

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Administration
DIVISION OF PURCHASES
One Capitol Hill
Providence, RI 02908-5855

Tel: (401) 574-8100
Fax: (401) 574-8387
Website: www.purchasing.ri.gov

January 29, 2013

ADDENDUM NUMBER THREE

RFQ # 7458339

**TITLE: LEWIS CITY BRIDGE REPLACEMENT
ARCADIA MGMT. AREA, DEM**

Closing Date and Time: 2/8/13 at 2:30 PM

**Per the issuance of this ADDENDUM #3
(32 pages, including this cover sheet)**

Specification Change /Addition / Clarification

SEE ATTACHED

SECTION 00310

BID PROPOSAL

BID PROPOSAL - GENERAL BIDS

TO THE CHIEF PURCHASING OFFICER OF THE STATE OF RHODE ISLAND, acting in the name and on behalf of the Department of Environmental Management, Division of Planning and Development.

The undersigned proposes to furnish all labor and materials required for the Lewis City Bridge Replacement in accordance with the accompanying Contract Documents, plans and specifications prepared by the Department of Environmental Management, Division of Planning and Development for the Bid Price specified below, subject to additions and deductions according to the terms of the contract documents.

A. ADDENDA

This bid includes Addenda numbered: _____ and dated: _____
This bid includes Addenda numbered: _____ and dated: _____
This bid includes Addenda numbered: _____ and dated: _____
This bid includes Addenda numbered: _____ and dated: _____

B. BASE BID

Total proposed Base Bid Price is:

_____ Dollars (\$) _____)
(Price in Words) (Numbers)

Base Bid Breakdown:

Base Bid Item 1, Demolition of Existing Bridge: \$ _____
Base Bid Item 2, Construct Replacement Bridge: \$ _____
Total Base Bid including transportation costs.: \$ _____

NOTE: The price of the Base Bid Items 1 through 2 should equal the Total Proposed Base Bid Price. In case of a conflict the Total Proposed Base Bid Price shall govern.

C. ALTERNATIVES:

There are no alternatives for this contract.

D. GENERAL CONTRACTOR AND SUBCONTRACTOR BASE BID PRICE BREAKDOWN

The PROPOSED BASE BID PRICE IS SUBDIVIDED AS FOLLOWS:

ITEM 1. The work of the General Contractor, being all work performed by the General Contractor's own work force:

_____ DOLLARS \$ _____

(Price in Words)

(Numbers)

ITEM 2. The work of the General Contractor, being all work performed by a subcontractor not part of the General Contractor's own work force covered by ITEM 1 above:

SUB-TRADE	NAME OF SUBCONTRACTOR	AMOUNT
_____	_____	\$ _____
_____	_____	\$ _____
_____	_____	\$ _____

TOTAL OF ITEM NO. 2: _____ \$ _____
 (Price in Words) (Price in Numbers)

E. QUALIFICATIONS OF SUBCONTRACTORS

The undersigned agrees that each of the above-named will be used for the work indicated at the amounts stated, unless a substitution is made with prior written approval of the Owner.

The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by the subcontractors as required herein and that all of the cost of all such premiums is included in the amount set forth in item 1 of this bid.

F. LEGAL ORGANIZATION

The undersigned is a (an) _____ (Individual-Partnership-Corporation-Joint Venture). Attach copies of articles of incorporation or partnership agreement, and Rhode Island Secretary of State's Certificate of Good Standing.

G. QUALIFICATIONS TO PERFORM WORK

The undersigned offers the following information as evidence of its organizational qualifications to perform the work as bid upon according to all requirements of the plans and the specifications.

- The undersigned has been in business as a General Contractor under present business name for years.
- List at least two and no more than five recent projects on which the undersigned served as the General Contractor for work of similar character as required for the above named project, along with the date of the project, the name of the Architect/Engineer, and the contract price

PROJECT NAME	DATE	ARCHITECT/ENGINEER	CONTRACT PRICE
1. _____	_____	_____	\$ _____
2. _____	_____	_____	\$ _____
3. _____	_____	_____	\$ _____
4. _____	_____	_____	\$ _____
5. _____	_____	_____	\$ _____

3. List all construction contracts between the undersigned and the State of Rhode Island in the past five (5) years:

	PROJECT NAME	DATE	STATE AGENCY	STATE CONTACT PERSON	CONTRACT PRICE
1.					\$
2.					\$
3.					\$
4.					\$
5.					\$

H. VIOLATION OF RI/DEM LAWS AND REGULATIONS

The undersigned is / is not (Please circle one) currently cited as being in violation of any law or regulation administered by the Department of Environmental Management.
 If Yes please explain. _____

I. REQUIREMENT FOR LICENSE NUMBER

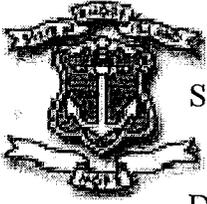
In compliance with the requirements of Rhode Island General Law, Section 5-65-23, my Rhode Island license number for work to be performed by this firm as prime contractor is:

LICENSE NUMBER: _____

The undersigned acknowledges by signature below that the undersigned has read and understands the Information to Bidders, the terms of which are hereby incorporated into this Proposal.

