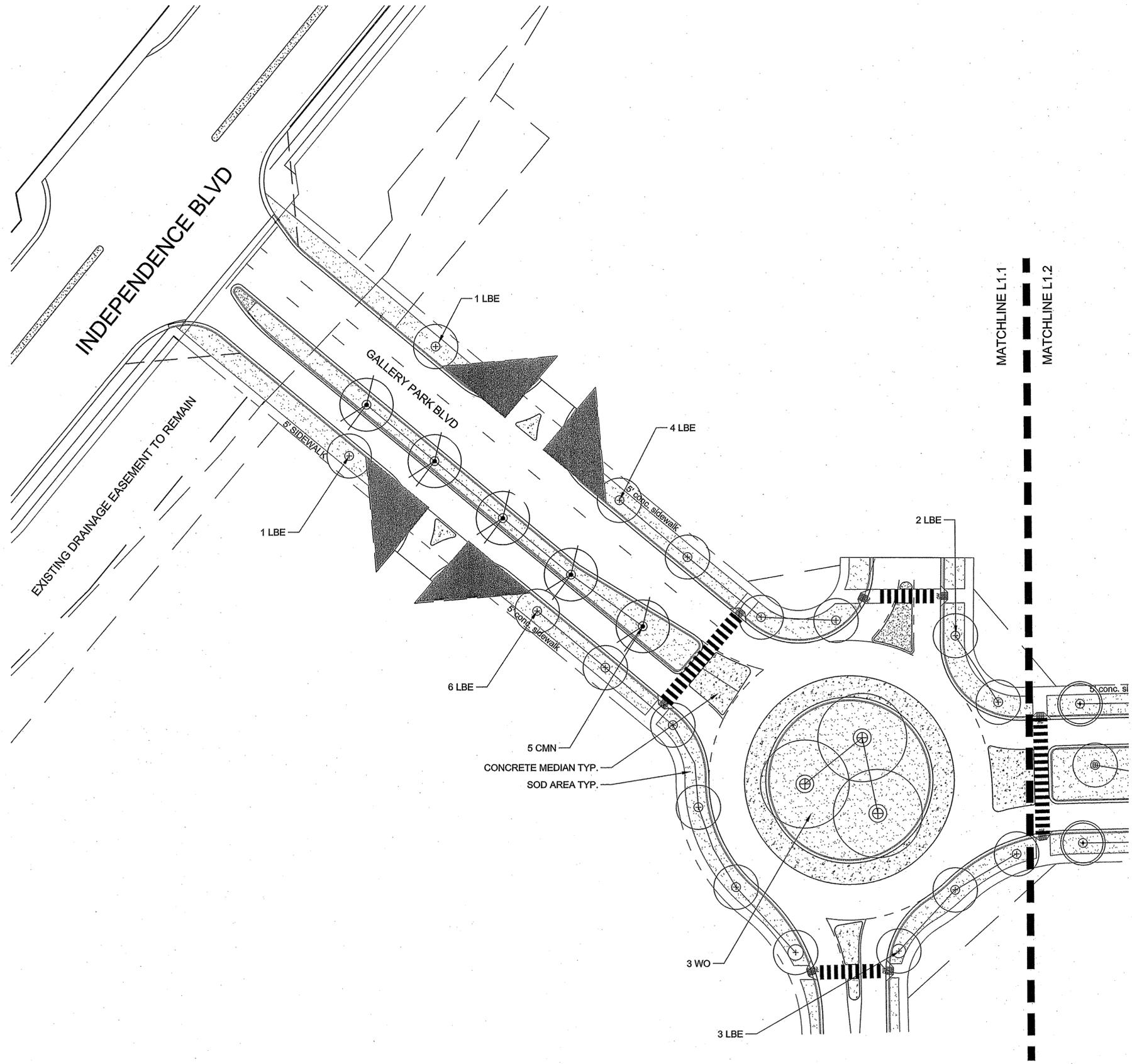
DRAWING INFORMATION:
DATE: 10/22/14
SCALE: 1" = 100'
DRAWN: JIM AHE
CHECKED: JIM AHE

SEAL:
NORTH CAROLINA
LANDSCAPE ARCHITECT
JIM AHE
10/15

L-1.0

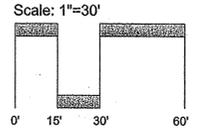
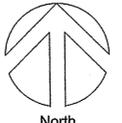
PEI JOB#: 13251.PE

PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION



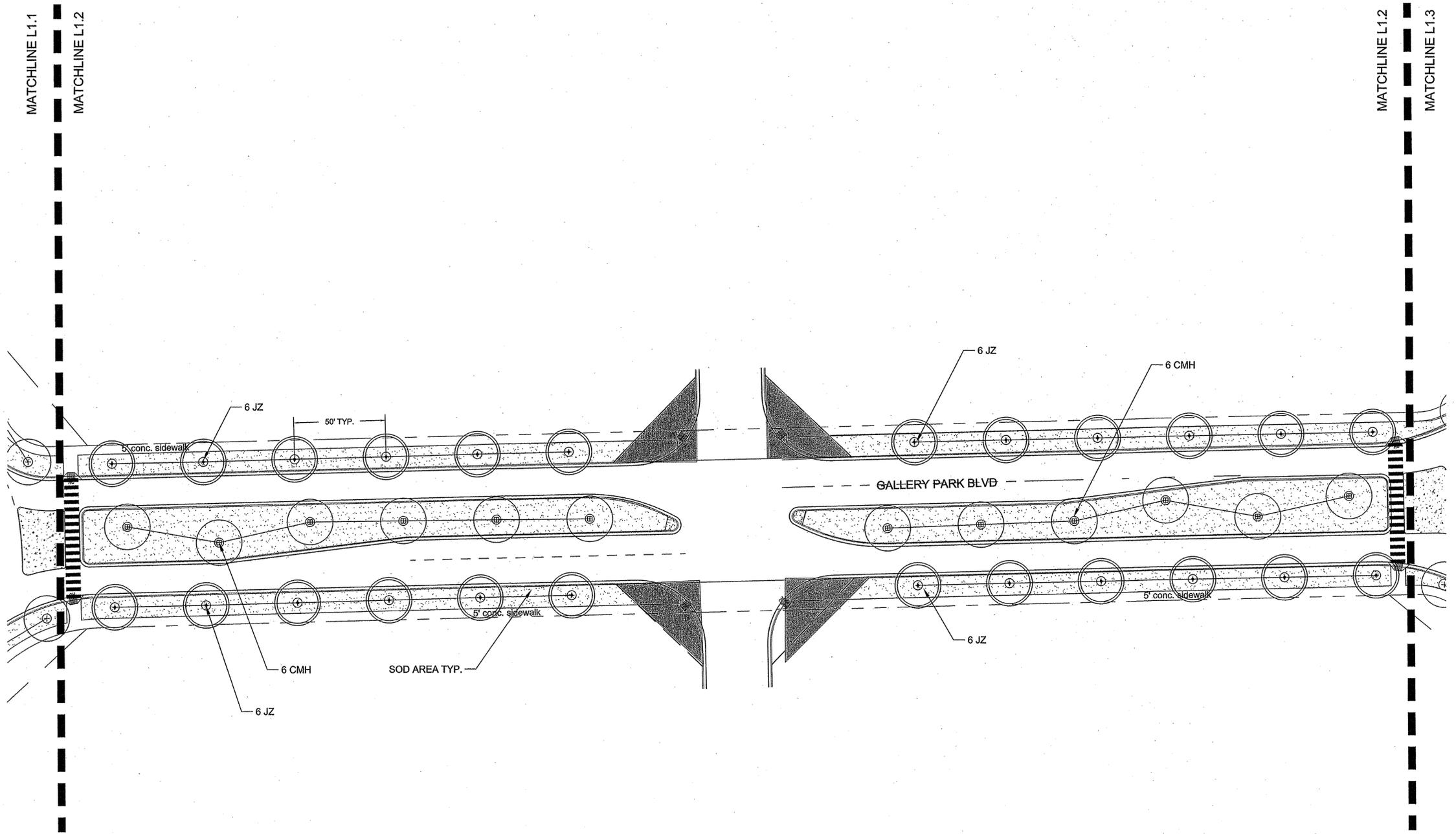
LEGEND:

-  SOD AREA
-  46' x 46' SIGHT TRIANGLE
-  RIGHT OF WAY



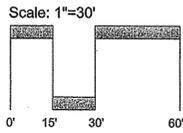
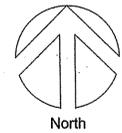
PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p> <table border="1"> <tr><td>2/18/15</td><td></td></tr> <tr><td>4/10/15</td><td></td></tr> </table>	2/18/15		4/10/15		<p>CLIENT INFORMATION:</p> <p>CAMERON PROPERTIES 2508 INDEPENDENCE BLVD WILMINGTON, NC</p>	<p>PARAMOUNT ENGINEERING, INC.</p> <p>5911 Oleander Drive, Suite 201 Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6160 (F) NC License #: C-2846</p>	<p>GALLERY PARK BLVD LANDSCAPE PLAN</p> <p>WILMINGTON NORTH CAROLINA</p>	<p>PROJECT STATUS: CONCEPTUAL LAYOUT: FINAL DESIGN: RELEASED FOR CONST:</p> <p>DRAWING INFORMATION: DATE: SCALE: DRAWN: CHECKED:</p> <p>2/22/14 1"=30' 1/10/15 4/10/15</p>
2/18/15								
4/10/15								
<p>L-1.1</p>								
<p>PEI JOB#: 13251.PE</p>								



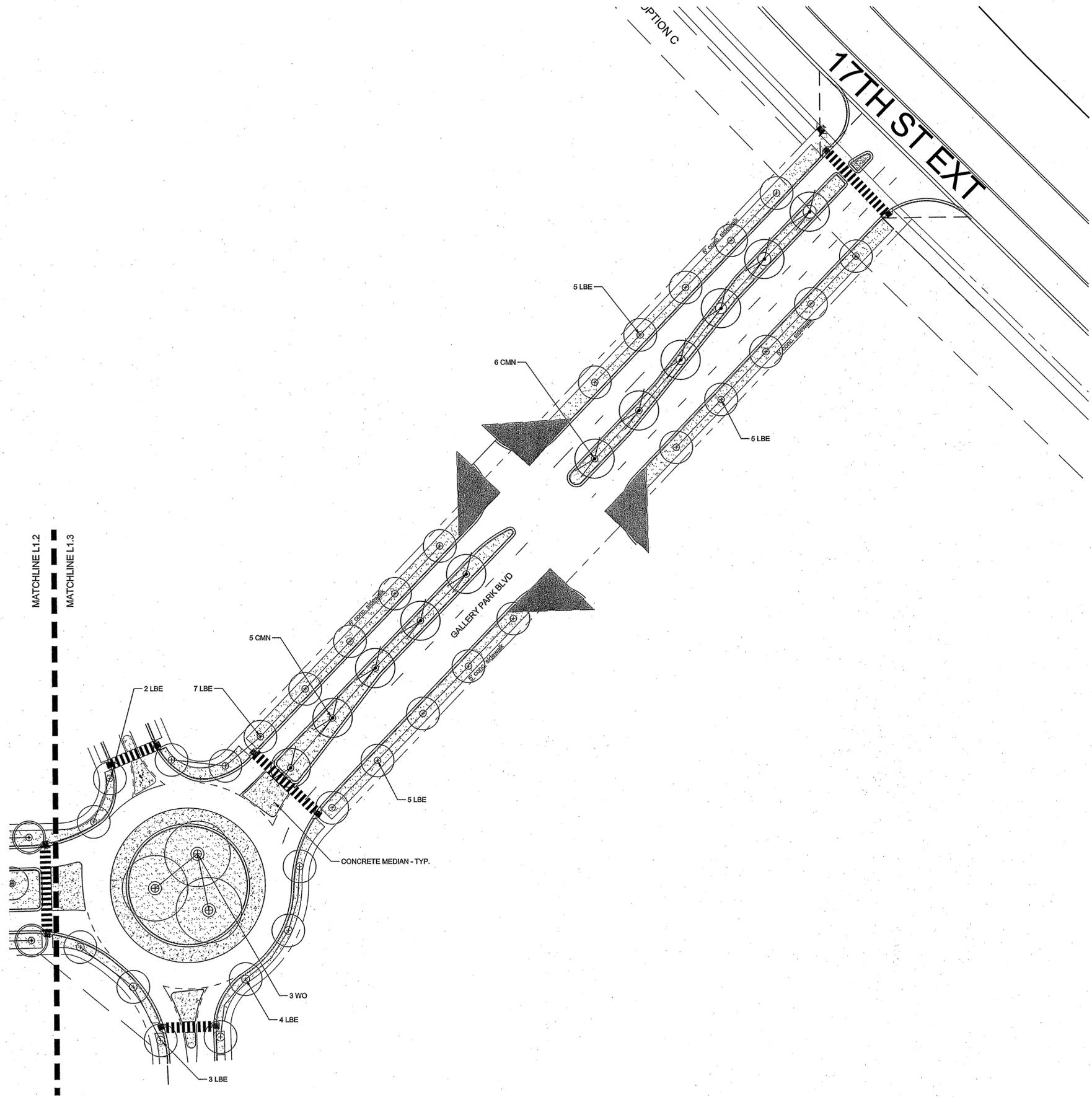
LEGEND:

-  SOD AREA
-  46' x 46' SIGHT TRIANGLE
-  RIGHT OF WAY



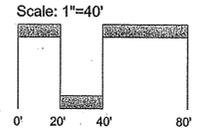
PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

PROJECT STATUS CONCEPTUAL LAYOUT: _____ PRELIMINARY LAYOUT: _____ RELEASED FOR CONSTRUCTION: _____	DRAWING INFORMATION DATE: 12/29/14 DRAWN BY: JON ANE CHECKED: _____		L-1.2	PEI JOB#: 13251.PE
PARAMOUNT ENGINEERING 5911 Oleander Drive, Suite 201 Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846		CLIENT INFORMATION: CAMERON PROPERTIES 2508 INDEPENDENCE BLVD WILMINGTON, NC		
REVISIONS: Rev. 1: Landscape Adjusted to new Resident Layout Rev. 2: Sheet layout revised per CDD comment				



LEGEND:

