

CONSTRUCTION PLANS FOR LAUDERHILL PARKING LOT

3760 N.W. 15TH STREET
LAUDERHILL, FLORIDA
SECTION 36, TOWNSHIP 49 SOUTH, RANGE 41 EAST
FOLIO ID # 4942-31-34-0020

DEVELOPER

CIVIL ENGINEER/ LAND PLANNER

URBN DESIGN
696 N.E. 125TH STREET
NORTH MIAMI, FLORIDA 33161
(305) 720-2079
ATTN. CHRISTOPHER P. COLLINS, P.E.

SURVEYOR

JORGEL L. CABRERA
SURVEYOR AND MAPPER
2852 S.W. 149th PLACE
MIAMI, FLORIDA 33185
Phone: (305) 302-2522
Fax: (305) 207-9537

ELECTRIC SERVICE

FLORIDA POWER & LIGHT
6195 N.W. 82nd AVENUE
MIAMI, FLORIDA 33166
(305) 599-4023
ATTN. CARLOS ECHEGOYEN

TELEPHONE SERVICE

AT&T
9001 S.W. 24TH STREET
MIAMI, FLORIDA 33165
(305) 222-8729
ATTN. REGINALD BARIL

WATER & SEWER

BROWARD COUNTY WATER AND WASTEWATER
ENGINEERING DIVISION
2555 WEST COPANS ROAD
POMPANO BEACH, FLORIDA 33369
(954) 831-0745

PERMITTING AGENCIES

BROWARD COUNTY PLANNING AND DEVELOPMENT
MANAGEMENT DIVISION
1 N. UNIVERSITY DR.
PLANTATION, FLORIDA 33324
(954) 357-6634

BROWARD COUNTY
ENVIRONMENTAL ENGINEERING
AND PERMITTING
1 N. UNIVERSITY DR., SUITE 201
PLANTATION, FLORIDA 33324
(954) 519-1483

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33406
(561) 682-6979

LEGAL DESCRIPTION

TRACT 2 OF "A.T. & T. NO." ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 127 AT PAGE 18 OF THE PUBLIC RECORDS OF BROWARD OCUNTY, FLORIDA.



BROWARD COUNTY, FLORIDA
SECTION 36, TOWNSHIP 49 SOUTH, RANGE 41 EAST
VICINITY MAP
SCALE: 1" = 300'

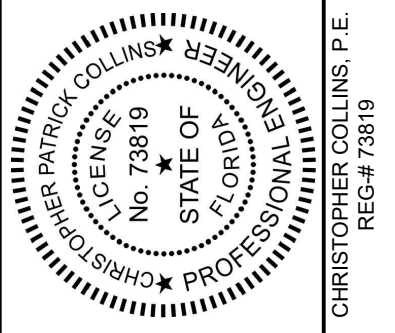
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C-6.2	GRADING AND DRAINAGE DETAILS

THE VERTICAL DATUM USED FOR THESE DRAWINGS ARE IN NAVD88



D E S I G N


666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221





6/26/2025


This item has been digitally signed and sealed by Christopher P. Collins, P.E. on the date adjacent to the seal.


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Designed by:	C.P.C.
Drawn by:	S.G.C.
Checked by:	C.P.C.
Approved by:	C.P.C.

Scale:	AS SHOWN
Date:	11/22/2024

Job No.:	Q003
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Plans for

**LAUDERHILL
PARKING LOT**
3760 N.W. 15TH STREET
LAUDERHILL, FL

**COVER
SHEET**

Sheet No.
C-1.0

I. GENERAL PROVISIONS:

1. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS.
2. ALL WORK AND MATERIALS SHALL CONFORM TO CURRENT BROWARD COUNTY TRANSIT (BCT), BROWARD COUNTY PUBLIC WORKS, BROWARD COUNTY TRAFFIC ENGINEERING DIVISION, CITY OF LAUDERHILL UTILITIES DEPARTMENT DEPARTMENT, CITY OF LAUDERHILL UTILITIES DEPARTMENT DEPARTMENT, FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD PLAN, FLORIDA DEPARTMENT OF HEALTH (FDH), AND SPECIFICATIONS AS WELL AS ALL LOCAL, STATE, AND NATIONAL CODES AND REGULATORY REQUIREMENTS, AS APPLICABLE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
4. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGE FROM SMALL AND LARGE CONSTRUCTION ACTIVITIES. IN ORDER TO MEET NPDES REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), IMPLEMENTING, INSPECTING, MAINTAINING, AND REPORTING ON ALL ELEMENTS OF THE SWPPP, COMPLETING AND SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) FORMS AS THE OPERATOR, AND PAYING ALL ASSOCIATED FEES. FOR PROJECTS LESS THAN 1 ACRE IN SIZE THAT ARE NOT REQUIRED TO COMPLY WITH THE NPDES GENERAL PERMIT, THE CONTRACTOR IS STILL RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
5. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY UNDERGROUND EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING, OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING THE PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
7. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
8. BASE SURVEY INFORMATION INCLUDING BUT NOT LIMITED TO ELEVATIONS, EASEMENTS, RIGHTS OF WAY, AND OTHER TOPOGRAPHIC INFORMATION SHOWN ON THE DRAWINGS HAVE BEEN PREPARED BY JORGE L. CABRERA, **URBN DESIGN**. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.
9. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. **URBN DESIGN** IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.
10. THE CONTRACTOR SHALL SUBMIT COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL THOROUGHLY CHECK SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR COMPLETENESS AND FOR COMPLIANCE WITH THE CONSTRUCTION PLANS AND SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL COORDINATE THE SHOP DRAWINGS WITH THE REQUIREMENTS FOR OTHER RELATED WORK. THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, AT THE TIME OF SUBMISSION, OF DEVIATIONS IN SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
11. PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.
12. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AS A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMPACTIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT PAVING QUALITY CONTROL TESTING INCLUDING DESIGN MIX REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.
13. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.
14. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COLLEGE OF INDEPENDENT LABORATORIES.
15. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.

II. UTILITY PROVISIONS:

1. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.
6. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROPRIATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GENERAL GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR WISHES TO NOTIFY.
7. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER BY DIALING "811" AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. PER FLORIDA STATUTE 553.851, THE CONTRACTOR OR EXCAVATOR IS REQUIRED TO NOTIFY THE GAS COMPANY TWO (2) WORKING DAYS PRIOR TO STARTING EXCAVATION.
8. THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP TO DATE AT ALL TIMES.
9. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRE-CONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER, AND THE ENGINEER OF RECORD.
10. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR ANY REMOVAL, RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK, IF APPLICABLE.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.
12. TYPICAL DETAILS AS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE METHOD OF CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDING HE SUBMITS A PROPOSAL, FOR AN ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL AND USES MATERIALS AS DESIGNATED IN THE SPECIFICATIONS.
13. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWING, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTORS CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

III. SITE PREPARATION:

1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.
3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION - TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15 FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION - TREES AND SHRUBS TO REMAIN OUTSIDE A 15 FOOT WIDE PATH, CENTERED ON THE PIPELINE.
5. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD.
6. AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.
7. CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR OTHERWISE OBSTRUCT THE WORK.
8. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.
9. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.
10. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

IV. DEWATERING:

1. DESIGN AND PROVIDE DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER OF FOUNDATION SOILS. DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. WHERE NECESSARY TO THESE PURPOSES, LOWER WATER LEVEL IN ADVANCE OF EXCAVATION, UTILIZING WELLS, WELLPOINTS, OR SIMILAR PUMPING METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2 FEET BELOW EXCAVATIONS. PROVIDE PIEZOMETERS IF DIRECTED BY THE ENGINEER TO DOCUMENT THE GROUNDWATER LEVEL, IS BEING MAINTAINED.
2. CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE AND BE FULLY RESPONSIBLE FOR DISPOSAL. PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.
3. OPEN PUMPING WITH PUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. PUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT STREAMS. DURING NORMAL PUMPING, AND UPON DEMAND OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE WATER SHALL NOT EXCEED 5 PPM.
4. IF DEWATERING EQUIPMENT NEEDED EXCEEDS ANY OF THE FOLLOWING: 1) 1" PUMP VOLUME; 2) 100,000 GPD TOTAL 24 HOUR (1 DAY) DEWATERING; AND, 3) 1,000,000 GPD PUMP CAPACITY, THE CONTRACTOR SHALL BE REQUIRED TO PERMIT THE DEWATERING SYSTEM WITH THE WATER MANAGEMENT DISTRICT.
5. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.
6. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

V. EROSION AND SEDIMENT CONTROL:

1. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEDIMENT CONTROL CONSISTS OF SILT FENCING AND FLOATING TURBIDITY BARRIERS PER FDOT INDEX NO. 102 AND 103. EROSION CONTROL CONSISTS OF SEEDING AND MULCHING, SODDING, WETTING SURFACES, PLACEMENT OF COARSE AGGREGATE, TEMPORARY PAVING.
2. MAINTAIN TEMPORARY EROSION CONTROL SYSTEMS AS DIRECTED BY OWNER OR GOVERNING AUTHORITIES TO CONTROL EROSION AND SILTATION DURING LIFE OF CONTRACT. OWNER HAS AUTHORITY TO LIMIT SURFACE AREA OF ERODIBLE AND EARTH MATERIAL EXPOSED BY CLEARING AND GRUBBING, EXCAVATION, TRENCHING, BORROW AND EMBANKMENT OPERATIONS. OWNER ALSO HAS AUTHORITY TO DIRECT CONTRACTOR TO PROVIDE IMMEDIATE PERMANENT OR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
3. CONTRACTOR SHALL RESPOND TO EROSION AND SEDIMENT CONTROL MAINTENANCE REQUIREMENTS OR IMPLEMENT ADDITIONAL MEASURES TO CONTROL EROSION ORDERED BY OWNER OR GOVERNING AUTHORITIES WITHIN 48 HOURS OR SOONER IF REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR WILL BE REQUIRED TO INCORPORATE PERMANENT EROSION CONTROL FEATURES INTO PROJECT AT EARLIEST PRACTICAL TIME TO MINIMIZE NEED FOR TEMPORARY CONTROLS.
5. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS REPRESENT A MINIMUM REQUIREMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NEEDED IN ORDER TO PREVENT THE TRANSFER OF SEDIMENT FROM THE PROJECT AREA AND PREVENT THE EROSION OF SURFACES DURING CONSTRUCTION, AS NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER BODIES.
6. GRASS ALL DISTURBED AREAS WITHIN 7 DAYS OF INITIAL DISTURBANCE. TYPE OF GRASSING SHALL BE AS FOLLOWS: TEMPORARY GRASSING TO BE SODDING AT ALL DRAINAGE STRUCTURES, RETENTION AREAS, SWALES AND DITCHES, AND WHERE SLOPES ARE STEEPER THAN 5:1. TEMPORARY GRASSING CAN BE SEED AND MULCH AT ALL OTHER LOCATIONS UNLESS OTHERWISE INDICATED IN THE DRAWINGS OR SPECIFICATIONS.
7. INSPECT EVERY TWO WEEKS DURING CONSTRUCTION. REMOVE ANY SEDIMENT BUILD-UP. REPAIR AND REINSTALL ANY DAMAGED OR MISSING SEDIMENT CONTROL MEASURES. INSTALL ADDITIONAL MEASURES IF INSPECTION REVEALS ADDITIONAL SEDIMENTATION CONTROL IS NECESSARY.
8. AREAS TO BE PAVED SHALL BE TREATED WITH A BITUMINOUS PRIME COAT AND SANDED TO MINIMIZE EROSION, WHERE PAVING IS SCHEDULED TO OCCUR MORE THAN 48 HOURS AFTER INSTALLATION OF BASE COURSE. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FOOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF INSTALLATION OF THE SUBGRADE. INSTALL FINAL SURFACE COURSES WITHIN 14 DAYS AFTER REMOVAL OF EXISTING PAVEMENT.

VI. TRAFFIC CONTROL:

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. ALL PROPOSED ROADWAY AND DRIVEWAY LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.
2. ALL CONSTRUCTION SIGNING AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH FDOT 2024-25 STANDARD PLAN INDEX NO. 102-600,602, 611,612,613,615, AND 660 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLACEMENT OF THE SIGNING AND MARKINGS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.
4. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.
5. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.
6. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.
7. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.
8. WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT 2024-25 STANDARD PLANS INDEX NO. 102-600 AND 102-602, FOR A 2-LANE ROADWAY.
9. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK OFF ANY AREA INTO OR FROM UNCOMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

VII. STORM DRAINAGE:

A. EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.
3. POND CONSTRUCTION SHALL RESULT IN THE FINISHED POND HAVING SIDE SLOPES AND DIMENSIONS THAT ARE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THE CONSTRUCTION METHODS HAVE BEEN MET. IF THE CONSTRUCTED SIDE SLOPES ARE STEEPER THAN THE REQUIRED SIDE SLOPES, OR THE POND VOLUME IS NOT WITHIN THREE (3) PERCENT OF THE DESIGN VOLUME, THE CONTRACTOR MAY BE REQUIRED TO MAKE CORRECTIONS TO THE POND AT NO ADDITIONAL COST TO THE OWNER.
4. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.
5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.
 - VI. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2, A-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SW, SP, UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
 - VJ. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SG, ML, MH, CL, CH, CL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT FOR EXCAVATIONS WITHIN THE PROJECTS TO KEEP EXCAVATIONS PROTECTED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
9. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL REPORT.
10. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVER EXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVER EXCAVATED MATERIAL WITH SUITABLE SOILS.
11. EXCEPT AS OTHERWISE INDICATED, EXCAVATE FOR PRESSURE PIPING SO TOP OF PIPING IS MINIMUM 3 FEET BELOW FINISHED GRADE.
12. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.
13. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.
14. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180): BACKFILL AND FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS - 98 PERCENT; BACKFILL AND FILL PLACED WITHIN PUBLIC ROAD RIGHT-OF-WAY AND UTILITY EASEMENTS - 95 PERCENT; BACKFILL AND FILL PLACED WITHIN POND AND ROAD EMBANKMENT - 95 PERCENT; BACKFILL AND FILL PLACED IN ALL OTHER AREAS - 90 PERCENT.

B. STORM SEWER SYSTEMS

1. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELIPTICAL CONCRETE PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS AND O-RING GASKETS SHALL COMPLY ASTM C443. MINIMUM COVER OVER THE PIPE, INCLUDING COVER OVER THE BELL OF THE PIPE WHERE APPLICABLE, SHALL BE 30 INCHES.
2. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED.
3. CORRUGATED POLYETHYLENE (PE) PIPE AND FITTINGS SHALL BE HIGH DENSITY, IN ACCORDANCE WITH ASTM D3389, CELL CLASSIFICATION 334420C (4"-10") OR CELL CLASSIFICATION 334420C (12"-36"). PIPE 4"-10" SHALL COMPLY WITH ASTM M252, TYPE S. PIPE 12"-36" SHALL COMPLY WITH ASTM M254, TYPE S. BELL JOINTS FOR 4"-10" PIPE SHALL BE PUSH-ON SLEEVE. BELL JOINTS FOR 12"-36" PIPE SHALL BE INTEGRALLY FORMED ON PIPE. GASKETS SHALL BE INSTALLED BY PIPE MANUFACTURER AND SHALL COMPLY WITH ASTM D1056, GRADE 2A2. FITTINGS SHALL COMPLY WITH AASHTO M234.
4. UNDERDRAIN PIPE SHALL BE PERFORATED POLYVINYL CHLORIDE PIPE IN ACCORDANCE WITH ASTM F758. FILTER FABRIC UNDERDRAIN SOCK SHALL BE TYPE D-3 IN ACCORDANCE WITH FDOT INDEX NO. 199.
5. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 199. TYPE D-3, A.O.S. 70-100. INSTALL IN ACCORDANCE WITH FDOT INDEX NO. 280. PROVIDE MINIMUM 12" OVERLAP.
6. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.
7. INSTALL UNDERDRAINS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 440. INSTALL CLEANOUTS AS SHOWN ON THE DRAWINGS.
8. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.
9. ALL STORM PIPE SHALL BE SUBJECTED TO LEAKAGE TESTING. WHEN THE GROUND WATER LEVEL IS ABOVE THE TOP OF THE PIPE, AN INFILTRATION TEST SHALL BE PERFORMED BY SEALING OFF A LENGTH OF PIPE AND MEASURING THE DEPTH OF FLOW OVER A MEASURING WEIR, OR BY PUMPING THE INFILTRATED WATER INTO CONTAINERS FOR MEASUREMENT. TESTS SHALL BE CONDUCTED FOR A MINIMUM OF FOUR HOURS. INFILTRATION LEAKAGE SHALL NOT EXCEED 150 GALLONS PER 24 HOURS, PER INCH DIAMETER, PER MILE OF PIPE. WHEN THE GROUND WATER LEVEL IS BELOW THE TOP OF THE PIPE, THE PIPE SHALL BE TESTED FOR LEAKAGE BY EXPLORATION. EXPLORATION LEAKAGE TEST SHALL CONSIST OF ISOLATING THE PARTICULAR SECTION, FILLING WITH WATER TO A POINT 4 FEET ABOVE THE TOP OF THE PIPE AT THE UPPER MANHOLE OR INLET, AND ALLOWING IT TO STAND NOT LESS THAN FOUR HOURS. THE SECTION SHALL THEN BE REFILLED WITH WATER UP TO THE ORIGINAL LEVEL AND AFTER TWO HOURS THE DROP IN WATER SURFACE SHALL BE MEASURED. THE COMPUTED LEAKAGE SHALL NOT EXCEED 150 GALLONS PER INCH DIAMETER, PER 24 HOURS, PER MILE OF PIPE.

VIII. PAVING AND GRADING:

A. PAVING, SIDEWALKS, AND CURBING

1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014 EDITION.
2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. MATERIAL STABILITY AND DENSITY REQUIREMENTS ARE AS FOLLOWS:
 - VII. TYPE S ASPHALTIC CONCRETE: MINIMUM STABILITY 1500 LBS, COMPACTED TO A MINIMUM OF 95% OF THE MARSHALL DESIGN DENSITY, FOR OFFSITE PAVEMENT USE TYPE SP PAVEMENT PER THE FDOT STANDARDS AND SPECIFICATIONS.
 - VIIJ. LIMEROCK BASE: MINIMUM LBR OF 100, PLACED IN 6" MAXIMUM LIFTS, COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180). CONTRACTOR MAY SUBSTITUTE ASPHALT BASE COURSE TYPE 3 (MIN. STABILITY OF 1000 LBS) AT NO ADDITIONAL COST, PROVIDED STRUCTURAL NUMBER EQUALS OR EXCEEDS THAT OF THE SPECIFIED LIMEROCK BASE.
 - VIII. SUBGRADE: STABILIZE TO A MIN. LBR OF 40, COMPACT TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180). CONTRACTOR MAY SUBSTITUTE LIMEROCK SUBGRADE (MIN. LBR OF 100) OR CONTROLLED LOW STRENGTH MATERIAL ("FLOWABLE FILL"), F_c (28 DAY) = 100-125 PSI AT NO ADDITIONAL COST, PROVIDED STRUCTURAL NUMBER EQUALS OR EXCEEDS THAT OF THE SPECIFIED SUBGRADE.
3. SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS. THE SIDEWALK SHALL BE CONSTRUCTED OF 4" OF CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 2800 PSI. JOINTS SHALL BE EITHER TOoled OR SAW CUT AT A DISTANCE OF 10'. HANDTIPPED CURBS SHALL BE PROVIDED AT ALL INTERSECTIONS AND SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION.
4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE FDOT CLASS "1" CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 2500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.
5. FIELD COMPACTION DENSITY, STABILITY, AND THICKNESS TESTING FREQUENCIES OF SUB-BASE, BASE, AND ASPHALT SHALL BE TESTED ONCE EVERY 300 LINEAR FEET OF PAVING PER 24-FT WIDE STRIP, STAGGERED LEFT, CENTER AND RIGHT OF CENTERLINE. WHERE LESS THAN 300 LINEAR FEET OF SUB-BASE, BASE, AND ASPHALT IS PLACED IN ONE DAY, PROVIDE MIN. OF ONE TEST FOR EACH PER DAY'S CONSTRUCTION AT A LOCATION DESIGNATED BY THE ENGINEER. ASPHALT EXTRACTION GRADATION SHALL BE TESTED FROM GRAB SAMPLES COLLECTED ONCE EVERY 1800 SQUARE YARDS OF ASPHALT DELIVERED TO THE SITE (OR A MINIMUM OF ONCE PER DAY).

