

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		1	36

CONTRACT NO. 3
D.E.M. PLAN SET : 1 OF 36

INDEX OF DRAWINGS

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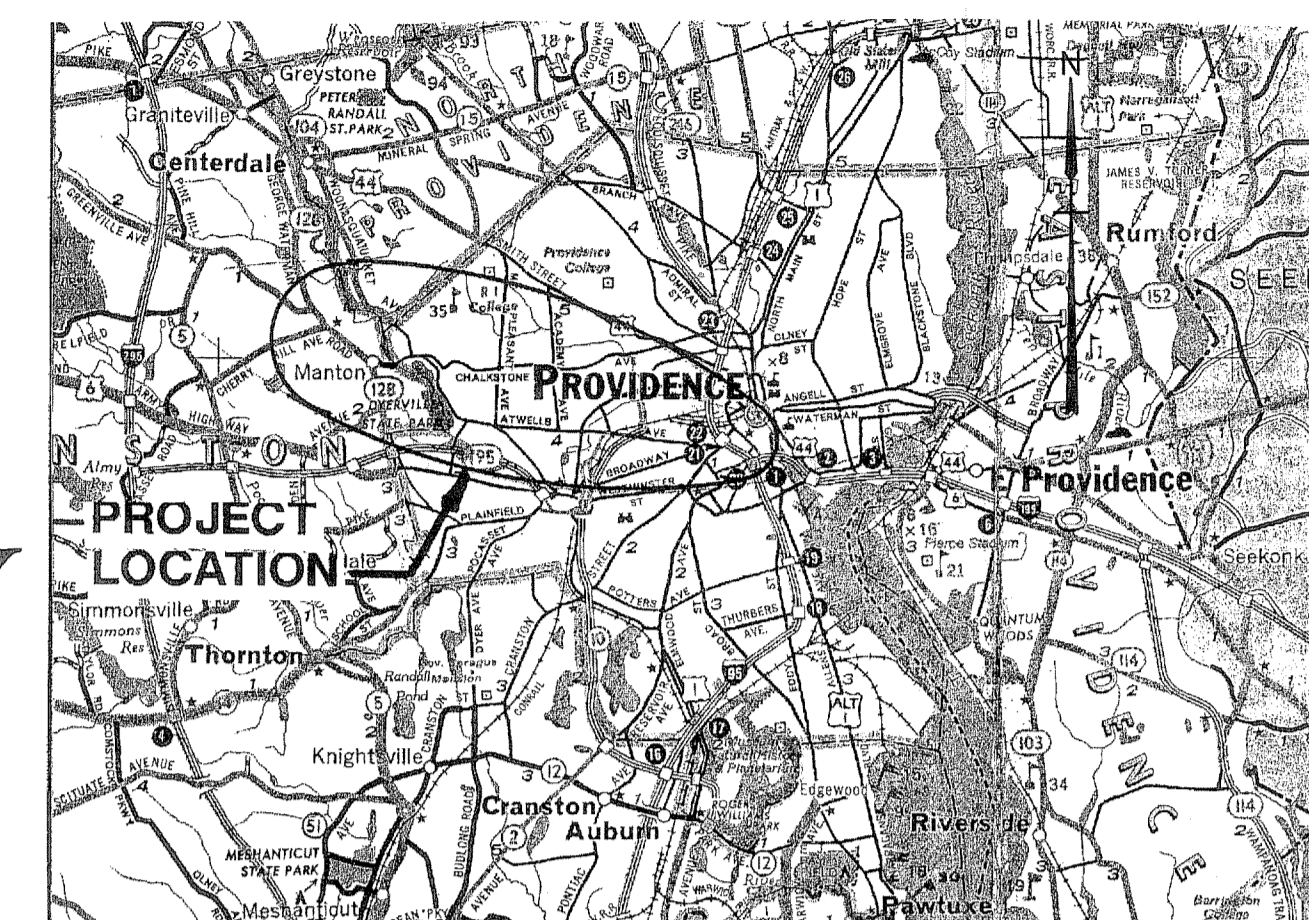
STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
PLAN, PROFILE AND SECTIONS OF PROPOSED
**NORTHWEST BIKE TRAIL/
WOONASQUATUCKET RIVER BIKEWAY**

CONTRACT NO. 3

CITY OF PROVIDENCE
COUNTY OF PROVIDENCE

RI. CONTRACT NO. 93107 F.A. PROJECT NO. HPP-1737(003)

LENGTH = 1,970 FEET



LOCATION MAP

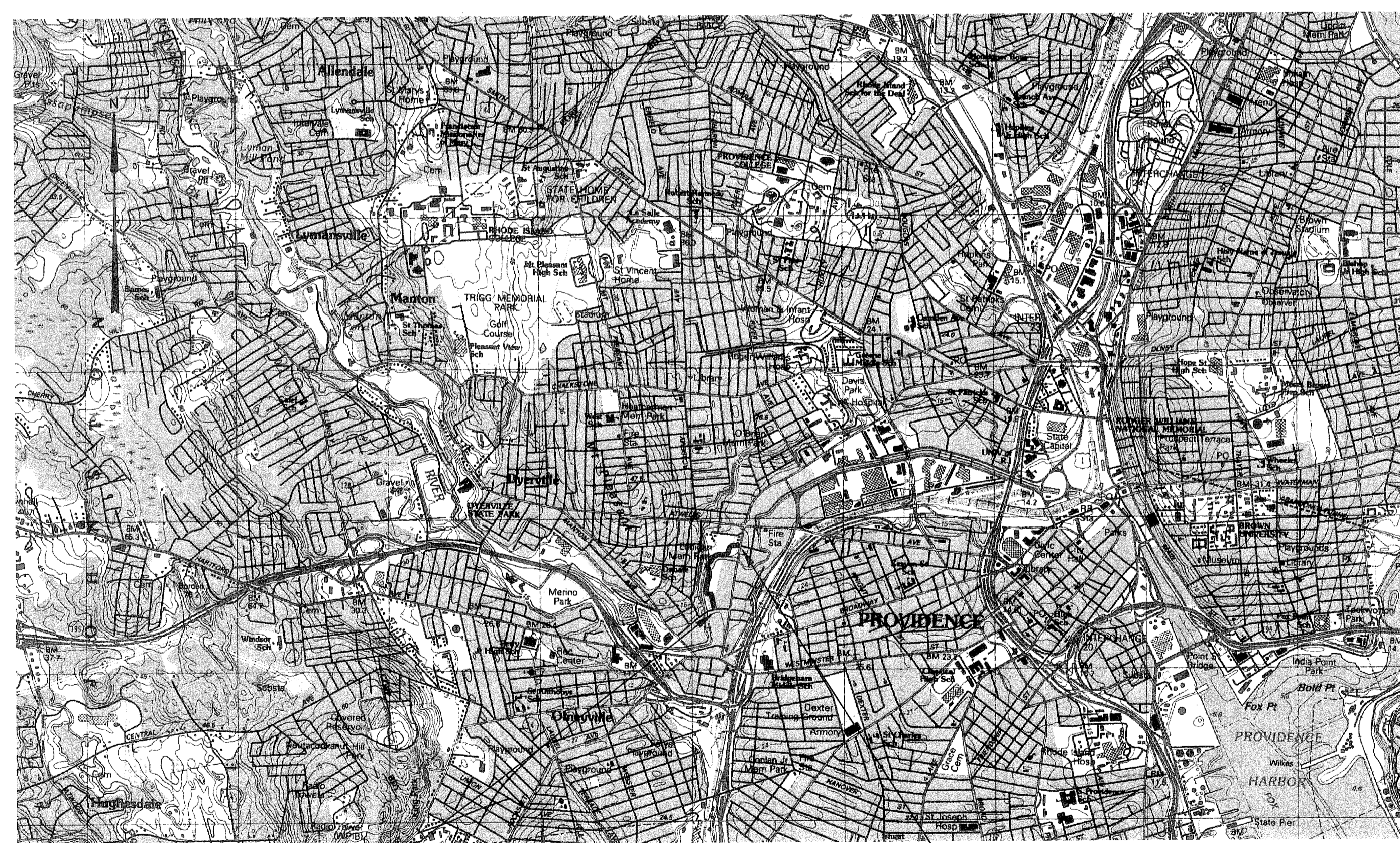
SCALE:
SCALE OF MILES
0 1/2 1 2 3 4 5

R.I. SPECIFICATIONS AND DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION, INCLUDING UPDATES, AND THE DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS.

THE FOLLOWING STANDARD DETAILS ARE INCLUDED IN THIS PROJECT:

- 7.3.0 GRANITE CURB
- 7.3.2 (M) 6'-0" GRANITE TRANSITION CURB (MODIFIED)
- 9.3.0 BALED HAY EROSION CHECK AND SILT FENCE COMBINED
- 24.1.0 SIGN POST SELECTION AND INSTALLATION DETAILS SQUARE POST
- 24.2.0 SIGN POST SELECTION AND INSTALLATION DETAILS U-CHANNEL POST
- 24.6.1 STREET SIGN MOUNTING DETAIL
- 26.1.0 FLUORESCENT TRAFFIC CONE
- 26.2.0 POLYETHYLENE DRUM WITH MARKINGS
- 26.3.0 PVC PLASTIC PIPE TYPE III BARRICADE
- 27.1.0 REGULATORY SIGNS
- 27.1.1 TRAFFIC FINES IN WORK ZONE REGULATORY SIGN
- 28.1.0 WARNING SIGNS
- 29.1.0 CONSTRUCTION SIGNS
- 43.1.0 CEMENT CONCRETE SIDEWALK
- 43.3.0 (M) HANDICAP RAMP (MODIFIED)
- 48.1.0 DETECTABLE WARNING SYSTEM
- 51.2.0 SHRUB PROTECTION DEVICE



PLAN
SCALE: 1"=2000'

R.I. CONTRACT NO. 93107
F.A. PROJECT NO. HPP-1737(003)
BEGINS STATION 518+00
DELAINE STREET

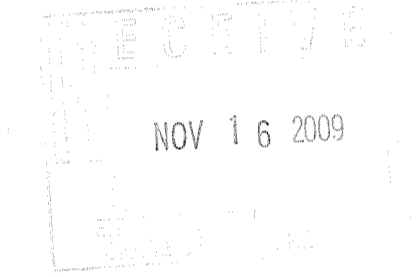
R.I. CONTRACT NO. 93107
F.A. PROJECT NO. HPP-1737(003)
ENDS STA. 537+69
VALLEY STREET

SCALE OF DRAWINGS
GENERAL PLANS AS NOTED
PROFILES 1"=20' HORIZONTAL
1"= 4' VERTICAL

BASE OF ALL LEVELS
NGVD OF 1929

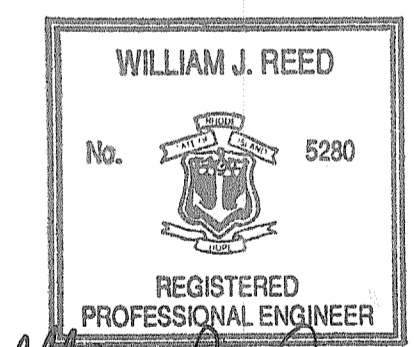
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

DEM SUBMISSION



PAVEMENT COMPOSITION

- 2" BITUMINOUS SURFACE COURSE, TYPE I-2
- 2" BITUMINOUS SURFACE COURSE, TYPE I-1
- 12" GRAVEL SUBBASE



William J. Reed 9/24/09

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Conroy
Contract Number 3
Number of Sheet 1
Total Sheets 36

R.I. DEPARTMENT OF TRANSPORTATION

APPROVED _____ DATE _____

DEPUTY CHIEF ENGINEER _____ DATE _____

APPROVED _____

CHIEF ENGINEER _____ DATE _____

APPROVED _____

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____

DIVISION ADMINISTRATOR _____ DATE _____

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		2	36

CONTRACT NO. 3
D.E.M. PLAN SET : 2 OF 36

EXISTING	NEW	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
EDGE OF PAVEMENT	EDGE OF PAVEMENT	(1.1.0)	UNDERDRAIN	(7.4.2)	GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPE FACE)
BERM	BERM	(1.3.0)	CONCRETE CONNECTING COLLAR	(7.5.0)	BITUMINOUS CONCRETE LIP CURB
CURB	CURB	(2.1.0)	CONCRETE HEADWALLS FOR PIPE CULVERTS	(7.5.1A)	BITUMINOUS BERM (CONSTRUCTION METHOD A)
GUARDRAIL	GUARDRAIL	(2.2.0)	STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS	(7.5.1B)	BITUMINOUS BERM (CONSTRUCTION METHOD B)
MAILBOX	MAILBOX	(2.3.0) (DIA.)	PRECAST CONCRETE FLARED END SECTION	(7.6.0)	CURB SETTING DETAIL
UTILITY POLE	UTILITY POLE	(3.2.0)	BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE	(8.2.0)	BITUMINOUS CONCRETE DITCH
POLE GUY	POLE GUY	(3.2.1) (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE	(8.3.0)	RIP-RAP DITCH
LUMINARE	LUMINARE	(3.3.0)	BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN	(8.4.0)	PAVED WATERWAY
SIGN	SIGN	(3.3.2)	BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN	(9.1.0)	BALED HAY EROSION CHECK
SUBDRAIN	SUBDRAIN	(3.3.3)	SOLID BLOCK FLUSH SQUARE CATCH BASIN	(9.2.0)	SILT FENCE DETAIL
STORMDRAIN	STORMDRAIN	(3.4.0)	BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN	(9.3.0)	BALED HAY DITCH EROSION CHECK AND SILT FENCE COMBINED
SANITARY SEWER	SANITARY SEWER	(3.4.1)	BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET	(9.4.0)	BALED HAY DITCH AND SWALE EROSION CHECK
WATER MAIN	WATER MAIN	(3.4.2)	BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN	(9.5.0)	LOG AND HAY CHECK DAM
GAS MAIN	GAS MAIN	(3.4.3)	BRICK/SOLID BLOCK TYPE "R" CATCH BASIN	(9.7.0)	DEWATERING BASIN
TELEPHONE DUCT	TELEPHONE DUCT	(3.4.4)	SOLID BLOCK FLUSH ROUND CATCH BASIN	(9.8.0)	BALED HAY CATCH BASIN INLET PROTECTION
ELECTRIC DUCT	ELECTRIC DUCT	(3.4.5) (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN	(9.9.0)	CONSTRUCTION ACCESS
PLUG AND CAP PIPE	PLUG AND CAP PIPE	(3.5.0)	SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN	(10.1.0)	WET STONE MASONRY RETAINING WALL
ABANDONED UTILITY	ABANDONED UTILITY	(3.5.1) (SIZE)	SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN	(10.2.0)	RUBBLE MASONRY WALL
FLARED END SECTION	FLARED END SECTION	(3.6.0)	BRICK/SOLID BLOCK DROP INLET	(10.3.0)	CONCRETE RETAINING WALL
HEADWALL	HEADWALL	(3.7.0) (DIA.)	BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'-0"	(10.4.0)	STONE MASONRY STEPS
WATER OR GAS GATE	WATER OR GAS GATE	(4.2.0)	PRECAST 4'-0" ROUND MANHOLE	(14.1.0)	CONCRETE HIGHWAY BOUND
CATCH BASIN	CATCH BASIN	(4.2.1)	PRECAST 5'-0" ROUND MANHOLE	(15.1.0)	POST AND MOUNTINGS FOR RURAL MAILBOX
MANHOLE	MANHOLE	(4.2.2)	PRECAST 6'-0" ROUND MANHOLE	(15.2.0) (NO.)	POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES
HYDRANT	HYDRANT	(4.3.0) (SIZE)	PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN	(18.2.0)	PRECAST TYPE "A" HANDHOLE
BASELINE OR CENTERLINE	BASELINE OR CENTERLINE	(4.4.0) (DIA.)	PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN	(18.2.2)	HEAVY DUTY TYPE "H" HANDHOLE
STATE HIGHWAY LINE	STATE HIGHWAY LINE	(4.5.0)	PRECAST CONCRETE DROP INLET	(18.3.0)	ALUMINUM LIGHTING STANDARDS
STATE FREEWAY LINE	STATE FREEWAY LINE	(4.5.1)	PRECAST CONCRETE DROP INLET LATERAL OUTLET	(20.2.0)	BI-DIRECTIONAL CONTROL DEVICE
PERMANENT EASEMENT LINE	PERMANENT EASEMENT LINE	(4.5.2)	PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET	(24.6.1)	STREET SIGN MOUNTING DETAIL
TEMPORARY EASEMENT LINE	TEMPORARY EASEMENT LINE	(5.3.0)	CATCH BASIN AND MANHOLE STEP	(26.2.0)	POLYETHYLENE DRUM WITH MARKINGS
PROPERTY LINE	PROPERTY LINE	(5.4.0)	CONCRETE COLLARS	(26.3.0)	PVC PLASTIC PIPE TYPE III BARRICADE
CITY OR TOWN LINE	CITY OR TOWN LINE	(6.1.0)	LIGHT-DUTY SQUARE FRAME AND ROUND COVER	(31.1.0)	CHAIN LINK FENCE 3'-0" TO 4'-0"
PAVED WATERWAY	PAVED WATERWAY	(6.1.1)	HEAVY DUTY SQUARE FRAME AND ROUND COVER	(31.2.0)	CHAIN LINK FENCE 5'-0" TO 6'-0"
CONTOUR LINE	CONTOUR LINE	(6.2.0)	LIGHT-DUTY ROUND FRAME AND COVER	(31.2.1)	CHAIN LINK FENCE 5'-0" TO 6'-0" INTERMEDIATE POST
OPEN DITCH	OPEN DITCH	(6.2.1)	HEAVY-DUTY ROUND FRAME AND COVER	(31.3.0)	WOVEN WIRE RIGHT-OF-WAY FENCE (STEEL POST)
R.I. HIGHWAY BOUND	R.I. HIGHWAY BOUND	(6.3.0)	SQUARE FRAME AND GRATE	(34.1.0)	TYPICAL GUARDRAIL INSTALLATION
STONE BOUND	STONE BOUND	(6.3.1)	SQUARE FRAME AND GRATE	(34.2.0)	STEEL BEAM GUARDRAIL
RETAINING WALL	RETAINING WALL	(6.3.2)	SQUARE FRAME AND GRATE (BICYCLE SAFE)	(34.2.1)	STEEL BEAM GUARDRAIL DETAILS
FIELD STONE WALL	FIELD STONE WALL	(6.3.3)	HIGH CAPACITY FRAME AND GRATE	(34.2.2)	STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY
BORINGS	BORINGS	(6.3.4)	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)	(34.2.3)	STEEL BEAM GUARDRAIL FIXTURES
FENCE	FENCE	(6.4.0)	ROUND FRAME AND GRATE	(34.2.5)	STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR
WOOD OR BRUSH LINE	WOOD OR BRUSH LINE	(7.1.0S)	PRECAST CONCRETE CURB (STRAIGHT)	(34.3.1)	GUARDRAIL END SECTION
TREES	TREES	(7.1.0C)	PRECAST CONCRETE CURB (CIRCULAR)	(34.3.2)	TERMINAL END SECTION (SINGLE FACE)
RIVER OR STREAM	RIVER OR STREAM	(7.1.1)	3'-0" PRECAST CONCRETE TRANSITION CURB	(34.3.3)	ANCHORAGE DETAILS APPROACH END SECTION
WETLAND AREA	WETLAND AREA	(7.1.2)	6'-0" PRECAST CONCRETE TRANSITION CURB	(34.3.4)	ANCHORAGE DETAILS TRAILING END SECTION
BUILDING	BUILDING	(7.1.4)	PRECAST 2'-0" RADIUS CORNER	(34.4.0)	STEEL BACKED TIMBER GUARDRAIL
FOUNDATION	FOUNDATION	(7.1.5)	PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)	(34.4.1)	STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION-TYPE 1
BUILDING TO BE REMOVED	BUILDING TO BE REMOVED	(7.1.6)	PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)	(40.1.0)	DOUBLE-FACED PRECAST MEDIAN BARRIER
RAILROAD TRACKS	RAILROAD TRACKS	(7.1.7)	PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)	(40.2.0)	SINGLE-FACED PRECAST MEDIAN BARRIER
CUT AND MATCH	CUT AND MATCH	(7.1.8)	PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)	(40.2.1)	SINGLE-FACED PRECAST MEDIAN BARRIER
RIP-RAP	RIP-RAP	(7.2.0S)	PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT)	(40.3.0)	PRECAST MEDIAN BARRIER TRANSITION UNIT
CUT SLOPE	CUT SLOPE	(7.2.0C)	PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR)	(40.5.0)	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
FILL SLOPE	FILL SLOPE	(7.2.1)	PRECAST CONCRETE SLOPED FACE TRANSITION CURB	(43.1.0)	CEMENT CONCRETE SIDEWALK
ROCK CUT	ROCK CUT	(7.2.2)	PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)	(43.2.0)	BITUMINOUS CONCRETE SIDEWALK
SPOT GRADE	SPOT GRADE	(7.3.0S)	GRANITE CURB (STRAIGHT)	(43.3.0)	WHEELCHAIR RAMP
AREA GRADED TO DRAIN	AREA GRADED TO DRAIN	(7.3.0C)	GRANITE CURB (CIRCULAR)	(43.3.1)	WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS
BALED HAY RI STD 9.1.0	BALED HAY RI STD 9.1.0	(7.3.1)	3'-0" GRANITE TRANSITION CURB	(43.4.0)	DRIVEWAY DEVELOPMENT FOR 3'-0" TRANSITION CURB
BALED HAY & SILT FENCE RI STD. 9.3.0	BALED HAY & SILT FENCE RI STD. 9.3.0	(7.3.2)	6'-0" GRANITE TRANSITION CURB	(43.4.1)	DRIVEWAY DEVELOPMENT FOR 6'-0" TRANSITION CURB
EDGE OF WETLAND	EDGE OF WETLAND	(7.3.3)	GRANITE WHEELCHAIR RAMP TRANSITION CURB	(43.5.0)	CEMENT CONCRETE DRIVEWAYS
WETLAND PERIMETER	WETLAND PERIMETER	(7.3.4)	GRANITE 2'-0" RADIUS CORNER	(48.1.0)	DETECTABLE WARNING SYSTEM
AREA SUBJECT TO STORM FLOW	AREA SUBJECT TO STORM FLOW	(7.3.5)	GRANITE INLET STONE (FOR SQUARE CATCH BASIN)	(51.1.0)	TREE PROTECTION DEVICE
100-YEAR FLOOD PLAIN	100-YEAR FLOOD PLAIN	(7.3.6)	GRANITE INLET STONE (FOR ROUND CATCH BASIN)	(51.1.1)	DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES
LIMIT OF DISTURBANCE	LIMIT OF DISTURBANCE	(7.3.7)	GRANITE APRON STONE (FOR SQUARE CATCH BASIN)	(51.2.0)	SHRUB PROTECTION DEVICE
LIMIT OF CLEARING	LIMIT OF CLEARING	(7.3.8)	GRANITE APRON STONE (FOR ROUND CATCH BASIN)	(51.3.0)	TREE WELL
		(7.4.0)	GRANITE SLOPED FACE CURB	(51.4.0)	TREE WALL
		(7.4.1)	GRANITE SLOPED FACE TRANSITION CURB		

