

SITE PLAN FOR PROPOSED MULTIFAMILY DEVELOPMENT WALPOLE, MA.

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PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

SHEET INDEX

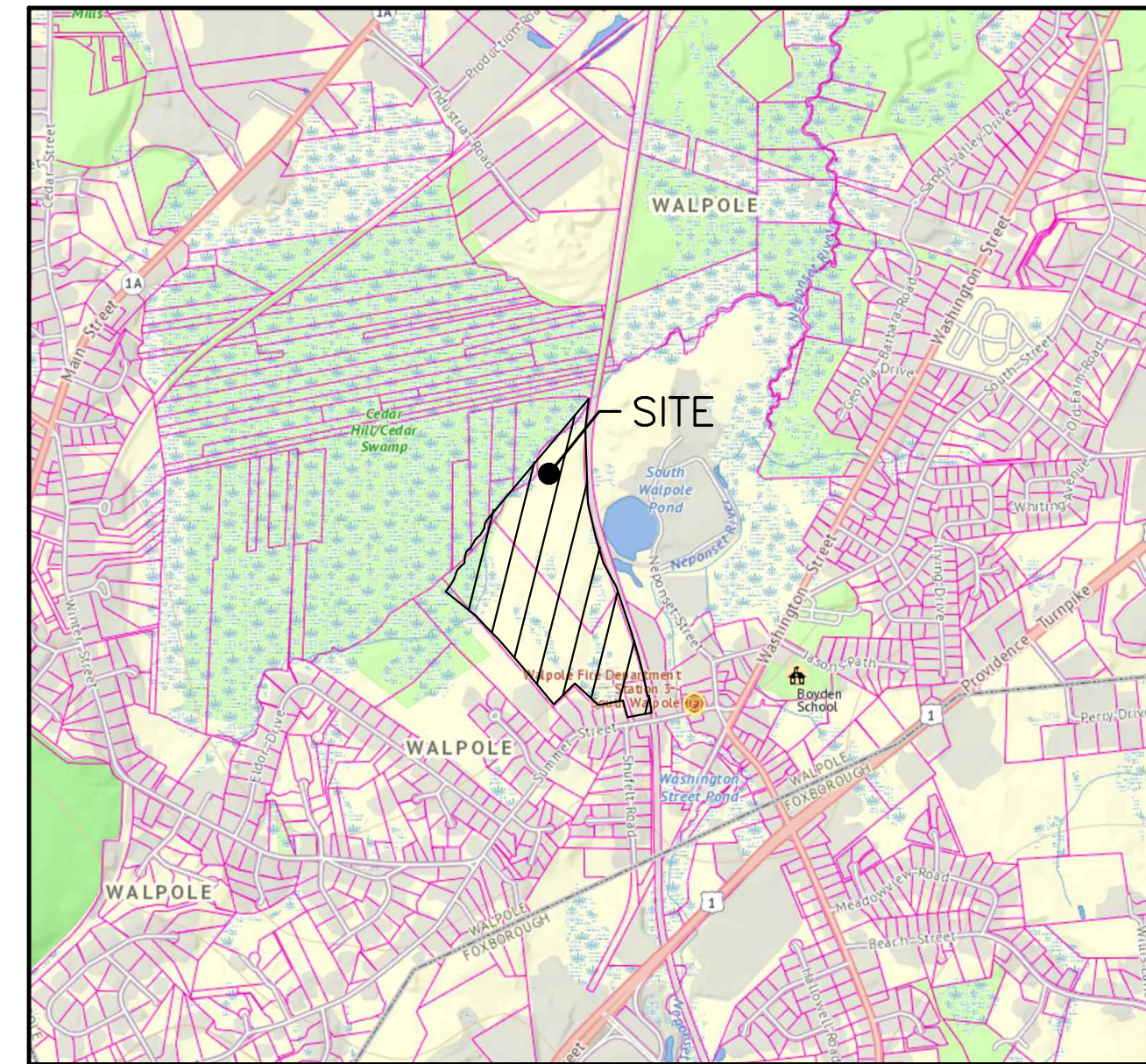
SHEET C.1	COVER SHEET
SHEET C.2-4	SITE PLAN NOTES
SHEET C.5	LOCUS / KEY PLAN
SHEET C.6-10	EXISTING CONDITIONS PLANS 1-5
SHEET C.11	EROSION CONTROL AND DEMOLITION SHEET
SHEET C.12	PROPOSED OVERALL PLAN
SHEET C.13	OPEN SPACE, RECREATION, AND PARKING PLAN
SHEET C.14-18	LAYOUT AND MATERIALS PLAN 1-5
SHEET C.19-23	GRADING AND DRAINAGE PLAN 1-5
SHEET C.24-28	UTILITY PLAN 1-5
SHEET C.29-33	LANDSCAPE PLAN 1-5
SHEET C.34-38	LIGHTING PLAN 1-5
SHEET C.39-85	DETAIL SHEET 1-27

GENERAL NOTES:

- EXISTING PROPERTY LINE AND UTILITY INFORMATION SHOWN IS BASED ON AN EXISTING SURVEY CONDUCTED BY LEGACY ENGINEERING REVISED THROUGH 10-23-22.
 - REGISTRY REFERENCES:
BOOK 37303 PG 11
LAND COURT CERT. OF TITLE 201454
 - DATUM: NAVD88
- SHEETS C6-C10 WITHIN THIS PLAN SET ARE FOR REFERENCE ONLY. THE INFORMATION CONTAINED WITHIN HAS BEEN PREPARED BY AND IS THE RESPONSIBILITY OF LEGACY ENGINEERING. REFER TO STAMPED EXISTING CONDITIONS PLAN DATED MAY 6, 2021, REVISED THROUGH OCTOBER 23, 2022.
- AS OF FEBRUARY 28, 2023, TREE CLEARING HAS OCCURRED AS DEPICTED ON PREVIOUSLY APPROVED PLANS DATED JANUARY 10, 2020 REVISED THROUGH APRIL 13, 2021.
- THE ACCURACY AND COMPLETENESS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE EXCAVATION, THE CONTRACTOR SHALL BE REQUIRED TO CONTACT DIGSAFE AT 1-888-344-7233.
- TOPOGRAPHIC INFORMATION IS APPROXIMATE IN SOME LOCATIONS, CONTRACTOR TO REPORT ANY DISCREPANCIES TO THE ENGINEER.
- THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE APPROPRIATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
- ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE WITHIN THE VICINITY OF SITE LOCUS IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, PRIOR TO EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAVING.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED, REMOVED AND DISPOSED.
- THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS AT HIS/HER OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.

LEGEND & ABBREVIATIONS

LSA	LANDSCAPE AREA	198	PROPOSED MINOR CONTOUR
EOP	EDGE OF PAVEMENT	200	PROPOSED MAJOR CONTOUR
MCC	MONOLITHIC CONCRETE CURB		PROPERTY LINE
CC	CONCRETE CURB		SETBACK LINE
COB	CAPE COD BERM		RIPARIAN SETBACK LINE
LSA	LANDSCAPED AREA	D	PROPOSED DRAIN LINE
FFE	FINISHED FLOOR ELEVATION	S	PROPOSED SEWER LINE
GV	GATE VALVE	FM	PROPOSED FORCE MAIN
SRW	STONE RETAINING WALL	OHW	EXISTING OVERHEAD WIRES
CRW	CONCRETE RETAINING WALL	S	EXISTING SANITARY LINE
INV.	INVERT	G	EXISTING GAS LINE
RCP	REINFORCED CONCRETE PIPE	W	EXISTING WATER LINE
PVC	POLYVINYL CHLORIDE	270	EXISTING INDEX CONTOURS
(R)	RECORD INFORMATION	268	EXISTING INTERMEDIATE CONTOURS
BCC	BIT. CONCRETE CURB		EXISTING TREELINE
VBB	VERTICAL BIT. BERM		FEMA FLOOD PLAIN DELINEATION
W	EXISTING WATER VALVE		MEAN ANNUAL HIGH WATER LINE
H	EXISTING HYDRANT		PROPOSED TREELINE
U	EXISTING UTILITY POLE		PROPOSED FENCE
P	POST		PROPOSED HYDRANT
DT	DECIDUOUS TREE		PROPOSED HANDICAP PARKING
CT	CONIFEROUS TREE		PROPOSED PAVEMENT STRIPING
CP	CONTROL POINT		PROPOSED CONCRETE SURFACE
SBDH	STONE BOUND WITH DRILLHOLE FOUND		PROPOSED DRAINAGE MANHOLE
CBDH	CONCRETE BOUND WITH DRILLHOLE FOUND		CB: SINGLE-GRATE CATCH BASIN
IRS	IRON ROD TO BE SET IN 2012		CB: DOUBLE-GRATE CATCH BASIN
S	SIGN (SINGLE POSTED)		DMH: DRAIN MANHOLE
TP	TEST PIT		DRAIN PIPELINE
CB	CATCH BASIN	12"D	SEWER PIPELINE
SM	EXISTING SEWER MANHOLE	8" S	REINFORCED CONCRETE PIPE
WR	WETLAND RESOURCE AREA	RCP	POLYVINYL CHLORIDE PIPE
CB	PROPOSED CATCH BASIN	PVC	SMH: SEWER MANHOLE
FHPT	FALLING HEAD PERMEABILITY TEST		
HSG	HYDROLOGIC SOIL GROUP DETERMINATION PIT		



LOCUS MAP
1" = 1500'

PROJECT TEAM:

OWNER/DEVELOPER/APPLICANT
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

55 SS LLC
6 LYBERTY WAY
WESTFORD, MA 01886

CIVIL ENGINEER
HOWARD STEIN HUDSON
114 TURNPIKE ROAD
SUITE 2C
CHELMSFORD, MA 01824

SURVEYORS
LEGACY ENGINEERING, LLC
730 MAIN STREET, SUITE 2C
MILLIS, MA 02054

WSP USA, INC.
10 AL PAUL LANE
SUITE 103
MERRIMACK, NH 03054

LIGHTING CONSULTANT
EXPOSURE 2 LIGHTING
6 SCOTT ROAD, UNIT A
HAMPTON, NH 03842

WETLAND SCIENCE
OXBOW ASSOCIATES, INC.
P.O. BOX 971
ACTON, MA 01720

ARCHITECT
CNK ARCHITECTS
3301 AIRPORT FWY STE 220
BEDFORD, TX 76021

PRESSURE SEWER/LIFT STATION DESIGN
ONSITE ENGINEERING INC.
279 EAST CENTRAL STREET
FRANKLIN, MA 02038

LANDSCAPE ARCHITECT
JAMES K. EMMANUEL ASSOCIATES
22 CARLTON ROAD
MARBLEHEAD, MA 01945

- C.O.: SEWER SERVICE CLEANOUT
- 6" W — WATER MAIN
- ⊕ HYD: HYDRANT
- ⊕ G.V.: WATER GATE VALVE
- C.S.: WATER SERVICE CURB STOP
- M.B.: WATER SERVICE METER BOX
- G — GAS PIPELINE
- E — ELECTRIC CONDUIT
- ⊕ L.P.: LIGHT POLE
- ⊕ U.P.: UTILITY POLE
- G.Y.: GUY WIRE
- ⊕ S.P.: TRAFFIC SIGNAL POLE

ASSESSORS INFORMATION

PROPERTY 307-52-59
PROPERTY 307-52-60
PORTION OF PROPERTY 307-52-78-3

OWNERS

FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

55 SS LLC
6 LYBERTY WAY
WESTFORD, MA 01886

REFERENCES

- EXISTING CONDITIONS SURVEY PREPARED FOR 55 BH LLC, CONDUCTED BY LEGACY ENGINEERING REVISED THROUGH 10-23-22.
- TOWN OF WALPOLE GEOGRAPHIC INFORMATION SYSTEM.
- COMPREHENSIVE PERMIT DATED JULY 14, 2021 AND RECORDED WITH THE REGISTRY IN BOOK 40432, PAGE 517 (THE "COMPREHENSIVE PERMIT")
- APPEALED DECISION FROM THE ZONING BOARD OF APPEALS CASE #3-20, 55 SS LLC DATED MARCH 2, 2022.
- ANR PLAN BY HOWARD STEIN HUDSON REVISED THROUGH 04-15-22 (BOOK 711 PAGE 95 AND 96) AND RECORDED EASEMENT (BOOK 38968 PAGE 99).
- ORDER OF CONDITIONS (MASSDEP FILE #315-1227) ISSUED JUNE 15, 2021 AND RECORDED WITH THE REGISTRY IN BOOK 39655, PAGE 587.
- CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS ON THE NOTICE OF PROJECT CHANGE, CEDAR EDGE AND CEDAR CROSSING, WALPOLE (EEA #163,82).
- DETERMINATION BY THE MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE, NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM THAT THE MASTER PROJECT WILL NOT RESULT IN A PROHIBITED TAKE OF THE STATE-LISTED RARE SPECIES DATED APRIL 1, 2020 (NHESP FILE NO.: 19-38660).

ZONING REQUIREMENTS - PARCEL 1

REQUIREMENT	PROPOSED - LOT 1	REFERENCE	COMPLIANCE	
MINIMUM LOT AREA	40,000	1,188,281 SF	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM LOT FRONTAGE	200 FT	86.25 FT	WAIVER SECTION 6-B-1.A	YES
MAXIMUM BUILDING COVERAGE	35%	7%±	ZONING BYLAWS TABLE 6-B.1	YES
MAX. BLDG & IMP. COVERAGE	70%*	25%±	WAIVER SECTION 12.3.A.2.d	YES
MINIMUM OPEN SPACE	N/A	75%±	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM FRONT YARD	50 FT	692 FT±	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM SIDE YARD	40 FT	11 FT±	WAIVER SECTION 6-B-1.C	YES
MINIMUM REAR YARD	25 FT	299 FT±	ZONING BYLAWS TABLE 6-B.1	YES
MAXIMUM BUILDING HEIGHT	40 FT*	5 STORIES	WAIVER TABLE 6-B.1	YES

- * PLUS ONE (1) FOOT FOR EACH ADDITIONAL FOOT BY WHICH:
- THE SETBACK EXCEEDS THE REQUIRED SETBACK DISTANCE;
 - THE NARROWEST SIDE YARD EXCEEDS THE REQUIRED SIDE YARD WIDTH; OR
 - THE REAR YARD EXCEEDS THE REQUIRED REAR YARD DEPTH, WHICHEVER OF THE THREE (3) ADDITIONAL DISTANCES IS THE SMALLEST.
- ** MAXIMUM BUILDING AND IMPERVIOUS COVERAGE OR 15% FOR RESIDENTIAL DEVELOPMENTS WITHIN LIMITED INDUSTRIAL DISTRICT

ZONING REQUIREMENTS - PARCEL 2

REQUIREMENT	PROPOSED - LOT 2	REFERENCE	COMPLIANCE	
MINIMUM LOT AREA	40,000	1,195,981 SF	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM LOT FRONTAGE	200 FT	133.26 FT	WAIVER SECTION 6-B-1.A	YES
MAXIMUM BUILDING COVERAGE	35%	3%±	ZONING BYLAWS TABLE 6-B.1	YES
MAX. BLDG & IMP. COVERAGE	70%*	12%±	WAIVER SECTION 12.3.A.2.d	YES
MINIMUM OPEN SPACE	N/A	88%±	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM FRONT YARD	50 FT	906 FT±	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM SIDE YARD	40 FT	98 FT±	ZONING BYLAWS TABLE 6-B.1	YES
MINIMUM REAR YARD	25 FT	248 FT±	ZONING BYLAWS TABLE 6-B.1	YES
MAXIMUM BUILDING HEIGHT	40 FT*	4 STORIES	WAIVER TABLE 6-B.1	YES

- * PLUS ONE (1) FOOT FOR EACH ADDITIONAL FOOT BY WHICH:
- THE SETBACK EXCEEDS THE REQUIRED SETBACK DISTANCE;
 - THE NARROWEST SIDE YARD EXCEEDS THE REQUIRED SIDE YARD WIDTH; OR
 - THE REAR YARD EXCEEDS THE REQUIRED REAR YARD DEPTH, WHICHEVER OF THE THREE (3) ADDITIONAL DISTANCES IS THE SMALLEST.
- ** MAXIMUM BUILDING AND IMPERVIOUS COVERAGE OR 15% FOR RESIDENTIAL DEVELOPMENTS WITHIN LIMITED INDUSTRIAL DISTRICT

DEVELOPMENT SUMMARY

LOT 1
PROPOSED: 160 APARTMENTS AND 36 TOWNHOME UNITS = 196 TOTAL UNITS
PARKING:
PERMITTED: MINIMUM 1.88 SPACES/UNIT (WAIVER SECTION 8.3.1)
196 UNITS x 1.88 SPACES/UNIT = 369 SPACES
PROPOSED: 369 SPACES
(SEE SHEET 13 FOR PARKING SUMMARY BREAKDOWN)

LOT 2
PROPOSED: 56 APARTMENTS AND 16 TOWNHOME UNITS = 72 TOTAL UNITS
PARKING:
PERMITTED: MINIMUM 1.88 SPACES/UNIT (WAIVER SECTION 8.3.1)
72 UNITS x 1.88 SPACES/UNIT = 136 SPACES
PROPOSED: 136 SPACES
(SEE SHEET 13 FOR PARKING SUMMARY BREAKDOWN)

SEE SHEET 2 FOR SPECIAL PERMITS AND WAIVERS

PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

COVER SHEET

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.1

EROSION CONTROL PLAN NOTES:

- 1. REMOVAL OF EXISTING STRUCTURES SHALL INCLUDE ALL EXISTING PAVEMENT, FOOTINGS, AND UTILITY CONNECTIONS.
2. IT IS THE RESPONSIBILITY OF THE CHOSEN CONTRACTOR TO ENSURE ALL STORMWATER INLETS DOWNSTREAM OF CONSTRUCTION ARE FITTED WITH TEMPORARY INLET PROTECTION.
3. ALL PROPOSED CATCH BASINS AND MANHOLES SHALL BE FITTED WITH INLET PROTECTIONS DURING CONSTRUCTION AS TO MINIMIZE EROSION AND SEDIMENTATION WITHIN THE PROPOSED STORMWATER MANAGEMENT SYSTEM.
4. ALL EXISTING SITE FEATURES NOT PROPOSED TO BE REMOVED SHALL BE PROTECTED DURING CONSTRUCTION TO THE MAXIMUM EXTENT FEASIBLE. ANY DAMAGE SHALL BE REPAIRED TO THE EXISTING CONDITION.
5. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND MAINTAINED AND UPGRADED AS NECESSARY DURING CONSTRUCTION BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND INSTALL ADDITIONAL CONTROL MEASURES AS NEEDED DURING CONSTRUCTION.
6. STABILIZATION OF ALL RE-GRADED AND SOIL STOCKPILE AREAS MUST BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
7. SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROL DEVICES MUST BE PROPERLY REMOVED AND DISPOSED. ALL DAMAGED CONTROLS MUST BE REMOVED AND REPLACED.
8. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING WIND EROSION AND DUST THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL MAY INCLUDE, BUT IS NOT LIMITED TO, SPRINKLING OF WATER ON EXPOSED SOILS AND STREET SWEEPING WITHIN ADJACENT ROADWAYS.
10. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN 21 DAYS AFTER LAND DISTURBANCE ACTIVITIES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZE SOILS WITHIN 14 DAYS OF THE LAST DISTURBANCE.
11. IF A DISTURBED AREA WILL BE EXPOSED FOR GREATER THAN ONE YEAR, PERMANENT GRASSES OR OTHER APPROVED COVER MUST BE INSTALLED.
12. THE CONTRACTOR MUST KEEP ON-SITE AT ALL TIMES ADDITIONAL COMPOST FILTER TUBE AND SILT FENCE FOR THE INSTALLATION AT THE DIRECTION OF THE ENGINEER, OR THE TOWN, TO MITIGATE ANY EMERGENCY CONDITION.
13. THE CONSTRUCTION FENCING AND EROSION AND SEDIMENT CONTROLS AS SHOWN MAY NOT BE PRACTICAL DURING ALL STAGES OF CONSTRUCTION. EARTHWORK ACTIVITY ON-SITE MUST BE DONE IN A MANNER SUCH THAT RUNOFF IS DIRECTED TO A SEDIMENT CONTROL DEVICE OR INFILTRATED TO THE GROUND.
14. DEMOLITION AND CONSTRUCTION DEBRIS MUST BE PROPERLY CONTAINED AND DISPOSED OF.
15. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE HAULED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.
16. NON-ORGANIC FERTILIZERS AND CHEMICAL PESTICIDES IN OUTSIDE AREAS WITHIN 100- FEET OF WETLAND PROTECTED AREAS ARE PROHIBITED FROM USE.
17. AN INVASIVE SPECIES PLAN IS TO BE PUT IN PLACE DURING CONSTRUCTION TO ADDRESS THE REMOVAL OF INVASIVE SPECIES AND INVASIVE SPECIES DISTURBED DURING CONSTRUCTION ARE TO BE DISPOSED OF APPROPRIATELY.
18. REFER TO THE PROJECT SPECIFIC STORMWATER POLLUTION PREVENTION PLAN.
19. REFER TO PHASING PLANS DATED 10/12/2022 FOR GENERAL CONSTRUCTION SEQUENCE.

SITE NOTES:

- 1. THE INTENT OF THIS PLAN IS TO CONSTRUCT A MULTIFAMILY HOUSING DEVELOPMENT CONSISTING OF APARTMENT BUILDINGS AND TOWNHOUSES FOR RENT. THIS PROJECT IS TO BE SERVICED BY MUNICIPAL UTILITIES.
2. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE TOWN, STATE, AND FEDERAL STANDARDS AND REGULATIONS.
3. ALTHOUGH NO WORK IS PROPOSED IN THE FLOOD PLAIN, THIS PROPERTY IS PARTIALLY WITHIN FLOOD ZONE A. REFER TO COMMUNITY PANEL NUMBER 25021C0332E, DATED JULY 17, 2012.
4. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.). THIS DOCUMENT IS TO BE KEPT ONSITE AT ALL TIMES AND UPDATED AS REQUIRED.
5. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES, AND BONDS.
6. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE TOWN ZONING REGULATIONS, UNLESS APPROVED AS PART OF THIS APPLICATION.
7. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND MASSDOT STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
8. ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL HAVE TWO COATS OF PAINT, ALKYD BASED SYNTHETIC RESIN, FEDERAL SPECIFICATION TTP-115 TYPE 1 IN A COLOR OF WHITE (OR APPROVED EQUAL). REFER TO SHEET 40 FOR DETAIL.
9. ALL NEW CURBING TO BE INSTALLED BY RADIUS AND MATERIALS AS NOTED ON THE LAYOUT AND MATERIALS SHEETS 14 - 18 ON THE SITE PLAN.
10. ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PROVIDED BY THE OWNER. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION. BUILDING DIMENSIONS ARE MEASURED TO THE OUTSIDE OF THE FOUNDATION UNLESS OTHERWISE NOTED.
11. SNOW TO BE STORED AT EDGE OF PAVEMENT, UNLESS OTHERWISE DESIGNATED. ALL SNOW IN EXCESS OF THESE DESIGNATIONS SHALL BE TRUCKED OFF SITE TO AN APPROVED SNOW DUMPING LOCATION.
12. ALL CONSTRUCTION ACTIVITIES SHALL CONFORM TO LABOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
13. ALL ACCESSIBLE RAMPS SHALL HAVE A SLOPE OF 1:12 OR LESS, HAVE VERTICAL TO FLUSH TRANSITION CURB ON BOTH SIDES OF THE LEVEL LANDING EXITING THE SIDEWALK, AND BE FITTED WITH A DETECTABLE WARNING PANEL AT ROAD INTERSECTIONS.
14. ALL PROPOSED RETAINING WALLS ARE SHOWN FOR LOCATION AND GRADING PURPOSES ONLY. EACH RETAINING WALL IS TO BE DESIGNED BY A STRUCTURAL ENGINEER AS PART OF THE CONSTRUCTION DOCUMENTS.
15. ALL WETLAND CROSSINGS ARE DESIGNED TO MEET MASSACHUSETTS DEP STREAM CROSSING STANDARDS.

GRADING AND DRAINAGE NOTES:

- 1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER HOWARD STEIN HUDSON, NOR ANY OTHER EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE
2. ALL BENCHMARKS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
3. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. REFER TO THE CONSTRUCTION SEQUENCE.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECTS LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS AND PROPERTY LINES. A MINIMUM OF 72 HOURS NOTICE IS REQUIRED.
5. ALL SWALES AND INFILTRATION PONDS ARE TO BE STABILIZED PRIOR TO ACCEPTING RUNOFF.
6. PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
7. ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN EROSION CONTROL S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
8. ALL DRAINAGE AND SANITARY STRUCTURES INTERIOR DIAMETERS (4" MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 4' DEEP SUMPS WITH GREASE HOODS, UNLESS OTHERWISE NOTED. REFER TO SHEET 44 FOR DETAILS.
9. ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED. SEE DETAIL SHEETS FOR DRAINAGE DETAILS.
10. IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE EROSION CONTROL IS NOT REQUIRED.
11. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
12. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING.
13. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
15. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. IF THE INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
16. SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
17. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
18. MONITORING WELLS ARE TO BE PROVIDED AT EACH INFILTRATION BASIN PER THE REQUIREMENT OF THE MASSACHUSETTS STORMWATER HANDBOOK.
19. EACH INFILTRATION BASIN/SYSTEM TO BE OBSERVED DURING EXCAVATION BY A TOWN AGENT PRIOR TO THE INSTALLATION OF LOAM AND SEED. REFER TO CONDITION 40 IN THE RECORDED ORDER OF CONDITIONS.
20. SOIL CONDITIONS BELOW THE PROPOSED INFILTRATION SYSTEMS SHALL BE INSPECTED BY A LICENSED SOIL EVALUATOR AT THE TIME OF EXCAVATION AND AN AFFIDAVIT FOR EACH SYSTEM SHALL BE PROVIDED BY A LICENSED ENGINEER CONFIRMING THAT AS-FOUND CONDITIONS ARE CONSISTENT WITH THE DESIGN ASSUMPTIONS USED IN THE MODEL OR ADDITIONAL JUSTIFICATION PROVIDED PROVING PERFORMANCE PRIOR TO THE INSTALLATION OF THE SYSTEMS. IF AS FOUND CONDITIONS VARY FROM DESIGN ASSUMPTIONS, THE ENGINEER WILL NEED TO ADDRESS ANY REQUIRED DESIGN CHANGES IN A MEMO FOR APPROVAL BY THE TOWN. IF THE DESIGN CHANGES ARE SIGNIFICANT, THE CHANGES MAY REQUIRE APPROVAL BY THE CONSERVATION COMMISSION AND/OR THE ZONING BOARD OF APPEALS. IN WHICH CASE THE PROJECT WILL OBTAIN THOSE APPROVALS PRIOR TO PROCEEDING WITH CONSTRUCTION OF THE INFILTRATION SYSTEMS.

UTILITY NOTES:

- 1. THE CONTRACTOR SHALL PROVIDE A MINIMUM NOTICE OF FOURTEEN (14) DAYS TO ALL CORPORATIONS, COMPANIES, AND/OR LOCAL AUTHORITIES OWNING OR HAVING A JURISDICTION OVER UTILITIES RUNNING TO, THROUGH OR ACROSS PROJECT AREAS PRIOR TO DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
2. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED UTILITY SERVICES SHALL BE TO THE STANDARDS AND REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANY (ELECTRIC, TELEPHONE, CABLE TELEVISION, WATER, GAS AND SEWER).
3. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, ENGINEER, ARCHITECT, CONTRACTOR, LOCAL OFFICIALS, AND ALL PROJECT-RELATED UTILITY COMPANIES (PUBLIC AND PRIVATE) PRIOR TO START OF CONSTRUCTION.
4. BUILDING TO BE SERVICED BY UNDERGROUND UTILITIES UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR IS TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND DISCONNECT ALL EXISTING SERVICE CONNECTIONS AT THEIR RESPECTIVE MAINS IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY'S STANDARDS AND SPECIFICATIONS. ENGINEER TO BE NOTIFIED.
6. AS-BUILT PLANS SHALL BE SUBMITTED TO THE ALL MUNICIPAL DEPARTMENTS SPECIFIED BY CONDITIONS OF APPROVAL.
7. CONTRACTOR SHALL PLACE 2" WIDE METAL WIRE IMPREGNATED RED PLASTIC WARNING TAPE OVER ENTIRE LENGTH OF ALL GRAVITY SEWERS, SERVICES, AND FORCE MAINS.
8. ALL SANITARY STRUCTURE INTERIOR DIAMETERS (4" MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS.
9. PROPOSED RIM ELEVATIONS OF DRAINAGE AND SANITARY MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, AND OTHER UTILITIES TO FINISH GRADE AS SHOWN ON THE GRADING AND DRAINAGE PLAN.
10. WATER MAINS SHALL BE HYDROSTATICALLY PRESSURE TESTED FOR LEAKAGE PRIOR TO ACCEPTANCE.
11. THRUST BLOCKS SHALL BE INSTALLED AT ALL BENDS, TEES, MECHANICAL JOINTS, AND FIRE HYDRANTS.
12. DIMENSIONS ARE SHOWN TO CENTERLINE OF PIPE OR FITTING.
13. EXISTING UTILITIES SHALL BE DIGSAFED AND PRIVATE UTILITY LOCATOR SERVICES SHOULD BE UTILIZED PRIOR TO CONSTRUCTION.
14. ALL FIRE SUPPRESSION WATER LINES SHALL HAVE TESTABLE BACKFLOW PREVENTERS AT THE ENTRANCE TO EACH BUILDING.
15. THE CONTRACTOR SHALL MINIMIZE THE DISRUPTIONS TO THE EXISTING SEWER FLOWS AND THOSE INTERRUPTIONS SHALL BE LIMITED TO LOCAL SEWER DEPARTMENT REGULATIONS.
16. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
17. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE.
18. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO USERS AT ALL TIMES. REQUIREMENTS BY THE TOWN WATER DEPARTMENT REGARDING NOTIFICATION FOR INTERRUPTION OF SERVICE SHOULD BE INCLUDED (TYPICALLY 24 HOURS) AND ALLOWABLE INTERRUPTION DURATION. WATER TESTING AND DISINFECTION REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
19. TRIPLE WATER GATE ASSEMBLIES SHALL BE INSTALLED AT ALL INTERSECTING WAYS INCLUDING THE CONNECTION WITHIN SUMMER STREET. THE TRIPLE VALVE ASSEMBLY IN SUMMER STREET SHALL BE CONNECTED TO EXISTING MAIN WITH LONG BODY SOLID SLEEVES. ALL OTHER TRIPLE GATE INTERSECTION SHALL BE A TEE, NIPPLE WITH MEGA-LUGS AND THE (OPEN LEFT) WATER GATE INSTALLED AS AN ASSEMBLY
20. ALL WATER AND SEWER INSTALLATION SHALL BE COORDINATED WITH THE TOWN OF WALPOLE, MA

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PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

Table with 4 columns: NO, BY, DATE, DESCRIPTION. Contains revision history entries for peer review, seeding, town/peer comm, soil testing, and full site plan.



SITE PLAN

SITE PLAN NOTES

Table with 2 columns: Field Name, Value. Includes DATE (JUNE 20, 2023), PROJECT NUMBER (19097), DESIGNED BY (PB/KE/KF), DRAWN BY (PB/MB/KF/KL), CHECKED BY (KE), and SHEET 2 OF 65.

SPECIAL PERMITS AND WAIVERS - LOT 1

- 1. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS SECTION 449 OF THE WALPOLE GENERAL BYLAWS - ARTICLE XXIX STORMWATER MANAGEMENT AND EROSION CONTROL BYLAW.
2. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS SECTION 561, DIVISION 2 OF THE GENERAL BYLAW.
3. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.4.1: NO ALTERATION ZONE: THE COMMISSION SHALL REQUIRE THE APPLICANT TO MAINTAIN A 25 FOOT WIDE CONTIGUOUS, UNDISTURBED, VEGETATIVE BUFFER MEASURED FROM, AND PARALLEL TO, THE WETLAND RESOURCE BOUNDARY, AS A MINIMUM;
4. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.5.2: REPLICATION REQUIREMENTS.
5. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 2.3: PLANS AND SUPPORTING DOCUMENTS;
6. WALPOLE ZONING BYLAWS TABLE 5-B.1.3.D; RESIDENTIAL USE PROHIBITED IN LIMITED MANUFACTURING ZONE.
7. WALPOLE ZONING BYLAWS TABLE 5-B.1.3.D.iii; IF THERE IS TO BE MORE THAN ONE PRINCIPLE BUILDING ON A LOT, THERE SHALL BE A MINIMUM OF 10,000 S.F. OF LATE AREA PER DWELLING UNIT.
8. WALPOLE ZONING BYLAWS SECTION 6-B-1: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON ANY PART OF A LOT WHICH DOES NOT HAVE AN AREA IN WHICH A CIRCLE, THE DIAMETER OF WHICH IS NOT LESS THAN 80% OF THE MINIMUM REQUIRED LOT FRONTAGE, TANGENT TO THE EXTERIOR STREET LINE FROM WHICH THE REQUIRED FRONTAGE AND MINIMUM SETBACK ARE DERIVED AND WITHIN ALL OTHER LOT LINES, MAY BE LOCATED.
9. WALPOLE ZONING BYLAWS SECTION 6-B-1.A: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON A LOT HAVING LESS THAN THE REQUIRED FRONTAGE.
10. WALPOLE ZONING BYLAWS SECTION 6-B-1.C: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED SO AS TO BE NEARER TO THE SIDE LINES OF ITS LOT THAN THE REQUIRED SIDE YARD WIDTH.
11. WALPOLE ZONING BYLAWS TABLE 6-B-1 AND 6-C.3.A: REQUIRED LOT FRONTAGE FOR A LOT IN THE LIMITED MANUFACTURING ZONE.
12. WALPOLE ZONING BYLAWS TABLE 6-B-1: REQUIRED MINIMUM SIDE YARD SETBACK FOR A LOT IN THE LIMITED MANUFACTURING ZONE.
13. WALPOLE ZONING BYLAWS TABLE 6-B-1: REQUIRED MAXIMUM BUILDING HEIGHT FOR A LOT IN THE LIMITED MANUFACTURING ZONE.
14. WALPOLE ZONING BYLAWS SECTION 6-C-11: PROJECTIONS.
15. WALPOLE ZONING BYLAWS SECTION 6-C.4.B: NUMBER OF BUILDINGS PER LOT.
16. WALPOLE ZONING BYLAWS SECTION 8.3.1: TOWNHOUSES & APARTMENTS ARE CLASSIFIED AS PARKING CODE 1 PER TABLE 6-B-1.
17. WALPOLE ZONING BYLAWS SECTION 8.3.1: 2 SPACES FOR EACH UNIT.
18. WALPOLE ZONING BYLAWS SECTION 8.8.A.1: TABLE OF PARKING SPACE AND AISLE DIMENSIONS.
19. WALPOLE ZONING BYLAWS SECTION 8.8.B-3 PARKING AISLES: THE ENDS OF PARKING AISLES THAT ARE MORE THAN 15 SPACES IN LENGTH SHALL INCORPORATE LANDSCAPE ISLANDS AT EITHER END OF THE ROW. WHERE THE LENGTH OF A PARKING AISLE EXCEEDS 25 SPACES, ADDITIONAL LANDSCAPED ISLANDS SHALL BE INSTALLED AT REGULAR INTERVALS. THIS INTERVAL SHALL NOT BE MORE THAN EVERY 13 SPACES. THE WIDTH OF LANDSCAPED ISLANDS PERPENDICULAR TO ADJACENT SPACES SHALL BE NO LESS THAN 8 FEET AT THEIR WIDEST POINT.
20. WALPOLE ZONING BYLAWS SECTION 12.3.A.2.D: RESIDENTIAL DEVELOPMENT OF SINGLE FAMILY DWELLINGS ARE PERMITTED BY RIGHT IF NO MORE THAN 15% OR 2,500 S.F., WHICHEVER IS GREATER, OF THE BUILDING LOT IS RENDERED IMPERVIOUS.
21. WALPOLE ZONING BYLAWS SECTION 12.3.C.3: IN AREAS 3 & 4, ANY USES IN WRPOD OTHER THAN A SINGLE-FAMILY DWELLING WITH A SEWAGE FLOW EXCEEDING 110 GPD PER 10,000 S.F. OF LOT AREA OR EXCEEDING 15,000 GPD TOTAL REQUIRES A SPECIAL PERMIT
22. WALPOLE ZONING BYLAWS SECTION 12.3.C.5: ANY RESIDENTIAL USE IN WRPOD THAT WILL RENDER IMPERVIOUS MORE THAN 15% OR 2,500 S.F. OF ANY LOT REQUIRES A SPECIAL PERMIT.
23. WALPOLE ZONING BYLAWS SECTION 13: SITE PLAN REVIEW;
24. ZBA SECTION 3.2.15 - STATEMENT OF IMPACT ON MUNICIPAL FACILITIES AND SERVICES.
25. ZBA SECTION 3.2.16: COMPLIANCE WITH MASTER AND OPEN SPACE PLANS.
26. ZBA SECTION 3.2.17: ROSTER OF DEVELOPMENT TEAM AND LIST OF PRIOR DEVELOPMENTS FOR PAST 10 YEARS.
27. ZBA SECTION 3.2.18: TWENTY (20) PAPER COPIES OF SAID APPLICATION WITH ATTACHMENTS AND EXHIBITS.
28. ZBA SECTION 3.2.5.4: SAID PLAN SHALL INCLUDE THE FOLLOWING INFORMATION: EXISTING SIGNIFICANT ENVIRONMENTAL FEATURES SUCH AS LEDGE OUTCROPS, SCENIC VIEWS AND LARGE TREES (I.E. GREATER THAN 24" DBH)
29. ZBA SECTION 5.5: ANY PROFESSIONAL EXPERT OR OTHER WITNESS THAT PARTICIPATED IN THE DRAFTING OF THE PROPOSED PROJECT PLANS OR OTHER ELEMENTS SHALL BE PRESENT AT EACH PUBLIC HEARING.
30. ZBA SECTION 5.6: BOARD MAY IN ITS DISCRETION COLLECT APPROPRIATE FEES FOR NOTARY PUBLIC OR STENOGRAPHER.

SPECIAL PERMITS AND WAIVERS - LOT 2

- 1. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS SECTION 449 OF THE WALPOLE GENERAL BYLAWS - ARTICLE XXIX STORMWATER MANAGEMENT AND EROSION CONTROL BYLAW;
2. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS SECTION 561, DIVISION 2 OF THE GENERAL BYLAW;
3. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.4.1: NO ALTERATION ZONE: THE COMMISSION SHALL REQUIRE THE APPLICANT TO MAINTAIN A 25 FOOT WIDE CONTIGUOUS, UNDISTURBED, VEGETATIVE BUFFER MEASURED FROM, AND PARALLEL TO, THE WETLAND RESOURCE BOUNDARY, AS A MINIMUM;
4. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 1.5.2: REPLICATION REQUIREMENTS;
5. WALPOLE WETLANDS PROTECTION BYLAWS REGULATIONS 2.3: PLANS AND SUPPORTING DOCUMENTS;
6. WALPOLE ZONING BYLAWS TABLE 5-B.1.3.A; RESIDENTIAL USE PROHIBITED IN LIMITED MANUFACTURING ZONE;
7. WALPOLE ZONING BYLAWS SECTION 6-B-1: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON ANY PART OF A LOT WHICH DOES NOT HAVE AN AREA IN WHICH A CIRCLE, THE DIAMETER OF WHICH IS NOT LESS THAN 80% OF THE MINIMUM REQUIRED LOT FRONTAGE, TANGENT TO THE EXTERIOR STREET LINE FROM WHICH THE REQUIRED FRONTAGE AND MINIMUM SETBACK ARE DERIVED AND WITHIN ALL OTHER LOT LINES, MAY BE LOCATED;
8. WALPOLE ZONING BYLAWS SECTION 6-B-1.A: IN ALL DISTRICTS NO BUILDING SHALL BE CONSTRUCTED ON A LOT HAVING LESS THAN THE REQUIRED FRONTAGE;
9. WALPOLE ZONING BYLAWS TABLE 6-B-1: REQUIRED MAXIMUM BUILDING HEIGHT FOR A LOT IN THE LIMITED MANUFACTURING ZONE, APPROVED TO ALLOW FOR A MAXIMUM OF FOUR (4) STORIES.
10. WALPOLE ZONING BYLAWS TABLE 6-B-1: REQUIRED LOT FRONTAGE FOR A LOT IN THE LIMITED MANUFACTURING ZONE;
11. WALPOLE ZONING BYLAWS TABLE 6-B-1: REQUIRED MINIMUM FRONT YARD SETBACK FOR A LOT IN THE LIMITED MANUFACTURING ZONE;
15. WALPOLE ZONING BYLAWS SECTION 6-C.4.B: NUMBER OF BUILDINGS PER LOT. COMMERCIAL/MIXED-USE - PROVIDED THEY ARE IN COMPLIANCE WITH ALL DIMENSIONAL REGULATIONS LISTED IN SECTION 6-C, MORE THAN ONE (1) BUILDING MAY BE CONSTRUCTED AND LOCATED ON EACH LOT IN ALL COMMERCIAL ZONES;
16. WALPOLE ZONING BYLAWS SECTION 6.C.8.D: FENCE WILL NOT HAVE A HEIGHT OF MORE THAN 6 FEET;
17. WALPOLE ZONING BYLAWS SECTION 8.8.A.1: TABLE OF PARKING SPACE AND AISLE DIMENSIONS;
18. WALPOLE ZONING BYLAWS SECTION 12.3.A.2.D: RESIDENTIAL DEVELOPMENT OF SINGLE FAMILY DWELLINGS ARE PERMITTED BY RIGHT IF NO MORE THAN 15% OR 2,500 S.F., WHICHEVER IS GREATER, OF THE BUILDING LOT IS RENDERED IMPERVIOUS.
19. WALPOLE ZONING BYLAWS SECTION 12.3.C.3: IN AREAS 3 & 4, ANY USES IN WRPOD OTHER THAN A SINGLE-FAMILY DWELLING WITH A SEWAGE FLOW EXCEEDING 110 GPD PER 10,000 S.F. OF LOT AREA OR EXCEEDING 15,000 GPD TOTAL REQUIRES A SPECIAL PERMIT;
20. WALPOLE ZONING BYLAWS SECTION 12.3.C.5: ANY RESIDENTIAL USE IN WRPOD THAT WILL RENDER IMPERVIOUS MORE THAN 15% OR 2,500 S.F. OF ANY LOT REQUIRES A SPECIAL PERMIT;
21. WALPOLE ZONING BYLAWS SECTION 13: SITE PLAN REVIEW;
22. SIGNS SECTION 7.6.C.4; SIGNS SHALL BE A MINIMUM OF 8 FEET FROM THE GROUND;
23. ZBA SECTION 3.2.15 - STATEMENT OF IMPACT ON MUNICIPAL FACILITIES AND SERVICES;
24. ZBA SECTION 3.2.16: COMPLIANCE WITH MASTER AND OPEN SPACE PLANS;
25. ZBA SECTION 3.2.17: ROSTER OF DEVELOPMENT TEAM AND LIST OF PRIOR DEVELOPMENTS FOR PAST 10 YEARS;
26. ZBA SECTION 3.2.18: TWENTY (20) PAPER COPIES OF SAID APPLICATION WITH ATTACHMENTS AND EXHIBITS;
27. ZBA SECTION 3.2.5.4: SAID PLAN SHALL INCLUDE THE FOLLOWING INFORMATION: EXISTING SIGNIFICANT ENVIRONMENTAL FEATURES SUCH AS LEDGE OUTCROPS, SCENIC VIEWS AND LARGE TREES (I.E. GREATER THAN 24" DBH);
28. ZBA SECTION 5.5: ANY PROFESSIONAL EXPERT OR OTHER WITNESS THAT PARTICIPATED IN THE DRAFTING OF THE PROPOSED PROJECT PLANS OR OTHER ELEMENTS SHALL BE PRESENT AT EACH PUBLIC HEARING;
29. ZBA SECTION 5.6: BOARD MAY IN ITS DISCRETION COLLECT APPROPRIATE FEES FOR NOTARY PUBLIC OR STENOGRAPHER.

ZONING BOARD OF APPEALS CONDITIONS (PRE-MODIFICATION):

A. GENERAL

A.1 EXCEPT AS MAY BE PROVIDED FOR IN THE FOLLOWING CONDITIONS, PARTICULARLY CONDITION A.3 BELOW, OR IN THE FINAL PLANS REFERENCED BELOW, THE PROJECT, INCLUDING DRIVEWAYS AND ACCESS STAGINGS AND MINIMIZE LIGHT POLLUTION AND ACCOMMODATIONS, SHALL BE CONSTRUCTED SUBSTANTIALLY IN CONFORMANCE WITH THE PLANS AND DRAWINGS LISTED BELOW IN THIS CONDITION A.1, WHICH FOR PURPOSES OF THE PROJECT (APPROVED PLANS). THE APPROVED PLANS CONSIST OF THE FOLLOWING:

PROPOSED MULTIFAMILY DEVELOPMENT, SUMMER STREET, WALPOLE MA, PREPARED BY HOWARD STEIN HUDSON, 114 TURNPIKE ROAD, SUITE 2C, CHELMSFORD, MA 01824, DATED JANUARY 10, 2020, WITH REVISIONS THROUGH APRIL 13, 2021.

A.2 THE APPLICANT SHALL BE A LIMITED DIVIDEND ORGANIZATION AS REQUIRED BY CHAPTER 40B AND IT AND ITS SUCCESSORS AND ASSIGNS, SHALL COMPLY WITH THE LIMITED DIVIDEND AND OTHER APPLICABLE REQUIREMENTS OF CHAPTER 40B AND THE REGULATIONS ADOPTED THEREUNDER.

A.3 THE PROJECT SHALL CONSIST OF NOT MORE THAN TWO HUNDRED AND SIXTY-EIGHT (268) UNITS IN THE FOLLOWING CONFIGURATION: LOW-RISE BUILDING 1, FIVE STORIES MAXIMUM HEIGHT WITH 90 APARTMENT UNITS; BUILDING 2, FIVE STORIES MAXIMUM HEIGHT WITH 90 APARTMENT UNITS; FOUR (4) BUILDINGS CONTAINING SIX TOWNHOUSE UNITS EACH; SEVEN (7) BUILDINGS CONTAINING FOUR TOWNHOUSE UNITS EACH; AND ONE (1) MAINTENANCE BUILDING ONE (1) MAIL HUT THIRTY-EIGHT (38) SINGLE-FAMILY HOMES; AND NINE (9) DUPLEX BUILDINGS WITH TWO TOWNHOUSE UNITS EACH. ONE (1) MAIL HUT

THE NUMBER OF PARKING SPACES SHALL BE AT LEAST 1.88 PARKING SPACES PER DWELLING UNIT.

A.4 ALL PARKING SPACES ARE TO BE SHOWN ON THE FINAL PLAN AS HEREINAFTER DEFINED IN GENERALLY THE SAME CONFIGURATION AS SHOWN ON THE APPROVED PLANS. VISITOR PARKING, EXCEPT APPROVED PLAN AND ALL OTHER, INCLUDING THE FORMS OF PARKING ARE PROHIBITED IN THE PROJECT DRIVEWAY. THE APPLICANT AND/OR ANY SUCCESSOR ESTABLISHED HOMEOWNER'S ASSOCIATION IS REQUIRED TO PROVIDE RESIDEN WITH ACCESS TO ALL RESIDENTS. ANY PARKED VEHICLE WITHOUT A STICKER WILL BE SUBJECT TO TOWING BY THE HOMEOWNER'S ASSOCIATION. THE APPLICANT AND/OR ANY SUCCESSOR ESTABLISHED HOMEOWNER'S ASSOCIATION SHALL MAINTAIN ACCESS TO ALL RESIDENTS AND PROVIDE ACCESS WITH REGARD TO EVENTS AT GILLETTE STADIUM. SAID PLAN SHALL BE ADMINISTRATIVELY APPROVED BY THE BOARD.

A.5 AFFORDABLE UNITS SHALL BE INTERSPERSED EVENLY THROUGHOUT THE PROJECT, AS APPROVED BY THE SUBSIDIZING AGENCY DURING FINAL APPROVAL.

A.6 PURSUANT TO THE REVISED WAIVER LIST SUBMITTED TO THE BOARD AND ATTACHED HERETO AS EXHIBIT A, THE APPLICANT HAS REQUESTED, AND THE BOARD HAS GRANTED, THOSE WAIVERS FROM THE WALPOLE ZONING BYLAW AND OTHER REGULATIONS AND REGULATIONS AS SPECIFIED THEREIN. SOME OF THE WAIVERS GRANTED BY THE BOARD HAVE BEEN GRANTED CONDITIONALLY, AS SET FORTH IN EXHIBIT A. THOSE CONDITIONS ARE EXPRESSLY INCORPORATED BY REFERENCE AS CONDITIONS OF OCCUPANCY TO THIS COMPREHENSIVE PERMIT. NO WAIVERS ARE GRANTED FROM REQUIREMENTS THAT ARE BEYOND THE PURVIEW OF G.L.C. 40B, §20-23, AND NO WAIVERS OF ANY REQUIREMENTS WITHIN THE BOARD'S JURISDICTION UNDER G.L.C. 40B, §20-23 HAVE BEEN GRANTED EXCEPT FOR THOSE EXPRESSLY GRANTED BY THE BOARD AS SET FORTH IN EXHIBIT A. TO THE EXTENT THE APPROVED PLANS REFLECT A WAIVER NOT EXPRESSLY GRANTED BY EXHIBIT A, THE TERMS AND CONDITIONS OF EXHIBIT A SHALL GOVERN. NO WAIVER OF BUILDING PERMIT OR INSPECTION FEES HAS BEEN GRANTED EXCEPT AS SPECIFICALLY STATED AND CONDITIONED. ANY SUBSEQUENT WAIVER CONCERNING WITHIN THE BOARD'S JURISDICTION UNDER G.L.C. 40B, §20-23 THAT ARE APPARENT IN THE FINAL PLANS THAT REQUIRE ADDITIONAL OR MORE EXPANSIVE WAIVERS OF ANY LOCAL BY-LAWS OR REGULATIONS, MUST BE APPROVED BY THE BOARD IN ACCORDANCE WITH 760 CMR 56.05(11).

A.7 THE PROJECT SHALL COMPLY WITH ALL LOCAL REGULATIONS OF THE TOWN OF WALPOLE AND ITS BOARDS, COMMISSIONS AND DEPARTMENTS UNLESS SPECIFICALLY WAIVED HEREIN.

A.8 THE APPLICANT SHALL COPY THE BOARD, THROUGH THE BOARD SECRETARY AND THE COMMUNITY AND ECONOMIC DEVELOPMENT DIRECTOR, ON ALL CORRESPONDENCE BETWEEN THE APPLICANT AND ANY FEDERAL, STATE, OR TOWN OFFICIAL, BOARD, OR AGENCIES CONCERNING WITHIN THE BOARD'S JURISDICTION UNDER G.L.C. 40B, §20-23 THAT ARE APPARENT IN THE FINAL PLANS THAT REQUIRE ADDITIONAL OR MORE EXPANSIVE WAIVERS OF ANY LOCAL BY-LAWS OR REGULATIONS, MUST BE APPROVED BY THE BOARD IN ACCORDANCE WITH 760 CMR 56.05(11).

A.9 EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED HEREIN, WHERE THIS DECISION PROVIDES FOR THE SUBMISSION OF PLANS OR OTHER DOCUMENTS FOR APPROVAL BY THE BUILDING INSPECTOR, THE APPLICANT SHALL BE RESPONSIBLE FOR THE COST OF ANY APPLICABLE DEPARTMENT HEAD WILL USE REASONABLE EFFORTS TO REVIEW AND PROVIDE A WRITTEN RESPONSE WITHIN THIRTY (30) DAYS FOLLOWING SUBMISSION. FOR SUBMISSIONS THAT REQUIRE CONSULTATION WITH THE BUILDING DEPARTMENT, THE DETERMINED BY THE BUILDING INSPECTOR OR APPLICABLE DEPARTMENT HEAD, THE THIRTY-DAY TIME PERIOD SHALL NOT BEGIN UNTIL THE CONSULTANT'S FEE HAS BEEN FULLY PAID BY THE APPLICANT.

A.10 THE PROVISIONS OF THIS COMPREHENSIVE PERMIT DECISION AND CONDITIONS SHALL BE BINDING UPON THE APPLICANT, HIS SUCCESSORS AND ASSIGNS. THE APPLICANT'S OBLIGATIONS SHALL RUN WITH THE LAND. IN THE EVENT THAT THE APPLICANT SELLS, TRANSFERS, OR ASSIGNS HIS INTEREST IN THE DEVELOPMENT, THIS COMPREHENSIVE PERMIT SHALL BE BINDING ON THE PURCHASER, TRANSFEREE, OR ASSIGNEE AND ANY SUCCESSOR PURCHASERS, TRANSFEREES OR ASSIGNEES. THE LIMITED DIVIDEND RESTRICTIONS SHALL APPLY TO THE OWNER OF THE PROJECT REGARDLESS OF SALE, TRANSFER, OR ASSIGNMENT OF THE PROJECT.

A.11 THE SIDEWALKS, DRIVEWAYS, ROADS, UTILITIES, DRAINAGE SYSTEMS, AND ALL OTHER INFRASTRUCTURE SHOWN ON THE APPROVED PLANS AND THE APPROVED PLANS SHALL REMAIN PRIVATE IN PERPETUITY, AND THE TOWN OF WALPOLE SHALL NOT HAVE, NOW OR IN THE FUTURE, ANY LEGAL RESPONSIBILITY FOR THE OPERATION OR MAINTENANCE OF SUCH INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO THE SIDEWALKS, DRIVEWAYS AND LANDSCAPE MAINTENANCE. IN THIS REGARD, THE DRIVEWAY WITHIN THE PROJECT SHALL NOT BE DEDICATED TO OR ACCEPTED BY THE TOWN.

A.12 UNLESS OTHERWISE INDICATED HEREIN, THE BOARD MAY DESIGNATE AN AGENT TO REVIEW AND APPROVE MATTERS ON THE BOARD'S BEHALF SUBJECT TO THIS DECISION.

A.14 APPLICANT MUST OBTAIN RIGHTS OF ACCESS FOR WORK PROPOSED ON ANY PROPERTY OUTSIDE OF THE APPLICANT'S OWN CONTROL AND THAT ANY MITIGATION REQUESTED BY ADJUTERS WHOSE PROPERTY WILL BE USED BY THE APPLICANT SHALL BE SHOWN ON THE FINAL PLANS.

A.15 THERE SHALL BE NO OTHER PERMANENT MARKETING OR IDENTIFICATION SIGNAGE OTHER THAN THAT SHOWN ON THE FINAL PLAN CONSISTING OF TWO SIGNS.

A.16 SIGNAGE INDICATING PROPERTY BOUNDARY SHALL BE INSTALLED.

A.17 ACCESS TO EXISTING TRAILS IN THE RIVER FRONT AREA - BETWEEN 30 MINUTES BEFORE SUNRISE AND 30 MINUTES AFTER SUNSET, AND WITH SUCH REASONABLE RESTRICTIONS AS IMPOSED BY THE HOA, THE PUBLIC SHALL HAVE PEDESTRIAN ACCESS TO AND THE RIGHT TO PASS OVER THE TRAILS IN THE RIVER FRONT AREA. THE PEDESTRIAN ACCESS TO THE UNIMPROVED TRAILS SHALL BE VIA THE TRAILS ON THE PROPERTY OF OTHERS, OR OVER THE PROPERTY DRIVEWAYS VIA THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) AND THE BOARD OF HEALTH. AT LEAST FOUR (4) MONITORING WELLS BE MAINTAINED ON SITE AT LOCATIONS APPROVED BY A LICENSED SITE PROFESSIONAL WHICH ARE SUITABLE FOR MONITORING GROUNDWATER ACROSS THE SITE.

A.18 TRAIL ACCESS SIGNS - A SIGN, NOT LESS THAN 8" X 12" WILL BE SET AT EACH OF THE 3 ABOVE MENTIONED LOCATIONS WHERE ACCESS IS ALLOWED TO THE UNIMPROVED TRAILS AT THE INTERSECTIONS WITH THE COMMON DRIVEWAYS. THE SIGN SHALL READ "WALKING TRAIL ACCESS" - FOOTING MAY BE SET ON CONCRETE OR UNEVEN. PLEASE REMOVE DOG WASTE AND TRASH" OR AS MUTUALLY AGREED WITH THE WALPOLE CONSERVATION COMMISSION.

B. AFFORDABILITY

B.1 A MINIMUM OF 25% OF BOTH THE RENTAL AND THE HOME OWNERSHIP UNITS SHALL BE LOW- OR MODERATE-INCOME UNITS, MEANING THAT THEY SHALL BE SOLD OR RENTED TO, AND OCCUPIED BY, HOUSEHOLDS WHOSE INCOME IS NOT MORE THAN 80% OF THE AREA MEDIAN INCOME (AS DETERMINED BY THE UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT ("HUD") AND DHCD (AFFORDABLE UNITS)). AFFORDABLE UNITS SHALL BE DISPERSED THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE GUIDELINES OF THE APPLICANT AND THE BOARD. THE APPLICANT SHALL BE RESPONSIBLE FOR MAINTAINING RECORDS SUFFICIENT TO COMPLY WITH DHCD GUIDELINES FOR THE LOCATION OF AFFORDABLE UNITS IN THE PROJECT AND OCCUPANCY OF SUCH UNITS BY INCOME-ELIGIBLE HOUSEHOLDS.

B.2 UPON COMPLETION OF THE PROJECT, AND IN PERPETUITY, 100% OF THE RENTAL UNITS (BOTH APARTMENT AND TOWNHOUSE) AND 100% OF THE HOMEOWNERSHIP UNITS AND 10 SINGLE-FAMILY HOME OWNERSHIP DWELLINGS SHALL MEET THE CRITERIA FOR INCLUSION IN THE DHCD'S SUBSIDIZED HOUSING INVENTORY.

B.3 THE APPLICANT SHALL OBTAIN APPROVAL BY THE SUBSIDIZING AGENCY OF AN AFFIRMATIVE FAIR HOUSING MARKETING PLAN PRIOR TO THE SALE OR RENTAL OF ANY UNITS AND SHALL ENSURE THAT THE PROJECT COMPLIES WITH THE SUBSIDIZING AGENCY'S FAIR HOUSING REQUIREMENTS.

C. SUBMISSION REQUIREMENTS

C.2 PRIOR TO THE ISSUANCE OF ANY BUILDING PERMITS, THE APPLICANT SHALL: a. RECORD THIS COMPREHENSIVE PERMIT WITH THE NORFOLK REGISTRY OF DEEDS, AT THE APPLICANT'S EXPENSE AND PROVIDE PROOF OF SUCH RECORDING WITH THE WALPOLE BUILDING INSPECTOR, COMMUNITY AND ECONOMIC DEVELOPMENT DIRECTOR AND TOWN CLERK.

b. SUBMIT TO THE BOARD AND THE BUILDING INSPECTOR EVIDENCE OF FINAL APPROVAL FROM THE SUBSIDIZING AGENCY, MASSHOUSING, AS REQUIRED BY THE PROJECT ELIGIBILITY LETTERS AND THE CHAPTER 40B REGULATIONS.

c. SUBMIT TO THE BOARD AND THE BUILDING INSPECTOR FULLY EXECUTED COPY OF THE REGULATORY AGREEMENT AND MONITORING SERVICES AGREEMENT FOR EACH OF THE HOMEOWNERS AND RENTAL ACCESS STAGINGS AND MINIMIZE LIGHT POLLUTION. THE BUILDING INSPECTOR SHALL ALSO BE PROVIDED WITH EVIDENCE OF A SUBSISTING FUNDING COMMITMENT BY MASSHOUSING OF AN APPROVED NEW ENGLAND FUND LEASER PRIOR TO THE APPROVED PLANS FOR THE BUILDING PERMITS.

d. SUBMIT A SIGN APPLICATION TO THE BUILDING INSPECTOR AND INCLUDE LOCATION AND DETAILS OF EVERY SIGN TO CONFIRM ITS COMPLIANCE WITH THIS DECISION.

e. SUBMIT FINAL PLANS AND REQUIRED SUPPORTING MATERIAL TO THE BOARD AND FIRE DEPARTMENT FOR ITS REVIEW AND APPROVAL BY THE FIRE DEPARTMENT PRIOR TO THE SUBMITTAL OF ANY BUILDING PERMITS OR CONSTRUCTION OF ANY UTILITY INFRASTRUCTURE.

f. OBTAIN AND FILE WITH THE BUILDING INSPECTOR A COPY OF ALL REQUIRED FEDERAL, STATE, AND LOCAL PERMITS AND APPROVALS REQUIRED TO BEGIN CONSTRUCTION OF THE PROJECT.

g. OBTAIN ALL NECESSARY ELECTRICAL, PLUMBING, AND OTHER PERMITS REQUIRED TO BEGIN CONSTRUCTION ON THE BUILDING FOR WHICH THE BUILDING PERMIT IS SOUGHT.

h. STAGING AREA(S) FOR CONSTRUCTION EQUIPMENT AND DELIVERIES MUST BE CONSTRUCTED BEFORE ANY BUILDINGS ARE STARTED. AREA(S) MUST BE ON THE PROPERTY AND NOT BLOCK ACCESS IN AND OUT OF THE PROPERTY.

D. CONSTRUCTION COMPLETION/CERTIFICATE OF OCCUPANCY

D.1 THE APPLICANT SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL LAWS REGARDING NOISE, VIBRATION, DUST, AND BLOCKING OF TOWN ROADS.

D.2 THE APPLICANT SHALL ADHERE TO STRICT COMPLIANCE WITH THIS DECISION TO MINIMIZE INCONVENIENCE TO RESIDENTS IN THE GENERAL AREA.

D.3 ADEQUATE PROVISIONS SHALL BE MADE BY THE APPLICANT TO CONTROL AND MINIMIZE DUST ON PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH THE CONSTRUCTION MANAGEMENT PLAN. THE APPLICANT SHALL KEEP ALL PORTIONS OF ANY PUBLIC WAY USED AS ACCESS/EGRESS TO THE PROJECT FREE OF SOIL, MUD OR DEBRIS DEPOSITED DUE TO USE BY CONSTRUCTION VEHICLES ASSOCIATED WITH THE PROJECT AND SHALL EMPLOY WATER-BASED STREET SWEEPING SO AS TO AVOID CLOUDS OF DUST IN AND AROUND THE PUBLIC AND PRIVATE WAYS AND SURROUNDING NEIGHBORHOOD.

D.4 DURING THE CONSTRUCTION PROCESS, UP-TO-DATE MATERIAL SAFETY DATA SHEET MUST BE KEPT ON SITE WITH ANY MATERIALS BROUGHT ONTO THE SITE AND USED ON SITE BY THE CONSTRUCTION TEAM.

D.5 PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY FOR SPECIFIC DWELLING UNIT(S), THE APPLICANT SHALL WITH RESPECT TO SAID DWELLING UNIT(S) AS APPLICABLE TO THE PORTION OF THE SITE WHERE THE DWELLING UNIT(S) IS/ARE LOCATED:

a. SUBMIT ENGINEER'S INTERIM CERTIFICATION OF COMPLIANCE WITH UTILITIES PLAN AND PROFILES (AS APPLICABLE) TO THE WALPOLE BUILDING INSPECTOR.

b. PROVIDE A LETTER TO THE BOARD, SIGNED BY THE APPLICANT'S CIVIL ENGINEER, CERTIFYING THAT THE BUILDING PROJECT HAS BEEN CONSTRUCTED IN COMPLIANCE WITH THE FINAL PLANS IN ALL MATERIAL RESPECTS, OR NOTING WHERE THERE ARE DIFFERENCES.

c. OBTAIN ACCEPTANCE FROM THE WALPOLE FIRE DEPARTMENT OF TESTING OF ALL FIRE PROTECTION SYSTEMS, FIRE ALARM SYSTEMS, FIRE SPRINKLER SYSTEMS, AND LOCAL FIRE DEPARTMENT WITHIN THE DWELLING UNITS AND THAT ALL FIRE HYDRANTS ARE IN PLACE AT PROPER GRADE AND FUNCTIONING.

d. PRIOR TO THE FIRST CERTIFICATE OF OCCUPANCY FOR THE FIRST DWELLING UNIT, SUBMIT TO THE BOARD'S COUNSEL THE HOMEOWNER'S ASSOCIATION DOCUMENTS FOR LOTS 1 AND 2 AND THE CONDOMINIUM MASTER DEED, CONDOMINIUM DECLARATION OF TRUST AND ACCOMPANYING CONVEYANCE INSTRUMENTS, NORTH AMERICAN DATUM 1983 AND NORTH AMERICAN VERTICAL DATUM 1988, IN U.S. SURVEY FEET.

e. SUBMIT AS-BUILT PLAN OF STORMWATER BASINS AND INFILTRATION UNITS ASSOCIATED WITH THIS DECISION, INCLUDING THE CERTIFICATE OF OCCUPANCY ALONG WITH CERTIFICATION BY APPLICANT'S CIVIL ENGINEER OF COMPLIANCE WITH THE CONDITIONS OF APPROVAL FOR THE STORMWATER MANAGEMENT SYSTEM SET FORTH IN THE FINAL APPROVED CONSTRUCTION PLANS THAT HAVE BEEN APPROVED BY THE TOWN'S PEER REVIEW ENGINEER.

D.6 PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE LAST RESIDENTIAL UNIT, THE APPLICANT SHALL:

a. SUBMIT TO THE BUILDING INSPECTOR, IN DIGITAL FILE FORMAT, A FINAL AS-BUILT UTILITIES PLAN SHOWING ACTUAL-IN-GROUND INSTALLATION OF ALL APPLICABLE UTILITIES, RIM AND INVERT ELEVATIONS, ROADWAY, SIDEWALK AND ASSOCIATED CONSTRUCTION. THE FILE FORMAT SHALL BE IN A WORD AND/OR EXCEL FILE FORMAT. THE AUTOCAD FILE DELIVERY SHALL BE IN FULL MODEL VIEW AND INDIVIDUAL SHEET VIEWS. THE DIGITAL FILE SHALL INCLUDE PROPERTY BOUNDARIES, DIMENSIONS, EASEMENTS, RIGHTS-OF-WAY, EDGE OF PAVEMENT, SIDEWALK, EDGE OF WATER BODIES, WETLAND BOUNDARIES, TOPOGRAPHIC CONTOURS, SPOT ELEVATIONS, PARKING AREAS, ROAD CENTERLINE AND ASSOCIATED TEXT. SAID DIGITAL DATA SHALL BE DELIVERED IN THE FOLLOWING FILE FORMATS: DWG, DXF, SHDW, NORTH AMERICAN DATUM 1983 AND NORTH AMERICAN VERTICAL DATUM 1988, IN U.S. SURVEY FEET.

b. SUBMIT TO THE BUILDING INSPECTOR AS-BUILT PLANS FOR ALL BUILDINGS IN THE PROJECT.

c. SUBMIT TO THE BOARD, BUILDING INSPECTOR AND CHIEF OF POLICE ALL INFORMATION RELATING TO THE HOMEOWNER'S ASSOCIATION RULES AND REGULATIONS AND THE MANAGEMENT COMPANY BEING RETAINED TO ACT AS THE PROPERTY MANAGER OF THE INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO THE SIDEWALKS, DRIVEWAYS AND LANDSCAPE MAINTENANCE. IN THIS REGARD, THE DRIVEWAY WITHIN THE PROJECT SHALL NOT BE DEDICATED TO OR ACCEPTED BY THE TOWN.

d. SUBMIT VERIFICATION THAT THE STORMWATER MANAGEMENT SYSTEM INCLUDING BUT NOT LIMITED TO CATCH BASINS, INFILTRATION UNITS, PIPES AND DETENTION BASIN, HAS BEEN INSPECTED AND CLEARED.

e. SUBMIT TO THE BOARD A CERTIFICATION OF COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THIS COMPREHENSIVE PERMIT.

f. CERTIFICATION BY THE TOWN ENGINEERING DEPARTMENT THAT ALL OFF-SITE MEASURES (IF ANY) ARE COMPLETE.

g. CERTIFICATION FROM THE TOWN'S DPW WATER AND SEWER DEPARTMENT THAT ALL SEWER AND WATER SYSTEMS HAVE BEEN INSTALLED, TESTED, AND THAT ALL VALVE COVERS AND OTHER RELATED ITEMS ARE AT GRADE AND ARE IN PROPER WORKING CONDITION.

D.7 ANY EVIDENCE OF ILLEGAL DUMPING OR CONTAMINATION OF SOIL OR GROUNDWATER ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED AS REQUIRED UNDER APPLICABLE FEDERAL, STATE OR MUNICIPAL REGULATIONS TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) AND THE BOARD OF HEALTH. AT LEAST FOUR (4) MONITORING WELLS BE MAINTAINED ON SITE AT LOCATIONS APPROVED BY A LICENSED SITE PROFESSIONAL WHICH ARE SUITABLE FOR MONITORING GROUNDWATER ACROSS THE SITE.

E. PROJECT DESIGN AND CONSTRUCTION

E.1 PRIOR TO THE COMMENCEMENT OF ANY WORK ON THE SITE, THE APPLICANT AND THE SITE GENERAL CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE BUILDING INSPECTOR AND OTHER TOWN STAFF. IF APPLICANT HAS OBTAINED A DEMOLITION PERMIT, APPLICANT MAY PROCEED WITH DEMOLITION OF EXISTING STRUCTURES IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT. FURTHER WORK SHALL BE LIMITED TO THE BUILDING INSPECTOR AND OTHER TOWN STAFF IF REQUESTED BY THE BUILDING INSPECTOR AND/OR ANY OTHER TOWN STAFF MEMBER UNTIL CONSTRUCTION IS COMPLETE.

E.2 AT REASONABLE TIMES AND AFTER NOTICE TO THE APPLICANT, REPRESENTATIVES OF THE BOARD MAY OBSERVE AND INSPECT THE PROPERTY AND CONSTRUCTION PROGRESS UNTIL SUCH TIME AS THE PROJECT HAS BEEN COMPLETED AT THEIR OWN RISK.

E.3 THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS, RULES AND REGULATIONS.

E.4 ALL SITE RETAINING WALLS FOUR (4) FEET OR GREATER IN HEIGHT SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE MASSACHUSETTS PROFESSIONAL STRUCTURE ENGINEERING BOARD'S DESIGN AND A 4 FOOT CHAIN LINK FENCE FOR SAFETY PURPOSES.

E.5 DURING CONSTRUCTION, THE APPLICANT SHALL COMPLY WITH THE CONSTRUCTION MANAGEMENT PLAN REFERENCED IN CONDITION C.1.

E.6 APPROPRIATE SIGNAGE SHALL BE SHOWN ON THE FINAL PLANS. THE BOARD HAS APPROVED CERTAIN WAIVERS FROM THE TOWN OF WALPOLE BYLAWS REGARDING SIGNS. ALL OTHER SIGN REGULATIONS SHALL BE ABIDED BY.

E.7 THE LOCATION OF ALL UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, AND CABLE, SHALL BE SHOWN ON THE FINAL PLANS PROVIDED TO THE BOARD AND BUILDING INSPECTOR.

E.8 IF THE APPLICANT USES NATURAL GAS FOR THE PROJECT OR ANY PART THEREOF, GAS SERVICE LOCATIONS SHALL BE INCLUDED ON THE FINAL PLANS.

E.9 LIGHTING SHALL BE INSTALLED AS FOLLOWS:

PLAN SUBMITTED SHALL SHOW ALL LOCATIONS OF PROPOSED STREET LIGHTING FIXTURES, EXTERIOR MOUNTED LIGHT FIXTURES, SIGNAGE LIGHTING, AND LANDSCAPE LIGHTING. THE LIGHTING PLAN PROPOSED SHALL INCLUDE, BUT NOT BE LIMITED TO, A SITE PLAN (A) FROM THE CHAIN-LINK FENCING AND ACCESS GATE TO THE PROPERTY TO THE ENTRANCE OF THE SITE. WALPOLE FIRE DEPARTMENT SHALL HAVE ACCESS TO A LOCK BOX PLACED AT THE ENTRANCE TO THE GATE DURING THE CONSTRUCTION PROCESS. FURTHER PERSONNEL SHALL BE UTILIZED TO OPEN AND CLOSE THE GATE AT ACCESS TIMES ACCORDING TO HOURS OF OPERATION AS STATED IN THIS COMPREHENSIVE PERMIT.

E.2.6 A PROPER TRUCK PAD SHALL BE CREATED AND MAINTAINED AT THE ENTRANCE TO SUMMER STREET TO WASH AND DIMINISH THE TRACKING OF ANY DEBRIS FROM THE SITE ONTO SUMMER STREET.

E.2.7 ALL CONSTRUCTION EQUIPMENT MUST BE OFF-LOADED ON THE PROPERTY. NO EQUIPMENT OR MATERIAL SHALL BE OFF-LOADED ON SUMMER STREET.

E.2.8 THE APPLICANT SHALL SUBMIT A TRUCKING ROUTES PLAN WHICH SHALL RESTRICT VEHICLES LARGER THAN A PICKUP TRUCK FROM PASSING BY THE BOYDEN SCHOOL DURING SCHOOL MORNING AND DROP OFF TIMES, AND TO THE REAR AND APPROVAL OF THE TOWN ENGINEER WHICH SHALL NOT BE UNREASONABLY WITHHELD AND DELAYED.

E.2.9 APPLICANT SHALL RESTRICT IDLING OF CONSTRUCTION EQUIPMENT DURING CONSTRUCTION PHASE OF PROJECT FOR MORE THAN 5 MIN PER MASSDEP REQUIREMENTS. ALL CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO STARTING TIMES DICTATED BY THE CONSTRUCTION PERMIT AND ORDER OF CONDITIONS SET FORTH HEREIN.

F. ROADWAY AND TRAFFIC SAFETY CONDITIONS

F.1 ACCESS AND EGRESS TO THE PROJECT SHALL BE CONSISTENT WITH THE APPROVED PLANS.

F.2 ANY REDUCTION IN THE NUMBER OF PARKING SPACES FOR THE PROJECT, ABSENT A CORRESPONDING REDUCTION IN THE NUMBER OF UNITS, SHALL CONSTITUTE A SUBSTANTIAL CHANGE PURSUANT TO 760 CMR 56.05(11).

F.3 INTERNAL SIDEWALKS SHALL BE CONSTRUCTED AS SHOWN ON THE FINAL PLANS. APPLICANT SHALL INSTALL ADA COMPLIANT WHEELCHAIR RAMPS WITH DETECTABLE WARNING PANELS AT THE SIDEWALK TRANSITIONS TO THE INTERNAL DRIVEWAYS.

F.4 THE INTERNAL DRIVEWAYS TO EACH UNIT SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS, EXCLUDING THE WAIVERS GRANTED BY THE BOARD.

F.5 ALL INDIVIDUAL UNIT DRIVEWAYS SHALL HAVE A MINIMUM DEPTH OF 18" AS MEASURED FROM THE FACE OF BUILDING/EDGE OF PAVEMENT TO THE NEAREST PATH OF PUBLIC ACCOMMODATION (IE. TRAVEL WAY OR SIDEWALK).

F.6 APPROPRIATE DIRECTIONAL AND SAFETY SIGNAGE SHALL BE INSTALLED AND MAINTAINED ON THE INTERNAL DRIVEWAYS AS SHOWN ON THE FINAL PLANS PROVIDED BY THE FIRE DEPARTMENT. ALL STOP SIGNS TO BE INSTALLED SHALL BE CONSISTENT WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND GUIDELINES.

F.7 APPLICANT SHALL MAINTAIN THE SIGHT DISTANCE AT THE ENTRANCE BY LIMITING/TRIMMING VEGETATION. THE SIGHT DISTANCE SHALL BE MAINTAINED UNDER THE TOWN ENGINEER'S SUPERVISION.

F.8 INTERNAL CROSS WALKS - INTERNAL CROSSWALKS SHALL COMPLY WITH THE CURRENT MUTCD.

F.9 THE APPLICANT AND/OR ITS SUCCESSOR SHALL BE RESPONSIBLE FOR PROVIDING PERSONNEL AT THE ENTRANCE TO THE PROJECT FOR STADIUM EVENTS. ADDITIONALLY, THE APPLICANT SHALL BE RESPONSIBLE FOR PROVIDING POLICE PERSONNEL AT THE PROPERTY IS NECESSARY HE MAY REQUIRE SUCH UP TO FIFTEEN (15) TIMES PER YEAR. THE POLICE DETAIL WOULD COME ONE HOUR BEFORE THE SCHEDULED PICKUP AND DROP OFF TIMES, AND UP TO THE REAR AND APPROVAL OF THE POLICE ORDERED DETAILS, THE POLICE DETAIL WILL REQUEST PAYMENT FROM THE STADIUM AND IF THE STADIUM REFUSES TO PAY WITHIN A REASONABLE TIME PERIOD, THE APPLICANT SHALL BE RESPONSIBLE FOR PAYING THE POLICE DETAIL UP TO EXCEED \$10,000.00 PER YEAR.

F.10 A TRANSPORTATION COORDINATOR ("TC") WILL BE ASSIGNED THE RESPONSIBILITIES OF COORDINATING THE TRANSPORTATION DEMAND MANAGEMENT ("TDM") PROGRAM AND WILL ALSO PROMOTE ALTERNATIVE TRANSPORTATION MODES BY POSTING LOCAL INFORMATION AND CONSULTING WITH THE TOWN ENGINEER AND POLICE REGARDING TRANSPORTATION. FURTHER, THE TC WILL ALSO PROMOTE RIDESHARING VIA CARPOOLS FOR RESIDENTS. THE APPLICANT WILL RECOMMEND THAT RESIDENTS INTERESTED IN CARPOOLS PROVIDE THEIR CONTACT INFORMATION.

F.11 BICYCLE RACKS WILL BE LOCATED THROUGHOUT THE SITE TO ENCOURAGE THE USE OF BICYCLES FOR COMMUTE AND RECREATION.

F.12 THE APPLICANT WILL DEVELOP ACCOMMODATIONS FOR CAR SHARING SERVICES (E.G., ZIPCAR).

F.13 5 PARKING SPACES AT EACH OF BUILDING 1 AND BUILDING 2 WILL BE RESERVED FOR LOW-CARBON VEHICLES AND WILL BE LOCATED CLOSER TO BUILDING ENTRANCES TO PROMOTE THE USE OF CLEAN FUEL VEHICLES.

G. POLICE, FIRE, AND EMERGENCY MEDICAL CONDITIONS

G.1 SPRINKLER SYSTEMS SHALL BE INSTALLED IN ALL BUILDINGS WITH MORE THAN TWO DWELLING UNITS.

G.2 THE PROJECT SHALL COMPLY WITH NFPA-113 AND APPLICABLE BUILDING CODES.

G.3 POSTED NO PARKING RESTRICTIONS ON INTERNAL PROJECT DRIVEWAYS WITH APPROPRIATE MARKINGS AND SIGNS SHALL BE PROVIDED, AS SHOWN ON THE FINAL PLANS.

G.4 THE APPLICANT HAS AGREED TO PROVIDE AN EMERGENCY ACCESS ROADWAY THROUGHOUT THE PROJECT'S DEVELOPED BOUNDARY WITH THE RAILROAD TRACKS SUFFICIENTLY REMOTE FROM THE MAIN ENTRANCE TO REASONABLY ENSURE EMERGENCY ACCESS TO/FROM THE PROPERTY CAN BE MAINTAINED. THE EMERGENCY ACCESS MUST BE CONSTRUCTED AND USABLE PRIOR TO ISSUING THE FIRST OCCUPANCY PERMIT.

G.5 THE APPLICANT HAS AGREED TO INSTALL AN UNINTERRUPTED FENCE FOR THE PERIMETER OF THE PROJECT'S DEVELOPED BOUNDARY WITH THE RAILROAD RIGHT-OF-WAY. THEREFORE, PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, THE APPLICANT SHALL INSTALL A CONTINUOUS (UNINTERRUPTED) FENCE RUNNING ALONG THE ENTIRE BOUNDARY OF THE PROJECT WITH FENCE ENDINGS DESIGNED TO RETURN INTO THE DEVELOPED SITE UNLESS OTHERWISE SPECIFICALLY PRECLUDED OR AS RESTRICTED FROM DOING SO IN WRITING BY THE WALPOLE CONSERVATION COMMISSION OR THE FIRE DEPARTMENT.

G.6 STORAGE AREAS FOR ANY CHEMICALS AND/OR HAZARDOUS MATERIALS MORE THAN HOURS-DURATION QUANTITIES USED AND/OR MAINTAINED AS OTHER PURPOSES ANY SHALL BE SHOWN ON THE FINAL PLAN (LOCATION) AND DESCRIBED IN A REPORT TO THE BUILDING INSPECTOR, WALPOLE CONSERVATION COMMISSION AND FIRE DEPARTMENT. SAID REPORT SHALL CONTAIN A WASTE STREAM PROFILE FOR ANY HAZARDOUS MATERIAL GENERATED ON SITE DURING CONSTRUCTION. REMOVAL OF HAZARDOUS MATERIALS FROM SITE TO BE CONDUCTED BY MASSDEP APPROVED VENDOR.

H. WATER, SEPTIC, STORMWATER, AND UTILITIES

H.1 THE APPLICANT SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE UTILITIES SERVICING THE PROJECT.

H.3 FIRE HYDRANTS SHALL BE PLACED AS SHOWN ON THE APPROVED PLANS, SUBJECT TO THE FINAL APPROVAL OF THE TOWN OF WALPOLE FIRE DEPARTMENT. IF THE WALPOLE FIRE DEPARTMENT APPROVES DIFFERENT HYDRANT LOCATIONS, SUCH MODIFICATION SHALL BE ACCEPTED AS AN INSUBSTANTIAL CHANGE PURSUANT TO 760 CMR 56.05(11).

H.4 THE SERVICE SIZE FOR THE DOMESTIC WATER SERVICE FOR EACH INDIVIDUAL BUILDING SHOULD BE VERIFIED BY THE WATER DEPARTMENT AND INFORMATION ON THE FIRE SERVICE SIZE AND REQUIREMENTS SHOULD BE VERIFIED BY THE FIRE DEPARTMENT PRIOR TO THE ISSUANCE OF THE BUILDING PERMIT FOR THE INDIVIDUAL BUILDING QUESTION. THE APPLICANT SHALL SUBMIT INFORMATION REGARDING THE SIZE OF BOTH THE DOMESTIC AND FIRE SERVICES AS PART OF FINAL PLANS. AFTER CONSULTATION WITH THE WATER DEPARTMENT AND THE FIRE DEPARTMENT, RESPECTIVELY.

H.5 ALL WATER AND SANITARY SEWER IMPROVEMENTS NECESSARY TO SERVE THE REGULATIONS CONTAINED AT 319 CMR 7.10 AND THE DEP'S NOISE AND VIBRATION INFORMATION REQUIRED FOR REVIEW BY THE WATER AND SEWER DEPARTMENTS. THE WATER AND SANITARY SEWER IMPROVEMENTS SERVING INDIVIDUAL STRUCTURES ARE TO CONSTITUTE A NUISANCE OR HAZARD BEYOND THE PROPERTY. SUCH MODIFICATION FROM APPROPRIATE MUNICIPAL OFFICIALS, THE APPLICANT SHALL CEASE ALL CONSTRUCTION ACTIVITIES CREATING NOISE IN EXCESS OF STATE AND FEDERAL REGULATIONS UNLESS THE LIMITED MITIGATION MEASURES ARE NECESSARY TO ENSURE THE CONSTRUCTION ACTIVITY WILL COMPLY WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.

H.6 THE PROJECT SHALL MEET ALL APPLICABLE STORMWATER MANAGEMENT STANDARDS TO BE DOCUMENTED ON THE FINAL PLANS AND APPROVED BY THE PEER REVIEWER PRIOR TO ISSUANCE OF THE BUILDING PERMIT. STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED AS SHOWN ON THE FINAL PLANS.

H.7 THE FINAL PLANS MUST DEPICT AT LEAST 20 FEET SEPARATION BETWEEN ANY BUILDING OR CONNECTING DRIVEWAY OR WALKWAY AND THE LIMIT OF INUNDATION DURING 100-YEAR STORM EVENT OF ANY ABOVE GRADE STORMWATER MANAGEMENT FACILITIES. THE LIMIT OF INUNDATION BE SHOWN ON THE FINAL PLANS OR SUPPLEMENTARY FIGURE.

H.8 THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE FILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO THE INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.

H.9 SOIL CONDITIONS BELOW DRIP EDGE SYSTEMS SHALL BE INSPECTED BY A LICENSED SOIL EVALUATOR AT THE TIME OF FOUNDATION EXCAVATION AND AN AFFIDAVIT FOR THE QUALITY OF SOILS OF THE MASSACHUSETTS BUILDING CODE. WATER MITIGATION AS-FOUND CONDITIONS ARE CONSISTENT WITH THOSE USED IN THE MODEL OR ADDITIONAL JUSTIFICATION PROVIDED PROVING PERFORMANCE PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ANY BUILDING SERVED BY A DRIP EDGE SYSTEM.

E.25 CONSTRUCTION SECURITY FENCING SHALL BE UTILIZED AT LEAST UNTIL THE FIRST CERTIFICATE OF OCCUPANCY IS ISSUED TO ENSURE THE SAFETY AND SECURITY OF THE SITE FOR THE BENEFIT OF THE SURROUNDING NEIGHBORHOOD AND THE APPLICANT. SIX (6) FEET TALL CHAIN-LINK FENCING SHALL BE INSTALLED TO THE PROPERTY TO THE ENTRANCE OF THE SITE. WALPOLE FIRE DEPARTMENT SHALL HAVE ACCESS TO A LOCK BOX PLACED AT THE ENTRANCE TO THE GATE DURING THE CONSTRUCTION PROCESS. FURTHER PERSONNEL SHALL BE UTILIZED TO OPEN AND CLOSE THE GATE AT ACCESS TIMES ACCORDING TO HOURS OF OPERATION AS STATED IN THIS COMPREHENSIVE PERMIT.

E.2.6 A PROPER TRUCK PAD SHALL BE CREATED AND MAINTAINED AT THE ENTRANCE TO SUMMER STREET TO WASH AND DIMINISH THE TRACKING OF ANY DEBRIS FROM THE SITE ONTO SUMMER STREET.

E.2.7 ALL CONSTRUCTION EQUIPMENT MUST BE OFF-LOADED ON THE PROPERTY. NO EQUIPMENT OR MATERIAL SHALL BE OFF-LOADED ON SUMMER STREET.

E.2.8 THE APPLICANT SHALL SUBMIT A TRUCKING ROUTES PLAN WHICH SHALL RESTRICT VEHICLES LARGER THAN A PICKUP TRUCK FROM PASSING BY THE BOYDEN SCHOOL DURING SCHOOL MORNING AND DROP OFF TIMES, AND TO THE REAR AND APPROVAL OF THE TOWN ENGINEER WHICH SHALL NOT BE UNREASONABLY WITHHELD AND DELAYED.

E.2.9 APPLICANT SHALL RESTRICT IDLING OF CONSTRUCTION EQUIPMENT DURING CONSTRUCTION PHASE OF PROJECT FOR MORE THAN 5 MIN PER MASSDEP REQUIREMENTS. ALL CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO STARTING TIMES DICTATED BY THE CONSTRUCTION PERMIT AND ORDER OF CONDITIONS SET FORTH HEREIN.

F. ROADWAY AND TRAFFIC SAFETY CONDITIONS

F.1 ACCESS AND EGRESS TO THE PROJECT SHALL BE CONSISTENT WITH THE APPROVED PLANS.

F.2 ANY REDUCTION IN THE NUMBER OF PARKING SPACES FOR THE PROJECT, ABSENT A CORRESPONDING REDUCTION IN THE NUMBER OF UNITS, SHALL CONSTITUTE A SUBSTANTIAL CHANGE PURSUANT TO 760 CMR 56.05(11).

F.3 INTERNAL SIDEWALKS SHALL BE CONSTRUCTED AS SHOWN ON THE FINAL PLANS. APPLICANT SHALL INSTALL ADA COMPLIANT WHEELCHAIR RAMPS WITH DETECTABLE WARNING PANELS AT THE SIDEWALK TRANSITIONS TO THE INTERNAL DRIVEWAYS.

F.4 THE INTERNAL DRIVEWAYS TO EACH UNIT SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS, EXCLUDING THE WAIVERS GRANTED BY THE BOARD.

F.5 ALL INDIVIDUAL UNIT DRIVEWAYS SHALL HAVE A MINIMUM DEPTH OF 18" AS MEASURED FROM THE FACE OF BUILDING/EDGE OF PAVEMENT TO THE NEAREST PATH OF PUBLIC ACCOMMODATION (IE. TRAVEL WAY OR SIDEWALK).

F.6 APPROPRIATE DIRECTIONAL AND SAFETY SIGNAGE SHALL BE INSTALLED AND MAINTAINED ON THE INTERNAL DRIVEWAYS AS SHOWN ON THE FINAL PLANS PROVIDED BY THE FIRE DEPARTMENT. ALL STOP SIGNS TO BE INSTALLED SHALL BE CONSISTENT WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND GUIDELINES.

F.7 APPLICANT SHALL MAINTAIN THE SIGHT DISTANCE AT THE ENTRANCE BY LIMITING/TRIMMING VEGETATION. THE SIGHT DISTANCE SHALL BE MAINTAINED UNDER THE TOWN ENGINEER'S SUPERVISION.

F.8 INTERNAL CROSS WALKS - INTERNAL CROSSWALKS SHALL COMPLY WITH THE CURRENT MUTCD.

F.9 THE APPLICANT AND/OR ITS SUCCESSOR SHALL BE RESPONSIBLE FOR PROVIDING PERSONNEL AT THE ENTRANCE TO THE PROJECT FOR STADIUM EVENTS. ADDITIONALLY, THE APPLICANT SHALL BE RESPONSIBLE FOR PROVIDING POLICE PERSONNEL AT THE PROPERTY IS NECESSARY HE MAY REQUIRE SUCH UP TO FIFTEEN (15) TIMES PER YEAR. THE POLICE DETAIL WOULD COME ONE HOUR BEFORE THE SCHEDULED PICKUP AND DROP OFF TIMES, AND UP TO THE REAR AND APPROVAL OF THE POLICE ORDERED DETAILS, THE POLICE DETAIL WILL REQUEST PAYMENT FROM THE STADIUM AND IF THE STADIUM REFUSES TO PAY WITHIN A REASONABLE TIME PERIOD, THE APPLICANT SHALL BE RESPONSIBLE FOR PAYING THE POLICE DETAIL UP TO EXCEED \$10,000.00 PER YEAR.

F.10 A TRANSPORTATION COORDINATOR ("TC") WILL BE ASSIGNED THE RESPONSIBILITIES OF COORDINATING THE TRANSPORTATION DEMAND MANAGEMENT ("TDM") PROGRAM AND WILL ALSO PROMOTE ALTERNATIVE TRANSPORTATION MODES BY POSTING LOCAL INFORMATION AND CONSULTING WITH THE TOWN ENGINEER AND POLICE REGARDING TRANSPORTATION. FURTHER, THE TC WILL ALSO PROMOTE RIDESHARING VIA CARPOOLS FOR RESIDENTS. THE APPLICANT WILL RECOMMEND THAT RESIDENTS INTERESTED IN CARPOOLS PROVIDE THEIR CONTACT INFORMATION.

F.11 BICYCLE RACKS WILL BE LOCATED THROUGHOUT THE SITE TO ENCOURAGE THE USE OF BICYCLES FOR COMMUTE AND RECREATION.

CONSERVATION CONSTRUCTION ORDER OF CONDITIONS

(PRE-MODIFICATION):

- C: GENERAL CONDITIONS UNDER MASSACHUSETTS WETLANDS PROTECTION ACT
C.1: FAILURE TO COMPLY WITH ALL CONDITIONS STATED HEREIN, AND WITH ALL RELATED STATUTES AND OTHER REGULATORY MEASURES, SHALL BE DEEMED CAUSE TO REVOKE OR MODIFY THIS ORDER.
C.2: THE ORDER DOES NOT GRANT ANY PROPERTY RIGHTS OR ANY EXCLUSIVE PRIVILEGES; IT DOES NOT AUTHORIZE ANY INJURY TO PRIVATE PROPERTY OR INVASION OF PRIVATE RIGHTS.
C.3: THIS ORDER DOES NOT RELIEVE THE PERMITTEE OR ANY OTHER PERSON OF THE NECESSITY OF COMPLYING WITH ALL OTHER APPLICABLE FEDERAL, STATE, OR LOCAL STATUTES, ORDINANCES, BYLAWS, OR REGULATIONS.
C.4: THE WORK AUTHORIZED HEREUNDER SHALL BE COMPLETED WITHIN THREE YEARS FROM THE DATE OF THIS ORDER UNLESS EITHER OF THE FOLLOWING APPLY:
C.4A: THE WORK IS A MAINTENANCE DREDGING PROJECT AS PROVIDED FOR IN THE ACT, OR
C.4B: THE TIME FOR COMPLETION HAS BEEN EXTENDED TO A SPECIFIED DATE MORE THAN THREE YEARS, BUT LESS THAN FIVE YEARS, FROM THE DATE OF ISSUANCE, IF THIS ORDER IS INTENDED TO BE VALID FOR MORE THAN THREE YEARS. THE EXTENSION DATE AND THE SPECIAL CIRCUMSTANCES WARRANTING THE EXTENDED TIME PERIOD ARE SET FORTH AS A SPECIAL CONDITION IN THIS ORDER.
C.4C: IF THE WORK IS FOR A TEST PROJECT, THIS ORDER OF CONDITIONS SHALL BE VALID FOR NO MORE THAN ONE YEAR.
C.5: THIS ORDER MAY BE EXTENDED BY THE ISSUING AUTHORITY FOR ONE OR MORE PERIODS OF UP TO THREE YEARS PRIOR TO THE EXPIRATION DATE OF THE ORDER. AN ORDER OF CONDITIONS FOR A TEST PROJECT MAY BE EXTENDED FOR ONE ADDITIONAL YEAR UPON WRITTEN APPLICATION BY THE APPLICANT, SUBJECT TO THE PROVISIONS OF 310 CMR 10.05(11)(F).
C.6: IF THIS ORDER CONSTITUTES AN AMENDED ORDER OF CONDITIONS, THIS AMENDED ORDER OF CONDITIONS DOES NOT EXTEND THE ISSUANCE DATE OF THE ORIGINAL FINAL ORDER OF CONDITIONS AND THE ORDER WILL EXPIRE ON _____ UNLESS EXTENDED IN WRITING BY THE DEPARTMENT
C.7: ANY FILL USED IN CONNECTION WITH THIS PROJECT SHALL BE CLEAN FILL. ANY FILL SHALL CONTAIN NO TRASH, REFUSE, RUBBISH, OR DEBRIS, INCLUDING BUT NOT LIMITED TO LUMBER, BRICKS, PLASTER, WIRE, LATH, PAPER, CARDBOARD, PIPE, TIRES, ASHES, REFRIGERATORS, MOTOR VEHICLES, OR PARTS OF ANY OF THE FOREGOING.
C.8: THIS ORDER IS NOT FINAL UNTIL ALL ADMINISTRATIVE APPEAL PERIODS FROM THIS ORDER HAVE ELAPSED, OR IF SUCH AN APPEAL HAS BEEN TAKEN, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION [OR "MASS DEP."] FILE NUMBER 315-1227.
C.9: NO WORK SHALL BE UNDERTAKEN UNTIL THE ORDER HAS BECOME FINAL AND THEN HAS BEEN RECORDED IN THE REGISTRY OF DEEDS OR THE LAND COURT FOR THE DISTRICT IN WHICH THE LAND IS LOCATED, WITHIN THE CHAIN OF TITLE OF THE AFFECTED PROPERTY. IN THE CASE OF RECORDED AND FINAL ORDER SHALL ALSO BE NOTED IN THE REGISTRY OF DEEDS OR THE LAND COURT CERTIFICATE OF TITLE OF THE OWNER OF THE LAND UPON WHICH THE PROPOSED WORK IS TO BE DONE. IN THE CASE OF THE REGISTERED LAND, THE FINAL ORDER SHALL ALSO BE NOTED ON THE LAND COURT CERTIFICATE OF TITLE OF THE OWNER OF THE LAND UPON WHICH THE PROPOSED WORK IS DONE. THE RECORDING INFORMATION SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION PRIOR TO THE END OF THIS ORDER, WHICH FORM MUST BE STAMPED BY THE REGISTRY OF DEEDS, PRIOR TO THE COMMENCEMENT OF WORK.
C.10: A SIGN SHALL BE DISPLAYED AT THE SITE NOT LESS THAN TWO SQUARE FEET OR MORE THAN THREE SQUARE FEET IN SIZE BEARING THE WORDS, "MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION [OR "MASS DEP."] FILE NUMBER 315-1227".
C.11: WHERE THE DEPARTMENT OF ENVIRONMENTAL PROTECTION IS REQUESTED TO ISSUE A SUPERSEDING ORDER, THE CONSERVATION COMMISSION SHALL BE A PARTY TO ALL AGENCY PROCEEDINGS AND HEARINGS BEFORE MASSDEP.
C.12: WHERE THE DEPARTMENT OF ENVIRONMENTAL PROTECTION IS REQUESTED TO ISSUE A SUPERSEDING ORDER, THE CONSERVATION COMMISSION SHALL BE A PARTY TO ALL AGENCY PROCEEDINGS AND HEARINGS BEFORE MASSDEP.
C.13: THE WORK SHALL CONFORM TO THE PLANS AND SPECIAL CONDITIONS REFERENCED IN THIS ORDER.
C.14: ANY CHANGE IN THE PLANS IDENTIFIED IN CONDITION #13 ABOVE SHALL REQUIRE THE APPLICANT TO INQUIRE OF THE RESTORATION COMMISSION IN WRITING WHETHER THE CHANGE IS SIGNIFICANT ENOUGH TO REQUIRE THE FILING OF A NEW NOTICE OF INTENT.
C.15: THE AGENT OR MEMBERS OF THE CONSERVATION COMMISSION AND THE DEPARTMENT OF ENVIRONMENTAL PROTECTION SHALL HAVE THE RIGHT TO ENTER AND INSPECT THE AREA SUBJECT TO THIS ORDER AT ANY REASONABLE HOURS TO EVALUATE COMPLIANCE WITH THE CONDITIONS STATED IN THIS ORDER AND OCCASIONALLY REQUIRE THE SUBMITTAL OF ANY DATA DEEMER NECESSARY BY THE CONSERVATION COMMISSION OR DEPARTMENT FOR THAT EVALUATION.
C.16: THIS ORDER OF CONDITIONS SHALL APPLY TO ANY SUCCESSOR IN INTEREST OR SUCCESSOR IN CONTROL OF THE PROPERTY SUBJECT TO THIS ORDER AND TO ANY CONTRACTOR OR OTHER PERSON PERFORMING WORK CONDITIONED BY THIS ORDER.
C.17: PRIOR TO THE START OF WORK, AND IF THE PROJECT INVOLVES WORK ADJACENT TO A BORDERING VEGETATED WETLAND, THE BOUNDARY OF THE WETLAND IN THE VICINITY OF THE PROPOSED WORK AREA SHALL BE MARKED BY WOODEN STAKES OR FLAGGING, ONCE IN PLACE, THE WETLAND BOUNDARY MARKERS SHALL BE MAINTAINED UNTIL THE END OF THE ORDER. ALL SEDIMENTATION BARRIERS SHALL BE MAINTAINED IN GOOD REPAIR UNTIL ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED WITH VEGETATION OR OTHER MEANS. AT NO TIME SHALL SEDIMENTS BE DEPOSITED IN A WETLAND OR WATER BODY DURING CONSTRUCTION. THE APPLICANT OR DESIGNEE SHALL INSPECT THE EROSION CONTROLS ON A DAILY BASIS AND SHALL REMOVE ACCUMULATED SEDIMENTS AS NEEDED. THE APPLICANT SHALL IMMEDIATELY CONTROL ANY EROSION PROBLEMS THAT OCCUR AT THE SITE AND SHALL ALSO IMMEDIATELY NOTIFY THE CONSERVATION COMMISSION, WHICH RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION AND/OR DAMAGE PREVENTION CONTROLS IF IT MAY BE NECESSARY. SEDIMENTATION BARRIERS SHALL SERVE AS THE LIMIT OF WORK UNLESS ANOTHER LIMIT OF WORK LINE HAS BEEN APPROVED BY THIS ORDER.
C.18: APPLICANT MUST OBTAIN RIGHTS OF ACCESS FOR WORK PROPOSED ON ANY PROPERTY OUTSIDE OF ITS OWNERSHIP AND/OR CONTROL AND THAT ANY MITIGATION REQUESTED BY ADJACENT WHOSE PROPERTY WILL BE USED BY THE APPLICANT SHALL BE SHOWN ON THE FINAL PLANS.
C.19: THE WORK ASSOCIATED WITH THE ORDER ("THE PROJECT"): (1) X IS SUBJECT TO THE MASSACHUSETTS STORMWATER STANDARDS (2) IS NOT SUBJECT TO THE MASSACHUSETTS STORMWATER STANDARDS IF THE WORK IS SUBJECT TO THE STORMWATER STANDARDS, THE PROJECT IS SUBJECT TO THE FOLLOWING CONDITIONS:
C.19A: ALL WORK, INCLUDING SITE PREPARATION, LAND DISTURBANCE, CONSTRUCTION AND REDEVELOPMENT, SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL PLAN, THE CONSTRUCTION PERIOD STORMWATER POLLUTION PREVENTION PLAN REQUIRED BY THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM CONSTRUCTION GENERAL PERMIT AS REQUIRED BY STORMWATER CONDITION 8, CONSTRUCTION PERIOD EROSION, SEDIMENTATION AND POLLUTION CONTROL MEASURES AND BEST MANAGEMENT PRACTICES (BMPs) SHALL REMAIN IN PLACE UNTIL THE SITE IS STABILIZED.
C.19B: NO STORMWATER RUNOFF MAY BE DISCHARGED TO THE POST-CONSTRUCTION STORMWATER BMPs UNLESS AND UNTIL A REGISTERED PROFESSIONAL ENGINEER PROVIDES A CERTIFICATION THAT:
C.19B.i: ALL CONSTRUCTION PERIOD BMPs HAVE BEEN REMOVED OR WILL BE REMOVED BY A DATE CERTAIN SPECIFIED IN THE CERTIFICATION, FOR ANY CONSTRUCTION PERIOD BMPs INTENDED TO BE CONVERTED TO POST-CONSTRUCTION OPERATION FOR STORMWATER ATTENUATION, RECHARGE, AND/OR TREATMENT, THE CONVERSION IS ALLOWED BY THE MASSDEP STORMWATER HANDBOOK BMP SPECIFICATIONS AND THAT THE BMP HAS BEEN PROPERLY CLEANED OR PREPARED FOR POST CONSTRUCTION OPERATION, INCLUDING REMOVAL OF ALL CONSTRUCTION PERIOD SEDIMENT TRAPPED IN INLET AND OUTLET CONTROL STRUCTURES;
C.19B.ii: AS-BUILT FINAL CONSTRUCTION BMP PLANS ARE INCLUDED, SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, CERTIFYING THE SITE IS FULLY STABILIZED;
C.19B.iii: ANY ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM HAVE BEEN REMOVED, AS PER THE REQUIREMENTS OF STORMWATER STANDARD 10;
C.19B.iv: ALL POST-CONSTRUCTION STORMWATER BMPs ARE INSTALLED IN ACCORDANCE WITH THE PLANS (INCLUDING ALL PLANTING PLANS) APPROVED BY THE ISSUING AUTHORITY, AND HAVE BEEN INSPECTED TO ENSURE THAT THEY ARE NOT DAMAGED AND THAT THEY ARE IN PROPER WORKING CONDITION.
C.19B.v: ANY VEGETATION ASSOCIATED WITH POST-CONSTRUCTION BMPs IS SUITABLY ESTABLISHED TO WITHSTAND EROSION.

