SPECIAL USE PERMIT
MODIFICATION SITE PLAN

FOR

MAVIS DISCOUNT TIRE

LOCATION OF SITE

HAMPTON POINTE BLVD
HILLSBOROUGH, NC 27278
ORANGE COUNTY

CONTACT INFORMATION

REFERENCES

- BOUNDARY & TOPOGRAPHIC/ALTA SURVEY:
  "ALTA/NSPS LAND TITLE SURVEY FOR MAVIS SOUTHEAST LLC"
  PREPARED BY: BOHLER ENGINEERING NC, PLLC
  4130 PARK LAKE AVE. STE. 130
  RALEIGH, NC 27612
  (919) 578-9000 (P)
  DATED: 11/16/18

GOVERNING AGENCIES

- TOWN OF HILLSBOROUGH PLANNING
  101 E. ORANGE STREET
  HILLSBOROUGH, NC 27278
  (919) 296-9472 (P)

- TOWN OF HILLSBOROUGH UTILITIES DEPARTMENT
  105 E. CORBIN ST.
  HILLSBOROUGH, NC 27278
  (919) 296-9630 (P)

ORANGE COUNTY SOLID WASTE STANDARD PLAN NOTES (CONSTRUCTION WASTER)

* OCSW CONSTRUCTION WASTE REQUIREMENTS

1. ALL EXISTING STRUCTURES 500 SQUARE FEET AND LARGER SHALL BE ASSESSED PRIOR TO ISSUANCE OF A DEMOLITION PERMIT TO ENSURE COMPLIANCE WITH THE COUNTY'S REGULATED RECYCLABLE MATERIALS ORDINANCE (RRMO) AND TO ACCESS THE POTENTIAL FOR DECONSTRUCTION AND/OR THE REUSE OF SALVAGEABLE MATERIALS. CONTACT THE ORANGE COUNTY SW ENFORCEMENT OFFICER AT 919-968-2788 TO ARRANGE FOR ASSESSMENT.
2. PURSUANT TO THE COUNTY'S RRMO, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATES CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
3. PURSUANT TO THE COUNTY'S RRMO, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE WHICH INCLUDES ANY REGULATED RECYCLABLES MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
4. PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE, THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH SOLID WASTE STAFF. THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/ENFORCEMENT OFFICIALS.
5. THE PRESENCE IF ANY ASBESTOS CONTAINING MATERIALS ('ACM') AND/OR OTHER HAZARDOUS MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.

WAIVERS REQUIRED/REQUESTED FROM UNIFIED DEVELOPMENT ORDINANCE SECTION 6 (DEVELOPMENT STANDARDS):

1. SUBSECTION 6.10 (LANDSCAPING (PARKING LOT)), PARAGRAPH 6.10.3 (LANDSCAPING REQUIREMENTS), SUBPARAGRAPH 6.10.3.7: "PARKING FACILITIES, UNLESS LOCATED ON OR WITHIN A STRUCTURE, SHALL BE SEPARATED FROM THE EXTERIOR WALL OF A STRUCTURE BY A LANDSCAPED AREA AT LEAST FIVE (5) FEET IN WIDTH."

   REASON FOR NEED: WAIVER NEEDED BECAUSE SEPARATION BETWEEN PARKING AND BUILDING IS LESS THAN FIVE FEET. SITE RESTRAINTS PROHIBIT THE EXTERIOR PARKING TO BE PUSHED OUT FURTHER AND ENCROACH ON EXISTING PARKING SPACES. THEREFORE, THE CURRENT DIMENSIONS OF THE SIDEWALK ON THE NORTHWEST SIDE AND THE LANDSCAPE AREA STRIP ON THE SOUTHEAST SIDE NEED TO BE KEPT UNDER THE 5 FOOT THRESHHOLD.

2. SUBSECTION 6.10 (LANDSCAPING (PARKING LOT)), PARAGRAPH 6.10.3 (LANDSCAPING REQUIREMENTS), SUB-PARAGRAPH 6.10.3.8: "GROUND LEVEL PARKING FACILITIES AND THE GROUND LEVEL OF ANY PARKING STRUCTURE SHALL PROVIDE A MINIMUM OF 10' PLANTED SETBACK AREA AROUND PARKING PERIMETER, WHETHER ALONG A SIDE STREET, PROPERTY LINE, DRIVEWAY, OR UNDEVELOPED PORTION OF THE SITE. WITHIN THIS SETBACK, AN OPAQUE SCREEN OR FENCE TO A HEIGHT OF AT LEAST 3 FEET SHALL BE REQUIRED WHEN THE ADJOINING LAND IS IN RESIDENTIAL USE OR A STREET."

   REASON FOR NEED: WAIVER NEEDED BECAUSE THERE IS A 10-FOOT WIDE LANDSCAPE STRIP REQUIRED DIVIDING OUR PARKING FROM THE SHOPPING CENTER ON PLAN SOUTH OF OUR PARCEL. PART OF OUR BOUNDARY LINE EXTENDS INTO THE ROADWAY BETWEEN THE PROPOSED BUILDING AND SHOPPING CENTER WHICH PROHIBITS US FROM PUTTING A LANDSCAPED ISLAND AT THE PROPERTY LINE AND IS AN EXISTING NONCONFORMANCE. THE PROPOSED PARKING IN THE PLAN SOUTH PART OF THE LOT IS BEYOND 10 FEET FROM THE PROPERTY LINE AND LANDSCAPING IS BEING PROVIDED SEPARATION.

3. SUBSECTION 6.13 (PARKING, LOADING, AND CIRCULATION), PARAGRAPH 6.13.9 (OFF-STREET PARKING DESIGN REQUIREMENTS), SUB-PARAGRAPH 6.13.9.10 : "IF AN APPLICANT PROPOSED TO CONSTRUCT PARKING SPACES IN EXCESS OF 125% OF THE NUMBER REQUIRED BY THIS ORDINANCE, THE APPLICANT WILL NEED TO SEEK A WAIVER FROM THE PERMIT ISSUING AUTHORITY. THE PERMIT ISSUING AUTHORITY MAY CONSIDER THE USE OF ALTERNATIVE PAVEMENT, RESERVATION OF SPACES FOR ELECTRIC CHARGING OR OTHER INNOVATIONS IN CONSIDERING A WAIVER REQUEST."

   REASON FOR NEED: WAIVER NEEDED BECAUSE PARKING COUNT FOR PROPOSED SITE IS OVER THE ALLOWED 125% OF MINIMUM PARKING STANDARDS. THE EXISTING SITE HAS 38 SPACES AND WE PLAN ON REDUCING THAT AMOUNT DOWN TO 28 SPACES. PER THE TABLE LOCATED ON C-301 - SITE PLAN WE SHOW WE ARE DECREASING THE OVERALL SHOPPING CENTERS PARKING SO WE BELIEVE THIS MEETS THE INTENT OF THE CODE SECTION.

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W E
S

SITE
TRUCK 15/501
85
Hampton Pointe Dr
Hampton Pointe Blvd
Old NC 86
Walmart Drive
Walmart Dr
Walmart Cir
Walmart Way
Walmart Ln
Walmart Ct
Walmart Trail
Walmart Trail Ln
Walmart Trail Dr
Walmart Sq
Walmart Sq Ln
Walmart Sq Dr
Walmart Sq Ln
Walmart Sq Ln
Walmart Sq Ln

GENERAL NOTES

(Rev. 1/2019)

1. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING, NORTH CAROLINA, PLLC (HEREIN "BOHLER ENGINEERING") PRIOR TO THE DATE ON WHICH ENGINEER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER ENGINEERING, IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
2. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.
3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE ENGINEER OF RECORD THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDA TO SAME.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND ENGINEER OF RECORD, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.
7. CONTRACTOR MUST REPAIR TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY ENGINEER OF RECORD, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR REWORK OR REPAIRS TO DIMENSIONS, MEASUREMENTS, ELEVATIONS, LOCATIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING ENGINEER OF RECORD WRITTEN NOTIFICATION OF SAME AND (B) ENGINEER OF RECORD, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
10. THE OWNER AND CONTRACTOR MUST BE SOLELY RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF THE APPLICABLE MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
12. ENGINEER OF RECORD IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
13. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS AND FOR INSTALLING ALL TEMPORARY SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES, ALL OF THIS WORK IS RESPONSIBILITY OF THE CONTRACTOR AND TO BE PERFORMED AT NO COST AND EXPENSE.
14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR ALL APPROPRIATE MEASURES REQUIRED TO PROPERLY ASSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
17. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST REPAIR ALL DAMAGE ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS FOR ANY AND ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
18. THE ENGINEER OF RECORD AND BOHLER ENGINEERING ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY, JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE ENGINEER OF RECORD AND BOHLER ENGINEERING HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEER OF RECORD'S AND BOHLER ENGINEERING SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD AND BOHLER ENGINEERING ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
19. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE ENGINEER OF RECORD AND BOHLER ENGINEERING, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR REQUIRE COST OR TIME CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE ENGINEER OF RECORD AND BOHLER ENGINEERING FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEYS FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
20. THE ENGINEER OF RECORD AND BOHLER ENGINEERING ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND FULLY INDEMNIFY AND HOLD THE ENGINEER OF RECORD AND BOHLER ENGINEERING HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT ENGINEER AND BOHLER ENGINEERING SUFFER AND ANY AND ALL COSTS THAT ENGINEER AND BOHLER ENGINEERING INCUR AS RELATED TO SAME.
21. ALL CONTRACTORS MUST PROVIDE AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED INSURANCE REQUIRED BY FEDERAL STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER ENGINEERING, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THE DEFEND, (IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER ENGINEERING WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER ENGINEERING AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, ATTORNEYS FEES AND REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. THE CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
22. THE ENGINEER OF RECORD AND BOHLER ENGINEERING ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK OR SPECIFICALLY AND/OR FOR ANY CONFLICTS IN SCOPE AND PROVISIONS THAT MAY RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
23. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER ENGINEERING, NOR THE PRESENCE OF BOHLER ENGINEERING AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER ENGINEERING PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER ENGINEERING AND ITS EMPLOYEES, PERSONNEL, AGENTS, SUBCONTRACTORS AND SUBCONSULTANTS HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND FOR COMPLIANCE WITH ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER ENGINEERING FOR AND FROM ANY LIABILITY TO BOHLER ENGINEERING RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER ENGINEERING AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.
24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER ENGINEERING'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER ENGINEERING WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER ENGINEERING HAS NO RESPONSIBILITY OR LIABILITY FOR SAME. BOHLER ENGINEERING WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER ENGINEERING'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER ENGINEERING HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER ENGINEERING IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER ENGINEERING'S ATTENTION. BOHLER ENGINEERING IS NOT REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD AND/OR BOHLER ENGINEERING FOR ALL DEVIATIONS WITHIN ENGINEER'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS AND COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE ENGINEER OF RECORD AND BOHLER ENGINEERING PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH APPLICABLE PERMITTING STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE ENGINEER OF RECORD AND/OR BOHLER ENGINEERING ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE ENGINEER OF RECORD AND BOHLER ENGINEERING PARTIES; HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT ENGINEER OF RECORD AND/OR BOHLER ENGINEERING INCUR AS A RESULT OF SAID FAILURE OR FAILURE TO PRESERVE.
28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. ENGINEER OF RECORD AND BOHLER ENGINEERING HAS NEITHER RESPONSIBILITY NOR CONTROL OVER THE CONTRACTOR'S EXCAVATION AND TRENCHING PROCEDURES AND WORK.
30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD ENGINEER OF RECORD AND/OR BOHLER ENGINEERING PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
31. THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL PLANS, PERMITS, INSPECTIONS AND COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP PLAN, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
32. AS CONTRACTORS MUST PREPARE SITE PLANS BASED ON DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER OF RECORD, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE ENGINEER OF RECORD'S KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURES CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

SITE LAYOUT NOTES

(Rev. 1/2019)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE MATERIALS FROM DISPERSING INTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS OF THE LINE.
4. THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE ERECTION OF THESE ITEMS WITH ALL OTHER CONSTRUCTION ACTIVITIES TO ENSURE THEY ARE INSTALLED PER THE PROJECT PLAN.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.

GRADING NOTES

(Rev.1/2019)

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO THE START OF RELATED WORK.
4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING.
5. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. IF NO GEOTECHNICAL REPORT EXISTS, ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE PROJECT IS LOCATED. THIS REPORT MUST VERIF

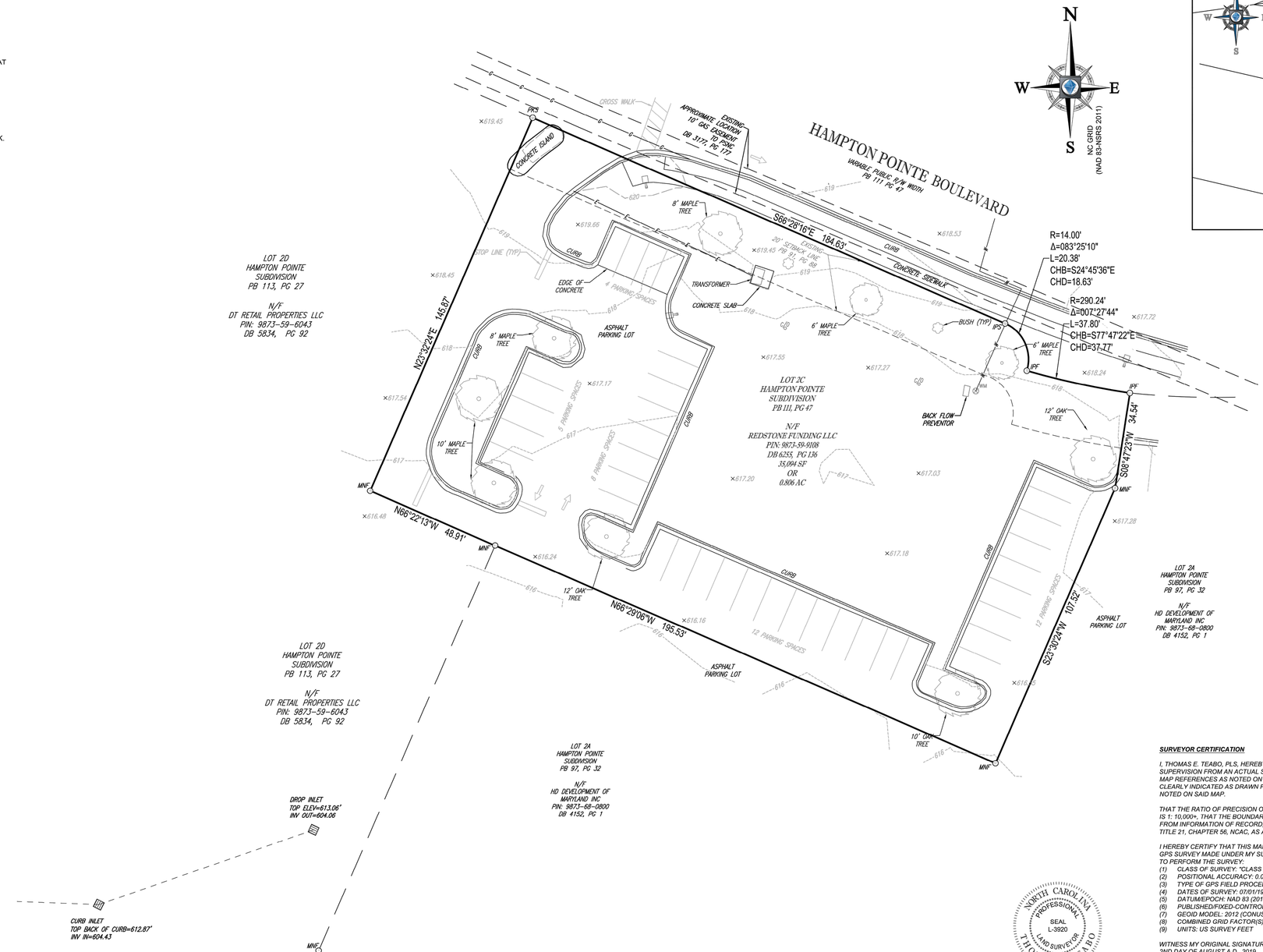
NOTES:

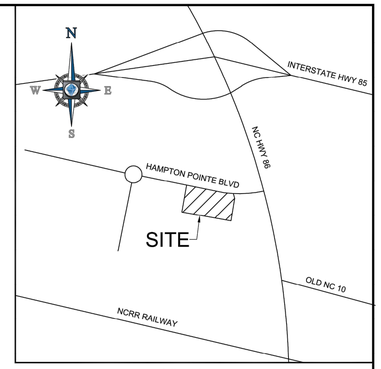
1) TITLE REPORT BY CHICAGO TITLE INSURANCE COMPANY DATED FEBRUARY 15, 2019 AT 8:00 AM, COMMITMENT NUMBER 19-02585WS.
2) AREAS COMPUTED BY COORDINATE METHOD.
3) PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIONS OF RECORD.
4) ALL DISTANCES SHOWN ON SURVEY ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
5) THIS SURVEY DOES NOT REPRESENT A TITLE SEARCH BY THIS FIRM.
6) RIGHTS-OF-WAY INFORMATION IS BASED ON DEEDS AND MAPS OF RECORD.
7) NC GRID COORDINATES (NAD83) OBTAINED BY USING GPS, PRE THE NCVRS NETWORK.
8) BASIS OF BEARING SHOWN HEREON IS NC GRID (NAD 83 NSRS 2011).
9) VERTICAL DATUM SHOWN HEREON IS NAVD88.
10) THE PROPERTY SHOWN HEREON IS LOCATED IN FLOODZONE "ZONE X", AREA OF MINIMAL FLOODING, PER FLOOD INSURANCE RATE MAP 3710987300J, PANEL 9873 EFFECTIVE DATE FEBRUARY 2, 2007.

