

MINOR SITE PLAN AND STORMWATER PERMIT APPLICATION

PROPOSED INTERNAL SERVICES MAINTENANCE BUILDING FOR

VOPAK TERMINAL WILMINGTON INC.
1704 WOODBINE STREET
CITY OF WILMINGTON

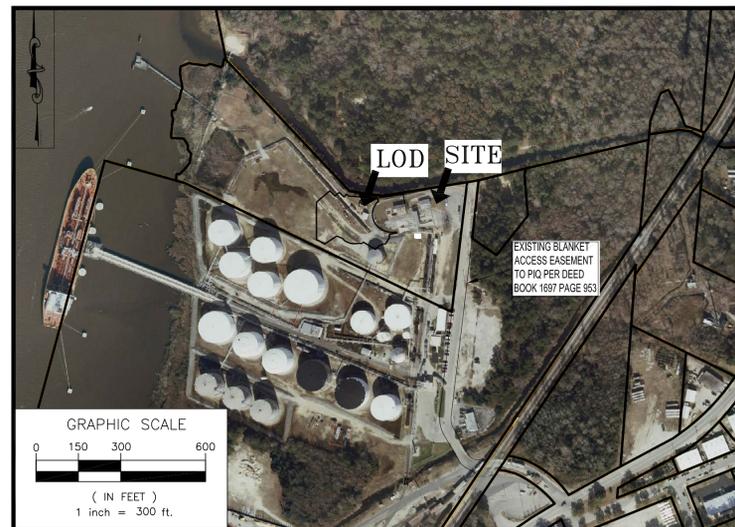
NEW HANOVER COUNTY, NORTH CAROLINA

PROTECT YOURSELF
A PHONE CALL
CAN BE YOUR INSURANCE POLICY

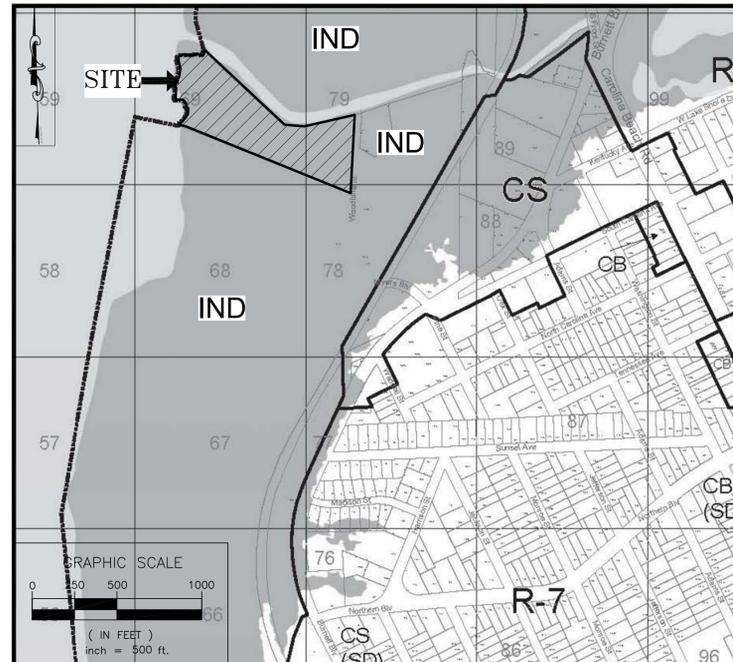


WHAT YOU DON'T KNOW CAN HURT YOU.
BEFORE YOU DIG!
CALL 1-800-632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW!

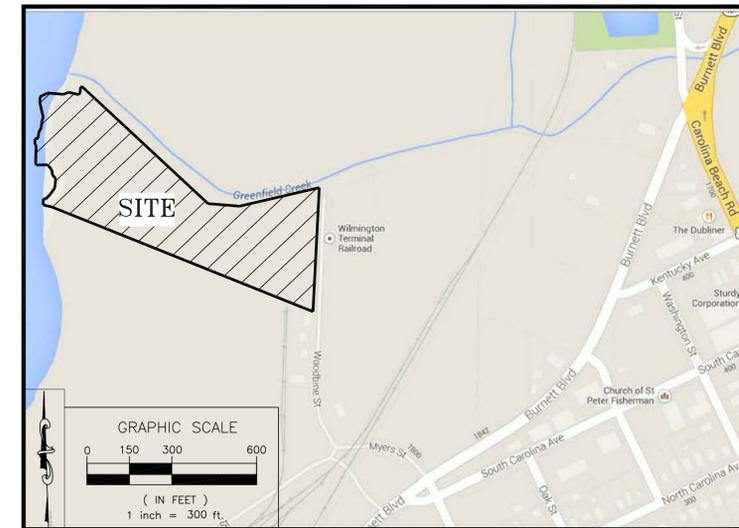
AERIAL MAP
SCALE: 1"=300'



ZONING MAP
SCALE: 1"=500'



LOCATION MAP
SCALE: 1"=300'



CITY OF WILMINGTON FINAL SITE PLAN NOTES:

From Section K of the City of Wilmington Site Plan Application:

- Prior to any clearing, grading or construction activity, tree protection fencing shall be installed around protected trees or groves of trees. No construction workers, tools, materials, or vehicles are permitted within the tree protection fencing.
- Any trees and/or areas designated to be protected must be properly barricaded with fencing and 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.
- Once streets are open to traffic, contact Traffic Engineering regarding the 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 Control Devices) standards.
- Contact Traffic Engineering at 910-341-7888 to ensure that all traffic signal facilities and equipment are shown on the plan.
- Call Traffic Engineering at 910-341-7888 forty-eight (48) hours prior to any excavation in the right-of-way.
- Traffic Engineering must approve of pavement marking prior to actual striping.
- All parking stall markings and lane arrows within parking areas shall be white.
- All traffic control signs and markings off the right-of-way are to be maintained by the property 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 will be replaced.
- Contact Karen Dixon at 910-341-7888 to discuss street lighting options.
- Water and sewer service shall meet Cape Fear Public Utility (CFPUA) details and specifications.
- Project shall comply with CFPWA Cross Connection Control requirements. Water meter(s) cannot be released until all requirements are met and the State has given their final approval. Call 910-343-3910 for information.
- If the contractor desires CFPWA water for construction, he shall apply in advance for this service and must provide a reduced pressure zone (RPZ) back-flow prevention device on the developer's side if the water meter box.
- Any irrigation system supplied by CFPWA water shall comply with CFPWA Cross Connection Control regulations. Call 910-343-3910 for information.
- Any irrigation system shall be equipped with a rain and freezer sensor.
- Any back-flow prevention devices required by the CFPWA will need to be on the list of approved devices by USFCFCCOHR or ASSE.
- Contractor to field verify existing water and sewer service locations, sizes and materials prior to construction. Engineer to be notified of any conflicts.
- Contractor shall maintain all-weather access for emergency vehicles at all times during construction.
- Underground fire line(s) 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 Safety at 910-341-0696.
- No obstructions are permitted in the space between thirty (30) inches and ten (10) feet above 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.