- C.19C: THE LANDOWNER IS RESPONSIBLE FOR BMP MAINTENANCE UNTIL THE ISSUING AUTHORITY IS NOTIFIED THAT ANOTHER PARTY HAS LEGALLY ASSUMED RESPONSIBILITY FOR BMP MAINTENANCE. PRIOR TO REQUESTING A CERTIFICATE OF COMPLIANCE, OR PARTIAL CERTIFICATE OF COMPLIANCE, THE RESPONSIBLE PARTY (DEFINED IN GENERAL CONDITION 18(C)) SHALL EXECUTE AND SUBMIT TO THE ISSUING AUTHORITY AN OPERATION AND MAINTENANCE PLAN AND STATEMENT OF WORK ("O&M PLAN") FOR THE STORMWATER BMPs IDENTIFYING THE PARTY RESPONSIBLE FOR IMPLEMENTING THE STORMWATER BMP OPERATION AND MAINTENANCE PLAN ("O&M PLAN") AND CERTIFYING THE FOLLOWING:
C.19C.i: THE O&M PLAN IS COMPLETE AND WILL BE IMPLEMENTED UPON RECEIPT OF THE CERTIFICATE OF COMPLIANCE, AND
C.19C.ii: THE FUTURE RESPONSIBLE PARTIES SHALL BE NOTIFIED IN WRITING OF THEIR ONGOING LEGAL RESPONSIBILITY TO OPERATE AND MAINTAIN THE STORMWATER MANAGEMENT BMPs AND IMPLEMENT THE STORMWATER POLLUTION PREVENTION PLAN.
C.19D: POST-CONSTRUCTION POLLUTION PREVENTION AND SOURCE CONTROL SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE LONG-TERM POLLUTION PREVENTION PLAN SECTION OF THE APPROVED STORMWATER REPORT AND, IF APPLICABLE, THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED BY THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM MULTI-SECTOR GENERAL PERMIT.
C.19E: UNLESS AND UNTIL ANOTHER PARTY ACCEPTS RESPONSIBILITY, THE LANDOWNER OR OWNER OF ANY DRAINAGE EASEMENT, ASSUMES RESPONSIBILITY FOR MAINTAINING EACH BMP TO OVERCOME THE PRESUMPTION, THE LANDOWNER OF THE PROPERTY MUST SUBMIT TO THE ISSUING AUTHORITY A LEGALLY BINDING AGREEMENT OF RECORD, ACCEPTABLE TO THE ISSUING AUTHORITY, EVIDENCING THAT ANOTHER ENTITY HAS ACCEPTED RESPONSIBILITY FOR MAINTAINING THE BMP, AND THAT THE PROPOSED RESPONSIBLE PARTY SHALL BE TREATED AS A PERMITTEE FOR PURPOSES OF IMPLEMENTING THE REQUIREMENTS OF CONDITIONS 18(F) THROUGH 18(K) WITH RESPECT TO THAT BMP. ANY FAILURE OF THE PROPOSED RESPONSIBLE PARTY TO IMPLEMENT THE REQUIREMENTS OF CONDITIONS 18(F) THROUGH 18(K) WITH RESPECT TO THAT BMP SHALL BE A VIOLATION IN THE ORDER OF CONDITIONS OR CERTIFICATE OF COMPLIANCE IN THE CASE OF STORMWATER BMPs THAT ARE SERVING MORE THAN ONE LOT UNDER THE LEGALLY BINDING AGREEMENT SHALL IDENTIFY THE LOTS THAT WILL BE SERVICED BY THE STORMWATER BMPs. A PLAN AND EASEMENT DEED THAT GRANTS THE RESPONSIBLE PARTY ACCESS TO PERFORM THE REQUIRED OPERATION AND MAINTENANCE MUST BE SUBMITTED ALONG WITH THE LEGALLY BINDING AGREEMENT.
C.19F: THE RESPONSIBLE PARTY SHALL OPERATE AND MAINTAIN ALL STORMWATER BMPs IN ACCORDANCE WITH THE DESIGN PLANS, THE O&M PLAN, AND THE REQUIREMENTS OF THE MASSACHUSETTS STORMWATER HANDBOOK.
C.19G.1: THE RESPONSIBLE PARTY SHALL MAINTAIN AN OPERATION AND MAINTENANCE LOG FOR THE LAST THREE (3) CONSECUTIVE CALENDAR YEARS OF INSPECTIONS, REPAIRS, MAINTENANCE AND/OR REPLACEMENT OF THE STORMWATER MANAGEMENT SYSTEM OR ANY PART THEREOF, AND DISPOSAL (FOR DISPOSAL THE LOG SHALL INDICATE THE TYPE OF MATERIAL AND THE DISPOSAL LOCATION).
C.19G.2: MAKE THE MAINTENANCE LOG AVAILABLE TO MASSDEP AND THE CONSERVATION COMMISSION ("COMMISSION") UPON REQUEST; AND
C.19G.3: ALLOW MEMBERS AND AGENTS OF THE MASSDEP AND THE COMMISSION TO ENTER AND INSPECT THE SITE TO EVALUATE AND ENSURE THAT THE RESPONSIBLE PARTY IS IN COMPLIANCE WITH THE REQUIREMENTS FOR EACH BMP ESTABLISHED IN THE O&M PLAN APPROVED BY THE ISSUING AUTHORITY.
C.19H: ALL SEDIMENT OR OTHER CONTAMINANTS REMOVED FROM STORMWATER BMPs SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
C.19I: ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM AS DEFINED IN 310 CMR 10.04 ARE PROHIBITED.
C.19J: THE STORMWATER MANAGEMENT SYSTEM APPROVED IN THE ORDER OF CONDITIONS SHALL NOT BE CHANGED OR ALTERED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ISSUING AUTHORITY.
C.19K: AREAS DESIGNATED AS QUALIFYING PERVIOUS AREAS FOR THE PURPOSE OF THE LOW IMPACT SITE DESIGN CREDIT (AS DEFINED IN THE MASSDEP STORMWATER HANDBOOK, VOLUME 3, CHAPTER 1, LOW IMPACT DEVELOPMENT SITE DESIGN CREDITS) SHALL NOT BE CHANGED OR ALTERED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ISSUING AUTHORITY.
C.19L: ACCESS FOR MAINTENANCE, REPAIR, AND/OR REPLACEMENT OF BMPs SHALL NOT BE WITHHELD. ANY FENCING CONSTRUCTED AROUND STORMWATER BMPs SHALL INCLUDE ACCESS GATES AND SHALL BE AT LEAST SIX INCHES ABOVE GRADE TO ALLOW FOR WILDLIFE PASSAGE.
C.20: FOR TEST PROJECTS SUBJECT TO 310 CMR 10.05(11), THE APPLICANT SHALL ALSO IMPLEMENT THE MONITORING PLAN AND THE RESTORATION PLAN SUBMITTED WITH THE NOTICE OF INTENT. IF THE CONSERVATION COMMISSION OR DEPARTMENT DETERMINES THAT THE TEST PROJECT THREATENS THE PUBLIC HEALTH, SAFETY OR THE ENVIRONMENT, THE APPLICANT SHALL IMPLEMENT THE REMOVAL PLAN SUBMITTED WITH THE NOTICE OF INTENT OR MODIFY THE PROJECT AS DIRECTED BY THE CONSERVATION COMMISSION OR THE DEPARTMENT.
D.1: IS A MUNICIPAL BYLAW OR ORDINANCE APPLICABLE _____ YES ___X___ NO
D.3: THE COMMISSION ORDERS THAT ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING CONDITIONS AND WITH THE NOTICE OF INTENT REFERENCED ABOVE TO THE EXTENT THAT THE FOLLOWING CONDITIONS MODIFY OR DIFFER FROM THE PLANS, SPECIFICATIONS, OR OTHER PROPOSALS SUBMITTED WITH THE NOTICE OF INTENT, THE CONDITIONS CONTROL, SPECIAL CONDITIONS RELATING TO MUNICIPAL ORDINANCE OR BYLAW ARE AS FOLLOWS (IF YOU NEED MORE SPACE FOR ADDITIONAL CONDITIONS, ATTACH A TEXT DOCUMENT)
G: PRIOR TO COMMENCEMENT OF WORK, THIS ORDER OF CONDITIONS MUST BE RECORDED IN THE REGISTRY OF DEEDS OR THE LAND COURT FOR THE DISTRICT IN WHICH THE LAND IS LOCATED, WITHIN THE CHAIN OF TITLE OF THE AFFECTED PROPERTY. IN THE CASE OF RECORDED LAND, THE FINAL ORDER SHALL ALSO BE NOTED IN THE REGISTRY'S GRANTOR INDEX UNDER THE NAME OF THE OWNER OF THE LAND SUBJECT TO THE ORDER. IN THE CASE OF REGISTERED LAND, THIS ORDER SHALL ALSO BE NOTED ON THE LAND COURT CERTIFICATE OF TITLE OF THE OWNER OF THE LAND SUBJECT TO THE ORDER OF CONDITIONS. THE RECORDING INFORMATION ON PAGE SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION LISTED BELOW.
1: THIS DOCUMENT SHALL BE INCLUDED IN ALL CONSTRUCTION CONTRACTS, SUBCONTRACTS, AND SPECIFICATIONS DEALING WITH THE WORK PROPOSED AND SHALL SUPERSEDE ANY CONFLICTING CONTRACT REQUIREMENTS. THE APPLICANT SHALL ASSURE THAT ALL CONTRACTORS, SUBCONTRACTORS, AND OTHER PERSONNEL PERFORMING THE PERMITTED WORK ARE FULLY AWARE OF THE PERMIT'S TERMS AND CONDITIONS. THEREAFTER, THE CONTRACTOR SHALL BE JOINTLY LIABLE FOR ANY VIOLATION OF THIS ORDER RESULTING FROM FAILURE TO COMPLY WITH ITS CONDITIONS.
2: A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE APPLICANT AND CONTRACTOR NO LATER THAN 72 HOURS (THREE BUSINESS DAYS) PRIOR TO STARTING ANY ASPECT OF THE PROJECT. AT THIS MEETING THE CONTRACTOR SHALL:
1.a: FURNISH THE CONSERVATION AGENT WITH THEIR NAMES, ADDRESS AND 24-HOUR TELEPHONE CONTACT NUMBER.
1.b: SIGN SHEET ATTACHED AT THE END OF THIS ORDER OF CONDITIONS;
1.c: SUBMIT FINAL SWPPP THAT INCLUDES SPECIAL CONDITIONS LISTED HEREIN AND DISCUSS PLAN FOR EROSION CONTROL AND STORMWATER MAINTENANCE DURING CONSTRUCTION INCLUDING PLAN FOR ADDITIONAL EROSION CONTROLS IF REQUIRED;
1.d: PROVIDE EPA NPDES PERMIT NUMBER AND WRITTEN AUTHORIZATION.
3: TO ASSURE AN IMMEDIATE RESPONSE TO THE COMMISSION/AGENT, THE APPLICANT SHALL PROVIDE THE WALPOLE CONSERVATION COMMISSION AGENT WITH THE NAME AND A 24-HOUR PHONE NUMBER OF THE ON-SITE CONSTRUCTION SUPERVISOR WHO WILL BE RESPONSIBLE TO COORDINATE THE CONSTRUCTION AND ENSURE COMPLIANCE WITH THIS ORDER.
4: IF UNFORESEEN PROBLEMS OCCUR DURING CONSTRUCTION WHICH MAY AFFECT THE STATUTORY INTERESTS OF THE WETLANDS PROTECTION ACT OR UPON DISCOVERY BY EITHER THE CONSERVATION COMMISSION, ITS AGENT, OR THE APPLICANT, SUCH PROBLEM SHALL REQUIRE IMMEDIATE NOTIFICATION TO THE COMMISSION AND AN IMMEDIATE MEETING SHALL BE HELD BETWEEN THE COMMISSION OR ITS AGENT, THE APPLICANT, AND OTHER CONCERNED PARTIES TO DETERMINE THE CORRECT MEASURES TO BE EMPLOYED. THE APPLICANT SHALL THEN ACT TO CORRECT THE PROBLEM USING THE CORRECTIVE MEASURES AGREED UPON BY THE APPLICANT AND AGENT OF THE COMMISSION. SUBSEQUENT TO RESOLUTION, THE ACTIVITY AND RESULTING ACTIONS SHALL BE DOCUMENTED IN WRITING.
5: UPON COMPLETION OF THIS PROJECT, THE APPLICANT SHALL SUBMIT THE FOLLOWING TO THE CONSERVATION COMMISSION/ AGENT TO RECEIVE A CERTIFICATE OF COMPLIANCE.
1.a: DEP FORM (8A) REQUESTING A CERTIFICATE OF COMPLIANCE.
1.b: A WRITTEN STATEMENT FROM A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH CERTIFYING THAT THE WORK HAS BEEN COMPLETED AS SHOWN ON THE PLANS(S) AND DOCUMENTS REFERENCED ABOVE, AND AS CONDITIONED BY THE COMMISSION; AND
1.c: COMPLIANCE WITH DEP CONDITIONS #18 AND #19
1.d: AN "AS-BUILT" PLAN PREPARED AND SIGNED AND STAMPED BY REGISTERED PROFESSIONAL LAND SURVEYOR OF THE COMMONWEALTH FOR THE PUBLIC RECORD;

- A: A FINAL REPORT FROM A BOTANIST OR WETLAND PROFESSIONAL DOCUMENTING IN WRITING AND PICTURES HOW THE WETLAND RESTORATION AREAS MEET THE REQUIREMENTS OF THIS ORDER;
1.f: A FINAL REPORT FROM A QUALIFIED PROFESSIONAL DOCUMENTING COMPLIANCE WITH THE PROJECT'S APPROVED INVASIVE SPECIES CONTROL PLAN.
1.g: THE APPLICANT SHALL HAVE SUBMITTED TO NHESP THE REQUIRED VERNAL POOL CERTIFICATION DOCUMENTS AND RECEIVED NHESP'S DETERMINATION RELATIVE TO POTENTIAL VERNAL POOL (PVP), 1, 2 AND 3 AS SHOWN ON THE PLANS.
5H: THE APPLICANT MAY RECEIVE A PARTIAL CERTIFICATE OF COMPLIANCE (PARTIAL) FOR THE RENTAL (LOT 1) SO LONG AS THE LOT IN QUESTION IS IN COMPLIANCE WITH A-G ABOVE AND ANY STORM WATER INFRASTRUCTURE ON THE ADJACENT LOT BUT TAKING INTO ACCOUNT THE PARTIAL IS IN PLACE AND IN COMPLIANCE WITH THE PLANS.
6: IT IS THE RESPONSIBILITY OF THE APPLICANT TO PROCURE ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL PERMITS AND APPROVALS ASSOCIATED WITH THIS PROJECT AND TO PROVIDE COPIES TO THE CONSERVATION COMMISSION/ AGENT.
7: ANY FUTURE WORK NOT COVERED BY THIS ORDER OF CONDITIONS WITHIN WETLAND RESOURCE AREAS BUFFER ZONES WILL REQUIRE THAT NOTICE OF INTENT OR REQUEST FOR DETERMINATION OF APPLICABILITY BE FILED WITH THE COMMISSION.
8: NO 200-FOOT RIVERFRONT AREA IMPACTS ARE PERMITTED BY THIS ORDER OF CONDITIONS. THE COMMISSION DETERMINED THAT THE PROJECT SITE PROVIDED ABOVE IS NOT AN EROSION CONTROL AND DEMOLITION PLAN SHEET 9 OF THE REFERENCED PLAN OF RECORD AND DETAIL SHEET 38.
9: PRIOR TO BEGINNING ANY WORK, THE VEGETATED WETLAND BOUNDARIES, VERNAL POOL BOUNDARIES, 200-FOOT RIVERFRONT AREA BOUNDARY AND NOT ALTERATION AREA/LIMIT OF WORK BOUNDARIES SHOWN ON THE ABOVE PLAN OF RECORD SHALL BE STAKED OR FLAGGED IN THE FIELD AND SHALL REMAIN IN PLACE UNTIL THE EARLIER OF THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE OR DIRECTED BY THE CONSERVATION AGENT. ALL FLAGS USED FOR THE ABOVE PURPOSES SHALL BE OF A COLOR DIFFERENT FROM OTHER FLAGGING USED ON THE SITE.
10: THE LOCATION OF THE EROSION CONTROL BARRIER SHALL BE SURVEY STAKED IN THE FIELD AND APPROVED BY THE CONSERVATION COMMISSION/AGENT PRIOR TO TREE CUTTING.
11: PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE EROSION CONTROL BARRIER (COMPOST TUBE MINIMUM 10-12-INCHES) SHALL BE INSTALLED AND STAKED IN THE EROSION CONTROL AND DEMOLITION PLAN SHEET 9 OF THE REFERENCED PLAN OF RECORD AND DETAIL SHEET 38.
12: THE EROSION CONTROL BARRIER AS SHOWN ON THE PLAN OF RECORD SHALL SERVE AS THE LIMIT OF WORK, AND LIMIT OF CLEARING AND GRADING.
13: THE EROSION CONTROL BARRIER SHALL BE MAINTAINED UNTIL ALL DISTURBED SOILS HAVE BEEN PERMANENTLY STABILIZED AND THE CONSERVATION COMMISSION'S AGENT AGREED, IN WRITING THAT THEY ARE NO LONGER NEEDED.
14: THE CONSERVATION COMMISSION'S AGENT MAY REQUIRE ADDITIONAL EROSION CONTROLS AND AS PER THE GENERAL CONDITIONS IN THE ORDER.
15: UPON COMPLETION OF THE PROJECT AND APPROVAL OF THE CONSERVATION COMMISSION/AGENT, THE EROSION CONTROL BARRIER SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16: ANY SOLID WASTE, OIL AND GAS OR HAZARDOUS MATERIALS ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED FROM ALL WETLAND RESOURCE AREAS AND REUSED, RECYCLED OR DISPOSED OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND BYLAWS.
17: ANY SUPPLIES, DEBRIS, FILL OR OTHER MATERIALS SHALL BE STOCKPILED AWAY FROM THE INLAND AND INTERMITTENT STREAMS, BAY AND RIVERFRONT AREA, AND AT A LOCATION TO PREVENT SUCH MATERIALS FROM ENTERING THOSE RESOURCE AREAS. UNDER NO CIRCUMSTANCES SHALL BE STOCKPILED OF MATERIAL OUT THE PERMITTING LIMIT OF WORK.
18: A CERTIFIED EROSION SPECIALIST ("CES") OR DESIGNATED PERSON EXPERIENCED IN EROSION CONTROL SHALL OVERSEE INSPECTION OF THE EROSION CONTROL BARRIER, THE NAME, PHONE NUMBER, AND CREDENTIALS OF THE CES SHALL BE PROVIDED TO THE CONSERVATION COMMISSION/AGENT AT THE PRECONSTRUCTION MEETING.
19: THE CES OR DESIGNATED PERSON EXPERIENCED IN EROSION CONTROL SHALL INSPECT EROSION CONTROL BARRIER AT LEAST WEEKLY AND PRIOR TO AND AFTER STORM EVENTS OF 1" OR GREATER UNTIL A CERTIFICATE OF COMPLIANCE IS ISSUED.
20: THE WEEKLY EROSION CONTROL INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE COMMISSION/AGENT UPON REQUEST UNTIL A CERTIFICATE OF COMPLIANCE IS ISSUED. THE NAME AND CONTACT NUMBER OF THE INSPECTOR SHALL BE PROVIDED IN EACH REPORT.
21: IN PROXIMITY TO RESOURCE AREAS, SITE GRADING AND CONSTRUCTION SHALL BE SCHEDULED DURING THE DRY SEASON WHENEVER POSSIBLE, TO AVOID PERIODS ABOVE TO THE EXTENT THAT THE FOLLOWING CONDITIONS MODIFY OR DIFFER FROM THE PLANS, SPECIFICATIONS, OR OTHER PROPOSALS SUBMITTED WITH THE NOTICE OF INTENT, THE CONDITIONS CONTROL, SPECIAL CONDITIONS RELATING TO MUNICIPAL ORDINANCE OR BYLAW ARE AS FOLLOWS (IF YOU NEED MORE SPACE FOR ADDITIONAL CONDITIONS, ATTACH A TEXT DOCUMENT)
22: A DESCRIPTION OF LOGGING / TREE REMOVAL OPERATIONS SHALL BE PROVIDED TO THE COMMISSION/ AGENT THAT INCLUDES TEMPORARY LOGGING ROAD LOCATIONS, TEMPORARY STREAM CROSSING DETAILS, LOCATION OF LOGS AND LOGS, AND APPROVAL OF THE AGENT. TEMPORARY STREAM CROSSINGS SHALL NOT IMPED WATER FLOW OR IMPACT WATER QUALITY WITHIN THE SURFACE WATERS.
23: ALL DISTURBED AREAS AND SLOPES SHALL BE LOAMED AND SEEDED OR STABILIZED THROUGH THE USE OF EROSION CONTROL BLANKETS OR OTHER APPROVED EROSION CONTROL MEASURES REQUIRED BY THE SWPPP UNTIL NOVEMBER 1 OF EACH YEAR, IF POSSIBLE. NO DISTURBED AREAS OR STOCKPILES OF MATERIAL SHALL BE LEFT UNPROTECTED OR WITHOUT EROSION CONTROLS DURING WINTER.
24: THE WETLAND REPLICATION AREA CONSISTING OF 7,106 S.F. DIVIDED INTO FOUR AREAS, AS DEPICTED ON SHEET 52, SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE ADJACENT ROAD CONSTRUCTION. THE PLANTING SHALL BE HELD JOINTLY DURING THE FIRST GROWING SEASON AFTER START OF SITE CONSTRUCTION.
25: THE WETLAND FILL AND CROSSING SHALL CONFORM TO THE APPROVED PLAN (SHEETS 10, 50 & 51) ANY CHANGES OR ALTERATION TO THE APPROVED PLAN SHALL BE SUBMITTED IN WRITING TO THE CONSERVATION COMMISSION/ AGENT.
26: A WETLAND SPECIALIST SHALL MONITOR THE PROGRESS OF THE REPLICATION AREA PROVIDING THE CONSERVATION COMMISSION/AGENT WITH A WRITTEN REPORT DOCUMENTING THE FOLLOWING REVIEW AND APPROVAL STAGES: 1) THE ELEVATION AND SOIL PROFILE OF THE SUBGRADE EXCAVATED 12-INCHES BELOW ADJACENT WETLANDS; 2) THE ORGANIC SOILS TO BE USED FOR FINAL GRADE; 3) MAKING NOTE THAT THE FINAL GRADE HAS NOT BEEN COMPACTED AND THE GRADE IS UNEVEN; 4) THE PLANT STOCK TO BE USED AND METHODS FOR PLANTING; AND 5) THE PLANTINGS THAT HAVE BEEN MADE.
27: THE WETLAND SPECIALIST SHALL PROVIDE THE CONSERVATION COMMISSION/AGENT WITH INSPECTION REPORTS IN EARLY SPRING (MAY-JUNE) AND EARLY FALL (SEPT-OCT) WITH PHOTOGRAPHS AND WRITTEN DOCUMENTATION OF PLANT GROWTH, SOIL DEVELOPMENT, AND RECOMMENDATIONS TO ACHIEVE COMPLIANCE WITH THE REPLICATION REQUIREMENTS UNTIL TWO YEARS AFTER THE INITIAL PLANTING.
28: THE REPLICATION AREA WILL NOT BE CONSIDERED COMPLETE UNTIL TWO YEARS HAVE PASSED SINCE THE INITIAL PLANTINGS OCCURRED, AND THE REPLICATION AREA MEETS THE REQUIREMENTS OF 310 CMR 10.55(4)(B) AS PROVIDED IN WRITING BY THE WETLAND SPECIALIST.
29: A PRE-CONSTRUCTION MEETING SHALL OCCUR WITH THE APPLICANT, ENGINEER, CONSTRUCTION AGENT AND MANAGER PRIOR TO ANY WORK STARTING AT WHICH TIME THE CONSERVATION AGENT WILL RECEIVE THE NAME(S) AND TELEPHONE NUMBER(S) OF THE PERSON(S) RESPONSIBLE ON-SITE FOR COMPLIANCE WITH THIS ORDER.
30: A COPY OF THE FINAL PLAN SET SUBMITTED TO THE ZBA SHALL BE PROVIDED TO THE CONSERVATION COMMISSION/ AGENT ONE WEEK PRIOR TO THE PRECONSTRUCTION MEETING. ANY DESIGN DETAILS DIFFERING FROM THE O&M PLANS-OF-RECORD SHALL BE MADE CLEAR IN WRITING IN A LETTER ACCOMPANYING THE FINAL PLAN SET. THE LETTER SHALL STATE AN OPINION AS TO WHY SAID DESIGN CHANGES WOULD NOT REQUIRE AN AMENDED ORDER OF CONDITIONS OR NEW NOTICE OF INTENT.
31: A COPY OF THIS ORDER OF CONDITIONS, AND FINAL REFERENCE PLANS LAST REVISED DATED 4-13-21 OR LATER AS APPROVED BY THE COMMISSION EITHER REFERENCED IN THE FILE OR THROUGH ISSUANCE OF AN AMENDED ORDER OF CONDITIONS OR NEW ORDER OF CONDITIONS, SHALL BE ON THE SITE UPON COMMENCEMENT AND DURING ANY SITE WORK FOR CONTRACTORS TO VIEW AND ADHERE TO.
32: THE CONSERVATION COMMISSION/AGENT SHALL BE PROVIDED A COPY OF THE DRAFT SWPPP FOR REVIEW AND A SIGNED COPY OF THE FINAL SWPPP. PRIOR TO COMMENCEMENT OF ACTIVITIES, THE COMMISSION WILL REQUIRE A TWO-WEEK REVIEW PERIOD FOR THE DRAFT SWPPP REVIEW.

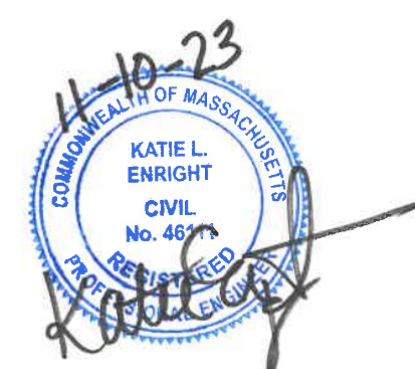
- NO VEHICLE OR OTHER MACHINERY REFUELING, LUBRICATION, OR MAINTENANCE SHALL TAKE PLACE WITHIN 100 FEET OF ANY WETLAND RESOURCE AREA. EQUIPMENT SHALL BE INSPECTED REGULARLY FOR LEAKS. ANY LEAKING HYDRAULIC LINES, CYLINDERS OR ANY OTHER COMPONENTS SHALL BE REPAIRED IMMEDIATELY. A FUEL OR HYDRAULIC OIL SPILL KIT SHALL BE MAINTAINED AT ALL TIMES ON SITE, PER WALPOLE FIRE DEPARTMENT SPECIFICATIONS. IN THE EVENT OF A SPILL, THE APPLICANT SHALL TAKE IMMEDIATE MEASURES TO CONTAIN SUCH SPILL AND SHALL NOTIFY THE FIRE DEPARTMENT.
34: SUMMER STREET SHALL BE MAINTAINED IN A CLEAN CONDITION FREE FROM DIRT AND DEBRIS IN ORDER TO KEEP SILTATION FROM ENTERING MUNICIPAL STORM DRAIN SYSTEM OR ADJACENT RESOURCE AREAS.
35: ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. CONSTRUCTION TRASH (MATERIAL THAT CAN BE BLOWN INTO THE ADJACENT LOT BUT TAKING INTO ACCOUNT THE PARTIAL IS IN PLACE AND IN COMPLIANCE WITH THE PLANS) SHALL BE PICKED UP BY THE END OF THE WORK DAY AND APPROPRIATELY DISPOSED.
36: INVASIVE SPECIES MATERIALS ACCUMULATED DURING SITE WORK SHALL BE REMOVED FROM THE SITE IN AN APPROPRIATE MANNER. INVASIVE PLANT MATERIAL SHALL BE DISPOSED OFFSITE IN AN APPROPRIATE MANNER, REMOVED OFFSITE TO A PROCESSING FACILITY EQUIPPED IN HANDLING INVASIVE PLANT MATERIAL IN COMPLIANCE WITH THE INVASIVE VEGETATION CONTROL PLAN OF THE SUPPLEMENTAL DATA REPORT, DATED JANUARY 2021.
37: THE "ENVIRONMENTALLY SENSITIVE AREA BEYOND THIS POINT-DO NOT ALTER" SIGNS SHALL BE INSTALLED IN CONJUNCTION WITH ROAD CONSTRUCTION AND BACKFILL OF FOUNDATIONS FOR EACH PHASE OF THE PROJECT.
38: THE CONSTRUCTION PERIOD STORMWATER SHALL BE MANAGED TO PREVENT SEDIMENTATION AND EROSION OF THE WETLANDS.
39: FOR EACH OF THE STORMWATER BASINS AND CONSTRUCTED STORMWATER BOWNS, THE CONSERVATION COMMISSION/ AGENT SHALL BE NOTIFIED TWO WEEKS PRIOR TO POST-CONSTRUCTION STORMWATER DISCHARGE FOR AN ON-SITE INSPECTION OF THE BASIN.
40: EXCAVATION OF EACH INFILTRATION BASIN/SYSTEM SHALL BE OBSERVED BY THE CONSERVATION COMMISSION OR COMMISSION'S AGENT PRIOR TO INSPECTION AND BEFORE ANY CONSTRUCTION AND RESTORATION CONSTRUCTION PRIOR TO PLACEMENT OF FINAL LOAM AND SEED SHALL BE DOCUMENTED AND THE INFORMATION PROVIDED IN WRITING FOR THIS INSPECTION. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION SEQUENCING PLAN AND NARRATIVE TO INCLUDE THE SCHEDULE OF THE STORM WATER SYSTEM INSTALLATION, PROVISIONS TO PROTECT STORMWATER BMPs DURING CONSTRUCTION AND RESTORATION OF DAMAGED AREAS PRIOR TO BMPs COMING ONLINE TO ENSURE THEY OPERATE AS DESIGNED AFTER CONSTRUCTION IS COMPLETE. THE CONSTRUCTION SEQUENCING PLAN SHALL ALSO PROVIDE THE ANTICIPATED LOCATIONS FOR STAGING AND STOCKPILE AREAS, NO STOCKPILING OR EQUIPMENT STAGING SHALL OCCUR WITHIN THE 200-FOOT RIVERFRONT AREA.
41: THE CONSTRUCTION SEQUENCING PLAN SHALL ALSO DESCRIBE THE PHASING FOR SITE CLEARING OF VEGETATION. PRIOR TO CLEARING OF THE NEXT CONSTRUCTION PHASE, THE DISTURBED PORTION OF THE SITE SHALL BE FULLY STABLE.
42: PROVIDE PROVISIONS IN THE DRAFT AND FINAL SWPPP TO PROTECT INFILTRATION BASINS DURING CONSTRUCTION TO ENSURE THEY OPERATE AS DESIGNED AFTER CONSTRUCTION IS COMPLETE.
43: NO FINAL INFILTRATION BASIN OR CONSTRUCTED STORMWATER WETLANDS SHALL BE USED FOR TEMPORARY CONSTRUCTION-RELATED SEDIMENT CONTROL.
44: THE CONTRACTOR SHALL PROVIDE SPECIFICATIONS FOR TEMPORARY AND FINAL SEEDING.
45: THE DRAFT AND FINAL SWPPP SHALL INCLUDE MEASURES TO PREVENT ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM.
46: THE AREA BETWEEN THE "ENVIRONMENTALLY SENSITIVE AREA BEYOND THIS POINT-DO NOT ALTER" AND THE WETLAND RESOURCE AREAS SHALL REMAIN AS NO ALTERATION AREAS IN PERPETUITY. ANY VARIATION SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION/ AGENT FOR REVIEW AND APPROVAL.
47: THE "ENVIRONMENTALLY SENSITIVE AREA BEYOND THIS POINT-DO NOT ALTER" SIGN AND BEHIND SIGN MODELS (D, C, AND E ON SHEET C-1 AND C-2 (3 SIGNS) AND THE SIGN (1 SIGN) LOCATED AT THE THREE PARKING SPOTS AT ROADWAY #4 SHALL BE INSTALLED AT THE TREE LINE/EROSION CONTROL LINE (SHEET C9).
48: THE "ENVIRONMENTALLY SENSITIVE AREA BEYOND THIS POINT -DO NOT ALTER" SIGN (SHEET 52) SHALL BE INSTALLED AT THE LAYOUT AND MATERIALS PLAN (SHEETS C12-C16) AND AS SPECIFIED IN CONDITION #49 SHALL REMAIN IN PERPETUITY AND BE REPLACED IF DAMAGED, REMOVED OR UNREADABLE.
49: ONCE THE RETAINING WALL AND THE CHAIN LINK FENCE AS SHOWN ON SHEET C12 LAYOUT AND MATERIALS PLAN ARE CONSTRUCTED, THE EXISTING TREE LINE BETWEEN THE PARKING LOT, SHALL REMAIN UNALTERED AS A VERNAL POOL SPECIES TRAVEL CORRIDOR.
50: THERE SHALL BE NO ADDITIONAL ALTERATION OF THE RIVERFRONT AREA OTHER THAN THAT NECESSARY TO MAINTAIN THE EXISTING TRAIL IN ITS NATURAL CONDITION AND PROPOSED ACCESS TRAILS.
51: NON-ORGANIC FERTILIZERS, CHEMICAL PESTICIDES, AND CHEMICAL LANDSCAPE CARE PRODUCTS FOR USE IN OUTSIDE AREAS ARE PROHIBITED WITHIN 100-FEET OF WETLAND RESOURCE AREAS.
52: THE DEVELOPMENT'S O&M PLAN SHALL BE ON-SITE WITH THE SITE MANAGER FOR EACH RESIDENTIAL AREA.
53: THE DEVELOPMENT'S O&M PLAN SHALL CLEARLY STATE THE PROHIBITION OF NON-ORGANIC FERTILIZERS AND THE PROHIBITION OF PESTICIDES AND LANDSCAPE CARE CHEMICALS WITHIN 100 FEET OF THE WETLANDS; REQUIREMENTS TO POST SIGNS AS REFERENCED IN CONDITION #49; AND IMPLEMENT DOG CURBING RULES (PICK UP AND PROPER DISPOSAL) TO FURTHER REDUCE NUTRIENT LOADING WITHIN WETLAND RESOURCE AREAS.
54: THE STORMWATER BASINS SHALL BE MANAGED FOR MOSQUITO CONTROL.
55: THE ARBORVITAE PLANTS (OR A COMPARABLE SPECIES) SHOWN ADJACENT TO THE REPLICATION AREAS SHOWN ON SHEET 52 AS WELL AS THOSE SHOWN ON SHEET 31 BEHIND OWNERSHIP UNITS 4 AND 5 (ON LOT 2) SHALL REMAIN IN PERPETUITY AND BE REPLACED IF DAMAGED OR REMOVED.
56: THE DOG PARK SHALL BE MANAGED IN A MANNER TO PREVENT ANY DISCHARGE OF NUTRIENTS TO THE WETLAND RESOURCE AREAS.
57: STORMWATER MANAGEMENT CERTIFICATE: THE CONSERVATION COMMISSION/AGENT SHALL BE PROVIDED AN ANNUAL STORMWATER MANAGEMENT REPORT OF MAINTENANCE WITH INSPECTION DATES AND MAINTENANCE ACTIVITIES LISTED FOR EACH STORMWATER COMPONENT. THE NAME AND CONTACT INFORMATION OF THE PERSON RESPONSIBLE FOR SUCH MAINTENANCE AND REPORT SHALL BE INCLUDED. THE REPORT SHALL BE SUBMITTED NO LATER THAN 12/31 OF EACH YEAR FOR STORMWATER CERTIFICATE.
58: MAINTENANCE OF THE STORMWATER BASINS AS STATED IN THIS ORDER OF CONDITIONS AND THE O & M PLAN SHALL NOT REQUIRE AN ADDITIONAL FILING WITH THE CONSERVATION COMMISSION/AGENT.
59: SIGNED BY CONTRACTOR PRIOR TO BEGINNING ANY ASPECT OF PROJECT.



PREPARED FOR: FRH REALTY LLC c/o FAIRFIELD RESIDENTIAL 5 BURLINGTON WOODS, SUITE 203 BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT SUMMER STREET WALPOLE, MA

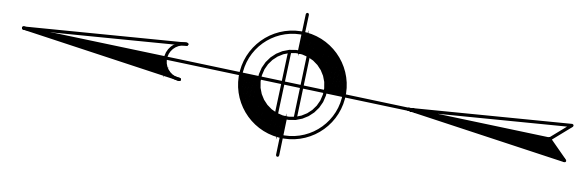
Table with 4 columns: NO, BY, DATE, DESCRIPTION. Contains 5 revision entries.



SITE PLAN

SITE PLAN NOTES

Table with 2 columns: FIELD, VALUE. Includes DATE (JUNE 20, 2023), PROJECT NUMBER (19097), DESIGNED BY (PB/KE/KF), DRAWN BY (PB/MB/KF/KL), CHECKED BY (KE).



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**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

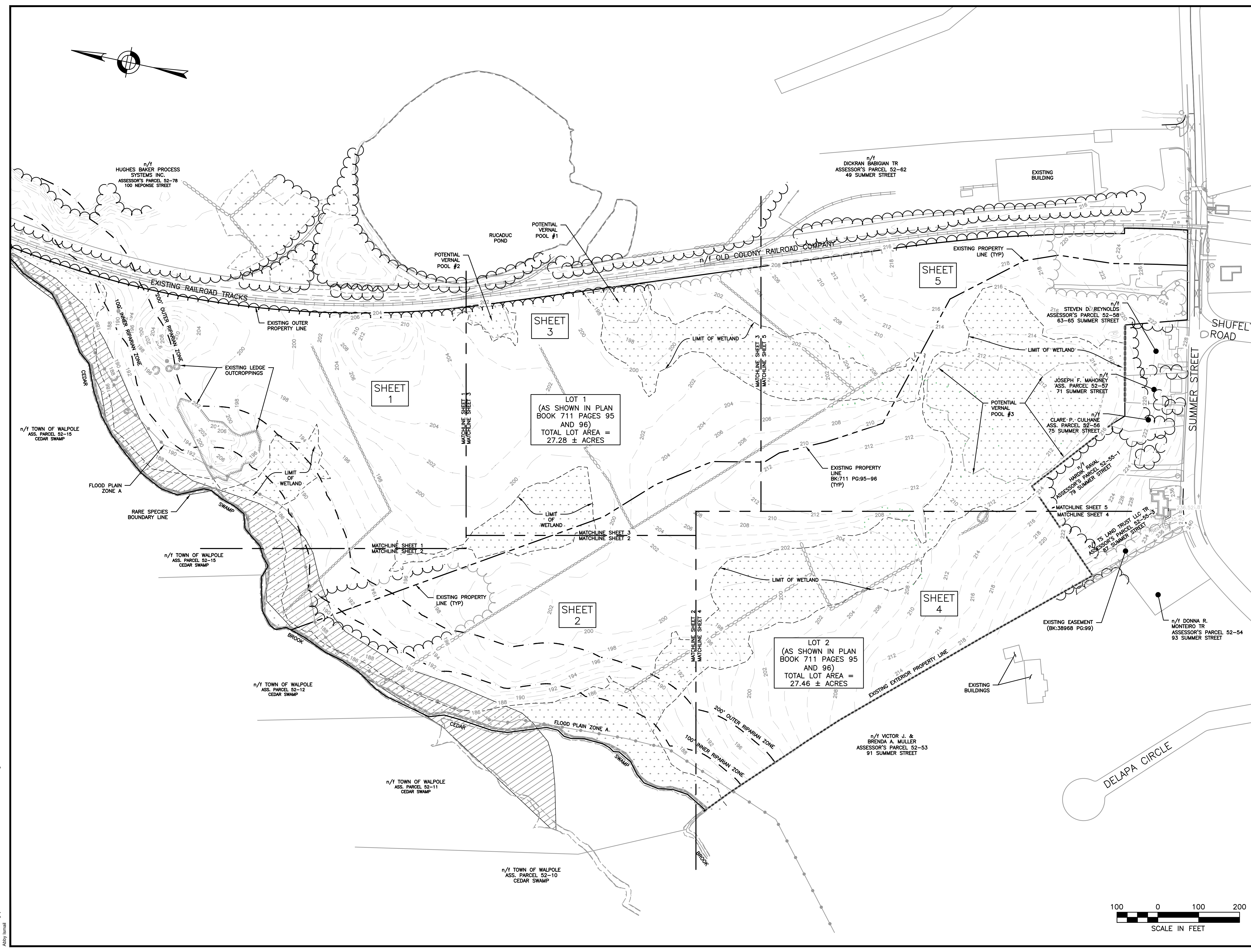


SITE PLAN

LOCUS / KEY PLAN

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.5



11/7/2023 \\Egnyte\dw\CAD\19097\19097 04 - Lot 2\CURRENT\19097 - COVER.dwg
 Abby Irmal



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PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA

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SITE
PLAN

EXISTING
CONDITIONS
PLAN 1 OF 5

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

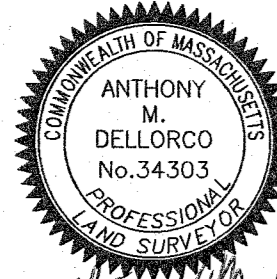
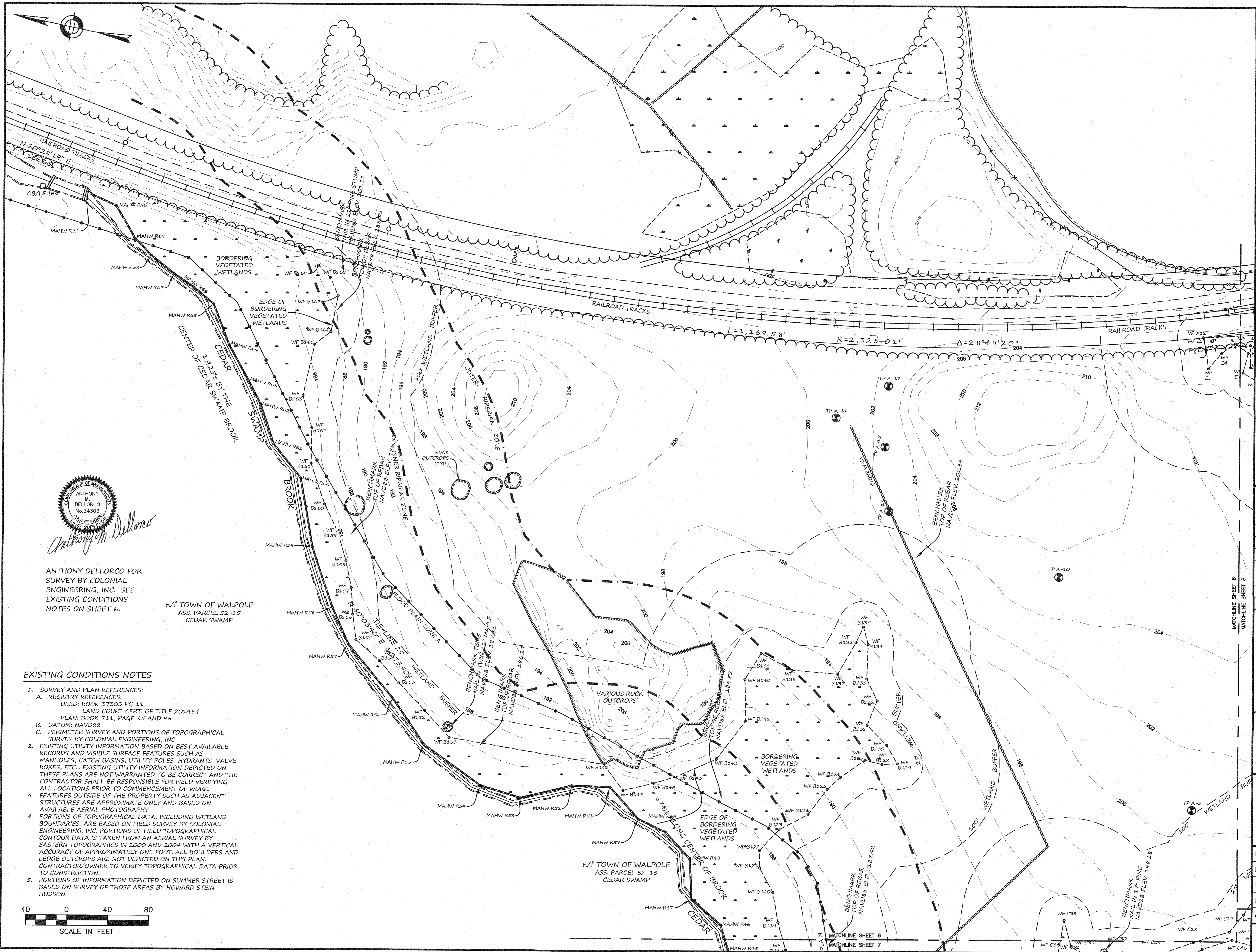
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SHEET 6 OF 65



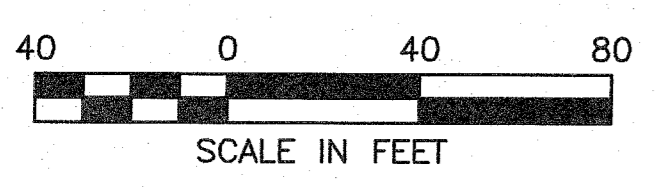
Anthony M. Dellorco

ANTHONY DELLORCO FOR
SURVEY BY COLONIAL
ENGINEERING, INC. SEE
EXISTING CONDITIONS
NOTES ON SHEET 6.

W/T TOWN OF WALPOLE
ASS. PARCEL 52-15
CEDAR SWAMP

EXISTING CONDITIONS NOTES

- SURVEY AND PLAN REFERENCES:
 - REGISTRY REFERENCES:
DEED: BOOK 37303 PG 11
LAND COURT CERT. OF TITLE 201454
PLAN: BOOK 711, PAGE 95 AND 96
 - DATUM: NAVD83
 - PERIMETER SURVEY AND PORTIONS OF TOPOGRAPHICAL SURVEY BY COLONIAL ENGINEERING, INC.
- EXISTING UTILITY INFORMATION BASED ON BEST AVAILABLE RECORDS AND VISIBLE SURFACE FEATURES SUCH AS MANHOLES, CATCH BASINS, UTILITY POLES, HYDRANTS, VALVE BOXES, ETC... EXISTING UTILITY INFORMATION DEPICTED ON THESE PLANS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS PRIOR TO COMMENCEMENT OF WORK.
- FEATURES OUTSIDE OF THE PROPERTY SUCH AS ADJACENT STRUCTURES ARE APPROXIMATE ONLY AND BASED ON AVAILABLE AERIAL PHOTOGRAPHY.
- PORTIONS OF TOPOGRAPHICAL DATA, INCLUDING WETLAND BOUNDARIES, ARE BASED ON FIELD SURVEY BY COLONIAL ENGINEERING, INC. PORTIONS OF FIELD TOPOGRAPHICAL CONTOUR DATA IS TAKEN FROM AN AERIAL SURVEY BY EASTERN TOPOGRAPHICS IN 2000 AND 2004 WITH A VERTICAL ACCURACY OF APPROXIMATELY ONE FOOT. ALL BOULDERS AND LEDGE OUTCROPS ARE NOT DEPICTED ON THIS PLAN. CONTRACTOR/OWNER TO VERIFY TOPOGRAPHICAL DATA PRIOR TO CONSTRUCTION.
- PORTIONS OF INFORMATION DEPICTED ON SUMMER STREET IS BASED ON SURVEY OF THOSE AREAS BY HOWARD STEIN HUDSON.



8/6/2023 11:50:07 AM - Lot 20/CURRENT/19097 - Existing Conditions.dwg
Patrick Bogue



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 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

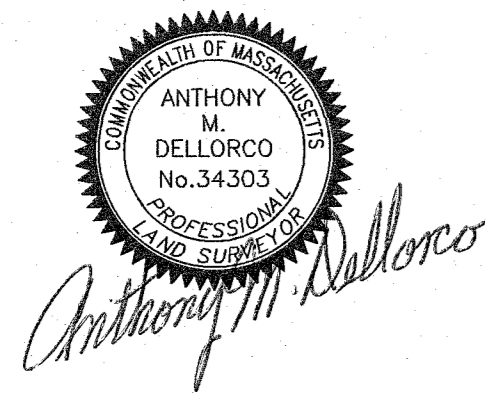
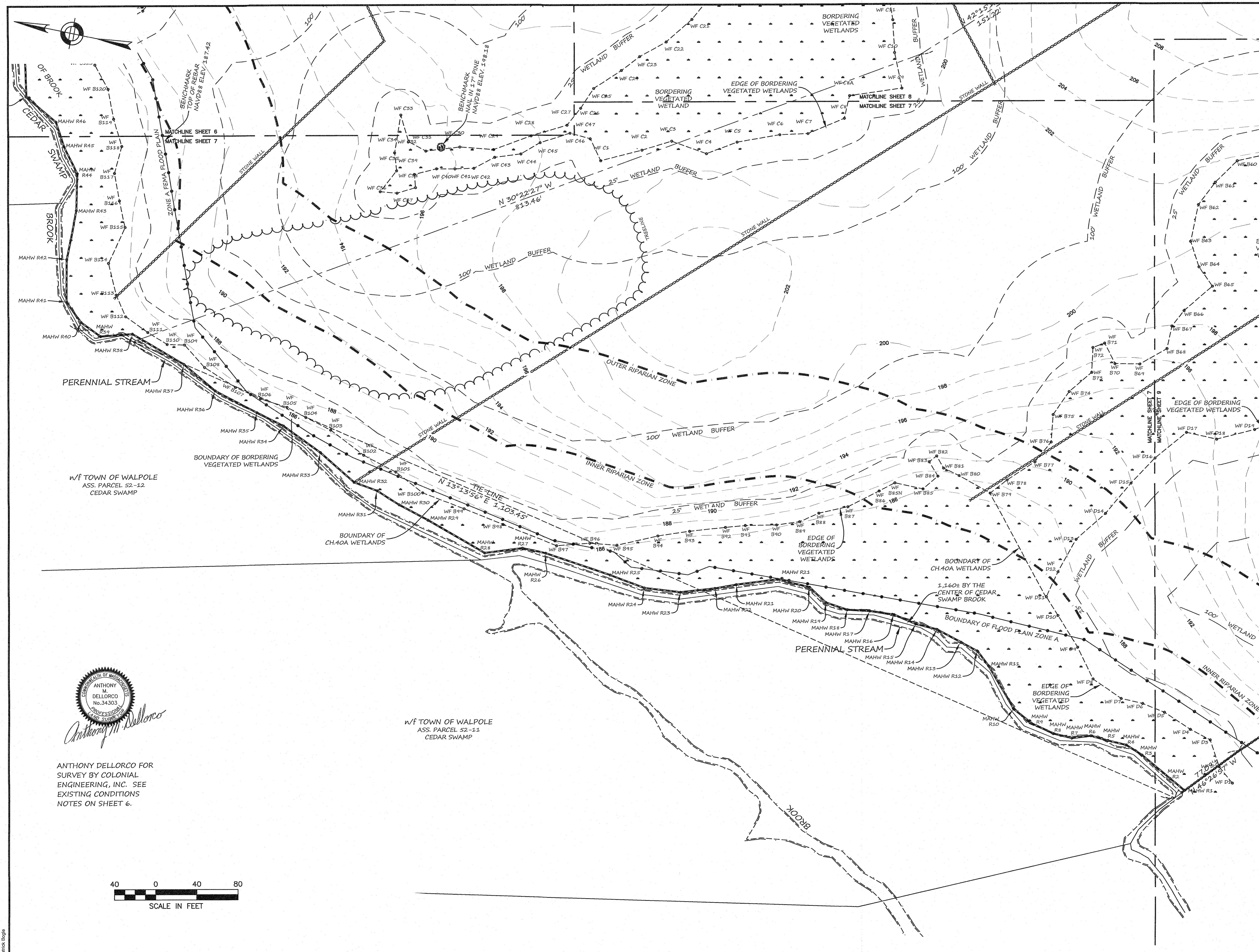
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SITE PLAN

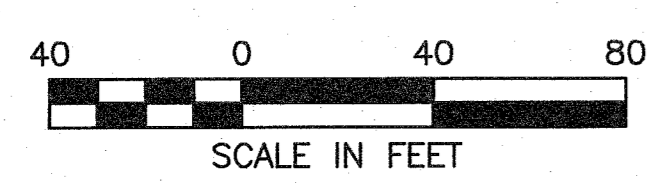
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 PLAN 2 OF 5**

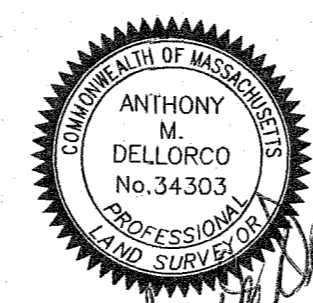
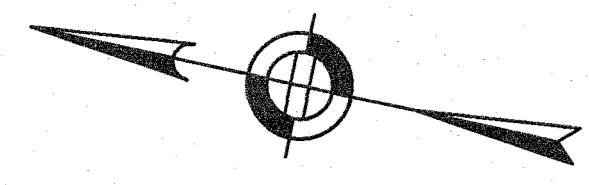
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ANTHONY DELLORCO FOR
 SURVEY BY COLONIAL
 ENGINEERING, INC. SEE
 EXISTING CONDITIONS
 NOTES ON SHEET 6.





ANTHONY DELLORCO FOR
SURVEY BY COLONIAL
ENGINEERING, INC. SEE
EXISTING CONDITIONS
NOTES ON SHEET 6.

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**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

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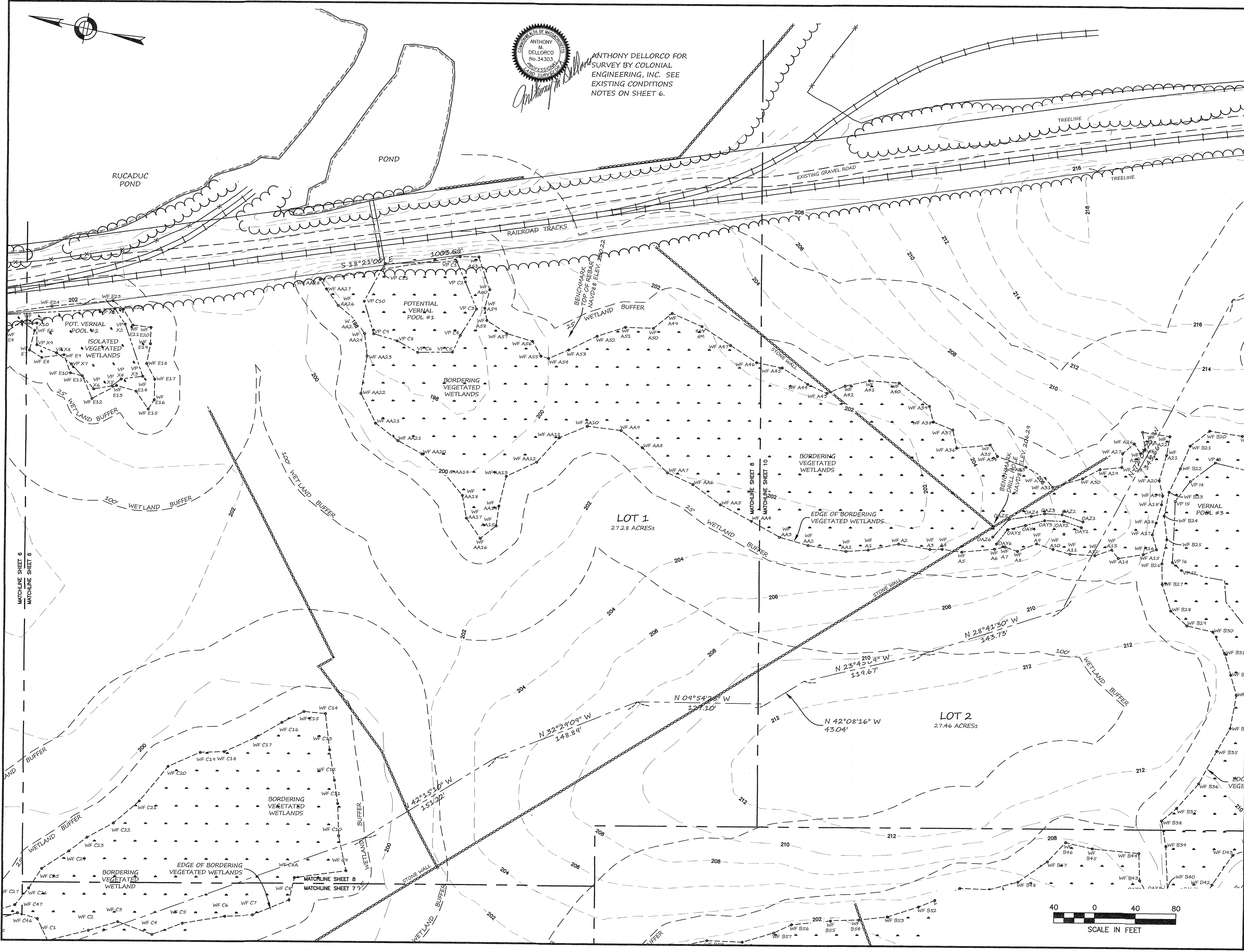
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SITE PLAN

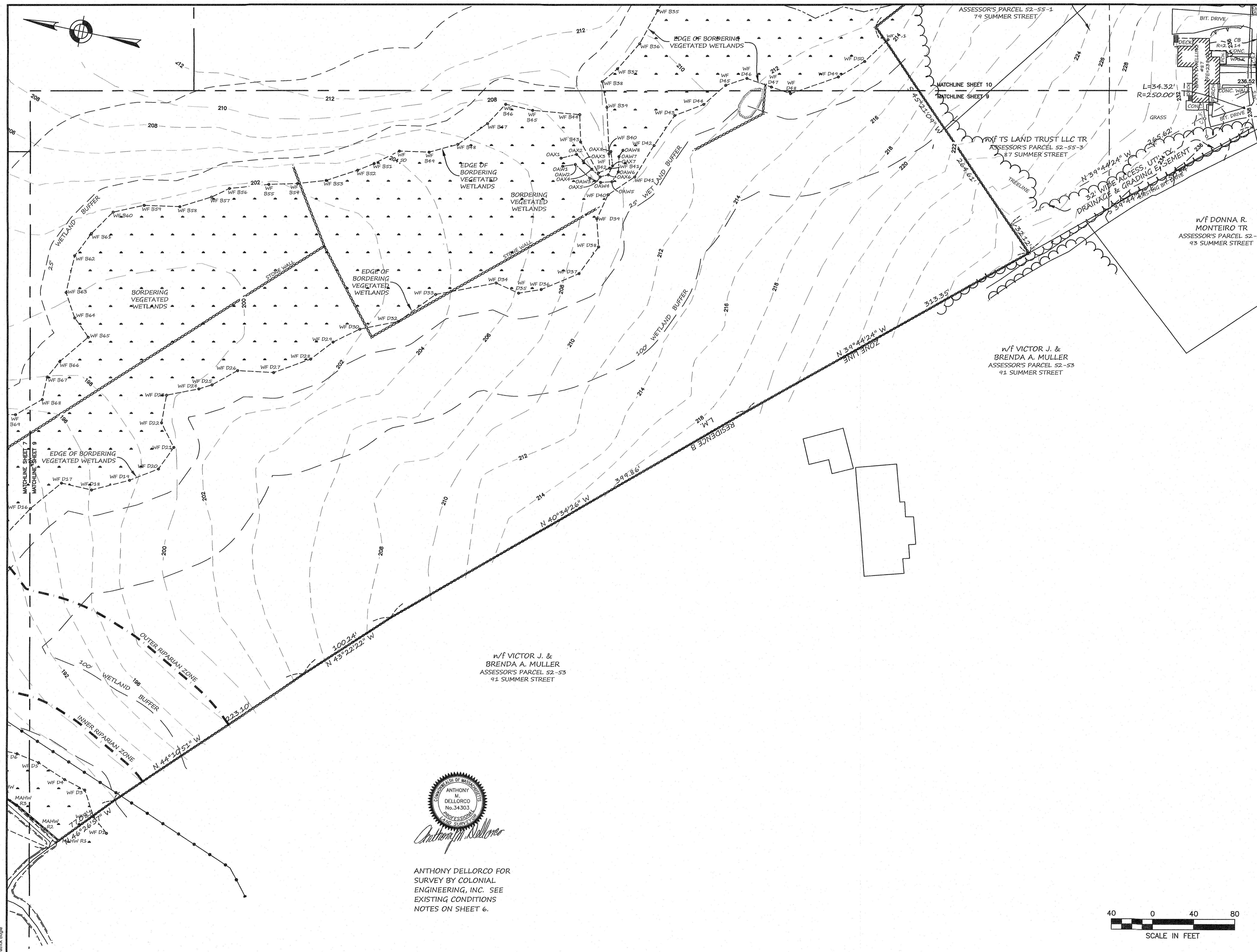
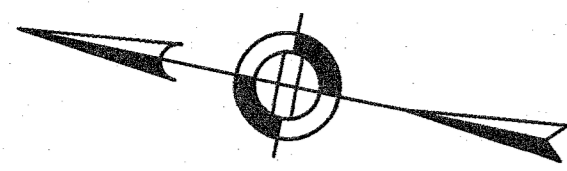
**EXISTING CONDITIONS
PLAN 3 OF 5**

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
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C.8



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**PROPOSED MULTIFAMILY
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 WALPOLE, MA**

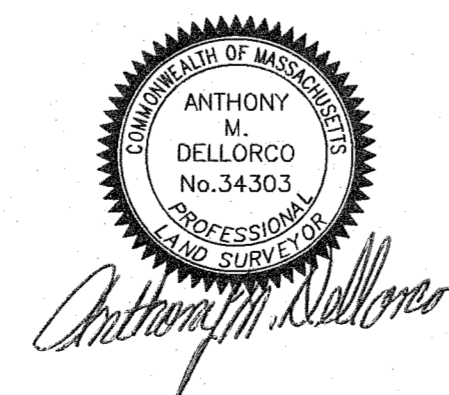
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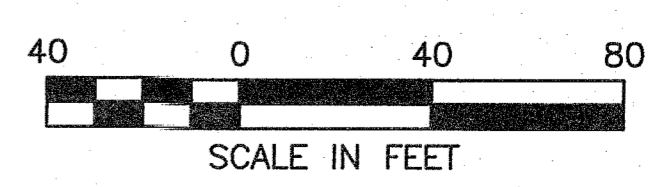
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EXISTING CONDITIONS
 PLAN 4 OF 5

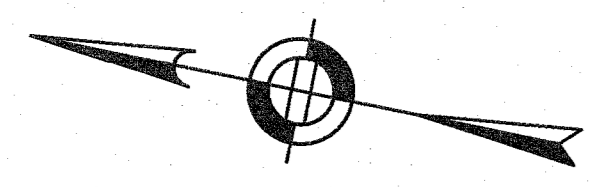
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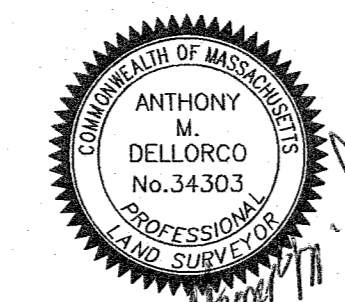
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 ENGINEERING, INC. SEE
 EXISTING CONDITIONS
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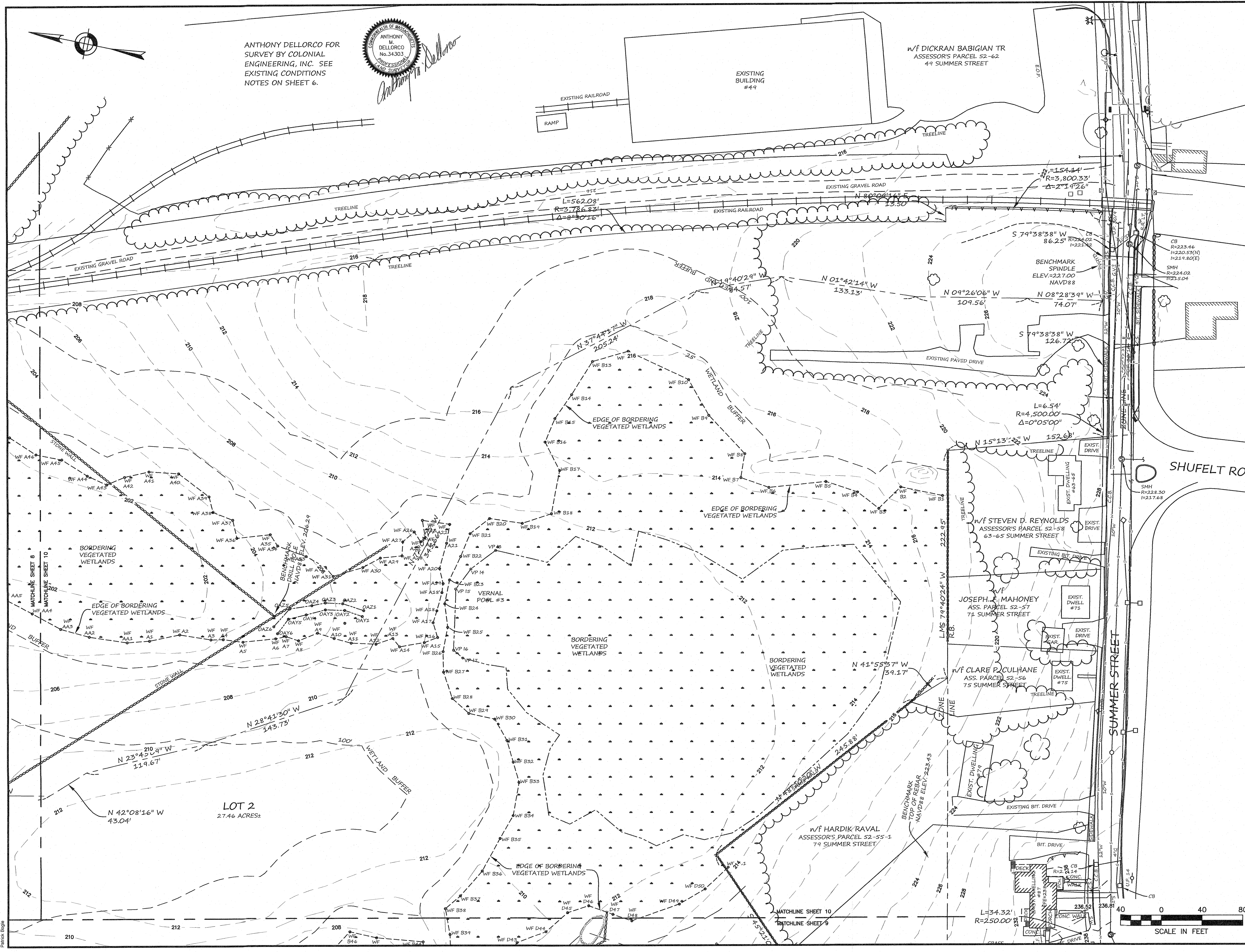
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Anthony M. Delorco



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**PROPOSED MULTIFAMILY
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WALPOLE, MA**

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SITE PLAN

**EXISTING CONDITIONS
PLAN 5 OF 5**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
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4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

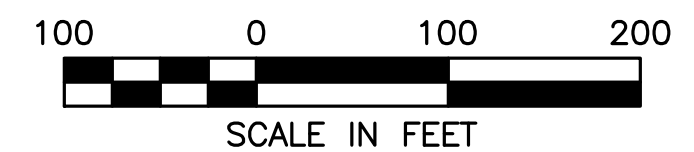
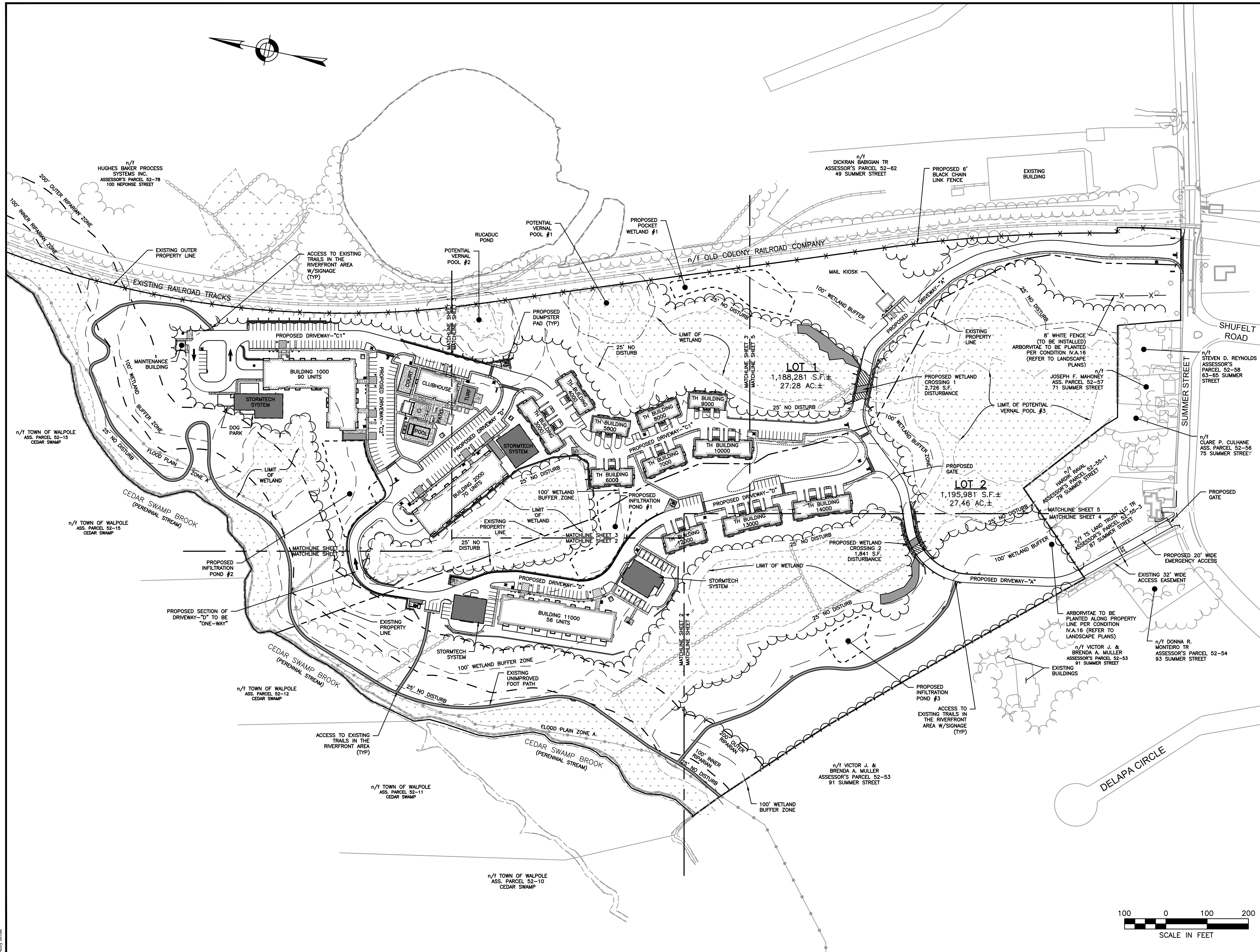


SITE PLAN

PROPOSED OVERALL PLAN

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
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**PROPOSED MULTIFAMILY
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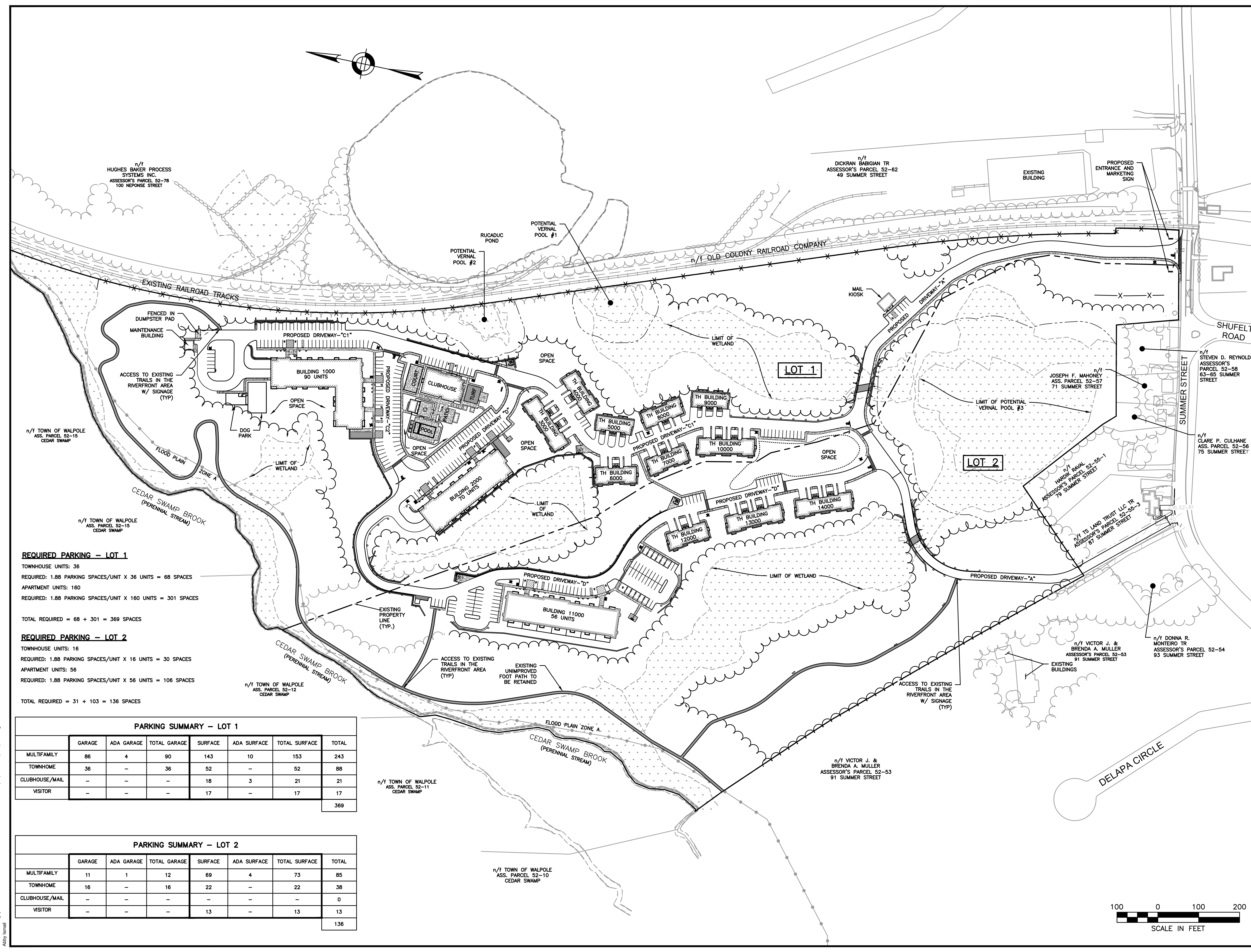


SITE PLAN

**OPEN SPACE,
 RECREATION, AND
 PARKING PLAN**

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.13



REQUIRED PARKING – LOT 1
 TOWNHOUSE UNITS: 36
 REQUIRED: 1.88 PARKING SPACES/UNIT X 36 UNITS = 68 SPACES
 APARTMENT UNITS: 160
 REQUIRED: 1.88 PARKING SPACES/UNIT X 160 UNITS = 301 SPACES
 TOTAL REQUIRED = 68 + 301 = 369 SPACES

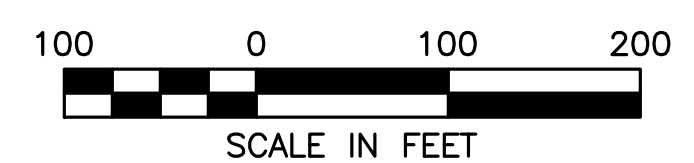
REQUIRED PARKING – LOT 2
 TOWNHOUSE UNITS: 16
 REQUIRED: 1.88 PARKING SPACES/UNIT X 16 UNITS = 30 SPACES
 APARTMENT UNITS: 56
 REQUIRED: 1.88 PARKING SPACES/UNIT X 56 UNITS = 106 SPACES
 TOTAL REQUIRED = 31 + 103 = 136 SPACES

PARKING SUMMARY – LOT 1

	GARAGE	ADA GARAGE	TOTAL GARAGE	SURFACE	ADA SURFACE	TOTAL SURFACE	TOTAL
MULTIFAMILY	86	4	90	143	10	153	243
TOWNHOME	36	–	36	52	–	52	88
CLUBHOUSE/MAIL	–	–	–	18	3	21	21
VISITOR	–	–	–	17	–	17	17
							369

PARKING SUMMARY – LOT 2

	GARAGE	ADA GARAGE	TOTAL GARAGE	SURFACE	ADA SURFACE	TOTAL SURFACE	TOTAL
MULTIFAMILY	11	1	12	69	4	73	85
TOWNHOME	16	–	16	22	–	22	38
CLUBHOUSE/MAIL	–	–	–	–	–	–	0
VISITOR	–	–	–	13	–	13	13
							136



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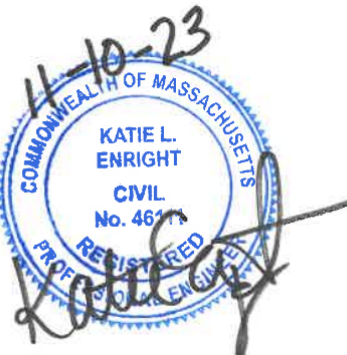
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 WALPOLE, MA**

REVISIONS:

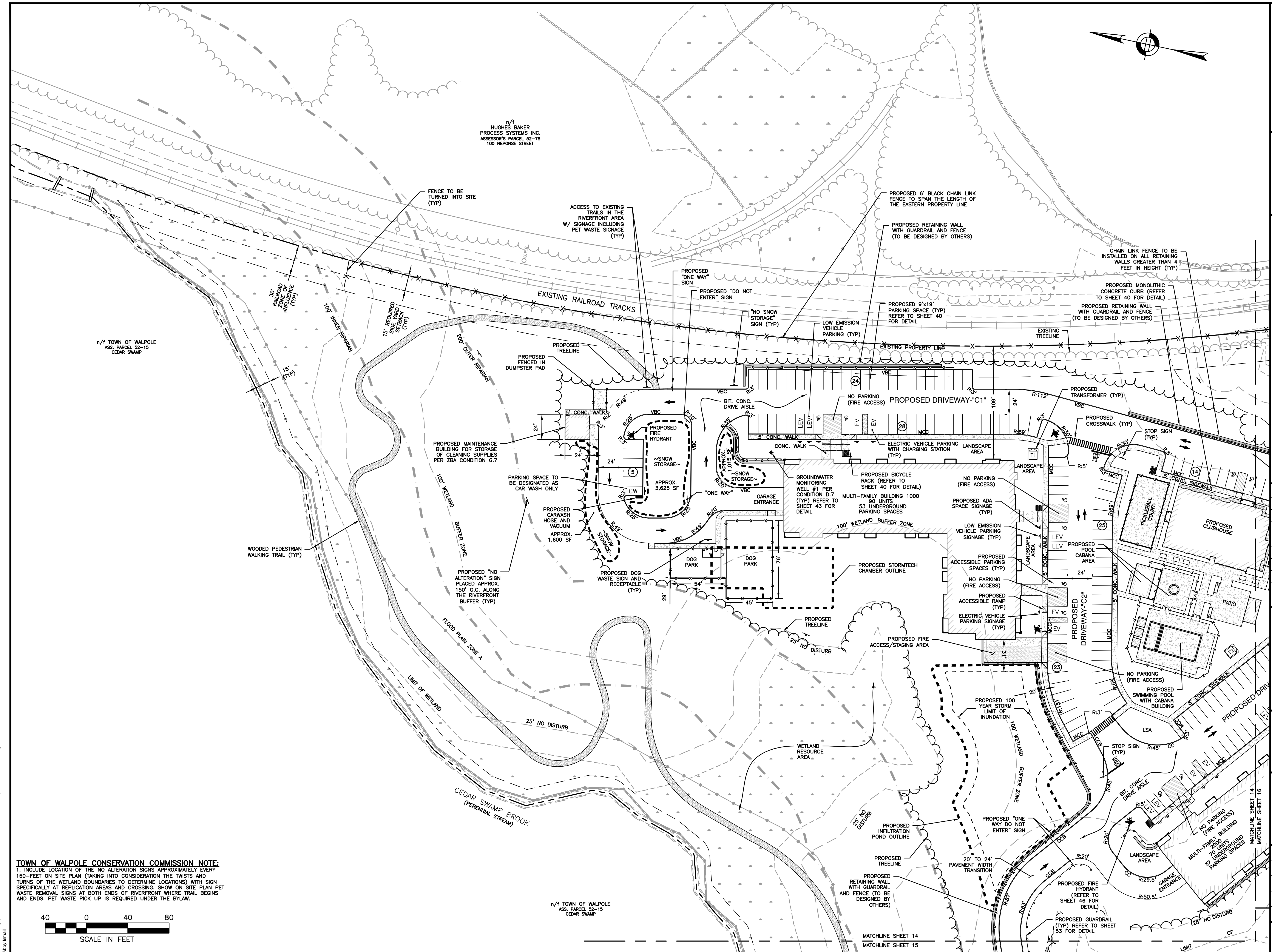
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2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



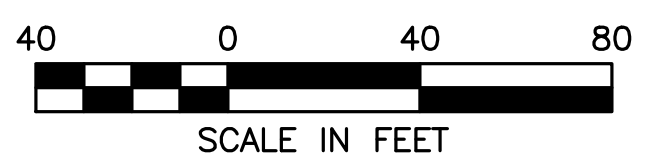
SITE PLAN

LAYOUT AND MATERIALS PLAN
 1 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.14



TOWN OF WALPOLE CONSERVATION COMMISSION NOTE:
 1. INCLUDE LOCATION OF THE NO ALTERATION SIGNS APPROXIMATELY EVERY 150- FEET ON SITE PLAN (TAKING INTO CONSIDERATION THE TWISTS AND TURNS OF THE WETLAND BOUNDARIES TO DETERMINE LOCATIONS) WITH SIGN SPECIFICALLY AT REPLICATION AREAS AND CROSSING. SHOW ON SITE PLAN PET WASTE REMOVAL SIGNS AT BOTH ENDS OF RIVERFRONT WHERE TRAIL BEGINS AND ENDS. PET WASTE PICK UP IS REQUIRED UNDER THE BYLAW.



1/17/2023 \\egny\dw\CADD\19097\19097_04 - LxL ZC\CURRENT\19097 - layout and materials.dwg
 Abby Imani



HOWARD STEIN HUDSON
 114 Turnpike Road, Suite 2C
 Chelmsford, MA 01824
 www.hshassoc.com

PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
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3	MB	09/20/23	REV. TOWN/PEER COMM.
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5	AI	11/10/23	REV. FULL SITE PLAN

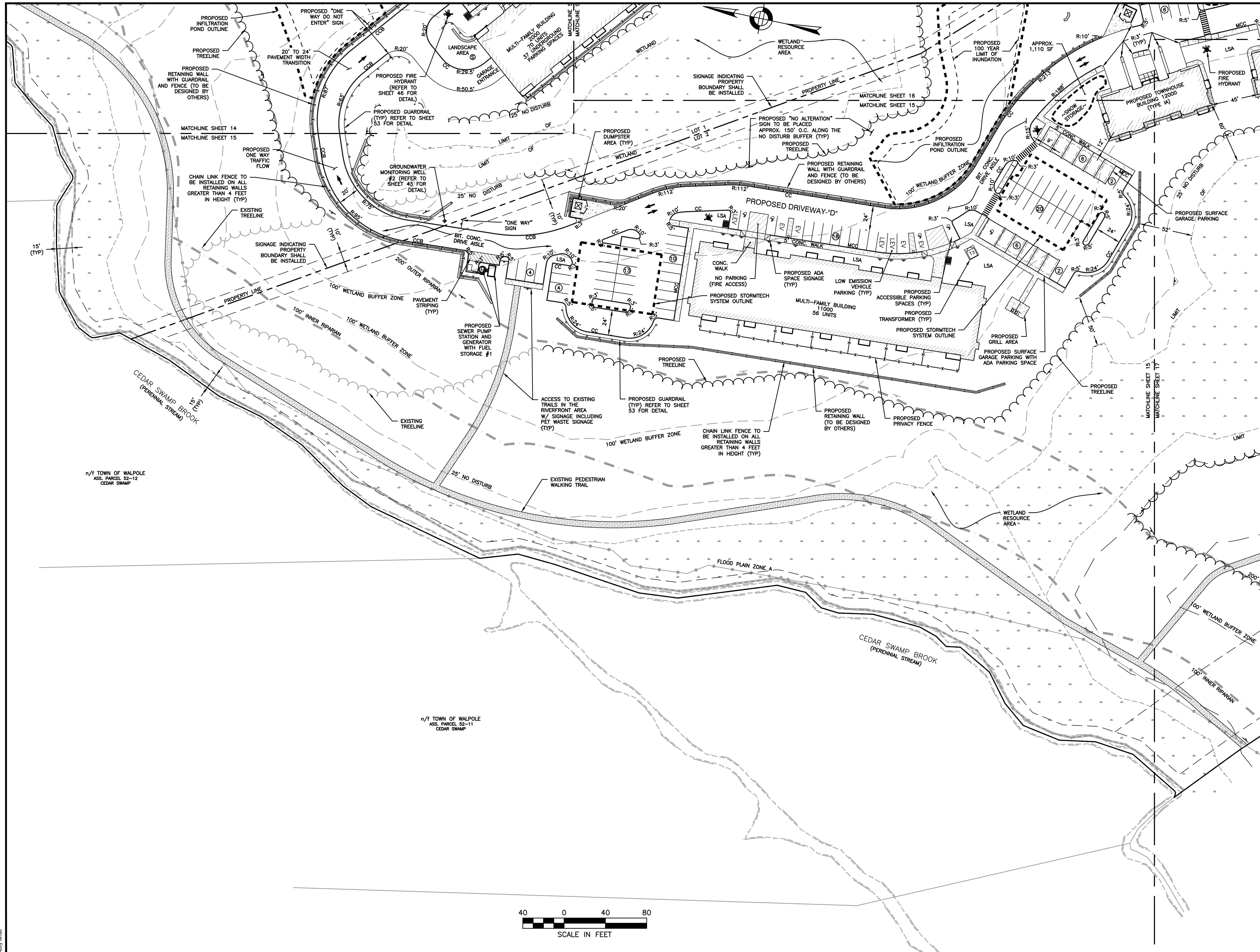


SITE PLAN

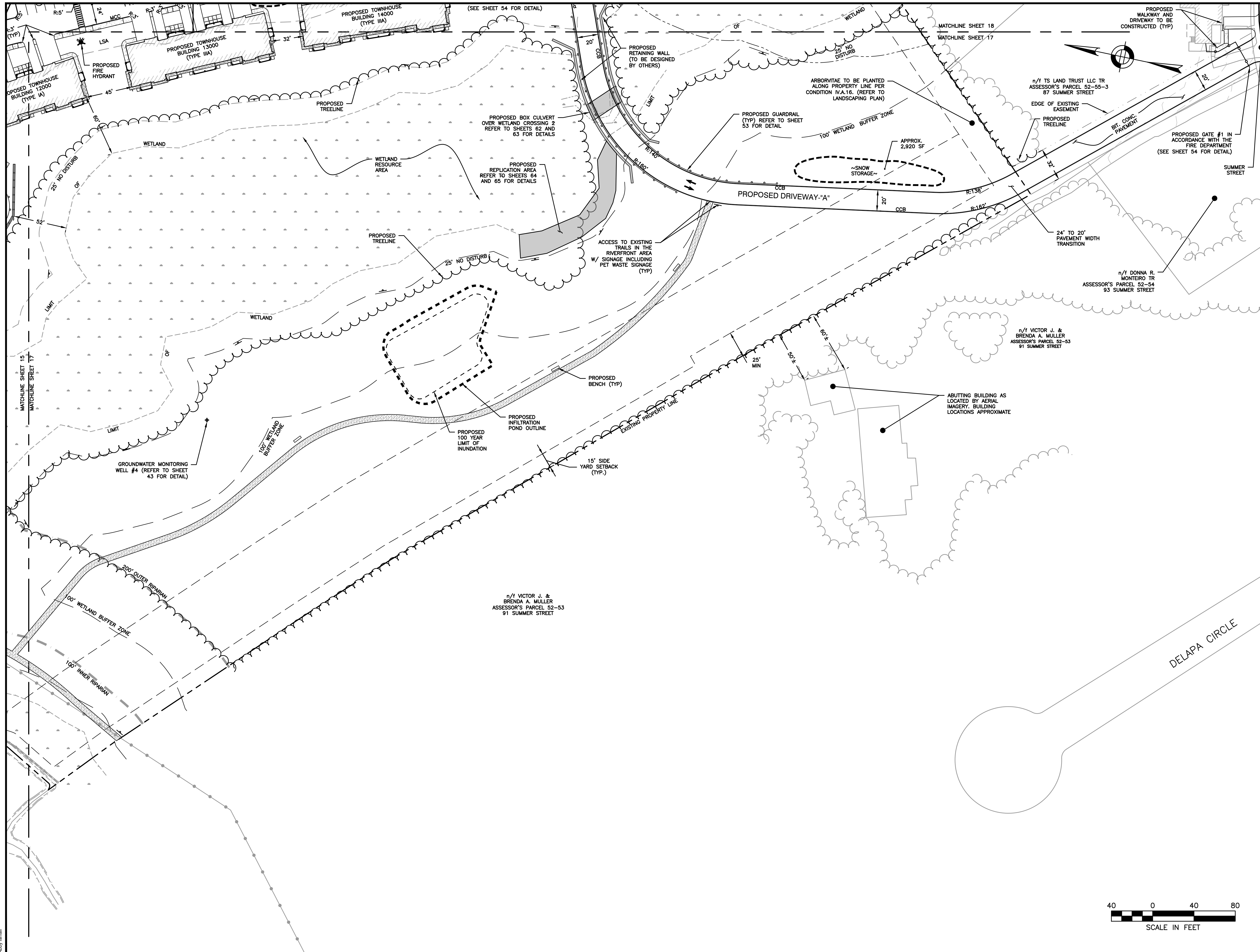
LAYOUT AND MATERIALS PLAN
 2 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.15



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 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

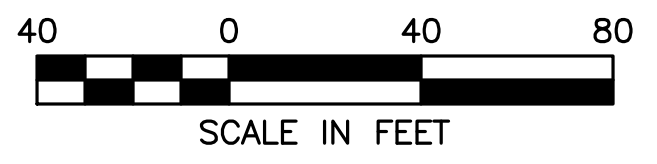
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2	PB	09/12/23	REV. TRAIL AND SEEDING
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SITE PLAN

**LAYOUT AND MATERIALS PLAN
 4 OF 5**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE



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 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

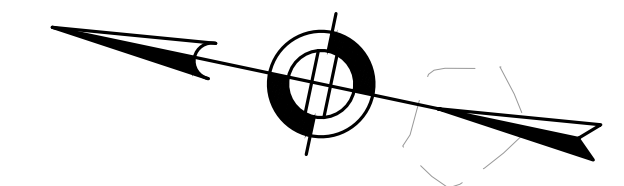
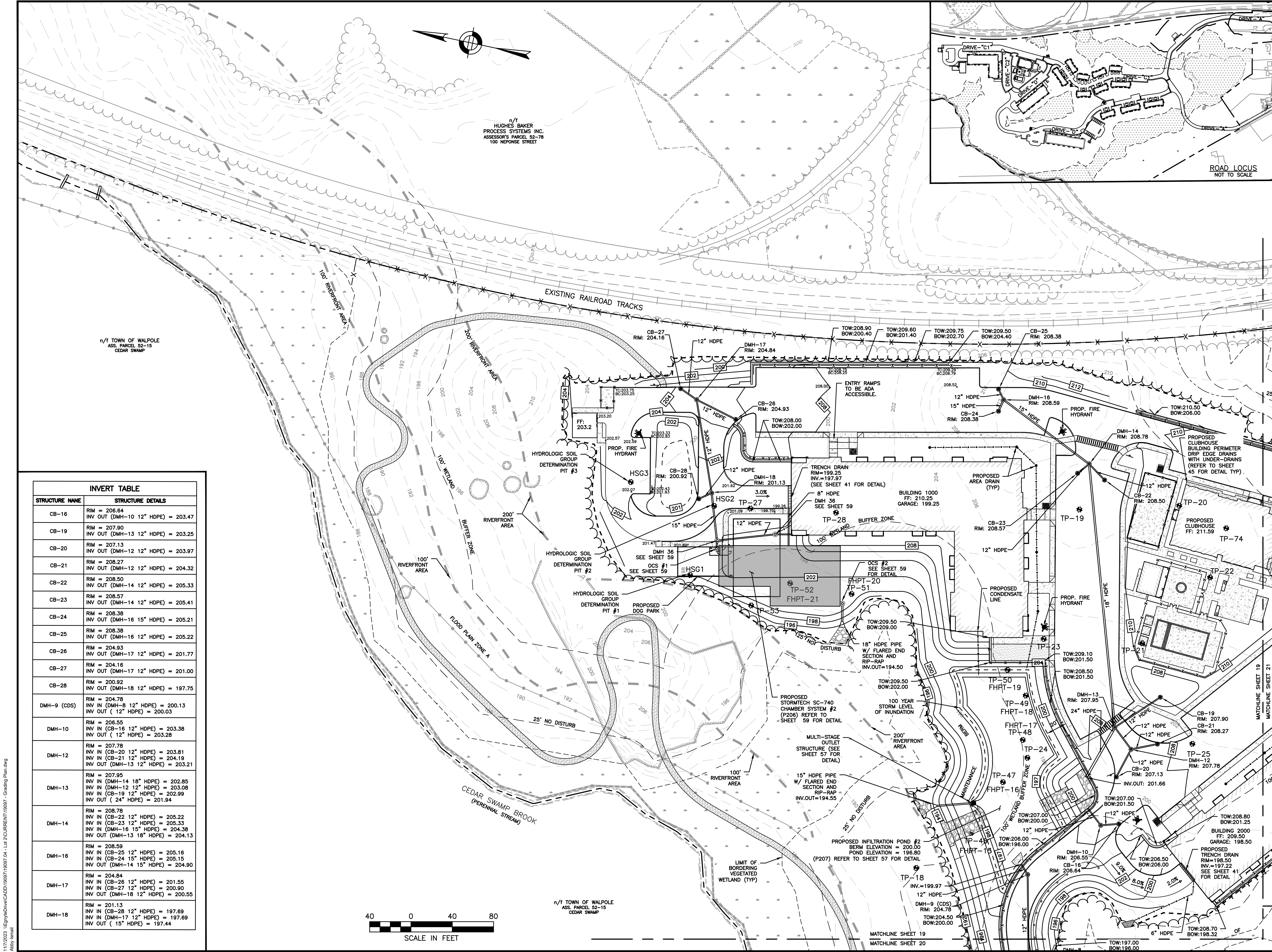
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SITE PLAN

**GRADING AND DRAINAGE PLAN
 1 OF 5**

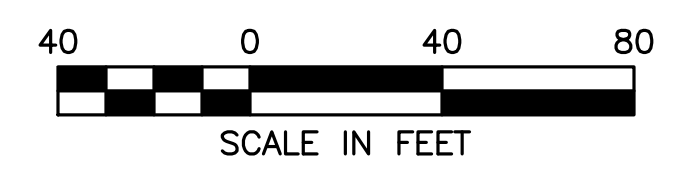
DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.19



n/1 HUGHES BAKER
 PROCESS SYSTEMS INC.
 ASSESSOR'S PARCEL 52-78
 100 NEPOSE STREET

n/1 TOWN OF WALPOLE
 ASS. PARCEL 52-15
 CEDAR SWAMP

n/1 TOWN OF WALPOLE
 ASS. PARCEL 52-15
 CEDAR SWAMP



STRUCTURE NAME	STRUCTURE DETAILS
CB-16	RIM = 206.64 INV OUT (DMH-10 12" HDPE) = 203.47
CB-19	RIM = 207.90 INV OUT (DMH-13 12" HDPE) = 203.25
CB-20	RIM = 207.13 INV OUT (DMH-12 12" HDPE) = 203.97
CB-21	RIM = 208.27 INV OUT (DMH-12 12" HDPE) = 204.32
CB-22	RIM = 208.50 INV OUT (DMH-14 12" HDPE) = 205.33
CB-23	RIM = 208.57 INV OUT (DMH-14 12" HDPE) = 205.41
CB-24	RIM = 208.38 INV OUT (DMH-16 15" HDPE) = 205.21
CB-25	RIM = 208.38 INV OUT (DMH-16 12" HDPE) = 205.22
CB-26	RIM = 204.93 INV OUT (DMH-17 12" HDPE) = 201.77
CB-27	RIM = 204.16 INV OUT (DMH-17 12" HDPE) = 201.00
CB-28	RIM = 200.92 INV OUT (DMH-18 12" HDPE) = 197.75
DMH-9 (CDS)	RIM = 204.78 INV IN (DMH-8 12" HDPE) = 200.13 INV OUT (12" HDPE) = 200.03
DMH-10	RIM = 206.55 INV IN (CB-16 12" HDPE) = 203.38 INV OUT (12" HDPE) = 203.28
DMH-12	RIM = 207.78 INV IN (CB-20 12" HDPE) = 203.81 INV IN (CB-21 12" HDPE) = 204.19 INV OUT (DMH-13 12" HDPE) = 203.21
DMH-13	RIM = 207.95 INV IN (DMH-14 18" HDPE) = 202.85 INV IN (DMH-12 12" HDPE) = 203.08 INV IN (CB-19 12" HDPE) = 202.99 INV OUT (24" HDPE) = 201.94
DMH-14	RIM = 208.78 INV IN (CB-22 12" HDPE) = 205.22 INV IN (CB-23 12" HDPE) = 205.33 INV IN (DMH-16 15" HDPE) = 204.38 INV OUT (DMH-13 18" HDPE) = 204.13
DMH-16	RIM = 208.59 INV IN (CB-25 12" HDPE) = 205.16 INV IN (CB-24 15" HDPE) = 205.15 INV OUT (DMH-14 15" HDPE) = 204.90
DMH-17	RIM = 204.84 INV IN (CB-26 12" HDPE) = 201.55 INV IN (CB-27 12" HDPE) = 200.90 INV OUT (DMH-18 12" HDPE) = 200.55
DMH-18	RIM = 201.13 INV IN (CB-28 12" HDPE) = 197.69 INV IN (DMH-17 12" HDPE) = 197.69 INV OUT (15" HDPE) = 197.44

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 Abby Iannelli



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 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