-  SOD AREA
-  46' x 46' SIGHT TRIANGLE
-  RIGHT OF WAY



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>PROJECT STATUS CONCEPTUAL LAYOUT: FINAL DESIGN: RELEASED FOR CONST:</p>	<p>DRAWING INFORMATION DATE: SCALE: DESIGNED: CHECKED:</p>	<p>CLIENT INFORMATION: CAMERON PROPERTIES 2508 INDEPENDENCE BLVD WILMINGTON, NC</p>	<p>PARAMOUNTE ENGINEERING, INC. 5911 Oleander Drive, Suite 201 Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846</p>
<p>GALLERY PARK BLVD LANDSCAPE PLAN</p>		<p>WILMINGTON NORTH CAROLINA</p>	
<p>L-1.3</p>		<p>PEI JOB#: 13251.PE</p>	

BARCLAY WEST GALLERY PARK BOULEVARD

Modification to Erosion & Sediment Control and Water Quality Plan

LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA
DATE: April 2015
SCALE: 1" = 200'

OWNER / DEVELOPER:
CAMERON PROPERTIES
P.O. BOX 3649
Wilmington, NC 28406
910-762-2676

LIMITS OF DISTURBANCE:
CAMERON PROPERTIES LAND COMPANY, LLC
22.67 Acres

SITE DATA TABLE:

PARCEL IDENTIFICATION:
RO6500-003-004-000
DB 5427 PG 622

STANDARD NOTES:

1. 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.
2. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
3. ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
4. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE AND CURB BOXES TO THE 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.
5. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. ROADS SHALL BE WATERED TO CONTROL DUST WHEN PROGRESS BY THE ENGINEER.
6. 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.
7. EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
8. CONTRACTOR TO ENSURE THAT PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE CURB OUTLETS AND CATCH BASINS. ALL ROOF DRAIN DOWNSPOUTS TO BE DIRECTED TO THE STORM SEWER SYSTEM.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
10. THIS PLAN IS FOR SITE GRADING, ROADWORK & SEWER INSTALLATION ONLY.
11. NO ENCUMBRANCES IN ROW EXCEPT AS SHOWN.
12. AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT. AT THE MINIMUM THIS SHOULD INCLUDE BELLSOUTH AND DUKE ENERGY.
13. PROJECT AREA = XXX.XX ACRES.
14. THIS PROPERTY IS ZONED RB, MF-M & O&1.
15. SEWER AND WATER TO BE PROVIDED BY CFPJA.
16. SITE WILL MEET ALL ZONING REQUIREMENTS.
17. ANY REGULATED TREES ON SITE TO BE PRESERVED AS SHOWN.
18. STRIPING AND LANES TO CITY STANDARDS (THERMOPLASTIC).
19. NO VEHICULAR ACCESS TO SITE EXCEPT AS SHOWN.
20. ALL UTILITIES UNDERGROUND.
21. LANDSCAPING PLAN BY OTHERS.

VEGETATIVE PLAN -

1. Permanent vegetation to be established in accordance with "North Carolina Erosion and Sediment Control Planning and Design Manual", Section 6.11, latest version. See next sheet.

LEGEND

- IRON IN EXIST. CONC. MON.
- EXISTING SANITARY SEWER & MANHOLE
- EXISTING WATERLINE
- E.I.P. = EXISTING IRON PIPE
- E.I.R. = EXISTING IRON REBAR
- E.C.M. = EXISTING CONCRETE MONUMENT
- I.S. = IRON SET
- W/V = WATER VALVE
- W/M = WATER METER
- F/H = FIRE HYDRANT
- P/P = POWER POLE
- C.P. = COMPUTED POINT
- X 49.0 INDICATES SPOT ELEVATION
- WETLANDS
- CE CONSTRUCTION ENTRANCE (TYPICAL)
- SF SILT FENCE (NEW) (TYPICAL)
- IP INLET PROTECTION (TYPICAL)
- OP OUTLET PROTECTION (TYPICAL)
- LIMITS OF DISTURBANCE (PROPOSED)
- PSC PERMANENT STREAM CROSSING
- SB SEDIMENT BASIN

SEE POND PLANS FOR ADDITIONAL MEASURES

SURVEY NOTES:

1. AREA COMPUTED BY COORDINATE METHOD.
2. ALL DISTANCES ARE HORIZONTAL GROUND.
3. PROPERTY SUBJECT TO ALL EASEMENTS OF RECORD.
4. THE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY ARE LOCATED FROM FIELD SURVEY INFORMATION, AND EXISTING AS-BUILT DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THE UTILITIES ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
5. THIS MAP IS NOT FOR CONVEYANCE, RECORDATION OR SALES.
6. PORTIONS OF THIS PROPERTY ARE LOCATED WITHIN A 100 YEAR FLOOD HAZARD AREA ACCORDING TO FLOOD INSURANCE RATE MAP COMMUNITY ID#87203125000, DATED APRIL 3, 2006, PANEL 3125J.
7. THIS PROPERTY IS ZONED RB, MF-M & O&1.
8. SURVEYED IN 2015, AND 2014.
9. COMBINED GRID FACTOR = 1.00000.

NOTE:
404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.



NOTE WELL:

1. EQUIPMENT CLEARANCE MINIMUM 16' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA-1910-269)

STABILIZATION TIME FRAMES:

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

NOTE WELL:

ANY AREAS ON-SITE WITHOUT ACTIVITY SHALL BE STABILIZED WITHIN 15 WORKING DAYS AND AS ABOVE. ALL SLOPES MUST BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY ACTIVITY.

DETAILS SHOWN ARE TYPICAL OF INSTALLATIONS REQUIRED BY CITY AND COUNTY. THIS SHEET DOES NOT PURPORT TO SHOW ALL REQUIRED CONSTRUCTION DETAILS, BUT RATHER SERVES AS A GUIDE. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL CITY, COUNTY AND STATE CODES AND CONSTRUCTION STANDARDS.

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.

INDEX TO DRAWINGS

SHEET No.	DESCRIPTION	DRAWING No.
1 OF 5	COVER SHEET AND GENERAL NOTES	12498-SHT1
2 OF 5	Erosion Control Plans	12498-SHT2
3 OF 5	Erosion Control Plans	12498-SHT3
4 OF 5	Erosion Control Plans	12498-SHT4
5 OF 5	Erosion Control Notes & Additional Details	12498-SHT5

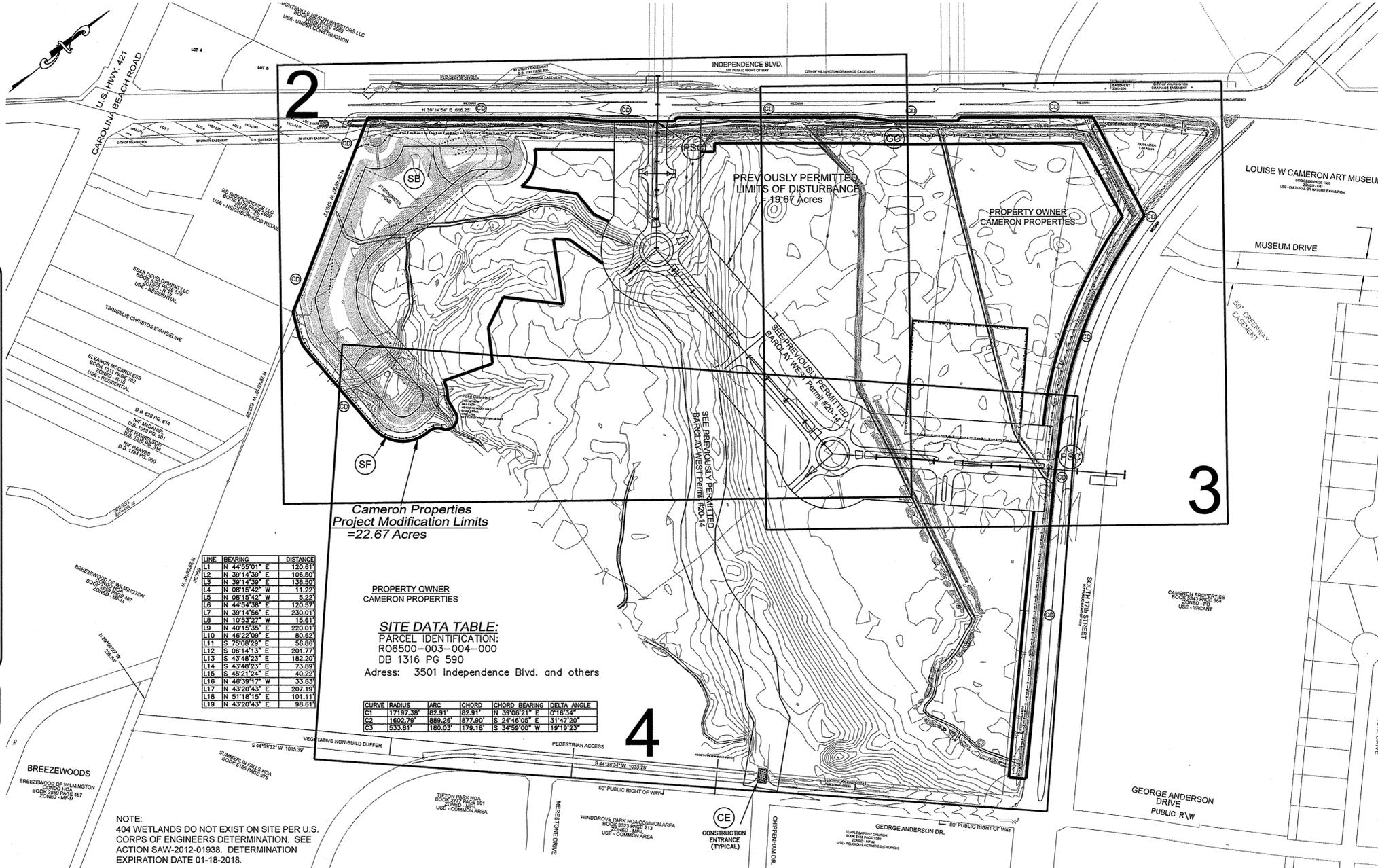
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

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

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

STABILIZATION TIME FRAMES:

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS



Cameron Properties
Project Modification Limits
= 22.67 Acres

PROPERTY OWNER
CAMERON PROPERTIES

SITE DATA TABLE:
PARCEL IDENTIFICATION:
RO6500-003-004-000
DB 1316 PG 590
Address: 3501 Independence Blvd. and others

LINE	BEARING	DISTANCE
L1	N 44°55'01" E	120.61
L2	N 39°14'39" E	106.50
L3	N 39°14'39" E	138.50
L4	N 08°15'42" W	11.22
L5	N 08°15'42" W	5.22
L6	N 44°54'38" E	120.57
L7	N 39°14'56" E	230.01
L8	N 10°53'27" W	15.61
L9	N 40°15'35" E	220.01
L10	N 49°22'09" E	80.92
L11	S 75°08'29" E	56.86
L12	S 09°14'13" E	201.77
L13	S 43°48'23" E	182.20
L14	S 43°48'23" E	73.89
L15	S 45°21'24" E	40.22
L16	N 46°39'17" W	33.53
L17	N 43°20'43" E	207.19
L18	N 51°18'15" E	101.11
L19	N 43°20'43" E	98.61

CURVE	RADIUS	ARC	CHORD	CHORD BEARING	DELTA ANGLE
C1	171.93	83.81	82.91	N 39°02'07" E	0°18'14"
C2	1602.79	869.26	877.90	S 24°40'05" E	31°47'20"
C3	533.81	180.03	179.18	S 34°59'00" W	19°19'23"

NOTE:
THIS PLAN TO BE UTILIZED AND REVIEWED ONLY IN CONJUNCTION WITH THE WRITTEN NARRATIVE WHICH IS AN INTEGRAL PART OF THIS EROSION AND SEDIMENT CONTROL PLAN.

BENCHMARK LOCATIONS AND ELEVATIONS

LOCATION:	ELEVATION
EX. CONCRETE MONUMENT AT INTERSECTION OF S. 17th STREET & MUSEUM DRIVE..	42.58

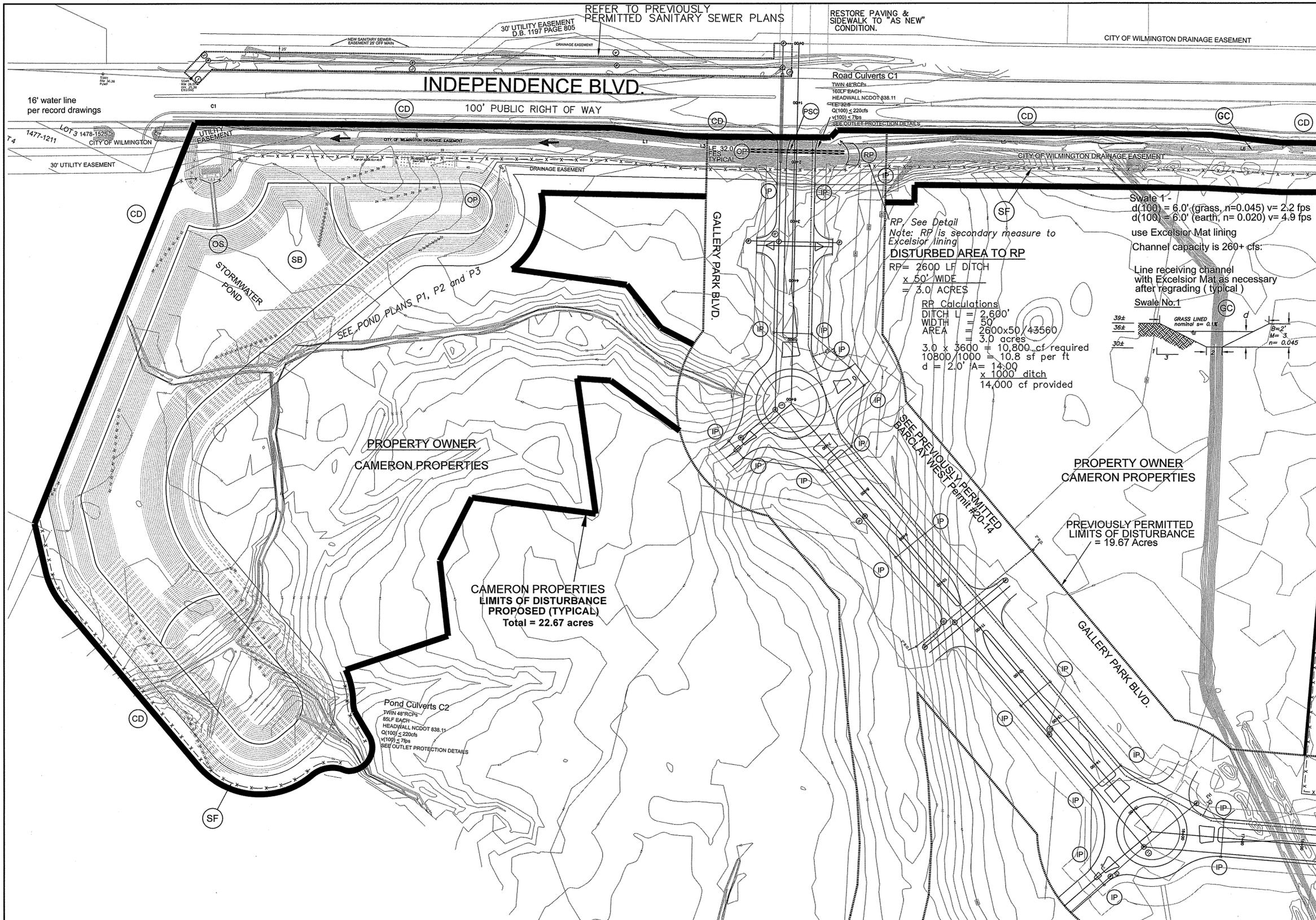
GP# 20-14

Modified Erosion Control Plan Cover Sheet and General Notes
BARCLAY WEST
GALLERY PARK BOULEVARD
LOCATED IN THE CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA



OWNER: CAMERON PROPERTIES
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORENCE PARKWAY
WILMINGTON, NC 28403
PHONE: (910) 343-8002
License # C-5997

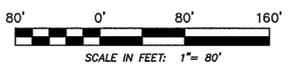


For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

STORMWATER MANAGEMENT PLAN
 APPROVED
 CITY OF WILMINGTON
 ENGINEERING DEPARTMENT
 DATE _____
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Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



NOTE:
 THIS PLAN TO BE UTILIZED AND REVIEWED ONLY IN CONJUNCTION WITH THE WRITTEN NARRATIVE, WHICH IS AN INTEGRAL PART OF THIS EROSION AND SEDIMENT CONTROL PLAN.

NOTE:
 404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.
 ***NOTE WELL:
 1. EQUIPMENT CLEARANCE MINIMUM 18' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.269)

STATION 0+00 THROUGH 10+50
 INDEPENDENCE BLVD.

REV. NO.	REVISIONS	DATE

GP# 20-14
 Modification to Erosion & Sediment Control and Water Quality Plan

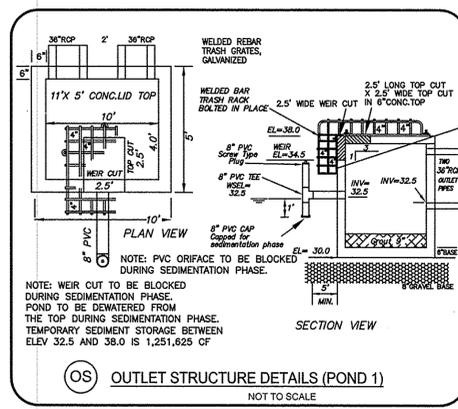
BARCLAY WEST
 GALLERY PARK BOULEVARD
 LOCATED IN THE CITY OF WILMINGTON
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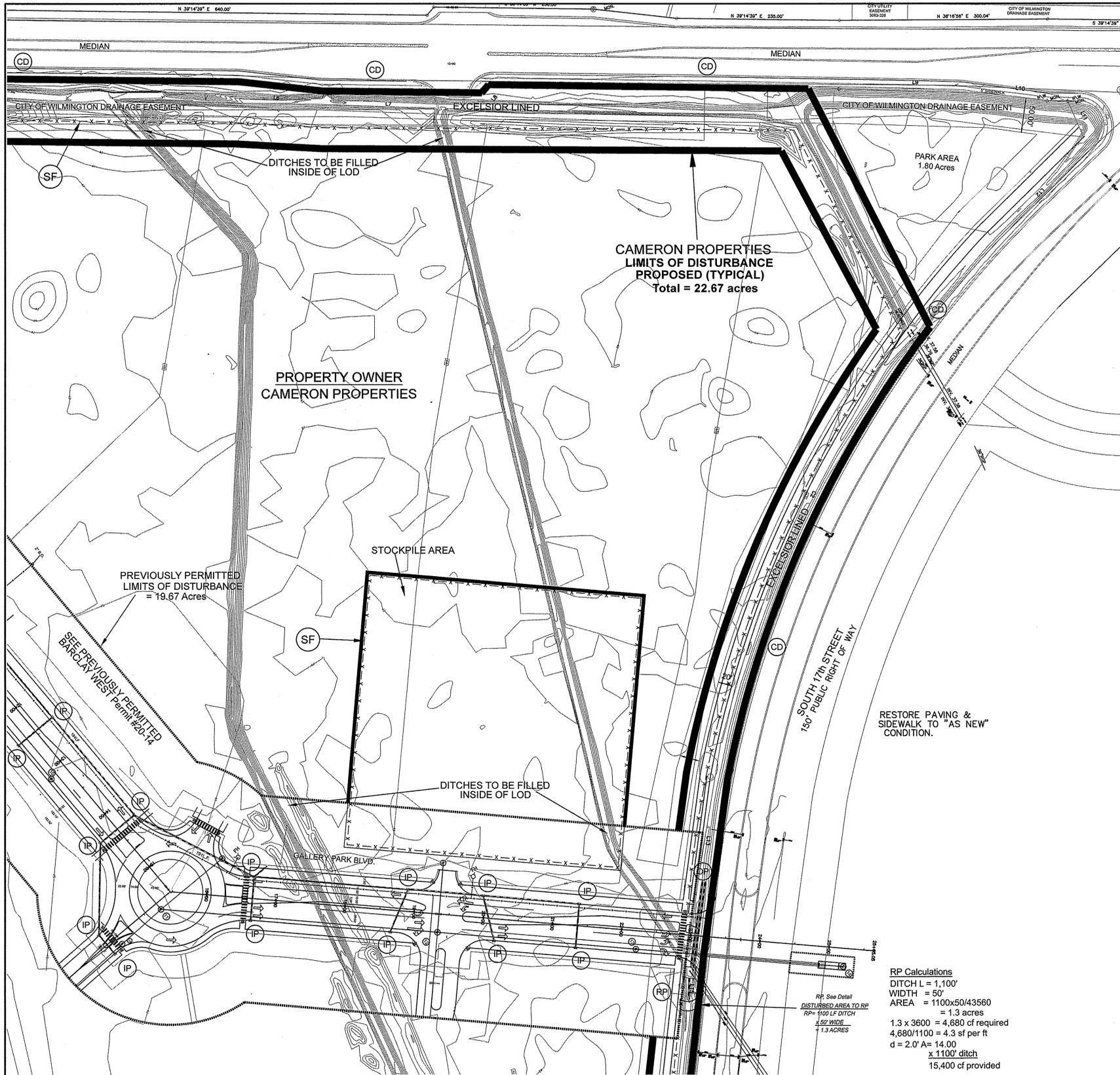
OWNER: CAMERON PROPERTIES
 P.O. BOX 3849
 WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORAL PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-8002
 License # C-0597

Date: 4-21-15
 Scale: HORIZ: 1" = 80'
 Drawn: WNP
 Checked: DSH
 Project No: 12498 P2
 Sheet No: 2
 5

- PLANNED EROSION AND SEDIMENT CONTROL PRACTICES -
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
 Practice 6.08
 Shall be installed at the entrances of the proposed project to and from Low Country Boulevard as shown. Drainage is away from the road and sedimentation will be controlled with downstream practices. During wet weather it may be necessary to wash truck tires at these locations.
 - LAND GRADING
 Practice 6.02
 Grading should be limited to areas as shown on the Plans. Cut and fill slopes shall be 3:1 or flatter except where specifically indicated. Care shall be taken during land grading activities not to damage existing trees that are not required to be removed.
 - SEDIMENT FENCE
 Practice 6.62
 Sediment fencing should be installed as shown on the Plan, first, to delineate and protect low areas, and around any temporary stockpile areas as necessary to prevent any graded interior areas from eroding onto adjacent lands or roadway, or into inlets.
 - PERMANENT STREAM CROSSING
 Practice 6.71
 Permanent stream crossings are to be constructed in the locations shown on the Plan to ensure protection of the existing drainageway.
 - GRASS-LINED CHANNELS
 Practice 6.30
 All collection ditches to be graded to design configuration, seeded, and stabilized if necessary with temporary straw-net liners to collect and convey silt water as shown on Plan. After final project stabilization, ditches to be re-graded and cleaned of siltation as needed to establish original contours for stormwater conveyance.
 - CHECK-DAM
 Practice 6.83
 Check dams are to be installed as indicated on plan (approximately every 500 feet) to reduce flow in an open channel, serving as a temporary measure to limit erosion.
 - SEDIMENT BASIN
 Practice 6.61
 The Sediment Basins are to be constructed (see Construction Schedule) as the primary Practice to prevent sediment from leaving the site. Detailed design and spillway configurations are specified in the details as shown on this Plan and the Narrative. The PVC outlet is to be attached to the abutment during the sedimentation function until entire watershed is permanently stabilized and pond is converted to permanent stormwater management detention / retention function. The Contractor will then install the control orifice to specifications as shown on Sheet 5 and in the calculations.





RP Calculations
 DITCH L = 1,100'
 WIDTH = 50'
 AREA = 1100x50/43560
 = 1.3 acres
 1.3 x 3600 = 4,680 cf required
 4,680/1100 = 4.3 sf per ft
 d = 2.0' A= 14.00
 x 1100' ditch
 15,400 cf provided

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

***NOTE WELL:
 1. EQUIPMENT CLEARANCE MINIMUM 16' FROM TRANSMISSION LINES TO BE MAINTAINED AT ALL TIMES. (REFERENCE: OSHA 1910.259)

***NOTE WELL:
 1. ALL WORK AND INSTALLATION OF THE LINER MUST BE COMPLETED PRIOR TO ANY RAIN EVENT OR DESIGN OTHER EROSION CONTROL FOR THIS ACTIVITY.

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

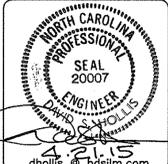
Approved Construction Plan
 Name _____ Date _____
 Planning _____
 Traffic _____
 Fire _____



STATION 0+00 THROUGH 10+50
 INDEPENDENCE BLVD.

REV. NO.	REVISIONS	DATE

GP# 20-14
 Modification to Erosion & Sediment Control and Water Quality Plan
BARCLAY WEST
 GALLERY PARK BOULEVARD
 LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

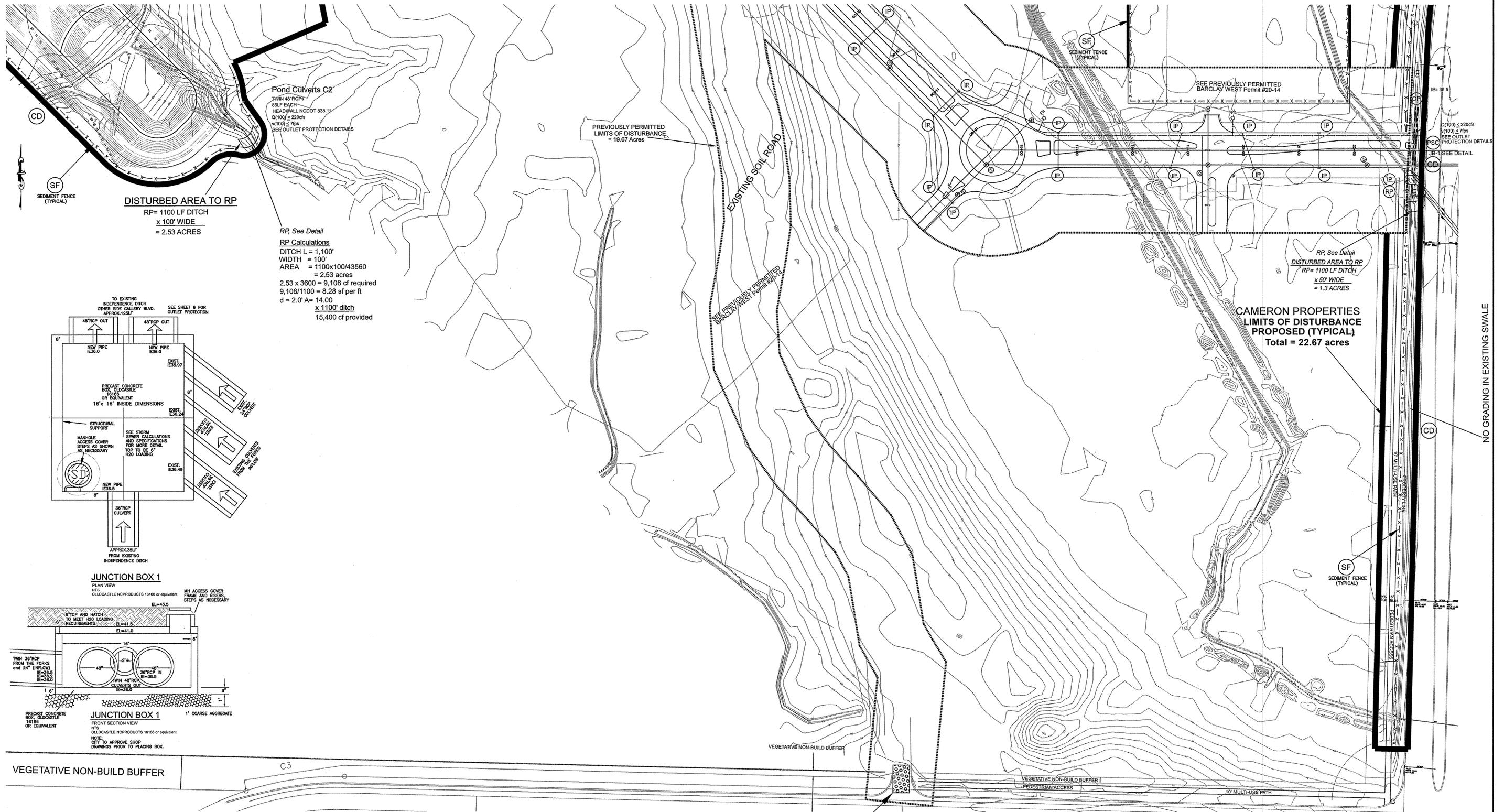


OWNER: CAMERON PROPERTIES
 P.O. BOX 3649
 WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
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 1123 FLORAL PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-8002
 License # C-0597

