

June 18, 2014

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF ADMINISTRATION

DIVISION OF PURCHASES BID NO. 7548775

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

RHODE ISLAND CONTRACT NO.2014-CB-037

FEDERAL-AID PROJECT NO. FAP Nos: 3RD-PRTY(222), BRO-0499(001)

Great Island Br. #499

Galilee Escape Road to Basin Road

CITY/TOWN OF Narragansett

COUNTY OF WASHINGTON

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 4 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Specifications - Job Specific

1. JS-22

Delete page JS-22 in its entirety and replace it with revised page JS-22(R-1) attached to this Addendum No. 4. The descriptions and areas of plantings have been clarified.

2. JS-171 and JS-172

Delete pages JS-171 and JS-172 in their entirety and replace them with revised pages JS-171(R-1) and JS-172(R-1) attached to this Addendum No. 4. Item Nos. 2 and 3 under Micropile Design Requirements have been revised.

3. JS-173

Delete page JS-173 in its entirety and replace it with revised page JS-173(R-1) attached to this Addendum No. 4. Item No. 6 under Design Calculations has been deleted.

4. JS-174

Delete page JS-174 in its entirety and replace it with revised page JS-174(R-1) attached to this Addendum No. 4. Item No. 5 under Working Drawings has been deleted.

B. Distribution of Quantities

1. Index Pages

Delete pages Index 1 through Index 4 in their entirety and replace them with revised pages Index 1(R-1) through Index 4(R-1) attached to this Addendum No. 4. Items with changes are indicated in bold type.

2. Page 15
Delete page 15 in its entirety and replace it with revised page 15(R-1) attached to this Addendum No. 4. The quantity for Item No. 65 has been revised, and Item Nos. 64 and 67 have been deleted.
3. Page 16
Delete page 16 in its entirety and replace it with revised page 16(R-1) attached to this Addendum No. 4. Item No. 68 has been deleted, and the quantity for Item No. 69 has been revised.
4. Page 25
Delete page 25 in its entirety and replace it with revised page 25(R-1) and new page 25a attached to this Addendum No. 4. The quantities for Item Nos. 110 and 111 have been revised.
5. Page 27
Delete page 27 in its entirety and replace it with revised page 27(R-1) attached to this Addendum No. 4. The quantity for Item No. 122 has been revised.
6. Page 28
Delete page 28 in its entirety and replace it with revised page 28(R-1) attached to this Addendum No. 4. The quantity for Item No. 124 has been revised.
7. Page 38
Delete page 38 in its entirety and replace it with revised page 38(R-1) attached to this Addendum No. 4. Item Nos. 166 and 167 have been added.

C. Drawings/Plans - Change/Addition

1. Sheet No. 7 – Sequence of Construction
Revise Sheet No. 7 as shown on Sketch No. 1(R-1) attached to this Addendum No. 4. Post Staged Construction Note 4 has been revised.
2. Sheet No. 10 – Micropile Pile Details
Revise Sheet No. 10 as shown on Sketch No. 2(R-1) and Sketch No. 3(R-1) attached to this Addendum No. 4. Centerlines of Front and Back Piles have been noted in Typical Section at Abutment, and Micropile Structural Design Loads have been added.
3. Sheet No. 65 – Mitigation Plan No. 2
Revise Sheet No. 65 as shown on Sketch No. 4(R-1) attached to this Addendum No. 4. Limits of Switchgrass planting have been revised.
4. Sheet No. 45 – Drainage & Utility Plan No. 1
Revise Sheet No. 45 as shown on Sketch No. 5(R-1) attached to this Addendum No. 4. The description of Drainage Structure “C” has been revised.
5. Sheet No. 29 - Demolition Plan
Revise Sheet No. 29 as shown on Sketch No. 6(R-1) attached to this Addendum No. 4. Note No. 2 in the Proposed Bracing of Existing Pier Detail has been revised.



RI Department of Transportation
Chief Engineer

MATERIALS: Herbicide shall be Glyphosate 53.8% (2 fl. oz. / gallon water), USEPA and state registered for application. A state-approved nonionic surfactant must be used in conjunction with the herbicides to ensure that the herbicide is taken up by the plants.

Finish surfaces of the stormwater outlet controls (Mitigation Area 1) shall be seeded with Switchgrass (*Panicum virgatum*) at a seeding rate of 6-12 lbs. of pure live seed (PLS) per acre. The seed shall be placed on the bottom and side slopes of the basin (elevation 1.5 to elevation 4.0, approximately 5,100 square feet) as indicated on the Plans.

Restoration plantings for the coastal wetland mitigation area (Mitigation Area 2) shall be plugs of Cordgrass (*Spartina alterniflora* and *Spartina patens*). Bare-root plugs of *Spartina alterniflora* shall consist of 3 stems minimum, 12" to 18" in height, with stems remaining attached at the root, and plugs shall have a rootmass of at least 2" in diameter at the root crown and 6" of root length. Bare root plugs of *Spartina patens* shall contain 3 to 5 stems per planting unit. Bare-root plugs of *Spartina alterniflora* shall be placed at or below below finished grade elevation 2.0 (approximately 5,800 square feet), and *Spartina patens* shall be placed above finished grade elevation 2.0 (approximately 3,200 square feet) as indicated on the Plans. Switchgrass (*Panicum virgatum*) shall be placed within the drainage ditch and on the slopes and embankments at a seeding rate of 6-12 lbs. of pure live seed (PLS) per acre, (approximately 5,400 square feet) as indicated on the Plans.

CONSTRUCTION METHODS: The mitigation shall be completed by implementing a combination of chemical and mechanical treatment methods as described below.

