MASHPEE-WAKEBY CAPE COD BOAT RAMP STORMWATER **RETROFIT PROJECT- PERMITTING PLANS** MASHPEE, MASSACHUSETTS OCTOBER 2023





VICINITY MAP **Graphic Scale** 1-inch = 500-feet

North

Sheet List Table						
Sheet Number	Sheet Title					
1	COVER SHEET					
2	NOTES & LEGEND					
3	DEMOLITION AND EROSION CONTROL PLAN					
4	SITE AND GRADING PLAN					
5	DRAINAGE PLAN					
6	DRIVEWAY PROFILE & DETAILS					
7	DETAILS (1)					
8	DETAILS (2)					
9	PLANTING PLAN					
10	PLANTING DETAILS					

GENERAL NOTES:

- SURVEY CONDUCTED BY HORSLEY WITTEN GROUP (HW) IN DECEMBER, 2022. HORIZONTAL DATUM IS MASS STATE PLANE COORDINATE SYSTEM. DATUM ESTABLISHED BY GPS RTK. THE ELEVATIONS DEPICTED HEREOI WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 NO PROPERTY LINE SURVEY WAS PERFORMED
- ABUTTER INFORMATION FROM ASSESSOR'S MAP
- SITE INFORMATION:



- ADDRESS: 0 MAIN STREET MASHPEE, MA
- ZONING DISTRICT: RESIDENTIAL 5 (R5) THE PROPERTY IS LOCATED WITHIN F.I.R.M ZONES X (0.2%), AS SHOWN ON COMMUNITY PANEL NO,
- 25001C0538J DATED JULY 16, 2014. THE WETLAND DELINEATION SHOWN HEREON WAS CONDUCTED BY THE HORSLEY WITTEN GROUP, INC. ON **DECEMBER 2, 2022**



GENERAL CONSTRUCTION NOTES

- ALL SITE WORK TO COMPLETE THIS PROJECT AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER AND OWNER IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED
- UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONNEL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY FENCING BARRICADES SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE TOWN. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL
- MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES INCLUDING POLICE DETAILS AND POST ALL BONDS, IF NECESSARY, ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER.
- ALL EXISTING CONDITIONS SHOWN ARE APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. PRIOR TO THE START OF CONSTRUCTION VERIFY THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, NOTIFY THE OWNER AND THE ENGINEER PRIOR TO INSTALLING ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED.
- THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS INDICATED ON THE DRAWINGS ARE BASED ON RECORDS OF VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY IN THE TOWN. AND "DIGSAFE" (1-888-344-7233) AT LEAST THREE BUSINESS DAYS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES. THE CONTRACTOR MUST RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD-LOCATED UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED. INCOMPLETELY OR INACCURATELY SHOWN. THE CONTRACTOR MUST MAINTAIN ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- IMPORT ONLY CLEAN MATERIAL. MATERIAL FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.0000 WILL NOT BE ACCEPTED
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH AND MAINTAIN ALL CONTROL POINTS AND BENCHMARKS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. COORDINATE WITH THE ENGINEER THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS.
- SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION MUST BE PROVIDED BY THE CONTRACTOR AND PERFORMED BY A MASSACHUSETTS' REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK.
- MAINTAIN ALL GRADE STAKES SET BY THE SURVEYOR. GRADE STAKES ARE TO REMAIN UNTIL A FINAL INSPECTION OF THE ITEM HAS BEEN COMPLETED BY THE ENGINEER. RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES IS THE RESPONSIBILITY (INCLUDING COST) OF THE CONTRACTOR
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND BRIDGES 2020 EDITION. AND THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 30, 2020).
- PROVIDE ALL CONSTRUCTION SERVICE IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, AND TRENCH WORK.
- MANAGEMENT REGULATIONS. RESTORE ALL SURFACES EQUAL TO THEIR ORIGINAL CONDITION AFTER CONSTRUCTION IS COMPLETE PER SPECIFICATIONS. LEAVE ALL AREAS NOT DISTURBED BY CONSTRUCTION IN THEIR NATURAL STATE. TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES,

OTHER LANDSCAPING AND/OR NATURAL FEATURES. WHEREAS THE PLANS DO NOT SHOW ALL LANDSCAPE FEATURES, EXISTING

COLLECT SOLID WASTES AND STORE IN A SECURED DUMPSTER. THE DUMPSTER MUST MEET ALL LOCAL AND STATE SOLID WASTE

- CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK. LEDGE OR BOULDER EXCAVATION IS NOT ANTICIPATED FOR THIS SITE. PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL LEDGE AND/OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. PROVIDE UNIT PRICES FOR BOTH ON AND OFF SITE DISPOSAL. IF
- REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. PROMPTLY REMOVE ALL DEMOLITION DEBRIS FROM THE SITE TO AN APPROVED DUMP SITE
- ALL TRUCKS LEAVING THE SITE MUST BE COVERED.
- DO NOT WASH ANY CONCRETE TRUCKS ONSITE. REMOVE BY HAND ANY CEMENT OR CONCRETE DEBRIS LEFT IN THE DISTURBED
- BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED. DO NOT USE ROAD SALT OR OTHER DE-ICING CHEMICALS ON THE ACCESS ROADWAY. AT THE END OF CONSTRUCTION, REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE AS INDICATED IN
- THE SPECIFICATIONS. PERFORM A THOROUGH INSPECTION OF THE WORK PERIMETER. COLLECT AND REMOVE ALL MATERIALS AND BLOWN OR WATER CARRIED DEBRIS FROM THE SITE.

