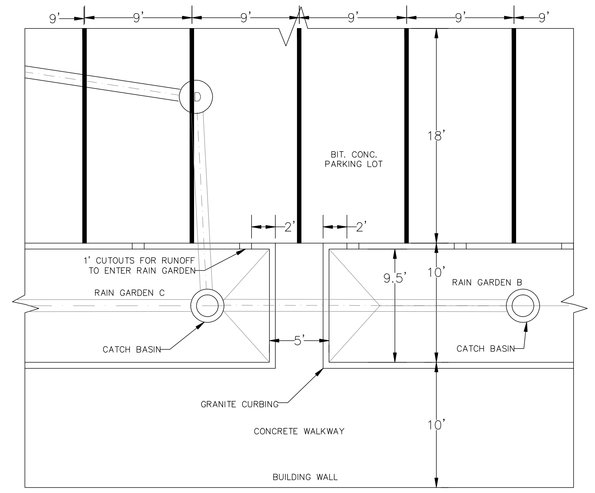
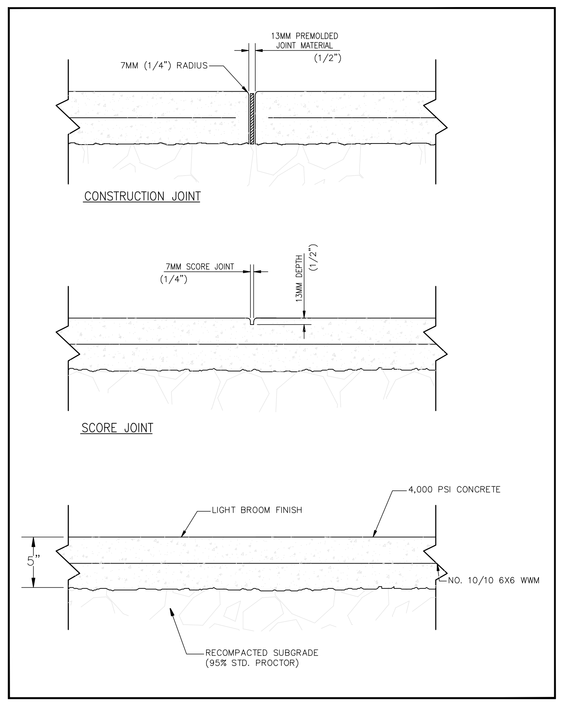
CONCRETE SIDEWALK SECTION

