

FINAL PLANS

FOR

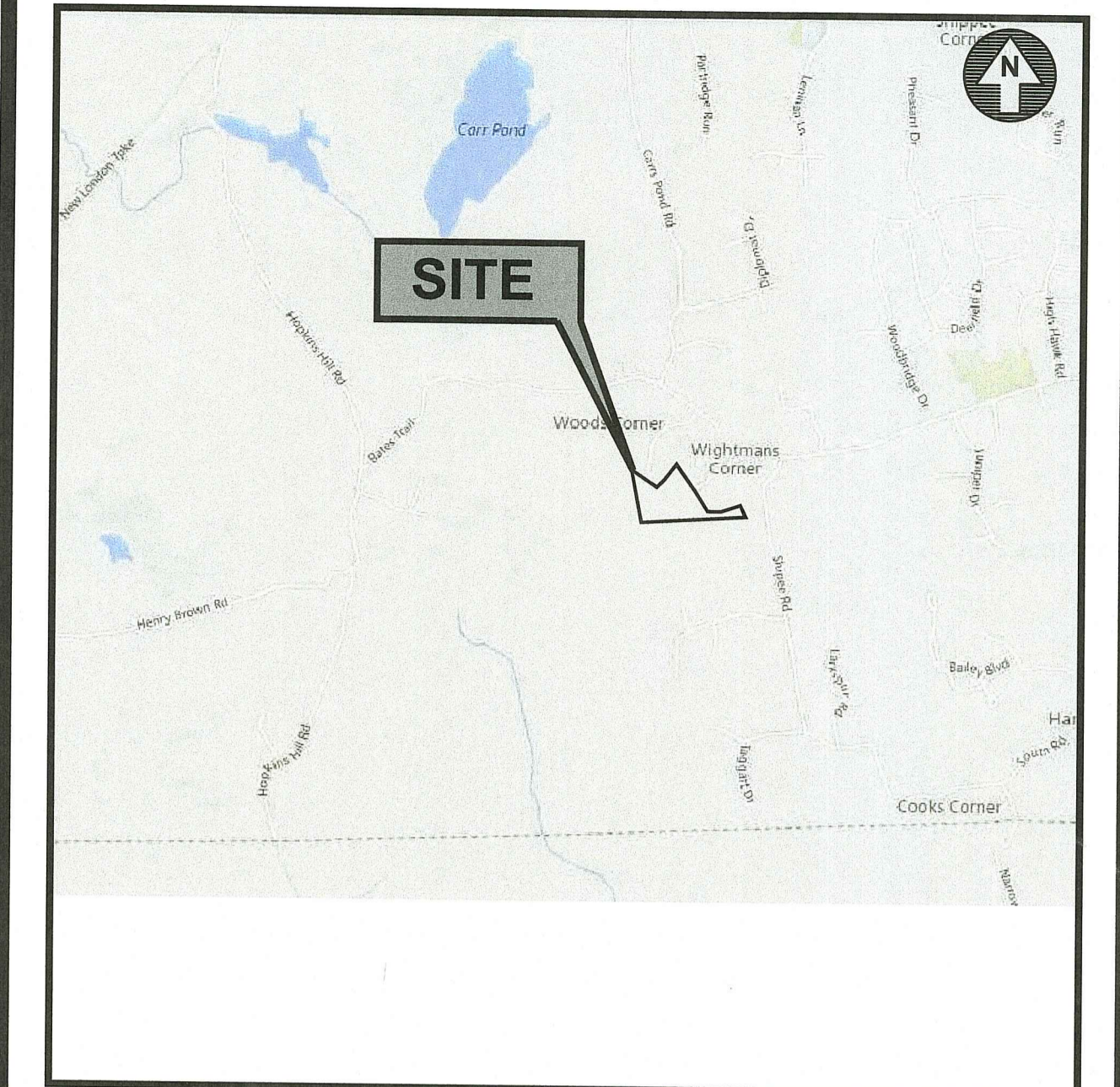
FOREST LANE SUBDIVISION

35 & 55 FOREST LANE

MAP 19/PLAT 19/LOTS 1 AND 2

EAST GREENWICH, RHODE ISLAND

ZONING DISTRICT: FARMING F2



LOCUS MAP
NO SCALE

INDEX OF DRAWINGS

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: OCT 16 2023 FILE # 21-0152
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



OWNER AND APPLICANT:

GDUBON PROPERTIES, LLC
C/O: CHRISTOPHER REYNOLDS, MEMBER
55 FOREST LANE
EAST GREENWICH, R.I. 02818

LEGAL COUNCIL:

DAVID V. IGLIOZZI, ESQ.
IGLIOZZI & REIS, LLC
926 PARK AVENUE
CRANSTON, R.I. 02852
(401) 781-1100

CIVIL ENGINEERS AND LAND SURVEYORS:



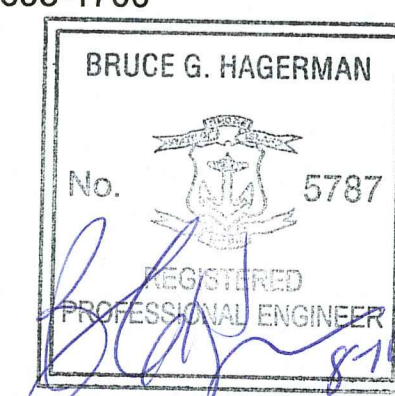
- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

CROSSMAN ENGINEERING

Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone: (401) 738-5660
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 695-1700

Email: cei@crossmaneng.com

MAY 2021
SHEET 1 of 17



APPROVALS:

- RIDEM WETLAND EDGE VERIFICATION NO.19-0023
- MASTER PLAN APPROVAL FEBRUARY 3, 2021; WAIVER GRANTED TO EXCEED THE MAXIMUM CUL-DE-SAC LENGTH OF 1,000'
- RIDEM INSIGNIFICANT ALTERATION PERMIT FILE NO. 21-0152 AND RIPDES PERMIT FILE NO. RIR102200 APPROVED ON SEPTEMBER 24, 2021
- RIDEM SUBDIVISION SUITABILITY FILE NO. 2109-0256, APPROVED OCTOBER 21, 2021
- PRELIMINARY PLAN APPROVAL JUNE 1, 2022

REVISIONS:

No.:	DATE:	DESCRIPTION:
1	7/8/21	RIDEM COMMENTS
2	8/6/21	RIDEM FWW COMMENTS
3	2/2022	PRELIMINARY PLAN SUBMISSION
4	3/2022	TOWN COMMENTS
5	5/2022	TOWN COMMENTS
6	11/2022	FINAL PLAN
7	11/28/2022	TOWN COMMENTS
8	5/12/2023	LOT GRADING
9	6/9/2023	RIDEM MODIFICATION
10	8/16/2023	RIDEM COMMENTS

GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES, BOTH UNDERGROUND AND OVERHEAD, BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH "DIG SAFE PROGRAM LAW" ENACTED BY THE R.I. LEGISLATURE AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY MUNICIPALITY, STATE OR FEDERAL AGENCY THAT MAY APPLY. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
2. SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I.D.O.T. STANDARD SPECIFICATIONS AND DETAILS. FOR ALL EXCAVATION, PLACEMENT OF FILL, PIPE, BITUMINOUS PAVEMENT, CONCRETE AND SAWCUTTING, THE CONTRACTOR SHALL PERFORM THE WORK IN FULL COMPLIANCE WITH THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AUGUST 2013 EDITION, WITH LATEST REVISIONS UNLESS OTHERWISE SHOWN ON PLANS. THE "METHOD OF MEASUREMENT" AND "BASIS OF PAYMENT" ARE NOT APPLICABLE. THESE SPECIFICATIONS CAN BE OBTAINED ON-LINE AT:
<http://www.dot.ri.gov/business/bluebook.php>
3. ALL WORK SHALL CONFORM TO RIDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED 2013, AND THE RHODE ISLAND STANDARD DETAILS, MAY 20, 2015, AS AMENDED AND THE EAST GREENWICH SUBDIVISION REGULATIONS.
4. THE CONTRACTOR MUST VERIFY PRIOR TO CONSTRUCTION THAT ALL REQUIRED AUTHORIZATION TO PERFORM WORK HAS BEEN OBTAINED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION OPERATIONS INCLUDING ALL ACTIONS OR OMISSIONS OF ANY SUBCONTRACTORS, AGENTS OR EMPLOYEES. THE CONTRACTOR MUST ENSURE THAT THE CONDITIONS OF ALL PERMITS, SPECIFICATIONS AND FEDERAL, STATE AND LOCAL REGULATIONS ARE STRICTLY ENFORCED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ASPECTS OF ON-SITE SAFETY INCLUDING ANY DAMAGE TO EXISTING STRUCTURES.
5. WORK SHOWN ON THE PLANS FOR WHICH THERE ARE NO PARTICULAR DETAILS OR SPECIFICATIONS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THE WORK. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE CONTRACT DOCUMENTS AND PLANS AND INSPECT THE SITE, AND THE BID PRICE SHALL INCLUDE ALL SERVICES AND MATERIALS NECESSARY TO COMPLETE THE PROJECT. ANY CHANGES TO THE PROJECT OR THE INSTALLATION OF AN ITEM FOR WHICH NO PARTICULAR DETAIL OR SPECIFICATION WAS PROVIDED MUST BE REVIEWED BY AND MUST BE ACCEPTABLE TO THE ENGINEER.
6. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ANY WORK. THE CONTRACTOR SHALL PERFORM TEST PITS TO LOCATE EXISTING UTILITY STUBS AT CONNECTION POINTS. THE CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES FOR NEW PIPES, CONDUITS AND SERVICES.
7. ALL DISTURBED AREAS OUTSIDE THE LIMIT OF DISTURBANCE SHALL BE REPLACED IN KIND UNLESS OTHERWISE SHOWN.
8. "APPROVED EQUAL" PRODUCTS MAY BE USED BY THE CONTRACTOR ONLY UPON APPROVAL BY THE EAST GREENWICH DEPARTMENT OF PUBLIC WORKS AND THE DESIGN ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SUBMITTALS TO THE EAST GREENWICH DEPARTMENT OF PUBLIC WORKS AND THE DESIGN ENGINEER AND/OR OWNER FOR REVIEW.
9. THERE ARE NO AGRICULTURAL USES ON THIS PROPERTY.
10. THERE ARE NO KNOWN EXISTING EASEMENTS ON THIS SITE.

LAYOUT NOTE

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEM FOUND WHICH DOES NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

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 CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
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 WILL NOT BE PARKED IN THE ROADWAY RIGHT-OF-WAY.
4. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION, LATEST REVISIONS.
5. SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE STATE D.O.T. SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

CONSTRUCTION NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN AND REVIEW ALL ENGINEERING AND PERMIT DOCUMENTS COMPLETED FOR FINAL DESIGN, INCLUDING TOWN PLANNING BOARD APPROVALS AND RIDEM PERMIT CONDITIONS.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLATION OF UTILITIES ON SITE. THE COORDINATION IS NECESSARY FOR THE ENGINEER TO SCHEDULE SITE INSPECTIONS AS REQUIRED.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN DETAILED AS-BUILT INFORMATION FOR ALL UTILITY AND WATER LINE INSTALLATION. AS-BUILT INFORMATION INCLUDES MATERIAL LIST, PIPE DEPTH NOTATIONS AND SWING TIE LOCATIONS (2 MINIMUM) FROM NEW PIPE TO PERMANENT STRUCTURES. ALL PIPE BEND/ELBOW LOCATIONS SHALL BE DIMENSIONED. REFER TO THE KCWA REQUIREMENTS.

PERMITTING NOTES

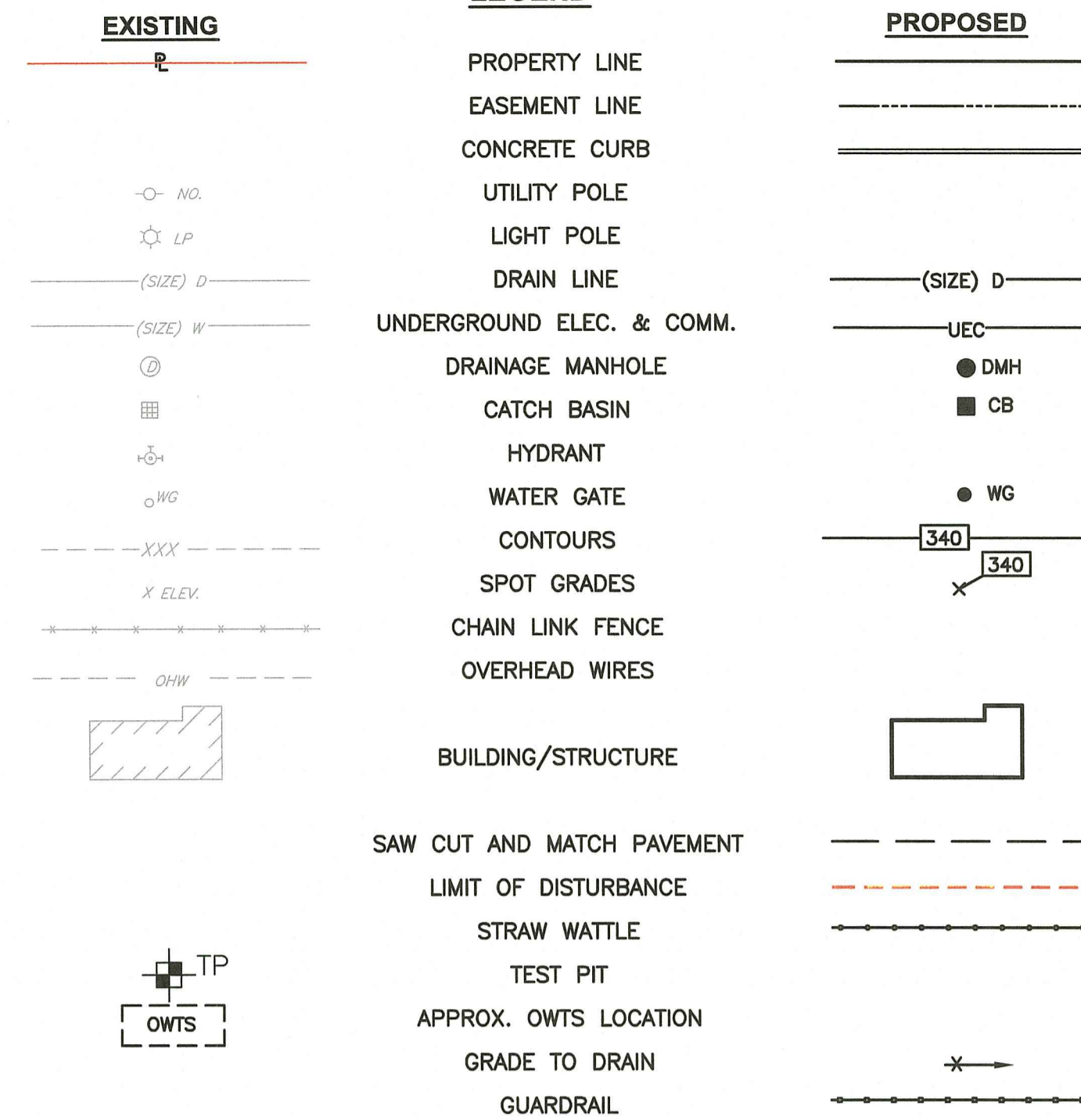
1. THE PROPOSED IMPROVEMENTS WILL REQUIRE PERMITS FROM RIDEM. THE PERMITS ANTICIPATED ARE:
-RIDEM RIPDES PERMIT
-RIDEM STORMWATER CONSTRUCTION PERMIT AND WATER QUALITY CERTIFICATION
-RIDEM OWTS DESIGNS (EACH LOT)
2. THE SITE IS NOT WITHIN A WELLHEAD PROTECTION AREA.
3. THE SITE IS NOT WITHIN A RIDEM NATURAL HERITAGE AREA, OR A CRITICAL RESOURCE AREA OR WITHIN A TOWN OF EAST GREENWICH HISTORIC DISTRICT.
4. WETLAND EDGES ON THE SITE WERE VERIFIED BY RIDEM UNDER APPLICATION NO. 19-0023.
5. THE SITE IS LOCATED WITHIN WATERSHED TO FRENCHTOWN BROOK (WATERBODY ID RID007028R-01).
6. THE GROUNDWATER CLASSIFICATION FOR THIS SITE IS GA.
7. THE EXISTING BUILDINGS/STRUCTURES ON THE SITE ARE NOT ON THE NATIONAL REGISTER OF HISTORIC PLACES.

PROPOSED STANDARD PAVEMENT STRUCTURE

- 2" HOT MIX ASPHALT SURFACE COURSE, RIDOT CLASS 9.5
- 2" HOT MIX ASPHALT BASE COURSE, RIDOT CLASS 12.5
- 12" GRAVEL BORROW SUBBASE

DESIGN NOTES

1. ALL FIRE CISTERNS ARE SUBJECT TO FIRE MARSHAL AND/OR FIRE CHIEF APPROVAL. A DESIGNATED MEMBER OF THE FIRE DEPARTMENT SHALL BE PRESENT AT INSTALLATION OF SUCH CISTERNS. ALL CISTERNS SHALL BE MAINTAINED IN PERPETUITY BY THE AFFECTED HOMEOWNER, HOMEOWNERS ASSOCIATION OR PRIVATE OWNER'S ASSOCIATION.
2. ALL PUBLIC IMPROVEMENTS MUST BE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS WITHIN TWO YEARS OF FINAL APPROVAL AND THERE SHALL BE NO CERTIFICATE OF OCCUPANCY ISSUED FOR LOTS 1, 2, 4 AND 5 WITHIN THE DEVELOPMENT UNTIL THE ROAD BINDER, UTILITIES, AND DRAINAGE IMPROVEMENTS ARE COMPLETE TO THE SATISFACTION OF THE EAST GREENWICH DEPARTMENT OF PUBLIC WORKS. THE EXISTING HOUSE ON LOT 3 IS CURRENTLY OCCUPIED AND WILL REMAIN OCCUPIED DURING CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO MAINTAIN SAFE ACCESS TO THE EXISTING HOUSE ON LOT 3 FROM FOREST LANE DURING CONSTRUCTION.
3. UPON COMPLETION OF INSTALLATION OF ANY STORMWATER MANAGEMENT SYSTEM, WRITTEN CERTIFICATION FROM A REGISTERED PROFESSIONAL ENGINEER THAT SUCH SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLANS. AN "AS-BUILT" PLAN SET OF THE STORMWATER MANAGEMENT SYSTEMS MUST BE SUBMITTED TO EAST GREENWICH DEPARTMENT OF PUBLIC WORKS ALONG WITH AN OPERATIONS AND MAINTENANCE PLAN. SUCH PLAN SHALL MAKE CLEAR THAT MAINTENANCE OF THE STORMWATER SYSTEM IS THE RESPONSIBILITY OF THE RESPECTIVE HOMEOWNERS ASSOCIATION OR PRIVATE OWNER'S ASSOCIATION.



NRCS SOIL TYPE LEGEND:

- BnB - Bridgehampton Charlton Complex, Very Stony, 0-8% slopes.
- NbB - Narragansett Very Stony Silt Loam, 0-8% slopes.
- NcC - Narragansett Very Stony Silt Loam, 8-15% slopes.
- Rf - Ridgebury, Leicester and Whitman Soils, 0-8% slopes.
- WcB - Wapping Very Stony Silt Loam, 0-8% slopes.

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Wendy L. Freeman

CROSSMAN ENGINEERING
Rhode Island: 151 CenterVillage Road, Warwick, RI 02886, Phone: (401) 738-5660
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PROJECT TITLE:

FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

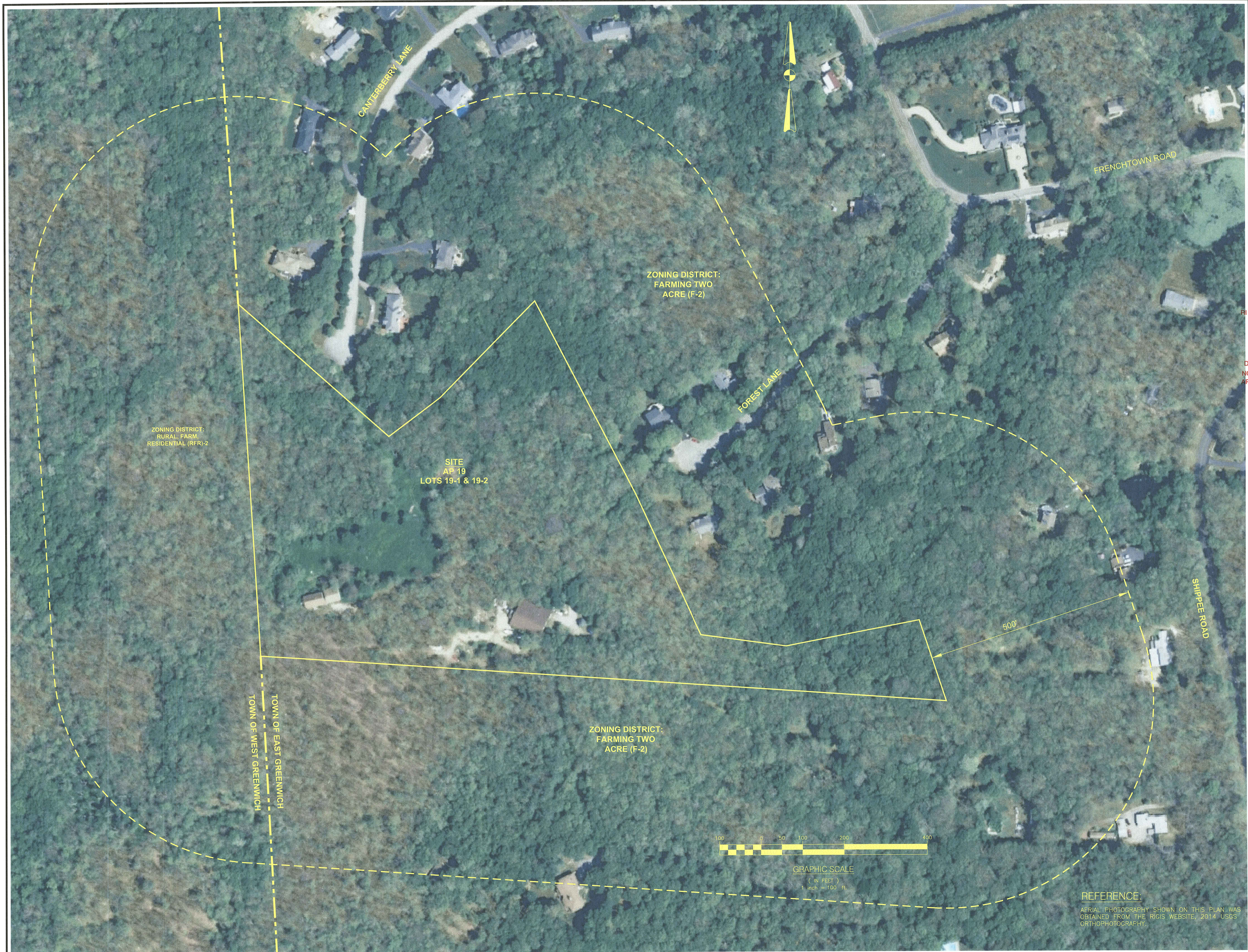
DRAWING TITLE:
GENERAL NOTES and LEGEND

DATE: MAY 2021 SCALE: NO SCALE

DWG. NAME: 2327-02-NOTE.dwg

REVISIONS		
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/9/21
2	RIDEM FWV COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER:
C1
SHEET: 2 OF 17




- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

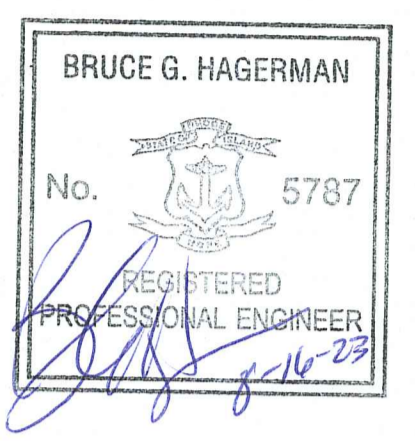
CROSSMAN ENGINEERING

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

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL

DATED: OCT 16 2023 FILE #: 21-0152

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Nancy L. Freeman

PROJECT TITLE:

FOREST LANE SUBDIVISION

35 & 55 FOREST LANE
MAP 19/ PLAT 19/ LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

APR 26 2023
Office of Water Resources

DRAWING TITLE:

AERIAL PLAN

DATE: MAY 2021 SCALE: 1" = 100'

DWG. NAME: 2327-03-AERIAL PLAN.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWM COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
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9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER

C2

SHEET: 3 OF: 17

REFERENCE:
AERIAL PHOTOGRAPHY SHOWN ON THIS PLAN WAS OBTAINED FROM THE RIGIS WEBSITE, 2014 USGS ORTHOPHOTOGRAPHY.



CROSSMAN ENGINEERING

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BRUCE G. HAGERMAN

No. 5787

REGISTERED PROFESSIONAL ENGINEER

8-16-23

PROJECT TITLE:

FOREST LANE SUBDIVISION

35 & 55 FOREST LANE
MAP 19/PLAT 19/ LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

DRAWING TITLE:

LOCATION MAP

DATE: MAY 2021 SCALE: 1" = 400'

DWG. NAME: 2327-04-LOCATION.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
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10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER

C3

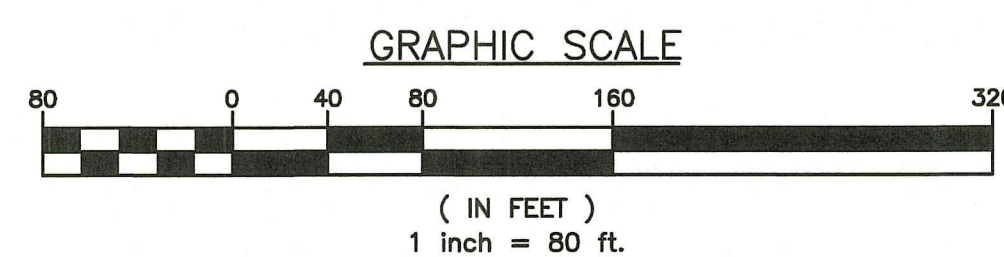
SHEET: 4 OF 17



NOTE:
THERE ARE NO SCHOOLS, PARKS, FIRE STATIONS
OR ANY OTHER PUBLIC FACILITY WITHIN 1/2 MILE
OF THE SITE.

Zoning

- Commercial Downtown One District
- Commercial Downtown Two District
- Commercial Highway District
- CL
- Farming District One Acre
- Farming District Two Acre
- Light Industry and Office District
- Mixed Use Planning District
- Planned Development
- Residential District- 10,000 SqFt
- Residential District- 20,000 SqFt
- Residential District-30,000 SqFt



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Nancy L. Freeman

SEaled
AUG 19 2023
Office of Water Resources



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PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

DRAWING TITLE:

200' RADIUS MAP

DATE: DECEMBER 2020 SCALE: 1" = 80'

DWG. NAME: 2327-05-RADIUS.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	PRELIMINARY PLAN	2/2022
2	TOWN COMMENTS	3/2022
3	TOWN COMMENTS	5/2022
4	FINAL PLAN	11/2022
5	TOWN COMMENTS	11/28/2022
6	LOT GRADING	5/12/2023
7	RIDEM MODIFICATION	6/9/2023
8	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER

C4

SHEET: 5 OF 17

200' ABUTTERS LIST
OWNER INFORMATION OBTAINED FROM THE TOWNS OF EAST GREENWICH AND WEST GREENWICH GIS ON DECEMBER 17, 2021.

TOWN OF EAST GREENWICH

13-19-6
145 SHIPPEE ROAD LLC
165 SHIPPEE ROAD
EAST GREENWICH, RI 02818

19-15-450
HERRINGTON, KIM/STACEY B. TE
100 CANTERBURY LANE
EAST GREENWICH, RI 02818

19-15-451
CATERSON, JAMES S./GRETCHEN E.
120 CANTERBURY LANE
EAST GREENWICH, RI 02818

19-15-452
STUPELL, TODD/MELISSA
140 CANTERBURY LANE
EAST GREENWICH, RI 02818

19-15-453
NOLAND, MICKY L./CHRISTINA V. TE
125 CANTERBURY LANE
EAST GREENWICH, RI 02818

19-19-3
BRINDAMOUR, MARSHA/IRELAND, JOH
30 FOREST LANE
EAST GREENWICH, RI 02818

19-19-5
HULING, BRUCE B.
111 SHIPPEE ROAD
EAST GREENWICH, RI 02818

19-19-73
PLACE, GLENN/DANIELLE TE
91 SHIPPEE ROAD
EAST GREENWICH, RI 02818

19-19-82
DUNWOODY, DONALD B./SHERRI A.
2080 FRENCHTOWN ROAD
EAST GREENWICH, RI 02818

19-19-126
OPISHINSKI, THOMAS B./CHRISTIANA
81 SHIPPEE ROAD
EAST GREENWICH, RI 02818

19-19-131
STEVENS, GREGORY/ROBERTA TE
7 FOREST LANE
EAST GREENWICH, RI 02818

19-19-132
CHEN, YONG JIANG/WEIKUANG TC
15 FOREST LANE
EAST GREENWICH, RI 02818

19-19-133
GARTHWAITE, TIMOTHY J. SO
19 FOREST LANE
EAST GREENWICH, RI 02818

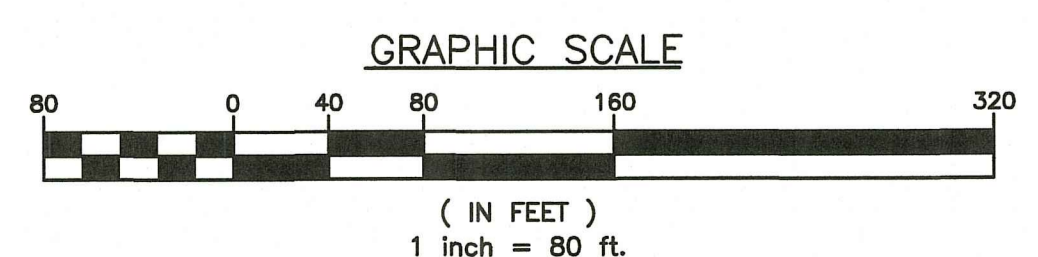
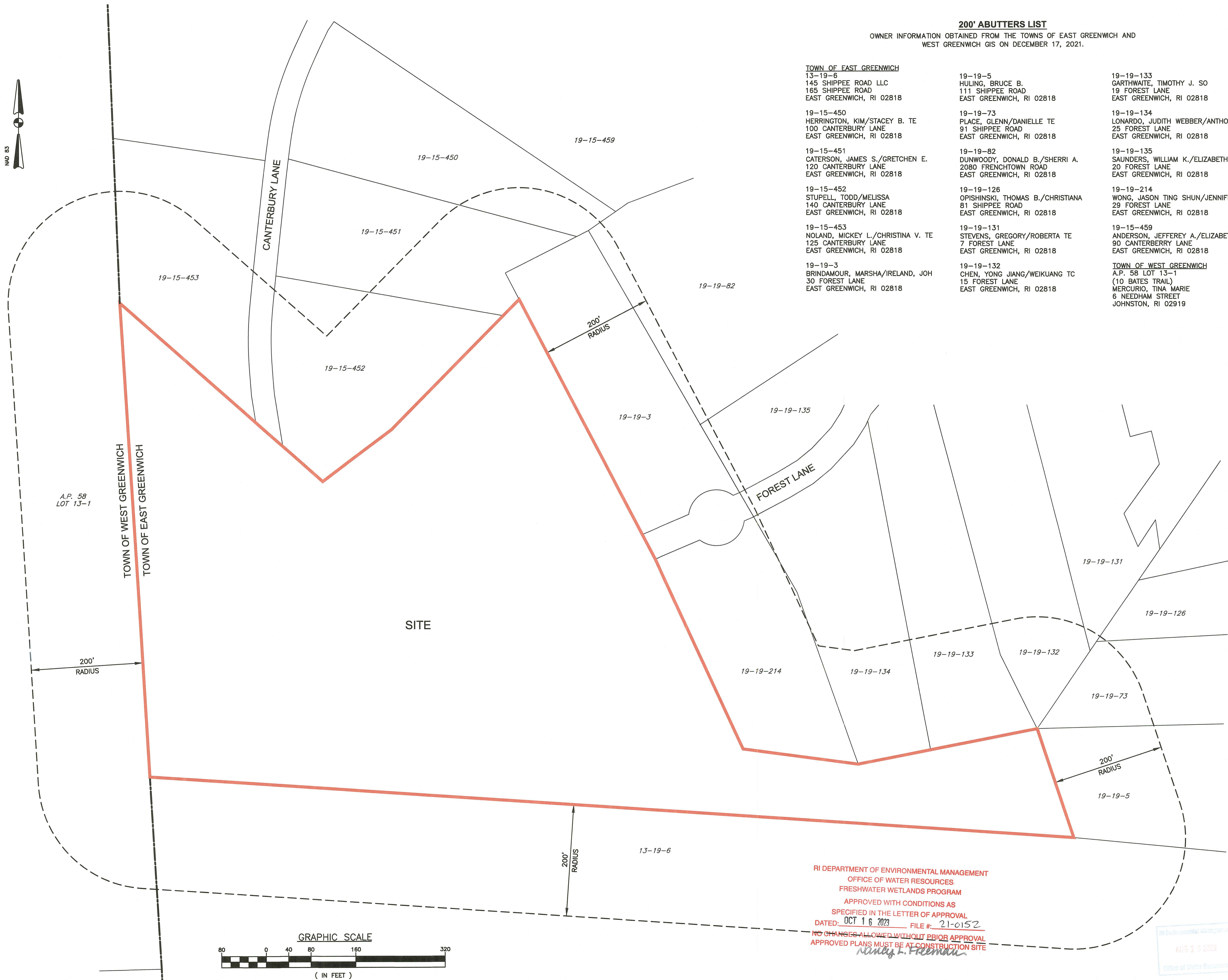
19-19-134
LONARDO, JUDITH WEBBER/ANTHONY
25 FOREST LANE
EAST GREENWICH, RI 02818

19-19-135
SAUNDERS, WILLIAM K./ELIZABETH A.
20 FOREST LANE
EAST GREENWICH, RI 02818

19-19-214
WONG, JASON TING SHUN/JENNIFER
29 FOREST LANE
EAST GREENWICH, RI 02818

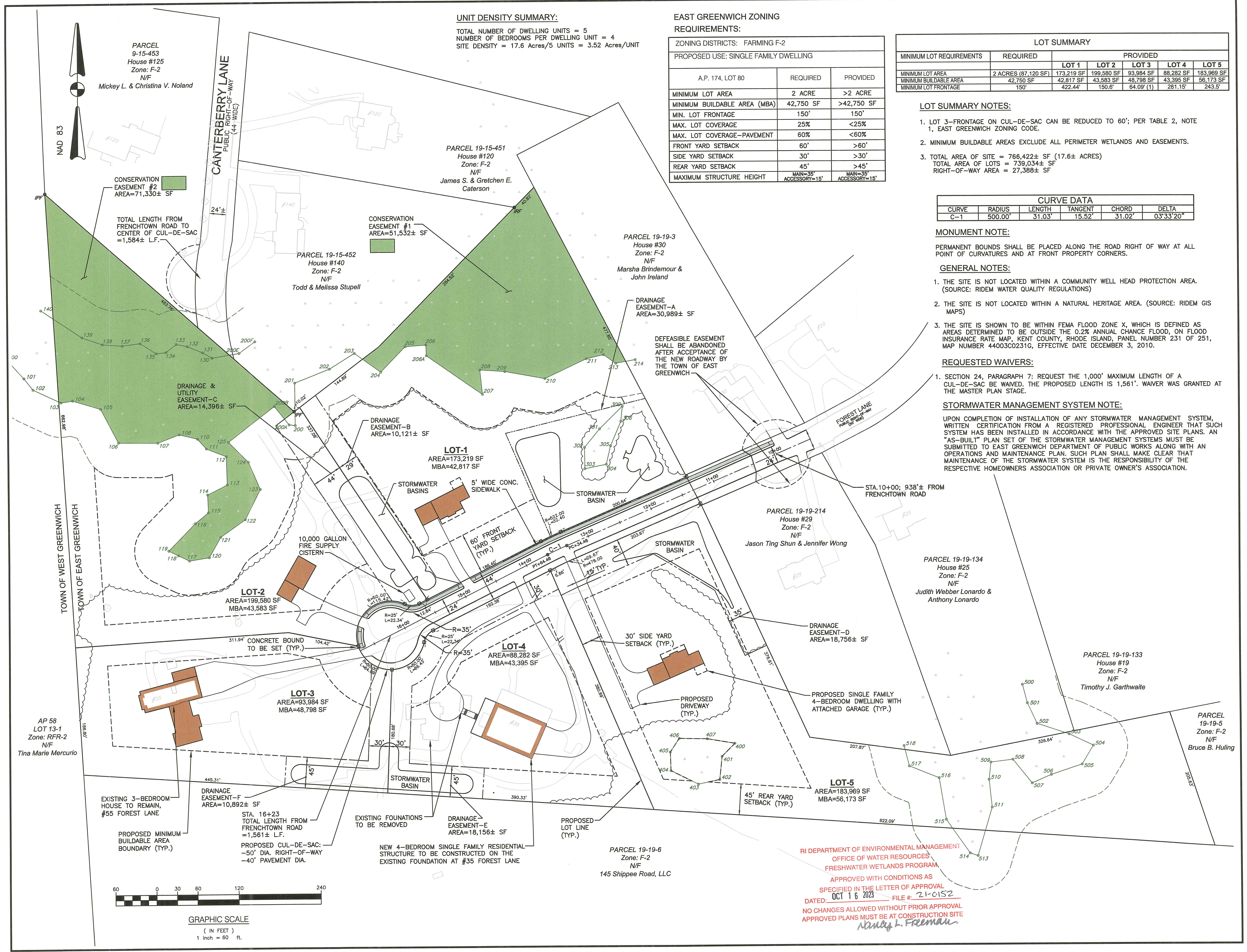
19-15-459
ANDERSON, JEFFEREY A./ELIZABETH C.
90 CANTERBURY LANE
EAST GREENWICH, RI 02818

TOWN OF WEST GREENWICH
A.P. 58 LOT 13-1
(10 BATES TRAIL)
MERCURIO, TINA MARIE
6 NEEDHAM STREET
JOHNSTON, RI 02919



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BRUCE G. HAGERMAN
 No. 5787
 REGISTERED PROFESSIONAL ENGINEER
 8/16/23

PROJECT TITLE:
FOREST LANE SUBDIVISION
 35 & 55 FOREST LANE
 MAP 19/PLAT 19, LOT 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:
GDUBON PROPERTIES, LLC
 55 FOREST LANE
 EAST GREENWICH, RI 02818

DRAWING TITLE:
SITE PLAN

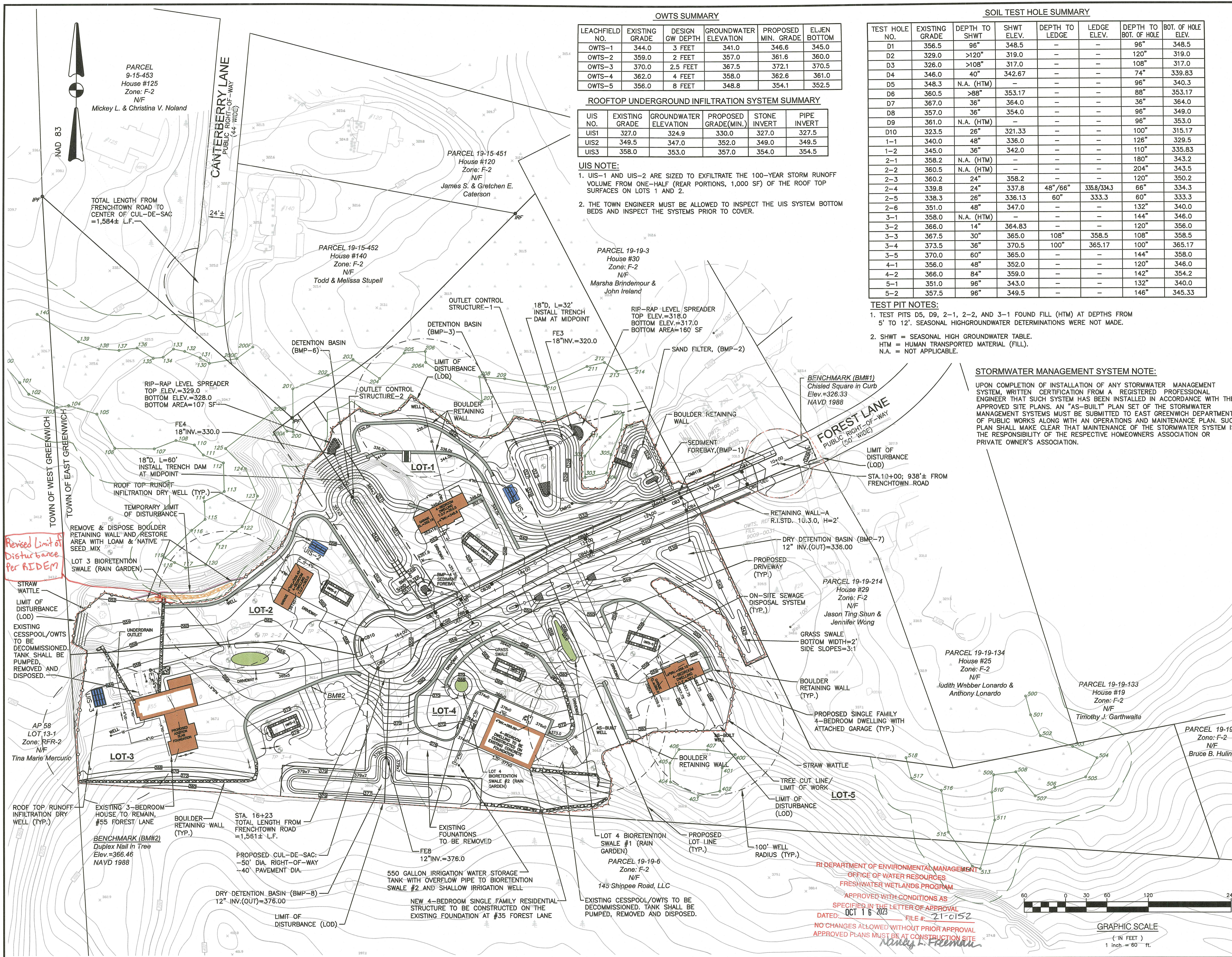
DATE: MAY 2021
SCALE: 1" = 60'
DWG. NAME: 2327-07-SITE PLAN.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/9/21
2	RIDEM FWV COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER:
C5
 SHEET: 7 OF 17

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: OCT 16 2023 FILE #: 21-0152
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 Nancy L. Freeman



OWTS SUMMARY

LEACHFIELD NO.	EXISTING GRADE	DESIGN GW DEPTH	GROUNDWATER ELEVATION	PROPOSED MIN. GRADE	ELJEN BOTTOM
OWTS-1	344.0	3 FEET	341.0	346.6	345.0
OWTS-2	359.0	2 FEET	357.0	361.6	360.0
OWTS-3	370.0	2.5 FEET	367.5	372.1	370.5
OWTS-4	362.0	4 FEET	358.0	362.6	361.0
OWTS-5	356.0	8 FEET	348.8	354.1	352.5

ROOFTOP UNDERGROUND INFILTRATION SYSTEM SUMMARY

UIS NO.	EXISTING GRADE	GROUNDWATER ELEVATION	PROPOSED GRADE(MIN.)	STONE INVERT	PIPE INVERT
UIS1	327.0	324.9	330.0	327.0	327.5
UIS2	349.5	347.0	352.0	349.0	349.5
UIS3	358.0	353.0	357.0	354.0	354.5

- UIS NOTE:**
- UIS-1 and UIS-2 ARE SIZED TO EXFILTRATE THE 100-YEAR STORM RUNOFF VOLUME FROM ONE-HALF (REAR PORTIONS, 1,000 SF) OF THE ROOF TOP SURFACES ON LOTS 1 AND 2.
 - THE TOWN ENGINEER MUST BE ALLOWED TO INSPECT THE UIS SYSTEM BOTTOM BEDS AND INSPECT THE SYSTEMS PRIOR TO COVER.

SOIL TEST HOLE SUMMARY

TEST HOLE NO.	EXISTING GRADE	DEPTH TO SHWT	SHWT ELEV.	DEPTH TO LEDGE	LEDGE ELEV.	DEPTH TO BOT. OF HOLE	BOT. OF HOLE ELEV.
D1	356.5	96"	348.5	-	-	96"	348.5
D2	329.0	>120"	319.0	-	-	120"	319.0
D3	326.0	>108"	317.0	-	-	108"	317.0
D4	346.0	40"	342.67	-	-	74"	339.83
D5	348.3	N.A. (HTM)	-	-	-	96"	340.3
D6	360.5	>88"	353.17	-	-	88"	353.17
D7	367.0	36"	364.0	-	-	36"	364.0
D8	357.0	36"	354.0	-	-	96"	349.0
D9	361.0	N.A. (HTM)	-	-	-	96"	353.0
D10	323.5	26"	321.33	-	-	100"	315.17
1-1	340.0	48"	336.0	-	-	126"	329.5
1-2	345.0	36"	342.0	-	-	110"	335.83
2-1	358.2	N.A. (HTM)	-	-	-	180"	343.2
2-2	360.5	N.A. (HTM)	-	-	-	204"	343.5
2-3	360.2	24"	358.2	-	-	120"	350.2
2-4	339.8	24"	337.8	48"/66"	335.8/334.3	66"	334.3
2-5	338.3	26"	336.13	60"	333.3	60"	333.3
2-6	351.0	48"	347.0	-	-	132"	340.0
3-1	358.0	N.A. (HTM)	-	-	-	144"	346.0
3-2	366.0	14"	364.83	-	-	120"	356.0
3-3	367.5	30"	365.0	108"	358.5	108"	358.5
3-4	373.5	36"	370.5	100"	365.17	100"	365.17
3-5	370.0	60"	365.0	-	-	144"	358.0
4-1	356.0	48"	352.0	-	-	120"	346.0
4-2	366.0	84"	359.0	-	-	142"	354.2
5-1	351.0	96"	343.0	-	-	132"	340.0
5-2	357.5	96"	349.5	-	-	146"	345.33

- TEST PIT NOTES:**
- TEST PITS D5, D9, 2-1, 2-2, AND 3-1 FOUND FILL (HTM) AT DEPTHS FROM 5' TO 12'. SEASONAL HIGHGROUNDWATER DETERMINATIONS WERE NOT MADE.
 - SHWT = SEASONAL HIGH GROUNDWATER TABLE.
HTM = HUMAN TRANSPORTED MATERIAL (FILL).
N.A. = NOT APPLICABLE.

STORMWATER MANAGEMENT SYSTEM NOTE:

UPON COMPLETION OF INSTALLATION OF ANY STORMWATER MANAGEMENT SYSTEM, WRITTEN CERTIFICATION FROM A REGISTERED PROFESSIONAL ENGINEER THAT SUCH SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLANS. AN "AS-BUILT" PLAN SET OF THE STORMWATER MANAGEMENT SYSTEMS MUST BE SUBMITTED TO EAST GREENWICH DEPARTMENT OF PUBLIC WORKS ALONG WITH AN OPERATIONS AND MAINTENANCE PLAN. SUCH PLAN SHALL MAKE CLEAR THAT MAINTENANCE OF THE STORMWATER SYSTEM IS THE RESPONSIBILITY OF THE RESPECTIVE HOMEOWNERS ASSOCIATION OR PRIVATE OWNER'S ASSOCIATION.

Crossman Engineering
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 10/16/23

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 35 & 55 FOREST LANE
 MAP 19/PLAT 19, LOT 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:
GDOBON PROPERTIES, LLC
 55 FOREST LANE
 EAST GREENWICH, RI 02818

DRAWING TITLE:
GRADING PLAN

DATE: MAY 2021
 SCALE: 1" = 60'

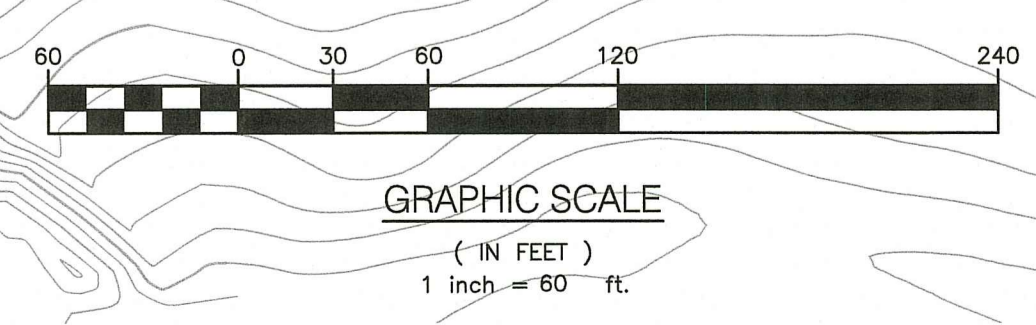
DWG. NAME:
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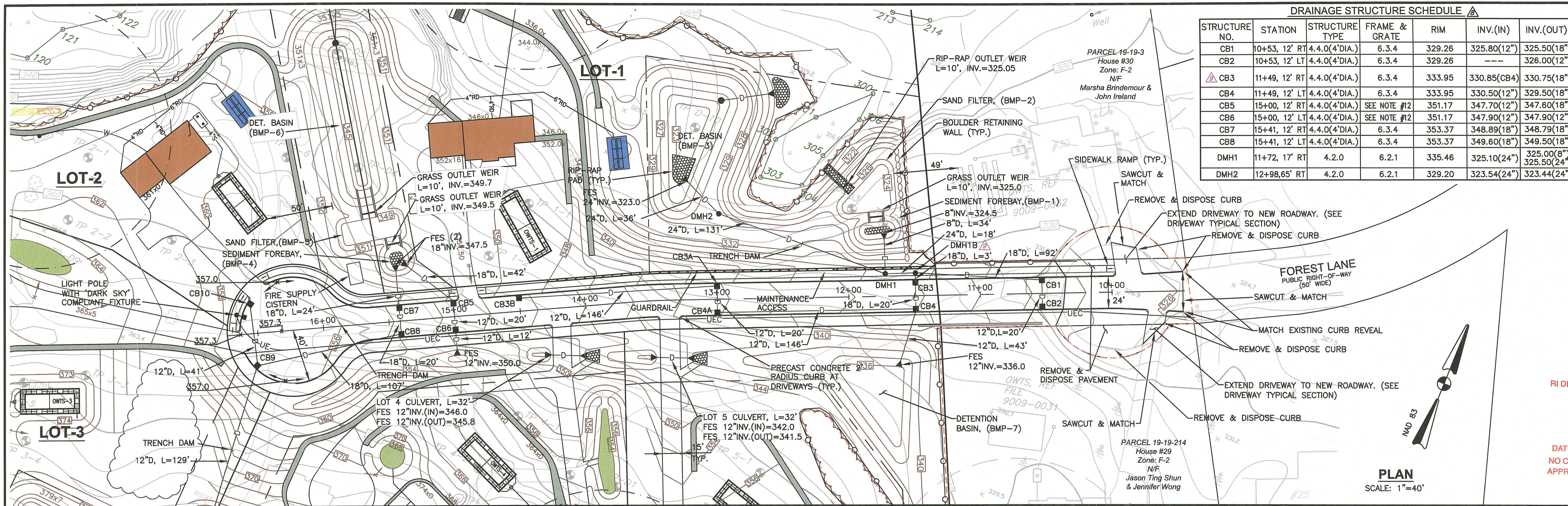
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER
C6
 SHEET: 8 OF 17

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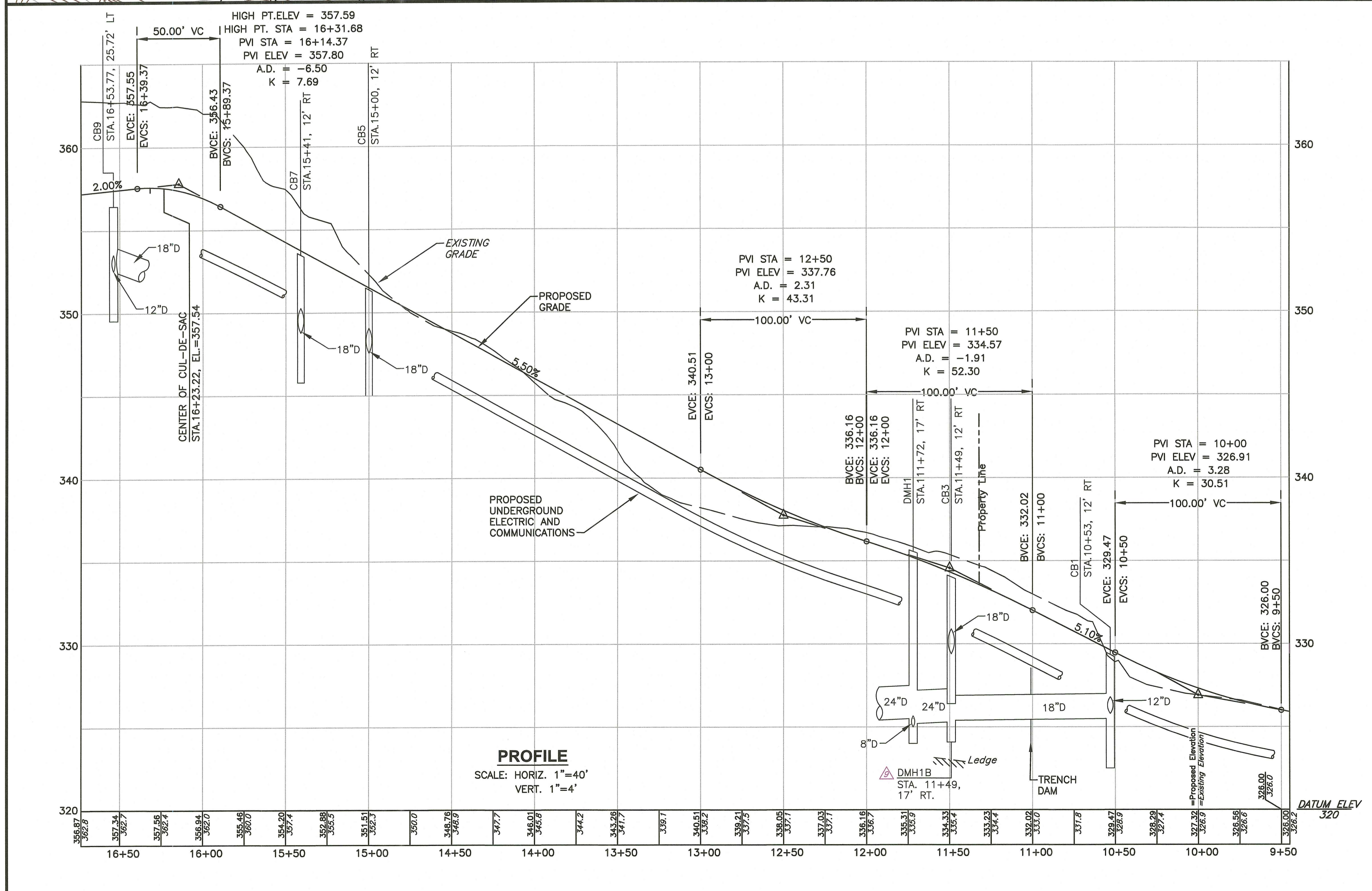




DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NO.	STATION	STRUCTURE TYPE	FRAME & GRATE	RIM	INV.(IN)	INV.(OUT)
CB1	10+53, 12' RT	4.4.0(4'DIA.)	6.3.4	329.26	325.80(12")	325.50(18")
CB2	10+53, 12' LT	4.4.0(4'DIA.)	6.3.4	329.26	---	326.00(12")
CB3	11+49, 12' RT	4.4.0(4'DIA.)	6.3.4	333.95	330.85(CB4)	330.75(18")
CB4	11+49, 12' LT	4.4.0(4'DIA.)	6.3.4	333.95	330.50(12")	329.50(18")
CB5	15+00, 12' RT	4.4.0(4'DIA.)	SEE NOTE #12	351.17	347.70(12")	347.80(18")
CB6	15+00, 12' LT	4.4.0(4'DIA.)	SEE NOTE #12	351.17	347.90(12")	347.90(12")
CB7	15+41, 12' RT	4.4.0(4'DIA.)	6.3.4	353.37	348.89(18")	348.79(18")
CB8	15+41, 12' LT	4.4.0(4'DIA.)	6.3.4	353.37	349.60(18")	349.50(18")
DMH1	11+72, 17' RT	4.2.0	6.2.1	335.46	325.10(24")	325.00(8") 325.50(24")
DMH2	12+98, 65' RT	4.2.0	6.2.1	329.20	323.54(24")	323.44(24")

PLAN
SCALE: 1"=40'



PROFILE
SCALE: HORIZ. 1"=40'
VERT. 1"=4'

DRAINAGE STRUCTURE SCHEDULE

STRUCTURE NO.	STATION	STRUCTURE TYPE	FRAME & GRATE	RIM	INV.(IN)	INV.(OUT)
CB3A	13+00, 12' RT	4.4.0(4'DIA.)	6.3.4	340.15	336.65(12")	336.55(12")
CB3B	14+50, 12' LT	4.4.0(4'DIA.)	6.3.4	348.40	---	345.00(12")
CB4A	13+00, 12' LT	4.4.0(4'DIA.)	6.3.4	340.15	336.00(12")	335.90(12")
CB9	16+53.77, 25.72' LT	4.4.0(4'DIA.)	6.3.0(2)	356.44	352.85(12")	352.35(18")
CB10	16+55.38, 23.77' RT	4.4.0(4'DIA.)	6.3.0(2)	356.44	---	353.10(12")
DMH1B	11+49, 17' RT	4.2.0	6.2.1	334.55	325.40(CB1) 330.55(CB3)	325.30(24")

DRAINAGE NOTES

- CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
- ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
- ALL CATCH BASINS SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES (NO WEEP HOLES) AND SHALL HAVE A 3' SUMP.
- UNLESS OTHERWISE NOTED, ALL SOLID DRAINAGE PIPE SHALL BE ADS N-12 HDPE OR APPROVED EQUAL. PIPE BEDDING SHALL BE IN CRUSHED STONE OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD). ADS PIPE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS. PIPES SHALL BE INSTALLED WITH CLAY TRENCH DAMS EVERY 50' (MINIMUM 1 PER PIPE).
- ALL ROOF DRAINS SHALL BE INSTALLED AT A 1.0% MINIMUM SLOPE.
- THE CONTRACTOR SHALL PROVIDE AS-BUILT PLANS THAT INCLUDE DRAINAGE SYSTEM (PIPE INVERTS, INFILTRATION BAIN LOCATION AND GRADES, UNDERGROUND INFILTRATION SYSTEM INVERTS AND LOCATION, AND OUTLET STRUCTURE INVERTS).
- A TRENCH CHECK DAM SHALL BE INSTALLED BETWEEN STRUCTURES WHERE NOTED. USE 12" WIDE CLAY DAM OR GEOMEMBRANE ANTI-SEEP COLLAR.
- RIP RAP SIZE NOT SPECIFICALLY IDENTIFIED SHALL BE R-5, UNLESS APPROVED OTHERWISE BY ENGINEER. COORDINATE AREAS WITH ENGINEER PRIOR TO PLACEMENT.
- ALL CATCH BASINS SHALL BE RIDOT STD. 4.4.0, TYPE 'F'.
- CATCH BASINS 9 AND 10 SHALL HAVE DOUBLE GRATES.
- CB5 AND CB6 FRAME AND GRATE SHALL BE GENERAL FOUNDRIES HEAVY DUTY CASCADE GRATE WITH A 4" HIGH FRAME, MODEL NUMBER 22443CAS.

