

architecturalteam.com
Consultant:
Horsley Witten Group, Inc.  www.horsleywitten.com  90 Route 6A Sandwich MA 02630
Revision:
DANIEL W. MACKENZIE NO. 47187  BOWAL LAND SURFINE  LONG TO THE PROPERTY OF THE
Drawn: MCL/JEH
Checked: RAC  Scale: Key Plan:
Project Name:  LITTLETON DRIVE  SENIOR BUILDING
LITTLETON DRIVE WAREHAM MA Sheet Name:
EXISTING CONDITIONS

## **GENERAL CONSTRUCTION NOTES:**

DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.

- 1. ALL SITE WORK TO COMPLETE THIS PROJECT AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 2 IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED.
- UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY FENCING BARRICADES, SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE TOWN MUNICIPALITY. THE

INTRACTOR IS RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE

- MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS. PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH
- ALL EXISTING CONDITIONS SHOWN ARE APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. PRIOR TO THE START OF CONSTRUCTION VERIFY THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
- THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS INDICATED ON THE DRAWINGS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN, AND "DIGSAFE" (1-888-344-7233) AT LEAST THREE BUSINESS DAYS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES. THE CONTRACTOR MUST RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD-LOCATED UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACCURATELY SHOWN. THE CONTRACTOR MUST MAINTAIN ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- COORDINATE AND MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS REQUIRED.
- 8. THE CONTRACTOR MUST MAINTAIN ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE FNTIRF DURATION OF THE PROJECT. REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ALL COST RELATED TO THE REPAIR OF UTILITIES. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES MUST BE DONE BY HAND.
- COORDINATE ALL TRENCHING WORK WITHIN ROADWAYS WITH THE PROPER LOCAL & STATE AGENCY. THE CONTRACTOR IS ESPONSIBLE FOR ALL TRENCH SAFETY INCLUDING ANY LOCAL AND/OR STATE PERMITS REQUIRED FOR THE TRENCH WORK. IF THIS WORK IS REQUIRED TO OCCUR OUTSIDE THE AGREED UPON HOURS OF OPERATION FOR THE FACILITY, THE CONTRACTOR MUST
- 10. SAWCUT ALL TRENCH WORK WITHIN EXISTING PAVEMENT AS INDICATED ON THE DRAWINGS. BACKFILL AND COMPACT TRENCH WORK AS INDICATED ON THE DRAWING AND IN THE SPECIFICATIONS. IF SETTLEMENT OCCURS DUE TO INADEQUATE COMPACTION AS DETERMINED BY THE ENGINEER, WITHIN THE WARRANTY PERIOD, CONTRACTOR IS REQUIRED TO REMOVE, PATCH AND REPAVE
- 11. IMPORT ONLY CLEAN MATERIAL. MATERIAL FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS

13. SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION MUST BE PROVIDED BY THE CONTRACTOR AND PERFORMED BY A

HIGHWAY AND BRIDGES 2020 EDITION, AND THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 30, 2020).

- 12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH AND MAINTAIN ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. COORDINATE WITH THE ENGINEER THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS.
- ISETTS' REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
- 14 MAINTAIN ALL GRADE STAKES SET BY THE SURVEYOR, GRADE STAKES ARE TO REMAIN LINTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES IS THE RESPONSIBILITY (INCLUDING
- 15. UNLESS OTHERWISE INDICATED ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

STANDARD SPECIFICATIONS (THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR

- 16. PROVIDE ALL CONSTRUCTION SERVICE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK
- 17. COLLECT SOLID WASTES AND STORE IN A SECURED DUMPSTER. THE DUMPSTER MUST MEET ALL LOCAL AND STATE SOLID WASTE
- 18. RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE PER SPECIFICATIONS. LEAVE ALL AREAS NOT DISTURBED BY CONSTRUCTION IN THEIR NATURAL STATE. TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK.
- 19. CONSTRUCT ALL WHEELCHAIR RAMPS IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS IND CONSTRUCTION AND TRAFFIC STANDARD DETAILS DRAWING NUMBER 107.1.0 AND 107.2.0. CONSTRUCT RAMPS WITH AN 8% MAX. SLOPE AND 2% CROSS SLOPE.
- 20. PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE AND/OR BOULDERS LESS AN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. PROVIDE UNIT PRICES
- FOR BOTH ON AND OFF SITE DISPOSAL. IF ADDITIONAL FILL MATERIAL IS REQUIRED INCLUDE THE COST OF ALL FILL MATERIAL. 21. REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT
- LEAVES THE SITE. PROMPTLY REMOVE ALL DEMOLITION DEBRIS FROM THE SITE TO AN APPROVED DUMP SITE 22. ALL TRUCKS LEAVING THE SITE MUST BE COVERED.
- 23. DO NOT WASH ANY CONCRETE TRUCKS ONSITE. REMOVE BY HAND ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED
- 24 BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED. DO NOT USE ROAD SALT OR OTHER DE-ICING CHEMICALS ON THE ACCESS ROADWAY.
- 25. AT THE END OF CONSTRUCTION, REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. PERFORM A HOROUGH INSPECTION OF THE WORK PERIMETER. COLLECT AND REMOVE ALL MATERIALS AND BLOWN OR WATER CARRIED DEBRIS FROM THE SITE.

# **GENERAL DEMOLITION NOTES:**

THIS PLAN SET DOES NOT INCLUDE DETAILS & SPECIFICATIONS FOR ALL DEMOLITION WORK REQUIRED WITHIN THE PROPOSE CONSTRUCTION LIMITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER, PROJECT ARCHITECT MECHANICAL ENGINEERS AND OTHER PROJECT ENGINEERS INVOLVED WITH THE PROPOSED NEW CONSTRUCTION TO DEVELOP A SUITABLE DEMOLITION PLAN, WHICH WILL ALLOW THE FACILITIES TO REMAIN IN OPERATION DURING THE ENTIRETY OF CONSTRUCTION

- UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION, DEMOLITION, REMOVAL AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL EXISTING SITE ELEMENTS AND STRUCTURES INCLUDING, BUT NOT LIMITED TO, BUILDINGS, ROADWAYS, PARKING AREAS, PARKING ISLANDS, BITUMINOUS CONCRETE, CEMENT CONCRETE, GRAVEL, CURBS WALKWAYS SIDEWALKS BERMS FENCES BOLLARDS POSTS PLANTING BEDS TREES SHRUBS LITHLITIES DRAINAGE STRUCTURES AND ALL OTHER STRUCTURES SHOWN AND NOT SHOWN WITHIN CONSTRUCTION LIMITS, AND WHERE NEEDED, TO ALLOW FOR NEW CONSTRUCTION. ALL FACILITIES TO BE REMOVED ARE TO BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS.
- 2. REMOVE ALL DEBRIS FROM THE SITE AND DISPOSE OF THE DEBRIS IN A PROPER AND LEGAL MANNER.
- 3. OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- 4. COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. COORDINATE WITH THE UTILITY COMPANIES CONCERNING PORTIONS OF THE WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL
- REFER TO MECHANICAL AND UTILITY PLANS AND SPECIFICATIONS FOR ALL WORK WHICH REQUIRES UTILITIES TO BE REMOVED,
- LINES, AS REQUIRED, BEFORE PROCEEDING WITH THE WORK.
- MAINTAIN CONTINUOUS ACCESS AND OPERATION FOR SURROUNDING FACILITIES, AS DEEMED BY THE OWNER, AT ALL TIMES DURING 5. PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE DEMOLITION OF THE EXISTING FACILITIES.
- 8. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

# **BASIC CONSTRUCTION SEQUENCE:**

THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. COORDINATE WITH THE OWNER, ENGINEERS, AND LANDSCAPE ARCHITECT AND SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

- 1. SURVEY AND STAKE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF SEDIMENTATION BARRIERS
- 2. PLACE SEDIMENTATION BARRIERS AS INDICATED ON DRAWINGS AND STAKED OUT IN THE FIELD, EXCEPT AROUND BIORETENTIONS AND INFILTRATION BASINS. UNDER NO CIRCUMSTANCES IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE AS INDICATED ON DRAWINGS AS APPROVED BY THE LOCAL CONSERVATION COMMISSION AND DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP
- INSTALL TEMPORARY CONSTRUCTION ENTRANCES IN LOCATIONS INDICATED ON DRAWINGS. NO OTHER ENTRANCES ARE TO BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
- 4. BEGIN CLEARING THE SITE AS REQUIRED.
- 5. SURVEY AND STAKE CENTERLINE OF THE PROPOSED ROADS, STORMWATER MANAGEMENT AREAS, AND DRAINAGE LINES. EXCAVATE AND ROUGH GRADE THE PROPOSED STORMWATER MANAGEMENT AREAS AND ANY ADDITIONAL TEMPORARY BASINS NECESSARY TO CONTROL SITE RUNOFF AND SEDIMENTS. TEMPORARILY STABILIZE/SEED PERMANENT STORMWATER MANAGEMENT AREAS AS NECESSARY TO REDUCE SIDE SLOPE EROSION AND SEDIMENT ACCUMULATION. PROTECT PERMANENT STORMWATER MANAGEMENT AREAS FROM RECEIVING DIRECT RUNOF
- BEGIN CLEARING AND GRUBBING THE AREAS OF ROADWAYS AND STORMWATER MANAGEMENT AREAS. TOPSOIL IS TO BE STRIPPED FROM THE AREA OF THE PROPOSED ROADWAYS AND STORMWATER MANAGEMENT AREAS AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES MUST BE PROTECTED BY A SEDIMENT BARRIER.
- INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO
- BEGIN ROUGH GRADING AREAS FOR ROADS, PARKING AND BUILDINGS. BRING ROUGH GRADING TO PROPER ELEVATIONS AS SOON AS PRACTICABLE. COORDINATE WORK TO MINIMIZE TIME SOILS ARE UN-STABILIZED
- 10. BEGIN UTILITY CONSTRUCTION. THE CONTRACTOR IS FREE TO INSTALL THE UTILITIES IN THE SEQUENCE HE/SHE CHOOSES IMMEDIATELY REPAIR. REPLACE AND STABILIZE ANY EROSION CONTROL DEVICES DISTURBED DURING THE UNDERGROUND UTILITY
- CONSTRUCTION. MODIFY TEMPORARY CONVEYANCE DEVICES, AS NECESSARY, TO CONVEY RUNOFF TO TREATMENT AREAS. INSTALL DRAINAGE PIPES. DRAINAGE MANHOLES. CATCH BASINS, AND UNDERGROUND DRAINAGE STRUCTURES. BEGIN WORK AT THE STORMWATER MANAGEMENT AREAS AND PROGRESS UP-GRADIENT. PROTECT DISCHARGE OUTLETS WITH RIP-RAP APRONS. THE STORMWATER MANAGEMENT AREA(S) AND DRAINAGE NETWORK ARE TO BE PROTECTED FROM SEDIMENTATION BY INSTALLING SILT SOCK BARRIERS AS INDICATED ON GRADING AND DRAINAGE PLAN. UNTIL ALL UN-STABILIZED AREAS ARE STABILIZED WITH STONE
- 12. PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED.

PARTICULAR CARE TO PROTECT THE UNDERGROUND STRUCTURES FROM SEDIMENT

13. UPON COMPLETION OF UNDERGROUND UTILITIES INSTALLATION, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE ROADWAYS/PARKING AREAS IN ACCORDANCE WITH THE SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL

SUB-BASE OR VEGETATION. INSTALL SEDIMENT BARRIERS AT ALL POINTS OF ENTRY INTO THE DRAINAGE NETWORK. TAKE

ROADS AND PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL FINISH PERMANENT STABILIZATION. COMPLETE PERMANENT STORMWATER MANAGEMENT AREA SEEDING AND PLANTING AFTER THE

14. BEGIN ROAD AND PARKING CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS.

- CONTRIBUTING AREA TO THE BASIN HAS REACHED A MINIMUM OF 80% STABILIZATION AND IS NO LONGER REQUIRED AS A CONSTRUCTION SEDIMENTATION BASIN.
- 16. COMPLETE ALL REMAINING PLANTING AND SEEDING.
- 16. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS. REPAIR DRAINAGE OUTLETS AND BASINS AS REQUIRED. CLEAN AND FLUSH THE DRAINAGE STRUCTURES AND PIPES AT THE END OF CONSTRUCTION AND REMOVE ALL ACCUMULATED SEDIMENTS IN THE STORMWATER MANAGEMENT AREAS. CONTRACTOR MUST INSPECT THE DRAINAGE NETWORK AND REPAIR ANY DAMAGE IMMEDIATELY
- ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS AND DETERMINE WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM OF 80% STABILIZATION

# **GENERAL GRADING AND DRAINAGE NOTES:**

- 1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- 3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- 4. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS. IMMEDIATELY NOTIFY THE ENGINEER IF 2. REMOVE AND DISPOSE ALL SEDIMENT AND DEBRIS TO A PRE-APPROVED LOCATION.
- POSITIVE DRAINAGE CANNOT BE PROVIDED. UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR DETAIL, A MINIMUM CONCRETE FOUNDATION REVEAL OF 8" TO BE PROVIDED
- AT ALL BUILDING CORNERS. NOTIFY THE ENGINEER AND ARCHITECT IF ANY DEVIATION OR ALTERATION OF FOUNDATION REVEAL IS REFER TO ARCHITECTURAL PLAN AND SPECIFICATIONS FOR EARTHWORK AND COMPACTION REQUIREMENTS FOR ALL SLABS AND
- PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
- ALL EARTHWORK AND SITE PREPARATION MUST BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION OR GEOTECHNICAL REPORTS PREPARED FOR THIS SITE.
- ALL DRAINAGE STRUCTURES AND PIPES MUST BE CONNECTED TO THE DRAINAGE SYSTEM PRIOR TO THE INSTALLATION OF ANY PAVEMENT. PAVING WILL <u>NOT BE ALLOWED</u> IF THE DRAINAGE SYSTEM FOR THE PROPOSED PAVED AREA IS NOT COMPLETELY AND PROPERLY INSTALLED. THIS INCLUDES THE STABILIZATION OF ALL DISTURBED AREAS CONTRIBUTING TO THE DRAINAGE SYSTEMS AND ANY STORMWATER BASIN FLOORS AND SIDE SLOPES

- A HIGH WATER TABLE IS ANTICIPATED. IF THE WATER TABLE IS ENCOUNTERED DURING EXCAVATION, TEMPORARILY LOWER THE WATER TABLE AS INDICATED IN THE SPECIFICATIONS
- PRIOR TO ANY DEWATERING, THE DEWATERING PLAN MUST BE APPROVED BY THE ENGINEER.