CHICAGO TITLE INSURANCE COMPANY
COMMITMENT NUMBER: 19-0285WS
COMMITMENT DATE: FEBRUARY 15, 2019 8:00AM
SCHEDULE B, PART II - EXCEPTIONS

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I - REQUIREMENTS ARE MET.
   NOT A SURVEY MATTER.
2. TAXES OR ASSESSMENTS FOR THE YEAR 2019, AND SUBSEQUENT YEARS, NOT YET DUE OR PAYABLE.
   NOT A SURVEY MATTER.
3. THE CORRECTNESS OF THE SQUARE FOOTAGE/ACREAGE COMPUTATION CONTAINED IN THE DESCRIPTION OF THE LAND IS NOT INSURED.
   AFFECTS SUBJECT PROPERTY. PLOTTED AND SHOWN HEREON.
4. RIGHTS OF TENANTS IN POSSESSION, IF ANY, AS TENANTS ONLY, UNDER UNRECORDED LEASES FOR A DURATION OF LESS THAN THREE (3) YEARS.
   NOT A SURVEY MATTER.
5. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN PLAT BOOK 44, PAGE 14, PLAT BOOK 54, PAGE 168, PLAT BOOK 71, PAGE 91, PLAT BOOK 91, PAGE 88, PLAT BOOK 97, PAGE 32 AND PLAT BOOK 111, PAGE 47.
   AFFECTS SUBJECT PROPERTY. PLOTTED AND SHOWN HEREON.
6. MEMORANDUM OF LEASE WITH THE CATO CORPORATION RECORDED IN BOOK 4514, PAGE 176.
   AFFECTS SUBJECT PROPERTY. NOT A PLOTTABLE MATTER.
7. MEMORANDUM OF LEASE WITH HIBBETT SPORTING GOODS, INC. RECORDED IN BOOK 5858, PAGE 407 AND AGREEMENT WITH HIBBETT SPORTING GOODS, INC. RECORDED IN BOOK 5879, PAGE 581.
   NOT A SURVEY MATTER. NOT A PLOTTABLE MATTER.
8. MEMORANDUM OF LEASE WITH PAPA JOHN'S USA, INC. (THIS APPEARS TO BE EXPIRED BUT THERE ARE RESTRICTED AREAS THAT APPEAR TO AFFECT THE SUBJECT PROPERTY AND THE PAPA JOHN'S APPEARS TO STILL BE IN EXISTENCE AT THE CENTER.)
   NO DEED BOOK OF RECORD WITH THIS EXCEPTION.
9. SPECIAL USE PERMIT RECORDED IN BOOK 2801, PAGE 355 AND IRREVOCABLE ASSIGNMENT OF DEVELOPMENT RIGHTS RECORDED IN BOOK 5736, PAGE 237.
   AFFECTS SUBJECT PROPERTY. USES, RIGHTS, AND RESTRICTIONS. NO PLOTTABLE MATTERS.
10. EASEMENTS WITH COVENANTS AND RESTRICTIONS AFFECTING LAND RECORDED IN BOOK 2801, PAGE 416 AS AMENDED BY THAT FIRST AMENDMENT TO EASEMENTS WITH COVENANTS AND RESTRICTIONS AFFECTING LAND RECORDED IN BOOK 3725, PAGE 448 AND AFFECTED BY THAT NOTICE OF TRANSFER OF INTERESTS RECORDED IN BOOK 5668, PAGE 487.
    AFFECTS SUBJECT PROPERTY. RESTRICTIONS AND COVENANTS. NO PLOTTABLE MATTERS.
11. RESTRICTION AGREEMENT AND GRANT OF EASEMENTS RECORDED IN BOOK 3735, PAGE 472.
    AFFECTS SUBJECT PROPERTY. RESTRICTIONS AND USES. NO PLOTTABLE MATTERS.
12. MEMORANDUM OF DEVELOPMENT AGREEMENT RECORDED IN BOOK 3725, PAGE 527 AS AFFECTED BY THAT RELEASE OF MEMORANDUM OF DEVELOPMENT AGREEMENT RECORDED IN BOOK 5668, PAGE 425.
    AFFECTS SUBJECT PROPERTY. RELEASE OF MEMORANDUM. NO PLOTTABLE MATTERS.
13. EASEMENTS TO DUKE POWER COMPANY RECORDED IN BOOK 432, PAGE 647 AND BOOK 669, PAGE 92.
    AFFECTS SUBJECT PROPERTY. BLANKET TYPE EASEMENT.
14. EASEMENTS TO PIEDMONT ELECTRIC MEMBERSHIP CORPORATION RECORDED IN BOOK 433, PAGE 641 AND BOOK 419, PAGE 510 AS AFFECTED BY THAT PARTIAL RELEASE OF INDENTURE RECORDED IN BOOK 2801, PAGE 359.
    DOES NOT AFFECT SUBJECT PROPERTY. EASEMENT RELEASE. NO PLOTTABLE MATTERS.
15. EASEMENT TO CENTRAL TELEPHONE COMPANY RECORDED IN BOOK 460, PAGE 240 AS AFFECTED BY THAT PARTIAL RELEASE OF EASEMENT RECORDED IN BOOK 2801, PAGE 364.
    AFFECTS SUBJECT PROPERTY. EASEMENT RELEASE. NO PLOTTABLE MATTERS.
16. EASEMENT TO CENTRAL TELEPHONE COMPANY RECORDED IN BOOK 3291, PAGE 316.
    AFFECTS SUBJECT PROPERTY. "10' WIDE CABLE EASEMENT CENTERED OVER EXISTING CABLES WITHIN, ALL OF THE ROADWAY RIGHTS-OF-WAY."
17. SEWER EASEMENT AGREEMENT RECORDED IN BOOK 2801, PAGE 369.
    DOES NOT AFFECT SUBJECT PROPERTY. EASEMENT IS LOCATED ON ADJACENT PROPERTIES.
18. EASEMENT AGREEMENT RECORDED IN BOOK 2801, PAGE 378 CREATING A NEW EASEMENT AND TERMINATING THAT EASEMENT RECORDED IN BOOK 423, PAGE 42 AND RE-RECORDED IN BOOK 606, PAGE 281.
    AFFECTS SUBJECT PROPERTY. HAMPTON POINTE DRIVE RIGHTS-OF-WAY SHOWN ON THE SURVEY.
19. EASEMENT TO PUBLIC SERVICE COMPANY OF NORTH CAROLINA RECORDED IN BOOK 3177, PAGE 177.
    AFFECTS SUBJECT PROPERTY. PLOTTED AND SHOWN ON THE SURVEY.
20. MEMORANDUM OF AGREEMENT RECORDED IN BOOK 2801, PAGE 404 AND RELEASING AGREEMENT IN BOOK 464, PAGE 418.
    AFFECTS SUBJECT PROPERTY. NO PLOTTABLE MATTERS.
21. EASEMENT TO THE TOWN OF HILLSBOROUGH RECORDED IN BOOK 423, PAGE 439.
    DOES NOT AFFECT SUBJECT PROPERTY. EASEMENT DESCRIBED IS LOCATED ON THE ADJACENT PROPERTIES.
22. ORDINANCE RECORDED IN BOOK 804, PAGE 447.
    AFFECTS SUBJECT PROPERTY. ORDINANCE TO LOCATE AREA INCLUDING SUBJECT PROPERTY INTO THE TOWN OF HILLSBOROUGH. NO PLOTTABLE MATTERS.
23. ANY DISCREPANCY, CONFLICT, ACCESS, SHORTAGE IN AREA OR BOUNDARY LINES, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OVERLAP, SETBACK, EASEMENT OR CLAIMS OF EASEMENT, RIPARIAN RIGHT, AND TITLE TO LAND WITHIN ROADS, WAYS, RAILROADS, WATERCOURSES, BURIAL GROUNDS, MARSHES, DREDGED OR FILLED AREAS OR LAND BELOW THE MEAN HIGHWATER MARK OR WITHIN THE BOUNDS OF ANY ADJOINING BODY OF WATER, OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY A CURRENT INSPECTION AND ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
    THE ABOVE INFORMATION IS SHOWN ON THE SURVEY, AS PLOTTABLE AND APPLICABLE.

BOHLER ENGINEERING, ALL RIGHTS RESERVED.
THE COPYING, DISTRIBUTION OF THIS DOCUMENT OR PORTIONS THEREOF FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF BOHLER ENGINEERING, IS PROHIBITED.





LOCATION MAP
NOT TO SCALE

REFERENCES:
DB 6255, PG 136
DB 5834, PG 92
DB 4152, PG 1
DB 5611, PG 285
PB 111, PG 47
PB 97, PG 632
PB 113, PG 627

SURVEYOR CERTIFICATION

I, THOMAS E. TEABO, PLS, HEREBY CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, FROM DEED AND MAP REFERENCES AS NOTED ON SAID MAP; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FROM DEED AND MAP REFERENCES AS NOTED ON SAID MAP.

THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY OF THE SURVEY AS CALCULATED IS 1: 10,000+, THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM INFORMATION OF RECORD; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH TITLE 21, CHAPTER 56, NCAC, AS AMENDED.

I HEREBY CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

(1) CLASS OF SURVEY: "CLASS A"
(2) POSITIONAL ACCURACY: 0.04'
(3) TYPE OF GPS FIELD PROCEDURE: REAL-TIME KINEMATIC NETWORKS-NCVRS
(4) DATES OF SURVEY: 07/01/19
(5) DATUM/EPOCH: NAD 83 (2011) EPOCH 2010.00
(6) PUBLISHED/FIXED-CONTROL USE: NCVRS
(7) GEOID MODEL: 2012 (CONUS)
(8) COMBINED GRID FACTOR(S): 0.999946233
(9) UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND AND SEAL THIS 2ND DAY OF AUGUST A.D., 2019.

NORTH CAROLINA PROFESSIONAL SEAL L-3920 LAND SURVEYOR THOMAS E. TEABO

PRELIMINARY - NOT FOR RECORDATION, SALES OR CONVEYANCES

SURVEYOR NC L-3920

LEGEND

123	EXISTING CONTOUR	G	APPROX. LOC. UNDERGROUND GAS LINE PER UTILITY MARKOUT
	LINE SURVEYED	W	APPROX. LOC. UNDERGROUND WATER LINE PER UTILITY MARKOUT
	LINE NOT SURVEYED	E	APPROX. LOC. UNDERGROUND ELEC. LINE PER UTILITY MARKOUT
X 123.45	EXISTING SPOT ELEVATION	MNF	MAG NAIL FOUND
WM	WATER METER	IPF	IRON PIPE FOUND
	AREA LIGHT	IPS	IRON PIPE SET
CO	CLEAN OUT	PKS	PK NAIL SET
	STORM DRAINAGE GRATE		

20' 10' 0' 20'
1" = 20'

TO: CHICAGO TITLE INSURANCE COMPANY, MAVIS SOUTHEAST, LLC, REDSTONE FUNDING, LLC AND ITS ASSIGNS:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 8, 9, 11 AND 13 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JULY 1, 2019.

THOMAS E. TEABO, PLS
NORTH CAROLINA PROFESSIONAL LAND SURVEYOR NO. L-3920

THIS CERTIFICATION IS MADE TO ONLY NAMED PARTIES FOR PURCHASE AND/OR MORTGAGE OF HEREIN DELINEATED PROPERTY BY THE NAMED PURCHASER. NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY SURVEYOR FOR THE USE OF SURVEY FOR ANY OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE OF SURVEY AFFIDAVIT, RESALE OF PROPERTY, OR TO ANY OTHER PERSON NOT LISTED IN CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

ALTA/NSPS LAND TITLE SURVEY
FOR
MAVIS SOUTHEAST, LLC
PINS: 9873-59-9108
TOWN OF HILLSBOROUGH
HILLSBOROUGH TOWNSHIP
ORANGE COUNTY, NORTH CAROLINA

BOHLER™
ENGINEERING NC, PLLC
NCBELS: P-1102
4130 PARKLAKE AVENUE
SUITE 130
RALEIGH, NORTH CAROLINA 27612
919.578.9000 - 919.703.2665 FAX
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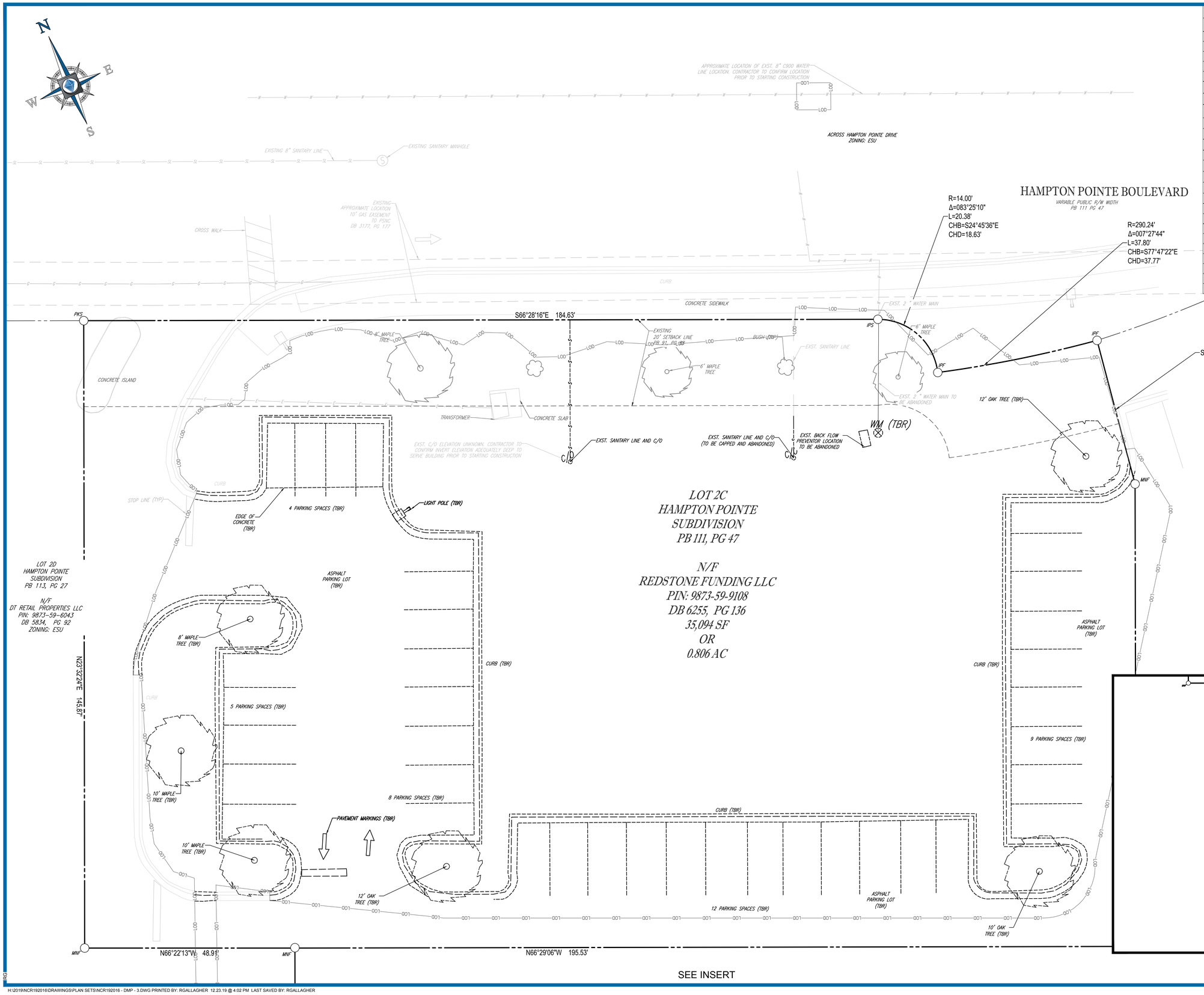
■ BALTIMORE, MD ■ SOUTHERN MARYLAND ■ NORTHERN VIRGINIA ■ WASHINGTON, DC ■ CENTRAL VIRGINIA ■ CHARLOTTE, NC ■ RALEIGH, NC