Date: 4-21-15
 Scale: HORZ.: 1" = 80'
 Drawn: WNP
 Checked: DSH
 Project No: 12498 P3

Sheet No: 3
 5



Pond Culverts C2
 TWIN 48"RCPPs
 85LF EACH
 HEADWALL NCDOT 838.11
 Q(100) ≤ 220cfs
 V(100) ≤ 7fps
 SEE OUTLET PROTECTION DETAILS

DISTURBED AREA TO RP
 RP= 1100 LF DITCH
 x 100' WIDE
 = 2.53 ACRES

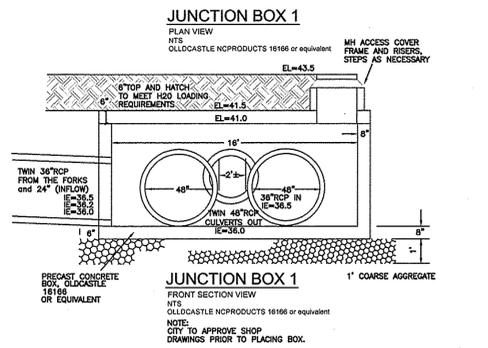
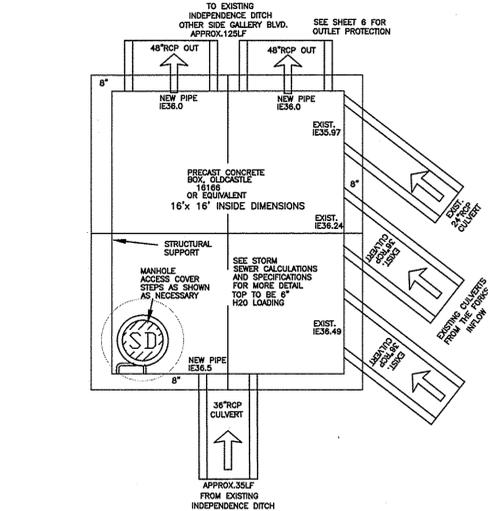
RP, See Detail
RP Calculations
 DITCH L = 1,100'
 WIDTH = 100'
 AREA = 1100x100/43560
 = 2.53 acres
 2.53 x 3600 = 9,108 cf required
 9,108/1100 = 8.28 sf per ft
 d = 2.0' A= 14.00
 x 1100' ditch
 15,400 cf provided

PREVIOUSLY PERMITTED
 LIMITS OF DISTURBANCE
 = 19.67 Acres

RP, See Detail
DISTURBED AREA TO RP
 RP= 1100 LF DITCH
 x 50' WIDE
 = 1.3 ACRES

**CAMERON PROPERTIES
 LIMITS OF DISTURBANCE
 PROPOSED (TYPICAL)**
 Total = 22.67 acres

NO GRADING IN EXISTING SWALE



VEGETATIVE NON-BUILD BUFFER

VEGETATIVE NON-BUILD BUFFER

VEGETATIVE NON-BUILD BUFFER

10' MULT-USE PATH

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

Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____



STATION 0+00 THROUGH 10+50
 INDEPENDENCE BLVD.

REV. NO.	REVISIONS	DATE

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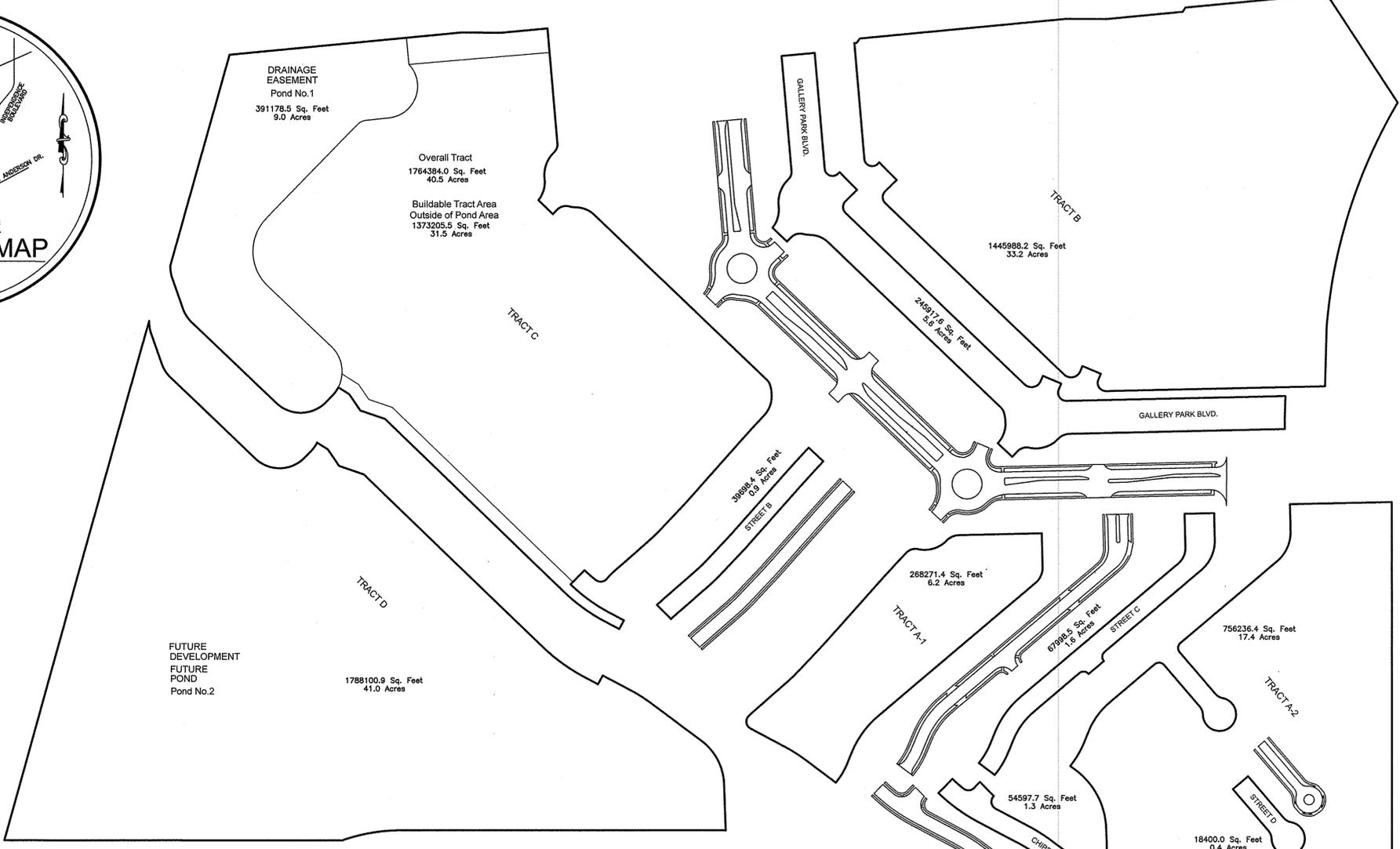
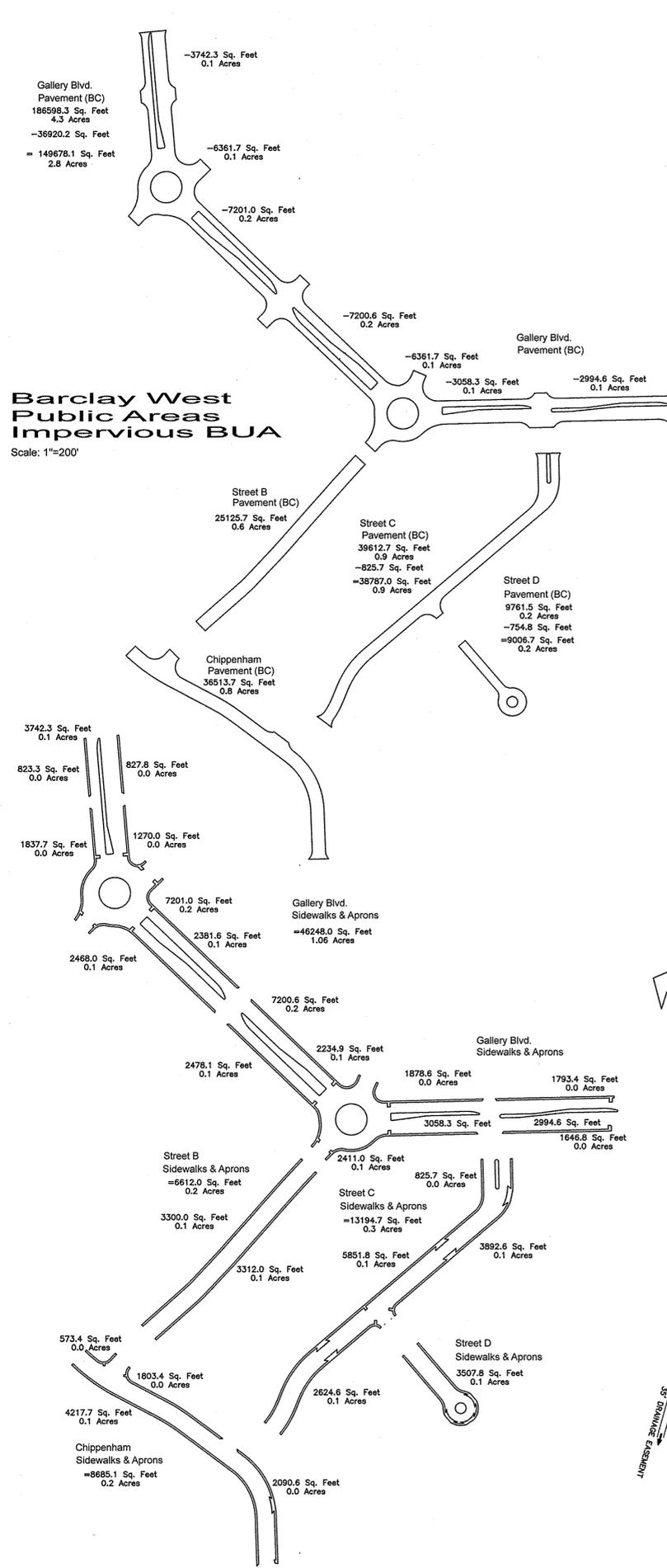
GP# 20-14
 Modification to Erosion & Sediment Control and Water Quality Plan
BARCLAY WEST
 GALLERY PARK BOULEVARD
 LOCATED IN THE CITY OF WILMINGTON
 NEW HANOVER COUNTY, NORTH CAROLINA



OWNER: CAMERON PROPERTIES
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 WILMINGTON, N.C. 28406 PH 910-762-2676

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 WILMINGTON, N.C. 28403
 PHONE: (910) 343-8002
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Date: 4-21-15
 Scale: HORIZ.: 1"= 80'
 Drawn: WNP
 Checked: DSH
 Project No: 12498 P4
 Sheet No: 4
 of: 5



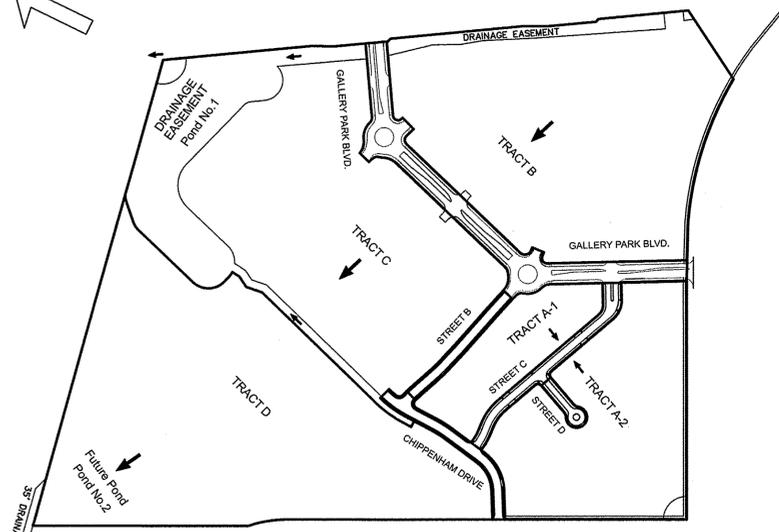
Barclay West - Pond No. 1 Areas

Tract	Area sf	Impervious (BUA) sf (@75%)	Forebay No.	Street	Area sf	Pvmt (BC) sf	SW, Islands sf	Street BUA sf	Forebay No.
A-1	268,271	201,203	2						
A-2	756,236	567,177	2	Gallery Blvd	245,918	149,678	46,248	195,926	1
B	1,445,988	1,084,491	1	Street B	39,698	25,126	6,612	31,738	2
overall C	1,754,394	NA	NA	Street C	67,999	38,787	13,195	51,962	2
(-) DE	391,179	NA	NA	Street D	18,400	9,007	3,509	12,515	2
net C	1,373,205	1,029,904	2	Chippenham	54,598	35,514	8,885	45,199	2
D	1,788,101	FUTURE POND							
Totals Tracts	3,843,700	2,882,775		Total Streets	426,613	259,112	78,248	337,360	
Total DA	4,661,492	107.01	acres	Total Impervious	3,220,135			Total BUA %	69%
Area into Forebay 1		1,691,906	40%						
Area into Forebay 2		2,578,407	60%						
Stormwater Management:									
Pre-developed CN		55		4,661,492					
Post-developed CN grass		61		1,441,357					
Post-developed CN BUA		98		3,220,135					
Composite Post-developed CN		88		4,661,492					

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

Approved Construction Plan
Name _____ Date _____
Planning _____
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Fire _____