LIST OF ROADWAY CONSTRUCTION QUANTITIES:

- CLEAR & GRUB = 3.6 AC.
- SILT SOCK/SILT FENCE = 3,136 LF
- SILT SACKS = 13 EACH
- EARTHWORK: CUT = 8,253 CY, FILL = 4,827 CY
- RIP-RAP = 121 SY
- CONCRETE CURB (STRAIGHT) = 1,133 LF
- CONCRETE CURB (CURVED) = 227 LF
- CONCRETE CURB 2' RADIUS = 14 EACH
- SINGLE GRATE CATCH BASIN = 11
- DOUBLE GRATE CATCH BASIN = 2
- CURB INLETS = 13
- DRAIN MANHOLE = 3
- OUTLET CONTROL STRUCTURE = 2
- 8" STORM DRAIN = 34 LF
- 12" STORM DRAIN = 617 LF
- 18" STORM DRAIN = 398 LF
- 24" STORM DRAIN = 185 LF
- 12" FLARED END SECTION = 7 EACH
- 18" FLARED END SECTION = 4 EACH
- 24" FLARED END SECTION = 1 EACH
- GRASS WEIR WITH CONCRETE CURB AND EC BLANKET = 54 SY
- 10,000 GALLON FIRE CISTERN = 1 EACH
- UNDERGROUND ELECTRIC AND COMMUNICATION = 900 LF
- 2" HOT MIX ASPHALT BINDER = 296 TON
- 2" HOT MIX ASPHALT SURFACE = 296 TON
- 3" HOT MIX ASPHALT DRIVEWAYS = 28 TON
- TREES = 137 EACH
- SHRUBS = 38 EACH
- 4" LOAM AND SEED = 14,700 SY

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EAST GREENWICH, RI 02818

DRAWING TITLE:
PLAN & PROFILE

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME:
2327-09-PLAN & PROFILE.dwg

REVISIONS

NO.	REVISIONS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWV COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	PIPE COVER	1/16/2023
9	LOT GRADING & DMH1B ADDED	5/12/2023
10	RIDEM MODIFICATION	6/9/2023
11	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER
C7
SHEET: 9 OF 17

PHASING SUMMARY:

PHASE 1 WILL INCLUDE INSTALLATION OF EROSION AND SEDIMENT CONTROLS, EARTHWORK, CONSTRUCTION OF THE ROADWAY, UTILITY SYSTEMS, DRAINAGE SYSTEM AND STORMWATER PONDS. AT THE COMPLETION OF PHASE 1 THE STORMWATER BASINS WILL BE OPERATIONAL AND THE BINDER COURSE OF PAVEMENT WILL BE INSTALLED ON THE ROADWAY.

PHASE 2 WILL INCLUDE THE NEW HOUSE CONSTRUCTION, REMOVAL OF EXISTING FOUNDATIONS, RENOVATION OF EXISTING STRUCTURES TO REMAIN, INSTALLATION OF NEW OWTS AND WELLS, DRIVEWAY CONSTRUCTION, DRYWELL INSTALLATION, LANDSCAPE PLANTINGS, FINAL SITE STABILIZATION AND INSTALLATION OF THE TOP LAYER OF PAVEMENT.

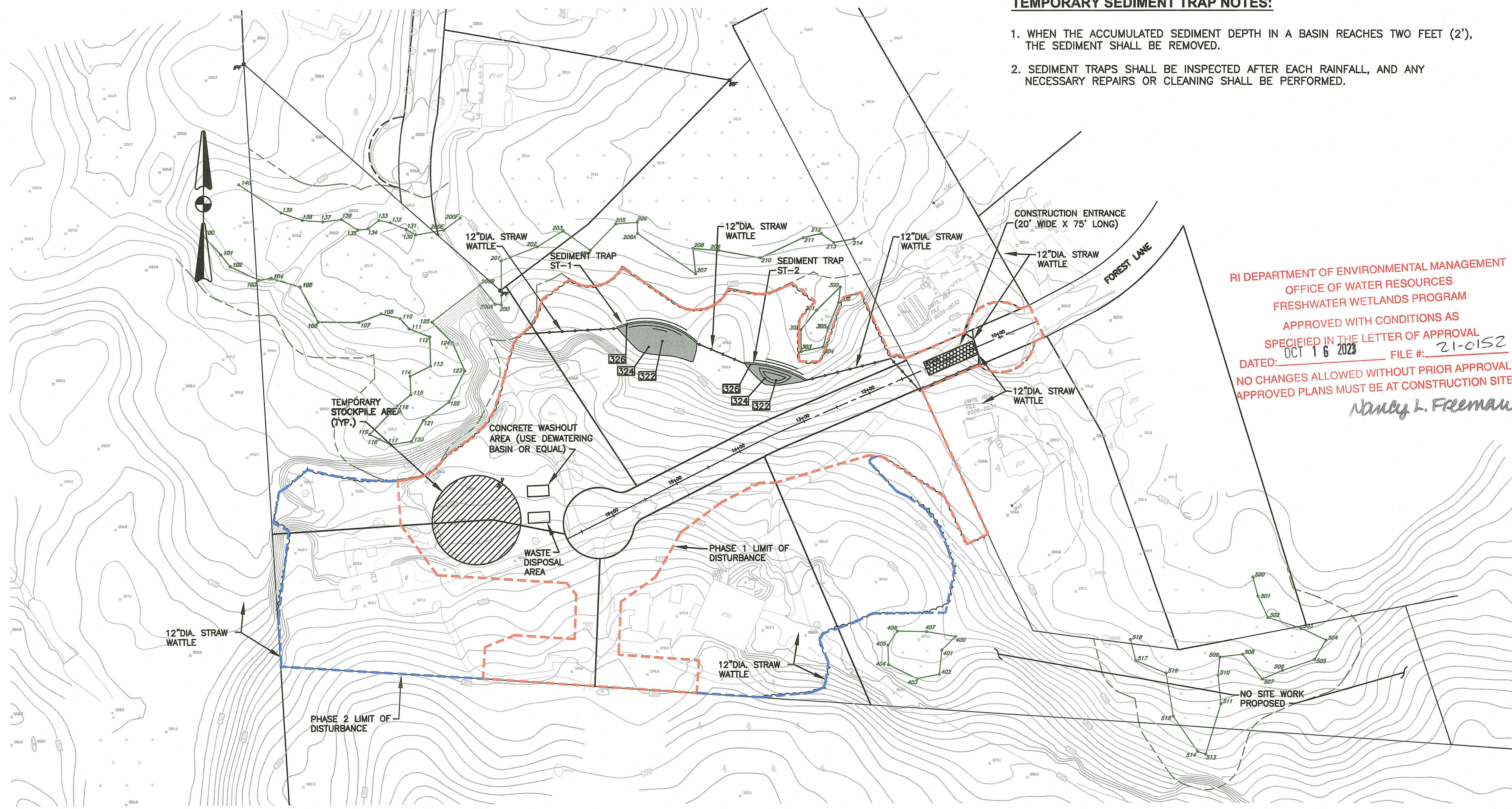
TEMPORARY SEDIMENT TRAP SUMMARY

TRAP	WATERSHED	MIN. REQUIRED VOL. (CF)	TOTAL VOLUME PROVIDED
ST-1	4.3± AC.	4.3 AC. x 134 CF/AC = 577 CF	2,715 CF
ST-2	4.0± AC.	4.00 AC. x 134 CF/AC = 536 CF	6,744 CF

TRAP	TOP OF BERM	BOTTOM OF BASIN	OUTLET ELEV.	WET VOLUME	DRY VOLUME	TOTAL VOLUME
ST-1	326	322	324	773 CF	1,942 CF	2,715 CF
ST-2	326	322	324	1,833 CF	4,911 CF	6,744 CF

TEMPORARY SEDIMENT TRAP NOTES:

1. WHEN THE ACCUMULATED SEDIMENT DEPTH IN A BASIN REACHES TWO FEET (2'), THE SEDIMENT SHALL BE REMOVED.
2. SEDIMENT TRAPS SHALL BE INSPECTED AFTER EACH RAINFALL, AND ANY NECESSARY REPAIRS OR CLEANING SHALL BE PERFORMED.



EROSION CONTROL SITE PLAN
SCALE: 1"=100'

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DUST CONTROL NOTES:

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK") TO CONTROL DUST:

- A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

INSPECTION/MAINTENANCE NOTES:

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DRAINAGE SYSTEMS, WETLANDS AND WATERWAYS.
2. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS JUTE MESH OR RIP-RAP.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPAIR / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
5. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER, MUNICIPAL REPRESENTATIVES, STATE AGENCIES OR ENGINEER.
6. THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, REVISED 2014 (LATEST REVISION), MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE THE SITE IS STABLE.

GENERAL PROJECT WIDE NOTES:

1. STRAW WATTLES AND SILT SACK IN CATCH BASINS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, MAINTAINED ON A REGULAR BASIS, AND SHALL BE PLACED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTY, ROADWAYS, WETLANDS AND WATERWAYS.
2. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. ALL STRAW WATTLES (SILT FENCE) OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
4. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DRIPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
5. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
6. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED FILTER SOXX (SILT SOCK) OR COVERED.
7. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING, COVERED WITH TARPS, OR APPROVED EQUAL.
8. COMPOST FILLED SILT SOCK MAY BE USED IN LIEU OF THE STRAW WATTLES.

EROSION CONTROL AND SOIL STABILIZATION PROGRAM:

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM, EXISTING RACEWAY, ADJACENT PROPERTY, AND ROADWAYS.
2. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, RIPRAP OR FIBER MULCH PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
3. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
4. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED SILT SOCKS OR COVERED.
5. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR COVERED WITH TARPS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
7. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER, MUNICIPAL REPRESENTATIVES OR STATE AGENCIES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST CONTROL AT NO ADDITIONAL COST TO THE OWNER.
9. THE CATCH BASINS ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED USING SILT SOCKS OR SILT SOCK INLET PROTECTION, AS NOTED.
10. ALL PROPOSED CATCH BASINS SHALL BE PROTECTED BY SILT SOCKS OR SILT SACKS.
11. COMPOST FILLED SILT SOCK MAY BE INSTALLED ON THE EXISTING PAVEMENT/IMPERVIOUS AREAS WITHOUT STAKES. CONTRACTOR SHALL INSPECT DAILY, IF SOIL EROSION OR SEDIMENT IS OBSERVED IN THESE AREAS, THE CONTRACTOR SHALL RELOCATE OR INSTALL ADDITIONAL SILT SOCK IN LOCATIONS THAT CAN BE STAKED. THIS WORK IS INCLUDED IN THE PROJECT SCOPE.
12. POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS MUST NOT BE USED ON THIS PROJECT FOR DUST, SEDIMENTATION AND EROSION CONTROL. WATER WILL BE USED FOR DUST CONTROL AND EROSION WILL BE CONTROLLED USING THE PROPOSED EROSION CONTROLS, AND TEMPORARY STABILIZATION TECHNIQUES.

SITE CONSTRUCTION SEQUENCE AND SCHEDULE:

1. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO ANY SOIL DISTURBANCE.
2. EXISTING PAVED DRIVEWAYS TO BE USED FOR ACCESS. THE CONTRACTOR SHALL SWEEP THE DRIVEWAYS AND ADJACENT ROADWAY AREAS AS NECESSARY TO REMOVE SEDIMENT DEPOSITS.
3. PRIOR TO CONSTRUCTION CLEARLY MARK AREAS TO BE LEFT UNDISTURBED.
4. CLEARING OF TREES AND VEGETATION AS SHOWN ON THE SITE PLANS.
5. TOP SOIL TO BE STRIPPED AND STOCKPILED.
6. ESTABLISH EROSION CONTROLS AROUND STOCKPILES (SILT SOCK). COVER STOCKPILES THAT WILL REMAIN FOR LONGER THAN ONE MONTH.
7. ROUGH GRADING.
8. DRAINAGE & UTILITY CONSTRUCTION.
9. CONSTRUCT NEW ROADWAY TO SUBGRADE.
10. CONSTRUCT NEW HOUSES.
11. INSTALL NEW CURBING AND SIDEWALKS.
12. INSTALL FINAL PAVING AND LANDSCAPING.
13. ESTIMATED DURATION OF SOIL EXPOSURE 12 TO 18 MONTHS.

RECEIVING WATER DATA:

- WATERSHED BODY NAME - FRENCHTOWN BROOK AND TRIBUTARIES WEST GREENWICH, EAST GREENWICH (R10007028R-01) (SOURCE: R.I.D.E.M.) TMDL: ENTEROCOCCUS
- GROUNDWATER CLASSIFICATION - GA

NOTES:

1. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS: FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
2. CONTRACTOR SHALL INSTALL SILT SOCK INLET PROTECTION OR APPROVED EQUAL UNDER THE EXISTING CATCH BASIN GRATE ON THE SITE IN ADJACENT STREETS DOWN GRADIENT OF THE SITE. REMOVE AFTER CONSTRUCTION.
3. STRAW WATTLES SHALL BE INSTALLED AROUND THE PERIMETER OF THE AREA TO BE DISTURBED BY CONSTRUCTION AS NOTED ON THE PLANS. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
4. IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE OWNER, LOCAL MUNICIPALITY, STATE AGENCIES OR ENGINEER DURING CONSTRUCTION.
5. IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING ROADWAYS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
6. THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK-UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTING CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.
7. THE CONTRACTOR MUST REFERENCE AND FOLLOW THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT'S STORM WATER POLLUTION PREVENTION PLAN (SWAPP). A COPY OF THE SWAPP SHOULD BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.

PROJECT DATA:

- LIMIT OF UPLAND DISTURBANCE AREA = 9.6± ACRES
PHASE 1 = 5.6± ACRES
PHASE 2 = 4.0± ACRES
- THE SITE IS NOT LOCATED WITHIN OR ADJACENT TO A RIDEM NATURAL HERITAGE AREA. (SOURCE: RIDEM)
- THE SITE IS NOT LOCATED WITHIN A WELLHEAD PROTECTION AREA. (SOURCE: R.I.D.E.M.)

ADDITIONAL CONTROLS:

1. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
2. THE CONTRACTOR IS REQUIRED TO NOTIFY LOCAL AUTHORITIES AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WASTE MANAGEMENT, OF ANY HAZARDOUS MATERIAL SPILL.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE IN AN ORDERLY AND CLEAN STATE. ALL CONSTRUCTION WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS PRIOR TO REMOVAL AND CONTACT WITH PRECIPITATION SHALL BE KEPT TO A MINIMUM.
4. GENERAL MAINTENANCE PROCEDURES ARE OUTLINED IN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR AND CONTRACTOR ARE REQUIRED TO INSPECT ALL EROSION CONTROLS ON THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN EVENT, WHICH GENERATES 0.25 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF.
5. CONCRETE WASHOUT SHALL BE PERFORMED USING ONE OF THE METHODS LISTED IN SECTION 3 OF THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. THE WASHOUT AREAS ARE DESIGNATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
6. VEHICLE AND EQUIPMENT WASHING ON-SITE DURING CONSTRUCTION IS NOT ALLOWED.
7. A SPILL RESPONSE KIT SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.



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PROJECT TITLE:

FOREST LANE SUBDIVISION

35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

DRAWING TITLE:

SOIL EROSION and SEDIMENT CONTROL PLAN

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME: 2327-10-SOIL.dwg

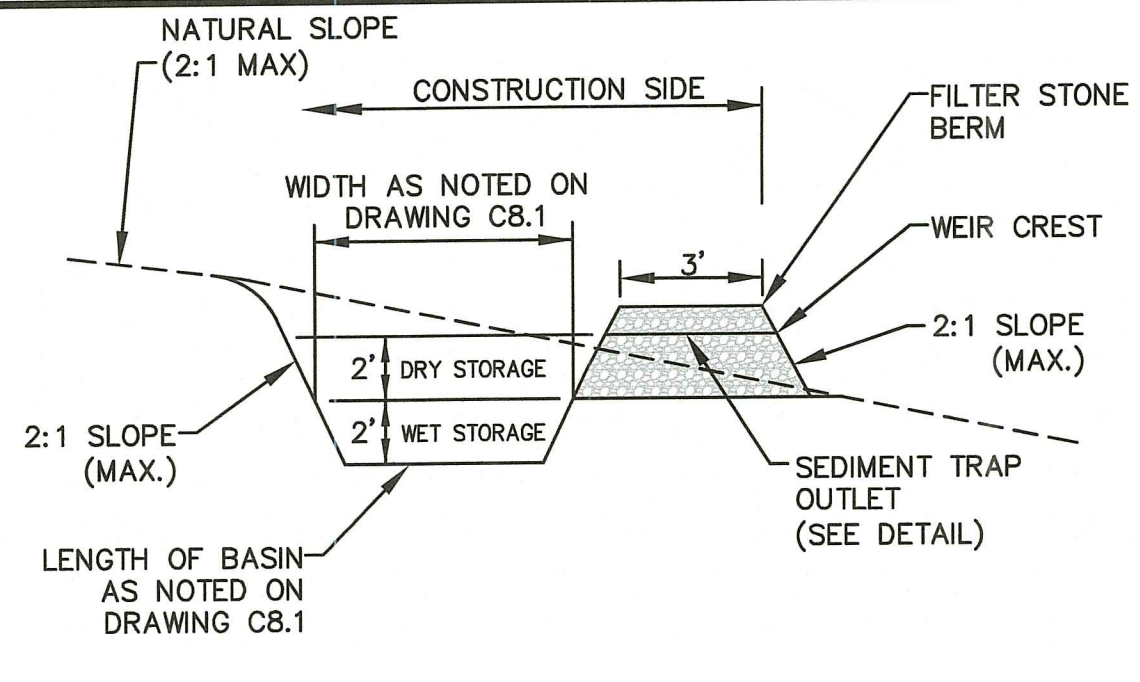
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT MODIFICATION	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER

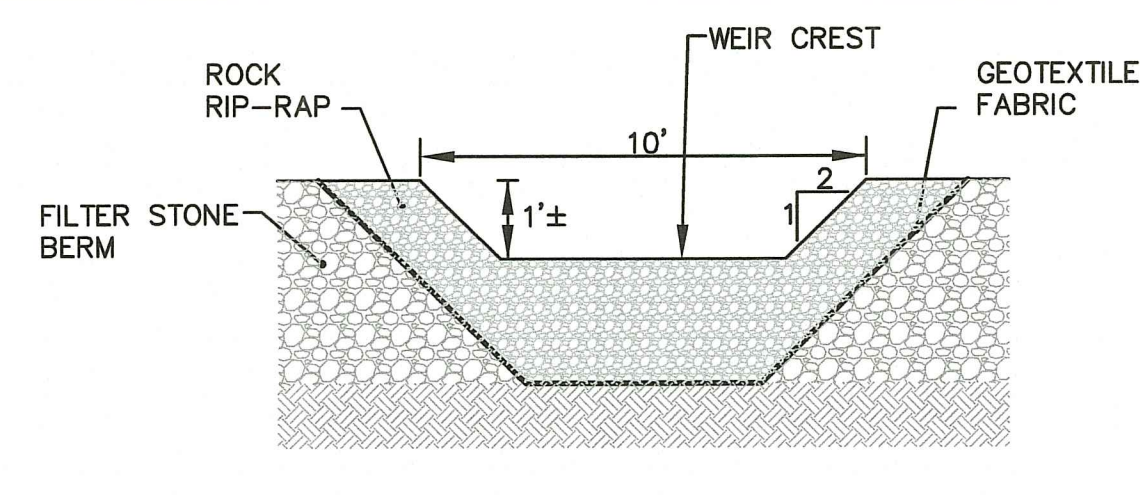
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SHEET: 10 OF 17

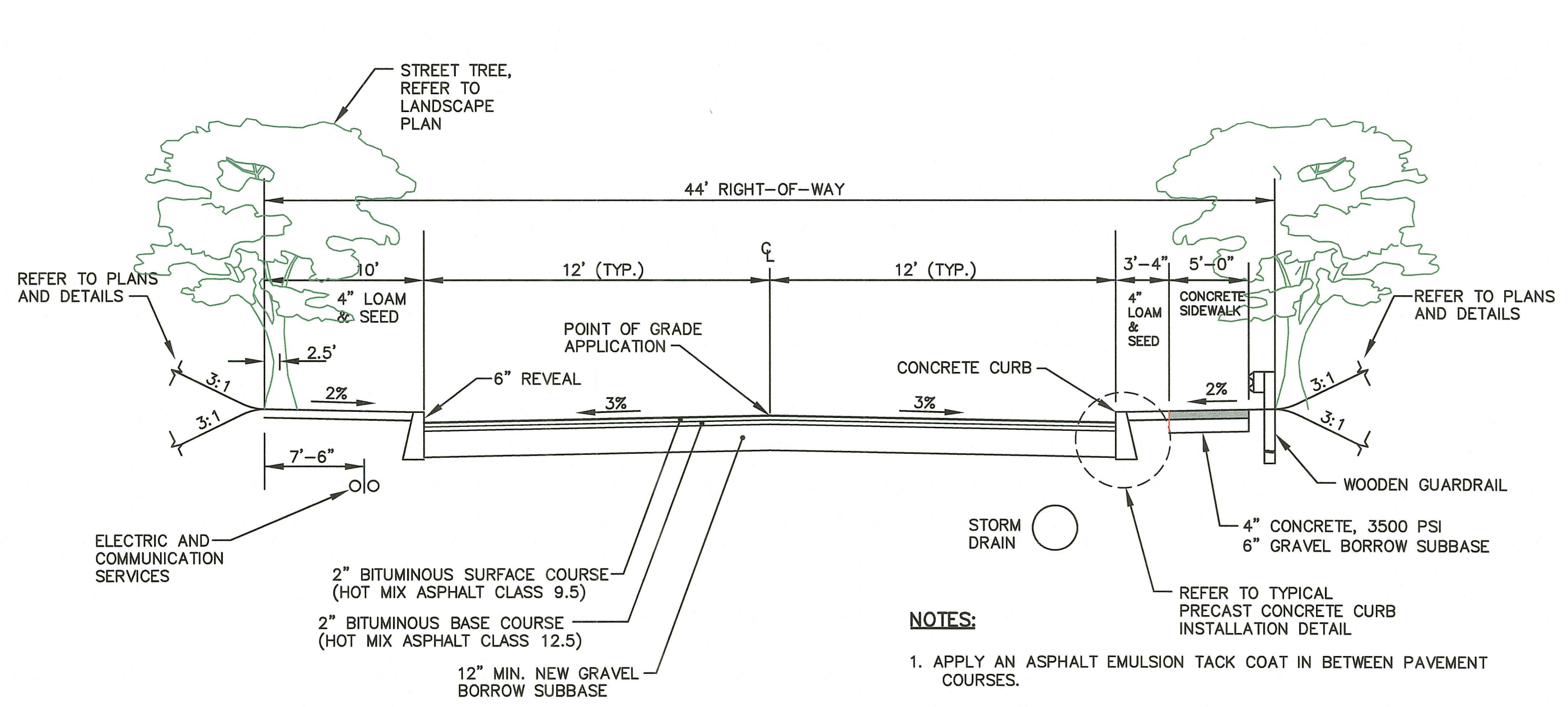


TEMPORARY SEDIMENT TRAP #1 AND #2 DETAIL
NOT TO SCALE

- NOTES:**
1. FILTER STONE SHALL MEET THE REQUIREMENTS OF R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.09 TABLE 1, COLUMN V FILTER STONE.
 2. THE TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO UNDISTURBED, STABILIZED GROUND.
 3. CONTRACTOR SHALL INSTALL 1 OUTLET PER 100' LENGTH OF TEMPORARY SEDIMENT TRAP (1 OUTLET MIN. PER TEMPORARY SEDIMENT TRAP).
 4. THE MODIFIED ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF THE R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.0.3.2.
 5. CONTRACTOR MUST REFER TO THE INSTALLATION, INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS PROVIDED IN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, AS AMENDED.

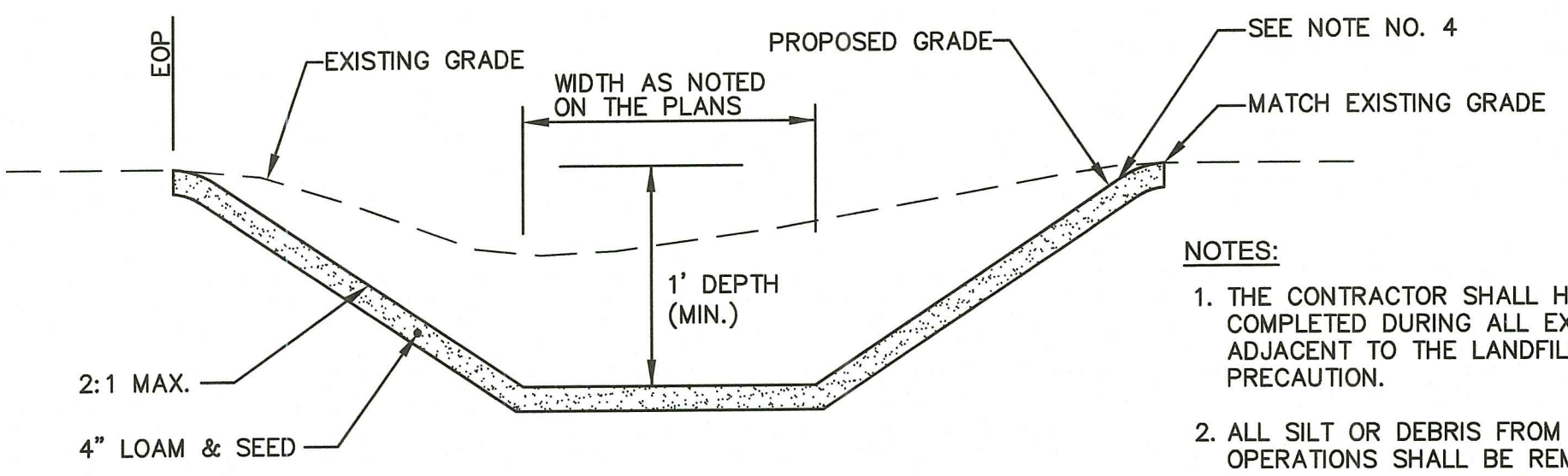


TEMPORARY SEDIMENT TRAP #1 AND #2 OUTLET DETAIL
NOT TO SCALE



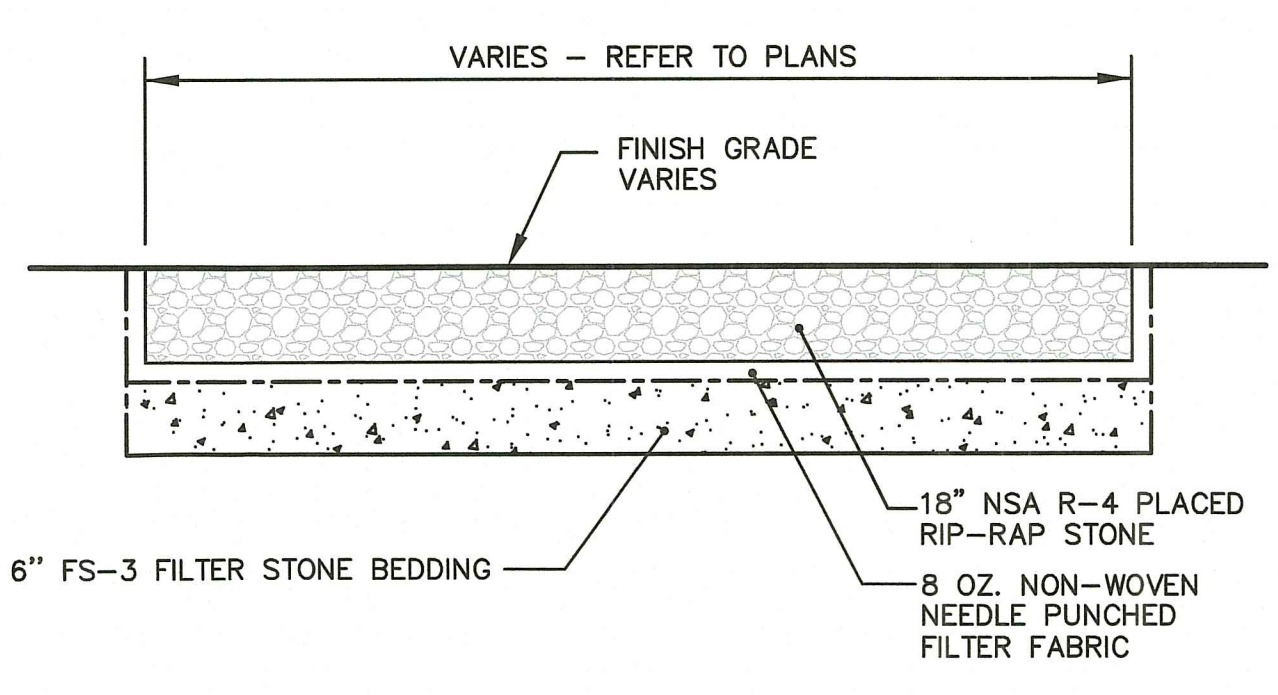
TYPICAL ROADWAY SECTION
NOT TO SCALE

- NOTES:**
1. APPLY AN ASPHALT EMULSION TACK COAT IN BETWEEN PAVEMENT COURSES.
 2. ALL BITUMINOUS PAVEMENT MIXES SHALL BE FROM R.I.D.O.T. APPROVED LIST.
 3. ALL BITUMINOUS PAVEMENT MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY R.I.D.O.T.

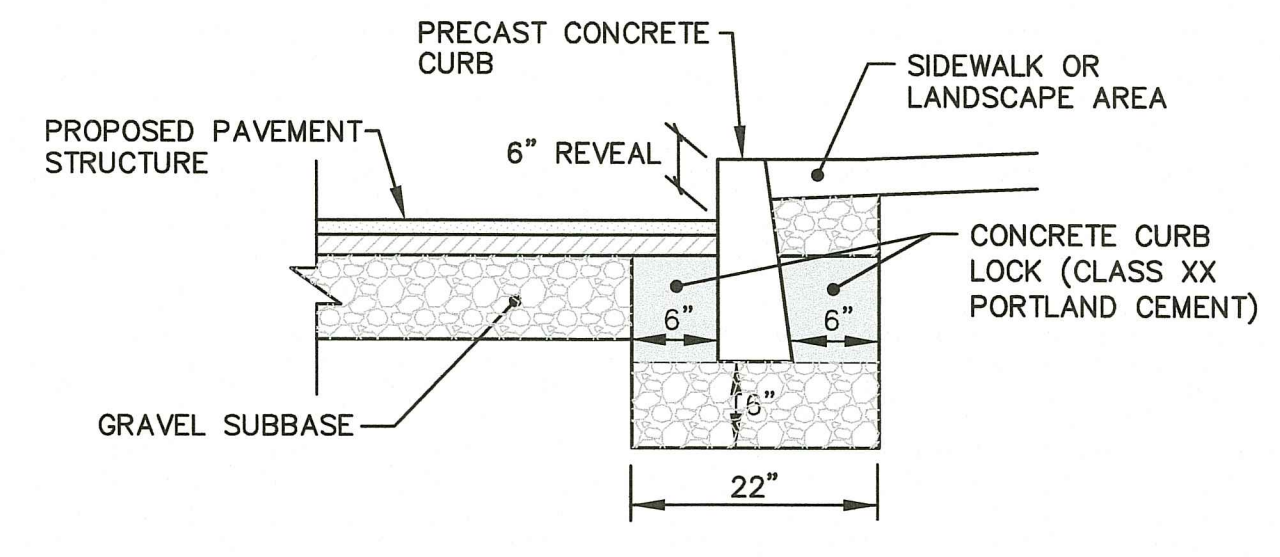


GRASS SWALE TYPICAL SECTION
NOT TO SCALE

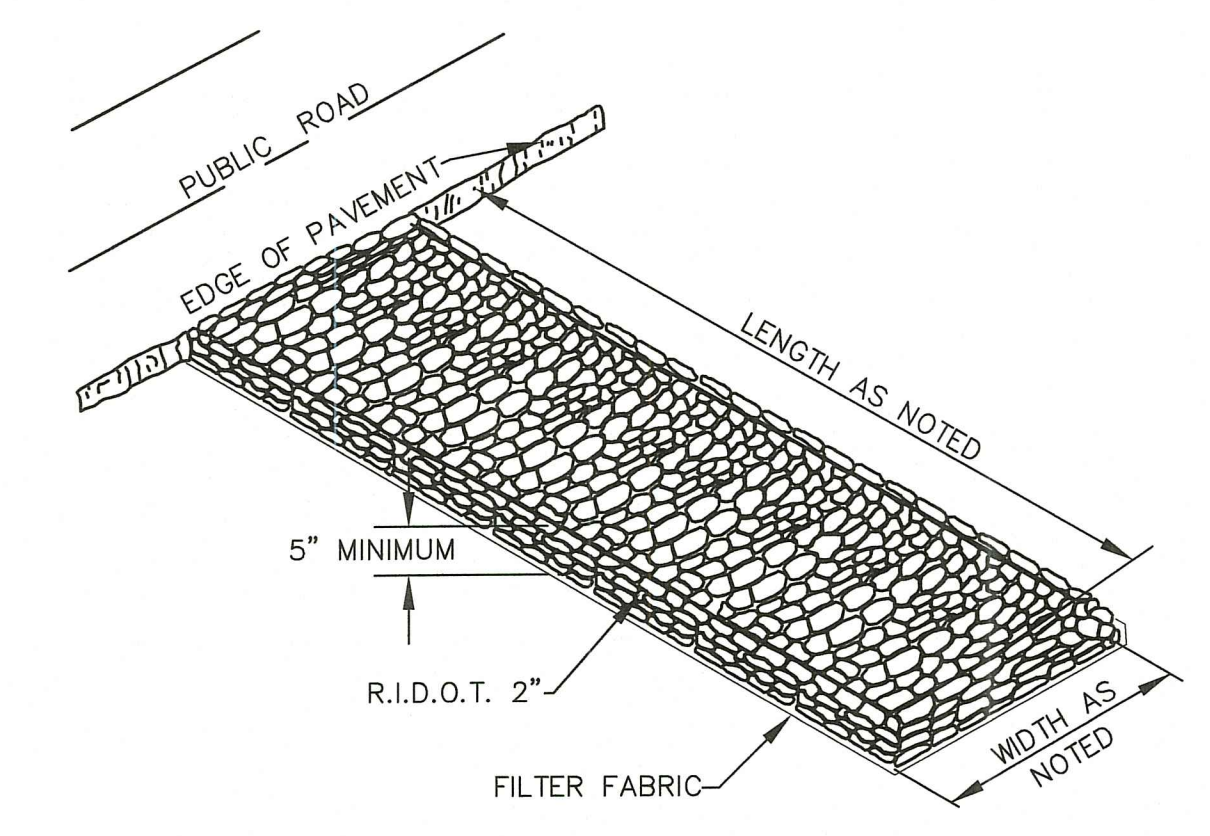
- NOTES:**
1. THE CONTRACTOR SHALL HAVE METHANE MONITORING COMPLETED DURING ALL EXCAVATING ACTIVITIES ON OR ADJACENT TO THE LANDFILL AS A SAFETY PRECAUTION.
 2. ALL SILT OR DEBRIS FROM THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AND DISPOSED FROM THE EXISTING SWALE OFF-SITE AT THE CONTRACTOR'S EXPENSE.
 3. CONTRACTOR SHALL HAND ROLL LOAM MATERIAL AFTER INSTALLATION AND PRIOR TO SEEDING.
 4. INSTALL EROSION CONTROL FABRIC OVER ALL AREAS OF THE NEWLY SEEDED GRASS SWALE.



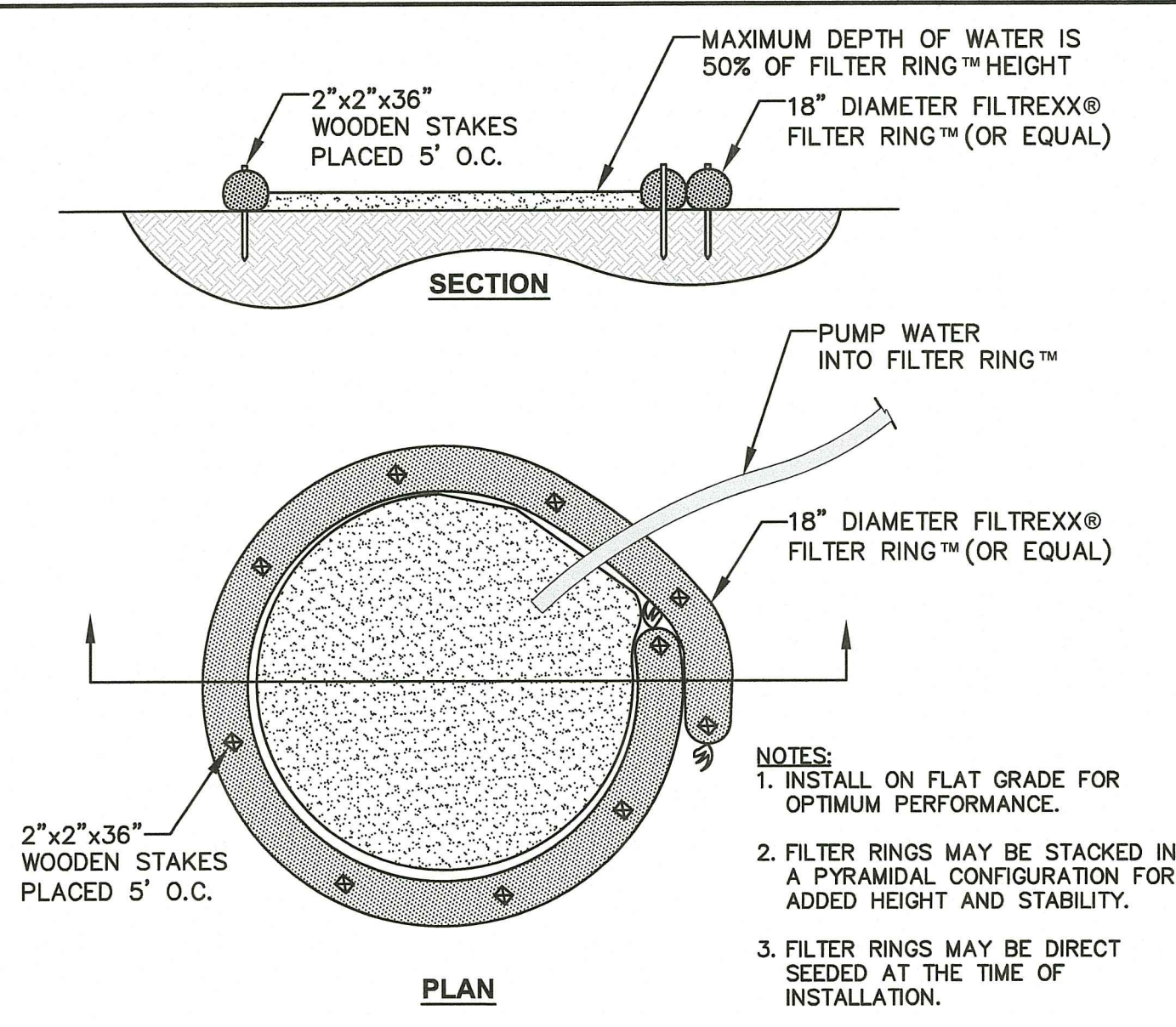
RIP-RAP OUTLET SCOUR PROTECTION
NOT TO SCALE



TYPICAL PRECAST CONCRETE CURB INSTALLATION
NOT TO SCALE

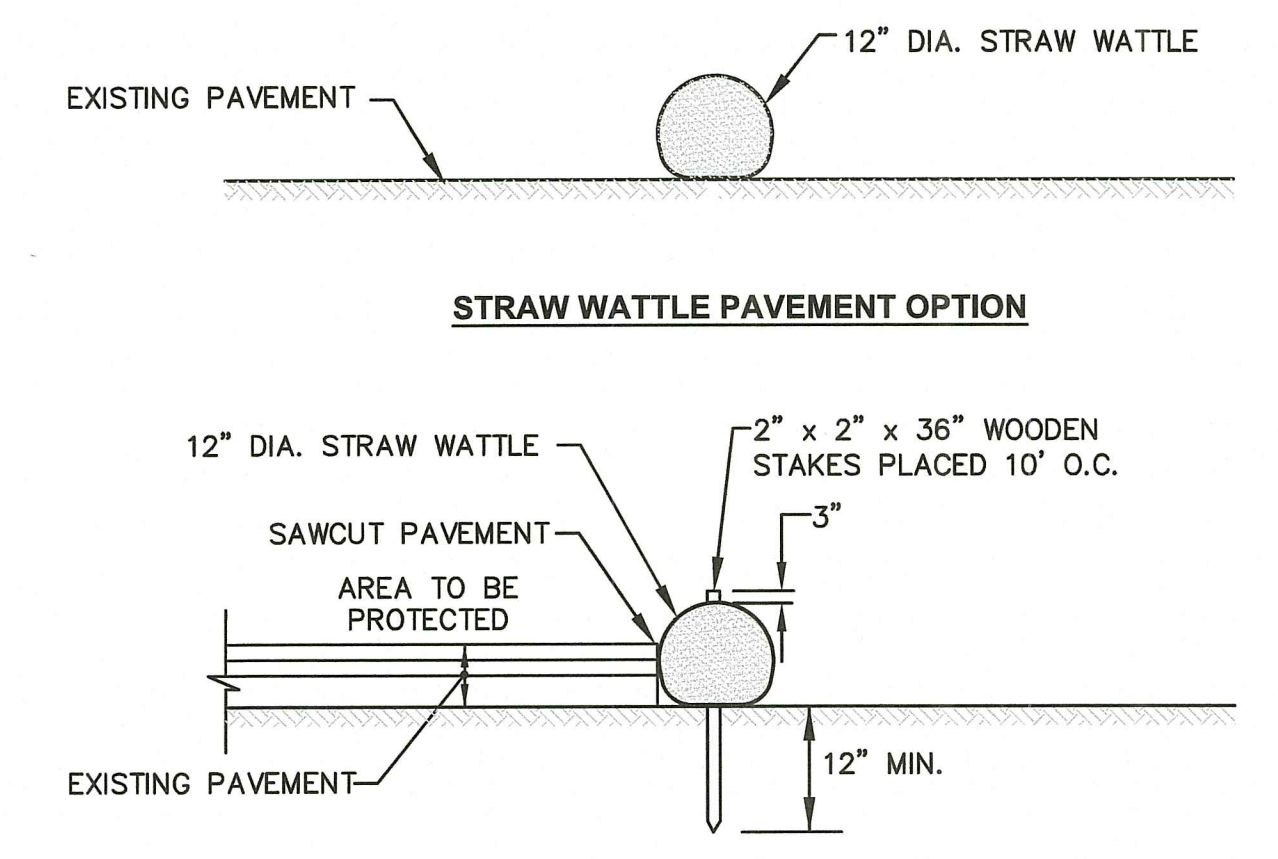


CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



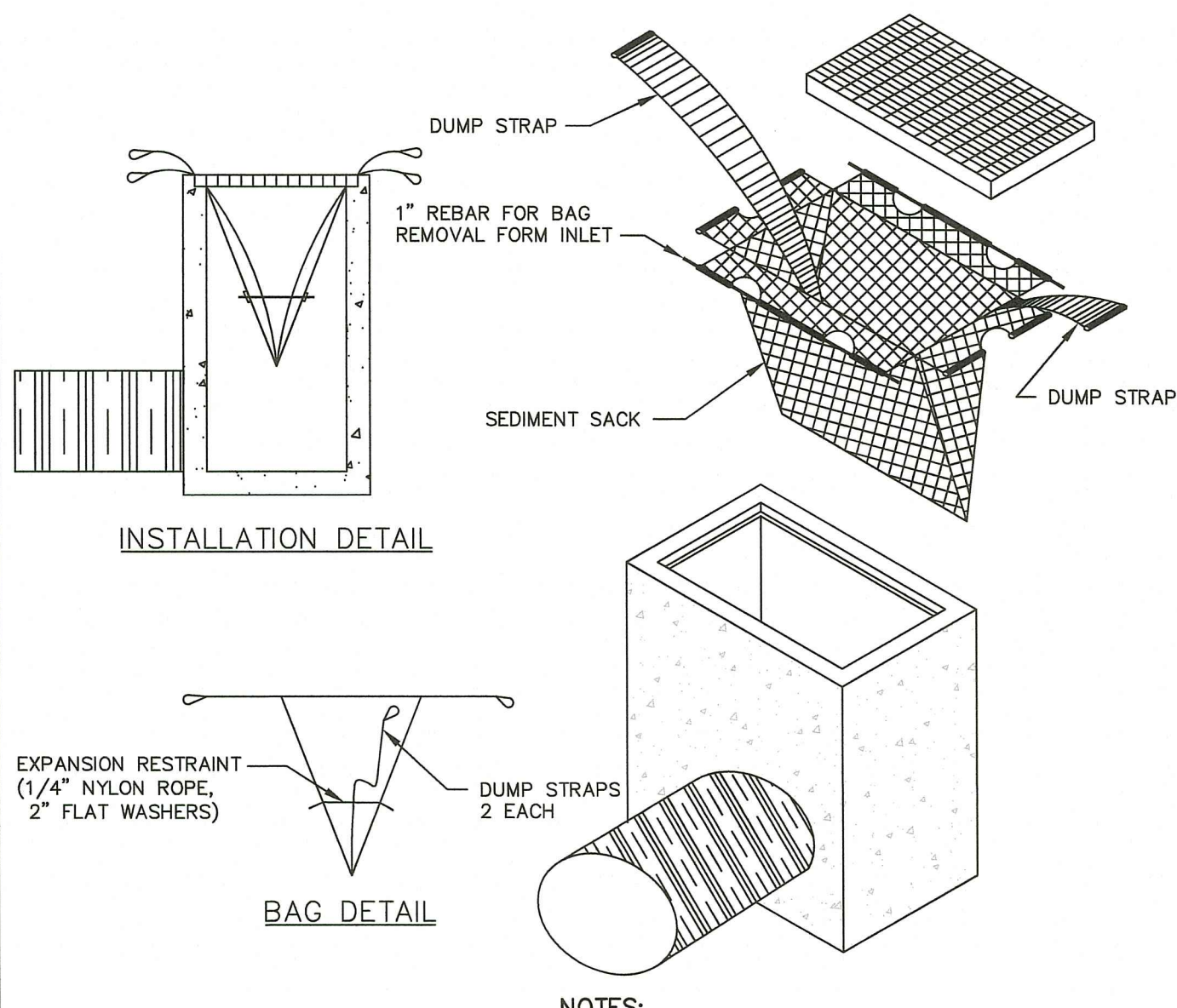
DETWATERING BASIN DETAIL
NOT TO SCALE

- NOTES:**
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 2. FILTER RINGS MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.
 3. FILTER RINGS MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
 4. THIS TYPICAL INSTALLATION SHALL BE USED FOR DEWATERING OPERATIONS.
 5. DEWATERING FILTER BAGS MAY BE USED IN LIEU OF THE FILTER RING.



STRAW WATTLE DETAIL
NOT TO SCALE

- NOTE:**
1. COMPOST SILT SOCKS MAY BE USED IN LIEU OF STRAW WATTLE.
 2. CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE STRAW WATTLE PRODUCTS AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT.
 3. CONTRACTOR SHALL SUBMIT STRAW WATTLE PRODUCT TO ENGINEER FOR APPROVAL.
 4. STRAW MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY ENGINEER.

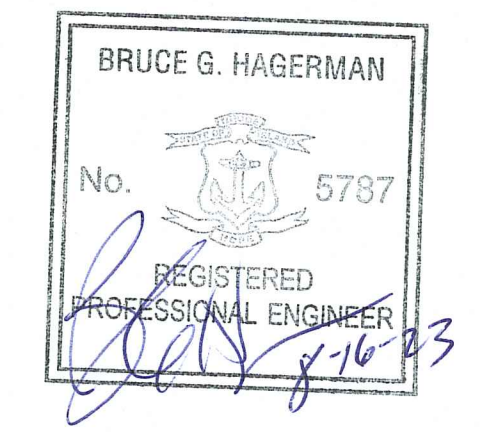


TYPICAL SILT SACK DETAIL
NOT TO SCALE

- NOTES:**
1. INSTALL SILT SACK AT CATCH BASINS IN VICINITY OF CONSTRUCTION AS SHOWN ON THE PLANS.
 2. CONTRACTOR SHALL SUBMIT SILT SACK PRODUCT TO ENGINEER FOR APPROVAL.

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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: OCT 16 2023 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

DRAWING TITLE:
MISCELLANEOUS DETAIL PLAN No. 1

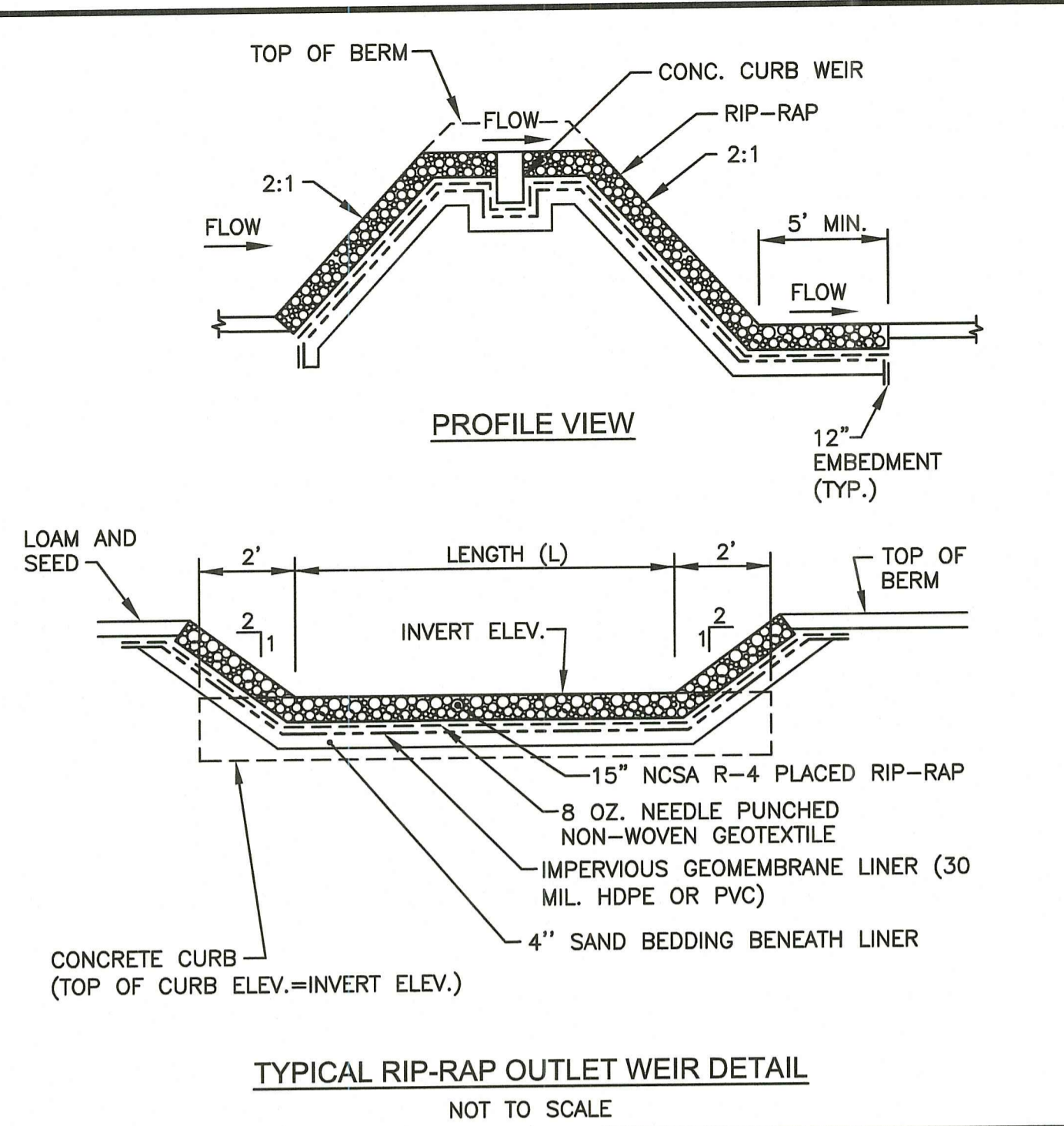
DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME: 2327-11-DETAIL1.dwg

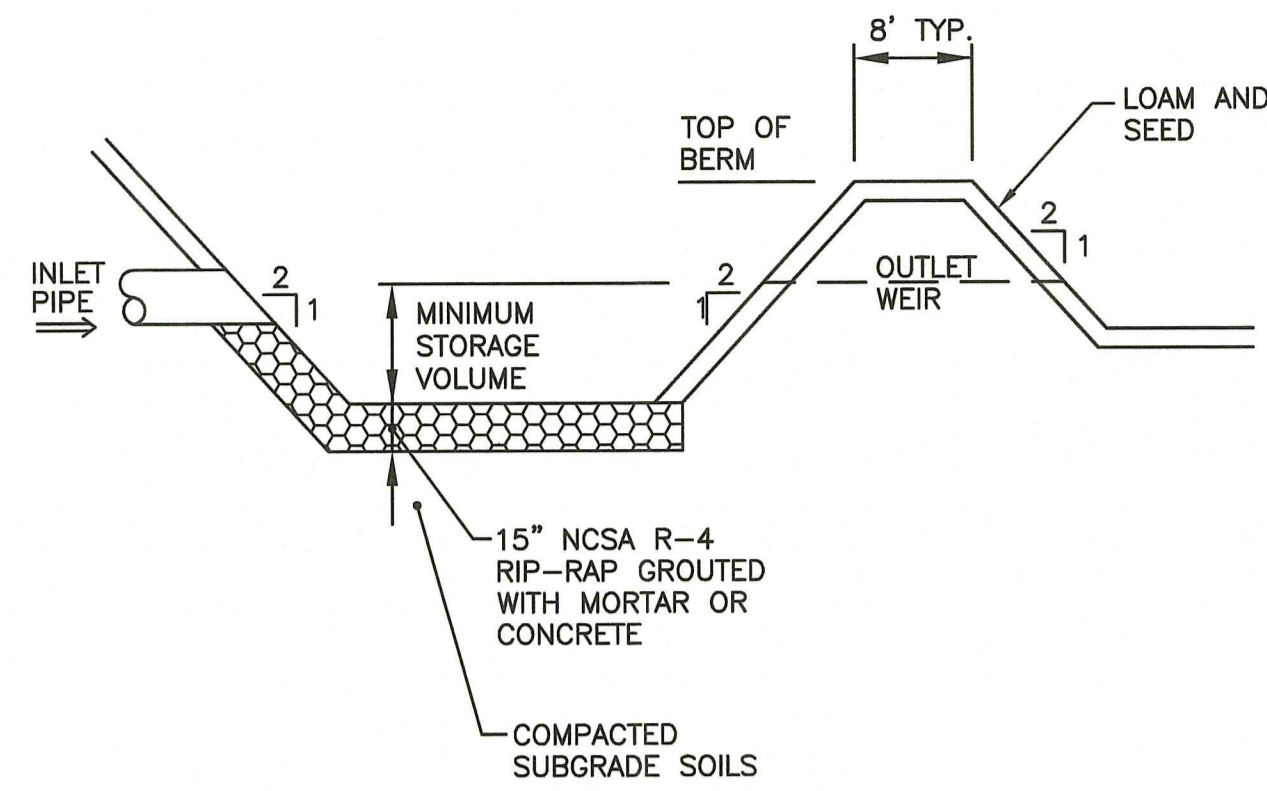
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER
C9.1
SHEET: 11 OF 17



TYPICAL RIP-RAP OUTLET WEIR DETAIL
NOT TO SCALE



BMP-1 AND BMP-4 SEDIMENT FOREBAY DETAILS
NOT TO SCALE

BMP-1 SEDIMENT FOREBAY

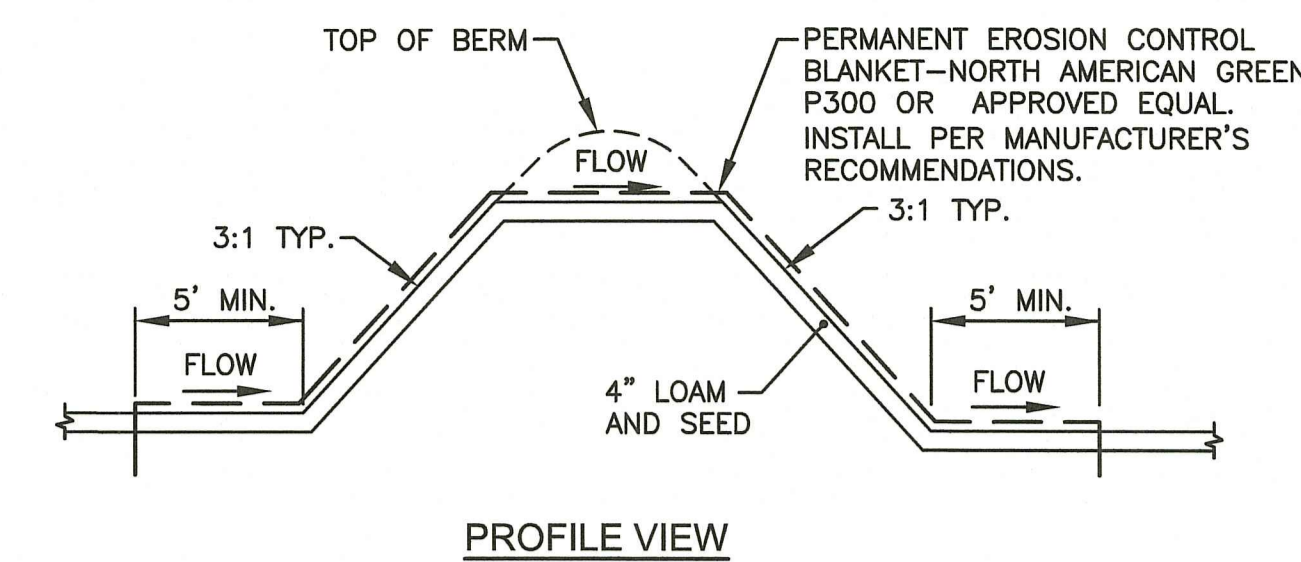
CONTOUR	AREA (SF)	VOLUME (CF)
322	93	0
324	322	415
326	653	1,390

MINIMUM STORAGE VOLUME BELOW
OUTLET INV.=325.0 IS 820 C.F.