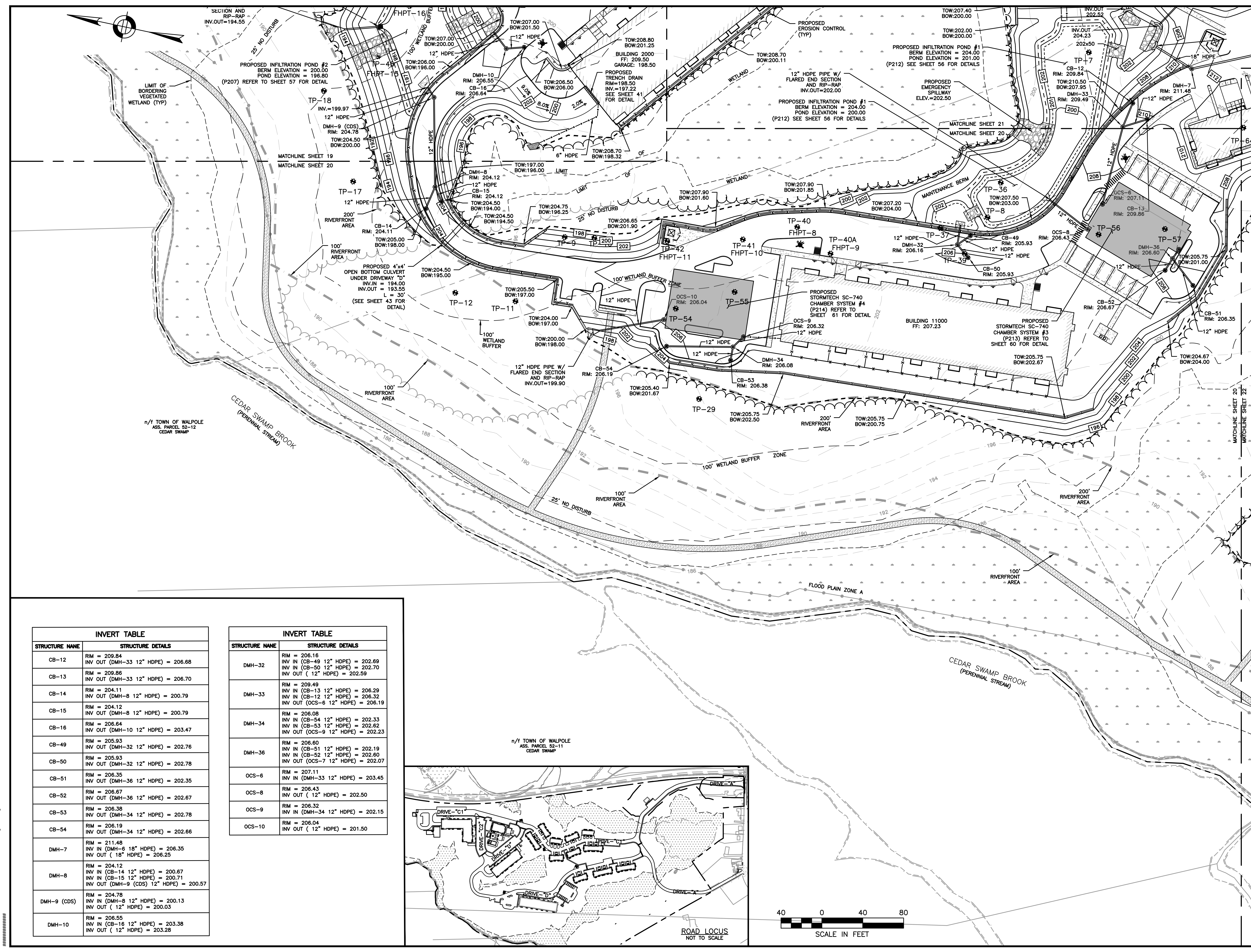
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SITE PLAN

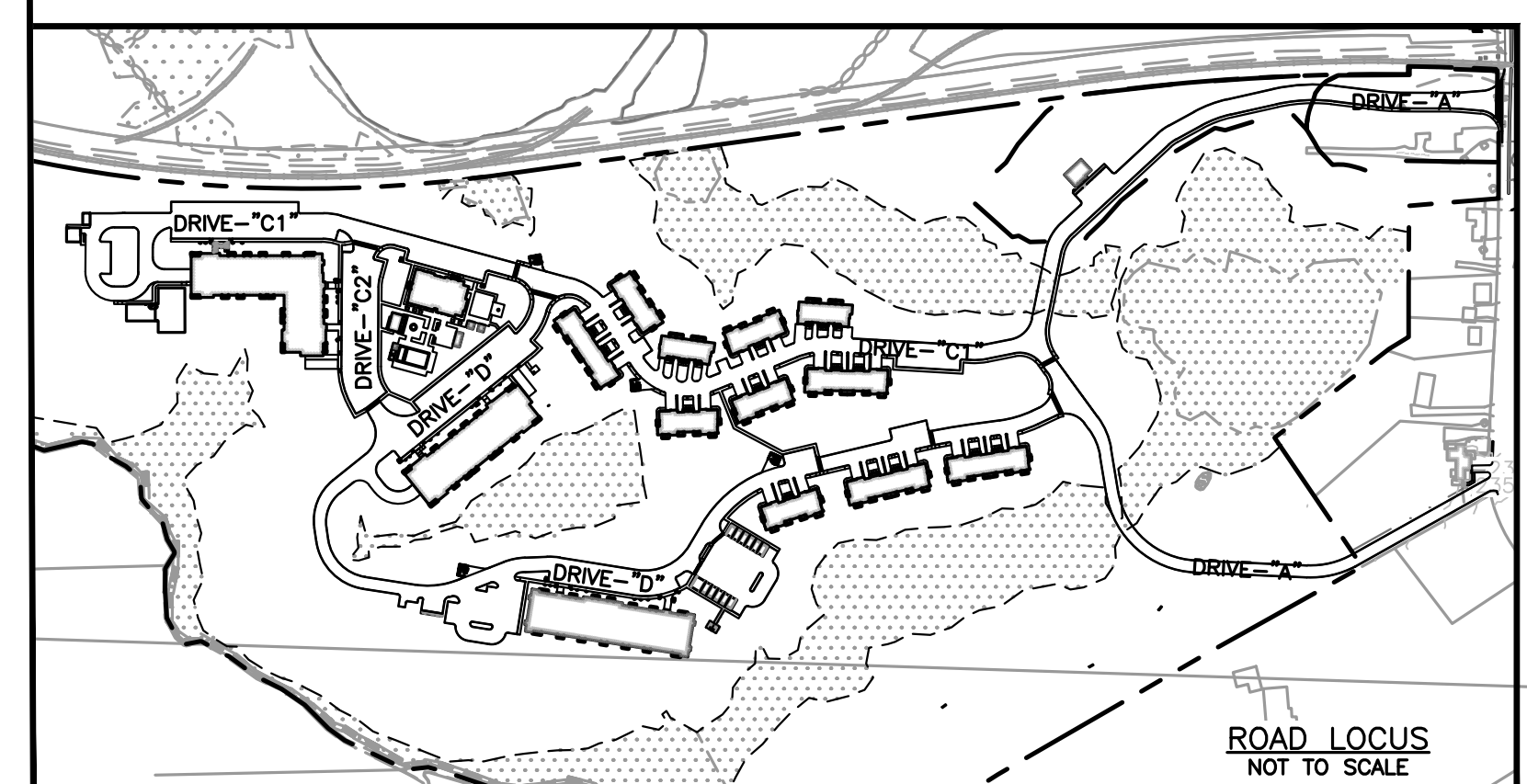
GRADING AND DRAINAGE PLAN
 2 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.20
	SHEET 20 OF 65



STRUCTURE NAME	STRUCTURE DETAILS
CB-12	RIM = 209.84 INV OUT (DMH-33 12" HDPE) = 206.68
CB-13	RIM = 209.86 INV OUT (DMH-33 12" HDPE) = 206.70
CB-14	RIM = 204.11 INV OUT (DMH-8 12" HDPE) = 200.79
CB-15	RIM = 204.12 INV OUT (DMH-8 12" HDPE) = 200.79
CB-16	RIM = 206.64 INV OUT (DMH-10 12" HDPE) = 203.47
CB-49	RIM = 205.93 INV OUT (DMH-32 12" HDPE) = 202.76
CB-50	RIM = 205.93 INV OUT (DMH-32 12" HDPE) = 202.78
CB-51	RIM = 206.35 INV OUT (DMH-36 12" HDPE) = 202.35
CB-52	RIM = 206.67 INV OUT (DMH-36 12" HDPE) = 202.67
CB-53	RIM = 206.38 INV OUT (DMH-34 12" HDPE) = 202.78
CB-54	RIM = 206.19 INV OUT (DMH-34 12" HDPE) = 202.66
DMH-7	RIM = 211.48 INV IN (DMH-6 18" HDPE) = 206.35 INV OUT (18" HDPE) = 206.25
DMH-8	RIM = 204.12 INV IN (CB-14 12" HDPE) = 200.67 INV IN (CB-15 12" HDPE) = 200.71 INV OUT (DMH-9 (CDS) 12" HDPE) = 200.57
DMH-9 (CDS)	RIM = 204.78 INV IN (DMH-8 12" HDPE) = 200.13 INV OUT (12" HDPE) = 200.03
DMH-10	RIM = 206.55 INV IN (CB-16 12" HDPE) = 203.38 INV OUT (12" HDPE) = 203.28

STRUCTURE NAME	STRUCTURE DETAILS
DMH-32	RIM = 206.16 INV IN (CB-49 12" HDPE) = 202.69 INV IN (CB-50 12" HDPE) = 202.70 INV OUT (12" HDPE) = 202.59
DMH-33	RIM = 209.49 INV IN (CB-13 12" HDPE) = 206.29 INV IN (CB-12 12" HDPE) = 206.32 INV OUT (OCS-6 12" HDPE) = 206.19
DMH-34	RIM = 206.08 INV IN (CB-54 12" HDPE) = 202.33 INV IN (CB-53 12" HDPE) = 202.62 INV OUT (OCS-9 12" HDPE) = 202.23
DMH-36	RIM = 206.60 INV IN (CB-51 12" HDPE) = 202.19 INV IN (CB-52 12" HDPE) = 202.60 INV OUT (OCS-7 12" HDPE) = 202.07
OCS-6	RIM = 207.11 INV IN (DMH-33 12" HDPE) = 203.45
OCS-8	RIM = 206.43 INV OUT (12" HDPE) = 202.50
OCS-9	RIM = 206.32 INV IN (DMH-34 12" HDPE) = 202.15
OCS-10	RIM = 206.04 INV OUT (12" HDPE) = 201.50



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 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

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SITE PLAN

GRADING AND DRAINAGE PLAN
 3 OF 5

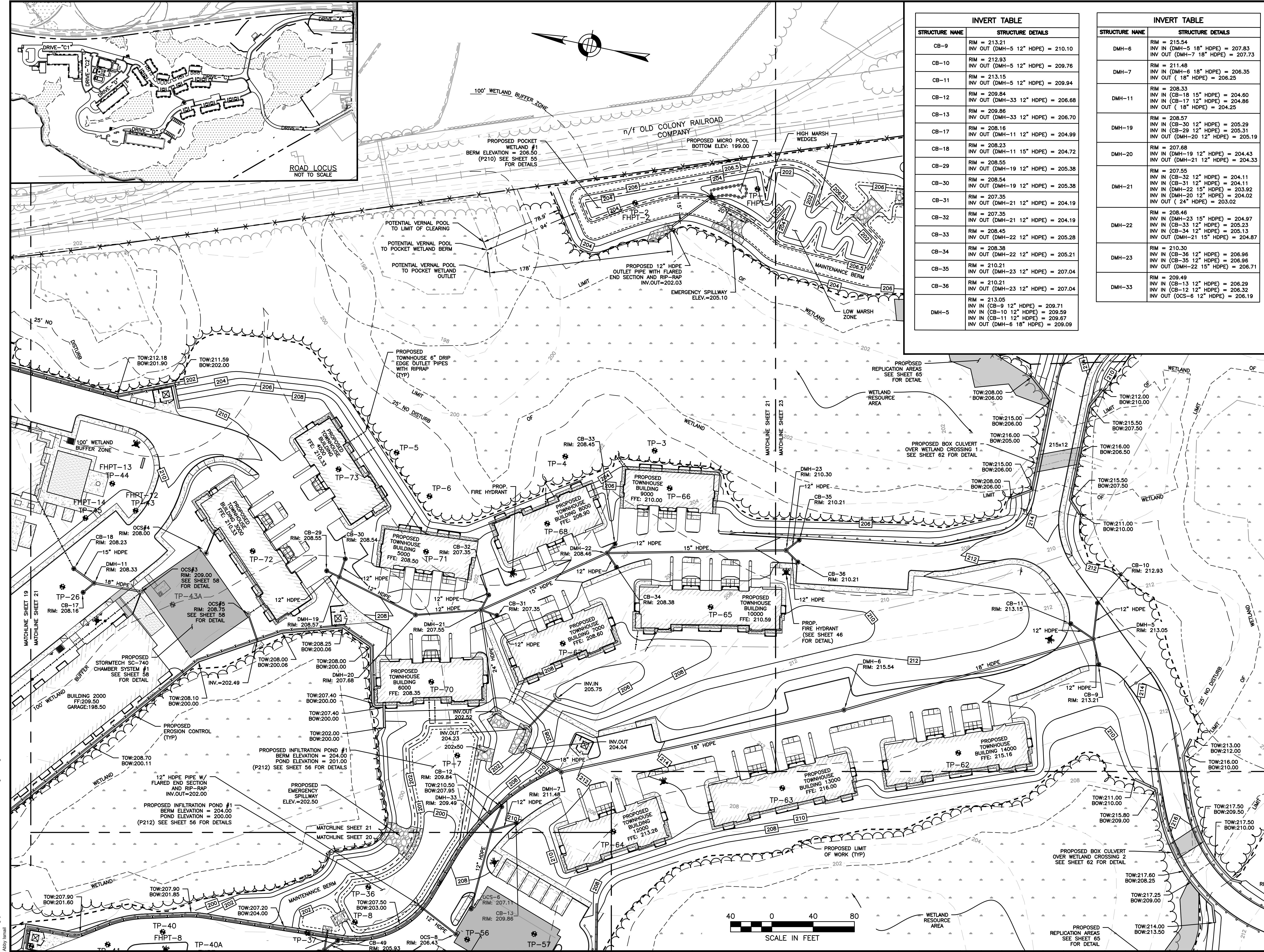
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 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

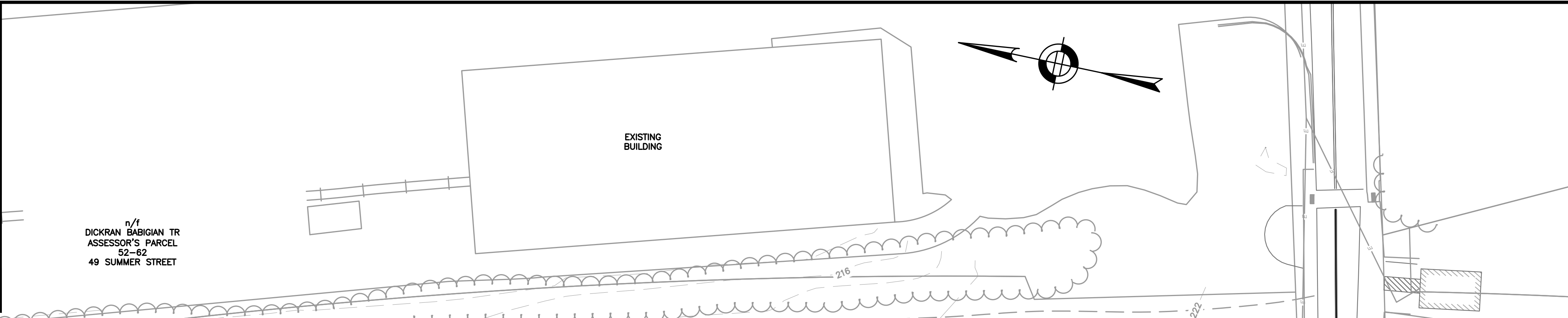
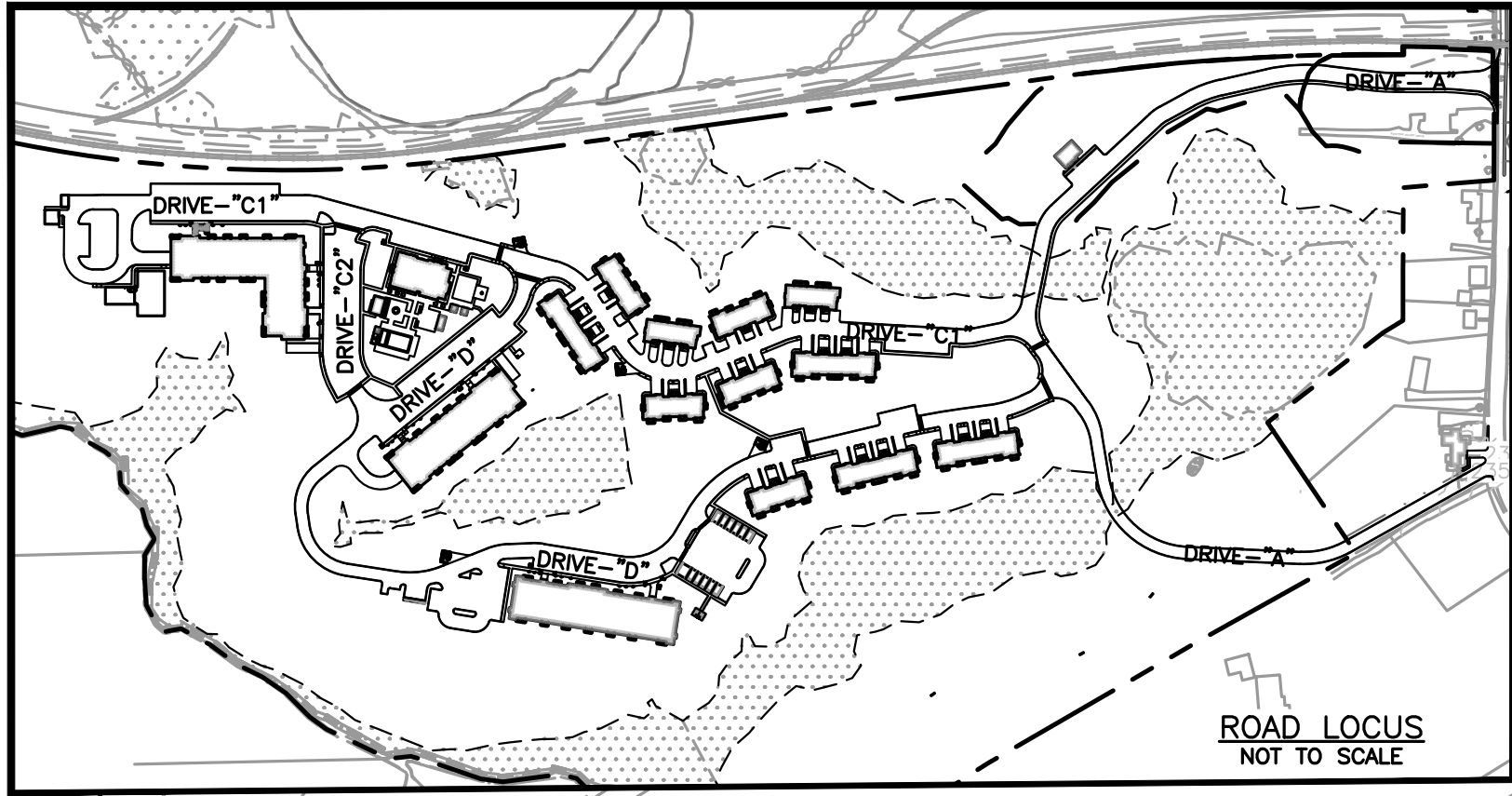
C.21

SHEET 21 OF 65

INVERT TABLE	
STRUCTURE NAME	STRUCTURE DETAILS
CB-9	RIM = 213.21 INV OUT (DMH-5 12" HDPE) = 210.10
CB-10	RIM = 212.93 INV OUT (DMH-5 12" HDPE) = 209.76
CB-11	RIM = 213.15 INV OUT (DMH-5 12" HDPE) = 209.94
CB-12	RIM = 209.84 INV OUT (DMH-33 12" HDPE) = 206.68
CB-13	RIM = 209.86 INV OUT (DMH-33 12" HDPE) = 206.70
CB-17	RIM = 208.18 INV OUT (DMH-11 12" HDPE) = 204.99
CB-18	RIM = 208.23 INV OUT (DMH-11 15" HDPE) = 204.72
CB-29	RIM = 208.55 INV OUT (DMH-19 12" HDPE) = 205.38
CB-30	RIM = 208.54 INV OUT (DMH-19 12" HDPE) = 205.38
CB-31	RIM = 207.35 INV OUT (DMH-21 12" HDPE) = 204.19
CB-32	RIM = 207.35 INV OUT (DMH-21 12" HDPE) = 204.19
CB-33	RIM = 208.45 INV OUT (DMH-22 12" HDPE) = 205.28
CB-34	RIM = 208.38 INV OUT (DMH-22 12" HDPE) = 205.21
CB-35	RIM = 210.21 INV OUT (DMH-23 12" HDPE) = 207.04
CB-36	RIM = 210.21 INV OUT (DMH-23 12" HDPE) = 207.04
DMH-5	RIM = 213.05 INV IN (CB-9 12" HDPE) = 209.71 INV IN (CB-10 12" HDPE) = 209.59 INV IN (CB-11 12" HDPE) = 209.67 INV OUT (DMH-6 18" HDPE) = 209.09

INVERT TABLE	
STRUCTURE NAME	STRUCTURE DETAILS
DMH-6	RIM = 215.54 INV IN (DMH-5 18" HDPE) = 207.83 INV OUT (DMH-7 18" HDPE) = 207.73
DMH-7	RIM = 211.48 INV IN (DMH-6 18" HDPE) = 206.35 INV OUT (18" HDPE) = 206.25
DMH-11	RIM = 208.33 INV IN (CB-18 15" HDPE) = 204.60 INV IN (CB-17 12" HDPE) = 204.86 INV OUT (18" HDPE) = 204.25
DMH-19	RIM = 208.57 INV IN (CB-30 12" HDPE) = 205.29 INV IN (CB-29 12" HDPE) = 205.31 INV OUT (DMH-20 12" HDPE) = 205.19
DMH-20	RIM = 207.68 INV IN (DMH-19 12" HDPE) = 204.43 INV OUT (DMH-21 12" HDPE) = 204.33
DMH-21	RIM = 207.55 INV IN (CB-32 12" HDPE) = 204.11 INV IN (CB-31 12" HDPE) = 204.11 INV IN (DMH-22 15" HDPE) = 203.92 INV IN (DMH-20 12" HDPE) = 204.02 INV OUT (24" HDPE) = 203.02
DMH-22	RIM = 208.46 INV IN (DMH-23 15" HDPE) = 204.97 INV IN (CB-33 12" HDPE) = 205.23 INV IN (CB-34 12" HDPE) = 205.13 INV OUT (DMH-21 15" HDPE) = 204.87
DMH-23	RIM = 210.30 INV IN (CB-36 12" HDPE) = 206.96 INV IN (CB-35 12" HDPE) = 206.96 INV OUT (DMH-22 15" HDPE) = 206.71
DMH-33	RIM = 209.49 INV IN (CB-13 12" HDPE) = 206.29 INV IN (CB-12 12" HDPE) = 206.32 INV OUT (OCS-6 12" HDPE) = 206.19

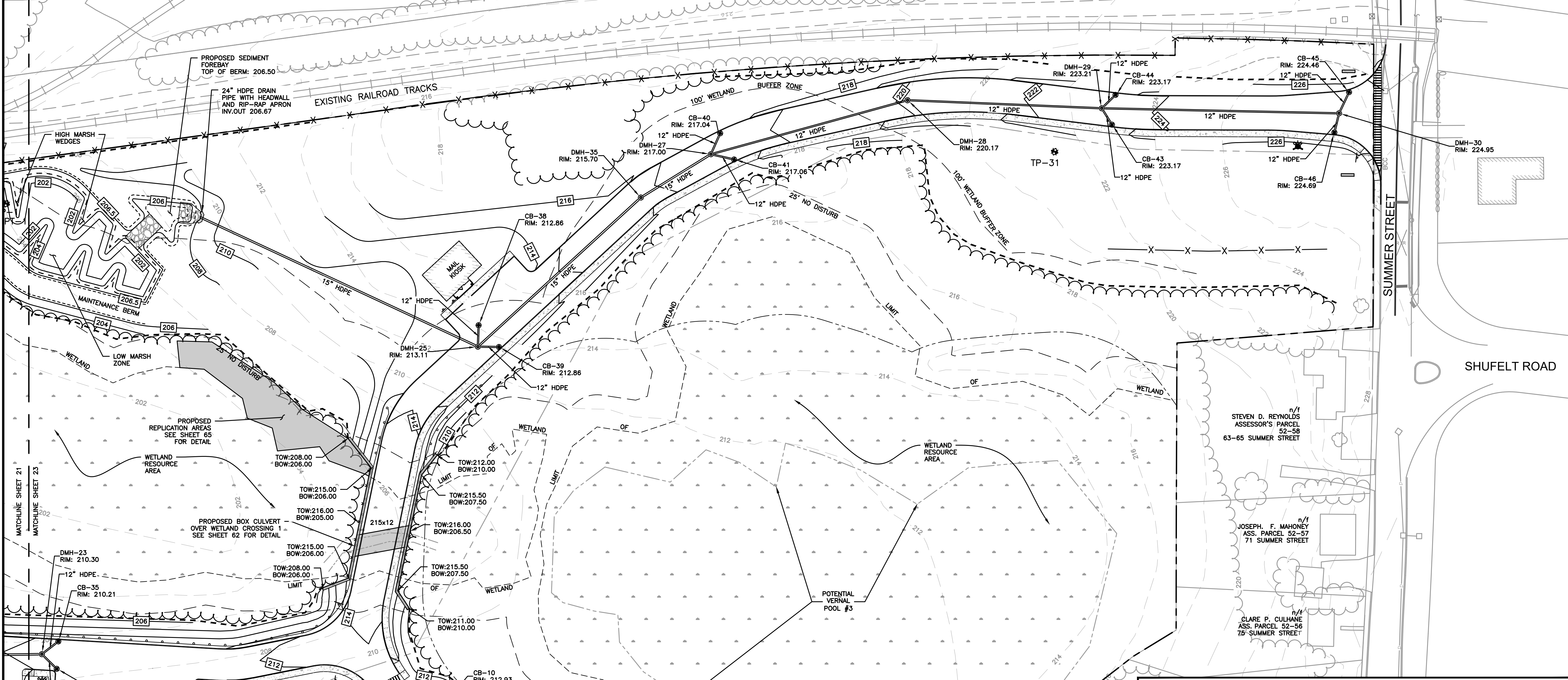




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 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**



REVISIONS:

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SITE PLAN

**GRADING AND
 DRAINAGE PLAN
 5 OF 5**

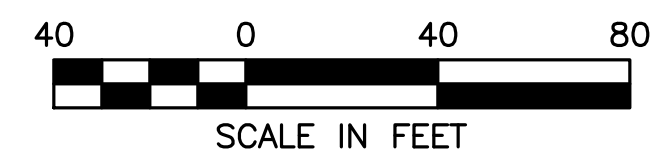
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 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE
 C.23

INVERT TABLE

STRUCTURE NAME	STRUCTURE DETAILS
DMH-25	RIM = 213.11 INV IN (CB-38 12" HDPE) = 209.61 INV IN (CB-39 12" HDPE) = 209.61 INV IN (DMH-35 15" HDPE) = 209.71 INV OUT (15" HDPE) = 209.36
DMH-27	RIM = 217.00 INV IN (CB-41 12" HDPE) = 213.80 INV IN (DMH-29 12" HDPE) = 213.59 INV IN (DMH-35 15" HDPE) = 214.29 INV OUT (DMH-35 15" HDPE) = 213.34
DMH-28	RIM = 220.17 INV IN (DMH-29 12" HDPE) = 217.56 INV OUT (DMH-27 12" HDPE) = 217.46
DMH-29	RIM = 223.21 INV IN (CB-43 12" HDPE) = 219.93 INV IN (CB-44 12" HDPE) = 219.93 INV IN (DMH-30 12" HDPE) = 220.00 INV OUT (DMH-28 12" HDPE) = 219.83
DMH-30	RIM = 224.95 INV IN (CB-45 12" HDPE) = 221.20 INV IN (CB-46 12" HDPE) = 221.45 INV OUT (DMH-29 12" HDPE) = 220.92
DMH-35	RIM = 215.70 INV IN (DMH-27 15" HDPE) = 212.38 INV OUT (DMH-25 15" HDPE) = 212.28

INVERT TABLE

STRUCTURE NAME	STRUCTURE DETAILS
CB-38	RIM = 212.86 INV OUT (DMH-25 12" HDPE) = 209.69
CB-39	RIM = 212.86 INV OUT (DMH-25 12" HDPE) = 209.69
CB-40	RIM = 217.04 INV OUT (DMH-27 12" HDPE) = 213.68
CB-41	RIM = 217.06 INV OUT (DMH-27 12" HDPE) = 213.89
CB-43	RIM = 223.17 INV OUT (DMH-29 12" HDPE) = 220.00
CB-44	RIM = 223.17 INV OUT (DMH-29 12" HDPE) = 220.00
CB-45	RIM = 224.46 INV OUT (DMH-30 12" HDPE) = 221.29
CB-46	RIM = 224.69 INV OUT (DMH-30 12" HDPE) = 221.53



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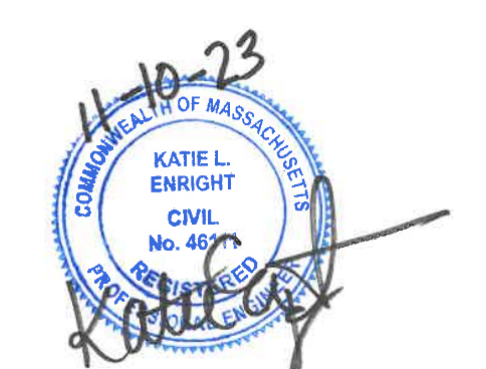
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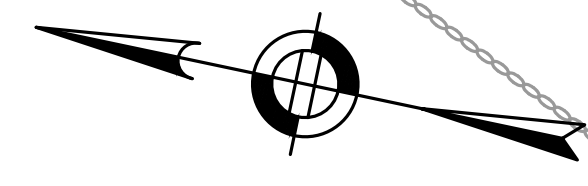
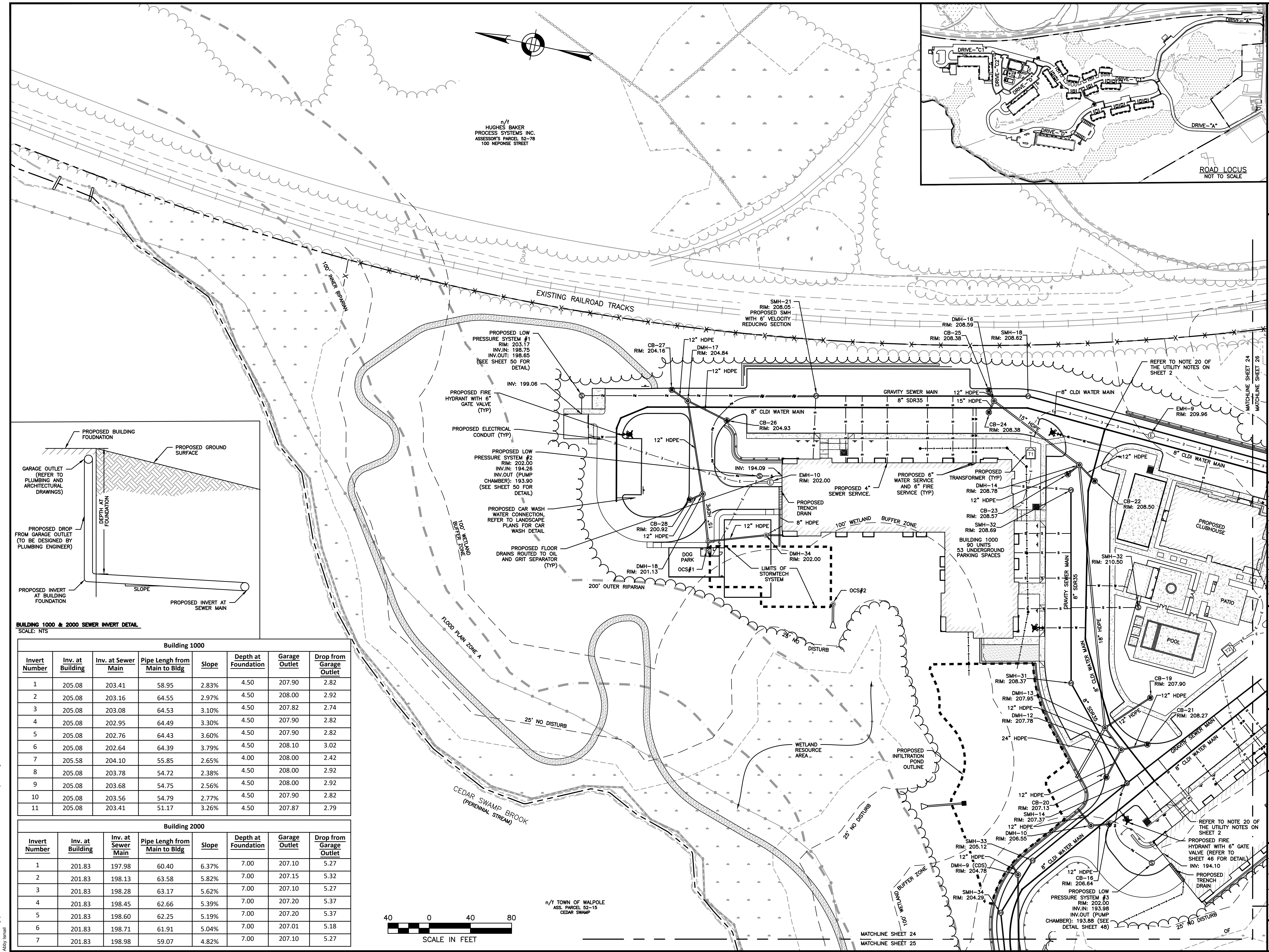
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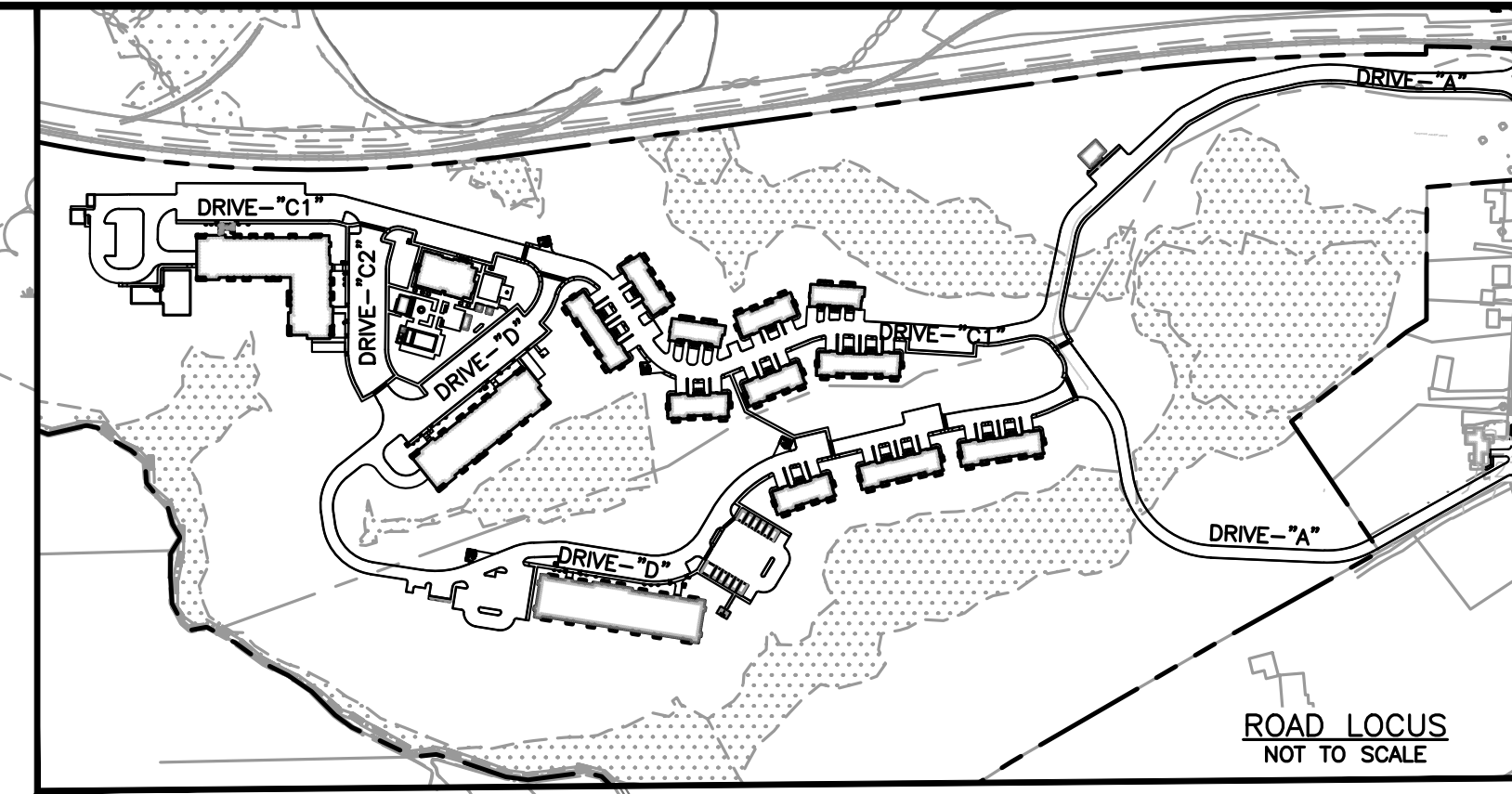
SITE PLAN

UTILITIES PLAN
 1 OF 5

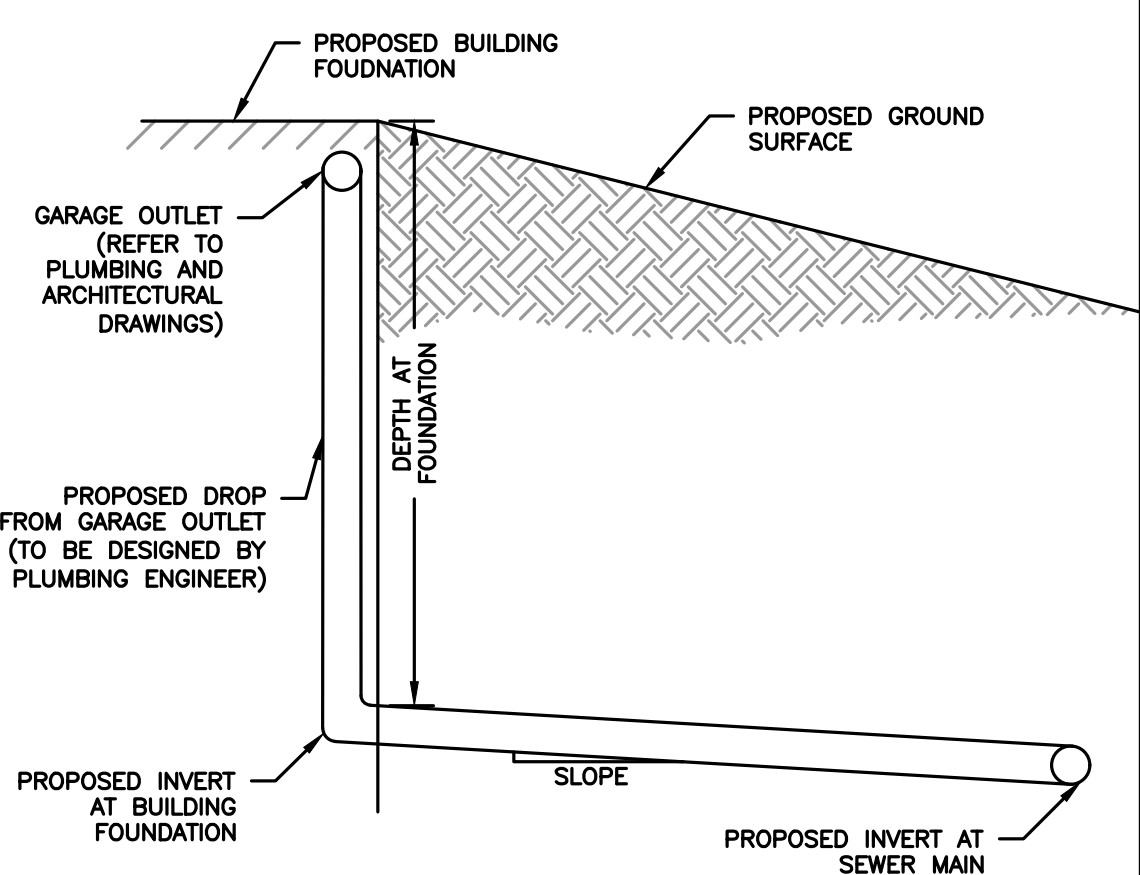
DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE
 C.24



n/1
 HUGHES BAKER
 PROCESS SYSTEMS INC.
 ASSESSOR'S PARCEL 52-78
 100 NEPOSE STREET



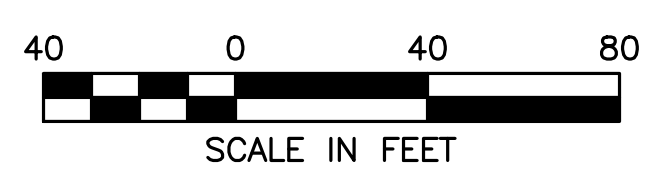
ROAD LOCUS
 NOT TO SCALE



BUILDING 1000 & 2000 SEWER INVERT DETAIL
 SCALE: NTS

Building 1000							
Invert Number	Inv. at Building	Inv. at Sewer Main	Pipe Length from Main to Bldg	Slope	Depth at Foundation	Garage Outlet	Drop from Garage Outlet
1	205.08	203.41	58.95	2.83%	4.50	207.90	2.82
2	205.08	203.16	64.55	2.97%	4.50	208.00	2.92
3	205.08	203.08	64.53	3.10%	4.50	207.82	2.74
4	205.08	202.95	64.49	3.30%	4.50	207.90	2.82
5	205.08	202.76	64.43	3.60%	4.50	207.90	2.82
6	205.08	202.64	64.39	3.79%	4.50	208.10	3.02
7	205.58	204.10	55.85	2.65%	4.00	208.00	2.42
8	205.08	203.78	54.72	2.38%	4.50	208.00	2.92
9	205.08	203.68	54.75	2.56%	4.50	208.00	2.92
10	205.08	203.56	54.79	2.77%	4.50	207.90	2.82
11	205.08	203.41	51.17	3.26%	4.50	207.87	2.79

Building 2000							
Invert Number	Inv. at Building	Inv. at Sewer Main	Pipe Length from Main to Bldg	Slope	Depth at Foundation	Garage Outlet	Drop from Garage Outlet
1	201.83	197.98	60.40	6.37%	7.00	207.10	5.27
2	201.83	198.13	63.58	5.82%	7.00	207.15	5.32
3	201.83	198.28	63.17	5.62%	7.00	207.10	5.27
4	201.83	198.45	62.66	5.39%	7.00	207.20	5.37
5	201.83	198.60	62.25	5.19%	7.00	207.20	5.37
6	201.83	198.71	61.91	5.04%	7.00	207.01	5.18
7	201.83	198.98	59.07	4.82%	7.00	207.10	5.27



n/1 TOWN OF WALPOLE
 ASS. PARCEL 52-15
 CEDAR SWAMP



HOWARD STEIN HUDSON
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 Chelmsford, MA 01824
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PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

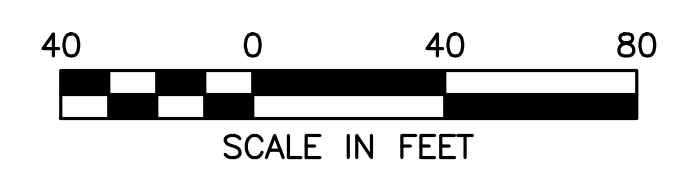
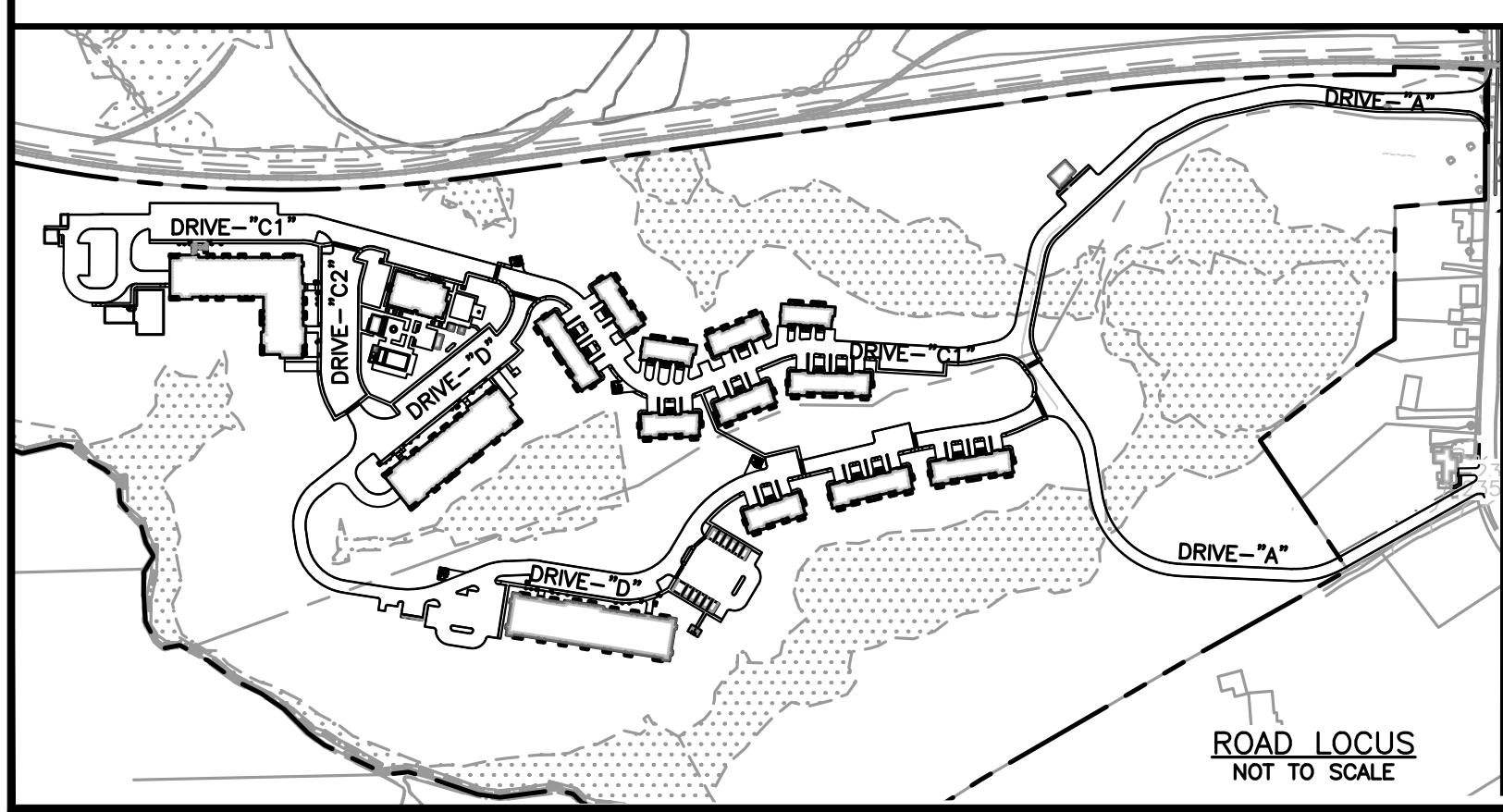
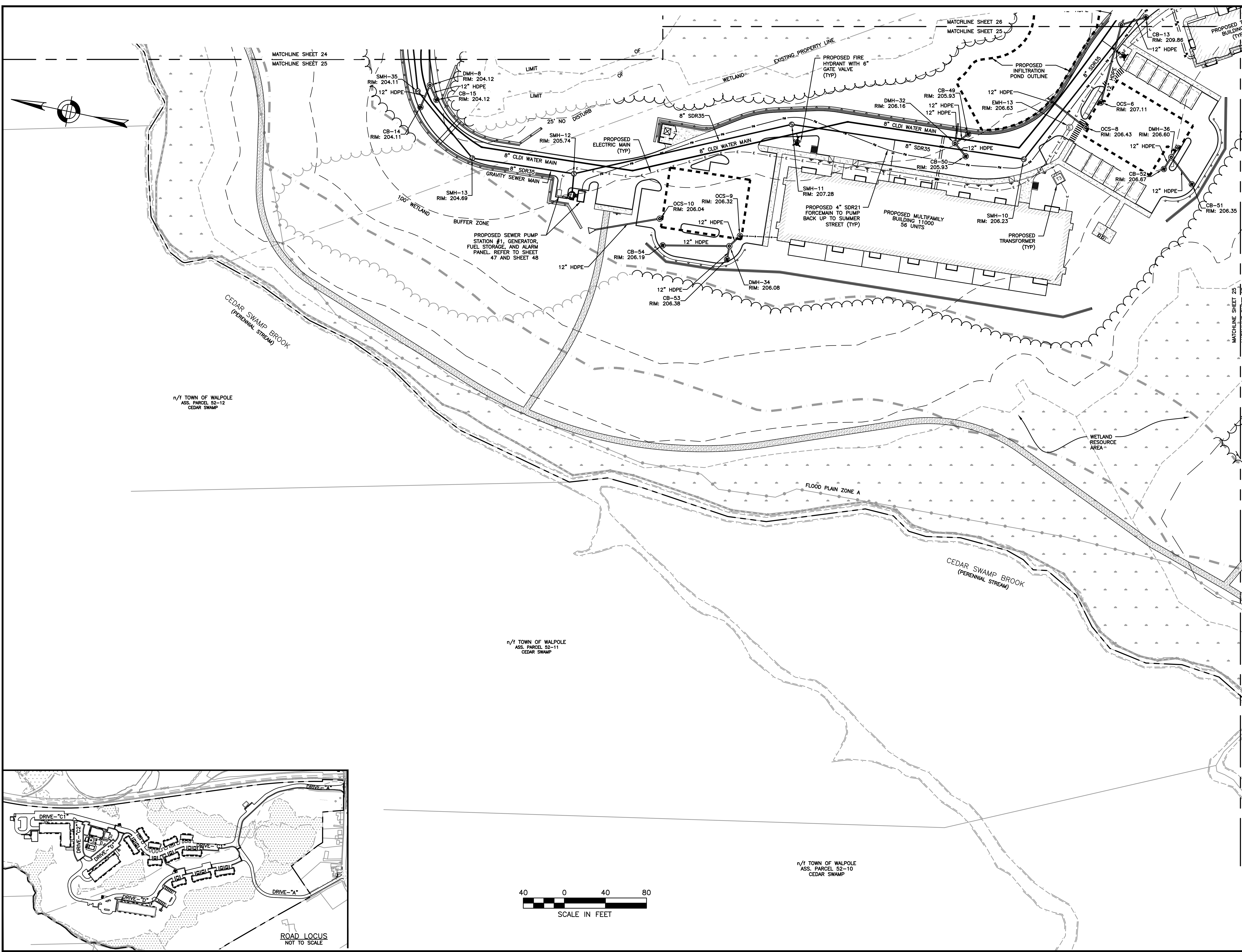
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2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



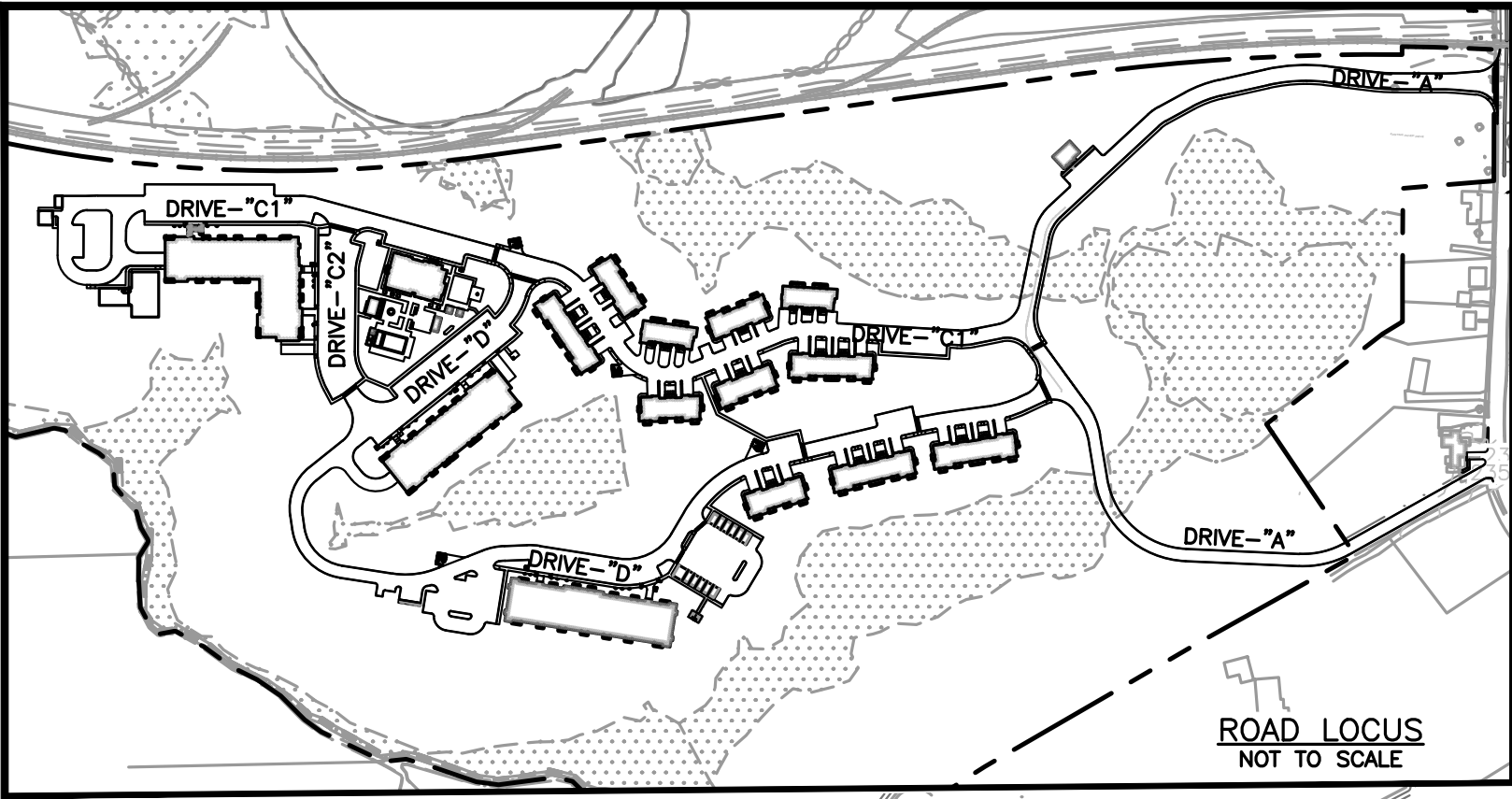
SITE PLAN

UTILITIES PLAN
 2 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.25



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 Abby Iannelli



Unit	FF	Inv. Depth	Unit Inv.	Sewer Inv.	Length	Slope
3000	209.84	7.8	202.01	201.14	43.60	2.00%
4000	210.30	8.6	201.66	201.04	31.00	2.00%
5000	208.80	6.0	202.77	201.99	38.60	2.00%
6000	208.35	5.3	203.03	202.08	47.16	2.00%
7000	208.60	4.7	203.92	202.98	47.06	2.00%
8000	208.90	5.2	203.72	203.22	25.16	2.00%
9000	213.26	8.3	204.99	204.26	36.50	2.00%
10000	210.14	4.5	205.62	204.71	45.34	2.00%
11000	207.23	6.1	201.12	200.31	40.79	2.00%
12000	216.00	8.7	207.30	206.64	33.00	2.00%
13000	216.15	7.4	208.75	208.17	29.09	2.00%
14000	216.15	6.5	209.67	209.06	30.50	2.00%

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**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

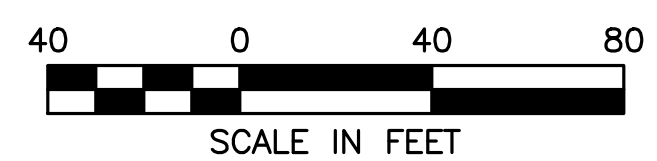
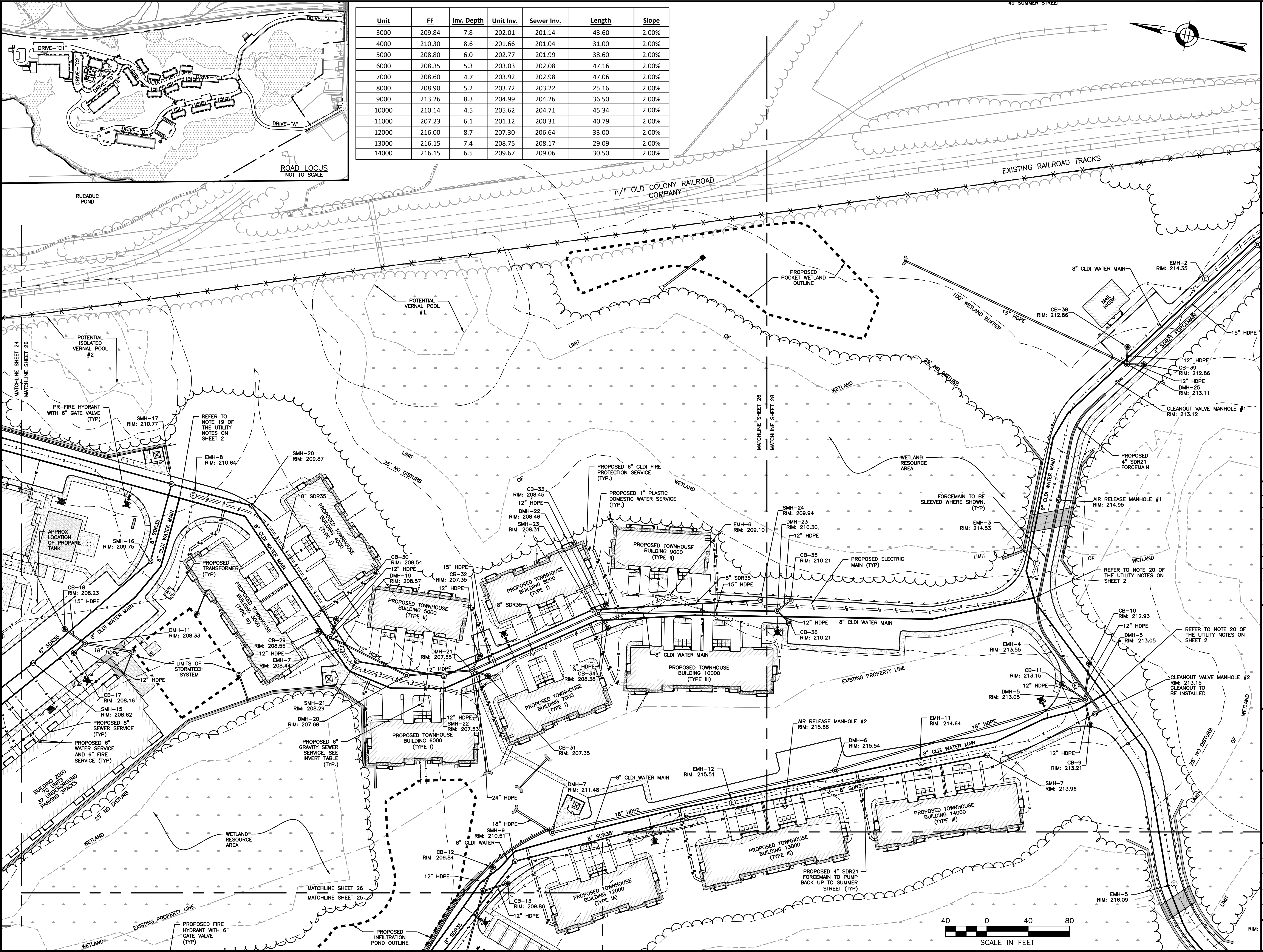
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5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

UTILITIES PLAN
 3 OF 5

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE



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 Abby Iannelli



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 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

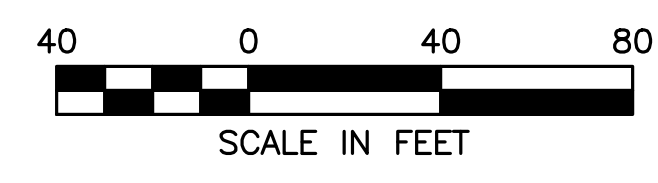
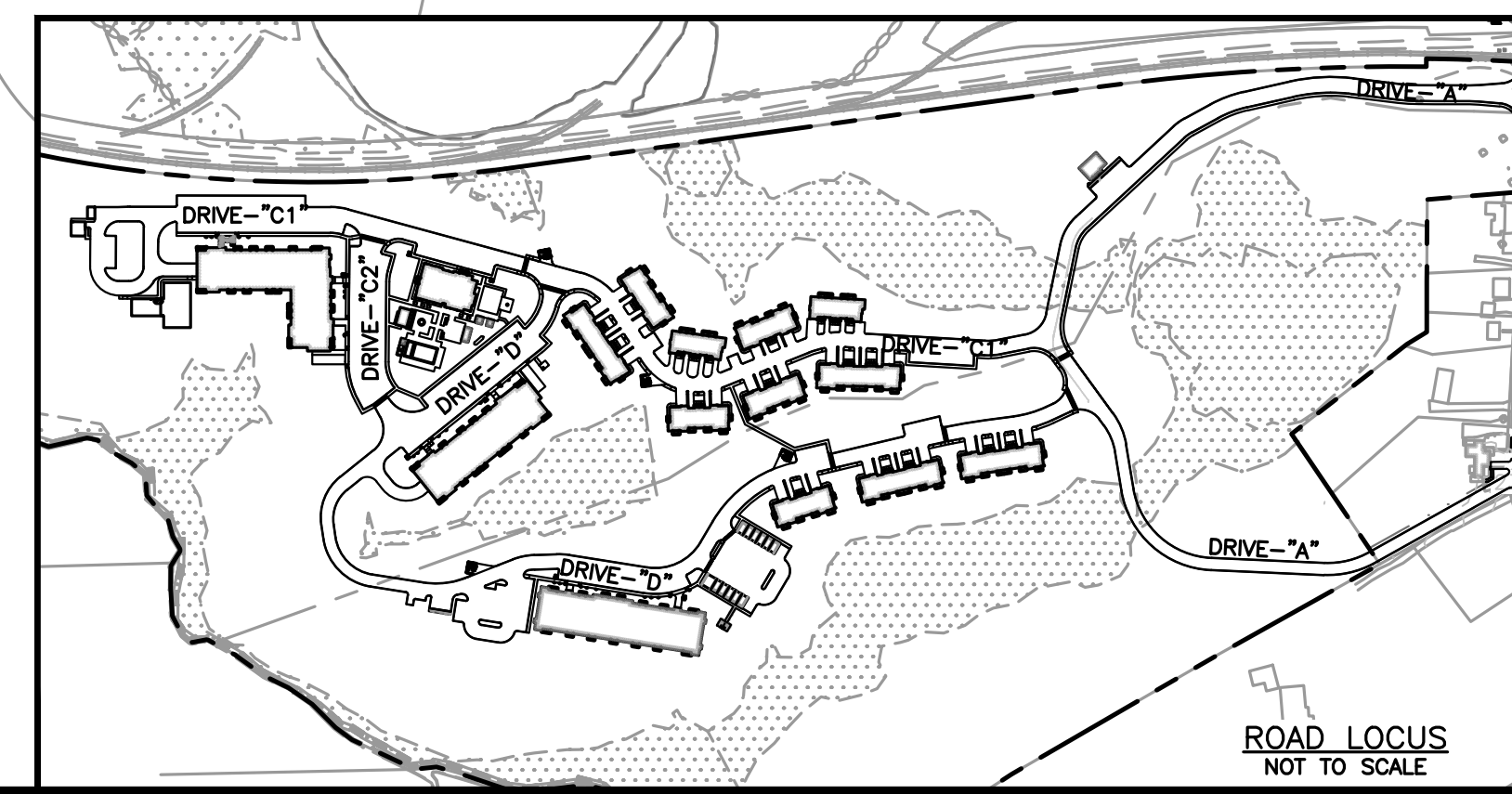
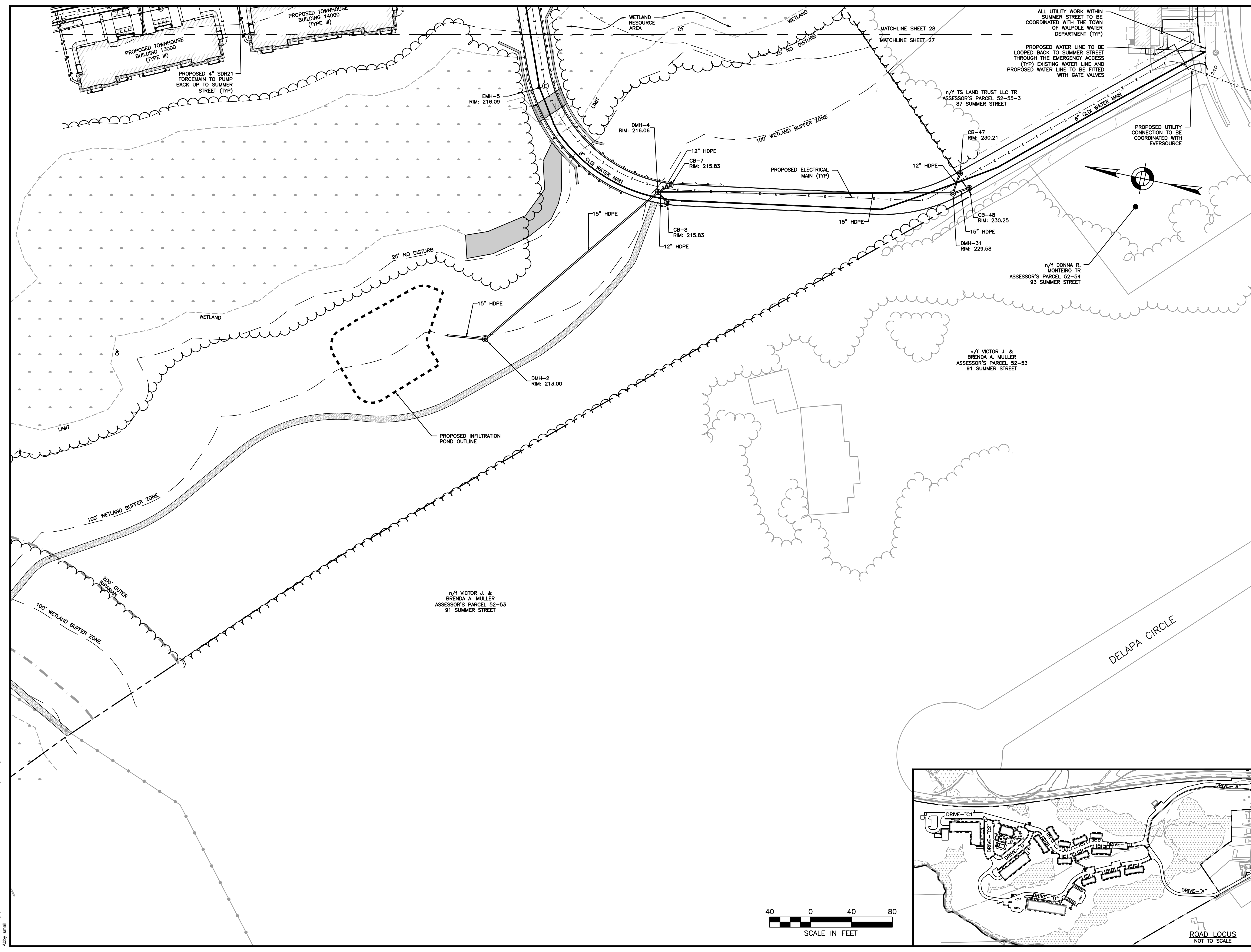


SITE PLAN

UTILITIES PLAN
 4 OF 5





DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.27
 SHEET 27 OF 65



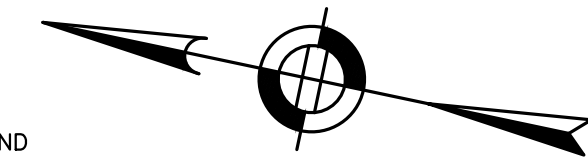
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 Abby Iannelli

LANDSCAPE LEGEND

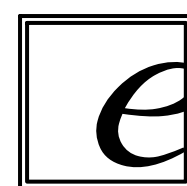
-  PROPOSED DECIDUOUS TREE
-  PROPOSED ORNAMENTAL TREE
-  PROPOSED EVERGREEN
-  PROPOSED SHRUBS

GENERAL LANDSCAPE NOTES:

1. AREAS NOT OTHERWISE DEVELOPED SHALL RECEIVE MINIMUM 6" COMPACTED DEPTH SCREENED LOAM.
2. EXISTING LOAM TO BE STOCKPILED FOR REUSE.
3. FINISH COVER OVER PLANTING BED SHALL INCLUDE 3" MINIMUM DEPTH PINE MULCH.
4. FINISH SURFACE SHALL BE GRADED FROM A HIGH POINT AT CENTER OF ISLAND OUT TO THE BACK OF CURB. SEE GRADING, DRAINAGE AND PAVING PLAN FOR FINISH GRADES.
5. AT A MINIMUM, TREES AND SHRUBS SHALL BE WATERED BY FLOODING AS FOLLOWS: MONTH 0-3: ONCE PER WEEK MONTH 3-6: TWICE PER MONTH MONTH 6-12: ONCE PER MONTH INCREASE WATERING FREQUENCY TO ACCOUNT FOR DROUGHT CONDITIONS AS REQUIRED.
6. TURF AREAS TO BE WATERED AND MOWED UNTIL ACCEPTED.
7. CONSERVATION SEED MIX AREA TO BE WATERED IF NECESSARY FOR ESTABLISHMENT
8. ALL SIGNAGE LIGHTING SHALL COMPLY WITH WALPOLE ZONING BY-LAWS PER SECTION 7. ALL SIGNAGE LIGHTING SHALL BE LIMITED TO WHITE STEADY, STATIONARY LIGHT OF A REASONABLE INTENSITY THAT IS DIRECTED SOLELY AT THE SIGN AND SHIELDED FROM ABUTTING PARCELS.
9. LANDSCAPE LIGHTING SHALL BE LIMITED TO LIGHTING OF TREES, SHRUBS, OR OTHER PLANT MATERIAL. LIGHTING SHALL BE "LOW-LEVEL LIGHT FIXTURES" (3 FEET OR LOWER) AND ONLY BE DIRECTED IN A DOWNWARD FACING DIRECTION. SEASONAL LIGHTING SHALL NOT BE PERMITTED FOR LONGER THAN A SIX-WEEK PERIOD IN ANY CALENDAR YEAR.



james k. emmanuel | associates
LANDSCAPE ARCHITECTS



22 Carlton Rd.
Marblehead, MA 01945
tel. (781) 622-7487

james@jamesemmanuel.com
www.jamesemmanuel.com

PLANTING NOTES

1. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE IS PROVIDED IN THE PLANT LIST FOR CONTRACTORS CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LIST AND THE NUMBER SHOWN ON THE DRAWING, THE GREATER NUMBER SHALL APPLY.
2. ALL PLANT MATERIAL SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT OR THE OWNER'S REPRESENTATIVE PRIOR TO ARRIVAL ON SITE.
3. PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE.
4. THE CONTRACTOR SHALL LOCATE AND MARK ALL UTILITIES PRIOR TO PLANTING. ANY CONFLICTS BETWEEN PLANTING AND UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE LANDSCAPE ARCHITECT SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
5. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTS AGAINST DAMAGE FROM ON-GOING CONSTRUCTION. PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL FORMAL ACCEPTANCE OF ALL PLANTING.
7. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE LOAMED 6" AND SEEDED.

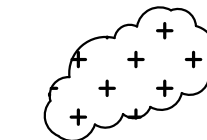
TOWN OF WALPOLE CONSERVATION COMMISSION NOTES:

1. INCLUDE LANDSCAPE PLAN FOR AREAS WITHIN THE 100-FOOT BUFFER ZONE SPECIFYING INVASIVE SPECIES MAINTENANCE PLAN, REMOVAL OF GRASS CLIPPING AND CUTTINGS OUTSIDE THE BUFFER ZONES, LIMIT USE OF NON-ORGANIC FERTILIZERS AND NO HERBICIDES OR PESTICIDES, AND DROUGHT RESISTANT NATIVE PLANTINGS.

STREET TREE PLANTINGS

Plant Schedule

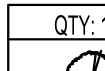
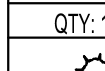
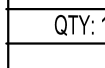
	Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:			
	Acer rubrum 'Red Sunset'	Red Sunset Maple	2"cal
	Acer saccharum 'Green Mountain'	Sugar Maple	2"cal
**	Carpinus caroliniana	American Hornbeam	2"cal
**	Carya ovata	Shagbark Hickory	2"cal
**	Ostrya virginiana	Hophornbeam	2"cal
**	Platanus x acerifolia	London Planetree	2"cal
**	Quercus coccinea	Scarlet Oak	2"cal
**	Quercus palustris	Pin Oak	2"cal
**	Tilia americana	Basswood	2"cal
**	Tilia cordata 'Greenspire'	Greenspire Linden	2"cal
**	Zelkova serrata	Japanese Zelkova	2"cal



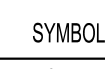


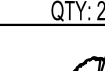
Conservation Seed Mix

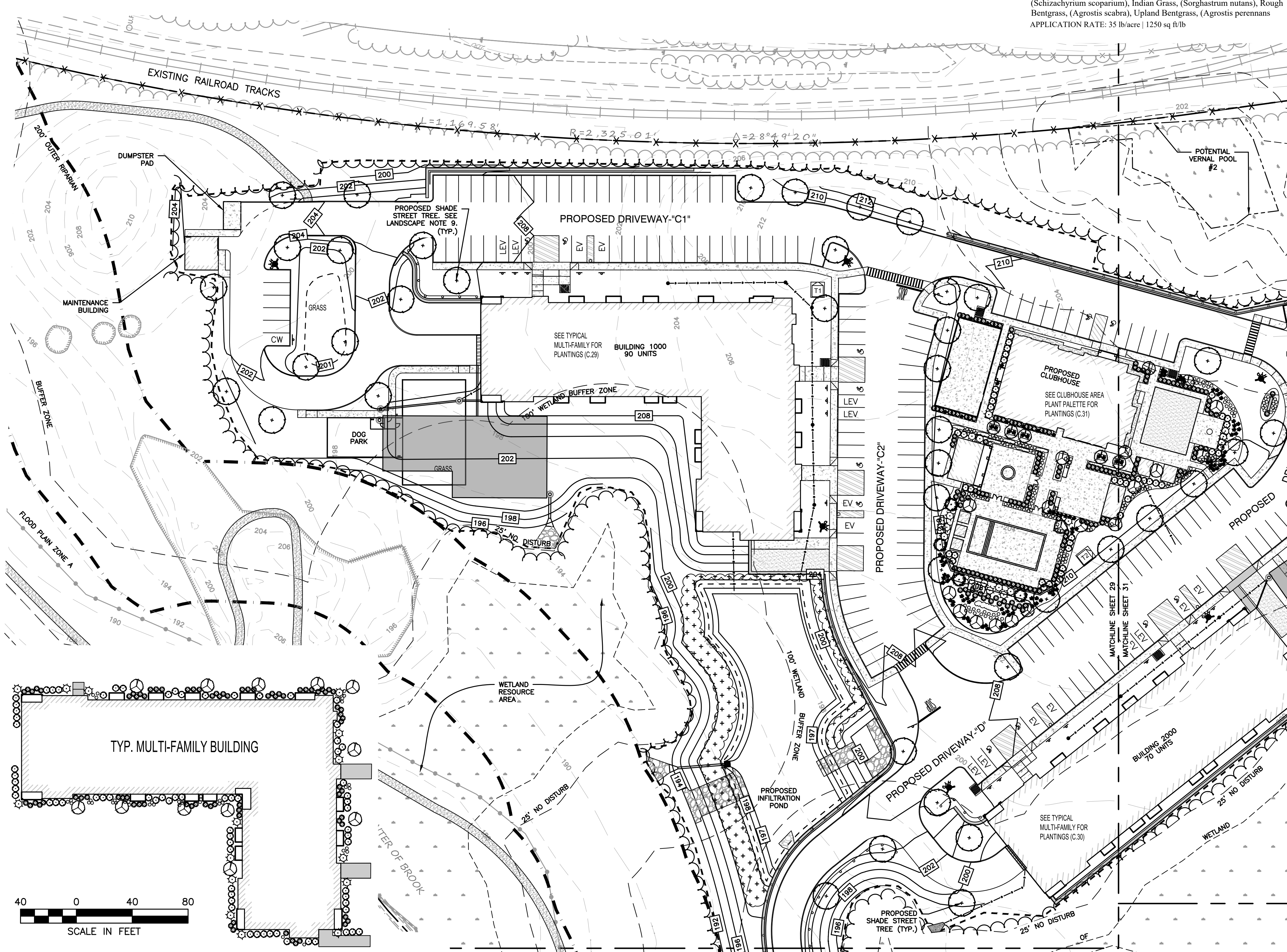
Creeping Red Fescue, (Festuca rubra), Canada Wild Rye, (Elymus canadensis), Annual Ryegrass, (Lolium multiflorum), Perennial Ryegrass, (Lolium perenne), Blue Grama, (Bouteloua gracilis), Little Bluestem, (Schizachyrium scoparium), Indian Grass, (Sorghastrum nutans), Rough Bentgrass, (Agrostis scabra), Upland Bentgrass, (Agrostis perennans)
APPLICATION RATE: 35 lb/acre | 1250 sq ft/lb

MULTI-FAMILY PLANTINGS

SYMBOL	QTY	DESCRIPTION	Botanical Name	Common Name	Size			
	11	FLOWERING TREE OPTIONS:	Cercis canadensis	Eastern Redbud	2"cal			
			Cornus florida	White Dogwood	2"cal			
			Cornus kousa	Korean Dogwood	2"cal			
			Cornus mas	Corneliancherry	2"cal			
			Crataegus phaenopyrum	Washington Hawthorne	2"cal			
			Magnolia x soulangiana	Saucer Magnolia	8-10'			
			Sophora japonica	Japanese Pagodatree	2"cal			
				12	MULTI-FAMILY EVERGREEN TREE OPTIONS:	Juniperus chinensis 'Blue Point'	Blue Point Juniper	6'
						Juniperus chinensis 'Moutbatten'	Moutbatten Juniper	6'
						Juniperus virginiana	Eastern Red Cedar	6'
Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6'						
Thuja x plicata 'Green Giant'	Green Giant Arborvitae	6'						
	117	SHRUB OPTIONS:				Cornus alba 'Elegantissima'	Variegated Red Twig Dogwood	2-3'
			Cornus racemosa	Grey Dogwood	2-3'			
			Forsythia	Forsythia	2-3'			
			Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'			
			Ilex verticillata	Winterberry	2-3'			
			Itea virginica	Virginia Sweetspire	2-3'			
			Kalmia latifolia	Mountain Laurel	2-3'			
			Myrica pennsylvanica	Northern Bayberry	2-3'			
			Physocarpus opulifolius 'Monlo'	Diabolo Ninebark	2-3'			
			Prunus Maratima	Beach Plum	2-3'			
			Syringa vulgaris	Common Lilac	2-3'			
			Viburnum dentatum	Arrowwood	2-3'			

Clubhouse Area Plant Palette

SYMBOL	QTY	DESCRIPTION	Botanical Name	Common Name	Size
	14	DECIDUOUS TREE OPTIONS:	Acer rubrum 'Red Sunset'	Red Sunset Maple	2"cal
			Platanus x acerifolia	London Planetree	2"cal
			Quercus coccinea	Scarlet Oak	2"cal
			Quercus palustris	Pin Oak	2"cal
			Tilia americana	Basswood	2"cal
			Tilia cordata 'Greenspire'	Greenspire Linden	2"cal
			Zelkova serrata	Japanese Zelkova	2"cal
				27	EVERGREEN TREE OPTIONS:
Picea glauca	White Spruce	6'			
Picea pungens 'Bakeri'	Bakers Blue Spruce3	6'			
Juniperus chinensis 'Blue Point'	Blue Point Juniper	6'			
Juniperus virginiana	Eastern Red Cedar	6'			
Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6'			
Thuja x plicata 'Green Giant'	Green Giant Arborvitae	6'			
	300	SHRUB OPTIONS:	Cornus alba 'Elegantissima'	Variegated Red Twig Dogwood	2-3'
			Cornus racemosa	Grey Dogwood	2-3'
			Forsythia	Forsythia	2-3'
			Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'
			Ilex verticillata	Winterberry	2-3'
			Itea virginica	Virginia Sweetspire	2-3'
			Kalmia latifolia	Mountain Laurel	2-3'
			Myrica pennsylvanica	Northern Bayberry	2-3'
			Physocarpus opulifolius 'Monlo'	Diabolo Ninebark	2-3'
			Prunus Maratima	Beach Plum	2-3'
			Syringa vulgaris	Common Lilac	2-3'
			Viburnum dentatum	Arrowwood	2-3'
			Rhus aromatica 'Gro-Low'	Grow Low Sumac	18-24"
			Kalmia angustifolia	Sheep Laurel	18-24"
Buxus sempervirens	Green Velvet Boxwood	18-24"			
Taxus medai 'Greenwave'	Greenwave Yew	18-24"			
	26	FLOWERING TREE OPTIONS:	Cercis canadensis	Eastern Redbud	2"cal
			Cornus florida	White Dogwood	2"cal
			Cornus kousa	Korean Dogwood	2"cal
			Cornus mas	Corneliancherry	2"cal
			Crataegus phaenopyrum	Washington Hawthorne	2"cal
			Magnolia x soulangiana	Saucer Magnolia	8-10'
			Sophora japonica	Japanese Pagodatree	2"cal



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PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

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4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

SITE PLAN

LANDSCAPING PLAN 1 OF 5

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE
C.29
SHEET 29 OF 65

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Abby Imani



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 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

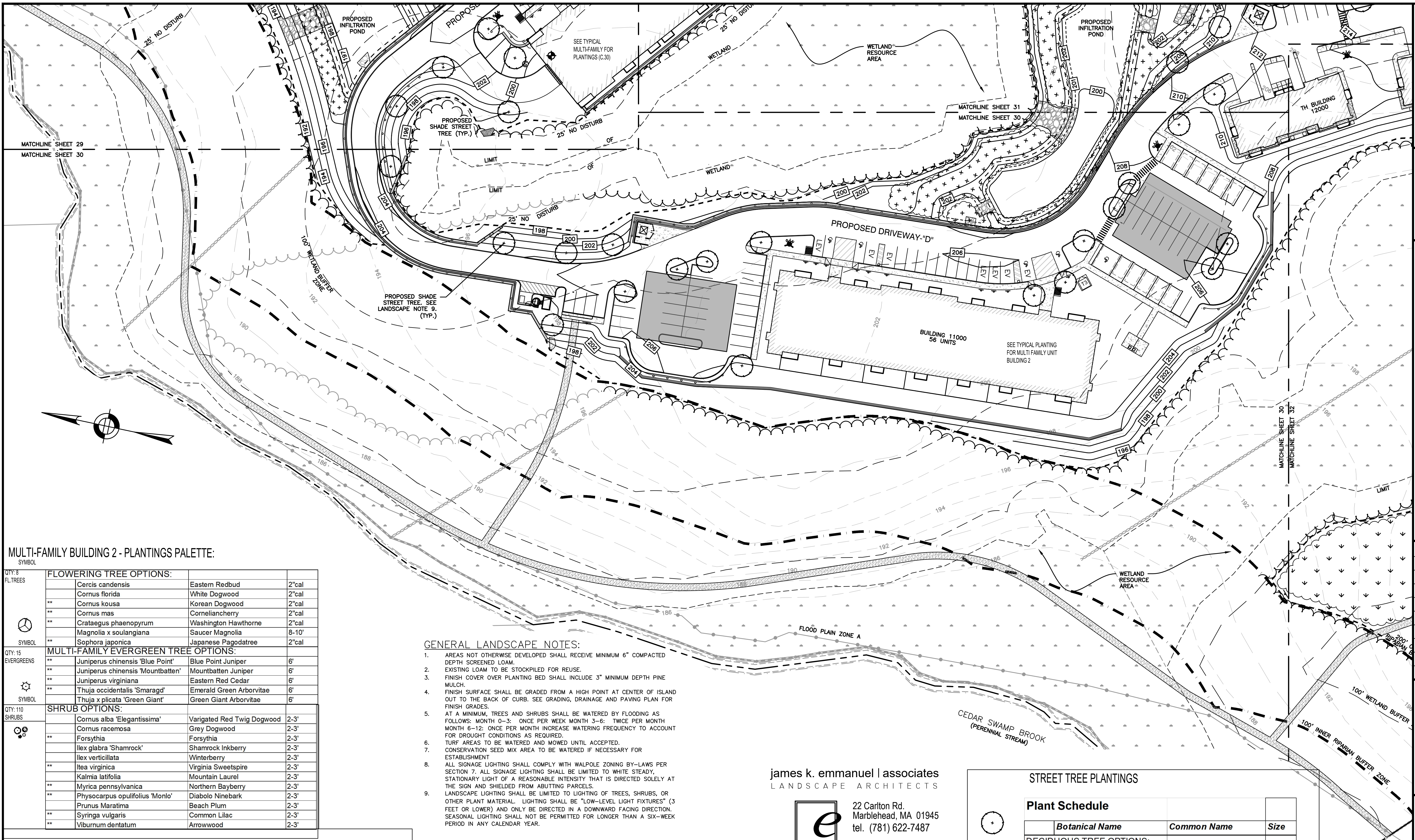
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SITE
 PLAN

LANDSCAPING
 PLAN 2 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.30

SHEET 30 OF 65



MULTI-FAMILY BUILDING 2 - PLANTINGS PALETTE:

SYMBOL	FLOWERING TREE OPTIONS:		
QTY: 8 FL TREES	Cercis canadensis	Eastern Redbud	2"cal
	Cornus florida	White Dogwood	2"cal
	Cornus kousa	Korean Dogwood	2"cal
	Cornus mas	Corneliancherry	2"cal
	Crataegus phaenopyrum	Washington Hawthorne	2"cal
	Magnolia x soulangiana	Saucer Magnolia	8-10'
	Sophora japonica	Japanese Pagodatree	2"cal
SYMBOL	MULTI-FAMILY EVERGREEN TREE OPTIONS:		
QTY: 15 EVERGREENS	Juniperus chinensis 'Blue Point'	Blue Point Juniper	6'
	Juniperus chinensis 'Mountbatten'	Mountbatten Juniper	6'
	Juniperus virginiana	Eastern Red Cedar	6'
	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6'
	Thuja x plicata 'Green Giant'	Green Giant Arborvitae	6'
SYMBOL	SHRUB OPTIONS:		
QTY: 110 SHRUBS	Cornus alba 'Elegantissima'	Variegated Red Twig Dogwood	2-3'
	Cornus racemosa	Grey Dogwood	2-3'
	Forsythia	Forsythia	2-3'
	Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'
	Ilex verticillata	Winterberry	2-3'
	Itea virginica	Virginia Sweetspire	2-3'
	Kalmia latifolia	Mountain Laurel	2-3'
	Myrica pennsylvanica	Northern Bayberry	2-3'
	Physocarpus opulifolius 'Monro'	Diabolo Ninebark	2-3'
	Prunus Maratima	Beach Plum	2-3'
	Syringa vulgaris	Common Lilac	2-3'
	Viburnum dentatum	Arrowwood	2-3'

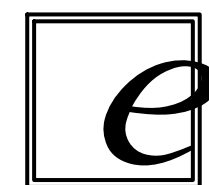
GENERAL LANDSCAPE NOTES:

- AREAS NOT OTHERWISE DEVELOPED SHALL RECEIVE MINIMUM 6" COMPACTED DEPTH SCREENED LOAM.
- EXISTING LOAM TO BE STOCKPILED FOR REUSE.
- FINISH COVER OVER PLANTING BED SHALL INCLUDE 3" MINIMUM DEPTH PINE MULCH.
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PLANTING NOTES

- THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE IS PROVIDED IN THE PLANT LIST FOR CONTRACTORS CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LIST AND THE NUMBER SHOWN ON THE DRAWING, THE GREATER NUMBER SHALL APPLY.
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- ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE LOAMED 6" AND SEEDDED.

james k. emmanuel | associates
 LANDSCAPE ARCHITECTS



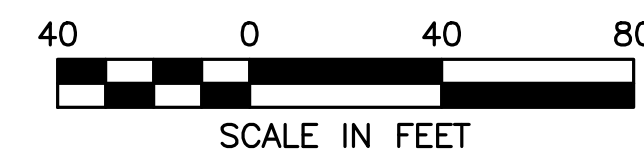
22 Carlton Rd.
 Marblehead, MA 01945
 tel. (781) 622-7487

james@jamesemmanuel.com
 www.jamesemmanuel.com

LANDSCAPE LEGEND

PROPOSED
 DECIDUOUS TREE

PROPOSED
 SHRUBS



STREET TREE PLANTINGS

Plant Schedule

	Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:			
	Acer rubrum 'Red Sunset'	Red Sunset Maple	2"cal
	Acer saccharum 'Green Mountain'	Sugar Maple	2"cal
**	Carpinus caroliniana	American Hornbeam	2"cal
**	Carya ovata	Shagbark Hickory	2"cal
**	Ostrya virginiana	Hophornbeam	2"cal
**	Platanus x acerifolia	London Planetree	2"cal
**	Quercus coccinea	Scarlet Oak	2"cal
**	Quercus palustris	Pin Oak	2"cal
**	Tilia americana	Basswood	2"cal
**	Tilia cordata 'Greenspire'	Greenspire Linden	2"cal
**	Zelkova serrata	Japanese Zelkova	2"cal

Conservation Seed Mix

Creeping Red Fescue, (Festuca rubra), Canada Wild Rye, (Elymus canadensis), Annual Ryegrass, (Lolium multiflorum), Perennial Ryegrass, (Lolium perenne), Blue Grama, (Bouteloua gracilis), Little Bluestem, (Schizachyrium scoparium), Indian Grass, (Sorghastrum nutans), Rough Bentgrass, (Agrostis scabra), Upland Bentgrass, (Agrostis perennans)
 APPLICATION RATE: 35 lbs/acre | 1250 sq ft/lb

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PLANTING NOTES

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7. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE LOAMED 6" AND SEEDED.