B. PAVING TIMING REQUIREMENTS

1. INSTALL SUBGRADE AND BASE COURSE MATERIALS WITHIN 48 HOURS OF THE REMOVAL/OPEN CUTTING OF EXISTING PAVEMENT CONSISTING OF STREETS, DRIVEWAYS, OR SIDEWALK. INSTALL FINAL SURFACE COURSES WITHIN 14 DAYS AFTER REMOVAL OF EXISTING PAVEMENT.
2. AREAS TO RECEIVE ASPHALT SHALL RECEIVE EROSION CONTROL MEASURES NO LATER THAN 48 HOURS AFTER ACCEPTANCE OF THE BASE COURSE. TEMPORARY EROSION CONTROL CONSISTS OF PLACEMENT OF A BITUMINOUS PRIME COAT AND SANDING THE SURFACE. PERMANENT EROSION CONTROL CONSISTS OF PLACEMENT OF THE STRUCTURAL COURSE.
3. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FDOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF ACCEPTANCE OF THE SUBGRADE.

C. GRADING

1. GRADING SHOWN ON THESE PLANS ARE PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
2. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.
3. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE, GRADER OPERATIONS.
4. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF ¼-INCH PER FOOT FOR 10 FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS AND WITHIN 10 FEET OF STRUCTURES SHALL BE WITHIN 1 INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN 3 INCHES OF THE PROPOSED GRADE.
5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.



666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



4/4/2025
This item has been digitally signed and sealed by Christopher P. Collins, P.E. on the date adjacent to the seal.

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Designed by: C.P.C.

Drawn by: S.G.C.

Checked by: C.P.C.

Approved by: C.P.C.

Scale: AS SHOWN

Date: 11/22/2024

Job No.: Q003

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Plans for

LAUDERHILL
PARKING LOT
3760 N.W. 15TH STREET
LAUDERHILL, FL

GENERAL
NOTES

Sheet No.

C-2.0



IX. WATER AND SEWER:

A. UTILITY SEPARATION REQUIREMENTS

- THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF THREE FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.
 - THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF SIX FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
 - THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM ALL PARTS OF ANY EXISTING OR PROPOSED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
- THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST SIX FEET FROM GRAVITY SANITARY JOINTS.
 - WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 12 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST SIX FEET FROM THE JOINTS OF WASTEWATER FORCE MAINS.
- NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.
- NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:
 - THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.
 - SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.
 - TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
- THE FOLLOWING ARE ACCEPTABLE ALTERNATIVE CONSTRUCTION VARIANCES WHERE IT IS NOT POSSIBLE TO MEET THE SEPARATION REQUIREMENTS, AND ARE ONLY TO BE IMPLEMENTED UPON RECEIPT OF EXPRESSED WRITTEN CONSENT FROM THE ENGINEER. IMPLEMENTATION OF THESE MEASURES WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER COULD RESULT IN THE REQUIREMENT THAT THE INSTALLED UNAPPROVED MEASURES BE REMOVED AND REPLACED AT NO COST.
 - WHERE A WATER MAIN IS LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE LESS THAN THE MINIMUM REQUIRED DISTANCE BETWEEN THE JOINTS IN THE OTHER PIPELINE:
 - USE OF PRESSURE RATED PIPE CONFORMING TO AWWA STANDARDS FOR A GRAVITY OR VACUUM TYPE PIPELINE.
 - USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER PIPELINE.
 - USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER PIPE.
 - WHERE A WATER MAIN IS LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE AND OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE LESS THAN THE REQUIRED MINIMUM SEPARATION:
 - USE OF PIPE OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (AT LEAST EQUAL TO 0.25 INCH THICK DUCTILE IRON PIPE), OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN AND FOR THE OTHER PIPELINE IF THE OTHER PIPELINE COVEYS WASTEWATER OR RECLAIMED WATER.

B. WATER AND RECLAIMED WATER DISTRIBUTION SYSTEMS

- THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER SYSTEMS SHOWN ON THESE PLANS IS CITY OF LAUDERHILL. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF CITY OF LAUDERHILL ENGINEERING DEPARTMENT.
- ALL WATER AND RECLAIMED MAIN PIPE SHALL BE EITHER DUCTILE IRON OR PVC, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- INSTALL ALL WATER AND RECLAIMED MAINS AT A MINIMUM 36 INCHES OF COVER.
- BURIED DUCTILE IRON PIPE SHALL CONFORM WITH ANSI/AWWA C150/A21.50 AND C151/A21.51, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. BURIED PIPE SHALL COMPLY WITH THE FOLLOWING PRESSURE CLASS (PC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 12" DIAMETER AND SMALLER =PC 350; B) 14" THROUGH 24" DIAMETER = PC 250; C) 30" THROUGH 64" DIAMETER = PC 200.
- EXPOSED PIPE 4" AND LARGER SHALL BE DUCTILE IRON FLANGED AND SHALL CONFORM WITH AWWA/ANSI C115/A21.15, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. FLANGED PIPE SHALL COMPLY WITH THE FOLLOWING THICKNESS CLASS (TC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 4" DIAMETER = TC 54; B) 6" THROUGH 24" DIAMETER = TC 53.
- DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
- PVC PIPE 4" - 12" SHALL CONFORM TO AWWA C900. PIPE 14" - 36" SHALL CONFORM TO AWWA C905. PIPE SHALL CONFORM TO ASTM D1740, TYPE I, GRADE I, AND DESIGN STRONG, AND SHALL BE NATIONAL SANITARIATION FEDERATION (NSF) APPROVED. PIPE SHALL BE CLASS 150 (DR18) WITH MARKINGS ON EACH SECTION SHOWING CONFORMANCE TO THE ABOVE SPECIFICATIONS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905. THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
- ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED AND COATED. INTERIOR LINING SHALL BE STANDARD THICKNESS CEMENT MORTAR LINING PER ANSI/AWWA C104/A21.4. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH TWO COATS TNEMC SERIES 2 TNEMC-GLOSS, GLIDDEN LIFE MASTER PRO HIGH PERFORMANCE ACRYLIC A. 6900 SERIES, OR EQUAL, AT MINIMUM 4 MILS DRY FILM THICKNESS PER COAT. PAINT COLOR TO BE IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS.
- MECHANICAL AND PUSH ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
- ALL FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH DIPRA, "THRUST RESTRAINT DESIGNED FOR DUCTILE IRON PIPE". PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER. DUCTILE IRON RESTRAINED JOINTS SHALL BE AMERICAN FAST GRIP GASKET, FLEX-RING, FIELD FLEX RING, LOK-RING, USE PIPE TR-FLEX, EBAA MEGALUG, OR EQUAL, PVC PIPE JOINTS SHALL BE RESTRAINED USING MECHANICAL DEVICES, UN-FLANGE BLOCK BUSTER SERIES 1350 OR ENGINEER APPROVED EQUAL.
- ALL SERVICE PIPING (1/2" - 3") SHALL BE POLYETHYLENE. SDR-PR PE PIPE SHALL BE MANUFACTURED FROM PE3408 AND SHALL CONFORM TO AWWA C901. ALL PIPE SHALL BE DR9, PRESSURE CLASS 200 PSI. PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PR PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS.
- ALL SERVICE SADDLES SHALL CONSIST OF DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE
- ALL SERVICES SHALL INCLUDE THE FOLLOWING: CURB STOPS, UNIONS AS REQUIRED, CORPORATION STOPS. CONFORMANCE WITH AWWA C900 AND C901 IS REQUIRED. THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT.

- UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS AND RECLAIMED WATER METERS. THE CONTRACTOR SHALL CONSTRUCT WATER SERVICE AND RECLAIMED WATER SERVICE TO THE CORPORATION STOP.
- UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.
- VALVES 4 INCHES AND LARGER SHALL BE LINED AND COATED. INTERIOR OF VALVES SHALL BE COATED WITH A RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY. TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS, APPLIED AT THE FACTORY. EXTERIOR COATING ON BURIED VALVES SHALL BE RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY, TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS, APPLIED AT THE FACTORY. EXTERIOR COATING OF EXPOSED VALVES SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH TWO COATS TNEMC SERIES 2 TNEMC-GLOSS, GLIDDEN LIFE MASTER PRO HIGH PERFORMANCE ACRYLIC NO. 6900 SERIES, OR EQUAL, AT 4 MILS MINIMUM DRY FILM THICKNESS PER COAT. PAINT COLOR TO BE IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS.
- ALL VALVES 12" AND SMALLER SHALL BE GATE VALVES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. GATE VALVES 3 INCHES TO 12 INCHES SHALL CONFORM TO AWWA C509. THE VALVES SHALL BE IRON BODY, CAST IRON FULLY ENCAPSULATED MOLDED RUBBER WEDGE COMPLYING WITH ASTM D2000, NON-RISING STEM WITH O-RING SEALS. VALVES SHALL OPEN COUNTERCLOCKWISE.
- TAPPING VALVES AND SLEEVES SHALL BE APPROVED AWWA TYPE OF THE SIZE REQUIRED. VALVES SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509.
- VALVES 14" AND LARGER SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN REQUIREMENTS AND PERFORMANCE REQUIREMENTS OF AWWA C504, CLASS 150. VALVE BODY SHALL BE MECHANICAL JOINT END TYPE VALVE CONSTRUCTED OF CAST IRON OR DUCTILE IRON. DISC SHALL BE ONE PIECE CAST DESIGN WITH NO EXTERNAL RIBS TRANSVERSE TO FLOW. DISC SHALL BE CAST IRON OR DUCTILE IRON. THE RESILIENT SEAT SHALL MATE WITH A 304 OR 316 STAINLESS STEEL SURFACE.
- VALVE SEATS SHALL BE MECHANICALLY RETAINED, AND MAY BE INSTALLED ON EITHER THE BODY OR DISC. O-RING SEATS ON VALVE DISCS ARE UNACCEPTABLE. SEATS FOR VALVES 14" DIAMETER AND LARGER SHALL BE FULLY FIELD REPAIRED WITHOUT THE USE OF SPECIAL TOOLS. OPERATORS OF THE ENCLOSED TRAVELING-NUT TYPE SHALL BE PROVIDED UNLESS OTHERWISE INDICATED.
- ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16 INCH CAST EQUAL. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH EQUAL. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATELY 18 INCH GALVANIZED CHAIN. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "WATER" OR "RECLAIMED WATER".
- PVC PIPE SHALL BE COLOR CODED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS), STENCILED "WATER LINE" OR "RECLAIMED WATER LINE", AS APPLICABLE, (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).
- INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. APPLY TAPE TO SURFACE OF PIPE, CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON BLUE BACKGROUND (WATER MAINS), BLACK PRINTING ON PURPLE BACKGROUND (RECLAIMED WATER MAINS). PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
- INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLOR CODED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) WITH BLACK LETTERING, CODED AND WORDED "CAUTION: WATER MAIN BURIED BELOW", OR "CAUTION: RECLAIMED WATER MAIN BURIED BELOW", AS APPLICABLE.
- INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 14 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING SHALL BE SIMILAR TO WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2" AND LARGER. LOOP WIRE INTO ALL VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM. WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES PER CITY REQUIREMENTS. CHECK WIRE FOR ELECTRICAL CONTINUITY.
- ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE, EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
- TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
- PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
- ALL SERVICE LINES SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
- APPLY HYDROSTATIC TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI (FIRE MAINS), OR 100 PSI (RECLAIMED WATER MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTEL, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
- APPLY LEAKAGE TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI (FIRE MAINS) OR 100 PSI (RECLAIMED WATER MAINS). MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
- NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
- TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SDPI/133200 (AWWA C-600 DUCTILE IRON MAINS), OR L = NDP/77400 (AWWAC-605 - PVC MAIN); WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = INTERIOR DIAMETER (INCHES) OF THE PIPE; N = NUMBER OF JOINTS ALONG LINE BEING TESTED; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED WATER JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
- ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
- DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS.
- ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.

C. FIRE PROTECTION SYSTEMS

- COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHAL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING ORDER.
- INSTALL ALL FIRE LINE PIPING AT A MINIMUM 36 INCHES OF COVER.
- ALL FIRE LINE PIPING FROM POINT OF SERVICE AS DEFINED BY FS 633.02(1)(6) SHALL BE C900 DR 14. THE FIRE LINE SHALL BE PRESSURE RATED TO 200 PSI FOR A MINIMUM OF TWO HOURS, TESTED IN ACCORDANCE WITH NFPA 24-9.2.
- THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL USE CLASS I, II, OR LEVEL V CERTIFICATION AS ISSUED BY THE STATE OF FLORIDA, AS REQUIRED BY FS 633.02(1)(5).
- ALL FIRE PROTECTION SPRINKLER SYSTEMS INSTALLED SHALL COMPLY WITH NFPA 13, AND SHALL BE MONITORED BY A COMPANY LISTED AS A CENTRAL STATION.
- FIRE HYDRANTS SHALL HAVE A MINIMUM 5 1/4" VALVE OPENING AND SHALL OPEN AGAINST THE PRESSURE AND CLOSING WITH THE FLOW. HYDRANTS SHALL BE MUELLER CENTURION, MODEL NUMBER A-423 OR EQUAL. HYDRANTS SHALL MEET OR EXCEED ANSVA WWA C502-85, C503-88 OR LATEST REVISION, AND SHALL COMPLY WITH FACTORY MUTUAL RESEARCH CORPORATION AND UNDERWRITERS LABORATORIES UL246 STANDARD (CITY OF LAUDERHILL LDR).
- ALL HYDRANTS SHALL BE OF BREAKABLE TYPE, WITH THE BREAKABLE SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO-TWO AND HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE-FOUR AND A HALF INCH (4-1/2") STEAMER CONNECTIONS WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. THE HYDRANTS SHALL OPEN COUNTERCLOCKWISE.
- HYDRANTS SHALL BE PAINTED WITH A REFLECTIVE TYPE YELLOW PAINT OSHA YELLOW OR APPROVED EQUAL (CITY OF LAUDERHILL LDR).

- BLUE PAVEMENT REFLECTORS (CAT EYES) SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE DIRECTLY IN FRONT OF ALL FIRE HYDRANTS. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED AROUND THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.
- NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST: THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER; SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN; AND TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
- THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.

D. SANITARY SEWER SYSTEMS

- THE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS LAUDERHILL MAIN INVESTMENT, LLC. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF CITY OF LAUDERHILL ENGINEERING DEPARTMENT AND BROWARD COUNTY WATER AND WASTEWATER ENGINEERING DIVISION.
- PVC SEWER PIPE SHALL BE TYPE PSM PVC PIPE CONFORMING TO ASTM D3034 AND SHALL BE SDR 35 FOR 4" THROUGH 15", AND ASTM F 678, WALL THICKNESS =1, FOR PIPE 18" THROUGH 27".
 - INSTALL ALL SEWER MAINS AT A MINIMUM 36 INCHES OF COVER.
 - JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3212 USING RUBBER GASKETS CONFORMING TO ASTM F477.
 - FITTINGS SHALL CONFORM TO THE SAME REQUIREMENTS AS THE PIPE. PROVIDE ADAPTERS AS REQUIRED TO JOIN PVC PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS. SOLVENT CEMENT SHALL BE AS RECOMMENDED BY THE PIPE MANUFACTURER.
 - PVC SEWER PIPE SHALL BE COLOR CODED GREEN, STENCILED "SEWER LINE" (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).
 - INSTALL ADHESIVE IDENTIFICATION TAPE ALONG PIPELINE. TAPE SHALL BE MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. TAPE COLOR AND LETTERING SHALL BE "SEWER LINE"; BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
 - INSTALL WARNING TAPE ALONG ALL SEWER PIPELINES. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE, COLORED GREEN WITH BLACK LETTERING CODED AND WORDED "CAUTION: SEWER BURIED BELOW". INSTALL ALONG PIPELINE, 2 FEET ABOVE PIPE, MINIMUM OF 1 FOOT ABOVE GRADE.
 - CONNECTIONS TO EXISTING SEWER SHALL BE CONDUCTED IN SUCH A MANNER THAT THE EXISTING SEWER REMAINS IN OPERATION. PROVIDE BY PASS PUMPING OF EXISTING FLOWS OR COLLECT AND LEGALLY DISPOSE OF EXISTING SEWER FLOW AS NEEDED TO ACCOMMODATE CONSTRUCTION WHILE KEEPING EXISTING SEWER IN SERVICE.
 - PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND MANHOLES. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
 - PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
 - ALL SERVICE LATERALS SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
 - PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY, UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
 - CONDUCT LOW PRESSURE AIR TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PIPING IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWABLE LEAKAGE IS 0.016 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AIR PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN 53 SEC; B) 6" PIPE = 2 MIN 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN 43 SEC, OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; E) 12" PIPE = 5 MIN 40 SEC, OR 1.709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER.
 - CONDUCT LEAKAGE TESTING OF MANHOLES. PLUG INVERTS AND FILL MANHOLE WITH WATER. ALLOWABLE WATER DROP IN MANHOLE TO BE FIELD DETERMINED BY UTILITY AND ENGINEER. MINIMUM TEST DURATION IS 1 HOUR.
 - CONDUCT DEFLECTION TESTING OF PIPELINE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. MAXIMUM ALLOWABLE PIPE DEFLECTION IS 5%. MEASURE DEFLECTION BY MANUALLY PULLING A MANDEL THROUGH THE PIPE. THE MINIMUM MANDEL OUTER DIAMETER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 6" SEWER = 5.45" MANDEL; 8" SEWER = 7.28" MANDEL; 10" SEWER = 9.08" MANDEL; 12" SEWER = 10.79" MANDEL; 15" SEWER = 13.20" MANDEL; 18" SEWER = 16.13" MANDEL; 21" SEWER = 19.00" MANDEL; 24" SEWER = 21.36" MANDEL; 27" SEWER = 24.06" MANDEL.
 - DEFLECTION TESTING IS CONSIDERED SATISFACTORY IF THE MANDEL CAN BE PULLED BY HAND THROUGH THE PIPE BEING TESTED. IF THE MANDEL CANNOT BE PULLED THROUGH THE PIPE, REPLACE OR CORRECT THE PIPE AND RETEST UNTIL DEFLECTION IS SATISFACTORY. IF A PIPE IS REMOVED OR CORRECTED DUE TO FAILING DEFLECTION TESTING SHALL ALSO BE RE-TESTED FOR LEAKAGE.