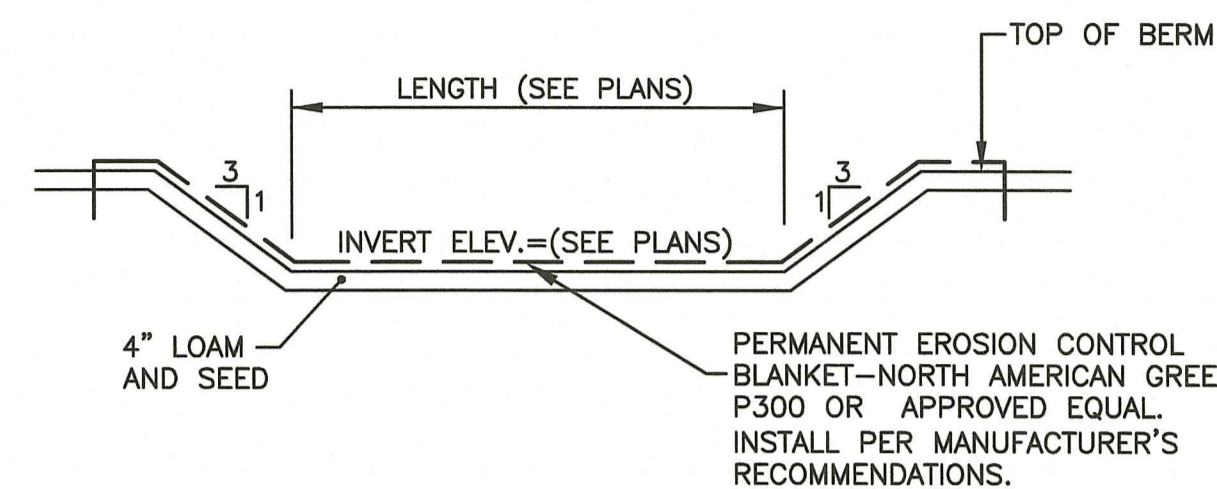
BMP-4 SEDIMENT FOREBAY

CONTOUR	AREA (SF)	VOLUME (CF)
347	93	0
349	282	375
351	572	1,229

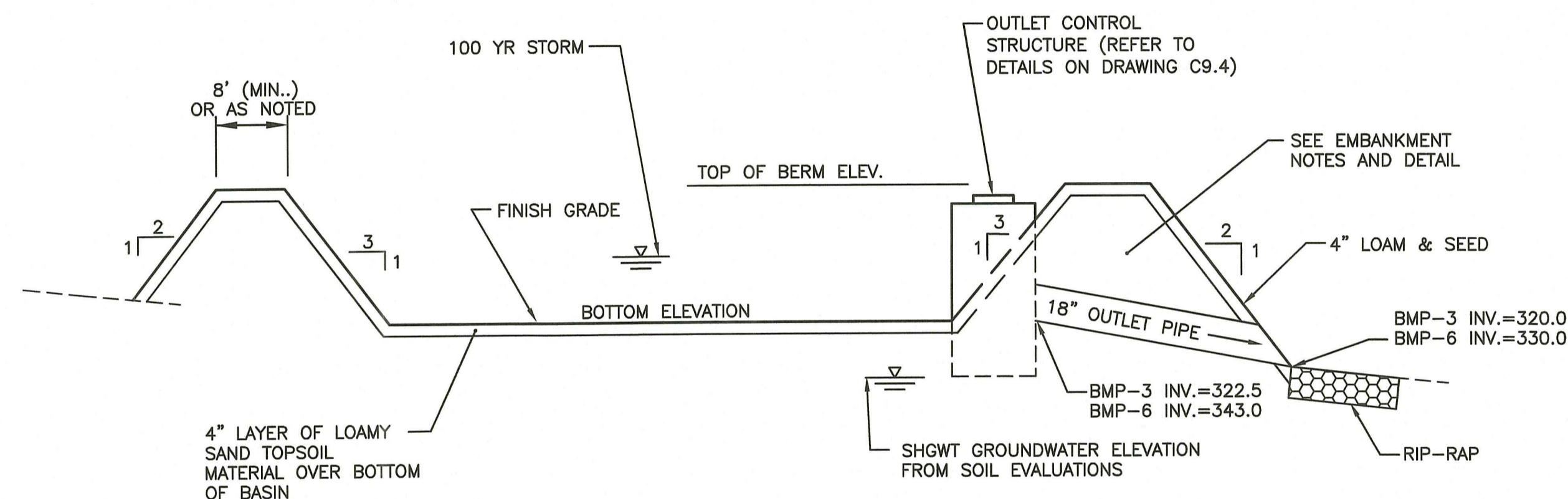
MINIMUM STORAGE VOLUME BELOW
OUTLET INV.=349.5 IS 534 C.F.



GRASS OUTLET WEIR DETAIL
NOT TO SCALE



EMBANKMENT CONSTRUCTION DETAIL - SCHEMATIC
NOT TO SCALE



DETENTION BASIN ELEVATION SUMMARY

BASIN	TOP OF BERM	BOTTOM OF BASIN	SHGWT	100-YR STORM
BMP-3	329.0	323.0	322.0 (TP D10)	328.03
BMP-6	352.0	345.0	343.0 (TP D4)	350.34

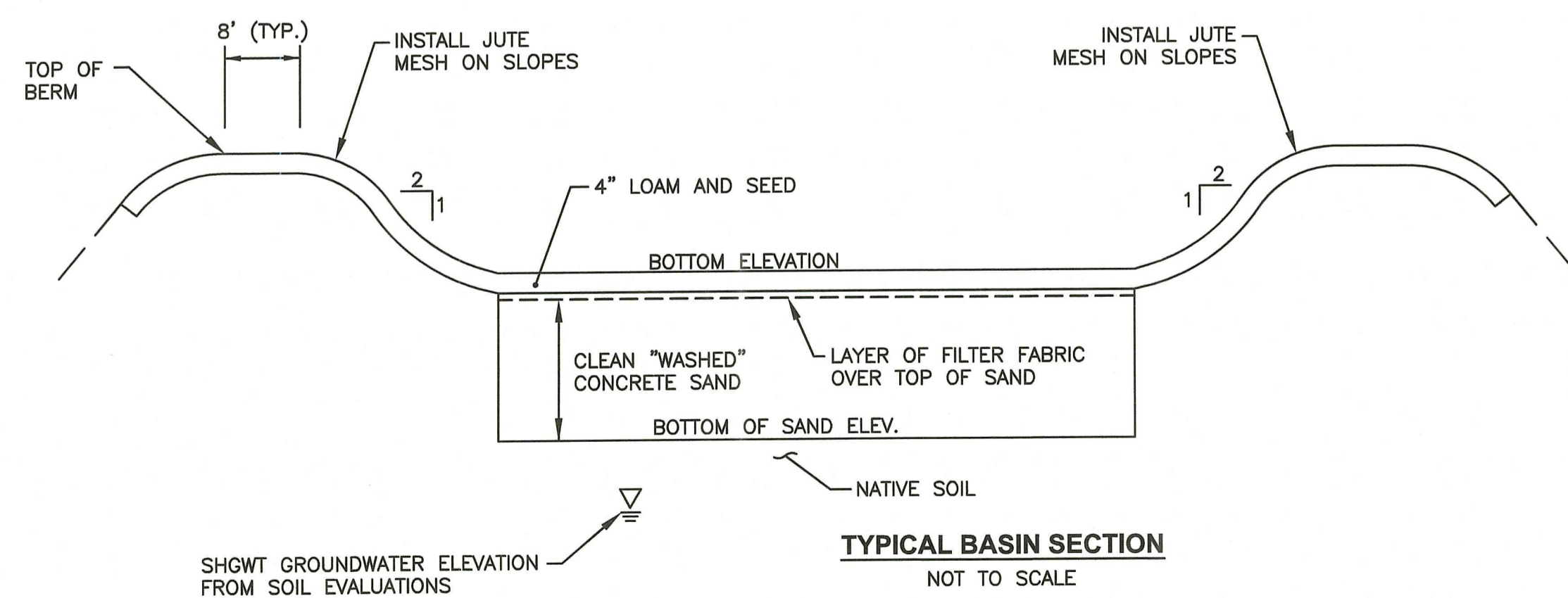
BMP-3 AND BMP-6 EXTENDED DURATION DETENTION BASIN DETAILS
NOT TO SCALE

BMP-3 BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
323	914	0
325	2,085	2,999
327	3,494	8,578
329	5,112	17,184

BMP-6 BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
345	832	0
346	1,532	1,182
348	3,128	5,842
350	4,936	13,906
352	6,971	25,813



BMP-2 AND BMP-5 SAND FILTER BASIN DETAILS
NOT TO SCALE

BMP-2 SAND FILTER BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
324	874	0
326	1,410	1,142

SAND FILTER ELEVATION SUMMARY

SAND FILTER	TOP OF BERM	BOTTOM OF BASIN	FILTER DEPTH	BOTTOM OF SAND	SHGWT	100-YR STORM
BMP-2	326	324	3.0'	321.0	319.0 (TP D2)	325.39
BMP-5	351	349	2.0'	347.0	346.0 (TP 2-6)	350.31

BMP-5 SAND FILTER BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
349	743	0
351	1,263	1,003

NOTES:

- SAND FILTER CONSTRUCTION SHALL MEET THE SPECIFICATIONS IN THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015, APPENDIX-F, SECTION F.5.1.
- FILTER SAND SHALL BE CLEAN AND WASHED, AND MEET THE SPECIFICATIONS OF AASHTO M-6 SAND OR ASTM C-33 CONCRETE SAND.
- NO RUNOFF IS TO ENTER THE SAND FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED. THE SAND FILTER SHALL BE PROTECTED (SURROUNDED) WITH COMPOST FILLED SILT SOCK UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
- FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.

STORMWATER BASIN EMBANKMENT NOTES:

- THE DETENTION AND INFILTRATION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 3" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 lb./cf. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
- THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHALL BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD AASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
- BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND MAY REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
- EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OUTFALL SHALL HAVE AN ANTI-SEEP COLLAR.

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PROJECT TITLE:
FOREST LANE SUBDIVISION
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 MAP 19, PLAT 19, LOTS 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:
GDUBON PROPERTIES, LLC
 55 FOREST LANE
 EAST GREENWICH, RI 02818

DRAWING TITLE:
MISCELLANEOUS DETAIL PLAN No. 3

DATE: MAY 2021 SCALE: AS NOTED

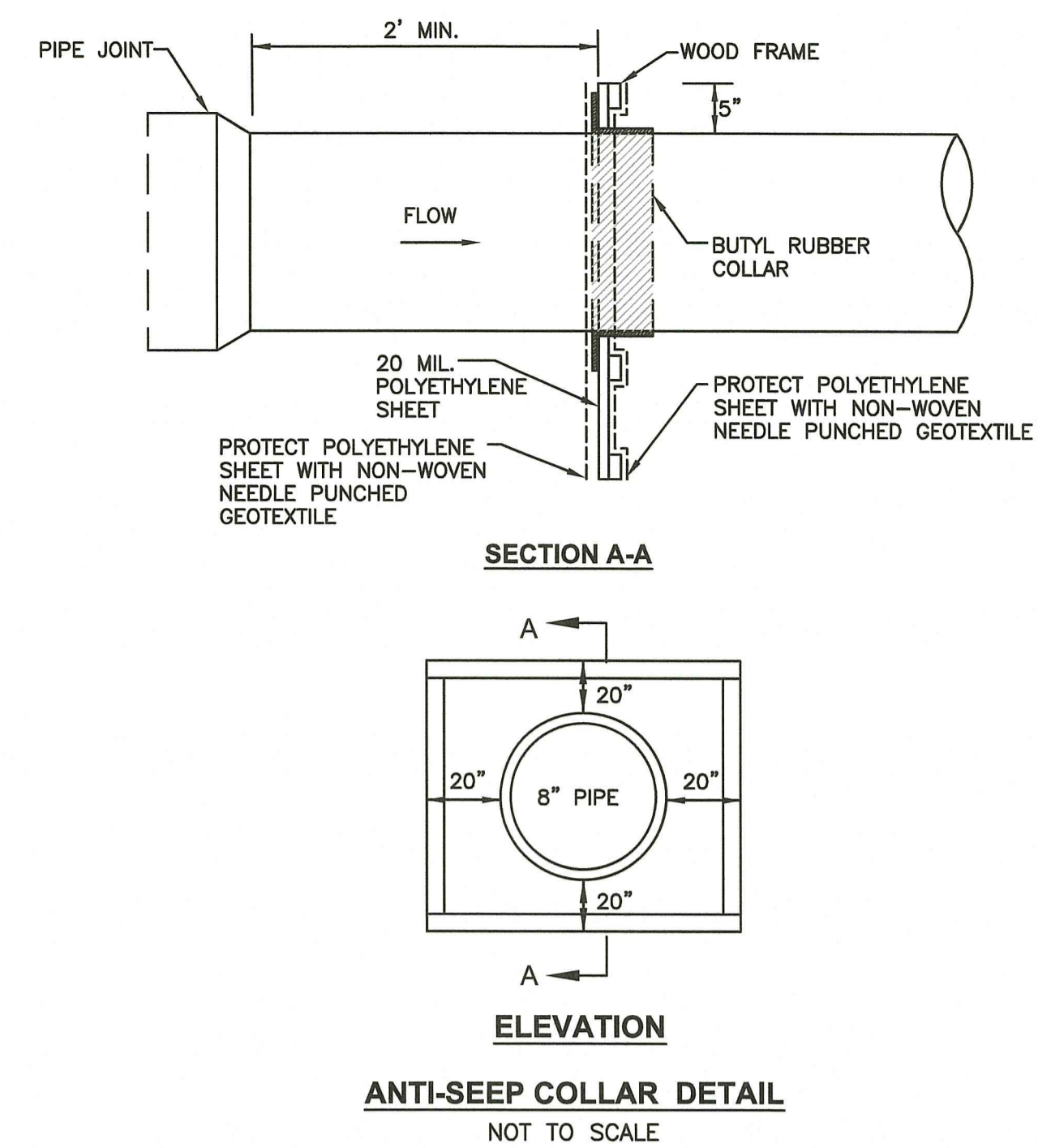
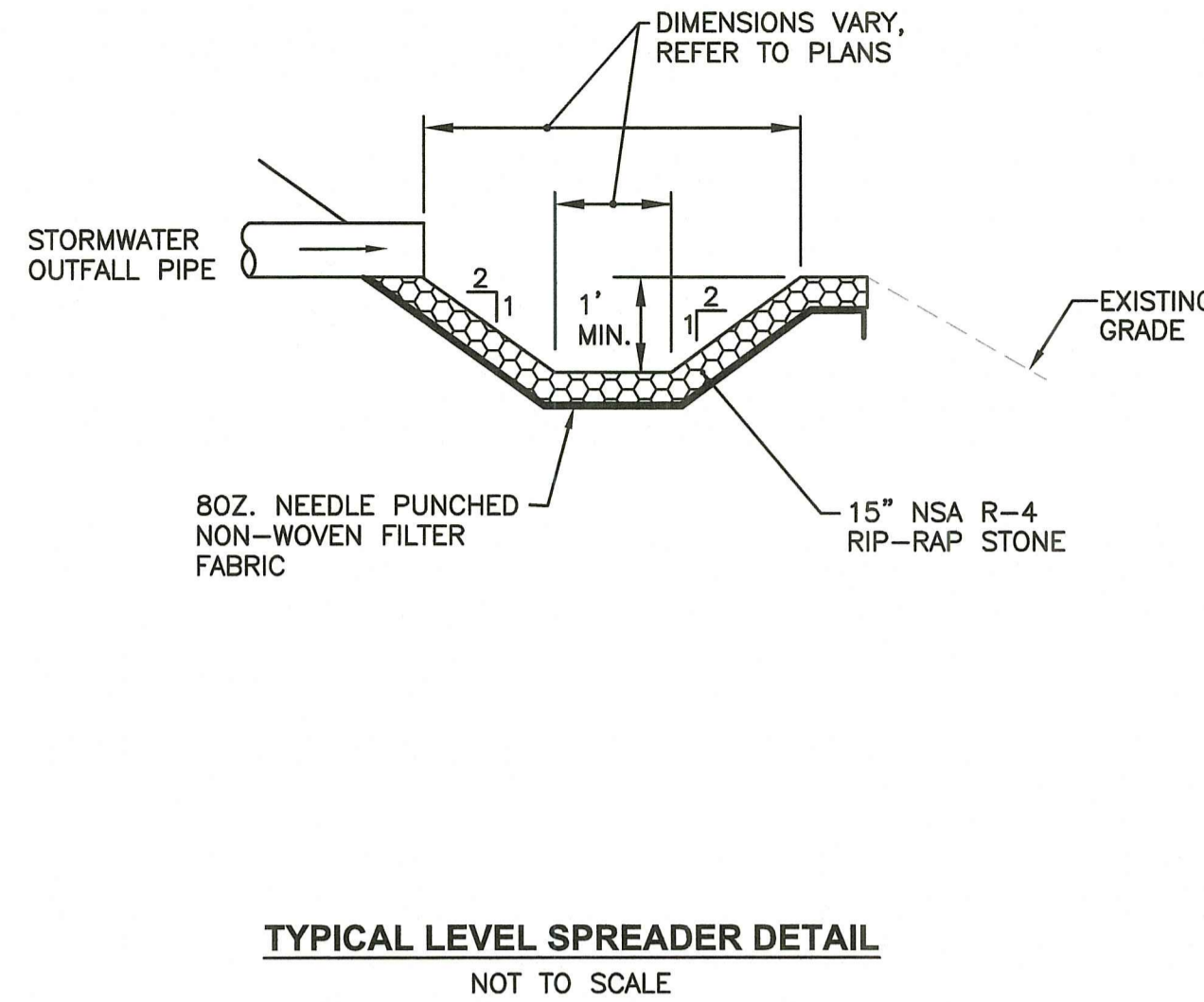
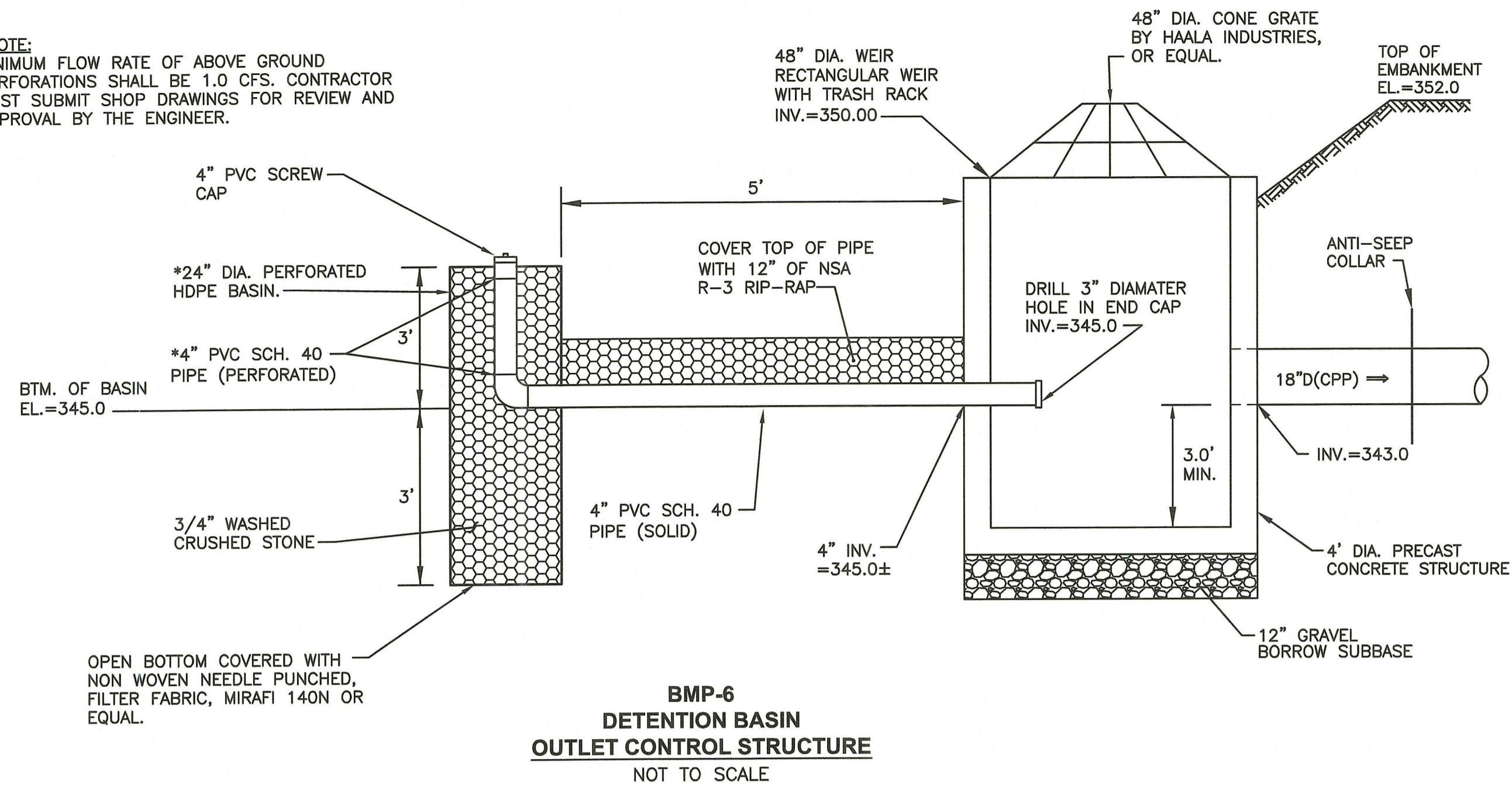
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REVISIONS

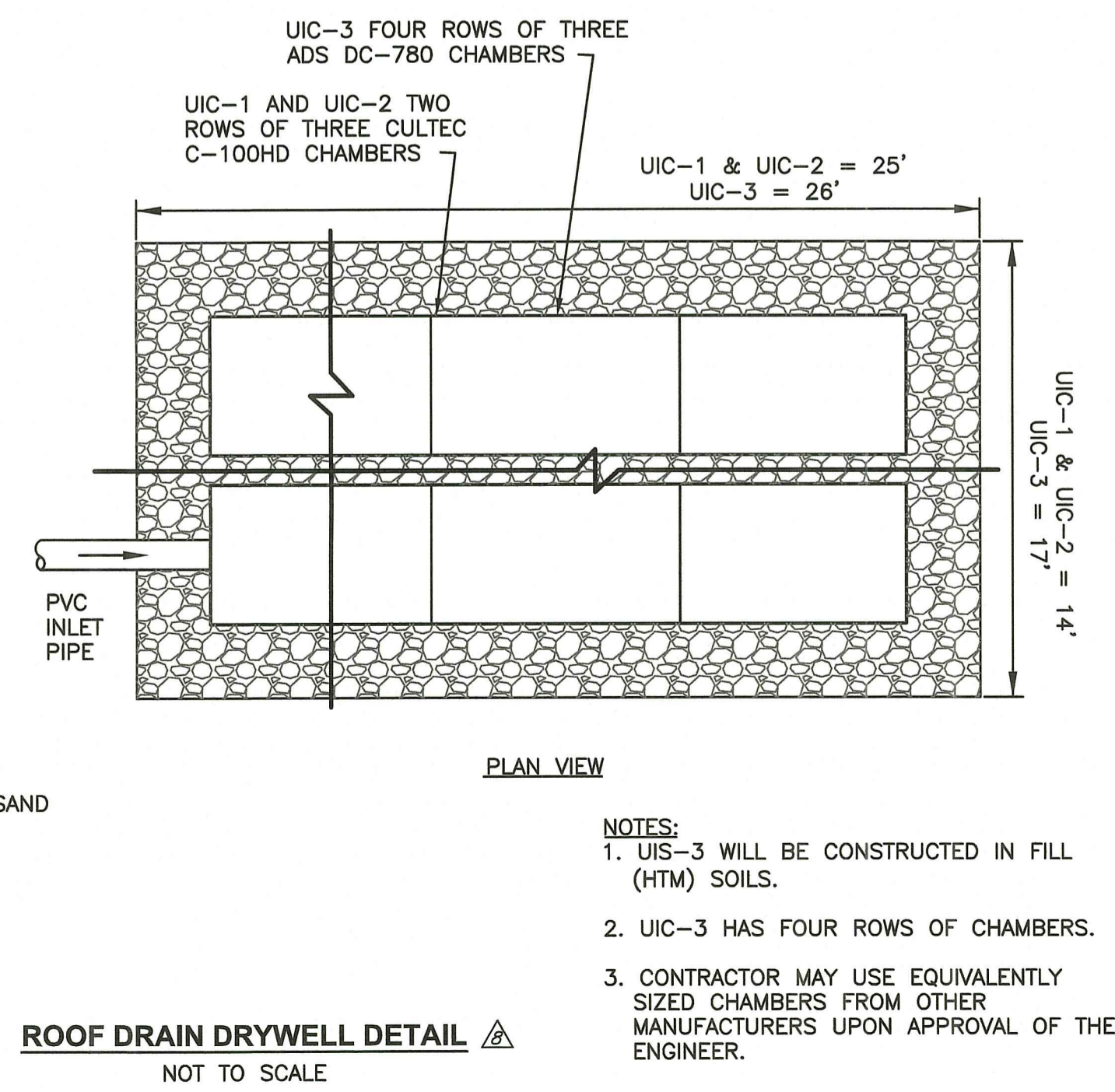
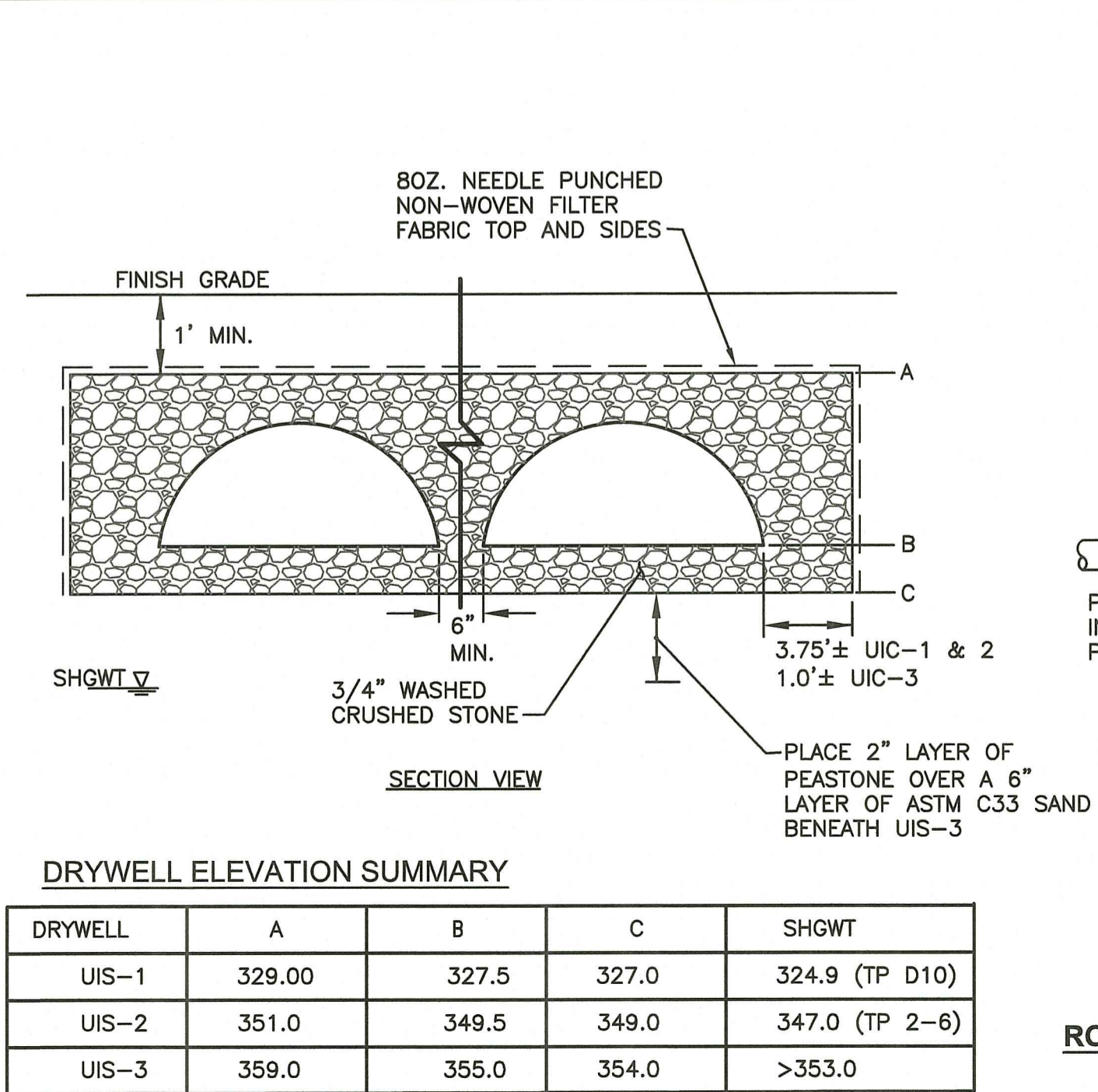
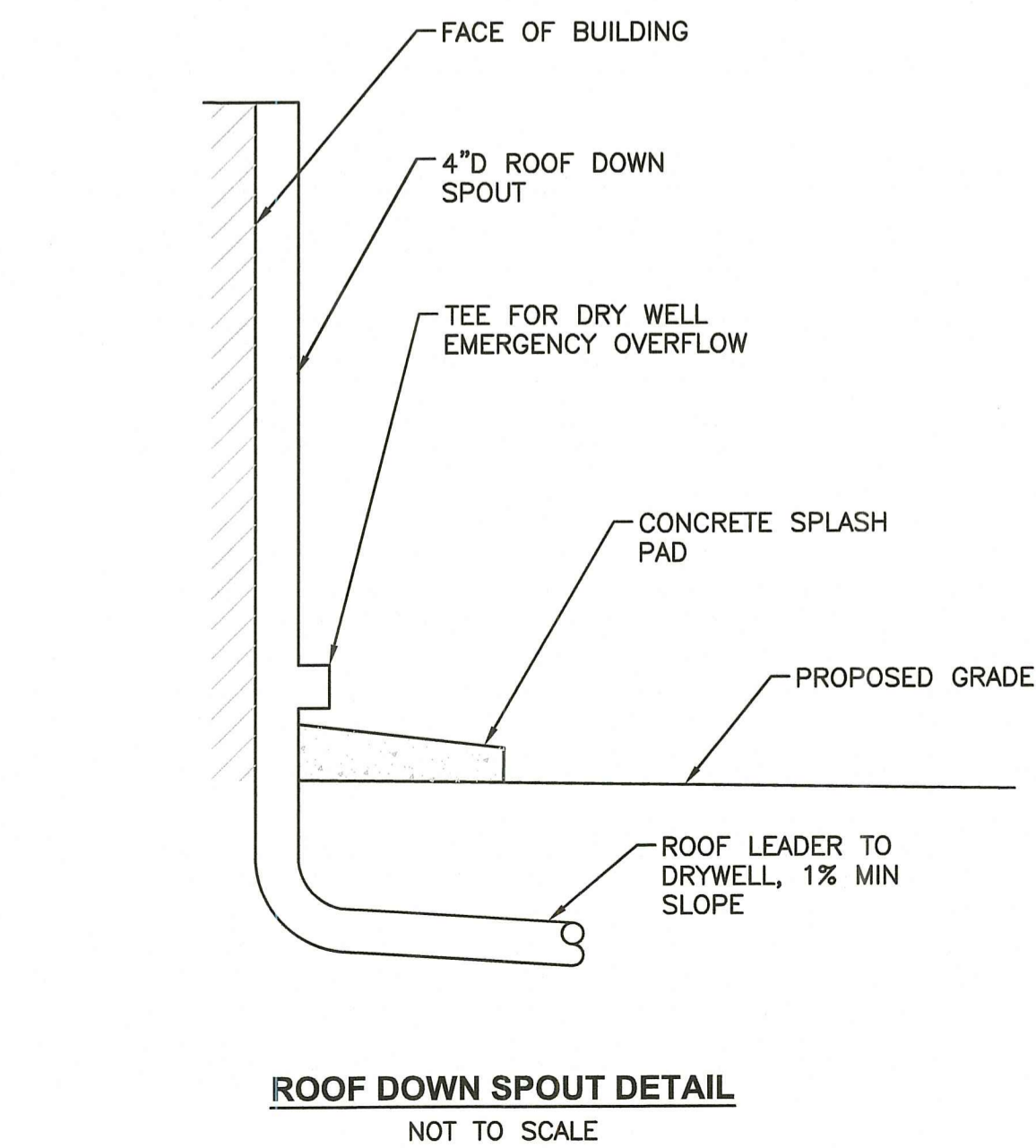
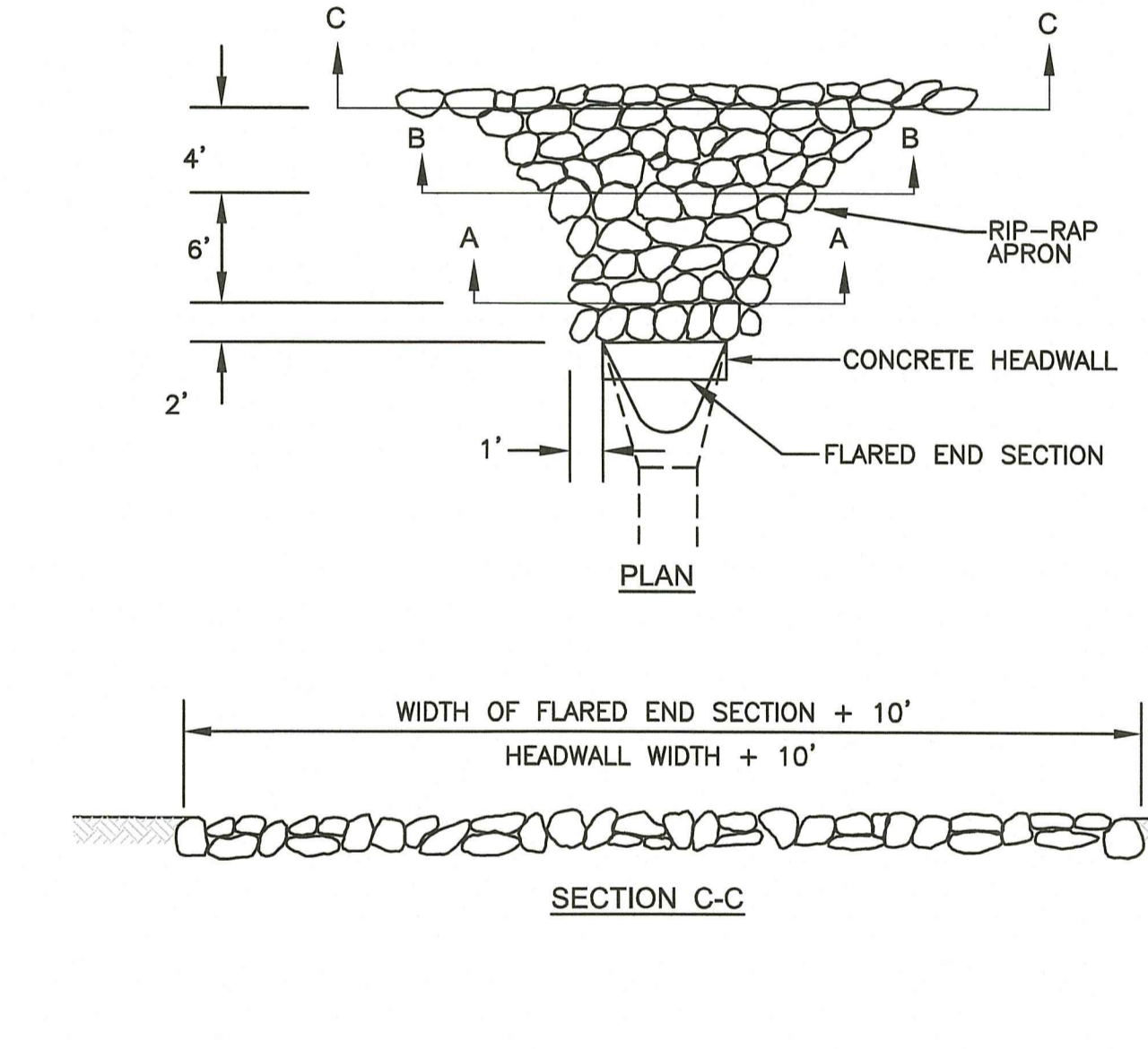
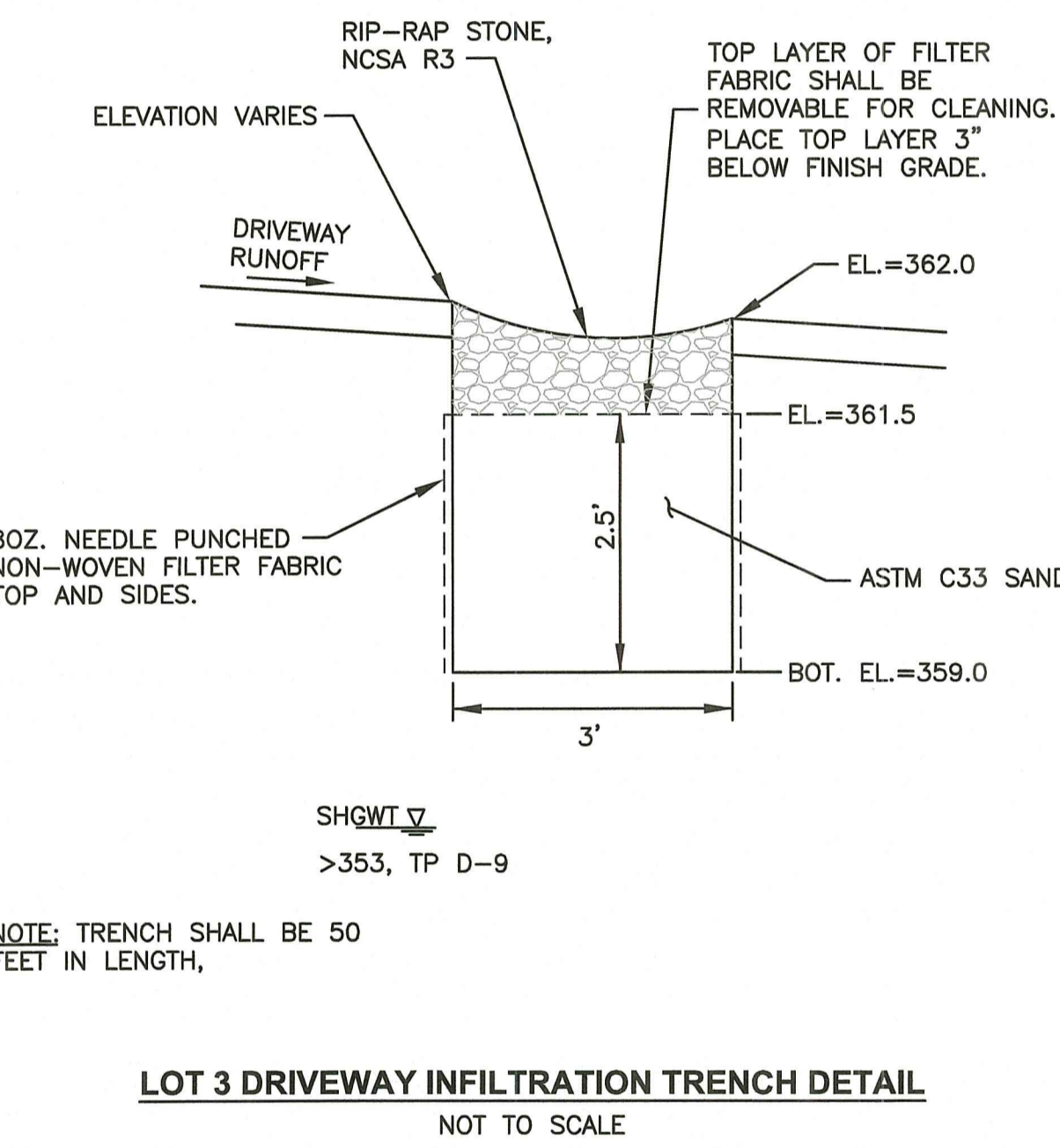
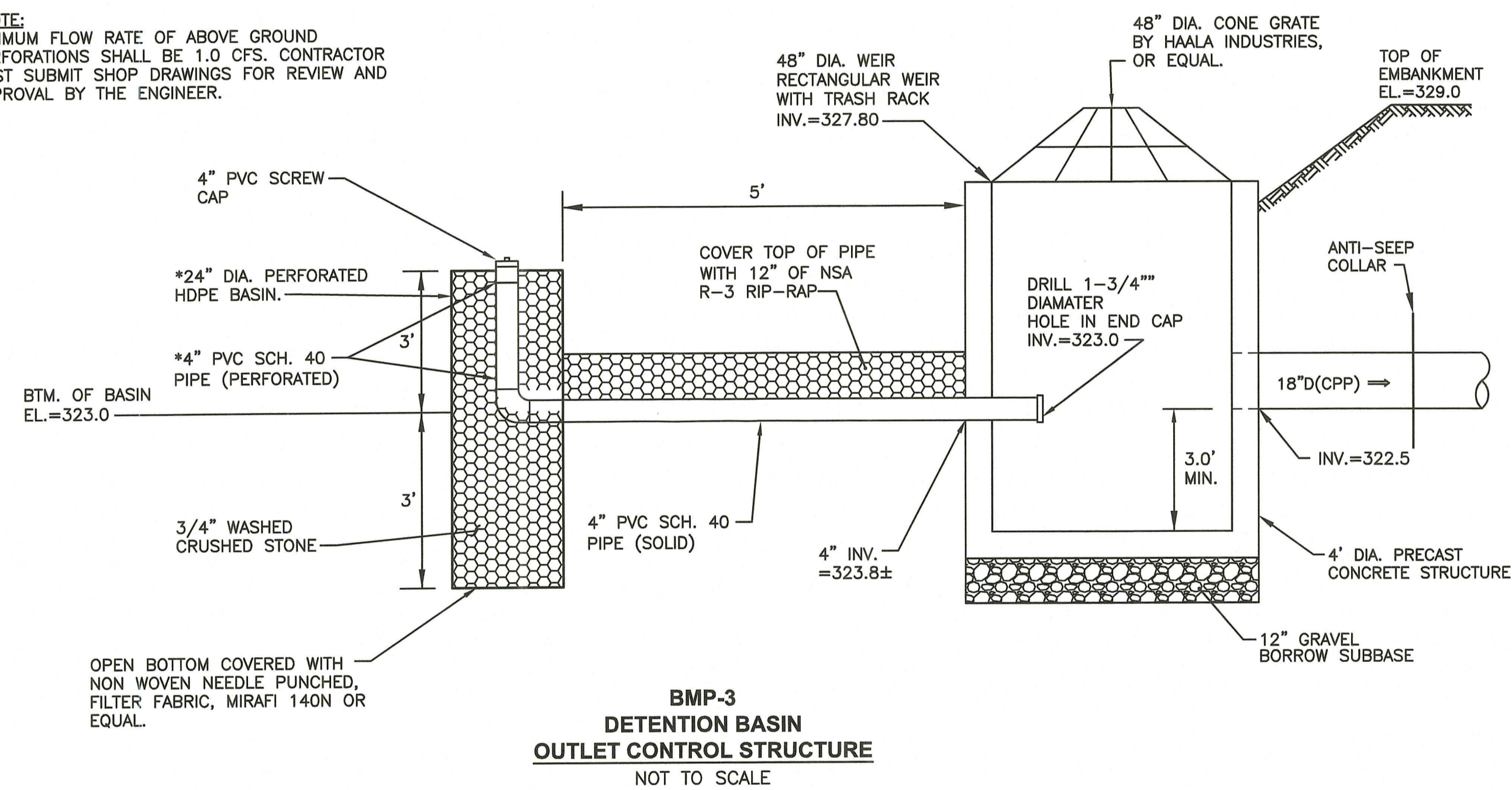
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER
C9.3
 SHEET: 13 OF 17

*NOTE:
MINIMUM FLOW RATE OF ABOVE GROUND PERFORATIONS SHALL BE 1.0 CFS. CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.



*NOTE:
MINIMUM FLOW RATE OF ABOVE GROUND PERFORATIONS SHALL BE 1.0 CFS. CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.



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RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED Oct 18 2023 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Wendy L. Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

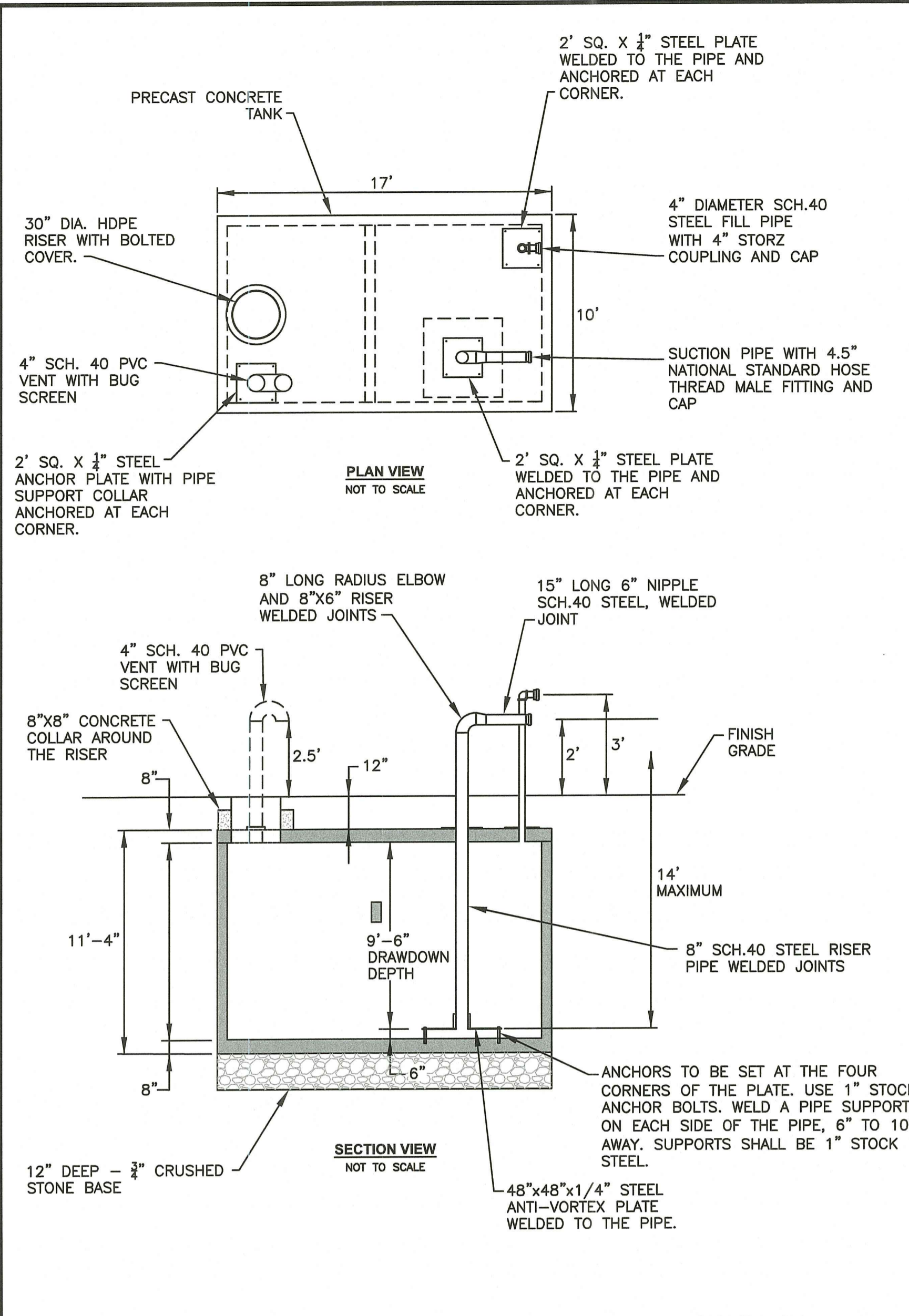
DRAWING TITLE:
MISCELLANEOUS DETAIL PLAN No. 4

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME: 2327-14-DETAILA.dwg

REVISIONS	NUMBER	REMARKS	DATE
△	1	RIDEM COMMENTS	7/8/21
	2	RIDEM FWW COMMENTS	8/6/21
	3	PRELIMINARY PLAN	2/2022
	4	TOWN COMMENTS	3/2022
	5	TOWN COMMENTS	5/2022
	6	FINAL PLAN	11/2022
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	10	RIDEM COMMENTS	8/16/2023

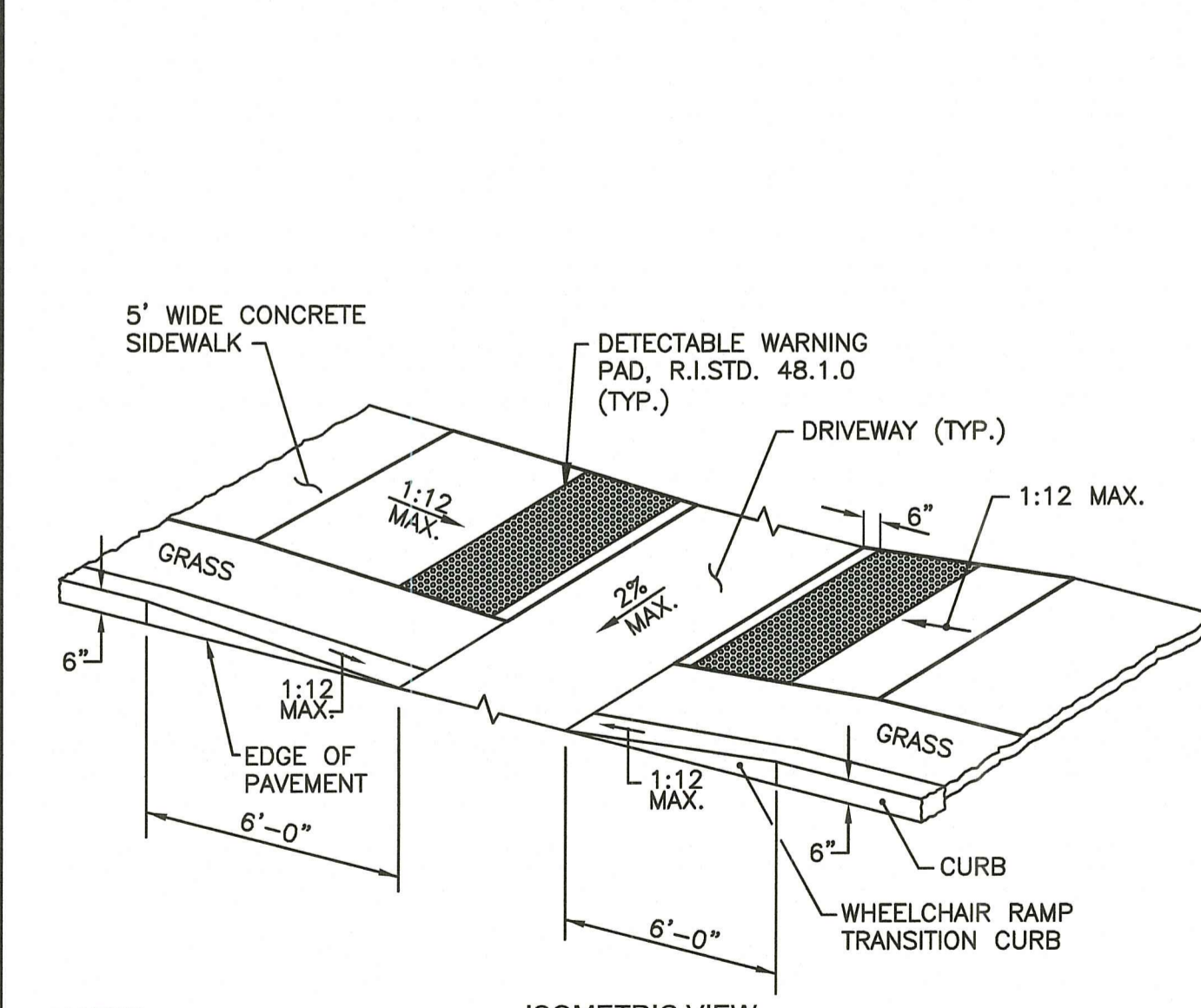
DRAWING NUMBER
C9.4
SHEET: 14 OF 17



FIRE CISTERN NOTES:

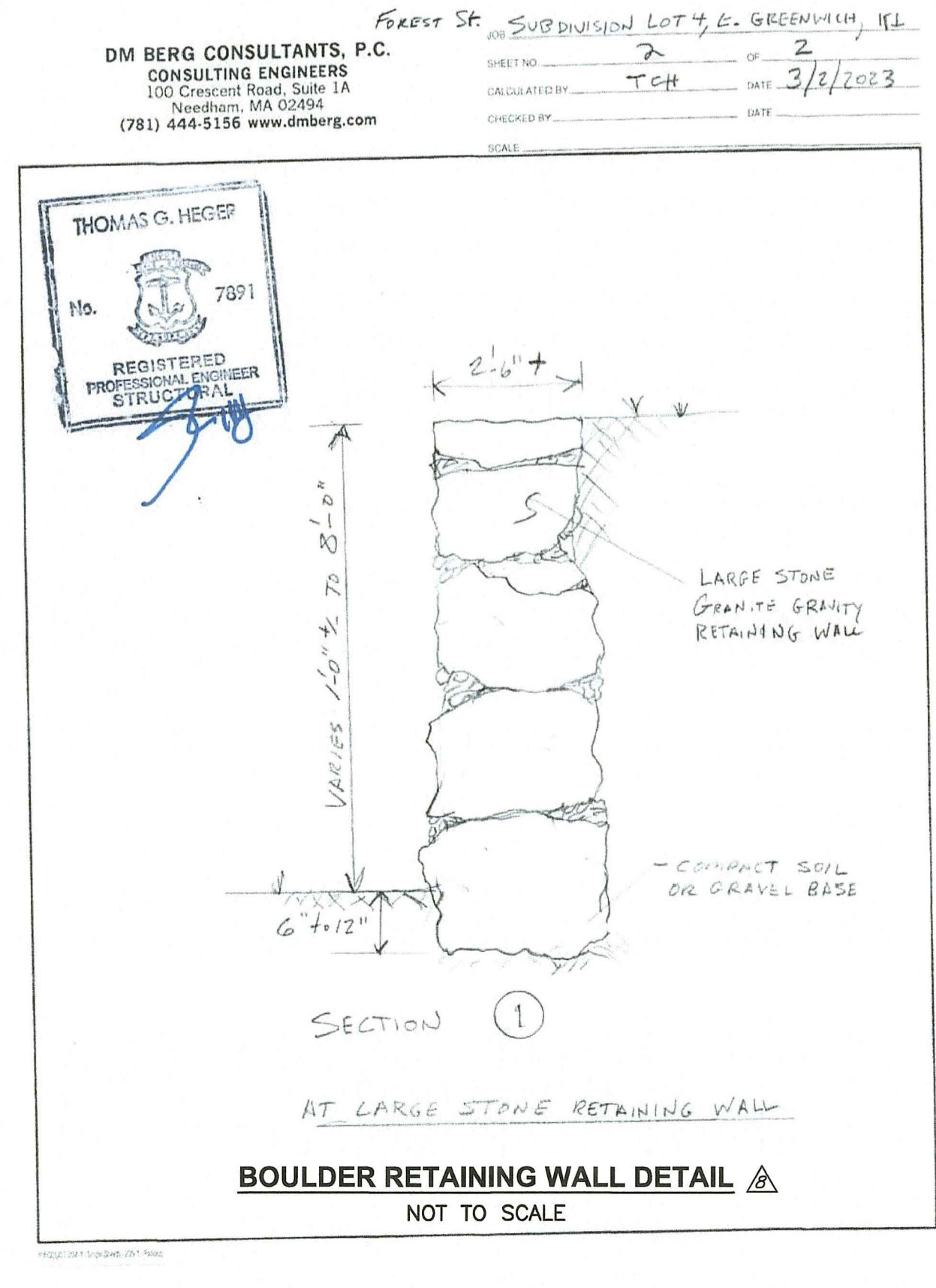
- PRECAST CONCRETE SPECIFICATIONS:
 -CONCRETE: $f_c=5,000$ PSI @ 28 DAYS MINIMUM TYPE III CEMENT.
 -REINFORCING STEEL: ASTM-A615 GRADE 60 BLACK DEFORMED BARS.
 -DESIGN LOADING: AASHTO-HS20-44, ASTM C-890-08
 -BUTYL RUBBER JOINT SEALANT BETWEEN ALL SECTION JOINTS.
 -BELOW GROUND EXTERIOR SURFACES SHALL BE DAMPROOFED.
- SPECIFICATION AND INSTALLATION OF EACH CISTERN SHALL BE IN COMPLIANCE WITH THE NFPA STANDARD ON WATER SUPPLIES FOR SUBURBAN AND RURAL FIRE FIGHTING, LATEST EDITION.
- MAINTENANCE OF THE CISTERN, INCLUDING FILLING WITH WATER, SHALL BE THE RESPONSIBILITY OF THE FOREST LANE SUBDIVISION HOME OWNERS ASSOCIATION.
- THE CISTERN CAPACITY SHALL BE A MINIMUM OF 10,000 GALLONS.
- SHOP DRAWINGS FOR THE CISTERN MUST BE SUBMITTED TO EAST GREENWICH FIRE DEPARTMENT FOR APPROVAL PRIOR TO ORDERING ANY MATERIALS.
- CISTERN TANK JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINT SEAL AND WRAPPED WITH 8\"/>

10,000 GALLON FIRE CISTERN DETAIL
NOT TO SCALE

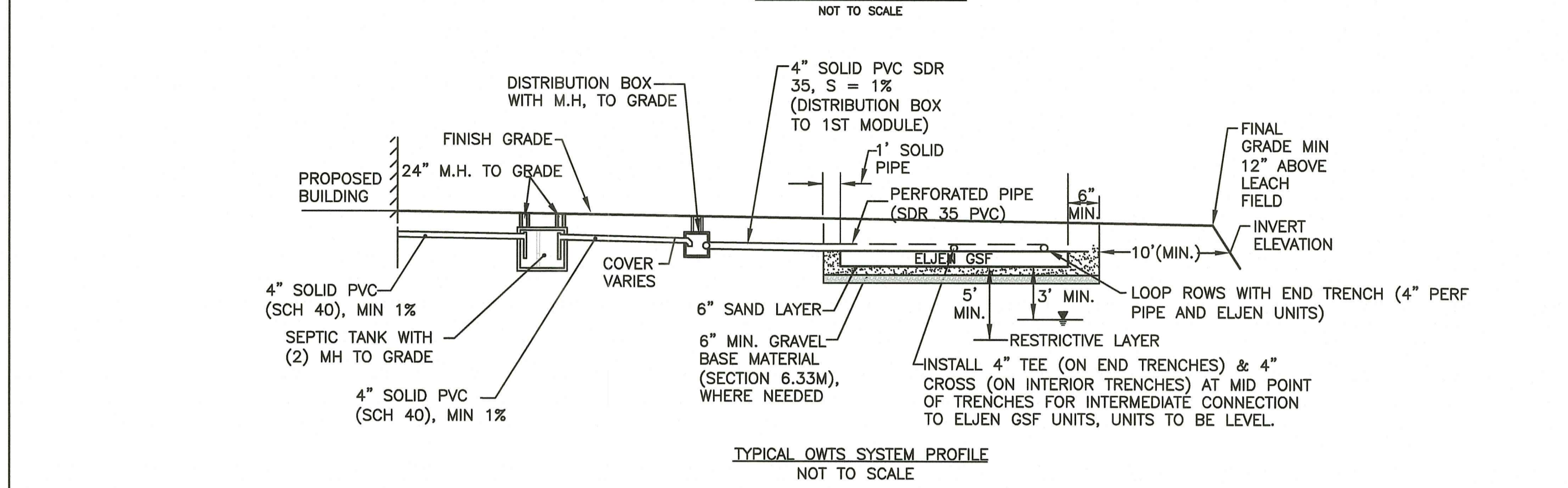
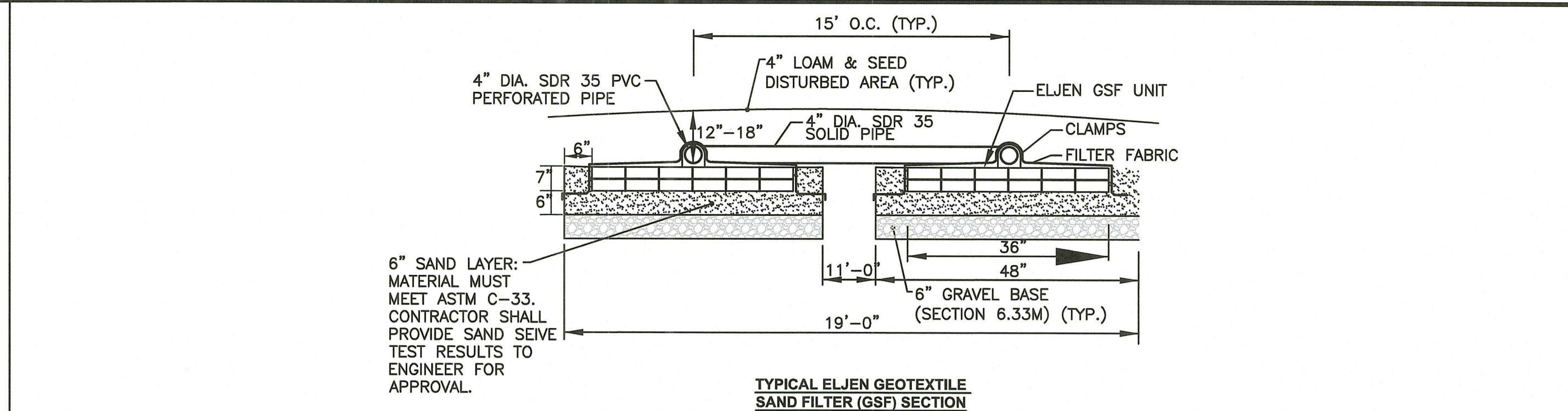


- NOTES:**
- ALL WHEELCHAIR RAMPS SHALL BE IN ACCORDANCE WITH THE LOCAL DOT STANDARDS, STATE BUILDING CODE AND ADA REQUIREMENTS.
 - ALL WHEELCHAIR RAMPS SHALL HAVE A DETECTABLE WARNING MAT.

