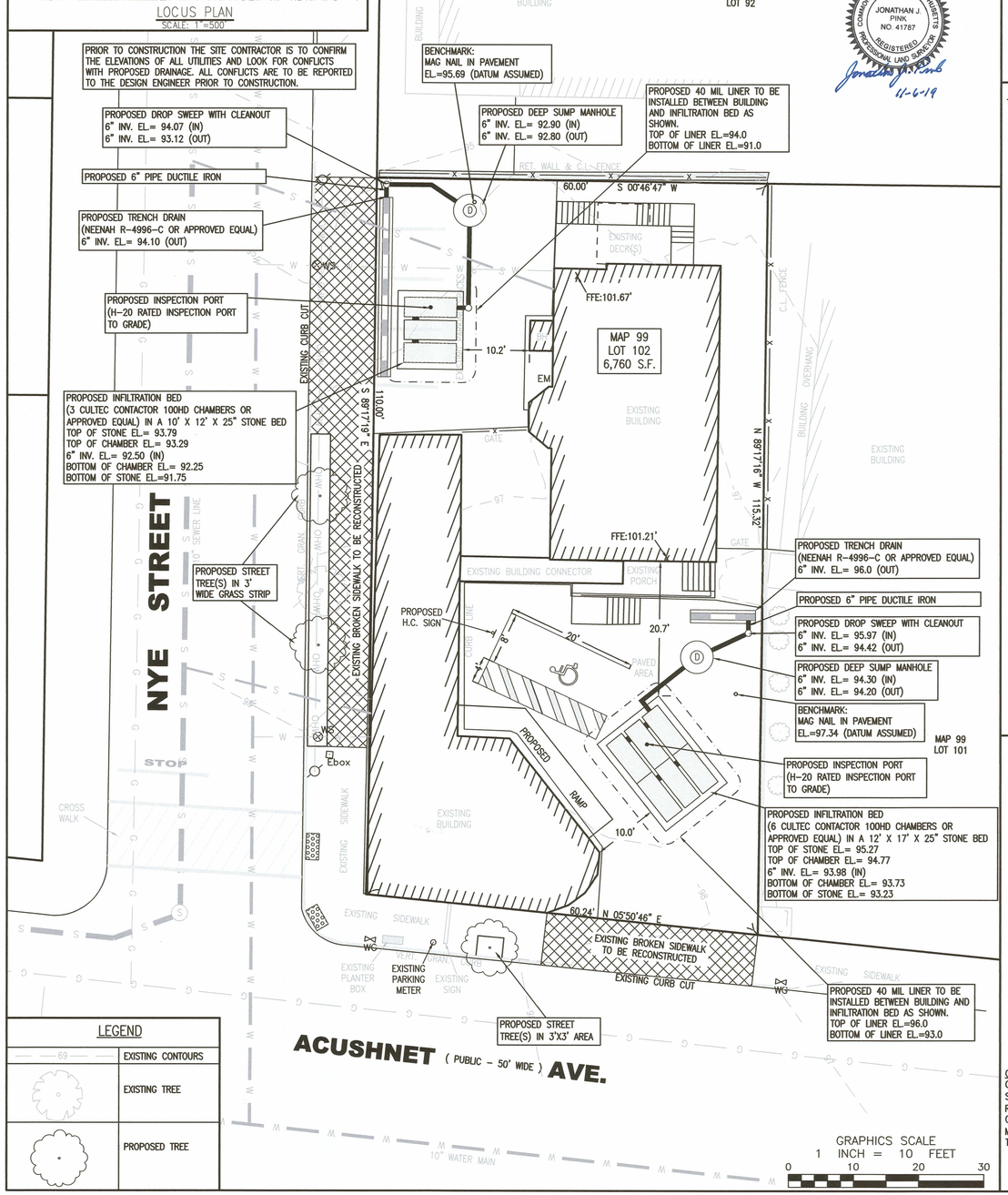
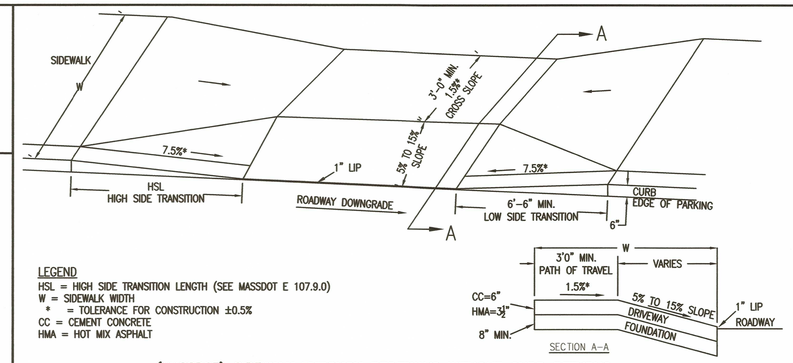
LOCUS PLAN
SCALE: 1"=500'



