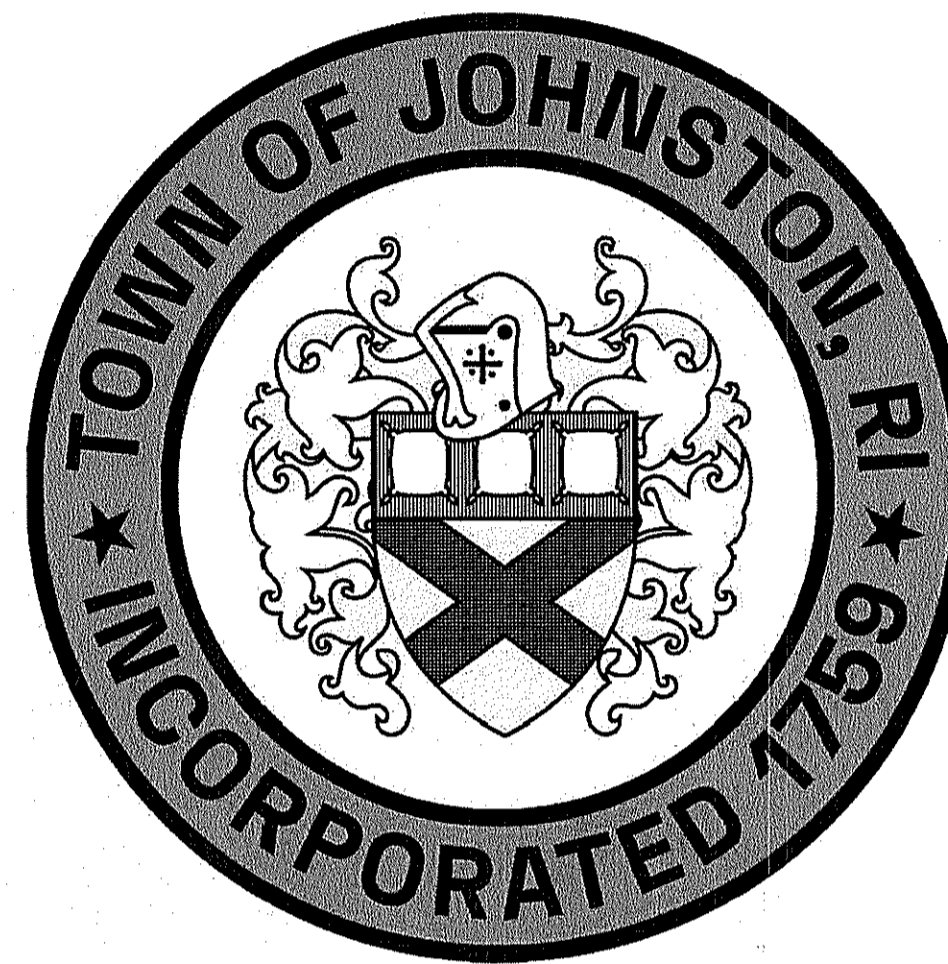


SITE IMPROVEMENT PLANS FOR TOWN OF JOHNSTON DEPARTMENT OF DEVELOPMENT AND PUBLIC SERVICES



100 IRONS AVENUE
JOHNSTON, RHODE ISLAND

THE HONORABLE JOSEPH POLISENA, JR. - MAYOR OF JOHNSTON
THOMAS E. DELLER, AICP, DIRECTOR DPS - TOWN PLANNER/ADMINISTRATIVE OFFICER

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

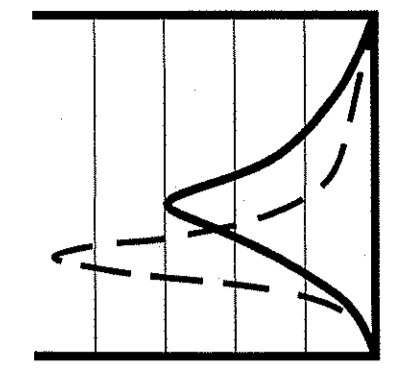
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM

APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL

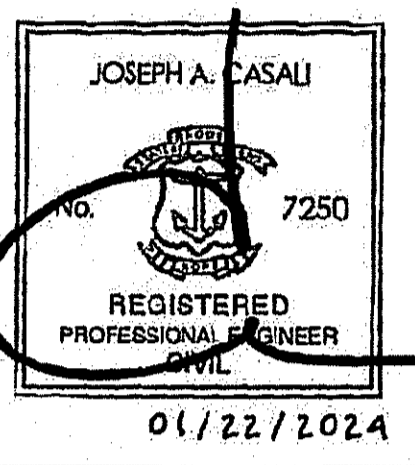
DATED: 2-15-24 FILE #: 23-0158

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

Andy Chapin



JOE CASALI ENGINEERING, INC.
CIVIL, SITE DEVELOPMENT, TRANSPORTATION
DRAINAGE, WETLANDS, ISDS, TRAFFIC, FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
401-944-1300 401-944-1313 FAX WWW.JCEENR.COM



**TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530**

REVISIONS:		
NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/20/24	RIDEM COMMENTS

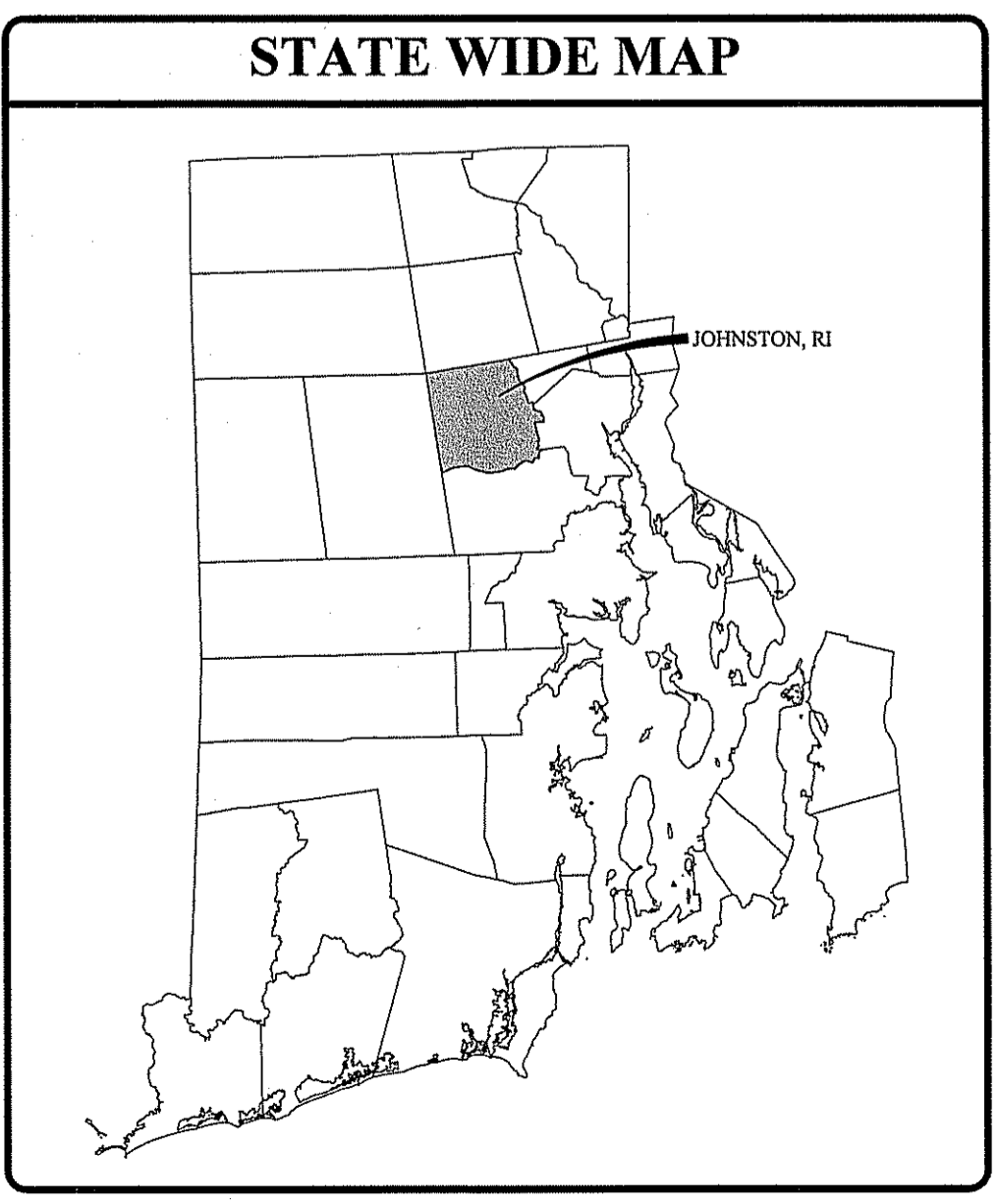
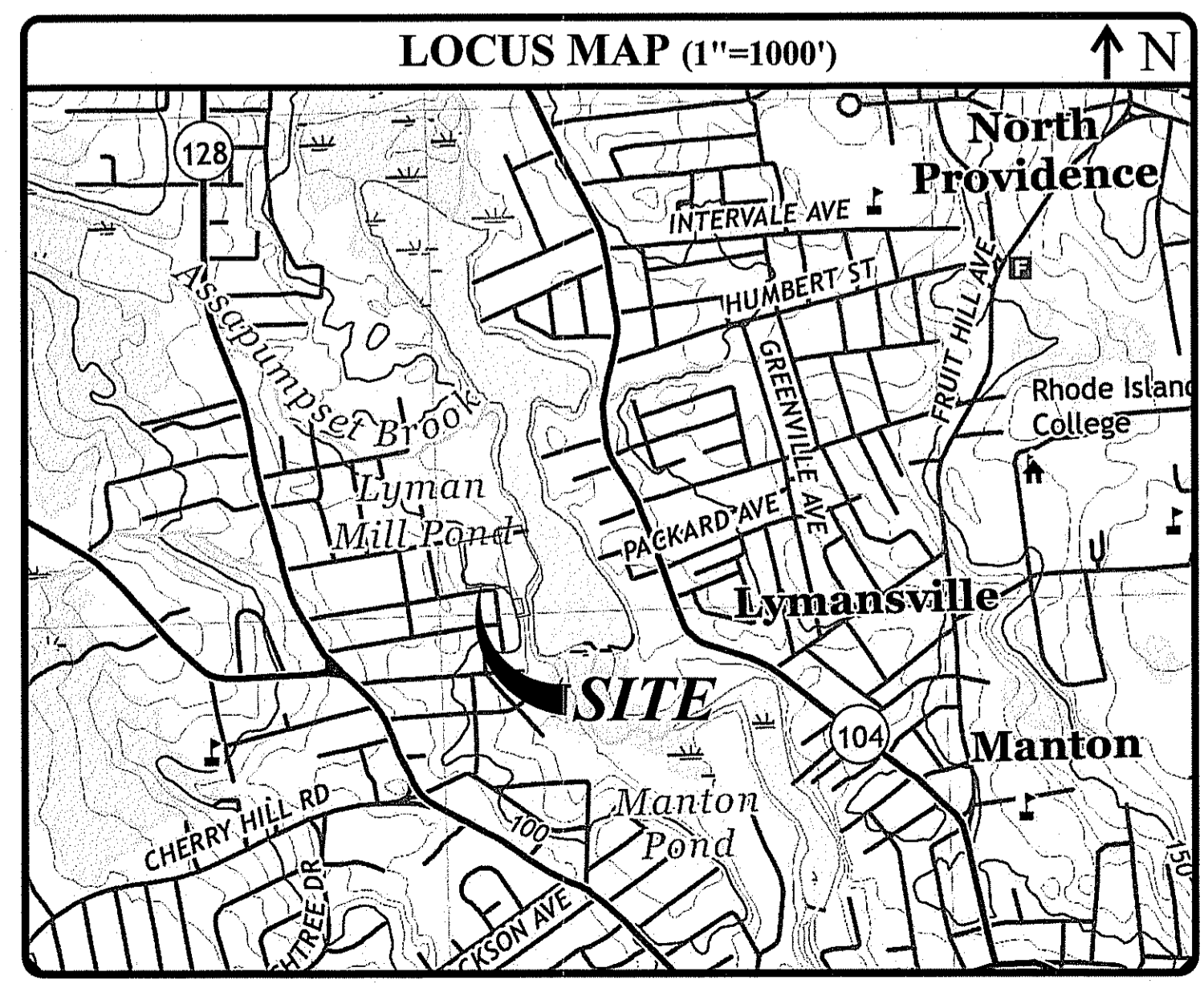
DESIGNED BY: WMLJR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: AUGUST 2023
PROJECT NO: 06-901

PRELIMINARY, NOT FOR CONSTRUCTION

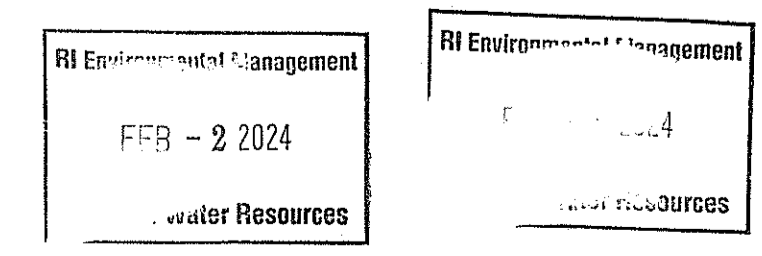
COVER SHEET

SHEET 1 OF 10

PROJECT TEAM	
OWNER:	TOWN OF JOHNSTON c/o THOMAS DELLER, DPS DIRECTOR 100 IRONS AVENUE JOHNSTON, RI 02919 PHONE: 401-231-4000, EXT. 4201
CIVIL ENGINEER:	JOE CASALI ENGINEERING, INC. 300 POST ROAD WARWICK, RI 02888 PHONE: 401-944-1300 FAX: 401-944-1313
WETLAND BIOLOGIST:	NATURAL RESOURCE SERVICES, INC. 180 TINKHAM LANE HARRISVILLE, RI 02830 PHONE: 401-568-7390
SURVEYOR:	N. VELTRI SURVEY, INC. 190 PUTNAM PIKE JOHNSTON, RI 02919 PHONE: 401-231-3200



INDEX OF DRAWINGS	
SHEET NO.	PLAN
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS AND SITE PREP. PLAN
4	SITE PLAN
5	GRADING AND DRAINAGE PLAN
6	UTILITY PLAN
7	DRAINAGE DETAILS I
8	CIVIL DETAILS I
9	CIVIL DETAILS II
10	RI STANDARD DETAILS
R1	EXISTING CONDITIONS PLAN, PREPARED BY N. VELTRI SURVEYING, INC., DATED AUGUST 2022.



GENERAL NOTES:

- 1. CLASS I LIMITED CONTENT BOUNDARY SURVEY AND CLASS III TOPOGRAPHIC SURVEY COMPLETED BY NICHOLAS VELTRI, PLS #1719 OF N. VELTRI SURVEY, INC., 24 CELESTIAL DRIVE, NARRAGANSETT, RI 02882 IN AUGUST 2022. SUPPLEMENTAL INFORMATION OBTAINED BY JOE CASALI ENGINEERING, INC. IN APRIL 2023.
2. THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION...

SITE NOTES:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS.
2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS, AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICAN WITH DISABILITIES ACT...

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- 1. THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
2. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION...

BMP MAINTENANCE SCHEDULE:

- 1. ALL MAINTENANCE (INCLUDING CLEANING) REQUIRED DURING THE CONSTRUCTION PHASE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL INCLUDE:
A. MEASURES NEEDED TO ENSURE THE PROPER OPERATION OF THE STORMWATER RUNOFF (DRAINAGE) AND WATER QUALITY CONTROL SYSTEMS...
B. INSPECTION OF ALL SLOPES, BERMS, AND OTHER CONTROL STRUCTURES FOR STRUCTURAL INTEGRITY/STABILITY AND EVIDENCE OF SOIL EROSION PROCESSES...

ROOF DRAIN LEADERS

- PERFORM ROUTINE ROOF INSPECTIONS QUARTERLY.
KEEP ROOFS CLEAN AND FREE OF DEBRIS.
KEEP ROOF DRAINAGE SYSTEMS CLEAR.

PRE-TREATMENT - PEA GRAVEL DIAPHRAGM

- AFTER CONSTRUCTION, THE SEDIMENT FOREBAYS SHALL BE INSPECTED AND CLEANED WHEN SEDIMENT BUILD UP IS IN EXCESS OF 6" OR 25% OF THE SEDIMENT STORAGE VOLUME.

PRE-TREATMENT SEDIMENT FOREBAYS

- AFTER CONSTRUCTION, THE SEDIMENT FOREBAYS SHALL BE INSPECTED AND CLEANED WHEN SEDIMENT BUILD UP IS IN EXCESS OF 6" OR 25% OF THE SEDIMENT STORAGE VOLUME.

SAND FILTER

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE SAND FILTER SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS...

BIORETENTION BASIN

- DURING THE SIX MONTHS IMMEDIATELY AFTER CONSTRUCTION, THE BASIN SHALL BE INSPECTED AFTER THE FIRST TWO RAINFALL EVENTS OF AT LEAST 1.0 INCH TO ENSURE THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER INSPECTIONS SHALL BE CONDUCTED ON AN ANNUAL BASIS...

LOAMING & SEEDING

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- 1. AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS 'LOAM AND SEED' ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
2. THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA)...

SEEDING

AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

- 40% CREEPING RED FESCUE
20% IMPROVED PERENNIAL RYEGRASS
20% IMPROVED KENTUCKY BLUEGRASS
20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE MARCH 15 TO JUNE 15 AND SEPTEMBER 15 TO NOVEMBER 15. AT THE CONTRACTORS DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION.
2. TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
3. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED IN THE STATE OR TOWN RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC, SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

MISCELLANEOUS UTILITY NOTES:

- 1. PRIOR TO CONSTRUCTION ALL POTENTIAL UTILITY/DRAINAGE CONFLICTS MUST BE IDENTIFIED BY THE CONTRACTOR. ANY MODIFICATIONS TO THE PROPOSED UTILITIES TO AVOID CONFLICTS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. OVERHEAD AND/OR UNDERGROUND ELECTRIC, GAS AND COMMUNICATIONS SERVICES ARE TO BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY.
3. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE A SUFFICIENT NUMBER OF WORKMEN AND GUARDS AS MAY BE NECESSARY TO PROPERLY SAFEGUARD THE PUBLIC FROM THEIR OPERATIONS.
4. THE CONTRACTOR SHALL TAKE PRECAUTIONS AGAINST DAMAGING OF PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES AND SHALL PROMPTLY REPAIR AT HIS OWN EXPENSE ANY DAMAGE TO SUCH PAVING, SIDEWALKS, UTILITIES, OR PRIVATE PROPERTIES TO THE SATISFACTION OF THE OWNER AND/OR THE TOWN OF SMITHFIELD.

LEGEND:

- EXISTING PROPERTY LINE
ABUTTING PROPERTY LINE
BUILDING SETBACK LINE
FEMA 100-YEAR FLOODPLAIN LINE
EDGE OF RIVER
TOP OF RIVERBANK
WETLAND BUFFER
20' PRIMARY STRUCTURE SETBACK FROM A WETLAND BUFFER
EXISTING JURISDICTION
EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING CURB
PROPOSED CURB
CHAIN LINK FENCE
EXISTING DRAIN LINE
PROPOSED DRAIN LINE
EXISTING DRAINAGE MANHOLE
PROPOSED DRAINAGE MANHOLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
EXISTING UTILITY POLE
PROPOSED UTILITY POLE
EXISTING TELECOM DUCTBANK
EXISTING ELECTRIC DUCTBANK
PROPOSED GAS LINE

JOE CASALI ENGINEERING, INC. CIVIL - SITE DEVELOPMENT - TRAFFIC - FLOODPLAIN DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN 300 POST ROAD, WARWICK, RI 02886 (401) 944-1000 (401) 944-1313 FAX WWW.JOECASALI.COM

JOSEPH A. CASALI No. 7250 REGISTERED PROFESSIONAL ENGINEER 01/22/2024

TOWN OF JOHNSTON DEPT. OF DEV. AND PUBLIC SERVICES 100 IRONS AVENUE JOHNSTON, RHODE ISLAND AP 34, LOTS 112 & 530

Table with 3 columns: NO., DATE, DESCRIPTION. Contains revision history for NBC COMMENTS, RIDEM COMMENTS.