RETAIN ALL SEDIMENTS ON-SITE WITHIN THE WORK AREA;

F DEWATERING IS NECESSARY DURING CONSTRUCTION, IMPLEMENT THE PROPER ESC MEASURES ON SITE TO PREVENT EROSION OR SEDIMENT RUNOFF. THESE MEASURES CAN INCLUDE DEWATERING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS AND/OR OTHER APPROVED DEVICES AS INDICATED IN THE DETAILS.

# DEWATERING NOTES

# SUPPLY THE DEWATERING SYSTEMS TO:

- DEVELOP A SUBSTANTIALLY DRY AND STABLE SUBGRADE FOR THE PROPOSED WORK B. PREVENT DAMAGE TO ADJACENT PROPERTIES, BUILDINGS, STRUCTURES, UTILITIES AND RESOURCES AREAS;
- PREVENT SEDIMENT DISCHARGE AND DEGRADATION OF THE RESOURCE AREA PREVENT LOSS OF FINES, QUICK CONDITION, OR SOFTENING OF FOUNDATION SUBGRADE; AND
- MAINTAIN STABILITY OF SIDES AND BOTTOMS OF EXCAVATIONS AND TRENCHES.
- MODIFY DEWATERING EQUIPMENT AND PROCEDURES WHEN OPERATIONS THREATEN TO CAUSE DAMAGE TO NEW OR EXISTING FACILITIES OR ADJACENT AREAS NOT WITHIN THE LIMIT OF WORK.

LOCATE DEWATERING FACILITIES WHERE THEY WILL NOT INTERFERE WITH CONSTRUCTION WORK OR ABUTTING RESOURCES

- PRIOR TO INSTALLATION OF THE DEWATERING SYSTEM PROVIDE THE ENGINEER WITH A SCHEDULE OF DEWATERING PROCEDURES DEWATERING SCHEDULE AND PROCEDURES ARE SUBJECT TO THE LOCAL AUTHORITY AND ENGINEER'S REVIEW AND APPROVAL AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING INFORMATION:
  - THE PROPOSED TYPES OF DEWATERING SYSTEMS;
  - ARRANGEMENT, LOCATION AND DEPTHS OF SYSTEM COMPONENTS COMPLETE DESCRIPTION OF EQUIPMENT AND INSTRUMENTATION TO BE USED INCLUDING INSTALLATION, OPERATION AND MAINTENANCE PROCEDURES: TYPES AND SIZES OF FILTERS (IF APPLICABLE);
  - DESIGN CALCULATIONS DEMONSTRATING ADEQUACY OF THE PROPOSED SYSTEM AND EQUIPMENT; AND PROVISIONS AND METHODS OF SEDIMENT REMOVAL AND DISPOSAL OF WATER. G. ALL PERMITS REQUIRED FOR THE WORK, IF NECESSARY
- FURNISH ALL MATERIAL/PRODUCTS REQUIRED TO ADEQUATELY PROVIDE DEWATERING WITHOUT DAMAGE TO SURROUNDING PROPERTIES, EXISTING UTILITIES, AND/OR RESOURCE AREA. SUBMIT ALL PRODUCTS AND MATERIALS TO THE ENGINEER FOR
- INTERCEPT AND DIVERT SURFACE WATER RUNOFF AWAY FROM EXCAVATIONS THROUGH THE USE OF DIKES, CURB WALLS, DITCHES,
- PIPES, SUMPS OR OTHER APPROVED MEANS IF PUMPS ARE USED, THE PUMP INTAKE LINE SHOULD NOT BE ALLOWED TO SETTLE TO THE BOTTOM OF THE EXCAVATION OR
- PROVIDE AND MAINTAIN HOLDING AREAS/TEMPORARY SETTLING BASINS OF ADEQUATE SIZE TO COLLECT AND PREVENT SURFACE AND SUBSURFACE WATER SEEPAGE FROM ENTERING THE EXCAVATIONS. DIVERT THE WATER TO SETTLING BASINS OR OTHER APPROVED EQUIPMENT REQUIRED TO REDUCE THE AMOUNT OF FINE PARTICLES BEFORE DISCHARGE INTO DRAINAGE PIPES AND NATURAL WATER COURSES. IF A DRAINAGE SYSTEM OR WATER COURSE BECOMES BLOCKED DUE TO DEWATERING OPERATION, IT MUST BE CLEANED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ANY ENFORCEMENT ACTIONS OR FINES ESULTING FROM IMPROPER DEWATERING AND/OR DISCHARGE OF TURBID WATER AND SEDIMENT TO PROTECTED AREAS ARE THE

ACCOMPLISH DEWATERING IN ACCORDANCE WITH THE MEANS AND METHODS SUBMITTED AND APPROVED BY THE ENGINEER. KEEP THE ENGINEER ADVISED OF ANY CHANGES REQUIRED TO ACCOMMODATE FIELD CONDITIONS AND, ON COMPLETION OF TH DEWATERING SYSTEM INSTALLATION, REVISE AND RESUBMIT THE INFORMATION REQUIRED TO SHOW THE INSTALLED SYSTEM

- A. PERFORM DEWATERING OPERATIONS TO LOWER THE GROUNDWATER LEVEL IN EXCAVATIONS AS REQUIRED TO PROVIDE A STABLE, DRY SUBGRADE FOR THE PROSECUTION OF THE PROPOSED WORK
- B. MAINTAIN DEWATERING OPERATIONS IN A MANNER THAT PREVENTS BUILDUP OF EXCESSIVE HYDROSTATIC PRESSURE AND DAMAGE TO STRUCTURES, AND THE SUBGRADE
- C. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES TO REMOVE PROMPTLY, AND TO DISPOSE OF PROPERLY, ALL WATER ENTERING EXCAVATIONS AND TO KEEP THEM DRY UNTIL THE PROPOSED WORK IS COMPLETED.
- D. DO NOT DISCHARGE WATER TO PROTECTED ENVIRONMENTAL RESOURCES WITHOUT TREATMENT TO REMOVE SUSPENDED SOLIDS AND SEDIMENTS
- E. DO NOT LAY PIPE AND/OR MASONRY IN WATER. DO NOT ALLOW WATER TO INUNDATE NEW CONCRETE AND NEW BRICK MASONRY WITHIN 48 HOURS AFTER INSTALLATION. PLACE BACKFILL PROMPTLY OR IMPLEMENT OTHER APPROVED

SOLE RESPONSIBILITY OF THE CONTRACTOR.

- PRIOR TO THE START OF CONSTRUCTION A NOTICE OF INTENT (NOI) MUST BE FILED WITH NPDES. REFER TO THE STORMWATER AND POLITION PREVENTION PLAN (SWPPP) REGARDING ALL EROSION CONTROL MATTERS. MAINTAIN A WORKING COPY OF THE SWPPP ONSITE AT ALL TIMES. FOLLOW THE SWPPP PROTOCOL FOR SITE MAINTENANCE, INSPECTIONS AND PROPER DOCUMENTATION UNTIL THE SITE HAS BEEN ACCEPTED BY THE OWNER. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR OR OWNER MUST FILE A NOTICE OF TERMINATION WITH NPDES. IN ACCORDANCE WITH NPDES REGULATIONS, THE COMPLETED SWPPP MUST INCLUDE ALL OF THE SITE EROSION CONTROL DOCUMENTATION. WEEKLY EROSION INSPECTION REPORTS COMPLETED BY THE DESIGNATED SITI PERSONNEL, AND ANY OTHER PERTINENT SITE DOCUMENTATION MUST BE RETAINED FOR A MINIMUM OF 3 YEARS FROM THE DATE
- DESIGNATE THE SITE CONSTRUCTION FOREMAN AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS AND IMPLEMENTATION OF ALL NECESSARY MEASURES TO CONTROL EROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE.
- INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS INDICATED ON DRAWINGS IN CONSULTATION WITH THE CONSERVATION AGENT, AND ENGINEER BEFORE <u>ANY CONSTRUCTION ACTIVITIES</u> BEGIN. INSPECT, MAINTAIN REPAIR AND REPLACE EROSION CONTROL MEASURES, AS NECESSARY, DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. THE SITE PERIMETER EROSION CONTROLS ARE THE DESIGNATED LIMIT OF WORK. INFORM ALL PERSONNEL WORKING ON THE PROJECT SITE THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGHOUT THE CONSTRUCTION
- 6. PROVIDE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL UTILITY 4. MAINTAIN A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER (SILT FENCE, STRAWBALE, &/OR SILT SOCK) ONSITE AT
  - PROVIDE CONSTRUCTION EXITS AS INDICATED ON DRAWINGS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. CLEAN AND/OR REPLACE THE CRUSHED STONE PAD, AS NECESSARY, TO MAINTAIN ITS EFFECTIVENESS.
  - 7. KEEP THE LIMIT OF CLEARING, GRADING AND DISTURBANCES TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, CLEAR AND GRUB ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION. PROPERLY INSTALL THE SEDIMENTATION CONTROLS PRIOR TO BEGINNING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK
  - MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING FARTHMOVING OR OTHER CONSTRUCTION ACTIVITIES WHICH LEAVE LARGE DISTURBED AREAS UNSTABILIZED. IF INCLEMENT WEATHER IS PREDICTED, USE BEST PROFESSIONAL JUDGEMENT AND GOOD CONSTRUCTION PRACTICES WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND ENSURE THE NECESSARY EROSION CONTROL DEVICES ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM
  - INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZED SLOPES ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF .25 INCH OR GREATER. REPAIR IDENTIFIED PROBLEMS WITHIN 24 HOURS TO ENSURE EROSION AND SEDIMENT CONTROLS ARE IN GOOD WORKING ORDER. RESET OR REPLACE MATERIALS AS REQUIRED.

10. SURROUND THE PERIMETER OF SOIL STOCKPILES WITH SILT SOCK, SILT FENCE, STRAWBALES, OR A COMBINATION OF SILT FENCE

DISTURBED AREAS AND SLOPES MUST NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, REINFORCE TEMPORARY AREAS HAVING A SLOPE GREATER THAN 4:1 WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE AREAS HAVING A SLOPE GREATER THAN 4:1 WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE

SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE

- INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCHBASIN RECEIVING RUNOFF FROM THE SITE. UPON THE INSTALLATION OF EACH CATCH BASIN, INSTALL A SILT SACK OR APPROVED EQUIVALENT. INSPECT SILT SACKS, AFTER EACH SIGNIFICANT STORM EVENT AND REMOVE AND EMPTY AS NEEDED FOR THE DURATION OF THE CONSTRUCTION PERIOD.
- 13. SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AID IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND CREATE THESE BASINS IN APPROPRIATE LOCATION
- CONTAIN ALL SEDIMENT ONSITE. SWEEP ALL EXITS FROM THE SITE AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. SWEEP PAVED AREAS AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS ACCUMULATED DURING SITE CONSTRUCTION. 15. REMOVE ACCUMULATED SEDIMENT FROM ALL TEMPORARY PRACTICES AND DISPOSE OF IN A PRE-APPROVED LOCATION.
- PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL EROSION AND SEDIMENTATION CONTROL DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS THE CONTRACTOR MUST CONTINUE TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ON SITE OR READILY AVAILABLE TO PROPERLY MAINTAIN AND REPAIR ALL EROSION AND SEDIMENTATION CONTROL DEVICES IN A TIMELY AND RESPONSIBLE MANNER
- PRIOR TO THE INSTALLATION OF FILTER FABRIC AND MEDIA WITHIN THE BIORETENTION AREAS, REMOVE AND PROPERLY DISPOSE OF SEDIMENT ACCUMULATED IN ANY PARTIALLY CONSTRUCTED OR TEMPORARY BIORETENTION/DRAINAGE AREA USED FOI SEDIMENT CONTROL DURING CONSTRUCTION. PROVIDE A SURFACE ELEVATION AT A MINIMUM 1-FOOT ABOVE THE BOTTOM OF MEDIA ELEVATION AS SHOWN IN THE BIORETENTION SCHEDULE FOR PARTIALLY CONSTRUCTED BIORETENTION AREAS. THIS ALLOWS FOR AN OVER-DIG OF THE COLLECTED SEDIMENT FROM WITHIN THE BIORETENTION AREA PRIOR TO MEDIA/FABRIC
- 18. CONTROL DUST BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. REMOVE SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK PRIOR TO THE OWNER'S ACCEPTANCE.