DATE:		
BIDDER:		
BY:		
	Signature	Title
BUSINESS ADDRESS:		
TELEPHONE NUMBER:		
FEIN NO. :		

END OF PROPOSAL



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

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January 29, 2013

ADDENDUM NUMBER THREE

RFQ # 7458339

**BELOW ARE ANSWERS TO THE QUESTIONS WE HAVE RECEIVED
REGARDING THIS SOLICITATION.**

RIDEM

Contractor Question (1-23-13 Email):

1. Can Douglas Fir be substituted for Southern Yellow Pine?

Response: Douglas Fir meeting the design properties specified on Sheet C001 Timber Notes #1 and #2 is acceptable.

2. Is S4S required for timber?

Response: All timber shall be finished with S4S.

Lewis City Bridge Pre-Bid Meeting Contractor Questions:

3. Who is responsible for sampling and testing materials?

Response: The Contractor is responsible for all quality assurance sampling and testing including soil and concrete testing.

4. Can trees be removed to improve access at the site?

Response: No trees may be removed without the approval of RIDEM?

5. There is a discrepancy in the decking call-out, should the decking be 4"x10" or 4"x8"?

Response: The decking shall be 4"x10".

6. There is a discrepancy in the exterior stringer call-out, should the stringers be 4"x16" or 6"x16"?

Response: The stringers shall be 4"x16".

7. Are there any permit requirements?

Response: A Wetlands Preliminary Determination Application was submitted to RIDEM, a copy is included with this addendum.

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

DIVISION OF PLANNING AND DEVELOPMENT

Lewis City Bridge Reconstruction

Arcadia Management Area, Exeter, RI

28 January 2013, 10:00 am

<u>Name</u>	<u>Company</u>	<u>Telephone</u>
1. Robert Bailey, P.E	RIDEM	222-4700, x-7702
2. RE GILL	RENOA	
3. J. ARON	RT-DFE	
4. FRED SALMENDO	D'AMBRA	401-737-1300
5. STEVE BAKES	EAST COAST CONSTRUCTION	401-665-5656
6. JOHN D. VITO	NORTHWOOD CONSTR. SERVICE LLC	781-340-9440
7. J. McLean	HKS Const. Holdings Corp	401 847 7350
8. D. DeCarle	HBV LLC	401 777-0323
9. DAVID STRUBA	AETNA BRIDGE	401-663-2292
10. CAELIN MAGEE	MAGE BUILDING & BRIDGE	508 520 2277
11. Wendy Kerkhoff	Thielich Engineering	401-996 3514
12. Anthony DiFazio	AMERICAN SITE CORP	401 647-4400
13. DAN KENNEY	ADS Construction	401-431-1278
14. DON LIVRAMENTO	B. Zoppo Corp	(401) 839-2320
15. Chris London	J. H. Lynch - Sons	401-333-4300
16. SAU LOH JOSEPH	TOWER CONST	401 943 2110

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

DIVISION OF PLANNING AND DEVELOPMENT

Lewis City Bridge Reconstruction

Arcadia Management Area, Exeter, RI

10 January 2013, 10:00 a.m.

<u>Name</u>	<u>Company</u>	<u>Telephone</u>
17. Raymond Albanese	R Albanese Construction Co	401-232-1700
18. David Manocchio	NE Bridge & Building	774-627-5293
19. Justin Wakim	Maran Construction	401-272-4930
20. Bill Peppas	W.H. Peppas BC, Inc	401-722-1912
21. WAYNE CLARKE	CARDI CORP	401-739-8300
22. Jim Jackson	CDR McGuire	401-272-6000 x 295
23.		
24.		
25.		
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31.		
32.		

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES\FRESHWATER WETLANDS PROGRAM**

235 Promenade Street, Providence, RI 02908
Telephone: 401-222-6820, Telecommunication Device for the Deaf: 401-222-4462

GENERAL APPLICATION FORM

Please type or print

PART A	Purpose of Application:
<input type="checkbox"/> Request to Determine Presence of Wetlands only (Rule 8.02)	
<input type="checkbox"/> Request to Verify Delineated Edge of Wetlands (Rule 8.03)	
<input type="checkbox"/> Request for Preliminary Determination (Rule 9.00)	
<input type="checkbox"/> Application to Alter a Freshwater Wetland (Rule 10.00)	
<input type="checkbox"/> Application For Renewal (Rule 11.02) Complete Only Parts B,D & H	
<input type="checkbox"/> Application for Permit Modification (Rule 11.03)	
<input type="checkbox"/> Application For Permit Transfer (Rule 11.04) Complete Only Parts B, E & H	
<input type="checkbox"/> Change in Owner during review – (Rule 7.02(E)) Cmpl. Only Parts B, F & H	

AGENCY USE ONLY Application No.:
AGENCY USE ONLY Application Received:

PART B	Applicant Information:						
• Name of Applicant (see Rules 7.02): _____ <i>Note: The applicant must be the owner of the property or easement which is the subject of this application or must be the government agency or entity with power of condemnation over such property or easement.</i>							
• Mailing Address of Applicant: _____							
_____	Street/Road	_____	P.O. Box				
_____	City/Town	_____	State	_____	Zip Code	_____	Telephone No.
• Location of Property subject to this Application: _____							
_____	City/Town	_____	Street Abutting Site	_____	Street address number (if applicable)		

Nearest street intersection and its distance and direction from site
Nearest utility pole number(s): _____ Direction to site from abutting street: N____ S____ E____ W____
Tax Assessor's Plat(s) and Lot No.(s): _____
Recorded Plat (s) and Lots No.(s) (if no Tax Assessor Plat and Lots available): _____

PART C	General Information:
• Any previous application for this site? Yes__ No__ Provide Application No.(s) _____	
• Any previous enforcement action for this site? Yes__ No__ Provide File No(s) _____	
• Amount of wetland area to be altered, if any:	
Palustrine wetland _____ square feet	
Riverbank or perimeter wetland _____ square feet	
Watercourse): _____ linear feet	
<input type="checkbox"/> Check here if any floodplain alteration is proposed	
• Fee category per Rule 7.11 (example 7.11(D)(6) 2-lots sub. Pre-Det. - \$900) _____ Check No. _____	
<input type="checkbox"/> Check here if the project has a Certificate of Critical Economic Concern (CEC) and attach copy of certification.	