TYPICAL WHEELCHAIR RAMP DETAIL
NOT TO SCALE



BOULDER RETAINING WALL DETAIL
NOT TO SCALE



DESIGN FLOW

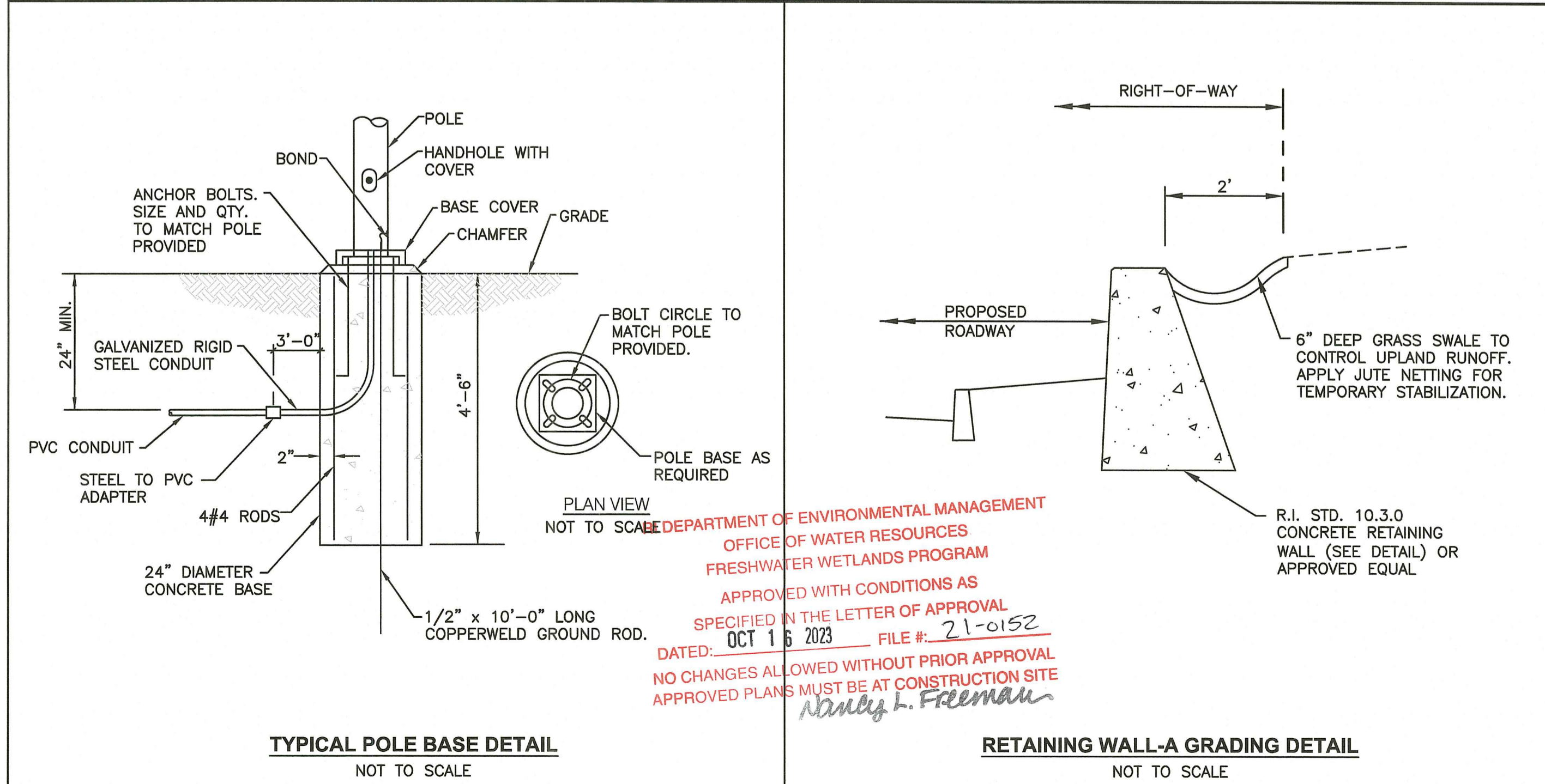
USE	DESIGN UNITS	UNIT FLOW RATE (gpd/unit)	DESIGN FLOW (gpd)
4 BEDROOM HOUSE	PER BEDROOM	115 gpd	460 gpd

SEPTIC TANK SIZING WITH NO GARBAGE GRINDER
REQUIRED SIZE: 1,500 GALLON TANK

LEACHING SYSTEM SIZING
TYPE OF SYSTEM: DISPOSAL TRENCH: ELJEN GSF SYSTEM WITH 6\"/>

EFFECTIVE AREA PER LINEAR FOOT: 7 S.F./FOOT OR 28 S.F./UNIT
 DESIGN LOADING RATE = 0.61 GAL/S.F./DAY (SOIL CAPACITY 9M)
 MIN. LEACHING AREA REQUIRED FOR 4 BEDROOM = 460 GPD / (0.61 GAL/S.F./DAY) = 754 S.F.
 TOTAL ELJEN GSF L.F. REQUIRED = 754 S.F. / 7 S.F./L.F. = 108 L.F.
 USE 2 ROWS OF 36 LF WITH 40 LF END TRENCH = 112 L.F. = 9 UNITS/ROW
 LEACHING AREA PROVIDED = 112 L.F. x 7 S.F./L.F. = 784 S.F.

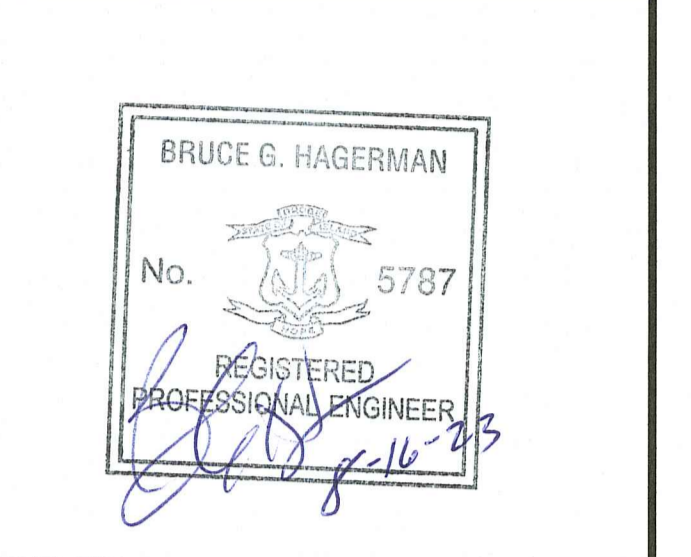
- ONSITE WASTEWATER TREATMENT SYSTEM NOTES**
- REMOVE TOPSOIL (A HORIZON) AND SUBSOIL (B HORIZON) AND ANY UNDESIRABLES FROM THE TRENCH AND ALL TOPSOIL WITHIN 10' OF THE TRENCH SHALL BE REMOVED. THE SUBSOIL (B HORIZON) BETWEEN TRENCHES SHALL REMAIN UNDISTURBED. REMOVE ALL TREES AND BRUSH AROUND SYSTEM PLUS (10) FEET.
 - NO VEHICULAR TRAFFIC IS ALLOWED ON LEACH FIELD.
 - THERE ARE NO KNOWN EXISTING OR PROPOSED PRIVATE WELLS WITHIN 200' OF THE SYSTEM AND THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500'.
 - MINIMUM ELEVATION OF TRENCH INVERT TO BE MAINTAINED WITHIN 10 FEET OF TRENCHES. INSTALL OWTS GRAVEL IN TRENCH AND ADJACENT TO TRENCHES TO ESTABLISH PROPOSED GRADES.
 - SURFACE RUNOFF TO BE DIVERTED FROM SYSTEM.
 - EACH LOT SHALL HAVE AN OWTS DESIGN SUBMITTED TO AND APPROVED BY THE RIDEM OWTS OFFICE.
 - ONLY AFTER THE OWTS APPROVAL AND COORDINATION WITH THE DESIGN ENGINEER, THE LICENSED INSTALLER MUST FOLLOW THE R.I.D.E.M. OWTS RULES AND REGULATIONS OUTLINED IN TITLE 230 - DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, CHAPTER 150 - WATER RESOURCES, SUBCHAPTER 10 - WASTEWATER & STORMWATER, PART 6 - RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, 11/25/18.
 - NO KNOWN DRAINS, PROPOSED DRAINS OR UNDERDRAINS DISCHARGING INTO A SURFACE WATER SUPPLY ARE WITHIN 100' OF LEACH FIELD.
 - ALL DISTURBED AREAS ARE TO RECEIVE 4\"/>



TYPICAL POLE BASE DETAIL
NOT TO SCALE

CROSSMAN ENGINEERING
 Rhode Island: 151 Centerville Road, Warwick, RI 02886
 Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763
 Phone: (401) 738-5660, (508) 695-1700
 Email: cel@crossmaneng.com

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PROJECT TITLE:

FOREST LANE SUBDIVISION
 35 & 55 FOREST LANE
 MAP 19, PLAT 19, LOTS 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
 55 FOREST LANE
 EAST GREENWICH, RI 02818

DRAWING TITLE:
MISCELLANEOUS DETAIL
PLAN No. 5

DATE: MAY 2021 **SCALE:** AS NOTED

DWG. NAME: 2327-15-DETAILS.dwg

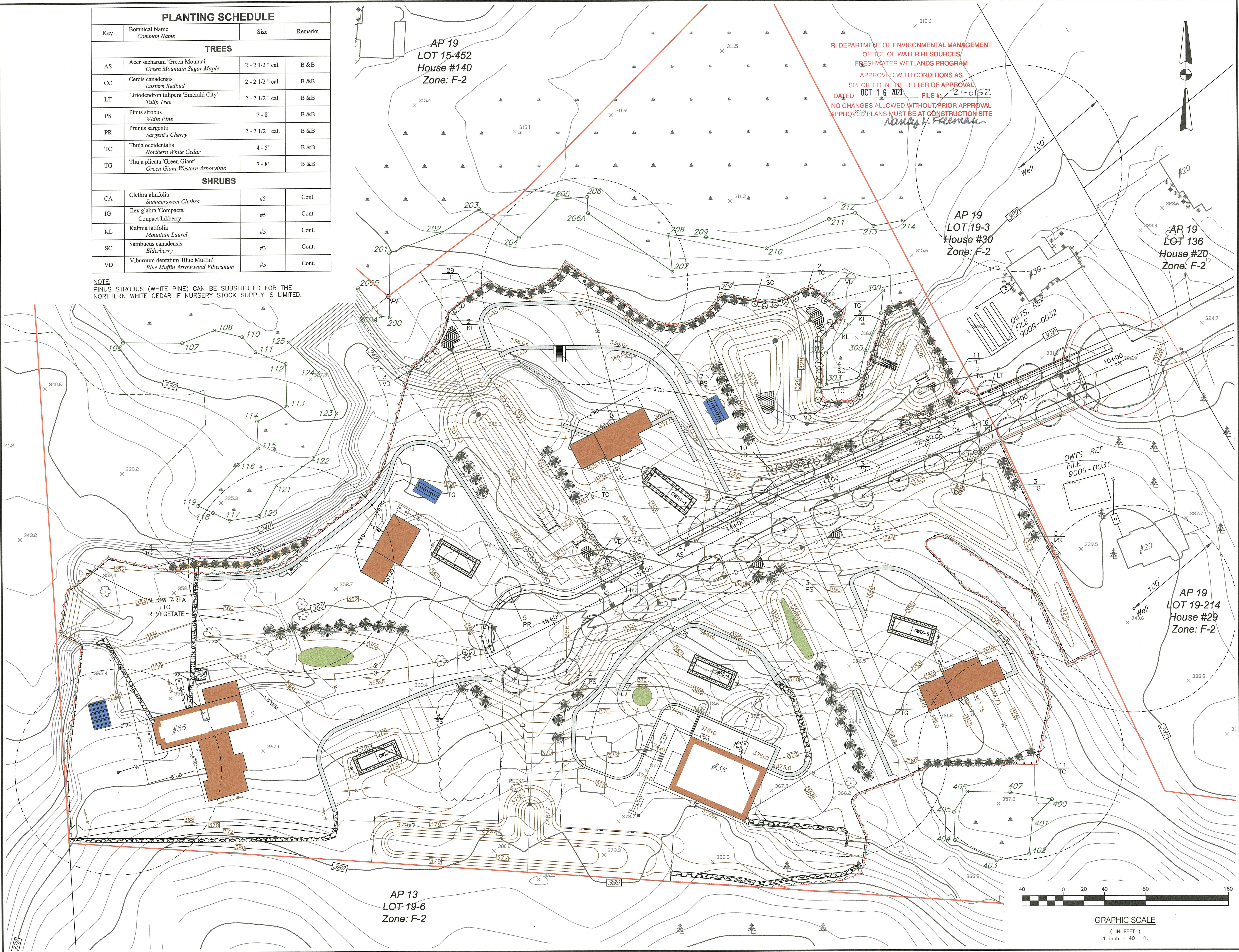
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWW COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
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10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER
C9.5
 SHEET: 15 OF 17

PLANTING SCHEDULE			
Key	Botanical Name Common Name	Size	Remarks
TREES			
AS	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	2 - 2 1/2" cal.	B & B
CC	Cercis canadensis Eastern Redbud	2 - 2 1/2" cal.	B & B
LT	Liriodendron tulipifera 'Emerald City' Tulip Tree	2 - 2 1/2" cal.	B & B
PS	Pinus strobus White Pine	7 - 8'	B & B
PR	Prunus sargentii Sargent's Cherry	2 - 2 1/2" cal.	B & B
TC	Thuja occidentalis Northern White Cedar	4 - 5'	B & B
TG	Thuja plicata 'Green Giant' Green Giant Western Arborvitae	7 - 8'	B & B
SHRUBS			
CA	Clethra alnifolia Summersweet Clethra	#5	Cont.
IG	Ilex glabra 'Compacta' Compact Inkberry	#5	Cont.
KL	Kalmia latifolia Mountain Laurel	#5	Cont.
SC	Sambucus canadensis Elderberry	#3	Cont.
VD	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum	#5	Cont.

NOTE:
PINUS STROBUS (WHITE PINE) CAN BE SUBSTITUTED FOR THE
NORTHERN WHITE CEDAR IF NURSERY STOCK SUPPLY IS LIMITED.



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 16 2023 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy H. Freeman

CROSSMAN ENGINEERING
Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone: (401) 738-9860
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 895-1700
Email: ce@crossmaneng.com

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BRUCE G. HAGERMAN
No. 5787
REGISTERED PROFESSIONAL ENGINEER
Bruce G. Hagerman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19/PLAT 19, LOT 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818
AUG 13 2023
Office of Water Resources

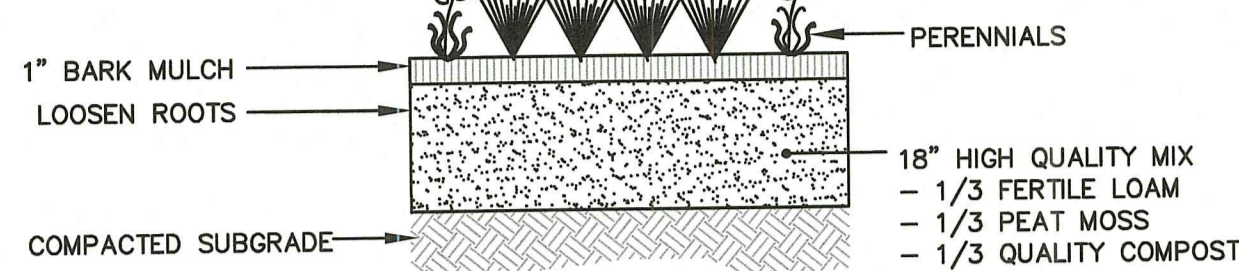
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LANDSCAPE PLAN

DATE: MAY 2021 SCALE: 1"=40'

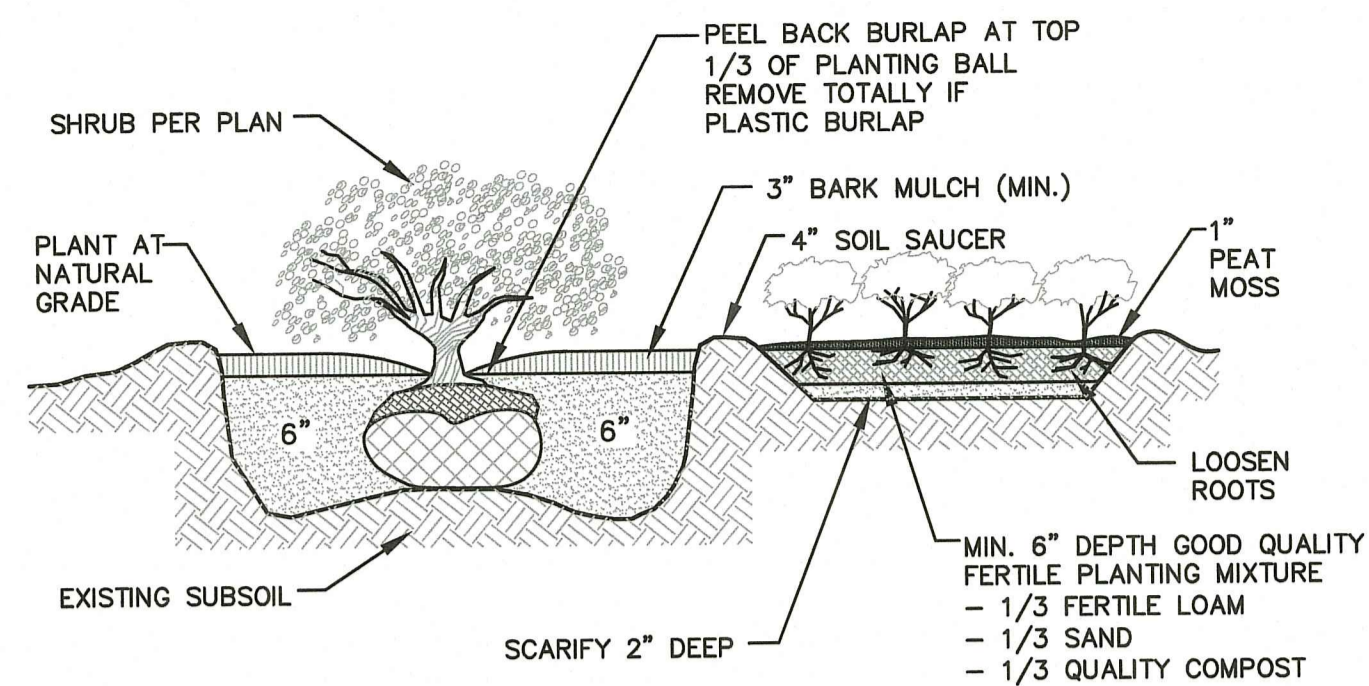
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2		RIDEM FW COMMENTS	8/6/21
3		PRELIMINARY PLAN	2/2022
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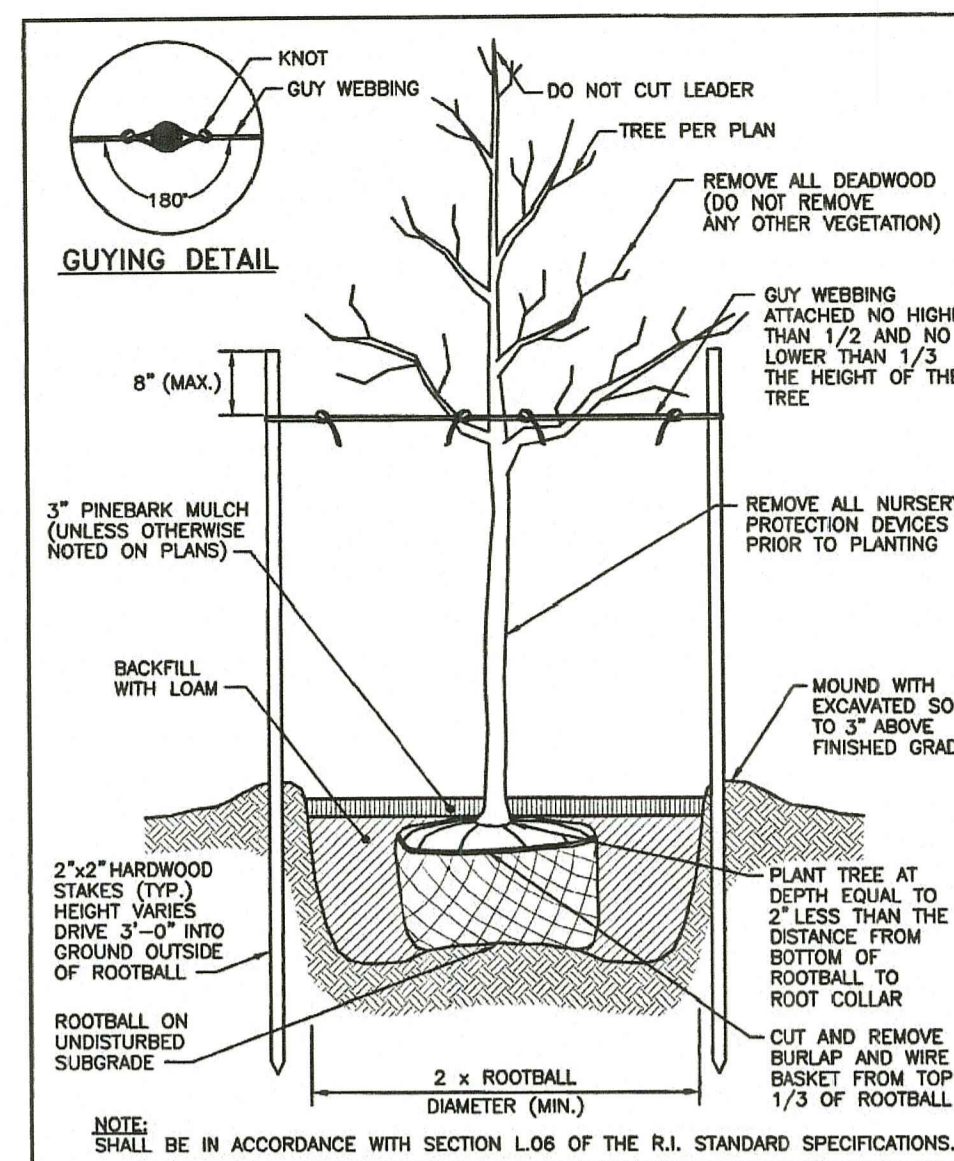
DRAWING NUMBER
L1.0
SHEET: 16 OF 17



PERENNIAL PLANTING DETAIL
NOT TO SCALE

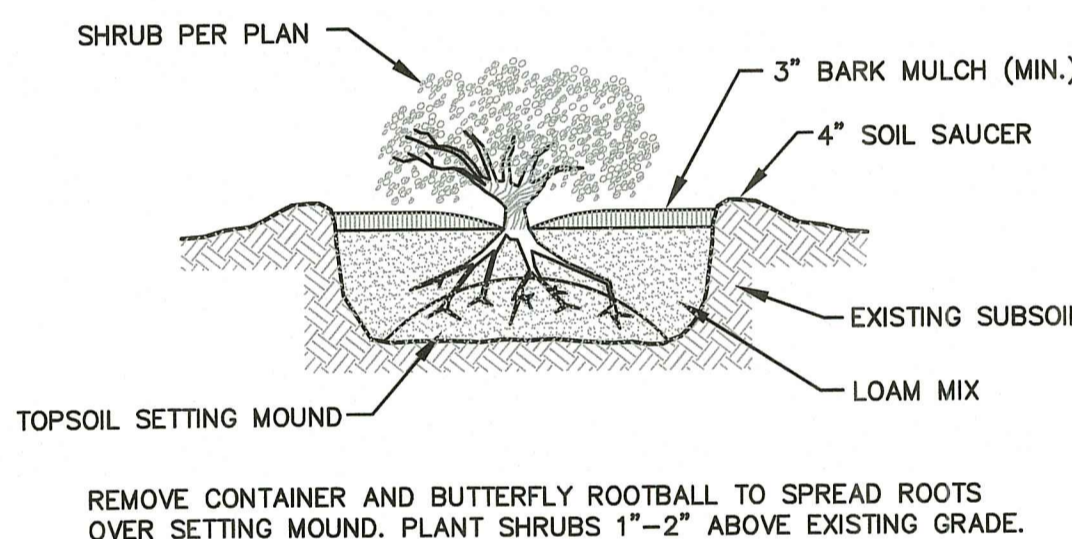


BALL and BURLAP
SHRUB and GROUND COVER PLANTING DETAIL
NOT TO SCALE



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
LARGE TREE STAKING AND PLANTING DETAIL
(2" CALIPER AND GREATER)
JUNE 15, 1998
R.I. STANDARD 50.1.0

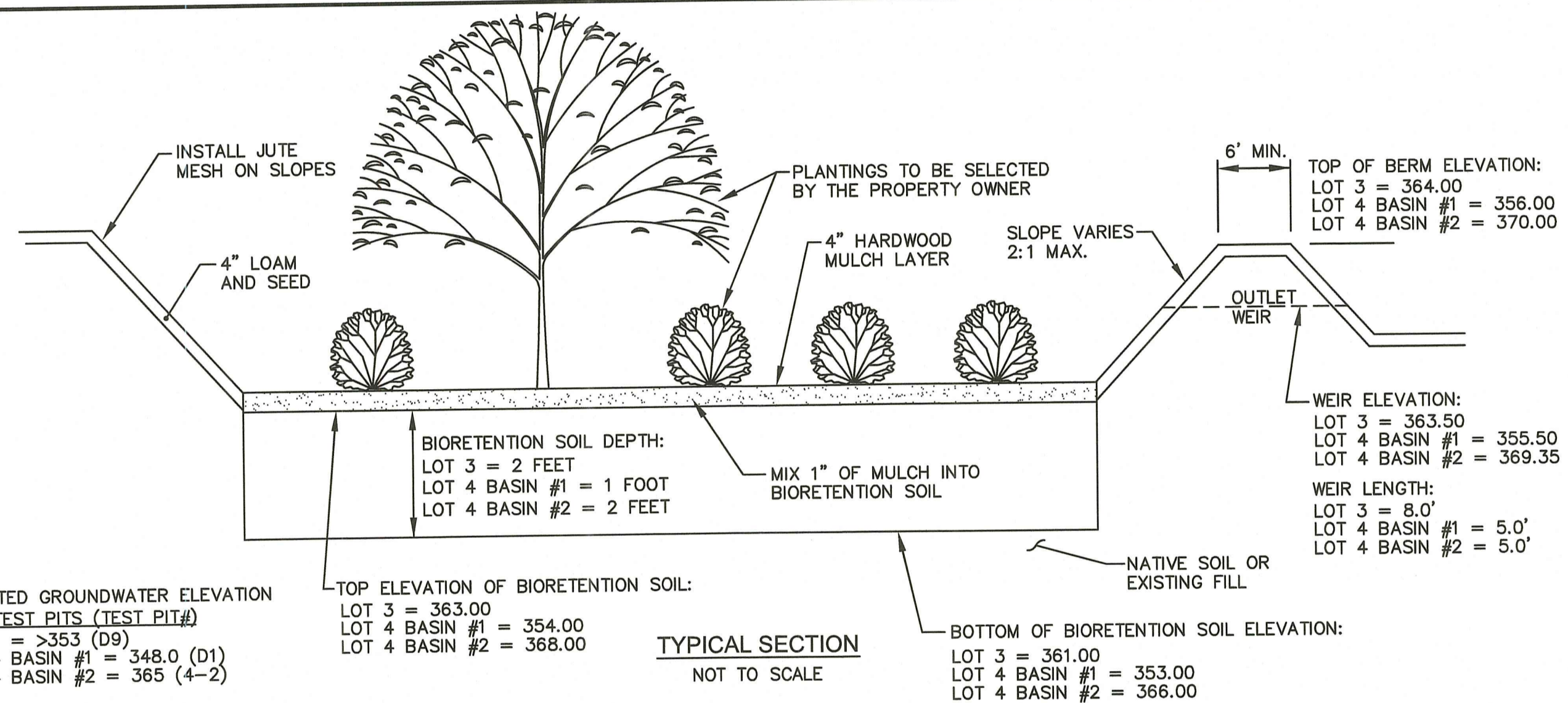
NOTE: CUT APART ROOTBALL WITHOUT SEVERING MAIN ROOTS.



CONTAINER GROWN PLANTING DETAIL
NOT TO SCALE

LANDSCAPE CONSTRUCTION NOTES

- FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
- LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 6" OVER ALL PLANTED AREAS.
- BIO-RETENTION AREAS-PLANTING SOIL AND MULCH: LOAMY SAND TO A SANDY LOAM-80% SAND <20% SILT, <2% CLAY. WELL AGED GRADED COMPOST (25% OF SOIL MIX). WELL AGED, AERATED DARK BROWN HARD-WOOD MULCH (AGED 6 MONTHS).
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
- SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
- WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING. IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
- PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT A RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
- LIMING: ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
- MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" DARK HEMLOCK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
- GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, FREE OF CHARGE. CONTRACTOR SHALL PROVIDE WRITTEN GUARANTEE PRIOR TO CONSTRUCTION COMPLETION.
- CALIPER MEASUREMENTS FOR ALL NEW PLANT STOCK TO BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GRADE FOR TREES OVER FOUR (4) INCHES IN CALIPER.
- ALL TREES SHALL BE LIMBED TO A MINIMUM OF SEVEN (7) FEET ABOVE FINISHED GRADE WHEN TREES ARE LOCATED WITHIN VEHICULAR OR PEDESTRIAN TRAVEL WAYS.
- THE CONTRACTOR SHALL REMOVE ALL STAKES, GUY WIRES AND TAPE FROM TREES AFTER A PERIOD OF ONE YEAR.



TYPICAL SECTION
NOT TO SCALE

BIORETENTION BASIN (RAIN GARDEN) DETAILS
NOT TO SCALE

BIORETENTION SOIL MIXTURE:

SAND: 85-88%
SOIL FINES: 8 TO 12% (NO MORE THAN 2% CLAY)
ORGANIC MATTER: 3 TO 5%
ADD 20% (BY VOLUME) OF WELL AGED (3 MONTHS), WELL AERATED LEAF COMPOST TO THE MIXTURE.

NOTES:

- BIORETENTION SOIL AND HARDWOOD MULCH SHALL MEET THE SPECIFICATIONS IN THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, DEC. 2010, APPENDIX-F, SECTION F.5.2.

LOT 3 BIORETENTION BASIN

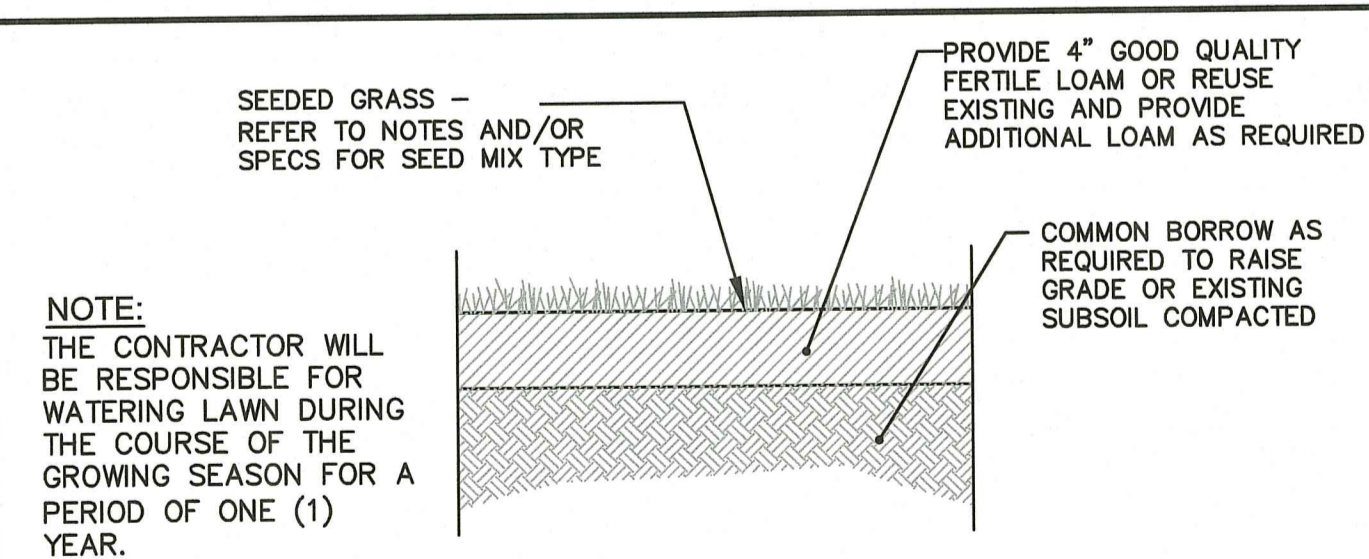
CONTOUR	AREA (SF)	VOLUME (CF)
361	837	0
363	837	552
364	2,997	2,469

LOT 4 BIORETENTION BASIN #1

CONTOUR	AREA (SF)	VOLUME (CF)
353	553	0
354	553	182
356	1,154	1,889

LOT 4 BIORETENTION BASIN #2

CONTOUR	AREA (SF)	VOLUME (CF)
366	279	0
368	279	184
370	746	1,209



NOTE: THE CONTRACTOR WILL BE RESPONSIBLE FOR WATERING LAWN DURING THE COURSE OF THE GROWING SEASON FOR A PERIOD OF ONE (1) YEAR.

TYPE	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDSFOOT TREFOIL	15
PERENNIAL RYE GRASS	10
APPLICATION RATE = 200 lbs. / ACRE	
TYPE	% BY WEIGHT
NASSAU KENT BLUE	60
JAMESTOWN CHEWINGS FESCUE	20
PALMER PERENNIAL RYE GRASS	20
APPLICATION RATE = 200 lbs. / ACRE	

SEED MIX No. 3
(STORMWATER BASIN AREAS)

LOAM-SEED DETAIL
NOT TO SCALE

SEEDING NOTES

- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
- LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DICING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
- APPLICATION OF SEED:
 - RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
 - SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:
SPRING SEEDING: MARCH 15 TO MAY 31
FALL SEEDING: AUGUST 15 TO OCTOBER 15
- THE CONTRACTOR SHALL KEEP ALL SEEDING AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
- DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
- OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
- REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
 - SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

STORMWATER BASIN SEED MIX (SEED MIX NO. 3)

APPLICATION RATE = 15-25 LBS. / ACRE
(SEASONALLY FLOODED MIX)
(BASIN BOTTOM AREA)

20% FOX SEDGE, PA ECOTYPE (CAREX VULPINOIDEA, PA ECOTYPE)
16% VIRGINIA WILD RYE, PA ECOTYPE (ELYMUS VIRGINICUS, PA ECOTYPE)
15% RIVERBANK WILD RYE, PA ECOTYPE (ELYMUS RIPARIUS, PA ECOTYPE)
15% JAPANESE MILLET (ECHINOCHLOA CRUSGALLI VAR. FRUMENTACEA)
15% DEER TONGUE, 'TIOGA' (PANICUM CLANDESTINUM (DICHANTHELIUM C.), 'TIOGA')
9% BLUNT BROOM SEDGE, PA ECOTYPE (CAREX SCOPARIA, PA ECOTYPE)
5% SWITCHGRASS, 'CAVE-IN-ROCK' (PANICUM VIRGATUM, 'CAVE-IN-ROCK')
2% GREEN BULRUSH, PA ECOTYPE (SCIRPUS ATROVIRENS, PA ECOTYPE)
2% AWL SEDGE, PA ECOTYPE (CAREX STIPATA, PA ECOTYPE)
1% AUTUMN BENTGRASS, APB (AGROSTIS PERENNANS, APB)

TOPSOIL MIX FOR STORMWATER BASINS

PLANTING SOIL SHALL MEET THE BELOW COMPOSITION;
SAND: 85-88%
SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)
ORGANIC MATTER: 3-5%

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
DATED: OCT 16 2023 FILE #: 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy L. Freeman



CROSSMAN ENGINEERING
Rhode Island
151 Centerville Road
Warwick, RI 02886
Phone: (401) 738-5660
Massachusetts
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BRUCE G. HAGERMAN
No. 5787
REGISTERED PROFESSIONAL ENGINEER

PROJECT TITLE:

FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:

GDUBON PROPERTIES, LLC
55 FOREST LANE
EAST GREENWICH, RI 02818

AUG 16 2023
Office of Water Resources

DRAWING TITLE:

LANDSCAPE DETAILS

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME: 2327-17-LAND DET.dwg

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWH COMMENTS	8/6/21
3	PRELIMINARY PLAN	2/2022
4	TOWN COMMENTS	3/2022
5	TOWN COMMENTS	5/2022
6	FINAL PLAN	11/2022
7	TOWN COMMENTS	11/28/2022
8	LOT GRADING	5/12/2023
9	RIDEM MODIFICATION	6/9/2023
10	RIDEM COMMENTS	8/16/2023

DRAWING NUMBER

L2.0

SHEET: 17 OF 17

PERMIT PLANS

FOR

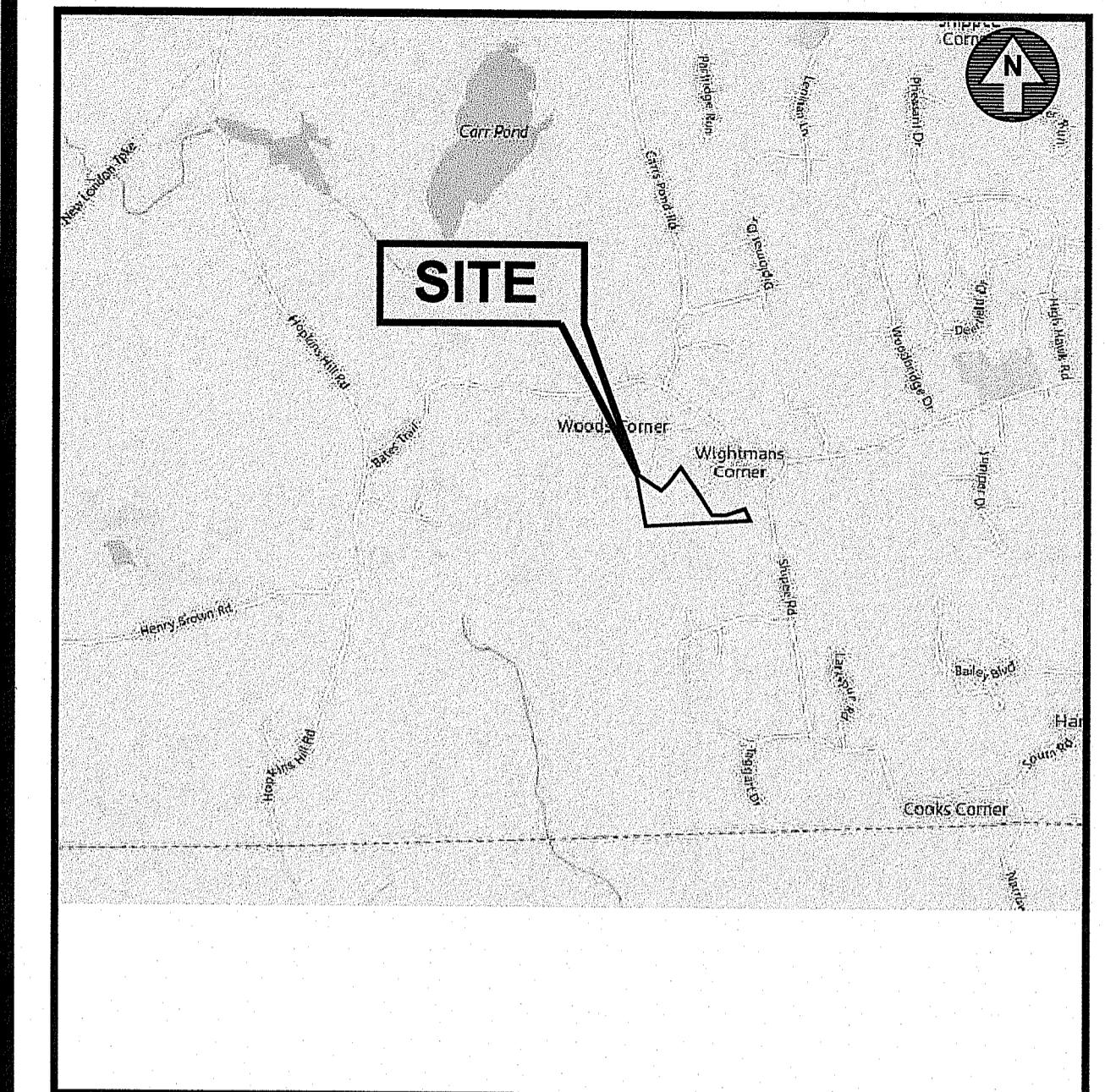
FOREST LANE SUBDIVISION

35 & 55 FOREST LANE

MAP 19/PLAT 19/LOTS 1 AND 2

EAST GREENWICH, RHODE ISLAND

ZONING DISTRICT: FARMING F2



LOCUS MAP
NO SCALE

INDEX OF DRAWINGS

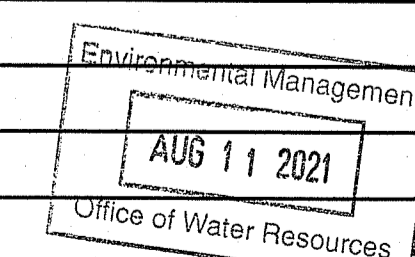
DRAWING No.	PLAN
	COVER
C1	AERIAL MAP
C2	LOCATION MAP
C3	GENERAL NOTES AND LEGEND
C4	EXISTING CONDITIONS PLAN
C5	SITE PLAN
C6	GRADING PLAN
C7	PLAN & PROFILE
C8	SOIL EROSION AND SEDIMENT CONTROL PLAN
C9.1	MISCELLANEOUS DETAILS-1
C9.2	MISCELLANEOUS DETAILS-2
C9.3	MISCELLANEOUS DETAILS-3
C9.4	MISCELLANEOUS DETAILS-4
C9.5	MISCELLANEOUS DETAILS-5
L1.0	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 24 2021 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Nancy L. Freeman

REVISIONS:

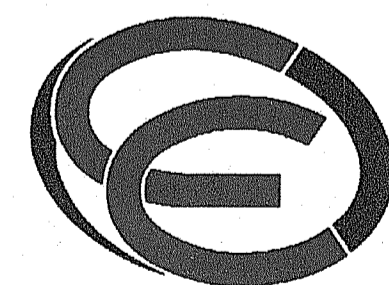
No.:	DATE:	DESCRIPTION:
1	7/8/21	RIDEM COMMENTS
2	8/6/21	RIDEM FWV COMMENTS



OWNER AND APPLICANT:

GDUBON PROPERTIES, LLC
C/O: CHRISTOPHER REYNOLDS, MEMBER
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

CIVIL ENGINEERS AND LAND SURVEYORS:



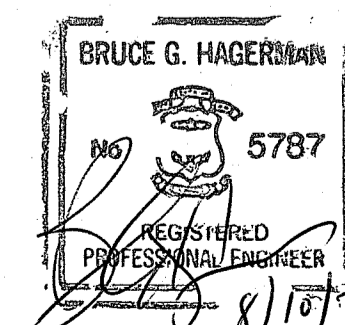
- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

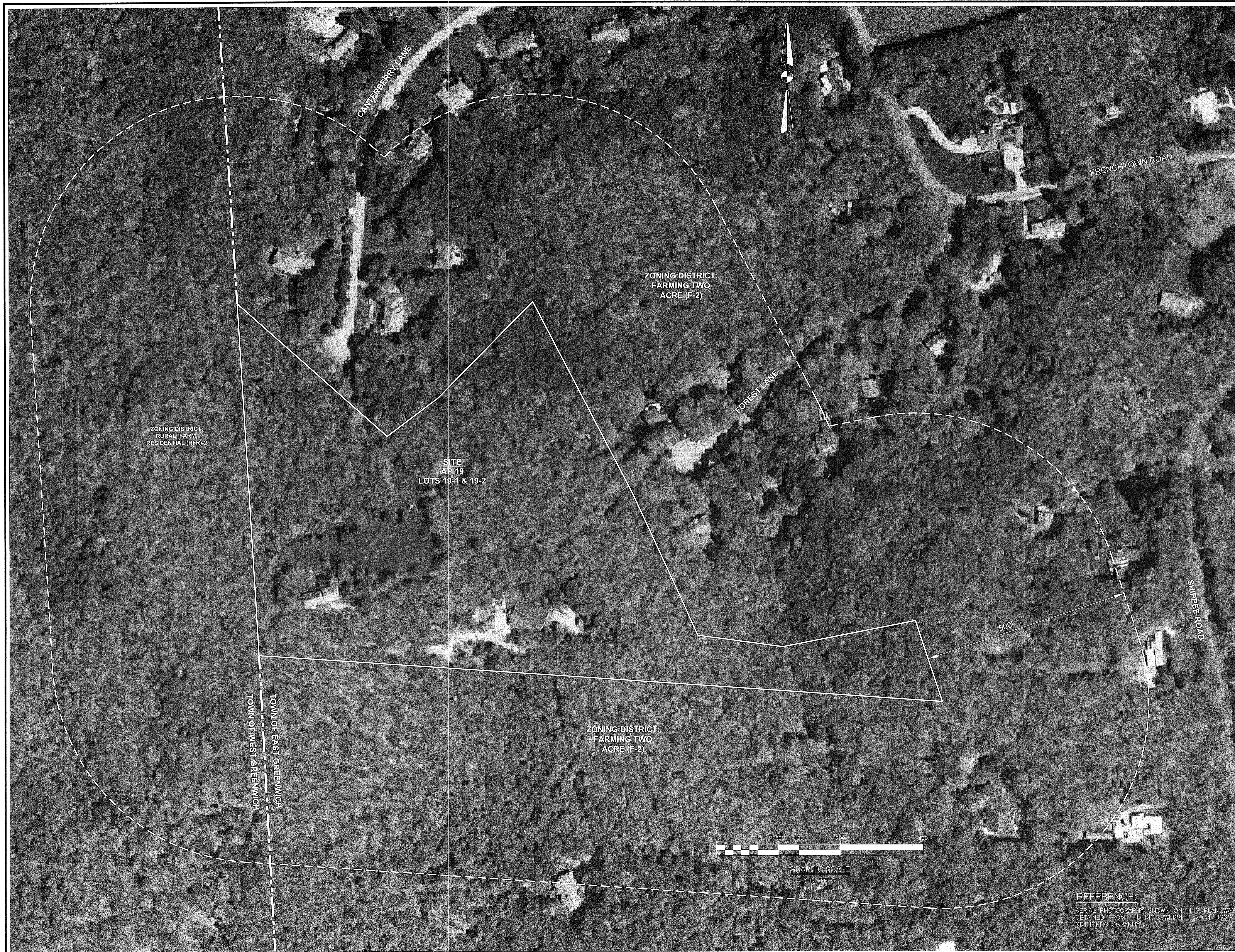
CROSSMAN ENGINEERING

Rhode Island 151 Centerville Road Warwick, RI 02886 Phone: (401) 738-5660	Massachusetts 103 Commonwealth Avenue North Attleboro, MA 02763 Phone: (508) 695-1700
--	--

Email: cei@crossmaneng.com

MAY 2021
SHEET 1 of 16



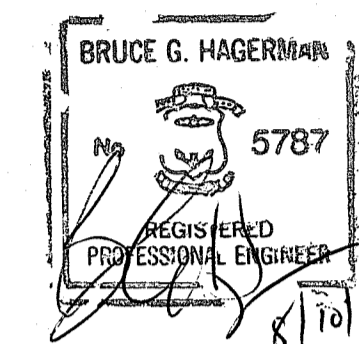


- Civil
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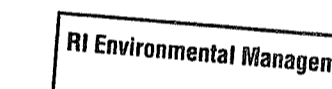
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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Nancy L. Freeman

PROJECT TITLE:

**FOREST LANE
 SUBDIVISION**

35 & 55 FOREST LANE
 MAP 19/ PLAT 19/ LOTS 1 AND 2
 EAST GREENWICH, R.I.



