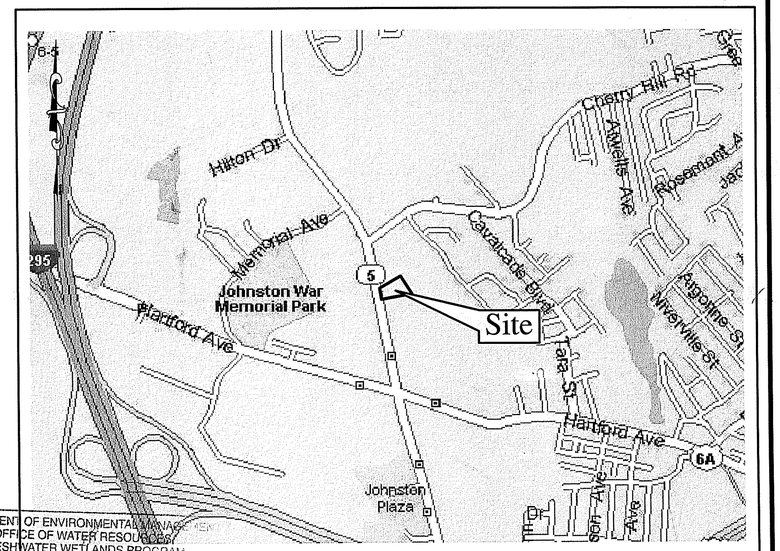
Preliminary Submission

1543 Atwood Avenue

Located on Atwood Avenue
Johnston, Rhode Island
Assessor's Plat 20/2 Lot 80

Sheet Index

1. Cover Sheet
2. Aerial 1/2 Mile Radius
3. Existing Conditions Plan
4. Parking Layout Plan/ Entrance Construction Detail
5. Grading Utility Plan
6. Detail Sheet
7. Detail Sheet
8. Detail Sheet
9. Detail Sheet
10. Detail Sheet



Location Map SCALE: 1"=1000'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPR
DATED JAN 0 0 2008 FILE # 07-0429
NO CHANGES ALLOWED WITHOUT PRIOR APPR
APPROVED PLANS MUST BE AT CONSTRUCTION
Charles A. Horbert

DEC 10 2007

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO.	DATE	DESCRIPTION	BY
3	12-6-07	ROOT/RIDER COMMENTS	S.A.B.
2	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
1	10-25-07	RIDEM/CRMC/ROOT/RIDER PRELIMINARY DETERMINATION	S.A.B.

COVER SHEET

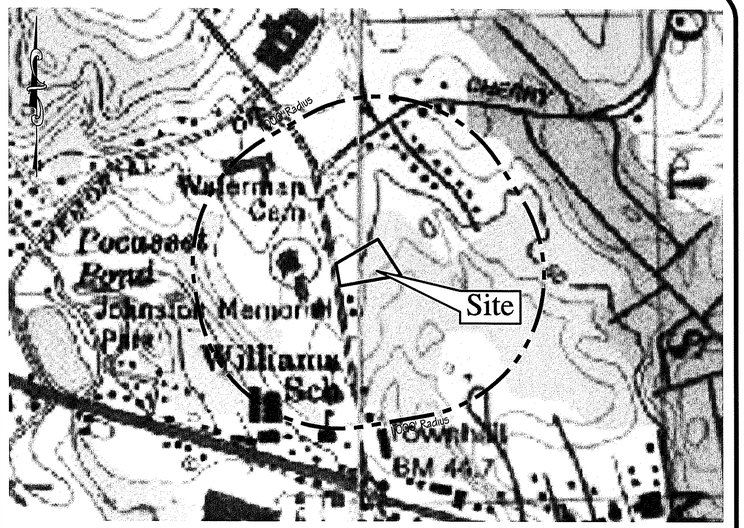
1543 Atwood Avenue
ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
(401) 943-1000 FAX: (401) 464-6006

OWNER/APPLICANT
Atwood Development, LLC
34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272-1100

OCTOBER, 2007
DWN. BY: S.A.B.

SHEET 1 OF 10



USGS Map SCALE: 1"=500'

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Photo obtained from the RI-GIS of 2004 Digital Orthophotography Northern Urban Areas of Rhode Island.

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AERIAL 1/2 MILE RADIUS

1543 Atwood Avenue

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OCTOBER, 2007
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SHEET 2 OF 10

GENERAL NOTES

1. THE SITE IS FOUND ON TOWN OF JOHNSTON ASSESSOR'S PLAT 20–2 LOT 80. CURRENT OWNER OF RECORD IS NOW OR FORMERLY ATWOOD DEVELOPMENT, LLC. REFERENCE DEED BOOK 852 PAGE 44 IN THE TOWN OF JOHNSTON LAND EVIDENCE RECORDS.
2. THE SITE IS APPROXIMATELY 1.95± ACRES AND IS ZONED B2.
3. TOPOGRAPHY AND EXISTING SITE CONDITIONS BY DIPRETE ENGINEERING, SUMMER, 2007.
4. THE BOUNDARY LINE AS SHOWN ON THIS PLAN DEPICTS A CLASS 1 SURVEY AS PERFORMED BY DIPRETE ENGINEERING.THE PLAN ITSELF CONFORMS ONLY TO A CLASS III STANDARD AS ADOPTED BY RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS PLAN IS NOT TO BE CONSTRUED AS A CLASS I BOUNDARY PLAN AND IS NOT SUITABLE FOR RECORDING AS A CLASS I STANDARD.
4. THERE ARE NO EASEMENTS OR RIGHT OF WAYS LOCATED ON THE SITE. THERE ARE NO EXTRAORDINARY OR UNUSUAL NATURAL FEATURES LOCATED ON THE SITE. THERE ARE NO HISTORIC AREAS OR CEMETERIES LOCATED ON THE SITE.
5. THERE IS NO 100 YEAR FLOOD PLAIN LOCATED ON THE SITE ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE TOWN OF JOHNSTON, RHODE ISLAND COMMUNITY PANEL 440018O020 C DATED NOVEMBER 17, 1993. THE SITE IS LOCATED WITHIN THE FOLLOWING FLOOD INSURANCE ZONE:
   ZONE X – AREAS DETERMINED TO BE OUTSIDE OF 500–YEAR FLOOD PLAIN.
6. ALL EXISTING UTILITIES SHOWN ARE FROM VISIBLE INFORMATION, DRAWINGS BY OTHERS, OR INFORMATION PROVIDED TO DIPRETE ENGINEERING AND ARE SUBJECT TO CHANGE. NO ONE SHOULD RELY ON THE UTILITY LOCATIONS SHOWN FOR CONSTRUCTION AND DIG SAFE SHOULD BE NOTIFIED PRIOR TO ANY WORK.
7. ALL EXISTING BUILDINGS ON THE PROPOSED SITE ARE TO BE RAZED PRIOR TO CONSTRUCTION.

SOIL INFORMATION

SOIL MAPPING OBTAINED FROM 'SOIL SURVEY OF RHODE ISLAND' PREPARED BY US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.

WoB WOODBRIDGE VERY STONY FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES

LEGEND

PROPERTY LINE
ASSESSOR LINE
10 FOOT CONTOUR — 40
2 FOOT CONTOUR — 56
SOIL TYPES — HkC
EXISTING TREELINE
EXISTING TREES
EXISTING STONEWALL
EXISTING RETAINING WALL
EXISTING PAVEMENT
EXISTING FENCE
EXISTING GUARD RAIL
EXISTING BUILDING
EXISTING UTILITY POLE
EXISTING OVERHEAD WIRES
EXISTING SEWER LINE — S
EXISTING WATER LINE — W
EXISTING GAS LINE — G
EXISTING DRAINAGE LINE
50' PERIMETER WETLAND
APPROXIMATE EDGE OF WETLAND
SOIL EVALUATION — SEV #19 GWT 72"
EXISTING HYDRANT
EXISTING WATER SHUT OFF
EXISTING WATER VALVE — WV
EXISTING GAS VALVE — GV
EXISTING CATCH BASIN
EXISTING MANHOLE

WoB

AP 20–2
LOT 58
N/F
JAMES R. SHAW, TRUSTEE OF THE
JAMES R. SHAW REVOCABLE TRUST

AP 20-2
LOT 80
N/F
ATWOOD DEVELOPMENT, LLC
AREA= 84,726 SQ. FT.±
(1.95 ACRES)

AP 20–2
LOT 79
N/F
PRIMARY CARE
ASSOCIATES OF JOHNSTON, LLC

Atwood Avenue
(Variable Width Public Right of Way)
(Rhode Island Highway Plat No. 609)

EDGE OF STATE HIGHWAY PLAT

338'±
297'±
433'±
150'±

SCALE: 1"=20'
0 10' 20' 40'

THIS PLAN IS TO BE INDEXED UNDER THE FOLLOWING STREETS:
- ATWOOD AVENUE
- HARTFORD AVENUE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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THIS SURVEY AND PLAN CONFORMS TO A CLASS III STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. SEE GENERAL NOTE 4.

CHRISTOPHER A. DUHAMEL
No. 1844
PROFESSIONAL LAND SURVEYOR

NO.	DATE	DESCRIPTION	BY
2	12-6-07	RDOT/ACOE COMMENTS	S.A.B.
1	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
0	10-25-07	RIDEM/USACOE/RIDOT PRELIMINARY DETERMINATION	S.A.B.

EXISTING CONDITIONS PLAN

1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
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(401) 943-1000 FAX: (401) 464-6006

OWNER/APPLICANT
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34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272-1100

OCTOBER, 2007
DWN. BY: S.A.B.

RIDOT NOTES

1. ALL WORK WITHIN THE STATE'S R.O.W. WILL CONFORM TO RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2004 INCLUDING ALL REVISIONS AND THE RI STANDARD DETAILS.
2. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES 2003 INCLUDING ALL REVISIONS.
3. NO LANE OR SHOULDER CLOSURES SHALL BE PERFORMED WITHIN THE STATE'S R.O.W. DURING PEAK TRAFFIC HOURS.
4. SEWER AND WATER CONNECTIONS WITHIN THE STATE R.O.W. WILL REQUIRE A SEPARATE RIDOT UTILITY PERMIT. CONTRACTOR TO OBTAIN BEFORE CONSTRUCTION.
5. THE DRAINAGE SYSTEM IS DESIGNED TO DECREASE BOTH STORM WATER RUNOFF RATE DISCHARGE, AND STORM WATER RUNOFF VOLUME TO THE STATE RIGHT-OF-WAY FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT. THERE WILL BE NO INCREASE IN RUNOFF TO THE STATE RIGHT OF WAY FROM THE PROPOSED DEVELOPMENT.

DIMENSIONAL REGULATIONS

ZONING	B2
MAXIMUM BUILDING HEIGHT	35 FEET
MINIMUM FRONT YARD	40 FEET
MINIMUM SIDE YARD	40 FEET
MINIMUM REAR YARD	40 FEET
TOTAL SITE AREA	1.95± ACRES

PROPOSED OFFICE BUILDING DATA:

AREA OF FIRST FLOOR	10,000 SQ.FT.
AREA OF SECOND FLOOR	10,000 SQ.FT.

PARKING CALCULATION:

OFFICE USE: 3 SPACES PLUS 1 SPACE FOR EVERY 250 SQ FT OF FLOOR AREA. SECTION H(2)(C) OFF-STREET PARKING REQUIREMENTS.

20,000 / 250 = 80 + 3 = 83 SPACES

REQUIRED PARKING: 83 SPACES

PROPOSED PARKING SPACES:

VISITOR PARKING SPACES	58 SPACES
STAFF PARKING	39 SPACES
TOTAL PARKING SPACES	97 SPACES

PROPOSED SILT FENCE OR STAKED HAYBALES AT LIMIT OF WORK
END OF SILT FENCE OR STAKED HAYBALES
LANDSCAPE AREA
AP 20-2 LOT 58 N/F JAMES R. SHAW, TRUSTEE OF THE JAMES R. SHAW REVOCABLE TRUST
PROPOSED 6' FENCE WITH GATE (RI STD 31.2.0)
PROPOSED 6' FENCE (RI STD 31.2.0)
PROPOSED 6" CONCRETE CURB
PROPOSED RETAINING WALL
PROPOSED LIMIT OF WORK ALONG PROPERTY LINE IN THIS AREA
PROPOSED SECURITY GATE
PROPOSED GUARDRAIL (RI STD 31.4.0)
PROPOSED STOP SIGN (R.I. STD 24.6.1 & 27.1.0)
CUT AND MATCH EXISTING SIDEWALK (TYPICAL)
PROPOSED 5'Ø (R.I. STD 7.1.0)
PROPOSED SAW-CUT AND MATCH (SEE DETAIL SHEET 10)
RAISED PLANTER BED (DESIGN BY OTHERS)
MAIN BUILDING ENTRANCE
REAR BUILDING ENTRANCE
Proposed 20,000 Sq. Ft. Office Building
Footprint: 10,000 Sq. Ft.
Finish Floor Elev. =185.00
PROPOSED STOP LINE (TYPICAL)
PROPOSED WHEEL CHAIR RAMP (SEE DETAIL SHEET 9) TYPICAL
PROPOSED DUMPSTER LOCATION
BUILDING SETBACK
PROPOSED LIMIT OF WORK
CONCRETE CURBING AND CONCRETE SIDEWALK TO BE REPLACED FOR ENTIRE FRONTAGE OF THE SITE
SAFE STOPPING SIGHT DISTANCE 700+ FEET
SAFE STOPPING SIGHT DISTANCE 700+ FEET
Atwood Avenue (Variable Width Public Right of Way) (Rhode Island Highway Plat No. 1609)
24.0' PAVEMENT WIDTH
PROPOSED TRANSFORMER PAD WITH BOLLARDS
PROPOSED LIMIT OF WORK SILT FENCE TO BE IN LANDSCAPE AREAS. (R.I. STD 9.1.0) TO BE USED IN PAVED AREAS
50' PERIMETER WETLAND
AP 20-2 LOT 79 N/F PRIMARY CARE ASSOCIATES OF JOHNSTON, LLC
EDGE OF STATE HIGHWAY PLAT
UP 129
UP 127S
UP 128
338'±
297'±
159'±
433'±

SCALE: 1"=20'
0 10' 20' 40'

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DEC 10 2007

ERIC M. PRIVE No. 8662 REGISTERED PROFESSIONAL ENGINEER CIVIL

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1	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
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OCTOBER, 2007
DWN. BY: S.A.B.