PART D	For Application Renewal (if applicable):
• Name of Original or Subsequent Permittee: _____	
• Application/Permit No. _____ Permit Expiration Date: _____	
• Number of previous renewals issued (if applicable): _____	
• Statement of Applicant: I hereby state that I am requesting renewal of the original or subsequently modified permitted project under Application/Permit No. _____. I fully understand the permit limitations and will comply with any and all conditions of the permit.	
• Applicant's name:(print) _____ (signature) _____	
<input type="checkbox"/> Check here if actual site work has commenced on the project for which renewal is requested.	

PART E For Application For Permit Transfer (if applicable):

- Name of Original Permittee: _____
- Application/Permit No. _____ Permit Expiration Date: _____
Note: A certified copy of the deed of transfer must be enclosed with application.
- **Statement of Applicant:** I hereby certify that I have reviewed the permit letter issued under Application/Permit No. _____ and hereby agree to comply with all conditions of the permit, including any time limitations imposed.
- Applicant's name:(*print*) _____ (*signature*) _____ Date: _____

PART F For Change in Owner During Application Processing (if applicable):

- Name of Original Applicant: _____ Application No. _____
Note: A certified copy of the deed of transfer must be enclosed for Applications to Alter only.

PART G Certification of Professional(s) (if applicable): *Note: Any professional (e.g. engineer, biologist, landscape architect, etc.) who participated in the submission and/or preparation of this Application and supporting documentation must sign below.*

- I hereby certify that I have been authorized by the applicant to prepare documentation to be submitted in support of this Application; that such documentation is in accordance with the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act*; and that such documentation is true, accurate and complete to the best of my knowledge.
 - Name of professional (*print*): _____ Title: _____
Address: _____ d/b/a: _____
Signature of professional: _____ Date: _____ Tel: _____
- Check this box if the above named is the project manager or project lead for the applicant.

- If more than one professional:**
- Name of professional (*print*): _____ Title: _____
Address: _____ d/b/a: _____
Signature of professional: _____ Date: _____ Tel: _____
 - Name of professional (*print*): _____ Title: _____
Address: _____ d/b/a: _____
Signature of professional: _____ Date: _____ Tel: _____
 - Name of professional (*print*): _____ Title: _____
Address: _____ d/b/a: _____
Signature of professional: _____ Date: _____ Tel: _____

PART H Certification/Authorization of Applicant:

• I hereby certify that I have requested and authorized the investigation, compilation, and submission of all the information, in whatever form, contained in this Application; that I have personally examined and am familiar with the information submitted herein; and that such information is true, accurate and complete to the best of my knowledge. I hereby authorize RIDEM personnel access to the property for purposes of observing conditions pertinent to this application and assessing compliance with any permit or determination resulting from this application, including any sampling, monitoring or surveying that may be deemed appropriate, consistent with the RIDEM Administrative Inspection Guidelines. (See DEM website - Office of Compliance and Inspection for copy). Note any special concerns for access here:

Signature of Applicant: _____ Title (if applicable): _____
See Rule 7.02 regarding Signatures

Print Name Signed Above: _____ Date: _____



***WETLANDS PRELIMINARY
DETERMINATION APPLICATION
LEWIS CITY BRIDGE REPLACEMENT
Exeter, Rhode Island***

*Submitted to: RI Department of Environmental Management
October 2009*

Prepared by:



Maguire Group Inc.
Architects/Engineers/Planners
225 Chapman Street
Providence, RI 02905

Table of Contents

INTRODUCTION	1
PROJECT DESCRIPTION	1
PURPOSE OF PROJECT	2
EVALUATION METHODOLOGY	3
QUALIFICATIONS.....	3
WETLANDS AFFECTED BY THE PROJECT.....	3
WETLAND DESCRIPTION.....	3
WETLAND IMPACTS.....	4
SOIL EROSION AND SEDIMENTATION CONTROL.....	4
WETLAND AVOIDANCE AND MINIMIZATION.....	5
WETLAND IMPACT AVOIDANCE	5
WETLAND IMPACT MINIMIZATION	6
CONCLUSION.....	8
SOURCES CONSULTED	11

List of Figures

FIGURE 1. LOCATION OF THE LEWIS CITY BRIDGE.....	2
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APPENDIX A - Site Photos

APPENDIX B - Wetland Data Sheets

INTRODUCTION

The Rhode Island Department of Environmental Management Parks and Recreation is seeking approval from the Rhode Island Department of Environmental Management Division of Wetlands for the installation and replacement of the Lewis City Bridge which is located in Arcadia Management Area Exeter, Rhode Island. The proposed project will remove the existing wooden bridge with a single span concrete bridge. Arcadia Management Area was acquired in the 1930's and was originally developed as a recreational area. A number of small bridges were originally constructed over the Flat River linking different regions of the park. Today these bridges are part of the management area and provide access for management vehicles and other vehicles such as emergency rescue and fire response. These bridges are not traversed at the speed which they were designed for. These bridges are also not currently designed to code.