PREPARED FOR: AUG 11 2021
 Office of Water Resources

GDUBON PROPERTIES, LLC
 197 PINECREST DRIVE
 NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:

AERIAL PLAN

DATE: MAY 2021 SCALE: 1" = 100'

DWG. NAME: 2327-C01-AERIAL PLAN.dwg

REVISIONS

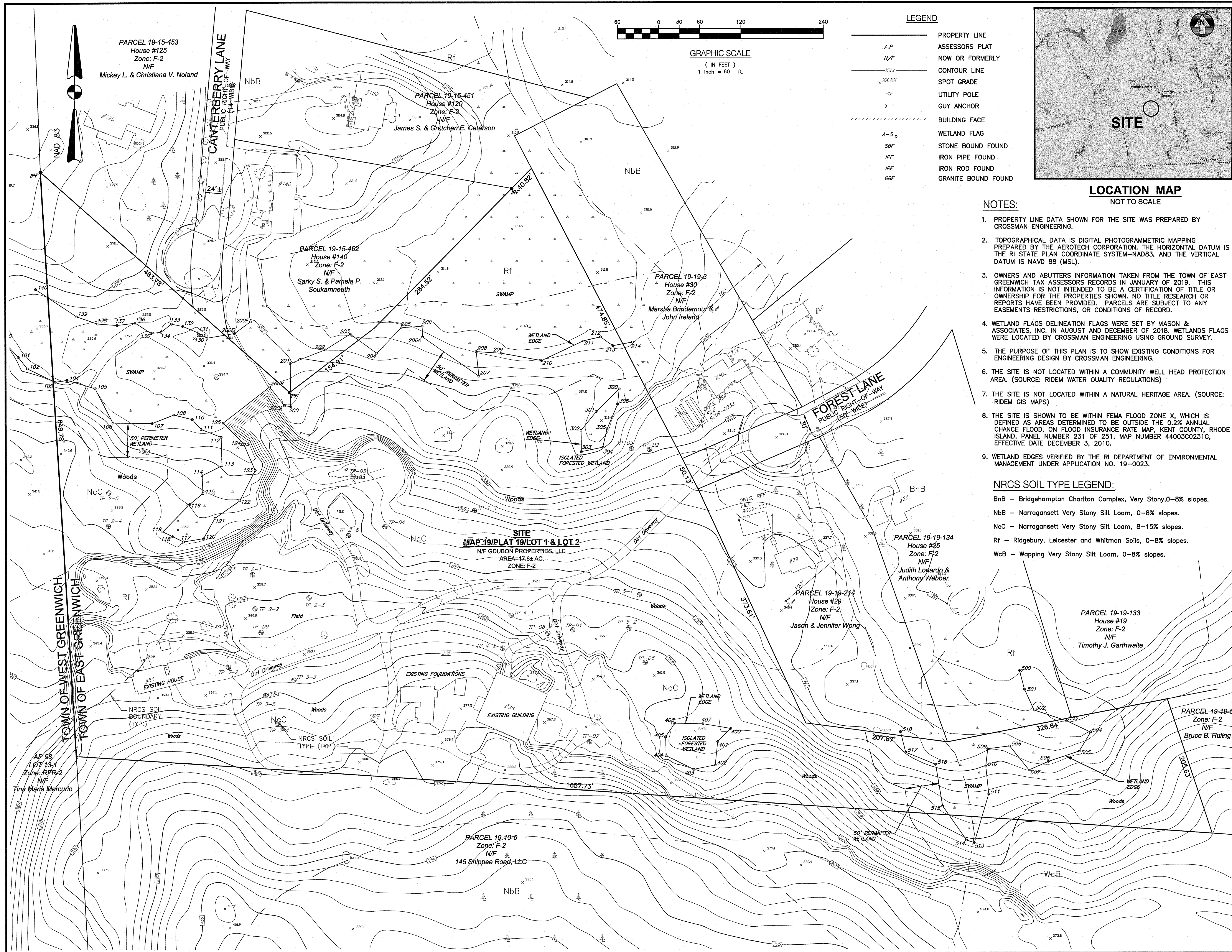
NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWV COMMENTS	8/6/21

DRAWING NUMBER

C1

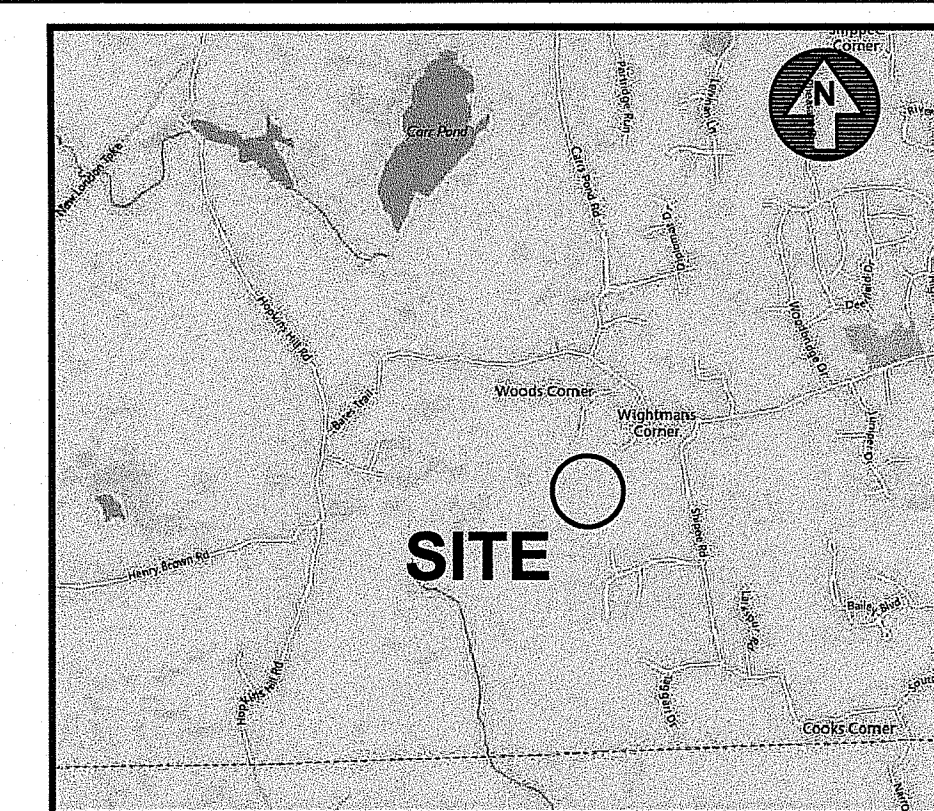
SHEET: 2 OF 16

REFERENCE:
 AERIAL PHOTOGRAPHY SHOWN ON THIS PLAN WAS OBTAINED FROM THE RICIS WEBSITE, 2014 USGS ORTHOPHOGRAPHY.



LEGEND

- PROPERTY LINE
- A.P. ASSESSORS PLAT
- N/F NOW OR FORMERLY
- - - - - CONTOUR LINE
- x XX.XX SPOT GRADE
- UTILITY POLE
- GUY ANCHOR
- ▬ BUILDING FACE
- A-5 ○ WETLAND FLAG
- SBF STONE BOUND FOUND
- IPF IRON PIPE FOUND
- IRF IRON ROD FOUND
- GBF GRANITE BOUND FOUND



LOCATION MAP
NOT TO SCALE

NOTES:

1. PROPERTY LINE DATA SHOWN FOR THE SITE WAS PREPARED BY CROSSMAN ENGINEERING.
2. TOPOGRAPHICAL DATA IS DIGITAL PHOTOGRAMMETRIC MAPPING PREPARED BY THE AEROTECH CORPORATION. THE HORIZONTAL DATUM IS THE RI STATE PLAN COORDINATE SYSTEM-NAD83, AND THE VERTICAL DATUM IS NAVD 88 (MSL).
3. OWNERS AND ABUTTERS INFORMATION TAKEN FROM THE TOWN OF EAST GREENWICH TAX ASSESSORS RECORDS IN JANUARY OF 2019. THIS INFORMATION IS NOT INTENDED TO BE A CERTIFICATION OF TITLE OR OWNERSHIP FOR THE PROPERTIES SHOWN. NO TITLE RESEARCH OR REPORTS HAVE BEEN PROVIDED. PARCELS ARE SUBJECT TO ANY EASEMENTS RESTRICTIONS, OR CONDITIONS OF RECORD.
4. WETLAND FLAGS DELINEATION FLAGS WERE SET BY MASON & ASSOCIATES, INC. IN AUGUST AND DECEMBER OF 2018. WETLANDS FLAGS WERE LOCATED BY CROSSMAN ENGINEERING USING GROUND SURVEY.
5. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING CONDITIONS FOR ENGINEERING DESIGN BY CROSSMAN ENGINEERING.
6. THE SITE IS NOT LOCATED WITHIN A COMMUNITY WELL HEAD PROTECTION AREA. (SOURCE: RIDEM WATER QUALITY REGULATIONS)
7. THE SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AREA. (SOURCE: RIDEM GIS MAPS)
8. THE SITE IS SHOWN TO BE WITHIN FEMA FLOOD ZONE X, WHICH IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD, ON FLOOD INSURANCE RATE MAP, KENT COUNTY, RHODE ISLAND, PANEL NUMBER 231 OF 251, MAP NUMBER 44003C0231G, EFFECTIVE DATE DECEMBER 3, 2010.
9. WETLAND EDGES VERIFIED BY THE RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT UNDER APPLICATION NO. 19-0023.

NRCS SOIL TYPE LEGEND:

- BnB - Bridgehampton Charlton Complex, Very Stony, 0-8% slopes.
- NbB - Narragansett Very Stony Silt Loam, 0-8% slopes.
- NcC - Narragansett Very Stony Silt Loam, 8-15% slopes.
- Rf - Ridgebury, Leicester and Whitman Soils, 0-8% slopes.
- WcB - Wapping Very Stony Silt Loam, 0-8% slopes.

CROSSMAN ENGINEERING
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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Nancy L. Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 OF 55 FOREST LANE
MAP 19 PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.
Office of Water Resources

PREPARED FOR:
GDUBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
EXISTING CONDITIONS PLAN

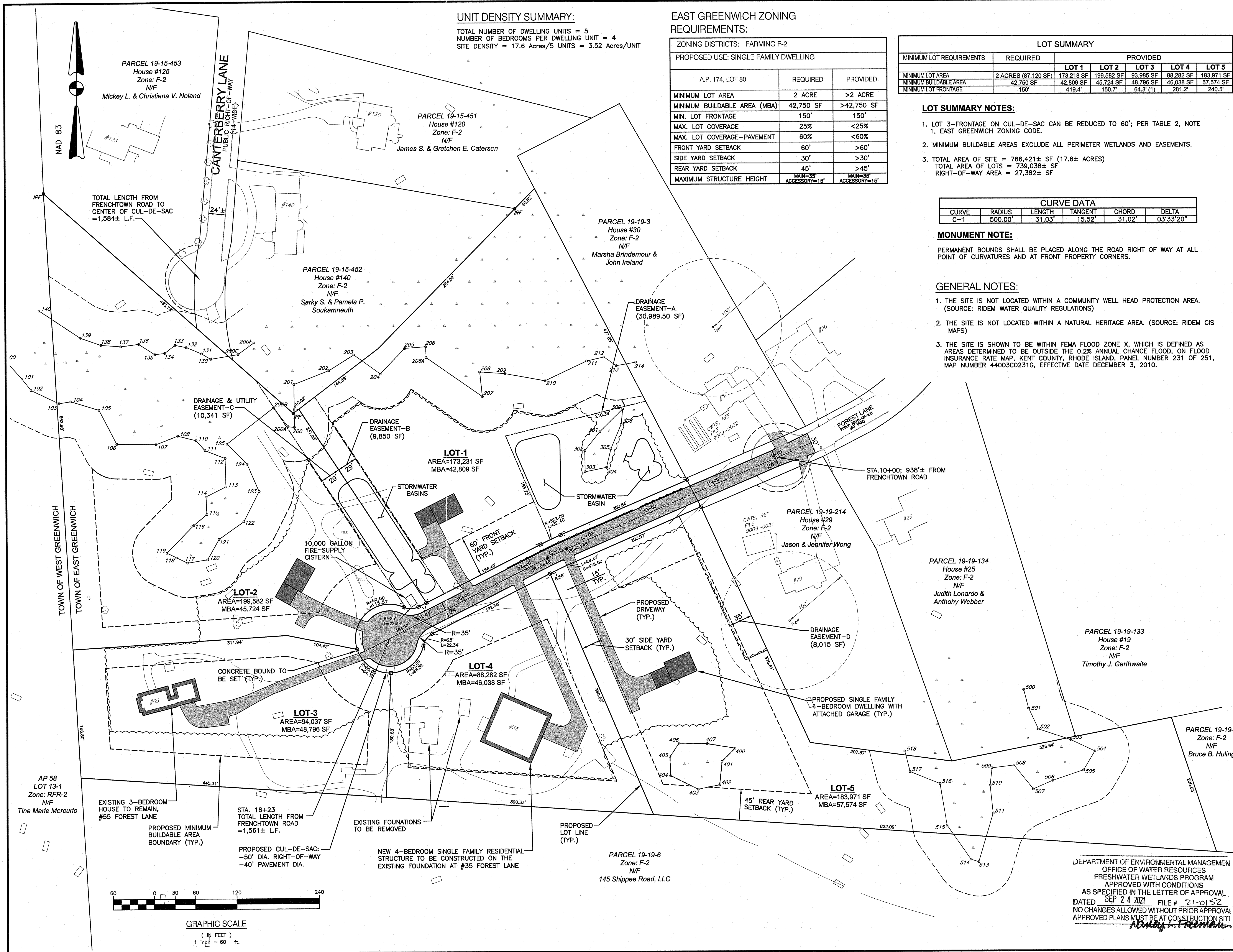
DATE: MAY 2021 SCALE: 1" = 60'

DWG. NAME: 2327-004-EXCOND.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21

DRAWING NUMBER
C4
SHEET: 5 OF 16



Crossman Engineering
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BRUCE G. HAGERMAN
 5787
 REGISTERED PROFESSIONAL ENGINEER
 8/19/21

PROJECT TITLE:
FOREST LANE SUBDIVISION
 35 & 55 FOREST LANE
 MAP 19/PLAT 19, LOT 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:
 RI Environmental Management
 AUG 11 2021
 Office of Water Resources

GDUBON PROPERTIES, LLC
 197 PINECREST DRIVE
 NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
SITE PLAN

DATE: MAY 2021 SCALE: 1" = 60'

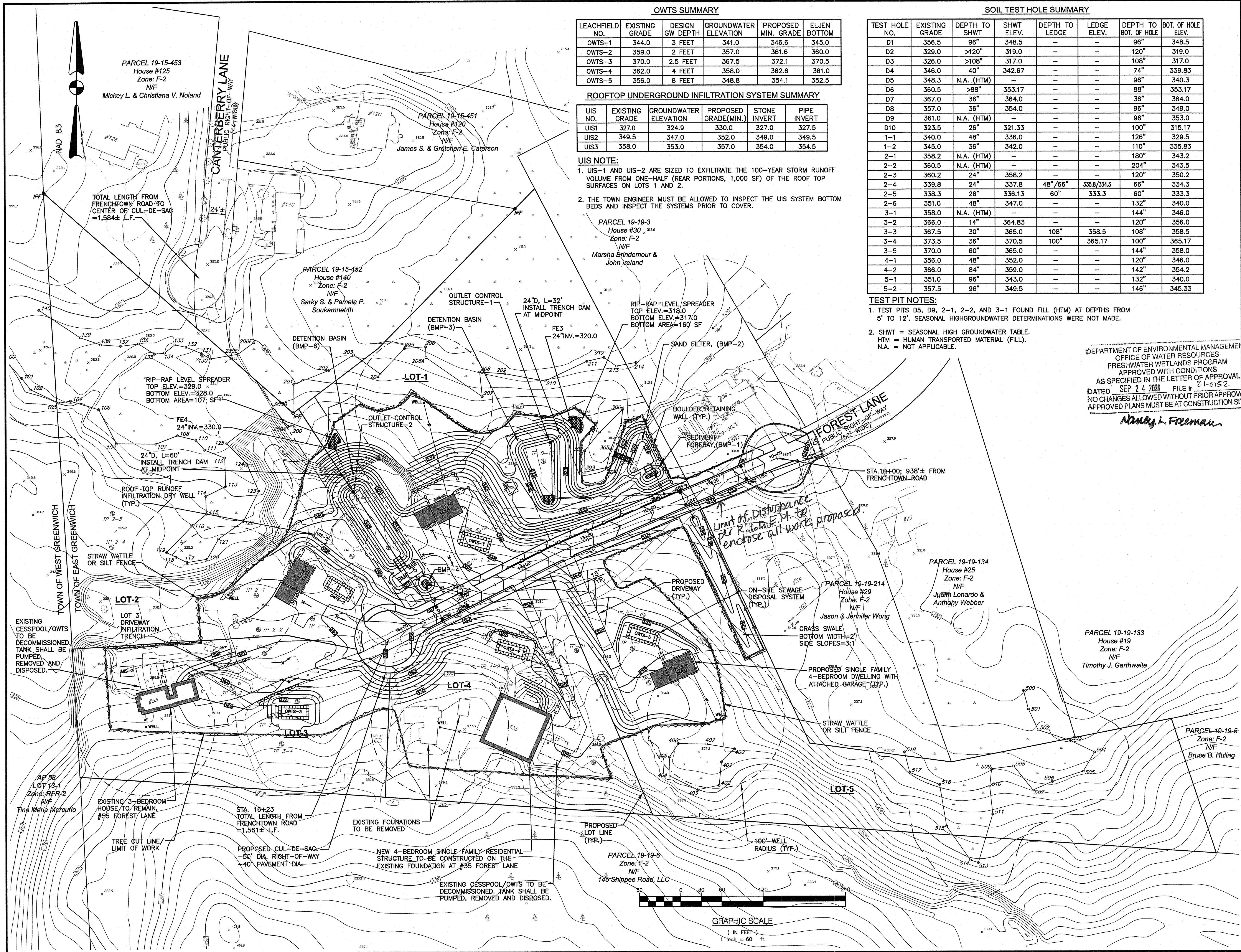
DWG. NAME:
 2327-C05-SITE PLAN.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21

DRAWING NUMBER
C5
 SHEET: 6 OF 16

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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OWTS SUMMARY

LEACHFIELD NO.	EXISTING GRADE	DESIGN GW DEPTH	GROUNDWATER ELEVATION	PROPOSED MIN. GRADE	ELJEN BOTTOM
OWTS-1	344.0	3 FEET	341.0	346.6	345.0
OWTS-2	359.0	2 FEET	357.0	361.6	360.0
OWTS-3	370.0	2.5 FEET	367.5	372.1	370.5
OWTS-4	362.0	4 FEET	358.0	362.6	361.0
OWTS-5	356.0	8 FEET	348.8	354.1	352.5

ROOFTOP UNDERGROUND INFILTRATION SYSTEM SUMMARY

UIS NO.	EXISTING GRADE	GROUNDWATER ELEVATION	PROPOSED GRADE(MIN.)	STONE INVERT	PIPE INVERT
UIS1	327.0	324.9	330.0	327.0	327.5
UIS2	349.5	347.0	352.0	349.0	349.5
UIS3	358.0	353.0	357.0	354.0	354.5

UIS NOTE:

- UIS-1 AND UIS-2 ARE SIZED TO EXFILTRATE THE 100-YEAR STORM RUNOFF VOLUME FROM ONE-HALF (REAR PORTIONS, 1,000 SF) OF THE ROOF TOP SURFACES ON LOTS 1 AND 2.
- THE TOWN ENGINEER MUST BE ALLOWED TO INSPECT THE UIS SYSTEM BOTTOM BEDS AND INSPECT THE SYSTEMS PRIOR TO COVER.

SOIL TEST HOLE SUMMARY

TEST HOLE NO.	EXISTING GRADE	DEPTH TO SHWT	SHWT ELEV.	DEPTH TO LEDGE	LEDGE ELEV.	DEPTH TO BOT. OF HOLE	BOT. OF HOLE ELEV.
D1	356.5	96"	348.5	-	-	96"	348.5
D2	329.0	>120"	319.0	-	-	120"	319.0
D3	326.0	>108"	317.0	-	-	108"	317.0
D4	346.0	40"	342.67	-	-	74"	339.83
D5	348.3	N.A. (HTM)	-	-	-	96"	340.3
D6	360.5	>88"	353.17	-	-	88"	353.17
D7	367.0	36"	364.0	-	-	36"	364.0
D8	357.0	36"	354.0	-	-	96"	349.0
D9	361.0	N.A. (HTM)	-	-	-	96"	353.0
D10	323.5	26"	321.33	-	-	100"	315.17
1-1	340.0	48"	336.0	-	-	126"	329.5
1-2	345.0	36"	342.0	-	-	110"	335.83
2-1	358.2	N.A. (HTM)	-	-	-	180"	343.2
2-2	360.5	N.A. (HTM)	-	-	-	204"	343.5
2-3	360.2	24"	358.2	-	-	120"	350.2
2-4	339.8	24"	337.8	48"/66"	335.8/334.3	66"	334.3
2-5	338.3	26"	336.13	60"	333.3	60"	333.3
2-6	351.0	48"	347.0	-	-	132"	340.0
3-1	358.0	N.A. (HTM)	-	-	-	144"	346.0
3-2	366.0	14"	364.83	-	-	120"	356.0
3-3	367.5	30"	365.0	108"	358.5	108"	358.5
3-4	373.5	36"	370.5	100"	365.17	100"	365.17
3-5	370.0	60"	365.0	-	-	144"	358.0
4-1	356.0	48"	352.0	-	-	120"	346.0
4-2	366.0	84"	359.0	-	-	142"	354.2
5-1	351.0	96"	343.0	-	-	132"	340.0
5-2	357.5	96"	349.5	-	-	146"	345.33

TEST PIT NOTES:

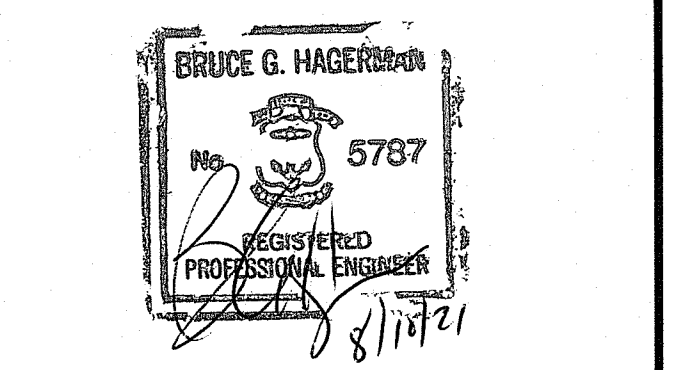
- TEST PITS D5, D9, 2-1, 2-2, AND 3-1 FOUND FILL (HTM) AT DEPTHS FROM 5' TO 12'. SEASONAL HIGHGROUNDWATER DETERMINATIONS WERE NOT MADE.
- SHWT = SEASONAL HIGH GROUNDWATER TABLE. HTM = HUMAN TRANSPORTED MATERIAL (FILL). N.A. = NOT APPLICABLE.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 24 2021 FILE # 21-6152
Nancy L. Freeman



CROSSMAN ENGINEERING
Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone: (401) 738-5660
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 695-1700
Email: cal@crossmaneng.com

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PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19/PLAT 19, LOT 1 AND 2
EAST GREENWICH, R.I.
RI Environmental Management
AUG 11 2021
Office of Water Resources

PREPARED FOR:
GDUBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
GRADING PLAN

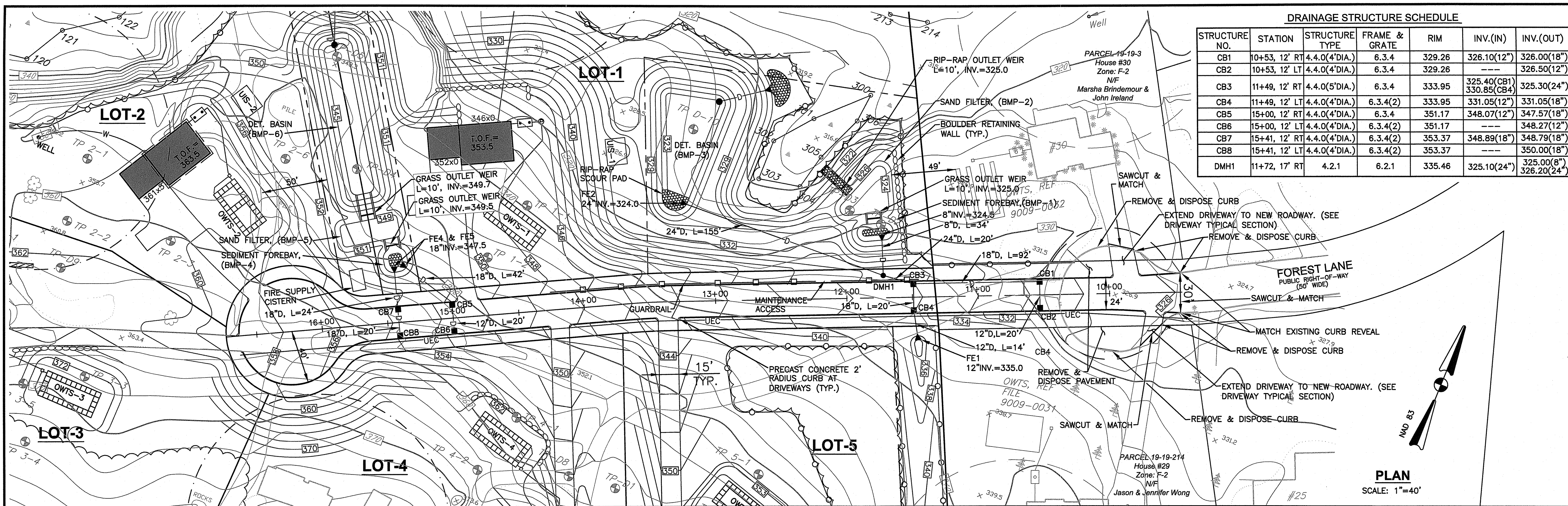
DATE: MAY 2021 SCALE: 1" = 60'

DWG. NAME: 2327-C06-GRADING PLAN.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWW COMMENTS	8/6/21

DRAWING NUMBER
C6
SHEET: 7 OF 16

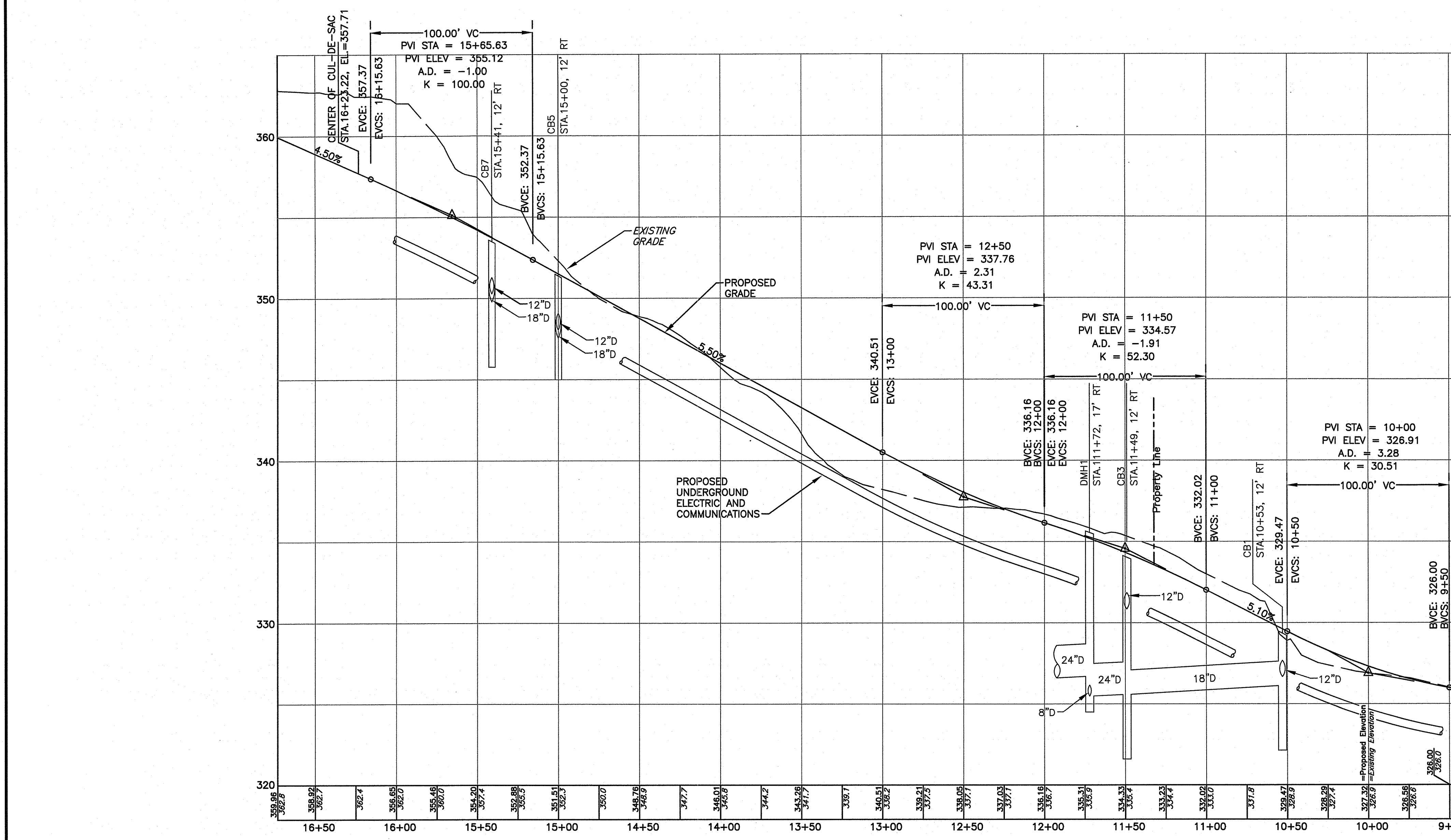
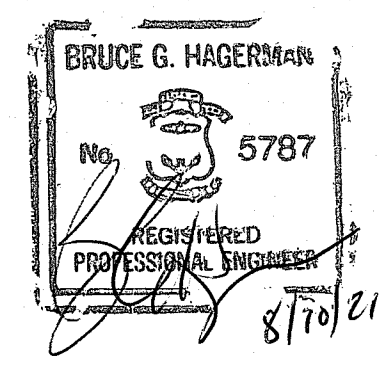


STRUCTURE NO.	STATION	STRUCTURE TYPE	FRAME & GRATE	RIM	INV.(IN)	INV.(OUT)
CB1	10+53, 12' RT	4.4.0(4'DIA.)	6.3.4	329.26	326.10(12")	326.00(18")
CB2	10+53, 12' LT	4.4.0(4'DIA.)	6.3.4	329.26	---	326.50(12")
CB3	11+49, 12' RT	4.4.0(5'DIA.)	6.3.4	333.95	325.40(CB1)	325.30(24")
CB4	11+49, 12' LT	4.4.0(4'DIA.)	6.3.4(2)	333.95	331.05(12")	331.05(18")
CB5	15+00, 12' RT	4.4.0(4'DIA.)	6.3.4	351.17	348.07(12")	347.57(18")
CB6	15+00, 12' LT	4.4.0(4'DIA.)	6.3.4(2)	351.17	---	348.27(12")
CB7	15+41, 12' RT	4.4.0(4'DIA.)	6.3.4(2)	353.37	348.89(18")	348.79(18")
CB8	15+41, 12' LT	4.4.0(4'DIA.)	6.3.4(2)	353.37	---	350.00(18")
DMH1	11+72, 17' RT	4.2.1	6.2.1	335.46	325.10(24")	325.00(8")

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- DRAINAGE NOTES**
- CONTRACTOR TO VERIFY THAT ALL STRUCTURES ARE COMPATIBLE WITH FRAME AND GRATE.
 - CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWINGS AND SPECIFICATIONS FOR ALL DRAINAGE RELATED ITEMS FOR REVIEW AND APPROVAL BY THE ENGINEER, PRIOR TO ORDERING. CONCRETE MANUFACTURER SHALL REVIEW RIM TO TOP OF PIPE ELEVATIONS AND PROVIDE SPECIFIC DETAILS.
 - ALL STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
 - ALL CATCH BASINS SHALL BE PRECAST CONCRETE WATER TIGHT STRUCTURES (NO WEEP HOLES) AND SHALL HAVE A 3' SUMP.
 - UNLESS OTHERWISE NOTED, ALL SOLID DRAINAGE PIPE SHALL BE ADS N-12 HDPE OR APPROVED EQUAL. PIPE BEDDING SHALL BE IN CRUSHED STONE OR GRAVEL BORROW COMPACTED TO 95% DRY DENSITY (MODIFIED PROCTOR METHOD). ADS PIPE SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' REQUIREMENTS. PIPES SHALL BE INSTALLED WITH CLAY TRENCH DAMS EVERY 50' (MINIMUM 1 PER PIPE).
 - ALL ROOF DRAINS SHALL BE INSTALLED AT A 1.0% MINIMUM SLOPE.
 - THE CONTRACTOR SHALL PROVIDE AS-BUILT PLANS THAT INCLUDE DRAINAGE SYSTEM (PIPE INVERTS, INFILTRATION BAIN LOCATION AND GRADES, UNDERGROUND INFILTRATION SYSTEM INVERTS AND LOCATION, AND OUTLET STRUCTURE INVERTS).
 - EACH PIPE RUN (BETWEEN STRUCTURES) SHALL HAVE A TRENCH CHECK DAM INSTALLED. USE 12" WIDE CLAY DAM OR GEOMEMBRANE ANTI-SEEP COLLAR.
 - RIP RAP SIZE NOT SPECIFICALLY IDENTIFIED SHALL BE R-5, UNLESS APPROVED OTHERWISE BY ENGINEER. COORDINATE AREAS WITH ENGINEER PRIOR TO PLACEMENT.
 - CATCH BASINS #2, 4, 6, 7, AND 8 SHALL HAVE DOUBLE GRATES.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 17 2021 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Andy L. Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19/PLAT 19, LOT 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
Environmental Management
AUG 11 2021
Office of Water Resources

GDUBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
PLAN & PROFILE

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME:
2327-C07-PLAN & PROFILE.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FW COMMENTS	8/6/21

DRAWING NUMBER:
C7
SHEET: 8 OF 16

PHASING SUMMARY:

PHASE 1 WILL INCLUDE INSTALLATION OF EROSION AND SEDIMENT CONTROLS, EARTHWORK, CONSTRUCTION OF THE ROADWAY, UTILITY SYSTEMS, DRAINAGE SYSTEM AND STORMWATER PONDS. AT THE COMPLETION OF PHASE 1 THE STORMWATER BASINS WILL BE OPERATIONAL AND THE BINDER COURSE OF PAVEMENT WILL BE INSTALLED ON THE ROADWAY.

PHASE 2 WILL INCLUDE THE NEW HOUSE CONSTRUCTION, REMOVAL OF EXISTING FOUNDATIONS, RENOVATION OF EXISTING STRUCTURES TO REMAIN, INSTALLATION OF NEW OWTS AND WELLS, DRIVEWAY CONSTRUCTION, DRYWELL INSTALLATION, LANDSCAPE PLANTINGS, FINAL SITE STABILIZATION AND INSTALLATION OF THE TOP LAYER OF PAVEMENT.

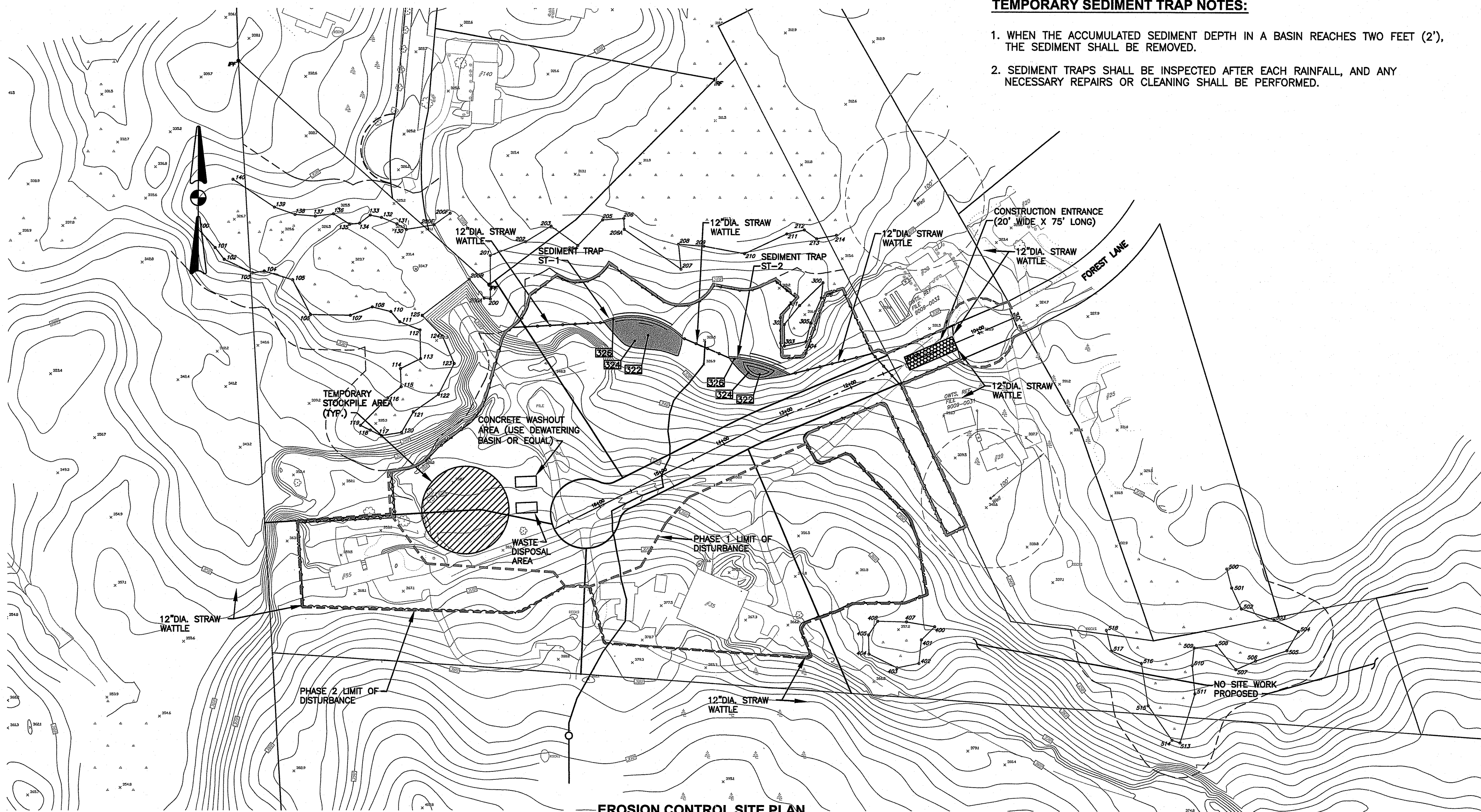
TEMPORARY SEDIMENT TRAP SUMMARY

TRAP	WATERSHED	MIN. REQUIRED VOL. (CF)	TOTAL VOLUME PROVIDED
ST-1	4.3± AC.	4.3 AC. x 134 CF/AC = 577 CF	2,715 CF
ST-2	4.0± AC.	4.00 AC. x 134 CF/AC = 536 CF	6,744 CF

TRAP	TOP OF BERM	BOTTOM OF BASIN	OUTLET ELEV.	WET VOLUME	DRY VOLUME	TOTAL VOLUME
ST-1	326	322	324	773 CF	1,942 CF	2,715 CF
ST-2	326	322	324	1,833 CF	4,911 CF	6,744 CF

TEMPORARY SEDIMENT TRAP NOTES:

1. WHEN THE ACCUMULATED SEDIMENT DEPTH IN A BASIN REACHES TWO FEET (2'), THE SEDIMENT SHALL BE REMOVED.
2. SEDIMENT TRAPS SHALL BE INSPECTED AFTER EACH RAINFALL, AND ANY NECESSARY REPAIRS OR CLEANING SHALL BE PERFORMED.



EROSION CONTROL SITE PLAN

SCALE: 1"=100'

NOTES:

1. CONTRACTOR SHALL INSTALL TEMPORARY MEASURES SUCH AS; FIBER MATTING, CRUSHED STONE, HAY OR STRAW IN AREAS WHERE SLOPES OR STABILIZATION HAS FAILED.
2. CONTRACTOR SHALL INSTALL SILT SOCK INLET PROTECTION OR APPROVED EQUAL UNDER THE EXISTING CATCH BASIN GRATE ON THE SITE IN ADJACENT STREETS DOWN GRADIENT OF THE SITE. REMOVE AFTER CONSTRUCTION.
3. STRAW WATTLES (OR SILT FENCE) SHALL BE INSTALLED AROUND THE PERIMETER OF THE AREA TO BE DISTURBED BY CONSTRUCTION AS NOTED ON THE PLANS. ADDITIONAL APPLICATIONS OF THESE CONTROLS MEASURES MAY BE REQUIRED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL INSPECT THE SITE AT A MINIMUM OF ONCE PER WEEK OR WITHIN 24 HOURS AFTER A STORM EVENT.
4. IF EROSION OR EROSION TENDENCIES ARE APPARENT ON THE SITE, THE CONTRACTOR IS RESPONSIBLE TO INSTALL ADDITIONAL CONSTRUCTION BMP'S SUCH AS SAND BAGS AS DIRECTED BY THE OWNER, LOCAL MUNICIPALITY, STATE AGENCIES OR ENGINEER DURING CONSTRUCTION.
5. IF SEDIMENT OR DEBRIS IS TRACKED ONTO EXISTING ROADWAYS ADJACENT TO THE CONSTRUCTION AREA, THE CONTRACTOR IS REQUIRED TO SWEEP THE PAVEMENT ON A DAILY BASIS. THE AREA SHALL BE INSPECTED DAILY.
6. THE CONTRACTOR IS RESPONSIBLE TO KEEP THE SITE CLEAN OF TRASH. RECOMMENDED DAILY PATROL OF THE CONSTRUCTION SHOULD BE CONDUCTED TO PICK-UP TRASH. THE OPERATOR SHALL REQUIRE THE CONTRACTOR TO HAVE PORTABLE SANITARY FACILITIES ON SITE. ROUTING CLEANING AND WASTE DISPOSAL OF THESE PORTABLE SANITARY FACILITIES IS REQUIRED.
7. THE CONTRACTOR MUST REFERENCE AND FOLLOW THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT'S STORM WATER POLLUTION PREVENTION PLAN (SWAPP). A COPY OF THE SWAPP SHOULD BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION.

PROJECT DATA:

- LIMIT OF UPLAND DISTURBANCE AREA = 7.8± ACRES
- PHASE 1 = 4.9± ACRES
- PHASE 2 = 2.9± ACRES
- THE SITE IS NOT LOCATED WITHIN OR ADJACENT TO A RIDEM NATURAL HERITAGE AREA. (SOURCE: RIDEM)
- THE SITE IS NOT LOCATED WITHIN A WELLHEAD PROTECTION AREA. (SOURCE: R.I.D.E.M.)

ADDITIONAL CONTROLS:

1. ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
2. THE CONTRACTOR IS REQUIRED TO NOTIFY LOCAL AUTHORITIES AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, OFFICE OF WASTE MANAGEMENT, OF ANY HAZARDOUS MATERIAL SPILL.
3. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE SITE IN AN ORDERLY AND CLEAN STATE. ALL CONSTRUCTION WASTE SHALL BE STORED IN APPROPRIATE CONTAINERS PRIOR TO REMOVAL AND CONTACT WITH PRECIPITATION SHALL BE KEPT TO A MINIMUM.
4. GENERAL MAINTENANCE PROCEDURES ARE OUTLINED IN THE ACCOMPANYING SITE PLANS. IN ADDITION, THE OPERATOR AND CONTRACTOR ARE REQUIRED TO INSPECT ALL EROSION CONTROLS ON THE SITE AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN EVENT, WHICH GENERATES 0.25 INCHES OF RAIN IN A TWENTY-FOUR (24) HOUR PERIOD AND/OR AFTER A SIGNIFICANT AMOUNT OF RUNOFF.
5. CONCRETE WASHOUT SHALL BE PERFORMED USING ONE OF THE METHODS LISTED IN SECTION 3 OF THE RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. THE WASHOUT AREAS ARE DESIGNATED ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
6. VEHICLE AND EQUIPMENT WASHING ON-SITE DURING CONSTRUCTION IS NOT ALLOWED.
7. A SPILL RESPONSE KIT SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.

SITE CONSTRUCTION SEQUENCE AND SCHEDULE:

1. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO ANY SOIL DISTURBANCE.
2. EXISTING PAVED DRIVEWAYS TO BE USED FOR ACCESS. THE CONTRACTOR SHALL SWEEP THE DRIVEWAYS AND ADJACENT ROADWAY AREAS AS NECESSARY TO REMOVE SEDIMENT DEPOSITS.
3. PRIOR TO CONSTRUCTION CLEARLY MARK AREAS TO BE LEFT UNDISTURBED.
4. CLEARING OF TREES AND VEGETATION AS SHOWN ON THE SITE PLANS.
5. TOP SOIL TO BE STRIPPED AND STOCKPILED.
6. ESTABLISH EROSION CONTROLS AROUND STOCKPILES (SILT SOCK). COVER STOCKPILES THAT WILL REMAIN FOR LONGER THAN ONE MONTH.
7. ROUGH GRADING.
8. DRAINAGE & UTILITY CONSTRUCTION.
9. CONSTRUCT NEW ROADWAY TO SUBGRADE.
10. CONSTRUCT NEW HOUSES.
11. INSTALL NEW CURBING AND SIDEWALKS.
12. INSTALL FINAL PAVING AND LANDSCAPING.
13. ESTIMATED DURATION OF SOIL EXPOSURE 12 TO 18 MONTHS.

RECEIVING WATER DATA:

- WATERSHED BODY NAME - FRENCHTOWN BROOK AND TRIBUTARIES WEST GREENWICH, EAST GREENWICH (R100702BR-01) (SOURCE: R.I.D.E.M.) TMDL: ENTEROCOCCUS
- GROUNDWATER CLASSIFICATION - GA

DUST CONTROL NOTES:

ON AN AS-NEEDED BASIS OR AS DIRECTED BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL UTILIZE ONE OF THE FOLLOWING METHODS (AS RECOMMENDED BY THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK") TO CONTROL DUST:

- A. THE EXPOSED SOIL SURFACE SHOULD BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST.

THE METHODS SHOULD BE REPEATED AS NEEDED, AND SPECIAL ATTENTION MUST BE GIVEN TO THE ACCESS DRIVES.

INSPECTION/MAINTENANCE NOTES:

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DRAINAGE SYSTEMS, WETLANDS AND WATERWAYS.
2. ALL DISTURBED AREAS WHICH BECOME SUBJECT TO EROSION TENDENCIES WHETHER THEY BE NEWLY FILLED OR EXCAVATED SHALL RECEIVE SLOPE PROTECTION - SUCH AS JUTE MESH OR RIP-RAP.
3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING PERIODS OF RAINFALL.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT / REPAIR / REPLACE DAILY DURING CONSTRUCTION, FOLLOWING RAINFALL AND WEEKLY DURING NON CONSTRUCTION PERIODS.
5. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER, MUNICIPAL REPRESENTATIVES, STATE AGENCIES OR ENGINEER.
6. THE "R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, REVISED 2014 (LATEST REVISION), MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL AND FOR THE ENTIRE PROJECT DURATION, INCLUDING TEMPORARY SHUT-DOWN PERIODS, MUST MONITOR AND REPAIR, AS NEEDED, ALL SLOPES TO ENSURE THE SITE IS STABLE.

GENERAL PROJECT WIDE NOTES:

1. STRAW WATTLES (SILT FENCE) AND SILT SACK IN CATCH BASINS SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, MAINTAINED ON A REGULAR BASIS, AND SHALL BE PLACED TO PREVENT SEDIMENTATION ONTO ADJACENT PROPERTY, ROADWAYS, WETLANDS AND WATERWAYS.
2. THE CONTRACTOR MUST REPLACE AND/OR RESEED ANY VEGETATION THAT DOES NOT DEVELOP/SURVIVE WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. ALL STRAW WATTLES (SILT FENCE) OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED AND POTENTIAL SEDIMENTATION SOURCES ARE REMOVED.
4. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE; THE AREA BEYOND THE DRIPLINE SHALL BE FENCED OR ROPED OFF TO PROTECT TREES FROM CONSTRUCTION EQUIPMENT.
5. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEED, OR OTHERWISE RESTORED AT THE CONTRACTOR'S EXPENSE.
6. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED FILTER SOCKS (SILT SOCK) OR COVERED.
7. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING, COVERED WITH TARPS, OR APPROVED EQUAL.
8. SILT FENCE OR COMPOST FILLED SILT SOCK MAY BE USED IN LIEU OF THE STRAW WATTLES.

EROSION CONTROL AND SOIL STABILIZATION PROGRAM:

1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING THE DRAINAGE SYSTEM, EXISTING RACEWAY, ADJACENT PROPERTY, AND ROADWAYS.
2. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, RIPRAP OR FIBER MULCH PROTECTIVE COVERS, SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE OWNER.
3. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS/ACRE.
4. STOCKPILES SHALL HAVE NO SLOPE STEEPER THAN 2:1 AND SHALL BE SURROUNDED BY STAKED SILT SOCKS OR COVERED.
5. STOCKPILES EXPOSED FOR EXCESSIVE PERIODS SHALL RECEIVE TEMPORARY TREATMENT CONSISTING OF HAY, STRAW, FIBER MATTING OR COVERED WITH TARPS.
6. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE AS NEEDED.
7. ADDITIONAL EROSION CONTROLS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER, OWNER, MUNICIPAL REPRESENTATIVES OR STATE AGENCIES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DUST CONTROL AT NO ADDITIONAL COST TO THE OWNER.
9. THE CATCH BASINS ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED USING SILT SOCKS OR SILT SOCK INLET PROTECTION, AS NOTED.
10. ALL PROPOSED CATCH BASINS SHALL BE PROTECTED BY SILT SOCKS OR SILT SACKS.
11. COMPOST FILLED SILT SOCK MAY BE INSTALLED ON THE EXISTING PAVEMENT/IMPERVIOUS AREAS WITHOUT STAKES. CONTRACTOR SHALL INSPECT DAILY, IF SOIL EROSION OR SEDIMENT IS OBSERVED IN THESE AREAS, THE CONTRACTOR SHALL RELOCATE OR INSTALL ADDITIONAL SILT SOCK IN LOCATIONS THAT CAN BE STAKED. THIS WORK IS INCLUDED IN THE PROJECT SCOPE.
12. POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS MUST NOT BE USED ON THIS PROJECT FOR DUST, SEDIMENTATION AND EROSION CONTROL. WATER WILL BE USED FOR DUST CONTROL AND EROSION WILL BE CONTROLLED USING THE PROPOSED EROSION CONTROLS, AND TEMPORARY STABILIZATION TECHNIQUES.



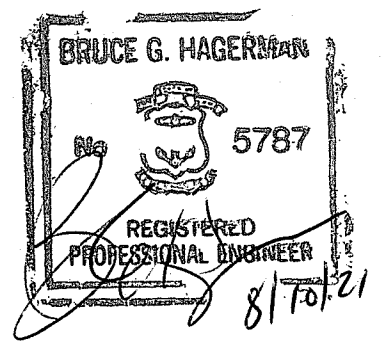
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Nancy L. Freeman

PROJECT TITLE:

FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

Prepared For:
Office of Water Resources
AUG 11 2021

GDOBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:

SOIL EROSION and SEDIMENT CONTROL PLAN

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME: 2327-C08-SOIL.dwg

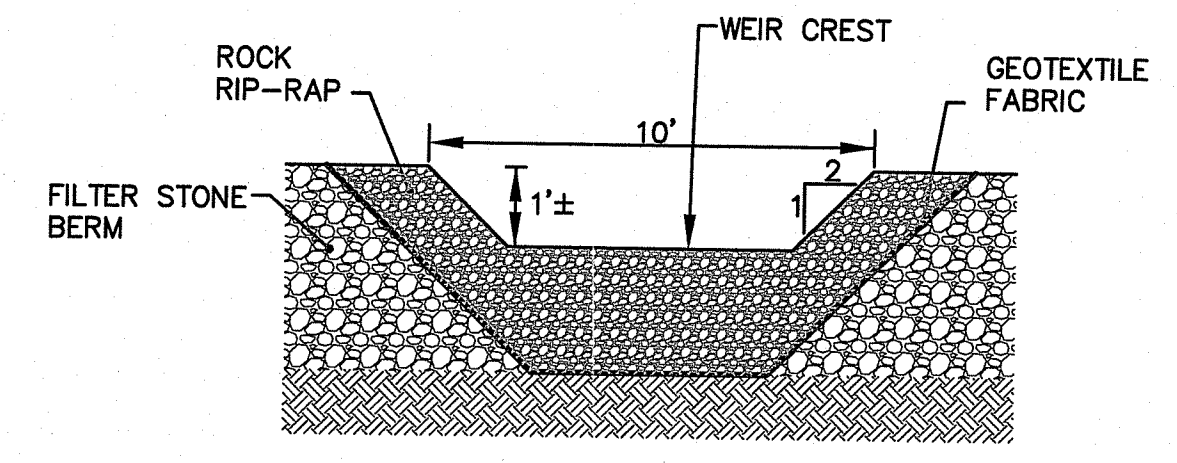
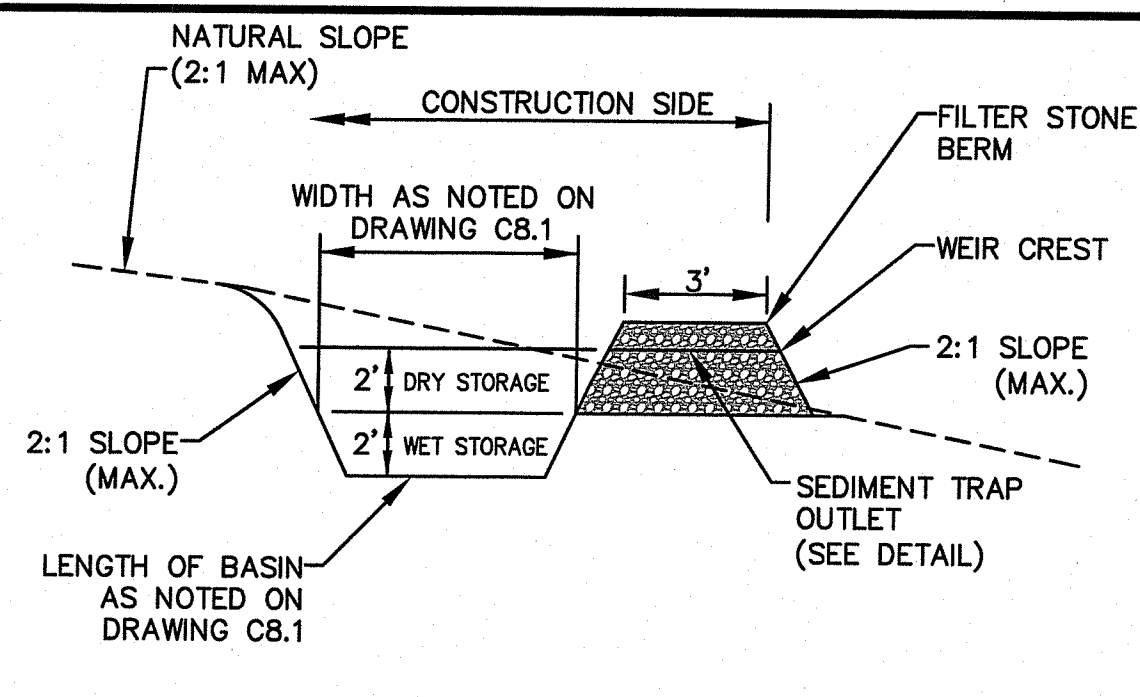
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWV COMMENTS	8/6/21

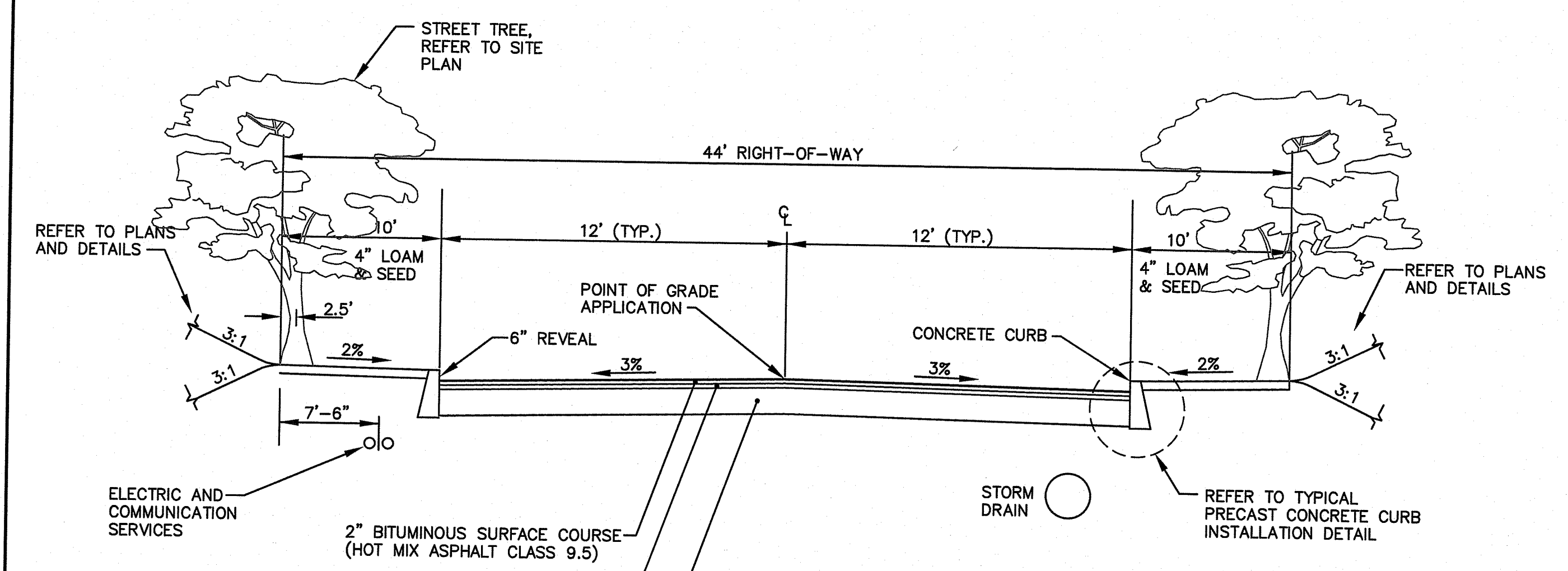
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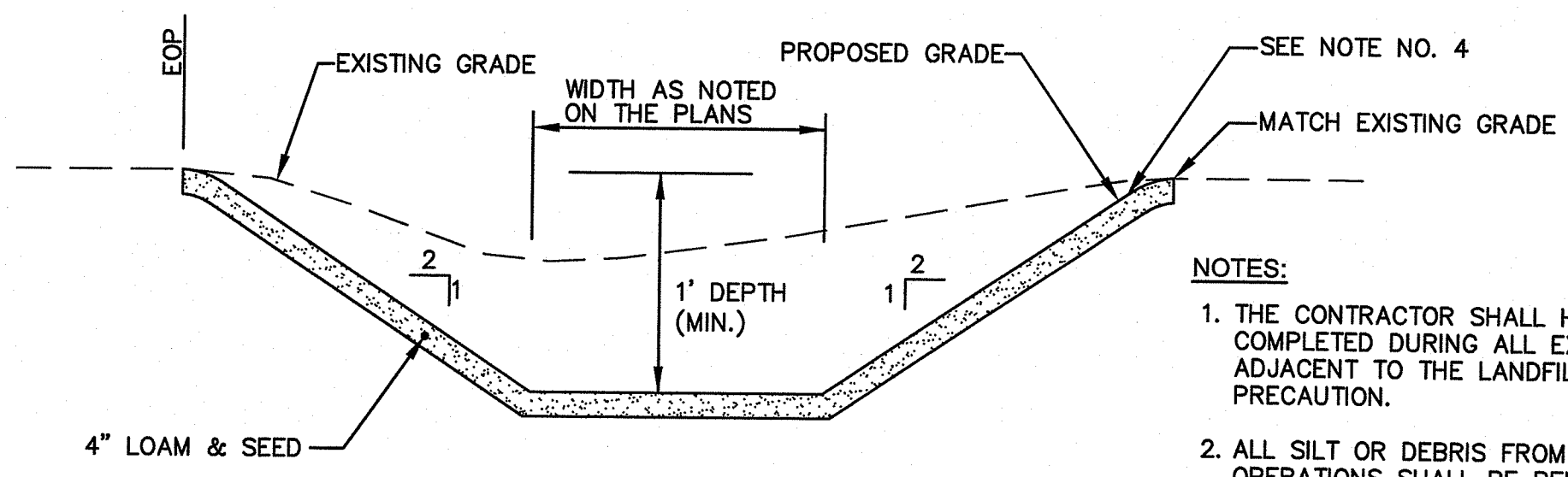
SHEET: 9 OF 16