PARKING LAYOUT/ENTRANCE CONSTRUCTION DETAIL

1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

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(401) 272-1100

GENERAL NOTES

1. THE DRAINAGE SYSTEM WILL BE DESIGNED TO MEET THE TOWN OF JOHNSTON SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF CATCH BASINS, CULVERTS, AND DRAINAGE BASINS. THE STORMWATER MANAGEMENT SYSTEM WILL MEET THE RIDEM BEST MANAGEMENT PRACTICES.
2. THE SITE IS TO BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER.
3. THE SITE IS PROPOSED TO BE BUILT IN 1 PHASE.
4. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING FINISH GRADING AND DRAINAGE AROUND THE BUILDING TO ENSURE SURFACE WATER AND/OR GROUND WATER ARE DIRECTED AWAY FROM THE STRUCTURE.
5. THE CONTRACTOR SHALL COORDINATE WITH ALL OF THE APPROPRIATE UTILITY COMPANIES FOR AGREEMENTS TO SERVICE THE PROPOSED BUILDING. THIS SHALL BE DONE PRIOR TO CONSTRUCTION. NO REPRESENTATIONS ARE MADE BY DIPRETE ENGINEERING ASSOCIATES, INC. THAT UTILITY SERVICE IS AVAILABLE.
6. UTILITY INFORMATION SHOWN IS BASED ON BOTH FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION, THE PROPER UTILITY ENGINEERING DEPARTMENTS SHALL BE CONTACTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHALL BE DETERMINED IN THE FIELD. CALL TOLL FREE THE DIG SAFE CENTER AT 1-888-344-7233, 72 HOURS PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES WHICH ARE SHOWN ON THE PLANS OR DETAILED BY DIG SAFE SHALL BE THE SITE CONTRACTORS RESPONSIBILITY.
7. ALL PROPOSED UNDERGROUND UTILITIES TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION.
8. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES 2003 INCLUDING ALL REVISIONS.
9. ALL RETAINING WALS AND STEEP SLOPES ARE SHOWN SCHEMATICALLY ONLY AND DIPRETE ENGINEERING ASSOCIATES, INC. IS NOT PROVIDING THE DESIGN OF THESE ITEMS. THE ACTUAL WALLS AND SLOPES ARE TO BE BUILT UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER AND CERTIFIED TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT. SHOP DRAWINGS TO BE SUBMITTED PRIOR TO CONSTRUCTION.

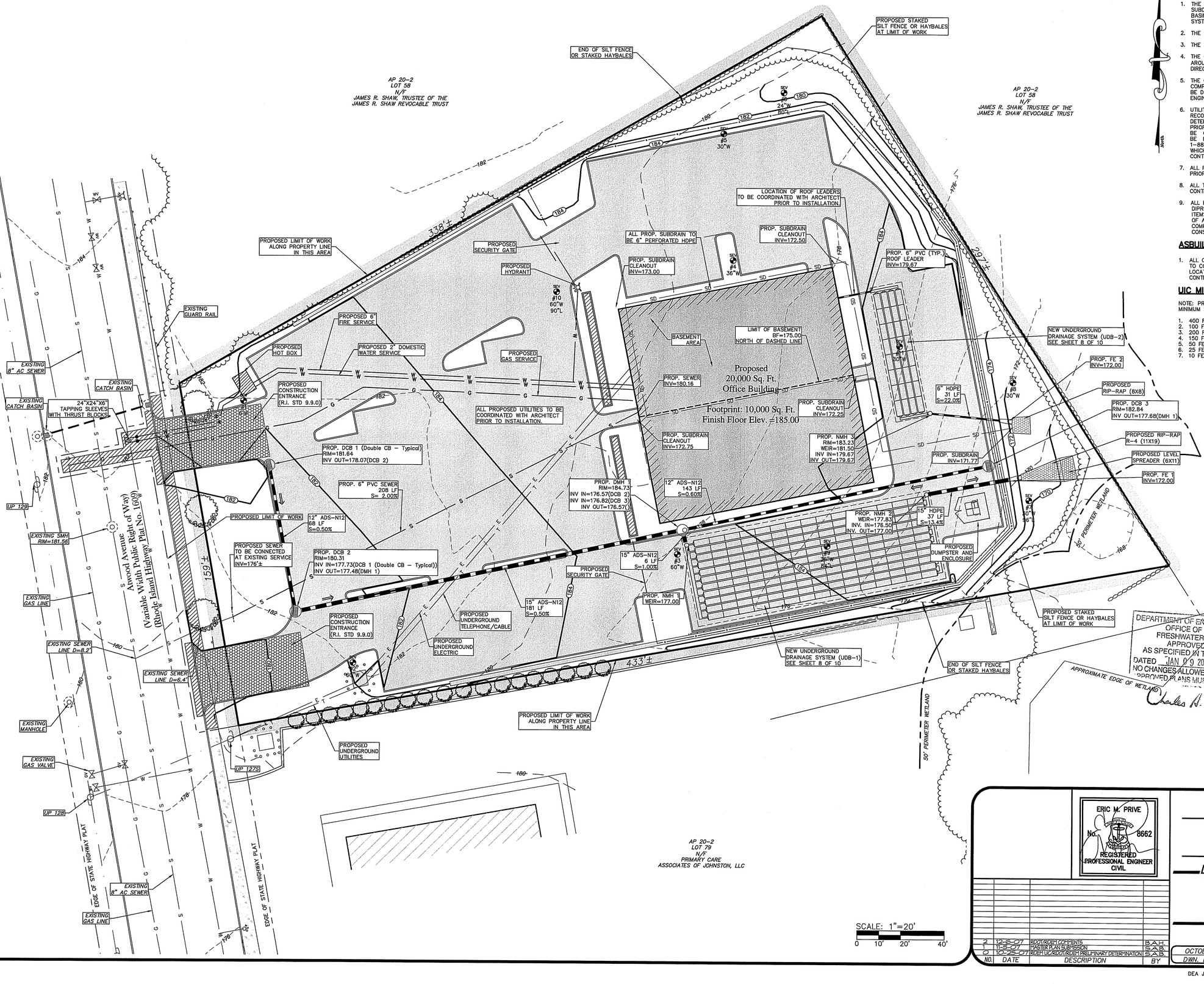
ASBUILT NOTES

1. ALL COMPONENTS OF THE DRAINAGE AND WATER SYSTEMS MUST BE ASBUILT PRIOR TO COVERING. ENGINEER TO BE NOTIFIED PRIOR TO COVERING TO SURVEY ASBUILT LOCATIONS. ENGINEER WILL NOT ACCEPT FIELD MEASUREMENTS FROM THE SITE CONTRACTOR.

UIC MINIMUM SETBACK REQUIREMENTS

NOTE: PROPOSED UNDERGROUND DRAINAGE SYSTEM MEETS ALL THE FOLLOWING UIC MINIMUM SETBACK REQUIREMENTS.

1. 400 FEET FROM ALL PUBLIC WELLS
2. 100 FEET FROM ALL PRIVATE WELLS
3. 200 FEET FROM AL SURFACE WATER SUPPLIES AND TRIBUTARIES
4. 150 FEET FROM ALL COASTAL POND
5. 50 FEET FROM ALL NON-CRITICAL SURFACE WATERS
6. 25 FEET FROM ALL EXISTING OR PROPOSED SUBSURFACE DISPOSAL SYSTEMS
7. 10 FEET FROM ALL BUILDING FOUNDATIONS AND SLABS



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REGISTERED PROFESSIONAL ENGINEER
CIVIL

GRADING/UTILITY PLAN

1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
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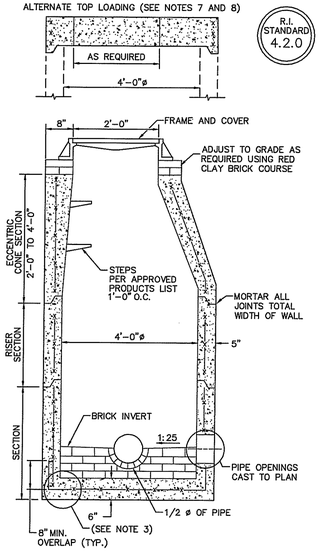
SHEET 5 OF 10



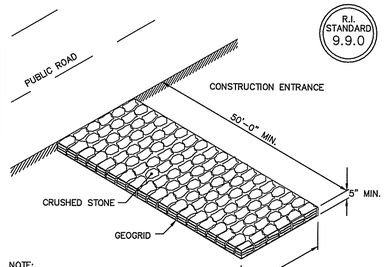
R.I. STANDARD 4.2.0

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS. MINIMUM.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN/LIN. FT.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN. / LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

PRECAST 4'-0" ROUND MANHOLE

NOT TO SCALE

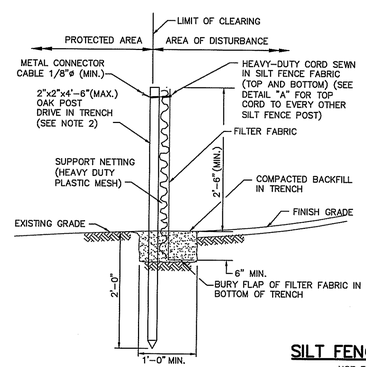


R.I. STANDARD 9.9.0

NOTE:
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

CONSTRUCTION ACCESS

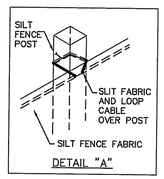
NOT TO SCALE



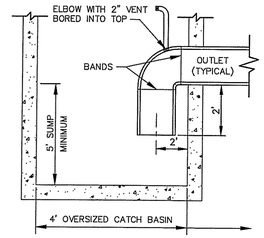
1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6"(MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AN 4'-0" (MAX.) O.C. IN WETLAND RAVINE. GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6"(MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

SILT FENCE DETAIL

NOT TO SCALE



R.I. STANDARD 9.2.0

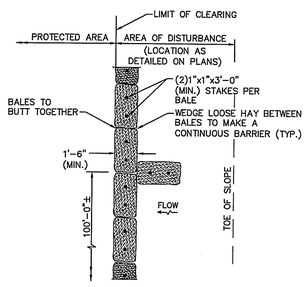


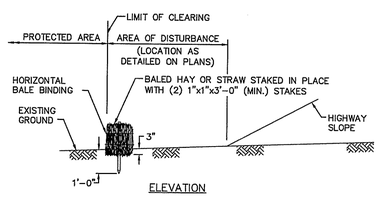
NOTES:

1. MAINTENANCE SCHEDULE TO BE COMPLETED BY THE OWNER
2. INSPECT BI ANNUALLY FOR SEDIMENT AND OIL ACCUMULATION.
3. PUMP OUT ANNUALLY AS REQUIRED AND DISPOSE OIL AND DEBRIS ACCORDING TO STATE OF RI WASTE MANAGEMENT AND OIL POLLUTION CONTROL REGULATIONS.
4. BOTTOM OF STRUCTURE SHALL BE NON-LEACHING
5. TO BE INSTALLED ON ALL CATCH BASINS.

OIL SEPARATOR DETAIL

NOT TO SCALE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE PERMANENT EASEMENT AS CALLED FOR ON PLANS.
3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

BALED HAY EROSION CHECK

NOT TO SCALE

R.I. STANDARD 9.1.0

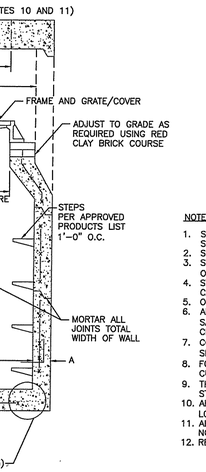


TABLE 1

CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.