DESIGNED BY: WMLJR DRAWN BY: SDSEIP CHECKED BY: JAC DATE: AUGUST 2023 PROJECT NO: 06-901

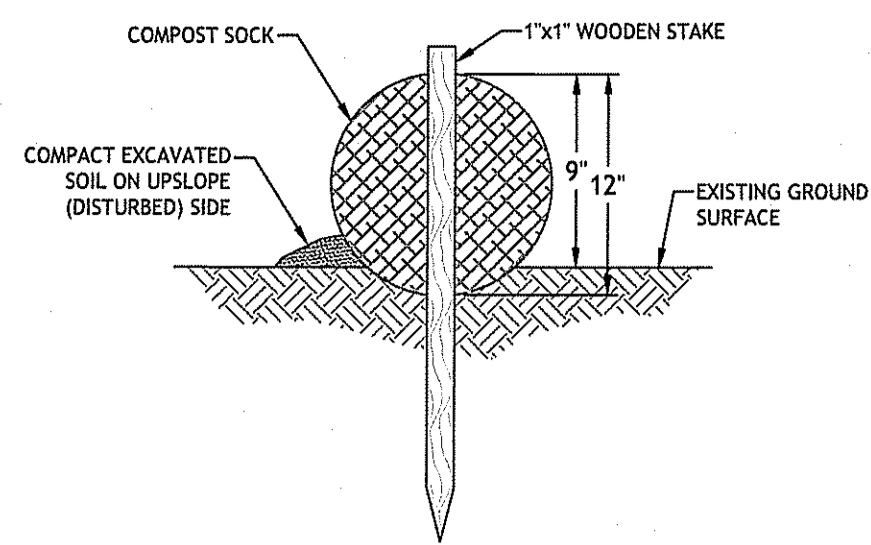
PRELIMINARY, NOT FOR CONSTRUCTION

GENERAL NOTES & LEGEND

SHEET 2 OF 10

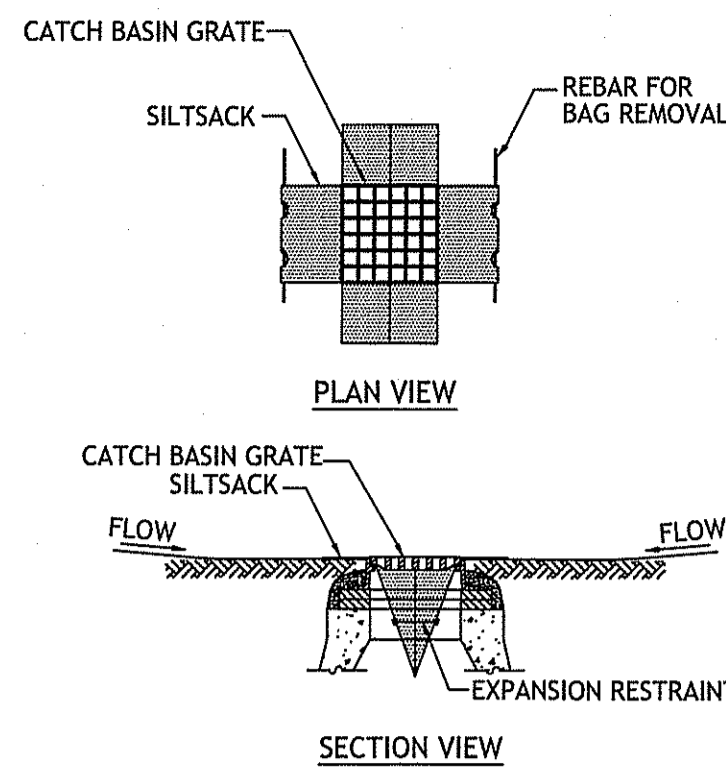
RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESHWATER WETLANDS PROGRAM APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED: 2-15-24 FILE #: 23-0188 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Q:\06-90 Town of Johnston\06-901 DPW Garage\ACAD\Johnston DPW [DEEM RT] - R1 - (Grading Adjustment).dwg Feb. 02, 2024 8:54am



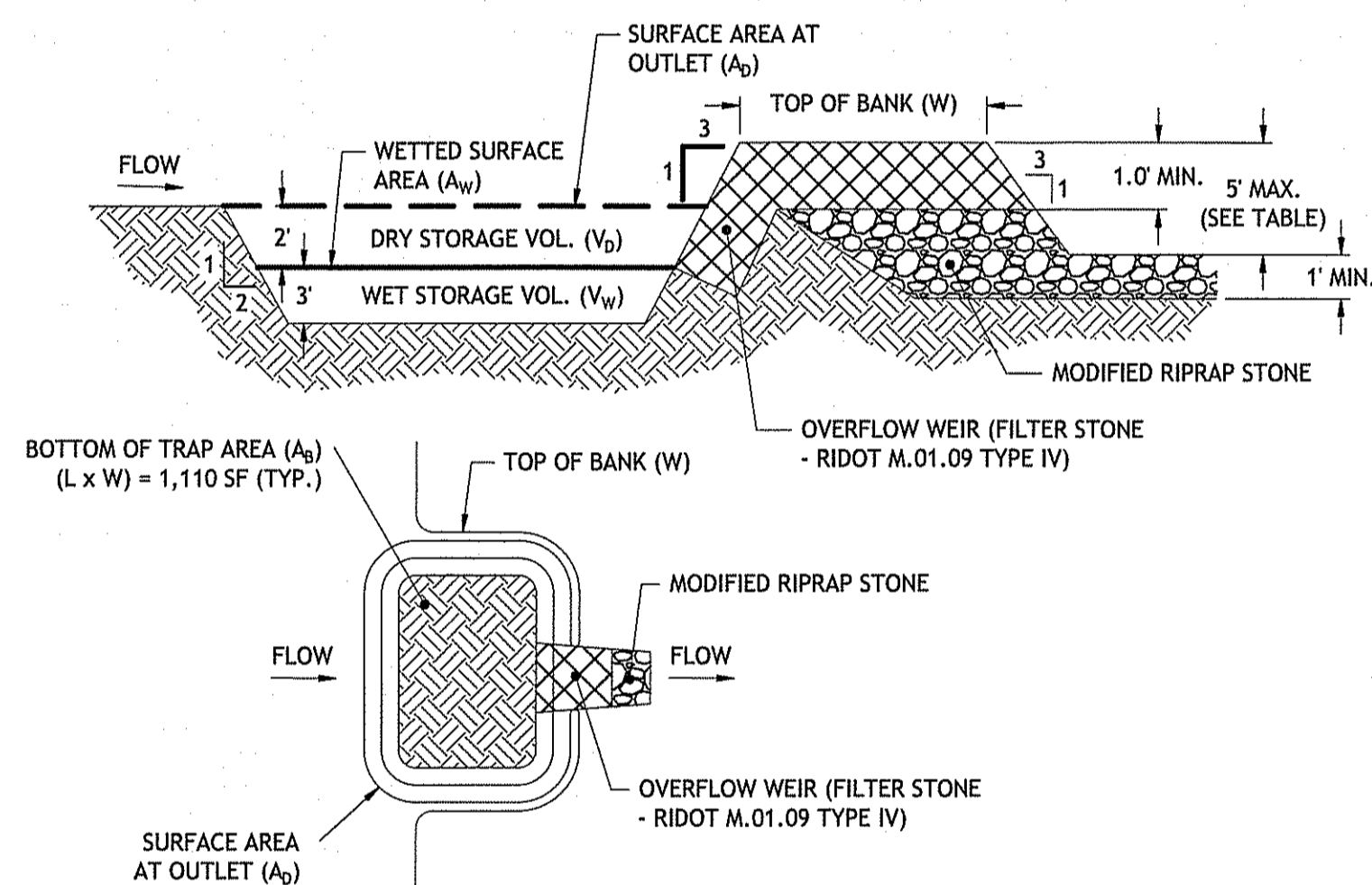
- NOTES:**
- BEGIN WATTLE INSTALLATION BY EXCAVATING A 2 TO 3-INCH-DEEP BY 9' WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE OR ALONG THE EXISTING GROUND SURFACE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE OR ON THE DISTURBED SIDE OF THE ANCHOR TRENCH.
 - PLACE WATTLE IN THE TRENCH SUCH THAT IT CONTOURS TO THE EXISTING SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UP-SLOPE OR DISTURBED SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
 - SECURE WATTLE WITH 18 TO 24-INCH-LONG STAKES. INSTALL AN ADDITIONAL STAKE AT EACH END OF THE WATTLE. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2 TO 3 INCHES OF STAKE EXTENDING ABOVE. THE STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE OR GROUND SURFACE.

1 COMPOST SOCK
NOT TO SCALE



- Notes:**
- INSTALL SILTSACK IN SELECTED CATCH BASINS IDENTIFIED ON THE EXISTING CONDITIONS AND SITE PREPARATION PLAN BEFORE COMMENCING WORK.
 - GRATE TO BE PLACED OVER SILTSACK. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

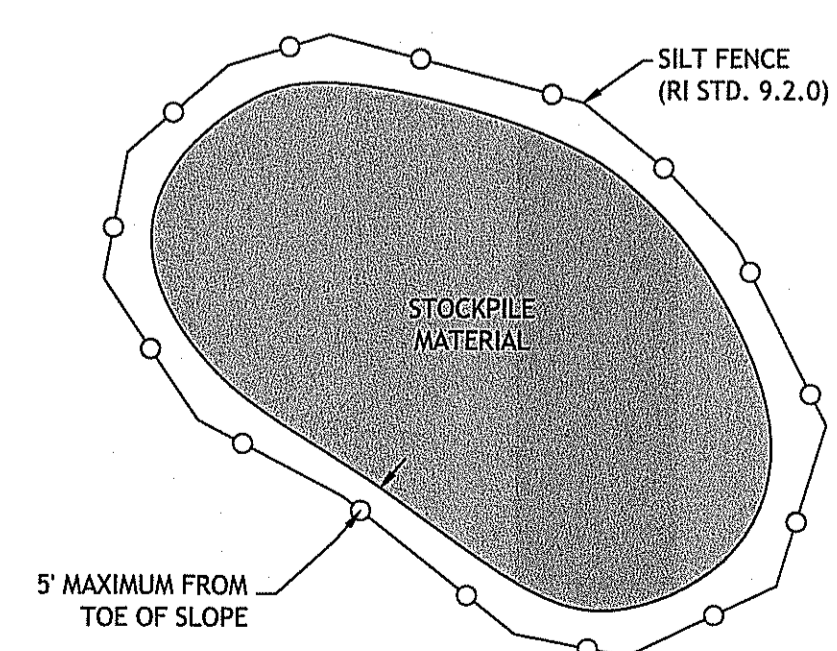
2 SILT SACK SEDIMENT TRAP
NOT TO SCALE



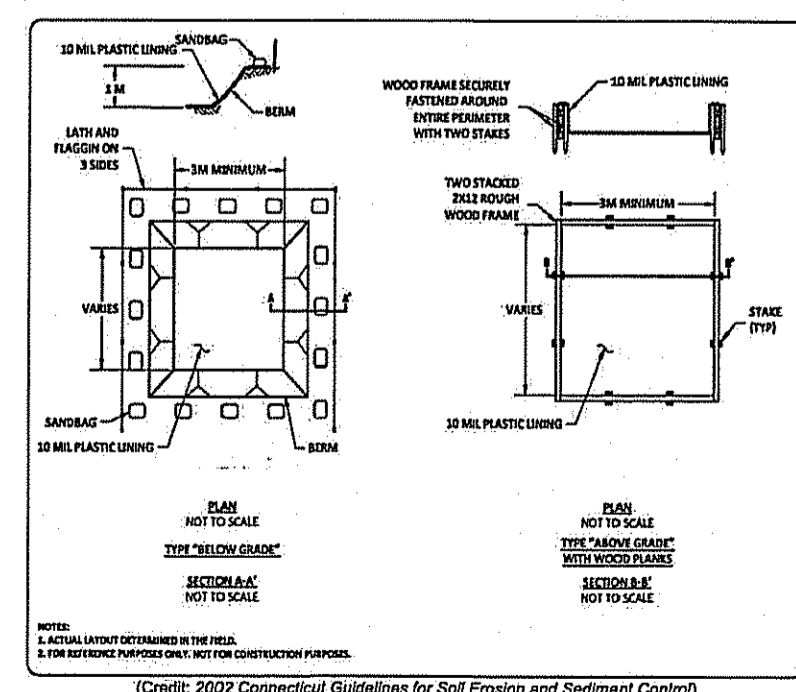
- NOTES:**
- PHASING IS ANTICIPATED TO BE UTILIZED FOR THIS PROJECT IN ORDER TO COMPLETE DISTURBANCE ACTIVITIES WITHIN A SIX (6) MONTH WINDOW. A DETAILED PHASING PLAN WILL BE DEVELOPED UPON ENGAGEMENT OF A SITE CONTRACTOR AND SUBMITTED TO THE DESIGN ENGINEERING AND THE TOWN OF COVENTRY FOR REVIEW AND APPROVAL.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD FIT AND DETERMINE ACTUAL SEDIMENT TRAP SIZES, LOCATIONS, DIVERSION BERM LOCATIONS, SWALES, SILT FENCE LOCATIONS AND ANY OTHER APPROPRIATE SEDIMENT CONTROL MEASURES. ALL SOIL EROSION MEASURES SHALL BE IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (2016).
 - PROPOSED SEDIMENT TRAP SHOWN SHALL BE DESIGNED TO ACCOMMODATE DRAINAGE FROM CONTRIBUTING AREAS OF 1 TO 5 ACRES.
 - EACH TEMPORARY SEDIMENT TRAP SHALL BE PROVIDED A SEDIMENT STORAGE STAKE AND MARKER, IN ACCORDANCE WITH THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (2016).

3 TEMPORARY SEDIMENT TRAP DETAIL
NOT TO SCALE

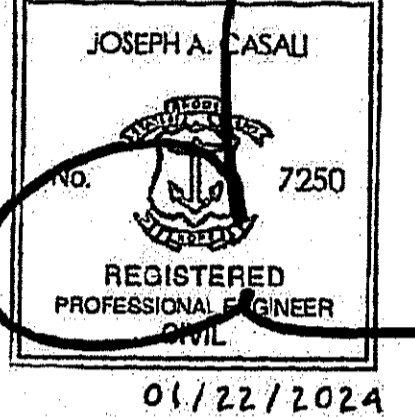
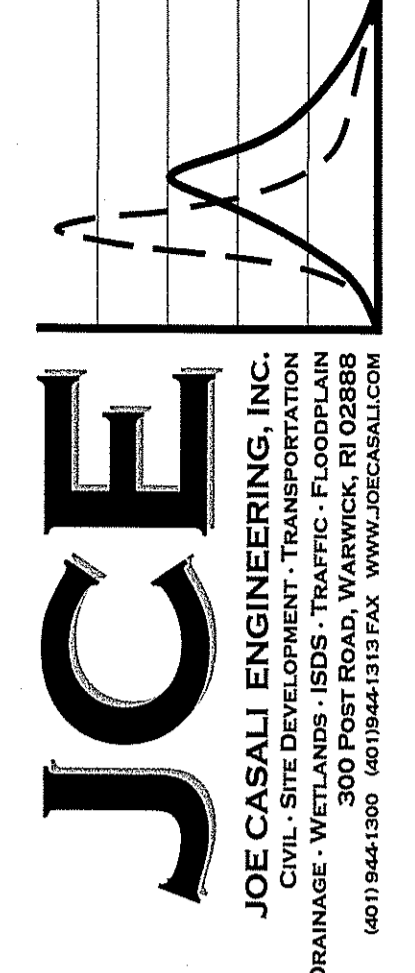
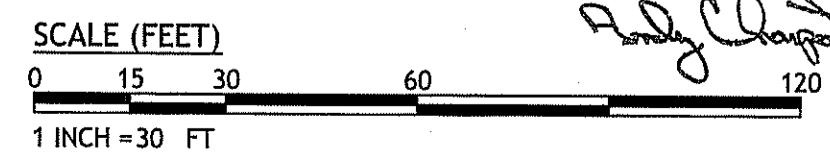
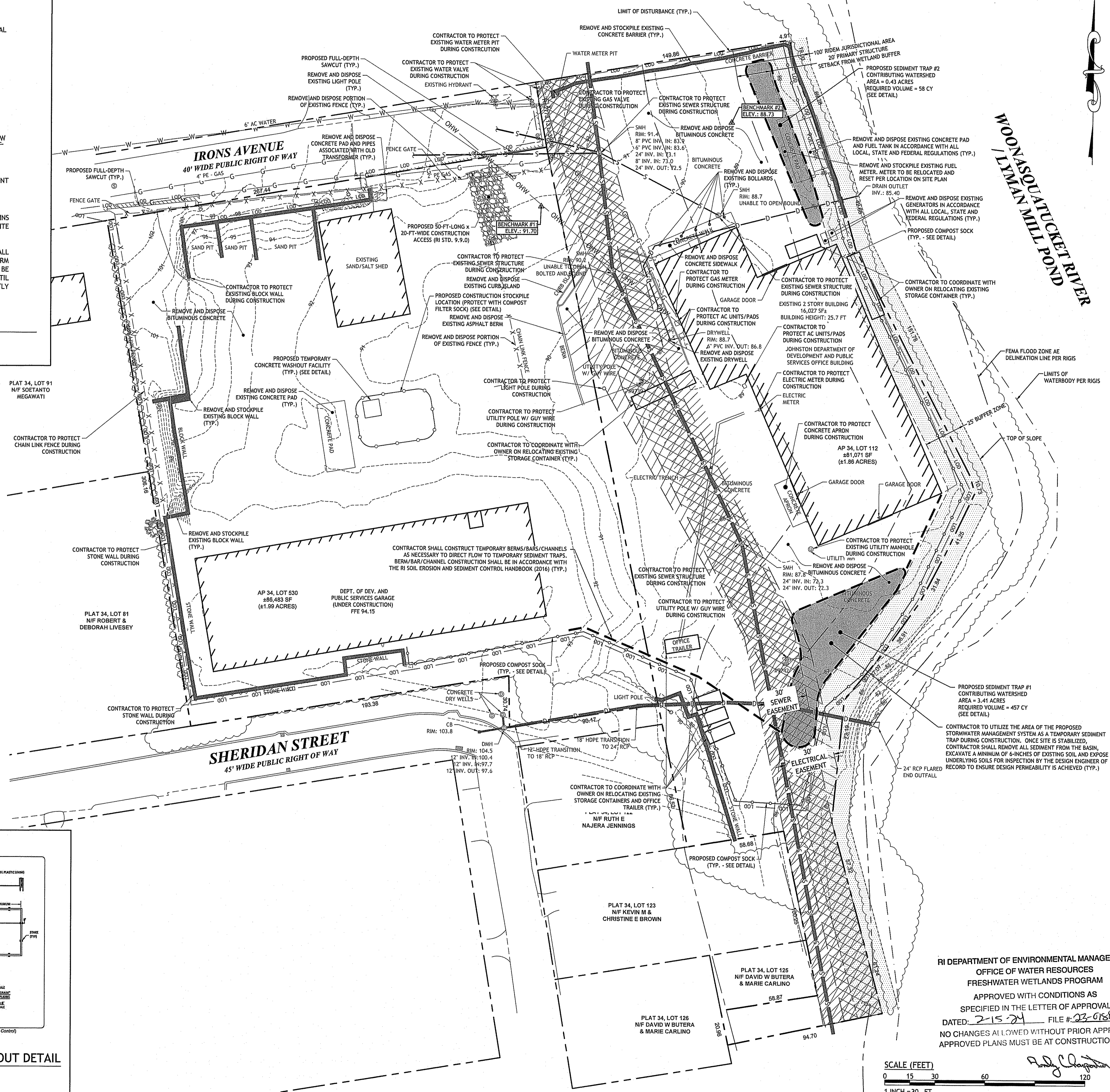
NOTE TO CONTRACTOR:
CONTRACTOR TO COORDINATE WITH OWNER ON LOCATION OF CONSTRUCTION TRAILER AND STAGING AREAS



4 STOCKPILE DETAIL
NOT TO SCALE



5 TEMP. CONCRETE WASHOUT DETAIL
NOT TO SCALE



**TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530**

REVISIONS:

NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/20/24	RIDEM COMMENTS

DESIGNED BY: WMLJR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: AUGUST 2023
PROJECT NO: 06-901

PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS & SITE PREP. PLAN

SHEET 3 OF 10

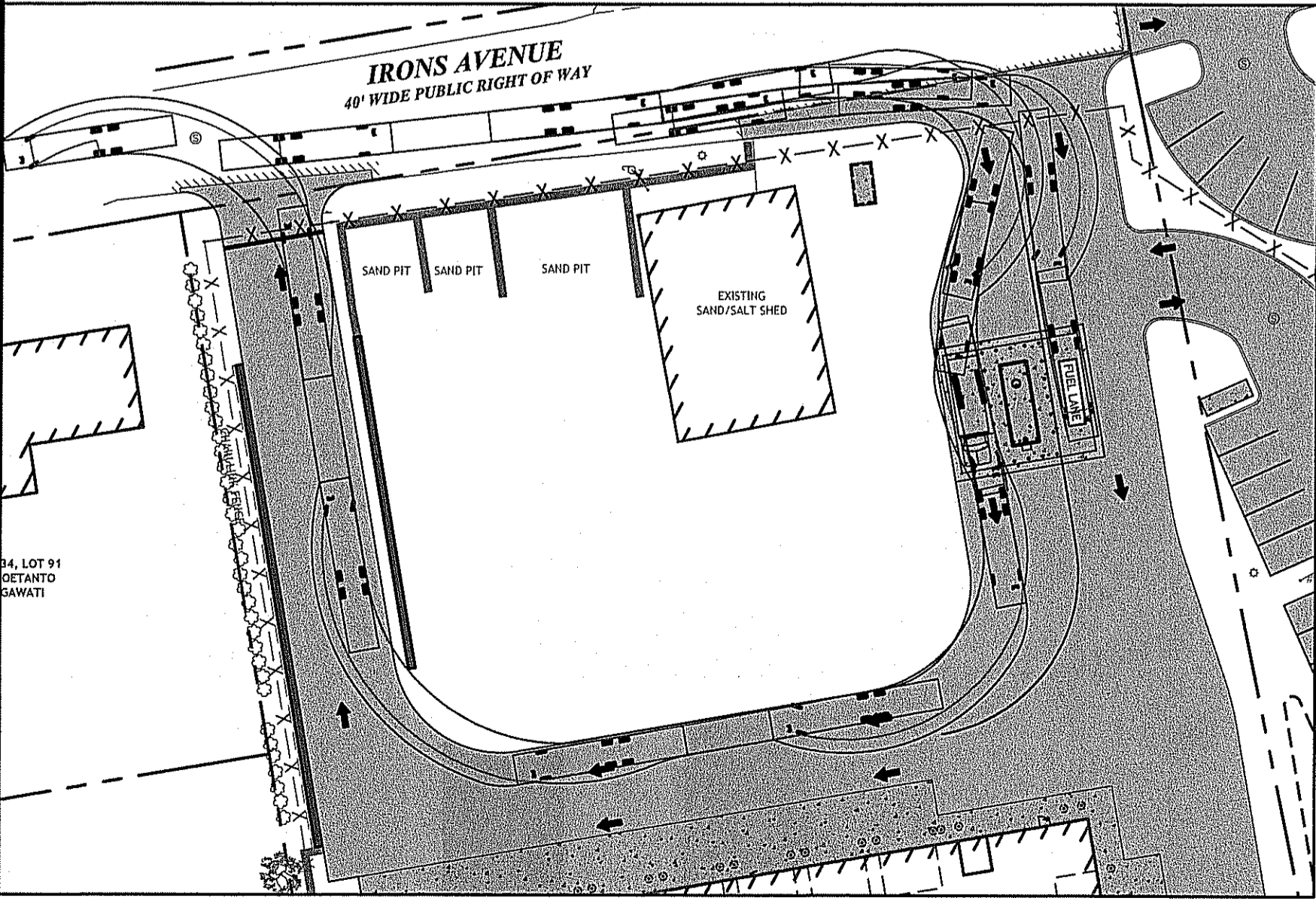
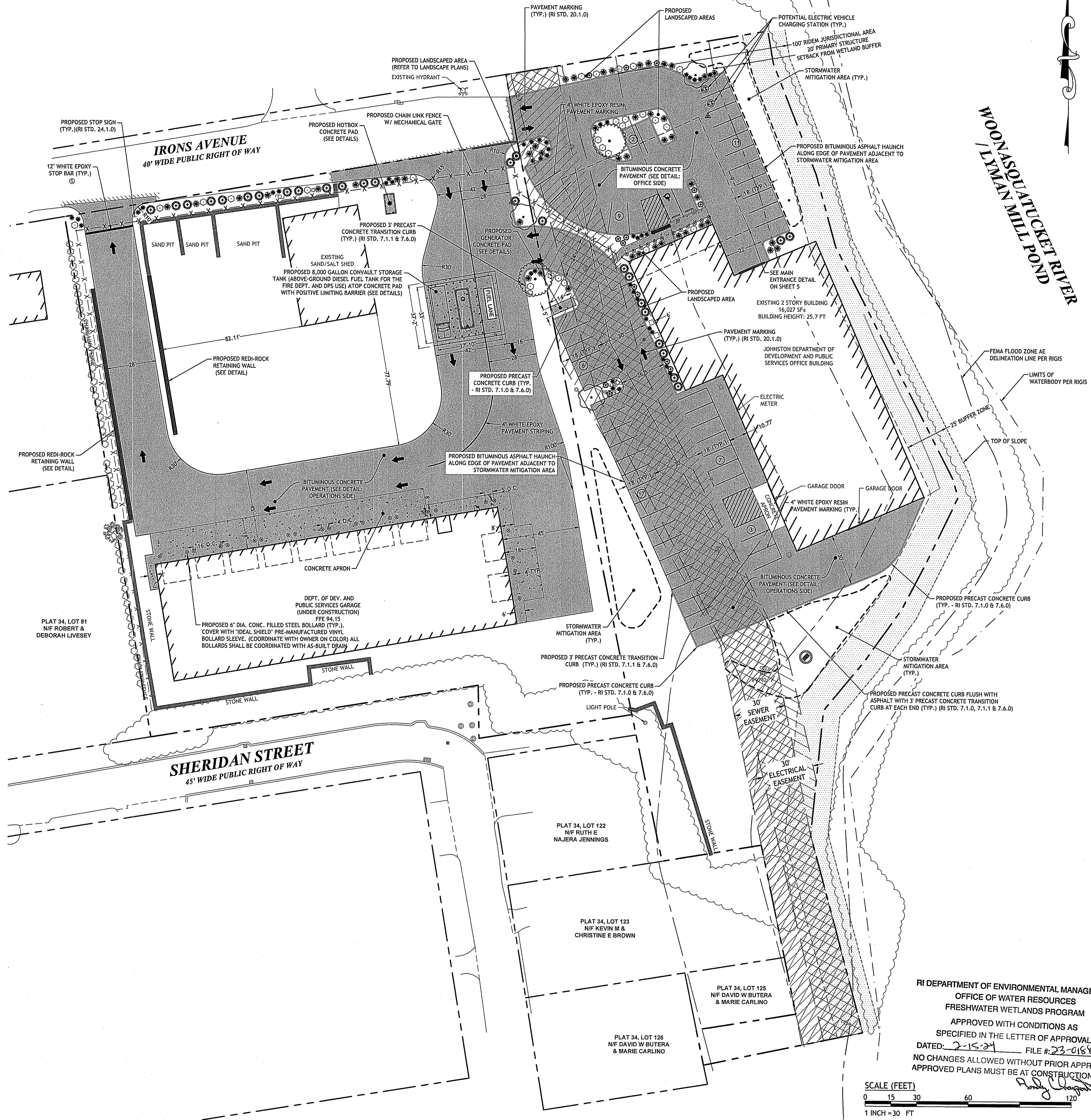
C:\06-90 Town of Johnston\06-901 DPW Garage\ACAD\Johnston DPW (DEA, RCT) - R1 - (Grading Adjustment).dwg, Feb. 02, 2024 8:54am

ZONING DIMENSIONAL REQUIREMENTS

ZONING CRITERIA	REQUIRED
ZONING DISTRICT	I
MINIMUM FRONT YARD SETBACK	50 FT
MINIMUM SIDE YARD SETBACK ⁽¹⁾	50 FT
MINIMUM REAR YARD SETBACK ⁽¹⁾	50 FT
MAXIMUM STRUCTURE HEIGHT ⁽²⁾	40 FT
MINIMUM BUILDING COVERAGE	40%

* EXISTING NON-CONFORMING CONDITION

- MINIMUM SIDE YARD AND MINIMUM REAR YARD DEPTH MAY BE DECREASED TO ZERO WHERE ADJACENT LOTS OR LAND PARCELS ARE TO BE COMBINED FOR THE PURPOSE OF SIMULTANEOUS DEVELOPMENT OF ONE LARGE STRUCTURE OR OF INTERCONNECTED STRUCTURES AS PART OF A PLANNED INTEGRATED COMMERCIAL OR INDUSTRIAL DEVELOPMENT.
- TOWERS, CHIMNEYS AND SIMILAR VERTICAL ELEMENTS MAY EXCEED THE MAXIMUM HEIGHT SPECIFIED FOR THE DISTRICT, PROVIDED THAT ANY SUCH VERTICAL ELEMENT SHALL BE SET BACK FROM ANY LOT LINE ONE ADDITIONAL FOOT FOR EACH FOOT BY WHICH IT EXCEEDS THE MAXIMUM BUILDING HEIGHT LIMIT FOR THE DISTRICT.



TURNING TEMPLATES
SCALE: 1" = 30'

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
CIVIL
01/22/2024

**TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530**

REVISIONS:

NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/20/24	RIDEM COMMENTS

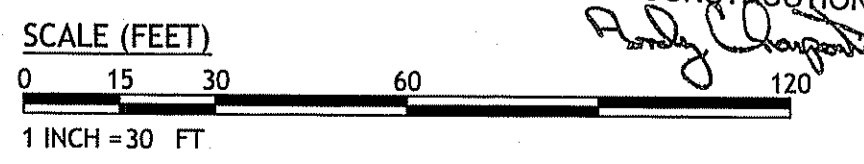
DESIGNED BY: WMLJR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: AUGUST 2023
PROJECT NO: 06-901

PRELIMINARY, NOT FOR CONSTRUCTION

SITE PLAN

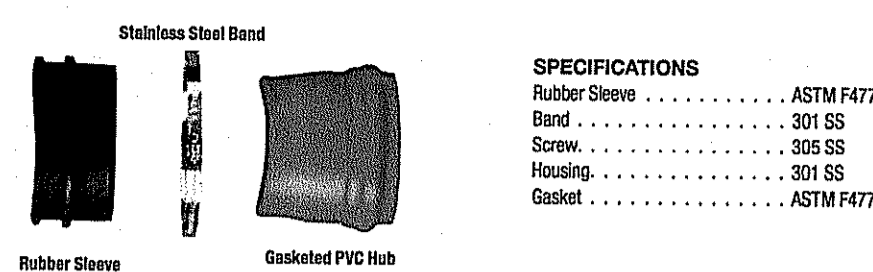
SHEET 4 OF 10

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: 2-15-24 FILE # 23-0188
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



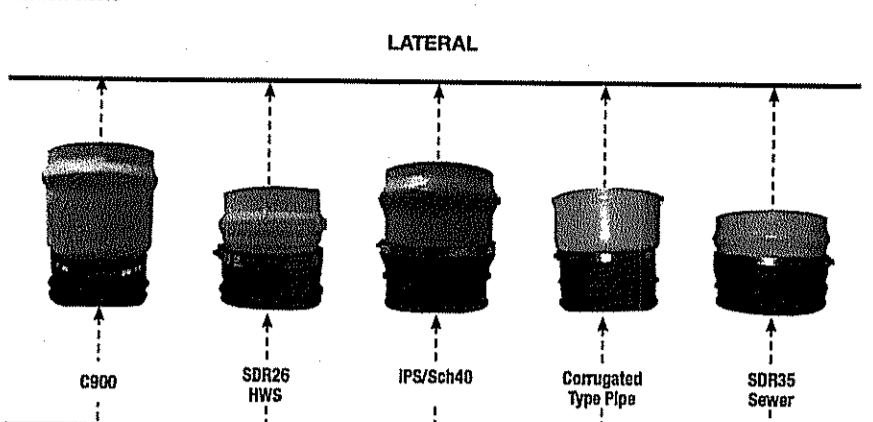
Q:\06-90 Town of Johnston\06-901.DWG Garbage\ACAD\Johnston.DWG (DETAILED) - 01 - (Grading Adjustment) - Aug. Feb. 02, 2024 8:54am

FITS ANY MAINLINE OR STRUCTURE



SPECIFICATIONS

Rubber Sleeve	ASTM F477
Band	301 SS
Screw	304 SS
Housing	301 SS
Gasket	ASTM F477

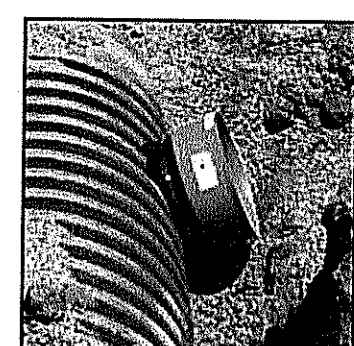


ANY MAINLINE OR STRUCTURE

INSERTA TEE FITTINGS FOR ALL GRAVITY FLOW PIPE AND MANHOLES

Ductile Iron	Scollite	Ultra RHM	Pvc 24"
Fiberglass	Hi O'Sure-Lok®	Permalok®	Polyethylene
PVC	Vloc®	Composite Metal	Truss®
Ultra-Duty™	N-12™	Soft™ Max	A2000®
GOLDFLO®	Kor-Flu™	Concrete	Clay
Weather®	Asbestos Cement	N-12™ HP	Santita™ HP
DuroMax®			

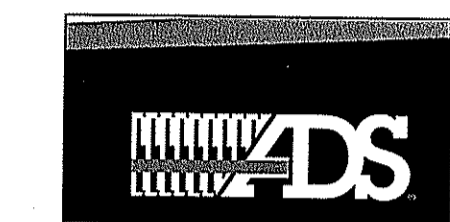
INSERTA TEE construction varies with pipe type and size. For pipe not listed, contact our engineering department.



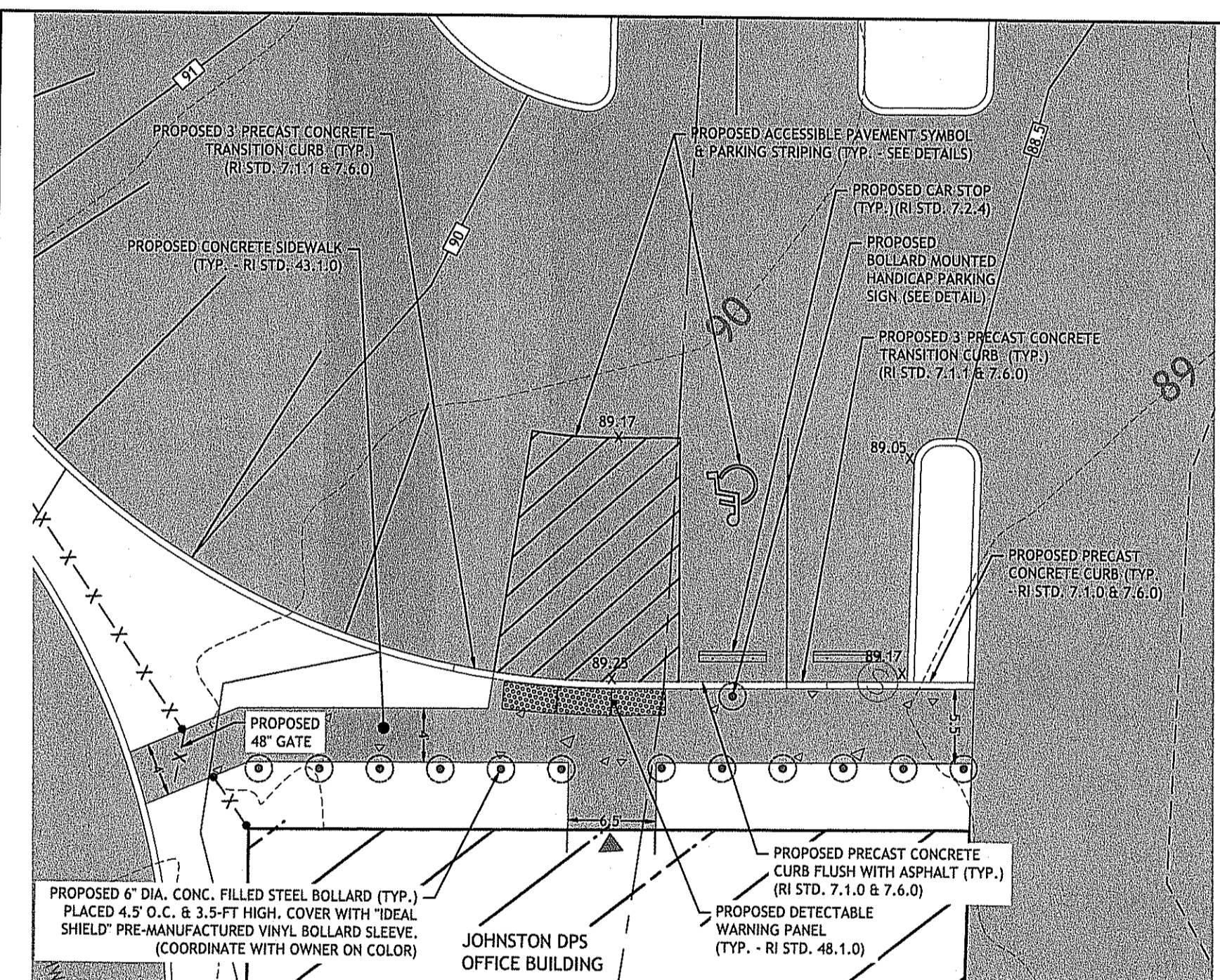
Storm Sewer

HOLE SAW SIZING CHART

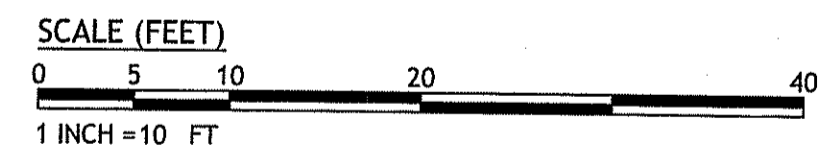
INSERTA TEE Size	Hole Saw Size
2" (51 mm)	2 1/4" (67 mm)
3" (76 mm)	3 1/4" (95 mm)
4" (100 mm)	4 1/4" (114 mm)
6" (150 mm)	6 1/4" (165 mm)
8" (200 mm)	8 1/4" (222 mm)
10" (250 mm)	10 1/4" (276 mm)
12" (300 mm)	12 1/4" (327 mm)
18" (450 mm)	19 1/4" (493 mm)
24" (600 mm)	25 1/4" (643 mm)
27" (675 mm)	28 1/4" (724 mm)
30" (750 mm)	32 1/4" (825 mm)



6 ADS INSERTA TEE DETAIL
NOT TO SCALE



PROPOSED MAIN ENTRANCE DETAIL



BIO-RETENTION AREA PLANTING SCHEDULE

AREA	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
A	3	Cephaelis occidentalis	Butterbush	2 gallon	as shown
	33	Iris versicolor	Blueflag Iris	18" o.c. spacing	
	33	Scirpus cyperinus	Wood Grass	18" o.c. spacing	
	33	Panicum capillare	Panicum	18" o.c. spacing	
B	6	Viburnum dentatum	Arrowwood	2 gallon	as shown

BIORETENTION AREA SEEDING PLAN

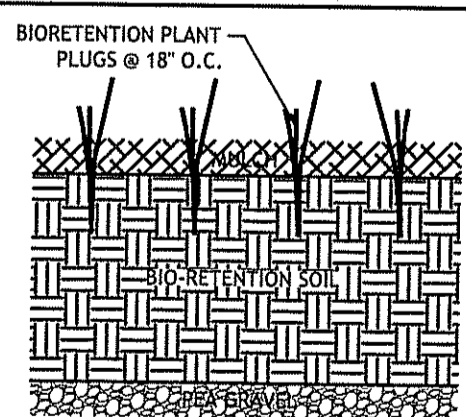
SEED FURNISHED BY NEW ENGLAND WETLAND PLANTS, INC. 820 West Street, Amherst, MA www.newp.com OR APPROVED EQUAL.

BIORETENTION AREA PLANTING DETAILS

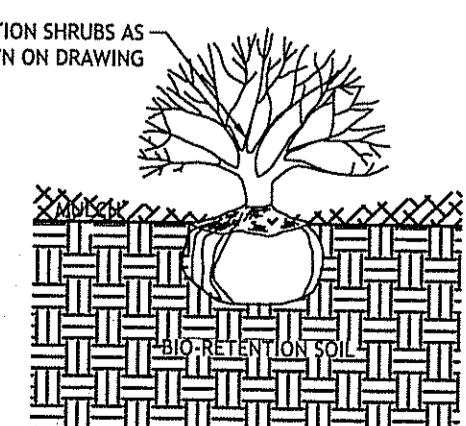
AREA	BOTANICAL NAME	COMMON NAME	INDICATOR
A	AGROSTIS PERENNANS	UPLAND BENTGRASS	FACU
	ARGOSTIS STOLONIFERA	CRISPING BENTGRASS	FAC
	ANDROPOGON GERARDII	BIG BLUESTEM, WAGRA	FAC
	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	FAC-OB
	CAREX VULPINOIDEA	FOOT SEDGE	FAC-OB
	ELLYMUS VIRGINICUS	VIRGINIA WILD RYE	FAC-OB
	EUPATORIUM PERFORATUM	BONASET	FAC
	EUTHAMIA GRAMMIFOLIA (SOLIDAGO G.)	GRASS LEAVED GOLDENROD	FAC
	FESTUCA RUBRA	CREeping RED FESCUE	FAC-OB
	JUNCUS EFFLUSUS	SOFT FLUSH	FAC-OB
	ONOCLEA SENSIBILIS	SENSITIVE FERN	FAC-OB
	PANDANUS VIRGATUS	SWITCH GRASS	FAC
	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
	SCRIPUS ATROVIRENS	GREEN BULRUSH	OB
	SCRIPUS CYPERINUS	WOOD GRASS	FAC-OB
VERBENA HASTATA	BLUE VERVAIN	FAC-OB	

NOTE: CONTRACTOR TO SOW ABOVE SEED AT 35 LBS/ACRE. SEED TO BE SOWN BY THE HAND BROADCAST METHOD.

