

# WATSON PARK SHORELINE EROSION MITIGATION AND COASTAL RESILIENCY PROJECT

GORDON ROAD · BRAINTREE · MASSACHUSETTS  
CONSTRUCTION DRAWING SET

JANUARY 2022



PREPARED FOR  
**TOWN OF BRAINTREE**  
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BRAINTREE, MA 02184



PREPARED BY  
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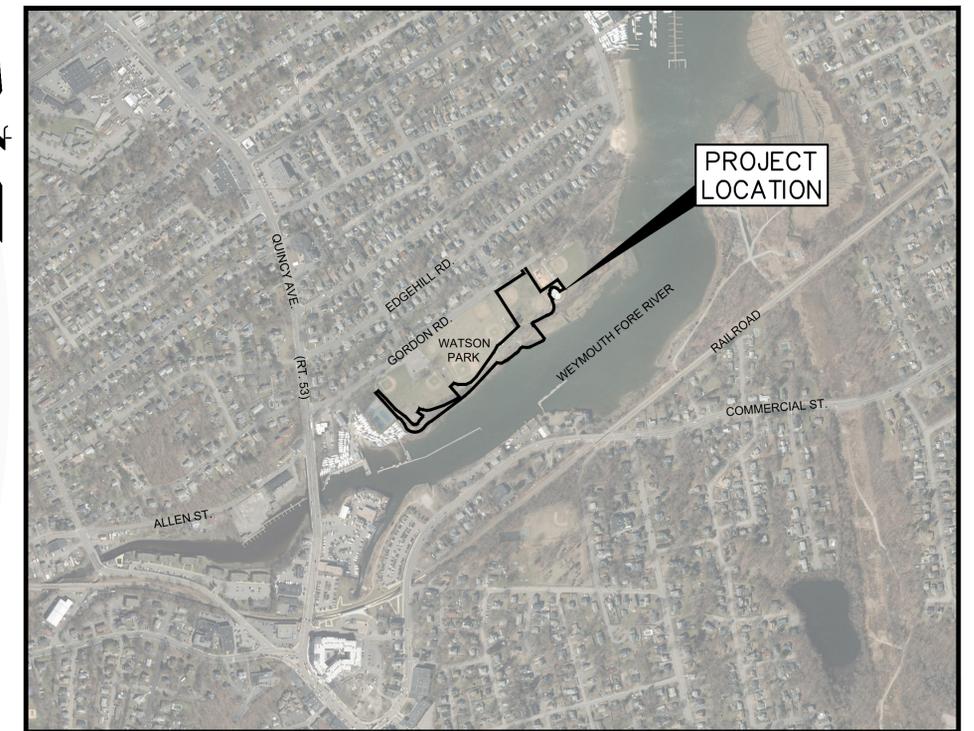
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## PROJECT TEAM

DESIGN CONSULTANT  
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PROVIDENCE, RI 02908

COASTAL ENGINEER  
WOODS HOLE GROUP, INC.  
107 WATERHOUSE ROAD  
BOURNE, MA 02532



LOCATION MAP  
SCALE: 1" = 500'



PROJ. No.: 20200523.A10  
DATE: JANUARY 2022

GI-001

EXIST	PROP	LEGEND
		PROPERTY LINE/RIGHT-OF-WAY
		LIMIT OF DISTURBANCE/CONTRACT LIMIT LINE
		BASELINE
		EDGE OF WATER
		WETLAND SYMBOL
		GRAVEL PATH
		EDGE OF PAVEMENT
		BITUMINOUS CURB
		MATCH LINE
		VINYL COATED CHAIN LINK FENCE
		CONSTRUCTION SAFETY FENCE
		TREE LINE
		EXISTING TREE
		RETAINING WALL
		MINOR CONTOUR
		MAJOR CONTOUR
		BUILDING
		BOLLARD
		SIGN
		SPOT ELEVATION
		DRAINAGE LINE
		CATCH BASIN
		DRAIN MANHOLE
		SEWER MANHOLE
		FIRE HYDRANT
		LIGHT POST
		UTILITY POLE
		GUY POLE
		COMPOST FILTER TUBE
		COASTAL BANK
		ROCKY INTERTIDAL SHORE
		SALT MARSH

**LEGEND NOTE**

SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSION OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS, AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

**ABBREVIATIONS**

GENERAL APPROX	APPROXIMATE
BIT	BITUMINOUS PAVEMENT
BW	BOTTOM OF WALL
CC	CONCRETE CURB
CCB	CAPE CODE BERM
ELEV	ELEVATION
EXIST	EXISTING
GC	GRANITE CURB
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
PCC	PRECAST CONCRETE CURB
PROP	PROPOSED
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
TOS	TOP OF SLOPE
TW	TOP OF WALL
TP	TYPICAL
VCC	VERTICAL GRANITE CURB
UTILITY	
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
DB	DOUBLE CATCH BASIN
DI	DUCTILE IRON PIPE
F&C	FRAME AND COVER
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV	INVERT ELEVATION
PVC	POLYVINYL CHLORIDE PIPE
RCF	REINFORCED CONCRETE
RD	ROOF DRAIN
SM	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE

**GENERAL NOTES**

- REFERENCES:**
  - COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, 2021 EDITION, REVISIONS AND ALL CURRENT ADDENDA, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO. ALL REFERENCES TO "STATE STANDARD SPECIFICATIONS" SHALL REFER TO THE LATEST EDITION OF THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES CONSTRUCTION.
  - THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARD DETAILS, 2017 EDITION, AND ALL CURRENT REVISIONS, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO. ALL REFERENCES TO "STATE STANDARD DETAILS" SHALL REFER TO THE LATEST EDITION OF THE STATE OF RHODE ISLANDS STANDARD DETAILS.
  - THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, 2013 EDITION, REVISIONS AND ALL CURRENT ADDENDA, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO. ALL REFERENCES TO "SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" SHALL REFER TO THE LATEST EDITION OF THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS.
  - THE BRAINTREE PLANNING BOARD RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND, 2002 EDITION, REVISIONS AND ALL CURRENT ADDENDA, ARE MADE A PART HEREOF, AS IF ATTACHED HERETO.
- EXISTING CONDITIONS:**
  - EXISTING AND TOPOGRAPHICAL FEATURES WITHIN THE AREA OF BIOTRETMENT BASINS 1 & 2, SALT MARSH AND COASTAL BANK RESTORATION AREAS ARE BASED ON A LIMITED ON-GROUND SURVEY PERFORMED BY WOODS HOLE GROUP, INC. IN NOVEMBER 2018 AND DECEMBER 2019.
  - TOPOGRAPHIC INFORMATION (SPOT ELEVATIONS), BUILDING FOOTPRINTS, EXISTING FEATURES SHOWN OUTSIDE OF THE AREA OF BIOTRETMENT BASINS 1 & 2, SALT MARSH AND COASTAL BANK RESTORATION AREAS ARE BASED ON A PLAN DEVELOPED BY THE TOWN OF BRAINTREE DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION TITLED "WATSON PARK PROPOSED EARTH BERM, EXISTING ELEVATIONS" DATED 12/15/2020.
  - AERIAL IMAGERY WAS OBTAINED FROM THE OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS (MASS.GOV).
- DATUM REFERENCE:**
  - ALL TOPOGRAPHIC INFORMATION INCLUDED HEREON IS IN REFERENCE TO NAVD83.
- FLOOD ZONE INFORMATION:**
  - THE PROJECT IS LOCATED IN FLOOD ZONE "ZONE AE (EL. 10.0)" AS DEPICTED ON FIRM PANEL NUMBER 2502330227F (DATED JUNE 9, 2014) AT THE PROJECT SITE.
- UTILITIES:**
  - THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM THE DEPTHS AND LOCATIONS WHERE UNDERGROUND UTILITIES WILL POTENTIALLY CONFLICT WITH THE INSTALLATION OF THE PROPOSED DRAINAGE SYSTEM AS INDICATED ON THESE PLANS.

**UTILITY COORDINATION REQUIREMENTS**

- THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AND UTILITY COMPANIES TO LOCATE ALL EXISTING UTILITIES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT ITS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
- THE LOCATION OF EXISTING UNDERGROUND INFRASTRUCTURE, UTILITIES, CONDUITS, AND LINES ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY AND ARE BASED ON RESEARCH OF AVAILABLE UTILITY RECORDS (AS NOTED) AND WILL NOT BE LIMITED TO THOSE SHOWN HEREIN. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO LOCATE SAID INFRASTRUCTURE AND UTILITIES EXACTLY. IF FIELD CONDITIONS DIFFER FROM PLAN INFORMATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AND UTILITY COMPANIES TO LOCATE ALL EXISTING UTILITIES, AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- BEFORE BEGINNING SITE WORK, THE CONTRACTOR SHALL INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER CONSTRUCTION AFFECTING THE WORK. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS (INCLUDING TEST PITS AT POTENTIAL UTILITY CONFLICT LOCATIONS AS INDICATED ON THE PLANS) AND LOCATE EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

- MATERIALS AND METHODS OF CONSTRUCTION ASSOCIATED WITH THE ADJUSTMENT AND/OR REMOVAL AND RELOCATIONS OF UNDERGROUND UTILITIES SHALL BE IN ACCORDANCE WITH THE UTILITY OWNER'S RULES AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY AFFECTED PROPERTY OWNERS AT LEAST 48 HOURS IN ADVANCE OF ANY DISRUPTIONS OR AS OTHERWISE REQUIRED BY THE RESPECTIVE UTILITY OWNER.

**PROTECTION OF WORK AND SITE REQUIREMENTS**

- THE WORK AND SITE (DEFINED HEREIN AS THE ENTIRE PARK AND INTERTIDAL AREA WITHIN THE LIMIT OF DISTURBANCE) SHALL BE PROTECTED AT ALL TIMES UNTIL FINAL ACCEPTANCE BY THE OWNER. CARE SHALL BE EXERCISED WHILE OPERATING EQUIPMENT WITHIN THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THE UTILIZED EQUIPMENT DOES NOT CAUSE DAMAGE TO EXISTING FEATURES. ANY DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S SOLE COST.
- ACCESS TO VARIOUS PORTIONS OF THE SITE SHALL BE UNDERTAKEN IN SUCH A MANNER THAT THE WORK AND SITE ARE PROTECTED AT ALL TIMES. ACCESS WAYS SHALL BE CONSTRUCTED, MAINTAINED, AND PROTECTED WITH SEDIMENT CONTROLS TO PREVENT DAMAGE FROM EROSION DURING MAJOR STORM EVENTS.
- ONLY FOOT ACCESS AND EQUIPMENT ACCESS ON TEMPORARY GROUND PROTECTION (SWAMP) MATS IS ALLOWED IN INTERTIDAL AREAS. OTHERWISE ALL WORK IN INTERTIDAL AREAS SHALL BE COMPLETED USING LONG-REACH EQUIPMENT POSITIONED ON UPLAND AREAS (ABOVE ELEV. 4.7).
- PLACEMENT AND COMPACTION OF FILL MATERIALS SHALL BE COMPLETED IN SUCH A MANNER THAT THE WORK AND ADJACENT ROADWAYS ARE PROTECTED FROM DAMAGE AT ALL TIMES.
- BACKFILL OPERATIONS SHALL PROCEED TO RAISE THE GROUND SURFACE UNIFORMLY AND SHAPED TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES. CONTRACTOR AND MAINTAIN ON THE SITE. ALL DITCHES AND CHANNELS NECESSARY TO KEEP THE SITE IN A DRY AND WORKABLE CONDITION. WHERE WATER IS FLOWING OR OTHERWISE INFILTRATING INTO AN EXCAVATION, PROVIDE FOR PUMPING AND OTHER DRAINAGE FACILITIES, INCLUDING EROSION AND SEDIMENT CONTROLS, TO DIVERT WATER FROM SUCH EXCAVATION.
- DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING OF FOOTINGS AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES, FOUNDATIONS AND STRUCTURES.

**CONTROL OF WATER**

- IT IS ANTICIPATED THAT PROPOSED WORK BELOW THE MEAN HIGH WATER ELEVATION SHALL BE LIMITED TO TIMES OF THE DAY WHEN SUCH WORK CAN BE COMPLETED IN DRY CONDITIONS (I.E. PERIODS OF LOWER TIDE LEVELS). THE CONTRACTOR SHALL PROVIDE NECESSARY MEASURES TO PROTECT THE WORK AREA DURING PERIODS OF HIGH TIDE.
- TEMPORARY STORMWATER BYPASS CONVEYANCE SYSTEMS (THAT MAY BE REQUIRED) TO DISCHARGE GROUNDWATER IN EXCAVATIONS OR STORMWATER THROUGH THE SITE (AND AROUND PROPOSED WORK) DURING CONSTRUCTION SHALL BE INSTALLED, OPERATED, MAINTAINED AND REMOVED IN SUCH MANNERS TO PROTECT THE ENVIRONMENT, WORK, PUBLIC, SITE WORKERS AND EXISTING FEATURES FROM DAMAGE AT ALL TIMES UNTIL FINAL ACCEPTANCE BY THE OWNER.
- DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING OF FOOTINGS AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES, FOUNDATIONS AND STRUCTURES.
- PUMP DISCHARGES FROM LOCALIZED TRENCH/FOOTING EXCAVATIONS SHALL BE MANAGED SUCH THAT THESE DO NOT CAUSE EROSION OF SOILS. FOR EXAMPLE, PUMP INTAKES SHALL BE FLOATED TO MINIMIZE SEDIMENTATION. PUMPED WATER SHALL BE DISCHARGED INTO A DEWATERING AREA WHICH IS SURROUNDED BY A TIGHT ENCLOSURE OF SILT FENCE AND/OR HAY BALES, OR OTHER APPROVED CONTROL DEVICE (E.G., SILT BAG) TO PROPERLY FILTER TURBID WATER PRIOR TO ITS RETURN TO THE WATERCOURSE. THE DISCHARGE OF PUMPED WATER SHALL BE ONTO AN APPROVED ARMORED SURFACE (E.G., RIPRAP ARROW) TO AVOID SCOUR OR SUSPENSION OF SOIL. AT THE DISCHARGE, WATER SHALL NOT BE DISCHARGED ONTO FILL OR BACKFILL AREAS OR FOUNDATIONS. WATER SHALL ONLY BE ALLOWED TO DISCHARGE DIRECTLY INTO THE WATERCOURSE AFTER EMERGING CLEAR WITHOUT ANY SUSPENDED SEDIMENT OR SILT.
- PROTECT CONSTRUCTED WORK ON THE SITE DURING STORM AND FLOOD CONDITIONS.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN OR AS REQUIRED BY SITE CONDITIONS. ALL EROSION CONTROL DEVICES WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.