E. PRECAST STRUCTURES AND APPURTENANCES

- ALL MANHOLES SHALL BE PRECAST CONSTRUCTION. THE MINIMUM SIZE DIAMETER OF MANHOLES SHALL BE 48" FOR SEWER LINES 21" IN DIAMETER OR LESS. INTEGRALLY CAST STEPS WITHIN PRECAST STRUCTURES ARE NOT ALLOWED.
- BASES SHALL BE ONE-PIECE PRECAST BASE SECTIONS CONSISTING OF INTEGRALLY CAST SLAB, BOTTOM RING SECTION AND CONCRETE FLOW CHANNELS. BASE SECTIONS SHALL HAVE INTEGRAL INVERTS WITH GASKETS TO MATCH THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL INVERT ANGLES. PROVIDE OUTLET STUBS WITH JOINTS TO MATCH THE PIPE.
- RISERS SHALL BE PRECAST REINFORCED CONCRETE PER ASTM C478, MANUFACTURED USING SULFATE RESISTANT CEMENT (ASTM C150, TYPE II). RISERS SHALL BE 48-INCH DIAMETER UNLESS OTHERWISE INDICATED AND SHALL HAVE A MINIMUM WALL THICKNESS OF 5 INCHES.
- GASKETS FOR SEATING PRECAST SECTIONS SHALL BE COLD ADHESIVE PREFORMED PLASTIC GASKETS CONFORMING TO FDOT SPECIFICATION 942.2, UNLESS OTHERWISE INDICATED.
- UNLESS OTHERWISE INDICATED, CONE TOP SECTIONS SHALL BE PRECAST, ECCENTRIC TYPE WITH 24-INCH DIAMETER TOP OPENING CONFORMING TO ASTM C478. PROVIDE 8-INCH MINIMUM THICKNESS FLAT SLAB TOPS WITH ECCENTRIC 24 INCH DIAMETER OPENING, UNLESS OTHERWISE INDICATED.
- PROVIDE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO THE MANHOLE. CONNECTION OF CONCRETE PIPE TO THE MANHOLE SHALL BE MADE WITH NON-SHRINK METALLIC GROUT. CONNECTION OF DUCTILE IRON OR PVC PIPE TO THE MANHOLE SHALL PROVIDE A WATERTIGHT CONNECTION PER ASTM C923. WHERE CONNECTORS ARE USED, THEY SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER. THE USE OF ADHESIVES OR LUBRICANTS FOR INSTALLATION OF RUBBER CONNECTORS IS PROHIBITED.
- FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE US FOUNDRY TYPE 227AS, TRAFFIC BEARING (ASHOTO H-30 LOADINGS), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES, AND SHRINKAGE. RAISED LETTERING ON COVERS SHALL BE "STORM", "SEWER", OR AS DETAILLED ON THE DRAWINGS.
- PROVIDE CAST IRON INLETS, FRAMES, AND GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR EQUAL.
- ALL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF THE STRUCTURE.
- MANHOLE COATINGS AND FINISHES SHALL BE:
 - SANITARY SEWER MANHOLE INTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.
 - INTERIOR OF MANHOLES WHICH RECEIVE FORCE MAIN DISCHARGE - INTEGRALLY ATTACHED INTERIOR LINER, FIBERGLASS LINER. LINER THICKNESS TO BE IN ACCORDANCE WITH THE DRAWINGS.
 - EXTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.
- AS-BUILT INFORMATION SHALL INCLUDE ALL RIM, TOP AND INVERT ELEVATIONS FOR ALL PRECAST STRUCTURES.

X. SIGNS AND PAVEMENT MARKINGS:

- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT STANDARD PLANS, STANDARD INDEX, NO 711-001 AND 711-002 APPLY. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6" EDGE LINES, 6" LANE LINES, 6" SINGLE CENTERLINES, AND 6" DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 - 4" x 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT INDEX NO. 706-001.
- PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971, NON-REFLECTIVE WHITE TRAFFIC PAINT.
- ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
- INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.
- THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
- ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
- PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

XI. AS-BUILT DRAWING REQUIREMENTS:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF THE APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
- AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.
- AT THE COMPLETION OF THE WORK, DELIVER THE DRAWINGS DOCUMENTING AS-BUILT INFORMATION, MEASURED BY A LICENSED SURVEYOR, TO THE ENGINEER, IN GOOD CONDITION AND FREE FROM ANY EXTRANEANOUS NOTATION. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.
 - DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.
 - STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AND HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND, AT LOCATIONS DESIGNATED BY THE ENGINEER. TOP OF POND HORIZONTAL DIMENSIONS ARE ALSO TO BE TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.
 - STORMWATER CONTROL, STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.
 - STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.
 - HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.
 - VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.
 - UTILITY PIPELINE TEST HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200-FT PLUS ALL CHANGES IN HORIZONTAL OFFSET.
 - PAVEMENT WIDTHS AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATION AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.
 - ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.
 - HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.
 - WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.
 - WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.

XII. OBSERVATIONS AND TESTING:

- THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY- EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRE-TESTING PRIOR TO NOTIFICATION.
- THE ENGINEER OF RECORD WILL REQUIRE THAT THE FOLLOWING TESTS BE PERFORMED WITH ACCEPTABLE RESULTS:
 - SANITARY SEWER COLLECTION SYSTEM:
 - INFILTRATION/EXFILTRATION TEST UP TO THE CONNECTING MANHOLE
 - LAMPING TEST FROM MANHOLE TO MANHOLE, INCLUDING CONNECTING MANHOLE (IF APPLICABLE)
 - PRESSURE TEST AS REQUIRED BY DRER
 - SANITARY SEWER COLLECTION SYSTEM:
 - EXFILTRATION TRENCH DEPTH
 - LAMPING TEST FROM MANHOLE TO MANHOLE, INCLUDING CONNECTING MANHOLE (IF APPLICABLE)



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SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



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Plans for

LAUDERHILL
PARKING LOT
3760 N.W. 15TH STREET
LAUDERHILL, FL

GENERAL
NOTES

Sheet No.

C-2.1

Sunshine
Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!

EROSION SEDIMENTATION CONTROL NOTES

MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES OR THE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE JURISDICTIONAL AUTHORITIES. REFERENCE THE EROSION CONTROL PLAN AND DETAILS.

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 17-25-FAC.

SITE

A. SITE CONDITIONS

1. SITE OPERATOR (CONTRACTOR) SHALL PREPARE A CONSTRUCTION SCHEDULE THAT INCLUDES THE DATE GRADING WILL BEGIN AND THE EXPECTED DATE OF STABILIZATION AND SHALL INCLUDE THE CONSTRUCTION SCHEDULE AS PART OF THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

B. SEQUENCE OF IMPLEMENTATION OF CONTROLS

1. INSTALLATION OF CONTROL MEASURES (CONSTRUCTION ENTRANCE, SILT FENCE, FILTER SACKS, GUTTER EEL) ETC.

2. DEMOLITION AND CLEARING, GRUBBING AND EXCAVATION

3. CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE BUILDING, SITE DEVELOPMENT, AND INFRASTRUCTURE NECESSARY TO SERVE THE PROPOSED PROJECT.

4. FINAL STABILIZATION

C. PHASING OF CONTROL MEASURES

1. PHASE 1- INITIAL PHASE

THIS PHASE INCLUDES EROSION AND SEDIMENT CONTROL MEASURES REQUIRED BEFORE AND DURING DEMOLITION STAGE OF CONSTRUCTION.

THIS PHASE INCLUDES

- ESTABLISH STABILIZED CONSTRUCTION ENTRANCE.
- INSTALLATION OF SILT FENCE.
- INSTALL FILTER SACKS IN OFF-SITE INLET GRATES AND PLACE GUTTER EEL ON TOP OF GRATES.
- INSTALL FILTER SACKS IN EXISTING ONSITE STORM INLETS DURING DEMOLITION.

2. PHASE 2- INTERMEDIATE PHASE

THIS PHASE INCLUDES EROSION AND SEDIMENT CONTROL MEASURES REQUIRED DURING SITE GRADING FROM INITIAL GRADING THROUGH CURBS AND GUTTER PHASE.

THIS PHASE INCLUDES

- INSTALLATION OF FILTER SACKS IN PROPOSED INLETS.
- MAINTAIN ALL MEASURES IN PHASE 1

3. PHASE 3- FINAL PHASE

THIS PHASE INCLUDES EROSION AND SEDIMENT CONTROL MEASURES REQUIRED DURING FINAL BUILDING CONSTRUCTION, PAVING, AND FINAL LANDSCAPE.

THIS PHASE INCLUDES

- REMOVAL OF GUTTER EELS FROM RIGHT OF WAY INLETS.
- MAINTAIN REMAINING MEASURES FROM PHASES 1 AND 2.

CONTROLS

EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR THE APPLICABLE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES (IF NEEDED) SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT IS NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BEST MANAGEMENT PRACTICES (BMPs). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN FDOT INDEXES #100 THROUGH #102 AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORM WATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.

A. EROSION AND SEDIMENT CONTROLS

GENERAL EROSION CONTROL

- A. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL BMPs SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.

- B. EXCAVATED MATERIAL WILL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF. STOCKPILED MATERIAL SHALL BE COVERED OR ENCLOSED WITH SEDIMENT CONTAINMENT DEVICES.

- C. STABILIZATION MEASURES SHALL BE IMMEDIATELY INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS. CLEARED SITE DEVELOPMENT AREAS WHICH WILL REMAIN AT ROUGH GRADE FOR 7 DAYS OR MORE SHOULD BE STABILIZED IMMEDIATELY BY COVERING WITH ADEQUATE AMOUNTS OF HAY, OVER SEEDING AND PERIODICALLY WATERED SUFFICIENT TO STABILIZE THE TEMPORARY GROUND COVER, OR BY THE USE OF AN APPROPRIATE ALTERNATIVE BMP.

- D. ALL GRASS SLOPES CONSTRUCTED STEEPER THAN 4H:1V SHALL BE SODDED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING.

- E. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEDIMENT CONTROL CONSISTS OF SILT FENCING AND FLOATING TURBIDITY BARRIERS PER FDOT INDEX NO. 102 AND 103. EROSION CONTROL CONSISTS OF SEEDING AND MULCHING, SODDING, WETTING SURFACES, PLACEMENT OF COARSE AGGREGATE, TEMPORARY PAVING.

- F. MAINTAIN TEMPORARY EROSION CONTROL SYSTEMS AS DIRECTED BY OWNER OR GOVERNING AUTHORITIES TO CONTROL EROSION AND SILTATION DURING LIFE OF CONTRACT. OWNER HAS AUTHORITY TO LIMIT SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY CLEARING AND GRUBBING, EXCAVATION, TRENCHING, BORROW AND EMBANKMENT OPERATIONS. OWNER ALSO HAS AUTHORITY TO DIRECT CONTRACTOR TO PROVIDE IMMEDIATE PERMANENT OR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

- G. CONTRACTOR SHALL RESPOND TO EROSION AND SEDIMENT CONTROL MAINTENANCE REQUIREMENTS OR IMPLEMENT ADDITIONAL MEASURES TO CONTROL EROSION ORDERED BY OWNER OR GOVERNING AUTHORITIES WITHIN 48 HOURS OR SOONER IF REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

- H. CONTRACTOR WILL BE REQUIRED TO INCORPORATE PERMANENT EROSION CONTROL FEATURES INTO PROJECT AT EARLIEST PRACTICAL TIME TO MINIMIZE NEED FOR TEMPORARY CONTROLS.

- I. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS REPRESENT A MINIMUM REQUIREMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NEEDED IN ORDER TO PREVENT THE TRANSFER OF SEDIMENT FROM THE PROJECT AREA AND PREVENT THE EROSION OF SURFACES DURING CONSTRUCTION, AS NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER BODIES.

- J. INSPECT EVERY TWO WEEKS DURING CONSTRUCTION. REMOVE ANY SEDIMENT BUILD-UP. REPAIR AND REINSTALL ANY DAMAGED OR MISSING SEDIMENT CONTROL MEASURES. INSTALL ADDITIONAL MEASURES IF INSPECTION REVEALS ADDITIONAL SEDIMENTATION CONTROL IS NECESSARY.

- K. AREAS TO BE PAVED SHALL BE TREATED WITH A BITUMINOUS PRIME COAT AND SANDED TO MINIMIZE EROSION. WHERE PAVING IS SCHEDULED TO OCCUR MORE THAN 48 HOURS AFTER INSTALLATION OF BASE COURSE, AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FOOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF INSTALLATION OF THE SUBGRADE. INSTALL FINAL SURFACE COURSES WITHIN 14 DAYS AFTER REMOVAL OF EXISTING PAVEMENT.

CONTROL OF WIND EROSION

- A. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IT MAY BE NECESSARY TO LIMIT CONSTRUCTION VEHICLE SPEED IF BARE EARTH HAS NOT BEEN EFFECTIVELY WATERED. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.

- B. AS REQUIRED AFTER COMPLETION OF CONSTRUCTION, BARE EARTH AREAS SHALL BE VEGETATED.

- C. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS MAY INCLUDE ERECTION OF DUST CONTROL FENCES. IF REQUIRED, DUST CONTROL FENCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL FOR A SILT FENCE EXCEPT THE MINIMUM HEIGHT SHALL BE 4 FEET.

IN ADDITION TO THOSE RESPONSIBILITIES OUTLINED WITHIN THE CONSTRUCTION PLANS AND DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING MEASURES:

- A. PROJECT SCHEDULE WITH EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE TIED TO SPECIFIC DATES OR CONSTRUCTION ACTIVITIES.

- B. ALTERATIONS TO THE DESIGN EROSION AND SEDIMENT CONTROLS DUE TO DIFFERENCES BETWEEN THE DESIGN PLANS AND ANTICIPATED CONSTRUCTION PHASING AND THE CONTRACTOR'S CONSTRUCTION METHODS.

- C. NAME AND PHONE NUMBER OF CONTRACTOR'S REPRESENTATIVE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL INSTALLATION AND MAINTENANCE ON A 24 HOUR BASIS.

- D. THE CONTRACTOR WILL FURNISH, INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE, ALL NECESSARY EROSION CONTROL. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT EROSION CONTROLS.

- E. THE DEVELOPMENT OF THE APPLICABLE BMPs TO ENSURE THE CONTROL OF OFF-SITE TRACKING (SPILLAGE, SANITARY WASTE, FERTILIZERS & PESTICIDES, SOLID WASTE DISPOSAL, AND NON-STORMWATER DISCHARGES & HAZARDOUS WASTE. WHEN A SPILL OF REPORTABLE QUANTITIES IS DISCOVERED ON THE SITE, THE CONTRACTOR SHALL CLEAN UP ALL SPILLED MATERIALS AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITIES, IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS AND PROJECT ENGINEER. THE CONTRACTOR SHALL RETAIN CLEAN UP INFORMATION AS WELL AS DISPOSAL MANIFESTS WITH THEIR SWPPP.

THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.

STORM WATER MANAGEMENT

THE STORM WATER RUNOFF FROM THE PROJECT AREA WILL BE COLLECTED IN A SYSTEM OF INLETS AND CONVEYED TO EXFILTRATION TRENCHES FOR WATER QUALITY TREATMENT AND PEAK ATTENUATION.

MAINTENANCE

MAINTENANCE OF EROSION CONTROL DEVICES IS OF PARAMOUNT IMPORTANCE TO CWS/PHARMACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL POLLUTION PREVENTION CONTROLS. DAILY REVIEW SHALL BE MADE BY THE CONTRACTOR TO DETERMINE IF CONSTRUCTION ACTIVITIES HAVE ALTERED THE EFFECTIVENESS OF EROSION, SEDIMENTATION, AND POLLUTION CONTROL MEASURES. CORRECTIVE ACTION SHALL BE PERFORMED IMMEDIATELY. AT THE END OF EACH DAY OF WORK THE CONTRACTOR WILL COMPLETE A REPORT DETAILING MEASURES THAT ARE NOT ACHIEVING PERMIT COMPLIANCE AND THE CORRECTIVE ACTION THAT IS TAKEN. UNLESS OTHERWISE SPECIFIED, ACCUMULATED SEDIMENTS SHOULD BE REMOVED BEFORE THEY REACH ONE-HALF OF THE CAPACITY OF THE CONTROL DEVICE.

INSPECTION

THE CONTRACTOR IS REQUIRED TO INSPECT AND MAINTAIN CONTROLS WEEKLY AND WITHIN 24 HOURS AFTER A RAINSTORM IN EXCESS OF 0.25 INCHES. THE CONTRACTOR SHALL REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION. INSPECTION REPORTS SHALL BE SIGNED BY THE INSPECTOR AND CONTRACTOR AND MAINTAINED FOR FUTURE REFERENCE AS NEEDED.

THE INSPECTOR MUST BE A QUALIFIED EROSION AND SEDIMENT CONTROL INSPECTOR AS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

IT IS THE CONTRACTOR'S RESPONSIBILITY (FOR ALL SITES WHICH ARE ONE (1) ACRE AND GREATER) TO FILE "NOTICE OF INTENT" (NOI) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT (EPA FORM 4510-9 OR LATEST VERSION) TO EPA AND "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" (EPA FORM 62-621-3004)(b) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESSES: NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2600 BLAIR STONE ROAD TALLAHASSEE, FLORIDA 32399-2400

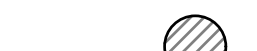
DRAINAGE SYMBOLS LEGEND



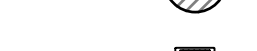
PROPOSED TEMPORARY CONSTRUCTION EXIT / ENTRANCE



PROPOSED TEMPORARY CHAIN LINK FENCE



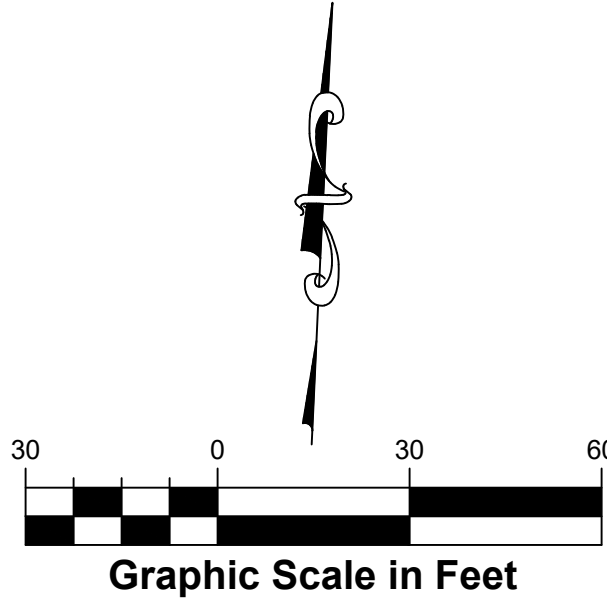
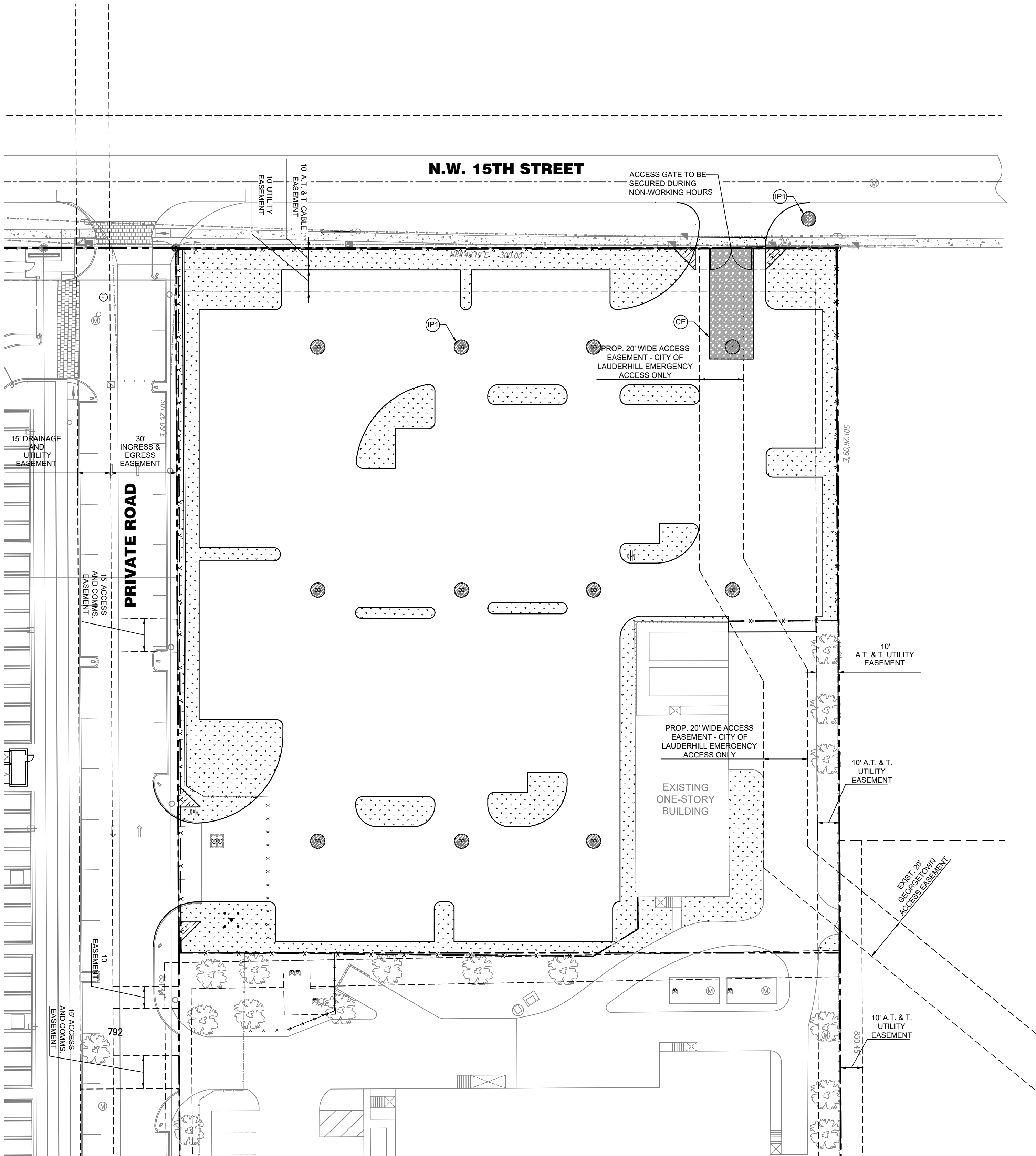
IP1 FILTER SACKS INLET PROTECTION



EXISTING INLET



TEMPORARY BARRICADE



666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



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Drawn by: S.G.C.