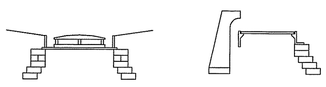
* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

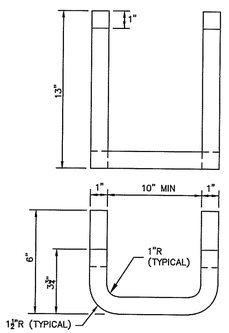
PRECAST ROUND CATCH BASIN

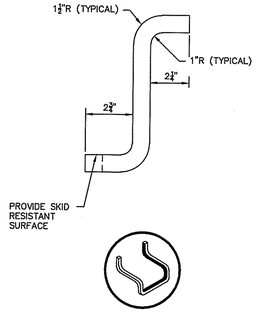
NOT TO SCALE



R.I. STANDARD 4.4.0

TYPE CATCH BASIN AS REQUIRED





R.I. STANDARD 5.3.0

NOTES:

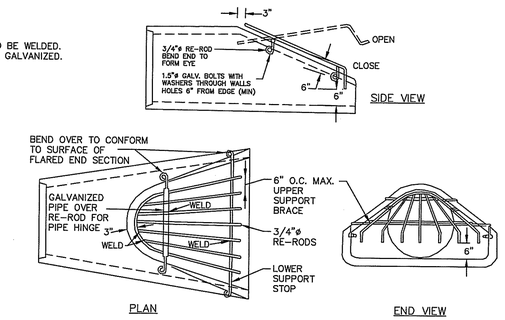
1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

CATCH BASIN AND MANHOLE STEP

NOT TO SCALE

NOTES:

1. ALL RE-RODS ARE TO BE WELDED.
2. ALL RODS ARE TO BE GALVANIZED.



GRATING FOR FLARED END

NOT TO SCALE

EROSION CONTROL NOTES

6.0 EROSION AND SEDIMENTATION CONTROL MEASURES, PERMANENT STABILIZATION, AND MAINTENANCE

THE SOIL EROSION, SEDIMENT, STABILIZATION, AND RUNOFF CONTROL WILL BE ACCOMPLISHED BY THE USE OF THE FOLLOWING DURING AND AFTER CONSTRUCTION:

ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER
NON-STRUCTURAL MEASURES
STRUCTURAL MEASURES

6.1 ESTABLISHMENT OF VEGETATIVE COVER

6.1.1 SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS THE INACTIVE WINTER SEASON. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.

6.1.2 ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED OR PROTECTED.

6.1.3 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'S STANDARD SPECIFICATION, M.20.

6.1.4 THE SEEDING DESIGN MIX SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	LBS/AC
CREEPING RED FESCUE	75
KENTUCKY BLUE GRASS	15
COLONIAL BENT GRASS	5
PERENNIAL RYE GRASS	5

EARLY SPRING OR LATE SUMMER SEEDING IS RECOMMENDED. SEED AS REQUIRED BY SOIL TESTING TO COMPLIMENT OR UPGRADE EXISTING CONDITIONS. THE SEED MIX SHALL BE INOCULATED WITHIN 24 HOURS AND BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUMS FOR EACH VARIETY.

6.1.5 TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW, OR FIBER MULCH OR PROTECTIVE COVER SUCH AS A MAT OR FIBER LINING. TEMPORARY HAY MULCH TO BE TACKED IN PLACE WITH NYLON MESH NETTING. STEEP SLOPES (2:1 SLOPES OR GREATER) SHALL BE TREATED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKETS SUCH AS S-350 OR APPROVED EQUAL. THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 2 TONS/ACRE.

6.1.6 ALL HAY BALES OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.

6.1.7 ALL FILL SHALL BE THOROUGHLY COMPACTED UPON PLACEMENT IN STRICT CONFORMANCE WITH LOCAL MUNICIPAL REQUIREMENTS AND THE RHODE ISLAND STANDARD SPECIFICATION FOR ROAD AND BRIDGE SECTION 202.

6.1.8 STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED. A SEDIMENT BARRIER SHALL SURROUND ALL TOPSOIL STOCKPILES.

6.1.9 ALL AREAS PROPOSED TO BE VEGETATED THAT ARE DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH MULCH. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STANDARD IS MAINTAINED. WELL ESTABLISHED VEGETATION SHALL BE MAINTAINED. BARE OR ERODED AREAS SHALL BE IMMEDIATELY REPAIRED AND RESEEDED BY THE CONTRACTOR. ACTIVITIES SHALL BE CONFINED TO WITHIN THE LIMIT OF WORK AS SHOWN ON THE PLANS.

6.1.10 MAXIMUM PERMANENT GRADED SLOPE WITHIN THE SITE IS TO BE 2:1 UNLESS NOTED OTHERWISE.

6.1.11 THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN. 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 TO THE OWNER.

6.1.12 REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989 AS A GUIDE.

6.2 NON-STRUCTURAL MEASURES

6.2.1 CONSTRUCTION TRAFFIC SHALL BE LIMITED TO THE ACCESS ROAD, UTILITY EASEMENTS AND AREAS TO BE GRADED.

6.2.2 TOPSOIL SHALL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE. STOCKPILE LOCATION SHALL BE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. A SEDIMENT BARRIER SHALL SURROUND ALL TOPSOIL STOCKPILES.

6.2.3 ALL TYPES OF WASTE GENERATED AT THE SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS. CONSTRUCTION DEBRIS SHALL BE DISPOSED OF DAILY TO AVOID EXPOSURE TO PRECIPITATION.

6.2.4 THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR PLAN IMPLEMENTATION OF NON-STRUCTURAL MEASURES AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.

6.2.5 REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY THE USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

6.3 STRUCTURAL MEASURES

6.3.1 RUNOFF WATER QUALITY IS IMPROVED UTILIZING AN UNDERGROUND INFILTRATION BASIN. THE UNDERGROUND BASIN IS DESIGNED TO PROMOTE SEDIMENT REMOVAL PRIOR TO FINAL DISCHARGE. DISCHARGE OUTLETS ARE PROTECTED WITH RIP-RAP APRONS OR LEVEL SPREADERS.

6.3.2 A STONE STABILIZATION PAD IS LOCATED AT THE SITE ENTRANCE TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT OF WAY.

6.3.3 RIP RAP APRONS AND/OR LEVEL SPREADERS SHALL BE INSTALLED AT THE OUTLETS OF ALL DRAINAGE PIPES.

6.3.4 HAY BALES OR SILT FENCE SHALL BE INSTALLED DOWNSTREAM OUTSIDE THE LIMITS OF ANY PROPOSED CONSTRUCTION AS SHOWN ON THE SITE PLANS AND PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATION.

6.3.5 THE CONSTRUCTION SUPERINTENDENT SHALL HAVE THE OVERALL RESPONSIBILITY FOR STRUCTURAL MEASURE IMPLEMENTATION AND FOR SEEING THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.

6.3.6 REFERENCE THE "RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" PREPARED BY USDA SOIL CONSERVATION SERVICE 1989, AS A GUIDE.

6.4 MAINTENANCE: SHORT TERM / LONG TERM

6.4.1 THE STONE STABILIZATION PADS AT THE SITE ENTRANCE SHALL BE MAINTAINED BY THE CONTRACTOR. THE MAINTENANCE SHALL INCLUDE TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND OR AS DIRECTED BY THE ENGINEER. ALL SEDIMENTS SPILLED, DROPPED, WASHED, OR TRACKED ON THE PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.

6.4.2 ALL HAY BALES/SILT FENCE, TEMPORARY TREATMENTS (HAY, STRAW, ETC.), AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION. HAY BALES/SILT FENCE SHALL BE INSPECTED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH STORM EVENT OR EVERY 7 DAYS, WHICHEVER COMES FIRST, FOR UNDERMINING AND DETERIORATION. A STORM EVENT SHALL BE DEFINED AS 0.25 INCHES OF RAIN WITHIN A 24-HOUR PERIOD. THE HAY BALES/SILT FENCE SHALL BE REPAIRED OR REPLACED AS WARRANTED. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAY BALES/SILT FENCE BECOMES FILLED IN WITH SEDIMENT. THE HAY BALES/SILT FENCE SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED. FOLLOWING CONFIRMATION FROM THE TOWN OF JOHNSTON AND OR THE DESIGN ENGINEER THAT AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER HAS BEEN ESTABLISHED THE HAY BALES/SILT FENCE SHALL BE REMOVED.

6.4.3 THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER. HAY BALES OR SILT FENCE SHALL BE STAKED AROUND THE STOCKPILES.

6.4.4 ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED, AND MAINTAINED BY THE CONTRACTOR FOLLOWING FINAL GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL CHECK REGULARLY ALL SEEDED AREAS TO SEE THAT A GOOD STAND OF VEGETATION IS MAINTAINED. THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER.

6.4.5 THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF THE SYSTEMS DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION AND ACCEPTANCE BY THE OWNER. THE OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE THEREAFTER. THE CONTRACTOR'S MAINTENANCE/INSPECTION RESPONSIBILITIES SHALL INCLUDE RESEEDING ANY UNSTABILIZED AREAS WITHIN THE SITE AT NO ADDITIONAL EXPENSE TO THE OWNER. THE OWNER'S MAINTENANCE/INSPECTION RESPONSIBILITIES SHALL INCLUDE INSPECTION OF THE RIP RAP PADS SEMIANNUALLY AND AFTER MAJOR STORMS. IF REPAIRS ARE NEEDED, THEY SHALL BE CARRIED OUT IMMEDIATELY. THE OWNER SHALL MAINTAIN A GOOD VEGETATIVE COVER. THE BOTTOM OF THE SYSTEMS SHALL BE INSPECTED ON A SEMI-ANNUAL BASIS AND SHALL BE REPAIRED OR REPLACED IF INFILTRATION IS NO LONGER TAKING PLACE (STANDING WATER 72 HOURS AFTER A STORM EVENT.)

6.4.6 THE CONTRACTOR SHALL MAINTAIN THE DRAINAGE NETWORK DURING AND UP TO A YEAR AFTER COMPLETION OF CONSTRUCTION AND ACCEPTANCE BY THE OWNER. THE OWNER IS RESPONSIBLE FOR INSPECTIONS AND MAINTENANCE THEREAFTER. THE ACCUMULATED SEDIMENTS IN THE CATCH BASINS SHALL BE REMOVED AND DRAINAGE PIPES FLUSHED BY THE CONTRACTOR AT THE END OF CONSTRUCTION. CATCH BASIN SUMPS SHALL BE CHECKED SEMIANNUALLY AND SEDIMENTS SHALL BE REMOVED IF THEY EXCEED 6" DEPTH OR EVERY YEAR, WHICHEVER COMES FIRST.

6.4.7 THE CONSTRUCTION SUPERINTENDENT SHALL HAVE OVERALL RESPONSIBILITY FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE AND FOR A PERIOD OF ONE YEAR AFTER CONSTRUCTION. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.

6.4.8 AFTER ACCEPTANCE BY THE OWNER, THE OWNER SHALL HAVE OVERALL RESPONSIBILITY FOR IMPLEMENTING THE MAINTENANCE PROGRAM FOR THE DRAINAGE NETWORK.

8.0 SEQUENCE OF CONSTRUCTION AND STAGING OF LAND DISTURBING ACTIVITIES

8.1 SURVEY AND STAKE THE PROPOSED UNDERGROUND INFILTRATION BASINS, DRAINAGE LINES, AND CENTERLINE OF THE LIMIT OF SEDIMENTATION BARRIERS/LIMIT OF DISTURBANCE.

8.2 PLACE SEDIMENTATION BARRIERS (HAY BALES OR SILT FENCE) AS SHOWN ON THE PLANS AND STAKED OUT IN THE FIELD. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE SEDIMENTATION BARRIERS.

8.3 BEGIN DEMOLITION OF EXISTING DWELLING AND PAVEMENT AS SHOWN ON PLANS.

8.4 BEGIN PARKING AND DRAINAGE WORK (CLEARING AND GRUBBING, EXCAVATING AND GRADING, ETC.). TOPSOIL TO BE STRIPPED AND STOCKPILED IN APPROVED AREAS. THE STOCKPILES ARE TO BE PROTECTED BY A ROW OF SEDIMENTATION BARRIERS AND COVERED OR TEMPORARILY SEEDED.

8.5 ALL PROPOSED CATCH BASINS SHALL BE PROTECTED WITH TEMPORARY SILT SACKS DURING CONSTRUCTION. THERE SHALL BE NO SEDIMENT ALLOWED WITHIN THE DRAINAGE SYSTEM PRIOR TO STABILIZATION.

8.6 BEGIN BUILDING FOUNDATION EXCAVATION AND POURING OF CONCRETE FOUNDATION.

8.7 INSTALL UTILITIES AND DRAINAGE PIPES. IMMEDIATELY PLACE THE EROSION CONTROLS AT THE DISCHARGE POINTS AND SEED THE DISTURBED AREAS.

8. BEGIN PARKING AREA PAVING.

8.9 BEGIN LANDSCAPING WHILE BUILDING IS UNDER CONSTRUCTION.

8.10 FINISH BUILDING AND PARKING AREA CONSTRUCTION.

8.11 FINISH LANDSCAPING AND PERMANENT STABILIZATION.

8.12 REPAIR DRAINAGE OUTLET AND UNDERGROUND INFILTRATION BASIN AS REQUIRED. REMOVE SILT SACKS FROM CATCH BASINS.

8.13 REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND SEED ANY DISTURBED AREAS FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS.

8.14 CONSTRUCTION TO COMMENCE WINTER 2007 OR UPON RECEIPT OF ALL NECESSARY APPROVALS.

8.15 PRIOR TO COMMENCING CONSTRUCTION, THE PROPOSED LIMITS OF CLEARING SHALL BE SURVEYED AND FLAGGED TO LIMIT TREE CLEARING.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 0 9 2008 FILE # 07-0427
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Horbert

RECEIVED
DEC 10 2007

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO.	DATE	DESCRIPTION	BY
2	12-6-07	RIDOT/RIDEM COMMENTS	B.A.H.
1	11-5-07	PLANS/PLAN SUBMISSION	S.A.B.
0	10-25-07	RIDEM LMC/RIDOT/RIDEM PRELIMINARY DETERMINATION	S.A.B.

OCTOBER, 2007
DWN. BY: S.A.B.