# STORMWATER FACILITY OPERATION & MAINTENANCE:

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES AS DUTLINED BELOW DURING CONSTRUCTION AND UNTIL SUCH TIME THAT THE ROADWAYS AND ASSOCIATED UTILITIES ARE ACCEPTED BY

- 1. INSPECT AND RESTORE/CLEAN ALL FACILITIES (INLETS, MANHOLES, INFILTRATION BASINS, STORMWATER MANAGEMENT AREAS AS DESCRIBED BELOW OF SEDIMENT AND DEBRIS PRIOR TO THE OWNER'S ACCEPTANCE
- REFER TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ADDITIONAL INFORMATION PERTAINING TO STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS. MAINTAIN A WORKING COPY OF THE SWPPP ON SITE AT ALL TIMES.
- 4. AT A MINIMUM INSPECT MONTHLY AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO 1" OF RAINFALL AS NECESSARY FOR THE NTIRE DURATION OF THE CONSTRUCTION PROJECT AND THE FIRST 3 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION.
- 5. SPECIFIC MAINTENANCE REQUIRED DURING CONSTRUCTION:

THE OWNER AND THE ENGINEER.

- DRAINAGE STRUCTURES (INLETS, MANHOLES, CATCHBASINS, DIVERSION STRUCTURE, WATER QUALITY UNITS): MONITOR AND REGULARLY INSPECT ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES FOR PROPER OPERATION, COLLECTION OF LITTER OR TRASH, AND STRUCTURAL DETERIORATION. CLEAN AND REMOVE SEDIMENT FROM THE STRUCTURES (INCLUDING
- B. <u>SEDIMENT FOREBAY</u>: REGULARLY INSPECT TO ENSURE PROPER FUNCTION. REMOVE SEDIMENT BUILD-UP ON THE FLOOR OF THE FOREBAY AND PROPERLY DISPOSE, AS NECESSARY, TO LIMIT CLOGGING. CLEAN SEDIMENT FOREBAYS PRIOR TO COMPLETION OF CONSTRUCTION.
- C. <u>INFILTRATION BASIN</u>: MONITOR AND INSPECT STRUCTURAL COMPONENTS, INCLUDING WEIR WALLS, DRAINAGE INLETS. CHECK RACKS, OUTLET STRUCTURES AND SPILLWAY, FOR PROPER FUNCTION. CLEAN AND REPAIR ANY CLOGGED OPENINGS IDENTIFIED DURING INSPECTIONS, FOR PROPER OPERATION. REMOVE SEDIMENT OR ORGANIC BUILD-UP AS NEEDED FOR PROPER OPERATION. REGULARLY INSPECT TO ENSURE THAT DESIGN INFILTRATION RATES ARE BEING MET. IF SEDIMENT OR ORGANIC DEBRIS BUILD-UP LIMITS THE INFILTRATION CAPABILITIES. REMOVE THE TOP 6" OR GREATER AND SURFACE ROTO-TILLED TO A DEPTH OF 12". RESTORE THE BASIN BOTTOM ACCORDING TO ORIGINAL DESIGN SPECIFICATIONS
- D. <u>BIORETENTION SYSTEMS AND RAINGARDENS</u>: REGULARLY INSPECT TO ENSURE PROPER FUNCTION. MONITOR AND INSPECT STRUCTURAL COMPONENTS, INCLUDING WEIR WALLS, DRAINAGE INLETS, OUTLET STRUCTURES AND SPILLWAYS, FOR PROPER FUNCTION. CLEAN AND REPAIR ANY CLOGGED STRUCTURES DURING INSPECTIONS. PRIOR TO THE COMPLETION OF CONSTRUCTION, REMOVE AND REPLACE ILL-ESTABLISHED, DEAD OR SEVERELY DISEASED PLANTS, REMOVE SEDIMENT BUILD-UP AS NEEDED, AND REPLACE SOIL WHEN NECESSARY. IF SEDIMENT OR ORGANIC DEBRIS BUILD-UP LIMITS THE INFILTRATION CAPABILITIES, REMOVE THE TOP 6" OR GREATER AND SURFACE ROTO-TILLED TO A DEPTH OF 12".
- E. GRASS SWALES: PERFORM A GENERAL INSPECTION OF THE SWALE AFTER STORM EVENTS GREATER THAN OR EQUAL TO 1" F RAINFALL OR MORE FREQUENTLY, AS NEEDED. MAINTENANCE CONSISTS OF REMOVAL OF ANY TRASH AND/OR DEBRIS FROM THE BOTTOM OF THE SWALE, REMOVAL OF SEDIMENT BUILDUP WITHIN THE SWALE, CORRECTING ANY EROSION GULLYING, AND RE-SEEDING, AS NECESSARY.
- ROUTINE MAINTENANCE: OTHER ROUTINE MAINTENANCE INCLUDES THE REMOVAL OF TRASH AND LITTER FROM PAVED AND PERIMETER AREAS, AND STREET AND PARKING LOT SWEEPING UPON COMPLETION OF CONSTRUCTION TO AVOID EXCESSIVE ACCUMULATION OF SEDIMENT IN THE DRAINAGE SYSTEM. INSPECT THE PIPES AND STRUCTURES FOR SEDIMENT ACCUMULATION AND PROPER FLOW.

# WATER & SEWER INSTALLATION NOTES

BOLTS AND NUTS MUST BE RUST PROOF STEEL.

INSTALL SEWER AND WATER MAINS ACCORDING TO THE FOLLOWING GUIDELINES TO PREVENT FREEZING OF THE MAIN OR SEWER:									
UTILITY TYPE	MIN. COVER OVER TOP OF PIPE	MIN. HORIZONTAL DISTANCE TO DRAIN STRUCTURE							
SANITARY FORCEMAIN	5'	3'							
GRAVITY FORCEMAIN	4'	2'							
WATER MAIN	5'	2'							

- 2. INSULATE SANITARY FORCE MAINS, WATER MAINS, HYDRANT PIPING AND DEAD END WATER LINES S WHERE SOIL COVER OR HORIZONTA EPARATION TO PRECAST STRUCTURES IS LESS THAN THE DISTANCE SPECIFIED ABOVE AND/OR WHERE SHOWN ON PLANS.
- INSULATION: 2" THICK POLYURETHANE INSULATION WITH PVC JACKET PLACED AROUND PIPE OR DESIGNER APPROVED EQUAL. 4. WATER AND SEWER SEPARATION IS TYPICALLY 10-FEET MINIMUM HORIZONTAL AND 18-INCHES VERTICAL WITH SEWER MAINS BELOW THE WATER MAINS (SEE DETAIL). IF SITE CONDITIONS REQUIRE LESS, THEN INSTALL UTILITIES AS INDICATED ON DETAILS.

# WATER SYSTEM INSTALLATION NOTES

SPECIFICATIONS AND PAY FOR ALL ASSOCIATED FEES AS REQUIRED BY THE WATER DEPARTMENT ALL PROPOSED WATER MAIN 4-INCHES AND GREATER IN DIAMETER ARE DUCTILE IRON CLASS 52. ONLY USE HDPE 3408 OR AS INDICATED ON

CONSTRUCT THE WATER MAIN AND ITS APPURTENANCE IN ACCORDANCE WITH THE LOCAL WATER DEPARTMENT'S STANDARDS AND

- SUPPLY TWO COPIES OF SWORN CERTIFICATES TO PROVE THAT ALL PIPES AND FITTINGS ARE INSPECTED AND TESTED AS REQUIRED BY THE ANDARD SPECIFICATIONS TO WHICH THE MATERIAL IS MANUFACTURE
- GATE VALVES: MUELLER (A 2360 SERIES), CLOW (AWWA STANDARD C509 SERIES), AMERICAN DARLING (RESILIENT WEDGE) OR APPROVED

PROVIDE GATE VALVES ON ALL HYDRANT BRANCHES AND WATER MAIN. THE GATE VALVE TO TURN TO THE RIGHT TO OPEN (CLOCKWISE). ALL

- CLEAR ALL NEWLY INSTALLED WATER SYSTEM COMPONENTS OF ALL FOREIGN MATERIALS SUCH AS DIRT AND MISCELLANEOUS DEBRIS PRIOR TO SYSTEM TESTING. NO TESTING IS ALLOWED WITHOUT REMOVAL OF ALL FOREIGN MATERIALS. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRESSURE TEST AND DISINFECTION TEST OF ALL WATER MAINS. THE TESTS MUST WITNESSED BY THE APPROVED INSPECTOR OR THE ENGINEER. THE CONTRACTOR MUST PROVIDE A MINIMUM OF 48-HOUR ADVANCE NOTICE TO THE LOCAL WATER DEPARTMENT PRIOR TO THE PRESSURE AND DISINFECTION TESTS. THE CONTRACTOR MUST PROVIDE ALL NECESSARY
- INSTALL AND REMOVE ALL NECESSARY BLOWOFFS REQUIRED FOR THIS PROJECT AT NO EXTRA COST TO THE OWNER.

9. COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.

- MAINTAIN UP-TO-DATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED. AS-BUILT DRAWINGS AND NOTES WILL BE UTILIZED BY THE ENGINEER FOR THE PREPARATION OF RECORD PLANS SEWER SYSTEM OPERATION & MAINTENANCE:
- CLEAN ALL NEWLY INSTALLED FACILITIES, INCLUDING SEWER COLLECTION SYSTEM OF ALL FOREIGN MATERIALS SUCH AS DIRT AND SCELLANEOUS DEBRIS PRIOR TO SYSTEM TESTING. TESTING MUST BE WITNESSED AND INSPECTED BY THE ENGINEER. NO TESTING IS ALLOWED WITHOUT REMOVAL OF ALL FOREIGN MATERIALS.

CONDUCT A FAKAGE TEST OF ALL SEWER MAINS, TEST MUST BE WITNESSED BY THE ENGINEER. THE CONTRACTOR MUST PROVIDE

AFTER THE STABILIZATION PERIOD (3.5 psi MINIMUM PRESSURE IN THE PIPE). THE PORTION OF PIPE TESTED IS ACCEPTABLE IF

THE TIME REQUIRED IN MINUTES FOR THE PRESSURE TO DECREASE FROM 3.5 TO 3 psi IS NOT LESS THAN 1.90 TIMES THE

- THE ENGINEER WITH A MINIMUM OF 48-HOURS ADVANCE NOTICE TO THE TIME OF THE PRESSURE TEST. TEST SEWER PIPES FOR LEAKAGE WITH THE FOLLOWING PROCEDURE NTRODUCE LOW PRESSURE AIR INTO THE SEAL LINE (WITH PNEUMATIC PLUGS) UNTIL THE INTERNAL AIR PRESSURE REACHES 4 psi GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE OVER THE PIPE. ALLOW AT LEAST 2 MINUTES FOR AIR PRESSURE TO STABILIZE.
- VACUUM TEST ALL SEWER MANHOLES. TESTS MUST BE WITNESSED BY THE ENGINEER UNLESS THE SEASONAL GROUNDWATER LEVEL IS MORE THAN 10 FEET FROM THE BOTTOM OF THE MANHOLE.

5. MANDREL TEST ALL SEWER MAINS AFTER 30 DAYS. TESTS MUST BE WITNESSED BY A TOWN REPRESENTATIVE OR THE ENGINEER.

# LEGEND:

**GENERAL** 

EXISTING	PROPOSED	BERM	SYMBOLS	
		BERM CUT		BENCHMARK
		BUILDING	CB	
		CENTERLINE	□CB	BOUNDARY
44	44	CONTOUR - MINOR	$\triangle$	CONTROL POINT
	50 —	CONTOUR - MAJOR CURB	E. C.	EXISTING TREE
		CURB CUT EDGE OF PAVEMENT	EL:98.45	EXISTING SPOT GRADE
o	0	FENCE - CHAIN LINK	+ EL:95.00	SPOT GRADE
x x	x x	FENCE - WIRE	(\$)	SEWER MANHOLE
		FENCE - WOOD  GUARD RAIL	E	ELECTRIC MANHOLE
		LIMIT OF WORK	T	TELEPHONE MANHOLE
		PATHWAY	MH	MANHOLE
		STONE SIDEWALK	TV	TV BOX
		STORMWATER AREA	?	UNKNOWN MANHOLE
* * * Y Y Y Y \.	., , , , , , , , , , , , , , , , , , ,	TREE LINE WALL - RETAINING	MP	METER PIT
		CONCRETE CROSSWALK/PAVEMENT	<b>(</b>	DRAIN MANHOLE
PROPERTY IN	NFORMATION	STRIPING		CATCHBASIN
EXISTING	PROPOSED	ABUTTING LOT		BIORETENTION OUTLET
		EASEMENT LINE		STONE APRON
		PROPERTY, LOT, OR ROW SETBACK LINE	$\nabla$	INLET PROTECTION
UTILI	ITIES	0215/16/12IINE	WV	WATER VALVE
EXISTING	PROPOSED		SV	SEWER VALVE
D D		DRAIN PIPE	GV	GAS VALVE
G		GAS LINE	cs	
——————————————————————————————————————			•	CURB STOP
FM			© ©	CLEAN OUT
E/T/C	E/T/C	UNDERGROUND E/T/C	•	THRUST BLOCK
	——————————————————————————————————————			UTILITY BOX
	т —		Ş	HYDRANT
W	——— w ———	WATER LINE	UP	UTILITY POLE W/GUY
EROSION & SEDI	MENT CONTROL		UP1	
	s —	SILT SOCK	© ♠	UTILITY POLE
s			•	GUY
S:	IMENTAL		٠.	LICHT DOCT
	MENTAL	WETLAND BOUNDARY	<b>\$</b>	LIGHT POST
	IMENTAL	WETLAND BOUNDARY WETLAND 50' BUFFER	(MW)	MONITORING WELL
	IMENTAL			MONITORING WELL WATER WELL
	IMENTAL	WETLAND 50' BUFFER		MONITORING WELL WATER WELL TEST PIT
	IMENTAL	WETLAND 50' BUFFER	(MW) (W) TP	MONITORING WELL WATER WELL TEST PIT
	IMENTAL	WETLAND 50' BUFFER	(MW) (W) TP	MONITORING WELL  WATER WELL  TEST PIT
	IMENTAL	WETLAND 50' BUFFER	(MW) (W) TP	MONITORING WELL  WATER WELL  TEST PIT  WETLAND FLAG
	IMENTAL	WETLAND 50' BUFFER	(MW) (W) TP	MONITORING WELL  WATER WELL  TEST PIT  WETLAND FLAG  ROCK