PREPARED BY

LANDTEK DESIGN, LLC
204 NORTH 6TH STREET
WILMINGTON, NORTH CAROLINA 28401

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SITE INVENTORY MAP EXHIBIT	1 OF 1
SURVEY (PLAN BY OTHERS)	1 OF 1

REV.	DATE	COMMENTS
3	03/19/14	REV PER MEETING WITH CITY ON 03/18/14
2	03/09/14	REV PER STORM SYSTEM LOCATION
1	02/26/14	REV PER PROJECT TEAM MEETING ON 02/25/14

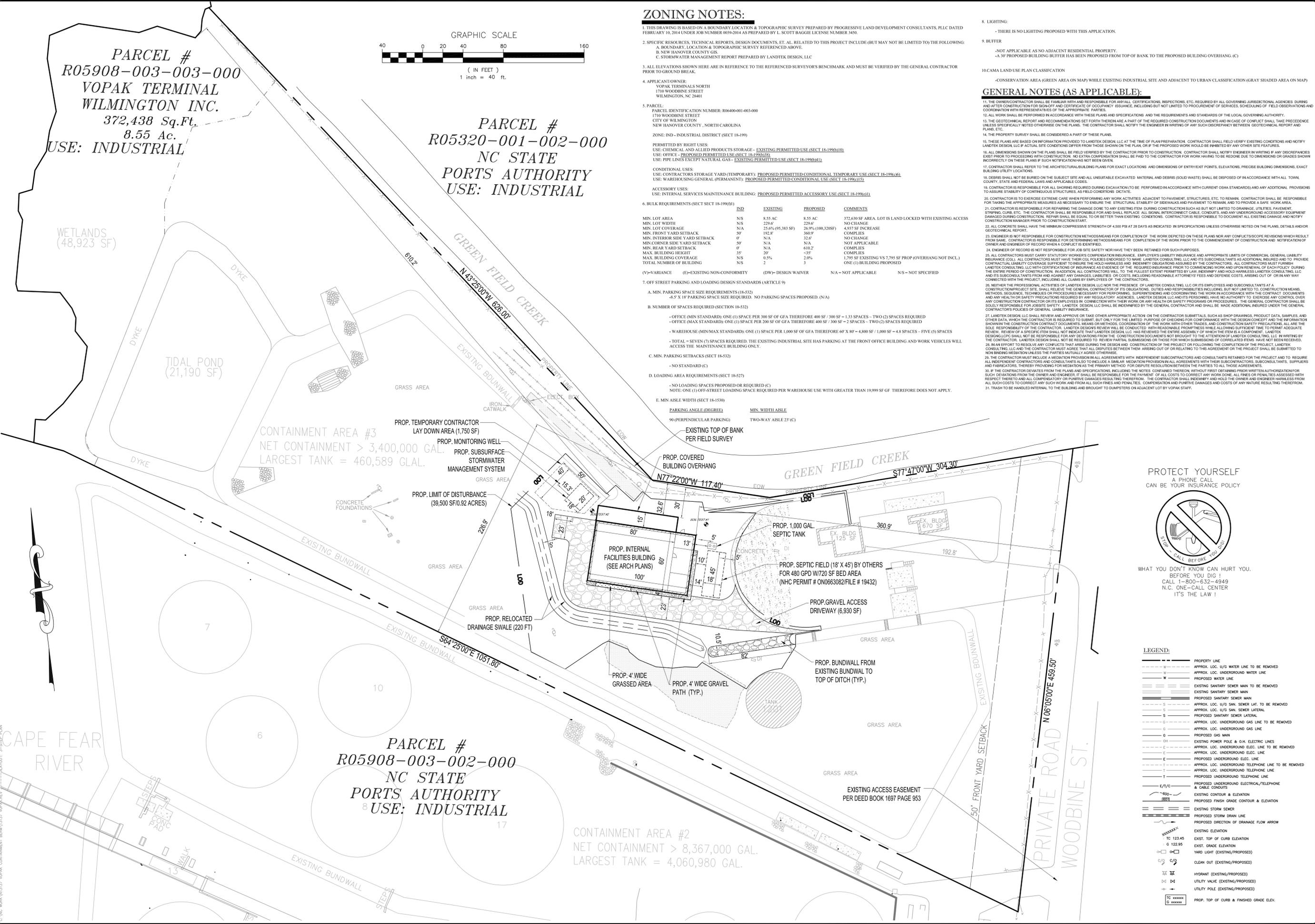
ERIC S. TOMCZAK, P.E.
NORTH CAROLINA LICENSE NO. 032281

PROJECT No: N13137
DRAWN BY: SC
CHECKED BY: ET
CAD ID #: 13137_VOPAK.REV.3

LANDTEK DESIGN, LLC
204 NORTH 6TH STREET
WILMINGTON, NC 28401
PHONE: (910) 772-8802 FAX: (910) 338-1815
ENGINEERING LICENSE NUMBER 032291

PROJECT: VOPAK TERMINAL WILMINGTON INC.
MINOR SITE PLAN AND STORMWATER PERMIT
INTERNAL SERVICES MAINTENANCE BUILDING
1704 WOODBINE STREET, CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA
TITLE: COVER SHEET

SCALE: (H) AS NOTED
(V)
DATE: 02/09/14
SHEET No: 1 OF 4
REV. No: 3



ZONING NOTES:

- THIS DRAWING IS BASED ON A BOUNDARY LOCATION & TOPOGRAPHIC SURVEY PREPARED BY PROGRESSIVE LAND DEVELOPMENT CONSULTANTS, PLLC DATED FEBRUARY 10, 2014 UNDER JOB NUMBER 0039-2014 AS PREPARED BY L. SCOTT BAGGIE LICENSE NUMBER 3450.
- SPECIFIC RESOURCES, TECHNICAL REPORTS, DESIGN DOCUMENTS, E.T. AL. RELATED TO THIS PROJECT INCLUDE (BUT MAY NOT BE LIMITED TO) THE FOLLOWING:
 - BOUNDARY, LOCATION & TOPOGRAPHIC SURVEY REFERENCED ABOVE.
 - NEW HANOVER COUNTY GIS.
 - STORMWATER MANAGEMENT REPORT PREPARED BY LANDTEK DESIGN, LLC.
- ALL ELEVATIONS SHOWN HERE ARE IN REFERENCE TO THE REFERENCED SURVEYORS' BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAK.
- APPLICANT OWNER:

VOPAK TERMINALS NORTH
1704 WOODBINE STREET
WILMINGTON, NC 28401
- PARCEL:

PARCEL IDENTIFICATION NUMBER: R06400001-003-000
1704 WOODBINE STREET
CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

ZONE: IND - INDUSTRIAL DISTRICT (SECT 18-199)

PERMITTED BY RIGHT USES:
 USE: CHEMICAL AND ALLIED PRODUCTS STORAGE - EXISTING PERMITTED USE (SECT 18-199(b)(1))
 USE: OFFICE - PROPOSED PERMITTED USE (SECT 18-199(b)(3))
 USE: PIPE LINES EXCEPT NATURAL GAS - EXISTING PERMITTED USE (SECT 18-199(b)(4))

CONDITIONAL USES:
 USE: CONTRACTORS STORAGE YARD (TEMPORARY); PROPOSED PERMITTED CONDITIONAL TEMPORARY USE (SECT 18-199(c)(6))
 USE: WAREHOUSING GENERAL (PERMANENT); PROPOSED PERMITTED CONDITIONAL USE (SECT 18-199(c)(5))

ACCESSORY USES:
 USE: INTERNAL SERVICES MAINTENANCE BUILDING; PROPOSED PERMITTED ACCESSORY USE (SECT 18-199(c)(1))
- BULK REQUIREMENTS (SECT 18-199(f))

	IND	EXISTING	PROPOSED	COMMENTS
MIN. LOT AREA	N/S	8.55 AC	8.55 AC	372,630 SF AREA. LOT IS LAND LOCKED WITH EXISTING ACCESS
MIN. LOT WIDTH	N/S	229.6'	229.6'	NO CHANGE
MIN. LOT COVERAGE	N/A	25.6% (95,383 SF)	26.9% (100,320 SF)	4,937 SF INCREASE
MIN. FRONT YARD SETBACK	5'	182.8'	360.9'	COMPLEX
MIN. INTERIOR SIDE YARD SETBACK	0'	N/A	32.6'	NO CHANGE
MIN. CORNER SIDE YARD SETBACK	5'	N/A	N/A	NOT APPLICABLE
MIN. REAR YARD SETBACK	0'	N/A	600.2'	COMPLEX
MAX. BUILDING HEIGHT	N/S	20'	-3'	COMPLEX
MAX. BUILDING COVERAGE	15%	0.5%	2.0%	1,795 SF EXISTING VS 7,795 SF PROP (OVERHANG NOT INCL.)
TOTAL NUMBER OF BUILDING	N/S	2	3	ONE (1) BUILDING PROPOSED

(V) = VARIANCE (E) = EXISTING NON-COMFORMITY (DW) = DESIGN WAIVER N/A = NOT APPLICABLE N/S = NOT SPECIFIED
- OFF STREET PARKING AND LOADING DESIGN STANDARDS (ARTICLE 9)
 - MIN. PARKING SPACE SIZE REQUIREMENTS (18-532)

- 8.5' X 18' PARKING SPACE SIZE REQUIRED. NO PARKING SPACES PROPOSED. (N/A)
 - NUMBER OF SPACES REQUIRED (SECTION 18-532)

- OFFICE (MIN STANDARD): ONE (1) SPACE PER 300 SF OF GFA THEREFORE 400 SF / 300 SF = 1.33 SPACES - TWO (2) SPACES REQUIRED
 - OFFICE (MAX STANDARD): ONE (1) SPACE PER 200 SF OF GFA THEREFORE 400 SF / 200 SF = 2 SPACES - TWO (2) SPACES REQUIRED
 - WAREHOUSE (MIN/MAX STANDARD): ONE (1) SPACE PER 1,000 SF OF GFA THEREFORE 60 X 80 = 4,800 SF / 1,000 SF = 4.8 SPACES - FIVE (5) SPACES
 - TOTAL = SEVEN (7) SPACES REQUIRED. THE EXISTING INDUSTRIAL SITE HAS PARKING AT THE FRONT OFFICE BUILDING AND WORK VEHICLES WILL ACCESS THE MAINTENANCE BUILDING ONLY.
 - MIN. PARKING SETBACKS (SECT 18-532)

- NO STANDARD (C)
 - LOADING AREA REQUIREMENTS (SECT 18-527)

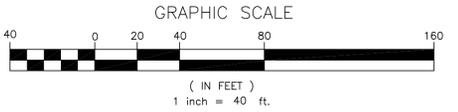
- NO LOADING SPACES PROPOSED OR REQUIRED (C)
 NOTE: ONE (1) OFF-STREET LOADING SPACE REQUIRED PER WAREHOUSE USE WITH GREATER THAN 19,999 SF OF THEREFORE DOES NOT APPLY.
 - MIN AISLE WIDTH (SECT 18-1530)

- NO STANDARD (C)

- LIGHTING:
 - THERE IS NO LIGHTING PROPOSED WITH THIS APPLICATION.
- BUFFER:
 - NOT APPLICABLE AS NO ADJACENT RESIDENTIAL PROPERTY.
 - 30' PROPOSED BUILDING BUFFER HAS BEEN PROPOSED FROM TOP OF BANK TO THE PROPOSED BUILDING OVERHANG. (C)
- CAMA LAND USE PLAN CLASSIFICATION:
 - CONSERVATION AREA (GREEN AREA ON MAP) WHILE EXISTING INDUSTRIAL SITE AND ADJACENT TO URBAN CLASSIFICATION (GRAY SHADED AREA ON MAP)

GENERAL NOTES (AS APPLICABLE):