GENERAL DEMOLITION NOTES:

FHIS PLAN SET DOES NOT INCLUDE DETAILS & SPECIFICATIONS FOR ALL DEMOLITION WORK REQUIRED WITHIN THE PROPOSED CONSTRUCTION LIMITS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER AND PROJECT ENGINEER INVOLVED NITH THE PROPOSED NEW CONSTRUCTION TO DEVELOP A SUITABLE DEMOLITION PLAN.

UNLESS OTHERWISE NOTED, THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION, DEMOLITION, REMOVAL AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL EXISTING SITE ELEMENTS AND STRUCTURES INCLUDING, BUT NOT LIMITED TO ROADWAYS. PARKING AREAS. BITUMINOUS CONCRETE, CEMENT CONCRETE, GRAVEL, CURBS, WALKWAYS, BERMS, POSTS, TREES, SHRUBS, DRAINAGE STRUCTURES AND ALL OTHER STRUCTURES SHOWN AND NOT SHOWN WITHIN CONSTRUCTION LIMITS, AND WHERE NEEDED, TO ALLOW FOR NEW CONSTRUCTION. ALL FACILITIES TO BE REMOVED ARE TO BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS

12" WASHED CRUSHED STONE AGGREGATE

SECTION A-A

ASTM DESIGNATION C-33, SIZE NO. 2 (1-1/2" TO 2-1/2")

PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

ADDITIONAL FILL MATERIAL IS REQUIRED INCLUDE THE COST OF ALL FILL MATERIAL

- REMOVE ALL DEBRIS FROM THE SITE AND DISPOSE OF THE DEBRIS IN A PROPER AND LEGAL MANNER.
- OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL
- COORDINATE WITH THE TOWN OF MASHPEE ON ACCESS CLOSURE DATES AND NOTIFICATIONS.

BASIC CONSTRUCTION SEQUENCE

- 1. SURVEY AND STAKE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF SEDIMENTATION BARRIERS. PLACE SEDIMENTATION BARRIERS AS INDICATED ON DRAWINGS AND STAKED OUT IN THE FIELD. UNDER NO CIRCUMSTANCES IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE AS INDICATED ON DRAWINGS AS APPROVED BY THE LOCAL CONSERVATION COMMISSION AND DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP).
- DESIGNATE THE SITE CONSTRUCTION FOREMAN AS THE ON-SITE PERSONNEL RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROLS AND IMPLEMENTATION OF ALL NECESSARY MEASURES TO CONTROL INSTALL TEMPORARY CONSTRUCTION ENTRANCES IN LOCATIONS INDICATED ON DRAWINGS. NO OTHER ENTRANCES ARE TO BE FROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
- BEGIN CLEARING THE SITE AS REQUIRED.
- EXCAVATE AND ROUGH GRADE THE PROPOSED STORMWATER MANAGEMENT AREAS THAT WILL SERVE AS TEMPORARY SEDIMENT TRAPS PER THE DRAWINGS AND ANY ADDITIONAL TEMPORARY BASINS NECESSARY TO CONTROL SITE RUNOFF AND SEDIMENTS. TEMPORARILY STABILIZE/SEED PERMANENT STORMWATER MANAGEMENT AREAS AS NECESSARY TO REDUCE SIDE SLOPE EROSION AND SEDIMENT ACCUMULATION.
- BEGIN CLEARING AND GRUBBING THE STORMWATER MANAGEMENT AREAS. TOPSOIL IS TO BE STRIPPED FROM THE AREA OF THE PROPOSED STORMWATER MANAGEMENT AREAS AND STOCKPILED IN APPROVED LOCATIONS. TOPSOIL STOCKPILES MUST BE PROTECTED BY A SEDIMENT BARRIER.
- INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, CHECK DAMS, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO TEMPORARY SEDIMENT TRAPS AND BASINS
- 7. KEEP THE LIMIT OF CLEARING, GRADING AND DISTURBANCES TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE. CLEAR INSTALL UNDERGROUND INFILTRATION SYSTEMS AND ALL ASSOCIATED DRAINAGE INFRASTRUCTURE. BEGIN WITH INSTALLING UIC #2 AND GRUB ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION. PROPERLY INSTALL THE SEDIMENTATION CONTROLS THEN MOVE ON TO UIC #1. LEAVE DRAINAGE STUBS AT EDGES OF BIORETENTION AREAS FOR FUTURE CONNECTION INTO THE PRIOR TO BEGINNING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK. OVERFLOW STRUCTURES. THE DRAINAGE NETWORK IS TO BE PROTECTED FROM SEDIMENTATION UNTIL ALL UN-STABILIZED AREAS ARE STABILIZED WITH STONE SUB-BASE OR VEGETATION. INSTALL SEDIMENT BARRIERS AT ALL POINTS OF ENTRY INTO THE MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING EARTHMOVING OR OTHER DRAINAGE NETWORK. TAKE PARTICULAR CARE TO PROTECT THE UNDERGROUND STRUCTURES FROM SEDIMENT
- PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED.
- 11 LIPON COMPLETION OF LINDERGROUND DRAINAGE INSTALLATION, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE ROADWAYS/PARKING AREAS IN ACCORDANCE WITH THE SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL **REGULATIONS AS SOON AS POSSIBLE**
- 12 BEGIN DRIVEWAY AND PARKING CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. DRIVEWAYS AND PARKING AREAS ARE NOT TO BE PAVED UNTIL ALL DRAINAGE STRUCTURES AND PIPES ARE INSTALLED AND READY FOR CONNECTION TO STORMWATER MANAGEMENT AREAS.
- 13. FINISH PERMANENT STABILIZATION. COMPLETE PERMANENT STORMWATER MANAGEMENT AREA SEEDING AND PLANTING AFTER THE CONTRIBUTING AREA TO THE BASIN HAS REACHED A MINIMUM OF 80% STABILIZATION AND IS NO LONGER REQUIRED AS A CONSTRUCTION SEDIMENTATION BASIN.
- COMPLETE ALL REMAINING PLANTING AND SEEDING. SWEEP THE ROADWAY TO REMOVE ALL SEDIMENTS. REPAIR DRAINAGE OUTLETS AND BASINS AS REQUIRED. CLEAN AND FLUSH THE DRAINAGE STRUCTURES AND PIPES AT THE END OF CONSTRUCTION AND REMOVE ALL ACCUMULATED SEDIMENTS IN THE STORMWATER MANAGEMENT AREAS. CONTRACTOR MUST INSPECT THE DRAINAGE NETWORK AND REPAIR ANY DAMAGE
- IMMEDIATELY
- OF 80% STABILIZATION.
- GENERAL GRADING AND DRAINAGE NOTES:
- 1. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- 2. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT. 3. PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- 4. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE
- 5. PROPOSED ELEVATIONS ARE SHOWN TO FINISH PAVEMENT OR GRADE UNLESS NOTED OTHERWISE.
- ALL EARTHWORK AND SITE PREPARATION MUST BE DONE IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF ANY SUBSURFACE INVESTIGATION OR GEOTECHNICAL REPORTS PREPARED FOR THIS SITE.
- PROPERLY INSTALLED. THIS INCLUDES THE STABILIZATION OF ALL DISTURBED AREAS CONTRIBUTING TO THE DRAINAGE SYSTEMS AND ANY STORMWATER BASIN FLOORS AND SIDE SLOPES

