

STORMWATER BEST MANAGEMENT PRACTICES

ROUTE 6 / ROUTE 116 INTERSECTION · SCITUATE · RHODE ISLAND
PERMITTING DRAWINGS

JANUARY 2014

PREPARED FOR
PROVIDENCE WATER
 552 ACADEMY AVENUE
 PROVIDENCE, RI 02908
 P: 401-521-6300



PREPARED BY
FUSS & O'NEILL
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

SHEET INDEX

SHEET No.	SHEET TITLE
GI-001	COVER SHEET
CN-001	GENERAL NOTES AND LEGEND
CR-101	SITE INDEX PLAN
CS-101 & CS-102	EXISTING CONDITIONS PLAN NOS. 1 & 2
CS-103 & CS-104	SITE PLAN NOS. 1 & 2
CS-105 & CS-106	EROSION CONTROL PLAN NOS. 1 & 2
LP-101 & LP-102	LANDSCAPE PLAN NOS. 1 & 2
CD-501 & CD-502	DETAILS
CT-401	TRAFFIC MANAGEMENT PLAN

PROJECT TEAM

DESIGN ENGINEER AND BIOLOGIST
 FUSS & O'NEILL, INC.
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 P: 401-861-3070

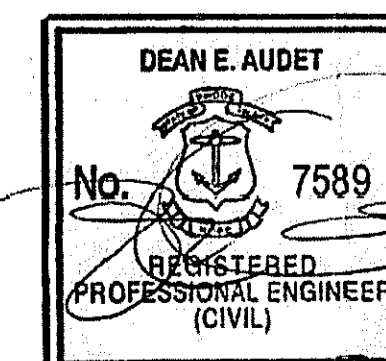
LAND SURVEYOR
 NATIONAL SURVEYORS-DEVELOPERS, INC.
 42 HAMLET AVENUE
 WOONSOCKET, RI 02895
 P: 401-769-7779



LOCATION MAP
 SCALE: 1" = 800'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF PERMITS AND REGULATORY SERVICES
 AS SPECIFIED IN THE PERMITTING APPROVAL
 DATED: MAR 27 2014
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLAN MUST BE AT CONSTRUCTION

Charles A. Hart



PROJ. No.: 20030272.C10
 DATE: JANUARY 2014

GI-001

RIDEM COPY

LEGEND

EXIST	PROP	DESCRIPTION
---	---	PROPERTY LINE/RIGHT-OF-WAY
---	---	LIMIT OF DISTURBANCE/CLEARING
---	---	GRAVEL ROAD
---	---	EDGE OF PAVEMENT
---	---	BITUMINOUS CURB
---	---	CONSTRUCTION ROAD
---	---	GUARD RAIL
---	---	STOCKADE FENCE
---	---	WIRE FENCE
---	---	CHAIN LINK FENCE
---	---	TREE LINE
---	---	SHRUB LINE
---	---	STONE WALL
---	---	RETAINING WALL
---	---	OVERHEAD WIRES
---	---	WATER MANHOLE
---	---	WATER GATE
---	---	GATE VALVE
---	---	GAS GATE
---	---	GAS METER
---	---	SIGN
---	---	WETLAND
---	---	UTILITY POLE
---	---	12" Ø DRAINAGE LINE
---	---	HAYBALES
---	---	HAYBALE CHECK DAMS
---	---	SPOT ELEVATION
---	---	MONITORING WELL
---	---	TEST PIT LOCATION

ABBREVIATIONS

APPROX	APPROXIMATE
ELEV	ELEVATION
EXIST	EXISTING
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INV	INVERT ELEVATION
PVC	POLYVINYL CHLORIDE PIPE
UP	UTILITY POLE

GENERAL NOTES AND REFERENCES

- EXISTING CONDITIONS INFORMATION:
 - SURVEY:** EXISTING FEATURES, PROPERTY LINES AND TOPOGRAPHIC INFORMATION SHOWN WAS OBTAINED FROM ON-GROUND SURVEY PERFORMED BY NATIONAL LAND SURVEYORS INC. ON JANUARY 17, 21 AND 22 OF 2013 AND JANUARY 2014.
 - UTILITIES:** THE LOCATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND HAVE NOT YET BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR IS TO CONTACT "DIG SAFE" AT 1-888-344-7233, 72-HOURS PRIOR TO ANY EXCAVATION PERFORMED ON SITE.
 - TEST PITS:** FUSS & O'NEILL EXCAVATED TWO TEST PITS ON JANUARY 15, 2013 TO DETERMINE THE LITHOLOGY, SOIL INFILTRATION RATES, AND DEPTH TO GROUNDWATER AT TWO LOCATIONS WITHIN THE PROJECT SITE. SOIL INFILTRATION RATES AT EACH LOCATION WERE DETERMINED USING AN INFILTRATOR AT A DEPTH OF 3.5 FEET BELOW GRADE. THE LOCATIONS OF EACH TEST PIT ARE SHOWN ON THE PLANS. THE DEPTH TO GROUNDWATER, DEPTH TO MOTTLING AND INFILTRATION RATES FOR EACH ARE DISPLAYED BELOW:

DEPTH TO GROUNDWATER	DEPTH TO MOTTLING	INFILTRATION RATE
TP-1: 8.0 FEET BELOW GRADE	TP-1: 4.5 FEET BELOW GRADE	TP-1: 38.4 INCHES PER HOUR
TP-2: NOT ENCOUNTERED (TEST PIT DEPTH = 8 FEET)	TP-2: 4.5 FEET BELOW GRADE	TP-2: 14.7 INCHES PER HOUR
- WETLANDS:**
 - ON-SITE WETLANDS WERE DELINEATED BY FUSS & O'NEILL PROFESSIONAL WETLAND SCIENTIST (JOSHUA WILSON, PWS) ON AUGUST 1, 2012 USING A SUBMETER GEOTX GPS DEVICE. THE FOLLOWING WETLANDS WERE IDENTIFIED ON-SITE WITH THE FOLLOWING JURISDICTIONAL BOUNDARIES ASSOCIATED WITH THEM AS IDENTIFIED ON THE PLANS:

FLAG SERIES	RIDEM CLASSIFICATION	JURISDICTIONAL BUFFER
A100-A140	FORESTED/SHRUB WETLAND	50-FOOT PERIMETER WETLAND*
B200-B223	EMERGENT WETLAND	50-FOOT PERIMETER WETLAND*
NOT FLAGGED	REGULATING RESERVOIR	50-FOOT PERIMETER WETLAND

*NOTE: ALTHOUGH FORESTED, SHRUB, AND EMERGENT WETLANDS DO NOT GENERALLY HAVE JURISDICTIONAL BUFFERS, A 50-FOOT PERIMETER WETLAND WAS CONSERVATIVELY APPLIED BECAUSE BOTH WETLANDS ARE ADJACENT TO THE RESERVOIR (POND) AND WOULD, THEREFORE BE CONSIDERED A POND-WETLAND COMPLEX.
 - BASED ON RHODE ISLAND GIS DATA LAYERS OBTAINED FROM THE RIGIS WEBSITE IN MARCH 2013, THERE ARE NO NATURAL HERITAGE AREAS OR RARE SPECIES AREAS LOCATED WITHIN THE PROJECT LIMITS. THIS SITE DOES NOT LIE WITHIN ANY KNOWN AGRICULTURAL USE, CIVIC STRUCTURAL USE, OR FARMLAND CONSERVATION AREAS.
 - FLOODZONE:** ALTHOUGH PORTIONS OF THE SUBJECT PROPERTY THAT DIRECTLY ADJUT THE RESERVOIR ARE LOCATED WITHIN THE 100-YEAR FLOOD ZONE (ZONE A WITH NO BASE FLOOD ELEVATIONS DETERMINED), THE SECTION OF THE SITE WHERE WORK IS PROPOSED IS LOCATED OUTSIDE OF THE 100-YEAR FLOODPLAIN ACCORDING TO FIRM NO. 4400700280G FOR PROVIDENCE COUNTY, RHODE ISLAND DATED MARCH 2, 2009.

GENERAL CONSTRUCTION REQUIREMENTS

- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH WORK.
- METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE TOWN OF SITUATE AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS WITH THE TOWN OF SITUATE AND/OR RIDOT. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
- DEVIATIONS OR CHANGES FROM THESE PLANS WILL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER/OWNER.
- THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS/HER EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR IS TO CONTACT "DIGSAFE" AT 1-888-344-7233, 72-HOURS PRIOR TO ANY EXCAVATION PERFORMED ON-SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
- AN APPROVED SET OF CONTRACT DOCUMENTS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- THE CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB AND SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER."
- THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, REVISION AND ALL CURRENT ADDENDA, AND THE RHODE ISLAND STANDARD DETAILS ARE MADE A PART HEREOF, AS IF ATTACHED HERETO.
- ALL WORK WITHIN THE RI ROUTE 116 AND RI ROUTE 6 STATE RIGHT OF WAY SHALL CONFORM TO RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2004 EDITION) INCLUDING ALL REVISIONS AND RHODE ISLAND STANDARD DETAILS.
- ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (2003 EDITION) INCLUDING ALL REVISIONS.

EROSION CONTROL

- DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW AND LOCAL ORDINANCE. ALL WORK SHALL COMPLY WITH THE FOLLOWING CRITERIA TO PREVENT OR MINIMIZE SOIL EROSION.
- THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN, OR AS DIRECTED BY THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE TOWN OF SITUATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR SHALL USE THE LATEST EDITION OF THE "STATE OF RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THE PLANS. ALL EROSION AND SEDIMENT CONTROL MEASURES OR WORKS AND REHABILITATION MEASURES MUST CONFORM TO OR EXCEED THE SPECIFICATIONS OR STANDARDS SET OUT IN THIS HANDBOOK.
- THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF PERMANENT MEASURES UNTIL CONSTRUCTION OF THE PROJECT IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE OWNER. THE OWNER IS RESPONSIBLE THEREAFTER.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF SEDIMENT ONTO PAVED ROADWAYS FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, WATER AND/OR CRUSHED STONE OR COARSE GRAVEL, SUBJECT TO THE APPROVAL OF THE ENGINEER. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE SURROUNDING ROADWAYS MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR VIA SWEEPING, DUST, SEDIMENT, AND MUD CONTROL EFFORTS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL PERIMETER SEDIMENT CONTROL BARRIERS AS SHOWN ON THE SITE PLANS OR AS MAY BE REQUIRED TO PREVENT SEDIMENT FLOW TO AND FROM THE SITE. COIR ROLLS SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS UTILIZED BY THE CONTRACTOR DURING CONSTRUCTION. COIR ROLLS SHALL ALSO BE INSTALLED AROUND THE UP-GRADE PERIMETERS OF BIOTRETMENT AREAS IMMEDIATELY FOLLOWING REMOVAL. IF 1/3 THE ORIGINAL HEIGHT OF THE BARRIER BECOMES FILLED WITH SEDIMENT, REPLACE BARRIERS IMMEDIATELY IF BARRIER DECOMPOSED OR BECOMES INEFFECTIVE. SUCH MEASURES SHALL NOT BE REMOVED UNTIL VEGETATION HAS BEEN SATISFACTORILY STABILIZED.
- THE PROPOSED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE SITE SHALL PASS OVER A CONSTRUCTION ENTRANCE TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONTINUOUS DEMAND AND REPAIR/OUT OF ANY MEASURES USED TO TRAP SEDIMENT IS NECESSARY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE SURROUNDING ROADWAYS MUST BE REMOVED IMMEDIATELY.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. IF SITE INSPECTIONS IDENTIFY CONTROLS THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE AND BEFORE THE NEXT STORM EVENT.
- THE CONTRACTOR SHALL IDENTIFY TREES TO BE REMOVED PRIOR TO CONSTRUCTION AND MARK THEM WITH CONSTRUCTION TAPE FOR REVIEW BY THE OWNER AND ENGINEER. CONTRACTOR SHALL NOT REMOVE TREES UNTIL REVIEWED AND APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO ORIGINAL CONDITION. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESEDED, RESEED OR OTHERWISE RESTORED TO THEIR ORIGINAL STATE. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE.
- TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, EXCEPT:
 - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS
 - STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE; OR
 - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- TEMPORARY VEGETATIVE COVER SHALL BE APPLIED ANYTIME BETWEEN MARCH 15 THROUGH NOVEMBER 15. TEMPORARY VEGETATIVE COVER SHALL CONSIST OF 60% OF PERENNIAL AND 40% ANNUAL RYEGRASS OR 100% OF WINTER RYE. ANNUAL OR PERENNIAL RYEGRASS SHALL BE PLANTED AT A RATE OF 1.5 POUNDS PER 1,000 SQUARE FEET AND WINTER RYE SHALL BE PLANTED AT A RATE OF 2.5 POUNDS PER 1,000 SQUARE FEET.
- PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTRIBUTED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED SEEDING DATES ARE APRIL 1 THROUGH MAY 31 AND AUGUST 15 THROUGH OCTOBER 15. REFER TO THE LANDSCAPE PLAN FOR PERMANENT SEED MIXES AND RATES OF APPLICATION.
- ALL AREAS WHICH ARE TO RECEIVE PERMANENT MULCHING IN ADDITION TO AREAS WHICH CANNOT BE SEEDS WITHIN THE RECOMMENDED SEEDING DATES AND ANY SOIL STOCKPILE AREAS, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
- ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. WHERE EROSION IS OBSERVED, ADDITIONAL MULCH MUST BE APPLIED. 1 STRAW OR HAY MULCH IS RECOMMENDED. STRAW OR HAY MULCH SHOULD BE APPLIED AT A RATE OF 2 TONS PER ACRE. STRAW OR HAY MULCH MUST BE ANCHORED IMMEDIATELY AFTER SPREADING TO PREVENT WINDBLOWNING. MULCH ANCHORING SHOULD ALSO BE USED ON SLOPES GREATER THAN THREE (3) PERCENT AND CONCENTRATED FLOW AREAS SUCH AS DIVERSION AND WATERWAY CHANNELS.
- IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING PERIOD, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- SEEDS ARE NOT TO BE INSPECTED EVERY 7 CALENDAR DAYS DURING CONSTRUCTION AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/4-INCHES OR MORE OF PRECIPITATION. CONTRACTOR SHALL SUPPLY TEMPORARY AND PERMANENT SEEDING WITH ADEQUATE MOISTURE AND SHALL SUPPLY WATER AS NEEDED, ESPECIALLY IN ABNORMALLY HOT OR DRY WEATHER OR ON ADVERSE SITES. THE RATE OF WATER APPLIED MUST BE IN A CONTROLLED MANNER TO PREVENT RUNOFF FROM BEING DISCHARGED ONTO ADJACENT ROADWAY AREAS. RE-SEED AREAS WHERE THE PLANTS DO NOT GROW QUICK ENOUGH, THICK ENOUGH, OR ADEQUATELY ENOUGH TO PREVENT EROSION SHOULD BE RE-SEEDS.
- ALL EXCESS EXCAVATED MATERIALS, EXCESS FILL, EXCESS CONSTRUCTION MATERIALS, AND DEBRIS SHALL BE REMOVED FROM THE SITE AND SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
- WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORMWATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION AND TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.
- SPILL PROTECTION AND RESPONSE: THE CONTRACTOR SHALL FUEL VEHICLES AND EQUIPMENT AWAY FROM INFILTRATION TRENCHES, POROUS ASPHALT, ADJACENT DRAINAGE INLETS, AND PRIVATE PROPERTY. BOOMS AND OTHER CONTAINMENT DEVICES SHALL BE PROVIDED BY THE CONTRACTOR AND USED IN THE EVENT OF A SPILL. THE CONTRACTOR SHALL NOTIFY CITY IF SPILL OCCURS.
- GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.

