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Revision:



Drawn: MCL/JEH
Checked: RAC
Scale:
Key Plan:

Project Name:
**LITTLETON DRIVE
SENIOR BUILDING**

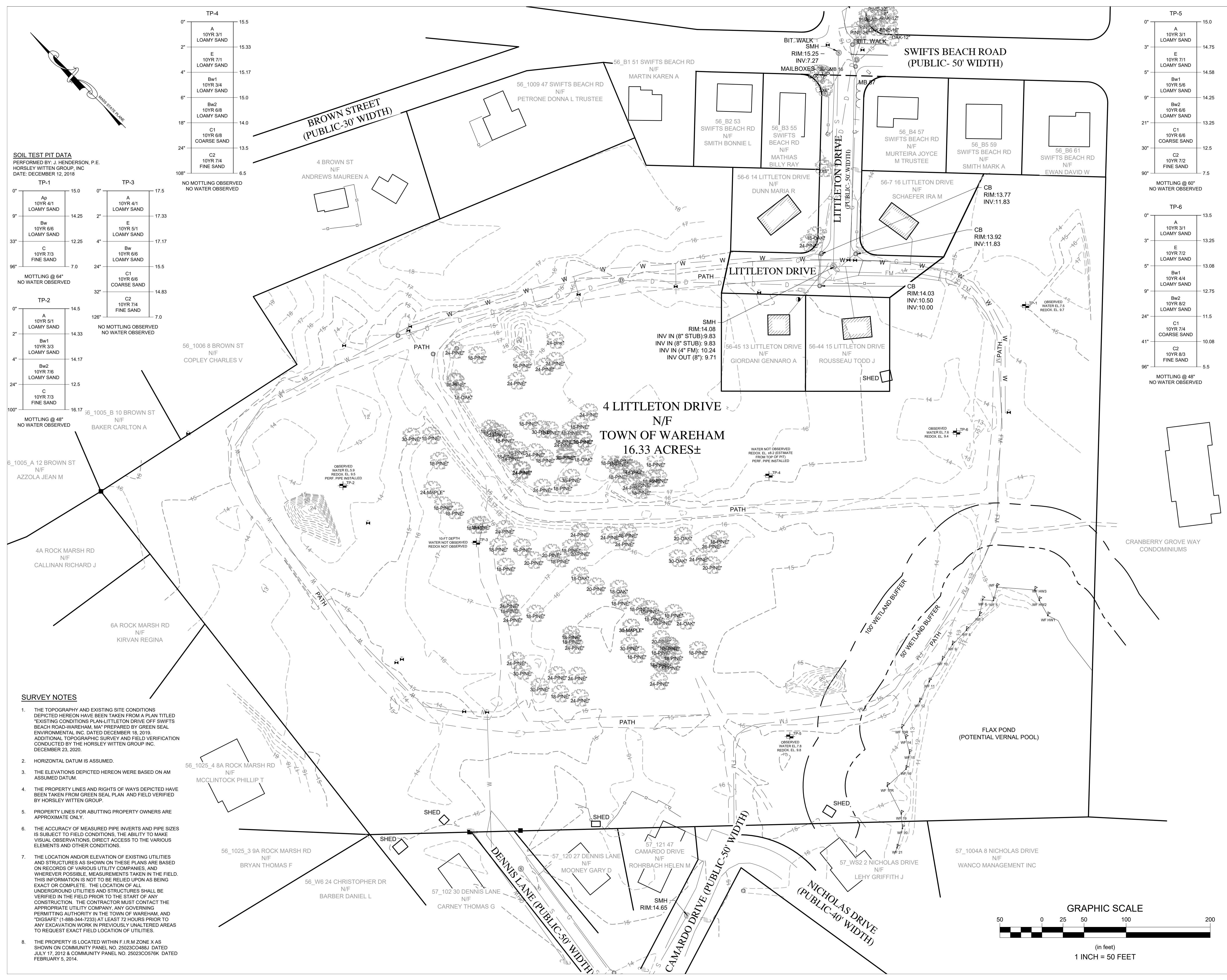
LITTLETON DRIVE
WAREHAM MA

Sheet Name:
EXISTING CONDITIONS

Project Number:

Issue Date:
4/25/22

Sheet Number:
C-1



SOIL TEST PIT DATA
PERFORMED BY: J. HENDERSON, P.E.
HORSLEY WITTEN GROUP, INC.
DATE: DECEMBER 12, 2018

TP-1

0"	A	10YR 4/1	LOAMY SAND	15.0
9"	Bw	10YR 6/6	LOAMY SAND	14.25
33"	C	10YR 7/3	FINE SAND	12.25
96"	MOTTLING @ 64" NO WATER OBSERVED			

TP-2

0"	A	10YR 5/1	LOAMY SAND	14.5
2"	Bw1	10YR 3/3	LOAMY SAND	14.33
4"	Bw2	10YR 7/8	LOAMY SAND	14.17
24"	C	10YR 7/3	FINE SAND	12.5
100"	MOTTLING @ 48" NO WATER OBSERVED			

TP-3

0"	A	10YR 4/1	LOAMY SAND	17.5
2"	E	10YR 5/1	LOAMY SAND	17.33
4"	Bw	10YR 6/6	LOAMY SAND	17.17
24"	C1	10YR 6/6	COARSE SAND	15.5
32"	C2	10YR 7/4	FINE SAND	14.83
126"	NO MOTTLING OBSERVED NO WATER OBSERVED			

TP-4

0"	A	10YR 3/1	LOAMY SAND	15.5
2"	E	10YR 7/1	LOAMY SAND	15.33
4"	Bw1	10YR 3/4	LOAMY SAND	15.17
6"	Bw2	10YR 6/8	LOAMY SAND	15.0
18"	C1	10YR 6/8	COARSE SAND	14.0
24"	C2	10YR 7/4	FINE SAND	13.5
108"	NO MOTTLING OBSERVED NO WATER OBSERVED			

TP-5

0"	A	10YR 3/1	LOAMY SAND	15.0
3"	E	10YR 7/1	LOAMY SAND	14.75
5"	Bw1	10YR 5/6	LOAMY SAND	14.58
9"	Bw2	10YR 6/6	LOAMY SAND	14.25
21"	C1	10YR 6/6	COARSE SAND	13.25
30"	C2	10YR 7/2	FINE SAND	12.5
90"	MOTTLING @ 69" NO WATER OBSERVED			

TP-6

0"	A	10YR 3/1	LOAMY SAND	13.5
3"	E	10YR 7/2	LOAMY SAND	13.25
5"	Bw1	10YR 4/4	LOAMY SAND	13.08
9"	Bw2	10YR 8/2	LOAMY SAND	12.75
24"	C1	10YR 7/4	COARSE SAND	11.5
41"	C2	10YR 8/3	FINE SAND	10.08
96"	MOTTLING @ 48" NO WATER OBSERVED			

SURVEY NOTES

1. THE TOPOGRAPHY AND EXISTING SITE CONDITIONS DEPICTED HEREON HAVE BEEN TAKEN FROM A PLAN TITLED "EXISTING CONDITIONS PLAN-LITTLETON DRIVE OFF SWIFTS BEACH ROAD-WAREHAM, MA" PREPARED BY GREEN SEAL ENVIRONMENTAL INC. DATED DECEMBER 18, 2019. ADDITIONAL TOPOGRAPHIC SURVEY AND FIELD VERIFICATION CONDUCTED BY THE HORSLEY WITTEN GROUP INC. DECEMBER 23, 2020.
2. HORIZONTAL DATUM IS ASSUMED.
3. THE ELEVATIONS DEPICTED HEREON WERE BASED ON AM ASSUMED DATUM.
4. THE PROPERTY LINES AND RIGHTS OF WAYS DEPICTED HAVE BEEN TAKEN FROM GREEN SEAL PLAN AND FIELD VERIFIED BY HORSLEY WITTEN GROUP.
5. PROPERTY LINES FOR ADJUTING PROPERTY OWNERS ARE APPROXIMATE ONLY.
6. THE ACCURACY OF MEASURED PIPE INVERTS AND PIPE SIZES IS SUBJECT TO FIELD CONDITIONS. THE ABILITY TO MAKE VISUAL OBSERVATIONS, DIRECT ACCESS TO THE VARIOUS ELEMENTS AND OTHER CONDITIONS.
7. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS 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. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN OF WAREHAM, AND "DIGSAFE" (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
8. THE PROPERTY IS LOCATED WITHIN F.I.R.M. ZONE X AS SHOWN ON COMMUNITY PANEL NO. 25023C0483, DATED JULY 17, 2012 & COMMUNITY PANEL NO. 25023C0576K, DATED FEBRUARY 5, 2014.

GENERAL CONSTRUCTION NOTES:

- 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.
3. UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS...
4. MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILED AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
5. ALL EXISTING CONDITIONS SHOWN ARE APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE...
6. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS INDICATED ON THE DRAWINGS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES...
7. 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 ENTIRE DURATION OF THE PROJECT...
9. COORDINATE ALL TRENCH WORK WITH ROADWAYS WITH THE PROPER LOCAL & STATE AGENCY...
10. SAWCUT ALL TRENCH WORK WITH EXISTING PAVEMENT AS INDICATED ON THE DRAWINGS...
11. IMPORT ONLY CLEAN MATERIAL...
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH AND MAINTAIN ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION...
13. SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION MUST BE PROVIDED BY THE CONTRACTOR AND PERFORMED BY A MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR...
14. MAINTAIN ALL GRADE STATES SET BY THE SURVEYOR...
15. UNLESS OTHERWISE INDICATED ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODS...
16. PROVIDE ALL CONSTRUCTION SERVICE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAMINANT, AND TRECH WORK.
17. COLLECT SOLID WASTES AND STORE IN A SECURED DUMPSTER...
18. RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE...
19. CONTRACT ALL WHEEL-CHAIR RAMPS IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS...
20. PROVIDE A LIMIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL...
21. REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS...
22. ALL TRUCKS LEAVING THE SITE MUST BE COVERED.
23. DO NOT WASH ANY CONCRETE TRUCKS ONSITE...
24. BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED...
25. AT THE END OF CONSTRUCTION, REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE...

GENERAL DEMOLITION NOTES:

- THIS PLAN SET DOES NOT INCLUDE DETAILS & SPECIFICATIONS FOR ALL DEMOLITION WORK REQUIRED WITHIN THE PROPOSED CONSTRUCTION LIMITS. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE WITH THE OWNER, PROJECT ARCHITECT, MECHANICAL ENGINEERS AND OTHER PROJECT ENGINEERS INVOLVED WITH THE PROPOSED NEW CONSTRUCTION TO DEVELOP OF A SUITABLE DEMOLITION PLAN, WHICH WILL ALLOW THE FACILITIES TO REMAIN IN OPERATION DURING THE ENTIRETY OF CONSTRUCTION.
1. UNLESS OTHERWISE NOTED, THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION, DEMOLITION, REMOVAL AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES...
2. OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
3. COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES...
4. REFER TO MECHANICAL AND UTILITY PLANS AND SPECIFICATIONS FOR ALL WORK WHICH REQUIRES UTILITIES TO BE REMOVED, RELOCATED OR ABANDONED AND LEFT IN PLACE.
5. PROVIDE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL UTILITY LINES, AS REQUIRED, BEFORE PROCEEDING WITH THE WORK.
6. MAINTAIN CONTINUOUS ACCESS AND OPERATION FOR SURROUNDING FACILITIES...
7. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
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...
3. INSTALL TEMPORARY CONSTRUCTION ENTRANCES IN LOCATIONS INDICATED ON DRAWINGS...
4. BEGIN CLEARING THE SITE AS REQUIRED.
5. SURVEY AND STAKE CENTERLINE OF THE PROPOSED ROADS, STORMWATER MANAGEMENT AREAS, AND DRAINAGE LINES.
6. EXCAVATE AND ROUGH GRADE THE PROPOSED STORMWATER MANAGEMENT AREAS AND ANY ADDITIONAL TEMPORARY BASINS...
7. BEGIN CLEARING AND GRUBBING THE AREAS OF ROADWAYS AND STORMWATER MANAGEMENT AREAS...
8. INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PILES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
9. BEGIN ROUGH GRADING AREAS FOR ROADS, PARKING AND BUILDINGS...
10. BEGIN UTILITY CONSTRUCTION...
11. INSTALL DRAINAGE PIPES, DRAINAGE MANHOLES, CATCH BASINS, AND UNDERGROUND DRAINAGE STRUCTURES...
12. PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED.
13. UPON COMPLETION OF UNDERGROUND UTILITIES INSTALLATION, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE ROADWAY/PARKING AREAS...
14. BEGIN ROAD AND PARKING CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS...
15. FINISH PERMANENT STABILIZATION...
16. COMPLETE ALL REMAINING PLANTING AND SEEDING.
17. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS...
18. ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES...

GENERAL GRADING AND DRAINAGE NOTES:

- 1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
2. 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.
5. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS...
6. UNLESS INDICATED OTHERWISE ON THE DRAWINGS OR DETAIL, A MINIMUM CONCRETE FOUNDATION REVEAL OF 3" TO BE PROVIDED AT ALL BUILDING CORNERS...
7. REFER TO ARCHITECTURAL PLAN AND SPECIFICATIONS FOR EARTHWORK AND COMPACTON REQUIREMENTS FOR ALL SLABS AND BUILDING FOUNDATIONS.
8. PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
9. ALL EARTHWORK AND SITE PREPARATION MUST BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION REPORTS...
10. ALL DRAINAGE STRUCTURES AND PIPES MUST BE CONNECTED TO THE DRAINAGE SYSTEM PRIOR TO THE INSTALLATION OF ANY PAVEMENT...
11. A HIGH WATER TABLE IS ANTICIPATED...
12. PRIOR TO ANY DEWATERING, THE DEWATERING PLAN MUST BE APPROVED BY THE ENGINEER.
13. IF DEWATERING IS NECESSARY DURING CONSTRUCTION, IMPLEMENT THE PROPER EROSION MEASURES ON SITE...
14. SUPPLY THE DEWATERING SYSTEMS TO:
 A. DEVELOP A SUBSTANTIALLY DRY AND STABLE SUBGRADE FOR THE PROPOSED WORK...
 B. PREVENT DAMAGE TO ADJACENT PROPERTIES, BUILDINGS, STRUCTURES, UTILITIES AND RESOURCES AREAS...
 C. PREVENT SEGMENT DISCHARGE AND DEGRADATION OF THE RESOURCE AREA...
 D. PREVENT LOSS OF FINES, QUICK CONDITION, OR SOFTENING OF FOUNDATION SUBGRADE...
15. LOCATE DEWATERING FACILITIES WHERE THEY WILL NOT INTERFERE WITH CONSTRUCTION WORK OR ADJUTING RESOURCES.
16. MODIFY DEWATERING EQUIPMENT AND PROCEDURES WHEN OPERATIONS THREATEN TO CAUSE DAMAGE TO NEW OR EXISTING FACILITIES...
17. PRIOR TO INSTALLATION OF THE DEWATERING SYSTEM, PROVIDE THE ENGINEER WITH A SCHEDULE OF DEWATERING PROCEDURES...
18. THE PROPOSED TYPES OF DEWATERING SYSTEMS, ARRANGEMENT, LOCATION AND DEPTHS OF SYSTEM COMPONENTS...
19. FURNISH ALL MATERIAL PRODUCTS REQUIRED TO ADEQUATELY PROVIDE DEWATERING WITHOUT DAMAGE TO SURROUNDING PROPERTIES...
20. INTERCEPT AND DIVERT SURFACE WATER RUNOFF AWAY FROM EXCAVATIONS THROUGH THE USE OF DIKES, CURB WALLS, DITCHES, PIPES, PUMPS OR OTHER APPROVED MEANS.
21. IF PUMPS ARE USED, THE PUMP INTAKE LINE SHOULD NOT BE ALLOWED TO SETTLE TO THE BOTTOM OF THE EXCAVATION OR DISTURB SUBGRADE...
22. PROVIDE AND MAINTAIN HOLDING AREAS/TEMPORARY SETTLING BASINS OF ADEQUATE SIZE TO COLLECT AND PREVENT SURFACE AND SUBSURFACE WATER SEEPAGE FROM ENTERING THE EXCAVATIONS...
23. ACCOMPLISH DEWATERING IN ACCORDANCE WITH THE MEANS AND METHODS SUBMITTED AND APPROVED BY THE ENGINEER...
24. PERFORM DEWATERING OPERATIONS TO LOWER THE GROUNDWATER LEVEL IN EXCAVATIONS AS REQUIRED...
25. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS...
26. DO NOT DISCHARGE WATER TO PROTECTED ENVIRONMENTAL RESOURCES WITHOUT TREATMENT...
27. DO NOT LAY PIPE AND/OR MASONRY IN WATER...
28. PRIOR TO THE START OF CONSTRUCTION A NOTICE OF INTENT (NOI) MUST BE FILED WITH NPDES...
29. DESIGNATE THE SITE CONSTRUCTION FOREMAN AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS...
30. INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS INDICATED ON DRAWINGS...
31. MAINTAIN A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER...
32. PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION...
33. PROVIDE CONSTRUCTION EXITS AS INDICATED ON DRAWINGS...
34. KEEP THE LIMIT OF CLEARING, GRADING AND DISTURBANCES TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION...
35. MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION...
36. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZED SLOPES...
37. SURROUND THE PERIMETER OF SOIL STOCKPILES WITH SILT SOCK...
38. DISTURBED AREAS AND SLOPES MUST NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME...
39. INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN...
40. SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS...
41. CONTAIN ALL SEDIMENT ONSITE...
42. REMOVE ACCUMULATED SEDIMENT FROM ALL TEMPORARY PRACTICES...
43. PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL...
44. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS...
45. ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES...

DEWATERING:

- 1. A HIGH WATER TABLE IS ANTICIPATED...
2. PRIOR TO ANY DEWATERING, THE DEWATERING PLAN MUST BE APPROVED BY THE ENGINEER.
3. IF DEWATERING IS NECESSARY DURING CONSTRUCTION, IMPLEMENT THE PROPER EROSION MEASURES ON SITE...

DEWATERING NOTES:

- 1. SUPPLY THE DEWATERING SYSTEMS TO:
 A. DEVELOP A SUBSTANTIALLY DRY AND STABLE SUBGRADE FOR THE PROPOSED WORK...
 B. PREVENT DAMAGE TO ADJACENT PROPERTIES, BUILDINGS, STRUCTURES, UTILITIES AND RESOURCES AREAS...
 C. PREVENT SEGMENT DISCHARGE AND DEGRADATION OF THE RESOURCE AREA...
 D. PREVENT LOSS OF FINES, QUICK CONDITION, OR SOFTENING OF FOUNDATION SUBGRADE...
2. LOCATE DEWATERING FACILITIES WHERE THEY WILL NOT INTERFERE WITH CONSTRUCTION WORK OR ADJUTING RESOURCES.
3. MODIFY DEWATERING EQUIPMENT AND PROCEDURES WHEN OPERATIONS THREATEN TO CAUSE DAMAGE TO NEW OR EXISTING FACILITIES...
4. PRIOR TO INSTALLATION OF THE DEWATERING SYSTEM, PROVIDE THE ENGINEER WITH A SCHEDULE OF DEWATERING PROCEDURES...
5. THE PROPOSED TYPES OF DEWATERING SYSTEMS, ARRANGEMENT, LOCATION AND DEPTHS OF SYSTEM COMPONENTS...
6. FURNISH ALL MATERIAL PRODUCTS REQUIRED TO ADEQUATELY PROVIDE DEWATERING WITHOUT DAMAGE TO SURROUNDING PROPERTIES...
7. IF PUMPS ARE USED, THE PUMP INTAKE LINE SHOULD NOT BE ALLOWED TO SETTLE TO THE BOTTOM OF THE EXCAVATION...
8. PROVIDE AND MAINTAIN HOLDING AREAS/TEMPORARY SETTLING BASINS OF ADEQUATE SIZE...
9. ACCOMPLISH DEWATERING IN ACCORDANCE WITH THE MEANS AND METHODS SUBMITTED AND APPROVED BY THE ENGINEER...
10. PERFORM DEWATERING OPERATIONS TO LOWER THE GROUNDWATER LEVEL...
11. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS...
12. DO NOT DISCHARGE WATER TO PROTECTED ENVIRONMENTAL RESOURCES WITHOUT TREATMENT...
13. DO NOT LAY PIPE AND/OR MASONRY IN WATER...
14. PRIOR TO THE START OF CONSTRUCTION A NOTICE OF INTENT (NOI) MUST BE FILED WITH NPDES...
15. DESIGNATE THE SITE CONSTRUCTION FOREMAN AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS...
16. INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS INDICATED ON DRAWINGS...
17. MAINTAIN A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER...
18. PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION...
19. PROVIDE CONSTRUCTION EXITS AS INDICATED ON DRAWINGS...
20. KEEP THE LIMIT OF CLEARING, GRADING AND DISTURBANCES TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION...
21. MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION...
22. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZED SLOPES...
23. SURROUND THE PERIMETER OF SOIL STOCKPILES WITH SILT SOCK...
24. DISTURBED AREAS AND SLOPES MUST NOT BE LEFT UNATTENDED...
25. INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN...
26. SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS...
27. CONTAIN ALL SEDIMENT ONSITE...
28. REMOVE ACCUMULATED SEDIMENT FROM ALL TEMPORARY PRACTICES...
29. PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL...
30. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS...
31. ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES...

EROSION & SEDIMENT CONTROL NOTES:

- 1. PRIOR TO THE START OF CONSTRUCTION A NOTICE OF INTENT (NOI) MUST BE FILED WITH NPDES. REFER TO THE STORMWATER AND POLLUTION PREVENTION PLAN (SWPPP) REGARDING ALL EROSION CONTROL MATTERS.
2. 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.
3. INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS INDICATED ON DRAWINGS IN CONSULTATION WITH THE CONSERVATION AGENCY...
4. MAINTAIN A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER...
5. PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION...
6. PROVIDE CONSTRUCTION EXITS AS INDICATED ON DRAWINGS...
7. KEEP THE LIMIT OF CLEARING, GRADING AND DISTURBANCES TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION...
8. MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION...
9. INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZED SLOPES...
10. SURROUND THE PERIMETER OF SOIL STOCKPILES WITH SILT SOCK...
11. DISTURBED AREAS AND SLOPES MUST NOT BE LEFT UNATTENDED...
12. INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN...
13. SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS...
14. CONTAIN ALL SEDIMENT ONSITE...
15. REMOVE ACCUMULATED SEDIMENT FROM ALL TEMPORARY PRACTICES...
16. PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL...
17. PRIOR TO THE INSTALLATION OF FILTER FABRIC AND MEDIA WITHIN THE BIOTRETION AREAS...
18. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS...
19. ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES...

STORMWATER FACILITY OPERATION & MAINTENANCE:

- THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES AS OUTLINED BELOW DURING CONSTRUCTION AND UNTIL SUCH TIME THAT THE ROADWAYS AND ASSOCIATED UTILITIES ARE ACCEPTED BY THE OWNER AND THE ENGINEER.
1. INSPECT AND RESTORE/CLEAN ALL FACILITIES (INLETS, MANHOLES, INFILTRATION BASINS, STORMWATER MANAGEMENT AREAS AS DESCRIBED BELOW OF SEDIMENT AND DEBRIS PRIOR TO THE OWNERS ACCEPTANCE.
2. REMOVE AND DISPOSE ALL SEDIMENT AND DEBRIS TO A PRE-APPROVED LOCATION.
3. REFER TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ADDITIONAL INFORMATION PERTAINING TO STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS.
4. AT A MINIMUM INSPECT MONTHLY AND AFTER STORM EVENTS GREATER THAN OR EQUAL TO 1" OF RAINFALL...
5. SPECIFIC MAINTENANCE REQUIRED DURING CONSTRUCTION:
 A. DRAINAGE STRUCTURES (INLETS, MANHOLES, CATCHBASINS, DIVERSION STRUCTURE, WATER QUALITY UNITS)...
 B. SEDIMENT FOREBAY...
 C. INFILTRATION BASINS...
 D. BIOTRETION SYSTEMS...
 E. GRASS SWALES...
 F. ROUTINE MAINTENANCE...
6. INSULATE SANITARY FORCE MAINS, WATER MAINS, HYDRANT PIPING AND DEAD END WATER LINES...
7. INSULATION: 2" THICK POLYURETHANE INSULATION WITH PVC JACKET...
8. WATER AND SEWER SEPARATION IS TYPICALLY 10 FEET MINIMUM HORIZONTAL AND 18 INCHES VERTICAL...
9. COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.
10. MAINTAIN UP-TO-GATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED...
11. CLEAN ALL NEWLY INSTALLED FACILITIES, INCLUDING SEWER COLLECTION SYSTEM...
12. CONDUCT A LEAKAGE TEST OF ALL SEWER MAINS...
13. TEST SEWER PIPES FOR LEAKAGE...
14. VACUUM TEST ALL SEWER MANHOLES...
15. MANDREL TEST ALL SEWER MAINS...

WATER & SEWER INSTALLATION NOTES:

- 1. 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 FORCE MAIN 3' 3'
 GRAVITY FORCE MAIN 4' 2'
 WATER MAIN 4' 2'
2. INSULATE SANITARY FORCE MAINS, WATER MAINS, HYDRANT PIPING AND DEAD END WATER LINES...
3. INSULATION: 2" THICK POLYURETHANE INSULATION WITH PVC JACKET...
4. WATER AND SEWER SEPARATION IS TYPICALLY 10 FEET MINIMUM HORIZONTAL AND 18 INCHES VERTICAL...
5. COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.
6. MAINTAIN UP-TO-GATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED...

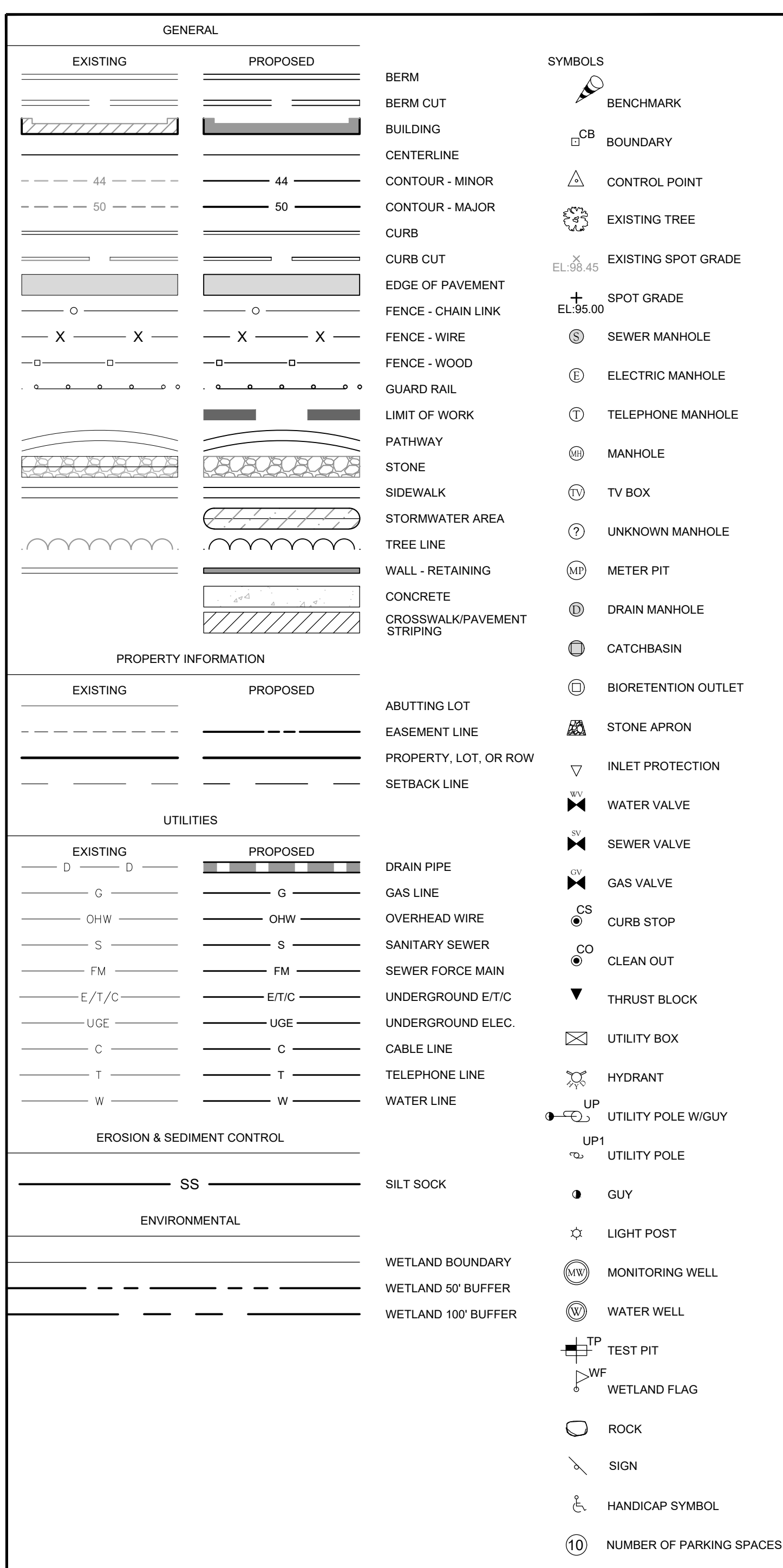
WATER SYSTEM INSTALLATION NOTES:

- 1. CONSTRUCT THE WATER MAIN AND ITS APPURTENANCE IN ACCORDANCE WITH THE LOCAL WATER DEPARTMENT'S STANDARDS AND SPECIFICATIONS AND PAY FOR ALL ASSOCIATED FEES AS REQUIRED BY THE WATER DEPARTMENT.
2. ALL PROPOSED WATER MAIN 4-INCHES AND GREATER IN DIAMETER ARE DUCTILE IRON CLASS 52...
3. SUPPLY TWO COPIES OF SWORN CERTIFICATES TO PROVE THAT ALL PIPES AND FITTINGS ARE INSPECTED AND TESTED AS REQUIRED...
4. GATE VALVES MUELLER (A 2800 SERIES), CLOW (AWWA STANDARD C500 SERIES), AMERICAN DARCING (RESILIENT GEAR) OR APPROVED EQUAL.
5. PROVIDE GATE VALVES ON ALL HYDRANT BRANCHES AND WATER MAIN.
6. CLEAR ALL NEWLY INSTALLED WATER SYSTEM COMPONENTS OF ALL FOREIGN MATERIALS...
7. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRESSURE TEST AND DISINFECTION TEST OF ALL WATER MAINS...
8. INSTALL AND REMOVE ALL NECESSARY BLOWOFFS REQUIRED FOR THIS PROJECT...
9. COLLECT ALL BACTERIOLOGICAL SAMPLES AND PAY FOR ALL RELATED LABORATORY FEES.
10. MAINTAIN UP-TO-GATE AS-BUILT DRAWINGS AND NOTES INDICATING THE HORIZONTAL AND VERTICAL LOCATION WITH TWO TIES OF ALL SYSTEM COMPONENTS INSTALLED...

SEWER SYSTEM OPERATION & MAINTENANCE:

- 1. CLEAN ALL NEWLY INSTALLED FACILITIES, INCLUDING SEWER COLLECTION SYSTEM...
2. CONDUCT A LEAKAGE TEST OF ALL SEWER MAINS...
3. TEST SEWER PIPES FOR LEAKAGE...
4. VACUUM TEST ALL SEWER MANHOLES...
5. MANDREL TEST ALL SEWER MAINS...