STREET TREE PLANTINGS

Plant Schedule			
Symbol	Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:			
○	Acer rubrum 'Red Sunset'	Red Sunset Maple	2"cal
○	Acer saccharum 'Green Mountain'	Sugar Maple	2"cal
**	Carpinus caroliniana	American Hornbeam	2"cal
○	Carya ovata	Shagbark Hickory	2"cal
**	Ostrya virginiana	Hophornbeam	2"cal
**	Platanus x acerifolia	London Planetree	2"cal
**	Quercus coccinea	Scarlet Oak	2"cal
**	Quercus palustris	Pin Oak	2"cal
**	Tilia americana	Basswood	2"cal
**	Tilia cordata 'Greenspire'	Greenspire Linden	2"cal
**	Zelkova serrata	Japanese Zelkova	2"cal
EVERGREEN TREE OPTIONS:			
**	Abies concolor	White Fir	6'
**	Picea abies	Norway Spruce	6'
**	Picea glauca	White Spruce	6'
**	Picea omorika	Serbian Spruce	6'
**	Picea pungens 'Glauca'	Colorado Blue Spruce	6'

CLUBHOUSE AREA PLANTINGS

SYMBOL	FLOWERING TREE OPTIONS:		
○	Cercis canadensis	Eastern Redbud	2"cal
○	Cornus florida	White Dogwood	2"cal
**	Cornus kousa	Korean Dogwood	2"cal
**	Cornus mas	Cornelancherry	2"cal
**	Crataegus phaenopyrum	Washington Hawthorne	2"cal
**	Magnolia x soulangiana	Saucer Magnolia	8-10'
**	Sophora japonica	Japanese Pagodatree	2"cal
QTY: As Shown	SHRUB OPTIONS:		
○	Cornus alba 'Elegantissima'	Varigated Red Twig Dogwood	2-3'
○	Cornus racemosa	Grey Dogwood	2-3'
**	Forsythia	Forsythia	2-3'
**	Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'
**	Ilex verticillata	Winterberry	2-3'
**	Itea virginica	Virginia Sweetpire	2-3'
**	Kalmia latifolia	Mountain Laurel	2-3'
**	Myrica pennsylvanica	Northern Bayberry	2-3'
**	Physocarpus opulifolius 'Monlo'	Diablo Ninebark	2-3'
**	Prunus Maratima	Beach Plum	2-3'
**	Syringa vulgaris	Common Lilac	2-3'
**	Viburnum dentatum	Arrowwood	2-3'

LANDSCAPE LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN
- PROPOSED SHRUBS

HIGH MARSH ZONE:

- 4400 CX - CAREX STRICTA - TUSsock SEDGE (3,800 SF±) 2" PLUG
- 3700 CV - CAREX VULPINOIDEA - FOX SEDGE (3,200 SF±) 2" PLUG
- 800 BV - VERBENA HASTATA - BLUE VERVAIN (720 SF±) 2" PLUG

LOW MARSH ZONE:

- 1250 BL - SCHOENOPLECTUS AMERICANUS - THREE SQUARE BULRUSH (4,300 SF±) 2" PLUG
- 800 SS - SCHOENOPLECTUS TABERNAEMONTANI - SOFT STEM BULRUSH (4,300 SF±) 2" PLUG

NOTES:
1. POCKET WETLAND PLANTINGS TO CONFORM TO THE ABOVE PLANTING SCHEDULE OR ECOLOGICALLY SIMILAR SEDGE OR RUSH SPECIES.

james k. emmanuel | associates
LANDSCAPE ARCHITECTS



22 Carlton Rd.
Marblehead, MA 01945
tel. (781) 622-7487

james@jamesemmanuel.com
www.jamesemmanuel.com

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PREPARED FOR:

FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

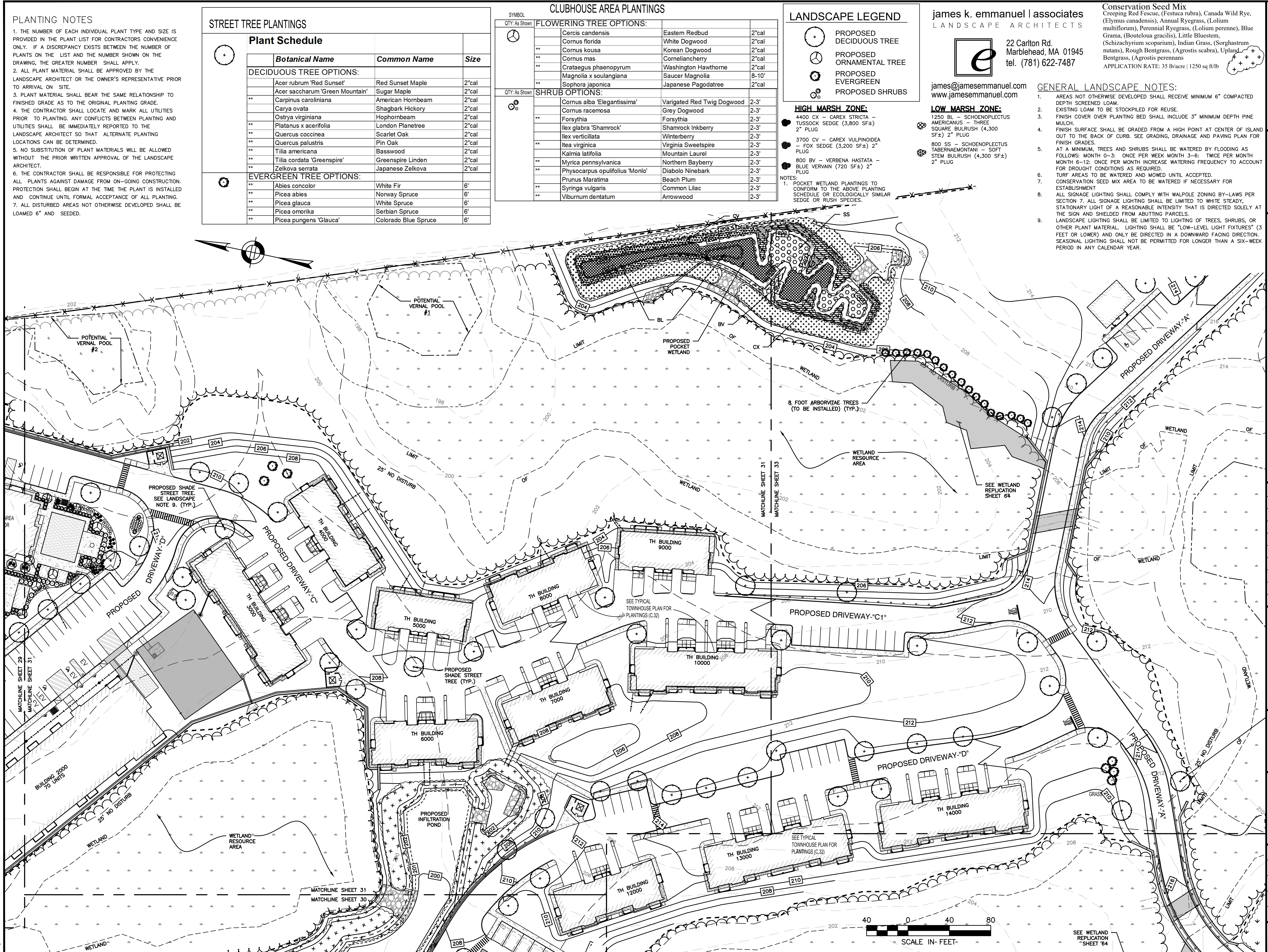
SITE PLAN

LANDSCAPING PLAN 3 OF 5

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE

C.31

SHEET 31 OF 65





HOWARD STEIN HUDSON
 114 Turnpike Road, Suite 2C
 Chelmsford, MA 01824
 www.hshassoc.com

PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

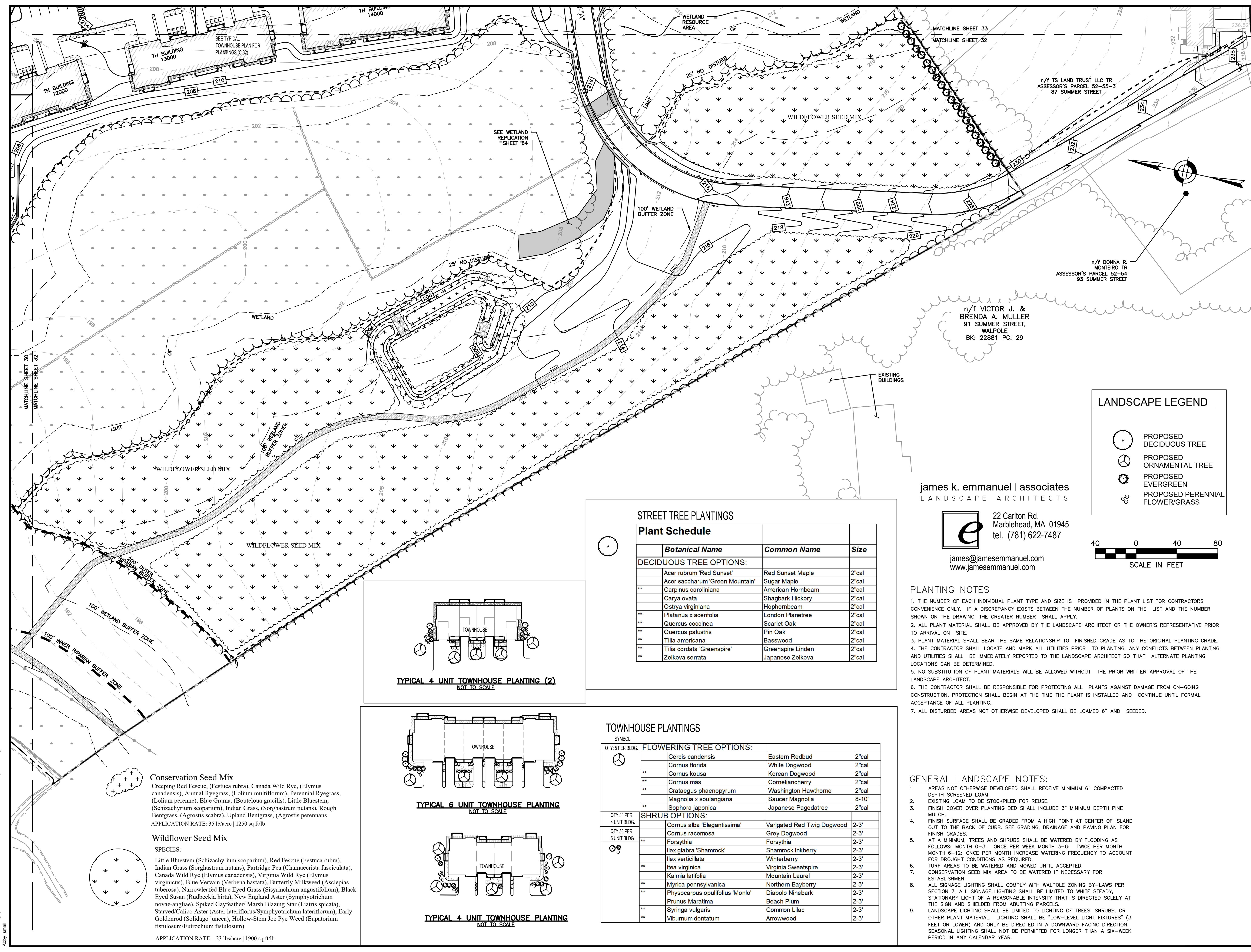
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SITE PLAN

LANDSCAPING PLAN 4 OF 5

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE
 C.32
 SHEET 32 OF 65



LANDSCAPE LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN
- PROPOSED PERENNIAL FLOWER/GRASS

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STREET TREE PLANTINGS

Plant Schedule

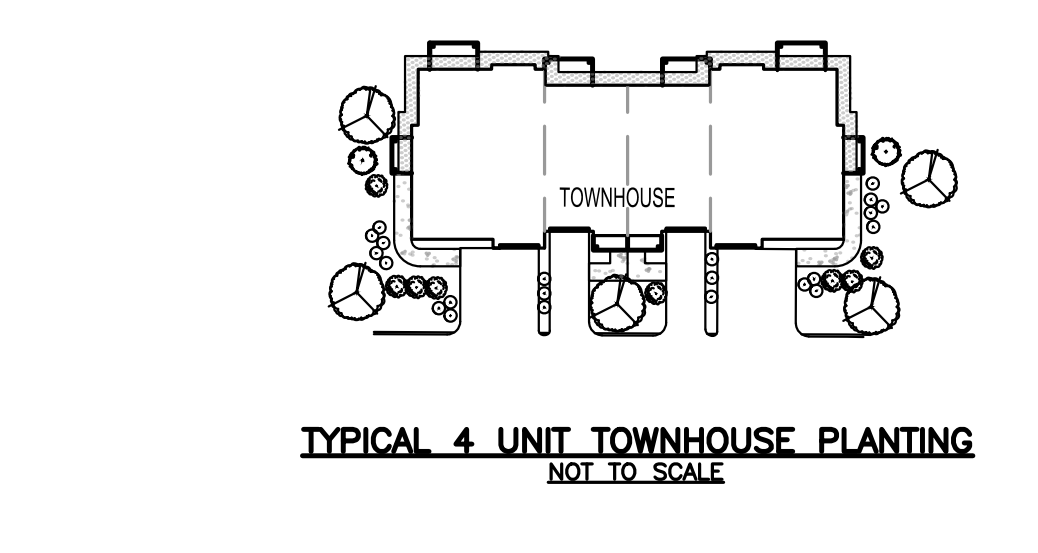
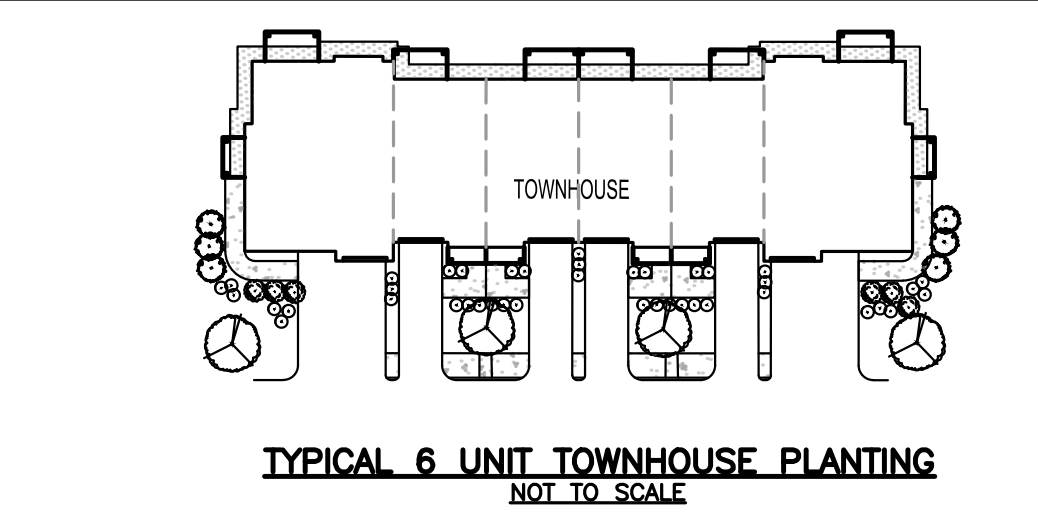
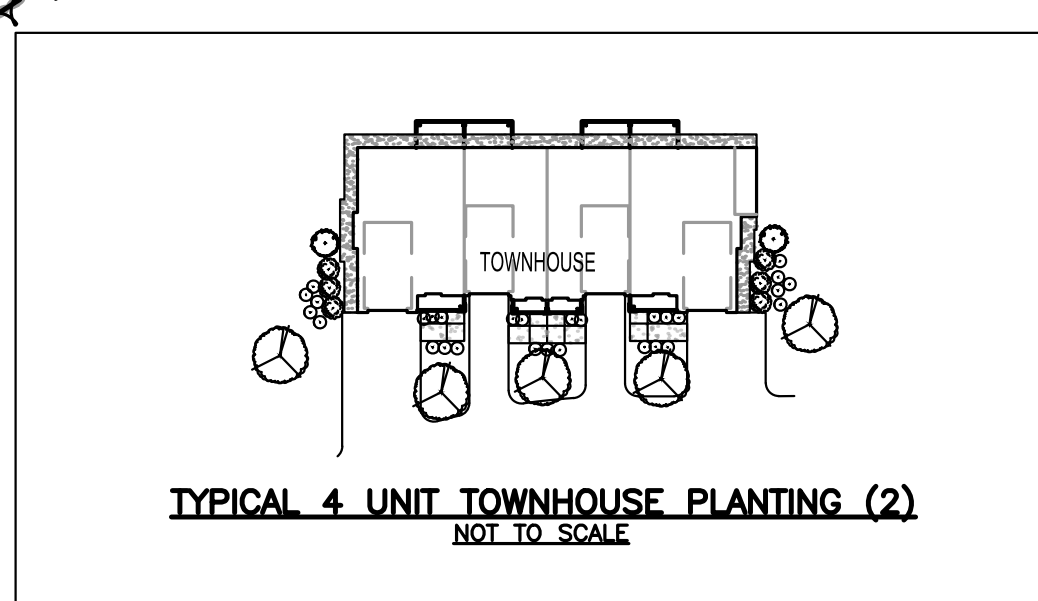
	Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:			
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TOWNHOUSE PLANTINGS

SYMBOL	QTY: 5 PER BLDG.	FLOWERING TREE OPTIONS:		
		Cercis canadensis	Eastern Redbud	2"cal
		Cornus florida	White Dogwood	2"cal
**		Cornus kousa	Korean Dogwood	2"cal
**		Cornus mas	Corneliancherry	2"cal
**		Crataegus phaenopyrum	Washington Hawthorne	2"cal
**		Magnolia x soulangiana	Saucer Magnolia	8-10'
**		Sophora japonica	Japanese Pagodatree	2"cal
SYMBOL	QTY: 33 PER 4 UNIT BLDG.	SHRUB OPTIONS:		
		Cornus alba 'Elegantissima'	Variegated Red Twig Dogwood	2-3'
		Cornus racemosa	Grey Dogwood	2-3'
**		Forsythia	Forsythia	2-3'
		Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'
		Ilex verticillata	Winterberry	2-3'
**		Itea virginica	Virginia Sweetspice	2-3'
**		Kalmia latifolia	Mountain Laurel	2-3'
**		Myrica pennsylvanica	Northern Bayberry	2-3'
**		Physocarpus opulifolius 'Monlo'	Diabolo Ninebark	2-3'
**		Prunus Maratima	Beach Plum	2-3'
**		Syringa vulgaris	Common Lilac	2-3'
**		Viburnum dentatum	Arrowwood	2-3'

Conservation Seed Mix
 Creeping Red Fescue, (Festuca rubra), Canada Wild Rye, (Elymus canadensis), Annual Ryegrass, (Lolium multiflorum), Perennial Ryegrass, (Lolium perenne), Blue Grama, (Bouteloua gracilis), Little Bluestem, (Schizachyrium scoparium), Indian Grass, (Sorghastrum nutans), Rough Bentgrass, (Agrostis scabra), Upland Bentgrass, (Agrostis perennans)
 APPLICATION RATE: 35 lb/acre | 1250 sq ft/lb

Wildflower Seed Mix
 SPECIES:
 Little Bluestem (Schizachyrium scoparium), Red Fescue (Festuca rubra), Indian Grass (Sorghastrum nutans), Partridge Pea (Chamaecrista fasciculata), Canada Wild Rye (Elymus canadensis), Virginia Wild Rye (Elymus virginicus), Blue Vervain (Verbena hastata), Butterfly Milkweed (Asclepias tuberosa), Narrowleafed Blue Eyed Grass (Sisyrinchium angustifolium), Black Eyed Susan (Rudbeckia hirta), New England Aster (Symphyotrichum novae-angliae), Spiked Gayfeather/ Marsh Blazing Star (Liatris spicata), Starved/Calico Aster (Aster lateriflorus/Symphotrichum lateriflorum), Early Goldenrod (Solidago juncea), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum)
 APPLICATION RATE: 23 lbs/acre | 1900 sq ft/lb

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 Abby Imani

Plant Schedule

Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:		
Acer rubrum 'Red Sunset'	Red Sunset Maple	2"cal
Acer saccharum 'Green Mountain'	Sugar Maple	2"cal
Carpinus caroliniana	American Hornbeam	2"cal
Carya ovata	Shagbark Hickory	2"cal
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Platanus x acerifolia	London Planetree	2"cal
Quercus coccinea	Scarlet Oak	2"cal
Quercus palustris	Pin Oak	2"cal
Tilia americana	Basswood	2"cal
Tilia cordata 'Greenspire'	Greenspire Linden	2"cal
Zelkova serrata	Japanese Zelkova	2"cal

Plant Schedule - Entry Plantings

Qty	Key	Botanical Name	Common Name	Size
TREES:				
6	PIGL	Picea glauca	White Spruce	6-7'
SHRUBS/PERENNIALS:				
10	CORE	Cornus racemosa	Gray Dogwood	#3pot
12	JUOW	Juniperus virginiana 'Grey Owl'	Grey Owl Cedar	#5pot
16	LISP	Liriope spicata	Creeping Lilyturf	#1pot
28	PEAT	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	#1pot

FLOWERING TREE OPTIONS:

Cercis canadensis	Eastern Redbud	2"cal
Cornus florida	White Dogwood	2"cal
Cornus kousa	Korean Dogwood	2"cal
Cornus mas	Corneliancherry	2"cal
Crataegus phaenopyrum	Washington Hawthorne	2"cal
Magnolia x soulangiana	Saucer Magnolia	8-10'
Sophora japonica	Japanese Pagodatree	2"cal

EVERGREEN TREE OPTIONS:

Abies concolor	White Fir	6'
Picea abies	Norway Spruce	6'
Picea glauca	White Spruce	6'
Picea omorika	Serbian Spruce	6'
Picea pungens 'Glauca'	Colorado Blue Spruce	6'
Pinus thunbergii	Japanese Black Pine	6'
Tsuga canadensis	Hemlock	6'
Juniperus chinensis 'Blue Point'	Blue Point Juniper	6'
Juniperus chinensis 'Mountbatten'	Mountbatten Juniper	6'
Juniperus virginiana	Eastern Red Cedar	6'
Pinus resinosa	Red Pine	6'
Pinus strobus	White Pine	6'
Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6'
Thuja x plicata 'Green Giant'	Green Giant Arborvitae	6'

PLANTING NOTES

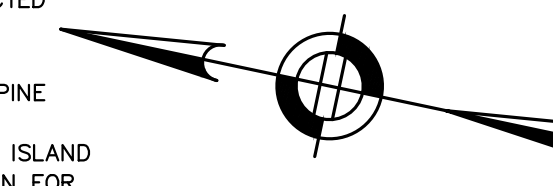
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7. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL BE LOAMED 6" AND SEEDED.

Conservation Seed Mix

Creeping Red Fescue, (Festuca rubra), Canada Wild Rye, (Elymus canadensis), Annual Ryegrass, (Lolium multiflorum), Perennial Ryegrass, (Lolium perenne), Blue Grama, (Bouteloua gracilis), Little Bluestem, (Schizachyrium scoparium), Indian Grass, (Sorghastrum nutans), Rough Bentgrass, (Agrostis scabra), Upland Bentgrass, (Agrostis perennans)
APPLICATION RATE: 35 lb/acre | 1250 sq ft/lb

GENERAL LANDSCAPE NOTES:

1. AREAS NOT OTHERWISE DEVELOPED SHALL RECEIVE MINIMUM 6" COMPACTED DEPTH SCREENED LOAM.
2. EXISTING LOAM TO BE STOCKPILED FOR REUSE.
3. FINISH COVER OVER PLANTING BED SHALL INCLUDE 3" MINIMUM DEPTH PINE MULCH.
4. FINISH SURFACE SHALL BE GRADED FROM A HIGH POINT AT CENTER OF ISLAND OUT TO THE BACK OF CURB. SEE GRADING, DRAINAGE AND PAVING PLAN FOR FINISH GRADES.
5. AT A MINIMUM, TREES AND SHRUBS SHALL BE WATERED BY FLOODING AS FOLLOWS: MONTH 0-3: ONCE PER WEEK MONTH 3-6: TWICE PER MONTH MONTH 6-12: ONCE PER MONTH INCREASE WATERING FREQUENCY TO ACCOUNT FOR DROUGHT CONDITIONS AS REQUIRED.
6. TURF AREAS TO BE WATERED AND MOWED UNTIL ACCEPTED.
7. CONSERVATION SEED MIX AREA TO BE WATERED IF NECESSARY FOR ESTABLISHMENT.
8. ALL SIGNAGE LIGHTING SHALL COMPLY WITH WALPOLE ZONING BY-LAWS PER SECTION 7. ALL SIGNAGE LIGHTING SHALL BE LIMITED TO WHITE STEADY, STATIONARY LIGHT OF A REASONABLE INTENSITY THAT IS DIRECTED SOLELY AT THE SIGN AND SHIELDED FROM ABUTTING PARCELS.
9. LANDSCAPE LIGHTING SHALL BE LIMITED TO LIGHTING OF TREES, SHRUBS, OR OTHER PLANT MATERIAL. LIGHTING SHALL BE "LOW-LEVEL LIGHT FIXTURES" (3 FEET OR LOWER) AND ONLY BE DIRECTED IN A DOWNWARD FACING DIRECTION. SEASONAL LIGHTING SHALL NOT BE PERMITTED FOR LONGER THAN A SIX-WEEK PERIOD IN ANY CALENDAR YEAR.



HOWARD STEIN HUDSON
114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

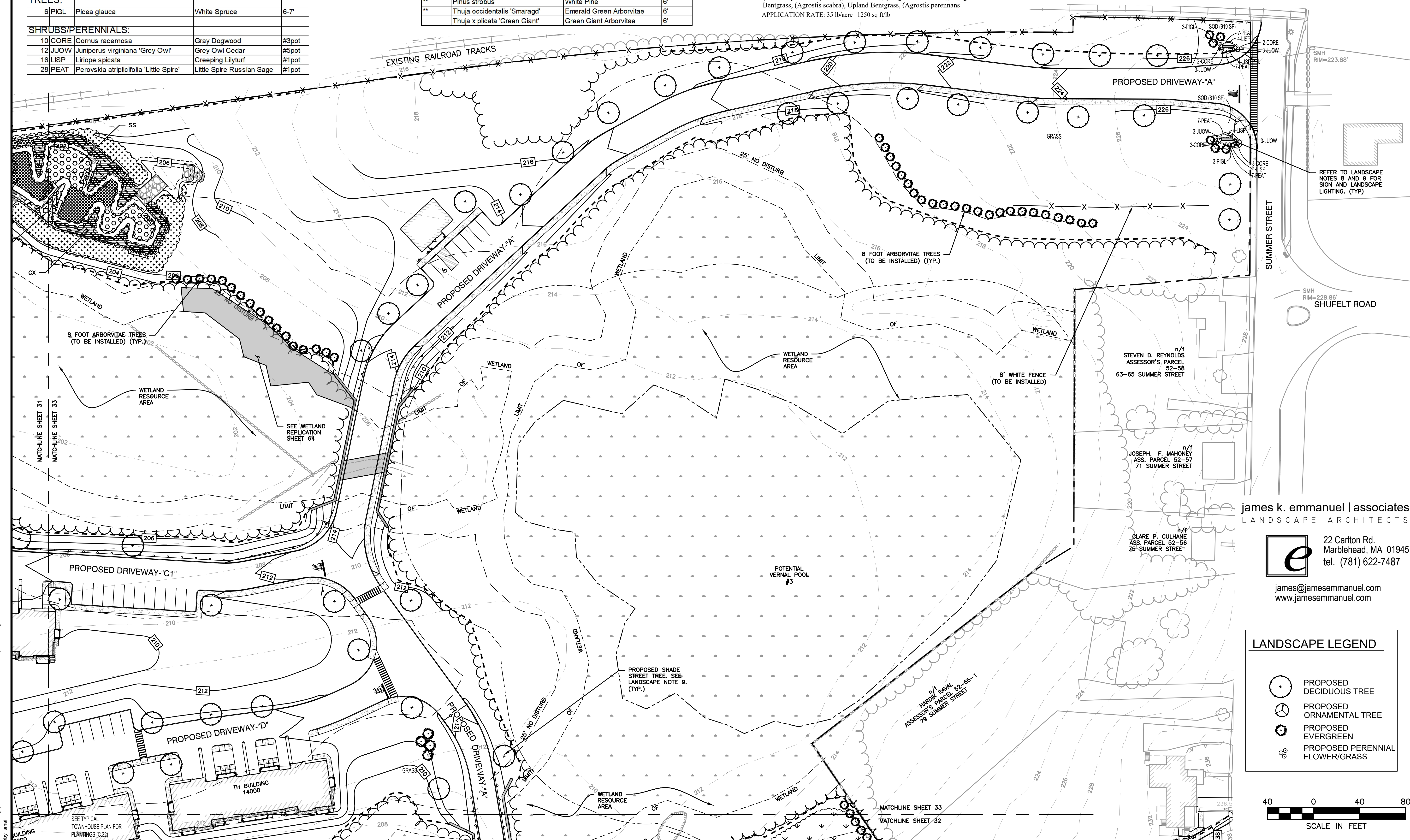
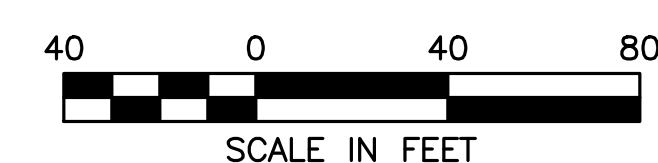
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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

james k. emmanuel | associates
LANDSCAPE ARCHITECTS
22 Carlton Rd.
Marblehead, MA 01945
tel. (781) 622-7487

james@jamesemmanuel.com
www.jamesemmanuel.com

LANDSCAPE LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN
- PROPOSED PERENNIAL FLOWER/GRASS



1/17/2023 11:59:07 AM C:\Users\james\OneDrive\Documents\19097_04 - Lot 2\CURRENT\19097 - Landscape Plan.dwg
james emmanuel

SITE PLAN

LANDSCAPING PLAN 5 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
	C.33

PREPARED FOR:
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c/o FAIRFIELD RESIDENTIAL
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BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

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SITE
PLAN

LIGHTING
PLAN 1 OF 5

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE
C.34

n/f
HUGHES BAKER
PROCESS SYSTEMS INC.
ASSESSOR'S PARCEL 32-78
100 NEPONSE STREET

n/f TOWN OF WALPOLE
ASS. PARCEL 52-15
CEDAR SWAMP

EXISTING RAILROAD TRACKS

FLOOD PLAIN ZONE A

BUILDING 1000
90 UNITS
53 UNDERGROUND
PARKING SPACES

PROPOSED CLUBHOUSE

PROPOSED COURTYARD
LANDSCAPE AND HARDSCAPE
TO BE LIT PER THE
REQUIREMENTS OF SECTION
7 OF THE WALPOLE ZONING
REGULATIONS

BUILDING 200
70 UNITS
37 UNDERGROUND
PARKING SPACES

MATCHLINE SHEET 34
MATCHLINE SHEET 35



LIGHTING NOTES:

- LIGHTING PREPARED AND DESIGNED BY EXPOSURE 2 LIGHTING.
- NO FREE-STANDING LIGHT FIXTURES SHALL BE INSTALLED TO A HEIGHT EXCEEDING 15 FEET. ALL ILLUMINATION SHALL BE DIRECTED AND/ OR SHIELDED SO AS NOT TO SHINE BEYOND THE PERIMETER OF THE SITE OR INTERFERE WITH TRAFFIC. (WALPOLE ZBL SECTION 13 SUB-SECTION 10.A(5))
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StatArea 1
MULTI FAMILY PARKING AREAS
Illuminance (Fc)
Average = 1.75
Maximum = 6.2
Minimum = 0.0
Avg/Min Ratio = N.A.
Max/Min Ratio = N.A.

Symbol	Qty	Label	Arrangement	Description	(MANUFAC)	Luminaire Lumens	CRI	CCT
⊖	53	P3	Single	XDLN-A-3-LED-LW-WV-BLK-CH-S-IMSBT1-IL / 4RP-I-S10G-12-BLK-GA-GBC (483859CLR) 12' POLE	LSI INDUSTRIES, INC.	6272	70	3000K
⊖	13	P4	Single	XDLN-A-FI-LED-LW-WV-BLK-CH-S-IMSBT1-IL / 4RP-I-S10G-12-BLK-GA-GBC(483859CLR) 12' POLE	LSI INDUSTRIES, INC.	5873	70	3000K
⊖	13	P5	Single	XDLN-A-5W-LED-LW-WV-BLK-CH-S-IMSBT1 / 4RP-I-S10G-12-BLK-GA-GBC(483859CLR) 12' POLE	LSI INDUSTRIES, INC.	7752	70	3000K
⊖	4	T4-	Single	XDLN-A-FI-LED-SS-WV-BLK-CH-S-IMSBT1 / 4RP-I-S10G-12-BLK-GA-GBC (483859C) 12' POLE	LSI INDUSTRIES, INC.	11257	70	3000K
⊞	30	W-	Single	WPSLS-01L-30 / WALL MTD 10' AFG	LSI INDUSTRIES, INC.	1180	70	3000K
⊞	4	W_1	Single	WPSLS-01L-30 / WALL MTD 8.5' AFG	LSI INDUSTRIES, INC.	1180	90	3000K
⊙	153	W1	Single	9004-W1-RW-LED3090-W-CXX-L2-UNV-RSM	COOPER LIGHTING SOLUTIONS - LUMIERE (FORMERLY EATON)	1489	70	3000K
⊞	12	W3-	Single	WPSLS-02L-30 / WALL MTD 12' AFG	LSI INDUSTRIES, INC.	2102		

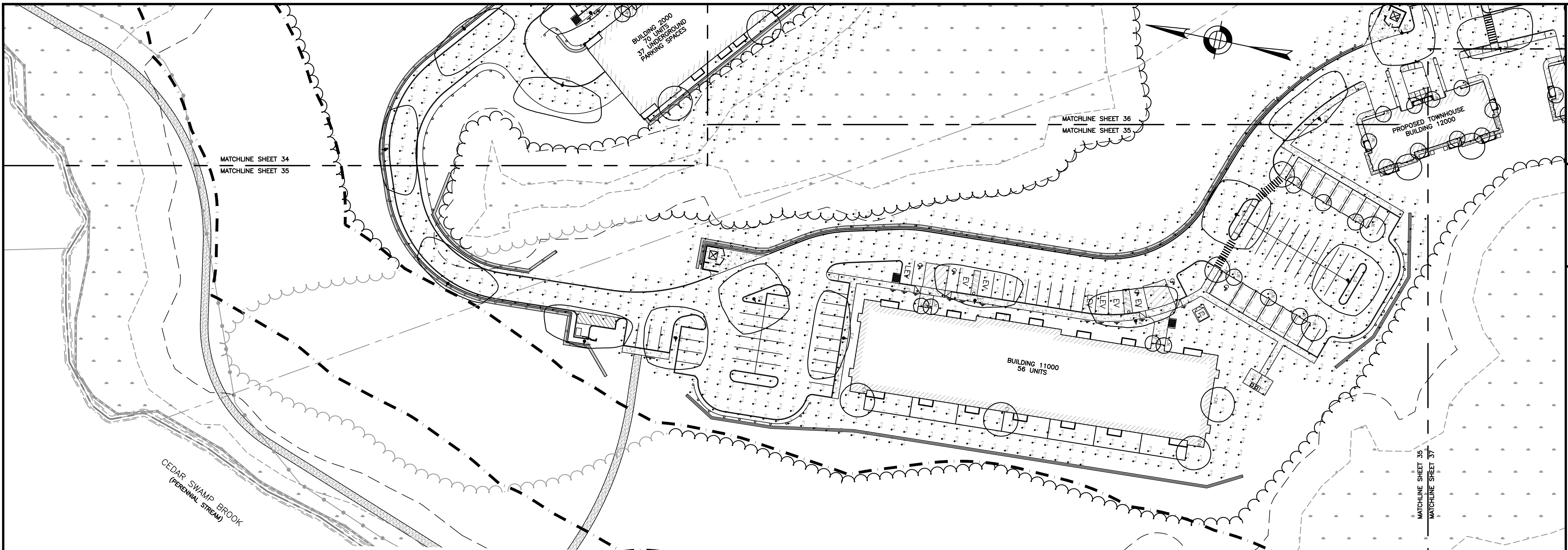


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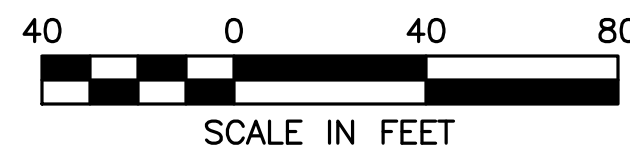
**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

NO	BY	DATE	DESCRIPTION
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5	AI	11/10/23	REV. FULL SITE PLAN



LIGHTING NOTES:

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*OR EQUIVALENT TYPE AND STYLE

*OR EQUIVALENT TYPE AND STYLE

*OR EQUIVALENT TYPE AND STYLE

*OR EQUIVALENT TYPE AND STYLE

Project	Catalog #	Type
Prepared by	Notes	Date

Lumark
Accent
Wall Mount Luminaire

Product Features

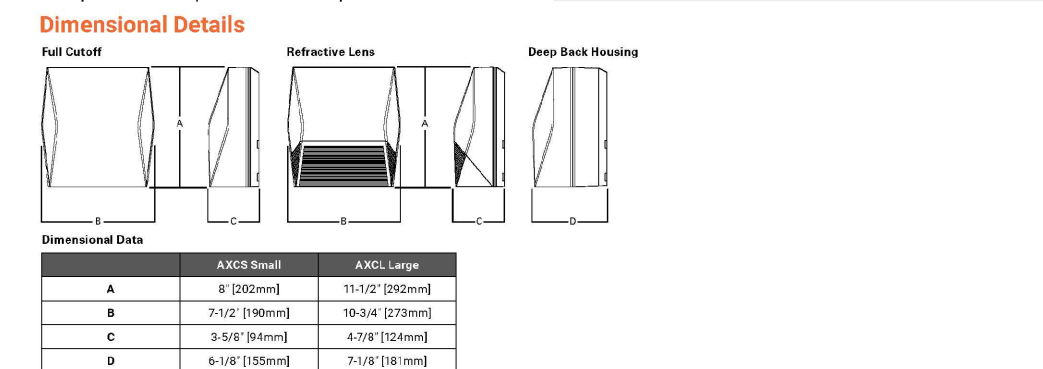
- Weather Resistant
- Energy Efficient
- Long Life Span
- Easy Installation

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Product Specifications page 4
- Energy and Performance Data page 5
- Control Options page 6

Quick Facts

- Available in 14W - 123W (1,800 - 17,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 1.44 LPW
- Replaces 70W up to 450W HID equivalents



Project	Catalog #	Type
Prepared by	Notes	Date

Lumiere
EON 303-B1-LEDB1
Bollard

Typical Applications

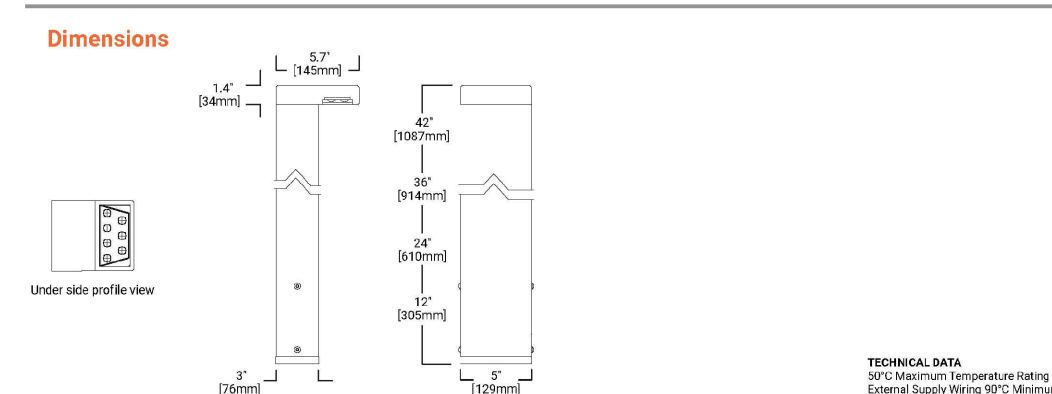
- Hospitality - Commercial Landscape - Outdoor Area/Sign - Residential - Architectural

Interactive Menu

- Order Information page 2
- Product Specifications page 3
- Lumen Maintenance page 4
- Product Warranty page 5

Top Product Features

- Full Cut Off Downlight, 12", 24", 36" or 42" height
- 2700K, 3000K or 3500 or 4000K Color Temperature and Amber (585-595nm)
- Type II, Type IV or Type V Optics with clear glass sealed lens
- Patented AccuLED Optics™ System
- Universal Input LED Driver Included (120 - 277V, 50/60 Hz)
- ELV or 0-10 Dimming



COOPER Lighting Solutions

Project	Catalog #	Type
Prepared by	Notes	Date

Lumiere
EON 303-S1-LEDB1
Ceiling / Wall Mount

Typical Applications

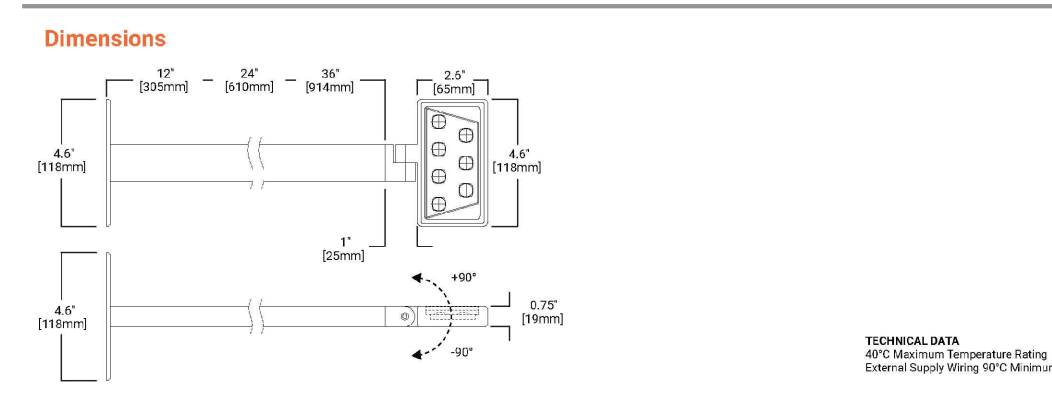
- Hospitality - Commercial Landscape - Outdoor Area/Sign - Residential - Architectural

Interactive Menu

- Order Information page 2
- Product Specifications page 3
- Lumen Maintenance page 4
- Product Warranty page 5

Top Product Features

- 180° Adjustability at the knuckle
- 2700K, 3000K, 3500K or 4000K Color Temperature and Amber (585-595nm)
- Forward/Lateral Throw or Flood Optics with diffuse glass sealed lens
- Patented AccuLED Optics™ System
- Universal Input LED Driver Included (120 - 277V, 50/60 Hz)
- ELV or 0-10 Dimming



COOPER Lighting Solutions

Project	Catalog #	Type
Prepared by	Notes	Date

Lumiere
Lanterna 9004

DESCRIPTION

Lanterna 9004-V1 (Up or Down) and 9004-V2 (Up and Down) are 4.25" O.D. line voltage cylinder fixtures with dimmable LED. The luminaire comes in various mounting, surface mount with integral driver in the housing, remote driver mount with remote and square wall plate and square wall integral driver, all of which can be mounted over standard 4 inch pipes. The luminaire also comes with various field replaceable optics and premium color tuning options. It also comes with various lens, covers and colors or decorative filters, which can combine up to five at once to create multiple lighting effects. The fixture may be used indoors or outdoors and carries IP66 rating.

DESCRIPTION FEATURES

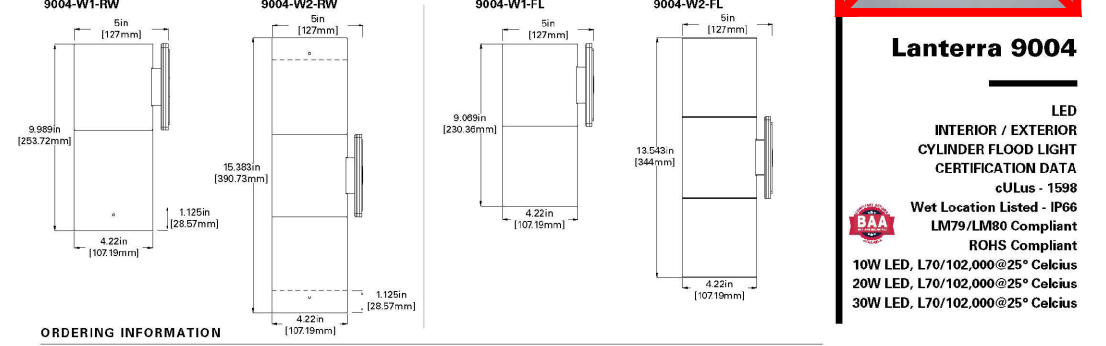
- Material:** Housing, hood and mounting stem are precision machined from corrosion resistant 6061-T6 aluminum.
- Finish:** Fixtures are powder coated with an RTOA complete electrocoat finish. Undercoating and primer powder coat paint finish, separating the pigment depends on the outdoor environment. A variety of standard colors are available.
- Head:** Head is removable and accepts up to 1/2" diameter accessories of choice. Bases, covers and filters to address multiple lighting effects. Vane holes prevents water and infrared stains from collecting on the lens, even in the upright up position. The flush lens design reduces fixture length, minimizes debris collection and prevents water and infrared stains from collecting on the lens.
- Optics:** Long life LED system coupled with electronic driver (120-277V/50/60Hz) compatible with TRAC, Trailing Edge, LED Forward phase and 0-10V dimming to deliver optimal performance. Light can be dimmed from 100% to 1%.
- Electrical:** The flush lens design incorporates surge protection. LED's are available in 2700K, 3000K, 3500K or 4000K, 50/60 Hz and are dimmable at 0-10V, DALI, 0-10V and are dimmable at 0-10V.

Material: Housing and hood are sealed with a high temperature silicone O-ring gasket to prevent water intrusion.

Lens: Tempered glass lens, factory sealed with high temperature adhesive. Cling to prevent water intrusion and breakage due to thermal shock.

Hardware: Stainless steel hardware is standard to provide maximum corrosion resistance.

Efficiency: Luminaire variants that Lumiere series of fixtures are designed to be material and workmanship for five (5) years. Auxiliary equipment with an LED driver carries the original manufacturer's warranty.



COOPER Lighting Solutions

Project	Catalog #	Type
Prepared by	Notes	Date

Lumiere
Lanterna 9004

DESCRIPTION

Lanterna 9004-V1 (Up or Down) and 9004-V2 (Up and Down) are 4.25" O.D. line voltage cylinder fixtures with dimmable LED. The luminaire comes in various mounting, surface mount with integral driver in the housing, remote driver mount with remote and square wall plate and square wall integral driver, all of which can be mounted over standard 4 inch pipes. The luminaire also comes with various field replaceable optics and premium color tuning options. It also comes with various lens, covers and colors or decorative filters, which can combine up to five at once to create multiple lighting effects. The fixture may be used indoors or outdoors and carries IP66 rating.

DESCRIPTION FEATURES

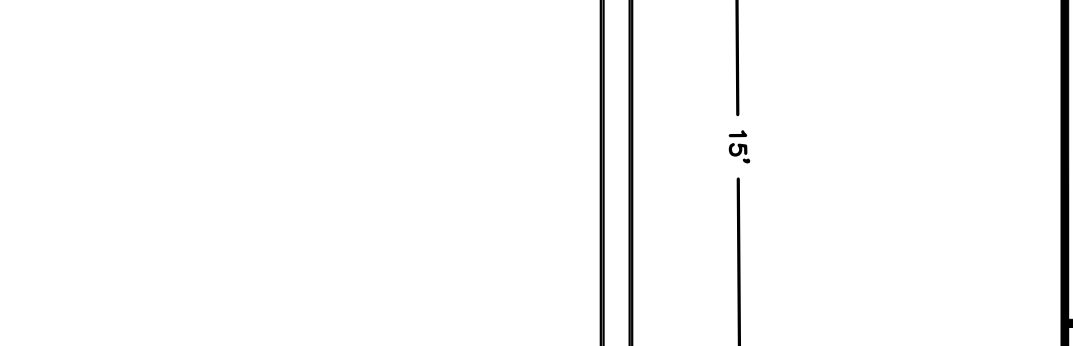
- Material:** Housing, hood and mounting stem are precision machined from corrosion resistant 6061-T6 aluminum.
- Finish:** Fixtures are powder coated with an RTOA complete electrocoat finish. Undercoating and primer powder coat paint finish, separating the pigment depends on the outdoor environment. A variety of standard colors are available.
- Head:** Head is removable and accepts up to 1/2" diameter accessories of choice. Bases, covers and filters to address multiple lighting effects. Vane holes prevents water and infrared stains from collecting on the lens, even in the upright up position. The flush lens design reduces fixture length, minimizes debris collection and prevents water and infrared stains from collecting on the lens.
- Optics:** Long life LED system coupled with electronic driver (120-277V/50/60Hz) compatible with TRAC, Trailing Edge, LED Forward phase and 0-10V dimming to deliver optimal performance. Light can be dimmed from 100% to 1%.
- Electrical:** The flush lens design incorporates surge protection. LED's are available in 2700K, 3000K, 3500K or 4000K, 50/60 Hz and are dimmable at 0-10V, DALI, 0-10V and are dimmable at 0-10V.

Material: Housing and hood are sealed with a high temperature silicone O-ring gasket to prevent water intrusion.

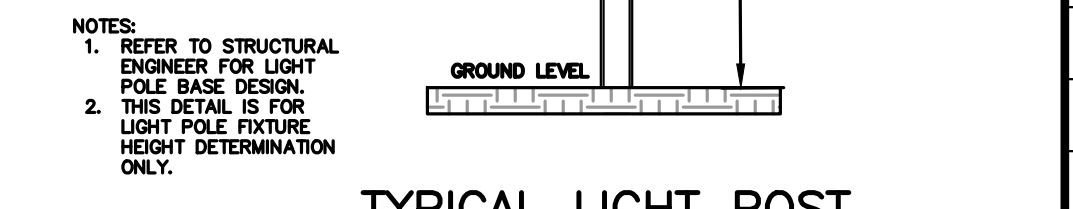
Lens: Tempered glass lens, factory sealed with high temperature adhesive. Cling to prevent water intrusion and breakage due to thermal shock.

Hardware: Stainless steel hardware is standard to provide maximum corrosion resistance.

Efficiency: Luminaire variants that Lumiere series of fixtures are designed to be material and workmanship for five (5) years. Auxiliary equipment with an LED driver carries the original manufacturer's warranty.



COOPER Lighting Solutions



COOPER Lighting Solutions

SITE PLAN

LIGHTING PLAN 2 OF 5

DATE: JUNE 20, 2023

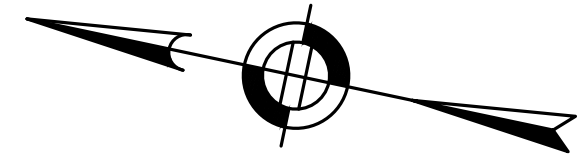
PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.35



LIGHTING NOTES:

1. LIGHTING PREPARED AND DESIGNED BY EXPOSURE 2 LIGHTING.
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**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

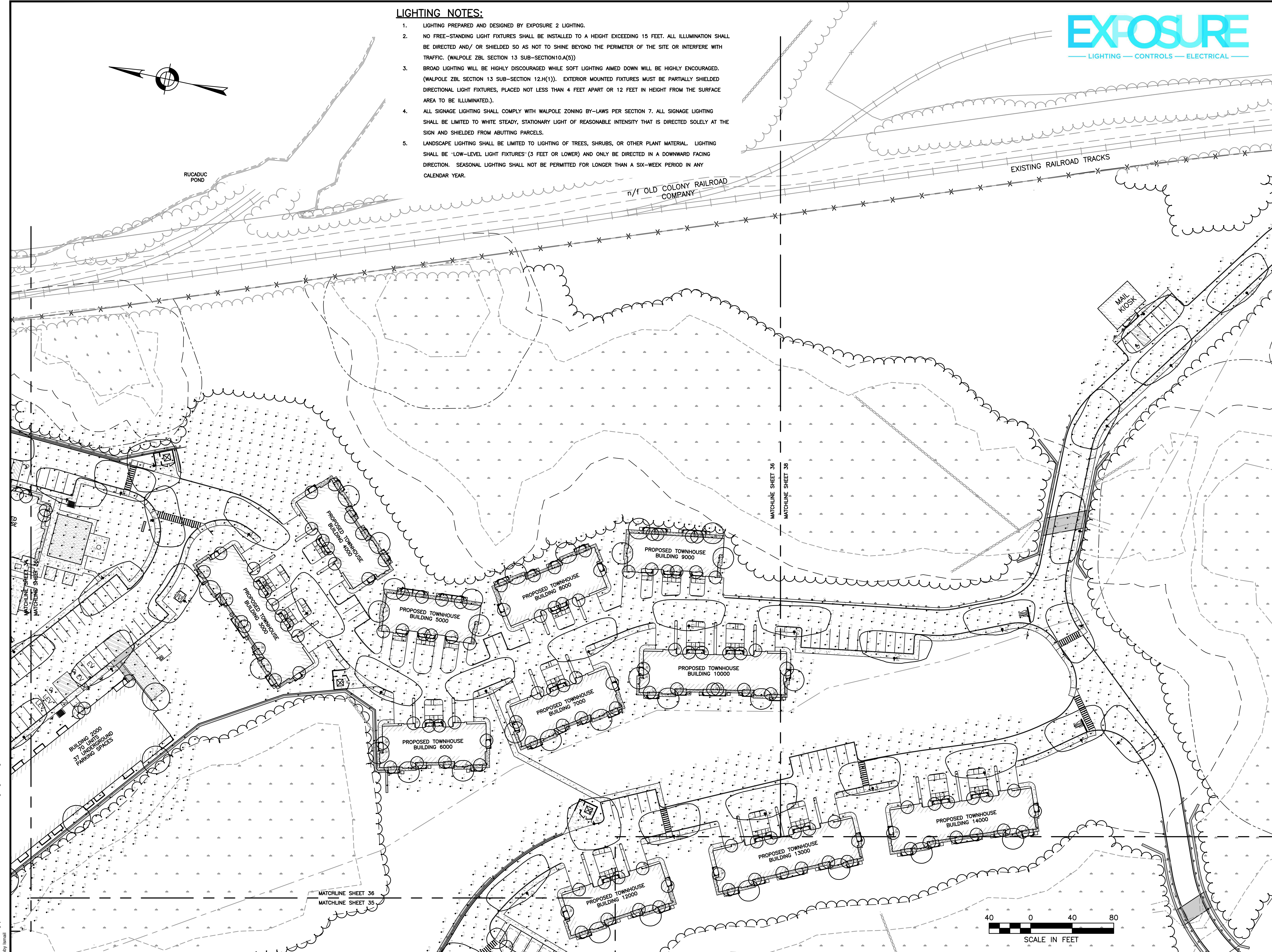
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SITE PLAN

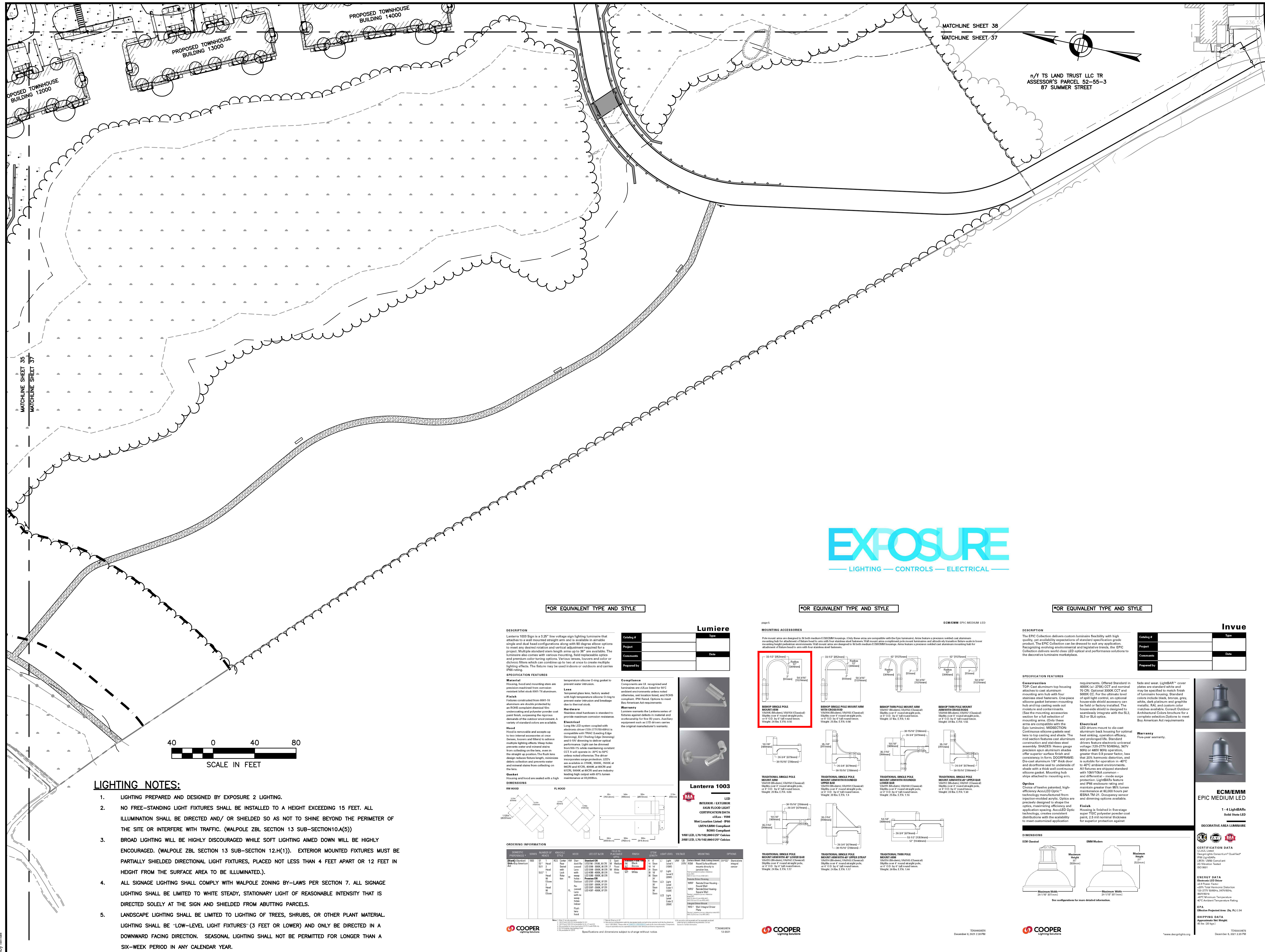
LIGHTING PLAN 3 OF 5

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.36



1/17/2023 1:58pm \\egny\dw\cadd\19097\19097_04 - Lot 2\CURRENT\19097 - Lighting Plan.dwg
 Abby Iannelli

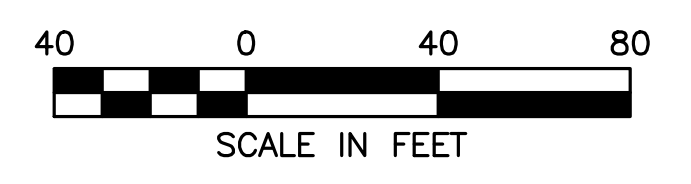


PREPARED FOR:
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**PROPOSED MULTIFAMILY
 DEVELOPMENT**
 SUMMER STREET
 WALPOLE, MA

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FOR EQUIVALENT TYPE AND STYLE

Lumiere

DESCRIPTION
 Lumiere 1000 Sign is a 2.25" line voltage sign lighting luminaire that attaches to a wall mounted straight arm and is available in standard mounting height configurations. Lumiere 1000 Sign is designed to meet any desired rotation and vertical adjustment required for a project. Multiple standard arm lengths from 18" to 36" are available. The luminaire also comes with various mounting, field replaceable optics and premium color tuning options. Various sensors, sensors and color or distance filters which can combine up to two at once to create multiple lighting effects. The fixture may be used indoors or outdoors and carries IP65 rating.

SPECIFICATION FEATURES
Material
 Housing, hood and mounting stem are precision-machined from corrosion resistant 6061-T6 aluminum.
Finish
 Fixtures coated from 4000 to 6000 CC aluminum are double protected for an RICHET compliant chemical film, waterproofing and weather powder coat paint finish, surpassing the rigorous demands of the outdoor environment. A variety of standard colors are available.
Mount
 Hood is removable and accepts up to three internal accessories (e.g. sensor, timers, and filters) to allow multiple lighting effects. One-time pre-wire water and mineral shields from collecting on the lens, even in the straight-up position. The flush line design reduces fixture height, maintains deflection and prevents water and mineral stains from collecting on the lens.
Glare
 Housing and hood are sealed with a high grade gasketing.
Temperature
 Housing is made of 6061-T6 aluminum to prevent water intrusion.
Lens
 Tempered glass lens, factory sealed with high temperature silicone O-ring to prevent water intrusion and leakage due to thermal shock.
Hardware
 Standard and hardware is standard to provide maximum corrosion resistance.
Electrical
 Core LED system coupled with a precision-machined LED driver is compatible with TRAC, leading edge dimming, 0-10V dimming and DALI dimming. Light can be dimmed with 0-10V dimming or DALI dimming. CCT is selectable in 2700K, 3000K, 3500K, 4000K and 5000K. DALI dimming is available in 4000K, 4500K and 5000K. DALI dimming is available at 4000K and any industry leading high output with 90% beam efficiency at 6000lm.

Compliance
 Components are UL recognized and luminaires are Class II listed to NEC ambient environments unless noted otherwise, and location listed, and RICHET compliant. IP65 listed. Options to meet any American Act requirements.

Warranty
 Lumiere warrants the Lumiere series of fixtures against defects in material and workmanship for five (5) years. Auxiliary equipment such as LED drivers carries the original manufacturer's warranty.

Lanterna 1003

LED INTERIOR / EXTERIOR SIGN FLOOD LIGHT CERTIFICATION DATA
 4000K 1900
 Watt Location Label: 9000
 LUM/LUMH Compliant
 8000 Compliant
 300W LED, L70/L80, 0.000/25° Cuckoo

Category	Project	Comments	Approved by
Category #	Project	Comments	Approved by
Type	Date		

FOR EQUIVALENT TYPE AND STYLE

ECM/EMM EPIC MEDIUM LED

DESCRIPTION
 The EPIC Collection features custom luminaires flexibility with high quality, set availability expectations of standard specification grade product. The EPIC Collection can be directed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection features world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES
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FOR EQUIVALENT TYPE AND STYLE

Invue

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SITE PLAN

LIGHTING PLAN 4 OF 5

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.37

LIGHTING NOTES:

- LIGHTING PREPARED AND DESIGNED BY EXPOSURE 2 LIGHTING.
- NO FREE-STANDING LIGHT FIXTURES SHALL BE INSTALLED TO A HEIGHT EXCEEDING 15 FEET. ALL ILLUMINATION SHALL BE DIRECTED AND/OR SHIELDED SO AS NOT TO SHINE BEYOND THE PERIMETER OF THE SITE OR INTERFERE WITH TRAFFIC. (WALPOLE ZBL SECTION 13 SUB-SECTION 10.A(5))
- BROAD LIGHTING WILL BE HIGHLY DISCOURAGED WHILE SOFT LIGHTING AIMED DOWN WILL BE HIGHLY ENCOURAGED. (WALPOLE ZBL SECTION 13 SUB-SECTION 12.H(1)). EXTERIOR MOUNTED FIXTURES MUST BE PARTIALLY SHIELDED DIRECTIONAL LIGHT FIXTURES, PLACED NOT LESS THAN 4 FEET APART OR 12 FEET IN HEIGHT FROM THE SURFACE AREA TO BE ILLUMINATED.).
- ALL SIGNAGE LIGHTING SHALL COMPLY WITH WALPOLE ZONING BY-LAWS PER SECTION 7. ALL SIGNAGE LIGHTING SHALL BE LIMITED TO WHITE STEADY, STATIONARY LIGHT OF REASONABLE INTENSITY THAT IS DIRECTED SOLELY AT THE SIGN AND SHIELDED FROM ABUTTING PARCELS.
- LANDSCAPE LIGHTING SHALL BE LIMITED TO LIGHTING OF TREES, SHRUBS, OR OTHER PLANT MATERIAL. LIGHTING SHALL BE "LOW-LEVEL LIGHT FIXTURES" (3 FEET OR LOWER) AND ONLY BE DIRECTED IN A DOWNWARD FACING DIRECTION. SEASONAL LIGHTING SHALL NOT BE PERMITTED FOR LONGER THAN A SIX-WEEK PERIOD IN ANY CALENDAR YEAR.

n/f
DICKRAN BABIGIAN TR
ASSESSOR'S PARCEL
52-62
49 SUMMER STREET



HOWARD STEIN HUDSON
114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

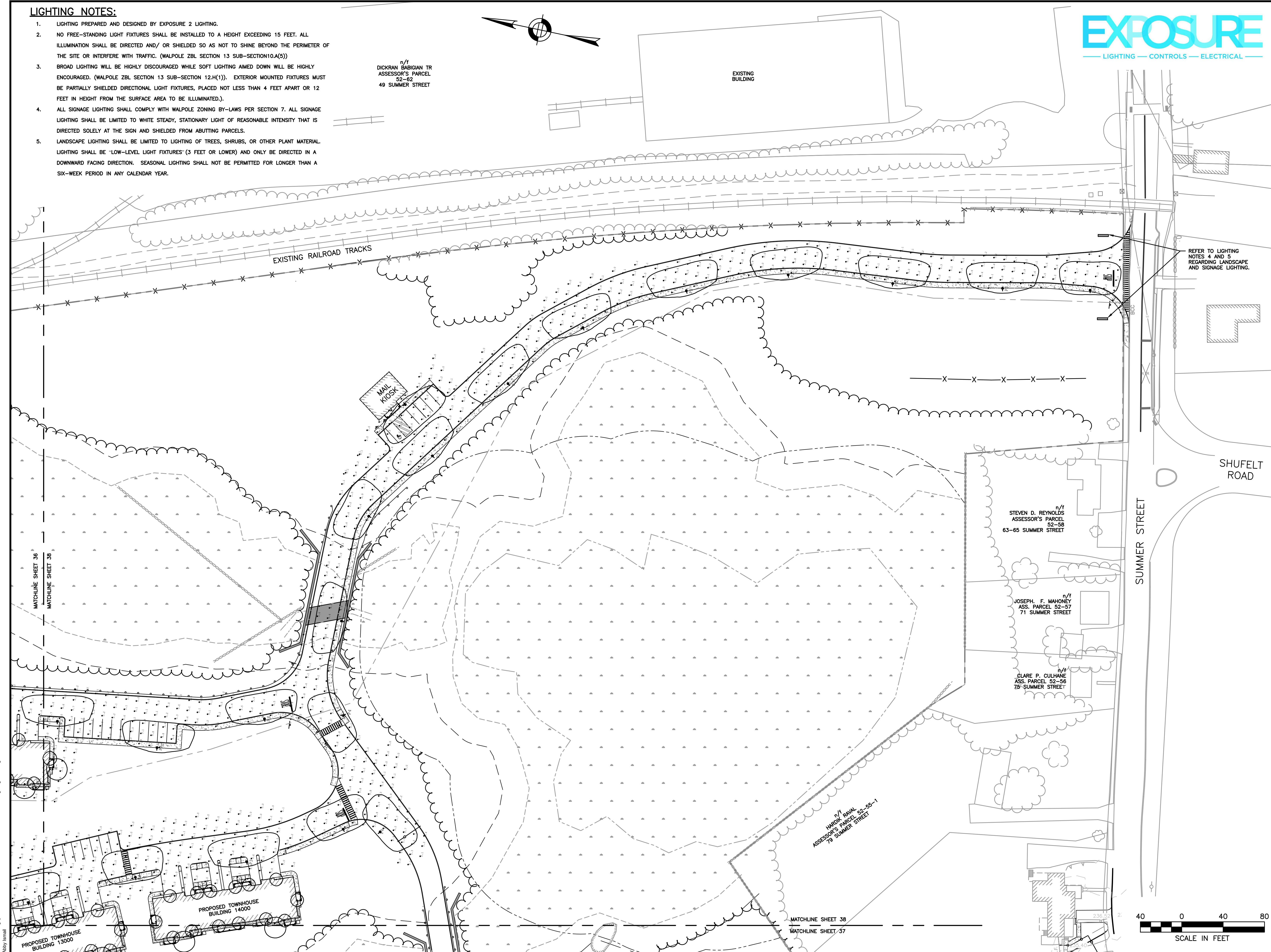
SITE
PLAN

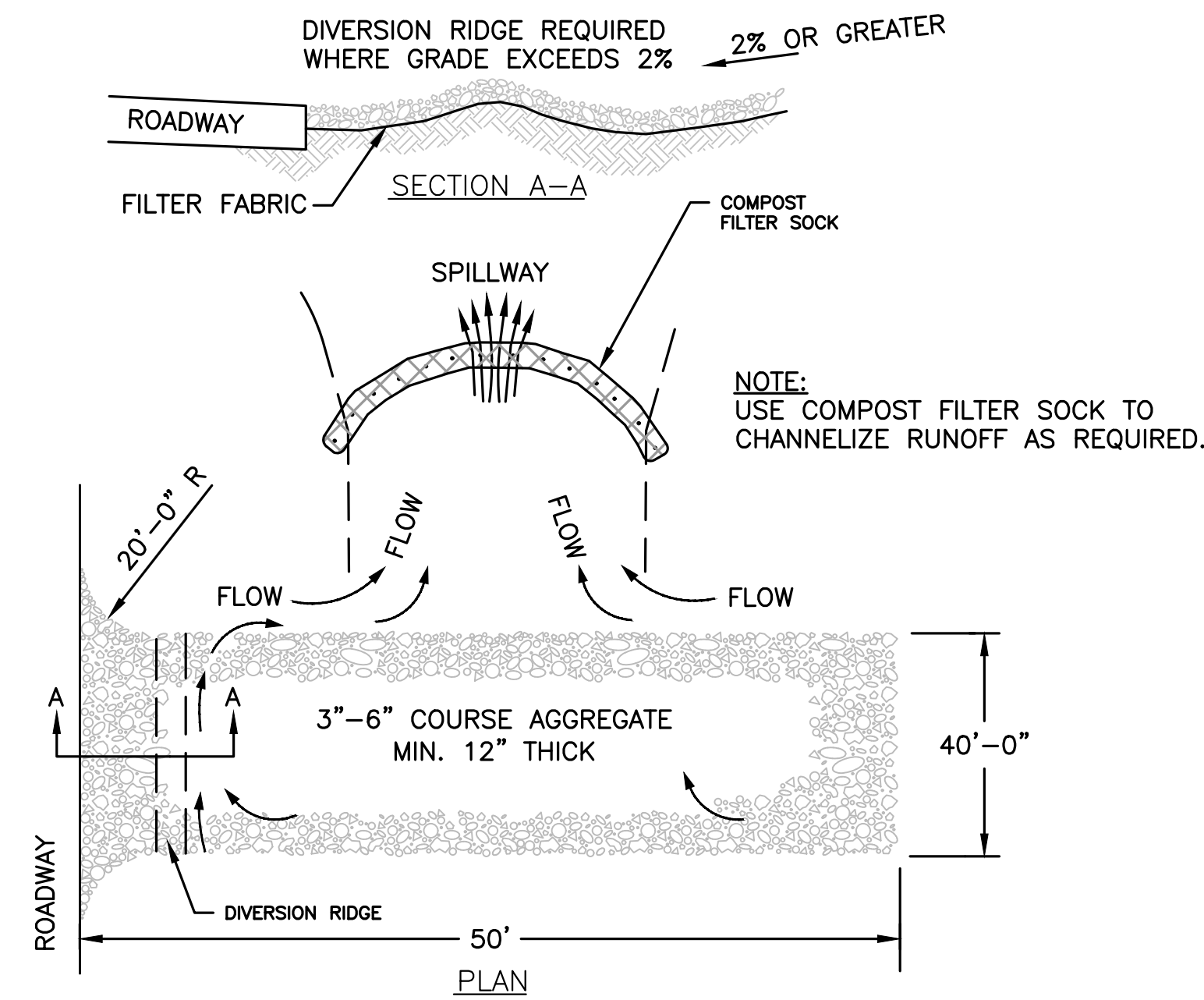
LIGHTING
PLAN 5 OF 5

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE

C.38

SHEET 38 OF 65

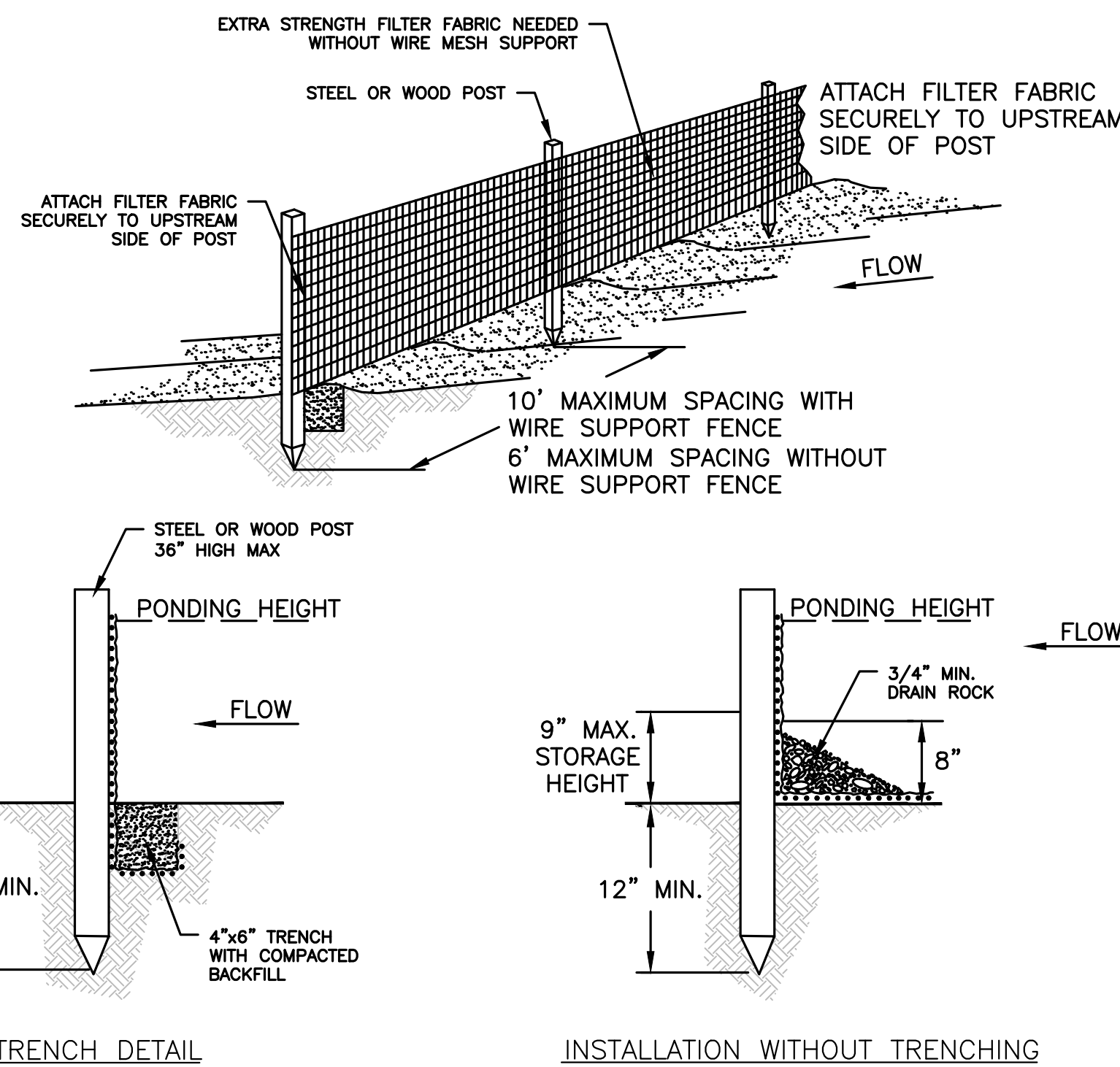




- NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE APPLIED WHERE NECESSARY TO KEEP PUBLIC WAYS FREE OF SEDIMENT INCLUDING STAGING AREAS

STABILIZED CONSTRUCTION ENTRANCE

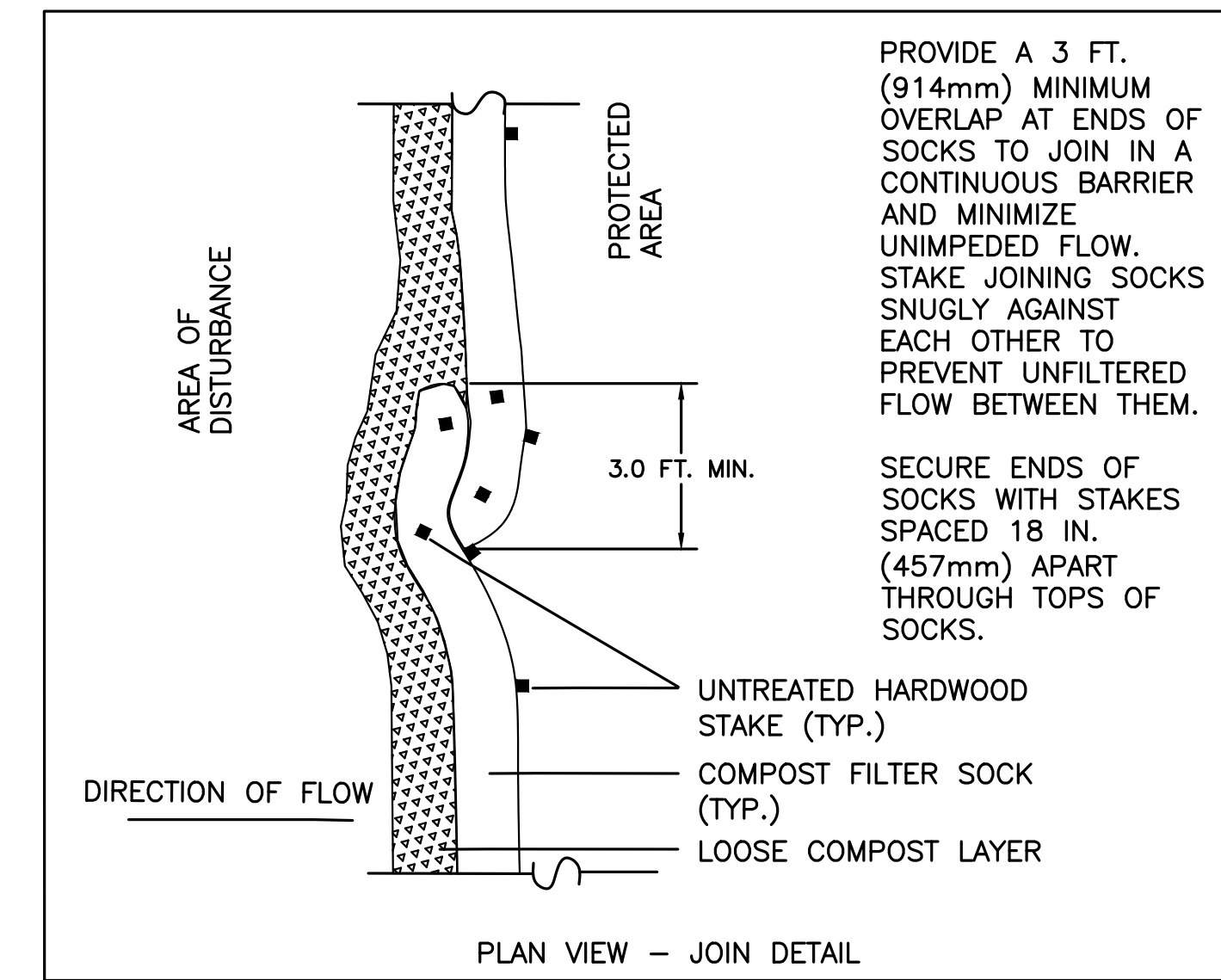
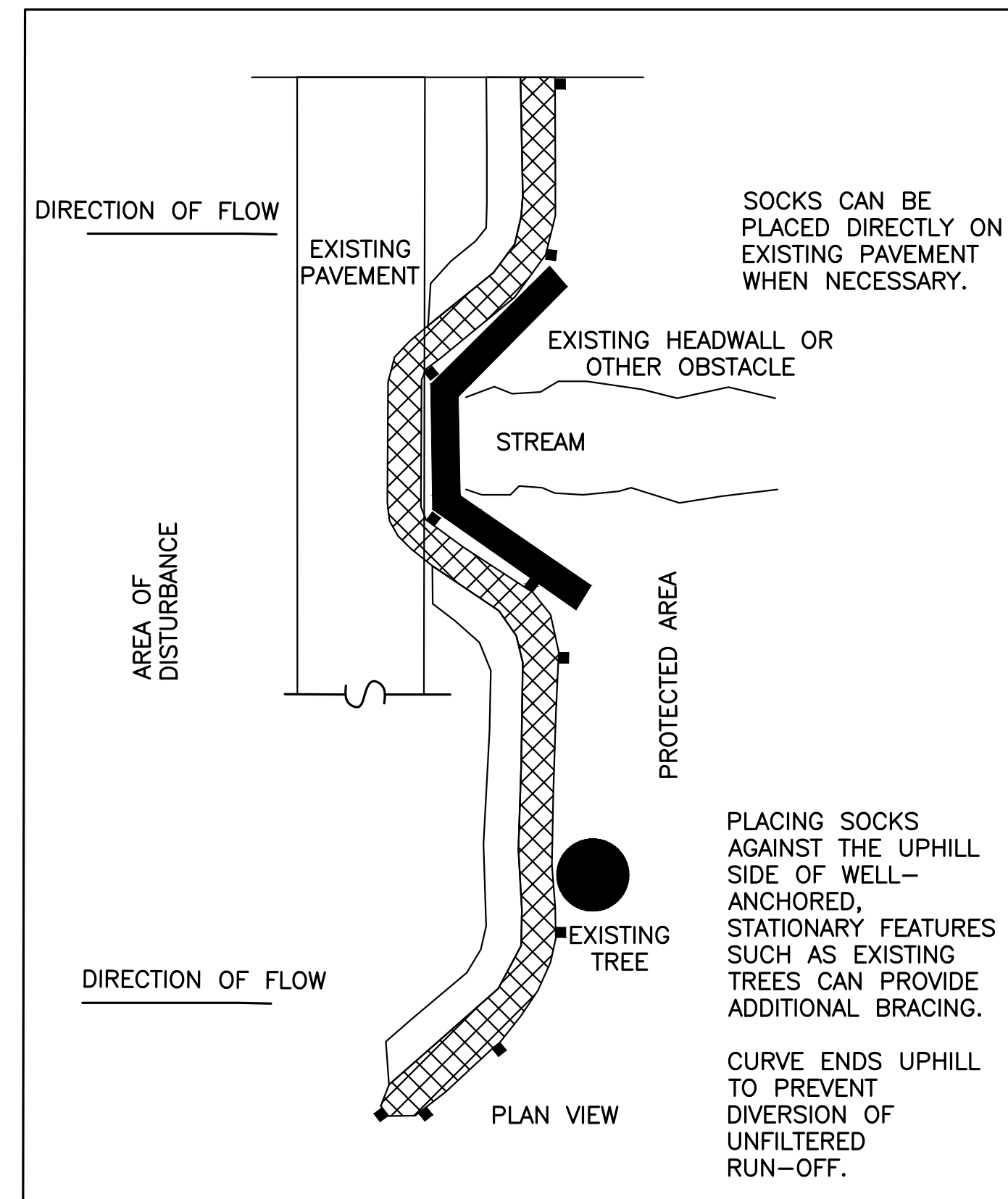
SCALE: N.T.S



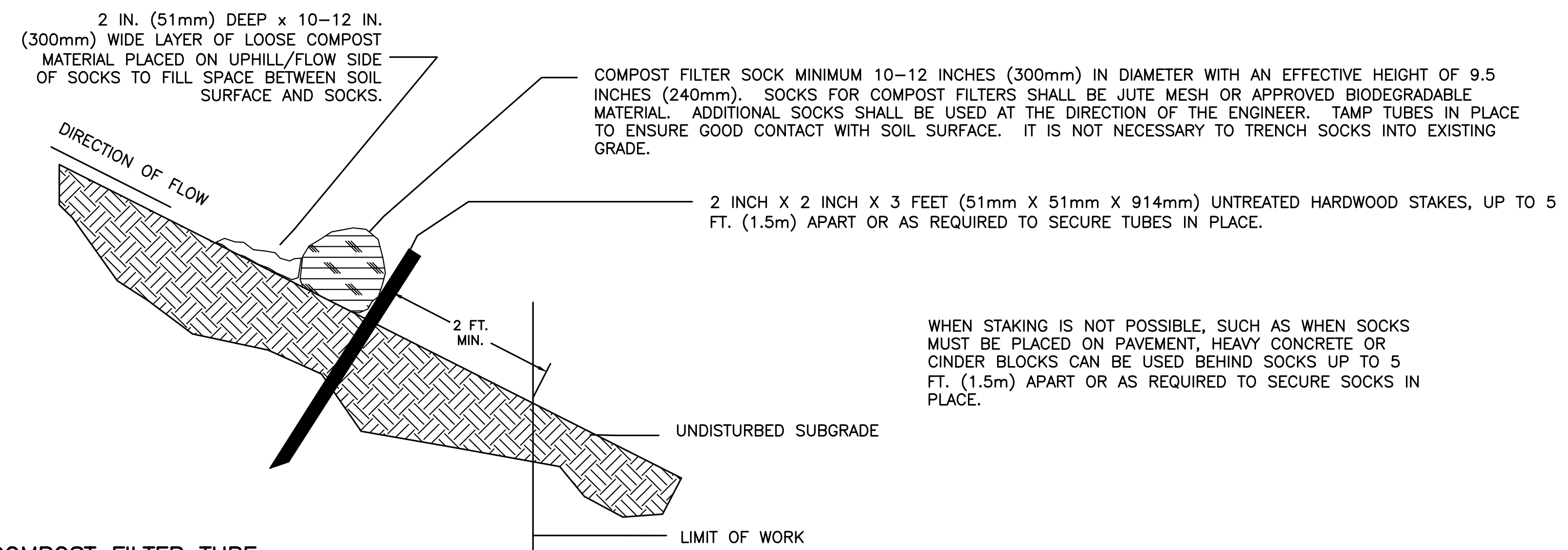
- NOTES:
1. EROSION CONTROL BARRIER (SILT FENCE OR EROSION STOCK) SHALL BE PLACED AROUND ALL MATERIAL STOCKPILE AREAS AND MAINTAINED AT STAGING AREAS TO ASSURE NO SILTATION ONTO PUBLIC OR PRIVATE WAYS OR PROPERTY.

EROSION CONTROL BARRIER

SCALE: N.T.S

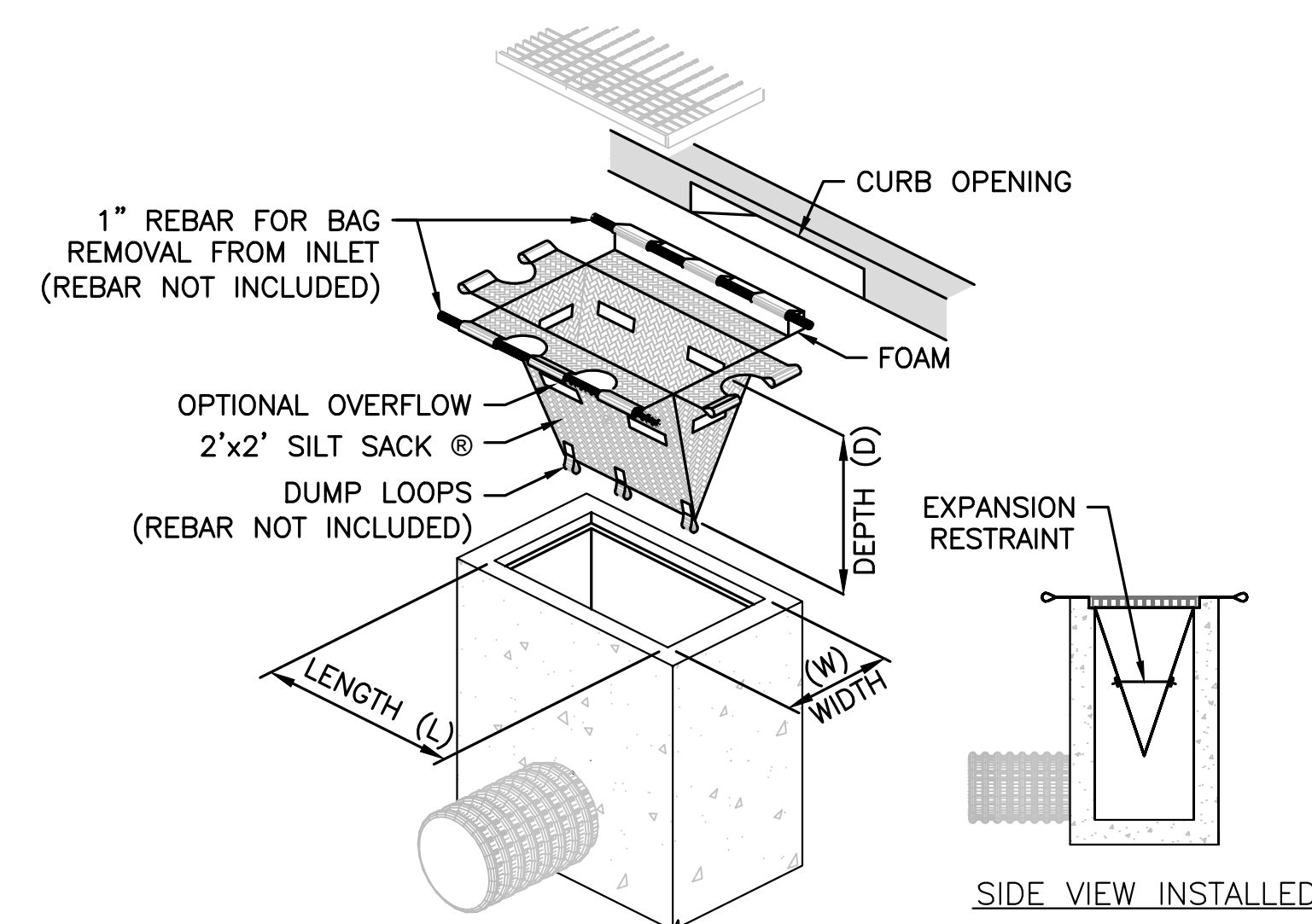


- GENERAL NOTES:
1. PROVIDE A MINIMUM SOCK DIAMETER OF 10-12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER SOCK DIAMETER OR ADDITIONAL COURSEING OF FILTER SOCK TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
 2. INSTALL SOCKS ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
 3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
 4. CONFIGURE SOCKS AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.



SINGLE COMPOST FILTER TUBE

SCALE: N.T.S



TEMPORARY INLET PROTECTION

SCALE: N.T.S

PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
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5	AI	11/10/23	REV. FULL SITE PLAN

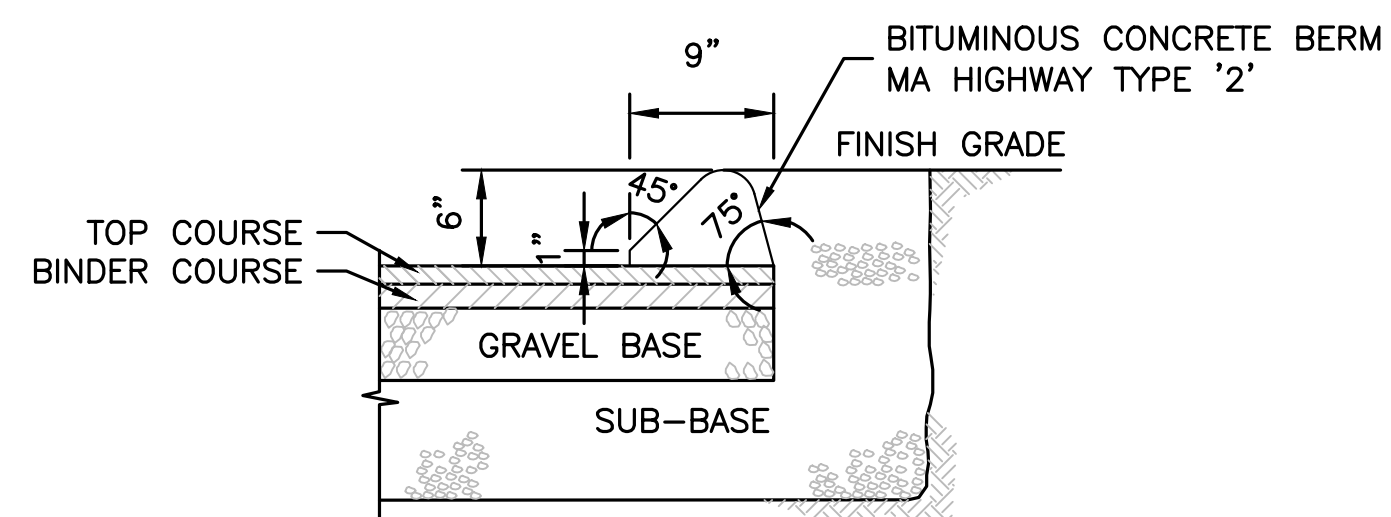


SITE PLAN

**EROSION CONTROL
 DETAILS
 (DETAIL SHEET
 1 OF 27)**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

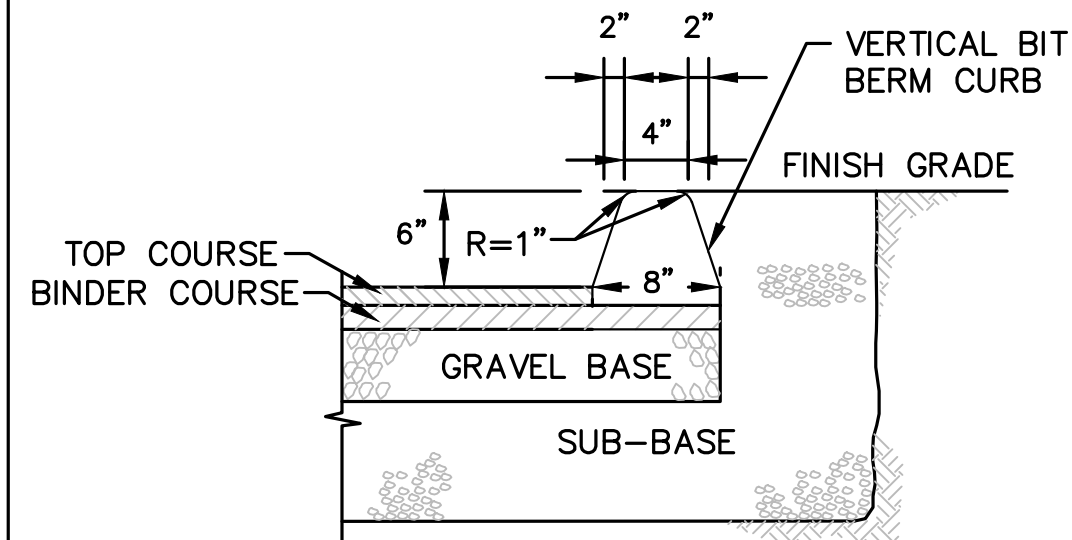
1/17/2023 11:59:56 AM C:\Users\ASB\OneDrive\Documents\19097_04 - Lot 2\CURRENT\19097 - Details.dwg
 Plot Saved by: ASB\AM
 Printed by: Roby Jaram



NOTE:
DETAIL DEVELOPED FROM MA HIGHWAY
CONSTRUCTION STANDARDS DRAWING NUMBER
106.2.0 "BITUMINOUS CONCRETE BERM - TYPE '2'"

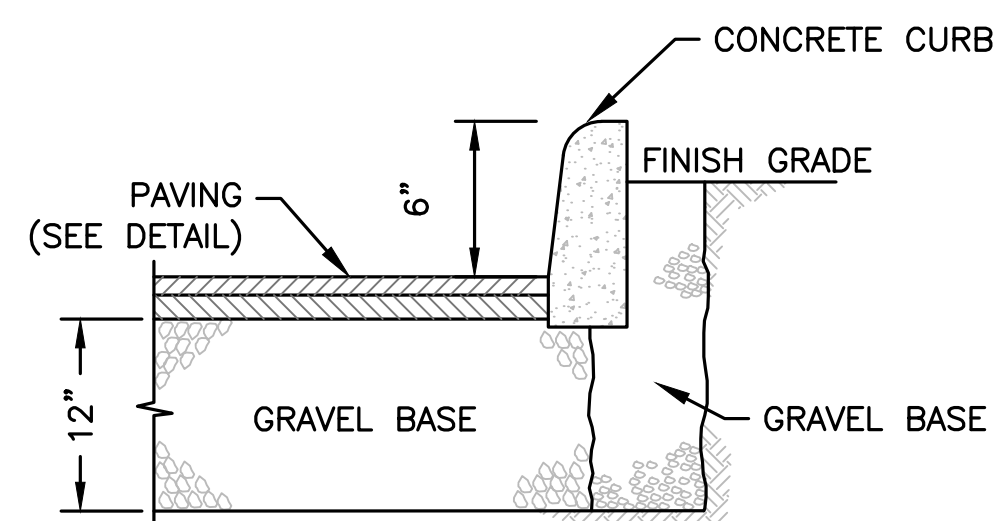
CAPE COD BERM/CURB (CCB)

SCALE: N.T.S.



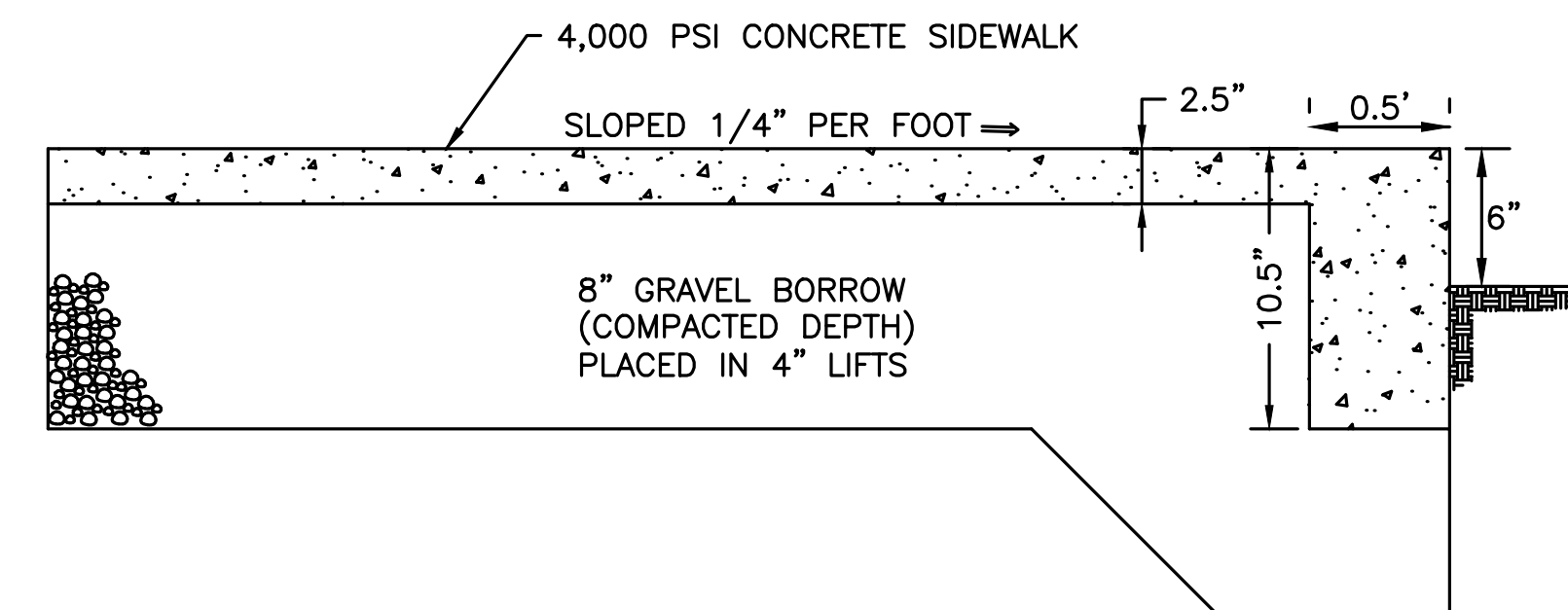
VERTICAL BIT BERM CURB (VBC)

SCALE: N.T.S.



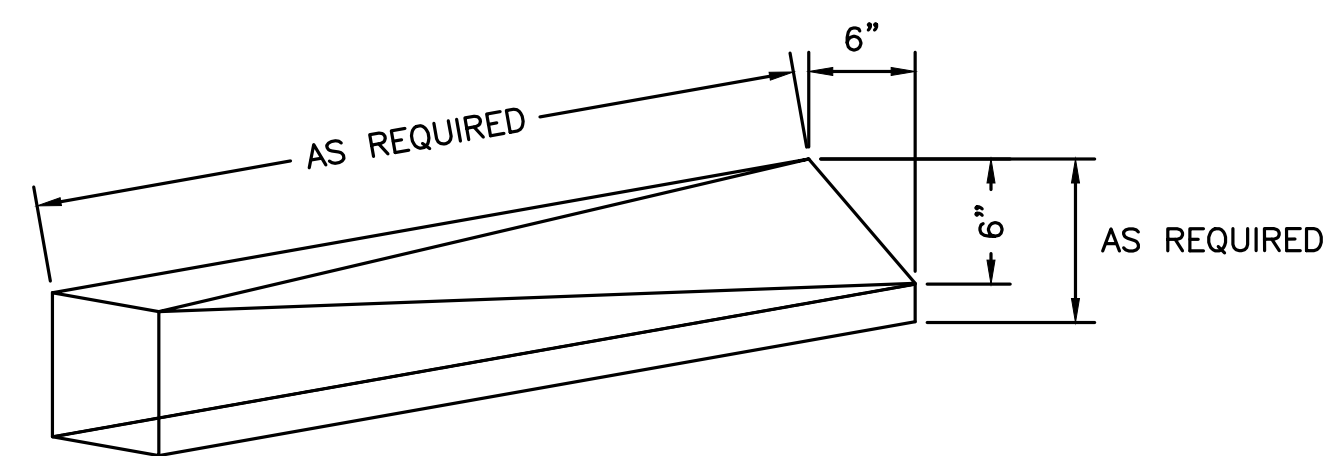
CEMENT CONCRETE CURB (CC)

SCALE: N.T.S.



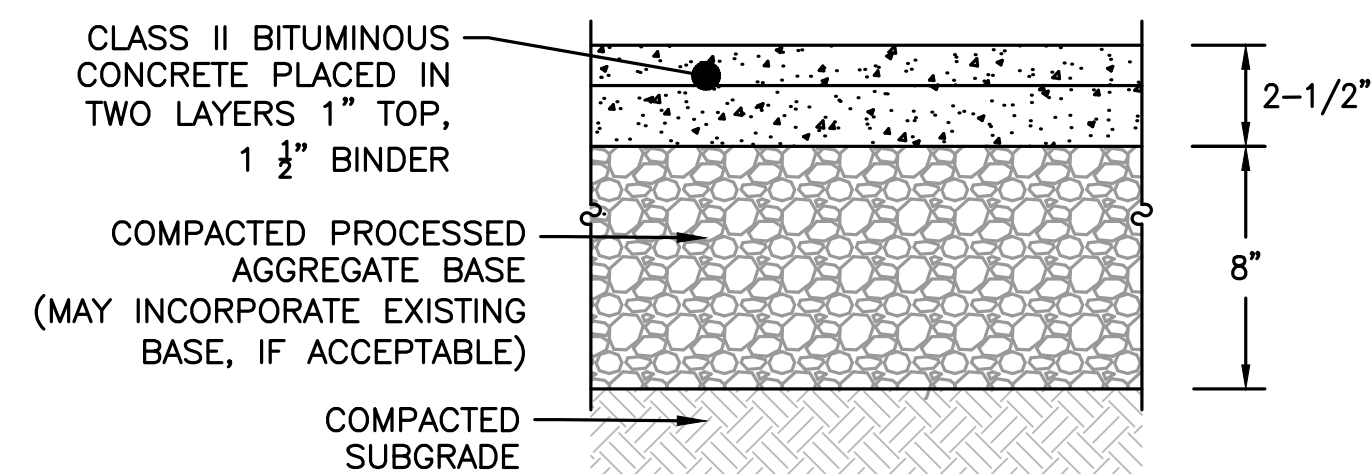
MONOLITHIC CONCRETE CURB AND WALK (MCC)

SCALE: N.T.S.



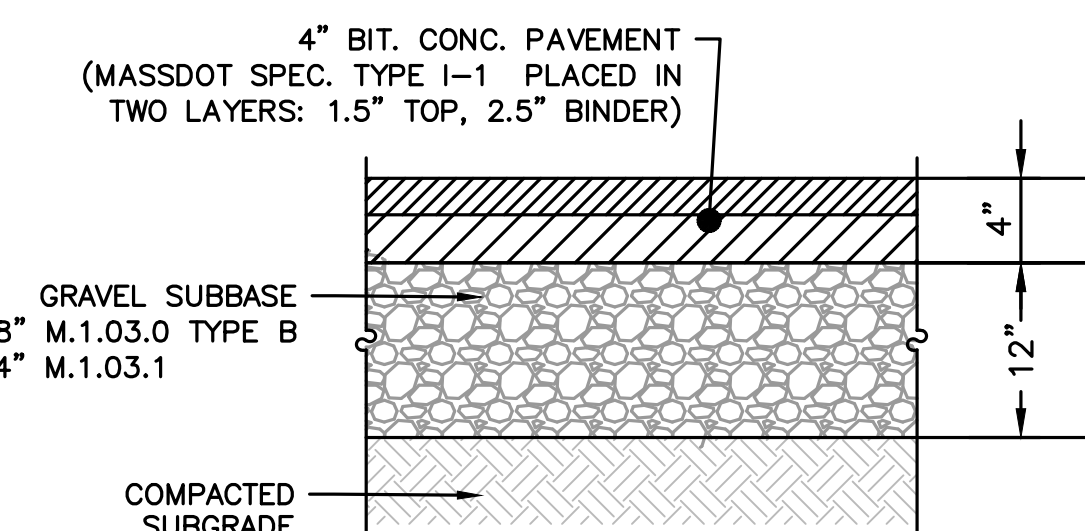
TRANSITION CURB

SCALE: N.T.S.



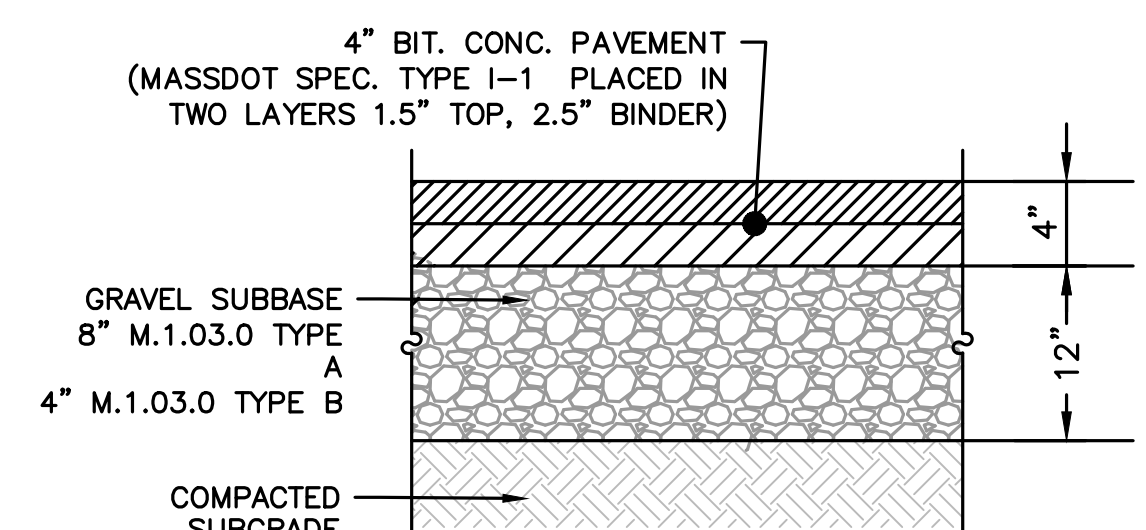
BIT CONC SIDEWALK SECTION

SCALE: N.T.S.



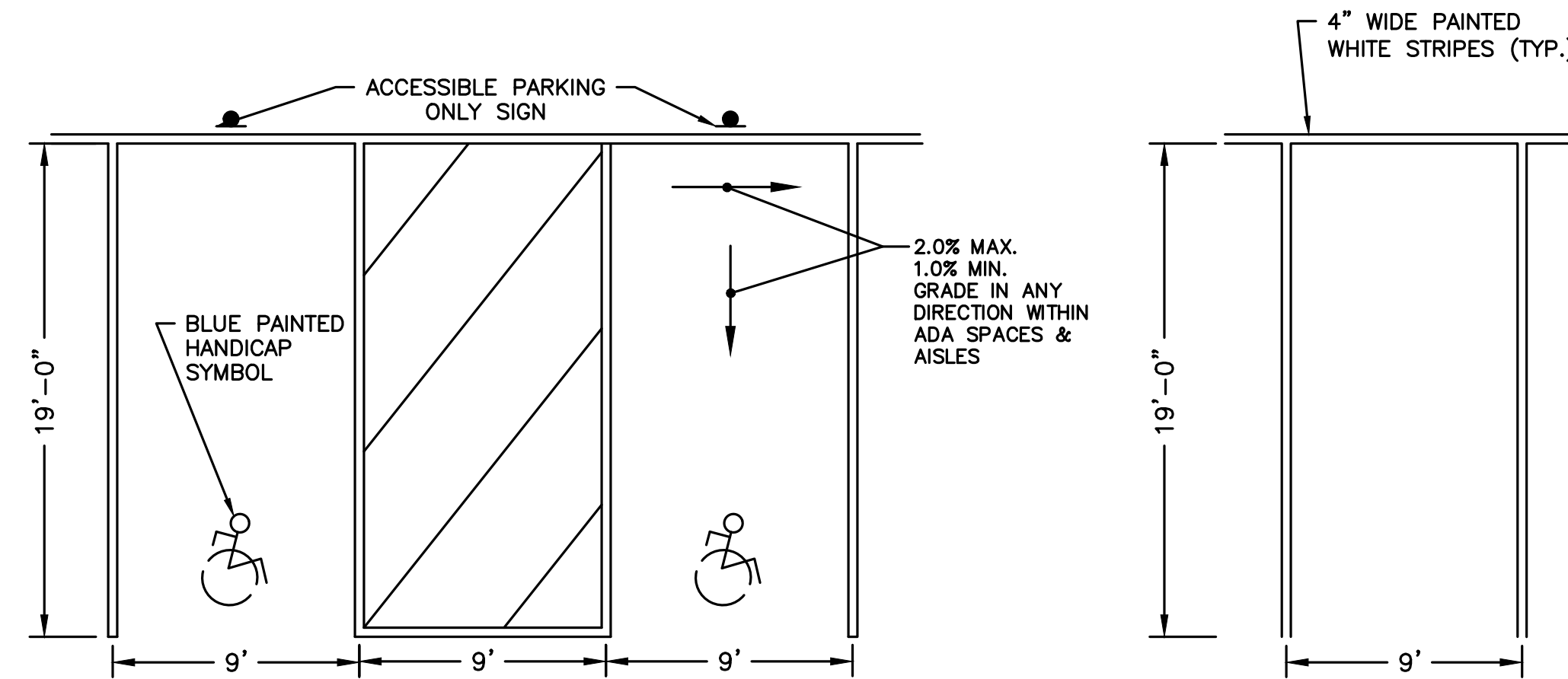
FULL DEPTH ROADWAY PAVEMENT SECTION

SCALE: N.T.S.



