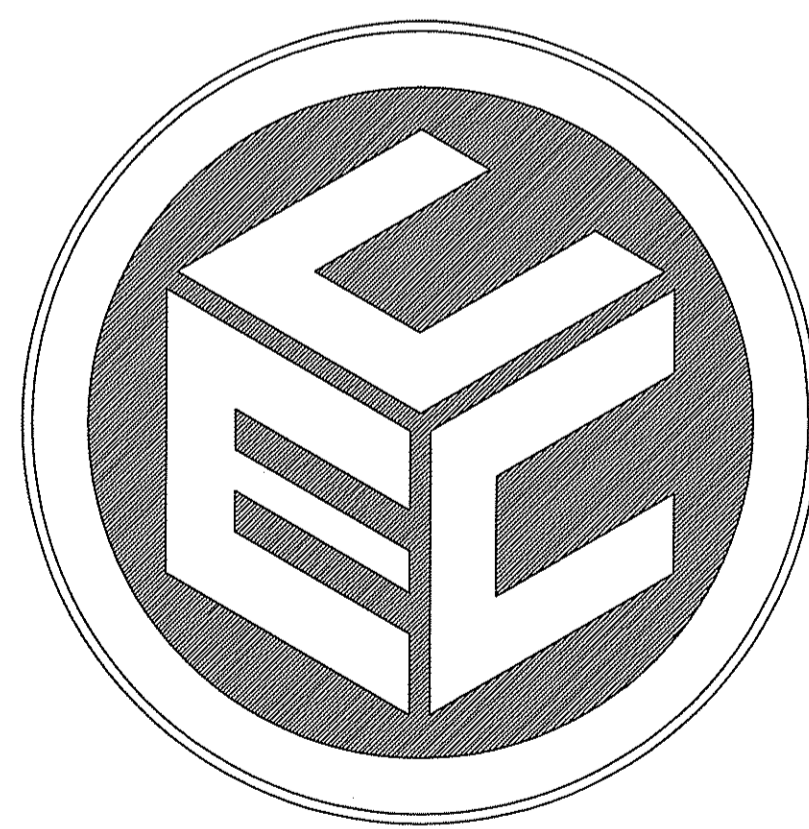


RIDEM SUBMITTAL FINAL PLAN SUBMISSION MINOR SUBDIVISION

FOR SPENCER'S CORNER ESTATES AP 14A LOT 16

on
DIVISION STREET & SHIPPEETOWN ROAD
in
EAST GREENWICH, RHODE ISLAND

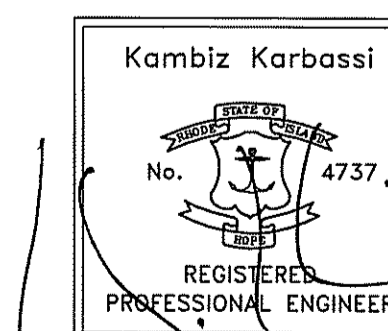
OWNER
EDWARD H. NESTER
1808 NEW LONDON TURNPIKE
WEST WARWICK, RI 02893



PREPARED BY:
COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.

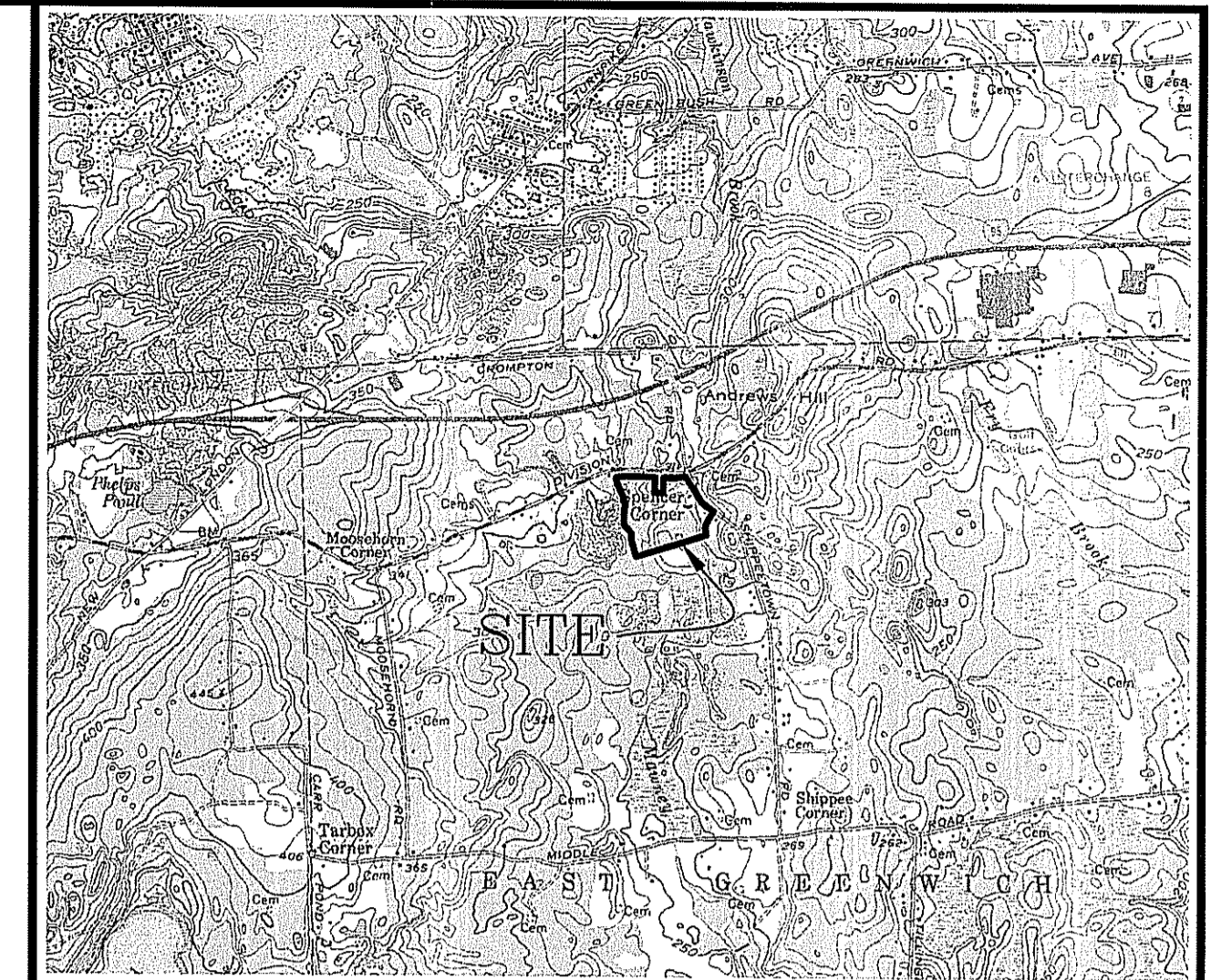
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
(401) 273-6600

JUNE 1, 2013
REVISED JULY 1, 2013



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THIS LETTER OF APPROVAL
DATED JUNE 1, 2013 FILE # 13-0073
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

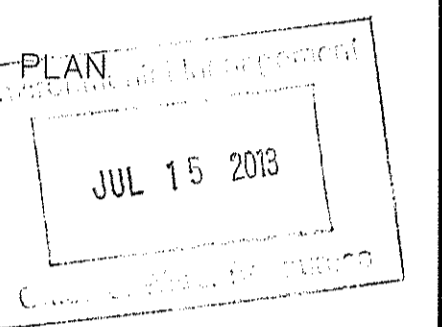
Master D. Wood



LOCUS MAP
SCALE: 1"=2,500'

LIST OF DRAWINGS

1. TITLE SHEET
2. AERIAL OVERLAY & 200 FOOT RADIUS PLAN
3. EXISTING CONDITIONS & SOILS PLAN
4. SITE DEVELOPMENT PLAN
5. CONSTRUCTION DETAILS
6. CONSTRUCTION DETAILS
7. OPERATION & MAINTENANCE PLAN



ASSESSORS REFERENCE:

A.P. 14A LOT 16

PARCEL DATA:

AREA=1,105,183 S.F. (25.37 ACRES)

ZONING REFERENCE: F-2

MINIMUM LOT AREA = 2 ACRES (87,120 S.F.)
MINIMUM BUILDABLE AREA = 42,750 S.F.
MINIMUM FRONTAGE = 150'
MINIMUM WIDTH AT THE FRONT YARD SETBACK LINE MUST BE 75% OF THE REQUIRED FRONTAGE. LOT FRONTAGES ON APPROVED CUL-DE-SACS MAY BE NO LESS THAN 60 FEET IN ALL ZONES.
MINIMUM FRONT YARD REQUIREMENT=60'
MINIMUM SIDE YARD REQUIREMENT=30'
MINIMUM REAR YARD REQUIREMENT=45'

PARCEL NOTES:

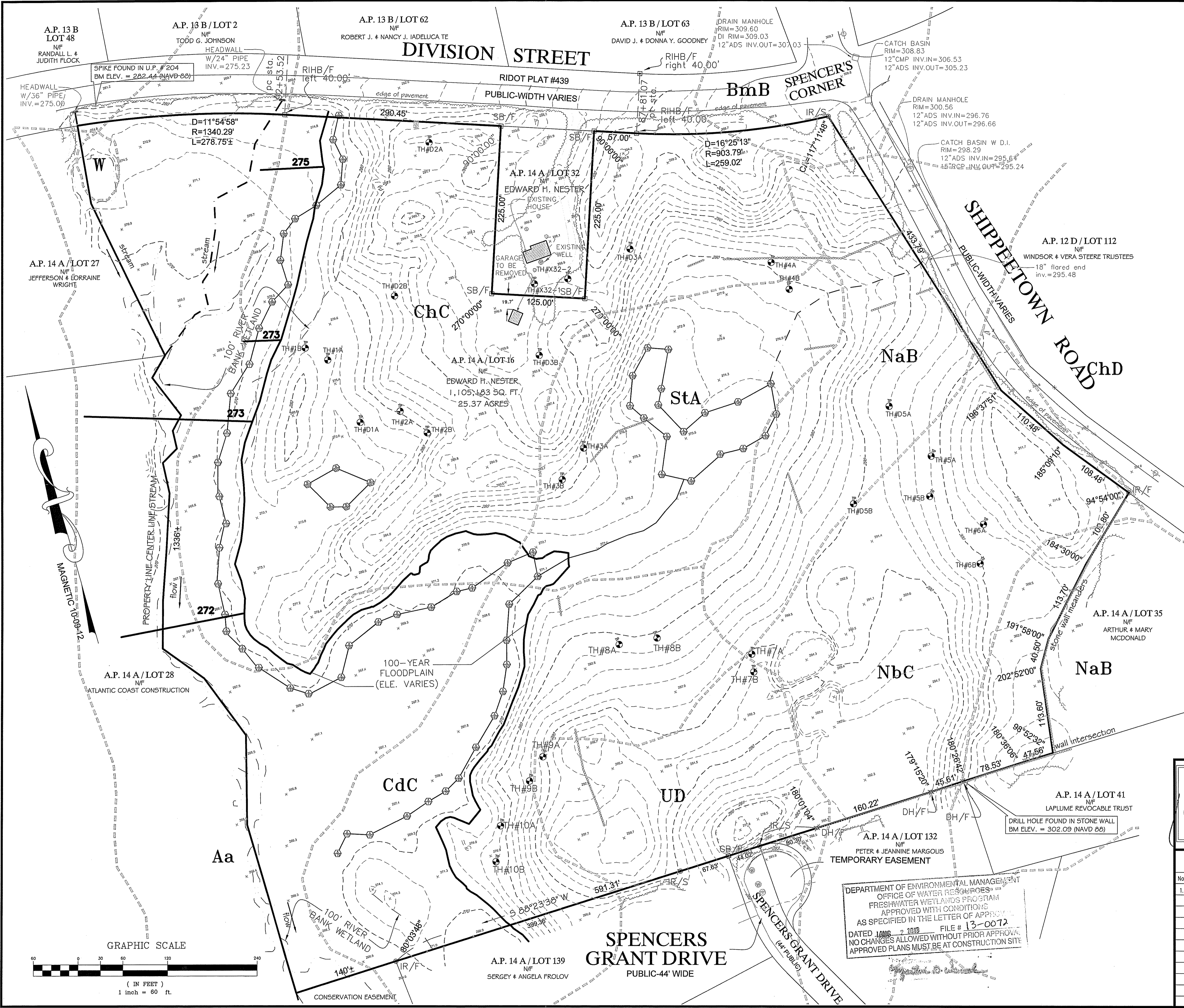
1. ALL LAND LOCATED WEST OF SHIPPEETOWN ROAD AND WITHIN ONE HALF MILE OF THE SUBJECT SITE IS LOCATED WITHIN THE F-2 ZONING DISTRICT. ALL LAND LOCATED EAST OF SHIPPEETOWN ROAD AND WITHIN ONE HALF MILE OF THE SUBJECT SITE IS LOCATED WITHIN THE F/F1 ZONING DISTRICT.
2. THE SITE IS LOCATED WITHIN THE HUNT RIVER DRAINAGE BASIN.
3. THE SITE IS NOT LOCATED WITHIN ANY OF THE FOLLOWING: GROUNDWATER RECHARGE AREAS, GROUNDWATER RESERVOIRS, WELLHEAD PROTECTION AREAS AND NATURAL HERITAGE AREAS. IN ADDITION THERE ARE NO PUBLIC DRINKING WATER RESERVOIRS, GROUNDWATER RESERVOIRS, GROUNDWATER RECHARGE AREAS, WELLHEAD PROTECTION AREAS AND PUBLIC WELLS LOCATED WITHIN A ONE-HALF MILE RADIUS OF THE SITE AS INDICATED BY THE RHODE ISLAND GIS WEB SITE.