Barclay West Tract Areas Summary Spreadsheet

Scale: NTS

REV. NO.	REVISIONS	DATE
1	MAJOR REVISION TO GALLERY PARK BOULEVARD	1-30-15

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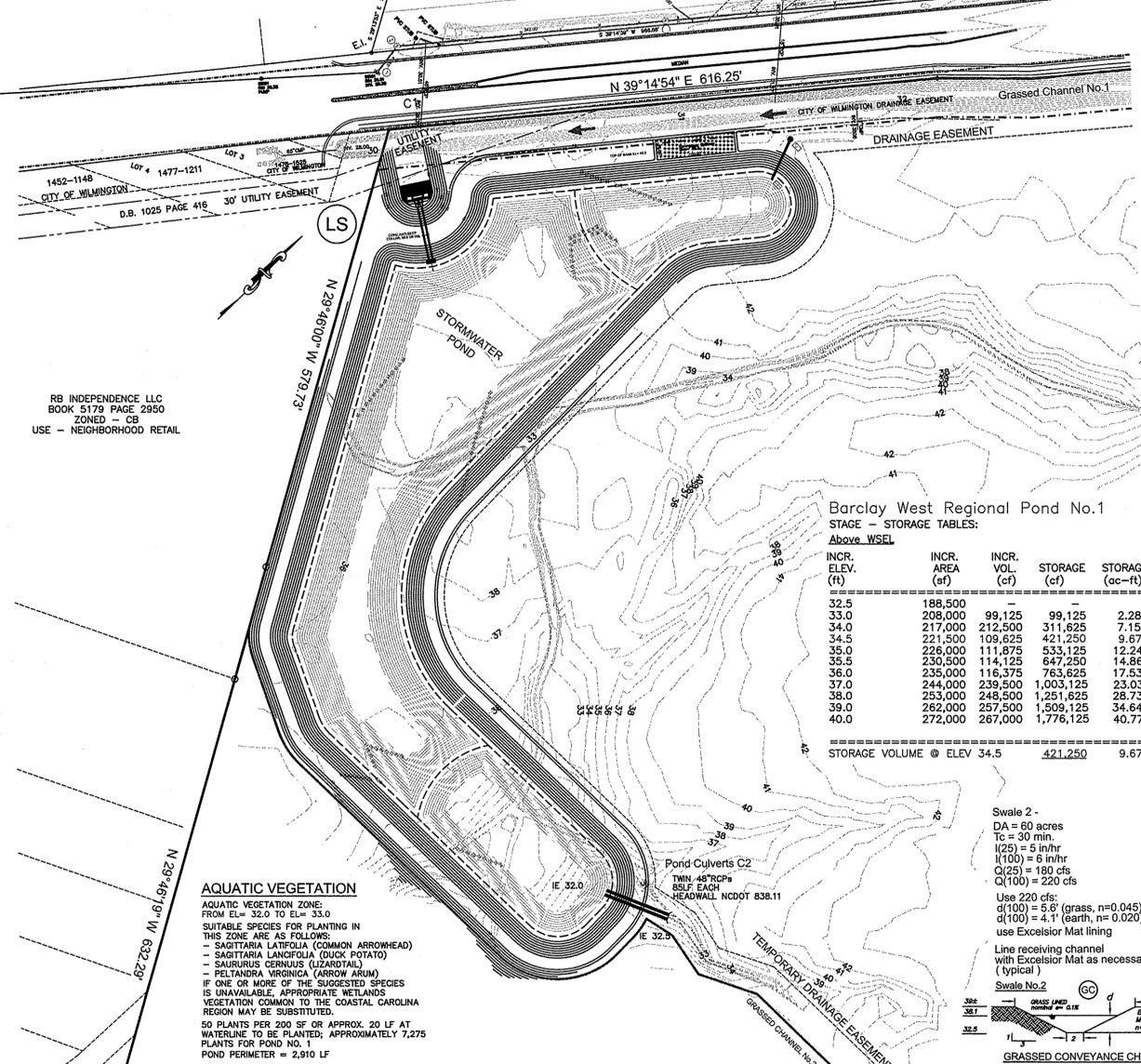
Water Quality Pond Plans - Drainage and BUA Areas
Barclay West
Regional Pond No. 1 Plans & Profiles and Details
CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
1201 GLEN MEADE ROAD
WILMINGTON, NC 28403
910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002 LICENSE No.: C-0582

Scale: 10-6-14
Scale: AS SHOWN
Drawn: DSH
Checked: GAW
Project No: 12498
Sheet No: P1
3

NOTE:
404 WETLANDS DO NOT EXIST ON SITE PER U.S. CORPS OF ENGINEERS DETERMINATION. SEE ACTION SAW-2012-01938. DETERMINATION EXPIRATION DATE 01-18-2018.



**Barclay West Regional Pond No. 1
STAGE - STORAGE TABLES:
Above WSEL**

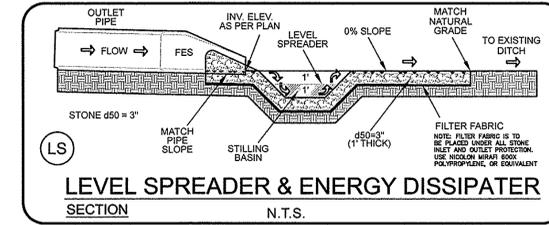
INCR. ELEV. (ft)	INCR. AREA (sf)	INCR. VOL. (cf)	STORAGE (cf)	STORAGE (ac-ft)
32.5	188,500	—	—	—
33.0	208,000	99,125	99,125	2.28
34.0	217,000	212,500	311,625	7.15
34.5	221,500	109,825	421,250	9.67
35.0	226,000	111,875	533,125	12.24
35.5	230,500	114,125	647,250	14.86
36.0	235,000	116,375	763,625	17.53
37.0	244,000	239,500	1,003,125	23.03
38.0	253,000	248,500	1,251,625	28.73
39.0	262,000	257,500	1,509,125	34.64
40.0	272,000	267,000	1,776,125	40.77
STORAGE VOLUME @ ELEV 34.5			421,250	9.67

AQUATIC VEGETATION
AQUATIC VEGETATION ZONE:
FROM EL= 32.0 TO EL= 33.0
SUITABLE SPECIES FOR PLANTING IN THIS ZONE ARE AS FOLLOWS:
- SAGITTARIA LATIFOLIA (COMMON ARROWHEAD)
- SAGITTARIA LANCIIFOLIA (DUCK POTATO)
- SAURURUS CERNUIS (LIZARDTAIL)
- PELTANDRA VIRGINICA (ARROW ARUM)
IF ONE OR MORE OF THE SUGGESTED SPECIES IS UNAVAILABLE, APPROPRIATE WETLANDS VEGETATION COMMON TO THE COASTAL CAROLINA REGION MAY BE SUBSTITUTED.
50 PLANTS PER 200 SF OR APPROX. 20 LF AT WATERLINE TO BE PLANTED; APPROXIMATELY 7,275 PLANTS FOR POND NO. 1
POND PERIMETER = 2,910 LF

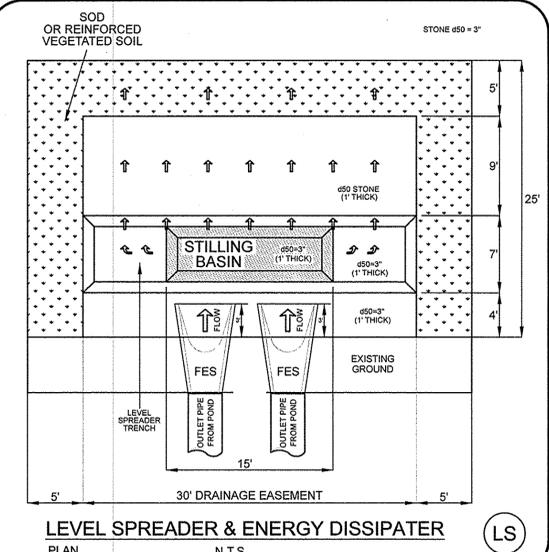
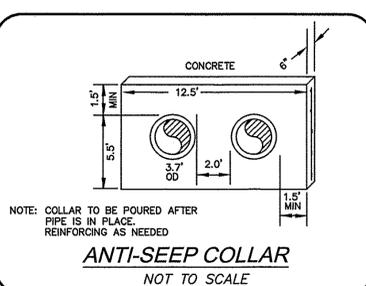
Swale 2 -
DA = 60 acres
Tc = 30 min.
I(25) = 5 in/hr
I(100) = 6 in/hr
Q(25) = 180 cfs
Q(100) = 220 cfs
Use 220 cfs:
d(100) = 3.6' (grass, n=0.045) v= 2.2 fps
d(100) = 4.1' (earth, n=0.020) v= 3.8 fps
use Excelsior Mat lining
Line receiving channel with Excelsior Mat as necessary (typical)
Swale No. 2

Swale 1 -
d(100) = 6.0' (grass, n=0.045) v= 2.2 fps
d(100) = 6.0' (earth, n=0.020) v= 4.9 fps
use Excelsior Mat lining
Channel capacity is 260+ cfs:
Line receiving channel with Excelsior Mat as necessary after regrading (typical)
Swale No. 1

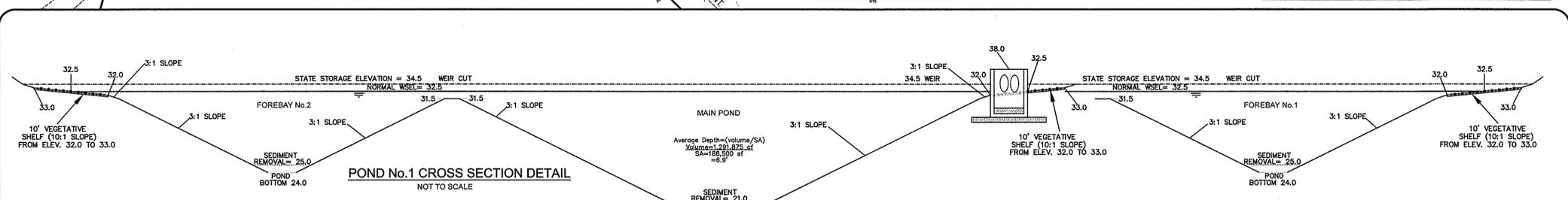
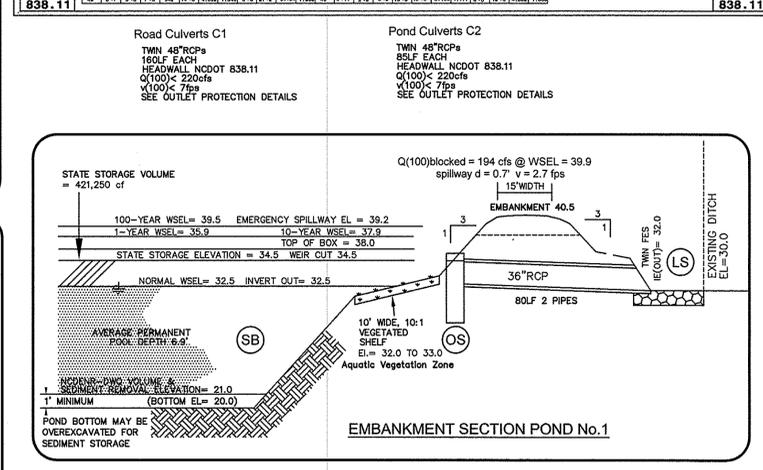
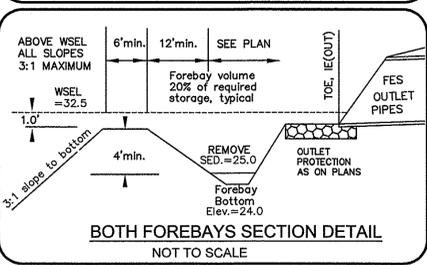
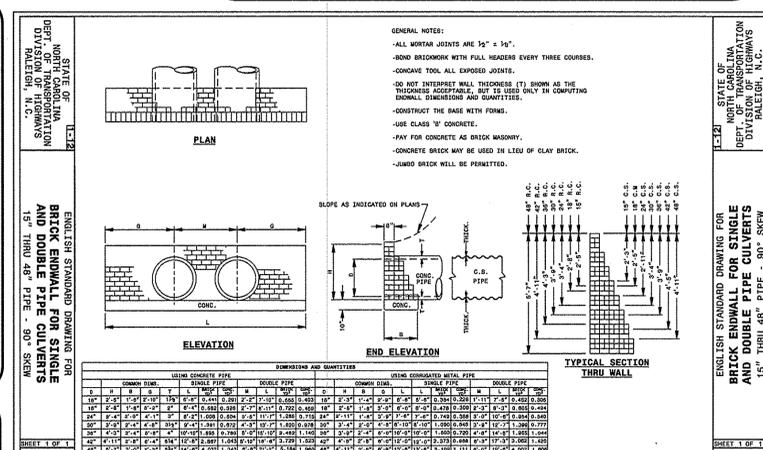
(SB) Sediment Basin
Specifications # 6.61 - Construction Specifications
1. Site preparation - Clear, grub and strip topsoil from areas under the embankment to remove trees, vegetation, roots and other objectionable material. Grub clearing the pool area until the dam is complete and then remove brush, trees and other objectionable materials to facilitate sediment cleanout. Stockpile all topsoil or soil containing organic matter for use on the outer edge of the embankment to facilitate vegetative establishment. Place temporary sediment control measures below the basin as needed.
2. Cut-off trench - Excavate a cut-off trench along the centerline of the earth fill embankment. Cut the trench to stable soil material, but in no case make it less than 2 ft. deep. The cut-off trench must extend into both abutments to at least the elevation of the riser crest. Make the minimum bottom width wide enough to permit operation of suction and compaction equipment but in no case less than 2 ft. Make side slopes of the trench no steeper than 1:1. Compaction requirements are the same as those for the embankment. Keep the trench dry during backfilling and compaction operations.
3. Embankment - Take fill material from the approved areas shown on the plans. It should be clean mineral soil, free of roots, woody vegetation, rocks and other objectionable material. Slightly areas on which fill is placed before placing fill. The fill material should contain sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Place fill material in 6 to 8-inch continuous layers over the entire length of the fill area and then compact it. Compaction may be obtained by routing the construction hauling equipment over the fill so that the entire surface of each layer is traversed by at least one wheel or track of the heavy equipment, or a compactor may be used. Construct the embankment to an elevation 10% higher than the design height to allow for settling.
4. Conduit spillway - Securely attach the riser to the barrel or barrel stub to make a watertight structural connection. Secure all connections between barrel sections by approved watertight assemblies. Place the barrel and riser on a firm, smooth foundation of impervious soil. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collars. Place the fill material around the pipe spillway in 4-inch layers and compact it under and around the pipe to at least the same density as the adjacent embankment. Care must be taken not to raise the pipe from firm contact with its foundation when compacting under the pipe haunches. Place a minimum depth of 2ft. of hand-compacted backfill over the pipe before crossing it with construction equipment. Anchor the riser in place by concrete or other satisfactory means to prevent flotation. In no case should the pipe conduit be installed by cutting a trench through the dam after the embankment is complete.
5. Emergency spillway - Install the emergency spillway in undisturbed soil. The achievement of planned elevations, grade, design width, and entrance and exit channel slopes are critical to the successful operation of emergency spillway.
6. Inlets - Discharge water into the basin in a manner to prevent erosion. Use diversions with outlet protection to divert sediment-laden water to the upper end of the pool area to improve basin trap efficiency (Reference: Runoff Control Measures and Outlet Protection).
7. Erosion control - Construct the structure so that the disturbed area is minimized. Divert surface water away from bare areas. Complete the embankment before the area is cleared. Stabilize the emergency spillway embankment and all other disturbed areas above the crest of the principal spillway immediately after construction (Reference: Surface Stabilization).
8. Safety - Sediment basins may attract children and can be dangerous. Avoid steep side slopes, and fence and mark basins with warning signs if trespassing is likely. Follow all state and local requirements.
Maintenance
Check sediment basins after periods of significant runoff. Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the design depth.
Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement. Make all necessary repairs immediately. Remove all trash and other debris from the riser and pool areas.



