

ENGINEERING | SITE WORK | LAND SURVEYING

October 25, 2017

Mr. Craig Dixon., Chairman New Bedford Conservation Commission New Bedford City Hall 133 Williams Street New Bedford, MA 02740

RE: Respons to Peer Review Comments
61 John Vertente Boulevard – New Bedford, MA
SE 049-0770

Dear Mr. Dixon and Commission members:

On behalf of the applicant, Parallel Products of New England, please find revised Site Plans and calculations enclosed with this letter. Revisions have been made in response to the comment letter prepared by the Nitsch Engineering dated October 16, 2017 in regards to their review of the Site Plans. Our responses to the comments provided in the review letter are provided on the following pages.

We trust the attachments noted above and included herewith will provide the necessary documentation to address their comments. If you should have any questions, please feel free to contact us.

Very truly yours,

FARLAND CORP., INC.

Christian A. Farland

Christian A. Farland, P.E., LEED AP Principal Engineer and President

Nitsch Engineering Comments

Comment #1:

A test hole was performed in the vicinity of the proposed stormwater basin. The test hole shows seasonal high groundwater at elevation 81.8 and the proposed bottom of the stormwater basin is at elevation 82. Since the stormwater basin has not been designed for infiltration, this level of separation from groundwater is accepted. We recommend that the bottom of the basin be lined to protect any pollutants from leaching into the groundwater table.

RE: A basin liner to be installed at the bottom of the proposed basin has been added to the construction detail on Sheet 9.

Comment #2:

The project includes the filling of 700 square feet of wetlands. The wetland replication area has been expanded to 1,060 square feet.

RE: No response necessary.

Comment #3:

Pipe sizing calculations were provided for the existing drainage system. The existing piping system in the expanded parking area is not adequately sized to accommodate the increase in flows.

RE: Piping has been revised to accommodate the existing and proposed flows. Two existing 12" concrete pipes are proposed to be replaced with 18" ductile iron pipe. This will require temporary disturbance at the piping system discharge located in the BVW, to replace the existing pipe.



