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Subject: NYSDEC Work Plan - Outer Harbor Greenbelt Project #31PL0202

FYI.

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As we discussed yesterday, attached is the subject Work Plan which addresses NYSDEC's comments dated 12/17/04. I will send you Appendix B, Minority/Women-owned Business Enterprise Utilization Plan under separate cover.

----- Forwarded by Richard Zynda/Buffalo/URSCorp on 01/06/2005 09:56 AM

Connie Peete

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AM Subject: NYSDEC Work Plan

REMEDIAL DESIGN WORK PLAN

Prepared for:

**NIAGARA FRONTIER TRANSPORTATION AUTHORITY
OUTER HARBOR- GREENBELT SHORELINE IMPROVEMENT PROJECT
PROJECT NO. 31PL0202
SITE NO. B00149-9
NYSDEC ASSISTANCE CONTRACT
BUFFALO, NEW YORK**

Prepared by:

**URS CORPORATION
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BUFFALO, NEW YORK 14203**

JANUARY 2005

**NFTA
OUTER HARBOR – GREENBELT SHORELINE IMPROVEMENT PROJECT
REMEDIAL DESIGN WORK PLAN**

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1.0 INTRODUCTION

This *Remedial Design Work Plan* has been prepared to identify the activities for the Outer Harbor – Greenbelt Shoreline Improvement Project by the URS Corporation in accordance with URS' contract (No. 31PL0202) with the Niagara Frontier Transportation Authority (NFTA) and the NFTA's State Assistance Contract (SAC) C302569 with the New York State Department of Environmental Conservation (NYSDEC).

1.1 General Site Information

The Outer Harbor – Greenbelt shoreline Improvement Project is located approximately 1 mile south of downtown Buffalo along Fuhrman Boulevard. The site is adjacent to the Lake Erie shoreline from the site of the former Pier Restaurant on the north to the Terminal B wall, and forms the majority of the western edge of the NFTA's overall 120 +/- acre Outer Harbor site.

As noted in the Environmental Restoration Program Remediation Application – NFTA, July 2002, the site has been subject to a series of fill activities from 1874 until 1986. The NFTA embarked upon a comprehensive program to redevelop the site in 1991 with the performance of a Preliminary Site Assessment (PSA). The results from the PSA indicated the site presented a threat to human health and the environment. In 1996 the site was listed on the NYSDEC registry of Hazardous Waste sites as a Class 2 property.

NYSDEC conducted a remedial investigation/feasibility study (RI/FS) to determine the nature and extent of contamination at the site, and the risk to human health and environment posed by the property. The results of the RI/FS provided a basis for development of the Preliminary Remedial Action Plan (PRAP) for the site (soil capping) which was completed in 2002. The final plan was documented by NYSDEC in a Record of Decision (ROD) in March 2002. Also, as a result of the ROD findings, the site was delisted from the registry and reclassified.

1.2 Scope of Project

This project consists of the renovation of a “greenbelt” area along approximately 4,300 lineal feet of Lake Erie shoreline including an additional 2,300 lineal feet of inner shoreline known as the "Bell Slip.”

The project site is considered part of the Buffalo Outer Harbor Brownfield Environmental Restoration Site and, therefore, must be designed to meet criteria specified by the Record of Decision (ROD) as issued by the New York State Department of Environmental Conservation (NYSDEC) in March 2002.

The project will include existing shore protection removal, placement of new shore protection, topsoil, seeding and mulching, onsite concrete crushing and storage, a bike trail along the water’s edge, and drainage outlets for future development.

Fundamental project design parameters include:

- 25.3 (+/-) acres of NFTA property extending to U.S. Harbor Line easement (restriction for public use only).
- 18.8 (+/-) acres of soil/land remediation (includes shore protection acreage).
- A minimum of two-community access points (locations to be determined by the NFTA).
- Approximately 35 to 75 feet of shore protection for the waterfront areas and as determined by slope requirements. Bioengineering to enhance shoreline habitat will be a design criterion.
- Approximately 75± feet of “greenspace”.