LEVEL SPREADER RCP DIAMETER	DESIGN MAXIMUM CFS	PROPOSED CFS	DESIGN MAXIMUM FPS	PROPOSED FPS
*TWIN 36"	120	10	82	6.2
36"	65	10	—	—
30"	45	10	—	—
24"	30	10	—	—
18"	18	10	—	—



(OP) Outlet Stabilization Structure
Specifications # 6.41 - Construction Specifications
1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of filter cloth over the damaged area. All connecting joints should overlap a minimum of 1 ft. If the damage is extensive, replace the entire filter cloth.
4. Riprap may be placed by equipment, but take care to avoid damaging the filter.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter.
6. Riprap may be field stone or rough quarry stone. It should be hard, angular, highly weather-resistant and well graded.
7. Construct the apron on zero grade with no overlap at the end. Make the top of the riprap at the downstream level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
9. Immediately after construction, stabilize all disturbed areas with vegetation (Practice 6.10, Temporary Seeding, and 6.11, Permanent Seeding).
Maintenance
Inspect riprap outlet structures after heavy rains to see if any erosion around or below the riprap has taken place or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.



OUTLET PROTECTION and ROCK STABILIZATION APRON
NOT TO SCALE ENTIRE PROJECT

RCP DIAMETER	La	W	d50	dMAX	APRON	REQ. STONE
ALL 18"	15'	15'	3"	6"	1'	approx. 7cy
ALL 24"	15'	15'	3"	6"	1'	approx. 7cy
ALL 30"	15'	15'	3"	6"	1'	approx. 7cy
ALL 36"	30'	15'	3"	6"	1'	approx. 14cy
ALL 48"	20'	20'	3"	6"	1'	approx. 13cy
ALL 54"	20'	20'	3"	6"	1'	approx. 13cy
ALL 60-66"	20'	20'	3"	6"	1'	approx. 13cy
TWIN 48"	20'	20'	3"	6"	1'	approx. 13cy
TWIN 36"	10'	15'	3"	6"	1'	approx. 6cy
TWIN 24"	10'	15'	3"	6"	1'	approx. 6cy
TWIN 18"	10'	15'	3"	6"	1'	approx. 6cy

NOTE: FILTER FABRIC IS TO BE PLACED UNDER ALL STONE INLET AND OUTLET PROTECTION. USE NICLON MIRA 600X POLYPROPYLENE, OR EQUIVALENT

NOTE: WELL:
1) OUTLET PROTECTION & ROCK STABILIZATION APRONS REQUIRED AS SHOWN ON PLAN.
2) SLOPE IS FLAT (0%) FOR A MINIMUM OF 2LF 2' MIN. BOTTOM WIDTH.

PEAK DISCHARGE SUMMARY -
Q(1) pre-developed = 11.2 cfs
Q(10) pre-developed = 54.0 cfs
Q(25) pre-developed = 81.1 cfs
Q(50) pre-developed = 104.2 cfs
Q(1) post-developed = 8.7 cfs @ WSEL = 35.9
Q(10) post-developed = 43.3 cfs @ WSEL = 37.9
Q(25) post-developed = 81.5 cfs @ WSEL = 38.7
Q(50) post-developed = 117.8 cfs @ WSEL = 39.2
Q(100) post-developed = 185.3 cfs @ WSEL = 39.5
Q(100) post-BLOCKED = 194.2 cfs @ WSEL = 39.9
STATE WATER QUALITY POND CONSIDERATIONS -
Surface Area required = 158,500 sf
Surface Area provided = 188,500 sf @ WSEL 32.5
Storage Volume required = 389,600 cf
Storage Volume provided = 421,250 cf @ WSEL 34.5
Storage Volume Drawdown Time = 3.5 days
SEDIMENTATION POND CONSIDERATIONS -
Storage required = 107.1 X 3600 = 385,500 cf
Storage provided = 1,713,000 cf ±
FOREBAY CALCULATION:
Forebay Volume = 264,750 cf (20%)

Barclay West Regional Pond No. 1
Wat detention/retention pond.
Additional Calculation Summary for City of Wilmington:
WATER QUALITY CONSIDERATIONS -
Impervious area calculations - See Project Data Sheet
TOTAL IMPERVIOUS = 3,220,135 sf
TOTAL AREA DRAINING TO POND = 4,661,492 sf (107.01 acres)
SA REQUIRED: 3220135 / 4661492 = 0.69, or 69%
At 6.5' average depth, 90% TSS removal, from chart - SA/DA factor = 3.4
54,661,492 x 0.01 x 3.4 = 186,500 sf SA REQUIRED
At Elev. = 347.5 = 188,500 sf SA PROVIDED
VOLUME REQUIRED: $R = [(P)(P)(Rv)/12(A)]$
SEE PAGES A.1 AND A.2, "Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMP"
(P) = 1.5"
(P) = 0.9
(Rv) = 0.67
(A) = 4,661,492 sf
 $R = [(1.5)(0.67)(12)(4,661,492)] = 8.94$ acre feet
= 389,600 cf REQUIRED STORAGE
= 421,250 cf PROVIDED STORAGE @ ELEV. = 34.5
DRAWDOWN:
Average head from storage elevation to orifice -
 $34.5 - 32.5 = 2$ ft
 $(8' RVO$ dia to draw-down pond:
Orifice equation: $Q = CA(2gh)^{1/2}$
T = 3.5 days

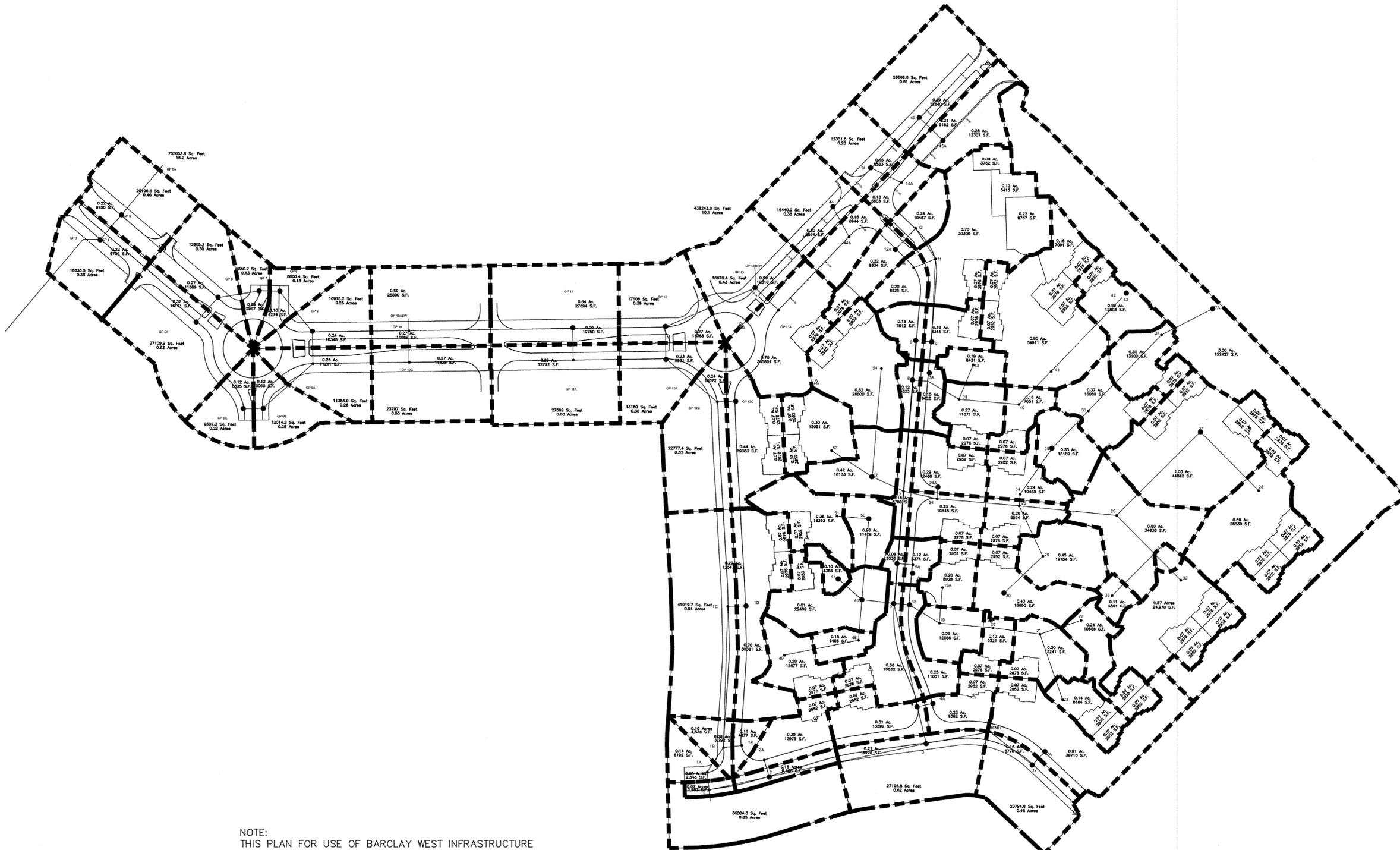
Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____

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

Erosion & Sediment Control and Water Quality Pond Plans
Barclay West
Regional Pond No. 1 Plans & Profiles and Details
CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, NC 28403
PHONE: (910) 343-8002 LICENSE No.: C-0582

Date: 10-6-14
Scale: 1" = 100'
Drawn: DSH
Checked: GAW
Project No: 12498
Sheet No: P2
Of: 3



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

NOTE:
THIS PLAN FOR USE OF BARCLAY WEST INFRASTRUCTURE
STORM SEWER DRAINAGE AREAS ONLY.

**Barclay West & Gallery Park Apartments
Storm Sewer Drainage Areas Map**

Scale: 1" = 100'

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

Barclay West Infrastructure -				Drainage Areas Forebay 1			
acres	acres	acres	acres	acres	acres	acres	acres
4	0.60	9A	0.52	12A	0.53	45A	0.49
5	0.68	9B	0.40	12B	0.16	44	0.58
5A(future)	16.19	9C	0.34	12C	0.58	44A	0.16
6	0.57	10	0.27	13	0.72		
6A	0.99	10AEW	0.59	13BEW	10.70		
7	0.22	10C	0.62	13A	0.77		
8	0.28	11	0.93	14	0.43		
9	0.49	11A	0.92	14A	0.13		
		12	0.66	45	0.9		

Gallery Parker Apartments-				Drainage Areas Forebay 2			
Inlet	Area	Inlet	Area	Inlet	Area	Inlet	Area
acres	acres	acres	acres	acres	acres	acres	acres
1	0.07	3	0.12	19	0.29	33	0.11
1A	0.19	8	0.12	19	0.29	33	0.11
1B	0.18	9	0.18	19A	0.27	34	0.31
1C	1.23	10	0.26	20	0.19	35	0.35
1D	0.84	11	1.20	21	0.37	36	0.44
1E	0.11	11A	0.20	22	0.38	37	0.37
2	0.15	12	0.24	23	0.28	37A	3.50
2A	0.37	12A	0.29	24	0.32	38	0.15
3	0.83			24A	0.36	39	0.34
4	0.38			25	0.27	40	0.23
4A	0.29			26	0.80	41	1.17
5	0.43			27	1.31	42	0.36
6	0.08	16MH	0	28	1.01	43	0.19
6A	0.12	17	0.64	29	0.45		
7	0.16	17A	0.98	30	0.50		
		18	0.25	31	0.05		

Approved Construction Plan		
Name	Date	
Planning		
Traffic		
Fire		

REV. NO.	REVISIONS	DATE
2	REVISION TO GALLERY PARK BOULEVARD	2-26-15
1	MAJOR REVISION TO GALLERY PARK BOULEVARD	1-30-15

Water Quality Pond Plans - Drainage and BUA Areas
Barclay West
Regional Pond No.1 Plans & Profiles and Details
CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA



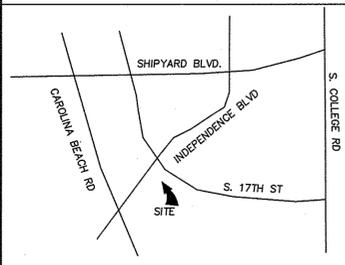
OWNER: CAMERON PROPERTIES LAND COMPANY, LLC
1201 GLEN MEADE ROAD
WILMINGTON, NC 28403
910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002 LICENSE No.: C-0582