FLOOD PLAIN NOTE:

THIS PROPERTY CONTAINS LAND AREA WITHIN FLOOD ZONE AE ASSOCIATED WITH THE MAWNEY BROOK IDENTIFIED WITH 100 YEAR FLOOD ELEVATIONS RANGING FROM 284' ALONG THE NORTHERLY EDGE OF THE DIVISION STREET TO APPROX. ELEVATION 271' AT THE SOUTHWESTERLY PROPERTY LIMITS AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM), TOWN OF EAST GREENWICH RHODE ISLAND, KENT COUNTY, MAP 44003C0117G & 44003C0119G EFFECTIVE DATE: DECEMBER 3, 2010.

REFERENCES:

1. SURVEY PLAN A.P. 68 - 14A/LOT 16 DIVISION STREET & SHIPPEETOWN ROAD EAST GREENWICH, R.I. SCALE: 1"=60' DATE: OCTOBER 11, 2012
PREPARED FOR: JAG CONSTRUCTION
PREPARED BY: OCEAN STATE PLANNERS, INC.
2. TOPOGRAPHIC SURVEY A.P. 68 - 14A/LOT 16 DIVISION STREET & SHIPPEETOWN ROAD, EAST GREENWICH, R.I. SCALE: 1"=60'
DATE: JANUARY 4, 2013
PREPARED FOR: JAG CONSTRUCTION
PREPARED BY: OCEAN STATE PLANNERS, INC.
3. RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT FRESHWATER WETLAND PROGRAM VERIFICATION OF WETLAND EDGE APPLICATION No. 12-0211 DATED: JANUARY 31, 2013.
4. RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT ON-SITE WASTE WATER TREATMENT PROGRAM SUBDIVISION SUITABILITY No. S09-137 DATED: 2/18/13.



- REFERENCES:**
1. SURVEY PLAN A.P. 68 - 14A/LOT 16 DIVISION STREET & SHIPPEETOWN ROAD EAST GREENWICH, R.I. SCALE: 1"=60' DATE: OCTOBER 11, 2012 PREPARED FOR: JAG CONSTRUCTION PREPARED BY: OCEAN STATE PLANNERS, INC.
 2. TOPOGRAPHIC SURVEY A.P. 68 - 14A/LOT 16 DIVISION STREET & SHIPPEETOWN ROAD, EAST GREENWICH, R.I. SCALE: 1"=60' DATE: JANUARY 4, 2013 PREPARED FOR: JAG CONSTRUCTION PREPARED BY: OCEAN STATE PLANNERS, INC.
 3. RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT FRESHWATER WETLAND PROGRAM VERIFICATION OF WETLAND EDGE APPLICATION No. 12-0211 DATED: JANUARY 31, 2013.

FLOOD PLAIN NOTE:
 THIS PROPERTY CONTAINS LAND AREA WITHIN FLOOD ZONE AE ASSOCIATED WITH THE MAWNEY BROOK IDENTIFIED WITH 100 YEAR FLOOD ELEVATIONS RANGING FROM 284' ALONG THE NORTHERLY EDGE OF THE DIVISION STREET TO APPROX. ELEVATION 271' AT THE SOUTHWESTERLY PROPERTY LIMITS AS SHOWN ON FLOOD INSURANCE RATE MAP (FIRM), TOWN OF EAST GREENWICH RHODE ISLAND, KENT COUNTY, MAP 44003C0117G & 44003C0119G EFFECTIVE DATE: DECEMBER 3, 2010.

LEGEND

- SOIL DESIGNATION & BOUNDARY** NaB
- SITE PERIMETER
 - WETLAND FLAGGING
 - RIVER BANK/WETLAND BUFFER
 - STONE WALL
 - FENCE LINE
 - TREE LINE
 - SPOT GRADE
 - CONTOUR LINE
 - IRON ROD SET
 - IRON ROD FOUND
 - DRILL HOLE FOUND
 - STONE BOUND FOUND
 - RI HIGHWAY BOUND FOUND
 - GRANITE BOUND FOUND
 - TEST HOLE
 - 100-YR FLOOD ELEVATION

SOIL DESCRIPTIONS

Aa-Adrian muck. This nearly level, very poorly drained soil is in depressions and small drainageways of glacial till uplands and outwash plains.

BmB-Bridgton silt loam, till substratum, 3 to 8 percent slopes. This gently sloping, well drained to moderately well drained soil is on side slopes and crests of upland hills.

CcC-Canton and Charlton fine sandy loams, 8 to 15 percent slopes. These sloping, well drained soils are on the crests and side slopes of glacial upland hills and ridges.

ChC-Canton and Charlton very stony fine sandy loams, 8 to 15 percent slopes. These sloping, well drained soils are on side slopes of glacial upland hills and ridges. Stones and boulders cover 2 to 10 percent of the surface.

NaB-Narragansett silt loam, 3 to 8 percent slopes. This gently sloping, well drained soil is on the crests and side slopes of glacial till uplands and till plains.

Nbc-Narragansett very stony silt loam, 8 to 15 percent slopes. This sloping, well drained soil is on side slopes of glacial till uplands. Stones and boulders cover 2 to 15 percent of the surface.

Sta-Sutton fine sandy loam, 0 to 3 percent slopes. This nearly level, moderately well drained soil is in depressions of glacial uplands and in low areas that border the uplands.

UD-Udorthents-Urban land complex. This complex consists of moderately well drained to excessively drained soils that have been disturbed by cutting or filling, and areas that are covered by buildings and pavement.

OWNER
 EDWARD H. NESTER
 1808 NEW LONDON TURNPIKE
 WEST WARWICK, RI 02893

**RIDEM SUBMITTAL
 FINAL PLAN SUBMISSION**

Kambiz Korbassi
 No. 737
 REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RHODE ISLAND 02908
 401-273-6600

REVISIONS

No.	DATE	DRWN	CHKD
1.	07/01/13	KAB	KK

MINOR SUBDIVISION
 for
SPENCER'S CORNER ESTATES
 AP 14A LOT 16
 in
 EAST GREENWICH, RHODE ISLAND
EXISTING CONDITIONS & SOILS PLAN

SCALE: 1"=60'	SHEET NO: 3 OF 7
DRAWN BY: JAR	DESIGN BY: JAR
DATE: 6/01/13	CHECKED BY: KK
PROJECT NO.: 12020.00	

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 1/16/2013 FILE # 13-0072
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

O:\12020\12020.00_Shippeetown_Rd - Division St_Survey\Drawings\Site\Current\Drawings\REVISED\WETLANDS-PHASE 1\LOT 14A\01_RIDEM_FINAL_REVISED_6-01-13.dwg

GENERAL NOTES:

1. THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE 2004 STANDARD SPECIFICATIONS MAY BE OBTAINED AT THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION WEB PAGE. THESE SPECIFICATIONS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO.
2. ALL REQUIRED SITE IMPROVEMENTS SHALL BE INSPECTED BY THE TOWN ENGINEER TO ENSURE SATISFACTORY COMPLETION. IN NO CASE SHALL THE INSTALLATION OF ANY IMPROVEMENTS BE STARTED UNTIL PRIOR NOTIFICATION IS GIVEN TO THE TOWN ENGINEER. AT LEAST A 48-HOUR NOTICE SHALL BE GIVEN TO THE TOWN ENGINEER PRIOR TO ANY SUCH START OF CONSTRUCTION. A FINAL INSPECTION OF ALL SITE IMPROVEMENTS, UTILITIES AND GRADING WILL BE MADE TO DETERMINE WHETHER THE WORK IS SATISFACTORY AND IN SUBSTANTIAL AGREEMENT WITH THE APPROVED FINAL CONSTRUCTION DRAWING AND THE TOWN SPECIFICATIONS.
3. LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CHECK AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES BOTH UNDERGROUND AND OVERHEAD. ANY DAMAGE TO EXISTING UTILITIES AS SHOWN OR NOT SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE BORNE BY THE CONTRACTOR. NO EXCAVATION SHALL BE DONE UNTIL ALL INVOLVED UTILITY COMPANIES ARE NOTIFIED 48-HOURS IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY DIG-SAFE (1-800-344-7233) A MINIMUM OF 48 WORKING HOURS EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO THE START OF ANY EXCAVATION AND/OR BLASTING WORK. THE NAME OF THE COMPANY PERFORMING THE EXCAVATION AND/OR BLASTING WORK MUST BE SUPPLIED TO DIG-SAFE, IF IT IS DIFFERENT FROM THE CALLER.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY, BUT NOT LIMITED TO, THE STATE OF RHODE ISLAND, THE FEDERAL GOVERNMENT, THE TOWN OF EAST GREENWICH AND ALL INDIVIDUAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL TEMPORARY SEDIMENTATION AND EROSION CONTROLS.
6. THE INSTALLATION OF THE WATER UTILITY IMPROVEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE KENT COUNTY WATER DEPARTMENT AND THE AMERICAN WATER WORKS STANDARDS.
7. ALL MATERIAL FOR FILL SHALL BE CLEAN AND FREE OF MATTER WHICH COULD POLLUTE ANY DOWN STREAM WATERCOURSE.
8. VERTICAL DATUM: MEAN SEA LEVEL (NAVD 88).
9. FILL MATERIAL SHALL BE COMPACTED IN ONE FOOT (MAXIMUM) LIFTS TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-1587 (MODIFIED PROCTOR TEST).

EROSION CONTROL AND SOIL STABILIZATION PROGRAM:

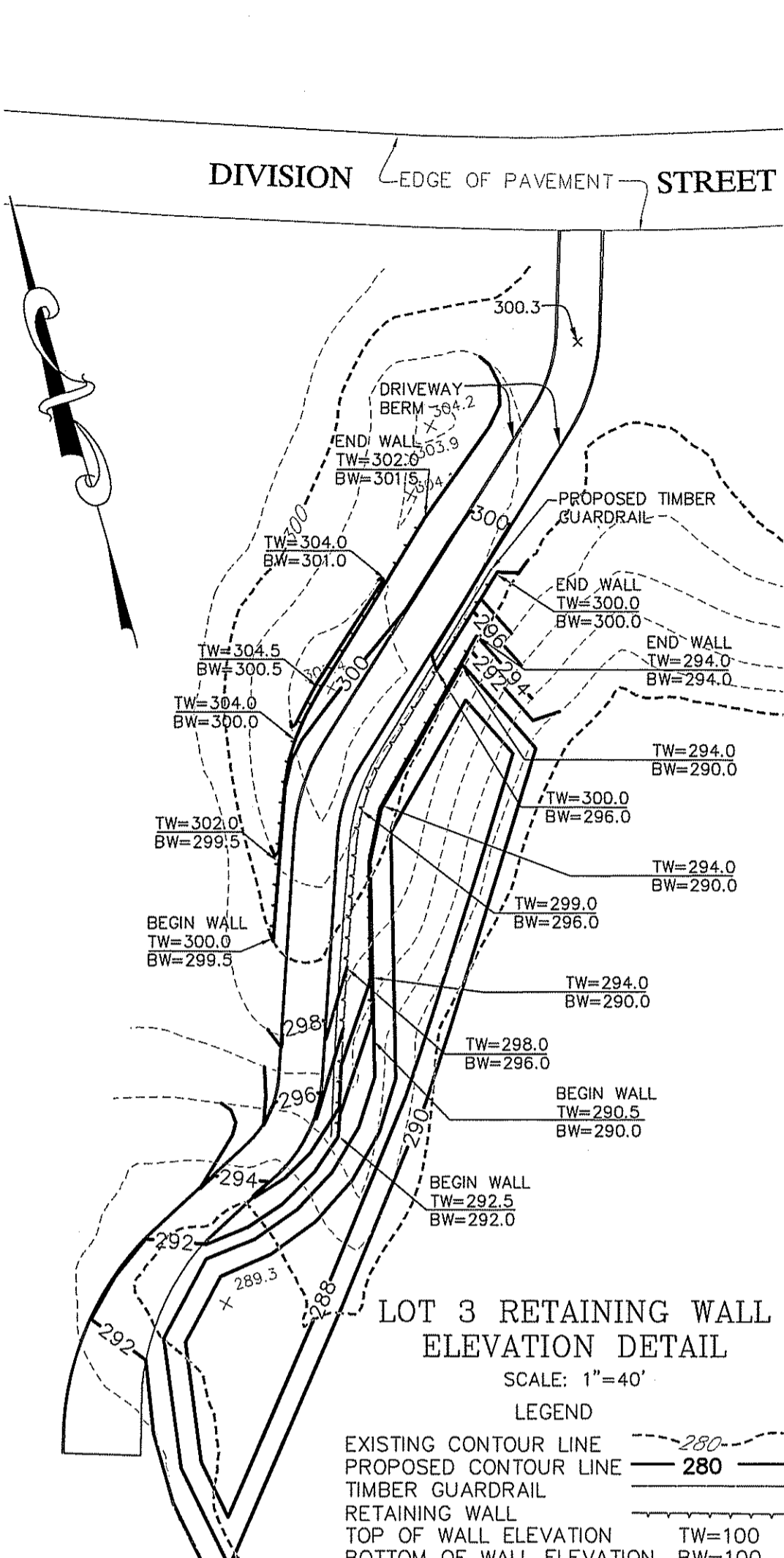
1. DENUDE SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS THE INACTIVE WINTER SEASONS.
2. TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCLOSOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
3. HAY OR STRAW APPLICATIONS SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
4. ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN-PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
5. THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS AND SHALL CONFORM WITH RHODE ISLAND STANDARD SPECIFICATION M.20.01.
6. THE SEED MIX SHALL BE INOCULATED WITHIN 24-HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.
7. THE DESIGN MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT	SEEDING DATE
CREeping RED FESCUE	70	APRIL 1 - JUNE 15
ASTORIA BENTGRASS	5	AUGUST 15 - OCTOBER
BIRDFOOT TREFFOIL	15	
PERENNIAL RYEGRASS	10	