Chemical Treatment. The boundaries of the two Phragmites removal areas shall be physically located and marked in the field and shall be approved by the Engineer prior to commencement of the work. Application of the herbicide (Glyphosate solution) shall be performed by a licensed herbicide applicator in strict accordance with manufacturer's recommendations, including those for application rate, handling, and safety. The preferred dates for application of the herbicide are between August 15 and September 10 provided the project schedule allows, however application may occur during the growing season of April 15th through October 15th. Within each mitigation area, the application of herbicide shall be performed as a single, continuous operation, to be completed either within a single work day or over consecutive calendar days.

Mechanical Removal. The herbicide solution will have been sufficiently drawn down into the Phragmites rhizome system approximately 2 to 3 weeks following its application, at which time the Contractor shall commence with mechanical removal operations. Cutting, excavation, and other mechanical work within the mitigation areas shall be performed using equipment specifically designed for operation within wetlands and other sensitive areas.

The initial operation shall consist of the mechanical cutting of withered Phragmites stalks to approximately 6 to 12 inches above existing grade using a brush cutter attachment to the crawler. Following completion of cutting and clearing operations, the Contractor shall excavate into the substrate to completely remove the Phragmites root system (rhizomes). All excavated sediments and biomass shall be removed from the mitigation areas for offsite disposal, whereupon the mitigation area shall be further excavated to the grades shown on the Plans to accommodate the stormwater outlet controls (Area 1 wet swale, Area 2 drainage channel) and restoration plantings. Straw, jute mesh, or other methods approved by the Engineer shall be employed for control of erosion both during and following excavation operations.

The Contractor shall classify excavated contaminated soil and sediment as "Wet" or "Dry". Wet contaminated soil and sediment shall be defined as excavated material whose moisture content is

the past five (5) years, with micropiles of similar capacity to those required in these plans and specifications. The micropile design engineer may be either an employee of the Contractor or a separate consultant design engineer meeting the stated experience requirements.

At least 45 calendar days before the planned start of micropile construction, the Contractor shall submit five (5) copies of the completed project reference list and a personnel list. The project reference list shall include a brief project description with the owner's name and current phone number and load test reports. The personnel list shall identify the micropile system design engineer, supervising project engineer, drill rig operators, and on-site foremen to be assigned to the project. The personnel list shall contain a summary of each individual's experience and be complete enough for the Engineer to determine whether each individual satisfies the required qualifications. The Engineer will approve or reject the Contractor's qualifications within 45 calendar days after receipt of a complete submission. Additional time required due to incomplete or unacceptable submittals will not be cause for time extension or impact or delay claims. All costs associated with incomplete or unacceptable submittals shall be borne by the Contractor.

Work shall not be started, nor materials ordered, until the Engineer's written approval of the Contractor's experience qualifications is given. The Engineer may suspend the work if the Contractor uses non-approved personnel. If work is suspended, the Contractor shall be fully liable for all resulting costs and no adjustment in contract time will result from the suspension.

SUBSURFACE INFORMATION. Available boring information is provided on the Plans. Boring Samples are available for inspection, by appointment, at the offices of Paul B. Aldinger & Associates, Inc., 860A Waterman Avenue, Suite 9, East Providence, Rhode Island 02914.

CONSTRUCTION SITE SURVEY. Prior to bidding, the Contractor shall review the available subsurface information and visit the site to assess the site geometry, equipment access conditions, and location of existing structures and above ground facilities.

The Contractor is responsible for coordinating with DigSafe and for field locating and verifying the location of all utilities shown on the plans prior to starting the work and shall maintain uninterrupted service for those utilities designated to remain in service throughout the work.

Prior to the start of any micropile construction activity, the Contractor and Engineer shall jointly inspect the site to observe and document the pre-construction condition of the site, existing structures and facilities.

MICROPILE DESIGN REQUIREMENTS. The micropiles shall be designed to meet the specified loading conditions, as shown on the Plans and approved working drawings. The Contractor shall design the micropiles and pile top to footing connections using the procedures contained in the *FHWA Micropile Design and Construction*, Report No. FHWA NHI-05-039. The following minimum requirements shall be met by the Contractor's design:

1. The required geotechnical resistance factor shall be 0.55, in accordance with the *AASHTO LRFD Bridge Design Specifications*, unless specified otherwise.
2. Estimated soil/rock design shear strength parameters, unit weights, applied foundation loadings, slope and construction surcharge loads, corrosion protection requirements, known utility locations, easements, right-of-ways and other applicable design criteria will be as shown on the Plans or specified herein.

3. The cased length of the micropile shall have a nominal pile diameter of 8 inches or larger.
4. Minimum steel bar reinforcing grade and other design details shall be as indicated on the Plans.
5. Provide a 2-inch concrete or grout cover over all steel reinforcing. Centralizers attached to the reinforcing bar steel shall be used to ensure the minimum grout cover. A minimum of 1 inch of cover shall be provided over reinforcing bar couplers.
6. Pile perimeter steel casing shall extend a minimum of 40 feet from the micropile cut-off elevation. Casing steel shall be of a minimum thickness of 0.5 inches and shall not be considered in the structural pile design. Structural design of any individual micropile structure elements not covered by the FHWA manual shall be by the LRFD design method in conformance with appropriate articles of the most current Edition of the *AASHTO LRFD Bridge Design Specifications*, including current interim specifications.
7. Minimum 28-day compressive strength of concrete or cement grout shall be 4,000 psi.
8. The design shall be completed in accordance with the requirements indicated in the AASHTO LRFD Bridge Design Specifications, latest edition.

