

# LOFTS AT RIVERPOINT

PERMIT SET REV1 8/26/24

## COVER SHEET

PREPARED BY NARRAGANSETT ENGINEERING INC.

### PROJECT SUMMARY

EXISTING MILLS TO BE CONVERTED INTO 4 UNIT RESIDENTIAL (54 EAST MAIN) AND 6 UNIT RESIDENTIAL, CAR STORAGE, AND OFFICE (60 EAST MAIN) SITE SHALL BE RE-PAVED AS INDICATED, AND ALSO INCLUDES A PROPOSED 13 SPACE EXTERIOR PARKING LOT (INCL. 1 ADA COMPLIANT), INCLUDING ASSOCIATED GRADING, STORMWATER BMPs AND ACCESSORY ELEMENTS (LANDSCAPE PATIO AREAS, ETC.) UTILITY LATERALS SHALL BE INSTALLED (WATER AND SEWER) AS INDICATED ON PLAN (WORK IS CURRENTLY UNDERWAY) 5 UNITS ARE PLANNED AS WORKFORCE HOUSING (RESTRICTED)

### SHEET INDEX

- SV-100 : EXISTING CONDITIONS PLAN
- C-100 : PROPOSED SITE PLAN
- C-101 : PROPOSED DETAIL SITE PLAN
- C-102 : PROPOSED GRADING PLAN
- C-103 : PROPOSED DRAINAGE PLAN
- C-200 - 206 : DETAILS + NOTES

### CONSULTANTS + REPORTS:

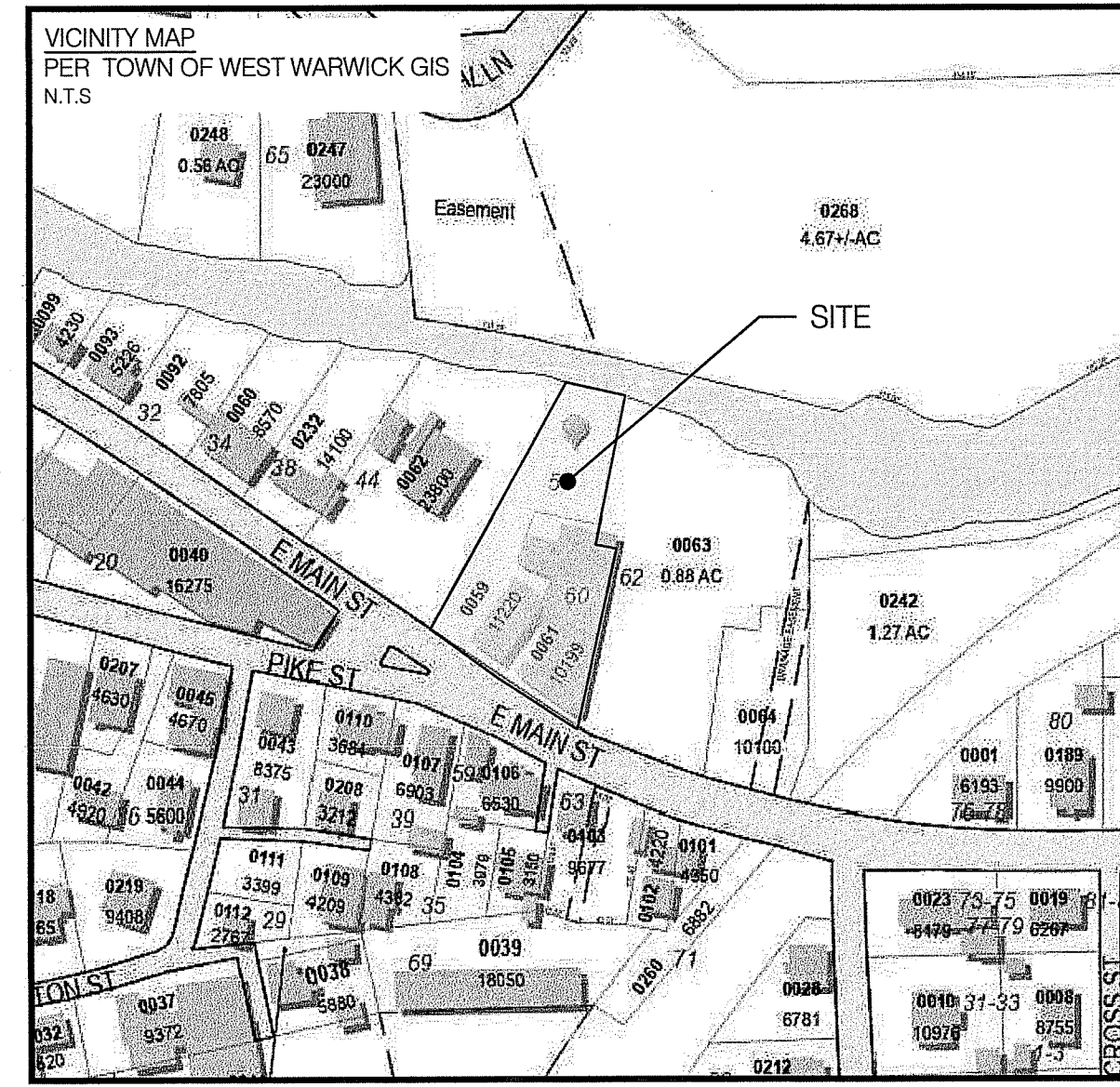
NARRAGANSETT ENGINEERING INC (NEI): SITE / CIVIL, SURVEY (SITE, TOPO) (THIS SET)  
 RAY MAIELLO, REGISTERED LANDSCAPE ARCHITECT  
 + AVINIS ENVIRONMENTAL SERVICES (AES), BIOLOGIST, PWS.

ZDS INC. ARCHITECTS  
 MASTER + PRELIM PLAN SET, EAST MAIN APARTMENTS  
 NOV. 1 2023

LAND PLANNERS: SURVEY (CLASS 1)  
 ADMINISTRATIVE SUBDIVISION PLAN DATED JULY 21, 2023

CROSSMAN ENGINEERING  
 PROPOSED WATER AND SEWER SERVICE PLAN SET  
 OCTOBER 2023

THEODORE F. LOWE AND ASSOCIATES INC. ENVIRONMENTAL CONSULTANTS  
 PRELIMINARY ENVIRONMENTAL SITE SCREENING  
 DATE MAY 17, 2019



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM

### NOTE PER DEM:

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site

### 5.14 Vacant historical mill structures.

5.14.1 Purpose. It is the purpose of this section to recognize that certain existing mill structures and properties in various zoning districts are desirable for conversion to mixed use and occupancy. However, uncontrolled conversion may lead to potential adverse impact on adjacent areas. These properties can be permitted to convert to a variety of limited housing, business and professional office uses. The full range of potentially acceptable uses and the limits of size and intensity that are acceptable are not able to be predetermined and therefore the final determination of acceptability must be made on an individual basis, predicated upon a definitive statement of proposed use and operation.

5.14.6 Bulk requirements for new construction. Yard, setback, lot size, height, and frontage requirements are hereby waived, provided that the intent of this section are complied with in the development plans as determined by the board. In consultation with the technical review committee, the board may determine that certain setbacks, etc. for new construction be required within all of or a portion of the perimeter of the site and shall exercise ultimate discretion as to whether the development plan does comply with the spirit and the intent of this section.

LEGEND	
100.00'	DIMENSION - EXISTING
100.00'	DIMENSION - PROPOSED
100.00' (D)	PLAN / DEED DIMENSION
100.00' (S)	SURVEY DIMENSION
---	PROPERTY LINE - ABUTTING
---	PROPERTY LINE - EXISTING
---	PROPERTY LINE - PROPOSED
---	SETBACKS
100.00'	GRADE CONTOUR - EXISTING
100.00'	GRADE CONTOUR - PROPOSED
---	ELECTRIC - OVERHEAD (OHE)
---	ELECTRIC - TELEPHONE - CABLE (ETC)
---	ELECTRIC - UNDERGROUND (UGE)
---	GAS (G)
---	SANITARY SEWER (S)
---	STORM DRAIN (SD)
---	WATER
---	LIMIT OF DISTURBANCE (LOD)
---	SEDIMENT CONTROL (SED)
---	LOD / SED
---	EDGE OF PAVEMENT - EXISTING
---	FENCE - METAL
---	FENCE - WOOD
---	STONE WALL
---	BRUSH LINE (APPROXIMATE)
---	WETLAND LIMIT
---	STRUCTURE, EXISTING
---	STRUCTURE, PROPOSED
---	SPOT GRADE - EXISTING
---	SPOT GRADE - PROPOSED
---	TREE
---	DRILL HOLE
---	GRANITE BOUND
---	REBAR / STEEL PIPE FOUND
---	SPIKE
---	WETLAND FLAG
---	COASTAL FEATURE FLAG
---	COASTAL BUFFER POST
---	FLOW ARROW
---	SOIL EVALUATION
---	TH No. 48' SHIMMY 80' LEDGE
---	CATCH BASIN
---	DRAINAGE MANHOLE
---	SANITARY MANHOLE
---	ELECTRICAL MANHOLE
---	TELEPHONE MANHOLE
---	WELL
---	GATE VALVE
---	WATER SHUT OFF
---	FIRE HYDRANT
---	ELECTRIC BOX (ETC)
---	UTILITY POLE
---	DOWNSPOUT
---	BENCHMARK
---	CURB INLET

Civil - Survey Structural Environmental Design  
 3102 East Main Road, Portsmouth RI 02871  
 Tel. 401.683.6630 www.nei-cds.com

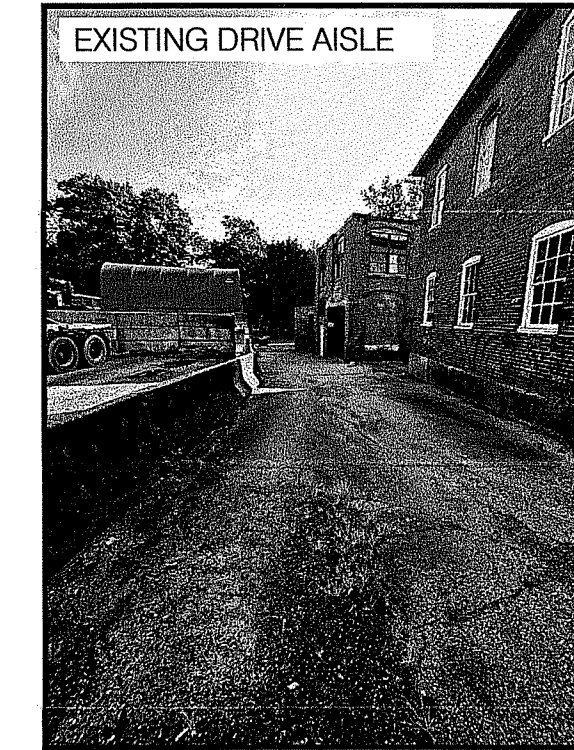
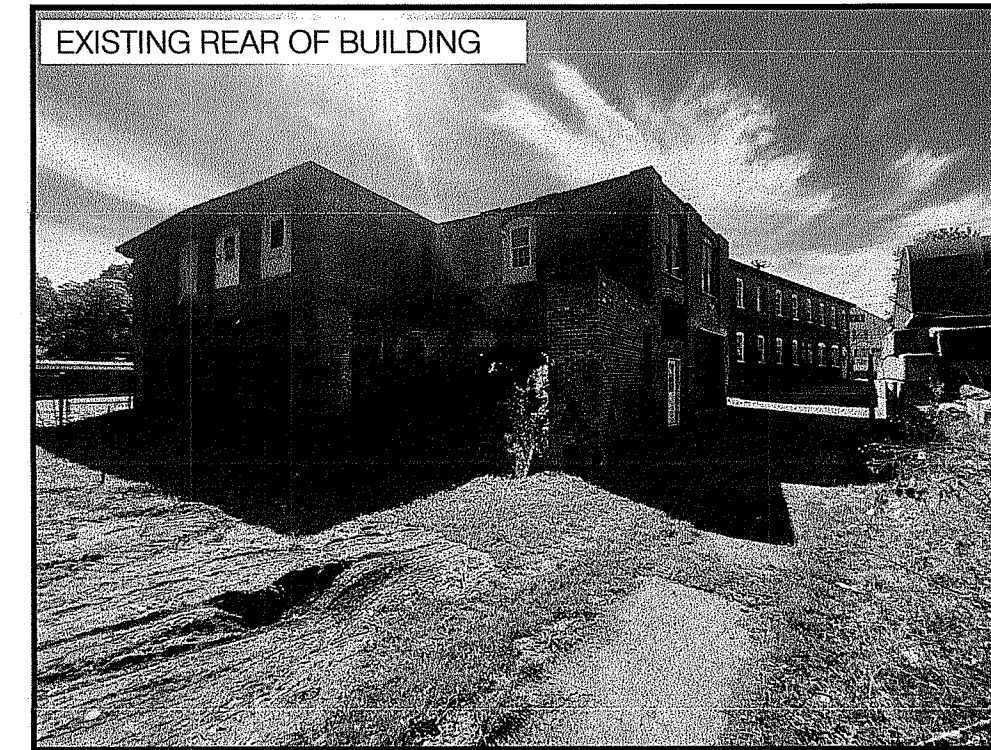
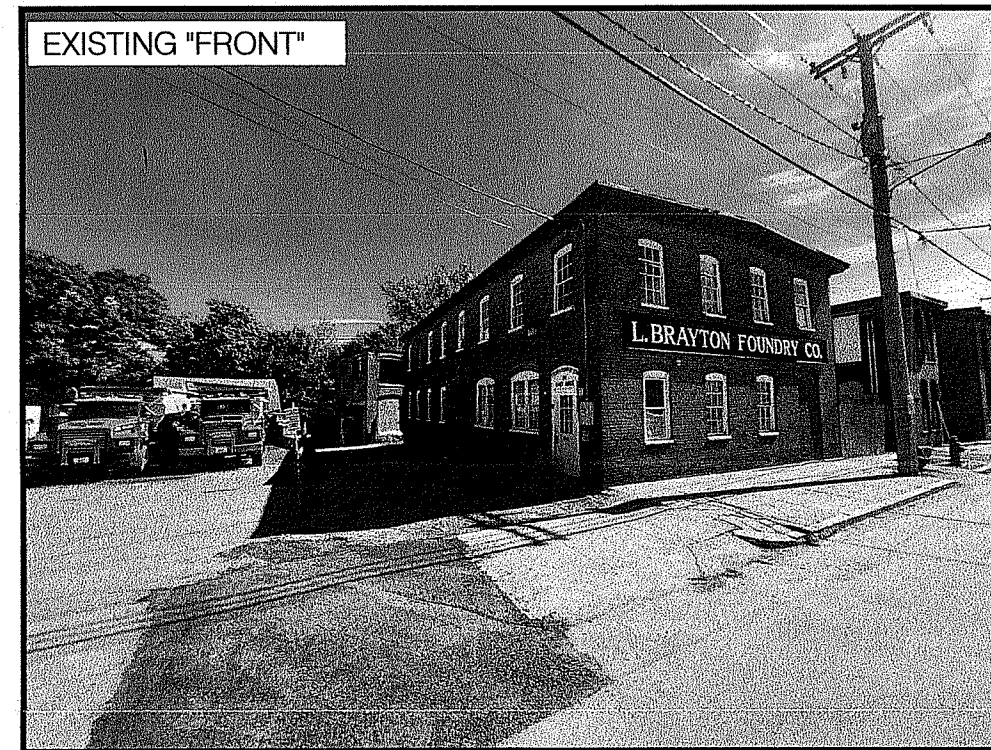
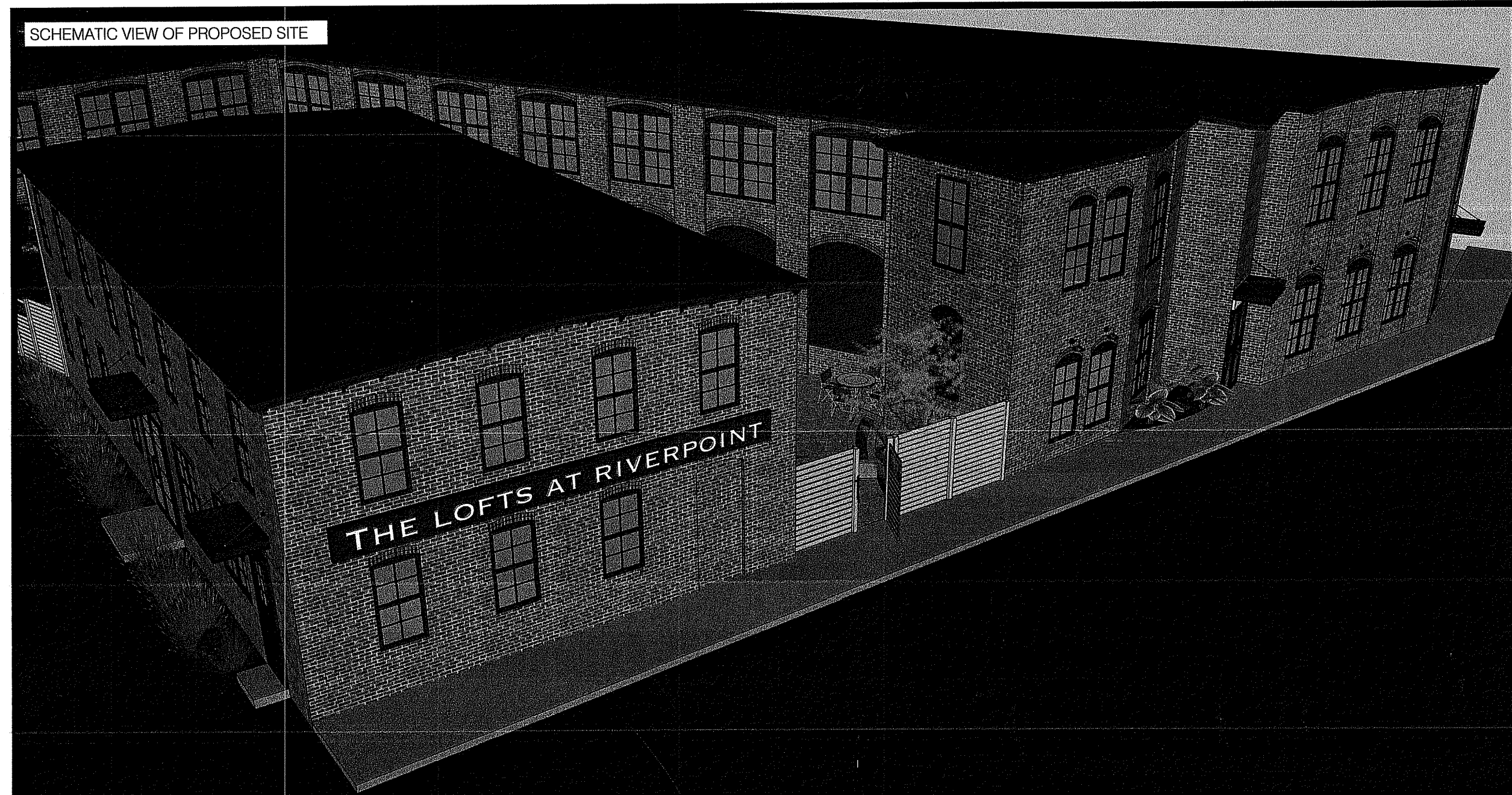
SHEET TITLE  
 COVER SHEET

BRANDON HAVENER  
 OWNER - 60 E MAIN LLC  
 60 EAST MAIN ST.  
 WEST WARWICK, RI 02893  
 CELL - 401-203-4799  
 E: BRANDON@60EMAINLLC.COM  
 E: BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
 PROPERTY RECORD  
 54 + 60 EAST MAIN ST, WEST WARWICK, RI  
 02893  
 PLAT: 18, LOT: 61  
 ZONE: (MILL OVERLAY), AREA: 0.234 ACRES  
 N/F: 60 E MAIN LLC  
 YEAR BUILT: 1908

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: Oct 21 2024 FILE #: 24-0057  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Andy Clayton*

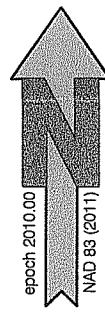


PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM
No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

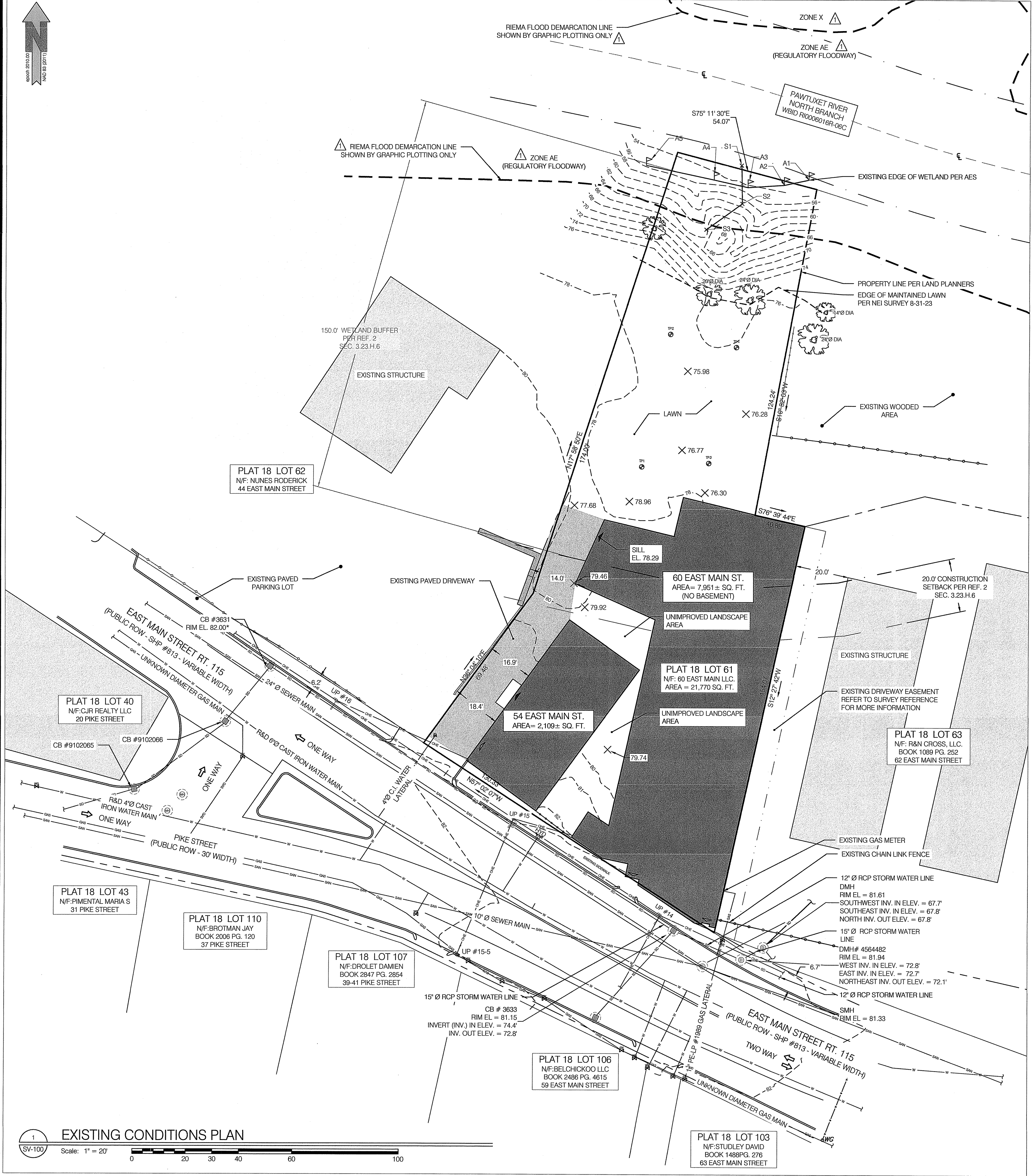
PERMITTING + STAGES:  
 -CONCEPT : COMPLETE  
 -MASTER PLAN : COMPLETE  
 -PRELIMINARY PLAN : COMPLETE  
 -RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)  
 -RIDOT PAPA: RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)  
 -FINAL PLAN: MUNICIPAL

RI Environmental Management  
 AUG 30 2024  
 Office of Water Resources

SCALE  
 n/a  
**COVER**



E:\PROJECTS\23.0138\_HAVENER\65 & 60 EAST MAIN ST\DWG SV-100\_NEI-Standard.cds 8/27/2024 Craig Barry



**WETLAND FLAGGING:**

PERFORMED BY EDWARD AVIZINIS, PWS  
AVIZINIS ENVIRONMENTAL SERVICES, INC.

SET & FIELD LOCATED VIA GPS. DATE: AUGUST 28, 2023

- FLAG LINES: A1 - A4
- FLAG LINES: S1 - S3

-SITE IS LOCATED IN RIVER PROTECTION REGION 2

WETLAND BUFFERS UPDATED PER RIDEM FRESHWATER WETLAND RULES JULY, 1 2022.  
(250-FR-150-15-3)

**SURVEY NOTES:**

1. SURVEY COMPLETED BY OTHERS. SEE REF. #1
2. ZONING INFORMATION SHOWN FROM RECORD INFORMATION, MAPS AND / OR GIS. ZONING DATA MAY VARY BASED ON USE, LOT SIZE, ORIENTATION AND OTHER FACTORS AND IS SHOWN FOR REFERENCE INFORMATION ONLY.
3. ZONING DATA MUST BE CONFIRMED WITH ZONING OFFICIAL AND / OR LEGAL COUNSEL FOR USE IN DESIGN OR PERMITTING.
4. COORDINATE SYSTEM IS RI8300 / NAVD 88.
5. PLAN ELEMENTS ARE IN U.S. SURVEY FEET
6. TOPOGRAPHY IS MIX OF ON-GROUND SHOTS, RECORD DATA, PLAN REFERENCE 1 (PLAN REF. 1), AND RI SPRING 2011 LIDAR.
7. ORTHOPHOTOGRAPHY SHOWN PER RIGIS STATEWIDE DIGITAL MULTISPECTRAL ORTHORECTIFIED AERIAL PHOTOGRAPHS, DATED SPRING 2021
8. ELEVATIONS SHOWN WITH \* PER UAV DATA
9. ALL PROPOSED ITEMS MUST BE LAID OUT BY REGISTERED SURVEYOR AS NOTED.
10. PLAN IS NOT AS-BUILT UTILITY PLAN.
11. ADJUTING PROPERTY LINES SHOWN APPROXIMATELY PER TOWN GIS OR BEST AVAILABLE INFORMATION
12. FLOOD ZONE LINE IS SHOWN PER GRAPHIC PLOTTING ONLY, UNLESS OTHERWISE NOTED ON PLAN.
13. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT OF PROBATE SEARCH, AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
14. LOCATION OF SUBSURFACE MAINS, SURFACE FEATURES, AND LATERALS ARE OMITTED. CONTRACTOR TO CALL DIG SAFE AND/OR APPLICABLE UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. DIG SAFE TEL. #1-800-344-7233 (1-800-DIG-SAFE).

A. WATER - SURFACE FEATURES SHOWN PER FIELD SURVEY, SUBSURFACE FEATURES SHOWN PER PLAN REF. 1  
 B. SEWER - SURFACE FEATURES SHOWN PER FIELD SURVEY, SUBSURFACE FEATURES SHOWN PER PLAN REF. 1  
 C. GAS - SURFACE FEATURES SHOWN PER FIELD SURVEY, SUBSURFACE FEATURES SHOWN PER PLAN REF. 1  
 D. ELECTRIC - SURFACE FEATURES AND SUBSURFACE FEATURES SHOWN PER PLAN REF. 1  
 E. STORM DRAIN - SURFACE FEATURES SHOWN PER FIELD SURVEY, SUBSURFACE FEATURES SHOWN APPROXIMATELY PER PHYSICAL FEATURES & PER PLAN REF. 1, INVERTS MEASURED IN FIELD 8/31/23 BY NEI

ALL UTILITIES DEPICTED AT ASCE QUALITY LEVEL D.  
 15. TREE DIAMETERS MEASURED DURING FIELD SURVEY 8-31-23.