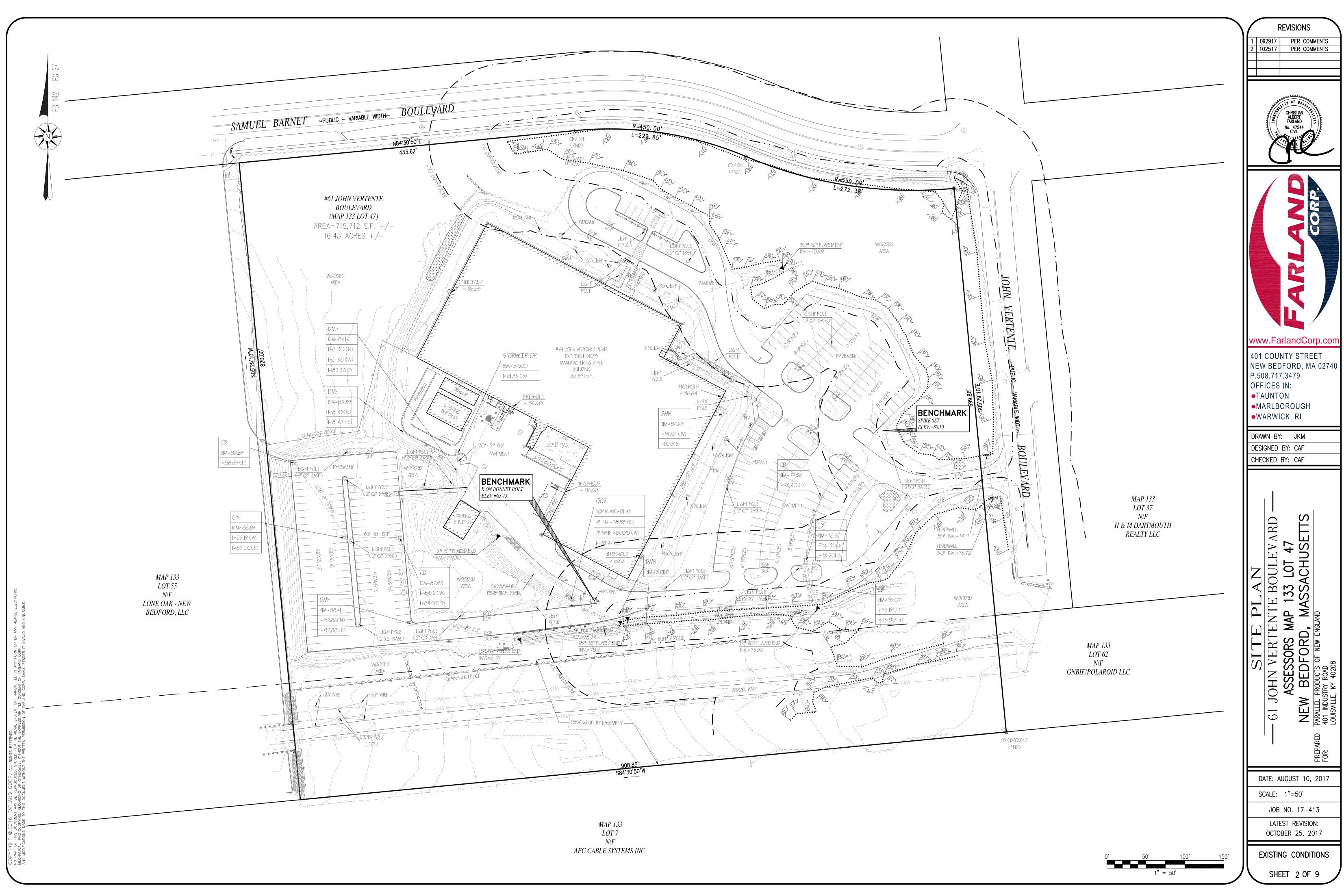
ENGINEERING A BETTER TOMORROW

ENGINEERING | SITE WORK | LAND SURVEYING

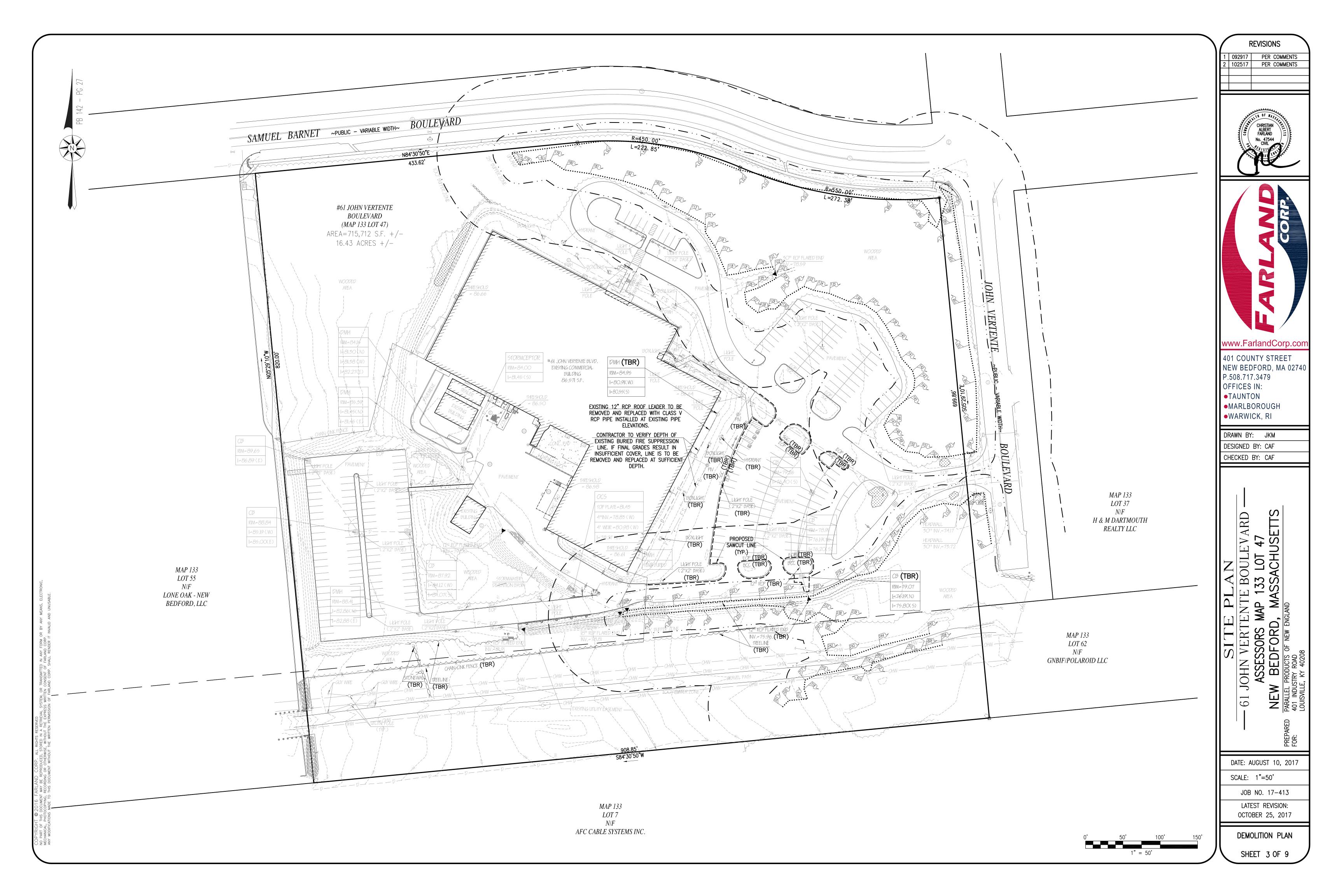
PIPE CAPACITY CALCULATIONS

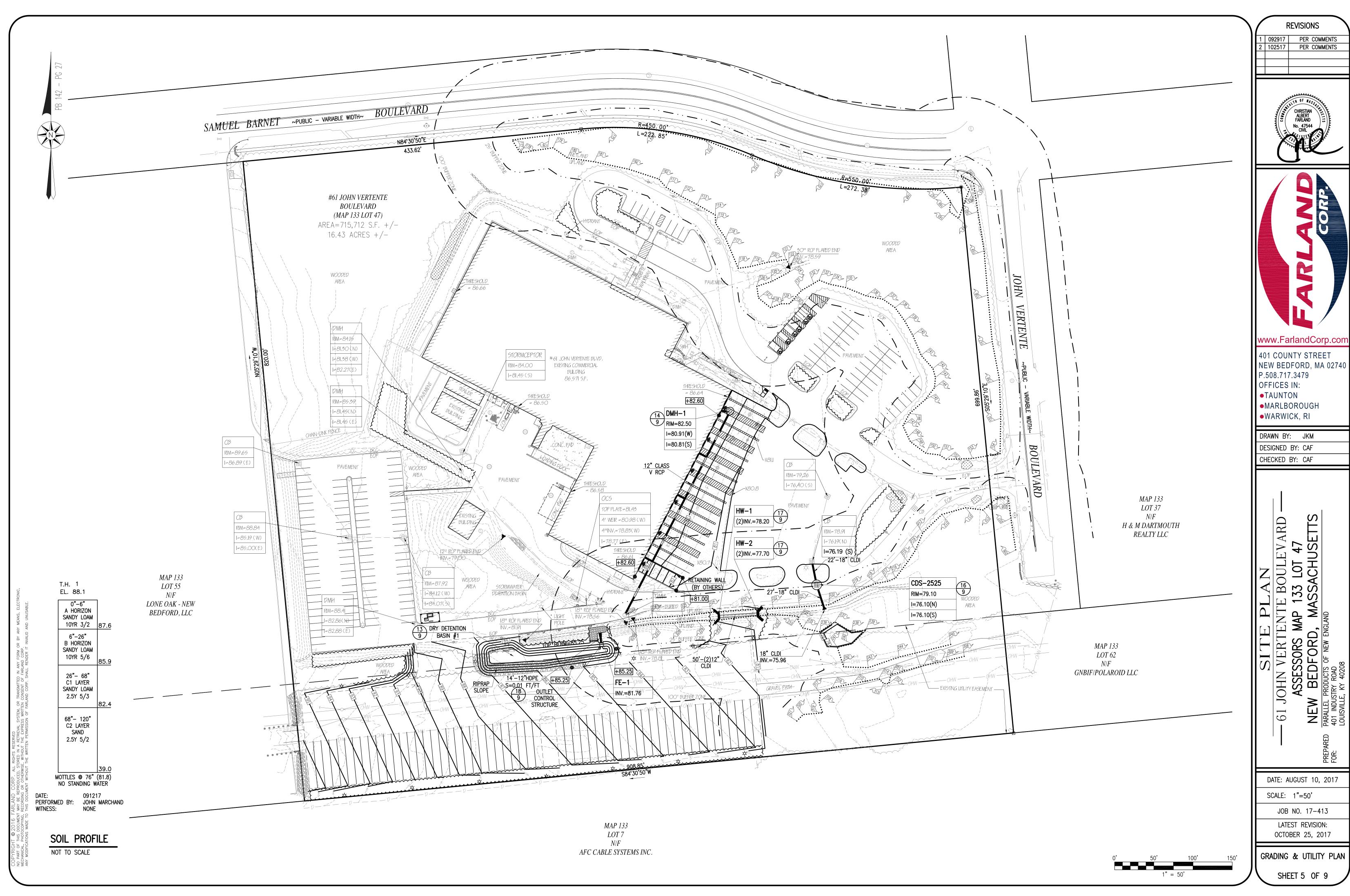
	10 YEAR STORM EVENT												
Pipe Description				Draiange Area (Acres)				Time of Concentration (min)					
Length #	DA#	From	То	Total	Imperv. C=0.90	Pervious C=0.30	Comp. C- Value	CA	Inlet	Drain	Total	(in./hr)	Qc=CIA (cfs)
	DRAINAGE PIPES												
1		CB-1	CB-2	0.287	0.000	0.287	0.30	0.086	10	0.49	10.49	4.3	0.37
2		CB-2	CB-3	0.849	0.350	0.499	0.55	0.465	10	0.19	10.19	4.3	2.37
3		CB-3	DMH-3	1.316	0.717	0.599	0.63	0.825	10	0.27	10.27	4.3	5.92
4		DMH-3	FES	1.316	0.717	0.599	0.63	0.825	10	0.49	10.49	4.3	3.55
5		CB-4	CB-5	0.331	0.329	0.002	0.90	0.297	10	0.51	10.51	4.3	1.28
6		CB-5	CDS-2025	0.828	0.826	0.002	0.90	0.744	10	0.09	10.09	4.3	4.48
7		CDS-2025	FES	0.961	0.959	0.002	0.90	0.864	10	0.10	10.10	4.3	8.19