- THE OWNER/CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR ANY ALL CERTIFICATIONS, INSPECTIONS, ETC. REQUIRED BY ALL GOVERNING JURISDICTIONAL AGENCIES DURING AND AFTER CONSTRUCTION FOR OBTAINING AND MAINTAINING OF ANY NECESSARY PERMITS, INCLUDING BUT NOT LIMITED TO PERMITS FOR CONSTRUCTION, SCHEDULING OF FIELD OBSERVATIONS AND ACCORDANCE WITH REPRESENTATIVES OF THE APPLICABLE PARTIES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
- THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCIES AND/OR TECHNICAL REPORT AND PLANS, ETC.
- THE PROPERTY SURVEY SHALL BE CONSIDERED A PART OF THESE PLANS.
- THESE PLANS ARE BASED ON INFORMATION PROVIDED TO LANDTEK DESIGN, LLC AT THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY LANDTEK DESIGN, LLC IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN OR IF THE PROPOSED WORK WOULD BE INHIBITED BY ANY OTHER SITE FEATURES.
- ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS.
- DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH TOWN, COUNTY, STATE AND FEDERAL LAWS AND APPLICABLE CODES.
- CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
- CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES AS NECESSARY TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT TO REMAIN AND TO PROVIDE A SAFE WORK AREA.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPPING, CURB, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPAIR ALL SIGNAL, INTERCONNECT CABLE, CONDUITS AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION. REPAIR SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
- ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS AS INDICATED. IN SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
- ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS MEANS FOR COMPLETION OF THE WORK DEPICTED ON THESE PLANS NOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY. WORK HAS BEEN RETAINED FOR SUCH PURPOSES.
- ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY. WORK HAS BEEN RETAINED FOR SUCH PURPOSES.
- ALL CONTRACTORS MUST CARRY STATUTORY WORKERS COMPENSATION INSURANCE, EMPLOYERS LIABILITY INSURANCE AND APPROPRIATE LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (GCL). ALL CONTRACTORS MUST HAVE THEIR GCL POLICES ENDORSED TO NAME LANDTEK CONSULTING, LLC AND ITS SUBCONSULTANTS AS ADDITIONAL INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THE HOLD HARMLESS AND INDEMNIFY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH LANDTEK CONSULTING, LLC WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL TO THE FULLEST EXTENT OF THEIR OWNERSHIP AND HOLD HARMLESS LANDTEK CONSULTING, LLC AND ITS SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS.
- NEITHER THE PROFESSIONAL ACTIVITIES OF LANDTEK DESIGN, LLC NOR THE PRESENCE OF LANDTEK CONSULTING, LLC OR ITS EMPLOYEES AND SUBCONSULTANTS AT A CONSTRUCTION PROJECT SITE SHALL RELIEVE THE GENERAL CONTRACTOR OF HIS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR THE PROPER PERFORMANCE OF THE WORK AND COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS. ALL ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. LANDTEK DESIGN'S REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT LANDTEK DESIGN, LLC HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. LANDTEK DESIGN, LLC SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE DESIGN DOCUMENTS NOT BROUGHT TO THE ATTENTION OF LANDTEK CONSULTING, LLC IN WRITING BY THE CONTRACTOR. LANDTEK DESIGN SHALL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS HAVE NOT BEEN RECEIVED.
- IN AN EFFORT TO RESOLVE ANY CONFLICTS THAT ARISE DURING THE DESIGN AND CONSTRUCTION OF THE PROJECT OR FOLLOWING THE COMPLETION OF THE PROJECT, LANDTEK CONSULTING, LLC AND THE CONTRACTOR MUST AGREE THAT ALL DISPUTES BETWEEN THEM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE PROJECT SHALL BE SUBMITTED TO NON BINDING MEDIATION UNLESS THE PARTIES MUTUALLY AGREE OTHERWISE.
- THE CONTRACTOR MUST INCLUDE A MEDIATION PROVISION IN ALL AGREEMENTS WITH INDEPENDENT SUBCONTRACTORS AND CONSULTANTS RETAINED FOR THE PROJECT AND TO REQUIRE ALL INDEPENDENT CONTRACTORS AND CONSULTANTS TO INCLUDE A SIMILAR MEDIATION PROVISION IN ALL AGREEMENTS WITH THEIR SUBCONTRACTORS, SUBCONSULTANTS, SUPPLIERS AND FABRICATORS, THEREBY PROVIDING FOR MEDIATION AS THE PRIMARY METHOD FOR DISPUTE RESOLUTION BETWEEN THE PARTIES TO ALL THOSE AGREEMENTS.
- IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS INCLUDING THE NOTES CONTAINED THEREON WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
- TRASH TO BE HANDLED INTERNAL TO THE BUILDING AND BROUGHT TO DUMPSTERS ON ADJACENT LOT BY VOPAK STAFF.



PROJECT: VOPAK TERMINAL WILMINGTON INC. MINOR SITE PLAN AND STORMWATER PERMIT INTERNAL SERVICES MAINTENANCE BUILDING 1704 WOODBINE STREET, CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

SCALE: (H) 1"=40' (V)