(NFH)	NEW FIRE HYDRANT WITH GATE VALVE
(NIC)	NOT IN THIS CONSTRUCTION CONTRACT
(NWB)	FURNISH AND INSTALL NEW WATER GATE VALVE BOX
(NWBV)	FURNISH AND INSTALL NEW WATER GATE VALVE AND BOX
(NWCB)	FURNISH AND INSTALL NEW WATER CURB STOP BOX
(NWSB)	FURNISH AND INSTALL NEW WATER CURB STOP AND BOX
(PCD)	PERMANENT CHECK DAM
(PS)	4" PLANTABLE SOIL AND SEED
(RCB)	RECONSTRUCT TYPE "D" CATCH BASIN, TO CATCH BASIN WITH GUTTER INLET
(RCM)	R.I.D.O.T. COMMUNICATIONS MANHOLE
(RHH)	REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR (ALL TYPES)
(RLP)	RELOCATE LAMP POST
(RMB)	RELOCATE MAILBOX (BY OTHERS)
(RPM)	REMOVE PAVEMENT MARKINGS
(RRP)	RIP-RAP PAD (SEE DETAIL)
(RRS)	REMOVE AND RELOCATE SIGN
(RUP)	RELOCATE UTILITY POLE (BY OTHERS)
(SB)	STONE BAFFLE
(SBAE)	STEEL BEAM BRIDGE CONNECTION APPROACH END (W/O NESTED RAIL)
(SBTE)	STEEL BEAM BRIDGE CONNECTION TRAILING END (W/NESTED RAIL)
(SD-)	STRUCTURAL DISPOSITION - SEE CS PAGES OF SPECIFICATION
(SF)	REMOVE AND STOCKPILE FENCE
(SGA)	SPECIAL GRADED AGGREGATE
(SGC)	REMOVE AND STOCKPILE GRANITE CURB
(SGR)	REMOVE AND STOCKPILE GUARDRAIL
(SH)	REMOVE AND STOCKPILE HYDRANT
(SS)	REMOVE AND STOCKPILE SIGN
(STS)	REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
(TEP)	CONCRETE THRUST BLOCK
(TNP)	TIE EXISTING PIPE INTO NEW STRUCTURE
(TBT)	TIE NEW PIPE INTO EXISTING STRUCTURE
(TBBC)	THREE BEAM TRANSITION
(TT)	THREE BEAM BRIDGE CONNECTION
(WCM)	TREE TRIMMING
(4DY)	4" WOOD CHIP MULCH
(6W)	4" EPOXY RESIN PAVEMENT MARKINGS - DOUBLE YELLOW
(12W)	6" EPOXY RESIN PAVEMENT MARKINGS - WHITE
(6WT)	12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
(4Y)	4" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
(6Y)	6" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
(P.G.L.)	PROFILE GRADE LINE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-0252
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

THIS PLAN SHALL NOT BE ALTERED

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO	DATE	BY		
1	4/07	TRB		
			NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE, RHODE ISLAND	
			STANDARD PLAN SYMBOLS & STANDARD LEGEND	
			CHECKED BY _____ DATE _____ SCALE NO SCALE _____	

4" LOAM AND 12" SAND TO BE ADVISED THAT THIS Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	HPP-1737(003)		4	37

GENERAL NOTES:

- ANY DAMAGE TO EXISTING PAVEMENT, BRIDGES, CONDUIT, SIDEWALK, FENCES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND MATERIAL AS FAR AWAY AS POSSIBLE FROM THE EDGE OF THE TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD, IN ACCORDANCE WITH SECTION 106.06 OF THE R.I.D.O.T. STANDARD SPECIFICATION, LATEST EDITION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL POINTS ARE LOCATED AND CONSTRUCTION LAYOUT IS ESTABLISHED. THE CONSTRUCTION LAYOUT SHALL BE PROVIDED IN SUFFICIENT DETAIL, THEREBY ENABLING HIM TO CONSTRUCT THE PROJECT IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS. SURVEY WILL BE PROVIDED BY THE CONTRACTOR. THE RESIDENT ENGINEER WILL NOT AUTHORIZE CONSTRUCTION ACTIVITIES TO BEGIN UNTIL HE IS SATISFIED THAT ALL GROUND CONTROL HAS BEEN ESTABLISHED, TIED DOWN, AND DULY RECORDED IN STANDARD FIELD BOOKS.
- ALL R.I. STD. 9.9.0 CONSTRUCTION ACCESS ROADS SHALL BE CONSTRUCTED PRIOR TO ANY ROADWAY ACCEPTING CONSTRUCTION TRAFFIC.
- THE FREQUENCY AND APPLICATION RATES FOR THE DUST CONTROL ITEMS WILL BE AS DIRECTED BY THE ENGINEER.
- ALL SIDEWALK AND DRIVEWAYS DESIGNATED FOR REPLACEMENT SHALL BE CUT AND MATCHED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ASPHALT EMULSION TACK COAT SHALL BE PLACED PRIOR TO PAVEMENT PLACEMENT ON THE CONCRETE BASE OR COLD PLANED PAVEMENT, AND ON ANY NEW COURSE WHICH HAS BEEN OPEN TO TRAFFIC, OR ANY NEW COURSE WHICH HAS BEEN EXPOSED FOR MORE THAN 3 DAYS, AND/OR AS DIRECTED BY THE ENGINEER. IT SHALL ALSO BE APPLIED TO VERTICAL PAVEMENT FACES BETWEEN ADJOINING PAVEMENT SECTIONS. ALL APPLICATIONS ON BOTH HORIZONTAL AND VERTICAL SURFACES SHALL BE PAID FOR UNDER THE CONTRACT UNIT BID PRICE FOR CODE 403.0300 "ASPHALT EMULSION TACK COAT."
- THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND PLACING, AT HIS OWN EXPENSE, PLANTABLE SOIL AND SEED IN AREAS WHICH ARE OUTSIDE OF THE PROJECT'S AREAS OF DISTURBANCE AND WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS INCLUDING THOSE AREAS WHERE VEHICLES, EQUIPMENT AND MATERIALS ARE STORED WITH THE PERMISSION OF THE ENGINEER.
- UNDER NO CIRCUMSTANCE WILL THE CONTRACTOR BE ALLOWED TO STOCKPILE REMOVED PAVEMENT MATERIALS WITHIN THE PROJECT LIMITS.
- CLEANING AND SWEEPING OF PAVEMENT WILL INCLUDE REMOVAL OF ALL PAVEMENT DEBRIS PRIOR TO THE PLACEMENT OF EACH BITUMINOUS PAVEMENT LIFT. ALL CLEANING AND SWEEPING SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.
- PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE ENGINEER.
- THE COORDINATE SYSTEM IS THE R.I. STANDARD GRID SYSTEM, NAD 83. THE VERTICAL CONTROL IS NGVD 29.
- PAVEMENT OPERATIONS FOR CURBED SECTIONS: IN AREAS WHERE CURBING IS SET TO FINISH LINE AND GRADE, THE CONTRACTOR WILL NOT BE REQUIRED TO UTILIZE THE SENSOR AND SKY-TYPE DEVICE FOR AUTOMATIC GRADE CONTROL, BUT WILL BE ALLOWED TO MANUALLY ADJUST THE BITUMINOUS PAVER FOR CONTROLLING GRADE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
- NO FUEL STORAGE, VEHICLE REFUELING, OR EQUIPMENT STORAGE SHALL TAKE PLACE IN DESIGNATED WETLANDS, NOR WITHIN 100' OF ANY WATER BODY. THIS REQUIREMENT SHALL NOT SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAW, ORDINANCE, RULE OR REGULATION THAT APPLIES TO THE SAME, UNLESS THIS REQUIREMENT IS MORE STRINGENT THAN SAID LAW, ORDINANCE, RULE OR REGULATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT AT THE END OF FINAL PAVING OPERATIONS, FLOW TO EXISTING DRAINAGE STRUCTURES HAS BEEN REESTABLISHED AND THAT NO ISOLATED DEPRESSIONS REMAIN. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS PROVISION; IT SHALL BE CONSIDERED INCIDENTAL TO PAVING AND COLD PLANING OPERATIONS.
- ALL EMBANKMENTS SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 12" (AFTER COMPACTION) AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED. ALSO, EMBANKMENT CONSTRUCTION SHALL CONFORM TO SECTION 202.03.2 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- IF THIS PROJECT IS ON A HURRICANE EVACUATION AND DIVERSIONARY ROUTE, AS DESIGNATED ON THE COVERSHEET, THE CONTRACTOR IS ADVISED THAT UPON 12 (TWELVE) HOURS NOTICE THE ROADWAY SHALL BE OPEN TO EVACUEES AND EMERGENCY PERSONNEL. ANY EXTRA WORK NECESSARY TO COMPLY WITH THIS REQUIREMENT WILL BE REIMBURSED UNDER FORCE ACCOUNT PROCEDURES.
- THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS STATED IN THE ENVIRONMENTAL APPROVALS ISSUED FOR THE PROJECT FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM), AND/OR THE ARMY CORPS OF ENGINEERS (ACOE), AND/OR THE COASTAL RESOURCES MANAGEMENT COUNCIL (CRMC). COPIES OF EACH OF THESE PERMITS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH THESE CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- FOR ALL PROJECTS INVOLVING KNOWN SITE REMEDIATION ISSUES, THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE CONSTRUCTION RELATED PROVISIONS, CONDITIONS, AND STIPULATIONS OF ANY REMEDIAL PLANS DEVELOPED FOR THE PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE DOCUMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- NO UNPROTECTED CONSTRUCTED FEATURE MAY PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. HEADWALL, DRAINAGE INLET, ETC.
- THE REMAINING SECTION OR STUB OF A BREAKAWAY BASE MAY NOT PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. SIGN POSTS, LIGHT POLES, FIRE HYDRANTS, ETC.

DRAINAGE AND EROSION CONTROL NOTES:

- FOR ALL PROJECTS WITH AT LEAST ONE(1) ACRE OF SOIL DISTURBANCE, R.I.D.O.T. IS REQUIRED TO DEVELOP AND ENFORCE A SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ORDER TO REMAIN IN COMPLIANCE WITH THE RIPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS OF THE GENERAL PERMIT AND THE SITE SPECIFIC SWPPP FOR THIS PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH ADHERENCE TO THE SWPPP SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
- NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15 OF ANY CALENDAR YEAR OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE RESIDENT ENGINEER OR ENVIRONMENTAL INSPECTOR, BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE REESTABLISHED WITHIN 5 WORKING DAYS. ANY WORK TO CORRECT PROBLEMS RESULTING FROM FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THERE WILL BE NO SEPARATE PAYMENT FOR THIS PROVISION. IT SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OPERATIONS. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 2 WEEKS OF FINAL GRADING.
- STOCKPILES OF MATERIAL SHALL NOT BE LOCATED WITHIN REGULATED WETLANDS OR BUFFER ZONE AREAS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES OF ERODIBLE MATERIAL SHALL ALSO BE SEEDED AND RINGED WITH R.I. STD. 9.1.0 TO STABILIZE.
- IF THE PLANS INCLUDE SPECIFIC AREAS FOR PLACEMENT OF CONSTRUCTION DEWATERING BASINS AND/OR EQUIPMENT AND MATERIALS STORAGE AND STOCKPILING, AND IF THE CONTRACTOR ELECTS TO UTILIZE ANY OTHER AREAS FOR THESE PURPOSES, THIS SHALL BE APPROVED BY THE ENGINEER ONLY AFTER OBTAINING ANY NECESSARY PERMITS AND/OR PERMIT MODIFICATIONS FROM THE APPROPRIATE REGULATORY AUTHORITY(IES). ANY PERMITTING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE ACCOMPLISHED AT NO COST TO THE STATE. THE ENGINEER WILL COORDINATE SUBMISSION OF ANY REQUIRED PERMIT APPLICATION MATERIALS WITH THE R.I.D.O.T. OFFICE OF ENVIRONMENTAL PROGRAMS.
- JUTE MESH SHALL BE USED TO STABILIZE PLANTABLE SOIL AND/OR LOAM IN ALL DITCHES, ON ALL SLOPES ADJACENT TO WETLANDS AND WETLAND PERIMETERS, AND ON ALL SLOPES WITHIN WATER QUALITY BASINS. JUTE MESH IN DITCHES SHALL EXTEND TO AN ELEVATION 2 FEET ABOVE THE BOTTOM OF THE DITCH.
 - SEEDING TYPE I.
 - ADHESIVE MULCH STABILIZER
- UNVEGETATED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR PERIODS IN EXCESS OF 2 WEEKS OR THROUGH THE INACTIVE WINTER SEASON.
- PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION (HORIZONTAL AND VERTICAL) OF ALL EXISTING PIPES AND/OR STRUCTURES WHICH ARE TO BE CONNECTED. ANY VARIATION FOUND FROM THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION. WORK CAN COMMENCE ONLY UPON THE ENGINEER'S AUTHORIZATION.
- ALL DRAINAGE AND UTILITY STRUCTURES WITHIN THE PAVED ROADWAY SHALL BE ADJUSTED TO GRADE WITH THE SURROUNDING PAVEMENT PRIOR TO THE WINTER SHUTDOWN.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL THROUGHOUT THE WORK AREA.
- CATCH BASIN RIM GRADES NOTED ON PLANS ARE DEPRESSED 0.1' LOWER THAN THE GUTTER GRADE. RIM ELEVATIONS SHOWN ARE FINAL GRADES. THE CONTRACTOR SHALL PLACE FRAMES AND GRATES 0.1' BELOW THE GRADE CONSTRUCTED IN THIS CONTRACT OR AS DIRECTED BY THE ENGINEER.
- PROVISIONS FOR CLEARING TO ACCESS OUTFALLS DURING THE CLEANING AND FLUSHING OF THE CLOSED DRAINAGE SYSTEM SHALL BE KEPT TO A MINIMUM.
 - ANY VEGETATIVE CLEARING SHALL BE LIMITED TO BRUSH AND TREES LESS THAN 3" DIAMETER.
 - NO HEAVY EQUIPMENT MAY ENCR OACH UPON VEGETATED PERIMETER OR RIVERBANK WETLANDS AS WELL AS BIOLOGICAL WETLANDS.
- THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES FOR OUTLET PROTECTION PRIOR TO CLEANING AND FLUSHING STORM WATER DRAINAGE. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL FLUSHED SEDIMENTS ARE REMOVED. AT ALL OUTFALL LOCATIONS WHERE PIPES ARE TO BE CLEANED AND FLUSHED, OUTLET PROTECTION (R.I. STD. 9.1.0 OR 9.3.0) SHALL BE INSTALLED TO TRAP SEDIMENTS. THESE SEDIMENTS SHALL THEN BE REMOVED AND DISPOSED OF LEGALLY BEFORE THE OUTLET PROTECTION DEVICES ARE REMOVED. IF OUTLET PROTECTION AT THE OUTFALL IS NOT FEASIBLE, THEN THE OUTLET PIPE OF THE LAST DRAINAGE STRUCTURE TO BE CLEANED SHALL BE PLUGGED TO CAPTURE ALL MATERIALS FLUSHED FROM PIPES. AFTER THE MATERIALS ARE REMOVED FROM THE DRAINAGE STRUCTURE, THE OUTLET SHALL BE UNPLUGGED TO RESUME NORMAL FUNCTIONING.
- R.I. STD. 9.8.0 BALED HAY INLET PROTECTION SHALL BE INSTALLED AT ALL CATCH BASINS AND INLETS WHENEVER SUBBASE IS EXPOSED, AND SHALL REMAIN IN PLACE UNTIL THE ABUTTING GROUND SURFACES ARE STABILIZED.
- WHERE BALED HAY INLET PROTECTION AND SILT FENCES ARE USED AT CATCH BASINS, THEY SHALL BE REMOVED AT THE END OF THE PROJECT OR AS DIRECTED BY THE ENGINEER IN ORDER TO PREVENT LOGGING OF THE INLET.