STORMWATER MAINTENANCE PROGRAM

- THE PROVIDENCE WATER SUPPLY BOARD WILL BE RESPONSIBLE FOR LONG-TERM MAINTENANCE OF THE CONSTRUCTED CONTROLS ONCE ACCEPTED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE UNTIL SUBSTANTIAL COMPLETION OF CONSTRUCTION. MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES SHALL BE PERFORMED AS FOLLOWS:
- WETLAND VEGETATED TREATMENT SYSTEMS (WVTS): DURING THE FIRST SIX MONTHS IMMEDIATELY FOLLOWING CONSTRUCTION, WVTS SHALL BE INSPECTED AFTER EVERY STORM EVENT LARGER THAN ONE-INCH. THEREAFTER, INSPECTION SHALL OCCUR AT LEAST SEMI-ANNUALLY AND AFTER EVERY STORM EVENT GREATER THAN 2.7 INCHES OVER A 24-HOUR PERIOD. INSPECTIONS SHALL INCLUDE CHECKING FOR STANDING WATER OR OTHER EVIDENCE OF CLOGGING BY ACCUMULATED SEDIMENTS, CHECKING INLETS AND OUTLET FOR SIGNS OF EROSION AND DAMAGE, CHECKING THE OVERFLOW STRUCTURES FOR BLOCKAGE AND STRUCTURAL INTEGRITY.
- AREAS WITH A PERMANENT POOL SHOULD BE INSPECTED ON A SEMI-ANNUAL BASIS. THE SLOPES OF THE WVTS SHALL BE INSPECTED FOR EROSION AND GULLING. REINFORCE EXISTING RIPRAP OR TURF REINFORCEMENT MATTING (TRM) IF RIPRAP OR TRM IS FOUND TO BE DEFICIENT. EROSION IS PRESENT AT THE OUTFALLS OF ANY CONTROL STRUCTURES, OR THE EXISTING RIPRAP OR TRM HAS BEEN COMPROMISED.
 - ALL STRUCTURAL COMPONENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, PIPES, MOV RISER STRUCTURES, AND SPILLWAY STRUCTURES, SHOULD BE INSPECTED AND ANY DEFICIENCIES SHALL BE REFORMED AND REPAIRED IMMEDIATELY. THIS INCLUDES A VISUAL INSPECTION OF ALL STORMWATER CONTROL STRUCTURES FOR DAMAGE AND/OR ACCUMULATION OF SEDIMENT.
 - SEEDING SHALL BE REMOVED FROM SEDIMENT FOREBAY AREAS WHEN FOREBAY DESIGN DEPTHS HAVE BEEN REDUCED BY 50%. DISPOSE OF SEDIMENT OFF-SITE IN ACCORDANCE WITH ALL FEDERAL AND LOCAL REGULATIONS. THE MATERIAL SHALL BE REMOVED WITH RAKES WHERE POSSIBLE RATHER THAN HEAVY EQUIPMENT TO AVOID COMPACTING. REPLACED MATERIAL SHALL BE OF THE SAME COMPOSITION AS ORIGINALLY INSTALLED.
 - REMOVE ALL TRASH AND/OR DEBRIS FROM ALL AREAS WITHIN THE EXTENTS OF THE WVTS.
 - REPAIR ANY AREAS WITHIN THE WVTS THAT EXHIBIT EROSION OR GULLING. THESE AREAS SHALL BE REPAIRED WITH THE ORIGINAL DESIGN MATERIALS AND RE-VEGETATED ACCORDING TO DESIGN DRAWINGS. SLOPE PROTECTION MATERIAL SHALL BE PLACED IN AREAS PRONE TO EROSION. EMBANKMENT STABILITY SHOULD BE INSPECTED FOR SEEPAGE AND BURROWING ANIMALS.
 - MOW THE GRASS AROUND THE PERIMETER OF THE BASIN QUARTERLY INCLUDING EMBANKMENT AND MAINTENANCE/ACCESS AREAS.
 - PRUNE ALL DEAD OR DYING VEGETATION WITHIN THE EXTENTS OF THE BASIN OR WVTS, REMOVE ALL HERBACEOUS VEGETATION ROOT STOCK WHEN OVERCROWDING THE MAINTENANCE ACCESS TO THE FACILITY, AND TRIM ANY OVERGROWING VEGETATION WITHIN THE BASIN.
 - ANY INVASIVE VEGETATION ENCRACING ON THE PERIMETER OF THE FACILITY SHALL BE PRUNED OR REMOVED IF IT IS PROHIBITING ACCESS TO THE FACILITY, COMPROMISING SIGHT VISIBILITY AND/OR COMPROMISING ORIGINAL DESIGN VEGETATION.
 - REPLACE ANY/ALL ORIGINAL VEGETATION THAT HAS DIED OFF OR HAS NOT FULLY ESTABLISHED, AS DETERMINED AT THE TIME OF THE INSPECTION. WVTS VEGETATION SHOULD BE REINFORCED TO ITS ORIGINAL DESIGN STANDARDS IF LESS THAN 50% OF THE ORIGINAL VEGETATION IS ESTABLISHED AFTER TWO YEARS.

CONSTRUCTION SEQUENCE

- CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT ARE EXPECTED TO COMMENCE IN JULY 2014. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED BY AUGUST 2014. THE GENERAL SEQUENCE FOR CONSTRUCTION IS AS FOLLOWS:
 - INSTALL PERIMETER SEDIMENT CONTROL BARRIERS AND PROPOSED CONSTRUCTION ENTRANCES, AS SHOWN ON THE CONSTRUCTION PLANS. EROSION CONTROL MEASURES WILL BE MAINTAINED OR REPLACED AS REQUIRED THROUGHOUT CONSTRUCTION PERIOD. ANY TEMPORARY SOIL STOCKPILE AREAS DURING CONSTRUCTION WILL ALSO BE ENCOMPASSED BY SILT FENCE.
 - CONDUCT SITE CLEARING AND SOIL STOCKPILING.
 - INSTALL TEMPORARY DIVERSION PIPING, FOREBAYS/DISSIPATORS ALONG RIGHT-OF-WAY WHERE FLOW FROM ADJACENT ROADWAYS IS ENTERING THE SITE, AND TEMPORARY BERMS AS INDICATED ON THE EROSION CONTROL PLANS.
 - CONDUCT EXCAVATION NECESSARY TO INSTALL SITE IMPROVEMENTS INCLUDING THE WETLAND VEGETATION TREATMENT SYSTEMS AND ASSOCIATED STORMWATER BEST MANAGEMENT PRACTICES. PERFORM ROUGH GRADING.
 - INSTALL SITE IMPROVEMENTS AND INSTALL SLOPE PROTECTION AND STABILIZATION MEASURES AS SHOWN ON DRAWINGS.
 - INSTALL VEGETATION & SEED AS INDICATED ON THE LANDSCAPE PLANS.
 - ONCE THE WETLAND VEGETATED TREATMENT SYSTEMS HAVE BEEN ADEQUATELY STABILIZED, REMOVE TEMPORARY DIVERSION PIPING AND BERMS AND RESTORE LOCATIONS TO GRADES INDICATED ON THE PLANS. REMOVE SEDIMENT FROM FOREBAYS/DISSIPATORS, REPAIR, AND COMPLETE FINAL INSTALLATION OF SUCH STRUCTURES.
 - REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE PERMANENT VEGETATION COVER HAS BEEN ESTABLISHED AND THE SITE IS STABILIZED, INSPECTED, AND APPROVED BY THE OWNER.

SPILL PREVENTION AND RESPONSE PROCEDURE

- ANY INADVERTENT OR DELIBERATE DISCHARGE OF WASTE OIL OR ANY OTHER POLLUTANT TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION TO THE RIDEM OIL POLLUTION CONTROL PROGRAM AT 401-277-2284, AS PER THE OIL POLLUTION CONTROL REGULATIONS. DURING NON-WORKING HOURS, NOTIFICATION OF SPILLS CAN BE MADE TO THE RIDEM DIVISION OF ENFORCEMENT AT 401-277-3070 (THE 24-HOUR EMERGENCY RESPONSE PHONE NUMBER).
- ANY INCIDENT OF GROUNDWATER CONTAMINATION RESULTING FROM THE IMPROPER DISCHARGE OF POLLUTANTS TO THE STORMWATER DISPOSAL SYSTEM REQUIRES IMMEDIATE NOTIFICATION TO THE RIDEM OIL POLLUTION CONTROL PROGRAM AS WELL AS ANY OTHER PARTIES THAT THE RIDEM DETERMINES TO BE RESPONSIBLE FOR THE CONTAMINATION. PURSUANT TO STATE LAWS AND REGULATIONS, THE RIDEM MAY REQUIRE THE PROPERTY OWNER AND OTHER RESPONSIBLE PARTIES TO REMEDIATE ANY INCIDENTS THAT MAY ADVERSELY IMPACT GROUNDWATER QUALITY.
- UPON COMPLETION OF CONSTRUCTION THE OWNER SHALL BE INFORMED AS TO THE LEGAL RESPONSIBILITIES ASSOCIATED WITH MAINTENANCE AND DISPOSAL REQUIREMENTS.
- THE OWNER WILL CREATE A MAINTENANCE LOG, SHOWING THE DATE, TIME, NAME OF INSPECTOR, INSPECTION COMMENTS, AND ANY ACTIONS TAKEN BASED ON THE ABOVE REFERENCE SCHEDULE.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE TO REMEDIATE INCIDENTS THAT ADVERSELY IMPACT GROUNDWATER QUALITY.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED **MAR 24 2014** FILE # **14-0011**
NO CHANGES ALLOWED WITHOUT PERMIT FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Hackett

JUN 31 2014

File Path: I:\DWG\20030222\2014-01-31\116-031.dwg User: rjrisel Plotter: DWG TO PDF-PC3 CTB File: FOSTB LAYER STATE: 1

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

DEAN E. AUDET
No. 7589
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:	HORIZ.: N/A	VERT.: N/A
DATUM:	HORIZ.: N/A	VERT.: N/A
GRAPHIC SCALE		

FUSS & O'NEILL
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fandoo.com

PROVIDENCE WATER
GENERAL NOTES AND LEGEND
STORMWATER BEST MANAGEMENT PRACTICES AT
ROUTE 6 / ROUTE 116 INTERSECTION
SITUATE RHODE ISLAND

PROJ. No.: 20030222C10
DATE: JANUARY 2014
CN-001

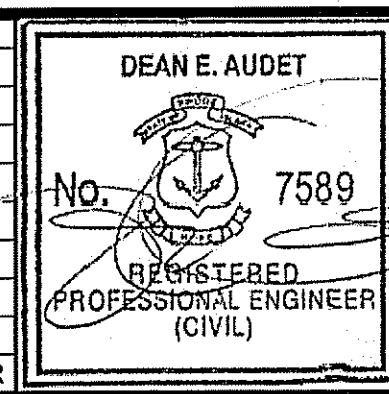
File Path: J:\DWG\20030272C10_1015 - Route 116 and Route 6\CivilPlan\0030272C10_Layout_CS-101.dwg Layout: CS-101 Plotted: Fri, January 31, 2014, 8:32 AM User: mrisell
 MS VIEW: LAYER: STATE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER PERMITS
 APPROVED AS SHOWN
 AS SPECIFIED IN THE LETTERS
 DATED MAR 21 2014 FILE # 19-0011
 NO CHANGES ALLOWED WITHOUT PERMITS
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harkin

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				



SEAL

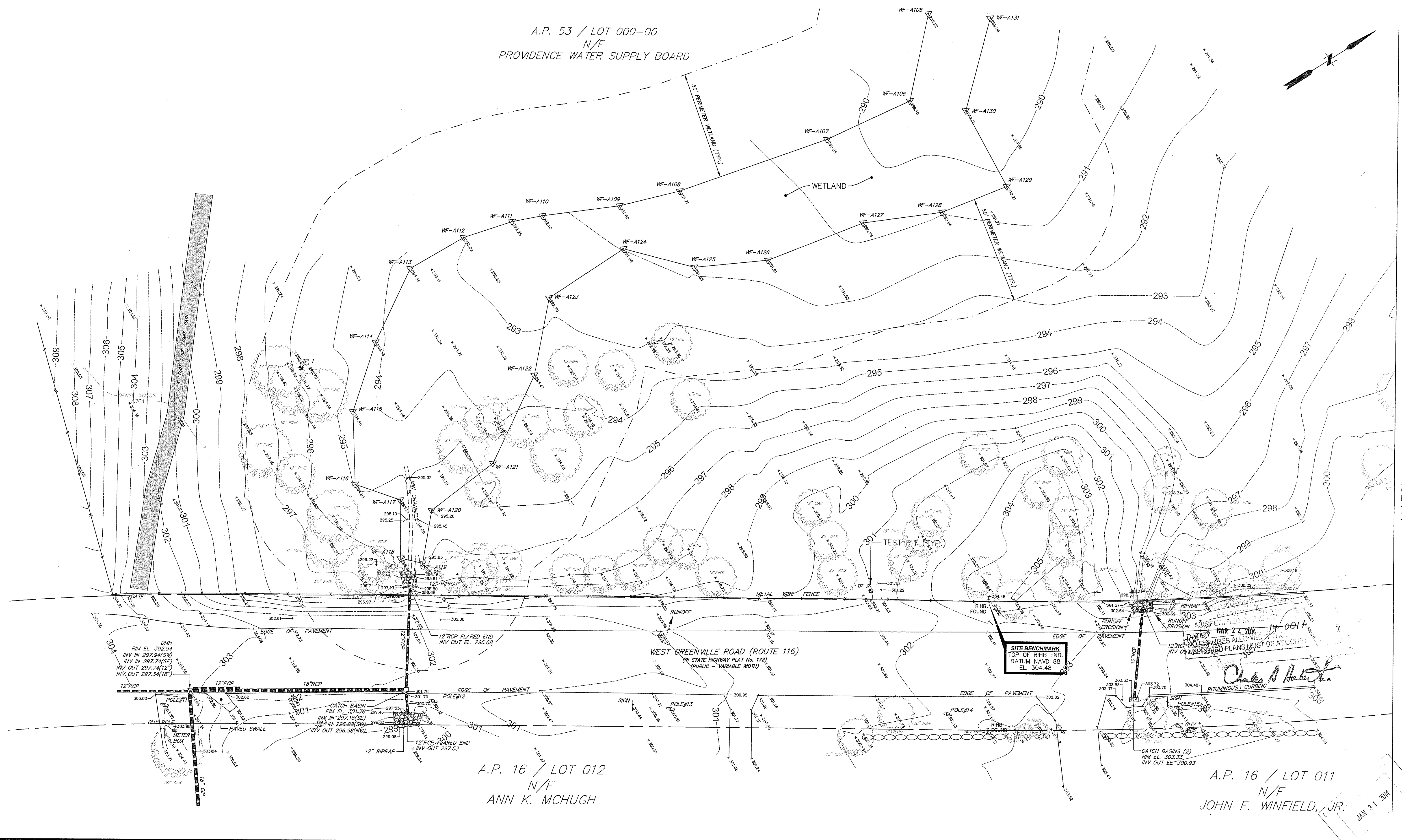
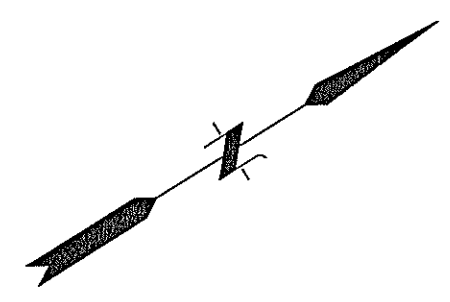
SCALE:
 HORZ.: 1" = 100'
 VERT.: N/A
 DATUM:
 HORZ.: NAD83
 VERT.: NAVD88
 100 50 0 100
 GRAPHIC SCALE

f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fundo.com

PROVIDENCE WATER
 SITE INDEX PLAN
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014
CR-101

A.P. 53 / LOT 000-00
N/F
PROVIDENCE WATER SUPPLY BOARD



MATCH LINE SEE SHEET CS-102

A.P. 16 / LOT 012
N/F
ANN K. MCHUGH

A.P. 16 / LOT 011
N/F
JOHN F. WINFIELD, JR.