DATE: 02/09/14

SHEET No: 3 OF 4

REV. No: 3

TITLE: SITE PLAN

PROJECT No: NT13137

DRAWN BY: SC

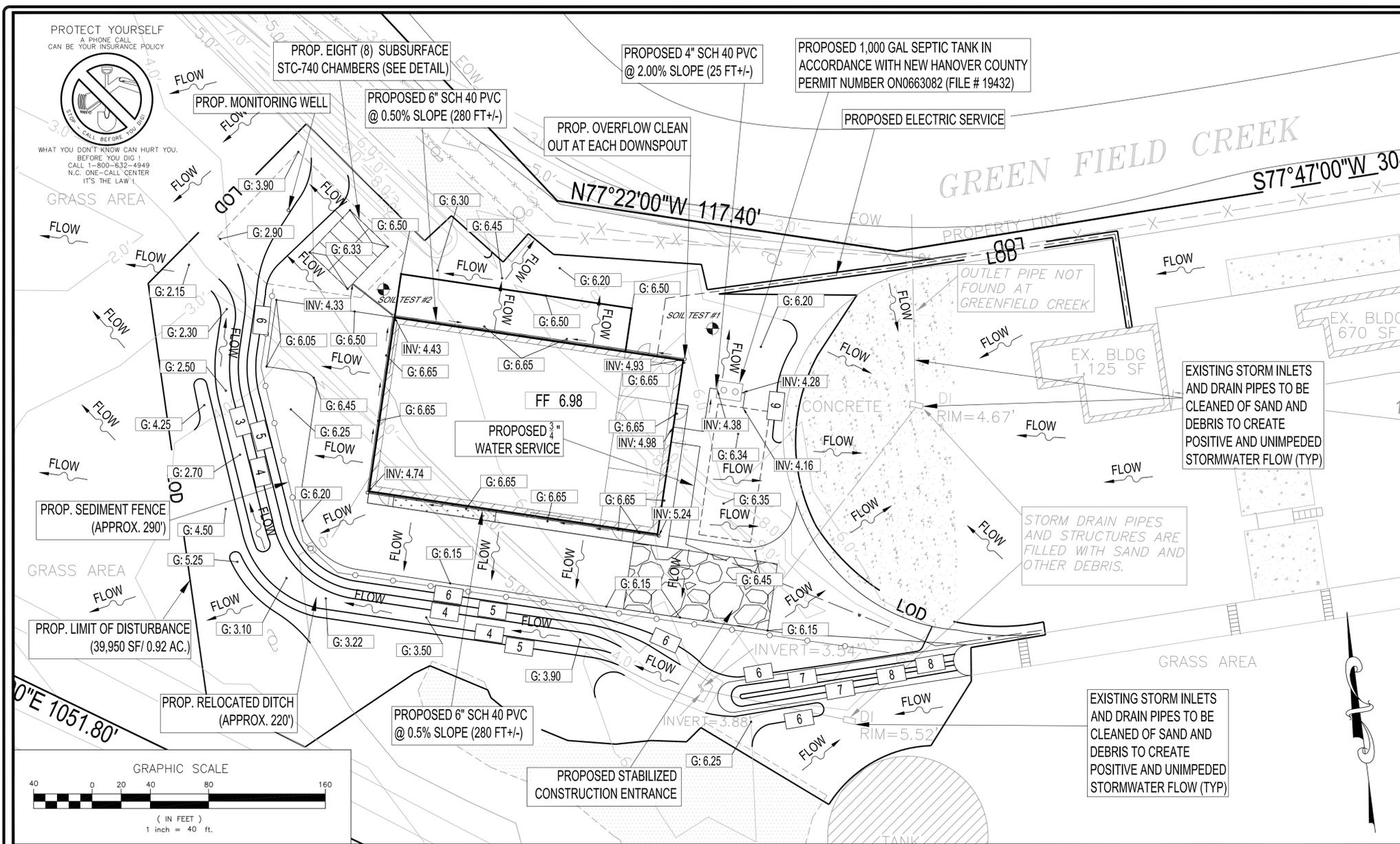
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CAD ID. #: 13137 VOPAK REV. 3

ERIC S. TOMCZAK, P.E.

NORTH CAROLINA LICENSE NO. 032291

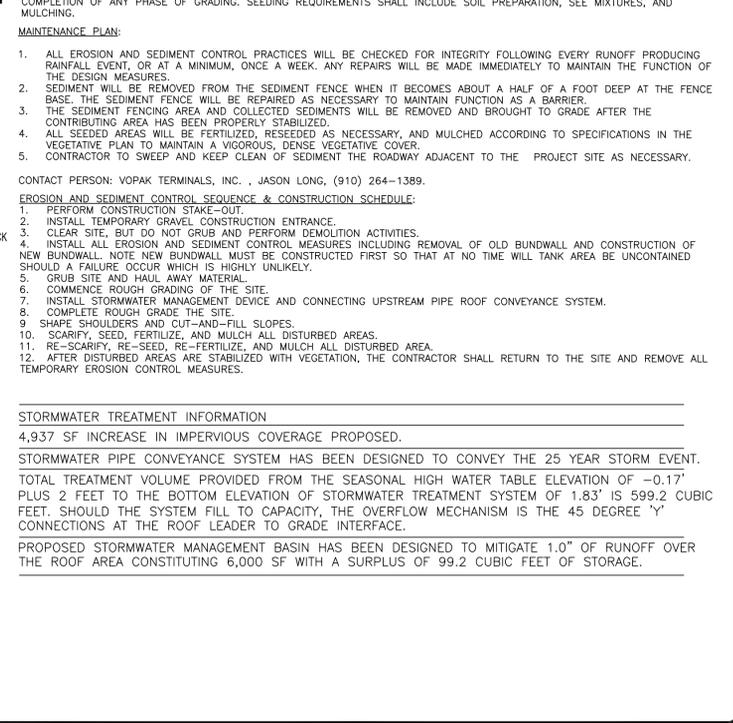
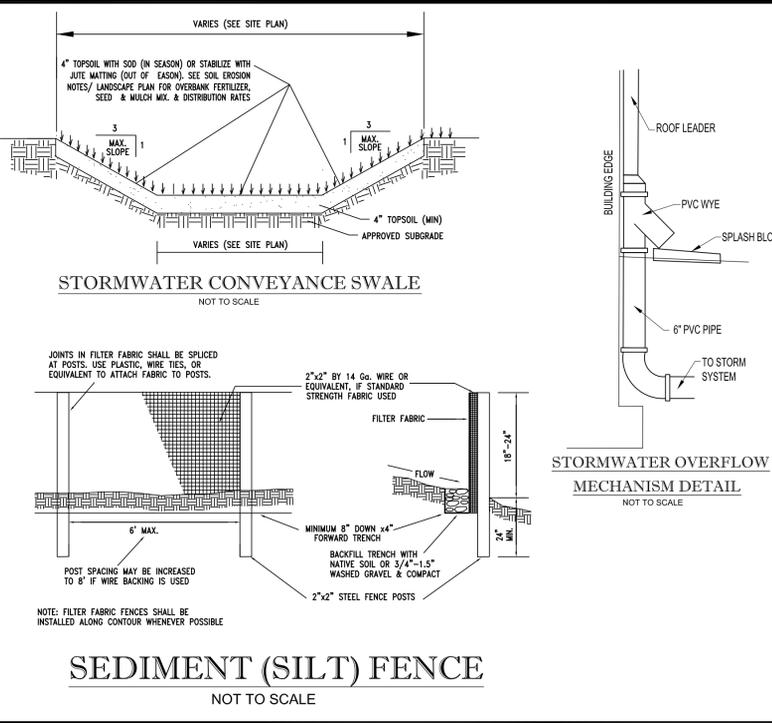
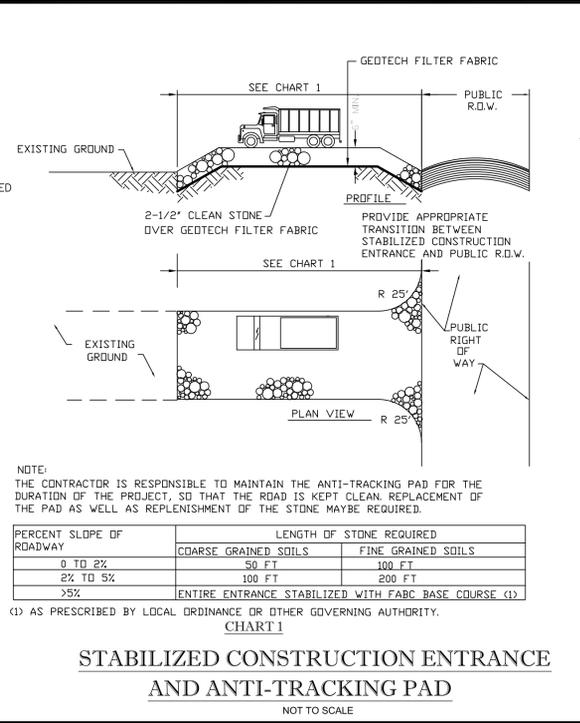
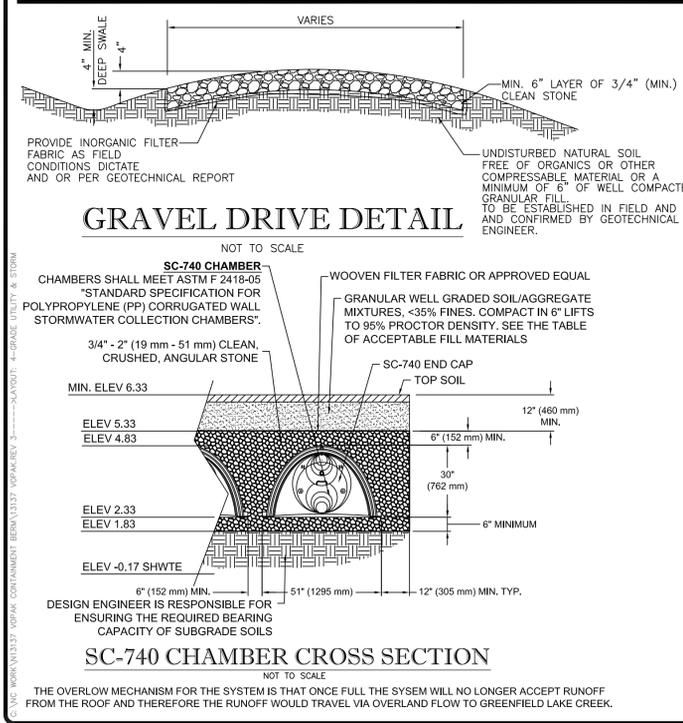
LANDTEK DESIGN, LLC
Engineers and Consultants
204 NORTH 6TH STREET
WILMINGTON, NC 28401
PHONE: (910) 772-8802 FAX: (910) 398-1815
ENGINEERING LICENSE NUMBER 032291