FILE NO.	DATE	FIELD DATE	CREW CHIEF	DRAWN	REVIEWED	APPROVED	SCALE	DWG. NO.
NS192039	08/02/19	07/01/19	DL	DET	TET	TET	1" = 20'	1 OF 1



DEMOLITION LEGEND

EXISTING NOTE	TYPICAL NOTE TEXT	DEMOLITION NOTE
	PROPERTY LINE	
	ADJACENT LOT LINE	
	CONCRETE CURB & GUTTER	
	SAWCUT LINE	
	SOILS BOUNDARY	
	LIMITS OF DISTURBANCE	LOD
X X	CHAINLINK FENCE	X X
W W	UNDERGROUND WATER LINE	
G G	UNDERGROUND GAS LINE	
OH OH	OVERHEAD WIRE	OH OH
E E	ELECTRIC LINE	E E
T T	UNDERGROUND TELEPHONE	
	STORM SEWER	
S S	SANITARY SEWER MAIN	
	HYDRANT	
	UTILITY POLE/LIGHT	
S	SANITARY MANHOLE	S
D	STORM MANHOLE	D
	STORM INLET	
	WATER VALVE	
	TREE	
	BOLLARD	
	SIGN	
TV	COMMUNICATION LINE MARKER	
T	TRANSFORMER PEDESTAL	T

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LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN IS PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER ENGINEERING, 3901 HOMEWOOD ROAD, RALEIGH, NC 27609 (919) 578-9000. THIS PLAN SHALL BE VALID FOR CONSTRUCTION PURPOSES ONLY IF ISSUED FOR CONSTRUCTION.

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	10/14/19	HILLSBOROUGH COMMENTS	RMG / WES
2	11/15/19	HILLSBOROUGH COMMENTS	RMG / WES
3	12/19/19	HILLSBOROUGH COMMENTS	RMG / WES
4	12/23/19	HILLSBOROUGH COMMENTS	RMG / WES

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.:	NCR192016
DRAWN BY:	ME
CHECKED BY:	WB
DATE:	9/3/2019
CAD I.D.:	NCR192016 - DMP - 3

PROJECT:

SITE PLAN REVIEW DOCUMENTS

FOR

MAVIS DISCOUNT TIRE

PROPOSED DEVELOPMENT

HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

BOHLER
ENGINEERING NC, PLLC
NCBELS P-1132
4130 PARKLAKE AVENUE, SUITE 130
RALEIGH, NC 27612
Phone: (919) 578-9000
NC@BohlerEng.com

NORTH CAROLINA PROFESSIONAL SEAL 040243 ENGINEER WYATT L. BONE 12/23/19

SHEET TITLE:

EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NUMBER:

C-201

REVISION 4 - 12/23/19

GRAPHIC LEGEND

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	PROPERTY LINE	
	BUILDING OR PARKING SETBACK	
	LIMITS OF DISTURBANCE	LOD LOD
	CURB & GUTTER	
	EDGE OF PAVEMENT	
	FLUSH CURB	
	SPILL CURB	
	RETAINING WALL	
	STORMWATER INLET	
	PARKING COUNT	6
	PAVEMENT STRIPING - 4" SSYL	

PAINTING STRIPING LEGEND

4"SSWL - SINGLE SOLID WHITE LINE / 4" WIDE
4"SSBL - SINGLE SOLID BLUE LINE / 4" WIDE

PAVEMENT LEGEND

- DELINEATES PROPOSED HEAVY DUTY ASPHALT
- DELINEATES STANDARD DUTY ASPHALT
- DELINEATES PROPOSED STANDARD DUTY CONCRETE
- DELINEATES PROPOSED HEAVY DUTY CONCRETE

SITE PLAN & ZONING NOTES:

1. THIS PLAN REFERENCE DOCUMENTS AND INFORMATION BY:

   ALTA/NSPS LAND TITLE SURVEY
   PREPARED BY BOHLER ENGINEERING NC, PLLC
   4130 PARKLAKE AVENUE, SUITE 130
   RALEIGH, NC 27612
   DATED 8/2/19

2. OWNER: REDSTONE FUNDING LLC
   5050 BELMONT AVE.
   YOUNGSTOWN, OH 44505

3. PARCEL: HAMPTON POINTE BLVD
   TOWN OF HILLSBOROUGH
   ORANGE COUNTY, NC 27278

4. ZONING: ESU
5. PIN: 9873599108
6. USE: MOTOR VEHICLE MAINTENANCE, & SERVICE
7. SITE ACREAGE: 0.810 AC
8. DISTURBED AREA: 0.695 AC
9. UNDISTURBED AREA: 0.250 AC

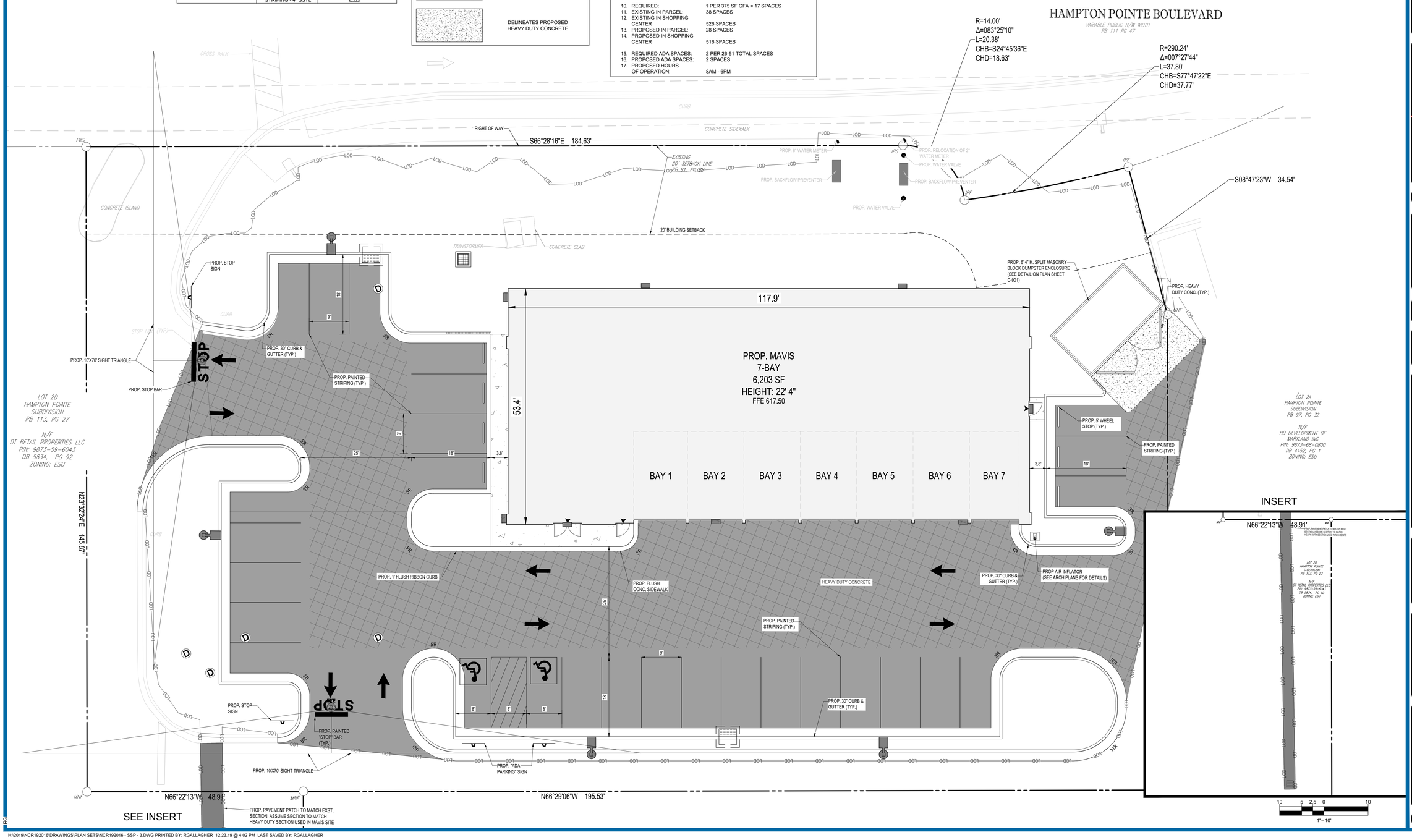
PARKING SUMMARY

10. REQUIRED: 1 PER 375 SF GFA = 17 SPACES
11. EXISTING IN PARCEL: 38 SPACES
12. EXISTING IN SHOPPING CENTER: 526 SPACES
13. PROPOSED IN PARCEL: 28 SPACES
14. PROPOSED IN SHOPPING CENTER: 516 SPACES
15. REQUIRED ADA SPACES: 2 PER 26-51 TOTAL SPACES
16. PROPOSED ADA SPACES: 2 SPACES
17. PROPOSED HOURS OF OPERATION: 8AM - 6PM

IMPERVIOUS AREA TABLE

	IMPERVIOUS (SF)	TOTAL SITE (SF)
PRE-DEVELOPED	16,421 SF	35,093 SF
POST-DEVELOPED	25,688 SF	35,093 SF
NET +/-	+9,267 SF	0 SF

1. THE MAXIMUM IMPERVIOUS SURFACE FOR THE HAMPTON POINTE SHOPPING CENTER IS 65%



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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	10/14/19	HILLSBOROUGH COMMENTS	RMG / WES
2	11/15/19	HILLSBOROUGH COMMENTS	RMG / WES
3	12/19/19	HILLSBOROUGH COMMENTS	RMG / WES
4	12/23/19	HILLSBOROUGH COMMENTS	RMG / WES

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ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.:	NCR192016
DRAWN BY:	ME
CHECKED BY:	WB
DATE:	9/3/2019
CAD I.D.:	NCR192016 - SSP - 3

PROJECT:
SITE PLAN REVIEW DOCUMENTS
FOR
MAVIS DISCOUNT TIRE
PROPOSED DEVELOPMENT
HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

BOHLER ENGINEERING NC, PLLC
NCBELS P-1132
4130 PARKLAKE AVENUE, SUITE 130
RALEIGH, NC 27612
Phone: (919) 578-9000
NC@BohlerEng.com

NORTH CAROLINA PROFESSIONAL SEAL 040243 ENGINEER WATT L. BOHLE 12/23/19

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C-301

REVISION 4 - 12/23/19

GRADING LEGEND

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	CONTOUR LINE	
	SPOT ELEVATIONS	
STM #	STORM LABEL	STM #
	STORM SEWER	
	SPILL CURB	
	CLEANOUT	● C/O
	RIGHT OF WAY	

GRADING NOTES

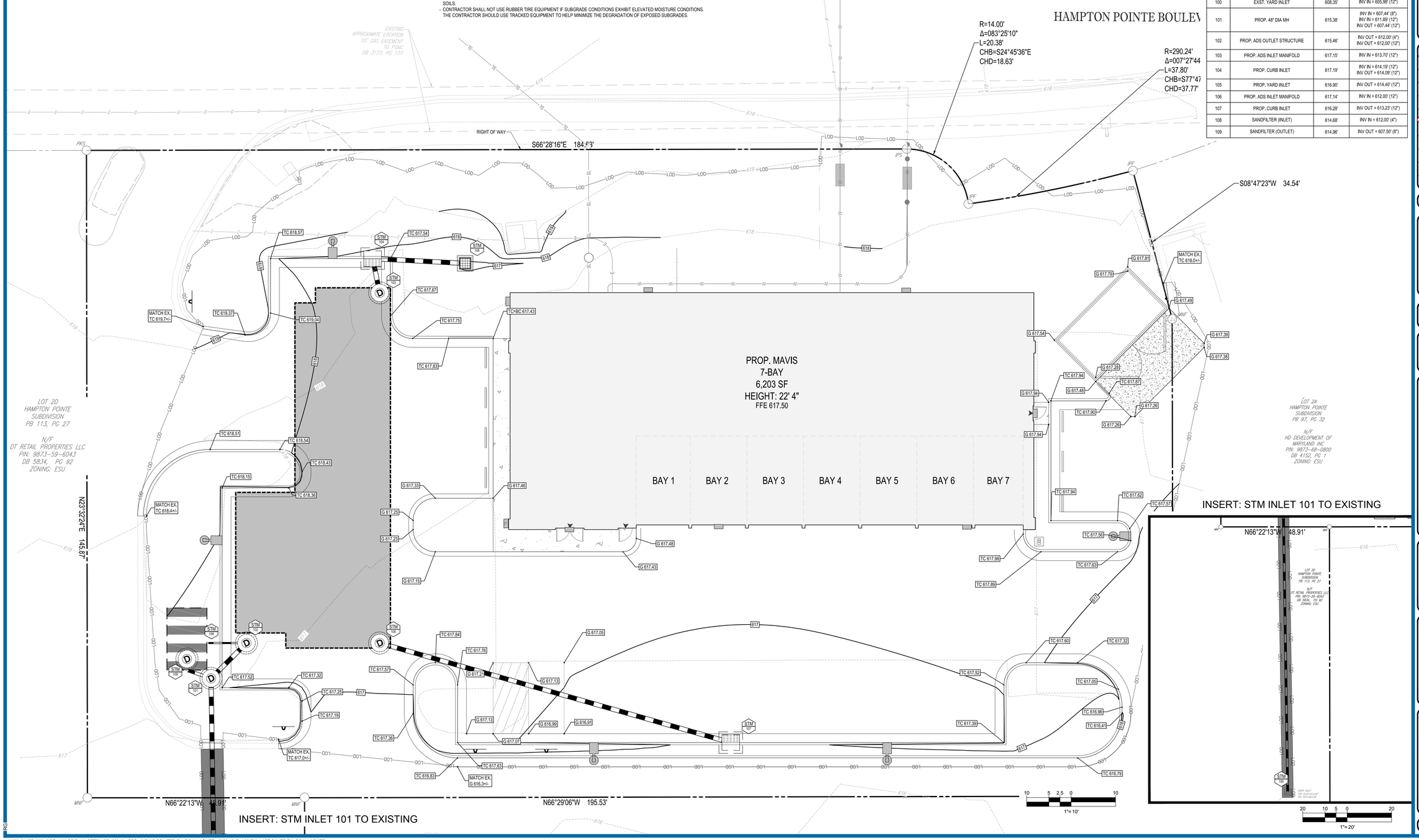
1. FOR GRADING LEGEND, REFER TO 'GENERAL NOTES & LEGEND' SHEET.
2. STORM AND SANITARY SEWER PIPE LENGTHS INDICATED ARE NOMINAL AND MEASURED CENTER OF INLET AND/OR MANHOLES STRUCTURE TO CENTER OF STRUCTURE.
3. CURB REVEALS ARE 6" UNLESS OTHERWISE NOTED. FLUSH CURB REVEAL IS 0".
4. IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL PRIOR TO COMMENCING WORK.
5. REFER TO DETAIL SHEETS FOR STORM/UTILITY STRUCTURE INFORMATION.
6. REFER TO ADA NOTES ON GENERAL NOTES SHEET.
   CONTRACTOR AND ARCHITECT AND DESIGNER TO FOLLOW ECS' RECOMMENDATIONS FOR SOIL PREPARATION AS OUTLINED IN GEOTECH REPORT DATED JANUARY 1, 2019:
   - SITE CLASS "D", AS DEFINED IN THE NCSBC 2018, BE USED FOR THE PROPOSED BUILDING.
   - A CBR VALUE OF 4 TO BE USED IN DESIGN OF THE PROJECT PAVEMENTS.
   - THE HEAVY DUTY SECTION SHALL BE USED IN ALL DRIVE AISLES AND AREAS WHERE TRASH COLLECTION TRUCKS MAY DRIVE.
   - THE REFUSE COLLECTOR SHALL BE CONSULTED TO DETERMINE THE SIZE AND THICKNESS OF THE CONCRETE PADS FOR DUMPSTERS.
   - MINIMUM SEPARATIONS FROM HIGH PLASTICITY SOILS (CH, MH) SHALL BE MAINTAINED BETWEEN FOOTING BEARING (MIN. 2FT), SLAB SUBGRADE (MIN. 3FT), AND PAVEMENT SUBGRADE (MIN. 2FT) TO HELP REDUCE THE POTENTIAL FOR DISTRESS OF CONSTRUCTION AS A RESULT OF VOLUMETRIC CHANGES IN THE SOIL DUE TO VARIATIONS IN ITS MOISTURE CONTENT.
   - THE GRADING CONTRACTOR SHALL HAVE EQUIPMENT ON SITE DURING EARTHWORK FOR BOTH DRYING AND WETTING FILL SOILS.
   - CONTRACTOR SHALL NOT USE RUBBER TIRE EQUIPMENT IF SUBGRADE CONDITIONS EXHIBIT ELEVATED MOISTURE CONDITIONS. THE CONTRACTOR SHOULD USE TRACKED EQUIPMENT TO HELP MINIMIZE THE DEGRADATION OF EXPOSED SUBGRADES.