**SOIL EVALUATION SUMMARY:**

J. MALO, PE 10073  
08.03.23

TH1:  
84-0: HTM  
0-24: LOAMY SAND  
24" SHGW, CAT 3

TH2:  
108-0: HTM (AGGREGATE INCLUSION AT 3')

TH3:  
28-0: HTM  
0-10: LOAMY SAND  
18-28: LOAMY SAND  
28-80: LOAMY SAND  
CAT. 3, 80" SHGW

TH4:  
108-0: HTM (AGGREGATE INCLUSION AT 3')

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: OCT 21 2024 FILE # 24-00  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Handwritten signature*

**NEI**  
**Narragansett**  
Engineering Inc.  
Civil - Survey Structural Environmental Design  
3102 East Main Road, Portsmouth RI 02871  
Tel. 401.683.6630 www.nei-cds.com

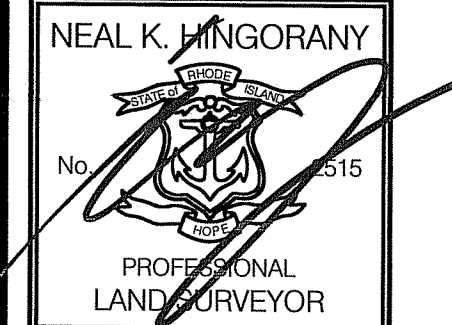
**SHEET TITLE**  
EXISTING CONDITIONS  
LOFTS AT RIVERPOINT

BRANDON HAVENER  
OWNER - 60 E MAIN LLC  
60 EAST MAIN ST.  
WEST WARWICK, RI 02893  
CELL - 401-203-4789  
E: BRANDON@60EMAINLLC.COM  
E: BRANDON@HAVENERPROPERTIES.COM

**PROPERTY RECORDS**  
PROPERTY RECORD  
54 + 60 EAST MAIN ST, WEST WARWICK, RI  
02893  
PLAT: 18, LOT: 61  
ZONE: C(MILL OVERLAY), AREA: 0.234 ACRES  
NF: 60 E MAIN LLC  
YEAR BUILT: 1908

**CERTIFICATION**  
THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 405-RICR00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON DECEMBER 31, 2020 (EFFECTIVE DATE), AS FOLLOWS:  
CLASS II (PHYSICAL FEATURES)  
TOPOGRAPHIC SURVEY T-2  
THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: FOR USE IN DEVELOPMENT PLANNING

NOTE: REFER TO SURVEY BY OCEAN STATE PLANNERS FOR BOUNDARY DATA.  
CAD OBTAINED AND DISPLAYED ON THIS PLAN FOR REFERENCE



NEAL K. HINGORANY REG. 2515 08-21-24  
COA: A38

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

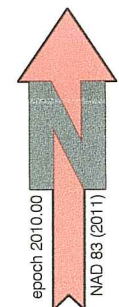
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**PERMITTING + STAGES:**

- CONCEPT - COMPLETE
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- RIDOT PAPA - RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)
- FINAL PLAN - MUNICIPAL



SCALE  
1" = 20' **SV-100**



**AS BUILTS REQUIRED**

AS BUILTS FOR ALL DRAINAGE SYSTEM ELEMENTS ARE REQUIRED TO BE PROVIDED TO RIDOT. CONTACT NEI FOR VERIFICATION OF DRAINAGE FEATURES PRIOR TO COVERING. CONTRACTOR SHALL ALSO RECORD AS BUILT DATA FOR ALL DRAINAGE SYSTEM ELEMENTS INCLUDING RIMS, PIPE LENGTHS, MATERIALS, INVERTS AND THE LIKE.

**UTILITY PERMIT REQUIRED**

ALL UTILITY WORK MUST BE APPLIED FOR UNDER A SEPARATE UTILITY PERMIT APPLICATION (RIDOT). THIS SHALL BE FILED BY THE CONTRACTOR RESPONSIBLE FOR POLICE DETAIL AND TRAFFIC CONTROL DURING CONSTRUCTION

**LIGHTING DESIGN:**

ALL LIGHTING DESIGN TO BE DARK SKY COMPLIANT, WARM LIGHT COLORS WITH POLES NOT TO EXCEED 14' HEIGHT. UNLESS NOTED, ALL LIGHTING SHALL BE BUILDING MOUNTED. LIGHTING SHALL POINT AWAY FROM WETLANDS, ADJUTING PROPERTIES AND VEGETATED AREAS AND SHALL COMPLY WITH ALL MUNICIPAL STANDARDS

**REFER TO PLANS BY RAB LIGHTING UNO**

**PAVING NOTE:**

CONTRACTOR TO INSTALL NEW 2" FINISH (HMA 9.5) 2" BASE (HMA 12.5) 8" BASE COURSE

**IN AREAS OF NEW PAVING:**

CONDUCT EXPLORATORY EXCAVATION IN EXISTING PARKING AREAS TO DETERMINE PAVING THICKNESS AND SUBBASE. IF SUFFICIENT DEPTH EXISTS, MILLING/PAVING MAY BE AN OPTION. BUDGET FULL RECONSTRUCTION FOR ESTIMATING PURPOSES UNTIL SUCH TIME AS THE CONDITIONS ARE KNOWN. AREAS WHERE FILLING OR RAISING OF GRADE, BASE COURSE SHALL BE INSTALLED IN CONFORMANCE WITH RIDOT STANDARD SPECIFICATIONS AND COMPACTED IN MINIMUM 8' LIFTS

**GENERAL RESIDENTIAL OR LIGHT COMMERCIAL SITE CONSTRUCTION NOTES:**

- 1. SOIL EVALUATIONS SHOULD BE PERFORMED FOR ANY BASEMENTS OR SUBSURFACE AREAS, AND FOR STORMWATER MITIGATION DESIGN
2. STORMWATER MITIGATION FOR WATER QUALITY (1") SHOULD BE INSTALLED IN THE FORM OF SWALES OR SIMILAR, ALONG WITH GUTTERS, LEADERS, AND DOWNSPOUTS TO SYSTEM REFER TO RI SINGLE FAMILY STORM-WATER MANUAL.
3. GRADING MUST BE UNDERTAKEN AS DIRECTED ON PLAN. SLOPES SHALL NOT EXCEED 3:1 UNLESS NOTED OTHERWISE. CARE MUST BE TAKEN TO DIRECT DRAINAGE AWAY FROM STRUCTURE AND BUTTERS.
4. ALL FILL MUST BE FREE OF ORGANICS, DEBRIS, STONES GREATER THAN 6". COMPACTED IN 8" LIFTS TO BE 95% MODIFIED PROCTOR COMPACTION.
5. ALL PROPOSED UTILITIES MUST CONFORM TO LOCAL CODE INSTALLATION REQUIREMENTS.
6. ALL WALLS, OR REVETMENTS MUST HAVE APPROPRIATE BACKFILL AND DRAINAGE BEHIND THEM. WALLS OVER 3' MAY REQUIRE DESIGN BY AN RHODE ISLAND PROFESSIONAL ENGINEER.
7. ALL WORK SHOULD BE DONE IN SUBSTANTIAL CONFORMANCE WITH RI CONSUMER PROTECTION CONSTRUCTION STANDARDS. REFER TO SECTION 1 AND SECTION FOR SITE AND GRADING STANDARDS.
8. HTTP://WWW.CRB.RI.GOV/DOCUMENTS/CONSTRUCTION-STANDARDS.PDF

**ZONING DISTRICT MILL RE-USE OVERLAY DISTRICT**

MINIMUM LOT AREA: NONE
MINIMUM LOT FRONTAGE: NONE
MINIMUM SETBACKS: FRONT: NONE, SIDE: NONE, CORNER SIDE: NONE, REAR: NONE
BUILDING HEIGHT: NONE
BUILDING LOT COVERAGE: PER SEC. 5.14.6

**PROPOSED BUILDING SUMMARY TABLE**

Table with 3 columns: NO, ITEM, NOTES. Rows include Building 60 (Parking Only), Building 54 (2 Bedroom Units), and Total Dwelling Units (10).

**REQUIRED PARKING TABLE**

Table with 5 columns: NO, ITEM, CODE, MUNICIPAL REQUIREMENT, Value, Category, Parking Req. Rows include Two Bedroom Unit, One Bedroom Unit, Office Space, and totals for Parking Required and Provided.

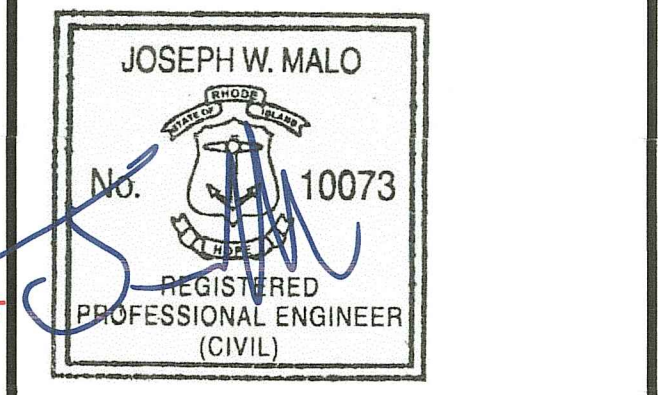


**SHEET TITLE PROPOSED SITE PLAN LOFTS AT RIVERPOINT**

BRANDON HAVENER OWNER - 60 E MAIN LLC
60 EAST MAIN ST. WEST WARWICK, RI 02893
CELL - 401-203-4799
E.BRANDON@60EMAINLLC.COM
E.BRANDON@HAVENERPROPERTIES.COM

CERTIFICATION THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 435-RICR00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF SURVEYORS ON DECEMBER 31, 2020 (EFFECTIVE DATE), AS FOLLOWS:
CLASS III (PHYSICAL FEATURES)
TOPOGRAPHIC SURVEY T-2
THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: FOR USE IN DEVELOPMENT PLANNING

NOTE: REFER TO SURVEY BY OCEAN STATE PLANNERS FOR BOUNDARY DATA.
CDS OBTAINED AND DISPLAYED ON THIS PLAN FOR REFERENCE



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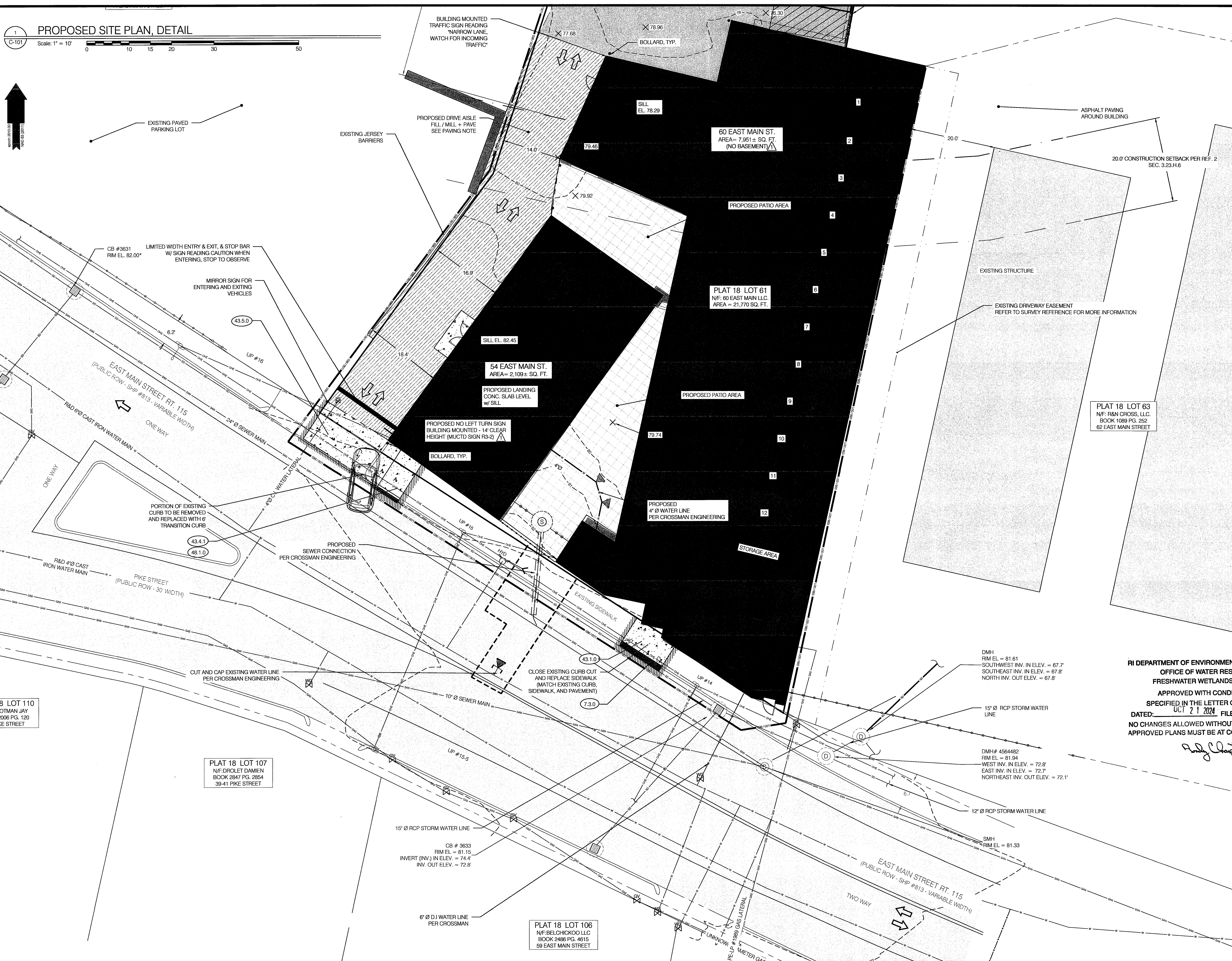
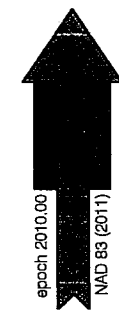
Handwritten signature: Andy Chapman

8/26/24 FOR CIVIL ENGINEERING ELEMENTS
nei-cds.com

Table with 4 columns: PROJECT #, DATE, DRAWN, CHECK. Row 1: 23.0138, 2/29/24, CB, JM.

PERMITTING + STAGES:
-CONCEPT - COMPLETE
-MASTER PLAN - COMPLETE
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-RIDOT PAPA - RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)
-FINAL PLAN - MUNICIPAL

**PROPOSED SITE PLAN, DETAIL**  
 Scale: 1" = 10'



**NEI**  
**Narragansett**  
**Engineering Inc.**  
 Civil • Survey Structural Environmental Design  
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 ZONE: CIVIL OVERLAY, AREA: 0.234 ACRES  
 N/F: 60 E MAIN LLC  
 YEAR BUILT: 1908

**JOSEPH W. MALO**  
 No. 10073  
 REGISTERED  
 PROFESSIONAL ENGINEER  
 (CIVIL)

8/26/24  
 FOR CIVIL ENGINEERING ELEMENTS

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No	DATE	REVISIONS/DESCRIPTION	BY
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**RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF WATER RESOURCES**  
**FRESHWATER WETLANDS PROGRAM**  
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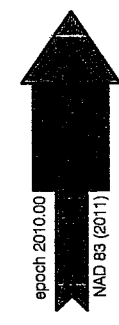
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SCALE  
 1" = 10' **C-101**

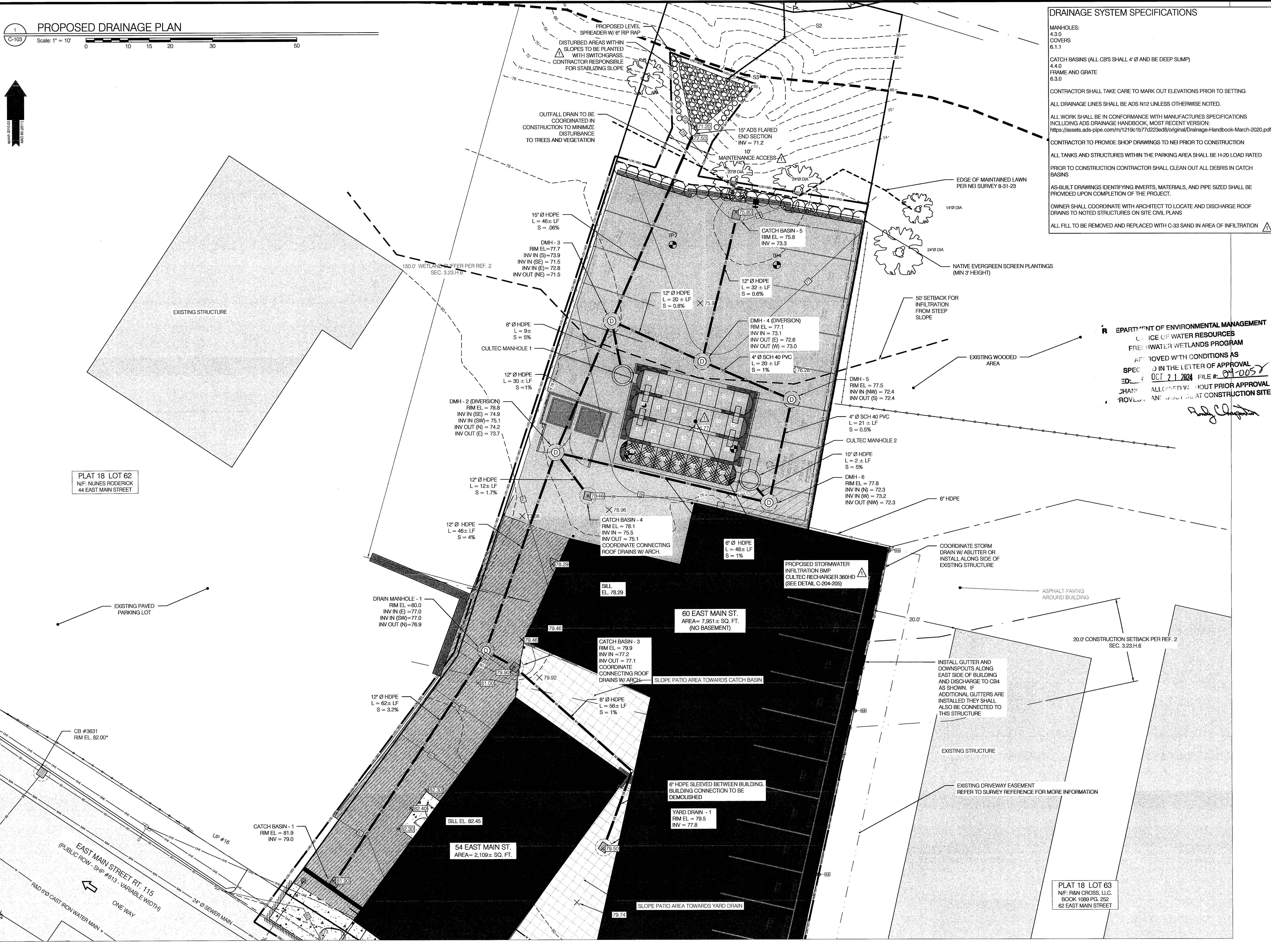
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**PROPOSED DRAINAGE PLAN**  
 Scale: 1" = 10'



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**DRAINAGE SYSTEM SPECIFICATIONS**

MANHOLES:  
 4.3.0  
 COVERS  
 6.1.1

CATCH BASINS (ALL C.B'S SHALL 4' Ø AND BE DEEP SUMP)  
 4.4.0  
 FRAME AND GRATE  
 6.3.0

CONTRACTOR SHALL TAKE CARE TO MARK OUT ELEVATIONS PRIOR TO SETTING

ALL DRAINAGE LINES SHALL BE ADS N12 UNLESS OTHERWISE NOTED.

ALL WORK SHALL BE IN CONFORMANCE WITH MANUFACTURES SPECIFICATIONS INCLUDING ADS DRAINAGE HANDBOOK, MOST RECENT VERSION: <https://assets.ads-pipe.com/ny1219c1b77d223d9/original/Drainage-Handbook-March-2020.pdf>

CONTRACTOR TO PROVIDE SHOP DRAWINGS TO NEI PRIOR TO CONSTRUCTION

ALL TANKS AND STRUCTURES WITHIN THE PARKING AREA SHALL BE H-20 LOAD RATED

PRIOR TO CONSTRUCTION CONTRACTOR SHALL CLEAN OUT ALL DEBRIS IN CATCH BASINS

AS-BUILT DRAWINGS IDENTIFYING INVERTS, MATERIALS, AND PIPE SIZED SHALL BE PROVIDED UPON COMPLETION OF THE PROJECT.

OWNER SHALL COORDINATE WITH ARCHITECT TO LOCATE AND DISCHARGE ROOF DRAINS TO NOTED STRUCTURES ON SITE CIVIL PLANS

ALL FILL TO BE REMOVED AND REPLACED WITH C-33 SAND IN AREA OF INFILTRATION

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATE: OCT 21 2024 FILE # 01-0057  
 CHANG ALLOWED WITHOUT PRIOR APPROVAL  
 REVIEW AND SIGNATURE AT CONSTRUCTION SITE

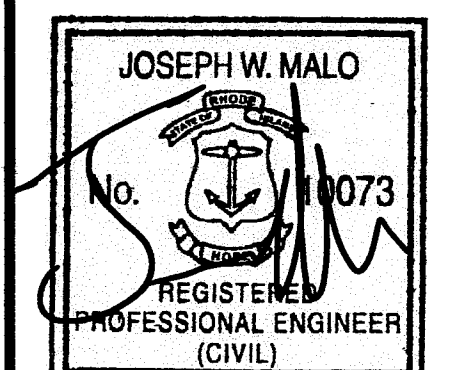
*Andy Cloutier*

**NEI**  
**Narragansett Engineering Inc.**  
 Civil - Survey Structural Environmental Design  
 3102 East Main Road, Portsmouth RI 02871  
 Tel. 401.683.6630 www.nei-cds.com

SHEET TITLE  
**PROPOSED DRAINAGE PLAN**  
 LOFTS AT RIVERPOINT

BRANDON HAVENER  
 OWNER: 60 E MAIN LLC  
 60 EAST MAIN ST.  
 WEST WARWICK, RI 02883  
 CELL - 401-203-4799  
 E: BRANDON@60EMAINLLC.COM  
 E: BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
 PROPERTY RECORD  
 54 + 60 EAST MAIN ST, WEST WARWICK, RI 02883  
 PLAT 18, LOT: 61  
 ZONE: (Q)MILL OVERLAY), AREA: 0.234 ACRES  
 N/F: 60 E MAIN LLC  
 YEAR BUILT: 1908



8/26/24  
 FOR CIVIL ENGINEERING ELEMENTS

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**  
 -CONCEPT : COMPLETE  
 -MASTER PLAN : COMPLETE  
 -PRELIMINARY PLAN : COMPLETE  
 -RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)  
 -RIDOT PAPA : RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)  
 -FINAL PLAN : MUNICIPAL

SCALE  
 1" = 10'

**C-103**

**GENERAL NOTES:**

- THE STATE OF RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. ALL WORK SHALL CONFORM TO RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION 2004 EDITION OR LATEST REVISION. THE 2004 EDITION OF THE STANDARD SPECIFICATION MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
- IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO APPLY FOR AND OBTAIN ANY AND ALL NECESSARY PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH ARCHITECT OR ENGINEER AS NECESSARY
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF THE JOB SITE. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AND/OR BARRIERS AROUND ANY EXPOSED EXCAVATED AREAS IN ACCORDANCE WITH OSHA STANDARDS.
- IN THE CASE THAT ANY DEVIATION / ALTERATION / OR IMPROVEMENT FROM THE APPROVED PLANS IS NECESSARY THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER AND OWNER PRIOR TO OCCURRENCE OF DEVIATION
- ALL WORK SHALL BE LIMITED TO THE AREAS WITHIN THE LIMIT OF DISTURBANCE DISPLAYED ON THESE PLANS OR PROPERTY LINE IF LIMIT OF DISTURBANCE IS UNCLEAR. ANY AREA DISTURBED OUTSIDE OF THE LIMIT OF DISTURBANCE SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER OR ENGINEER, AND PERFORMED TO THE ENGINEERS SATISFACTION
- ALL SITE WORK SHALL MEET OR EXCEED THE SITE WORK SPECIFICATION SHOWN ON THESE PLANS AND/OR ACCOMPANYING SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF ANY CONFLICTS WITH EXISTING CONDITIONS OR PROPOSED CONDITIONS EXIST. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED
- EXCAVATED ROCK SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF UNLESS OTHER ARRANGEMENTS ARE MADE WITH THE OWNER. SUITABLE ROCK MAY BE UTILIZED IN FILL AREAS WITH WRITTEN PERMISSION OF THE OWNERS REPRESENTATIVES
- DEBRIS, ORGANICS AND OTHER UNSUITABLE MATERIALS UNCOVERED DURING THE COURSE OF SITE EXCAVATION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES THAT SERVICE THE SITE AND NEIGHBORING AREAS. IF ANY DAMAGE OCCURS TO EXISTING UTILITIES IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PAY ALL COSTS ASSOCIATED WITH REPAIR OF UTILITIES AS DIRECTED BY THE ENGINEER, UTILITY OWNER, OR GOVERNING AGENCY
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR QUANTITY TAKE-OFF IN COMPUTING ANY ESTIMATES
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
- THE LOCATION OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. "DIG SAFE" SHALL BE CONTACTED BY THE CONTRACTOR AS PART OF THIS VERIFICATION
- NO EXCAVATION SHALL PROCEED UNTIL UTILITY COMPANIES ARE NOTIFIED IN ADVANCE
- ALL TREE PROTECTION BY OTHERS UNLESS OTHERWISE NOTED
- CONTRACTOR TO LOAM AND SEED ALL DISTURBED AREAS WITH APPROPRIATE SEED MIXTURES

**GRADING AND UTILITIES NOTES:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED WORK SHOWN ON THESE PLANS DO NOT CONFLICT WITH ANY EXISTING CONDITIONS OR OTHER PROPOSED WORK. IF CONFLICTS ARISE, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS APPROVAL
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH WORK, THE LOCATION, ELEVATION, SIZE AND MATERIAL SHALL BE ACCURATELY DETERMINED BY THE CONTRACTOR IMMEDIATELY AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION. THE CONTRACTOR SHALL NOT CONTINUE WORK ON AFFECTED UTILITIES UNTIL THE CONFLICT IS RESOLVED
- ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINE AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS
- AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS
- ALL UTILITY COVERS, GRATES, AND THE LIKE SHALL BE BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH. RIM ELEVATIONS ARE APPROXIMATE AND FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH GRADING
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANY, AS REQUIRED.
- THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADING. ANY DAMAGE RESULTING TO THESE FACILITIES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE
- ALL WATER WORKS SHALL HAVE 5 FEET OF COVER
- GAS, ELECTRIC, AND COMMUNICATIONS ROUTING ARE SUBJECT TO REVIEW AND APPROVAL BY UTILITY COMPANY
- DURING CONSTRUCTION CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETING AS REQUIRED AT NOT ADDITIONAL COST TO THE OWNER
- EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINE OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATION AT NO COST TO THE OWNER
- PITCH EVENLY BETWEEN ALL SPOT GRADES.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ANY, ROCKS, DEBRIS, ORGANICS, OR THE LIKE UNCOVERED IN THE COURSE OF WORK