File Path: J:\DWG\20030272C10_15 - Route 116 and Route 6\CivilPlan\20030272C10_EX01.dwg Layout: CS-101 Plotted: Fri, January 31, 2014 - 8:32 AM User: mifsell
 MS VIEW: LAYER: STATE

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

DEAN E. AUDET
No. 7589
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
HORIZ.: 1" = 20'
VERT.:
DATUM:
HORIZ.:
VERT.:
GRAPHIC SCALE

f **FUSS & O'NEILL**
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fandco.com

PROVIDENCE WATER
EXISTING CONDITIONS PLAN No. 1
STORMWATER BEST MANAGEMENT PRACTICES AT
ROUTE 6 / ROUTE 116 INTERSECTION
SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
DATE: JANUARY 2014
CS-101

MAR 22 2014
14-0011
CHANGES ALLOWED
REVISED PLANS MUST BE AT COMPLETION
BY DATE PROVIDED

Charles A. Harbeck
BITUMINOUS CURBING

File Path: J:\DWG\20030272C1015 - Route 116 and Route 6\CivilPlan\20030272C10_EXC01.dwg Layout: CS-102 Plotted: Fri, January 31, 2014 - 8:32 AM User: mfrisell
 Plotter: DWG TO PDF PC3 CTB File: FO.STB
 LAYER STATE:

MATCH LINE SEE SHEET CS-101



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LISTING
 DATED MAR 21 2011 FILE # 14-0011
 NO CHANGES ALLOWED WITHOUT
 APPROVED PLANS MUST BE AT CONST.

Charles A. Hackett

JAN 31 2014

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

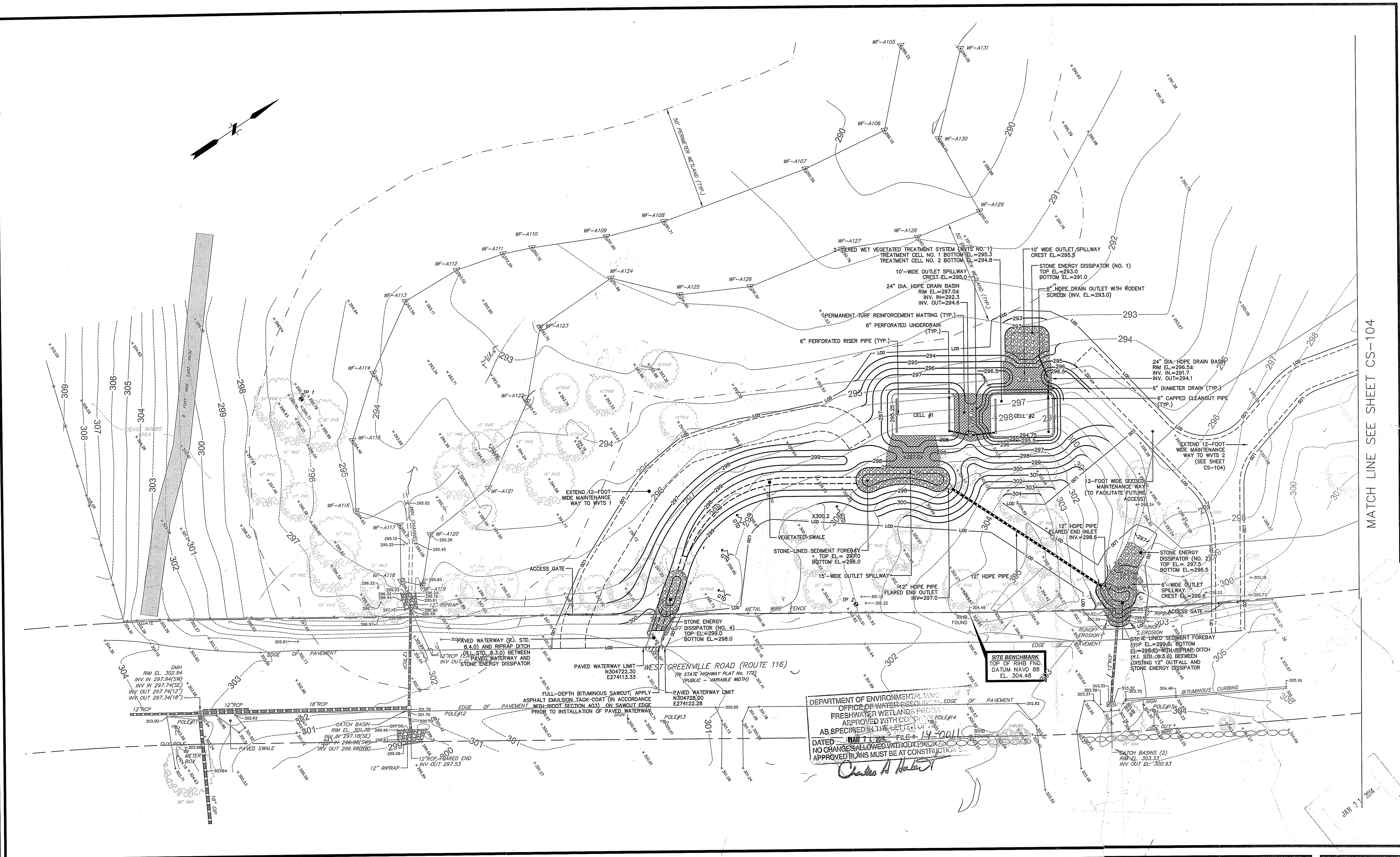
f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fandoc.com

PROVIDENCE WATER
 EXISTING CONDITIONS PLAN No. 2
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014
CS-102

File Path: J:\DWG\20030222C1015 - Route 116 and Route 6\Civil\Plan\20030222C1015 - STP01.dwg Layout: CS-103 Plotted: Fri, January 31, 2014 - 8:32 AM User: mhsaell
 Plotter: DWG TO PDF PLOT CTB File: FOSTB

LAYER STATE:



MATCH LINE SEE SHEET CS-104

JAN 31 2014

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

PROVIDENCE WATER
 SITE PLAN No. 1
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

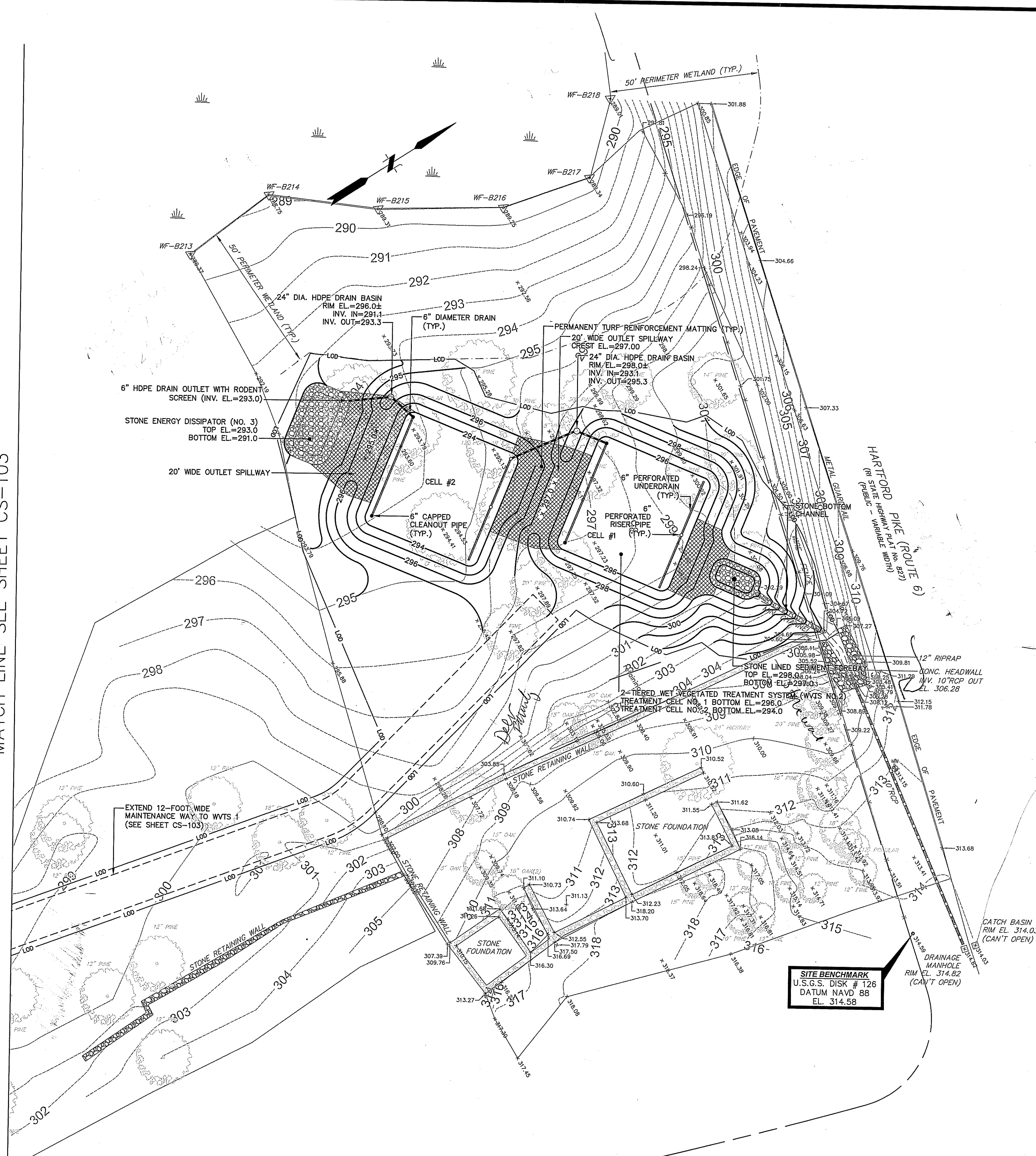
PROJ. No.: 20030222C1015
 DATE: JANUARY 2014
CS-103

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 21 2014 FILE # 14-0011
 NO CHANGES ALLOWED WITHOUT PROPOSED APPROVED PLANS MUST BE AT CONSTRUCTION

Charles A. Humber

File Path: J:\DWG\20030272C10\115 - Route 116 and Route 6\CivilPlan\20030272C10_STP01.dwg Layout: CS-104 Plotted: Fri, January 31, 2014 - 8:32 AM User: mrisell
 Plotter: DWG TO PDF PC3 CTB File: FO.STB
 LAYER STATE: []

MATCH LINE SEE SHEET CS-103



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED Mar 2 FILE # 14-0011
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Harbert

JAN 31 2014

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 SEAL

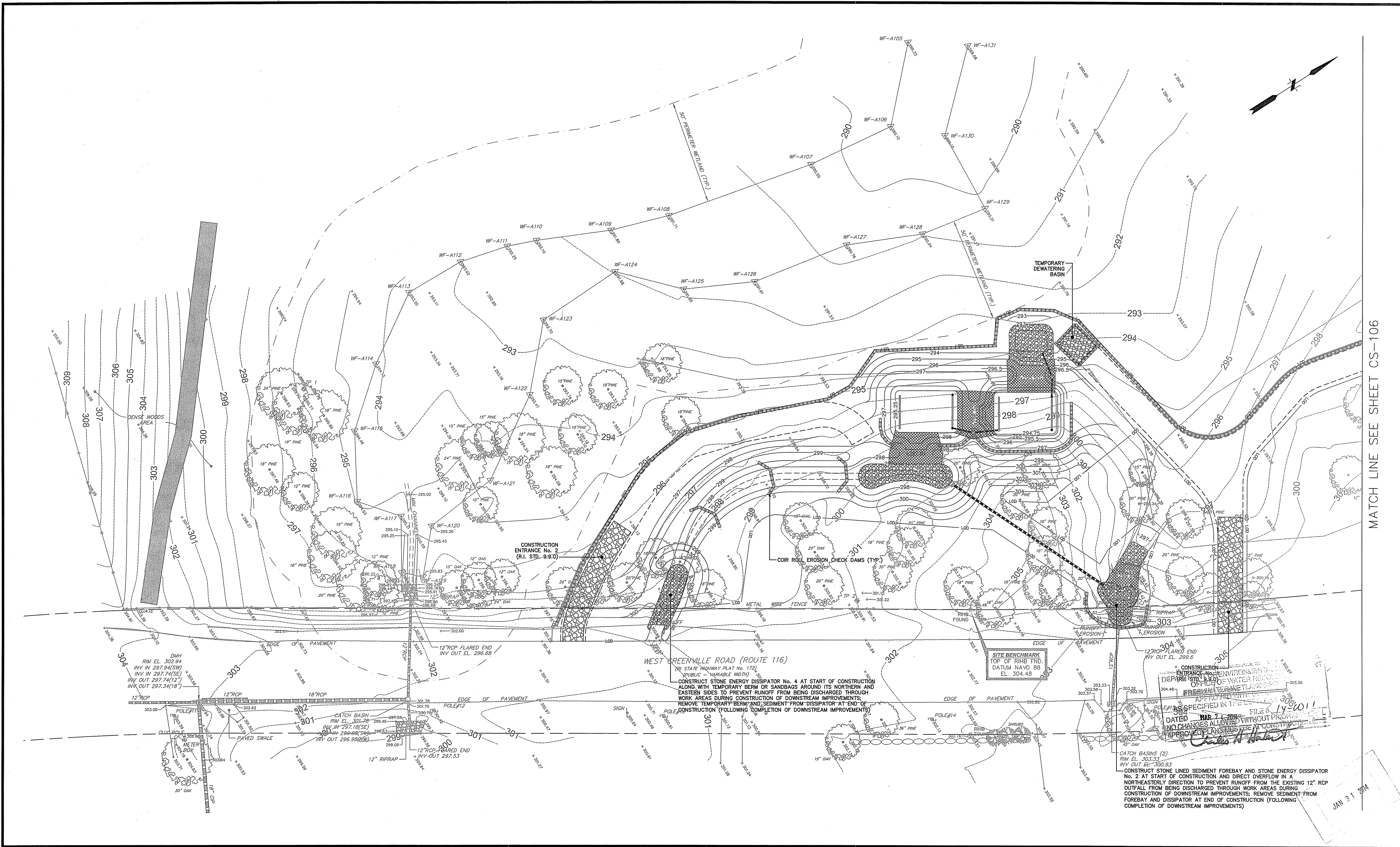
SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 20 10 0 20
 GRAPHIC SCALE

f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.841.3070
 www.fando.com

PROVIDENCE WATER
 SITE PLAN No. 2
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014
CS-104

File Path: J:\DWG\2003\272C1015 - Route 116 and Route 6\Plan\20030272C1015 - Route 116 and Route 6\Civil\Plan\20030272C1015 - Route 116 and Route 6.dwg Layout: CS-105 Plotted: Fri, January 31, 2014 - 8:33 AM User: mfrisel
 MS VIEW: Plotter: DWG TO PDF.PC3 CTB File: FO.STB LAYER STATE:



MATCH LINE SEE SHEET CS-106

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
 HORIZ.: 1" = 20'
 VERT.:
 DATUM:
 HORIZ.:
 VERT.:
 20 10 0 20
 GRAPHIC SCALE

f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

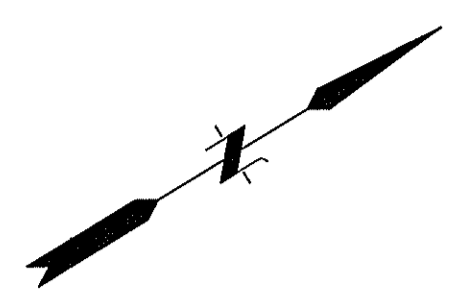
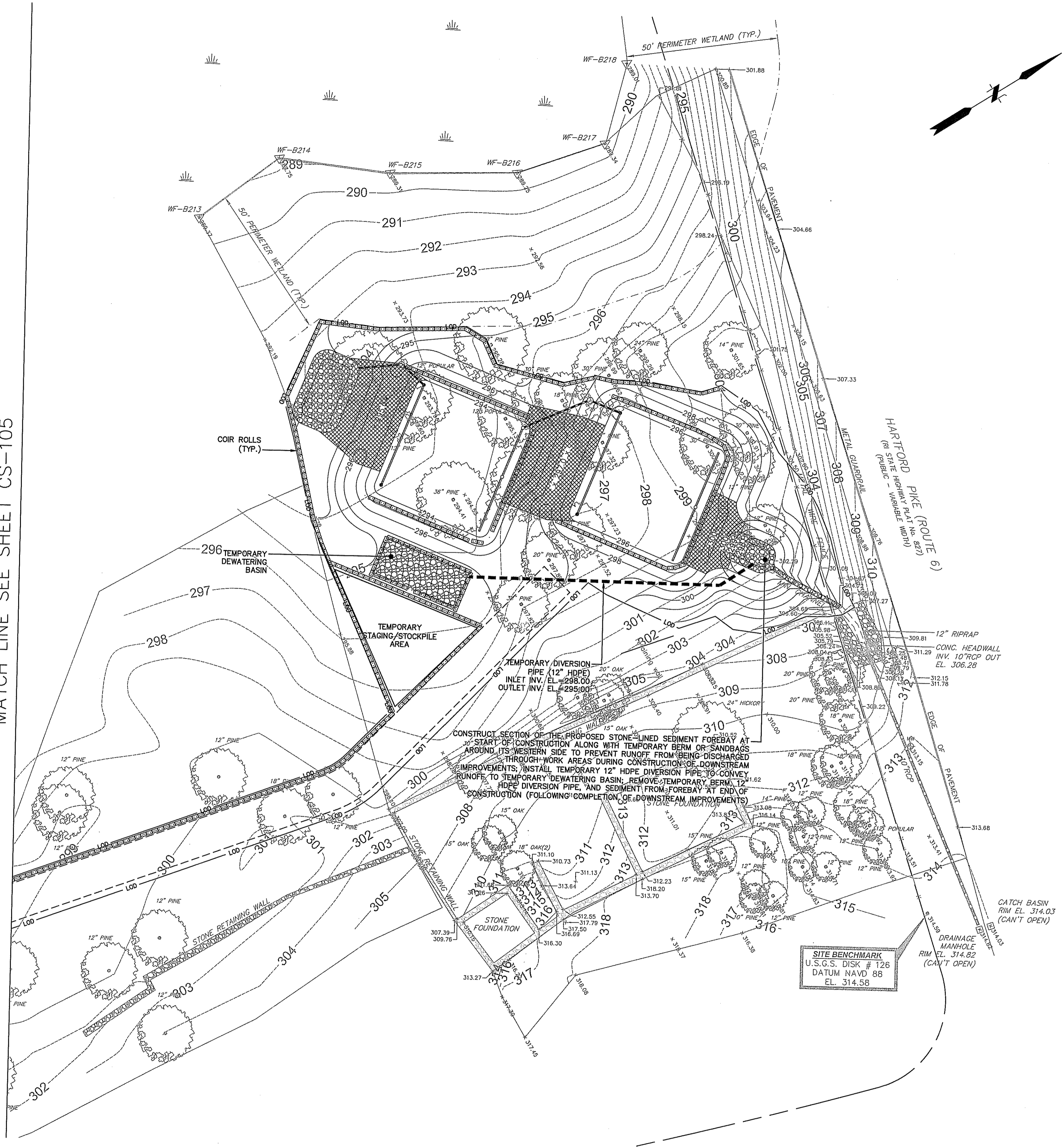
PROVIDENCE WATER
 EROSION CONTROL PLAN No. 1
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014
CS-105

JAN 31 2014

File Path: J:\DWG\2003\272C1015 - Route 116 and Route 6\Civil\Plan\20030272C10_ERC01.dwg Layout: CS-106 Plotted: Fri, January 31, 2014 - 9:28 AM User: mfrisel
 MS VIEW: LAYER STATE: PLOTTER: NONE CTB FILE: FO.STB

MATCH LINE SEE SHEET CS-105



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER QUALITY
 FRESHWATER WETLANDS
 APPROVED FOR CONSTRUCTION
 AS SPECIFIED IN THE PERMIT
 DATED MAR 14 2014
 NO CHANGES ALLOWED WITHOUT APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION

Charles A. Hallett

JAN 31 2014

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

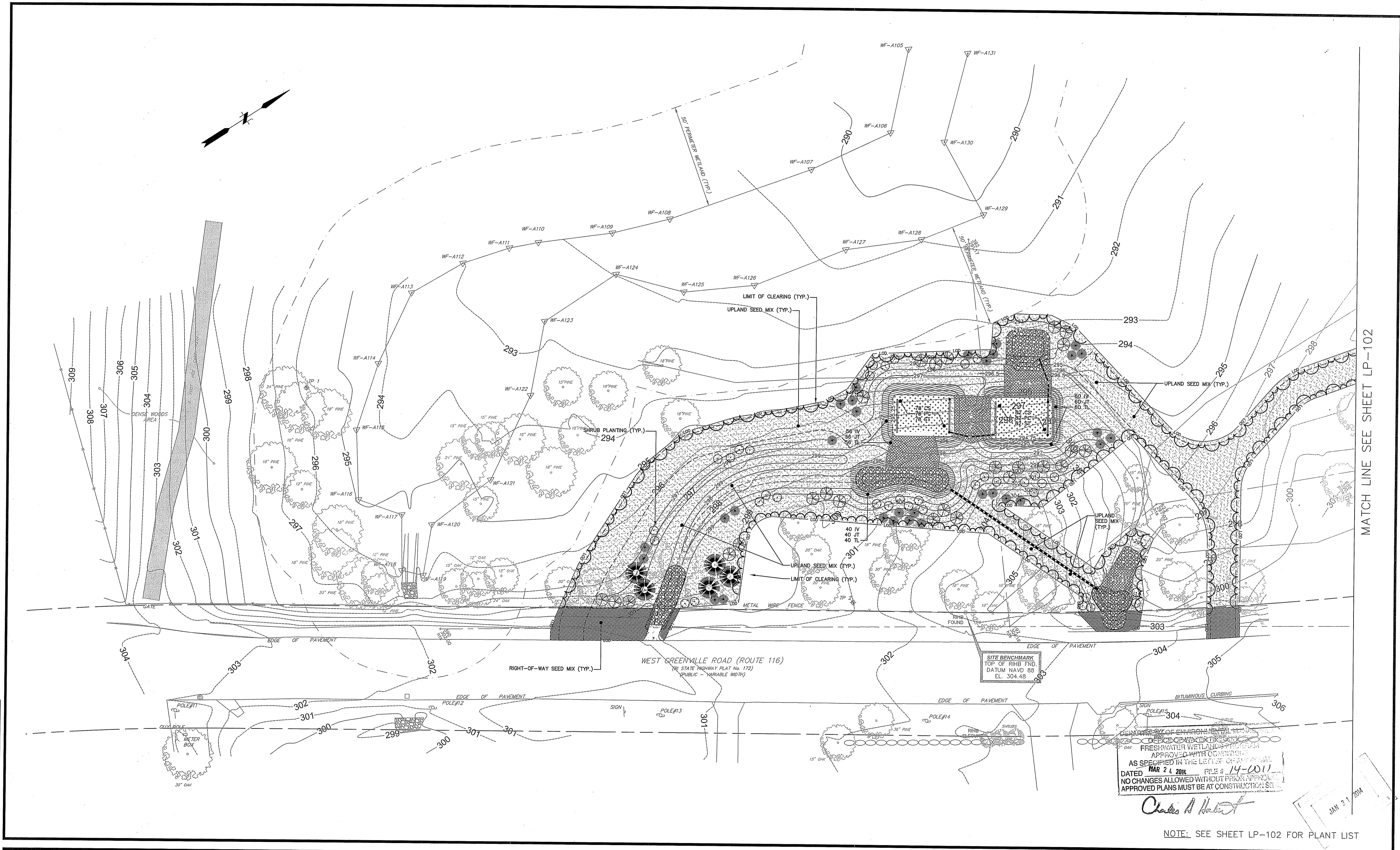
f FUSS & O'NEILL
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

PROVIDENCE WATER
 EROSION CONTROL PLAN No. 2
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014

CS-106

File Path: J:\DWG\2003272C1015 - Route 116 and Route 6\CivilPlan\2003272C10_LND01.dwg Layout: LP-101 Plotted: Fri, January 31, 2014 8:33 AM User: mfrsnel
 PLOTTER: DWG TO PDF.PCS CTB File: FOSTB
 LAYER STATE:



MATCH LINE SEE SHEET LP-102

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF ENVIRONMENTAL SERVICES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED **MAR 24, 2014** FILE # **14-0011**
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harter

NOTE: SEE SHEET LP-102 FOR PLANT LIST

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

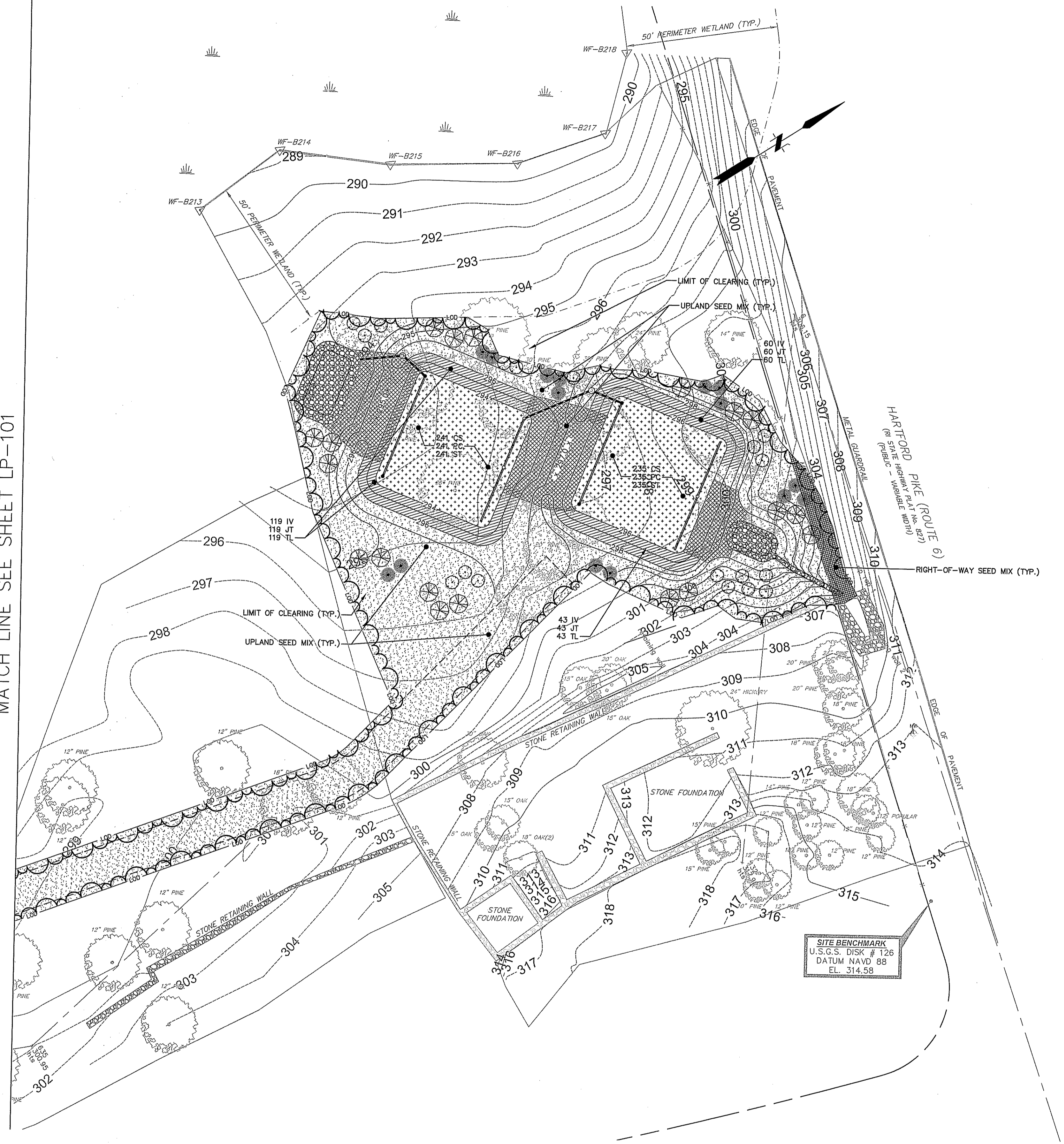
f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

PROVIDENCE WATER
 LANDSCAPE PLAN No. 1
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE RHODE ISLAND

PROJ. No.: 20030272C10
 DATE: JANUARY 2014
LP-101

File Path: J:\DWG\2003\272C1015 - Route 116 and Route 6\CivilPlan\20030272C10_LND01.dwg Plotter: DWG TO PDF.PC3 CTB File: FO.STB
 User: mfrisell
 Date: January 31, 2014 8:33 AM
 Layer: LAYER STATE

MATCH LINE SEE SHEET LP-101



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE
	ABIES BALSAMEA	BALSAM FIR	4-5' HT
	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	2'-3' HT.
	VIBURNUM DENTATUM	NORTHERN ARROWWOOD	2'-3' HT.
	VIBURNUM TRILOBUM	AMERICAN CRANBERRY BUSH	2'-3' HT.

SIDE SLOPE MIX
NATIVE PLUG MIX

KEY	BOTANICAL NAME	COMMON NAME	SIZE
IV	IRIS VERSICOLOR	BLUE FLAG IRIS	2" PLUG
JT	JUNCUS TENUIS	PATH RUSH	2" PLUG
TL	TYPHA LATIFOLIA	COMMON CATTAIL	2" PLUG

PLANTING RATE: INTERPERSE PLUG SPECIES THROUGHOUT SLOPES IN GROUPS OF 15±. SPACE AT 18" O.C.

WET VEGETATED TREATMENT SYSTEM FLOOR MIX
NATIVE PLUG MIX

KEY	BOTANICAL NAME	COMMON NAME	SIZE
CS	CAREX STRICTA	TUSsock SEDGE	2" PLUG
PC	PONTEDERIA CORDATA	PICKERELWEED	2" PLUG
ST	SCHOENOPLECTUS TABERNAEMONTANI	SOFT STEM BULLRUSH	2" PLUG

PLANTING RATE: INTERPERSE PLUG SPECIES THROUGHOUT BASIN BOTTOM IN GROUPS OF 15±. SPACE AT 18" O.C.

SEDIMENT FOREBAY MIX
NATIVE PLUG MIX

KEY	BOTANICAL NAME	COMMON NAME	SIZE
CL	CAREX LURIDA	LURID SEDGE	2" PLUG
JE	JUNCUS EFFUSUS	SOFT RUSH	2" PLUG

PLANTING RATE: INTERPERSE PLUG SPECIES THROUGHOUT FOREBAY FLOOR IN GROUPS OF 15±. SPACE AT 18" O.C.

UPLAND SEED MIX
NATIVE RIGHT-OF-WAY WOODS MIX WITH ANNUAL RYEGRASS

BOTANICAL NAME	COMMON NAME
ELYMUS VIRGINICUS	VIRGINIA WILDRYE
PANICUM CLANDESTINUM	DEERTONGUE
LOLIUM MULTIFLORUM	ANNUAL RYEGRASS
FESTUCA RUBRA	CREeping RED FESCUE
PANICUM VIRGATUM	SWITCHGRASS
CAREX VULPINOIDEA	FOX SEDGE
CHAMAECRISTA FASCICULATA	PARTRIDGE PEA
AGROSTIS PERENNANS	AUTUM BENTGRASS

APPLICATION RATE: 30 LBS/ACRE

STATE HIGHWAY RIGHT-OF-WAY SEED MIX
TYPE I GENERAL HIGHWAY SEEDING (RIDOT M.18.10.2)
PARK MIX FOR FLAT AREAS

SPECIES	PERCENT BY WEIGHT
CREeping RED FESCUE	70%
KENTUCKY BLUEGRASS	15%
PERENNIAL RYEGRASS	15%

SLOPE MIX FOR AREAS WITH SLOPES STEEPER THAN 3(H):1(V)

SPECIES	PERCENT BY WEIGHT
CREeping RED FESCUE	70%
PERENNIAL RYEGRASS	15%
BIRDSFOOT TREFOL	15%

APPLICATION RATE: 150 LBS/ACRE

IF THERE IS A DISCREPANCY BETWEEN QUANTITIES THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE LARGER QUANTITY.

