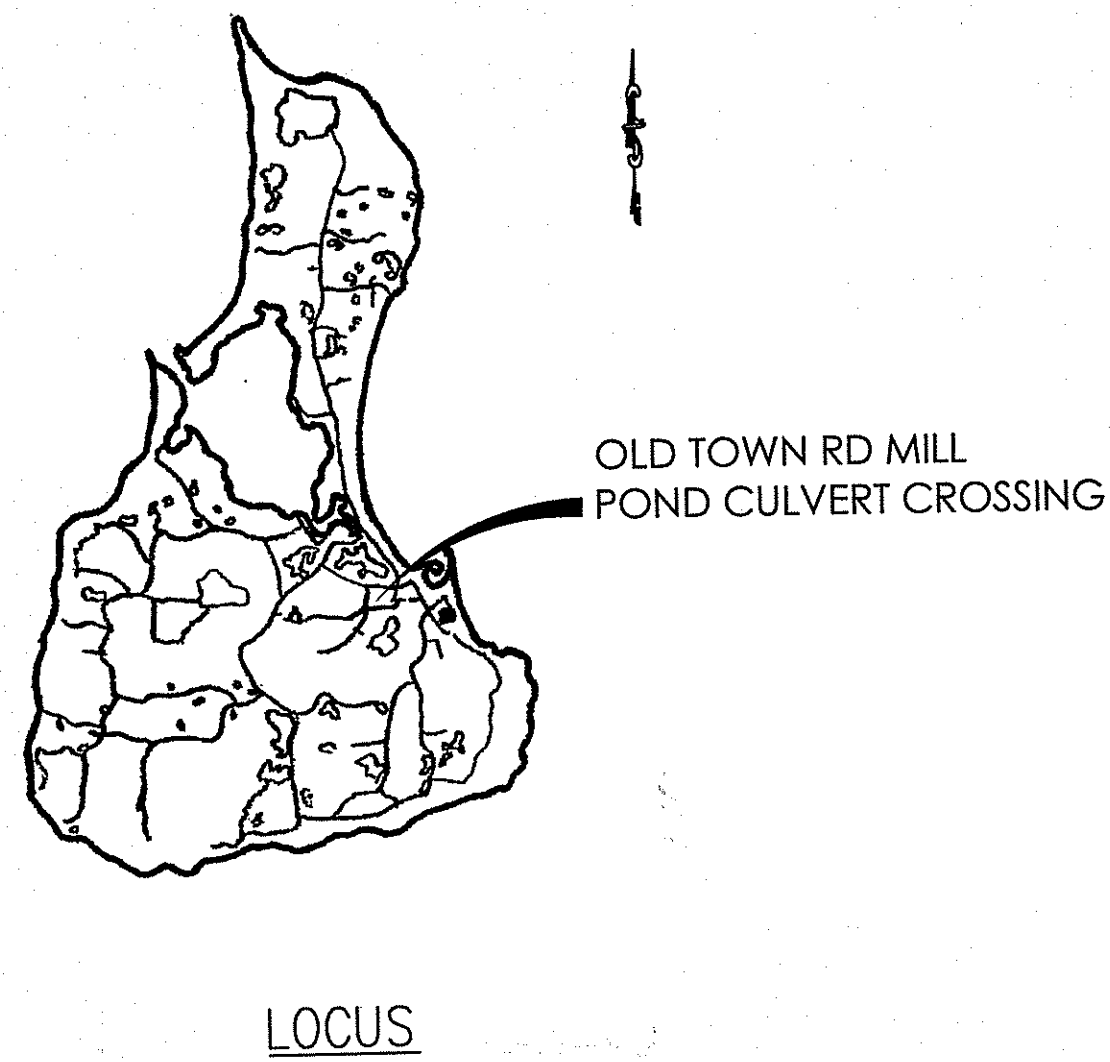


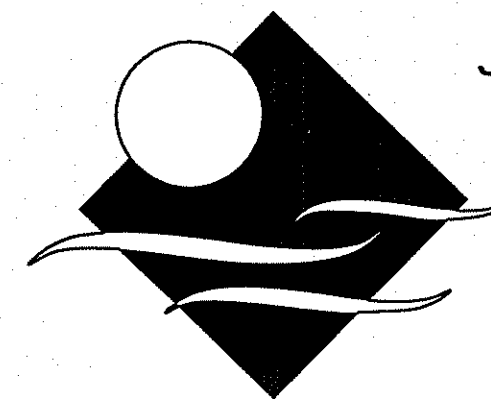
TOWN OF NEW SHOREHAM, RI



INDEX TO DRAWINGS

1. GENERAL - NOTES, LEGEND, & TRAFFIC CONTROL PLAN
2. PLAN - EXISTING CONDITIONS
3. PLAN - LIMITS OF DISTURBANCE & BYPASS PUMPING
4. PLAN - GRADING AND PAVING
5. SECTIONS - OLD TOWN ROAD STA 0+75 & STA 1+75
6. PLAN & SECTION - OLD TOWN ROAD CULVERT
7. MISCELLANEOUS DETAILS I
8. MISCELLANEOUS DETAILS II

OLD TOWN ROAD IMPROVEMENTS APRIL 2017

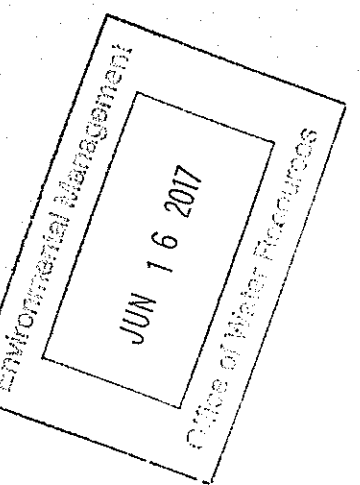


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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 19 2017 FILE # 17-0021
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harkin



GENERAL:

1. SURVEY BY MARC N. NYBERG ASSOCIATES. WETLAND FLAGGING BY NATURAL RESOURCE SERVICES, INC. HORIZONTAL DATUM - NAD 1983 AND VERTICAL DATUM = NAVD 1988
2. LOCATION AND DEPTHS OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION BY MARC N. NYBERG ASSOCIATES. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY AUTHORITIES, INCLUDING "DIG SAFE" PRIOR TO STARTING WORK. ANY DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COST OF REPAIRS SHALL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
3. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS AND ACTIVITIES FOR CONSTRUCTION PURPOSES TO WITHIN THE AREA IDENTIFIED ON THE CONTRACT DRAWINGS.
4. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
5. ALL GRASSED AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE LOAMED AND SEED.
6. PROPERTY AND STREET LINE INFORMATION SHOWN ON THE DRAWINGS WERE OBTAINED FROM ASSESSOR'S PLAT MAPS AND SHOULD BE CONSIDERED APPROXIMATE.
7. SAW CUT PAVEMENT FULL-DEPTH PRIOR TO THE INSTALLATION OF CULVERT.
8. DRIVEWAYS TO BE SAW CUT.
9. AT THE END OF EACH WORK DAY, THE AREA SHALL BE TOTALLY BACKFILLED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
10. DEWATERING SYSTEMS FLOW FOR POND EXCAVATIONS SHALL BE DISCHARGED INTO DEWATERING BASINS. THE FLOW FROM THE DEWATERING BASINS SHALL HAVE NO VISUAL SEDIMENTATION PRESENT AND SHALL NOT CAUSE SILTATION OF EXISTING DRAINAGE SYSTEM AND REGULATED WETLANDS. THE DEWATERING BASINS SHALL HAVE A VOLUME NOT LESS THAN THE TOTAL VOLUME OF WATER THAT WILL BE PUMPED DURING A FOUR-HOUR PERIOD.
11. THE DEWATERING BASINS SHALL BE DESIGNED IN ACCORDANCE WITH THE R.I. SOIL EROSION AND SEDIMENTATION CONTROL HANDBOOK.
12. THE CONTRACTOR SHALL SUBMIT CALCULATIONS FOR SIZING OF DEWATERING BASINS TO THE ENGINEER FOR REVIEW.
13. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEDIMENTATION THAT ENTERS THE DOWNSTREAM DRAINAGE SYSTEM AND REGULATED WETLANDS. THE WETLANDS SHALL BE RESTORED IN ACCORDANCE WITH RIDEM REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR WILL BE RESPONSIBLE FOR FINES THAT MAY BE IMPOSED BY THE RIDEM, AND THE OWNER WILL NOT REIMBURSE THE CONTRACTOR.
14. PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, SILT FENCING SHALL BE PLACED SO AS TO PREVENT SEDIMENT FROM ENTERING ADJOINING REGULATED WETLANDS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE DAILY AND AFTER EACH RAINFALL. REPAIRS SHALL BE MADE IMMEDIATELY.
16. ALL SEDIMENT MUST BE REMOVED WHEN THE HEIGHT OF THE SEDIMENT REACHES THE HEIGHT OF THE SEDIMENT BARRIER (SILT FENCE).
17. THE "R.I. EROSION AND SEDIMENT CONTROL HANDBOOK", PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE (LATEST EDITION) MUST BE UTILIZED BY THE CONTRACTOR AS A GUIDE.
18. THE CONTRACTOR SHALL HAVE TRAFFIC CONTROL DEVICES, SUCH AS SIGNAGE, ETC., INSTALLED PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
19. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE CERTIFICATION (BY A PROFESSIONAL ENGINEER) THAT THE SOIL COMPACTION MEETS SPECIFIED STANDARDS.
20. THE DOWNSTREAM SLOPE OF THE DAM AREA MUST BE CLEARED AND GRUBBED AND REPLACED WITH LOAM AND SEED

EARTHWORK:

1. THE EARTHWORK REQUIRED TO SUPPORT THIS PROJECT IS RELATED TO EXCAVATION REQUIRED TO INSTALL THE NEW WEIR BOX AT THE UPSTREAM END OF THE CULVERT, EXCAVATION REQUIRED TO INSTALL THE NEW PRECAST WINGWALLS AND CULVERT EXTENSION WORK AT THE DOWNSTREAM END OF THE CULVERT, AND THE EXCAVATION WORK REQUIRED TO SUPPORT THE REMAINING WORK NEEDED TO COMPLETE THE PROJECT (INCLUDING THE RECONSTRUCTION OF THE UPSTREAM RETAINING WALL, SIDEWALK AND ROADWAY CONSTRUCTION, ETC.)
2. ALL EXCAVATION AREAS SHALL BE UNDERTAKEN IN A MANNER THAT ENSURES A STABLE SUBGRADE HAS BEEN ADEQUATELY ACHIEVED BEFORE PLACING BACKFILL MATERIALS. THIS SHALL INCLUDE A SURVEY THAT VERIFIES DESIGN SUBGRADE ELEVATIONS ARE ACHIEVED.
3. ALL EXCAVATION SHALL BE UNDERTAKEN IN COORDINATION WITH A SUPPORT OF EXCAVATION SYSTEM(S) AS NEED TO ENSURE THAT WATER LEVELS WITHIN MILL POND ARE NOT COMPROMISED AND ALSO IN MANNER THAT ENSURES THE EXISTING CULVERT, STONE MASONRY RETAINING WALL, AND ROAD ARE PROTECTED.
4. AFTER THE SUBGRADE IS PREPARED AND APPROVED THE GEOTEXTILE REINFORCEMENT MATERIAL (AS APPLICABLE) SHALL BE PLACED AND SECURED TO ENSURE IT DOES NOT MOVE DURING THE BACKFILL MATERIAL PLACEMENT.
5. CRUSHED STONE BASE MATERIAL SHALL BE PLACED ON THE GEOTEXTILE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE GEOTEXTILE. THE CRUSHED STONE BASE SHALL BE COMPACTED AS REQUIRED HEREIN. THE BASE MATERIAL SHALL BE GRADED AS REQUIRED TO CREATE A FLAT UNIFORM SURFACE FOR PLACEMENT OF THE PROPOSED STRUCTURES.
6. THE EXCAVATION AREAS THAT EXTEND BELOW THE EXISTING CULVERT ARE ANTICIPATED TO BE DIFFICULT TO ADEQUATELY COMPACT AND AS SUCH LEAN CONCRETE BACKFILL IS REQUIRED IN THESE AREAS.

7. PLACE THE GEOTEXTILE ON THE APPROVED BASE MATERIAL. SECURE THE GEOTEXTILE AS REQUIRED TO ALLOW THE SURFACE TO BE PLACED WITHOUT CAUSING MOVEMENT. IF IT IS DETERMINED THAT THE GEOTEXTILE IS BEING DAMAGED DURING SURFACE PLACEMENT ADD ADDITIONAL LAYERS AS NECESSARY.
8. THE BASE MATERIALS BELOW STRUCTURES SHALL BE 3/4" TO 1" SIZE CRUSHED STONE. THE STONE SHALL BE WASHED AND FREE OF ANY DELETERIOUS MATERIALS.
9. THE STONE FOR USE TO RECONSTRUCT THE EXISTING RETAINING WALL ALONG THE UPSTREAM SLOPE OF THE DAM SHALL BE OBTAINED FROM THE SITE EXCAVATION (RE-USE OF EXISTING STONE). HOWEVER, IF ADDITIONAL STONE IS REQUIRED TO COMPLETE THE WORK IT SHALL BE OF THE SAME TYPE AND SIZE STONE THAT COMPRISE THE EXISTING WALL. THE UPPER WALL RECONSTRUCTION SHALL BE UNDERTAKEN USING WET MASONRY METHODS. THE CONTRACTOR SHALL SUBMIT THE PROPOSED MORTAR FOR APPROVAL. ALSO WEEPS (3" SIZE) SHALL BE PROVIDED THROUGH THE REBUILT WALL SECTION AT MAXIMUM 8 FT INTERVALS. THE TOP OF THE WALL SHALL BE RELATIVELY FLAT; THE INTENT BEING THAT SOMEONE COULD WALK THE TOP OF THE WALL WITHOUT TRIPPING.
10. GRAVEL BASE BORROW MATERIALS SHALL MEET THE REQUIREMENTS OF RIDOT M.01.09, TABLE 1, I, GRAVEL BORROW, GRADATION 1A.
11. FORMAL COMPACTION TESTING SHALL BE UNDERTAKEN BY AN INDEPENDENT FIRM QUALIFIED TO PERFORM THESE TYPES OF TESTS. ALL RESULTS SHALL BE SUBMITTED AND STAMPED BY A RI PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AND PAYING FOR THIS TESTING

SOIL & COMPACTION:

1. AREAS SHALL BE EXCAVATED TO A FIRM HARD SUBGRADE. PROVIDE TRAP ROCK, CRUSHED STONE OR BORROW SOILS AS NEEDED TO ENSURE THIS CONDITION EXISTS PRIOR TO PLACING GEOTEXTILE FABRIC AND BACKFILL ON THE SUBGRADE.
2. GAVEL BORROW SOIL MATERIALS SHALL MEET THE REQUIREMENTS OF RIDOT M.01.09, TABLE 1, I, GRAVEL BORROW, GRADATION 1A. CRUSHED STONE SHALL BE HARD, SOUND, ANGULAR, AND CLEAN IN A SIZE RANGING FROM 3/4" TO 1".
3. THE CONTRACTOR SHALL PLACE ALL FILL IN LIFTS AND COMPACT USING CONSTRUCTION EQUIPMENT USED TO SPREAD THE MATERIAL INITIALLY. THEN THE SOIL SHALL BE COMPACTED USING A LARGE VIBRATORY ROLLER, 20,000 LB MIN STATIC WEIGHT IN THE ROAD, HOWEVER A SMALLER WALK BEHIND PLATE TYPE COMPACTOR SHALL BE USED ABOVE, AND WITHIN 5 FT LATERALLY OF THE OUTSIDE EDGE OF THE EXISTING CULVERT AND ALSO WITHIN 10 FEET LATERALLY FROM THE EXISTING STONE RETAINING WALL. THE PLATE COMPACTOR IS ANTICIPATED TO REQUIRE ADDITIONAL PASSES TO ACHIEVE COMPACTION. SOIL LIFTS SHALL NOT EXCEED 6 TO 12 INCHES. THE EXISTING SOILS MAY BE SILTY AND AS SUCH IT MAY BE NECESSARY TO COMPACT USING STATIC METHODS TO AVOID DEGRADING THE SUBGRADE. THE ENGINEER SHALL BE CONTACTED IF THIS CONDITION EXISTS TO ENSURE ADEQUATE COMPACTION IS ACHIEVED.
4. BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557, MODIFIED PROCTOR. THERE IS NO NEED TO TEST THE COMPACTION OF CRUSHED STONE BACKFILL BUT THE STONE SHALL BE COMPACTED TO ENSURE SUITABILITY TO SUPPORT THE NEW LOADS.
5. ALL LANDSCAPE/GRASS SOIL AREAS IMPACTED/DAMAGED BY EXCAVATION OR BY THE CONSTRUCTION, EXCEPT THE PLANTING AREAS DETAILED HEREIN, SHALL RECEIVE A MIN OF 4 INCHES OF NEW ORGANIC LOAM OF SUFFICIENT QUALITY TO GROW AND MAINTAIN GRASS. THE MATERIAL SHALL MEET RIDOT MATERIAL REQUIREMENTS FOR LOAM. PREPARE AREAS TO SUBGRADE, INCLUDING SCARIFYING AS NEEDED, TO ALLOW FOR THE NEW LOAM.
6. PLANT GRASS ON ALL DISTURBED/EXPOSED SOIL/LOAM AREAS RESULTING FROM THIS CONSTRUCTION WORK. SUBMIT PROPOSED MIX FOR APPROVAL. THIS DOES NOT APPLY TO THE NEW LANDSCAPE AREAS ALREADY DETAILED IN THE PLANS.