STORM SEWER PIPE SCHEDULE

FROM	TO	FROM INV	TO INV	PIPE LENGTH	SLOPE (%)	DIAMETER (IN.)	MATERIAL
109	101	607.50'	607.44'	5.73'	1.00%	8"	HDPE
107	106	613.23'	612.00'	82.16'	1.50%	12"	HDPE
105	104	614.40'	614.19'	20.85'	1.00%	12"	HDPE
104	103	614.09'	613.70'	7.88'	5.00%	12"	HDPE
102	101	612.00'	611.89'	11.27'	1.00%	12"	HDPE
102	108	612.00'	612.00'	8.89'	0.00%	4"	HDPE
101	100	607.44'	605.98'	146.34'	1.00%	12"	HDPE

STORM STRUCTURE SCHEDULE

NAME	TYPE	RIM ELEV. (FT.)	INVERTS
100	EXST. YARD INLET	608.35'	INV IN = 605.98' (12")
101	PROP. 48" DIA MH	615.38'	INV IN = 607.44' (8") INV IN = 611.89' (12") INV OUT = 607.44' (12")
102	PROP. ADS OUTLET STRUCTURE	615.46'	INV OUT = 612.00' (4") INV OUT = 612.00' (12")
103	PROP. ADS INLET MANIFOLD	617.15'	INV IN = 613.70' (12")
104	PROP. CURB INLET	617.19'	INV IN = 614.19' (12") INV OUT = 614.09' (12")
105	PROP. YARD INLET	616.90'	INV OUT = 614.40' (12")
106	PROP. ADS INLET MANIFOLD	617.14'	INV IN = 612.00' (12")
107	PROP. CURB INLET	616.28'	INV OUT = 613.23' (12")
108	SANDFILTER (INLET)	614.68'	INV IN = 612.00' (4")
109	SANDFILTER (OUTLET)	614.96'	INV OUT = 607.50' (8")



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SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
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Phone: (919) 578-9000
NC@BohlerEng.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040243 WYATT L. BOHLE 12/23/19

SHEET TITLE:
GRADING AND DRAINAGE PLAN

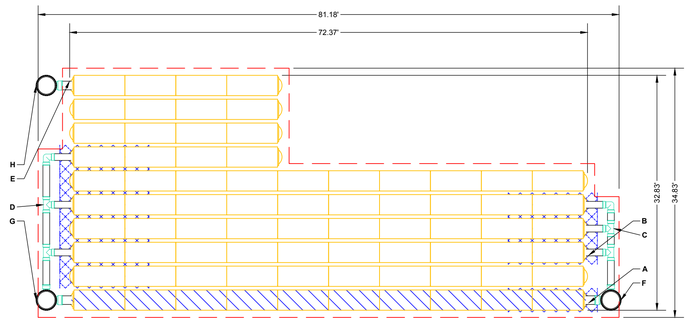
SHEET NUMBER:
C-401

REVISION 4 - 12/23/19

PROPOSED LAYOUT		CONCEPTUAL ELEVATIONS	
76	STORMTECH SC-310 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	9.83
20	STORMTECH SC-310 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	3.83
6	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	3.33
6	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	3.33
40	% STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	3.33
2685	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	2.33
		TOP OF SC-310 CHAMBER:	1.83
		10" x 10" TOP MANIFOLD INVERT:	0.62
		10" x 10" TOP MANIFOLD INVERT:	0.62
2159	SYSTEM AREA (SF)	12" ISOLATOR ROW INVERT:	0.58
232.02	SYSTEM PERIMETER (ft)	12" ISOLATOR ROW INVERT:	0.58
		12" BOTTOM CONNECTION INVERT:	0.58
		BOTTOM OF SC-310 CHAMBER:	0.50
		BOTTOM OF STONE:	0.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	12" BOTTOM PREFABRICATED END CAP/TYP OF ALL 12" BOTTOM CONNECTIONS AND ISOLATOR ROWS	0.90"	
PREFABRICATED END CAP	B	10" TOP PREFABRICATED END CAP/TYP OF ALL 10" TOP CONNECTIONS	1.40"	
MANIFOLD	C	10" X 10" TOP, MOLDED FITTINGS	1.40"	
MANIFOLD	D	10" X 10" TOP, MOLDED FITTINGS	1.40"	
PIPE CONNECTION	E	12" BOTTOM CONNECTION	0.90"	
NYLOPLAST (INLET W/ ISO ROW)	F	30" DIAMETER (24" SUMP MIN)		3.7 CFS IN
NYLOPLAST (INLET W/ ISO ROW)	G	30" DIAMETER (24" SUMP MIN)		3.7 CFS IN
NYLOPLAST (OUTLET)	H	30" DIAMETER (DESIGN BY ENGINEER)		2.0 CFS OUT



ISOLATOR ROW (SEE DETAIL)

PLACE MINIMUM 12.50' OF ADS GEOSYNTHETICS 315WTK WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION

HAMPTON POINTE MAVIS
HILLSBOROUGH, NC

DATE: | DRAWN: WS
PROJECT #: | CHECKED: N/A

REV	DRW	CHK	DESCRIPTION

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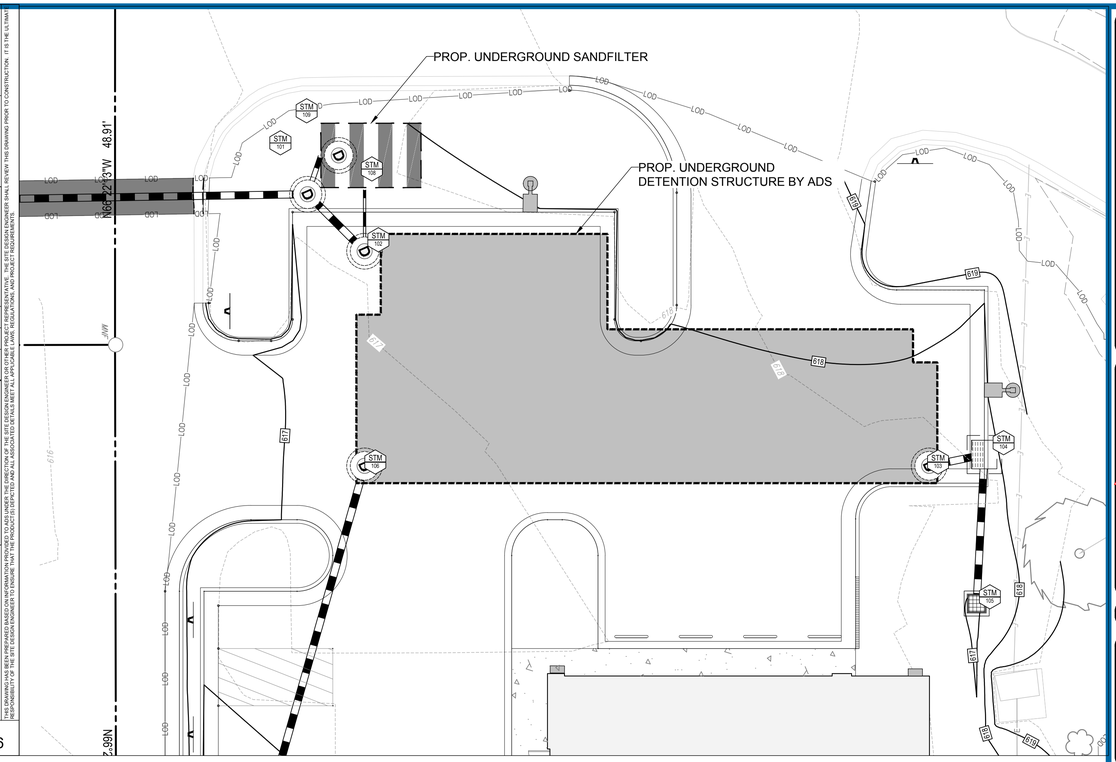
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 1'0" 20'

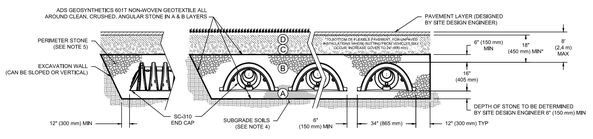
SHEET
2 OF 6



ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RD DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[1,2]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT, FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

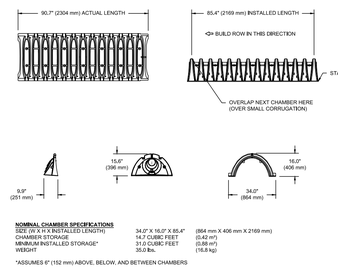


NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SC-310 TECHNICAL SPECIFICATION

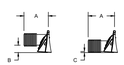
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS



STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"*

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.8" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.8" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310EPE12B	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC310EPE12B THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

HAMPTON POINTE MAVIS
HILLSBOROUGH, NC
DRAWN: YR
DATE: CHECKED: NA
PROJECT #:
REV | DRW | CHK | DESCRIPTION

Stormtech
70 INGHAM RAND, SUITE 1 BOONTON, NJ 07005
T: 973-940-7000 F: 973-940-7001
WWW.STORMTECH.COM

ADS
4640 TRUEMAN BLVD HILLSBOROUGH, NC 27278 1-800-733-7473
SHEET 3 OF 6

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PROJECT INFORMATION

ENGINEERED PRODUCT MANAGER	EPM NAME EPM NUMBER EPM EMAIL
ADS SALES REP	SALES NAME SALES NUMBER SALES EMAIL
PROJECT NO.	

ADS
ADVANCED DRAINAGE SYSTEMS, INC.

HAMPTON POINTE MAVIS
HILLSBOROUGH, NC

SiteASSIST by Stormtech
FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

SC-310 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-310.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PAIRED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED, UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, WITH CONSIDERATION FOR:
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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HAMPTON POINTE MAVIS
HILLSBOROUGH, NC
DRAWN: YR
DATE: CHECKED: NA
PROJECT #:
REV | DRW | CHK | DESCRIPTION

Stormtech
70 INGHAM RAND, SUITE 1 BOONTON, NJ 07005
T: 973-940-7000 F: 973-940-7001
WWW.STORMTECH.COM

ADS
4640 TRUEMAN BLVD HILLSBOROUGH, NC 27278 1-800-733-7473
SHEET 4 OF 6

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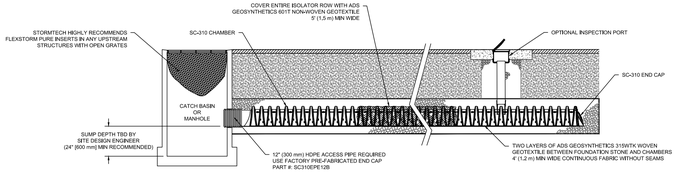

SC-310 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
A. INSPECTION PORTS (IF PRESENT):
A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
B. ALL ISOLATOR ROWS:
B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

HAMPTON POINTE MAVIS
HILLSBOROUGH, NC
DRAWN: YR
DATE: CHECKED: NA
PROJECT #:
REV | DRW | CHK | DESCRIPTION

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SHEET 5 OF 6

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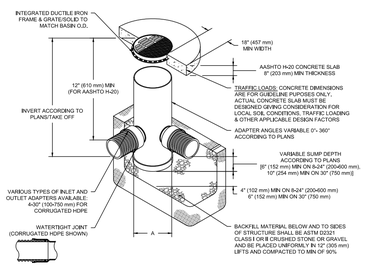
NYLOPLAST DRAIN BASIN

NTS



NOTES

1. 12" (305/750 mm), GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
6. TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

HAMPTON POINTE MAVIS
HILLSBOROUGH, NC
DATE: CHECKED: NA
PROJECT #:
REV | DRW | CHK | DESCRIPTION

Nyloplast
3310 VERTION AVE BIRMINGHAM, AL 35210
PHONE (800) 821-6710
FAX (205) 933-9441
1-800-733-7473
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ADS
4640 TRUEMAN BLVD HILLSBOROUGH, NC 27278 1-800-733-7473
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3	12/19/19	HILLSBORUGH COMMENTS	RMG / WES
4	12/23/19	HILLSBORUGH COMMENTS	RMG / WES

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CAD I.D.: NCR192016 - GDP - 3

PROJECT:
SITE PLAN REVIEW DOCUMENTS
FOR
MAVIS DISCOUNT TIRE

PROPOSED DEVELOPMENT
HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

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RALEIGH, NC 27612
Phone: (919) 578-9000
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NORTH CAROLINA PROFESSIONAL SEAL 040242 ENGINEER WYATT L. HONE 12/23/19