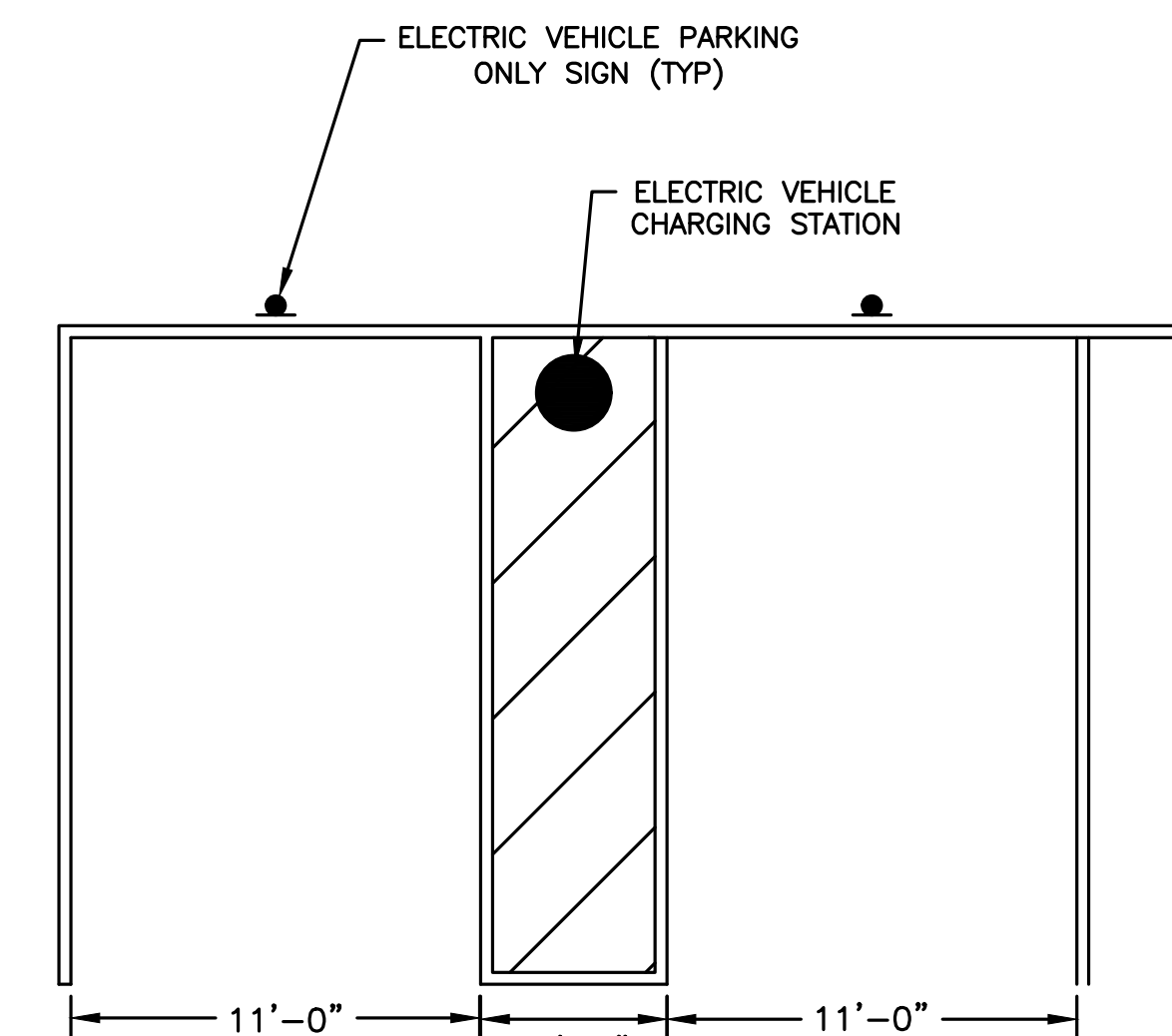
FULL DEPTH PARKING LOT SECTION

SCALE: N.T.S.



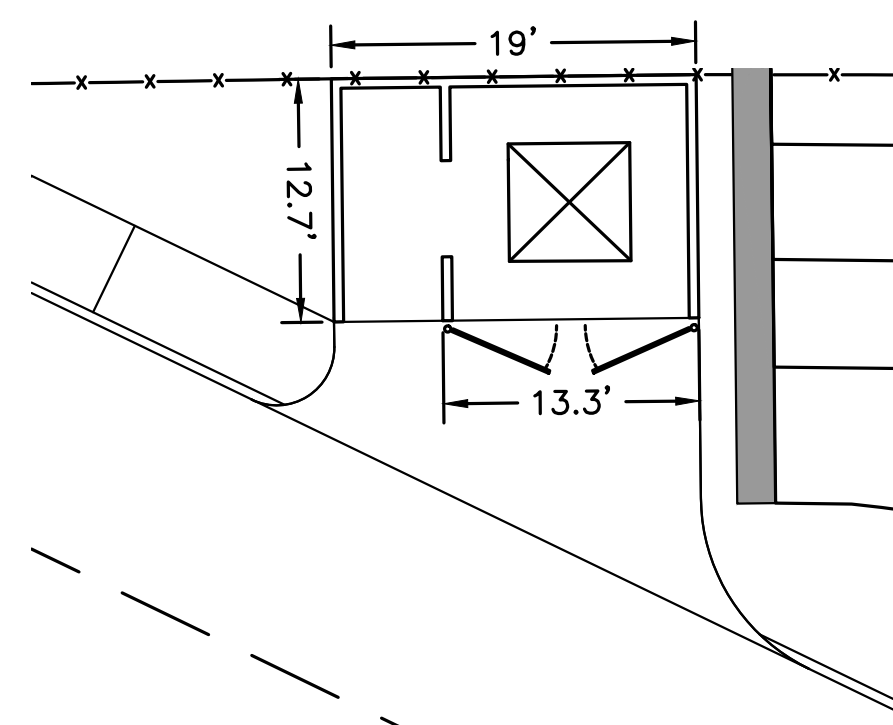
TYPICAL PARKING SPACE

SCALE: N.T.S.



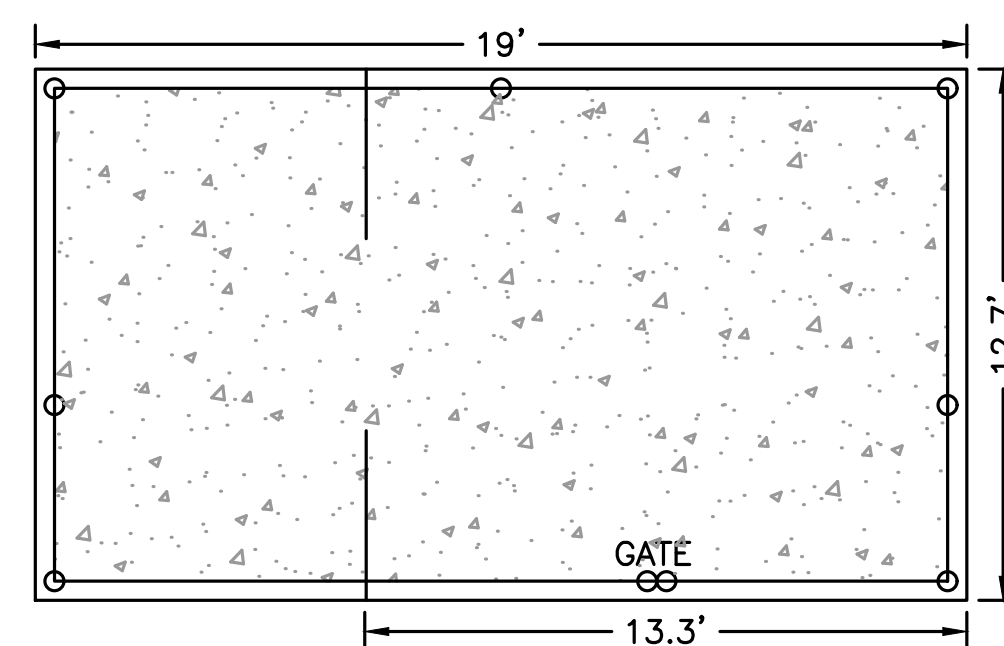
TYPICAL ELECTRIC VEHICLE PARKING SPACE

SCALE: N.T.S.



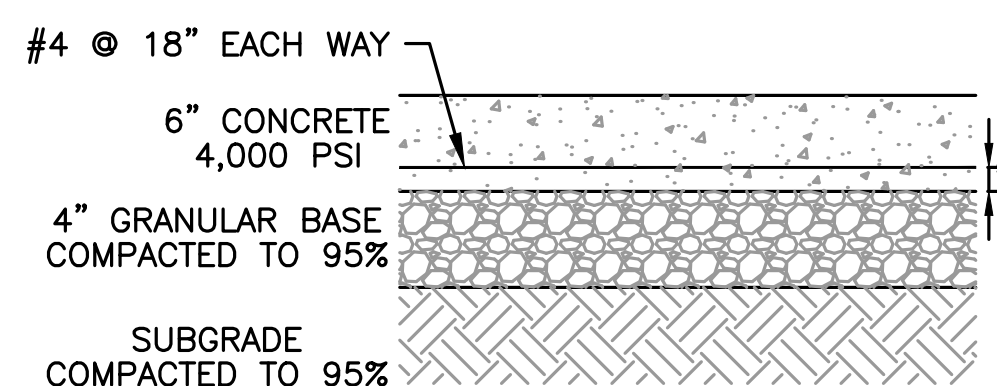
DOUBLE SIDED TRANSITION CURB

SCALE: N.T.S.



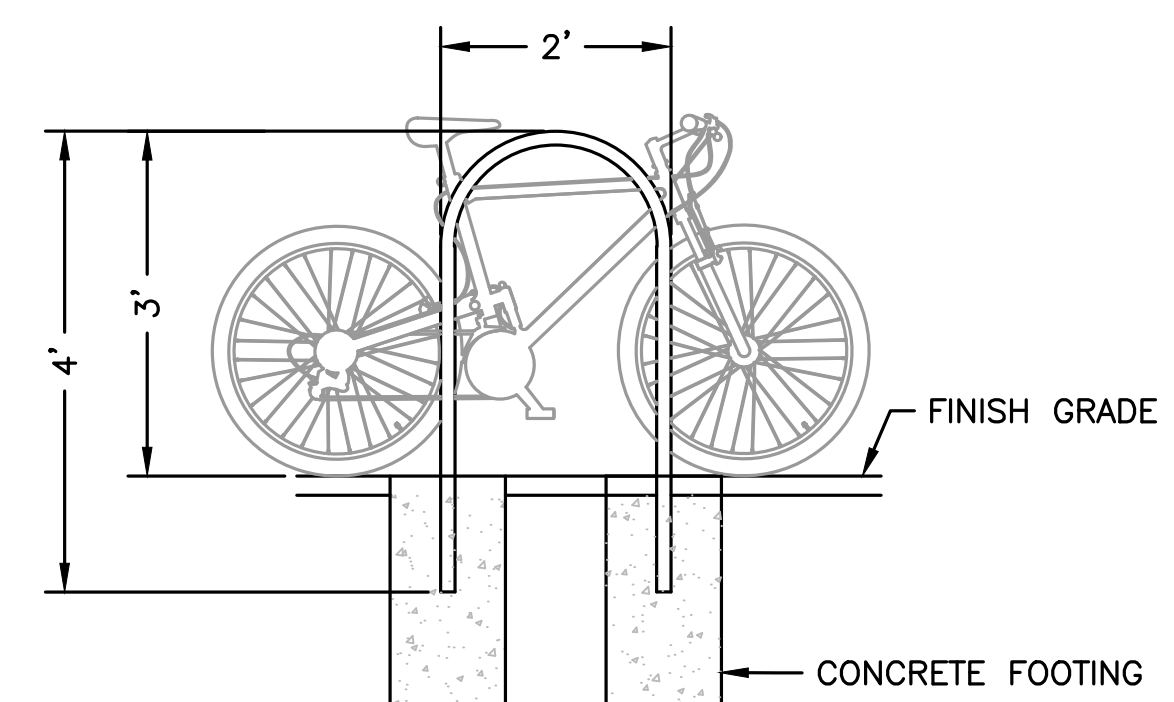
DUMPSTER PAD

SCALE: N.T.S.



INVERTED "U" BICYCLE RACK

SCALE: N.T.S.



PREPARED FOR:

FRH REALTY LLC
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**PROPOSED MULTIFAMILY
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SUMMER STREET
WALPOLE, MA**

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**SITE
PLAN**

**PAVEMENT & CURBING
DETAILS
(DETAIL SHEET
2 OF 27)**

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

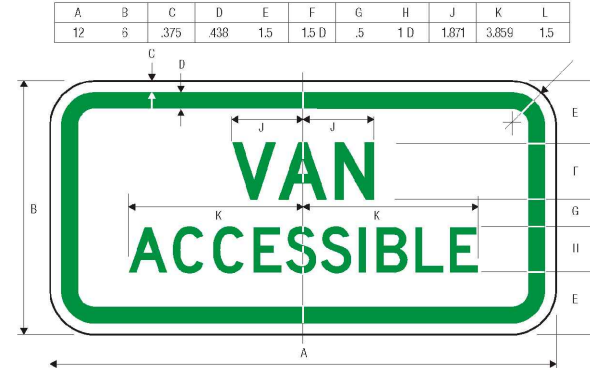
CHECKED BY: KE

C.40

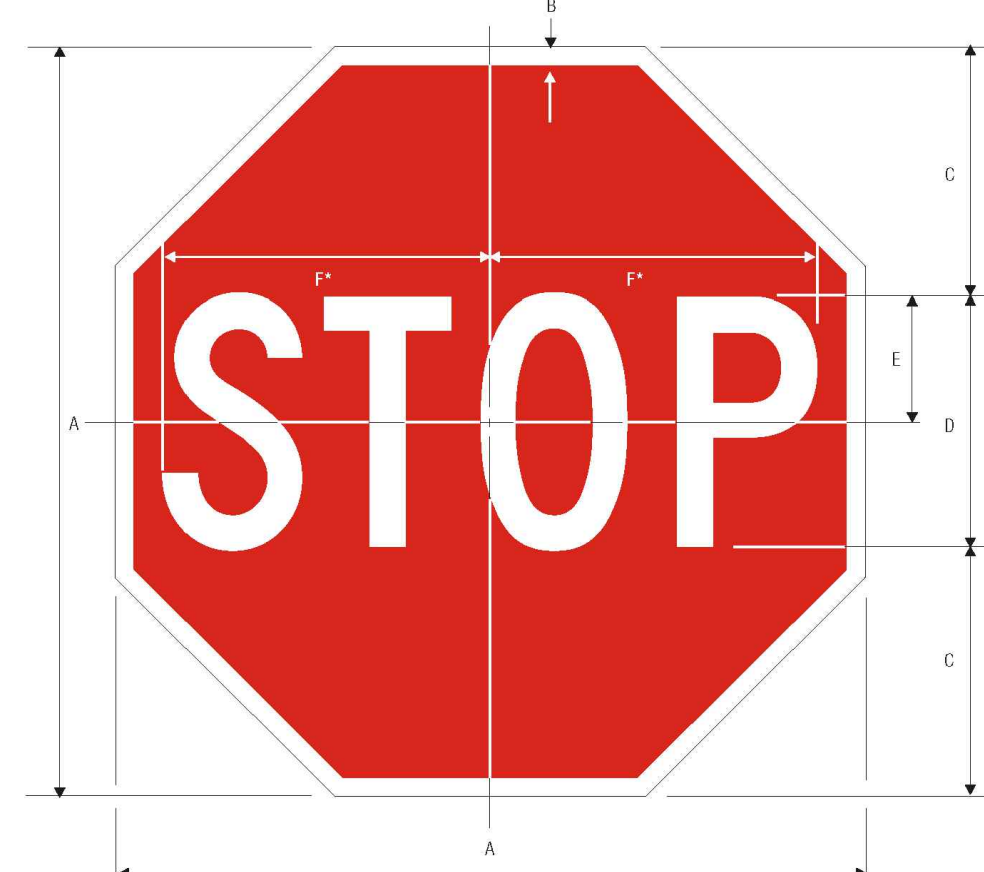
SHEET 40 OF 65



LEGEND - GREEN (RETROREFL), WHITE SYMBOL ON BLUE (RETROREFL) BACKGROUND - WHITE (RETROREFL)



HANDICAP & VAN ACCESSIBLE SIGN
SCALE: N.T.S

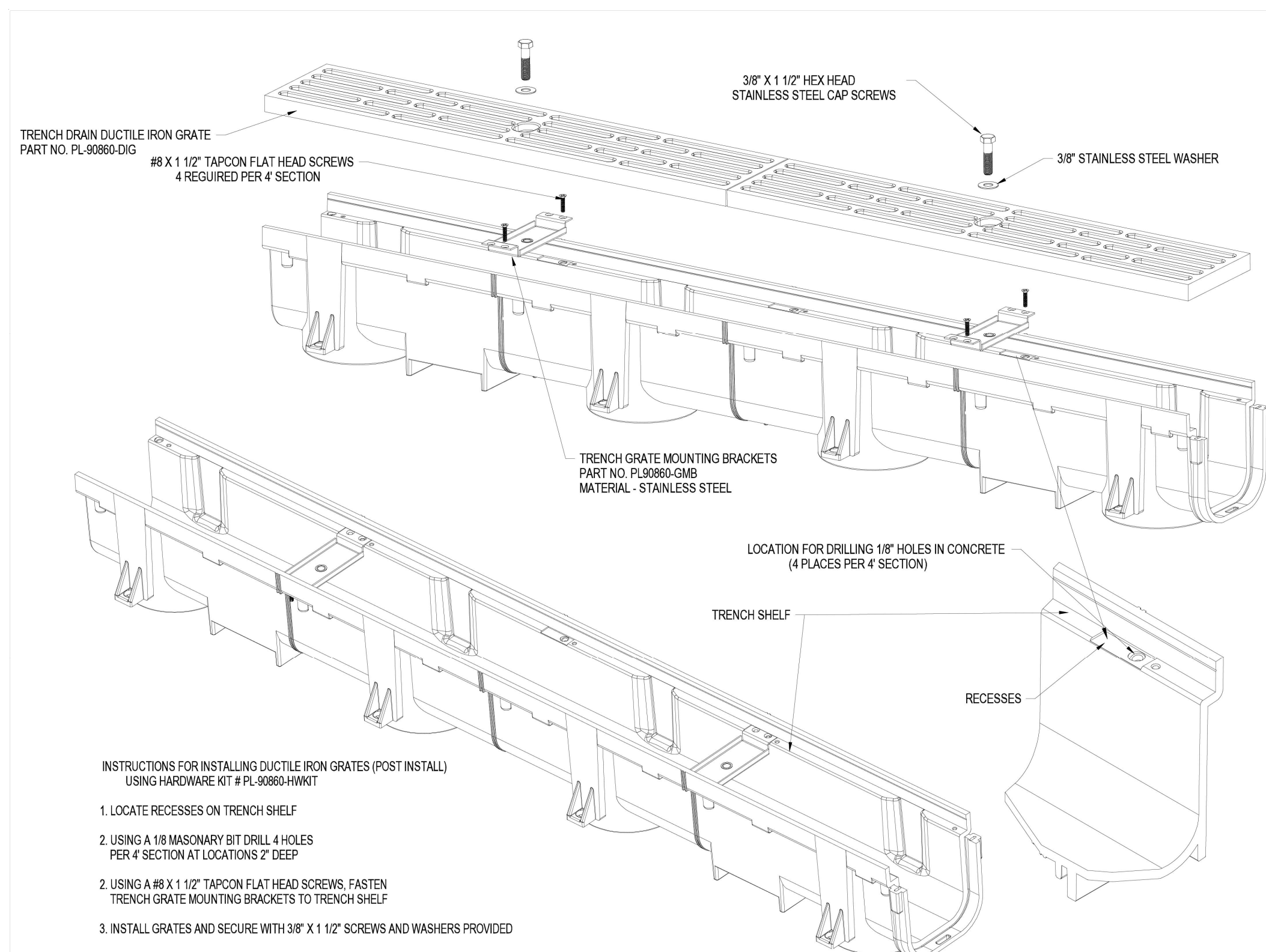


R1-1 STOP *Reduce spacing 40%

A	B	C	D	E	F
18	3.75	6	6.0	3	7.75
24	5.25	8	8.0	4	10
30	7.5	10	10.0	5	12.5
36	9.75	12	12.0	6	15
48	12.5	16	16.0	8	20

COLORS: LEGEND - WHITE (RETROREFLECTIVE) BACKGROUND - RED (RETROREFLECTIVE)
1-1

STOP SIGN
SCALE: N.T.S



INSTRUCTIONS FOR INSTALLING DUCTILE IRON GRATES (POST INSTALL)
USING HARDWARE KIT # PL-90880-HWKIT

1. LOCATE RECESSES ON TRENCH SHELF
2. USING A #8 X 1 1/2" MASONRY BIT DRILL 4 HOLES PER 4' SECTION AT LOCATIONS 2' DEEP
3. INSTALL GRATES AND SECURE WITH 3/8" X 1 1/2" SCREWS AND WASHERS PROVIDED

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



NO EVENT PARKING SIGN
SCALE: N.T.S

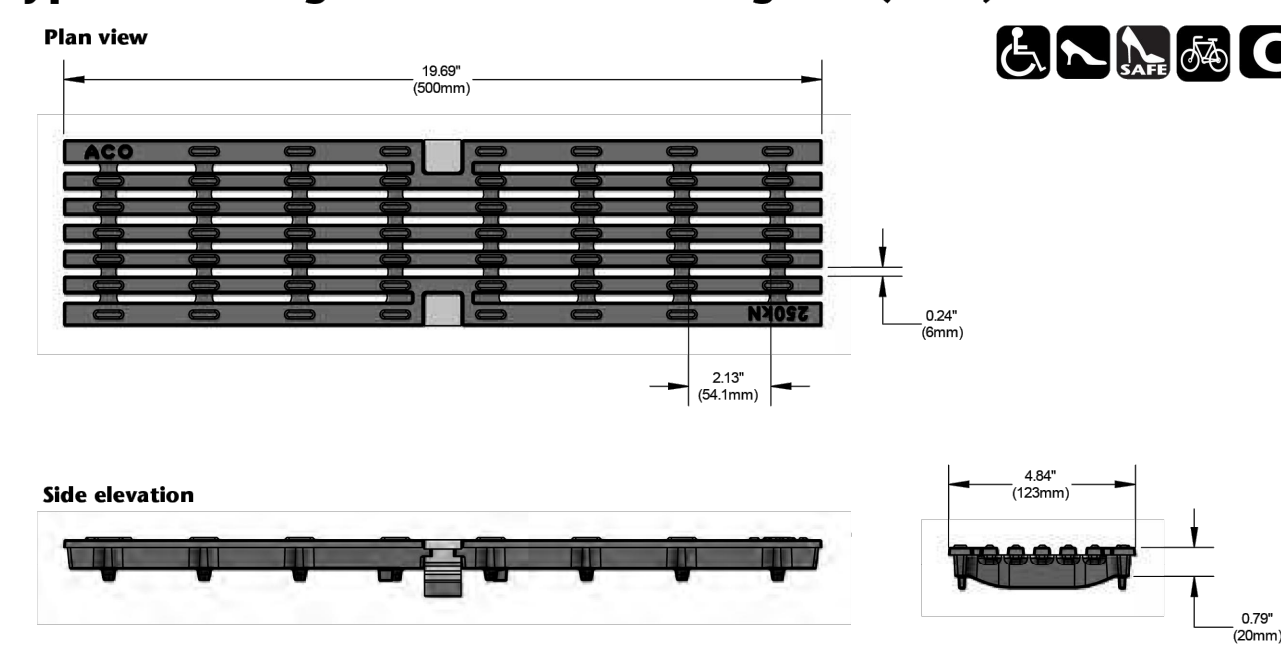
ACO DRAIN
Type 476D Longitudinal ductile iron grate (ADA)

- Product Features**
- Certified to EN 1433 Load Class C - 56,000 lbs - 1,162 psi
 - Uses 'DrainLok' boltless locking system
 - Suitable for use with K100, KS100, and H100K-8 channels
 - Manufactured from ductile iron to ASTM A 536-84 - Grade 65-45-12
 - E-coated for improved resistance against rust
 - Complies with ADA - American Disabilities Act of 1990 Section 4.5.4
 - Bicycle Tire Penetration Resistant to AS 3996 - 2006

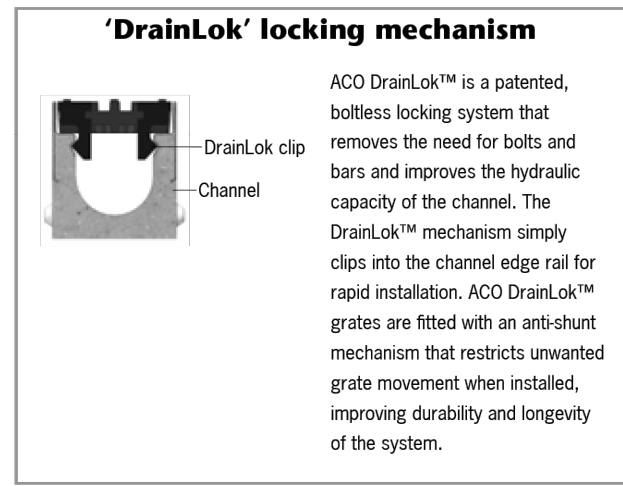


ACO Specification Information

ACO DRAIN
Type 476D Longitudinal ductile iron grate (ADA)



Description	Part No.	Length inches (mm)	Width inches (mm)	Weight lbs.
DrainLok grate Type 476D Ductile iron longitudinal grate	142171	19.69 (500)	4.85 (123.1)	7.0



ACO, Inc.
Northeast Sales Office
9470 Pinacene Drive
Mentor, OH 44060
Tel: (440) 639-7230
Toll Free: (800) 343-4764
Fax: (440) 639-7235

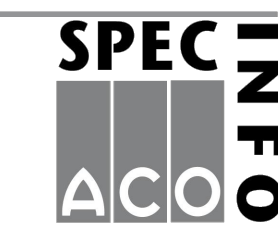
West Sales Office
529 W. Beacrest St.
Casa Grande, AZ 85122
Tel: (520) 421-9980
Toll Free: (888) 490-9552
Fax: (520) 421-9999

Southeast Sales Office
4211 Pleasant Road
Fort Mill, SC 29708
Tel: (803) 543-4764
Fax: (803) 803-1063

Follow us on
Facebook, LinkedIn, Twitter, YouTube

Electronic Contact:
info@ACODrain.us
www.ACODrain.us

April 2018
www.ACODrain.us



TRAIL ACCESS
UNIMPROVED TRAIL— FOOTING MAY BE UNEVEN
PASS AT OWN RISK

TRAIL RULES

- TRAIL OPEN 30 MINUTES BEFORE SUNRISE UNTIL 30 MINUTES AFTER SUNSET
- MOTORIZED VEHICLES PROHIBITED
- STAY ON TRAIL
- PETS MUST BE LEASHED
- REMOVE PET WASTE AND TRASH FROM TRAIL

THANK YOU

TRAIL SIGN
SCALE: N.T.S

Specifications

General
The surface drainage system shall be ACO Drain K100, KS100, and H100K-8 channels*, complete with ACO Type 476D longitudinal ductile iron grate with "DrainLok" locking as manufactured by ACO, Inc. or similar approved.

Materials
The covers shall be manufactured from ductile iron and have minimum properties as follows:

- Independently certified to meet Load Class C to EN 1433 - 56,000 lbs - 1,162 psi
- Ductile iron to ASTM A 536-84 - Grade 65-45-12
- Intake area of 22.6 sq. in. (145.16 cm²) per half meter of grate

The overall width of 4.85" (123mm) and overall length of 19.69" (500mm). Slots measure at 2.1" (53.34mm) by 0.24" (6.09mm).

Installation
The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

TRENCH DRAIN
SCALE: N.T.S

SITE PLAN

SIGNS AND TRENCH DRAINS
(DETAIL SHEET 3 OF 27)

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.41

SHEET 41 OF 65



HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:

FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
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5	AI	11/10/23	REV. FULL SITE PLAN



SITE
PLAN

ACCESSIBLE CURB
RAMPS
(DETAIL SHEET
4 OF 27)

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.42

SHEET 42 OF 65

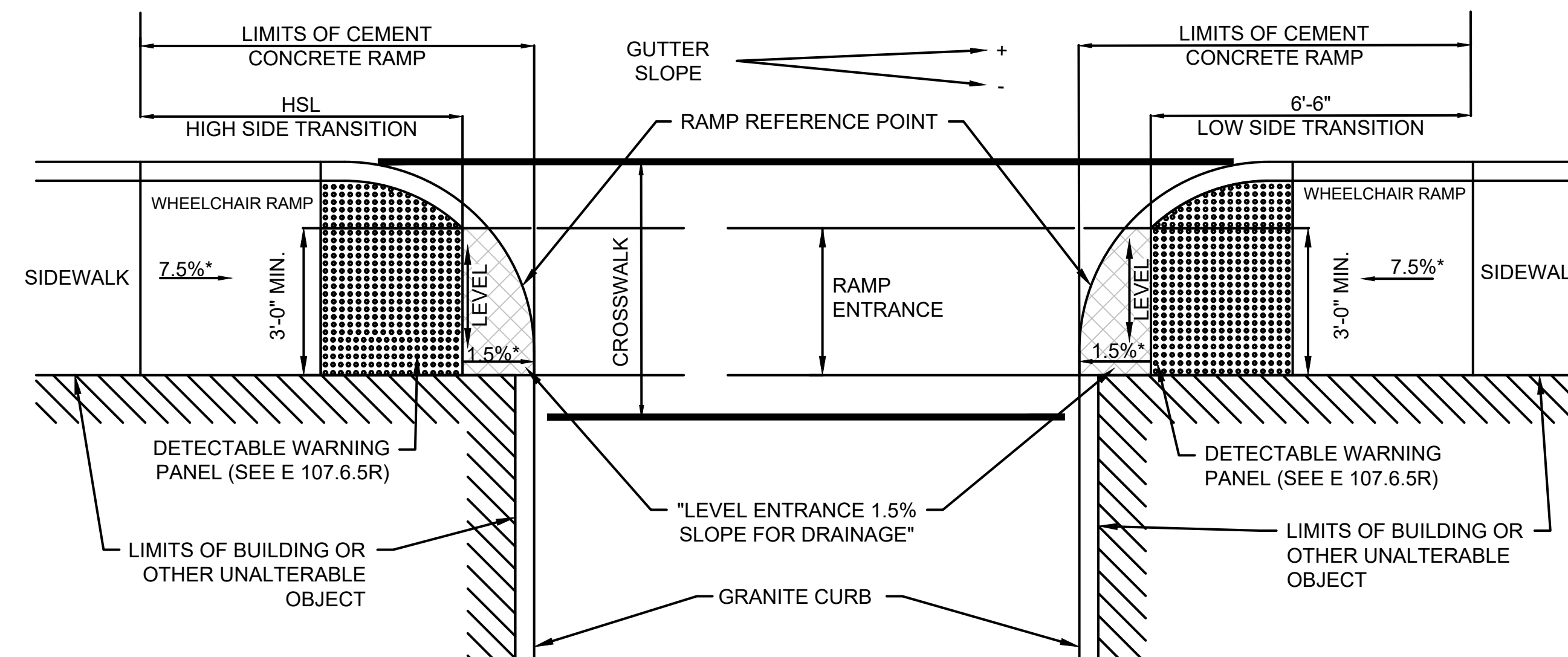
NOTES:
DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.

FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

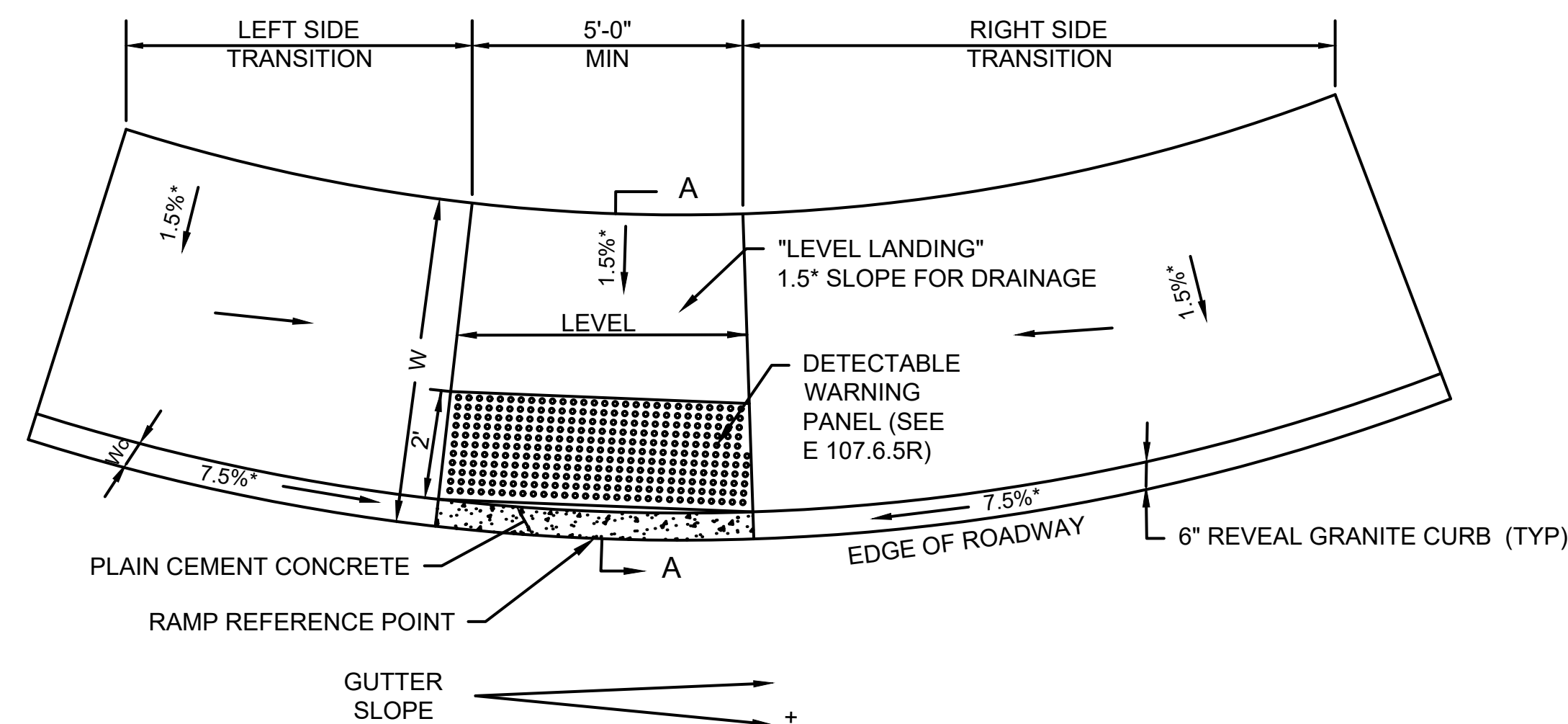
LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
* = TOLERANCE FOR CONSTRUCTION ±0.5%



WHEELCHAIR RAMP FOR CONTINUOUS DIRECTION TRAVEL

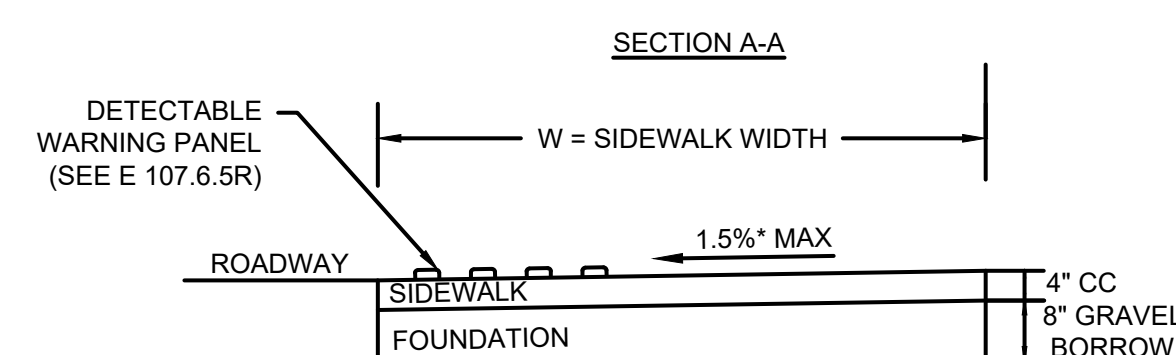
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LEGEND:

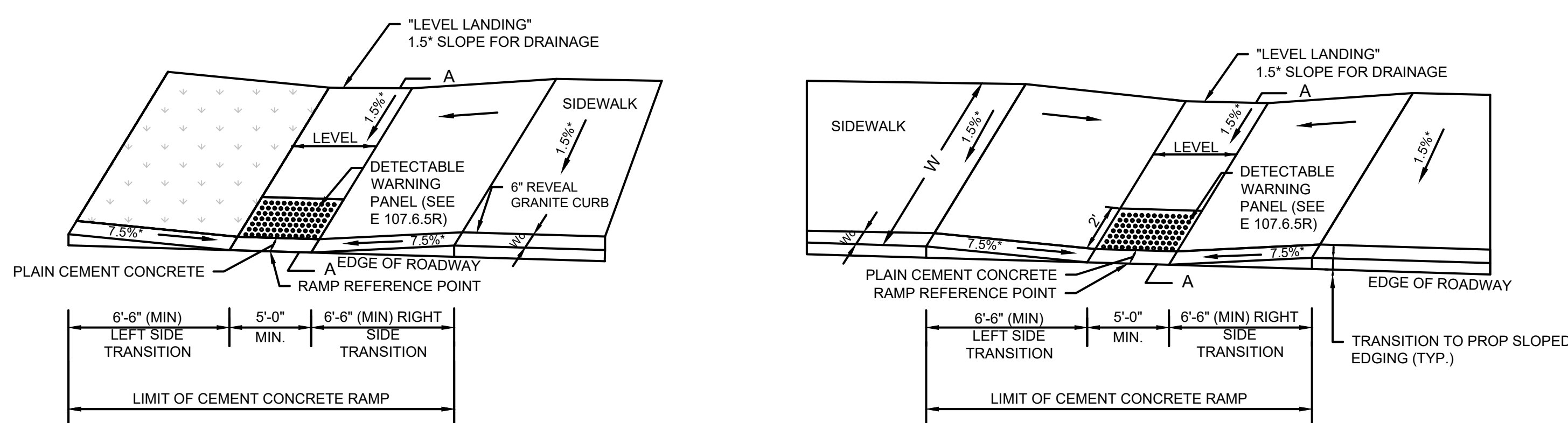
HSL = HIGH SIDE TRANSITION (SEE E 107.9.0)
W = SIDEWALK WIDTH
Wc = WIDTH OF CURB (6" TYP)
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W-WC



WHEELCHAIR RAMPS ON CURVED SIDEWALK

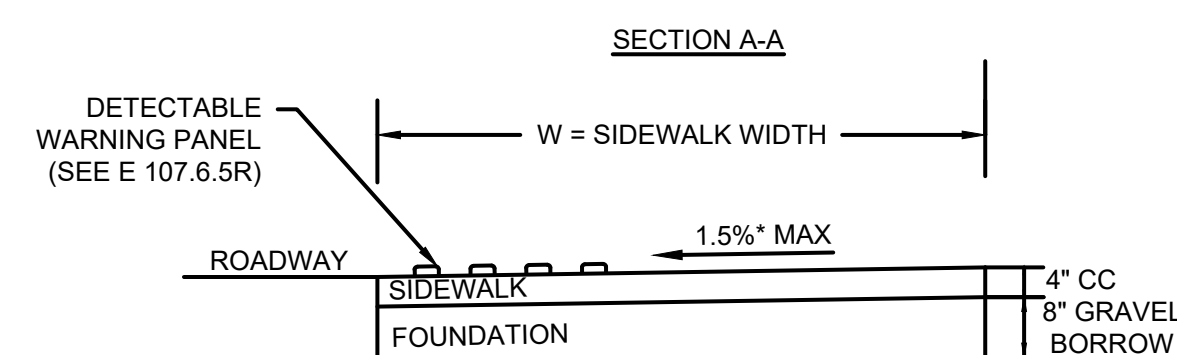
SCALE: N.T.S.



LEGEND:

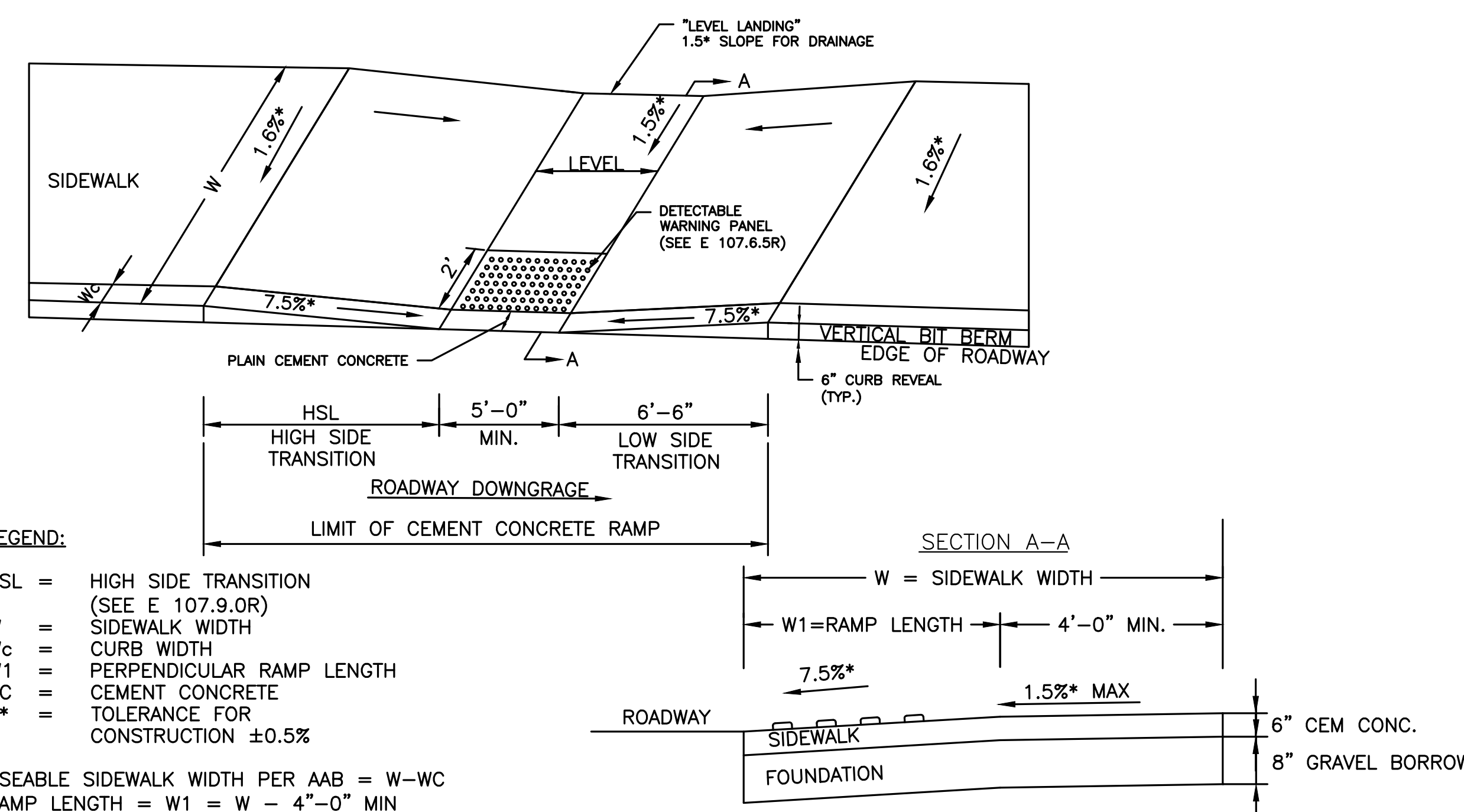
HSL = HIGH SIDE TRANSITION (SEE E 107.9.0)
W = SIDEWALK WIDTH
Wc = WIDTH OF CURB (6" TYP)
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W-WC



WHEELCHAIR RAMPS ON NARROW SIDEWALK

SCALE: N.T.S.



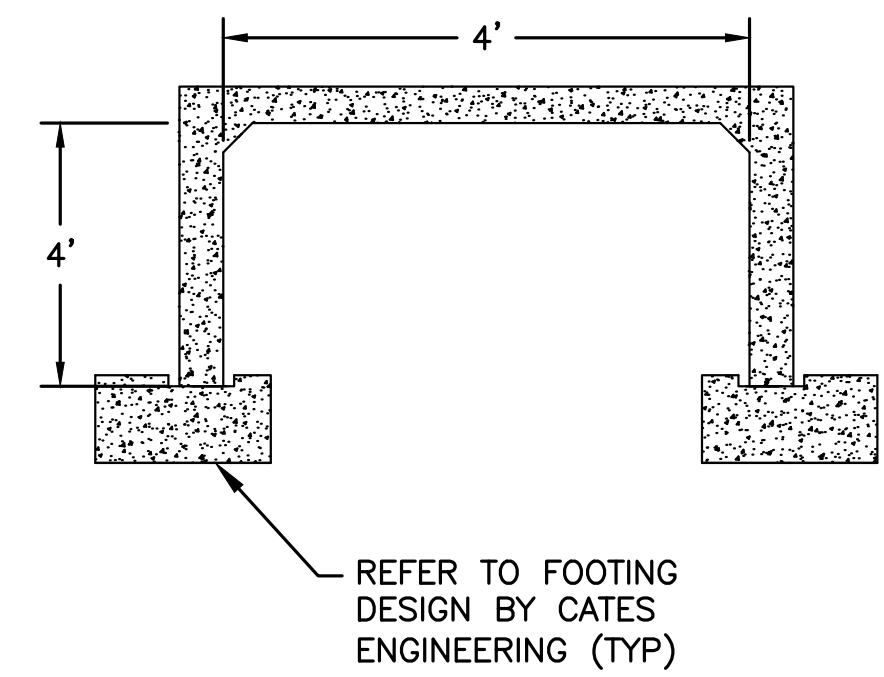
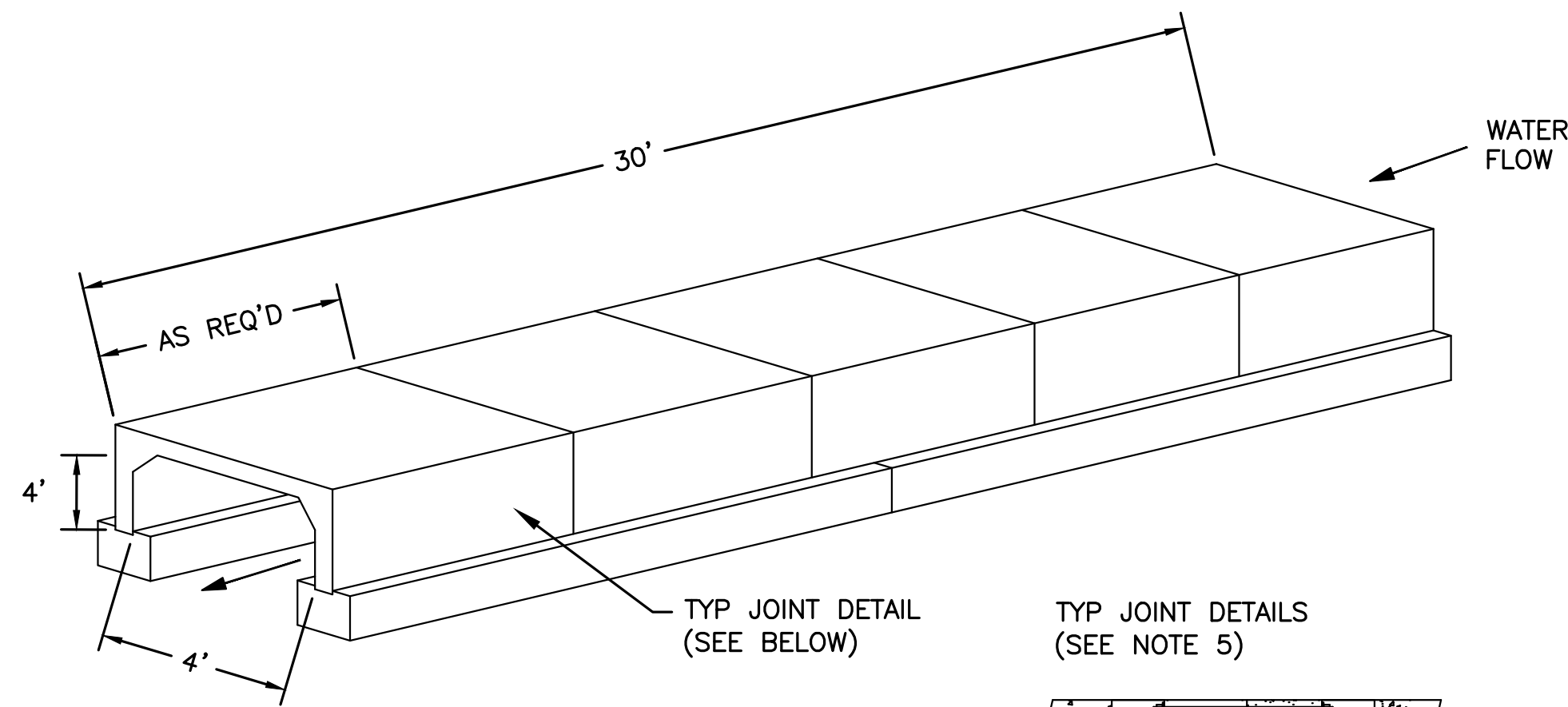
LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
Wc = CURB WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W-WC
RAMP LENGTH = W1 = W - 4"-0" MIN

WHEELCHAIR RAMPS ON NARROW SIDEWALK

SCALE: N.T.S.

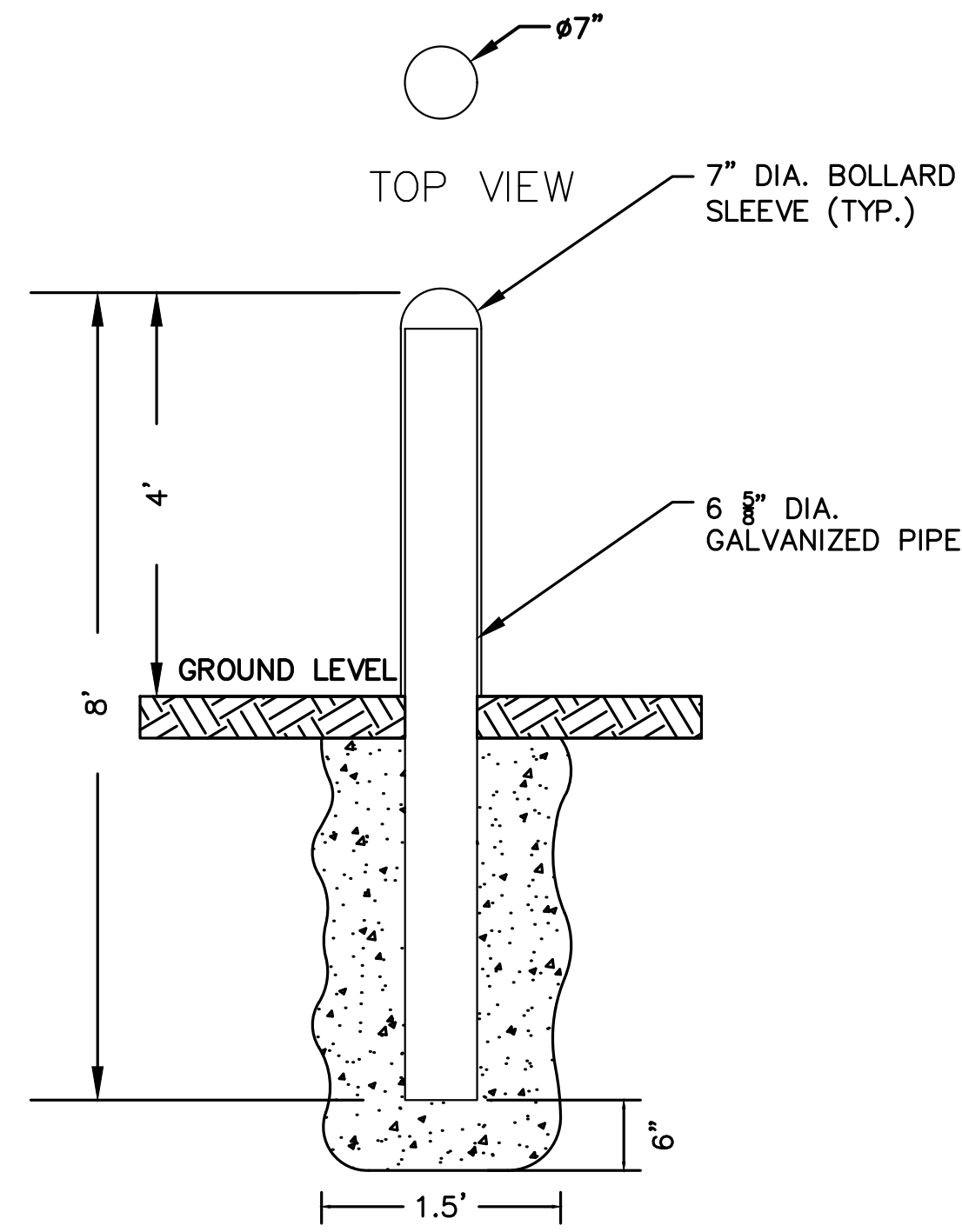


NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN PER ASTM C1504 SPECIFICATION FOR 3-SIDED CULVERT.
3. ALL REINFORCEMENT PER ASTM A615.
4. DESIGNED AASHTO HS-20 LOADING OR AS REQUIRED.
5. TONGUE AND GROOVE JOINT SEALED WITH BUTYL WRAP.
6. PRECAST FOOTINGS OPTIONAL.
7. EXCAVATE, ROUGH GRADE, BACKFILL AND COMPACT PER SPECIFICATIONS SECTION AND THE GEOTECHNICAL REPORT.

3-SIDED CULVERT

SCALE: N.T.S

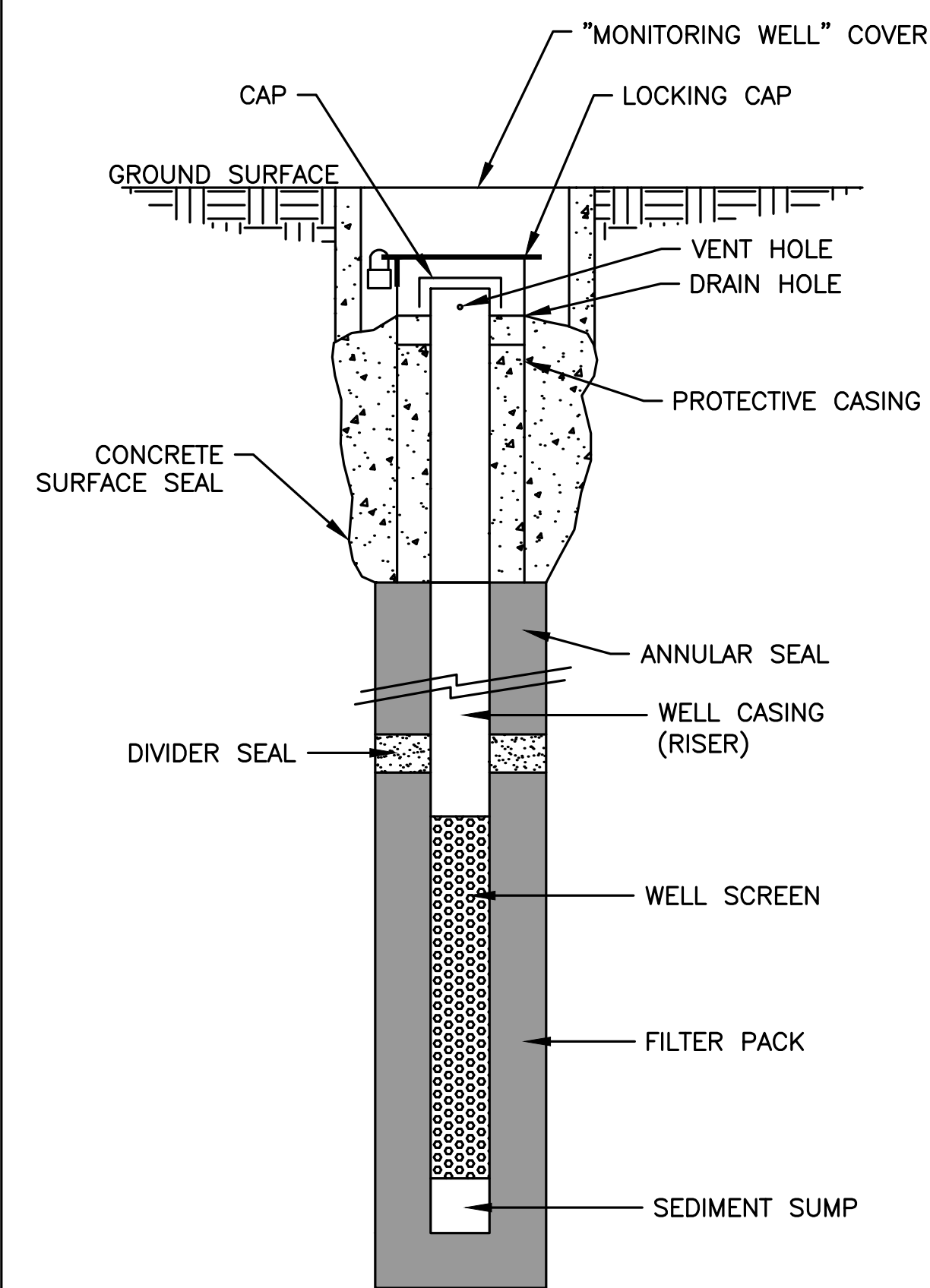


NOTES:

1. BOLLARD PIPE TO BE FILLED WITH MINIMUM 3,000 PSI CONCRETE.
2. BOLLARD SLEEVE COLOR SELECTION BY OWNER.

BOLLARD

SCALE: N.T.S



NOTES:

1. FOUR GROUND-WATER MONITORING WELLS ARE REQUIRED TO BE INSTALLED PER THE COMP PERMIT C.1.H AND D.7. INSTALLATION IS TO BE COORDINATED WITH THE OWNER'S LSP. THE APPROXIMATE LOCATIONS OF THESE WELLS ARE SHOWN ON SHEETS 14 THROUGH 18.
2. UNLESS OTHERWISE SPECIFIED, WELL MATERIALS ARE THREADED, ONE OR TWO-INCH DIAMETER, FLUSH JOINTED, SCHEDULE 40, POLYVINYL CHLORIDE (PVC). WELL SCREEN LENGTH IS TEN FEET AND SCREEN SLOT WIDTH IS 0.010-INCH. NO PVC SOLVENTS OR GLUES ARE TO BE USED AT ANY POINT DURING THE MONITORING WELL CONSTRUCTION.
3. WELL BORINGS ARE TYPICALLY ADVANCED FIVE FEET BELOW THE WATER TABLE OR TO REFUSAL. IF GROUND WATER IS ENCOUNTERED AT OR NEAR REFUSAL, ATTEMPTS MAY BE MADE TO ADVANCE THE BORING SEVERAL FEET INTO THE REFUSAL USING SPECIALIZED DRILLING METHODS. UNLESS OTHERWISE SPECIFIED, ALL WELL BORING ARE ADVANCED IN ACCORDANCE WITH THE LSP'S SOIL BORING PROTOCOL.
4. THE WELL SCREEN IS SET TO INTERCEPT THE WATER TABLE SURFACE, THE TOP OF THE WELL SCREEN IS TO BE SET ABOVE THE HIGHEST ANTICIPATED SEASONAL WATER TABLE, WHILE THE BOTTOM OF THE WELL SCREEN IS SET AT THE BASE OF THE BORING.
5. THE ANNULAR SPACE AROUND THE WELL SCREEN IS BACKFILLED WITH CLEAN SILICA SAND TO APPROXIMATELY ONE FOOT ABOVE THE TOP OF THE WELL SCREEN AS NECESSARY AND IF POSSIBLE, A BENTONITE SEAL (TYPICALLY ONE-FOOT THICK) IS PLACED ABOVE THE SILICA SAND. THE REMAINING ANNULAR SPACE AROUND THE WELL CASING IS TO BE BACKFILLED WITH NATIVE MATERIAL TO APPROXIMATELY SIX-TWELVE INCHES BELOW GRADE. A PROTECTIVE ROADBOX AND LOCKING CAP ARE INSTALLED AT THE TOP OF THE WELL CASING FLUSH WITH THE GROUND SURFACE. THE REMAINING ANNULAR SPACE IS FILLED WITH CONCRETE TO A LEVEL FLUSH WITH THE GROUND SURFACE. PROTECTIVE STANDPIPES OR OTHER WELL FINISHING TECHNIQUES ARE ACCEPTABLE IN LIEU OF THE STANDARD ROADBOXES FOR SITE SPECIFIC PURPOSES.

MONITORING WELL

SCALE: N.T.S

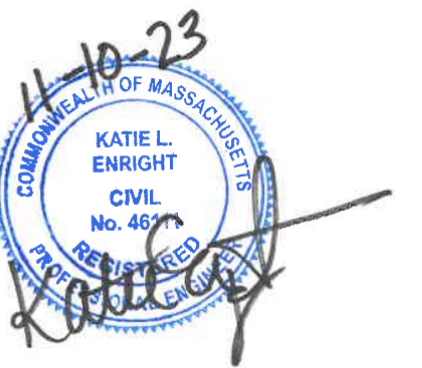
PREPARED FOR:

FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
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4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



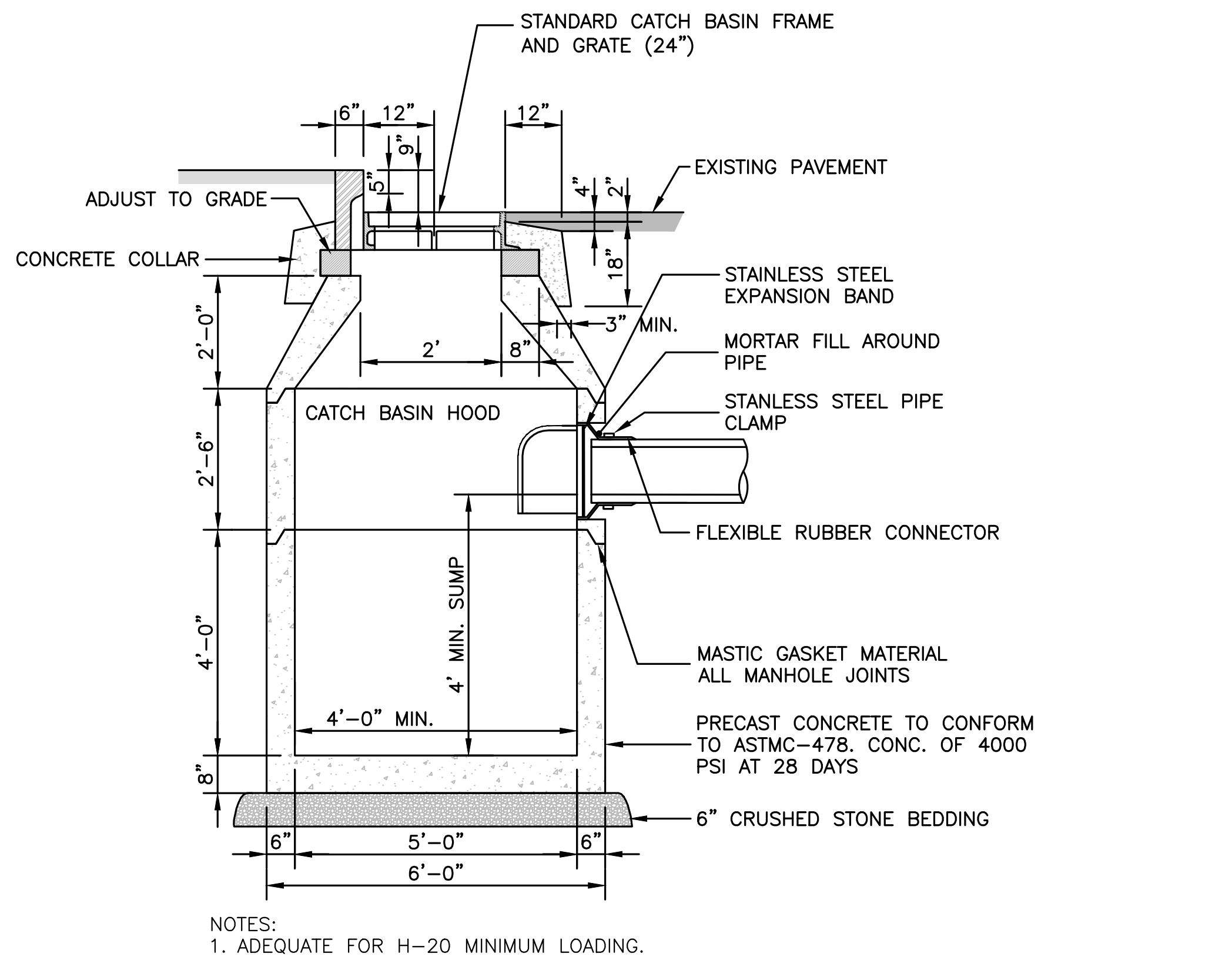
**SITE
PLAN**

**DRAINAGE STRUCTURES
(DETAIL SHEET
5 OF 27)**

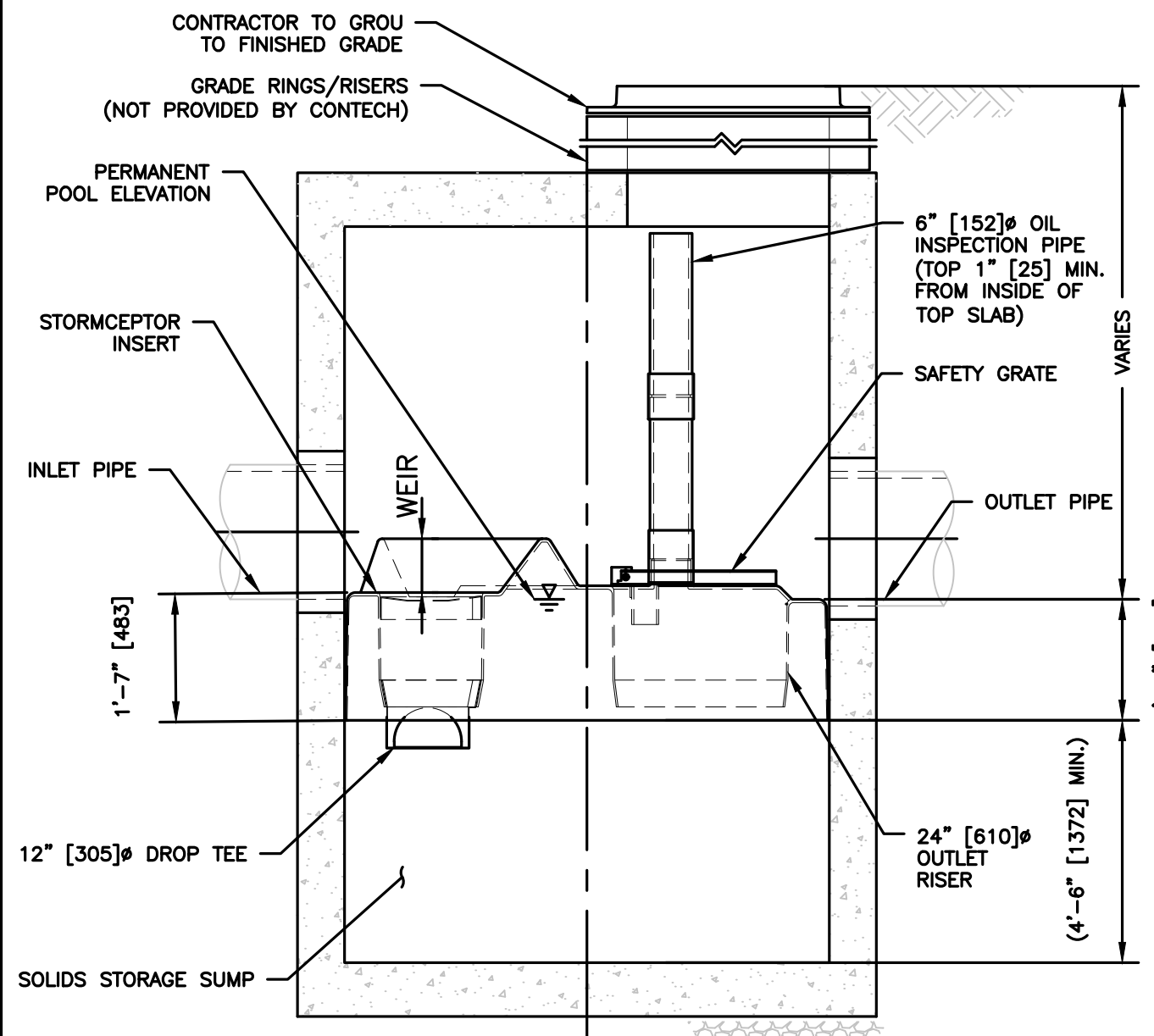
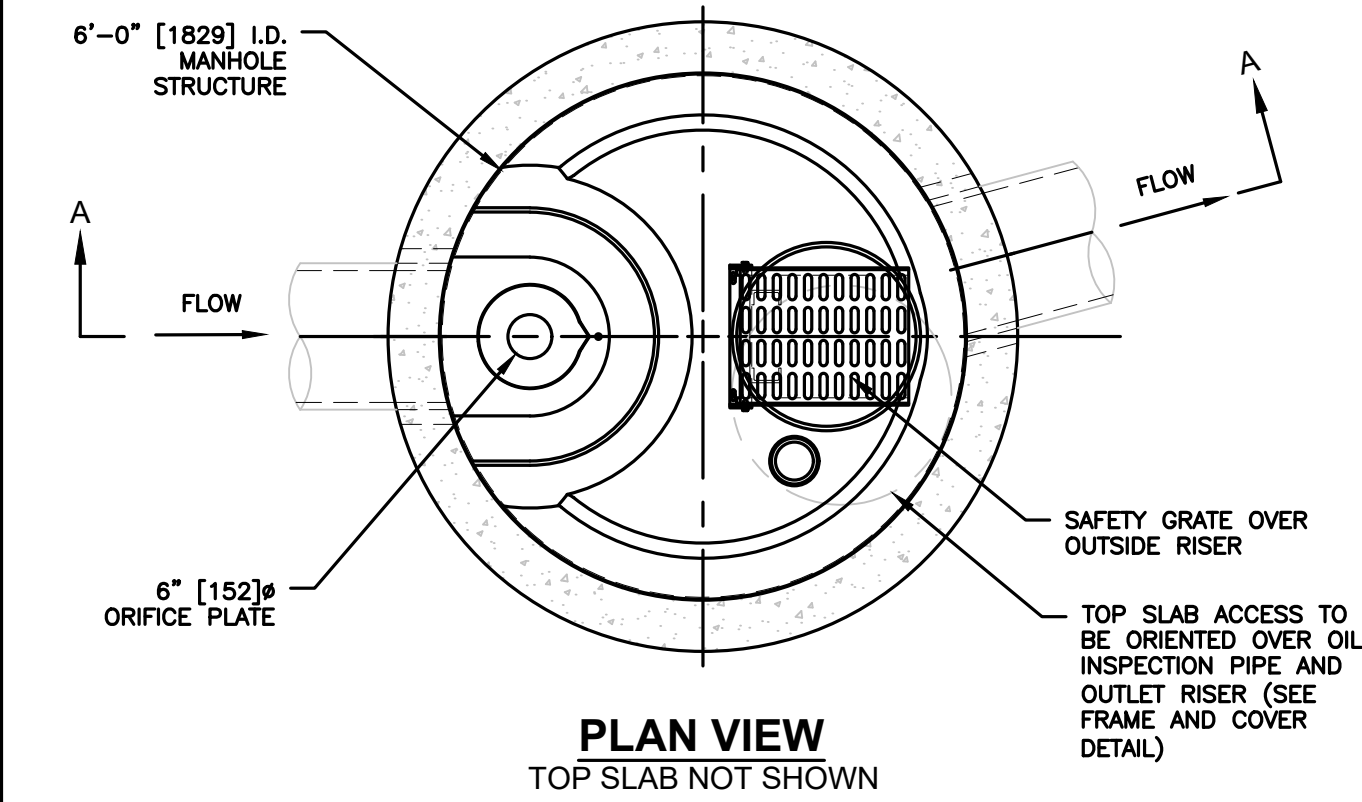
DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.43

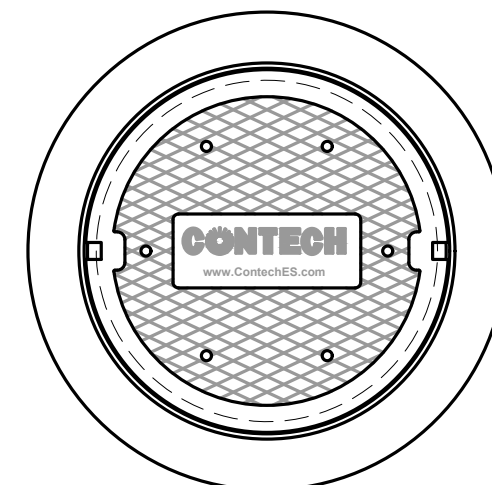
SHEET 43 OF 65



CATCH BASIN
SCALE: N.T.S.



SECTION A-A



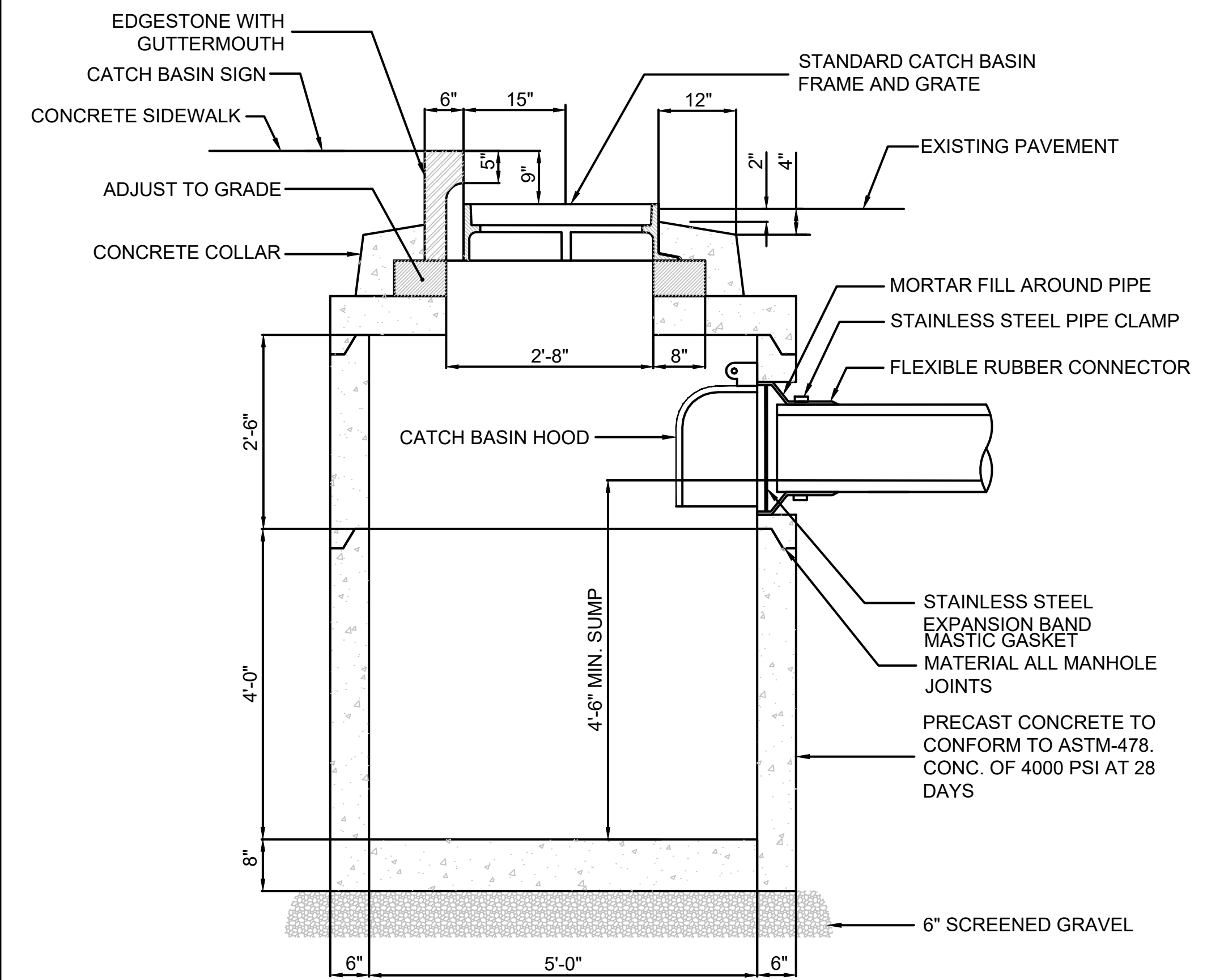
GENERAL NOTES

- CONTECH, OR APPROVED EQUAL, TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
- STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
- ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

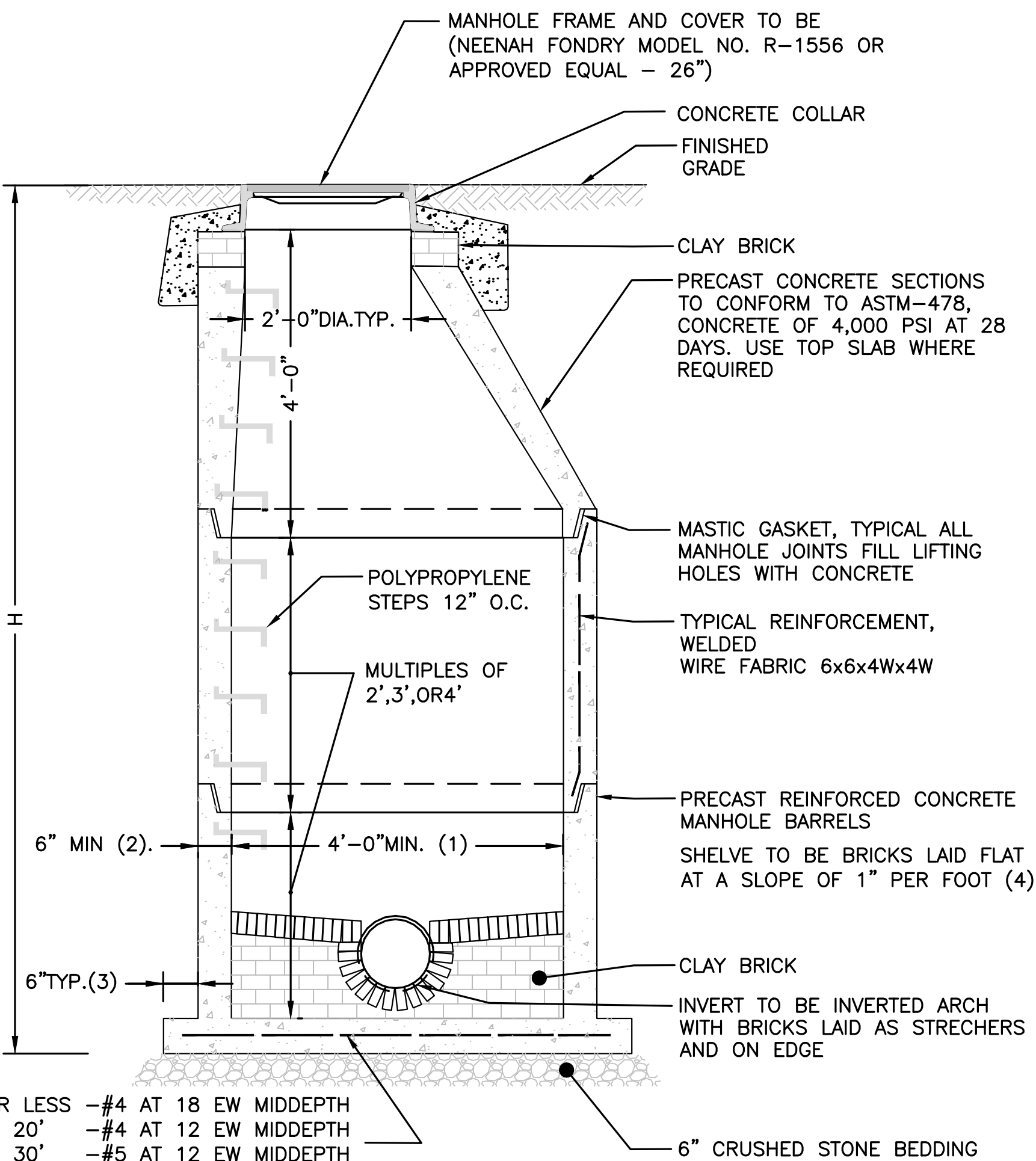
INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

WATER QUALITY UNIT - STC 900 (DMH-9)
SCALE: N.T.S. OR APPROVED EQUAL



SHALLOW CATCH BASIN
SCALE: N.T.S.



H= 10' OR LESS -#4 AT 18 EW MIDDEPTH
H= 10' TO 20' -#4 AT 12 EW MIDDEPTH
H= 20' TO 30' -#5 AT 12 EW MIDDEPTH
IN ADDITION TO WELDED WIRE FABRIC

NOTES:

- 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER.
- 6 INCH MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.
- 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED. CONCRETE INVERT AND SHELF MAY BE SUBSTITUTED IN STORM DRAIN MANHOLES AS DIRECTED BY THE ENGINEER.

PRECAST CONCRETE MANHOLE
SCALE: N.T.S.

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

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**SITE
PLAN**

**DRAINAGE STRUCTURES
(DETAIL SHEET
6 OF 27)**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.44



HOWARD STEIN HUDSON
 114 Turnpike Road, Suite 2C
 Chelmsford, MA 01824
 www.hshassoc.com

PREPARED FOR:
 FRH REALTY LLC
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 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

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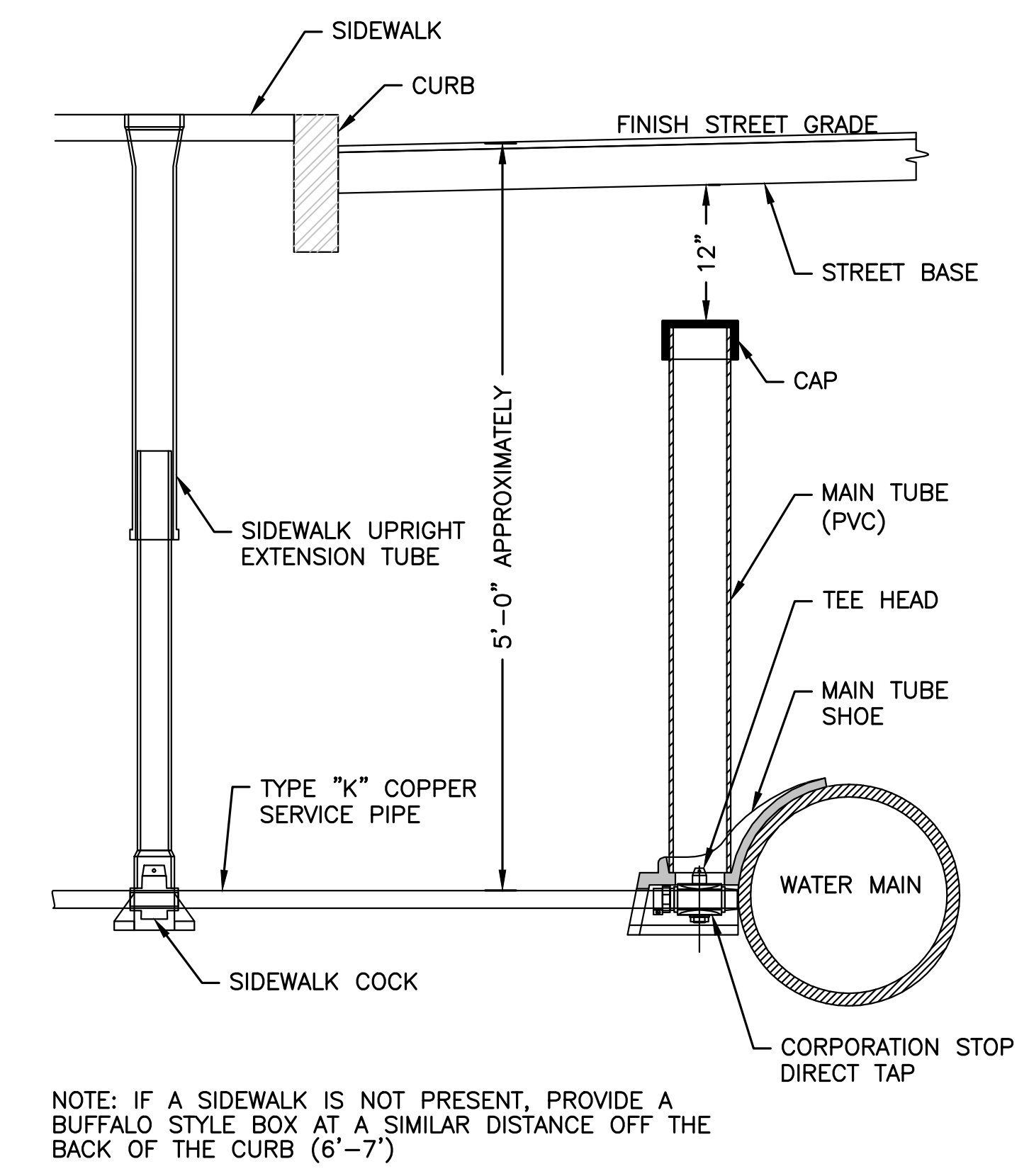
SITE PLAN

**WATER AND SEWER
 CONNECTIONS
 (DETAIL SHEET
 8 OF 27)**

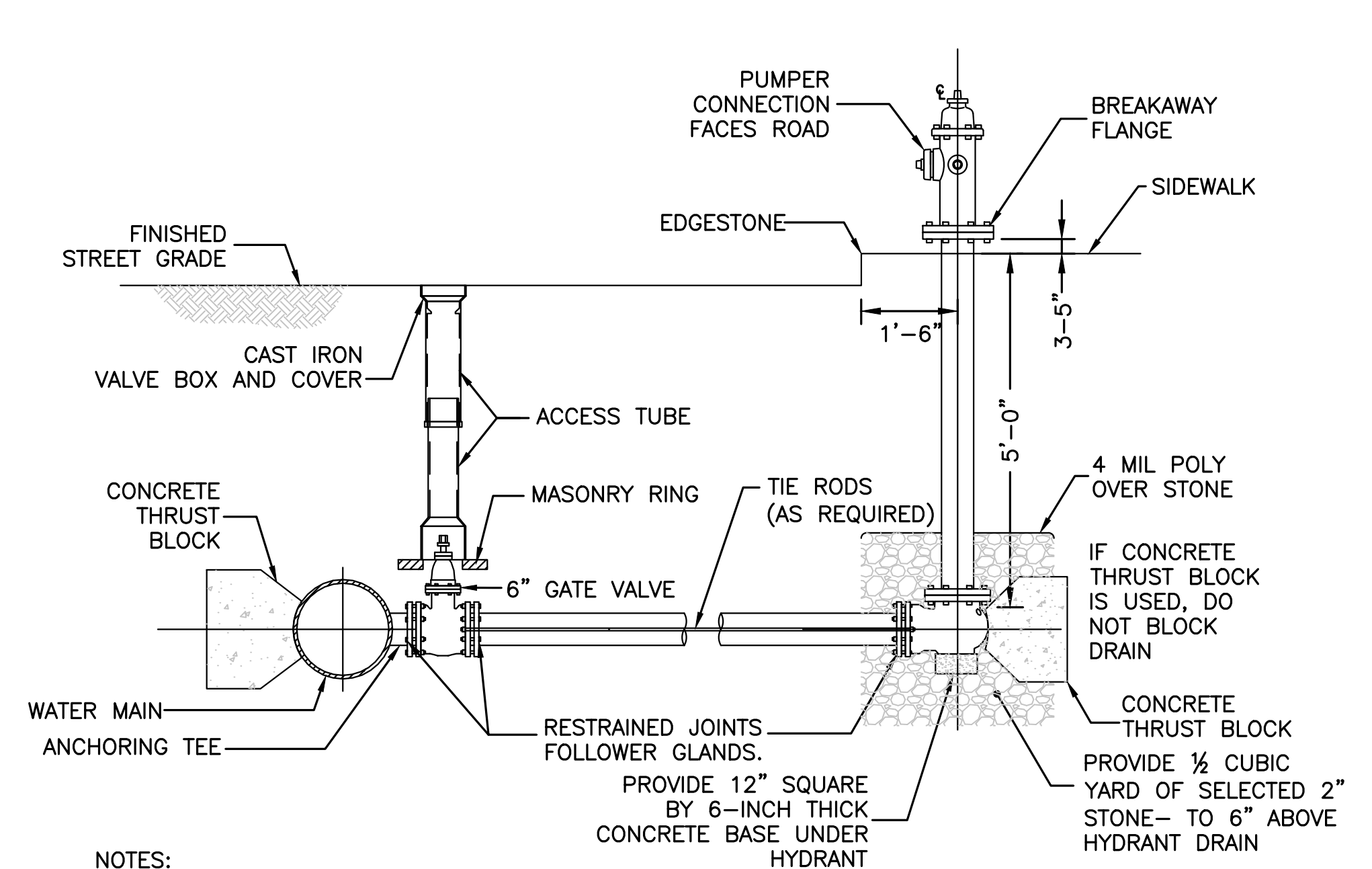
DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.46

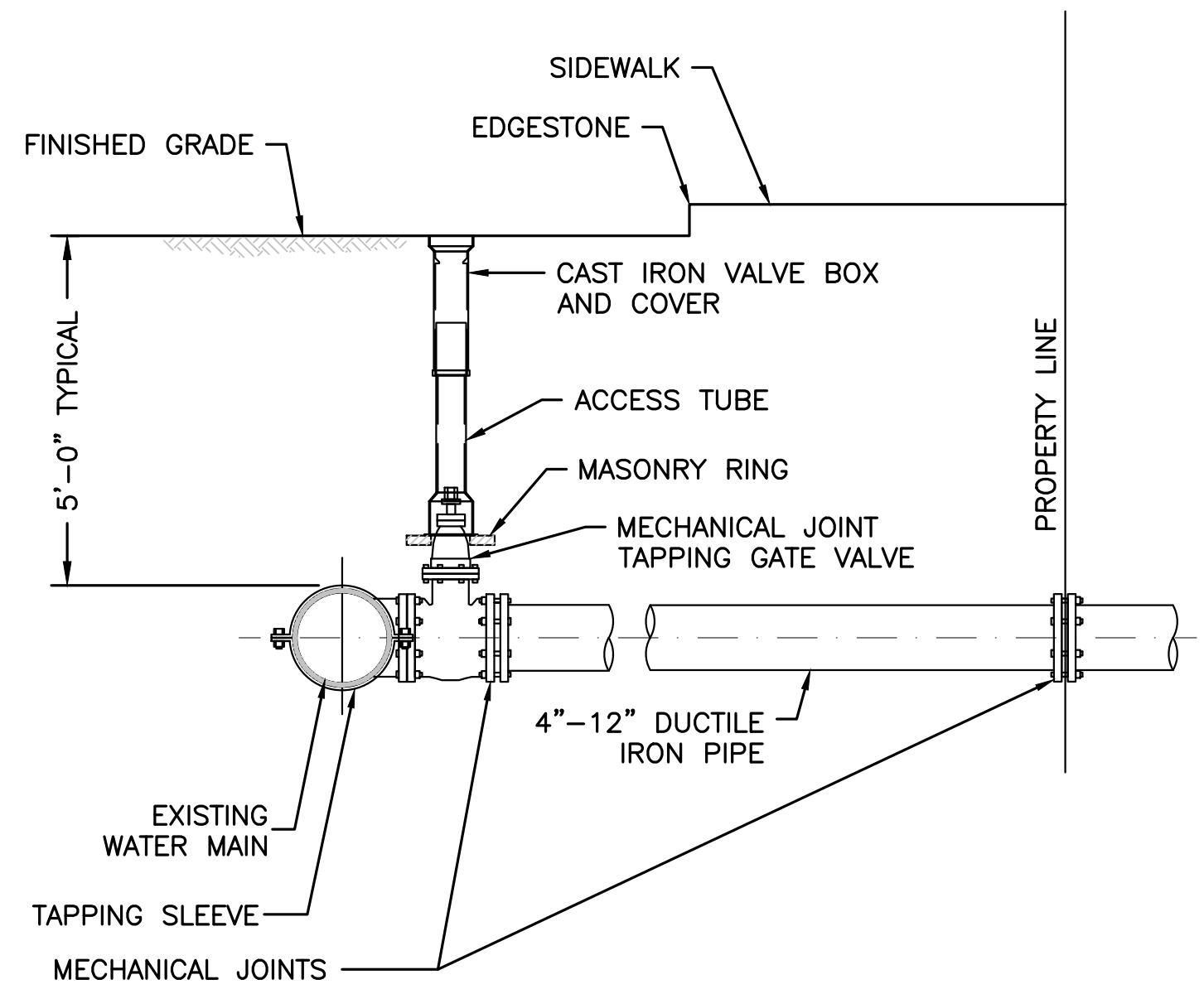
SHEET 46 OF 65



TYPICAL WATER CONNECTION 1" SERVICE PIPE
 SCALE: N.T.S.



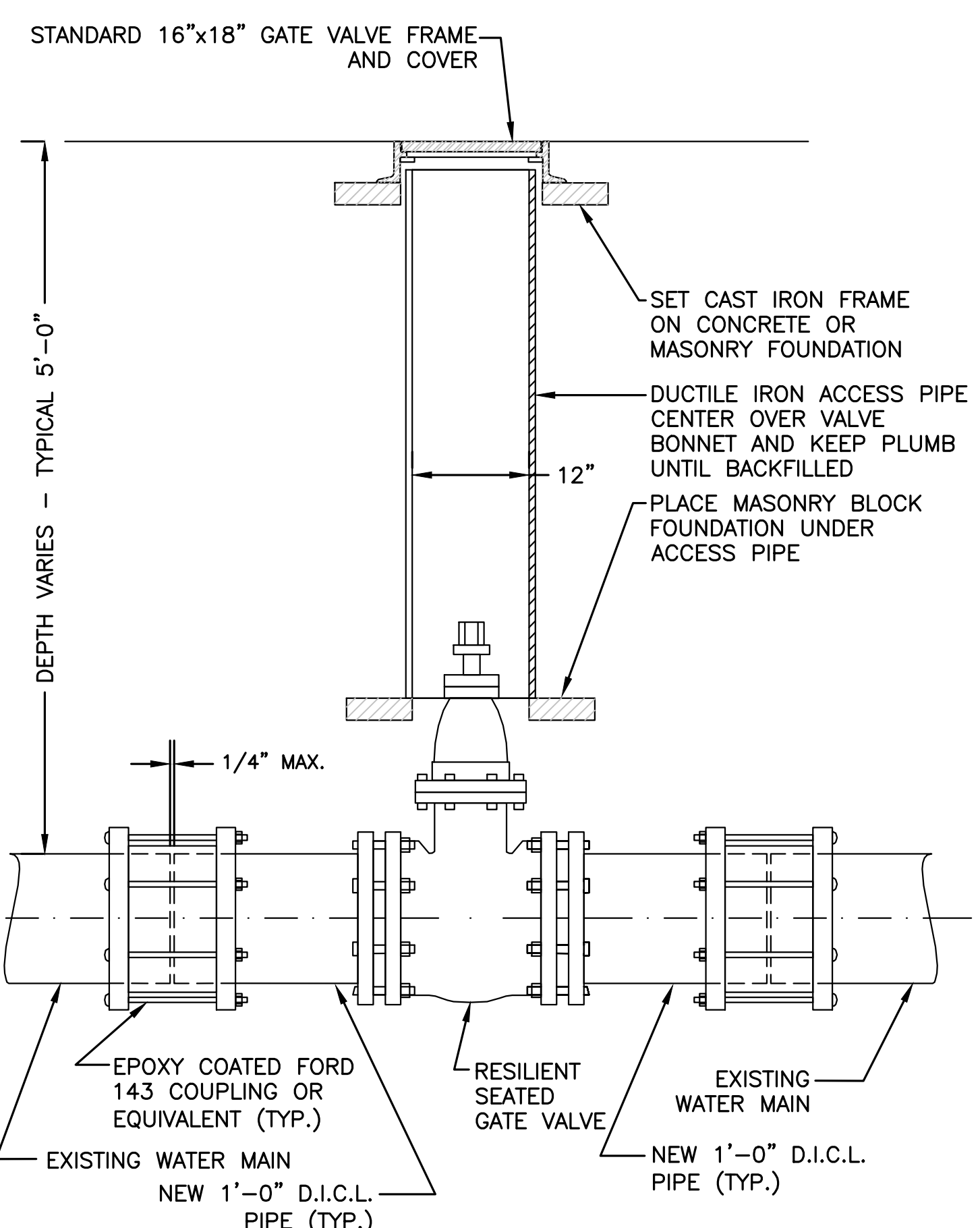
TYPICAL FIRE HYDRANT CONNECTION
 SCALE: N.T.S.



TAPPING SLEEVE & VALVE
 SCALE: N.T.S.

- NOTES:
1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
 2. USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
 3. SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.

- NOTES:
- CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
 - USE RESTRAINED JOINT FOLLOWER GLANDS, OR TIE RODS, WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
 - SIZE OF BLOCK OR FITTING TO BE DESIGNED FOR SPECIFIC CONDITIONS, OR ANY NECESSARY BENDS.



TYPICAL GATE VALVE INSTALLATION
 SCALE: N.T.S.

- NOTE:
1. ALL EXCAVATION AND BACKFILLING AND PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF BOSTON REQUIREMENTS.