GRADING AND UTILITY NOTES:

- LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINTS OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFERENCE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE CODES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
- DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS, DOOR ACCESS, AND EXTERIOR GRADING. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND ENSURE PROPER DEPTHS ARE ACHIEVED. THE JURISDICTION UTILITY REQUIREMENTS SHALL ALSO BE MET, AS WELL AS COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER'S PLANS, EXISTING UTILITY REQUIREMENTS, OR ANY OTHER REQUIREMENTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING. THE CONTRACTOR'S PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
- ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION. A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS TO BE COMPLETED, ALL FILL AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED ARE TO BE COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. SUBBASE MATERIAL FOR SIDEWALKS, CURBS, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULDER SUBBASE OR PROPOSED SUBBASE MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITHOUT NOTIFICATION IS DONE AT THE CONTRACTOR'S OWN RISK. IN CASE OF DISCREPANCIES BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE. IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS.
- CONTRACTOR SHALL BE REQUIRED TO SECURE ALL NECESSARY PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR SHALL SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.
- ALL WETLAND PERMITS TO BE OBTAINED (NATIONWIDE PERMIT, INDIVIDUAL PERMIT, NC DENR DWO WETLANDS PERMIT AND DELINEATION CONFIRMATION) FROM US ARMY CORPS OF ENGINEER TO DISTRIB ANY WETLANDS. NOTE NONE PRESENT ON SITE PURSUANT TO FIELD REVIEW OF SITE AND GIS MAPPING.