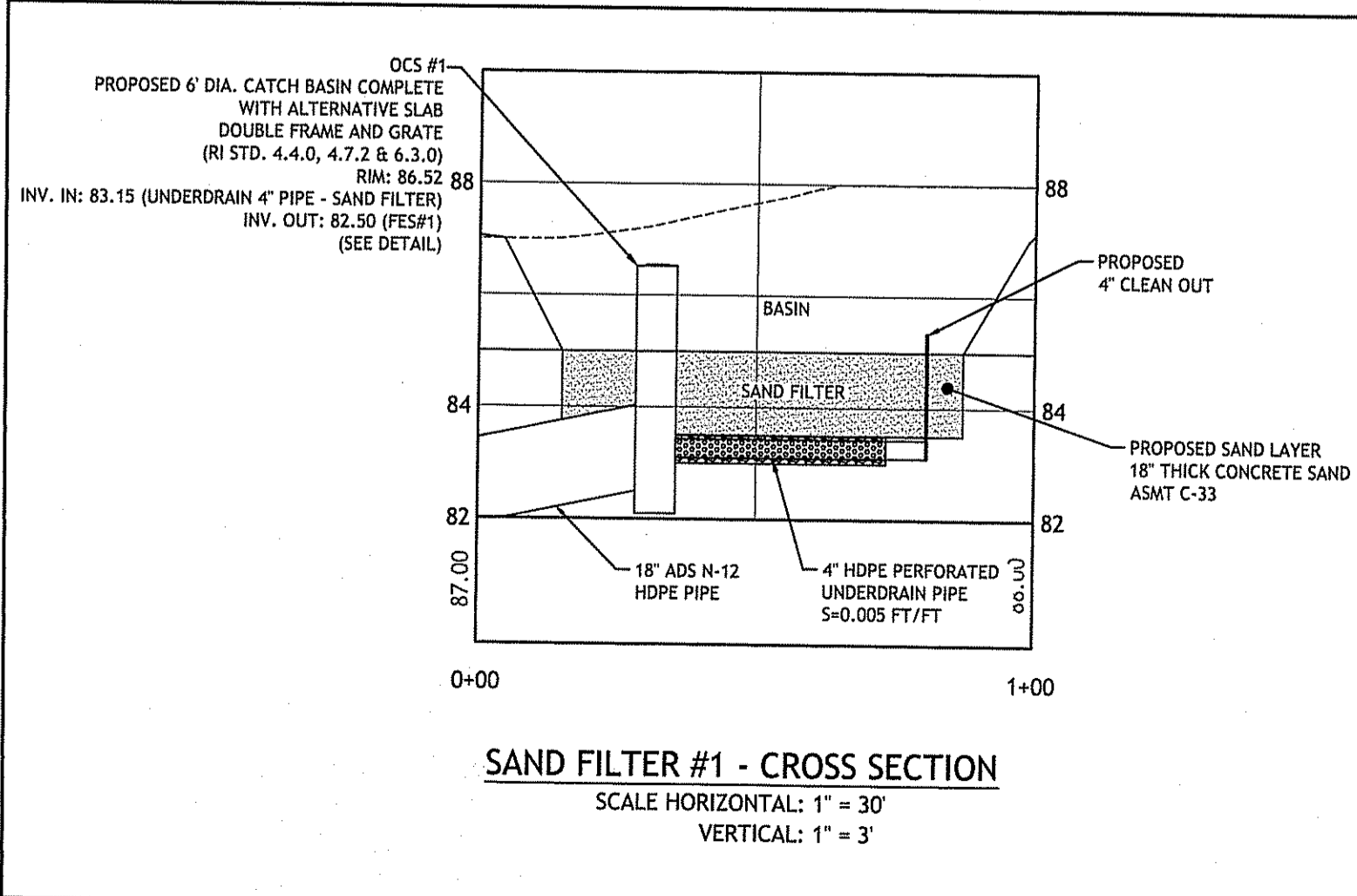
BIORETENTION AREA PLANTING DETAILS
NO SCALE



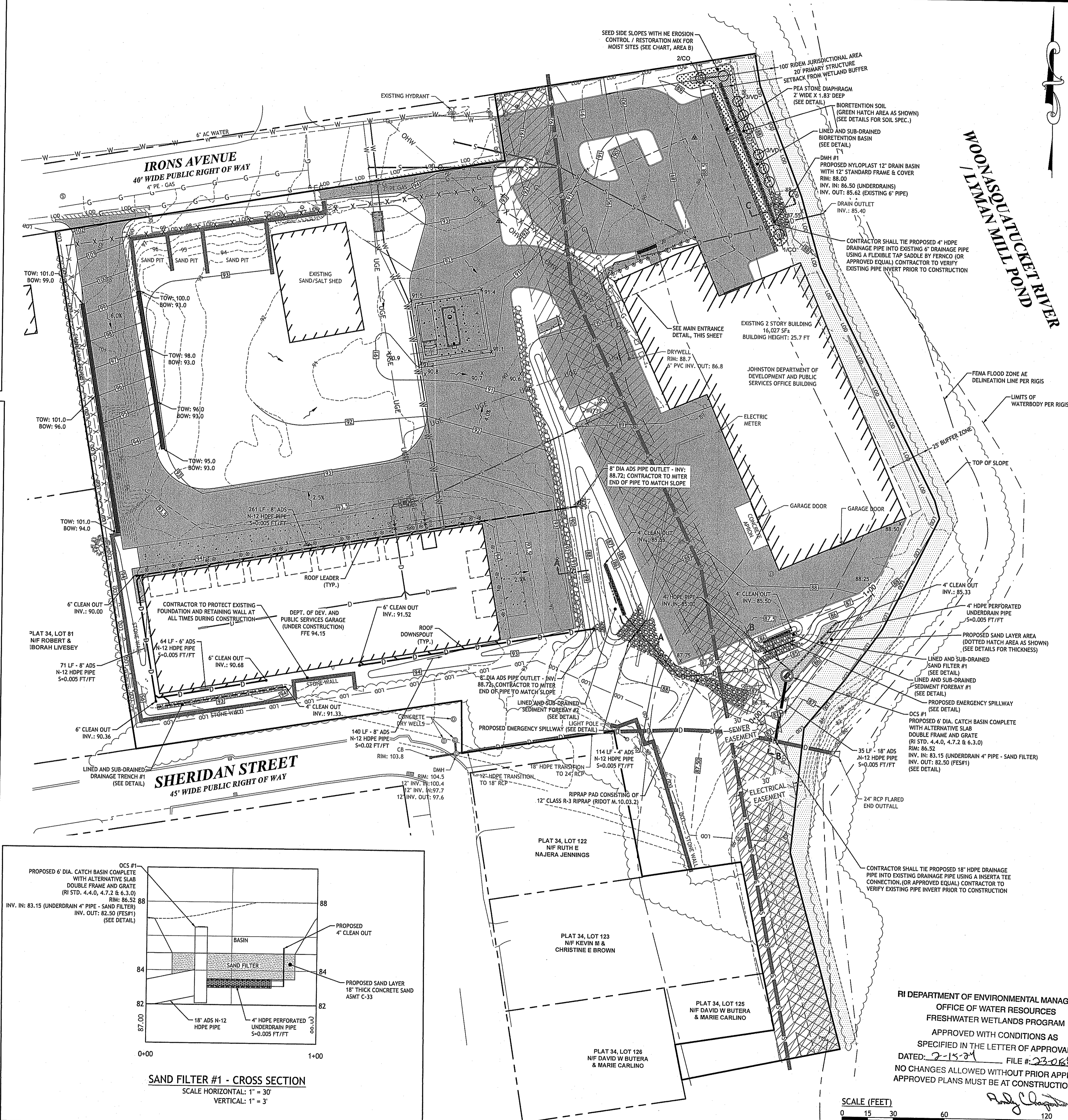
PLUG PLANTING



SHRUB PLANTING



SAND FILTER #1 - CROSS SECTION
SCALE HORIZONTAL: 1" = 30"
VERTICAL: 1" = 3"



JCE
JOE CASALI ENGINEERING, INC.
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND 02888
DRAINAGE: WILMINGTON, MASS. 01984-1313 FAX: WWW.JCE-RI.COM

JOSEPH A. CASALI
7250
REGISTERED PROFESSIONAL ENGINEER
01/22/2024

TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530

REVISIONS:

NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/2023	RIDEM COMMENTS
3	1/2024	RIDEM COMMENTS

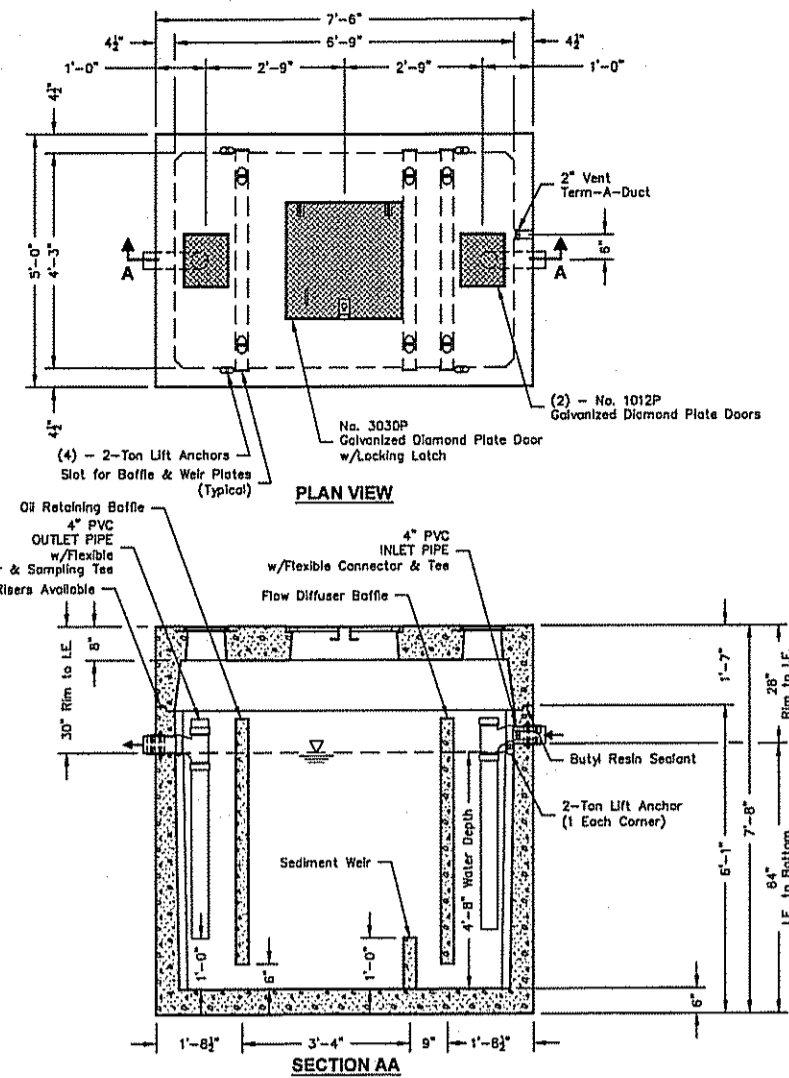
DESIGNED BY: WMLJR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: AUGUST 2023
PROJECT NO: 06-901

PRELIMINARY, NOT FOR CONSTRUCTION

GRADING & DRAINAGE PLAN

SHEET 5 OF 10

576-SA-1000



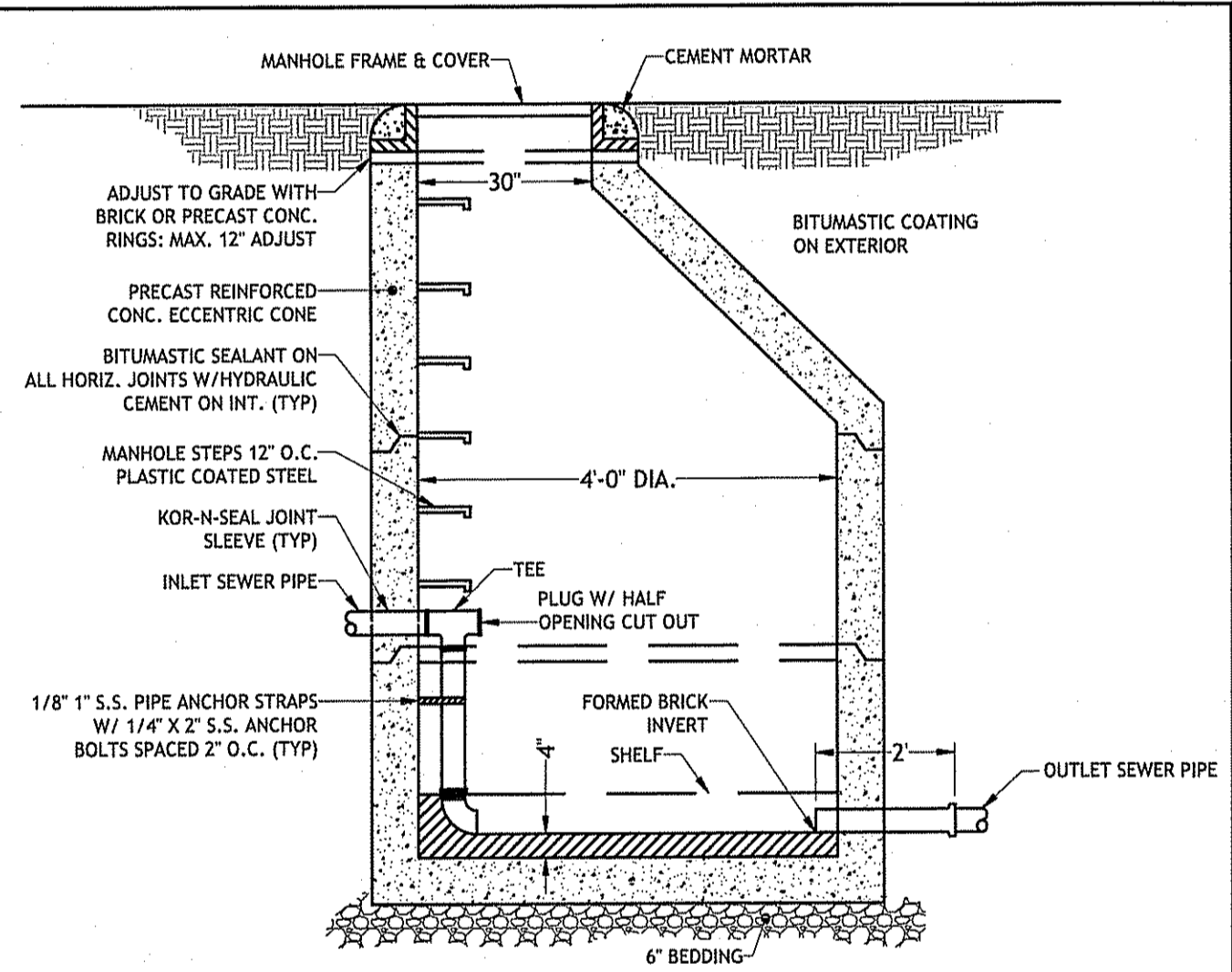
Notes:
 1. Designed in accordance with ASTM C 880 for AASHTO H20-44 white loading.
 2. Flow Rate 10' O.D. based on 15 min. retention time.
 3. Manufacturer's recommendations.
 4. 1/2" vent pipe each end to open atmosphere.
 5. Prior to "Start Up" of System, fill with clean water to bottom of outlet pipe (approx. one foot deep).
 6. For best results, fill for five days.
 7. Follow Regular Inspection, Cleaning, & Maintenance Schedule (See Close Out & Maintenance).

Oldcastle Precast
 PO Box 223, Wilsonville, Oregon 97170-0223
 Tel: (503) 682-2844 Fax: (503) 682-2857

576-SA-1000
 File Name: 020-576SA-1000
 Issue Date: 2018
 oldcastleprecast.com/wilsonville

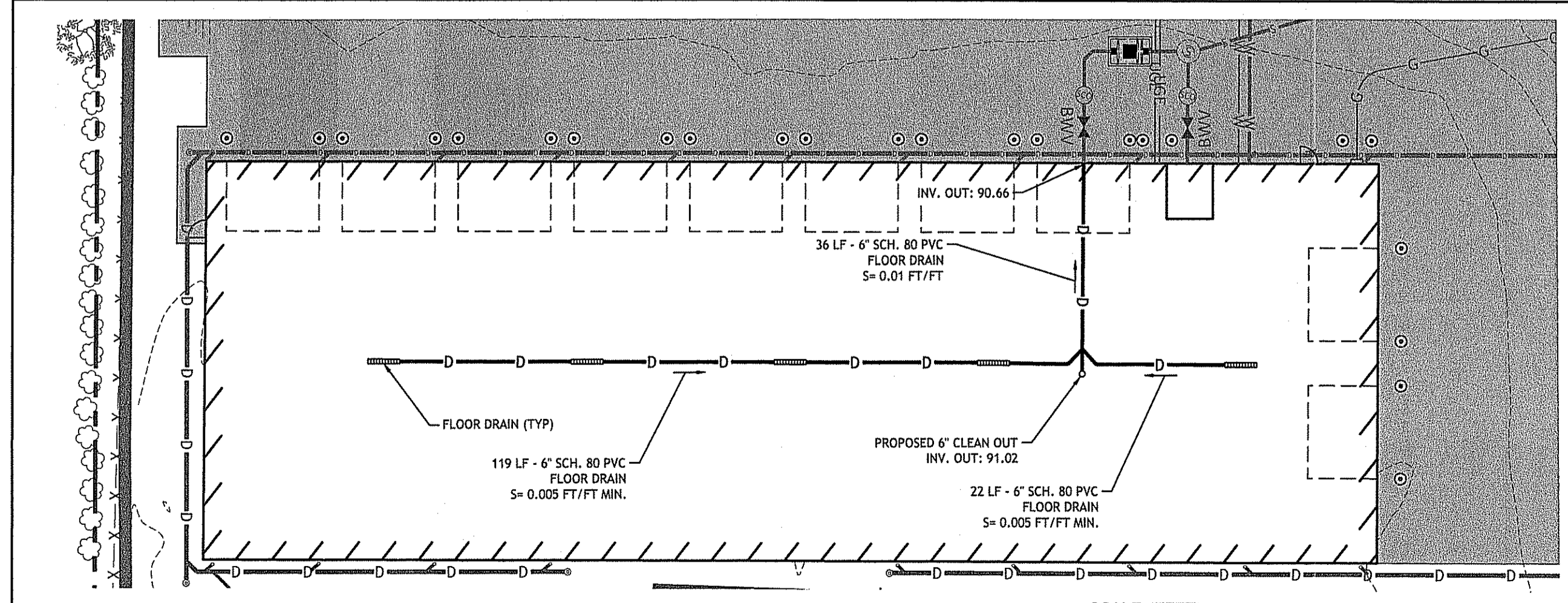
576-SA-1000
 OIL / WATER SEPARATOR
 1000 GALLON - API STYLE

15.1

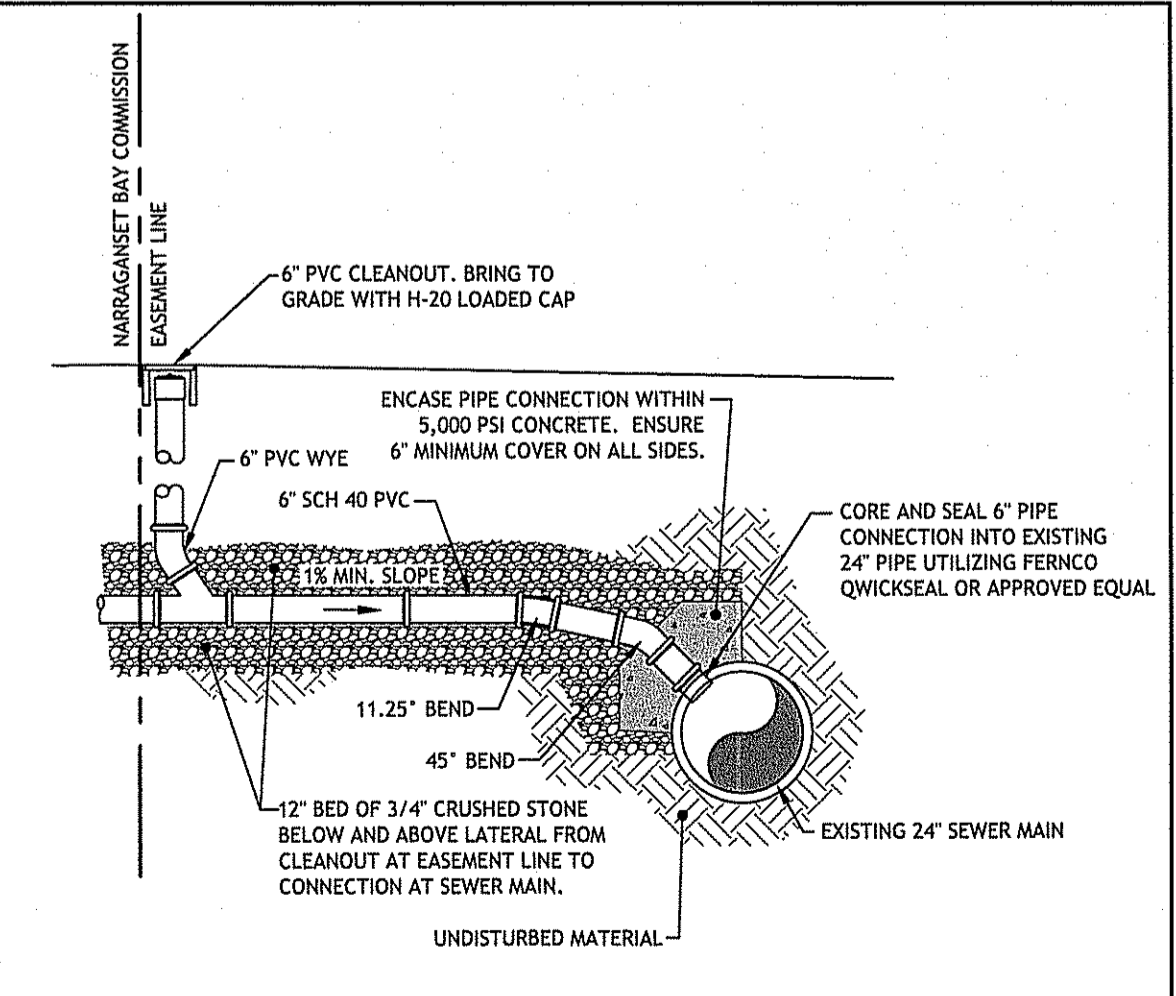


NOTE:
 1. ALL LIFTING HOLES TO BE PLUGGED IN AND OUT WITH HYDRAULIC CEMENT.
 2. DROP PIPE SHALL BE PVC AND SAME SIZE AS INLET SEWER.