**EROSION AND SEDIMENT CONTROL**

- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN OR AS REQUIRED BY SITE CONDITIONS. ALL EROSION CONTROL DEVICES WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW AND LOCAL ORDINANCE. ALL WORK SHALL COMPLY WITH THE FOLLOWING CRITERIA AND OTHER PERMIT CONDITIONS TO PREVENT OR MINIMIZE SOIL EROSION AND SEDIMENTATION TO OFF-SITE AREAS.
- THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THE PLANS. ALL EROSION AND SEDIMENT CONTROL MEASURES OR WORKS AND REHABILITATION MEASURES MUST CONFORM TO OR EXCEED THE SPECIFICATIONS OR STANDARDS SET OUT IN THIS DOCUMENT.
- THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHOWN ON THESE PLANS TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF PERMANENT MEASURES UNTIL CONSTRUCTION OF THE PROJECT IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE OWNER. REMOVE EROSION AND SEDIMENTATION CONTROLS AFTER STABLE VEGETATIVE GROWTH IS ESTABLISHED.
- THE CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROL DEVICES ON A WEEKLY BASIS, AFTER EACH STORM EVENT, AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLEAN OUT ACCUMULATED SEDIMENT BEHIND CONTROLS. REPAIR OR REPLACE CONTROLS PROMPTLY AS NEEDED. REMOVE ACCUMULATED SEDIMENT FROM BEHIND PERIMETER CONTROLS WHEN ONE-HALF OF THE ORIGINAL HEIGHT OF THE PERIMETER CONTROLS BECOME FILLED WITH SEDIMENT. REMOVE SEDIMENT FROM CATCH BASIN INLET PROTECTION IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. DISPOSE OF REMOVED SEDIMENT IN ON-SITE FILL AREAS OR LAWFULLY OFF-SITE.
- TREES AND OTHER EXISTING VEGETATION NOT WITHIN THE LIMITS OF DISTURBANCE SHALL BE PROTECTED FROM DAMAGE. VEGETATED AREAS AND/OR TREES DAMAGED THAT ARE NOT PLANNED FOR REMOVAL SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE TOWN.
- TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY UPLAND, DISTURBED AREAS THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN SEVEN (7) DAYS AFTER CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN THIRTY (30) DAYS. TEMPORARY VEGETATIVE COVER SHALL CONSIST OF 40% ANNUAL RYEGRASS AND 60% PERENNIAL RYEGRASS FROM APRIL 1 TO NOVEMBER 15 AND WINTER RYEGRASS BETWEEN NOVEMBER 15 AND MARCH 31. SEED AT A RATE OF 75 LBS/ACRE BY HAND.
- PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 30 AND SEPTEMBER 1 TO OCTOBER 1. PERMANENT VEGETATIVE COVER SEED MIXTURES AND APPLICATION RATES SHALL BE IN ACCORDANCE WITH THE SITE RESTORATION PLANS. ALL PLANTINGS AND SEED SHALL BE COVERED BY A ONE-YEAR WARRANTY PERIOD; RE-SEEDING/RE-PLANTING SHALL BE COMPLETED TO ENSURE STABLE VEGETATIVE COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.
- IF PERMANENT SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, TEMPORARY BIODEGRADABLE EROSION CONTROL BLANKETING (CONTAINING NO PLASTIC COMPONENTS) OR MULCHING SHALL BE SPREAD/INSTALLED OVER ALL UPLAND DISTURBED AREAS TO PROTECT THE SITE UNTIL ARRIVAL OF THE NEXT RECOMMENDED SEEDING PERIOD. MULCHING OR BLANKETING SHOULD BE INSTALLED AS SOON AS POSSIBLE IF SEEDING IS INSTALLED BETWEEN OCTOBER 1 AND MARCH 31, BUT NOT MORE THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN THIRTY (30) DAYS. IF PERMANENT SEEDING IS INSTALLED IN JULY AND AUGUST, APPLY WATER TO SEEDED AREAS ON A DAILY BASIS.
- BLANKETING OR MULCHING MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION, WHERE EROSION IS OBSERVED, ADDITIONAL MULCH MUST BE APPLIED OR BLANKETING REPAIRED OR REPLACED. INSPECTIONS SHALL TAKE PLACE UNTIL VEGETATION IS THOROUGHLY ESTABLISHED.
- GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WASH BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.
- STORAGE AND DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORMWATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., WILL BE STORED AT THE END OF EACH DAY IN A LOCKED STORAGE TRAILER OR COVERED AND PROPERLY TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE WILL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.
- SPILL/LEAK PROTECTION AND RESPONSE: FUEL VEHICLES AND EQUIPMENT AWAY FROM THE WETLAND AND DRAINAGE SYSTEM AND PREVENT CONTAMINATION OF SOIL, GROUNDWATER OR SURFACE WATER FROM SPILLS OR LEAKS. DEPLOY BOOMS AND OTHER CONTAINMENT/CLEANUP MEASURES IN THE EVENT OF A SPILL OR LEAK. NOTIFY LOCAL FIRE DEPT. AND DEP IMMEDIATELY OF ANY SPILLS.
- DEWATERING: DEWATERING SHALL BE IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS." THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE TOWN FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

- TRACKING AND DUST CONTROL: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ADJACENT ROADS WHERE CONSTRUCTION VEHICLES HAVE TRACKED SEDIMENT FROM THE PROJECT. CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUDDY AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE PROJECT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE SURROUNDING ROADWAYS MUST BE REMOVED IMMEDIATELY. DUST CONTROL MAY INCLUDE APPLICATION OF CONTROLLED AMOUNTS OF WATER ONTO AFFECTED AREAS OR OTHER CONTROL MEASURES APPROVED BY THE ENGINEER. THE TEMPORARY STONE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THE CONTRACTOR MUST PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND.

**CONSTRUCTION SEQUENCE**

CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT ARE EXPECTED TO COMMENCE IN MARCH 2022 AND WILL BE COMPLETED BY JUNE 2022. SOME OF THE CONSTRUCTION ACTIVITIES MAY OCCUR CONCURRENTLY WITH OTHER CONSTRUCTION ACTIVITIES. THE GENERAL SEQUENCE FOR EACH PHASE OF CONSTRUCTION IS AS FOLLOWS:

- PROVIDE PERIMETER SEDIMENT CONTROL BARRIERS, EROSION CONTROLS, CONSTRUCTION SAFETY FENCING, AND CONSTRUCTION ACCESS (INCLUDING STAGING AND STORAGE AREA). SEDIMENT EROSION CONTROL MEASURES SHALL BE MAINTAINED OR REPLACED AS REQUIRED THROUGHOUT CONSTRUCTION PERIOD. ANY TEMPORARY SOIL STOCKPILE AREAS DURING CONSTRUCTION SHALL ALSO BE ENCOMPASSED BY PERIMETER CONTROLS.
- CONFIRM EXISTING SITE CONDITIONS AND IDENTIFY TREES AND OTHER EXISTING FEATURES (STRUCTURES, UTILITIES, ETC.) THAT ARE NOT DESIGNATED FOR REMOVAL. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- COMPLETE DEMOLITION ACTIVITIES IN ACCORDANCE WITH THE PROJECT'S SITE PREPARATION AND EROSION & SEDIMENT CONTROL PLAN. THIS WORK INCLUDES CLEARING AND GRUBBING WITHIN THE AREAS OF THE PROPOSED DEWATERED BERM AND ELEVATED WALKWAY AND THE PROPOSED RAIN GARDENS. REMOVING AND STOCKPILING THE EXISTING GRANITE HEADWALL, AND REMOVING THE EXISTING DRAINAGE PIPES.
- THE CONTRACTOR SHALL PLAN/SCHEDULE THE REMOVAL AND REPLACEMENT OF THE EXISTING DRAINAGE PIPES AND CONSTRUCTION OF NEW OVERFLOW AND MANHOLE STRUCTURES TO OCCUR OVER A PERIOD WHEN DRY WEATHER IS EXPECTED IN ORDER TO MINIMIZE IMPACTS RELATED TO STORMWATER RUNOFF AND THE NEED FOR SIGNIFICANT WATER CONTROL MEASURES.
- RECONSTRUCT GRANITE BLOCK HEADWALL CONCURRENTLY OR IMMEDIATELY FOLLOWING REPLACEMENT OF DRAINAGE PIPES. THIS WORK SHOULD ALSO BE SCHEDULED OVER A PERIOD WHEN DRY WEATHER IS EXPECTED AND AT TIMES WHEN RIVER LEVELS ARE BELOW EL. 3.0 FEET (NAVD83).
- CONSTRUCT SALT MARSH ROCK SILL AREAS TO THE NORTH AND SOUTH OF THE HEADWALL DURING PERIODS OF LOWER TIDE LEVELS. THE INSTALLATION OF THE ROCK SILL TO THE NORTH OF THE HEADWALL SHALL BE LIMITED TO PERIODS WHEN WATER LEVELS ARE EL. -3.0 FEET (NAVD83) OR LOWER; THE INSTALLATION OF THE ROCK SILL TO THE SOUTH OF THE HEADWALL SHALL BE LIMITED TO PERIODS WHEN WATER LEVELS ARE EL. 1.0 FEET OR LOWER.
- PLACE ADDITIONAL STONE TO ENHANCE THE ROCKY INTERTIDAL AREA AT THE HEADWALL/OUTFALL TO BE RECONSTRUCTED.
- FOLLOWING CONSTRUCTION OF BOTH ROCK SILLS AND ENHANCED ROCKY INTERTIDAL AREA, CONSTRUCT ENGINEERED WETLAND SOIL BACKFILL WITHIN SALT MARSH RESTORATION AREAS AND PROVIDE ASSOCIATED PLANTINGS AND STABILIZATION MEASURES.
- WORK ASSOCIATED WITH RAIN GARDEN 3 AND THE SOUTHERN EARTHEN BERM (I.E., PORTION DEPICTED ON SHEET CG-101) SHALL OCCUR CONCURRENTLY TO WORK ASSOCIATED WITH SALT MARSH AND COASTAL BANK RESTORATION IN ORDER TO COMPLETE EARTHWORK WITHIN THE FIRST 45 DAYS OF THE CONTRACT TERM. A 20-FOOT PORTION OF THE SOUTHERN EARTHEN BERM SHALL BE LEFT UNCONSTRUCTED UNTIL THE OVERFLOW STRUCTURE AND DRAIN PIPING OF RAIN GARDEN 3 HAVE BEEN COMPLETED. THE UNFINISHED PORTION OF THE SOUTHERN EARTHEN BERM SHALL BE STABILIZED AND PROTECTED UNTIL THE EARTHEN BERM WORK CAN BE COMPLETED. THE SEQUENCE OF CONSTRUCTION SHALL FOLLOW THE GENERAL OUTLINE DESCRIBED BELOW.
- REGRADE COASTAL BANK AREA AND COMPLETE ROUGH GRADING OF REMAINING RAIN GARDENS AND EARTHEN BERM. CONSTRUCT REMAINING RAIN GARDEN OVERFLOW STRUCTURES, DRAIN MANHOLES AND ASSOCIATED DISCHARGE PIPES.
- CONDUCT FINAL GRADING OF EACH REMAINING RAIN GARDEN AND EARTHEN BERM. SEED RAIN GARDENS IN ORDER TO START THE ESTABLISHMENT OF VEGETATION BEFORE PROCEEDING WITH OTHER WORK. PROVIDE PERIMETER EROSION CONTROL MEASURES AROUND EACH RAIN GARDEN TO MINIMIZE THE EROSION OF SIDE SLOPES AND BOTTOM FROM OVERLAND FLOW FROM SURROUNDING AREAS. KEEP THE PERIMETER EROSION CONTROL AROUND EACH RAIN GARDEN IN PLACE UNTIL SURROUNDING DISTURBED AREAS HAVE BEEN ADEQUATELY ESTABLISHED.
- PROVIDE SEED, PLANTINGS, AND BIODEGRADABLE EROSION CONTROL BLANKETING WITHIN RAIN GARDENS, ON THE EARTHEN BERM SLOPES, AND WITHIN THE COASTAL BANK; CONSTRUCT STONE DUST WALKWAYS.
- REMOVE TEMPORARY EROSION CONTROLS MEASURES ONCE PERMANENT VEGETATION COVER HAS BEEN ESTABLISHED AND THE SITE IS STABILIZED, INSPECTED, AND APPROVED BY PERMITTING AUTHORITY AND THE ENGINEER. REMOVE CONSTRUCTION SAFETY FENCING AND OTHER EROSION CONTROLS ONCE APPROVED BY THE OWNER.

**STORMWATER MAINTENANCE PROGRAM**

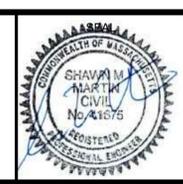
- REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES SHALL BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
- THE TOWN OF BRAINTREE SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM ONCE CONSTRUCTION IS COMPLETE AND ACCEPTED BY THE OWNER.
- THE FOLLOWING INSPECTION AND MAINTENANCE SCHEDULE IS REQUIRED FOR THE PROPOSED RAIN GARDENS FOLLOWING CONSTRUCTION:
  - DURING THE FIRST THREE MONTHS OF OPERATION (FOLLOWING CONSTRUCTION), THE RAIN GARDENS SHALL BE INSPECTED AFTER EVERY MAJOR STORM TO CHECK FOR EXTENDED PONDING TIMES AND DRAINAGE ISSUES. STANDING WATER WITHIN EACH RAIN GARDEN AFTER 48 TO 72 HOURS AFTER A STORM INDICATES THE INFILTRATIVE CAPACITY OF THE SOILS IS IMPACTED DUE TO CLOGGING OF BASIN SOILS. IMMEDIATELY ADDRESS THE REASON FOR CLOGGING (SUCH AS UPLAND SEDIMENT EROSION, EXCESSIVE COMPACTION OF SOILS, OR LOW SPOTS). DURING THESE INSPECTIONS, IT MAY BE NECESSARY TO DEWATER THE RAIN GARDENS FOR ASSESSMENT AND REPAIRS. DEWATERING FLOW MUST BE ADEQUATELY FILTERED PRIOR TO DISCHARGE INTO THE GARDEN'S OUTLET SYSTEM.
  - AFTER THREE MONTHS OF OPERATION (FOLLOWING CONSTRUCTION), THE RAIN GARDEN SHALL BE INSPECTED AND TRASH REMOVED MONTHLY.
    - REMOVE TRASH DURING EACH INSPECTION.
    - REMOVE AND REPLACE DEAD VEGETATION FROM THE RAIN GARDEN AT LEAST ONCE PER YEAR.
    - PRUNE VEGETATION IN SPRING OR FALL AT LEAST ONCE PER YEAR.
    - DURING EACH INSPECTION, CHECK FOR STANDING WATER THAT REMAINS IN THE BASINS AFTER 48 TO 72 HOURS AFTER MAJOR RAINFALL EVENTS. THIS DEFICIENCY SHOULD BE CORRECTED IMMEDIATELY TO PREVENT A NUISANCE HABIT OF MOSQUITOES, ESPECIALLY MOSQUITOES. THIS COULD INDICATE THAT THE BASIN SOILS WITHIN THE BOTTOM OF EACH BASIN HAVE BECOME CLOGGED WITH SEDIMENT. IF SO, USE LIGHT EQUIPMENT TO REMOVE TOP LAYER OF SOIL SO AS NOT TO COMPACT UNDERLYING SOILS. DEEPLY TILL THE REMAINING SOIL AND REVEGETATE. DISPOSAL OF THE ACCUMULATED SEDIMENT AND HYDROCARBONS MUST BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL GUIDELINES AND REGULATIONS.
  - THE FOLLOWING INSPECTION AND MAINTENANCE IS REQUIRED FOR STORM DRAIN PIPING AND ASSOCIATED MANHOLES AND OVERFLOW STRUCTURES:
    - INSPECT TWO TO FOUR TIMES PER YEAR TO CHECK FOR SEDIMENT AND DEBRIS BUILD-UP, IN ADDITION TO THE STRUCTURAL INTEGRITY OF (OR DAMAGE TO) THE PIPE NETWORK AND ASSOCIATED STRUCTURES. SUCH DEFICIENCIES MUST BE CORRECTED IMMEDIATELY.
    - REMOVE SEDIMENT FROM SUMPS OF OVERFLOW STRUCTURES WHEN DEPTH OF SEDIMENT ACCUMULATES TO 1/2 THE HEIGHT OF THE SUMP OR ONCE PER YEAR, WHICHEVER IS MORE FREQUENT.
    - DISPOSAL OF THE ACCUMULATED SEDIMENT AND HYDROCARBONS MUST BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL GUIDELINES AND REGULATIONS.