LEGEND

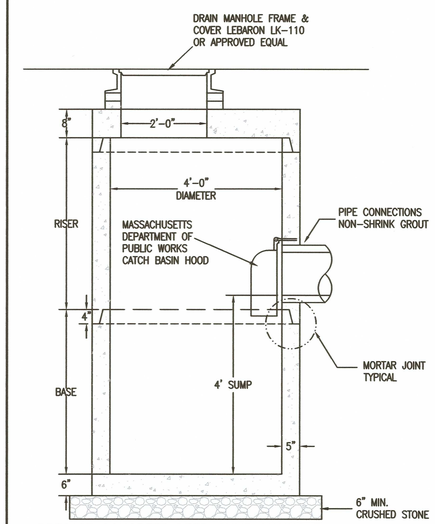
69	EXISTING CONTOURS
	EXISTING TREE
	PROPOSED TREE



LEGEND
HSL = HIGH SIDE TRANSITION LENGTH (SEE MASSDOT E 107.9.0)
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

(MASSDOT) SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS
NOT TO SCALE

NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."
4. AN H-20 RATED PRE-CAST FLAT TOP SHALL BE USED ON ALL DRAINAGE STRUCTURES WITH LESS THAN 3' OF COVER TO FINISH GRADE.
5. FRAME TO BE SET IN A FULL BED OF MORTAR
6. BRICK LEVELING COURSE AS REQUIRED FOR GRADE ADJUSTMENTS (5 MAXIMUM)
7. MASSACHUSETTS STANDARD CATCH BASIN HOOD SHALL BE INSTALLED ON OUTLET PIPE.
8. STRUCTURE TO BE MANUFACTURED BY SHEA CONCRETE OR APPROVED EQUAL



PRECAST CONCRETE DEEP SUMP MANHOLE
NOT TO SCALE

DRAINAGE CALCULATIONS:

AREA TO THE WEST
SOILS: MAPPED AS URBAN (USDA/NRCS)
WATERSHED 2,861 SF
DESIGN FOR 0.5" RAIN EVENT (VOLUME ONLY)

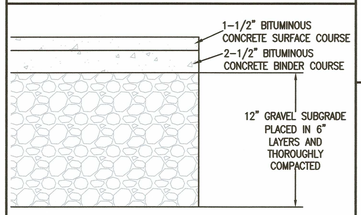
2,861 SF X 0.5 INCH/12 INCH PER FT = 119.2 CF

USING CULTEC BED WITH CONTACTOR 100HD UNITS IN CRUSHED STONE
119.2 CF / 3.84 CF/FT = 31.1 FT
INSTALLED LENGTH OF CONTACTOR 100HD IS 7.5 FT/CHAMBER
31.1 FT / 7.5 FT/CHAMBER = 4.2 CHAMBERS REQUIRED USE 6