Checked by: C.P.C.

Approved by: C.P.C.

Scale: 1" = 20'

Date: 11/21/2024

Job No.: Q003

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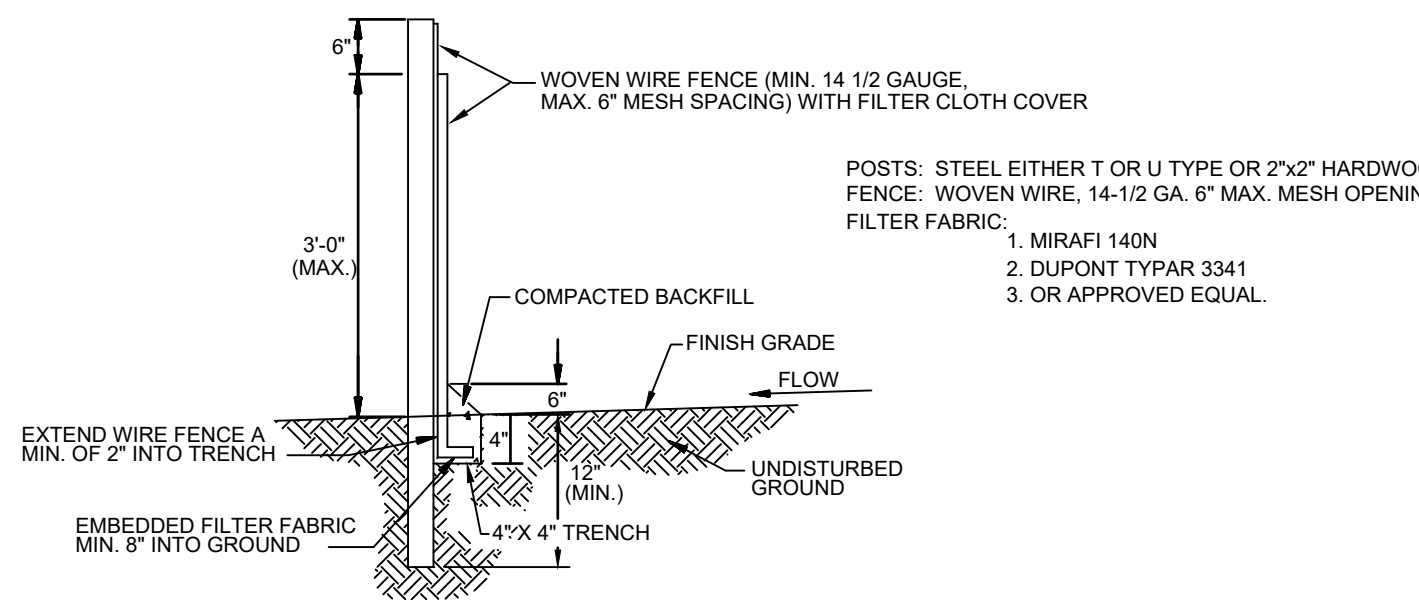
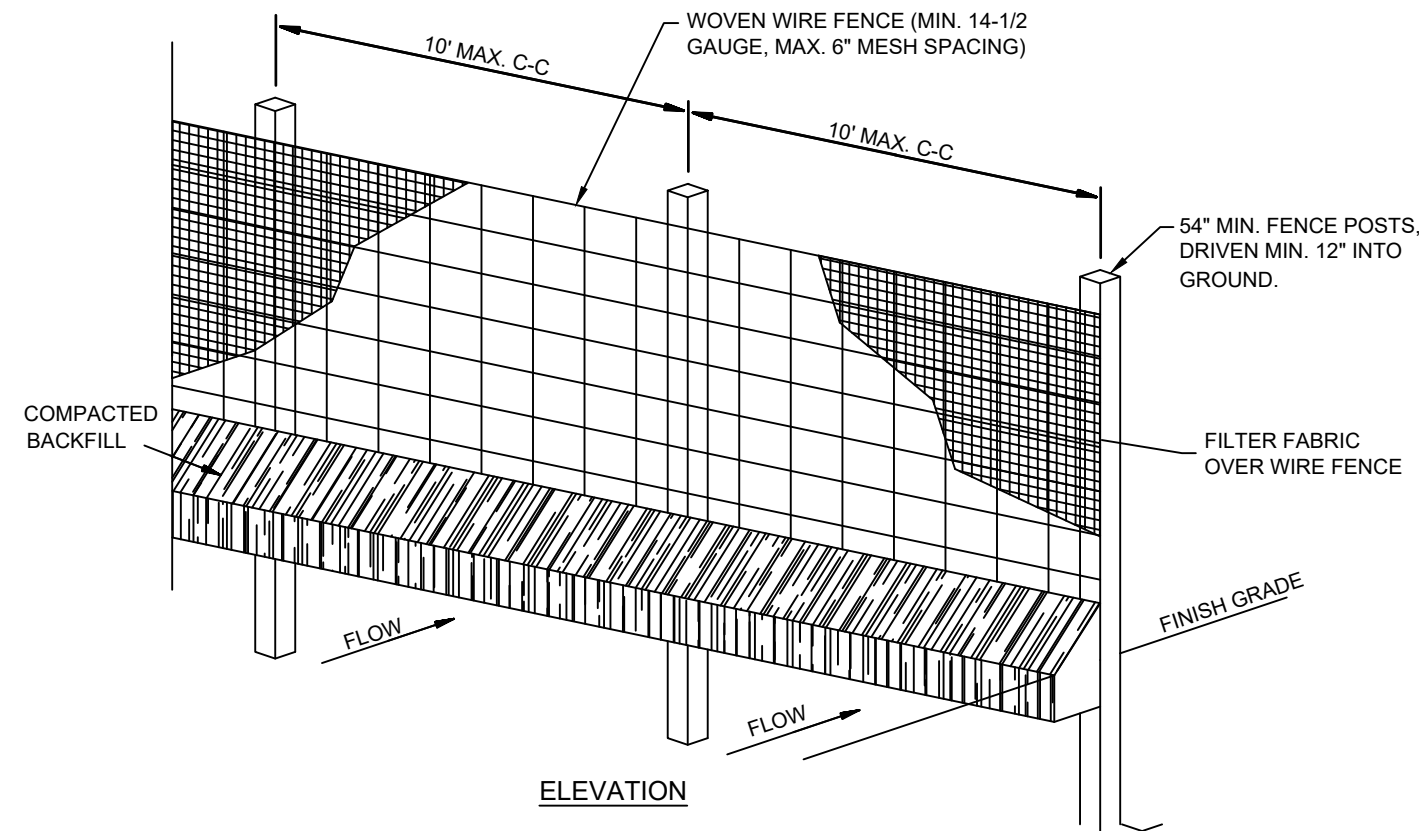
Plans for

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PARKING LOT
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LAUDERHILL, FL

EROSION
CONTROL
PLAN

Sheet No.

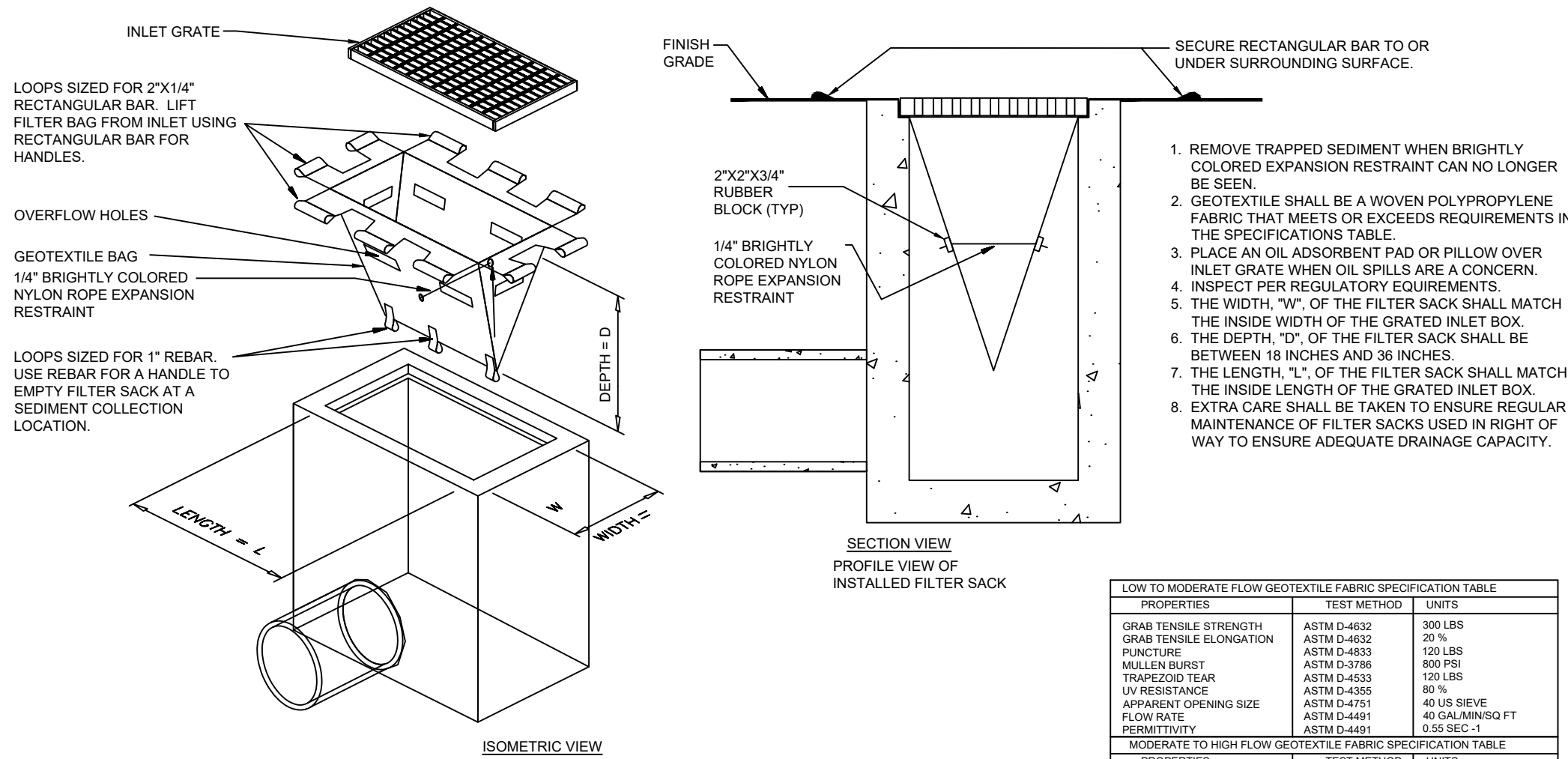
C-3.0



- CROSS-SECTION**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO HALF THE HEIGHT OF THE SILT FENCE.

SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT

N.T.S.

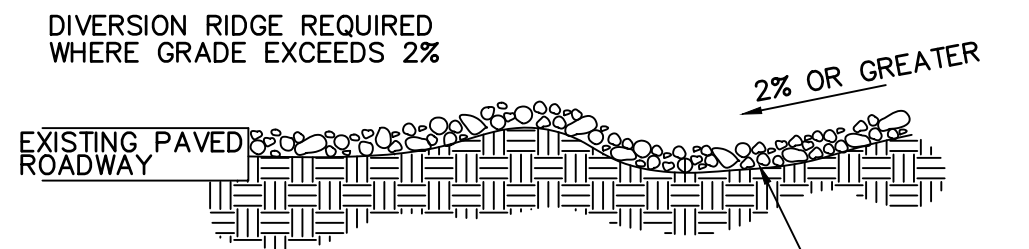


CAUTION: BAGGED INLET PROTECTION REQUIRES ADDITIONAL MAINTENANCE TO ENSURE THAT THE BMP FUNCTIONS PROPERLY AND DOES NOT CAUSE FLOODING.

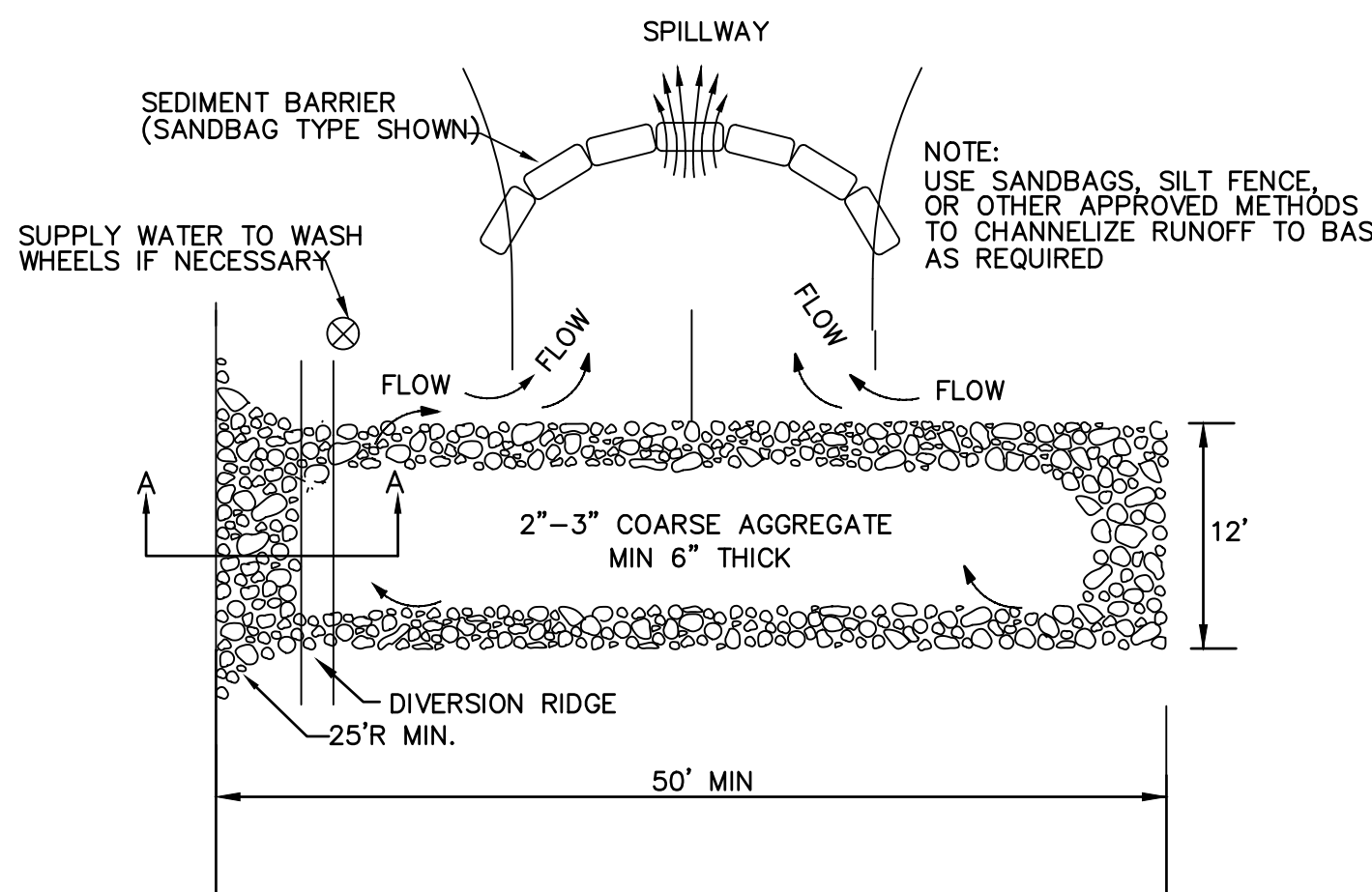
FILTER SACK GEOTEXTILE BAG INLET PROTECTION DETAIL

N.T.S.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4832	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4832	20 %
PUNCTURE	ASTM D-4833	125 LBS
MULLEN BURST	ASTM D-3706	800 PSI
TRAPEZOID TEAR	ASTM D-4333	125 LBS
UV RESISTANCE	ASTM D-4335	80 %
APARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/50 FT
PERMITTIVITY	ASTM D-4491	0.5 SEC.-1
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4832	285 LBS
GRAB TENSILE ELONGATION	ASTM D-4832	20 %
PUNCTURE	ASTM D-4833	125 LBS
MULLEN BURST	ASTM D-3706	420 PSI
TRAPEZOID TEAR	ASTM D-4333	40 LBS
UV RESISTANCE	ASTM D-4335	90 %
APARENT OPENING SIZE	ASTM D-4751	30 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/50 FT
PERMITTIVITY	ASTM D-4491	1.5 SEC.-1



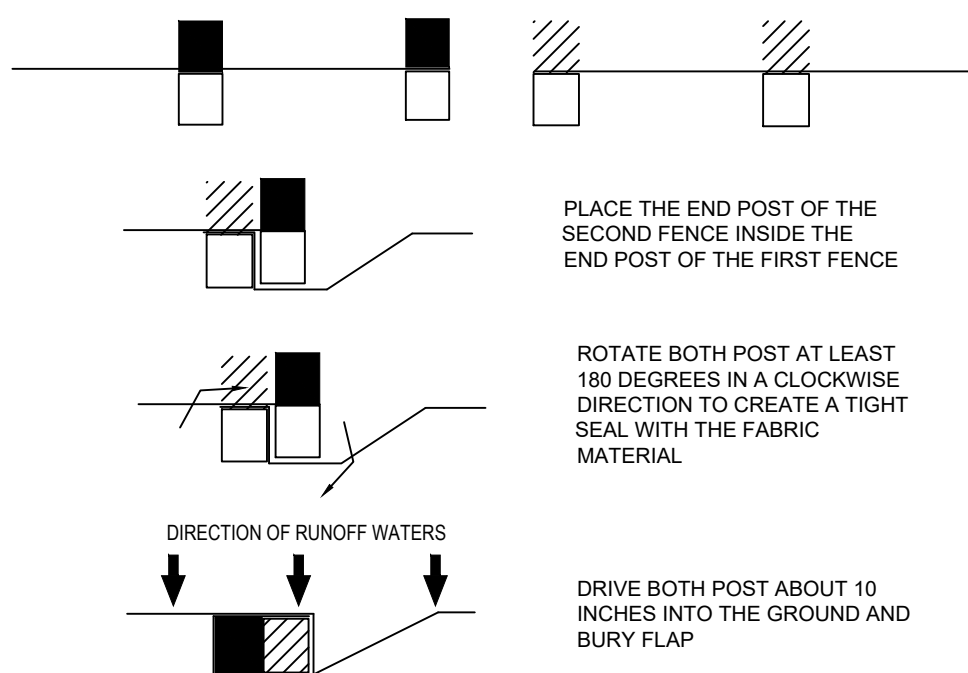
SECTION A-A



- NOTE:**
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY CONSTRUCTION ACCESS DETAIL

N.T.S.

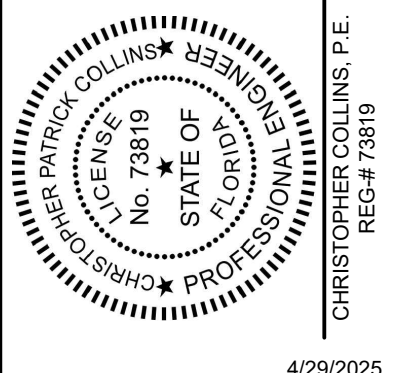


ATTACHING TWO SILT FENCES

N.T.S.