Micropile Design Submittals. At least 45 calendar days before the planned start of micropile structure construction, the Contractor shall submit complete design calculations and working drawings to the Engineer for review and approval. This submittal shall include an installation narrative, all details, dimensions, quantities, ground profiles, and cross-sections necessary to construct the micropile structure. The installation narrative shall provide details of the specific method of construction, the proposed procedure for by-pass of obstructions, the proposed equipment for pile installation, and means and methods for measuring grout quantities and pressures during installation. The proposed records keeping format shall be described and a sample installation form provided for approval. The Contractor shall verify the limits of the micropile structure and ground survey data before preparing the detailed working drawings.

The drawings and calculations shall be signed and sealed by the Contractor's Professional Engineer or by the Consultant designer's Professional Engineer (if applicable), previously approved by the Engineer. If the micropile Contractor uses a consultant design engineer to prepare the design, the micropile Contractor shall still have overall contract responsibility for both the design and the construction.

Design Calculations. The design calculations shall include, but not be limited to, the following items:

1. A written summary report which describes the overall micropile design.
2. Applicable code requirements and design references.
3. Micropile structure critical design cross-section(s) geometry including soil/rock strata and piezometric levels and location, magnitude and direction of design applied loadings, including slope or external surcharge loads.

4. Design criteria including soil/rock shear strengths (friction angle and cohesion), unit weights, and ground-grout bond values and micropile drillhole diameter assumptions for each soil/rock strata.
5. Factors of safety and allowable stresses used in the design on the ground-grout bond values, surcharges, soil/rock and material unit weights, steel, grout, and concrete materials.
6. [DELETED]
7. Design calculation sheets (both static and seismic) with the project number, micropile structure location, designation, date of preparation, initials of designer and checker, and page number at the top of each page. Provide an index page with the design calculations.
8. Design notes including an explanation of any symbols and computer programs used in the design.
9. Pile to footing connection calculations.

Working Drawings. The working drawings shall include all information required for the construction and quality control of the piling. Working drawings shall include, but not be limited to, the following items unless provided in the Plans:

1. A plan view of the micropile structure(s) identifying:
 - a. A reference baseline and elevation datum.
 - b. The offset from the construction centerline or baseline to the face of the micropile structure at all changes in horizontal alignment.
 - c. Beginning and end of micropile structure stations.
 - d. Right-of-way and permanent or temporary construction easements limits, location of all known active and abandoned existing utilities, adjacent structures or other potential interferences.
 - e. Subsurface exploration locations shown on a plan view of the proposed micropile structure alignment with appropriate reference base lines to fix the locations of the explorations relative to the micropile structure.
2. An elevation view of the micropile structure(s) identifying:
 - a. Elevation view showing micropile locations and elevations, vertical and horizontal spacing, and batter and alignment.
 - b. Existing and finish grade profiles both behind and in front of the micropile structure.
3. Design parameters and applicable codes.
4. General notes for constructing the micropile structure including construction sequencing or other special construction requirements.

5. [DELETED]
6. A listing of the summary of quantities on the elevation drawing of each micropile structure showing pay item estimated quantities.
7. Micropile typical sections including micropile spacing and inclination; minimum drillhole diameter; pipe casing and reinforcing bars sizes and details; splice types and locations; centralizers and spacers; grout bond zone and casing plunge lengths (if used); corrosion protection details; and connection details to the substructure footing, anchorage, plates, etc.
8. A typical detail of verification and production proof test micropiles defining the micropile length, minimum drillhole diameter, inclination, and load test bonded and unbonded test lengths.
9. Details, dimensions, and schedules for all micropiles, casing and reinforcing steel, including reinforcing bar bending details.

The working drawings and design calculations shall be signed and sealed by the Contractor's Professional Engineer, previously pre-qualified by the Engineer. If the micropile Contractor uses a Consultant design engineer to prepare the design, the micropile Contractor shall still have overall contract responsibility for both the design and construction.

The Contractor shall submit eight (8) sets of the working drawings with the initial submission. One set will be returned with any indicated corrections. The Engineer will approve or reject the Contractor's submittal within 45 calendar days after receipt of a complete submission. If revisions are necessary, the Contractor shall make the necessary corrections and resubmit eight (8) revised sets. The Contractor will not be allowed to begin micropile structure construction or incorporate materials into the work until the submittal requirements are satisfied and found acceptable to the Engineer. Changes or deviations from the approved submittals must be re-submitted for approval. No adjustment in contact time or delay or impact claims will be allowed due to incomplete submittals.

The working drawings shall be revised when plan dimensions are changed due to field conditions or for other reasons. Within 30 days after completion of the work, the Contractor shall submit as-built drawings to the Engineer. The Contractor shall provide revised design calculations signed by the approved registered Professional Engineer for all design changes made during the construction of the micropile structure.

CONSTRUCTION SUBMITTALS. The Contractor shall prepare and submit to the Engineer, for review of completeness, eight (8) copies of the following for the micropile system or systems to be constructed:

1. Detailed step-by-step description of the proposed micropile construction procedure, including personnel, testing and equipment to assure quality control. This step-by-step procedure shall be shown on the working drawings in sufficient detail to allow the Engineer to monitor the construction and quality of the micropiles.
2. Proposed start date and time schedule and micropile installation schedule and a plan with proposed micropile layout with the micropile numbering system.