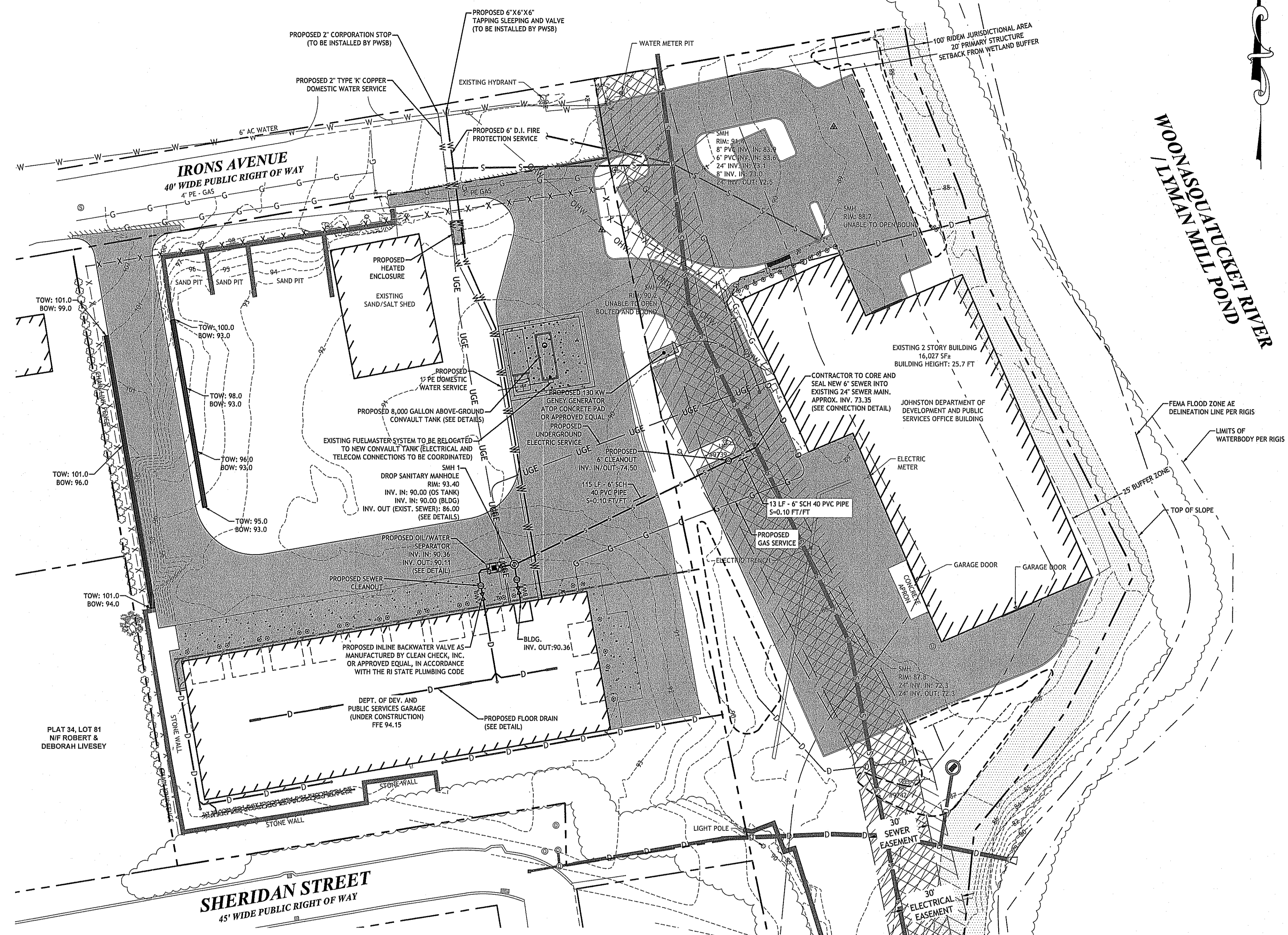
7 DROP SANITARY MANHOLE DETAIL
 NOT TO SCALE



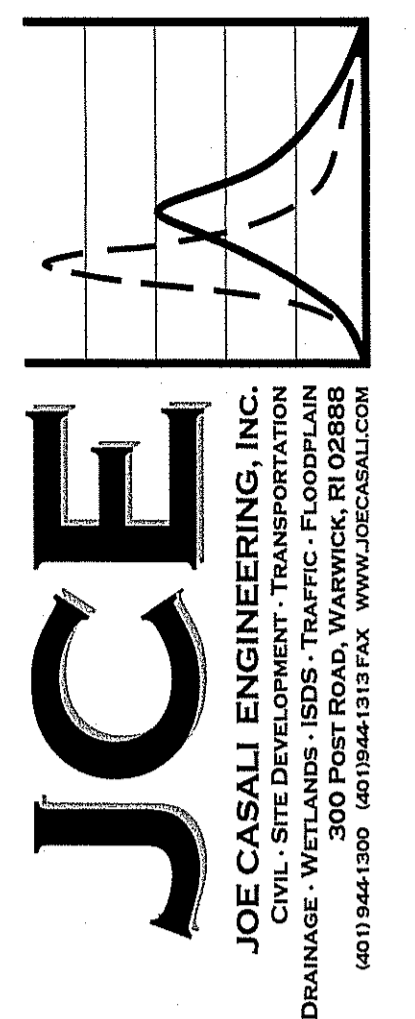
PROPOSED FLOOR DRAIN DETAIL
 SCALE (FEET)
 0 10 20 40 80
 1 INCH = 20 FT



SEWER LATERAL CONNECTION WITHIN NBC EASEMENT
 NTS



WONASQUATUCKET RIVER
 LYMAN MILL POND



JOSEPH A. CASALI
 NO. 7250
 REGISTERED PROFESSIONAL ENGINEER
 01/22/2024

TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530

REVISIONS:

NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/20/24	RIDEM COMMENTS

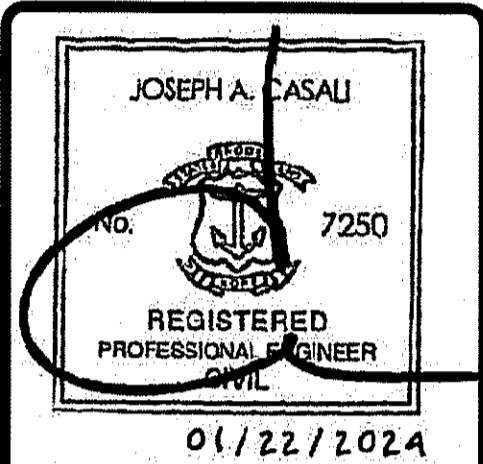
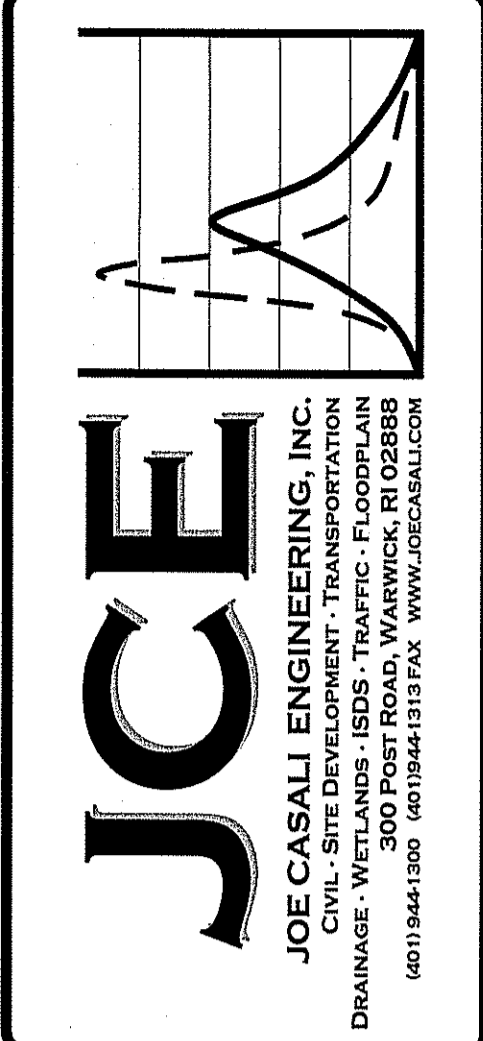
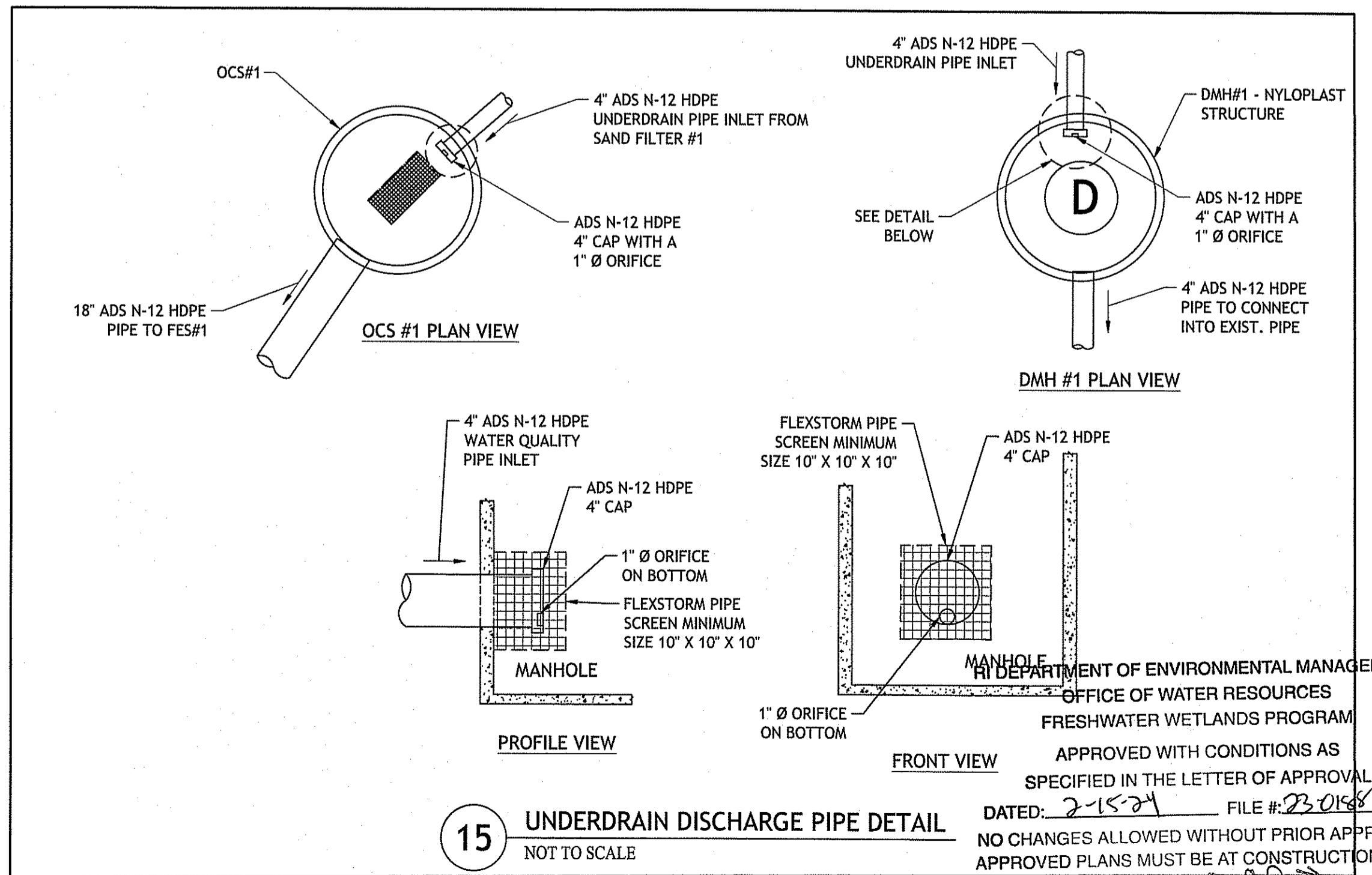
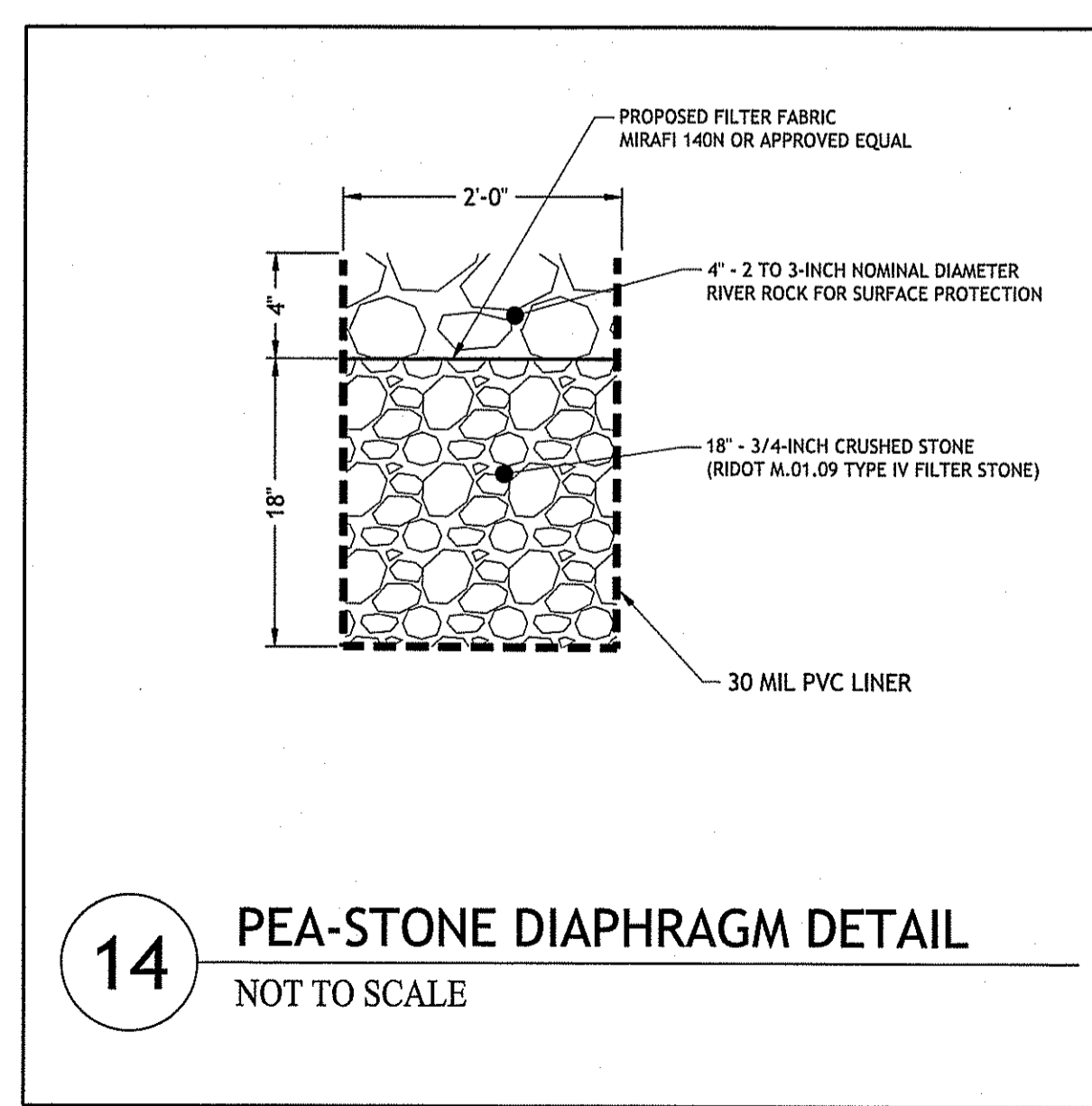
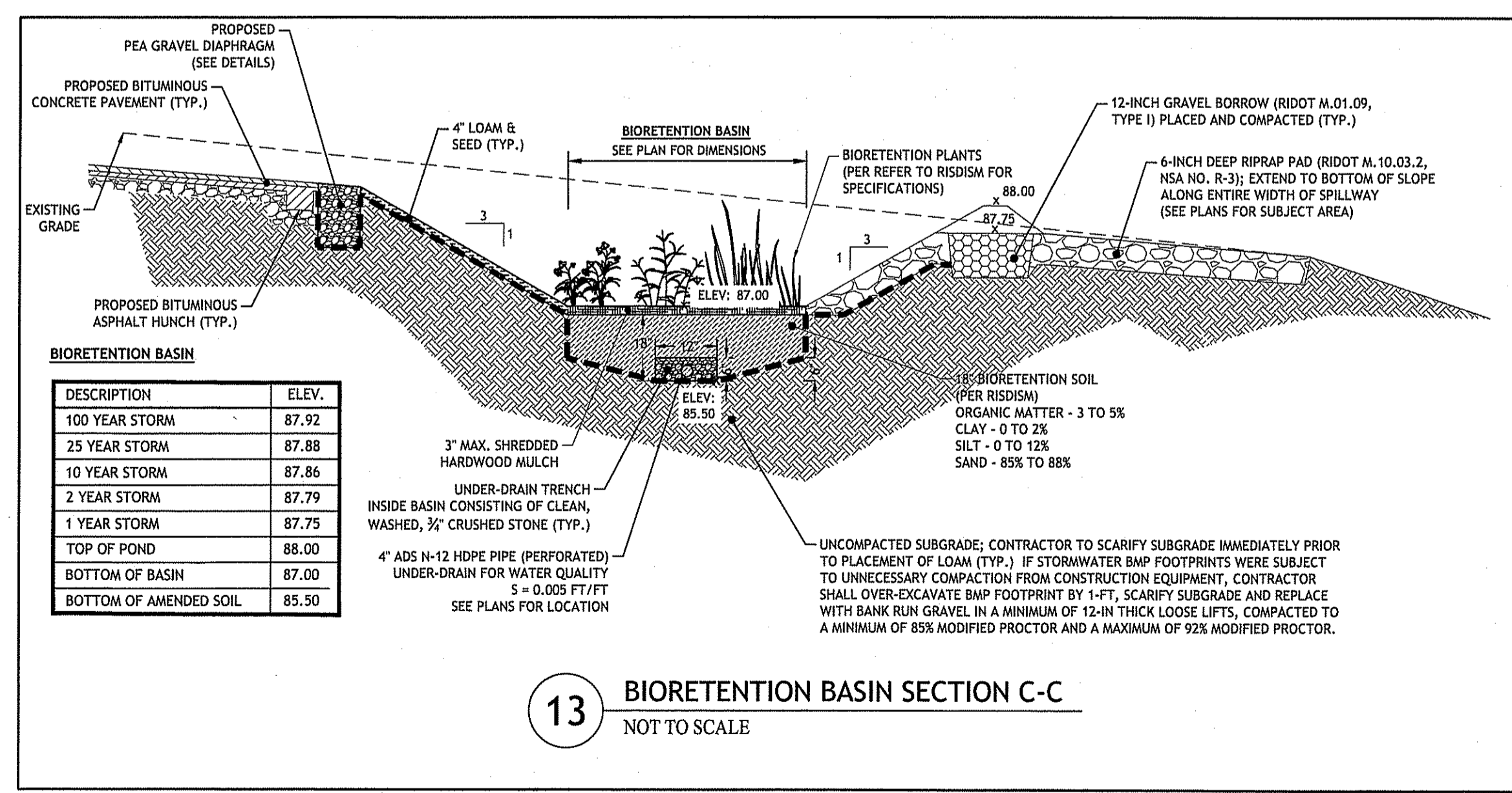
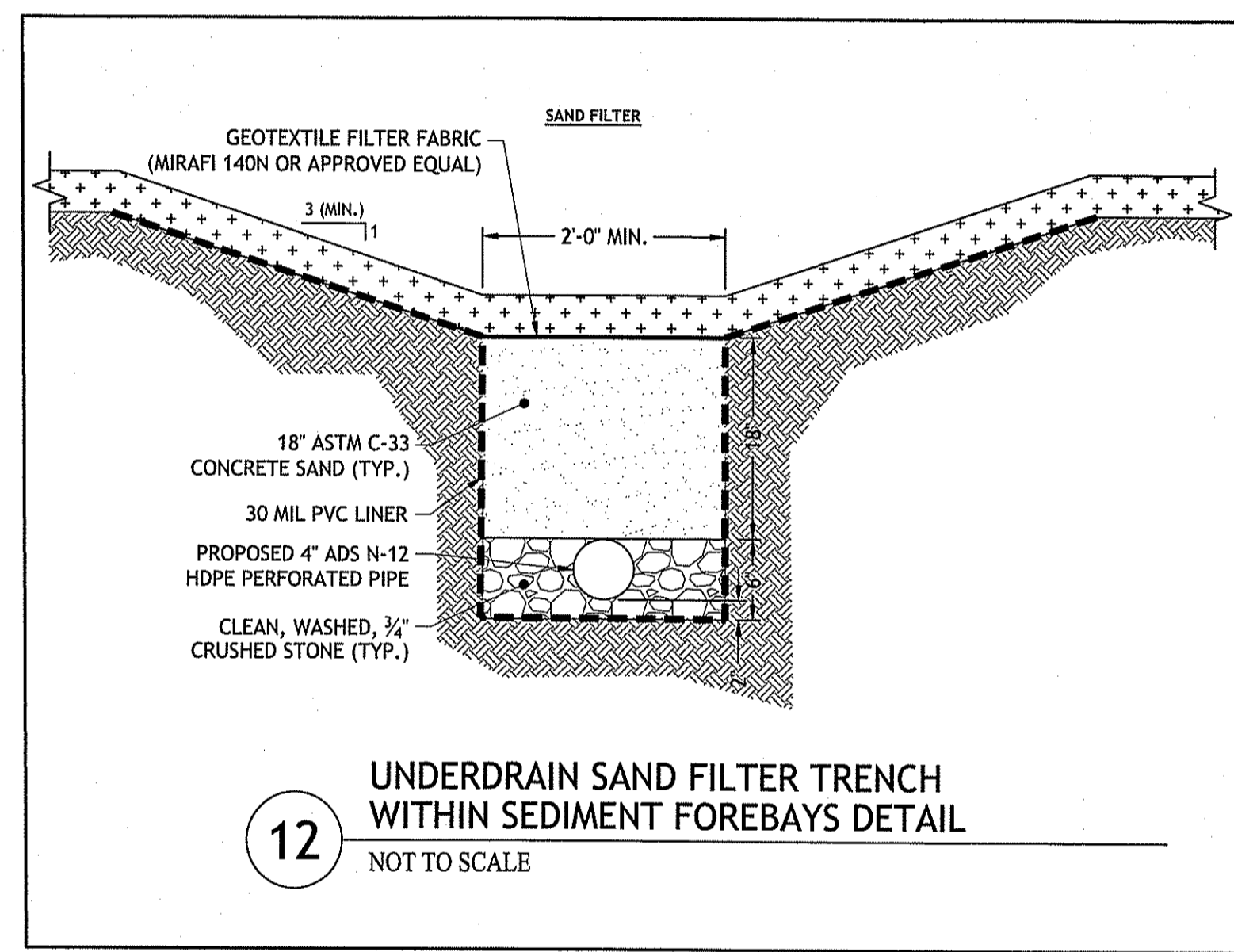
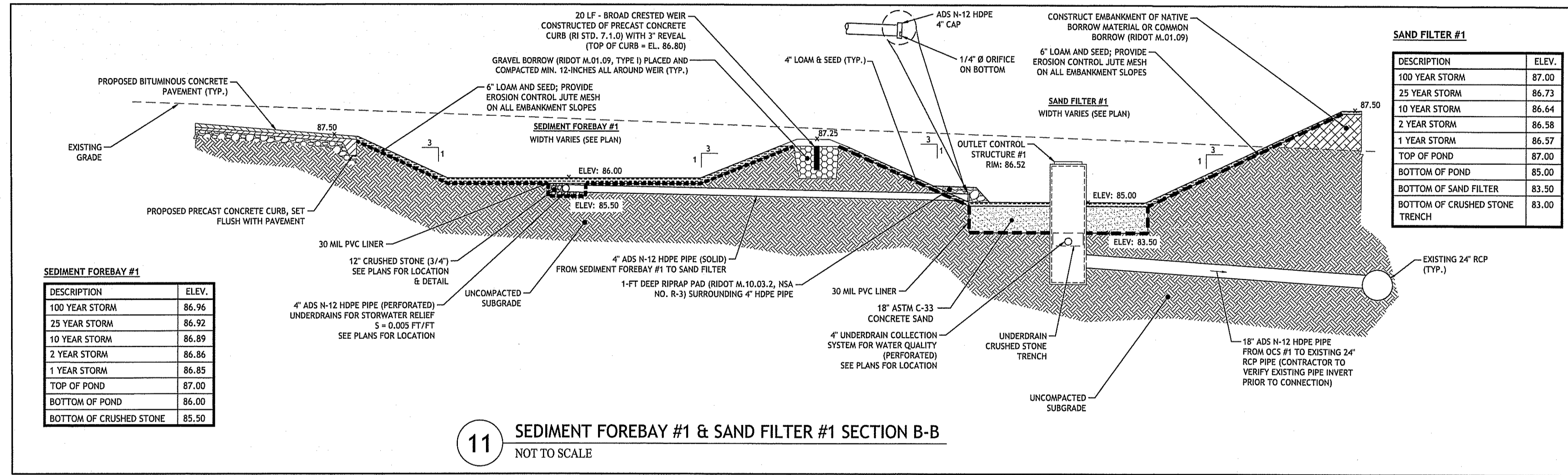
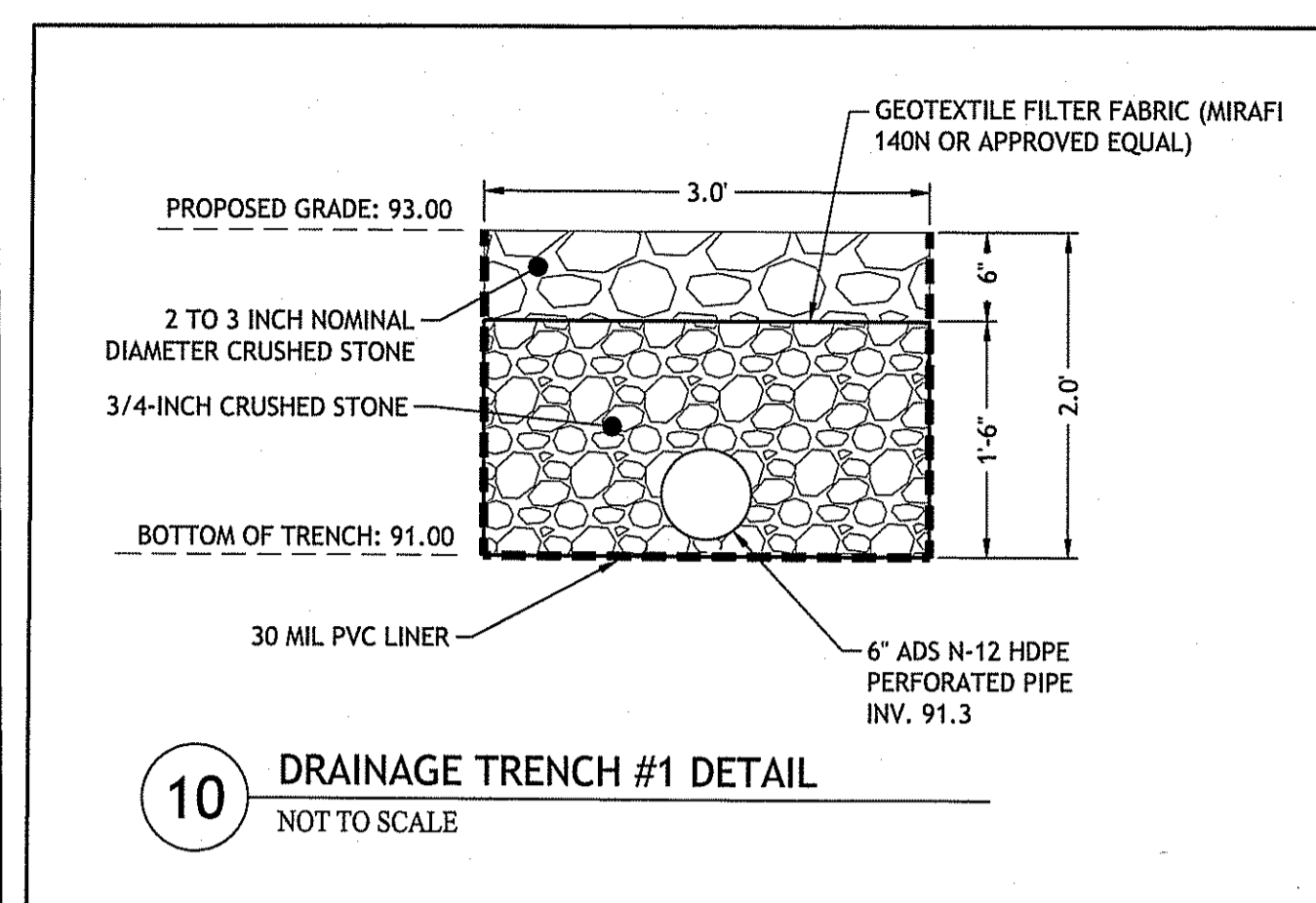
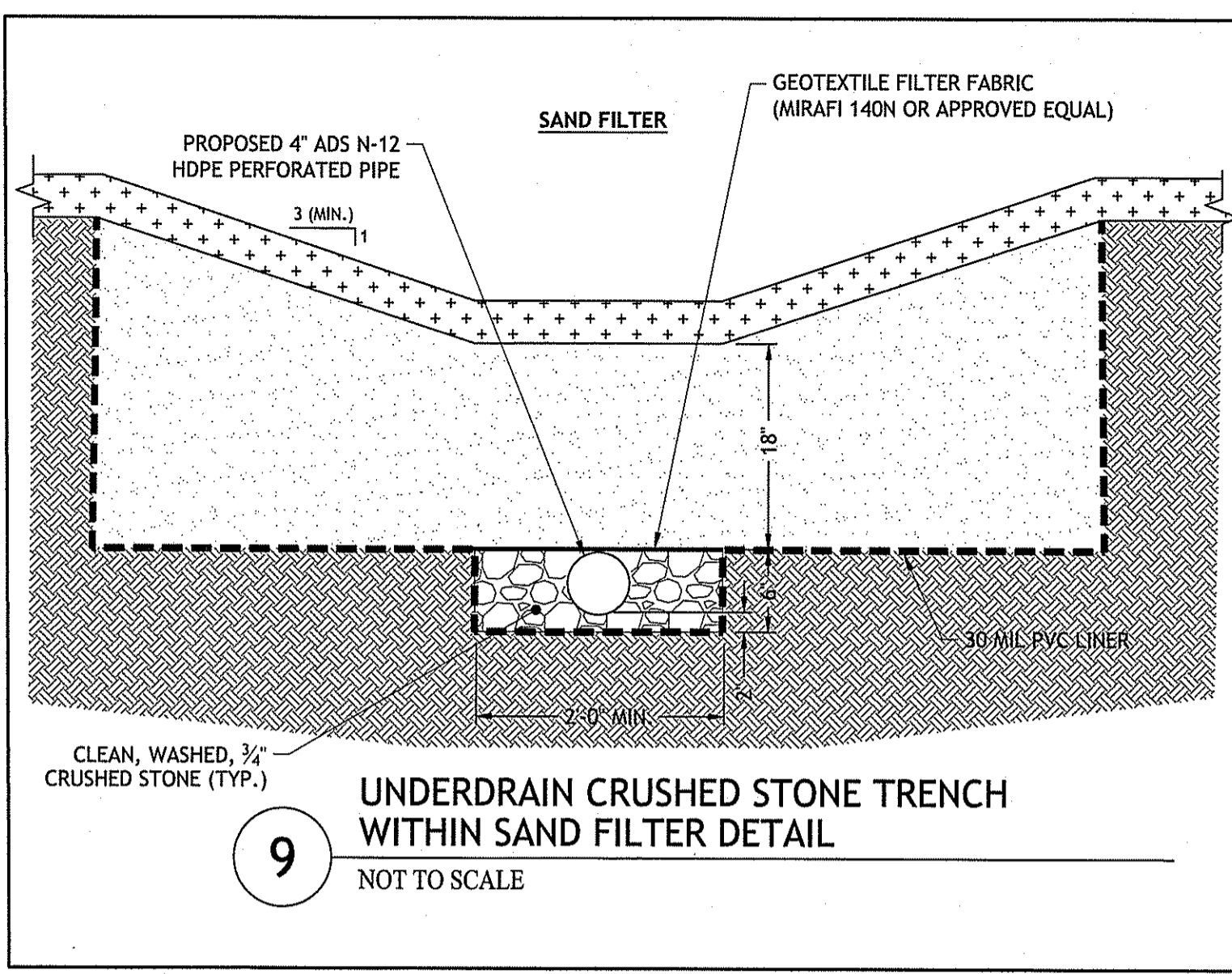
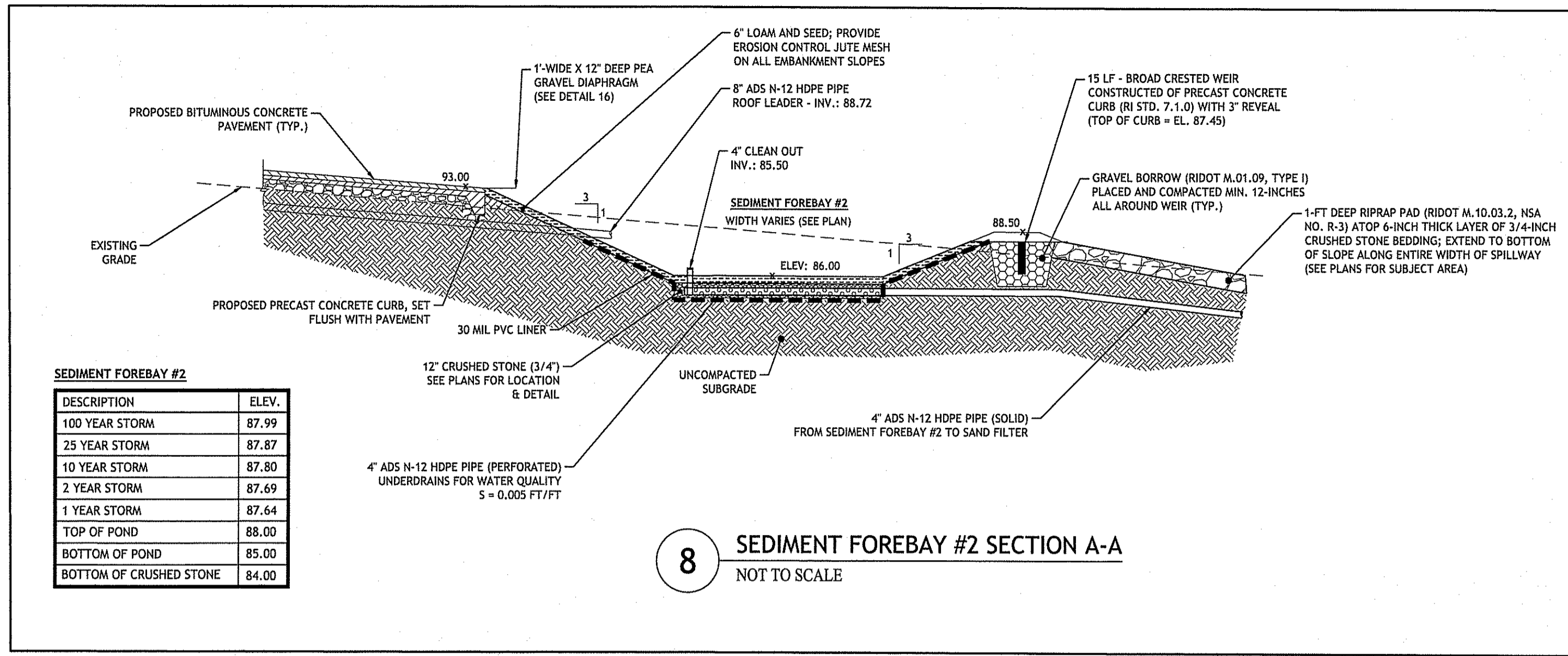
DESIGNED BY: WMLJR
 DRAWN BY: SD/SEP
 CHECKED BY: JAC
 DATE: AUGUST 2023
 PROJECT NO: 06-901