CAST IN PLACE / PRECAST CONCRETE:

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301 AND ACI 350, LATEST EDITION.
2. CONCRETE 28 DAY COMPRESSIVE STRENGTH SHALL BE 5,000 PSI, IN ACCORDANCE WITH ASTM STANDARDS.
3. PORTLAND CEMENT: ASTM C150, TYPE II
4. AIR ENTRAIN ALL CONCRETE TO 5-6%.
5. NO CHLORIDES SHOULD INTENTIONALLY BE ADDED. TOTAL WATER SOLUBLE CHLORIDE ION (Cl) CONTENT OF THE CONCRETE PRIOR TO EXPOSURE SHOULD NOT EXCEED 0.10 PERCENT BY WEIGHT OF THE CEMENT FOR NORMAL REINFORCED CONCRETE AND 0.06 PERCENT BY WEIGHT FOR PRESTRESSED CONCRETE.
6. WATER-CEMENT RATIOS AND COMPRESSIVE STRENGTHS FOR THE THREE (3) EXPOSURE ZONES SHALL BE AS FOLLOWS:

ZONE	MAX. W/C RATIO	MIN. 28 DAY CYLINDER COMPRESSIVE STRENGTH
SUBMERGED	0.45	5000 PSI (35 MPa)
SPLASH	0.40	5000 PSI (35 MPa)
ATMOSPHERIC	0.40	5000 PSI (35 MPa)

MAXIMUM SLUMP SHALL BE 4".
7. REINFORCING STEEL SHALL BE ASTM A615 GR. 60 HOT DIPPED GALVANIZED. REINFORCING STEEL SCHEDULED FOR WELDING SHALL BE ASTM A706. NOMINAL CONCRETE COVER FOR CAST-IN-PLACE CONCRETE OVER REINFORCEMENT SHALL BE AS FOLLOWS:

ZONE	COVER OVER PRIMARY REINFORCING STEEL	COVER OVER STIRRUPS, SPIRALS, AND TIES
SUBMERGED	3 in. (84 mm)	2.5 in. (51 mm)
*SPLASH	3.5 in. (76 mm)	3 in. (64 mm)

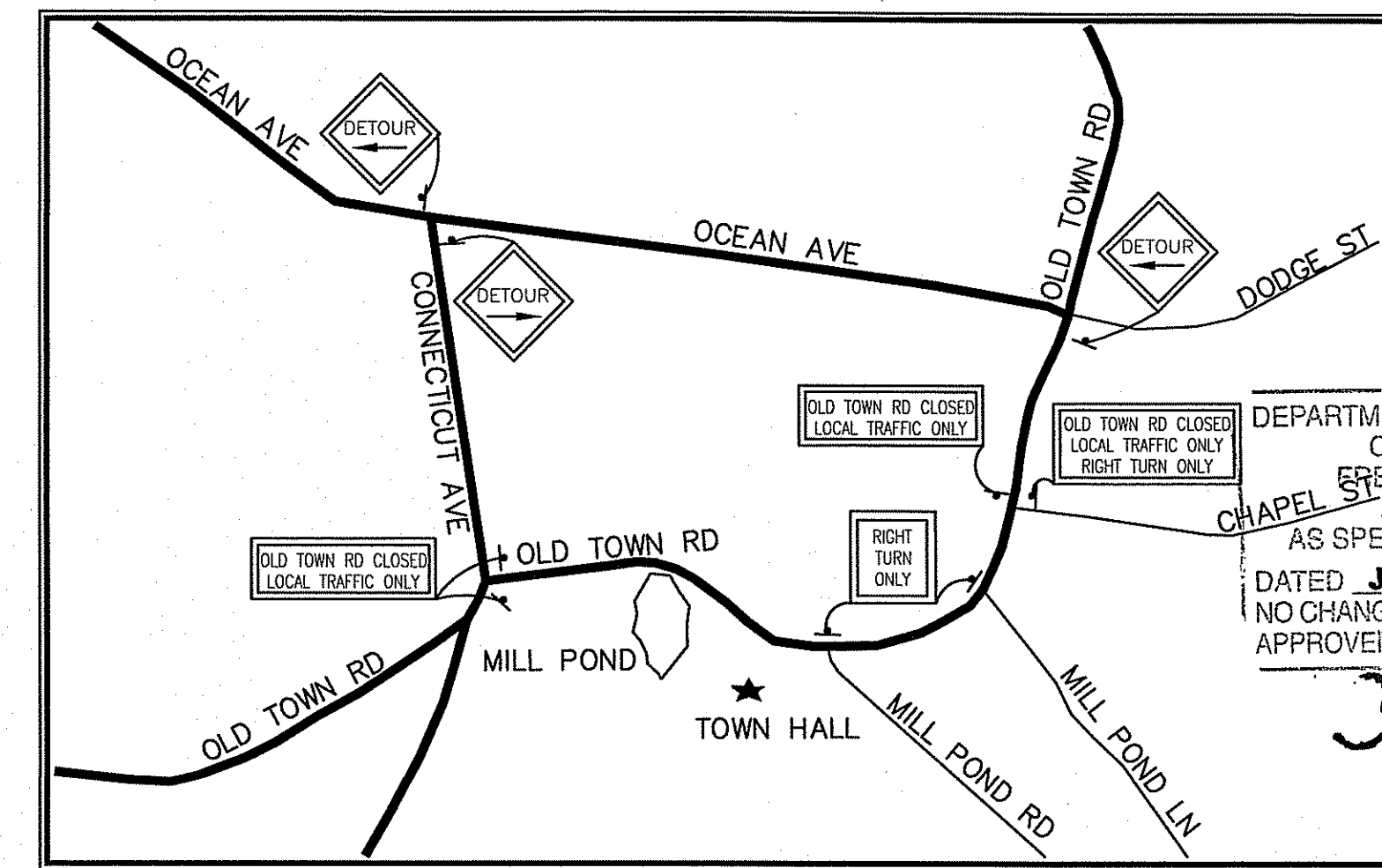
NOMINAL CONCRETE COVER FOR PRECAST CONCRETE SHALL BE AS FOLLOWS:

ZONE	COVER OVER PRIMARY REINFORCING STEEL	COVER OVER STIRRUPS, SPIRALS, AND TIES
SUBMERGED	2.5 in. (64 mm)	2 in. (51 mm)
*SPLASH	3.0 in. (76 mm)	2.5 in. (64 mm)

*NOTE: SPLASH ZONE INCLUDES ATMOSPHERIC ZONE SUBJECT TO SALT SPRAY.
8. CONSTRUCTION JOINTS SHALL BE PREPARED WITH EXTRA CARE AS FOLLOWS:
 - (a) CAREFUL PREPARATION OF THE SURFACE BY HEAVY WET ABRASIVE BLASTING OR HIGH-PRESSURE WATER JET TO REMOVE LAITANCE AND TO EXPOSE THE COARSE AGGREGATE. THE MAXIMUM SIZE AGGREGATE SHOULD BE EXPOSED TO ABOUT 25 PERCENT OF ITS NORMAL DIAMETER.
 - (b) USE AN EPOXY-RESIN BONDING COMPOUND SPRAYED ON JUST BEFORE CONCRETING. APPLY IN STRICT CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS. SUPPLY MANUFACTURER, PRODUCT INFORMATION AND APPLICATION LITERATURE TO ENGINEER FOR APPROVAL PRIOR TO USE.
 - (c) INCREASING THE CEMENT CONTENT OF THE CONCRETE AT THE START OF THE NEXT PLACEMENT.
9. HOT DIPPED GALVANIZED REINFORCING BAR SPLICES SHALL OVERLAP A MINIMUM OF 56 BAR DIAMETERS FOR #7 AND LARGER BARS, 36 DIAMETERS FOR #6 AND SMALLER BARS, AND 28 BAR DIAMETERS FOR STIRRUPS, SPIRALS AND TIES, UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL SUBMIT PLACING DRAWINGS AND SHOP DRAWINGS FOR ALL REINFORCEMENT USED IN THE PROJECT.
11. IN HOT WEATHER CONCRETE SHALL BE PROTECTED IN ACCORDANCE WITH ACI 305R-89.
12. THE REPAIRING OF DAMAGED OR ABRADED SURFACES OF THE HOT DIPPED GALVANIZED COATING SHALL BE DONE WITH MATERIALS RECOMMENDED FOR THIS PURPOSE BY THE MANUFACTURER OF THE COATING MATERIALS AND APPROVED BY THE OWNER. REPAIR COATINGS SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND DIRECTIONS.
13. THE WEIR BOX AND WING WALLS SHALL BE AS DIMENSIONED ON THE DRAWINGS. WALL THICKNESS AND FOOTINGS SHALL BE DESIGNED BY THE MANUFACTURE. THE WATER ELEVATION AT THE WEIR BOX SHALL BE ASSUMED AT ELEVATION 20.0.
14. DESIGN CALCULATIONS AND DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER REGISTERED IN THE STATE OF RI AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER.
15. BRICK SHALL BE RED STRUCTURAL BRICK CONFORMING TO ASTM C62-13a. MORTAR SHALL BE TYPE S.

LEGEND

	EXISTING TREE		EXISTING CONTOURS		RCP REINFORCED CONCRETE PIPE
	WOOD LINE		APPROXIMATE ROW		CMP CORRUGATED METAL PIPE
	SPOT SHOT		LIMITS OF DISTURBANCE		INV INVERT
	SEWER MANHOLE		NEW BIT. BERM		CB CATCH BASIN
	MANHOLE		COMPOST FILTER SOCK		SMH SEWER MANHOLE
	DRAIN MANHOLE		WATER LINE		SOE SUPPORT OF EXCAVATION
	CATCH BASIN		APPROX. LIMITS OF DAM		DMH DRAIN MANHOLE
	LIGHT				BC BOTTOM CURB
	WETLAND FLAG				TC TOP CURB
	BORINGS BY ALL STATE DRILLING				PVC POLYVINYL CHLORIDE
					R&D REMOVE AND DISPOSE
					GV GATE VALVE
					CONC CONCRETE



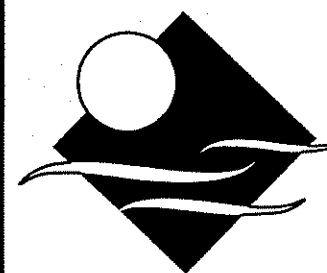
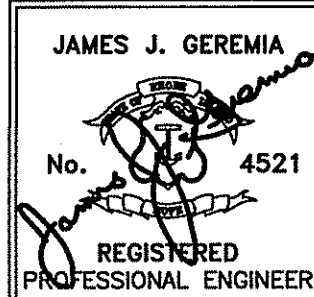
OLD TOWN RD DETOUR PLAN
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
SHOREHAM WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 11/19/2017 FILE # 17-0021
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED

James A. Haber

JUN 16 2017

DESIGNED BY:	OL
DRAWN BY:	OL
CHECKED BY:	JG
SCALE:	AS SHOWN
DATE:	DEC 2016
NO.:	BY:
DATE:	REMARKS:
CADD FILE:	DATE PRINTED: 6/14/17



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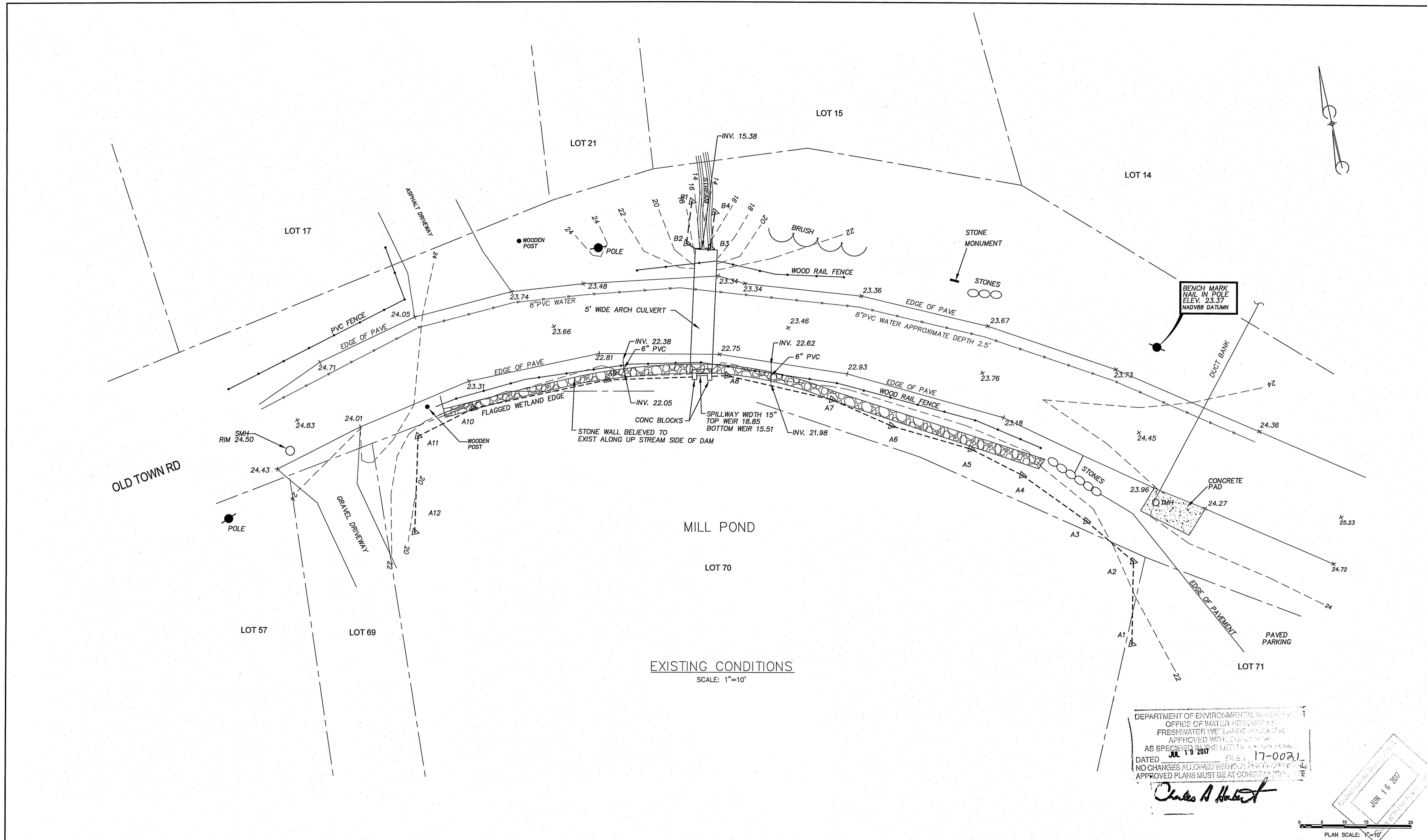


TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD
IMPROVEMENTS

GENERAL
NOTES, LEGEND,
TRAFFIC CONTROL PLAN,

Z:\Projects\Black Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg

Z:\Projects\Black Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg



EXISTING CONDITIONS
SCALE: 1"=10'

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTERS OF APPROVAL
DATED JUL 19 2017 FILE # 17-0021
NO CHANGES ALLOWED WITHOUT PERMITTING AGENCY
APPROVED PLANS MUST BE AT CONSISTENT WITH