DRAINAGE AND EROSION CONTROL NOTES (CONTINUED):

- DETENTION AND RETENTION BASINS MAY BE ROUGH GRADED AND STABILIZED WITH VEGETATION AND/OR OTHER EROSION CONTROL MEASURES AS REQUIRED BY THE ENGINEER PRIOR TO USE AS TEMPORARY SEDIMENTATION BASINS DURING PROJECT CONSTRUCTION. FINAL BASIN CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL SOURCES OF SEDIMENT HAVE BEEN ELIMINATED, FINAL ROADSIDE VEGETATION IS ESTABLISHED AND USE OF TEMPORARY BASINS IS NO LONGER REQUIRED AS DIRECTED BY THE ENGINEER. ANY ISSUES RELATING TO EROSION AND/OR SEDIMENT TRANSPORT INTO WETLAND AREAS RESULTING FROM SUCH USE OF SEDIMENTATION BASINS DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY CORRECTIVE ACTION REQUIRED TO RESOLVE SUCH ISSUES SHALL BE COMPLETED BY THE CONTRACTOR.
- THE TOE OF ANY FILL SLOPE IS TO REMAIN AT LEAST 1' INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROL MEASURES WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED.
- PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THOSE AREAS INDICATED ON THE PLANS. CLEARING MAY OCCUR PRIOR TO INSTALLATION OF SUCH CONTROLS, HOWEVER NO GRUBBING, GRADING, FILLING, OR OTHER SOIL DISTURBANCE SHALL OCCUR PRIOR TO INSTALLATION. THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS.
- ALL HAY BALES, SILT FENCE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN HELP TO MINIMIZE EROSION. TEMPORARY SEED WILL CONFORM TO R.I.D.O.T. STANDARD TEMPORARY SEED MIX.
- THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE STATE.
- THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE SPECIFIED IN SUBSECTION L.02.03 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ADDITIONAL EROSION CONTROLS, SHALL BE INSTALLED AS DIRECTED BY THE RESIDENT ENGINEER. THESE ADDITIONAL ITEMS WILL BE PAID AT THE UNIT PRICE FOR THAT BID ITEM.

UTILITY NOTES:

- EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. BUILDING SERVICE CONNECTIONS (ELECTRIC, GAS, TELEPHONE, WATER AND SANITARY) ARE NOT SHOWN. CONTRACTOR IS TO ASSUME SERVICES ARE PRESENT TO ALL BUILDINGS.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH THE "DIG SAFE LAW" ENACTED BY R.I. LEGISLATURE BILL NO. 79S-291, WHICH BECAME EFFECTIVE JULY 1, 1979 AND BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY APPLICABLE CITY, TOWN, STATE OR FEDERAL AGENCY. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE DIG SAFE PROGRAM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND ENSURE THAT ALL UTILITIES HAVE BEEN MARKED PRIOR TO COMMENCING THEIR WORK. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANY, SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE CAPPED.
- EXISTING WATER SERVICES SHALL BE RECONNECTED TO THE NEW WATER MAINS.
- UTILITY SERVICE CONNECTIONS SHALL BE MAINTAINED TO ALL EXISTING FACILITIES TO REMAIN.
- FIRE HYDRANTS SHALL NOT BE REMOVED FROM SERVICE WITHOUT WRITTEN AUTHORIZATION FROM THE FIRE DEPARTMENT OR THE WATER AUTHORITY.
- ALL NEW WATER LINES SHALL BE DISINFECTED TO THE SATISFACTION OF THE WATER AUTHORITY IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL UTILITY POLE RELATED WORK SHALL BE BY OTHERS.

NOV 16 2009

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 002182
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Conroy

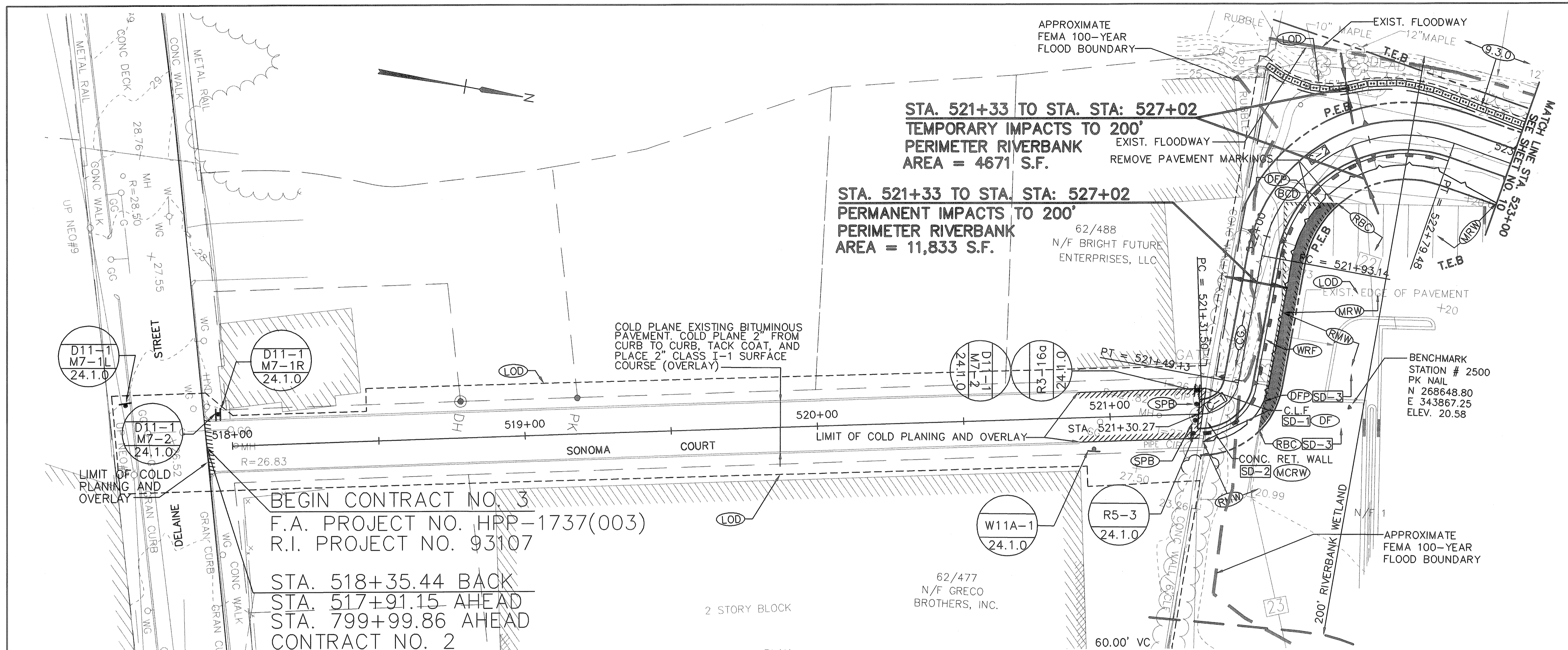
THIS PLAN SHALL NOT BE ALTERED

REVISIONS			RHODE ISLAND	
NO.	DATE	BY	DEPARTMENT OF TRANSPORTATION	
1	4/07	TRB	NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE AND JOHNSTON, RHODE ISLAND	
			STANDARD NOTES - 1	
			CHECKED BY _____ DATE _____ SCALE NO SCALE	

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		9	36

CONTRACT NO. 3
D.E.M. PLAN SET : 9 OF 36



STA. 521+33 TO STA. 527+02
TEMPORARY IMPACTS TO 200'
PERIMETER RIVERBANK
AREA = 4671 S.F.

STA. 521+33 TO STA. 527+02
PERMANENT IMPACTS TO 200'
PERIMETER RIVERBANK
AREA = 11,833 S.F.

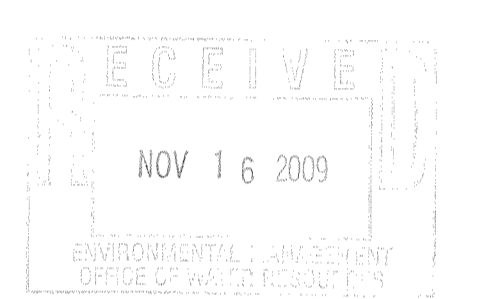
BEGIN CONTRACT NO. 3
F.A. PROJECT NO. HPP-1737(003)
R.I. PROJECT NO. 93107

STA. 518+35.44 BACK
STA. 517+91.15 AHEAD
STA. 799+99.86 AHEAD
CONTRACT NO. 2

COORDINATES				
NO.	STATION	NORTH	EAST	
C-1	PC STA. 521+50.04	268,599.85	343,877.21	
	PI STA. 521+42.90	268,609.99	343,875.01	
	PT STA. 521+32.52	268,610.08	343,864.67	
C-2	PC STA. 521+93.14	268,610.48	343,821.53	
	PI STA. 522+51.62	268,611.02	343,763.05	
	PT STA. 522+79.48	268,668.70	343,772.67	

CURVE DATA				
NO.	Δ	RADIUS	LENGTH	TANGENT
C-1	17°12'15"	13.00'	17.52'	10.38'
C-2	98°56'26"	50.00'	86.34'	58.48'

NOTE:
1. EXISTING TRAVEL LANES IN THE PARKING LOT SHALL REMAIN OPEN AT ALL TIMES.



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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATE: DEC 24 2009 FILE # 09-2252
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

REVISIONS
NO DATE BY
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

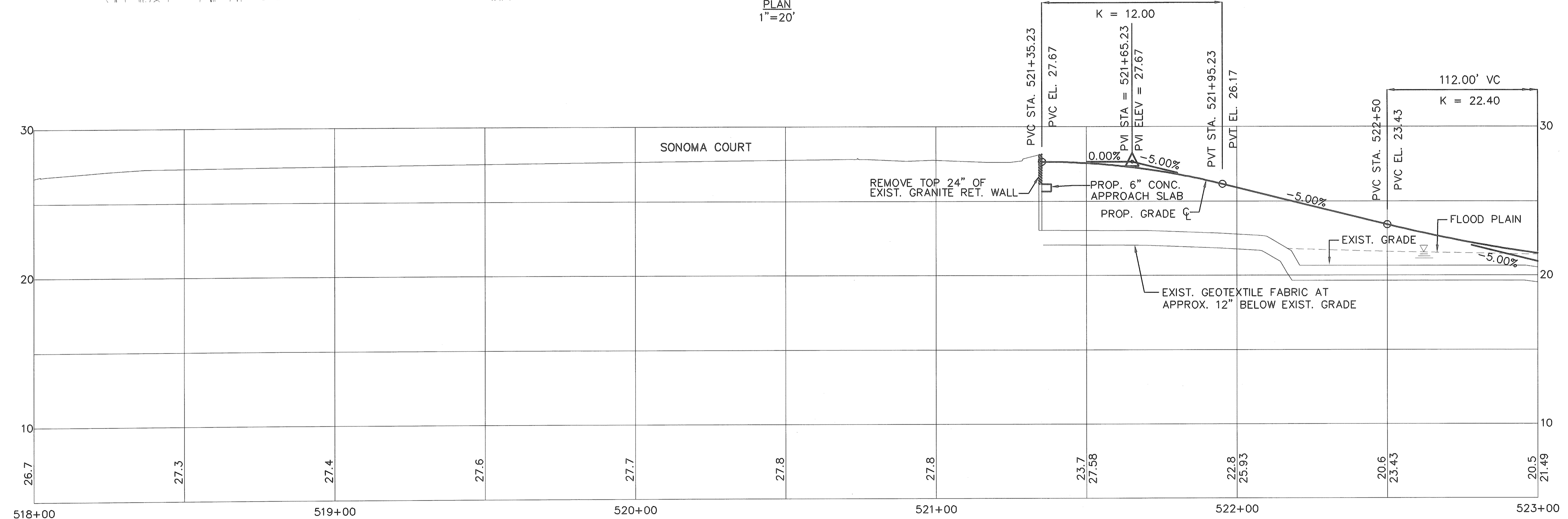
NORTHWEST BIKE TRAIL/
WOONASQUATUCKET RIVER BIKEWAY
PROVIDENCE, RHODE ISLAND

GENERAL PLAN NO. 1

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

CHECKED BY _____ DATE _____ SCALE AS NOTED

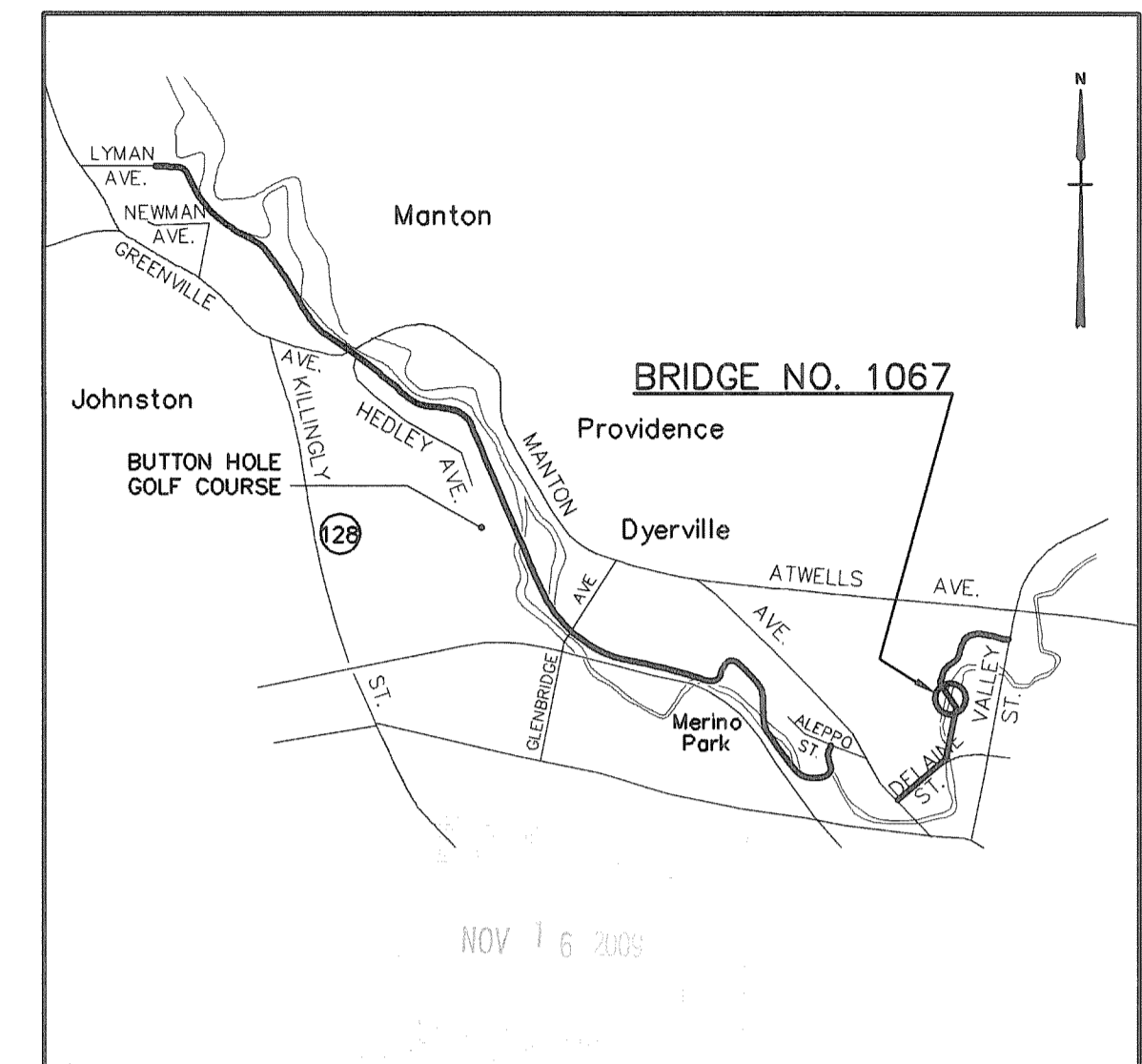
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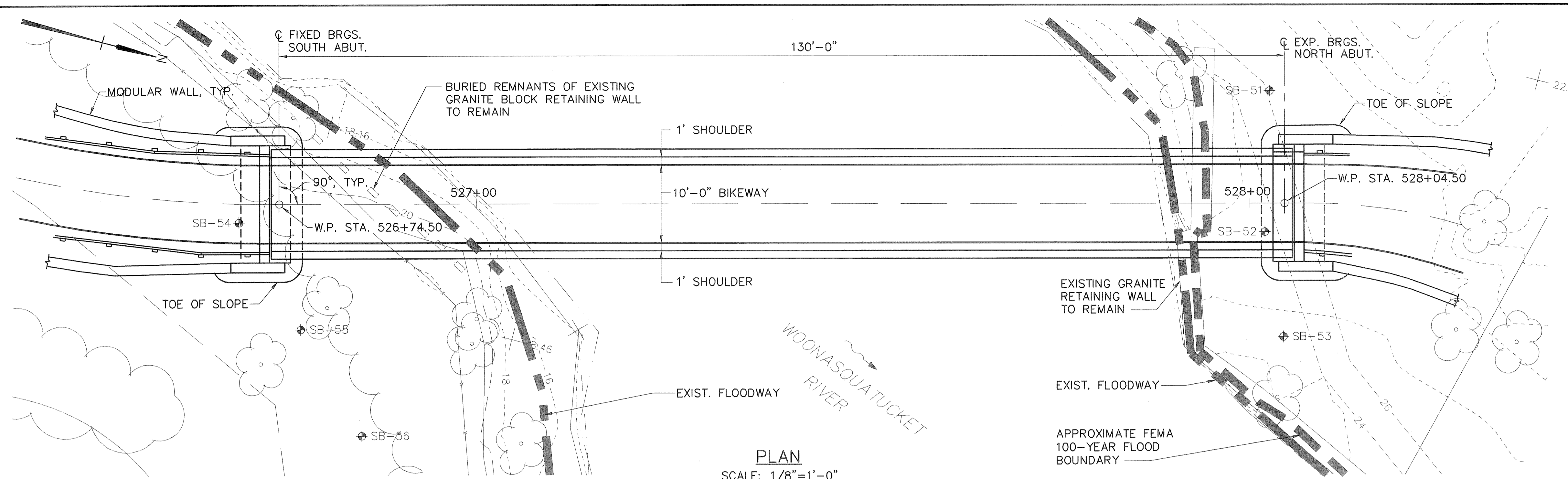
PROFILE
HOR: 1"=20'
VERT: 1"=4'