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L11.0103	SHRUB PLANT PROTECTION DEVICE STANDARD 51.2.0	33
T08.9901	DECORATIVE POLE/LUMINAIRES AND ELECTRICAL SYSTEMS	34
T12.9901	TEMPORARY SIGNAL SYSTEM	34
T12.9902	MAINTENANCE OF TEMPORARY SIGNAL SYSTEM	34
T15.0100	DIRECTIONAL REGULATORY AND WARNING SIGNS	34

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Project Name - Great Island Br. #499
 Estimate Name - Addendum 4
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 FAP Nos: 3RD-PRTY(222), BRO-0499(001)

ItemCode	Description	Page
T15.2000	PARKING SIGNS	35
T20.0006	6 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	35
T20.0012	12 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	35
T20.0104	4 INCH YELLOW FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT	35
T20.1000	REMOVE EXISTING PAVEMENT MARKINGS	35
T20.2006	6 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	36
T20.2012	12 INCH EPOXY RESIN PAVEMENT MARKINGS WHITE	36
T20.2014	4 INCH EPOXY RESIN PAVEMENT MARKINGS YELLOW	36
T20.9901	6 INCH TEMPORARY EPOXY RESIN PAVEMENT MARKINGS WHITE	37
T20.9903	24 INCH TEMPORARY EPOXY RESIN PAVEMENT MARKINGS WHITE	37
T20.9905	12 INCH TEMPORARY EPOXY RESIN PAVEMENT MARKINGS WHITE	37
T20.9910	6 INCH TEMPORARY WATERBORNE PAVEMENT MARKING PAINT WHITE - 8 MILS	37
T20.9911	12 INCH TEMPORARY WATERBORNE PAVEMENT MARKING PAINT WHITE - 8 MILS	38
T20.9912	4 INCH TEMPORARY WATERBORNE PAVEMENT MARKING PAINT YELLOW - 8 MILS	38
702.0542	GRANITE APRON STONE 5FT. STANDARD 7.3.7	38
702.0620	PRECAST CATCH BASIN 4' SQUARE STANDARD 4.3.0	38

Distribution of Quantities

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Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
063	702.0516 Cont.	GREAT ISLAND ROAD				
		10+50 LT/RT		2.00	0011	01
		11+00 RT		1.00	0011	01
		13+83 RT		1.00	0011	01
		14+75 LT/RT		2.00	0011	01
		17+50 LT/RT		2.00	0011	01
		26+00 RT		1.00	0011	01
Item 702.0516 Total:				9.00		
064	702.0522	FRAME AND COVER STANDARD 6.2.1	EACH			
		GREAT ISLAND ROAD				
		10+50 LT/RT		1.00	0011	01
Item 702.0522 Total:				1.00		
065	702.0541	GRANITE INLET STONE 38'' STANDARD	EACH			
		7.3.6				
		GREAT ISLAND ROAD				
		10+50 RT/LT		2.00	0011	01
		11+00 RT		1.00	0011	01
		13+83 RT		1.00	0011	01
		14+75 RT		1.00	0011	01
		17+50 RT		1.00	0011	01
		26+00 RT		1.00	0011	01
Item 702.0541 Total:				6.00		
066	702.0543	GRANITE APRON STONE 38'' STANDARD	EACH			
		7.3.8				
		GREAT ISLAND ROAD				
		14+75 LT		1.00	0011	01
		17+50 LT		1.00	0011	01
Item 702.0543 Total:				2.00		
067	702.0544	FRIBREX WASHOBS 4' DIAMETER	EACH			

Distribution of Quantities

Project Name - Great Island Br. #499
 Estimate Name - Addendum 4
 R.I. Contract No. - 2014-CB-037
 FAP Nos: 3RD-PRTY(222), BRO-0499(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
167	702.0630 Cont	STANDARD 4.2.0 GREAT ISLAND ROAD 10+50 RT			0011	01
				Item 702.0630 Total: **DELETED**		
168	702.0645	PRECAST MANHOLE 4' SQUARE STANDARD EACH 4.3.0 GREAT ISLAND RD 12+00 RT			0011	01
				Item 702.0645 Total: **DELETED**		
069	702.0705	CATCH BASIN W/GUTTER INLET STANDARD 3.4.1 GREAT ISLAND ROAD	EACH			
		10+50 LT/RT		2.00	0011	01
		11+00 RT		1.00	0011	01
		13+83 RT		1.00	0011	01
		14+75 RT		1.00	0011	01
		17+50 RT		1.00	0011	01
		18+00 RT			0011	01
				Item 702.0705 Total: 6.00		
070	702.0713	PRECAST CONCRETE DROP INLET WITH APRON STONE STANDARD 4.5.1 GREAT ISLAND ROAD	EACH			
		14+75 LT		1.00	0011	01
		17+50 LT		1.00	0011	01
				Item 702.0713 Total: 2.00		
071	702.9902	SEWER MAIN INSULATION GREAT ISLAND ROAD 19+72-22+20	LF			
				Item 702.9902 Total: 250.00		