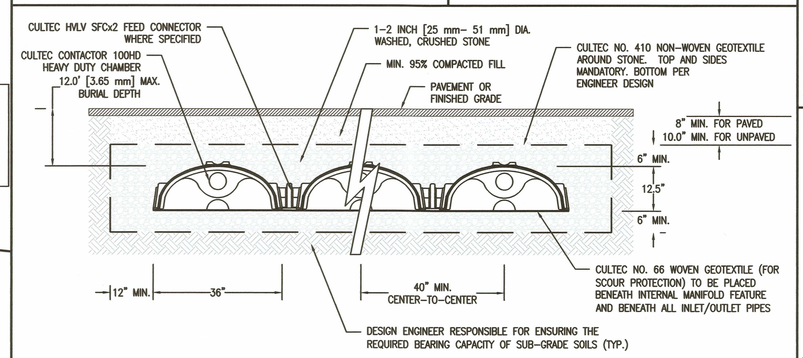
AREA TO THE EAST
SOILS: MAPPED AS URBAN (USDA/NRCS)
WATERSHED 1,959 SF
DESIGN FOR 0.5" RAIN EVENT (VOLUME ONLY)

1,959 SF X 0.5 INCH/12 INCH PER FT = 81.63 CF

USING CULTEC BED WITH CONTACTOR 100HD UNITS IN CRUSHED STONE
81.63 CF / 3.84 CF/FT = 21.3 FT
INSTALLED LENGTH OF CONTACTOR 100HD IS 7.5 FT/CHAMBER
21.3 FT / 7.5 FT/CHAMBER = 2.84 CHAMBERS REQUIRED USE 3



BITUMINOUS CONCRETE PAVEMENT
NOT TO SCALE



GENERAL NOTES
CONTACTOR 100HD BY CULTEC, INC. OF BROOKFIELD, CT.
STORAGE PROVIDED = 3.84 CF/FT [0.82 M^3/3] PER DESIGN UNIT.
REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
MAXIMUM ALLOWED COVER ON TOP OF UNIT SHALL BE 12.0' [3.66 m]
THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS

WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.ALL CONTACTOR 100HD HEAVY DUTY UNITS ARE MARKED WITH A COLOR STRIPE FORMED INTO THE PART ALONG THE LENGTH OF THE CHAMBER. ALL CONTACTOR 100 CHAMBERS MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

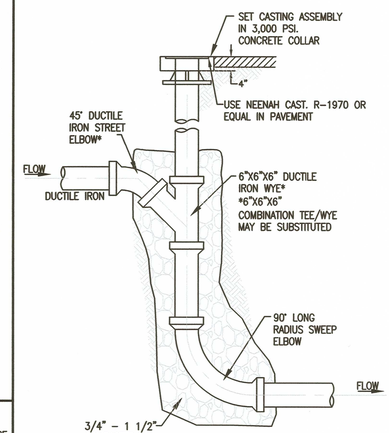
CULTEC CONTACTOR 100 HD DETAIL OF DRAIN INFILTRATION SYSTEM
NOT TO SCALE

SITE NOTES:

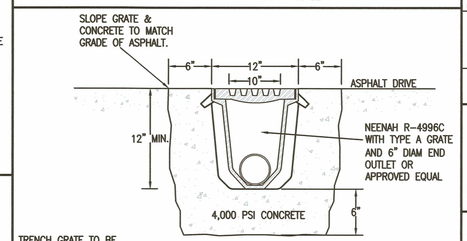
1. THE SITE IS SHOWN AS LOT 102 ON THE CITY OF NEW BEDFORDS ASSESSORS MAP 99.
2. EXISTING CONDITIONS AND PROPERTY LINE SURVEY COMPLETED BY ROMANELLI ASSOCIATES, INC.
3. THE SUBJECT PARCEL IS LOCATED ENTIRELY IN FLOOD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS INDICATED ON THE F.E.M.A. FLOOD INSURANCE RATE MAP NUMBER 25005C0391G WITH AN EFFECTIVE DATE OF JULY 16, 2014).
4. ALL UNDERGROUND UTILITIES ARE TO BE CONSIDERED APPROXIMATE. LOCATIONS WERE TAKEN FROM PLANS OF RECORD WITH THE MUNICIPALITY, DIG SAFE (1-888-DIG SAFE) AND ALL UTILITY COMPANIES TO CONFIRM LOCATIONS AND ELEVATIONS PRIOR TO THE START OF WORK.