- Approximately 4,300 feet of lakefront frontage.
- Approximately 2,300 feet of “Bell Slip” waterfront frontage.
- Potential trailhead parking.
- Drainage outlets will be provided for future inland development of the Outer Harbor site.

B. Project Objective

The objective of the Outer Harbor Greenbelt Remediation Project is to develop a focused long-term, cost effective and environmentally sound remediation plan for property that envisions providing public access to the waterfront of the Lake Erie shoreline and meets the current ROD requirements. It is anticipated that this project will assure permanent public access to the waterfront.

2.0 SCOPE OF WORK

This section describes the eleven major tasks associated with the Remedial Design Work Assignment at the Outer Harbor Site.

2.1 Task 1 - Develop Detailed Work Plan

URS will develop and submit for NFTA's, NYSDEC's, and USACE review and approval, a Remedial Design Work Plan that includes, at a minimum, a description of major tasks, a schedule with milestones and deliverables. Under this task URS will investigate, identify, review, and become thoroughly familiar with existing drawings, specifications, and documents pertaining to the project, its requirements, operations, equipment, and systems.

Assumptions

- No trips to the site or to Albany are included.
- No supplemental public participation plan.
- No Health and Safety Plans are prepared under this task.

Deliverables

- Six copies of Draft and Final Work Plan/Budget, and one electronic copy.

2.2 Task 2.0 - Site and Project Investigation including Topographic and Bathymetric Surveys

URS will perform an on site investigation to identify the work and requirements necessary for project analysis, recommendation, design, engineering, and for preparation of Contract Documents.

Prior to any intrusive activities (i.e., geoprobing or drilling), the utility locating service Underground Facilities Protective Organization (UFPO) will be contacted for the identification and marking of utilities at the site including water lines, drains, gas lines, electrical service, storm sewers and sanitary sewers. URS and its subconsultants will have Health and Safety Plans in place prior to field investigation activities.

2.2.1 Task 2.1 Soil Borings

Soil borings will be performed to obtain geotechnical data required for the design of shoreline protection systems. URS will perform soil borings at both the top of bank and at the water's edge at an approximate 1,000-foot spacing. A total of 25 borings is anticipated. Borings will be performed via hollow stem auguring to a depth of 40-feet. Split spoons will be obtained at 5-foot intervals. 4 soil samples from each borehole will be tested for Grain Size Distribution (ASTM D6913-04), and Atterberg Limits and Moisture Content (ASTM D4318-00). One sample from each borehole will be tested for unconfined compression. Each boring will be backfilled to existing grades with cuttings and granular bentonite material.

All boring locations completed during this pre-design investigation will be surveyed for horizontal and vertical control under the direct supervision of a New York State-licensed land surveyor. Horizontal control will be referenced to New York State Plane, North American Datum 1983 (NAD 83). Vertical control will be referenced to New York State Plane, North American Vertical Datum of 1988 (NAVD 1988).

2.2.2 Task 2.2 Topographic Survey and Mapping

Topographic survey and mapping of the Outer Harbor site from the north property line of the NFTA's Terminal B to a slip adjacent to the former Pier Restaurant, and from the top of the shoreline slope to 150 feet east of the top of slope. Mapping accuracy shall be to 1-foot contour. Existing aerial photography shall be used to generate mapping.

2.2.3 Task 2.3 Bathymetric Survey

Bathymetric survey of the lake bottom to 100 feet from the shoreline. A common survey datum shall be used for both the topographic and bathymetric surveys.

2.2.4 Task 2.4 Test Trenches

Test trenches will be excavated along the shoreline in order to estimate the quantity of concrete and stone debris and to ascertain the profile of the existing shoreline beneath the debris.