**LOAM AND SEED:**

- GENERAL:**
- ALL DISTURBED AREAS TO BE LOAMED AND SEEDED PER "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" AS AMENDED OR REVISED
  - FOR NON-NATIVE PLANTING SEEDING DATES ARE APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH SEPTEMBER 30, DATE MAY BE EXTENDED 15 DAYS IN NEWPORT COUNTY
  - FOR NATIVE PLANTING SEEDING DATES ARE BETWEEN AUGUST AND SEPTEMBER

**SEED BED PREPARATION:**

- LOOSEN SOIL TO A DEPTH OF FIVE INCHES BY RAKING, DISCING, DRAGGING OR TRAVERSING WITH TRACKED MACHINERY, OVER COMPACTION SHALL BE AVOIDED CLEAT MARKS SHALL BE PERPENDICULAR TO ANTICIPATED DIRECTION OF SURFACE WATER FLOW
- APPLY TOPSOIL IF NECESSARY
- APPLY SLOW RELEASE FERTILIZER NOT TO EXCEED 1500 LBS PER ACRE OR 36 LBS PER 1,000 SF USING THE FOLLOWING PERCENTAGES BY WEIGHT
  - 10% AVAILABLE NITROGEN (N)
  - 20% AVAILABLE PHOSPHORIC ACID (P)
  - 20% AVAILABLE POTASSIUM (K)
- REMOVE FROM SURFACE ALL STONES LARGER THAN 2" IN DIAMETER, ALL DEBRIS, TREE ROOTS OR OTHER UNSUITABLE MATERIAL
- INSPECT AREA TO BE SEEDED IMMEDIATELY PRIOR TO SEEDED FOR ANY COMPACTED AREAS, IF COMPACTED AREAS EXIST SCARIFY PRIOR TO COMMENCING SEEDED

**SEEDING:**

- APPLY SELECTED SEED AT RATES PROVIDED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER
- NORMAL SEEDING DEPTH IS .25 TO .5 INCH. HYDROSEEDINGS MAY BE LEFT ON THE SOIL SURFACE
- WHERE FEASIBLE, EXCEPT WHERE EITHER CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, FIRM THE SEEDBED FOLLOWING SEEDING OPERATION WITH ROLLER, OR LIGHT DRAG.
- SEEDING RATES SHALL BE INCREASED BY 10% WHEN USING HYDROSEEDING
- USE OF STRAW MULCH HELD WITH ADHESIVE MATERIALS OR 500 LBS PER ACRE OF WOOD FIBER MULCH IS RECOMMENDED FOR PROTECTION FROM SOIL EROSION.
- IF SEEDING CAN NOT BE COMPLETED WITHIN SEEDING DATES USE MULCHING TO PROTECT SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

**RECOMMENDED SEEDING:**

SEED MIXTURE NO. 1

KENTUCKY BLUE GRASS	22.5 LBS/AC	0.5 LBS/1000 SF
CREeping RED FESCUE	105 LBS/AC	2.5 LBS/1000 SF
PERENNIAL RYEGRASS	22.5 LBS/AC	0.5 LBS/1000 SF

NOTES: WHERE CONFUSION OR UNCERTAINTY EXISTS IN LOAMING AND SEEDING CONSULT THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" AS AMENDED OR REVISED, ENGINEER, LANDSCAPE ARCHITECT

Class NMAAS	Recommended Lift Thickness Inches	Typical Use	
		Min.	Max.
Dense Base Courses Class 19.0 HMA	3	5	Base or other underlying layers. Preferred mix for lifts greater than or equal to 3"
Dense Surface Courses Class 12.5 HMA	2	3	Surface, Base or other underlying layers. Patching, Utilities, Waterways
Dense Surface Courses Class 9.5 HMA	1 1/2	2 1/4	Surface, Bridges, Driveways, Leveling, Patching, Utilities, Waterways, Misc.
Dense Surface Courses Class 4.75 HMA	3/4	1 1/4	Surface, Surface for Bike Paths, Sidewalks, Leveling, Patching, Utilities, Waterways, Misc.
Special Courses and Other Courses Friction Course (FC) Friction Course for Shoulders	1 1/2		Limited Access, Interstate Highways, High Speed Facilities
	PPEST	1	Pavement Preservation Overlay
	SMA	Varies	Base and/or Surface

HMA = Hot Mix Asphalt, NMAAS = Nominal Maximum Aggregate Size, FC = Friction Course, PPEST = Paver Placed Elastomeric Surface Treatment, SMA = Stone Matrix Asphalt

- Notes:
- "Class" refers to dense HMA courses. "Class" is followed by a number representing the NMAAS of the mix in millimeters.
  - Minimum lift thickness may be calculated as 4 times the NMAAS. For example: Class 12.5 HMA, 4 x 12.5mm = 50 mm or 2 inches as a lift thickness (this rule excludes special courses). In general, using more lifts will provide for a smoother pavement; the largest NMAAS should be used for each lift.
  - Surface course binder shall be modified for all paver placed surface courses unless otherwise designated. Other additives for binder will be specified in the Contract Documents as required, e.g. WMA, anti-stripping.
- a) The term "binder" refers to liquid asphalt.  
b) The term "modified" refers to the polymer modification of binder.

Ver 2.4 07/2019

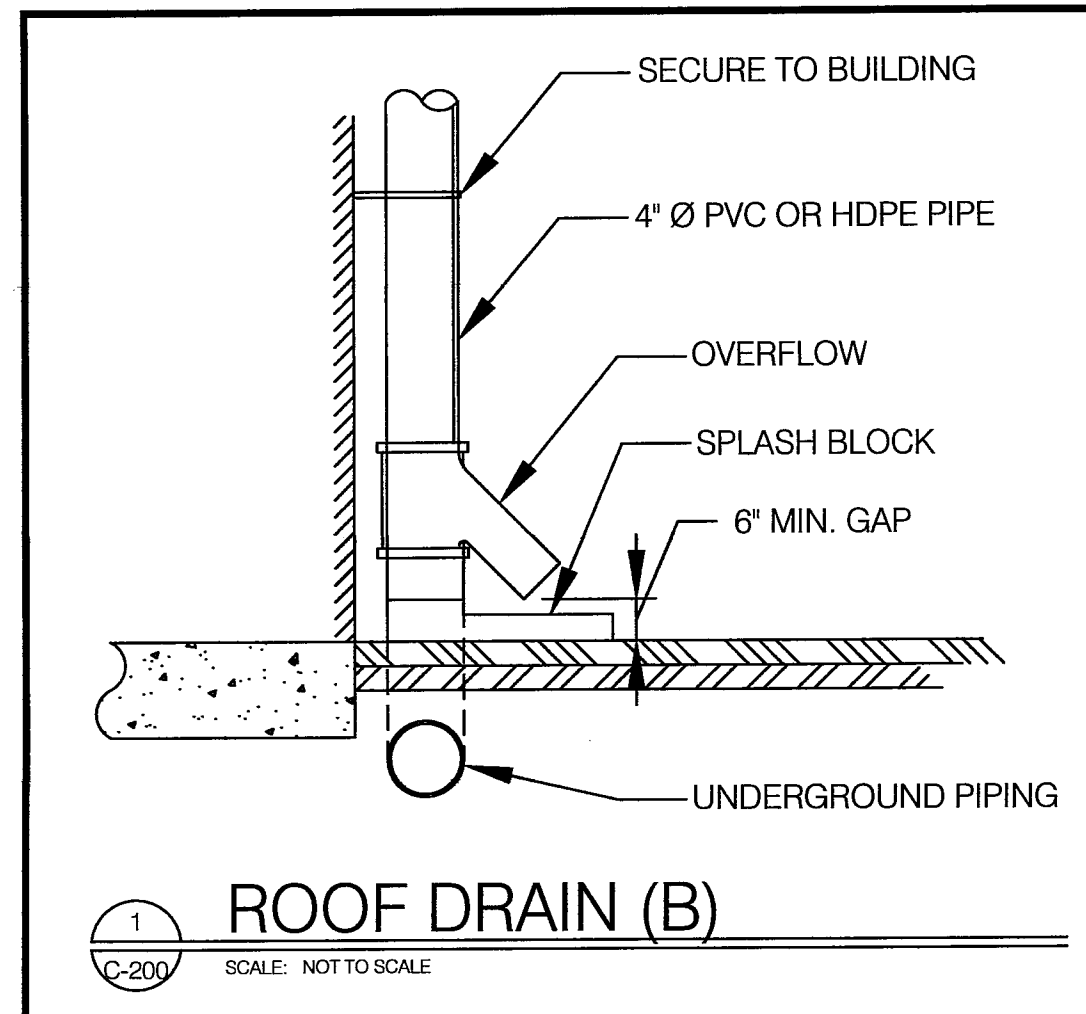
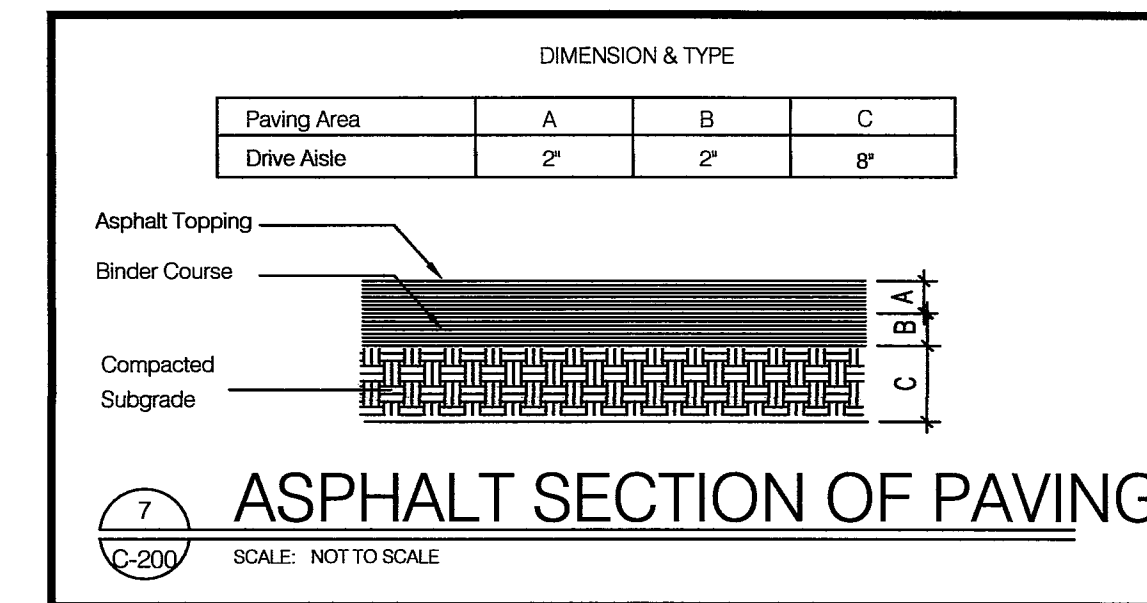
**RIDOT HMA MATRIX**

SCALE: NOT TO SCALE

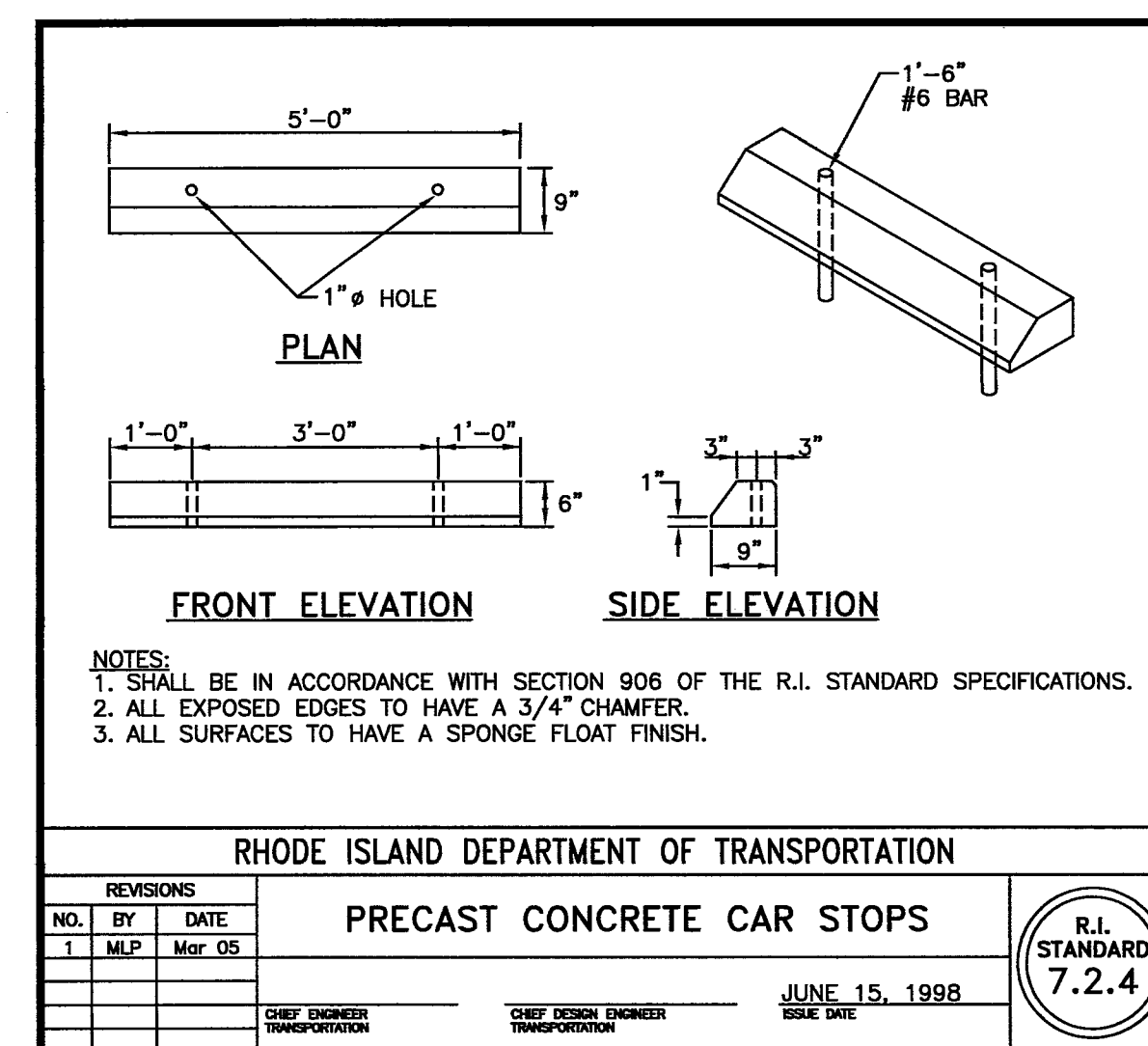
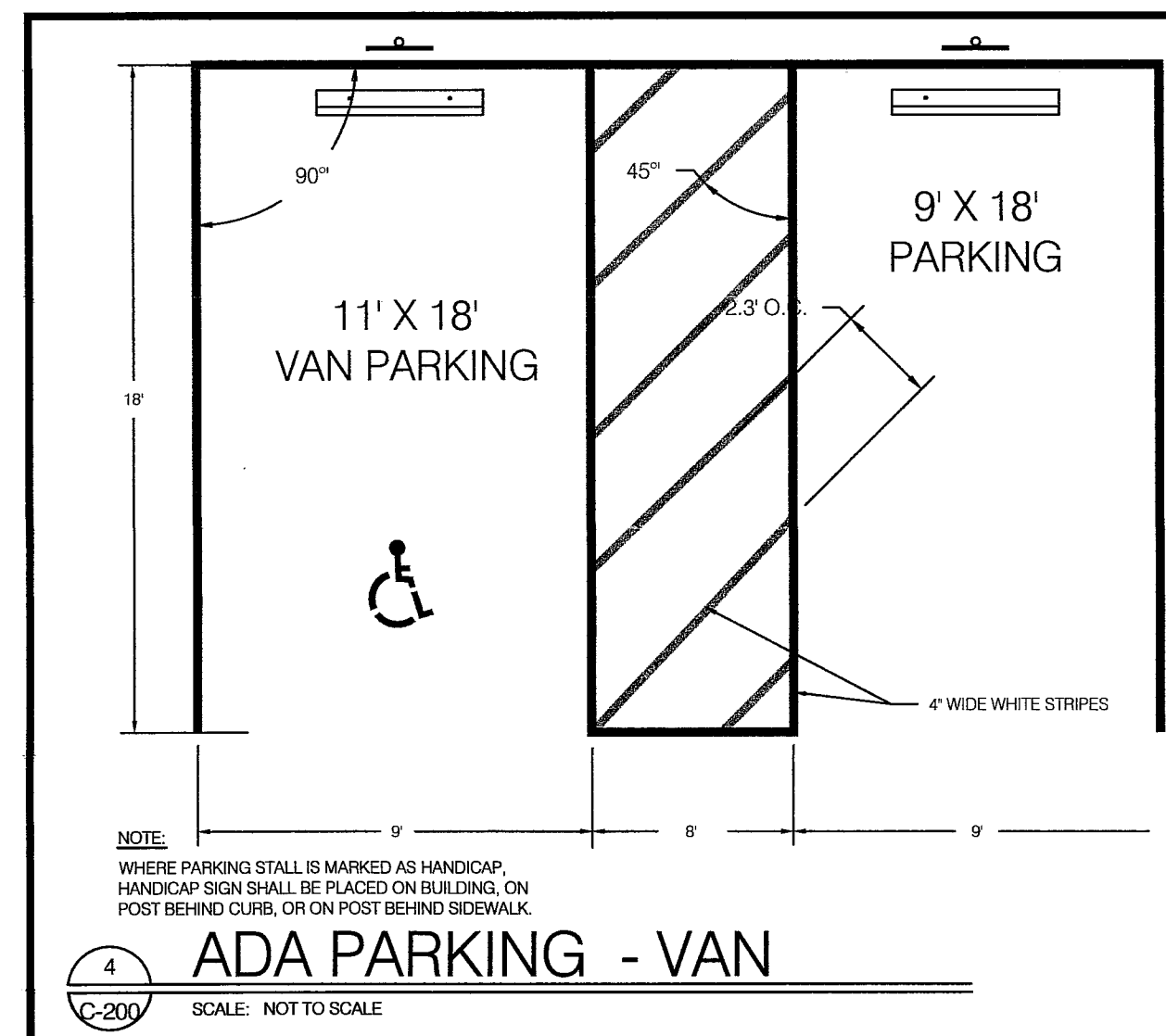
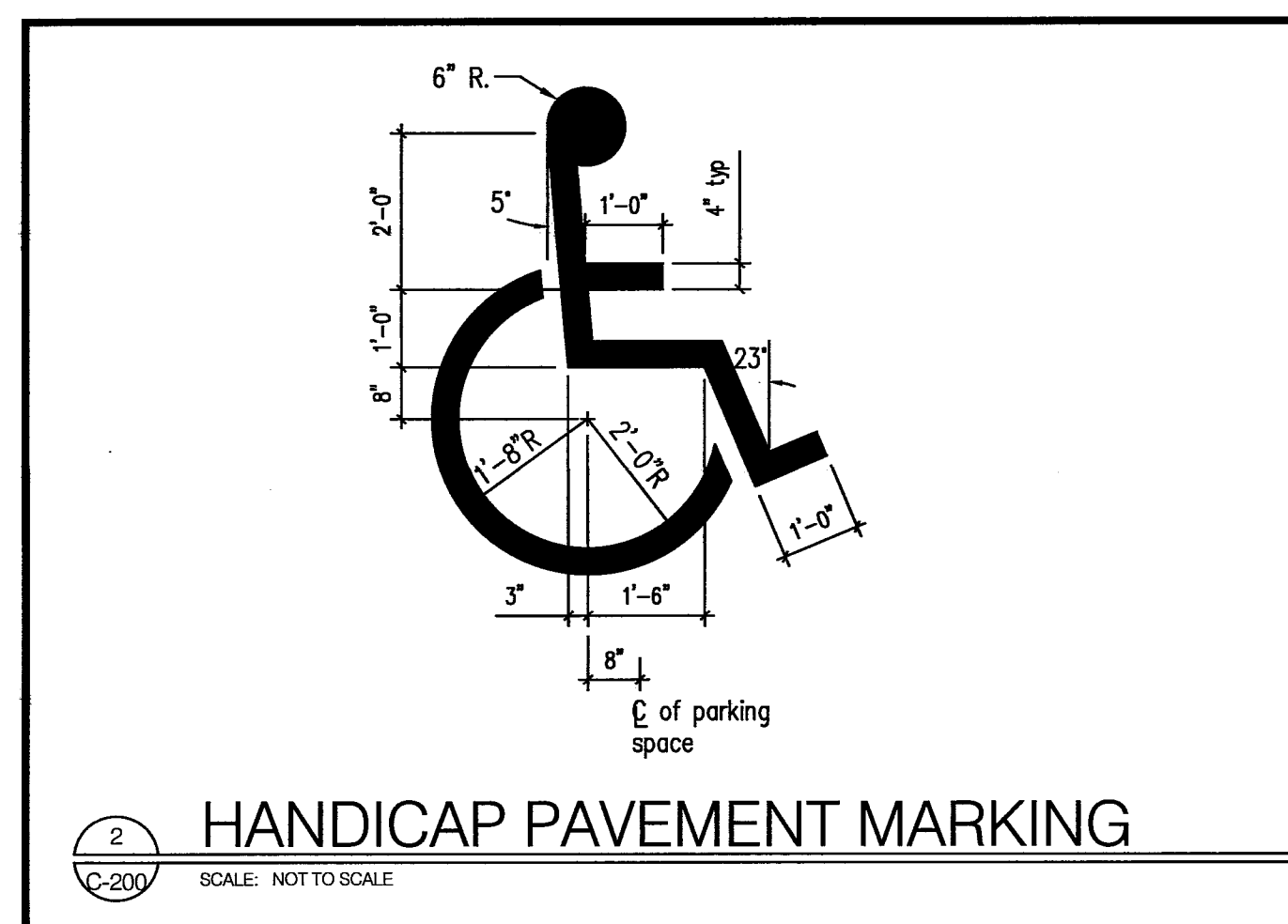
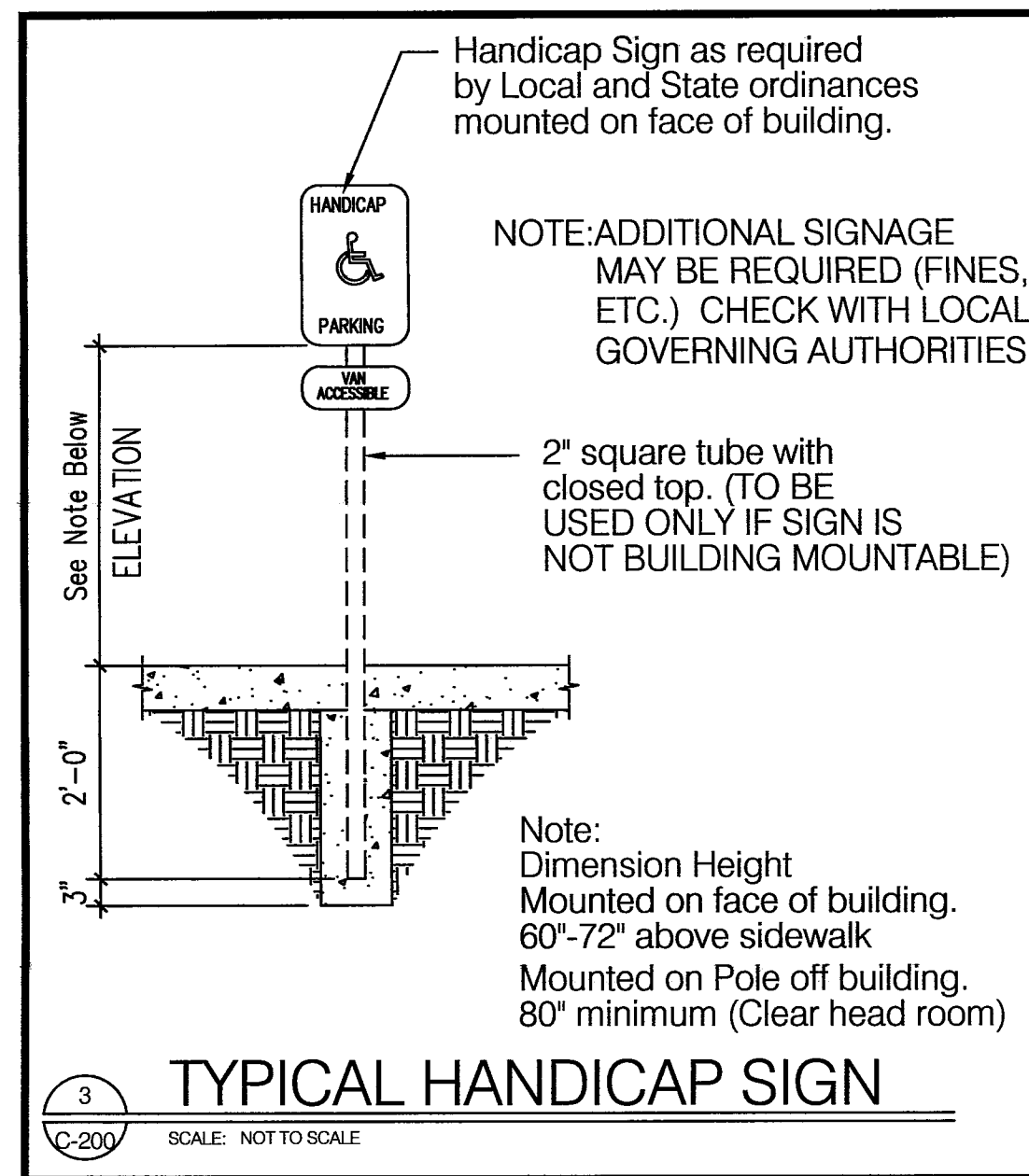
US STANDARD SIEVE SIZE	PERCENT PASSING (%)			
	CHOKER COURSE (AASHTO NO. 57)	FILTER COURSE (AASHTO NO. M-6)	RESERVOIR COURSE (AASHTO NO. 3)	RESERVOIR COURSE (AASHTO NO. 5)
6 INCHES 150 MM	-	-	-	-
2 1/2 INCHES 63 MM	-	-	100	-
2 INCHES 50 MM	-	-	90 - 100	-
1 1/2 INCHES 37.5 MM	100	-	35 - 70	100
1 INCH 25 MM	95 - 100	-	0 - 15	90 - 100
3/4 INCH 19 MM	-	-	-	20 - 55
1/2 INCH 12.5 MM	25 - 60	-	0 - 5	0 - 10
3/8 INCH 9.5 MM	-	100	-	0 - 5
#4 4.75 MM	0 - 10	70 - 100	-	-
#8 2.36 MM	0 - 5	-	-	-
#200 0.075 MM	-	0 - 6**	-	-
% COMPACTION ASTM D698 / AASHTO T99	95	95	95	95

**STD GRADATIONS TABLE F-7 RIDEM**

SCALE: NOT TO SCALE



NOTE: GRADE ALL OVERFLOWS AWAY FROM STRUCTURES, ABUTTING PROPERTIES, AND PARKING AREAS. COORDINATE ROOF DRAIN LOCATIONS WITH ARCHITECT



RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS

NO.	BY	DATE
1	MLP	Mar 05

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATED: OCT 21 2024 FILE #: 24-002

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE

R.I. STANDARD 7.2.4

**NET Narragansett Engineering Inc.**  
Civil • Survey • Structural • Environmental Design  
3102 East Main Road, Portsmouth RI 02871  
Tel. 401.683.6630 www.net-cds.com

