

**REQUEST FOR PROPOSALS
CRRA HARTFORD LANDFILL
FINAL PHASE OF MSW AREA CLOSURE
ENGINEERING SUPPORT**

October 29, 2010

INTRODUCTION

The Connecticut Resources Recovery Authority (CRRA) is requesting proposals from pre-qualified CONSULTANTS to provide engineering services related to the preparation of construction drawings, technical specifications, a design report including a construction cost estimate, an updated Construction Quality Assurance Plan (CQAP), an updated Stormwater Pollution Control Plan (SPCP), and public bid assistance for the capping of the east side of the MSW Area of the CRRA Hartford Landfill in Hartford, CT. This work is being requested and shall be performed pursuant to the Engineering Services Agreement currently in-place between the CRRA and CONSULTANT.

BACKGROUND

The CRRA Hartford Landfill consists of an approximately 18 acre Lined Ash Area, and an adjacent, approximately 78 Acre historic MSW Area. Construction of the final synthetic membrane cap over the CRRA Hartford landfill began in 2007. The cap over the 18 acre Ash Area on the northerly end of the site is now substantially complete. A project to cap approximately 44 acres of the 78 acre MSW Area (herein referred to as Phase 1) was begun in 2007 and is currently ongoing with an estimated completion date of December 15, 2010. Upon completion of this 44 acre project approximately 34 acres will remain to be capped. CRRA anticipates the public solicitation for the capping of the final 34 acres (herein referred to as Phase 2) will occur in February 2011, with construction beginning in the spring of 2011. Therefore, CRRA requires engineering assistance to prepare the documents listed above and to aide in the public bidding and contractor selection process for the project.

Various Phase 1 documents are linked on CRRA's website www.crra.org under the "Business Opportunities" link for CONSULTANT'S reference in its preparation of its proposal. The documents include a complete set of drawings, CRRA front end Bid documents, and Technical Specifications. Other pertinent documents will be made available to the CONSULTANT upon request. CONSULTANTS wishing to visit the landfill should contact Mr. David Bodendorf, P.E. at 860-757-7721.

CRRA expects the documents generated by the CONSULTANT for Phase 2 pursuant to this RFP will be substantially similar to those utilized for Phase 1. However, CRRA is willing to consider design changes and innovative/alternative products and materials that improve the project either from an engineering standpoint or economically in terms of lower construction and/or long term maintenance costs. As such, CRRA requests that each CONSULTANT allot 100 man hours for research/design changes. CRRA may or may not direct the CONSULTANT to utilize some or

all of these man hours for changes that may improve the project. Each of the Phase 1 documents attached to this RFP will be provided to the successful Proposer in electronic format for its use in generating the Phase 2 documents.

SCOPE OF SERVICES

The following is an anticipated Scope of Services required to complete this project. CONSULTANT is responsible for detailing the Scope of Work to be performed in completing the project. It is anticipated the Scope of Work will include but may not be limited to the following tasks:

- 1) Provide an updated topographic survey of the approximately 34 acres associated with the Phase 2 closure and a proposed grading plan showing cut/fill depths on a 50 foot grid Preparation of construction level Engineering Drawings
- 2) Provide research/design services to for product or design changes that will improve the project. Assume 100 man hours for this task.
- 3) Preparation of Engineering Drawings
- 4) Preparation of Technical Specifications
- 5) Preparation of an Engineer's Design Report, including a Construction Cost Estimate
- 6) Preparation of a Bid Price Form and associated Pay Item descriptions
- 7) Preparation of an updated Construction Quality Assurance Plan
- 8) Preparation of an updated Stormwater Pollution Control Plan (SPCP) under CRRA's existing registration under the General Permit GSN001627 for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.
- 9) Assembly of Bid Documents (technical specifications, drawings, front end contract documents provided by CRRA) and reproduction of 3 sets of Bid Documents.
- 10) Provide assistance during bid process, including participation in one pre-bid meeting, preparation of up to two addenda, evaluation of bids, and a recommendation for award.

CONSULTANT shall review all regulatory documents pertinent to the preparation of design plans and specifications for the construction of the final cap. Aspects of the design requiring consideration include:

- Determination of minimum interface friction angles to maintain an adequate factor of safety for slope stability for the various cap components.
- Determination of the required hydraulic conductivity of granular and/or manufactured cap drainage materials.
- Construction Sequencing
- Termination of the cap at the extents of the project, including termination along the Army Corps of Engineers flood control dike at the eastern extent of the project.

- Access to eastern extent of project and whether or not dike usage shall be considered along with any federal or local permitting required for its use.
- Stormwater management considerations.
- Contractor laydown area(s), and site restoration.

After review of these items with CRRA staff, selected design features shall be incorporated into the final design and construction drawings.

Included in its response to this RFP, CONSULTANT shall provide a detailed cost breakdown of each of the tasks listed herein and any other tasks the CONSULTANT believes are required to complete the work.

Task 1 – Topographic Survey and Grading Plan

CONSULTANT shall provide an updated topographic survey of the approximately 34 acres associated with the Phase 2 closure and a proposed grading plan showing cut/fill depths on a 50 foot grid. CRRA will use this plan to direct its landfill operator to grade the site to approximate subgrade elevations in advance of a successful bidder beginning the closure project.

Task 2 – Research/Design Services

CONSULTANT may present CRRA with innovative or alternative products or design to improve the project. Any proposed alternatives must be approvable by CTDEP, ACOE, the Greater Hartford Flood Commission, CRRA, and any other permitting or approving authority. CRRA considers improvement to be one or more of the following:

- a) Reduced construction cost
- b) Reduced long term maintenance cost
- c) Equivalent or better environmental protection compared to “traditional” membrane cap technology
- d) No adverse impacts to future use of the site as compared to “traditional” membrane cap technology

CONSULTANT shall provide CRRA its cost for this task assuming 100 man hours are spent at an hourly rate determined by CONSULTANT.