2.3 Task #3 Draft and Final Design Rationale Report

URS will prepare and submit a Draft Design Rationale Report (DRR) consisting of six (6) hard copies for review, and provide a Final DRR consisting of six (6) hard copies and one (1) electronic copy on computer disks each, for approval.

The DRR will outline a projected "Scope of Work" in narrative form, identify and describe specific approaches and methods available to accomplish the intent of and requirements for the project, and present conclusions with recommendations. The DRR will contain an Appendix containing an evaluation of soil boring logs and the slope stability design and other basic calculations on major design elements of the project. An evaluation and presentation of bioengineering concepts will be developed under this task. A site management plan that identifies how the NFTA will maintain site controls will also be included in the DRR. An environmental easement will be prepared by NFTA upon completion of the project and approval of the site management plan by NYSDEC.

Included in the DRR will be the Engineer's Construction Cost Estimate (Engineer's Estimate) for the project, in a format approved by the Authority with value engineering and bidding alternatives and other options required to keep the project cost within the Authority's designated budget.

Approval of the DRR shall be sought by the NFTA from both the New York State Department of Environmental Conservation and the United States Army Corp of Engineers.

2.4 Task #4 Contract Documents

Following NFTA approval of the DRR, final Contract Documents based on the approved design approach will be prepared. URS will coordinate design development with pertinent NFTA activities and personnel. The Contract Documents will identify specific requirements and restrictions to be placed on the contractor's work effort, methods, schedules, etc., to assure that interruptions or inconveniences to any site operations are approved, coordinated, and kept to a minimum.

URS will prepare and assemble the technical specifications and other components of the Project Manual to meet specific project requirements, in CSI division and section format. New York State Department of Transportation (NYSDOT) and NYSDEC standard specification references will be incorporated as appropriate.

The Project Manual will include NFTA furnished terms and conditions, which consist of the Invitation to Bid, Instructions to Bidders, Bid Forms, Surety Forms, Agreement, General Conditions, and Insurance Requirements. URS will prepare or obtain all other items and components required by the project for incorporation in the Project Manual, including the current Federal and State Wage Rates, Itemized Bid Proposal, Supplementary Conditions, General Requirements (Division 1), etc.

Ten (10) sets each of progress drawings and technical specifications will be submitted to the NFTA at 50% and 95% completion of design for review and approval.

50% Design Document Progress Submission is to include as a minimum:

- Updated Engineer's Estimate to reflect probable cost at time of construction.
- Updated time of construction schedule with a projected monthly cash flow representing a two-month lag from implementation.
- Specifications:
 - 'Table of Contents.'
 - NFTA-furnished 'Boiler Plate.'
 - Draft 'Itemized Bid Proposal'. The Bid Proposal shall include provisions for additional worker protection in the event unforeseen levels of contamination are encountered.
 - 'Supplementary Conditions.'

- 'Division 1' specification sections.
- 'Technical Specification' table of contents.
- Drawings:
 - Title sheet including project specifics and location map.
 - Sheet identifying the list of projected drawings to be included.
 - Site drawing(s) showing all existing conditions including utilities.
 - All background and outline drawings including plans, elevations and sections pertinent to the project.
 - 50% development of design on the balance of the drawings.

95% Design Document Progress Submission is to include as a minimum:

- Final Engineer's Estimate summarized in the same form and format as the 'Itemized Bid Proposal.'
- Updated time of construction schedule with a projected monthly cash flow representing a two-month lag from implementation.
- All project calculations, catalog cuts and criteria bound with an approved format including a table of contents.
- Specifications:
 - 'Table of Contents' complete.
 - NFTA-furnished 'Boiler Plate' complete with all required information.
 - 'Itemized Bid Proposal' complete.
 - 'Supplementary Conditions' complete.
 - Applicable 'Federal' and 'State Prevailing Wage Rates.'
 - 'Division 1' specification sections complete.
 - All 'Technical Specification' sections complete, including measurement and payment articles.
- Drawings:
 - Title sheet including project specifics and location map.
 - Sheet identifying the list of drawings included.
 - Site drawing(s) showing all existing conditions including utilities.
 - All background and outline drawings including plans, elevations and sections pertinent to the project.

