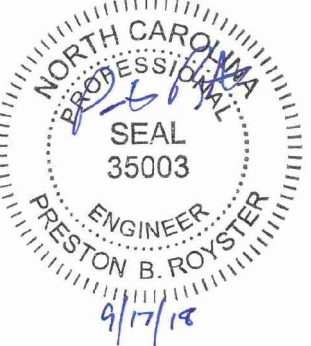




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CJT Job Number: 1707

Drawn VJC_PBR
Checked VJC
Date 07/02/2018
Revisions

CONSTRUCTION
DRAWINGS

NOT RELEASED FOR
CONSTRUCTION

Sheet Title

GRADING AND
DRAINAGE
PLAN

Sheet Number

CD-3.0

| PIPE SEGMENT | UPSTREAM RIM | INVERT DOWN. | INVERT UPSTRM | LENGTH (FT) | DIA (FT.) | SLOPE | PIPE MATERIAL | O-RING/ GASKETTED |
|-------------------|-----------------|-----------------|------------------|----------------|--------------|-------|------------------|----------------------|
| EX FES1 TO EX CI2 | 336.85 | 322.86 | 327.32 | 50 | 18 | 9.00% | RCP | |
| EX CI2 TO CI1 | 338.34 | 327.57 | 329.54 | 58 | 18 | 3.40% | RCP | |
| CI1 TO CI3 | 343.44 | 334.91 | 337.30 | 116 | 15 | 2.05% | RCP | |
| CI3 TO DI4 | 343.50 | 337.40 | 338.21 | 81 | 15 | 1.00% | RCP | |
| DI4 TO CI5 | 343.00 | 338.31 | 339.57 | 126 | 15 | 1.00% | RCP | |
| CI1 TO Sandfilter | 340.86 | 329.79 | 330.19 | 40 | 15 | 1.00% | RCP | YES |

1/CD-2.0 GRADING AND DRAINAGE PLAN SCALE: 1"=20'

GRADING NOTES:

- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF DURHAM STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (1-800-532-4849) AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL".
- PRIOR TO BEGINNING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL SCHEDULE AND ATTEND A PRECONSTRUCTION CONFERENCE WITH THE CITY OF DURHAM INSPECTIONS DEPARTMENT (919) 860-4326 EXT. 30287, AND A REPRESENTATIVE OF THE OWNER.
- CONSTRUCTION, MAINTENANCE AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- SOIL UNDER BUILDING PAD, PAVED AREAS AND WITHIN SLOPES GREATER THAN 3:1 (H:V) SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THESE SOILS SHALL BE COMPACTED AS SPECIFIED UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ANY UNDERCUT OF SOILS IN THESE AREAS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER & OWNER. THE UNDERCUT SOILS SHALL ALSO QUANTIFIED BY THE GEOTECHNICAL ENGINEER.
- ALL BANKS, SLOPES AND FILL SLOPES SHALL BE NO STEEPER THAN 2.5:1 MAXIMUM. CUT SLOPES SHALL BE NO STEEPER THAN 2:1.
- ALL GRADING MUST PRODUCE SURFACE DRAINAGE ADEQUATE TO PREVENT STANDING WATER OR WET LAWN AREAS, AND TO ENSURE THAT ALL STORM WATER FLOWS TO INLETS OR OTHER POINTS OF DISCHARGE.
- ALL SIDEWALKS SHALL BE CONSTRUCTED WITH A MAXIMUM 1.8% CROSS SLOPE IN THE DIRECTION SHOWN ON THE PLAN.
- CONNECT ALL ROOF LEADERS AND DOWNSPOUTS TO STORM DRAINAGE SYSTEM WITH PVC PIPE. SEE ARCHITECTURAL PLANS FOR LOCATIONS.
- THE PROPER PROCEDURE FOR COMPACTED SOIL REMEDIATION IS AS FOLLOWS:
 - REMOVE ALL IMPERVIOUS SURFACES FROM THE SUBJECT AREA.
 - TILL THE AREA TO A DEPTH OF 12" BELOW THE TOP OF COMPACTED SUBGRADE.
 - SUITABLE RATES AND TYPES OF SOIL AMENDMENTS SHOULD BE DETERMINED THROUGH SOIL TESTS, LIMESTONE AND FERTILIZER SHOULD BE APPLIED UNIFORMLY DURING SEEDBED PREPARATION AND MIXED WELL WITH THE TOP 4 TO 6 INCHES OF SOIL.

STORM DRAINAGE NOTES:

- ALL STORM DRAINAGE PIPES SHOWN ARE TO BE CLASS II REINFORCED CONCRETE (RCP) UNLESS NOTED OTHERWISE.
- ALL STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF DURHAM AND NC DOT STANDARDS AS APPLICABLE.
- ALL CONCRETE SHALL MEET A MINIMUM 3000 PSI COMPRESSIVE STRENGTH.
- ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
- ALL PIPE JOINTS SHALL BE MADE WITH PREFORMED JOINT SEALER, WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE B FLEXIBLE PLASTIC GASKETS UNLESS OTHERWISE NOTED.
- THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
- ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
- MATERIALS DEEMED BY THE OWNER'S REPRESENTATIVE AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- BACKFILLING OF TRENCHES SHALL ACCOMPLISHED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100% STANDARD PROCTOR.
- UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- SEE THE COVER SHEET FOR NOTES REGARDING IMPERVIOUS SURFACE.

2/CD-3.0 GRADING AND STORM DRAINAGE NOTES SCALE: NTS

20 0 20 40 60
Scale 1" = 20'