	Pipe	Pipe			Full Flow		Current Flow			Pipe capacity		
Length #	Diameter (in)	Material (n- value)	Slope (ft./ft.)	Length (ft)	Vf (ft/sec)	Qf (cfs)	Vc (ft/sec)	Qc (cfs)	Qc/Qf	d/D (in.)	Flow Depth in pipe (in)	
						DRAINAG	E PIPES					
1	8	0.013	0.0156	108	4.32	1.51	3.67	0.37	0.25	0.3	2.7	OK!
2	18	0.013	0.0137	63	6.96	12.30	5.55	2.37	0.19	0.3	5.4	OK!
3	18	0.013	0.0110	106	6.23	11.02	6.50	5.92	0.54	0.5	9.2	OK!
4	18	0.013	0.0069	140	4.94	8.73	4.78	3.55	0.41	0.4	7.8	OK!
5	12	0.013	0.0027	79	2.36	1.85	2.60	1.28	0.69	0.6	7.2	OK!
6	18	0.013	0.0040	22	3.76	6.64	4.14	4.48	0.67	0.6	10.7	OK!
7	18	0.013	0.0050	27	4.20	7.43	4.62	8.19	1.10	1.0	17.3	OK!

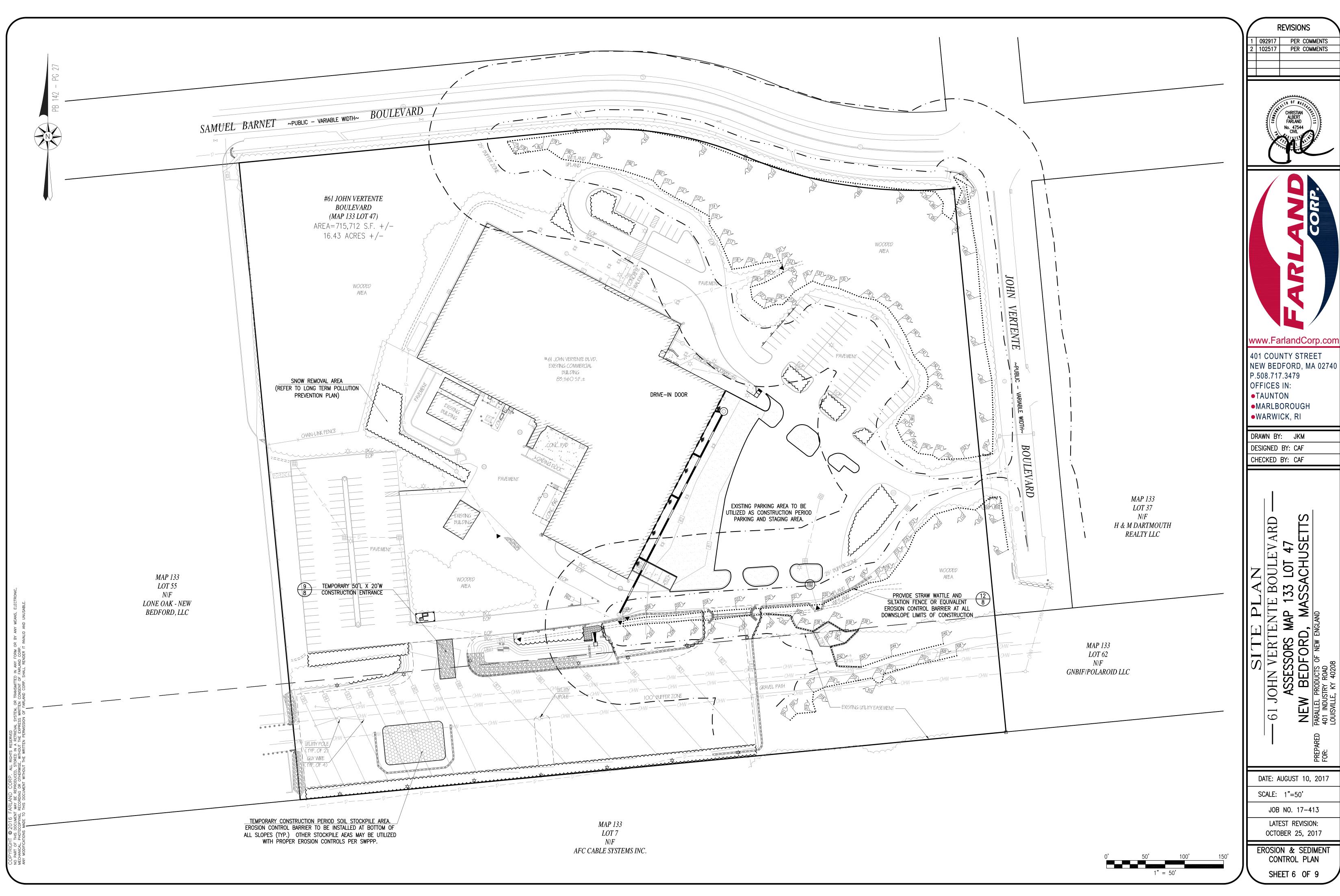




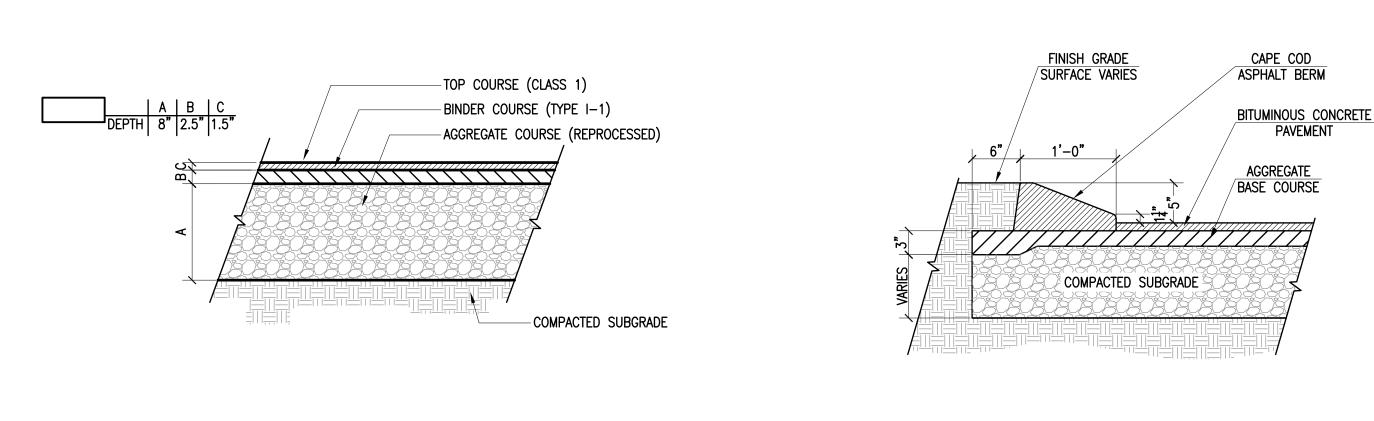












ACCESSIBLE PARKING

__5'-0"__

SEE ACCESSIBILITY

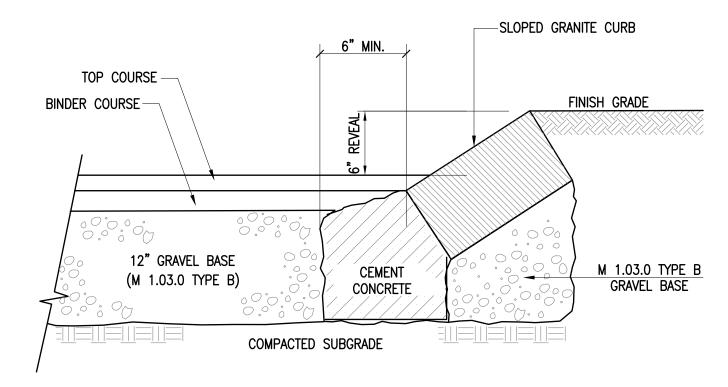
SYMBOL DETAIL

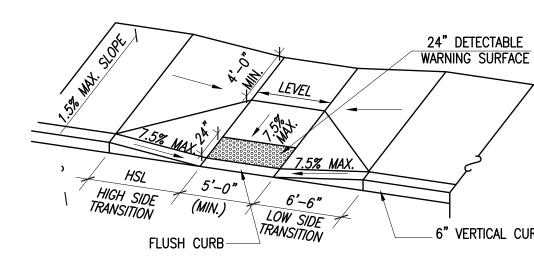
SPACE

SPACE

PAINTED ISLAND 4" W/ WHITE

TRAFFIC PAINT TYP. 18" O.C.





HIGH SIDE TRANSITION PROFILE GRADE % LENGTH 0% 6'-6" >0% TO 1% 7'-8" >1% TO 2% 9'-0**"** >2% TO 3% 11'–0" 14'-0" No. 47544 CIVIL >4% TO 5% | 15'-0" (MAX.) NOTE: BASED ON DESIGN SLOPE OF 7.5% AND A 6" CURB REVEAL

TRANSITION CURB LENGTH

REVISIONS

092917 PER COMMENTS 102517 PER COMMENTS

www.FarlandCorp.com

NEW BEDFORD, MA 02740

401 COUNTY STREET

P.508.717.3479

MARLBOROUGH

WARWICK, RI

DRAWN BY: JKM

DESIGNED BY: CAF

CHECKED BY: CAF

PLAN NTE BOULEVARD -AP 133 LOT 47 MASSACHUSETTS

ORD

OFFICES IN:

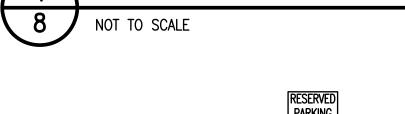
TAUNTON

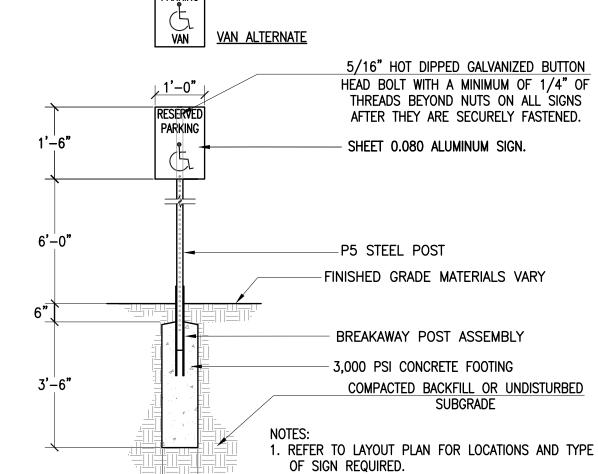
>3% TO 4% __6" VERTICAL CURB REVEAL

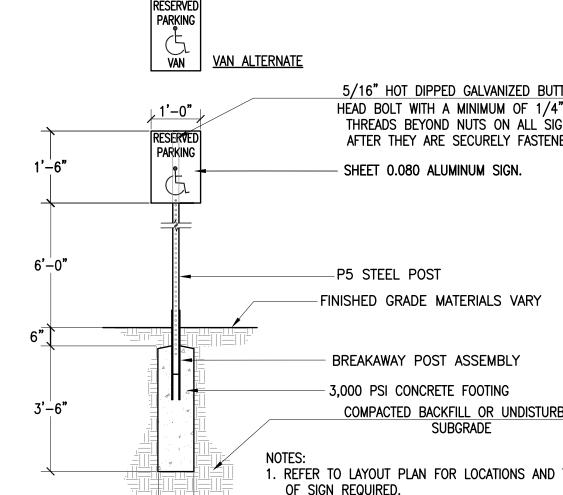
1. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK, I.E. DEPTH OF SURFACE AND FOUNDATION. 2. DIMENSIONS ARE SUBJECT TO CHANGE IN FIELD. ALL SLOPES AND DIMENSIONS TO COMPLY WITH ADA MAAB

- PROVIDE EXPANSION JOINTS AT TOPS OF RAMP AND AT BACK OF WALK AT INTERFACE OF CURB. PROVIDE HEAVY BROOM FINISH ON RAMP AND SIDE SLOPES PERPENDICULAR TO FLOW OF TRAFFIC.
- MINIMUM WALK DIMENSIONS ARE FROM BACK OF CURB. TRANSITION CURB LENGTH AS REQUIRED TO MEET CODE.
- FIXED OBJECTS (I.E. UTILITY POLES, HYDRANTS, ETC.) MUST NOT ENCROACH ON ANY PART OF A WHEELCHAIR RAMP, INCLUDING TRANSITION SLOPES.
- 8. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP, EXCLUDING CURB TRANSITIONS, TO BE LOCATED OUTSIDE OF THE CROSSWALK.