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		17	36

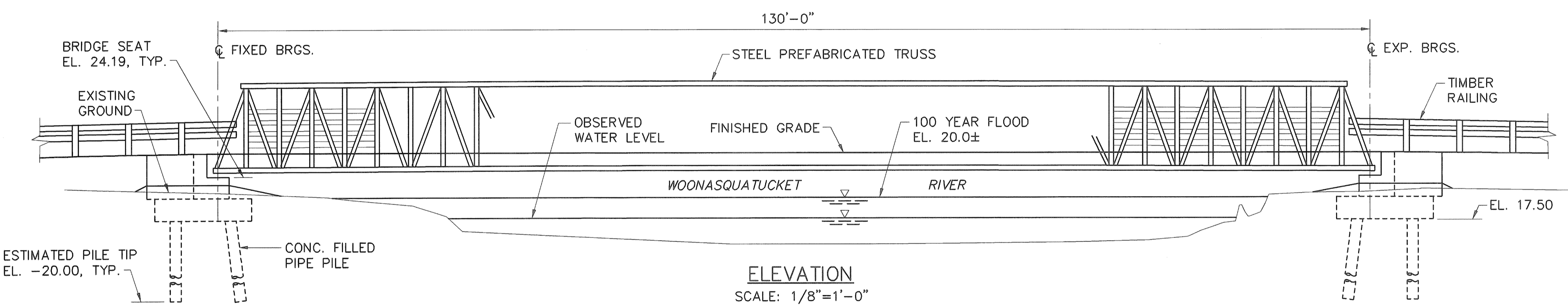
CONTRACT NO. 3
D.E.M. PLAN SET : 17 OF 36



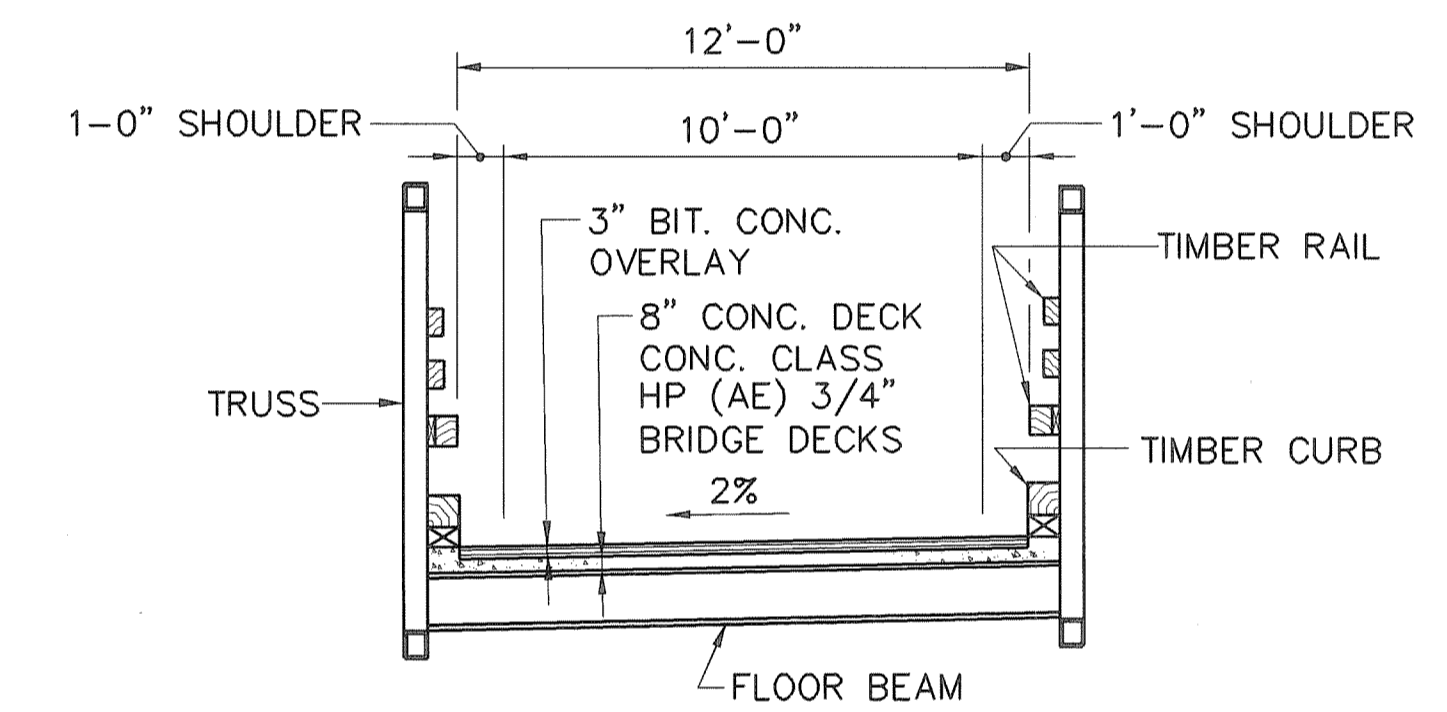
LOCATION PLAN
SCALE : 1"=2000'



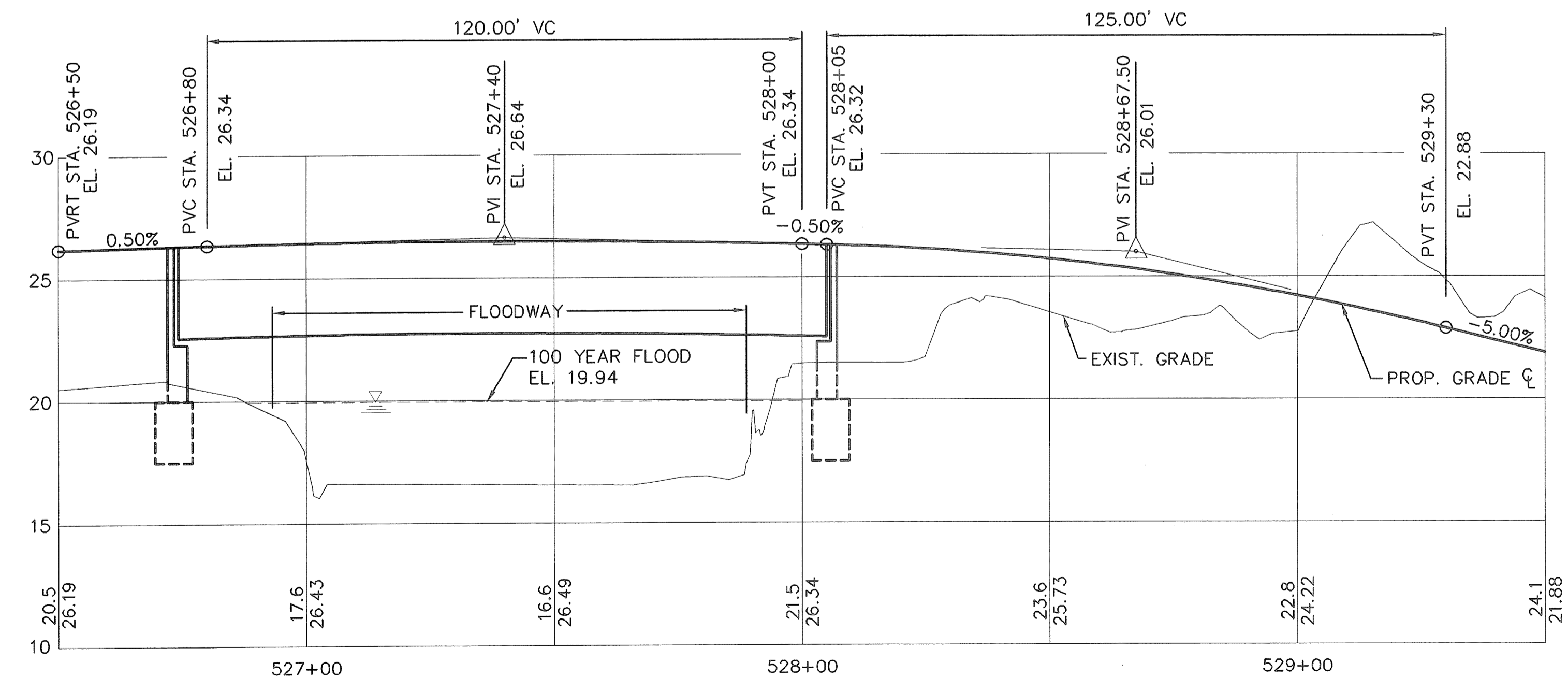
PLAN
SCALE: 1/8"=1'-0"



ELEVATION
SCALE: 1/8"=1'-0"



TYPICAL SECTION
SCALE: 1/4"=1'-0"



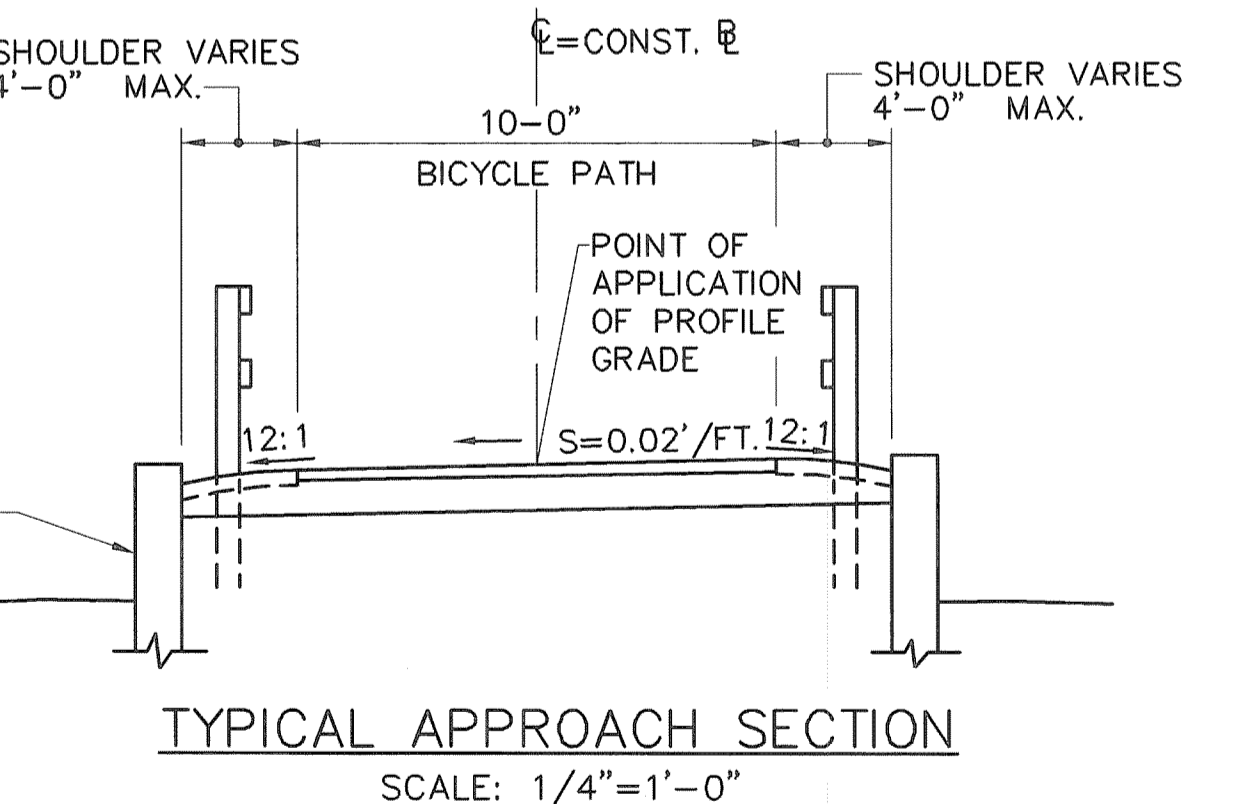
PROFILE
SCALE: HOR. 1"=20'
VERT. 1"=4'

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2014 FILE # 09-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL.
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

LEGEND

- 22 --- EXISTING CONTOUR
- 22 — PROPOSED CONTOUR



TYPICAL APPROACH SECTION
SCALE: 1/4"=1'-0"

BRIDGE SHT. 1 OF 6

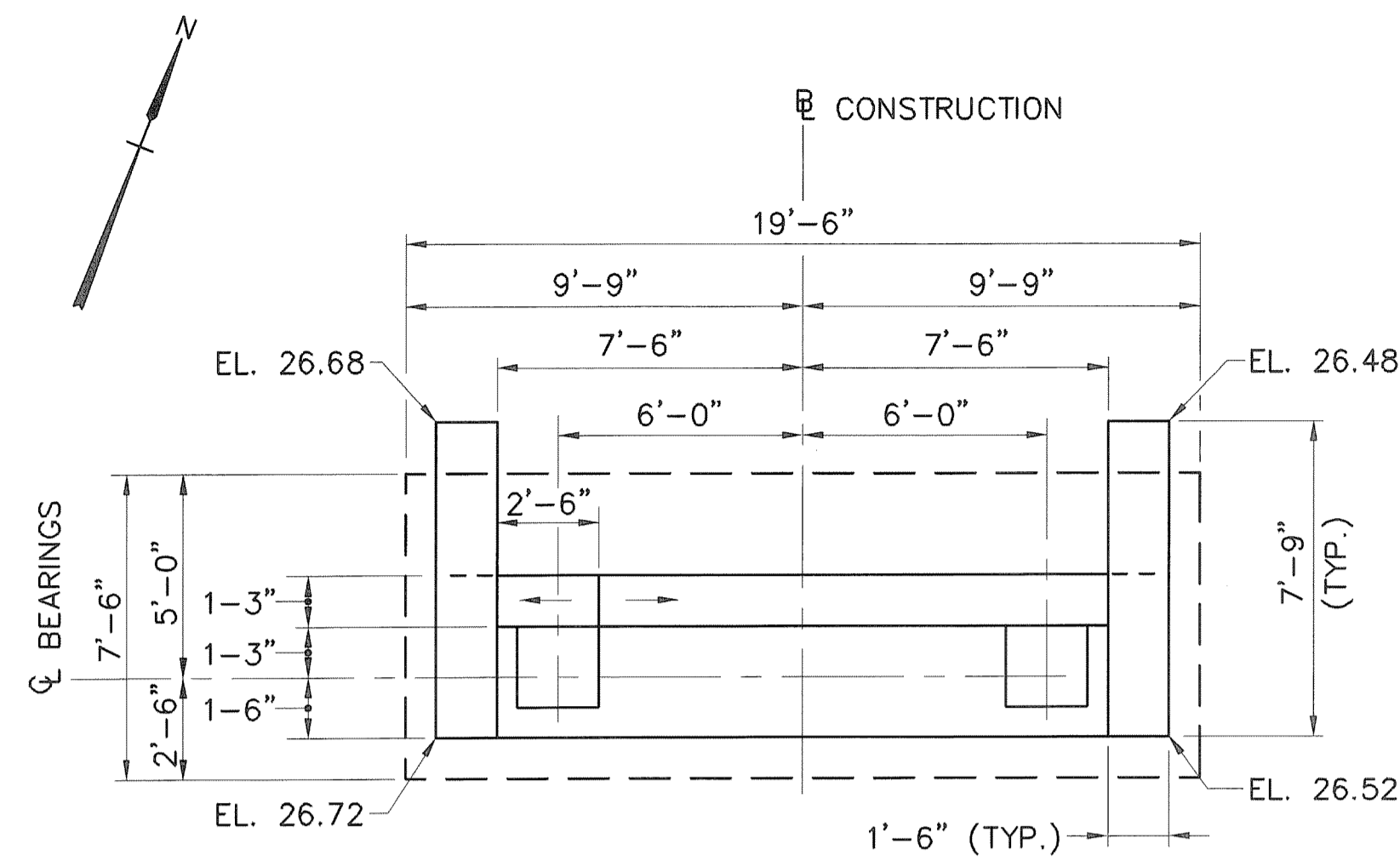
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS

BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

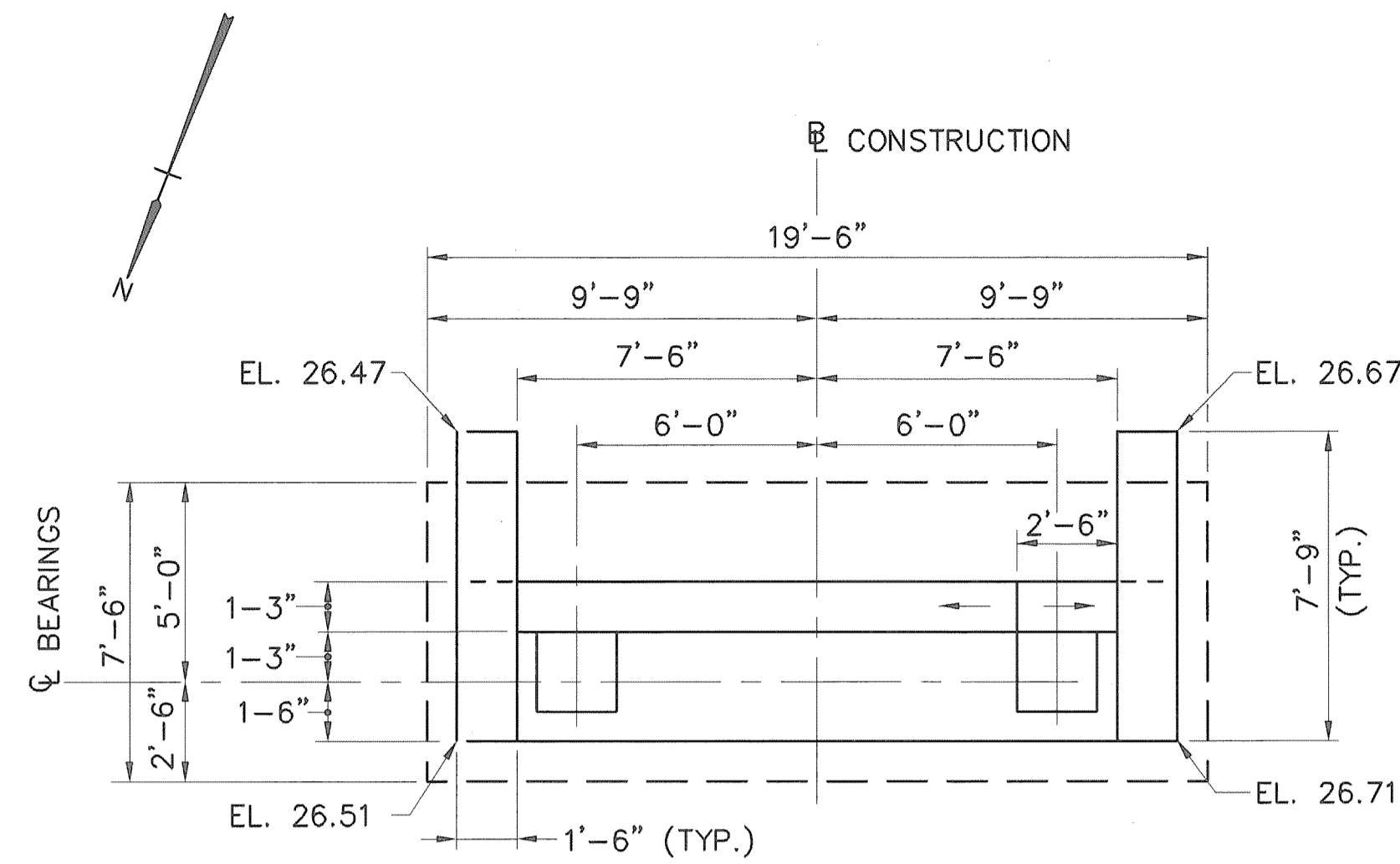
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO	DATE	BY	
			NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE, RHODE ISLAND
			DONIGIAN PARK BRIDGE BRIDGE NO. 1067 GENERAL PLAN
			CHECKED BY _____ DATE _____ SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	R.I.	HPP-1737(003)		19	36

