

Department of Resources Recycling and Recovery

SCOPE OF WORK

Engineering and Construction Management Services for Civil Engineering Applications Using Tire Derived Aggregate (TDA) Contract

I. INTRODUCTION/OBJECTIVES

The primary purpose of this contract is to assist and support CalRecycle's efforts to promote the use of Tire Derived Aggregate (TDA) in various civil engineering applications to ultimately divert waste tires from California landfills. The Contractor will provide education, design and/or technical assistance to local and state government agencies and private entities interested in the use of TDA in civil engineering projects (e.g., lightweight fill, vibration attenuation layers, erosion control).

II. WORK TO BE PERFORMED

The Contractor will assist CalRecycle's efforts to increase the use of TDA by expanding the knowledge of TDA's engineering benefits and its construction management procedures. Pursuant to CalRecycle's direction, the Contractor will work in partnership with local and state government agencies to provide TDA technology transfer and construction management support on pilot demonstration projects and TDA grant projects awarded by CalRecycle. The Contractor may conduct research on issues related to the use of TDA in civil engineering applications and to provide technical assistance to industry as needed.

All work under this contract shall be performed in accordance with the work plans developed by CalRecycle and the instructions included in the work orders/change orders issued under the contract. Work to be performed will include, but is not limited to, the following:

1. TDA project design and analysis;
2. TDA pilot demonstration and grant project construction management oversight and technical assistance;
3. Identification and investigation of potential barriers and environmental impacts to using TDA;
4. Research investigations for new civil engineering applications for TDA; and
5. Training and technical assistance on technical issues related to using TDA in civil engineering applications.

III. TASKS IDENTIFIED

All work under this contract will be performed through work orders issued by CalRecycle to the Contractor. The Contractor will initially receive a planning work order that includes information specific to each task. As required and pursuant to the planning work order, CalRecycle staff will issue a detailed work order. Any subsequent changes to the work order shall be documented through a revised work order signed by both parties.

There will likely be occasions when multiple TDA projects must be completed or constructed at the same time. The Contractor shall provide CalRecycle with sufficient resources to ensure cost-effective and timely completion of multiple projects.

Tasks performed under this contract will be provided in two specific areas: Technical Assistance and Education and Construction Management Oversight. The tasks include, but are not limited to, the following:

A. Technical Assistance and Education

1. Perform and coordinate the design of TDA pilot and grant projects with CalRecycle staff and state and local agency partners. Specific subtasks include, but are not limited to:
 - a. geotechnical and earthquake analysis of landslide and retaining wall projects;
 - b. landfill design and operation;
 - c. vibration and sound mitigation analysis related to light rail design; and
2. As directed by CalRecycle staff, assist in or organize educational seminars, workshops and meetings to educate engineers and other individuals on using TDA in civil engineering applications. Develop informational and educational materials for distribution and/or presentation at the seminars, workshops, and meetings. Prior to releasing or presenting such materials, Contractor shall provide the materials to CalRecycle staff for review and written approval. Prior to presentation of the materials, Contractor shall submit its overall presentation plan to CalRecycle staff for review and written approval.
3. Investigate and evaluate existing and new civil engineering uses of waste tires, such as lightweight fill, vibration attenuation layers, and erosion control applications.
4. Develop technical standards for use in state and local government design specifications, guidance manuals and/or regulations.

Conduct pilot and bench scale test studies, lab studies, paper studies, and literature reviews regarding additional reuses and possible environmental effects of tire shreds.

B. Construction Management Oversight

1. TDA pilot demonstration and grant project oversight and technical assistance including but not limited to:
 - a. Procure TDA material and coordinate shredding, stockpiling and transport for selected projects;
 - b. Oversee construction activities and perform QA/QC during TDA production and TDA placement at project sites;
 - c. Prepare daily work logs, construction progress reports, and project cost tracking reports;
 - d. Prepare final construction completion reports; and
 - e. Evaluate long-term performance of past projects.
2. Assist staff with the placement of instrumentation and monitoring equipment at selected TDA projects for the purpose of long-term surveillance.
3. Assist in obtaining permits and coordinating environmental issues with appropriate regulatory agencies.
4. Assist CalRecycle staff with addressing general questions from local and state governments or other interested stakeholder groups regarding the construction management of TDA projects.

IV. TIME FRAME

It is anticipated that this contract would be awarded in February 2012 and expire in May 2014. This contract will ultimately encumber funding from Fiscal Years 2011/2012 and 2012/2013, subject to the passage of the Fiscal Year 2012/13 Budget Act and funding availability.

V. CONTRACT/TASK

CalRecycle staff will develop a work order for each task and the time frame will be included in that work order. The following provisions will be included in the Terms and Conditions or Special Terms and Condition of the Contract:

VI. COPYRIGHT PROVISION

The contractor shall establish for CalRecycle good title in all copyrightable and trademarkable materials developed as a result of this Scope of Work. Such title shall include exclusive copyrights and trademarks in the name of the State of California, Department of Resources, Recovery and Recycling (CalRecycle).

VII. CALIFORNIA WASTE TIRES

Unless otherwise provided for in this Scope of Work, in the event the contractor and/or subcontractor(s) purchases waste tires or waste-tire derived products for the performance of this Scope of Work, only California waste tires and California waste tire-derived products shall be used. As a condition of payment under the agreement, the contractor shall be required to provide documentation substantiating the source of the tire materials used during the performance of this Scope of Work to the contract manager.

VIII. WASTE REDUCTION AND RECYCLED-CONTENT PRODUCT PROCUREMENT

In the performance of this Agreement, Contractor shall use recycled content, used or reusable products, and practice other waste reduction measures where feasible and appropriate.

Recycled Content Products: All products purchased and charged/billed to the CalRecycle to fulfill the requirements of this contract shall be Recycled Content Products (RCPs), or used (reused, remanufactured, refurbished) products. All RCPs purchased or charged/billed to CalRecycle to fulfill the requirements of the contract shall have both the total recycled-content (TRC) and the postconsumer content (PC) clearly identified on the products. Specific requirements for the aforementioned purchases and identification are discussed in the Terms and Conditions of the Contractual Agreement under Recycled-Content Product Purchasing and Certification.

The contractor should, at a minimum, ensure that the following issues are addressed, as applicable to the services provided:

IX. WRITTEN DOCUMENT PROVISION

All documents and/or reports drafted for publication by or for CalRecycle in accordance with this contract shall adhere to CalRecycle's *Guidelines For Preparing CalRecycle Reports (available upon request)* and shall be reviewed by CalRecycle's Contract Manager in consultation with one of the CalRecycle's editors.

In addition, these documents and/or reports shall be printed double-sided on one hundred percent (100%) recycled-content paper. Specific pages containing full-color photographs or other ink-intensive graphics may be printed on photographic paper. The paper should identify the postconsumer recycled content of the paper (i.e., "printed on 100% postconsumer paper"). When applicable, the contractor shall provide the contract manager with an electronic copy of the document and/or report for CalRecycle's uses.

To the greatest extent possible, soy ink instead of petroleum-based inks should be used to print all documents