DEVICES, LATEST EDITION. ACCESSIBLE PARKING SIGN NOT TO SCALE



SPACE

NOT TO SCALE

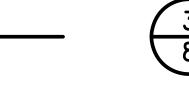
ACCESSIBLE PARKING LAYOUT

TRAFFIC SIGN ACCESSIBLE VAN PARKING

PRECAST CONCRETE

CURB STOP





SLOPED GRANITE CURB

1. COLOR OF TACTILE DETECTABLE WARNINGS SHALL BE YELLOW.

CONTRACTOR SHALL INSTALL TILE PER MANUFACTURER'S SPECIFICATIONS

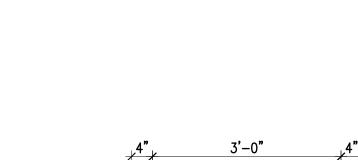
PREFERRED PRODUCT SHALL BE REPLACEABLE (WET-SET) COMPOSITE TACTILE BY

ADA SOLUTIONS, INC. FOR PRICING QUOTATIONS, PLACING ORDERS, AND FURTHER INFORMATION, CALL JON MEHLMAN, EAST REGIONAL ACCOUNT DIRECTOR FOR ADA

SOLUTIONS, INC. AT (800) 372-0519 or (978) 262-9900. DETAILED INFORMATION

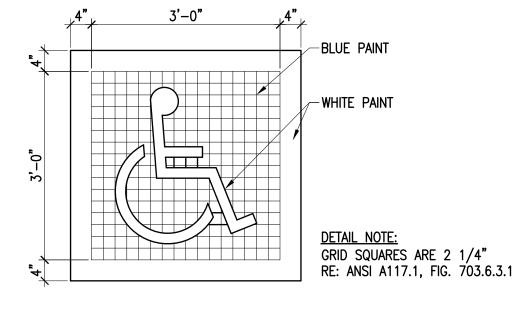
NOT TO SCALE

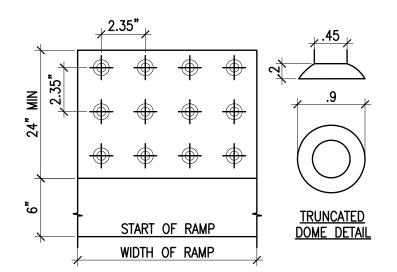
IS AVAILABLE AT www.adatile.com.

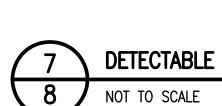


ACCESSIBLE PARKING SYMBOL

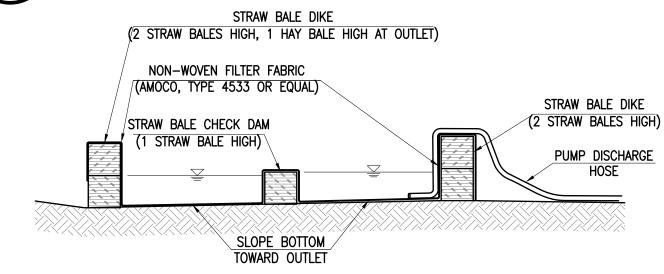
NOT TO SCALE

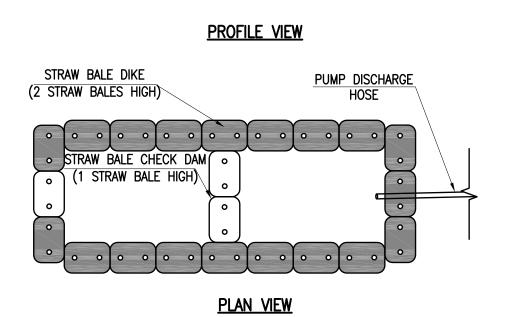


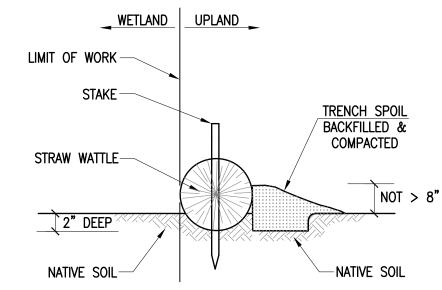








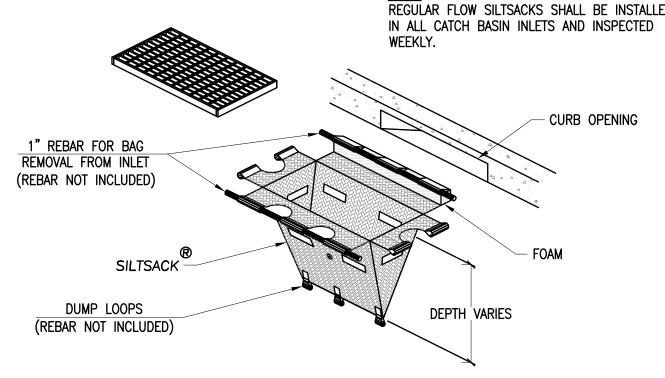




EXISTING	10'-0"	10'-0"	30'-0"	_1
ROADWAY				
	6" MIN. AT ENDS	12" MIN.		₹ ₹
				
			= = = = = <u>= = </u>	= -
	"'		1-1/2" TO 4" CLEAN STONE	
			GEOTEXTILE FABRIC	

(20' WIDE MINIMUM)

NOTE: PURPOSE IS TO REMOVE MUD FROM TIRES OF CONSTRUCTION VEHICLES.