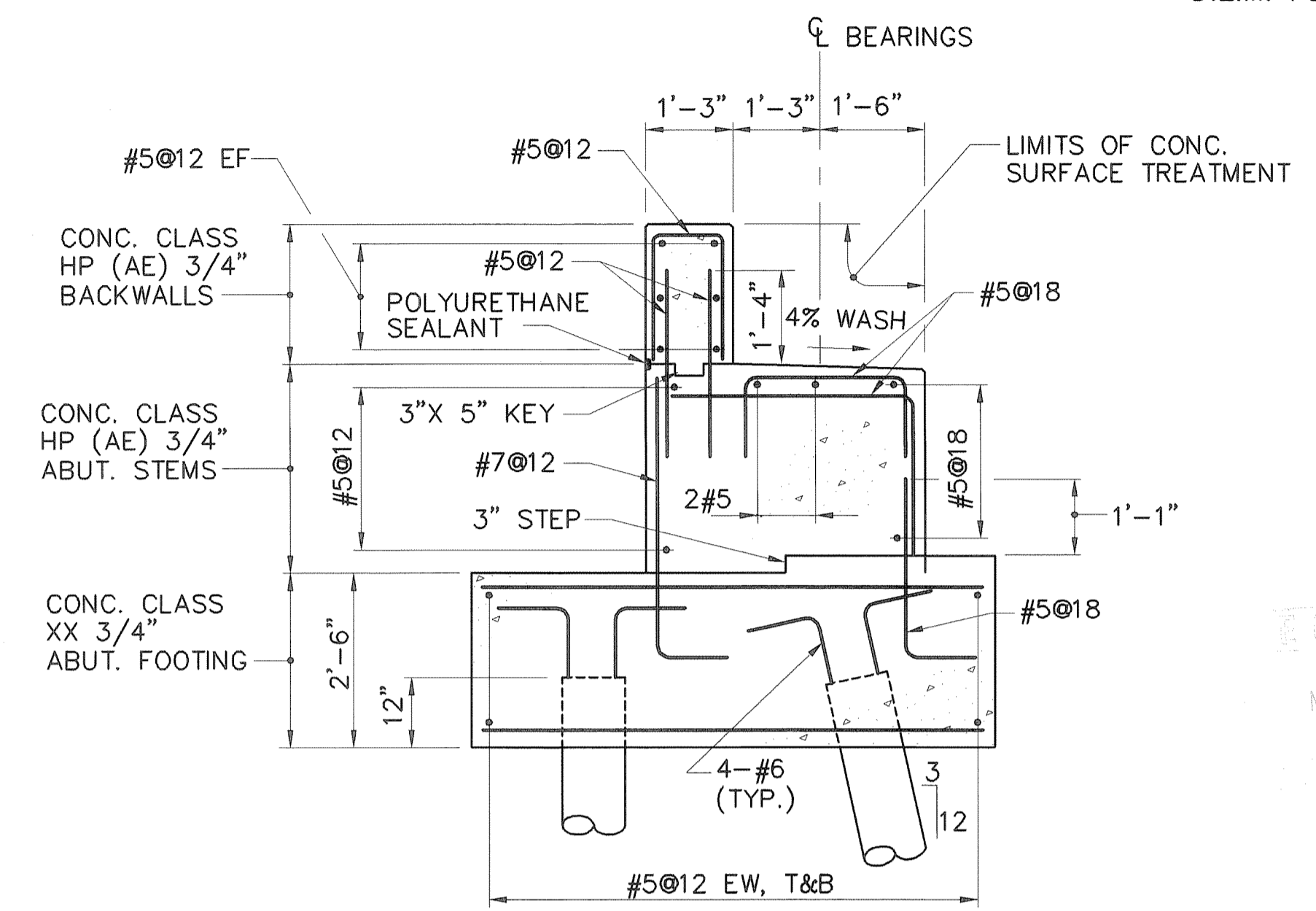
CONTRACT NO. 3
D.E.M. PLAN SET : 19 OF 36



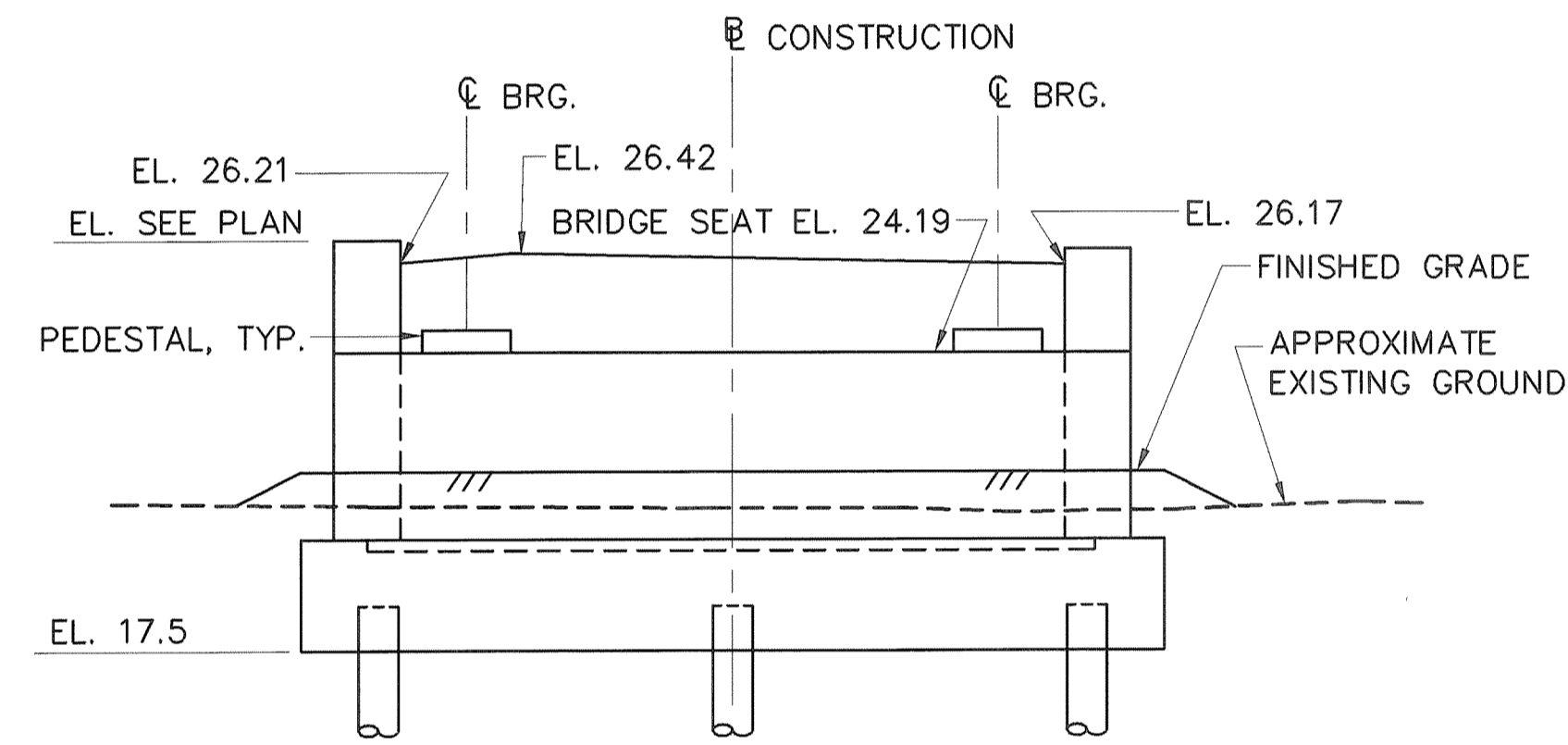
PLAN



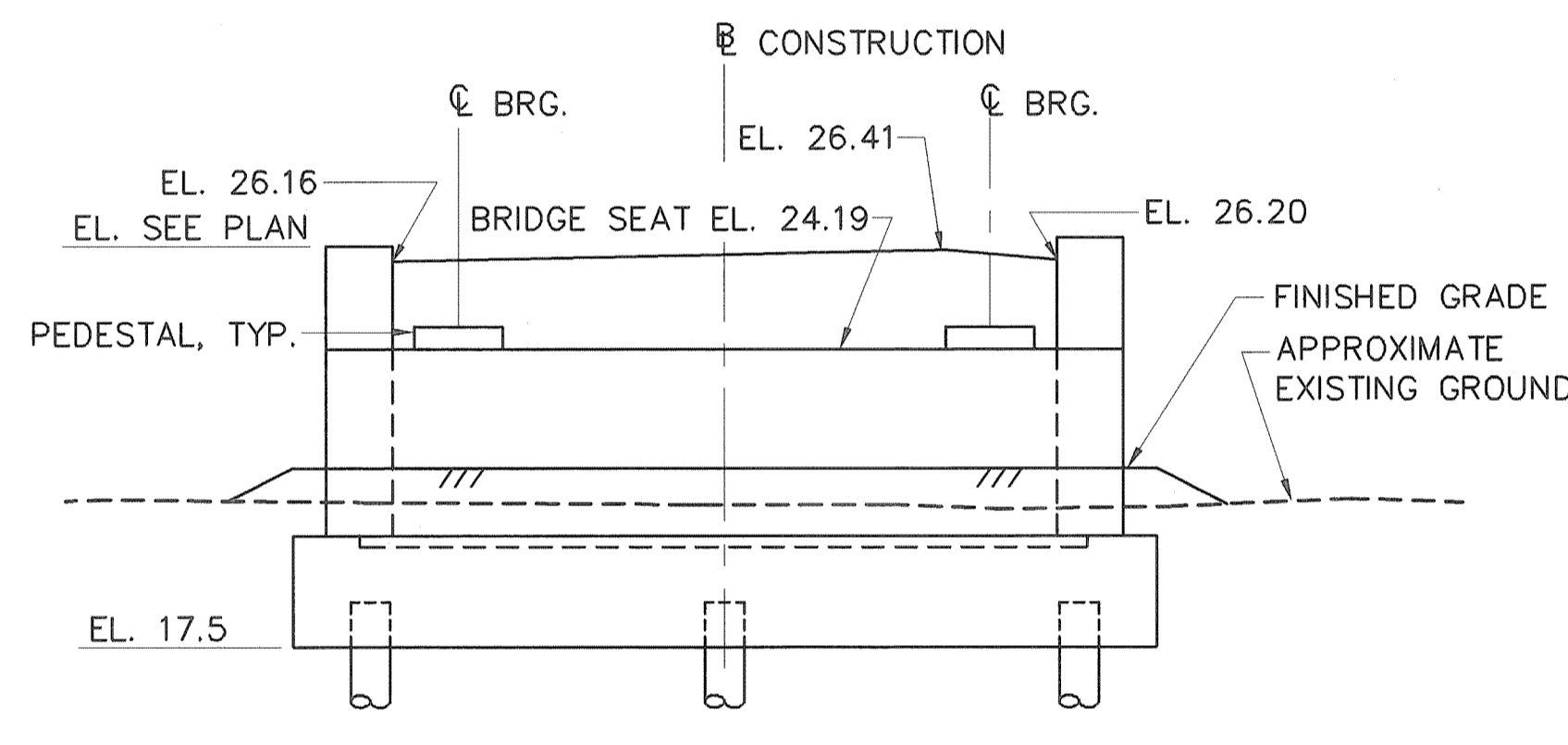
PLAN



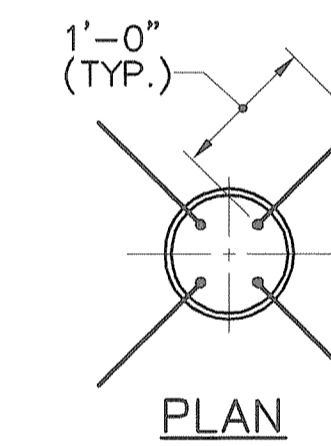
TYPICAL ABUTMENT SECTION
SCALE: 1/2"=1'-0"



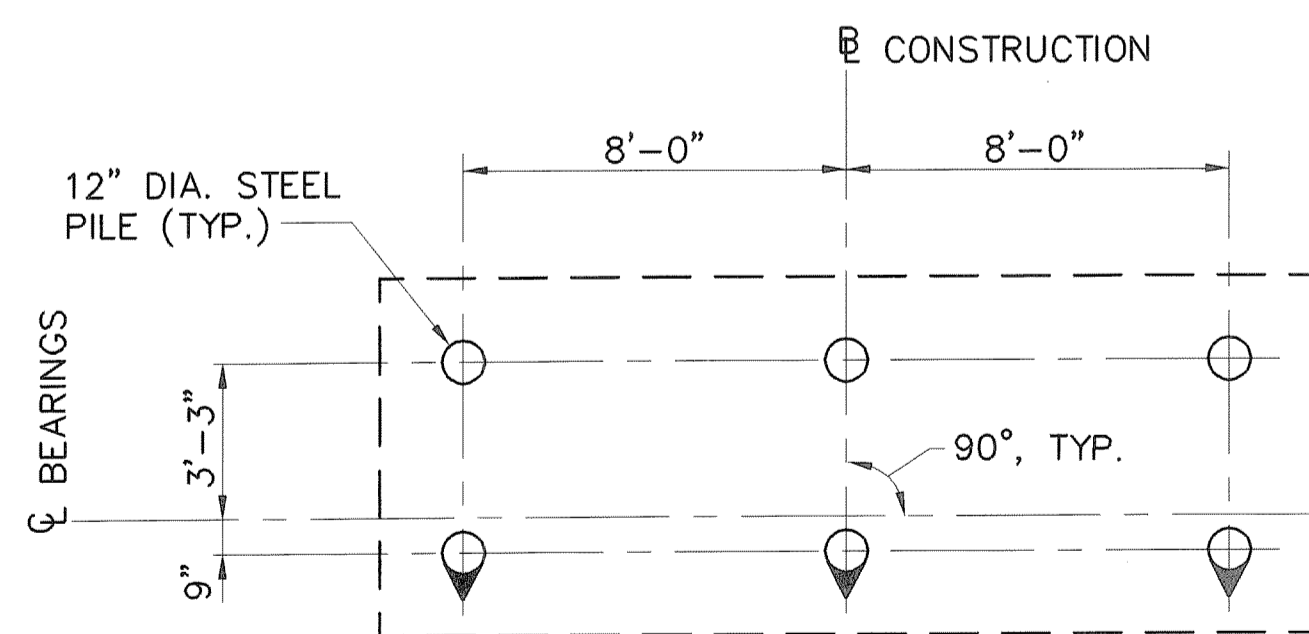
ELEVATION



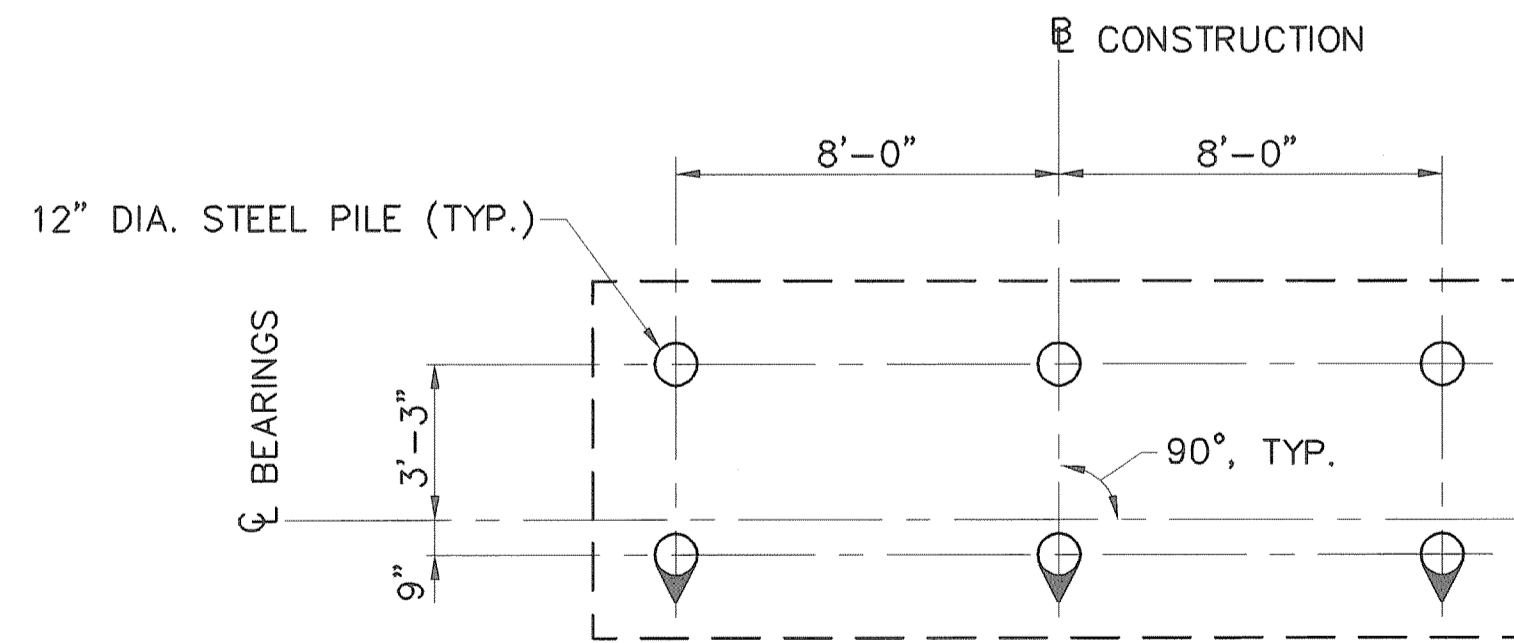
ELEVATION



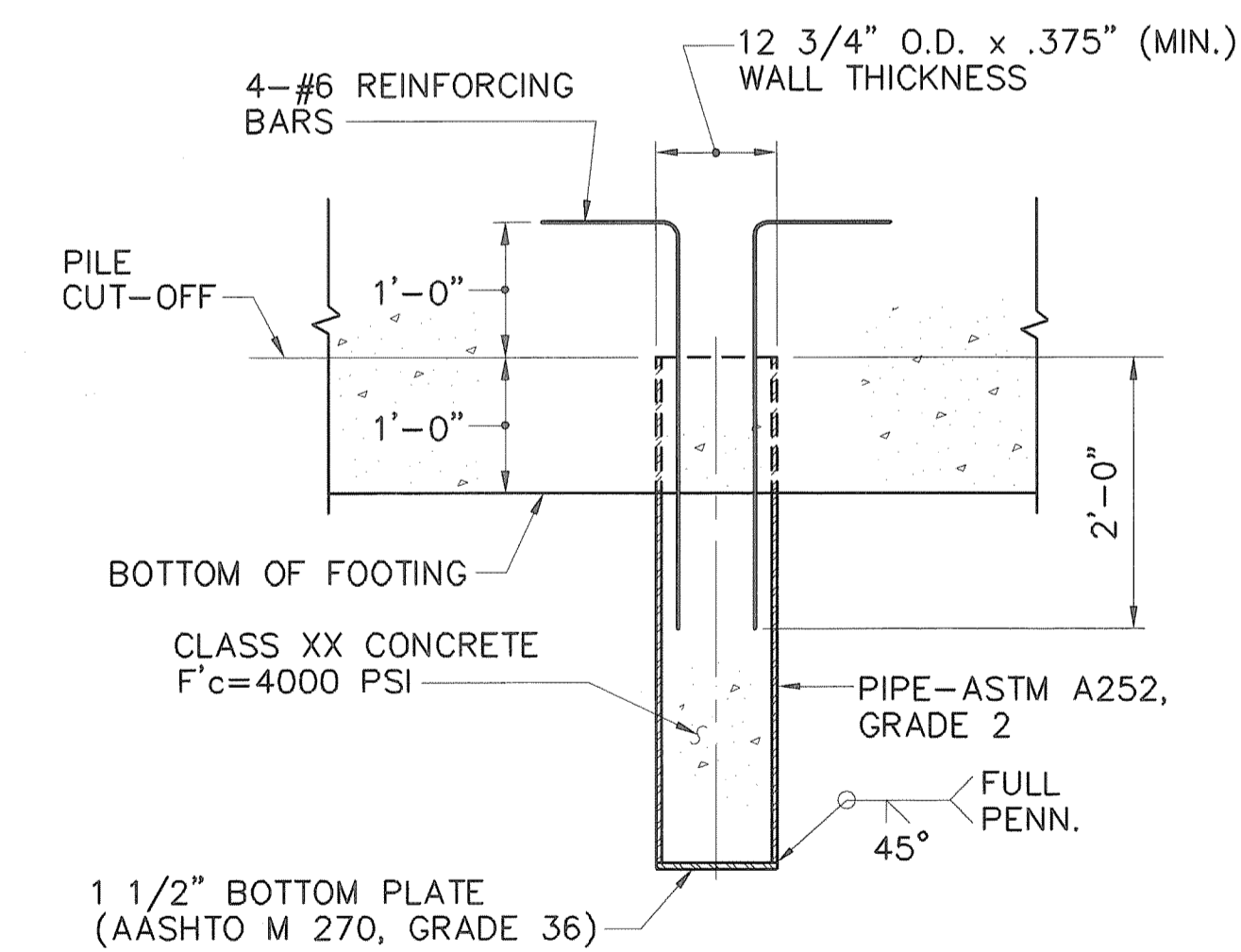
PLAN



NORTH ABUTMENT
SCALE: 1/4"=1'-0"