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: 7-15-24 FILE #: 22-6158
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

UTILITY PLAN

SHEET 6 OF 10

Q:\06-90 Town of Johnston\06-901 DPW Garage\ACAD\Johnston DPW [DEAN RTC] - RT - (Grading Adjustment).dwg Feb. 02. 2024 8:55am



TOWN OF JOHNSTON
 DEPT. OF DEV. AND PUBLIC SERVICES
 100 IRONS AVENUE
 JOHNSTON, RHODE ISLAND
 AP 34, LOTS 112 & 530

NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/2/2024	RIDEM COMMENTS

DESIGNED BY: WMLR
 DRAWN BY: SD/SEP
 CHECKED BY: JAC
 DATE: AUGUST 2023
 PROJECT NO: 06-901

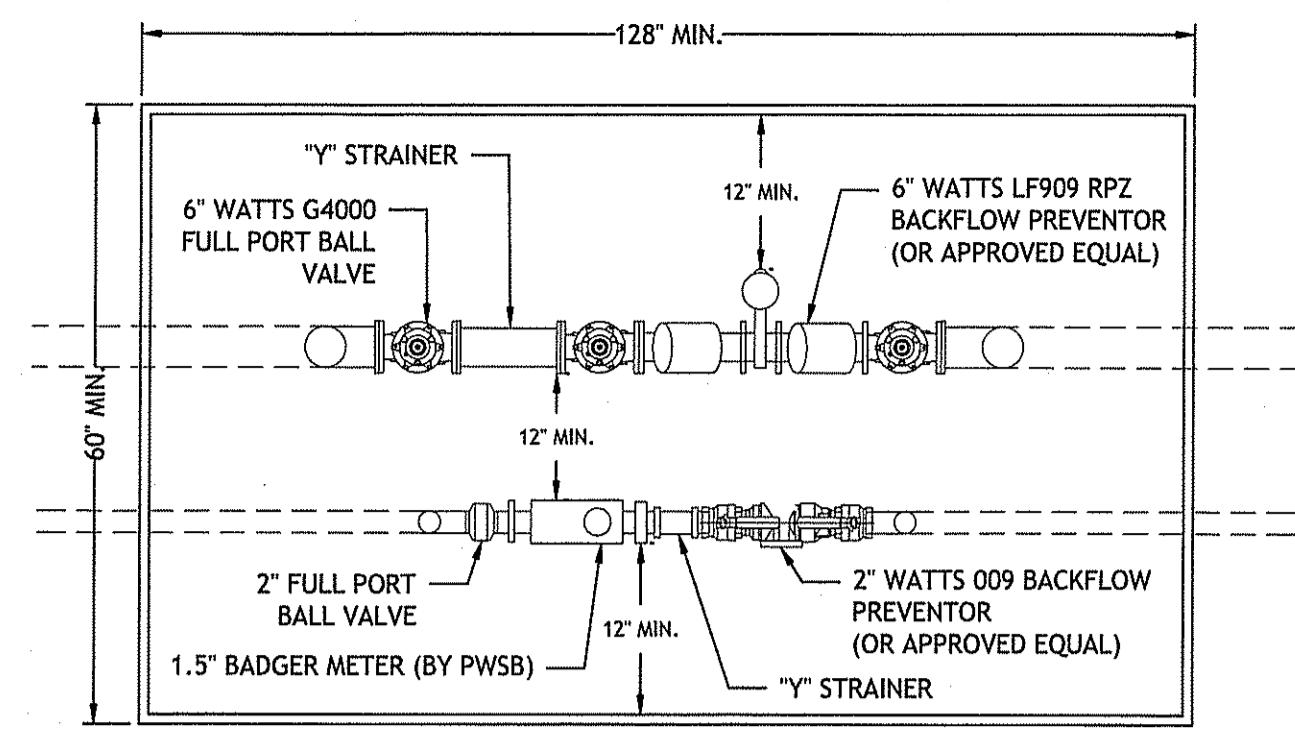
PRELIMINARY, NOT FOR CONSTRUCTION

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: 2-15-24 FILE # 23-0154

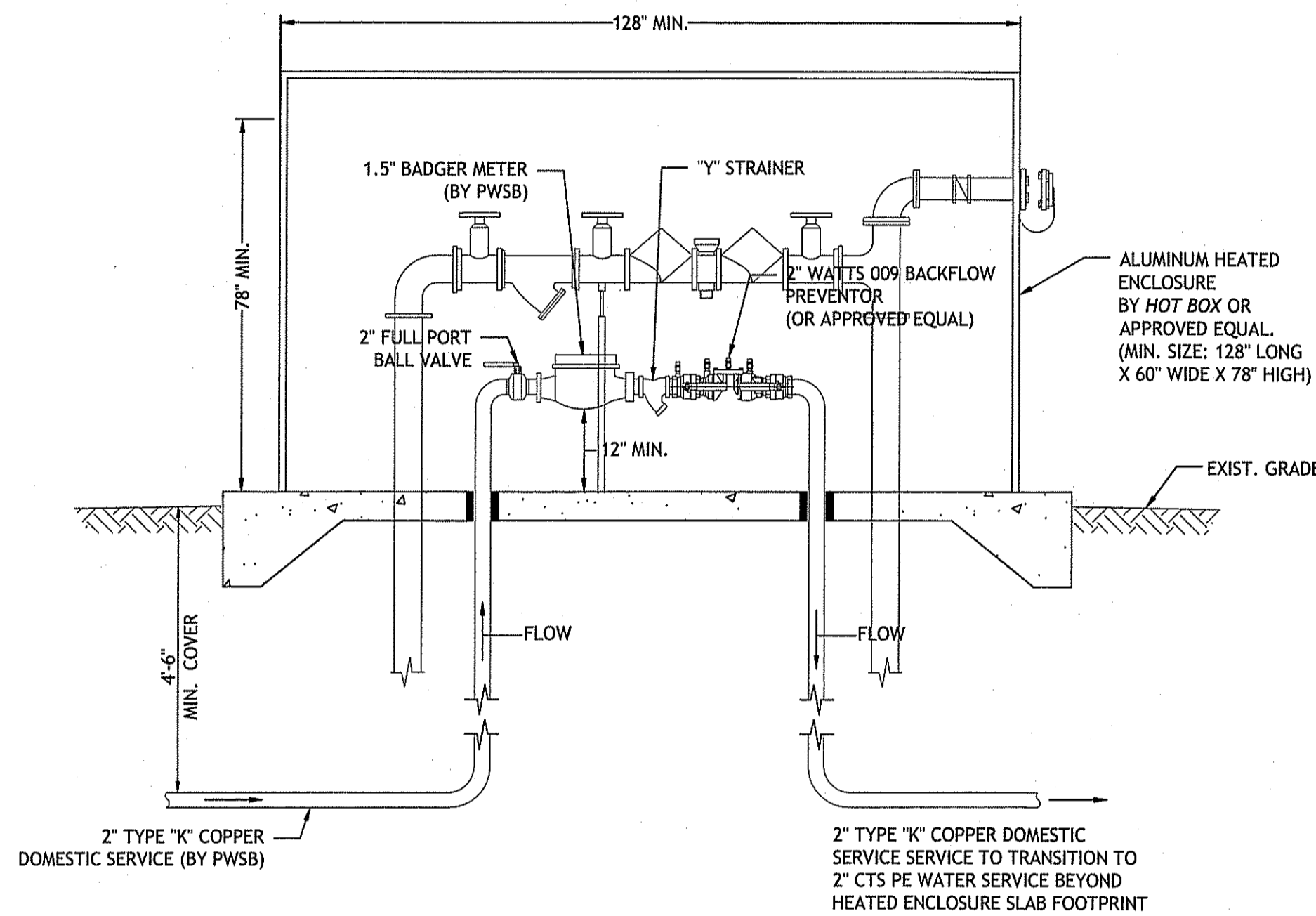
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DRAINAGE DETAILS I
 SHEET 7 OF 10

