

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	RI	Environment	2018	44	44

INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	STANDARD PLAN SYMBOLS, LEGEND AND NOTES
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10-44	GENERAL PLANS, DRAINAGE AND UTILITY 1-35

STATE OF RHODE ISLAND



DEPARTMENT OF TRANSPORTATION

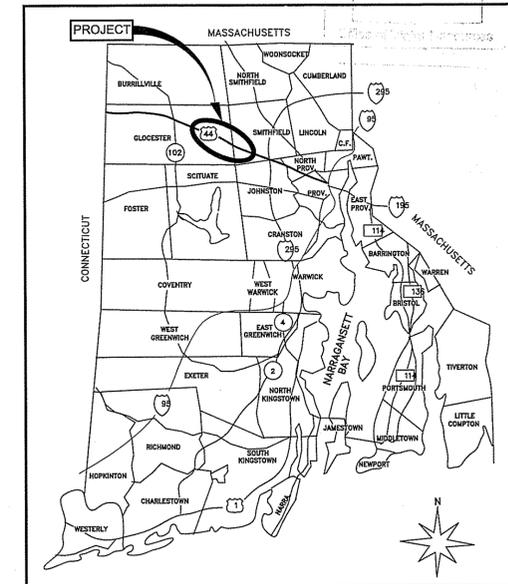
PLAN OF PROPOSED STATE HIGHWAY IMPROVEMENTS U.S. ROUTE 44 (PUTNAM PIKE) CONTRACT 3B

R.I. CONTRACT NO. 2018-CH-064 F.A. PROJECT NO.

RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
TOWNS OF GLOCESTER AND SMITHFIELD
3.75 MILES

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED AUGUST 2013, WITH ALL REVISIONS AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.



LOCATION MAP
SCALE: 1"=8 MILES

DESIGN DESIGNATION

2016 AADT PUTNAM PIKE
12,700 - 13,550 V.P.D.

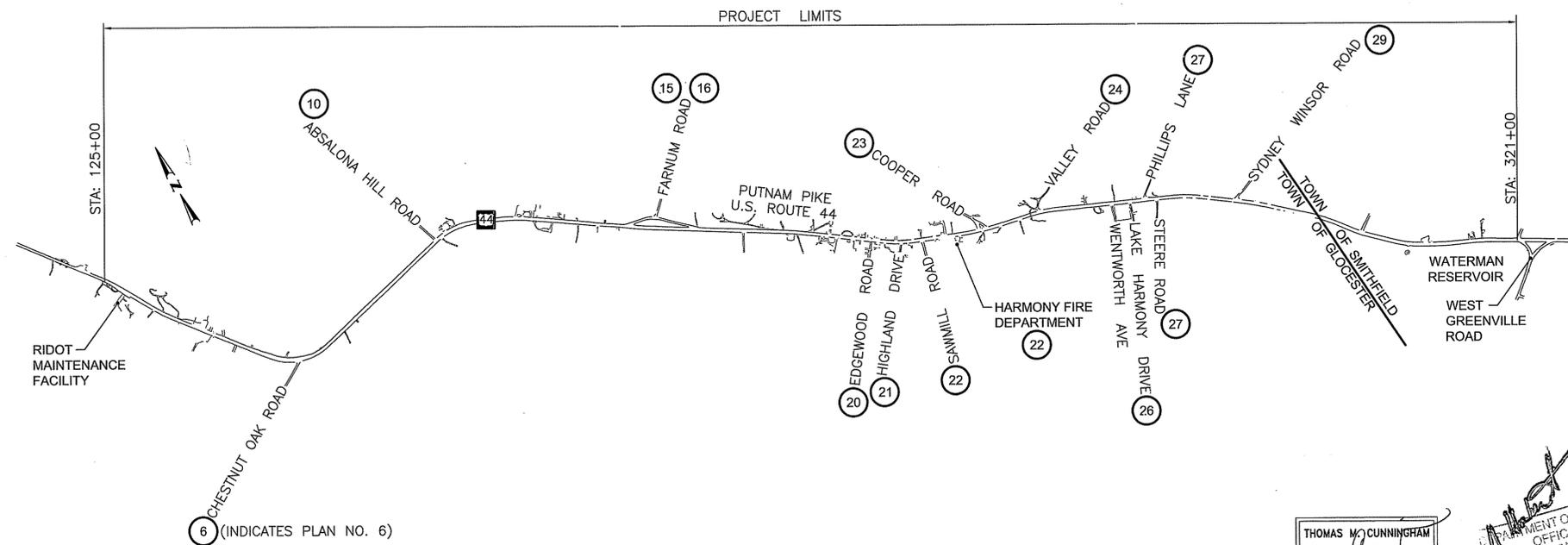
SPEED LIMIT (STC)

PUTNAM PIKE

45 MPH 200' EAST OF ACOTE FIELD
TO 0.3 MILES WEST OF SAWMILL ROAD, GLOCESTER

35 MPH 0.3 MILES WEST OF SAW MILL ROAD
TO AUSTIN AVENUE, SMITHFIELD

Environmental Management
JUL 25 2018
Office of Water Resources



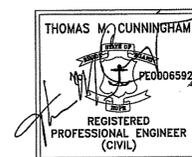
LAYOUT PLAN
SCALE: 1"=1000'

SCALES OF DRAWINGS

Plans	1 inch = 20 feet
Profiles	1 inch = 20 feet Horizontal
Profiles	1 inch = 4 feet Vertical
Cross Sections	1 inch = 4 feet Horizontal
Cross Sections	1 inch = 4 feet Vertical

BASE OF LEVELS

NAVD 1988 VERTICAL
RI PLANE COORDINATE SYSTEM
NAD 1927 HORIZONTAL



COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

APPROVED
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
OCT 18 2018 FILE # 18-011
UNAPPROVED CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

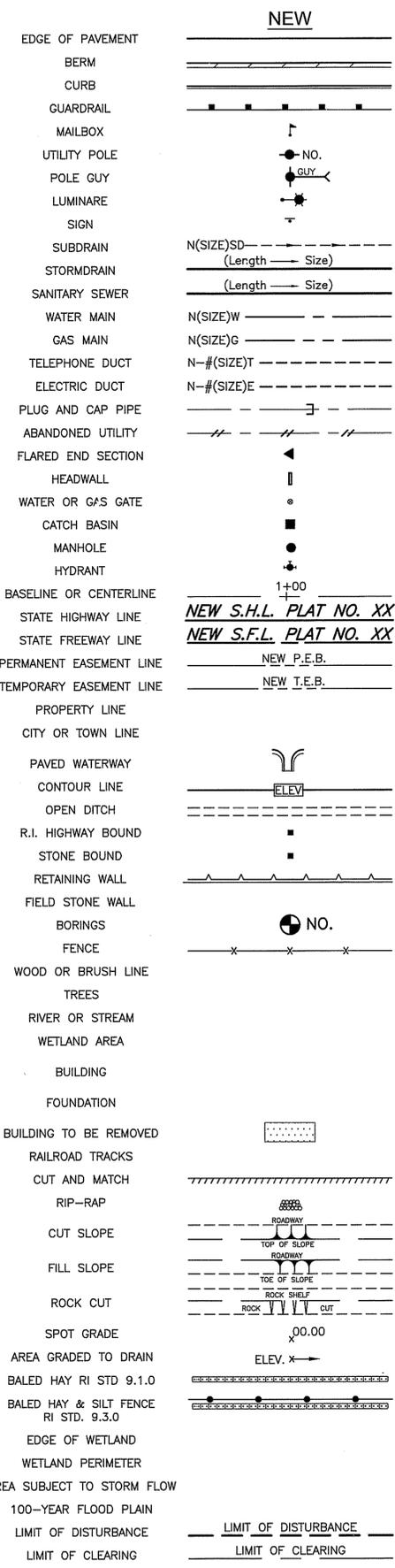
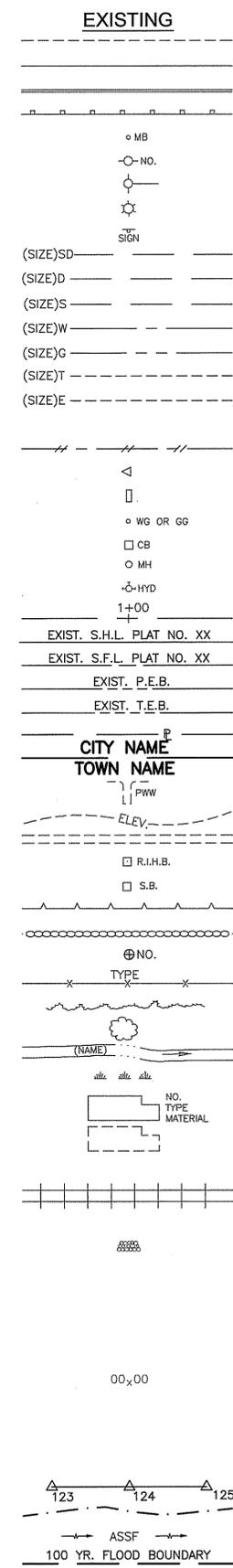
**RIDEM SUBMISSION
JULY 13, 2018**

R.I. DEPARTMENT OF TRANSPORTATION	
APPROVED	
ADMINISTRATOR, PROJECT MANAGEMENT	DATE
APPROVED	
CHIEF ENGINEER OF INFRASTRUCTURE	DATE
APPROVED	
DIRECTOR	DATE
US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ADMINISTRATOR	DATE

Contract Number 2018-CH-064
Number of Sheet 1
Total Sheets 44



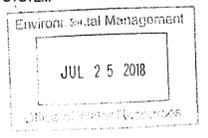
Approved Plans DOT-RI-44 18-0197



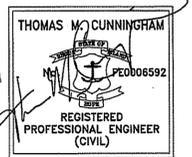
- 1.1.0 UNDERDRAIN
- 1.3.0 CONCRETE CONNECTING COLLAR
- 2.1.0 CONCRETE HEADWALLS FOR PIPE CULVERTS
- 2.2.0 STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS
- 2.3.0 (DIA.) PRECAST CONCRETE FLARED END SECTION
- 3.2.0 BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE
- 3.2.1 (DIA.) BRICK/SOLID BLOCK 5'-0"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

- AB ADJUST CATCH BASIN TO GRADE
- ABM ADJUST CATCH BASIN TO MANHOLE
- AC ADJUST CURB STOP TO GRADE
- AD ADJUST DRAINAGE MANHOLE TO GRADE
- AE ADJUST ELECTRIC MANHOLE TO GRADE
- AF ADJUST FRAME AND COVER TO GRADE
- AFG ADJUST FRAME AND GRATE TO GRADE
- AG ADJUST GAS GATE BOX TO GRADE
- AHH ADJUST HANDHOLE TO GRADE
- AS ADJUST SANITARY SEWER MANHOLE TO GRADE
- AT ADJUST TELEPHONE MANHOLE TO GRADE
- AW ADJUST WATER GATE BOX TO GRADE
- BCD BITUMINOUS CONCRETE DRIVEWAY
- BPS BUILD NEW STRUCTURE OVER EXISTING PIPE
- CCB CLEAN CATCH BASIN
- CCP CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES)
- CFP CLEAN AND FLUSH PIPE
- CG CLEARING AND GRUBBING
- CMH CLEAN MANHOLE
- CP (DEPTH) COLD PLANE
- CPP CUT AND PLUG PIPE (ALL TYPES, ALL SIZES)
- DB REMOVE AND DISPOSE BITUMINOUS CURB
- DC REMOVE AND DISPOSE CONCRETE CURB
- DCB REMOVE AND DISPOSE CATCH BASIN
- DDI REMOVE AND DISPOSE DROP INLET
- DF REMOVE AND DISPOSE FENCE
- DFC REMOVE AND DISPOSE FRAME AND COVER
- DFE REMOVE AND DISPOSE FLARED END SECTION
- DFG REMOVE AND DISPOSE FRAME AND GRATE
- DFH REMOVE AND DISPOSE FIRE HYDRANT
- DFP REMOVE AND DISPOSE FLEXIBLE PAVEMENT
- DG REMOVE AND DISPOSE GUARDRAIL
- DH REMOVE AND DISPOSE HEADWALL
- DHB REMOVE AND DISPOSE HIGHWAY BOUND
- DHH REMOVE AND DISPOSE HANDHOLE
- DL REMOVE AND DISPOSE LIGHT AND FOUNDATION
- DMB REMOVE AND DISPOSE MEDIAN BARRIER
- DMH REMOVE AND DISPOSE MANHOLE
- DMM REMOVE AND DISPOSE MEDIAN MARKER
- DOW REMOVE AND DISPOSE OBSERVATION WELL
- DP REMOVE AND DISPOSE PIPE
- DPB REMOVE AND DISPOSE PAVEMENT AND RIGID BASE
- DRB REMOVE AND DISPOSE RIGID BASE
- DS REMOVE AND DISPOSE SIGN
- DSS REMOVE AND DISPOSE TRAFFIC SIGNAL SYSTEM
- DSW REMOVE AND DISPOSE SIDEWALK
- DTD REMOVE AND DISPOSE TELEPHONE DUCT BANKS
- DLP REMOVE AND DISPOSE UTILITY POLE
- DWW REMOVE AND DISPOSE PAVED WATERWAY
- FF FILTER FABRIC RIPRAP FLARED END UNDERLAYMENT
- GET FLARED GUARDRAIL END TREATMENT
- IA IMPACT ATTENUATOR
- IDL IMPERVIOUS DITCH LINER
- LOD LIMIT OF DISTURBANCE
- LOR LIMIT OF REGRADING
- LS 4" LOAM AND SEED