**SPILL PREVENTION AND RESPONSE PROCEDURE**

- ANY INCIDENT OF GROUNDWATER CONTAMINATION RESULTING FROM THE IMPROPER DISCHARGE OF POLLUTANTS TO THE STORMWATER DISPOSAL SYSTEM SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER AS WELL AS ANY OTHER PARTIES DETERMINE TO BE RESPONSIBLE FOR THE CONTAMINATION. PURSUANT TO STATE LAWS AND REGULATIONS, THE REGULATING AGENCY MAY REQUIRE THE PROPERTY OWNER AND OTHER RESPONSIBLE PARTIES TO REMEDIATE ANY INCIDENTS THAT MAY ADVERSELY IMPACT GROUNDWATER QUALITY.
- UPON TRANSFER OF THE PROPERTY, THE NEW OWNER SHALL BE INFORMED AS TO THE LEGAL RESPONSIBILITIES ASSOCIATED WITH DISPOSAL SYSTEM, AS INDICATED ABOVE.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE TO REMEDIATE INCIDENTS THAT ADVERSELY IMPACT GROUNDWATER QUALITY.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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TOWN OF BRAINTREE  
 GENERAL NOTES AND LEGEND  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523A10  
 DATE: JANUARY 2022  
**CN-001**

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No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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 GRAPHIC SCALE

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TOWN OF BRAINTREE  
 INDEX PLAN  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAintree MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**CS-101**

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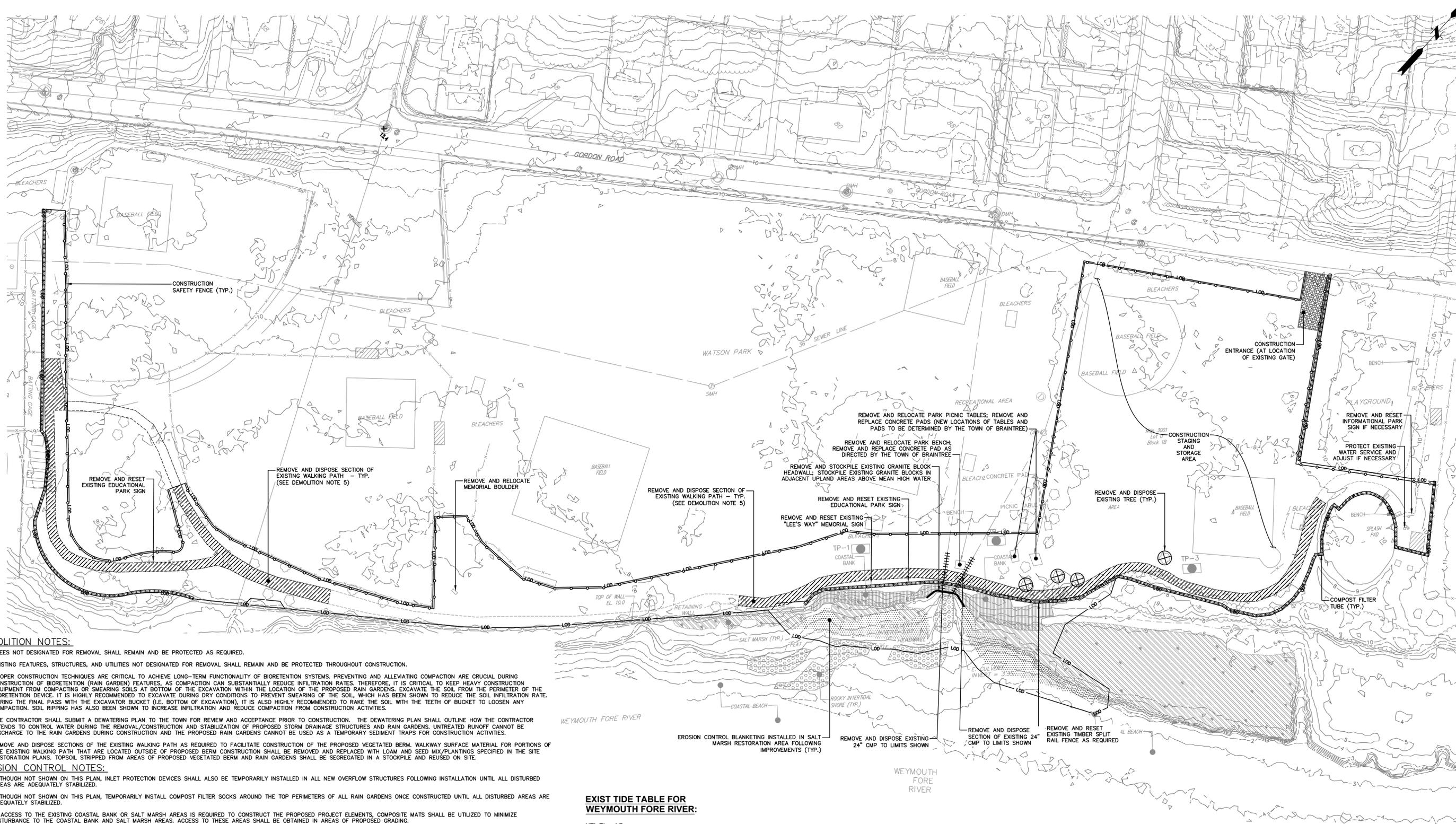
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TOWN OF BRAINTREE  
 EXISTING CONDITIONS PLAN  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**CS-102**

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**DEMOLITION NOTES:**

- TREES NOT DESIGNATED FOR REMOVAL SHALL REMAIN AND BE PROTECTED AS REQUIRED.
- EXISTING FEATURES, STRUCTURES, AND UTILITIES NOT DESIGNATED FOR REMOVAL SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
- PROPER CONSTRUCTION TECHNIQUES ARE CRITICAL TO ACHIEVE LONG-TERM FUNCTIONALITY OF BIORETENTION SYSTEMS. PREVENTING AND ALLEVIATING COMPACTION ARE CRUCIAL DURING CONSTRUCTION OF BIORETENTION (RAIN GARDEN) FEATURES, AS COMPACTION CAN SUBSTANTIALLY REDUCE INFILTRATION RATES. THEREFORE, IT IS CRITICAL TO KEEP HEAVY CONSTRUCTION EQUIPMENT FROM COMPACTING OR SMEARING SOILS AT BOTTOM OF THE EXCAVATION WITHIN THE LOCATION OF THE PROPOSED RAIN GARDENS. EXCAVATE THE SOIL FROM THE PERIMETER OF THE BIORETENTION DEVICE. IT IS HIGHLY RECOMMENDED TO EXCAVATE DURING DRY CONDITIONS TO PREVENT SMEARING OF THE SOIL, WHICH HAS BEEN SHOWN TO REDUCE THE SOIL INFILTRATION RATE. DURING THE FINAL PASS WITH THE EXCAVATOR BUCKET (I.E. BOTTOM OF EXCAVATION), IT IS ALSO HIGHLY RECOMMENDED TO RAKE THE SOIL WITH THE TEETH OF BUCKET TO LOOSEN ANY COMPACTION. SOIL RIPPING HAS ALSO BEEN SHOWN TO INCREASE INFILTRATION AND REDUCE COMPACTION FROM CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE TOWN FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION. THE DEWATERING PLAN SHALL OUTLINE HOW THE CONTRACTOR INTENDS TO CONTROL WATER DURING THE REMOVAL/CONSTRUCTION AND STABILIZATION OF PROPOSED STORM DRAINAGE STRUCTURES AND RAIN GARDENS. UNTREATED RUNOFF CANNOT BE DISCHARGED TO THE RAIN GARDENS DURING CONSTRUCTION AND THE PROPOSED RAIN GARDENS CANNOT BE USED AS A TEMPORARY SEDIMENT TRAPS FOR CONSTRUCTION ACTIVITIES.
- REMOVE AND DISPOSE SECTIONS OF THE EXISTING WALKING PATH AS REQUIRED TO FACILITATE CONSTRUCTION OF THE PROPOSED VEGETATED BERM. WALKWAY SURFACE MATERIAL FOR PORTIONS OF THE EXISTING WALKING PATH THAT ARE LOCATED OUTSIDE OF PROPOSED BERM CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH LOAM AND SEED MIX/PLANTINGS SPECIFIED IN THE SITE RESTORATION PLANS. TOPSOIL STRIPPED FROM AREAS OF PROPOSED VEGETATED BERM AND RAIN GARDENS SHALL BE SEGREGATED IN A STOCKPILE AND REUSED ON SITE.

**EROSION CONTROL NOTES:**

- ALTHOUGH NOT SHOWN ON THIS PLAN, INLET PROTECTION DEVICES SHALL ALSO BE TEMPORARILY INSTALLED IN ALL NEW OVERFLOW STRUCTURES FOLLOWING INSTALLATION UNTIL ALL DISTURBED AREAS ARE ADEQUATELY STABILIZED.
- ALTHOUGH NOT SHOWN ON THIS PLAN, TEMPORARILY INSTALL COMPOST FILTER SOCKS AROUND THE TOP PERIMETERS OF ALL RAIN GARDENS ONCE CONSTRUCTED UNTIL ALL DISTURBED AREAS ARE ADEQUATELY STABILIZED.
- IF ACCESS TO THE EXISTING COASTAL BANK OR SALT MARSH AREAS IS REQUIRED TO CONSTRUCT THE PROPOSED PROJECT ELEMENTS, COMPOSITE MATS SHALL BE UTILIZED TO MINIMIZE DISTURBANCE TO THE COASTAL BANK AND SALT MARSH AREAS. ACCESS TO THESE AREAS SHALL BE OBTAINED IN AREAS OF PROPOSED GRADING.

**STAGING AREA AND ACCESS NOTES:**

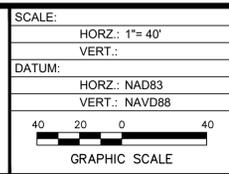
- CONSTRUCTION STAGING AREA AND ACCESS SHALL BE COORDINATED WITH THE TOWN PRIOR TO START OF WORK. DURING PERIODS OF HIGH WATER LEVELS, ALL EQUIPMENT WILL EITHER BE MOVED ABOVE HIGH WATER AT THE SITE OR TRANSPORTED FROM SITE AS NECESSARY.
- WORK IN AREAS ON AND WATER-WARD OF COASTAL BANK RESOURCES SHALL, WHERE POSSIBLE, BE PERFORMED WITH A LONG-REACH EXCAVATOR TO AVOID DISTURBANCE OF THOSE AREAS. WHERE WORK CANNOT BE COMPLETED BY A LONG-REACH EXCAVATOR, ACCESS SHALL BE VIA ONE ROUTE THROUGH THE COASTAL BANK WHERE THE COASTAL BANK IS TO BE DISTURBED BY PROPOSED REGRADING. IF CONSTRUCTION OF THE NORTHEASTERN SALT MARSH SILL REQUIRES ACCESS TO THE EXISTING NORTHERN SALT MARSH LOBE, TEMPORARY CONSTRUCTION ACCESS MATS SHALL BE DEPLOYED AND REMOVED TO AVOID TRAVELING ON VEGETATION.