**SHEET TITLE DETAILS & NOTES LOFTS AT RIVERPOINT**

BRANDON HAVENER  
OWNER - 60 E MAIN LLC  
60 EAST MAIN ST.  
WEST WARWICK, RI 02883  
CELL - 401-203-4799  
E: BRANDON@60EMAINLLC.COM  
E: BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
PROPERTY RECORD  
54 + 60 EAST MAIN ST, WEST WARWICK, RI 02883  
PLAT: 18, LOT: 81  
ZONE: (M) (M) OVERLAY, AREA: 0.234 ACRES  
N/F: 60 E MAIN LLC  
YEAR BUILT: 1908

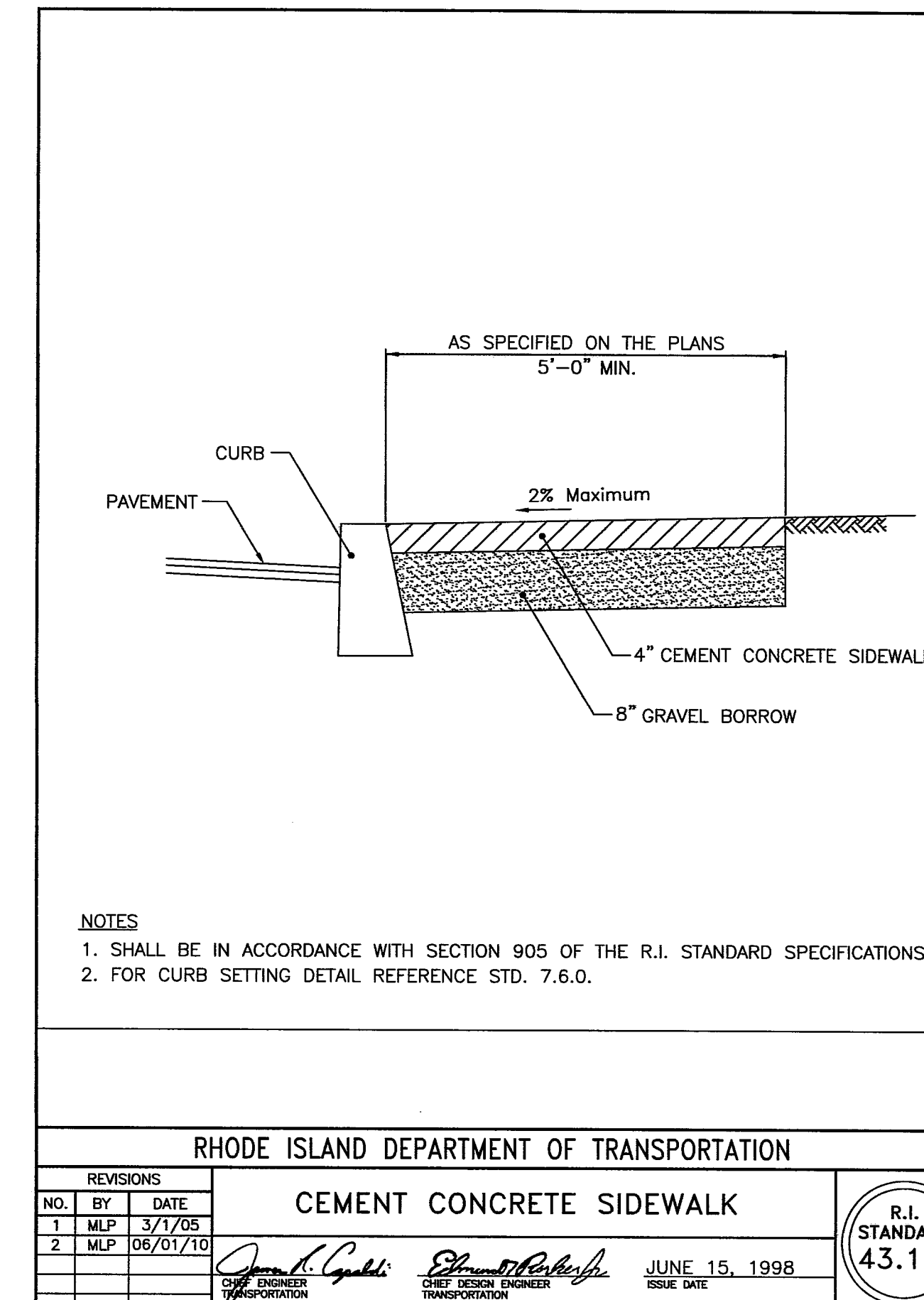
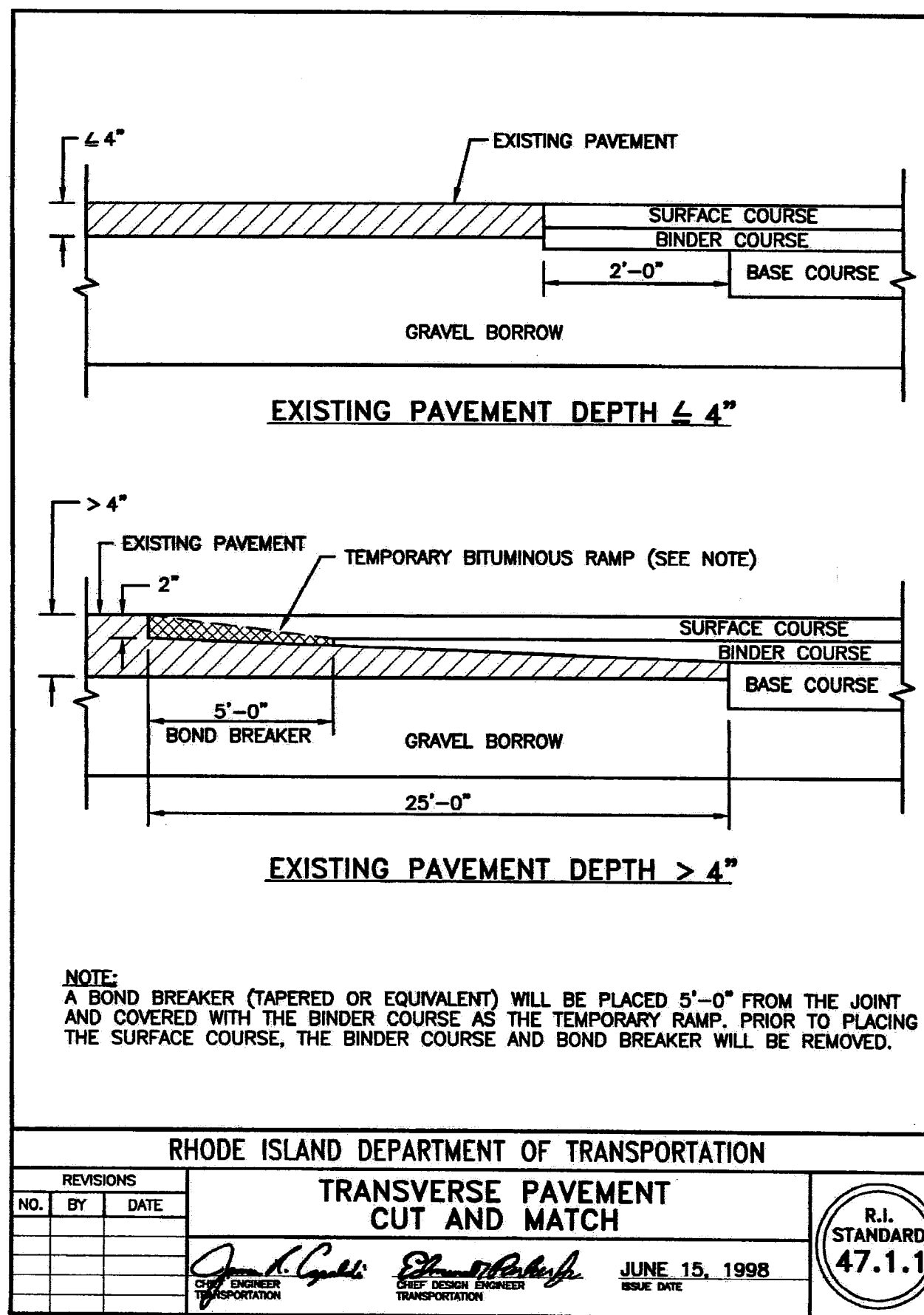
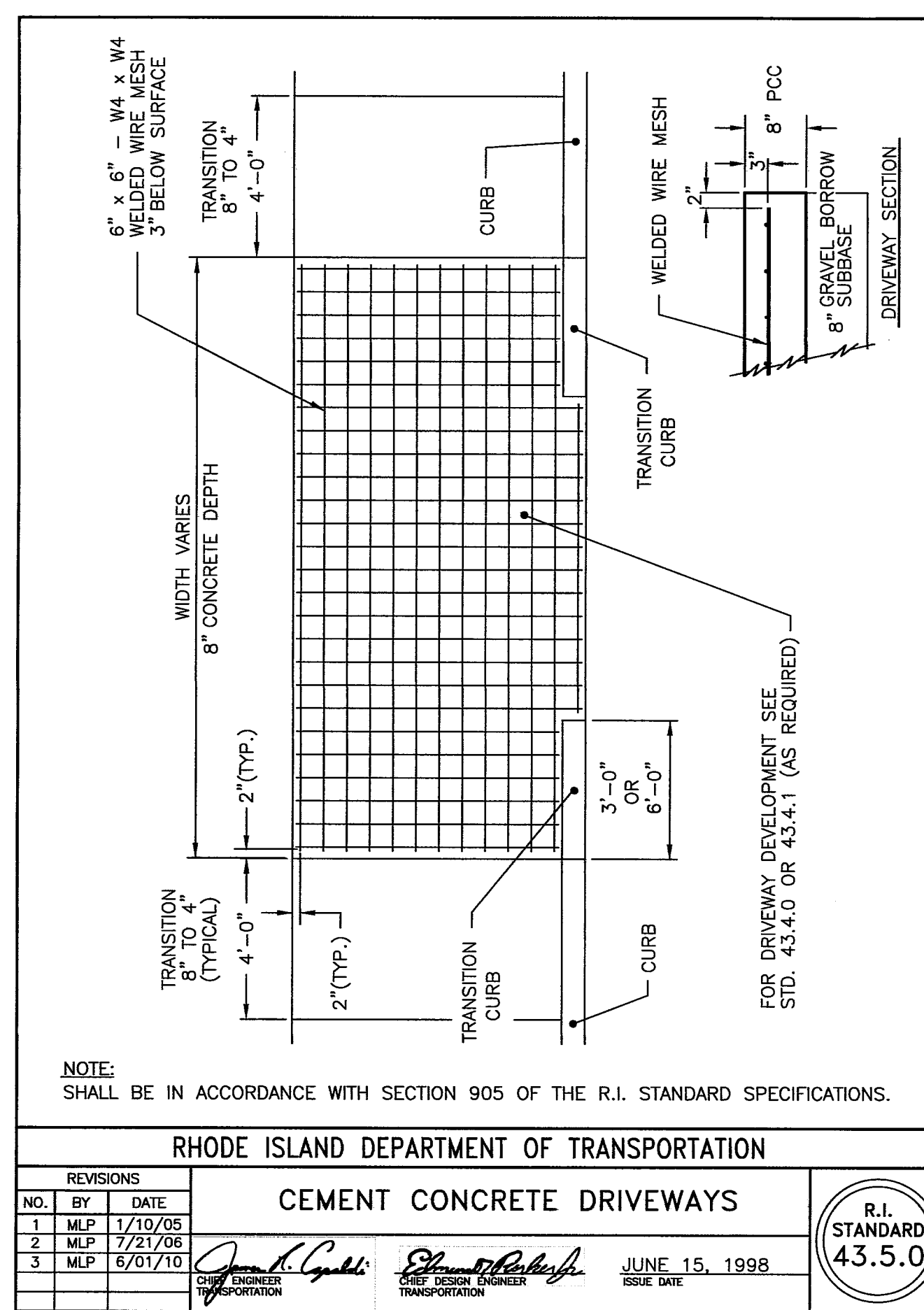
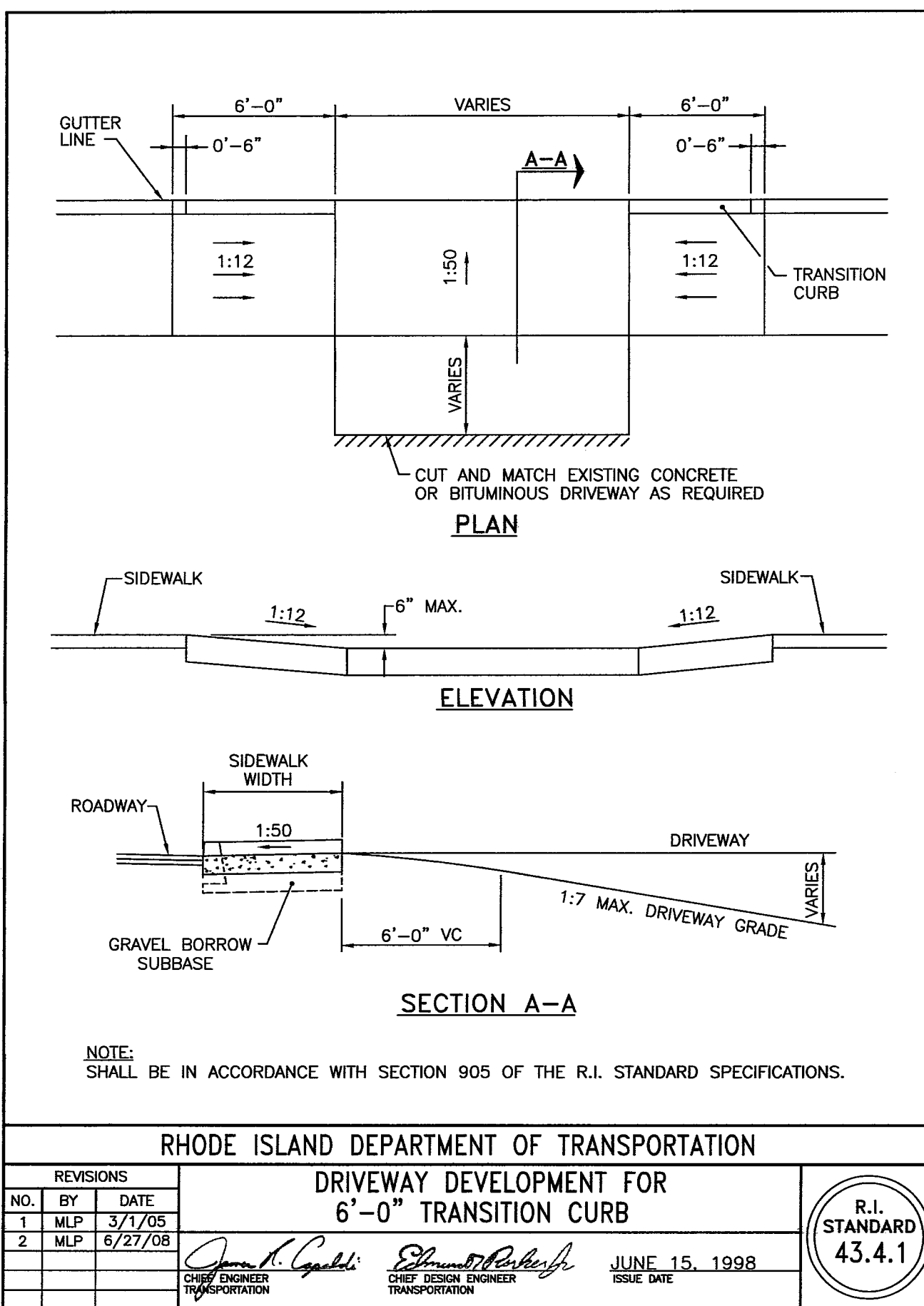
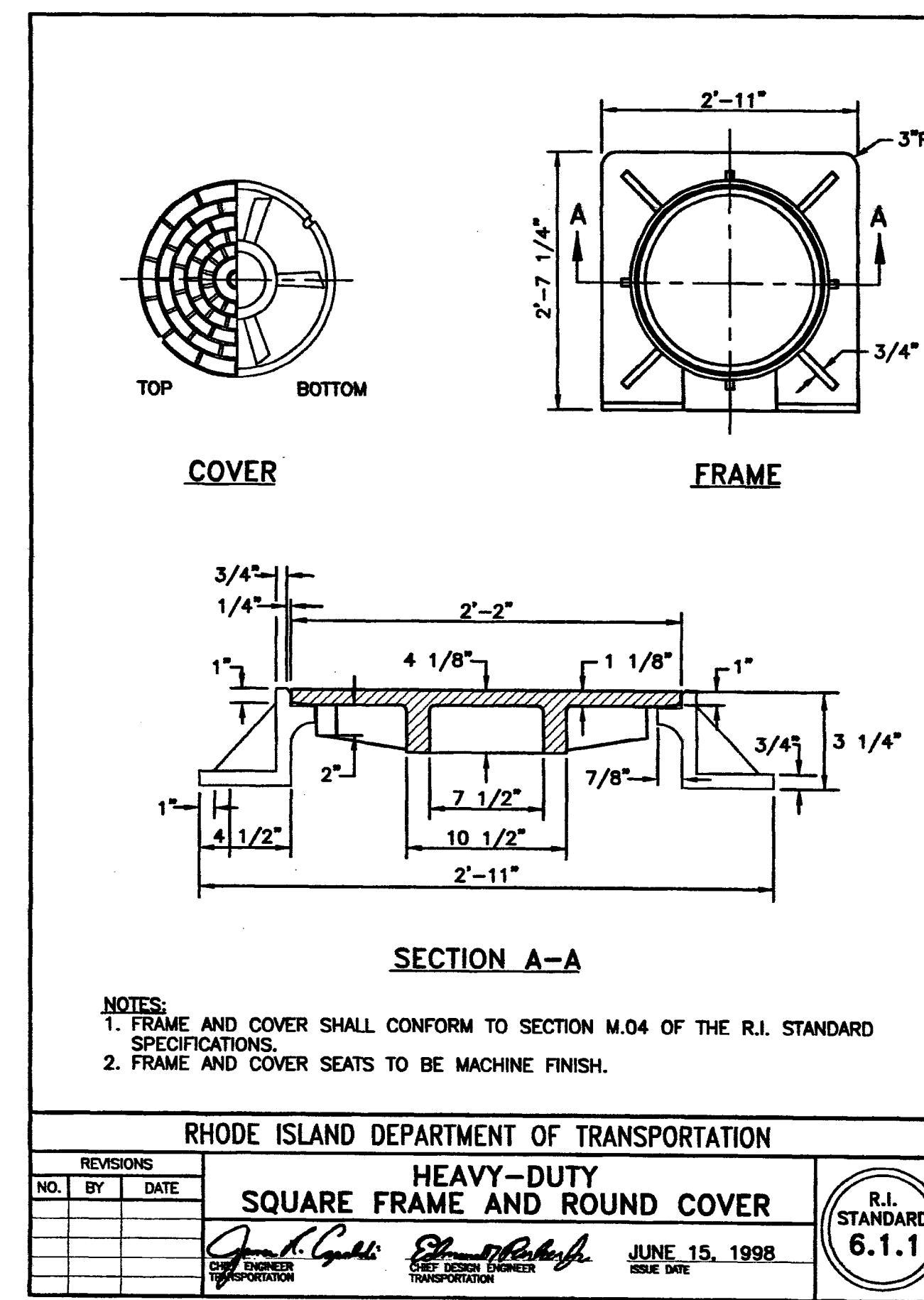
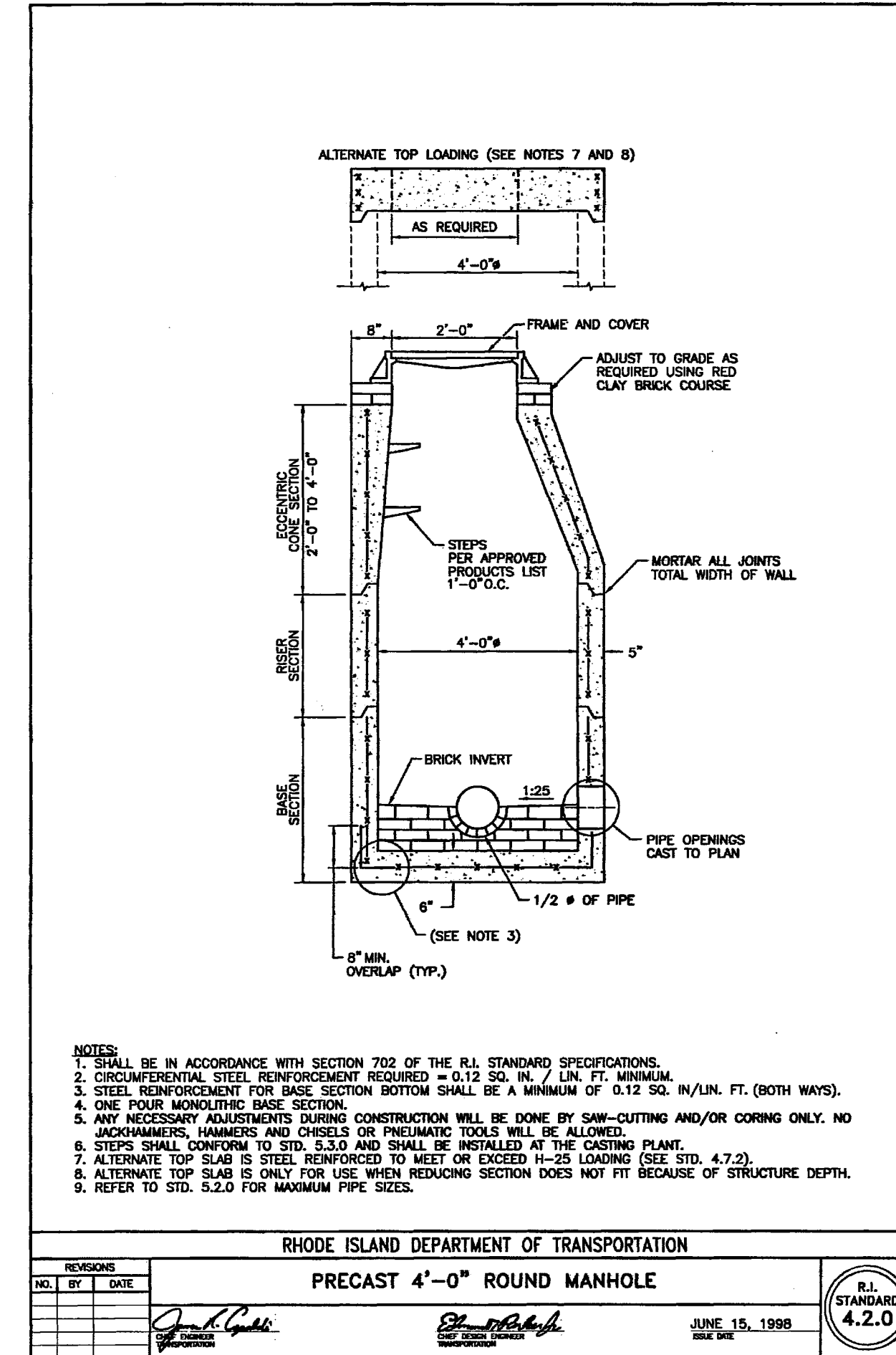
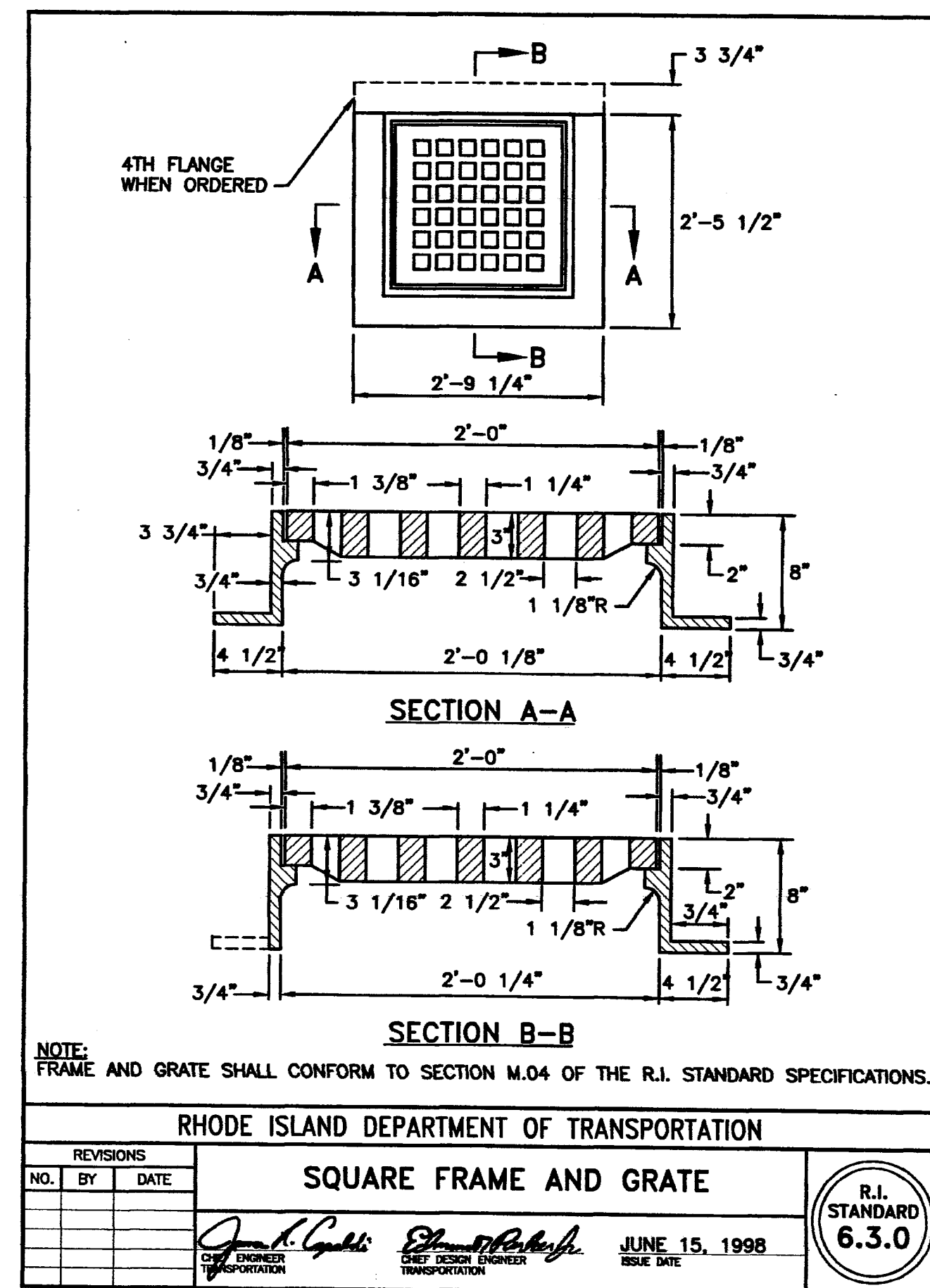
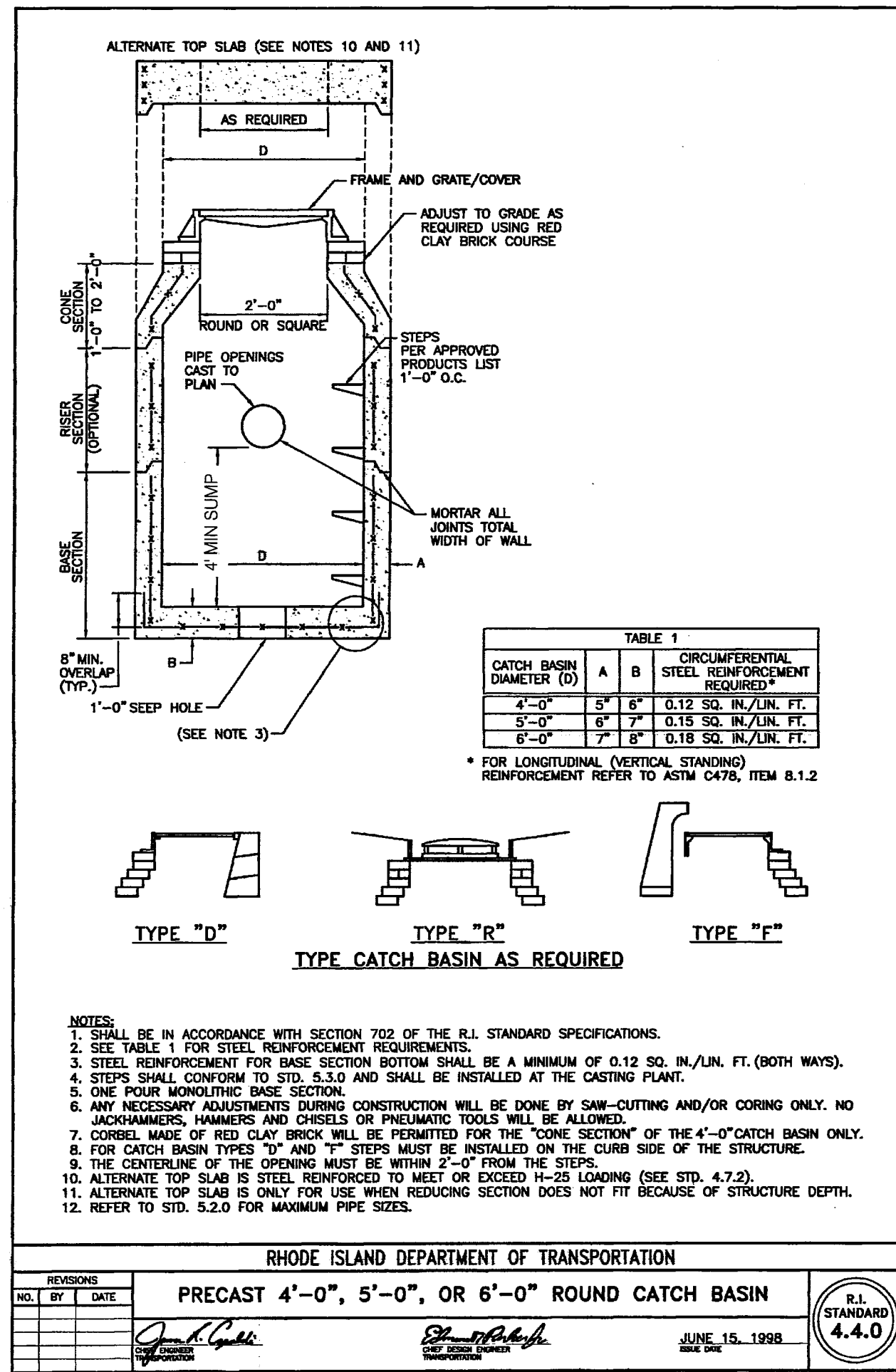
**JOSEPH W. MALO**  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