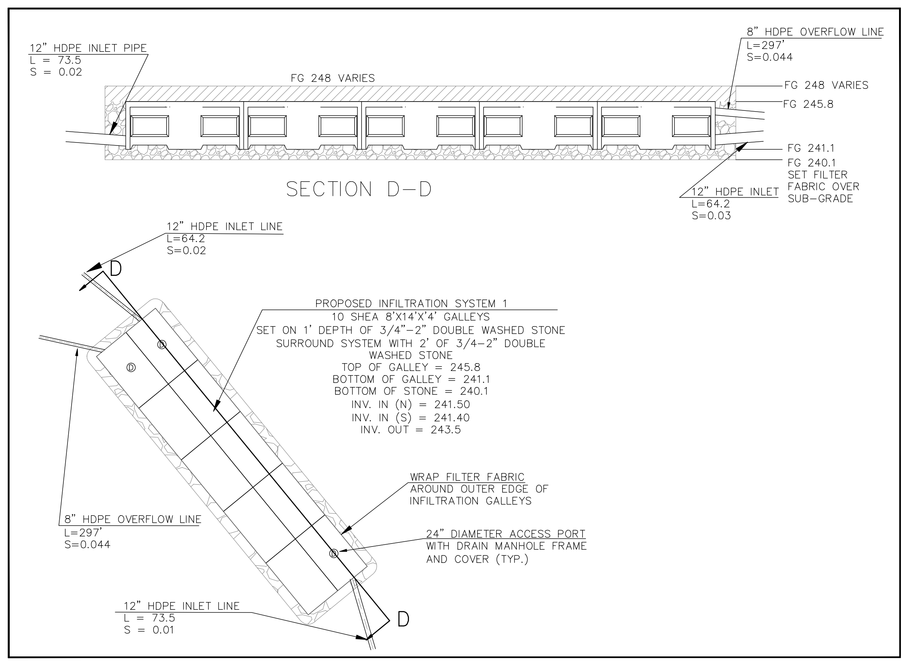
NOT TO SCALE





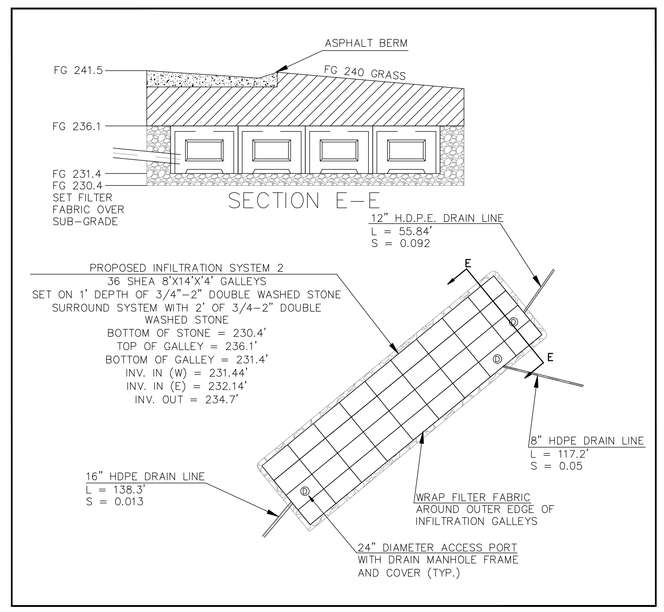
SUBSURFACE INFILTRATION SYSTEM 1

NOT TO SCALE



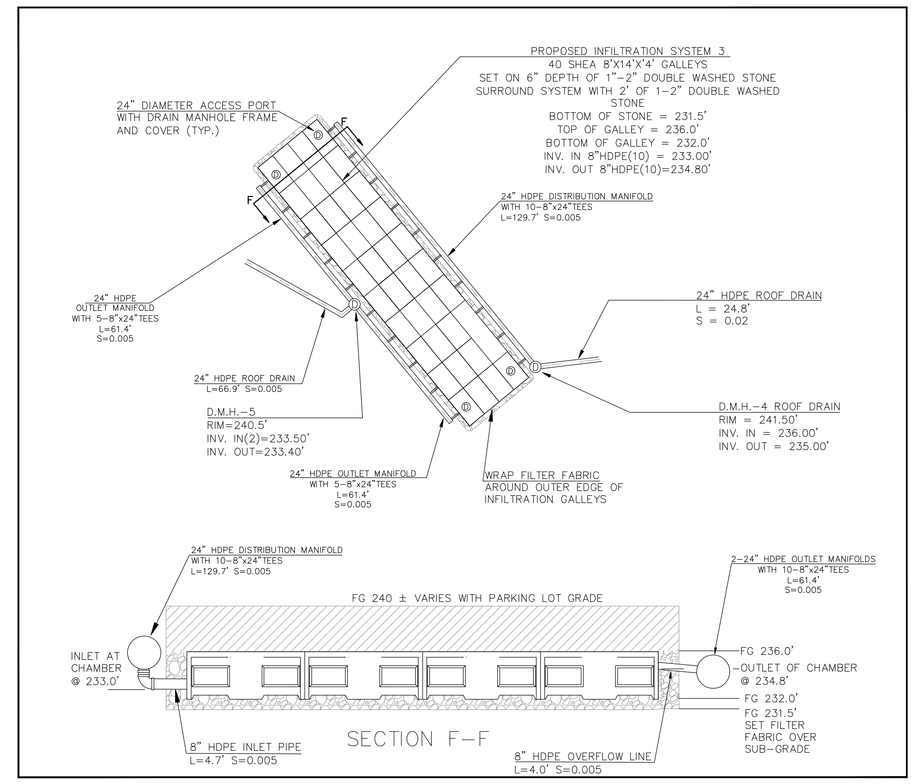
SUBSURFACE INFILTRATION SYSTEM 2

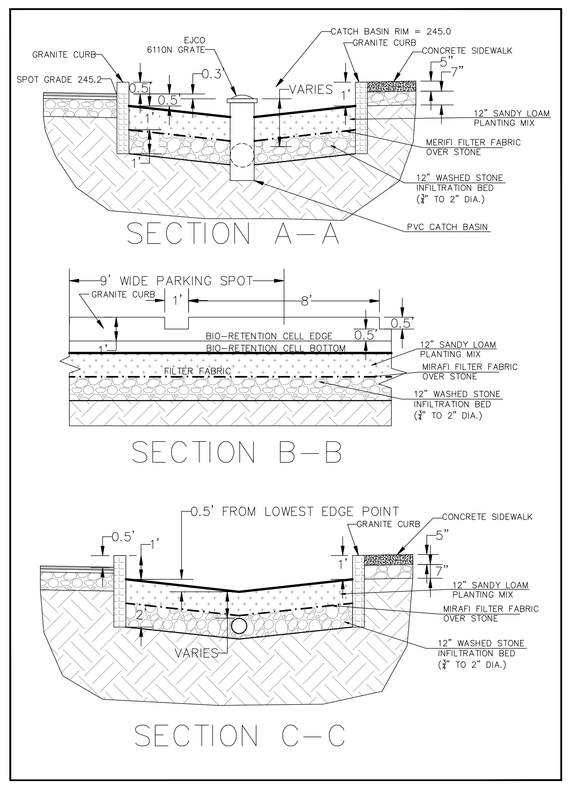
NOT TO SCALE



SUBSURFACE INFILTRATION SYSTEM 3

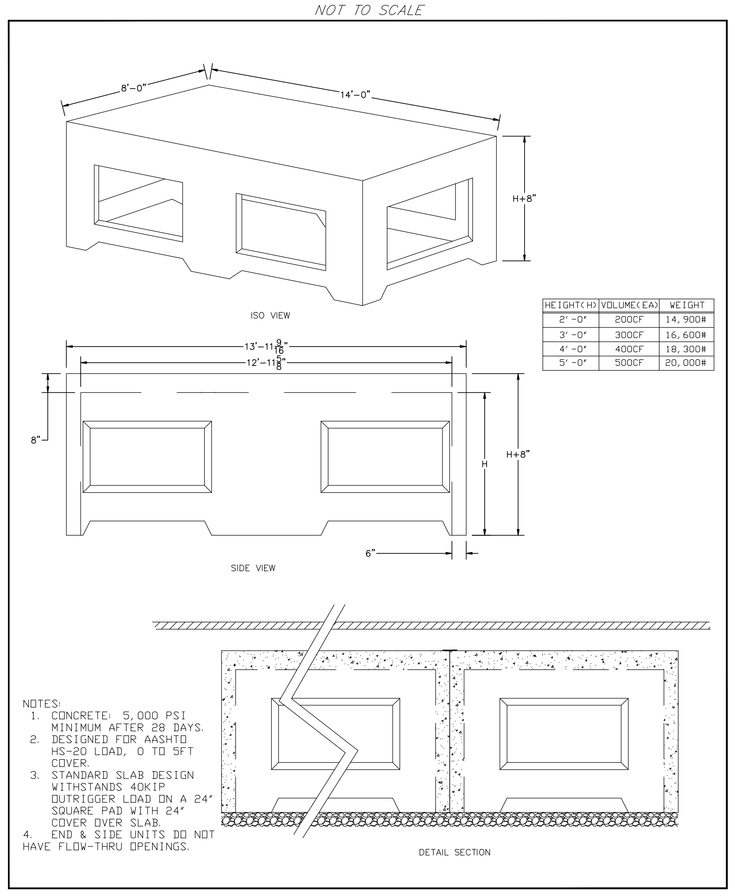
NOT TO SCALE





SHEA 8X14 LEACHING BASIN

NOT TO SCALE



HEIGHT(H)	VOLUME(EA)	WEIGHT
2'-0"	200CF	14,900#
3'-0"	300CF	16,600#
4'-0"	400CF	18,300#
5'-0"	500CF	20,000#

NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR AASHTO HS-20 LOAD, 0 TO 5FT COVER.
3. STANDARD SLAB DESIGN WITHSTANDS 40KIP OUTRIGGER LOAD ON A 24' SQUARE PAD WITH 24" COVER OVER SLAB.
4. END & SIDE UNITS DO NOT HAVE FLOW-THRU OPENINGS.

WETLAND BUFFER RESTORATION PLANTING