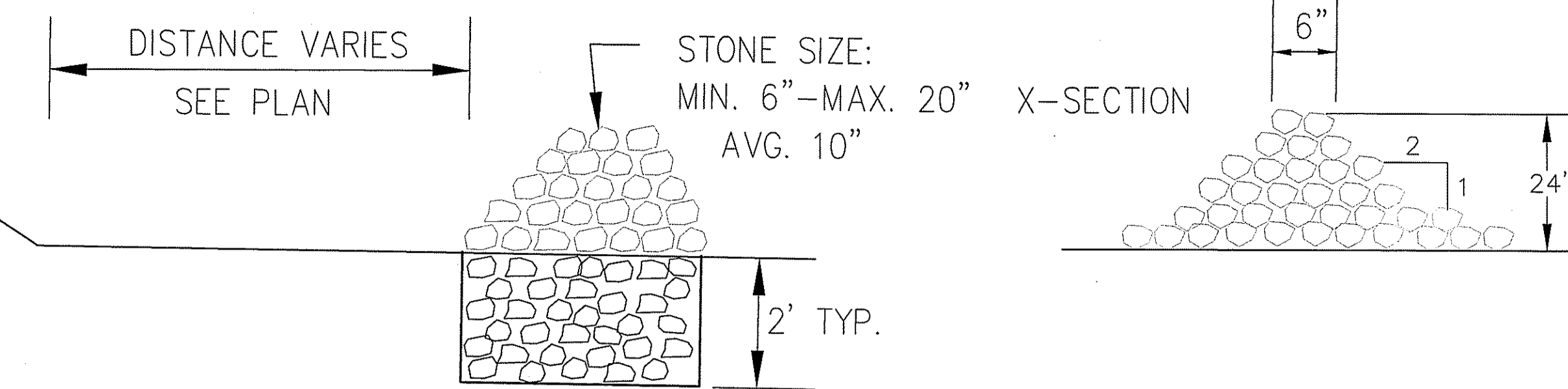
8. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR, AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
9. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH OCTOBER 15TH.
10. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
11. STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%) AND STOCKPILE SHALL ALSO BE SEED AND/OR STABILIZED.
12. ON BOTH STEEP AND LONG SLOPES, CONSIDERATION SHOULD BE GIVEN TO "CRIMPING" OR "TRACKING" TO TACK DOWN MULCH APPLICATIONS.
13. TREES TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT.
14. ALL PROPOSED PLANTINGS MUST BE ACCOMPLISHED AS EARLY AS POSSIBLE UPON COMPLETION OF GRADING AND CONSTRUCTION, AND AT LEAST PRIOR TO ANY ON-SITE OCCUPANCY.
15. ALL PROPOSED PLANTINGS MUST BE MAINTAINED BY THE PROPERTY OWNER TO ENSURE SURVIVAL.
16. SHOULD ANY OR ALL OF THE PROPOSED PLANTS FAIL TO SURVIVE AT LEAST ONE (1) FULL GROWING SEASON FROM THE TIME THEY HAVE BEEN PLANTED, THE OWNER SHALL BE FULLY RESPONSIBLE FOR REPLACING AND MAINTAINING THE SAME PLANT SPECIES FOR ONE (1) ADDITIONAL GROWING SEASON.
17. ALL DISTURBED AREAS MUST BE SEED OR PLANTED WITHIN THE CONSTRUCTION SEASON.
18. TEMPORARY SEEDING MUST BE DONE WITHIN ONE (1) MONTH AFTER DISTURBANCE.
19. ALL DISTURBED AREAS MUST BE PERMANENTLY SEED OR PLANTED BEFORE OCTOBER 1ST, IF NOT THEY MUST BE TEMPORARILY SEED.
20. SLOPES CONSTRUCTED AT, OR STEEPER THAN, 15% SHALL HAVE TEMPORARY EROSION CONTROL MATTING UTILIZED AS A SUPPORTIVE METHOD IN ADDITION TO THE METHODS DESCRIBED ABOVE.
21. ALL PROPOSED INLETS AND OUTLETS SHALL BE PROTECTED WITH RIPRAP BOTH TEMPORARILY AND PERMANENTLY. SEE DETAIL THIS SHEET.

SEDIMENTATION CONTROL PROGRAM:

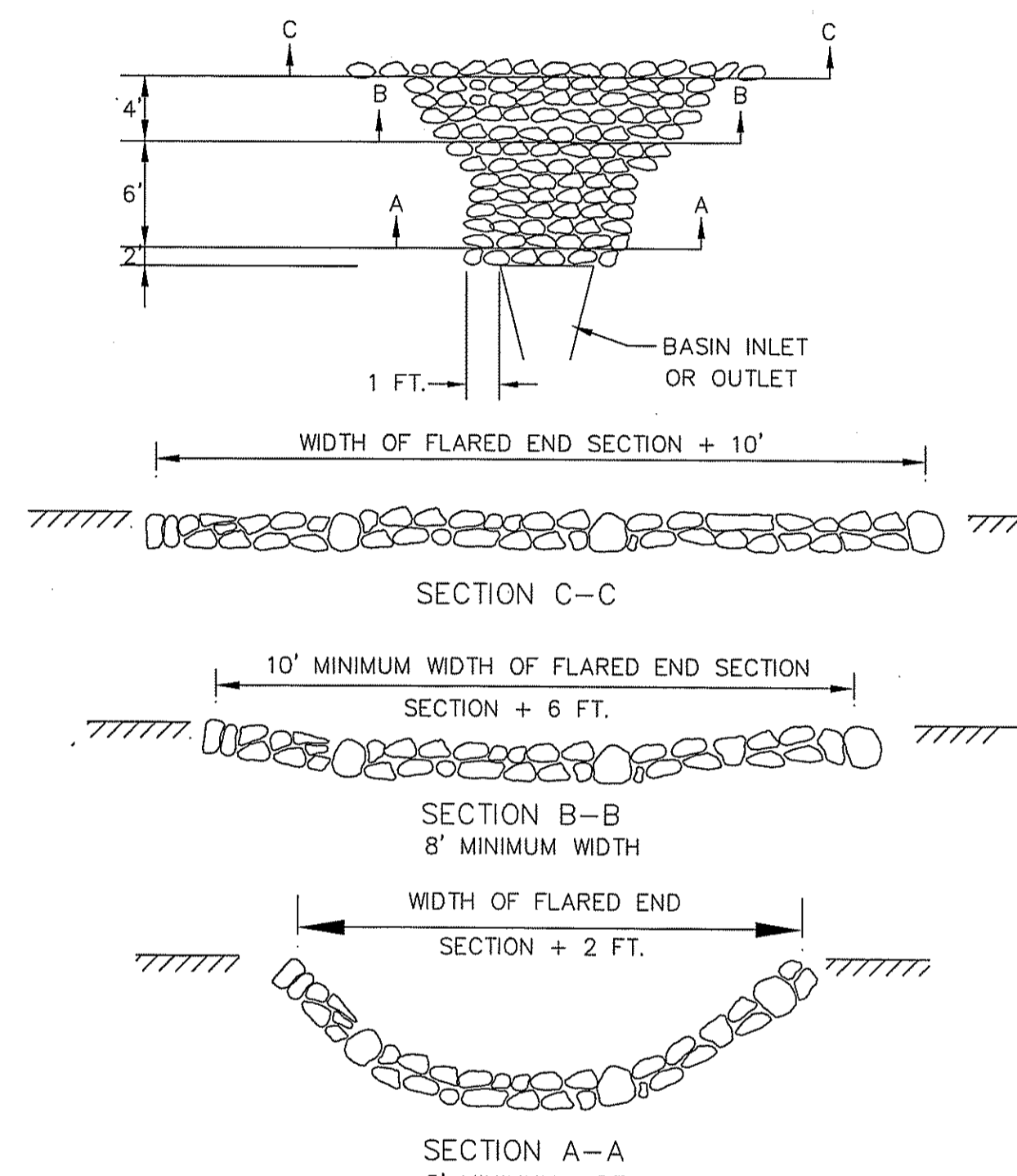
1. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
2. DURING CONSTRUCTION, THE CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUN-OFF FLOW DURING STORMS AND PERIODS OF
3. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL. 4. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECTED TO STORMWATER FLOWAGE.
5. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER.
6. SEDIMENTATION TRAPS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURES DURING CONSTRUCTION.
7. EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THE SITE PRIOR TO THE START OF CONSTRUCTION AND BE PROPERLY MAINTAINED UNTIL ALL DISTURBED AREAS ARE STABILIZED INCLUDING:
 - A) THE INSTALLATION OF A CONTINUOUS LINE OF STAKED HAYBALES IN ALL LOCATIONS SHOWN ON THE APPROVED SITE PLANS AND WHERE OTHERWISE NECESSARY TO PREVENT SEDIMENTS FROM ENTERING DOWNSTREAM WATERCOURSES AND STORMWATER DRAINAGE SYSTEMS.
 - B) ALL DISTURBED AREAS ARE TO BE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER PRIOR TO THE COMPLETION OF THE PROJECT. AREAS EXPOSED FOR EXTENDED PERIODS ARE TO BE COMPLETELY COVERED WITH SPREAD HAY MULCH.
 - C) CATCH BASINS WILL BE PROTECTED WITH HAYBALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. SUMPS ARE TO BE CLEANED IMMEDIATELY FOLLOWING INSTALLATION OF PERMANENT PAVEMENT.
 - D) OUTFALLS ARE TO BE PROTECTED BY HAYBALE FILTERS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH APPROVED GROUND COVER.
 - E) ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
8. THE LIMITS OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REMAIN TOTALLY UNDISTURBED.
9. UPON COMPLETION OF CONSTRUCTION OF SITE IMPROVEMENTS AND THE STORMWATER DRAINAGE SYSTEM, ALL CATCH BASINS AND STORM DRAIN PIPING SHALL BE CLEANED OF SEDIMENT. DETENTION BASINS SHALL BE CLEANED OF SEDIMENT TO THE DESIGN GRADES INDICATED.
10. AT NO TIME DURING CONSTRUCTION SHALL THE SUBGRADE OF THE SITE BE SUCH THAT SURFACE RUNOFF WILL BE PERMITTED TO DIRECTLY ENTER ANY DRAINAGE STRUCTURE. A TEMPORARY DEPRESSED AREA AROUND THE STRUCTURE SHALL BE INCORPORATED AS A SEDIMENTATION TRAP. THE MOUTH OF THE TRAP SHALL BE LINED WITH HAYBALES AROUND THE COMPLETE PERIMETER. DURING ALL PRELIMINARY STAGES, THE TOP OF THE STRUCTURE SHALL ALWAYS BE HIGHER THAN THE SUBGRADE.
11. HAYBALE EROSION CHECKS SHALL BE MAINTAINED AROUND ALL CATCH BASINS UNTIL ALL UPGRADIENT DISTURBED AREAS ARE STABILIZED BY PAVEMENT OR VEGETATION.
12. ALL COMPONENTS OF THE DRAINAGE SYSTEM MUST BE CLEANED OF SEDIMENT BY THE APPLICANT OR HIS REPRESENTATIVE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
13. INSPECT TEMPORARY DIVERSIONS AND THEIR COMPONENTS ONCE A WEEK AND AFTER EVERY RAINFALL. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHOULD BE REPAIRED BEFORE THE END OF EACH WORKING DAY. A SEDIMENTATION TRAP. THE MOUTH OF THE TRAP SHALL BE LINED WITH HAYBALES AROUND THE COMPLETE PERIMETER. DURING ALL PRELIMINARY STAGES, THE TOP OF THE STRUCTURE SHALL ALWAYS BE HIGHER THAN THE SUBGRADE.
14. CHECK DAMS SHALL BE INSTALLED EVERY 300 FEET FOR SLOPES OF 1% OR LESS, EVERY 200 FEET FOR SLOPES OF 2%, EVERY 150 FEET FOR SLOPES OF 3% TO 5%, AND EVERY 100 FEET FOR SLOPES OF 5% OR GREATER.
15. SEDIMENTS SHOULD BE REMOVED FROM THE CHECK DAM WHEN IT REACHES ONE-HALF THE DAM HEIGHT.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED AUG 2 2013 FILE # 13-C072
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