- PLANNED EROSION AND SEDIMENTATION CONTROL PRACTICES:**
- CONSTRUCTION SEQUENCE: THE CONSTRUCTION SEQUENCE FOR THIS PROJECT IS PARTICULARLY CRUCIAL TO MITIGATING OFF-SITE TRANSFER OF SEDIMENT. THE PROJECT, AS DESCRIBED, WILL UTILIZE SEDIMENT FENCE TO MITIGATE THE DISTURBANCE OF LAND FROM AN EROSION CONTROL STANDPOINT.
 - LAND GRADING: APPROXIMATELY 0.92 ACRES OF GRADING WILL BE REQUIRED FOR THE DEVELOPMENT OF THE STORMWATER IMPROVEMENTS AND ASSOCIATED APPURTENANCES. ALL FILL AND CUT SLOPES WILL BE MAXIMUM OF 3:1.
 - TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT - PRACTICE 6.06: ONE (1) GRAVEL AREA WILL BE PUT DOWN TO PROVIDE A BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING INTO PUBLIC ROADS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.
 - SEDIMENT FENCING: A SEDIMENT FENCE WILL BE CONSTRUCTED ALONG THE DOWN-GRADIENT BOUNDARY OF THE PROJECT TO PREVENT UNTREATED RUNOFF FROM EXITING THE DISTURBANCE AREA.
 - CONTROLLED SEDIMENT FENCE OUTLET: CONTROLLED SEDIMENT FENCE OUTLETS WILL BE UTILIZED AS NEEDED TO FURTHER TREAT RUNOFF BEFORE IT ENTERS THE OFF SITE AREAS AND ADDITIONAL TRIBUTARY AREAS. PLEASE REFERENCE DETAIL ON ATTACHED PLAN SET IN ADDITION TO PLAN SET.
 - TEMPORARY VEGETATIVE COVER: TEMPORARY VEGETATIVE COVER WILL BE IMPLEMENTED THROUGH SEEDING AFTER EVERY LAND DISTURBING ACTIVITY IS COMPLETED. VEGETATIVE COVER MUST BE ESTABLISHED WITHIN 21 DAYS OF LAND DISTURBING ACTIVITY. PERMANENT COVER MUST BE ESTABLISHED PRIOR TO COMPLETION OF THE PROJECT.
- VEGETATIVE PLAN:**
THE CONTRACTOR SHALL PROVIDE SEEDING AND MULCHING ON ALL DISTURBED AREAS WITHIN 21 WORKING DAYS FOLLOWING THE COMPLETION OF ANY PHASE OF GRADING. SEEDING REQUIREMENTS SHALL INCLUDE SOIL PREPARATION, SEE MIXTURES, AND MULCHING.
- MAINTENANCE PLAN:**
- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR INTEGRITY FOLLOWING EVERY RUNOFF PRODUCING RAINFALL EVENT, OR AT A MINIMUM, ONCE A WEEK. ANY REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN THE FUNCTION OF THE DESIGN MEASURES.
 - SEDIMENT WILL BE REMOVED FROM THE SEDIMENT FENCE WHEN IT BECOMES ABOUT A HALF OF A FOOT DEEP AT THE FENCE BASE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN FUNCTION AS A BARRIER.
 - THE SEDIMENT FENCING AREA AND COLLECTED SEDIMENTS WILL BE REMOVED AND BROUGHT TO GRADE AFTER THE CONTRIBUTING AREA HAS BEEN PROPERLY STABILIZED.
 - ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
 - CONTRACTOR TO SWEEP AND KEEP CLEAN OF SEDIMENT THE ROADWAY ADJACENT TO THE PROJECT SITE AS NECESSARY.
- CONTACT PERSON: VOPAK TERMINALS, INC. JASON LONG, (910) 264-1389.
- EROSION AND SEDIMENT CONTROL SEQUENCE & CONSTRUCTION SCHEDULE:**
- PERFORM CONSTRUCTION STAKE-OUT.
 - INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
 - CLEAR SITE, BUT DO NOT GRUB AND PERFORM DEMOLITION ACTIVITIES.
 - INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING REMOVAL OF OLD BUNDWALL AND CONSTRUCTION OF NEW BUNDWALL. NOTE NEW BUNDWALL MUST BE CONSTRUCTED FIRST SO THAT AT NO TIME WILL TANK AREA BE UNCONTAINED SHOULD A FAILURE OCCUR WHICH IS HIGHLY UNLIKELY.
 - COMPLETE ROUGH GRADE TIE-INS.
 - COMMENCE ROUGH GRADING OF THE SITE.
 - INSTALL STORMWATER MANAGEMENT DEVICE AND CONNECTING UPSTREAM PIPE ROOF CONVEYANCE SYSTEM.
 - COMPLETE ROUGH GRADE TIE-INS.
 - SHAPE SHOULDERS AND CUT-AND-FILL SLOPES.
 - SCARIFY, SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS.
 - RE-SCARIFY, RE-SEED, RE-FERTILIZE, AND MULCH ALL DISTURBED AREA.
 - AFTER DISTURBED AREAS ARE STABILIZED WITH VEGETATION, THE CONTRACTOR SHALL RETURN TO THE SITE AND REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.



STORMWATER TREATMENT INFORMATION
4,937 SF INCREASE IN IMPERVIOUS COVERAGE PROPOSED.

STORMWATER PIPE CONVEYANCE SYSTEM HAS BEEN DESIGNED TO CONVEY THE 25 YEAR STORM EVENT.

TOTAL TREATMENT VOLUME PROVIDED FROM THE SEASONAL HIGH WATER TABLE ELEVATION OF -0.17' PLUS 2 FEET TO THE BOTTOM ELEVATION OF STORMWATER TREATMENT SYSTEM OF 1.83' IS 599.2 CUBIC FEET. SHOULD THE SYSTEM FILL TO CAPACITY, THE OVERFLOW MECHANISM IS THE 45 DEGREE 'Y' CONNECTIONS AT THE ROOF LEADER TO GRADE INTERFACE.

PROPOSED STORMWATER MANAGEMENT BASIN HAS BEEN DESIGNED TO MITIGATE 1.0" OF RUNOFF OVER THE ROOF AREA CONSTITUTING 6,000 SF WITH A SURPLUS OF 99.2 CUBIC FEET OF STORAGE.

PROJECT: VOPAK TERMINAL WILMINGTON, INC. MINOR SITE PLAN AND STORMWATER PERMIT INTERNAL SERVICES MAINTENANCE BUILDING 1704 WOODBINE STREET, CITY OF WILMINGTON NEW HANOVER COUNTY, NORTH CAROLINA

SCALE: (H) 1"=20' (V)

DATE: 02/09/14

SHEET No: 3 OF 4

REV. No: 3

PROJECT No: N13137

DRAWN BY: SC

CHECKED BY: ET

CAD ID #: 13137 VOPAK REV. 3

ERIC S. TOMCZAK, P.E.

NORTH CAROLINA LICENSE NO. 002281

LANDTEK DESIGN, LLC
Engineers and Consultants
204 NORTH 6TH STREET
WILMINGTON, NC 28401
PHONE: (910) 772-8802 FAX: (910) 390-358-1615
ENGINEERING LICENSE NUMBER 032291

GRADING, UTILITY AND STORMWATER PLAN

2006 CAMA LAND USE CLASSIFICATION MAP

SCALE: NOT TO SCALE



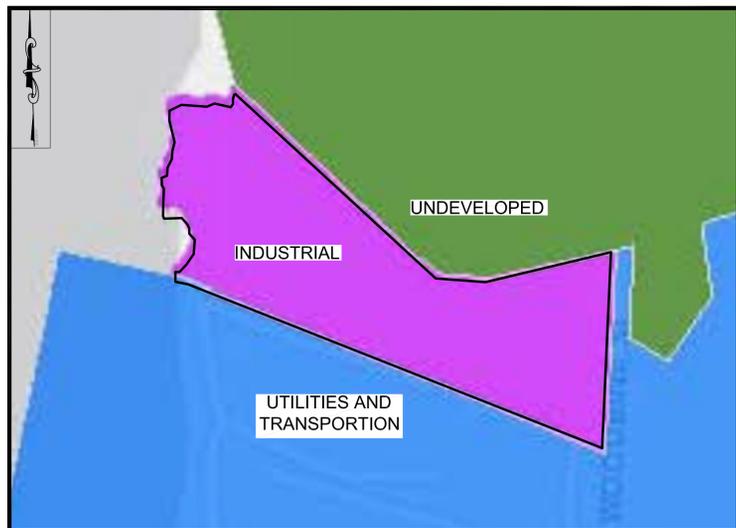
NEW HANOVER COUNTY GIS WETLANDS MAP

SCALE: 1"=200'