LEGEND:



tat
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www.horsleywitten.com
90 Route 6A Sandwich MA 02630

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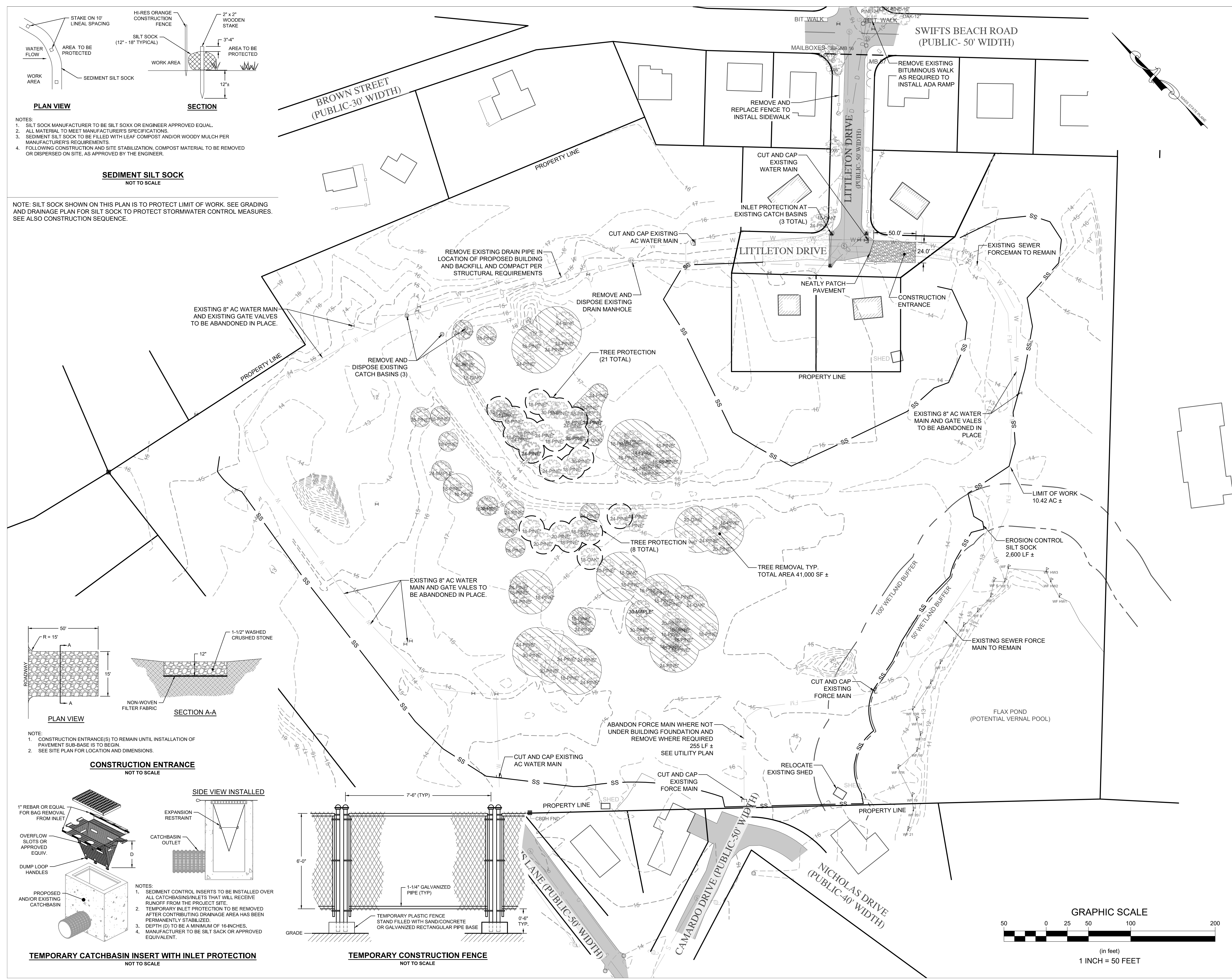
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Checked: RAC
Scale:
Key Plan:

Project Name:
LITTLETON DRIVE
SENIOR BUILDING
LITTLETON DRIVE
WAREHAM MA

Sheet Name:
GENERAL NOTES

Project Number:
Issue Date:
4/25/22
Sheet Number:
C-2

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Key Plan:

Project Name:
**LITTLETON DRIVE
SENIOR BUILDING**

LITTLETON DRIVE
WAREHAM MA

Sheet Name:
OVERALL SITE PLAN

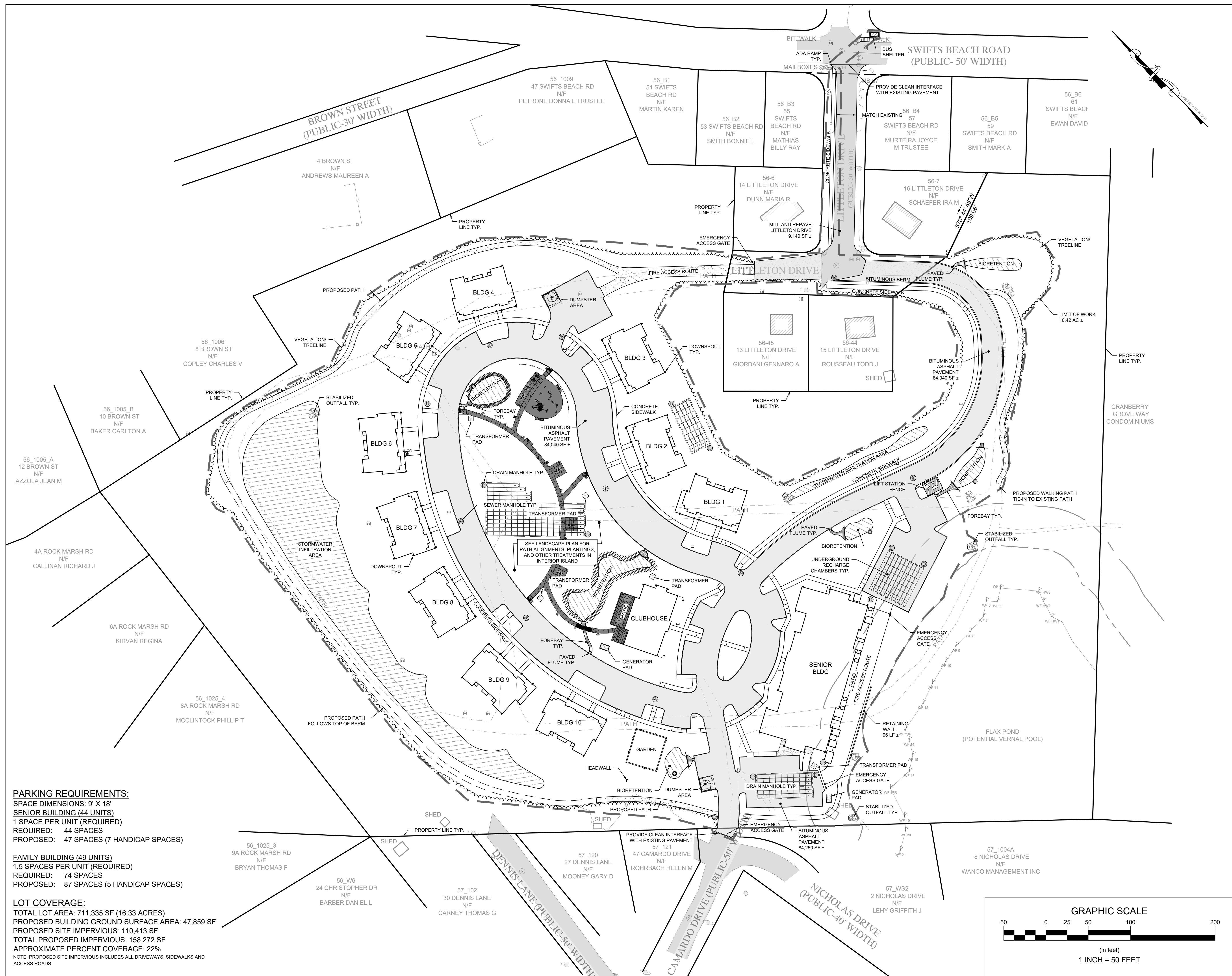
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4/25/22

Sheet Number:

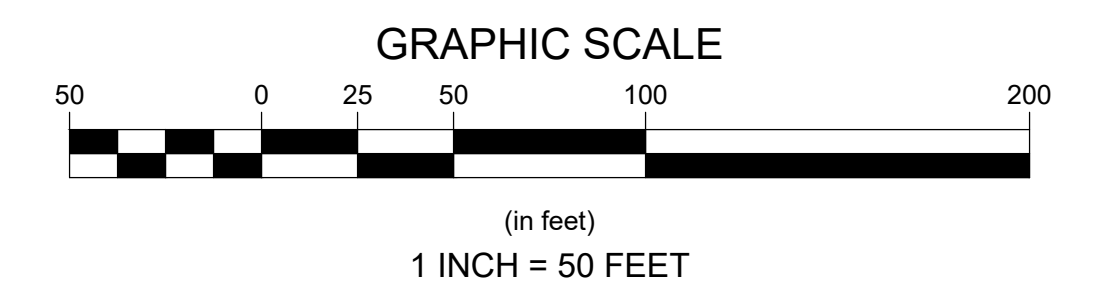
C-4



PARKING REQUIREMENTS:
SPACE DIMENSIONS: 9' X 18'
SENIOR BUILDING (44 UNITS)
1 SPACE PER UNIT (REQUIRED)
REQUIRED: 44 SPACES
PROPOSED: 47 SPACES (7 HANDICAP SPACES)

FAMILY BUILDING (49 UNITS)
1.5 SPACES PER UNIT (REQUIRED)
REQUIRED: 74 SPACES
PROPOSED: 87 SPACES (5 HANDICAP SPACES)

LOT COVERAGE:
TOTAL LOT AREA: 711,335 SF (16.33 ACRES)
PROPOSED BUILDING GROUND SURFACE AREA: 47,859 SF
PROPOSED SITE IMPERVIOUS: 110,413 SF
TOTAL PROPOSED IMPERVIOUS: 158,272 SF
APPROXIMATE PERCENT COVERAGE: 22%
NOTE: PROPOSED SITE IMPERVIOUS INCLUDES ALL DRIVEWAYS, SIDEWALKS AND ACCESS ROADS



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Architect of Record:

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Scale:

Key Plan:

Project Name:
**LITTLETON DRIVE
 SENIOR BUILDING**

LITTLETON DRIVE
 WAREHAM MA

Sheet Name:
**LAYOUT & MARKING
 PLAN**

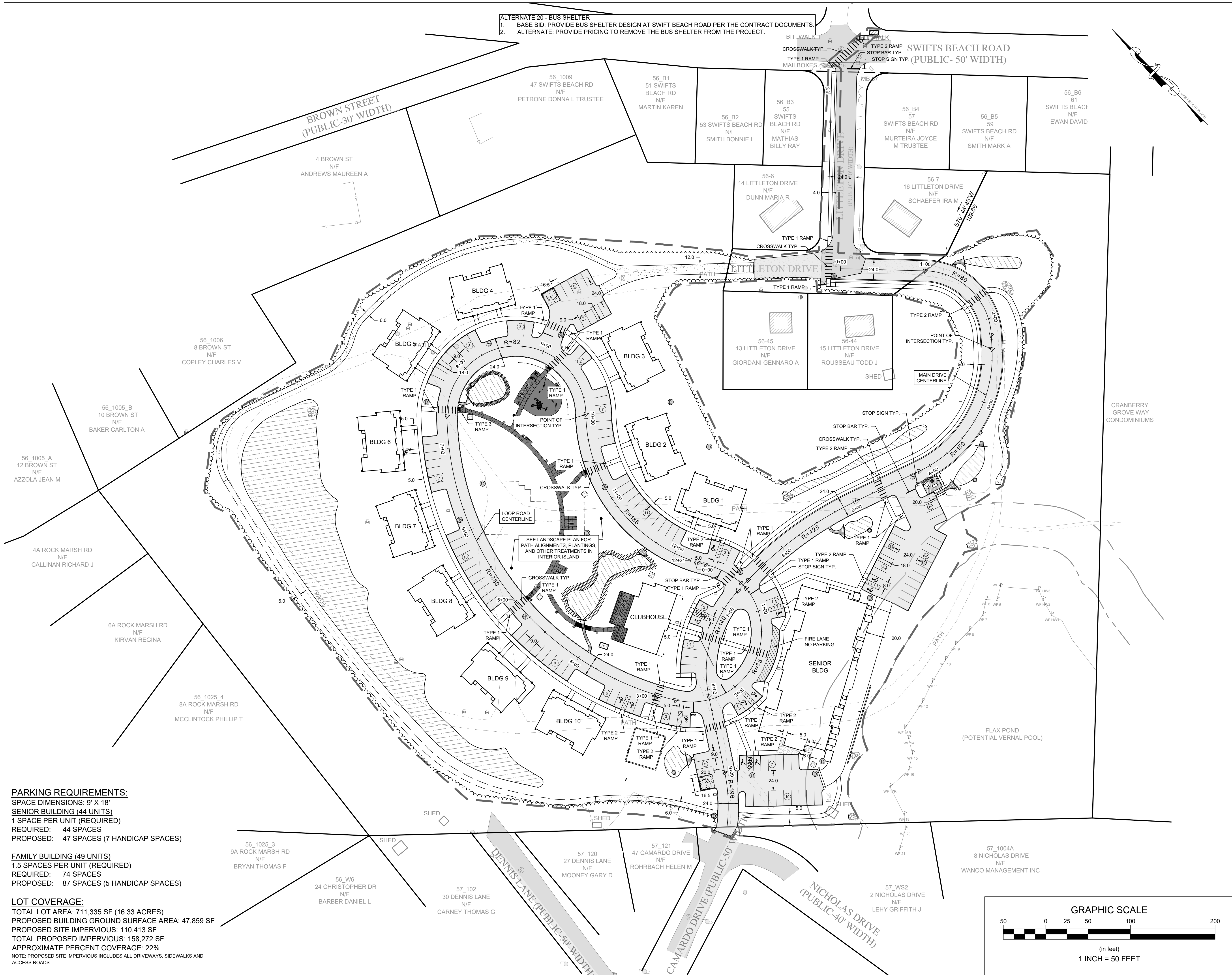
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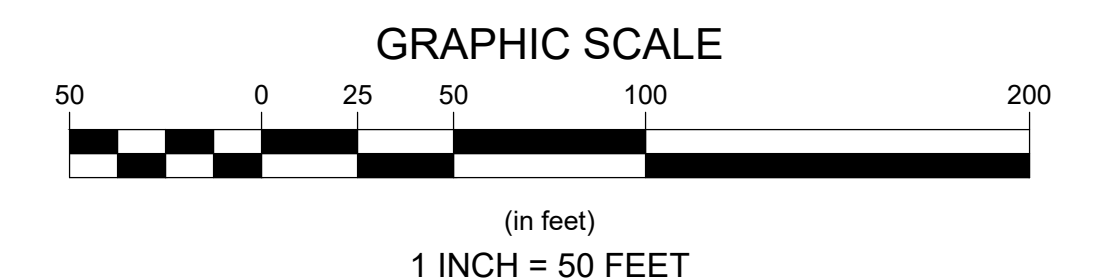


ALTERNATE 20 - BUS SHELTER
 1. BASE BID: PROVIDE BUS SHELTER DESIGN AT SWIFT BEACH ROAD PER THE CONTRACT DOCUMENTS.
 2. ALTERNATE: PROVIDE PRICING TO REMOVE THE BUS SHELTER FROM THE PROJECT.

PARKING REQUIREMENTS:
 SPACE DIMENSIONS: 9' X 18'
 SENIOR BUILDING (44 UNITS)
 1 SPACE PER UNIT (REQUIRED)
 REQUIRED: 44 SPACES
 PROPOSED: 47 SPACES (7 HANDICAP SPACES)

FAMILY BUILDING (49 UNITS)
 1.5 SPACES PER UNIT (REQUIRED)
 REQUIRED: 74 SPACES
 PROPOSED: 87 SPACES (5 HANDICAP SPACES)

LOT COVERAGE:
 TOTAL LOT AREA: 711,335 SF (16.33 ACRES)
 PROPOSED BUILDING GROUND SURFACE AREA: 47,859 SF
 PROPOSED SITE IMPERVIOUS: 110,413 SF
 TOTAL PROPOSED IMPERVIOUS: 158,272 SF
 APPROXIMATE PERCENT COVERAGE: 22%
 NOTE: PROPOSED SITE IMPERVIOUS INCLUDES ALL DRIVEWAYS, SIDEWALKS AND ACCESS ROADS



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Project Name:
**LITTLETON DRIVE
 SENIOR BUILDING**

LITTLETON DRIVE
 WAREHAM MA

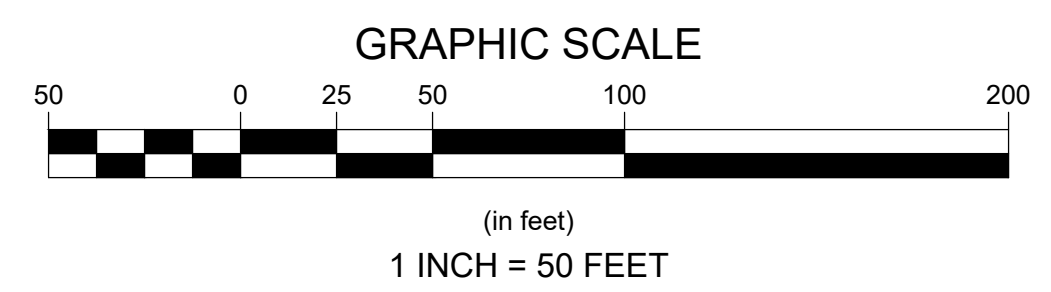
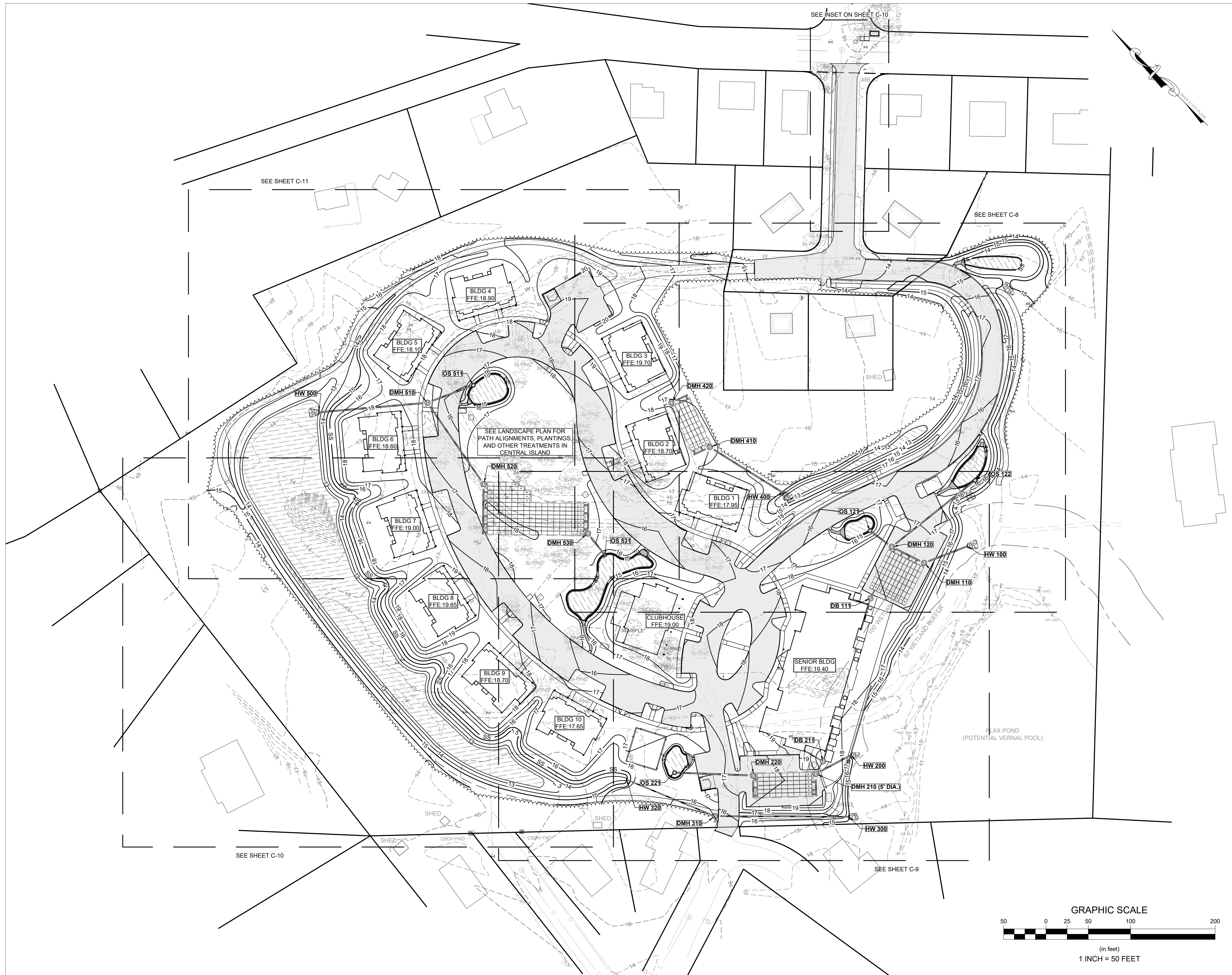
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**GRADING & DRAINAGE
 PLAN**

Project Number:

Issue Date:
4/25/22

Sheet Number:

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Project Name:
**LITTLETON DRIVE
 SENIOR BUILDING**

LITTLETON DRIVE
 WAREHAM MA

Sheet Name:

**GRADING & DRAINAGE
 DETAIL PLAN (1)**

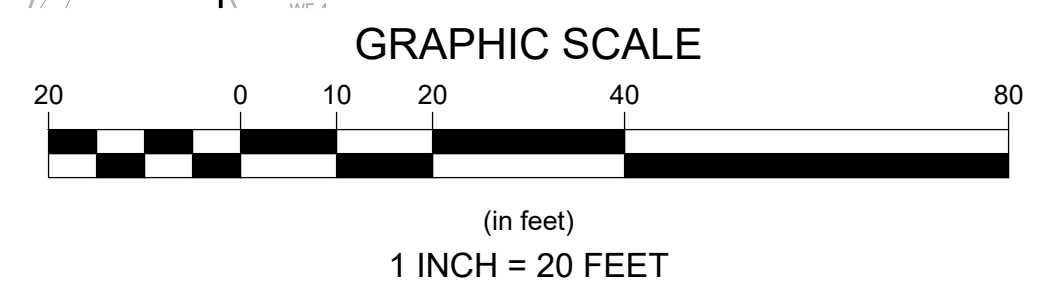
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Key Plan:

Project Name:
**LITTLETON DRIVE
SENIOR BUILDING**

LITTLETON DRIVE
WAREHAM MA

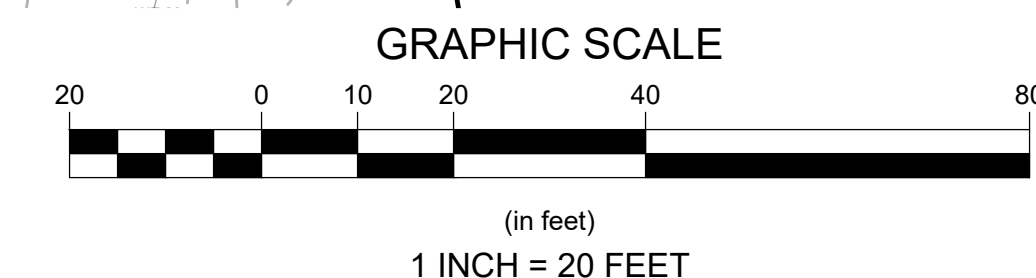
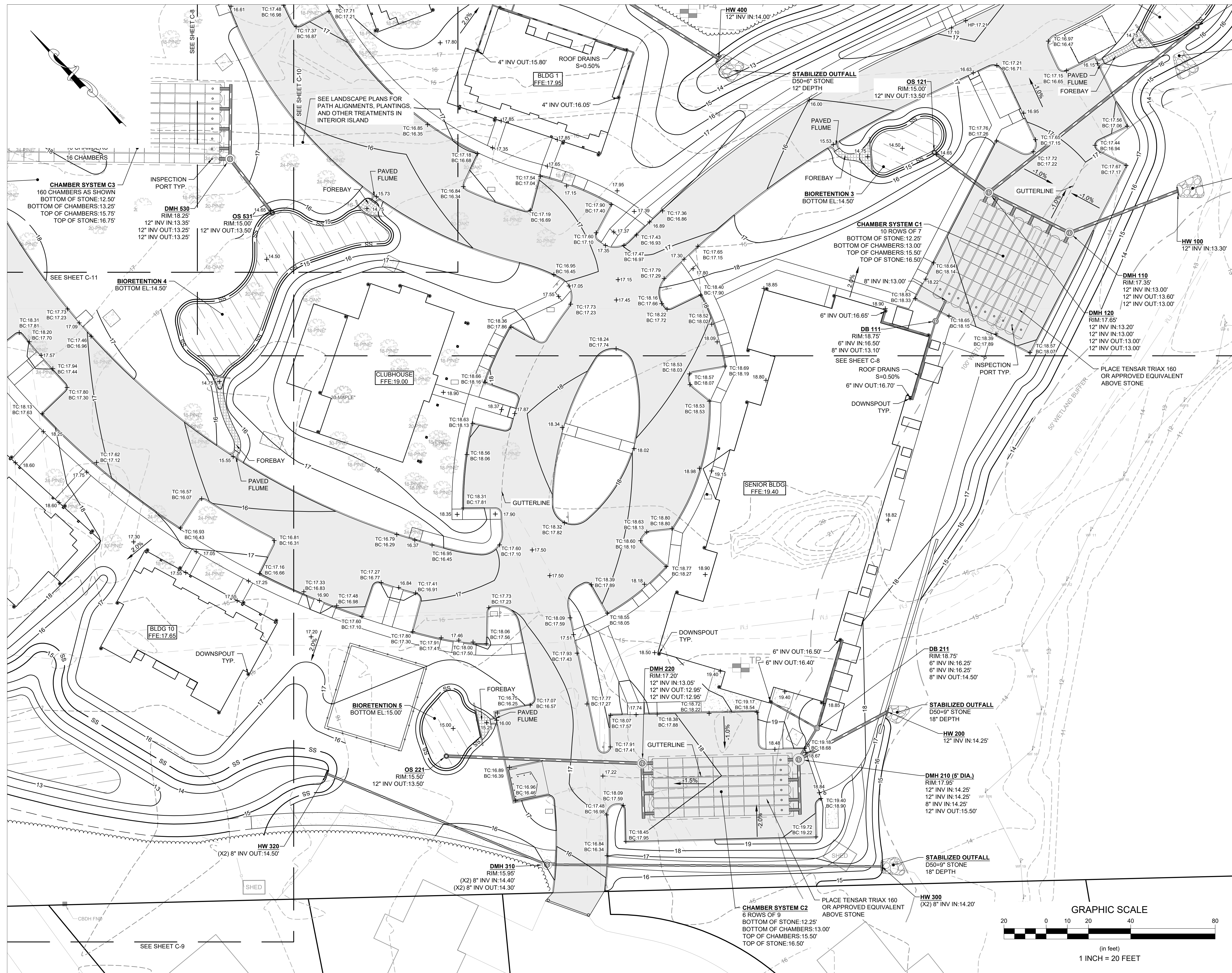
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**GRADING & DRAINAGE
DETAIL PLAN (2)**

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 www.horsleywitten.com
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Project Name:
LITTLETON DRIVE SENIOR BUILDING

LITTLETON DRIVE
 WAREHAM MA

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**GRADING & DRAINAGE
 DETAIL PLAN (4)**

Project Number:

Issue Date:
4/25/22

Sheet Number:
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Revision:

Architect of Record:

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Key Plan:

Project Name:
**LITTLETON DRIVE
 SENIOR BUILDING**

**LITTLETON DRIVE
 WAREHAM MA**

Sheet Name:
UTILITY PLAN

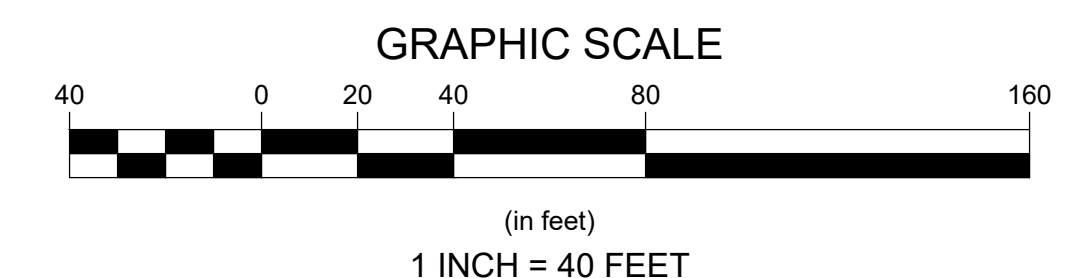
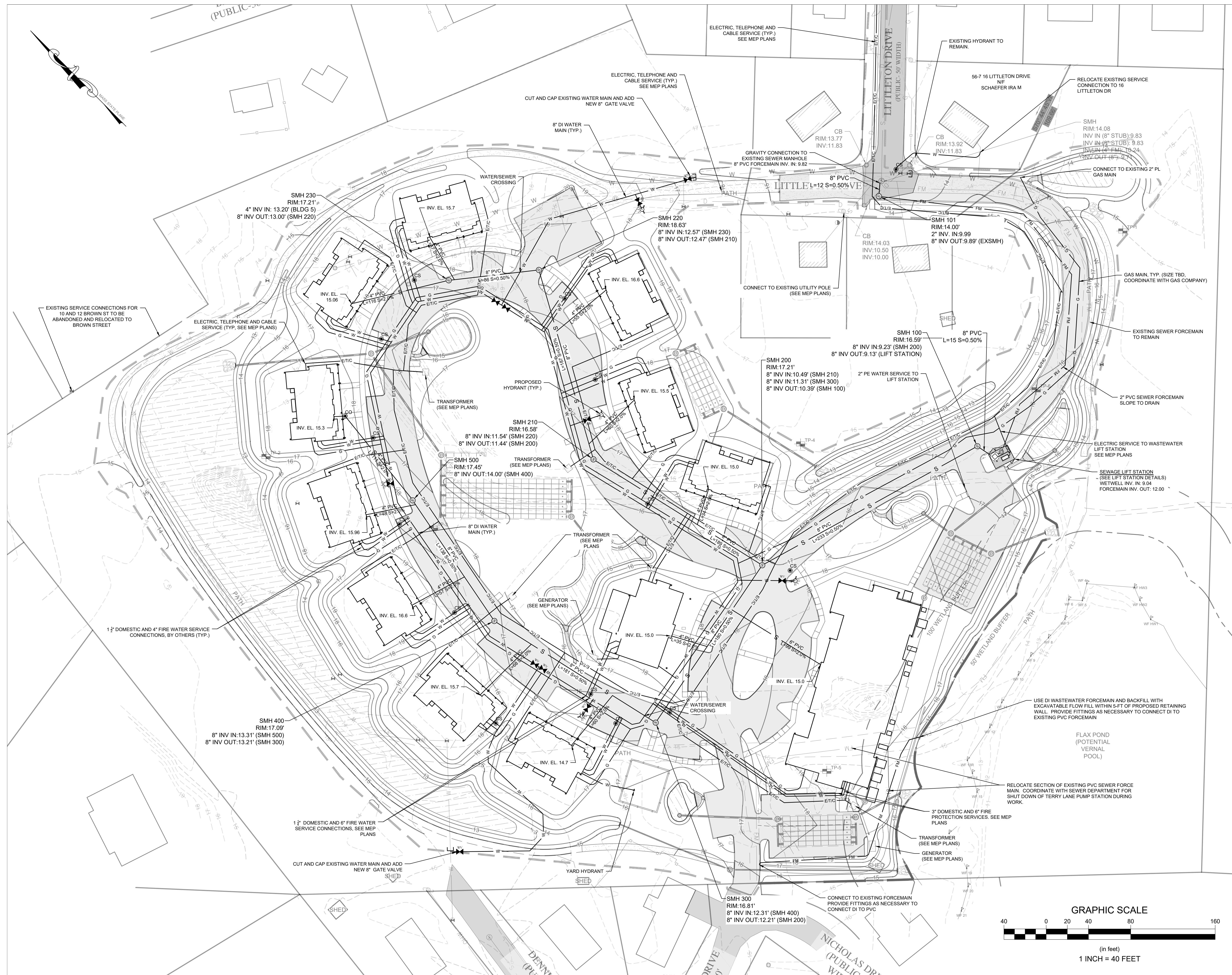
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Project Name:
**LITTLETON DRIVE
 SENIOR BUILDING**