WETLAND AREA SHALL BE SEEDED WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX, PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC. OF AMHERST, MA. PHONE (413) 548-8000.

APPLICATION RATE FOR SEEDING SHALL BE 1 POUND PER 1750 SQUARE FEET (3 POUNDS REQUIRED).

SEEDING OF RESTORATION AREA SHALL BE SUPPLEMENTED WITH THE FOLLOWING PLANTINGS:

a) RED MAPLE	RM	a) ACER RUBUM	a)	5	10x10' (APPROXIMATELY 1 EVERY 100 S.F.)
b) RED OAK	RO	b) QUERCUS RUBRA	b)	5	10x10' (APPROXIMATELY 1 EVERY 100 S.F.)
c) WHITE PINE	WP	c) PINUS STROBUS	c)	5	10'x10' (APPROXIMATELY 1 EVERY 100 S.F.)
d) SERVICEBERRY	SB	d) AMELANCHIER CANADENSIS	d)	10	8x8' (APPROXIMATELY 1 EVERY 65 S.F.)
e) AMERICAN HAZELNUT	HZ	e) CORYLUS AMERICANA	e)	20	8x8' (APPROXIMATELY 1 EVERY 65 S.F.)
f) GRAY DOGWOOD	GD	f) CORNUS RACEMOSA	f)	20	8x8' (APPROXIMATELY 1 EVERY 65 S.F.)