Charles A. Harte

PLAN SCALE: 1"=10'

DESIGNED BY:	OL
DRAWN BY:	OL
CHECKED BY:	JG
SCALE:	AS SHOWN
DATE:	DEC 2016
NO.:	BY: DATE: REMARKS:
1	OL 2/17 DESIGN REVISIONS
2	OL 4/17 RIDEM COMMENTS
CADD FILE: DATE PRINTED: 6/14/17	

DESIGNED BY: OL
DRAWN BY: OL
CHECKED BY: JG
SCALE: AS SHOWN
DATE: DEC 2016

JAMES J. GEREMIA
No. 4521
REGISTERED PROFESSIONAL ENGINEER

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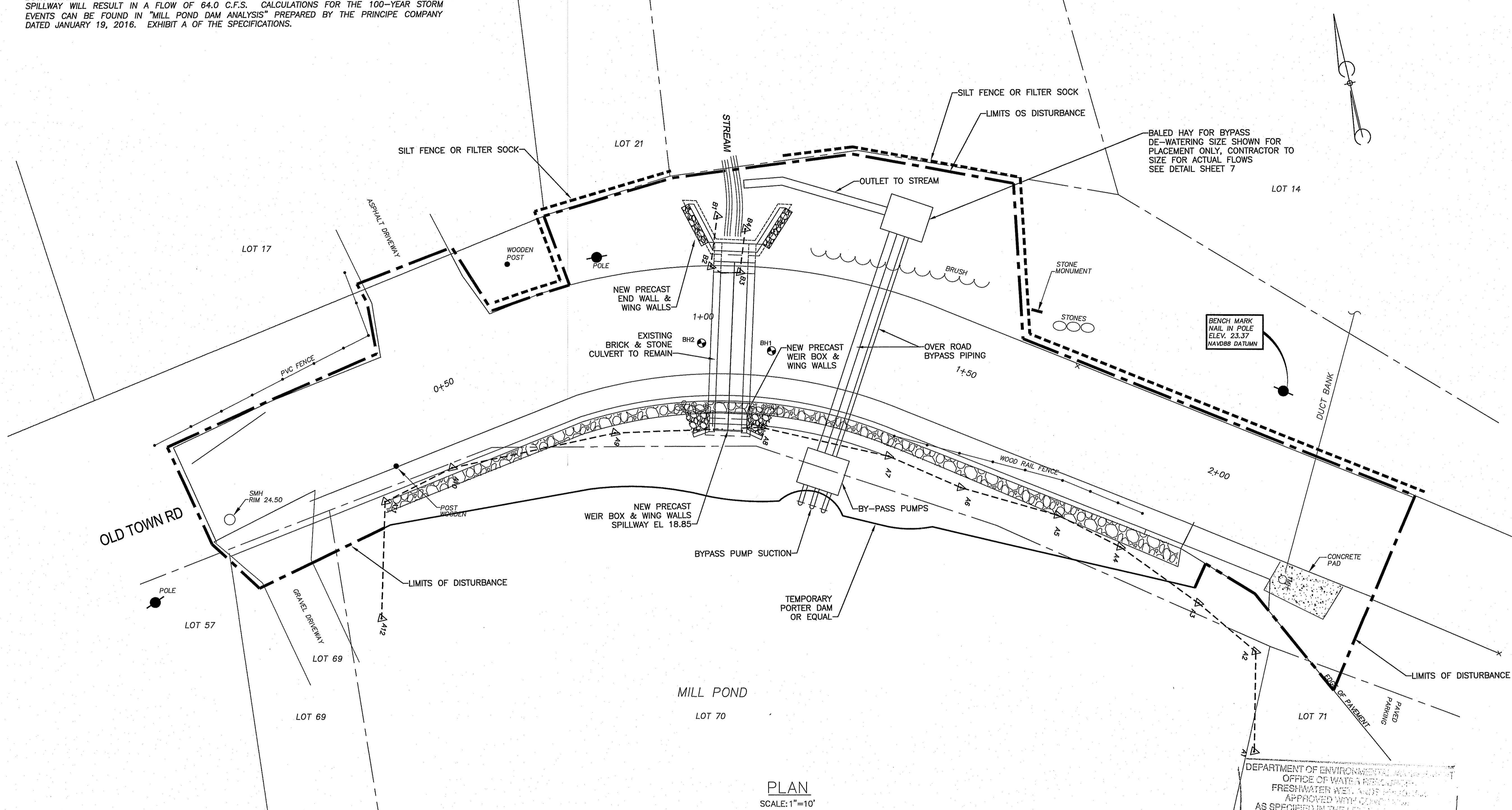


TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD IMPROVEMENTS

PLAN
EXISTING CONDITIONS

BY-PASS NOTES:

1) CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE CURRENT WATER SURFACE ELEVATION DURING BOTH MINIMUM FLOWS AND 100-YEAR RAIN EVENTS. 100-YEAR STORM EVENT OVER THE SPILLWAY WILL RESULT IN A FLOW OF 64.0 C.F.S. CALCULATIONS FOR THE 100-YEAR STORM EVENTS CAN BE FOUND IN "MILL POND DAM ANALYSIS" PREPARED BY THE PRINCIPE COMPANY DATED JANUARY 19, 2016. EXHIBIT A OF THE SPECIFICATIONS.



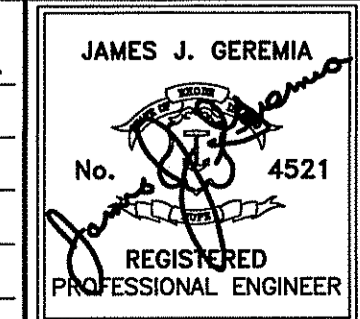
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS DIVISION
 APPROVED WITH COMMENTS
 AS SPECIFIED IN THE LETTERS
 DATED JUN 19 2017 FILE # 17-0021
 NO CHANGES ALLOWED WITHOUT APPROVAL OF THE
 APPROVED PLANS MUST BE AT CONSTRUCTION

Charles A. Herbert

PLAN
 SCALE: 1"=10'

PLAN SCALE: 1"=10'

DESIGNED BY:	OL
DRAWN BY:	OL
CHECKED BY:	JG
SCALE:	AS SHOWN
DATE:	DEC 2016
NO.:	BY: DATE: REMARKS:
2	OL 4/17 RIDEM COMMENTS
1	OL 2/17 DESIGN REVISIONS
CADD FILE: DATE PRINTED: 6/14/17	



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TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD
IMPROVEMENTS

PLAN
LIMITS OF DISTURBANCE
& BYPASS PUMPING

Z:\Projects\Black Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg

DAM NOTES:

- 1) ALL VEGETATION MUST BE STRIPPED FROM THE UPSTREAM SLOPE AND WITHIN 15 FEET OF THE DOWNSTREAM SLOPE, AND WITHIN THE APPROXIMATE LIMITS OF THE DAM, AND REPLACE WITH LOAM AND SEED. GRASS MUST BE PLANTED TO PREVENT SOIL EROSION.

STRIPPING NOTES:

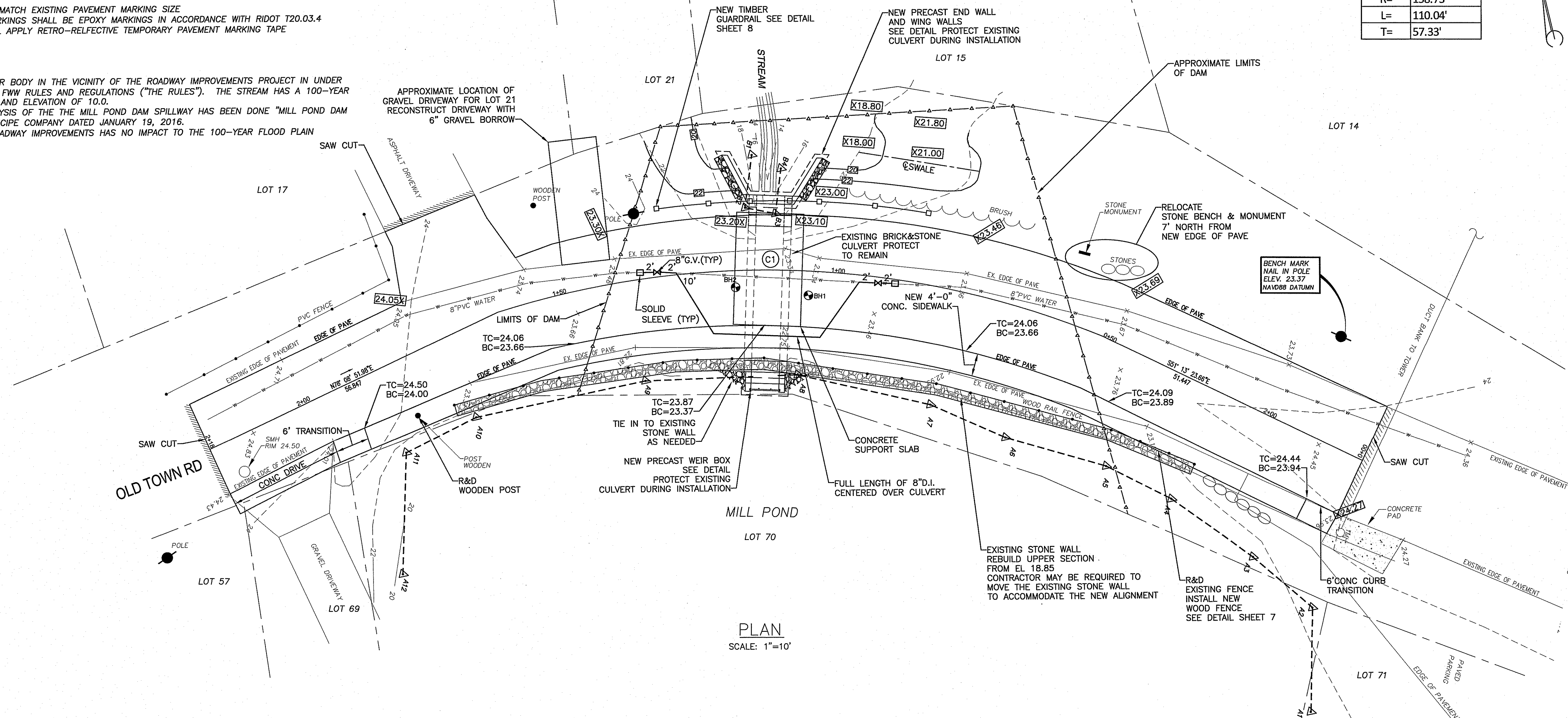
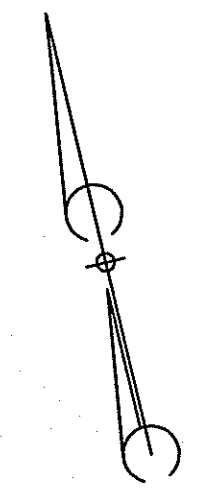
- 1) CONTRACTOR WILL MATCH EXISTING PAVEMENT MARKING SIZE
- 2) ALL PAVEMENT MARKINGS SHALL BE EPOXY MARKINGS IN ACCORDANCE WITH RIDOT T20.03.4
- 3) CONTRACTOR SHALL APPLY RETRO-REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE

WETLAND NOTES:

- 1) THE FLOWING WATER BODY IN THE VICINITY OF THE ROADWAY IMPROVEMENTS PROJECT IN UNDER THE LATEST RIDEM FWW RULES AND REGULATIONS ("THE RULES"). THE STREAM HAS A 100-YEAR FLOOD PLAIN LINE AND ELEVATION OF 10.0.
- 2) A HYDRAULIC ANALYSIS OF THE MILL POND DAM SPILLWAY HAS BEEN DONE "MILL POND DAM ANALYSIS" BY PRINCIPE COMPANY DATED JANUARY 19, 2016.
- 3) THE PROPOSED ROADWAY IMPROVEMENTS HAS NO IMPACT TO THE 100-YEAR FLOOD PLAIN ELEVATION.

Curve Table (C1)

PC=	0+56.85
PT=	1+66.88
Δ=	39.72°
R=	158.73'
L=	110.04'
T=	57.33'



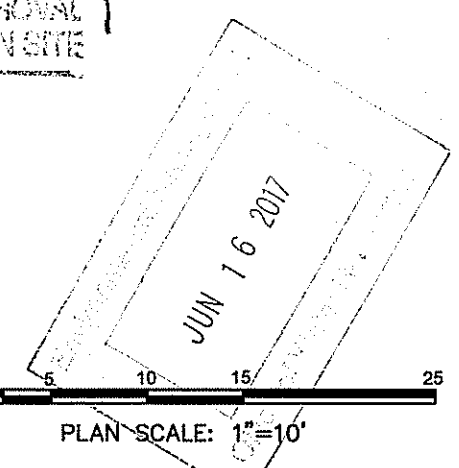
PLAN
SCALE: 1"=10'

WATER SYSTEM NOTES:

- 1) DUCTILE IRON PIPE SHALL BE MADE IN THE USA PIPE SHALL BE DOUBLE CEMENT LINED AND COATED WITH MECHANICAL JOINTS, PRESSURE RATING OF 350 PSI CLASS THICKNESS NO.54, IN ACCORDANCE WITH ANSI/AWWA FITTING D SHALL BE MADE IN THE USA WITH A PRESSURE RATING OF 350 PSI, SHORT BODY CONFORMING TO AWWA C153, DOUBLE CEMENT LINED AND SEAL COATED CONFORMING TO ANSI/AWWA C104/A21.4, JOINT SHALL BE MECHANICALLY RESTRAINED
- 2) PIPE SHALL BE INSULATED WITH 2" THICK FOAMGLASS INSULATION CONFORMING TO ASTM C55 2" SPEC FOR CELLULAR GLASS THERMAL INSULATION AS MANUFACTURED BY PITTSBURGH CORNING CORP. INSULATION SHALL BE WRAPPED WITH PITTRAP JACKETING AS MANUFACTURED BY PITTSBURGH CORNING CORP.
- 3) SOLID SLEEVE SHALL BE DUCTILE IRON MADE IN THE USA, DOUBLE CEMENT LINED, SEAL COATED CONFORMING TO ANSI / AWWA C153A 21.53, THE MECHANICAL JOINT SHALL BE EBAA IRON.
- 4) GATE VALVES SHALL BE AS MANUFACTURED BY KENNEDY, OPEN LEFT, 250 PSI WORKING PRESSURE, STAINLESS STEEL STEM (60,000 PSI YIELD STRENGTH), STAINLESS STEEL FASTENERS, FULLY RUBBER WEDGE AND INTERIOR AND EXTERIOR COATING WITH FUSE BONDED HOLIDAY FREE EPOXY COATING (BMILS)
- 5) VALVE BOXES SHALL BE TWO PIECE BUFFALO TYPE MADE IN THE USA WITH THE WORD "WATER" CAST IN COVER
- 6) THE PIPE, SOLID SLEEVES, AND GATE VALVE SHALL BE SWABBED WITH CHLORINE TO THE SATISFACTION OF THE WATER DEPARTMENT.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED 11 9 2017 FILE # 17-0021
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Harbert



NO.	BY:	DATE:	REMARKS:
4	OL	6/17	RIDEM COMMENTS
3	EB	5/17	RI DEM DAM COMMENTS
2	OL	4/17	RIDEM COMMENTS
1	OL	2/17	DESIGN REVISIONS

CADD FILE: _____ DATE PRINTED: 6/14/17

DESIGNED BY: OL
DRAWN BY: OL
CHECKED BY: JG
SCALE: AS SHOWN
DATE: DEC 2016

JAMES J. GEREMIA
No. 4521
REGISTERED PROFESSIONAL ENGINEER



JAMES J. GEREMIA & ASSOCIATES, INC.
CONSULTING ENVIRONMENTAL ENGINEERS & SCIENTISTS
272 W. Exchange Street Suite 201 Providence, RI 02903-1025
Phone: 401-454-7000 Fax: 401-454-7415



TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD
IMPROVEMENTS

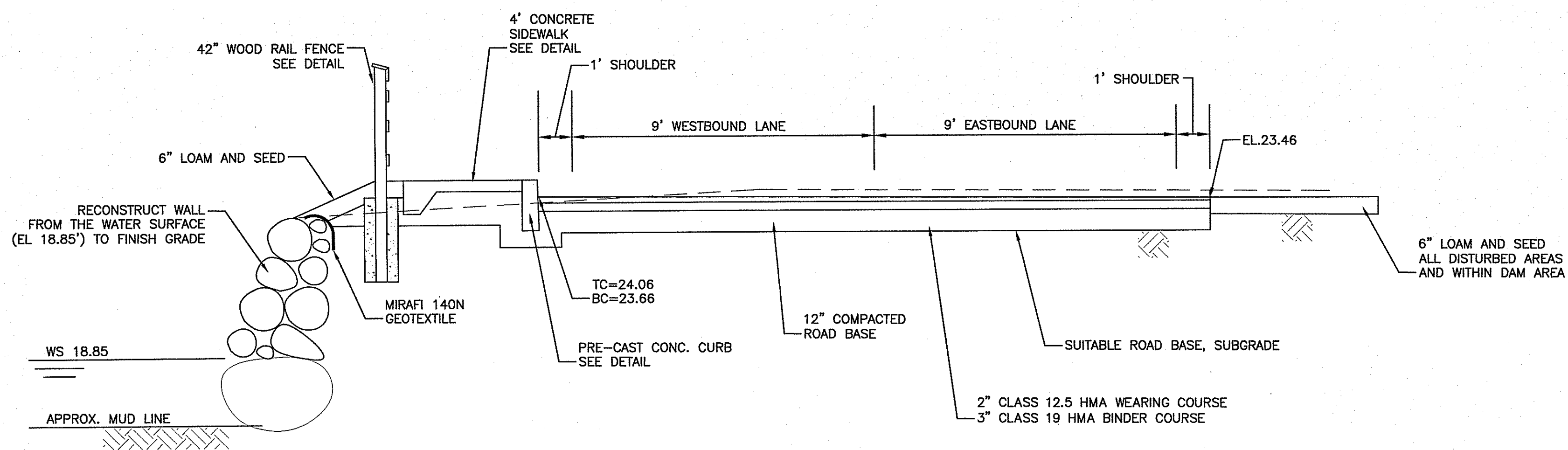
PLAN
GRADING AND PAVING

Z:\Projects\Black Island\Old Town Road Imp - DD.dwg

Z:\Projects\Block Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg

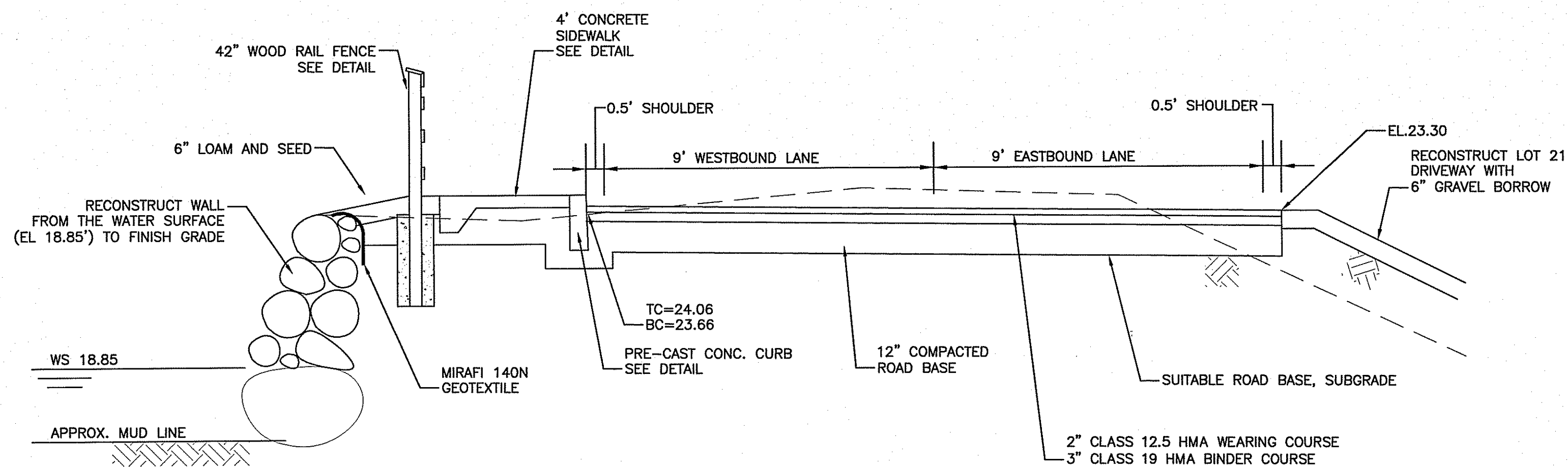
100 9 1 MHP

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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SECTION STA 0+75

SCALE: 3/8"=1'-0"



SECTION STA 1+50

SCALE: 3/8"=1'-0"

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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 DATED JUN 19 2017 PLAN 17-0021
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James A. Habert

DESIGNED BY:	OL
DRAWN BY:	OL
CHECKED BY:	JG
SCALE:	AS SHOWN
DATE:	DEC 2016
NO.:	BY:
DATE:	REMARKS:
CADD FILE:	DATE PRINTED: 6/14/17

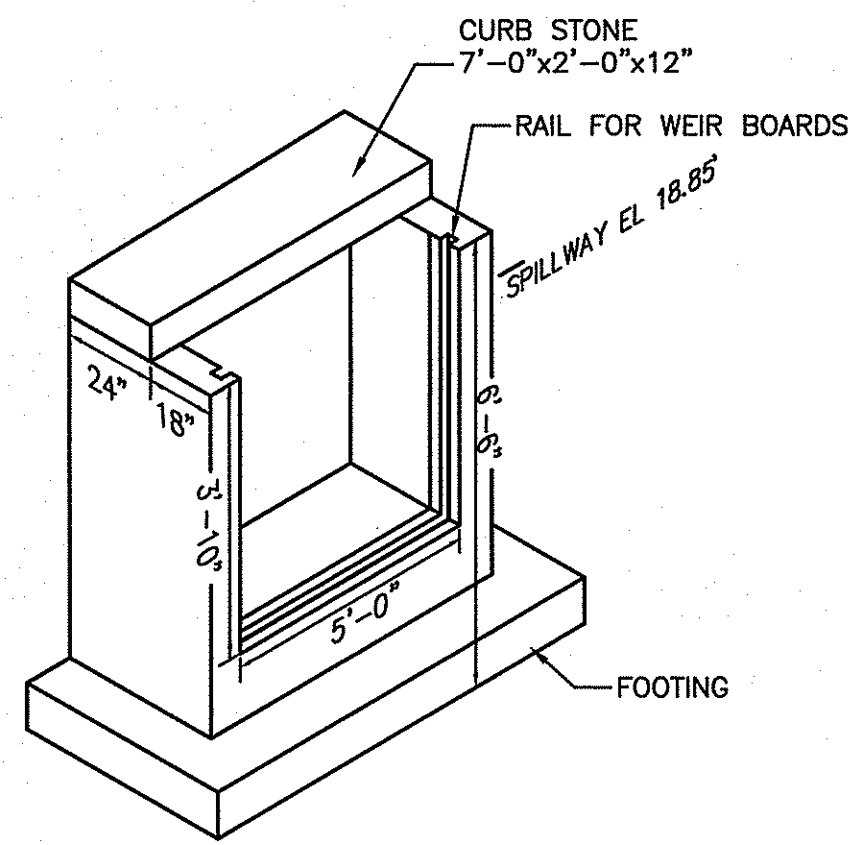
JAMES J. GEREMIA
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TOWN OF NEW SHOREHAM, RI
 OLD TOWN ROAD
 IMPROVEMENTS

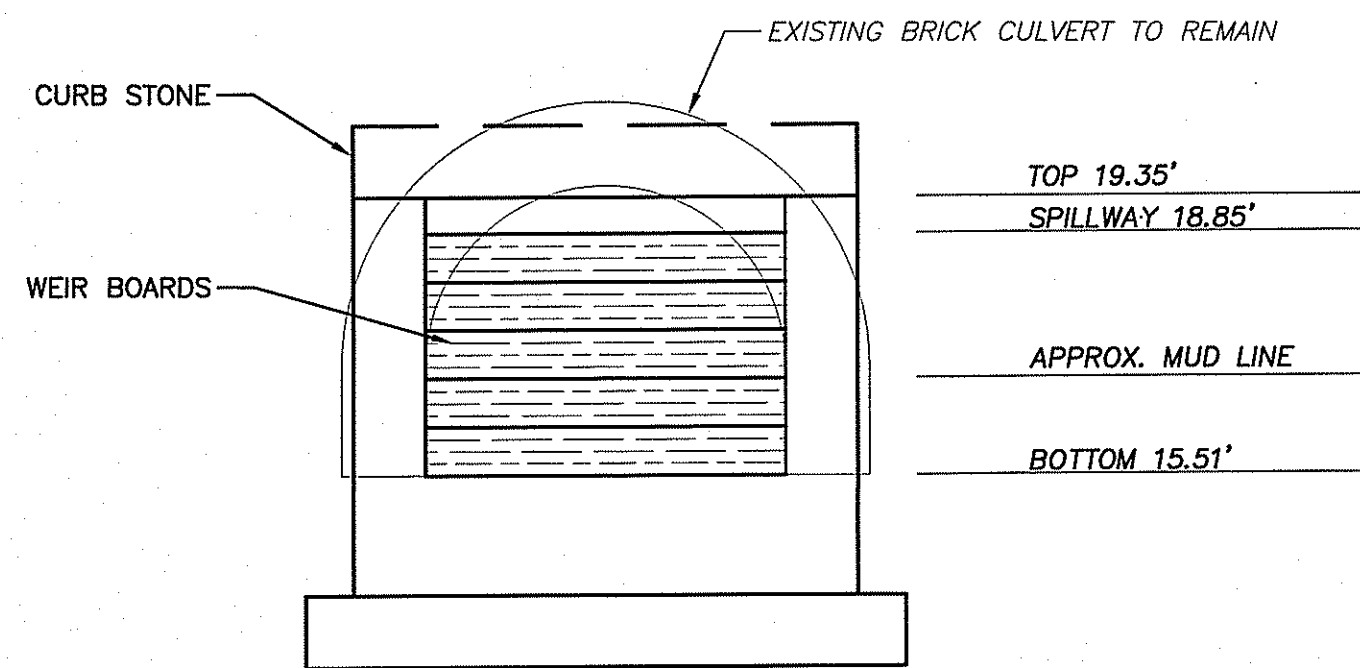
SECTIONS
OLD TOWN ROAD STA 0+75 & STA 1+75



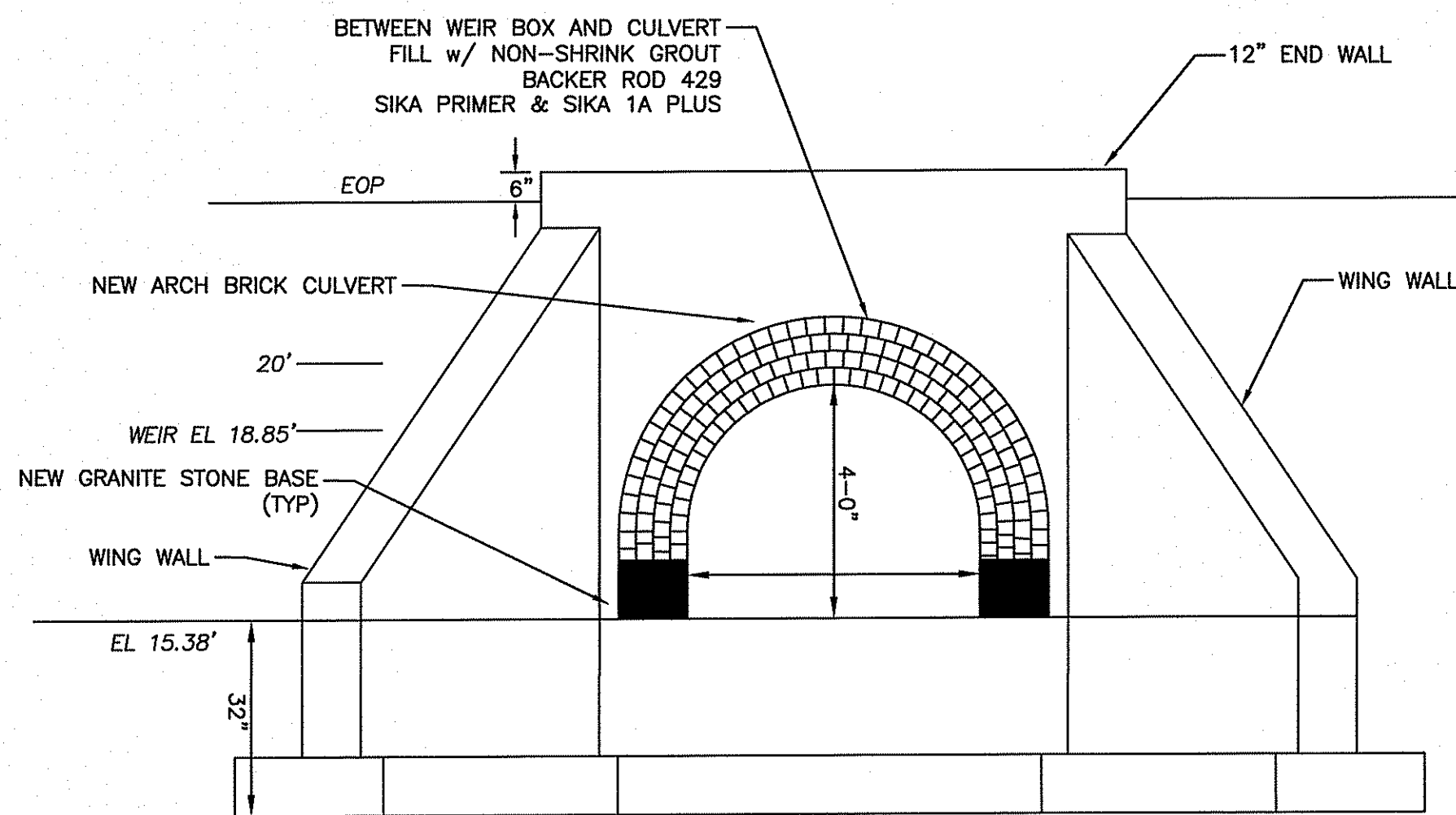
WEIR BOX
SCALE: NTS

TOC 23.87'

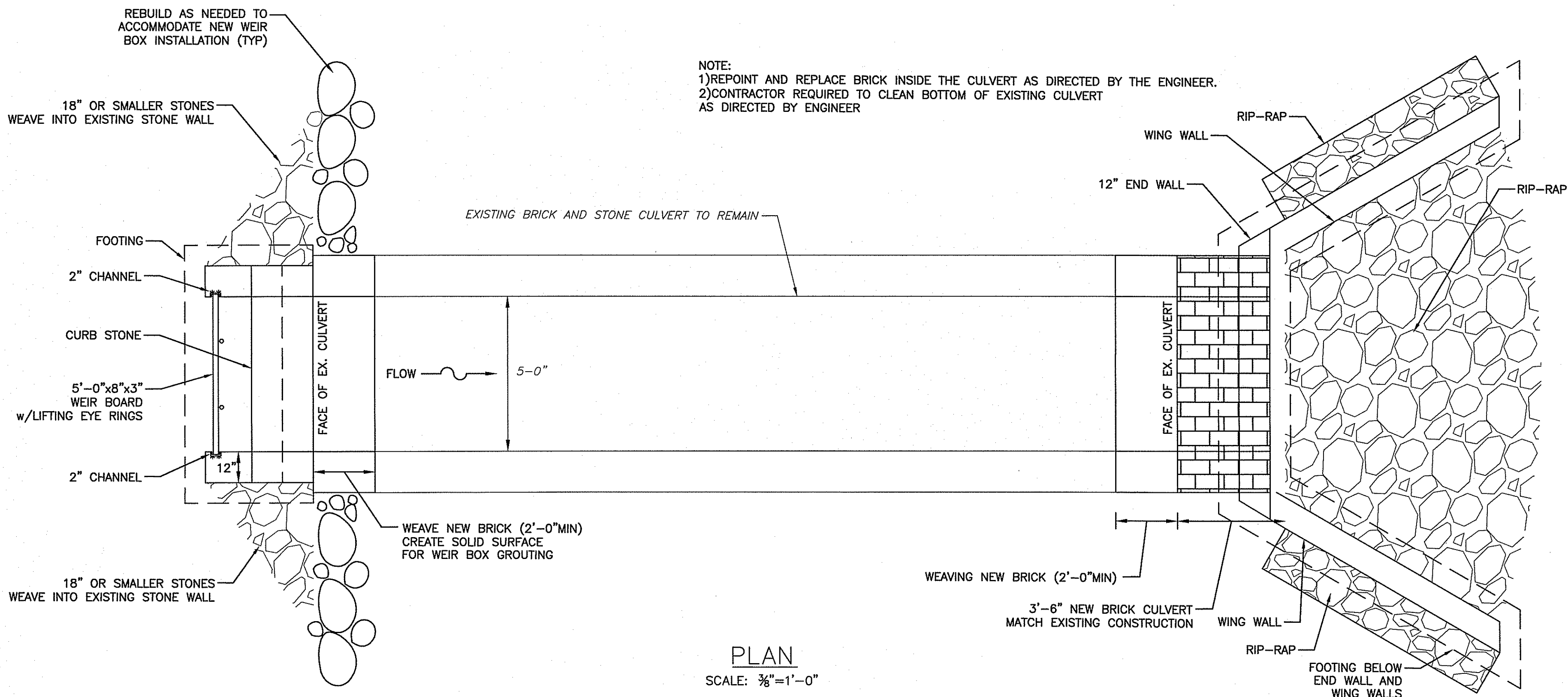
TOW 23.0'