Distribution of Quantities

Project Name - Great Island Br. #499

Estimate Name - Addendum 4

R.I. Contract No. - 2014-CB-037

FAP Nos: 3RD-PTY(222), BRO-0499(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
109	906.0120	Cont.				
Item 906.0120 Total:				10.00		
110	906.0130	GRANITE RAMP STONE STRAIGHT STANDARD 7.3.9 GREAT ISLAND ROAD	EACH			
		4+00 RT			0011	01
		14+53 LT		1.00	0011	01
		9+00 RT/LT		2.00	0011	01
		9+83 RT/LT		2.00	0011	01
Item 906.0130 Total:				5.00		
111	906.0131	GRANITE RAMP STONE CIRCULAR STANDARD 7.3.9 GREAT ISLAND ROAD	EACH			
		13+93 LT		1.00	0011	01
		9+02 LT		1.00	0011	01
		9+55 LT		1.00	0011	01
		9+70 RT		1.00	0011	01
		9+90 RT		1.00	0011	01
Item 906.0131 Total:				5.00		
112	906.0602	BITUMINOUS BERM STANDARD 7.5.1 GREAT ISLAND ROAD	LF			
		26+25 - 26+47 LT		30.00	0011	01
		26+25 - 26+86 RT		60.00	0011	01
Item 906.0602 Total:				90.00		
113	906.0700	REMOVE, HANDLE, HAUL TRIM RESET CURB EDGING, STRAIGHT, CIRCULAR ALL TYPES GREAT ISLAND ROAD	LF			
		14+42 - 19+80 LT		550.00	0011	01
		8+75 - 9+09 RT		35.00	0011	01

Distribution of Quantities

Project Name - Great Island Br. #499

Estimate Name - Addendum 4

R.I. Contract No. - 2014-CB-037

FAP Nos: 3RD-PRTY(222), BRO-0499(001)

<u>Item No.</u>	<u>Item Code</u>	<u>Description</u>	<u>UM</u>	<u>Qty.</u>	<u>Pay Code</u>	<u>Seq. No.</u>
113	906.0700	Cont.	8+75 - 9+15 LT	55.00	0011	01

Distribution of Quantities

Project Name - Great Island Br. #499

Estimate Name - Addendum 4

R.I. Contract No. - 2014-CB-037

FAP Nos: 3RD-PRTY(222), BRO-0499(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
117	915.0200	Cont. 26+38 LT		1.00	0011	01
				Item 915.0200 Total:		13.00
118	916.0600	SHOCK ABSORBING BARRIER MODULES STAGE 1 ENDS OF TEMP TRAFFIC BARRIER	GRP	2.00	0011	01
				Item 916.0600 Total:		2.00
119	916.0650	REMOVE, RELOCATE AND RESET SHOCK ABSORBING BARRIER MODULES STAGE 2 FROM STAGE 1	GRP	2.00	0011	01
				Item 916.0650 Total:		2.00
120	917.0105	REMOVE AND REPLACE RURAL MAILBOX POST WITH STANDARD 15.1.0 GREAT ISLAND ROAD 13+28 LT	EACH	1.00	0011	01
				Item 917.0105 Total:		1.00
121	919.0101	TEST PITS GREAT ISLAND RD PROJECT WIDE	EACH	10.00	0011	01
				Item 919.0101 Total:		10.00
122	920.0040	DUMPED STONE RIPRAP R-3, R-4, R-5 STANDARD 8.3.0 GREAT ISLAND ROAD 10+51 RT 26+50 LT 26+85 RT WEIR WALL	SY	16.00 16.00 16.00 12.00	0011	01 01 01 01

Distribution of Quantities

Project Name - Great Island Br. #499

Estimate Name - Addendum 4

R.I. Contract No. - 2014-CB-037

FAP Nos: 3RD-PRTY(222), BRO-0499(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
122	920.0040	Cont.				
		Item 920.0040 Total:		60.00		
123	920.0055	PLACED STONE RIPRAP R-3, R-4, R-5 STANDARD 8.3.0 GREAT ISLAND ROAD	SY			
		NE CORNER		30.00	0011	01
		NW CORNER		30.00	0011	01
		SE CORNER		26.00	0011	01
		SW CORNER		14.00	0011	01
		Item 920.0055 Total:		100.00		
124	920.0135	BEDDING FOR RIPRAP FS-2 STANDARD 8.3.0 GREAT ISLAND ROAD	SY			
		FROM ITEM 920.0040		60.00	0011	01
		FROM ITEM 920.0055		100.00	0011	01
		Item 920.0135 Total:		160.00		
125	920.0200	FILTER FABRIC FOR RIP-RAP GREAT ISLAND ROAD	SY			
		FROM ITEM 920.0135		207.00	0011	01
		Item 920.0200 Total:		207.00		
126	920.9901	PLACED STONE RIPRAP R-5 GREAT ISLAND BRIDGE	SY			
		GREAT ISLAND BRIDGE		190.00	0011	01
		Item 920.9901 Total:		190.00		
127	920.9902	BEDDING FOR RIPRAP FS-2 GREAT ISLAND BRIDGE	SY			
		GREAT ISLAND BRIDGE		190.00	0011	01
		Item 920.9902 Total:		190.00		

Distribution of Quantities

Project Name - Great Island Br. #499
 Estimate Name - Addendum 4
 R.I. Contract No. - 2014-CB-037
 FAP Nos: 3RD-PRTY(222), BRO-0499(001)

Item No.	Item Code	Description	UM	Qty.	Pay Code	Seq. No.
S163	T20.9910	Cont.				
Item T20.9910 Total:				3,550.00		
S164	T20.9911	12 INCH TEMPORARY WATERBORNE PAVEMENT MARKING PAINT WHITE - 8 MILS FINAL SURFACE COURSE FROM ITEM T20.2012	LF			
				750.00	0011	01
Item T20.9911 Total:				750.00		
S165	T20.9912	4 INCH TEMPORARY WATERBORNE PAVEMENT MARKING PAINT YELLOW - 8 MILS FINAL SURFACE COURSE FROM ITEM T20.2014	LF			
				3,600.00	0011	01
Item T20.9912 Total:				3,600.00		
166	702.0542	GRANITE APRON STONE 5FT. STANDARD 7.3.7 GREAT ISLAND RD 26+00 RT	EACH			
				1.00	0011	01
Item 702.0542 Total:				1.00		
167	702.0620	PRECAST CATCH BASIN 4' SQUARE STANDARD 4.3.0 GREAT ISLAND RD 26+00 RT	EACH			
				1.00	0011	01
Item 702.0620 Total:				1.00		