SOUTH ABUTMENT
SCALE: 1/4"=1'-0"



ELEVATION

PILE REINFORCEMENT DETAIL
SCALE: 3/4"=1'-0"

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

NOTES:

- FOR PEDESTAL DETAILS SEE BRIDGE SHEET 4 OF 6.
- FOR WING DETAILS SEE BRIDGE SHEET 4 OF 6.
- PILE SPACING IS GIVEN AT THE BOTTOM OF FOOTING.
- FOR THE REQUIREMENTS PERTAINING TO THE FURNISHING AND DRIVING OF FOUNDATION PILES, REFER TO THE RHODE ISLAND STANDARD SPECIFICATIONS.
- FOUNDATION PILES SHALL BE DRIVEN TO A SUFFICIENT DEPTH AND RESISTANCE TO ADEQUATELY DEVELOP THEIR SPECIFIED LOAD SUPPORTING CAPACITY. THE ENGINEER SHALL BE THE SOLE JUDGE, BASED ON SOIL DATA AND THE RESULTS OF THE WAVE EQUATION ANALYSIS, OF THE REQUIRED DEPTH AND DRIVING RESISTANCE TO DEVELOP THE LOAD CAPACITY.
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

- INDICATES PLUMB PILE
- ◑ INDICATES PILES BATTERED IN DIRECTION OF ARROW.

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
			NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE, RHODE ISLAND	
			DONIGIAN PARK BRIDGE BRIDGE NO. 1067 ABUTMENT DETAILS	
			CHECKED BY _____	DATE _____ SCALE AS NOTED

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-0282
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

BRIDGE SHT. 3 OF 6

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS

BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

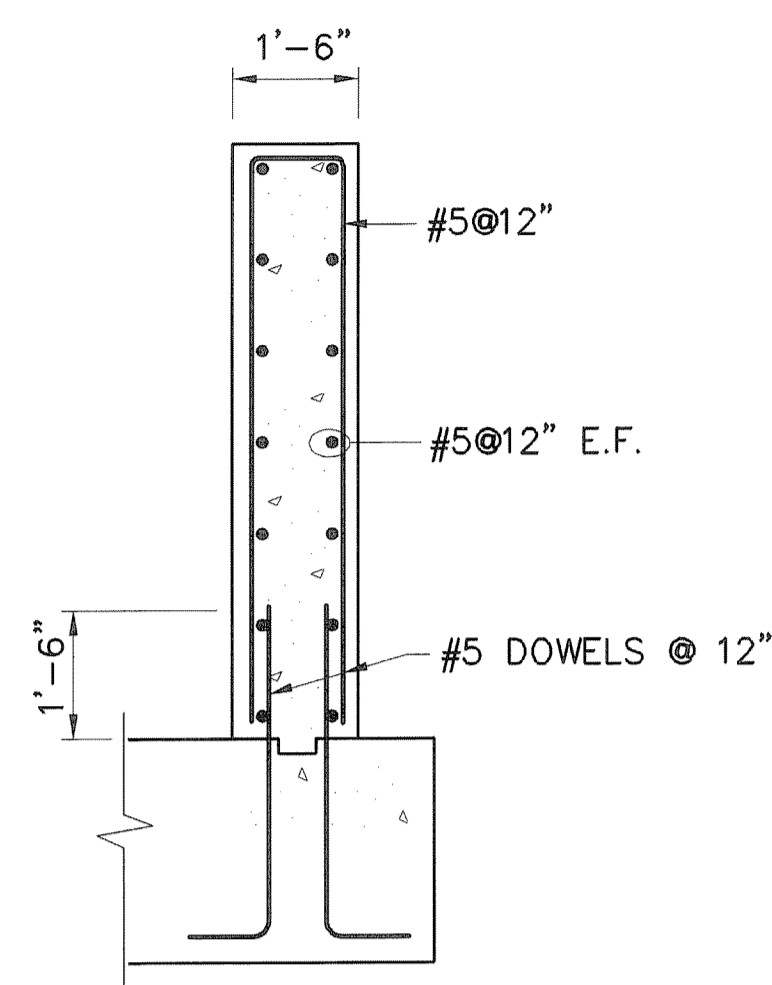
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	R.I.	HPP-1737(003)		20	36

CONTRACT NO. 3
D.E.M. PLAN SET : 20 OF 36

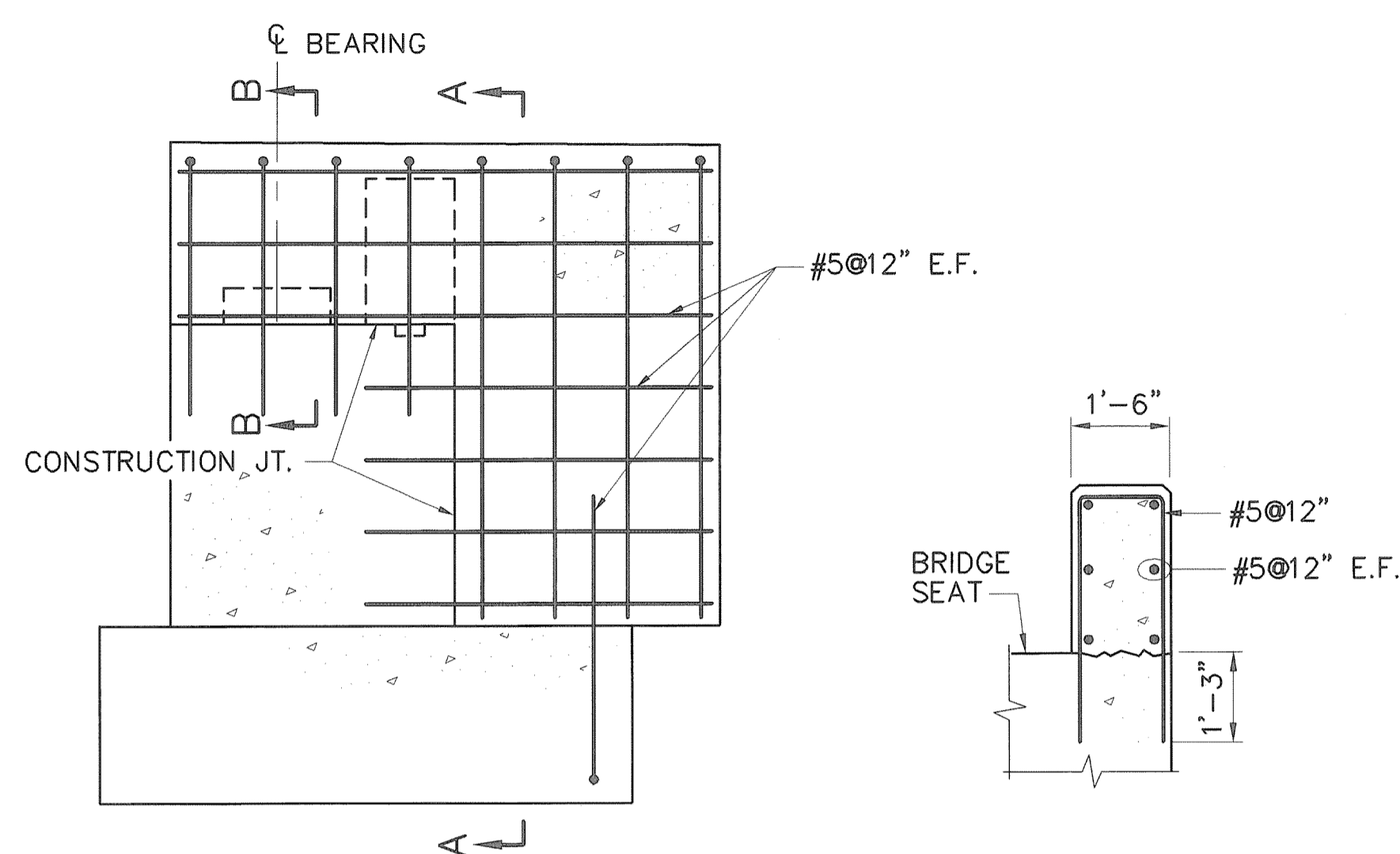
PEDESTAL HEIGHT	NUMBER OF HOOPS
4" - 8"	2
8" - 11"	3
11" - 14"	4
14" - 17"	5
17" - 20"	6

NOV 16 2000

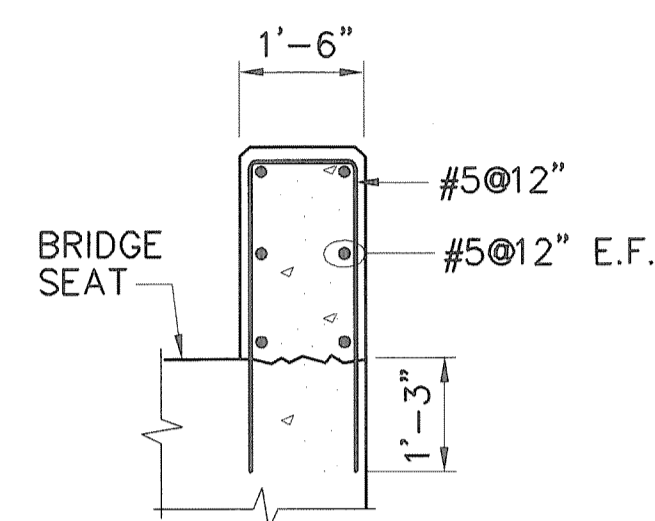
- NOTES:
- BARS SHOULD BE LOCATED SO AS TO NOT INTERFERE WITH THE BEARING ANCHOR BOLTS. MAXIMUM SPACING BETWEEN BARS IS 18".
 - REINFORCING BARS ARE NOT REQUIRED IF PEDESTAL HEIGHT IS LESS THAN 4".



SECTION A-A

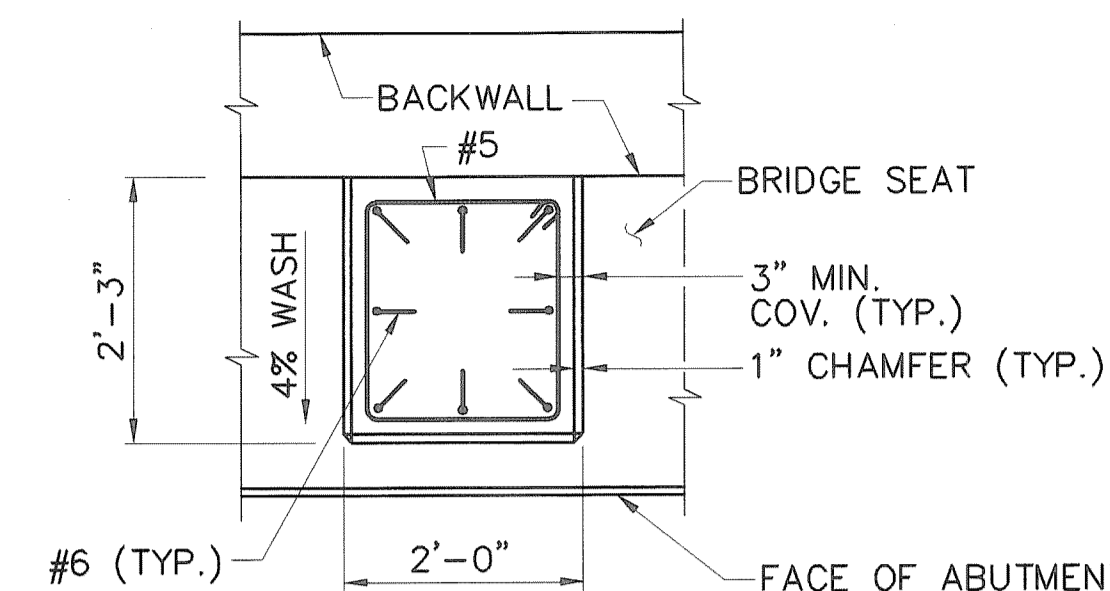


SECTION

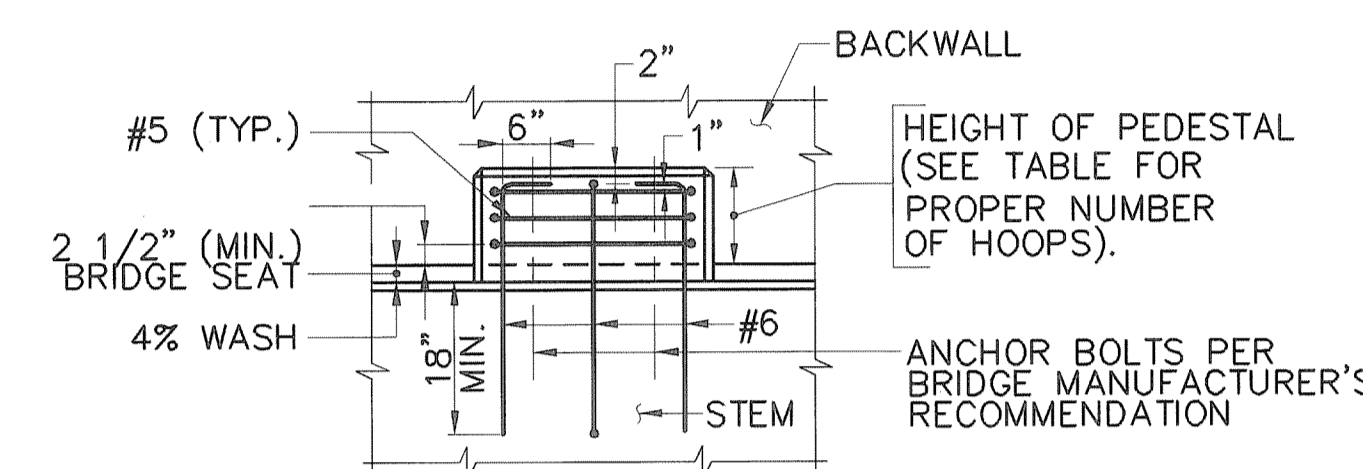


SECTION B-B

WING DETAILS
SCALE: 1/2"=1'-0"