- NFH NEW FIRE HYDRANT WITH GATE VALVE
- NIC NOT IN THIS CONSTRUCTION CONTRACT
- NWB FURNISH AND INSTALL NEW WATER GATE VALVE BOX
- NWWB 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
- TB CONCRETE THRUST BLOCK
- TEP TIE EXISTING PIPE INTO NEW STRUCTURE
- TNP TIE NEW PIPE INTO EXISTING STRUCTURE
- TBT THRIE BEAM TRANSITION
- TBBC THRIE BEAM BRIDGE CONNECTION
- TT TREE TRIMMING
- WCM 4" WOOD CHIP MULCH
- 4DY 4" EPOXY RESIN PAVEMENT MARKINGS - DOUBLE YELLOW
- 6W 6" EPOXY RESIN PAVEMENT MARKINGS - WHITE
- 12W 12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
- 6WT 6" PREFORMED PATTERNED MARKING (HIGH PERFORMANCE TAPE)
- 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
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 AS SPECIFIED BY THE LETTER OF APPROVAL
 FILE # 18-011
 OCT 18 2018
 CHANGES ALL COVERED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



REVISIONS		
NO.	DATE	BY
1	6/07	TRB

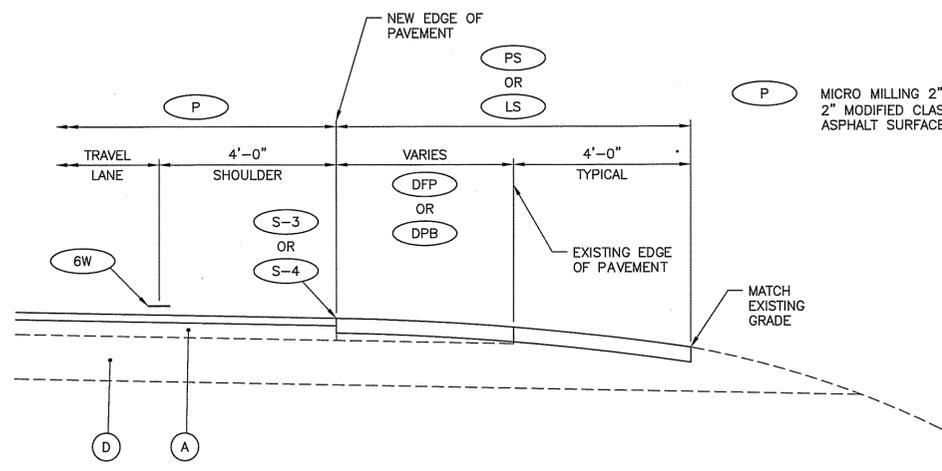
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

STANDARD PLAN SYMBOLS & STANDARD LEGEND

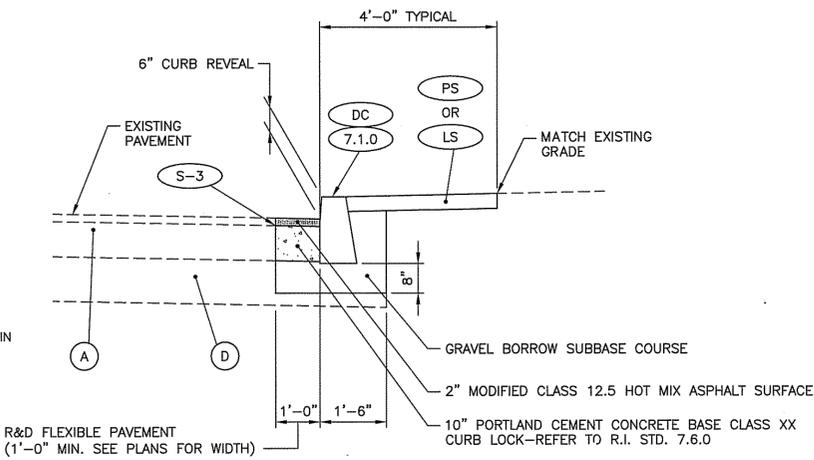
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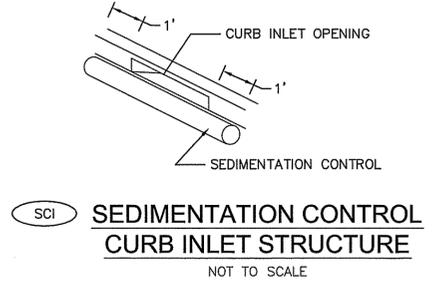


TYPICAL PAVEMENT NARROWING DETAIL
SCALE: 1/2"=1'-0"

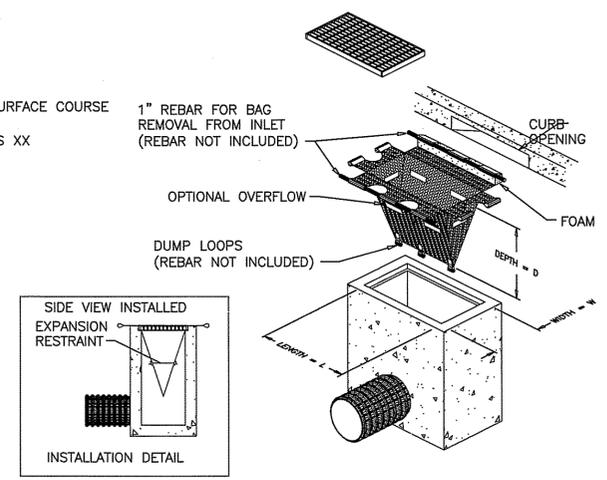
- EXISTING PAVEMENT LEGEND**
- (A) EXISTING 4 1/2" TO 9" ASPHALT PAVEMENT (PER PAVEMENT CORES)
 - (B) EXISTING 2" TO 3" ASPHALT PAVEMENT OVER EXISTING CEMENT CONCRETE BASE (PER PAVEMENT CORES)
 - (C) EXISTING 8"± CEMENT CONCRETE BASE COURSE TO REMAIN (PER PAVEMENT CORES)
 - (D) EXISTING GRAVEL BORROW SUBBASE COURSE TO REMAIN



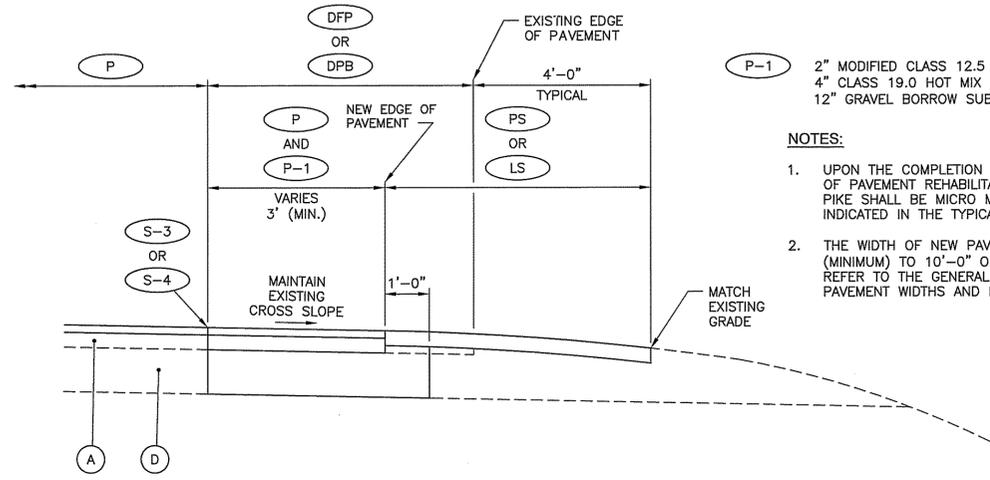
TYPICAL CURB REPLACEMENT DETAIL
SCALE: 1/2"=1'-0"



SC1 SEDIMENTATION CONTROL CURB INLET STRUCTURE
NOT TO SCALE

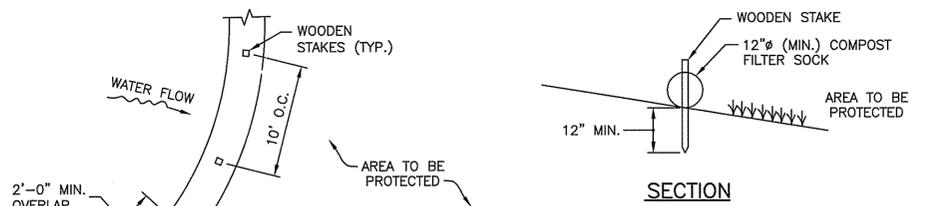


SCCB SEDIMENTATION CONTROL - CATCH BASIN
NOT TO SCALE



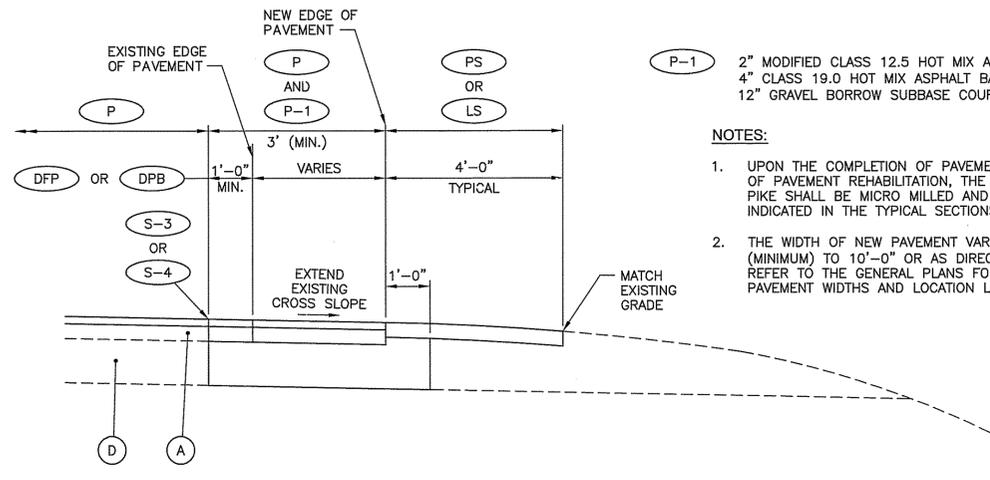
TYPICAL EDGE OF PAVEMENT REHABILITATION DETAIL
SCALE: 1/2"=1'-0"

- NOTES:**
- UPON THE COMPLETION OF PAVEMENT WIDENING AND EDGE OF PAVEMENT REHABILITATION, THE ENTIRE WIDTH OF PUTNAM PIKE SHALL BE MICRO MILLED AND RESURFACED AS INDICATED IN THE TYPICAL SECTIONS.
 - THE WIDTH OF NEW PAVEMENT VARIES FROM 3'-0" (MINIMUM) TO 10'-0" OR AS DIRECTED BY THE ENGINEER. REFER TO THE GENERAL PLANS FOR REHABILITATION PAVEMENT WIDTHS AND LOCATION LIMITS.