666 N.E. 125th STREET,
SUITE 247
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PARKING LOT**
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**EROSION
CONTROL
DETAILS**

Sheet No.

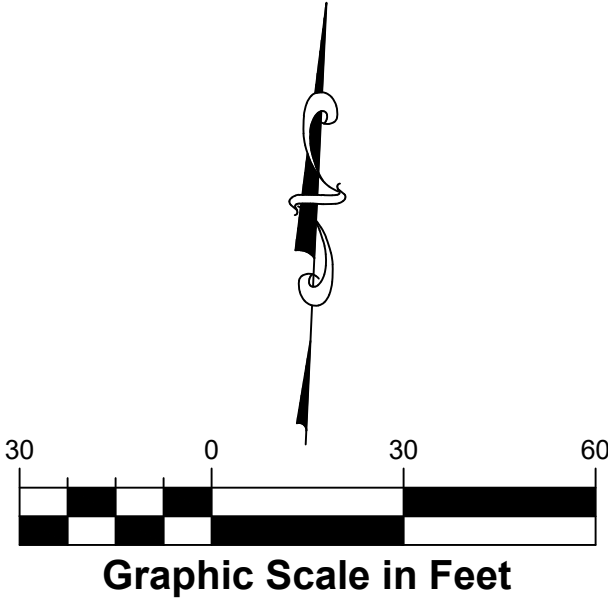
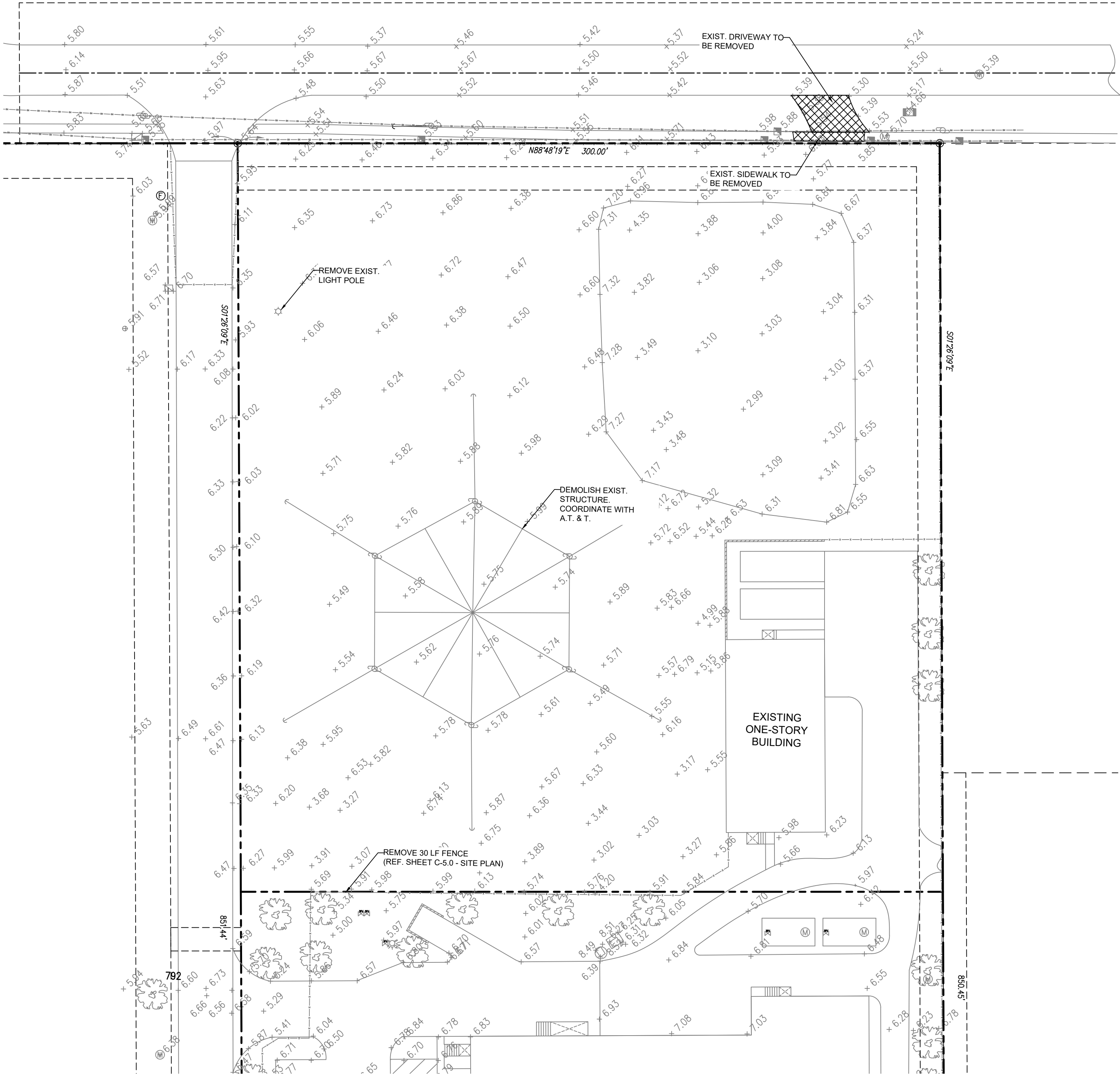
C-3.1

DEMOLITION NOTES

1. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, SUPERVISION, AND EQUIPMENT REQUIRED FOR THE ORDERLY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES, PAVEMENT AND UTILITIES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
2. DEMOLITION SHALL BE CONDUCTED AS SHOWN ON CONSTRUCTION DRAWINGS AND SHALL MEET APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS
3. THE CONTRACTOR SHALL COORDINATE DEMOLITION OF UTILITIES WITH UTILITY COMPANIES, GIVING THEM NOTICE OF DESTRUCTION AND REMOVAL OF SERVICE LINES AND CAPPING LINES WHEN NECESSARY.
4. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.
5. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE STRUCTURES TO BE DEMOLISHED. A BRIEF DESCRIPTION OF THE STRUCTURES IS INCLUDED FOR THE CONTRACTOR'S CONVENIENCE ONLY.
6. THE DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: PAVEMENTS, SIGNS, CURBS, UTILITIES, SIDEWALKS, TREES, BUILDING AND MISCELLANEOUS APPURTENANCES. UTILITY DEMOLITION INCLUDES ABOVE GROUND AND UNDERGROUND UTILITIES.
7. THE CONTRACTOR SHALL PRESERVE ANY BENCHMARKS LOCATED ON THE SITE.
8. PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES. EXECUTE THE WORK IN A MANNER TO AVOID HAZARDS TO PERSONS AND PROPERTY AND PREVENT INTERFERENCE WITH THE USE OF AND ACCESS TO ADJACENT BUILDINGS. STREETS AND SIDEWALKS SHALL NOT BE BLOCKED BY DEBRIS AND EQUIPMENT.
9. WET DOWN DEBRIS DURING DEMOLITION AND LOADING OPERATIONS TO PREVENT THE SPREAD OF DUST.
10. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING THE DEMOLITION/EXCAVATION PROCESS.
11. DISPOSAL:
 - A. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE FILL MATERIAL, DEPOSITED AND COMPACTED IN 12 INCH LIFTS.
 - B. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING OF THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
12. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING BUILDINGS AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES AND THE CONSTRUCTION OF THE NEW DEVELOPMENT.
13. PERMITTING: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY REQUIRED PERMITTING FOR DEMOLITION FROM RESPONSIBLE REGULATORY AGENCIES AND FULLY ACKNOWLEDGE AND COMPLY WITH ALL REQUIREMENTS PRIOR TO COMMENCING DEMOLITION WORK.
14. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED IN ORDER TO PERFORM THE CONTRACT WORK FOR THIS PROJECT. THE CONTRACTOR SHALL CONDUCT SITE VISITS AND SHALL EXAMINE ALL OF THE INFORMATION WITHIN THESE DOCUMENTS. ALL DISCREPANCIES AND/OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID SUBMITTAL.
15. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
16. THE SITE SHALL BE LEFT CLEAN AFTER DEMOLITION WORK AND BE READY FOR FILLING AND COMPACTION OPERATIONS (FILL SHALL BE COMPACTED 12 INCH LIFTS).
17. PAVEMENT REMOVAL:
 - A. WHERE EXISTING PAVEMENT IS TO BE REMOVED, SAW-CUT THE SURFACING LEAVING A UNIFORM AND STRAIGHT EDGE WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACING. IF CONSTRUCTION RESULTS IN RAVELING OF THE SAW-CUT SURFACE, RE-CUT BACK FROM THE RAVELED EDGE PRIOR TO RESTORATION.
 - B. WHERE EXISTING PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK, DRIVEWAY, OR VALLEY GUTTER IS REMOVED FOR THE PURPOSE OF CONSTRUCTING OR REMOVING BOX CULVERTS, PIPE, INLETS, MANHOLES, APPURTENANCES, FACILITIES OR STRUCTURES, SAID PAVEMENT, ETC., SHALL BE REPLACED AND RESTORED IN EQUAL OR BETTER CONDITION THAN THE ORIGINAL. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, TOOLS, SUPPLIES, AND OTHER EQUIPMENT AS REQUIRED.

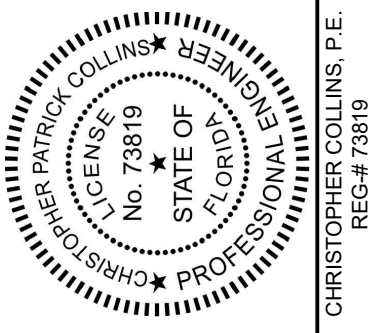
GENERAL NOTES

1. CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL ASSESSMENT DONE FOR THE SITE PRIOR TO DEMOLITION.
2. REFER TO LANDSCAPE PLAN FOR TREE REMOVAL.
3. THE CONTRACTOR SHALL PREPARE THE SITE FOR FILLING AND COMPACTION OPERATIONS PER THE GEO-TECHNICAL REPORT.
4. PER BROWARD COUNTRY PUBLIC WORKS DEPT.:
 - ALL BACKFILL SHALL BE DEPOSITED AND COMPACTED IN 12 INCH LIFTS.
 - UTILITIES TO BE ABANDON IN PLACE ARE REQUIRED TO BE CAPPED AND FILLED WITH FLOW-ABLE FILL. EXCAVATION TO BE BACKFILLED IN 12" COMPACTED LIFTS.
 - BACKFILLING OF UNDERGROUND REMOVALS (SUCH AS STORM DRAINAGE STRUCTURES/PIPE & UTILITY LINES) WILL REQUIRE BACKFILLING IN 12" COMPACTED LIFTS.
5. THE REMOVED FILL MAY CONTAIN UNSTABLE MATERIAL SUCH AS LARGE PIECES OF CONCRETE, ASPHALT, WOOD, ORGANICS, METAL AND OTHER DELETERIOUS MATERIALS. THESE MATERIALS ARE NOT SUITABLE FOR USE AS ENGINEERED FILL WITH THE EXCEPTION OF CONCRETE AND ASPHALT, IF PROCESSED TO AN ACCEPTABLE SIZE. IF ENCOUNTERED, THESE MATERIALS MUST BE SEGREGATED FROM THE REUSABLE MATERIAL.
6. CONTRACTOR SHALL COORDINATE SEQUENCING OF REMOVAL WITH UTILITY COMPANIES PRIOR TO COMMENCEMENT OF DEMOLITION.



D E S I G N

666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



4/29/2025
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Designed by: C.P.C.

Drawn by: S.G.C.

Checked by: C.P.C.

Approved by: C.P.C.

Scale: AS SHOWN

Date: 11/22/2024

Job No.: Q003

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Plans for
**LAUDERHILL
PARKING LOT**
3760 N.W. 15TH STREET
LAUDERHILL, FL

**DEMOLITION
PLAN**

Sheet No.
C-4.0

SITE DATA

FOLIO NUMBER: 4942-31-34-0020
ADDRESS: 3760 NW 15TH STREET, LAUDERHILL FLORIDA 33311
LOT/SITE AREA: 1.87 AC (81,569 S.F.)
PERVIOUS AREA: 0.37 AC (16,188 S.F.) 20%
IMPERVIOUS AREA: 1.50 AC (65,381 S.F.) 80%

LAND USE
EXISTING: 91-06 UTILITY, TELEPHONE AND TELEGRAPH - IMPROVED
PROPOSED: PARKING LOT

ZONING
EXISTING/PROPOSED: IL - LIGHT INDUSTRIAL

PROPOSED PARKING SPACES
OFF-STREET STANDARD SPACES (18' x 9'):
OFF-STREET PARKING SPACES (26' x 9'):
OFF-STREET LOADING SPACES (38' x 12'):
TOTAL SPACES PROVIDED:

116 SPACES
13 SPACES
15 SPACES
144 SPACES

TOTAL PROVIDED PARKING: 144 SPACES

KEYNOTE LEGEND

- 1 PROP. 24" STOP BAR
2 PROP. PAVEMENT MARKING (TYP.)
3 PROP. WHITE DIRECTIONAL TRAFFIC ARROWS
4 PROP. 6' HIGH CHAINLINK FENCE
5 PROP. SLIDING GATE. GATE OPEN FROM LANDSCAPE AREA. ALL GATES MUST HAVE CLICK 2 ENTER SYSTEM WITH KNOX KEY SWITCH
6 PROP. GRASS
7 EXIST. CONCRETE SIDEWALK (TO REMAIN)
8 EXIST. FENCE TO REMAIN
9 MATCH EXISTING LINE AND GRADE
10 PROP. 6" CONCRETE SIDEWALK (PUBLIC)
11 PROP. 10' x 10' SIGHT TRIANGLE
12 EXIST. GATE TO BE REMOVED
13 EXIST. UTILITY POLE TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
14 EXIST. CATCH BASIN TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
15 PROP. 240 LF 8" HIGH PRE-FABRICATED WALL
16 PROP. EDGE OF PAVEMENT, TYP.
17 PROP. HYDRANT GUARDS PER CITY OF LAUDERHILL DETAIL W-5
18 PROP. FIRE HYDRANT PER CITY OF LAUDERHILL DETAIL W-5
19 PROP. 25 LF C.I. M.J. PIPE
20 PROP. TAPPING SLEEVE W/ 6" G.V. PER CITY OF LAUDERHILL DETAIL W-1 AND W-5. CONTRACTOR TO VERIFY SIZE, MATERIAL, INVERT, AND LOCATION OF EXIST. WATER MAIN.
21 INSERT PRIVACY FENCE SLAT TO EXISTING FENCE
22 PROP. ALUMINUM PICKET SLIDING GATE. GATE OPEN FROM LANDSCAPE AREA. ALL GATES MUST HAVE CLICK 2 ENTER SYSTEM WITH KNOX KEY SWITCH

GENERAL SITE NOTES

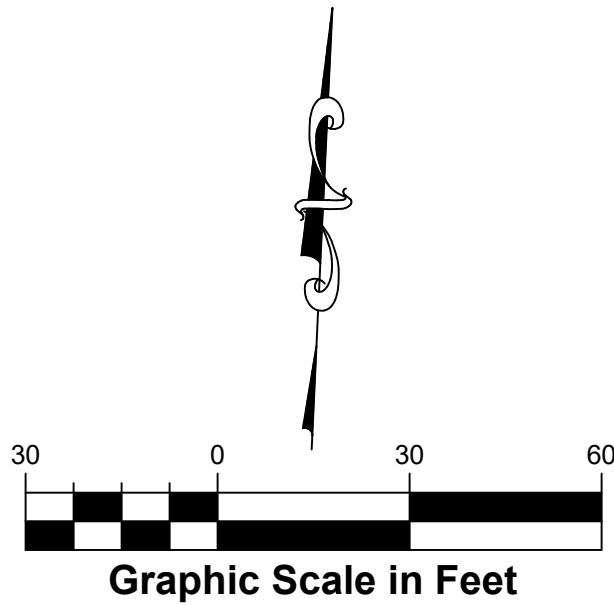
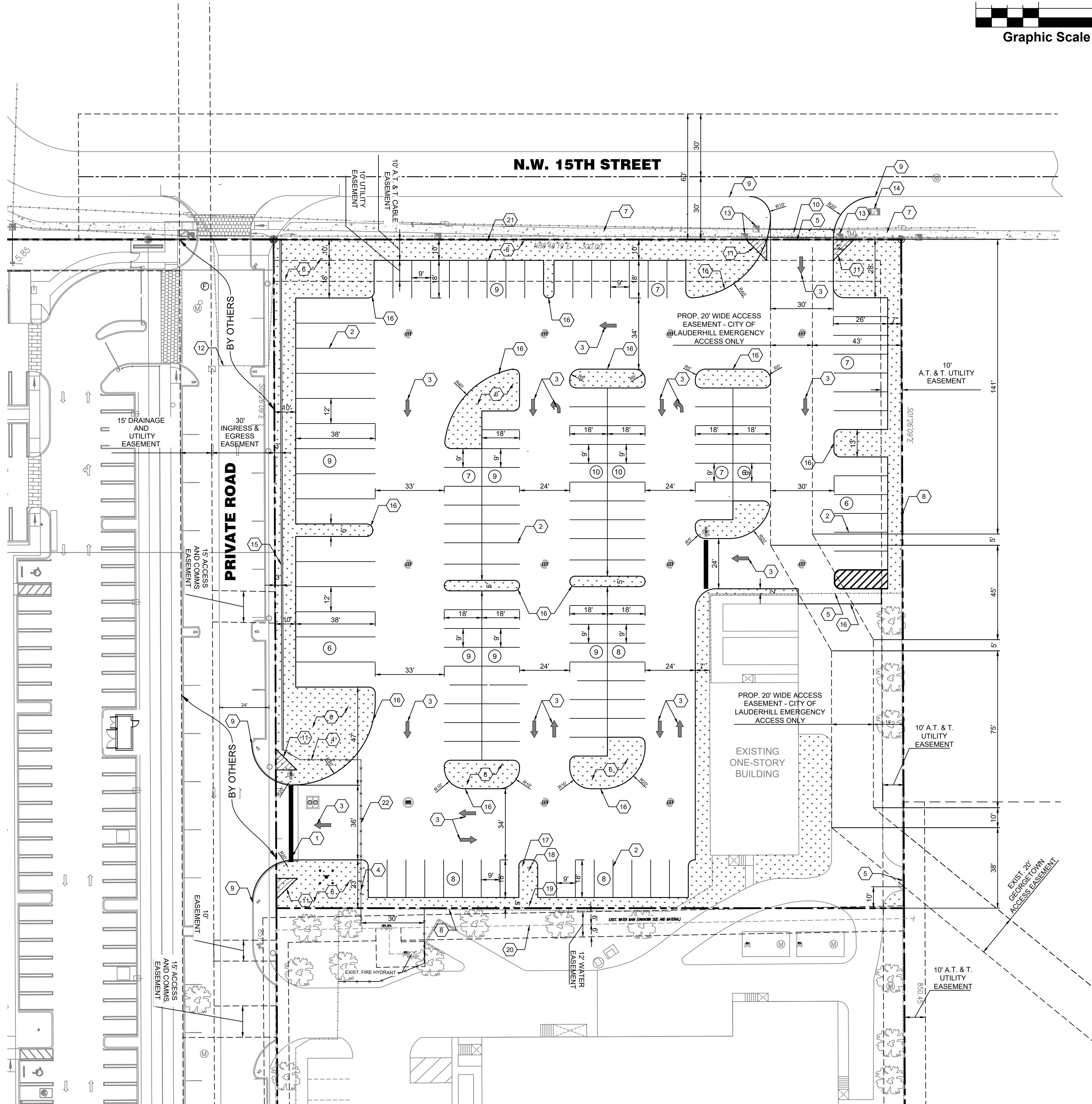
1. FOR LEGAL DESCRIPTION, BOUNDARY INFO., AND BENCHMARK INFO. SEE SITE SURVEY SHEETS.
2. PRIOR TO ANY CONSTRUCTION, CONTRACTOR SHALL FIELD STAKE ALL CENTERLINE GEOMETRY TO ENSURE PROPOSED DIMENSIONS FIT EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARISE.
3. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
4. CONTRACTOR SHALL MATCH PROPOSED CURB AND GUTTER, CONCRETE AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
5. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS, SPECIFICATIONS AND GEOTECHNICAL REPORT. THE MORE STRINGENT CRITERIA SHALL APPLY.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.
7. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL COUNTY REGULATIONS, CODES, AND O.S.H.A. STANDARDS.
8. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PRECISE BUILDING DIMENSIONS AND EXACT BUILDING AND UTILITY ENTRANCE LOCATIONS.
9. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
10. ALL RADII FOR PARKING ISLAND ARE 3' AND/OR 10' UNLESS OTHERWISE NOTED.
11. SIGNAGE NOT PART OF APPLICATION AND SHOULD BE SUBMITTED SEPARATELY.