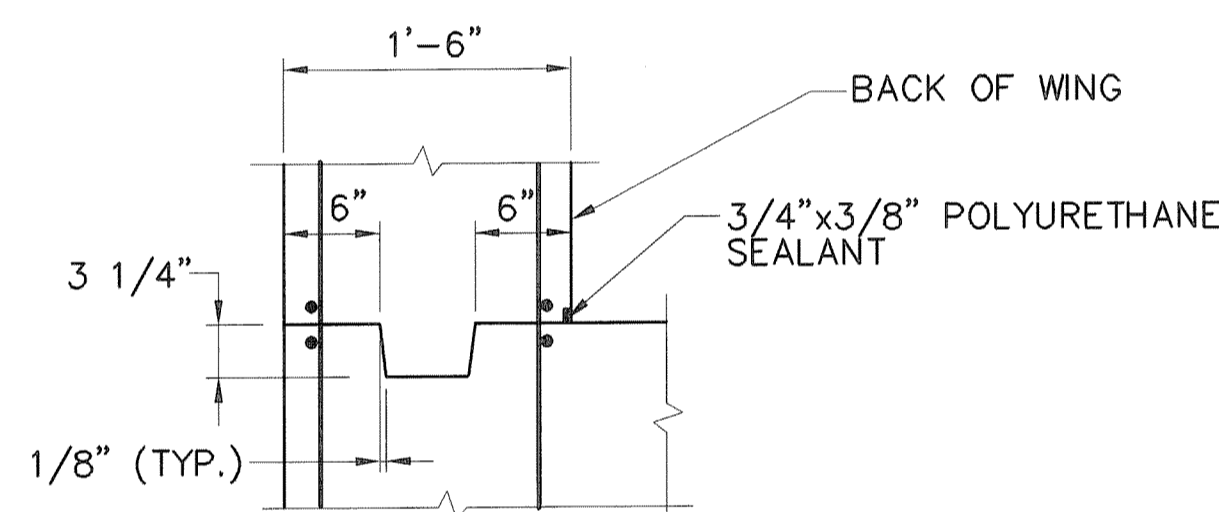


PLAN

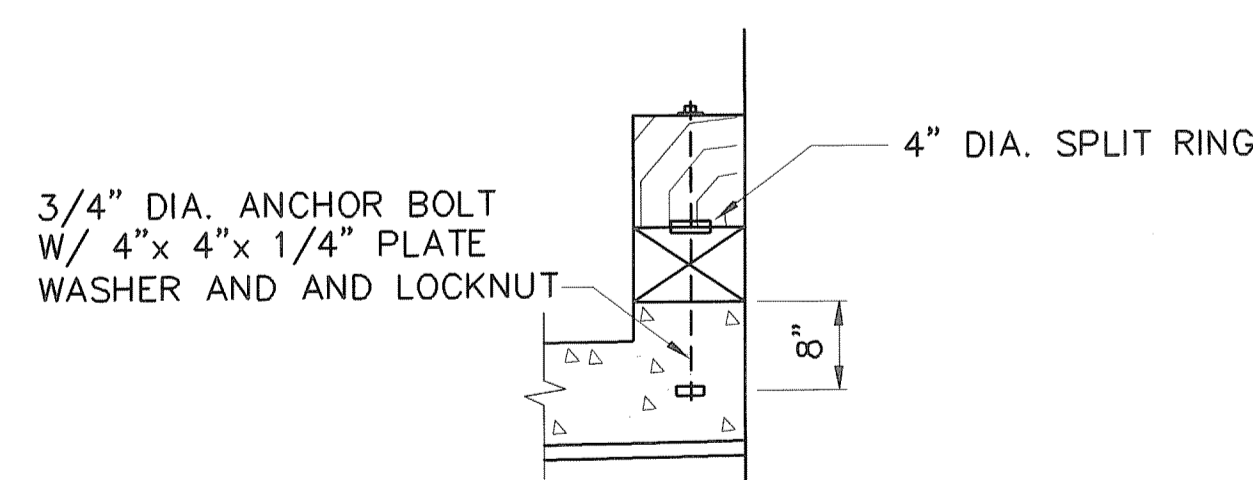


ELEVATION

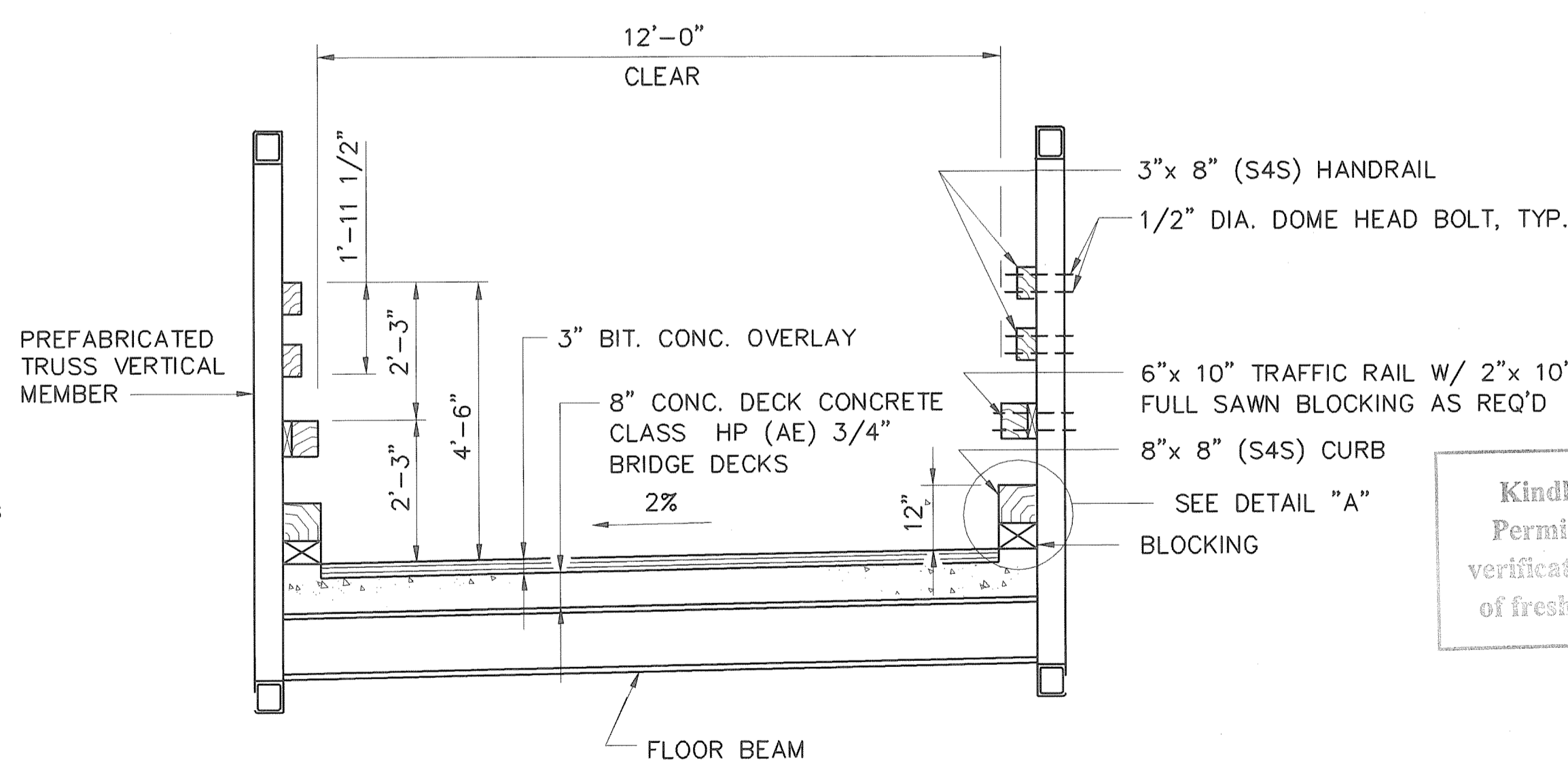
PEDESTAL DETAILS
SCALE: 1/2"=1'-0"



CONSTRUCTION JOINT DETAIL
SCALE: 1"=1'-0"



DETAIL "A"
SCALE: 1"=1'-0"



TYPICAL SECTION
SCALE: 1/2"=1'-0"

PREFABRICATED TRUSS DETAILS

TIMBER CONSTRUCTION NOTES:

- ALL TIMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR TIMBER BRIDGE SUPERSTRUCTURE AND WITH AASHTO SPEC. M133. SAWN TIMBER DECK LAMINATIONS, TRAFFIC RAIL, SOLID SAWN RAIL POSTS, CURB, DECK PLANKS, HANDRAILS AND ANY MISCELLANEOUS TIMBER COMPONENTS SHALL BE PRESSURE TREATED USING A FULL-CELL PROCESS WITH CCA CONFORMING TO AWP STANDARD P5 TO A NET RETENTION OF 0.6 LBS/CU FT. DETERMINED BY ASSAY, IN ACCORDANCE WITH AWP STANDARD C14. ALL TIMBER IS TO BE CUT TO EXACT LENGTH BEFORE TREATMENT. ALL DECKING CURBS AND RAIL POSTS SHALL BE PRE-DRILLED PRIOR TO TREATMENT. THE TIMBER FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER PRIOR TO TREATMENT OF MATERIALS.
- ALL TIMBER IS TO BE GRADED AS PER THE LATEST EDITION OF ANSI/AF&PA NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION.
- TIMBER SHALL BE AS FOLLOWS:
 - CURB: SOUTHERN PINE, 5"x 5" AND LARGER, NO. 1, F_b = 1350 PSI, F_c = 375 PSI, E = 1,500,000 PSI.
 - TRAFFIC RAIL: SOUTHERN PINE, 5"x 5" AND LARGER, DENSE SELECT STRUCTURAL, F_b = 1750 PSI, F_v = 110 PSI, E = 1,600,000 PSI.
 - HANDRAIL: SOUTHERN PINE, 2"-4" THICK X 8" WIDE, NO. 2 OR BETTER, F_b = 1200 PSI, F_c = 565 PSI, E = 1,600,000 PSI.
- ALL TIMBER CUT OR DRILLED IN THE FIELD SHALL BE TREATED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- ALL MATERIAL FOR BOLTS, LAG SCREWS, SPIKES AND THREADED RODS SHALL CONFORM TO ASTM A307. MATERIAL FOR WASHER PLATES SHALL CONFORM TO ASTM A709, GRADE 36. SPLIT RINGS SHALL BE MANUFACTURED FROM MATERIAL CONFORMING WITH SAE 1010. ALL HARDWARE IS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232.
- ALL BOLTS AND NUTS SHOULD BE TIGHTENED "SNUG TIGHT" AND SHALL HAVE ADEQUATE LOCKING DEVICES.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED **DEC 24 2000** FILE # **00-0082**
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

BRIDGE SH. 4 OF 6

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS

BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION	
NO.	DATE	BY		
			NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE, RHODE ISLAND	
			DONIGIAN PARK BRIDGE BRIDGE NO. 1067 MISCELLANEOUS DETAILS	
CHECKED BY _____			DATE _____	SCALE AS NOTED

CONTRACT NO. 3
D.E.M. PLAN SET : 21 OF 36

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-51	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 of 2 FILE No. 417118 CHKD. BY	
FOREMAN: DON DUNKLEE CLASSIFIED BY: JOHN OMARA INSPECTOR:		BORING LOCATION: 2 C, 3 B DATE START: 9/17/02 DATE END: 9/18/02		DATUM	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
Bottom of boring at 75'					
DEPTH (ft)	PEN/REC (ft)	DEPTH (ft)	BLOWS/ft	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/8	0-2	5-15	Dense, dark brown SILT, some fine to coarse Sand, trace Gravel	1. FILL
5	S-2 24/0	4-6	4-5	No sample	
10	S-3 24/3	9-11	6-3	Medium dense, brown, fine to medium SAND, little Sil, little red Brick, trace Gravel	2. SILT
15	S-4 24/0	14-16	12-8	No Recovery	
20	S-5 24/10	19-21	9-9	Medium dense, gray SILT, trace fine Sand	SILT
25	S-6 24/15	24-26	14-14	Medium dense, brown SILT, trace fine Sand	
30	S-7 24/1	29-31	8-10	Medium dense, brown SILT, trace fine Sand	SAND AND SILT
35	S-8 24/9	34-36	12-11	Medium dense, brown SILT	
40	S-9 24/2	39-41	24-20	Dense, gray SILT, some fine to medium Sand	41' BOULDERS
45	S-10 24/8	44-46	30-44	Very dense, gray SILT, trace Sand	
50	C-1 60/21	47-52	1	SHIST; RQD = 0%	1. SAND
55	S-11 24/8	52-53	51-100#	Very dense, gray SILT, trace Sand	
60	C-3 60/48	58-63	4	SHIST; RQD = 60%	58' WEATHERED ROCK
65	C-4 60/19	63-68	3	SANDSTONE; RQD = 0%	
70	C-5 60/54	68-73	2	SANDSTONE; RQD = 48%	SANDSTONE
75	C-6 24/0	73-75	3.5	SANDSTONE; RQD = 0%	

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-52	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 of 2 FILE No. 417118 CHKD. BY	
FOREMAN: DON DUNKLEE CLASSIFIED BY: JOHN OMARA INSPECTOR:		BORING LOCATION: 1 F, 9 B DATE START: 9/19/02 DATE END: 9/19/02		DATUM	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
Bottom of boring at 76'					
DEPTH (ft)	PEN/REC (ft)	DEPTH (ft)	BLOWS/ft	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/10	0-2	3-9	Medium dense, brown SAND, little Sil, trace Fibers	0' SAND
5	S-2 24/5	4-6	7-12	Medium dense, brown, fine to coarse SAND, some Sil, trace Gravel	
10	S-3 24/2	9-11	22-14	Medium dense, brown, fine to coarse SAND, some Sil, trace Gravel	1. SAND
15	S-4 24/12	14-16	7-9	Medium dense, gray SILT	
20	S-5 24/6	19-21	10-9	Medium dense, gray SILT	53' WEATHERED ROCK
25	S-6 24/10	24-26	12-15	Medium dense, gray SILT	
30	S-7 24/16	29-31	9-8	Medium dense, brown SILT, little Clay, trace Sand	58' SLATE
35	S-8 24/24	34-36	23-23	Dense, gray SILT, trace Clay, trace Gravel	
40	S-9 8/4	39-41	85-100	Very dense, gray SILT, trace Sand, trace Gravel	SANDSTONE
45	C-1 48/8	41-45	1	RQD = 0%	
50	C-2 60/4	45-50	1	RQD = 0%	RQD = 18.5%
55	C-3 60/54	50-55	1	RQD = 0%	
60	C-4 36/12	55-58	3	RQD = 0%	RQD = 38%
65	C-5 36/27	58-61	3	RQD = 22.2%	
70	C-6 60/0	61-66	4	RQD = 18%	RQD = 0%
75	C-7 60/54	66-71	3	RQD = 18.5%	
80	C-8 60/58	71-76	2	RQD = 38%	

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-53	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 of 2 FILE No. 417118 CHKD. BY	
FOREMAN: DON DUNKLEE CLASSIFIED BY: JOHN OMARA INSPECTOR: JIM BROOKS		BORING LOCATION: 1 F, 6 B DATE START: 9/16/02 DATE END: 9/16/02		DATUM	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
Bottom of boring at 75'					
DEPTH (ft)	PEN/REC (ft)	DEPTH (ft)	BLOWS/ft	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/14	0-2	4-5	Loose, brown SILT, trace Sand, trace Fibers	0' FILL
5	S-2 24/10	4-6	3-3	Loose, brown, fine to medium SAND, little Sil	
10	S-3 24/8	9-11	2-1	Very loose, brown, fine to medium SAND, little Sil	SAND
15	S-4 24/15	14-16	7-6	Medium dense, gray SILT, trace Sand	
20	S-5 24/24	19-21	8-8	Medium dense, gray SILT, trace fine Sand	SILT
25	S-6 24/24	24-26	8-8	Medium dense, gray SILT, trace Sand	
30	S-7 24/20	29-31	6-9	Medium dense, brown SILT	1. WEATHERED ROCK
35	S-8 24/24	34-36	10-14	Medium dense, gray SILT, little Gravel, trace Sand	
40	S-9 24/12	39-41	12-17	Dense, dark gray SILT, trace Sand, trace Fibers	SANDSTONE
45	C-1 60/7	41-46	1.5	RQD = 0%	
50	C-2 60/18	46-51	3	RQD = 0%	SHIST
55	C-3 60/57	51-56	1.5	RQD = 86%	
60	C-4 60/54	56-61	1	RQD = 20%	SANDSTONE
65	C-5 60/12	61-66	3	RQD = 0%	
70	C-6 60/20	66-71	3	RQD = 50%	SANDSTONE
75	C-7 48/11	71-75	1	RQD = 0%	

NOV 16 2009

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-0552
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

REVISIONS

NO	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

NORTHWEST BIKE TRAIL/
WOONASQUATUCKET RIVER BIKEWAY
PROVIDENCE, RHODE ISLAND

BRIDGE NO. 1067

BORING LOGS - PART 1

CHECKED BY _____ DATE _____ SCALE AS NOTED

BRIDGE SHT. 5 OF 6

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS

BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

I:\PR-007\PR\Cont\3\plans\90%21-1067\001.dwg 04/17/09 10:38 [106.68] By Arnold_S

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		22	36

CONTRACT NO. 3
D.E.M. PLAN SET : 22 OF 36

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-54	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 OF 2 FILE No. 417118 CHKD. BY	
FOREMAN: PAUL WORDELL CLASSIFIED BY: JOHN OMARA INSPECTOR:		BORING LOCATION GROUND SURFACE ELEVATION 19.48		DATUM DATE START 9/18/02 DATE END 9/20/02	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
9/18/02 5' 5' 5'					
COMPLETION					
9/20/02					
DEPTH (ft)	PEN/REC	DEPTH (ft)	BLOWS*	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/22	0-2	8-10 10-15	Medium dense, dark brown SILT, some Sand, trace Gravel	0'2" ASPHALT
5	S-2 24/13	5-7	5-1 3-3	Very loose, dark brown SILT, some Bricks, trace Gravel	SILT (FILL)
10	S-3 24/18	10-12	12-13 5-5	Medium dense, dark brown SAND, some Silt, trace Gravel, trace Fibers	SAND Silt Gravel
15	S-4 24/15	15-17	33-25 16-14	Dense, gray SAND, some Silt, trace Gravel, trace Fibers	SAND
20	S-5 24/24	20-24	6-7 5-4	Medium dense, gray SILT	SILT
25	S-6 24/24	25-27	5-5 4-7	Loose, gray SILT	SILT
30	S-7 16/5	30-31.2	19-35 100-4	Very dense, gray SILT, some Sand	TILL
35	S-8 24/14	35-37	34-44 55-57	Very dense, dark brown SILT, little Gravel	TILL
40	C-1 60/42	40-45	2	RQD = 0%	SHIST-PHILLITE
45	C-2 60/45	45-50	2	RQD = 20%	
50	C-3 60/44	50-55	2	RQD = 43%	
55	C-4 60/60	55-60	3	RQD = 13%	
60	C-5 60/50	60-65	3	RQD = 38%	
65	C-6 60/52	65-70	3	RQD = 27%	
70	C-7 60/60	70-75	4	RQD = 56%	
75	Bottom of boring at 75'				
GRANULAR SOILS Blows/ Ft Density		COHESIVE SOILS Blows/ Ft Density		REMARKS:	
0-4 V. LOOSE <2 4-10 LOOSE 2-4 10-30 M. DENSE 4-8 30-50 DENSE 8-15 >50 V. DENSE 15-30 HARD >30		V. SOFT <2 SOFT 2-4 M. STIFF 4-8 STIFF 8-15 V. STIFF 15-30 HARD >30		1. Possible FILL to 17'-2"	
NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE					

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-55	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 OF 2 FILE No. 417118 CHKD. BY	
FOREMAN: PAUL WORDELL CLASSIFIED BY: JOHN OMARA INSPECTOR:		BORING LOCATION GROUND SURFACE ELEVATION 19.48		DATUM DATE START 9/18/02 DATE END 9/18/02	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
9/18/02 5' 5' 5'					
COMPLETION					
9/18/02					
DEPTH (ft)	PEN/REC	DEPTH (ft)	BLOWS*	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/16	0-2	3-4 3-17	Medium dense, brown SILT, some Sand, trace Brick	0' SILT (FILL)
5	S-2 24/2	5-7	9-11 3-15	Medium dense, brown SILT, some Gravel, little Brick	5'6" SILT
10	S-3 24/10	10-12	1-2 2-2	Very loose, gray SILT, some Sand	SILT
15	S-4 26/9	15-18.3	40-66 90-4	Very dense, brown GRAVEL, some Sand, trace Silt	SAND AND GRAVEL
20	S-5 24/11	20-22	15-17 17-13	Dense, brown SILT, some Sand, little Gravel	SILT
25	S-6 24/20	25-27	6-7 7-9	Medium dense, gray SILT, some Gravel	SILT Gravel
30	S-7 24/12	30-31.2	21-47 88-2"	Very dense, gray SILT	TILL
35	S-8 24/21	35-37	19-27 42-60	Very dense, gray SILT, little Sand	TILL
40	S-9 32/12	38-40	77-112	Very dense, gray SILT, some Sand, little Gravel	TILL
45	C-1 60/30	40-45	4	RQD = 0%	GRAPHITIC SHALE
50	C-2 60/20	45-50	3	RQD = 20%	
55	C-3 60/32	50-55	3	RQD = 25%	
60	C-4 60/48	55-60	4	RQD = 21%	
65	C-5 60/58	60-65	3	RQD = 18%	
70	C-6 60/52	65-70	3	RQD = 7.6%	
75	C-7 60/33	70-75	3	RQD = 0%	
75	Bottom of boring at 75'				
GRANULAR SOILS Blows/ Ft Density		COHESIVE SOILS Blows/ Ft Density		REMARKS:	
0-4 V. LOOSE <2 4-10 LOOSE 2-4 10-30 M. DENSE 4-8 30-50 DENSE 8-15 >50 V. DENSE 15-30 HARD >30		V. SOFT <2 SOFT 2-4 M. STIFF 4-8 STIFF 8-15 V. STIFF 15-30 HARD >30		1. Hole caving in fractured rock.	
NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE					