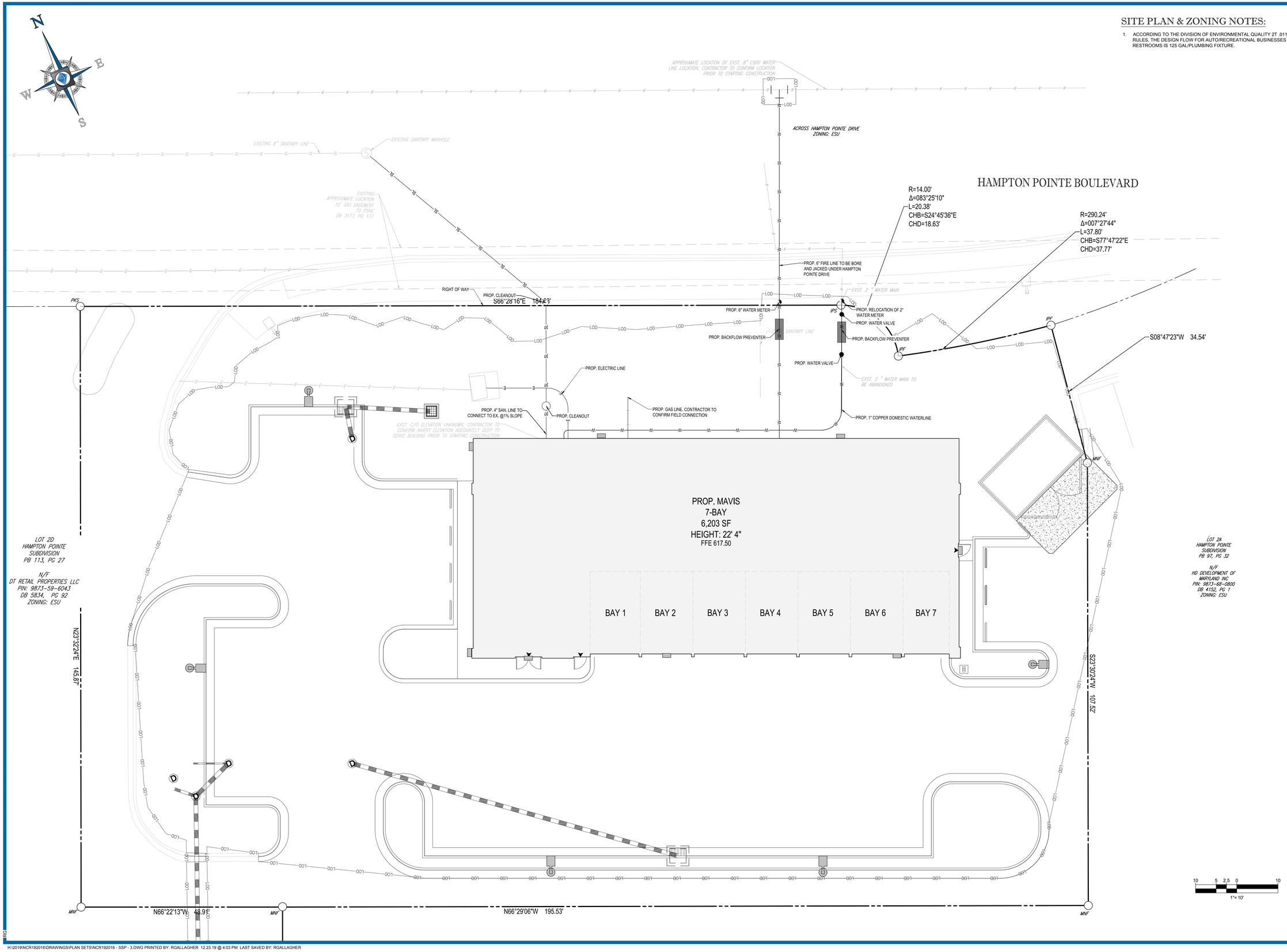
SHEET TITLE:
SCM DETAILS

SHEET NUMBER:
C-403

REVISION 4 - 12/23/19

SITE PLAN & ZONING NOTES:

1. ACCORDING TO THE DIVISION OF ENVIRONMENTAL QUALITY 2T .0114 RULES, THE DESIGN FLOW FOR AUTO/RECREATIONAL BUSINESSES WITH RESTROOMS IS 125 GAL/PLUMBING FIXTURE.



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H:\2019\NCR192016\DRAWINGS\PLAN SETS\NCR192016 - SSP - 3---LAYOUT: C-501 UTILITY PLAN

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CAD I.D.:	NCR192016 - SSP - 3

PROJECT:

SITE PLAN REVIEW DOCUMENTS FOR

MAVIS DISCOUNT TIRE

PROPOSED DEVELOPMENT

HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040243 WYATT L. BONE
12/23/19

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C-501

REVISION 4 - 12/23/19

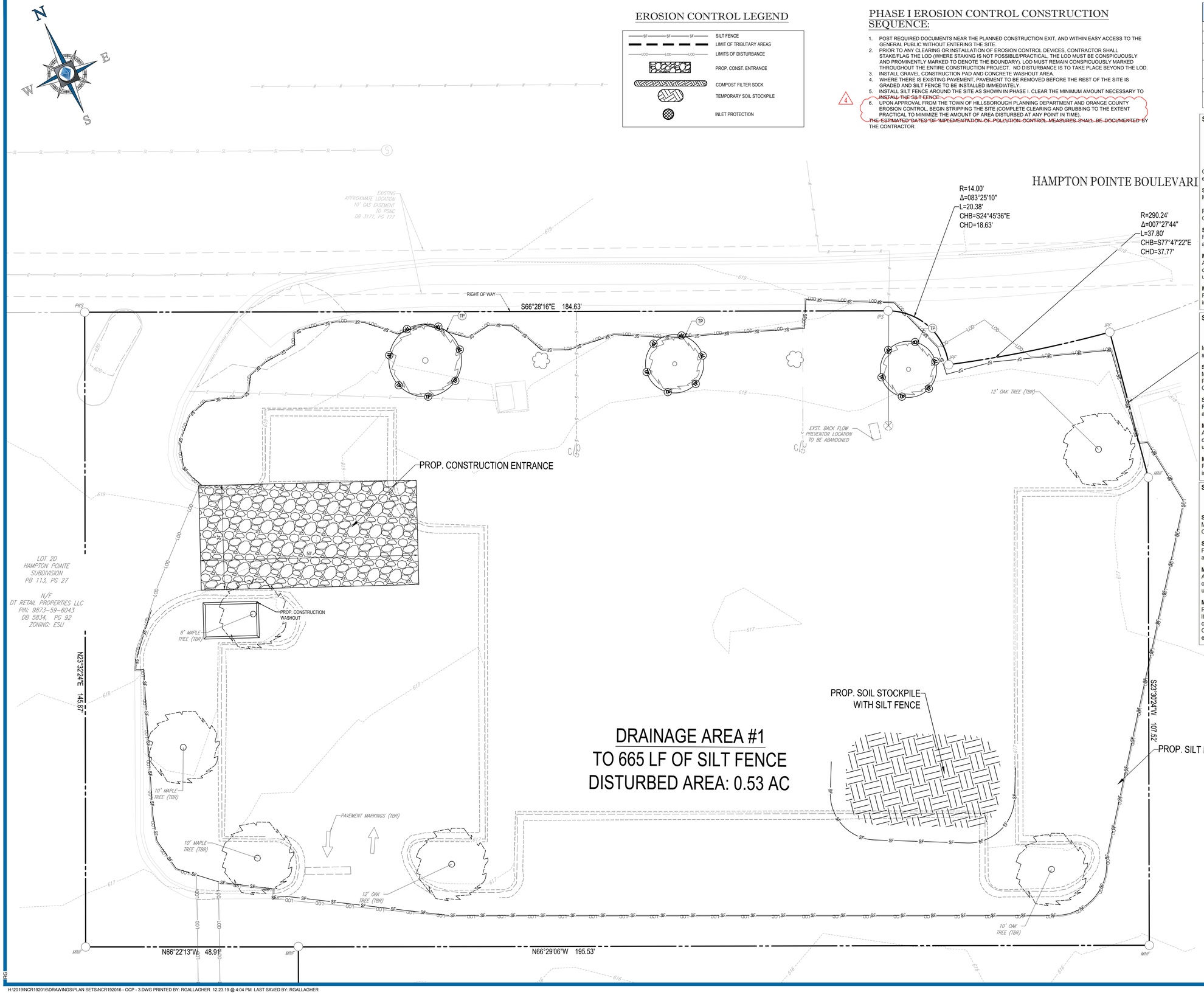
EROSION CONTROL LEGEND

- SF — SILT FENCE
- LOD — LIMIT OF TRIBUTARY AREAS
- LOD — LIMITS OF DISTURBANCE
- PROP. CONST. ENTRANCE
- COMPOST FILTER SOCK
- TEMPORARY SOIL STOCKPILE
- INLET PROTECTION

PHASE I EROSION CONTROL CONSTRUCTION SEQUENCE:

1. POST REQUIRED DOCUMENTS NEAR THE PLANNED CONSTRUCTION EXIT, AND WITHIN EASY ACCESS TO THE GENERAL PUBLIC WITHOUT ENTERING THE SITE.
2. PRIOR TO ANY CLEARING OR INSTALLATION OF EROSION CONTROL DEVICES, CONTRACTOR SHALL STAKE/FLAG THE LOD (WHERE STAKING IS NOT POSSIBLE/PRACTICAL, THE LOD MUST BE CONSPICUOUSLY AND PROMINENTLY MARKED TO DENOTE THE BOUNDARY). LOD MUST REMAIN CONSPICUOUSLY MARKED THROUGHOUT THE ENTIRE CONSTRUCTION PROJECT. NO DISTURBANCE IS TO TAKE PLACE BEYOND THE LOD.
3. INSTALL GRAVEL CONSTRUCTION PAD AND CONCRETE WASHOUT AREA.
4. WHERE THERE IS EXISTING PAVEMENT, PAVEMENT TO BE REMOVED BEFORE THE REST OF THE SITE IS GRADED AND SILT FENCE TO BE INSTALLED IMMEDIATELY.
5. INSTALL SILT FENCE AROUND THE SITE AS SHOWN IN PHASE I. CLEAR THE MINIMUM AMOUNT NECESSARY TO INSTALL THE SILT FENCE.
6. UPON APPROVAL FROM THE TOWN OF HILLSBOROUGH PLANNING DEPARTMENT AND ORANGE COUNTY EROSION CONTROL, BEGIN STRIPPING THE SITE (COMPLETE CLEARING AND GRUBBING TO THE EXTENT PRACTICAL TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY POINT IN TIME).

4 THE ESTIMATED DATES OF IMPLEMENTATION OF POLLUTION CONTROL MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR.



STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)		
Site Area Description	**Stabilization**	**Timeframe Exceptions**
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Seeding mixture

Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extent temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

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DRAWN BY:	ME
CHECKED BY:	WB
DATE:	9/3/2019
CAD I.D.:	NCR192016 - OCP - 3

PROJECT:
SITE PLAN REVIEW DOCUMENTS
FOR
MAVIS DISCOUNT TIRE
PROPOSED DEVELOPMENT
HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

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NCBELS P-1122
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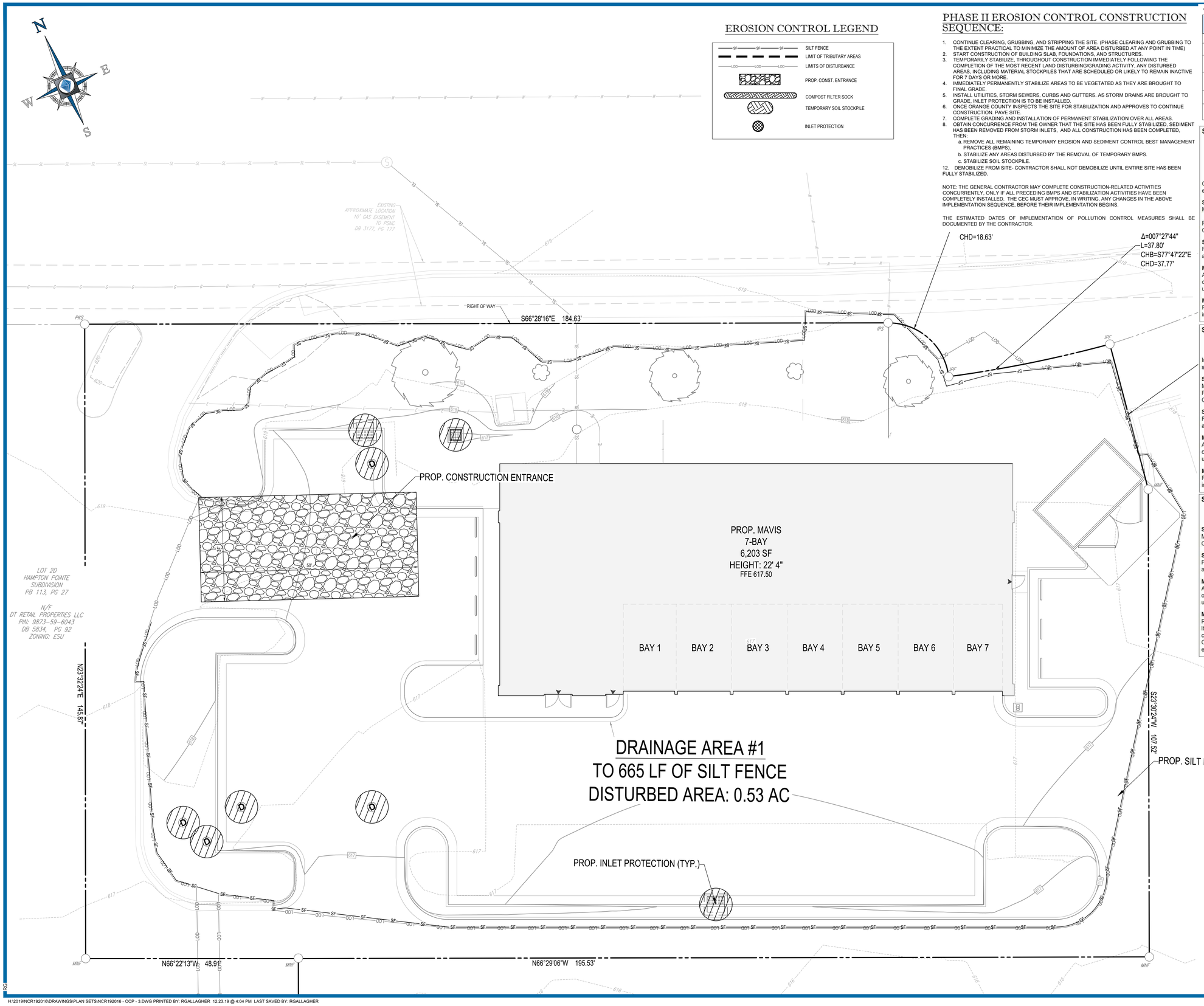
NORTH CAROLINA PROFESSIONAL SEAL 040244 ENGINEER WYATT L. BONE 12/23/19

SHEET TITLE:
EROSION & SEDIMENT CONTROL - PHASE I

SHEET NUMBER:
C-601

REVISION 4 - 12/23/19



EROSION CONTROL LEGEND

- SILT FENCE
- LIMIT OF TRIBUTARY AREAS
- LIMITS OF DISTURBANCE
- PROP. CONST. ENTRANCE
- COMPOST FILTER SOCK
- TEMPORARY SOIL STOCKPILE
- INLET PROTECTION

PHASE II EROSION CONTROL CONSTRUCTION SEQUENCE:

1. CONTINUE CLEARING, GRUBBING, AND STRIPPING THE SITE. (PHASE CLEARING AND GRUBBING TO THE EXTENT PRACTICAL TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY POINT IN TIME)
2. START CONSTRUCTION OF BUILDING SLAB, FOUNDATIONS, AND STRUCTURES.
3. TEMPORARILY STABILIZE, THROUGHOUT CONSTRUCTION IMMEDIATELY FOLLOWING THE COMPLETION OF THE MOST RECENT LAND DISTURBING/GRADING ACTIVITY, ANY DISTURBED AREAS, INCLUDING MATERIAL STOCKPILES THAT ARE SCHEDULED OR LIKELY TO REMAIN INACTIVE FOR 7 DAYS OR MORE.
4. IMMEDIATELY PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
5. INSTALL UTILITIES, STORM SEWERS, CURBS AND GUTTERS. AS STORM DRAINS ARE BROUGHT TO GRADE, INLET PROTECTION IS TO BE INSTALLED.
6. ONCE ORANGE COUNTY INSPECTS THE SITE FOR STABILIZATION AND APPROVES TO CONTINUE CONSTRUCTION, PAVE SITE.
7. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.
8. OBTAIN CONCURRENCE FROM THE OWNER THAT THE SITE HAS BEEN FULLY STABILIZED, SEDIMENT HAS BEEN REMOVED FROM STORM INLETS, AND ALL CONSTRUCTION HAS BEEN COMPLETED, THEN:
   a. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS).
   b. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF TEMPORARY BMPS.
   c. STABILIZE SOIL STOCKPILE.
12. DEMOBILIZE FROM SITE- CONTRACTOR SHALL NOT DEMOBILIZE UNTIL ENTIRE SITE HAS BEEN FULLY STABILIZED.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY, ONLY IF ALL PRECEDING BMPS AND STABILIZATION ACTIVITIES HAVE BEEN COMPLETELY INSTALLED. THE CEC MUST APPROVE, IN WRITING, ANY CHANGES IN THE ABOVE IMPLEMENTATION SEQUENCE, BEFORE THEIR IMPLEMENTATION BEGINS.