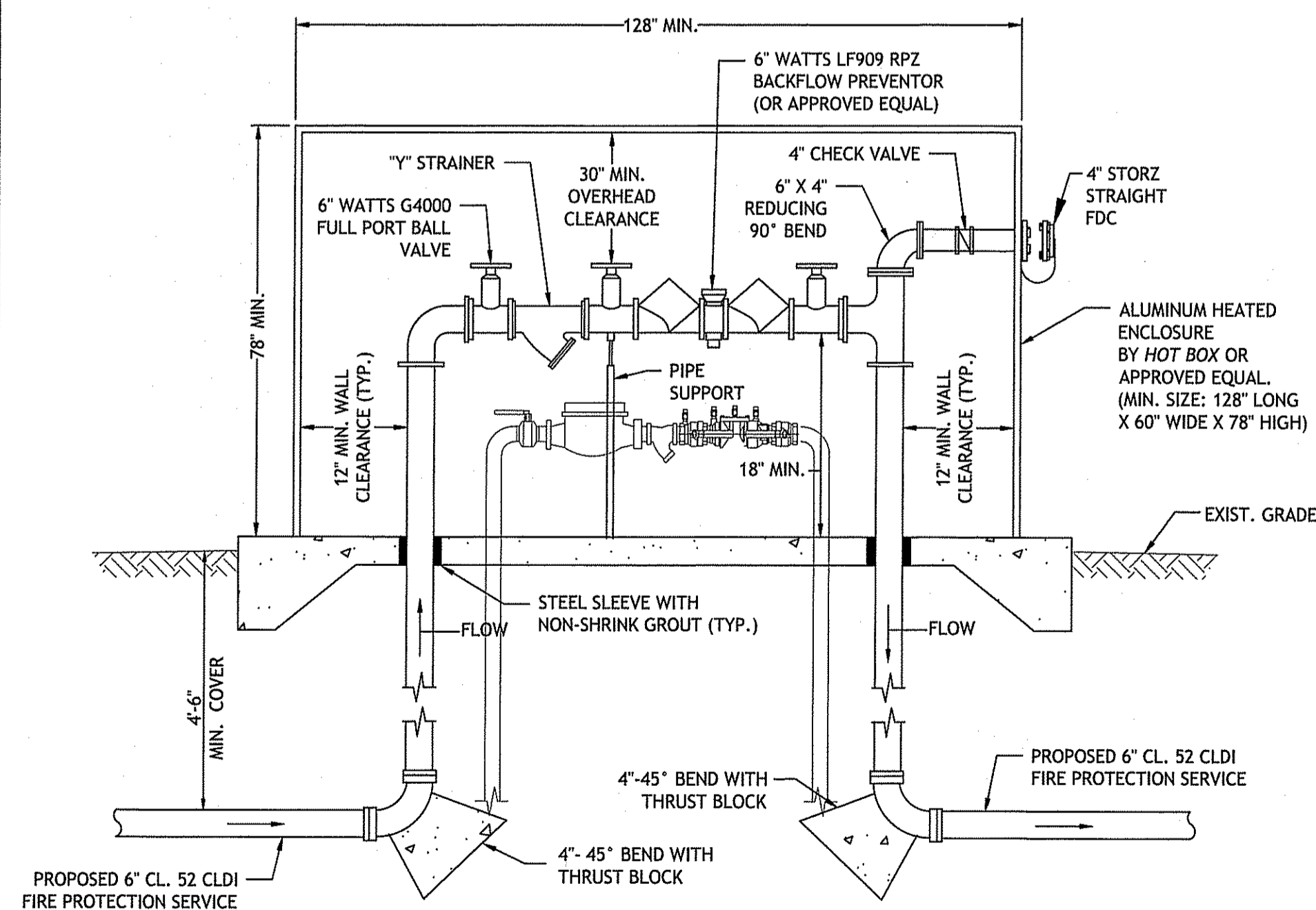
Q:\06-90 Town of Johnston\06-901 DPW Garage\ACAD\Johnston DPW (DEA.RTC) - RI - (Grading Adjustment).dwg Feb. 07, 2024 8:35am



PLAN VIEW
NOT TO SCALE

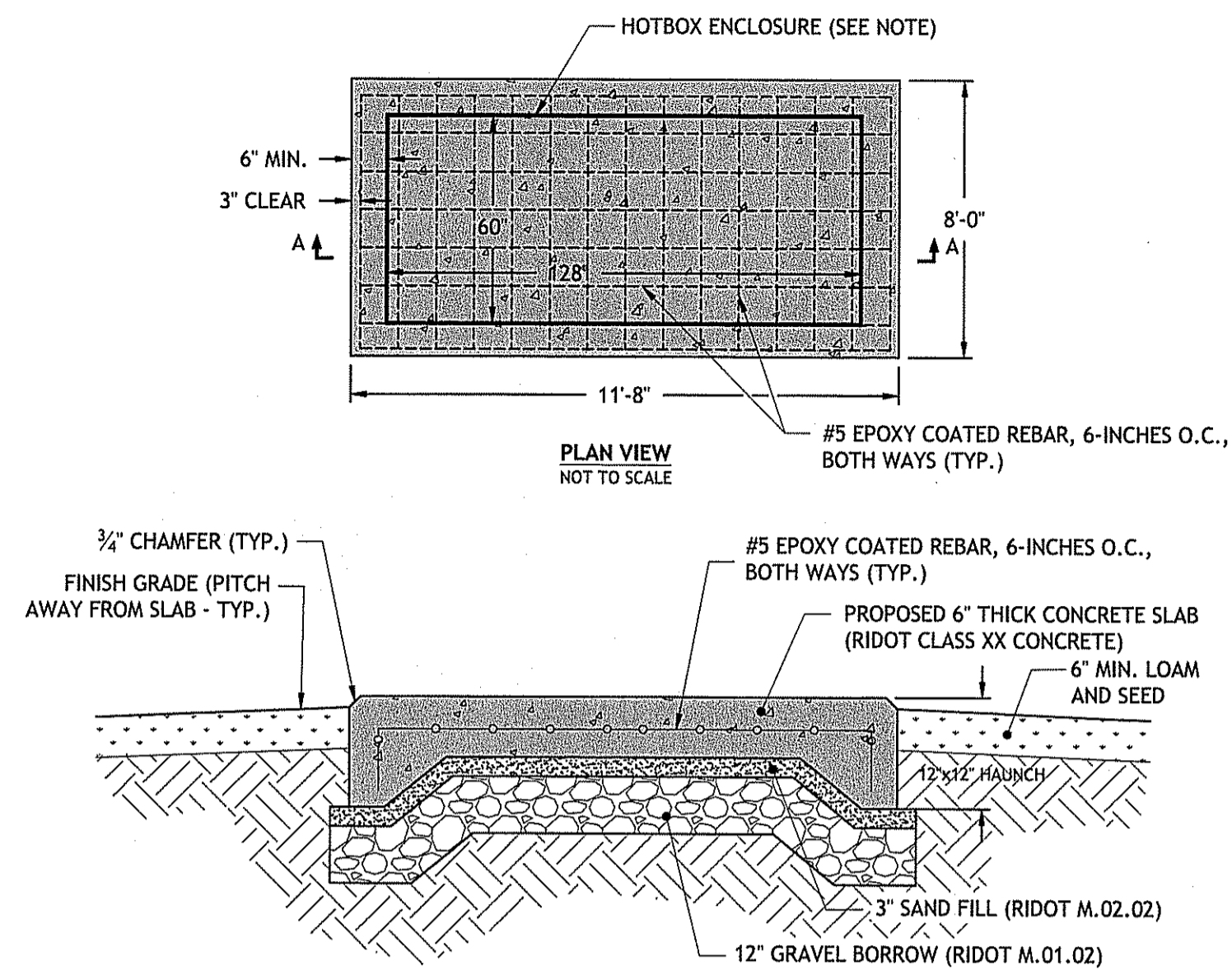


SECTION THROUGH DOMESTIC SERVICE
NOT TO SCALE



SECTION THROUGH FIRE PROTECTION SERVICE
NOT TO SCALE

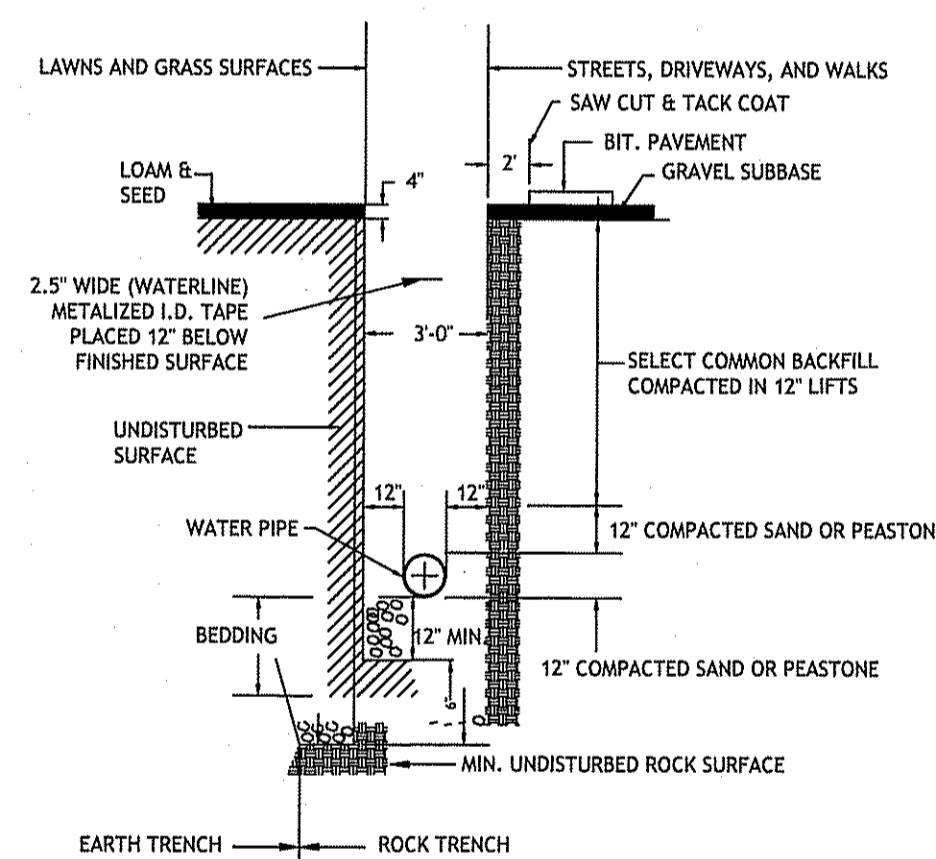
26 ABOVE GROUND HEATED ENCLOSURE DETAILS
NOT TO SCALE



SECTION A-A
NOT TO SCALE

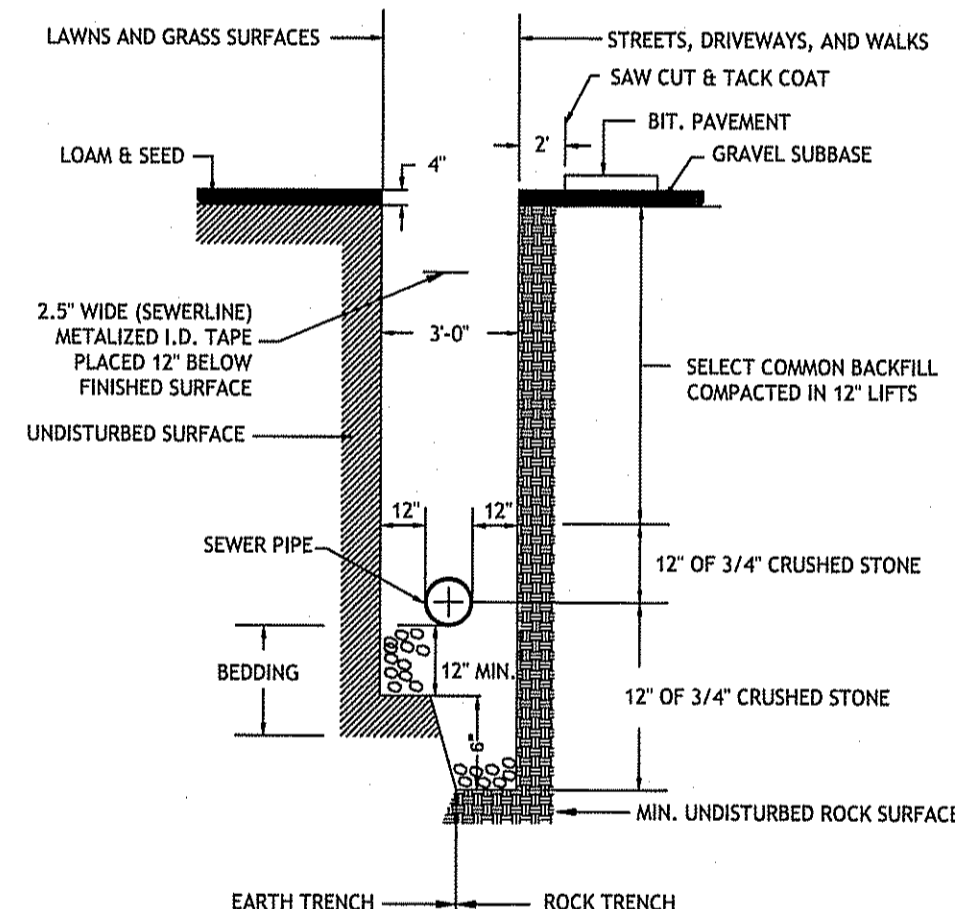
- NOTES:
1. PROVIDE ANCHOR BOLTS AS NECESSARY PER AT'S ENCLOSURE MANUFACTURER.
 2. HOT BOX SIZING IS CUSTOM; THEREFORE ACTUAL SIZE OF CONCRETE SLAB MAY CHANGE BASED ON ACTUAL HOT BOX FABRICATION PARAMETERS. UPON FINAL CONFIRMATION OF CUSTOM HOT BOX SIZE, CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF RECORD TO REVIEW AND MODIFY THIS DETAIL IF NECESSARY.

27 HOTBOX CONCRETE SLAB
NOT TO SCALE



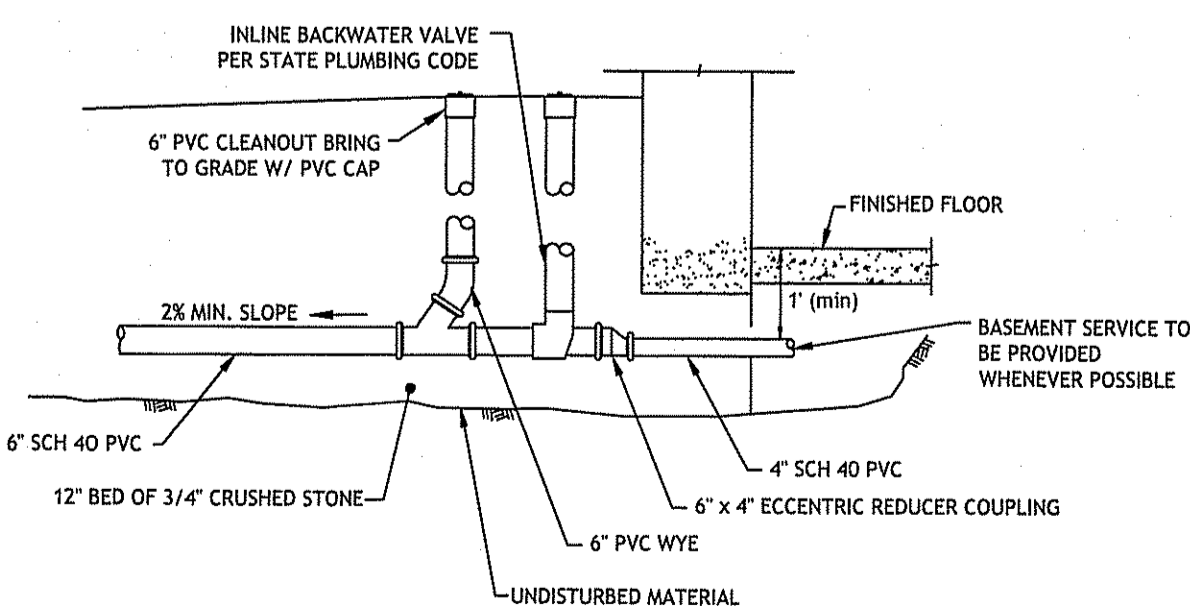
- NOTES:
1. COMPACTED SAND OR PEASTONE FOUNDATION SHALL BE PLACED 12" UNDER THE PIPE UP TO THE PIPE GRADE. THE PIPE LAID THEREON, AND COMPACTED SAND OR PEASTONE PULLED AGAINST THE PIPE SIDE TO FIRMLY HOLD THE PIPE IN PLACE. NO BLOCKS OR STONES SHALL BE USED TO SUPPORT THE PIPE.
 2. COMPACTED SAND OR PEASTONE HAUNCHING SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE. COMPACTED SAND OR PEASTONE BLANKET SHALL BE PLACED 12" ABOVE THE PIPE.
 3. WATER PIPE SHALL HAVE AT LEAST 5-FOOT OF COVER AT ALL TIMES.

30 WATER LINE TRENCH DETAIL
NOT TO SCALE

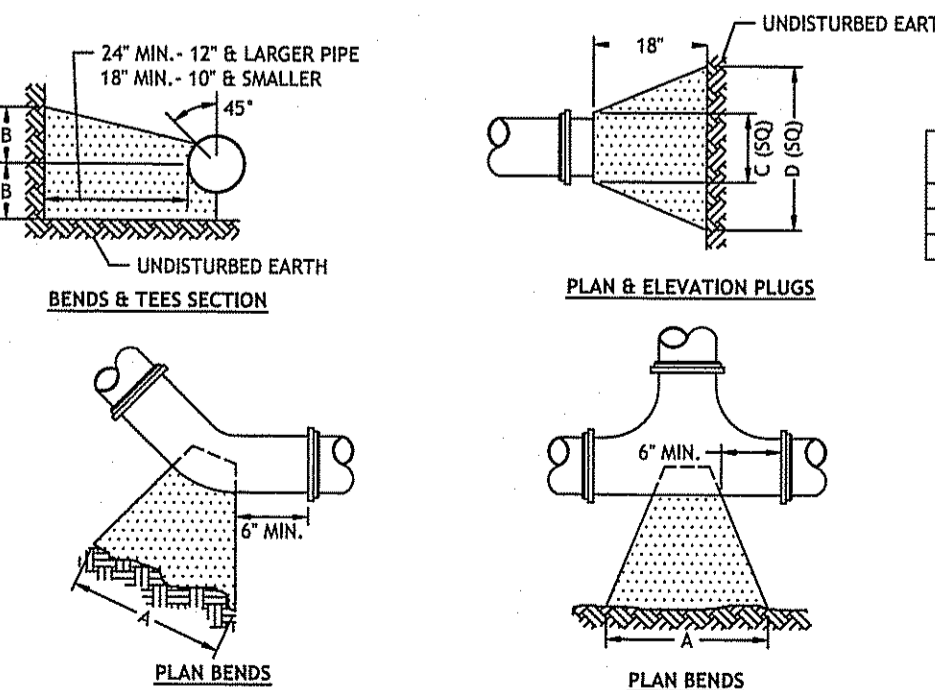


- NOTES:
1. 3/4-INCH CRUSHED STONE FOUNDATION SHALL BE PLACED 12" UNDER THE PIPE UP TO THE PIPE GRADE. THE PIPE LAID THEREON, AND 3/4-INCH CRUSHED STONE PULLED AGAINST THE PIPE SIDE TO FIRMLY HOLD THE PIPE IN PLACE. NO BLOCKS OR STONES SHALL BE USED TO SUPPORT THE PIPE.
 2. 3/4-INCH CRUSHED STONE HAUNCHING SHALL BE BROUGHT LEVEL TO THE TOP OF THE PIPE AND OUT TO THE TRENCH WALL AT THIS ELEVATION FOR ALL PIPE. 3/4-INCH CRUSHED STONE BLANKET SHALL BE PLACED 12" ABOVE THE PIPE.