SITE SYMBOLS /LEGEND

- (S) STOP SIGN (R1-1)
(DN) DO NOT ENTER (R5-1)
⑩ PROPOSED PARKING SPACE COUNT
➡ PROPOSED SOLID DIRECTIONAL ARROW

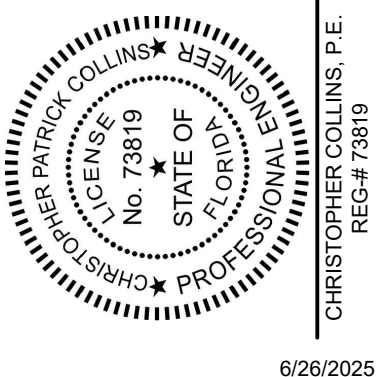
HATCH LEGEND

- PROPOSED 6" CONCRETE SIDEWALK (PUBLIC)
EXISTING CONCRETE SIDEWALK
PROPOSED GRASS
EXISTING GRASS



D E S I G N

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SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



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Revision	Date
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Designed by:	C.P.C.
Drawn by:	S.G.C.
Checked by:	C.P.C.
Approved by:	C.P.C.
Scale:	1"=30'
Date:	11/22/2024
Job No.:	Q003

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Plans for

**LAUDERHILL
PARKING LOT**
3760 N.W. 15TH STREET
LAUDERHILL, FL

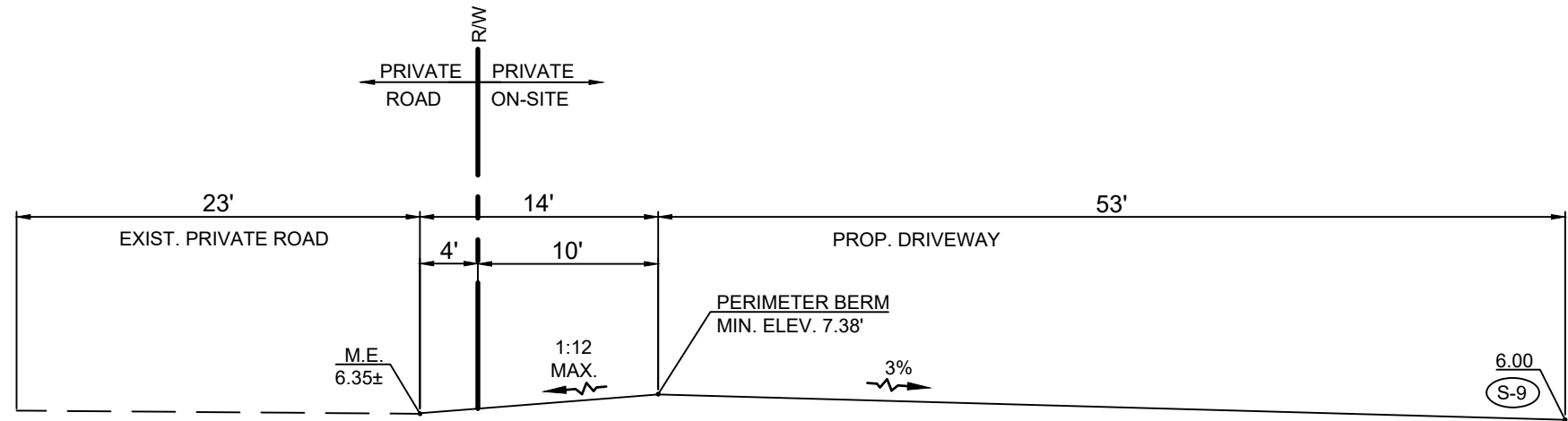
SITE PLAN

Sheet No.
C-5.0

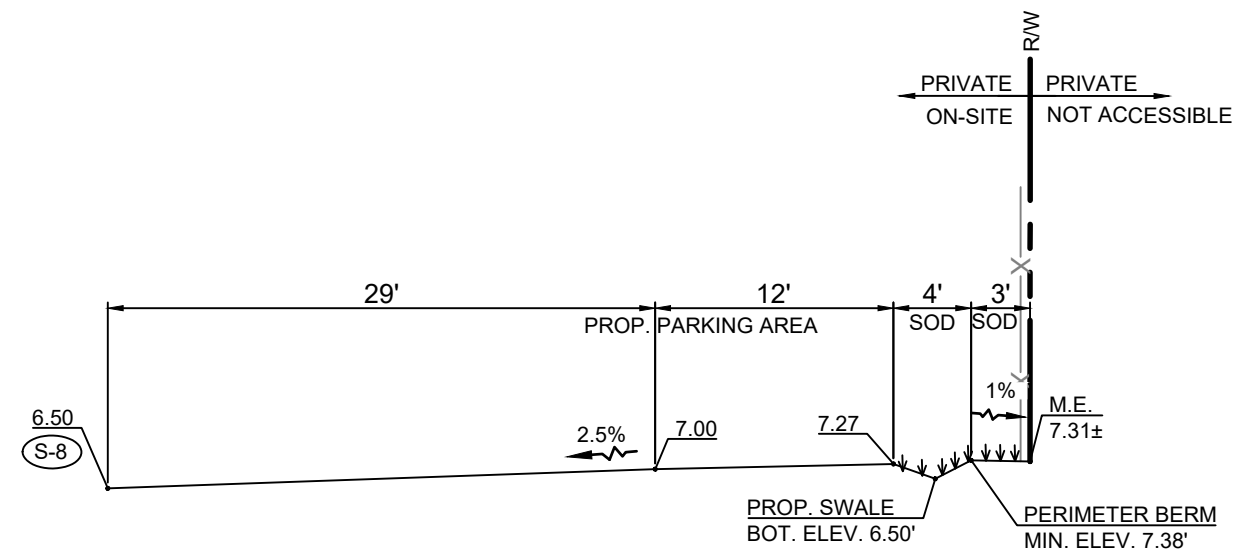
EXFILTRATION TRENCH TABLE		
NUMBER	LENGTH	DESCRIPTION
T-1	53	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-2	48	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-3	51	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-4	53	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-5	48	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-6	51	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-7	53	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
T-8	48	PROP. 18" HDPE PERFIATED PIPE W/ EXFIL. TRENCH AND 8 LF OF SOLID 18" HDPE PIPE
Total	405	

STRUCTURE TABLE									
STRUCTURE	TYPE	SIZE	RIM	BOTTOM	INVERTS				COMMENTS
					N	S	E	W	
S-1	INLET	48-INCH	6.00	-1.00		1.00	2.50		SKIMMER (E)
S-2	INLET	48-INCH	6.00	-1.00			2.50	2.50	SKIMMER (E&W)
S-3	INLET	48-INCH	6.00	-1.00			2.50	2.50	SKIMMER (E&W)
S-4	INLET	42-INCH	6.00	-1.00				2.50	SKIMMER (W)
S-5	INLET	48-INCH	6.00	-1.00	1.00	1.00	2.50		SKIMMER (E)
S-6	INLET	48-INCH	6.00	-1.00			2.50	2.50	SKIMMER (E&W)
S-7	INLET	48-INCH	6.00	-1.00			2.50	2.50	SKIMMER (E&W)
S-8	INLET	42-INCH	6.50	-1.00				2.50	SKIMMER (W)
S-9	INLET	48-INCH	6.00	-1.00	1.00		1.00	2.50	SKIMMER (E)
S-10	INLET	48-INCH	6.00	-1.00			2.50	2.50	SKIMMER (E&W)
S-11	INLET	42-INCH	6.00	-1.00				2.50	SKIMMER (W)
S-12	MH	60-INCH	7.23	0.50	3.13	3.13	2.50		WEIR ELEVATION 4.67

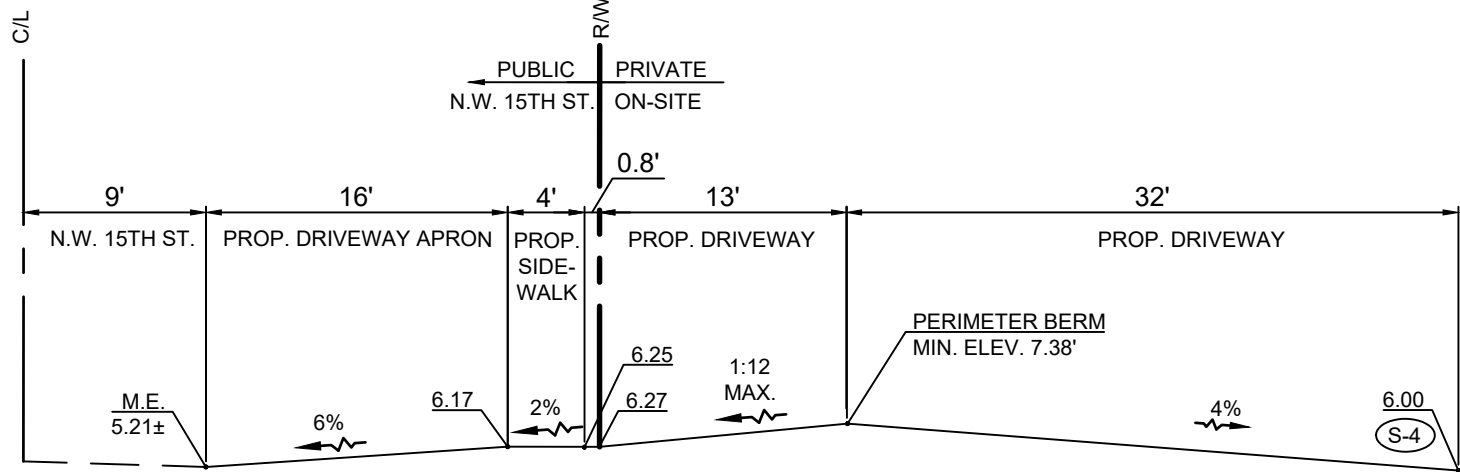
PIPE TABLE			
NUMBER	LENGTH	DIA.	MATERIAL
P-1	107	18"	SOLID HDPE PIPE
P-2	113	18"	SOLID HDPE PIPE
P-3	43	18"	SOLID HDPE PIPE



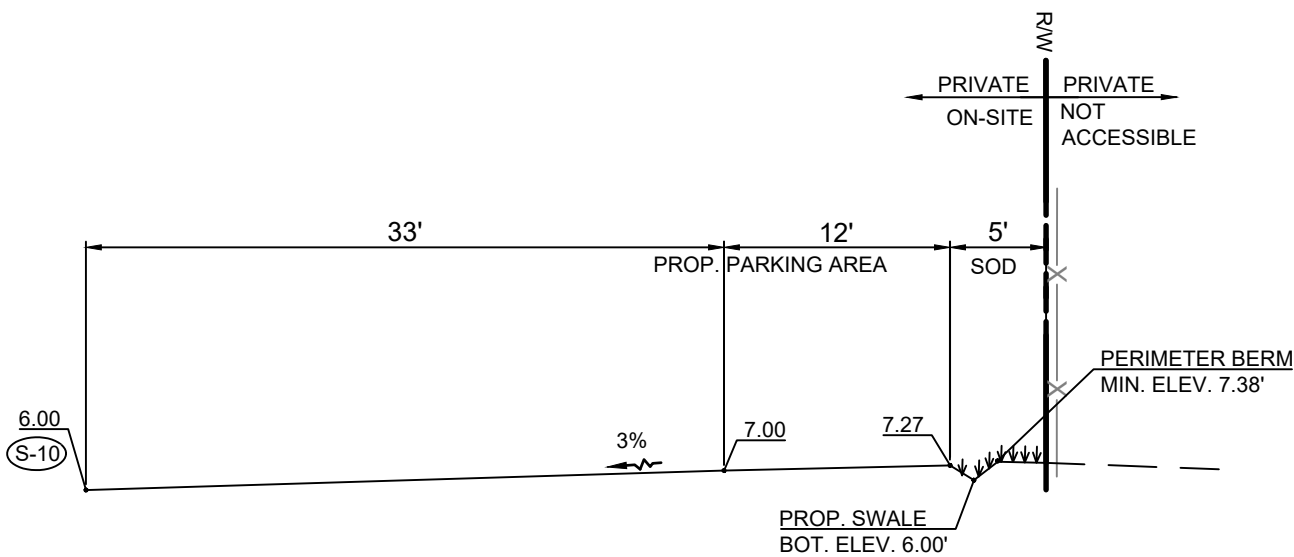
SECTION A-A
SCALE: 1"=10' H, 1"=5' V



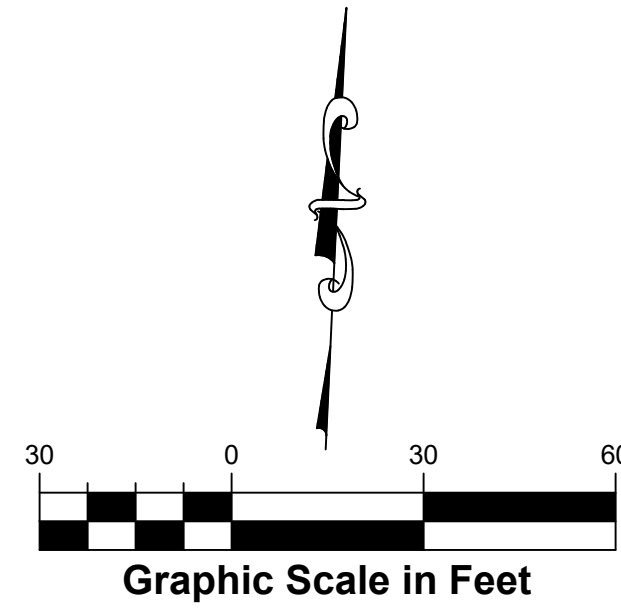
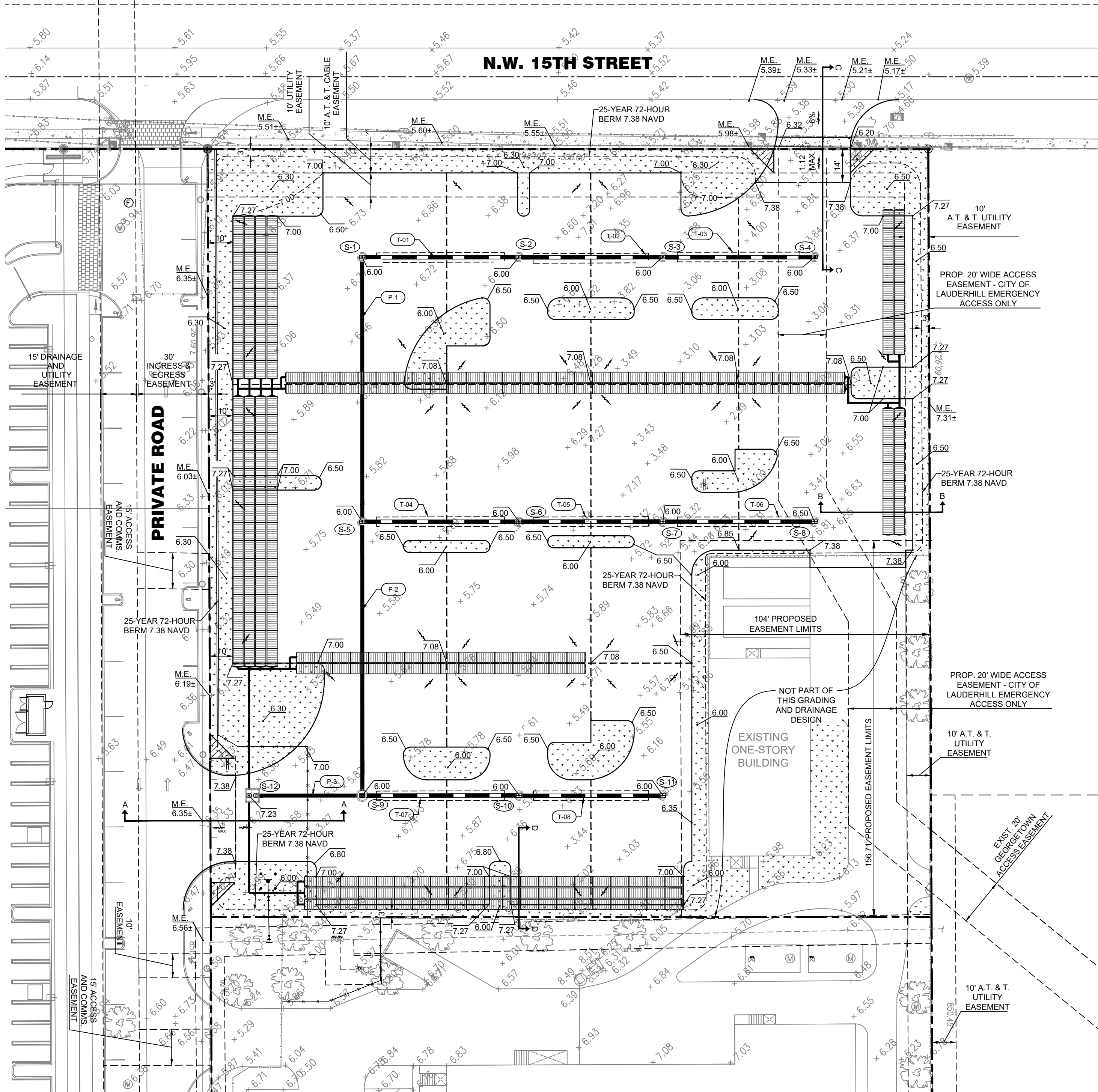
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SCALE: 1"=10' H, 1"=5' V



SECTION C-C
SCALE: 1"=10' H, 1"=5' V



SECTION D-D
SCALE: 1"=10' H, 1"=5' V



PROPOSED DRAINAGE
SYMBOLS LEGEND

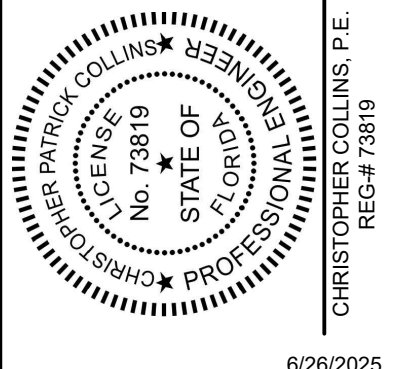
- (T.C.)
(E.P.) TOP OF CURB, ELEV.
EDGE OF P.V.M.T. ELEV. OR GROUND ELEV.
- X% PROP. FLOW DIRECTION AND SLOPE
- EXIST. GRADE ELEVATION
- PROP. STORM SEWER PIPE
- PROP. INLET WITH EXFILTRATION TRENCH
- PROPOSED GRADE INLET
- PROPOSED GRADE BREAK
- PROPOSED STORMTECH CHAMBER

ADA NOTE:

CONSULTANT HAS IDENTIFIED AND USED THE CURRENT VERSION OF ALL LOCAL, STATE, AND FEDERAL ACCESSIBILITY GUIDELINES FOR SITE ACCESSIBILITY. THE SITE HAS BEEN DESIGNED IN ACCORDANCE WITH, BUT NOT LIMITED TO, CITY, COUNTY, AND STATE ACCESSIBILITY CODES, AND THE 2010 AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN (2010 ADA STANDARDS), AS AMENDED.