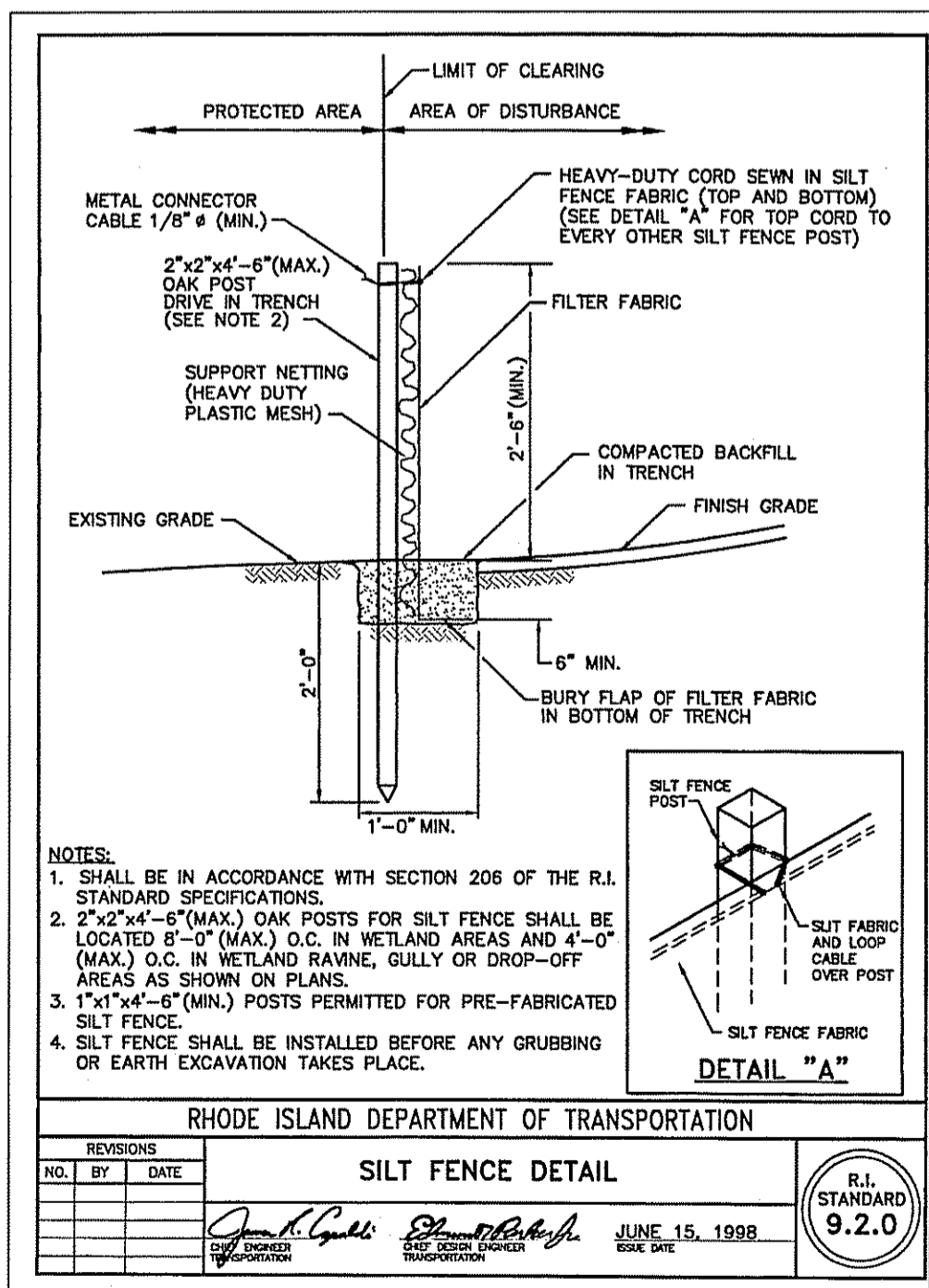
STONE FOREBAY
NOT TO SCALE



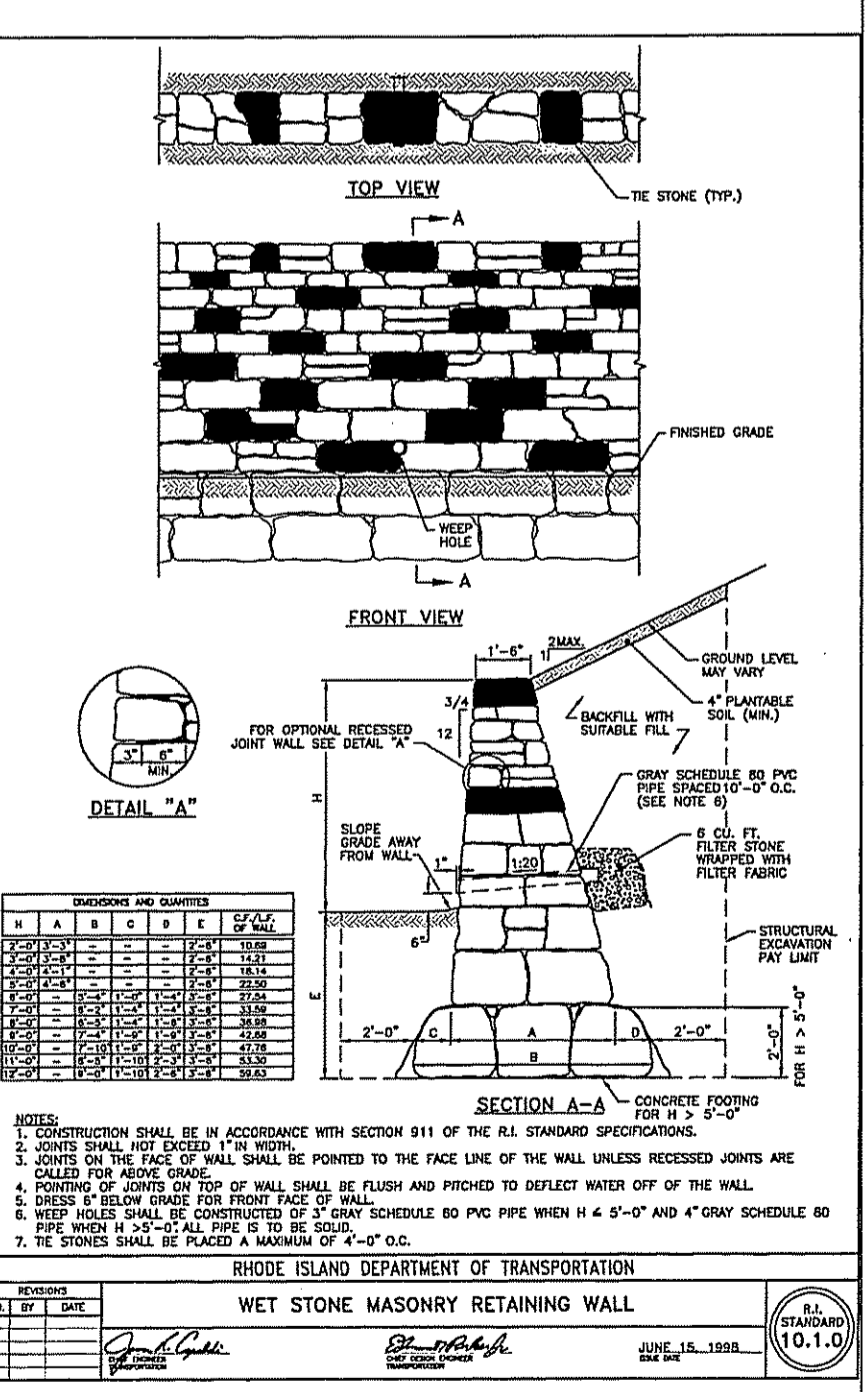
NOTES:
DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS UNLESS OTHERWISE SPECIFIED, DUMPED RIP-RAP SHALL BE USED.

RIP ROCK FILL RIP-RAP
@ BASIN INLETS AND OUTLETS
NOT TO SCALE

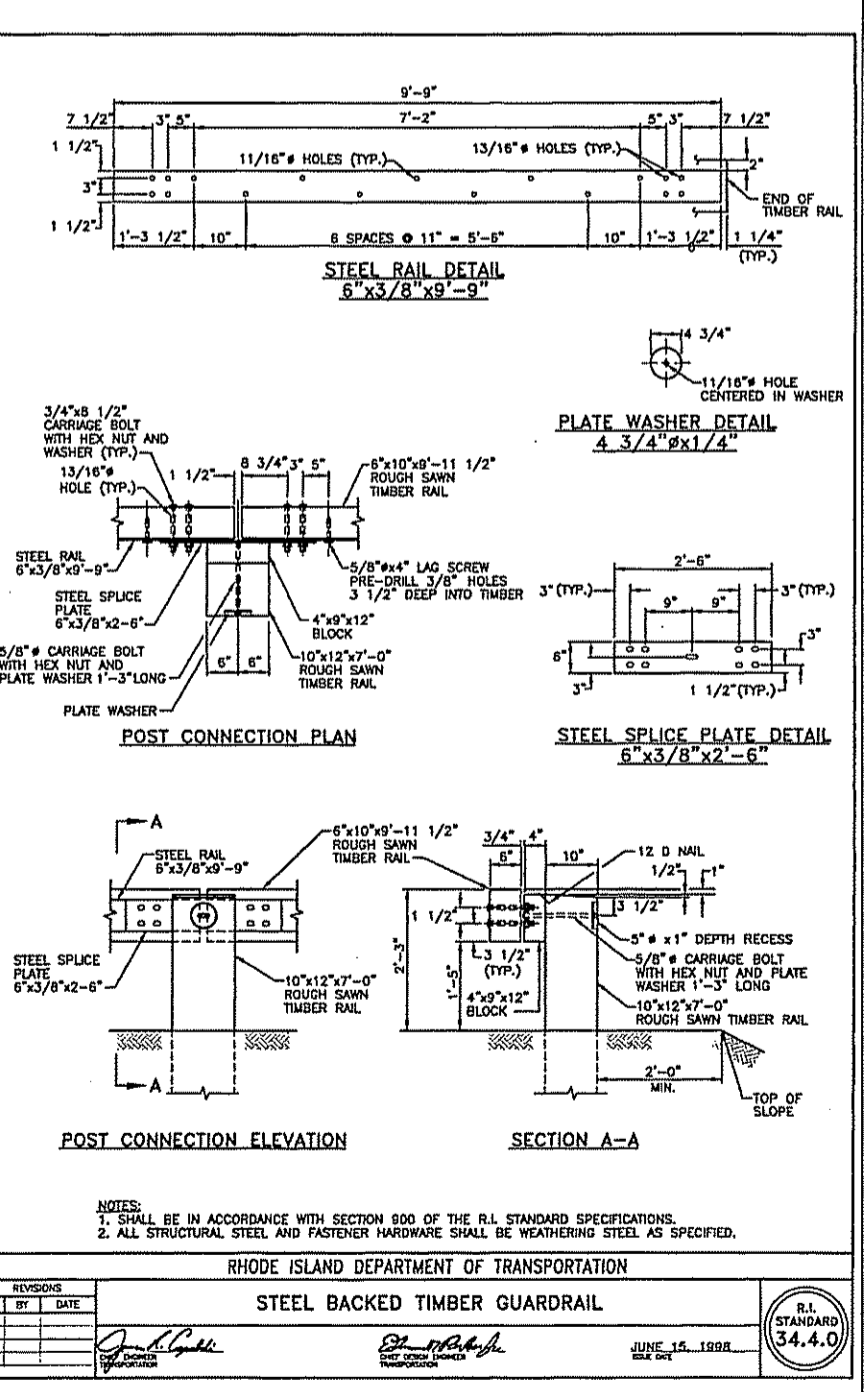
STONE / DEPTH	BEDDING	SIZE / DEPTH
MO2.02.4 / 12"	1" STONE / 4"	
MO2.02.4 =	8" - 95 / 100%	
	4" - 0 / 25%	
	2 1/2" - 0 / 5%	



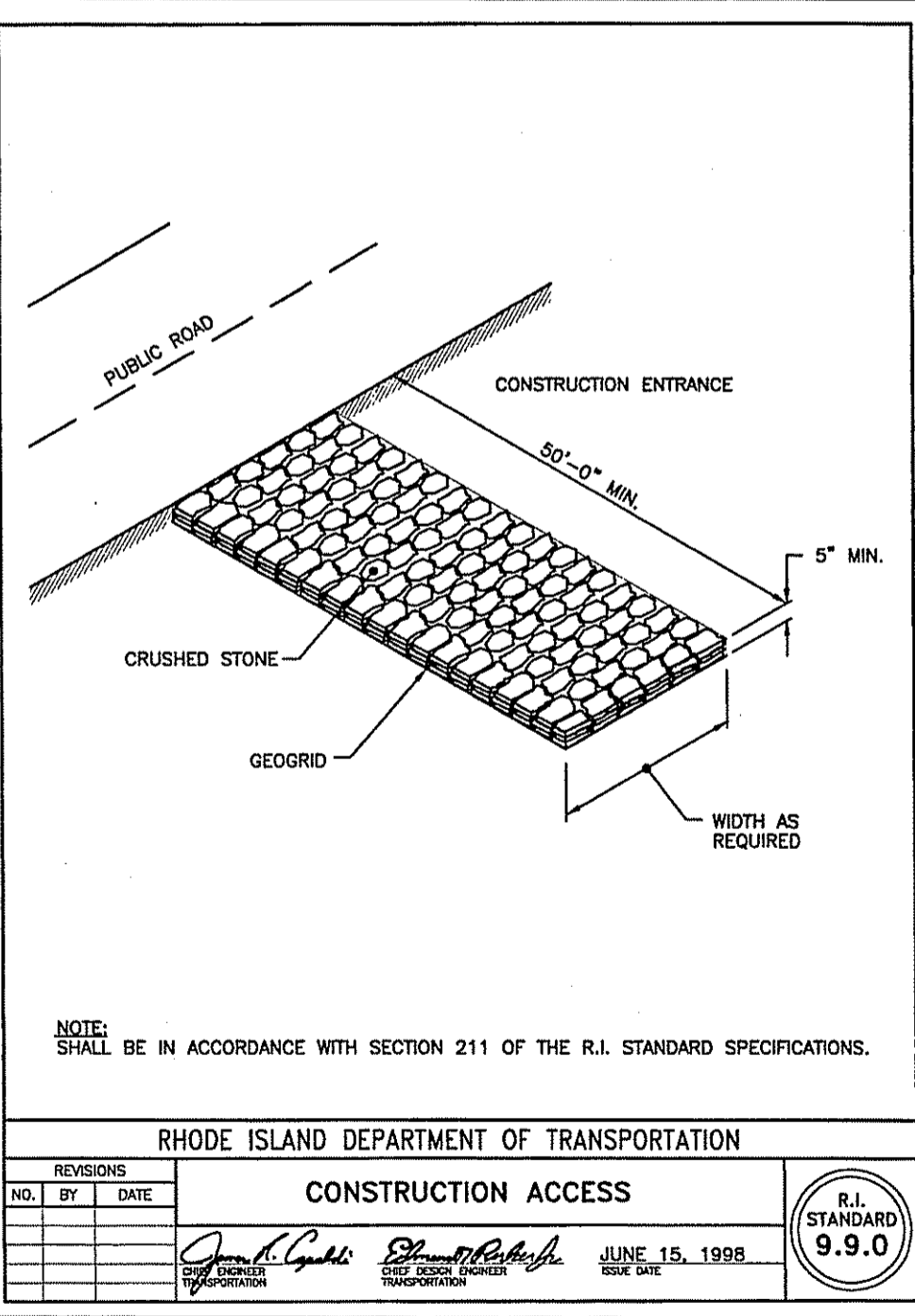
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
SILT FENCE DETAIL
R.I. STANDARD 9.2.0
DATE: JUNE 15, 1998