8/28/24

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM
NO	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**  
-CONCEPT : COMPLETE  
-MASTER PLAN : COMPLETE  
-PRELIMINARY PLAN : COMPLETE  
-RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)  
-RIDOT PAPA : RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)  
-FINAL PLAN : MUNICIPAL

SCALE **C-200**



8/28/24

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

PERMITTING + STAGES:

- CONCEPT : COMPLETE
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- RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)
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- FINAL PLAN : MUNICIPAL

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESH WATER WETLANDS PROGRAM

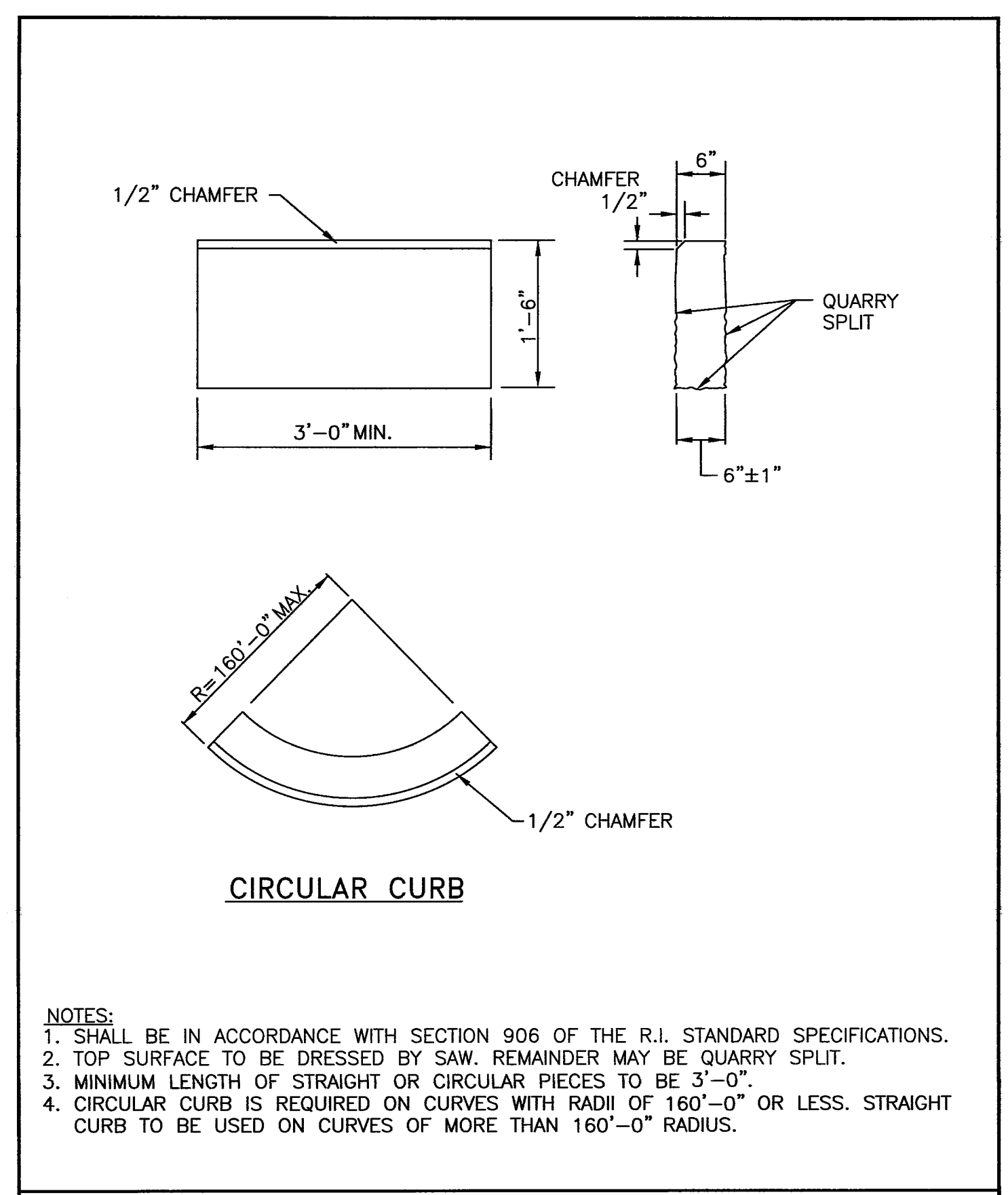
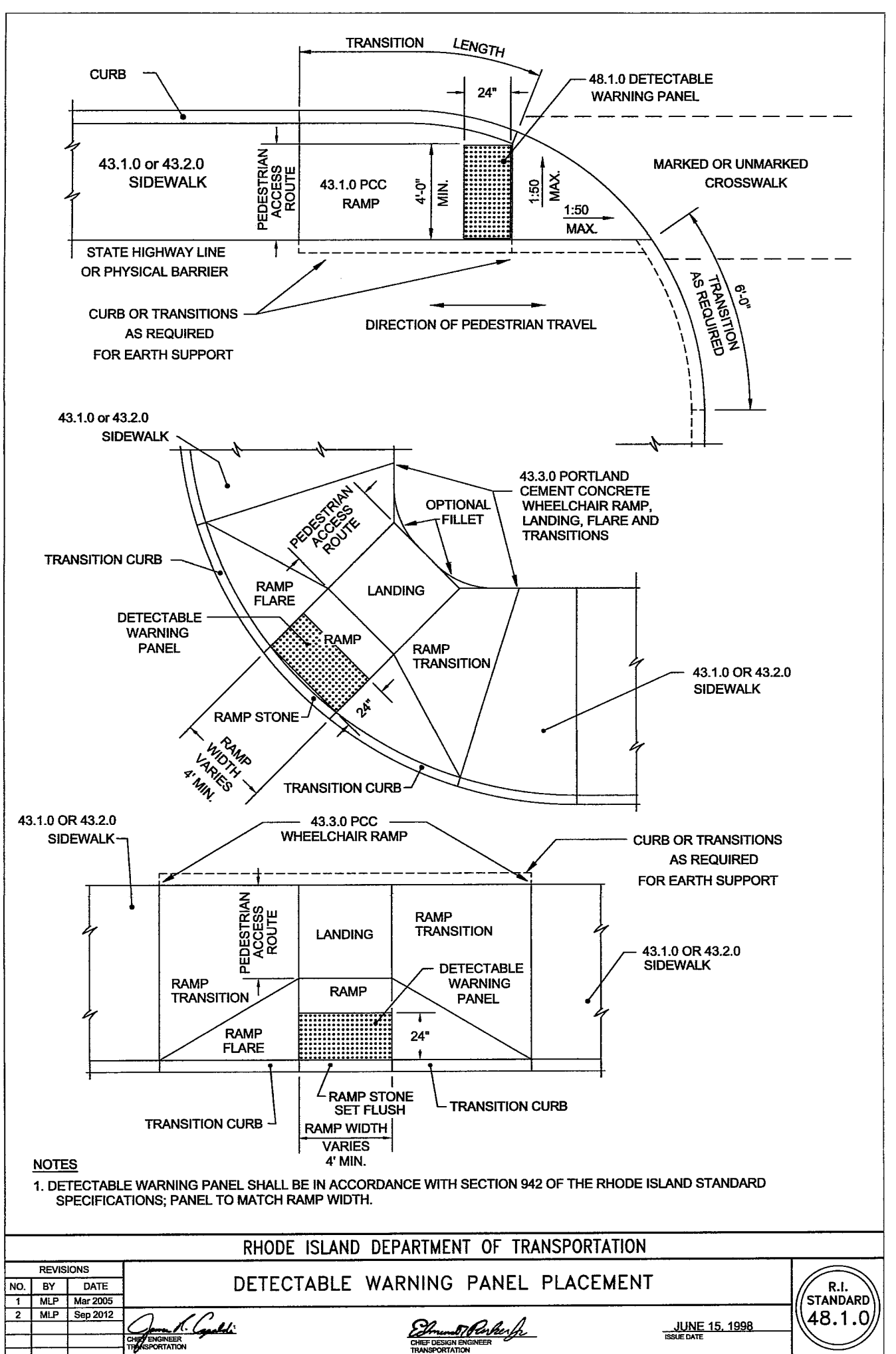
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATE: OCT 21 2024 FILE #: 24-0057

NO REVISIONS ALLOWED WITHOUT PRIOR APPROVAL  
ALL PLANS MUST BE AT CONSTRUCTION SITE

SCALE

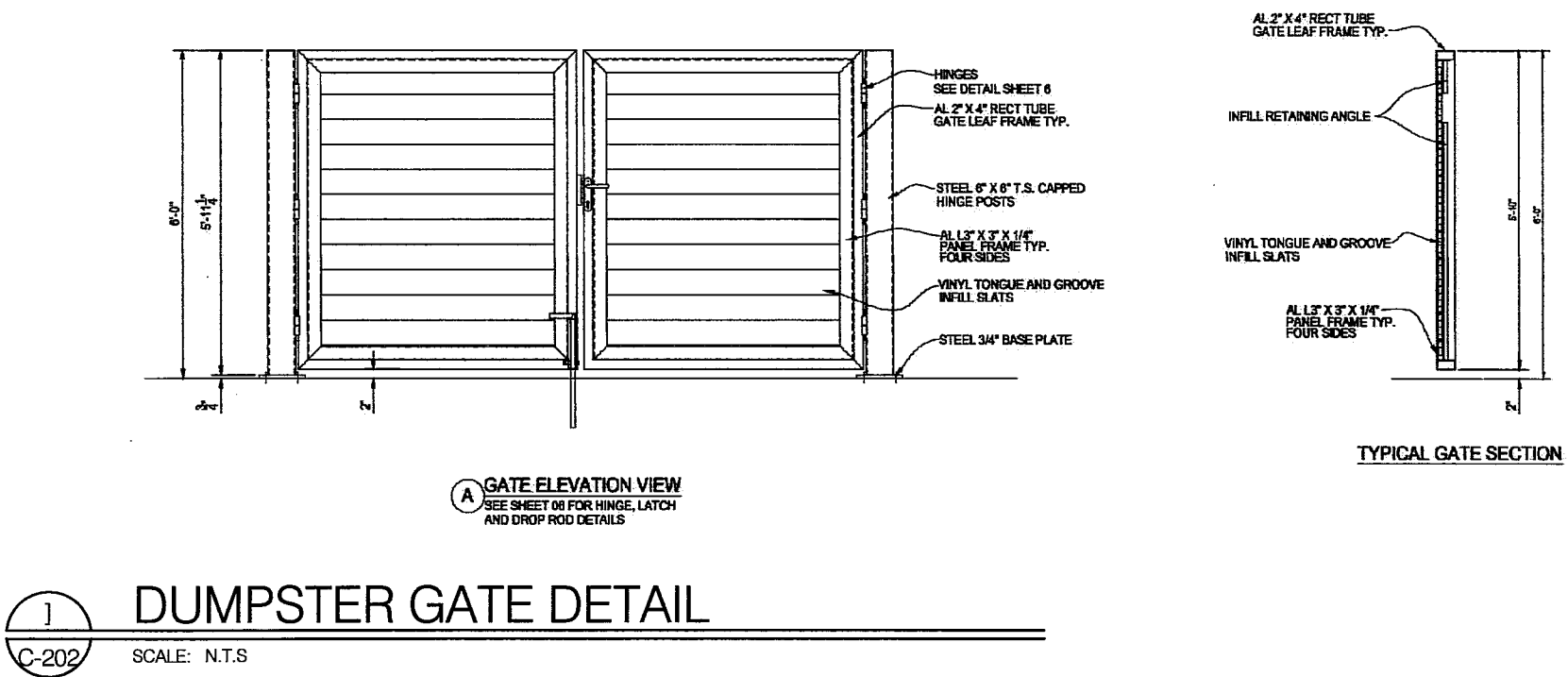
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**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>GRANITE CURB</b>  R.I. STANDARD 7.3.0
NO.	BY	DATE	
1	MLP	Mar 2005	
2	MLP	Sep 2012	

JUN 15, 1998  
 ISSUE DATE



**DUMPSTER GATE DETAIL**  
SCALE: N.T.S.

**NEI**  
**Narragansett**  
 Engineering Inc.  
 Civil - Survey Structural Environmental Design  
 3102 East Main Road, Portsmouth RI 02871  
 Tel. 401.683.6630 www.nei-cds.com

**SHEET TITLE**  
 DETAILS & NOTES  
 LOFTS AT RIVERPOINT

BRANDON HAVENER  
 OWNER - 60 E MAIN LLC  
 60 EAST MAIN ST,  
 WEST WARWICK, RI 02893  
 CELL - 401-203-4799  
 E. BRANDON@60EMAINLLC.COM  
 E. BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
 PROPERTY RECORD  
 54 + 60 EAST MAIN ST, WEST WARWICK, RI  
 02893  
 PLAT: 18, LOT: 61  
 ZONE: GUMILL OVERLAY, AREA: 0.234 ACRES  
 NF: 60 E MAIN LLC  
 YEAR BUILT: 1908

JOSEPH W. MALO  
  
 REGISTERED  
 PROFESSIONAL ENGINEER  
 (CIVIL)

8/26/24

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM  
 APPROVED WITH CONDITIONS AS  
 SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: OCT 21 2024 FILE #: 21058  
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Randy Clapton*

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM
No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**  
 -CONCEPT : COMPLETE  
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 -FINAL PLAN : MUNICIPAL

SCALE **C-202**

**Oldcastle Precast** Water **2'x2' Catch Basin** Model: 2x2-CB

**2'x2' C.B. STD. Risers**

Height	Weight	Lift Gear
0'-0"	253 lbs.	2 Ton Swirl Lift
1'-0"	497 lbs.	2 Ton Swirl Lift
1'-6"	700 lbs.	2 Ton Swirl Lift
2'-0"	933 lbs.	2 Ton Swirl Lift
2'-6"	1,167 lbs.	2 Ton Swirl Lift
3'-0"	1,400 lbs.	2 Ton Swirl Lift
4'-0"	1,887 lbs.	2 Ton Swirl Lift

**2'x2' C.B. STD. Bases**

Height	Weight	Lift Gear
2'-0"	1,084 lbs.	2 Ton Swirl Lift
2'-6"	1,298 lbs.	2 Ton Swirl Lift
3'-0"	1,531 lbs.	2 Ton Swirl Lift
4'-0"	1,897 lbs.	2 Ton Swirl Lift

**NOTES:**

- All inlets are designed and manufactured according to ASTM C193
- Inlets are suitable for 18-20 Loading
- Bases are available with Flat Top or Joint Keyway
- Custom Hole Size & Location Available

Great Plains West Region For more information about our products please visit us on the web at: [oldcastleprecast.com](http://oldcastleprecast.com) 888-9 Oldcastle (888-965-3277) © 2013 Oldcastle Precast, Inc. 19-CB-1

**TYPICAL PIPE TRENCH**

**NOTES:**

- MAINTAIN UNIFORM TRENCH WIDTH TO 6" OVER PIPE.
- IF SHEETING IS REQUIRED TO REMAIN, CUT OFF TWO (2) FEET BELOW FINISH GRADE.
- IF GROUNDWATER IS ENCOUNTERED, WRAP STONE WITH MIRAFIL 140N FILTER FABRIC OR APPROVED EQUAL.
- SEE PAVEMENT REPAIR DETAILS FOR ROAD WORK AREAS.
- PROVIDE 6" MIN. BEDDING FOR AREAS OF EXCAVATION IN ROCK.
- LOOSELY PLACE SUITABLE BACKFILL OR CLEAN WASHED 3/4" CRUSHED STONE IN MIDDLE BEDDING AREA. DO NOT COMPACT MIDDLE BEDDING AREA.
- ALL TRENCHES SHALL BE SUFFICIENTLY WIDE TO ACCOMMODATE TRENCH BOX.
- PER RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, APPROVED SUBGRADE SHOULD NOT CONSIST OF UNSUITABLE SOIL. UNSUITABLE SOILS IS DEFINED AS THOSE SOILS, OTHER THAN MUCK, WHICH DUE TO THEIR CONSOLIDATION PROPERTIES, DEGREE OF SATURATION, GRADATION, OR OTHER DELETERIOUS CHARACTERISTICS WILL NOT PROVIDE A STABLE SUBGRADE OR SIDE SLOPES. CANNOT BE USED AS OR SUPPORT EMBANKMENT, OR CANNOT BE PLACED AND COMPACTED AS BACKFILL.

**TRENCH WIDTHS**

PIPE SIZE	MAX (ONE PIPE) <sup>(a)</sup>
15" OR LESS	4'-0"
18"	5'-0"
24"	5'-6"
30"	6'-0"
36"	6'-6"
42"	7'-0"
48"	7'-6"
MANHOLES	O.D. + 6'-0"
CATCH BASINS <sup>a</sup>	O.D. + 6'-0"

<sup>a</sup> FOR ROCK EXCAVATION SUBTRACT 1'-0"

**3** SCALE: N.T.S.

**CATCH BASIN INSERT FILTER**

**ADD TO ALL CATCH BASINS (TYP.)**

**7** SCALE: N.T.S.

**YARD DRAIN DETAIL**

**7** SCALE: N.T.S.

**SITE LIGHTING POLE BASE DETAIL**

**NOTES:**

- BASE DETAIL PROVIDED TO INDICATE GENERAL INTENT OF THE ELECTRICAL INSTALLATION. MODIFY BASE DEPTH AND DIAMETER TO ACCOMMODATE LIGHTING FIXTURE AND SOIL CHARACTERISTICS.
- COORDINATE ANCHOR BOLT PLACEMENT WITH GENERAL CONTRACTOR. POLE BASE EXCAVATION FORMING, REBAR AND CONCRETE BY G.C.
- POLE BASE DETAIL FOR INFORMATION ONLY. REFER TO SITE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

**NOT TO SCALE**

**Figure 20.0-1 Typical Trenches**

**LEGEND:**

- Base Spacer
- Intermediate Spacer
- Primary Electric Duct
- Communication Duct or Cable
- Spare Duct
- Direct Burial
- Concrete
- Sand

**Notes:**

- If more than one set of primary is installed in the trench, separate primary by 6" minimum.
- Nantucket MA area to use this trench with a spare 4" conduit to be installed at least 6" away from the direct burial cable.

**8** SCALE: NOT TO SCALE

**ADS PIPING DETAIL**

ADS, Inc. Product Specifications Specifications + 1-5

**N-12® WT IB JOINT SYSTEM**

(Joint configuration & availability subject to change without notice.)

**CERAMIC ACTIVE WRAP**

**ADS N-12® WT IB PIPE SPECIFICATION**

**Scope**  
This specification describes 4- through 60-inch (100 to 1500 mm) ADS N-12 WT IB pipe for use in gravity flow applications.

**Pipe Requirements**  
N-12 WT IB pipe shall have a smooth interior and annular exterior corrugations.  
• 12- through 60-inch (300 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306.  
• Manning's "n" values for use in design shall be 0.012.

**Joint Performance**  
Pipe shall be joined with the N-12 WT IB joint meeting the requirements of AASHTO M294 or ASTM F2306.

The 4- through 60-inch (100 to 1500 mm) pipe shall be watertight according to the requirements of ASTM D3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

**Fittings**  
Fittings shall conform to AASHTO M294 or ASTM F2306. Fabricated fittings shall be welded at all accessible interior and exterior junctions.

**Material Properties**  
Pipe and fittings shall be made of virgin polyethylene compounds that comply with the cell classification 424420C for 4- through 10-inch (100 to 250mm) diameters, or 435400C for 12- through 60-inch (300 to 1500mm) diameters, as defined and described in ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 60-inch (300 to 1500mm) virgin pipe material shall comply with the notched constant ligament stress (NCLS) test as specified in Section 6.1.1 and 5.1 of AASHTO M294 and ASTM F2306 respectively.

**Installation**  
Installation shall be in accordance with ASTM D2321 and ADS installation guidelines, with the exception that minimum cover in traffic areas for 12- through 48-inch (300 to 1200 mm) diameters shall be one foot (0.3 m) and for 60-inch (1500 mm) diameters, the minimum cover shall be 2 feet (0.6 m). Contact your local ADS representative or visit our website at [www.ads-pipe.com](http://www.ads-pipe.com) for a copy of the installation guidelines.

**Pipe Dimensions**

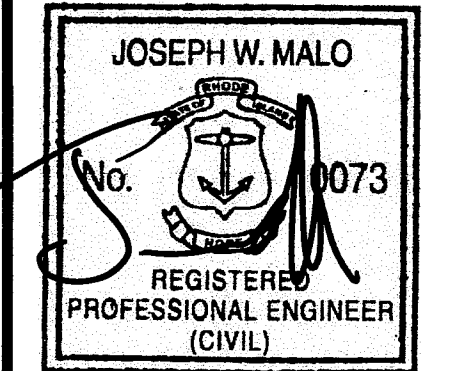
Pipe I.D.	4	6	8	10	12	15	18	24	30	36	42	48	60
in (mm)	(100)	(150)	(200)	(250)	(300)	(375)	(450)	(600)	(750)	(900)	(1050)	(1200)	(1500)
Pipe O.D.	4.8	6.9	9.1	11.4	14.6	18	21	28	36	42	48	54	67
in (mm)	(122)	(175)	(231)	(290)	(369)	(457)	(539)	(711)	(914)	(1067)	(1219)	(1372)	(1702)

<sup>a</sup> Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ± 1 inch. Contact Applications Engineering for exact values.

© ADS, Inc., March 2006

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM  
APPROVED WITH CONDITIONS AS  
SPECIFIED IN THE LETTER OF APPROVAL  
DATED: OCT 21 2024 FILE # 24-0057  
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

*Andy Cloutier*



8/26/24

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**

- CONCEPT - COMPLETE
- MASTER PLAN - COMPLETE
- PRELIMINARY PLAN - COMPLETE
- RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)
- RIDOT PAPA : RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)
- FINAL PLAN : MUNICIPAL

E:\PROJECTS\23.0138 - HAVENER (64 & 60 EAST MAIN ST.)\CIVIL\23.0138 - HAVENER SITE PLAN.DWG C-203.NEJ.Standard.dwg \$R/26/2024 - Craig Barry

**CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS**

**GENERAL**  
CULTEC RECHARGER® 360HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

**CHAMBER PARAMETERS**

- THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
  - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
  - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
  - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
- THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
  - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
  - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
  - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
- THE INSTALLED CHAMBER SYSTEM SHALL BE STRUCTURALLY DESIGNED TO PROVIDE RESISTANCE TO LIVE LOADS AS DEFINED BY THE AASHTO H-20/HL-93 SPECIFICATION WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
- THE CHAMBER SHALL BE ANCHED IN SHAPE.
- THE CHAMBER SHALL BE OPEN-BOTTOMED.
- THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 36 INCHES (914 MM) TALL, 60 INCHES (1525 MM) WIDE AND 50 INCHES (1275 MM) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER 360HD SHALL BE 3.67 FEET (1.12 M).
- MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 MM) HDPE OR 30 INCHES (750 MM) PVC.
- THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCHES (250 MM) HDPE AND 12 INCHES (300 MM) PVC.
- THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 MM) WIDE AND 49 INCHES (1245 MM) LONG.
- THE NOMINAL STORAGE VOLUME OF THE RECHARGER 360HD CHAMBER SHALL BE 10.0 FT³ (0.28 M³) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 360HD SHALL BE 36.67 FT³ / UNIT (1.038 M³ / UNIT) - WITHOUT STONE.
- THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 M³ / M) - WITHOUT STONE.
- THE RECHARGER 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
- THE CHAMBER SHALL BE CAPABLE OF ACCEPTING A 6 INCH (150 MM) INSPECTION PORT OPENING AT THE TOP CENTER OF EACH CHAMBER, CENTERED ON THE CORRUGATION CREST.
- THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY CORRUGATION.
- THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
- MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 M).