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LITTLETON DRIVE

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**GENERAL NOTES** 

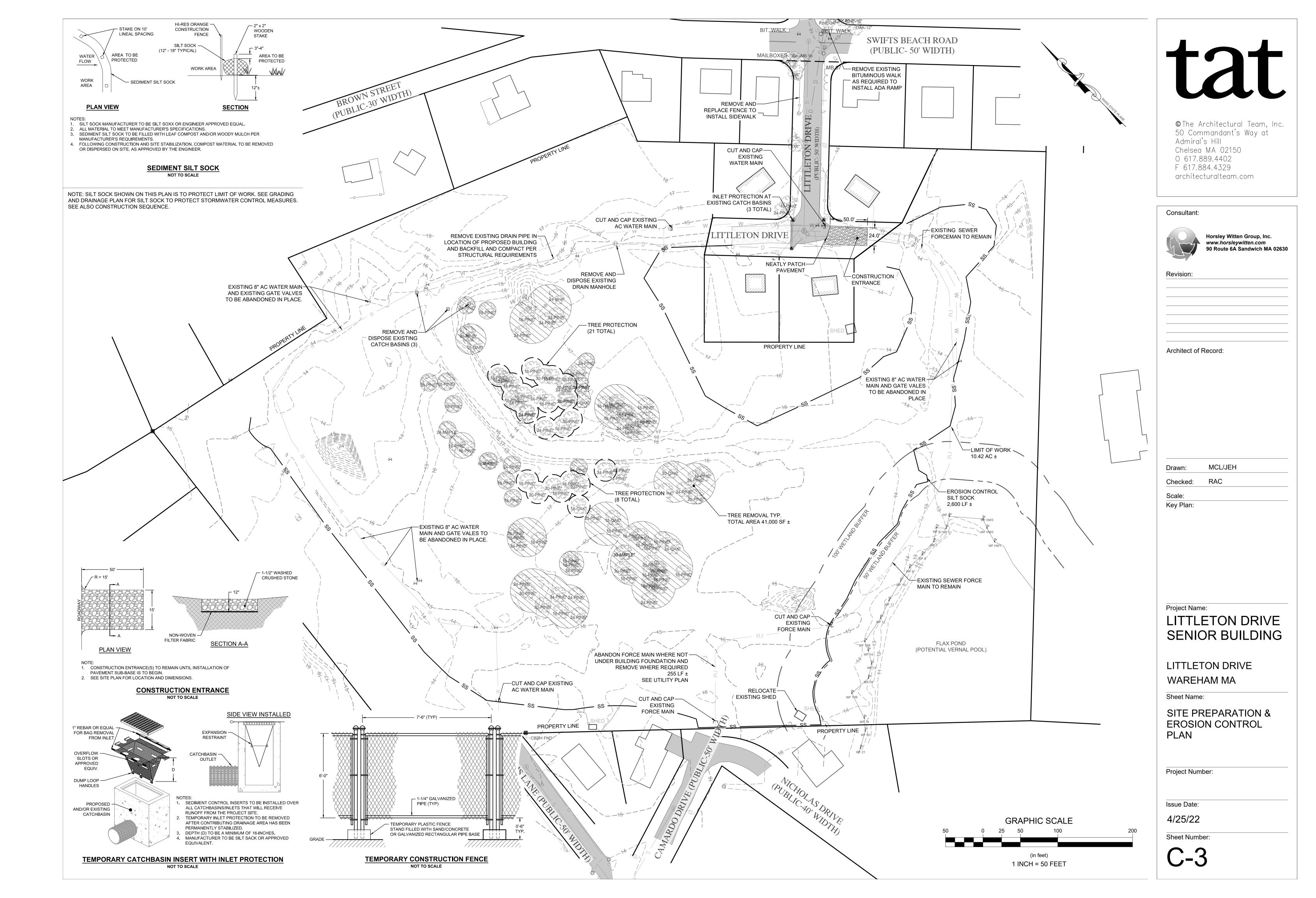
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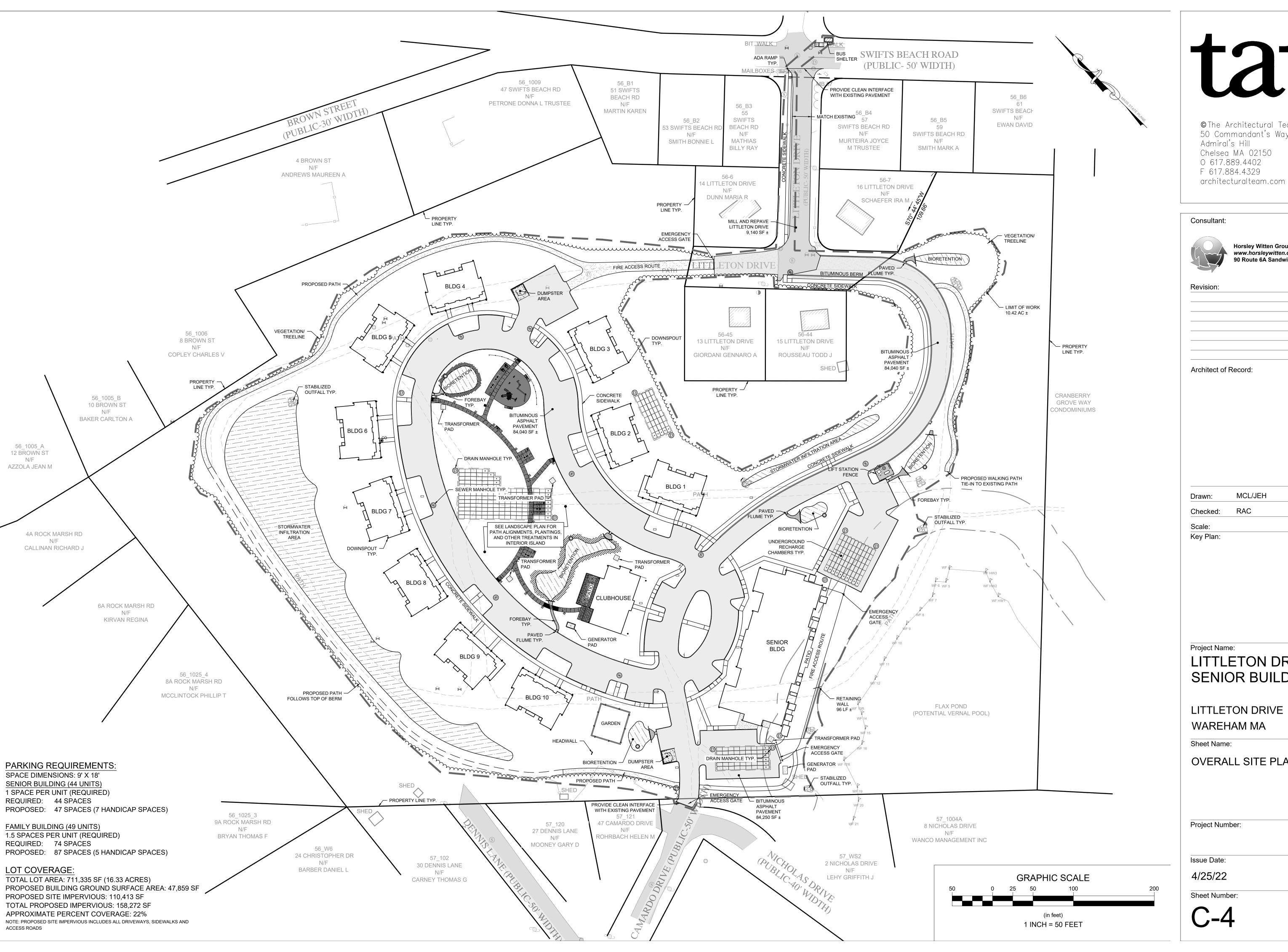
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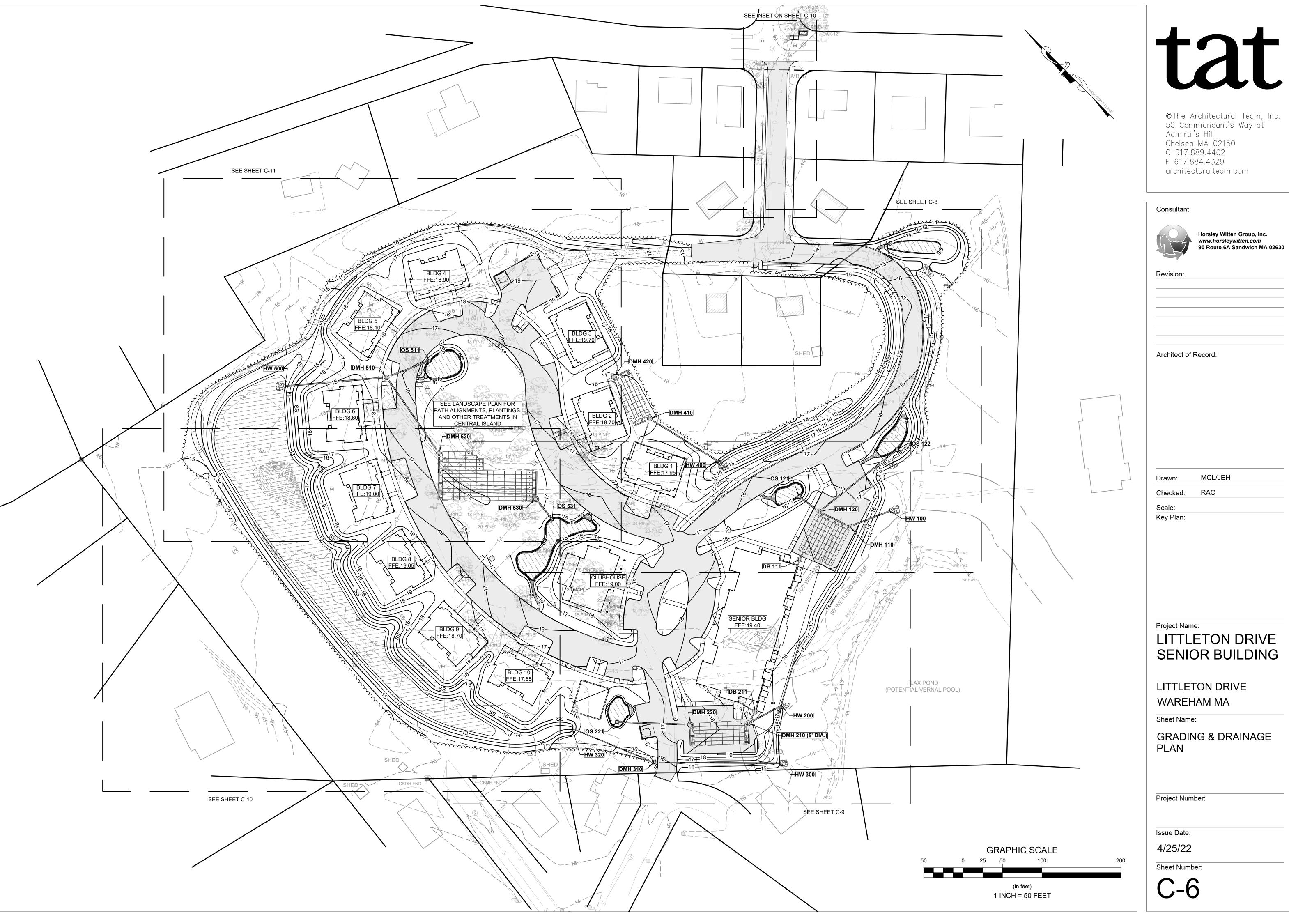