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
STONE MASONRY RETAINING WALL
R.I. STANDARD 10.1.0
DATE: JUNE 15, 1998



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
STEEL BACKED TIMBER GUARDRAIL
R.I. STANDARD 34.4.0
DATE: JUNE 15, 1998



RHODE ISLAND DEPARTMENT OF TRANSPORTATION
CONSTRUCTION ACCESS
R.I. STANDARD 9.9.0
DATE: JUNE 15, 1998

LOTS 1, 3 & 4
SEE SHEET 5 OF 11

LOT 3
SEE SHEET 5 OF 11

LOTS 1 - 5

RIDEM SUBMITTAL
FINAL PLAN SUBMISSION

OWNER
EDWARD H. NESTER
1808 NEW LONDON TURNPIKE
WEST WARWICK, RI 02893

Kambiz Korbassi
REGISTERED PROFESSIONAL ENGINEER
No. 4787

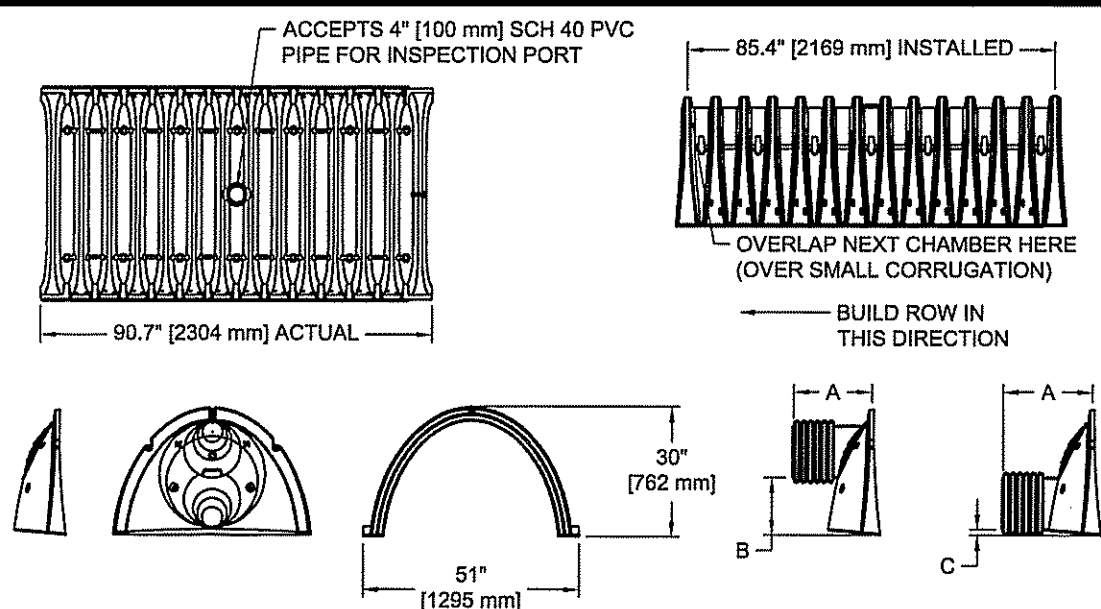
COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

REVISIONS

No.	DATE	DRWN	CHKD
1.	07/01/13	KAB	KK

MINOR SUBDIVISION
for
SPENCER'S CORNER ESTATES
AP 14A, LOT 16
in
EAST GREENWICH, RHODE ISLAND
CONSTRUCTION DETAILS

SCALE: AS NOTED	SHEET NO: 5 OF 7
DRAWN BY: JAR	DESIGN BY: JAR
DATE: 05/31/13	CHECKED BY: KK
PROJECT NO.: 12020.00	



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W x H x INSTALLED LENGTH)	51.0" x 30.0" x 85.4" (1295 mm x 762 mm x 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET (1.30 m ³)
MINIMUM INSTALLED STORAGE	74.9 CUBIC FEET (2.12 m ³)
WEIGHT	75 lbs. (33.8 kg)

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EP001	6" (152 mm)	10.50" (277 mm)	18.50" (470 mm)	N/A
SC740EP002	6" (152 mm)	10.50" (277 mm)	N/A	0.50" (13 mm)
SC740EP003	8" (203 mm)	12.20" (310 mm)	16.50" (419 mm)	N/A
SC740EP004	8" (203 mm)	12.20" (310 mm)	N/A	0.60" (15 mm)
SC740EP101	10" (254 mm)	13.40" (340 mm)	14.50" (368 mm)	N/A
SC740EP102	10" (254 mm)	13.40" (340 mm)	N/A	0.70" (18 mm)
SC740EP103	12" (305 mm)	14.70" (373 mm)	12.50" (318 mm)	N/A
SC740EP104	12" (305 mm)	14.70" (373 mm)	N/A	1.20" (30 mm)
SC740EP105	15" (375 mm)	18.40" (467 mm)	9.00" (229 mm)	N/A
SC740EP106	15" (375 mm)	18.40" (467 mm)	N/A	1.30" (33 mm)
SC740EP107	18" (457 mm)	19.70" (500 mm)	5.00" (127 mm)	N/A
SC740EP108	18" (457 mm)	19.70" (500 mm)	N/A	1.60" (41 mm)
SC740EP24B	24" (609 mm)	18.50" (470 mm)	N/A	0.10" (3 mm)

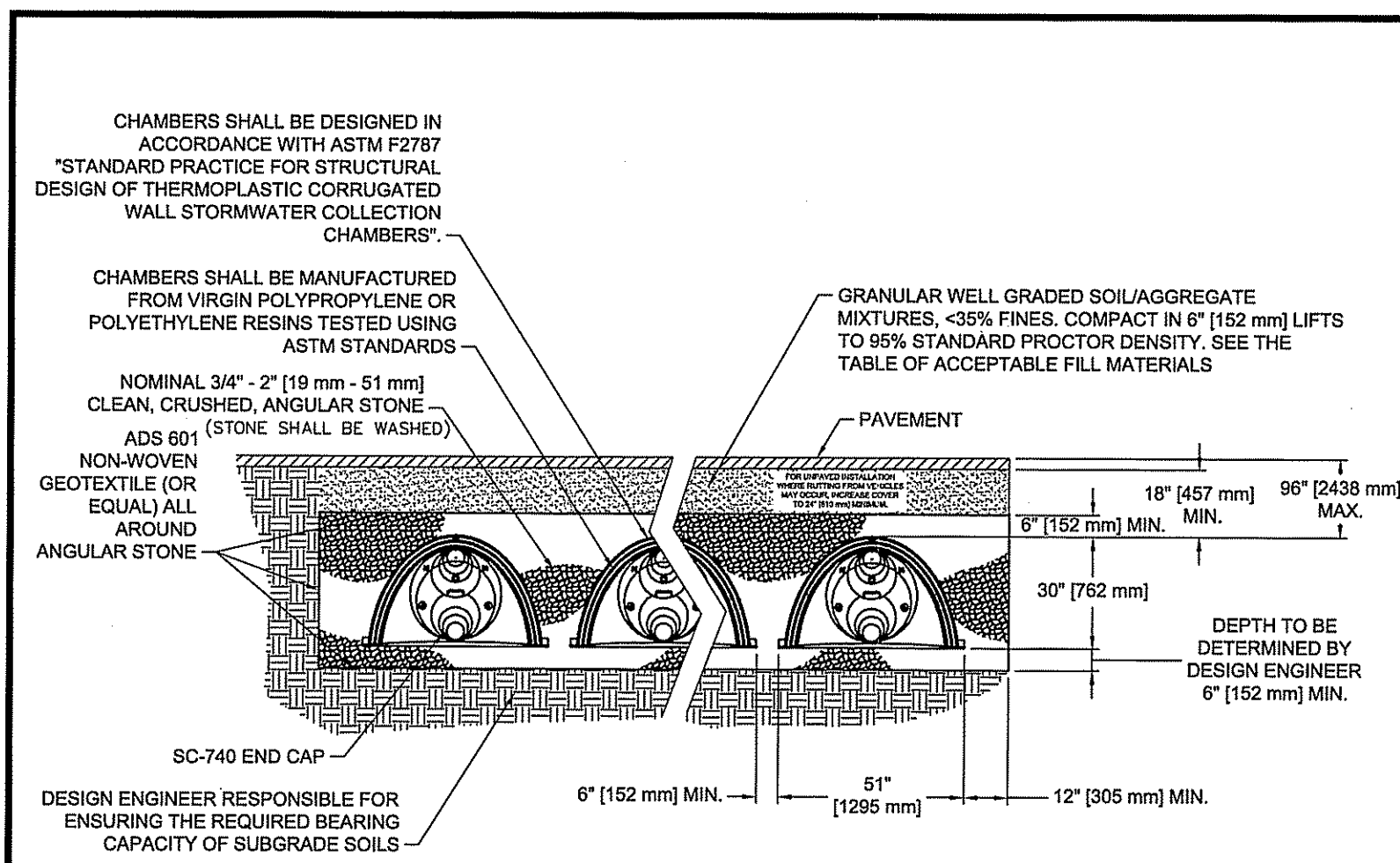
ALL STUBS, EXCEPT FOR THE SC740EP24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

*FOR THE SC740EP24B THE 24" (609 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL.

SC-740 TECHNICAL SPECIFICATIONS

SCALE: NTS
DATE: 3/30/10
DRAWN BY: KJL
CHECKED:



THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.

SC-740 TYPICAL CROSS-SECTION

SCALE: NTS
DATE: 6/19/11
DRAWN BY: KJL
CHECKED:

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 AND SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
1. FILL MATERIAL FOR LAYER D STARTS FROM THE TOP OF THE CLAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THIS LAYER.	ANY SOLID ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	NA	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRONG MATERIAL AND PREPARATION REQUIREMENTS.
2. FILL MATERIAL FOR LAYER C STARTS FROM THE TOP OF THE EMBEDMENT STONE (A LAYER) TO 18" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <3% FINES. COMPACT IN 6" (152 mm) LIFTS TO 95% STANDARD PROCTOR DENSITY. SEE THE TABLE OF ACCEPTABLE FILL MATERIALS.	3, 387, 4, 487, 5, 58, 67, 6, 67, 68, 7, 76, 8, 83, 9, 10	95% COMPACTION AT 18" (457 mm) OF MATERIAL OVER THE CHAMBERS IS REQUIRED. COMPACT ADDITIONAL LAYERS IN 6" (152 mm) LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY. (HOLE DRICE VEHICLE WEIGHT NOT TO EXCEED 12,000 LB (5,443 kg), DYNAMIC FORCE NOT TO EXCEED 2,500 LB (1,134 kg))
3. EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE CLAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH (19 - 51 mm) (STONE SHALL BE WASHED)	3, 387, 4, 487, 5, 58, 67	NO COMPACTION REQUIRED.
4. FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH (19 - 51 mm) (STONE SHALL BE WASHED)	3, 38, 4, 487, 5, 58, 67	FLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'X' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (152 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.