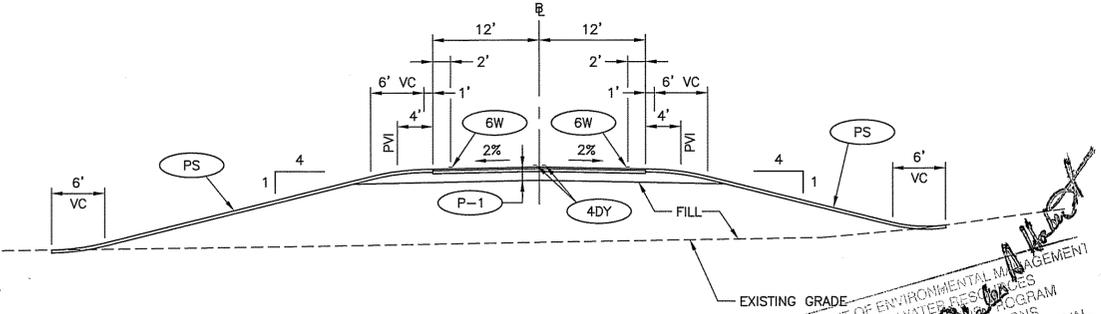
CFS COMPOST FILTER SOCK
NOT TO SCALE

- NOTES:**
- ALL MATERIAL TO MEET REQUIREMENTS OF SECTION 206 OF RI STANDARD SPECIFICATIONS.
 - COMPOST MATERIAL MUST BE ACCEPTED BY THE ENGINEER PRIOR TO PLACEMENT.

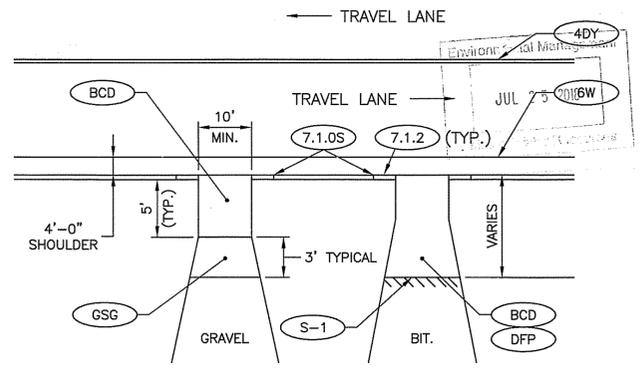


TYPICAL PAVEMENT WIDENING DETAIL
SCALE: 1/2"=1'-0"

- NOTES:**
- UPON THE COMPLETION OF PAVEMENT WIDENING AND EDGE OF PAVEMENT REHABILITATION, THE ENTIRE WIDTH OF PUTNAM PIKE SHALL BE MICRO MILLED AND RESURFACED AS INDICATED IN THE TYPICAL SECTIONS.
 - THE WIDTH OF NEW PAVEMENT VARIES FROM 3'-0" (MINIMUM) TO 10'-0" OR AS DIRECTED BY THE ENGINEER. REFER TO THE GENERAL PLANS FOR REHABILITATION PAVEMENT WIDTHS AND LOCATION LIMITS.

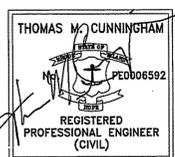


TYPICAL SECTION FARNUM ROAD
SCALE: 1"=10'



TYPICAL DRIVEWAY TREATMENT
NOT TO SCALE

- NOTE:**
- SEE RI STD. DETAIL 43.4.1 FOR DRIVEWAY DEVELOPMENT FOR 6'-0" CONCRETE TRANSITION CURB STD. 7.1.2.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WATER QUALITY PROGRAM
APPROVED WITH CONDITIONS
APPROVED IN THE LETTER OF APPROVAL
DATED OCT 18 2018 FILE # B-0117
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



REVISIONS		
NO.	DATE	BY

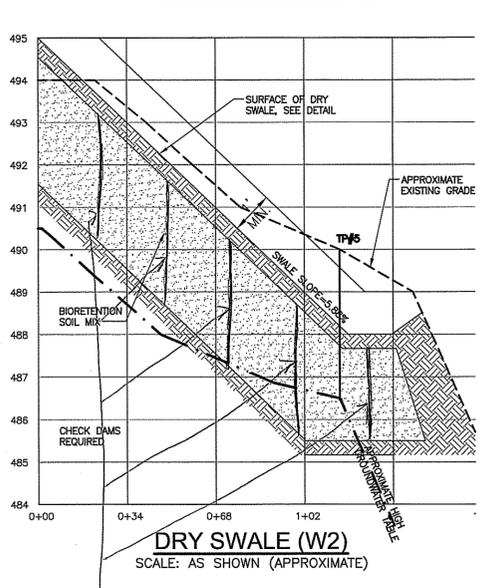
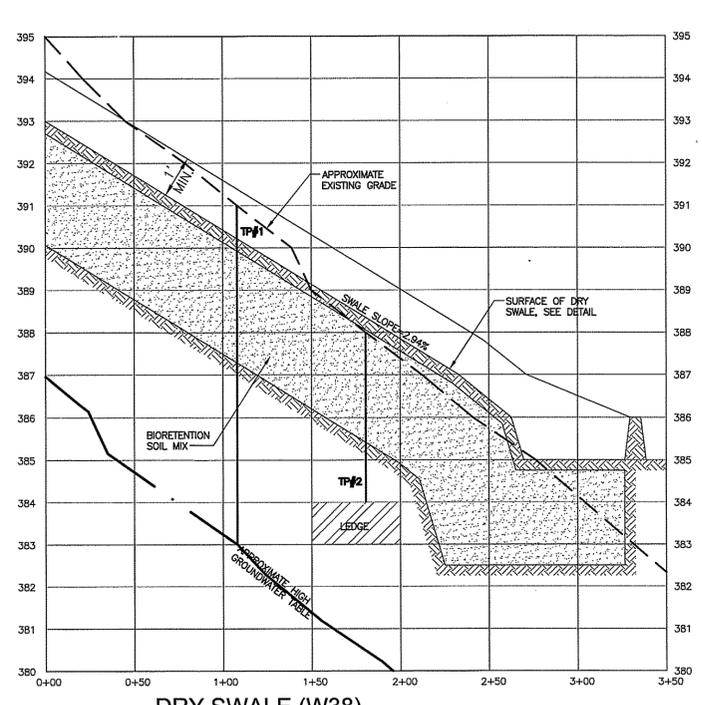
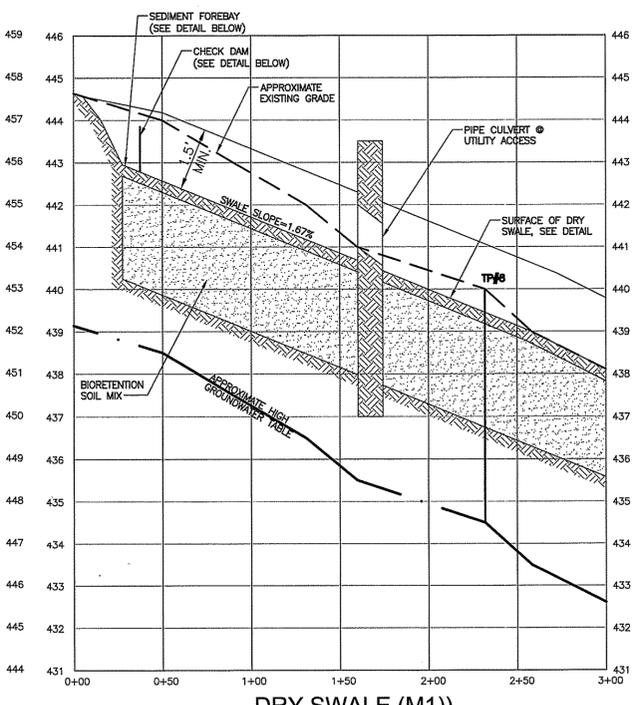
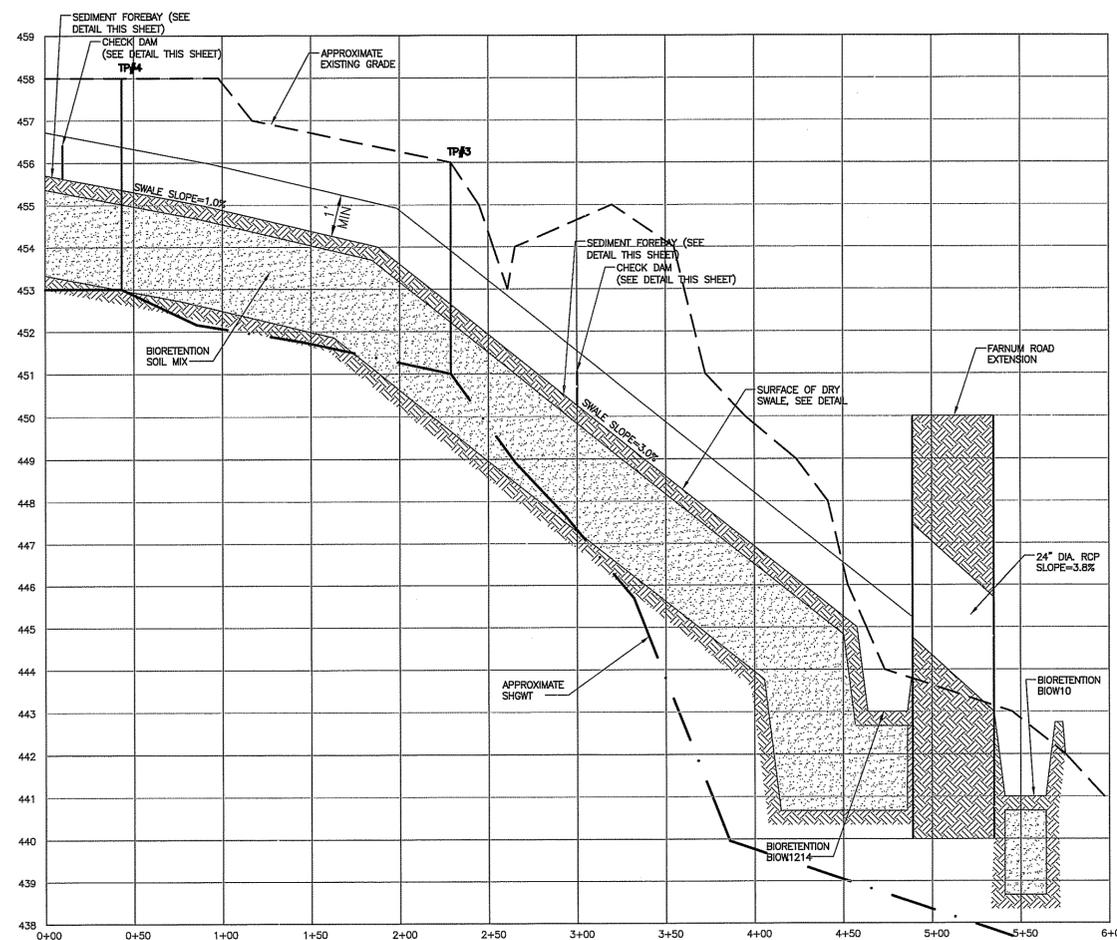
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD

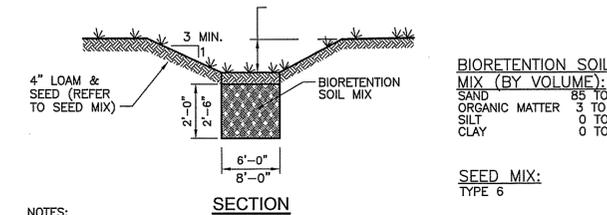
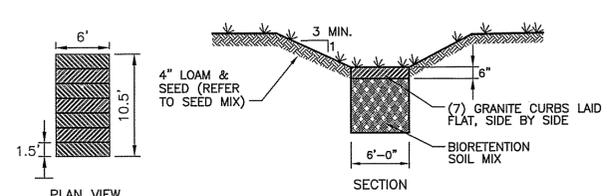
GLOCESTER AND SMITHFIELD RHODE ISLAND

TYPICAL SECTIONS AND DETAILS NO. 2

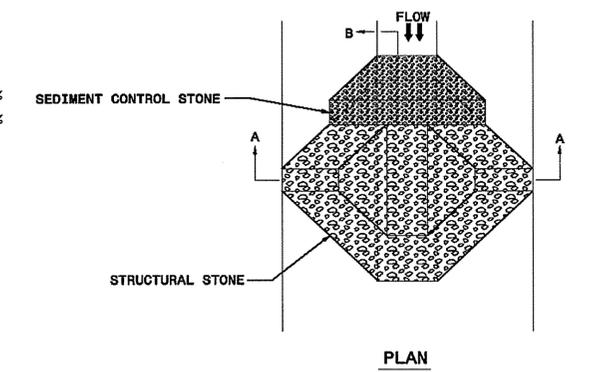
CHECKED BY _____ DATE _____ SCALE AS SHOWN



Provide Anti-Seep Barriers at 25' to 30' Intervals per RIDEM.