- 100% development of design.

It is the intent to develop detailed plan sheets at a 1"=30' scale. Any planting plans will be developed at a 1"=50' scale. Cross-sections at 100' stations will be developed at a 1:5 scale [1' horizontal, 5' vertical].

The 95% contract document submission is to represent presentation of a fully coordinated bid document ready for printing, minus final concurrence from the NFTA.

2.5 Task #5 Final Contract Documents and Bidding

Upon receipt of final concurrence from NFTA, URS will incorporate the final review comments by the NFTA, stamp and seal by the contractual Professional Engineer (P.E.) licensed to practice in the State of New York the specifications title page and each original mylar or contract drawing and return same to the NFTA for bid printing.

The NFTA will have final Contract Documents printed and bound, and will make distribution during the bid period.

Commencing at time of local advertisement, URS will actively notify qualified prospective prime contractors capable of performing the work for this project, documenting all contacts and responses. Notifications and follow-up of contractors are to continue until a reasonable number of prospective bidders have received the documents and are expected to submit bids. URS will provide a contact person to receive and respond to telephone and written inquiries about technical portions of the contract from prospective bidders during the bid period. Responses to all questions shall be in the form of addenda to the Contract Documents. Inquires of a non-technical nature shall be directed to the Authority's Project Manager.

2.6 Task #6 Progress Reports

URS will prepare monthly progress reports consistent with NYSDEC protocol by the 10th day of each month. Reports will include: manpower use in terms of hours spent, percent of budget spent and percent of project completion, communications, decisions made and work progress during period, work scheduled for next period, problems and outstanding issues.

2.7 Task #7 Meetings and Presentations/Public Participation

URS will attend periodic design and monthly coordination meetings with the NFTA and NYSDEC as may be required and/or directed, and will chair formal design review meetings for the Design Rationale Report, the 50% and 95% design submittals. URS assumes three meetings will be required.

It is anticipated that one presentation of project design information, cost, schedules, etc., to appropriate persons or groups, including outside and/or oversight agencies will be performed. This meeting will be advertised by the NFTA.

URS will take notes and distribute draft minutes of all presentations and meetings for review, address comments received, and distribute final minutes within a reasonable time period to maintain the effectiveness of the effort and the schedule of the project.

2.8 Task #8 Pre-Bid Walk-Through

URS will conduct pre-bid meeting and walk-through for potential bidders at the job site as directed. URS will take notes, record questions and responses, and prepare and distribute minutes.

2.9 Task #9 Addenda and Clarifications

Prepare addenda to the Contract Documents, as required or deemed necessary by the NFTA. All changes, corrections and clarifications shall be made to the appropriate drawings and specification

pages. Copies of modified drawings and specifications shall be distributed as part of an addendum. All modifications to the drawings and project manual shall be identified, by a method approved by the NFTA, and each page and drawing altered shall incorporate revision identification. Addenda shall be issued a minimum of seven-calendar days prior to date of receipt of bids. The NFTA, prior to issuance, shall approve all addenda.

Five (5) calendar days prior to bid opening, URS will submit an amended final Construction Cost Estimate to NFTA, reflecting the costs associated with all Contract Document revisions included in addenda.

Five (5) working days following the receipt of bids, URS will provide a final and complete conformed set of Contract Documents, which incorporate all addenda on original drawings and specification pages. URS will retain revision designations for the changes, and include any revised documents provided by the NFTA. All original drawings and the title page of the Project Manual shall be sealed, signed, and identified as "Conformed Contract Documents."

2.10 Task #10 Bid Analysis

URS will perform a detailed bid analysis comparing bids received and the final Engineer's Estimate, with specific regard to the base bid, add/deduct alternatives, and unit prices. A written analysis and recommendation for award of the construction contract, based on selection of the base bid or base bid and most appropriate combination of alternates, which, considering possible construction change orders, will best complete the project within the project budget. All information associated with this task is due within three (3) working days following the bid date.