**EXIST TIDE TABLE FOR WEYMOUTH FORE RIVER:**

HTL EL= 4.7  
 MHW EL= 4.3  
 MTL EL= -0.03  
 MLW EL= -5.4  
 MLLW EL= -5.6

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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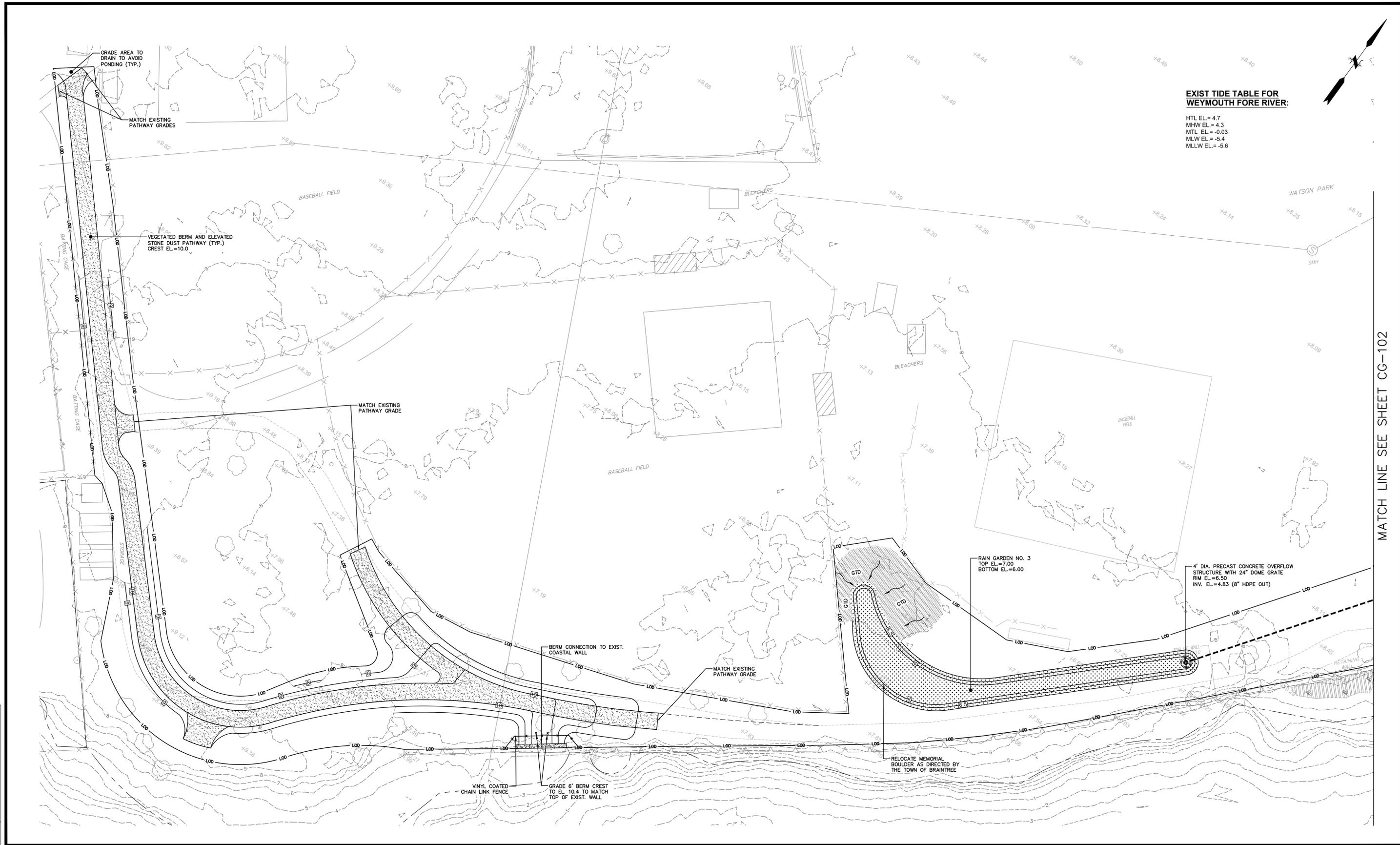
TOWN OF BRAINTREE  
 SITE PREPARATION AND EROSION AND  
 SEDIMENT CONTROL PLAN  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT

BRAINTREE MASSACHUSETTS

PROJ. No.: 2020523.A10  
 DATE: JANUARY 2022

**CE-101**

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**EXIST TIDE TABLE FOR WEYMOUTH FORE RIVER:**

HTL EL.= 4.7  
 MHW EL.= 4.3  
 MTL EL.= -0.03  
 MLW EL.= -5.4  
 MLLW EL.= -5.6



MATCH LINE SEE SHEET CG-102

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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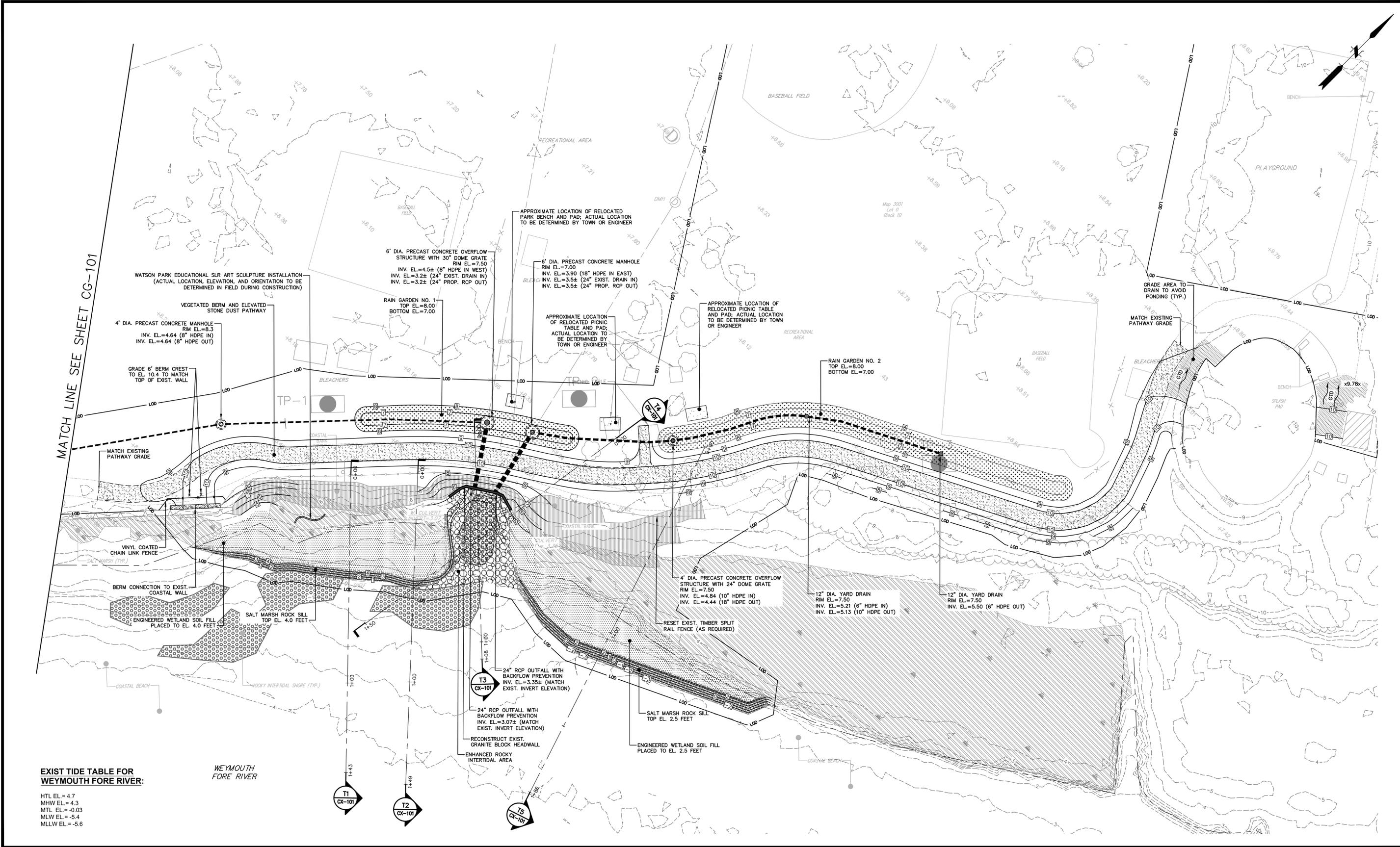
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TOWN OF BRAINTREE  
 COASTAL RESILIENCY IMPROVEMENT PLAN No. 1  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**CG-101**

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 LAYER STATE:



**EXIST TIDE TABLE FOR WEYMOUTH FORE RIVER:**

HTL EL. = 4.7
MHW EL. = 4.3
MTL EL. = -0.03
MLW EL. = -5.4
MLLW EL. = -5.6

WEYMOUTH FORE RIVER

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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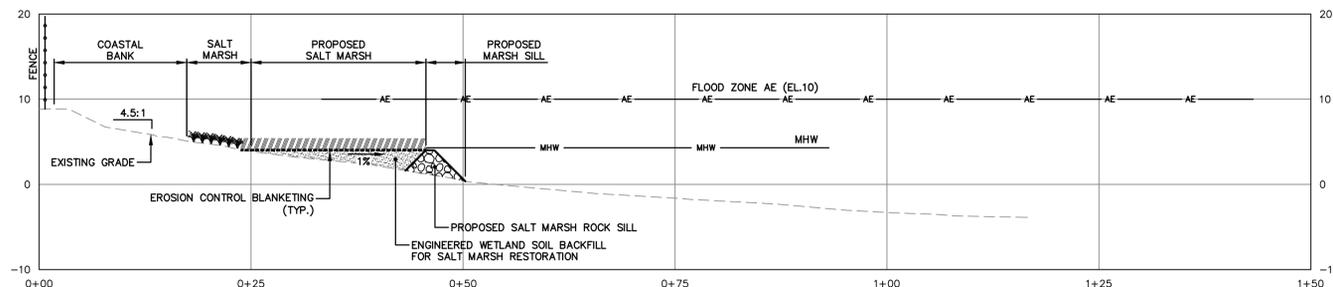
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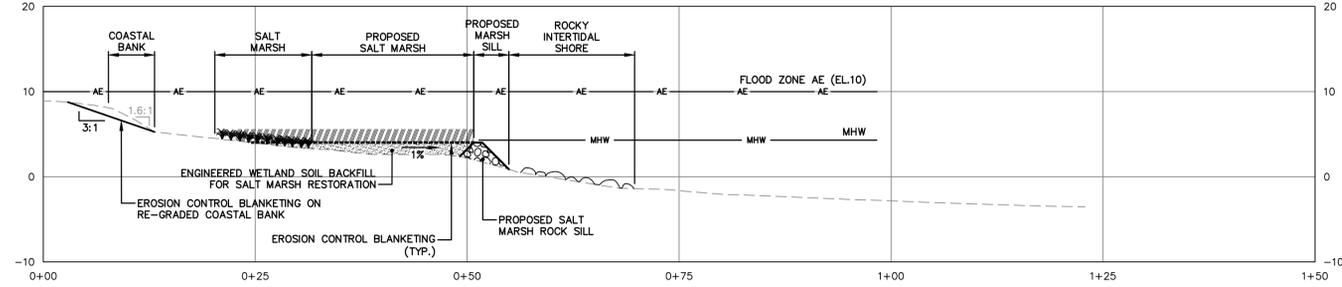
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 AND COASTAL RESILIENCY PROJECT  
 BRAintree MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
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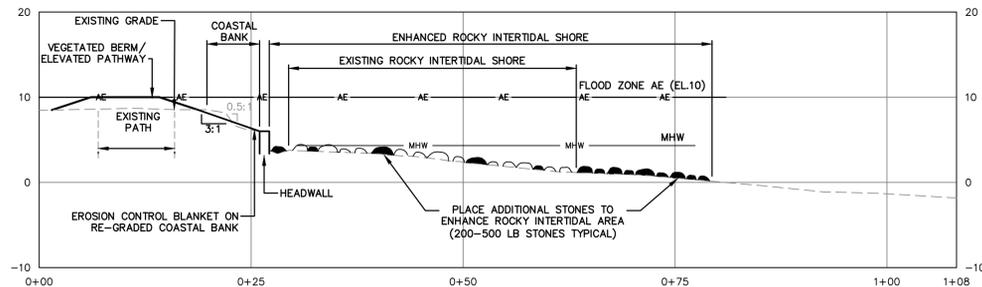
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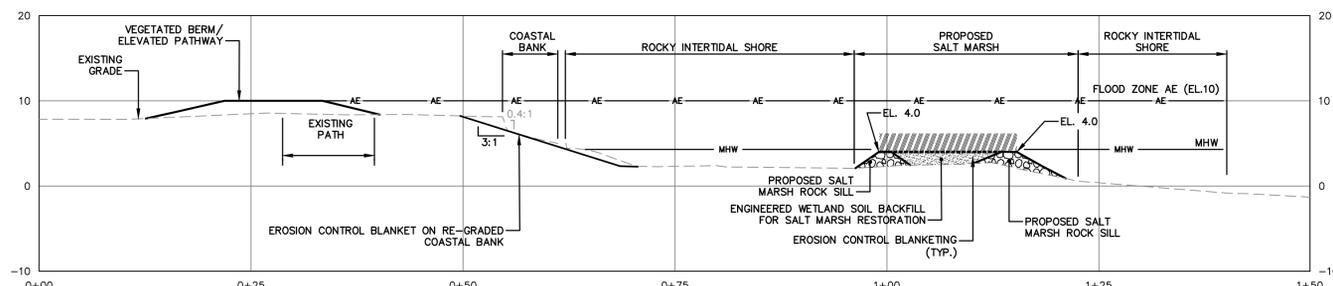
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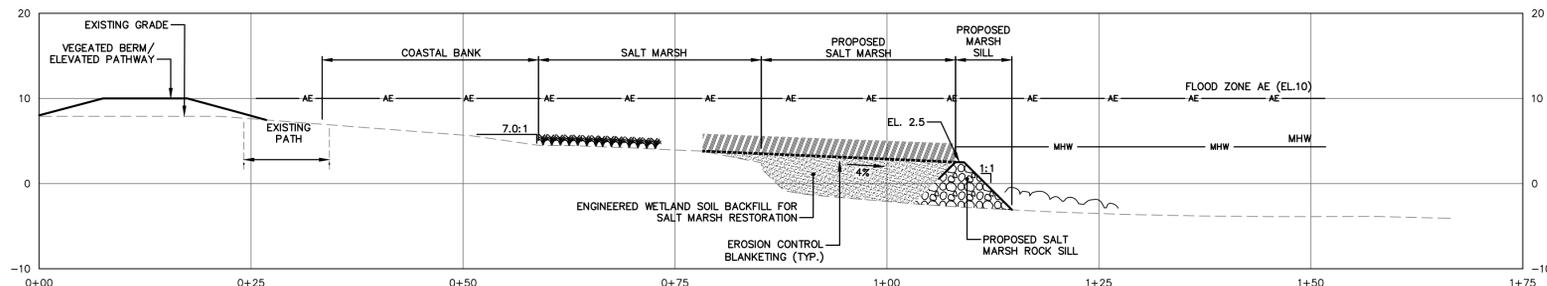
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1" = 10'



**TRANSECT 3**  
1" = 10'



**TRANSECT 4**  
1" = 10'

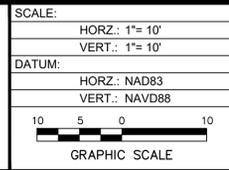


**TRANSECT 5**  
1" = 10'

**TRANSECT NOTE:**  
 PROPOSED FEATURES SHOWN IN PROFILES ARE SHOWN FOR LOCATION PURPOSES ONLY. REFER TO CONSTRUCTION DETAILS AND SITE RESTORATION PLANS FOR MORE DETAILS PERTAINING TO SALT MARSH ROCK SILL, VEGETATED BERM/ELEVATED PATHWAY, AND SALT MARSH AREA CONSTRUCTION IN ADDITION TO PLANTINGS, SEED MIX, AND STABILIZATION MEASURES.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL

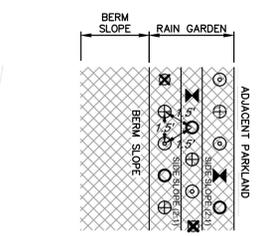
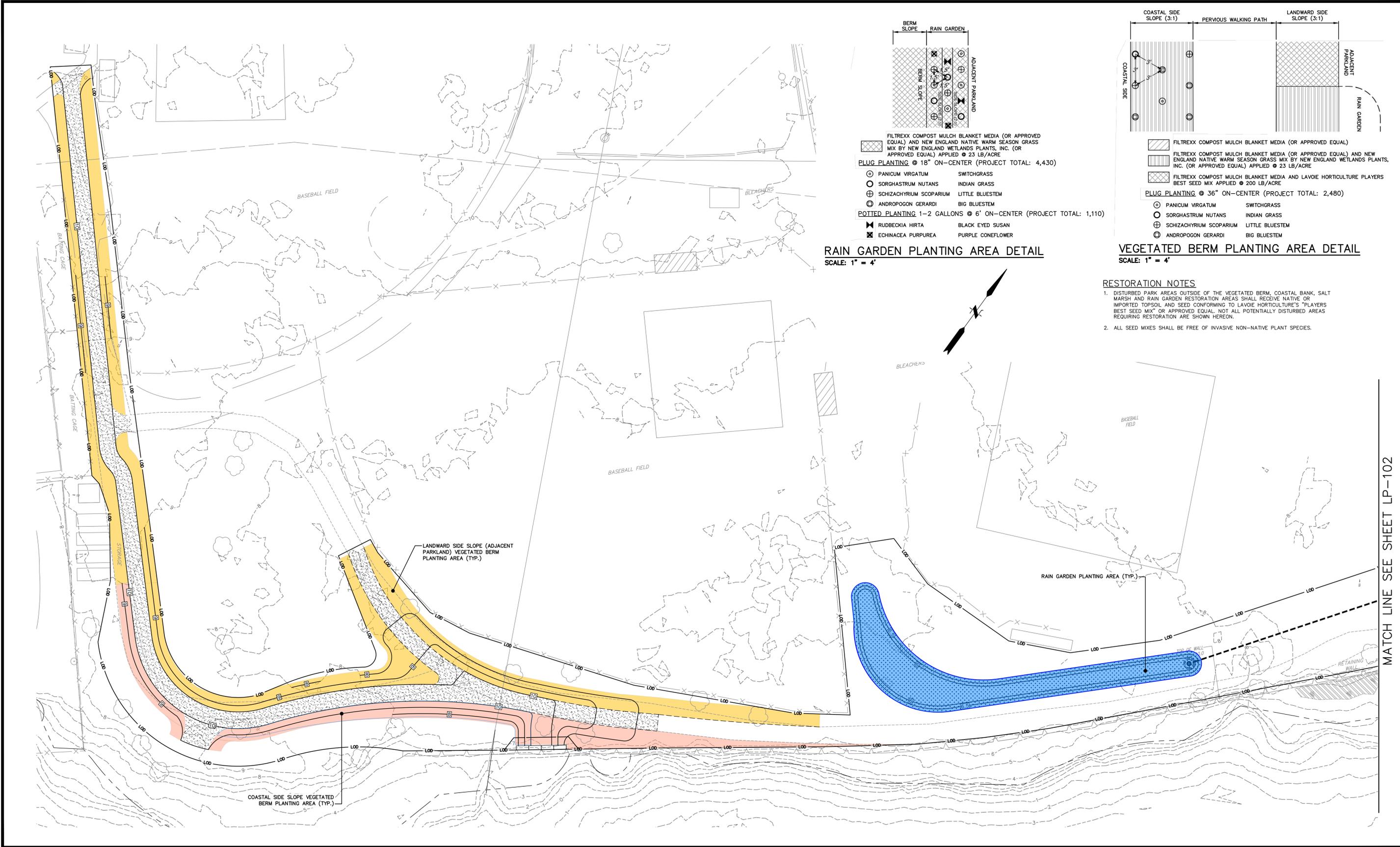


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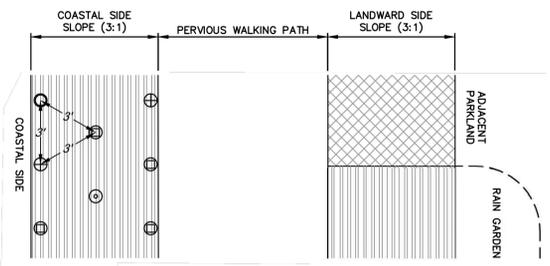
TOWN OF BRAINTREE  
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 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**CX-101**

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 LAYER STATE:



- RAIN GARDEN PLANTING AREA DETAIL**  
 SCALE: 1" = 4'
- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>○ PANICUM VIRGATUM</li> <li>○ SORGHASTRUM NUTANS</li> <li>⊕ SCHIZACHYRIUM SCOPARIUM</li> <li>⊕ ANDROPOGON GERARDI</li> </ul> | <ul style="list-style-type: none"> <li>○ SWITCHGRASS</li> <li>○ INDIAN GRASS</li> <li>○ LITTLE BLUESTEM</li> <li>○ BIG BLUESTEM</li> </ul> |
|---|--|
  - |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>⊕ RUDBECKIA HIRTA</li> <li>⊕ ECHINACEA PURPUREA</li> </ul> | <ul style="list-style-type: none"> <li>○ BLACK EYED SUSAN</li> <li>○ PURPLE CONEFLOWER</li> </ul> |
|---|---|
- FILTERREX COMPOST MULCH BLANKET MEDIA (OR APPROVED EQUAL) AND NEW ENGLAND NATIVE WARM SEASON GRASS MIX BY NEW ENGLAND WETLANDS PLANTS, INC. (OR APPROVED EQUAL) APPLIED @ 23 LB/ACRE  
**PLUG PLANTING @ 18" ON-CENTER (PROJECT TOTAL: 4,430)**



- VEGETATED BERM PLANTING AREA DETAIL**  
 SCALE: 1" = 4'
- |   |  |
|---|--|
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|---|--|
- FILTERREX COMPOST MULCH BLANKET MEDIA (OR APPROVED EQUAL)  
 FILTERREX COMPOST MULCH BLANKET MEDIA (OR APPROVED EQUAL) AND NEW ENGLAND NATIVE WARM SEASON GRASS MIX BY NEW ENGLAND WETLANDS PLANTS, INC. (OR APPROVED EQUAL) APPLIED @ 23 LB/ACRE  
 FILTERREX COMPOST MULCH BLANKET MEDIA AND LAVOIE HORTICULTURE PLAYERS BEST SEED MIX APPLIED @ 200 LB/ACRE  
**PLUG PLANTING @ 36" ON-CENTER (PROJECT TOTAL: 2,480)**

- RESTORATION NOTES**
1. DISTURBED PARK AREAS OUTSIDE OF THE VEGETATED BERM, COASTAL BANK, SALT MARSH AND RAIN GARDEN RESTORATION AREAS SHALL RECEIVE NATIVE OR IMPORTED TOPSOIL AND SEED CONFORMING TO LAVOIE HORTICULTURE'S "PLAYERS BEST SEED MIX" OR APPROVED EQUAL. NOT ALL POTENTIALLY DISTURBED AREAS REQUIRING RESTORATION ARE SHOWN HEREON.
  2. ALL SEED MIXES SHALL BE FREE OF INVASIVE NON-NATIVE PLANT SPECIES.

MATCH LINE SEE SHEET LP-102

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

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 VERT.:  
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 HORZ.: NAD83  
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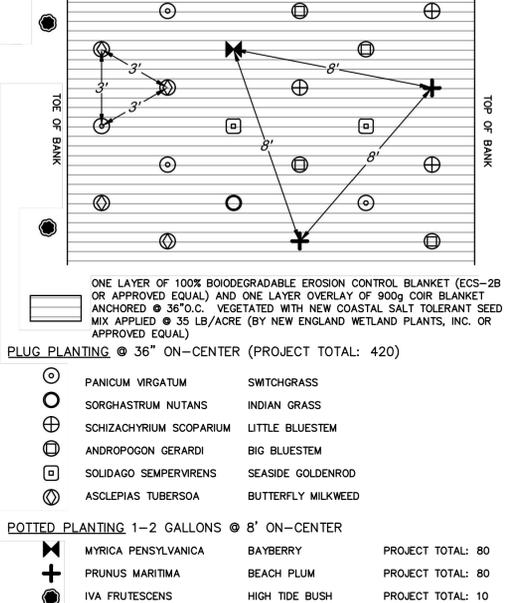
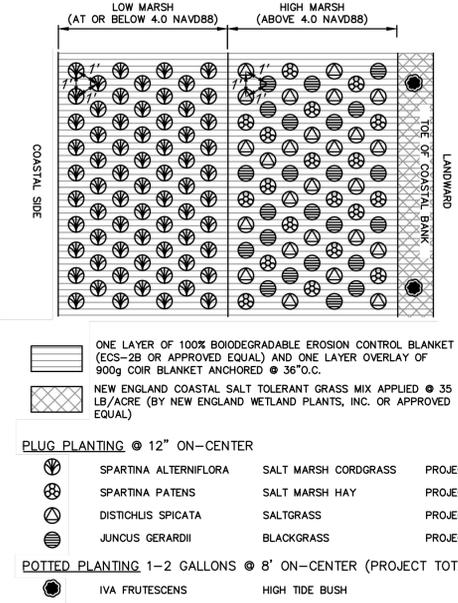
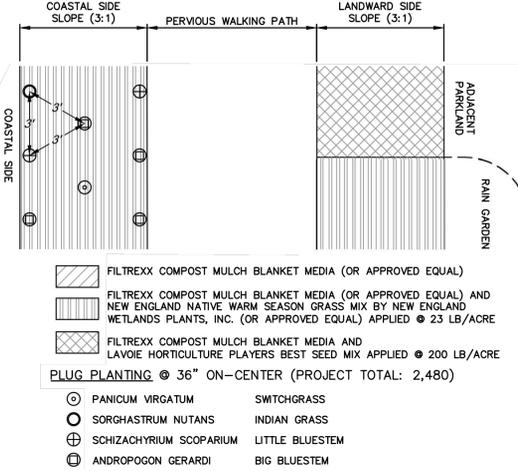
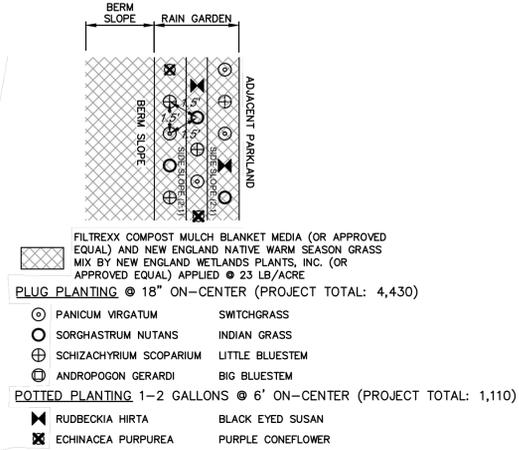
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TOWN OF BRAINTREE  
 SITE RESTORATION PLAN No. 1  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

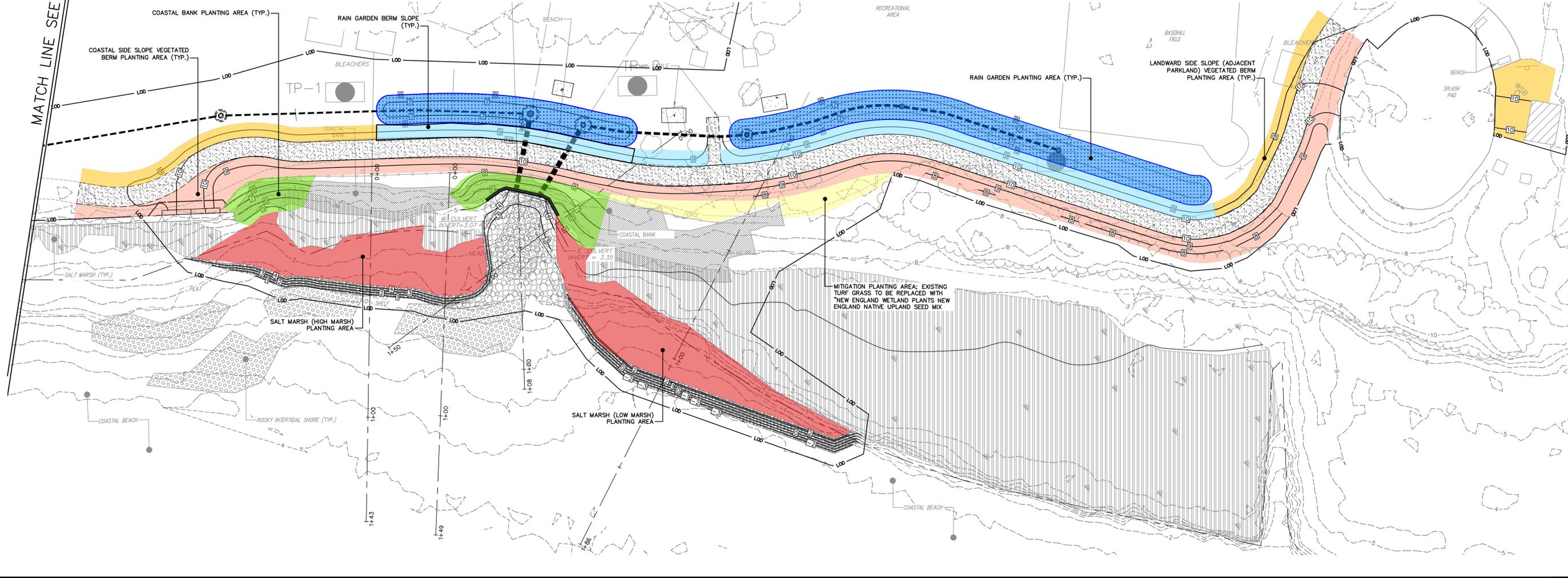
PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**LP-101**

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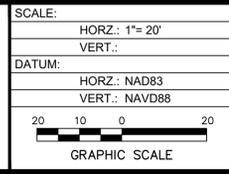


- RESTORATION NOTES**
- DISTURBED PARK AREAS OUTSIDE OF THE VEGETATED BERM, COASTAL BANK, SALT MARSH AND RAIN GARDEN RESTORATION AREAS SHALL RECEIVE NATIVE OR IMPORTED TOPSOIL AND SEED CONFORMING TO LAVOIE HORTICULTURE'S "PLAYERS BEST SEED MIX" OR APPROVED EQUAL, NOT ALL POTENTIALLY DISTURBED AREAS REQUIRING RESTORATION ARE SHOWN HEREON.
  - ALL SEED MIXES SHALL BE FREE OF INVASIVE NON-NATIVE PLANT SPECIES.
  - ALL DISTURBED MARSH AREAS TO BE RESTORED AND REVEGETATED WITH PLUG PLANTINGS TO BE PLANTED DURING LOW TIDE CONDITIONS.