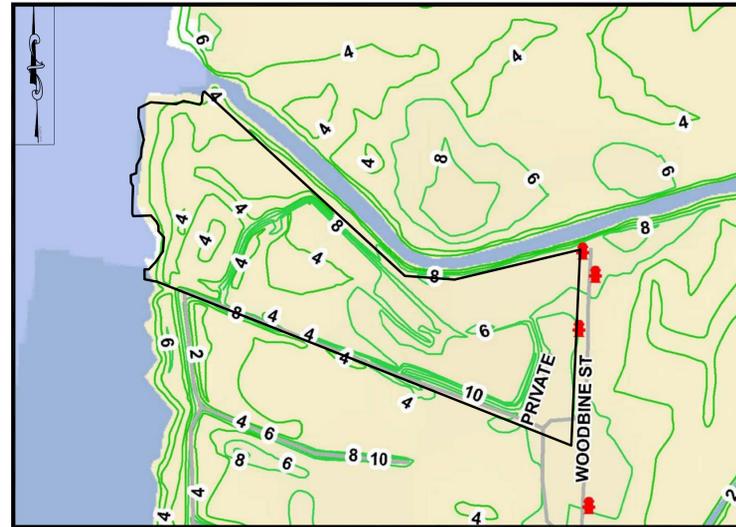
NEW HANOVER COUNTY GIS EXISTING LAND USE

SCALE: 1"=200'



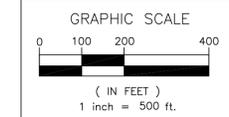
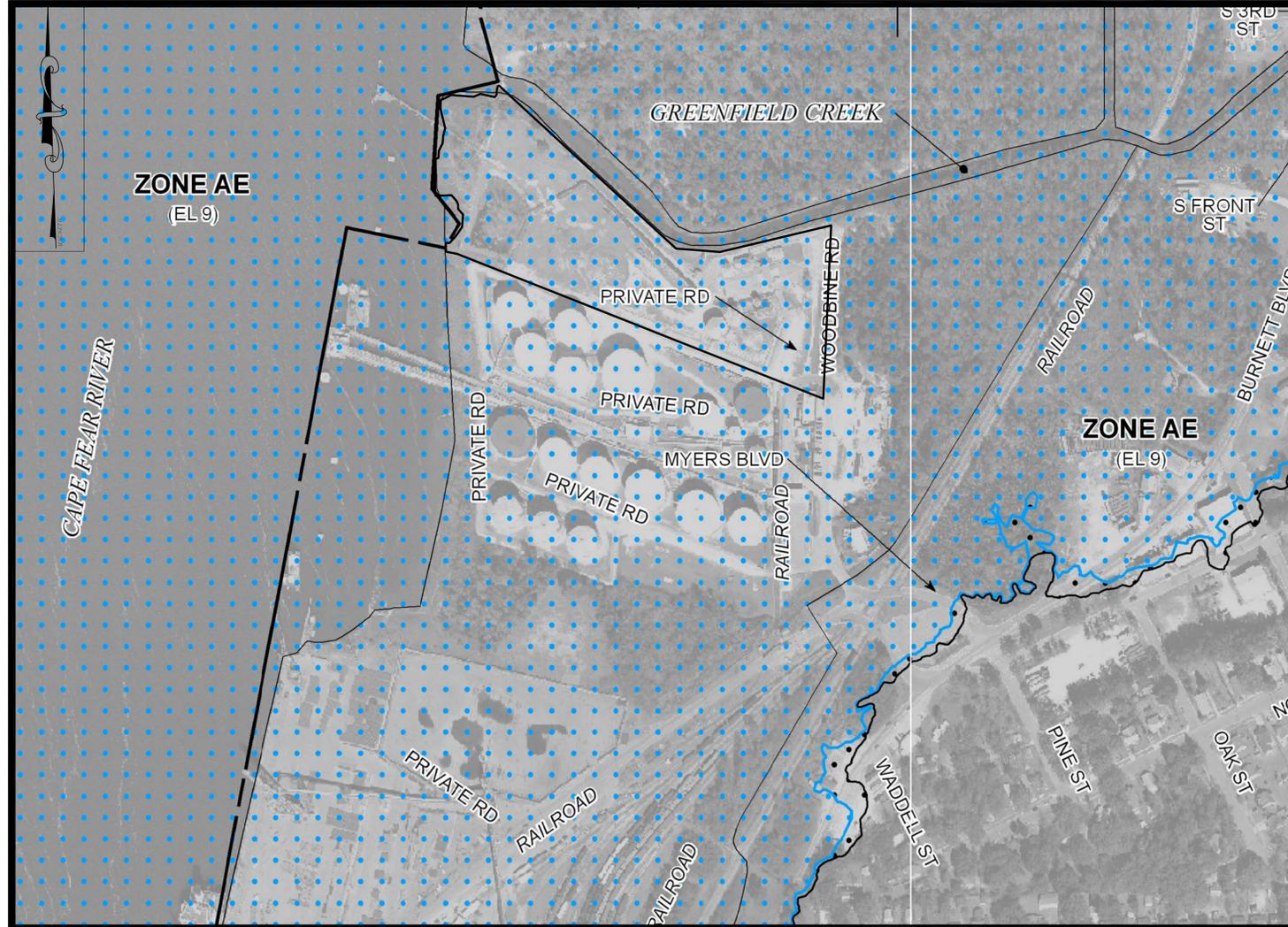
NEW HANOVER COUNTY GIS TOPOGRAPHY MAP

SCALE: 1"=200'



FEMA FLOOD INSURANCE RATE MAP

SCALE: 1"=200'



NEW HANOVER COUNTY SOIL SURVEY

SCALE: 1"=5000'



ERIC S. TOMCZAK, P.E.

PROJECT No: N13137
DRAWN BY: SG
CHECKED BY: ET
CAD ID #: 13137 VOPAK.REV. 3

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PROJECT: VOPAK TERMINAL WILMINGTON, INC.
MINOR SITE PLAN AND STORMWATER PERMIT
INTERNAL SERVICES MAINTENANCE BUILDING
1704 WOODBINE STREET, CITY OF WILMINGTON
NEW HANOVER COUNTY, NORTH CAROLINA

SCALE: (H) AS NOTED
DATE: 02/09/14
SHEET No: 1
REV. No: 3

TITLE: SITE INVENTORY MAP EXHIBIT

REV.	DATE	COMMENTS
1	02/25/14	REV. PER PROJECT TEAM MEETING ON 02/25/14
2	02/25/14	REV. PER STORM SYSTEM LOCATION
3	02/19/14	REV. PER MEETING WITH CITY ON 03/18/14
ET		