31 TYPICAL SEWER LINE TRENCH DETAIL
NOT TO SCALE



33 GRAVITY SEWER BUILDING CONNECTION DETAIL
NOT TO SCALE

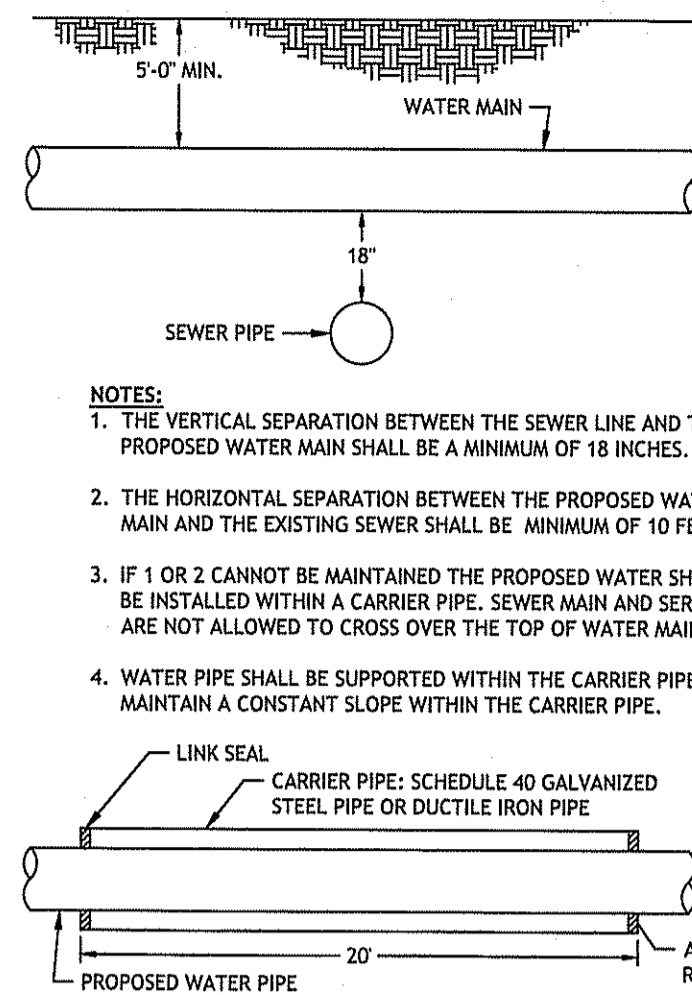


SIZE	TEES		PLUGS		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	A	B	A	B	A	B	A	B	A	B	A	B
4"	22"	12"	22"	12"	24"	16"	20"	10"	14"	7"	11"	5"
6"	30"	18"	30"	18"	35"	22"	27"	15"	19"	12"	13"	8"
8"	38"	24"	38"	24"	45"	29"	33"	22"	25"	14"	19"	10"

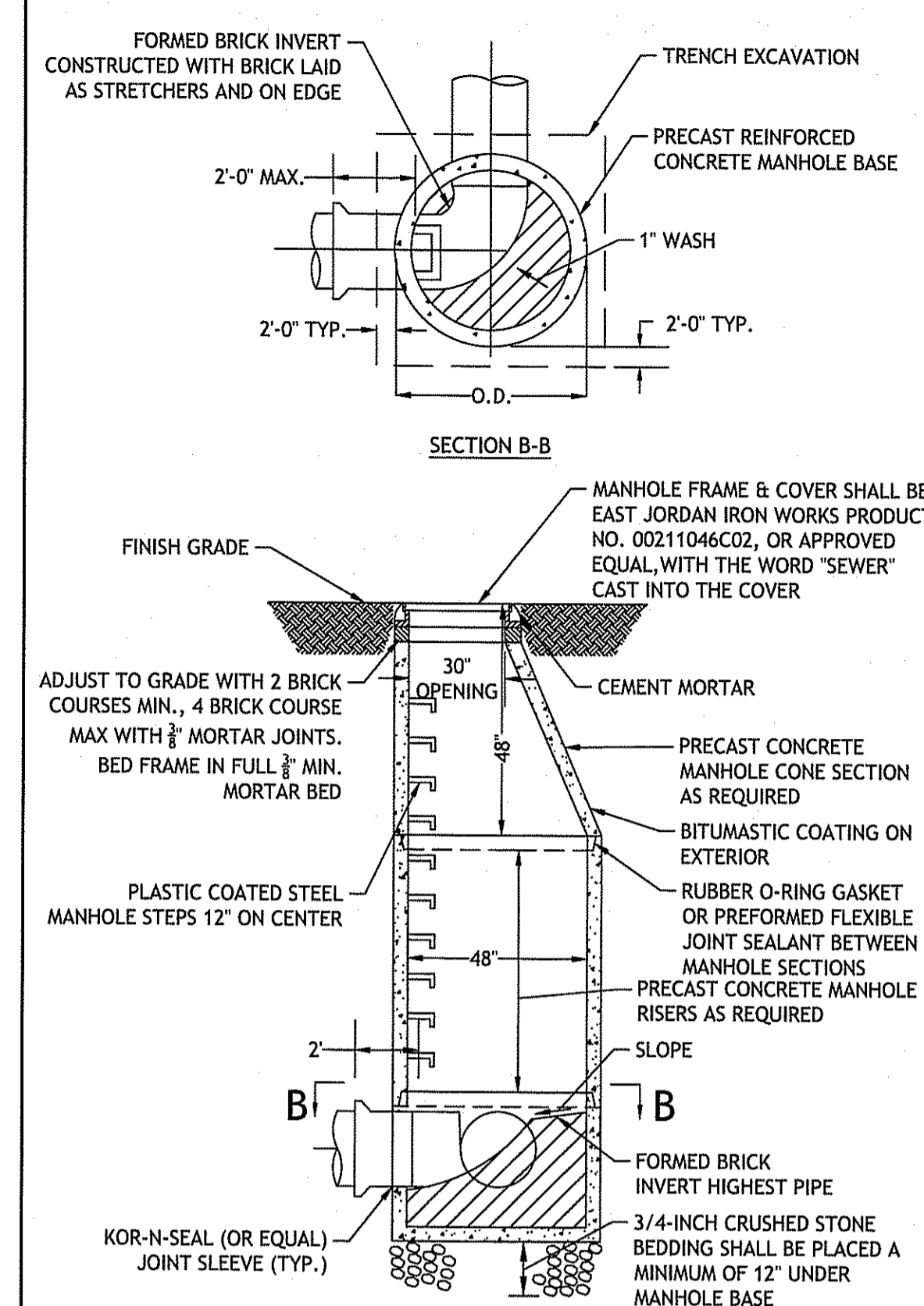
- NOTE:
1. ALL CONCRETE SHALL BE 4000 P.S.I. @ 28 DAYS.
 2. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
 3. FORMS TO BE USED AS NECESSARY.
 4. ALL BOLTS AND NUTS TO BE PROTECTED FROM CONCRETE AND EASILY ACCESSIBLE WHEN THRUST BLOCK INSTALLED.

34 THRUST BLOCK DETAIL
NOT TO SCALE

28 SEWER / WATER SEPARATION DETAIL
NOT TO SCALE

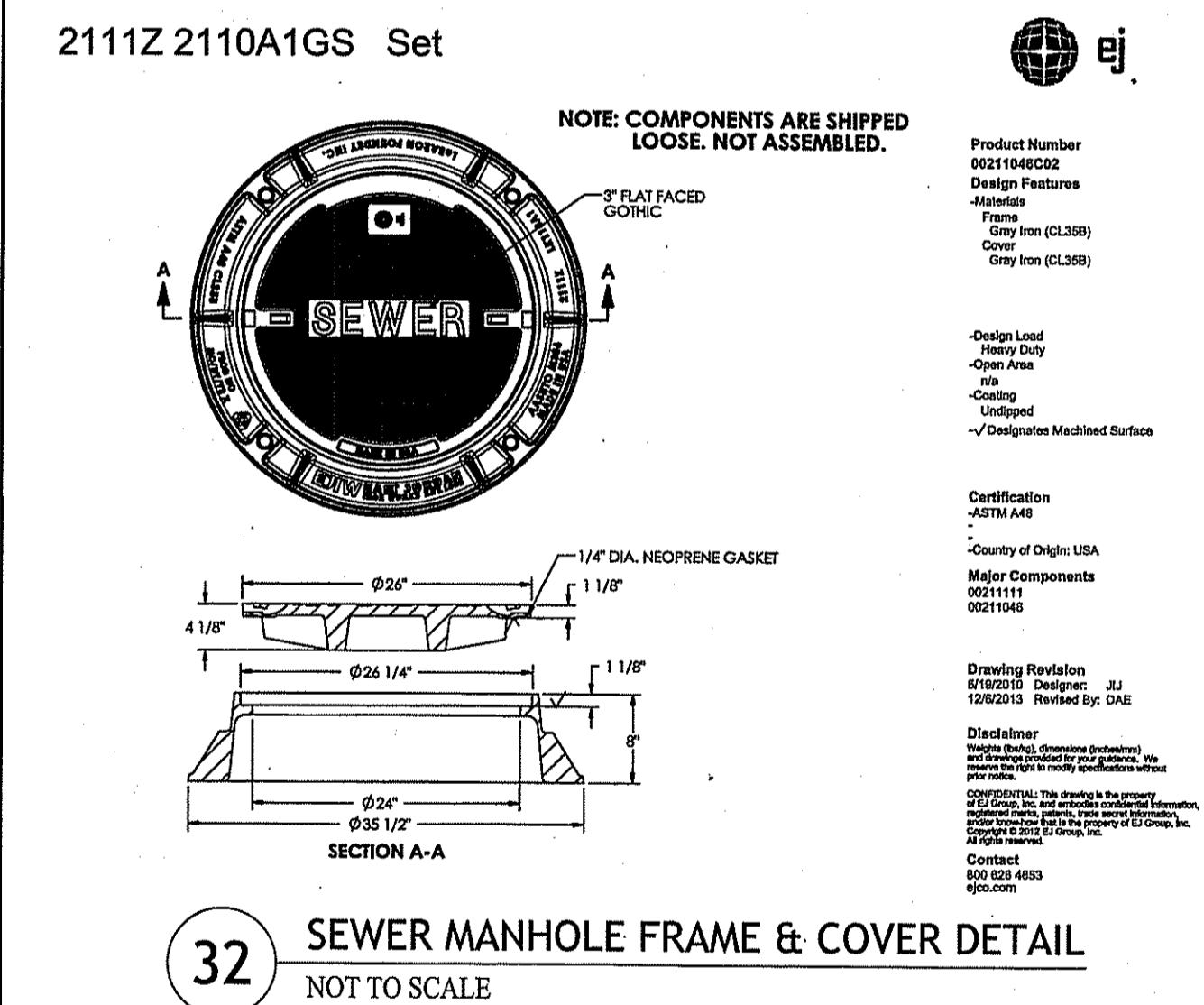


- NOTES:
1. THE VERTICAL SEPARATION BETWEEN THE SEWER LINE AND THE PROPOSED WATER MAIN SHALL BE A MINIMUM OF 18 INCHES.
 2. THE HORIZONTAL SEPARATION BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SEWER SHALL BE A MINIMUM OF 10 FEET.
 3. IF 1 OR 2 CANNOT BE MAINTAINED THE PROPOSED WATER SHALL BE INSTALLED WITHIN A CARRIER PIPE. SEWER MAIN AND SERVICES ARE NOT ALLOWED TO CROSS OVER THE TOP OF WATER MAIN.
 4. WATER PIPE SHALL BE SUPPORTED WITHIN THE CARRIER PIPE TO MAINTAIN A CONSTANT SLOPE WITHIN THE CARRIER PIPE.

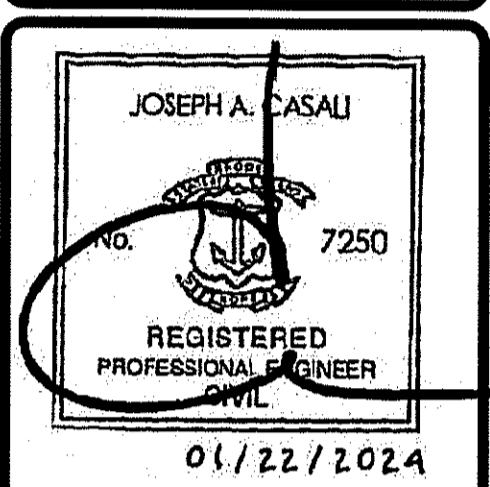
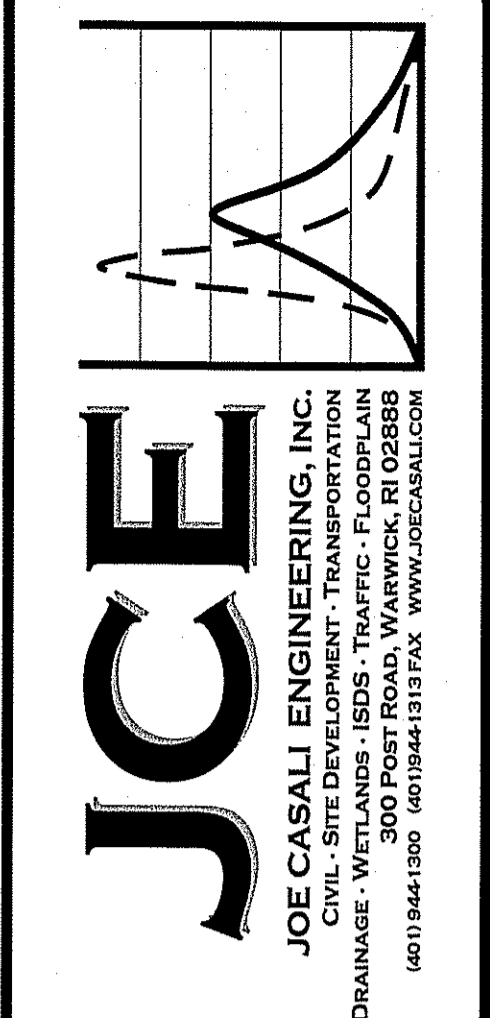


- NOTES:
1. ALL LIFTING HOLES TO BE PLUGGED IN AND OUT WITH HYDRAULIC CEMENT.
 2. ALL JOINTS TO BE HYDRAULICALLY CEMENTED.
 3. BACKFILL TO BE SCREENED WITH NO STONES LARGER THAN 2" DIAMETER.

29 TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



32 SEWER MANHOLE FRAME & COVER DETAIL
NOT TO SCALE



TOWN OF JOHNSTON
DEPT. OF DEV. AND PUBLIC SERVICES
100 IRONS AVENUE
JOHNSTON, RHODE ISLAND
AP 34, LOTS 112 & 530

REVISIONS:

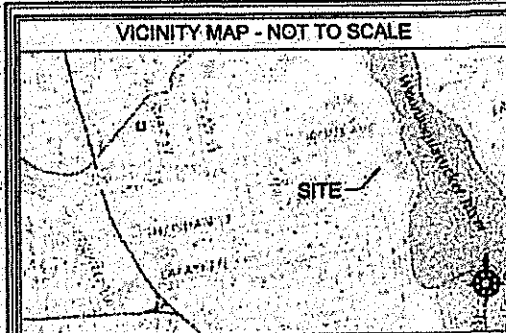
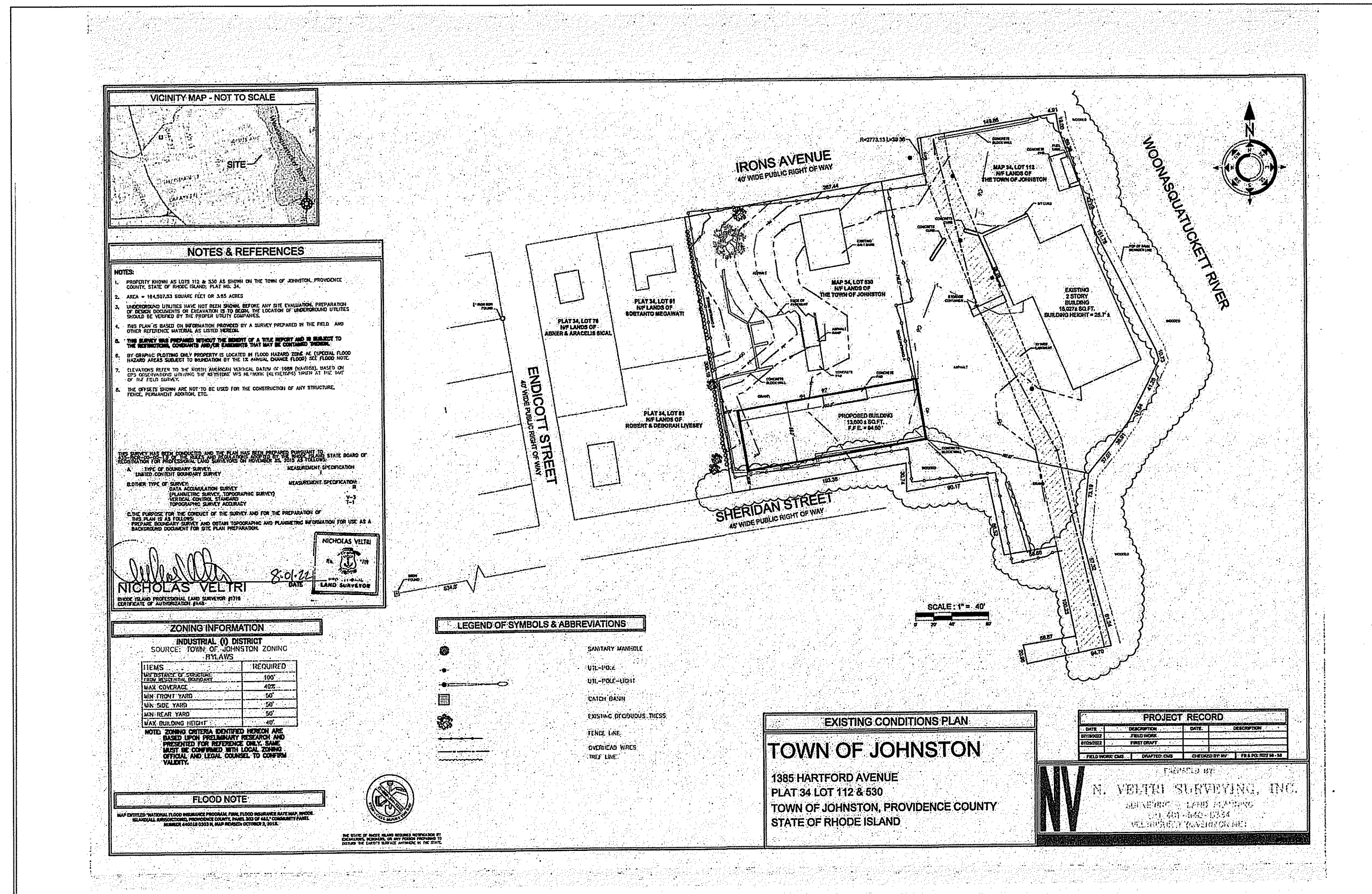
NO.	DATE	DESCRIPTION
1	9/21/23	NBC COMMENTS
2	11/20/23	RIDEM COMMENTS
3	1/20/24	RIDEM COMMENTS

DESIGNED BY: WMLR
DRAWN BY: SD/SEP
CHECKED BY: JAC
DATE: AUGUST 2023
PROJECT NO: 06-901

PRELIMINARY, NOT FOR CONSTRUCTION

CIVIL DETAILS II

SHEET 9 OF 10



NOTES & REFERENCES

NOTES:

- PROPERTY BOUNDARIES SHOWN ARE BASED ON THE TOWN OF JOHNSTON, PROVIDENCE COUNTY, STATE OF RHODE ISLAND, TAX MAP.
- AREA = HIGHLIGHTED HAVING FEET OR SAS AGRES.
- IMPROVEMENTS LOCATED ARE NOT SHOWN BY THIS PLAN AND THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE PROPERTY SURVEY CONTRACTOR.
- SEE PLAN FOR BOUNDARY INFORMATION, PROVIDED BY A SURVEY PREPARED BY THE FIELD AND OTHER SURVEYING MATERIAL, AT OWNERS RISK.
- THE SURVEYOR HAS REVIEWED THE RECORDS OF THE TOWN OF JOHNSTON AND HAS FOUND NO RECORDS TO BE RELEVANT TO THIS PROJECT.
- BY CREATING THIS PLAN, THE SURVEYOR IS NOT PROVIDING ANY GUARANTEE OF ACCURACY OR LIABILITY FOR THE INFORMATION PROVIDED HEREIN. THE SURVEYOR IS NOT PROVIDING ANY GUARANTEE OF ACCURACY OR LIABILITY FOR THE INFORMATION PROVIDED HEREIN.
- ALL DIMENSIONS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, FURNITURE, SIGNAGE, ETC.

THE SURVEYOR HAS REVIEWED THE RECORDS OF THE TOWN OF JOHNSTON AND HAS FOUND NO RECORDS TO BE RELEVANT TO THIS PROJECT.

BY CREATING THIS PLAN, THE SURVEYOR IS NOT PROVIDING ANY GUARANTEE OF ACCURACY OR LIABILITY FOR THE INFORMATION PROVIDED HEREIN.

ALL DIMENSIONS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, FURNITURE, SIGNAGE, ETC.

NICHOLAS VELTRI
 LICENSED PROFESSIONAL LAND SURVEYOR #7714
 STATE OF RHODE ISLAND

ZONING INFORMATION

INDUSTRIAL (I) DISTRICT

SOURCE: TOWN OF JOHNSTON ZONING BYLAWS

ITEMS	REQUIRED
MINIMUM LOT AREA	100'
MAX COVERAGE	40%
MIN FRONT YARD	50'
MIN SIDE YARD	50'
MIN REAR YARD	50'
MAX BUILDING HEIGHT	40'

NOTE: ZONING REGULATIONS SUBJECT TO CHANGE AND SHOULD BE VERIFIED WITH THE TOWN OF JOHNSTON PLANNING DEPARTMENT AND LOCAL CODES TO DETERMINE CURRENT ZONING REGULATIONS.

LEGEND OF SYMBOLS & ABBREVIATIONS

- SAUNTRY MANHOLE
- UTILITY POLE
- UTILITY POLE-UPHILL
- CATCH BASIN
- EXISTING STRUCTURE, DECK
- FENCE LINE
- OVERHEAD WIRE
- WIRE LINE

EXISTING CONDITIONS PLAN

TOWN OF JOHNSTON

1885 HARTFORD AVENUE
 PLAT 34 LOT 112 & 530
 TOWN OF JOHNSTON, PROVIDENCE COUNTY
 STATE OF RHODE ISLAND

PROJECT RECORD

DATE	DESCRIPTION	BY	REVISION

PREPARED BY:
N. VELTRI SURVEYING, INC.
 111 WEST 10TH STREET
 JOHNSTON, RHODE ISLAND 02839
 TEL: 401-242-1334
 FAX: 401-242-1334

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

APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL

DATED: 2-18-24 FILE #: 23-0158

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

Andy Clayton