LITTLETON DRIVE
 WAREHAM MA

Sheet Name:

**CONSTRUCTION
 DETAILS**

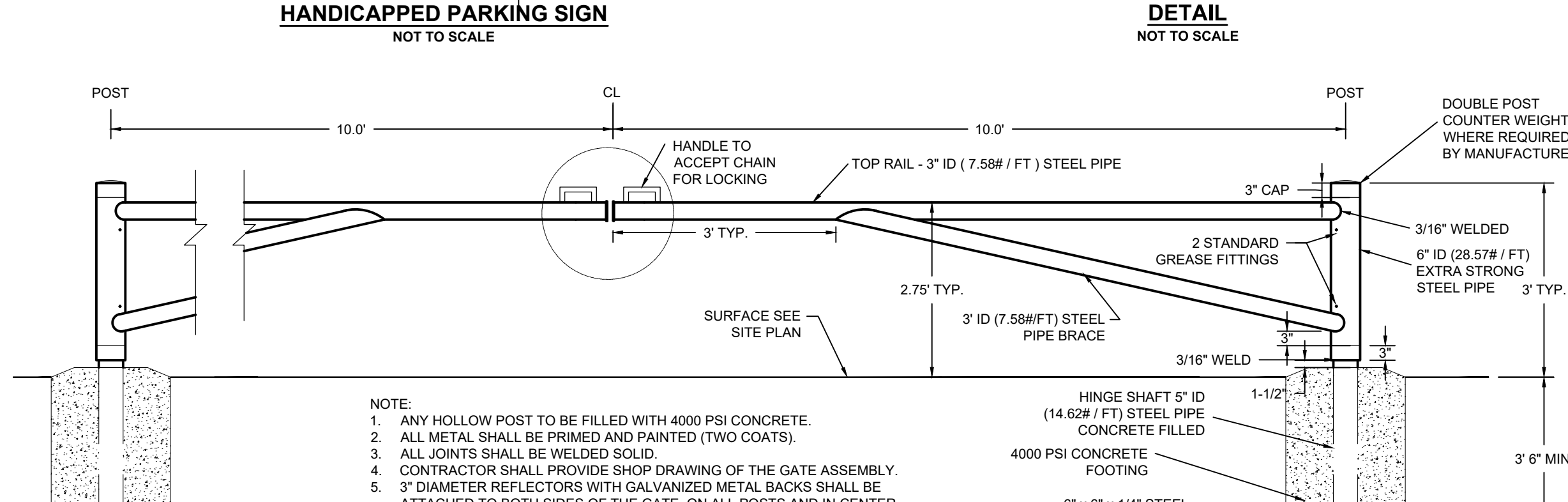
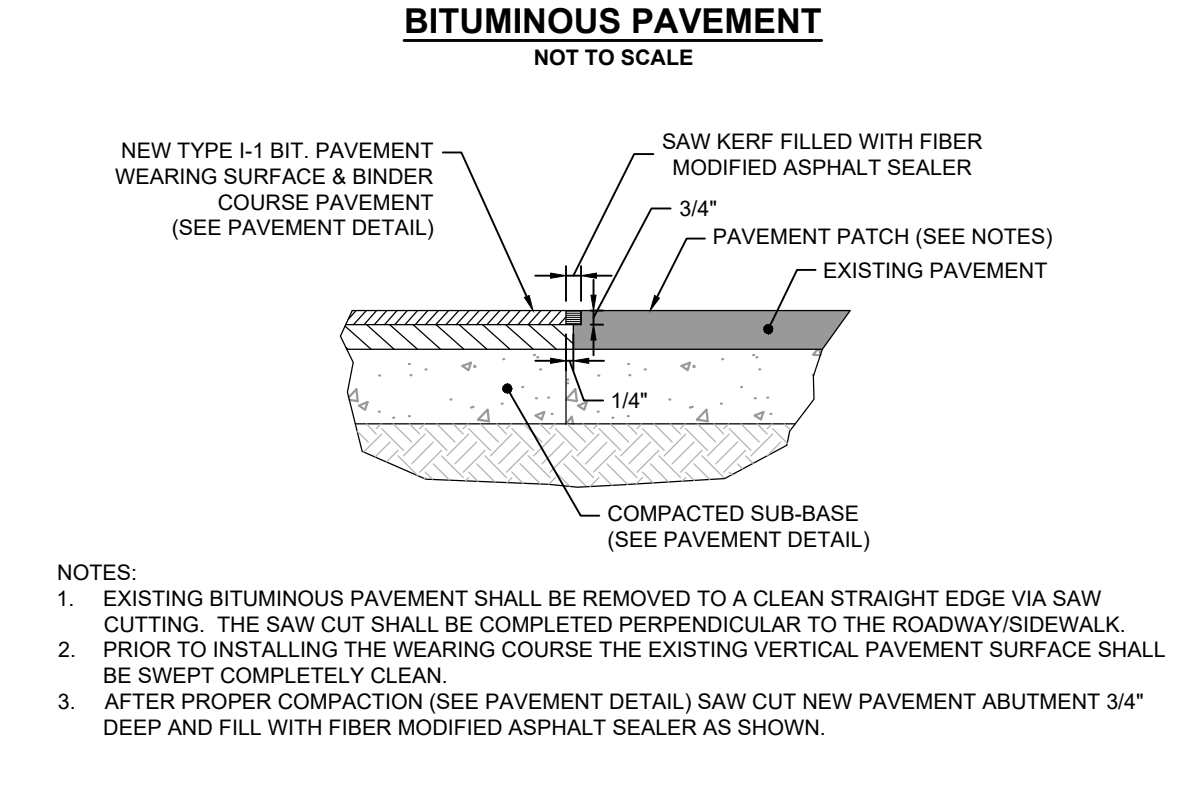
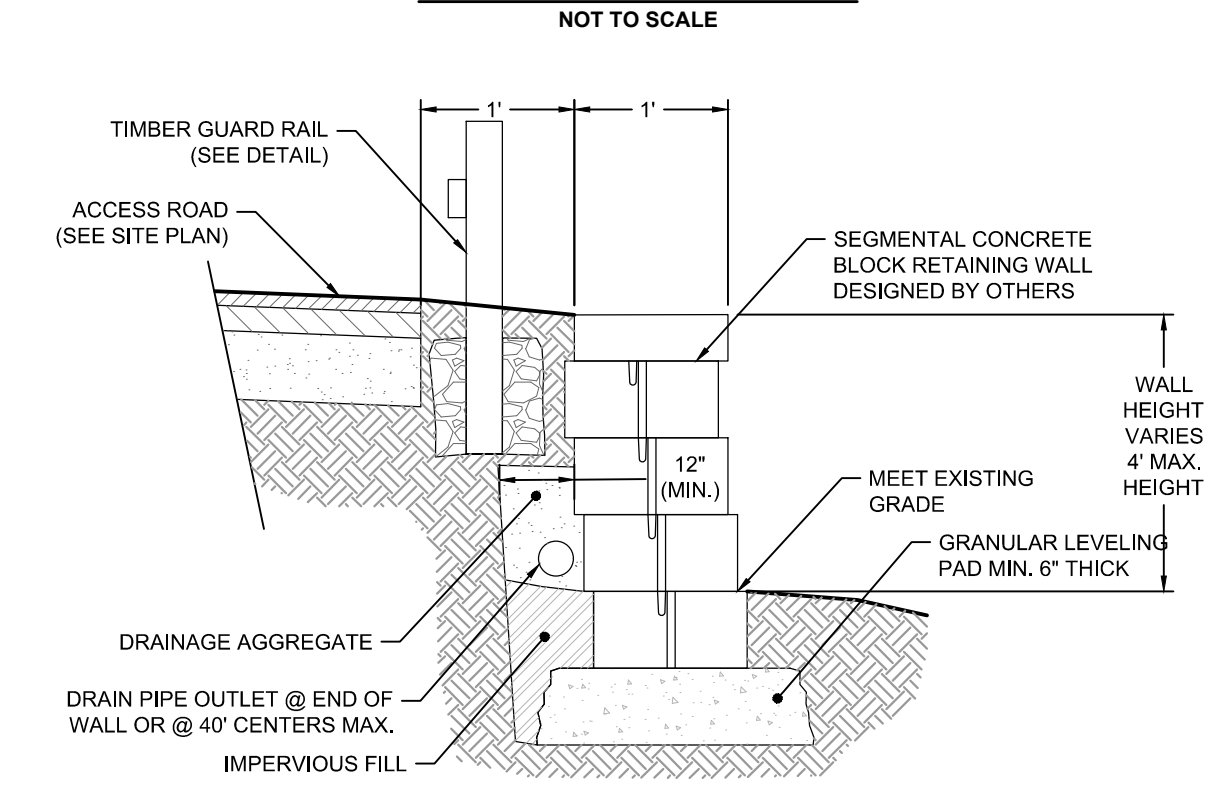
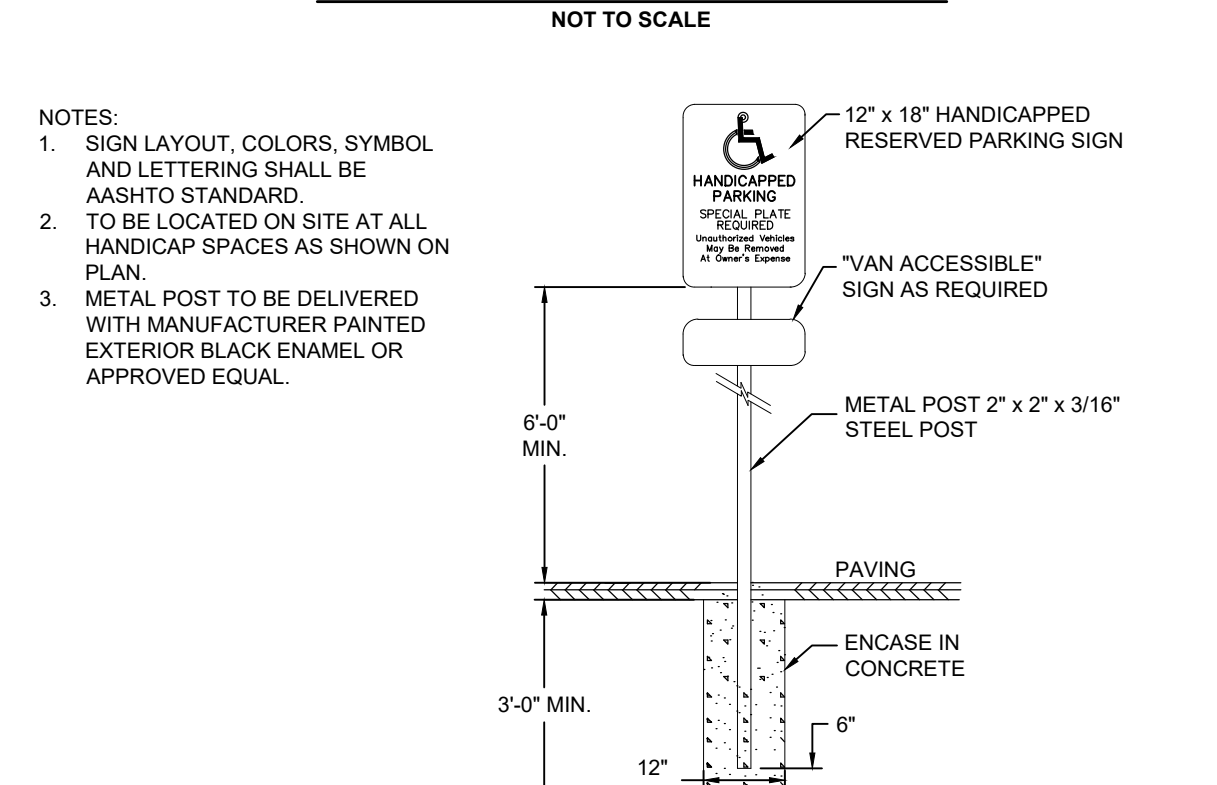
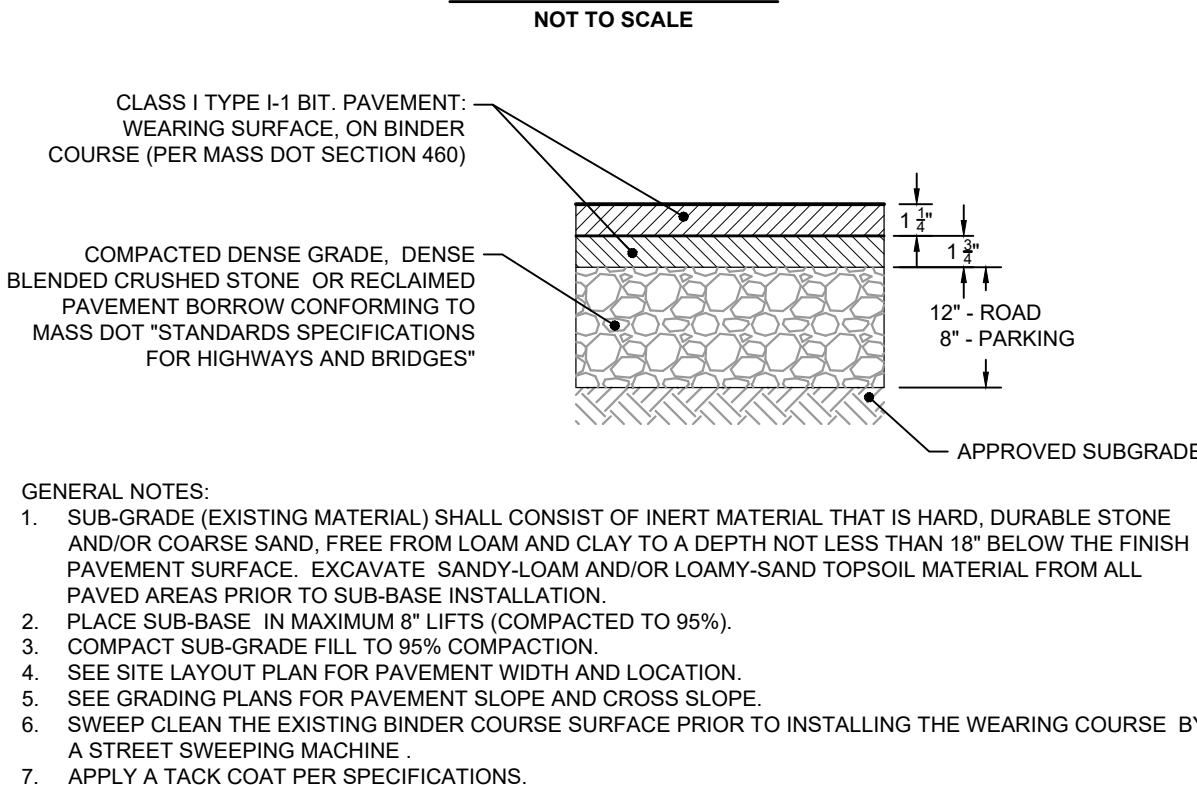
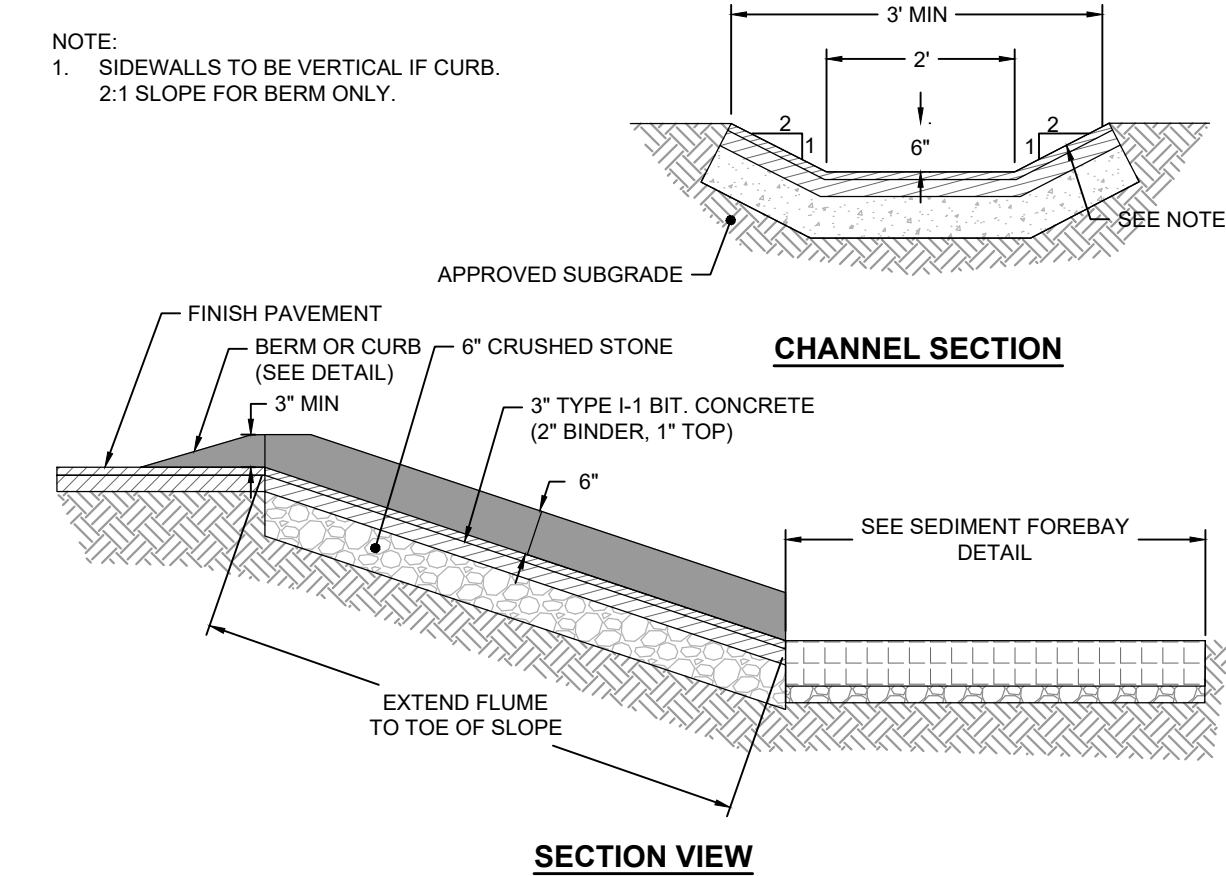
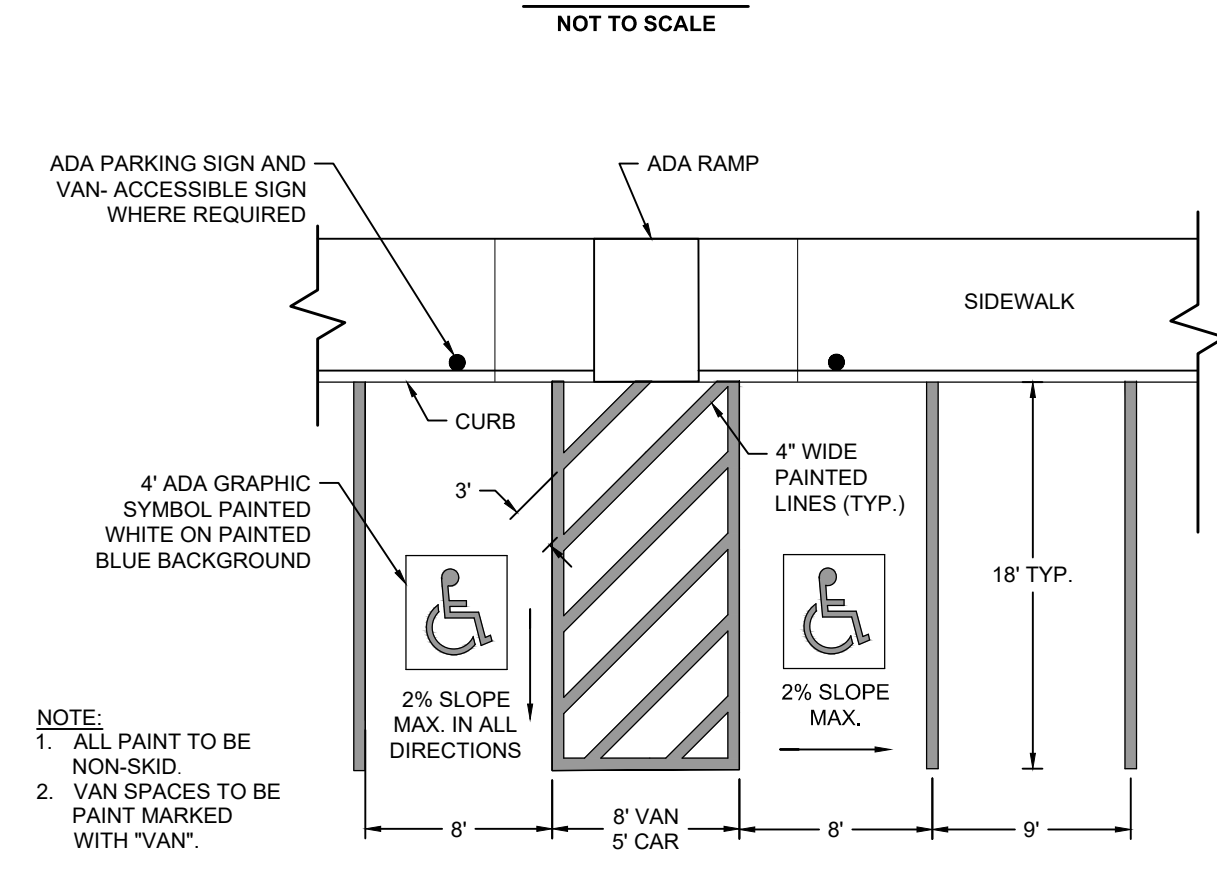
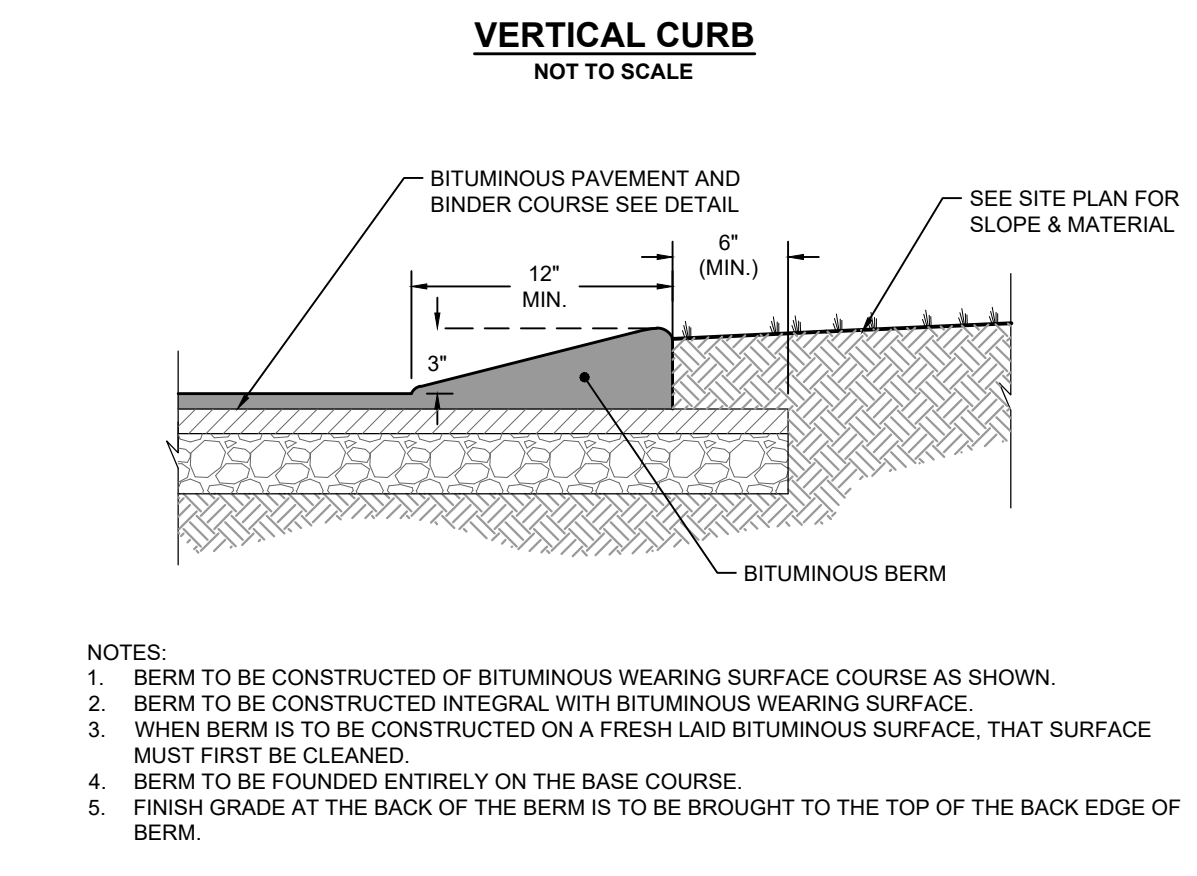
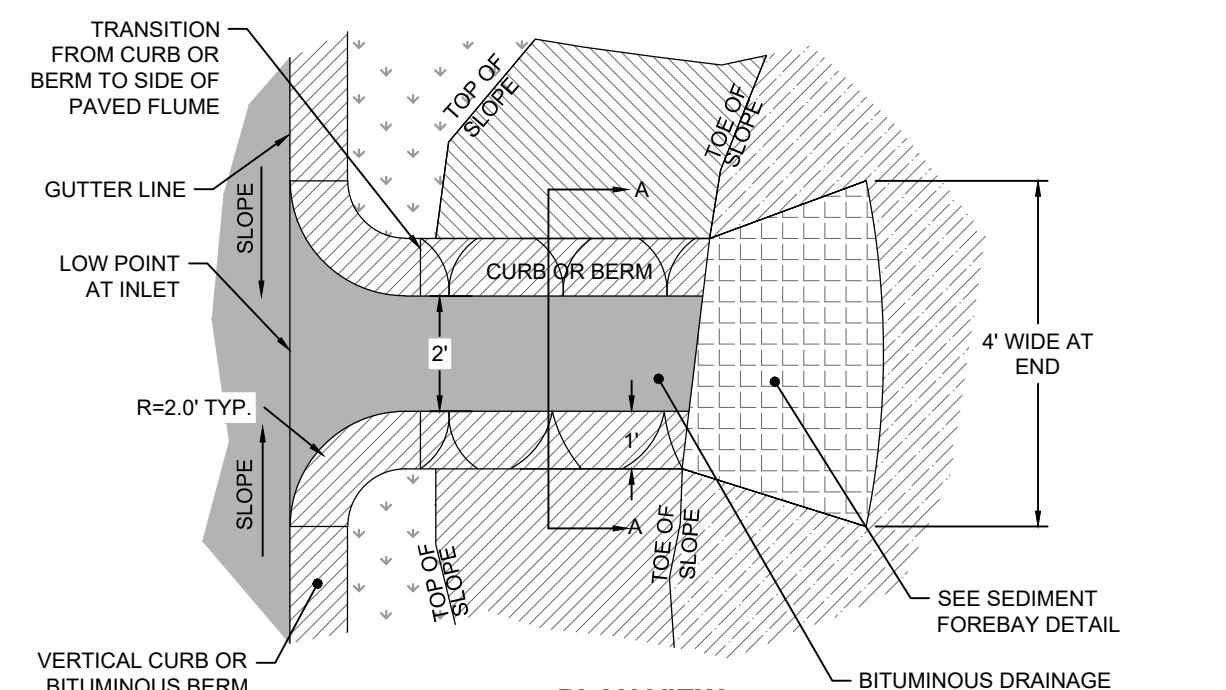
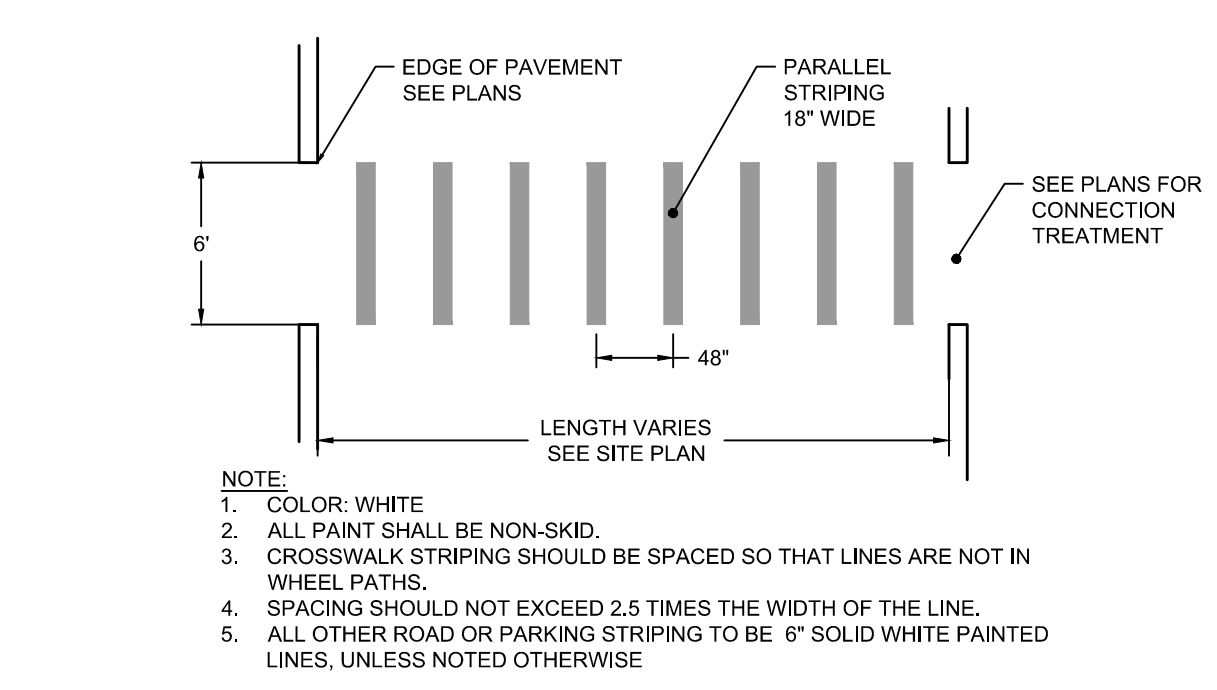
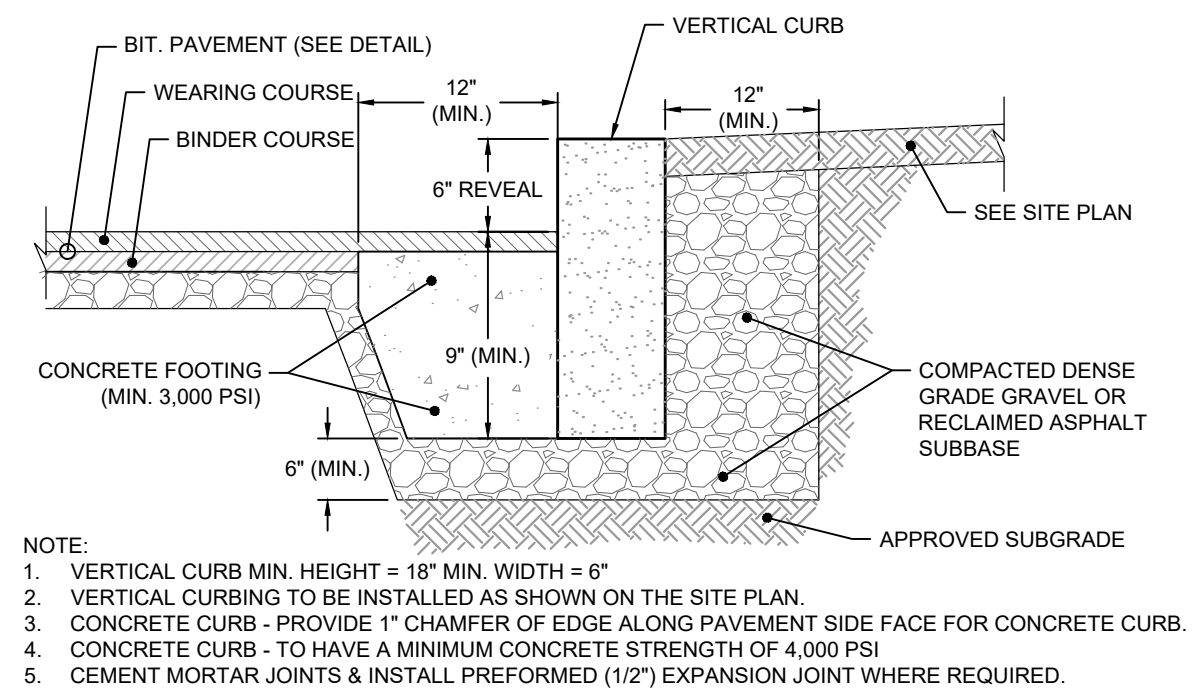
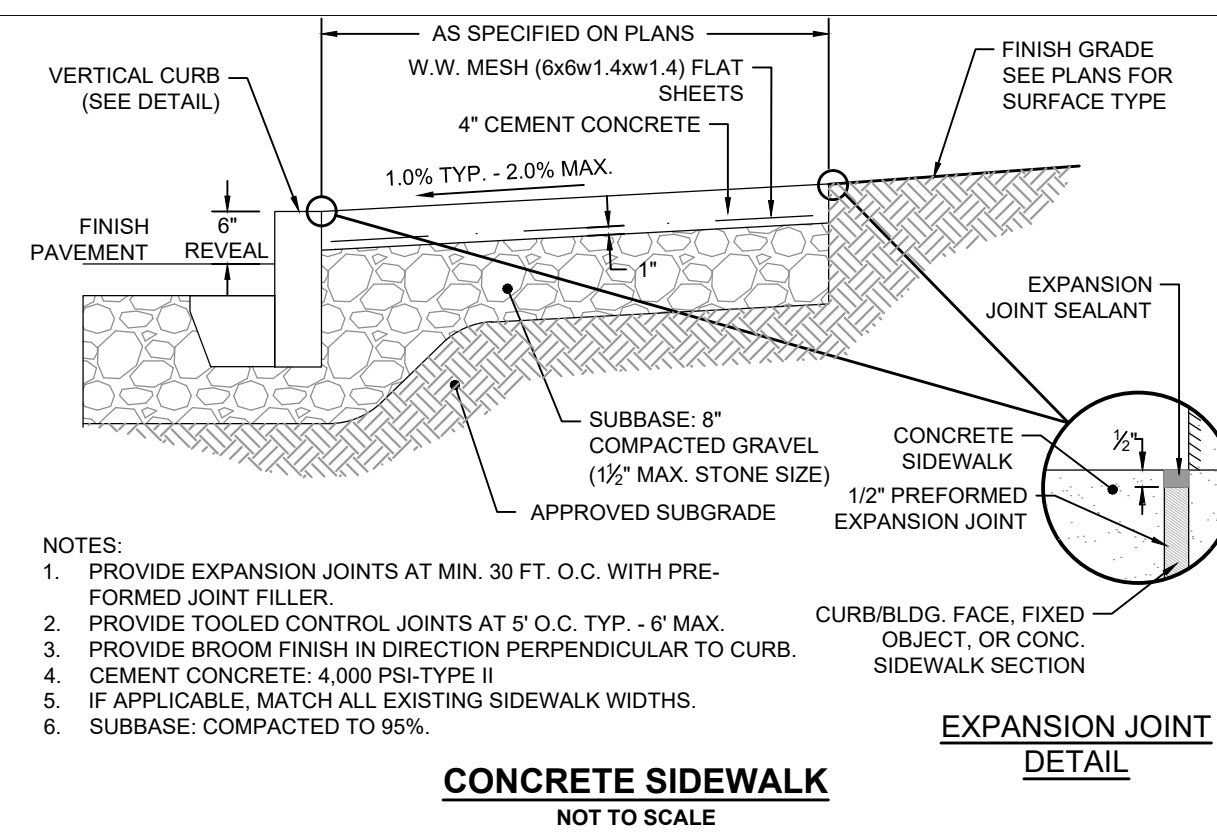
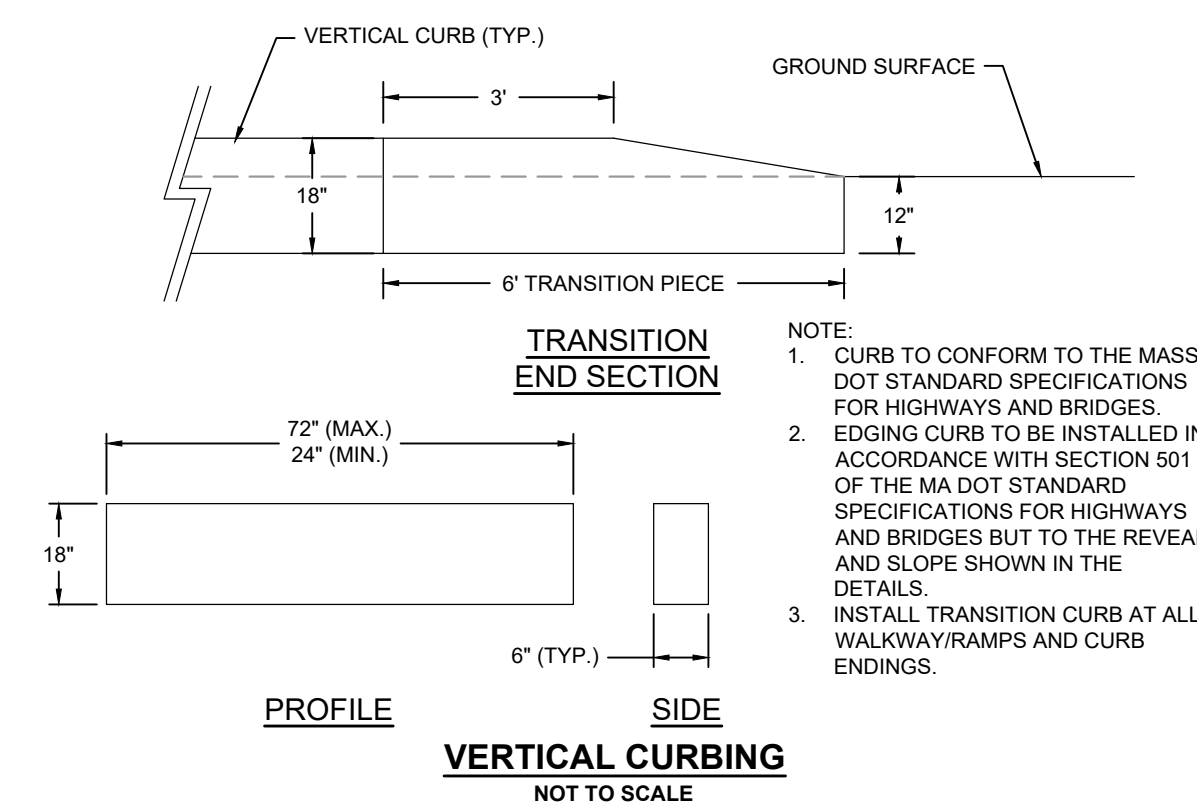
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Key Plan:

Project Name:
**LITTLETON DRIVE
SENIOR BUILDING**

LITTLETON DRIVE
WAREHAM MA

Sheet Name:

STORMWATER DETAILS

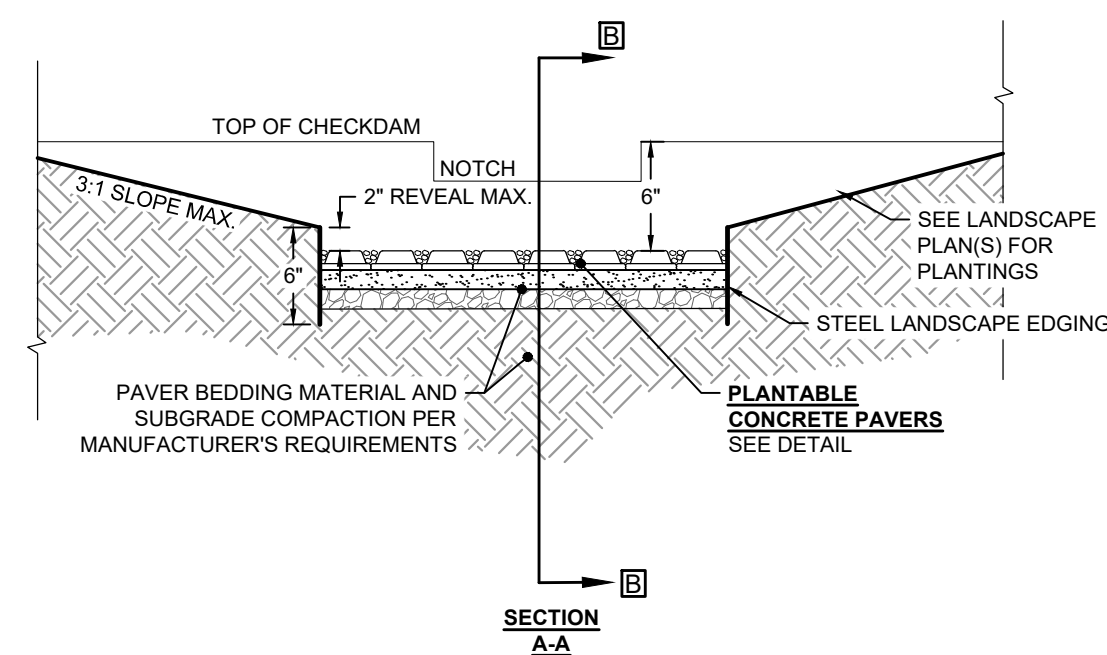
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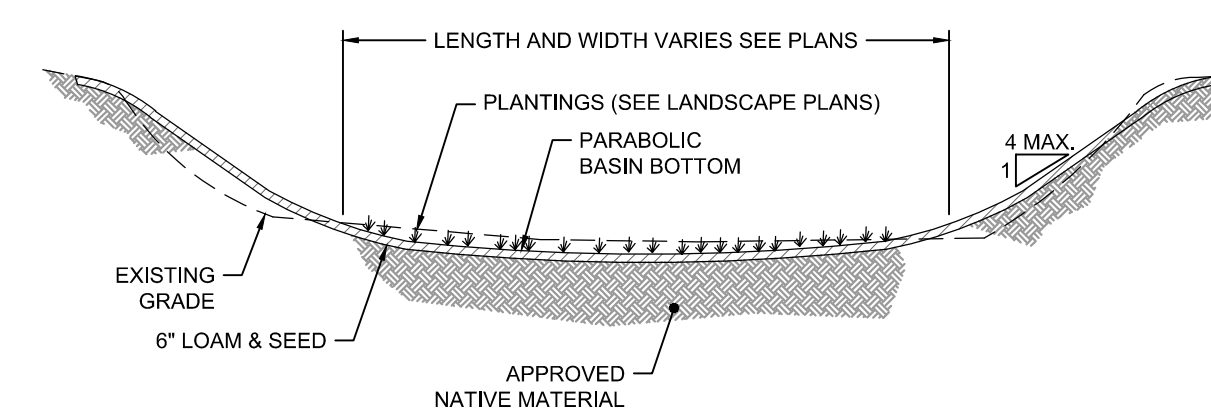
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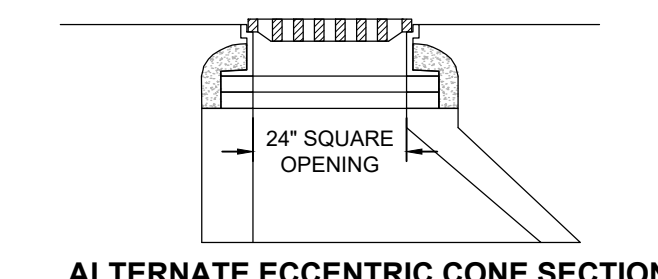


BIORETENTION SCHEDULE:													
		ELEV. A		ELEV. B		ELEV. C		ELEV. D		ELEV. F		FOREBAY	CHECKDAM
No.	Bottom Surface Area (sf)	Overflow Inlet Rim (el.)	Ponding Depth (ft)	Bottom of Bio Area (el.)	Overflow Inlet Type & #	Top of Bio Soil (el.)	Bio Soil Depth (ft)	Bottom of Bio Soil (el.)	Depth Pea Gravel (ft)	Bottom of Bed (el.)	Outlet Invert (el.)	Bottom of Forebay (el.)	Checkdam Notch (el.)
1	790	15.00	1.25	13.75	SPILLWAY	13.75	1.50	12.25	0.50	11.75	N/A	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



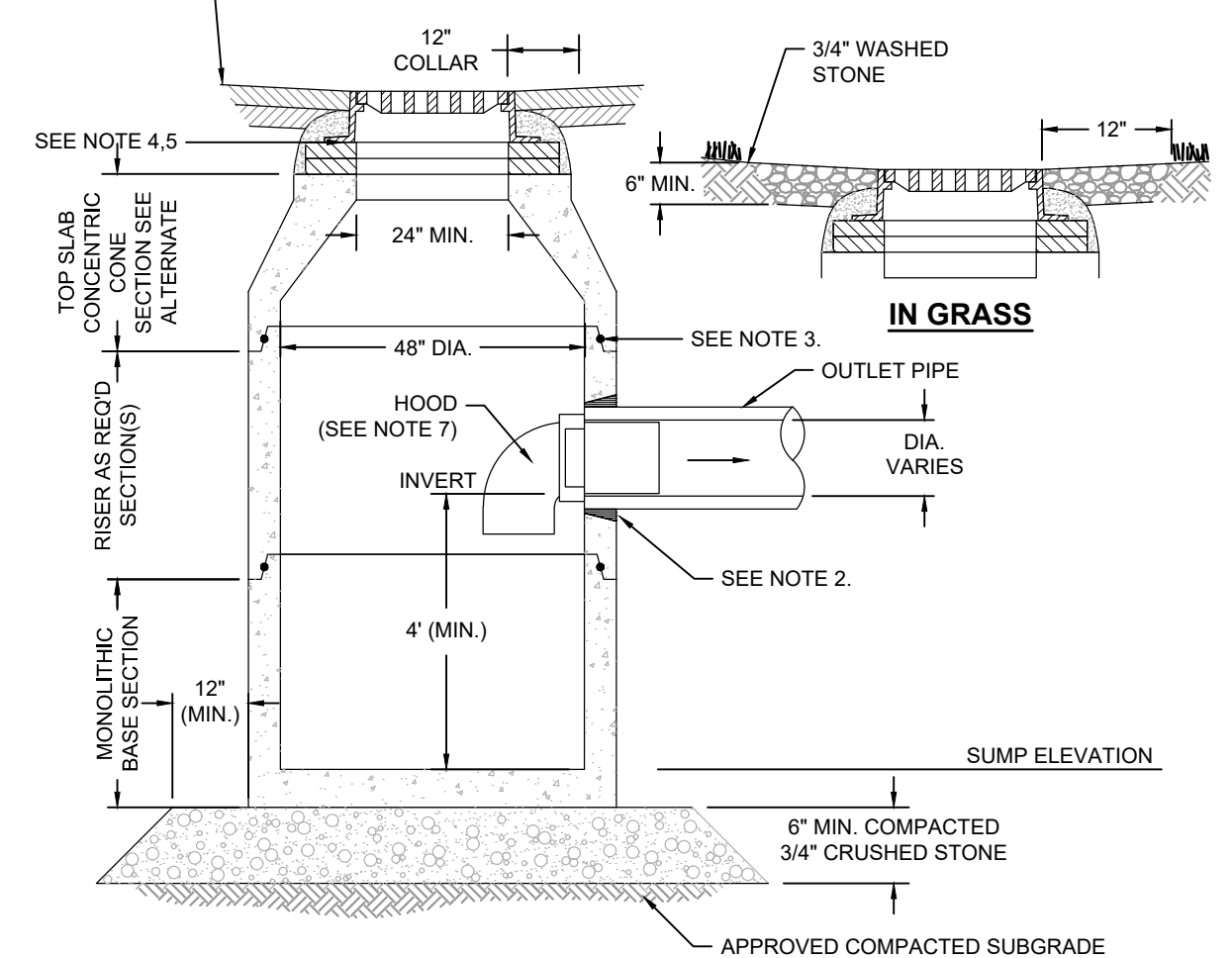
INFILTRATION BASIN
NOT TO SCALE

- NOTES:
- ALL SECTIONS TO BE DESIGNED FOR H-20 LOADING.
 - PROVIDE 1" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
 - JOINT SEALANT BETWEEN PRECAST SECTIONS TO BE PERFORMED BUTYL RUBBER.
 - CATCH BASIN FRAME AND GRATE TO BE SET IN FULL 12" WIDE MORTAR BED. ADJUST TO GRADE WITH PRECAST CONCRETE RISER OR BRICK.
 - DO NOT PLACE MORTAR BED AROUND STRUCTURE UNTIL IT IS AT THE REQUIRED FINISH ELEVATION AND ALIGNMENT.
 - FRAME AND COVER TO CONFORM TO MASSACHUSETTS STANDARDS HEAVY DUTY (EAST JORDAN, NEENAH, OR APPROVED EQUIVALENT)
 - HOPE PIPE HOOD TO BE 90° BEND FASTENED TO PIPE WITH SEALANT. BEND TO HAVE 1 INCH PURGE HOLE DRILLED INTO TOP OF ELBOW.



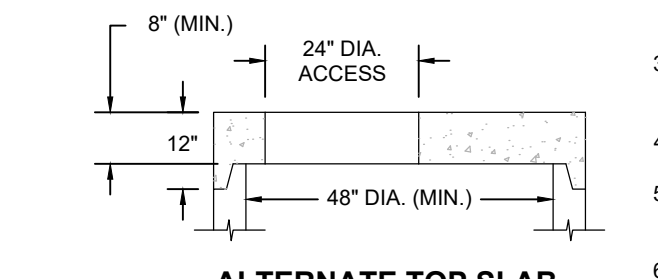
ALTERNATE ECCENTRIC CONE SECTION

ALTERNATE TOP SLAB

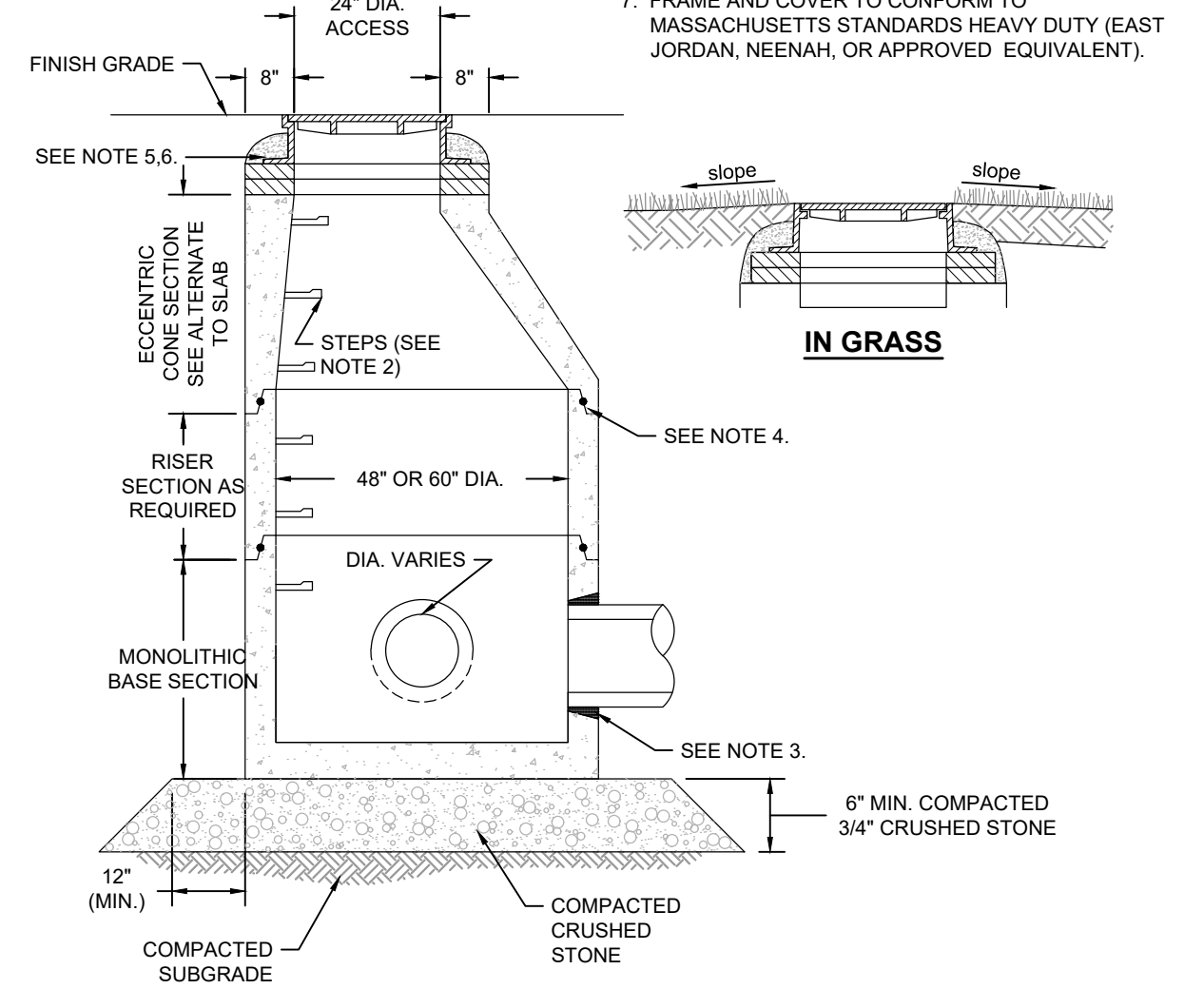


PRECAST CONCRETE CATCH BASIN WITH HOOD ("CB")
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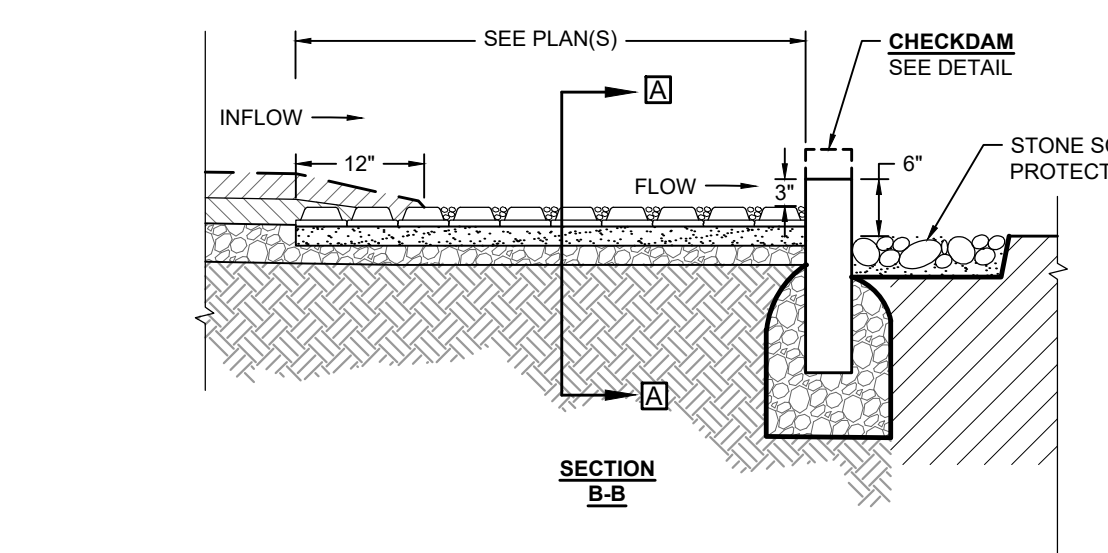
- NOTES:
- ALL SECTIONS TO BE DESIGNED FOR H-20 LOADING.
 - COPOLYMER MANHOLE STEPS TO BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
 - PROVIDE 1" KNOCKOUTS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
 - JOINT SEALANT BETWEEN PRECAST SECTIONS TO BE PERFORMED BUTYL RUBBER.
 - DRAIN MANHOLE FRAME AND COVER TO BE SET IN FULL 12" MORTAR BED. ADJUST TO GRADE WITH PRECAST CONCRETE RISER OR BRICK.
 - DO NOT PLACE MORTAR BED AROUND STRUCTURE UNTIL IT IS AT THE REQUIRED FINISH ELEVATION AND ALIGNMENT.
 - FRAME AND COVER TO CONFORM TO MASSACHUSETTS STANDARDS HEAVY DUTY (EAST JORDAN, NEENAH, OR APPROVED EQUIVALENT).



ALTERNATE TOP SLAB



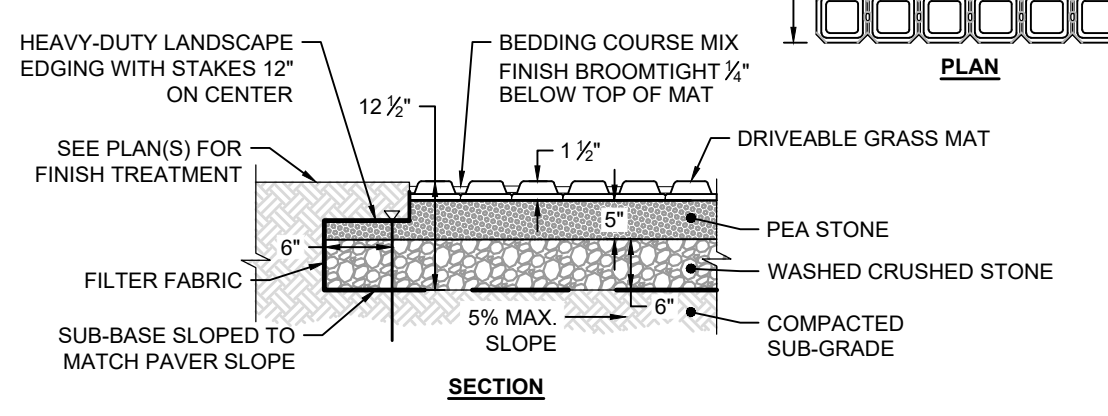
PRECAST DRAIN MANHOLE ("DMH")
NOT TO SCALE



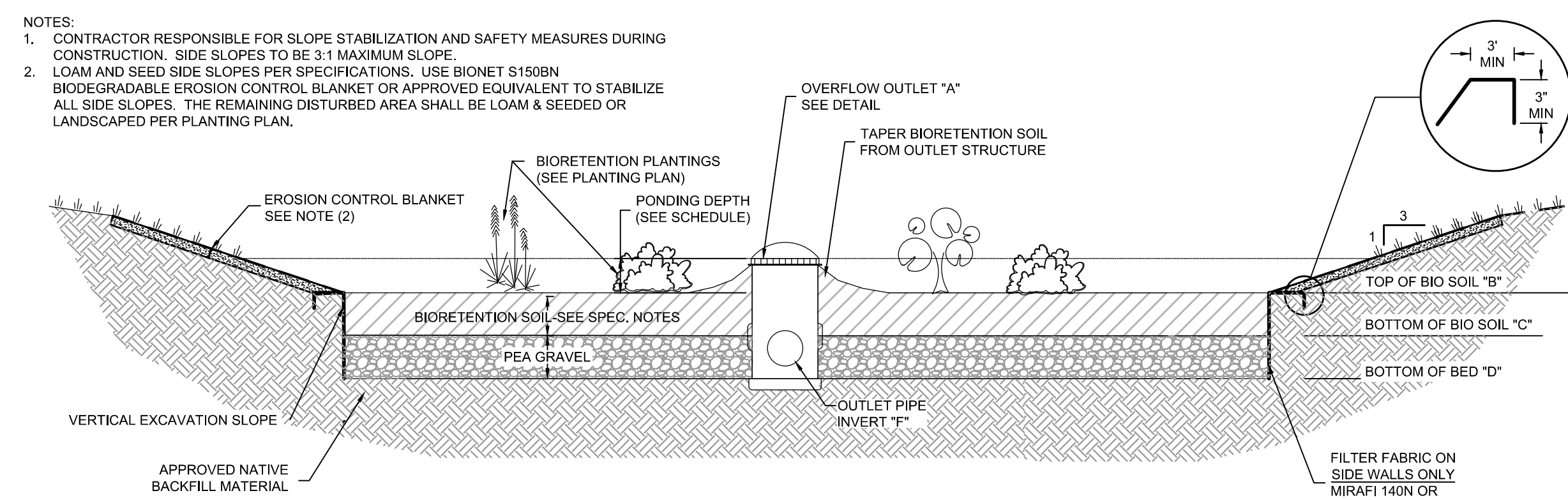
- NOTES:
- SEE **PLANTABLE CONCRETE PAVERS** DETAIL AND SPECIFICATIONS FOR PLANTABLE PAVER REQUIREMENTS.
 - INSTALL PLANTABLE/PERMEABLE PAVER SYSTEM PER MANUFACTURER'S REQUIREMENTS.
 - SHAPE FOREBAY AS REQUIRED WITH MIN. 6" SIDE SLOPE DEPTH. DO NOT EXCEED 3:1 SIDE SLOPES.
 - STEEL LANDSCAPE EDGING TO BE 1/2" THICKNESS HEAVY-DUTY STEEL WITH NATURAL FINISH.