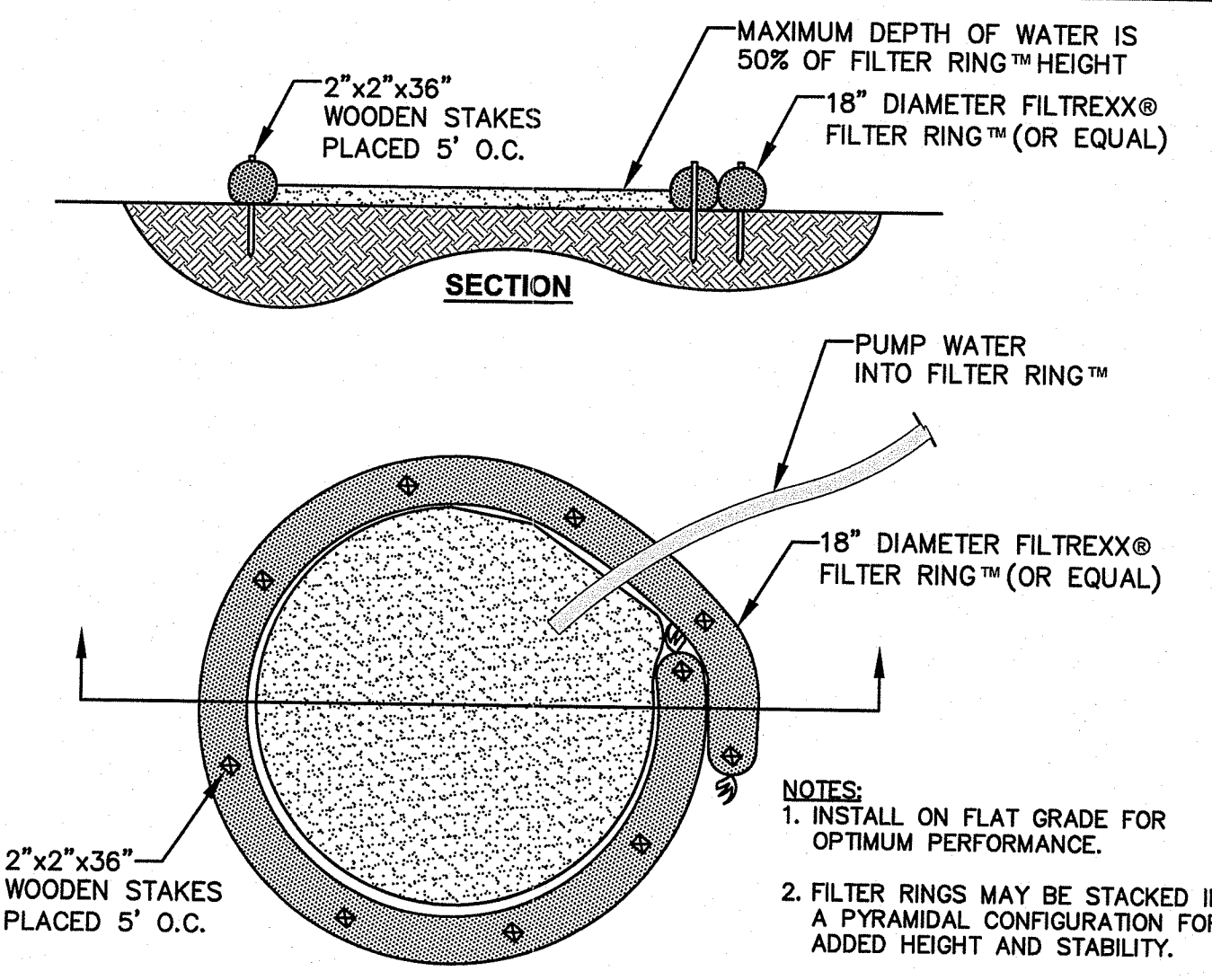
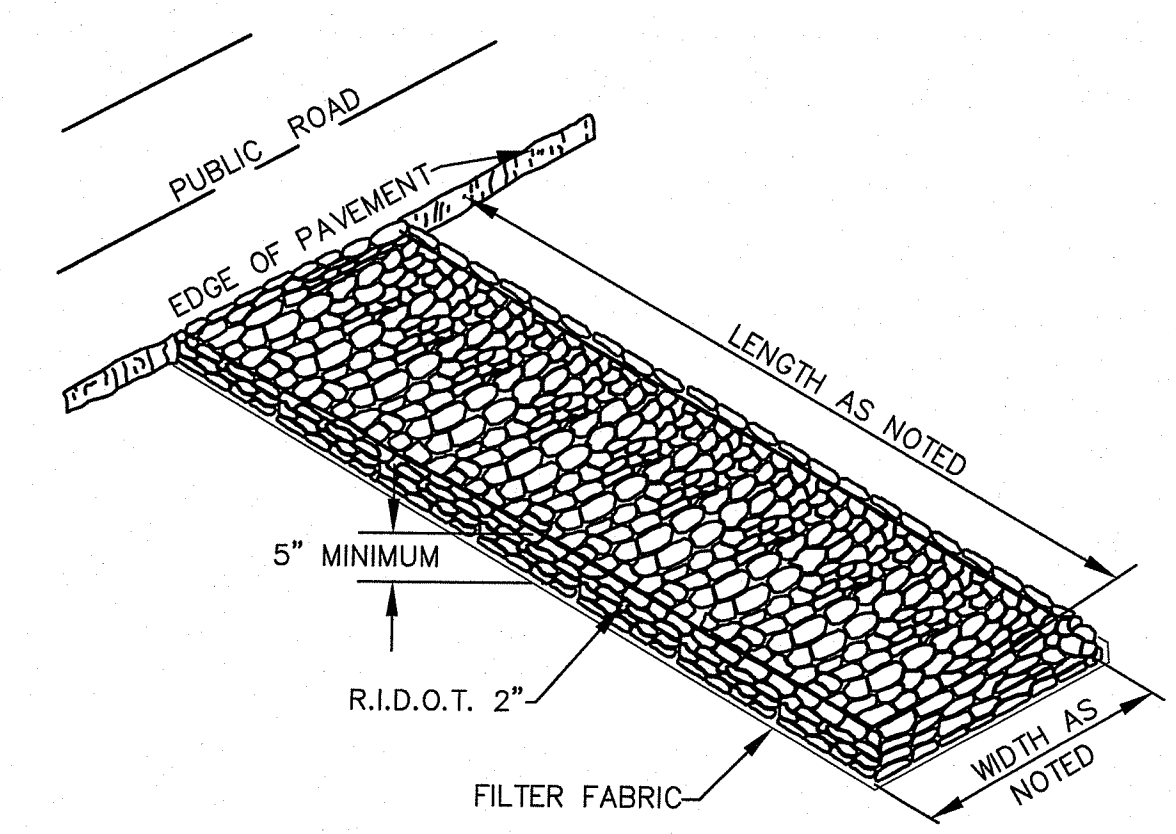
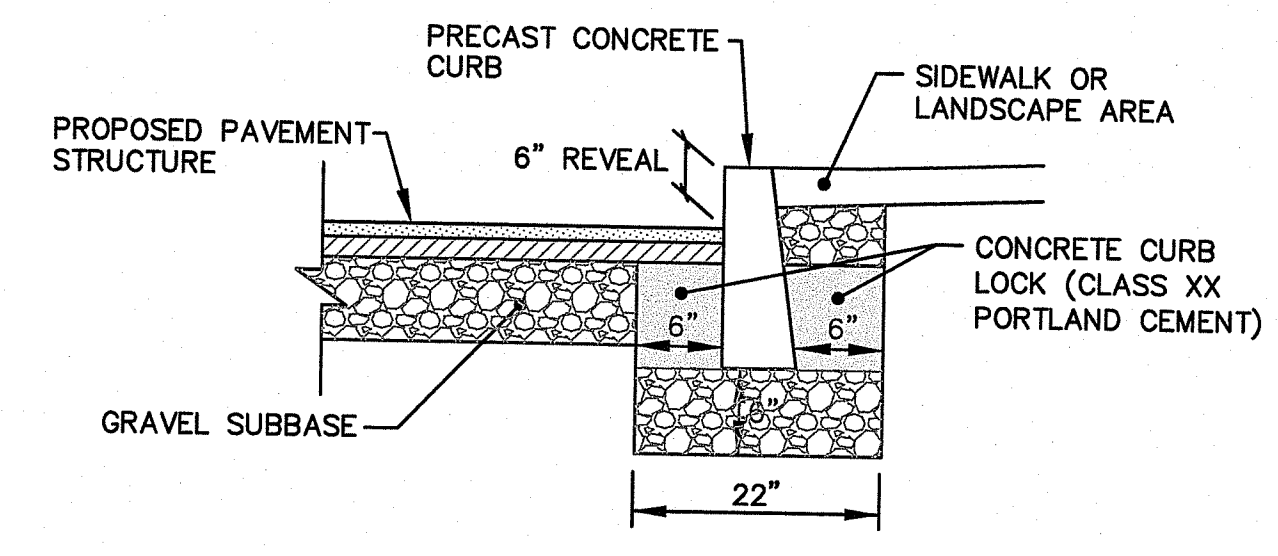
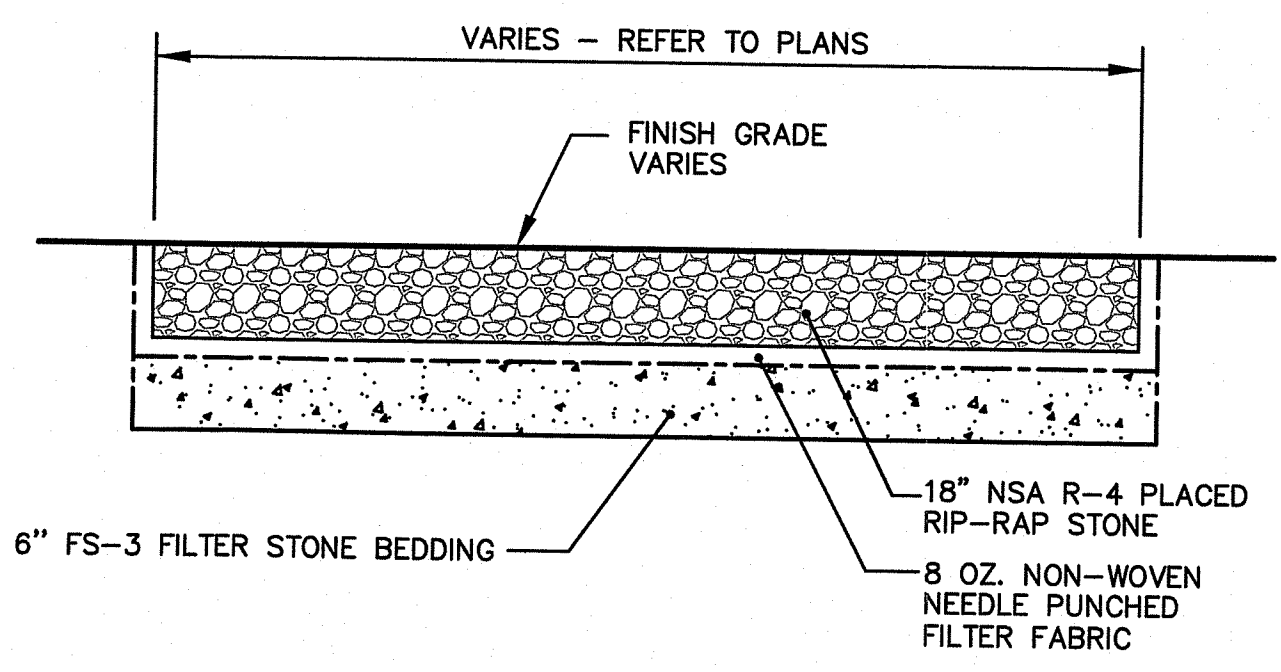
- NOTES:**
1. FILTER STONE SHALL MEET THE REQUIREMENTS OF R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.09 TABLE 1, COLUMN V FILTER STONE.
 2. THE TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO UNDISTURBED, STABILIZED GROUND.
 3. CONTRACTOR SHALL INSTALL 1 OUTLET PER 100' LENGTH OF TEMPORARY SEDIMENT TRAP (1 OUTLET MIN. PER TEMPORARY SEDIMENT TRAP).
 4. THE MODIFIED ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF THE R.I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.0.3.2.
 5. CONTRACTOR MUST REFER TO THE INSTALLATION, INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS PROVIDED IN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, AS AMENDED.



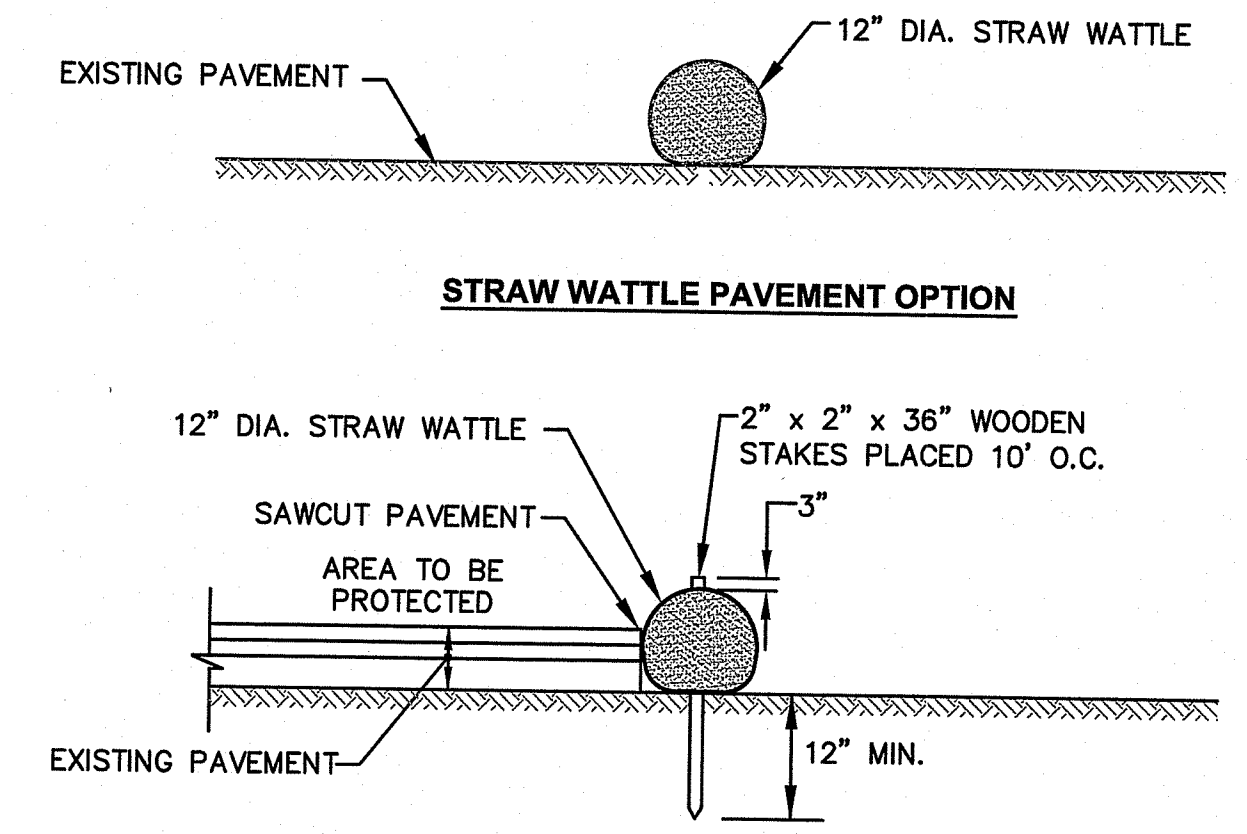
- NOTES:**
1. APPLY AN ASPHALT EMULSION TACK COAT IN BETWEEN PAVEMENT COURSES.
 2. ALL BITUMINOUS PAVEMENT MIXES SHALL BE FROM R.I.D.O.T. APPROVED LIST.
 3. ALL BITUMINOUS PAVEMENT MATERIALS SHALL BE OBTAINED FROM A SOURCE APPROVED BY R.I.D.O.T.



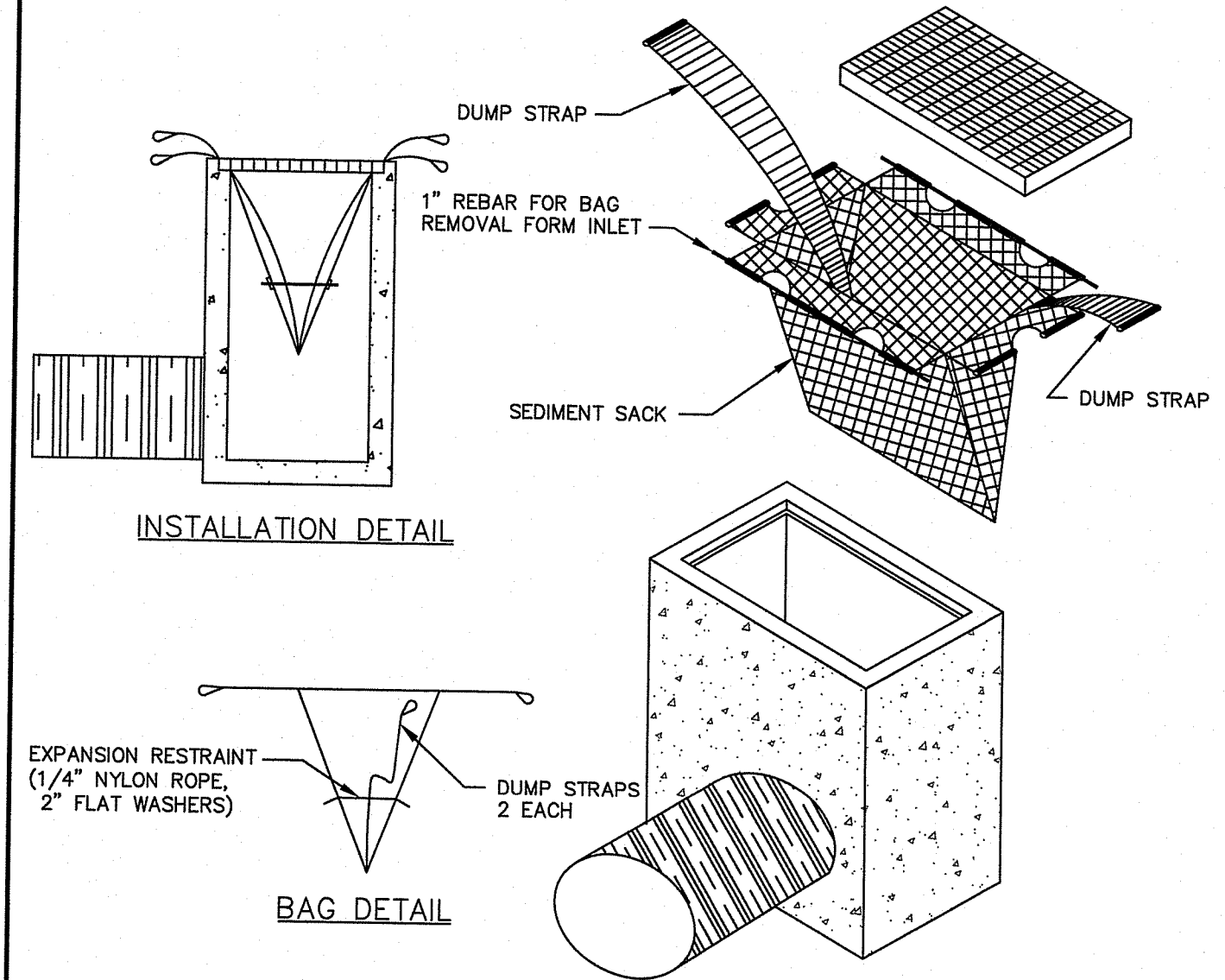
- NOTES:**
1. THE CONTRACTOR SHALL HAVE METHANE MONITORING COMPLETED DURING ALL EXCAVATING ACTIVITIES ON OR ADJACENT TO THE LANDFILL AS A SAFETY PRECAUTION.
 2. ALL SILT OR DEBRIS FROM THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AND DISPOSED FROM THE EXISTING SWALE OFF-SITE AT THE CONTRACTOR'S EXPENSE.
 3. CONTRACTOR SHALL HAND ROLL LOAM MATERIAL AFTER INSTALLATION AND PRIOR TO SEEDING.
 4. INSTALL EROSION CONTROL FABRIC OVER ALL AREAS OF THE NEWLY SEEDED GRASS SWALE.



- NOTES:**
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 2. FILTER RINGS MAY BE STACKED IN A PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT AND STABILITY.
 3. FILTER RINGS MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
 4. THIS TYPICAL INSTALLATION SHALL BE USED FOR DEWATERING OPERATIONS.
 5. DEWATERING FILTER BAGS MAY BE USED IN LIEU OF THE FILTER RING.



- NOTE:**
1. SILT FENCE MAY BE USED IN LIEU OF STRAW WATTLE.
 2. CONTRACTOR IS RESPONSIBLE TO BECOME FAMILIAR WITH THE STRAW WATTLE PRODUCTS AND COORDINATE INSTALLATION SCHEDULES AND METHODS WITH THE ENGINEER PRIOR TO PLACEMENT.
 3. CONTRACTOR SHALL SUBMIT STRAW WATTLE PRODUCT TO ENGINEER FOR APPROVAL.
 4. STRAW MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY ENGINEER.



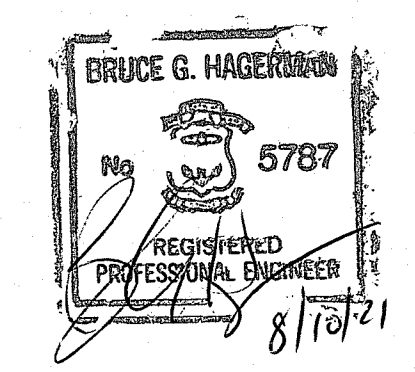
- NOTES:**
1. INSTALL SILT SACK AT CATCH BASINS IN VICINITY OF CONSTRUCTION AS SHOWN ON THE PLANS.
 2. CONTRACTOR SHALL SUBMIT SILT SACK PRODUCT TO ENGINEER FOR APPROVAL.

CROSSMAN ENGINEERING
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• Civil
• Transportation
• Environmental
• Site Planning
• Surveying
• Permitting
• Landscape Architecture

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PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR: **GDUBON PROPERTIES, LLC**
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
MISCELLANEOUS DETAIL PLAN No. 1

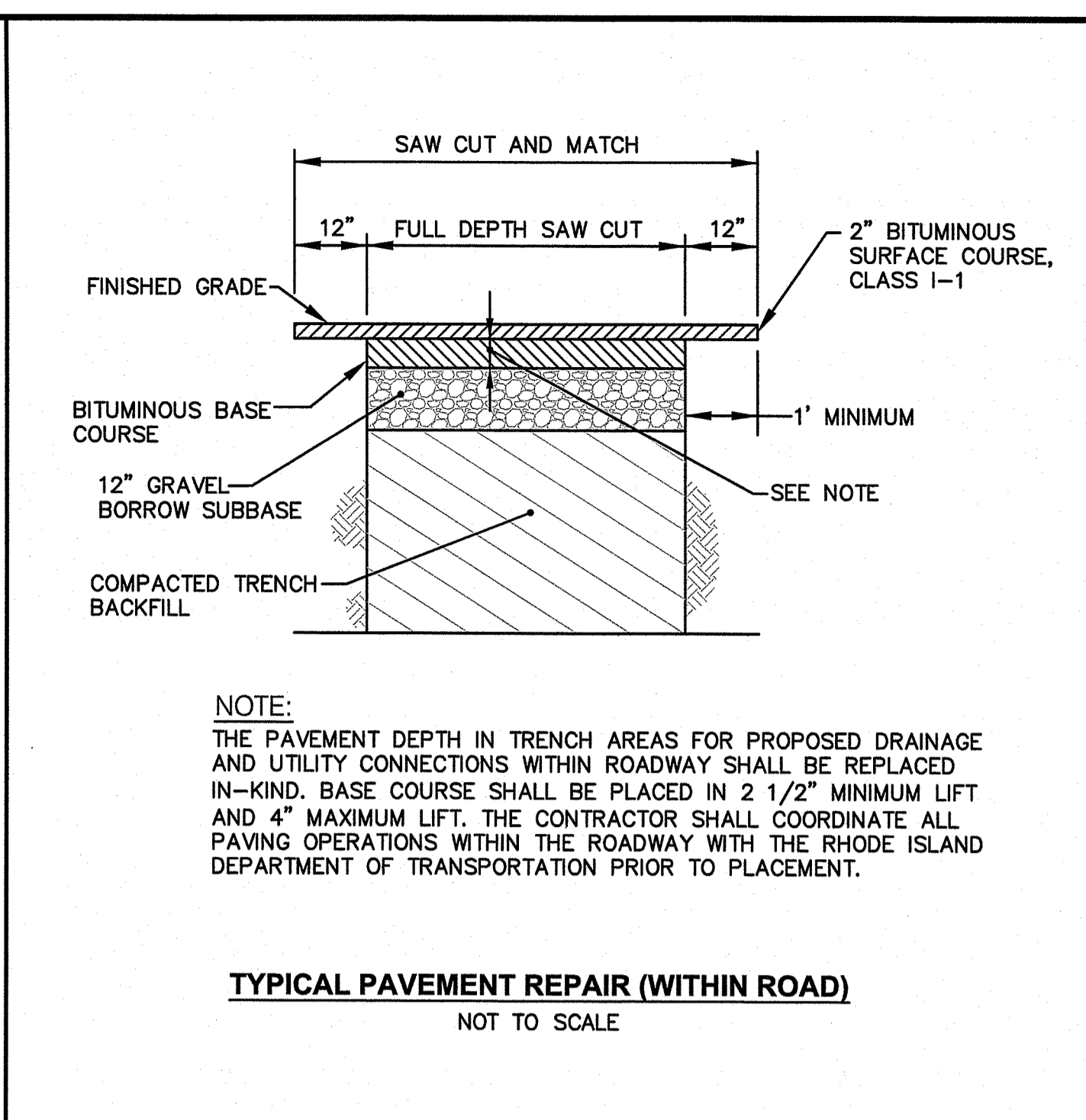
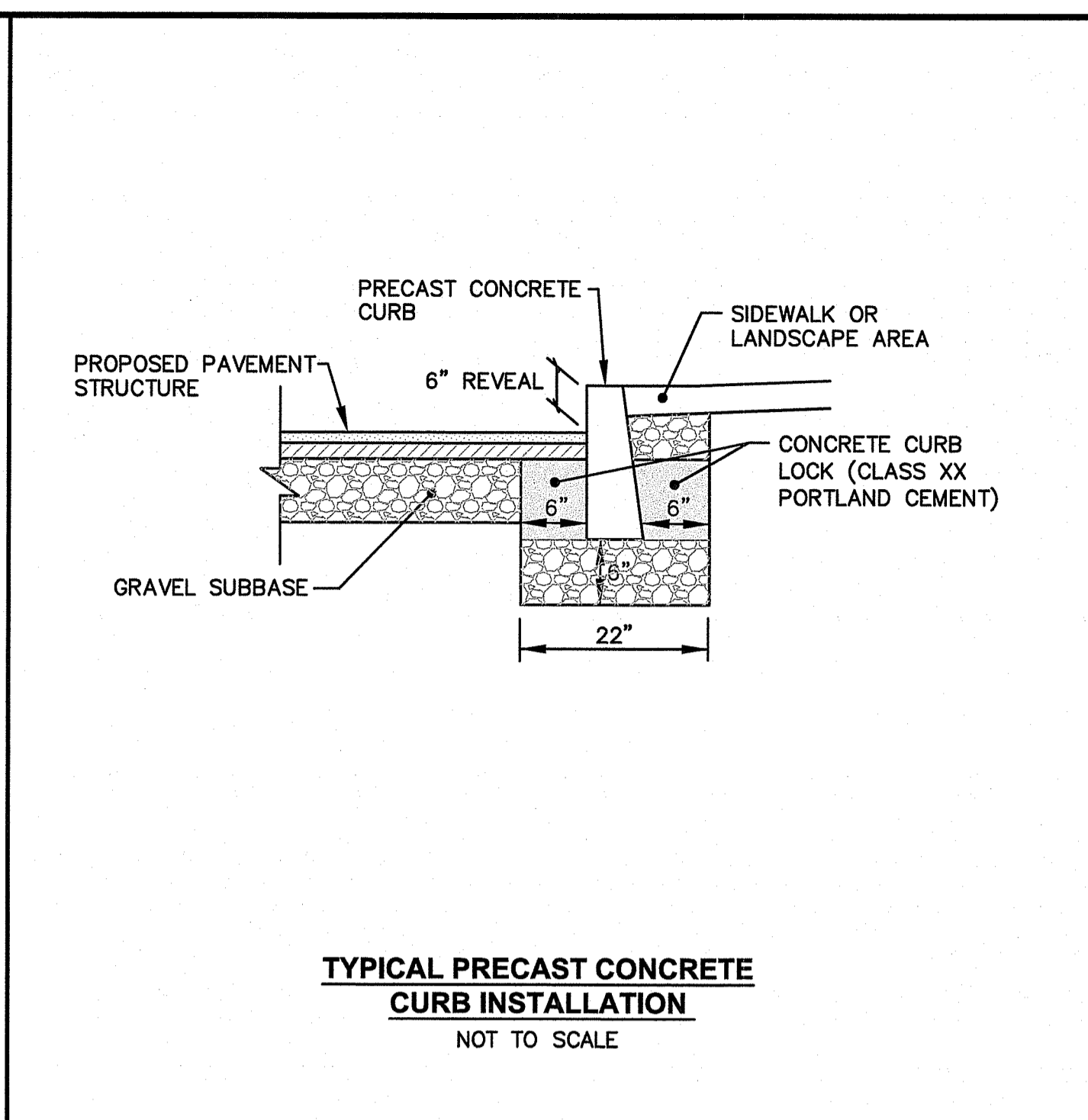
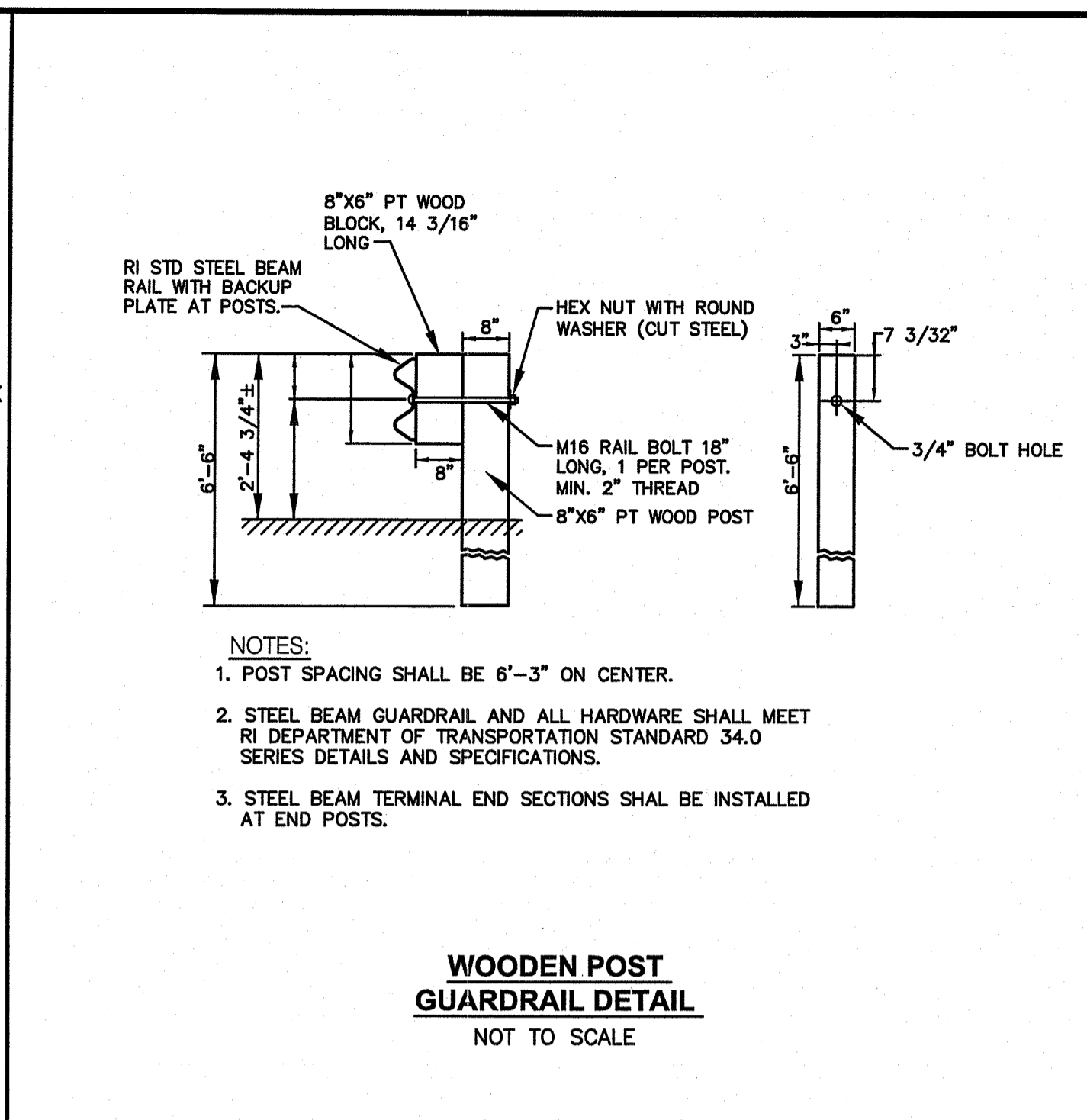
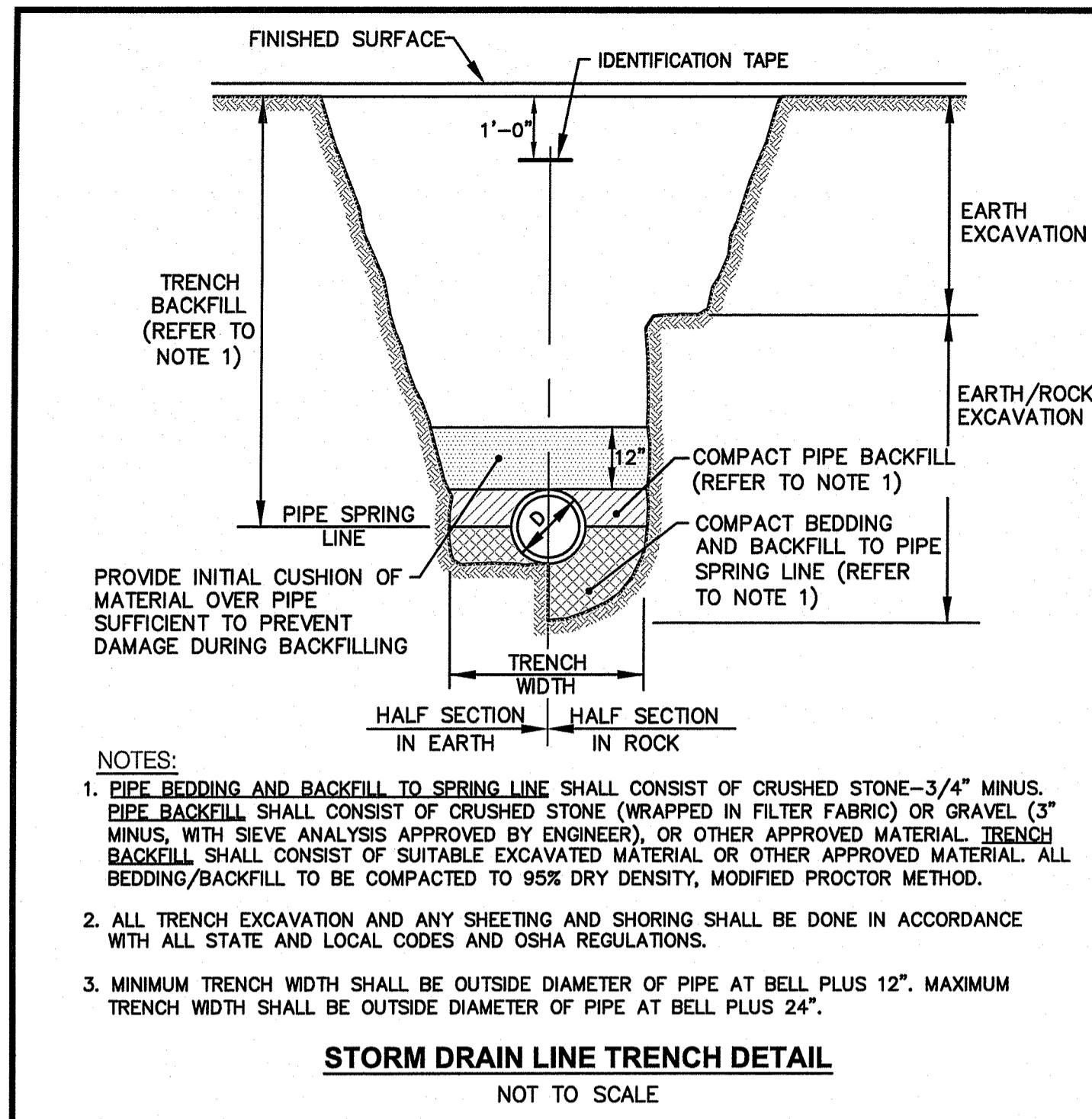
DATE: MAY 2021
SCALE: AS NOTED

DWG. NAME: 2327-C9.1-DETAIL1.dwg

REVISIONS

NUMBER	REMARKS	DATE
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2	RIDEM FWW COMMENTS	8/6/21

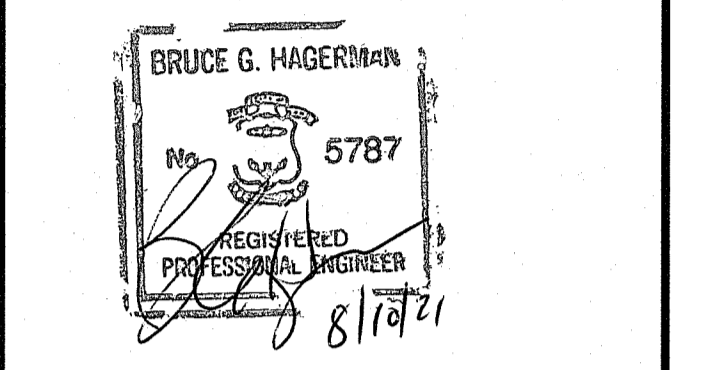
DRAWING NUMBER
C9.1
SHEET: 10 OF 16



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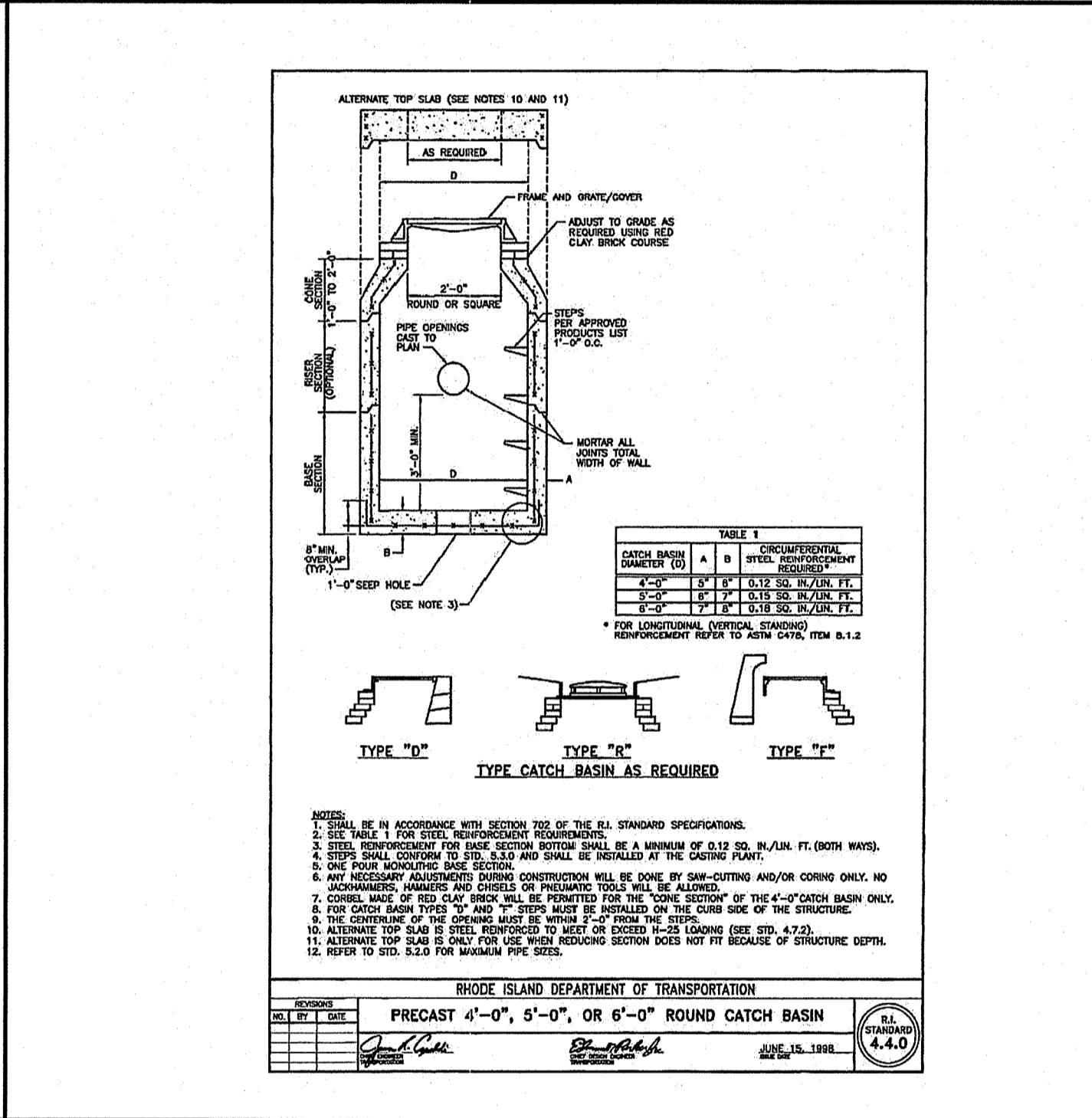
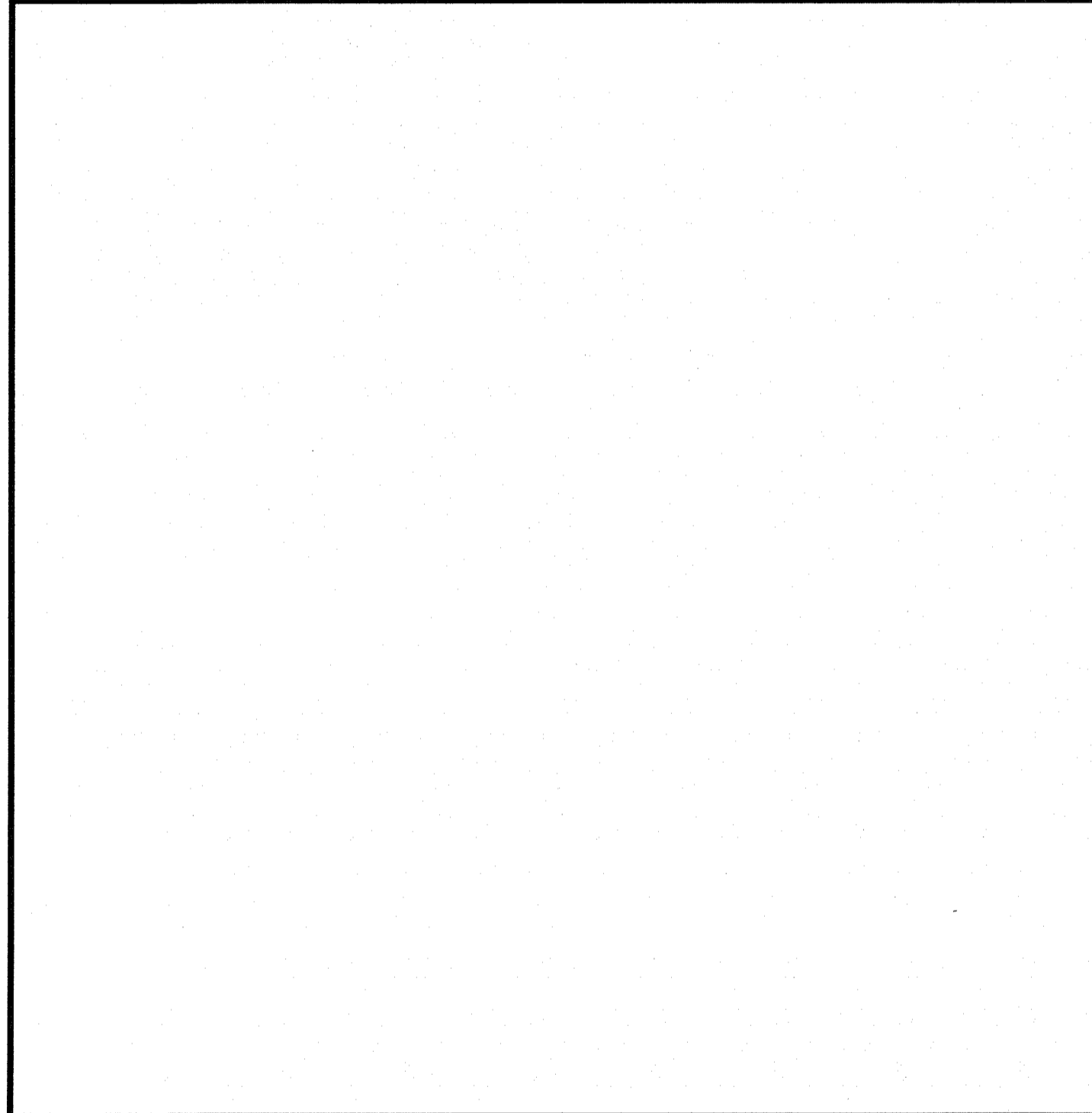
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 24 2021 FILE # 21-0152
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Mindy Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

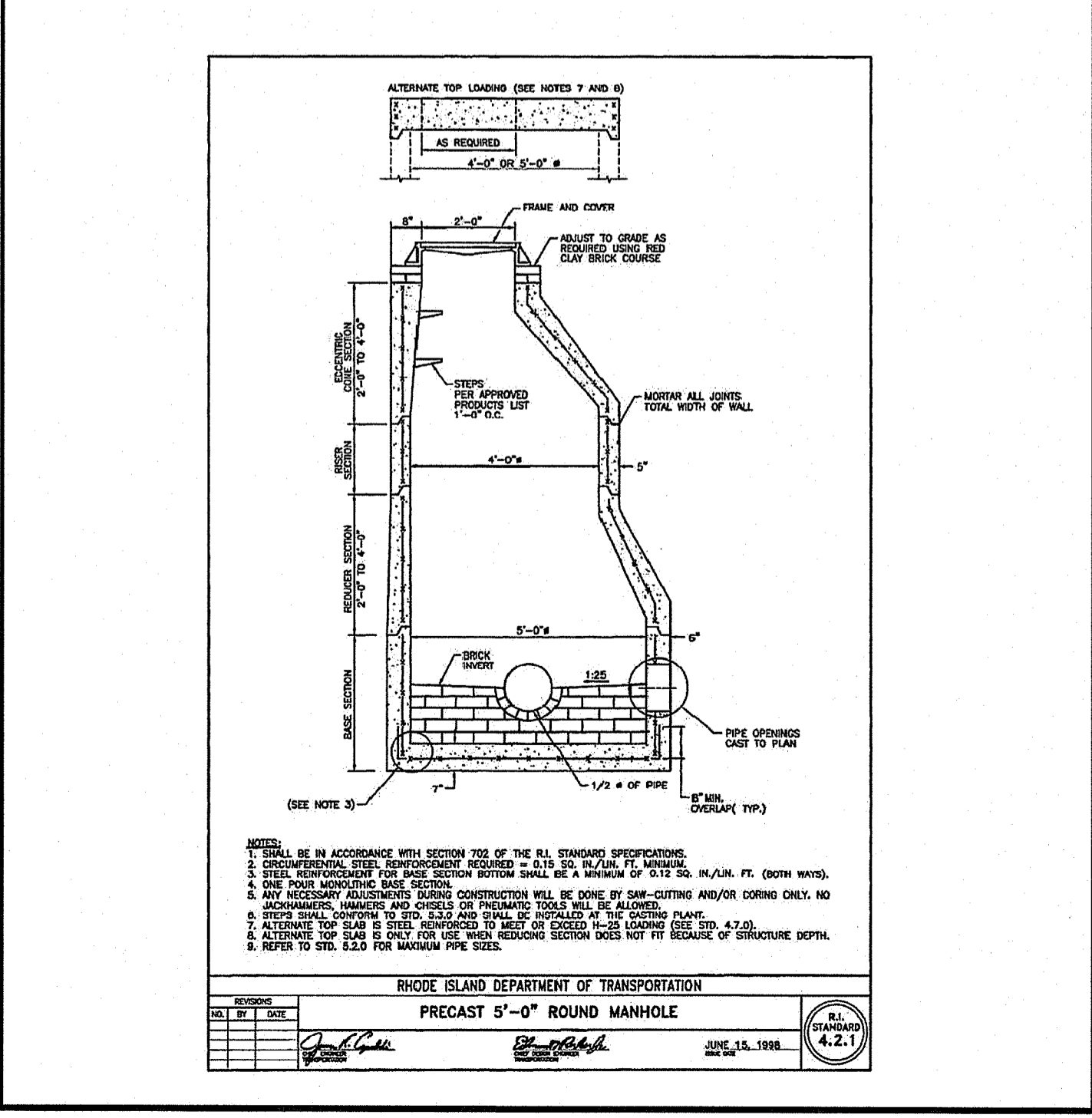
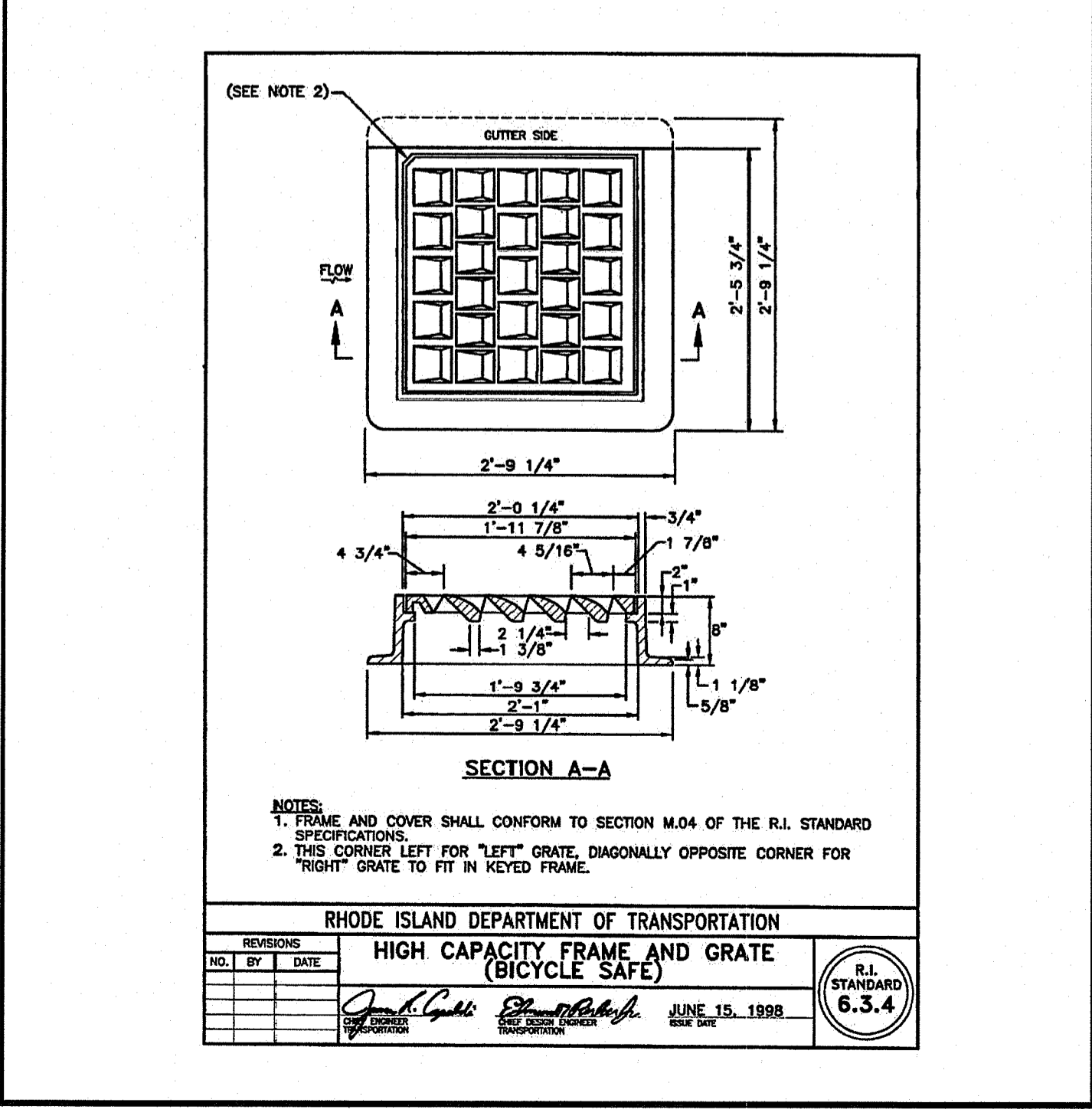
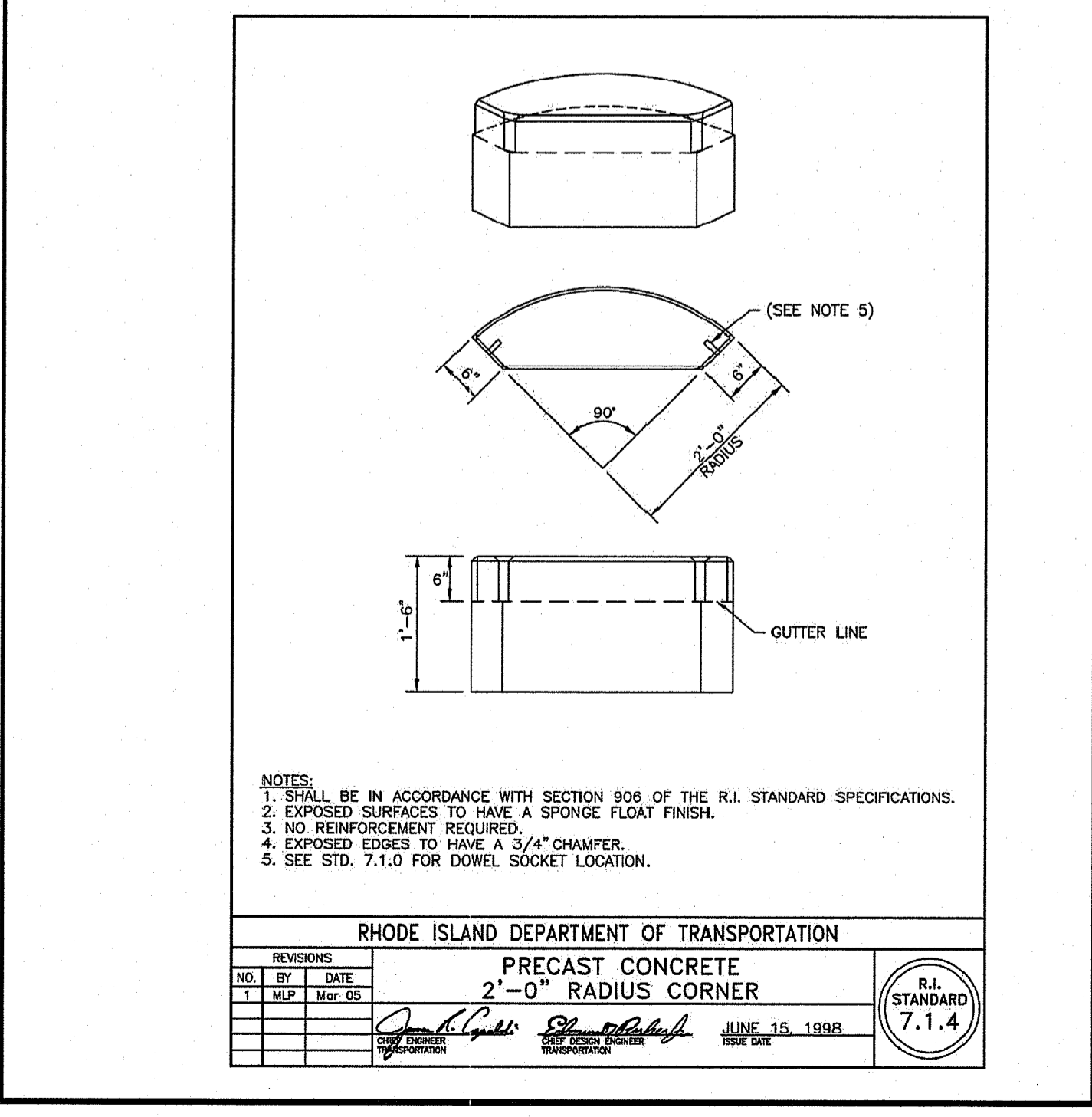
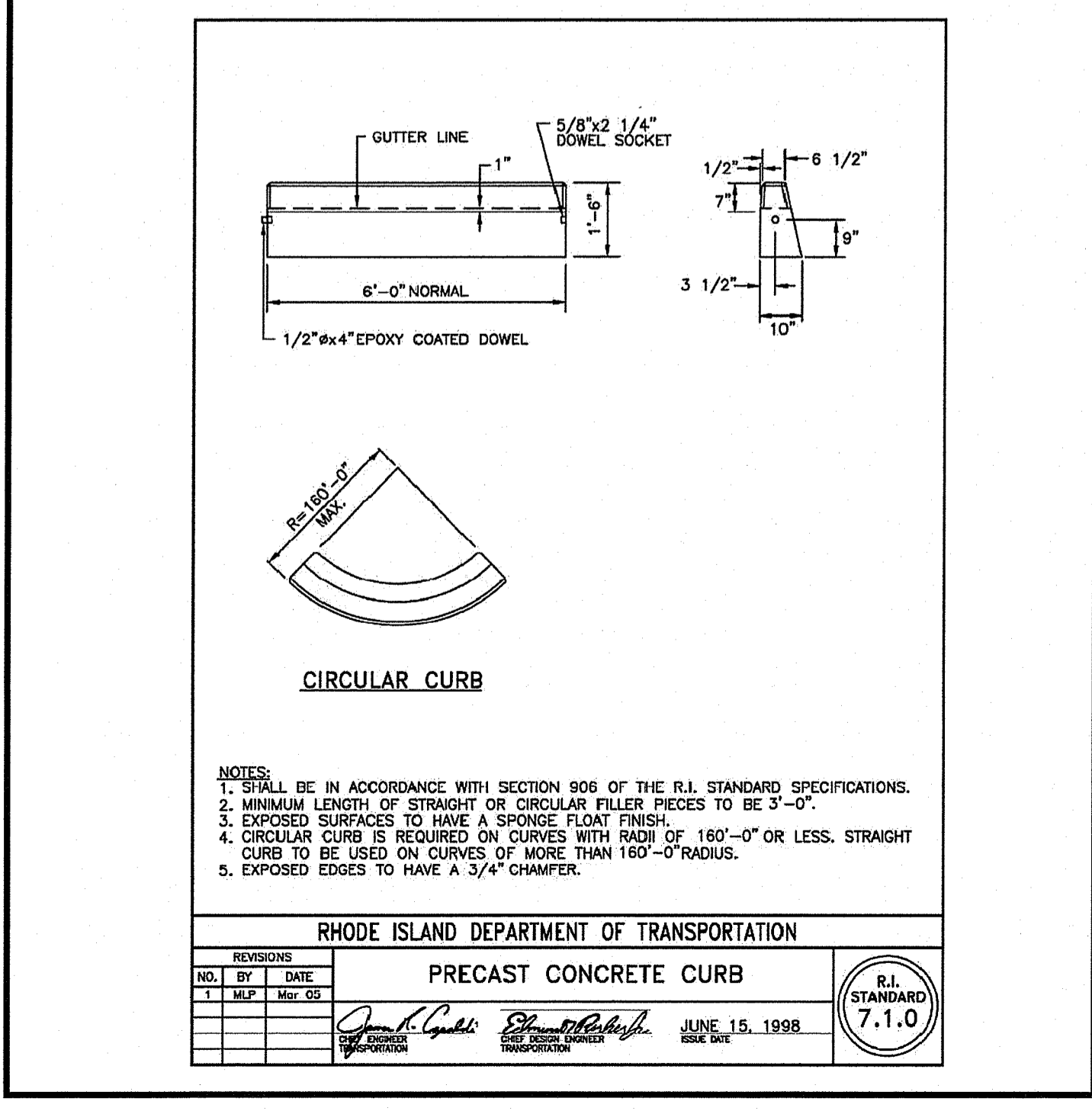
PREPARED FOR:
RI Environmental Management
AUG 11 2021
Office of Water Resources

GDUBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852



R.I. STANDARD MODIFICATION NOTES:

- HDPE (OPP) PIPE OR PVC PIPE AND CONCRETE STRUCTURE JOINTS SHALL BE SEALED WITH NON-SHRINK GROUT OR SHALL BE A FLEXIBLE SLEEVE WITH HDPE ADAPTER.
- THERE SHALL BE NO WEEP HOLE IN THE R.I. STD. 4.4.0 CATCHBASIN.