DETAIL SHEET

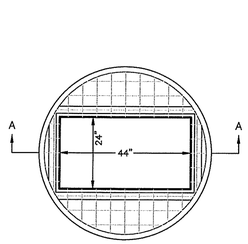
1543 Atwood Avenue

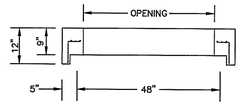
ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
(401) 943-1000 FAX: (401) 464-6006

OWNER/APPLICANT
Atwood Development, LLC
34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272-1100

SHEET 6 OF 10





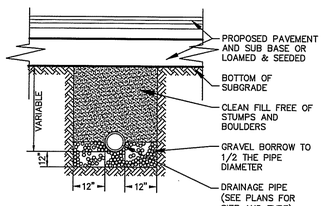
SECTION A–A

1. CONCRETE 4000 PSI.
2. CONSTRUCTION PER ASTM C478.
3. ALL REBAR SHALL HAVE A MINIUM OF 1.5" CLEARANCE FROM OPENINGS
4. REINFORCING STEEL PER ASTM A–185 & A–615.
5. FLAT TOP STEEL IS REINFORCED TO MEET OR EXCEED H–20 LOADING.

4' DIA. DOUBLE OPENING SLAB COVER

HANSON PIPE (OR EQUAL)

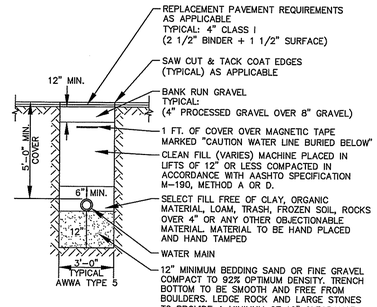
NOT TO SCALE



NOTE: ALL PIPE TO BE RCP CLASS III UNLESS NOTED OTHERWISE

DRAINAGE TRENCH DETAIL

NOT TO SCALE



WATER TRENCH DETAIL

NOT TO SCALE

SEWER LINE/WATER MAIN SEPARATION POLICY FOR DESIGN OF SANITARY SEWERS

A. LATERAL PLACEMENT OF SEWERS AND WATER MAINS SEWERS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN. THE DISTANCE SHALL BE MEASURED EDGE–TO–EDGE. THERE IS NO MINIMUM VERTICAL SEPARATION REQUIRED PROVIDED THE 10 FOOT HORIZONTAL SEPARATION IS MAINTAINED.

IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE DIVISION MAY ALLOW DEVIATION ON A CASE BY CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THAT:

1. THE SEWER AND WATERMAIN ARE LAID IN SEPARATE TRENCHES, OR
2. THE SEWER AND WATERMAIN MAY BE INSTALLED IN THE SAME TRENCH WITH THE WATERMAIN PLACED ON A BENCH OF UNDISTURBED EARTH, AND
3. IN EITHER CASE, THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATERMAIN.

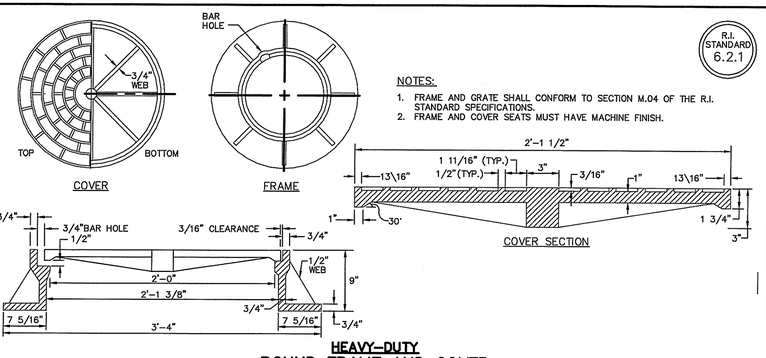
IN SITUATIONS WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, THE FOLLOWING PROTECTION SHALL BE PROVIDED:

1. ENCASEMENT OF THE SEWER PIPE IN CONCRETE (MIN. 6 INCH. THICKNESS) OR A CARRIER PIPE FOR AT LEAST 10 FEET EITHER SIDE OF THE AREA NOT COMPLYING WITH THE MINIMUM HORIZONTAL AND VERTICAL SEPARATION, OR
2. DESIGN AND CONSTRUCTION OF THE SEWER EQUAL TO WATERMAIN PIPE (CEMENT–LINED DUCTILE IRON OR OTHER AWWA–APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE), AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS.

B. SEWERS CROSSING WATERMAINS SEWERS CROSSING OVER WATERMAINS SHOULD BE AVOIDED, BUT IF CONDITIONS WARRANT THIS SITUATION, THEN ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO MAINTAIN LINE AND GRADE. SEWERS CROSSING UNDER WATERMAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE WATERMAIN AND THE CROWN OF THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATERMAIN JOINTS.

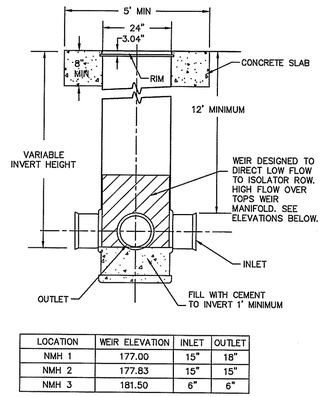
WHERE CONDITIONS PREVENT AN 18 INCH VERTICAL SEPARATION FROM BEING MAINTAINED, THE FOLLOWING METHODS SHALL BE SPECIFIED:

1. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATERMAIN PIPE (CEMENT–LINED DUCTILE IRON PIPE, PVC OR OTHER AWWA APPROVED MATERIAL FOR POTABLE WATER CONVEYANCE) FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER– MAIN AND PRESSURE TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS, OR
2. EITHER THE WATERMAIN OR THE SEWER MAY BE ENCASED IN CONCRETE (MIN. 6 INCH THICKNESS) OR A CARRIER PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER– MAIN. THE CARRIER PIPE SHALL BE DESIGNED AND CONSTRUCTED OF MATERIALS WHICH ARE SATISFACTORY TO THE DIVISION, OR
3. ANY OTHER METHODS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER, WHICH ENSURE ADEQUATE WATERTIGHTNESS AND ARE SATISFACTORY TO THE DIVISION.



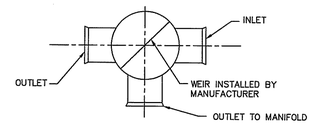
HEAVY–DUTY ROUND FRAME AND COVER

NOT TO SCALE

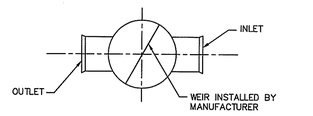


LOCATION	WEIR ELEVATION	INLET	OUTLET
NMH 1	177.00	15"	18"
NMH 2	177.83	15"	15"
NMH 3	181.50	6"	6"

PROFILE VIEW



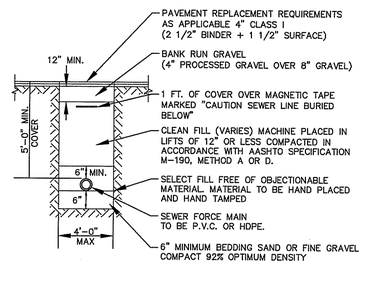
PLAN VIEW (NMH 1)



PLAN VIEW (NMH 2 & NMH 3)

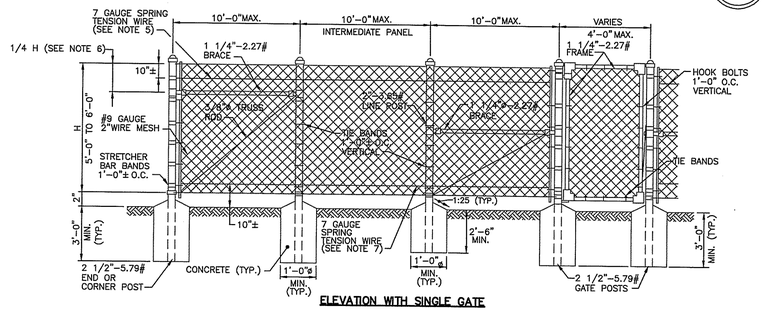
TYPICAL 24" NYOPLAST MANHOLE WITH WEIR

NOT TO SCALE

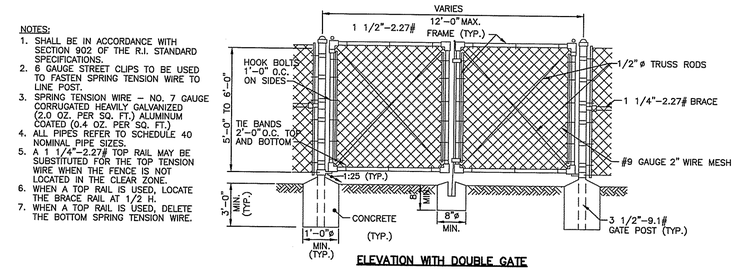


SEWER TRENCH DETAIL

NOT TO SCALE



ELEVATION WITH SINGLE GATE

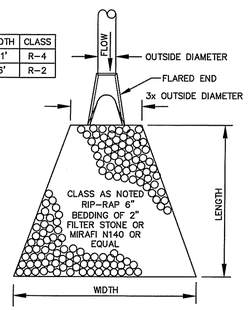


ELEVATION WITH DOUBLE GATE

CHAIN LINK FENCE 5'–0" TO 6'–0"

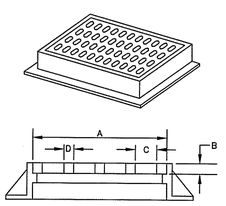
NOT TO SCALE

LOCATION	LENGTH	WIDTH	CLASS
UDB–1 (FE 1)	19'	11'	R–4
UDB–2 (FE 2)	6'	6'	R–2



RIP–RAP APRON DETAIL

NOT TO SCALE

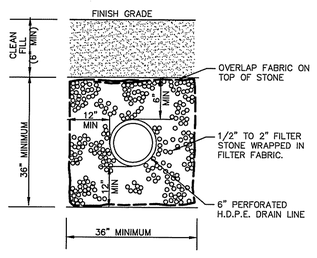


CAT. NO.	A	B	C	D	WT. (LBS)
R–4853–A	24"x45"	3"	13"x 61"	1 1/4"	520

DOUBLE FRAME & GRATE

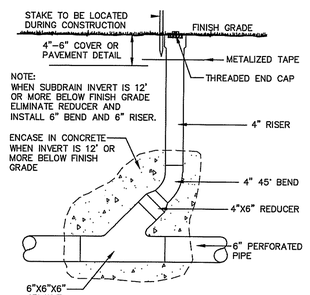
NEEHAH FOUNDRY CORP. (OR EQUAL)

NOT TO SCALE



SUBDRAIN TRENCH (TYPICAL)

NOT TO SCALE

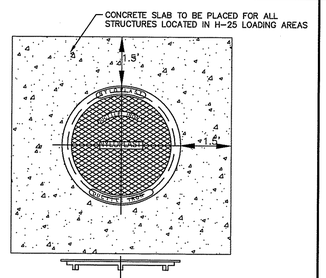


6" SUBDRAIN CLEANOUT (TYPICAL)

NOT TO SCALE

SUBDRAIN: CONSTRUCTION, MAINTENANCE & INSPECTION NOTES

1. SUBDRAIN AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON SUBDRAIN AREA PRIOR TO CONSTRUCTION.
2. STAKE CENTERLINE OF SUBDRAIN.
3. EXCAVATE TRENCH. IF NECESSARY, PUMP GROUNDWATER TO DE–WATERING BASIN. THE TRENCH SHALL BE A MINIMUM OF 36" IN WIDTH.
4. PLACE FILTER FABRIC ALONG THE BOTTOM AND SIDES OF TRENCH AND FILL WITH 1/2" TO 2" DIAMETER FILTER STONE. THE DEPTH OF STONE BELOW THE INVERT OF THE SUBDRAIN SHALL BE A MINIMUM OF 12".
5. PLACE SUBDRAIN AT THE INVERT ELEVATION ALONG WITH CLEAN–OUTS AS INDICATED ON THE PLANS. BACKFILL SIDES AND TOP OF SUBDRAIN WITH FILTER STONE. THERE SHALL BE A MINIMUM OF 12" OF FILTER STONE ON BOTH SIDES OF THE SUBDRAIN. A MINIMUM OF 6" OF FILTER STONE SHALL COVER THE SUBDRAIN.
6. OVERLAP FILTER FABRIC ON THE TOP OF THE FILTER STONE. BACKFILL WITH A MINIMUM OF 6" CLEAN FILL TO FINISH GRADE.
7. MONITORING WATER LEVELS WITHIN THE CLEAN–OUTS AT VARIOUS TIME INTERVALS AFTER A RAINFALL EVENT WILL INDICATE THE EFFECTIVENESS OF THE SYSTEM. IF WATER IS STANDING IN SUBDRAIN 72 HOURS AFTER A STORM EVENT, SYSTEM FAILURE HAS OCCURRED AND WILL REQUIRE FLUSHING

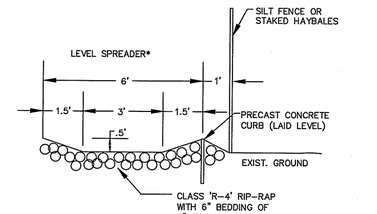


NOTES:

SOLID COVER HAS H–25 HEAVY DUTY RATING
QUALITY: MATERIALS SHALL CONFORMS TO ASTM A536 GRADE 70–50–05
MATERIAL: DUCTILE IRON
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

NYOPLAST 24" COVER

NOT TO SCALE



NOTE:

* LENGTHS AS SPECIFIED ON SITE PLANS

LEVEL SPREADER

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF
DATED JAN 09 2008 FILE # 07-0427
NO CHANGES ALLOWED WITHOUT PRIOR
APPROVED PLANS MUST BE AT CONSTRUCTION

RECEIVED
DEC 10 2007

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO.	DATE	DESCRIPTION	BY
3	12-6-07	RIDOT/RIDEM COMMENTS	S.A.B.
2	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
1	10-25-07	RIDEM LUC/RIDOT/RIDEM PRELIMINARY DETERMINATION	S.A.B.
0			

OCTOBER, 2007
DWN. BY: S.A.B.