**END CAP PARAMETERS**

- THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS "END CAP") SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).
- THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
- THE END CAP SHALL BE ANCHED IN SHAPE.
- THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
- THE END CAP SHALL HAVE 5 CORRUGATIONS.
- THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 36.5 INCHES (927 MM) TALL, 60 INCHES (1525 MM) WIDE AND 38 INCHES (965 MM) LONG. WHEN JOINED WITH A RECHARGER 360HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 15 INCHES (381 MM).
- THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT³ (0.48 M³) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 6.46 FT³ / UNIT (0.183 M³ / UNIT) - WITHOUT STONE.
- MAXIMUM INLET OPENING ON THE END CAP IS 24 INCHES (600 MM) HDPE OR 30 INCHES (750 MM) PVC.
- THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

**CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS**

**GENERAL**  
CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 360HD STORMWATER CHAMBERS.

**FEED CONNECTOR PARAMETERS**

- THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR.
- THE FEED CONNECTOR SHALL BE ANCHED IN SHAPE.
- THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
- THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
- THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 M³ / M) - WITHOUT STONE.
- THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
- THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN ENDS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
- THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

**CULTEC NO. 410™ NON-WOVEN GEOTEXTILE**  
CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

**GEOTEXTILE PARAMETERS**

- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
- THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M²).
- THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (53 N) PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSF (1551 KPA) PER ASTM D3786 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4633 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

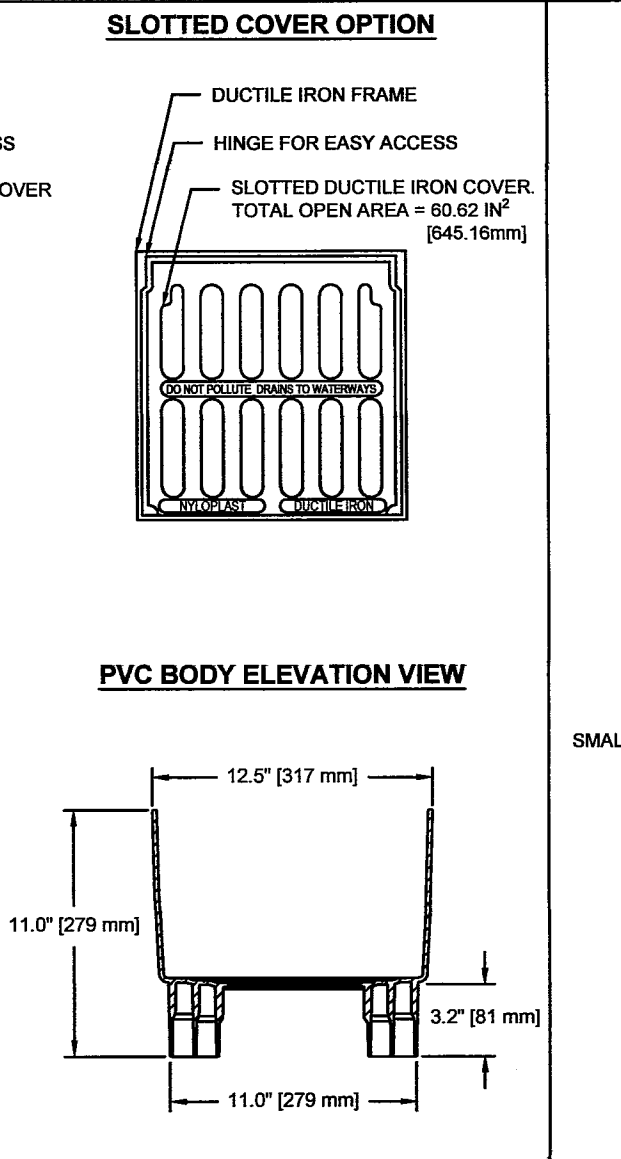
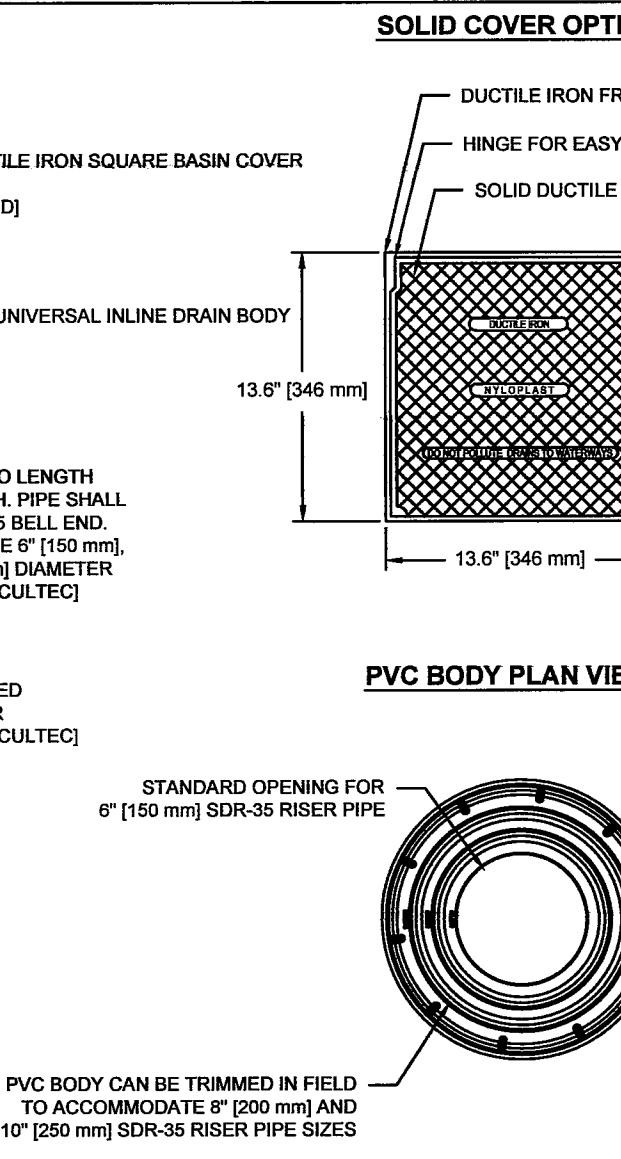
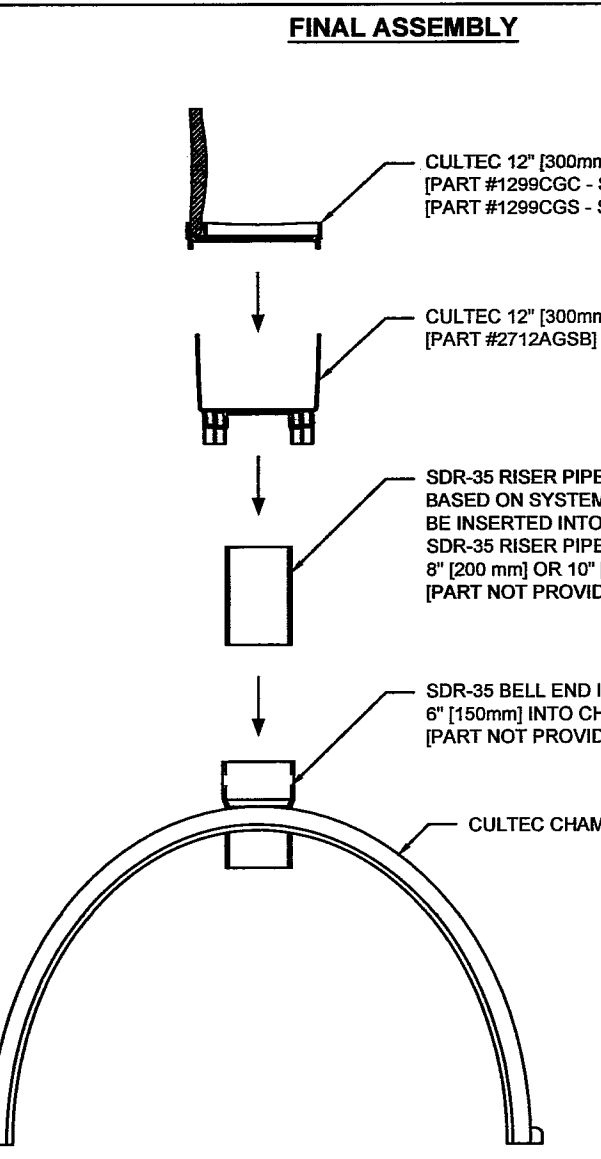
**CULTEC AFAB-HPE™ WOVEN GEOTEXTILE**  
CULTEC AFAB-HPE WOVEN GEOTEXTILE IS DESIGNED AS AN UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

**GEOTEXTILE PARAMETERS**

- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
- THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 320 X 320 LBS (1,420 X 1,420 N) PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 15 X 15% PER ASTM D4632 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 3,563 X 3,563 LBS/FT (52 X 52 KN/M) PER ASTM D4595 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,500 LBS (6,670 N) PER ASTM D6241 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 120 X 120 LBS (540 X 540 N) PER ASTM D4533 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 30 US STD. SIEVE (0.60 MM) PER ASTM D4751 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.2 SEC-1 PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 22 GPM/FT² (900 LPM/M²) PER ASTM D4491 TESTING METHOD.
- THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

**GENERAL NOTES**

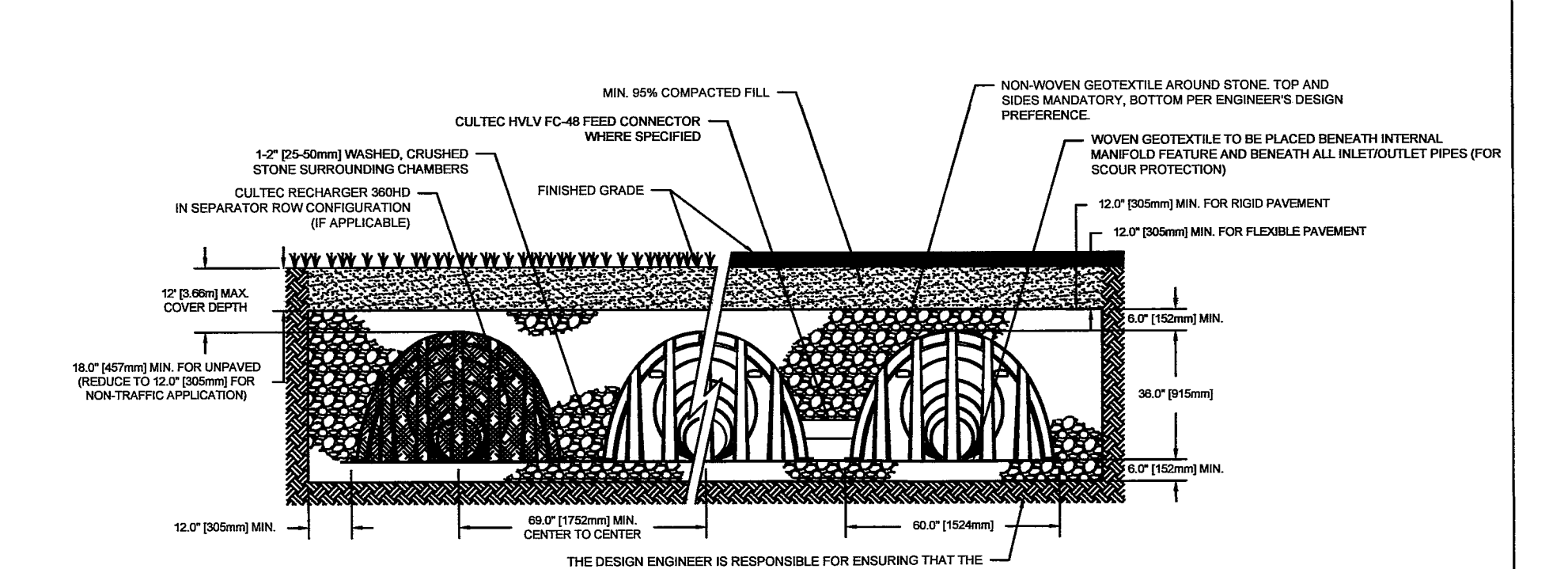
- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
  - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
  - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
  - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
- THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
  - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
  - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
  - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95



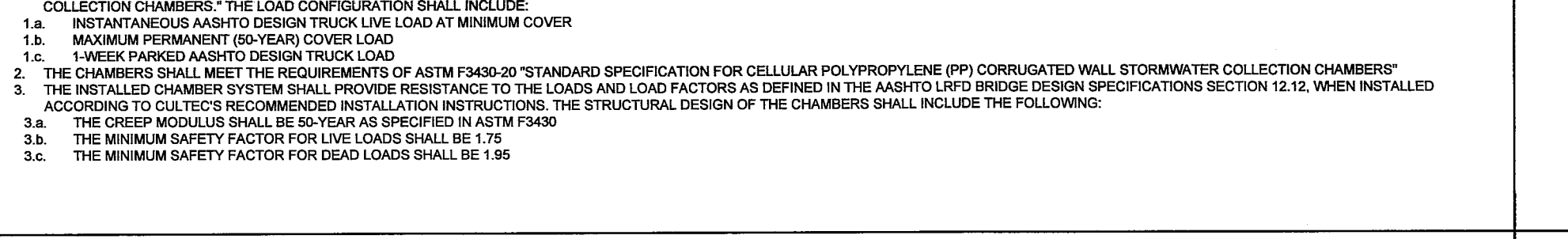
**PVC BODY PLAN VIEW**

**PVC BODY ELEVATION VIEW**

**CULTEC UNIVERSAL INSPECTION PORT KIT DETAIL**



**CULTEC RECHARGER 360HD CROSS SECTION**



**CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW**



**CULTEC RECHARGER 360HD HEAVY DUTY END CAP THREE VIEW**



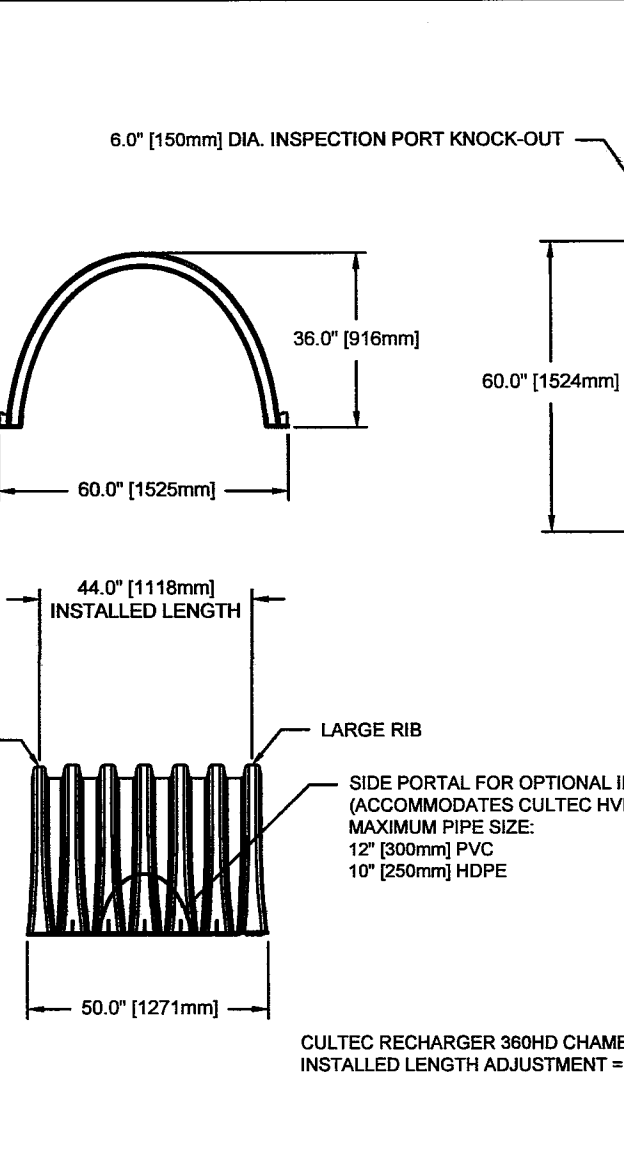
**CULTEC RECHARGER 360HD TYPICAL PIPE INVERTS**

PIPE	A	B
6" [150 mm]	26.50" [673 mm]	1.00" [25 mm]
8" [200 mm]	24.50" [622 mm]	1.00" [25 mm]
10" [250 mm]	22.25" [565 mm]	1.25" [32 mm]
12" [300 mm]	19.75" [502 mm]	1.75" [45 mm]
15" [375 mm]	16.50" [419 mm]	2.00" [50 mm]
18" [450 mm]	13.00" [330 mm]	2.50" [64 mm]
21" [525 mm]	10.00" [254 mm]	2.50" [64 mm]
24" [600 mm]	7.00" [178 mm]	2.50" [64 mm]
30" [750 mm]	N/A	3.50" [89 mm]

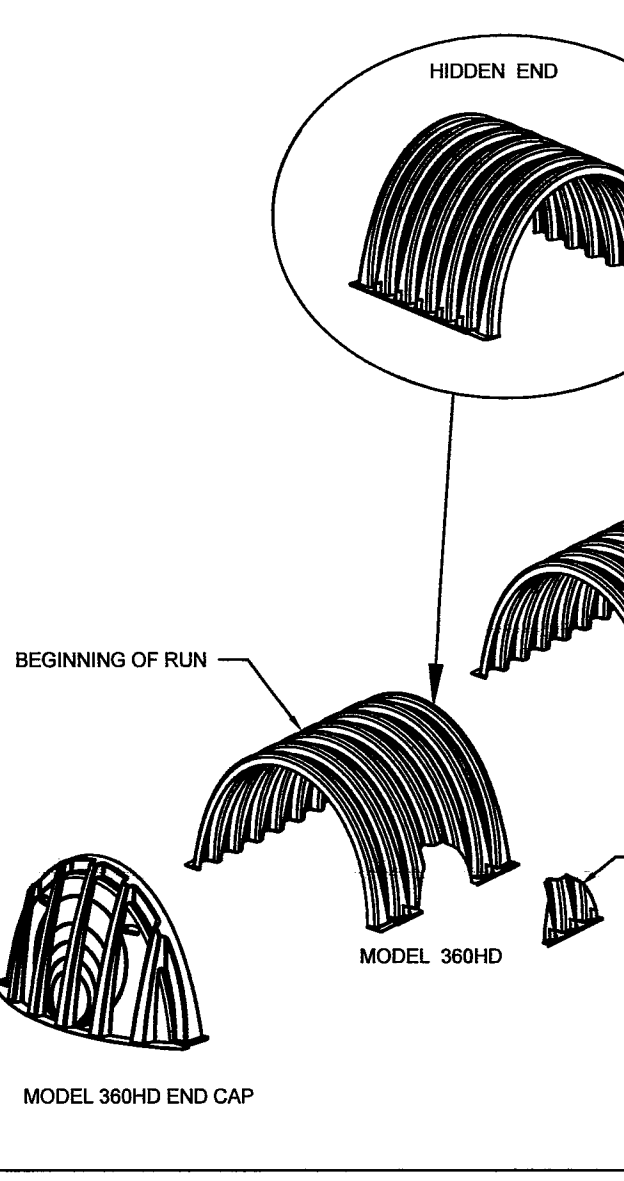
THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. 30" (750 mm) SMOOTH WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.

**CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW**

**OPTIONAL CULTEC INSPECTION PORT - ZOOM DETAIL**



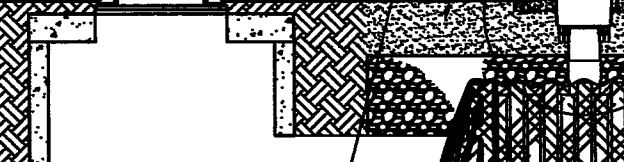
**CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW**



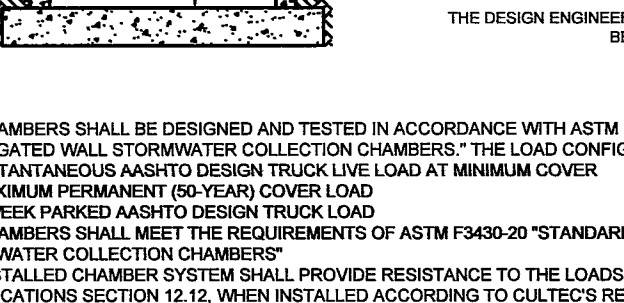
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



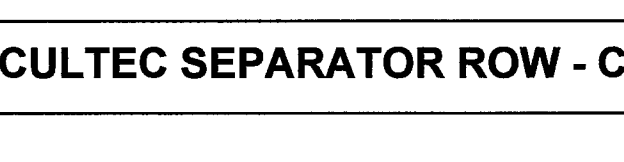
**CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK**



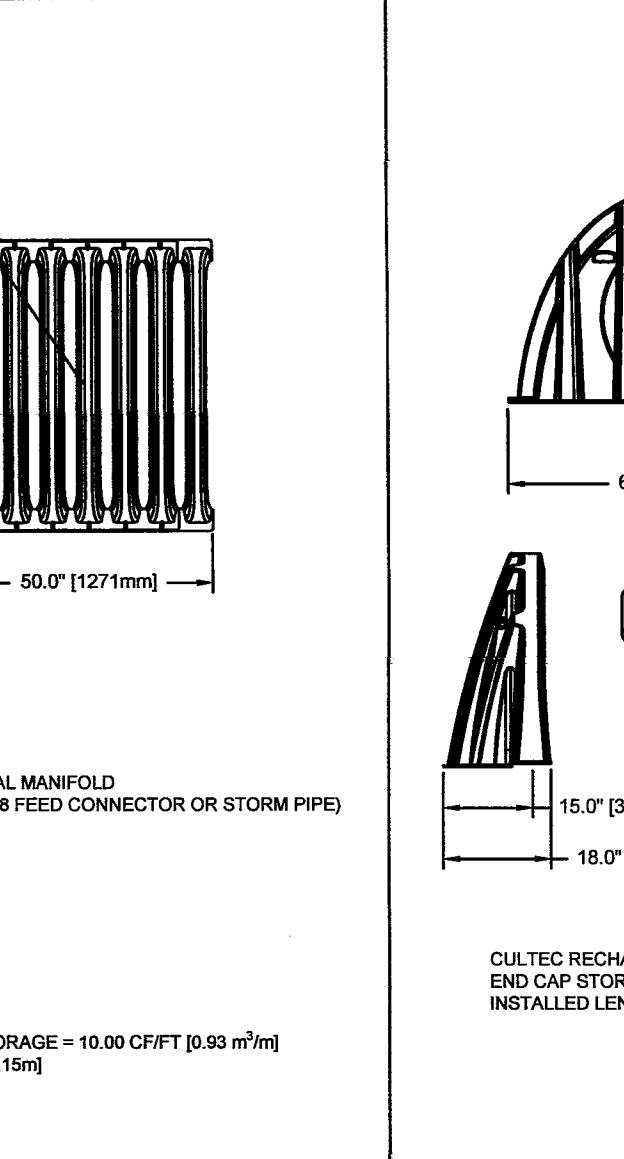
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



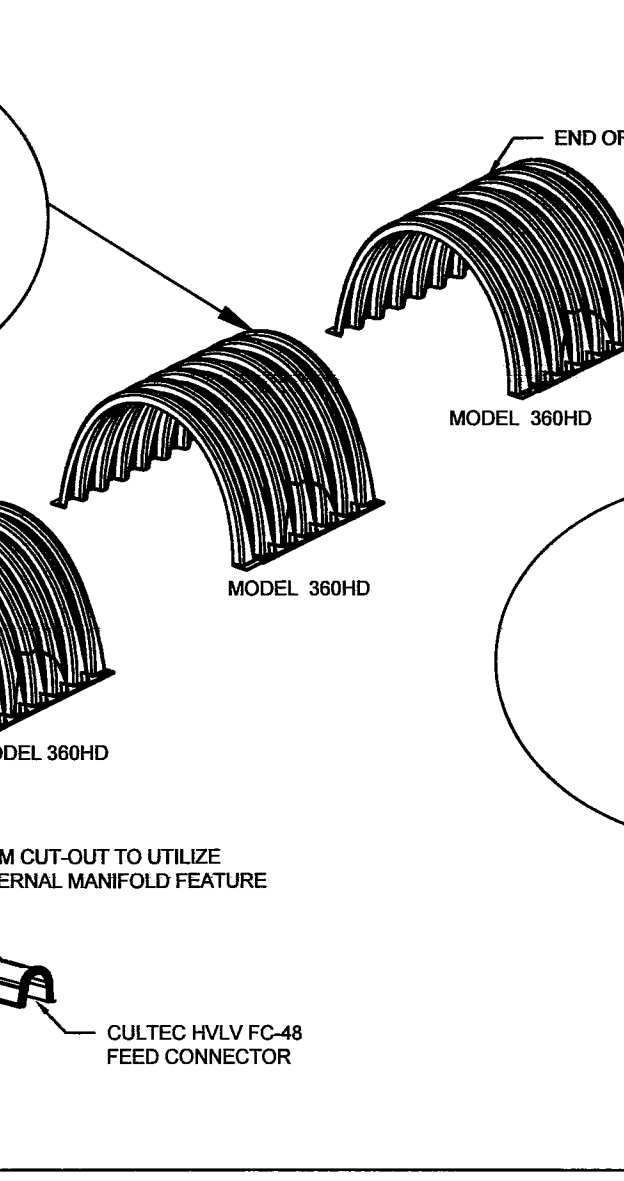
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



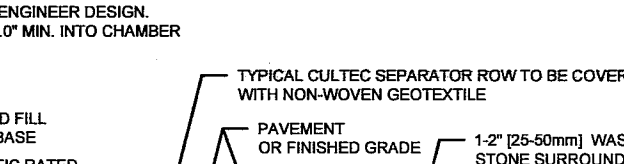
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



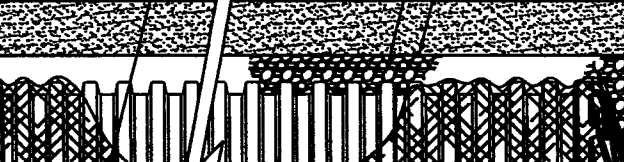
**CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW**



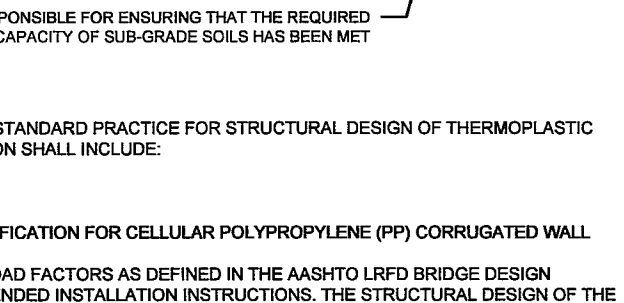
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



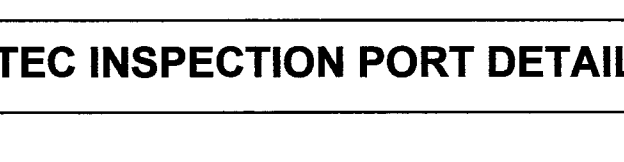
**CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK**



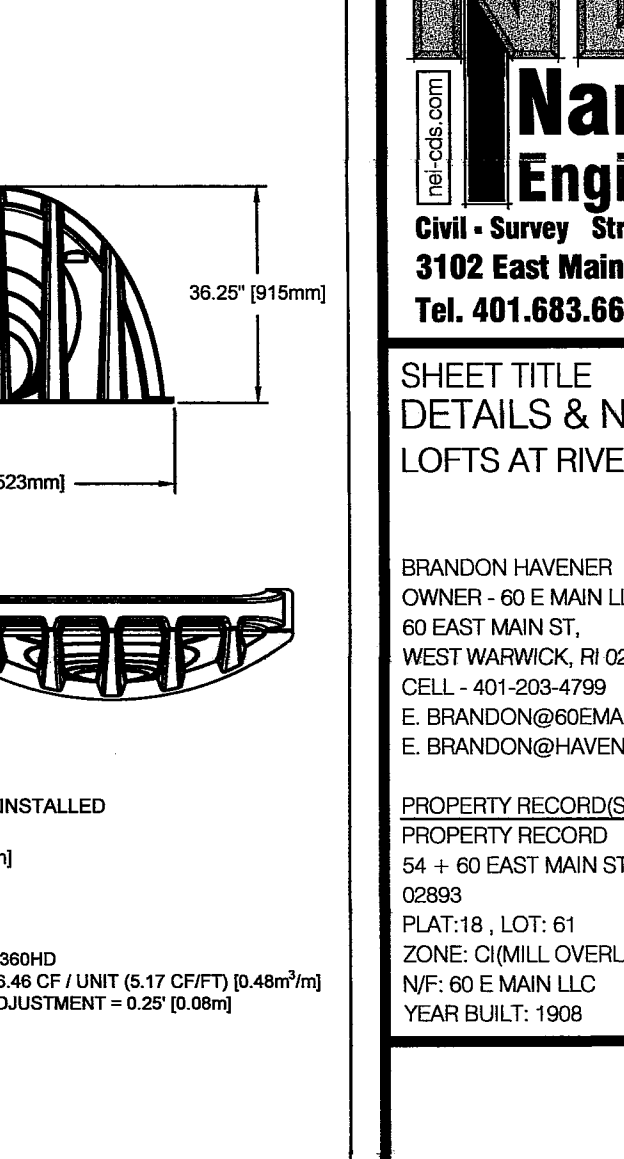
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