This report addresses the specific requirements for a Preliminary Determination Application and Request for Approval of Proposed Site Alterations. As required in Rule 7.00 and 9.00 of the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act* (herein referred to as the Rules), this report will also address impact avoidance and minimization in order to demonstrate to RIDEM that impacts to the wetlands are not significant, cannot be avoided, and that all alternatives to the proposed alterations were considered.

Project Description

The Lewis City Bridge spans the Flat River in Arcadia Management Area, Exeter Rhode Island. The existing bridge is a wooden bridge approximately 16 feet wide and approximately 24 feet long. The existing bridge structure is set on top of a dry stacked stone and block abutment. Figure 1 shows the approximate location of the Lewis City Bridge. The bridge is one of many wooden bridges located throughout Arcadia Management Area. This particular bridge was replaced as recently as 15 years ago but was not brought up to code when replaced. The new bridge will replace the wooden bridge with a single span concrete bridge placed on abutments which will be installed behind the existing stone abutments. The new bridge will be up to safety codes and will be able to accommodate the fire and rescue vehicles which may need to use the bridge for rescue.

The new bridge will be a single span concrete bridge approximately 36 feet in length and 16 feet wide. The new bridge span is slightly longer to reach the new concrete abutments which are being installed. This will help avoid impact of the wetlands by leaving the stone and block abutments in place instead of removing them and excavating down to install new concrete abutments. Sediment and erosion controls will be set up around the perimeter of construction to avoid any sediment from reaching the river. The stone abutments will not be removed to preserve the area and keep the river bank intact.

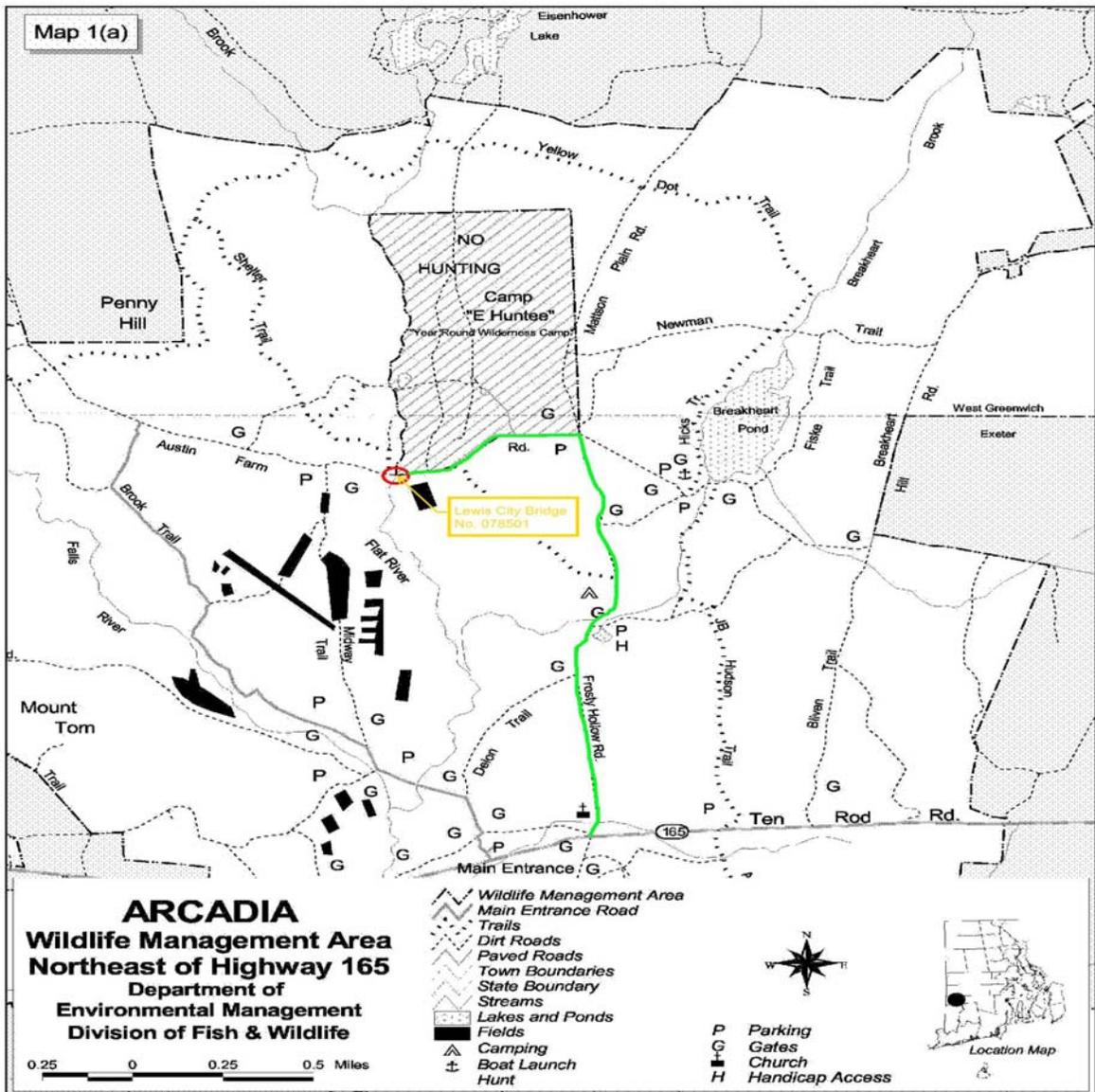


Figure 1 - Lewis City Bridge Exeter, RI

Purpose of Project

The proposed project is necessary because the current bridge is a safety risk. The current bridge is not rated to adequately handle use by emergency response vehicles. This was a concern expressed by RIDEM Planning and Development in the request for proposal