DETAIL SHEET

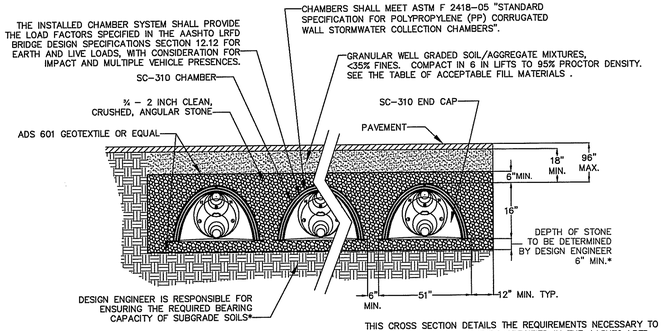
1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
(401) 943–1000 FAX: (401) 464–6006

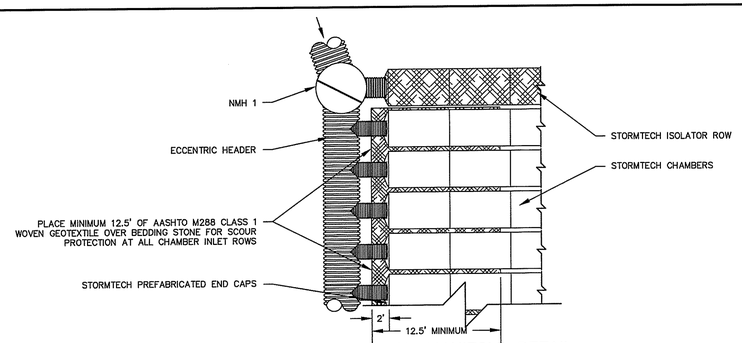
OWNER/APPLICANT
Atwood Development, LLC
34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272–1100

SHEET 7 OF 10



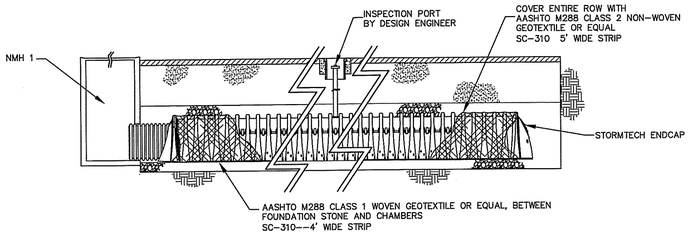
STORMTECH SC-310 TYPICAL CROSS SECTION

NOT TO SCALE



STORMTECH ISOLATOR™ ROW MANIFOLD DETAIL

NOT TO SCALE



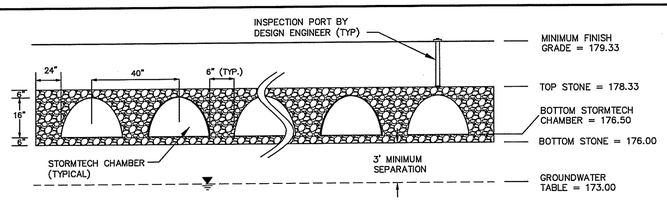
STORMTECH ISOLATOR™ ROW DETAIL

NOT TO SCALE

NOTE:

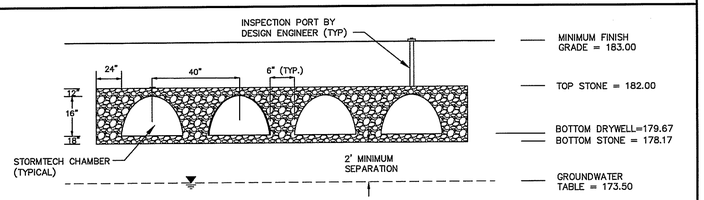
SECTION ONLY SHOWS PORTION OF UNDERGROUND SYSTEM.

STORM EVENT	ELEV.
2-YEAR	177.14
10-YEAR	177.99
25-YEAR	178.06
100-YEAR	178.20



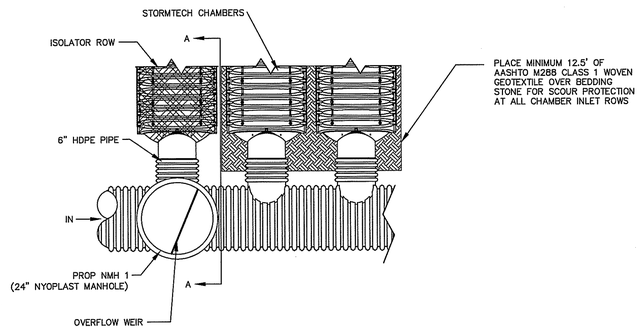
UNDERGROUND INFILTRATION SYSTEM CROSS SECTION (UDB-1)

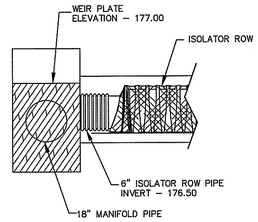
NOT TO SCALE



UNDERGROUND BUILDING DRYWELL SYSTEM CROSS SECTION (UDB-2)

NOT TO SCALE

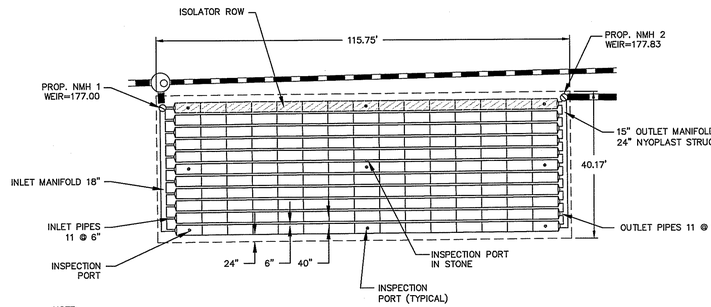




SECTION A A

STORMTECH ELEVATIONS (UDB-1)

NOT TO SCALE

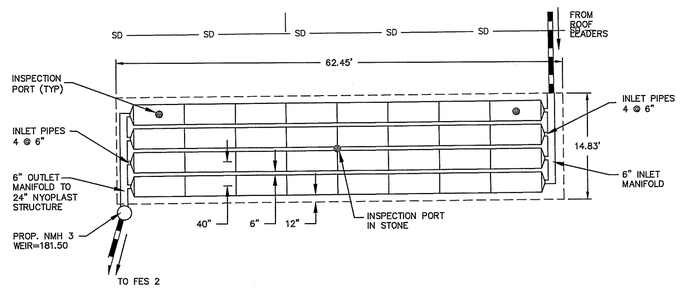


NOTE:

1. NMH IS ABBREVIATION FOR 24" NYOPLAST STRUCTURE
2. 24" STRUCTURES TO BE NYOPLAST OR ENGINEER APPROVED EQUAL

UNDERGROUND INFILTRATION SYSTEM (UDB-1)

SCALE: 1"=20'



DRYWELL SYSTEM (UDB-2)

SCALE: 1"=10'

UNDERGROUND INFILTRATION: CONSTRUCTION, MAINTENANCE & INSPECTION NOTES

1. UNDERGROUND DRAINAGE AREA TO BE STAKED, MARKED, AND REMAIN UNDISTURBED PRIOR TO CONSTRUCTION. THERE IS TO BE NO CONSTRUCTION TRAFFIC ON DESIGNATED AREA PRIOR TO CONSTRUCTION.
2. STAKE CORNERS OF INFILTRATION BASINS.
3. PLACE FILTER FABRIC ALONG THE BOTTOM AND SIDES OF TRENCH AND FILL WITH SPECIFIED DIAMETER FILTER STONE.
4. SET STRUCTURES AT THE INVERT ELEVATION ALONG WITH INSPECTION/MAINTENANCE PORTS AS INDICATED ON THE PLANS. BACKFILL SIDES AND TOP OF STRUCTURE WITH FILTER STONE. THERE SHALL BE A MINIMUM OF 12" OF FILTER STONE ALL SIDES OF THE STRUCTURE.
5. OVERLAP FILTER FABRIC ON THE TOP OF THE FILTER STONE. BACKFILL WITH CLEAN FILL TO FINISH GRADE.
6. MONITORING WATER LEVELS WITHIN THE CLEAN-OUTS AT VARIOUS TIME INTERVALS AFTER A RAINFALL EVENT WILL INDICATE THE EFFECTIVENESS OF THE SYSTEM. IF WATER IS STANDING IN INFILTRATION SYSTEM 72 HOURS AFTER A STORM EVENT, SYSTEM FAILURE HAS OCCURRED AND WILL REQUIRE FLUSHING MAINTENANCE, REPAIR OR REPLACEMENT OF THE SYSTEM. THE OWNER WILL MAINTAIN THE DRAINAGE COMPONENTS.
7. IF STANDING WATER PERSISTS 72 HOURS AFTER A STORM EVENT WITHIN THE MONITORING WELLS, THE UNDERGROUND STORMTECH SC-310 SYSTEM SHALL UNDERGO MAINTENANCE IMMEDIATELY AND NON-IMPROVEMENTS OF CONDITIONS THEREAFTER WILL CALL FOR CONTRACTOR REPLACEMENT OF SYSTEM AND OR IMPROVEMENT OF SURROUNDING STONE.
8. MAINTENANCE WITHIN THE UNDERGROUND STORMTECH SC-310 SHALL CONSIST OF INSPECTION OF THE RESPECTIVE MONITORING WELLS SEMI-ANNUALLY, TO OCCUR WITHIN 72 HOURS OF A RAINFALL EVENT. IF IT IS FOUND THAT STORMTECH SC-310 SYSTEMS ARE NOT INFILTRATING STORMWATER AFTER 72 HOURS FOLLOWING A RAINFALL EVENT, THE (OWNER/H.A.) SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF THE APPROPRIATE SYSTEM COMPONENTS.
9. FOR APPROPRIATE SEDIMENT REMOVAL TIME-TABLE OF CATCH BASINS DISCHARGING TO SYSTEM SEE SEDIMENT VOLUME CALCULATIONS IN STORMWATER REPORT.

STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON THE STORMTECH CHAMBER SYSTEM AND INFORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICE REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM.

STORMWATER CHAMBER SPECIFICATIONS

CHAMBERS SHALL BE STORMTECH SC-310 OR APPROVED EQUAL.

1. CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418-05, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
3. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
4. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   A. A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM 2418-05 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   B. A CERTIFICATION BY THE MANUFACTURER THAT THE CHAMBERS ARE IN ACCORDANCE WITH ASTM F2418-05.
5. CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
6. ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN MANUAL.
7. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 09 2008 FILE # 07-0427
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Horbert

RECEIVED
DEC 19 2007

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO.	DATE	DESCRIPTION	BY
2	12-6-07	RIDOT/RIGHT COMMENTS	S.A.B.
1	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
0	10-25-07	RIDEM/CRMC/RIDOT PRELIMINARY DETERMINATION	S.A.B.

OCTOBER, 2007
DWN. BY: S.A.B.

DETAIL SHEET

1543 Atwood Avenue

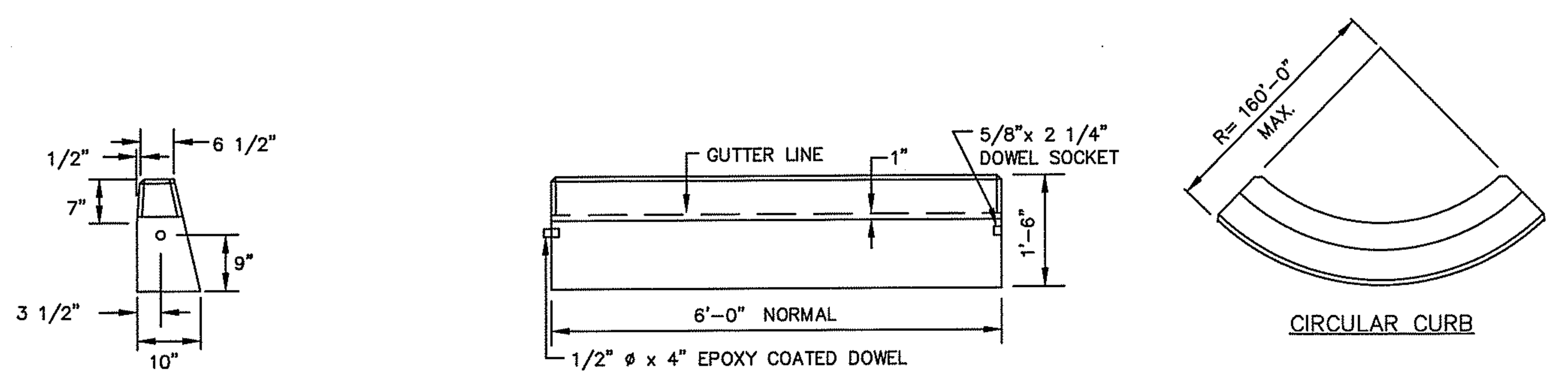
ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
(401) 943-1000 FAX: (401) 464-6006

OWNER/APPLICANT
Atwood Development, LLC
34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272-1100

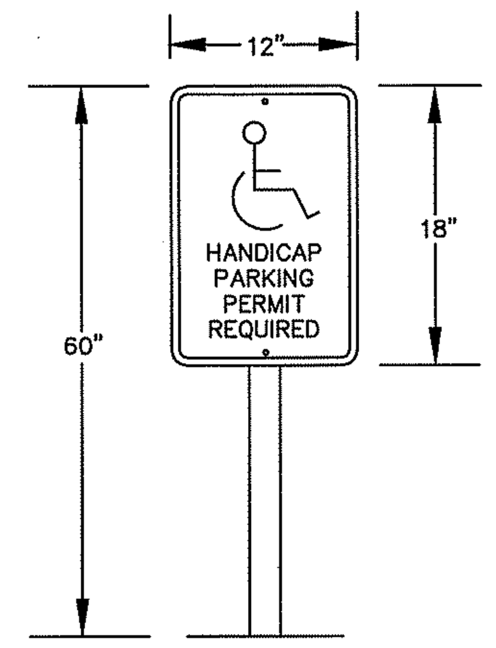
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'–0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'–0" RADIUS.
5. EXPOSED EDGES TO HAVE A 3/4 CHAMFER.