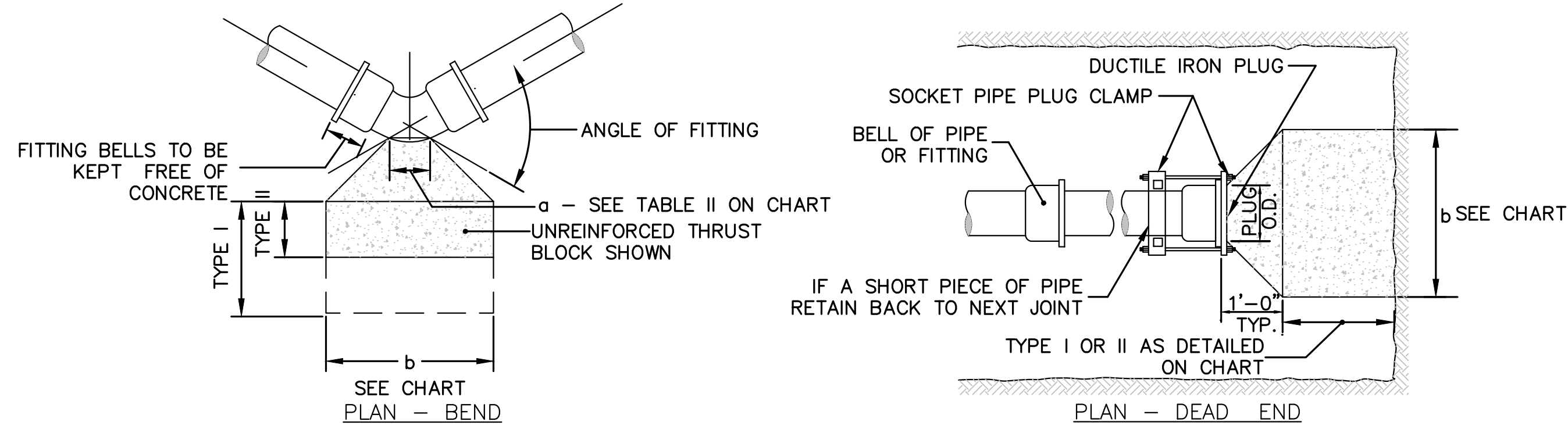
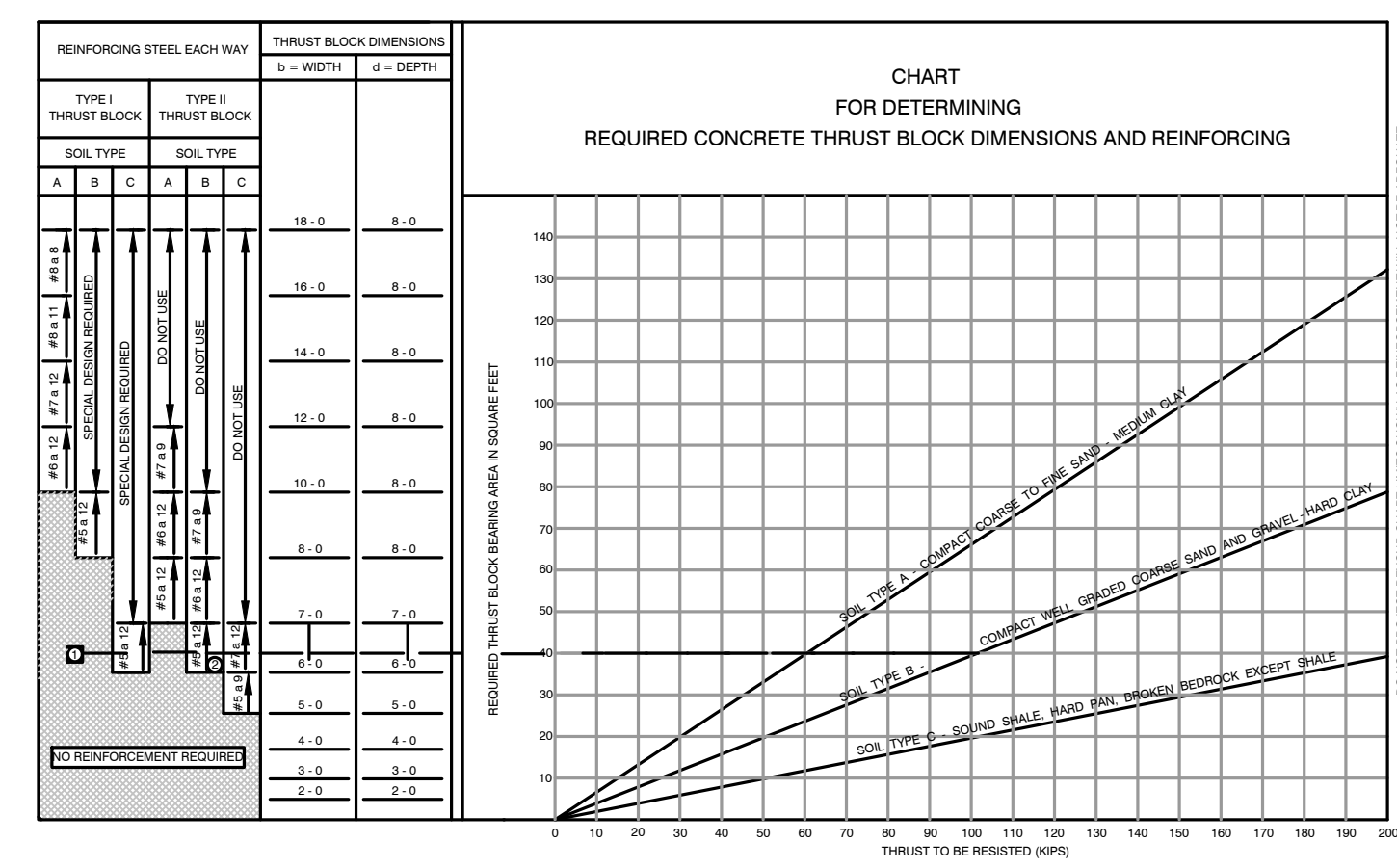


TABLE II - "a" DIMENSION - FEET

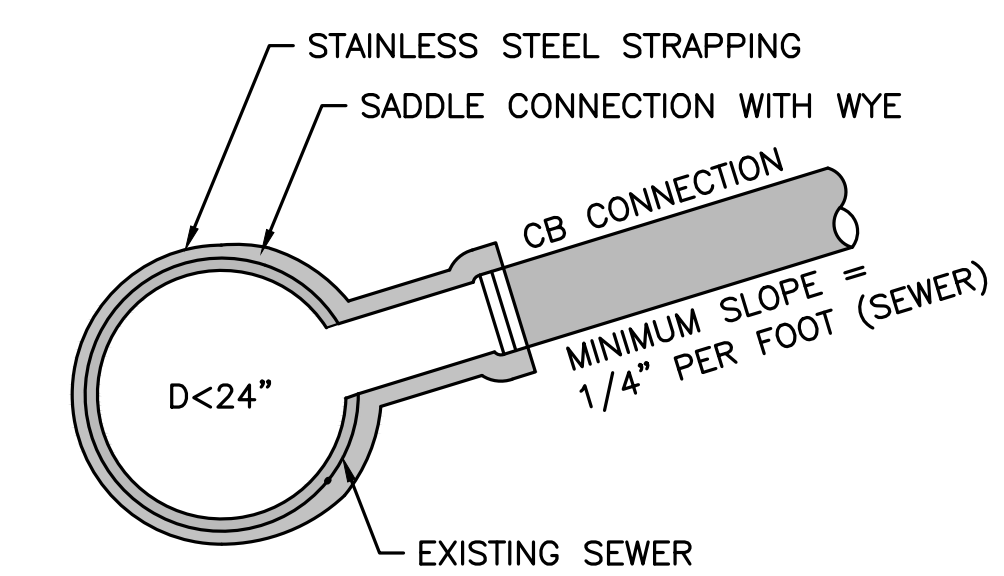
PIPE DIAMETER, INCHES	90° FITTING	OTHERS
6-8 TO 8-12	1-0	1-0
18 TO 20	2-0	1-8
24-30	3-0	2-0

TABLE I - THRUST - KIPS (WATER PRESSURE = 200 P.S.I.)

PIPE DIAMETER (INCHES)	6	8	10	12	18	20	24	30	36	42
CAST IRON	3.6	10	15.8	22.8	45.2	60.8	90.4	141.0	201.8	277.0
DUCTILE IRON	2.8	14.2	29.4	39.6	58.8	107.7	166.0	249.0	362.0	492.0
40" DIA.	11.1	17.5	25.1	44.7	70.0	102.2	152.0	225.0	336.0	456.0
48" DIA.	14.9	21.2	37.9	59.2	85.1	133.0	192.0	281.0	411.0	541.0
60"	17.0	30.4	48.1	66.0	106.0	156.0	230.0	330.0	470.0	610.0
72"	15.1	25.5	38.5	52.8	82.0	116.0	161.0	230.0	330.0	430.0
84"	15.8	27.0	39.5	55.0	85.0	120.0	170.0	240.0	340.0	440.0



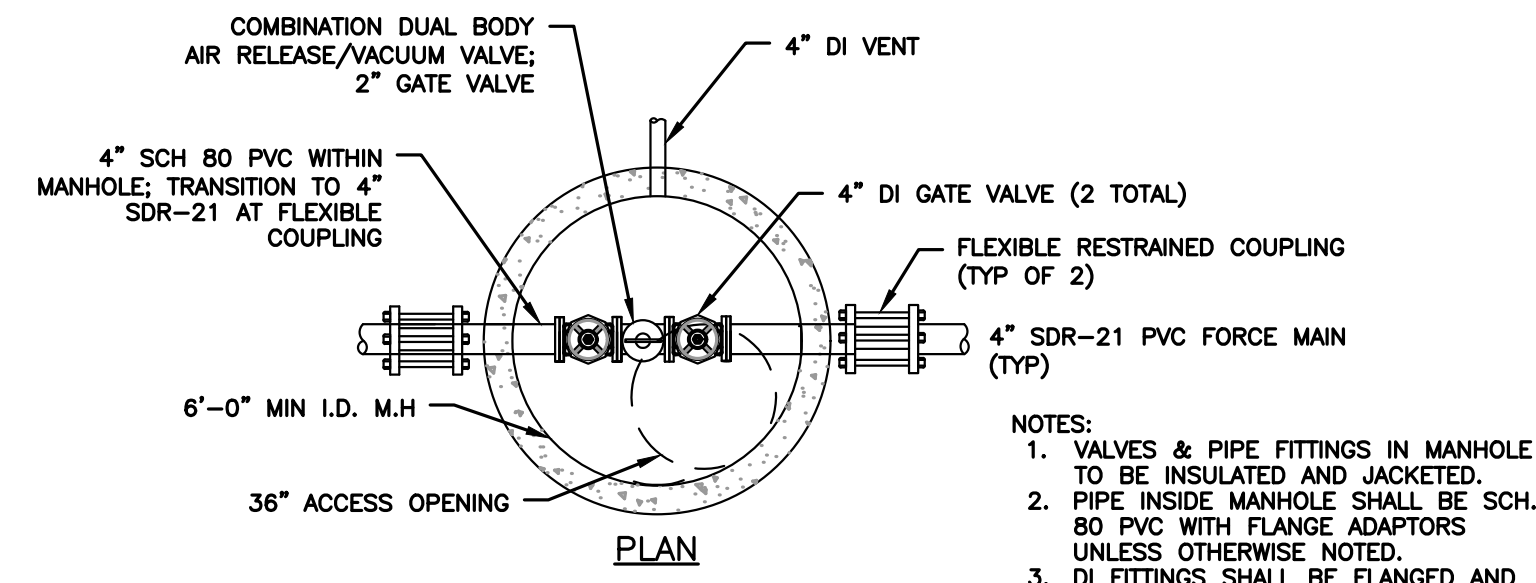
THRUST BLOCK & DIMENSIONS
 SCALE: N.T.S.



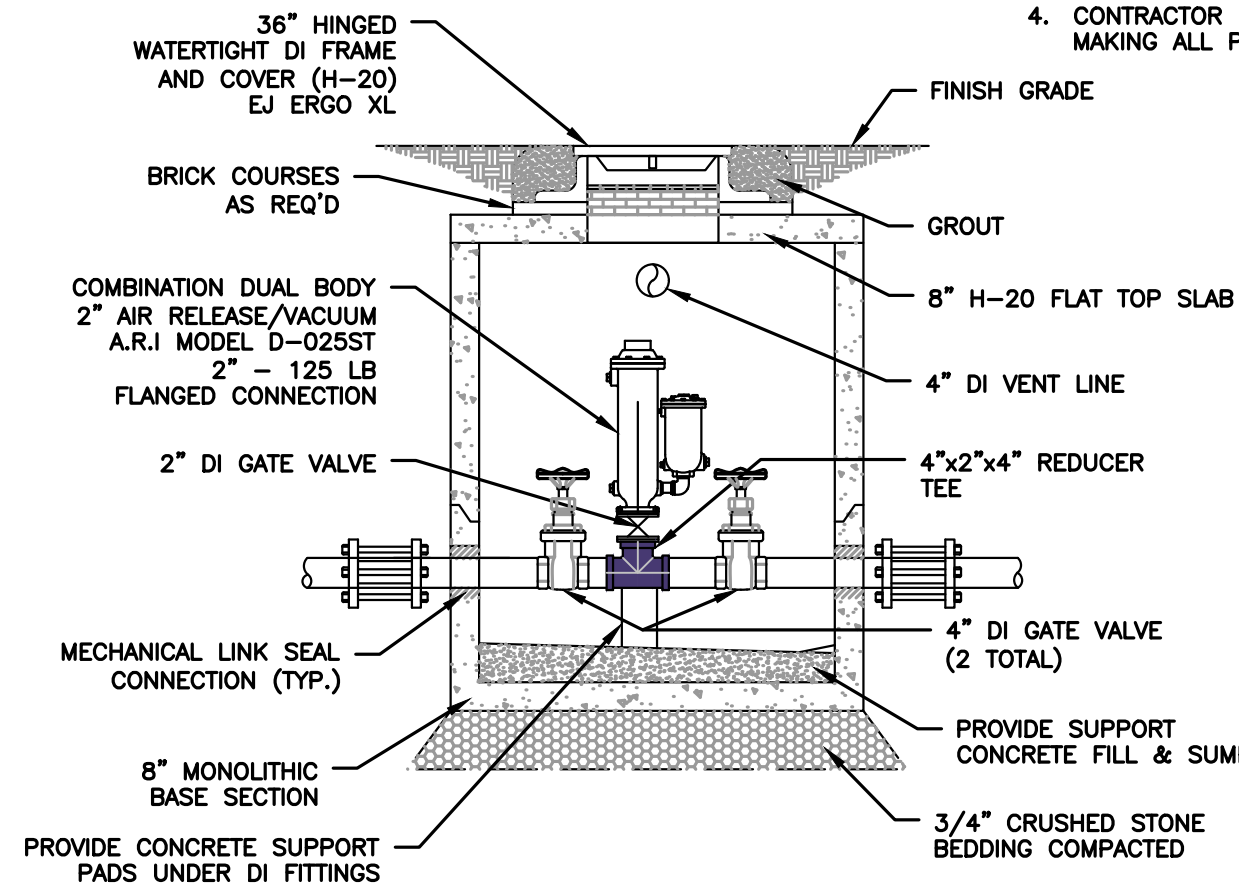
- NOTES:
1. FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE, OR IRON PIPE.
 2. SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENTED ONTO THE PIPE.
 3. FULL WYE CONNECTION FITTINGS MAY BE USED.
 4. PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
 5. CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.

TYPICAL SADDLE CONNECTION TO SEWER
 SCALE: N.T.S.

1/17/2023 11:59:56 AM CADD:19097.04 - L04.20CURRENT19097 - Details.dwg
 Plot Saved by: AISHAM
 Printed by: Roby Jamal

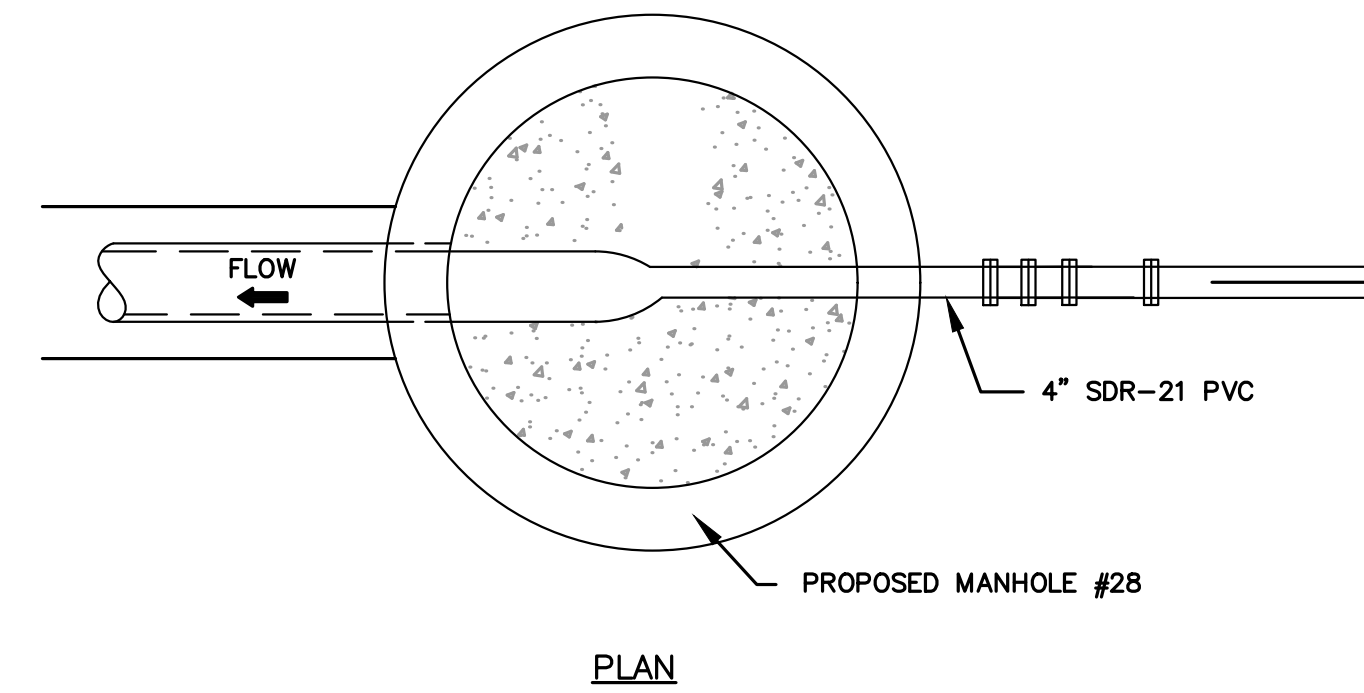
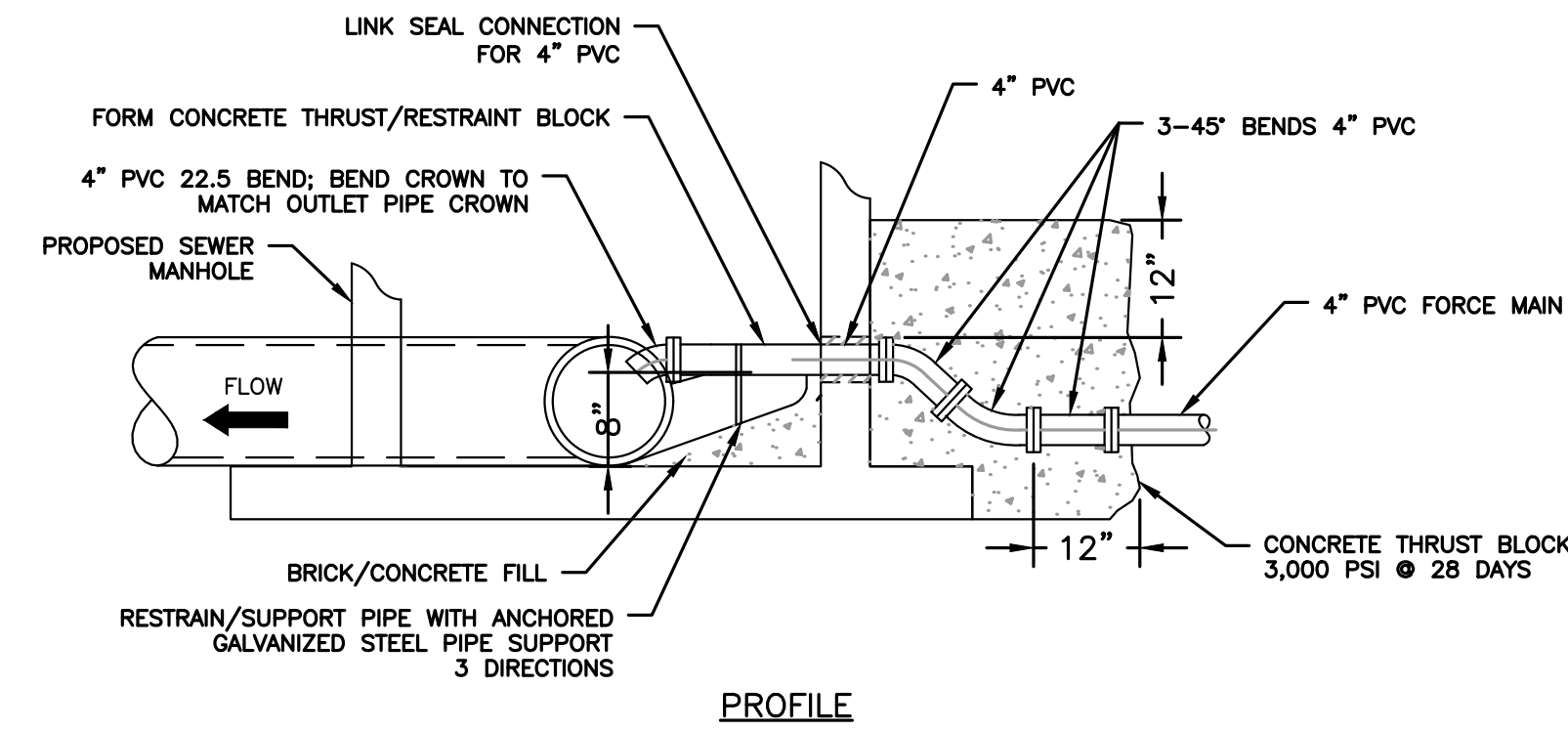


- NOTES:
1. VALVES & PIPE FITTINGS IN MANHOLE TO BE INSULATED AND JACKETED.
 2. PIPE INSIDE MANHOLE SHALL BE SCH. 80 PVC WITH FLANGE ADAPTORS UNLESS OTHERWISE NOTED.
 3. DI FITTINGS SHALL BE FLANGED AND CERAMIC EPOXY LINED.
 4. CONTRACTOR IS RESPONSIBLE FOR MAKING ALL PIECES FIT.



AIR RELEASE MANHOLE

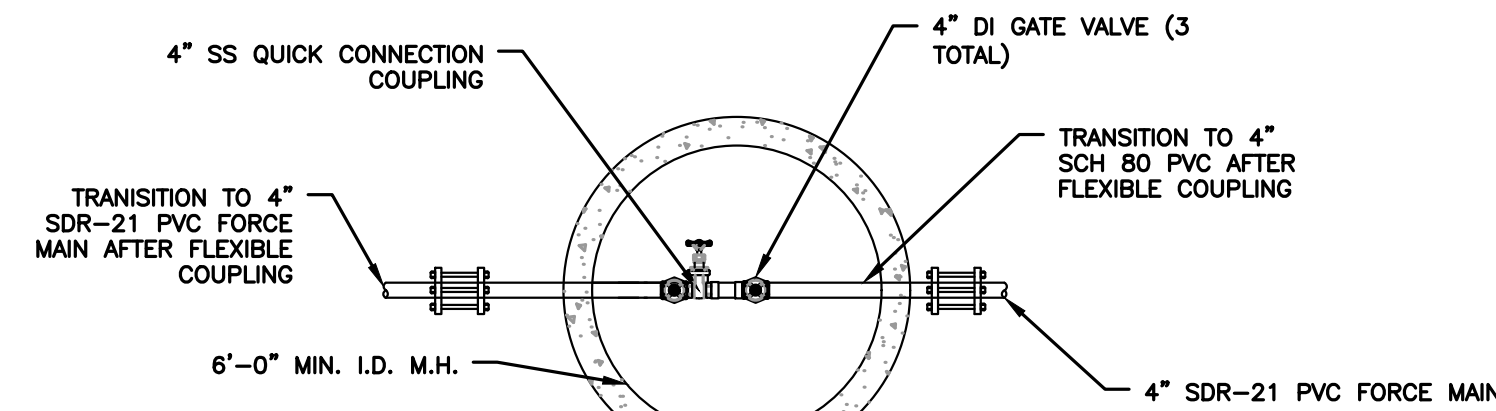
SCALE: N.T.S



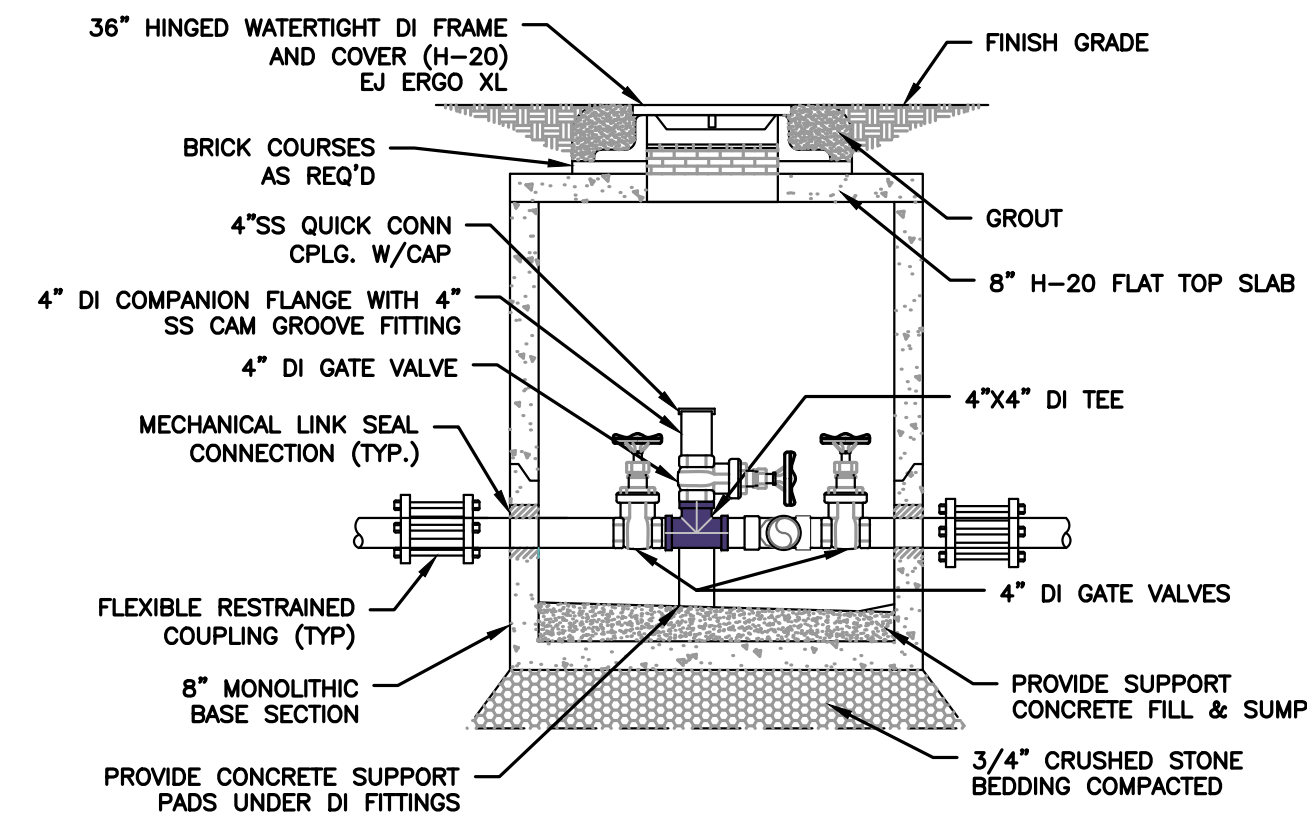
- NOTE:
- CROWN OF FORCE MAIN TO MATCH CROWN OF 8" PIPE.

SMH #28 FORCE MAIN CONNECTION

SCALE: N.T.S

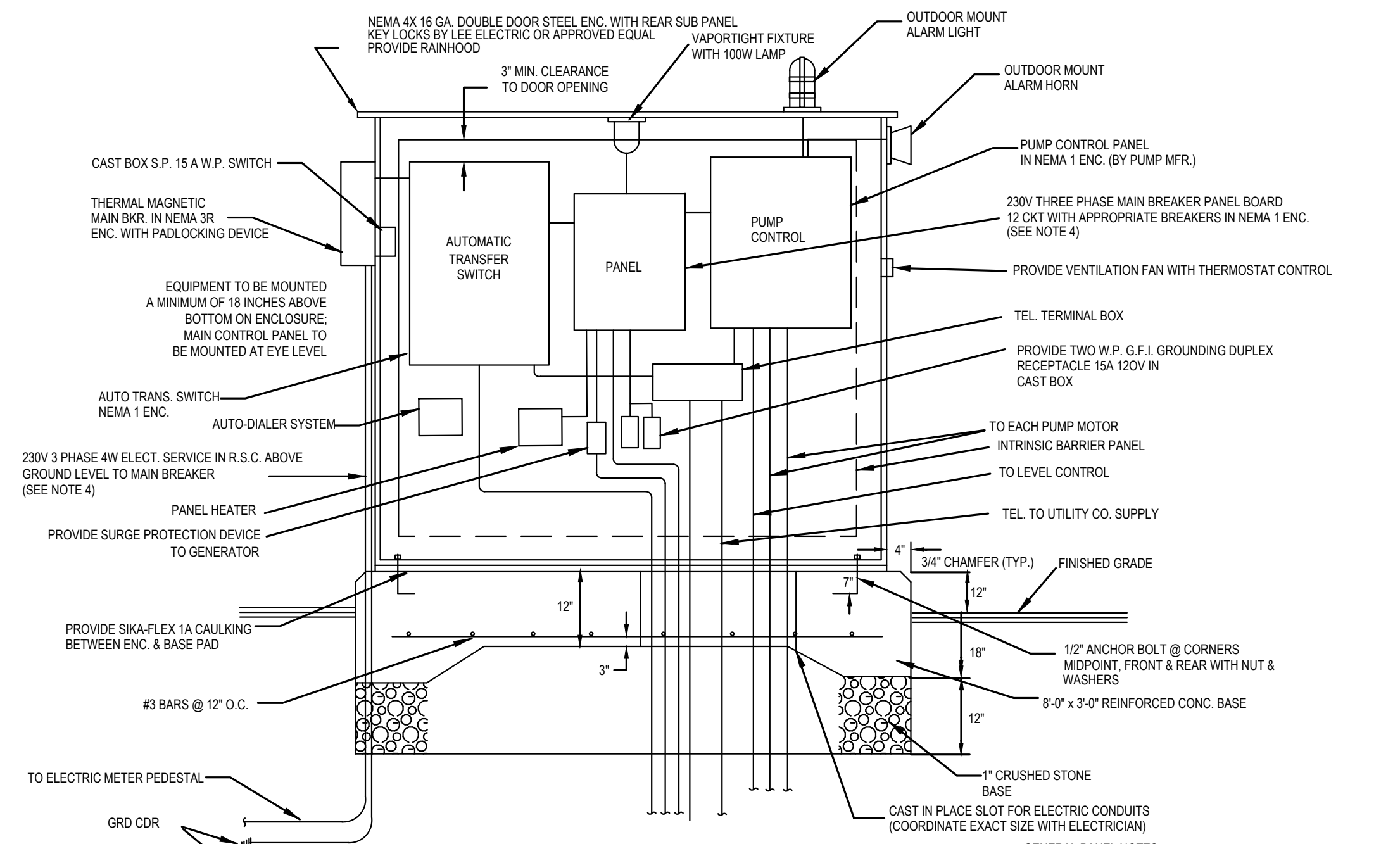


- NOTES:
1. VALVES & PIPE FITTINGS IN MANHOLE TO BE INSULATED AND JACKETED.
 2. PIPE INSIDE MANHOLE SHALL BE SCH. 80 PVC WITH FLANGE ADAPTORS UNLESS OTHERWISE NOTED.
 3. DI FITTINGS SHALL BE FLANGED AND CERAMIC EPOXY LINED.
 4. CONTRACTOR IS RESPONSIBLE FOR MAKING ALL PIECES FIT.



CLEANOUT VALVE MANHOLE

SCALE: N.T.S



- NOTE:
- PRIOR TO CONTRACTOR BIDDING, SPECS SHALL BE REQUESTED FROM ONSITE ENGINEERING INC.

PUMP STATION CONTROL PANEL

SCALE: N.T.S

PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

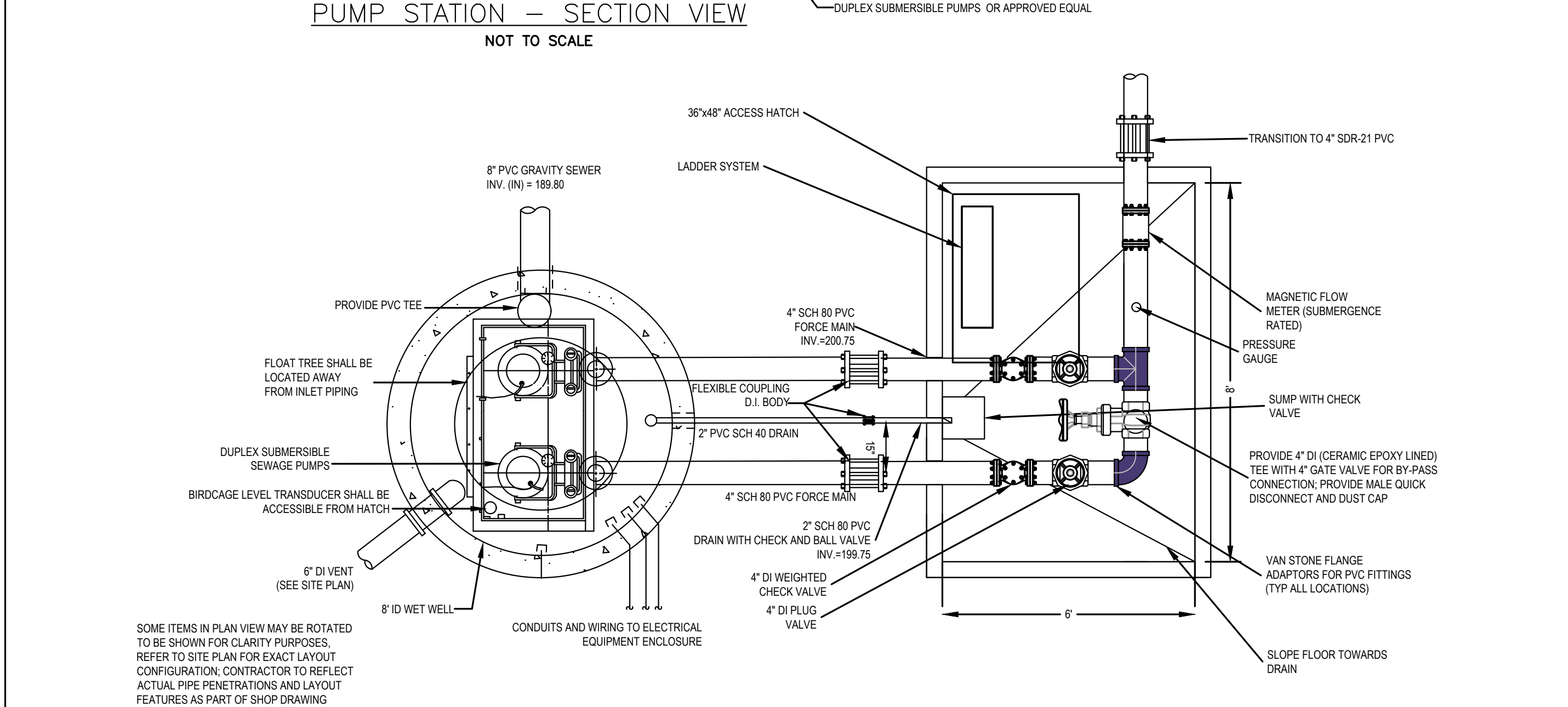
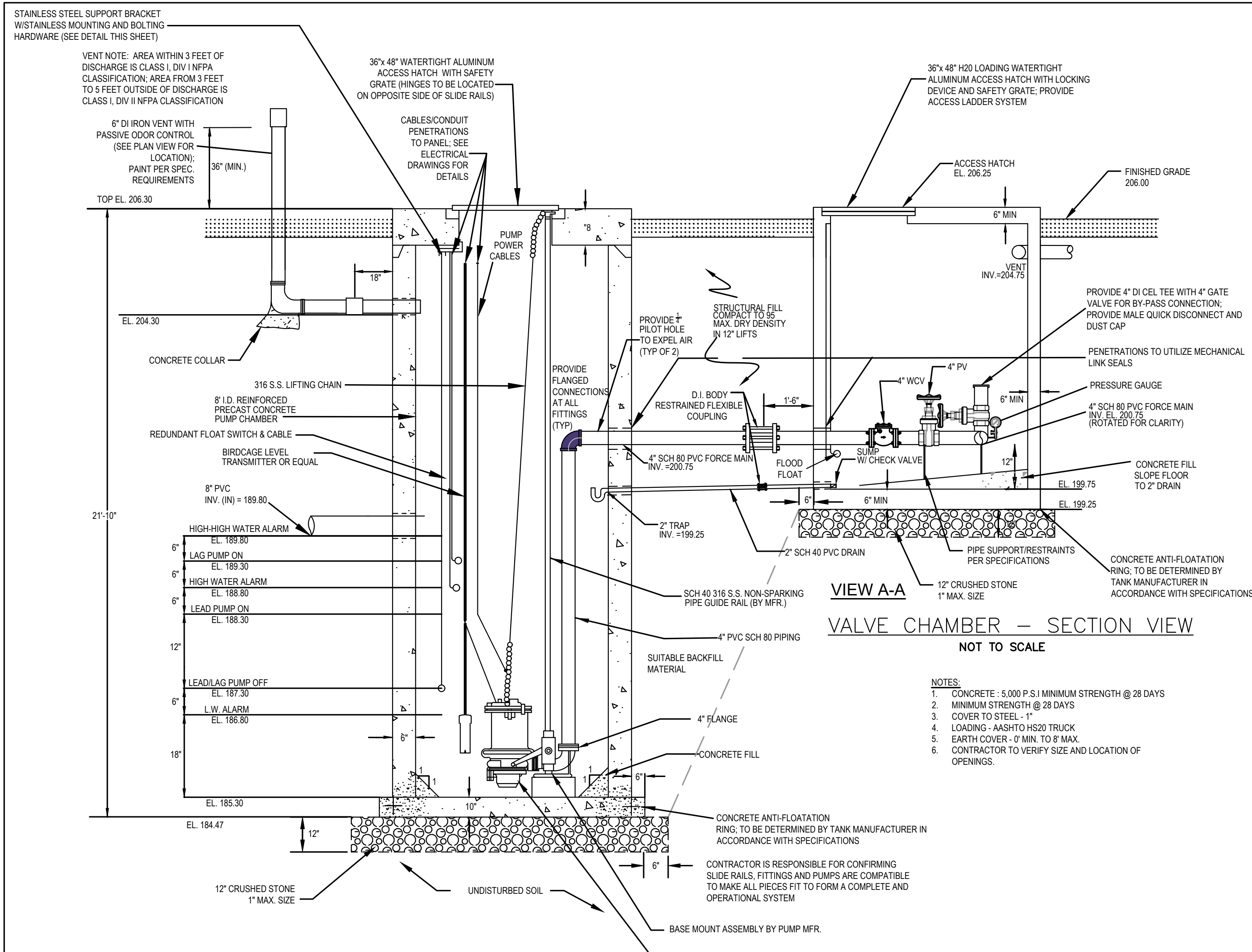
NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

**SITE
 PLAN**

**FORCE MAIN AND PUMP
 STATION DETAILS
 (DETAIL SHEET
 9 OF 27)**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.47

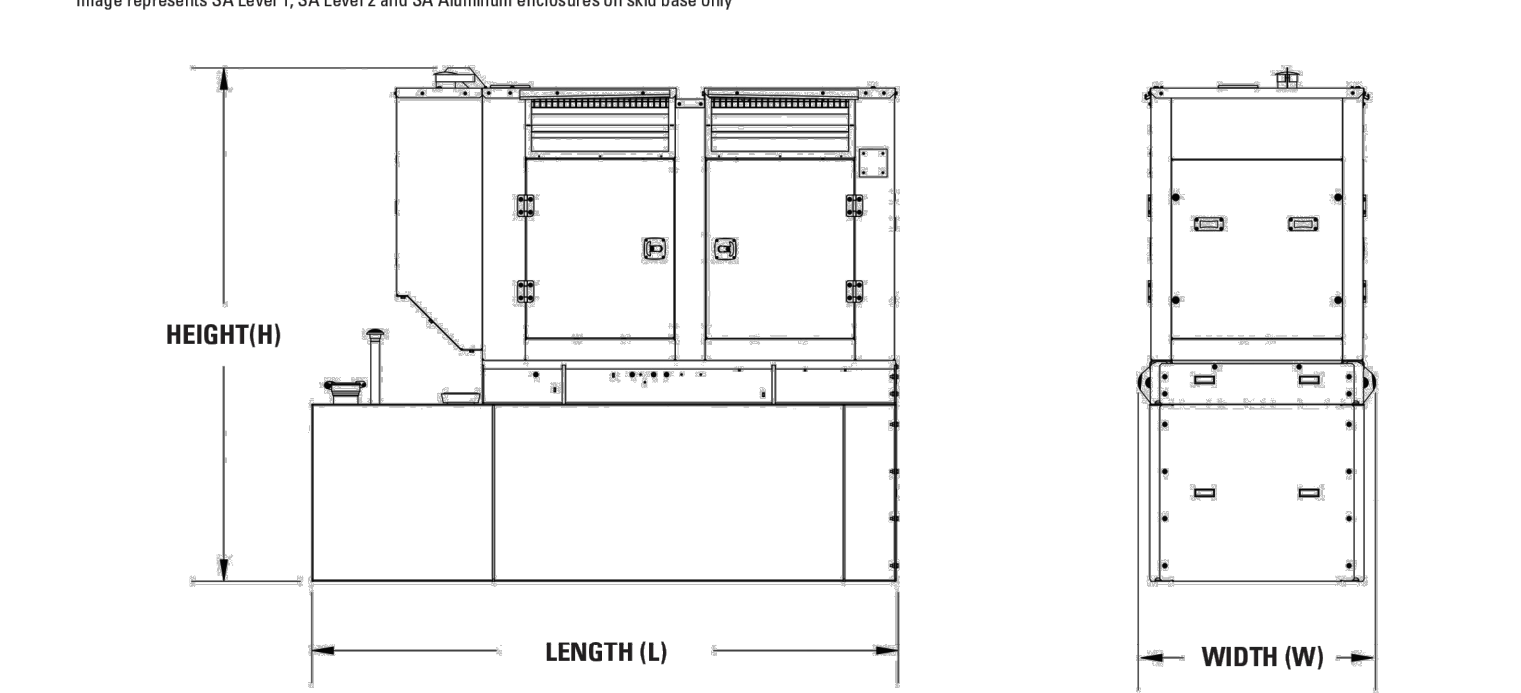
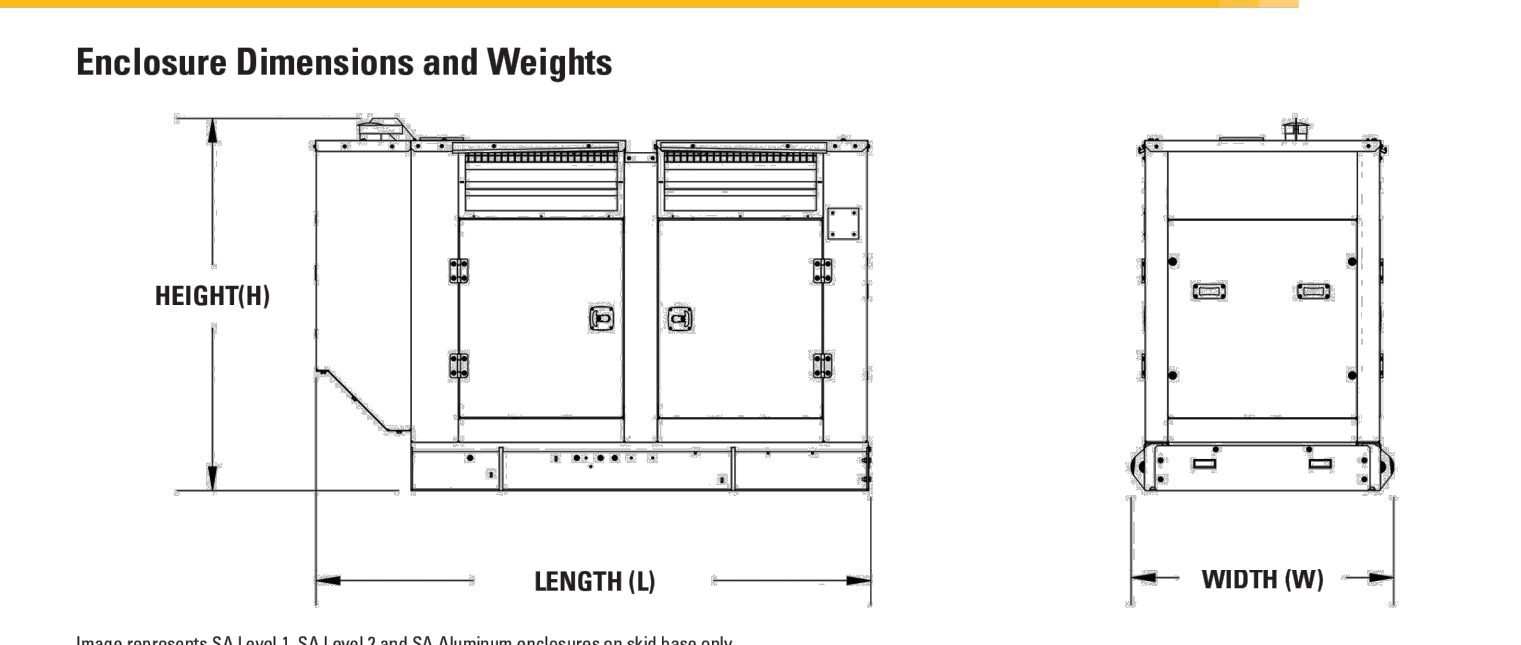


GENERAL REQUIREMENTS
SEWAGE PUMPS AND VALVES (PUMP STATION #1)

- 1) PUMPS SHALL BE ALTERNATING DUPLEX SUBMERSIBLE EXPLOSION PROOF SUBMERSIBLE NON-CLOG PUMPS CAPABLE OF DELIVERING THE TARGET FLOW OF 120 GPM @ 88 FT T.D.H. (TRIMMING OF IMPELLER MAY BE NECESSARY). PUMP MOTORS SHALL BE 3.0 H.P., 3.450 R.P.M., CONNECTED FOR OPERATION ON A 200 VOLT, 60 HZ, THREE PHASE SERVICE. CONTRACTOR TO PROVIDE EQUIPMENT BASED ON AVAILABLE ELECTRIC SERVICE AND SHALL CONFIRM PRIOR TO ORDERING ANY EQUIPMENT IF ELECTRIC NOT VERIFIED PRIOR TO CONSTRUCTION.
- 2) DISCHARGE PORT SHALL BE DIRECTLY CONNECTED TO THE HYDRAULIC SEALING FLANGE ON THE BASE MOUNT TO ALLOW FOR REMOVAL OF THE PUMPS WITHOUT LIFTING THE VERTICAL DISCHARGE PIPING.
- 3) THE PUMP MANUFACTURER SHALL SUPPLY DUPLEX CONTROL PANEL, 2 PUMPS WITH NON-SPARKING GUIDE RAILS, LEVEL TRANSDUCER, REDUNDANT FLOAT SWITCHES, LIFTING CHAINS, AND ALL NECESSARY MOUNTING HARDWARE FOR COMPLETE INSTALLATION INSIDE THE WET WELL.
- 4) INSTALLATION OF THE PUMPS AND CONTROL WIRING SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND NATIONAL, STATE AND LOCAL ELECTRICAL CODES.
- 5) PLUG VALVES SHALL BE 4 INCH, DUCTILE IRON BODY, RATED AT 175 P.S.I. WORKING PRESSURE, WITH ANSI B 16.5 (CLASS 150) FLANGED ENDS.
- 6) CHECK VALVES SHALL BE 4 INCH, DUCTILE IRON BODY, SWING TYPE WITH LEVER AND WEIGHT, RUBBER FACED BRONZE DISC, RATED AT 200 P.S.I. WORKING PRESSURE, WITH ANSI B 16.5 FLANGED ENDS. CHECK VALVES SHALL BE CONSTRUCTED TO PERMIT TOP ENTRY FOR COMPLETE REMOVAL OF INTERNAL COMPONENTS WITHOUT REMOVING THE VALVE FROM THE LINE.

PUMP STATION #1
SCALE: N.T.S.

Enclosures



Model	Standby eKW	WP Industrial		SA Level 1		SA Level 2		SA Aluminum	
		kg	lb	kg	lb	kg	lb	kg	lb
D40-2	40								
D50-2	50	121	267	137	302	NA	NA	NA	NA
D60-2	60								
U80-8	80								
D100-8	100	263	580	313	690	321	708	142	312
D125-8	125								
D150-10	150								
D175-4	175	348	768	393	867	406	896	176	387
D200-2	200								

Enclosure weights (includes muffler)
LEH0417-11 4/6

GENERATOR AND FUEL STORAGE*
SCALE: N.T.S.

*OR APPROVED EQUAL

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

**SITE
PLAN**

**SEWER PUMP STATION
DETAIL
(DETAIL SHEET
10 OF 27)**

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE



HOWARD STEIN HUDSON

114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:

FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
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5	AI	11/10/23	REV. FULL SITE PLAN

SITE
PLAN

E-ONE CONTROL PANEL
DETAILS
(DETAIL SHEET
11 OF 27)

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

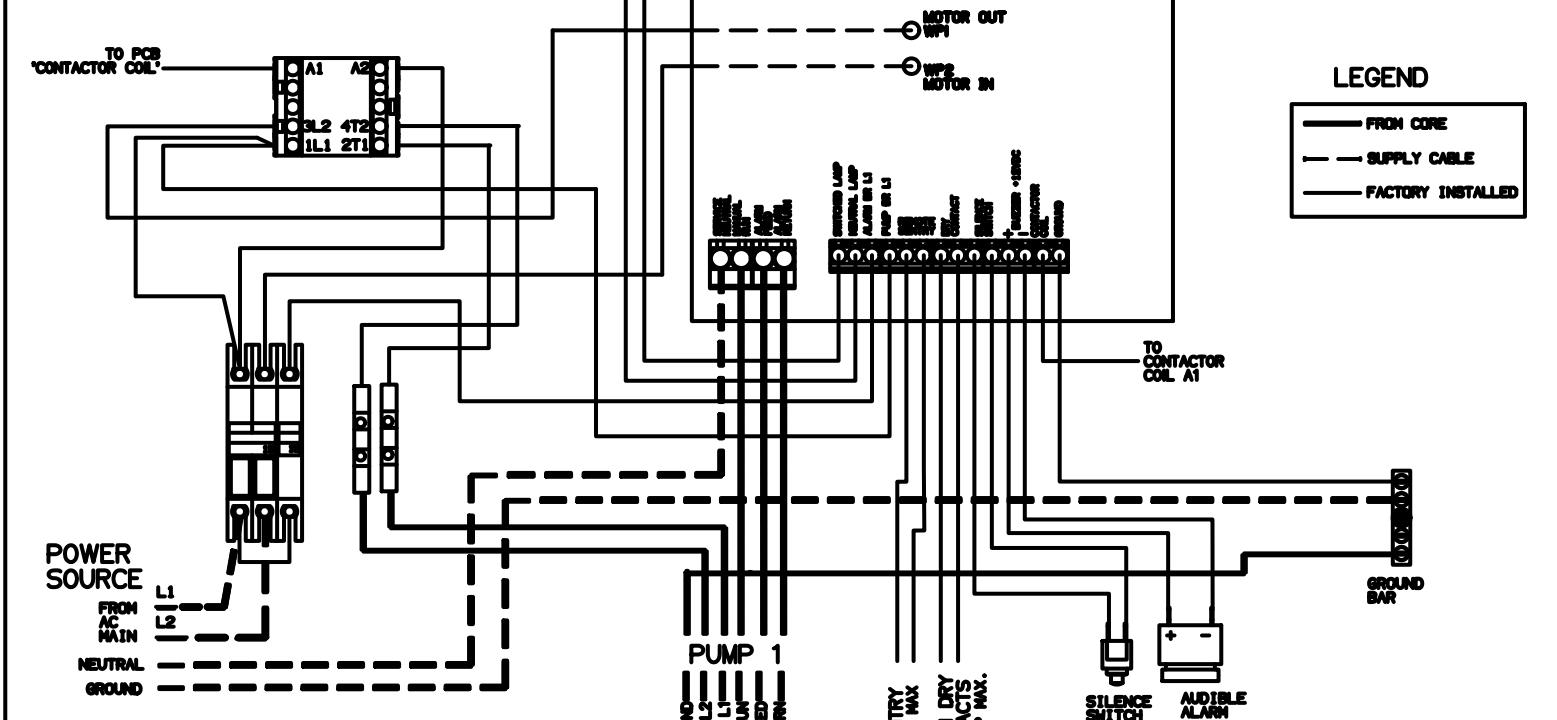
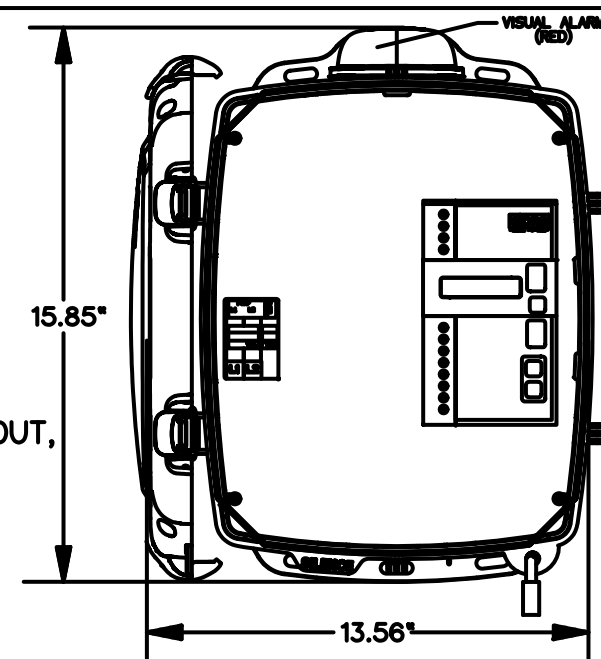
C.49

SHEET 49 OF 65

SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL
ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT,
VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC
POLYESTER APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE



OLD / NEW WIRE COLOR MAP			
PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TO DIRECT BURIAL,
SIX CONDUCTOR

AD	12/14/07	DMS	C	08/23/11
DR BY	DATE	CHK'D	ISSUE	DATE
eone				
SEWER SYSTEMS				
SENTRY PROTECT PLUS PANEL, SIMPLEX 240V 60Hz DOUBLE POLE POWER				
NA0079P03				

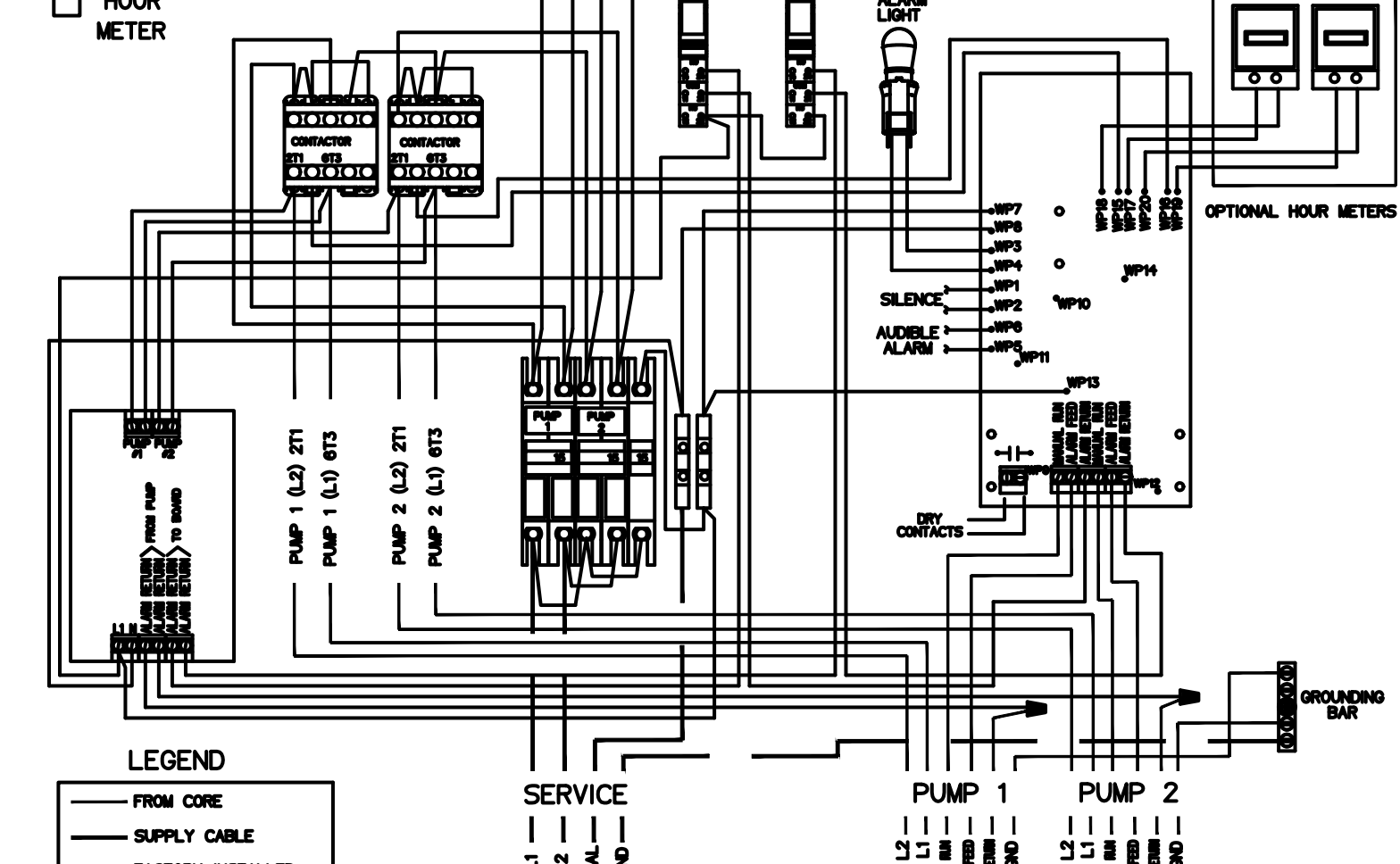
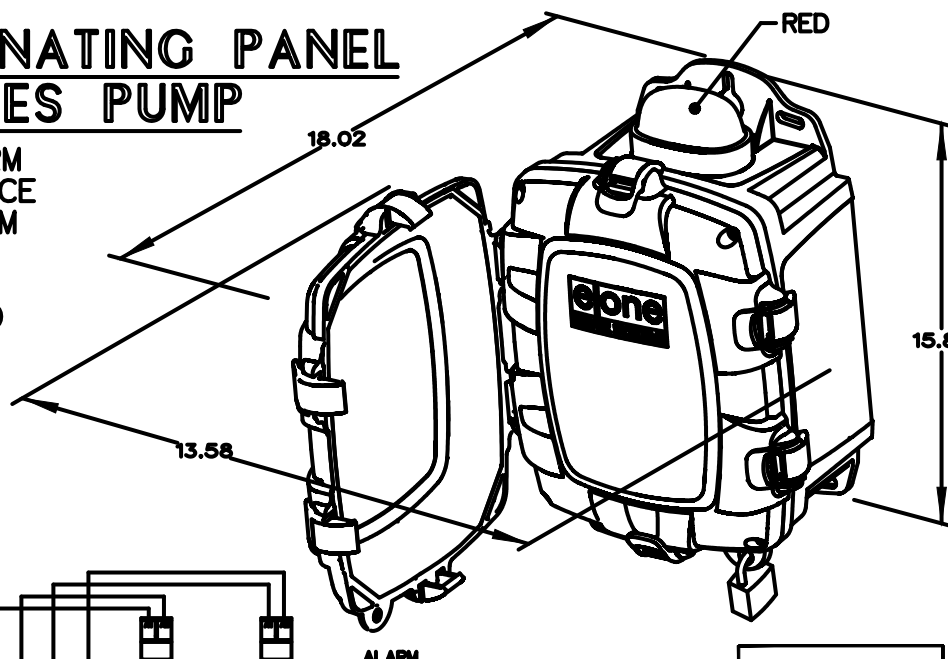
DUPLEX T260 ALTERNATING PANEL USED WITH WX SERIES PUMP

EXTERNAL VISUAL & AUDIBLE ALARM
EXTERNAL LATCHING MANUAL SILENCE
CORE(PUMP) LEAK DETECTION ALARM
MANUAL RUN
PUMP RUN INDICATORS
CONFORMAL COATED CIRCUIT BOARD
PADLOCK
ALARM DRY CONTACT
NEMA 4X ENCLOSURE ASSEMBLY

CORROSION PROOF THERMOPLASTIC
POLYESTER APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE

OPTIONS:

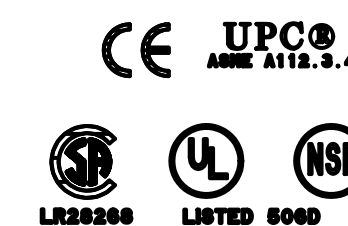
- HOUR METER



PIN	FUNCTION	WX PUMP	RF PUMP
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TO DIRECT BURIAL, 12AWG,
SIX CONDUCTOR

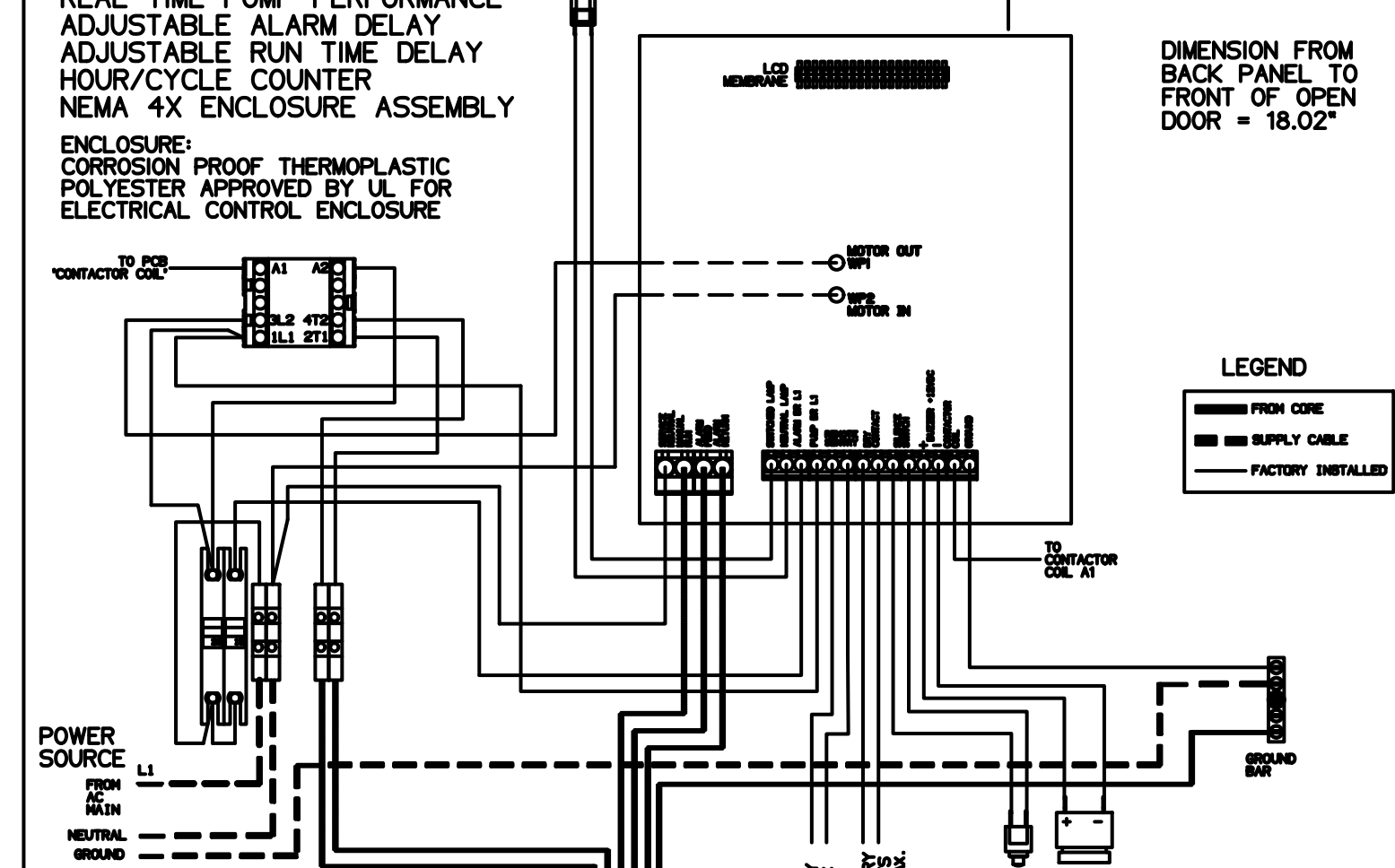
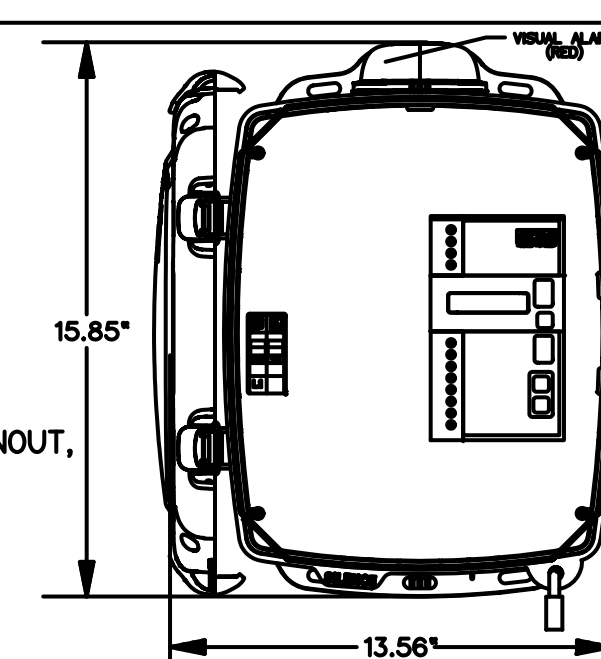
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DR BY	CHK'D	DATE	ISSUE	SCALE
eone				
SEWER SYSTEMS				
DUPLEX T-260 ALTERNATING PANEL FOR USE WITH WX SERIES PUMP 240V 60Hz DOUBLE POLE POWER				
LM00381				



SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL
ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT,
VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC
POLYESTER APPROVED BY UL FOR
ELECTRICAL CONTROL ENCLOSURE



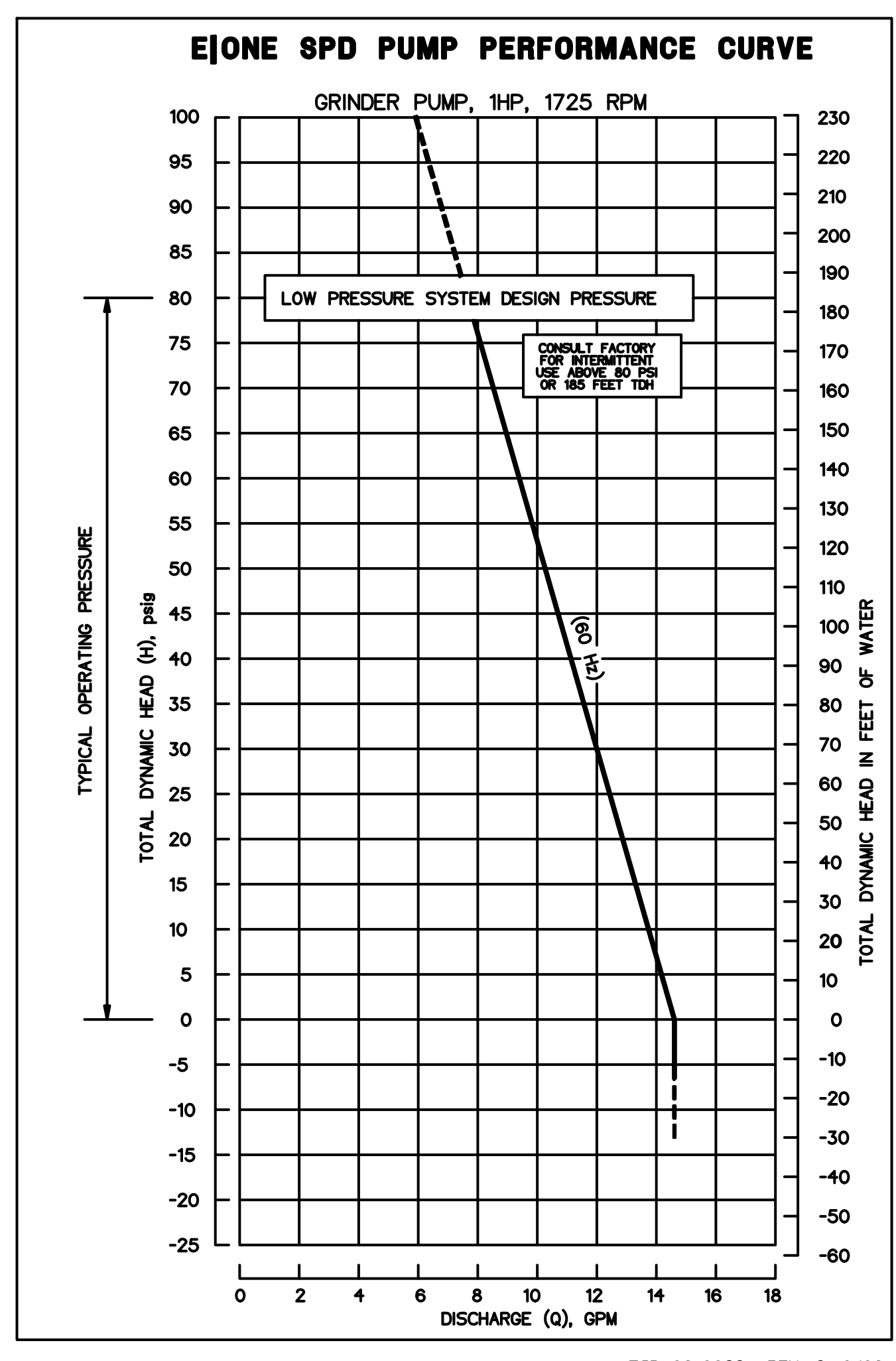
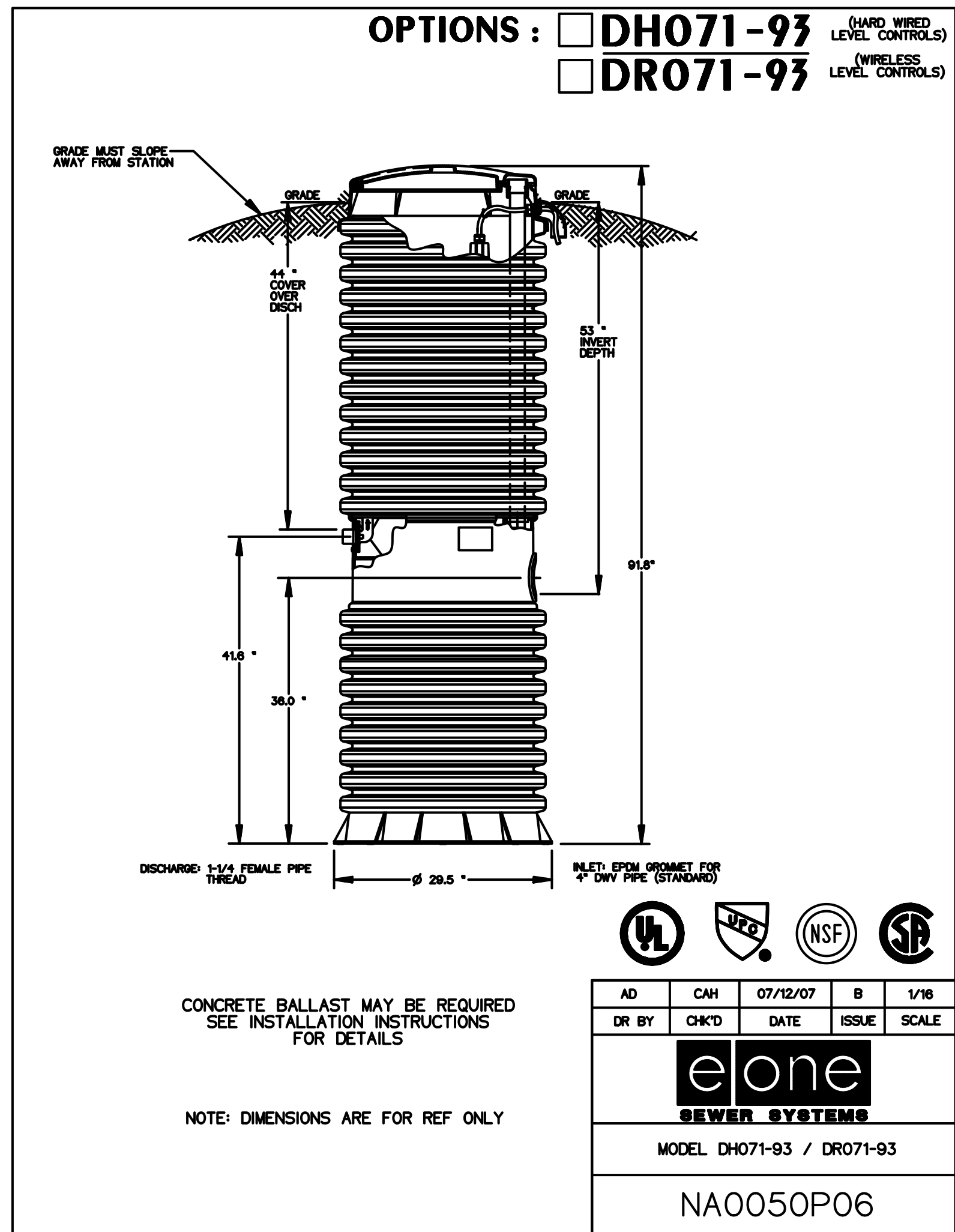
OLD / NEW WIRE COLOR MAP			
PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	NEUTRAL	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TO DIRECT BURIAL,
SIX CONDUCTOR

AD	01/10/08	DMS	A	08/23/11
DR BY	DATE	CHK'D	ISSUE	DATE
eone				
SEWER SYSTEMS				
SENTRY PROTECT PLUS PANEL, SIMPLEX 120V, SINGLE POLE POWER				
NA0079P04				

E-ONE CONTROL PANELS

SCALE: N.T.S.



HOWARD STEIN HUDSON
 114 Turnpike Road, Suite 2C
 Chelmsford, MA 01824
 www.hshassoc.com

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 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

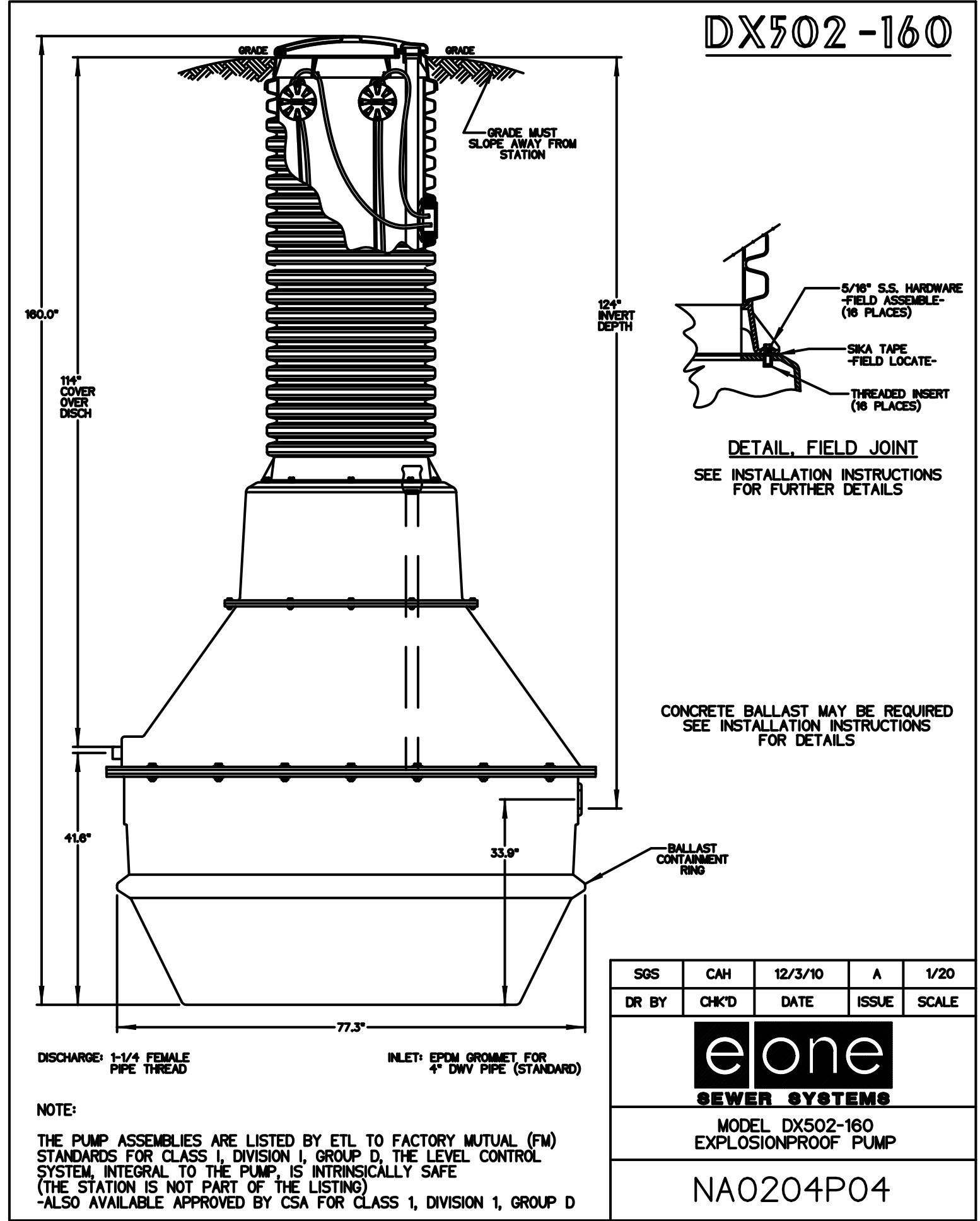
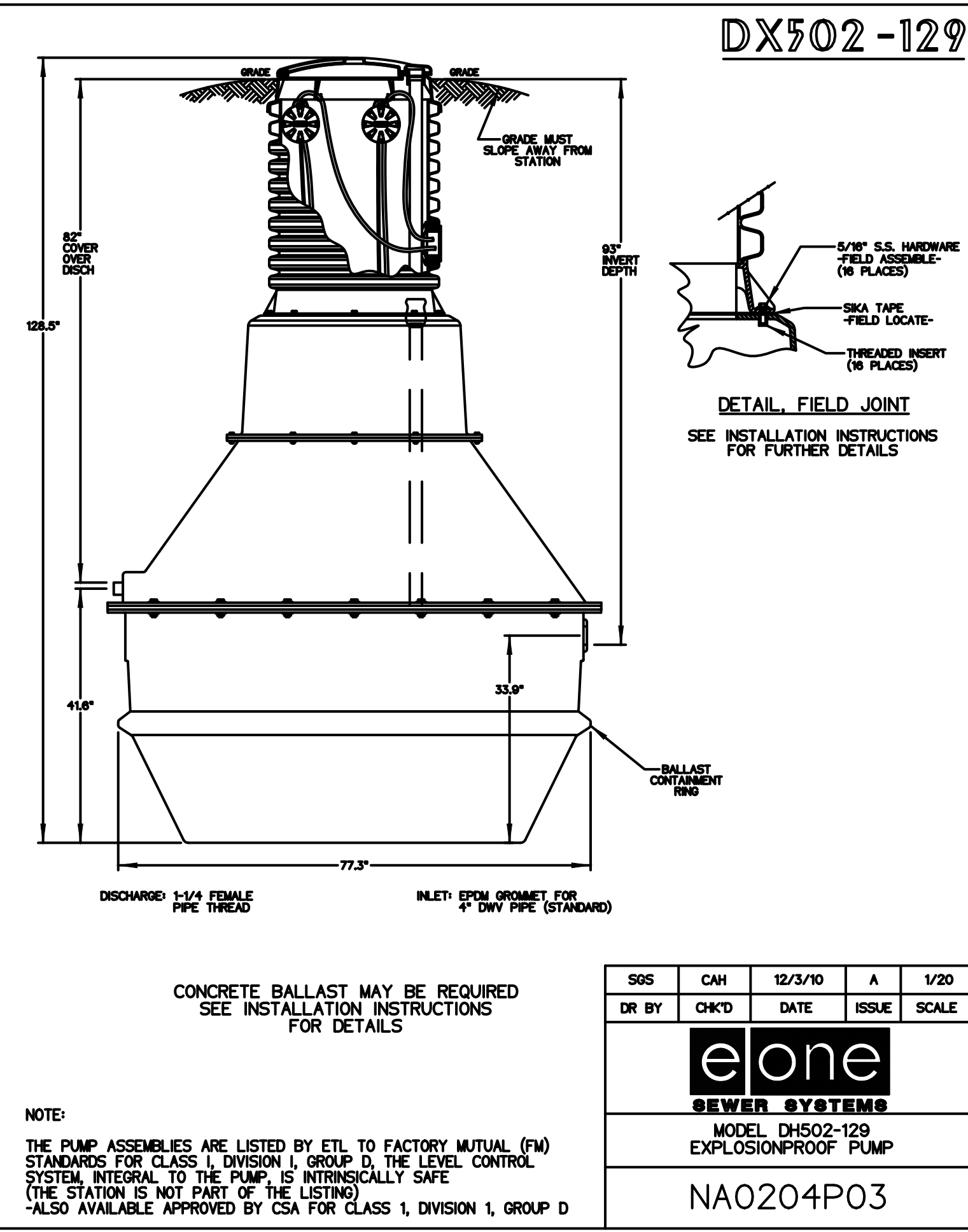
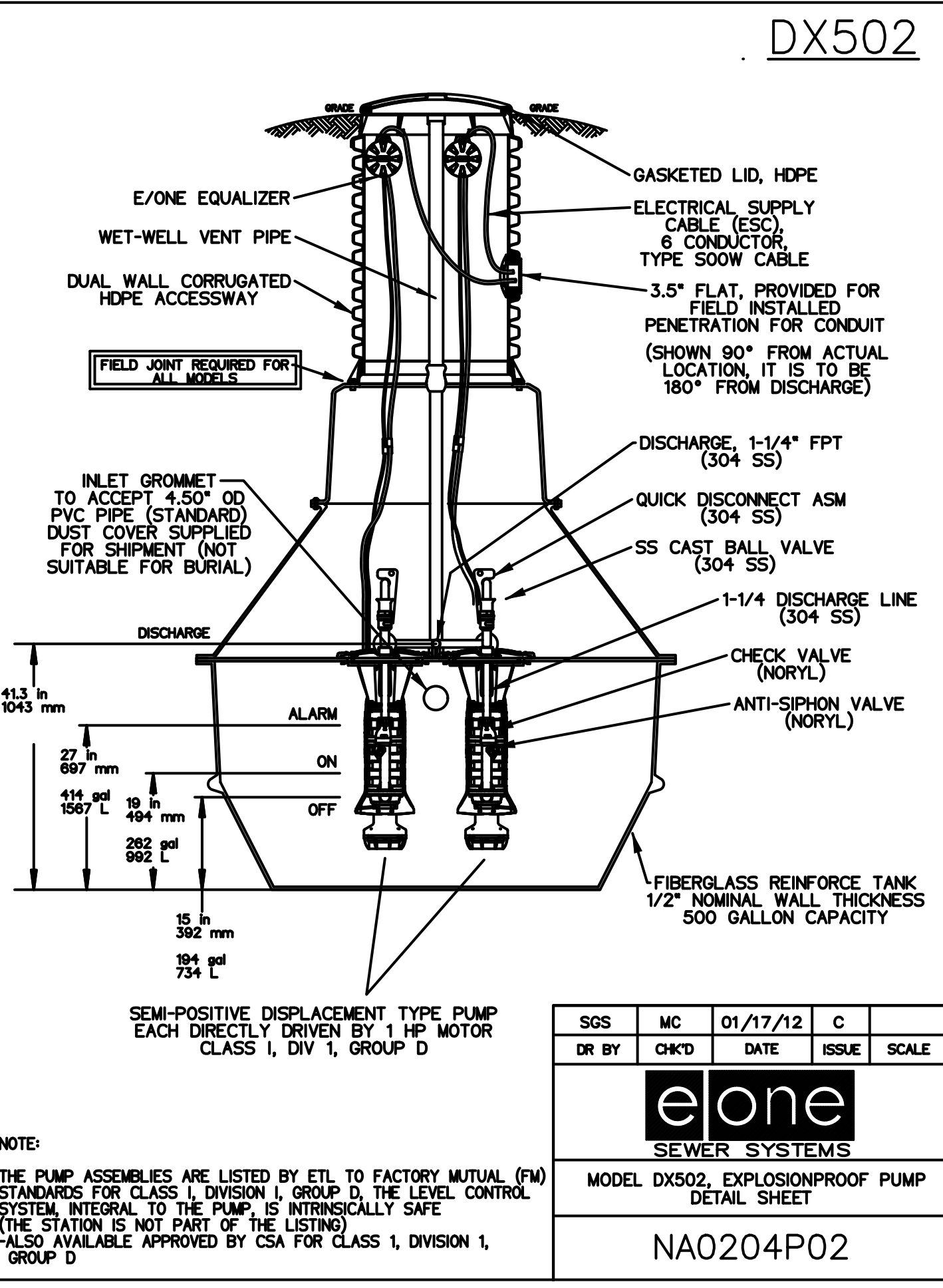
**PROPOSED MULTIFAMILY
 DEVELOPMENT**
 SUMMER STREET
 WALPOLE, MA

MAINTENANCE BUILDING FORCE MAIN CONNECTION
 SCALE: N.T.S.

E-ONE PUMP PERFORMANCE CURVE
 SCALE: N.T.S.

REVISIONS:

NO	BY	DATE	DESCRIPTION
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5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

SEWER PUMP
 DETAILS
 (DETAIL SHEET
 12 OF 27)

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

1/17/2023 10:59:56 AM C:\Users\ASB\OneDrive\Work\19097\04 - Loc 2\CURRENT\19097 - Details.dwg
 Plot Saved by: ASB\AMM
 Printed by: Roby Jaramal

DEEP HOLE TESTING
 12-4-2019 THROUGH 10-21-2020
 SOIL EVALUATOR: KASEY FERREIRA
 WITNESSED BY: CHRIS JOHNSON
 PERMEABILITY TESTING BY: DANIEL J. MERRIKIN, P.E.; KASEY FERREIRA

IP1
 0"-13" A L/O
 13"-23" B SL
 23"-120" C LS
 ESHW: 24"
 HSG: C
 FHPT: DESIGN K = 0.11 IN/HR

IP10
 0"-9" A L
 9"-23" B SL
 23"-96" C CS
 ESHW: 34"
 HSG: C

IP19
 0"-8" A L
 8"-20" B LS
 20"-120" C S
 ESHW: 50"
 HSG: A

IP27
 0"-8" A L
 8"-25" B SL
 25"-48" C1 LS
 48"-110" C2 LS
 ESHW: 30"
 HSG: C

IP37
 0"-11" A SL
 11"-28" B SL
 28"-52" C SL
 ESHW: 28"
 HSG: C

IP43
 0"-10" A SL
 10"-26" B SL
 26"-64" C1 SL
 64"-100" C2 LS
 ESHW: 26"
 HSG: C
 FHPT (IN C2): DESIGN K = 0.66 IN/HR

IP49
 0"-10" A SL
 10"-24" B SL
 24"-60" C LS
 REFUSAL: 60"
 HSG: B
 FHPT: DESIGN K = 2.91 IN/HR

IP54
 0"-6" A L/O
 6"-15" B SL
 15"-106" C MED. SAND
 ESHW: 67"
 HSG: B

IP63
 0"-10" A L/O
 10"-19" B SL
 19"-94" C SL
 ESHW: 90"
 REFUSAL @ 94"

IP74
 0"-16" A L/O
 16"-28" B SL
 28"-80" C SL
 ESHW: 52"

IP2
 0"-10" A L/O
 10"-118" C LS
 ESHW: 33"
 HSG: B

IP11
 0"-8" A L
 8"-17" B LS
 17"-122" C MED. S
 ESHW: 30"
 HSG: B

IP20
 0"-7" A L
 7"-24" B SL
 24"-103" C LS
 ESHW: 48"
 HSG: B

IP28
 0"-6" A L
 6"-24" B SL
 24"-99" C LS
 ESHW: 32"
 HSG: C

IP38
 0"-12" A SL
 12"-28" B SL
 28"-72" C S
 ESHW: 42"
 HSG: B
 FHPT: DESIGN K = 10.41 IN/HR

IP43A
 0"-10" A SL
 10"-19" B SL
 19"-89" C SL
 ESHW: 16"
 HSG: B/D

IP50
 0"-12" A SL
 12"-25" B SL
 25"-67" C LS
 ESHW: NONE
 HSG: B
 FHPT: DESIGN K = 0.59 IN/HR

IP55
 0"-9" A L/O
 9"-20" B SL
 20"-97" C GRAVELLY SAND
 ESHW: 68"
 HSG: B

IP64
 0"-11" A L/O
 11"-24" B LS
 24"-110" C SL
 ESHW: 52"

IP65
 0"-7" A L/O
 7"-15" B SL
 15"-92" C LS
 ESHW: 50"

IP2A
 0"-14" A SL
 14"-28" B SL
 28"-72" C SL
 ESHW: 25"
 HSG: C
 FHPT: DESIGN K = 0.21 IN/HR

IP12
 0"-9" A L
 9"-18" B LS
 18"-120" C MED. S
 ESHW: 29"
 HSG: B

IP21
 0"-9" A L
 9"-24" B LS
 24"-102" C S
 ESHW: 43"
 HSG: A

IP29
 0"-13" A L
 13"-18" B SL
 18"-132" C LS
 ESHW: 43"
 HSG: B

IP39
 0"-14" A SL
 14"-37" B SL
 37"-66" C LS
 ESHW: 36"
 HSG: C

IP44
 0"-10" A SL
 10"-35" B SL
 35"-52" C1 SL
 52"-76" C2 LS
 ESHW: 35"
 HSG: C
 FHPT (IN C2): DESIGN K = 8.95 IN/HR

IP51
 0"-12" A SL
 12"-34" B SL
 34"-65" C LS
 ESHW: 21"
 HSG: B/D
 FHPT (IN C2): DESIGN K = 1.40 IN/HR

IP56
 0"-6" A L/O
 6"-18" B L
 18"-76" C SL
 ESHW: 18"
 HSG: B

IP66
 0"-10" A L/O
 10"-23" B SL
 23"-98" C SL
 ESHW: 23"

IP67
 0"-10" A L/O
 10"-22" B SL
 22"-90" C LS
 ESHW: 49"

IP3
 0"-12" A L
 12"-20" B SL
 20"-98" C LS
 ESHW: 31"
 HSG: C

IP13
 0"-13" A L
 13"-28" B SL
 28"-135" C LS
 ESHW: 43"
 HSG: B

IP22
 0"-6" A L
 6"-23" B SL
 23"-66" C LS
 ESHW: 32"
 HSG: C

IP30
 0"-12" A L/O
 12"-30" B L
 30"-128" C LS
 ESHW: 36"
 HSG: C

IP40
 0"-14" A SL
 14"-30" B SL
 30"-59" C1 S
 59"-98" C2 LS
 ESHW: 28"
 HSG: C
 FHPT: DESIGN K = 5.13 IN/HR

IP45
 0"-12" A SL
 12"-27" B SL
 27"-56" C1 SL
 56"-91" C2 LS
 ESHW: N/A
 HSG: N/A
 FHPT (IN C2): DESIGN K = 0.35 IN/HR

IP52
 0"-10" A SL
 10"-28" B SL
 28"-72" C LS
 ESHW: 53"
 HSG: B
 FHPT: DESIGN K = 3.50 IN/HR

IP57
 0"-8" A L/O
 8"-24" B L
 24"-102" C SL < 10% GRAVEL
 ESHW: 24"
 STANDING WATER @ 102"

IP68
 0"-8" A L/O
 8"-18" B SL
 18"-100" C SL
 ESHW: 16"

IP70
 0"-8" A L/O
 8"-19" B SL
 19"-88" C LS
 ESHW: 19"

IP4
 0"-11" A L/O
 11"-96" C LS
 ESHW: 49"
 HSG: A

IP14
 0"-7" A L
 7"-13" B LFS
 13"-95" C1 CS
 95"-120" C2 G
 ESHW: 95"
 HSG: A

IP23
 0"-12" A L
 12"-24" B LS
 24"-118" C S
 ESHW: 36"
 HSG: B

IP31
 0"-7" FILL
 7"-32" C GLS
 ESHW: 42"
 HSG: A

IP40A
 0"-14" A SL
 14"-23" B SL
 23"-80" C S
 ESHW: 40"
 HSG: C
 FHPT: DESIGN K = 6.58 IN/HR

IP46
 0"-12" A SL
 12"-27" B SL
 27"-52" C1 SL
 52"-100" C2 LS
 ESHW: 18"
 HSG: B/D
 FHPT (IN C2): DESIGN K = 0.59 IN/HR

IP53
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP59
 0"-6" A L/O
 6"-16" B L
 16"-112" C SL
 ESHW: 90"

IP71
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP72
 0"-14" A L/O
 14"-30" B SL
 30"-90" C LS
 ESHW: 46"

IP5
 0"-12" A L/O
 12"-109" C LS
 ESHW: 41"
 HSG: A

IP15
 0"-5" A L
 5"-22" B SL
 22"-120" C LS
 ESHW: 30"
 HSG: C

IP24
 0"-11" A L
 11"-24" B LS
 24"-102" C S
 ESHW: 39" REFUSAL @ 102"
 HSG: B

IP32
 0"-14" A SL
 14"-20" B SL
 20"-88" C SL
 ESHW: 30"
 HSG: C
 FHPT: DESIGN K = 0.89 IN/HR

IP41
 0"-9" A SL
 9"-20" B SL
 20"-88" C S
 ESHW: 45"
 HSG: B
 FHPT: DESIGN K = 8.28 IN/HR

IP47
 0"-10" A SL
 10"-28" B SL
 28"-86" C S
 ESHW: 48"
 HSG: B
 FHPT (IN C1): DESIGN K = 3.27 IN/HR
 FHPT (IN C2): DESIGN K = 10.74 IN/HR

IP55
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP60
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP73
 0"-10" A L/O
 10"-22" B SL
 22"-75" C LS
 ESHW: 50"

IP74
 0"-16" A L/O
 16"-28" B SL
 28"-80" C SL
 ESHW: 52"

IP6
 0"-11" A L/O
 11"-20" B SL
 20"-99" C LS
 ESHW: 26"
 HSG: C

IP16
 0"-5" A L
 5"-20" B SL
 20"-120" C LS
 ESHW: 36"
 HSG: C
 FHPT: DESIGN K = 0.23 IN/HR

IP25
 0"-10" A L
 10"-20" B LS
 20"-69" C S
 ESHW: 41" REFUSAL @ 69"
 HSG: A

IP33
 0"-12" A SL
 12"-30" B SL
 30"-87" C LS
 ESHW: 30"
 HSG: C
 FHPT: DESIGN K = 0.09 IN/HR

IP42
 0"-10" A SL
 10"-28" B SL
 28"-86" C S
 ESHW: 48"
 HSG: B
 FHPT (IN C1): DESIGN K = 3.27 IN/HR
 FHPT (IN C2): DESIGN K = 10.74 IN/HR

IP47
 0"-12" A SL
 12"-34" B SL
 34"-48" C1 SL
 48"-102" C2 LS
 ESHW: 30"
 HSG: C
 FHPT (IN C2): DESIGN K = 3.69 IN/HR

IP53
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP59
 0"-6" A L/O
 6"-16" B L
 16"-112" C SL
 ESHW: 90"

IP71
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP72
 0"-14" A L/O
 14"-30" B SL
 30"-90" C LS
 ESHW: 46"

IP7
 0"-7" A L
 7"-122" C LS
 ESHW: 40"
 HSG: B

IP17
 0"-9" A L/O
 9"-108" C LS
 ESHW: 18"
 HSG: A/D

IP26
 0"-10" A L
 10"-18" B SL
 18"-75" C LS
 ESHW: 49" REFUSAL @ 75"
 HSG: B

IP34
 0"-10" A SL
 10"-24" B SL
 24"-72" C LS
 ESHW: 37"
 HSG: C
 FHPT: DESIGN K = 0.30 IN/HR

IP42
 0"-10" A SL
 10"-28" B SL
 28"-86" C S
 ESHW: 48"
 HSG: B
 FHPT (IN C1): DESIGN K = 3.27 IN/HR
 FHPT (IN C2): DESIGN K = 10.74 IN/HR

IP47
 0"-12" A SL
 12"-34" B SL
 34"-48" C1 SL
 48"-102" C2 LS
 ESHW: 30"
 HSG: C
 FHPT (IN C2): DESIGN K = 3.69 IN/HR

IP53
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP59
 0"-6" A L/O
 6"-16" B L
 16"-112" C SL
 ESHW: 90"

IP71
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP72
 0"-14" A L/O
 14"-30" B SL
 30"-90" C LS
 ESHW: 46"

IP8
 0"-7" A L
 7"-18" B SL
 18"-139" C LS
 ESHW: 44"
 HSG: B

IP18
 0"-8" A L
 8"-17" B SL
 17"-120" C LS
 ESHW: 26"
 HSG: C

IP26
 0"-10" A L
 10"-18" B SL
 18"-75" C LS
 ESHW: 49" REFUSAL @ 75"
 HSG: B

IP36
 0"-10" A SL
 10"-22" B SL
 22"-62" C SL
 ESHW: 21"
 HSG: C

IP42
 0"-10" A SL
 10"-28" B SL
 28"-86" C S
 ESHW: 48"
 HSG: B
 FHPT (IN C1): DESIGN K = 3.27 IN/HR
 FHPT (IN C2): DESIGN K = 10.74 IN/HR

IP47
 0"-12" A SL
 12"-34" B SL
 34"-48" C1 SL
 48"-102" C2 LS
 ESHW: 30"
 HSG: C
 FHPT (IN C2): DESIGN K = 3.69 IN/HR

IP53
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP59
 0"-6" A L/O
 6"-16" B L
 16"-112" C SL
 ESHW: 90"

IP71
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP72
 0"-14" A L/O
 14"-30" B SL
 30"-90" C LS
 ESHW: 46"

IP9
 0"-40" FILL
 40"-117" C MED. S
 ESHW: 40"
 HSG: A

IP18
 0"-8" A L
 8"-17" B SL
 17"-120" C LS
 ESHW: 26"
 HSG: C

IP26
 0"-10" A L
 10"-18" B SL
 18"-75" C LS
 ESHW: 49" REFUSAL @ 75"
 HSG: B

IP36
 0"-10" A SL
 10"-22" B SL
 22"-62" C SL
 ESHW: 21"
 HSG: C

IP42
 0"-10" A SL
 10"-28" B SL
 28"-86" C S
 ESHW: 48"
 HSG: B
 FHPT (IN C1): DESIGN K = 3.27 IN/HR
 FHPT (IN C2): DESIGN K = 10.74 IN/HR

IP47
 0"-12" A SL
 12"-34" B SL
 34"-48" C1 SL
 48"-102" C2 LS
 ESHW: 30"
 HSG: C
 FHPT (IN C2): DESIGN K = 3.69 IN/HR

IP53
 0"-10" A SL
 10"-32" B SL
 32"-78" C SL
 ESHW: 32"
 HSG: C

IP59
 0"-6" A L/O
 6"-16" B L
 16"-112" C SL
 ESHW: 90"

IP71
 0"-10" A L/O
 10"-24" B L
 24"-79" C SL FEW COBBLES
 ESHW: 40"
 STANDING WATER @ 62"

IP72
 0"-14" A L/O
 14"-30" B SL
 30"-90" C LS
 ESHW: 46"

SOIL TESTING RESULTS
 SCALE: N.T.S

HOWARD STEIN HUDSON
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 www.hshassoc.com

PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

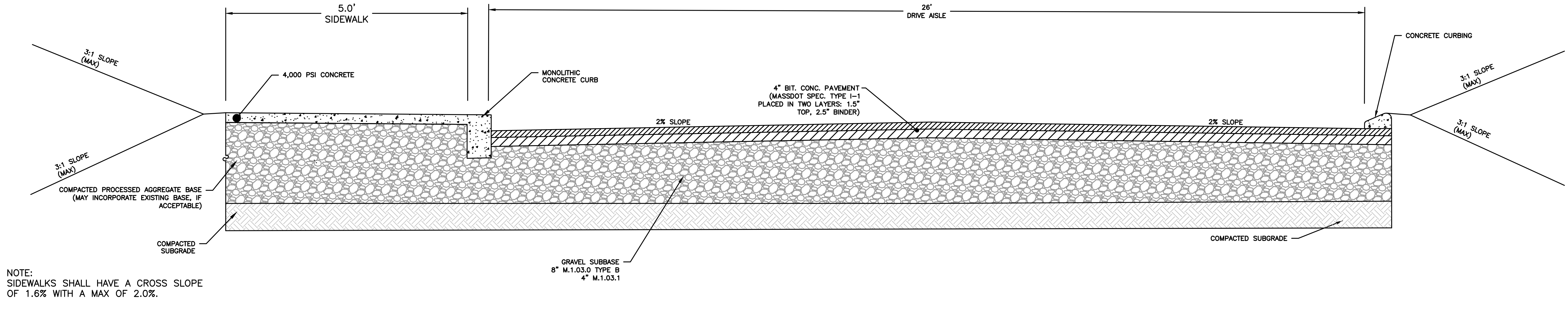
**SOIL TESTING & CROSS SECTIONS
 (DETAIL SHEET
 13 OF 27)**

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.51

11/7/2023 11:57:23 AM \\egryndrive\CAD\19097\19097_04 - Lot 2\CURRENT\19097 - Details.dwg
 Plot Saved by: AISHAM
 Printed by: Ashy Jamal

TYPICAL DRIVEWAY CROSS SECTION
 SCALE: N.T.S



NOTE:
 SIDEWALKS SHALL HAVE A CROSS SLOPE
 OF 1.6% WITH A MAX OF 2.0%.