DEPARTMENT OF
 OFFICE OF PERMITS AND
 FRESH WATER WETLANDS PROTECTION
 APPROVED WITH COMMENTS
 AS SPECIFIED IN THE PERMIT
 DATED **MAR 24, 2014** FILE # **14-0011**
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Hunter

JAN 31 2014

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.				

DEAN E. AUDET
 No. 7589
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

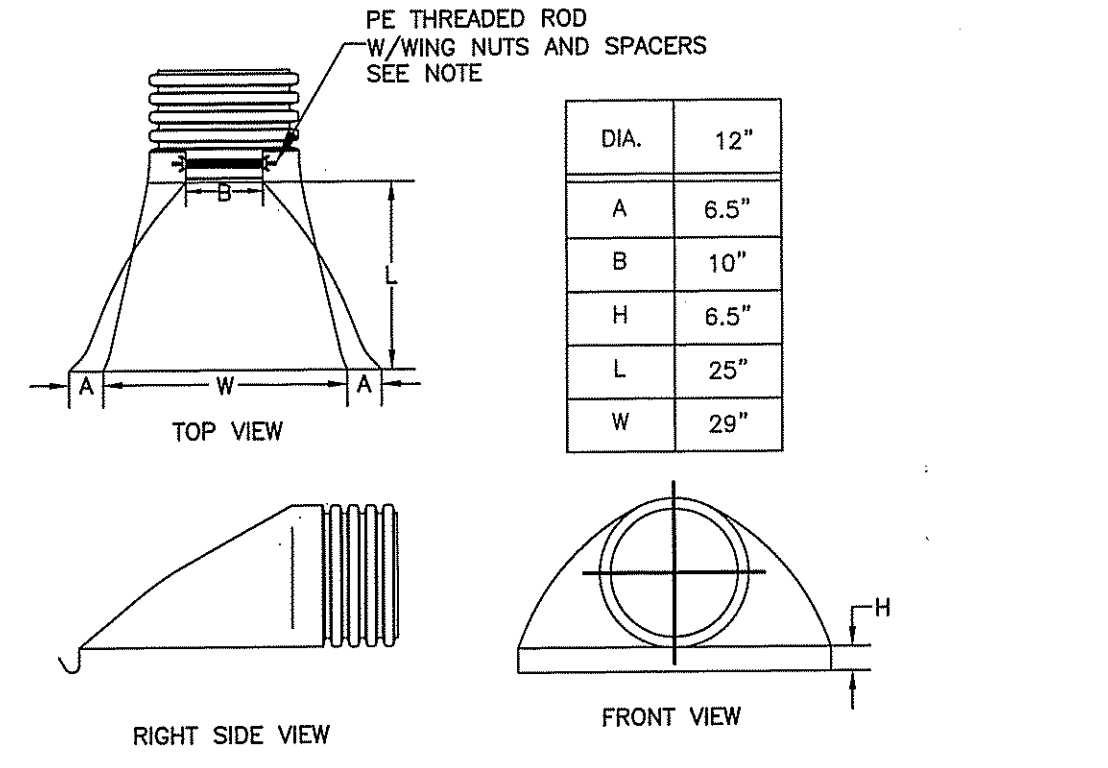
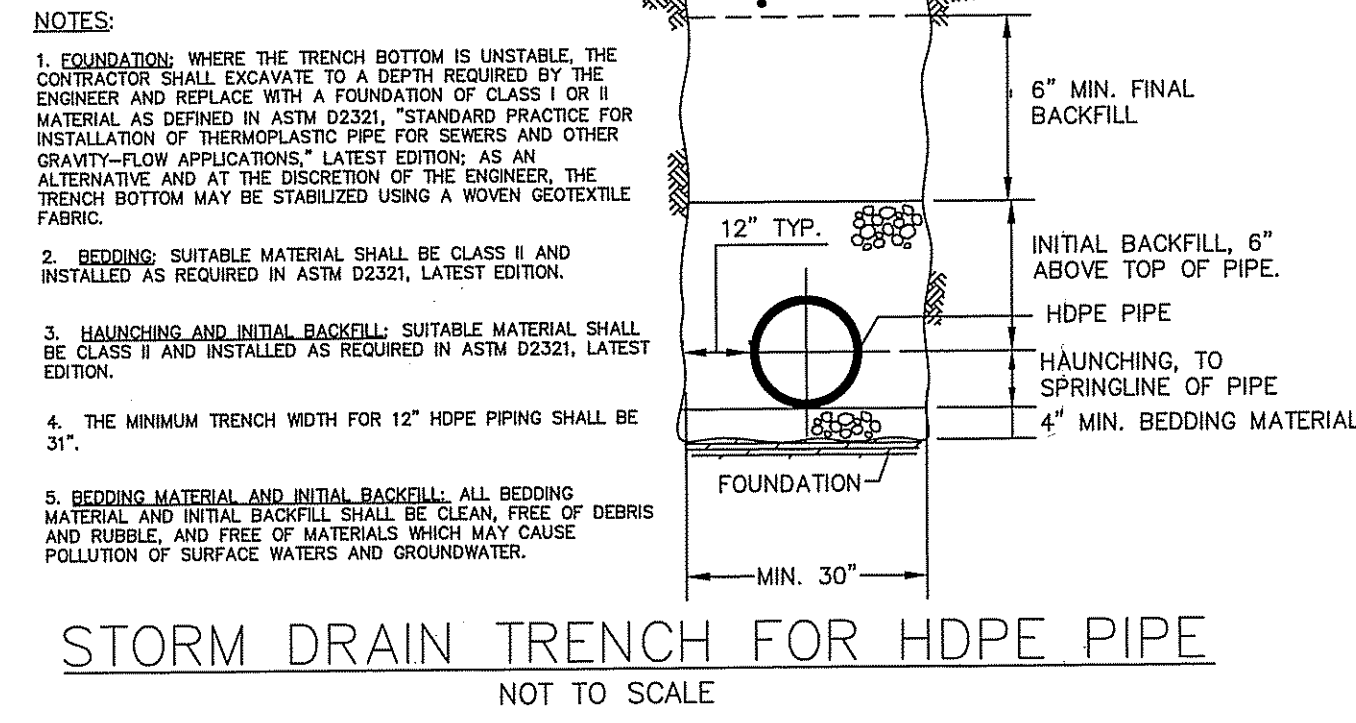
SCALE:
 HORZ.: 1" = 20'
 VERT.:
 DATUM:
 HORZ.:
 VERT.:
 GRAPHIC SCALE

f **FUSS & O'NEILL**
 317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fandoo.com

PROVIDENCE WATER
 LANDSCAPE PLAN No. 2
 STORMWATER BEST MANAGEMENT PRACTICES AT
 ROUTE 6 / ROUTE 116 INTERSECTION
 SCITUATE
 RHODE ISLAND

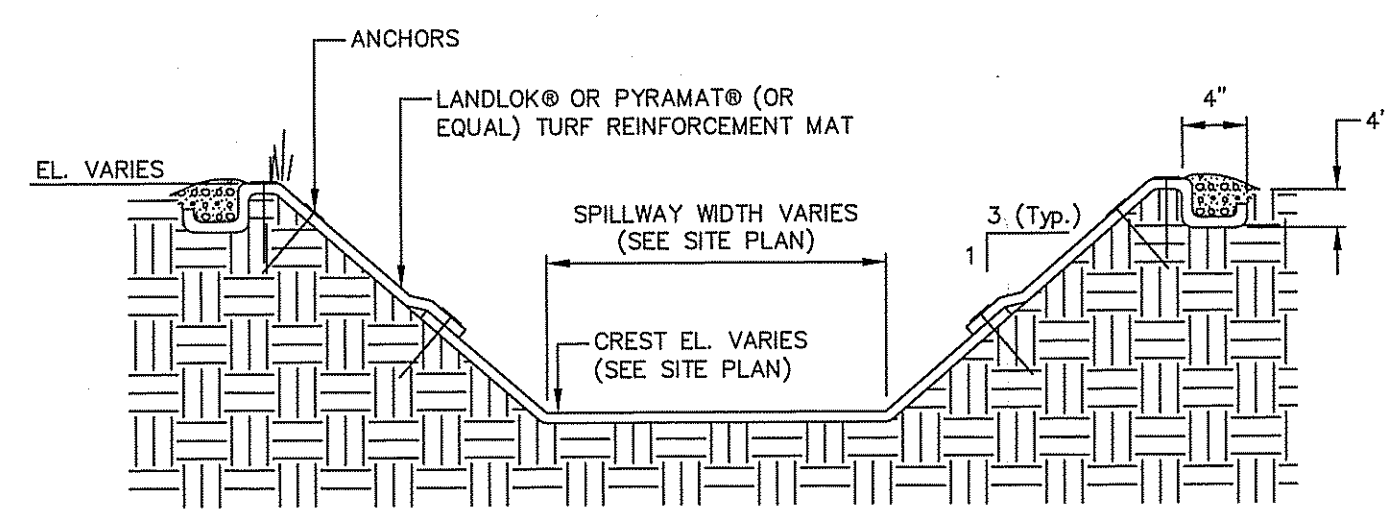
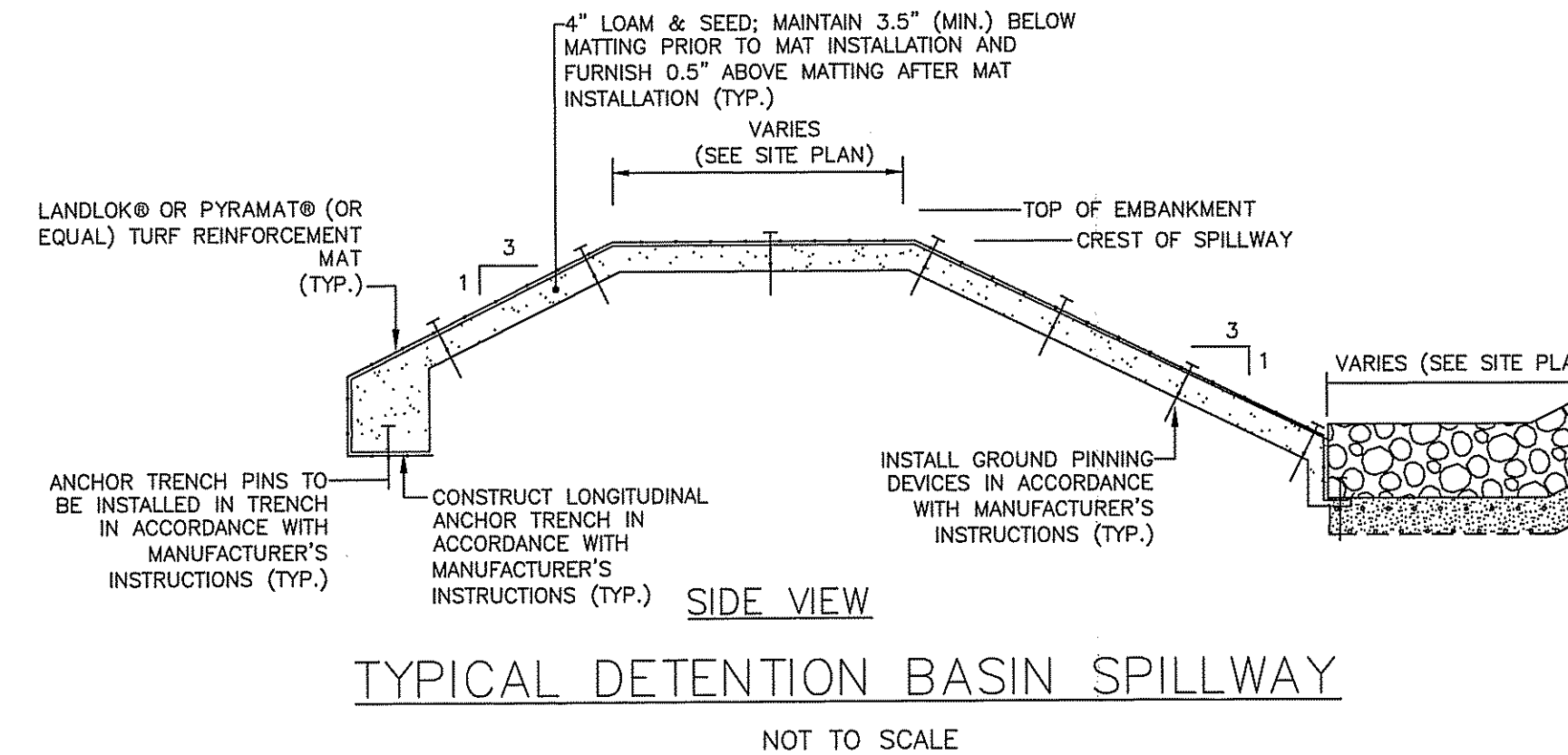
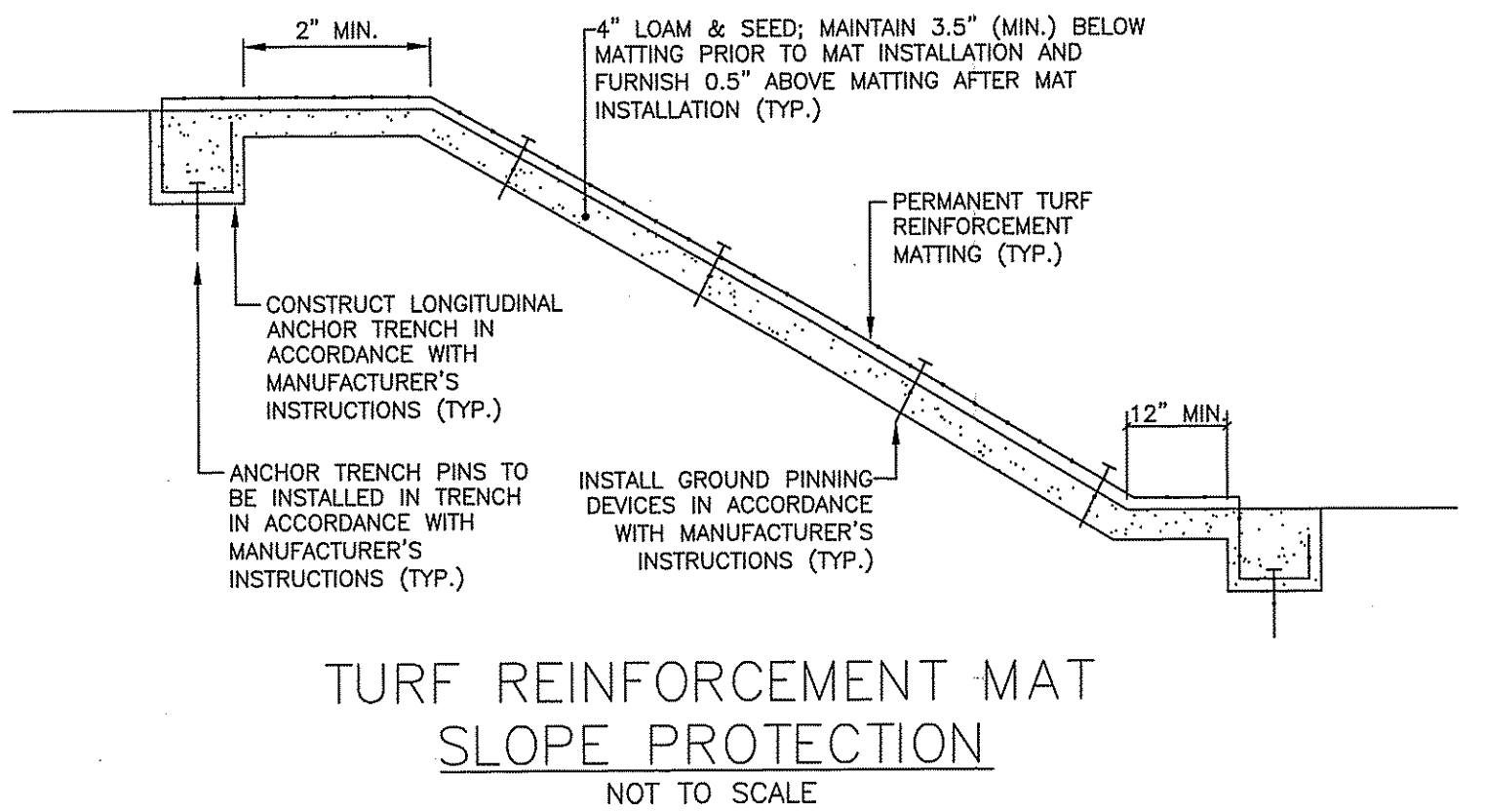
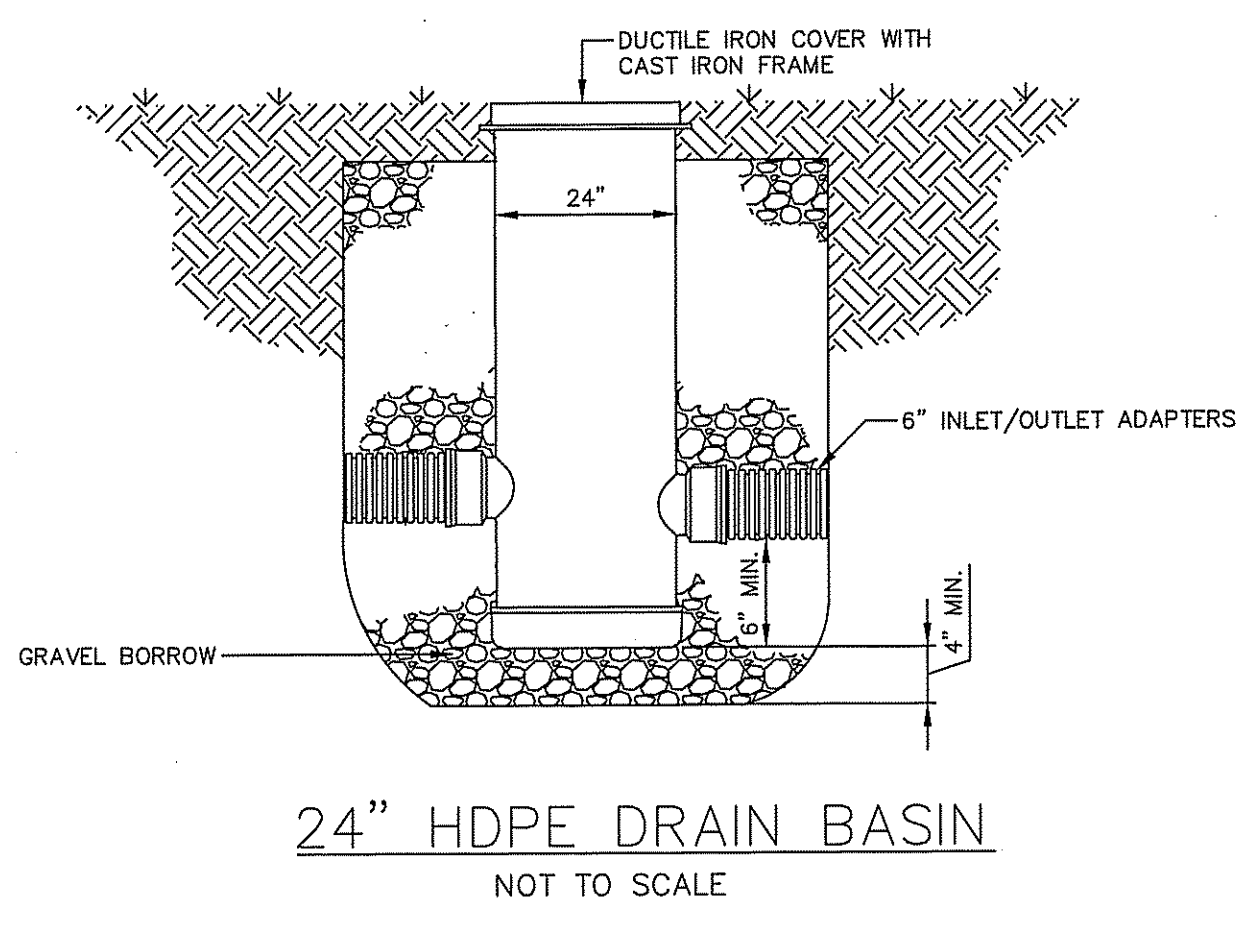
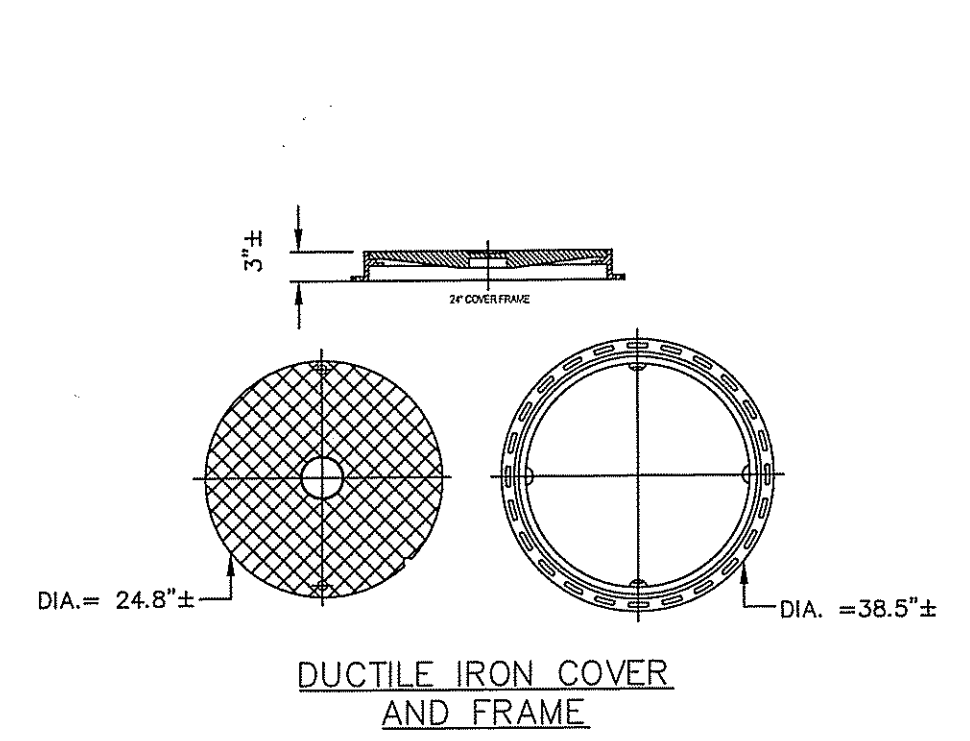
PROJ. No.: 20030272C10
 DATE: JANUARY 2014
LP-102