R.I. STANDARD 7.1.0



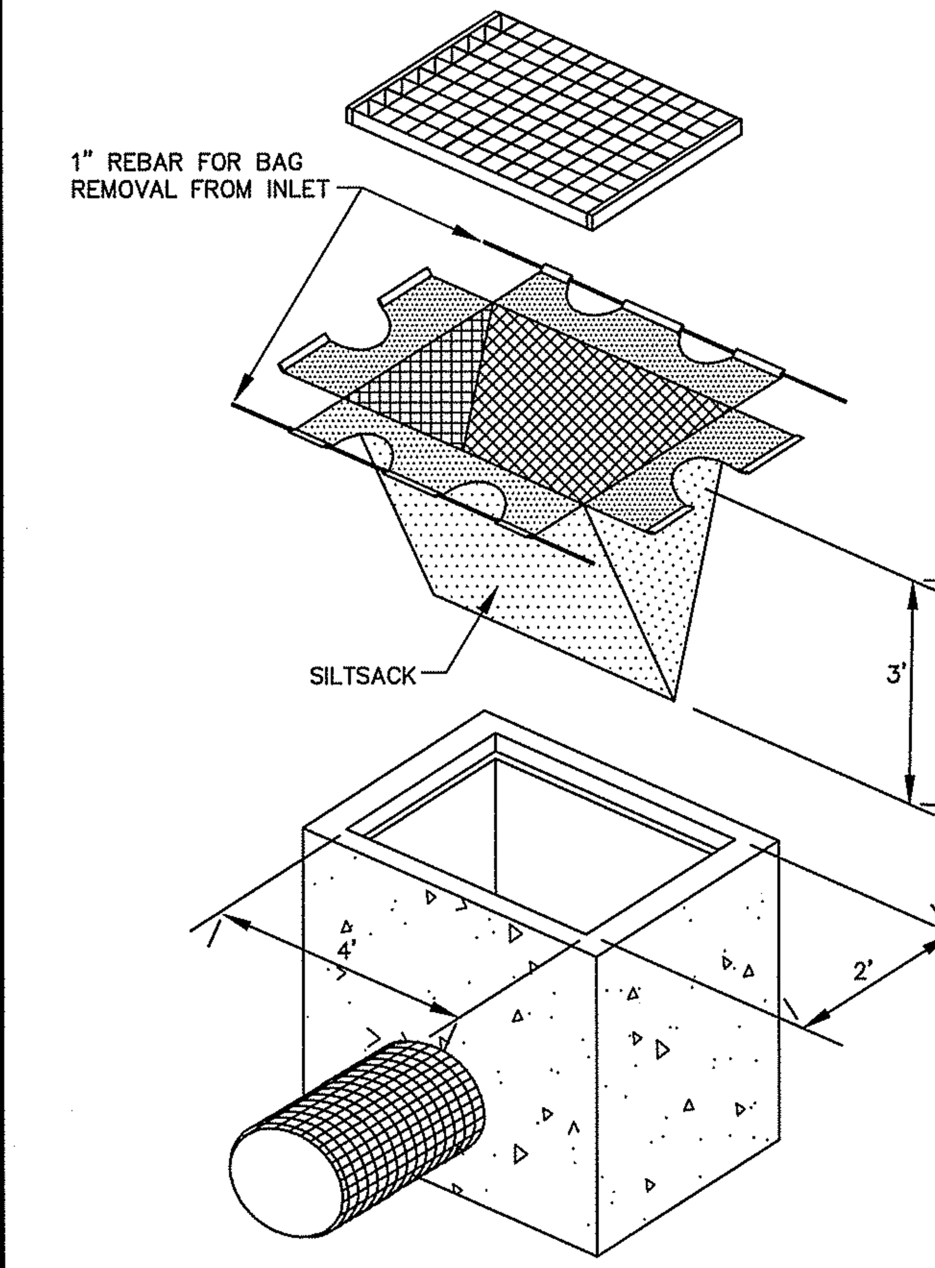
PRECAST CONCRETE CURB

NOT TO SCALE

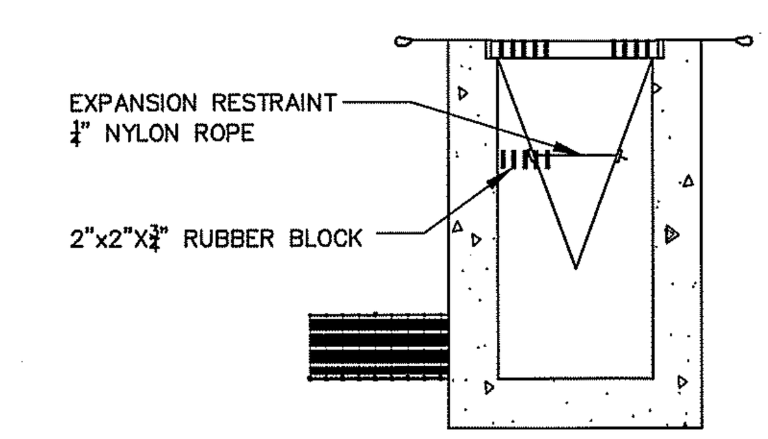


TYPICAL HANDICAP PARKING POST & SIGN

NOT TO SCALE



NOTE:
REGULAR FLOW=40 GAL./MIN/SF
HIGH FLOW=200 GAL./MIN.SF



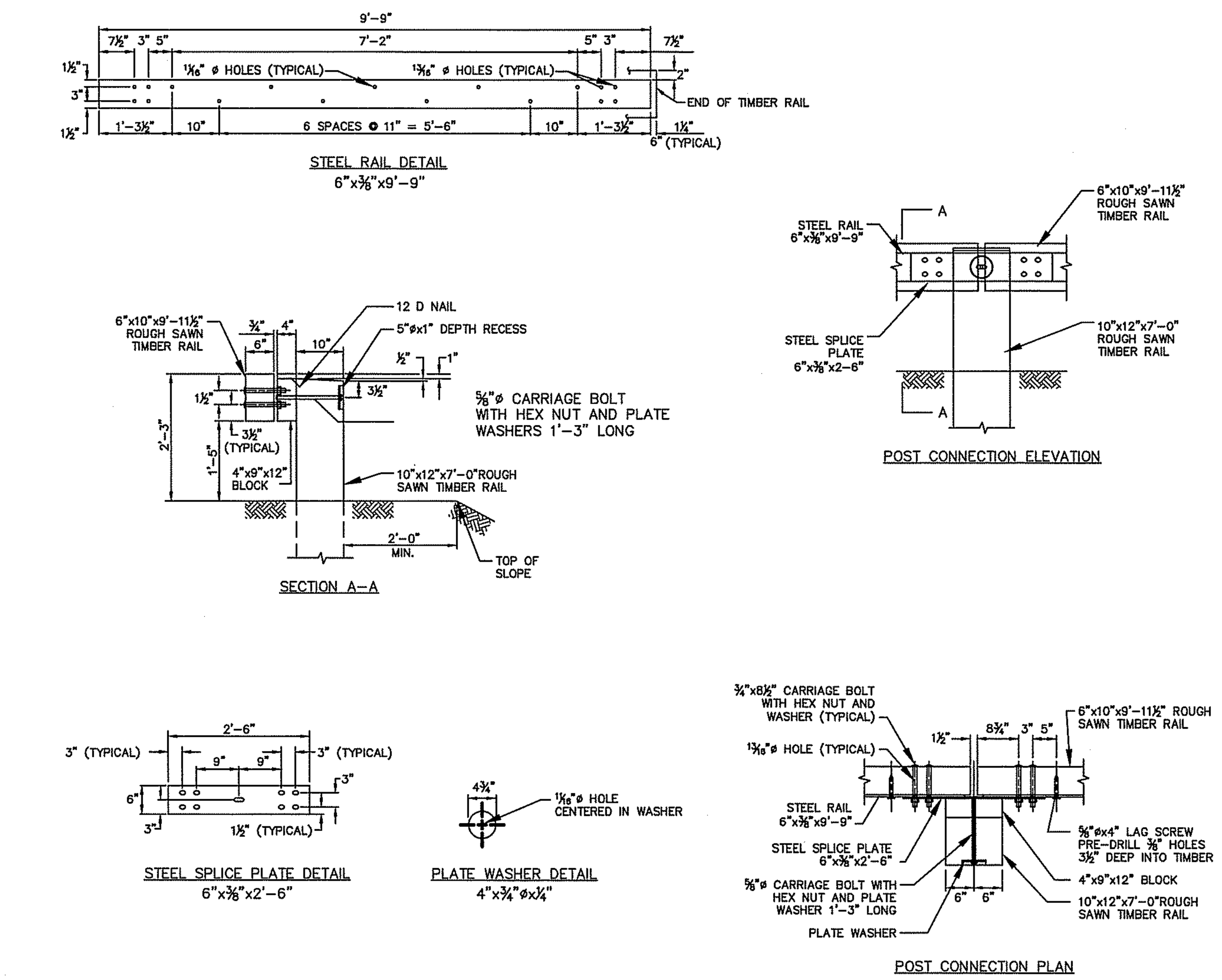
NOTE:
ALL CATCHBASINS TO BE INSTALLED WITH SILT CATCHERS FOR SEDIMENT CONTROL. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE SYSTEM DURING CONSTRUCTION.

SILT SACK DETAIL

NOT TO SCALE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 900 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

R.I. STANDARD 34.4.0

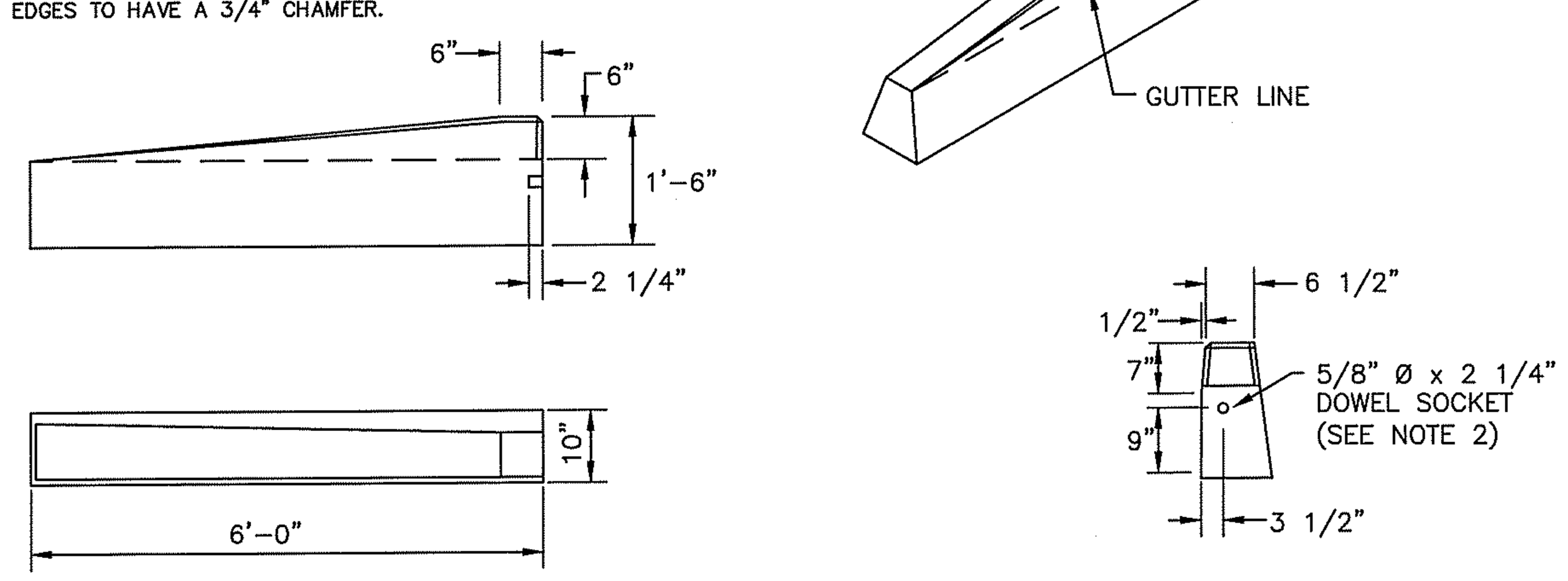


STEEL BACKED TIMBER GUARDRAIL

NOT TO SCALE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"ø x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