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**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



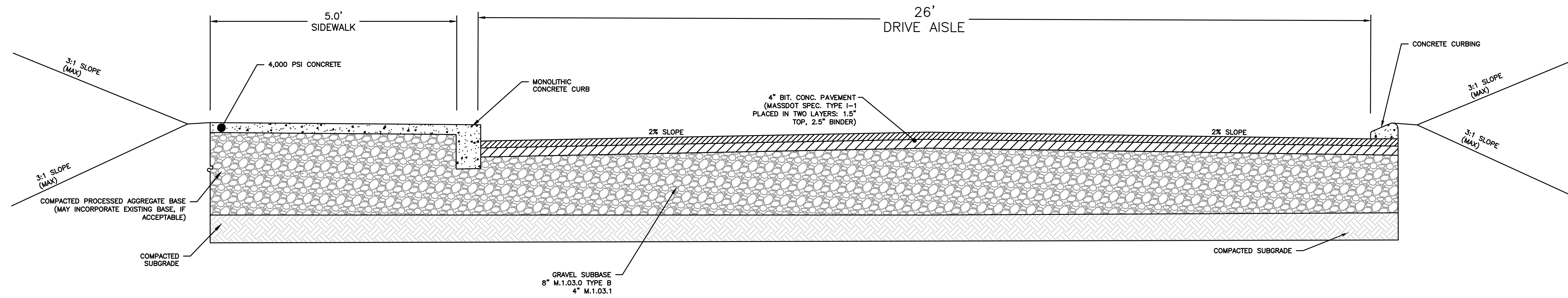
SITE PLAN

ROADWAY CROSS SECTIONS
 (DETAIL SHEET
 14 OF 27)

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.52

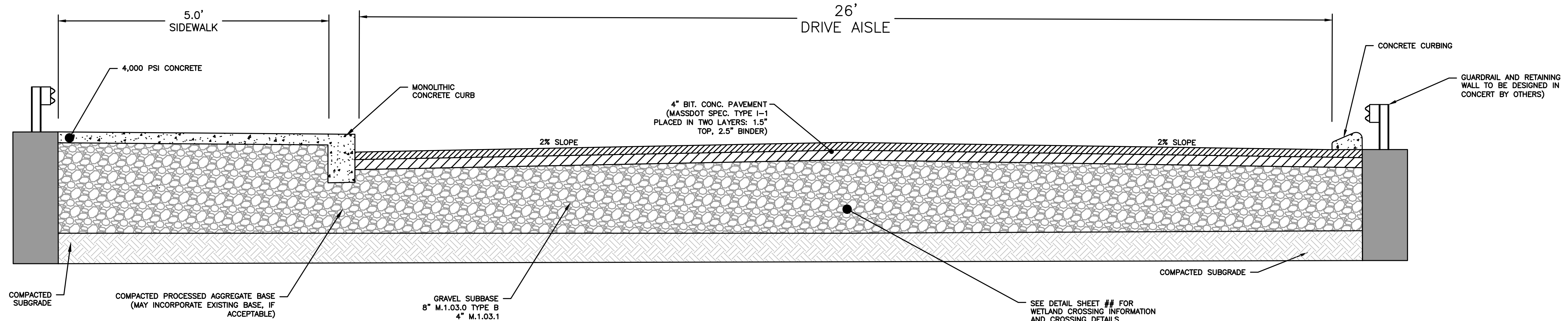
SHEET 52 OF 65



NOTE:
 SIDEWALKS SHALL HAVE A CROSS SLOPE
 OF 1.6% WITH A MAX OF 2.0%.

TYPICAL DRIVEWAY CROSS SECTION

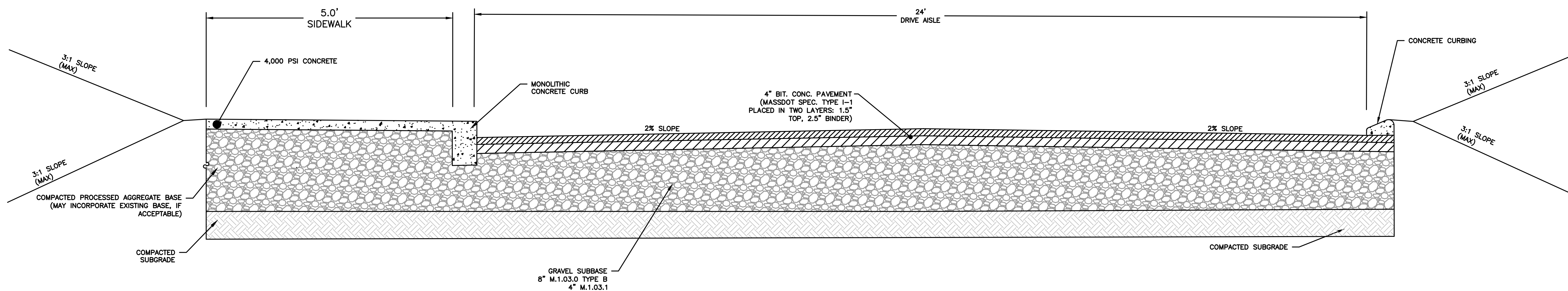
SCALE: N.T.S



NOTE:
 SIDEWALKS SHALL HAVE A CROSS SLOPE
 OF 1.6% WITH A MAX OF 2.0%.

WETLAND CROSSING CROSS SECTION

SCALE: N.T.S



NOTE:
 SIDEWALKS SHALL HAVE A CROSS SLOPE
 OF 1.6% WITH A MAX OF 2.0%.

TYPICAL DRIVEWAY CROSS SECTION

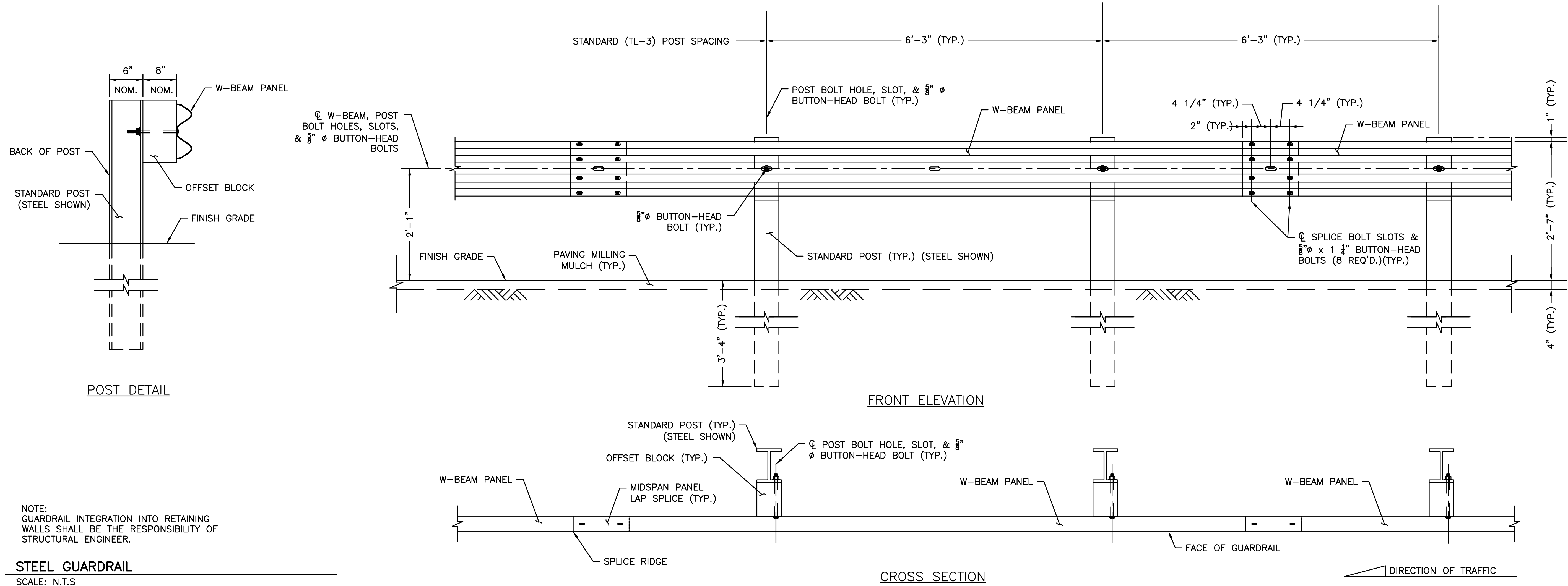
SCALE: N.T.S



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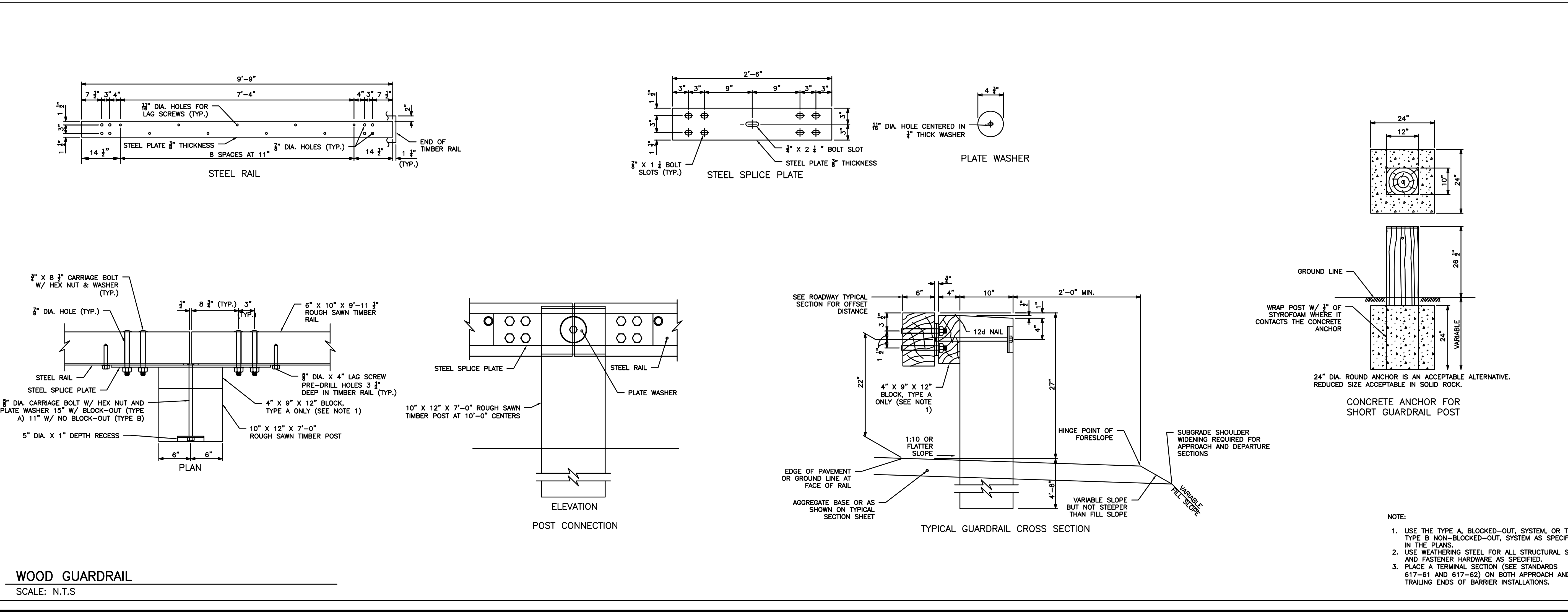
PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT**
 SUMMER STREET
 WALPOLE, MA



NOTE:
 GUARDRAIL INTEGRATION INTO RETAINING
 WALLS SHALL BE THE RESPONSIBILITY OF
 STRUCTURAL ENGINEER.

STEEL GUARDRAIL
 SCALE: N.T.S.



WOOD GUARDRAIL
 SCALE: N.T.S.

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
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5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

RETAINING WALL/
 GUARDRAIL DETAILS
 (DETAIL SHEET
 15 OF 27)

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE
C.53	

1/17/2023 11:59:45 AM C:\Users\jshudson\OneDrive\Documents\19097\19097.dwg
 Plotted by: jshudson



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 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

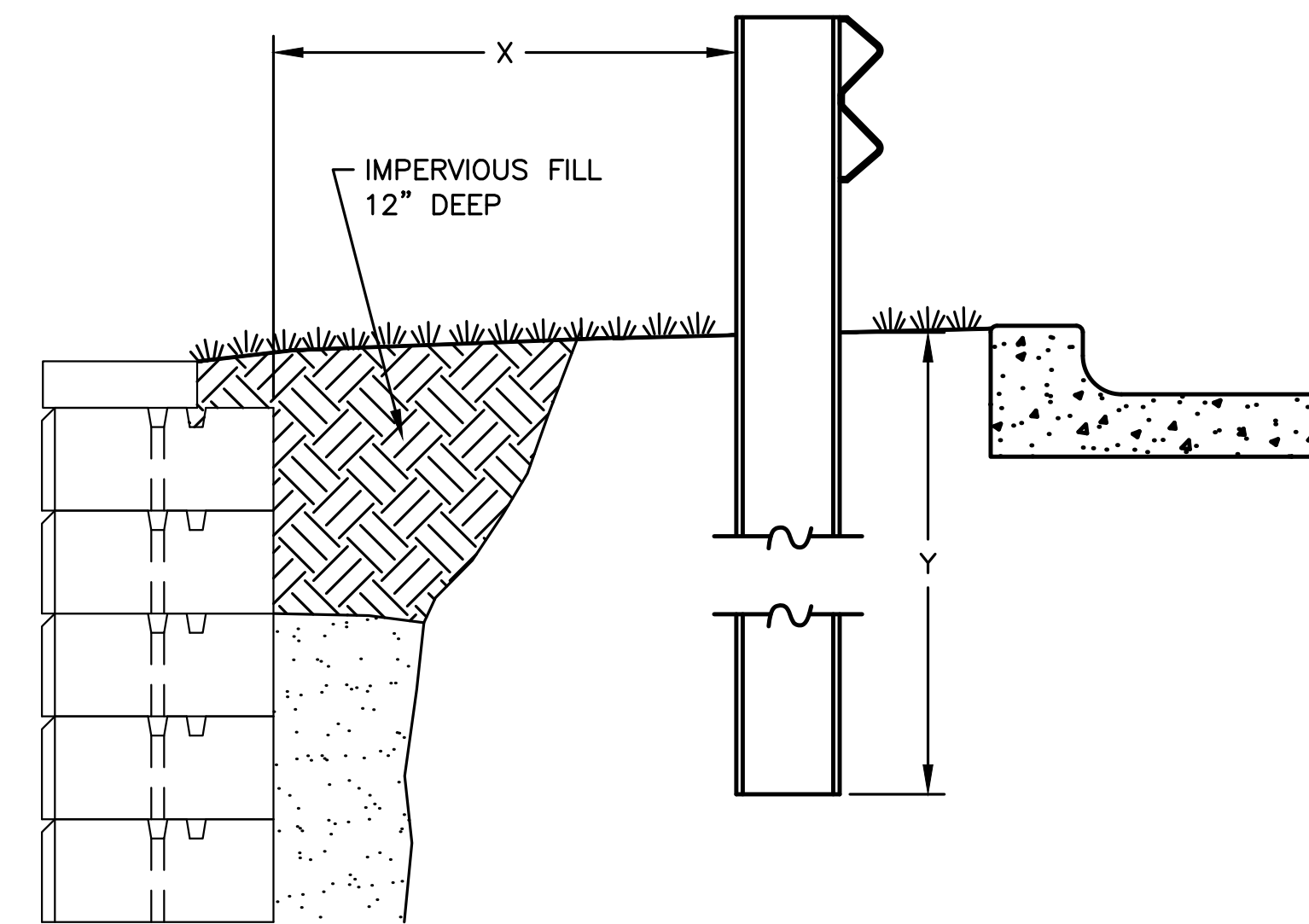
RETAINING WALL/
 GUARDRAIL DETAILS
 (DETAIL SHEET
 16 OF 27)

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

C.54

- NOTES:
- ALL LOCATIONS, DIMENSIONS, MATERIALS OF RETAINING WALL AND GUARDRAIL TO BE DESIGNED AND DETERMINED BY A STRUCTURAL ENGINEER BASED ON THE CRITERIA LISTED WITHIN THE GRADING AND DRAINAGE AND LAYOUT AND MATERIAL PLANS.
 - RETAINING WALL AND GUARDRAIL TO BE DESIGNED IN CONCERT.
 - RETAINING WALL TO BE DESIGNED AND SIGNED OFF ON BY A LICENSED STRUCTURAL ENGINEER.

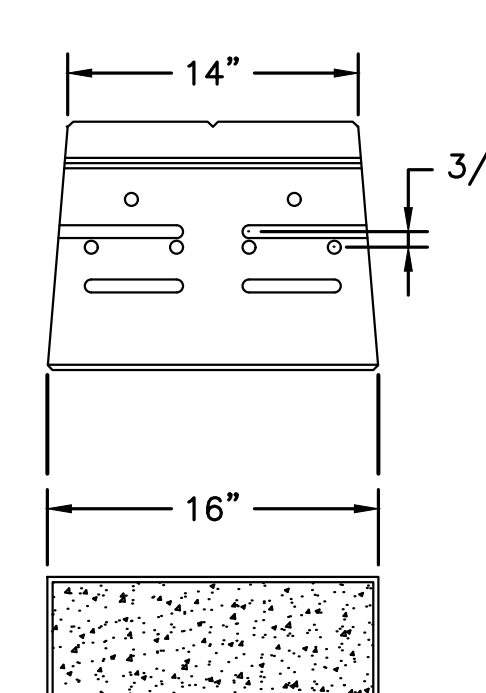
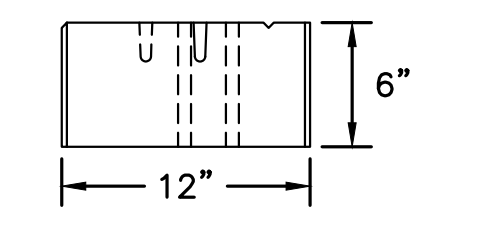
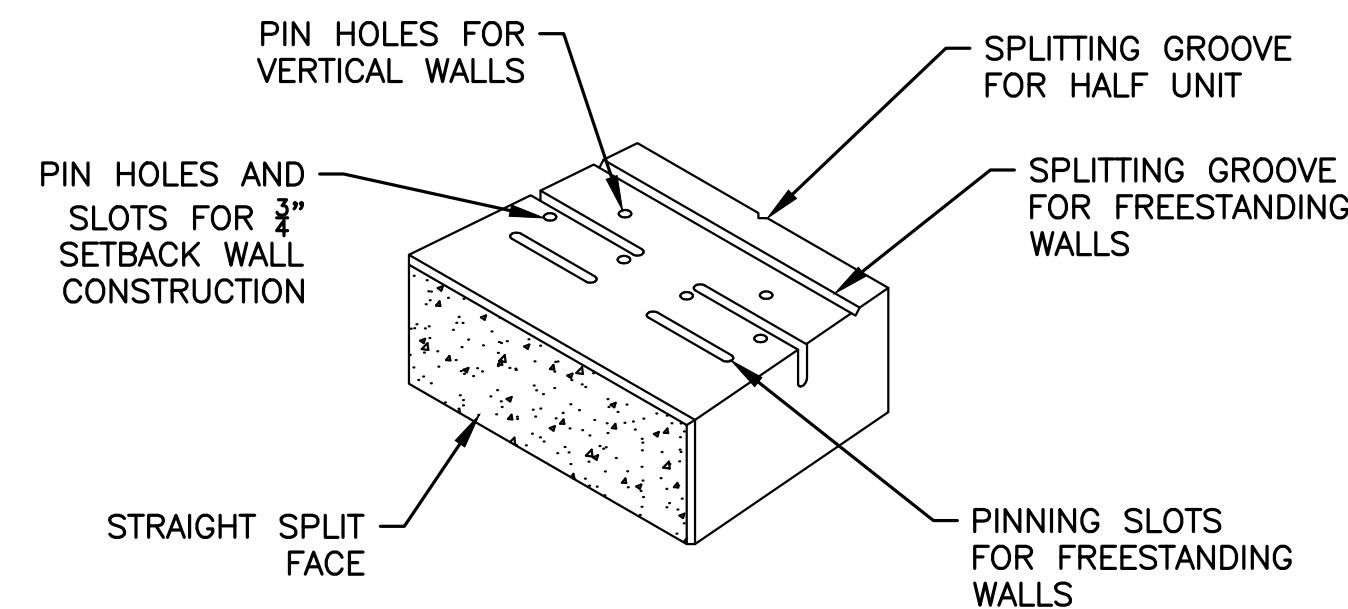
- GUARDRAIL NOTES:
- RETAINING WALL TO BE CERTIFIED BY A PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
 - DISTANCE X AND Y TO BE DETERMINED BY A STRUCTURAL ENGINEER.
 - GUARDRAIL TO BE SPECIFICALLY SELECTED FOR ENGINEERED RETAINING WALL.
 - REFER TO STRUCTURAL ENGINEERING PLANS FOR WALLS GREATER THAN 4 FEET IN HEIGHT.



NOT FOR CONSTRUCTION

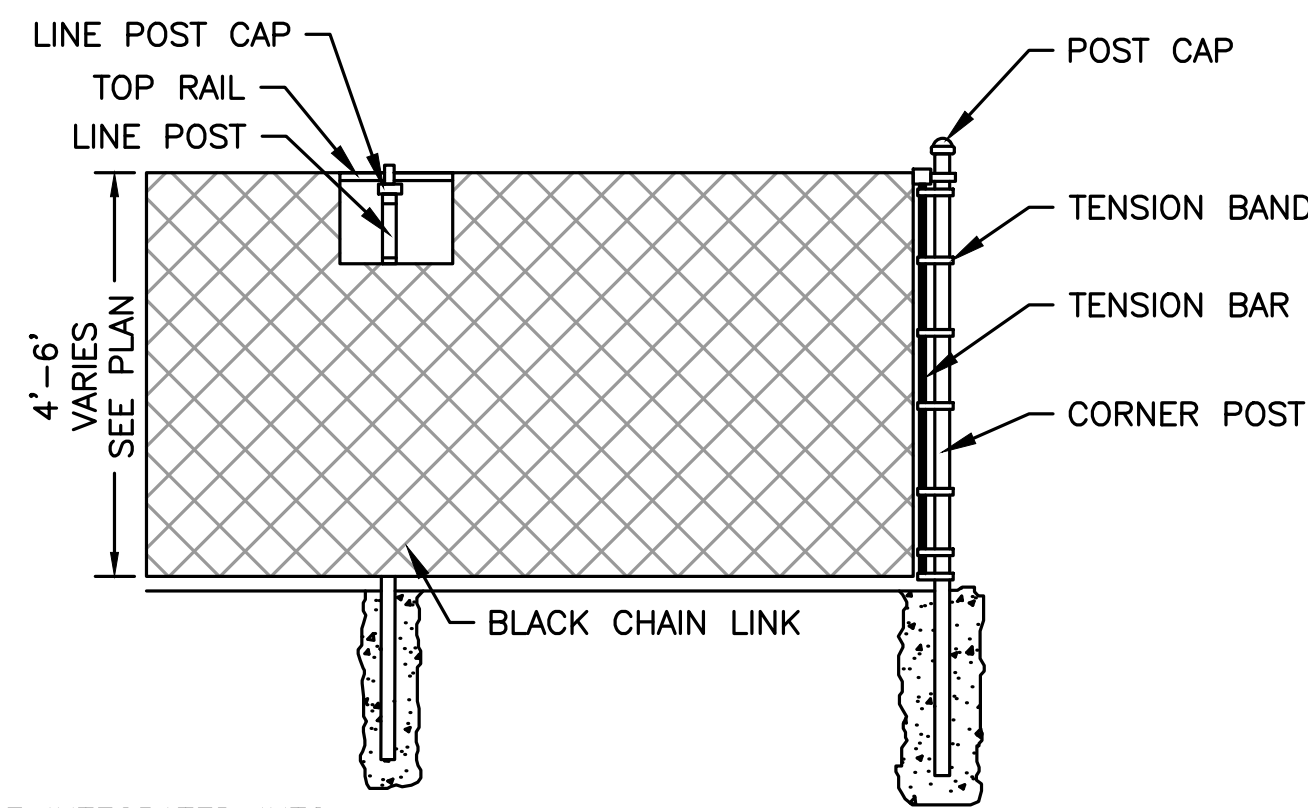
RETAINING WALL WITH GUARDRAIL AND FENCE

SCALE: N.T.S



VERSA-LOK UNIT

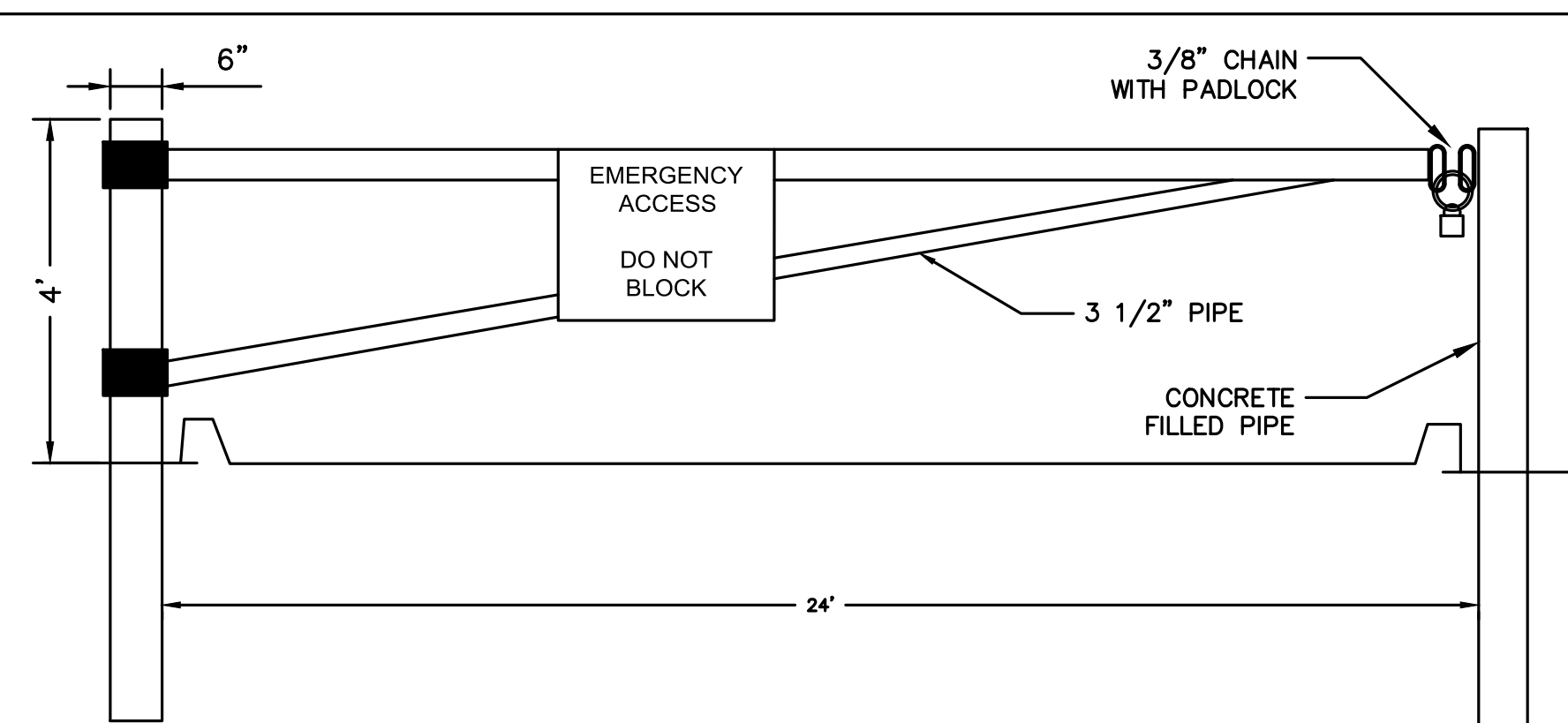
SCALE: N.T.S



NOTE:
 IF FENCE IS TO BE INTEGRATED INTO RETAINING WALL, FENCE INTEGRATION IS TO BE DETAILED ON STRUCTURAL ENGINEERS PLANS

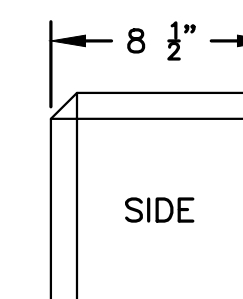
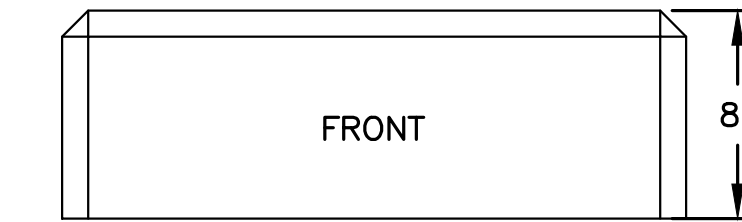
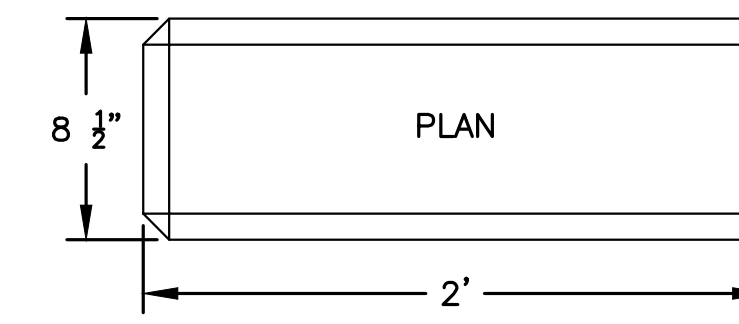
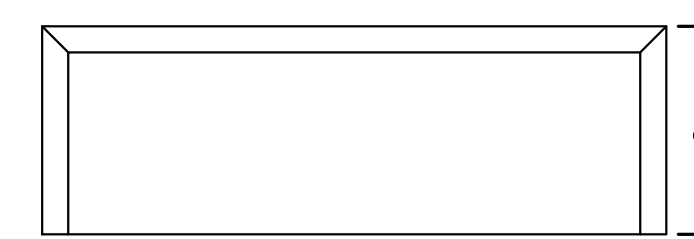
CHAIN LINK FENCE DETAIL

SCALE: N.T.S

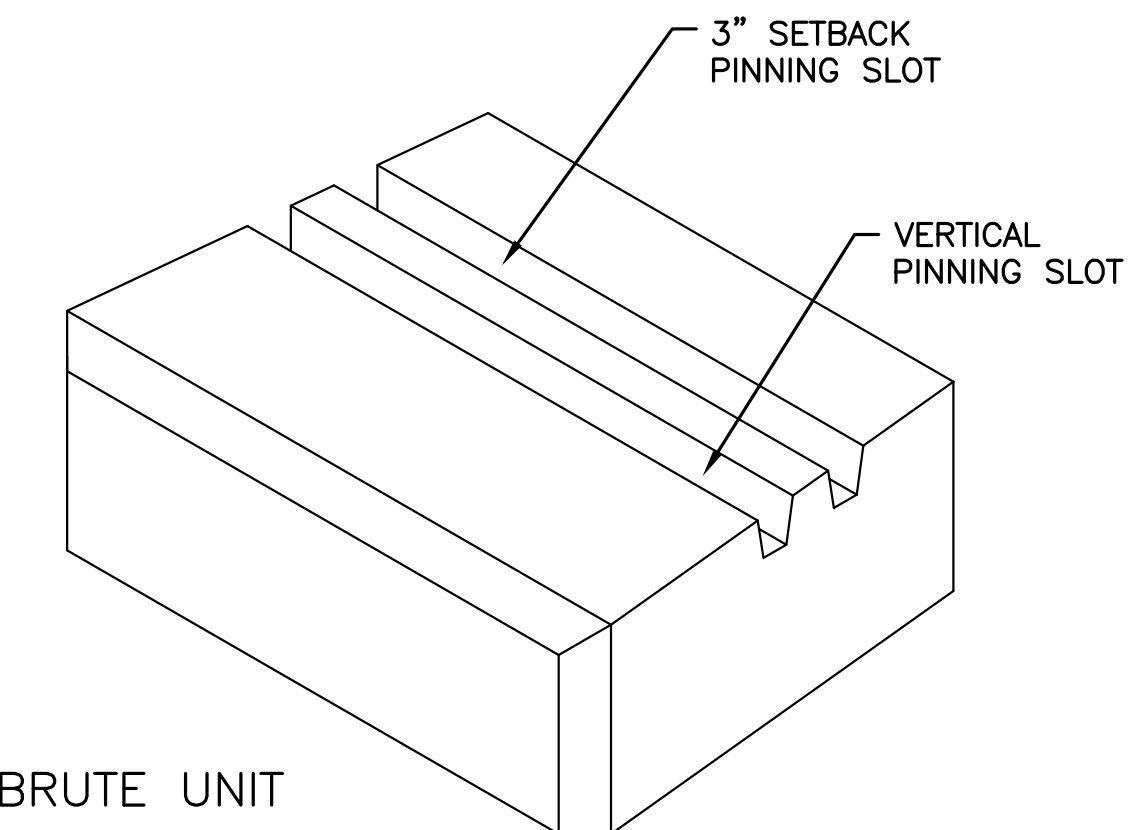
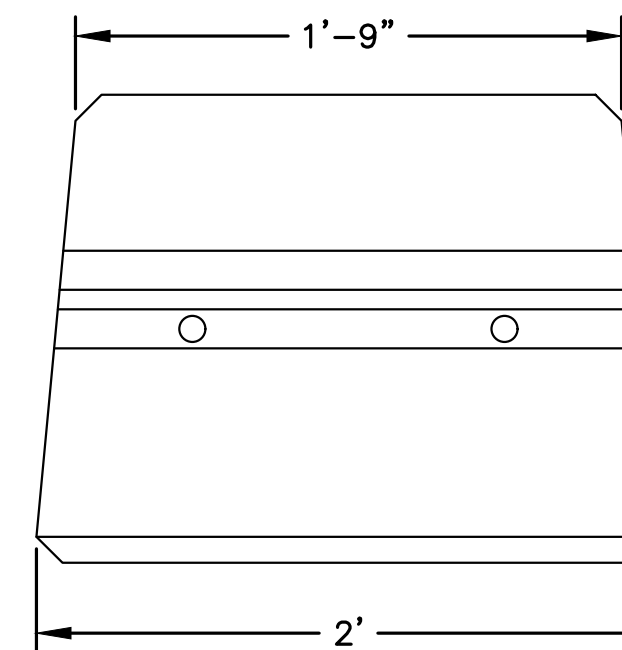
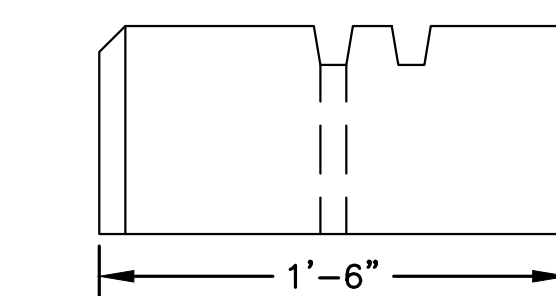


EMERGENCY ACCESS GATE DETAIL

SCALE: N.T.S



VERSA-LOK BRUTE HALF UNIT



VERSA-LOK BRUTE UNIT

VERSA-LOK BRUTE UNIT

SCALE: N.T.S



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 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

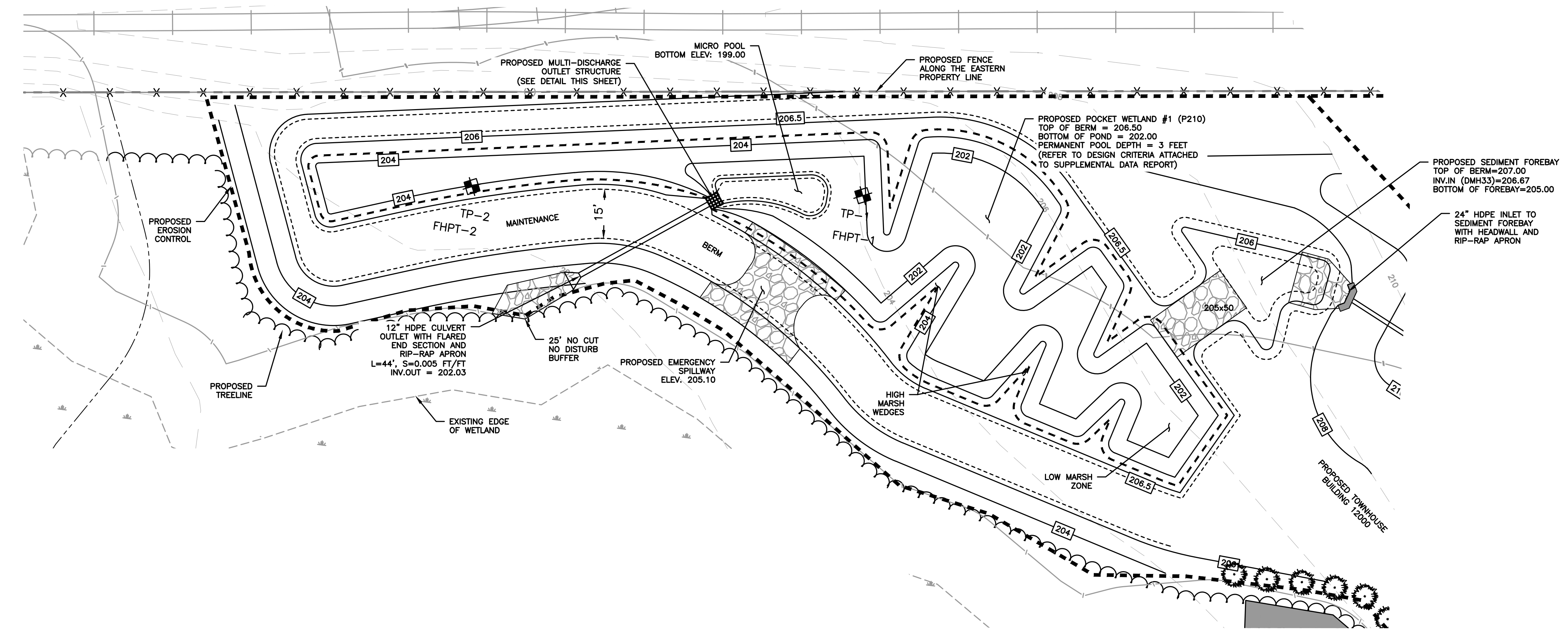
**POCKET WETLAND
 DETAIL
 (DETAIL SHEET
 17 OF 27)**

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.55

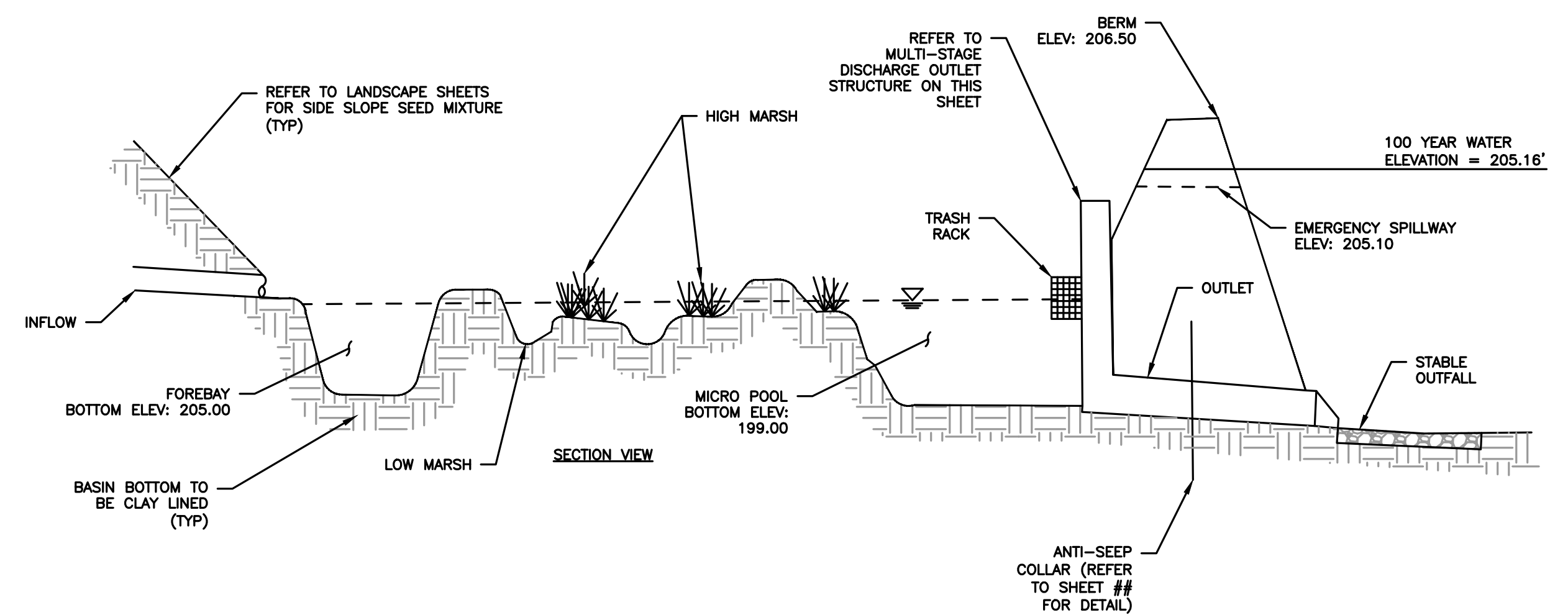
CONSTRUCTION

- A SEVEN-STEP PROCESS TO PREPARE A WETLAND BEFORE PLANTING (SHUELER 1992):
1. PREPARE FINAL POND-SCAPING AND GRADING PLANS FOR THE CONSTRUCTED STORMWATER WETLAND. AT THE SAME TIME, ORDER WETLAND PLANT STOCKS FROM AQUATIC NURSERIES.
 2. ONCE THE CONSTRUCTED STORMWATER WETLAND VOLUME HAS BEEN EXCAVATED, GRADE THE WETLAND TO CREATE THE MAJOR INTERNAL FEATURES (POOL, AQUATIC BENCH, DEEP WATER CHANNELS, ETC.).
 3. BECAUSE DEEP SUBSOILS OFTEN LACK THE NUTRIENTS AND ORGANIC MATTER NEEDED TO SUPPORT VIGOROUS PLANT GROWTH, ADD TOPSOIL AND/OR WETLAND MULCH TO THE WETLAND EXCAVATION. IF AVAILABLE, WETLAND MULCH IS PREFERABLE TO TOPSOIL.
 4. AFTER THE MULCH OR TOPSOIL HAS BEEN ADDED, GRADE THE CONSTRUCTED STORMWATER WETLAND TO ITS FINAL ELEVATIONS. TEMPORARILY STABILIZE ALL WETLAND FEATURES ABOVE THE NORMAL POOL. AFTER FINAL GRADING, CLOSE THE POOL DRAIN TO ALLOW THE POOL TO FILL. MASSDEP RECOMMENDS EVALUATING THE WETLAND ELEVATIONS DURING A STANDING PERIOD OF APPROXIMATELY SIX MONTHS TO ASSESS HOW THE CONSTRUCTED STORMWATER WETLAND RESPONDS TO STORM FLOWS AND INUNDATION, WHERE THE POND-SCAPING ZONES ARE LOCATED, AND WHETHER THE FINAL GRADE AND MICRO-TOPOGRAPHY WILL PERSIST OVER TIME.
 5. BEFORE PLANTING, MEASURE THE CONSTRUCTED STORMWATER WETLAND DEPTH. IF NECESSARY, MODIFY THE POND-SCAPE PLAN AT THIS TIME TO REFLECT ALTERED DEPTHS OR AVAILABILITY OF PLANT STOCK.
 6. AGGRESSIVELY APPLY EROSION CONTROLS DURING THE STANDING AND PLANTING PERIODS. STABILIZE THE VEGETATION IN ALL AREAS ABOVE THE NORMAL POOL ELEVATION DURING THE STANDING PERIOD (TYPICALLY BY HYDROSEEDING).
 7. DEWATER THE CONSTRUCTED STORMWATER WETLAND AT LEAST THREE DAYS BEFORE PLANTING, BECAUSE A DRY WETLAND IS EASIER TO PLANT THAN A WET ONE.



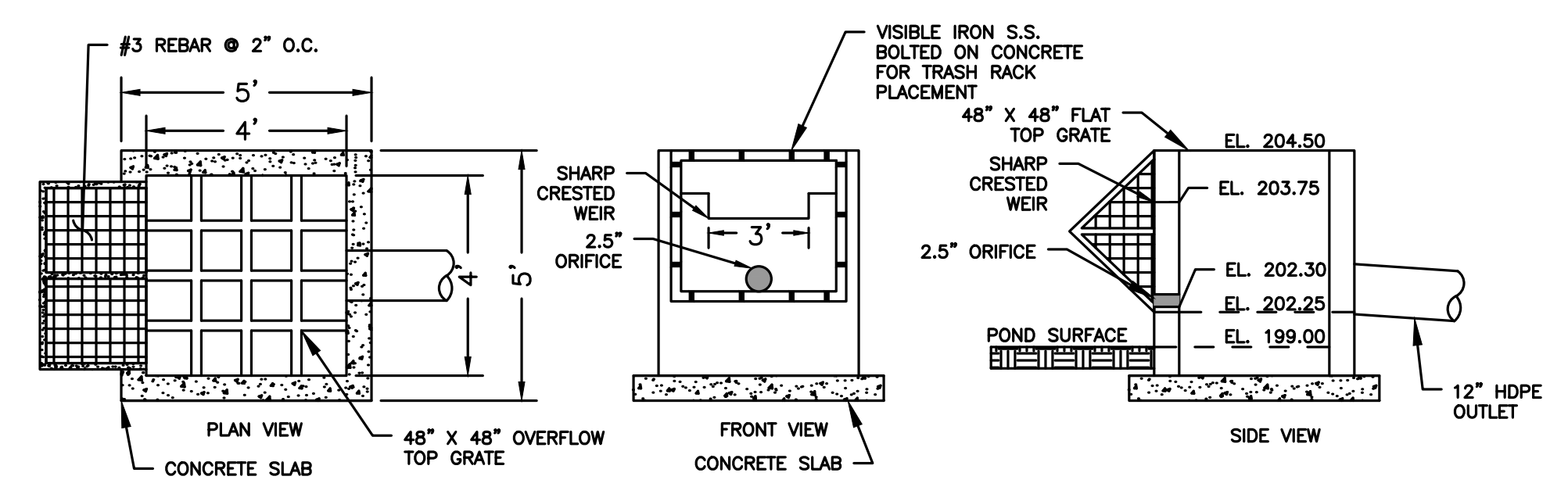
POCKET WETLAND

SCALE: 1"=20'



POCKET WETLAND SECTION

SCALE: N.T.S



MULTI-STAGE DISCHARGE OUTLET STRUCTURE

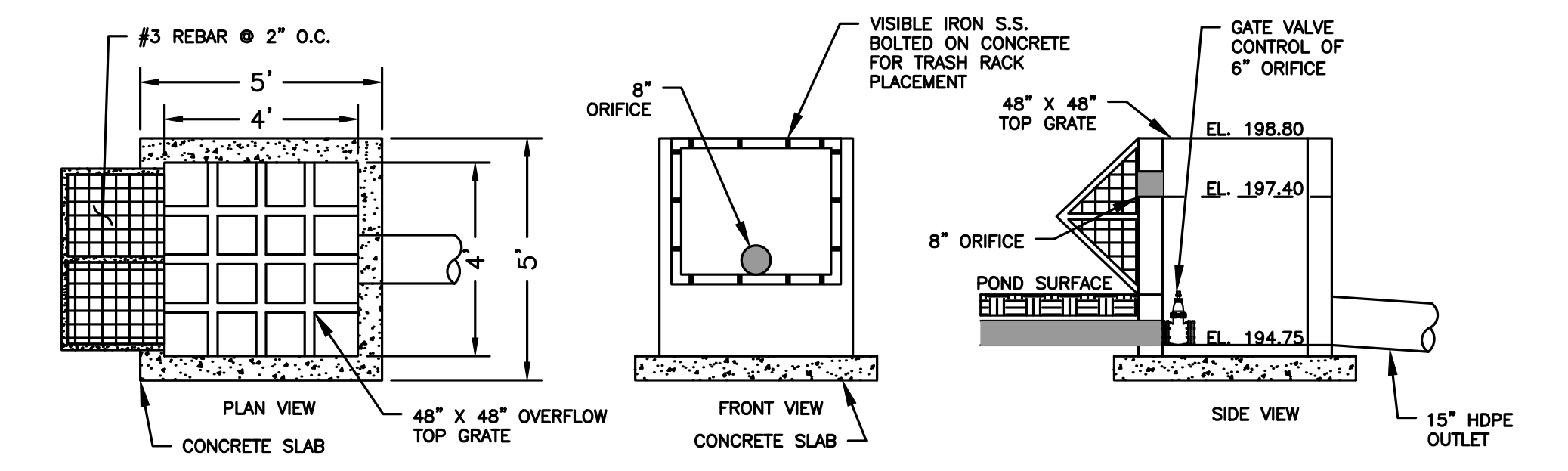
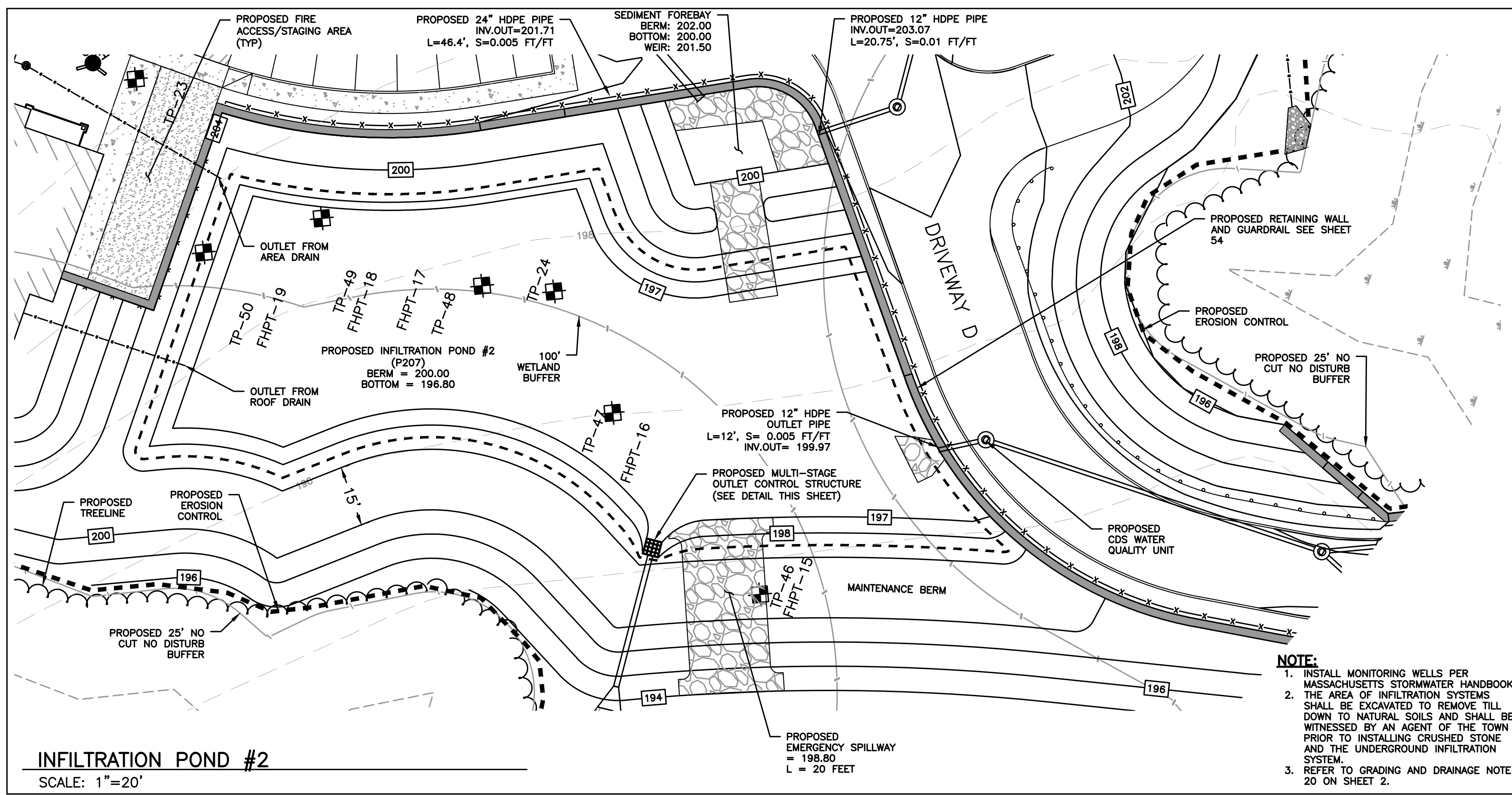
SCALE: N.T.S



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 FRH REALTY LLC
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 5 BURLINGTON WOODS, SUITE 203
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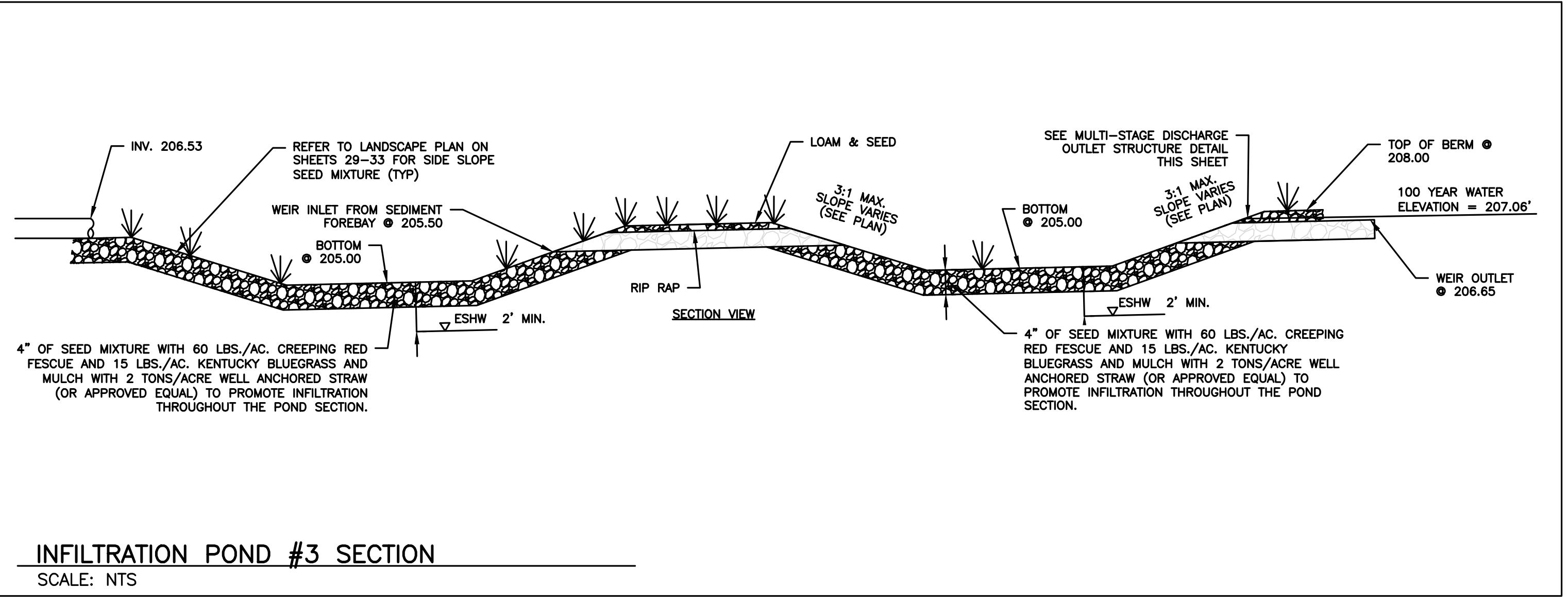
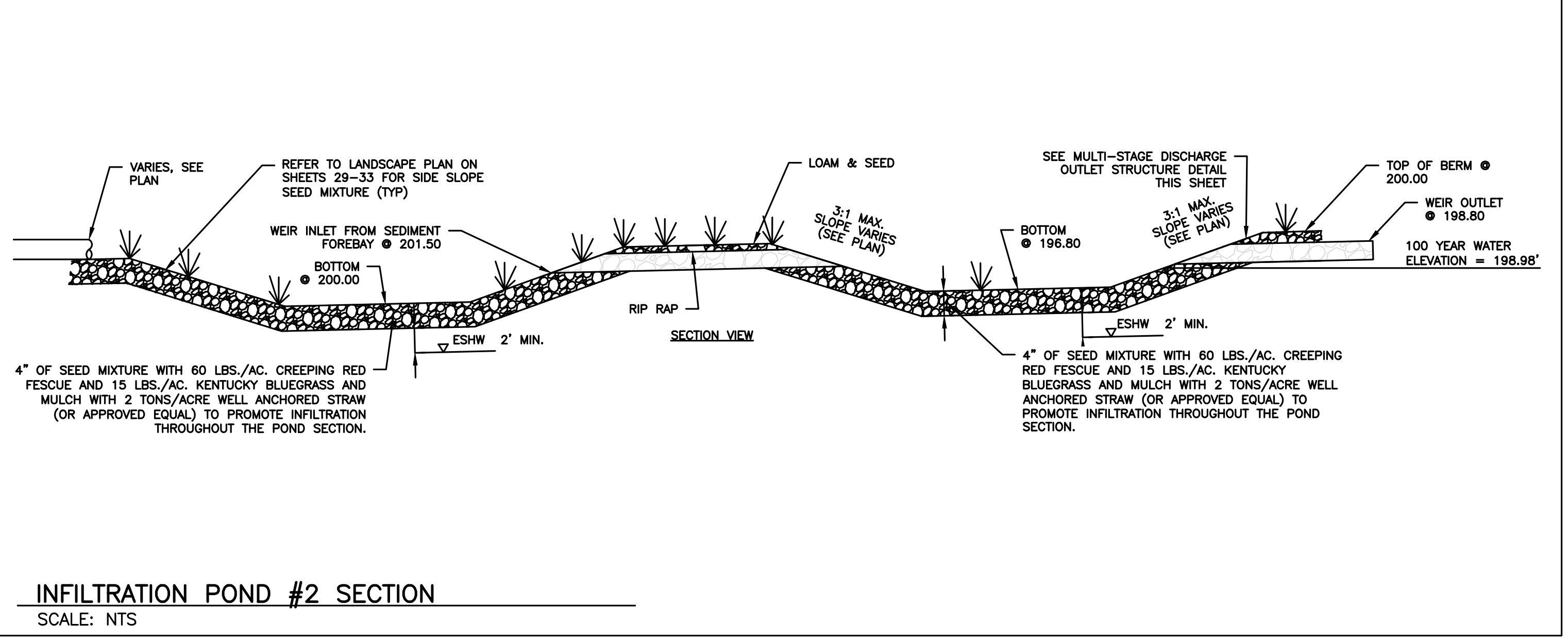
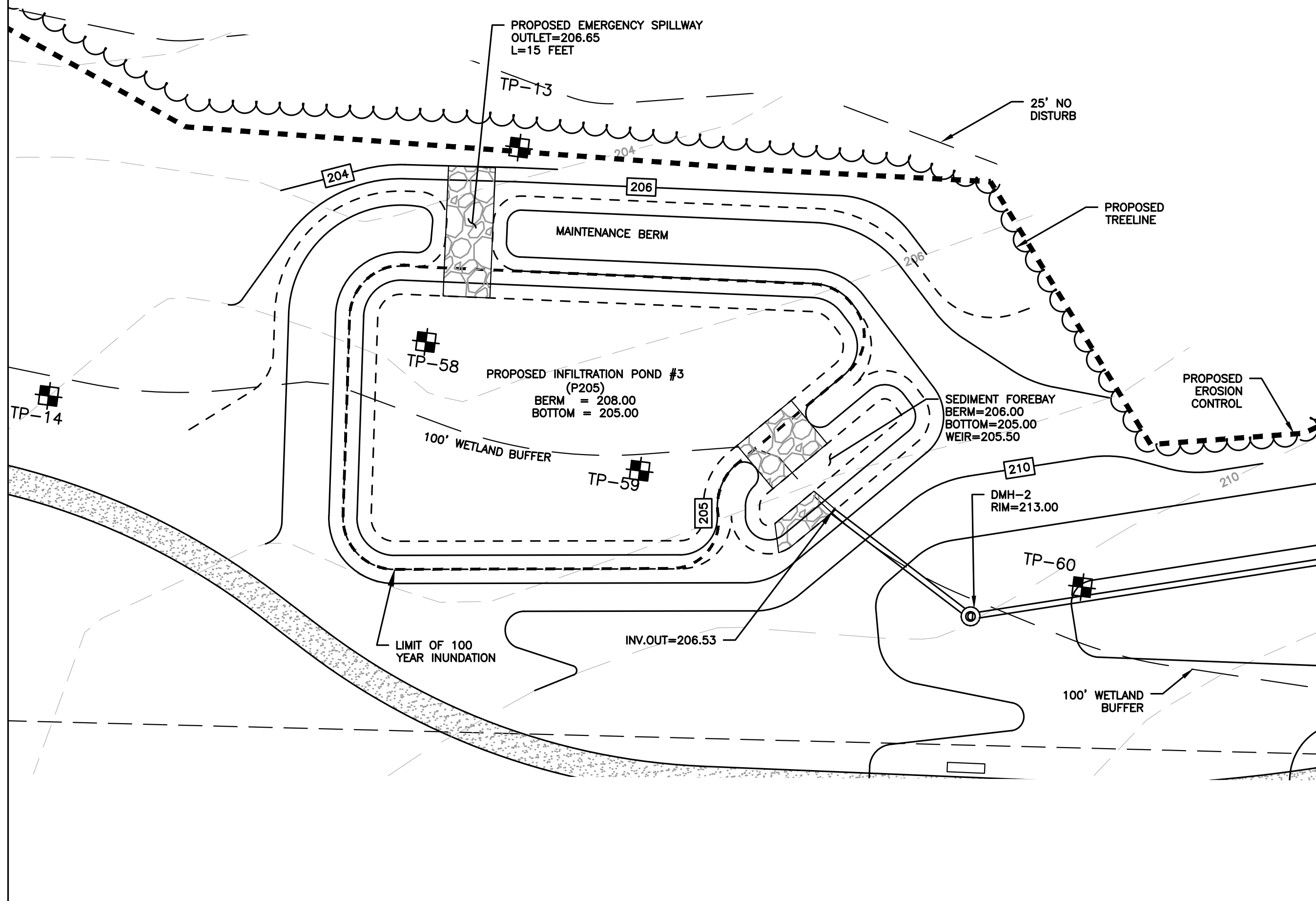
**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**



NOTE:
 1. INSTALL MONITORING WELLS PER MASSACHUSETTS STORMWATER HANDBOOK.
 2. THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.
 3. REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.

ESTIMATED SEASONAL HIGH GROUNDWATER
 TP-13 ELEVATION: 203.76±
 GROUNDWATER ELEVATION: 200.18± (43")
 TP-14 ELEVATION: 206.00±
 GROUNDWATER ELEVATION: 198.08± (95")
 TP-58 ELEVATION: 205.80±
 GROUNDWATER ELEVATION: 199.88± (71")
 TP-59 ELEVATION: 207.10±
 GROUNDWATER ELEVATION: 199.60± (90")
 PROPOSED BOTTOM OF POND: 205.00
 ESTIMATED GROUNDWATER ELEVATION BASED ON TP-58: 199.88±

NOTE:
 1. INSTALL MONITORING WELLS PER MASSACHUSETTS STORMWATER HANDBOOK.
 2. THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.
 3. REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.



REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

**INFILTRATION POND
 DETAILS
 (DETAIL SHEET
 19 OF 27)**

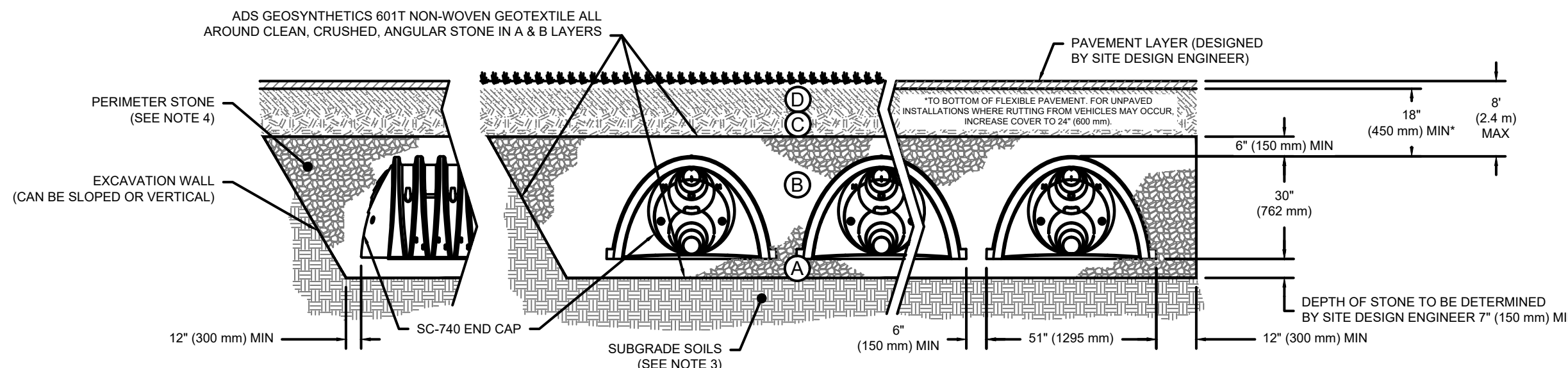
DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

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 Plot Saved by: AISHAM
 Printed by: Roby Jaramal

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

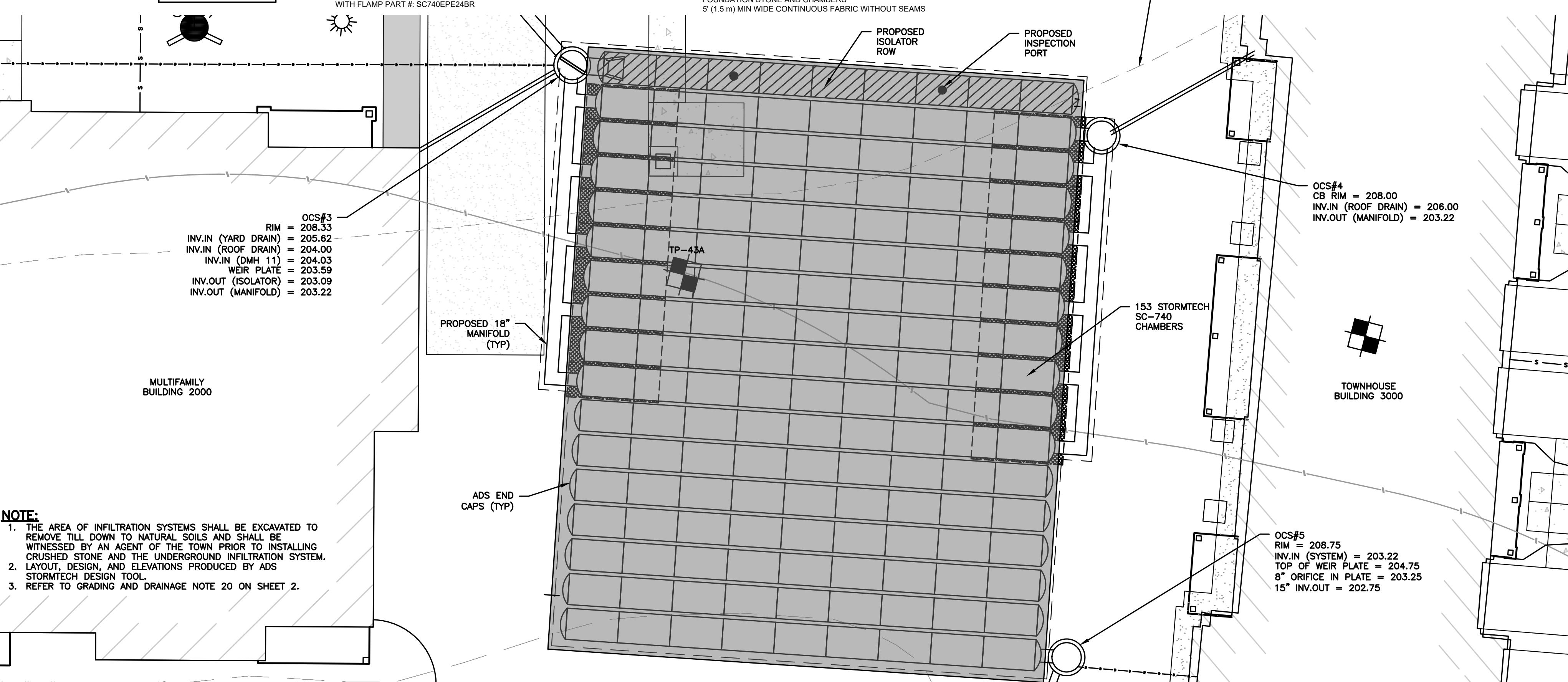
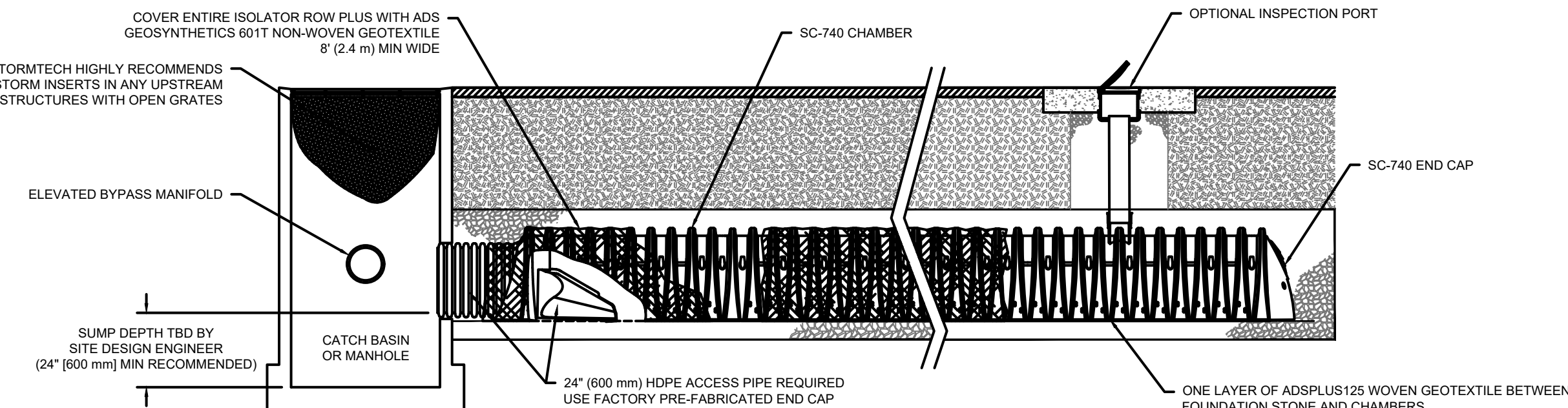
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145* A-1, A-2.4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER DENSITY VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

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



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



NOTE:
 1. THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.
 2. LAYOUT, DESIGN, AND ELEVATIONS PRODUCED BY ADS STORMTECH DESIGN TOOL.
 3. REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (+1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (-5-1R) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

SYSTEM DETAILS (2204)
 PROPOSED LAYOUT INCLUDES 153 STORMTECH SC-740 CHAMBERS AND 34 ENDCAPS INSTALLED WITH 7" BASE STONE AND 12" COVER STONE. AN ISOLATOR ROW IS ALSO PROPOSED.

MAX. ALLOWABLE GRADE (TOP OF PAVE/UNPAVE)	213.58
MIN. ALLOWABLE GRADE (UNPAVE W/ TRAFFIC)	207.58
MIN. ALLOWABLE GRADE (UNPAVE NO TRAFFIC)	207.08
TOP OF STONE	206.58
TOP OF SC-740 CHAMBER	205.58
WEIR PLATE INVERT	203.59
18"x18" BOTTOM MANIFOLD INVERT	203.22
18" BOTTOM CONNECTION INVERT	203.22
24" ISOLATOR ROW INVERT	203.09
BOTTOM OF SC-740 CHAMBER	203.08
BOTTOM OF STONE	202.50

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - ALL ISOLATOR PLUS ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAR
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

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

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

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

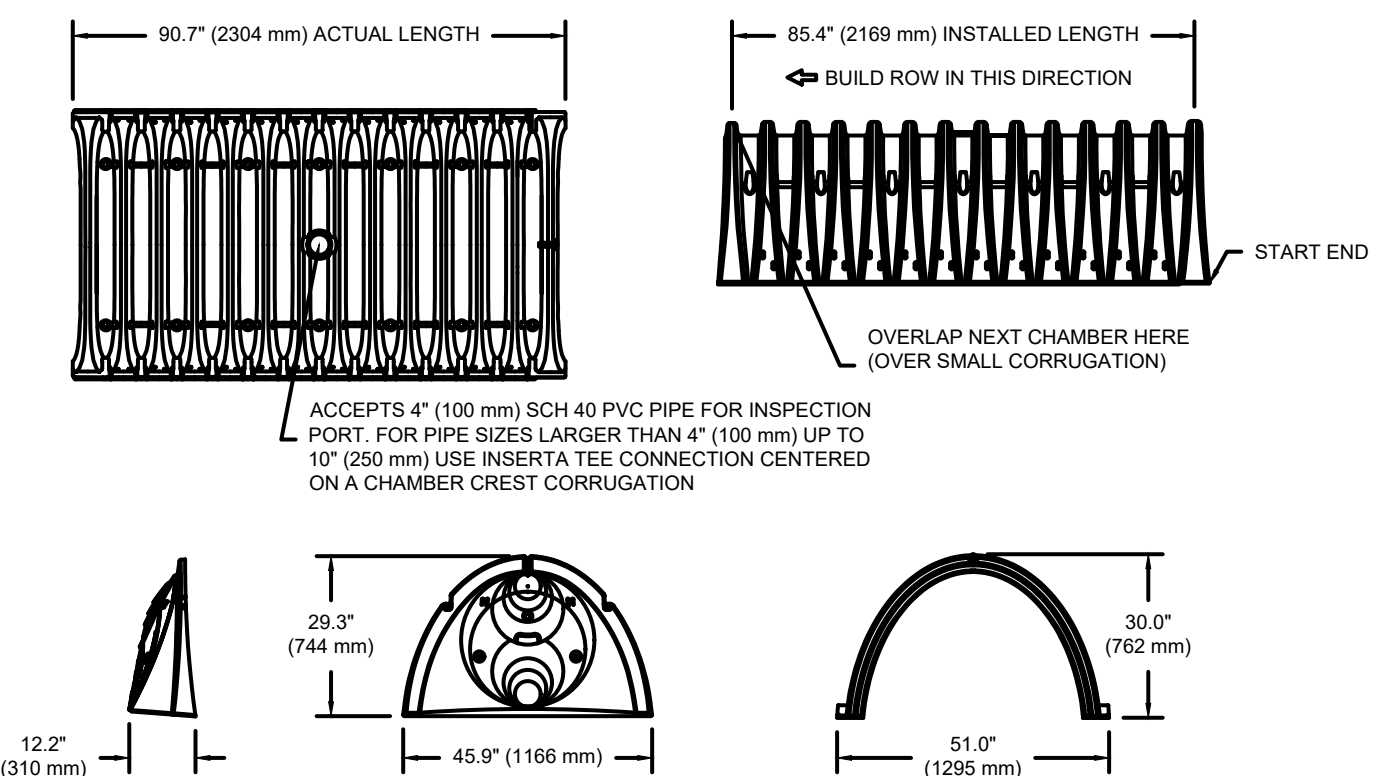
NOTES FOR CONSTRUCTION EQUIPMENT

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

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

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

SC-740 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4" (130 mm)	1295 mm X 762 mm X 2169 mm
CHAMBER STORAGE	45.9 CUBIC FEET (1.30 m³)	1295 mm X 762 mm X 2169 mm
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET (2.12 m³)	1295 mm X 762 mm X 2169 mm
WEIGHT	75.0 lbs. (33.6 kg)	1295 mm X 762 mm X 2169 mm

*ASSUMES #1 (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

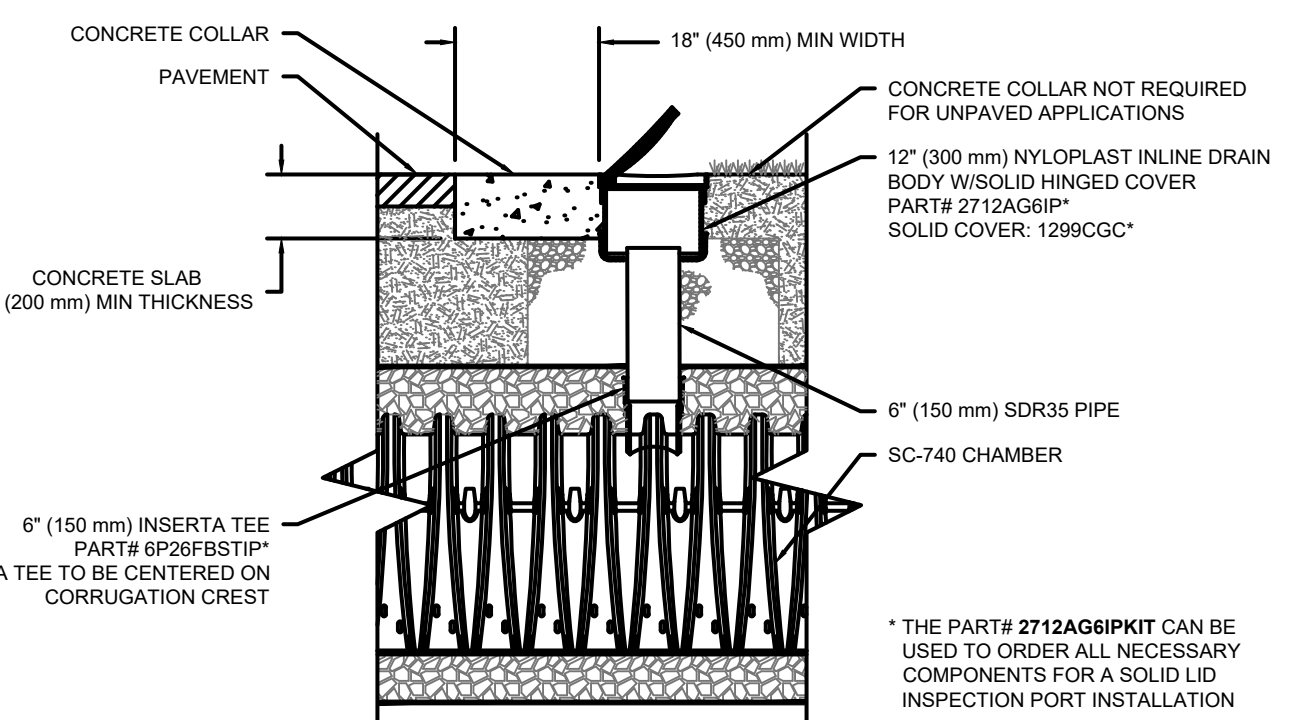
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
 STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06BPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740EPE08T / SC740EPE08BPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.6" (15 mm)
SC740EPE10T / SC740EPE10BPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EPE12T / SC740EPE12BPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	0.8" (20 mm)
SC740EPE14T / SC740EPE14BPC	14" (350 mm)	16.0" (407 mm)	10.5" (267 mm)	0.9" (23 mm)
SC740EPE16T / SC740EPE16BPC	16" (400 mm)	17.3" (439 mm)	8.5" (216 mm)	1.0" (25 mm)
SC740EPE18T / SC740EPE18BPC	18" (450 mm)	18.6" (472 mm)	6.5" (165 mm)	1.1" (28 mm)
SC740EPE20T / SC740EPE20BPC	20" (500 mm)	19.9" (502 mm)	4.5" (114 mm)	1.2" (30 mm)
SC740EPE22T / SC740EPE22BPC	22" (550 mm)	21.2" (538 mm)	2.5" (64 mm)	1.3" (33 mm)
SC740EPE24T	24" (600 mm)	18.5" (470 mm)	0.5" (13 mm)	0.1" (3 mm)

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

NOTE: ALL DIMENSIONS ARE NOMINAL



SC-740 6" (150 mm) INSPECTION PORT DETAIL

HOWARD STEIN HUDSON
 114 Turnpike Road, Suite 2C
 Chelmsford, MA 01824
 www.hshassoc.com

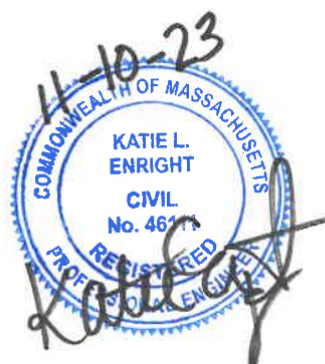
PREPARED FOR:

FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

STORMTECH
 INFILTRATION SYSTEM #1
 (DETAIL SHEET
 20 OF 27)

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

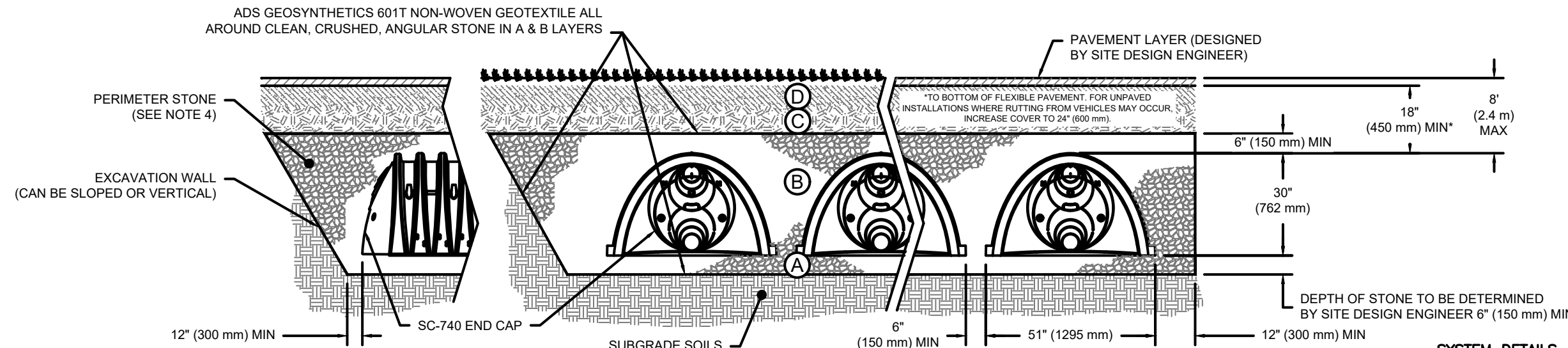
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SHEET 58 OF 65

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

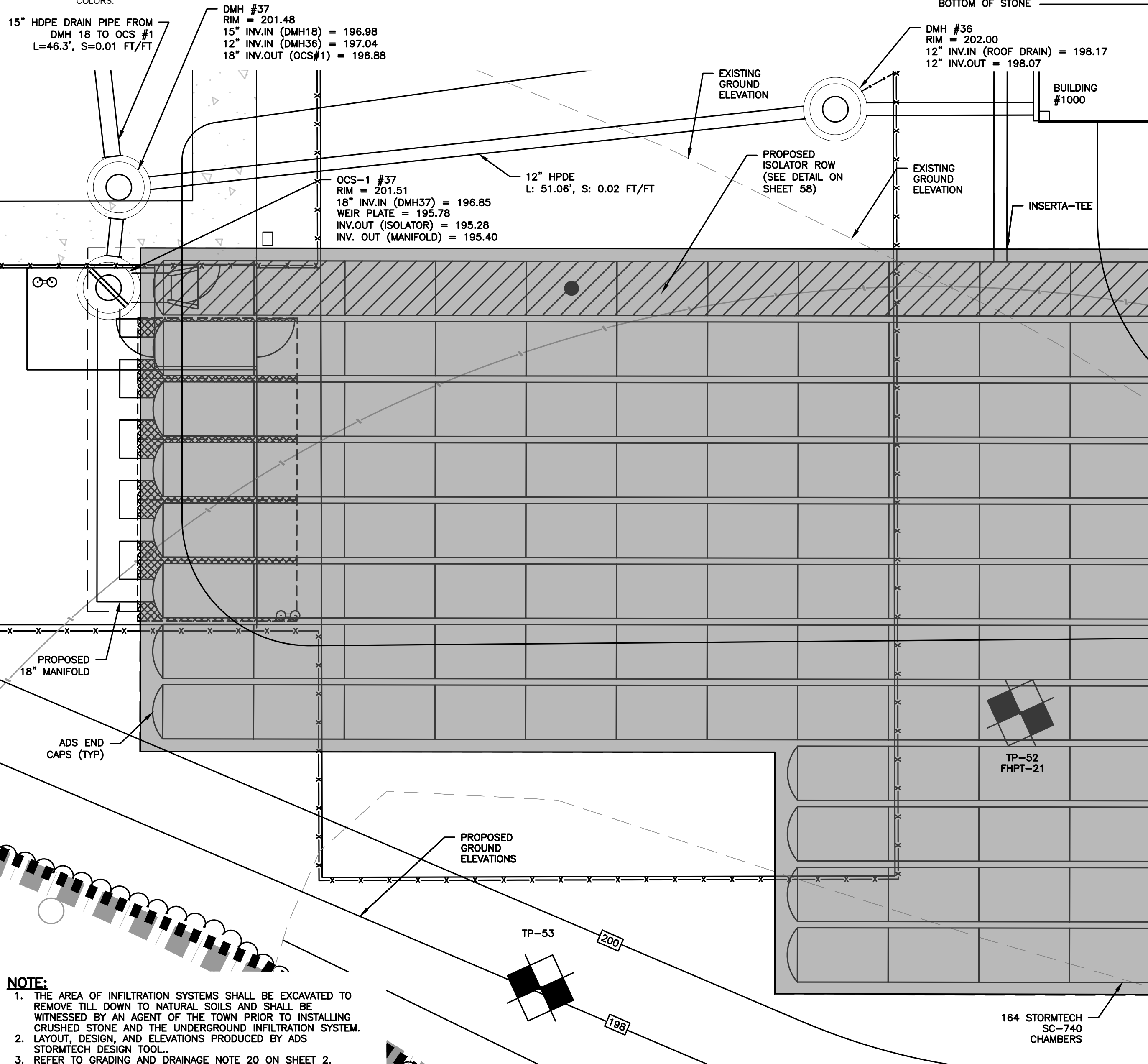
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	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 90% 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).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE ^{2,3}

- PLEASE NOTE:
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 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

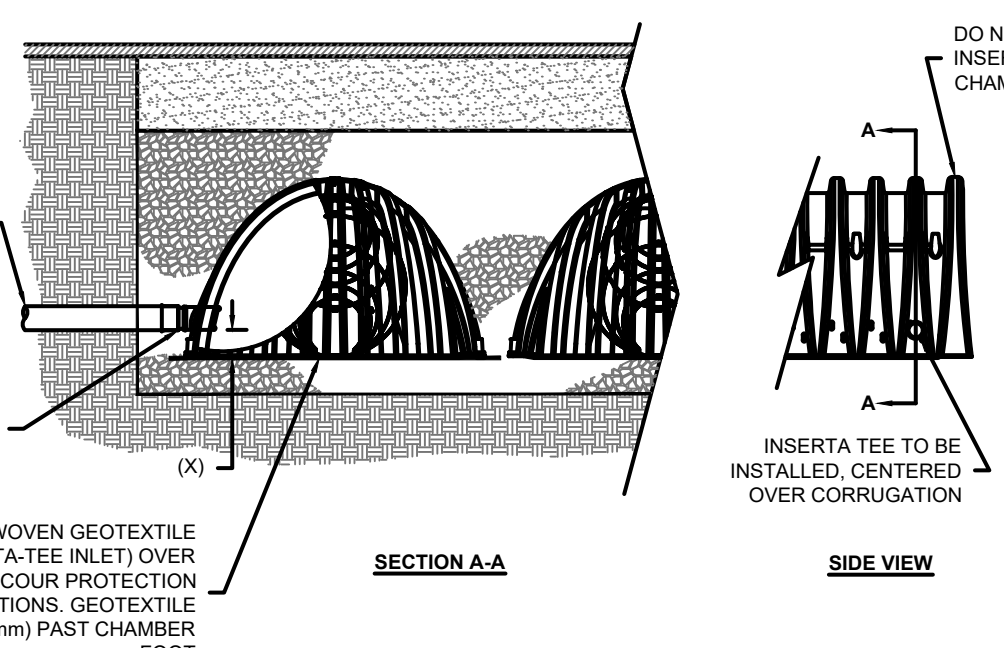
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



- NOTE:**
- THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM. LAYOUT, DESIGN, AND ELEVATIONS PRODUCED BY ADS STORMTECH DESIGN TOOL.
 - REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.



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

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

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

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

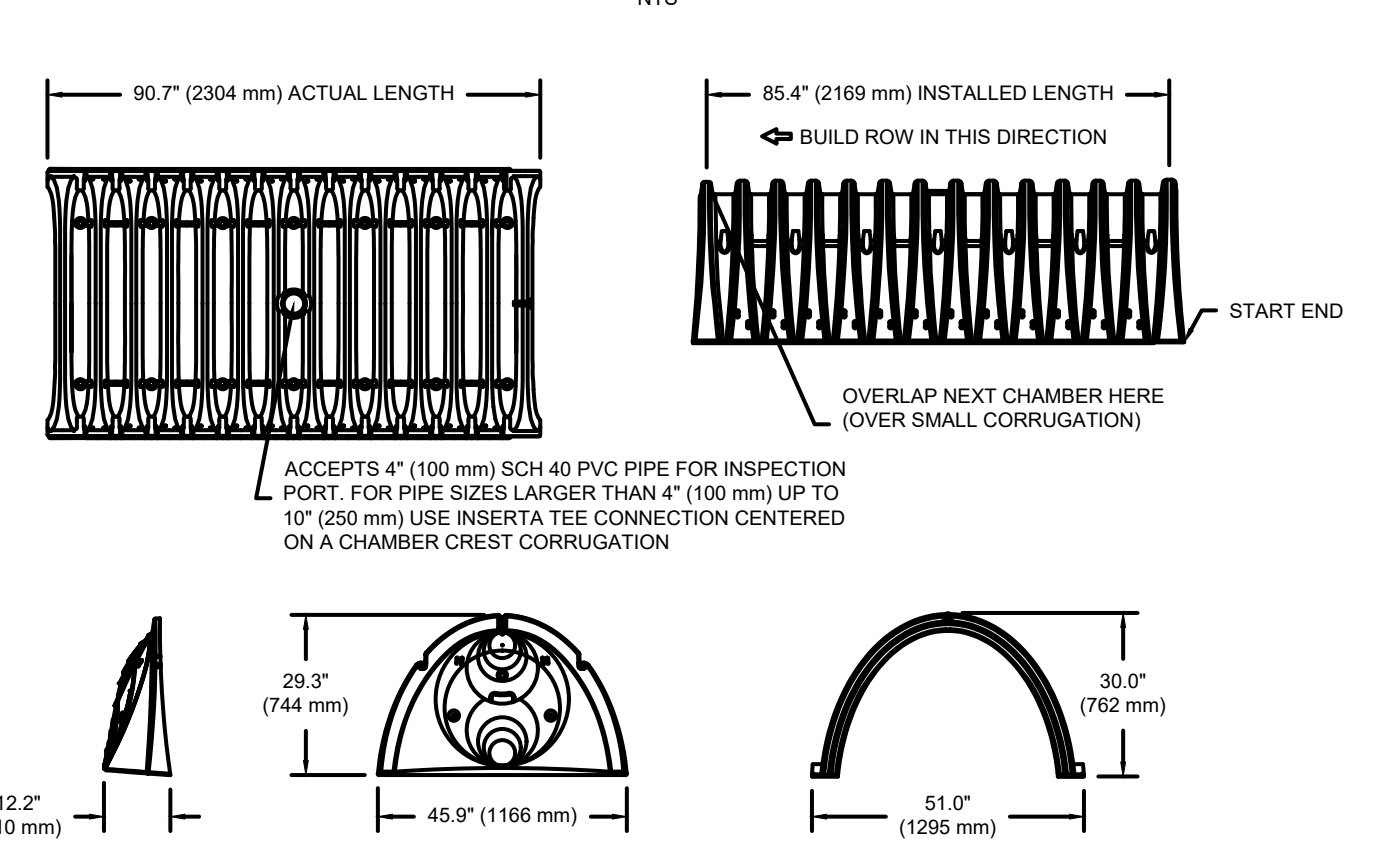
NOTES FOR CONSTRUCTION EQUIPMENT

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

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

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

SC-740 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4" (1.30 m)	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	74.9 CUBIC FEET (2.12 m³)	74.9 CUBIC FEET (2.12 m³)
MINIMUM INSTALLED STORAGE*	75.0 lbs. (33.6 kg)	75.0 lbs. (33.6 kg)

*ASSUMES 6" (150 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

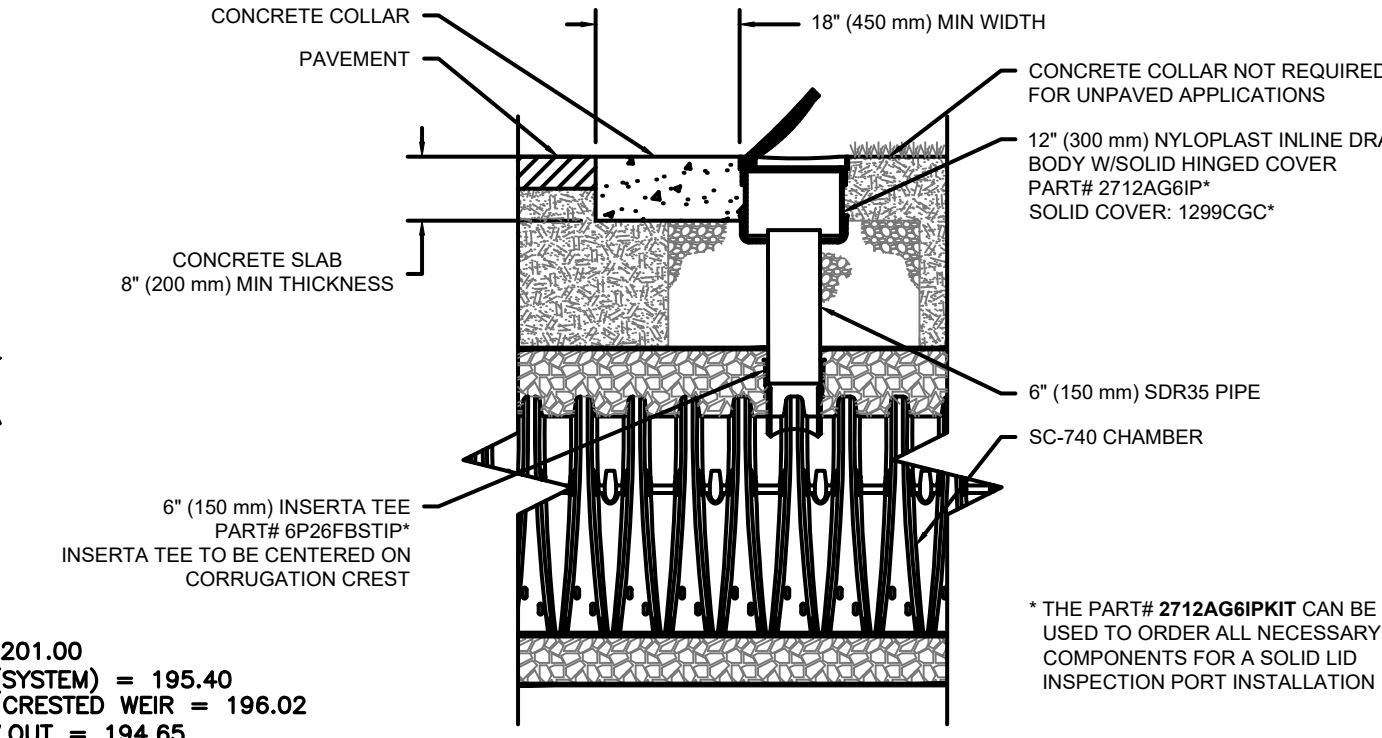
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EP06T / SC740EP06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EP08B / SC740EP08BPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.5" (13 mm)
SC740EP08T / SC740EP08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EP08B / SC740EP08BPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.0" (15 mm)
SC740EP10B / SC740EP10BPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EP10T / SC740EP10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EP12T / SC740EP12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	1.2" (30 mm)
SC740EP12B / SC740EP12BPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EP15T / SC740EP15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	1.3" (33 mm)
SC740EP15B / SC740EP15BPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EP18T / SC740EP18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740EP18B / SC740EP18BPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EP24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

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

NOTE: ALL DIMENSIONS ARE NOMINAL



SC-740 6" (150 mm) INSPECTION PORT DETAIL

HOWARD STEIN HUDSON
114 Turnpike Road, Suite 2C
Chelmsford, MA 01824
www.hshassoc.com

PREPARED FOR:
FRH REALTY LLC
c/o FAIRFIELD RESIDENTIAL
5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

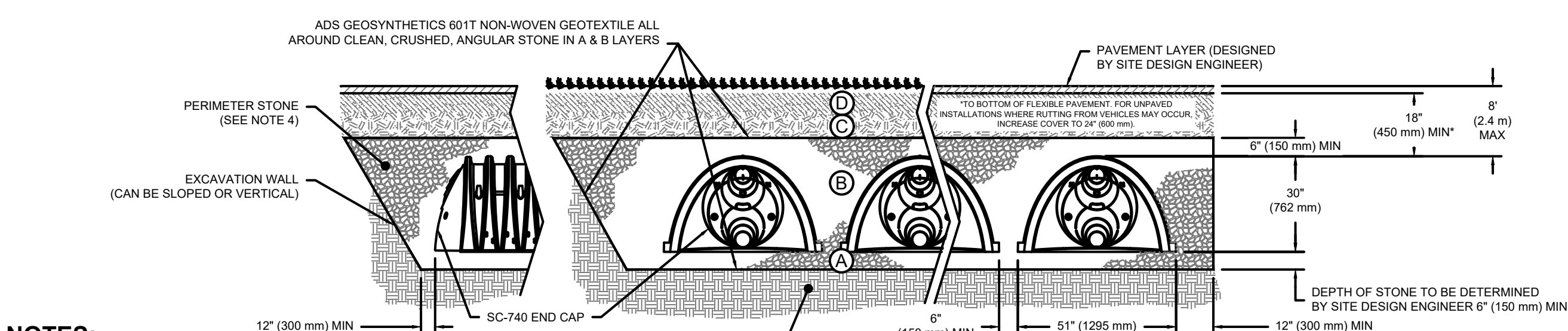
STORMTECH INFILTRATION SYSTEM #2 (DETAIL SHEET 21 OF 27)

DATE:	JUNE 20, 2023
PROJECT NUMBER:	19097
DESIGNED BY:	PB/KE/KF
DRAWN BY:	PB/MB/KF/KL
CHECKED BY:	KE

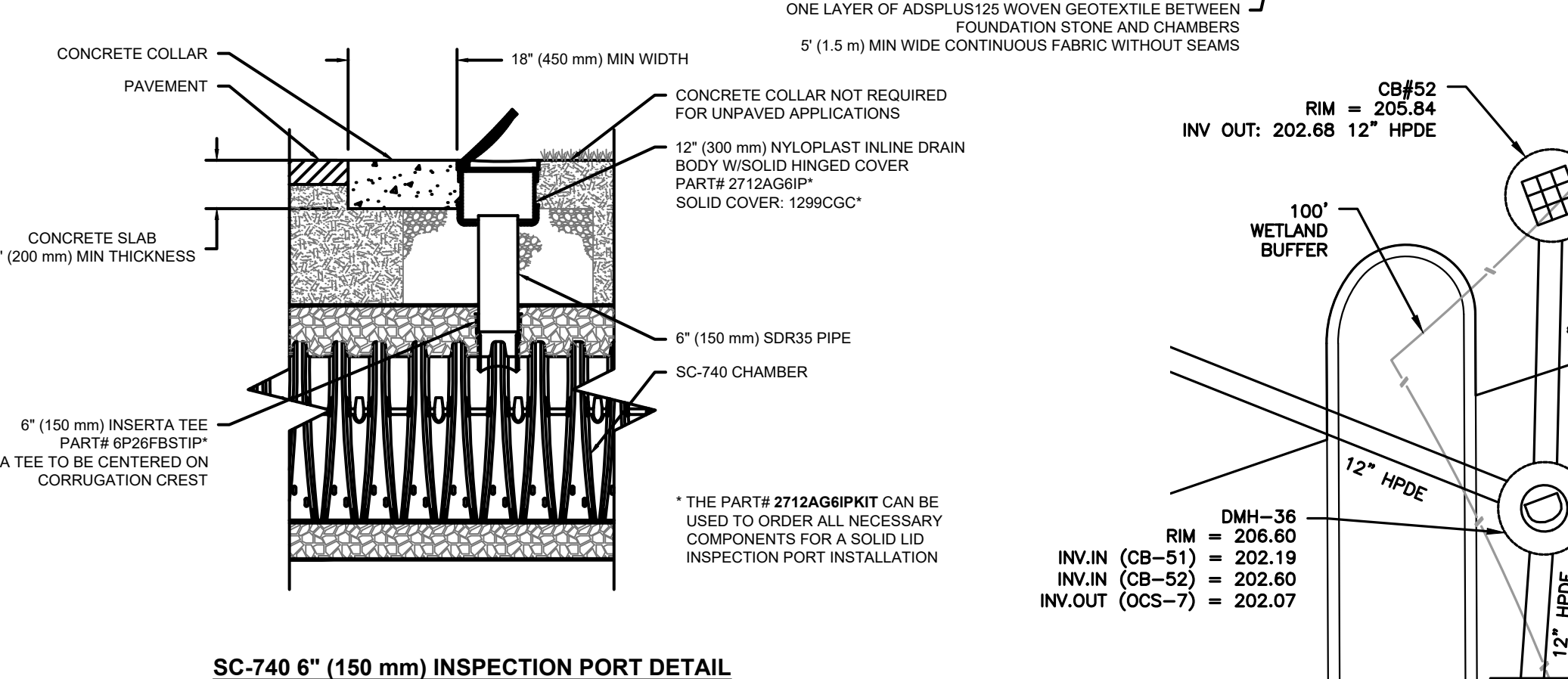
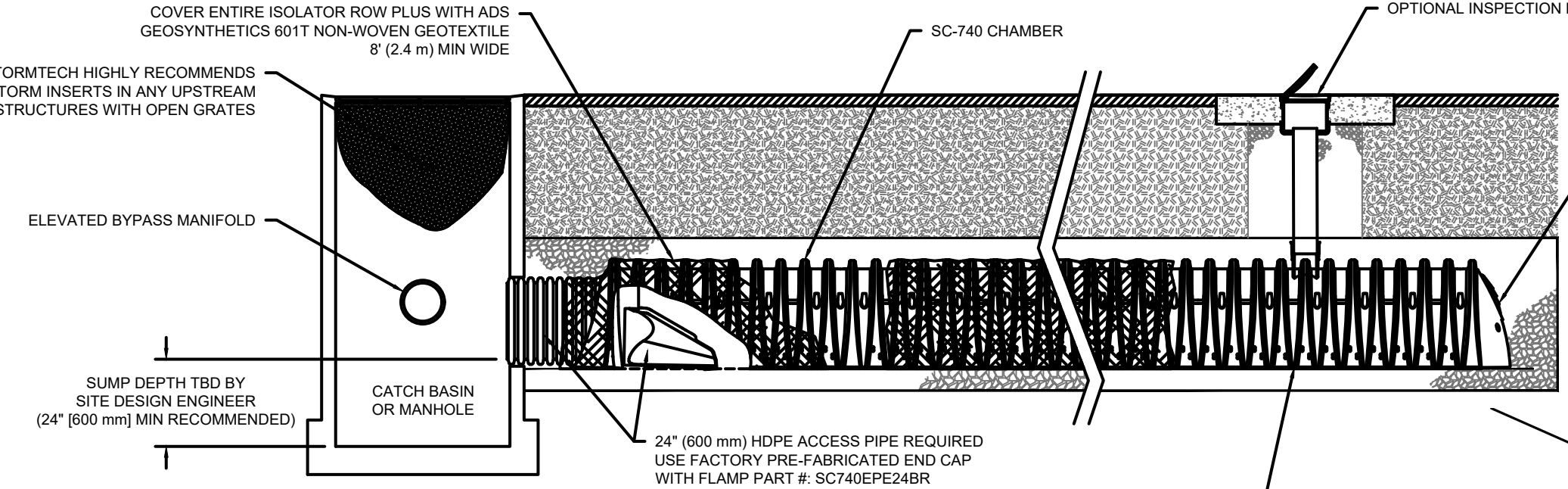
ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

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.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

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



NOTES:
 1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS."
 2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS."
 3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 • TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 • TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 • TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



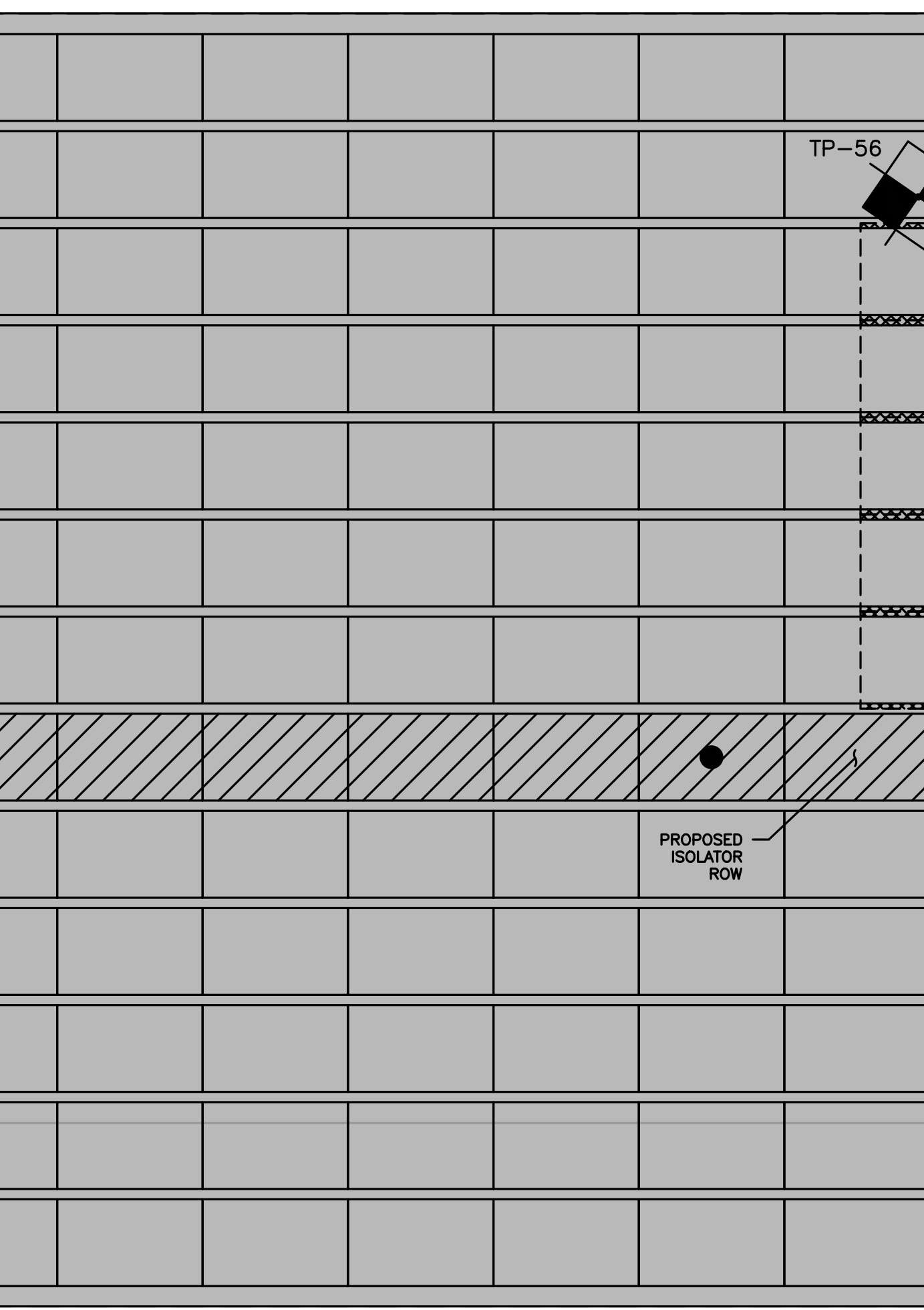
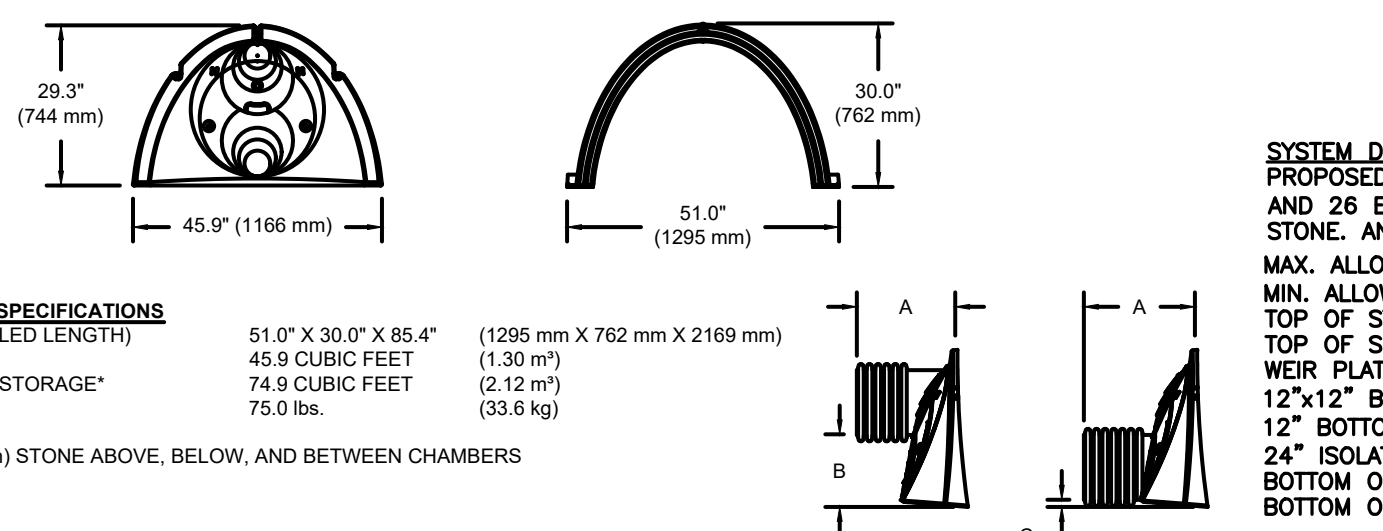
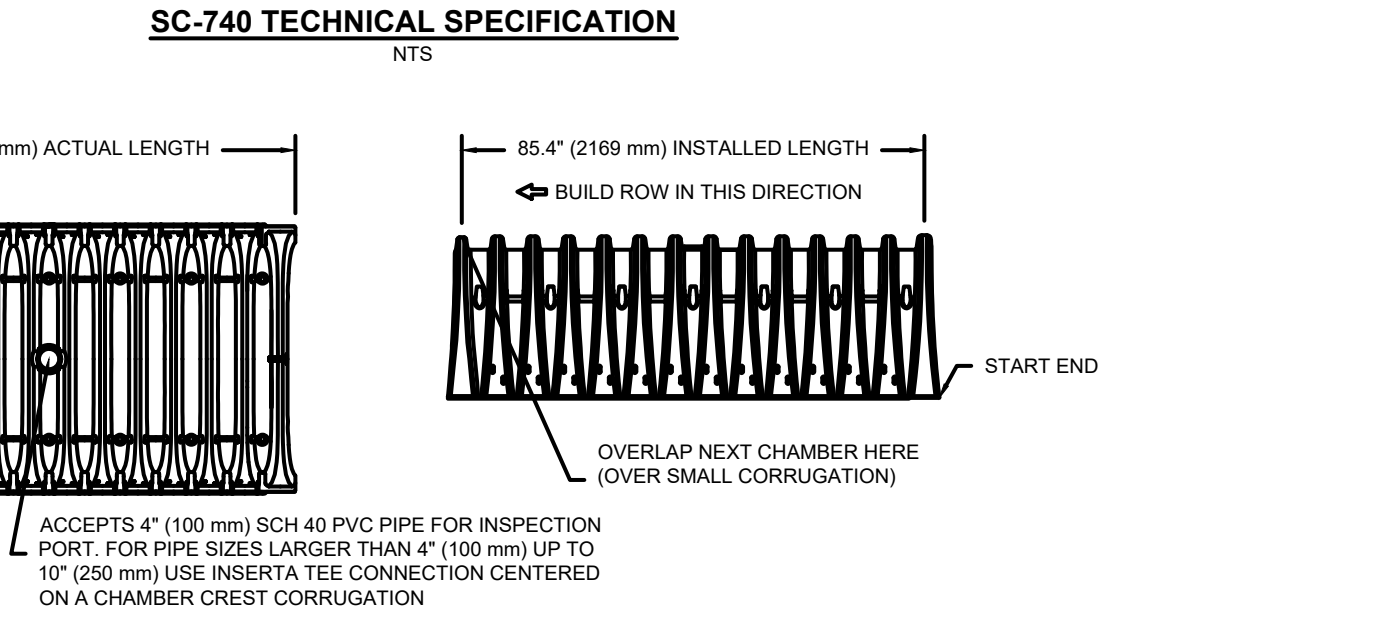
INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
 A. INSPECTION PORTS (IF PRESENT)
 A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 A.2. REMOVE AND CLEAN FLEXTORM FILTER IF INSTALLED
 A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 A.5. IF SEDIMENT IS AT OR ABOVE, 3" (80 mm) PROCEED TO STEP 2; IF NOT, PROCEED TO STEP 3.
 B. ALL ISOLATOR PLUS ROWS
 B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 B.3. IF SEDIMENT IS AT OR ABOVE, 3" (80 mm) PROCEED TO STEP 2; IF NOT, PROCEED TO STEP 3.
 STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 C. VACUUM STRUCTURE SUMP AS REQUIRED
 STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
 STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

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

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 • TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 • TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 • TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 • THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 • THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 • THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.