File Path: J:\DWG\2003272C10_1015 - Route 116 and Route 6\Civil\Plan\2003272C10_DET01.dwg Layout: CD-502 Plotted: Fri, January 31, 2014 - 8:33 AM User: mfriscell
 PLOTTER: DWG TO PDF.PC3 CTB File: FO.STB
 LAYER STATE:



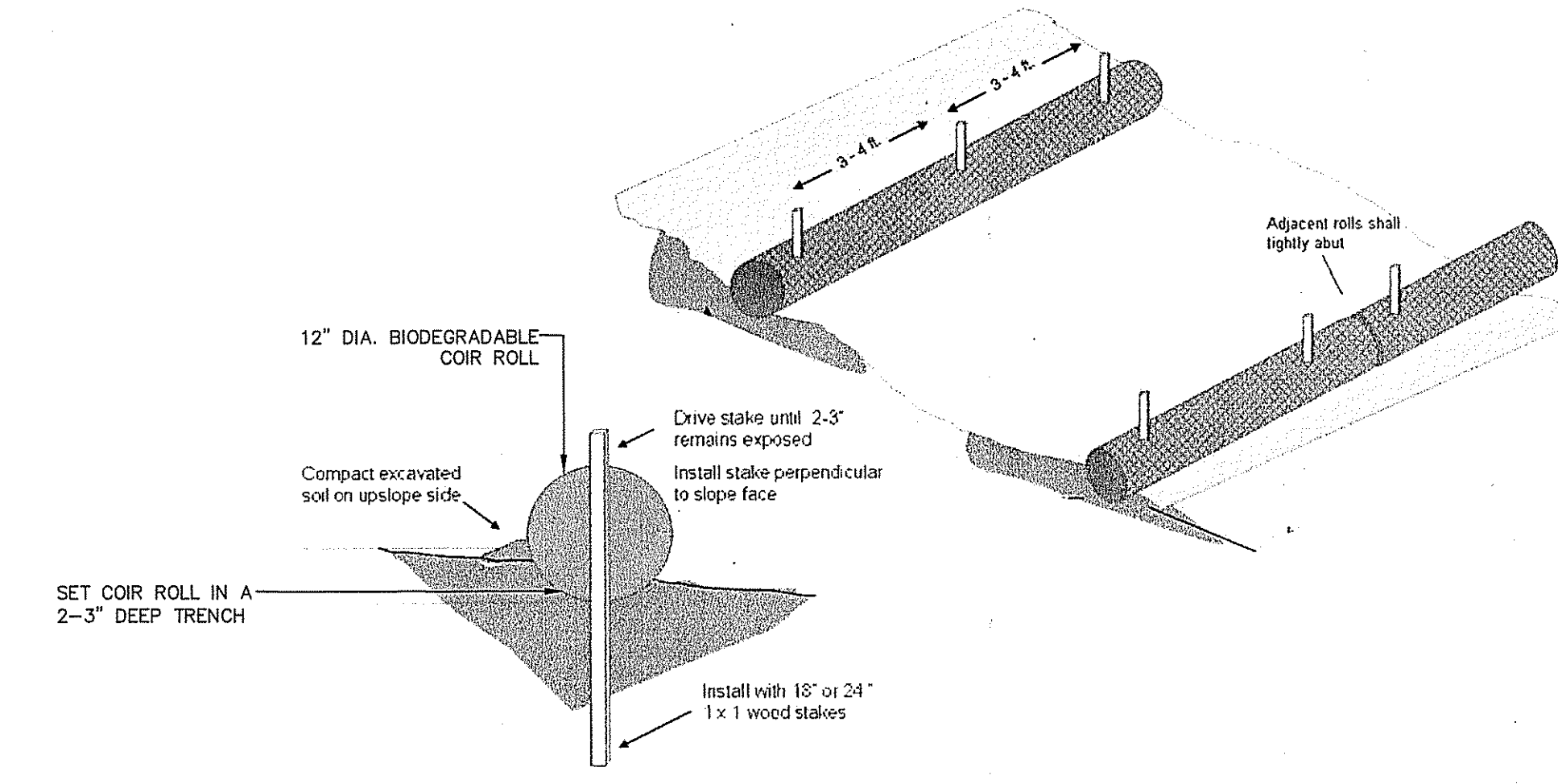
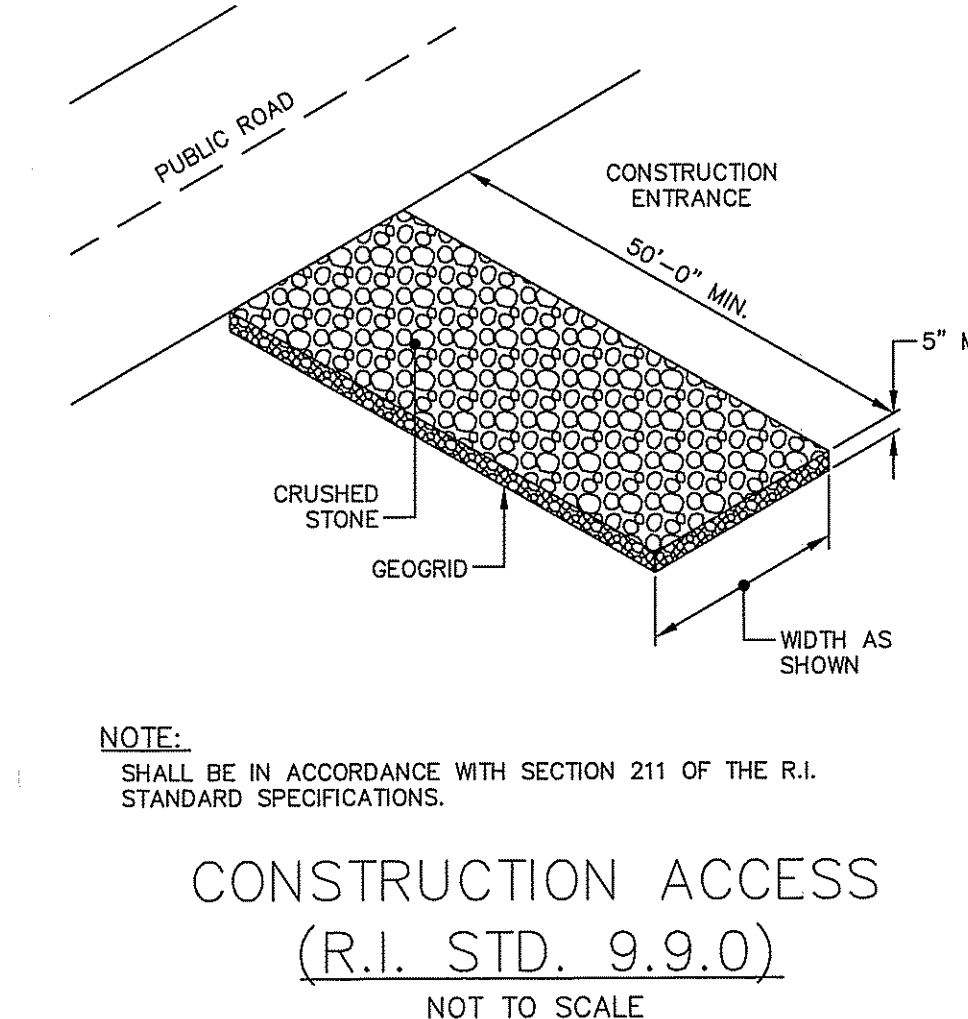
NOTE:
SHALL BE MANUFACTURED WITH POLYETHYLENE RESINS AS DESCRIBED AND DEFINED IN ASTM D3350. WHEN PROVIDED, THE METAL THREADED FASTENING ROD SHALL BE STAINLESS STEEL.