STORMTECH ACCEPTABLE FILL

SCALE: NTS
DATE: 3/30/10
DRAWN BY: KJL
CHECKED:

NOTES:

- INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
- ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

NYLOPLAST 12" (300 mm) IN LINE DRAIN BODY W/ 12" (300 mm) SOLID HINGED COVER AND FRAME (SEE NYLOPLAST DWG# 7003-110-044 FOR PAVED APPLICATIONS / SEE DWG# 7003-110-045 FOR UNPAVED APPLICATIONS)

4" (100 mm) SCHED 40 SCREW-IN CAP
CONCRETE COLLAR
PAVEMENT

SC-740 CHAMBER

4" (100 mm) SCHED 40 PVC
4" (100 mm) SCHED 40 PVC COUPLING
6" (152 mm)

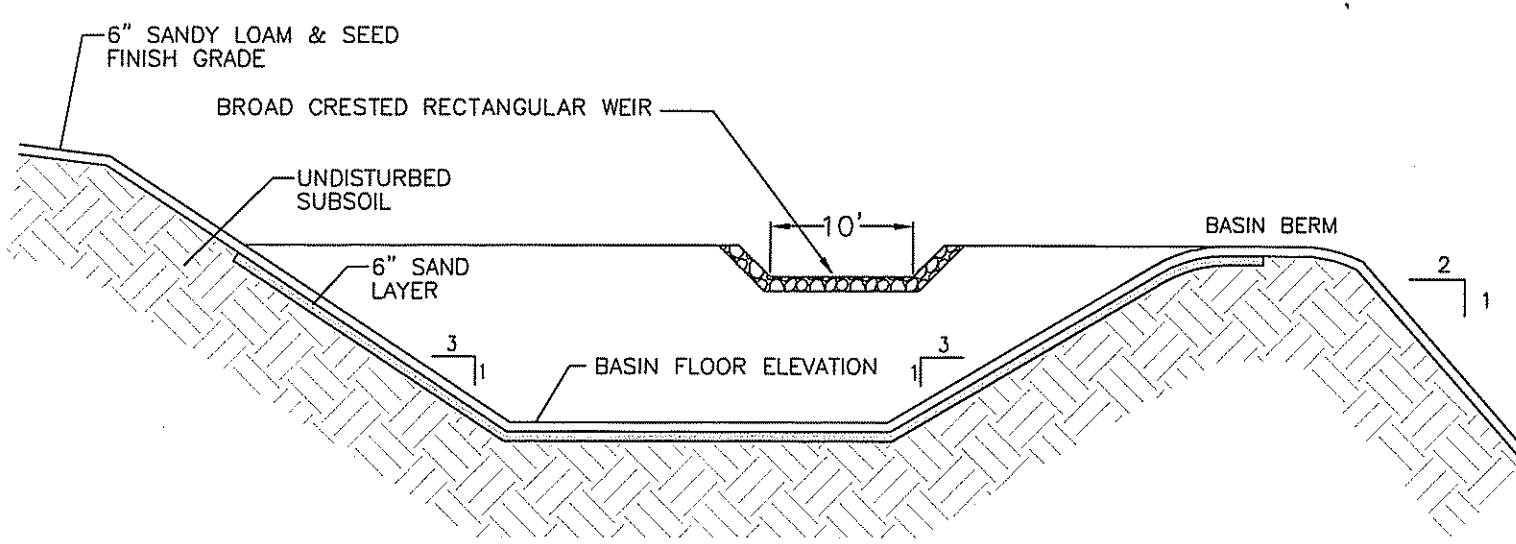
NOMINAL 3/4" - 2 INCH (19 mm - 51 mm) CLEAN CRUSHED ANGULAR STONE (STONE SHALL BE WASHED)

ADS 601 NON-WOVEN GEOTEXTILE (OR EQUAL)

CORE 4.5" (114 mm) Ø HOLE-IN-CHAMBER (4.5" HOLE SAW REQ'D)

CONNECTION DETAIL

SCALE: NTS
DATE: 6/19/11
DRAWN BY: KJL
CHECKED:



LOT 4 INFILTRATION BASIN DETAIL

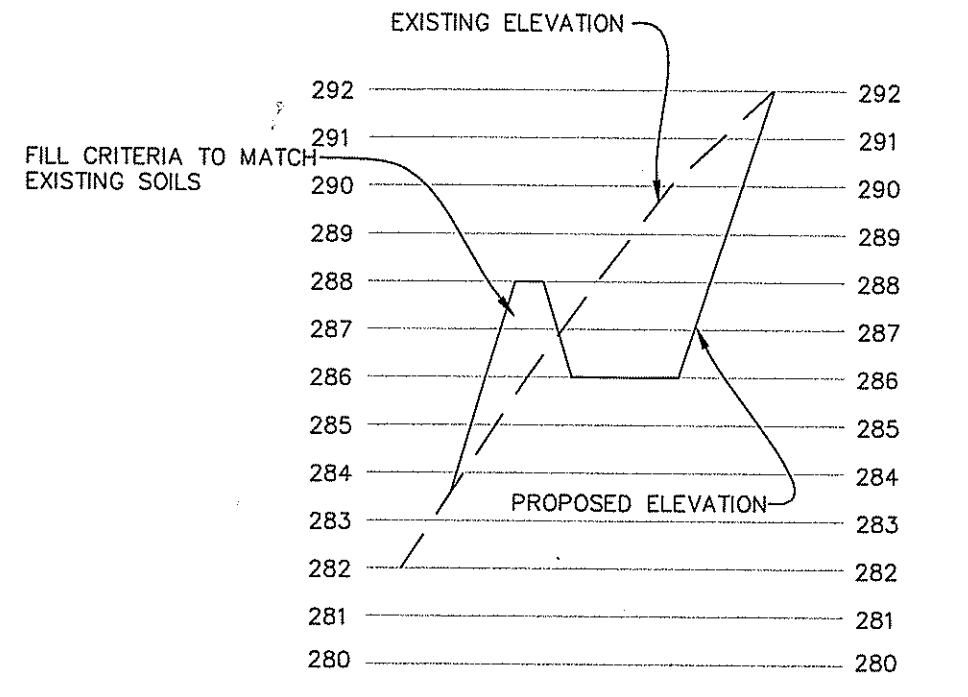
NOT TO SCALE

GROUND WATER ELEVATION	270.0
BASIN FLOOR ELEVATION	274.0
BASIN TOP ELEVATION	276.0
100 YEAR STORM WATER ELEVATION	275.21
BROAD CRESTED RECTANGULAR WEIR ELEVATION	275.0

INFILTRATION SYSTEM NOTES:

- ALL UPSTREAM AREAS TO THE PROPOSED INFILTRATION SYSTEMS SHALL BE STABILIZED PRIOR TO DELIVERING ANY RUNOFF INTO THE RESPECTIVE SYSTEMS.
- PROPOSED BMPs ARE NOT ALLOWED TO SERVE AS SEDIMENTATION BASINS DURING CONSTRUCTION. BMP AREAS SHALL BE PROTECTED BY SURROUNDING THE SYSTEM WITH EROSION CONTROLS TO PREVENT SUCH USE.
- SNOW FENCING SHALL BE PLACED AROUND ALL INFILTRATION SYSTEMS TO PREVENT CONSTRUCTION EQUIPMENT FROM COMPACTING THE AREAS.

	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5
GROUND WATER ELEVATION	269.0	276.0	282.0	278.0	284.0
BOTTOM ELEVATION (STONE)	273.0	280.0	286.0	282.0	288.0
TOP ELEVATION (STONE)	276.5	283.5	289.5	285.5	291.5
100 YEAR STORM WATER ELEVATION	275.78	282.78	288.78	284.78	290.78



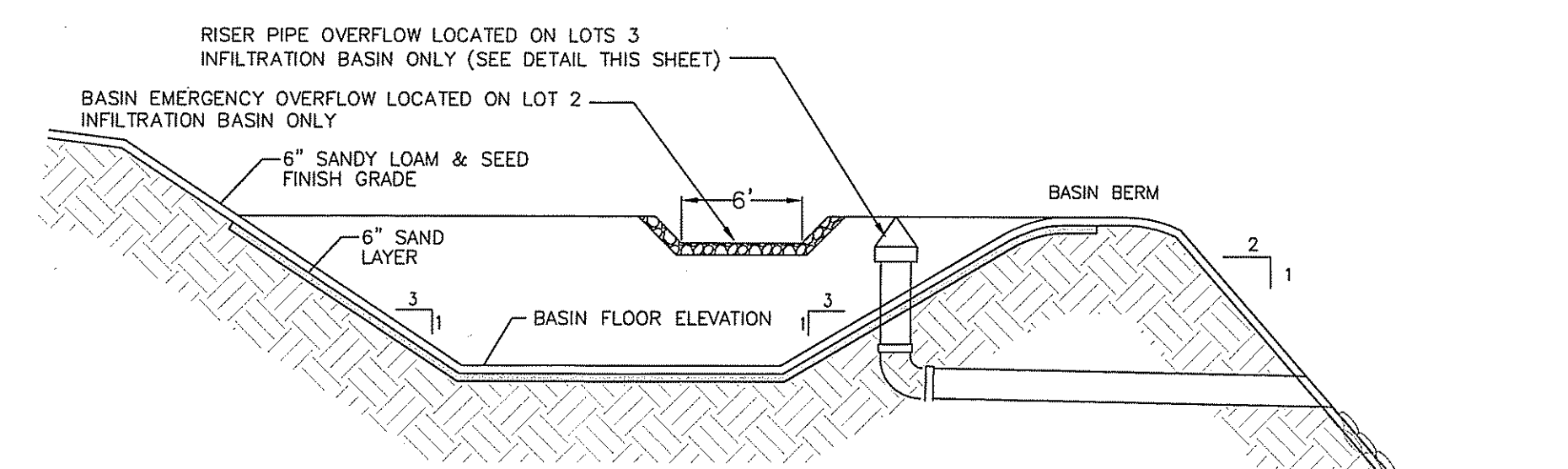
SECTION A-A
VIEW THROUGH LOT 5 INFILTRATION BASIN

SCALE: 1"=40' HORIZONTAL, 1"=4' VERTICAL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATERSHEDS PROGRAM
APPROVED WITH CONDITIONS
AS STATED IN THE LETTER OF APPROVAL
DATED AUG. 2 2013 FILE # 13-0072
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

OWNER
EDWARD H. NESTER
1808 NEW LONDON TURNPIKE
WEST WARWICK, RI 02893

RIDEM SUBMITTAL
FINAL PLAN SUBMISSION



LOTS 1-3 & 5 INFILTRATION BASIN DETAIL

NOT TO SCALE

	LOT 2	LOT 3	LOT 1	LOT 5
GROUND WATER ELEVATION	284.0	284.0	272.0	280.0
BASIN FLOOR ELEVATION	288.0	288.0	276.0	286.0
BASIN TOP ELEVATION	290.0	290.0	277.0	288.0
100 YEAR STORM WATER ELEVATION	288.84	289.29	276.96	287.58
EMERGENCY OVERFLOW ELEVATION	289.0			

CONCEPTUAL LAYOUT

7 STORMTECH SC-740 CHAMBERS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID

INLET IN FROM DRAIN BASIN

24" PREFABRICATED END CAP / PART # SC740EP24B
TYP OF ALL SC-740 3/4" AND ISOLATOR ROW CONNECTIONS

PLACE MINIMUM 12" OF AASHTO M28 CLASS 1 WOVEN GEOTEXTILE OVER BEDDING STONE FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

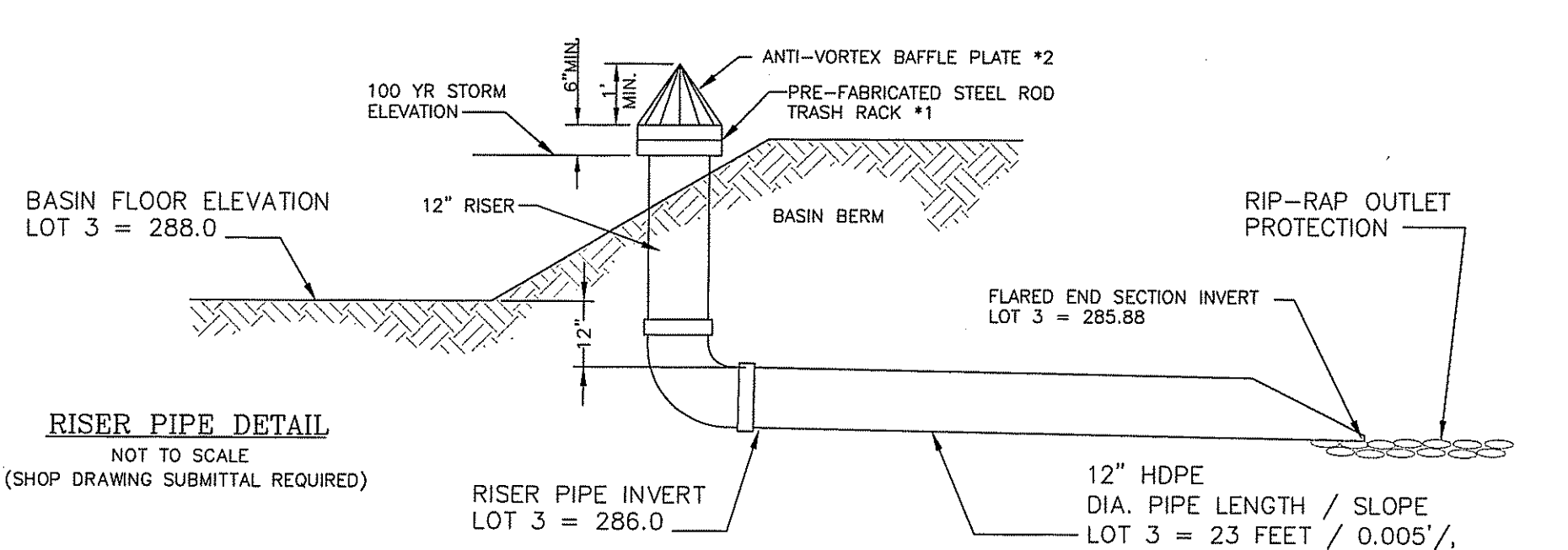
MANIFOLD NOTE:
DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT & COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.