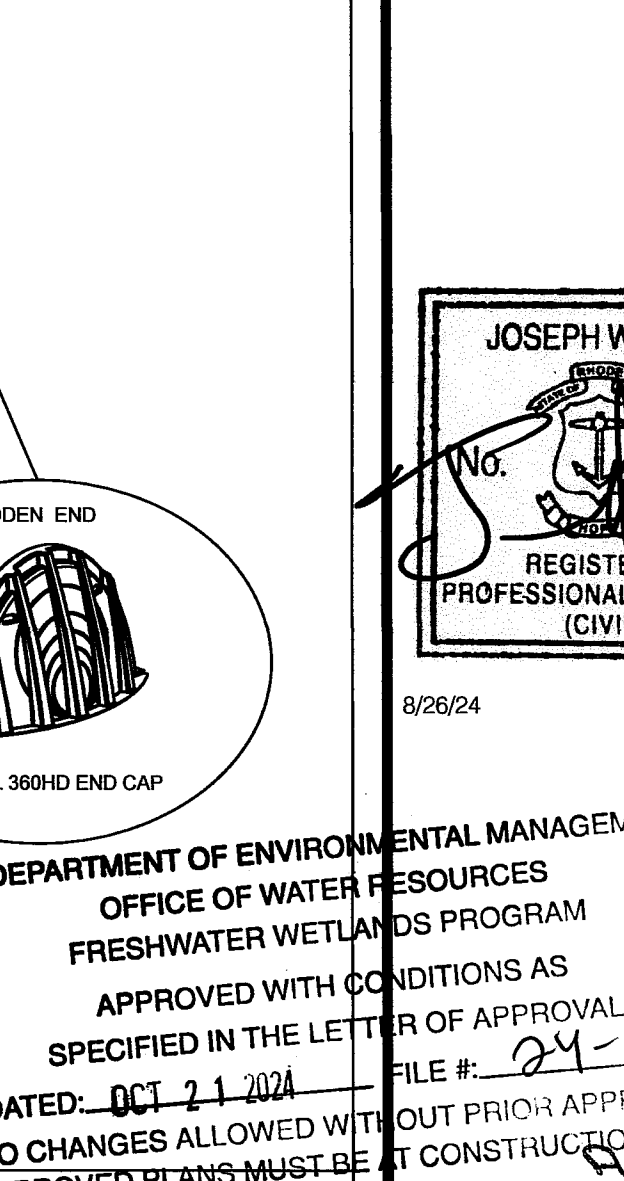
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



**CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW**



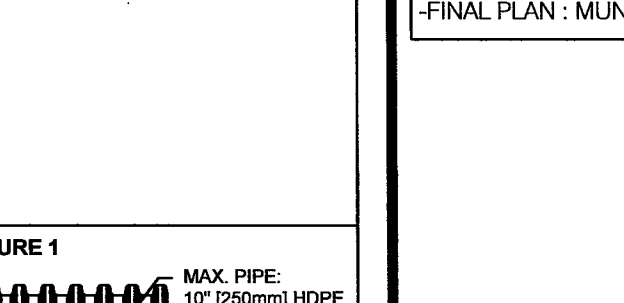
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



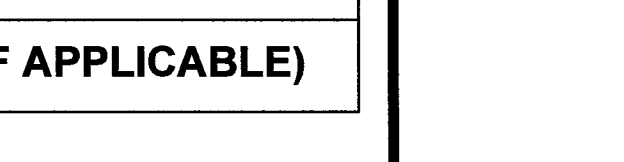
**CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK**



**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



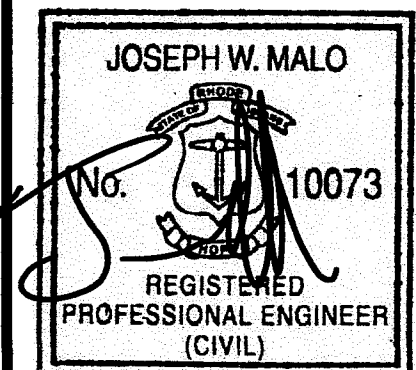
**CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)**



**SHEET TITLE**  
DETAILS & NOTES  
LOFTS AT RIVERPOINT

BRANDON HAVENER  
OWNER - 60 E MAIN LLC  
60 EAST MAIN ST.  
WEST WARWICK, RI 02893  
CELL - 401-203-4799  
E: BRANDON@60EMAINLLC.COM  
E: BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
PROPERTY RECORD  
54 + 60 EAST MAIN ST, WEST WARWICK, RI 02893  
PLAT: 18, LOT: 61  
ZONE: C/MALL OVERLAY, AREA: 0.234 ACRES  
NF: 60 E MAIN LLC  
YEAR BUILT: 1908



8/26/24

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF WATER RESOURCES  
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

FILE # 24-005

DATED: OCT 21 2024

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL PERMIT APPLICATION

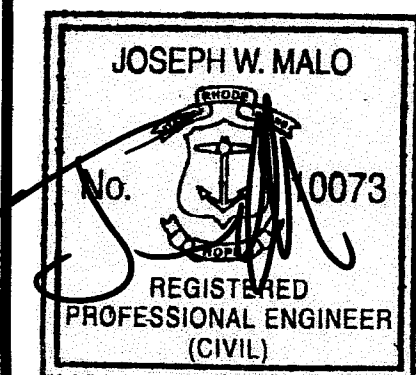
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**  
CONCEPT: COMPLETE  
MASTER PLAN: COMPLETE  
PRELIMINARY PLAN: COMPLETE  
RIDEM WETLANDS: RIDEM WETLANDS GENERAL PERMIT + RIDES (STORMWATER)  
RIDOT PAPA: RIDOT PHYSICAL ALTERATION PERMIT APPLICATION  
FINAL PLAN: MUNICIPAL

PROJECT: 2024.01.08 - HAVENER (64 & 60 EAST MAIN ST) CIVIL 23.0138 - HAVENER SITE PLAN DWG C-204 - NEI-Standards.dwg 8/26/2024 Craig Berry



8/26/24

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF WATER RESOURCES  
 FRESHWATER WETLANDS PROGRAM

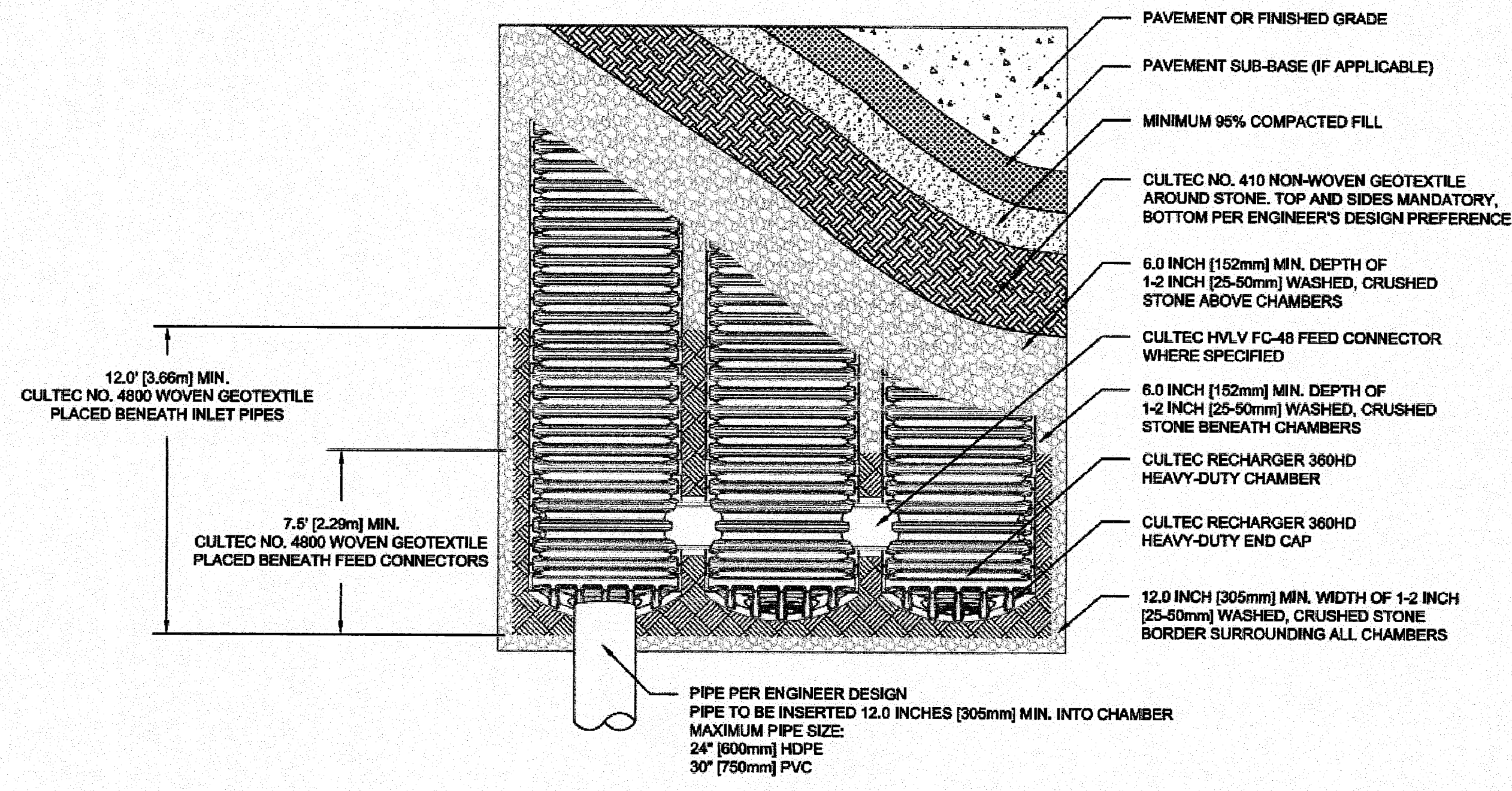
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL  
 DATED: OCT 21 2024 FILE # 21-0052

NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL  
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

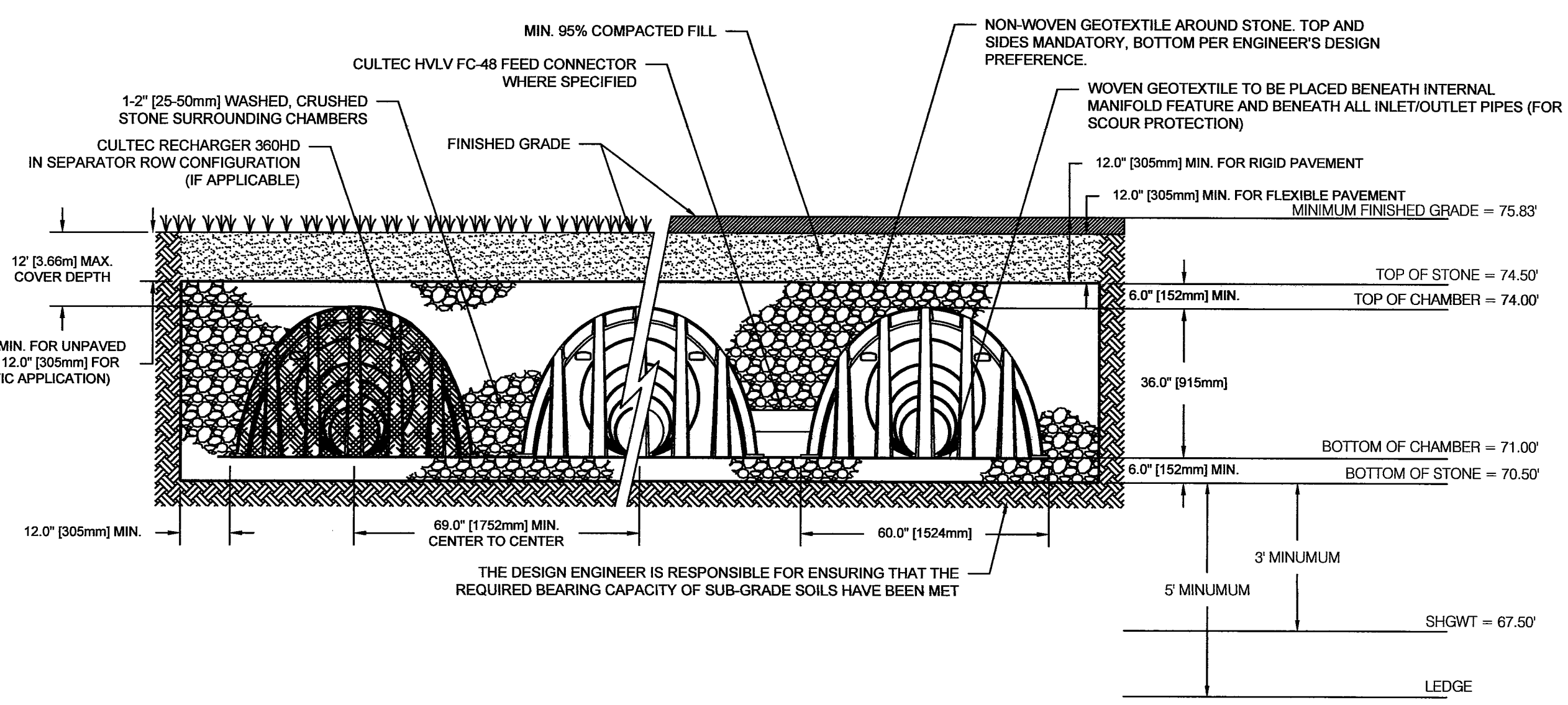
*Andy Chapman*

PERMITTING + STAGES:  
 -CONCEPT : COMPLETE  
 -MASTER PLAN : COMPLETE  
 -PRELIMINARY PLAN : COMPLETE  
 -RIDEM WETLANDS : RIDEM WETLANDS GENERAL PERMIT + RIDDES (STORMWATER)  
 -RIDOT PAPA : RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)  
 -FINAL PLAN : MUNICIPAL

**Plan View Drawing**

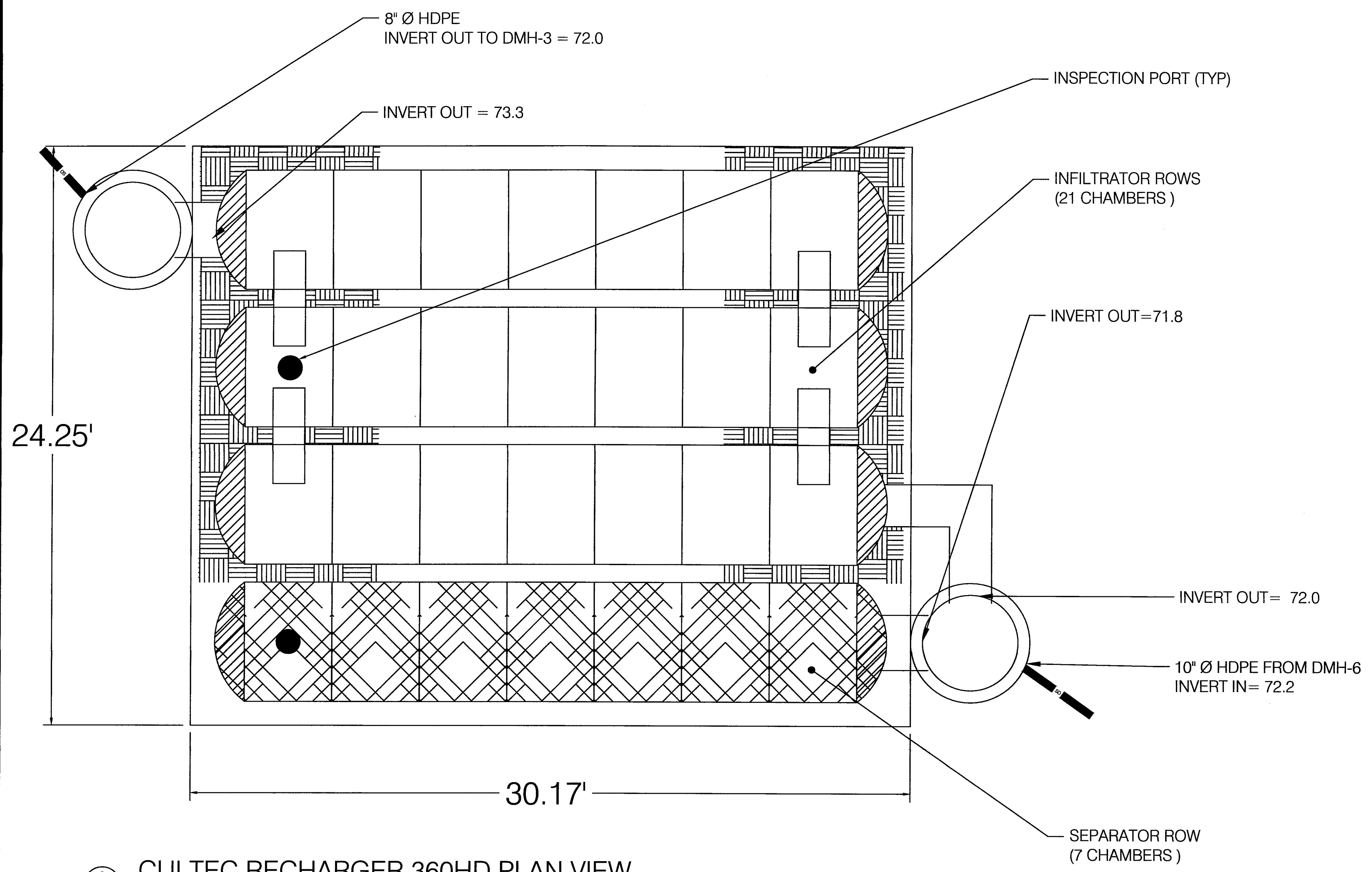


**CULTEC RECHARGER 360HD PLAN VIEW (TYP)**



**CULTEC RECHARGER 360HD CROSS SECTION**

- NOTES:
- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
    - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
    - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
    - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
  - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
  - THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
    - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
    - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
    - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
- THE DESIGN ENGINEER IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAVE BEEN MET



**CULTEC RECHARGER 360HD PLAN VIEW**

E:\PROJECTS\23.0138\_HAVENER\64 + 60 EAST MAIN ST\CIVIL\23.0138\_HAVENER SITE PLAN.DWG, C-205 NEI-Standard.cad, 8/26/2024, Craig Barry

**EROSION AND SEDIMENT CONTROL NOTES:**

- ALL EROSION CONTROL SHALL BE IN ACCORDANCE WITH RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST REVISION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THESE PLANS.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ONCE WEEKLY OR AFTER EVERY RAINFALL EVENT GREATER THAN 0.25 INCHES.
- SEDIMENT BUILD UP GREATER THAN ONE-HALF THE BARRIER HEIGHT SHALL BE REMOVED AND DISPOSED OF PROPERLY AS REQUIRED. ANY SEDIMENT BUILD UP OUTSIDE OF THE SEDIMENT BARRIER SHALL BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL MAINTAIN A RESERVE OF EROSION CONTROL MATERIALS FOR EMERGENCY USE AND ROUTINE MAINTENANCE.
- THE CONTROLS SHOWN ON THESE PLANS ARE INTENDED AS MINIMUM MEASURES. ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE IMPLEMENTED BY THE CONTRACTOR IF WARRANTED OR REQUESTED BY THE OWNER, OWNERS REPRESENTATIVE, ENGINEER, OR ANY APPLICABLE REGULATING AGENCY.
- PRIOR TO THE START OF ANY LAND CLEARING / GRUBBING OR OTHER CONSTRUCTION ACTIVITY THE PERIMETER CONTROLS SHALL BE PLACED, PROPERLY CONSTRUCTED AND CLEARLY VISIBLE. THESE CONTROLS SHALL REPRESENT THE LIMITS OF WORK AND WORKERS SHALL BE NOTIFIED THAT NO CONSTRUCTION ACTIVITY IS ALLOWED BEYOND THESE CONTROLS.
- IF OR AS POSSIBLE CONSTRUCTION SHALL BE PHASED TO LIMIT TO THE MAXIMUM EXTENT PRACTICABLE THE AMOUNT OF EXPOSED SOILS. ALL DISTURBED AREAS SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF COMPLETION OF GRADING ACTIVITIES.
- THE CONTRACTOR SHALL SCHEDULE WORK IN A WAY TO ALLOW POSITIVE DRAINAGE OF SUBGRADE THROUGHOUT CONSTRUCTION.
- CONSTRUCTION ENTRANCES PER RIDOT STANDARD DETAIL 9.9.0 SHALL BE EMPLOYED AT ALL POINTS OF INGRESS AND EGRESS FROM THE SITE.
- TEMPORARY DIVERSIONS, SEDIMENT BASINS, AND TEMPORARY SWALES MAY BE USED AND SHALL BE SIZED ACCORDING TO THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
- CATCH BASINS AND STORM DRAINS SHALL BE PROTECTED PER RIDOT STANDARD DETAIL 9.8.0 IN GRASSED AREAS OR SEDIMENT BAGS IN PAVED AREAS.
- TEMPORARY SEDIMENT STOCK PILES SHALL BE KEPT MOIST AND COVERED AT ALL TIMES. CALCIUM CHLORIDE SHALL ONLY BE USED IF AN APPROVAL FROM THE TOWN/CITY OR OTHER APPLICABLE AGENCY HAS BEEN GRANTED.
- DEWATERING FROM EXCAVATIONS WILL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO A DEWATERING BASIN PER RIDOT STANDARD 9.7.0. HAYBALE COIRALS, OR SEDIMENTATION BAGS. THE CONTRACTOR SHALL ENSURE THAT NO CONTAMINATE IS PRESENT IN ANY WATERS PRIOR TO DISCHARGE FROM SITE AND IS RESPONSIBLE FOR ALL ENGINEERING, EQUIPMENT, MATERIAL AND LABOR REQUIRED FOR THE SITE WATER REMOVAL DURING CONSTRUCTION.
- CONSTRUCTION WASTE MATERIALS SHALL BE KEPT ON-SITE AND DISPOSED OF IN AN APPROVED AND APPROPRIATE MANNER IN ACCORDANCE WITH ALL APPLICABLE REGULATORY AGENCIES.
- RIP-RAP SHALL BE USED WHERE NECESSARY TO CONTROL EXIT VELOCITIES.
- NON MOBILE (I.E. TRACKED MACHINERY) SHALL BE MAINTAINED WITHIN THE LIMIT OF DISTURBANCE DEFINED BY SEDIMENT BARRIER.
- NEWLY VEGETATED AREAS SHALL BE REGULARLY INSPECTED AND MAINTAINED TO ENSURE ESTABLISHMENT OF APPROPRIATE VEGETATION.
- THE CONTRACTOR SHALL NOT REMOVE ANY EROSION AND SEDIMENTATION CONTROL MEASURES UNTIL FINAL ACCEPTANCE OF THE SITE HAS OCCURRED.
- ALL DRAINAGE STRUCTURES SHALL BE CLEARED OF ACCUMULATED SEDIMENT PRIOR TO THE FINAL SITE ACCEPTANCE.
- TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISH GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS A TEMPORARY ASSIST UNLESS THE ACTIVITY IS TO RESUME WITHIN 21 DAYS. THE RECOMMENDED TEMPORARY SEATING DATES ARE MARCH 15 TO NOVEMBER 15 WITH THE APPROVAL OF THE ENGINEER. THIS TEMPORARY VEGETATIVE COVER SHALL CONSIST OF 60% OF ANNUAL OR PERENNIAL RYEGRASS AND 40% OF MULLETT OR SUDAN GRASS OR 100% OF WINTER RYE, ANNUAL OR PERENNIAL RYEGRASS SHALL BE PLANTED AT THE RATE OF 1.5 POUNDS PER 1000 FT<sup>2</sup>. WINTERIZE SHALL BE PLANTED AT A RATE OF 2.5 POUNDS PER 1000 FT<sup>2</sup>, AND MILLET OR SUDAN GRASS SHALL BE PLANTED AT A RATE OF 1 POUND PER 1000 FT<sup>2</sup>.