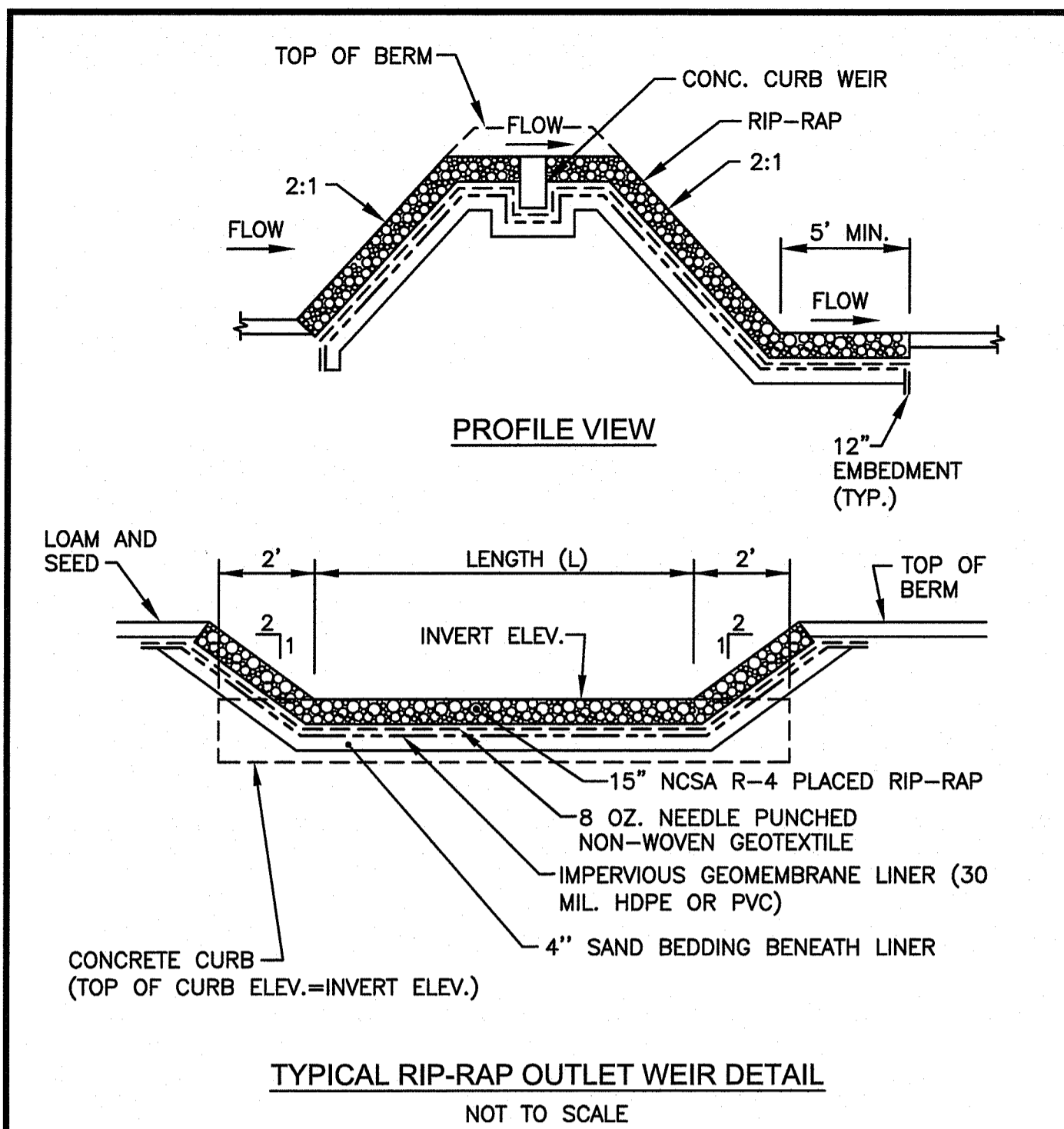
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MISCELLANEOUS DETAIL PLAN No. 2

DATE: MAY 2021 SCALE: AS NOTED

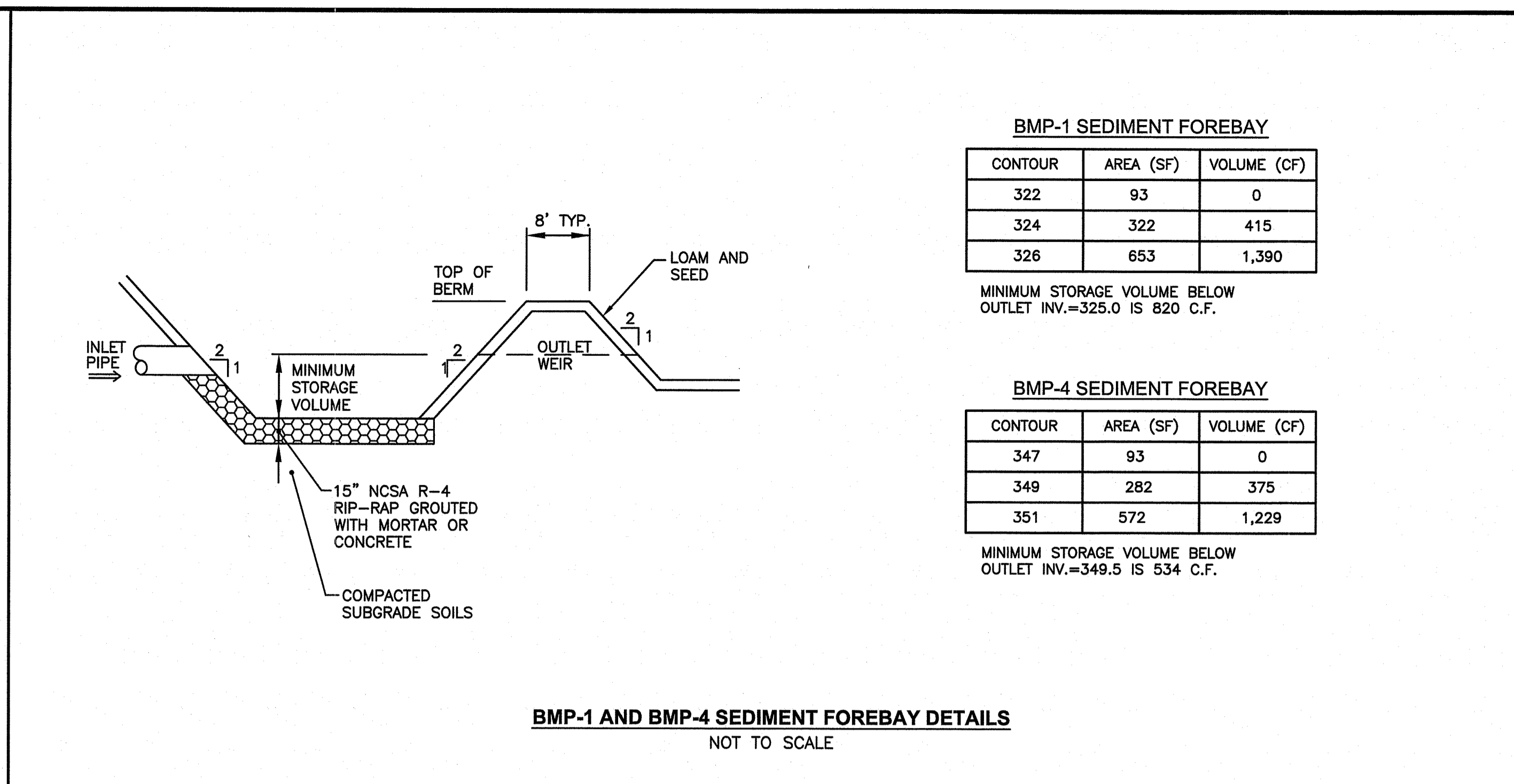
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REVISIONS	NUMBER	REMARKS	DATE
1	1	RIDEM COMMENTS	7/9/21
2	2	RIDEM FWW COMMENTS	8/6/21

DRAWING NUMBER:
C9.2
SHEET: 11 OF 16



TYPICAL RIP-RAP OUTLET WEIR DETAIL
NOT TO SCALE



BMP-1 AND BMP-4 SEDIMENT FOREBAY DETAILS
NOT TO SCALE

BMP-1 SEDIMENT FOREBAY

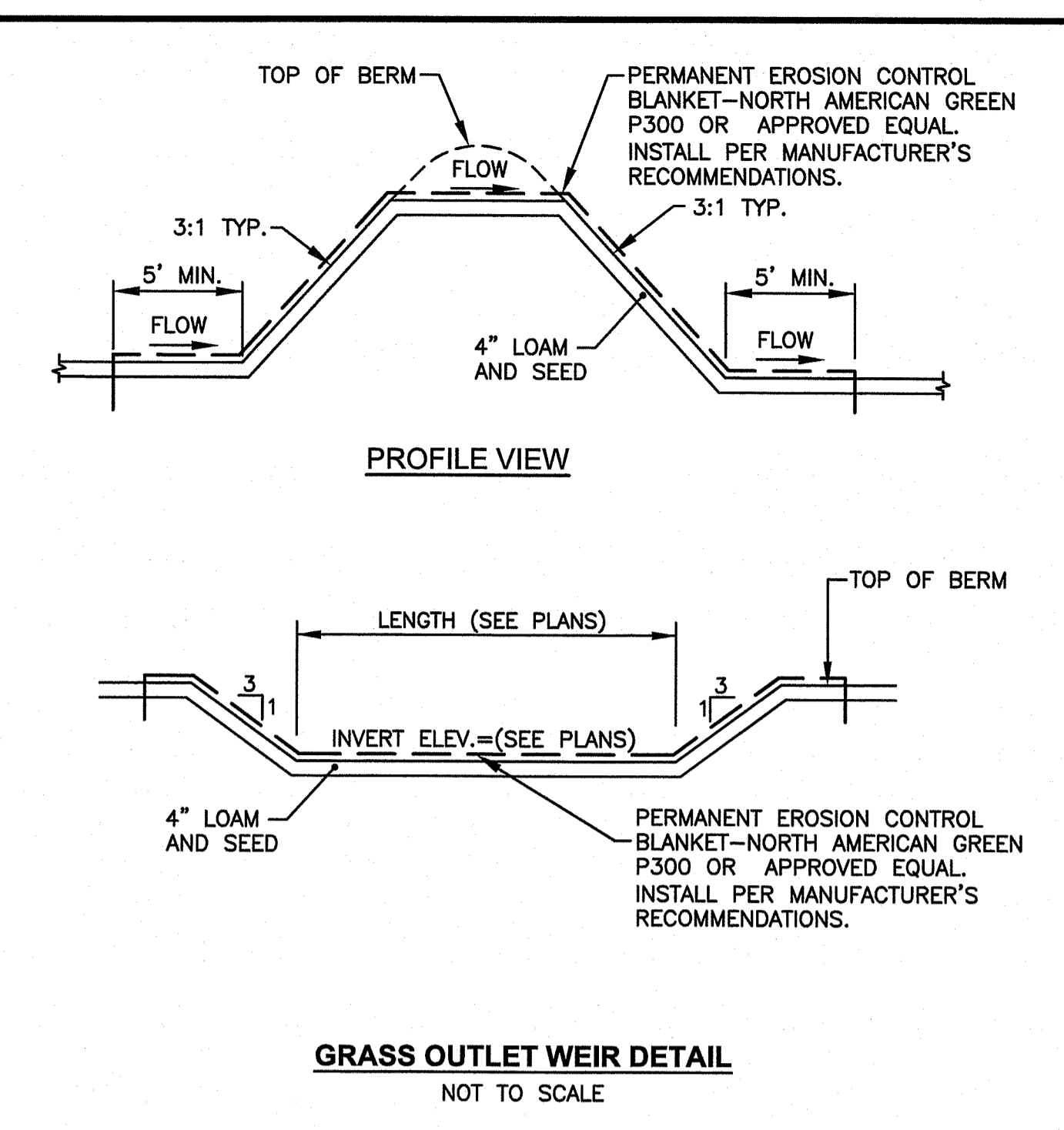
CONTOUR	AREA (SF)	VOLUME (CF)
322	93	0
324	322	415
326	653	1,390

MINIMUM STORAGE VOLUME BELOW
OUTLET INV.=325.0 IS 820 C.F.

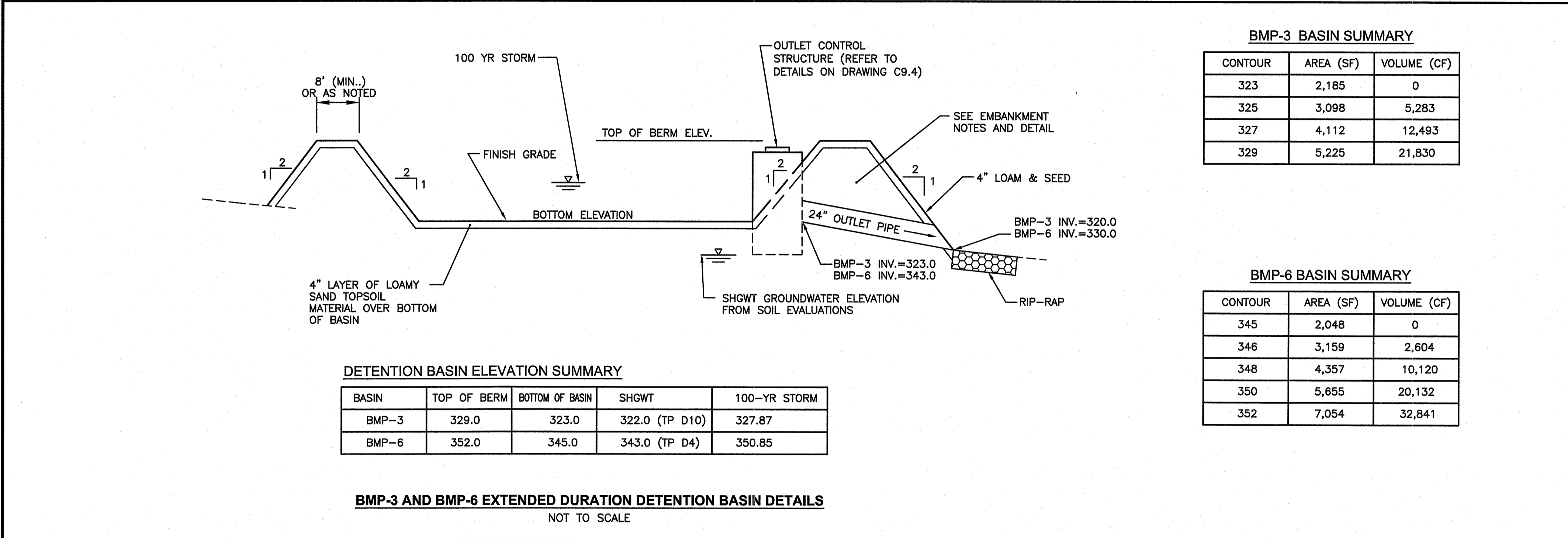
BMP-4 SEDIMENT FOREBAY

CONTOUR	AREA (SF)	VOLUME (CF)
347	93	0
349	282	375
351	572	1,229

MINIMUM STORAGE VOLUME BELOW
OUTLET INV.=349.5 IS 534 C.F.



GRASS OUTLET WEIR DETAIL
NOT TO SCALE



DETENTION BASIN ELEVATION SUMMARY

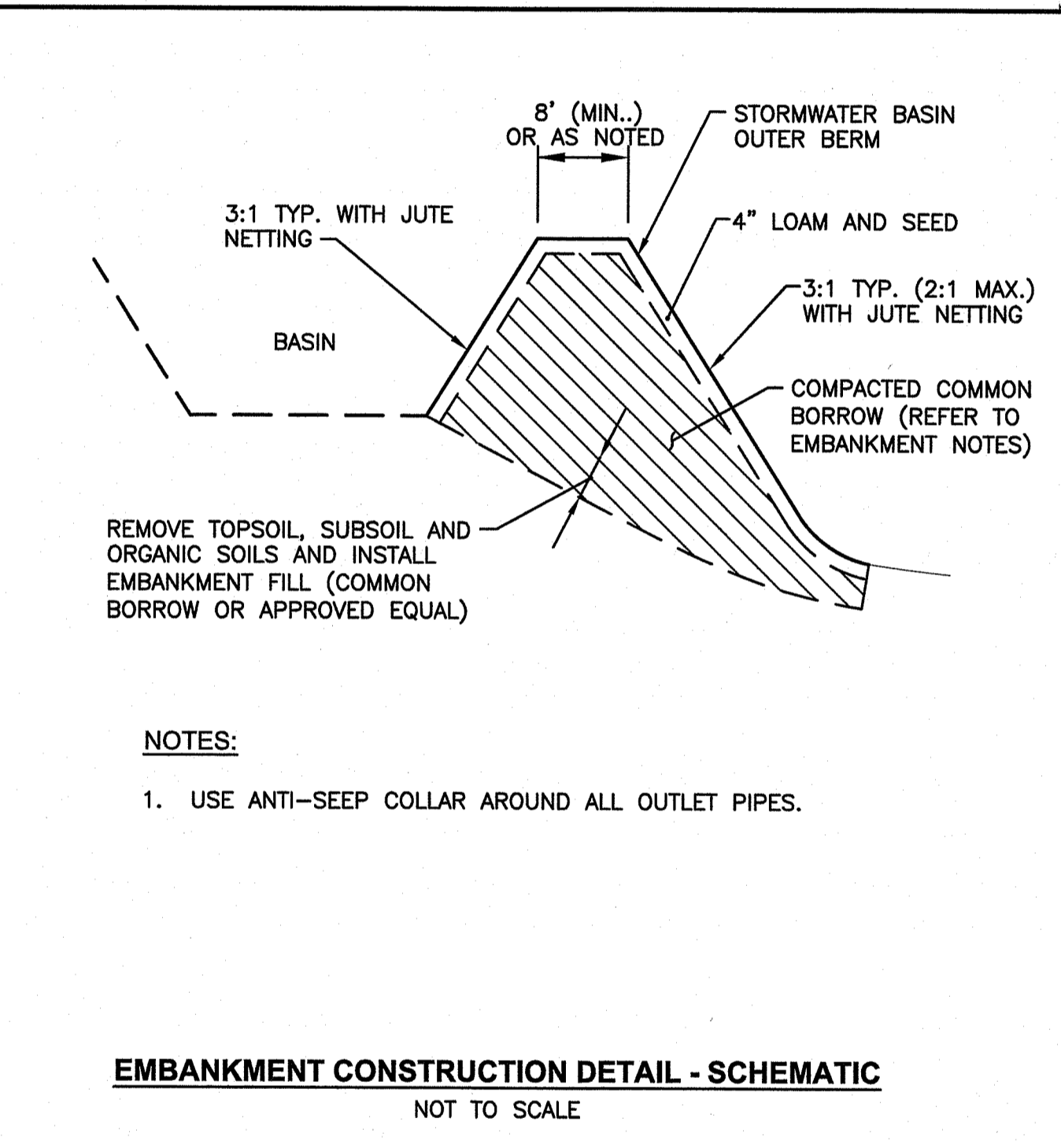
BASIN	TOP OF BERM	BOTTOM OF BASIN	SHGWT	100-YR STORM
BMP-3	329.0	323.0	322.0 (TP D10)	327.87
BMP-6	352.0	345.0	343.0 (TP D4)	350.85

BMP-3 BASIN SUMMARY

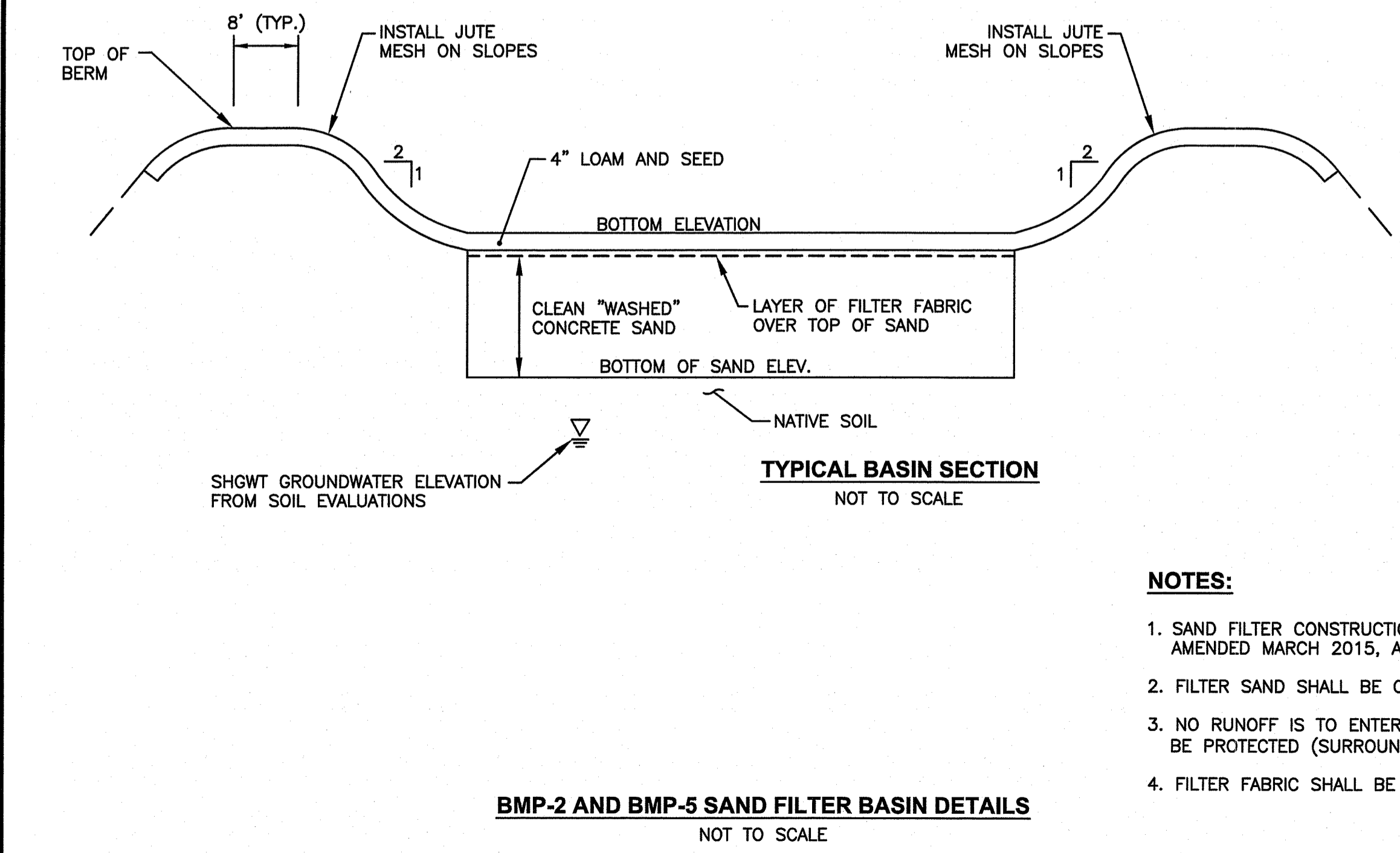
CONTOUR	AREA (SF)	VOLUME (CF)
323	2,185	0
325	3,098	5,283
327	4,112	12,493
329	5,225	21,830

BMP-6 BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
345	2,048	0
346	3,159	2,604
348	4,357	10,120
350	5,655	20,132
352	7,054	32,841



EMBANKMENT CONSTRUCTION DETAIL - SCHEMATIC
NOT TO SCALE



BMP-2 AND BMP-5 SAND FILTER BASIN DETAILS
NOT TO SCALE

BMP-2 SAND FILTER BASIN SUMMARY

CONTOUR	AREA (SF)	VOLUME (CF)
324	874	0
326	1,410	1,142

BMP-5 SAND FILTER BASIN SUMMARY


CONTOUR	AREA (SF)	VOLUME (CF)
349	743	0
351	1,263	1,003

SAND FILTER ELEVATION SUMMARY

SAND FILTER	TOP OF BERM	BOTTOM OF BASIN	FILTER DEPTH	BOTTOM OF SAND	SHGWT	100-YR STORM
BMP-2	326	324	3.0'	321.0	319.0 (TP D2)	325.33
BMP-5	351	349	2.0'	347.0	346.0 (TP 2-6)	350.87

- NOTES:**
- SAND FILTER CONSTRUCTION SHALL MEET THE SPECIFICATIONS IN THE R.I. STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, AMENDED MARCH 2015, APPENDIX-F, SECTION F.5.1.
 - FILTER SAND SHALL BE CLEAN AND WASHED, AND MEET THE SPECIFICATIONS OF AASHTO M-6 SAND OR ASTM C-33 CONCRETE SAND.
 - NO RUNOFF IS TO ENTER THE SAND FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED. THE SAND FILTER SHALL BE PROTECTED (SURROUNDED) WITH COMPOST FILLED SILT SOCK UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
 - FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.

- STORMWATER BASIN EMBANKMENT NOTES:**
- THE DETENTION AND INFILTRATION BASIN EMBANKMENTS ARE TO BE CONSTRUCTED WITH APPROVED COMMON BORROW. NO SOIL/ROCK GRATER THAN 3" SHALL BE UTILIZED. COMMON BORROW SHALL MEET OR EXCEED AN IN-PLACE DENSITY OF 100 lb./cf. ALL MATERIAL SHALL BE PLACED IN 8 TO 12 INCH LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. FILL MATERIAL WILL NOT CONTAIN FROZEN MATERIALS OR BE PLACED ON FROZEN SURFACES. COMMON BORROW SHALL MEET MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS.
 - UPON COMPLETION OF CLEARING AND GRUBBING OPERATIONS, THE EMBANKMENT AREAS ARE TO BE EXCAVATED. IF ANY ORGANIC OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR REVIEW OF EXCAVATION AREA. THE DEPTH OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER BASED UPON THE LOCAL CONDITIONS. NO FILL MATERIAL SHALL BE PLACED UNTIL THE FOUNDATION PREPARATION HAS BEEN COMPLETED. ALL WATER SHALL BE REMOVED FROM THE FOUNDATION PRIOR TO PLACING THE EMBANKMENT.
 - THE FILL MATERIAL MUST BE SPREAD IN UNIFORM LAYERS AND FALL WITHIN THE SPECIFIED OPTIMUM WATER CONTENT RANGE IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EACH LAYER IS TO BE COMPACTED PRIOR TO LAYING AN ADDITIONAL LAYER. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER HIS SELECTED METHOD OF COMPACTION, COMPACTION EQUIPMENT AND THE SEQUENCE OF OPERATIONS NECESSARY TO OBTAIN THE REQUIRED DENSITY. THE WATER CONTENT AT COMPACTION SHALL BE IN THE RANGE BETWEEN ONE PERCENTAGE POINT BELOW AND TWO PERCENTAGE POINTS ABOVE STANDARD AASHTO OPTIMUM WATER CONTENT. THE MATERIAL SHALL BE PROCESSED TO A UNIFORM WATER CONTENT BY ADDING WATER TO THE MATERIAL IN ADVANCE OF THE FILL PLACEMENT.
 - BACKFILL MATERIAL AROUND STRUCTURES AND PIPE IS TO BE PLACED TO PREVENT THE MOVEMENT OF WATER. THE OPTIMUM WATER CONTENT MUST BE MAINTAINED IN THE SAME RANGE AS IN THE EMBANKMENT. THE BACKFILL MUST BE PLACED IN LAYERS LESS THAN 4 INCHES IN THICKNESS AND DISTRIBUTED UNIFORMLY AROUND THE STRUCTURE/PIPE. ALL COMPACTION WILL BE TO 95% MAXIMUM DENSITY AND MAY REQUIRE HAND TAMPERS OR SMALL POWER EQUIPMENT.
 - EMBANKMENT DAMAGE COMMONLY RESULTS FROM IMPROPER CONSTRUCTION OF CONDUIT AND STRUCTURAL BACKFILL WITHIN THE EMBANKMENT BECAUSE SEEPAGE WILL OCCUR WITH IMPROPER BACKFILL AND COMPACTION. THEREFORE, STRUCTURES AND PIPES ARE TO BE CONSTRUCTED AS THE EMBANKMENT CONSTRUCTION RISES TO THE RESPECTIVE PIPE OR STRUCTURE. THIS WILL PREVENT THE DISTURBANCE OF CONSTRUCTED EMBANKMENT MATERIAL. PIPES FROM THE OUTLET STRUCTURE TO THE OUTFALL SHALL HAVE AN ANTI-SEEP COLLAR.

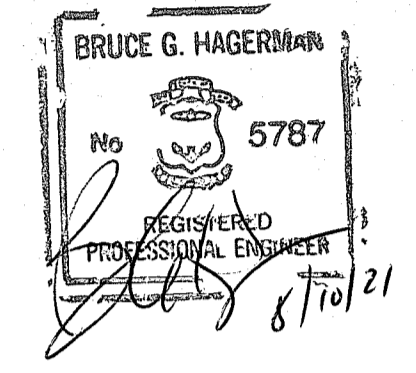


- Civil
- Transportation
- Environmental
- Site Planning
- Surveying
- Permitting
- Landscape Architecture

CROSSMAN ENGINEERING

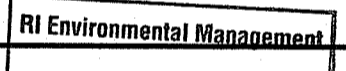
Rhode Island Massachusetts
 151 Centerville Road 103 Commonwealth Avenue
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 SET 7/4/2021 FILE # 21-0152
 DATED 7/4/2021
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE APPROVAL
Nancy L. Freeman

PROJECT TITLE:
FOREST LANE SUBDIVISION
 35 & 55 FOREST LANE
 MAP 19, PLAT 19, LOTS 1 AND 2
 EAST GREENWICH, R.I.

PREPARED FOR:

 AUG 11 2021
 Office of Water Resources

GDUBON PROPERTIES, LLC
 197 PINECREST DRIVE
 NORTH KINGSTOWN, R.I. 02852

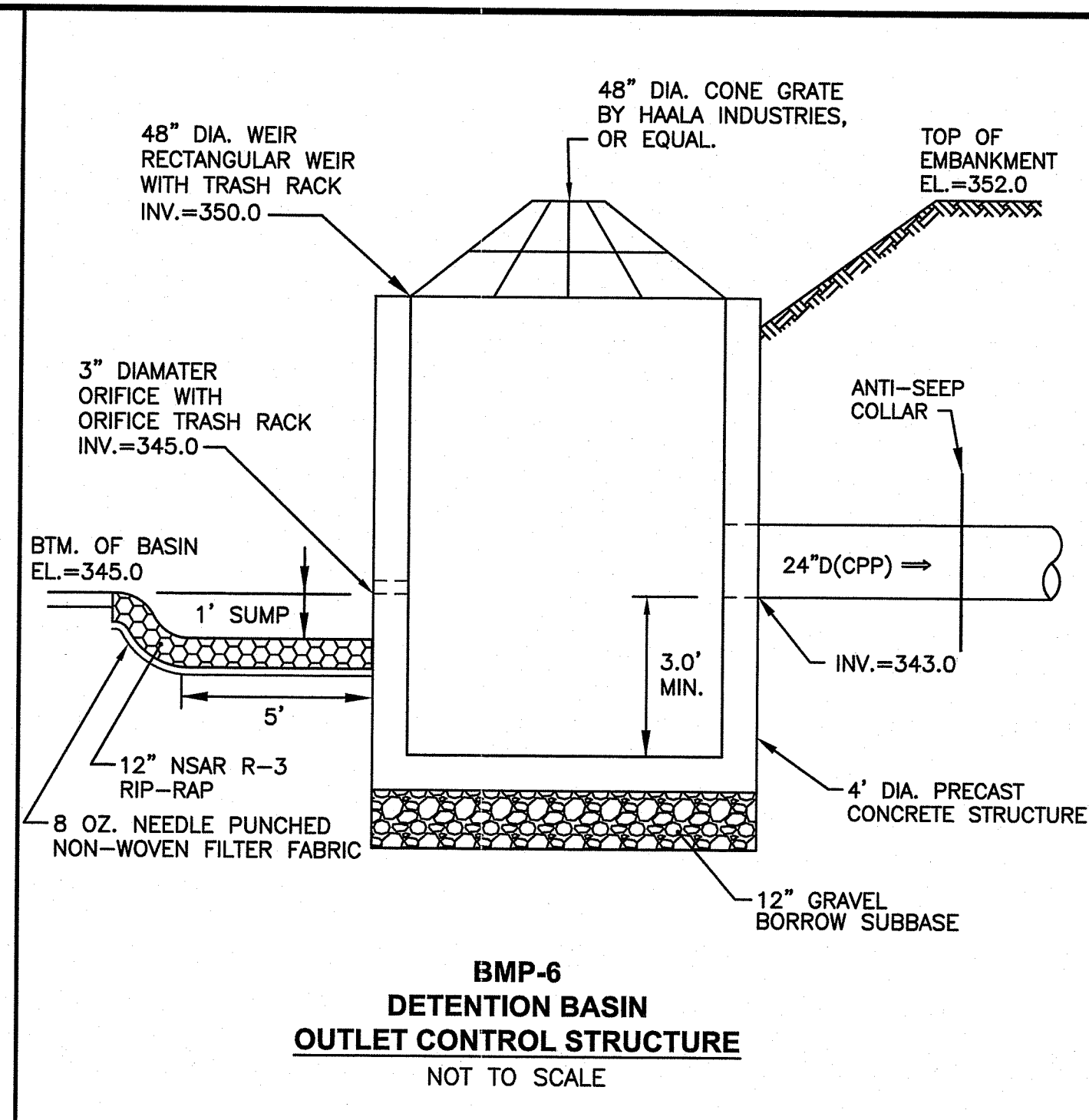
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**MISCELLANEOUS DETAIL
 PLAN No. 3**

DATE: MAY 2021 SCALE: AS NOTED
 DWG. NAME: 2327-C9.3-DETAIL3.dwg

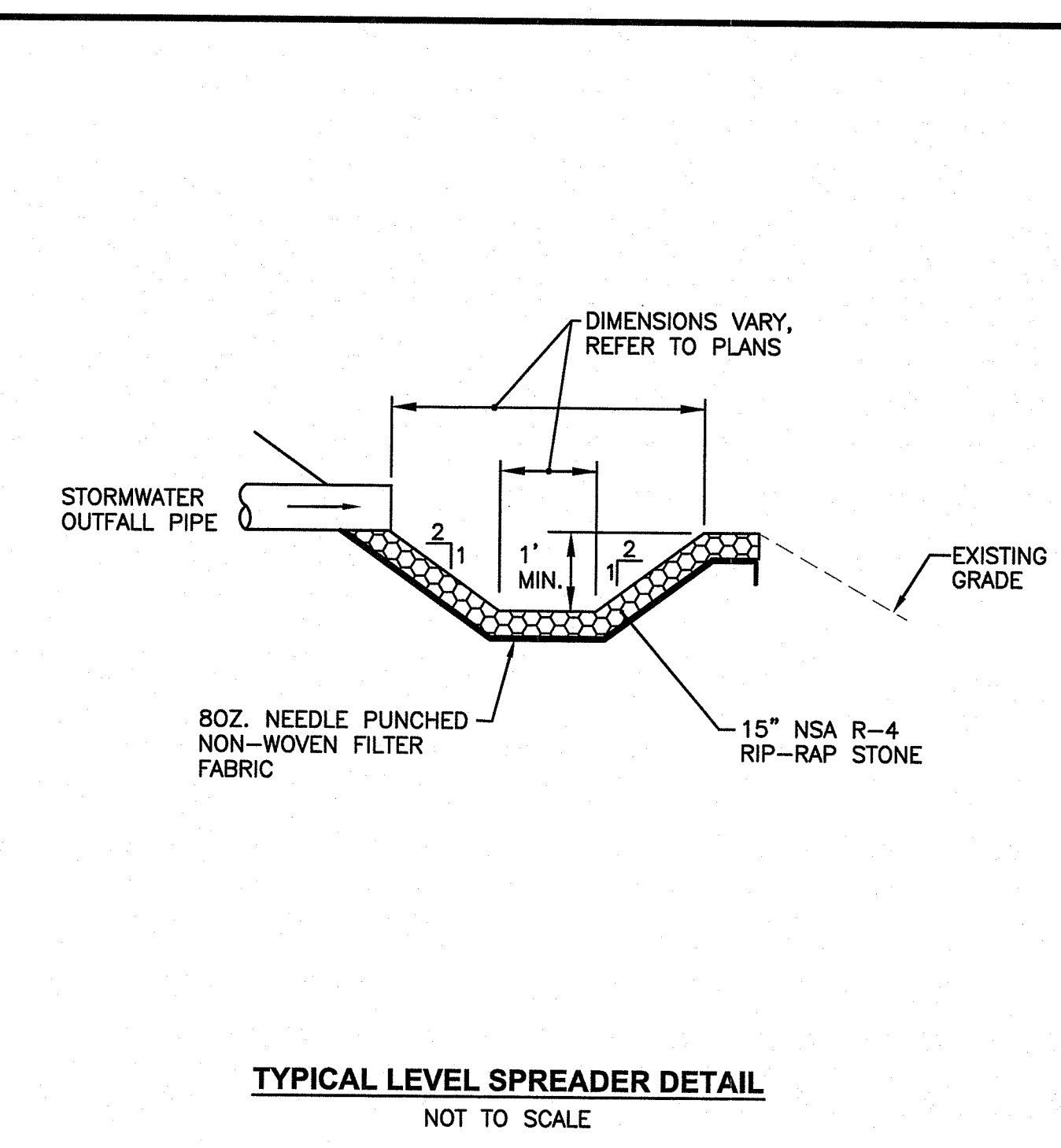
REVISIONS:

NUMBER	REMARKS	DATE
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2	RIDEM FWW COMMENTS	8/6/21

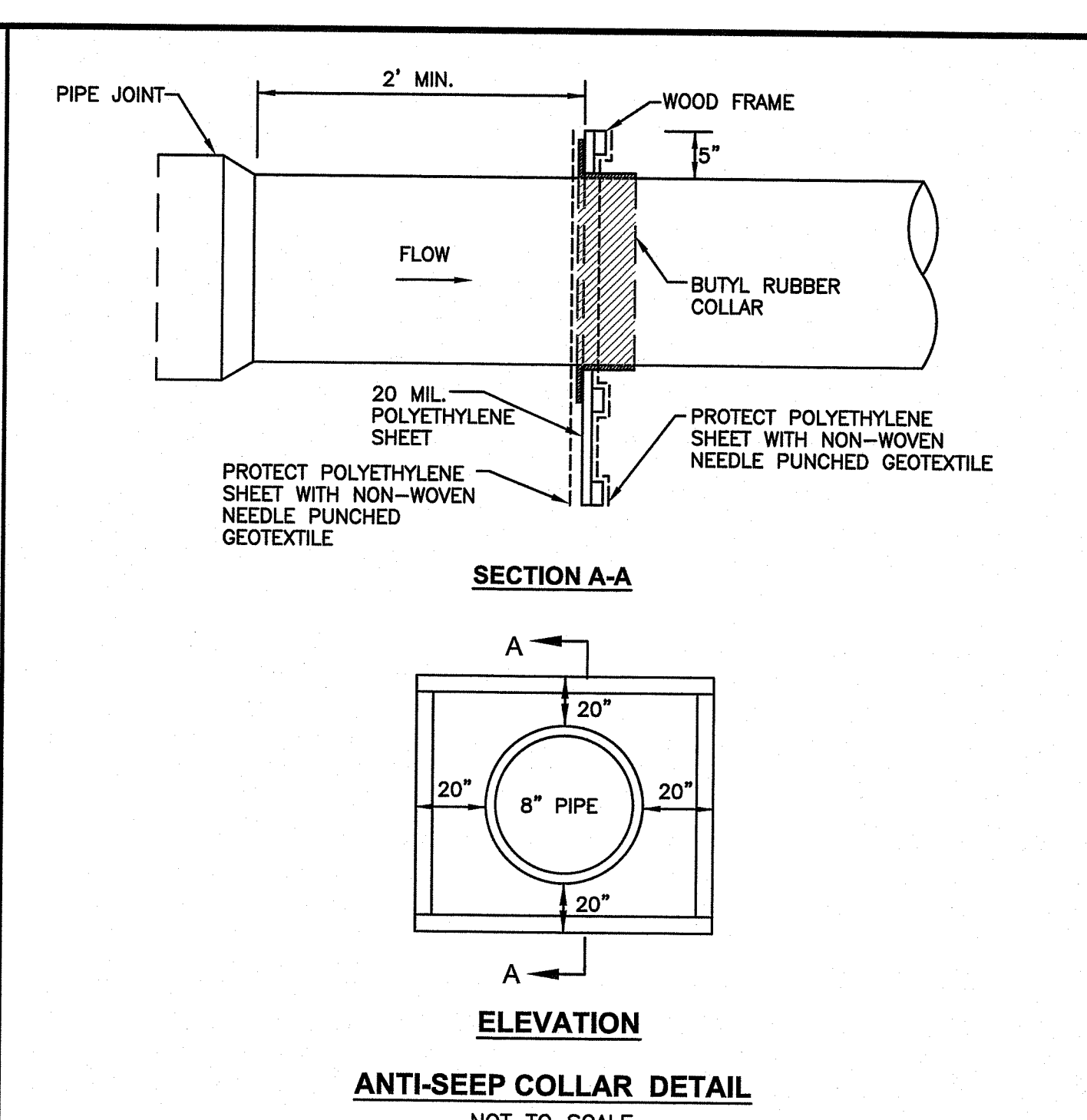
DRAWING NUMBER
C9.3
 SHEET: 12 OF 16



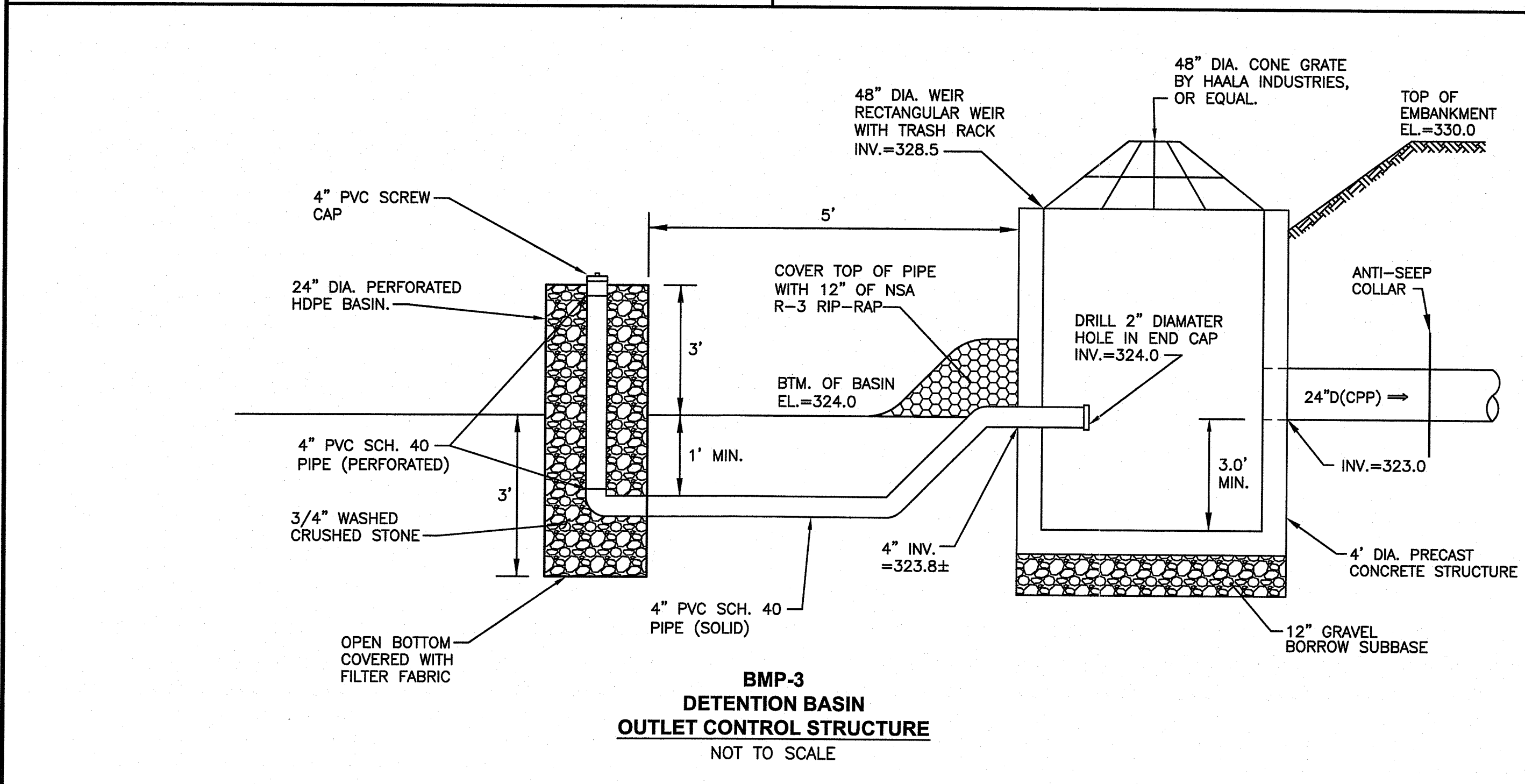
**BMP-6
DETENTION BASIN
OUTLET CONTROL STRUCTURE**
NOT TO SCALE



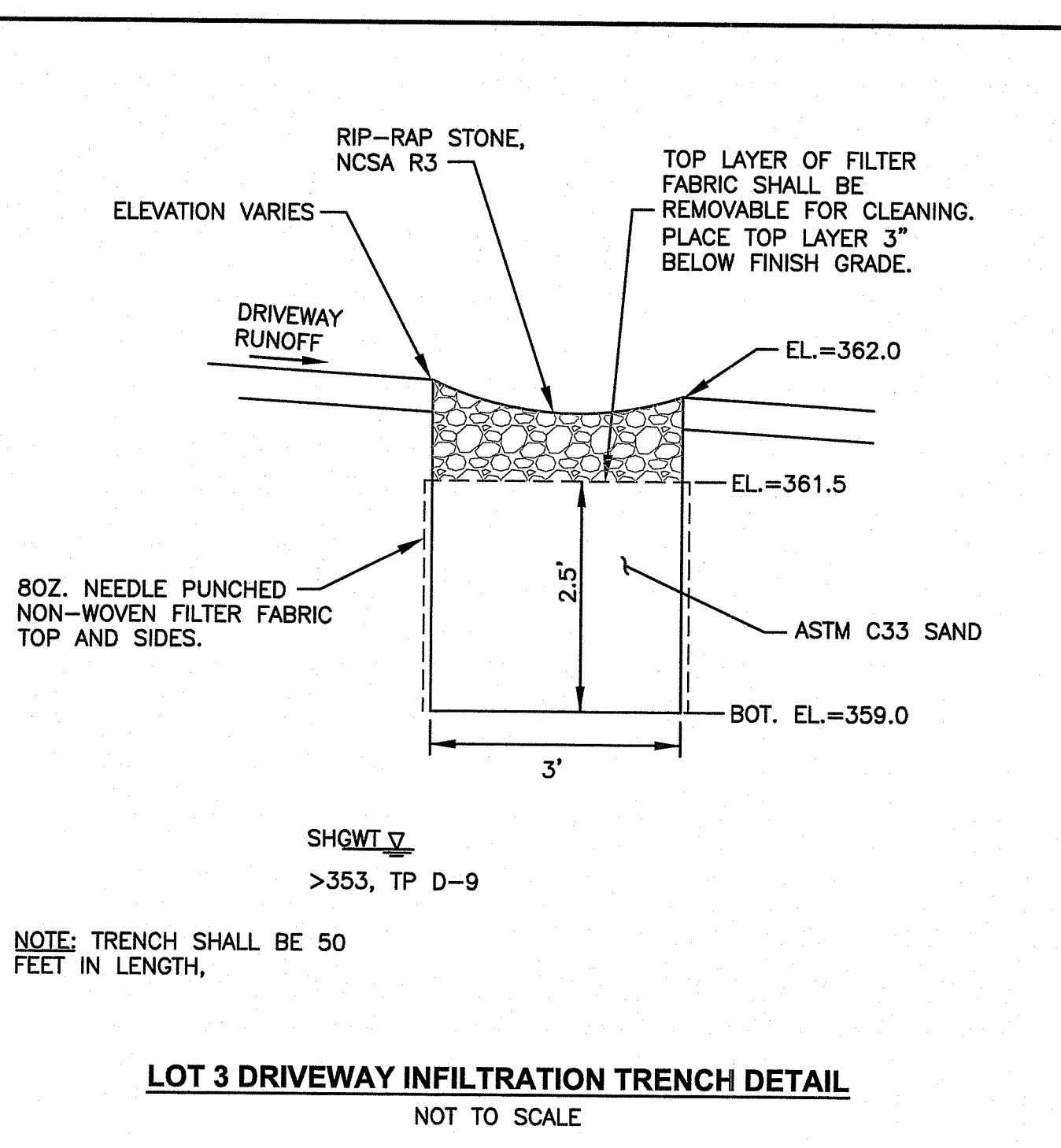
TYPICAL LEVEL SPREADER DETAIL
NOT TO SCALE