THE ESTIMATED DATES OF IMPLEMENTATION OF POLLUTION CONTROL MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR.

NPDES Stormwater Discharge Permit for Construction Activities (NCG010) — NCDENR/Division of Energy, Mineral and Land Resources

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2011)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Seeding mixture

Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extent temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

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4	12/23/19	HILLSBOROUGH COMMENTS	RMG / WES

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PROJECT:
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FOR
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PROPOSED DEVELOPMENT
HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

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NORTH CAROLINA PROFESSIONAL SEAL 040243 ENGINEER WYATT L. BONE 12/23/19

SHEET TITLE:
EROSION & SEDIMENT CONTROL - PHASE II

SHEET NUMBER:
C-602

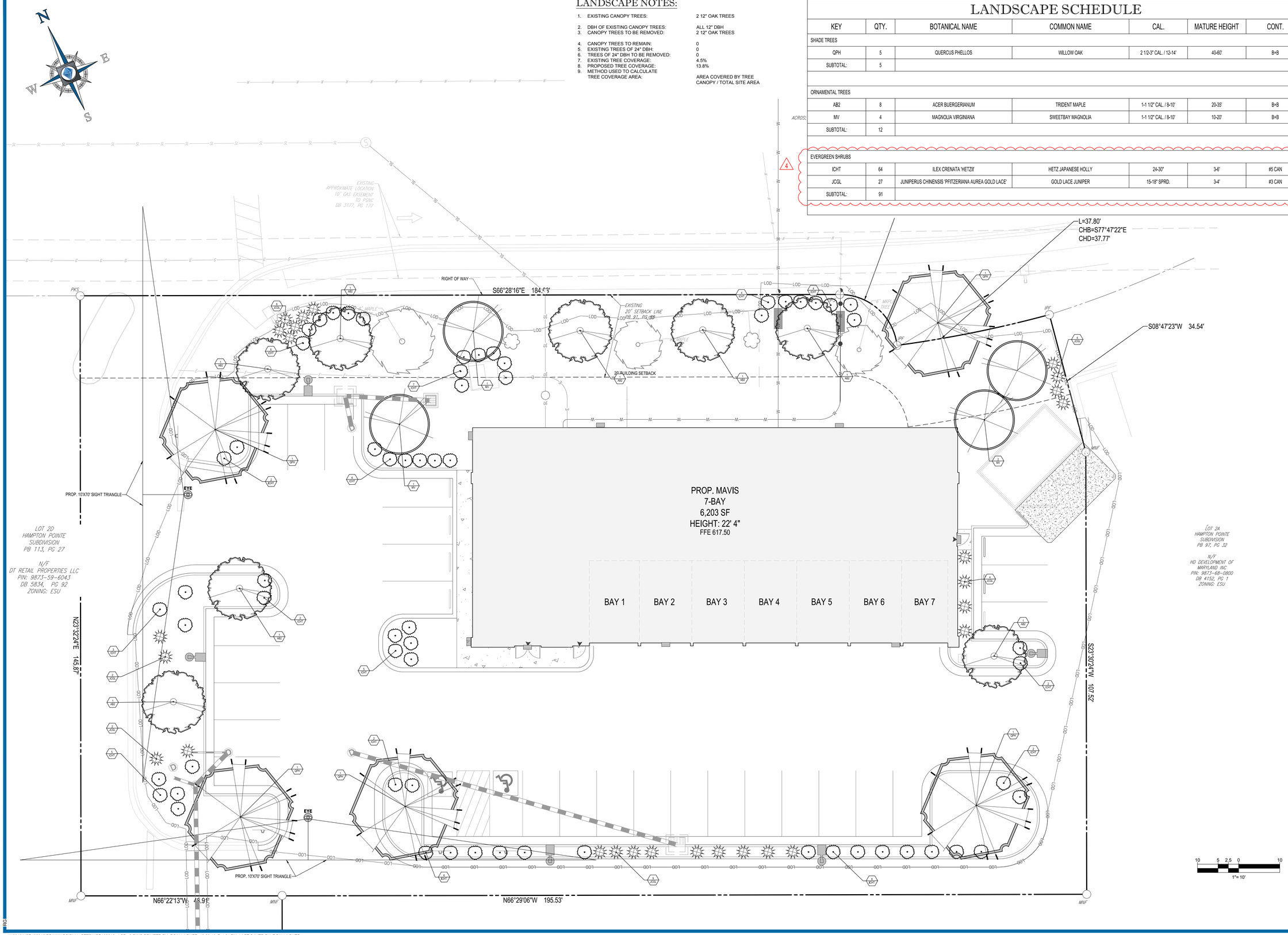
REVISION 4 - 12/23/19

LANDSCAPE NOTES:

1.	EXISTING CANOPY TREES:	2 12" OAK TREES
2.	DBH OF EXISTING CANOPY TREES:	ALL 12" DBH
3.	CANOPY TREES TO BE REMOVED:	2 12" OAK TREES
4.	CANOPY TREES TO REMAIN:	0
5.	EXISTING TREES OF 24" DBH:	0
6.	TREES OF 24" DBH TO BE REMOVED:	0
7.	EXISTING TREE COVERAGE:	4.5%
8.	PROPOSED TREE COVERAGE:	13.8%
9.	METHOD USED TO CALCULATE TREE COVERAGE AREA:	AREA COVERED BY TREE CANOPY / TOTAL SITE AREA

LANDSCAPE SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	CAL.	MATURE HEIGHT	CONT.
SHADE TREES						
QPH	5	QUERCUS PHELLOS	WILLOW OAK	2 1/2-3" CAL. / 12-14'	40-60'	B+B
SUBTOTAL:	5					
ORNAMENTAL TREES						
AB2	8	ACER BUERGERIANUM	TRIDENT MAPLE	1-1 1/2" CAL. / 8-10'	20-35'	B+B
MV	4	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	1-1 1/2" CAL. / 8-10'	10-20'	B+B
SUBTOTAL:	12					
EVERGREEN SHRUBS						
ICHT	64	ILEX CRENATA 'HETZII'	HETZ JAPANESE HOLLY	24-30"	3-6'	#5 CAN
JCGL	27	JUNIPERUS CHINENSIS 'PFITZERIANA AUREA GOLD LACE'	GOLD LACE JUNIPER	15-18" SPRD.	3-4'	#3 CAN
SUBTOTAL:	91					



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NORTH CAROLINA PROFESSIONAL SEAL 2102 STEVEN D. SINGLETON 10/21/19

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
C-701

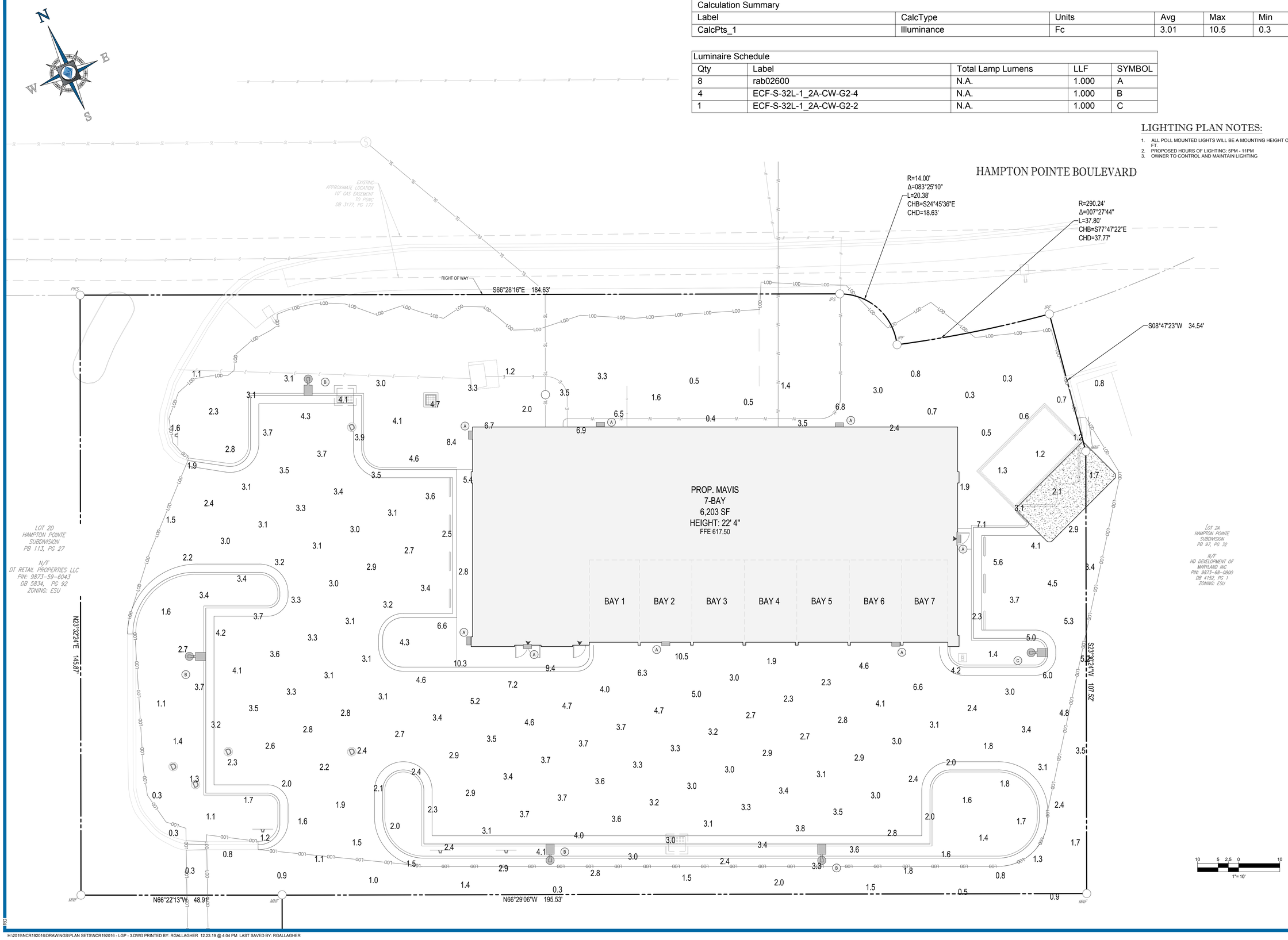
REVISION 4 - 12/23/19

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
CalcPts_1	Illuminance	Fc	3.01	10.5	0.3

Luminaire Schedule				
Qty	Label	Total Lamp Lumens	LLF	SYMBOL
8	rab02600	N.A.	1.000	A
4	ECF-S-32L-1_2A-CW-G2-4	N.A.	1.000	B
1	ECF-S-32L-1_2A-CW-G2-2	N.A.	1.000	C

LIGHTING PLAN NOTES:

1. ALL POLL MOUNTED LIGHTS WILL BE A MOUNTING HEIGHT OF 25 FT.
2. PROPOSED HOURS OF LIGHTING: 5PM - 11PM
3. OWNER TO CONTROL AND MAINTAIN LIGHTING



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NORTH CAROLINA PROFESSIONAL SEAL 040247 ENGINEER WYATT L. BONE 12/23/19

SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

C-800

REVISION 4 - 12/23/19

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.

C. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM SIX INCH (6") THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES.
1.1. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
1.2. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS.
1.3. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - THE MULCH AROUND THE PERIMETER OF THE BUILDING SHALL BE A 3" LAYER OF DOUBLE SHREDDED BLACK CEDAR MULCH ONLY. ALL OTHER AREAS SHALL BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED DARK BROWN HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
1.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
1.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
1.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
1.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
1.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
1.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1½", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED.PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
1.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
1.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
1.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
1.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
1.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 8-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
1.2. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
1.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

D. ALL PLANTING AND LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA):
1.1. 20 POUNDS 'GROW POWER' OR APPROVED EQUAL
1.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING
A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.

E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
1.1. PLANTS: MARCH 15 TO DECEMBER 15
1.2. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1

G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.

H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULOUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBER STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

I. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
- 1 PART PEAT MOSS
- 1 PART COMPOSTED COW MANURE BY VOLUME
- 3 PARTS TOPSOIL BY VOLUME
- 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
  - A) 2 TABLETS PER 1 GALLON PLANT
  - B) 3 TABLETS PER 5 GALLON PLANT
  - C) 4 TABLETS PER 15 GALLON PLANT
  - D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

L. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.

M. GROUND COVER AREAS SHALL RECEIVE A ½" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.

O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

10. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.

B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.

D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

11. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

12. GUARANTEE
A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

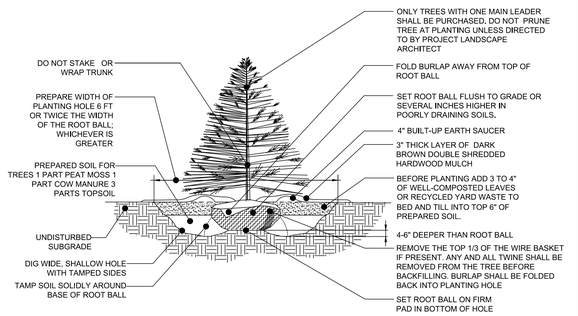
B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.

C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

13. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

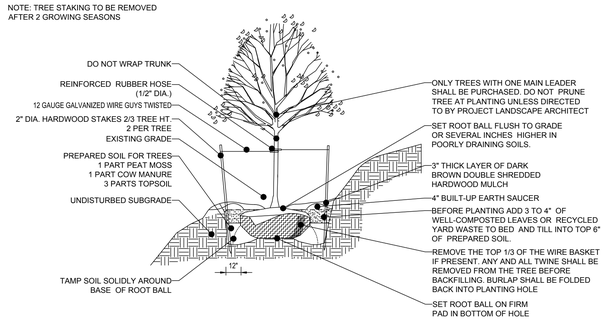
B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.



REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.

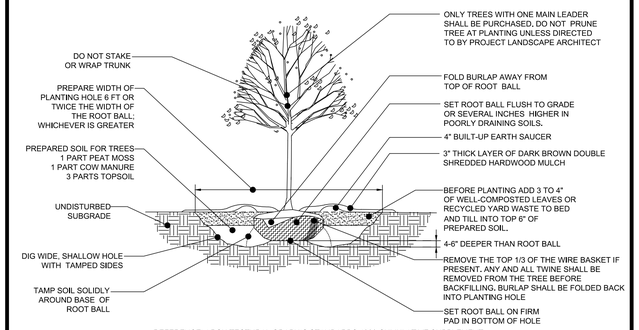
EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE



TREE PLANTING ON SLOPE DETAIL

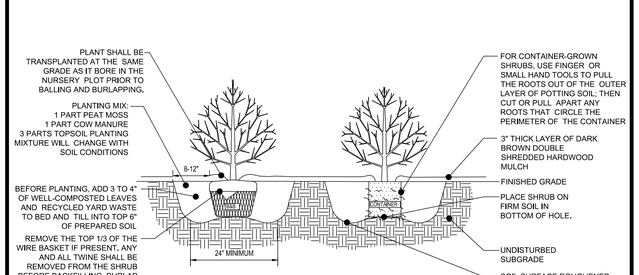
NOT TO SCALE



REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.