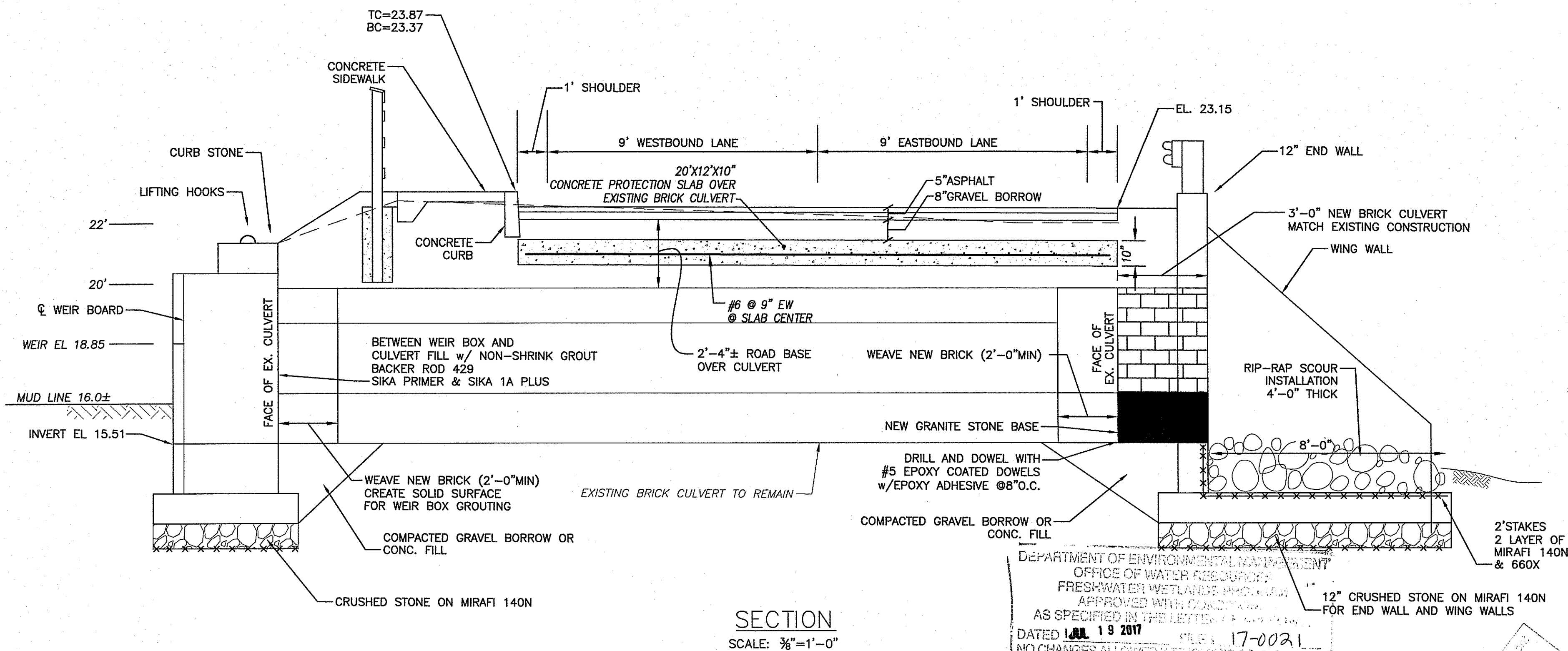
POND SIDE END SECTION
SCALE: 3/8"=1'-0"



STREAM SIDE END SECTION
SCALE: 3/8"=1'-0"



PLAN
SCALE: 3/8"=1'-0"



SECTION
SCALE: 3/8"=1'-0"

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER ASSOCIATION
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTERS
DATED 10/19/2017
17-0021
NO CHANGES ALLOWED WITHOUT APPROVAL
APPROVED PLANS MUST BE AT OUR OFFICE

James A. Habert

APPROVED
JUN 16 2017
Office of Water Resources

Z:\Projects\Black Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg

DESIGNED BY:	OL
DRAWN BY:	OL
CHECKED BY:	JG
SCALE:	AS SHOWN
DATE:	DEC 2016
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DATE:	REMARKS:
CADD FILE:	
DATE PRINTED: 6/14/17	

JAMES J. GEREMIA
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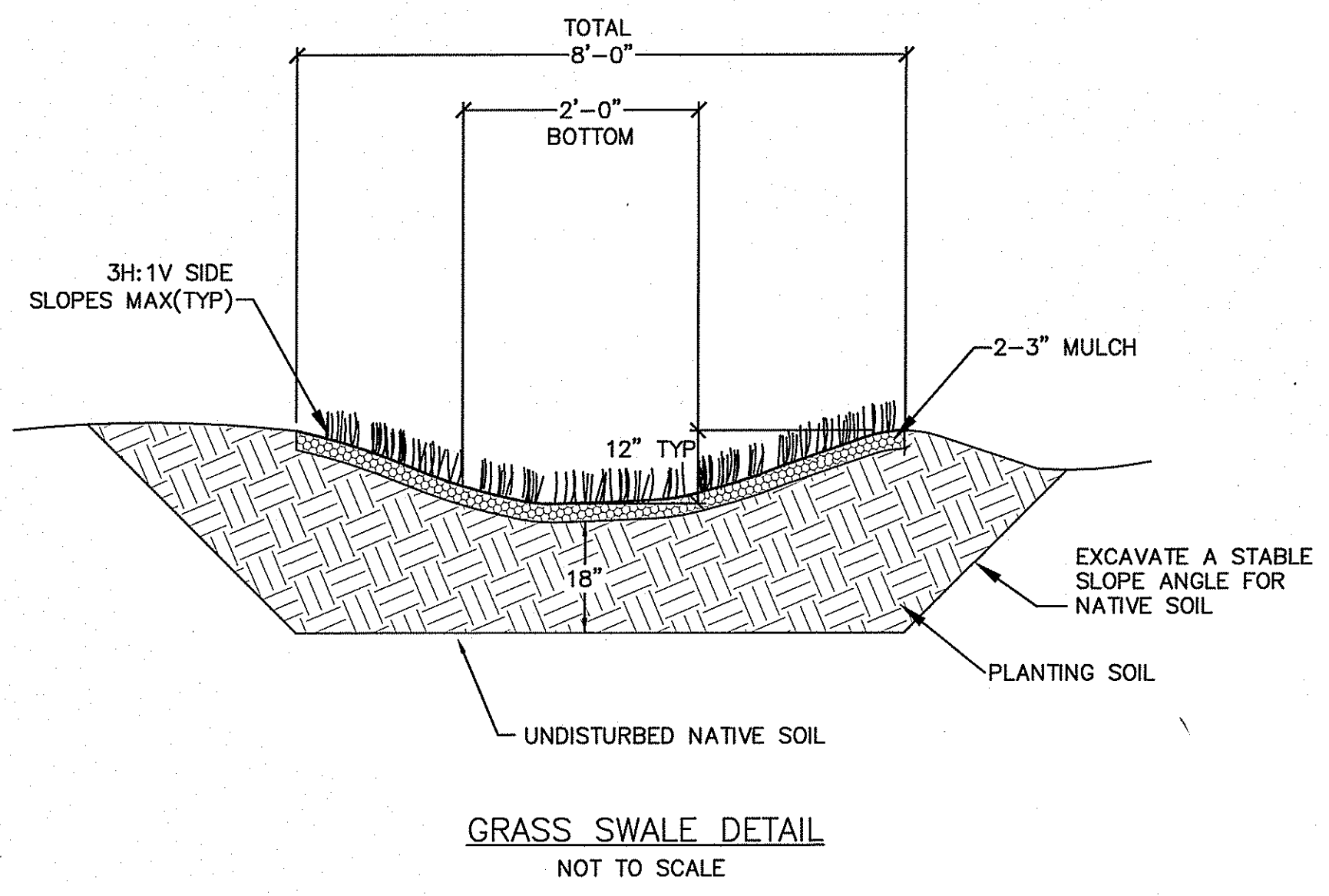
JAMES J. GEREMIA & ASSOCIATES, INC.
CONSULTING ENVIRONMENTAL ENGINEERS & SCIENTISTS
272 W. Exchange Street Suite 201 Providence, RI 02903-1025
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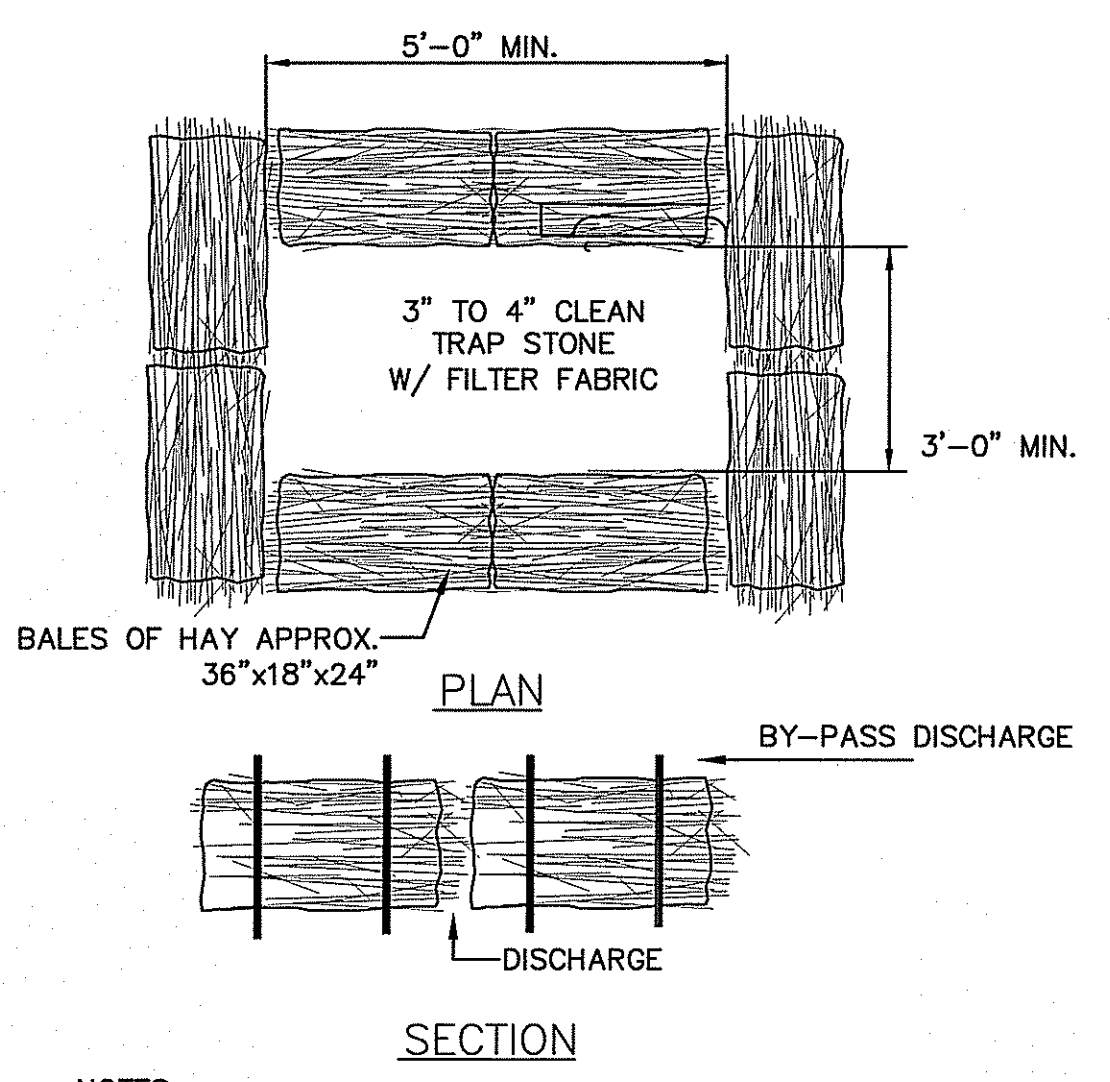
TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD IMPROVEMENTS

PLAN & SECTION
OLD TOWN ROAD CULVERT

6

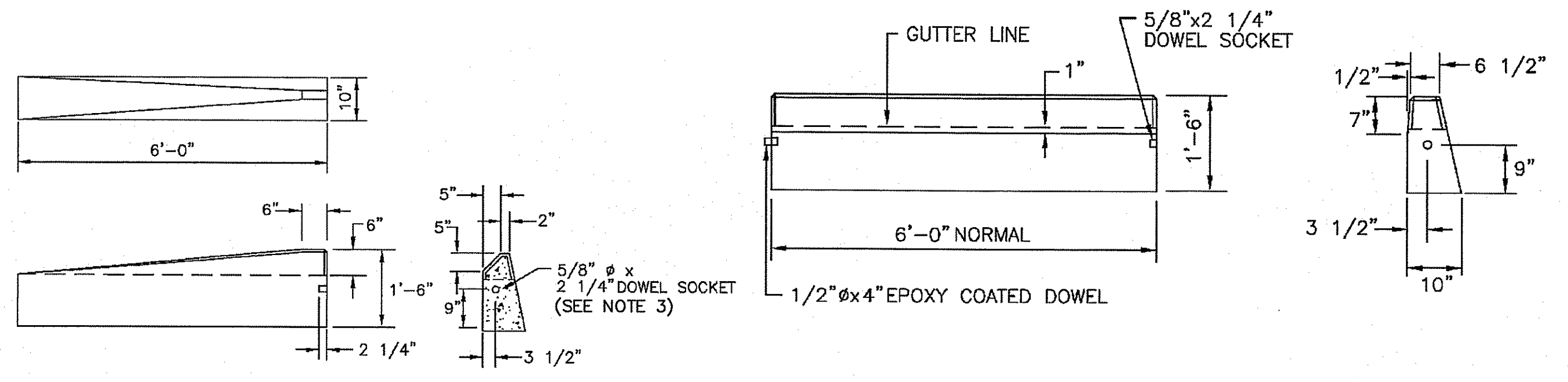


GRASS SWALE DETAIL
NOT TO SCALE



- NOTES:**
1. ALL BALES ARE 18" X 36" X 24" HIGH (APPROX.)
 2. ALL BALES ARE TO BE BUTTED TOGETHER AND STAKED DOWN WITH 2" X 2" X 36" LONG STAKES (2EA. BALE)
 3. ALL MILL POND BY-PASS DISCHARGES SHALL BE THROUGH SEDIMENT CONTROL TRAPS. CONTRACTOR SHALL MAINTAIN AND CLEAN TRAP AS REQUIRED. SIZES SHOWN ARE MINIMUM (MAY BE ENLARGED AS NECESSARY- AS DIRECTED BY THE ENGINEER)