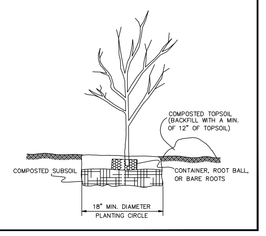
EXISTING ASPHALT AND GRAVEL BASE WILL BE REMOVED DOWN TO NATIVE SOILS. THE REMOVAL WILL BE FOLLOWED BY BACKFILLING OF CLEAN SANDY LOAM MATERIAL INTO THE AREA. THE BUFFER RESTORATION AREAS SHALL BE GRADED TO 10" BELOW THE PROPOSED CONTOURS SHOWN ON THE CONSTRUCTION PLAN (WITHOUT FILLING, EXCAVATING, OR ALTERING ANY EXISTING WETLAND). THE TOP 8" OF SOIL SHALL BE SCREENED LOAM.

IMMEDIATELY FOLLOWING PREPARATION OF THE SURFACE LAYER, THE RESTORATION AREAS SHALL BE PLANTED WITH INDIGENOUS WETLAND BUFFER PLANTS AS OUTLINED IN THE PLANT SPECIES LIST.

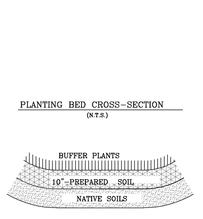
IMPERVIOUS AREA INSIDE 50' NO DISTURB TO BE RESTORED = 267 S.F.
MAINTAINED LAWN AREA INSIDE 50' NO DISTURB TO BE RESTORED = 3507 S.F.
AREA OUTSIDE 50' NO DISTURB AREA TO BE RESTORED = 1519 S.F.