SEDIMENT FOREBAY
NOT TO SCALE

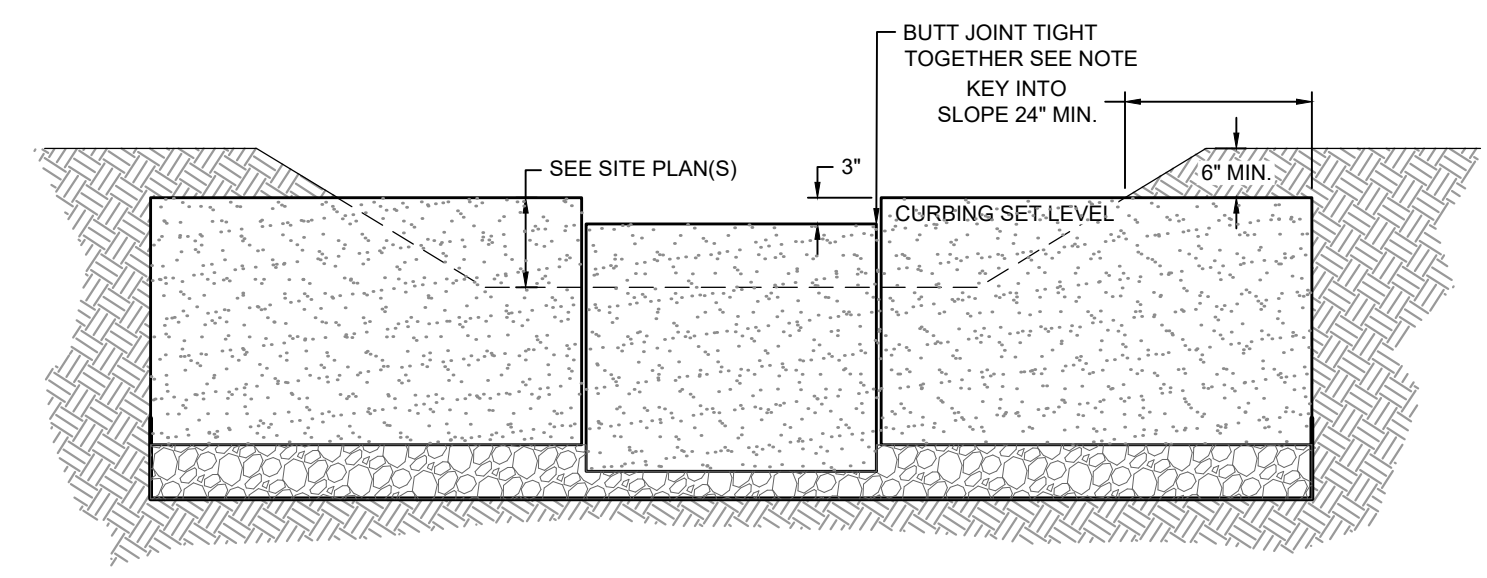
- NOTES:
- PAVER EDGING TO BE 3" X 3" PERMALOC ASPHALT EDGE OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS. BACKFILL OVER TOP OF EDGING.
 - DRIVEABLE GRASS MATS SHALL BE "DRIVEABLE GRASS" MANUFACTURED BY SOIL RETENTION OR AN ENGINEER APPROVED EQUAL.



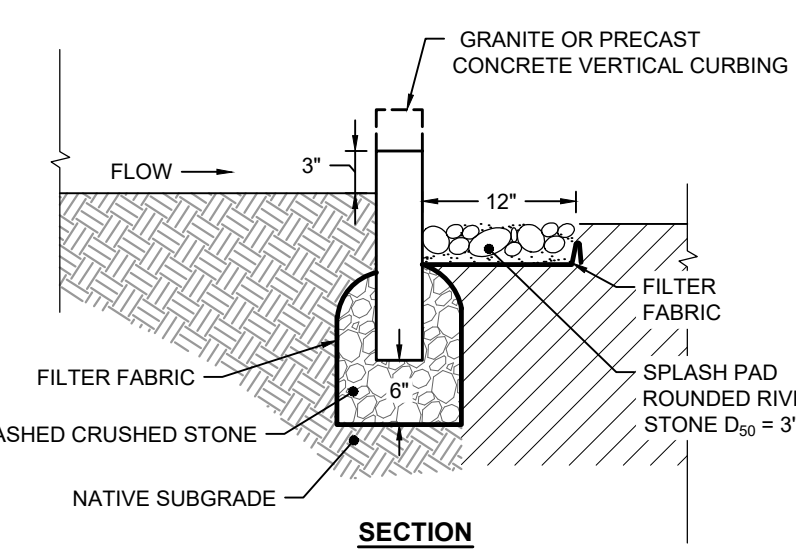
PLANTABLE CONCRETE PAVERS
NOT TO SCALE



BIORETENTION
NOT TO SCALE



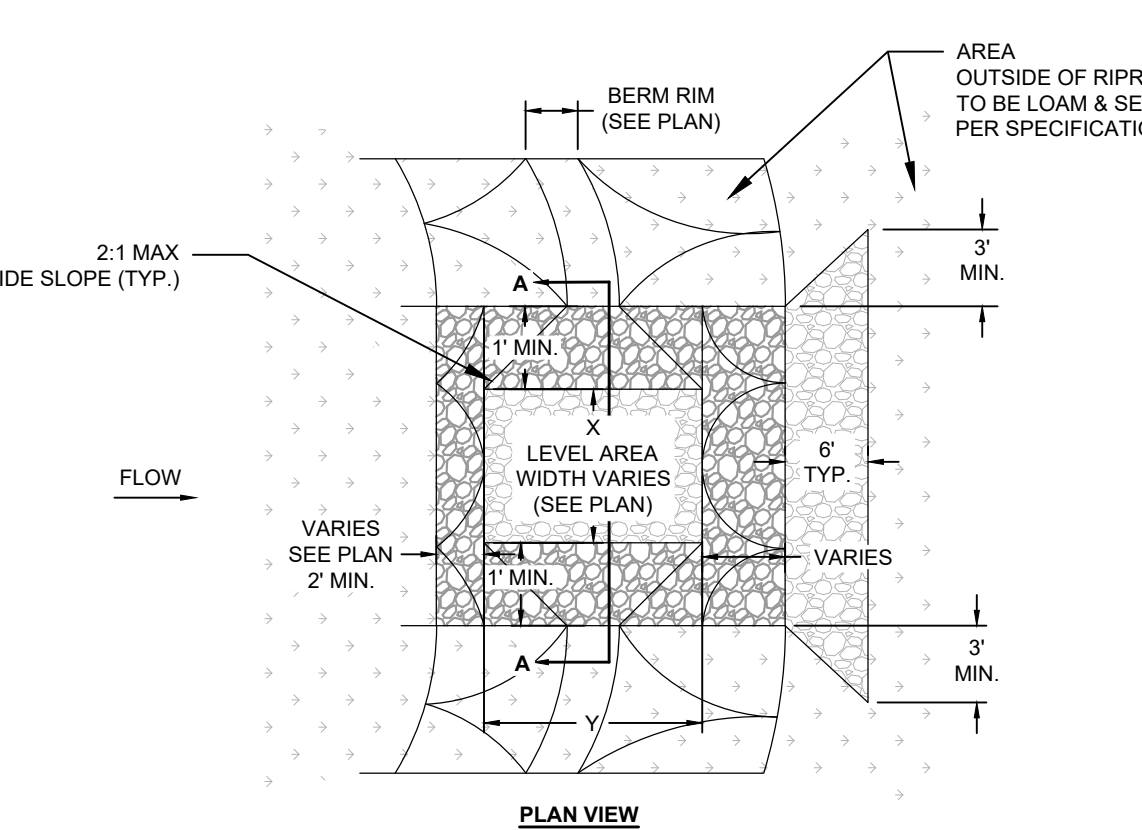
ELEVATION



SECTION

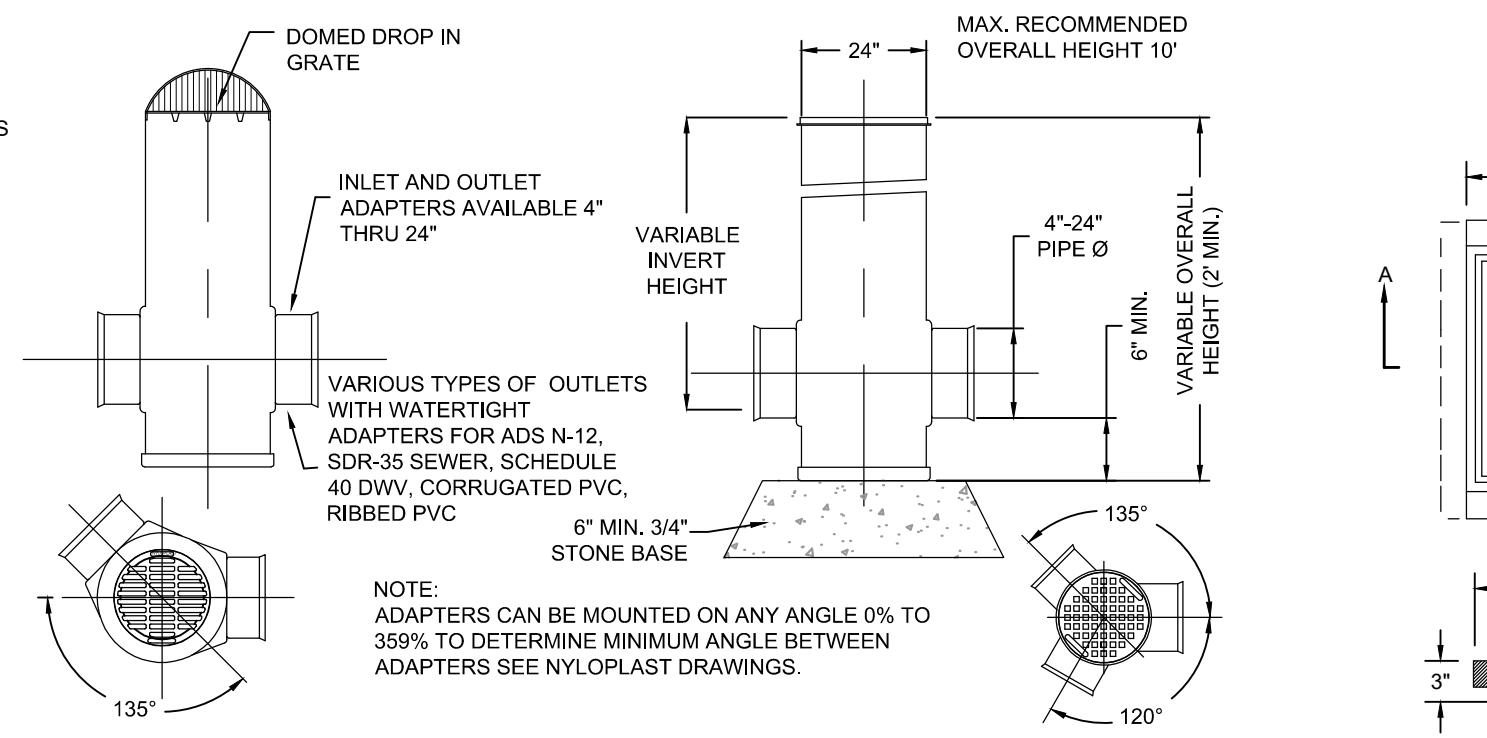
- NOTES:
- USE RECYCLED/RECLAIMED GRANITE CURB WHEN POSSIBLE OR BUTT TIGHTLY TO FACE OF GRANITE CURB.
 - KEY CHECKDAM INTO FOREBAY SIDE SLOPES A MINIMUM OF 24" TO PREVENT FLOW FROM DIVERTING THE CHECK DAM.
 - SEE PLAN(S) FOR CHECKDAM DIMENSIONS AND LAYOUT.

CHECKDAM
NOT TO SCALE

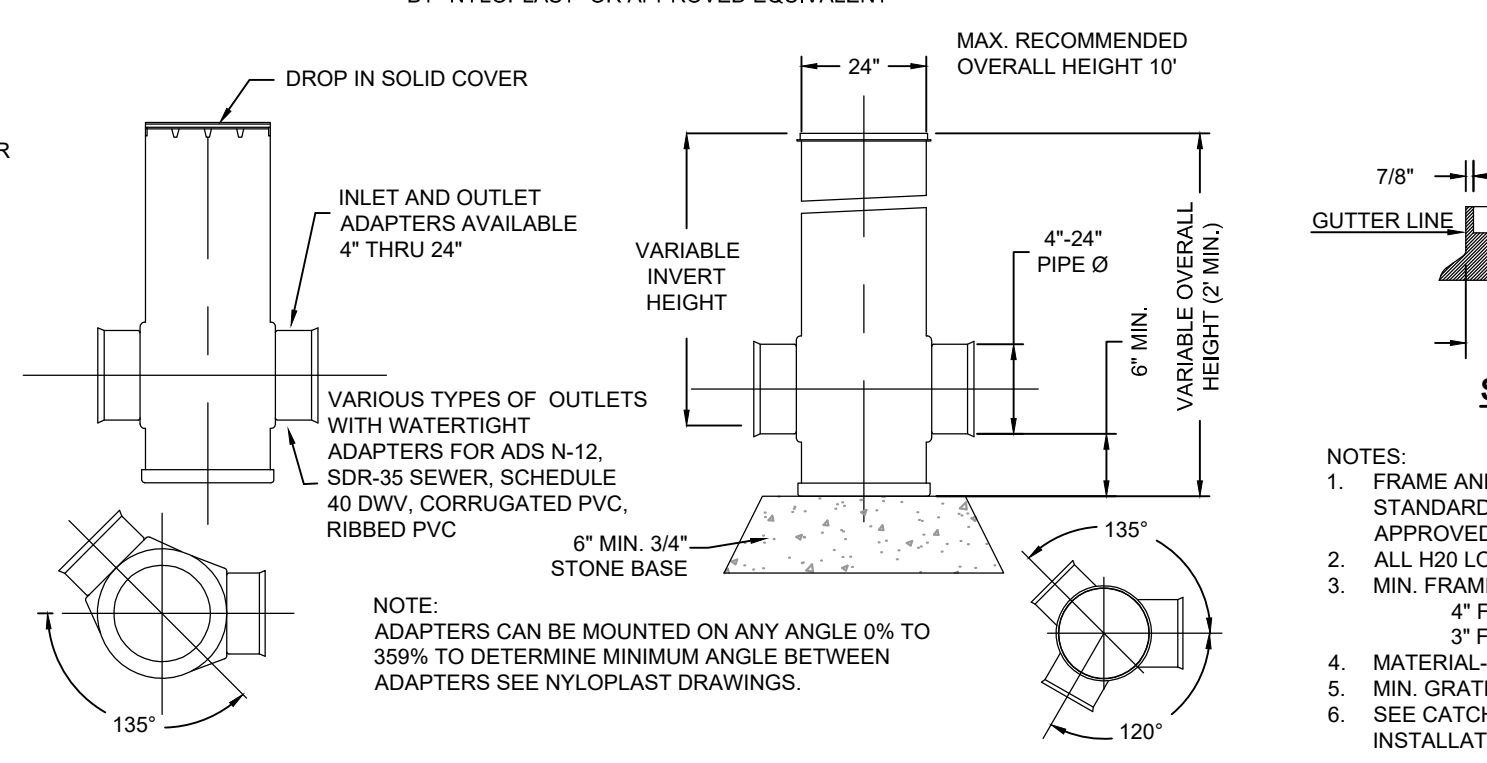


OVERFLOW SPILLWAY
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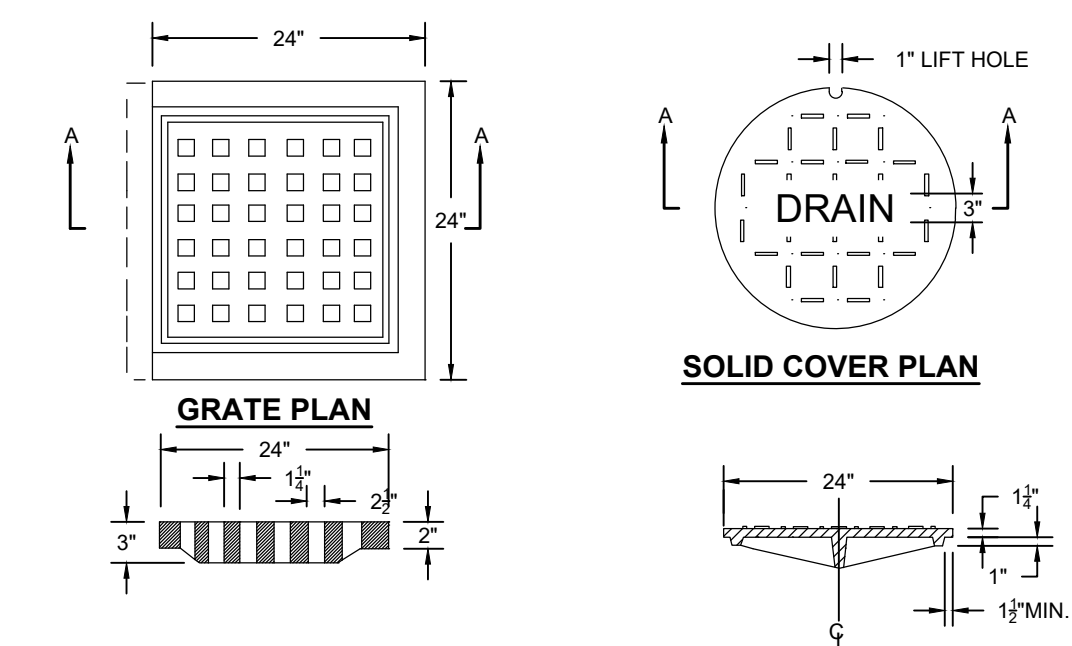
- NOTES:
- FILTER FABRIC TO EXTEND AT LEAST 12 INCHES BEYOND THE RIPRAPPED AREA IN ALL DIRECTIONS AND TO BE KEYPED INTO THE SOIL AS SHOWN.



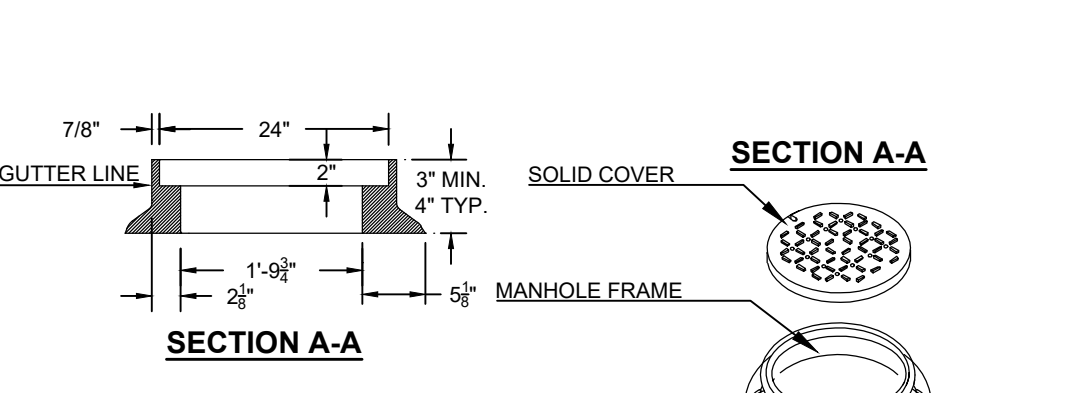
OUTLET STRUCTURE ("OS")
NOT TO SCALE



DRAIN BASIN ("DB")
NOT TO SCALE



DRAINAGE STRUCTURE FRAME AND COVER OR GRATE
NOT TO SCALE



- NOTES:
- FRAME AND COVER TO CONFORM TO MASSACHUSETTS STANDARDS HEAVY DUTY (EAST JORDAN, NEENAH, OR APPROVED EQUIVALENT)
 - ALL H20 LOADING
 - MIN. FRAME WEIGHT:
4" FLANGE 295 LBS
3" FLANGE 265 LBS
 - MATERIAL-CAST IRON
 - MIN. GRATE WEIGHT: 200LBS
 - SEE CATCHBASIN AND MANHOLE DETAILS FOR INSTALLATION.

DRAINAGE STRUCTURE FRAME AND COVER OR GRATE
NOT TO SCALE



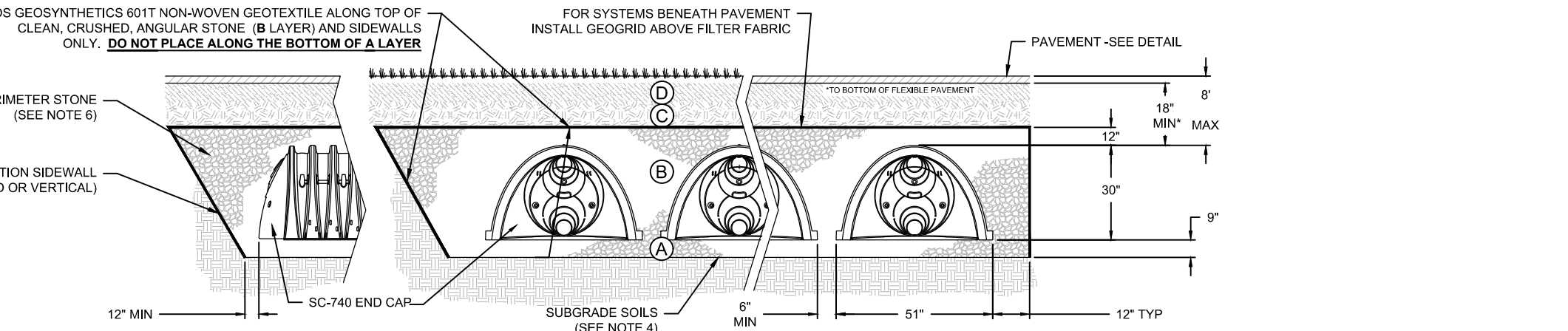
Subsurface Stormwater Management™
STORMTECH GENERAL NOTES

- STORMTECH LLC (STORMTECH) REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- 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 SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.) MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT MAXIMUM COVER IS 36 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 36 INCHES.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- 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 STORMTECH SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION INCLUDING COVER AND DESIGN ENGINEER'S SPECIFICATIONS.
- 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 ENGINEERS PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (IF LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES. D_{15} FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 A-1, A-2, A-3 OR AASHTO M37 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 9, 9, 10
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M37 3, 357, 4, 467, 5, 56, 57
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M37 3, 357, 4, 467, 5, 56, 57

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, NO. 4 (AASHTO M3) STONE.
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 4" (100 mm) MAX LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
 - WHERE INSTALLATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY BANKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

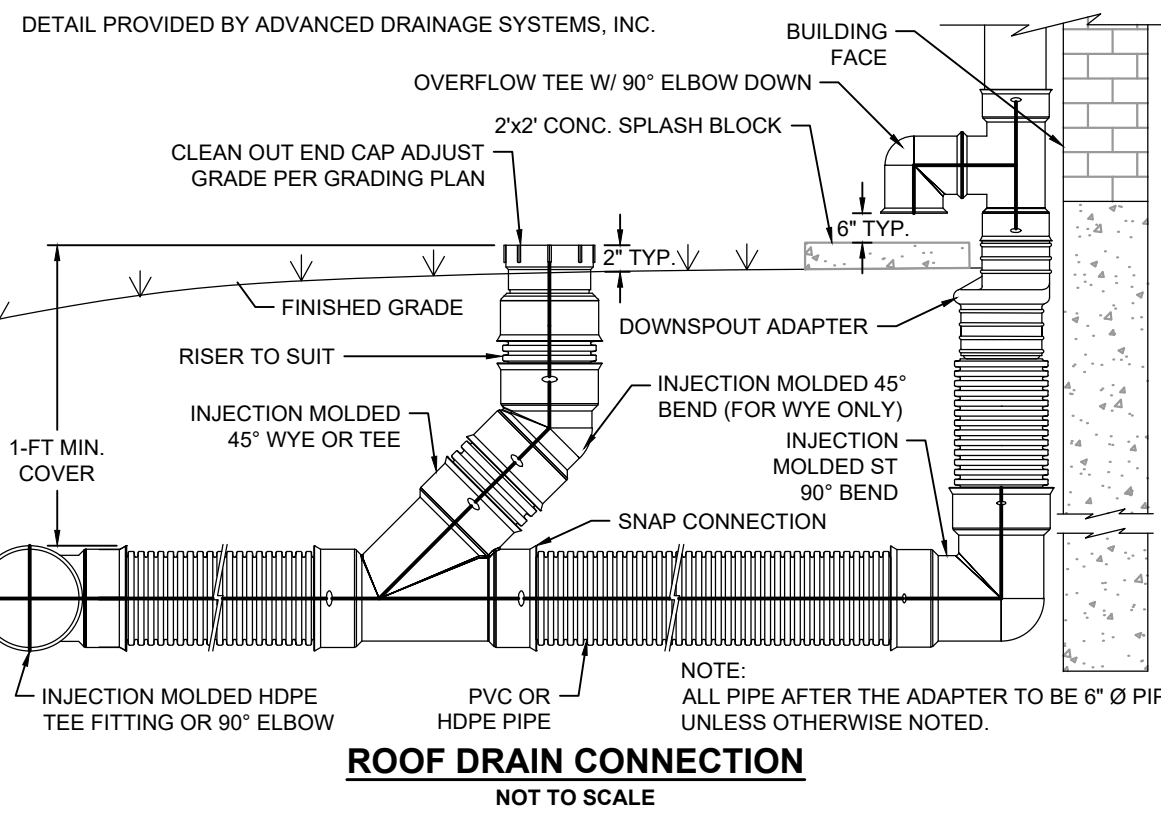


NOTES:

- 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 STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2779 "STANDARD PRACTICES FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE INSTALLED CHAMBER SYSTEM TO PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT 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 CAPACITY (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE BIRTH 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.
- 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.
- FOR INFORMATION, CONTACT STORMTECH AT 1-888-892-2694.

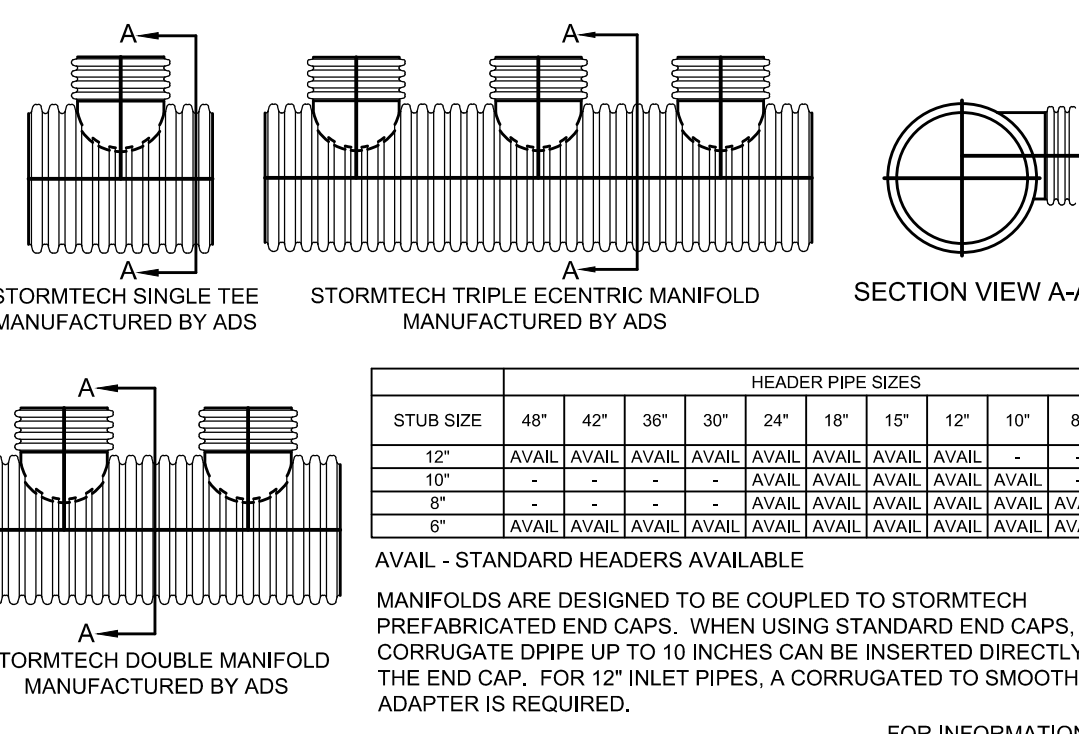
STORMTECH SC-740 CHAMBER TYPICAL CROSS SECTION

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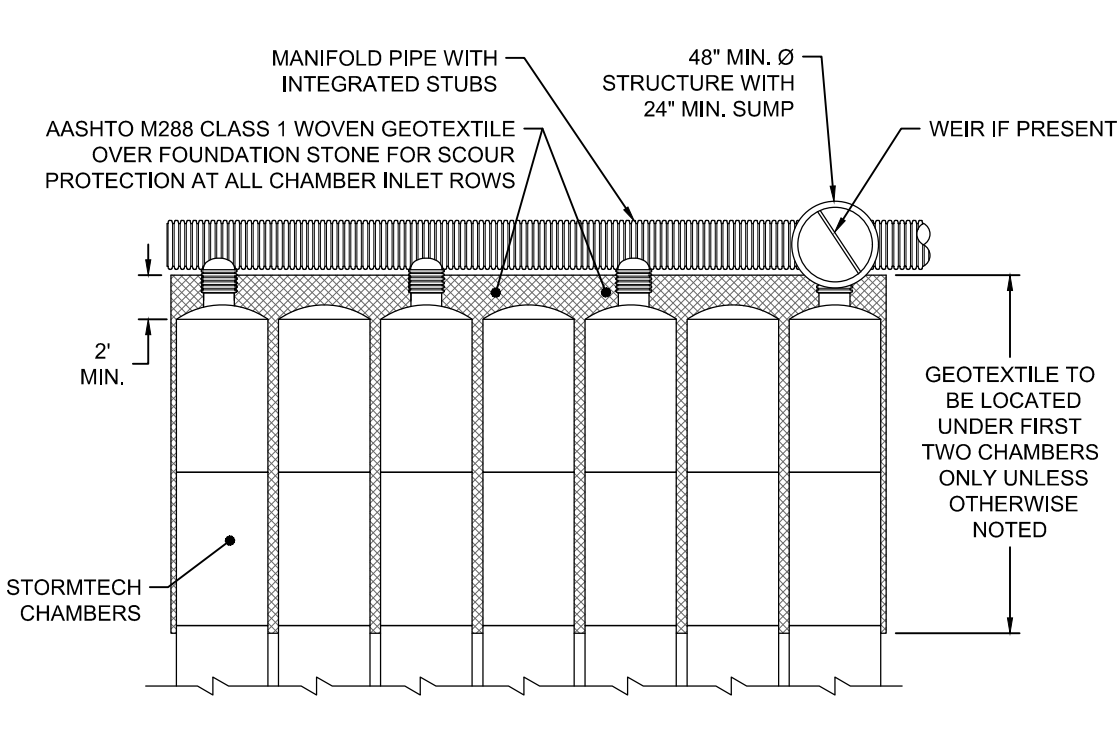
ROOF DRAIN CONNECTION