DEWATERING:

- IF THE WATER TABLE IS ENCOUNTERED DURING EXCAVATION, TEMPORARILY LOWER WATER TABLE AS INDICATED IN THE SPECIFICATIONS
- 3. IF DEWATERING IS NECESSARY DURING CONSTRUCTION, IMPLEMENT THE PROPER ESC MEASURES ON SITE TO PREVENT EROSION OR SEDIMENT RUNOFF. THESE MEASURES CAN INCLUDE DEWATERING BAGS, TEMPORARY STRAWBALES, SILT FENCES, SILT SOCKS AND/OR OTHER APPROVED DEVICES AS INDICATED IN THE DETAILS.



NOTES: 1. LOCATE SO AS NOT TO ALLOW BACKFLOW ONTO WORK AREA.

STONE FILTER BERN NOT TO SCALE



PLAN VIEW

- SILT SOCK MANUFACTURER TO BE SILT SOXX OR ENGINEER APPROVED EQUAL.
- ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS. SEDIMENT SILT SOCK TO BE FILLED WITH LEAF COMPOST AND/OR WOODY MULCH PER
- MANUFACTURER'S REQUIREMENTS. 4. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

INSTALLATION OF PAVEMENT SUB-BASE IS TO BEGIN. SEE SITE PLAN FOR LOCATION & ACTUAL DIMENSIONS

STONE CONSTRUCTION ENTRANCE(S) TO REMAIN UNTIL

CONSTRUCTION ENTRANCE NOT TO SCALE

NON - WOVEN -

FILTER FABRIC

VARIES

SEE SITE PLAN

(15' MIN. 25' TYP.)

SILT SOCK

VARIES

(25' MIN.

- R= TO SUIT

- SEE SITE PLAN -----

(15' MIN., 25' TYP.)

PLAN VIEW

EROSION & SEDIMENT CONTROL NOTES:

- THE FOLLOWING CONSTRUCTION SEQUENCE IS TO BE USED AS A GENERAL GUIDELINE. COORDINATE WITH THE OWNER, ENGINEERS, AND LANDSCAPE ARCHITECT AND SUBMIT A PROPOSED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- SURVEY AND STAKE CENTERLINE OF THE PROPOSED ROADS, STORMWATER MANAGEMENT AREAS, AND DRAINAGE LINES.

- 16. ENGINEER TO APPROVE THE REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS AND DETERMINE WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM
- ALL DRAINAGE STRUCTURES AND PIPES MUST BE CONNECTED TO THE DRAINAGE SYSTEM PRIOR TO THE INSTALLATION OF ANY PAVEMENT. PAVING WILL NOT BE ALLOWED IF THE DRAINAGE SYSTEM FOR THE PROPOSED PAVED AREA IS NOT COMPLETELY AND
- PRIOR TO ANY DEWATERING, THE DEWATERING PLAN MUST BE APPROVED BY THE ENGINEER AND THE TOWN OF MASHPEE