CONSTRUCTION NOTES:

1. CONTRACTOR TO VERIFY BENCHMARKS FOR CONSISTENCY PRIOR TO CONSTRUCTION AND SHALL NOTIFY ZENITH CONSULTING ENGINEERS, LLC. OF ANY DISCREPANCIES.
2. IT IS THE CONTRACTORS' RESPONSIBILITY TO CONTACT DIG SAFE (1-888-DIG SAFE) PRIOR TO THE COMMENCEMENT OF WORK AND ALL UNDERGROUND UTILITY COMPANIES TO CONFIRM LOCATIONS AND ELEVATIONS.
3. UNLESS OTHERWISE NOTED, ALL DRAINAGE PIPE IS TO BE 6" ADS N-12 STYLE PIPE.
4. SITE IS SERVICED BY MUNICIPAL WATER AND MUNICIPAL SEWER
5. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO MUTCD STANDARDS.
6. PROPOSED UTILITIES AND CONSTRUCTION METHODS UNDER AREAS SUBJECT TO TRAFFIC LOADING SHALL BE INSTALLED TO WITHSTAND H-20 LOADING TRAFFIC STANDARDS. CONTRACTOR SHALL VERIFY THAT ALL STRUCTURES COMPLY TO THIS STANDARD.
7. WHERE ALL CONCRETE STRUCTURES INTERCEPT THE SEASONAL HIGH GROUNDWATER TABLE, THE CONTRACTOR SHALL SEAL THE ENTIRE STRUCTURE WITH WATERPROOF SEALER.
8. IF APPLICABLE, ANY RETAINING WALLS SHALL BE DESIGNED BY A MASSACHUSETTS REGISTERED PROFESSIONAL STRUCTURAL ENGINEER.
9. ALL WORK SHALL CONFORM TO THE RULES AND REGULATIONS OF THE CITY OF NEW BEDFORD AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY AND BRIDGES, MOST CURRENT VERSION.

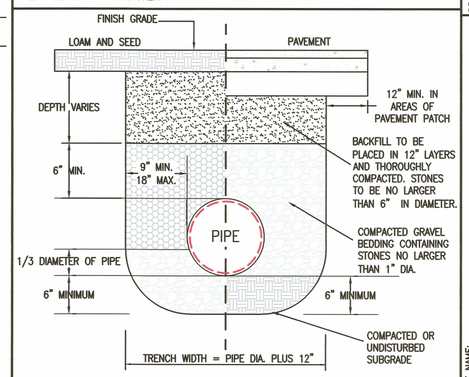


DRAINAGE DROP- SWEEP CLEANOUT
NOT TO SCALE



TRENCH GRATE TO BE INSTALLED PER METHODOLOGY PRESCRIBED BY MANUFACTURER.

TRENCH GRATE
NOT TO SCALE



DRAINAGE PIPE TRENCH DETAIL
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
JAMES L. BISSONNETTE
CIVIL
No. 47285
REGISTERED PROFESSIONAL ENGINEER
11-6-19
P.E. STAMP

ZCE
ZENITH CONSULTING ENGINEERS, LLC
3 MAIN STREET LAKEVILLE, MA 02347
PHONE: (508) 947-4208

REV.	DATE	DESCRIPTION	BY	APP.

DRAWN BY: JLB	DATE: 11/6/19
DESIGNED BY: JLB	PROJECT NUMBER 0113-06-01
CHECKED BY: NCZ	DRAWING SCALE: 1" = 10'
APPROVED BY JLB	SHEET ID D-1

SHEET NAME: **DRAINAGE IMPROVEMENT PLAN**

PROJECT SITE: **1332 ACUSHNET AVE.**
NEW BEDFORD, MASSACHUSETTS

CLIENT INFO: **ROMANELLI ASSOCIATES INC.**
1162 ROCKDALE AVE.
NEW BEDFORD, MASSACHUSETTS

S:\Civil Engineering Projects\New Bedford\Acushnet Ave\1332 Acushnet Ave\DWG\Drainage Base.dwg