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ADS MANIFOLD DETAIL

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STORMTECH MANIFOLD DETAIL

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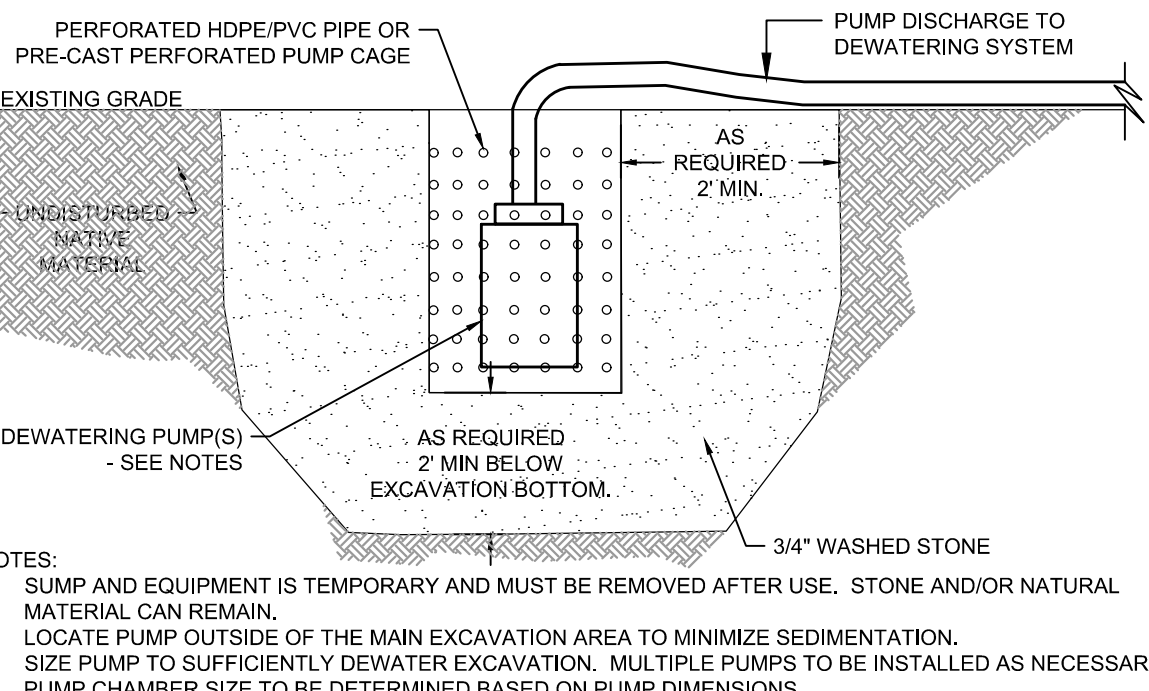
SPECIFICATIONS										ELEVATIONS									
NUMBER	COVER TYPE	NUMBER OF UNITS	CHAMBER TYPE/ MODEL	CHAMBER HEIGHT (IN.)	STONE TOP OF CHAMBER (IN.)	BOTTOM OF CHAMBER TO INVERT IN (IN.)	STONE UNDER CHAMBER (IN.)	STONE SIDE CHAMBER (IN.)	STONE END CHAMBER (IN.)	DIAMETER HEADER MANIFOLD (IN.)	DIAMETER CHAMBER INLET STUB (IN.)	# OF MANIFOLD INLETS STUBS	ELEV. A INVERT HEADER MANIFOLD (FT)	ELEV. B MANIFOLD STUB INVERT (FT)	ELEV. C TOP OF CHAMBER S (FT)	ELEV. D BOTTOM OF STONE (FT)	ELEV. E TOP OF CHAMBER (FT)	ELEV. F TOP OF STONE (FT)	ELEV. G 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

INSTALLATION NOTES:

- PLACE LIFTING STRAPS (NOT INCLUDED) UNDER THE UNIT TO FACILITATE REMOVAL AFTER USAGE
- UNFOLD DANDY DEWATERING BAG ON STABILIZED AREA OVER DENSE VEGETATION, STRAW, OR GRAVEL (IF AN INCREASED DRAINAGE SURFACE IS NEEDED)
- INSERT DISCHARGE HOSE FROM PUMP INTO DANDY DEWATERING BAG A MINIMUM OF SIX INCHES AND TIGHTLY SECURE WITH ATTACHED THE DOWN STRAP TO PREVENT WATER FROM FLOWING OUT OF THE UNIT WITHOUT BEING FILTERED
- IF USING OPTIONAL ABSORBENTS, PLACE ABSORBENT BOOM INTO THE DANDY DEWATERING BAG
- REPLACE THE UNIT WHEN 1/2 FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE
- IF USING OPTIONAL OIL ABSORBENTS, REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION

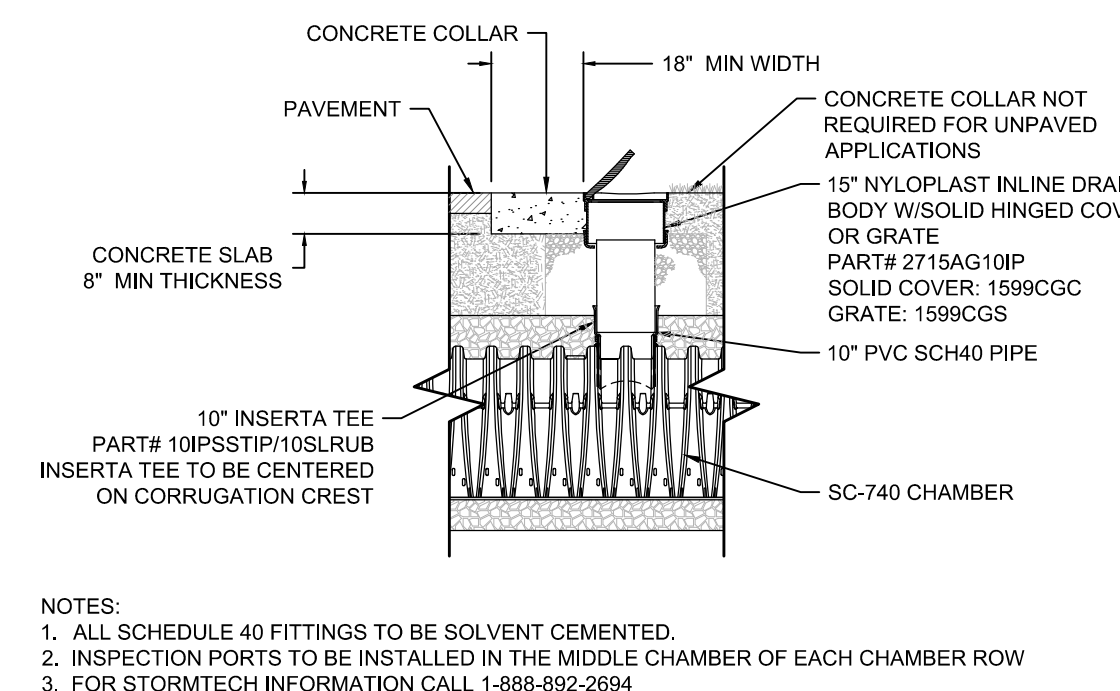
DEWATERING BAG DETAIL

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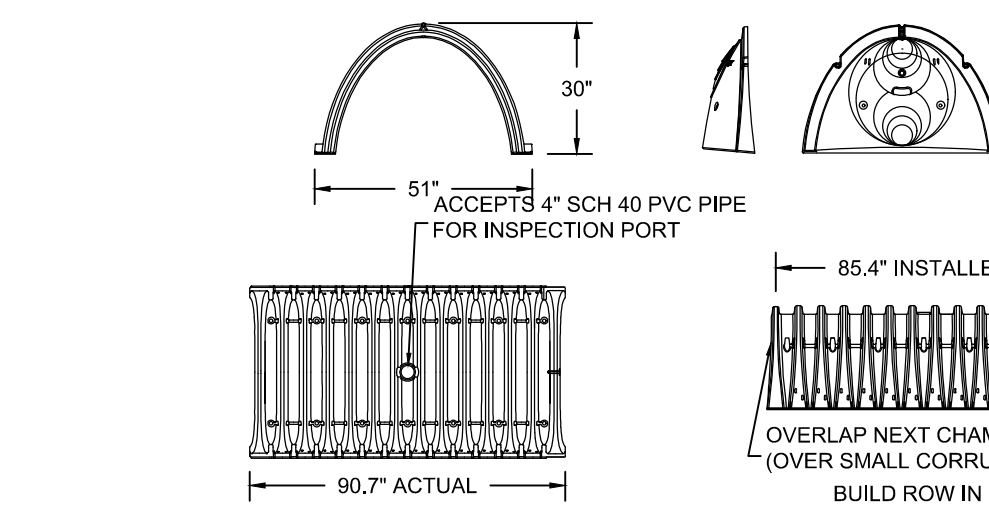
DEWATERING SUMP DETAIL

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INSPECTION PORT

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NOMINAL CHAMBER SPECIFICATIONS

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

51.0" x 30.0" x 85.4"
45.9 CUBIC FEET
74.9 CUBIC FEET
75 lbs.

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

PART#	STUB	A	B	C
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)
SC740EP24T	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	N/A
SC740EP24B	18135 (mm)	16.80" (427 mm)	16.80" (427 mm)	6.80" (173 mm)

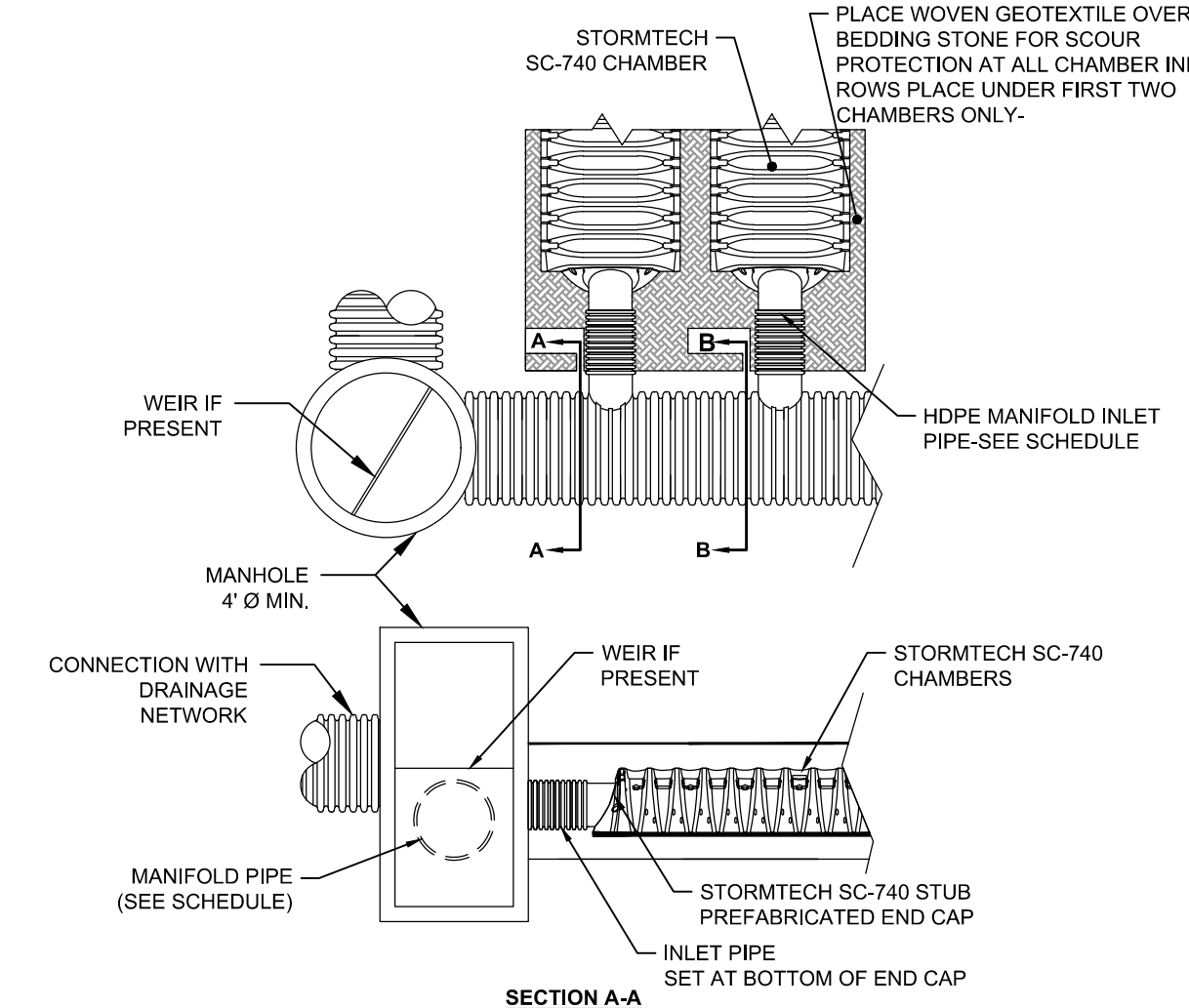
NOTE: ALL DIMENSIONS ARE NOMINAL

ALL STUBS, EXCEPT FOR THE SC740EP24B 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.

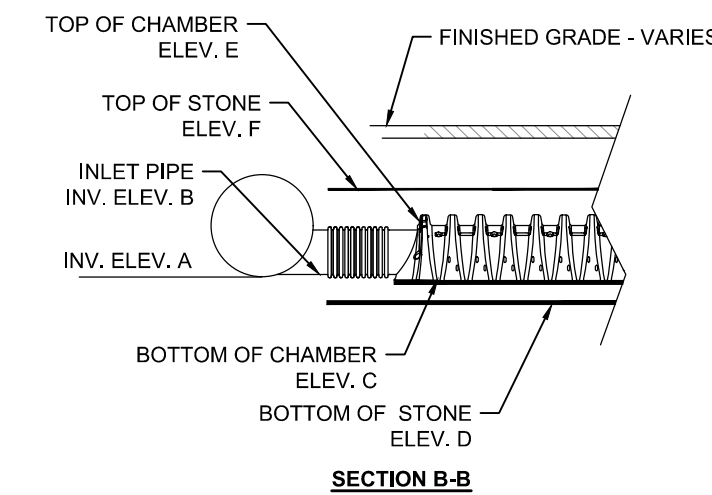
*FOR THE SC740EP24B THE 24" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75". BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

STORMTECH TECHNICAL DETAILS

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SECTION A-A

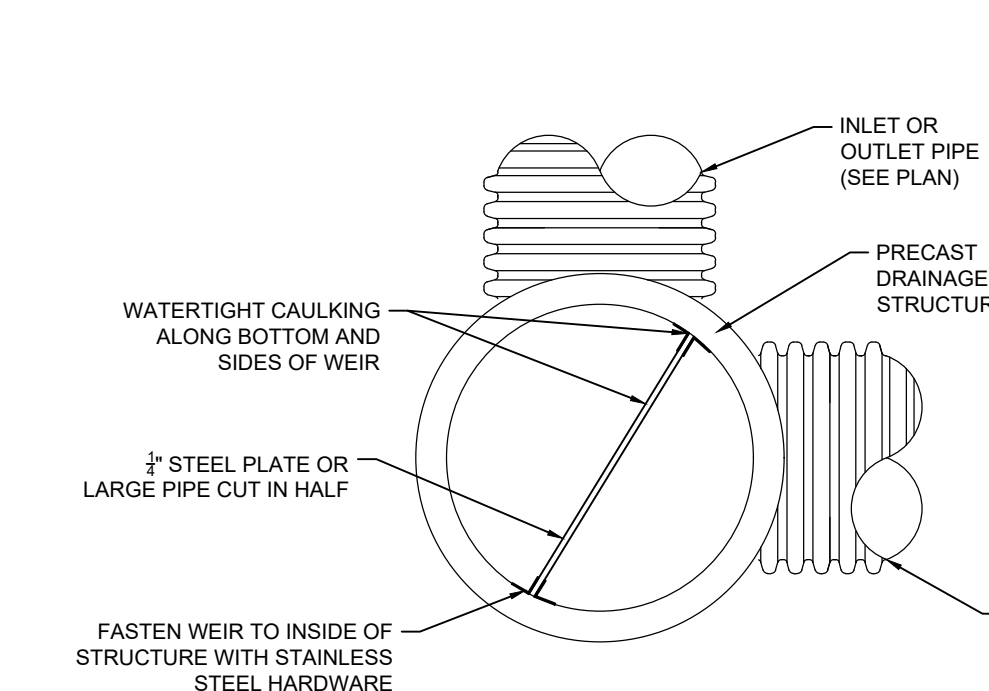


SECTION B-B

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STORMTECH SYSTEM DETAIL

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MANHOLE WEIR

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Consultant:



Revision:

Architect of Record:

Drawn: MCL/JEH

Checked: RAC

Scale:

Key Plan:

Project Name:
LITTLETON DRIVE SENIOR BUILDING

LITTLETON DRIVE
WAREHAM MA

Sheet Name:
STORMWATER DETAILS (2)

Project Number:

Issue Date:
4/25/22

Sheet Number:
C-14

Consultant:



Revision:

Architect of Record:

Drawn: MCL/JEH

Checked: RAC

Scale:

Key Plan:

Project Name:
**LITTLETON DRIVE
SENIOR BUILDING**

LITTLETON DRIVE
WAREHAM MA

Sheet Name:

UTILITY DETAILS

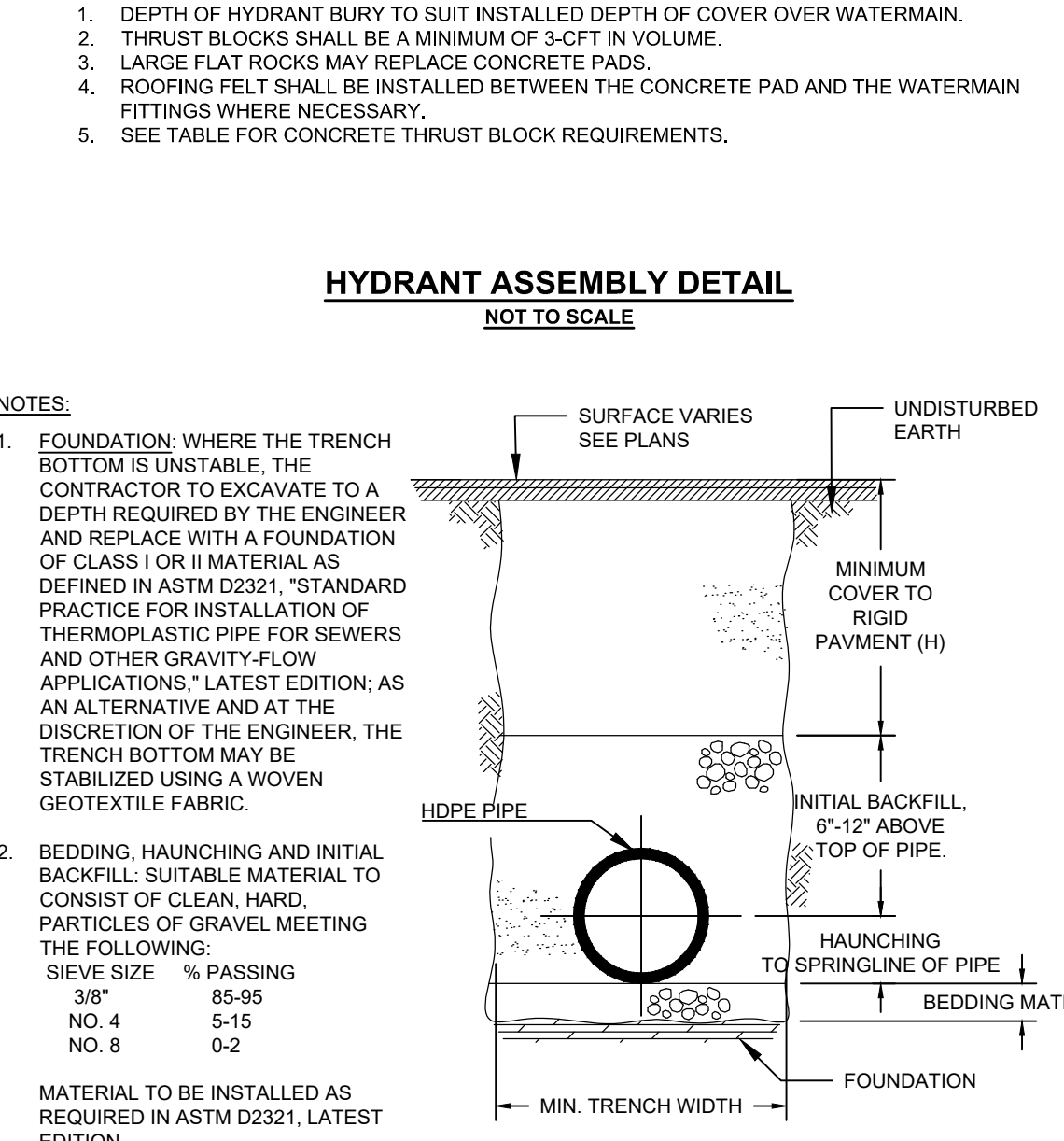
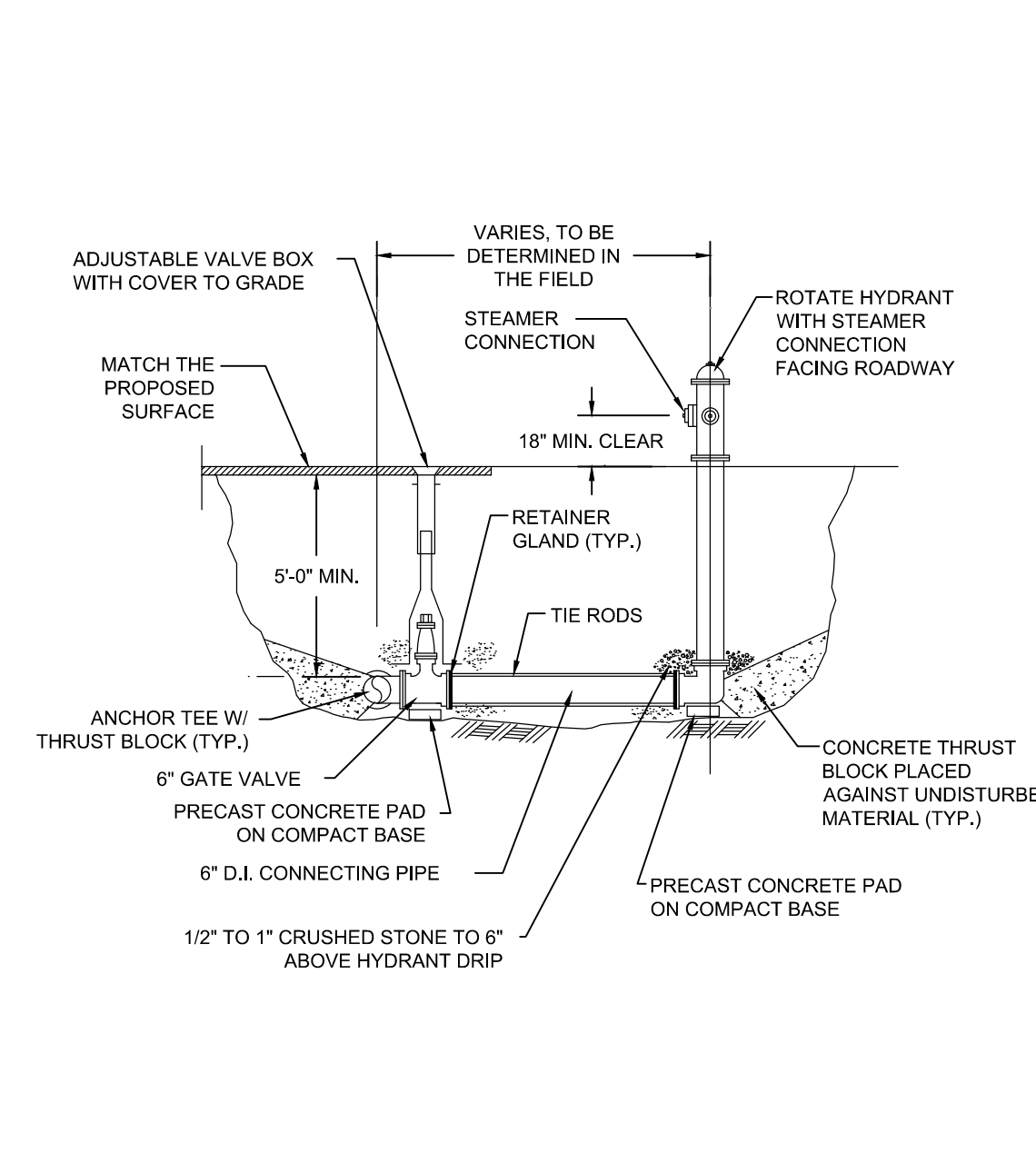
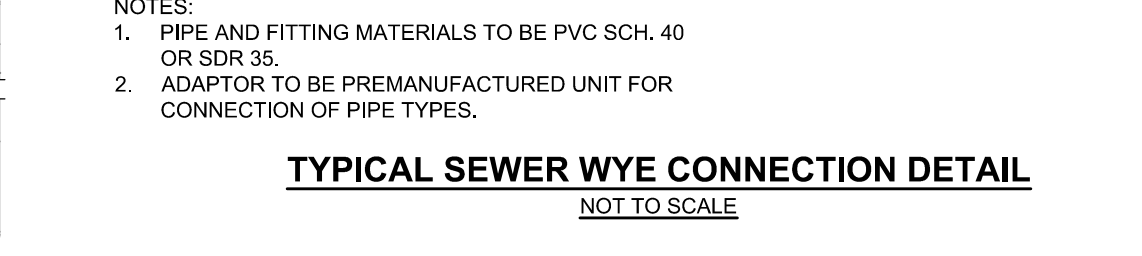
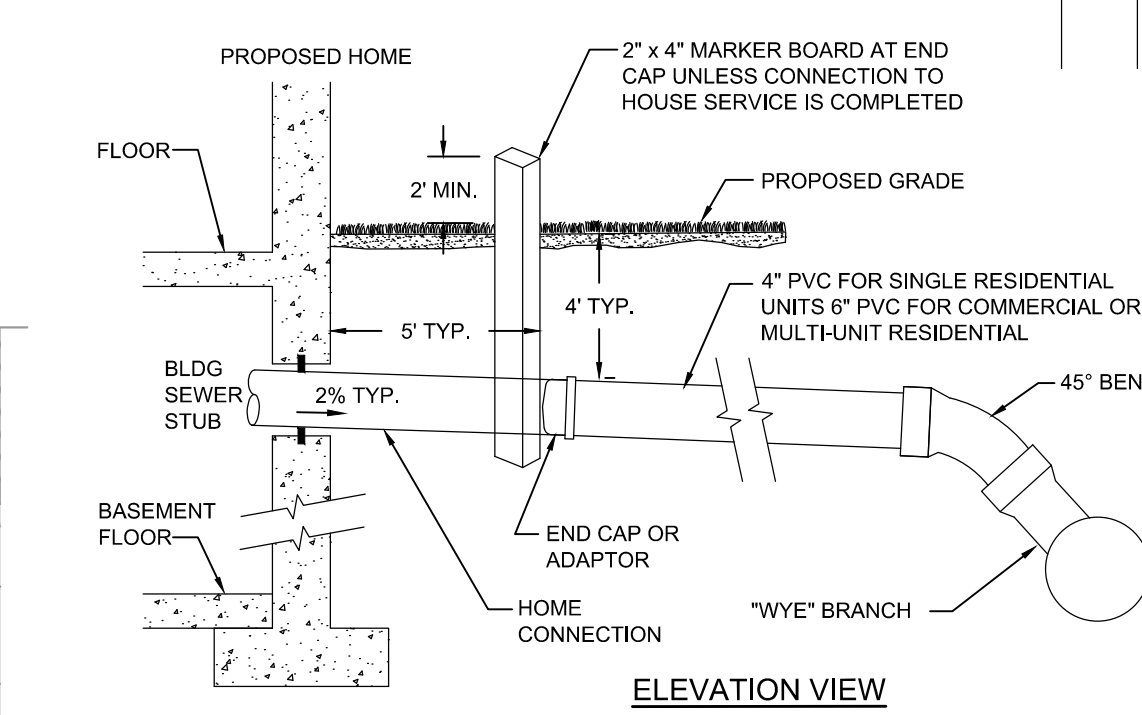
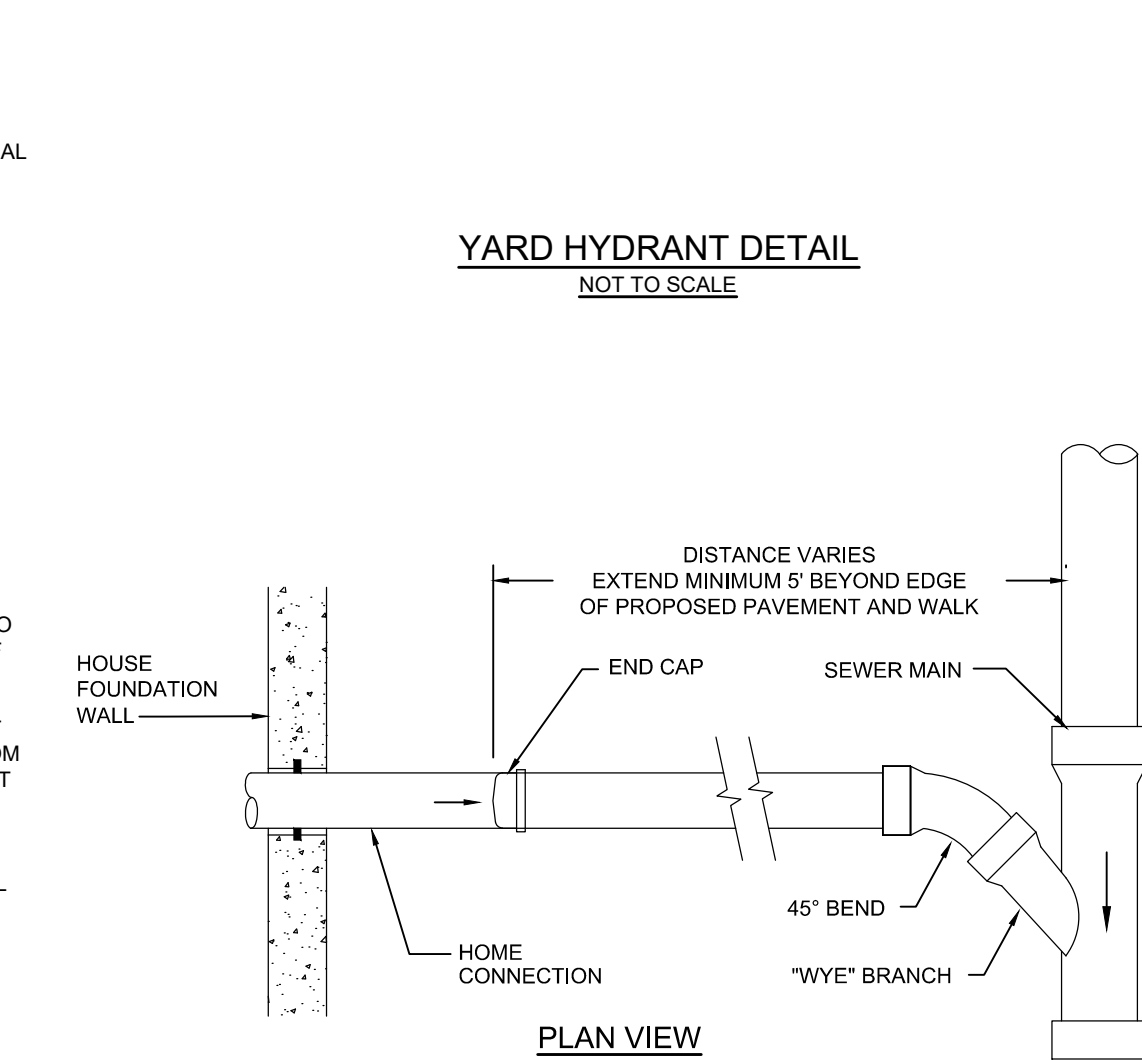
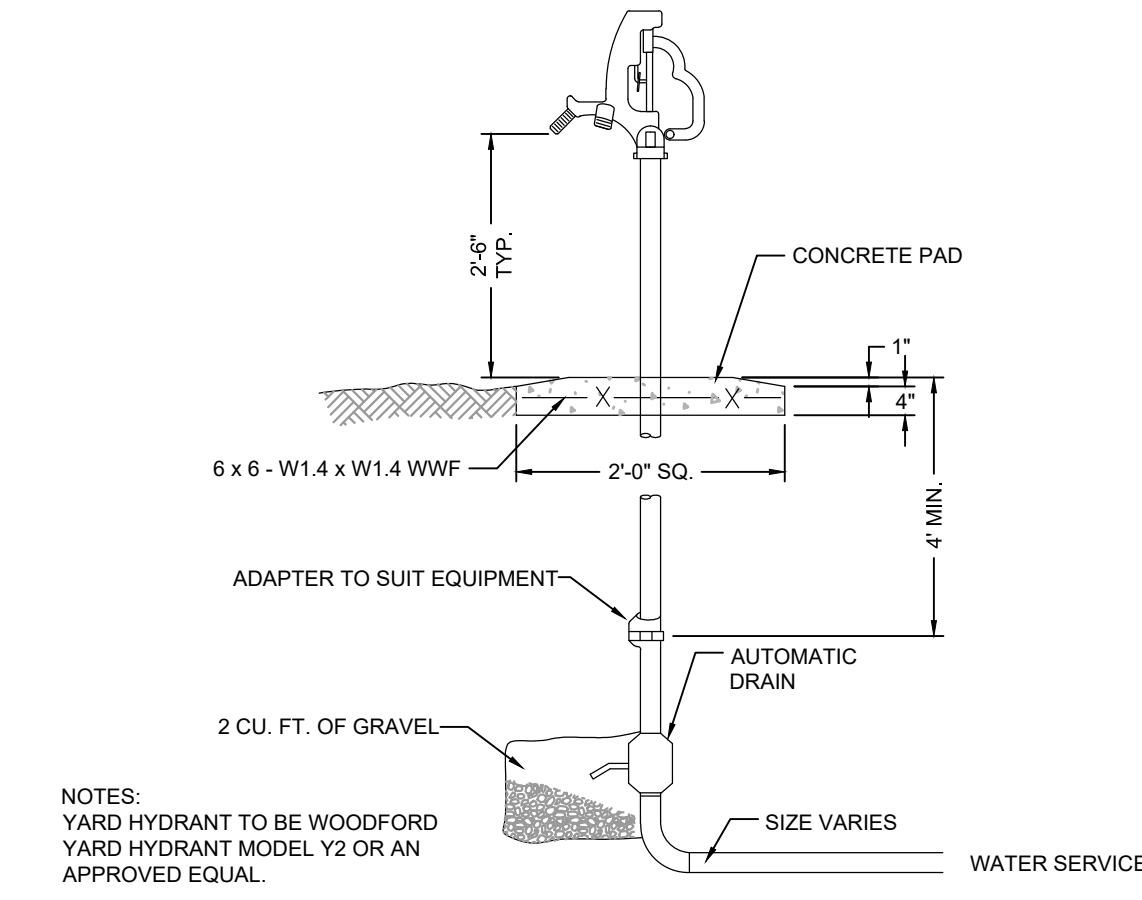
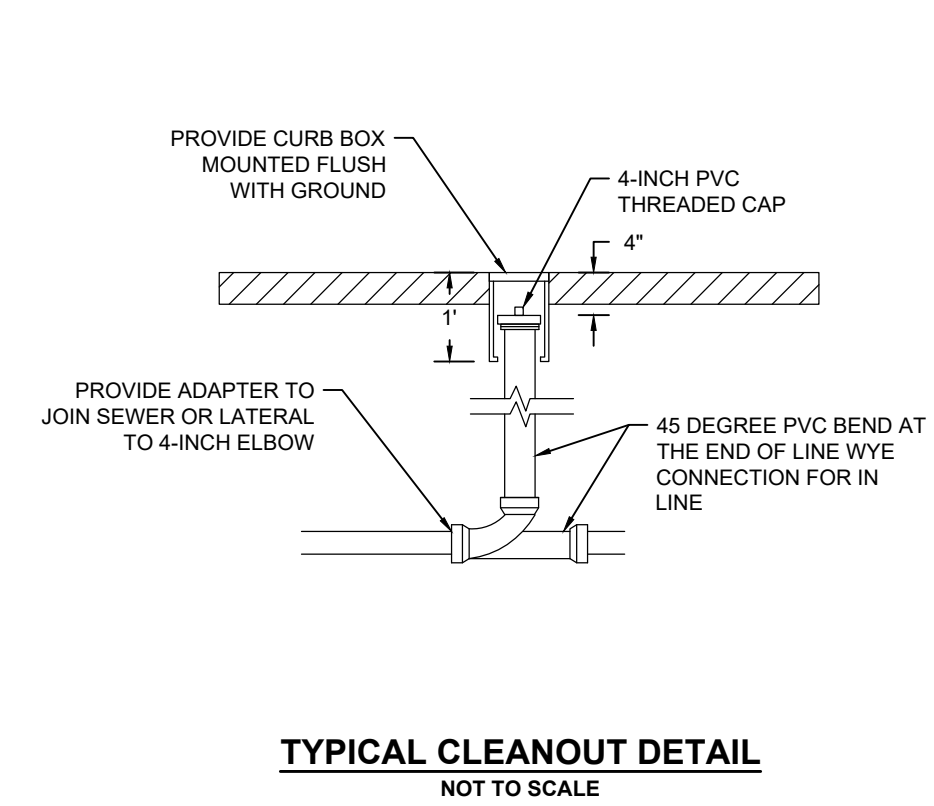
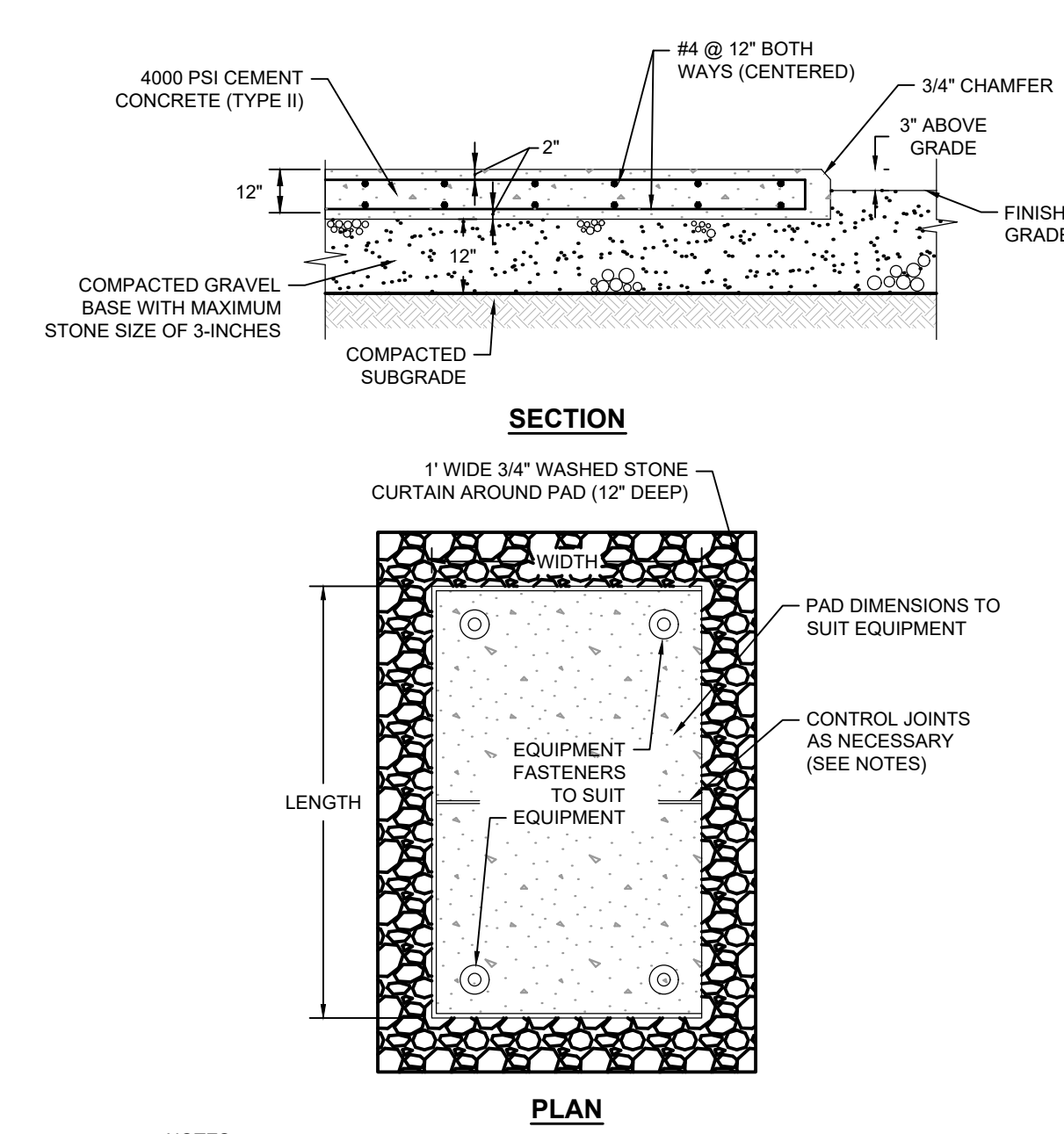
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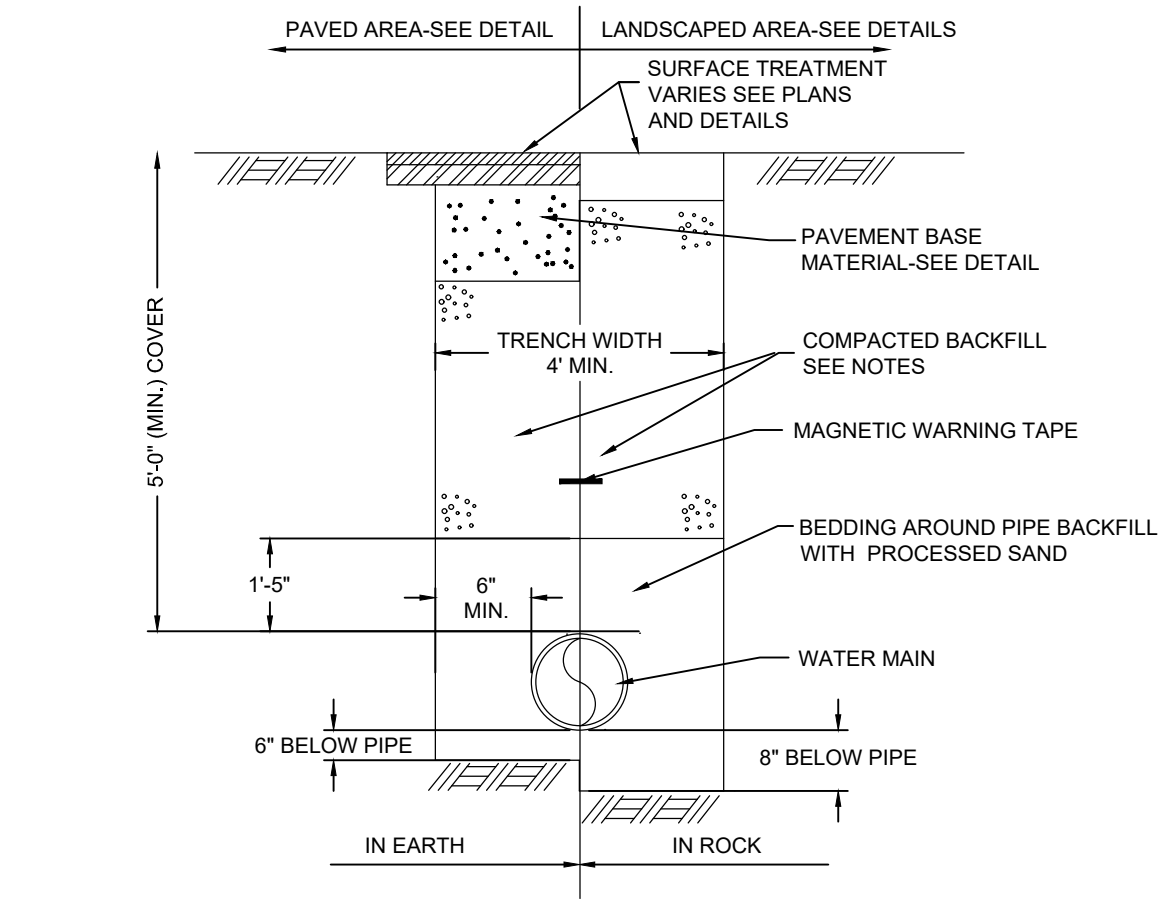
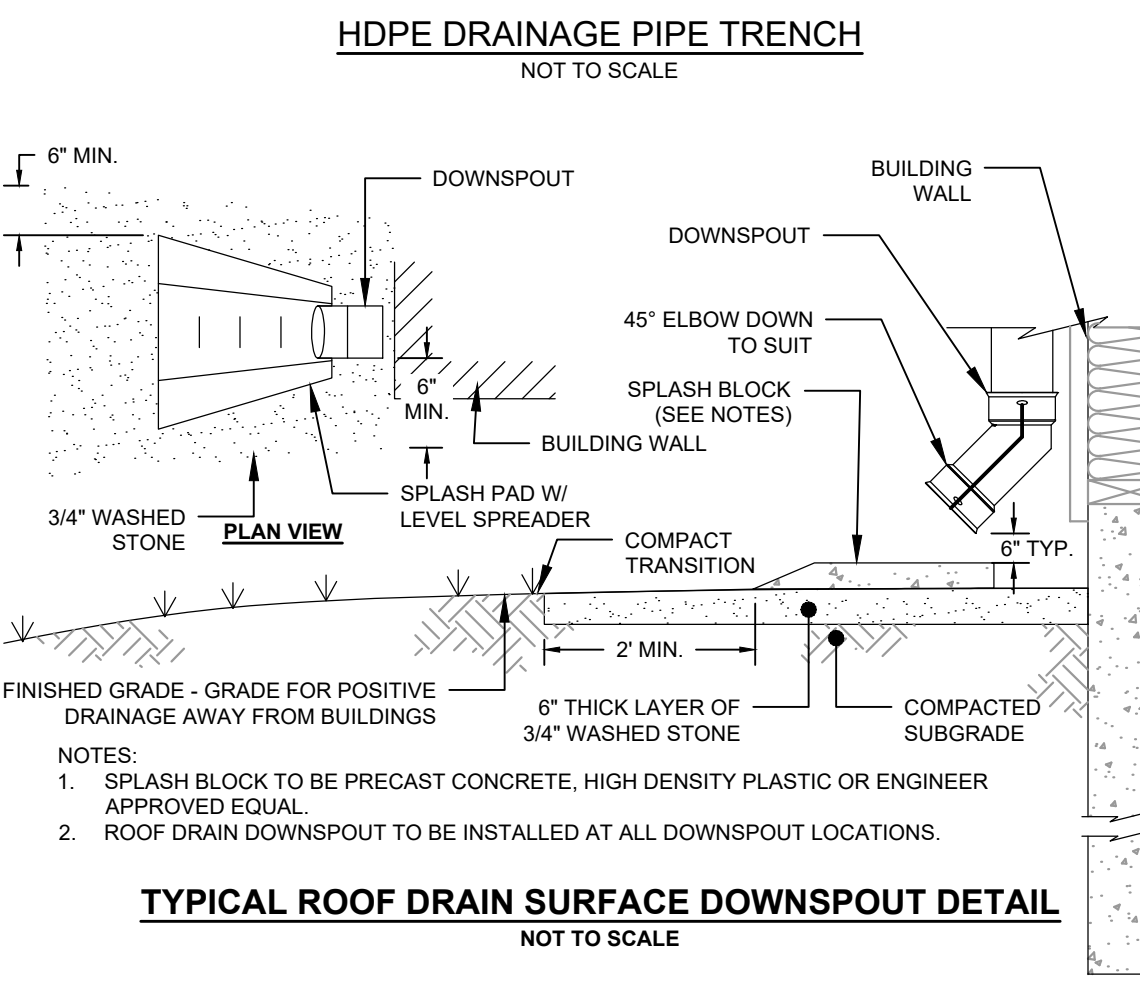


DETAIL PROVIDED BY ADVANCED DRAINAGE SYSTEMS, INC.

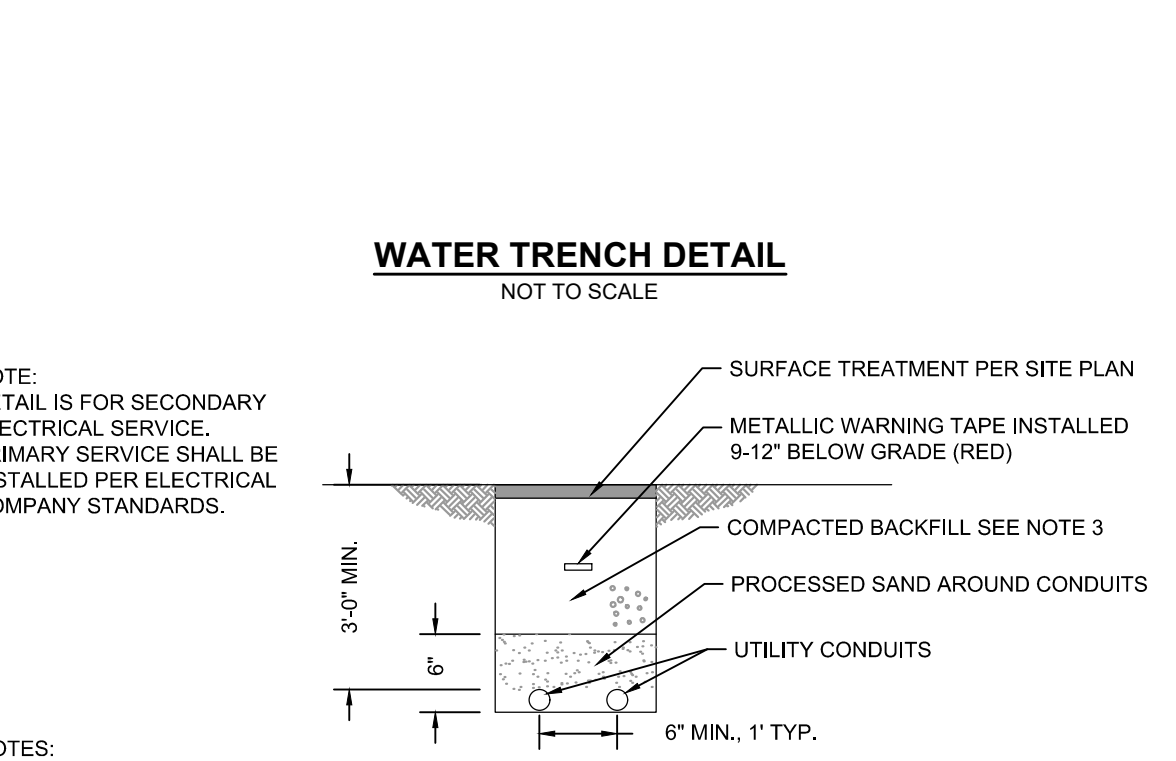
SURFACE LIVE LOADING CONDITION	MINIMUM RECOMMENDED COVER, in (mm)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT) E80	12 (300)
RAILWAY HEAVY CONSTRUCTION	24 (610)
	48 (1220)

* TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT

THE MINIMUM COVER FOR A HDPE PIPE IS 1'-0" FOR H-20 TRAFFIC LOADS IF INSTALLED IN ACCORDANCE WITH AASHTO SECTION 30. THIS IS BASED ON EMPIRICAL CALCULATION OF LOAD RESPONSE, MANUFACTURER'S TESTING AND FIELD EXPERIENCE WITH THE PIPE. AASHTO SPECIFICATIONS SECTION 18.4.1.5 DEFINES THE MINIMUM COVER AS "ID8 BUT NOT LESS THAN 12 INCHES". THIS COVER IS MEASURED FROM THE PIPE OD TO THE TOP OF A RIGID (CONCRETE) PAVEMENT OR THE BOTTOM OF A FLEXIBLE (BITUMINOUS) PAVEMENT. BOTH AASHTO AND ASTM, AS WELL AS MOST MANUFACTURERS, REQUIRE ADDITIONAL TEMPORARY COVER, MOUNDING OVER THE PIPE AND REMOVED FOR FINAL GRADING AND PAVING, IS SUFFICIENT FOR LARGE CONSTRUCTION VEHICLE LOADS.



- NOTES:
- TRENCH BACKFILL: BENEATH PAVEMENT WITHIN EX. ROADWAY RIGHT OF WAY, BACKFILL SHALL BE EXCAVATABLE FLOWABLE FILL. BENEATH PAVEMENT, BACKFILL SHALL BE ROAD BASE AND COMPACTED TO PAVEMENT SUBGRADE REQUIREMENTS-SEE DETAIL. OUTSIDE PAVEMENT: GRAVEL BORROW TYPE B (3" MINUS) COMPACTED IN MAXIMUM 8 INCH LIFTS TO 95% COMPACTION.
 - TRACER TAPE FOR NON-FERROUS PIPE SHALL BE CONSTRUCTED OF A METALLIC CORE BONDED TO PLASTIC LAYERS. THE METALLIC TRACER TAPE SHALL BE A MINIMUM 5mm THICK AND MUST BE LOCATABLE AT A DEPTH OF 18 INCHES WITH ORDINARY PIPE LOCATORS.
 - CONTRACTOR SHALL ACHIEVE 95% COMPACTION FOR THE BEDDING.
 - PROCESSED SAND: CLEAN, HARD, MEDIUM GRAIN, FREE OF FINE MATERIAL OR DEBRIS.
 - UTILITY SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY STANDARDS THAT MAY BE MORE STRINGENT THAN THIS DETAIL.



- NOTE: DETAIL IS FOR SECONDARY ELECTRICAL SERVICE. PRIMARY SERVICE SHALL BE INSTALLED PER ELECTRICAL COMPANY STANDARDS.
- NOTES:
- SITE WORK SUBCONTRACTOR SHALL PERFORM EXCAVATION, AND BACKFILL FOR ALL CONDUIT INSTALLATIONS. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS, PULLWIRES, HANDHOLES, AND WARNING TAPE AS REQUIRED FOR ELECTRICAL WORK.
 - UTILITY CONDUITS SHALL INCLUDE A COMBINATION OF ONE, TWO, OR ALL OF (1) FOR TELEPHONE, (1) FOR ELECTRICAL, AND (1) FOR CABLE TELEVISION, (1) COMMUNICATION, (1) FOR OTHER AS SHOWN IN THE SITE PLAN.
 - TRENCH COMPACTED BACKFILL: BENEATH PAVEMENT: BACKFILL SHALL BE ROADBASE AND COMPACTED TO PAVEMENT SUBBASE REQUIREMENTS-SEE DETAIL. OUTSIDE PAVEMENT: GRAVEL BORROW TYPE B (3" MINUS) COMPACTED IN MAXIMUM 8 INCH LIFTS TO 95% COMPACTION.
 - UTILITY SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY STANDARDS THAT MAY BE MORE STRINGENT THAN THIS DETAIL.

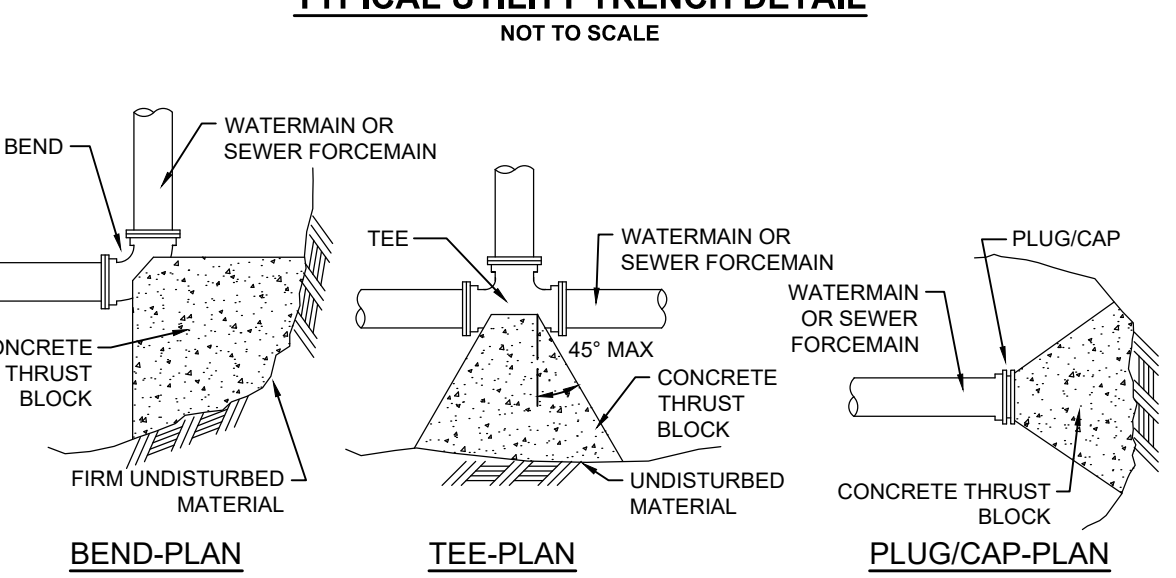
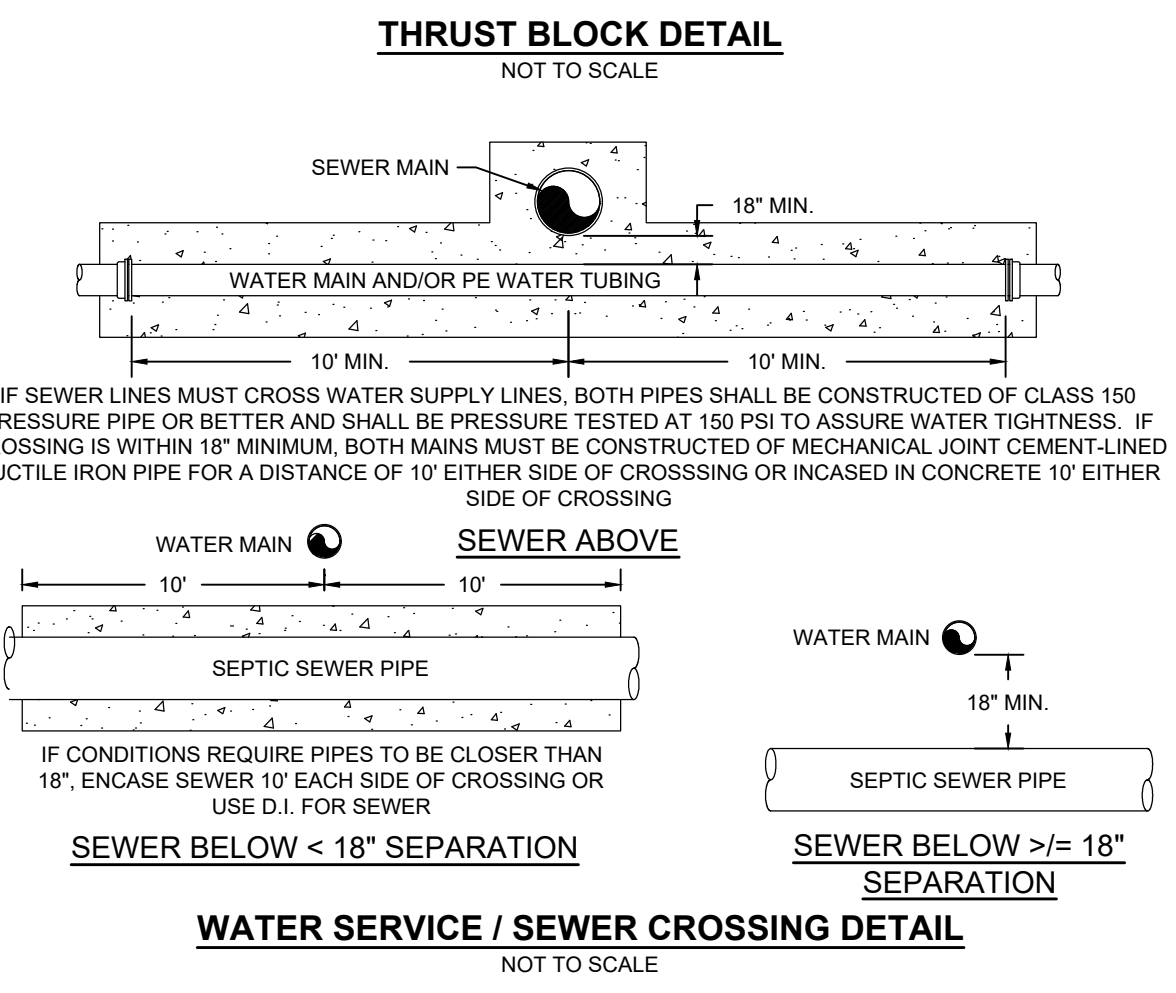
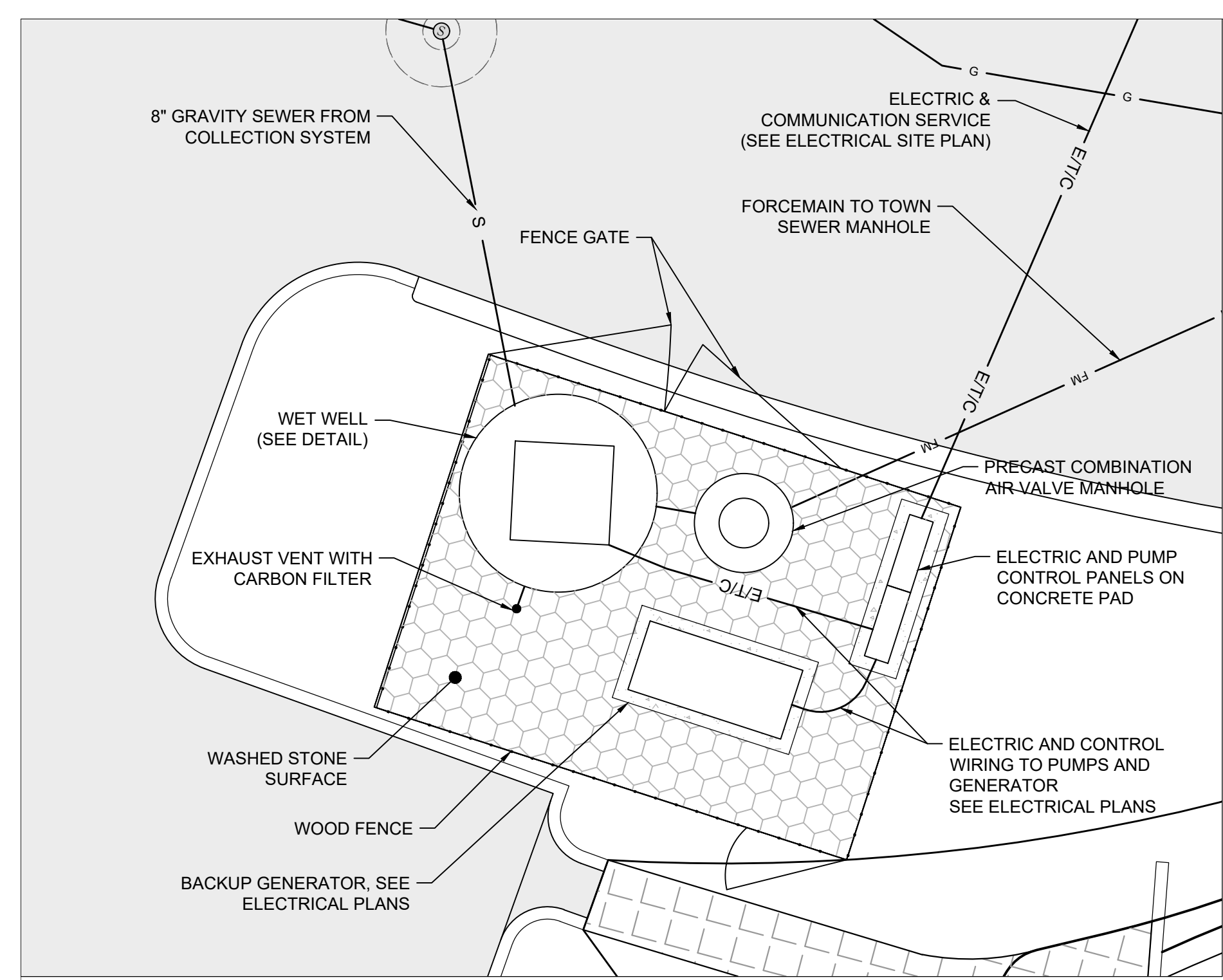


TABLE OF BEARING AREAS (S.F.)