No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

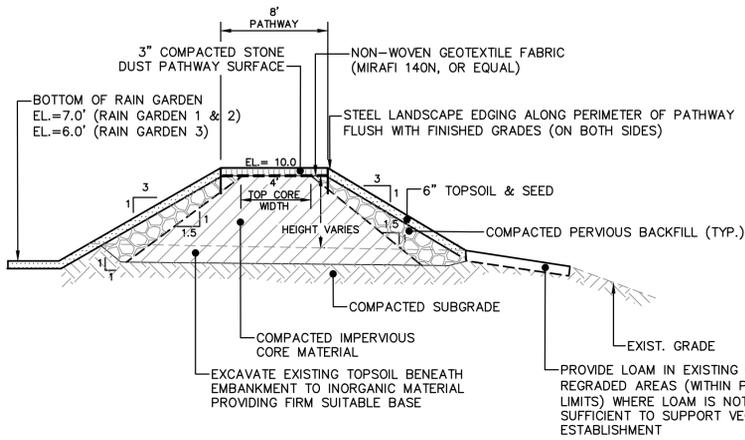
SEAL



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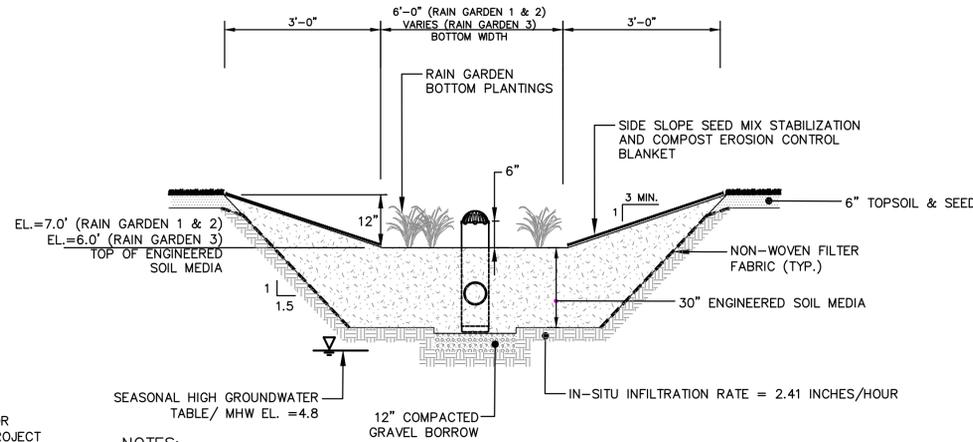
TOWN OF BRAINTREE  
 SITE RESTORATION PLAN No. 2  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**LP-102**



**VEGETATED BERM AND ELEVATED PATHWAY**

NOT TO SCALE

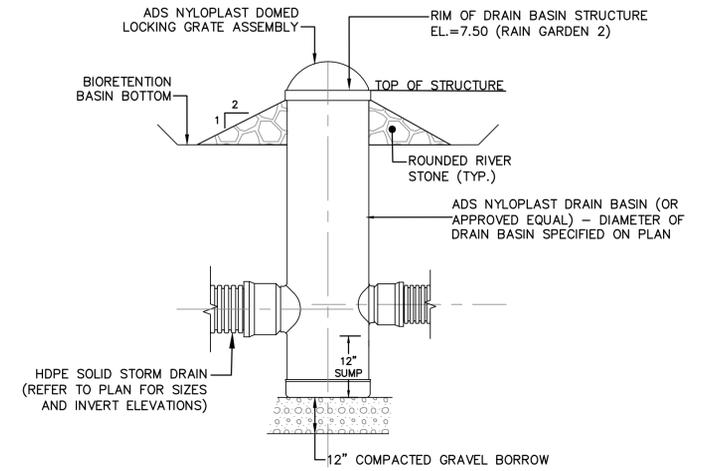


**NOTES:**

- ENGINEERED SOIL MEDIA SHALL HAVE A LOAMY SAND SOIL TEXTURE PER USDA TEXTURAL TRIANGLE. THE SOIL MIXTURE SHALL BE 60 - 70% SAND BY VOLUME; 15 - 25% TOPSOIL OR LOAM BY VOLUME; AND 15 - 25% ORGANIC MATTER (CONSISTING OF PARTIALLY DECOMPOSED SPHAGNUM PEAT WITH 100% PASSING A 1/2\"/>

**RAIN GARDEN SECTION DETAIL**

NOT TO SCALE

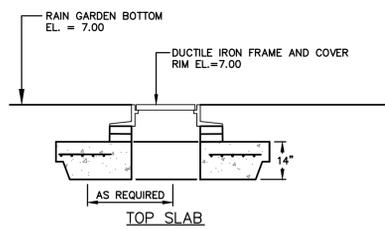


**NOTES:**

- BEDDING MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.
- DOMED GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE.

**RAIN GARDEN YARD DRAIN**

NOT TO SCALE



**NOTES:**

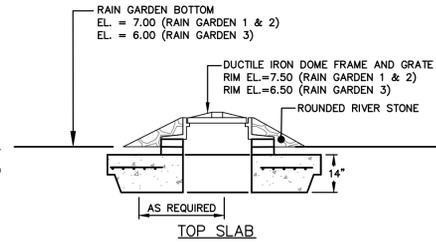
- STRUCTURE SHALL BE PRECAST CONCRETE AND SHALL BE IN ACCORDANCE WITH SECTION 200 OF THE MASSDOT STANDARD SPECIFICATIONS. CONCRETE STRUCTURE, STEEL REINFORCING, FRAME AND GRATE SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- FRAME & COVER SHALL BE 24\"/>

TABLE 1				
STRUCTURE DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED *	
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.	
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.	
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.	

\* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478

**PRECAST CONCRETE MANHOLE STRUCTURE**

NOT TO SCALE



**NOTES:**

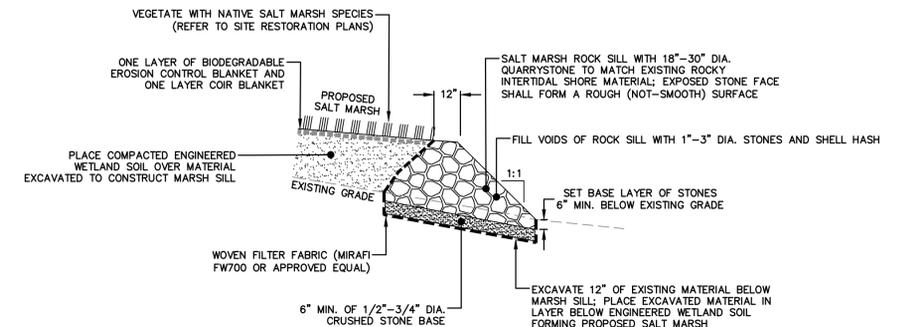
- STRUCTURE SHALL BE PRECAST CONCRETE AND SHALL BE IN ACCORDANCE WITH SECTION 200 OF THE MASSDOT STANDARD SPECIFICATIONS. CONCRETE STRUCTURE, STEEL REINFORCING, FRAME AND GRATE SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- FRAME & DOME GRATE SHALL BE 24\"/>

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\* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478

**PRECAST CONCRETE OVERFLOW STRUCTURE**

NOT TO SCALE



**SALT MARSH ROCK SILL - TYPICAL CROSS SECTION**

NOT TO SCALE

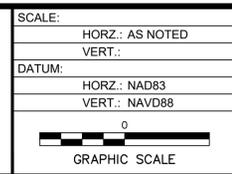
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No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL



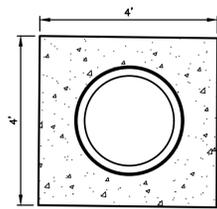
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HORIZ.: NAD83
VERT.: NAVD88
GRAPHIC SCALE



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TOWN OF BRAINTREE  
 CONSTRUCTION DETAILS  
 WATSON PARK SHORELINE EROSION MITIGATION  
 AND COASTAL RESILIENCY PROJECT  
 BRAintree MASSACHUSETTS

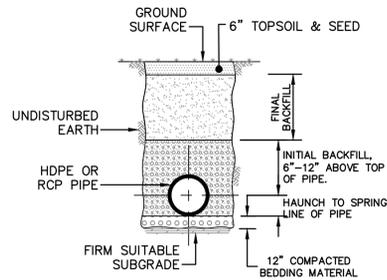
PROJ. No.: 20200523.A10  
 DATE: JANUARY 2022  
**CD-501**



**SEEPAGE COLLAR**

- NOTES:
- SEEPAGE COLLARS THAT ARE 4'x4'(MIN.) SHALL BE INSTALLED ALONG SECTIONS OF NEWLY INSTALLED RCP OUTFALL PIPING AT 10' O.C.
  - BEDDING AND BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 6".

**SEEPAGE COLLAR**  
NOT TO SCALE

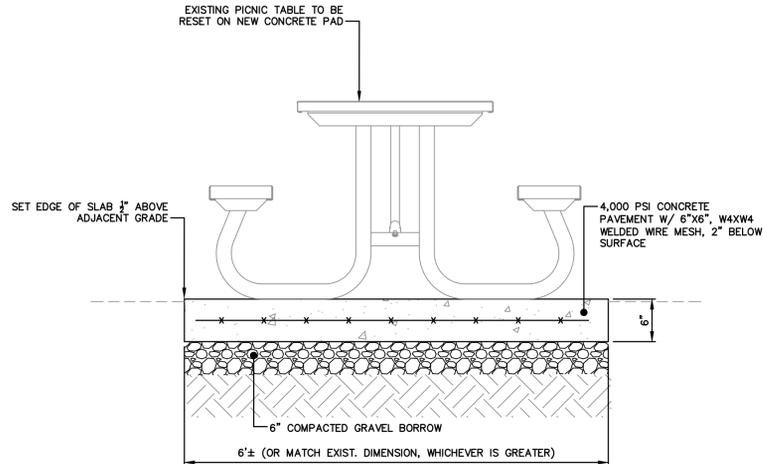


**STORM DRAIN TRENCH**

- NOTES:
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF COMPACTED GRAVEL BORROW IN ACCORDANCE WITH M1.03.0, TYPE B OF THE STANDARD SPECIFICATIONS OR CRUSHED STONE CONFORMING TO SECTIONS 150.68 AND M2.01.4 OR M2.01.5 OF THE STANDARD SPECIFICATIONS.
  - BEDDING: SUITABLE MATERIAL SHALL CONSIST OF COMPACTED GRAVEL BORROW IN ACCORDANCE WITH M1.03.0, TYPE B OF THE STANDARD SPECIFICATIONS. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12".
  - HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL CONSIST OF NATIVE OR IMPORTED COMPACTED GRAVEL BORROW CONFORMING TO THE GRADATION REQUIREMENTS OF M1.03.0, TYPE B OF THE STANDARD SPECIFICATIONS.
  - FINAL BACKFILL: SATISFACTORY NATIVE OR IMPORTED MATERIAL CONFORMING TO THE GRADATION REQUIREMENTS OF ORDINARY BORROW, M1.01.0, OF THE STANDARD SPECIFICATIONS.

NOMINAL Ø (IN.)	MIN. RECOMMENDED TRENCH WIDTH (IN.)
6	24
12	30
18	42
24	60

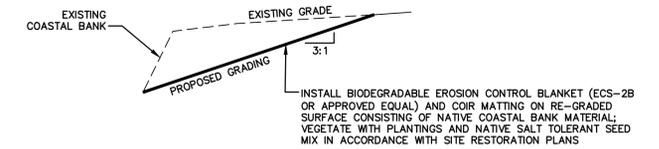
**STORM DRAIN TRENCH**  
NOT TO SCALE



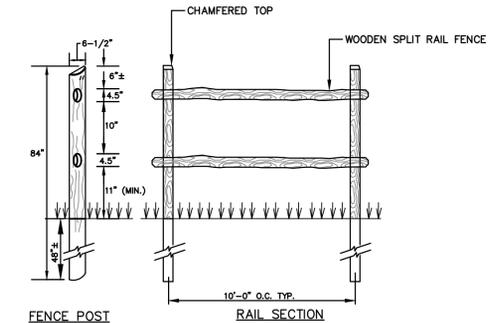
**RESET PICNIC TABLE (WITH NEW CONCRETE PAD)**

- NOTES:
- UTILIZE EXISTING PICNIC TABLE(S) IF DETERMINED TO BE IN GOOD CONDITION BY THE TOWN.
  - THE INTENT IS TO REMOVE AND RELOCATE EXISTING PICNIC TABLE(S) ONLY AS REQUIRED FOR COMPLETION OF PROPOSED WORK. THE APPROXIMATE DIMENSIONS OF THE NEW CONCRETE PAD(S) SHALL BE APPROXIMATELY 6'± BY 10'± OR SHALL MATCH THE EXISTING DIMENSIONS, WHICHEVER IS GREATER.