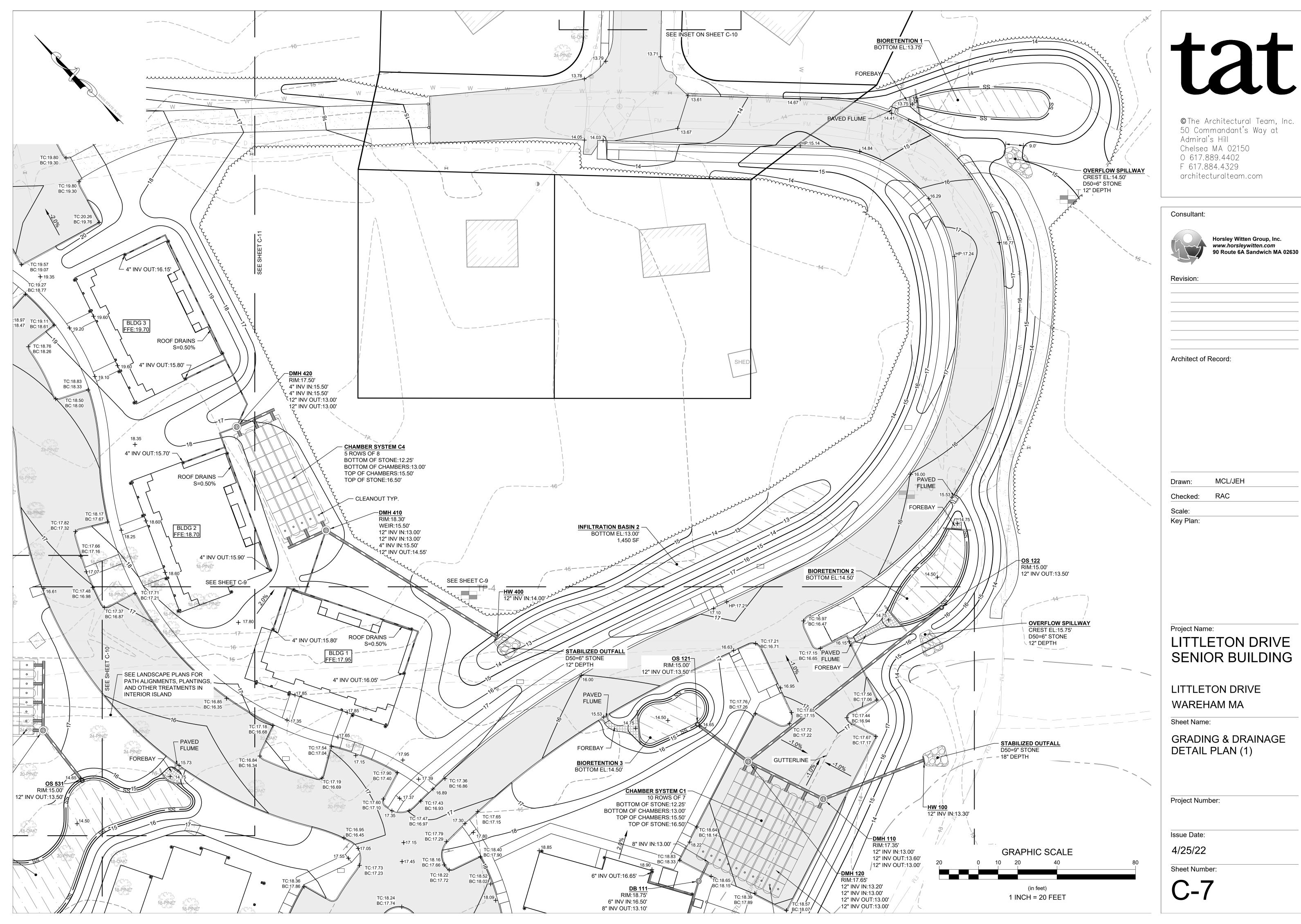
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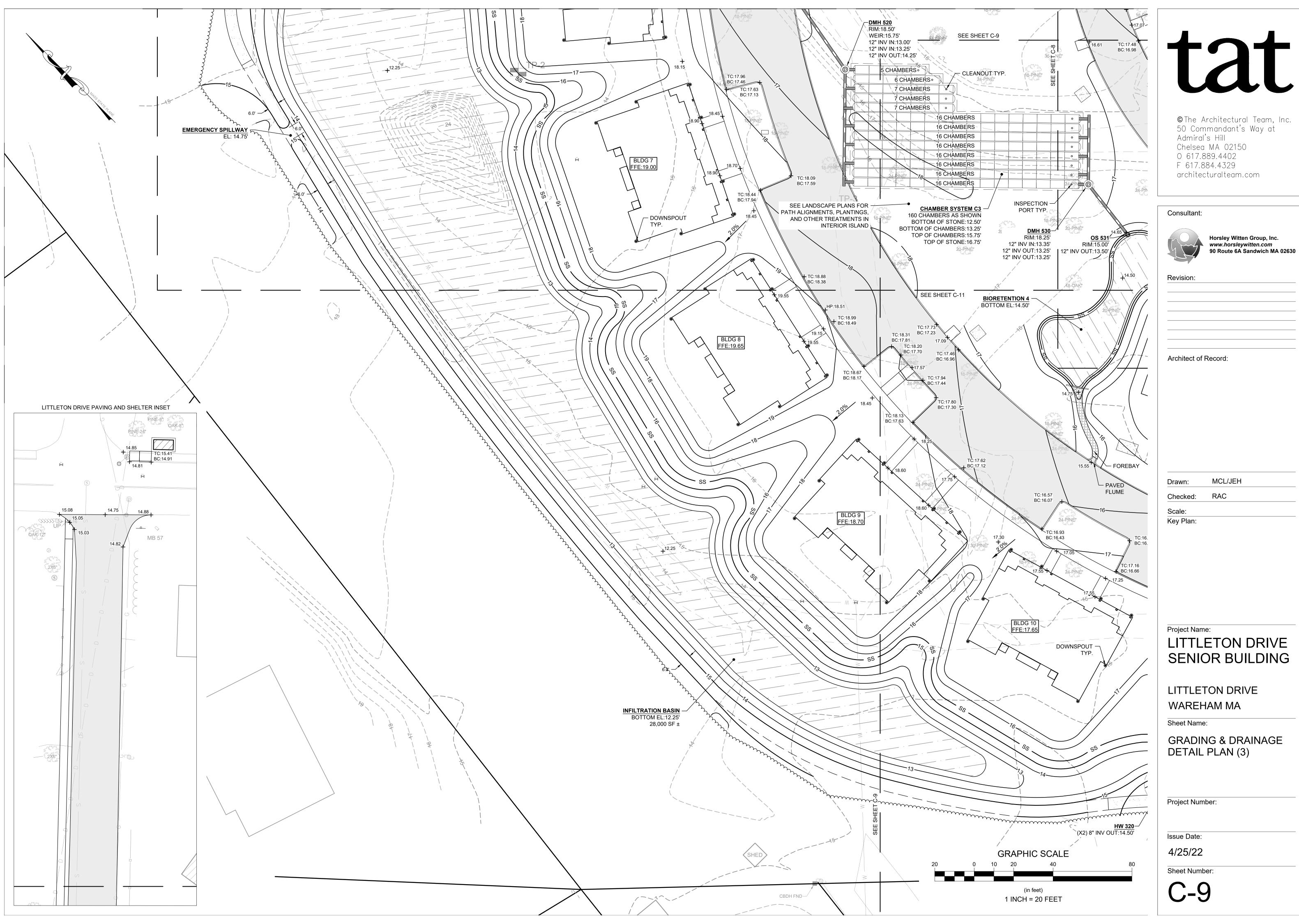


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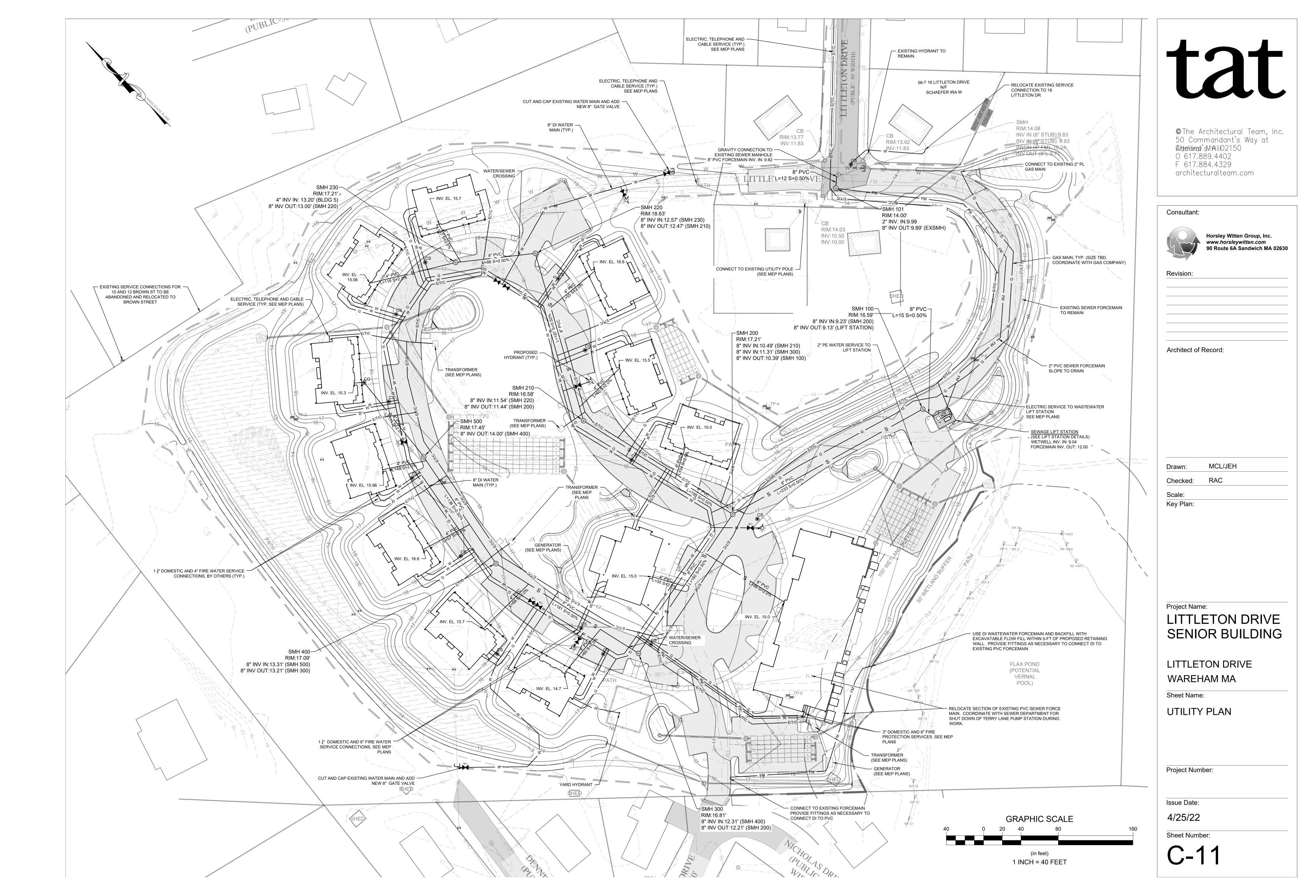