which was issued. The current wooden bridge is not adequate to handle the speed at which most vehicles using the park traverse it. The wooden bridge was also constructed on boulder and block abutments. These are not structurally sound enough to handle heavier vehicles such as rescue vehicles or fire trucks. Since this is a public park this becomes a risk to the safety of the public.

Evaluation Methodology

Wetlands in the project area were delineated for the proposed Lewis City Bridge. Delineation was accomplished using the three parameter approach (soils, vegetation and hydrology) approved by RIDEM and the US Army Corps of Engineers.

Qualifications

Wetlands evaluations were provided by Mr. Brandon Faneuf of Ecosystem Solutions, Inc. Mr. Faneuf has a Bachelor of Science degree in Wildlife Biology from the University of Massachusetts and a Masters Degree in Wetland Conservation from the University of Massachusetts. He is the owner of Ecosystem Solution and prior to that worked for the Rhode Island Department of Environmental Management Wetland Permitting Program. He has over 10 years of experience in the natural resource field.

WETLANDS AFFECTED BY THE PROJECT

Wetland Description

The Site includes a 200-foot Riverbank wetland. The area surrounding the bridge was previously disturbed for the installation of the abutments. The area outside of the abutments which surround the bridge area is mainly unaltered. The soils in the area of the bridge were MmB – defined as Merrimac sandy loams with slopes from 3 to 8 percent, which is not a hydric soil and Co- Carlisle muck which is on the hydric soil list. The Co soils were located along the B series flag line.

Wetland A is one side of the 200-foot riverbank wetland on the west side of the bridge. Wetland A is delineated by flags numbered A-1 through A -20. Wetland A is a scrub-shrub swamp which consisted of red maple (*Acer rubrum*), white pine (*Pinus strobus*), poison ivy (*Toxicodendron radicans*), arrow wood (*Viburnum recognitum*), cinnamon fern (*Osmunda cinnamomea*), tussock sedge (*Carex stricta*), and *Sphagnum spp.* Soil saturation near flag A-17 was at approximately 14 inches below the surface. Upland species of plants near the A series of flags were composed of white pine (*Pinus strobus*), black cherry (*Prunus serotina*), red maple (*Acer rubrum*), and arrow wood (*Viburnum recognitum*).

Wetland B is the east side of the riverbank and is delineated with flags B-1 through B-18. This wetland is also part of the scrub-shrub wetland which exists in the A series. Wetland B consisted of speckled alder (*Alnus serrulata*), dogwood (*Cornus amomum*), arrow wood (*Viburnum recognitum*), *Sphagnum spp.*, and tussock sedge (*Carex stricta*).

Soils located near this flags series were Carlisle Muck which is listed by NRCS as a hydric soil. Free water was at approximately 2 inches below the ground surface. Upland species associated with the B flags series were black cherry (*Prunus serotina*), arrow wood (*Viburnum recognitum*), and grape (*Vitis spp*). Other species similar to the A flag series are present on both sides of the riverbank.

Wetland Impacts

The proposed replacement of the Lewis City Bridge will be conducted in the upland area surrounding the Flat River. Due to the location of the Site and the nature of work which is being proposed it will be necessary to obtain a water quality certification as well as the determination from the department. There will be no work conducted within the water or directly in the surrounding wetland areas. The bridge abutments will be left in place and the new abutments will be installed behind the existing ones. This will minimize the impacts to the wetlands and reduce the amount of disturbance in water which would normally occur if the old abutments were to be completely removed. No additional stormwater runoff will be generated from the replacement of the bridge and no work will alter the wetlands or their function.

Soil Erosion and Sedimentation Control

Soil erosion and sedimentation controls during construction will adhere to the *Rhode Island Stormwater Design and Installation Standards Manual* and the *Soil Erosion and Sediment Control Handbook*. Best management practices (BMPs) will be used to reduce changes in runoff and stormwater flows, water quality, flood storage, erosion and sedimentation. During construction, structural controls will be in place including staked hay bales and silt fences around the perimeter of the work area. Other measures that will be in place include:

- **Waste Disposal:** Solid waste will be collected and stored in a secure and lidded metal dumpster. The dumpster will meet all local and state solid waste management regulations. The dumpster will be emptied as needed and the trash will be hauled to a state approved landfill. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted at the construction site by the construction superintendent. The individual who manages the day-to-day operations will be responsible for seeing that these procedures are followed.
- **Spill Prevention:** Construction personnel will call RIDEM should a spill occur. Notices stating this practice will be posted at the construction site by the construction superintendent. The individual who manages the day-to-day operations will be responsible for seeing that these procedures are followed.
- **Good Housekeeping:** The superintendent will maintain a clean and orderly work environment. This will include maintenance of industrial machinery; material storage practices; material inventory controls; routine and regular clean-up; maintaining well organized work areas; and educational programs

for employees regarding these practices. Material storage piles, such as stockpiles of dry materials, topsoil, spoils piles, gravel, sand, compost, sawdust, wood chips, and building materials will be covered.