BALED HAY SEDIMENT CONTROL DETAIL FOR BY-PSAS DISCHARGE
NOT TO SCALE

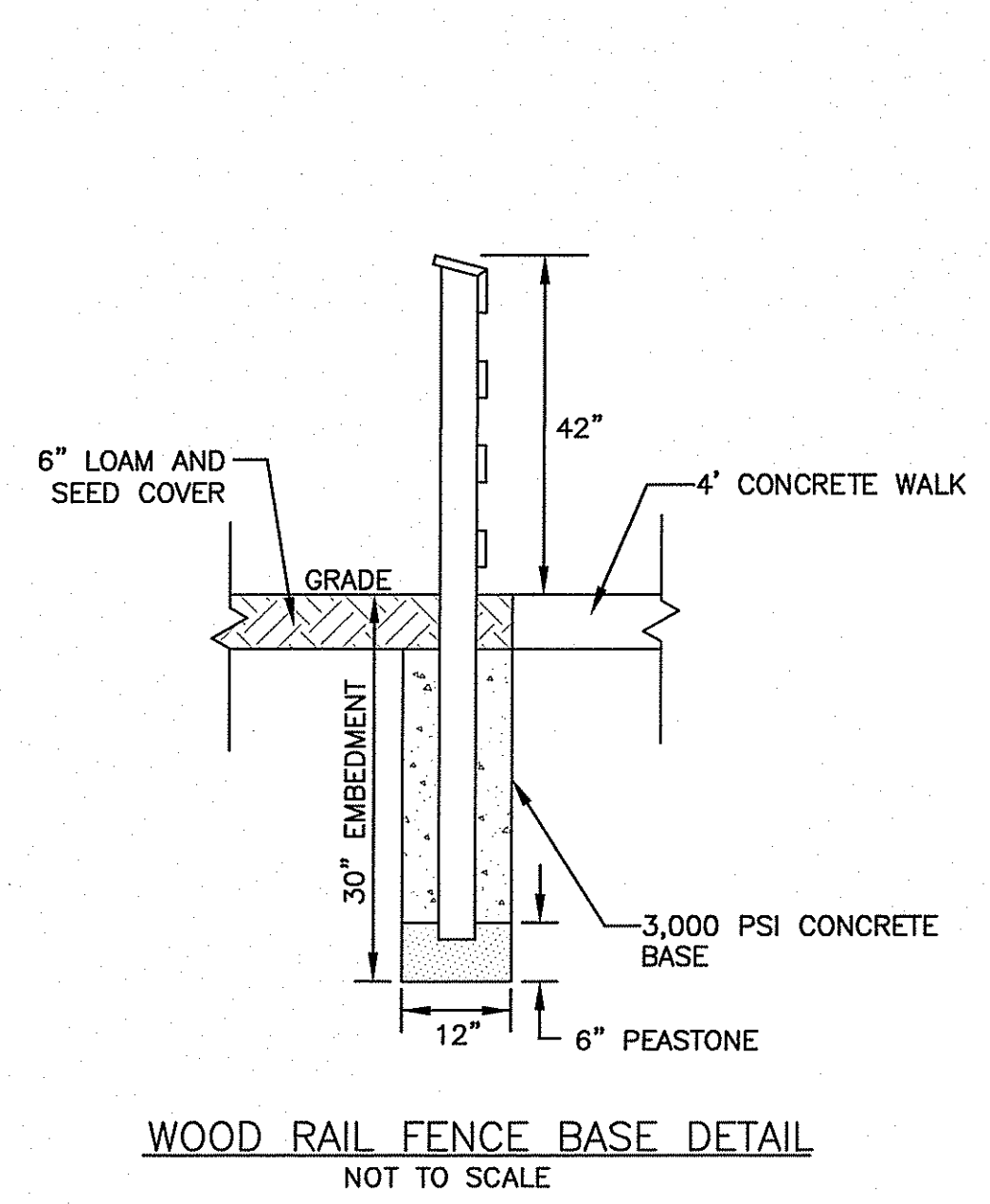


- NOTES:**
1. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
 2. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
 3. DRAWING ON SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE 1/2" DIA. x 4" EPOXY COATED DOWEL.

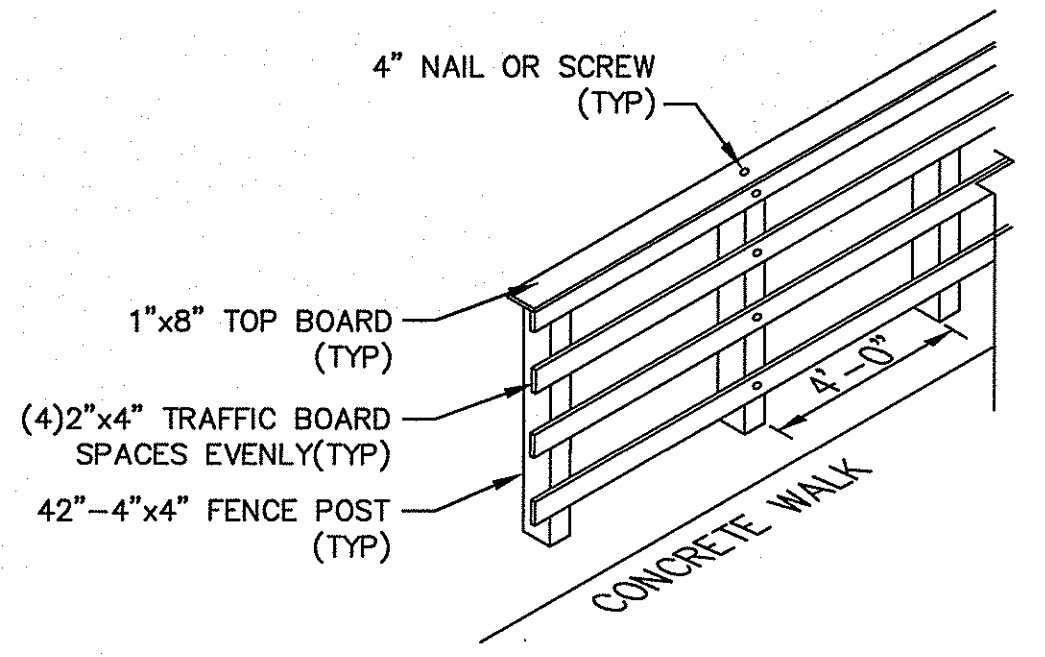
PRECAST CONCRETE SLOPED FACE TRANSITION CURB
NOT TO SCALE

- NOTES:**
1. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLERS PIECES TO BE 3'-0".
 2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
 3. CIRCULAR CURB IS REQUIRED WITH CURVE RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
 4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

PRECAST CONCRETE CURB
NOT TO SCALE

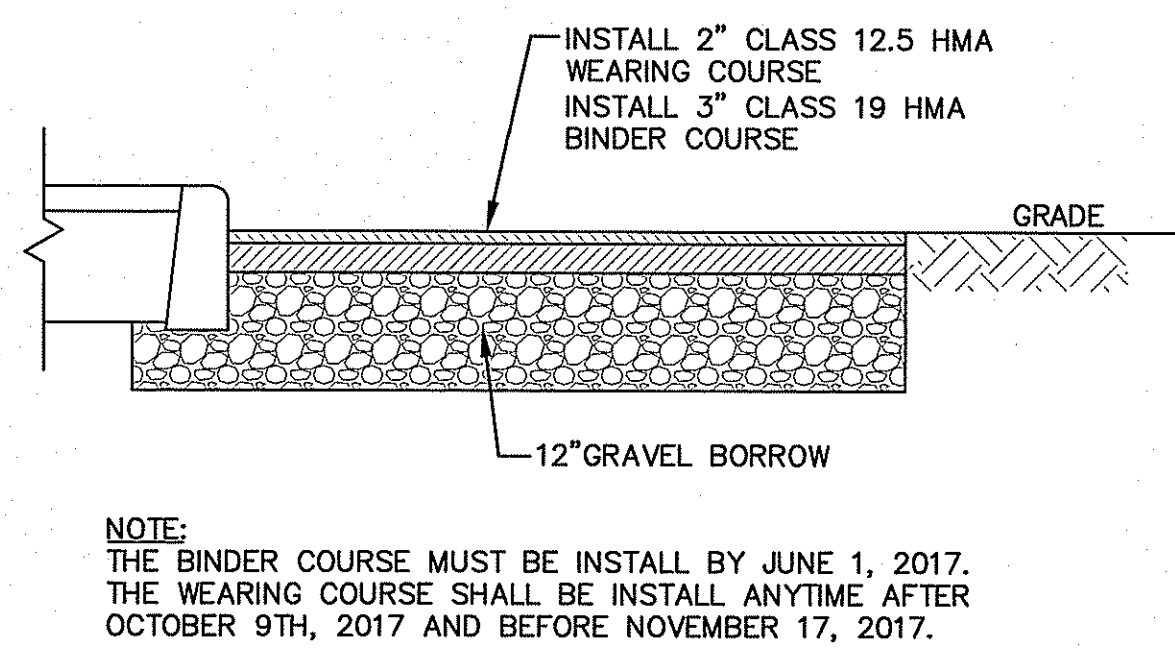


WOOD RAIL FENCE BASE DETAIL
NOT TO SCALE



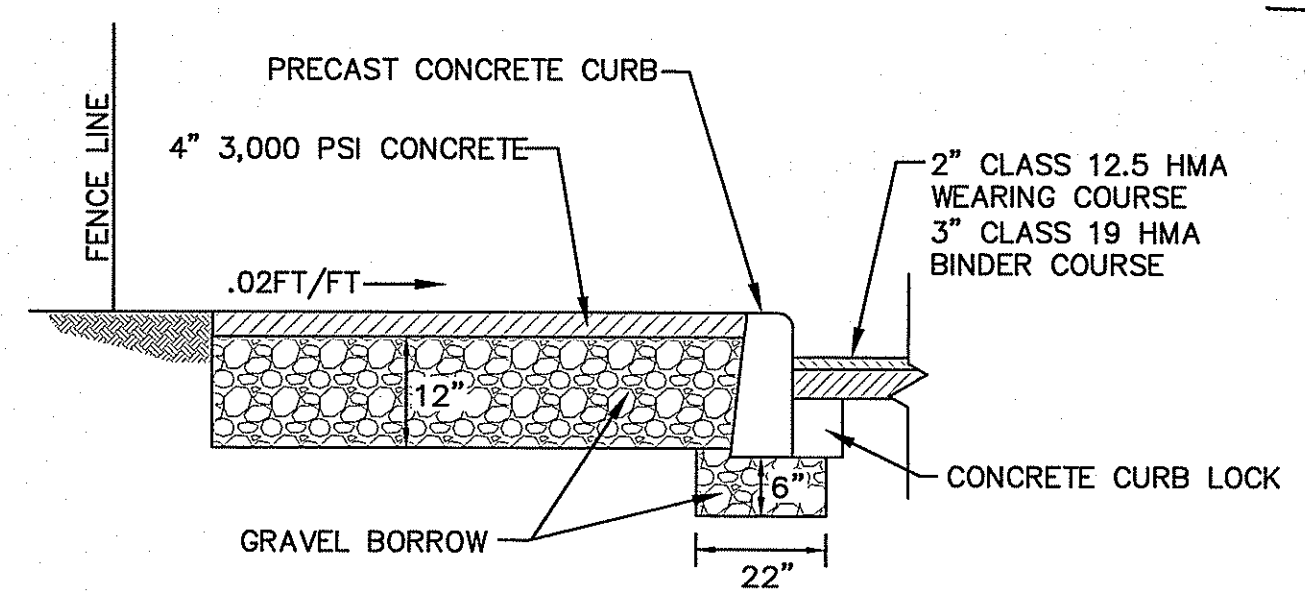
- NOTES:**
1. ALL TIMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR TIMBER BRIDGE SUPERSTRUCTURES AND WITH AASHTO SPEC. M133. SAWN TIMBER LAMINATIONS, TRAFFIC RAIL, ALL POST SHALL BE TREATED USING A CCA WITH A MINIMUM RETENTION ASSOCIATED WITH DIRECT BURIAL.
 2. UNLESS SPECIFIED BY THE TOWN'S ENGINEER ALL TIMBER FRAMING SHALL BE STRESS GRADED LUMBER HAVING THE FOLLOWING PROPERTIES:
SOUTHERN YELLOW PINE (SYP)
Fb = 1,400 PSI
Fv = 110 PSI
FENCE POST SHALL BE SYP SELECT STRUCTURAL
 3. ALL SCREWS SHALL BE STAINLESS STEEL
 4. ALL NAILS TO BE HOT DIP GALVANIZED STEEL FOR HIGH HUMIDITY MARINE ENVIRONMENTS.

NEW WOOD FENCE
NOT TO SCALE

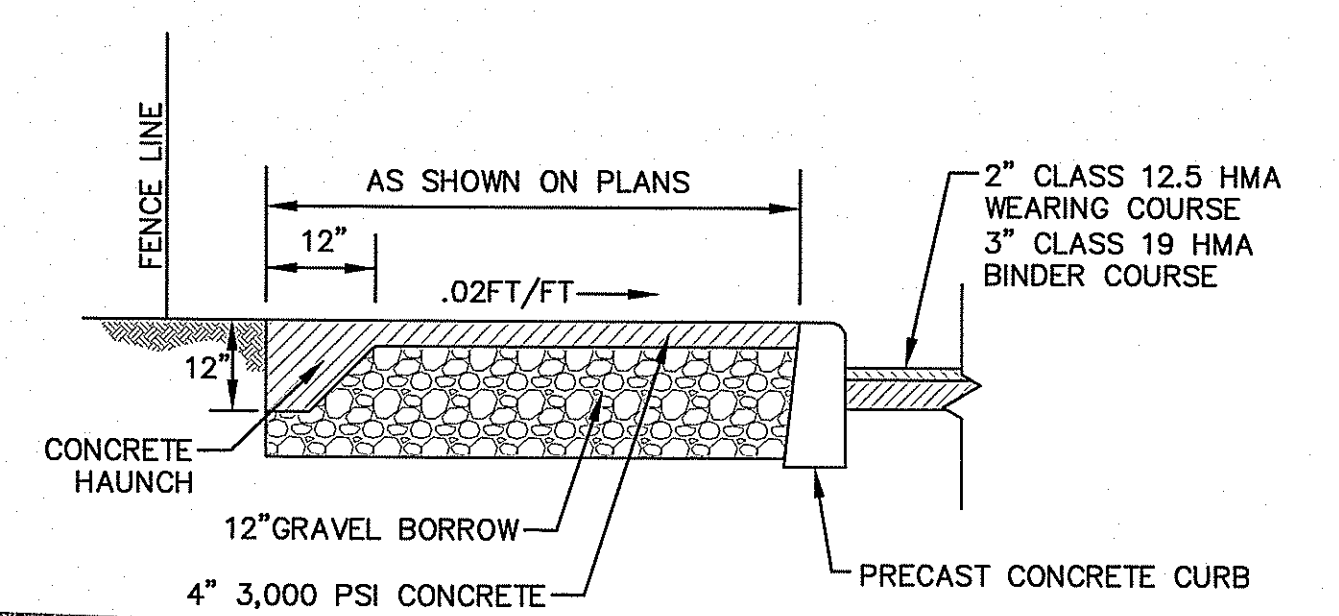


NOTE:
THE BINDER COURSE MUST BE INSTALL BY JUNE 1, 2017. THE WEARING COURSE SHALL BE INSTALL ANYTIME AFTER OCTOBER 9TH, 2017 AND BEFORE NOVEMBER 17, 2017.