DECIDUOUS TREE PLANTING DETAIL

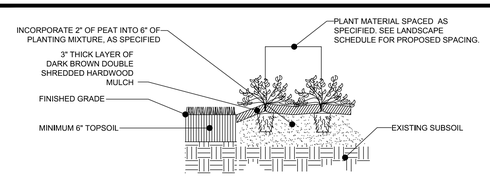
NOT TO SCALE



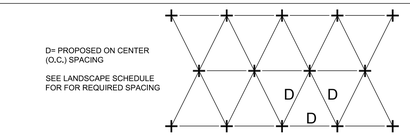
REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT

DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

NOT TO SCALE



TYPICAL PERENNIAL AND GROUND COVER PLANTING



TYPICAL PERENNIAL AND GROUND COVER SPACING & LAYOUT

PERENNIAL/GROUND COVER PLANTING DETAIL

NOT TO SCALE

BOHLER™
ENGINEERING NC, PLLC
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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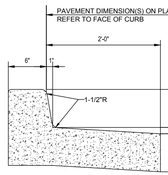
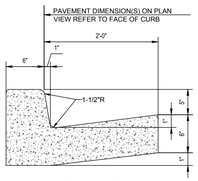
REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	10/14/19	HILLSBOROUGH COMMENTS	RMG / WES
2	11/15/19	HILLSBOROUGH COMMENTS	RMG / WES
3	12/19/19	HILLSBOROUGH COMMENTS	RMG / WES
4	12/23/19	HILLSBOROUGH COMMENTS	RMG /



SPILL CURB & GUTTER



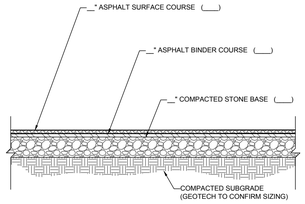
COLLECTOR CURB & GUTTER

NOTES:

1. CONCRETE FOR CURBING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. @ 28 DAYS.
2. CONSTRUCTION STAKING FOR CURB INSTALLATION SHALL BE REFERENCED (CUT OR FILL) TO THE TOP OF CURB.
3. AT CONTRACTOR'S OPTION, THE CURB THICKNESS MAY BE INCREASED AT THE EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER CONTIGUOUS WITH BOTTOM OF ASPHALT PAVEMENT.
4. CONTRACTION JOINTS SHALL BE PLACED @ 10'-0" O.C. TOOLED 1/4" (±1/16") WIDE, 1" DEEP. EXPANSION JOINTS SHALL BE PLACED @ 40'-0" INTERVALS, MAXIMUM, AND ALL P.C.'S.
5. GUTTER PAN SLOPE TO BE ADJUSTED WITHIN ACCESSIBLE PARKING SPACES TO MATCH SLOPE BETWEEN SPOT ELEVATIONS.

CONCRETE CURB & GUTTER DETAIL

NOT TO SCALE

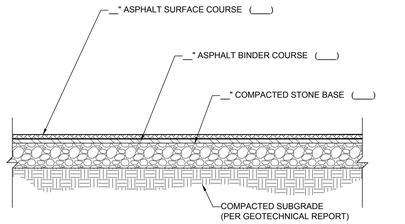


NOTE:

1. SECTION SHOWN IS BASED ON AN ANTICIPATED CBR OF __ PER GEOTECHNICAL REPORT PREPARED BY _____ ENTITLED _____ DATED _____ (PROJECT #_____). FINAL DESIGN TO BE PROVIDED ONCE FINAL CBR'S ARE AVAILABLE ON COMPACTED SUB-BASE.

STANDARD DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE

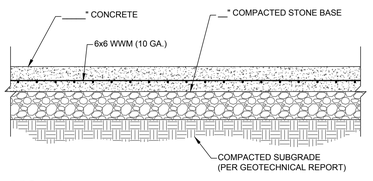


NOTE:

1. SECTION SHOWN IS BASED ON AN ANTICIPATED CBR OF __ PER GEOTECHNICAL REPORT PREPARED BY _____ ENTITLED _____ DATED _____ (PROJECT #_____). FINAL DESIGN TO BE PROVIDED ONCE FINAL CBR'S ARE AVAILABLE ON COMPACTED SUB-BASE.

HEAVY DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE

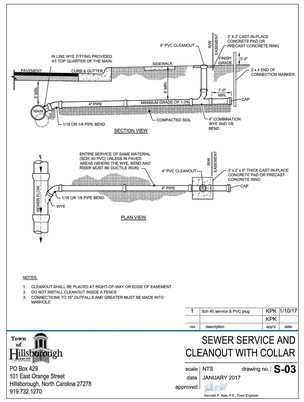


NOTE:

1. SECTION SHOWN IS BASED ON AN ANTICIPATED CBR OF __ PER GEOTECHNICAL REPORT PREPARED BY _____ ENTITLED _____ DATED _____ (PROJECT #_____). FINAL DESIGN TO BE PROVIDED ONCE FINAL CBR'S ARE AVAILABLE ON COMPACTED SUB-BASE.

STANDARD DUTY CONCRETE SECTION

NOT TO SCALE



NOTES:

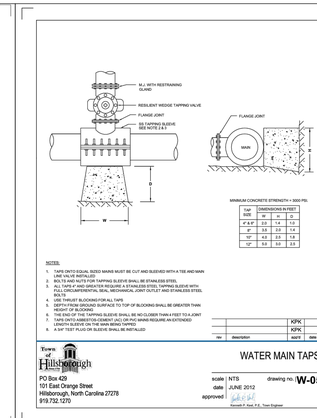
1. CLEANOUT SHALL BE PLACED AT RIGHT-OF-WAY OR EDGE OF EASEMENT
2. ONE (1) INSTALL CLEANOUT RISER & FENCE
3. CONNECTIONS TO 10" OUTFALLS AND GREATER MUST BE MADE INTO MANHOLE

1	Sch 40 service & PVC plug	KPK	1/10/17
		KPK	
rev	description	appr'd	date

Town of Hillsborough
PO Box 429
101 East Orange Street
Hillsborough, North Carolina 27278
919.732.1270

SEWER SERVICE AND CLEANOUT WITH COLLAR

scale: NTS
date: JANUARY 2017
approved: Kenneth P. Kerr, P.E., Town Engineer
drawing no.: S-03



MINIMUM CONCRETE STRENGTH = 3000 PSI.

Cast SIZE	DIMENSIONS IN FEET		
	W	H	D
4" & 6"	2.0	1.4	1.0
8"	2.5	2.0	1.4
10"	4.0	2.0	1.5
12"	5.0	3.0	2.5

NOTES:

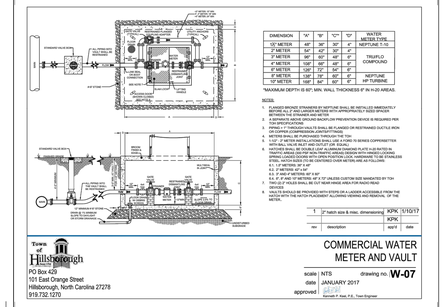
1. TAPS ONTO EQUAL SIZED MAINS MUST BE CUT AND SLEEVED WITH A TEE AND MAIN VALVE AS SHOWN ABOVE.
2. BOLTS AND NUTS FOR TAPPING SLEEVE SHALL BE STAINLESS STEEL.
3. ALL TAPS 4" AND GREATER REQUIRE A STAINLESS STEEL TAPPING SLEEVE WITH A FACTORY INCORPORATED, SEAL MECHANICAL JOINT OUTLET AND STAINLESS STEEL BOLTS.
4. USE THRUST BLOCKING FOR ALL TAPS
5. THE BOTTOM OF TAPPING SLEEVE SURFACE TO TOP OF BLOCKING SHALL BE GREATER THAN HEIGHT OF BLOCKING
6. THE END OF THE TAPPING SLEEVE SHALL BE NO CLOSER THAN 4 FEET TO A JOINT
7. TAPS 4" AND GREATER ON PVC MAINS OR ASBESTOS CEMENT MAIN REQUIRE AN EXTENDED LENGTH SLEEVE ON THE MAIN BEING TAPPED.
8. A 3/4" TEST PLUG OR SLEEVE SHALL BE INSTALLED

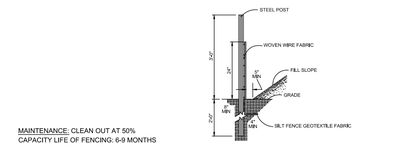
		KPK	
		KPK	
rev	description	appr'd	date

Town of Hillsborough
PO Box 429
101 East Orange Street
Hillsborough, North Carolina 27278
919.732.1270

WATER MAIN TAPS

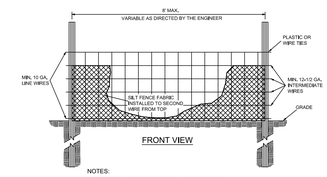
scale: NTS
date: JUNE 2012
approved: Kenneth P. Kerr, P.E., Town Engineer
drawing no.: W-05


2" HOLE FOR TAPPING MAIN
STANDARD VALVE BOX
FULL PERIMETER CONCRETE SUPPORT
FINISH GRADE
2" STEEL PIPE
CONCRETE SUPPORT
STANDARD VALVE BOX
FINISH GRADE
TAPPING SLEEVE
MAIN
CONCRETE SUPPORT
2" STEEL PIPE



MAINTENANCE: CLEAN OUT AT 50% CAPACITY LIFE OF FENCING: 6-9 MONTHS

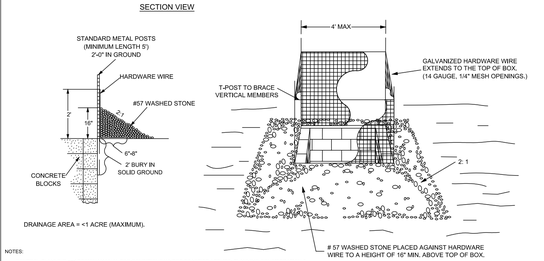
SIDE VIEW



FRONT VIEW

NOTES:
1. FLOW SHALL NOT RUN PARALLEL WITH THE FENCE.
2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
3. SEE NC DEQ SEDIMENT DESIGN MANUAL FOR CONSTRUCTION SPECIFICATIONS, WHERE PRACTICE APPLIES AND PLANNING CONSIDERATIONS.
4. SILT FENCE SHOULD NOT BE USED ALONE BELOW GRADED SLOPES GREATER THAN 10' IN HEIGHT.

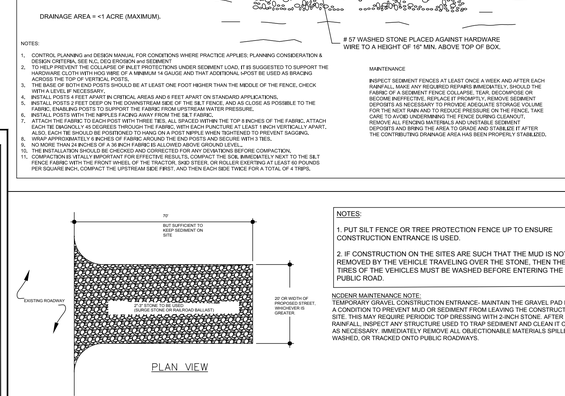
SECTION VIEW



NOTES:
1. CONTROL PLANNING and DESIGN MANUAL FOR CONDITIONS WHERE PRACTICE APPLIES; PLANNING CONSIDERATION & DESIGN CRITERIA, SEE N.C. DEQ EROSION and SEDIMENT
2. TO HELP PREVENT THE COLLAPSE OF INLET PROTECTIONS UNDER SEDIMENT LOAD, IT IS SUGGESTED TO SUPPORT THE HARDWARE CLOTH WITH HOG WIRE OF A MINIMUM 14 GAUGE AND THAT ADDITIONAL 'sPOST BE USED AS BRACING AGAINST THE TOP OF VERTICAL POSTS.
3. THE HEIGHT OF THE POSTS SHOULD BE AT LEAST ONE FOOT HIGHER THAN THE MIDDLE OF THE FENCE, CHECK FOR FLA LEVEL IF NECESSARY.
4. INSTALL POSTS 4 FEET APART IN CRITICAL AREAS AND 6 FEET APART ON STANDARD APPLICATIONS.
5. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC, ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE.
6. INSTALL POSTS WITH THE NIPPLES FACING AWAY FROM THE SILT FABRIC.
7. ATTACH THE FABRIC TO THE UPSTREAM SIDE OF THE POSTS USING WIRE TIES WITHIN THE TOP 8 INCHES OF THE FABRIC. ATTACH EACH TIE DIAGONALLY AS DEGREES THROUGH THE FABRIC, WRAP EACH PLACTURE AT LEAST 1 INCH VERTICALLY APART. ALSO, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
8. WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
9. NO MORE THAN 24 INCHES OF A 36 INCH FABRIC IS ALLOWED ABOVE GROUND LEVEL.
10. THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATIONS BEFORE COMPACTION.
11. COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 50 POUNDS PER SQUARE INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE THICE FOR A TOTAL OF 4 TRIPS.

MAINTENANCE

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC DECOMPOSE OR BECOME BROKEN OUT OR THE POSTS TOPPLE OVER, BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



CROSS SECTION

STANDARD CONSTRUCTION ENTRANCE

NOT TO SCALE

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.

2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.

NCDENR MAINTENANCE NOTE:
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE- MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections 5 and 7, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION I: GROUND STABILIZATION

	Required Ground Stabilization Timeframes	
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	7 days for slopes greater than 50' in length and with slopes steeper than 4:1 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones 10 days for Tails Lake Watershed
(e) Areas with slopes flatter than 4:1	14	7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones 10 days for Tails Lake Watershed unless there is an HQW Zone

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed (overseed with straw or other mulches and backfill) • Straw or hay mulch • Rolled erosion control products (with or without temporary grass seed) • Aqua-or-comb approved blend or other mulch • Plastic sheeting	• Permanent grass seed (overseed with straw or other mulches and backfill) • Sod (installed on permanent soil reinforcement matting) • Hydromulching • Straw or wood fiber mulch (plus overseed where applicable) • Uncform and erosite distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or mulching walls • Rolled erosion control products w/ grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are approved for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants
2. Apply flocculants at or before the weirs to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's specifications.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Recycle buildings materials. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g.dumpster, trash receptacle) on site to collect construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on paved areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each work day or before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Dispose of unused paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be lakeed, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Anchor portable toilets to prevent tipping or floatation using a minimum of two (2) toilet truffs/ ones.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect all stockpiles with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverings techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within bermed or lined sediment trap.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or location is not required by local or state regulations, then install washouts prior to the start of concrete work that will result in washout. Maintain washouts until the concrete has been poured and the washout is no longer needed. If washouts are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. As a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Maintain washout to provide storage for at least approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day in which it is safe to perform the inspection. In addition, when the storm event of equal to or greater than 2.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any sites where inspections were delayed shall be noted in the inspection Record.

Frequent	Frequency (during normal business hours)	Inspection rounds must include:
(1) Each silt/sediment trap/trap/basin/dewatering basin	Daily	Daily visual accuracy. If the daily rain gauge observations say rainfall during weekend or holiday was greater than 1.0 inch, the next business day shall be the deadline, meaning the cumulative rain measurement for those prior days (and this will determine if a site inspection is required). If the rain gauge is broken, the 1.0 inch shall be used as "trigger". If the weather, now, is whether safe conditions, shall be determined by the Director.
(2) All BMC Measures	At least once per 7 calendar days and within 24 hours of the end of a 0.5 inch or greater rain event	1. Date and time of the inspection; 2. Name of the person performing the inspection; 3. Indication of whether the measures were operating properly; 4. Description of maintenance needs for the measures; 5. Description of the condition of the downstream waters to ensure no exacerbation of the receiving waters impairment; 6. Date and time of the inspection; 7. Name of the person performing the inspection; 8. Indication of whether the measures were operating properly; 9. Description of maintenance needs for the measures; 10. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge locations/SDMs	At least once per 7 calendar days and within 24 hours of the end of a 0.5 inch or greater rain event (1.0 inch in 24 hours)	If there is evidence of sediment in the receiving waters, the inspection shall include visually monitoring the receiving waters for the duration of the storm event.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of the end of a 0.5 inch or greater rain event (1.0 inch in 24 hours)	1. Visible sediment deposition in the stream or wetland; 2. Date and time of the inspection; 3. Name of the person performing the inspection; 4. Description, evidence, and date of corrective actions taken.
(5) Stream or wetland crossings where work in the channel has ceased	At least once per 7 calendar days and within 24 hours of the end of a 0.5 inch or greater rain event (1.0 inch in 24 hours)	If the stream or wetland has increased visible sedimentation as a result of the stream crossing, work in the channel shall cease and all activity shall be suspended until the following plan has been: 1. Description, evidence and date of corrective actions taken; and 2. Documentation of the coordination with the Wetlands Regulatory Office (the Office) in accordance with 15A NCAC 02H .0506(b)(6) and (7) (b) (c) and (d). Upon receipt of the written authorization from the Office, the work in the channel may resume.
(6) Stream stabilization measures	After each phase of grading	1. Date and time of the inspection; 2. Name of the person performing the inspection; 3. Description of the present phase of the project and of the next phase to be initiated; 4. Date and time that the required ground stabilization measures for the completed phase of the project will be initiated no or sooner than they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. ESC Plan Documentation

The approved EBSC plan as well as any approved deviation shall be kept on the site. The approved EBSC plan must be kept up to date throughout the coverage under this permit. The following items pertaining to the EBSC plan shall be documented in the manner described:

Items to Document	Documentation Requirements:
(a) Each EBSC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved EBSC Plan.	Initial and date each EBSC Measure on a copy of the approved EBSC Plan or complete, date and sign an inspection report. (N.c. Rec each EBSC Measure shown on the approved EBSC Plan. Note the dimensions and elevations of the installed/installation of the EBSC Measures or if the EBSC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved EBSC Plan or complete, date and sign an inspection report to indicate completion of the corrective phase.
(c) Ground cover is located and installed in accordance with the approved EBSC Plan.	Initial and date a copy of the approved EBSC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all EBSC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to EBSC Measures.	Initial and date a copy of the approved EBSC Plan or complete, date and sign an inspection report to indicate the completion of the corrective actions.