Task 3 - Engineering Drawings

CRRA shall provide CONSULTANT with a complete set of AutoCAD drawings in electronic format depicting existing and proposed grades in the project area, along with all plan view and detail drawings from the Phase 1 project by Fuss & O’Neill. The CONSULTANT shall update the Fuss & O’Neill drawings if/as necessary to adequately describe the construction of the final cap. All construction level engineering drawings shall be signed and sealed by a Professional

Engineer registered in the State of Connecticut. The drawings shall include but may not be limited to:

1. Title Sheet

The Title Sheet shall include the title of the project, a locus plan and the drawing index.

2. Site Plan

The Site Plan shall be prepared at a scale of 1" = 100' and shall typically include the following:

- Site access point(s)
- Limits of work
- Drawing key
- Stockpile/Laydown areas
- Restricted areas
- Survey benchmarks
- Staging area
- Location of temporary office and sanitary facilities

3. Subgrade Preparation Plans

Subgrade Preparation Plans shall be prepared at a maximum scale of 1" = 40'. These plans shall identify the elevations that must be achieved prior to construction of the landfill cap.

4. Final Grading Plans

These plans shall also be prepared at a maximum scale of 1"=40' and show contours of the completed cap system.

5. Facility Entrance and Access Road Plan

A facility entrance and access road plan shall include a plan of the entrance roadway, outlines of buildings, location of fences, local site topography, erosion control, and the access road leading to the work area.

6. Cross Sections

Cross sections through Phase 1 areas subject to closure shall be prepared as necessary to identify the relationship between existing conditions, subgrade elevations, and the proposed elevation of the final cap system.

7. Drainage Details

This item shall include details for the required drainage swales, piping, downchutes, inlet/outlet structures, energy dissipation structures, tie in with existing drainage features, etc.

8. Erosion Control and Miscellaneous Details

Erosion and sediment control is an important aspect of this project. The design shall include details for erosion control and other miscellaneous details, as necessary.

Task 4 – Technical Specifications

Technical specifications necessary for construction shall be developed for all pertinent components of the design. Technical Specifications for the Phase 1 project by Fuss & O'Neill will be provided to the CONSULTANT in electronic format. Those technical specifications shall be updated for consistency with the Phase 2 closure design.

Task 5 – Engineer's Design Report

CONSULTANT shall prepare a brief report documenting the design considerations for the project. Included in the report shall be evaluations of slope stability, cap drainage, short term and long term stormwater management, including all backup calculations. A detailed quantity estimate for all construction materials shall also be prepared. These estimates will be used in the development of a schedule of values for the bidding documents. An engineer's estimate of construction costs is also required.

Task 6 – Bid Price Form and associated Pay Item descriptions

CONSULTANT shall develop a Bid Price Form to be included in CRRA's front end specifications along with a description of each Pay Item to be included in CONSULTANT's Technical Specifications.

Task 7 - Construction Quality Assurance Plan

CONSULTANT shall update the Phase 1 Construction Quality Assurance Plan (CQAP) by Fuss & O'Neill as necessary to ensure construction of the final cap conforms with the plans and specifications, and all applicable regulations.

Task 8 – Stormwater Pollution Control Plan and Registration under Construction General Permit

CONSULTANT shall update the Phase 1 Stormwater Pollution Control Plan by Fuss & O'Neill for consistency with the Phase 2 design.

Task 9 – Prepare and Assemble Contract Documents

This work shall include a review of CRRA's standard "boiler plate" contract documents and supplemental conditions, and modification of such for site-specific issues. CONSULTANT shall assemble contract documents by combining CRRA "boiler plate" documents with final design plans, technical specifications, SPCP, and CQAP. CONSULTANT should budget for copying and binding a maximum of 10 sets of contract documents.

Task 10 – Provide Assistance during Bid Process

CONSULTANT shall assist the CRRA in the bidding and selection of a contractor for the work, including:

1. Participation in one pre-bid meeting.
2. Preparation of two addenda, if necessary.
3. Review of bids submitted and preparation of a summary memorandum recommending contract award.

TIME OF PERFORMANCE

As part of this proposal, CONSULTANT is required to submit a proposed schedule for completion of the design, quality assurance plan, stormwater pollution control plan, and other contract documents in as short a time frame as possible.

ESTIMATED COST

The cost for completion of the Work is to be provided based on hourly rates and expenses as outlined in the Engineering Services Agreement. This cost is to be provided on a Not-to-Exceed basis. The cost is to include all anticipated expenses including any costs for site inspections, survey, reproduction, soils investigation, etc., and any subcontracted work.

CONSULTANT shall provide estimates of man-hours, labor rates, direct and indirect costs, and a Not-to-Exceed cost for each of the Tasks, including a breakdown for any associated sub-tasks.

CRRA reserves the right to eliminate any task listed above and its respective cost from the Scope of Services without additional compensation to CONSULTANT.

PROPOSAL REQUIREMENTS

CONSULTANT shall provide a proposal that briefly summarizes its anticipated design along with a brief summary of its experience in providing similar services to other landfill owners. The proposal shall detail the personnel anticipated to perform the work along with their title, hourly rate, and the number of hours anticipated to perform each task. For Task 2, CONSULTANT shall assume 100 hours and determine the personnel that will perform the task. The hourly rates proposed by CONSULTANT shall not exceed, but may be less than, the hourly rates contained in its Engineering Services Agreement with CRRA.

All proposals are due to CRRA by Noon, Friday, December 3, 2010, Attn. David Bodendorf, P.E.