PERMANENT PAVEMENT DETAIL
NOT TO SCALE



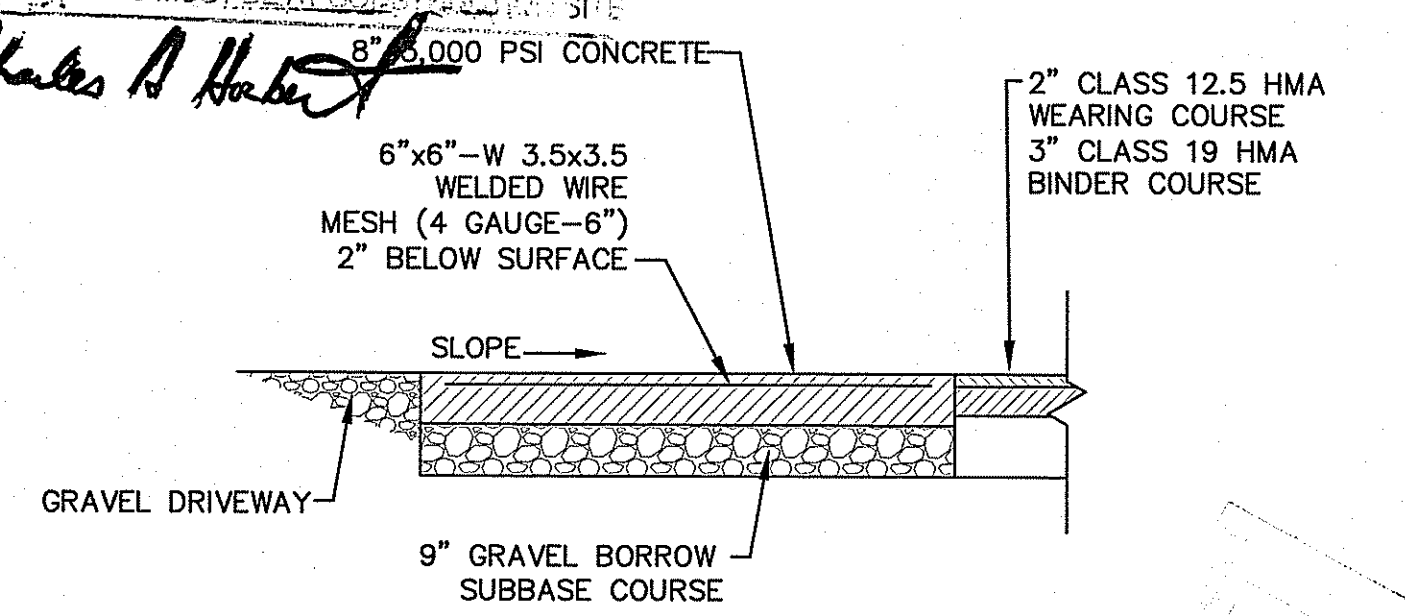
TYPICAL PRECAST CURB INSTALLATION
NOT TO SCALE



CONCRETE SIDEWALK DETAIL
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH MODIFICATIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED JUL 13 2017 FILE # 17-0021
NO CHANGES ALLOWED WITHOUT PRELIMINARY WRI APPROVED PLANS MUST BE AT CONTRACTOR'S RISK

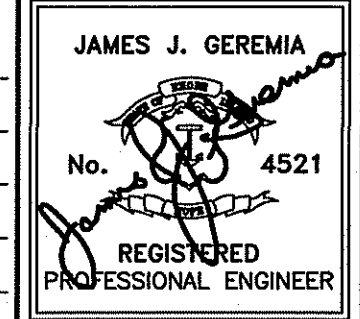
James A. Harte



CONCRETE DRIVEWAY DETAIL
NOT TO SCALE

NO.	BY:	DATE:	REMARKS:
2	OL	6/17	RIDEM COMMENTS
1	OL	2/17	DESIGN REVISIONS
CADD FILE:			DATE PRINTED: 6/14/17

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DRAWN BY: OL
CHECKED BY: JG
SCALE: AS SHOWN
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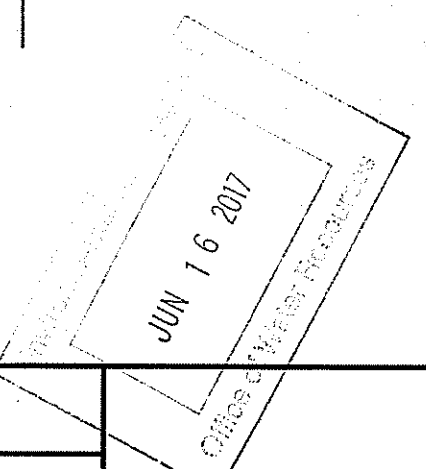


JAMES J. GEREMIA & ASSOCIATES, INC.
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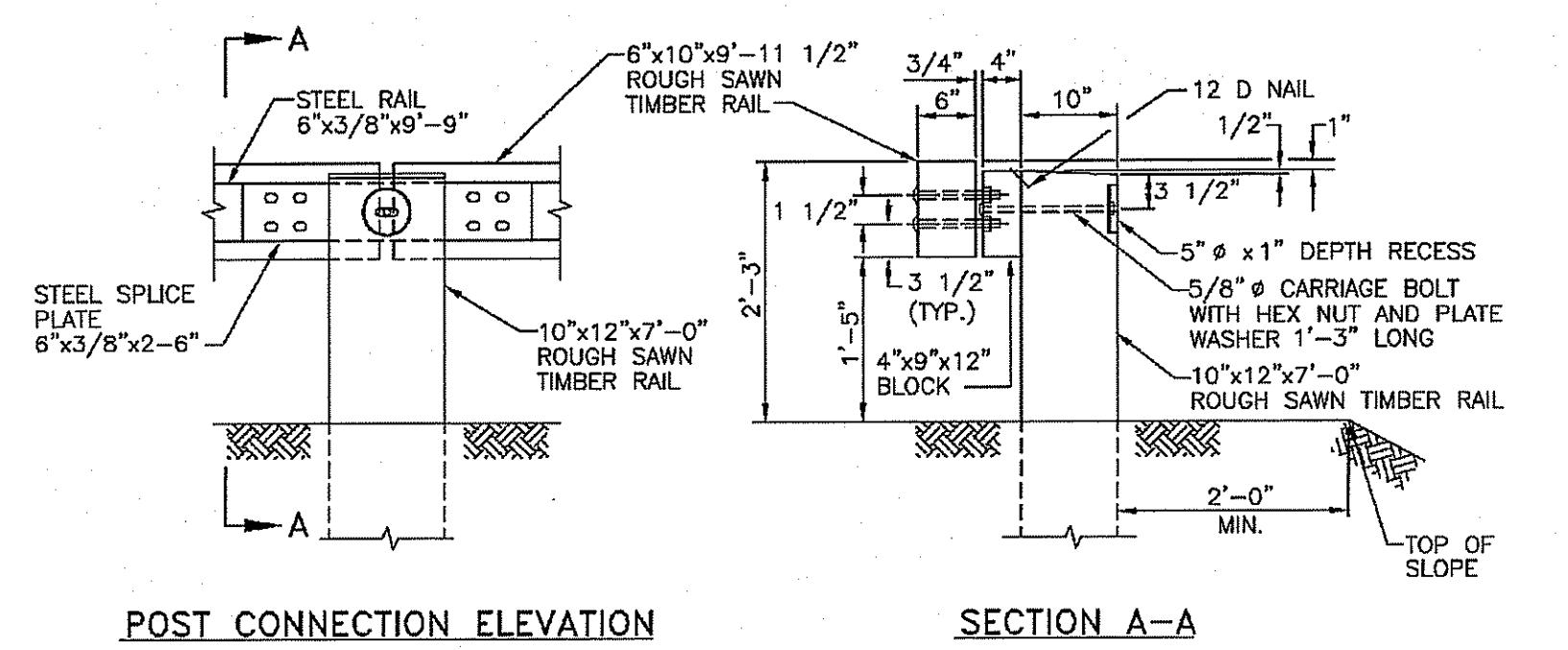
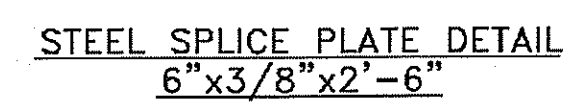
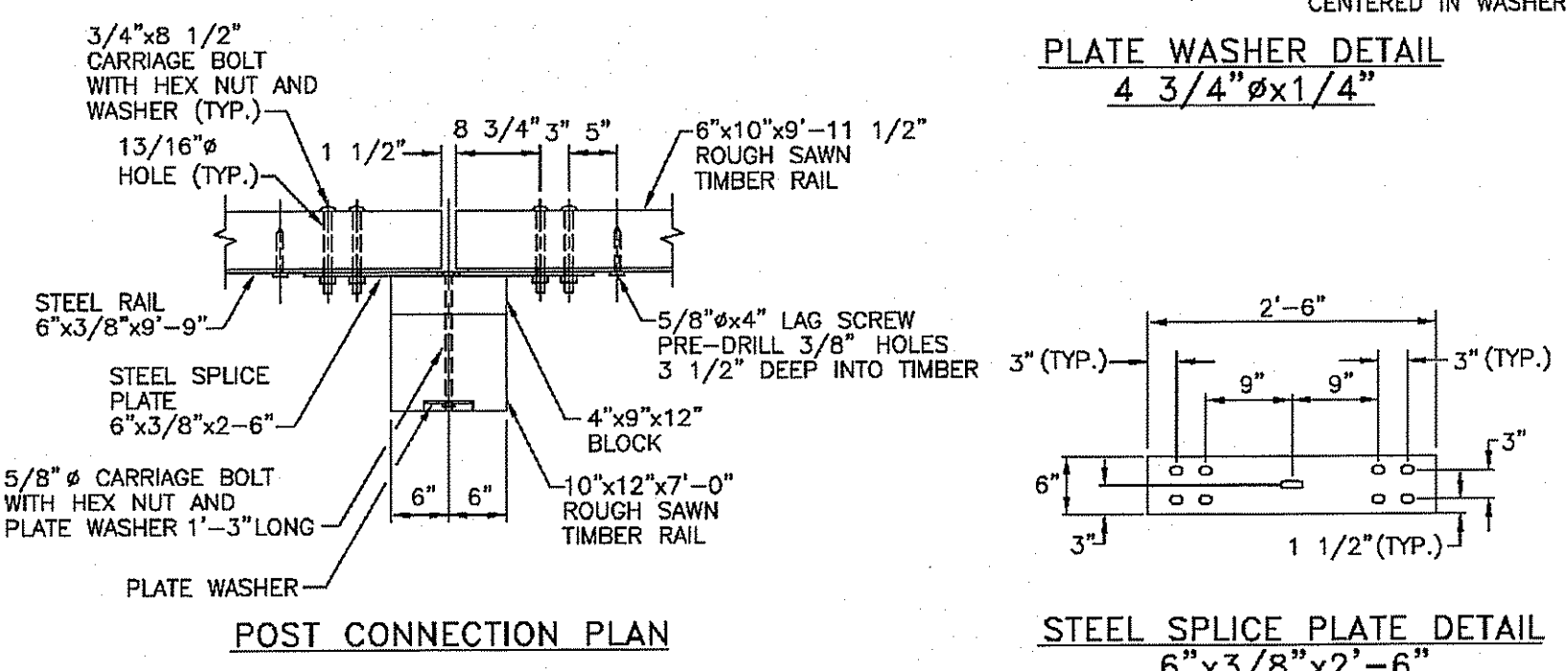
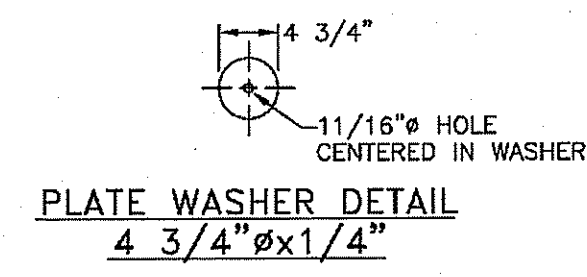
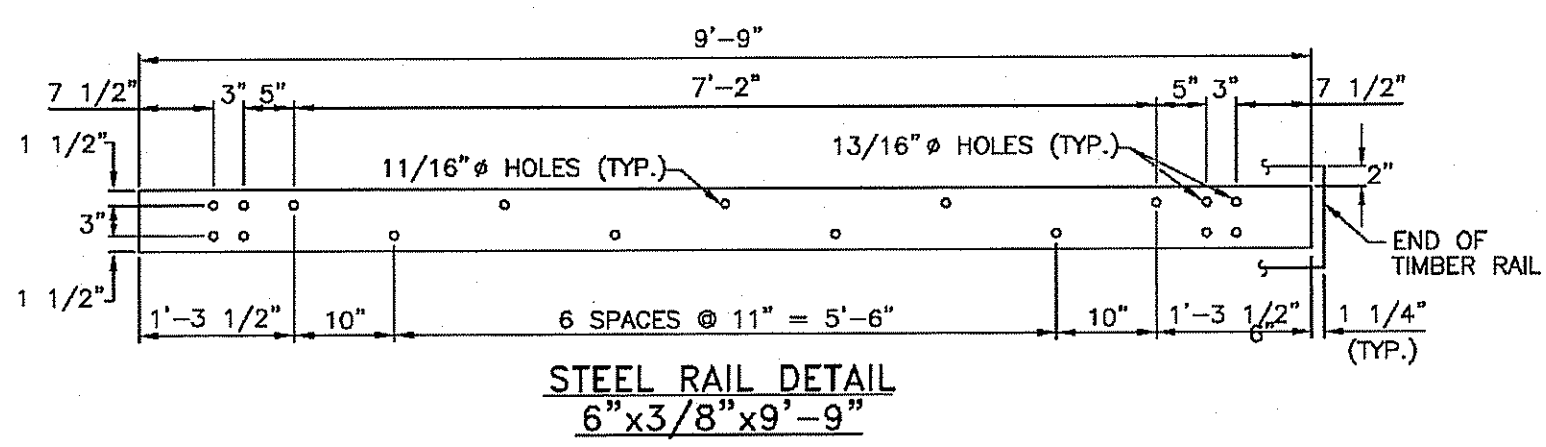


TOWN OF NEW SHOREHAM, RI
OLD TOWN ROAD IMPROVEMENTS

MISCELLANEOUS DETAILS I



Z:\Projects\Black Island\Old Town Rd - Road Improvements\Old Town Road Imp - DD.dwg



NOTES:
 1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
 2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

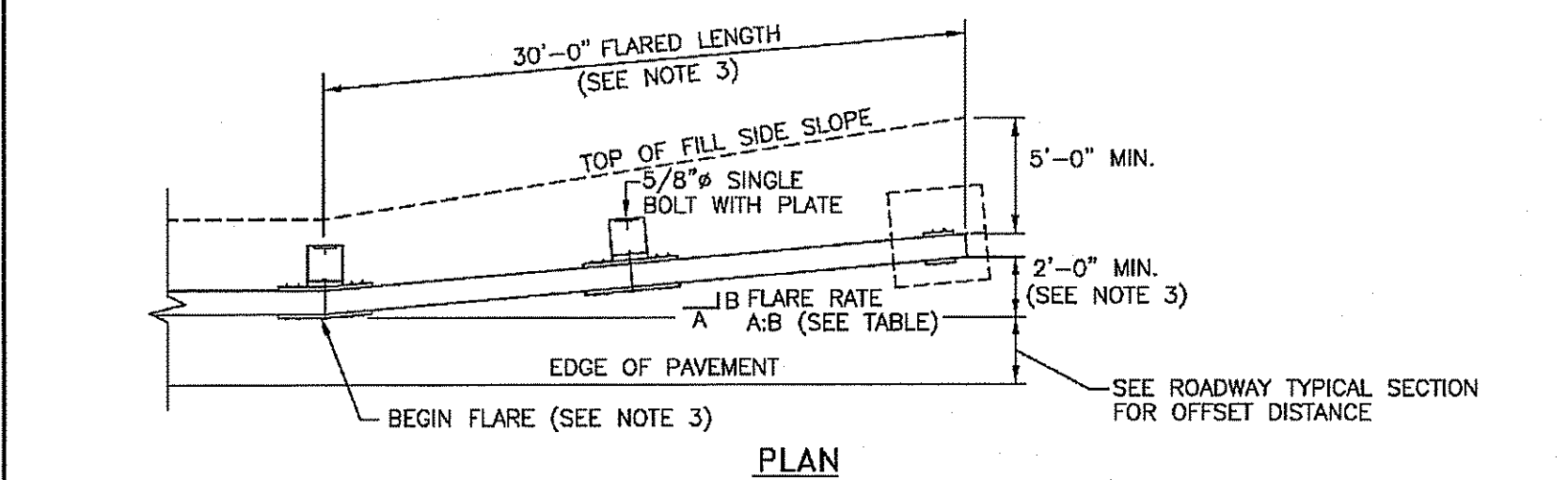
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BACKED TIMBER GUARDRAIL