- **Maintenance and Inspections:** Erosion controls on the site will be inspected at least once every seven calendar days and within twenty four hours after a rain event that generates 0.25 inches of rain in a twenty four hour period using the inspection form below. Inspections will be completed by the individual who manages the day-to-day operations. Based on the results of the inspections the permit will be revised no case later than seven (7) calendar days following the inspection.

WETLAND AVOIDANCE AND MINIMIZATION

Wetland Impact Avoidance

This section specifically addresses Avoidance Alternatives and Impact Minimization as required by Rule 9.02 in the “Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act,” pursuant to Chapter 2-1-20.1, 42-17.1, 42-17.6, and 42-35 of the General Laws of Rhode Island, 1956, as amended.

The following text documents the unavoidable wetland impacts necessary to fulfill the basic purpose of the project:

- 1) *Whether the primary proposed activity is water-dependent, or if it requires access to freshwater wetlands as a central element of its primary purpose (i.e. a pier);*

The project is water dependent because it is replacing the existing bridge located over the Flat River. The bridge replacement will require access within 50-feet of the bordering vegetated wetlands.

- 2) *Whether there are any areas within the same property or other property owned or controlled by the applicant that could be used to achieve the same project purpose without altering the natural character of any freshwater wetlands;*

The project needs to maintain its present location because it is an existing bridge which requires replacement.

- 3) *Whether there are any other properties not currently owned or controlled by the applicant but which are reasonably available to the applicant that would not involve wetland alterations and could be used to achieve the same project purpose;*

Other properties would not accomplish the goals for this project. The bridge is an existing structure and requires replacement.

- 4) *Whether there are alternative designs, layouts, or technologies that could be used to*

avoid freshwater wetlands or impacts on wetland functions and values on the subject property or reasonably available properties which would achieve the same project purpose, and whether these design alternatives are feasible;

Alternatives options for this project involved removal of existing abutments, however this would create more disturbance and impacts than the proposed project. The single span concrete pre-cast bridge is the best option for bridge replacement because it will require the least amount of construction while providing an adequate structure for heavier vehicles to traverse.

5) *Description of all attempts applicant has made to overcome or remove such constraints as zoning, infrastructure, parcel size, or other similar constraints in order to avoid wetland alterations; and*

The project is replacing an existing bridge and will not require new zoning. The applicant does not have any constraints on the project Site which would be adverse to proposed bridge replacement.

6) *Whether the feasible alternatives which would not alter the natural character of any freshwater wetlands on the subject property or reasonably available properties, if incorporated in the proposed project, would result in significant adverse consequences to the public health and safety, and/or the environment.*

There are no properties which could be acquired which would achieve the purpose of this project. If this project is not constructed at its current proposed location then there could be a potential safety hazard by not having a structure capable of supporting the weight of emergency vehicles.

Wetland Impact Minimization

This project has been designed to minimize impacts on wetlands. Best management practices (BMPs) will be used. Sediment generation and transport will be greatly reduced through proper mitigation measures.

1) *Whether the proposed project is necessary at the proposed scale and whether the scale of the alteration could be reduced and still achieve the same primary project purpose;*

The proposed bridge will be essentially the same size as the existing bridge but will require some lengthening for the installation of new concrete abutments behind the existing ones.

2) *Whether the proposed project is necessary at the proposed location or whether another location within the site could achieve the same primary project purpose while resulting in less impact to the wetland;*

The proposed project must be at the same location or it does not replace the existing inadequate bridge.

3) *Whether there are alternative designs, layouts, densities, or technologies that are feasible and which would result in less impact to the wetland while still achieving the same project purpose; and*

No alternative designs or layouts would accomplish the projects goals. Other layouts would have greater impact to the wetland area.

4) *Whether reduction in the scale of the proposed project or relocation to minimize impact to the wetland would result in significant adverse consequences to public health and safety and/or the environment.*

The proposed scale of the project is necessary to protect human life and safety by providing an adequate bridge .capable of supporting emergency vehicles.

CONCLUSION

Measures considered to reduce impacts and the reasons why these cannot or should not be employed are described in detail above. This section details how the proposed project will meet the review criteria set forth in Rule 10.05.

1. The proposed project will not result in significant reduction in overall wildlife production and/or diversity of the wetland.
2. The proposed project will not reduce the ability of the wetland to satisfy the needs of a particular wildlife species.
3. The project area will not alter valuable wildlife habitat and will not result in the displacement or extirpation of any wildlife species.
4. The proposed project will not result in any impacts on rare animal or plant species. There are no rare animal or plant species within the proposed limits of work or in the vicinity of the project.
5. The proposed project will not result in any degradation in the natural characteristics of any rare wetland type as there are no rare wetland types in the project area.
6. The proposed project does not negatively impact the vegetated wetland. This will not result in significant reduction in the suitability of the wetland for use by any resident, migratory, seasonal, transient, facultative or obligate species, in either the short- or long-term as a travel corridor; feeding site; resting site; nesting site; escape cover; seasonal breeding and/spawning area.
7. The project will not result in an intrusion of, or increase in, less valuable, invasive and/or exotic plant or animal species into any of the affected wetlands. Less valuable, invasive and/or exotic species are not part of the planting plans proposed for the affected area.
8. The project will not result in significant reduction in the wildlife habitat functions and values of any wetland which could disrupt the management program for any game or non-game wildlife species carried out by state or federal fish and game or wildlife agencies.
9. The project will not result in significant reduction in overall existing or potential ability of wetlands to provide active or passive recreational activities to the public. The project area already has a public fishing area to the west of the Reservoir and this area will be preserved during the proposed project.