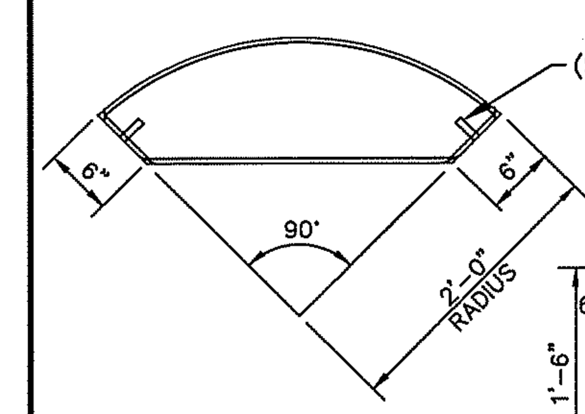
R.I. STANDARD 7.1.2

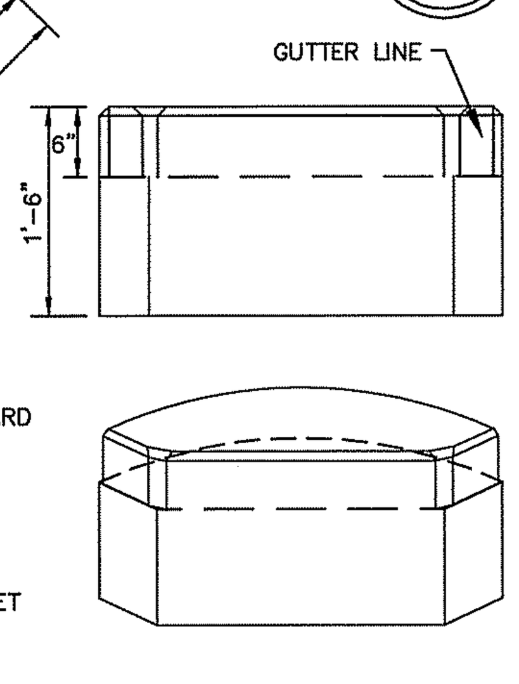


6'–0" PRECAST CONCRETE TRANSITION CURB

NOT TO SCALE

R.I. STANDARD 7.1.4

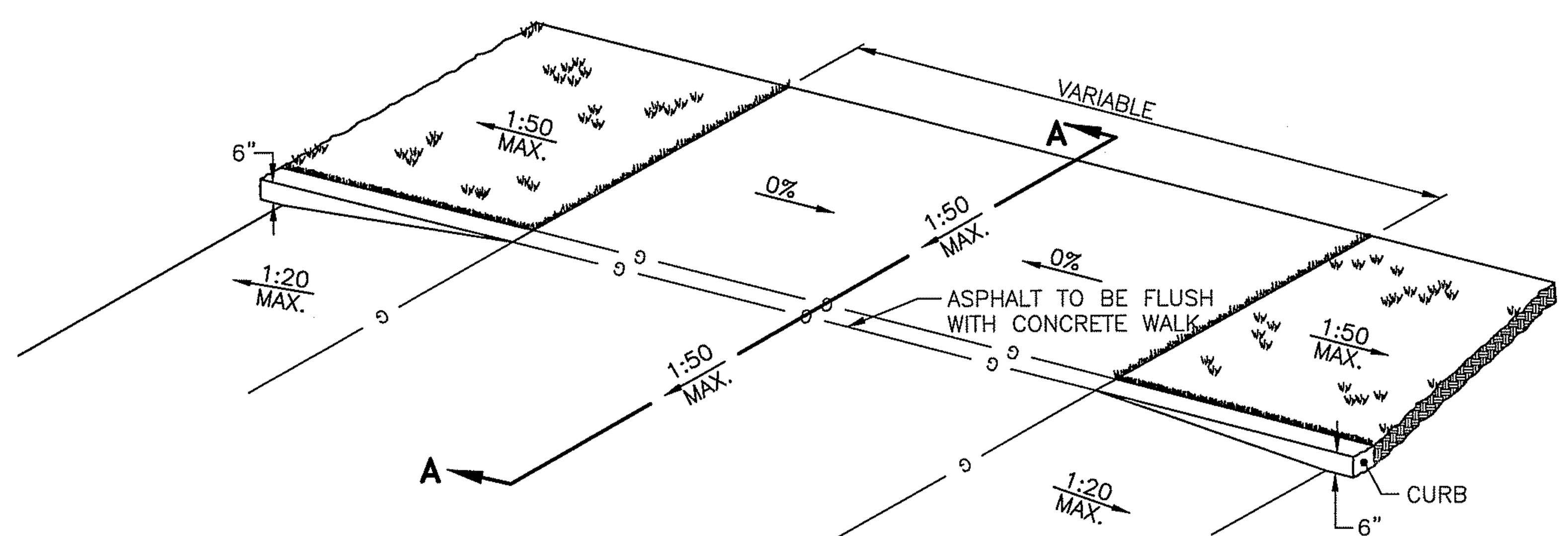




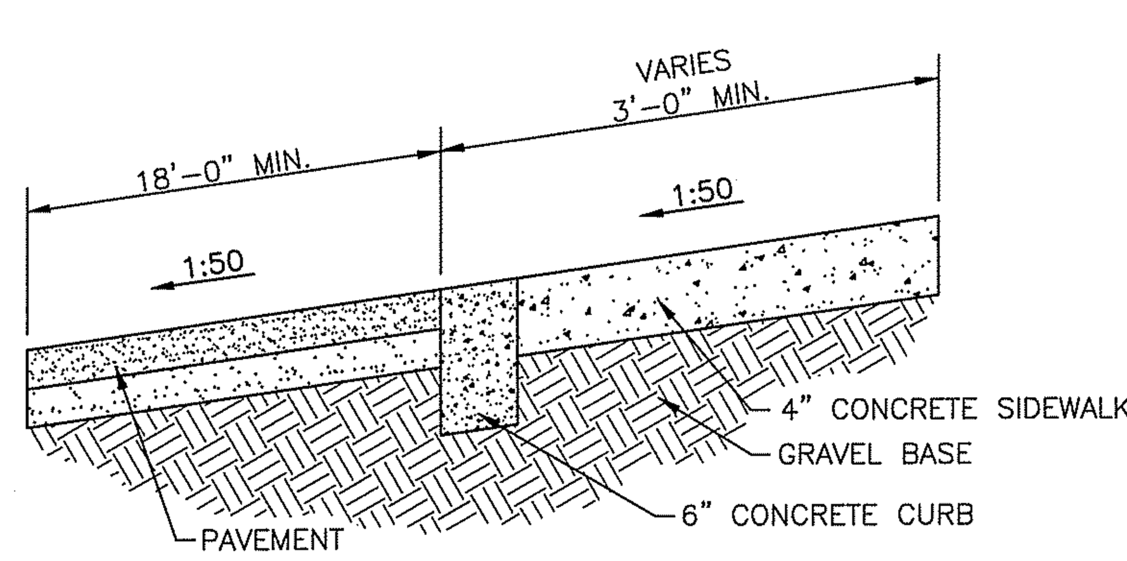
NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. NO REINFORCEMENT REQUIRED.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. SEE STD. 7.1.0 FOR DOWEL SOCKET LOCATION.

PRECAST CONCRETE 2'–0" RADIUS CORNER

NOT TO SCALE



ISOMETRIC VIEW
NOT TO SCALE



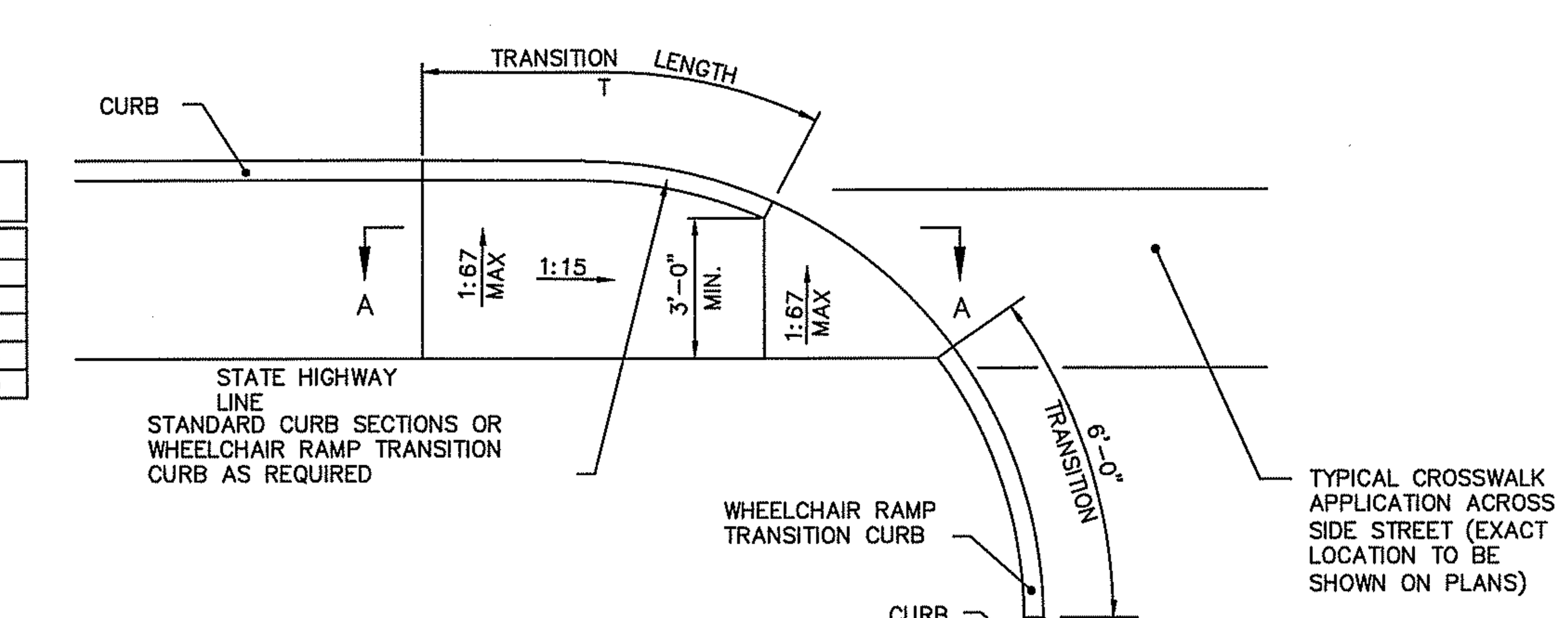
SECTION A–A
NOT TO SCALE

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR ACCESS AREA WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE ACCESS AREA.
3. AT NO TIME IS ANY PART OF THE WHEELCHAIR ACCESS AREA TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
4. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR ACCESS AREAS.
5. LOCATION OF WHEELCHAIR ACCESS AREAS IS AS SHOWN ON CONTRACT DRAWINGS.
6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE ACCESS AREA.
7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'–0" SHALL BE MAINTAINED.
8. HANDICAPPED ACCESSIBLE STALLS AND LOADING AREA SHALL NOT EXCEED A SLOPE OF 1:50 IN ANY DIRECTION.
9. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL AN ACCESS AREA BE PLACED BEHIND THE STOP LINE.
10. THE ENTRANCE OF THE WHEELCHAIR ACCESS AREA SHALL BE FLUSH WITH THE PAVEMENT.
11. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
12. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.

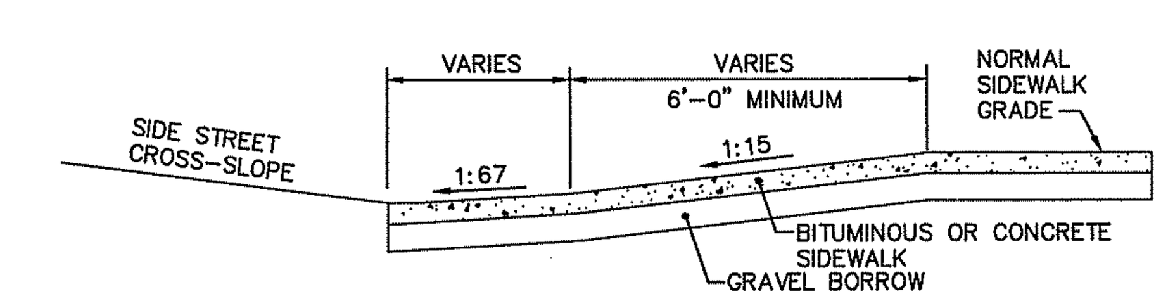
WHEELCHAIR ACCESS

NOT TO SCALE

PROFILE GRADE	T
0.00	7.5
0.01	9.0
0.02	11.0
0.03	13.5
0.04	19.0
0.05	30.0



PLAN



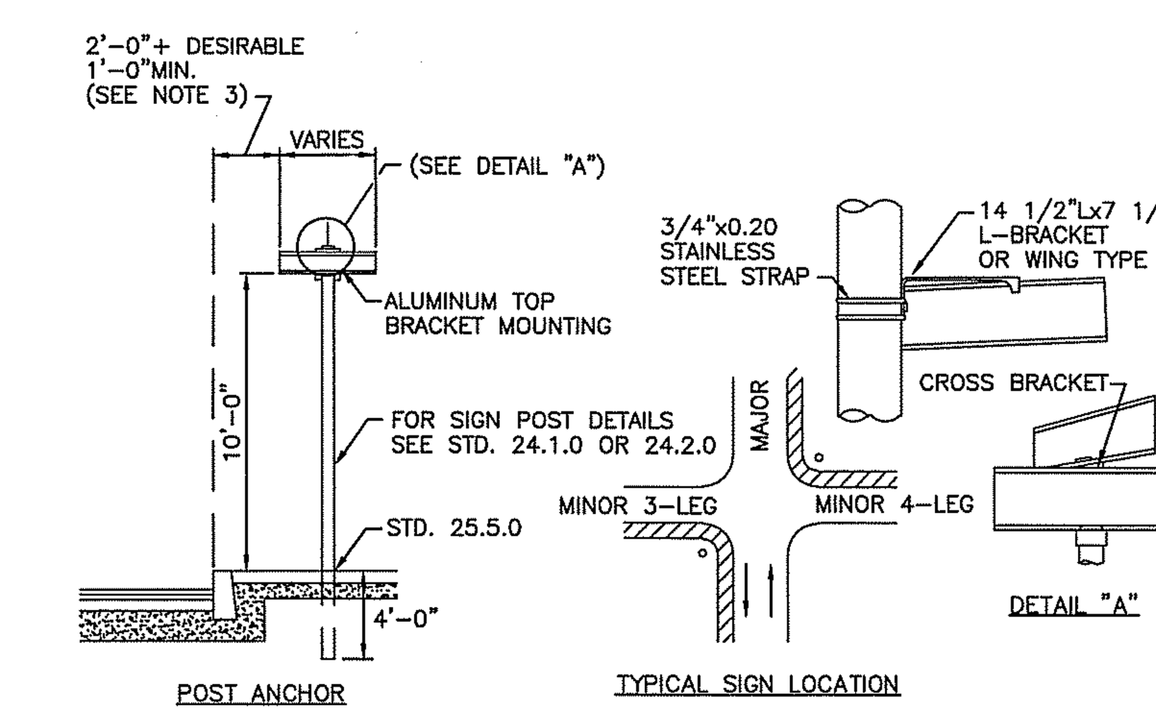
SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 904 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT–OF–WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP–GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'–0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'–0" (GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'–0" SHALL BE MAINTAINED.
12. MEETS OR EXCEEDS GUIDELINES OF RIDOT STANDARD DETAIL 43.3.1.