STAGE 2 CONSTRUCTION NOTES

1. INSTALL STAGE 2 TRAFFIC CONTROL AS SHOWN IN THE HIGHWAY DRAWINGS.
2. REMOVE AND DISPOSE REMAINING PORTION OF EXISTING SUPERSTRUCTURE, ALL TIMBER PIER BENTS AND A PORTION OF THE EXISTING TIMBER ABUTMENTS.
3. REMOVE PORTION OF TEMPORARY CONCRETE BLOCK WALL AT BOTH APPROACHES TO FACILITATE STAGE 2 SUBSTRUCTURE CONSTRUCTION.
4. COMPLETE STAGE 2 CONSTRUCTION AS SHOWN.
5. REMOVE REMAINING PORTION OF TEMPORARY CONCRETE BLOCK WALL AT BOTH APPROACHES.

POST STAGED CONSTRUCTION NOTES

1. PRELOAD STAGE 2 AS REQUIRED (SEE NOTE).
2. CONSTRUCT 3'-0" CLOSURE POUR.
3. INSTALL WATERPROOFING MEMBRANE AND 1½" LAYER OF MODIFIED HOT MIX ASPHALT WITHIN STAGE 2 AND CLOSURE POUR ROADWAY.

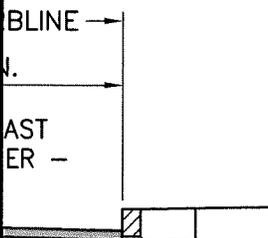


4. REMOVE 1½" LAYER OF HOT MIX ASPHALT PLACED DURING STAGE 1 SUPERSTRUCTURE CONSTRUCTION. REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 839 OF THE RI STANDARD SPECIFICATIONS.

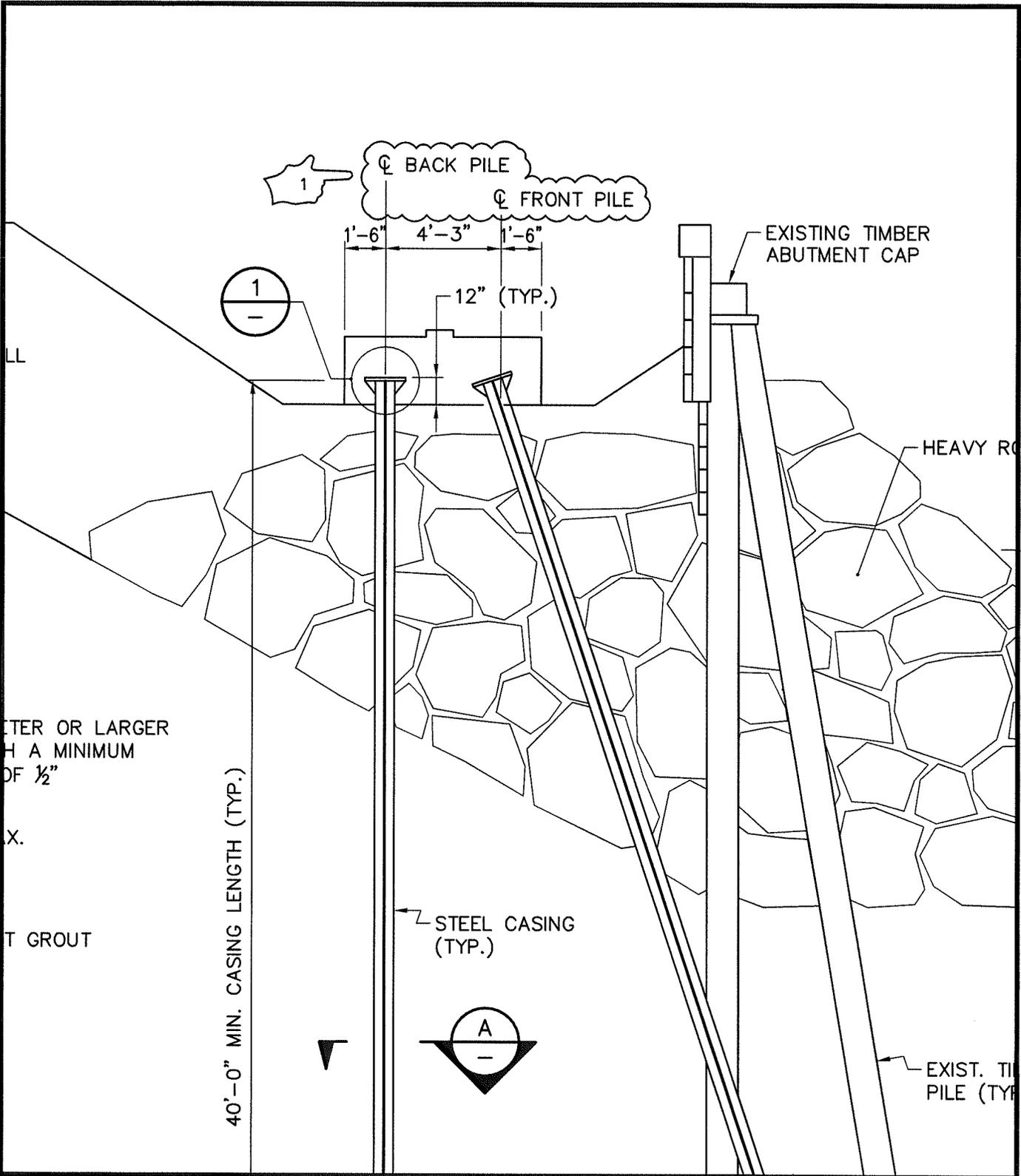
5. PLACE FINAL 1½" LAYER OF MODIFIED CLASS 9.5 HOT MIX ASPHALT OVER ENTIRE ROADWAY WIDTH.
6. INSTALL FINAL STRIP SEAL.