DATE: 4/23/13
DRAWN: []
CHECKED: []

Stormtech
70 WOODS ROAD, SUITE 3
ROCKY HILL, CT 06067
P: 888-892-2694
F: 860-264-8001
WWW.STORMTECH.COM

SPENCER'S CORNER ESTATES
EAST GREENWICH, RI

DATE: 4/23/13
PROJECT: []
DRAWN: []
SCALE: NTS
CHECKED: []
PAGE: OF



RISER PIPE DETAIL

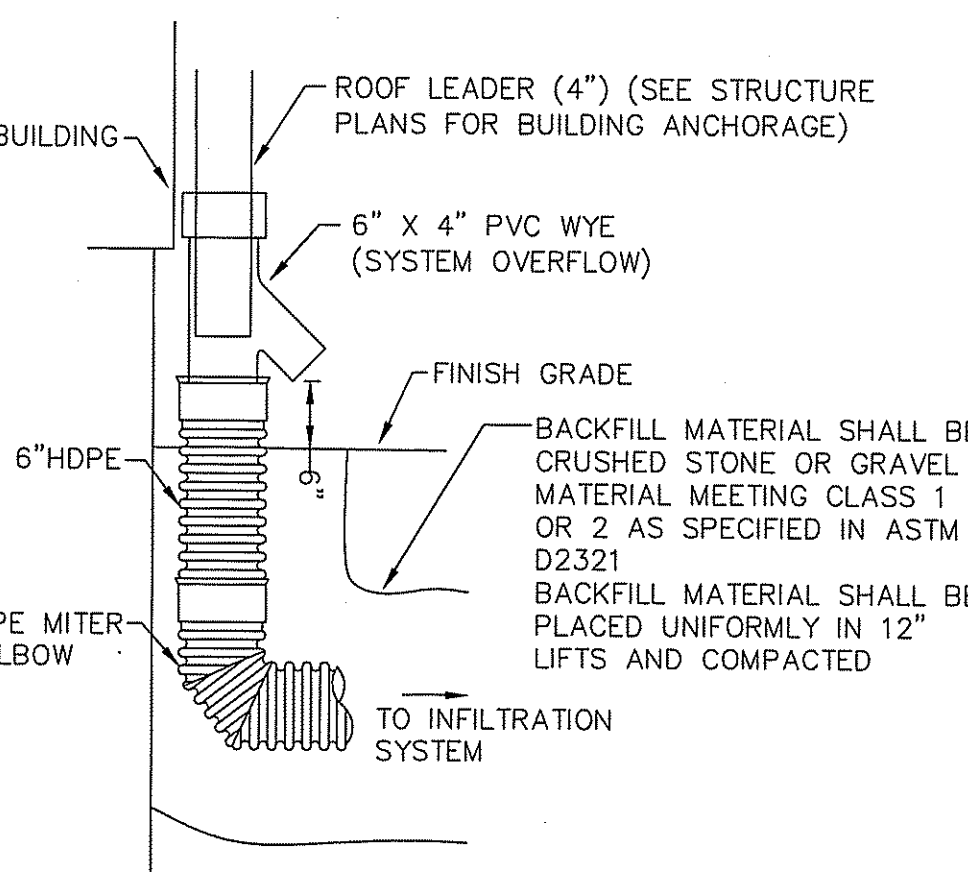
NOT TO SCALE
(SHOP DRAWING SUBMITTAL REQUIRED)

RISER PIPE INVERT
LOT 3 = 286.0

12" HDPE
DIA. PIPE LENGTH / SLOPE
LOT 3 = 23 FEET / 0.005'/

INDIVIDUAL BUILDING ROOF INFILTRATION UNITS
FOR LOTS 1 - 5
(STORMTECH SC-740 UNITS OR APPROVED EQUAL)

* SIZING FOR 2,400 SF BUILDING FOOTPRINT AS SHOWN ON THE PROVIDED PLANS REQUIRES 7 SC-740 UNITS.



ROOF LEADER COLLECTOR DETAIL

NOT TO SCALE

Kambiz Karbassi
No. 4737
REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

MINOR SUBDIVISION
for
SPENCER'S CORNER ESTATES
AP 14A, LOT 16
in
EAST GREENWICH, RHODE ISLAND

CONSTRUCTION DETAILS

SCALE: AS NOTED
SHEET NO: 6 OF 7

DRAWN BY: JAR
DESIGN BY: JAR
CHECKED BY: KK

DATE: 05/31/13
PROJECT NO.: 12020.00

REVISIONS

No.	DATE	DRWN	CHKD
1.	07/01/13	KAB	KK

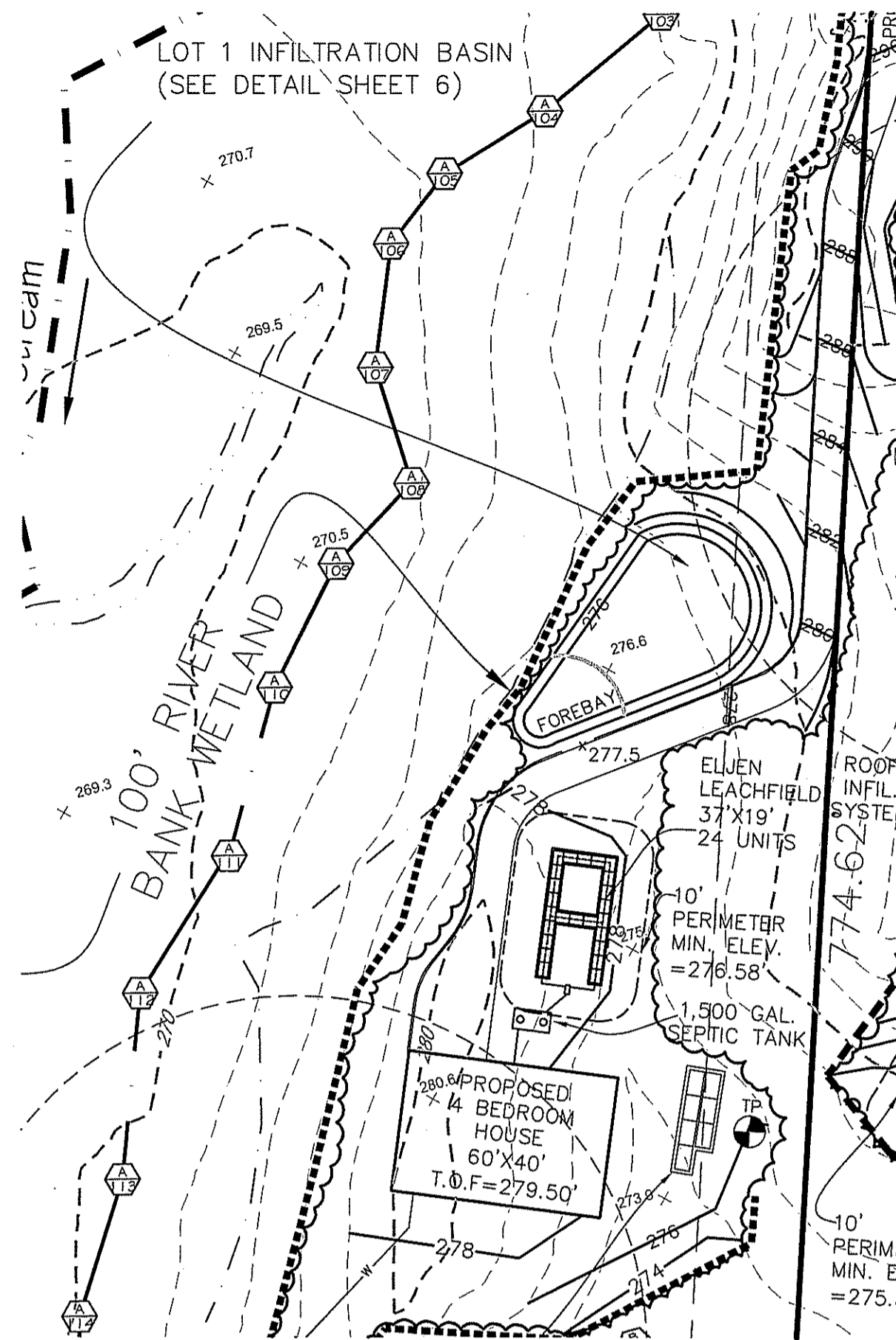
5.3.6 Maintenance

Required Elements

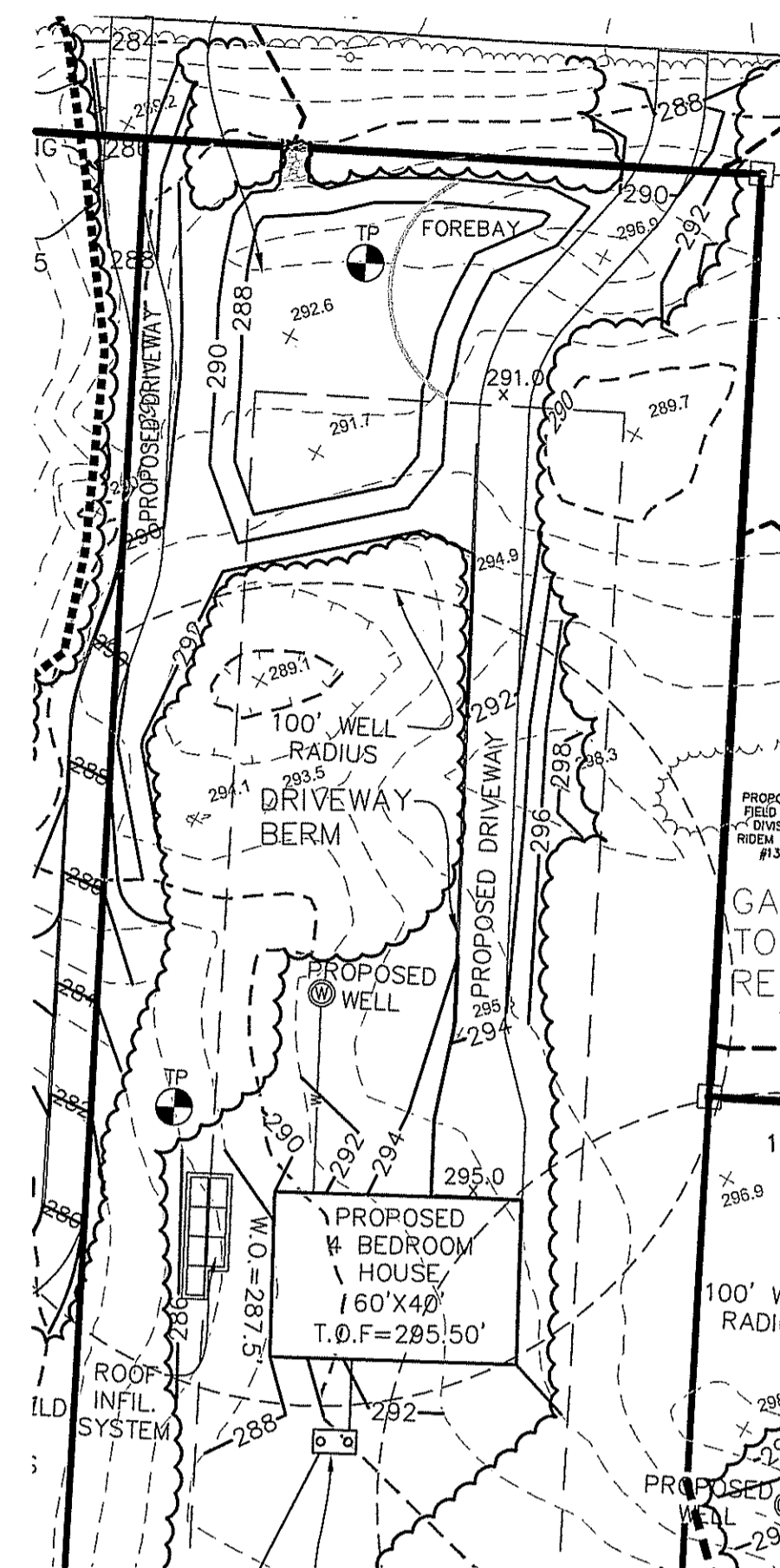
- A legally binding and enforceable maintenance agreement shall be executed between the facility owner and the responsible authority to ensure the following:
 - Infiltration practices shall never serve as a sediment control device during site construction phase. Great care must be taken to prevent the infiltration area from compaction by marking off the location before the start of construction at the site and constructing the infiltration practice last, connecting upstream drainage areas only after construction is complete, and the contributing area is stabilized.
 - In addition, the ESC plan for the site shall clearly indicate how sediment will be prevented from entering the site of an infiltration facility.
 - An observation well shall be installed in every infiltration trench or chamber system, consisting of an anchored 4- to 6-inch diameter perforated PVC pipe with a lockable cap installed flush with the ground surface. The approving agency may require multiple observation wells for large underground chamber systems.
- Infiltration practices shall be inspected annually and after storms equal to or greater than the 1-year, 24-hour Type III storm event (2.70").
- If sediment or organic debris build-up has limited the infiltration capabilities (infiltration basins) to below the design rate, the top 6 inches shall be removed and the surface roto-filled to a depth of 12 inches. The basin bottom should be restored according to original design specifications.