DUCTILE IRON COVER AND FRAME



NOTES:
1. INSTALL TRM PER MANUFACTURER'S INSTRUCTIONS

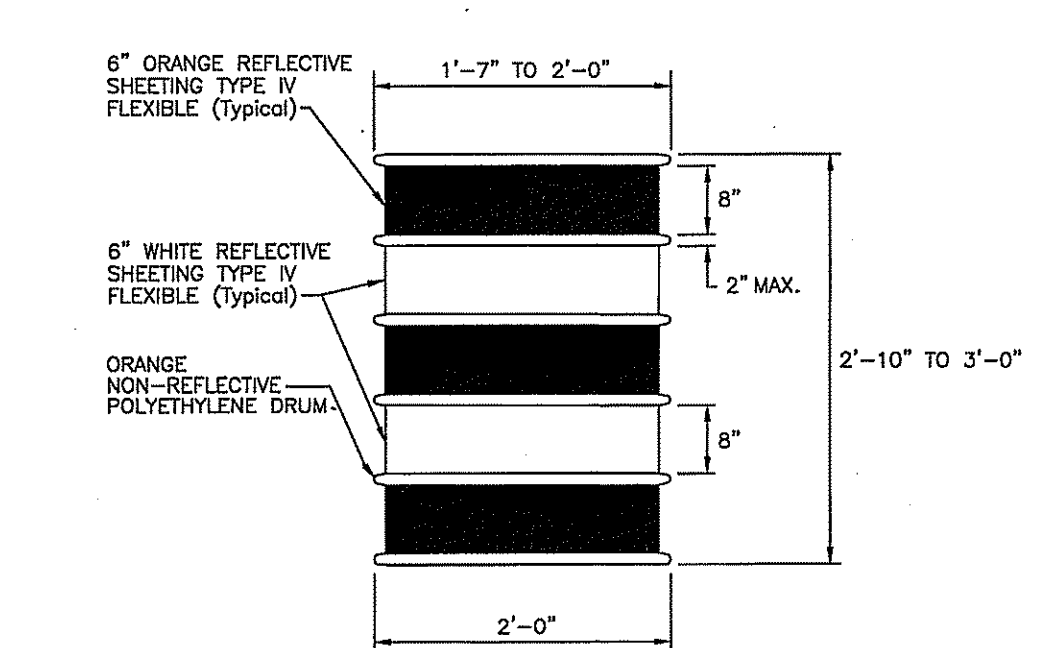
CONSTRUCTION ACCESS (R.I. STD. 9.9.0)
NOT TO SCALE



NOTES:

- COIR ROLLS SHALL BE INSTALLED WHERE INDICATED ON THE CONTRACT DRAWINGS. A ROW OF COIR ROLLS SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS UTILIZED BY THE CONTRACTOR DURING CONSTRUCTION IN UNPAVED AREAS.
- COIR ROLLS SHALL BE TRENCHED APPROXIMATELY 2-3 INCHES AND STAKED SUCH THAT COIR ROLLS DIRECTLY CONTACT SOIL AND PRECLUDE UNDERMINING OR BLOWOUTS. THE TRENCH SHALL BE APPROXIMATELY 9 INCHES WIDE. STAKES SHALL BE DRIVEN THROUGH THE CENTER OF THE COIR ROLL AT A SPACING OF 3-4 FEET ON CENTER AND NO GREATER THAN 6" FROM THE EACH END OF THE COIR ROLL. STAKES SHALL BE 1-INCH BY 1-INCH WOODEN STAKES WITH A LENGTH OF 18-24 INCHES. COMPACT SOIL EXCAVATED TO CREATE TRENCH ON UPHILL SIDE.
- ENDS OF ADJACENT COIR ROLLS SHALL BE TIGHTLY BUTTED OR OVERLAPPED SO THAT NO OPENING EXISTS FOR WATER TO PASS THROUGH. COIR ROLLS SHALL BE FREE OF DAMAGE OR DEFECTS WHEN DELIVERED TO THE SHIPPER. NO VEHICLES SHALL BE DRIVEN OVER COIR ROLLS.

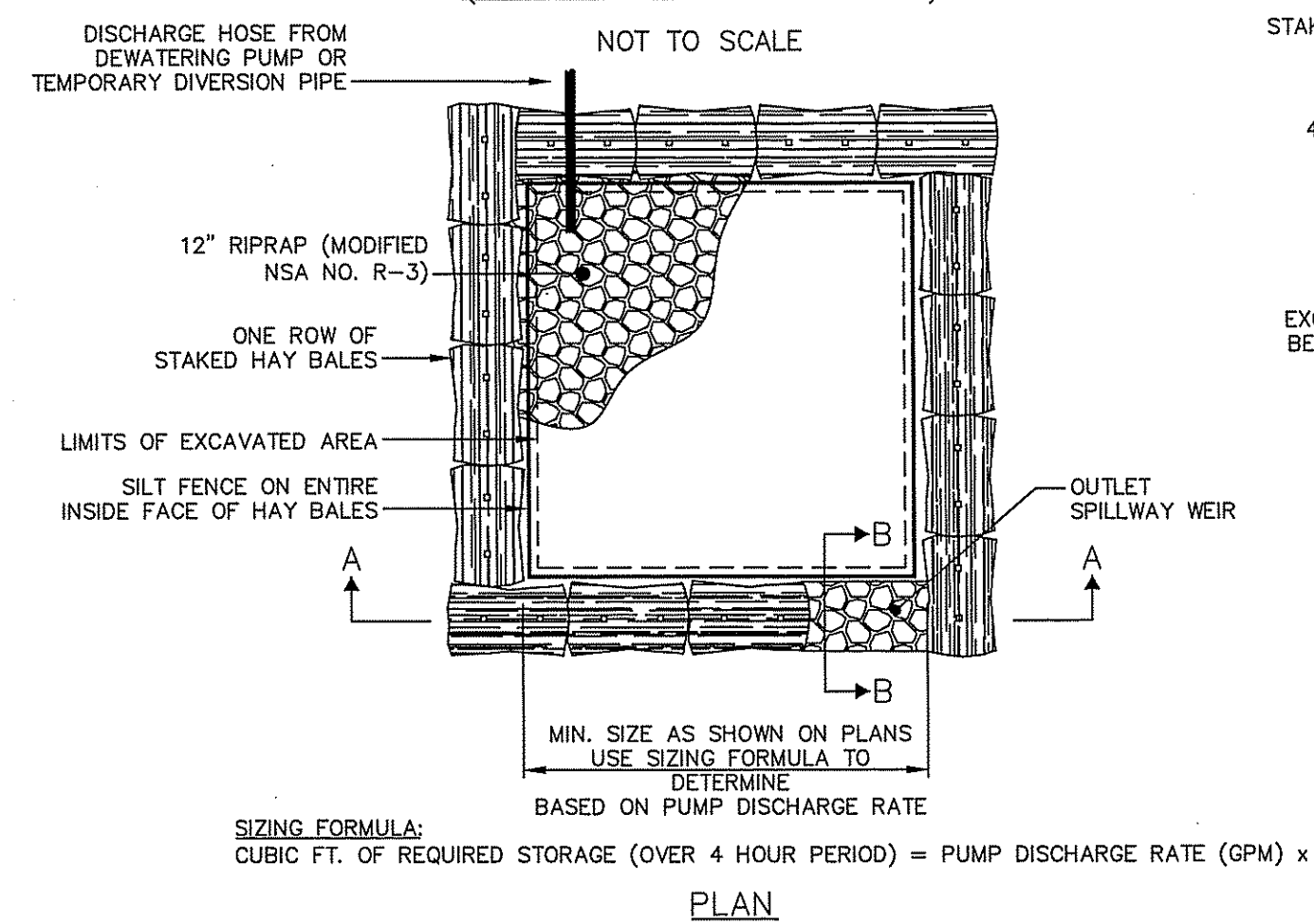
COIR ROLL
NOT TO SCALE



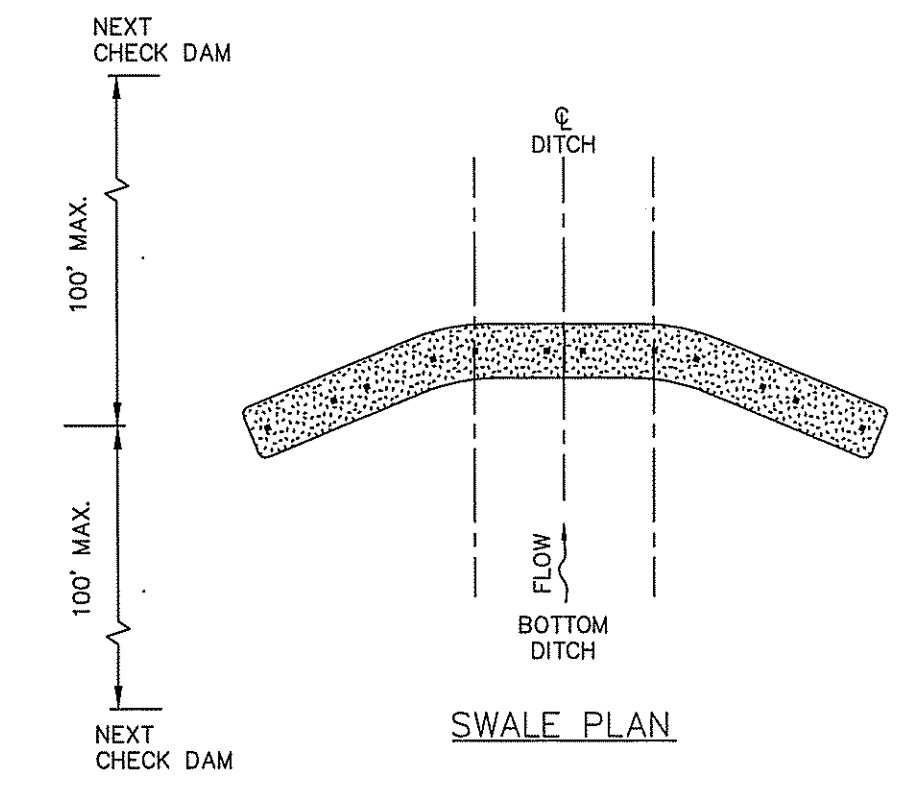
NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
- BASE TO BE ADAPTED FOR SANDBAG BALLAST.
- DRUM CAN BE CYLINDRICAL OR PARTLY CYLINDRICAL WITH A FLAT SIDE.
- DRUM SHALL BE MANUFACTURED FROM TOUGH, REBOUNDABLE PLASTIC, MADE OF HIGH DENSITY (HD) POLYETHYLENE.

POLYETHYLENE DRUM WITH MARKINGS (R.I. STD. 26.2.0)



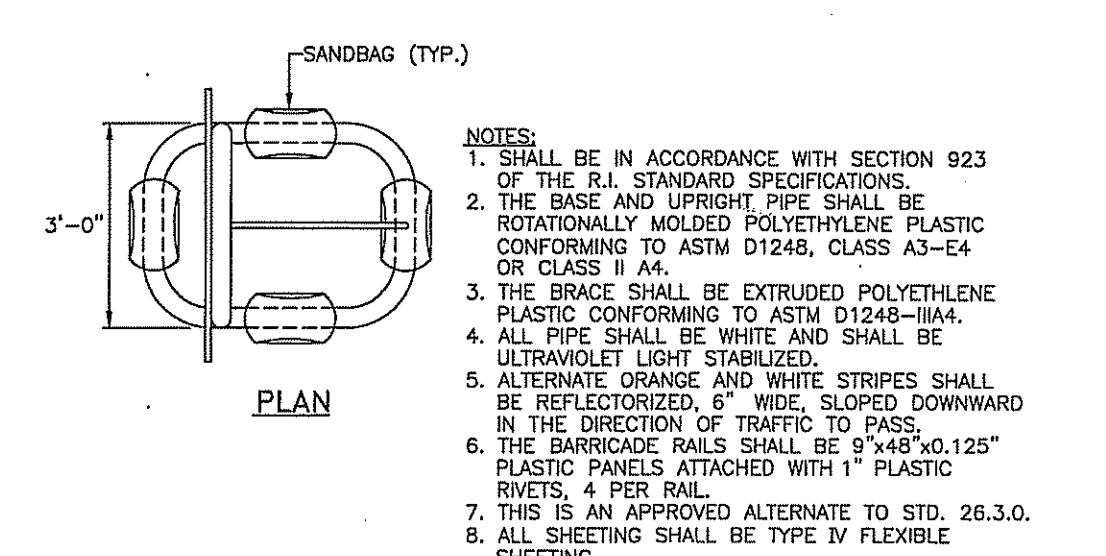
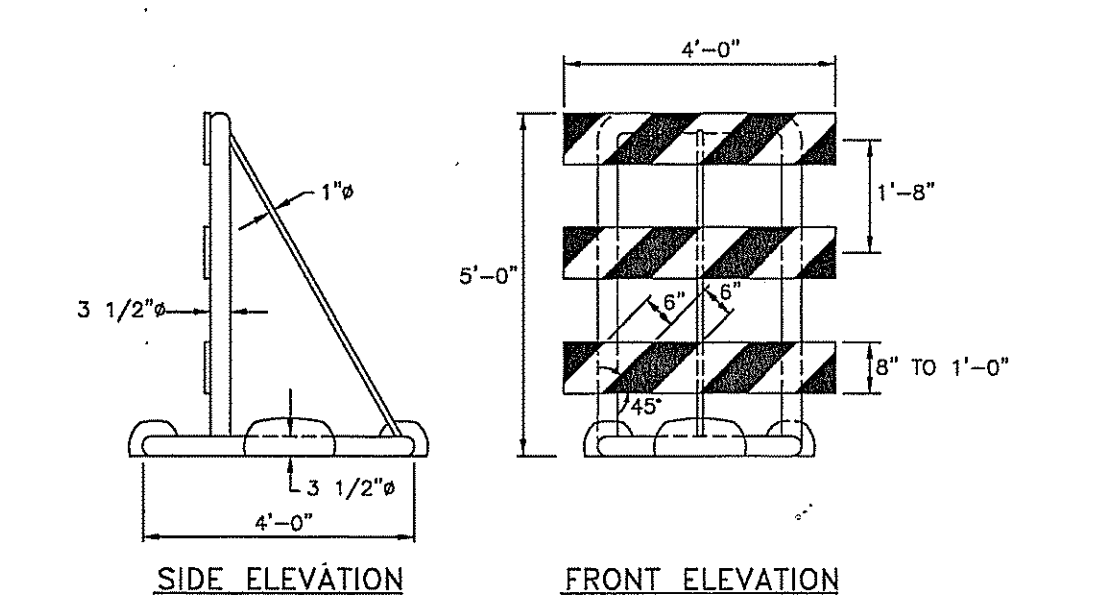
SIZING FORMULA:
CUBIC FT. OF REQUIRED STORAGE (OVER 4 HOUR PERIOD) = PUMP DISCHARGE RATE (GPM) x 32



NOTES:

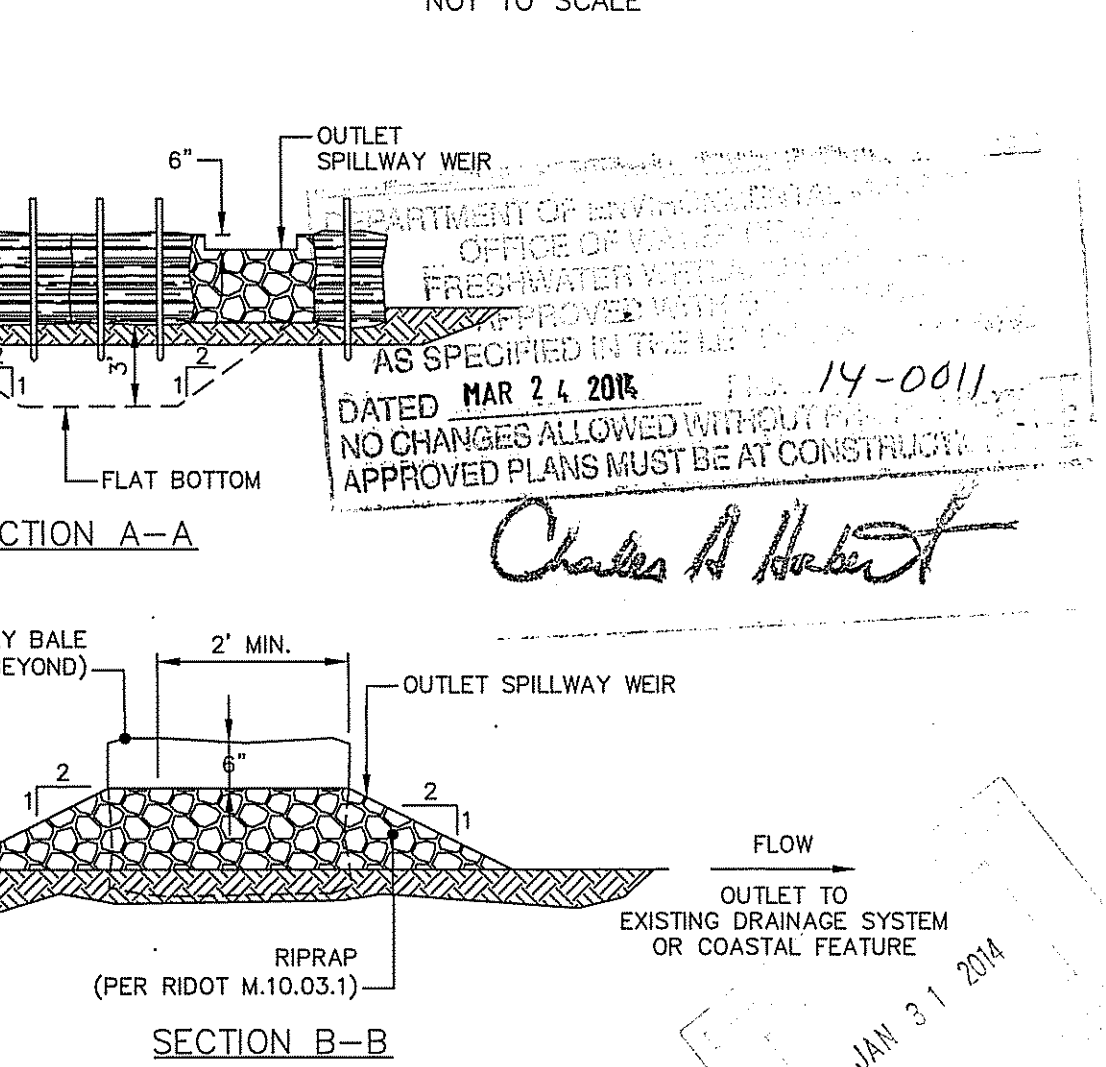
- COIR ROLLS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- COIR ROLLS ARE TO BE EMBEDDED A MINIMUM OF 2" TO 3" INTO THE BOTTOM OF THE SWALE.