10	REGULAR	FLOW	SILTSACK®
	·		

JLAR	FLOW	SILTSACK "		
) SCALE				



STAKED STRAW WATTLE

DATE: AUGUST 10, 2017 SCALE: AS NOTED JOB NO. 17-413 LATEST REVISION:

61

DETAIL SHEET

OCTOBER 25, 2017

SHEET 8 OF 9

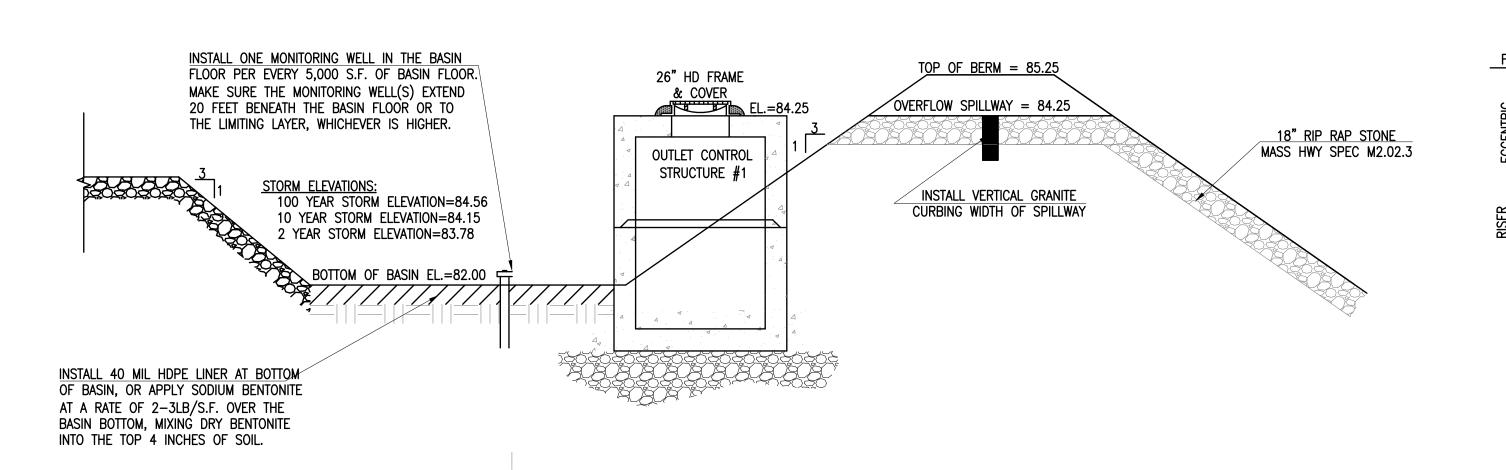
TEMPORARY CONSTRUCTION ENTRANCE

NOT TO

NOT TO SCALE

2. ALL SIGNS SHALL BE INSTALLED AS INDICATED IN 1'-0" THE MANUAL ON UNIFORM TRAFFIC CONTROL

NOTE: REGULAR FLOW SILTSACKS SHALL BE INSTALLED IN ALL CATCH BASIN INLETS AND INSPECTED



White pine (Pinus strobus)

White oak (Quercus alba)

White pine (Pinus strobus)

Gray birch (Betula populifolia)

Black gum (Nyssa sylvatica)

American holly (llex opaca)

Climbing woody vines

Shrub layer

Herbaceous

Gray birch (Betula populifolia)

Eastern hemlock (Tsuga canadensis)

Sweet pepperbush (Clethra alnifolia)

American beech (Fagus grandifolia)

Broom sedge (Andropogon virginicus)

Unspecified sedge species (Carex sp.)

Trailing raspberry (Rubus sp.)

Little bluestem (Schizachyrium scoparium)

Round-leaved greenbrier (Smilax rotundifolia)

STORMWATER DRY DETENTION BASIN

REPLICAITON PLANTING TABLE								
SYMBOL	SYMBOL BOTANICAL NAME		SIZE	QUANTITY				
	TREES							
	ACER RUBRUM	RED MAPLE	1 INCH CALIPER	1				
	SHRUBS							
	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	36 INCH	13				
	VACCINUIM CONYMBOSIUM	HIGHBUSH BLUEBERRY	36 INCH	12				
GROUND								
	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GALLON	25				
	OSMUNDA CINNAMOMEA	CINNAMON FERN	1 GALLON	24				

WETLAND

SURROUNDING WETLAND PLANT SPECIES SURROUNDING UPLAND PLANT SPECIES Tree layer Gray birch (Betula populifolia) Red maple (Acer rubrum)

> Shrub layer Red maple (Acer rubrum) Sweet pepperbush (Clethra alnifolia) Multiflora rose (Rosa multiflora) Highbush blueberry (Vaccinium corymbosum) Maleberry (Lyonia ligustrina) Arrowwood (Viburnum recognitum)

> > Herbaceous layer

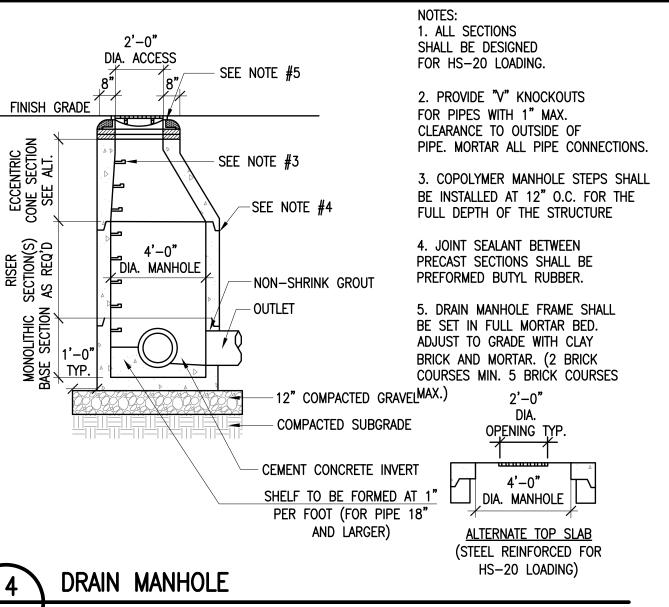
Climbing woody vines Oriental bittersweet (Celastrus orbiculatus)

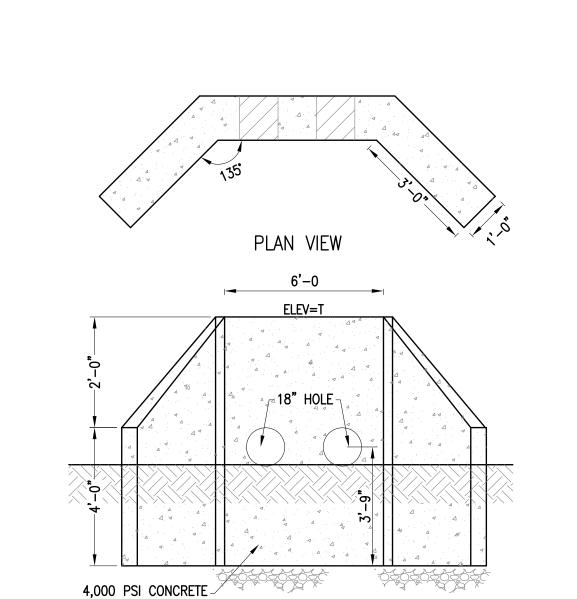
Sensitive fern (Onoclea sensibilis) Cinnamon fern (Osmunda cinnamomea) Soft rush (Juncus effusus) Reed canary—grass (Phalaris arundinacea) Pennsylvania smartweed (Polygonum pensylvanica) Arrow-leaved tearthumb (Polygonum cuspidatum)