**RESET PICNIC TABLE (WITH NEW CONCRETE PAD)**  
NOT TO SCALE



**COASTAL BANK PLANTING AREA GRADING - TYPICAL CROSS SECTION**  
NOT TO SCALE



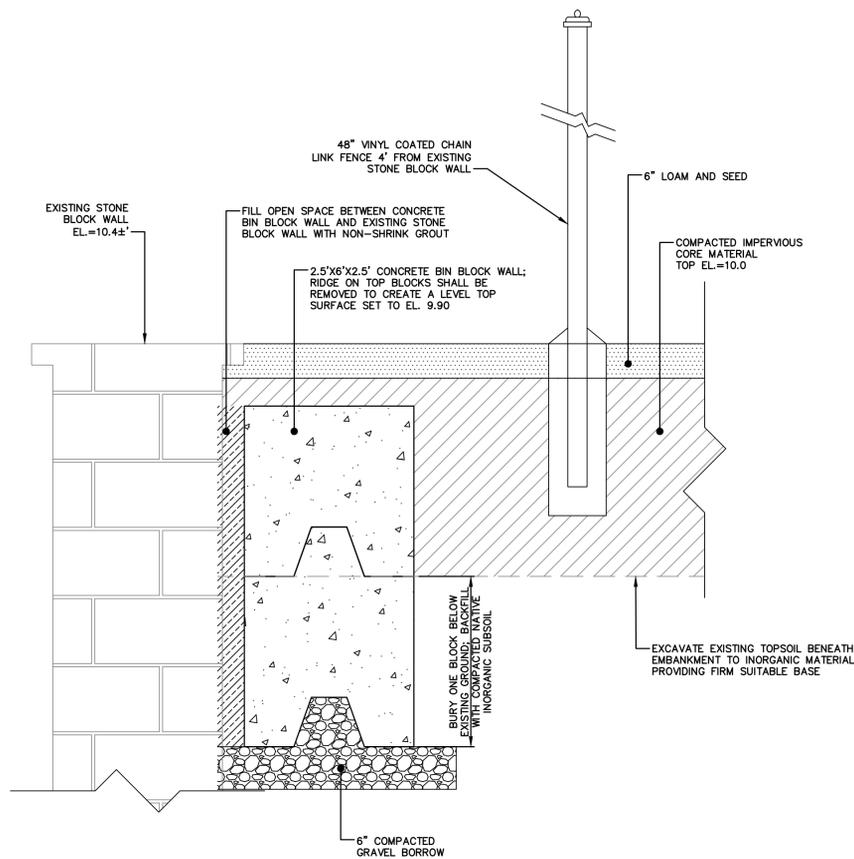
**FENCE POST**

**RAIL SECTION**

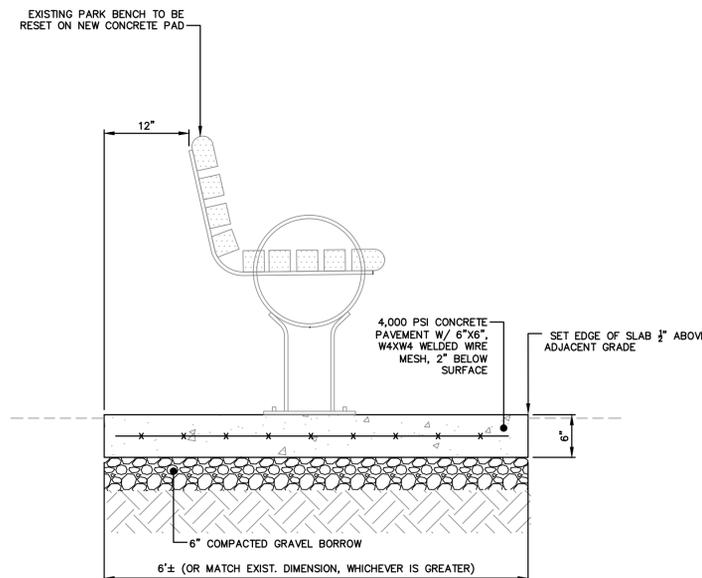
**NOTES:**

- THE INTENT IS TO REMOVE AND RELOCATE EXISTING POSTS AND RAILS ONLY AS REQUIRED FOR COMPLETION OF PROPOSED WORK.
- DIMENSIONS SHOWN ARE APPROXIMATE ONLY AND ARE ONLY INTENDED TO REFLECT APPROXIMATE DIMENSIONS DURING THE RE-INSTALLATION OF THE EXISTING RAILS AND FENCE POSTS.
- SHOULD IT BE DETERMINED THAT NEW POSTS AND RAILS ARE REQUIRED DUE TO POOR CONDITION (AS DETERMINED BY TOWN OR ENGINEER) OR CONTRACTOR DAMAGE, THE POSTS AND RAILS SHOULD BE REPLACED IN-KIND AND INSTALLED TO MATCH EXISTING CONDITIONS.

**RESET SPLIT RAIL FENCE**  
NOT TO SCALE



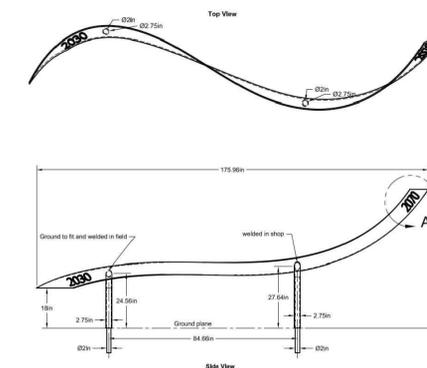
**BERM CONNECTION TO COASTAL WALL**  
NOT TO SCALE



**NOTES:**

- UTILIZE EXISTING PARK BENCH IF DETERMINED TO BE IN GOOD CONDITION BY THE TOWN.
- THE INTENT IS TO REMOVE AND RELOCATE EXISTING PARK BENCH ONLY AS REQUIRED FOR COMPLETION OF PROPOSED WORK. THE APPROXIMATE DIMENSIONS OF THE NEW CONCRETE PAD SHALL BE APPROXIMATELY 6'± BY 8'± OR SHALL MATCH THE EXISTING DIMENSIONS, WHICHEVER IS GREATER.

**RESET PARK BENCH (WITH NEW CONCRETE PAD)**  
NOT TO SCALE



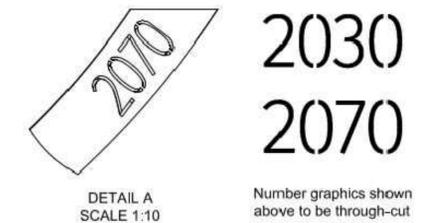
**Notes**

- Total estimated weight 250lbs
- All parts to be 316 Corrosion-resistant stainless steel, brushed finish
- Main body of sculpture to be 7in x 0.5in
- Legs to be 2.75in tubes
- Connections to be welded, ground, and finished
- Numbers ("2030" and "2070") to be through-cut
- Overall footprint: 3ft x 14.65ft

**NOTES:**

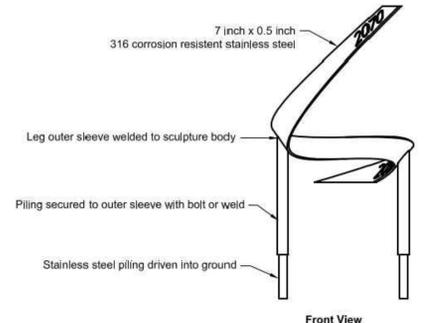
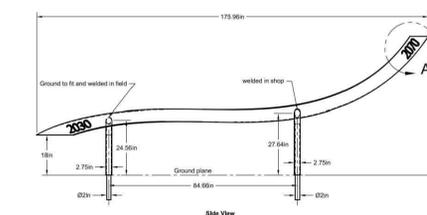
- ALL SCULPTURE GRAPHICS AND INFORMATION PROVIDED HEREON WERE PROVIDED TO FUSS & O'NEILL BY THE SCULPTURE DESIGNER/FABRICATOR AS OF THE DATE OF THESE DRAWINGS, AND ARE SUBJECT TO CHANGE AS REFLECTED ON MATERIALS PROVIDED IN EXHIBIT 'C' OF THE PROJECT MANUAL.
- SCULPTURE TO BE FURNISHED BY THE DESIGNER/FABRICATOR AND TRANSPORTED, STORED, PROTECTED AND ERECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE SCULPTURE DESIGNER/FABRICATOR'S INSTRUCTIONS.
- APPROXIMATE LOCATION OF SCULPTURE SHOWN ON PLANS. ACTUAL LOCATION AND ELEVATION SHALL BE DETERMINED IN THE FIELD THROUGH CONSULTATION WITH THE ENGINEER, CONTRACTOR AND THE TOWN HOWEVER WILL NOT BE PLACED BELOW THE HIGH TIDE LINE.
- THE TYPES, CONFIGURATIONS AND DEPTHS THAT THE SCULPTURE'S FOUNDATIONS/SUPPORTS SHALL BE CONSTRUCTED TO SUPPORT THE SCULPTURE SHALL BE DETERMINED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER AND SUBMITTED FOR INFORMATIONAL PURPOSES PRIOR TO CONSTRUCTION.

**WATSON PARK EDUCATIONAL SLR ART SCULPTURE**  
NOT TO SCALE



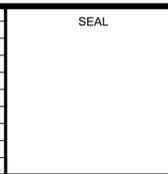
**DETAIL A**  
SCALE 1:10

2030  
2070  
Number graphics shown above to be through-cut

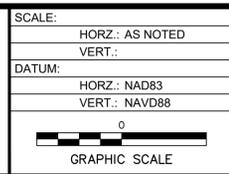


**Front View**

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER



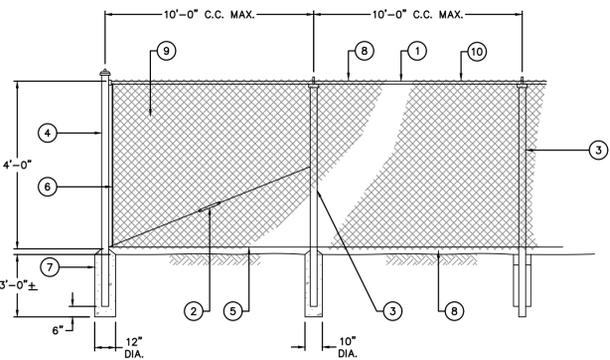
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DATUM:	HORIZ.: NAD83
	VERT.: NAVD88
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TOWN OF BRAINTREE  
CONSTRUCTION DETAILS  
WATSON PARK SHORELINE EROSION MITIGATION  
AND COASTAL RESILIENCY PROJECT  
BRAintree MASSACHUSETTS

PROJ. No.: 20200523.A10  
DATE: JANUARY 2022  
**CD-502**



**VINYL COATED CHAIN LINK FENCE**  
SCALE: N.T.S.

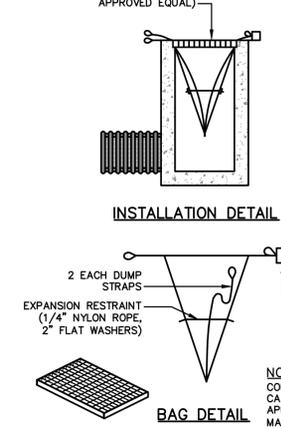
**NOTES:**

1. FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS, FOOTINGS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE FENCE MANUFACTURER AND ACCEPTED BY THE ENGINEER.

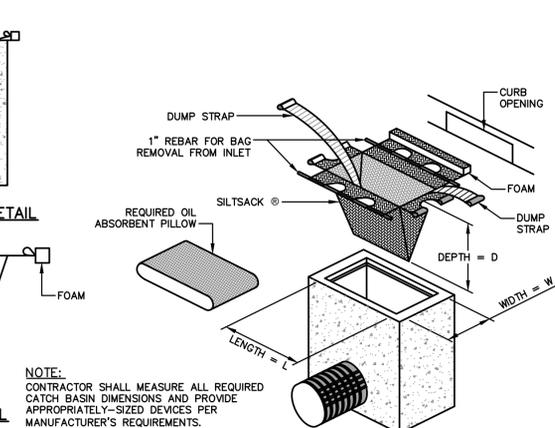
**CHAIN LINK FENCE LEGEND**

- ① 1 5/8" O.D. TOP RAIL ATTACH FABRIC WITH 9 GAUGE WIRE CLIP EVERY 24"
- ② 5/16" TRUSS ROD AND TURNBUCKLE
- ③ INTERMEDIATE POST
- ④ END OR CORNER POST
- ⑤ 6 GAUGE BOTTOM TENSION WIRE ATTACH TO FABRIC WITH HOG RING AT 24" C.C.
- ⑥ TENSION ROD ATTACHED TO END OR CORNER POST
- ⑦ CONCRETE FOOTING 36" DEEP WITH 12" DIA. AT END POST AND 10" DIA. AT INTERMEDIATE POST. HOLE CORE IN UNDISTURBED OR COMPACTED SOIL. (SEE NOTE NO. 1)
- ⑧ FABRIC SELVAGE: KNUCKLED TOP AND BOTTOM
- ⑨ 9 GAUGE 1 1/2" WIRE MESH FABRIC (COMMERCIAL) BLACK VINYL COATED.

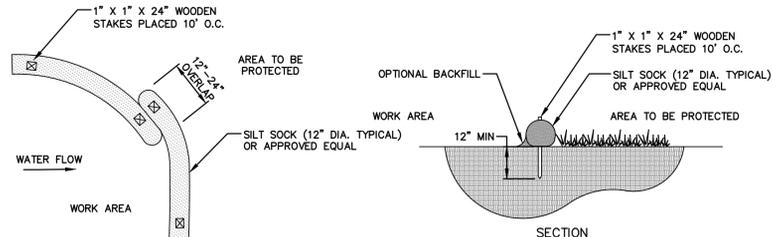
PROPOSED CATCH BASIN INLET PROTECTION DEVICE (SILT SOCK OR APPROVED EQUAL)



SCALE: N.T.S.

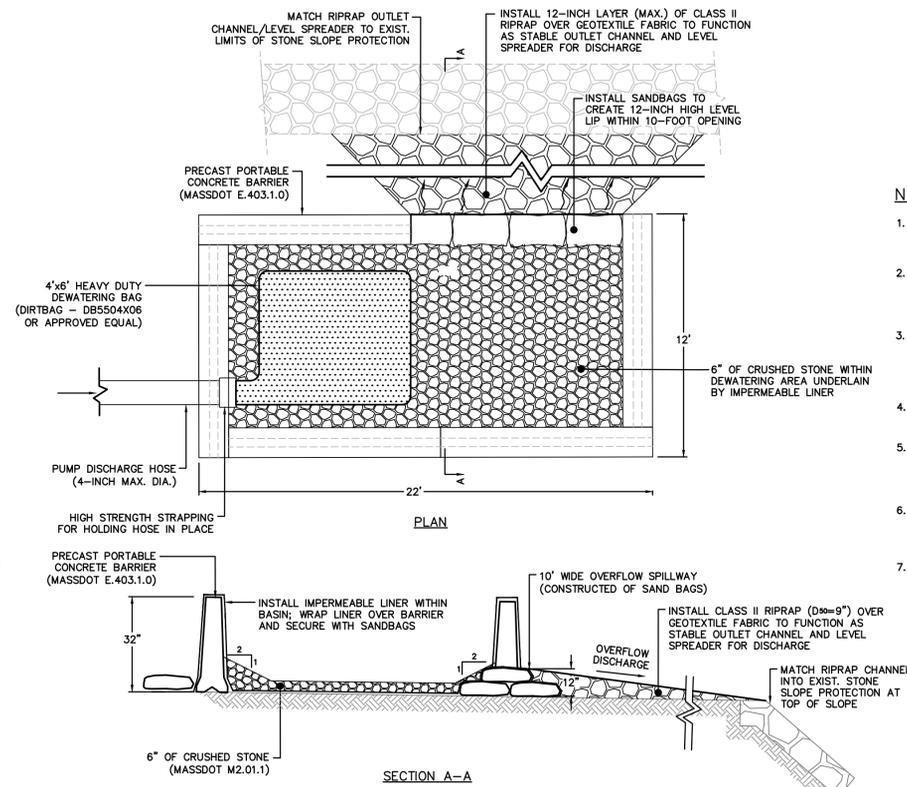


NOTE: CONTRACTOR SHALL MEASURE ALL REQUIRED CATCH BASIN DIMENSIONS AND PROVIDE APPROPRIATELY-SIZED DEVICES PER MANUFACTURER'S REQUIREMENTS.