TOTAL BUFFER RESTORATION = 5293 S.F.

TREE/SHRUB PLANTING DETAIL (N.T.S.)

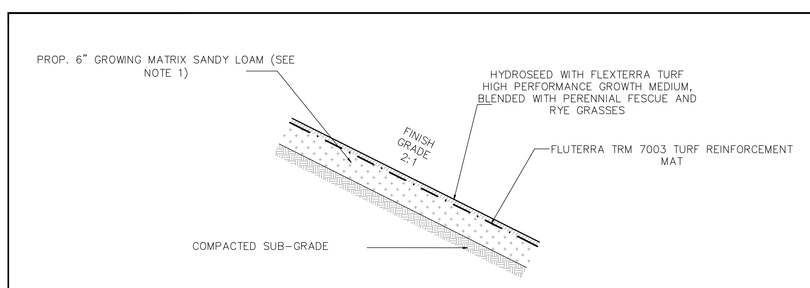


PLANTING BED CROSS-SECTION (N.T.S.)



REINFORCED TURF SLOPE FOR 2:1 SLOPE

NOT TO SCALE



NOTE:
1) GROWING MATRIX: PLANTING MIX WILL BE TESTED FOR PH, ORGANIC MATTER, P, K, MG, CA, S, B, Cu, Fe, Mn, Zn, Na, AVAILABLE NITROGEN AND SOLUBLE SALT PRIOR TO INSTALLATION, AND AMENDED AS NECESSARY FOR OPTIONAL SEED GERMINATION.

BIO-RETENTION CELL PLANTING RECOMMENTATIONS

OSTRICH FERN
OBEDIENT PLANT
BROOM SEDGE
SWITCH GRASS
INDIAN GRASS
ROYAL FERN
SWAMP ASTER
BLUE JOINT GRASS
TURTLEHEAD
CARDINAL FLOWER
PICKEREL WEED

INSTALL ONE PLANT PER 6 SF IN BIO-RETENTION CELL
APPROX. 550 PLANTS REQUIRED

BIO-RETENTION CELL DIMENTIONS

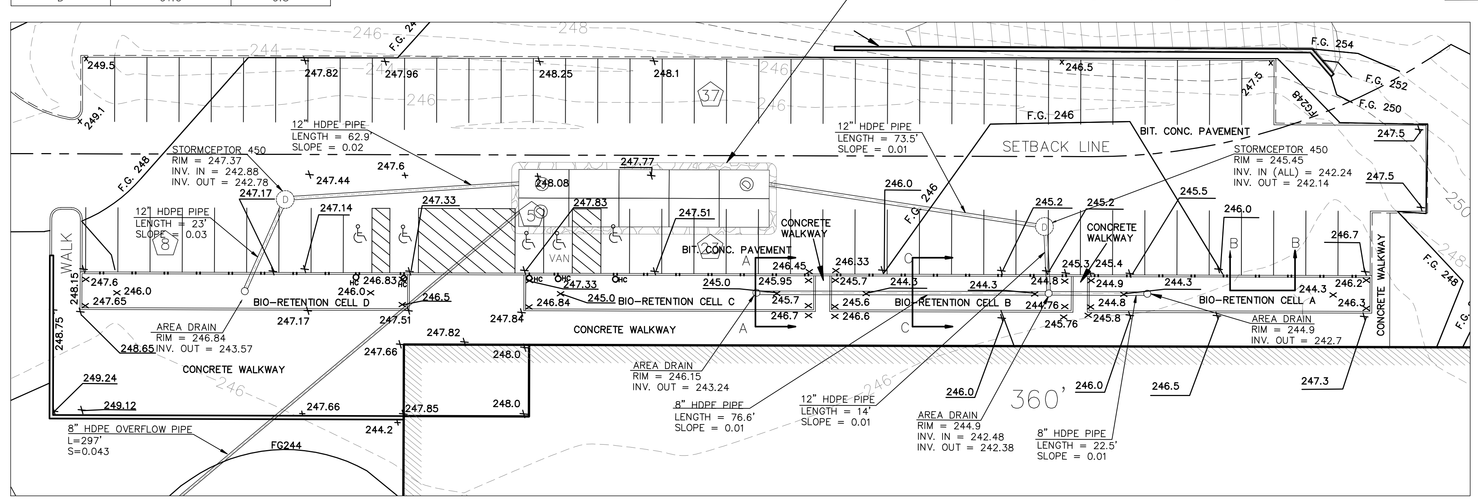
BIO-RET CELL	LENGTH (FT)	WIDTH (FT)
A	78.5	9.5
B	67.0	9.5
C	50.5	9.5
D	91.0	9.5