Date: 10-6-14
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Drawn: DSH
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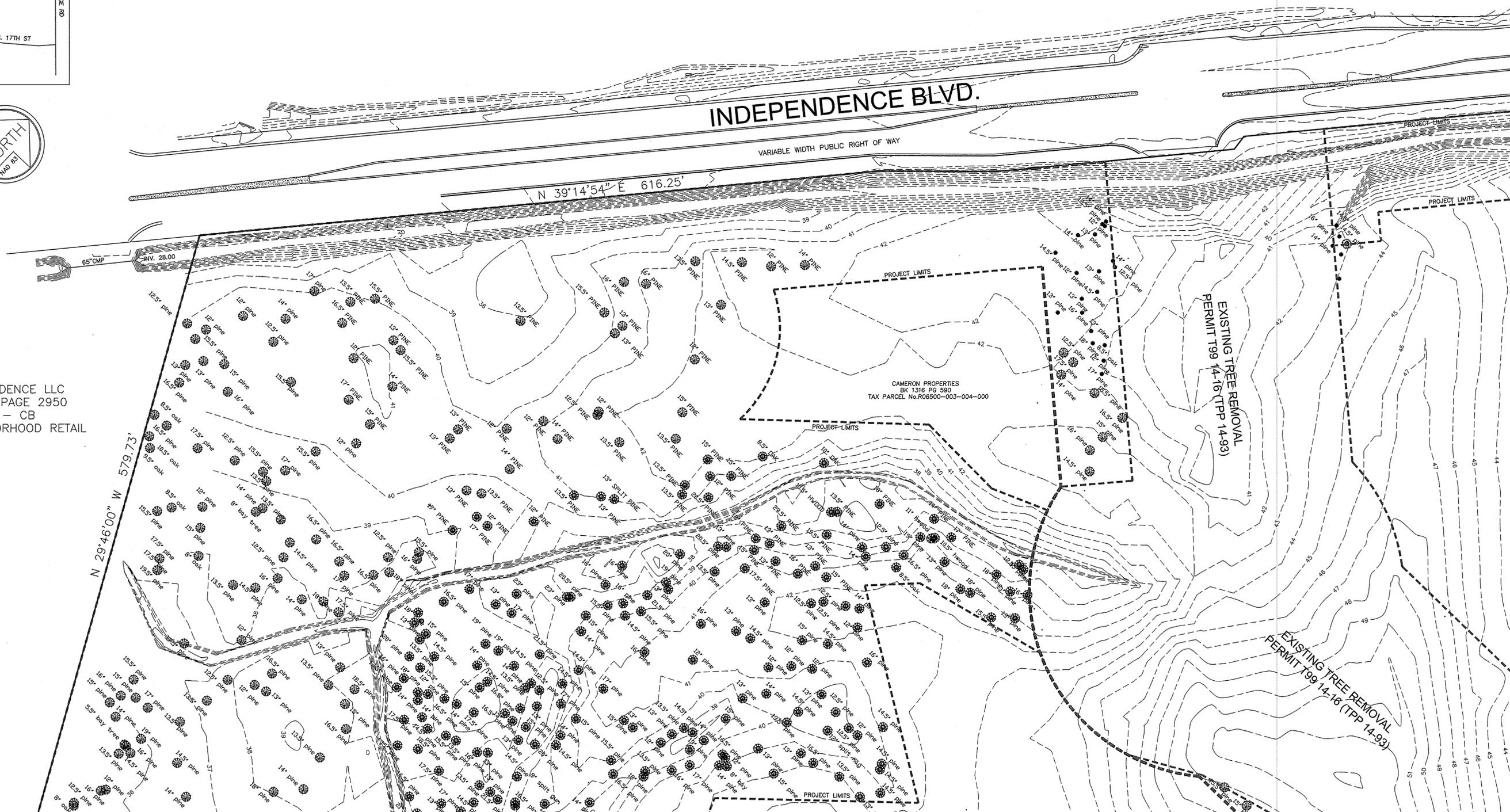
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LOCATION MAP
NOT TO SCALE



TREE INVENTORY
TREES TO BE REMOVED
PINE --- 312
HARDWOOD --- 17

RB INDEPENDENCE LLC
BOOK 5179 PAGE 2950
ZONED - CB
USE - NEIGHBORHOOD RETAIL



LEGEND

	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROJECT LIMITS

- SITE INVENTORY NOTES**
- SOILS TYPE - Mu, La, Rm, Ly
Mu - MURVILLE FINE SAND
La - LEON SAND
Rm - RIMMI SAND
Ly - LYNN HAVEN FINE SAND
 - THIS PROPERTY IS NOT IMPACTED BY ANY AEC.
 - NO CONSERVATION OVERLAY BOUNDARIES
 - SITE DOES NOT APPEAR TO BE IMPACTED BY ANY HISTORIC OR ARCHEOLOGICAL SIGNIFICANCE.
 - NO EVIDENCE OF CEMETERIES FOUND
 - NO JURISDICTIONAL WETLAND ON SITE
 - NO EVIDENCE OF ENDANGERED SPECIES FOUND ON SITE
 - THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEMA FIRM 3720312500J DATE APRIL 3, 2006
 - CAMA LAND USE CLASSIFICATION - URBAN
 - SITE DRAINS INTO BARNARDS CREEK, INDEX No. 18-80 CLASSIFICATION C:5w

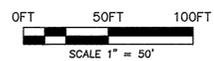
- GENERAL NOTES**
- TAX PARCEL No. R06500-003-004-000
 - SURVEYED JUNE - DEC. 2013
 - SITE ADDRESS - 3501 INDEPENDENCE BLVD.
 - CAMA LAND USE CLASSIFICATION - URBAN
 - ALL DISTANCES ARE HORIZONTAL
 - ALL ELEVATIONS ARE NGVD 1988

- TREE PRESERVATION NOTES**
- TREE PRESERVATION / REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBANCE
 - ANY REGULATED OR SIGNIFICANT TREES WITHIN STREETYARDS, AND ALL TREES WITHIN BUFFER YARDS OR BEYOND LIMITS OF ESSENTIAL SITE IMPROVEMENTS ARE REQUIRED TO BE PROTECTED AND PRESERVED. EXISTING TREES WITHIN CONSTRUCTION LIMITS SHOULD BE SPADED AND REPLANTED ELSEWHERE ON SITE WHEN FEASIBLE.
 - NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. PROTECTION FENCING SHALL BE INSTALLED AROUND ALL INDIVIDUAL TREES OR GROVES OF TREES THAT HAVE BEEN DESIGNATED FOR PRESERVATION AND PROTECTION.
 - NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
 - PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.

EXISTING CONDITONS

REV. NO.	REVISIONS	DATE

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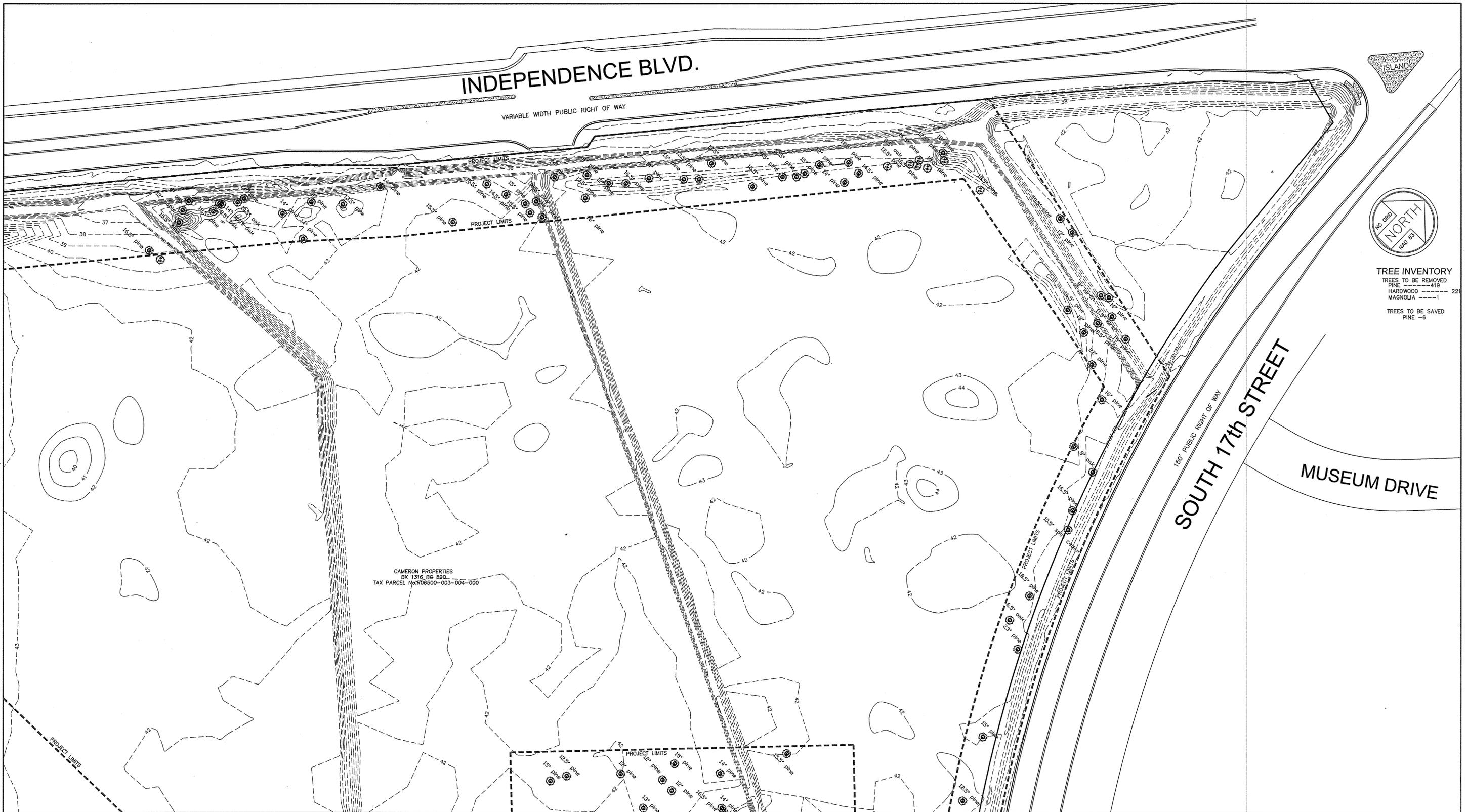


BARCLAY WEST INFRASTRUCTURE
LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES
P.O. BOX 3649
WILMINGTON, N.C. 28406 PH 910-762-2676

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-6002

Date: 04/16/15
Scale: HORZ: 1" = 50'
Drawn: J.WAYNE
Checked: J.WAYNE
Project No: 12498
Sheet No: 1/5



TREE INVENTORY
 TREES TO BE REMOVED
 PINE -----419 22'
 HARDWOOD -----1
 MAGNOLIA -----1
 TREES TO BE SAVED
 PINE -6

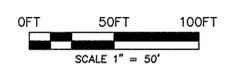
CAMERON PROPERTIES
 BK 1316 PG 500
 TAX PARCEL No. R06500-003-004-000

LEGEND
 ——— EXISTING PROPERTY LINE
 - - - - - PROPOSED PROPERTY LINE
 - - - - - PROJECT LIMITS

SITE INVENTORY NOTES
 1. SOILS TYPE - Mu, Lo, Rm, Ly
 Mu - MURVILLE FINE SAND
 Lo - LEON SAND
 Rm - RIMINI SAND
 Ly - LYNN HAVEN FINE SAND
 2. THIS PROPERTY IS NOT IMPACTED BY ANY AEC.
 3. NO CONSERVATION OVERLAY BOUNDARIES
 4. SITE DOES NOT APPEAR TO BE IMPACTED BY ANY HISTORIC OR ARCHEOLOGICAL SIGNIFICANCE.
 5. NO EVIDENCE OF CEMETERIES FOUND
 6. NO JURISDICTIONAL WETLAND ON SITE
 7. NO EVIDENCE OF ENDANGERED SPECIES FOUND ON SITE
 8. THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEMA FIRM 3720312500J DATE APRIL 3, 2006
 9. CAMA LAND USE CLASSIFICATION - URBAN
 10. SITE DRAINS INTO BARNARDS CREEK, INDEX No. 18-80 CLASSIFICATION C:SW

GENERAL NOTES
 1. TAX PARCEL No. R06500-003-004-000
 2. SURVEYED JUNE - DEC. 2013
 3. SITE ADDRESS - 3501 INDEPENDENCE BLVD.
 4. CAMA LAND USE CLASSIFICATION - URBAN
 5. ALL DISTANCES ARE HORIZONTAL
 6. ALL ELEVATIONS ARE NGVD 1988

TREE PRESERVATION NOTES
 1. TREE PRESERVATION / REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBANCE
 2. ANY REGULATED OR SIGNIFICANT TREES WITHIN STREETYARDS, AND ALL TREES WITHIN BUFFER YARDS OR BEYOND LIMITS OF ESSENTIAL SITE IMPROVEMENTS ARE REQUIRED TO BE PROTECTED AND PRESERVED. EXISTING TREES WITHIN CONSTRUCTION LIMITS SHOULD BE SPADED AND REPLANTED ELSEWHERE ON SITE WHEN FEASIBLE.
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EXISTING CONDNTIONS		
REV. NO.	REVISIONS	DATE

BARCLAY WEST INFRASTRUCTURE
 LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES
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 Drawn: J.WAYNE
 Checked: J.WAYNE
 Project No: 12498
 Sheet No: 2
 of: 5



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CAMERON PROPERTIES
BK 1316 PG 690
TAX PARCEL No. R06500-003-004-000

TREE INVENTORY
TREES TO BE REMOVED
PINE -----160
HARDWOOD ---17
MAGNOLIA ---2

LEGEND

- EXISTING PROPERTY LINE
- - - - - PROPOSED PROPERTY LINE
- - - - - PROJECT LIMITS

SITE INVENTORY NOTES

1. SOILS TYPE - Mu, Le, Rm, Ly
Mu - MURVILLE FINE SAND
Le - LEON SAND
Rm - RIMINI SAND
Ly - LYNN HAVEN FINE SAND
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9. CAMA LAND USE CLASSIFICATION - URBAN
10. SITE DRAINS INTO BARNARDS CREEK, INDEX No. 18-80 CLASSIFICATION C:Sw

GENERAL NOTES

1. TAX PARCEL No. R06500-003-004-000
2. SURVEYED JUNE - DEC. 2013
3. SITE ADDRESS - 3501 INDEPENDENCE BLVD.
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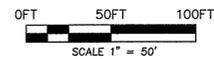
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4. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
5. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.