R.I. STANDARD 34.4.0

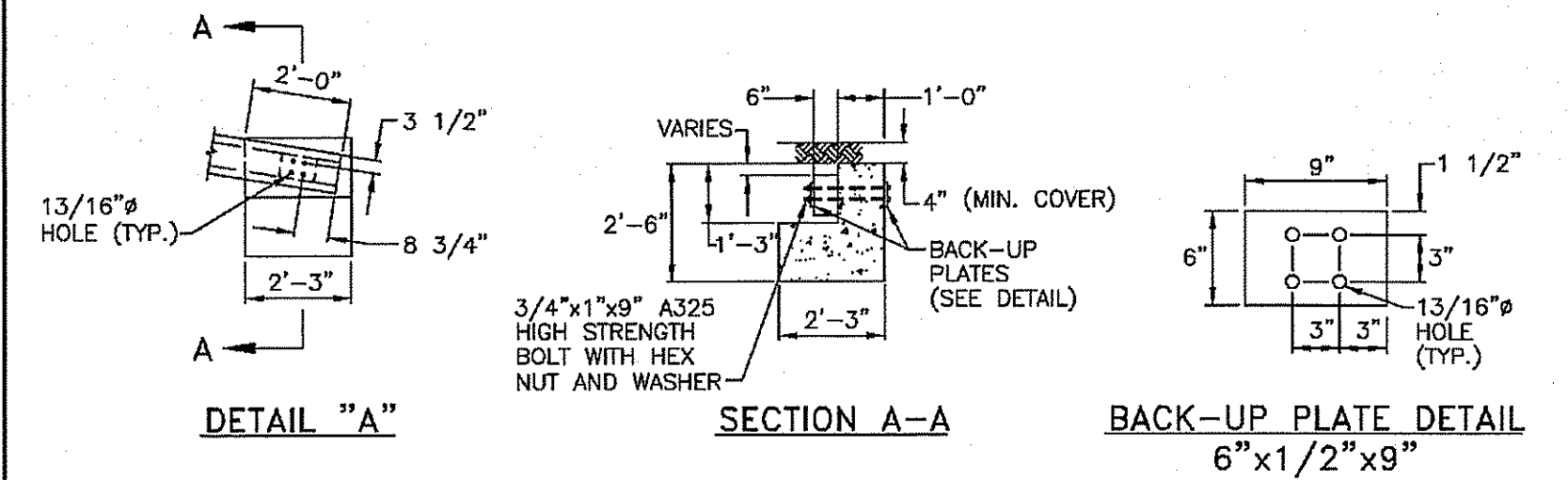
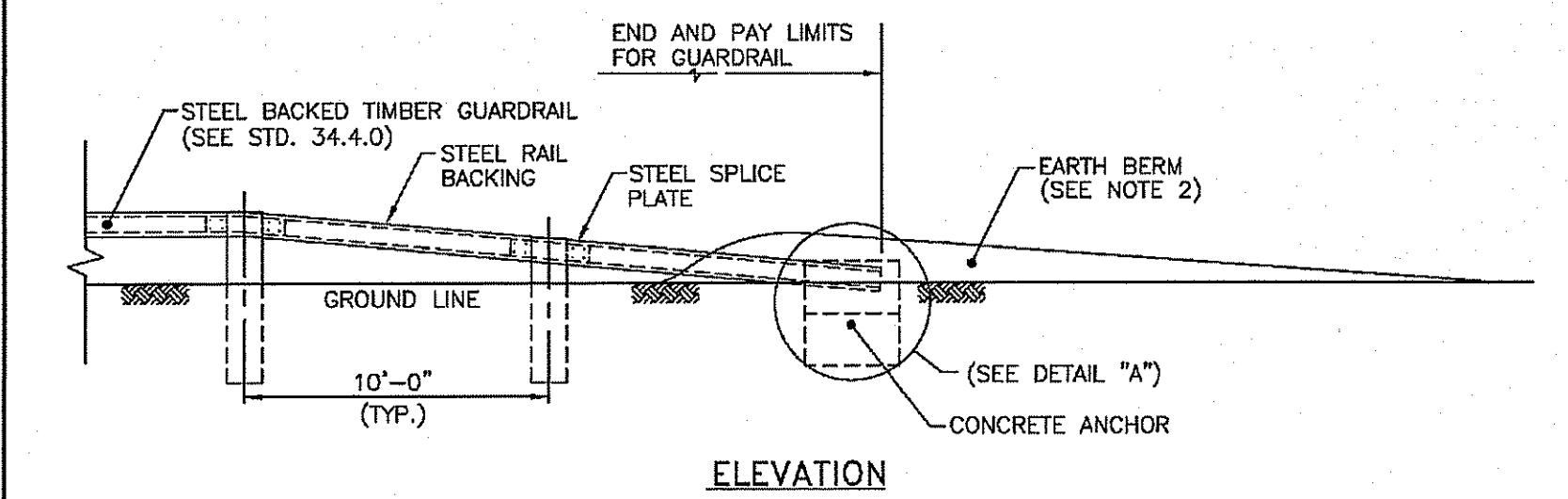
REVISIONS: 1 MLP 3/1/2005

DESIGNED BY: *James J. Geremia*
 DRAWN BY: *James J. Geremia*
 CHECKED BY: *James J. Geremia*
 SCALE: AS SHOWN
 DATE: JUNE 15, 1998



GUARDRAIL FLARE RATES

DESIGN SPEED (MPH)	FLARE RATE A:B
60	13:1
50	11:1
40	9:1
30 OR LESS	7:1



NOTES:
 1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
 2. REFERENCE STD. 34.3.0 FOR CONSTRUCTION OF EARTH BERM.
 3. THE GUARDRAIL FLARE SHOWN IN THE PLAN VIEW IS THE MINIMUM LENGTH AND RATE REQUIRED, AS DIRECTED BY THE ENGINEER. THE GUARDRAIL SHOULD BE FLARED SO THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE. WHEN THIS IS NOT PRACTICAL, IT SHOULD BE FLARED AS FAR FROM THE ROAD AS PRACTICAL AT THE MAXIMUM RATE INDICATED ON THE GUARDRAIL FLARE RATE TABLE.
 4. REFERENCE STD. 34.4.0 FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
 5. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.

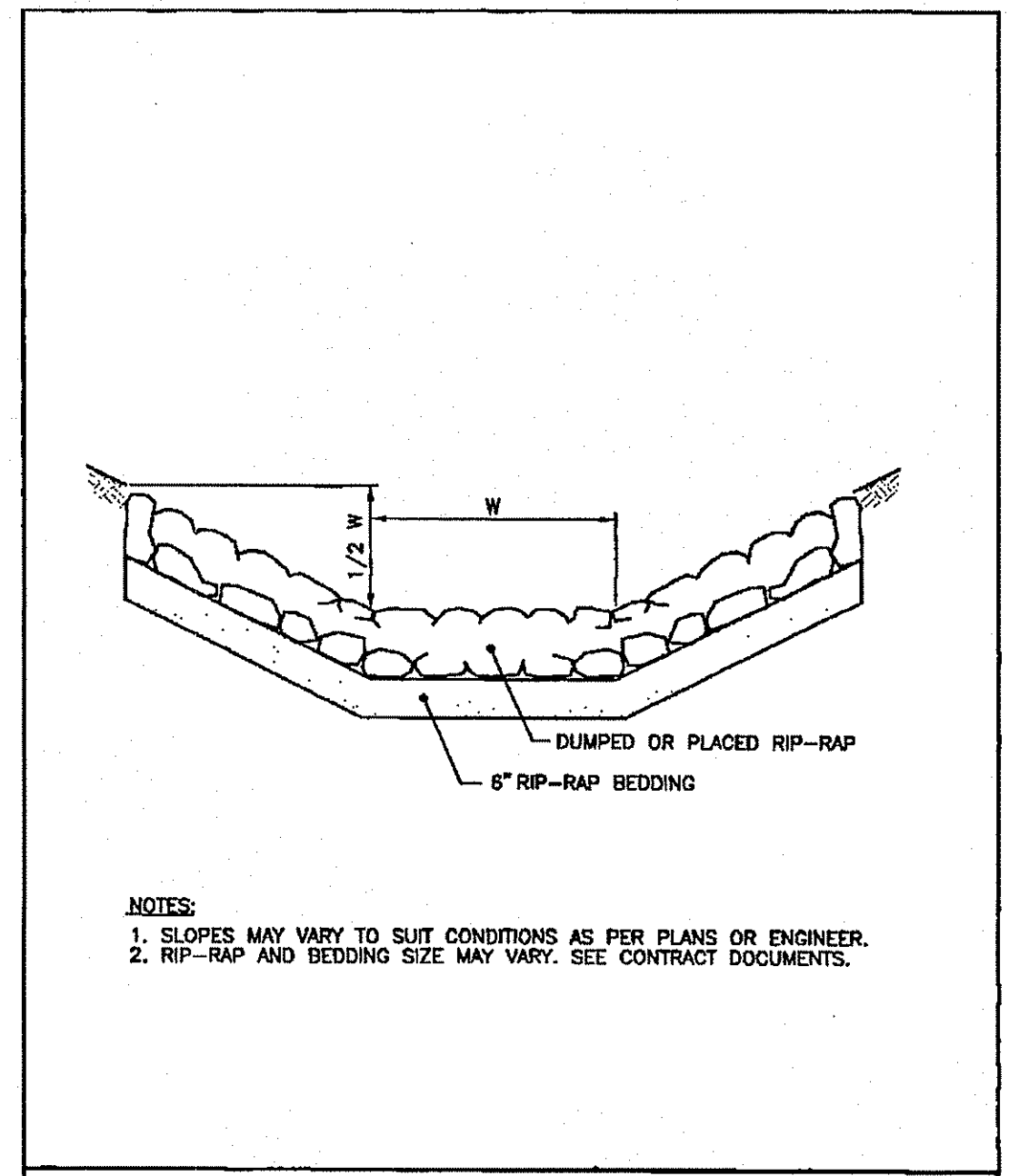
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION - TYPE 1

R.I. STANDARD 34.4.1

REVISIONS: 1 MLP 3/1/2005

DESIGNED BY: *James J. Geremia*
 DRAWN BY: *James J. Geremia*
 CHECKED BY: *James J. Geremia*
 SCALE: AS SHOWN
 DATE: JUNE 15, 1998



NOTES:
 1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
 2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

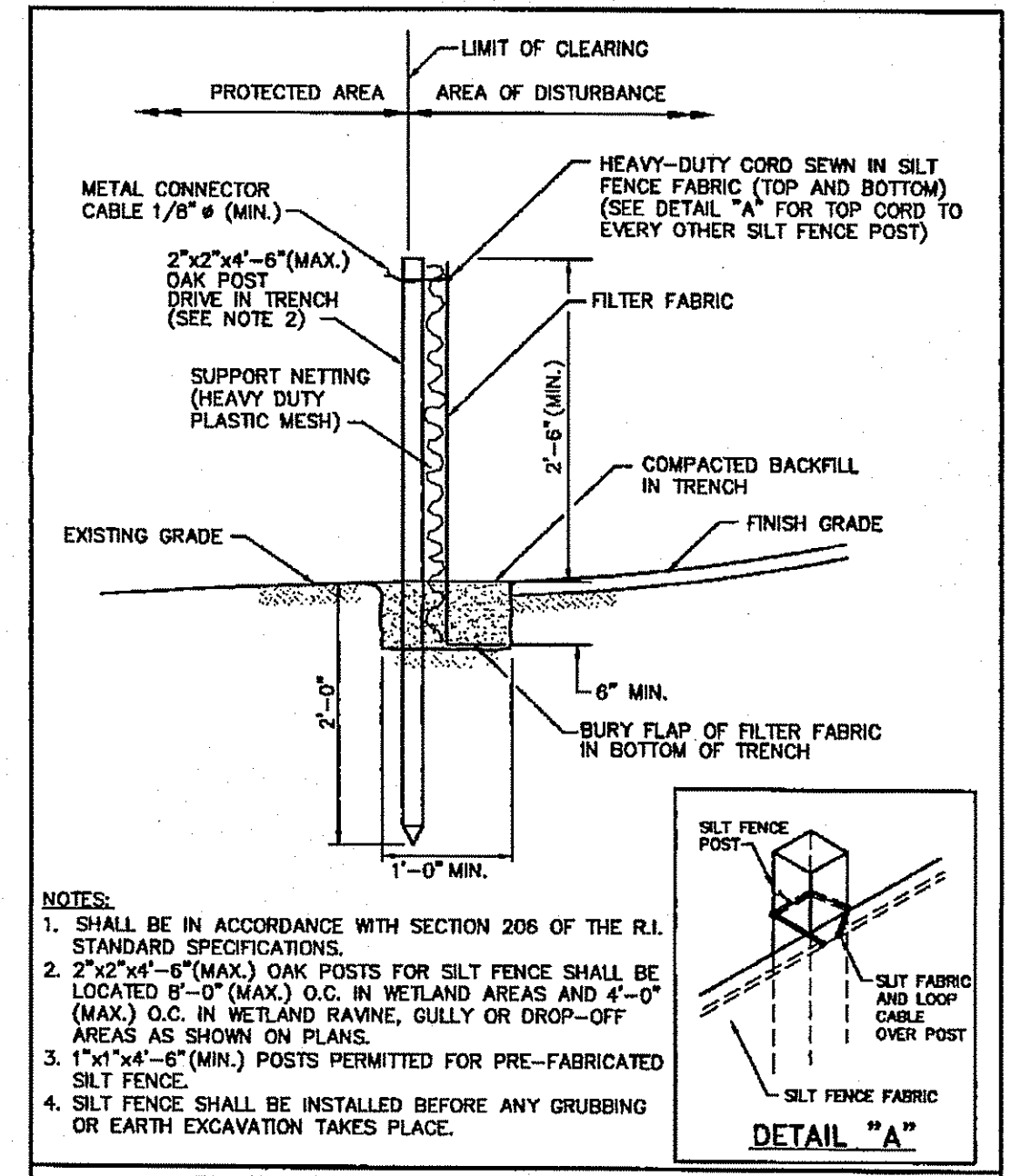
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RIP-RAP DITCH

R.I. STANDARD 8.3.0

REVISIONS: 1 MLP 3/1/2005

DESIGNED BY: *James J. Geremia*
 DRAWN BY: *James J. Geremia*
 CHECKED BY: *James J. Geremia*
 SCALE: AS SHOWN
 DATE: JUNE 15, 1998



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

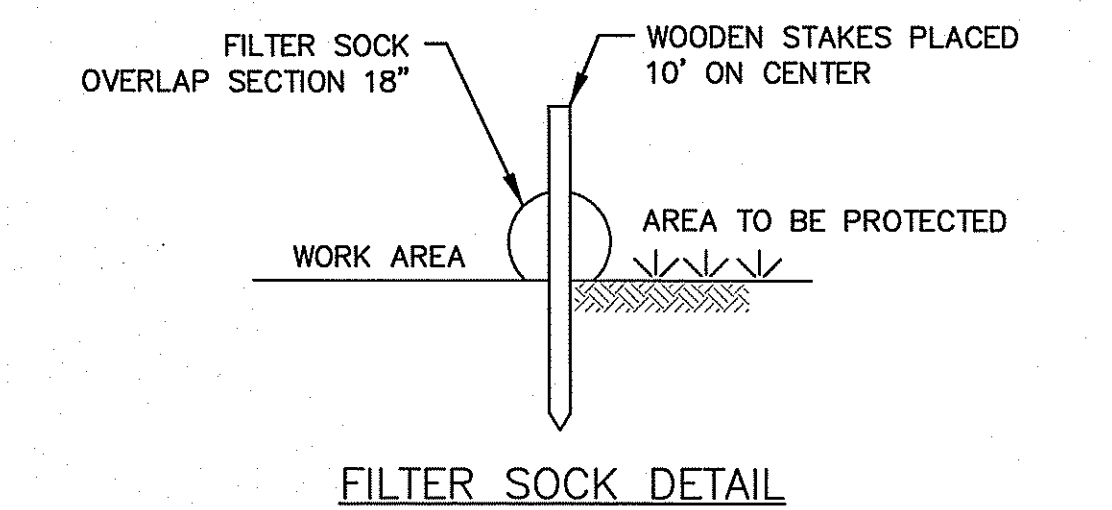
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SILT FENCE DETAIL

R.I. STANDARD 9.2.0

REVISIONS: 1 MLP 3/1/2005

DESIGNED BY: *James J. Geremia*
 DRAWN BY: *James J. Geremia*
 CHECKED BY: *James J. Geremia*
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 DATED: JUN 19 2017 FILE: 17-0021
 NO CHANGES ALLOWED WITHOUT APPROVAL OF THE APPROVED PLANS MUST BE AT THE SIGNATURE OF THE

Charles A. Haber

APPROVED FOR THE TOWN OF NEW SHOREHAM
 JUN 16 2017
 Office of Water Resources

DESIGNED BY:	OL
DRAWN BY:	OL
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TOWN OF NEW SHOREHAM, RI
 OLD TOWN ROAD IMPROVEMENTS

MISCELLANEOUS DETAILS II