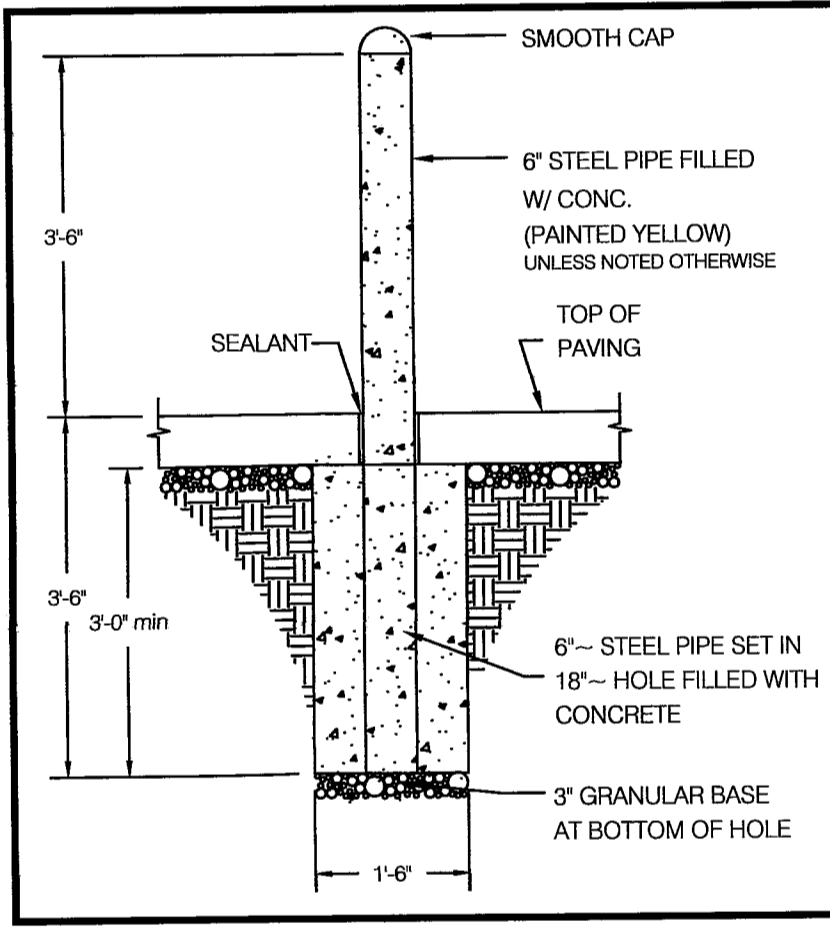
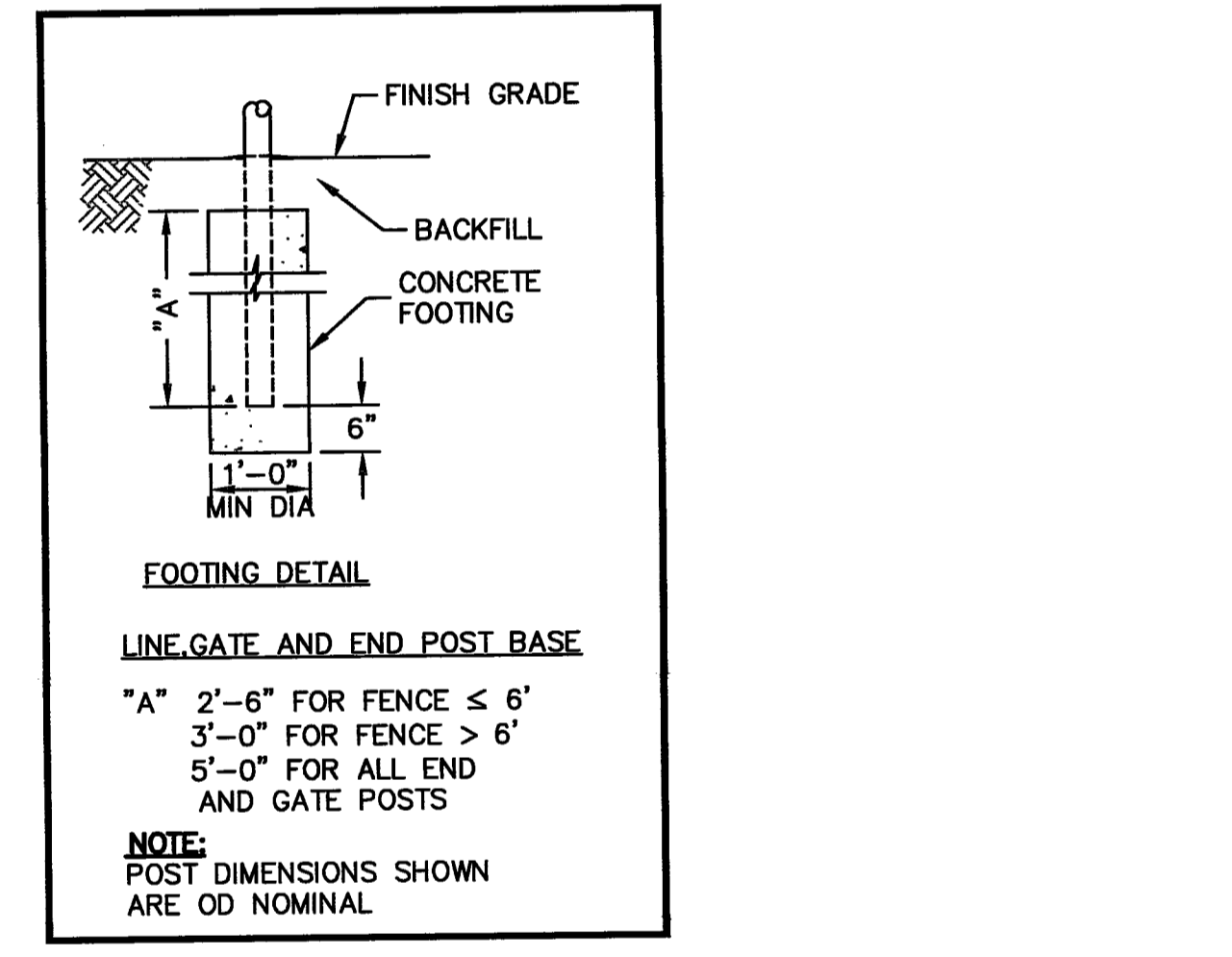
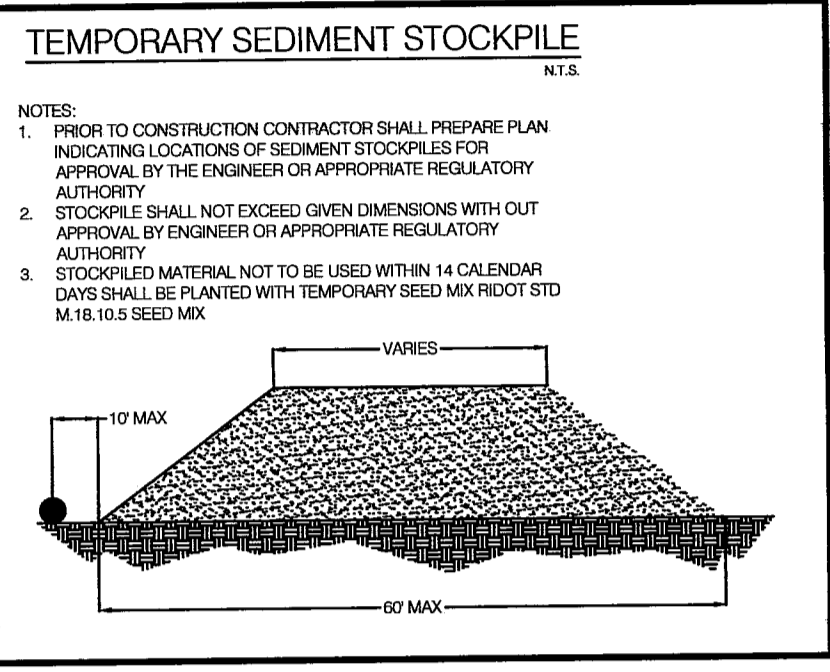
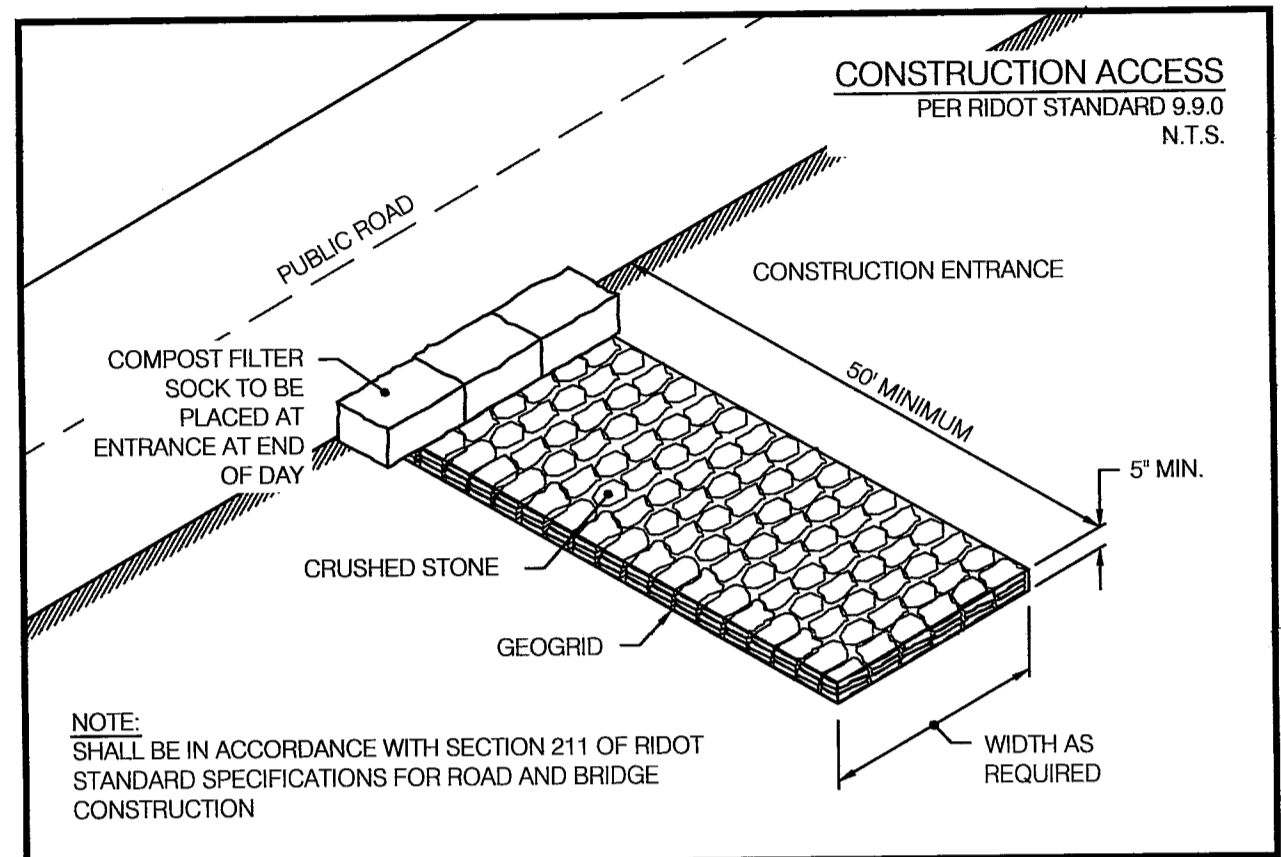
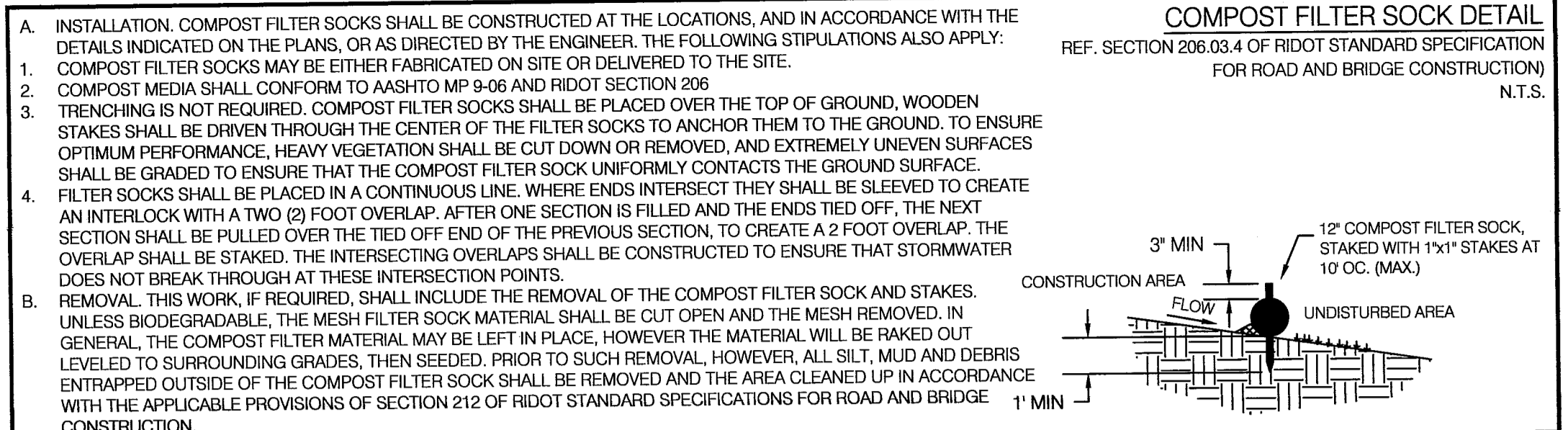
LIMESTONE AND FERTILIZER SHALL BE APPLIED ACCORDING TO SOIL TEST RECOMMENDATIONS OFFERED BY THE UNIVERSITY OF RHODE ISLAND SOIL TESTING LABORATORY. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE OR 7 1/2 POUNDS PER 1000 FT<sup>2</sup> OF 10 - 10-10 OR EQUIVALENT. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE AS FOLLOWS: (1) 3 TONS PER ACRE OR 135 POUNDS FOR 1000 FT<sup>2</sup> FOR CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL (2) 2 TONS PER ACRE OR 90 POUNDS FOR 1000 FT<sup>2</sup> FOR SANDY LOAM, LOAM, SILTY LOAM, AND (3) 1 TON PER ACRE OR 45 POUNDS FOR 1000 FT<sup>2</sup> LOAMY SAND OR SAND. TEMPORARY VEGETATIVE COVER SHALL BE INSTALLED AS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.

22. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISH GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEATING DATES ARE APRIL 1 TO MAY 31 AND AUGUST 15 TO OCTOBER 15. PERMANENT VEGETATIVE COVER OUTSIDE OF DETENTION BASINS, IMPERVIOUS SURFACES, OR NOT OTHERWISE SPECIFIED ON THE LANDSCAPE PLANS SHALL RECEIVE THE FOLLOWING SEED MIXTURE ALSO KNOWN AS PARK SEED MIXTURE.

75% OF RED FESCUE APPLICATION RATE: 1.75 LBS / 1,000 SF  
 15% OF KENTUCKY BLUEGRASS APPLICATION RATE: 0.35 LBS / 1,000 SF  
 5% OF COLONIAL BENTGRASS APPLICATION RATE: 0.11 LBS / 1,000 SF  
 5% OF PERENNIAL RYEGRASS APPLICATION RATE: 0.11 LBS / 1,000 SF

LIMESTONE AND FERTILIZER SHALL BE APPLIED ACCORDING TO SOIL TEST RECOMMENDATIONS OFFERED BY THE UNIVERSITY OF RHODE ISLAND SOIL TESTING LABORATORY. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT A RATE OF 500 POUNDS PER ACRE OR 11.5 POUNDS PER 1000 FT<sup>2</sup> OF 10-20 DASH 20 OR EQUIVALENT. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE AS FOLLOWS: 4 TONS PER ACRE OR 180 POUNDS PER 1000 FT<sup>2</sup> FOR CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL; 3 TONS PER ACRE OR 135 POUNDS PER 1000 FT<sup>2</sup> FOR SANDY LOAM, LOAM, OR SILTY LOAM; AND 2 TONS PER ACRE OR 90 POUNDS PER 1000 FT<sup>2</sup> LET ME SAND OR SAND.

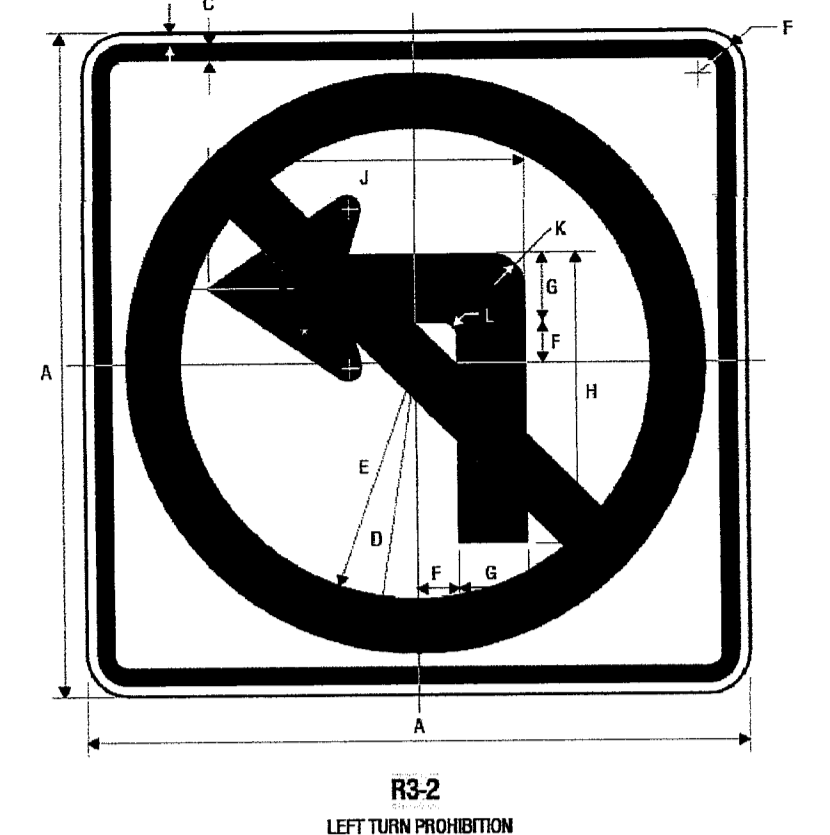
NOTE: THE USE OF HAY IS NOT ALLOWED. ALL REFERENCES TO HAY, SHALL BE TAKEN TO MEAN STRAW.



**FLARED END SECTIONS**

PART #	PIPE SIZE	A	B(MAX)	H	L	W
1015NP	10 in (254 mm)	3.8 in (95 mm)	10.0 in (254 mm)	6.5 in (165 mm)	28.0 in (711 mm)	34.5 in (876 mm)
1215NP	12 in (305 & 375 mm)	8.5 in (215 mm)	10.0 in (254 mm)	6.5 in (165 mm)	25.0 in (635 mm)	29.0 in (737 mm)
1910NP	16 in (406 mm)	7.5 in (191 mm)	15.0 in (381 mm)	6.5 in (165 mm)	32.0 in (813 mm)	35.0 in (889 mm)
2410NP	24 in (603 mm)	7.5 in (191 mm)	18.0 in (457 mm)	6.5 in (165 mm)	36.0 in (914 mm)	45.0 in (1143 mm)
3015NP	30 in (762 mm)	7.5 in (191 mm)	25.0 in (635 mm)	6.5 in (165 mm)	42.0 in (1067 mm)	58.0 in (1473 mm)
3615NP	36 in (914 mm)	7.5 in (191 mm)	25.0 in (635 mm)	6.5 in (165 mm)	42.0 in (1067 mm)	63.0 in (1600 mm)

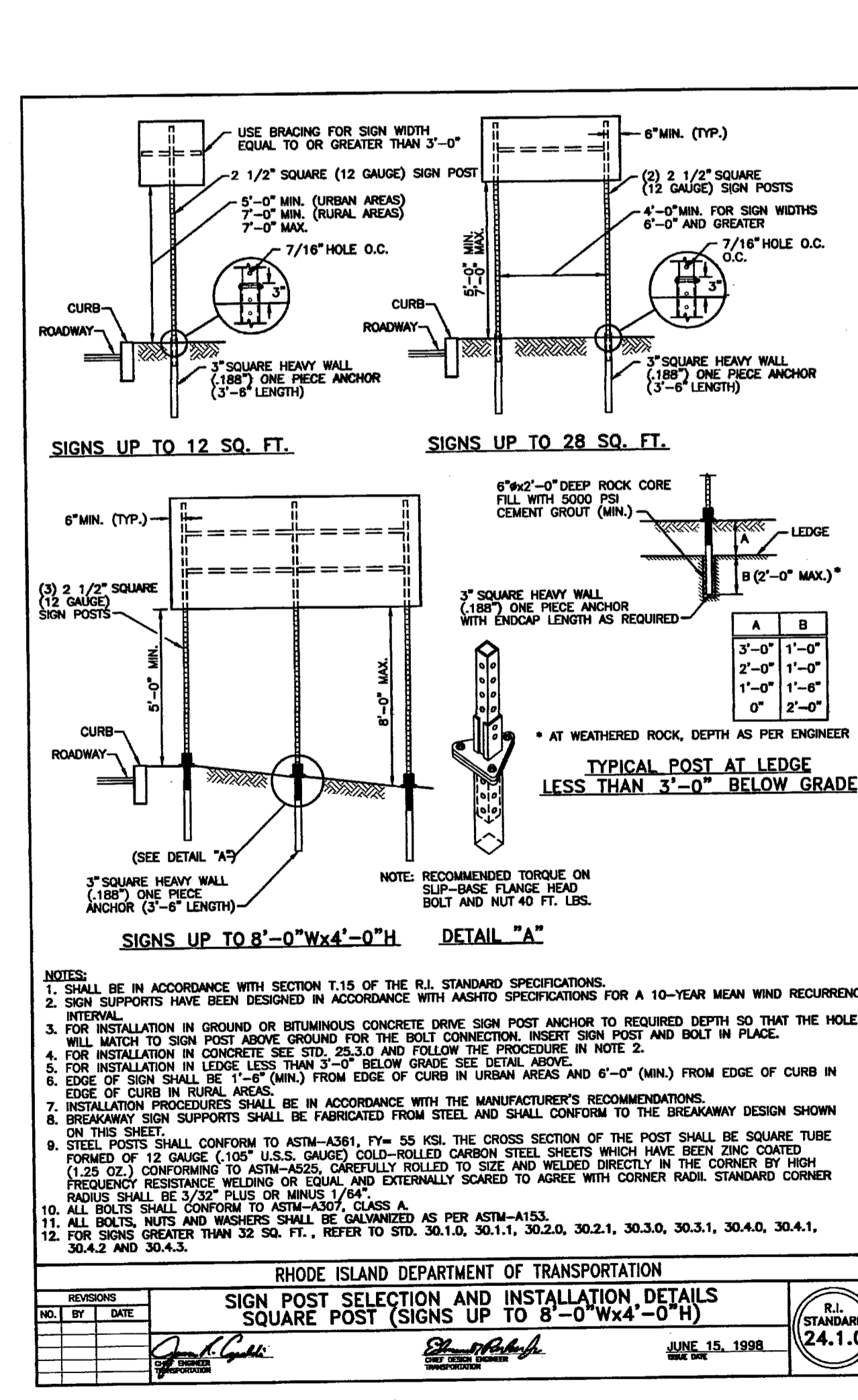
NOTE: ALL DIMENSIONS ARE NOMINAL.  
 © 2023 Advanced Drainage Systems, Inc.



A	B	C	D	E	F	G	H	J	K	L
24	3/75	8/25	10/5	8.5	1.5	2.5	10.5	11.5	2	.5
30	.5	.75	13/25	10/25	1.8/75	3.2/25	13/25	14.5	2.5	8/25
36	8/25	8/75	15/75	12/75	2.2/5	3.7/5	15/75	17/25	3	7/5
48	.75	1.25	21	17	3	5	21	23	4	1

COLORS: CIRCLE & DIAGONAL - RED (RETROREFLECTIVE)  
 SYMBOL & BORDER - BLACK  
 BACKGROUND - WHITE (RETROREFLECTIVE)

**NO LEFT TURN MUTCD SIGN DETAIL**  
 SCALE: N.T.S.



REVISIONS

NO.	BY	DATE
1		

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
**SIGN POST SELECTION AND INSTALLATION DETAILS**  
 SQUARE POST (SIGNS UP TO 8'-0" Wx4'-0" H)

APPROVED BY: [Signature]  
 DATE: JUNE 15, 1998  
 R.I. STANDARD 24.1.0

**NEI**  
**Narragansett Engineering Inc.**  
 Civil - Survey Structural Environmental Design  
 3102 East Main Road, Portsmouth RI 02871  
 Tel. 401.683.6630 www.nei-cds.com

**SHEET TITLE**  
 DETAILS & NOTES  
 LOFTS AT RIVERPOINT

BRANDON HAVENER  
 OWNER - 60 E MAIN LLC  
 60 EAST MAIN ST,  
 WEST WARWICK, RI 02893  
 CELL - 401-203-4799  
 E: BRANDON@BR5EMAINLLC.COM  
 E: BRANDON@HAVENERPROPERTIES.COM

PROPERTY RECORDS  
 PROPERTY RECORD  
 64 - 60 EAST MAIN ST, WEST WARWICK, RI 02893  
 FLAT: 18, LOT: 61  
 ZONE: C(MILL OVERLAY), AREA: 0.234 ACRES  
 N/P: 60 E MAIN LLC  
 YEAR BUILT: 1908

**JOSEPH W. MALO**  
 No. 0073  
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

8/26/24

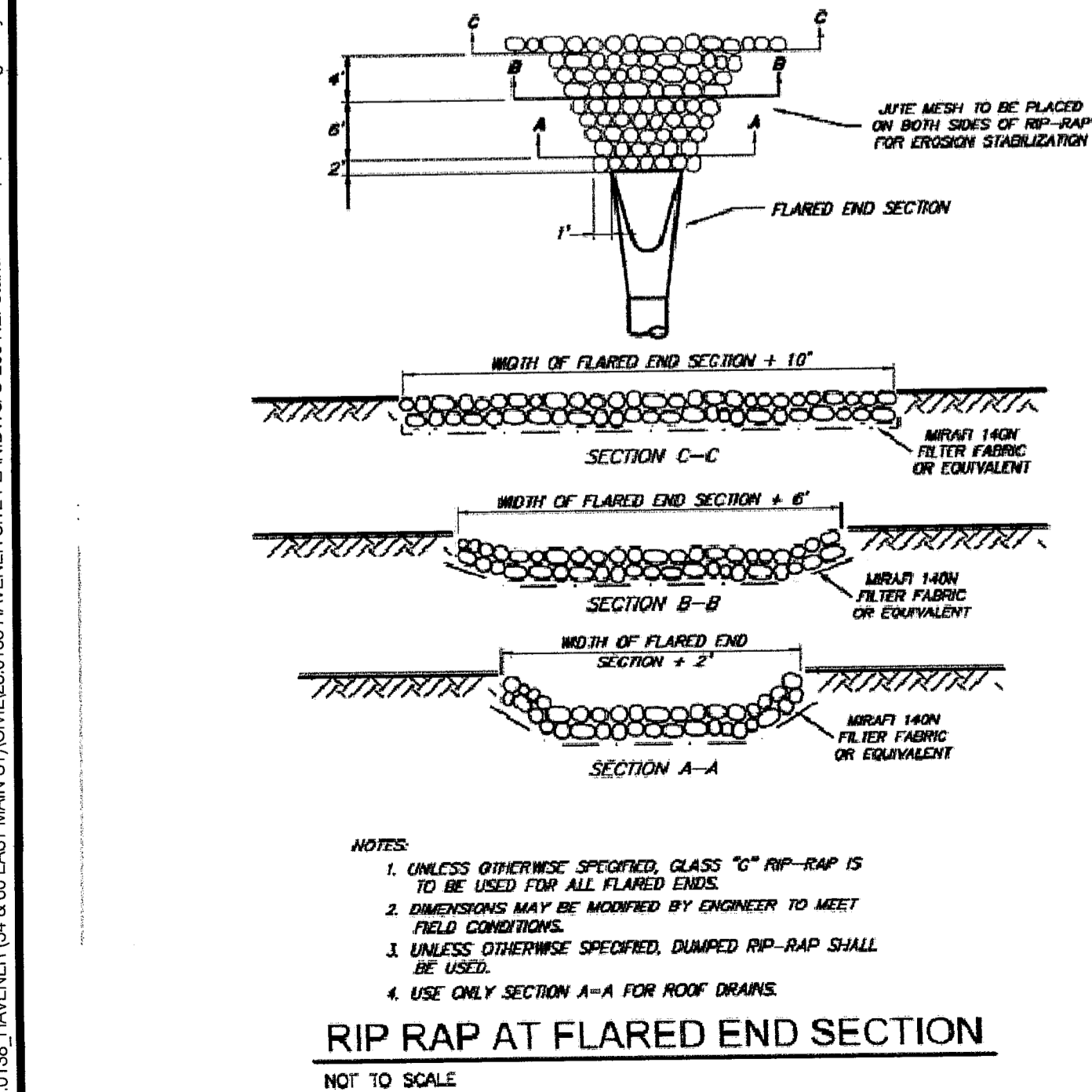
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF PERMITTING  
 FRESHWATER DIVISION  
 APPROVED WITH COMMENTS

SPECIFIC TO THE LETTER OF APPROVAL  
 DATED: OCT 21 2024  
 NO CHANGES ALLOWED WITHOUT APPROVAL  
 APPROVED PLANS FOR CONSTRUCTION SITE

PROJECT #	DATE	DRAWN	CHECK
23.0138	2/29/24	CB	JM

No	DATE	REVISIONS/DESCRIPTION	BY
1	8/20/24	DEM / DOT COMMENTS	CB

**PERMITTING + STAGES:**  
 -CONCEPT : COMPLETE  
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 -HIDEM WETLANDS - RIDEM WETLANDS GENERAL PERMIT + RIPDES (STORMWATER)  
 -RIDOT PAPA : RIDOT (PHYSICAL ALTERATION PERMIT APPLICATION)  
 -FINAL PLAN : MUNICIPAL



SCALE: C-206

E:\PROJECTS\23.0138 - HAVENER\64 & 60 EAST MAIN ST\23.0138 - HAVENER SITE PLAN DWG C-206 NEI-Standard.dwg 8/26/2024 Craig Barry