- NOTES:**
- 1. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
  - 2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
  - 3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

**COMPOST FILTER TUBE**  
NOT TO SCALE

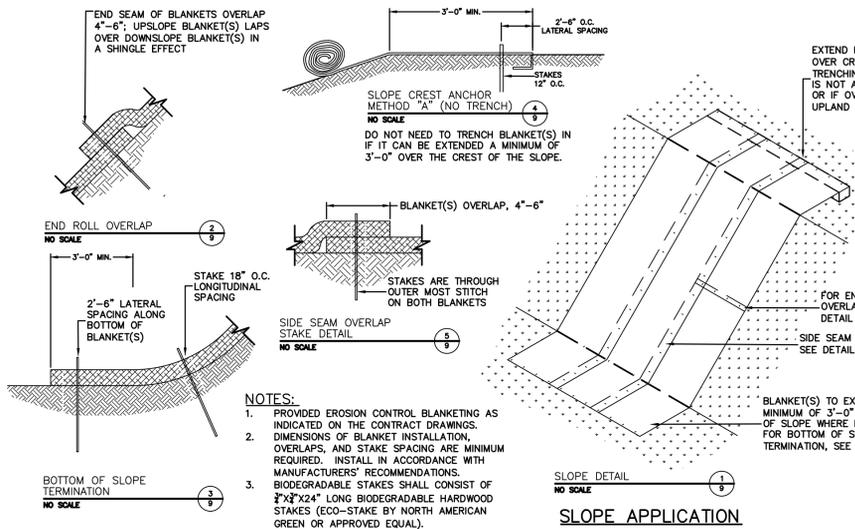


**TEMPORARY CONSTRUCTION DEWATERING DISCHARGE SETTLING BASIN**  
NOT TO SCALE

**NOTES:**

- 1. THE DEWATERING BAG, DIRTBAG DB 55 OR APPROVED EQUAL, SHALL BE HEAVY DUTY AND CONSIST OF A NONWOVEN BAG SEWN WITH A DOUBLE NEEDLE MATCHING USING A HIGH STRENGTH THREAD.
- 2. EACH DEWATERING BAG SHALL HAVE A FILL SPOUT LARGE ENOUGH TO ACCOMMODATE A 4-INCH DISCHARGE HOSE. THE BAG SHALL BE PROVIDED WITH STRAPS TO SECURE THE HOSE AND PREVENT PUMPED WATER FROM ESCAPING WITHOUT BEING FILTERED.
- 3. MAINTAIN DEWATERING BAG(S) AS NECESSARY TO EFFICIENTLY FILTER SEDIMENT OR PASS WATER AT A REASONABLE RATE. USE OF EXCESSIVE FLOW RATES OR OVERFILLING DIRTBAG OF THE HOSE ATTACHMENT STRAPS WITH SEDIMENT WILL CAUSE RUPTURES OF THE BAGS OR FAILURE.
- 4. DISPOSE OF DEWATERING BAG AND CONTENTS AT OFF-SITE DISPOSAL FACILITY IN ACCORDANCE WITH LOCAL, STATE, AND/OR FEDERAL REGULATIONS.
- 5. INSTALL DEWATERING BAG AND CRUSHED STONE BEDDING WITH A SLOPE SO INCOMING WATER FLOWS DOWNHILL THROUGH THE BAG WITHOUT CREATING MORE EROSION. STRAP THE NECK OF DEWATERING BAG TIGHTLY TO THE DISCHARGE HOSE.
- 6. GEOTEXTILE FILTER FABRIC SHALL CONSIST OF A NONWOVEN GEOTEXTILE FABRIC CONFORMING TO TYPE III FABRIC IN ACCORDANCE WITH TABLE III, SECTION M.9.50.0 OF THE MASSDOT STANDARD SPECIFICATIONS.
- 7. THE IMPERMEABLE LINER SHALL CONSIST OF A 30-MIL THICK PVC LINER.

**CATCH BASIN INLET PROTECTION**  
NOT TO SCALE

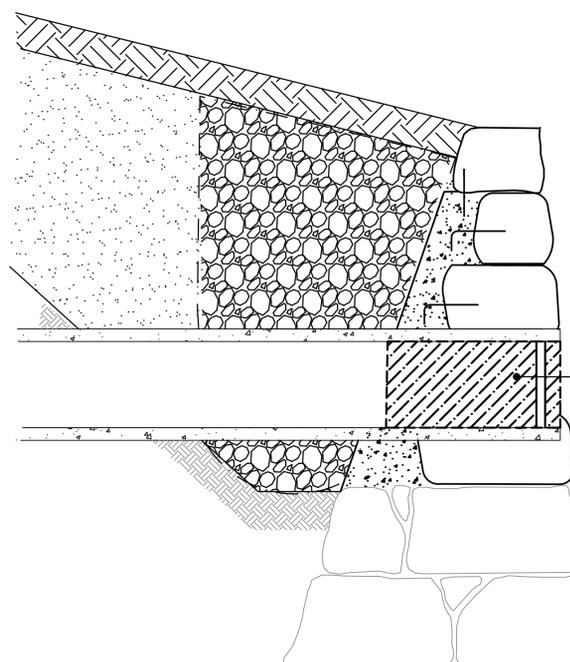


- NOTES:**
- 1. PROVIDED EROSION CONTROL BLANKETING AS INDICATED ON THE CONTRACT DRAWINGS. DIMENSIONS OF BLANKET INSTALLATION, OVERLAPS, AND STAKE SPACING ARE MINIMUM REQUIRED. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - 2. BIODEGRADABLE STAKES SHALL CONSIST OF 2"x2" LONG BIODEGRADABLE HARDWOOD STAKES (ECO-STAKE BY NORTH AMERICAN GREEN OR APPROVED EQUAL).
  - 3. FIRMLY SECURE THE BLANKETING TO THE SOIL SURFACE BY STRETCHING TWINE BETWEEN STAKES IN A CRISS-CROSS OR SQUARE PATTERN. SECURE THE TWINE AROUND EACH STAKE WITH TWO OR MORE TURNS AROUND THE STAKE AT THE GROUND SURFACE.

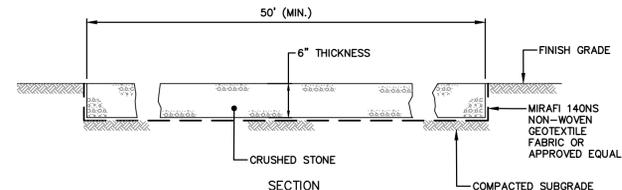
**COIR, COMPOST MULCH, AND EROSION CONTROL BLANKETS**  
NOT TO SCALE

**STAKE PATTERN GUIDE**

Blanket	Stake Pattern
M1	30"
M2	30"
M3	18"
M4	18"
M5	18"
M6	18"
M7	18"
M8	18"
M9	18"
M10	18"
M11	18"
M12	18"
M13	18"
M14	18"
M15	18"
M16	18"
M17	18"
M18	18"
M19	18"
M20	18"
M21	18"
M22	18"
M23	18"
M24	18"
M25	18"
M26	18"
M27	18"
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M49	18"
M50	18"

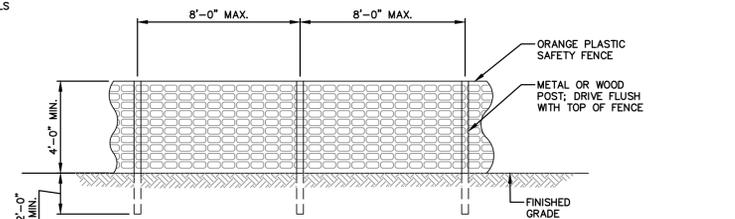


**OUTFALL WITH BACKFLOW PROTECTION DEVICE**  
NOT TO SCALE



- NOTES:**
- 1. MAINTAIN CONSTRUCTION ENTRANCE IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
  - 2. ANY PAVED AREAS, ADJACENT TO THE CONSTRUCTION ENTRANCE SHALL BE SWEEP DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO PAVEMENT.
  - 3. REMOVE STONE, FABRIC, AND TRACKED MATERIALS FOLLOWING CONSTRUCTION ACTIVITIES AND RESTORE AREA TO ORIGINAL CONDITION.
  - 4. CRUSHED STONE SHALL CONFORM TO THE GRADATION LISTED FOR M2.01.0 OF THE MASSDOT STANDARD SPECIFICATIONS.

**TEMPORARY CONSTRUCTION ENTRANCE**  
NOT TO SCALE

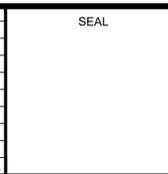


- NOTES:**
- 1. CONSTRUCTION SAFETY FENCE SHALL BE PROVIDED WHERE SHOWN ON DRAWINGS OR AS DIRECTED BY THE OWNER.
  - 2. TREE PROTECTION FENCE SHALL BE PROVIDED AT DRIPLINE OF TREE OR TREE GROUPING FOR ALL TREES TO REMAIN OR AFTER RELOCATION.

**CONSTRUCTION SAFETY FENCE AND TREE PROTECTION FENCE**  
NOT TO SCALE

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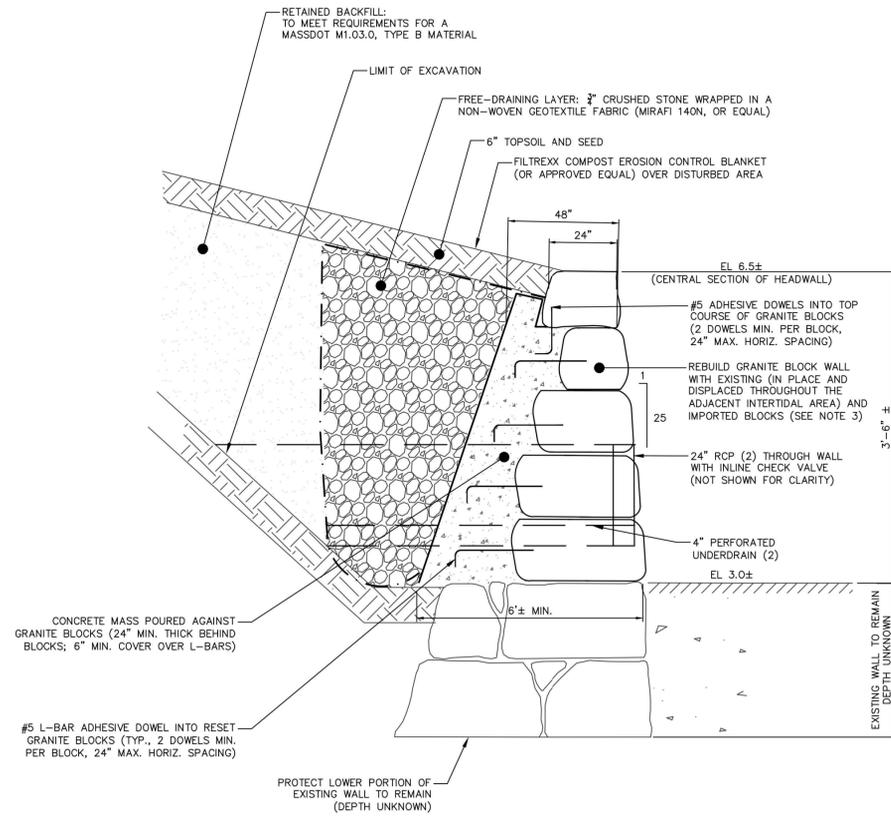


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	VERT.: NAVD88
	GRAPHIC SCALE

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TOWN OF BRAINTREE  
CONSTRUCTION DETAILS  
WATSON PARK SHORELINE EROSION MITIGATION  
AND COASTAL RESILIENCY PROJECT  
BRAintree MASSACHUSETTS

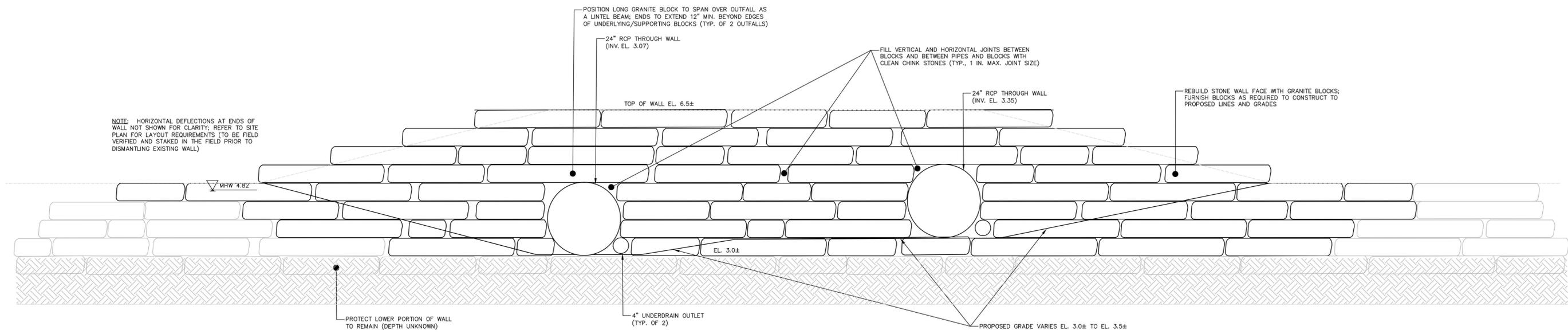
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**WALL SECTION**  
NOT TO SCALE

**CONCRETE AND MASONRY NOTES:**

1. CONCRETE MASS SHALL BE 4,000 PSI, 1.5 IN. CEMENT CONCRETE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. EACH GRANITE BLOCK SHALL BE HELD SECURELY IN POSITION BY 2 EPOXY-COATED STEEL ANCHORS. THE ANCHORS SHALL BE OF THE REQUIRED DIMENSIONS AND SHAPES AND SHALL EXTEND 3 IN. INTO STONE AND 6 IN. MINIMUM INTO CONCRETE.
3. PACK FRONT FACE OF DRY STACKED WALL JOINTS WITH TEMPORARY JOINT FILLER, BACKER ROD OR OTHER SUITABLE MATERIAL AS REQUIRED TO PREVENT CONCRETE MASS FROM SEEPING THROUGH AND CREATE A 2" MIN. REVEAL FROM FRONT FACE OF WALL. REMOVE ALL PACKING MATERIAL AFTER CONCRETE MASS HAS SET.



**WALL ELEVATION**  
3/4" = 1'-0"

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TOWN OF BRAINTREE  
HEADWALL RECONSTRUCTION PLAN  
AND SECTION  
WATSON PARK SHORELINE EROSION MITIGATION  
AND COASTAL RESILIENCY PROJECT  
BRAINTREE MASSACHUSETTS

PROJ. No.: 20200523.A10  
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**CD-504**