666 N.E. 125th STREET,
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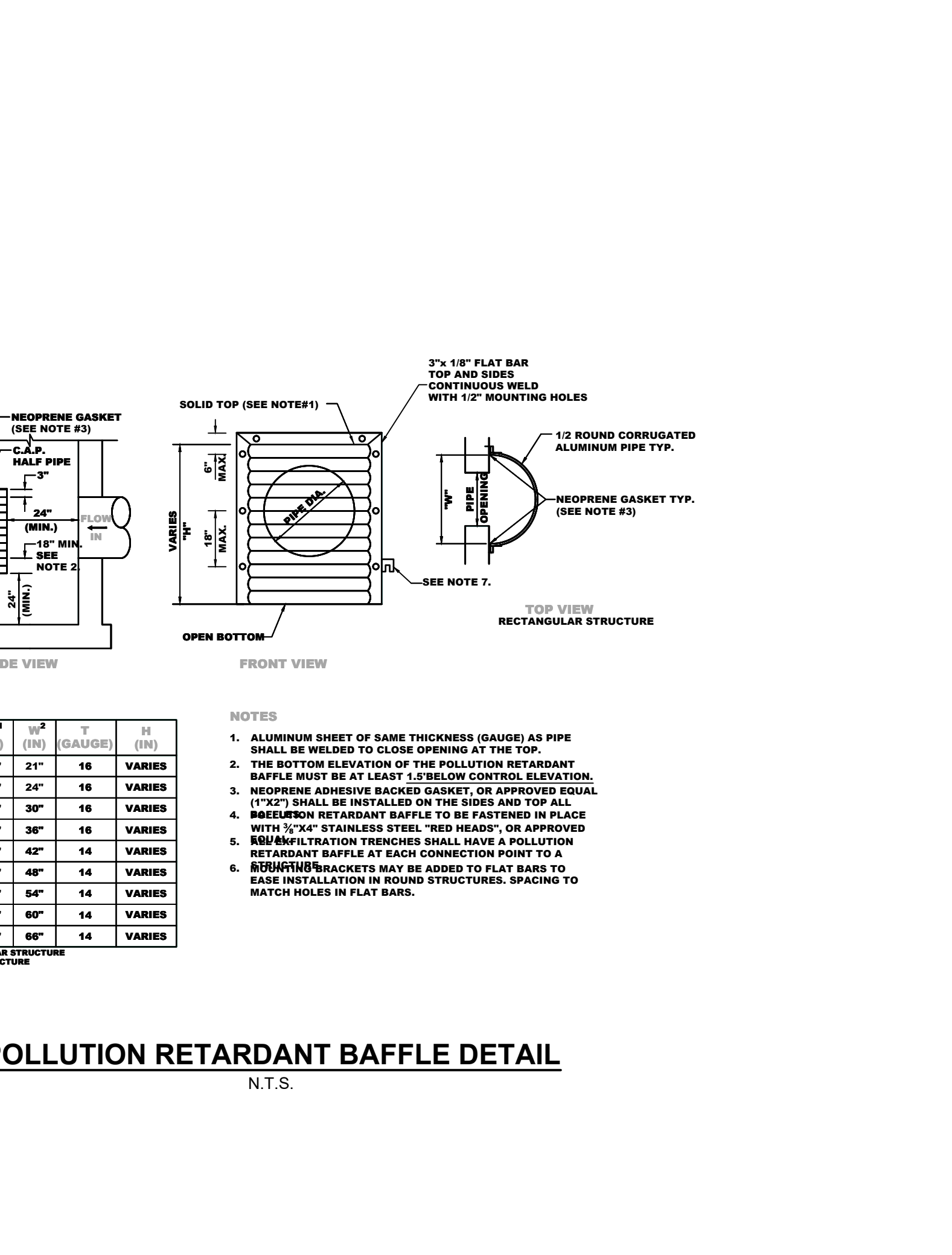
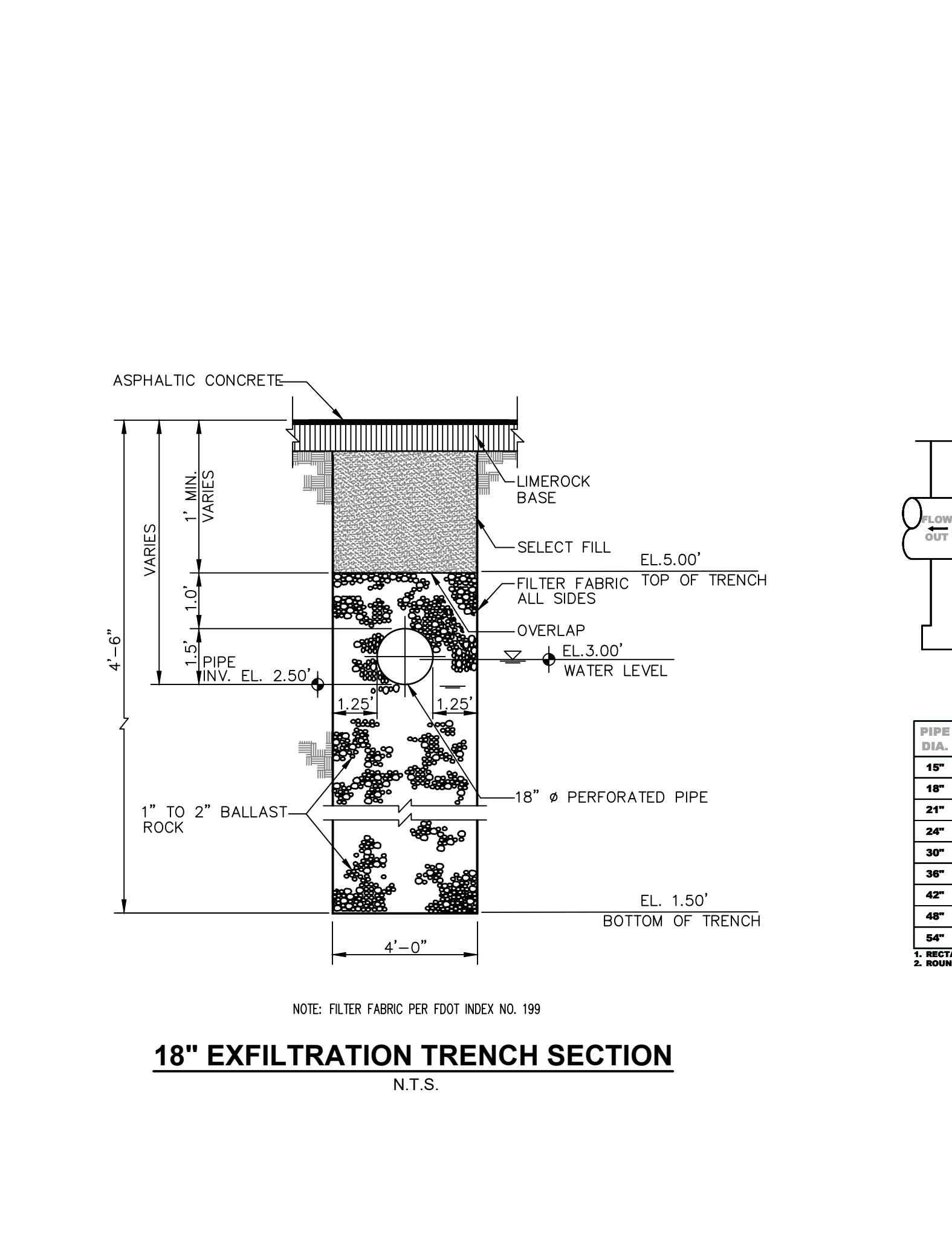
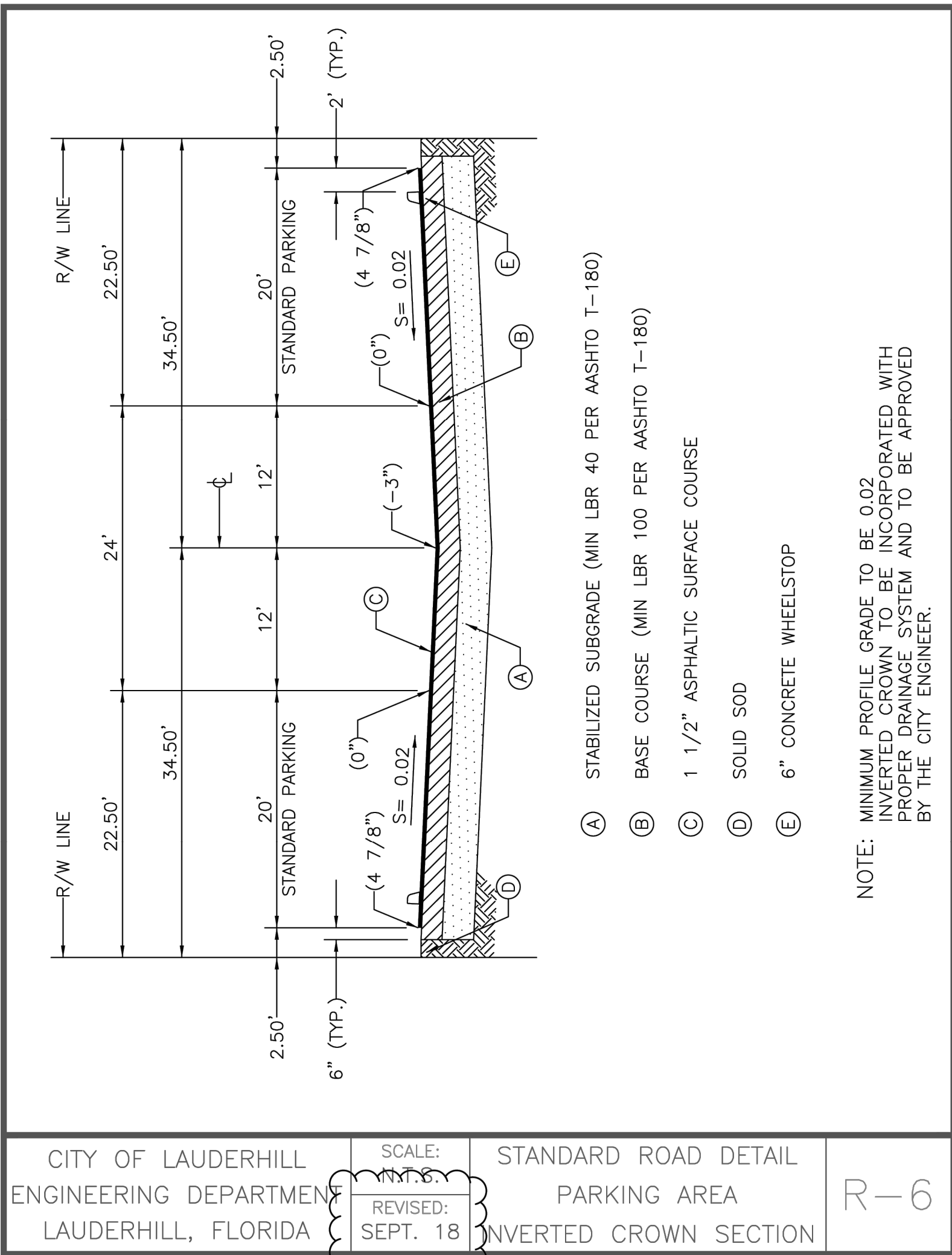
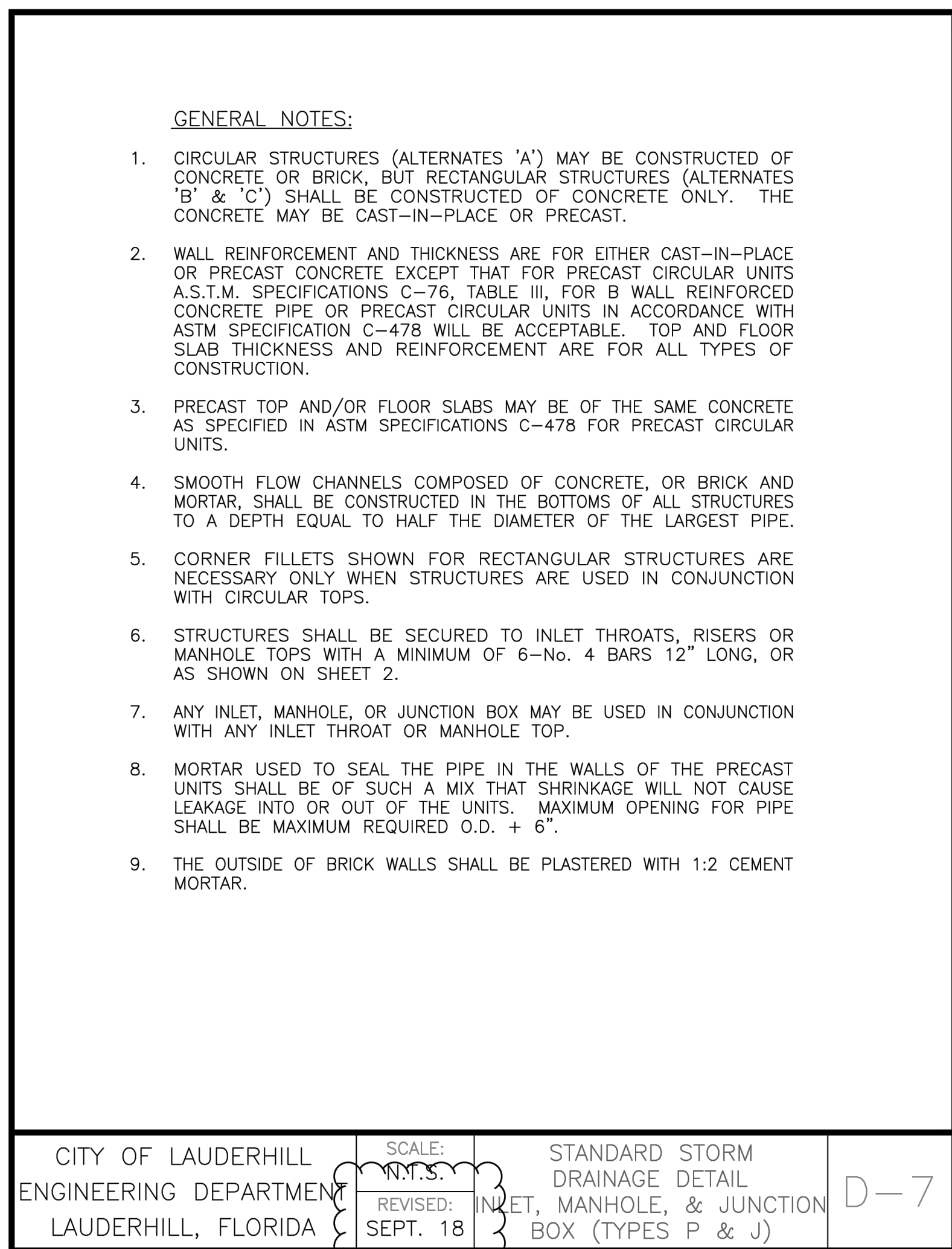
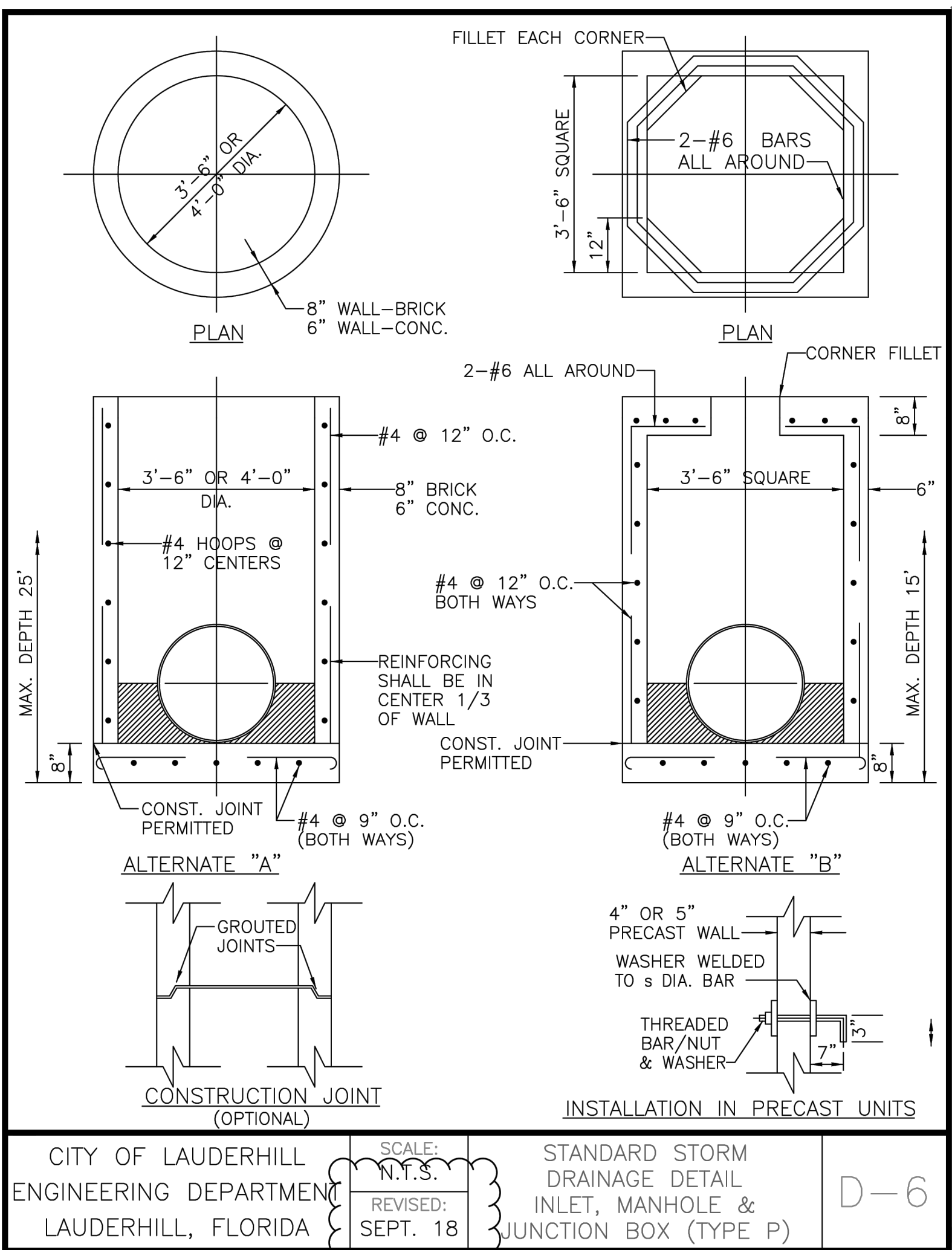
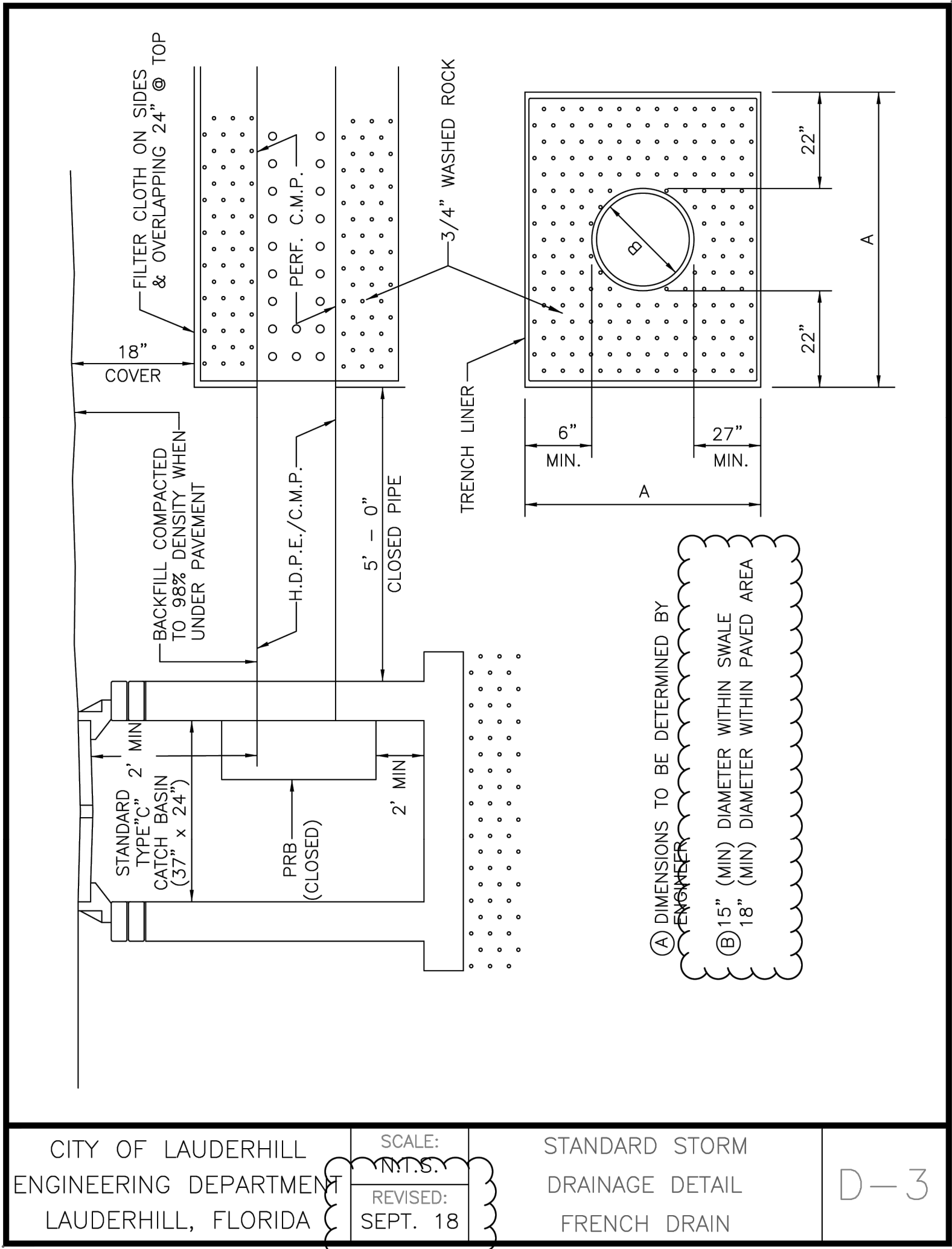
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Drawn by:	S.G.C.
Checked by:	C.P.C.
Approved by:	C.P.C.
Scale:	AS SHOWN
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Job No.:	Q003
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Plans for
**LAUDERHILL
PARKING LOT**
3760 N.W. 15TH STREET
LAUDERHILL, FL

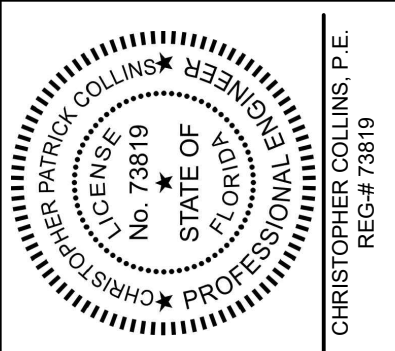
**GRADING
AND
DRAINAGE
PLAN**

Sheet No.
C-6.0



DESIGN

666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



4/29/2025

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Plans for

LAUDERHILL
PARKING LOT
3760 N.W. 15TH STREET
LAUDERHILL, FL

GRADING
AND
DRAINAGE
DETAILS

Sheet No.