COIR ROLL EROSION CHECK DAMS
NOT TO SCALE



NOTES:

- SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
- THE BASE AND UPRIGHT PIPE SHALL BE ROTATIONALLY MOLDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248, CLASS A3-E4 OR CLASS II A4.
- THE BRACE SHALL BE EXTRUDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248-11M4.
- ALL PIPE SHALL BE WHITE AND SHALL BE ULTRAVIOLET LIGHT STABILIZED.
- ALTERNATE ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED, 6" WIDE, SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC TO PASS.
- THE BARRICADE RAILS SHALL BE 9" X 48" X 0.125" PLASTIC PANELS ATTACHED WITH 1" PLASTIC RIVETS, 4 PER RAIL.
- THIS IS AN APPROVED ALTERNATE TO STD. 26.3.0.
- ALL SHEETING SHALL BE TYPE IV FLEXIBLE SHEETING.



SECTION A-A
SECTION B-B

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL

DEAN E. AUDET
No. 7589
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SCALE:

HORZ.:
VERT.:

DATUM:

HORZ.:
VERT.:

GRAPHIC SCALE

f **FUSS & O'NEILL**

317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

PROVIDENCE WATER
DETAILS

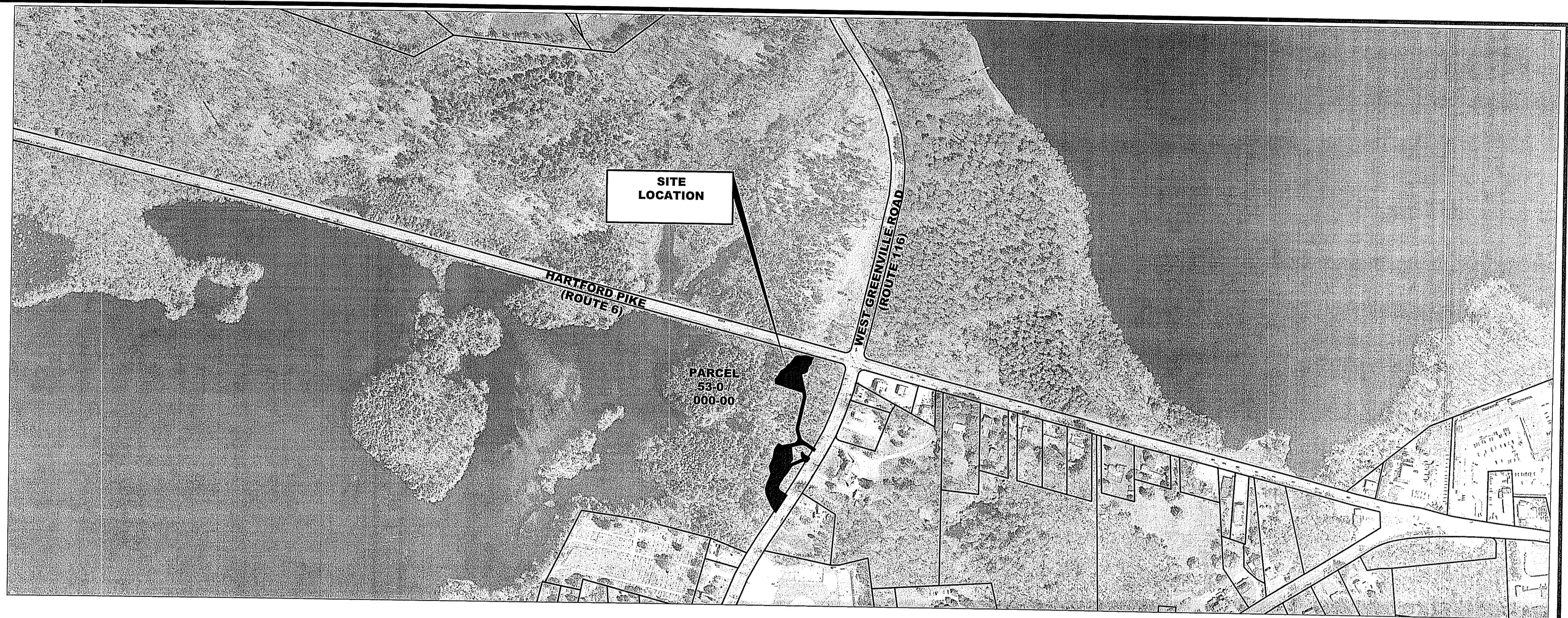
STORMWATER BEST MANAGEMENT PRACTICES AT
ROUTE 6 / ROUTE 116 INTERSECTION
SCITUATE RHODE ISLAND

PROJ. No.: 02003272.C10
DATE: JANUARY 2014

CD-502

NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL WORK WITHIN THE STATE HIGHWAY RIGHT-OF-WAY SHALL CONFORM TO RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2004 EDITION) INCLUDING ALL REVISIONS AND RHODE ISLAND STANDARD DETAILS.
3. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
4. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
5. TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
6. SIGNS TO REMAIN IN PLACE FOR PROJECT DURATION. TYPICAL LANE CLOSURE AS SHOWN TO BE IMPLEMENTED DURING INSTALLATION OF PAVED WATER WAY. TYPICAL CLOSED SHOULDER AS SHOWN TO BE IMPLEMENTED DURING INSTALLATION OF ALL OTHER WORK OUTSIDE OF THE PROVIDENCE WATER FENCE INCLUDING STONE ENERGY DISSIPATOR, STONE LINED SEDIMENT FOREBAY, STONE BOTTOM CHANNEL, EARTHWORK AND DURING PERIODS OF REGULAR HEAVY VEHICLE ACCESS.
7. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES."
8. THE FIRST THREE PLASTIC DRUMS OF A TAPER MAY BE MOUNTED WITH TYPE A LIGHTS.
9. AN ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
10. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
11. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
12. MINIMUM LANE WIDTH IS TO BE 11 FEET DURING LANE CLOSURE. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS.
13. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
14. CHANNELIZING DEVICES AND ADVANCE WARNING SIGNS SHOULD BE PLACED BEYOND THE MINIMUM DISTANCES SHOWN, IF NEEDED TO MAINTAIN THEIR VISIBILITY TO MOTORISTS WHERE SIGHT DISTANCE IS RESTRICTED.
15. A BUFFER SPACE IS RECOMMENDED FOR ALL WORK ZONES.



PROJECT LOCATION
SCALE: 1"=300'

LEGEND:

● REFLECTORIZED PLASTIC DRUM	▨ WORK ZONE	☐ WORK VEHICLE
⚓ POLICE DETAIL/FLAGGER	➔ DIRECTION OF TRAFFIC	☒ TRUCK MOUNTED ATTENUATOR
▤ TYPE III BARRICADE	⊕ IMPACT ATTENUATOR	➔ TRAFFIC OR PEDESTRIAN SIGNAL
⚡ FLASHING ARROW PANEL	▭ MEDIAN BARRIER	⚓ SIGN
⚡ FLASHING ARROW PANEL	▭ MEDIAN BARRIER WITH WARNING LIGHTS	

SUGGESTED WORK ZONE WARNING SIGN SPACING

Road Type	Distance Between Signs**		
	A	B	C
URBAN (LOW SPEED)*	100	100	100
URBAN (HIGH SPEED)*	350	350	350
RURAL	500	500	500
EXPRESSWAY/FREEWAY	1,000	1,500	2,640

* SPEED CATEGORY TO BE DETERMINED BY HIGHWAY AGENCY

**DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "FIRST SIGN" IS THE SIGN IN A THREE-SIGN SERIES THAT IS CLOSEST TO THE TTC ZONE. THE "THIRD SIGN" IS THE SIGN THAT IS FURTHEST UPSTREAM FROM THE TTC ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TMP SETUPS. IT IS THE ONE WHICH MAY OFTEN HAVE THE "STANDARD RED OR RED-ORANGE FLAGS (16 in. X 16 in.) MOUNTED ON IT. THESE ADVANCE WARNING SIGNS ARE LOCATED AT THE PROJECT LIMITS ON ALL APPROACHES (I.E. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

BASED ON: TABLE 6C-1 2009 MUTCD

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE: L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH.

SOURCE: TABLE 6C-4 2009 MUTCD

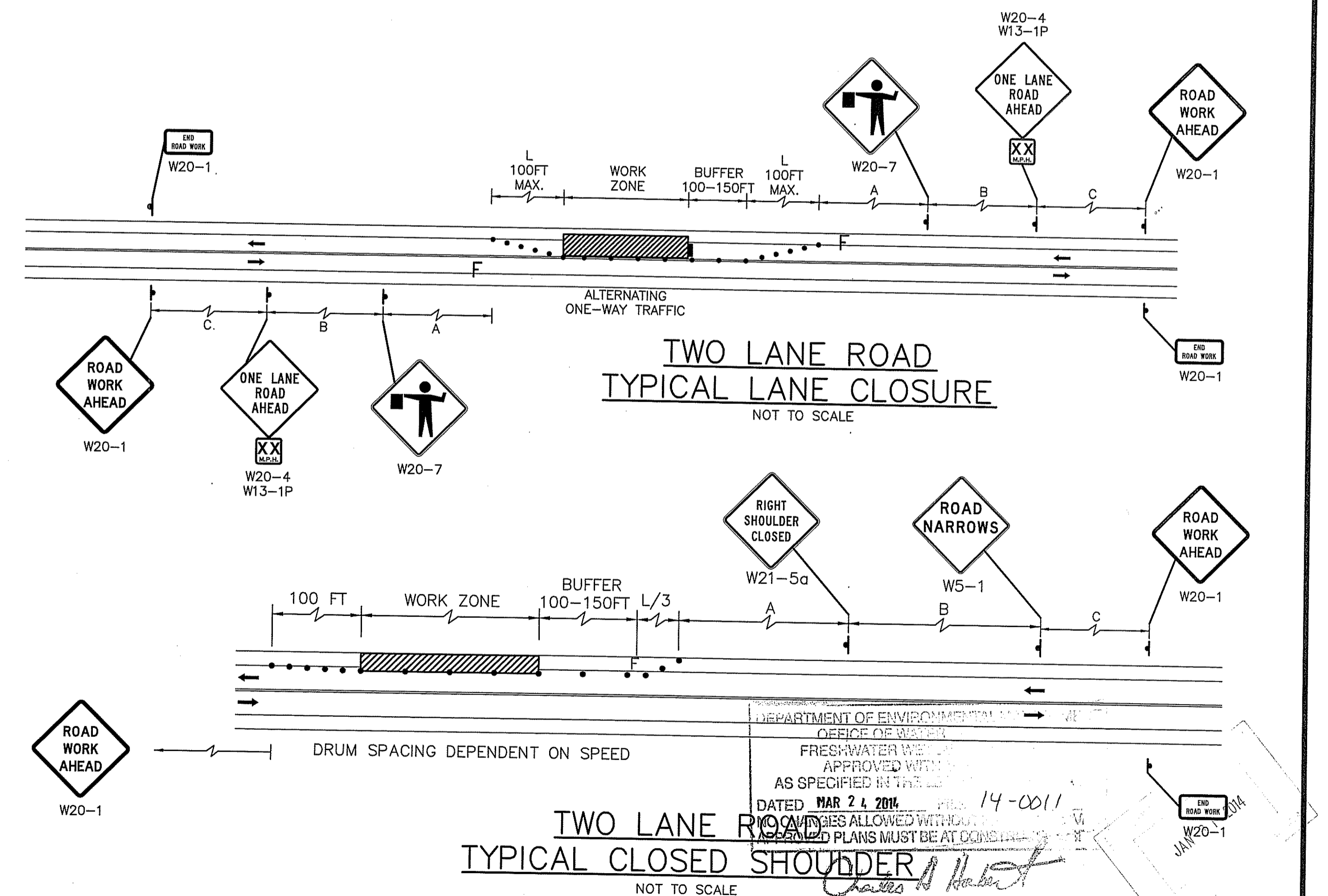
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MINIMUM, 100 FT MAXIMUM
DOWNSTREAM TAPER	50 FT MINIMUM, 100 FT MAXIMUM

SOURCE: TABLE 6C-3 2009 MUTCD

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	AREA IN SQUARE FEET
	WIDTH (in)	HEIGHT (in)		
W20-1 (AHEAD)	36	36	ROAD WORK AHEAD	9
G20-2	36	18	END ROAD WORK	4.5
W20-4 (AHEAD)	36	36	ONE LANE ROAD AHEAD	9
W20-7	36	36	WORK AHEAD	9
W21-5a	36	36	RIGHT SHOULDER CLOSED	9
W5-1	36	36	ROAD NARROWS	9
W13-1P	24	24	XX M.P.H.	4

NOT TO SCALE



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER
FRESHWATER WATER QUALITY
APPROVED WITH
AS SPECIFIED IN THE
DATED MAR 24 2014
14-0011
Charles A. Haber

File Path: J:\DWG\20030272C10_116 - Route 116 and Route 6\CivilPlan\030272C10_116.dwg Layout: CT-401 Plotted: Fri, January 31, 2014 - 8:45 AM User: mhsall
LAYER STATE: PLOTTER: NONE CTB FILE: FO.STB

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

DEAN E. AUDET
No. 7589
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

SEAL

SCALE:
HORIZ.: AS NOTED
VERT.:
DATUM:
HORIZ.:
VERT.:
GRAPHIC SCALE

f **FUSS & O'NEILL**
317 IRON HORSE WAY, SUITE 204
PROVIDENCE, RI 02908
401.861.3070
www.fando.com

PROVIDENCE WATER
TRAFFIC MANAGEMENT PLAN
STORMWATER BEST MANAGEMENT PRACTICES AT
ROUTE 6 / ROUTE 116 INTERSECTION
SCITUATE
RHODE ISLAND

PROJ. No.: 20030272C10
DATE: JANUARY 2014
CT-401