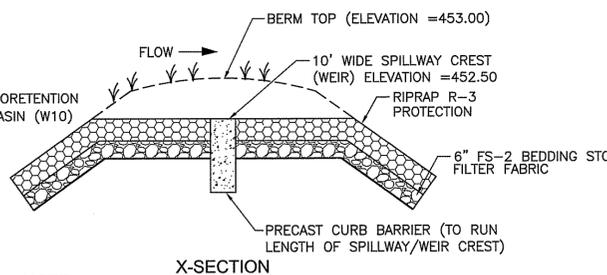


- NOTES:**
- THE BIORETENTION SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OTHER WOODY MATERIAL OVER 1" IN DIAMETER, OR BRUSH/SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE SOIL SHOULD BE IN LIFTS OF 12 TO 18 INCHES, LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET).
 - CONSTRUCT AND MAINTAIN IN ACCORDANCE WITH THE RHODE ISLAND STORMWATER DESIGN AND INSTALLATION STANDARDS MANUAL, DEC. 2010 AS AMENDED.
 - SIDE SLOPES SHALL BE 3:1 (HORIZONTAL:VERTICAL) OR FLATTER, SEE GRADING PLAN.

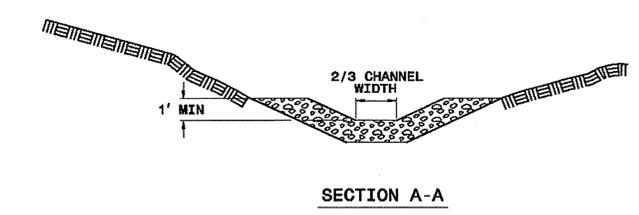


NOTE
USE CLASS B EROSION CONTROL STONE FOR STRUCTURAL STONE.
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.

DRY SWALE W/O DRAIN TYPICAL DETAIL
NOT TO SCALE

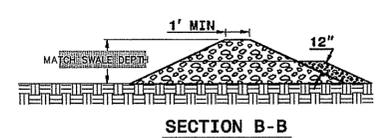


NOTE:
MULTIPLE CURB SECTIONS MAY BE NECESSARY TO SPAN WEIR WIDTH.



(Credit: USDA, NRCS)

SWALE CHECK DAM
NO SCALE



10' MAX. BETWEEN DAMS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 10 2018 FILE # 16-019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

NOTE:
1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

THOMAS W. CUNNINGHAM
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

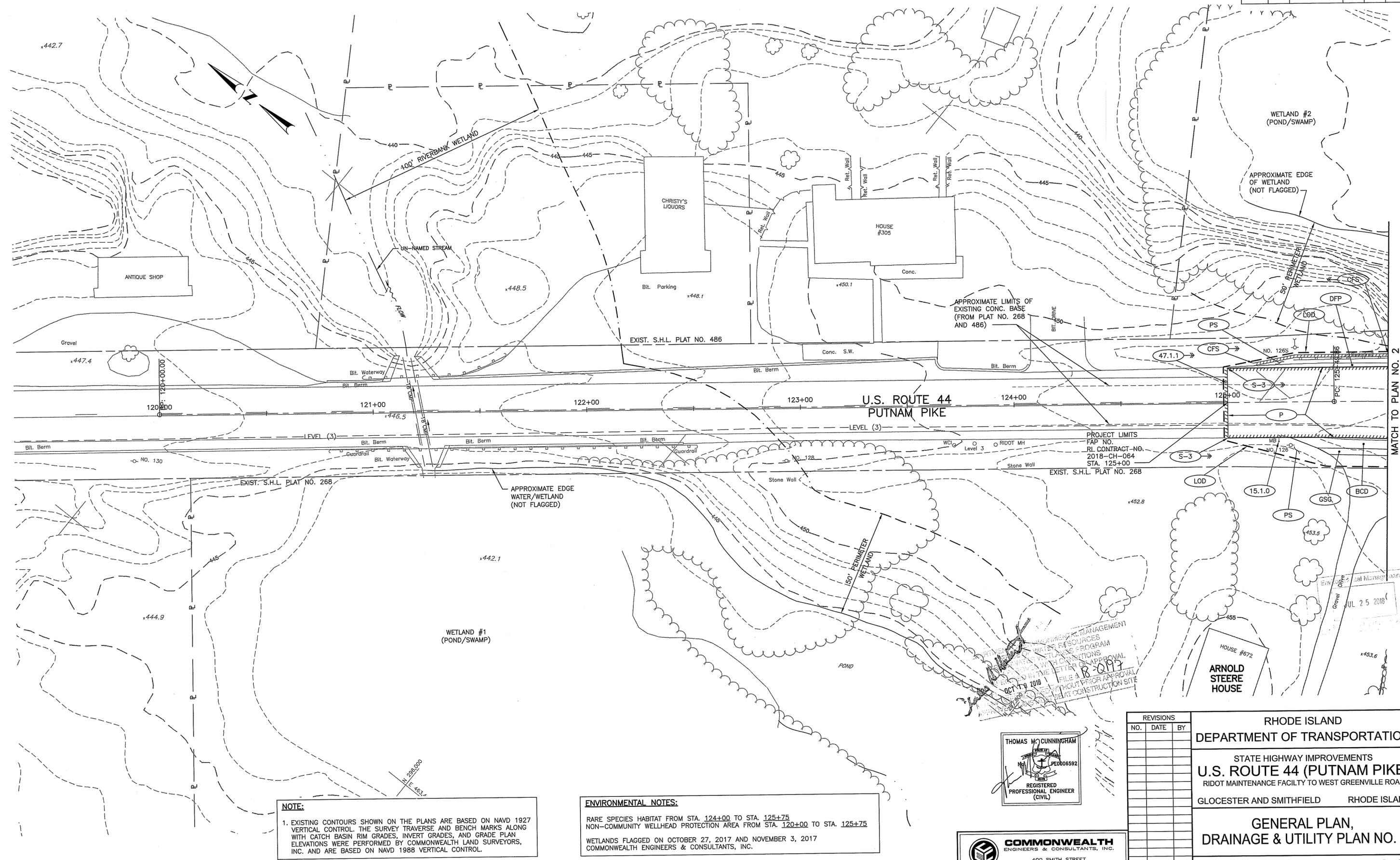
STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD

GLOCESTER AND SMITHFIELD RHODE ISLAND

SWALE DETAILS

CHECKED BY _____ DATE _____ SCALE AS SHOWN

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RI 02908



NOTE:

- EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:

RARE SPECIES HABITAT FROM STA. 124+00 TO STA. 125+75
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 120+00 TO STA. 125+75

WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

THOMAS W. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS	NO.	DATE	BY

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

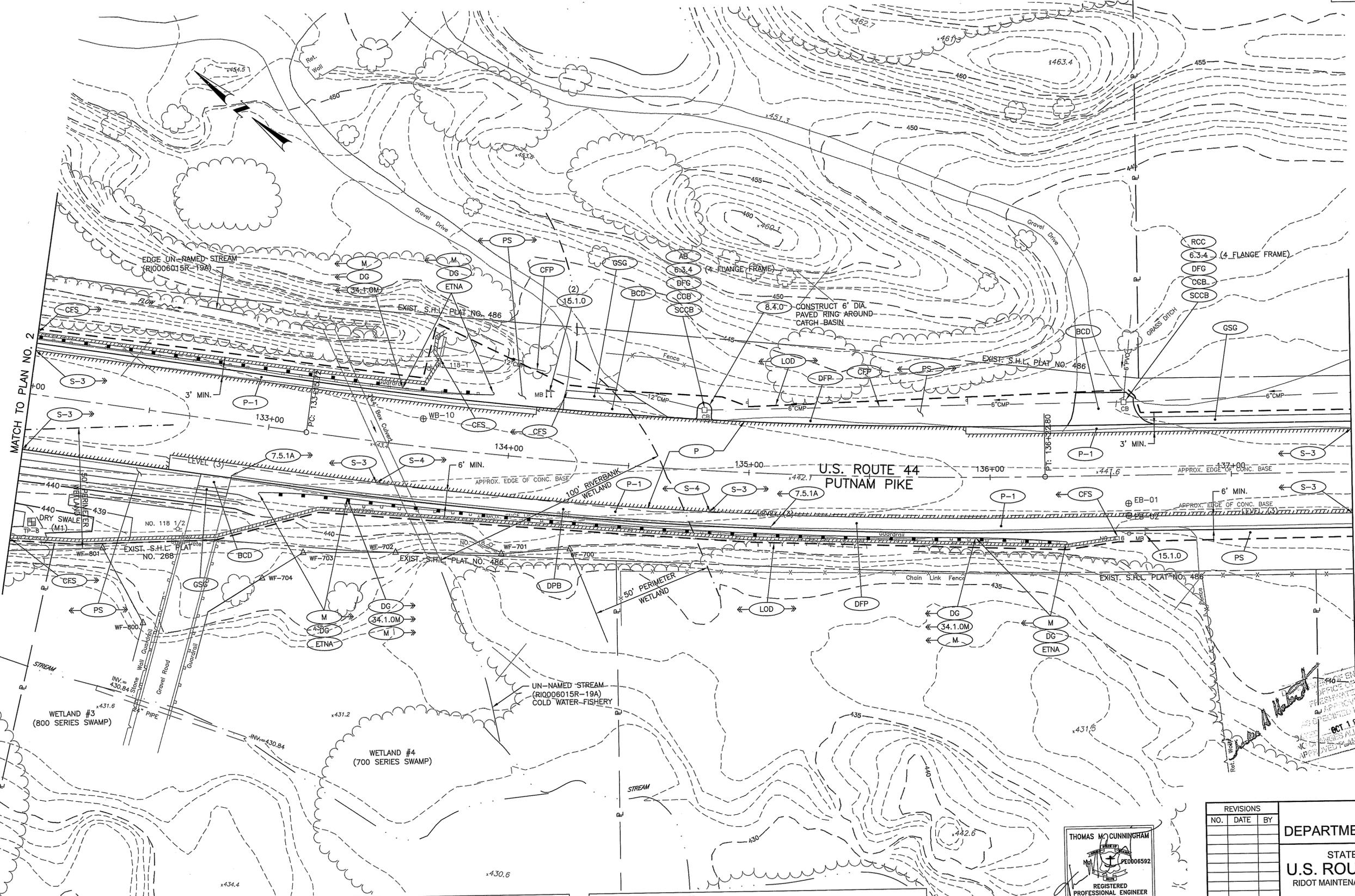
**GENERAL PLAN,
 DRAINAGE & UTILITY PLAN NO. 1**

CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018

MATCH TO PLAN NO. 2

JUL 25 2018
 Environmental Management

ENVIRONMENTAL MANAGEMENT
 WATER FIT SOURCES
 TRAILING PROGRAM
 WHICH CONDITIONS
 IN THE LETTER OF APPROVAL
 FILE # 18-097
 WITHOUT PRIOR APPROVAL
 AT CONSTRUCTION SITE
 OCT 19 2018



MATCH TO PLAN NO. 2

MATCH TO PLAN NO. 4

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 RARE SPECIES HABITAT FROM STA. 132+00 TO STA. 137+50
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 132+00 TO STA. 137+50
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

Environmental Management
 JUL 25 2018

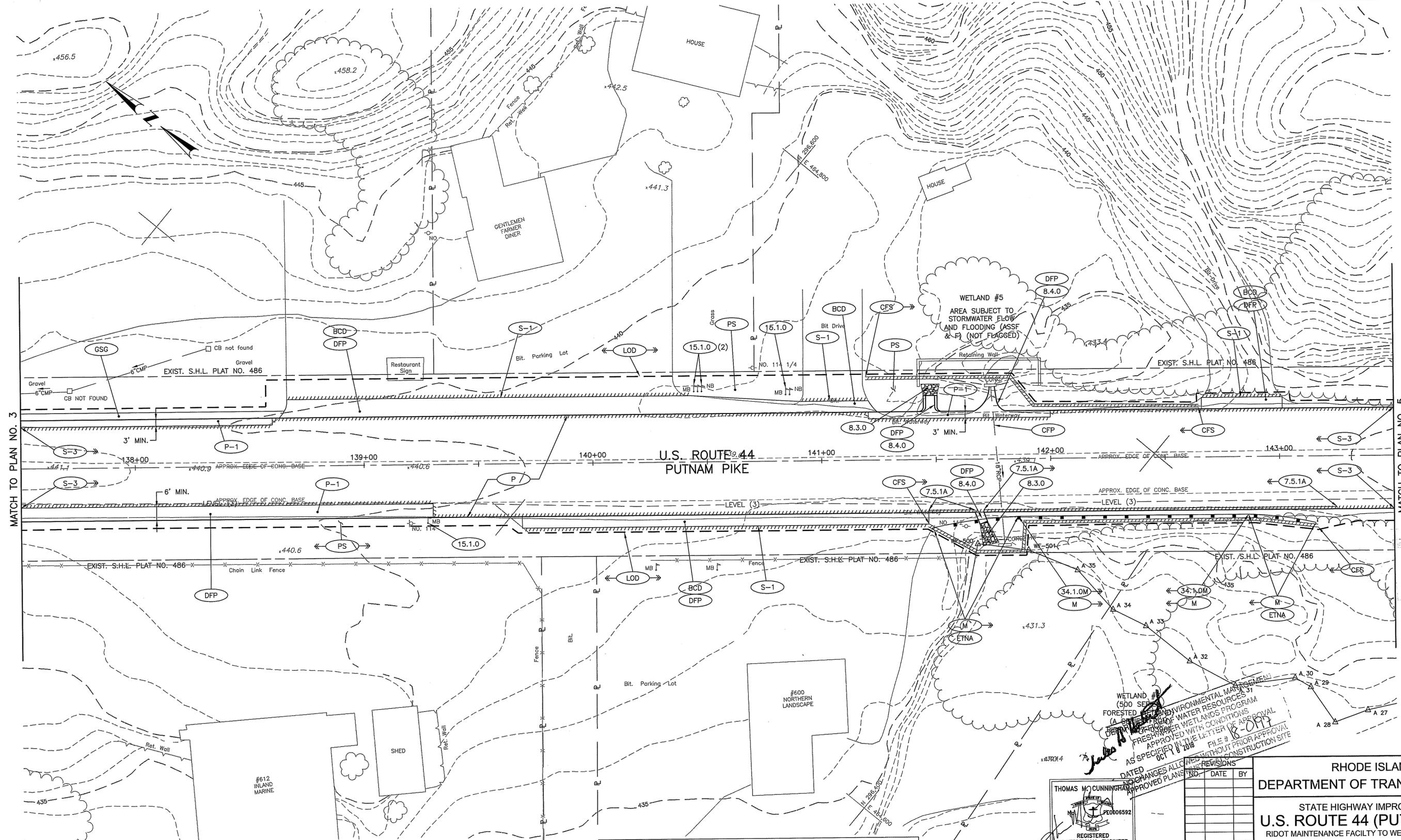
APPROVED FOR THE STATE OF RHODE ISLAND
 DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 DIVISION OF WATER RESOURCES
 PERMITTER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 FILE # 18-017
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 OCT 18 2019

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND
GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 3
 CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018



MATCH TO PLAN NO. 3

MATCH TO PLAN NO. 5

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 RARE SPECIES HABITAT FROM STA. 137+50 TO STA. 143+50
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 137+50 TO STA. 143+50
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

WETLAND #5 (500 SE)
 FORESTED WETLAND ENVIRONMENTAL MANAGEMENT PLAN
 APPROVED WITH LETTER OF APPROVAL
 FILE # 18-097
 AS SPECIFIED IN THE LETTER OF APPROVAL
 OCT 18 2018
 DATED 10/18/2018
 CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS NO. REVISIONS

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

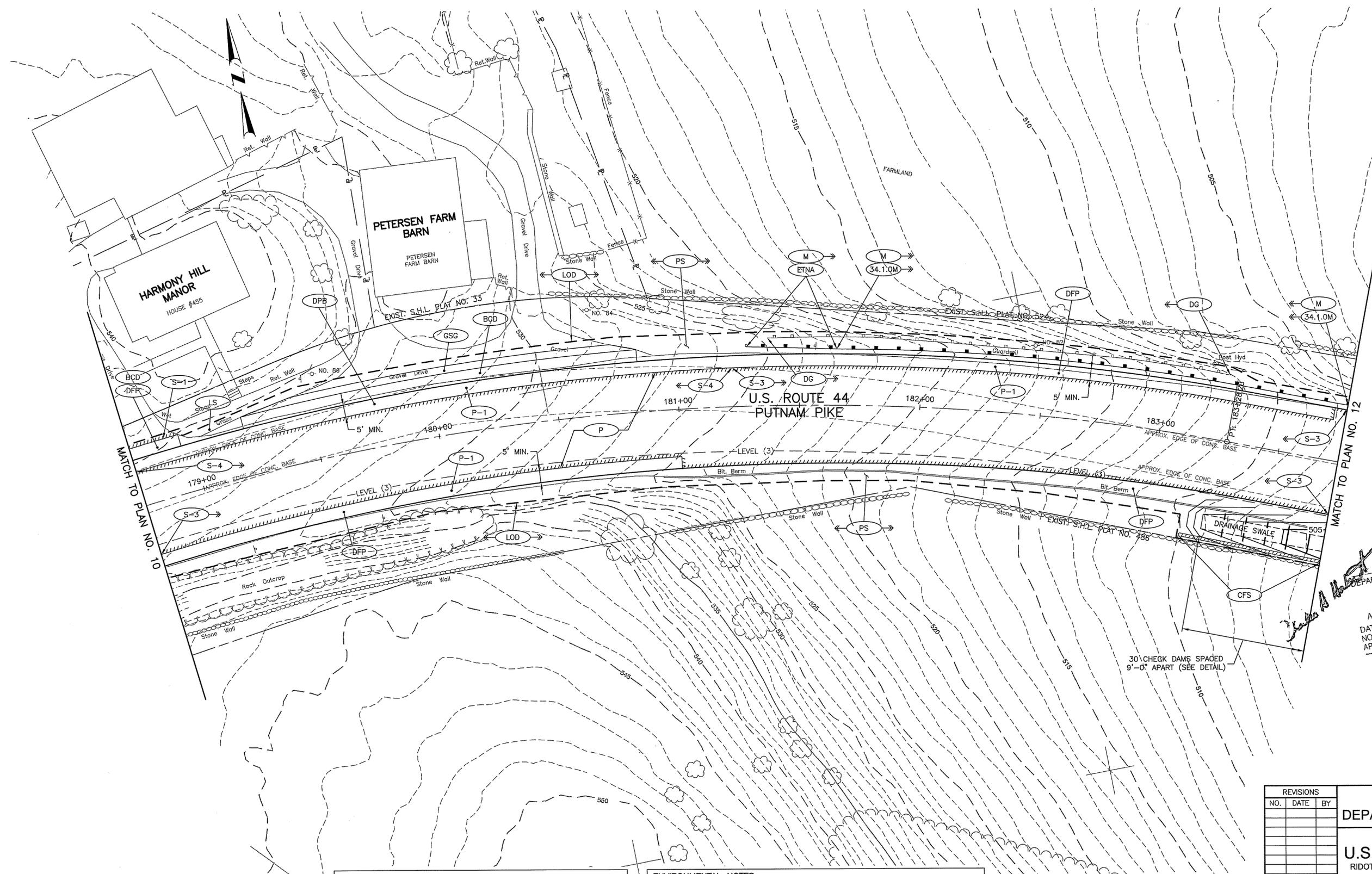


RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

**GENERAL PLAN,
 DRAINAGE & UTILITY PLAN NO. 4**

CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018

Environmental Management
 JUL 25 2018



Environmental Management
 JUL 25 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 18 2018 FILE # 18-0197
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 178+75 TO STA. 183+75
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

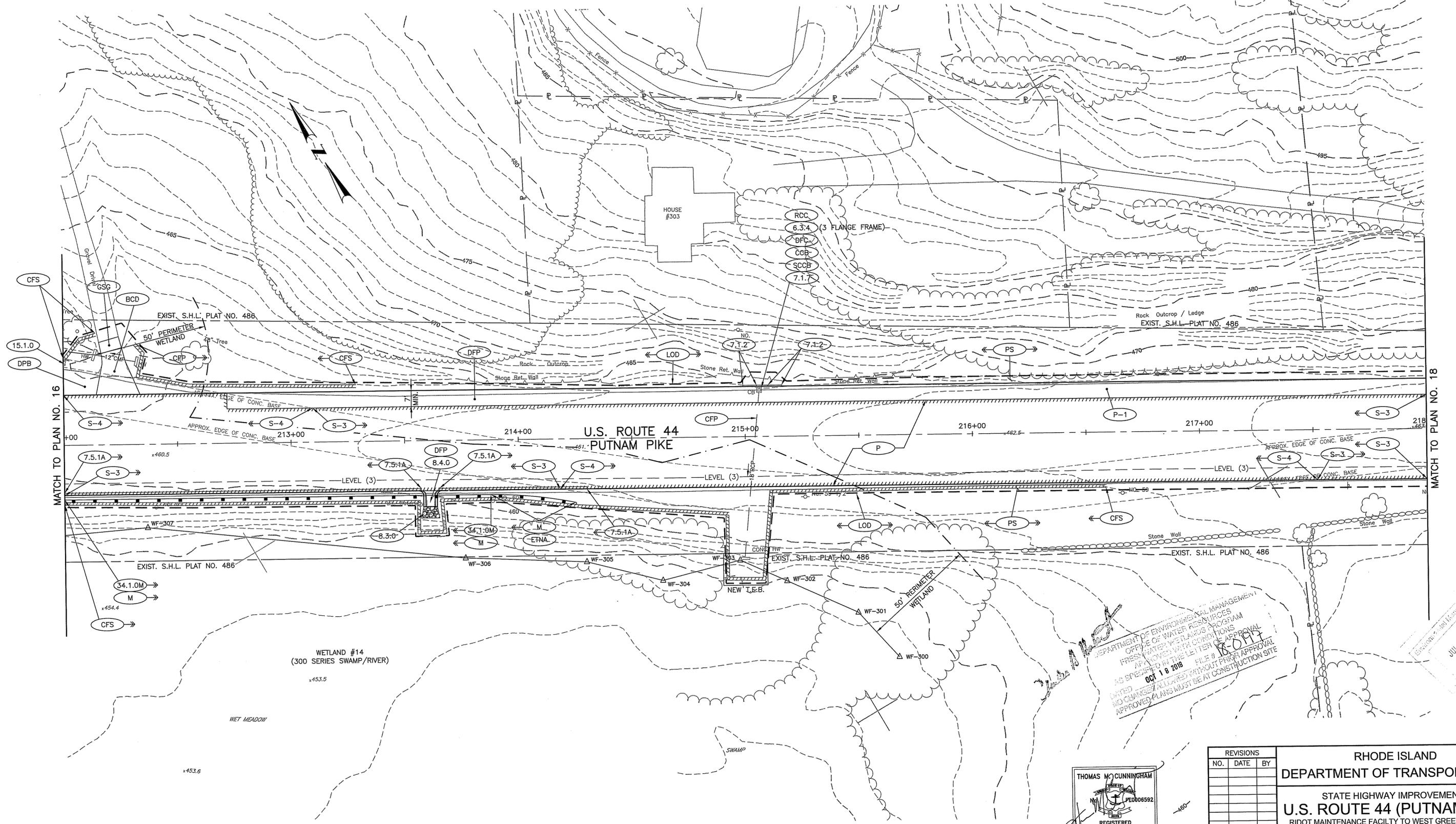
REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 11