WHEELCHAIR RAMP
FOR LIMITED RIGHT–OF–WAY AREAS (ADA)

NOT TO SCALE

R.I. STANDARD 24.6.1



IF SIGNS ARE ON THEIR OWN SUPPORT POST, THE POST SHALL BE LOCATED NEARER TO THE MAJOR STREET AND WITHIN 5'–0" OF THE P.T. OF THE CURVE.

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. POSTS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE BACK OF SIDEWALK, UNLESS SPACE DOES NOT PERMIT.

STREET SIGN MOUNTING DETAIL

NOT TO SCALE

STANDARD 27.1.0

SIGN NUMBER		R1–1			
LEGEND		STOP			
COLOR	BACKGROUND	RED			
	COPY	WHITE			
SIGN DIMENSION	WIDTH	24"	30"	36"	48"
	HEIGHT	24"	30"	36"	48"

REGULATORY SIGNS

NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 0 9 2008 FILE # 07-0427
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

DEC 1 0 2007

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER CIVIL

NO.	DATE	DESCRIPTION	BY
2	12-6-07	RIDOT/RIDEM COMMENTS	B.A.H.
1	11-5-07	MASTER PLAN SUBMISSION	S.A.B.
0	10-25-07	RIDEM LOC/RIDOT/RIDEM PRELIMINARY DETERMINATION	S.A.B.

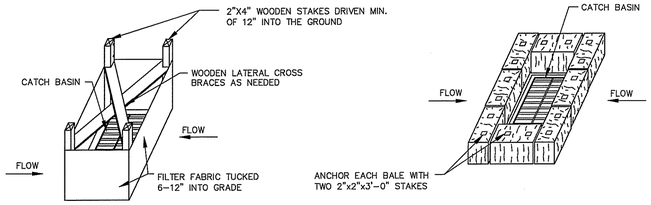
DETAIL SHEET

1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
DiPrete Engineering Associates, Inc.
ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
(401) 943–1000 FAX: (401) 464–6006
OWNER/APPLICANT
Atwood Development, LLC
34 OAKDALE AVE
JOHNSTON, RI 02919
(401) 272–1100

OCTOBER, 2007
DWN. BY: S.A.B.



SILT FENCE INSTALLATION AT CATCH BASIN AT LOW POINTS

HAYBALE FILTER INSTALLATION AT CATCH BASIN AT LOW POINTS

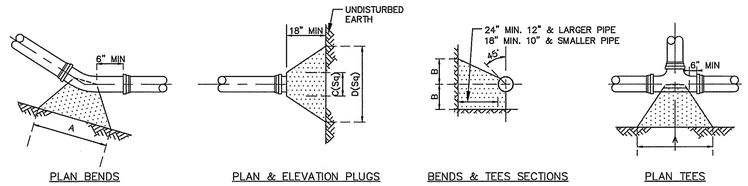
NOTES:
1. STORMWATER INLETS WHICH DO NOT DISCHARGE TO SEDIMENT TRAPS OR BASINS, MUST BE PROTECTED UNTIL THE TRIBUTARY AREAS ARE STABILIZED.
2. SEDIMENT MUST BE REMOVED FROM INLET PROTECTION AFTER EACH STORM EVENT.

CATCH BASIN EROSION CONTROL

NOT TO SCALE

NOTES:
1. ALL CONCRETE SHALL BE 4000 P.S.I. @ 28 DAYS
2. CONCRETE THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.
3. FORMS TO BE USED AS NECESSARY.
4. ALL BOLTS AND NUTS TO BE PROTECTED FROM CONCRETE AND EASILY ACCESSIBLE WHEN THRUST BLOCK INSTALLED.
5. REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF R.I. SHALL VERIFY ALL CALCULATIONS DURING DESIGN TO MEET CONDITIONS OF PROJECT AND WATER REQUIREMENTS.

SIZE	TEES		PLUGS		90° BEND		45° BEND		22.5° BEND		11.25° BEND	
	A	B	C	D	A	B	A	B	A	B	A	B
6"	20"	10"	10"	21"	24"	12"	18"	9"	13"	7"	9"	5"
8"	26"	13"	12"	26"	32"	16"	24"	12"	17"	9"	12"	6"
10"	34"	17"	14"	34"	40"	20"	30"	15"	22"	11"	15"	8"
12"	41"	20"	16"	41"	48"	24"	35"	18"	25"	13"	18"	9"
16"	54"	27"	20"	54"	64"	32"	47"	23"	34"	17"	24"	12"

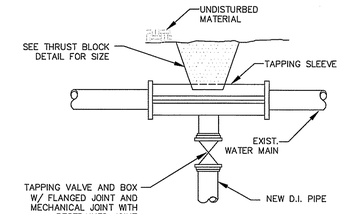


PLAN BENDS | PLAN & ELEVATION PLUGS | BENDS & TEES SECTIONS | PLAN TEES

THRUST BLOCK

NOT TO SCALE

NOTES:
1. TAPPING SLEEVE AND VALVE TO BE SWABBED WITH CHLORINE SOLUTION.
2. CONTRACTOR TO VERIFY SIZE OF EXISTING WATERMAIN PRIOR TO PURCHASE OF TAPPING SLEEVE.



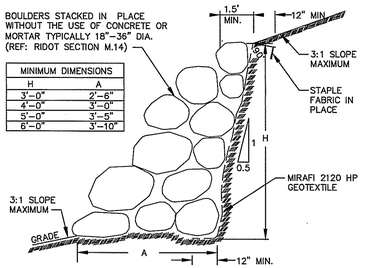
TAPPING SLEEVE AND VALVE

NOT TO SCALE

NOTES:
1. MAXIMUM HEIGHT OF BOULDER RETAINING WALL IS 6 FEET. GREATER THAN 6 FOOT HEIGHT WILL REQUIRE DEVELOPMENT PLAN REVIEW WITH THE TOWN.
2. FOOTING TO BE COMPACTED TO 95% AND SLOPED TOWARDS EMBANKMENT OR LAID LEVEL.
3. SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER, TO BE APPROVED BY PROJECT ENGINEER PRIOR TO CONSTRUCTION.

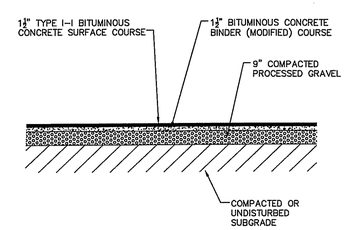
BOULDERS STACKED IN PLACE WITHOUT THE USE OF CONCRETE OR MORTAR TYPICALLY 18"–36" DIA. (REF: RIDOT SECTION M.14)

MINIMUM DIMENSIONS	
H	A
3'–0"	2'–6"
4'–0"	3'–0"
5'–0"	3'–5"
6'–0"	3'–10"



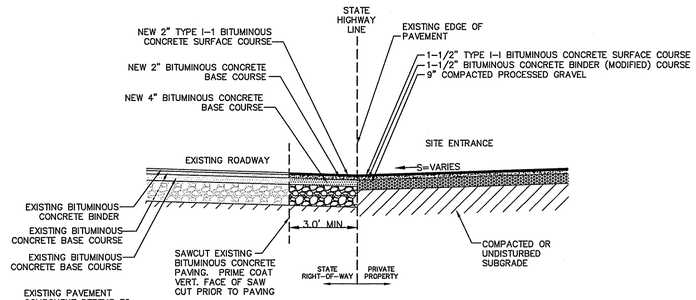
BOULDER RETAINING WALL

NOT TO SCALE



TYPICAL PAVEMENT CROSS SECTION

NOT TO SCALE



MINIMUM COMPACTION FOR GRAVEL SUB–BASE OR SUBGRADE: 95% MODD PROCTOR

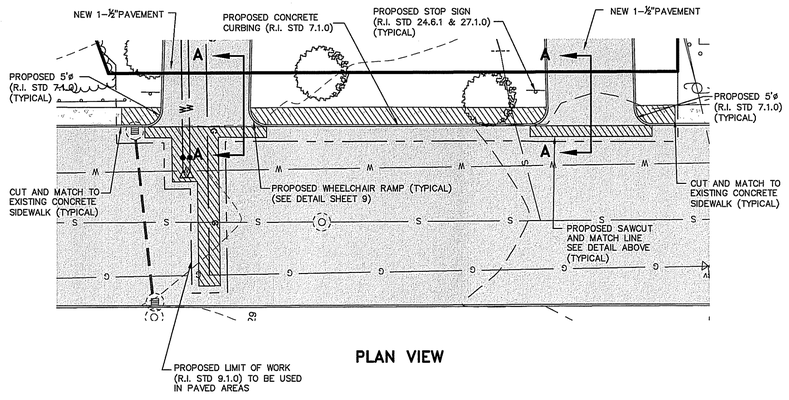
SAWCUT & MATCH PAVEMENT DETAIL

NOT TO SCALE

NOTES:

1. THIS PAVEMENT SECTION DETAIL REFLECTS MINIMUM REQUIREMENTS. ENGINEER TO DETERMINE DESIGN BASED ON GEO–TECHNICAL DATA OF SPECIFIC PROJECT AND DAILY TRAFFIC DESIGN REQUIREMENT.
2. AREAS OF SIDEWALK DISRUPTED DUE TO INSTALLATION OF NEW UTILITIES ARE TO BE PATCHED AND REPAIRED ONCE INSTALLATION IS COMPLETE.

SECTION A–A

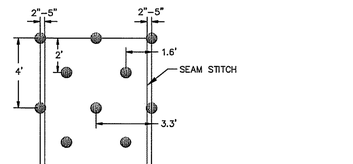


PLAN VIEW

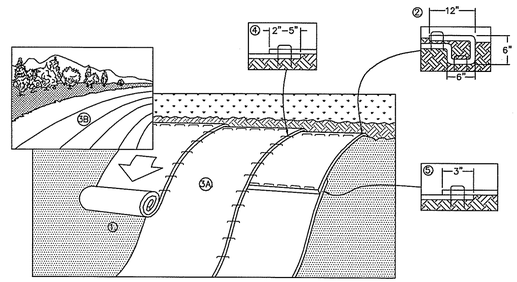
CUT & MATCH DETAIL

SECTION A–A

NOT TO SCALE



STAPLE PATTERN FOR SLOPES GREATER THAN 2:1.



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"–5" (5cm–12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

NORTH AMERICAN GREEN
EROSION CONTROL Products Guaranteed SOLUTIONS

REINFORCED SLOPE INSTALLATION

(NORTH AMERICAN GREEN C–350 OR ENGINEER APPROVED EQUAL)

NOT TO SCALE

RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JAN 09 2008 FILE # 07-0427
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RECEIVED
DEC 19 2007

Charles A. Horbert

ERIC M. PRIVE
No. 8662
REGISTERED PROFESSIONAL ENGINEER
CIVIL

NO.	DATE	DESCRIPTION	BY
3	12-6-07	RIDOT/RIDEM COMMENTS	S.A.B.
2	11-5-07	PLANNING BOARD SUBMISSION	S.A.B.
1	10-25-07	RIDEM/USACE/RIDOT/RIDEM PRELIMINARY DETERMINATION	S.A.B.
0	10-25-07	RIDEM/USACE/RIDOT/RIDEM PRELIMINARY DETERMINATION	S.A.B.

DETAIL SHEET

1543 Atwood Avenue

ASSESSOR'S PLAT 20/2 LOT 80
JOHNSTON, RHODE ISLAND

PREPARED BY
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ENGINEERING, SURVEYING AND PLANNING CONSULTANTS
TWO STAFFORD COURT
CRANSTON, R.I. 02920
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OWNER/APPLICANT
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DWN. BY: S.A.B.

SHEET 10 OF 10