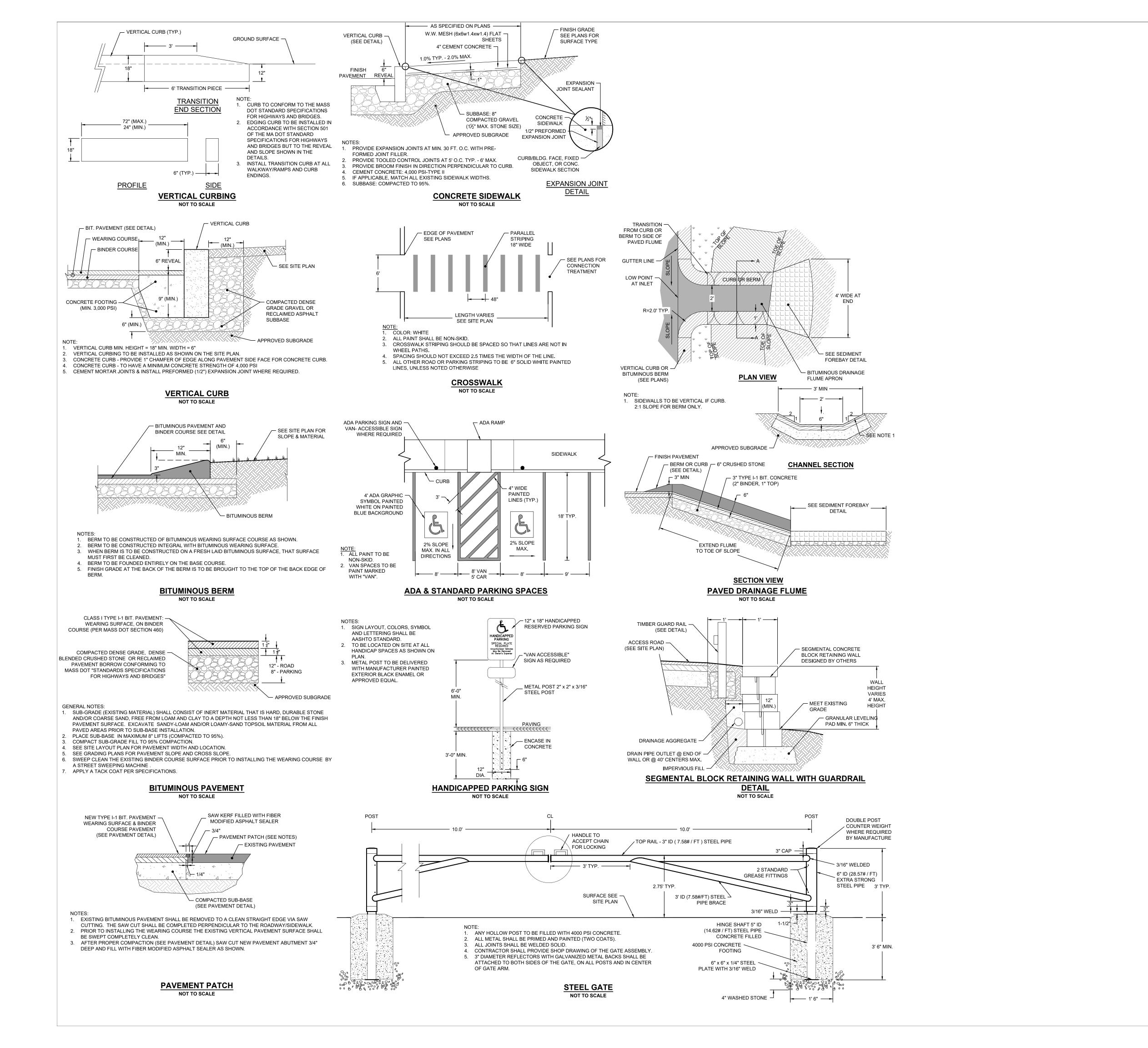


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CONSTRUCTION DETAILS

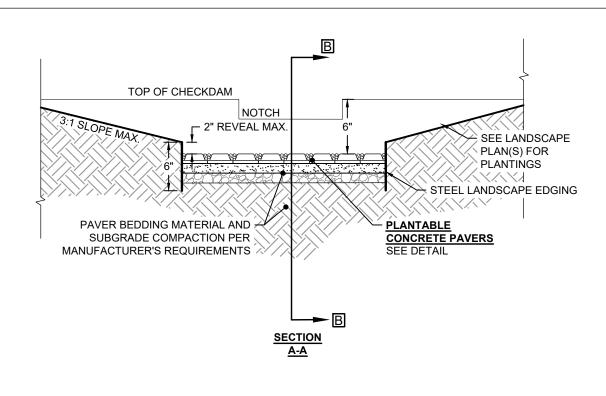
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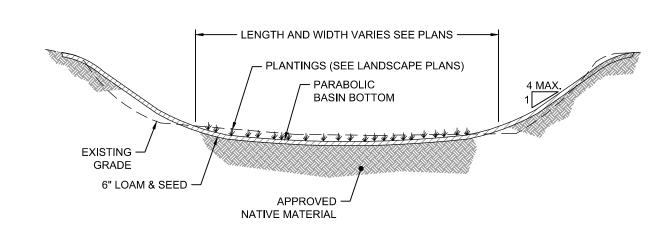
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				BIC	DRETENTION	ON SCHE	DULE:						
		ELEV. A				ELEV. B		ELEV. C		ELEV. D	ELEV. F	FOREBAY	CHECKDAM
	Bottom	Overflow	Ponding	Bottom of	Overflow		Bio Soil	Bottom	Depth Pea	Bottom of	Outlet	Bottom of	Checkdam
	Surface	Inlet Rim	Depth	Bio Area	Inlet Type &	Top of Bio	Depth	Bio Soil	Gravel	Bed	Invert	Forebay	Notch
No.	Area (sf)	(el.)	(ft)	(el.)	#	Soil (el.)	(ft)	(el.)	(ft)	(el.)	(el.)	(el.)	(el.)
1	790	15.00	1.25	13.75	SPILLWAY	13.75	1.50	12.25	0.50	11.75	NA	13.75	14.00
2	860	15.00	0.50	14.50	STR	14.50	1.50	13.00	0.50	12.50	13.50	14.75	15.00
3	330	15.00	0.50	14.50	STR	14.50	1.50	13.00	0.50	12.50	13.50	14.75	15.00
4	2,280	15.00	0.50	14.50	STR	14.50	1.50	13.00	0.50	12.50	13.50	14.75	15.00
5	550	15.13	0.50	14.63	STR	14.63	1.50	13.13	0.50	12.63	13.50	15.25	15.50
6	1,130	15.25	0.50	14.75	STR	14.75	1.50	13.25	0.50	12.75	13.50	15.00	15.25



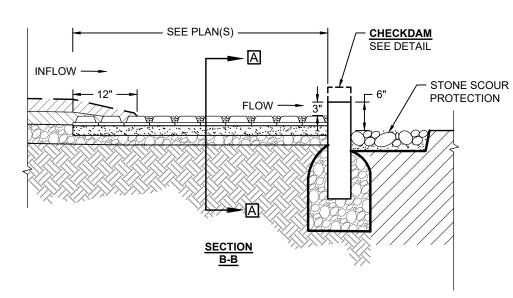
# **INFILTRATION BASIN** NOT TO SCALE

1. ALL SECTIONS TO BE DESIGNED FOR H-20

6" MIN. COMPACTED

3/4" CRUSHED STONE

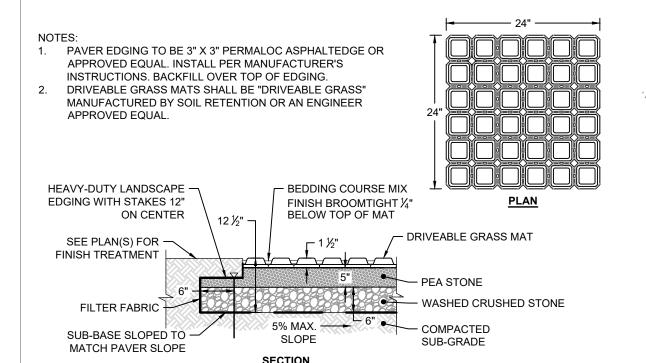
- APPROVED COMPACTED SUBGRADE



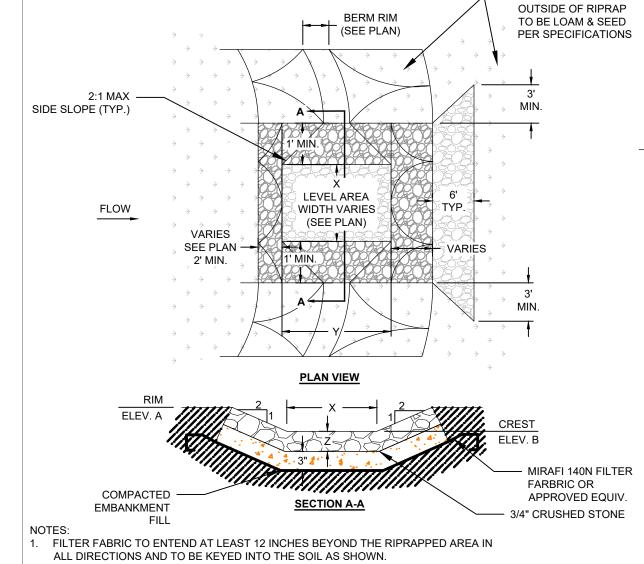
1. SEE <u>PLANTABLE CONCRETE PAVERS</u> DETAIL AND SPECIFICATIONS FOR PLANTABLE PAVER 2. INSTALL PLANTABLE/PERMEABLE PAVER SYSTEM PER MANUFACTURERS REQUIREMENTS. 3. SHAPE FOREBAY AS REQUIRED WITH MIN. 6" SIDE SLOPE DEPTH. DO NOT EXCEED 3:1 SIDE SLOPES.

4. STEEL LANDSCAPE EDGING TO BE ¼" THICKNESS HEAVY-DUTY STEEL WITH NATURAL FINISH.

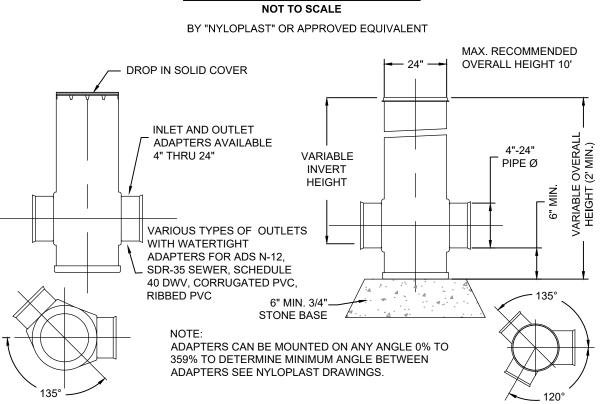
# SEDIMENT FOREBAY NOT TO SCALE

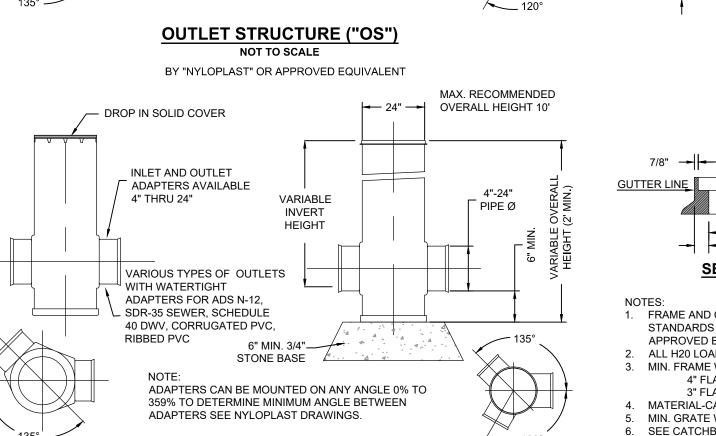


# PLANTABLE CONCRETE PAVERS NOT TO SCALE

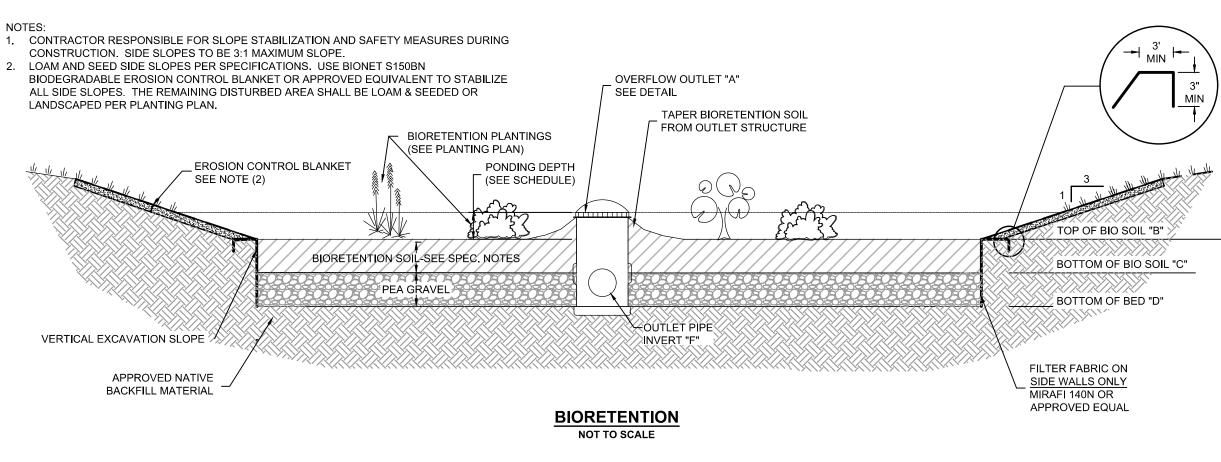


**OVERFLOW SPILLWAY** 





**DRAIN BASIN ("DB")** NOT TO SCALE BY "NYLOPLAST" OR APPROVED EQUIVALENT



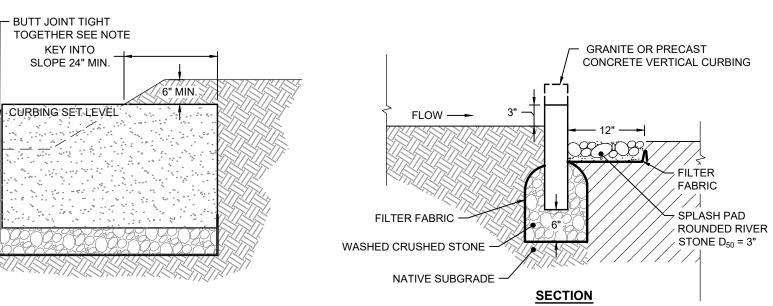
**CHECKDAM** 

NOT TO SCALE

MAX. RECOMMENDED

PIPE Ø

→ 24" → OVERALL HEIGHT 10'



1. USE RECYCLED/RECLAIMED GRANITE CURB WHEN POSSIBLE OR BUTT TIGHTLY TO FACE OF GRANITE CURB. 2. KEY CHECKDAM INTO FOREBAY SIDE SLOPES A MINIMUM OF 24" TO PREVENT FLOW FROM DIVERTING THE CHECK DAM.

3. SEE PLAN(S) FOR CHECKDAM DIMENSIONS AND LAYOUT.

INLET AND OUTLET

WITH WATERTIGHT

NOTE:

THRU 24"

ADAPTERS AVAILABLE 4"

VARIOUS TYPES OF OUTLETS

ADAPTERS FOR ADS N-12,

\_ SDR-35 SEWER, SCHEDULE

40 DWV, CORRUGATED PVC,

DOMED DROP IN

SEE SITE PLAN(S)

**ELEVATION** 

INVERT

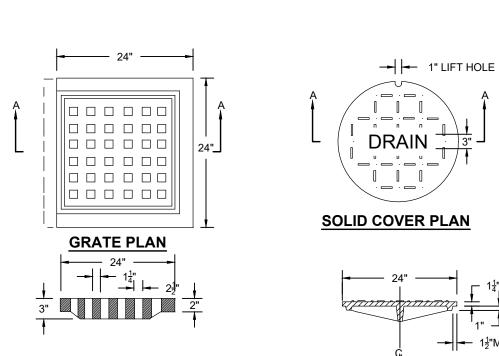
HEIGHT

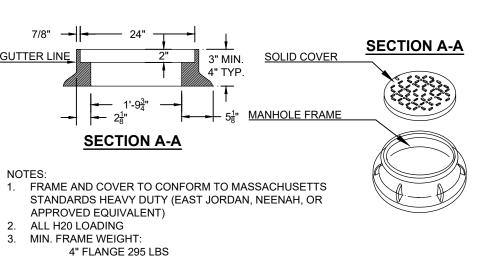
6" MIN. 3/4"

ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0% TO

359% TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE NYLOPLAST DRAWINGS.