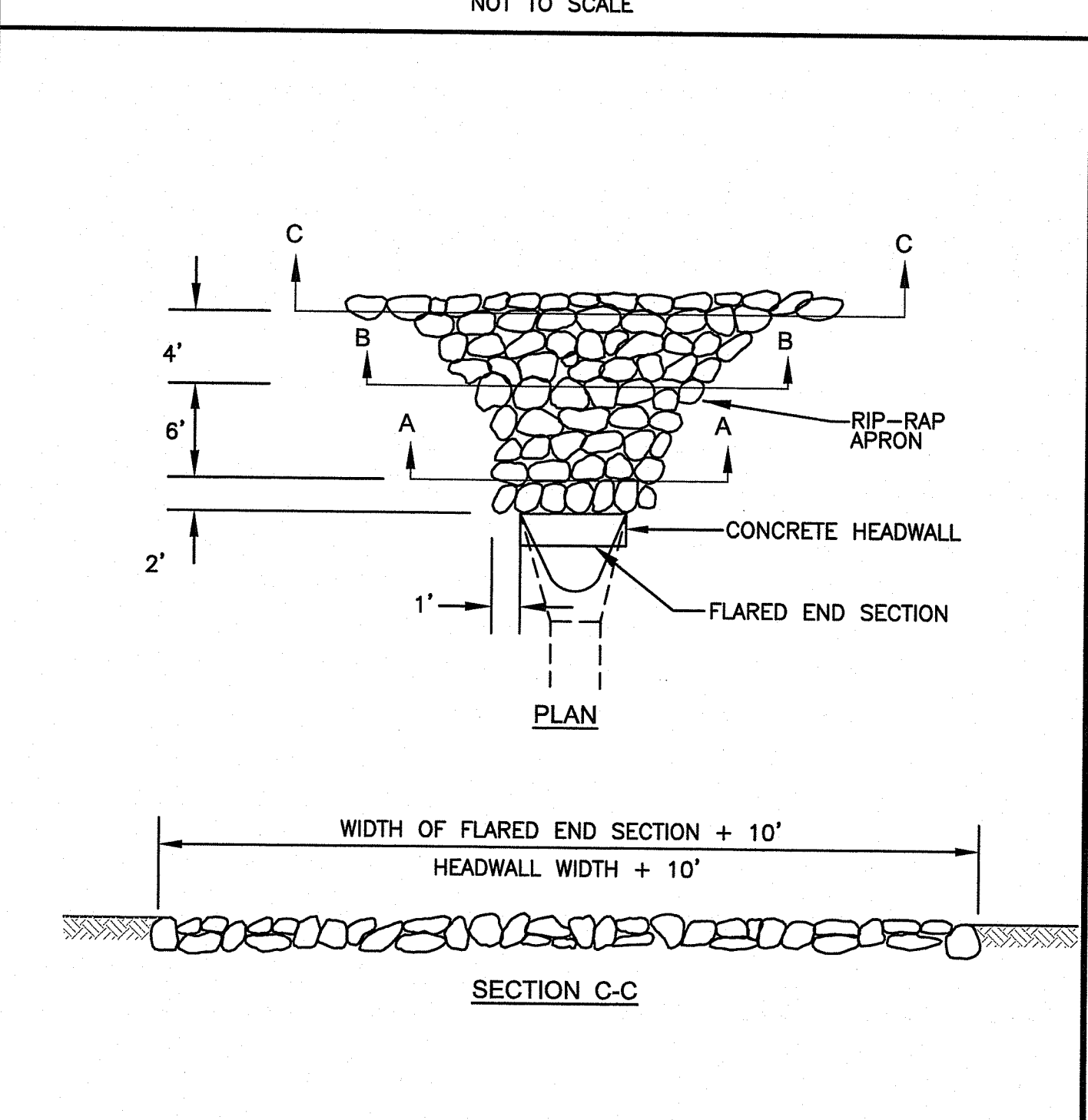
**SECTION A-A
ELEVATION
ANTI-SEEP COLLAR DETAIL**
NOT TO SCALE



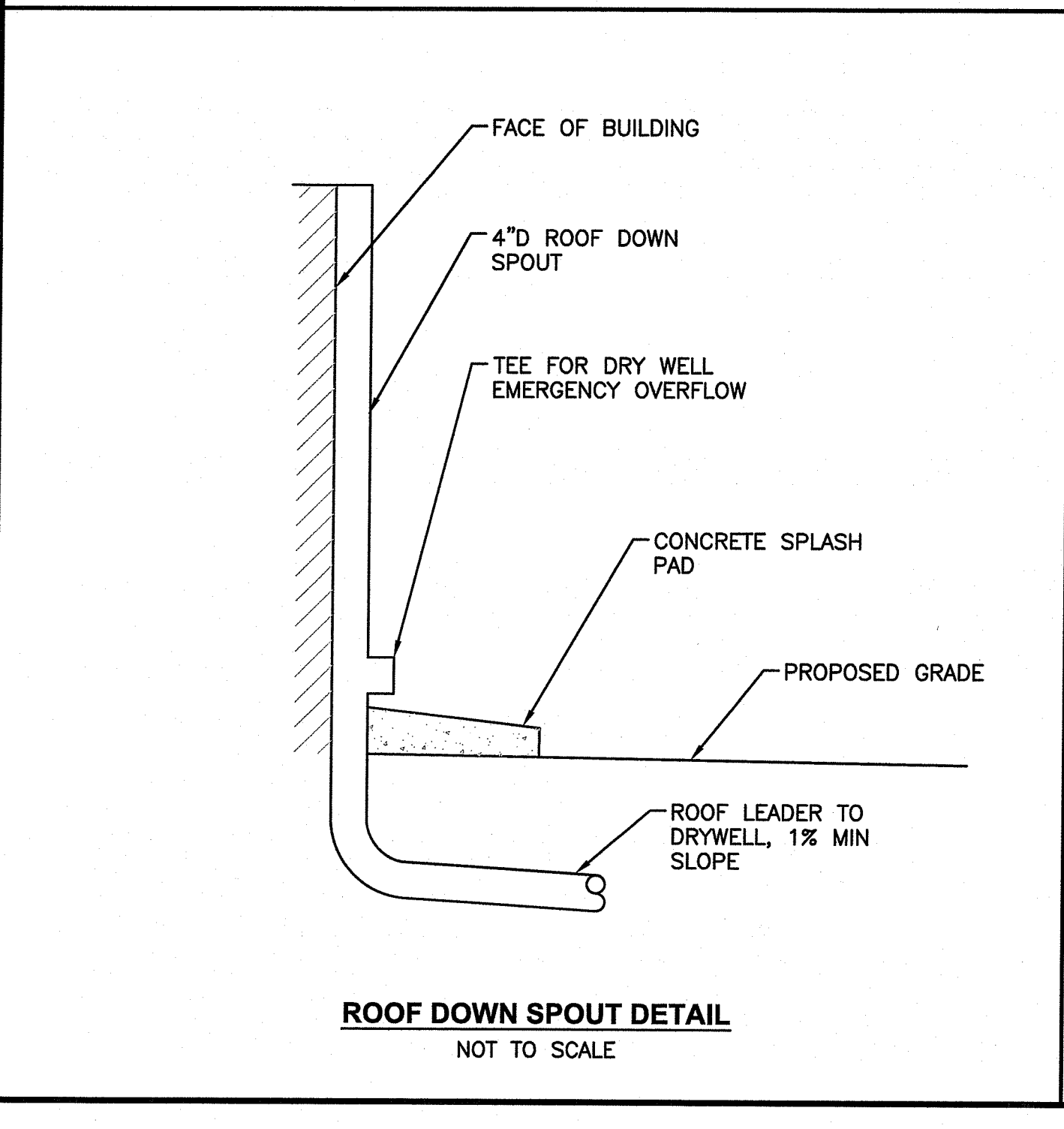
**BMP-3
DETENTION BASIN
OUTLET CONTROL STRUCTURE**
NOT TO SCALE



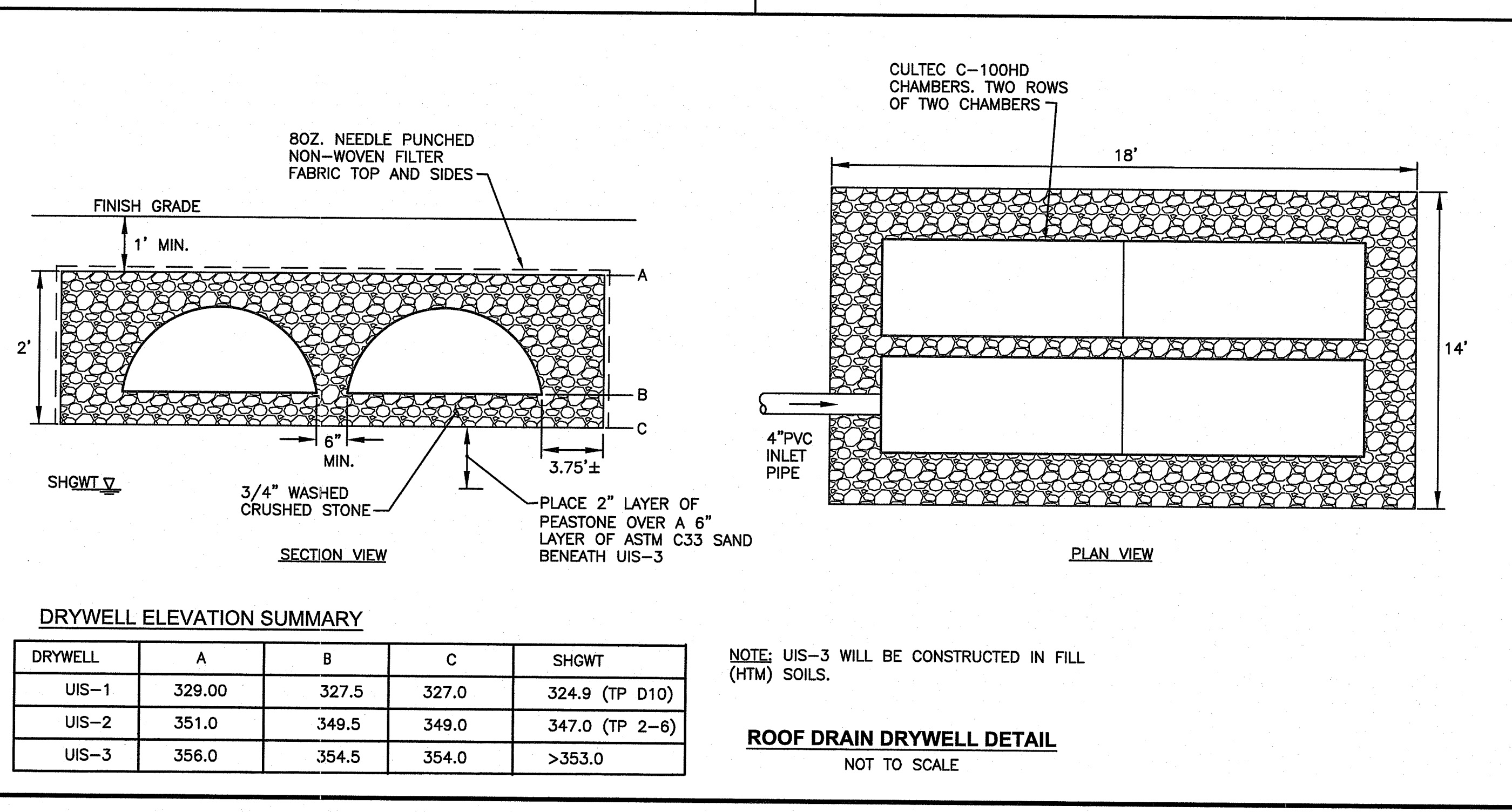
LOT 3 DRIVEWAY INFILTRATION TRENCH DETAIL
NOT TO SCALE



**TYPICAL LAYOUT OF RIP RAP OUTLET
PROTECTION AT FLARED END SECTIONS
and CONCRETE HEADWALLS**
NOT TO SCALE



ROOF DOWN SPOUT DETAIL
NOT TO SCALE



ROOF DRAIN DRYWELL DETAIL
NOT TO SCALE

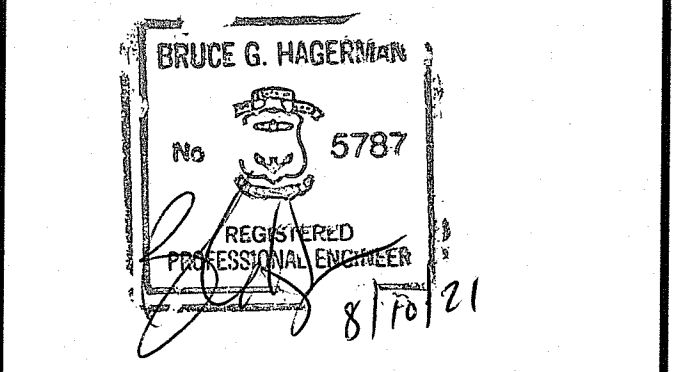
DRYWELL ELEVATION SUMMARY

DRYWELL	A	B	C	SHGWT
UIS-1	329.00	327.5	327.0	324.9 (TP D10)
UIS-2	351.0	349.5	349.0	347.0 (TP 2-6)
UIS-3	356.0	354.5	354.0	>353.0

NOTE: UIS-3 WILL BE CONSTRUCTED IN FILL (HTM) SOILS.

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SUBDIVISION**
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
Ri Environmental Management
AUG 11 2021
Office of Water Resources

GDUBON PROPERTIES, LLC
197 PINECREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
**MISCELLANEOUS DETAIL
PLAN No. 4**

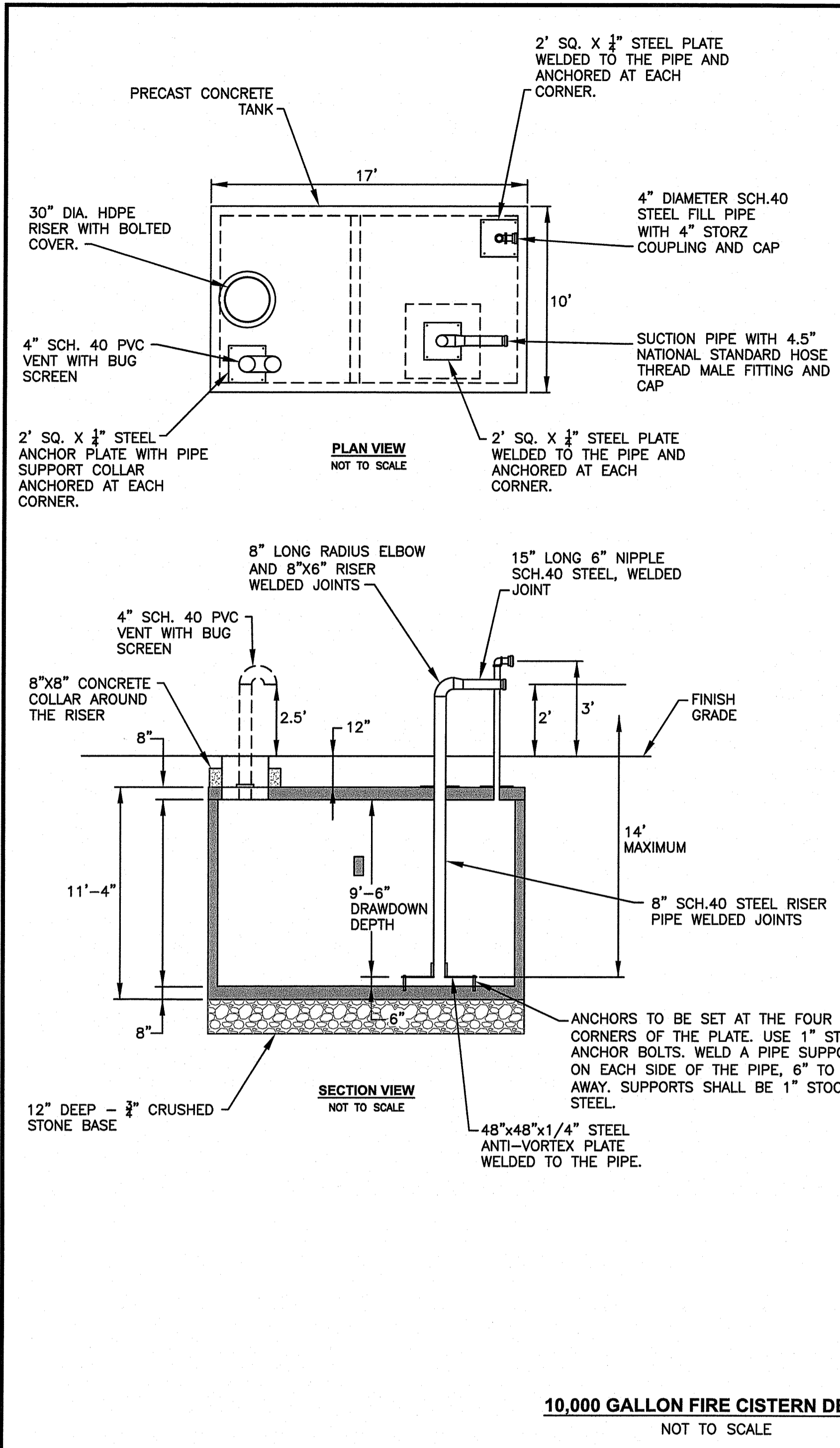
DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME:
2327-C9.4-DETAIL4.dwg

REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWV COMMENTS	8/6/21

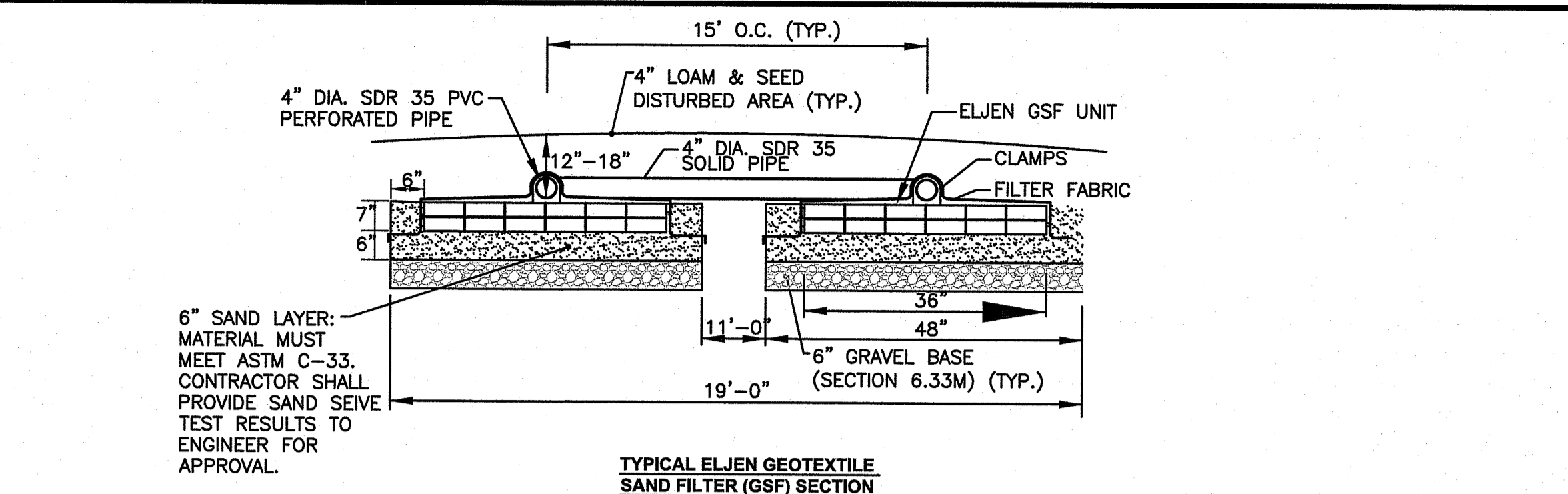
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C9.4
SHEET: 13 OF 16



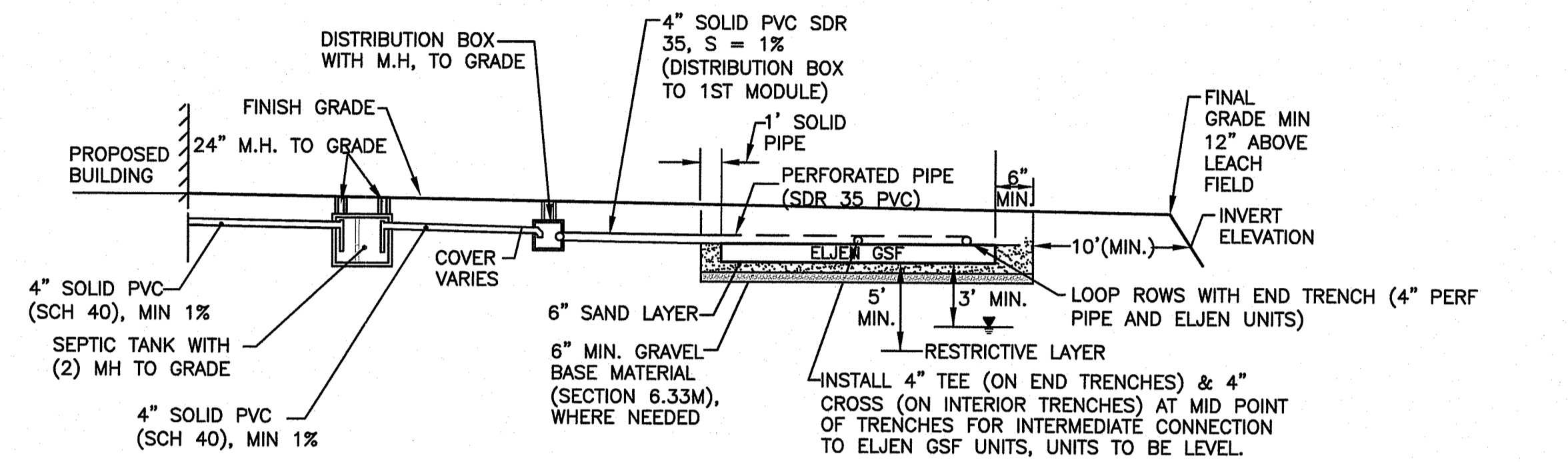
10,000 GALLON FIRE CISTERN DETAIL
NOT TO SCALE

FIRE CISTERN NOTES:

1. PRECAST CONCRETE SPECIFICATIONS:
-CONCRETE: $f_c=5,000$ PSI @ 28 DAYS MINIMUM TYPE III CEMENT.
-REINFORCING STEEL: ASTM-A615 GRADE 60 BLACK DEFORMED BARS.
-DESIGN LOADS: AASHTO-H20-44, ASTM C-890-06
-BUTYL RUBBER JOINT SEALANT BETWEEN ALL SECTION JOINTS.
-BELOW GROUND EXTERIOR SURFACES SHALL BE DAMPROOFED.
2. SPECIFICATION AND INSTALLATION OF EACH CISTERN SHALL BE IN COMPLIANCE WITH THE NFPA STANDARD ON WATER SUPPLIES FOR SUBURBAN AND RURAL FIRE FIGHTING, LATEST EDITION.
3. MAINTENANCE OF THE CISTERN, INCLUDING FILLING WITH WATER, SHALL BE THE RESPONSIBILITY OF THE FOREST LANE SUBDIVISION HOME OWNERS ASSOCIATION.
4. THE CISTERN CAPACITY SHALL BE A MINIMUM OF 10,000 GALLONS.
5. SHOP DRAWINGS FOR THE CISTERN MUST BE SUBMITTED TO EAST GREENWICH FIRE DEPARTMENT FOR APPROVAL PRIOR TO ORDERING ANY MATERIALS.
6. CISTERN TANK JOINTS SHALL BE SEALED WITH BUTYL RUBBER JOINT SEAL AND WRAPPED WITH 8" WATERSTOP. EXTERIOR SURFACES TO BE LOCATED BELOW GROUND SHALL BE COATED WITH BITUMINOUS WATERPROOFING.
7. EXTERIOR/ABOVE GRADE PORTIONS OF THE SUCTION PIPE SHALL BE PRIMED AND PAINTED RED. EXTERIOR/ABOVE GRADE PORTION OF THE FILL PIPE AND VENT PIPE SHALL BE PRIMED AND PAINTED GREEN. PAINT SHALL BE HIGH QUALITY EXTERIOR GRADE GLOSS ENAMEL.
8. THE FILLER PIPE SHALL HAVE ONE 4" DIAMETER STORZ COUPLING WITH A CAP.
9. THE SUCTION PIPE SHALL HAVE A 4.5" NATIONAL STANDARD MALE THREAD CONNECTION WITH A CAP. VERTICAL DISTANCE FROM BOTTOM OF SUCTION PIPE RISER TO THE SUCTION PIPE CONNECTION CAN NOT EXCEED 14 FEET.
10. THE ENTIRE CISTERN ASSEMBLY SHALL BE COMPLETED AND INSPECTED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO BACKFILL.
11. THE CISTERN SHALL BE DESIGN TO RESIST BUOYANCY FORCES FROM GROUNDWATER WHEN EMPTY.
12. ALL CONSTRUCTION, BACKFILL, GRADING AND MATERIALS SHALL BE IN ACCORDANCE WITH PROPER CONSTRUCTION PRACTICES AND ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.
13. ALL HORIZONTAL SUCTION PIPING SHALL SLOPE SLIGHTLY UPHILL TOWARDS THE CONNECTION FITTING.
14. THE AUTHORITY HAVING JURISDICTION IS THE EAST GREENWICH FIRE DEPARTMENT.



TYPICAL ELJEN GEOTEXTILE SAND FILTER (GSF) SECTION
NOT TO SCALE



TYPICAL OWTS SYSTEM PROFILE
NOT TO SCALE

DESIGN FLOW

USE	DESIGN UNITS	UNIT FLOW RATE (gpd/unit)	DESIGN FLOW (gpd)
4 BEDROOM HOUSE	PER BEDROOM	115 gpd	460 gpd

SEPTIC TANK SIZING WITH NO GARBAGE GRINDER
REQUIRED SIZE: 1,500 GALLON TANK

LEACHING SYSTEM SIZING

TYPE OF SYSTEM: DISPOSAL TRENCH: ELJEN GSF SYSTEM WITH 6" DEPTH OF SAND AND 4" TOTAL WIDTH

EFFECTIVE AREA PER LINEAR FOOT: 7 S.F./FOOT OR 28 S.F./UNIT
DESIGN LOADING RATE = 0.61 GALS./S.F./DAY (SOIL CATEGORY 9M)

MIN. LEACHING AREA REQUIRED FOR 4 BEDROOM = 460 GPD / (0.61 GAL./S.F./DAY) = 754 S.F.
TOTAL ELJEN GSF L.F. REQUIRED = 754 S.F. / 7 S.F./L.F. = 108 L.F.

USE 2 ROWS OF 36 LF WITH 40 LF END TRENCH = 112 L.F. = 9 UNITS/ROW
28 UNITS TOTAL
LEACHING AREA PROVIDED = 112 L.F. x 7 S.F./L.F. = 784 S.F.

ONSITE WASTEWATER TREATMENT SYSTEM NOTES

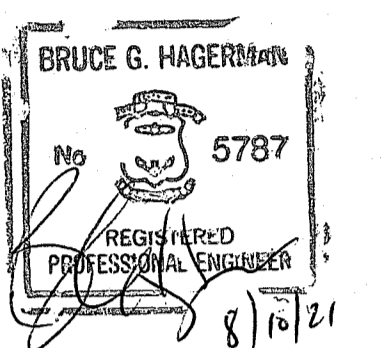
1. REMOVE TOPSOIL (A HORIZON) AND SUBSOIL (B HORIZON) AND ANY UNDESIRABLES FROM THE TRENCH AND ALL TOPSOIL WITHIN 10' OF THE TRENCH SHALL BE REMOVED. THE SUBSOIL (B HORIZON) BETWEEN TRENCHES SHALL REMAIN UNDISTURBED. REMOVE ALL TREES AND BRUSH AROUND SYSTEM PLUS (10) FEET.
2. NO VEHICULAR TRAFFIC IS ALLOWED ON LEACH FIELD.
3. THERE ARE NO KNOWN EXISTING OR PROPOSED PRIVATE WELLS WITHIN 200' OF THE SYSTEM AND THERE ARE NO KNOWN EXISTING OR PROPOSED PUBLIC WELLS WITHIN 500'.
4. MINIMUM ELEVATION OF TRENCH INVERT TO BE MAINTAINED WITHIN 10 FEET OF TRENCHES. INSTALL OWTS GRAVEL IN TRENCH AND ADJACENT TO TRENCHES TO ESTABLISH PROPOSED GRADES.
5. SURFACE RUNOFF TO BE DIVERTED FROM SYSTEM.
6. EACH LOT SHALL HAVE AN OWTS DESIGN SUBMITTED TO AND APPROVED BY THE RIDEM OWTS OFFICE.
7. ONLY AFTER THE OWTS APPROVAL AND COORDINATION WITH THE DESIGN ENGINEER, THE LICENSED INSTALLER MUST FOLLOW THE R.I.D.E.M. OWTS RULES AND REGULATIONS OUTLINED IN TITLE 250 - DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, CHAPTER 150 - WATER RESOURCES, SUBCHAPTER 10 - WASTEWATER & STORMWATER, PART 6 - RULES ESTABLISHING MINIMUM STANDARDS RELATING TO LOCATION, DESIGN, CONSTRUCTION AND MAINTENANCE OF ONSITE WASTEWATER TREATMENT SYSTEMS, 11/25/18.
8. NO KNOWN DRAINS, PROPOSED DRAINS OR UNDERDRAINS DISCHARGING INTO A SURFACE WATER SUPPLY ARE WITHIN 100' OF LEACH FIELD.
9. ALL DISTURBED AREAS ARE TO RECEIVE 4" OF LOAM & SEED, UNLESS OTHERWISE NOTED.
10. THERE ARE NO WETLANDS WITHIN 50' OF THE PROPOSED OWTS. ALL KNOWN WATERCOURSES, WETLANDS, DRAINS AND STORMWATER MANAGEMENT SYSTEMS WITHIN 200' OF THE PROPOSED OWTS ARE SHOWN.
11. GARBAGE DISPOSAL GRINDERS ARE NOT ALLOWED FOR HOUSES.
12. THERE ARE NO PUBLIC SEWERS WITHIN 200' OF THE PARCEL.
13. THE SITE IS NOT WITHIN THE CRITICAL RESOURCE AREA AS DEFINED BY SECTION 6.42-6.45 OF THE OWTS RULES AND REGULATIONS. THE NEAREST CRITICAL RESOURCE AREA IS THE PROVIDENCE WATER SUPPLY PUBLIC WATERSHED IS 1.5 MILES NORTH OF THE SITE.
14. THE SITE IS NOT WITHIN THE WATERSHED OF THE PUBLIC WATER SUPPLY AS DEFINED IN SECTION 6.44, AND DRAINS WITHIN THE VICINITY DO NOT DISCHARGE DIRECTLY OR INDIRECTLY TO A CRITICAL RESOURCE AREA IDENTIFIED IN SECTION 6.42.
15. NO OWTS CONSTRUCTION SHALL BEGIN UNTIL AUTHORIZED BY R.I.D.E.M. AND THE OWTS DESIGNER.

TYPICAL OWTS DETAILS
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
SEP 24 2021 FILE # 21-0152
DATED
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Nancy J. Freeman

Crossman Engineering
Rhode Island: 151 Centerville Road, Warwick, RI 02886, Phone: (401) 738-5660
Massachusetts: 103 Commonwealth Avenue, North Attleboro, MA 02763, Phone: (508) 695-1700
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PROJECT TITLE:
FOREST LANE SUBDIVISION
35 & 55 FOREST LANE
MAP 19, PLAT 19, LOTS 1 AND 2
EAST GREENWICH, R.I.

PREPARED FOR:
AUG 11 2021
Office of Water Resources

GDUBON PROPERTIES, LLC
197 PINCREST DRIVE
NORTH KINGSTOWN, R.I. 02852

DRAWING TITLE:
**MISCELLANEOUS DETAIL
PLAN No. 5**

DATE: MAY 2021 SCALE: AS NOTED

DWG. NAME:
2327-C9.5-DETAIL5.dwg

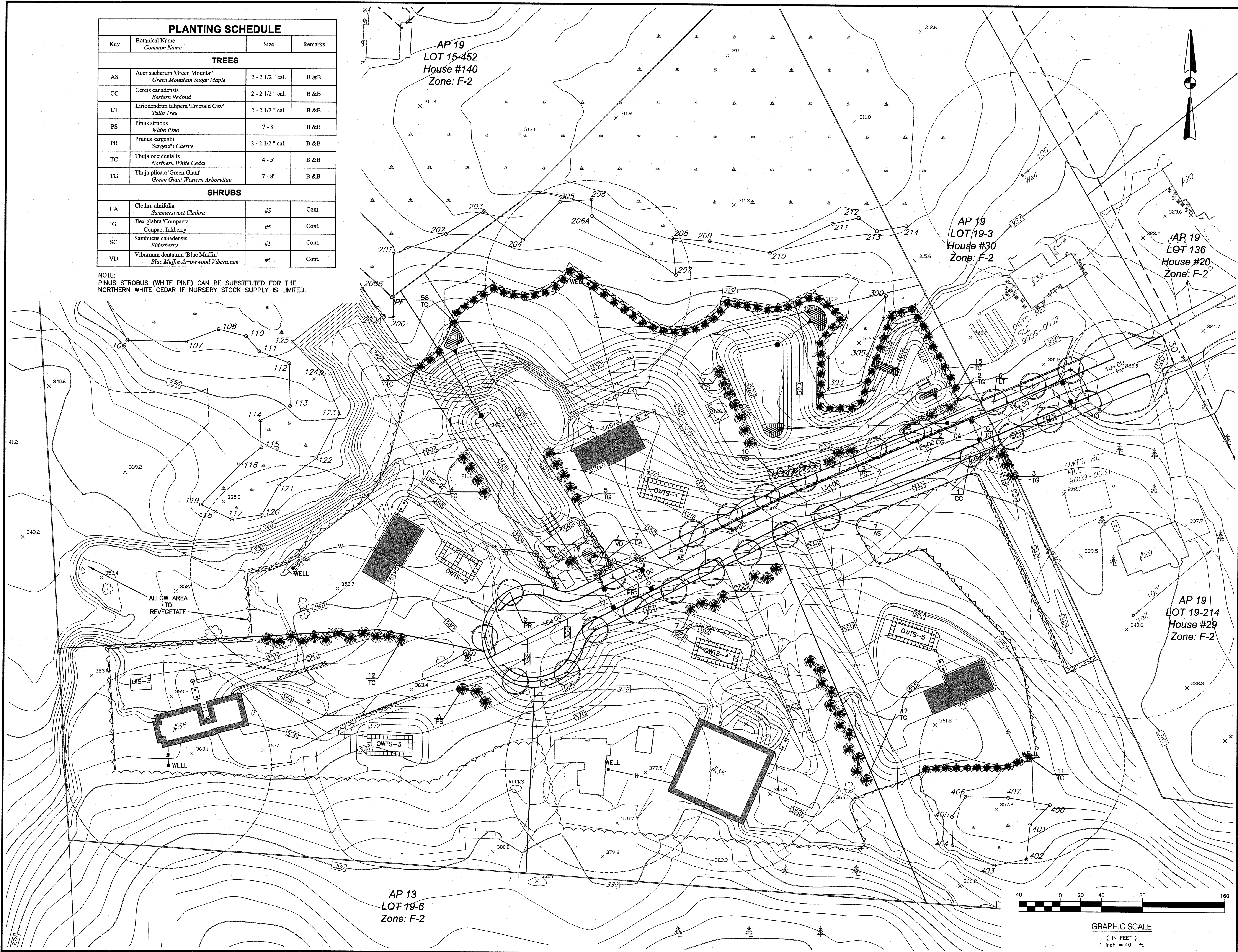
REVISIONS

NUMBER	REMARKS	DATE
1	RIDEM COMMENTS	7/8/21
2	RIDEM FWV COMMENTS	8/6/21

DRAWING NUMBER
C9.5
SHEET: 14 OF 16

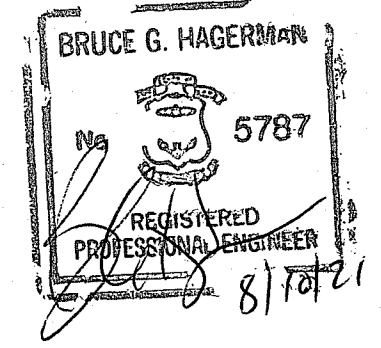
PLANTING SCHEDULE			
Key	Botanical Name Common Name	Size	Remarks
TREES			
AS	Acer saccharum 'Green Mountain' Green Mountain Sugar Maple	2 - 2 1/2" cal.	B & B
CC	Cercis canadensis Eastern Redbud	2 - 2 1/2" cal.	B & B
LT	Liriodendron tulipifera 'Emerald City' Tulip Tree	2 - 2 1/2" cal.	B & B
PS	Pinus strobus White Pine	7 - 8'	B & B
PR	Prunus sargentii Sargent's Cherry	2 - 2 1/2" cal.	B & B
TC	Thuja occidentalis Northern White Cedar	4 - 5'	B & B
TG	Thuja plicata 'Green Giant' Green Giant Western Arborvitae	7 - 8'	B & B
SHRUBS			
CA	Clethra alnifolia Summersweet Clethra	#5	Cont.
IG	Ilex glabra 'Compacta' Compact Inkberry	#5	Cont.
SC	Sambucus canadensis Elderberry	#3	Cont.
VD	Viburnum dentatum 'Blue Muffin' Blue Muffin Arrowwood Viburnum	#5	Cont.

NOTE:
PINUS STROBUS (WHITE PINE) CAN BE SUBSTITUTED FOR THE
NORTHERN WHITE CEDAR IF NURSERY STOCK SUPPLY IS LIMITED.



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 OFFICE OF WATER RESOURCES
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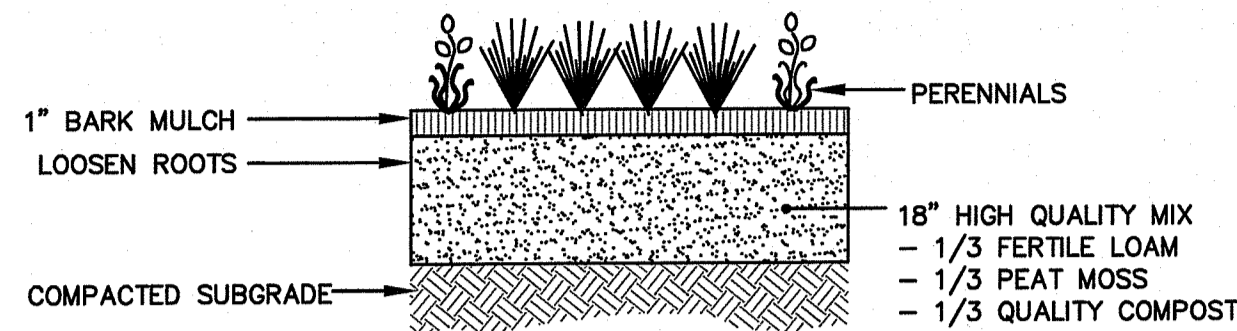
DRAWING TITLE:
LANDSCAPE PLAN

DATE: MAY 2021 SCALE: 1"=40'

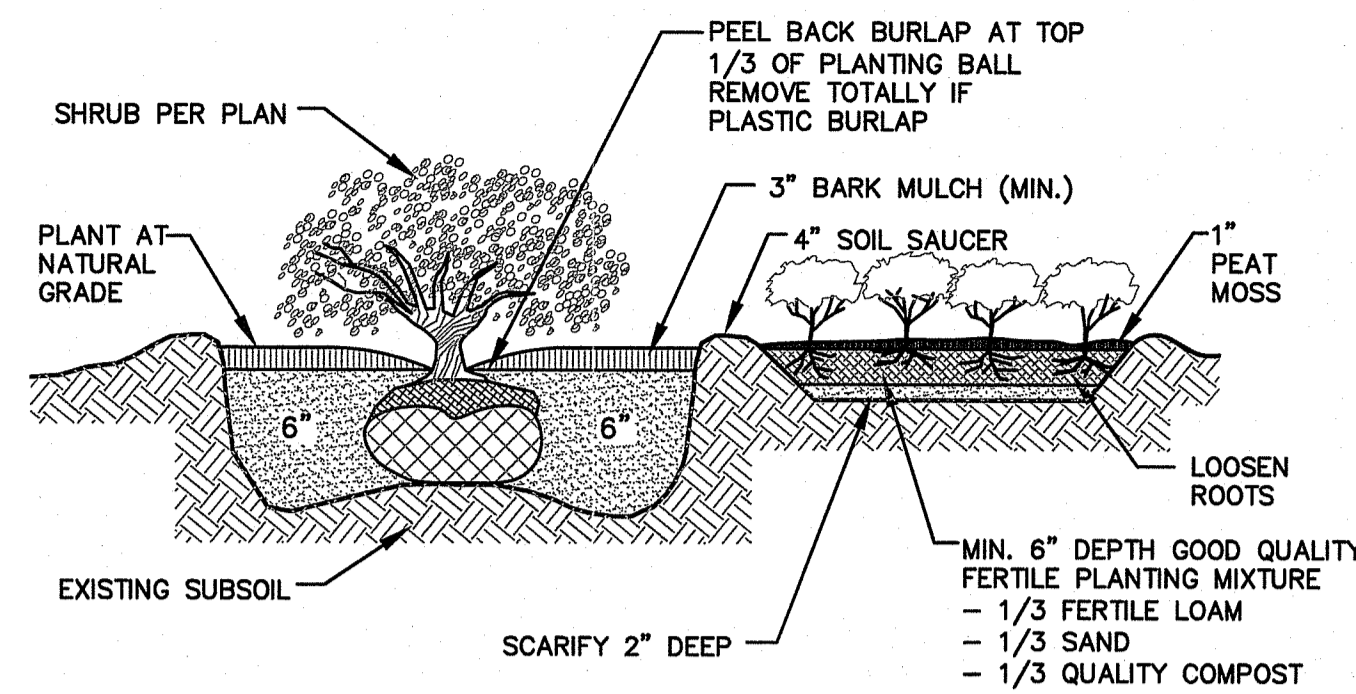
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REVISIONS	NUMBER	REMARKS	DATE
△	1	RIDEM COMMENTS	7/9/21
△	2	RIDEM FWV COMMENTS	8/6/21

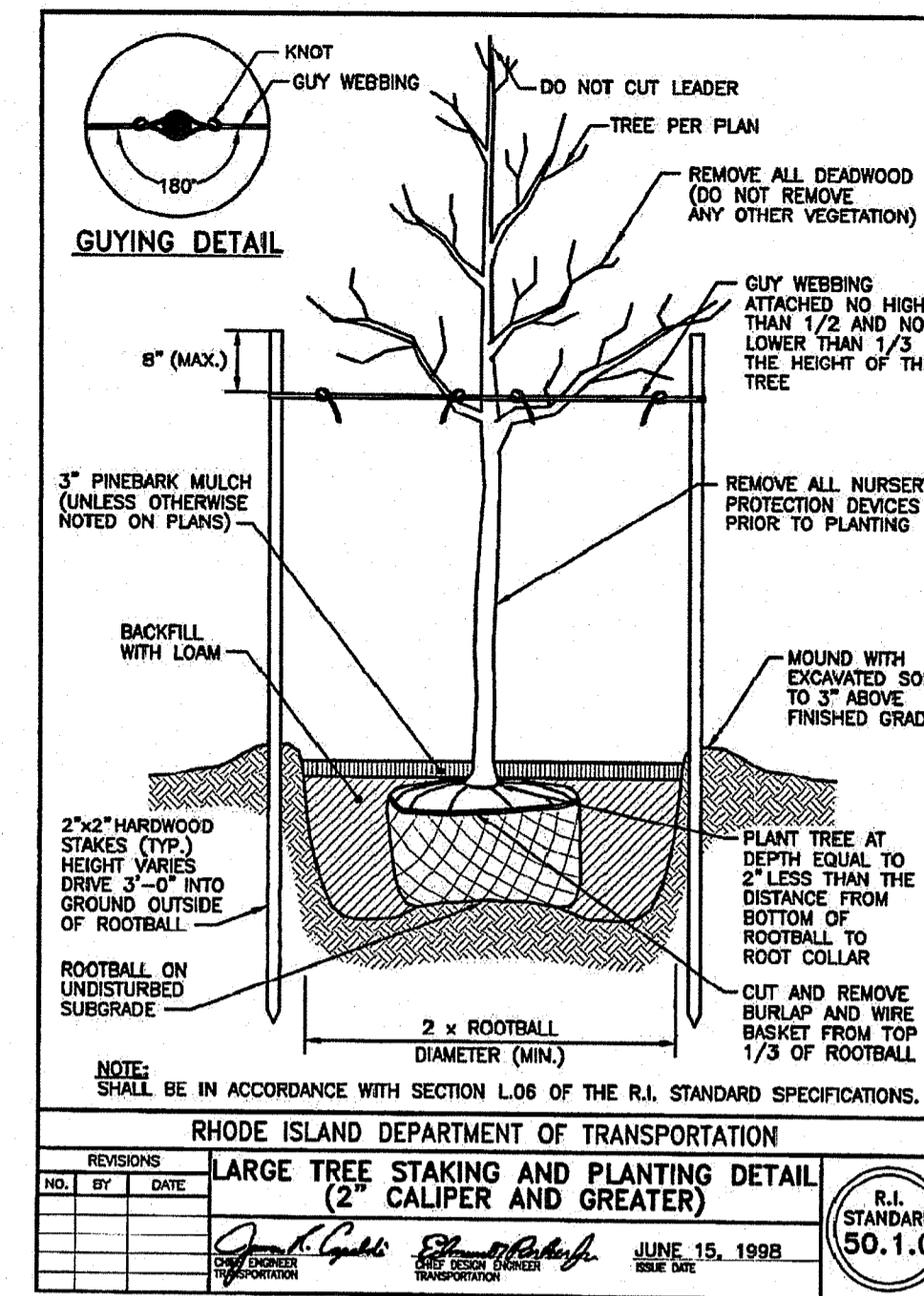
DRAWING NUMBER:
L1.0
 SHEET: 15 OF 16



PERENNIAL PLANTING DETAIL
NOT TO SCALE

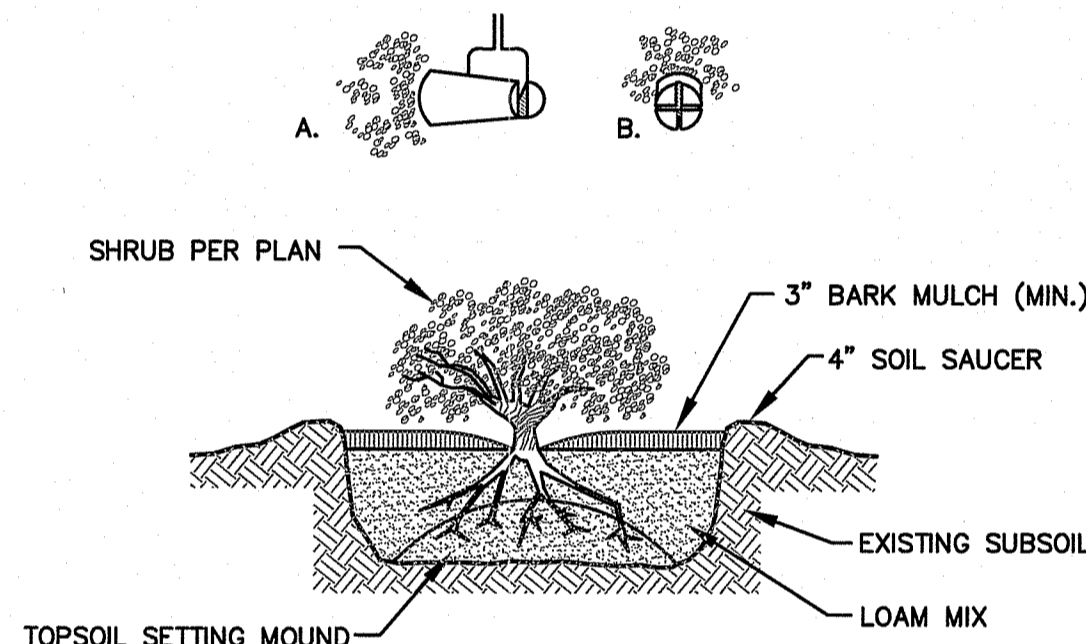


SHRUB and GROUND COVER PLANTING DETAIL
NOT TO SCALE

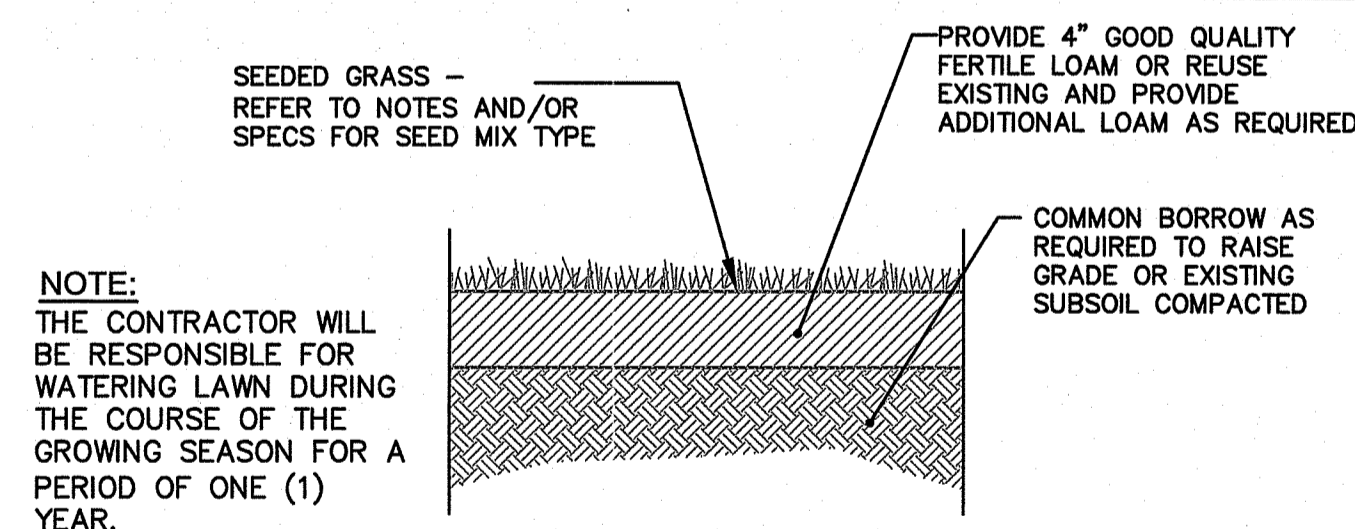


LARGE TREE STAKING AND PLANTING DETAIL
(2" CALIPER AND GREATER)

NOTE:
CUT APART ROOTBALL WITHOUT SEVERING MAIN ROOTS.



CONTAINER GROWN PLANTING DETAIL
NOT TO SCALE



NOTE:
THE CONTRACTOR WILL BE RESPONSIBLE FOR WATERING LAWN DURING THE COURSE OF THE GROWING SEASON FOR A PERIOD OF ONE (1) YEAR.

SEED MIX No. 1
(SLOPES)

TYPE	% BY WEIGHT
CREeping RED FESCUE	70
ASTORIA BENTGRASS	5
BIRDSFOOT TREFLOIL	15
PERENNIAL RYE GRASS	10

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 2
(MOWED/LAWN AREAS)

TYPE	% BY WEIGHT
NASSAU KENT BLUE	60
JAMESTOWN CHEWINGS FESCUE	20
PALMER PERENNIAL RYE GRASS	20

APPLICATION RATE = 200 lbs. / ACRE

SEED MIX No. 3
(STORMWATER BASIN AREAS)

LOAM-SEED DETAIL
NOT TO SCALE

SEEDING NOTES

- LOAM SHALL BE SPREAD TO A MINIMUM DEPTH OF 4" OVER ALL AREAS DESIGNATED ON PLANS.
- SHAPE AND SMOOTH THE SURFACE TO THE LINES AND GRADES AS SHOWN ON PLANS.
- FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN A SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 3 TO 4 INCHES OF THE PLANTING SOIL. APPLY AT THE RATE OF 8 POUNDS PER 1,000 SQUARE FEET AT SEEDING.
- LIME: SPREAD EVENLY AND WORK INTO THE SOIL DURING PREPARATION OF SEED BED AT THE RATE OF ONE TON PER ACRE. INCORPORATE INTO THE SOIL BY DICING OR OTHER APPROVED METHOD. DISTRIBUTE LIME UNIFORMLY AND WORK INTO TOP 4 INCHES OF TOP SOIL (MINIMUM) AND UNIFORMLY BLEND BY DICING OR ROTOTILLING.
- APPLICATION OF SEED:
 - A. RATE OF APPLICATION OF SEED SHALL BE 8 POUNDS PER 1,000 SQUARE FEET OR AS INDICATED ON PLANS.
 - B. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS, AND ONLY DURING THE FOLLOWING DATES:
 SPRING SEEDING: MARCH 15 TO MAY 31
 FALL SEEDING: AUGUST 15 TO OCTOBER 15
 - C. THE CONTRACTOR SHALL KEEP ALL SEEDED AREAS WATERED AND IN GOOD CONDITION, RESEEDING IF AND WHEN NECESSARY FOR AN 8 WEEK PERIOD OR UNTIL A GOOD, HEALTHY, UNIFORM GROWTH IS ESTABLISHED OVER THE ENTIRE AREA. THE CONTRACTOR SHALL ALSO MAINTAIN THESE AREAS IN AN APPROVED CONDITION UNTIL PROVISIONAL ACCEPTANCE.
 - D. DURING THIS PERIOD, WATER TURF AS NECESSARY TO MAINTAIN AN ADEQUATE SUPPLY OF MOISTURE WITHIN THE ROOT ZONE. AN ADEQUATE SUPPLY OF MOISTURE IS EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK THAT IS DELIVERED AT WEEKLY INTERVALS IN THE FORM OF NATURAL RAIN OR IS AUGMENTED AS REQUIRED BY PERIODIC WATERING.
 - E. OVERSEED WHEN NECESSARY TO PROMOTE GRASS GROWTH.
 - F. REPLANT AREAS VOID OF TURF ONE SQUARE FOOT OR LARGER.
- SEED:
 - a. SEED ALL AREAS DESIGNATED ON PLAN AS WELL AS ALL DISTURBED EXISTING AREAS WITH THE FOLLOWING SEED MIX:

LANDSCAPE CONSTRUCTION NOTES

- FURNISH AND INSTALL ALL PLANTS SHOWN ON THE DRAWINGS SPECIFIED HEREIN, AND IN THE QUANTITIES LISTED ON THE PLANT LIST. NO SUBSTITUTIONS WILL BE PERMITTED, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
- LOAM TO BE SCREENED, GOOD QUALITY, FERTILE, FREE OF WEEDS, STICKS, STONES OVER 3/4", AND ROOTS. SPREAD TO A MINIMUM OF 6" OVER ALL PLANTED AREAS.
- BIO-RETENTION AREAS-PLANTING SOIL AND MULCH:
 LOAMY SAND TO A SANDY LOAM-80% SAND <2% SILT, <2% WELL AGED GRADED COMPOST (25% OF SOIL MIX). WELL AGED, AERATED DARK BROWN HARD-WOOD MULCH (AGED 6 MONTHS).
- NURSERY STOCK SHALL MEET THE STANDARDS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION AS TO GRADING AND QUALITY.
- ONLY NURSERY-GROWN PLANTS, GROWN IN ACCORDANCE WITH ACCEPTED HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO (2) YEARS, WILL BE ACCEPTED.
- SET PLANTS PLUMB AND AT A LEVEL THAT AFTER SETTLEMENT THEY BEAR THE SAME RELATION TO THE SURROUNDING GROUND AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. SETTLE BACKFILL MATERIAL FOR PLANTS, THOROUGHLY AND PROPERLY BY FIRING OR TAMPING. FORM SAUCERS, CAPABLE OF HOLDING WATER ABOUT INDIVIDUAL PLANTS, BY PLACING RIDGES OF PLANTING SOIL AROUND EACH.
- STAKE ALL TREES OVER 5 FEET AS SHOWN ON PLANS. REMOVE STAKES AT THE END OF THE GUARANTEE PERIOD.
- WATERING: WATER ALL PLANTS WITHIN 48 HOURS AFTER PLANTING. IF CONDITIONS WARRANT, AND AS MANY TIMES THEREAFTER TO SUSTAIN HEALTHY CONDITIONS UNTIL LANDSCAPE INSTALLATION IS COMPLETED. SATURATE THE SOIL AROUND EACH PLANT THOROUGHLY AT EACH WATERING.
- PRUNING: PRUNE PLANTS, AS DIRECTED BY OWNER, AT THE PROJECT SITE BEFORE OR IMMEDIATELY AFTER PLANTING IN ACCORDANCE WITH THE BEST HORTICULTURAL PRACTICE. CUT BROKEN, DEAD OR INJURED BRANCHES IMMEDIATELY ABOVE THE STEM COLLAR ON THE TRUNK OR LIMB. PRUNE ALL BROKEN ROOTS ON THE PLANT SIDE OF THE BREAK. PAINT CUTS OVER 3/4" IN DIAMETER WITH TREE WOUND PAINT. PRUNING SHALL NOT DEFORM OR OTHERWISE DESTROY THE TYPICAL SHAPE OR SYMMETRY OF THE PLANT, AND SHALL NOT REDUCE THE HEIGHT BY MORE THAN ONE-THIRD. DO NOT CUT BACK THE LEADER OF THE PLANT UNLESS DIRECTED BY THE LANDSCAPE ARCHITECT.
- FERTILIZING: FERTILIZE SHRUB BEDS WITH 10-6-4 FERTILIZER BROADCAST AT A RATE OF THREE POUNDS PER 100 SQUARE FEET OF SURFACE AREA BROADCAST. APPLY THE FERTILIZER UNIFORMLY TO THE SURFACE BEDS AND WORK INTO THE UPPER TWO INCHES OF SOIL. FERTILIZE INDIVIDUAL TREES AT A RATE OF ONE AGRIFORM PELLET PER INCH OF TRUNK DIAMETER (FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS). APPLY A SECOND APPLICATION OF FERTILIZER TO ALL PLANT ITEMS AT THE SAME SPECIFIED RATES OVER THE MULCH AT THE END OF AN EIGHT WEEK PERIOD.
- LIMING: ADD POWDERED LIME EVERY SIX MONTHS - OR SLOW RELEASE GRANULAR LIME-AS PER MANUFACTURER'S INSTRUCTION.
- MULCHING: WITHIN A 72 HOUR PERIOD AFTER PLANTING, COVER ALL PLANTED AREAS WITH 3" DARK HEMLOCK MULCH. NO RED OR DYED MULCH IS TO BE USED. MULCH SHOULD BE PULLED ONE INCH AWAY FROM PLANT TRUNK OR STEM, AND NOT ALLOWED TO REST DIRECTLY AGAINST THE TRUNK OR STEM.
- GUARANTEE: ALL PLANTS FURNISHED BY THE CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER PRELIMINARY INSPECTION AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ALL DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED AT ONCE BY THE CONTRACTOR, TREE OF CHARGE. CONTRACTOR SHALL PROVIDE WRITTEN GUARANTEE PRIOR TO CONSTRUCTION COMPLETION.
- CALIPER MEASUREMENTS FOR ALL NEW PLANT STOCK TO BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GRADE FOR TREES OVER FOUR (4) INCHES IN CALIPER.
- ALL TREES SHALL BE LIMBED TO A MINIMUM OF SEVEN (7) FEET ABOVE FINISHED GRADE WHEN TREES ARE LOCATED WITHIN VEHICULAR OR PEDESTRIAN TRAVEL WAYS.
- THE CONTRACTOR SHALL REMOVE ALL STAKES, GUY WIRES AND TAPE FROM TREES AFTER A PERIOD OF ONE YEAR.

STORMWATER BASIN SEED MIX (SEED MIX NO. 3)

- APPLICATION RATE = 15-25 LBS. / ACRE
(SEASONALLY FLOODED MIX)
(BASIN BOTTOM AREA)
- 20% FOX SEDGE, PA ECOTYPE (CAREX VULPINOIDEA, PA ECOTYPE)
 - 16% VIRGINIA WILD RYE, PA ECOTYPE (ELYMUS VIRGINICUS, PA ECOTYPE)
 - 15% RIVERBANK WILD RYE, PA ECOTYPE (ELYMUS RIPARIUS, PA ECOTYPE)
 - 15% JAPANESE MILLET (ECHINOCHLOA CRUSGALLI VAR. FRUMENTACEA)
 - 15% DEER TONGUE, "TIOGA" (PANICUM CLANDESTINUM (DICANTHELIUM C.), "TIOGA")
 - 9% BLUNT BROOM SEDGE, PA ECOTYPE (CAREX SCOPARIA, PA ECOTYPE)
 - 5% SWITCHGRASS, "CAVE-IN-ROCK" (PANICUM VIRGATUM, "CAVE-IN-ROCK")
 - 2% GREEN BULRUSH, PA ECOTYPE (SCIRPUS ATROVIRENS, PA ECOTYPE)
 - 2% AWL SEDGE, PA ECOTYPE (CAREX STIPATA, PA ECOTYPE)
 - 1% AUTUMN BENTGRASS, APB (AGROSTIS PERENNANS, APB)

TOPSOIL MIX FOR STORMWATER BASINS

PLANTING SOIL SHALL MEET THE BELOW COMPOSITION:

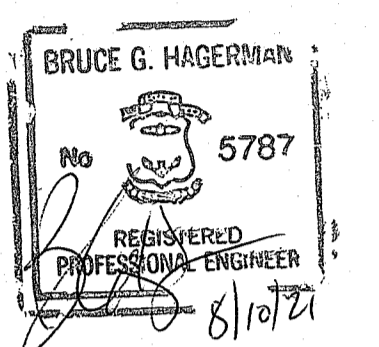
SAND: 85-88%
 SOIL FINES: 8-12% (NO MORE THAN 2% CLAY)
 ORGANIC MATTER: 3-5%

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