CONSTRUCTION SEQUENCE & NOTES

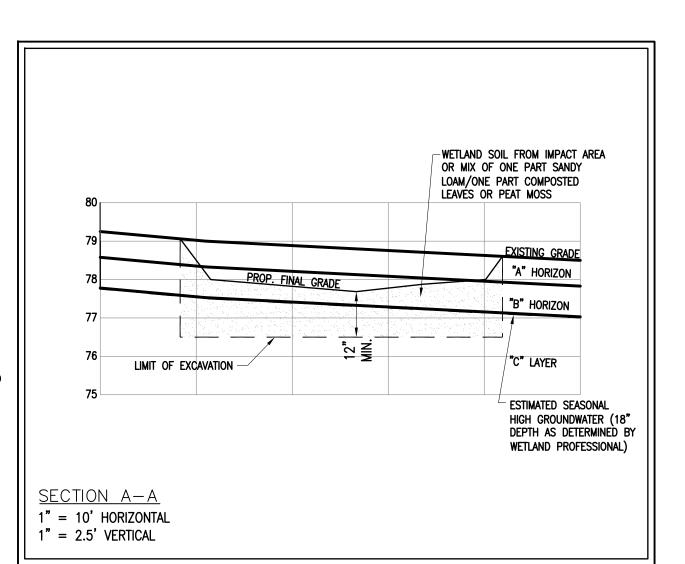
THE WETLAND REPLICATION AREA SHALL BE CONSTRUCTED PRIOR TO ANY EARTH DISTURBANCE REQUIRED FOR THE PROPOSED PROJECT.

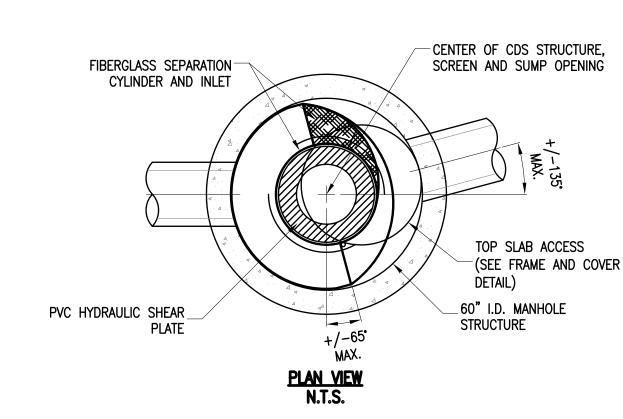
- 2. WETLAND REPLICATION SHALL BE PERFORMED UNDER THE DIRECTION AND GUIDANCE OF A QUALIFIED BOTANIST. THE RESUME OF THE WETLAND PROFESSIONAL WHO SHALL OVERSEE THE CONSTRUCTION OF TEH WETLAND REPLICATION AREA IS TO BE SUBMITTED TO THE CONSERVAITON COMMISSION OR ITS DESIGNATED AGENT FOR ACCEPTANCE TWO WEEKS PRIOR TO THE INITIATION OF REPLICATION ACTIVITIES.
- 3. PRIOR TO THE COMMENCEMENT OF WORK, THE LIMITS OF THE EXISTING WETLAND BOUNDARY SHALL BE STAKED OR FLAGGED AT 15' INTERVALS IN THE VICINITY OF THE REPLICATION AREAS, AND AN EROSION CONTROL BARRIER (STRAW WATTLE AND/OR SILT FENCE) SHALL BE INSTALLED ALONG THE PERIMETER OF THE REPLICATION AREA, AS SHOWN ON THE SITE PLAN, TO SERVE AS A LIMIT OF WORK, SUCH THAT NO ACTIVITIES ARE TO OCCUR ON THE WETLAND SIDE OF THE
- ACCESS TO THE WETLAND REPLICATION AREA SHALL OCCUR FROM UPLAND AREAS AND SHALL NOT RESULT IN IMPACT TO EXISTING WETLANDS..
- CONSTRUCTION SHALL COMMENCE WITH REMOVAL OF EXISTING VEGETATION WITHIN THE REPLICATION AREA. EXISTING MATURE UPLAND TREES THAT ARE FACULTATIVE OR WETTER MAY BE LEFT ON HUMMOCKS WITHIN THE REPLICATION AREA, AS THEY MAY PROVIDE SHADING TO THE PLANTINGS INSTALLED AROUND THESE HUMMOCKS. EXISTING BOULDERS WITHIN THE REPLICATION AREA ARE ALSO TO REMAIN. BOULDERS SHALL NOT COMPRISE MORE THAN 15% OF THE COVERAGE OF THE REPLICATION AREA.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR REUSE ELSEWHERE ON-SITE. EXCAVATION SHALL EXTEND TO APPROXIMATELY 12" BELOW THE PROPOSED FINAL GRADE ELEVATION. IF DENSE SOILS ARE ENCOUNTERED, IT IS RECOMMENDED TO EXCAVATE AN ADDITIONAL 6" TO ACCOMMODATE WETLAND SOIL MIX.
- THE EXCAVATED REPLICATION AREA FLOOR SHALL BE GRADED TO BLEND WITH UNDISTURBED WETLAND AREAS AND REMAINING HUMMOCKS WHERE EXISTING TREES ARE TO REMAIN. THE REPLICATION AREA SHALL NOT HAVE FINISHED TOPOGRAPHY WHICH RESULTS IN COMPLETELY FLAT TOPOGRAPHY. THE FINISH GRADING SHOULD RESULT IN A SHALLOW PIT AND MOUND TOPOGRAPHY THROUGHOUT THE REPLICATION AREA.
- A WET SOIL MIX SHALL BE COMPRISED OF THE "O" AND "A" HORIZON SOILS STRIPPED FROM THE WETLAND DISTURBANCE AREA. SHOULD THESE SOILS BE OF INSUFFICIENT QUANTITY OR QUALITY, A CREATED BLEND CONSISTING OF ONE PART SANDY LOAM AND ONE PART COMPOSTED LEAVES OR PEAT MOSS SHALL BE USED.
- TREE, SHRUB, AND GROUND COVER PLANTINGS SHALL BE INSTALLED PER PLAN IMMEDIATELY FOLLOWING THE EXCAVATION AND PLACEMENT OF ORGANIC SOILS WITHIN THE REPLICATION AREA. DUE TO HIGH PLANT MORTALITY, PLANTING SHOULD BE AVOIDED DURING THE SUMMER MONTHS. LOCATION OF PLANTS MAY BE ADJUSTED IN THE FIELD TO ACCOMMODATE EXISTING TREES AND/OR BOULDERS WHICH ARE TO REMAIN. TREES ARE TO BE PLANTED AT NO MORE THAN 25 FEET ON-CENTER. SHRUBS PLANTED AT 5-6 FEET ON CENTER, AND FERNS AT 3-5 FEET ON CENTER. ALL WETLAND
- 10. AFTER PLANTING IS COMPLETED, THE REPLICATION AREA SHALL BE HAND RAKED TO ELIMINATE AND DEPRESSIONS GREATER THAN FOUR INCHES IN DEPTH WHICH MAY HAVE BEEN CREATED DURING DIGGING, AND TO ELIMINATE COMPACTION AS MUCH
- THE WETLAND FLOOR (UP TO ELEVATION 78.0 +/-) SHALL BE SEEDED WITH COMMERCIALLY AVAILABLE SEED MIX (NEW ENGLAND WETLAND PLANTS, INC. "NEW ENGLAND WETMIX", OR EQUAL), APPLIED AT A RATE OF 1 LB PER 2.500 S.F.
- 12. DEPENDING UPON THE WEATHER, THE REPLICATION AREA MAY NEED DAILY WATERING FOR APPROXIMATELY ONE MONTH, OR UNTIL THE PLANTINGS HAVE TAKEN ROOT AND GROWTH IS OBSERVED. IT IS RECOMMENDED THAT PLANTING BE PERFORMED IN APRIL/MAY OR SEPTEMBER/OCTOBER, TO AVOID PLANT MORTALITY DURING SUMMER MONTHS. PLANTINGS SHALL BE WATERED AS NECESSARY TO ENSURE SURVIVAL FOR A MINIMUM TWO-YEAR PERIOD.
- 13. THE CITY OF NEW BEDFORD CONSERVATION COMMISSION SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF THE COMMENCEMENT OF WETLAND REPLICATION CONSTRUCTION.
- 14. A WETLAND SCIENTIST OR OTHER QUALIFIED PROFESSIONAL SHALL CONDUCT A PRE-CONSTRUCITON MEETING WITH THE CONTRACTOR, AND SHALL INSPECT THE CONSTRUCTION OF THE REPLICATION AREA UPON EXCAVATION TO THE SUBGRADE, WHEN WETSOIL MIX IS APPLIED AT FINISH GRADE, AND ONCE PLANTING HAVE BEEN INSTALLED.
- AFTER ONE GROWING SEASON, THE REPLICATION AREA SHALL BE ASSESSED BY A WETLAND SCIENTIST TO DETERMINE THE GROWING SUCCESS OF THE PLANTINGS, AND ASSESS THE NEED FOR POSSIBLE ADDITIONAL PLANTINGS.
- AFTER THE SECOND GROWING SEASON, A REPORT SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION, STATING THE SUCCESS OF THE WETLAND REPLICATION AREA. IN ACCORDANCE WITH THE PERFORMANCE STANDARDS FOUND IN 310 CMR 10.55(4)(B)(6), IF THE 75% AERIAL COVERAGE CRITERIA IS NOT ACHIEVED, A MITIGATION PLAN SHALL BE SUBMITTED TO THE CONSERVATION COMMISSION AND THE MONITORING PERIOD SHALL BE EXTENDED.