- PRIOR TO THE START OF CONSTRUCTION A NOTICE OF INTENT (NOI) MUST BE FILED WITH NPDES. REFER TO THE STORMWATER AND POLLUTION PREVENTION PLAN (SWPPP) REGARDING ALL EROSION CONTROL MATTERS. MAINTAIN A WORKING COPY OF THE SWPPP ONSITE AT ALL TIMES. FOLLOW THE SWPPP PROTOCOL FOR SITE MAINTENANCE, INSPECTIONS AND PROPER DOCUMENTATION UNTIL THE SITE HAS BEEN ACCEPTED BY THE OWNER AT THE COMPLETION OF THE PROJECT THE CONTRACTOR OR OWNER MUST FILE A NOTICE OF TERMINATION WITH NPDES. IN ACCORDANCE WITH NPDES REGULATIONS, THE COMPLETED SWPPP MUST INCLUDE ALL OF THE SITE EROSION CONTROL DOCUMENTATION, WEEKLY EROSION INSPECTION REPORTS COMPLETED BY THE DESIGNATED SITE PERSONNEL, AND ANY OTHER PERTINENT SITE DOCUMENTATION MUST BE RETAINED FOR A MINIMUM OF 3 YEARS FROM THE DATE OF TERMINATION.
- 3. INSTALL ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES AS INDICATED ON DRAWINGS IN CONSULTATION WITH THE CONSERVATION AGENT, AND ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES BEGIN. INSPECT, MAINTAIN REPAIR AND REPLACE FROSION CONTROL MEASURES AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. THE SITE PERIMETER EROSION CONTROLS ARE THE DESIGNATED LIMIT OF WORK. INFORM ALL PERSONNEL WORKING ON THE PROJECT SITE THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGHOUT THE CONSTRUCTION PERIOD
- MAINTAIN A MINIMUM SURPLUS OF 100 FEET OF EROSION CONTROL BARRIER (SILT SOCK) ONSITE AT ALL TIMES.
- PROTECT THE ADJACENT RESOURCE AREA FROM SEDIMENTATION DURING PROJECT CONSTRUCTION UNTIL ACCEPTANCE BY THE OWNER & IN CONFORMANCE WITH THE ORDER OF CONDITIONS.
- 6. PROVIDE CONSTRUCTION EXITS AS INDICATED ON DRAWINGS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. CLEAN AND/OR REPLACE THE CRUSHED STONE PAD, AS NECESSARY, TO MAINTAIN ITS EFFECTIVENESS.
- CONSTRUCTION ACTIVITIES WHICH LEAVE LARGE DISTURBED AREAS UNSTABILIZED. IF INCLEMENT WEATHER IS PREDICTED, USE BEST PROFESSIONAL JUDGEMENT AND GOOD CONSTRUCTION PRACTICES WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND ENSURE THE NECESSARY EROSION CONTROL DEVICES ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM ANY IMPENDING WEATHER EVENTS.
- INSPECT EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZED SLOPES ON A WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF .25 INCH OR GREATER. REPAIR IDENTIFIED PROBLEMS WITHIN 24 HOURS TO ENSURE EROSION AND SEDIMENT CONTROLS ARE IN GOOD WORKING ORDER. RESET OR REPLACE MATERIALS AS REQUIRED.
- 10. SURROUND THE PERIMETER OF SOIL STOCKPILES WITH SILT SOCK, SILT FENCE, STRAWBALES, OR A COMBINATION OF SILT FENCE WITH STRAWBALE. AS DETERMINED NECESSARY
- DISTURBED AREAS AND SLOPES MUST NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, REINFORCE TEMPORARY AREAS HAVING A SLOPE GREATER THAN 2:1 WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
- UPON THE INSTALLATION OF EACH OVERFLOW STRUCTURE, INSTALL A SILT SACK OR APPROVED EQUIVALENT. INSPECT SILT SACKS, AFTER EACH SIGNIFICANT STORM EVENT AND REMOVE AND EMPTY AS NEEDED FOR THE DURATION OF THE CONSTRUCTION PERIOD.
- ADDITIONAL SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AID IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND CREATE THESE BASINS IN APPROPRIATE LOCATIONS.
- 14. CONTAIN ALL SEDIMENT ONSITE. SWEEP ALL EXITS FROM THE SITE AS NECESSARY INCLUDING ANY SEDIMENT TRACKING. SWEEP PAVED AREAS AS NEEDED TO REMOVE SEDIMENT AND POTENTIAL POLLUTANTS ACCUMULATED DURING SITE CONSTRUCTION.
- 15. REMOVE ACCUMULATED SEDIMENT FROM ALL TEMPORARY PRACTICES AND DISPOSE OF IN A PRE-APPROVED LOCATION.
- 16. PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL EROSION AND SEDIMENTATION CONTROL DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS THE CONTRACTOR MUST CONTINUE TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ON SITE OR READILY AVAILABLE TO PROPERLY MAINTAIN AND REPAIR ALL EROSION AND SEDIMENTATION CONTROL DEVICES IN A TIMELY AND RESPONSIBLE MANNER
- 17. PRIOR TO THE INSTALLATION OF THE MEDIA WITHIN THE BIORETENTION AREAS, REMOVE AND PROPERLY DISPOSE OF SEDIMENT ACCUMULATED IN ANY TEMPORARY SEDIMENT TRAP USED FOR SEDIMENT CONTROL DURING CONSTRUCTION. PROVIDE A SURFACE ELEVATION AT A MINIMUM 1-FOOT ABOVE THE BOTTOM OF MEDIA ELEVATION AS SHOWN IN THE BIORETENTION SCHEDULE FOR PARTIALLY CONSTRUCTED BIORETENTION AREAS. THIS ALLOWS FOR AN OVER-DIG OF THE COLLECTED SEDIMENT FROM WITHIN THE BIORETENTION AREA PRIOR TO MEDIA/FABRIC INSTALLATION.
- CONTROL DUST BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER.
- 19. THE CONTRACTOR IS RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR AFFECTED BY THE PROJECT. REMOVE SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK PRIOR TO THE OWNER'S ACCEPTANCE.





DEEP AND FILL WITH FIBER MODIFIED ASPHALT SEALER AS SHOWN

BE SWEPT COMPLETELY CLEAN.