GZA DRILLING, INC.		PROJECT		REPORT OF BORING No. SB-56	
1215 W. CHESTNUT ST., BROCKTON, MA 02301 (A DIVISION OF GZA GEOTECHNICAL, INC.)		Providence Bike Path Providence, Rhode Island		SHEET 1 OF 2 FILE No. 417118 CHKD. BY	
FOREMAN: PAUL WORDELL CLASSIFIED BY: JOHN OMARA INSPECTOR:		BORING LOCATION GROUND SURFACE ELEVATION 19.48		DATUM DATE START 9/12/02 DATE END 9/16/02	
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.					
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb. HAMMER FALLING 24 in.					
CASING SIZE: NW OTHER					
GROUNDWATER READINGS					
DATE TIME WATER CASING STABILIZATION TIME COMPLETION					
9/12/02 5' 5' 5'					
COMPLETION					
9/16/02					
DEPTH (ft)	PEN/REC	DEPTH (ft)	BLOWS*	SAMPLE DESCRIPTION	STRATUM DESCRIPTION
0	S-1 24/15	0-2	2-6 11-11	Medium dense, dark brown SILT, some Gravel, trace Brick	0'1" BLACKTOP
5	S-2 24/10	5-7	1-2 2-4	Very loose, brown SILT, some Sand	SILT (FILL)
10	S-3 24/12	10-12	4-5 5-7	Loose, dark brown SILT, some Sand	SILT
15	S-4 12/6	15-16	44 91	Very dense, gray SILT, some Gravel, little Sand	SILT Gravel Sand
20	S-5 24/10	20-22	3-3 4-3	Loose, gray SILT	17'6" BOULDER
25	S-6 24/24	25-27	4-4 5-4	Loose, gray SILT	SILT
30	S-7 24/12	30-32	6-7 7-6	Medium dense, gray SILT	SILT
35	S-8 24/9	35-37	16-23 24-31	Dense, gray SILT, little Gravel	TILL
40	C-1 60/28	38-44	3	RQD = 17%	SHIST
45	C-2 60/30	44-49	4	RQD = 50%	
50	C-3 60/48	48-54	4	RQD = 0%	
55	C-4 60/32	54-59	3	RQD = 0%	
60	C-5 60/30	58-64	3	RQD = 16%	
65	C-6 60/57	64-69	3	RQD = 58%	
70	C-7 60/60	68-74	3	RQD = 58%	SHIST
75	C-8 12/12	74-75	6	RQD = 42%	
75	Bottom of boring at 75'				
GRANULAR SOILS Blows/ Ft Density		COHESIVE SOILS Blows/ Ft Density		REMARKS:	
0-4 V. LOOSE <2 4-10 LOOSE 2-4 10-30 M. DENSE 4-8 30-50 DENSE 8-15 >50 V. DENSE 15-30 HARD >30		V. SOFT <2 SOFT 2-4 M. STIFF 4-8 STIFF 8-15 V. STIFF 15-30 HARD >30		1. Hole caving in fractured rock.	
NOTES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE					

NOV 16 2009

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-0882
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

W. Joseph Caray

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

NORTHWEST BIKE TRAIL/
WOONASQUATUCKET RIVER BIKEWAY
PROVIDENCE, RHODE ISLAND

BRIDGE NO. 1067
BORING LOGS - PART 2

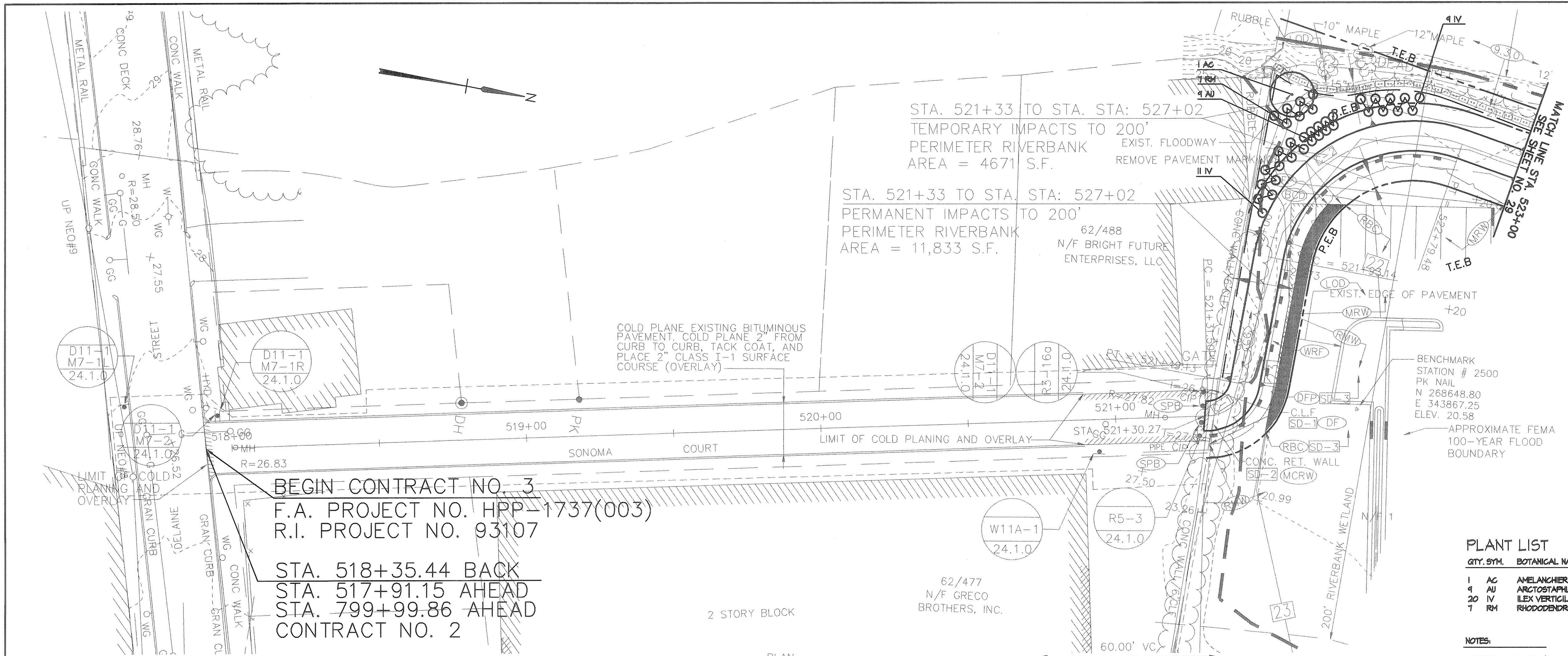
CHECKED BY _____ DATE _____ SCALE AS NOTED

BRIDGE SHT. 6 OF 6
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

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FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		30	36

CONTRACT NO. 3
D.E.M. PLAN SET : 30 OF 36



BEGIN CONTRACT NO. 3
F.A. PROJECT NO. HPP-1737(003)
R.I. PROJECT NO. 93107
STA. 518+35.44 BACK
STA. 517+91.15 AHEAD
STA. 799+99.86 AHEAD
CONTRACT NO. 2

COORDINATES

NO.	STATION	NORTH	EAST
C-1	PC STA. 521+50.04	268,599.85	343,877.21
	PI STA. 521+42.90	268,609.99	343,875.01
	PT STA. 521+32.52	268,610.08	343,864.67
C-2	PC STA. 521+93.14	268,610.48	343,821.53
	PI STA. 522+51.62	268,611.02	343,763.05
	PT STA. 522+79.48	268,668.70	343,772.67

CURVE DATA

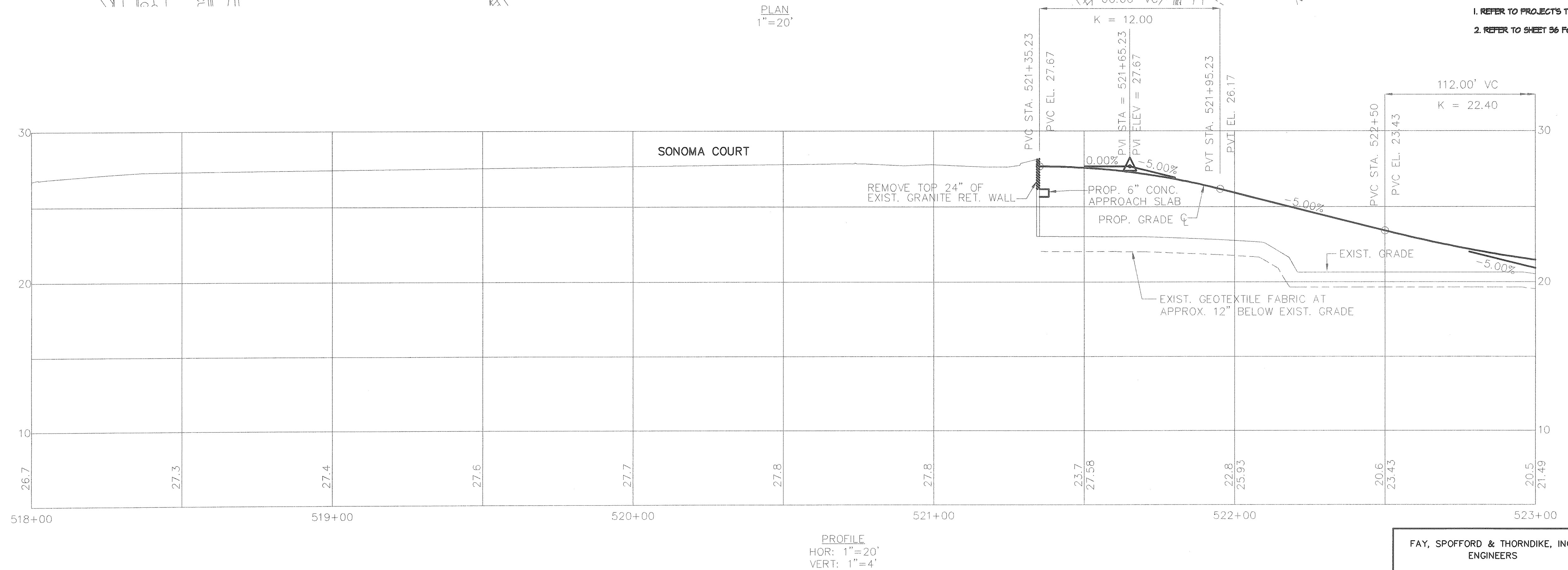
NO.	Δ	RADIUS	LENGTH	TANGENT
C-1	17°12'15"	13.00'	17.52'	10.38'
C-2	98°56'26"	50.00'	86.34'	58.48'

NOTE:
1. EXISTING TRAVEL LANES IN THE PARKING LOT SHALL REMAIN OPEN AT ALL TIMES.

PLANT LIST

QTY.	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
1	AC	AMELANCHIER CANADENSIS	SHADBLOW	2-25"	B&B	AS SHOWN
4	AJ	ARGOSTAPHLOS UVA URSI	BEAR BERRY	12-18"	CONTAINER	5' O.C.
20	IV	ILEX VERTICILLATA	WINTERBERRY	24-30"	CONTAINER	5' O.C.
7	RM	RHOODENDRON MAXIMUM	ROSEBAY RHODY	24-30"	B&B	5' O.C.

NOTES:
1. REFER TO PROJECT'S TOTAL PLANT LIST SEE SHEET 36 FOR TOTAL OF ALL PLANTS ON ALL SHEETS.
2. REFER TO SHEET 36 FOR GENERAL LANDSCAPE NOTES.



Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED DEC 24 2009 FILE # 09-2882
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

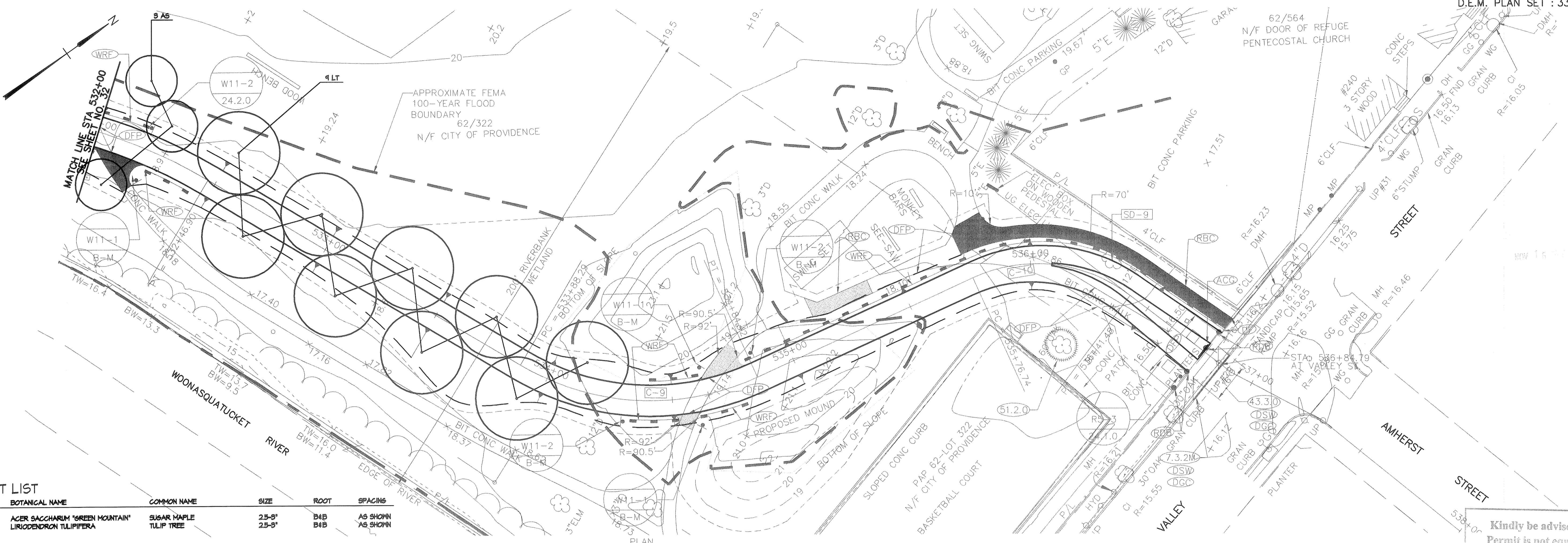
Joseph Carney

REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION
NO.	DATE	BY	
			NORTHWEST BIKE TRAIL/ WOONASQUATUCKET RIVER BIKEWAY PROVIDENCE, RHODE ISLAND
			LANDSCAPE PLAN NO. 1
			CHECKED BY _____ DATE _____ SCALE AS NOTED

FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

FED ROAD DIV NO	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	R.I.	HPP-1737(003)		33	36

CONTRACT NO. 3
D.E.M. PLAN SET : 33 OF 36



PLANT LIST

QTY. SYM.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
3 AS	ACER SACCHARUM 'GREEN MOUNTAIN'	SUGAR MAPLE	25-3'	B&B	AS SHOWN
4 LT	LIRIODENDRON TULIPIFERA	TULIP TREE	25-3'	B&B	AS SHOWN

NOTES:

- REFER TO PROJECT'S TOTAL PLANT LIST SEE SHEET 36 FOR TOTAL OF ALL PLANTS ON ALL SHEETS.
- REFER TO SHEET 36 FOR GENERAL LANDSCAPE NOTES.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

C COORDINATES			
NO.	STATION	NORTH	EAST
C-9	PC STA. 533+88.29	269,465.41	344,242.47
	PT STA. 534+84.42	269,464.86	344,294.61
C-10	PC STA. 535+76.64	269,582.42	344,378.56
	PT STA. 536+41.48	269,607.06	344,435.08

C CURVE DATA			
NO.	Δ	RADIUS	LENGTH TANGENT
C-9	55°04'55"	133.33	30.03
C-10	61°49'51"	37.22	53.15

APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL DATED DEC 24 2009 FILE # 19-2282 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED PLANS MUST BE AT CONSTRUCTION SITE.

REVISIONS

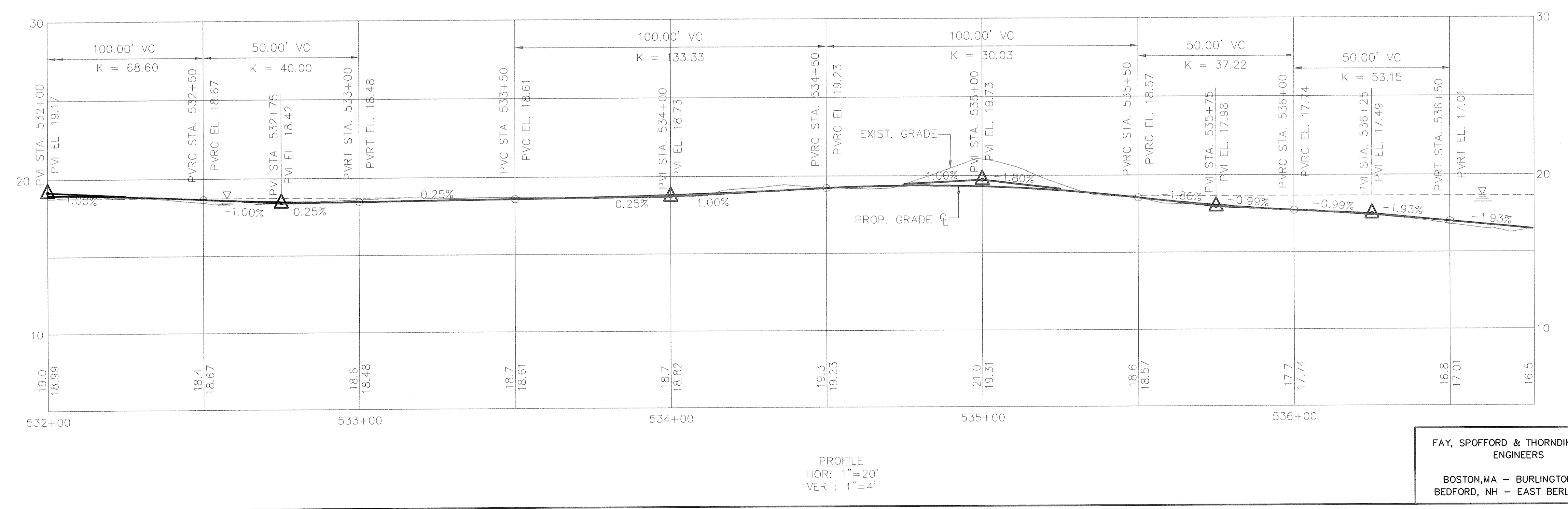
NO	DATE	BY

W. Joseph Connor
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

NORTHWEST BIKE TRAIL/
WOONASQUATUCKET RIVER BIKEWAY
PROVIDENCE, RHODE ISLAND

LANDSCAPE PLAN NO. 4

CHECKED BY _____ DATE _____ SCALE AS NOTED



FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS
BOSTON, MA - BURLINGTON, MA
BEDFORD, NH - EAST BERLIN, CT

PROFILE
HOR: 1"=20'
VERT: 1"=4'

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