BIO-RETENTION CELLS GRADING DETAIL

SCALE: 1"=20'

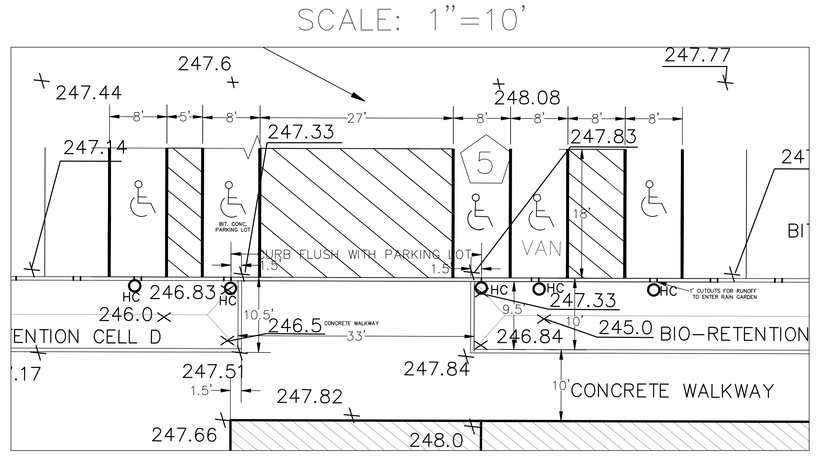
PROPOSED INFILTRATION SYSTEM 1
10 SHEA 8'X14'X'4' GALLEYS
SET ON 1' DEPTH OF 1"-2" DOUBLE WASHED STONE
SURROUND SYSTEM WITH 2' OF 1-2" DOUBLE WASHED STONE
TOP OF GALLEY = 245.8
BOTTOM OF GALLEY = 241.1
BOTTOM OF STONE = 240.1
INV. IN (N) = 241.50
INV. IN (S) = 241.40
INV. OUT = 243.5

NOTE: SOIL TEST TO BE PERFORMED TO CONFIRM SOIL CONDITIONS PRIOR TO INSTALLATION OF INFILTRATION SYSTEM



ADA GRADING DETAIL

SCALE: 1"=10'



NO.	DATE	DESCRIPTION	BY
4	08/03/18	UPDATE LOCUS AND DETAILS	KJZ
3	06/24/18	ADDRESS REVIEW COMMENTS	PHA
2	05/29/18	SITE REDESIGN	KJZ
1	05/23/18	WETLAND REVISIONS	KJZ

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967

PROPOSED DETAIL PLAN 2
IN
LITTLETON, MASS

PREPARED FOR:
BULLFINCH COMPANIES
SUITE 200, 250 FIRST AVENUE
NEEDHAM, MA 02494-2805

PROPERTY OF:
151 TAYLOR DE, LLC
SUITE 200, 250 FIRST AVENUE
NEEDHAM, MA 02494-2805

ENGINEERS & SURVEYORS:
MWE *METROWEST ENGINEERING, INC.*
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE.: (508)626-0063

SHEET 8 OF 8 | DATE: APRIL 20, 2018

CALC'D BY: PHA	FIELD BK: 453	CAD FILE: 20180301 PROP PLANS R10.dwg
DRAFTER: KJZ	PROJECT: LIT_TAYL	DWG FILE:

SP042018