PRELOADING NOTE

THE CONTRACTOR SHALL BE AWARE THAT PRELOADING OF THE STAGE 2 DECK MAY BE REQUIRED IN ORDER TO PROPERLY PLACE THE CLOSURE POUR. UPON COMPLETION OF THE STAGE 2 CONSTRUCTION, THE ENGINEER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING IF PRELOADING IS REQUIRED. IF REQUIRED, THE CONTRACTOR'S PROPOSED METHOD OF PRELOADING SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE PAID FOR THE PRELOADING; THE COST SHALL BE CONSIDERED INCIDENTAL.



 <p>Gordon R. Archibald, Inc. Civil and Environmental Engineers</p>	<p><u>TITLE OF SKETCH</u> REPLACEMENT OF GREAT ISLAND BRIDGE NO. 499 SEQUENCE OF CONSTRUCTION</p>	<p>R.I. CONTRACT NO. 2014-CB-037</p>
		<p>SKETCH NO. 1</p>
<p>DATE: 6/18/2014</p>	<p>ADDENDUM NUMBER 4</p>	<p>REVISION TO SHEET NO. 7</p>



Gordon R. Archibald, Inc.
Civil and Environmental Engineers

TITLE OF SKETCH
REPLACEMENT OF
GREAT ISLAND BRIDGE NO. 499
MICROPILE PILE DETAILS

R.I. CONTRACT NO.
2014-CB-037

SKETCH NO.
2

DATE: 6/18/2014

ADDENDUM NUMBER 4

REVISION TO
SHEET NO. 10



MICROPILE STRUCTURAL DESIGN LOADS			
LIMIT STATE	AXIAL LOAD (KIP)		LATERAL LOAD (KIP)
	FRONT PILE	BACK PILE	
SERVICE	96.5	-3.9	5.6
STRENGTH (MAX. AXIAL)	128.6	9.9	3.6
STRENGTH (MAX. LATERAL)	85.2	-45.5	11.8
EXTREME	95.6	-85.5	7.6

NOTES:

1. THE CONTRACTOR'S MICROPILE STRUCTURAL DESIGN SHALL BE BASED UPON THE LOADS PROVIDED ABOVE; AXIAL LOAD RESISTANCE SHALL BE VERIFIED BY LOAD TESTING AS DESCRIBED IN THE ITEM CODE 804.99.
2. LOADS GIVEN ARE FACTORED LOADS PER PILE AT THE BOTTOM OF FOOTING ELEVATION.
3. NEGATIVE AXIAL LOAD INDICATES A TENSILE LOAD.
4. BOTH FRONT AND BACK PILES SHALL BE DESIGNED FOR THE GIVEN LATERAL LOAD.

— BOTTOM OF CHANNEL

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TITLE OF SKETCH
 REPLACEMENT OF
 GREAT ISLAND BRIDGE NO. 499
MICROPILE PILE DETAILS