10. The project will not result in significant disruption of any on-going scientific studies or observations. There are no such on-going studies in or near the project area.
11. The project will not result in elimination of or severe limitation to traditional human access to, along the bank of, up and/or down, or through any rivers, streams, ponds, or other freshwater wetlands.
12. The project will not result in any reduction in water quality functions and values or negative impacts to natural water quality characteristics, either in the short- or long-term, by modifying or changing: water elevations, temperature regimes, volumes, velocity of flow regimes of water; increasing turbidity; decreasing oxygen; causing any form of pollution; or modifying the amount of flow of nutrients so as to negatively impact wetland functions and values. The project will improve water quality through the installation of best management practices for stormwater.
13. The project will not place any matter or material beneath surface water elevations or erect any barriers within any ponds or flowing bodies of water which could cause any hazards to safety.
14. The proposed project will not result in the significant loss of important open space or significant modification of any uncommon geologic or archaeological features. The area is not designated by the community master plan as an open space and there are no significant archaeological or cultural features at the site.
15. The wetlands surrounding the project area are not identified as having unusually high visual quality; therefore this project will not result in significant modification to the natural characteristics of any wetland area of unusually high visual quality.
16. The project will not decrease the flood storage capacity of the wetlands.
17. The project will not result in significant reduction of the rate at which flood water is stored by the wetland during any flooding event.
18. The project will not result in restriction or significant modification of the path and/or velocities of flood flow for the 2-year, 10-year, 25-year or 100-year frequency, 24-hour, Type III storm events so as to cause harm to life, property, or other functions and values provided by freshwater wetlands.
19. The project will not result in the placement of any structure or obstruction within a floodway so as to cause harm to life, property, or other functions and values provided by freshwater wetlands.
20. There will not be a significant increase in run-off because of the proposed project. The addition of gravel to the utility easement will not cause an increase of stormwater run-off since the gravel allows for infiltration.

21. The project will not result in any increase in runoff volumes and discharge rates; the proposed project will not exacerbate flooding conditions in flood-prone areas.
22. The project will not result in significant changes in the quantities and discharge rates of surface and/or groundwater to or from isolated wetlands. The project is not associated with any surface or groundwater sources.
23. The project will not utilize the wetlands as a retention area. The project will place erosion and sediment controls surrounding the limits of disturbance. All efforts to protect water quality will be made.
24. The project will not result in any decrease in surface water and/or groundwater elevations within any wetland.
25. The project will not result in non-compliance with the RIDEM water quality regulations for water pollution control because the project has been specifically designed to comply with said requirements. Water quality is important to the purpose of this project and will be protected during all construction activities.
26. The project will not eliminate the wetland's ability to retain and/or remove nutrients or act as natural pollution filter.

SOURCES CONSULTED

Kollmorgen Instruments Corporation, Munsell® Soil Color Charts, 1988.

Rhode Island Geographic Information System (RIGIS), data themes for Exeter, RI.

U.S. Department of the Interior, Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States. Cowardin, Lewis, Virginia Carter, Fancis Golet, and Edward LaRoe, 1979. FWS/OBS-79/31

U.S. Department of the Interior Fish and Wildlife Service, National List of Plant Species that Occur in Wetlands: 1988 National Summary. Biological Report 88(24) September, 1988.

U.S. Department of Agriculture, Natural Resource Conservation Service Soil Survey of Rhode Island, July, 1991

Appendix A

Site Photographs



Photograph Log

Project Name: Lewis City Bridge, Exeter RI
Site Location: Arcadia Management Area
Project Number: 18744
By: JAJ



Photo 1: View of the existing bridge looking east



Photo 2: View of existing bridge looking west.



Photo 3: View of upstream (northern) side of bridge.



Photo 4: View looking at existing wooden decking facing south.



Photo 5: View showing existing stone abutments and wooden bridge.



Photo 6: View of existing wooden support and rock abutment.



Photograph Log

Project Name: Lewis City Bridge, Exeter RI
Site Location: Arcadia Management Area
Project Number: 18744
By: JAJ



Photo 7: View of existing abutment to remain in place..



Photo 8: River View looking up at the existing bridge..



Photo 9: View looking into the southern wetlands.



Photo 10: View looking northwest at existing wetlands..

Appendix B

Wetland Data Sheets

Wetland Edge Delineation Data Form (WETLAND)

Applicant: RI Dept. of Environmental Mgmt.