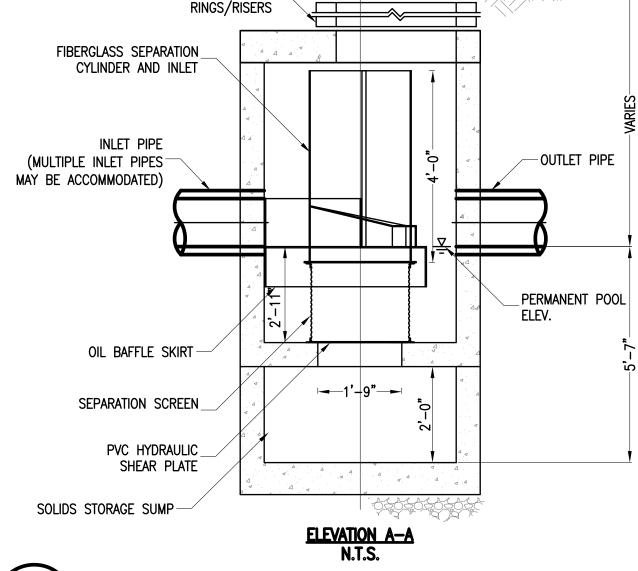




FRONT ELEVATION VIEW CONCRETE WING HEADWALL





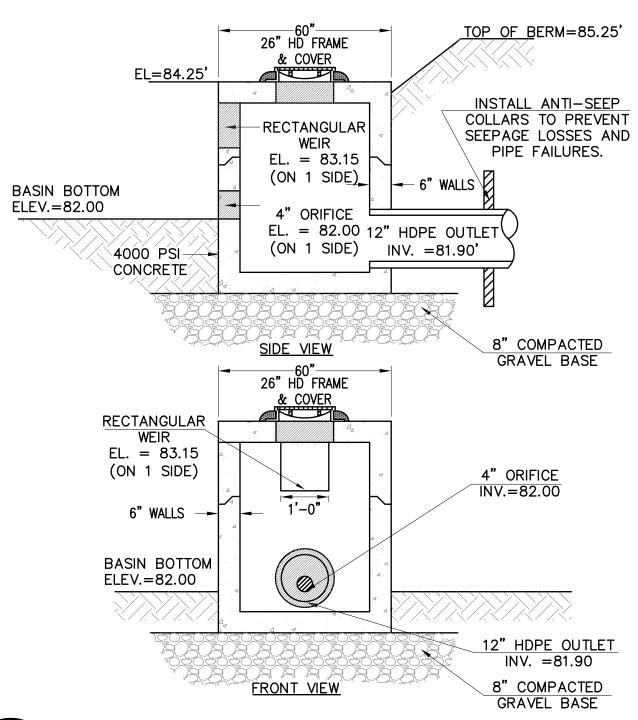


CDS2025-5-C INLINE CDS

CONTRACTOR TO GROUT

TO FINISHED GRADE

GRADE



OUTLET CONTROL STRUCTURE

REVISIONS PER COMMENTS 092917 102517 PER COMMENTS No. 47544 CIVIL



401 COUNTY STREET NEW BEDFORD, MA 02740 P.508.717.3479 OFFICES IN: TAUNTON MARLBOROUGH •WARWICK, RI

DRAWN BY: JKM DESIGNED BY: CAF CHECKED BY: CAF

CH

SES 9

DATE: AUGUST 10, 2017 SCALE: AS NOTED JOB NO. 17-413 LATEST REVISION: OCTOBER 25, 2017

DETAIL SHEET

SHEET 9 OF 9

WETLAND REPLICATION PLAN