2. Additional Documentation

In addition to the EBSC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the permittee demonstrates to the agency staff's exemption based on unique site conditions that makes this requirement not practical:

(a) This general permit as well as the certificates of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if chosen to provide equal access and utility as the hard copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. (SCDN 122.41).

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3 (in Section 102 of CERCLA (Ref: 40 CFR 302.4) or S.G. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After the permittee has become aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframe and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements:
(a) Visible sediment deposition in a stream or wetland.	• Within 24 hours, or used an electronic notification. • Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. The permittee may also submit the report upon request on a case-by-case basis.
(b) Oil spills and releases of hazardous substances in excess of reportable quantities.	• If the release is material (as the RQ Report Rq) as required for sediment-related releases, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that the permittee's practices are not sufficient to ensure compliance with the Material or Cross Impairment water conditions.
(c) Bypasses and unanticipated bypasses that exceed any effluent limitation in the permit or that bypass treatment.	• Within 24 hours, or used an electronic notification. The oral/telephone report shall include, at a minimum, the date, time, nature, volume and location of the spill or release.
(d) Noncompliance with the conditions of this permit that may endanger health or the environment. 15A 02.0505(7)	• A report shall include: a description of the noncompliance and its cause; the period of noncompliance, including dates and times, or if not yet corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. (40 CFR 122.41(l)(6)).
(e) Other noncompliance	• Division staff may waive the written report on a case-by-case basis.

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H:\2019\NCR192016\DRAWINGS\PLAN SETS\NCR192016 - OCP - 3.---LAYOUT C-910 EROSION & SEDIMENT CONTROL - DETAILS

BOHLER™
ENGINEERING NC, PLLC
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY
1	10/14/19	HILLSBOROUGH COMMENTS	RMG / WES
2	11/15/19	HILLSBOROUGH COMMENTS	RMG / WES
3	12/19/19	HILLSBOROUGH COMMENTS	RMG / WES
4	12/23/19	HILLSBOROUGH COMMENTS	RMG / WES

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811 Know what's below. Call before you dig.

ALWAYS CALL 811

It's fast. It's free. It's the law.

ISSUED FOR MUNICIPAL & AGENCY REVIEW & APPROVAL

PROJECT No.:	NCR192016
DRAWN BY:	ME
CHECKED BY:	WB
DATE:	9/3/2019
CAD I.D.:	NCR192016 - OCP - 3

PROJECT:

SITE PLAN REVIEW DOCUMENTS

FOR

MAVIS DISCOUNT TIRE

PROPOSED DEVELOPMENT

HAMPTON POINTE BLVD
ORANGE COUNTY
HILLSBOROUGH, NC

BOHLER
ENGINEERING NC, PLLC
NCBELS P-1132
4130 PARKLAKE AVENUE, SUITE 130
RALEIGH, NC 27612
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NC@BohlerEng.com

NORTH CAROLINA PROFESSIONAL SEAL 040264 ENGINEER WATT L. BONE 12/23/19

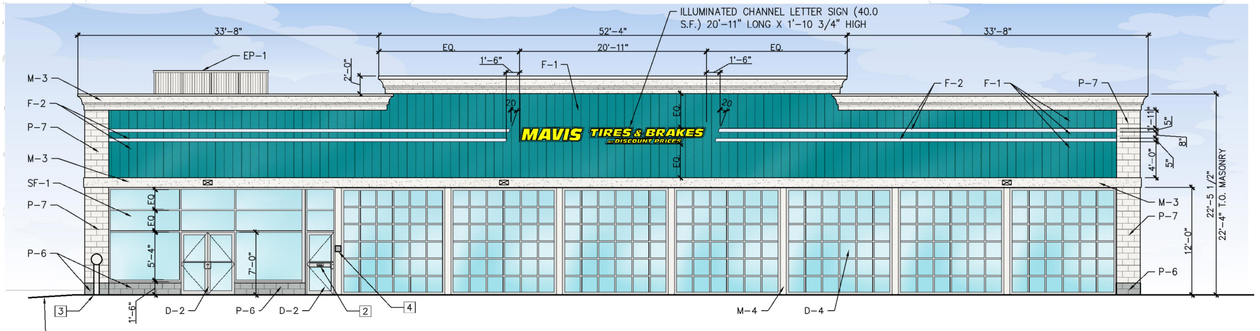
SHEET TITLE:

EROSION & SEDIMENT CONTROL - DETAILS

SHEET NUMBER:

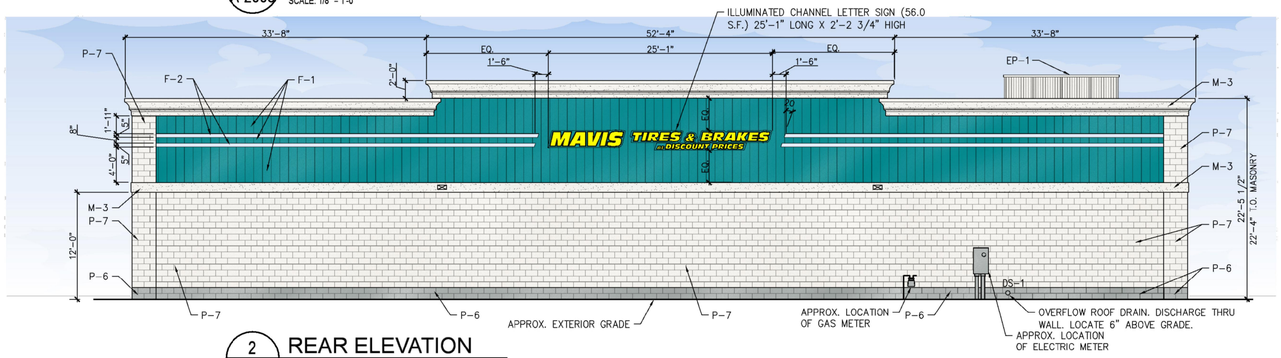
C-910

REVISION 4 - 12/23/19



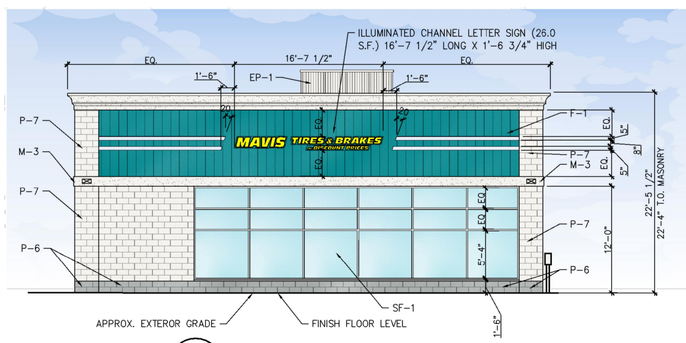
1 A-200c FRONT ELEVATION

SCALE: 1/8" = 1'-0"



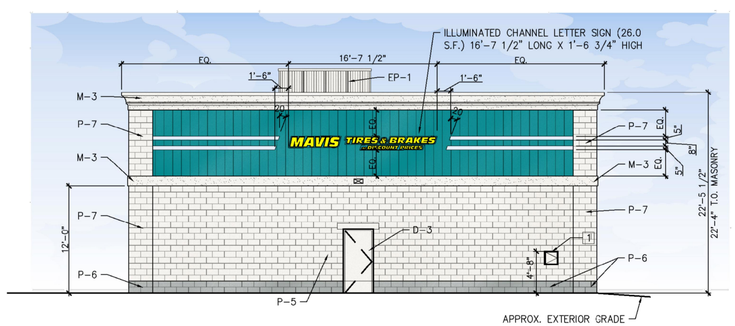
2 A-200c REAR ELEVATION

SCALE: 1/8" = 1'-0"



3 A-200c LEFT ELEVATION

SCALE: 1/8" = 1'-0"



4 A-200c RIGHT ELEVATION

SCALE: 1/8" = 1'-0"

EXTERIOR MATERIALS SCHEDULE

	MARK	MATERIAL	MANUFACTURER	STYLE/COLOR	NOTES
DOOR FINISHES	D-2	ALUMINUM STOREFRONT DOOR & FRAME	KAWNEER	COLOR: CLEAR ANODIZED ALUMINUM	INSTALL PER MFR RECOMMENDATIONS.
	D-3	PAINT FOR GALVANIZED HM DOOR & FRAME	BENJAMIN MOORE	COLOR: OC-129 ALABASTER WHITE SHEEN: SEMI-GLOSS	FINISH PER MFR RECOMMENDATIONS. PRIMER: (1) COAT- BM SUPER SPEC HP ACRYLIC PRIMER #HP04 FINISH COAT: (2) COATS- BM SUPER SPEC HP D.T.M. ACRYLIC SEMI-GLOSS #HP29
	D-4	ALUMINUM AND GLASS OH DOORS	CLOPAY BUILDING PRODUCTS COMPANY	CLOPAY MODEL 903 COLOR: CLEAR SATIN ANODIZED ALUMINUM	INSTALL PER MFR RECOMMENDATIONS. RE: SPECS FOR ADDITIONAL INFO.
MISC. ITEMS	F-1	VERTICAL METAL FASCIA	ATAS	MULTIPURPOSE PANELS- MPN SEMI STANDING SEAM 12" WIDE, 0.032" ALUMINUM COLOR: #19 TEAL	INSTALL PER MFR RECOMMENDATIONS.
	F-2	ALUMINUM ACCENT STRIPE	ATAS	0.032" ALUMINUM COLOR: #26 BONE WHITE	INSTALL PER MFR RECOMMENDATIONS.
	F-3	METAL ROOF COPING	ROOF MFR	MATCH ROOF SYSTEM COLOR: MATCH ALABASTER WHITE	INSTALL PER MFR RECOMMENDATIONS.
	M-3	EIFS CORNICE & BAND	DRYVIT OR APPROVED EQUAL	COLOR: #101 SUPER WHITE	INSTALL PER MFR RECOMMENDATIONS.
	M-4	PAINT FOR STEEL LINTELS & COLUMNS	BENJAMIN MOORE	COLOR: OC-129 ALABASTER WHITE SHEEN: LOW LUSTRE	FINISH PER MFR RECOMMENDATIONS. PRIMER: (1) COAT- BM SUPER SPEC HP ACRYLIC PRIMER #HP04 FINISH COAT: (2) COATS- BM SUPER SPEC HP D.T.M. ACRYLIC LOW LUSTRE #HP25
WALL FINISHES	P-5	PAINTED CONCRETE BLOCK	BENJAMIN MOORE	COLOR: OC-129 ALABASTER WHITE SHEEN: LOW LUSTRE	FINISH AND INSTALL PER MFR RECOMMENDATIONS. PRIMER: (1) COAT-BM ULTRA SPEC MASONRY HI-BUILD BLOCK FILLER 571 FINISH COAT: (2) COATS- BM ULTRA SPEC ELASTOMERIC LOW LUSTRE 360
	P-6	PAINTED SPLIT FACE BLOCK	BENJAMIN MOORE	COLOR: HC-164 PURITAN GRAY SHEEN: LOW LUSTRE	FINISH AND INSTALL PER MFR RECOMMENDATIONS. PRIMER: (1) COAT-BM ULTRA SPEC MASONRY HI-BUILD BLOCK FILLER 571 FINISH COAT: (2) COATS- BM ULTRA SPEC ELASTOMERIC LOW LUSTRE 360
	P-7	PAINTED SPLIT FACE BLOCK	BENJAMIN MOORE	COLOR: OC-129 ALABASTER WHITE SHEEN: LOW LUSTRE	FINISH AND INSTALL PER MFR RECOMMENDATIONS. PRIMER: (1) COAT-BM ULTRA SPEC MASONRY HI-BUILD BLOCK FILLER 571 FINISH COAT: (2) COATS- BM ULTRA SPEC ELASTOMERIC LOW LUSTRE 360
	SF-1	ALUMINUM STOREFRONT SYTEM	KAWNEER	COLOR: CLEAR ANODIZED ALUMINUM	INSTALL PER MFR RECOMMENDATIONS. INSTALL WITH 1" LOW-E INSULATED GLAZING. MAX U-FACTOR: U-0.32 MAX SHGC: 0.40
	EP-1	ENVISOR PANEL RTU SCREEN	CITYSCAPES	COLOR: ALABASTER STYLE: VERTICAL 7.2 RIB METAL TRIM STYLE: BAND	INSTALL PER MFR RECOMMENDATIONS.

GENERAL NOTES:

A. ALL FINISHES ON MATERIAL SCHEDULE MAY NOT BE USED
B. CENTER WALL LIGHTS OVER COLUMNS, DOORS & WINDOWS, ETC., AS SHOWN U.O.N.
C. MOUNTING HEIGHT OF EXTERIOR LIGHT FIXTURE ON REAR AND SIDE ELEVATIONS TO MATCH MOUNTING HEIGHT OF LIGHT FIXTURES ON FRONT ELEVATION
D. REFER TO SHEET A-800 FOR INFO REGARDING ILLUMINATED CHANNEL LETTER SIGNS.

EXTERIOR ELEVATION KEYNOTES

1	16"X16" INSULATED ALUMINUM ACCESS DOOR BY BEST ACCESS DOORS. SKU # BA-PAL-16-16. FINAL COLOR SELECTION TO BE APPROVED BY OWNER AND ARCHITECT. RE: DETAIL 7/A-502 FOR ADDITIONAL INFO. (ACCESS DOOR IS FOR USE TO ACCESS OIL TANKS. COORDINATE FINAL LOCATION WITH TANK INSTALLER)
2	PROVIDE KEY DROP SLOT IN GARAGE ENTRY DOOR. FINAL INSTALLATION LOCATION TO BE DIRECTED BY MAVIS.
3	FREESTANDING AIR INFLATOR. LOCATION TO BE SITE SPECIFIC. (RE: RESPONSIBILITY SCHEDULE FOR ADDITIONAL INFO.)
4	PROVIDE KNOX BOX WHERE REQUIRED BY JURISDICTION (PURCHASED FROM LOCAL FIRE DEPARTMENT.) MOUNT PER FIRE DEPARTMENT REQUIREMENTS ON WALL ADJACENT TO ENTRANCE. CONTRACTOR TO MAKE APPLICATION FOR KNOX BOX AND COORDINATE WITH LOCAL APPROVING AUTHORITY.

ARCHITECT
THE LARSON ARCHITECTURAL GROUP, INC.
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EXTERIOR ELEVATIONS

MAVIS DISCOUNT TIRE #391 - HILSBOROUGH, NC

MAVIS TIRE SUPPLY, LLC
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