C-6.1



Call 811 or visit sunshine811.com two full business days before digging to have buried facilities located and marked.
Check positive response codes before you dig!



SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 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.
- 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 PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 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 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT³. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.
- 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 1.85 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 FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANFOLD 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 MANFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- 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.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- 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.

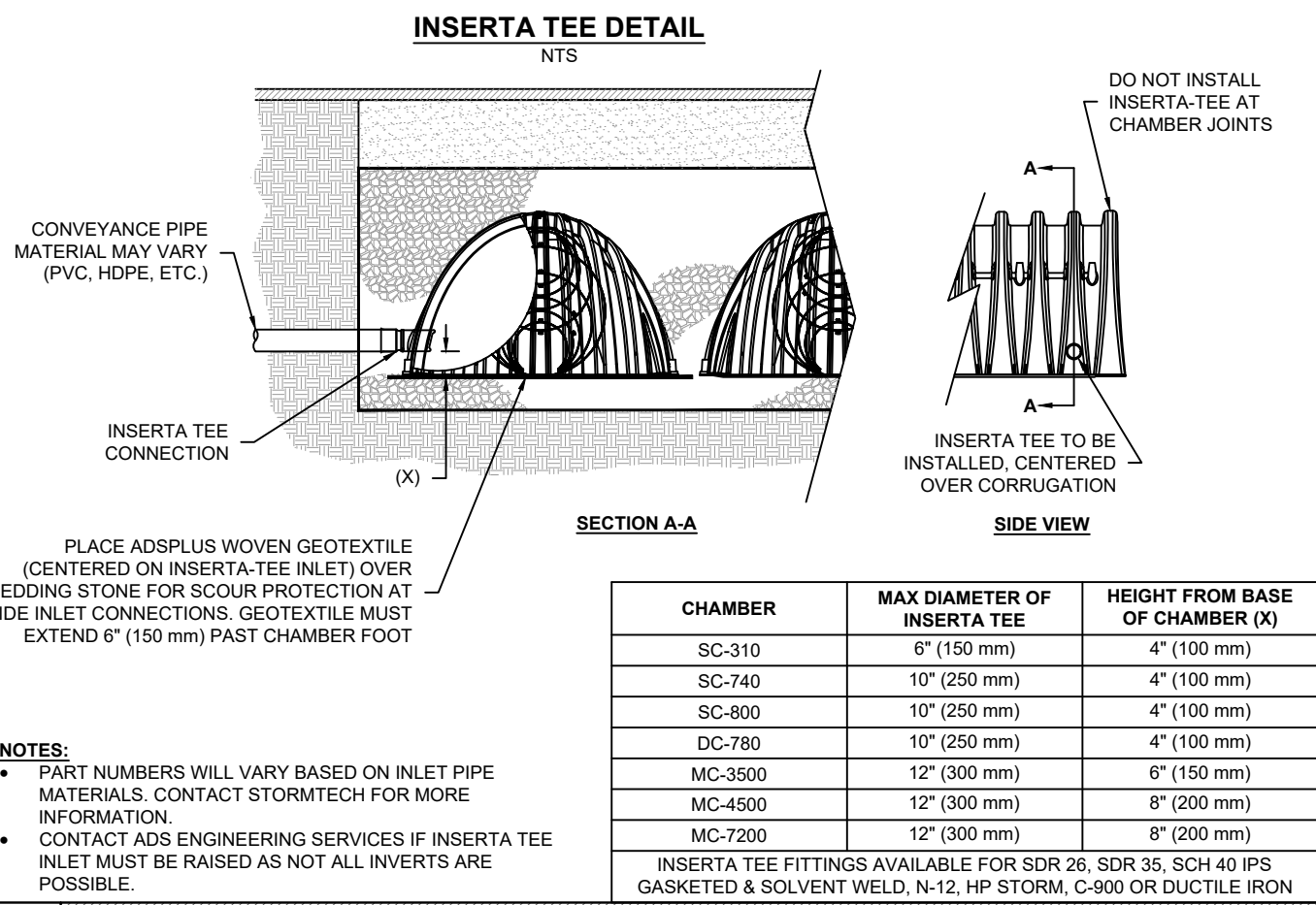
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER 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/SC-800/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- 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 1-800-921-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

CONCEPTUAL LAYOUT	
278	STORMTECH SC-740 CHAMBERS
38	STORMTECH SC-740 END CAPS (SC740EPE12BPC)
6	STONE ABOVE (in)
6	STONE BELOW (in)
40	% STONE VOID
20,376	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
8,930	SYSTEM AREA (ft ²)
CONCEPTUAL ELEVATIONS (NAVD)	
13.50	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
7.50	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
7.00	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
7.00	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
7.00	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
6.00	TOP OF STONE
5.50	TOP OF SC-740 CHAMBER
3.13	BOTTOM 12" MANIFOLD INVERT
3.00	BOTTOM OF SC-740 CHAMBER
2.50	BOTTOM OF STONE

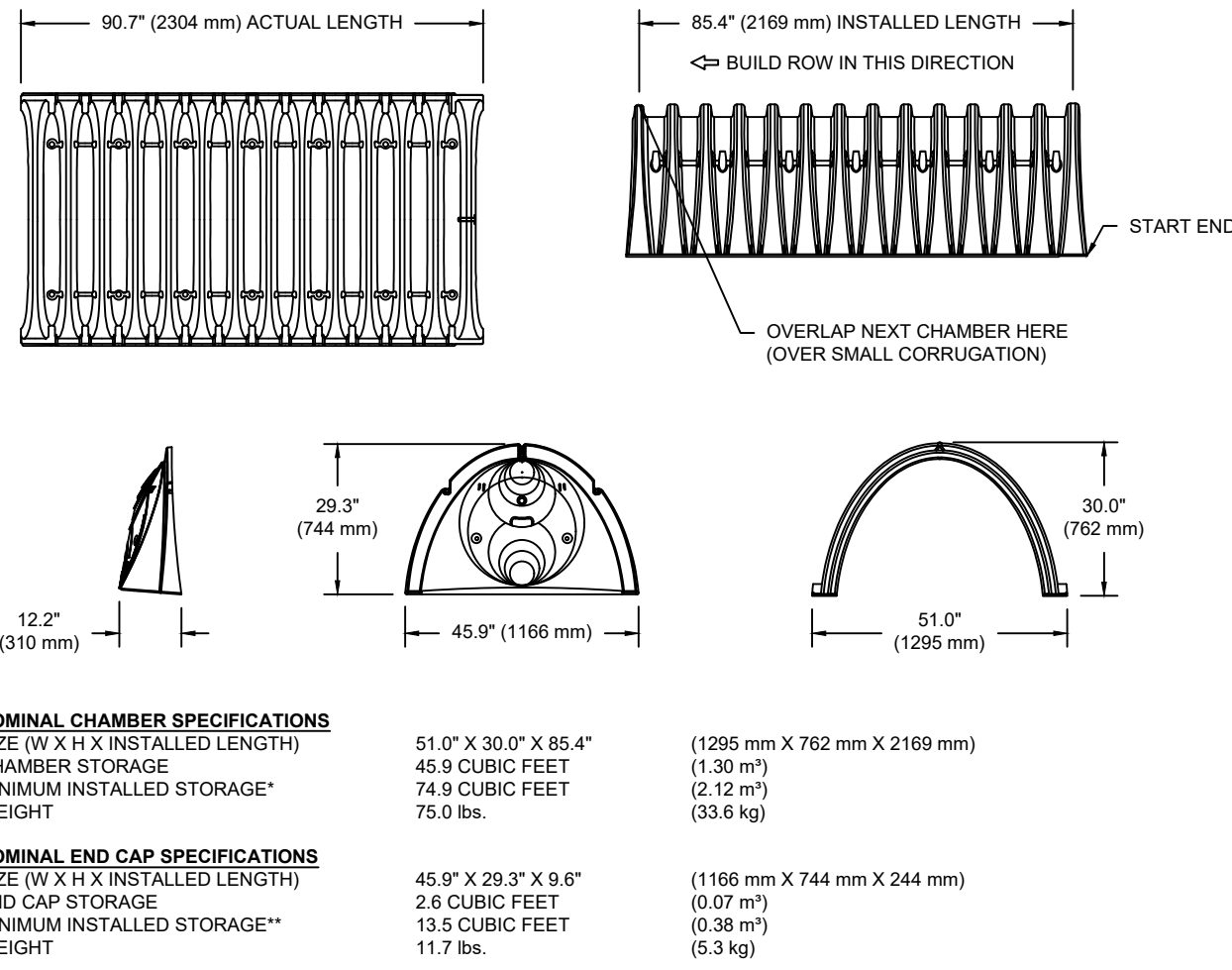


- NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
 - CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SDR 40 IPS CASING & SOLVENT WELD, N-12, HP STORM, C-200 OR DUCTILE IRON

SC-740 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH)
CHAMBER STORAGE
MINIMUM INSTALLED STORAGE*
WEIGHT

NOMINAL END CAP SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH)
END CAP STORAGE
MINIMUM INSTALLED STORAGE**
WEIGHT

* ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS
** ASSUMES 6" (152 mm) STONE ABOVE AND BELOW END CAPS, 6" (152 mm) BETWEEN ROWS, 12" (305 mm) BEYOND END CAPS

PART #	STUB	B	C
SC740EPE08TPC	6" (150 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740EPE08BPC	6" (150 mm)	16.5" (419 mm)	---
SC740EPE08TPC	8" (200 mm)	14.5" (368 mm)	0.6" (15 mm)
SC740EPE10BPC	10" (250 mm)	12.5" (318 mm)	---
SC740EPE12TPC	12" (300 mm)	9.0" (229 mm)	1.2" (30 mm)
SC740EPE12BPC	12" (300 mm)	9.0" (229 mm)	1.3" (33 mm)
SC740EPE18TPC	18" (450 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740EPE18BPC	18" (450 mm)	---	0.1" (3 mm)
SC740ECEZ	24" (600 mm)	---	---

ALL STUBS, EXCEPT FOR THE SC740ECEZ 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 SC740ECEZ THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL. PRE-CORED END CAPS END WITH "PC"

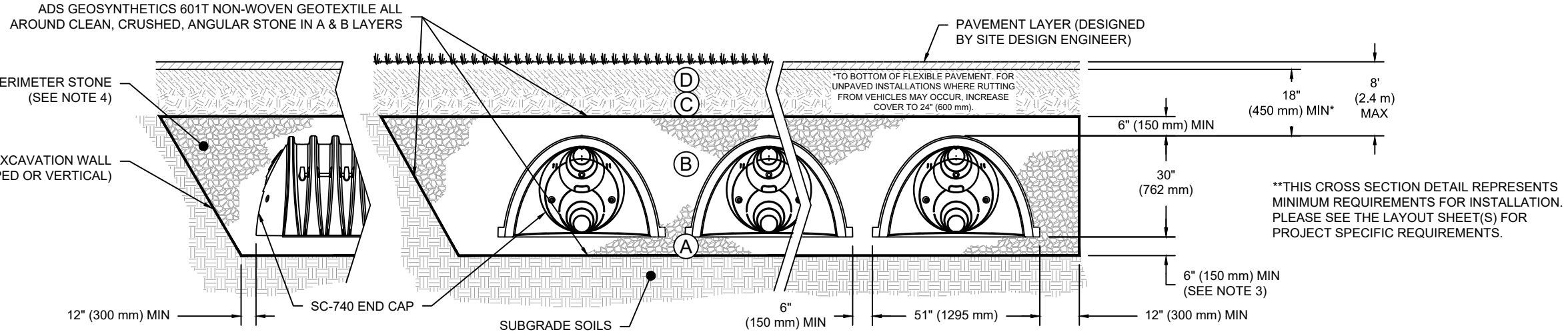
INSERTA-TEE SIDE INLET DETAIL

SC-740 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 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 A PART OF THE 'D' LAYER.	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, 'E' LAYER TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ² 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% RELATIVE DENSITY FOR PROCESSSED 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.	AASHTO M43 ² 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.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

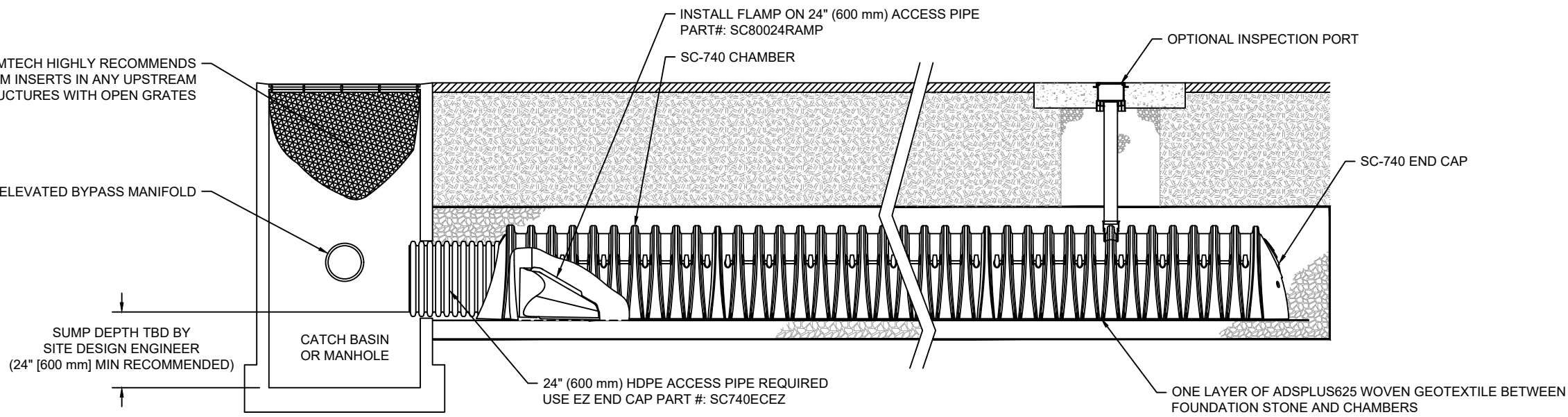
- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - 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.
 - 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.
 - WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 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 F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT³. 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-740 CROSS SECTION DETAIL



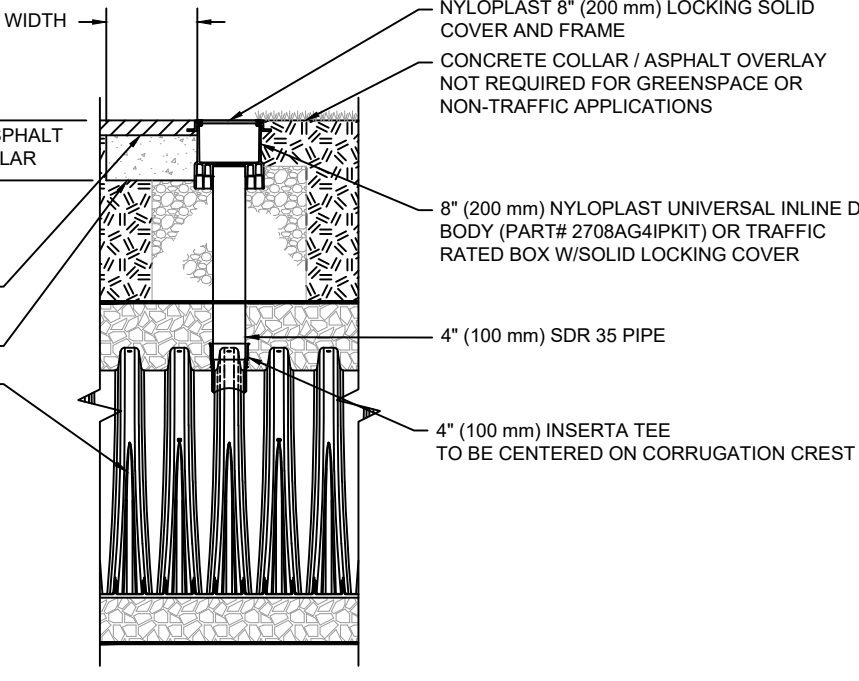
SC-740 ISOLATOR ROW PLUS DETAIL

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - ALL ISOLATOR PLUS ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - MIRRORS OR POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - B.3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A PRIOR CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - 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

- 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.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

SC-740 STANDARD DETAILS

StormTech®
Chamber System

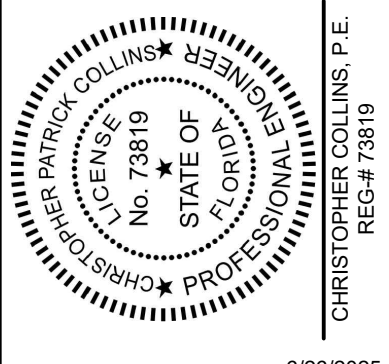
4640 TRUEJMAN BLVD
HILLIARD, OH 43026



SHEET
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666 N.E. 125th STREET,
SUITE 247
NORTH MIAMI, FL 33161
Phone: 305.720.2079
C.O.A. 33221



This item has been digitally signed and sealed by Christopher P. Collins, P.E. on the date adjacent to the seal.

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Checked by:	C.P.C.
Approved by:	C.P.C.
Scale:	AS SHOWN
Date:	11/22/2024
Job No.:	Q003
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Plans for

LAUDERHILL
PARKING LOT
3760 N.W. 15TH STREET
LAUDERHILL, FL

GRADING
AND
DRAINAGE
DETAILS

Sheet No.

C-6.2