Design Guidance

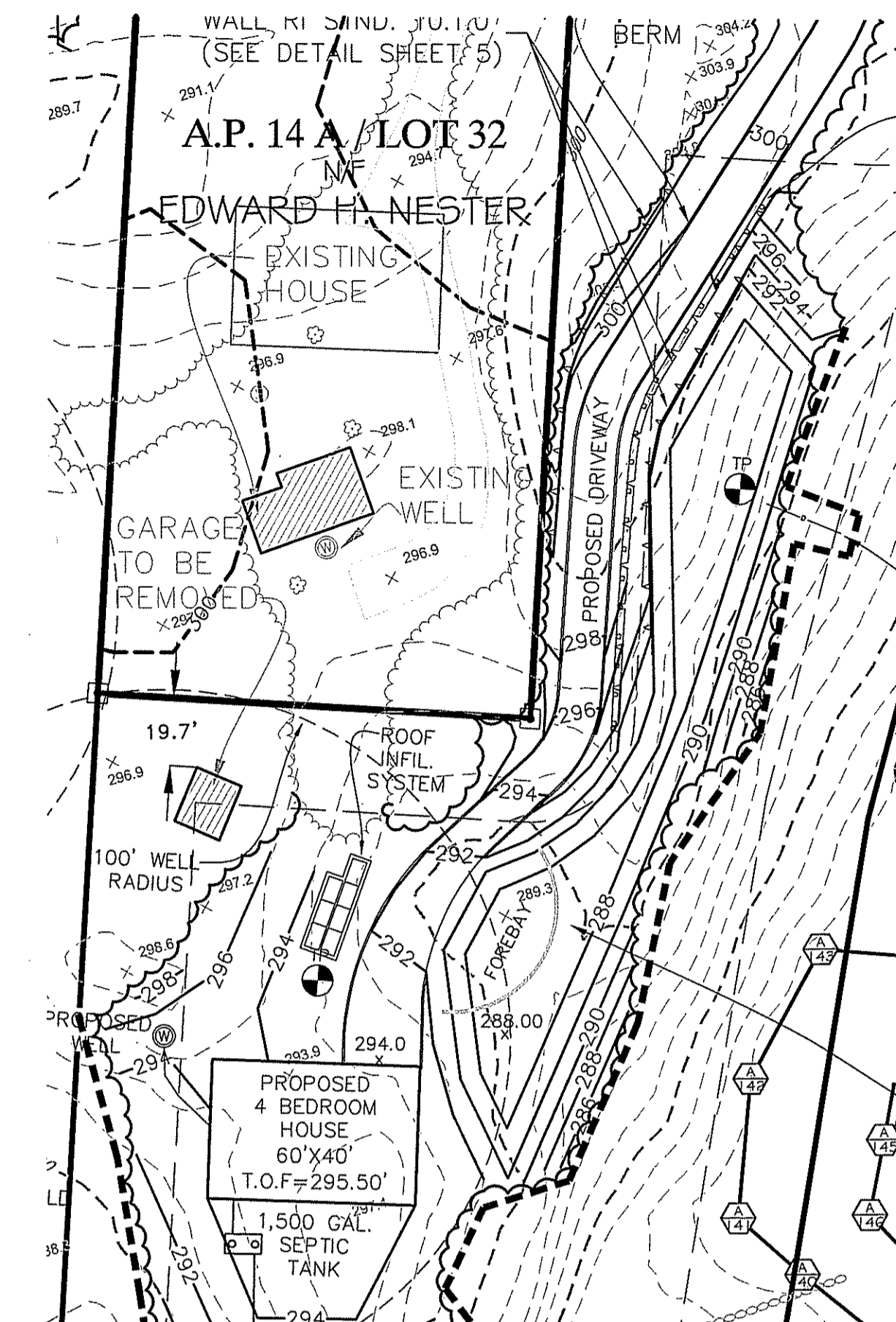
- OSHA trench safety standards should be observed if the infiltration trench will be excavated more than five feet.
- Infiltration basin designs may include dewatering methods in the event of failure..
- In the absence of evidence of contamination, removed debris may be taken to a landfill or other permitted facility. Any oil or grease found at the time of the inspection should be cleaned with oil absorption pads and disposed of in an approved location.
- Preferably, direct access should be provided to infiltration practices for maintenance and rehabilitation. For trenches or chambers, which are used to temporarily store runoff prior to infiltration, the practice should ideally not be completely covered by an impermeable surface unless significant design constraints exist.
- Surface infiltration practices should be mowed at least 2 times/yr. Stabilize eroded banks and repair eroded areas at inflow and outflow structures as necessary.



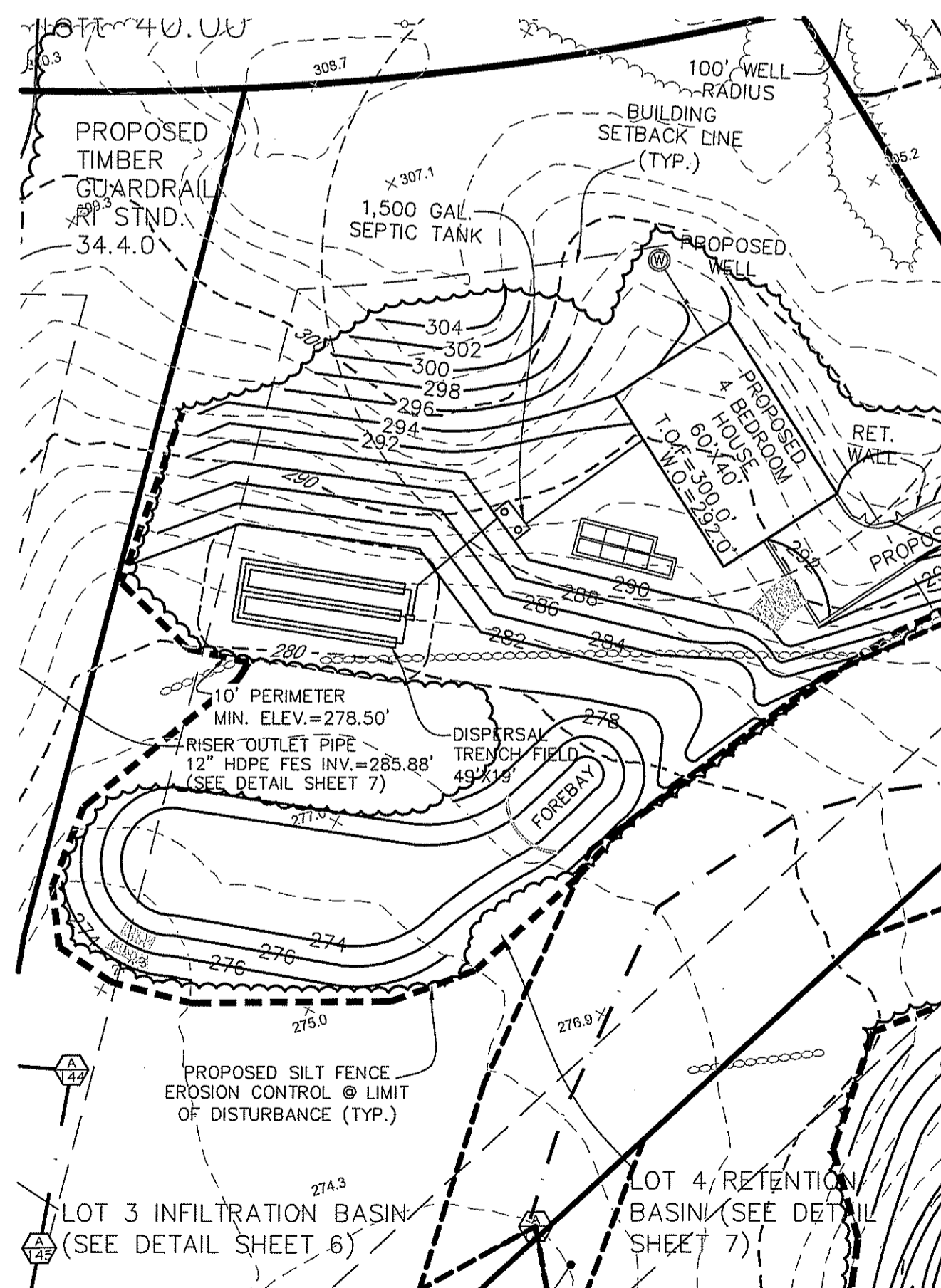
LOT 1 BMP LOCATIONS
SCALE: 1"=40'



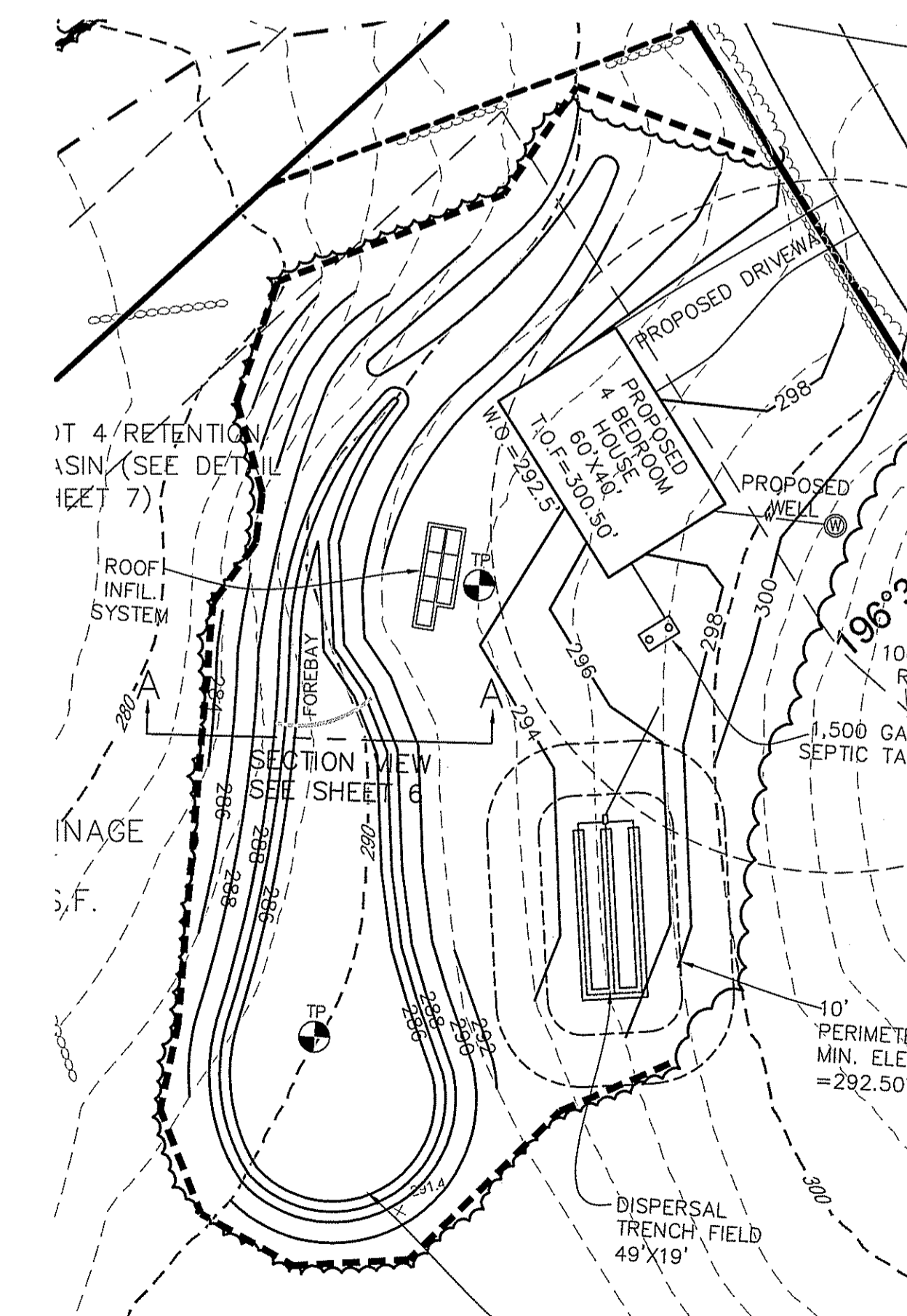
LOT 2 BMP LOCATIONS
SCALE: 1"=40'



LOT 3 BMP LOCATIONS
SCALE: 1"=40'



LOT 4 BMP LOCATIONS
SCALE: 1"=40'



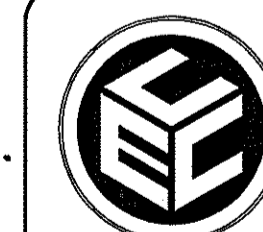
LOT 5 BMP LOCATIONS
SCALE: 1"=40'

OWNER/RESPONSIBLE FOR MAINTENANCE:
EDWARD H. NESTER
1808 NEW LONDON TURNPIKE
WEST WARWICK, RI 02893

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
AS SPECIFIED IN LETTER OF APPROVAL
DATED AUG 2 2013 FILE # 13-0072
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION

RIDEM SUBMITTAL
FINAL PLAN SUBMISSION

Kambiz Karbassi
REGISTERED PROFESSIONAL ENGINEER



COMMONWEALTH
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400 SMITH STREET
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401-273-6600

REVISIONS

No.	DATE	DRWN	CHKD
1.	07/01/13	KAB	KK

MINOR SUBDIVISION
for
SPENCER'S CORNER ESTATES
AP 14A LOT 16
in
EAST GREENWICH, RHODE ISLAND

OPERATION & MAINTENANCE PLAN

SCALE: 1"=50' SHEET NO: 7 OF 7
DRAWN BY: JAR DESIGN BY: JAR CHECKED BY: KK
DATE: 6/01/13 PROJECT NO.: 12020.00

JUL 1 2013