EXISTING CONDITONS

REV. NO.	REVISIONS	DATE

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BARCLAY WEST INFRASTRUCTURE

LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

OWNER: CAMERON PROPERTIES
P.O. BOX 5649
WILMINGTON, N.C. 28406 PH 910-762-2676

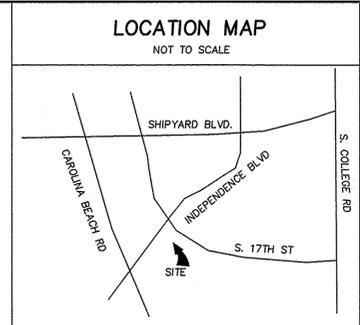
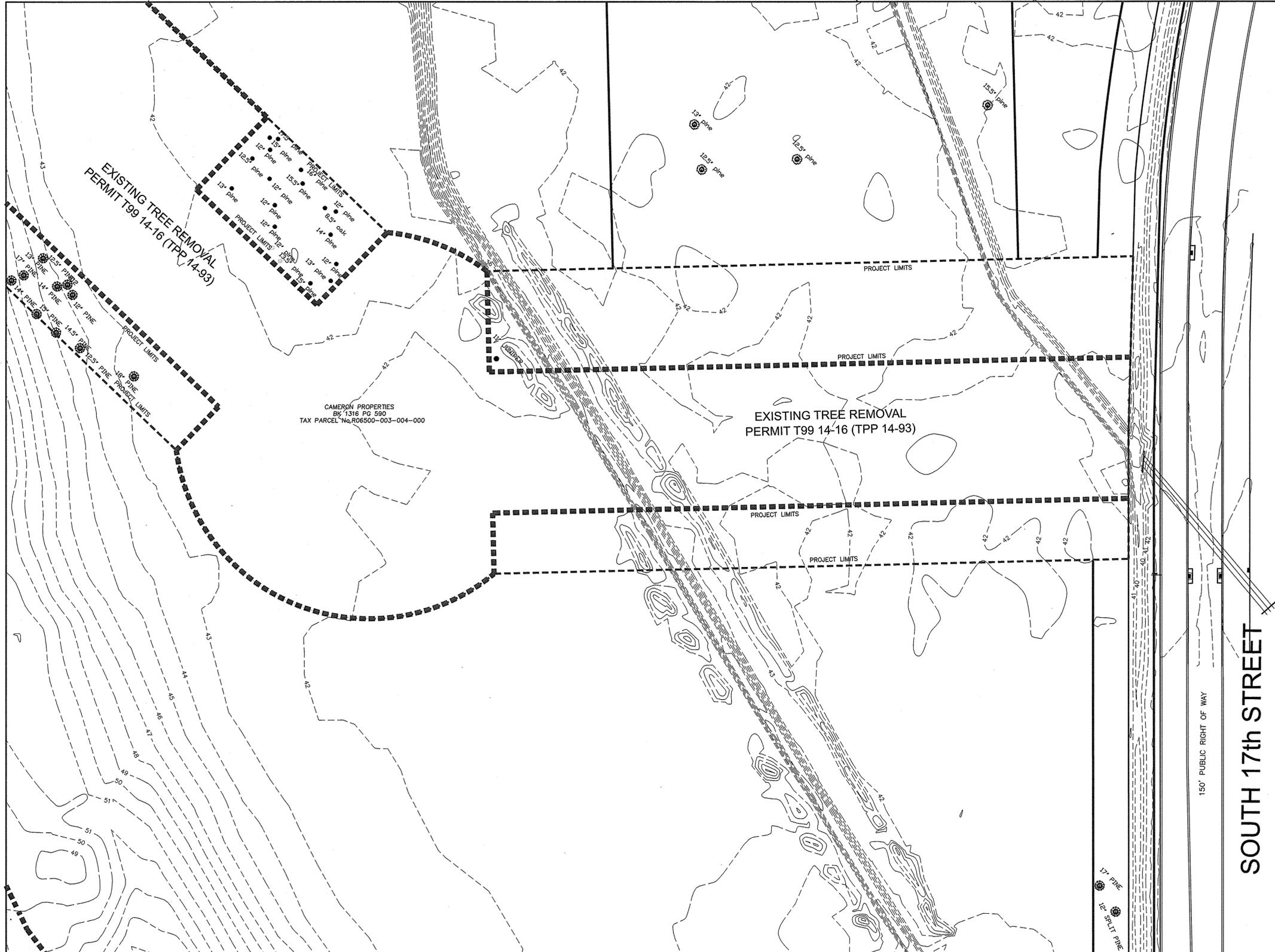
HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS

1123 FLORENZ PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 543-8002



Date: 04/16/15
Scale: HORZ.: 1" = 50'
Drawn: J.WAYNE
Checked: J.WAYNE
Project No: 12498

Sheet No: 3
5



TREE INVENTORY
 TREES TO BE REMOVED
 PINE -----30
 HARDWOOD ---2

CAMERON PROPERTIES
 DIV 1316 PG 590
 TAX PARCEL No. R06500-003-004-000

EXISTING TREE REMOVAL
 PERMIT T99 14-16 (TPP 14-93)

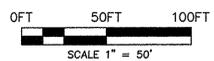
150' PUBLIC RIGHT OF WAY
SOUTH 17th STREET

LEGEND
 ——— EXISTING PROPERTY LINE
 - - - - - PROPOSED PROPERTY LINE
 - - - - - PROJECT LIMITS

SITE INVENTORY NOTES
 1. SOILS TYPE - Mu, Le, Rm, Ly
 Mu - MURVILLE FINE SAND
 Le - LEON SAND
 Rm - RIMINI SAND
 Ly - LYNN HAVEN FINE SAND
 2. THIS PROPERTY IS NOT IMPACTED BY ANY AEC.
 3. NO CONSERVATION OVERLAY BOUNDARIES
 4. SITE DOES NOT APPEAR TO BE IMPACTED BY ANY HISTORIC OR ARCHEOLOGICAL SIGNIFICANCE.
 5. NO EVIDENCE OF CEMETERIES FOUND
 6. NO JURISDICTIONAL WETLAND ON SITE
 7. NO EVIDENCE OF ENDANGERED SPECIES FOUND ON SITE
 8. THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA ACCORDING TO FEMA FIRM 3720312500J DATE APRIL 3, 2006
 9. CAMA LAND USE CLASSIFICATION - URBAN
 10. SITE DRAINS INTO BARNARDS CREEK, INDEX No. 18-80 CLASSIFICATION C.Sw

GENERAL NOTES
 1. TAX PARCEL No. R06500-003-004-000
 2. SURVEYED JUNE - DEC. 2013
 3. SITE ADDRESS - 3501 INDEPENDENCE BLVD.
 4. CAMA LAND USE CLASSIFICATION - URBAN
 5. ALL DISTANCES ARE HORIZONTAL
 6. ALL ELEVATIONS ARE NGVD 1988

TREE PRESERVATION NOTES
 1. TREE PRESERVATION / REMOVAL PERMIT IS REQUIRED PRIOR TO CLEARING AND LAND DISTURBANCE
 2. ANY REGULATED OR SIGNIFICANT TREES WITHIN STREETYARDS, AND ALL TREES WITHIN BUFFER YARDS OR BEYOND LIMITS OF ESSENTIAL SITE IMPROVEMENTS ARE REQUIRED TO BE PROTECTED AND PRESERVED. EXISTING TREES WITHIN CONSTRUCTION LIMITS SHOULD BE SPADED AND REPLANTED ELSEWHERE ON SITE WHEN FEASIBLE.
 3. NO EQUIPMENT IS ALLOWED ON THE SITE UNTILL ALL TREE PRETECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED. PROTECTION FENCING SHALL BE INSTALLED AROUND ALL INDIVIDUAL TREES OR GROVES OF TREES THAT HAVE BEEN DESIGNATED FOR PRESERVATION AND PROTECTION.
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EXISTING CONDITONS		
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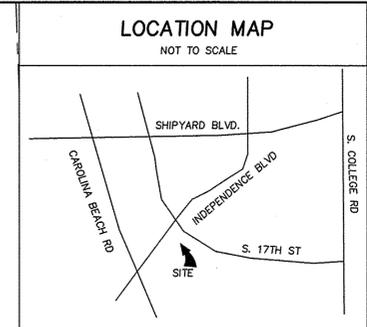
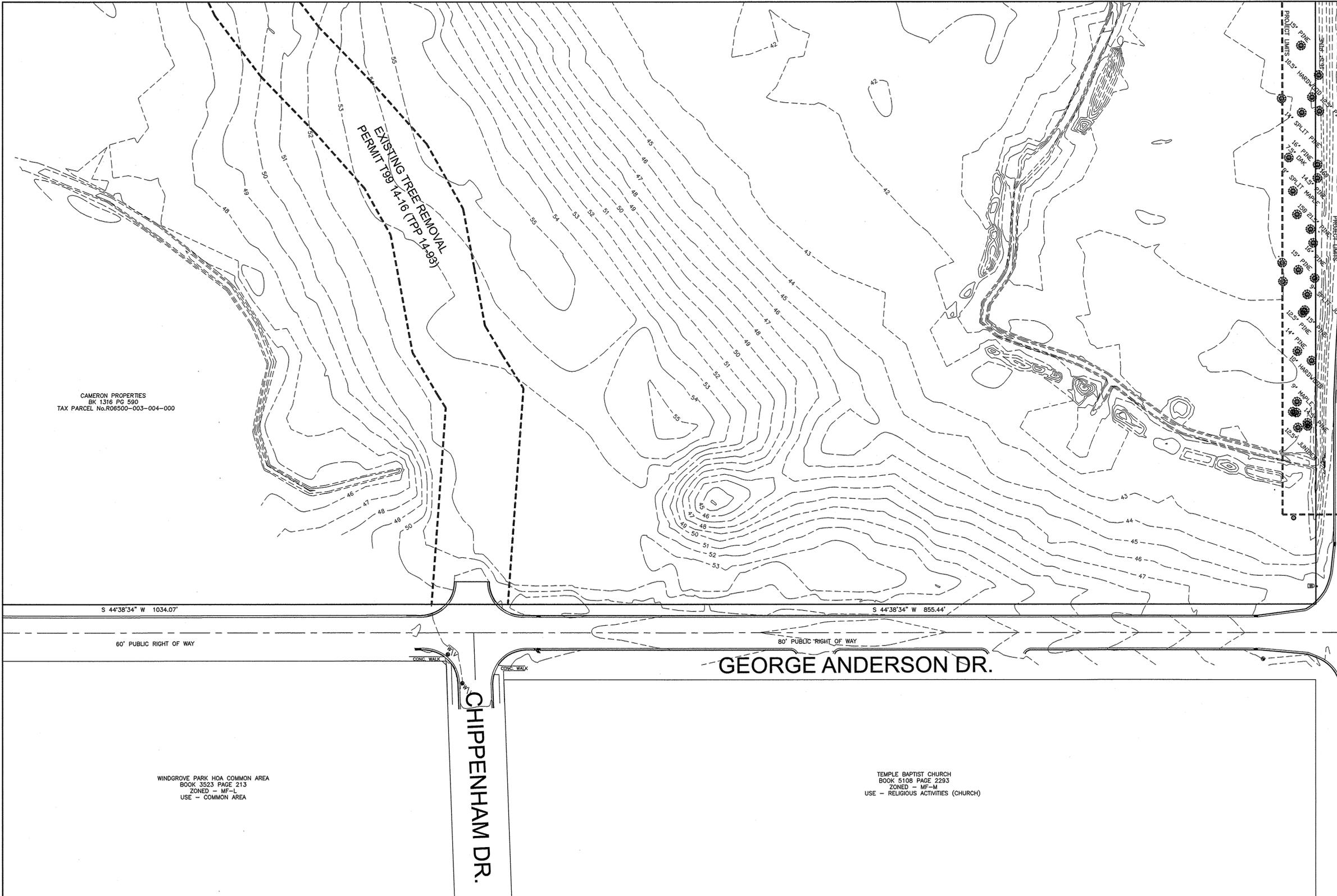
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 LOCATED IN THE CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA



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 1123 FLORAL PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-8002

Date: 04/16/15
 Scale: HORZ.: 1"= 50'
 Drawn: J.WAYNE
 Checked: J.WAYNE
 Project No: 12498
 Sheet No: 4
 5
 Of:



TREE INVENTORY
 TREES TO BE REMOVED
 PINE ---18
 HARDWOOD --10

S 44°38'34" W 1034.07'

S 44°38'34" W 855.44'

60' PUBLIC RIGHT OF WAY

80' PUBLIC RIGHT OF WAY

GEORGE ANDERSON DR.

CHIPPENHAM DR.

WINDGROVE PARK HOA COMMON AREA
 BOOK 3523 PAGE 213
 ZONED - MF-L
 USE - COMMON AREA

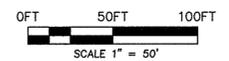
TEMPLE BAPTIST CHURCH
 BOOK 5108 PAGE 2293
 ZONED - MF-M
 USE - RELIGIOUS ACTIVITIES (CHURCH)

LEGEND
 ——— EXISTING PROPERTY LINE
 - - - - - PROPOSED PROPERTY LINE
 - - - - - PROJECT LIMITS

- SITE INVENTORY NOTES**
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 - SITE DRAINS INTO BARNARDS CREEK, INDEX No. 18-80 CLASSIFICATION C:5w

- GENERAL NOTES**
- TAX PARCEL No. R06500-003-004-000
 - SURVEYED JUNE - DEC. 2013
 - SITE ADDRESS - 3501 INDEPENDENCE BLVD.
 - CAMA LAND USE CLASSIFICATION - URBAN
 - ALL DISTANCES ARE HORIZONTAL
 - ALL ELEVATIONS ARE NGVD 1988

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 Of: 5

Professional Seal: NORTH CAROLINA PROFESSIONAL SEAL L-3391
 Date: 4/20/15

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