1. FENCING SHALL BE ORANGE RESINET SM60 BARRIER FENCE "SNOW FENCE" OR APPROVED EQUIVALENT

SITE PERIMETER

- 2. POST SHALL BE HOT ROLLED RAIL STEEL AND FORMED INTO A "T". DIMENSIONS OF "T" POST SECTION, APPROXIMATELY 1 7/16" X 1 5/16" X 1/8" X 6' (SIX FEET) LONG. THE POST SHALL BE PAINTED GREEN OR
- GAI VANIZED 3. THE FENCING SHALL REMAIN IN PLACE UNTIL ALL EXCAVATION HAS BEEN COMPLETED AND THE
- SURFACE HAS BEEN RE-ESTABLISHED.
- 4. VISIBILITY FENCE TO BE PLACED AT TREE DRIPLINES WITHIN THE LIMIT OF WORK WHERE NOTED ON PI ANS

SAWCUT & PAVEMENT PATCH NOT TO SCALE

VISIBILITY FENCE NOT TO SCALE

LAYER OF RIP-RAP FIELD STONE, ETC. TO ANCHOR FABRIC TOE **EXISTING GRADE**

- 2" x 2" WOODEN STAKE

- 3"-4" AREA TO BE PROTECTED

SECTION



CONSTRUCTION FENCE

NOT TO SCALE

C - 2











- BIORETENTION PLANTINGS

(SEE LANDSCAPE PLAN)



- OVERFLOW STRUCTURE





CONTRACTOR RESPONSIBLE FOR SLOPE STABILIZATION AND SAFETY MEASURES DURING

LOAM AND SEED SIDE SLOPES AND DISTURBED AREAS PER SPECIFICATIONS AND

CONSTRUCTION. SIDE SLOPES TO BE 3:1 MAXIMUM SLOPE.

LANDSCAPE PLAN.

lified: 11/02/23 printed: 11/02/23 by eh H:\Projects\2022\22032 CC Boat Ramp SW Retrofits\Drawings\MASHPEE\22032 MAS

<section-header><text></text></section-header>		Witten Group, Inc. Environmental Solutions ywitten.com A 02563 0 voice 0 fax	Designed By: Drawn By: Checked By: 023 JLV JLV JLV MW Rev. Date By Appr. Description
		Horsley Bustainable Sustainable www.horsle 90 Route 6A Sandwich, A 508-833-660 508-833-315	Date: OCTOBER 20
SS.		Plan Set: MASHPEE-WAKEBY CAPE COD BOAT RAMP STORMWATER RETROFIT PROJECT- PERMITTING PLANS MASHPEE, MASSACHUSETTS	Plan Title: DETAILS (1)
PROVED SOLID 3GRADE MATERIAL 1 BOTTOM OF LOWER STATED ON PLANS OR ED AND WHITE 3M		Prepared For: Town of Mashpee 16 Great Neck Road Mashpee, MA Phone: (508) 539-1400 Fax:	
INCHED GALVANIZED INCHED KNOCKOUTS ON SHALL BE ZINC HOT /ITH A 6 INCH DIAMETER D SURFACE.		Survey Provided By: Horsley Witten Group, Inc. 90 Route 6A Sandwich, MA 02563 Phone: (508) 833-6600 Fax: (508) 833-6600 Fax: (508) 833-3150 Dated: December 29, 2022	
ALK ANT OINT CT, ION <u>EXPANSION</u> JOINT DETAIL D JOINT FILLER.	PERMITTING SET ONLY	Project Number: Sheet : 22032A	of 10
	NOT FOR CONSTRUCTION	Sheet Number:	

Subsurface Stormwater Management[®]

STORMTECH GENERAL NOTES

- 1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
- OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT. WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
- 4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- 5. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- 8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- 10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.

MANIFOLDS ARE DESIGNED TO BE COUPLED TO STORMTECH PREFABRICATED END CAPS. WHEN USING STANDARD END CAPS, CORRUGATE DPIPE UP TO 10 INCHES CAN BE INSERTED DIRECTLY INTO THE END CAP. FOR 12" INLET PIPES, A CORRUGATED TO SMOOTH PIPE ADAPTER IS REQUIRED. FOR INFORMATION

CALL 1-888-892-2694

ADS MANIFOLD DETAIL

NOT TO SCALE

ONDUCT JETTING AND VACTORING ANNUALLY OR IAINTENANCE IS NECESSARY.	WHEN INSPECTION SHOWS THAT	<u>u</u>
	COLLAR - 18" MIN WIDTH	CONCRE REQUIRI APPLICA 15" NYLO BODY W OR GRA PART# 2
10" INSERTA TEE PART# 10IPSSTIP/10SLRUB INSERTA TEE TO BE CENTERED ON CORRUGATION CREST		SOLID C GRATE: 10" PVC

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

	UNDERGROUND INFILTRATION CHAMBERS SCHEDULE																
	SPECIFI	CATIONS	5					INPUTS					MANI	HOLE			FIELD
FIELD #	COVER TYPE	# OF UNITS	CHAMBER TYPE/ MODEL	CHAMBER HEIGHT (IN.)	STONE TOP OF CHAMBER (IN.)	STONE UNDER CHAMBER (IN.)	DIAM. HEADER MANIFOLD (IN.)	DIAM. ISOLATOR ROW (IN.)	DIAM. CHAMBER INLET STUB (IN.)	DIM. INLET INVERT TO BOTTOM CHAMBER (IN.)	# OF MANIFOLD INLETS STUBS REQ'D	DIM. FROM CHAMBER BOTTOM TO ISOLATOR INVERT (IN)	ELEV. A INVERT HEADER MANIFOLD (FT)	ISOLATOR ROW INVERT (FT)	ELEV. B MANIFOLD INLET INVERT (FT)	ELEV. C BOTTOM OF CHAMBER (FT)	ELEV. D BOTTOM OF STONE (FT)
UIC-1	PAVEMENT	56	STORMTECH SC-740	30.00	12	12	24	24	12	12.50	4	0.10	68.00	67.97	69.00	67.96	66.96
UIC-2	PAVEMENT	42	STORMTECH SC-740	30.00	12	12	24	24	12	12.50	3	0.10	66.00	65.97	67.00	65.96	64.96

		MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT					
	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER		ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.					
	С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).					
	В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 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.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 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. 									
AD3 (CLEAN, CRUSHED, ANGULAR STONE (B LAYER) AND SIDEWALLS ONLY. DO NOT PLACE ALONG THE BOTTOM OF A LAYER									
PERIM (ERIMETER STONE - Cover to 24 (600 mm) - 18" 8' MIN* MAX									

NOTES: STORMWATER COLLECTION CHAMBERS' STORWWATER 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 INSTALLED CHAMBER SYSTEM TO PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING 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. 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. 3. FOR INFORMATION, CONTACT STORMTECH AT 1-888-892-2694.