SIZE OF MAIN (IN.)	BEND (90)	BENDS (45 & <)	TEES, CAPS OR PLUGS
8 & x	6	3	4
10 & 12	12	7	9
16 & >	18	10	14





LIFT STATION DESIGN CALCULATIONS

PEAK FLOW	47,625 GAL/DAY
MAX DAY FLOW	15,875 GAL/DAY
AVERAGE FLOW	7,938 GAL/DAY
MAX DAY FLOW	661 GAL/HR
MAX DAY FLOW	11.02 GAL/MIN

WET WELL	8 FT
DIAMETER (INSIDE)	376 GAL/FT
VOLUME PER FOOT	6.33 FT
DEPTH TO INVERT	12.15 FT
TOTAL STATION DEPTH	

PUMP SYSTEM	15 GAL/MIN
PUMP RATE	2 IN
FORCEMAIN DIAMETER	410 FT
FORCEMAIN LENGTH	

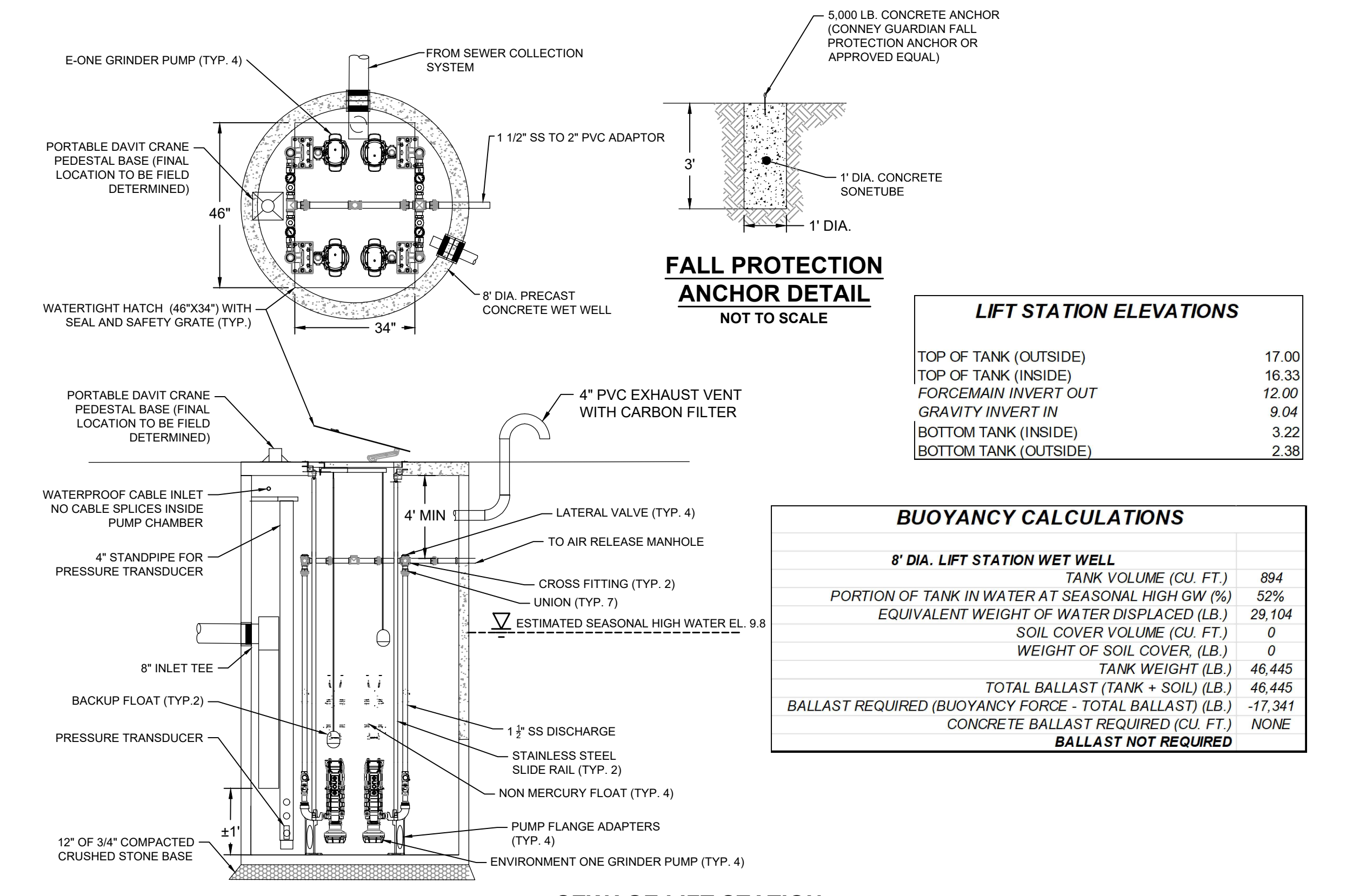
SYSTEM DISCHARGE RATE	0.03 CFS
CROSS SECTIONAL AREA	0.01 SF
VELOCITY	2.72 FT/SEC
PIPE VOLUME	5.03 CF
PIPE VOLUME	38 GAL
ESTIMATED VOLUME PUMPED PER DAY	9,150 GAL

STATIC HEAD	5 FT
FRICTION LOSS IN FITTINGS & VALVES	2 FT
FRICTION LOSS IN FORCEMAIN	10 FT
HEAD LOSS	17 FT

RUN TIME	16.7 MIN
DOSE VOLUME	250 GAL
DOSE FILL TIME	23 MIN
DOSE FILL TIME	0.38 HR
TOTAL DOSES PER DAY	37
TOTAL RUN TIME	610 MIN
TOTAL RUN TIME	10.17 HR
EMERGENCY STORAGE	4.00 HR
EMERGENCY STORAGE	2,646 GAL
EMERGENCY STORAGE	7.04 FT

PUMP RATE	15 GAL/MIN
HEAD LOSS	17 FT

SEE LIFT STATION PUMP CONTROL PANEL SPECIFICATIONS FOR PUMP MODEL.

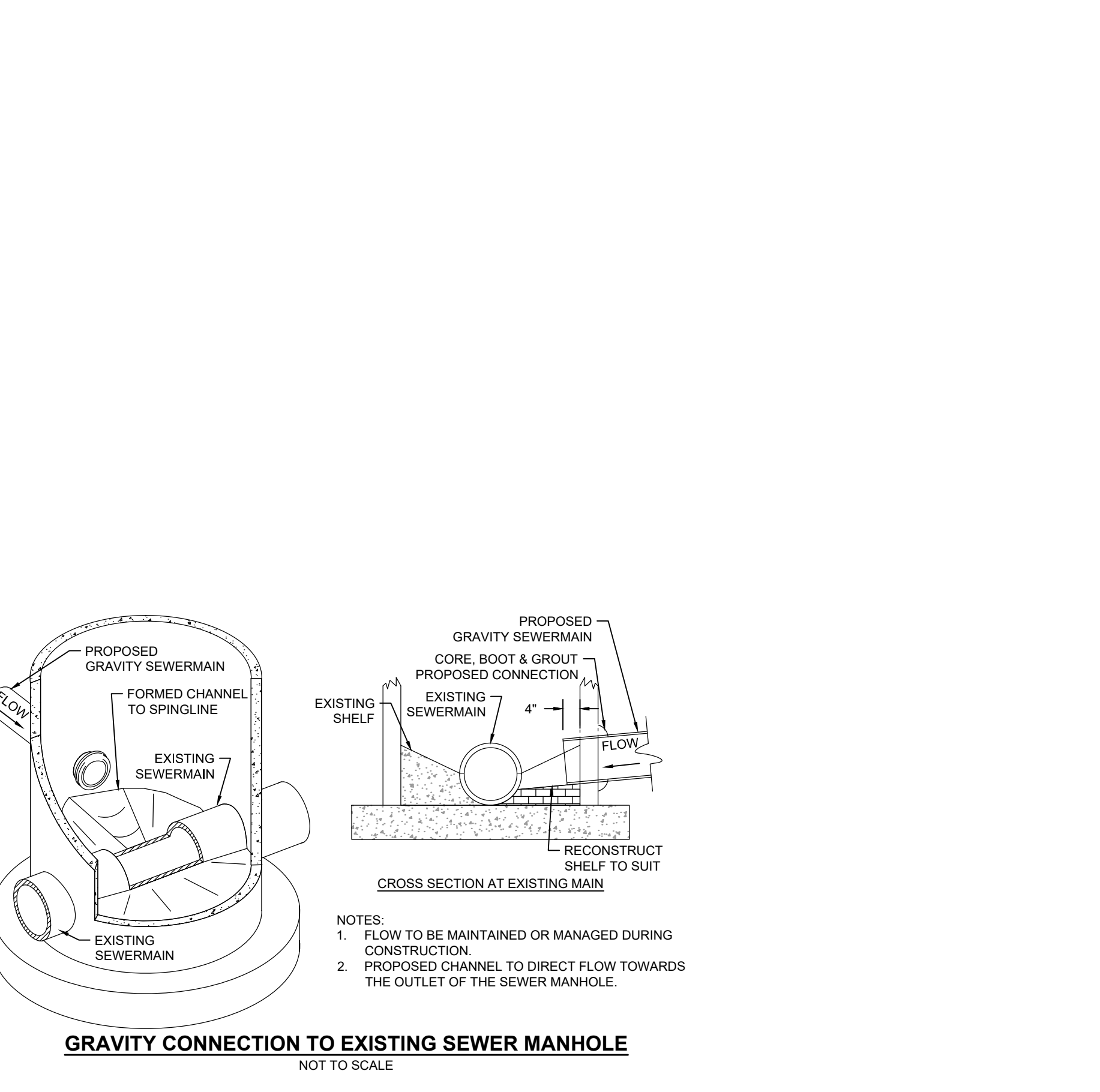
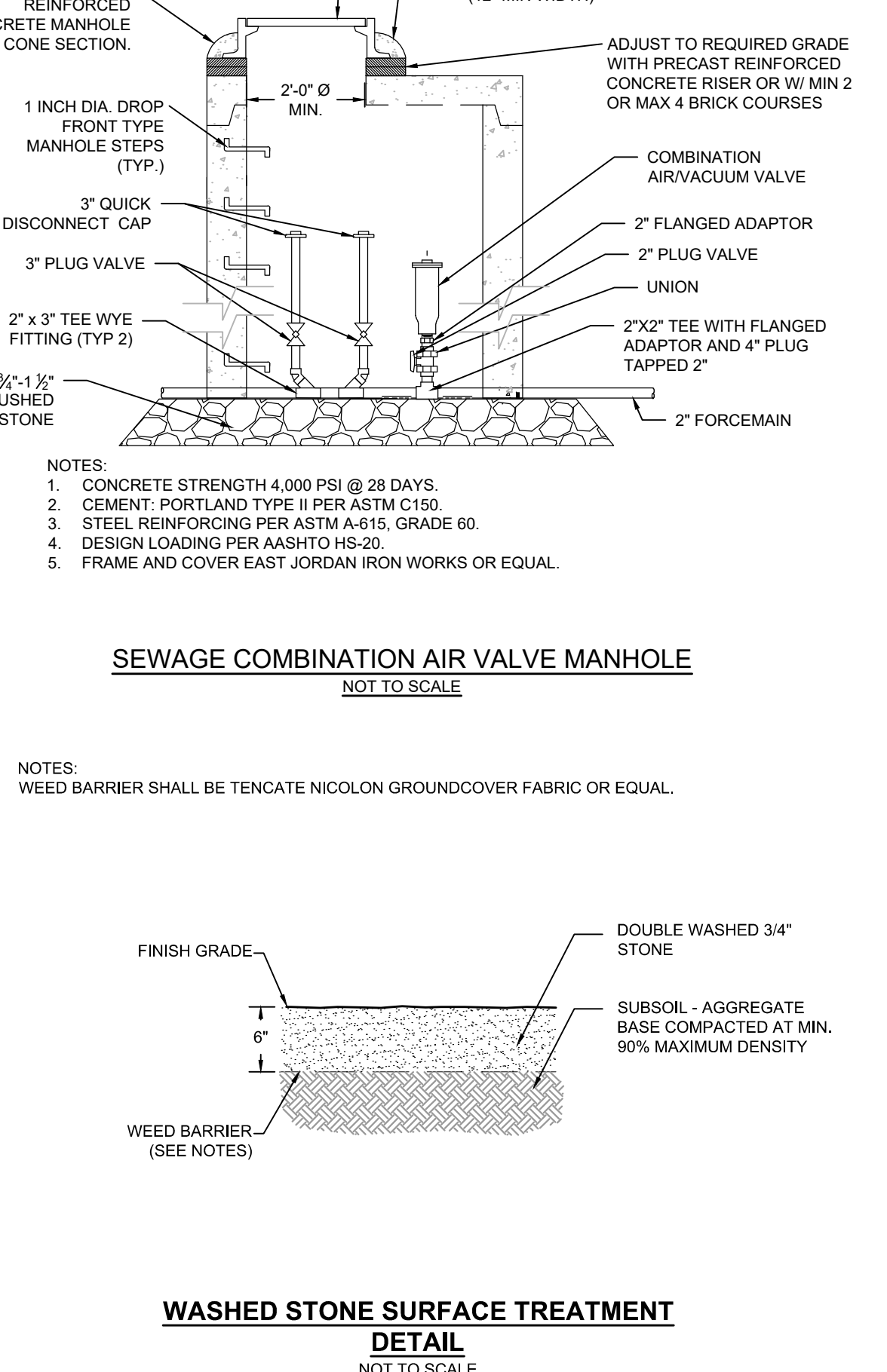
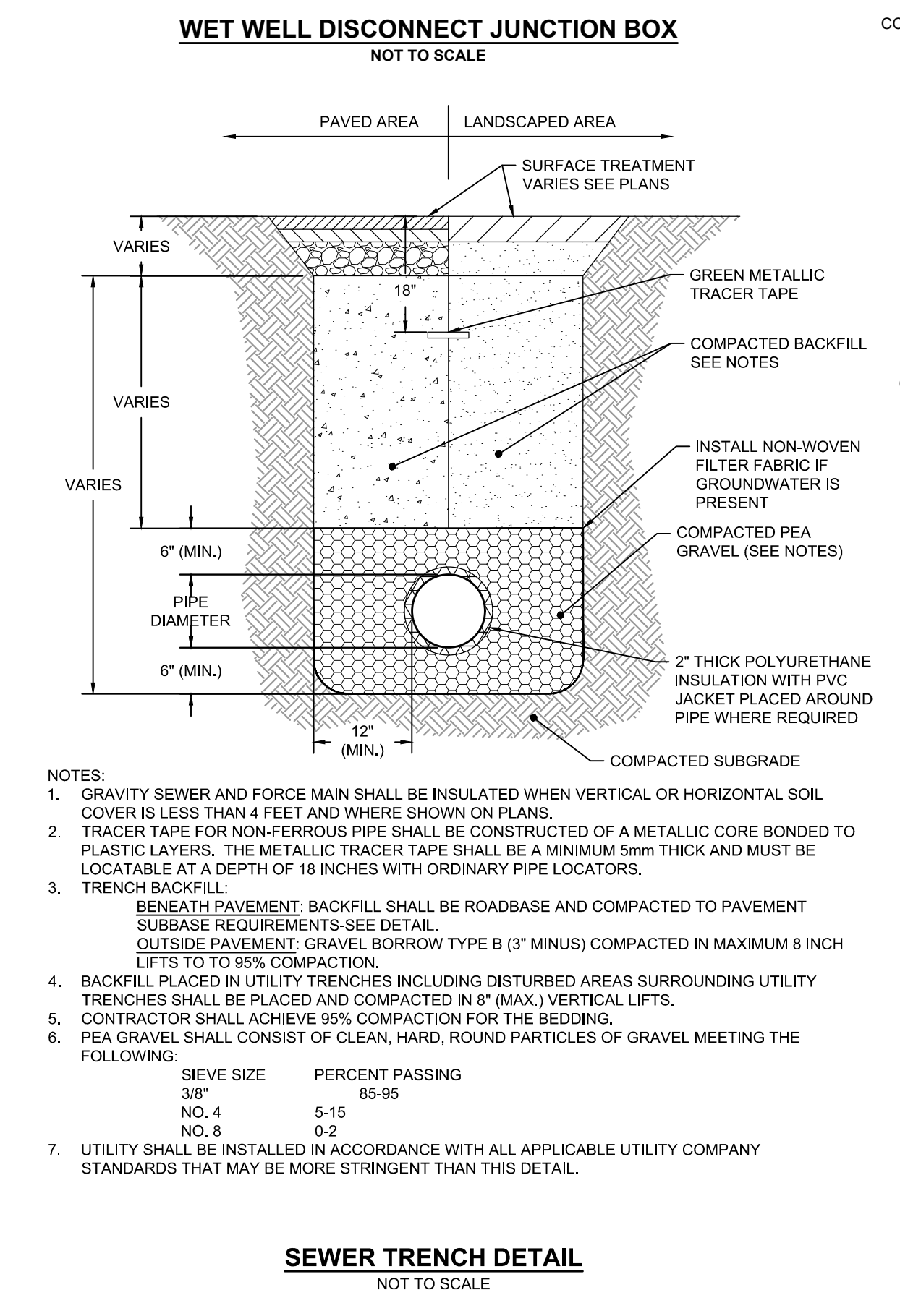
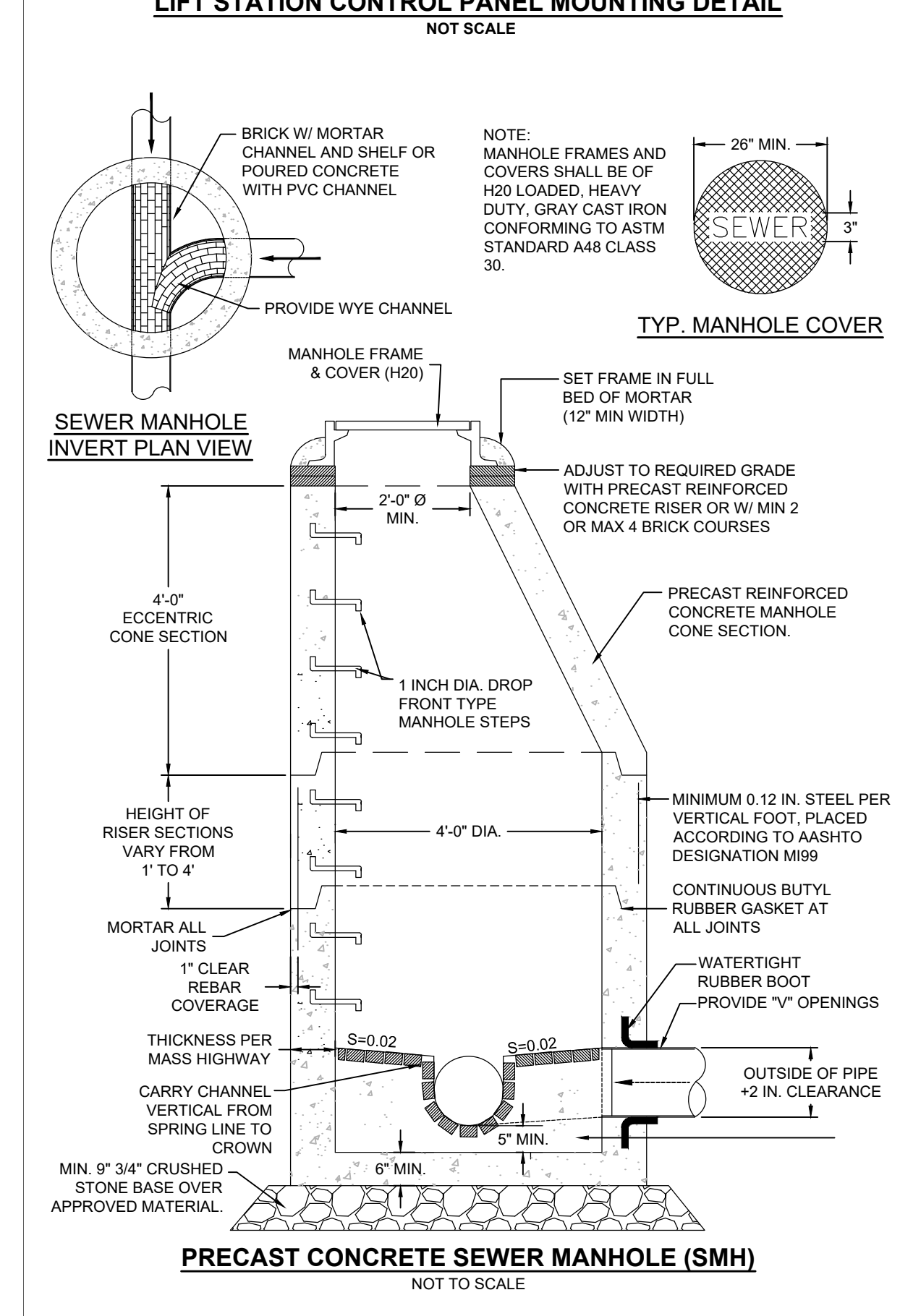
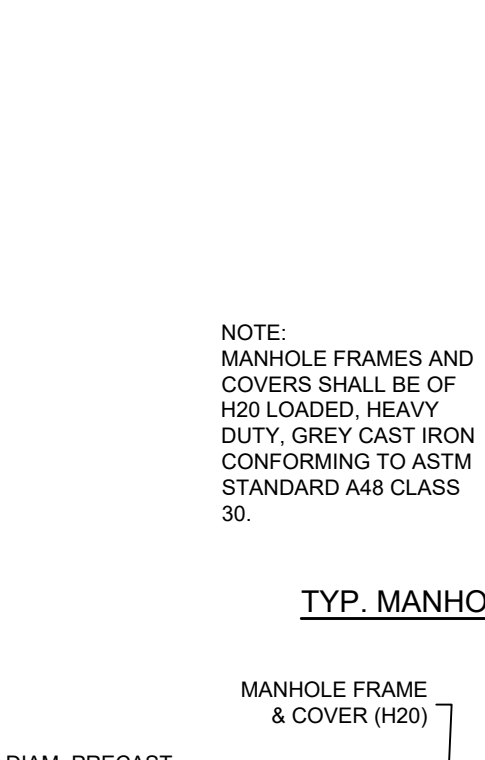
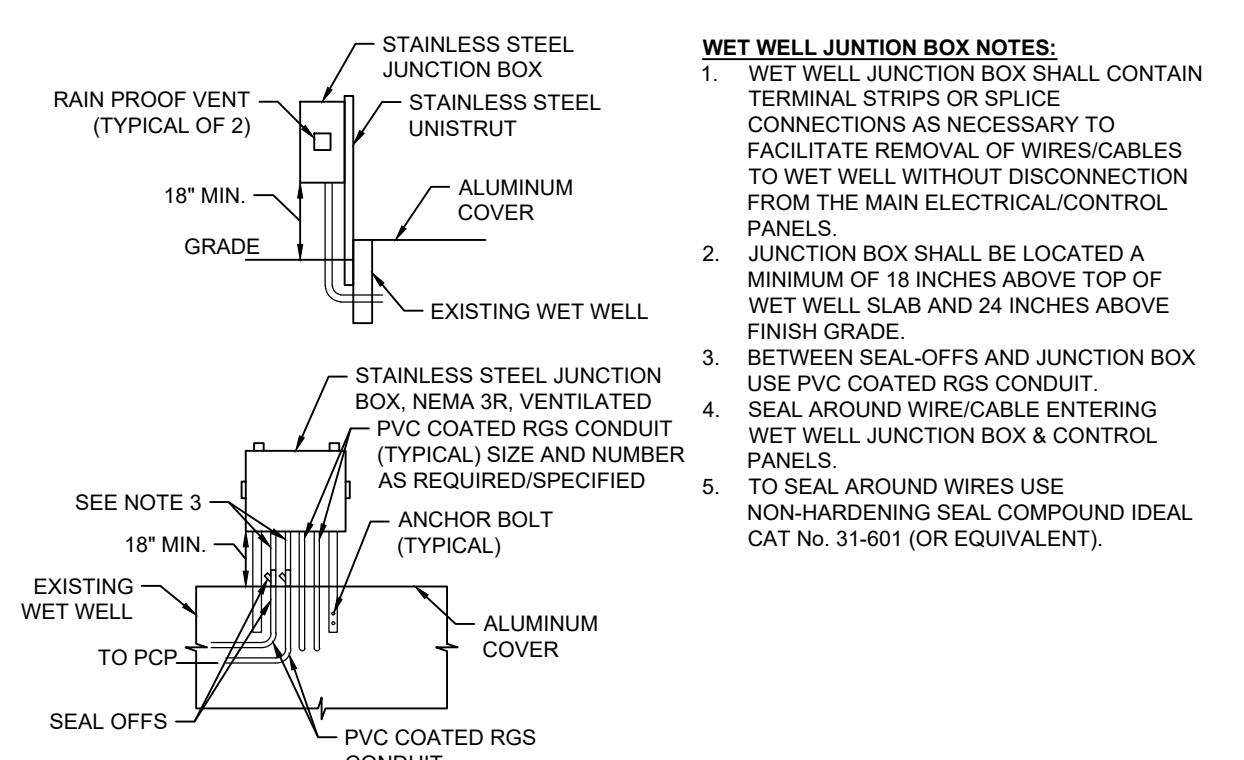
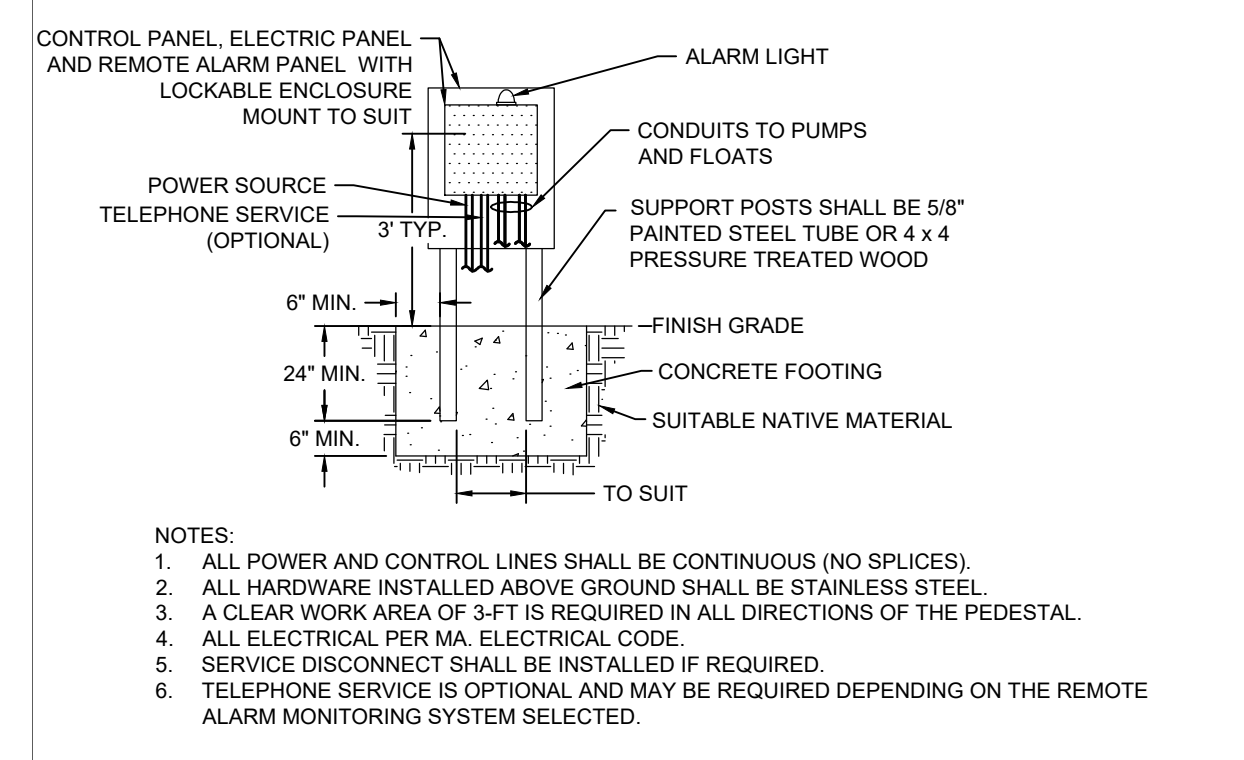


LIFT STATION ELEVATIONS

TOP OF TANK (OUTSIDE)	17.00
TOP OF TANK (INSIDE)	16.33
FORCEMAIN INVERT OUT	12.00
GRAVITY INVERT IN	9.04
BOTTOM TANK (INSIDE)	3.22
BOTTOM TANK (OUTSIDE)	2.38

BUOYANCY CALCULATIONS

8' DIA. LIFT STATION WET WELL	TANK VOLUME (CU. FT.)	894
	PORTION OF TANK IN WATER AT SEASONAL HIGH GW (%)	52%
	EQUIVALENT WEIGHT OF WATER DISPLACED (LB.)	29,104
	SOIL COVER VOLUME (CU. FT.)	0
	WEIGHT OF SOIL COVER (LB.)	0
	TANK WEIGHT (LB.)	46,445
	TOTAL BALLAST (TANK + SOIL) (LB.)	46,445
	BALLAST REQUIRED (BUOYANCY FORCE - TOTAL BALLAST) (LB.)	-17,341
	CONCRETE BALLAST REQUIRED (CU. FT.)	NONE
	BALLAST NOT REQUIRED	



Consultant:
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Revision:

Architect of Record:

Drawn: MCL/JEH
Checked: RAC
Scale:
Key Plan:

Project Name:
LITTLETON DRIVE SENIOR BUILDING

LITTLETON DRIVE
WAREHAM MA

Sheet Name:
LIFT STATION DETAILS

Project Number:
Issue Date:
4/25/22
Sheet Number:
C-16