CHECKED BY _____ DATE _____ SCALE 1"=20'

RIDEM SUBMISSION - JULY 13, 2018



MATCH TO PLAN NO. 16

MATCH TO PLAN NO. 18

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTE:
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESH WATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED _____ FILE # 18-0917
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 OCT 18 2018

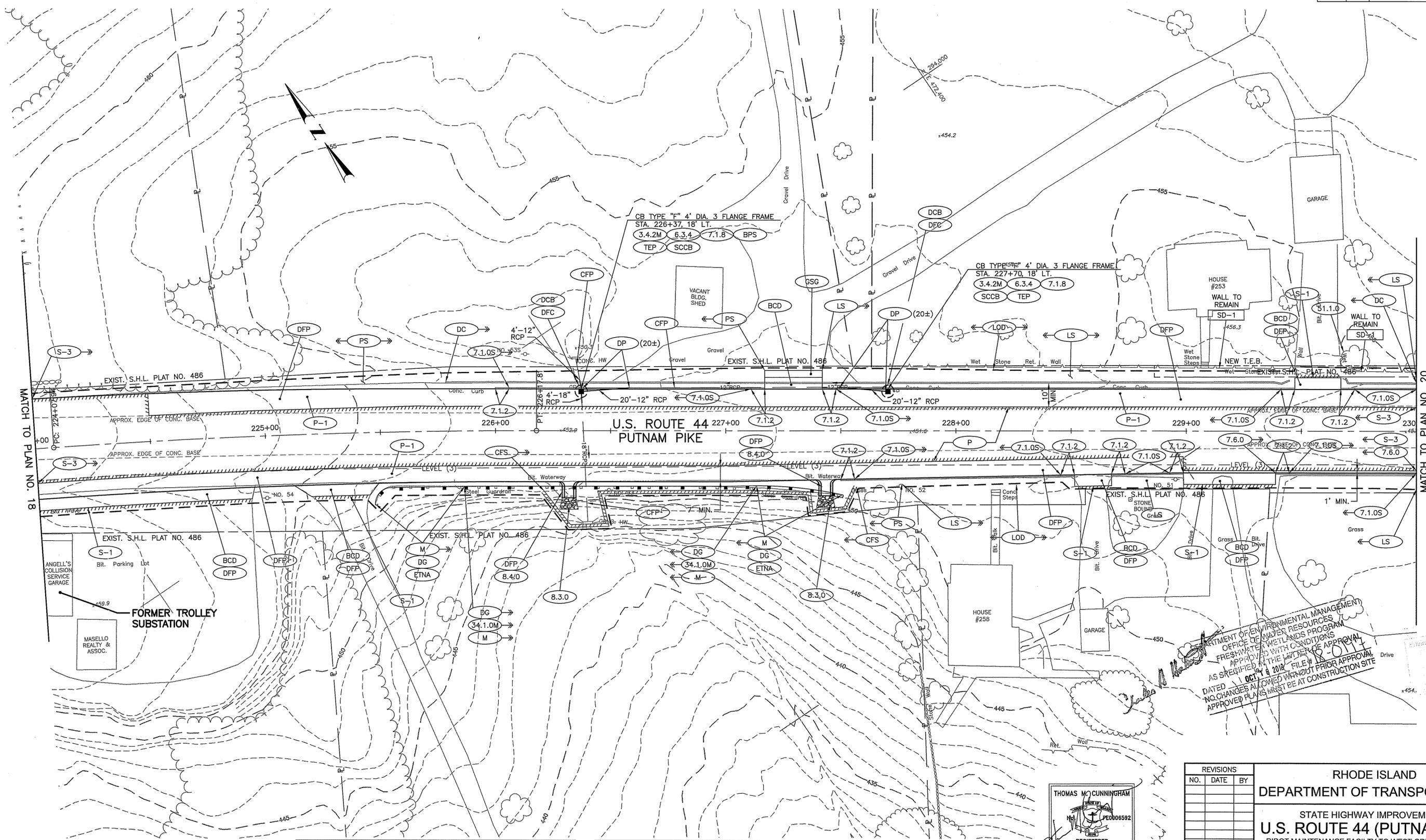
JUL 25 2018

THOMAS W. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND
GENERAL PLAN,
DRAINAGE & UTILITY PLAN NO. 17
 CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018



NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 225+00 TO STA. 230+00
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 10/18/2018 FILE # 18-011
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

JUL 25 2018

THOMAS W. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

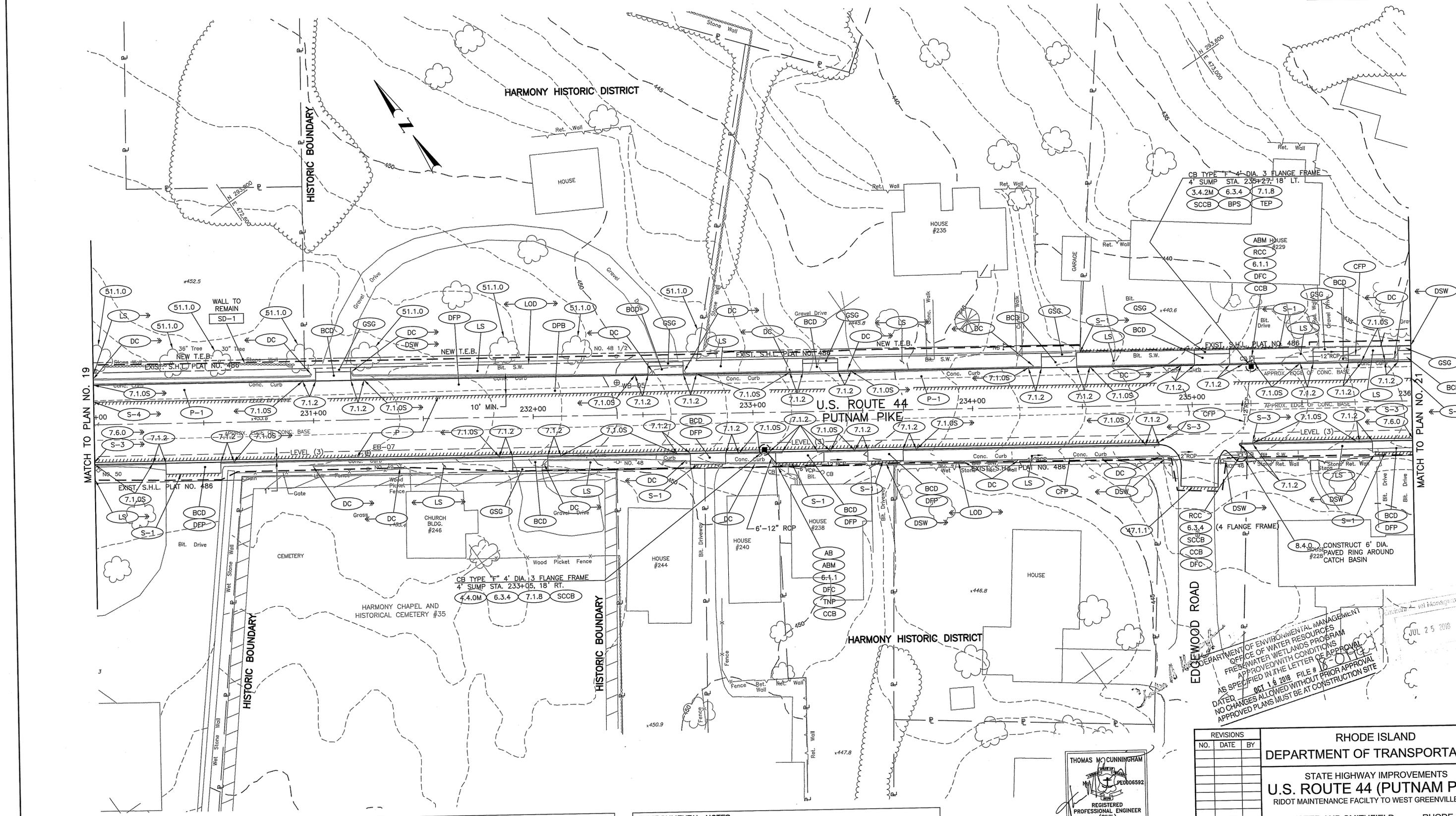
REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 19

CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 18 2018 FILE # 18-016
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

JUL 25 2018

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 230+00 TO STA. 236+00
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE00006592

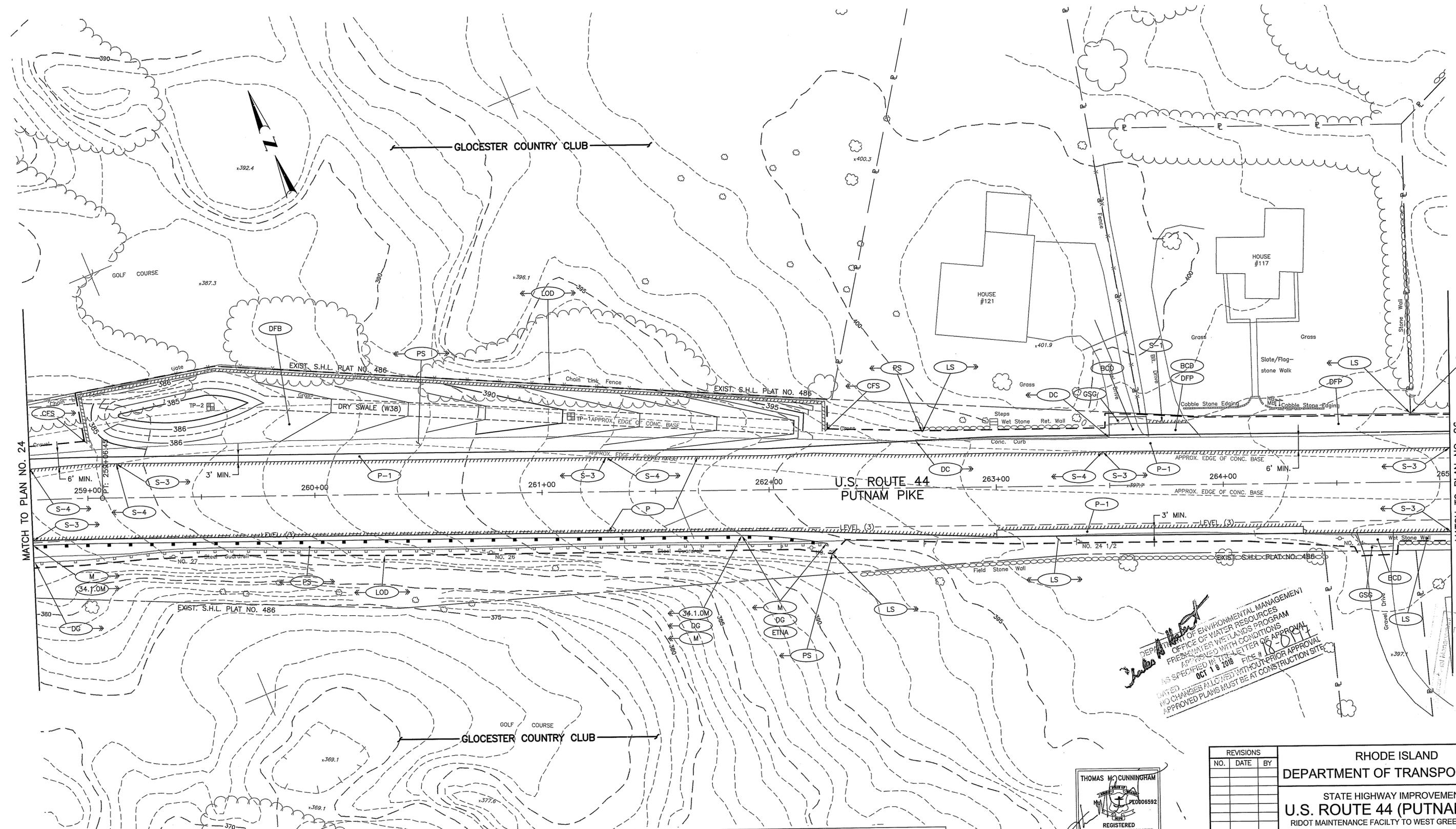
COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 20

CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018



MATCH TO PLAN NO. 24

MATCH TO PLAN NO. 26

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 258+75 TO STA. 265+00
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 APPROVED IN THE LETTER OF APPROVAL
 OCT 18 2018 FILE # 18-017
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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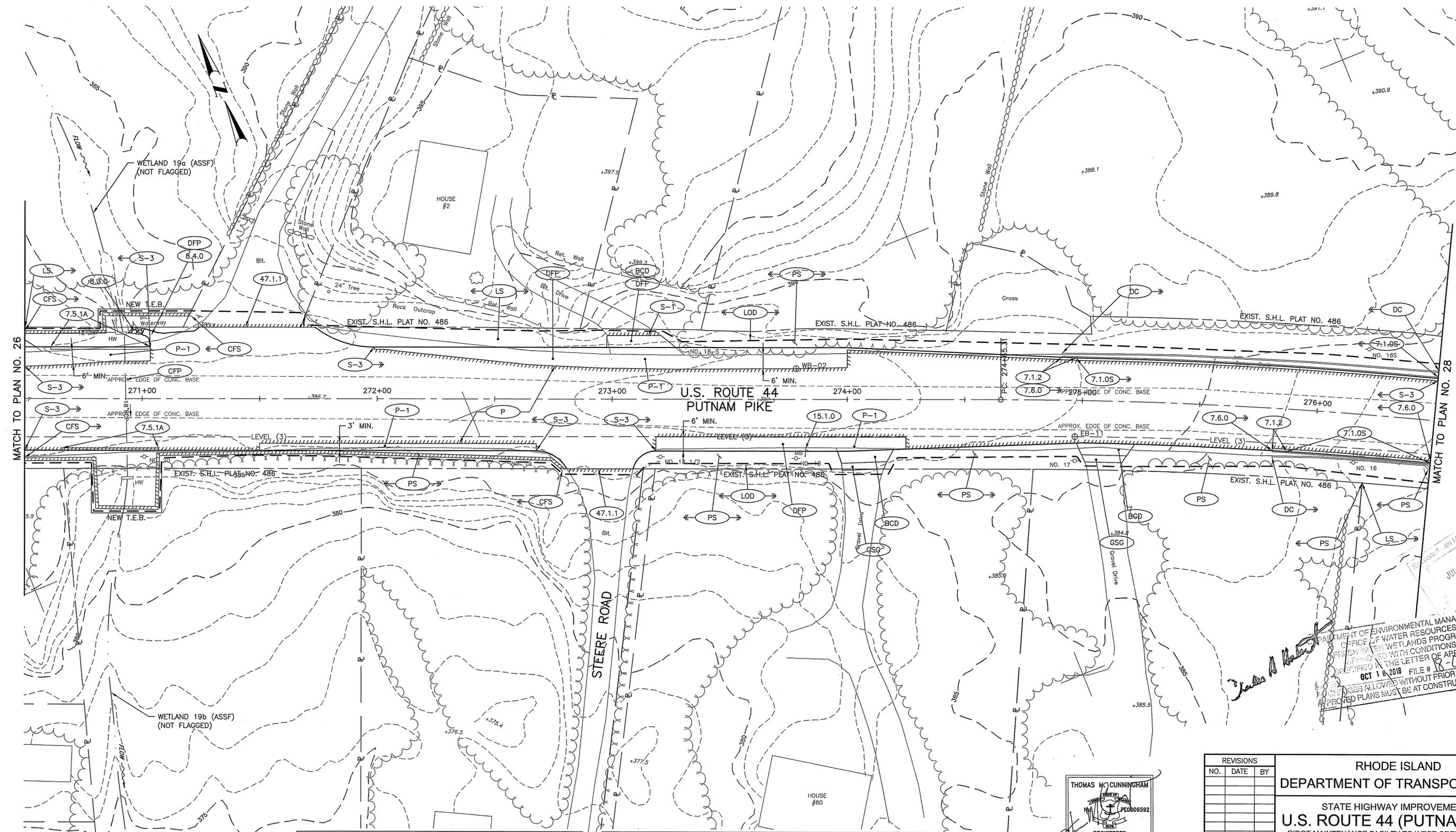
THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 P.E. 0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND
**GENERAL PLAN,
 DRAINAGE & UTILITY PLAN NO. 25**
 CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018

JUL 25 2018



MATCH TO PLAN NO. 26

MATCH TO PLAN NO. 28

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 270+50 TO STA. 276+50
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

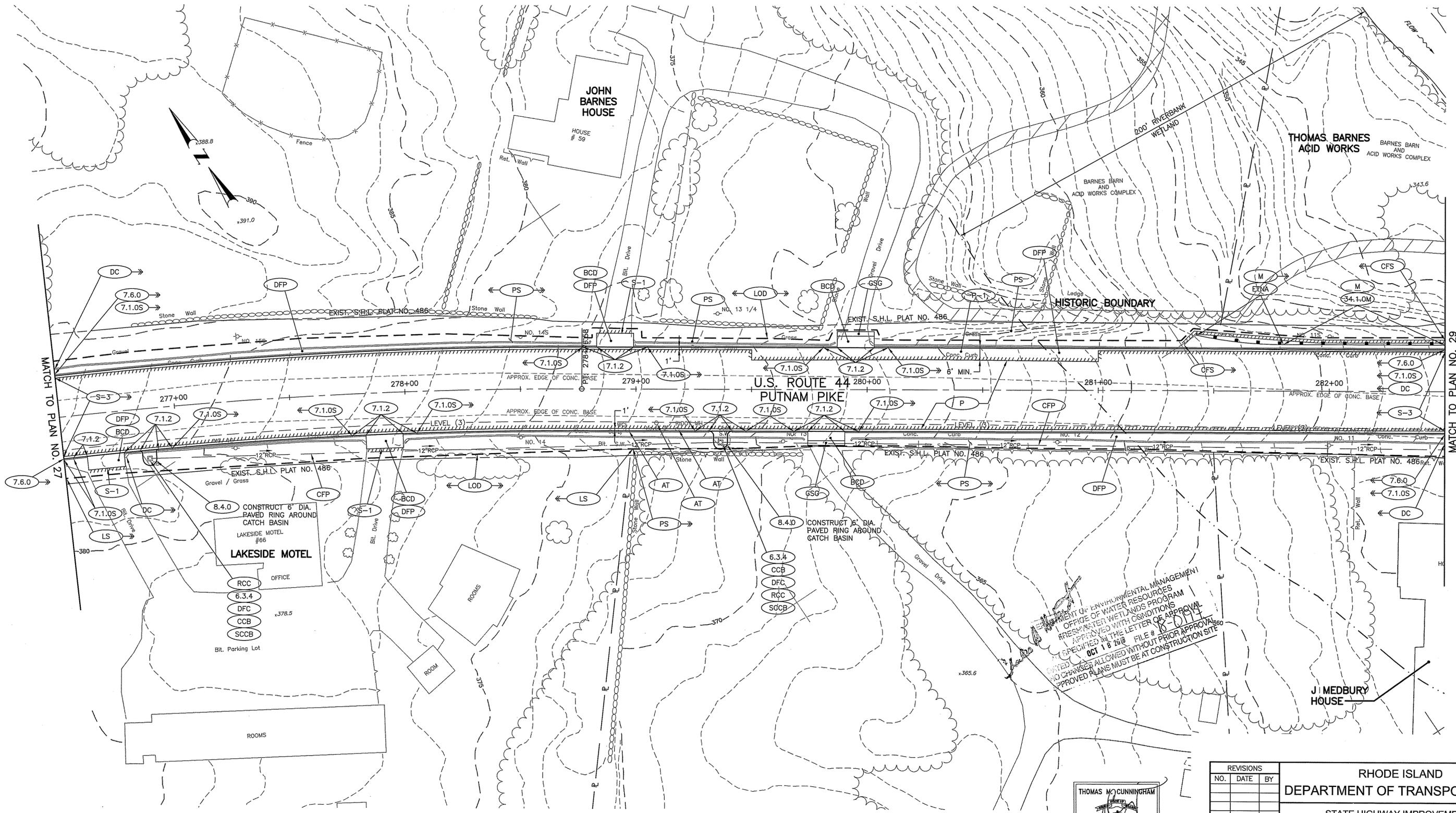
RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 27

CHECKED BY _____ DATE _____ SCALE 1"=20'
 RIDEM SUBMISSION - JULY 13, 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESH WATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 SPECIFIED IN THE LETTER OF APPROVAL
 OCT 16 2018 FILE # 18-0117
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

JUL 25 2018



NOTE:

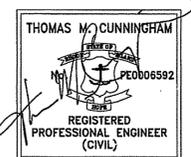
1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:

NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 276+50 TO STA. 282+50

WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
SPECIFIED IN THE LETTER OF APPROVAL
OCT 18 2018 FILE # 18-0114
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



REVISIONS		
NO.	DATE	BY

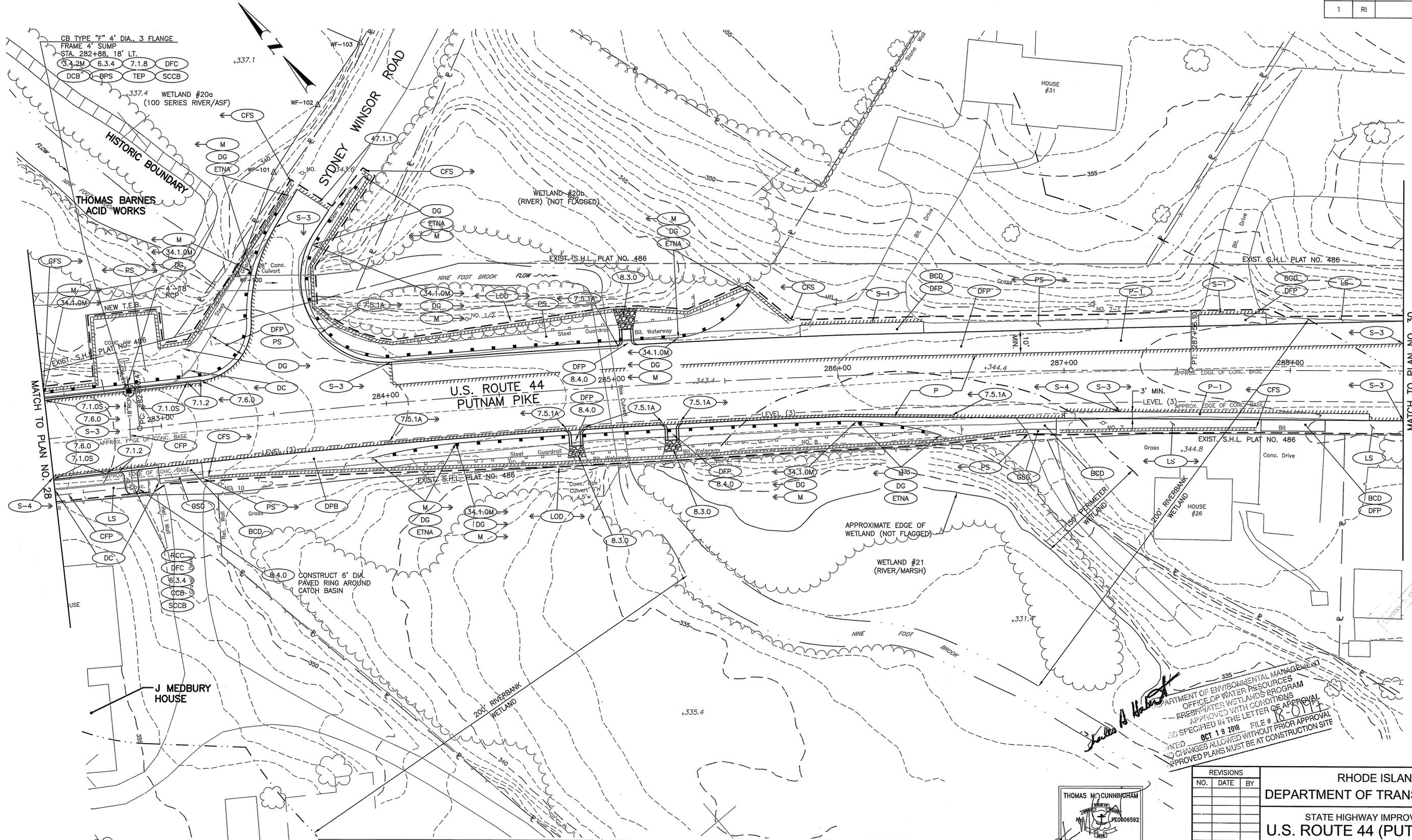
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD

GLOCESTER AND SMITHFIELD RHODE ISLAND

**GENERAL PLAN,
DRAINAGE & UTILITY PLAN NO. 28**

CHECKED BY _____ DATE _____ SCALE 1"=20'
RIDEM SUBMISSION - JULY 13, 2018



MATCH TO PLAN NO. 28

MATCH TO PLAN NO. 30

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 282+50 TO STA. 288+50
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 18 2018 FILE # 18-0194
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THOMAS M. CUNNINGHAM
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)
 PE0006592

COMMONWEALTH ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

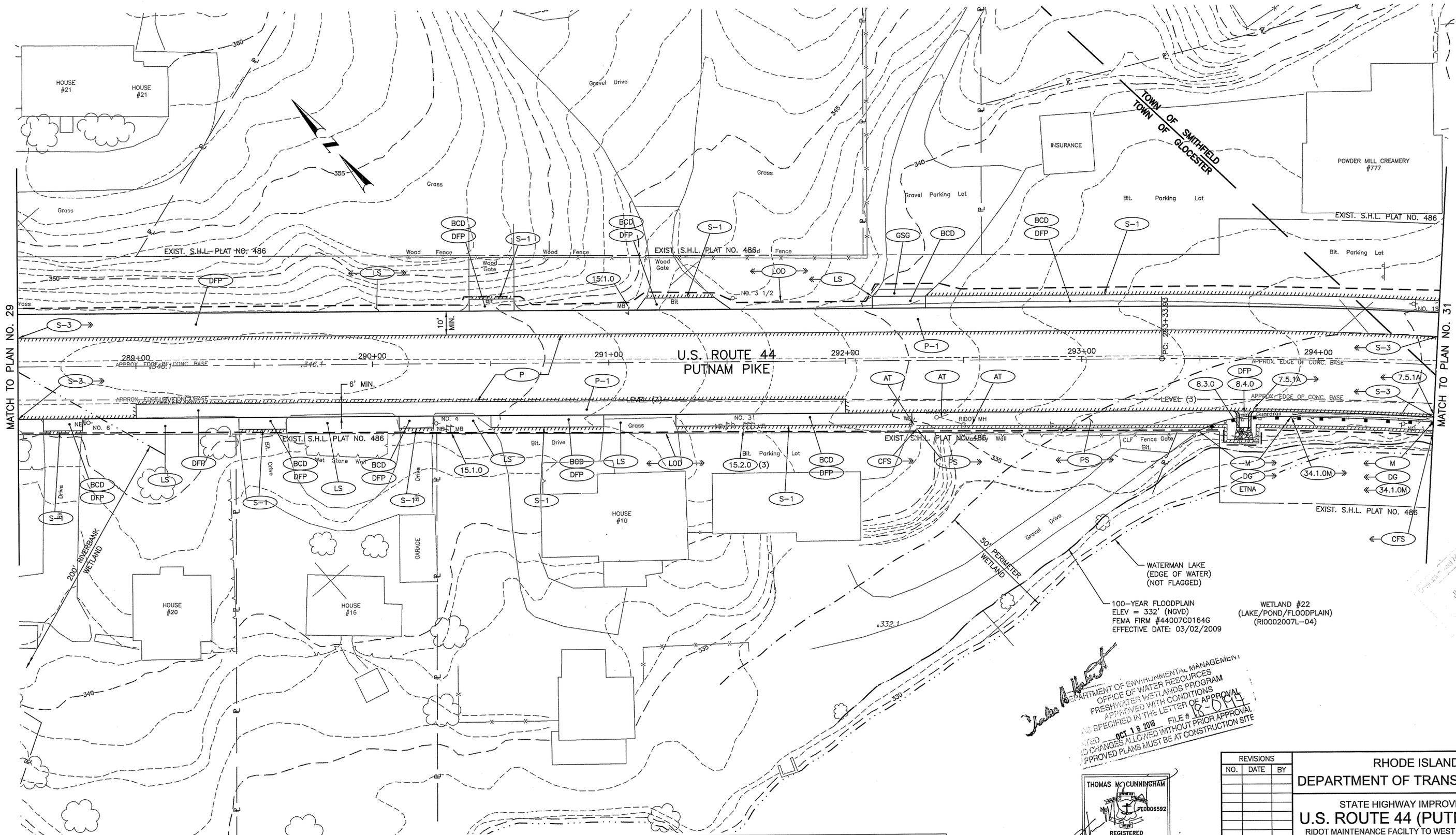
REVISIONS		
NO.	DATE	BY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN, DRAINAGE & UTILITY PLAN NO. 29

CHECKED BY _____ DATE _____ SCALE 1"=20'

RIDEM SUBMISSION - JULY 13, 2018



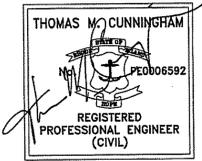
MATCH TO PLAN NO. 29

MATCH TO PLAN NO. 31

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

ENVIRONMENTAL NOTES:
 NON-COMMUNITY WELLHEAD PROTECTION AREA FROM STA. 288+50 TO STA. 294+50
 WETLANDS FLAGGED ON OCTOBER 27, 2017 AND NOVEMBER 3, 2017
 COMMONWEALTH ENGINEERS & CONSULTANTS, INC.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 19 2018 FILE # 18-014
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



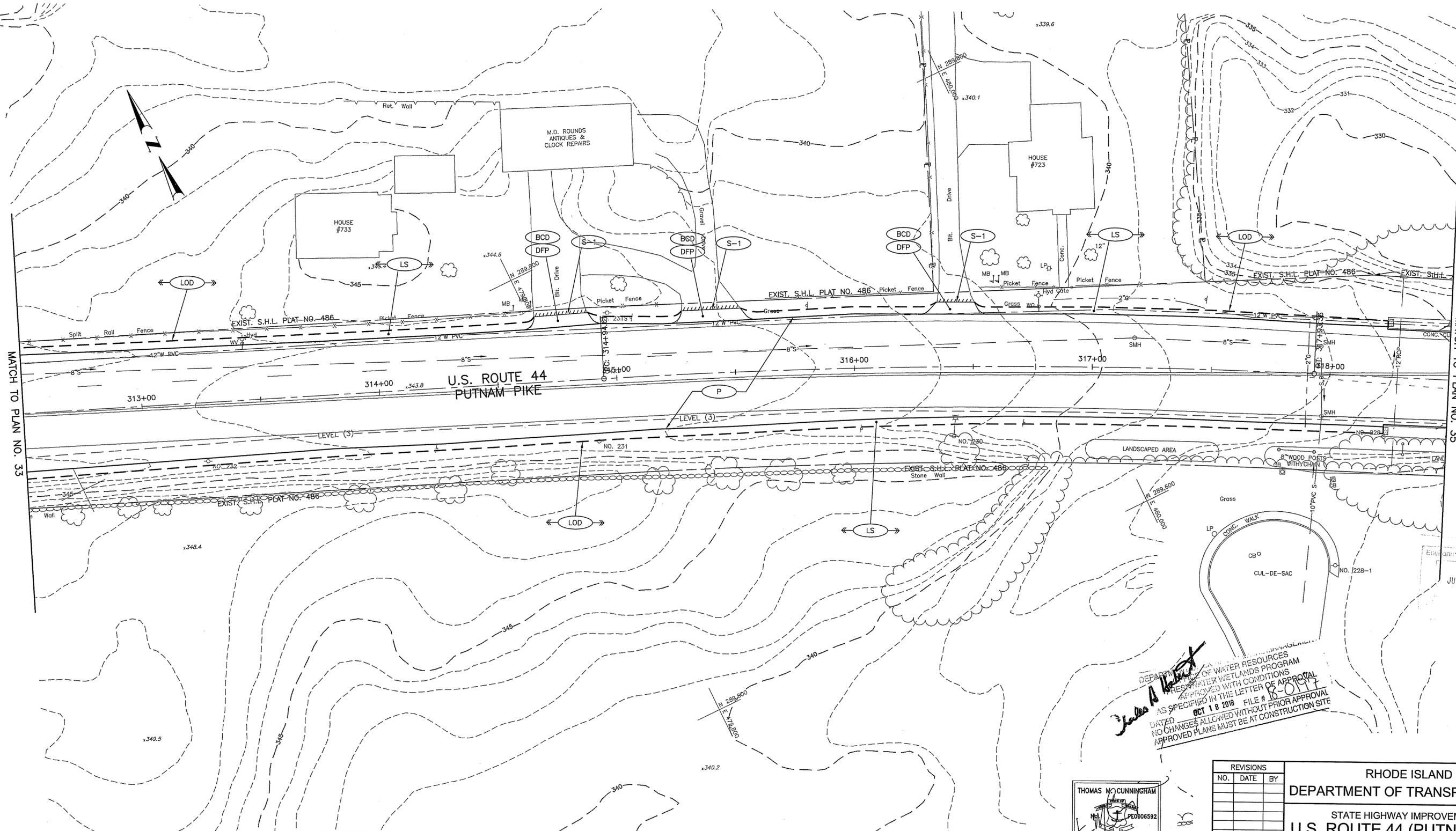
REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN,
DRAINAGE & UTILITY PLAN NO. 30

CHECKED BY _____ DATE _____ SCALE 1"=20'



MATCH TO PLAN NO. 33

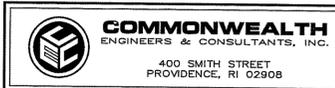
MATCH TO PLAN NO. 35

NOTE:
 1. EXISTING CONTOURS SHOWN ON THE PLANS ARE BASED ON NAVD 1927 VERTICAL CONTROL. THE SURVEY TRAVERSE AND BENCH MARKS ALONG WITH CATCH BASIN RIM GRADES, INVERT GRADES, AND GRADE PLAN ELEVATIONS WERE PERFORMED BY COMMONWEALTH LAND SURVEYORS, INC. AND ARE BASED ON NAVD 1988 VERTICAL CONTROL.

DEPARTMENT OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 18 2018 FILE # 18-017
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

APPROVED
 JUL 25 2018

CE&C #16043.01



COMMONWEALTH
 ENGINEERS & CONSULTANTS, INC.
 400 SMITH STREET
 PROVIDENCE, RI 02908

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY IMPROVEMENTS
U.S. ROUTE 44 (PUTNAM PIKE)
 RIDOT MAINTENANCE FACILITY TO WEST GREENVILLE ROAD
 GLOCESTER AND SMITHFIELD RHODE ISLAND

GENERAL PLAN,
DRAINAGE & UTILITY PLAN NO. 34

CHECKED BY _____ DATE _____ SCALE 1"=20'