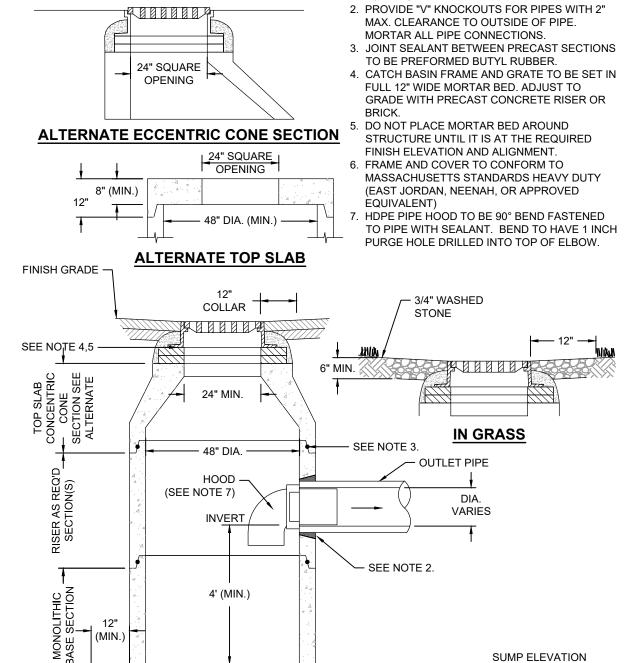
STONE BASE



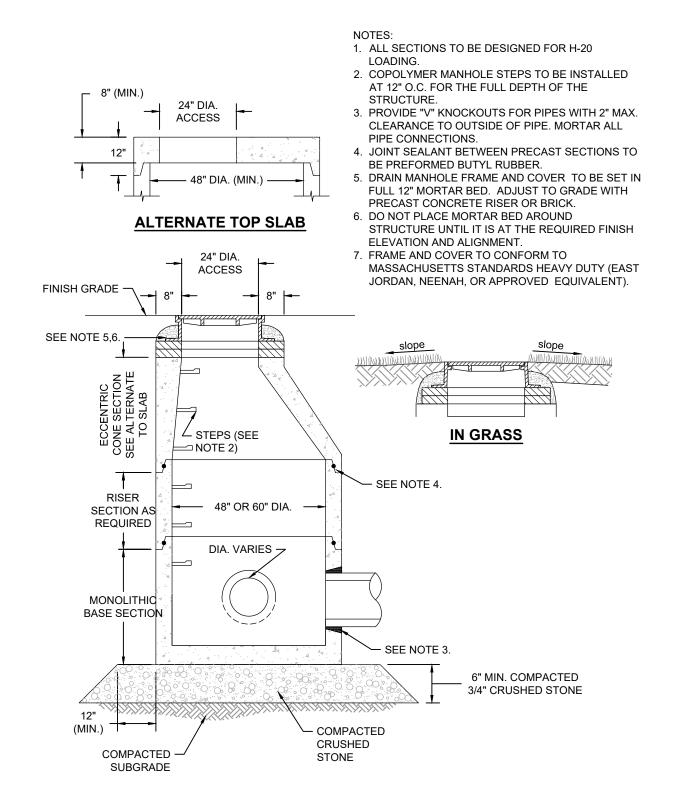


3" FLANGE 265 LBS MATERIAL-CAST IRON 5. MIN. GRATE WEIGHT: 200LBS. 6. SEE CATCHBASIN AND MANHOLE DETAILS FOR INSTALLATION.

DRAINAGE STRUCTURE FRAME AND COVER OR GRATE



# PRECAST CONCRETE CATCH BASIN WITH HOOD ("CB") **NOT TO SCALE**



PRECAST DRAIN MANHOLE ("DMH") NOT TO SCALE

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Sheet Name:

STORMWATER DETAILS

Project Number:

Issue Date:

4/25/22



Subsurface Stormwater Management<sup>st</sup> STORMTECH GENERAL NOTES

STORMTECH'S INSTALLATION INSTRUCTIONS.

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION

- 2 OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL
- 3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.

SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.

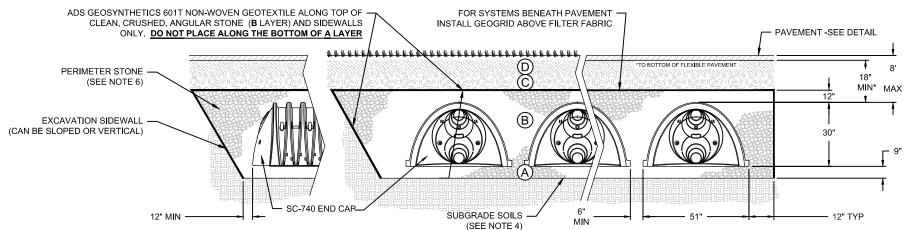
- 4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- 5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS. 6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN
- THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS. 7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF
- 8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING
- 9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- 10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.

# 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 PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.		
	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145¹ A-1, A-2-4, A-3 OR AASHTO M43¹ 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 PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).		
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.		
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLA SURFACE. <sup>2 3</sup>		

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. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE."

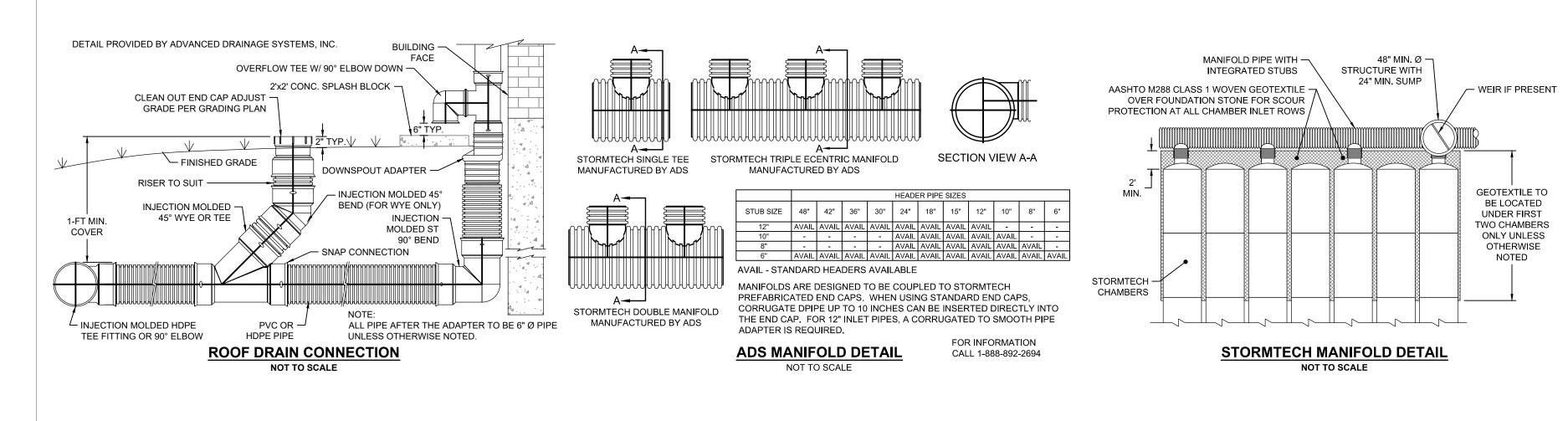
STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



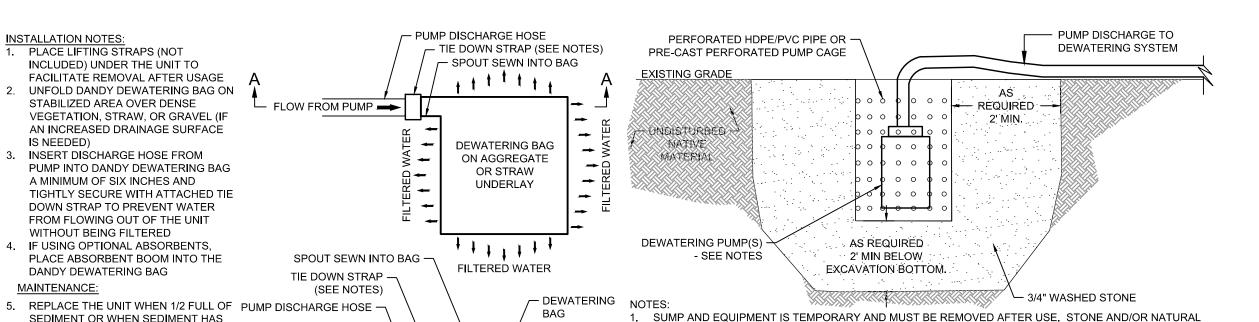
- 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPI ASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" THE INSTALLED CHAMBER SYSTEM TO PROVIDE THE LOAD FACTORS SPECIFIED IN THE ASSISTO CHAMBER SYSTEM TO PROVIDE THE LOAD FACTORS SPECIFIED IN THE ASSISTO REPORT AND MULTIPLE VEHICLE PRESENCE.

  "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS."
- 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.
  PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 7. ONCE LAYER 'C' IS PLACED, ANY SOLIMATERIAL 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.
  8. FOR INFORMATION, CONTACT STORMTECH AT 1-888-892-2694.

# STORMTECH SC-740 CHAMBER TYPICAL CROSS SECTION **NOT TO SCALE**



	UNDERGROUND RECHARGE CHAMBER SCHEDULE																		
	SPECIFICATIONS  SPECIFICATIONS												ELEVATIONS	<u> </u>					
NUMBER	COVER TYPE	NUMBER OF UNITS	CHAMBER TYPE/ MODEL	CHAMBER HEIGHT (IN.)	STONE TOP OF CHAMBER (IN.)	BOTTOM OF CHAMBER TO INVERT IN (IN.)	STONE UNDER CHAMBER (IN.)	STONE SIDE CHAMBER (IN.)	STONE END CHAMBER (IN)	HEADER	DIAMETER CHAMBER INLET STUB (IN.)	# OF MANIFOLD INLETS STUBS	ELEV. A INVERT HEADER MANIFOLD (FT)	ELEV. B MANIFOLD STUB INVERT (FT)	ELEV. C BOTTOM OF CHAMBER S (FT)	BOTTOM OF STONE (FT)	ELEV. E TOP OF CHAMBER (FT)	ELEV. F TOP OF STONE (FT)	ELEV. G DIVERSION WEIR (FT)
C-1	PAVEMENT	70	STORMTECH SC-740	30.00	12	0	9	12	12	12	12	4	13.00	13.00	13.00	12.25	15.50	16.50	-
C-2	PAVEMENT	54	STORMTECH SC-740	30.00	12	0	9	12	12	12	12	3	13.00	13.00	13.00	12.25	15.50	16.50	-
C-3	GRASS	160	STORMTECH SC-740	30.00	12	0	9	12	12	12	12	4	13.25	13.25	13.25	12.50	15.75	16.75	15.00
C-4	GRASS	40	STORMTECH SC-740	30.00	12	0	9	12	12	12	12	2	13.00	13.00	13.00	12.25	15.50	16.50	15.00



DANDY DEWATERING BAG MAINTENANCE: 5. REPLACE THE UNIT WHEN 1/2 FULL OF PUMP DISCHARGE HOSE — SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE

PUMP DISCHARGE TO AN

WITHOUT BEING FILTERED

IS NEEDED)

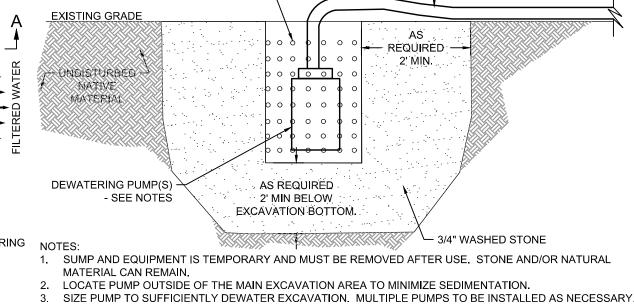
- IMPRACTICAL RATE 6. IF USING OPTIONAL OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENT
- PILLOW WHEN NEAR SATURATION

FLOW FROM PUMP -

**DEWATERING BAG DETAIL** NOT TO SCALE

STRAW BALE UNDERLAY -

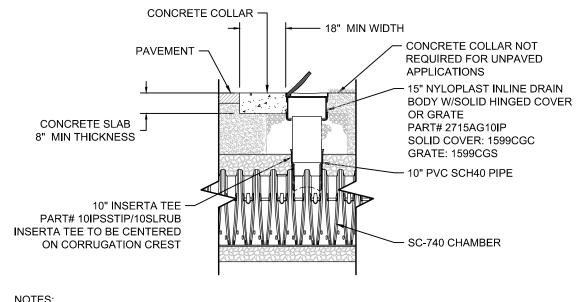
SECTION A - A



4. PUMP CHAMBER SIZE TO BE DETERMINED BASED ON PUMP DIMENSIONS.

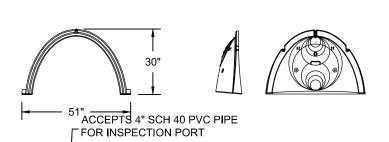
**DEWATERING SUMP DETAIL** NOT TO SCALE

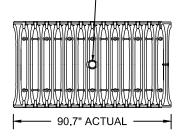
5. FINAL DEPTH TO BE DETERMINED BY CONTRACTOR BASED ON EXISTING GRADE AND DEPTH OF WATER.



1. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED. 2. INSPECTION PORTS TO BE INSTALLED IN THE MIDDLE CHAMBER OF EACH CHAMBER ROW 3. FOR STORMTECH INFORMATION CALL 1-888-892-2694

> **INSPECTION PORT** NOT TO SCALE





85.4" INSTALLED --OVERLAP NEXT CHAMBER HERE (OVER SMALL CORRUGATION) BUILD ROW IN THIS DIRECTION

SIZE (W x H x INSTALLED LENGTH) CHAMBER STORAGE MINIMUM INSTALLED STORAGE

51.0" x 30.0" x 85.4" 45.9 CUBIC FEET 74.9 CUBIC FEET

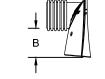
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	Α	В	С
SC740EPE06T	6"(150 mm)	10.90" (277 mm)	18.50" (470 mm)	N/A
SC740EPE06B	6"(150 mm)	10.90" (277 mm)	N/A	0.50" (13 mm)
SC740EPE08T	8"(200 mm)	12.20" (310 mm)	16.50" (419 mm)	N/A
SC740EPE08B	8"(200 mm)	12.20" (310 mm)	N/A	0.60" (15 mm)
SC740EPE10T	10"(250 mm)	13.40" (340 mm)	14.50" (368 mm)	N/A
SC740EPE10B	10"(250 mm)	13.40" (340 mm)	N/A	0.70" (18 mm)
SC740EPE12T	12"(300 mm)	14.70" (373 mm)	12.50" (318 mm)	N/A
SC740EPE12B	12"(300 mm)	14.70" (373 mm)	N/A	1.20" (30 mm)
SC740EPE15T	15"(375 mm)	18.40" (467 mm)	9.00" (229 mm)	N/A
SC740EPE15B	15"(375 mm)	18.40" (467 mm)	N/A	1.30" (33 mm)
SC740EPE18T	18"(450 mm)	19.70" (500 mm)	5.00" (127 mm)	N/A
SC740EPE18B	18"(450 mm)	19.70" (500 mm)	N/A	1.60" (41 mm)
SC740EPE24B	24"(600 mm)	18 50" (470 mm)	N/A	0.10" (3 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

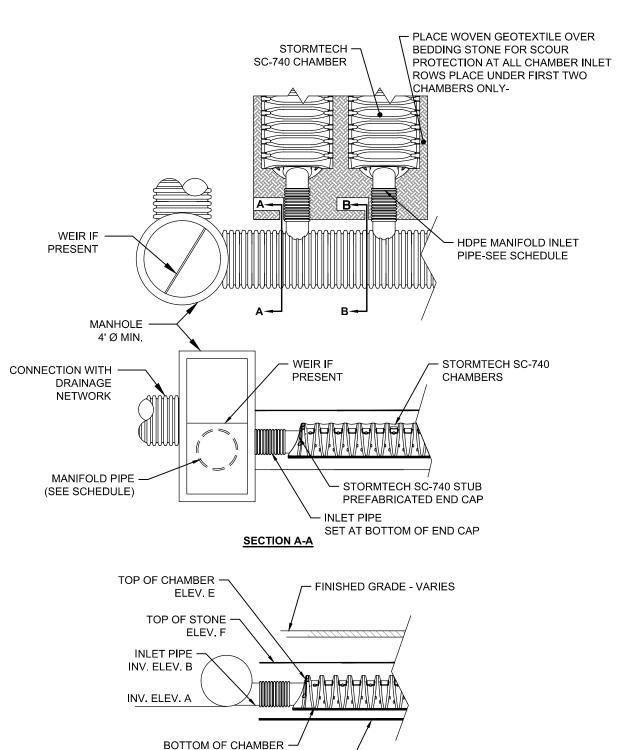
ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

\*FOR THE SC740EPE24B THE 24" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS





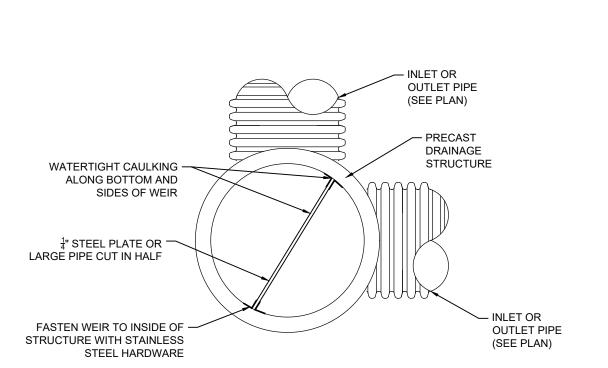
# STORMTECH TECHNICAL DETAILS



STORMTECH SYSTEM DETAIL NOT TO SCALE

ELEV. D SECTION B-B

ELEV. C BOTTOM OF STONE -



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SENIOR BUILDING

LITTLETON DRIVE **WAREHAM MA** 

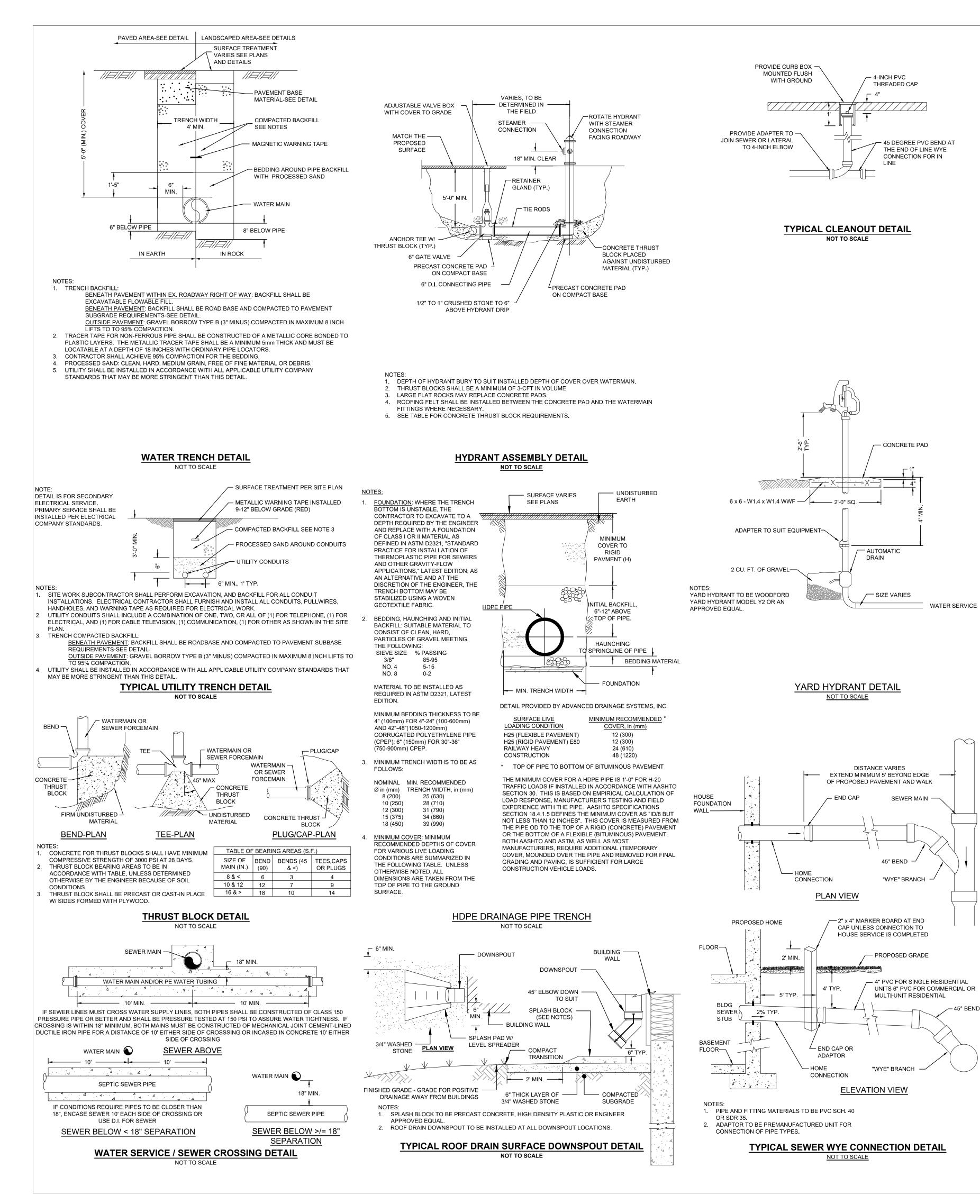
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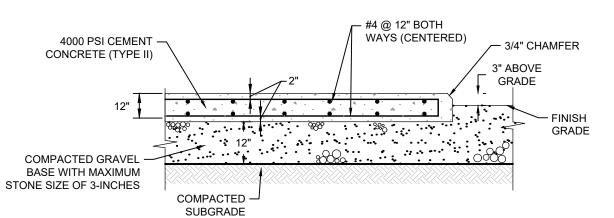
STORMWATER DETAILS

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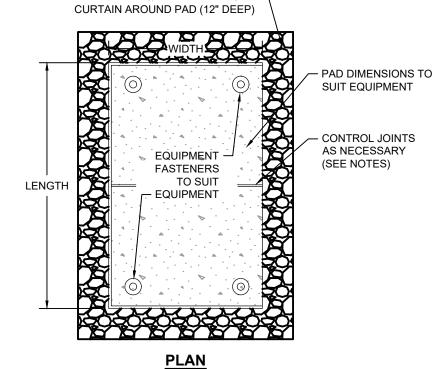
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1' WIDE 3/4" WASHED STONE -



CONCRETE PAD PROPOSED FOR ALL ABOVE GROUND STORAGE TANKS AND

- GENERATORS. ALL GENERATORS TO BE EQUIPPED WITH FULL ENCLOSURES. 2. LENGTH AND WIDTH TO SUIT MANUFACTURER'S EQUIPMENT WITH THE PAD EXTENDING A MINIMUM 1.5' OUTSIDE THE OUTER EDGE OF THE TANK AND/OR GENERATOR ENCLOSURE (SEE SITE PLAN FOR APPOX. SIZE).
- 3. PROVIDE TOOLED CONTROL JOINTS AT 6-FOOT INTERVALS ACROSS SURFACE. 4. PROVIDE BROOM FINISH TO SURFACE AND 3/4" CHAMFER TO ALL EDGES.
- 5. FENCE TO BE INSTALLED AROUND PAD WHEN SHOWN IN THE PLANS IN CONFORMANCE WITH THE DETAILS.

TYPICAL CONCRETE PAD DETAIL

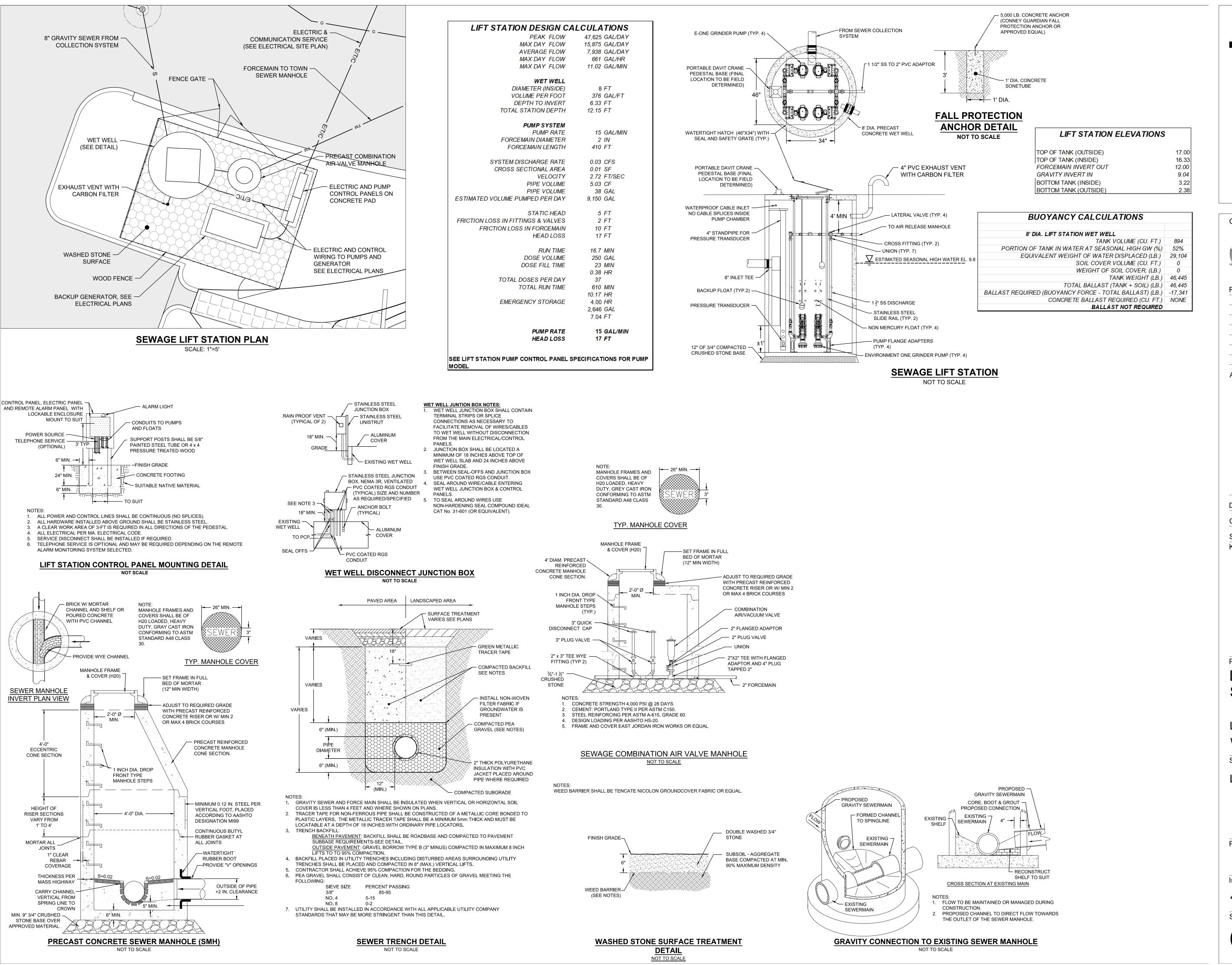
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