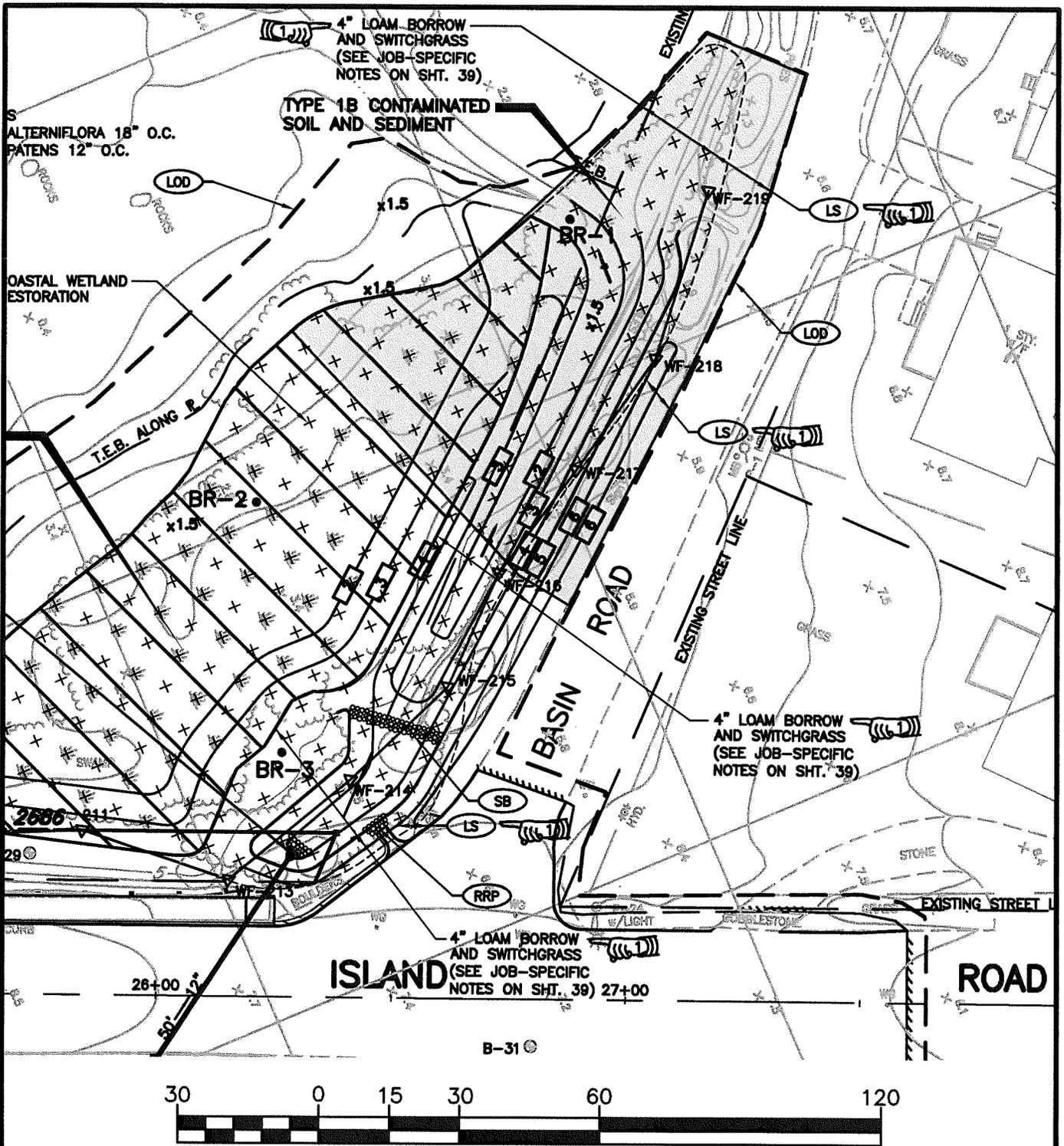
R.I. CONTRACT NO.
 2014-CB-037

SKETCH NO.
3

DATE: 6/18/2014

ADDENDUM NUMBER 4

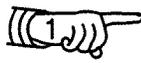
REVISION TO
 SHEET NO. 10



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 <p>Gordon R. Archibald, Inc. Civil and Environmental Engineers</p>	<p>TITLE OF SKETCH</p> <p>REPLACEMENT OF GREAT ISLAND BRIDGE NO. 499 MITIGATION PLAN NO. 2</p>	<p>R.I. CONTRACT NO. 2014-CB-037</p>
	<p>DATE: 6/18/2014</p>	<p>ADDENDUM NUMBER 4</p>
		<p>REVISION TO SHEET NO. 65</p>

DRAINAGE STRUCTURES

- (A) ROUND CATCH BASIN WITH GUTTER INLET R.I. STD. 3.4.1, R.I. STD. 6.1.0 FRAME & COVER, R.I. STD. 6.3.4 FRAME & GRATE, R.I. STD. 7.3.6 GRANITE INLET STONE, CATCH BASIN INLET PROTECTION.
- (B) DROP INLET R.I. STD. 4.5.1 WITH R.I. STD. 6.3.4 FRAME & GRATE AND R.I. STD. 7.3.8 GRANITE APRON STONE, CATCH BASIN INLET PROTECTION.
-  (C) PRECAST SQUARE CATCH BASIN R.I. STD. 4.3.0 WITH R.I. STD. 6.3.4 FRAME & GRATE AND R.I. STD. 7.3.7 GRANITE APRON STONE, CATCH BASIN INLET PROTECTION.

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 <p>Gordon R. Archibald, Inc. Civil and Environmental Engineers</p>	<p><u>TITLE OF SKETCH</u> REPLACEMENT OF GREAT ISLAND BRIDGE NO. 499 DRAINAGE & UTILITY PLAN NO. 1</p>	<p>R.I. CONTRACT NO. 2014-CB-037</p>
		<p>SKETCH NO. 5</p>
<p>DATE: 6/18/2014</p>	<p>ADDENDUM NUMBER 4</p>	<p>REVISION TO SHEET NO. 45</p>

EXISTING LONGITUDINAL SECTION

SCALE: $\frac{3}{32}$ " = 1' - 0"

NOTES:

1. SAWN LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO M168. ANY SPECIES MAY BE USED PROVIDED IT IS TREATABLE WITH WOOD PRESERVATIVES AND THE MINIMUM TABULATED DESIGN VALUES ARE NOT LESS THAN THE FOLLOWING:
F_{co} = 1,650 psi E_o = 1,700,000 psi

2. ALL TIMBER SHALL BE PRESSURE TREATED WITH WOOD PRESERVATIVE IN ACCORDANCE WITH AASHTO M133.



3. ALL BOLTS SHALL CONFORM TO ASTM A307, GRADE 2 AND SHALL BE GALVANIZED DOME HEAD TIMBER BOLTS. BOLTS SHALL BE SITUATED SO THAT THE DOME HEAD IS ON THE EAST SIDE OF THE EXISTING PILE.

4. BRACING SHALL BE INSTALLED PRIOR TO BEGINNING ANY DEMOLITION WORK.

5. THE COST OF THE BRACING SHALL BE CONSIDERED INCIDENTAL TO THE DEMOLITION ITEM; NO SEPARATE PAYMENT WILL BE MADE.

OF EXISTING PIER

1' - 0"



Gordon R. Archibald, Inc.
Civil and Environmental Engineers

TITLE OF SKETCH
REPLACEMENT OF
GREAT ISLAND BRIDGE NO. 499
DEMOLITION PLAN

R.I. CONTRACT NO.
2014-CB-037

SKETCH NO.
6

DATE: 6/18/2014

ADDENDUM NUMBER 4

REVISION TO
SHEET NO. 29