INSPECTION & MAINTENANCE

EXCAVATION SIDEWALL

(CAN BE SLOPED OR VERTICAL

)	INGFLU	I ISOLATOK KOW I OK SEDIMENT
	A. INS	PECTION PORTS (IF PRESENT)
	A.1.	REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
	A.2.	REMOVE AND CLEAN FLEXSTORM 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 FOR VISUAL INSPECTION OF SEDIMENT
		LEVELS (OPTIONAL)
	A.5.	IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEE

- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS A. 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. 2. C

STORMTECH 10 INCH PORT DETAIL

NOT TO SCALE

A-----

ORMTECH DOUBLE MANIFOLD

MANUFACTURED BY ADS

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL

STORMTECH SC-740 CHAMBER TYPICAL CROSS SECTION NOT TO SCALE

51.0" x 30.0" x 85.4"

45.9 CUBIC FEET

74.9 CUBIC FEET

75 lbs

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

NOMINAL CHAMBER SPECIFICATIONS

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	В
SC740EPE06T	6"(150 mm)	10.90" (277 mm)	18.50" (470 n
SC740EPE06B	6"(150 mm)	10.90" (277 mm)	N/A
SC740EPE08T	8"(200 mm)	12.20" (310 mm)	16.50" (419 n
SC740EPE08B	8"(200 mm)	12.20" (310 mm)	N/A
SC740EPE10T	10"(250 mm)	13.40" (340 mm)	14.50" (368 n
SC740EPE10B	10"(250 mm)	13.40" (340 mm)	N/A
SC740EPE12T	12"(300 mm)	14.70" (373 mm)	12.50" (318 n
SC740EPE12B	12"(300 mm)	14.70" (373 mm)	N/A
SC740EPE15T	15"(375 mm)	18.40" (467 mm)	9.00" (229 m
SC740EPE15B	15"(375 mm)	18.40" (467 mm)	N/A
SC740EPE18T	18"(450 mm)	19.70" (500 mm)	5.00" (127 m
SC740EPE18B	18"(450 mm)	19.70" (500 mm)	N/A
SC740EPE24B	24"(600 mm)	18.50" (470 mm)	N/A

NOTE: ALL DIMENSIONS ARE NOMINAL

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

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

> STORMTECH TECHNICAL DETAILS NOT TO SCALE

STORMTECH ISOLATOR ROW DETAIL NOT TO SCALE

CALL 1-888-892-2694

ETE COLLAR NOT ED FOR UNPAVED ATIONS OPLAST INLINE DRAIN //SOLID HINGED COVER TE 2715AG10IP COVER: 1599CGC

1599CGS SCH40 PIPE

CHAMBER

(ov		Botanical Name	Common Name	Size	Snacin
ley		Shrubs	Common Name	UILC	opacin
HV	3	Hammamelis virginiana	Common Witch Hazel	3/4' B&B	As Show
RH	2	Ribes hirtellum	Hairy Stemmed Gooseberry	#2	As Show
SC	2	Sambucus canadensis	American Elderberry	#2	As Show
		Bioretention Plantings			
вс	7	Boehmeria cylindrica	False Nettle/Smooth Nettle	#1	As Show
CR	160	Carex radiata	Star Sedge	#1	18" O.C
SH	160	Sporobolus heterolepis	Prairie Dropseed	#1	18" O.C
CV	160	Carex vulpinoidea	Fox Sedge	#1	18" O.C
EP	9	Eupatorium perfoliatum	Boneset	#1	As Shov
ΗТ	11	Helianthus divaricatus	Woodland Sunflower	#1	As Show
но	42	Hierochloe odorata	Sweetgrass	#1	As Show
HYC	9	Hydrastis canadensis	Golden Seal	#1	As Shov
VV	60	Veronicastrum virginicum	Culvers Root	#1	24" 0.0
MF	107	Monarda fistulosa	Wild Bee-balm	#1	18" 0.0
LS	107	Liatris spicata	Marsh Blazing Star	#1	18" O.C
BA	60	Baptisia australis	Blue False Indigo	#1	24" 0.0
AI	95	Aesclepias incarnata	Swamp Milkweed	#1	24" 0.0
		Seed Mixes			
12,07	5 SF	SEED MIX #1: Lavoie Horticulture "	Stabilizer Mix"		
		Deschampsia flexuosa	Wavy Hair Grass		
		Schizachyrium scoparium	Little Bluestem		
		Andropogon gerardi	Big Bluestem		
		Agrostis perennans	Upland Bent Grass		
		Agrostis scabra	Rough Bent Grass		
		Festuca x spp	Blue X Hard Fescue		
		Festuca glauca	Blue Fescue		
		Elymus canadensis	Candada Wild Rye		
		Carex swanii	Swan Sedge		
		Solidago sempervirens	Seaside Goldenrod		
		Asclepias tuberosa	Butterfly Milkweed		
		Coreopsis lanceolata	Lance-Leaved Coreopsis		
		Trifolium repens spp.	Micro-Clover		
		Trifolium repens	White Clover		
		Chamaecrista fasciculata	Partridge Pea		

GENERAL PLANTING NOTES:

- . THE FOLLOWING NOTES ARE PROVIDED AS GENERAL PLANTING GUIDELINES ONLY. THOROUGHLY REVIEW THE PROJECT SPECIFICATIONS FOR ALL LANDSCAPE REQUIREMENTS PRIOR TO THE COMMENCEMENT OF ANY LANDSCAPE WORK. SUBMIT IN WRITING TO THE LANDSCAPE ARCHITECT ANY QUESTIONS OR CLARIFICATIONS REQUIRED AT A MINIMUM OF 30 DAYS PRIOR TO ORDERING ANY MATERIALS OR BEGINNING ANY LANDSCAPE CONSTRUCTION.
- . SUBMIT TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL ALL REQUIRED LANDSCAPE SUBMITTALS AS DESCRIBED IN THE SPECIFICATIONS INCLUDING A PLANT LIST WITH PLANT SIZE AND QUANTITIES TO BE ORDERED PRIOR TO DELIVERY TO THE PROJECT SITE.
- . FURNISH AND INSTALL ALL PLANTS AS SHOWN ON THE DRAWINGS AND IN THE SIZE AND QUANTITIES SPECIFIED ON THE PLANTING SCHEDULE. PLANT SUBSTITUTION SELECTION MUST BE APPROVED BY BIOLOGIST OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- 4. ALL PLANTS TO COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK." LATEST EDITION, PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION INC.
- 5. PLANTS TO BE GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS. USE HEALTHY NURSERY GROWN PLANTS THAT HAVE A WELL DEVELOPED ROOT SYSTEM. PLANTS MUST BE FREE OF DISEASE, INSECTS, EGGS OR LARVAE.
- . INSTALL PLANTS WITHIN ONE (1) WEEK OF PURCHASE. IF PLANTS ARE TO BE STORED AT THE SITE PRIOR TO PLANTING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THEY ARE PROPERLY MAINTAINED, WATERED, AND REMAIN HEALTHY.
- PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT. SUBMIT TO THE LANDSCAPE ARCHITECT IN WRITING THE PROPOSED PLANTING SCHEDULE. OBTAIN APPROVAL OF PLANTING SCHEDULE FROM THE LANDSCAPE ARCHITECT PRIOR TO PERFORMING ANY WORK.
- 8. SEASONS FOR PLANTING:

SPRING:	DECIDUOUS:	APRIL 1 TO JUNE 15
	EVERGREEN:	APRIL 1 TO JUNE 15
	PERENNIALS:	APRIL 15 TO JUNE 1
	GROUNDCOVERS:	APRIL 15 TO JUNE 1
FALL:	DECIDUOUS:	SEPTEMBER 15 TO NOVEMBER 15
	EVERGREEN:	SEPTEMBER 15 TO NOVEMBER 15
	PERENNIALS:	SEPTEMBER 15 TO NOVEMBER 15

SEPTEMBER 15 TO NOVEMBER 15

9. PLANTING UNDER FROZEN CONDITIONS WILL NOT BE PERMITTED. PLANTING BEFORE OR AFTER THE ABOVE REFERENCED PLANTING DATES WILL INCREASE THE LIKELIHOOD OF PLANT ESTABLISHMENT FAILURE. ANY DEVIATION FROM THE ABOVE REFERENCED PLANTING DATES IS UNDERTAKEN AT SOLE RISK OF THE CONTRACTOR AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY ADDITIONAL MAINTENANCE AND WATERING WHICH MAY BE REQUIRED TO ENSURE SATISFACTORY PLANT ESTABLISHMENT.

GROUNDCOVERS:

- 10. FURNISH ONE YEAR MANUFACTURER WARRANTY FOR TREES, PLANTS, AND GROUND COVER AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. EXCEPTIONS ARE DEFECTS RESULTING FROM LACK OF ADEQUATE MAINTENANCE, NEGLECT OR ABUSE BY OWNER, OR ABNORMAL WEATHER CONDITIONS UNUSUAL FOR WARRANTY PERIOD. THE DATE OF FINAL ACCEPTANCE OF ALL COMPLETED PLANTING WORK ESTABLISHES THE END OF INSTALLATION AND INITIAL MAINTENANCE PERIOD AND THE COMMENCEMENT OF THE GUARANTEE PERIOD.
- 11. INSPECT ALL AREAS TO BE PLANTED OR SEEDED PRIOR TO STARTING ANY _ANDSCAPE WORK. REPORT ANY DEFECTS SUCH AS INCORRECT GRADING INCORRECT SUBGRADE ELEVATIONS OR DRAINAGE PROBLEMS, ETC. TO THE LANDSCAPE ARCHITECT AND ENGINEER PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK INDICATES ACCEPTANCE OF SUBGRADE AREAS TO BE PLANTED, AND THE LANDSCAPE CONTRACTOR ASSUMES RESPONSIBILITY FOR ALL LANDSCAPE WORK.
- 12. PROVIDE PROPER PREPARATION OF ALL PROPOSED PLANTED AND SEEDED AREAS PER THE NOTES AND SPECIFICATIONS.
- 13. ALL PLANT LAYOUT AND ACTUAL PLANTING LOCATIONS ARE TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT AT A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO SCHEDULING ANY FIELD INSPECTIONS.
- 14. BALL AND BURLAP: REMOVE BURLAP AND WIRE BASKETS FROM TOPS OF BALLS AND FROM TOP HALF OF ROOTBALL AS INDICATED ON DRAWINGS. REMOVE PALLETS, IF ANY, BEFORE SETTING.
- 15. POTTED PLANTS: REMOVE THE PLANT FROM THE POT AND LOOSEN OR SCORE THE ROOTS BEFORE PLANTING TO PROMOTE OUTWARDS ROOT GROWTH INTO THE SOIL.
- 16. PLUGS: PLANT UPRIGHT AND NOT AT AN ANGLE. DIG PLANTING HOLES LARGE ENOUGH AND DEEP ENOUGH TO ACCOMMODATE THE ENTIRE ROOT MASS. PLANT PLUGS WITH NO TWISTED OR BALLED ROOTS AND WITH NO ROOTS EXPOSED ABOVE THE GRADE LINE. HAND PACK THE SOIL AROUND THE ENTIRE PLUG ROOT MASS
- 17. DIG THE THE PLANTING HOLE TO THE SAME DEPTH AS THE ROOT BALL AND TWO TO THREE TIMES WIDER. SCORE ALL SIDES OF THE HOLE, PLACE THE PLANT IN THE HOLE SO THE TOP OF ROOT BALL IS EVEN WITH SOIL SURFACE. FILL THE HOLE HALFWAY AND THEN ADD WATER ALLOWING IT TO SEEP INTO BACK FILLED MATERIAL. BE SURE TO REMOVE ALL AIR POCKETS FROM BACK FILLED SOIL. DO NOT SPREAD SOIL ON TOP OF THE ROOTBALL. IF SOIL IS EXTREMELY POOR, REPLACE BACK FILL WITH GOOD QUALITY TOP SOIL. AMEND THE SOIL, AS NECESSARY.
- 18. CREATE A 2" TO 4" BERM AROUND THE EDGE OF PLANTING HOLE WITH REMAINING SOIL TO RETAIN WATER.
- 19. REMOVE ALL PLANT TAGS AND FLAGS FROM THE PLANTS.
- 20. MULCH ALL PLANTINGS AS INDICATED ON DRAWINGS. UNLESS NOTED OTHERWISE, ALL PLANTS TO RECEIVE 2-3 INCHES OF MULCH. DO NOT PILE OR MOUND MULCH AROUND THE PLANT STEMS OR TRUNK. DO NOT MULCH WITHIN THE BIORETENTION AREAS.
- 21. TRIM BROKEN AND DEAD BRANCHES FROM SHRUBS AFTER PLANTING. NEVER CUT A LEADER.
- 22. MINIMIZE THE USE OF FERTILIZERS AS REQUIRED FOR PLANT ESTABLISHMENT, SEE SPECIFICATIONS. DO NOT USE NITROGEN CONTAINING FERTILIZERS, PESTICIDES OR CHEMICALS DURING PLANTING AND MAINTENANCE OF THE LANDSCAPING OR LAWN AREAS. ADDITIONALLY, DO NOT USE PESTICIDES OR HERBICIDES CONTAINING INORGANIC COMPOUNDS (IOC) AS LISTED IN THE MASSACHUSETTS DRINKING WATER REGULATION (310 CMR 22.06), OR SYNTHETIC ORGANIC COMPOUNDS (SOC) OR VOLATILE ORGANIC COMPOUNDS (VOC) AS LISTED IN THE MASSACHUSETTS DRINKING WATER REGULATION (310 CMR 22.07)

GENERAL SEEDING NOTES:

- 1. SEND A REPRESENTATIVE SAMPLE OF THE TOPSOIL TO A TESTING LABORATORY FOR STANDARD SOIL ANALYSIS AS DESCRIBED IN THE SPECIFICATIONS. SUBMIT TO THE LANDSCAPE ARCHITECT AND ENGINEER TEST RESULTS WITH RECOMMENDED SOIL TREATMENTS TO PROMOTE PLANT AND GRASS GROWTH. CORRECT DEFICIENCIES IN THE LOAM AND STOCKPILED TOPSOIL AS DIRECTED BY THE TESTING AGENCY.
- 2. ALL AREAS THAT ARE DISTURBED AND/OR GRADED DURING CONSTRUCTION ARE TO BE BROUGHT TO FINISHED GRADE WITH AT LEAST 4" MINIMUM DEPTH OF GOOD QUALITY LOAM AND SEEDED WITH A QUICK GERMINATING GRASS SEED SUCH AS NEW ENGLAND EROSION CONTROL RESTORATION MIX OR AS SPECIFIED ON THE PLANS.
- 3. PRIOR TO THE PLACEMENT OF TOP SOIL, LOOSEN THE SUBGRADE OF ALL PROPOSED SEEDED AREAS TO A DEPTH OF 6" AND RAKE TO REMOVE STONES LARGER THAN 1 INCH, STICKS, ROOTS, RUBBISH AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE TO AN OFF SITE LOCATION.
- 4. DO NOT SPREAD TOPSOIL IF THE SUBGRADE IS FROZEN, EXCESSIVELY WET, COMPACTED OR NOT PROPERLY PREPARED PER THE NOTES AND SPECIFICATIONS.
- 5. SEE SPECIFICATIONS FOR SEASONAL REQUIREMENTS FOR SEEDING.

WATERING NOTES:

- FULLY ESTABLISHED.
- RECOMMENDED PLANTING SEASONS.

MULCH TRAIL SURFACE TREATMENT

- 3" DEPTH

NOT TO SCALE

MULCH TO BE THE SURFACE TREATMENT FOR EXISTING PATH AREAS THAT ABUT NEW WORK.

FINISH GRADE-

EXISTING GRADE-

visions							Date By Appr. Description
Rev			▼	\mathbb{P}	\blacksquare	hecked By: 🖄	BRK Rev.
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			MASHPEE. MASSACHUSETTS		Plan Title:	PLANTING DETAILS	
Prepared For: Town of Mashpee	16 Great Neck Road Mashpee, MA	Phone: (508) 539-1400	гах:				
Ball Survey Provided By: Horsley Witten Group, Inc.	Sandwich, MA 02563	Phone: (508) 833-6600	Fax: (508) 833-3150	Dated. Dated. Detelliber 29, 2022		1	
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PERMITTING SET ONLY **NOT FOR CONSTRUCTION**

SUBSOIL - NATIVE UNDISTURBED OR IMPORTED BACKFILL COMPACTED TO MIN. 90% MAXIMUM DENSITY

BLACK PINE MULCH

DOUBLE SHREDDED NATURAL