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

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

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 • NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 • NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
 • WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 30" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

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

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

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
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC	6" (150 mm)	12.2" (310 mm)	16.5" (419 mm)	0.5" (13 mm)
SC740EPE08T / SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	14.5" (368 mm)	0.8" (15 mm)
SC740EPE10B / SC740EPE10BPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

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

NOTE: ALL DIMENSIONS ARE NOMINAL

SYSTEM DETAILS (P213)	ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION
PROPOSED LAYOUT INCLUDES 136 STORMTECH SC-740 CHAMBERS AND 26 END CAPS INSTALLED WITH 6" BASE STONE AND 6" COVER STONE. AN ISOLATOR ROW IS ALSO PROPOSED.	TP-8 ELEVATION: 200.15± GROUNDWATER ELEVATION: 196.48± (44")
MAX. ALLOWABLE GRADE (TOP OF PAVED/UNPAVED)	TP-39 ELEVATION: 200.13± GROUNDWATER ELEVATION: 197.13± (36")
MIN. ALLOWABLE GRADE (PAVED W/ TRAFFIC)	TP-56 ELEVATION: 200.45± GROUNDWATER ELEVATION: 198.95± (18")
TOP OF SC-740 CHAMBER	TP-57 ELEVATION: 200.90± GROUNDWATER ELEVATION: 198.90± (24")
WEIR PLATE INVERT	PROPOSED BOTTOM OF SYSTEM: 200.95 ESTIMATED GROUNDWATER ELEVATION: 198.95± (18")
12" X 12" BOTTOM MANFOLD INVERT	
12" BOTTOM CONNECTION INVERT	
24" ISOLATOR ROW INVERT	
24" SC-740 CHAMBER BOTTOM OF STONE	

- NOTE:**
 1. THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WITNESSED BY AN AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.
 2. ESTIMATED SEASONAL HIGH GROUNDWATER CONFIRMED USING TP-56. REFER TO DETAIL CALCULATION PROVIDED ABOVE.
 3. LAYOUT, DESIGN, AND ELEVATIONS PRODUCED BY ADS STORMTECH DESIGN TOOL.
 4. REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.

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PREPARED FOR:
 FRH REALTY LLC
 c/o FAIRFIELD RESIDENTIAL
 5 BURLINGTON WOODS, SUITE 203
 BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

11/10/23
 KATIE L. ENRIGHT
 CIVIL
 No. 4673
 REGISTERED PROFESSIONAL ENGINEER

SITE PLAN

STORMTECH INFILTRATION SYSTEM #3
 (DETAIL SHEET 22 OF 27)

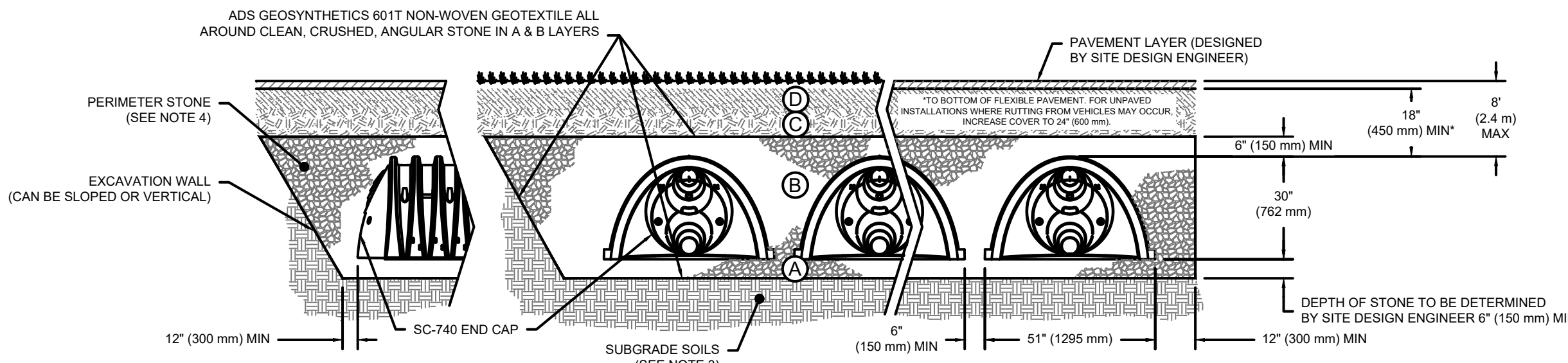
DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.60
 SHEET 60 OF 65

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

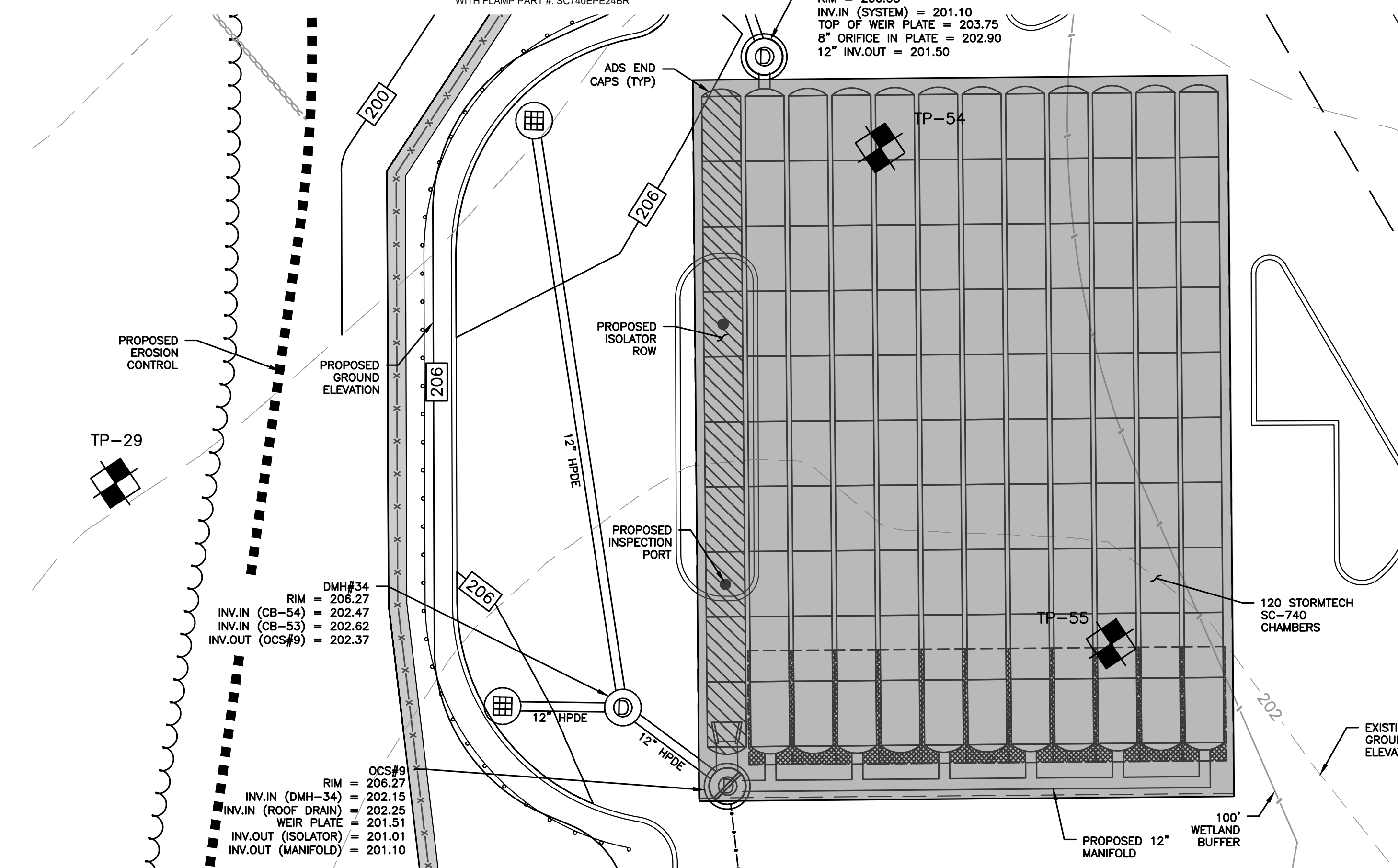
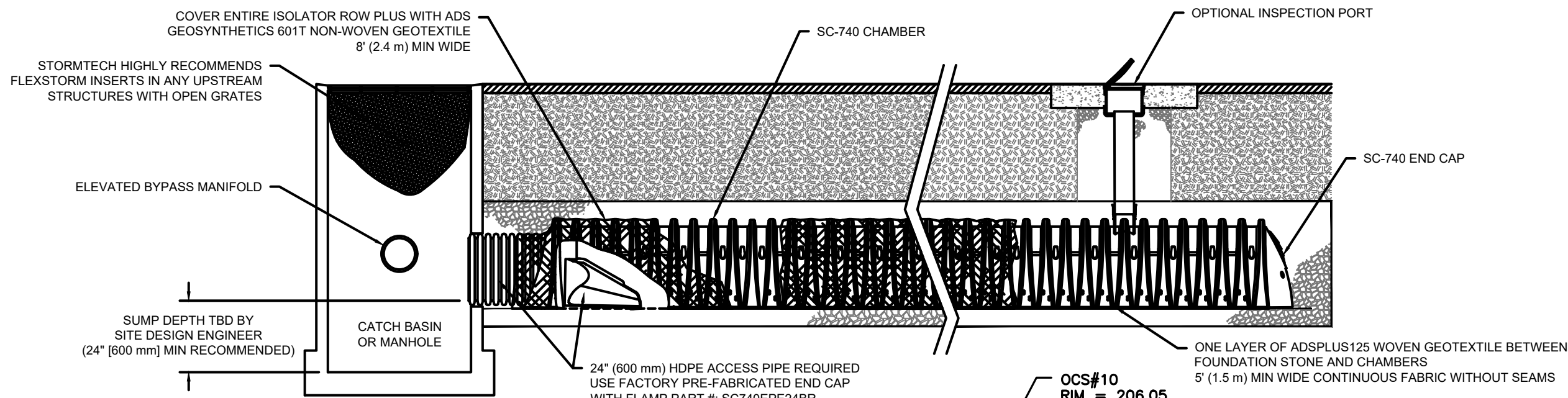
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

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



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. (AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (4" MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-TR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN. (AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

SYSTEM DETAILS (P214)

PROPOSED LAYOUT INCLUDES 120 STORMTECH SC-740 CHAMBERS AND 24 END CAPS INSTALLED WITH 6" BASE STONE AND 6" COVER STONE. AN ISOLATOR ROW IS ALSO PROPOSED.

MAX. ALLOWABLE GRADE (TOP OF PAVE/UNPAVED)	211.50
MIN. ALLOWABLE GRADE (PAVED W/ TRAFFIC)	205.00
TOP OF STONE	204.00
TOP OF SC-740 CHAMBER	203.50
WEIR PLATE INVERT	201.51
12"x12" BOTTOM MANIFOLD INVERT	201.10
12" BOTTOM CONNECTION INVERT	201.10
24" ISOLATOR ROW INVERT	201.01
BOTTOM OF SC-740 CHAMBER	201.00
BOTTOM OF STONE	200.50

ESTIMATED SEASONAL HIGH GROUNDWATER

IP-1	ELEVATION: 200.71±
GROUNDWATER ELEVATION:	196.96± (45°)
IP-42	ELEVATION: 199.48±
GROUNDWATER ELEVATION:	195.48± (48°)
IP-54	ELEVATION: 200.20±
GROUNDWATER ELEVATION:	194.82± (67°)
IP-55	ELEVATION: 201.70±
GROUNDWATER ELEVATION:	196.04± (68°)
PROPOSED BASE OF SYSTEM:	200.50
ESTIMATED GROUNDWATER ELEVATION:	196.96± (45°)

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - ALL ISOLATOR PLUS ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

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

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

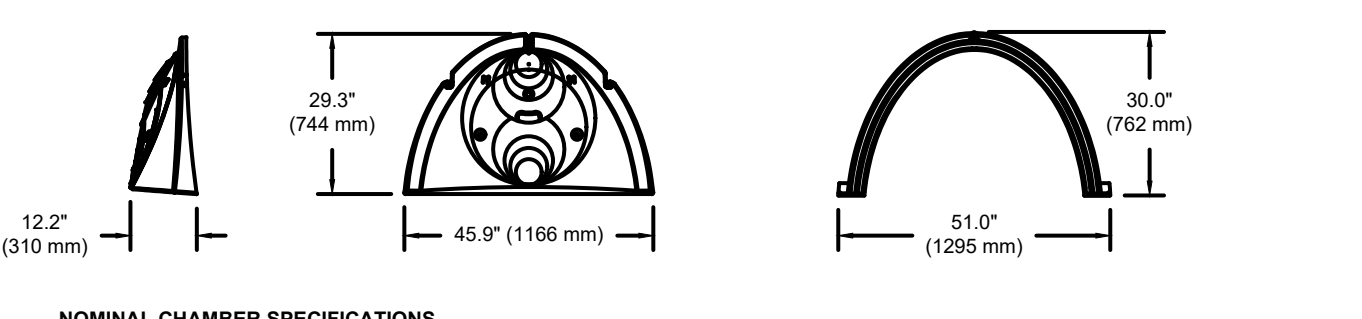
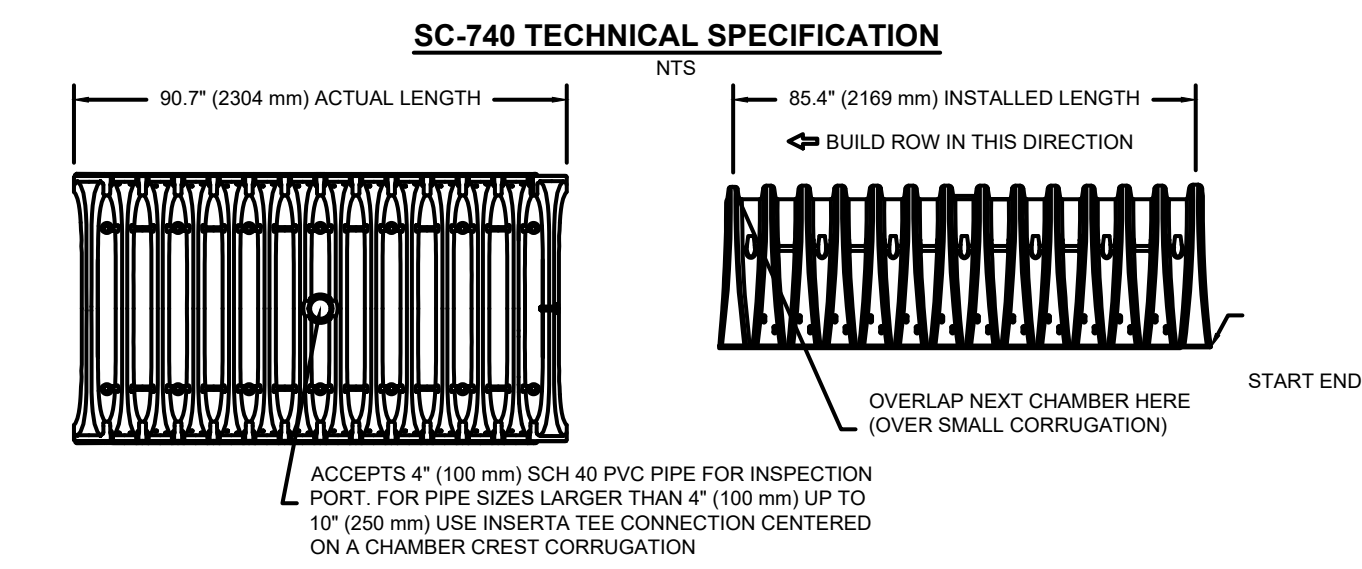
- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED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

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 30" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

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

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



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4" (1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET (1.30 m ³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET (2.12 m ³)
WEIGHT	75.0 lbs. (33.6 kg)

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

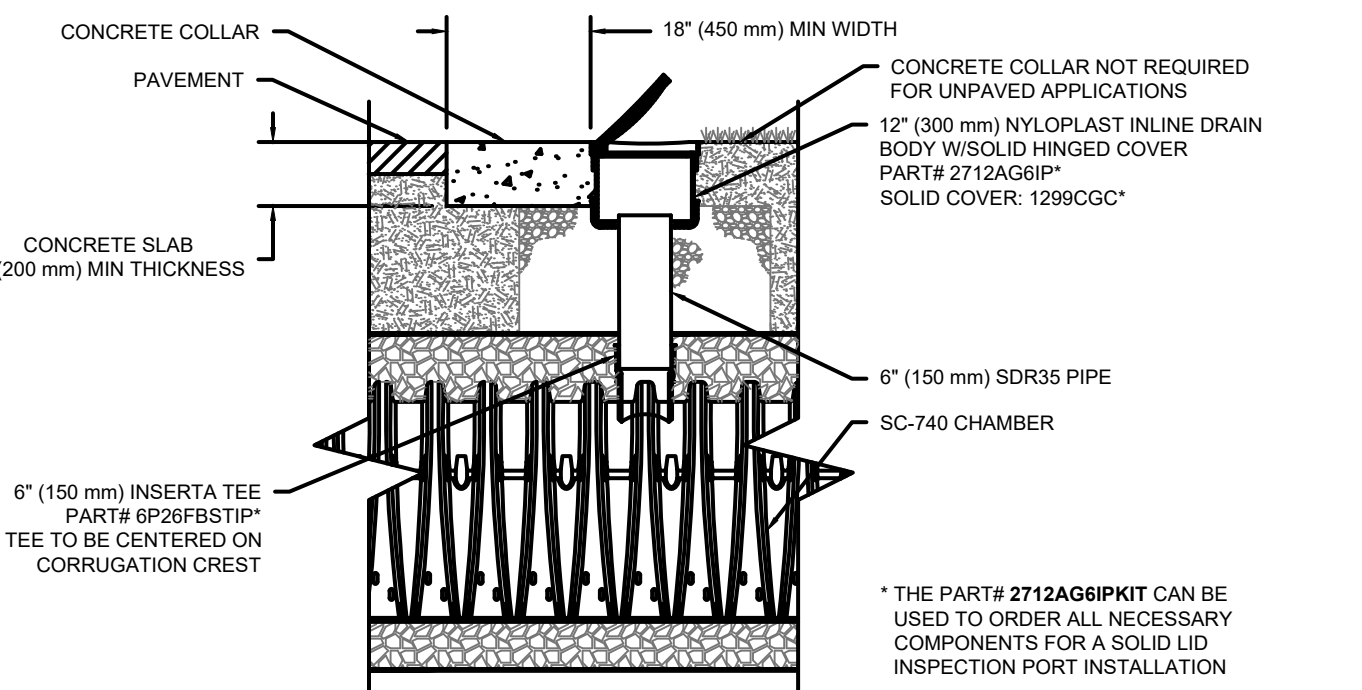
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EPE0T / SC740EPE0T0PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	—
SC740EPE0B / SC740EPE0B0PC	—	—	—	0.5" (13 mm)
SC740EPE0T / SC740EPE0T0PC	6" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	—
SC740EPE0B / SC740EPE0B0PC	—	—	—	0.6" (15 mm)
SC740EPE10T / SC740EPE10T0PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	—
SC740EPE10B / SC740EPE10B0PC	—	—	—	0.7" (18 mm)
SC740EPE12T / SC740EPE12T0PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	—
SC740EPE12B / SC740EPE12B0PC	—	—	—	1.2" (30 mm)
SC740EPE15T / SC740EPE15T0PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	—
SC740EPE15B / SC740EPE15B0PC	—	—	—	1.3" (33 mm)
SC740EPE18T / SC740EPE18T0PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	—
SC740EPE18B / SC740EPE18B0PC	—	—	—	0.8" (21 mm)
SC740EPE24T / SC740EPE24T0PC	24" (600 mm)	18.5" (470 mm)	—	0.1" (3 mm)

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

NOTE: ALL DIMENSIONS ARE NOMINAL



* THE PART# 2712AG6IPKIT CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

NOTE:

- THE AREA OF INFILTRATION SYSTEMS SHALL BE EXCAVATED TO REMOVE TILL DOWN TO NATURAL SOILS AND SHALL BE WET SET BY AGENT OF THE TOWN PRIOR TO INSTALLING CRUSHED STONE AND THE UNDERGROUND INFILTRATION SYSTEM.
- ESTIMATED SEASONAL HIGH GROUNDWATER HAS BEEN CONFIRMED USING TP-55. REFER TO DETAIL CALCULATION PROVIDED ABOVE.
- LAYOUT, DESIGN, AND ELEVATIONS PRODUCED BY ADS STORMTECH DESIGN TOOL.
- REFER TO GRADING AND DRAINAGE NOTE 20 ON SHEET 2.

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BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN

11-10-23
KATE ENRIGHT
CIVIL
No. 4878
Professional Seal

SITE PLAN

STORMTECH INFILTRATION SYSTEM #4
(DETAIL SHEET 23 OF 27)

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE
C.61
SHEET 61 OF 65

NOTE:

1. THESE CULVERT DESIGNS HAVE BEEN PREPARED IN ACCORDANCE WITH THE MASSACHUSETTS STREAM CROSSING STANDARDS HANDBOOK BY THE DIVISION OF ECOLOGICAL RESTORATION 2ND ADDITION DATED JUNE 2012.

GENERAL CONSTRUCTION SEQUENCE

1. ESTABLISH DOWNSTREAM EROSION CONTROLS
2. PERFORM APPROXIMATE GRADING FOR APPROACH ON BOTH SIDES OF CULVERT.
3. STOCK PILE FILL MATERIALS WITHIN THE UPLAND AREA ADJACENT TO EITHER CULVERT INSTALLATION. INSTALL EROSION CONTROLS AROUND THE BASE OF THE PILE.
4. ESTABLISH STREAM BED WITH GRAVEL AND RIP RAP IN A NATURALISTIC PATTERN.
5. PLACE EROSION CONTROLS BETWEEN THE LOCATION OF THE FOOTINGS AND THE STREAM EDGE ON BOTH THE NORTH AND SOUTH SIDES.
6. EXCAVATE THE AREA FOR CONSTRUCTION OF THE FOOTINGS AND ESTABLISH DEWATERING PROTOCOLS.
7. FORM, POUR, CURE AND BACKFILL FOOTINGS AND WING WALL FOOTINGS.
8. CONSTRUCT CULVERT PER RECOMMENDATION OF CULVERT MANUFACTURER.
9. BACKFILL CULVERT TO TIE IN WITH APPROACHES PREVIOUSLY GRADED ON BOTH SIDES.
10. LOAM AND SEED AFFECTED AREAS WITH AN APPROPRIATE WETLAND SEED MIX.
11. REFER TO SHEET 63 FOR CULVERT CROSSING CUT SHEET.

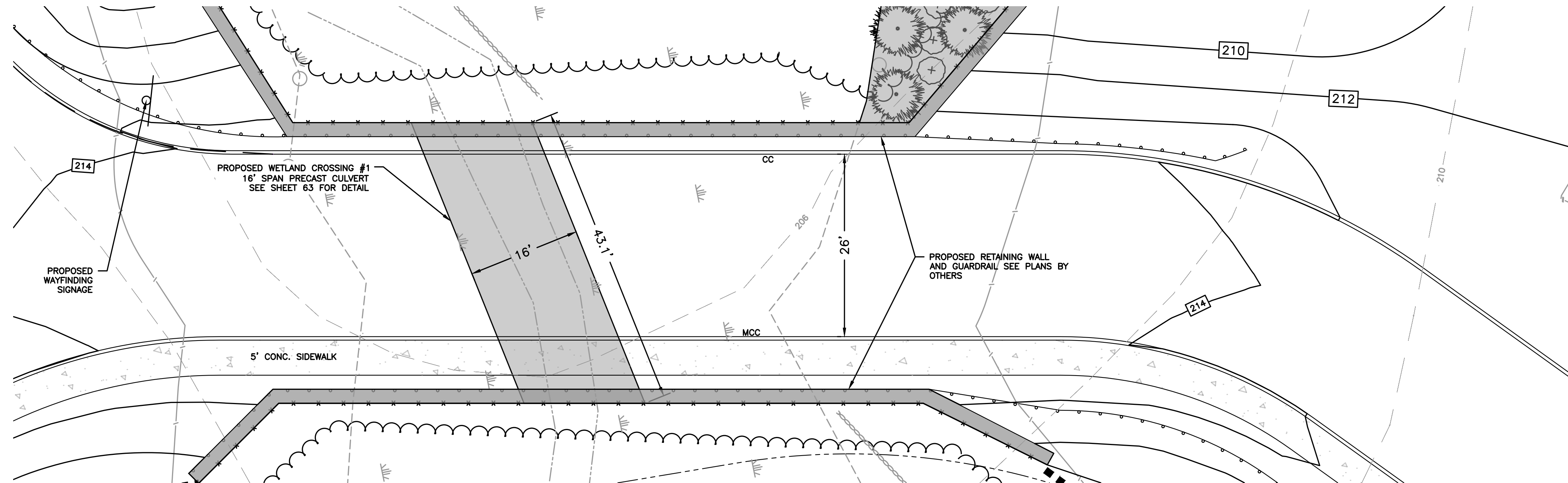
DEWATERING CONTROLS

DEWATERING ACTIVITIES MUST BE PROVIDED IN AN APPROPRIATE MANNER TO AVOID SOIL EROSION DURING CONSTRUCTION.

IF GROUNDWATER IS PRESENT WHEN EXCAVATING FOR THE PROPOSED FOOTINGS A WATER PUMP DRAINING THROUGH A DEWATERING BAG, MADE OF GEOTEXTILE FABRIC, WILL BE USED TO REMOVE SEDIMENTS AND ALLOW THE FLOW TO DISCHARGE OVER A LARGER AREA ON THE LAWN AREA UPHILL FROM THE PROPOSED CONSTRUCTION.

PRECAUTIONS:

1. WATER SHOULD NOT BE PUMPED DIRECTLY ONTO SLOPES
2. DEWATERING ACTIVITIES SHOULD BE DIRECTED TO VEGETATED AREAS
3. REVIEW AREA FOR EROSION AND INSTABILITY
4. NEVER DISCHARGE WATER THAT HAS BEEN CONTAMINATED WITH OIL, GREASE, OR CHEMICAL PRODUCTS.



DESIGN NOTES:

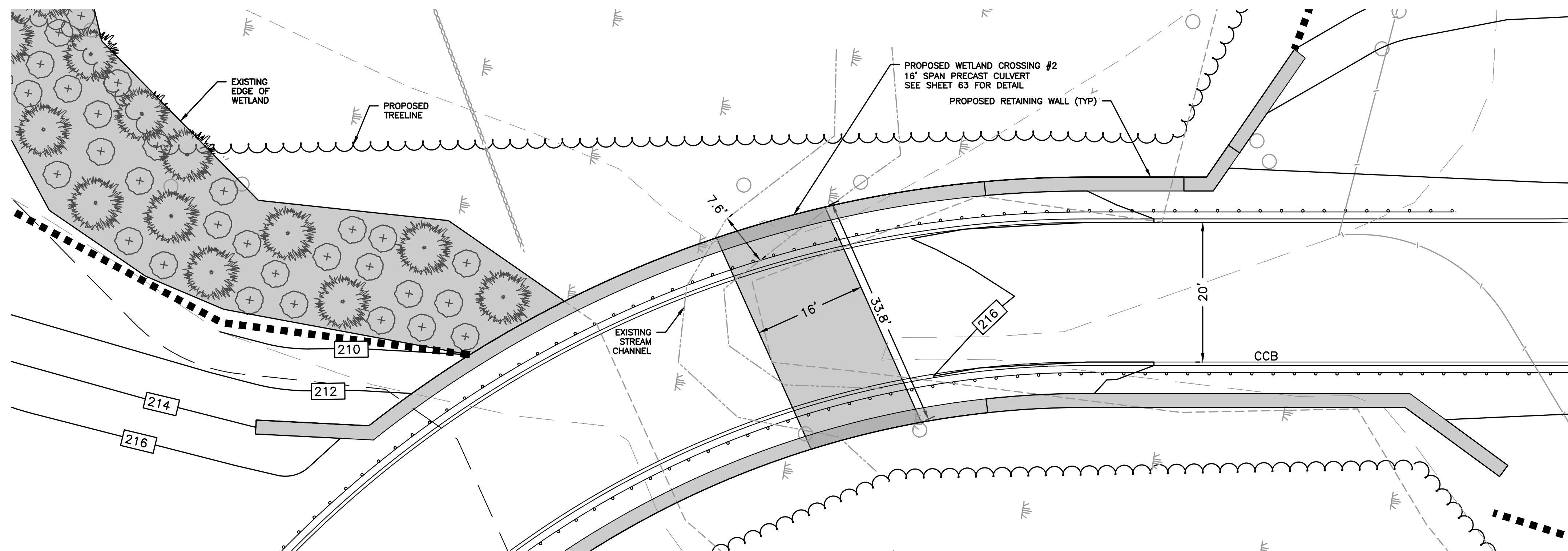
1. CULVERT DESIGN REQUIREMENTS PER NOTE 4
2. TYPE OF CROSSING – MUST BE 3 SIDED BOX CULVERT, OPEN BOTTOM CULVERT OR ARCH
3. EMBEDMENT – ALL CULVERTS MUST BE EMBEDDED A MINIMUM OF 2 FT AND ROUND PIPES AND CULVERTS AT LEAST 25%
4. CROSSING SPAN – A MINIMUM OF 1.2 TIMES THE BANK FULL WIDTH OF STREAM. AT WEST SIDE OF CULVERT STREAM WIDTH IS 8.6 FEET THEREFORE MINIMUM WIDTH IS 10.3 FT ~ 12 FT. 16' IS PROPOSED.
5. OPENNESS RATIO – RATIO OF CROSS SECTIONAL AREA TO CROSSING LENGTH MUST BE AT LEAST 0.82 FT. EXISTING LENGTH IS 43.5 FEET THEREFORE THE MINIMUM CROSS SECTIONAL AREA IS 35.7 FT² ~ 36 FT². THEREFORE MINIMUM INTERNAL OPEN HEIGHT SHALL BE AT LEAST 3 FT. 5 FT HEIGHT PROVIDED

WETLAND CROSSING #1

SCALE: 1"=10'

DESIGN NOTES:

1. CULVERT DESIGN REQUIREMENTS PER NOTE 4
2. TYPE OF CROSSING – MUST BE 3 SIDED BOX CULVERT, OPEN BOTTOM CULVERT OR ARCH
3. EMBEDMENT – ALL CULVERTS MUST BE EMBEDDED A MINIMUM OF 2 FT AND ROUND PIPES AND CULVERTS AT LEAST 25%
4. CROSSING SPAN – A MINIMUM OF 1.2 TIMES THE BANK FULL WIDTH OF STREAM. AT WEST SIDE OF CULVERT STREAM WIDTH IS 7.6 FEET THEREFORE MINIMUM WIDTH IS 9.1 FEET ~ 10 FT. 16' IS PROPOSED.
5. OPENNESS RATIO – RATIO OF CROSS SECTIONAL AREA TO CROSSING LENGTH MUST BE AT LEAST 0.82 FT. EXISTING LENGTH IS 33 FEET THEREFORE THE MINIMUM CROSS SECTIONAL AREA IS 27.1 FT² ~ 30 FT². THEREFORE MINIMUM INTERNAL OPEN HEIGHT SHALL BE 2.5 FT. 5 FT HEIGHT PROVIDED



WETLAND CROSSING #2

SCALE: 1"=10'



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BURLINGTON, MA 01803

**PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA**

REVISIONS:

NO	BY	DATE	DESCRIPTION
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2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



**SITE
PLAN**

**WETLAND CROSSINGS
(DETAIL SHEET
24 OF 27)**

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.62

SHEET 62 OF 65



HOWARD STEIN HUDSON

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BURLINGTON, MA 01803

PROPOSED MULTIFAMILY
DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
1	PB	08/31/23	REV. PER PEER REVIEW
2	PB	09/12/23	REV. TRAIL AND SEEDING
3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE
PLAN

WETLAND CROSSING
CULVERT
(DETAIL SHEET
25 OF 27)

DATE: JUNE 20, 2023

PROJECT NUMBER: 19097

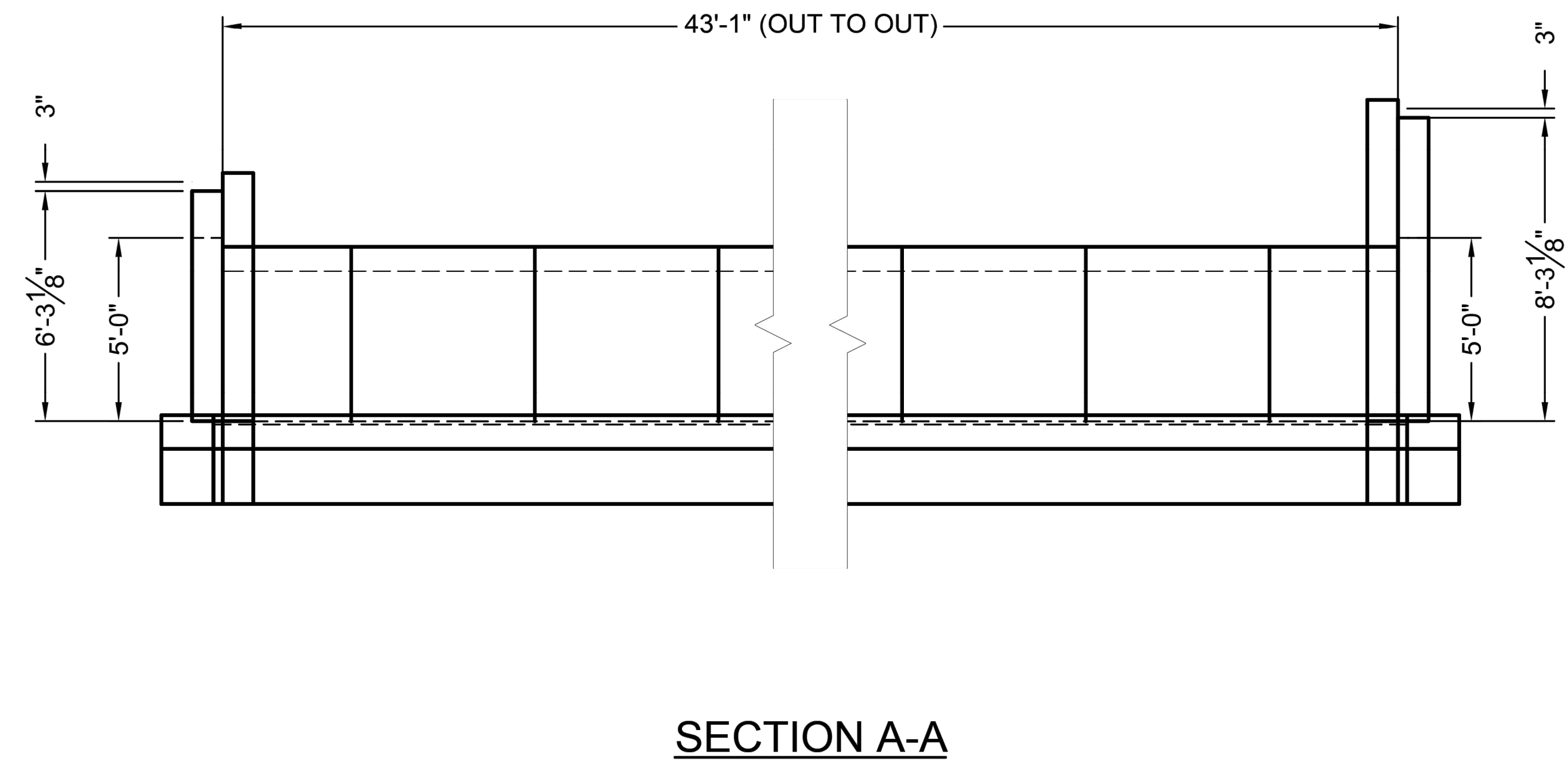
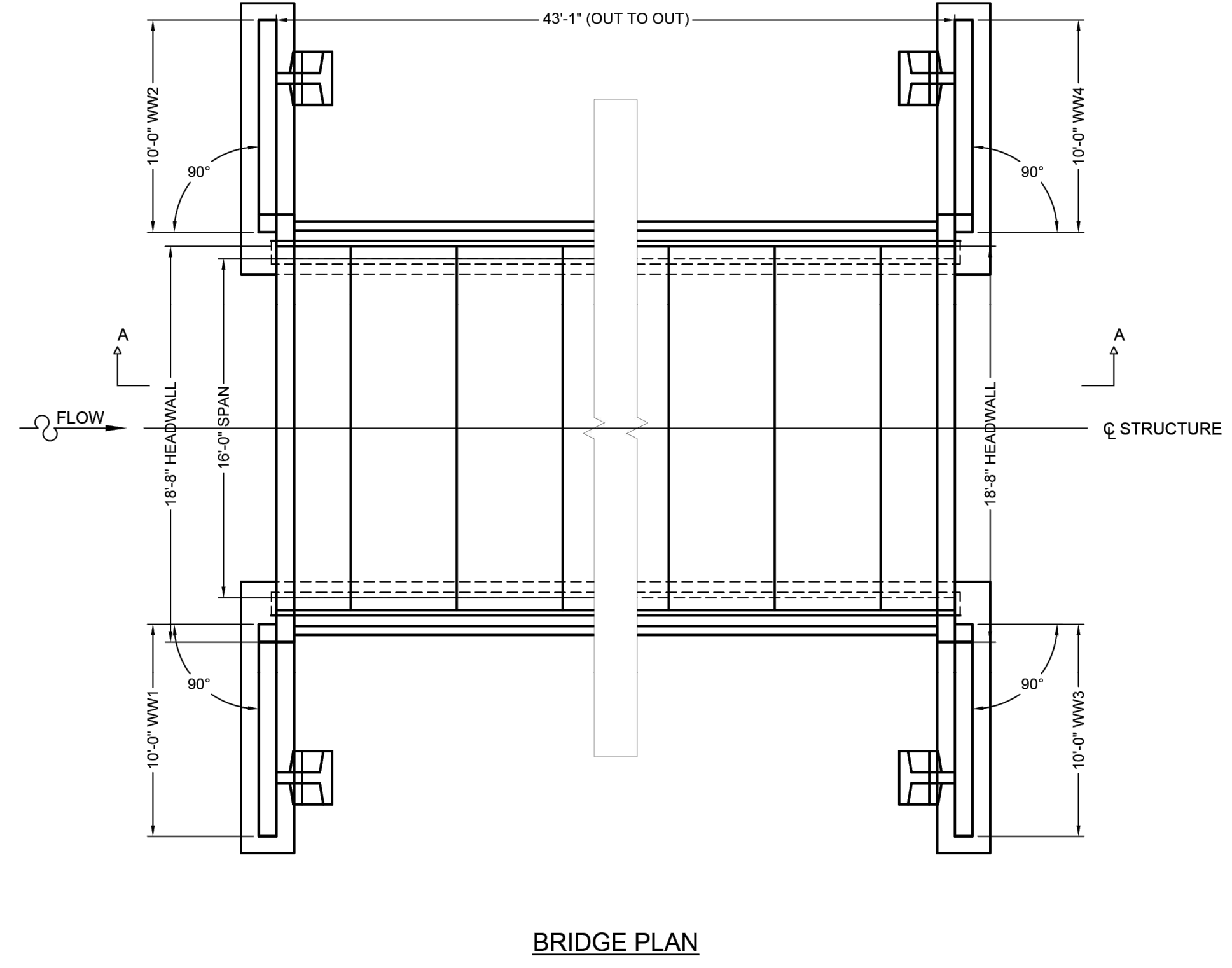
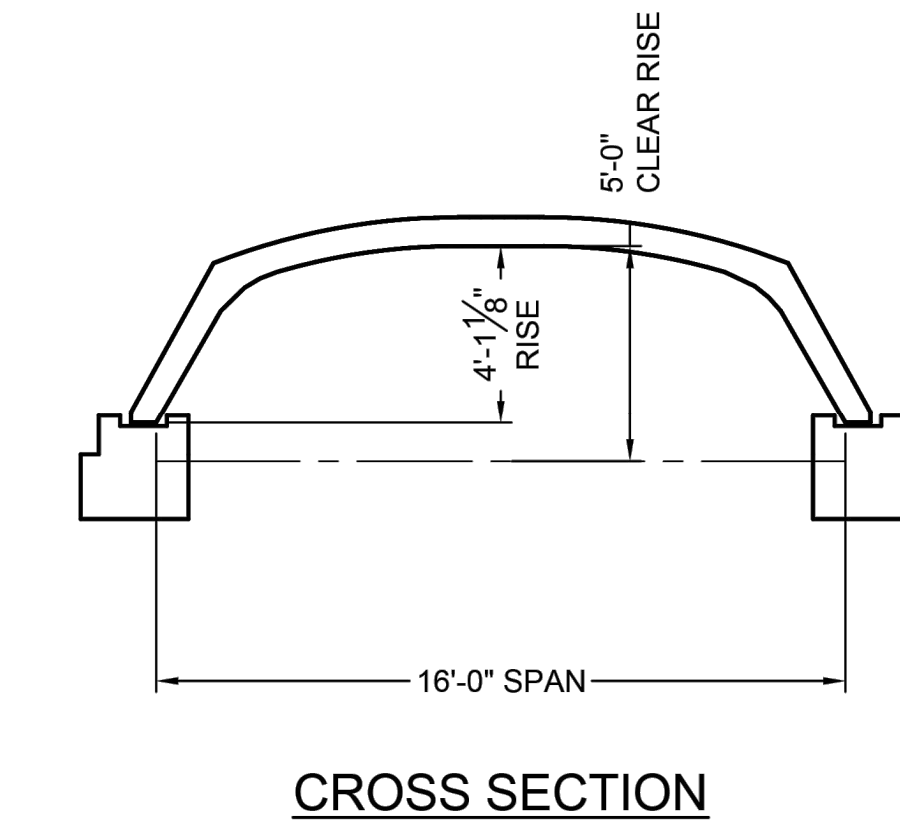
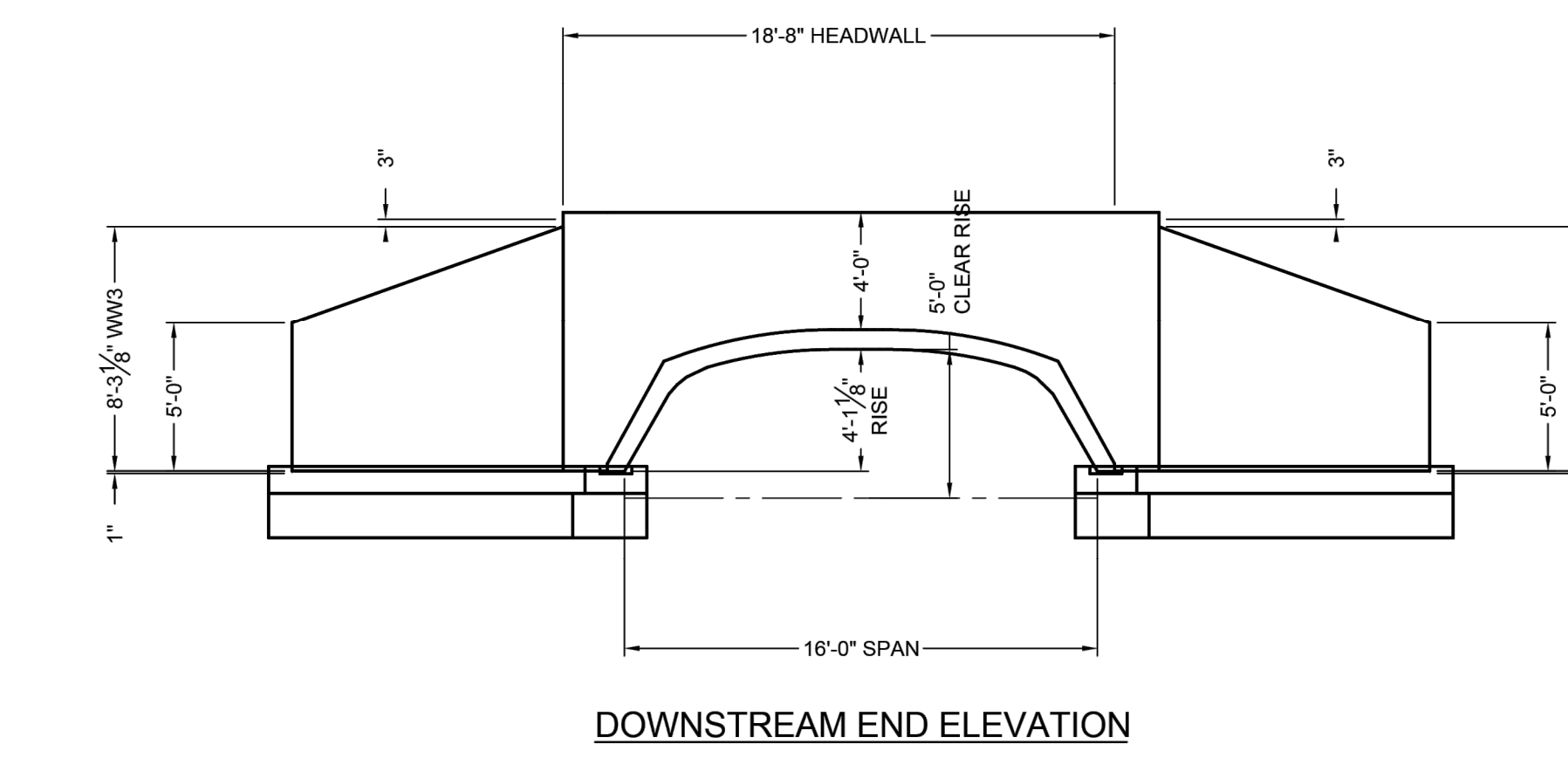
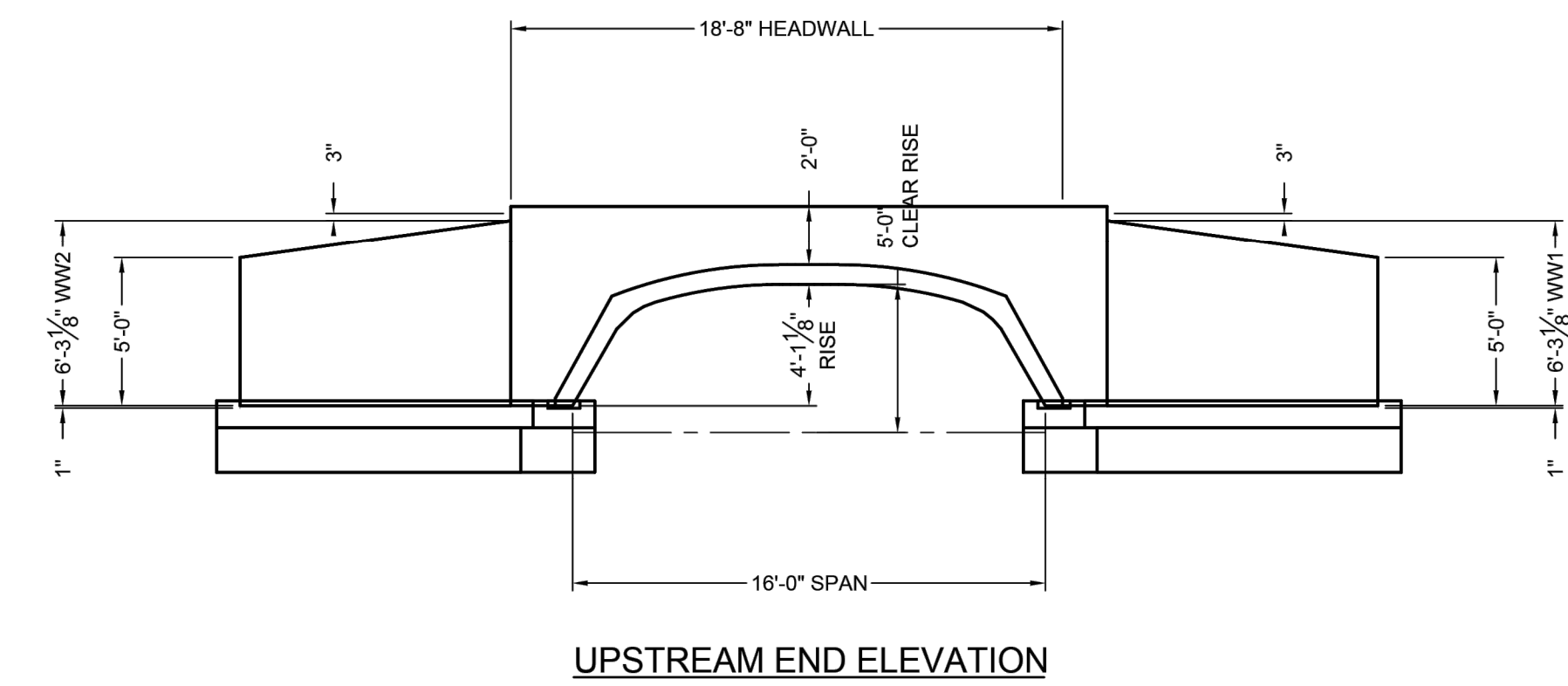
DESIGNED BY: PB/KE/KF

DRAWN BY: PB/MB/KF/KL

CHECKED BY: KE

C.63

SHEET 63 OF 65



- NOTES:
1. DETAILS PROVIDED THROUGH CONTECH DESIGN YOUR OWN BRIDGE TOOL. DETAILS ARE PRELIMINARY IN NATURE AND NOT INTENDED FOR CONSTRUCTION. REFER TO STRUCTURAL ENGINEERING PLANS FOR FINAL DETAILS.
 2. CONSPAN CULVERT OR APPROVED EQUAL TO BE USED.
 3. REFER TO SHEET 62 FOR BACKFILL, EMBEDMENT, BEDDING, OR BOTTOM CONSTRUCTION.

WETLAND CROSSING CONSPAN O-SERIES 16' SPAN CULVERT

SCALE: N.T.S

1/17/2023 11:57:00 AM \\egryndrive\CADD\19097\19097_04 - Lot 2\CURRENT\19097 - Details.dwg
Plot Saved by: AIB/MAL
Printed by: Roby Jaramal

CEDAR RIDGE WETLAND REPLICATION PLAN

1. THE REPLICATION AREA PLANTING HAS BEEN PRODUCED BY BRIAN BUTLER OF OXBOW ASSOCIATES.
2. THE CONSTRUCTION OF COMPENSATORY WETLAND FOR ALTERATION OF BORDERING VEGETATED WETLAND (BWV) IS PROPOSED IN 2 LOCATIONS. THE LOCATIONS CHOSEN AND THE METHODOLOGY EMPLOYED FOR THE REPLICATION EFFORT ARE COMPLIANT WITH THE APPLICABLE STANDARDS AT 310 CMR 10.055 (4) (B);
- 2.1. THE SURFACE OF THE REPLACEMENT AREA TO BE CREATED ("THE REPLACEMENT AREA") SHALL BE EQUAL TO THAT OF THE AREA THAT WILL BE LOST ("THE LOST AREA");
3. THE AGGREGATE ALTERED AREA EQUALS LESS THAN 4,567 SQUARE FEET WITH THE REDUCTION OF THE CROSSING 1 FOOTPRINT. THE PROPOSED 7,106 SQ. FT. REPLICATION EXCEEDS AN IMPACT TO REPLICATION RATION OF 1:1.55.
- 3.1. THE GROUND WATER AND SURFACE ELEVATION OF THE REPLACEMENT AREA SHALL BE APPROXIMATELY EQUAL TO THAT OF THE LOST AREA;
4. THE LOCATIONS (2) WERE CHOSEN BOTH FOR ADJACENCY AND CONSISTENCY WITH THE SAME SUBDRAINAGE, AS WELL AS TO APPROXIMATE THE IMPACTED ELEVATIONS AND AMBIENT GROUNDWATER CONDITIONS. THE ALTERATION AT CROSSING 1 IS AT +/- 208 ELEVATION, AS ARE THE PROPOSED REPLACEMENT AREAS. SIMILARLY, CROSSING 2 IS AT +/- 208 ELEVATION AND FINAL GRADES ARE ANTICIPATED TO BE BETWEEN 206 AND 208.
- 4.1. THE OVERALL HORIZONTAL CONFIGURATION AND LOCATION OF THE REPLACEMENT AREA WITH RESPECT TO THE BANK SHALL BE SIMILAR TO THAT OF THE LOST AREA;
5. THE LOCATIONS WERE ADAPTED SO AS TO BE ADJACENT AND PARALLEL TO THE IMPACTED SYSTEMS (SEE SHEET C.87, REV. 9/14/20).
- 5.1. THE REPLACEMENT AREA SHALL HAVE AN UNRESTRICTED HYDRAULIC CONNECTION TO THE SAME WATER BODY OR WATERWAY ASSOCIATED WITH THE LOST AREA;
6. THE LOCALITIES CHOSEN FOR THE COMPENSATORY REPLICATION WERE IDENTIFIED BASED UPON THEIR ADHERENCE TO THIS CRITERIA. THEY ARE WITHIN FEET OF THE IMPACT AND ANNECTANT OR CONFLUENT WITH THE PARENT RESOURCE AREA(S).
- 6.1. THE REPLACEMENT AREA SHALL BE LOCATED WITHIN THE SAME GENERAL AREA OF THE WATER BODY OR REACH OF THE WATERWAY AS THE LOST AREA;
7. THE LOCATION OF THE 2 REPLICATION POLYGONS IS IMMEDIATELY ADJACENT TO THE IMPACTED AREAS AND THEREFORE MEETS THIS STANDARD.
- 7.1. AT LEAST 75% OF THE SURFACE OF THE REPLACEMENT AREA SHALL BE REESTABLISHED WITH INDIGENOUS WETLAND PLANT SPECIES WITHIN TWO GROWING SEASONS, AND PRIOR TO SAID VEGETATIVE REESTABLISHMENT ANY EXPOSED SOIL IN THE REPLACEMENT AREA SHALL BE TEMPORARILY STABILIZED TO PREVENT EROSION IN ACCORDANCE WITH STANDARD U.S. SOIL CONSERVATION SERVICE METHODS;
8. THE PROPOSED REPLICATION PLANS, QUANTIFIED IN THE ACCOMPANYING TABLES WILL MEET THE 75% THRESHOLD, OR, IF NECESSARY WILL BE SUPPLANTED DURING THE TWO-SEASON MONITORING PERIOD. THE SPECIES COMPOSITION AND PREFERRED GROUND TREATMENT (USE OF NATIVE LITTER IF POSSIBLE) ARE IN KEEPING WITH SPECIES NATIVE TO THE AREA AND THE SITE.
- 8.1. THE REPLACEMENT AREA SHALL BE PROVIDED IN A MANNER WHICH IS CONSISTENT WITH ALL OTHER GENERAL PERFORMANCE STANDARDS FOR EACH RESOURCE AREA IN PART III OF 310 CMR 10.00. THE REPLACEMENT AREA MEETS OR EXCEEDS THE APPLICABLE STANDARDS.

SITE PREPARATION AND PLANTING

TOPOGRAPHY IN EACH REPLICATION SITE (2) IS VARIABLE. THE ADJACENT FACES (TO WETLAND) ARE CONTIGUOUS WITH EXISTING BWV AND THE ADJACENT CONSTRUCTION OF THE AREAS WILL PROVIDE A 'BORDERING' CONDITION IN KEEPING WITH THE REPLICATION STANDARDS.

EACH REPLICATION SITE HAS BEEN EXAMINED FOR PRACTICALITY OF IMPLEMENTATION; SPECIFICALLY, THAT NO RADICAL CUTS, ROCK OUTCROPS OR OTHER OBSTACLES TO THE REQUIRED GRADING ARE PRESENT. EACH SITE WILL BE ISOLATED, AT THE BWV BOUNDARY WITH STAKED SILTATION FENCE AND STRAW WATTLES TO FORM A LIMIT OF WORK AND EROSION BARRIER. TREES AND VEGETATION WILL BE CUT AND STUMPS REMOVED AS NEEDED. LEAF LITTER WILL BE GATHERED AND STOCKPILED IF SEASONALLY PRACTICAL.

SOIL WILL BE REMOVED FROM EACH AREA TO A POINT AT LEAST 12 INCHES BELOW SEASONAL HIGH GROUNDWATER. EXAMINATION OF SOILS CHARACTERISTICS BY A WETLAND SCIENTIST WILL SET THE FINAL, OVER-EXCAVATED ELEVATION, ASSURING RELIABLE INTERCEPTION OF LOCAL SEASONAL GROUNDWATER. SOIL FROM THE IMPACT AREAS WILL NOT BE UTILIZED IN THE REPLACEMENT AREAS DUE TO THE PRESENCE OF INVASIVE PROPAGULES AND THE RELATIVELY LOW ORGANIC CONTENT OF THE IMPACT AREA SOILS. CLEAN, WEED-FREE LOAM WITH UP TO 40% HOT-COMPOSTED MATERIAL WILL BE SPREAD AT A DEPTH OF APPROXIMATELY 6" THROUGHOUT THE REPLICATION AREAS AND LIGHTLY COMPACTED.

DURING A SUITABLE SEASONAL PERIOD (AVOIDING MID-WINTER AND LATE SUMMER) TREE AND SHRUB PLANTINGS WILL BE INSTALLED. SPECIES WILL BE DRAWN FROM THE LIST IN TABLE 2, WITH NOT LESS THAN THREE SPECIES IN EACH CATEGORY. PLANTINGS WILL BE WATERED AND/OR STAKED AS NECESSARY. AT THE COMPLETION OF PLANTING ONE OF TWO FINISH TREATMENTS WILL BE APPLIED. IF SUFFICIENT LEAF-LITTER FROM UPLAND SITE AREAS EXHIBITING LOW INVASIVES (BUCKTHORN, BARBERRY, HONEYSUCKLE) CAN BE GATHERED AND STOCKPILED WITHOUT BEING LOST TO COMPOSTING ACTION, THIS WILL BE THE PREFERRED GROUND COVER. TREES AND SHRUBS WILL BE PLANTED PRIOR TO GROUND COVER; HERBACEOUS PLUGS WILL BE INSTALLED THROUGH THE LEAF LITTER. IF RETENTION OF SUITABLE LEAF LITTER MATERIAL IS IMPRACTICAL DUE TO SEASONAL SCHEDULING, OR IF IT CAN ONLY BE SOURCED ON SITE WHERE INVASIVE SPECIES MAY BE PROBLEMATIC, THE SOIL SURFACE WILL BE RAKED, AND SEEDED AT TWO TIMES THE RECOMMENDED RATE WITH A NATIVE NEW ENGLAND WETLAND SEED MIX (NE WETLAND PLANTS OR APPROVED EQUIVALENT). PLUG PLANTINGS WILL FOLLOW THIS TREATMENT. SEEDLESS STRAW MAY BE UTILIZED TO RETAIN SOIL MOISTURE AND DISCOURAGE SEED LOSS, PARTICULARLY IF SEEDING IS LATE IN THE SEASON.

THE REPLICATION AREAS SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE ADJACENT ROAD CONSTRUCTION. THE PLANTING SHALL BE COMPLETED DURING THE FIRST GROWING SEASON AFTER START OF SITE CONSTRUCTION.

MONITORING

ALL GROWTH WILL BE MONITORED TWICE PER YEAR FOR TWO COMPLETE GROWING SEASONS FOLLOWING INSTALLATIONS. IN THE EVENT THAT LESS THAN 80% OF PLANTINGS SURVIVE, REPLACEMENTS WILL BE INSTALLED TO ASSURE A MINIMUM OF 75% HYDROPHYTIC COVERAGE.

PLANTING DENSITIES PROPOSED ANTICIPATE MATURITY OF TREE AND SHRUB SPECIMENS, DELIBERATELY AVOIDING OVERSHADING OF UNDERSTORY PLANTINGS UNTIL THEY HAVE HAD MULTIPLE SEASONS OF GROWTH WITH ADEQUATE INSOLATION TO BECOME ESTABLISHED.

Table 1. Planting densities for the respective replication areas (see plan set).

Planting Category	Replication Area 1	Replication Area 2
Trees	35	24
Shrubs	230	165
Herbaceous Plugs	450	330
Native Wet Mix*	2x recommended	2x recommended

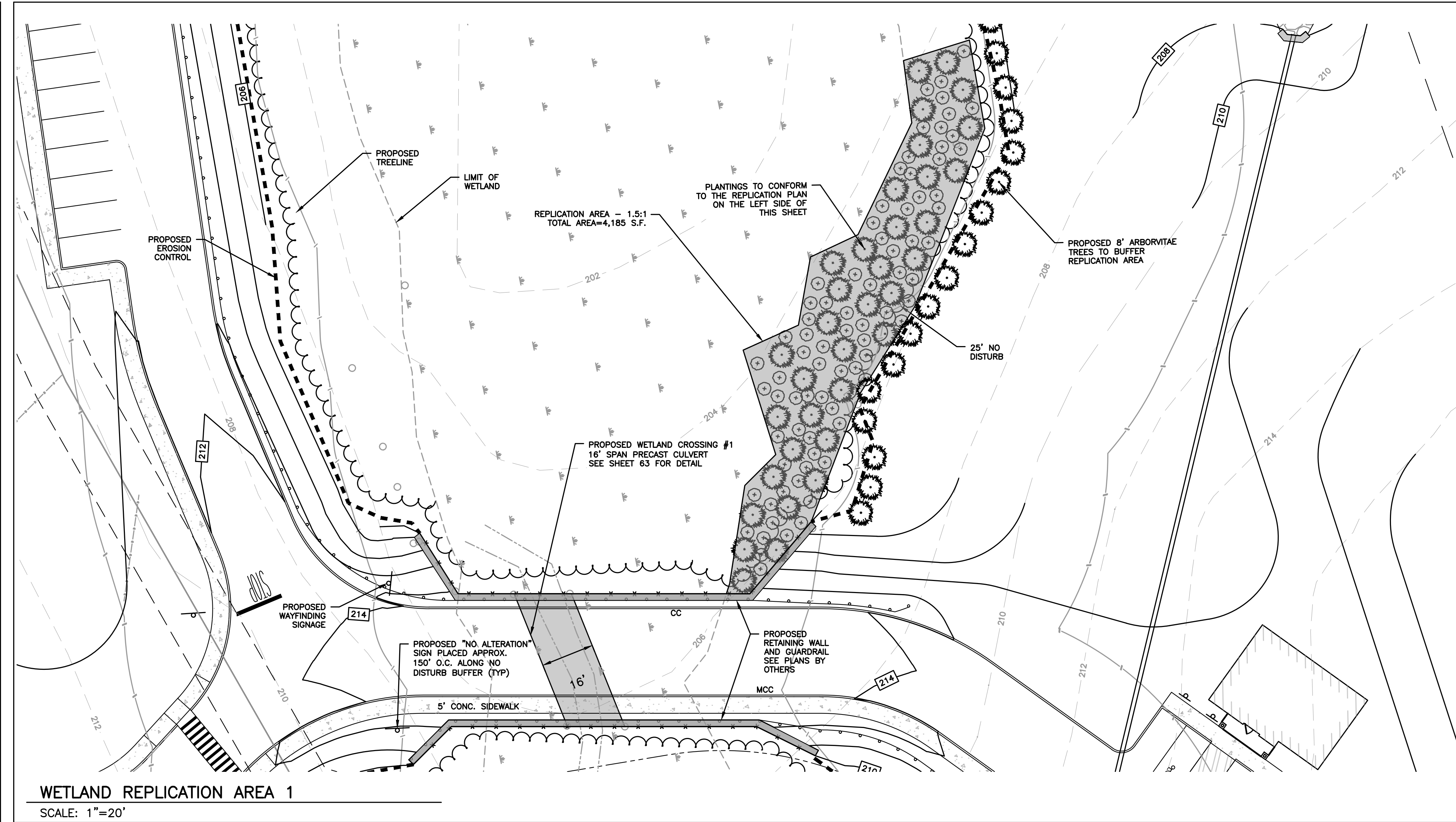
Table 2. Species list of acceptable plantings - at least 3 of tree and shrub species to be planted.

Category	Species	Common Name	Notes
Tree	<i>Acer rubrum</i>	Red Maple	Only specimens >8'
Tree	<i>Fraxinus pennsylvanicum</i>	Green Ash	
Tree	<i>Quercus bicolor</i>	Swamp White Oak	
Tree	<i>Quercus palustris</i>	Pin Oak	
Tree	<i>Ulmus americana*</i>	American Elm*	*Resistant hybrid only
Shrub	<i>Lindera benzoin</i>	Spicebush	
Shrub	<i>Ilex verticillata</i>	Winterberry Holly	Plant in groups of 2-4
Shrub	<i>Viburnum recognitum</i>	Northern Arrowwood	Plant in groups of 2-4
Shrub	<i>Vaccinium corymbosum</i>	Highbush blueberry	Plant in groups of 2-4
Shrub	<i>Viburnum trilobum</i>	Highbush cranberry	Plant in groups of 2-4
Herb. Plugs	<i>Onoclea sensibilis</i>	Sensitive fern	
Herb. Plugs	<i>Osmundastrum cinnamomeum</i>	Cinnamon fern	
Herb. Plugs	<i>Osmunda regalis</i>	Royal fern	
Herb. Plugs	<i>Carex stricta</i>	Tussock sedge	
Seed Mix	<i>New England Native Wet Mix</i>	NE Wetland Plants	Or approved mix
Alt. Ground Cover	<i>Salvaged native leaf mulch*</i>		*Subs for seed mix if possible

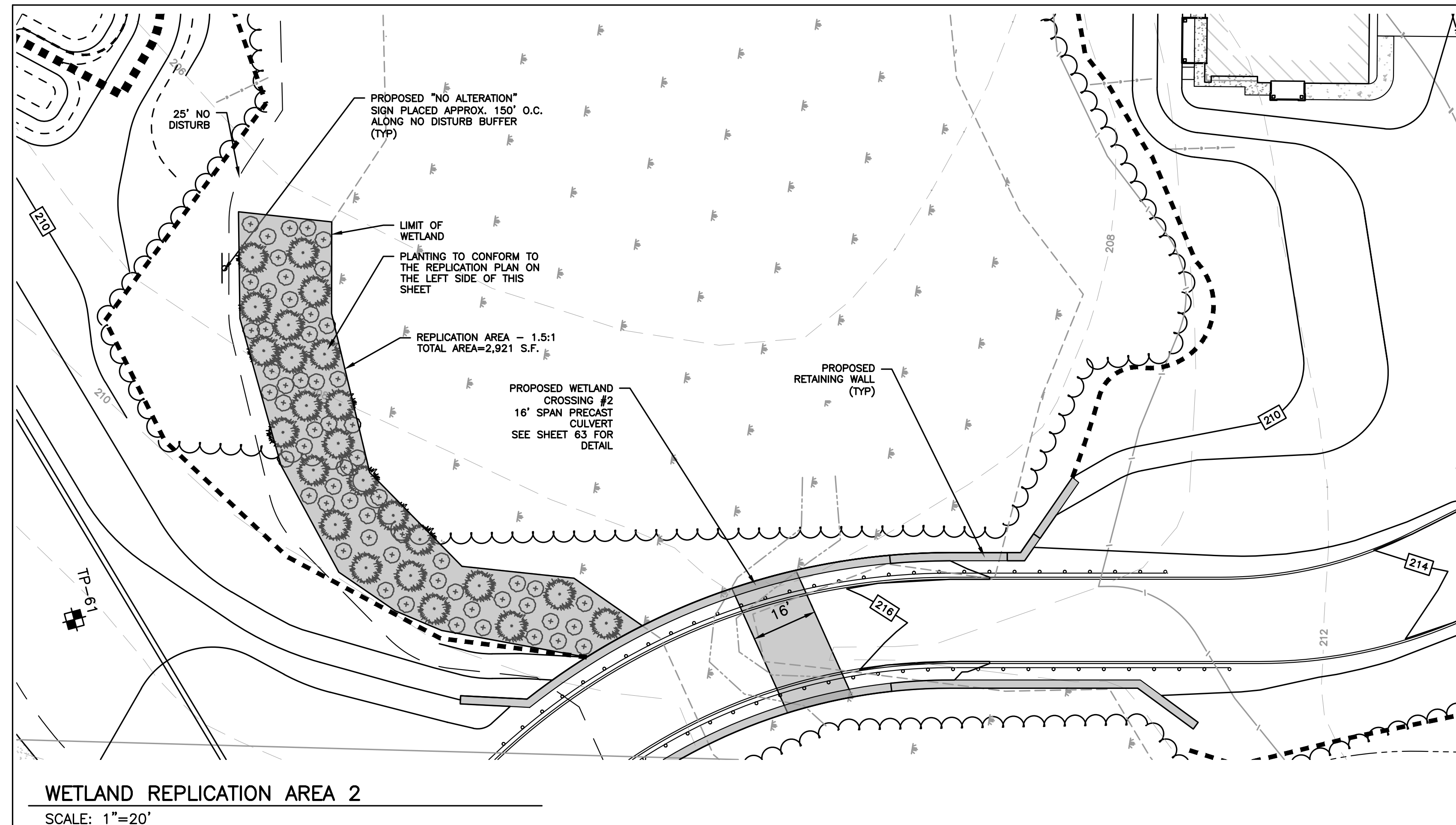
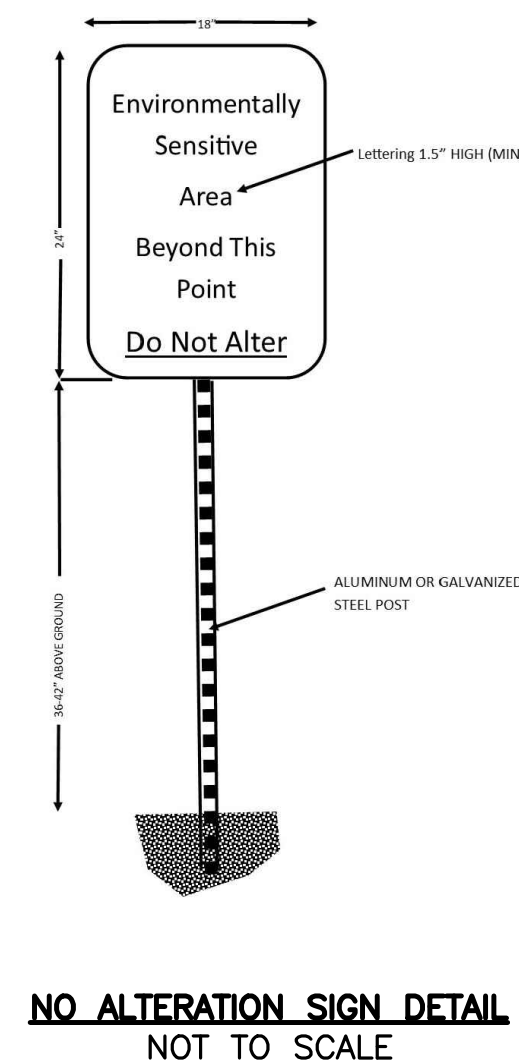
*NOTE: PLANTINGS MAY BE BUMPED UP BY 10% TO INCREASE DENSITY IF DESIRED

TOWN OF WALPOLE CONSERVATION COMMISSION NOTES:

1. INCLUDE LOCATION OF THE NO ALTERATION SIGNS APPROXIMATELY EVERY 150- FEET ON SITE PLAN (TAKING INTO CONSIDERATION THE TWISTS AND TURNS OF THE WETLAND BOUNDARIES TO DETERMINE LOCATIONS) WITH SIGN SPECIFICALLY AT REPLICATION AREAS AND CROSSING. SHOW ON SITE PLAN PET WASTE REMOVAL SIGNS AT BOTH ENDS OF RIVERFRONT WHERE TRAIL BEGINS AND ENDS. PET WASTE PICK UP IS REQUIRED UNDER THE BYLAW.
2. INCLUDE LANDSCAPE PLAN FOR AREAS WITHIN THE 100-FOOT BUFFER ZONE SPECIFYING INVASIVE SPECIES MAINTENANCE PLAN, REMOVAL OF GRASS CLIPPING AND CUTTINGS OUTSIDE THE BUFFER ZONES, LIMIT USE OF NON-ORGANIC FERTILIZERS AND NO HERBICIDES OR PESTICIDES, AND DROUGHT RESISTANT NATIVE PLANTINGS.



- NOTE:**
1. WETLAND REPLICATION AREA - 1.5:1. TOTAL REPLICATION AREA = 7,106 S.F.



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5 BURLINGTON WOODS, SUITE 203
BURLINGTON, MA 01803

PROPOSED MULTIFAMILY DEVELOPMENT
SUMMER STREET
WALPOLE, MA

REVISIONS:

NO	BY	DATE	DESCRIPTION
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3	MB	09/20/23	REV. TOWN/PEER COMM.
4	KL	10/16/23	REV. SOIL TESTING
5	AI	11/10/23	REV. FULL SITE PLAN



SITE PLAN

WETLAND REPLICATION AREAS (DETAIL SHEET 26 OF 27)

DATE: JUNE 20, 2023
PROJECT NUMBER: 19097
DESIGNED BY: PB/KE/KF
DRAWN BY: PB/MB/KF/KL
CHECKED BY: KE
C.64



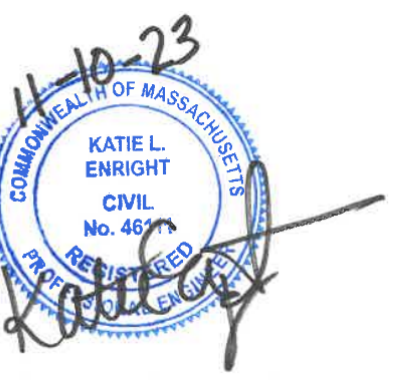
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**PROPOSED MULTIFAMILY
 DEVELOPMENT
 SUMMER STREET
 WALPOLE, MA**

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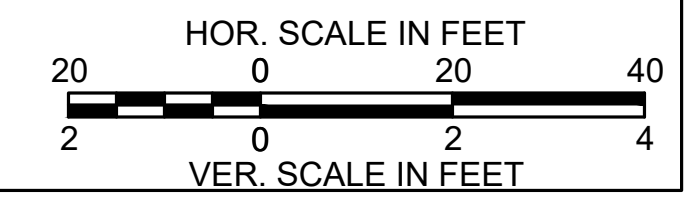
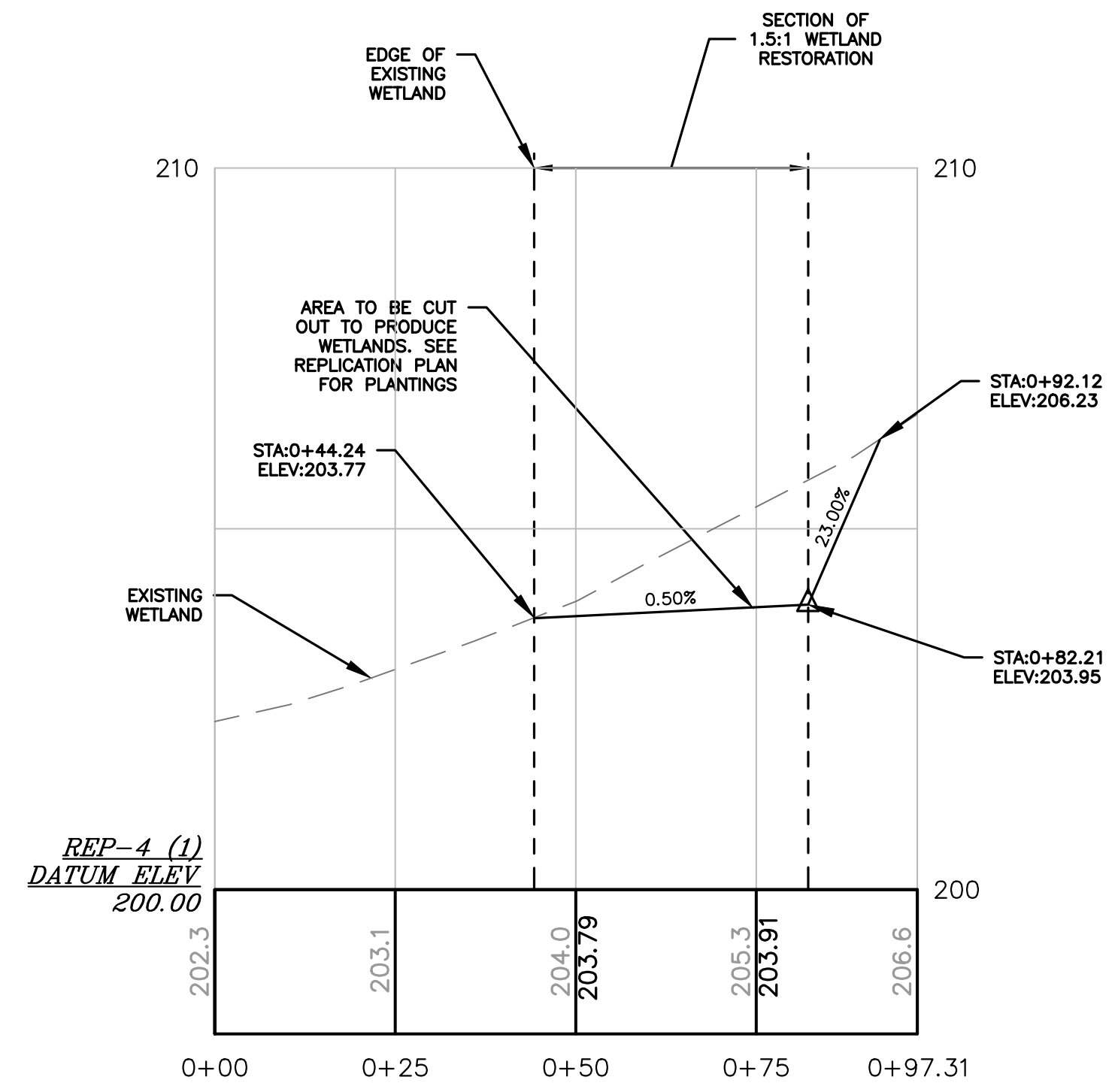
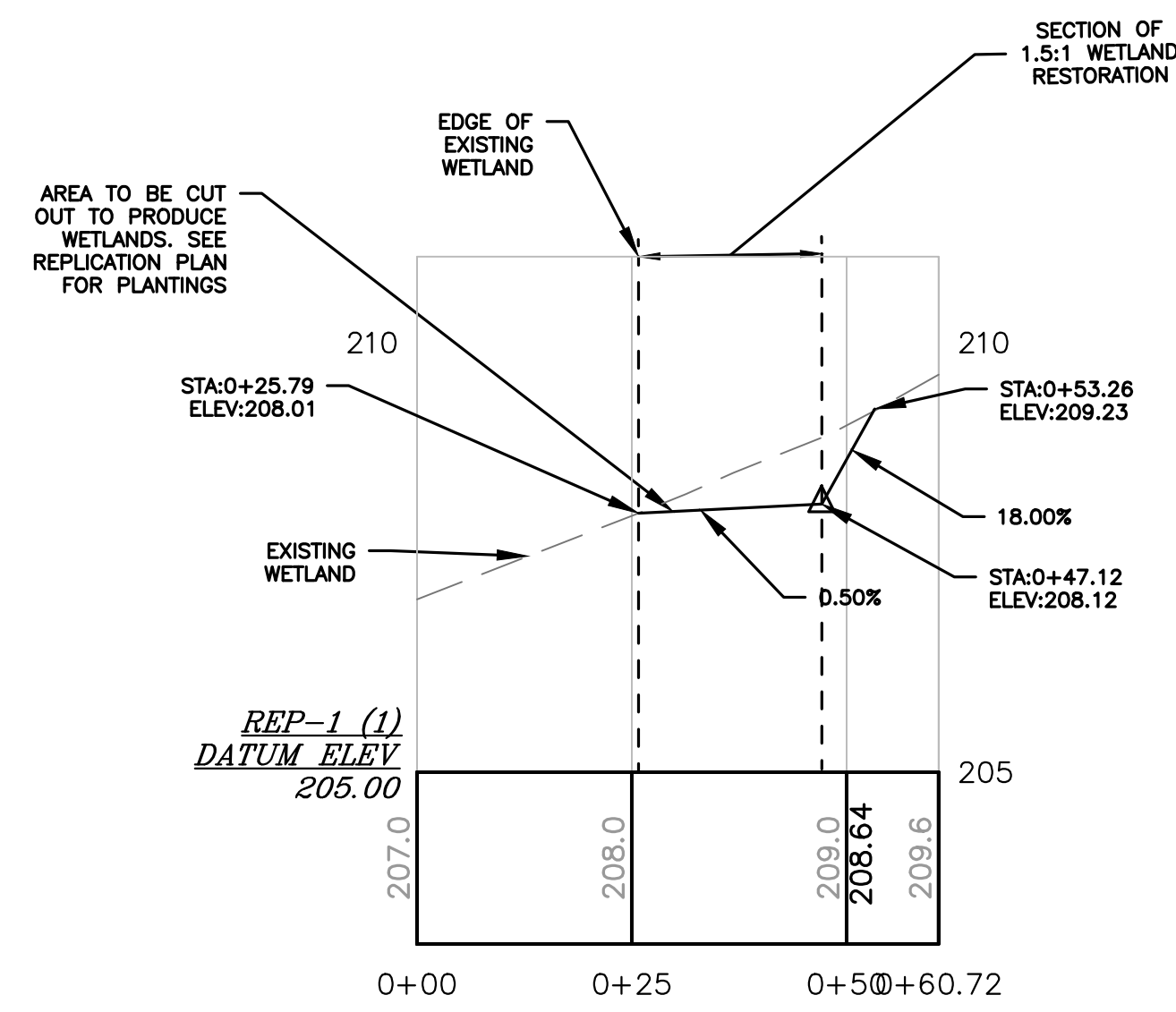
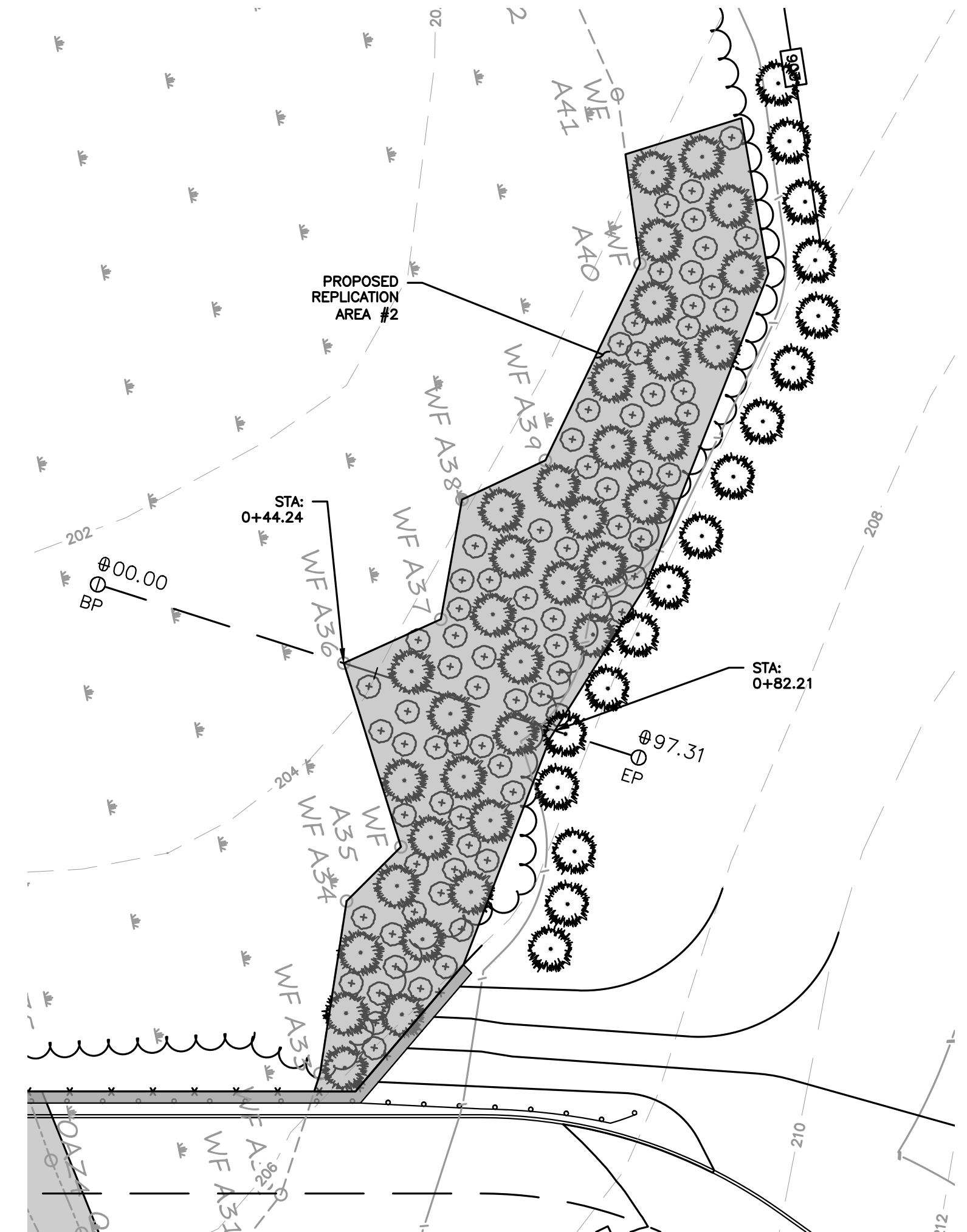
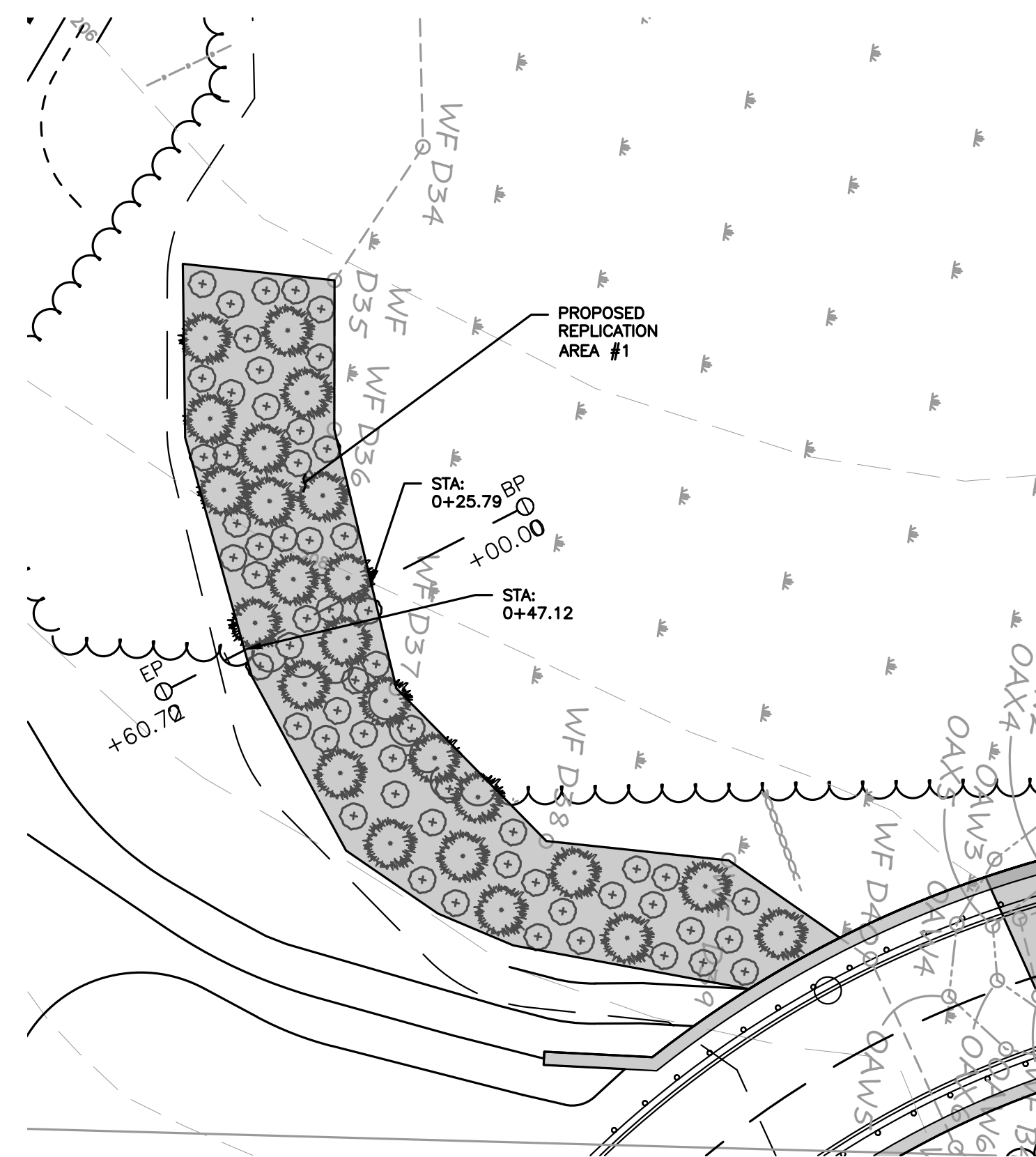


SITE PLAN

REPLICATION AREA PROFILES
 (DETAIL SHEET 27 OF 27)

DATE: JUNE 20, 2023
 PROJECT NUMBER: 19097
 DESIGNED BY: PB/KE/KF
 DRAWN BY: PB/MB/KF/KL
 CHECKED BY: KE

C.65



1/17/2023 11:59:46 AM \\EgryveDive\CADD\19097\04 - Lot 2\CURRENT\19097 - Details.dwg
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