2.11 Task 11 Pedestrian/Bicycle Pathway

URS will include the pedestrian/bicycle pathway in the contract documents. The Authority shall identify a point of access for each end of the pathway. URS will utilize the design criteria from the adjacent Waterfront Trail project, which is being concurrently advanced by the NFTA under a separate project initiative. Under this 'Greenbelt' project design development there will be no site amenities, e.g. lighting, emergency telephones, parking, kiosks, trash containers, bicycle racks, etc.

3.0 SCHEDULE

A schedule for performing the work described in section 2 is presented in Table 3-1.

Table 3-1
Project Schedule

PROJECT SCHEDULE

November 3, 2004	-NTP for design
November 24, 2004	-Draft Work Plan
December 23, 2004	-Draft Work Plan Approval (NYSDEC, NFTA)
December 28, 2004	-Final Work Plan
January 7, 2005	-Draft Design Rationale Report (DRR) Due
February 4, 2005	-NYSDEC Approval / Draft DRR
March 14, 2005	-50% Design Submission
April 8, 2005	-NYSDEC Approval / 50% Design
April 25, 2005	-Final DRR Due
April 25, 2005	-95% Design Submission (<i>Final</i>)
May 20, 2005	-NYSDEC Approval / 95% Design (<i>Final</i>)
June 6, 2005	-100% Design Submission – PS&E
June 6, 2005	-NYSDEC Approval / 100% design – PS&E
June 20, 2005	-Advertise Invitation to Bid
July 19, 2005	-Receipt of Bids
July 22, 2005	-Bid Analysis Due
August 6, 2005	-NYSDEC Approval / Bids
August 22, 2005	-Board Award
September 12, 2005	-NTP Construction
September 29, 2006	-Construction Complete (<i>tentative date</i>)*

4.0 IDENTIFICATION OF AREAS OF WORK REQUIRING SUBCONTRACTING

Subcontracted services will be used to support site investigation, mapping, and report preparation. The Minority/Women-owned business utilization plan form is included in Appendix B.

Subcontractors will be needed for the following activities:

- Drilling services
- Geotechnical analysis
- Topographic and Bathymetric Surveys
- Copy and reproduction services

5.0 STAFFING PLAN/KEY PERSONNEL

The proposed management plan and key personnel for this project and the responsibilities of each project position are described below.

- Project Director (V. Singb, P.E.) is the URS corporate officer responsible for assuring the availability of resources, overall project performance, and representing URS in all contractual matters with NFTA.
- Project Manager (R. Zynda, P.E.) will be responsible for technical and financial management of the project, and for overall coordination and review of component work activities. The Project Manager will serve as the initial and primary contact with NFTA throughout the project.
- Project Quality Assurance Officer (J. Lanzo, P.E.), will ensure that all project deliverables undergo a thorough QA review by senior staff members who are qualified and experienced in appropriate disciplines.
- Environmental Engineer (M. Wawrowski, P.E.), will provide design services associated with the remedial action and ensure project deliverables are consistent with NYSDEC standards.
- Shoreline Bioengineering (J. Kooser), will oversee the design of creative bioengineered waterfront components.
- Shoreline Structural Engineering Coordinator (R. Pirog, P.E.) will oversee the design of structural waterfront components.
- Pedestrian/Bikepath Design (M. DiPasquale, P.E.), will perform design services for bikepath and ancillary features.

6.0 PROJECT COST

An estimate of the project cost is presented in Appendix A.

APPENDIX A

PROJECT BUDGET ESTIMATE

APPENDIX B

M/WBE UTILIZATION PLAN

As you requested.

(See attached file: NYSDEC Work-Plan.doc)

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(See attached file: NYSDEC Work-Plan.doc)

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