Wetland No. 1

Project: Lewis City Bridge

Flag No. Sequence: A-1 through A-20

City/Town: Exeter

Date: 03/09/04

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree</u>	<u>Indicator</u>	<u>Herbs</u>	<u>Indicator</u>
1. <u><i>Pinus strobus</i></u>	<u>FACU</u>	1. <u><i>Sphagnum spp.</i></u>	<u>OBL</u>
2. <u><i>Acer rubrum</i></u>	<u>FAC</u>	2. <u><i>Carex stricta</i></u>	<u>OBL</u>
3. _____	_____	3. _____	_____
<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. <u><i>Pinus strobus</i></u>	<u>FACU</u>	1. _____	_____
2. <u><i>Osmunda cinnamomea</i></u>	<u>FACW</u>	2. _____	_____
3. <u><i>Viburnum recognitum</i></u>	<u>FACW-</u>	3. _____	_____

List other vegetative species noted which may have affected determination of the wetland edge:
Vaccinium corymbosum

Soil: SCS Soil Survey Mapping Unit: MmB-Merrimac sandy loams, 3 to 8 % slopes
 On Hydric Soils List? (Y/N): No

Soil Profile (Note wetland flag no. nearest soil test pit): A-17

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water
A	0-2	10YR 2/1	-	-	-
Bw1	2-16	10YR 3/4	-	14"	-
Bw2	16-20	10YR 4/4	-	-	-

Other hydrological indicators (e.g. water marks, drainage patterns, root rhizospheres, etc.; see Appendix 4(A(4) of the Rules): _____

Landscape Position: Toeslope

Altered/Atypical situation? (describe): _____

Comments: _____

Wetland Edge Delineation Data Form (UPLAND)

Applicant: RI Dept. of Environmental Mgmt.

Wetland No. 1

Project: Lewis City Bridge

Flag No. Sequence: A-1 through A-20

City/Town: Exeter

Date: 03/09/04

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree</u>	<u>Indicator Status</u>	<u>Herbs</u>	<u>Indicator Status</u>
1. <u><i>Pinus strobus</i></u>	<u>FACU</u>	1. _____	_____
2. <u><i>Prunus serotina</i></u>	<u>FACU</u>	2. _____	_____
3. _____	_____	3. _____	_____
<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. <u><i>Pinus strobus</i></u>	<u>FACU</u>	1. _____	_____
2. <u><i>Acer rubrum</i></u>	<u>FAC</u>	2. _____	_____
3. <u><i>Viburnum recognitum</i></u>	<u>FACW-</u>	3. _____	_____

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: MmB-Merrimac sandy loams, 3 to 8 % slopes
 On Hydric Soils List? (Y/N): No

Soil Profile (Note wetland flag no. nearest soil test pit): A-17

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water
A	0-10	10YR 3/3	-	-	-
Bw	10-20	10YR 4/6	-	-	-

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.): All of above

Landscape Position: Backslope

Altered/Atypical situation? (describe): _____

Comments: _____

Wetland Edge Delineation Data Form (WETLAND)

Applicant: RI Dept. of Environmental Mgmt.

Wetland No. 1

Project: Lewis City Bridge

Flag No. Sequence: B-1 through B-18

City/Town: Exeter

Date: 03/09/04

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree</u>	<u>Indicator Status</u>	<u>Herbs</u>	<u>Indicator Status</u>
1. _____	_____	1. <u>Sphagnum spp.</u>	<u>OBL</u>
2. _____	_____	2. <u>Carex stricta</u>	<u>OBL</u>
3. _____	_____	3. _____	_____
<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. <u>Alnus serrulata</u>	<u>FACW+</u>	1. _____	_____
2. <u>Cornus amomum</u>	<u>FACW</u>	2. _____	_____
3. <u>Viburnum recognitum</u>	<u>FACW-</u>	3. _____	_____

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: Co-Carlisle muck
 On Hydric Soils List? (Y/N): Yes

Soil Profile (Note wetland flag no. nearest soil test pit): B-7

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water
A	0-6	10YR 2/1	-	0"	2"
Cr	6+	-	-	-	-

Other hydrological indicators (e.g. water marks, drainage patterns, root rhizospheres, etc.; see Appendix 4(A(4) of the Rules): _____

Landscape Position: Toeslope

Altered/Atypical situation? (describe): _____

Comments: _____

Wetland Edge Delineation Data Form (UPLAND)

Applicant: RI Dept. of Environmental Mgmt.

Wetland No. 1

Project: Lewis City Bridge

Flag No. Sequence: B-1 through B-18

City/Town: Exeter

Date: 03/09/04

Vegetation: List the three dominant species in each vegetative strata along with their NWI status:

<u>Tree</u>	<u>Indicator Status</u>	<u>Herbs</u>	<u>Indicator Status</u>
1. <u>Prunus serotina</u>	<u>FACU</u>	1. _____	_____
2. _____	_____	2. _____	_____
3. _____	_____	3. _____	_____
<u>Saplings/Shrubs</u>		<u>Woody Vines</u>	
1. <u>Prunus serotina</u>	<u>FACU</u>	1. <u>Vitis spp.</u>	<u>FACW</u>
2. <u>Viburnum recognitum</u>	<u>FACW-</u>	2. _____	_____
3. _____	_____	3. _____	_____

List other vegetative species noted which may have affected determination of the wetland edge:

Soil: SCS Soil Survey Mapping Unit: MmB-Merrimac sandy loams, 3 to 8 % slopes
 On Hydric Soils List? (Y/N): No

Soil Profile (Note wetland flag no. nearest soil test pit): B-7

Horizon	Depth	Matrix Color	Mottling Description	Depth to Saturation	Depth to Free Water
A	0-16	10YR 4/3	-	-	-
Cr	16+	-	-	-	-

Other indicators exhibiting an absence of wetland hydrology (e.g. absence of water marks, lack of redoximorphic features, lack of oxidized rhizospheres, etc.): _____

Landscape Position: Backslope

Altered/Atypical situation? (describe): _____

Comments: _____

