LITTER TRAP WITH TRASH BOOM INSTALLATION ON ALAZAN CREEK  
ADDENDUM 1  
April 1, 2016

The following Addendum modifies and becomes part of the Contract Documents dated March 3, 2016.

MODIFICATIONS TO THE BIDDING DOCUMENTS

Item 1.01: Delete page TOC – 2 and TOC – 3 and replace with attached Bidding Documents Table of Contents.

MODIFICATIONS TO THE SPECIFICATIONS

Item 1.01: Delete page CS – 1 and CS – 2 and replace with attached Specifications Table of Contents  
Item 1.02: Delete Section 02519 – Geosynthetics for Earthwork  
Item 1.03: Delete Section 02201 – Soil Stabilization System  
Item 1.04: Delete Section 02235 – Excavation and Fill  
Item 1.05: Delete Section 11310 – Litter Trap and Trash Boom System and replace with attached specification 11310.  
Item 1.06: Delete Section 01540 – Job Site Security and replace with attached specification 01540

MODIFICATIONS TO THE DRAWINGS

None

ATTACHMENTS

1. Questions and Answers  
2. Bidding Documents Table of Contents  
3. Specifications Table of Contents  
4. Specification 11310  
5. Specification 01540
Litter Trap with Trash Boom Installation on Alazan Creek
Questions/Answers
As of March 30, 2016

1. Is the 20 year warranty something that an approved equal will need to match?
   a. Yes. All approved equals need to meet specification 11310.

2. The geotech specs say owner is responsible in one section and that the contractor is responsible in another. Which is accurate?
   a. The contractor is responsible for the geotechnical work. See specification 11310.

3. Do you want 1 or 2 baskets?
   a. Two baskets. One basket in stream and a spare basket.

4. The drawings and specs call for two anchors and the approved manufacturer uses six anchors. Which is accurate?
   a. See addendum 1.

5. The document asks to provide references of similar work, but since this is the first installation of one of these in San Antonio that is hard to find. Can you please clarify similar work?
   a. We are looking for contractors with similar concrete work. Pier design and installation experience.

6. Will the geotech for the ground anchors come from SARA or the contractor to the manufacturer?
   a. The geotechnical analysis will be the responsibility of the contractor.

7. If the geotech analysis is not provided are the contractors just supposed to guess on the pier depth?
   a. No. The contractor is responsible for getting a geotechnical report.

8. Is this a hard bid?
   a. Yes.

9. Is there access to the site from both sides?
   a. Yes.

10. Is revegetation required?
    a. Yes. Please refer to addendum 1.

11. Are the contractors responsible for a SWPPP permit?
    a. Yes. Please refer to Exhibit.

12. Are the contractors responsible for anything with the USACE?
    a. No. SARA has secured the USACE permit.

13. What is the time frame?
a. We expect it to take at least a month after Board approval. Hopeful to give NTP by end of May or early June. The construction time for this project is 180 days.

14. What is the engineer’s estimate?
   a. $400,000

15. What does the grass look like now and what do we need to put back?
   a. Please refer to observation at site visit and addendum 1.

16. Is submittal to HDRC part of the 180 days?
   a. SARA is responsible for submittals to HDRC. This will occur in concurrence with the construction time.

17. Can we order equipment prior to HDRC approval?
   a. Yes.

18. What is the timeframe for the NTP after Board approval is received?
   a. We expect it to take at least a month after Board approval. Hopeful to give NTP by end of May or early June.

19. Can the contractor leave equipment in the purple marked areas on the plan sheet?
   a. Equipment storage is the responsibility of the contractor. They will have to coordinate with CPS, COSA, or Tafolla Middle School about storage on their property.

20. Will there be any maintenance or access roads built as a part of this project?
   a. No. They already exist.

21. Is there a bright light required at every barricade per the job site security specification?
   a. Please see addendum 1 in reference to the job site security specification 01540.

22. Is there a requirement to store equipment for inspection before installation?
   a. SARA will inspect equipment as it is delivered to the job site or installed.

23. Spare parts page: What does one additional boom section mean?
   a. The additional boom section is the individual, 15 foot boom link (HDPE pipe).

24. Is the contractor responsible for damage within their 1 year warranty?
   a. Please refer to specifications 11310 and 01740.

25. Performance requirement?
   a. The performance requirements are based on the flows and velocities noted in specification 11310 and the Exhibit.

26. Can we cross the channel?
   a. Yes. There is also access to both sides.

27. Where should the contractor have the spare parts delivered to?
   a. The spare parts may be delivered to the job site.

28. When there is no flow what should the bed of the creek look like so the boom doesn’t get damaged?
   a. No site work is required in the channel. The trash basket and booms will be able to site on the dry creek bed as is.
29. Is there any specific color for the powder coated aluminum?
   a. Color will be determined during the submittal phase.

30. Will a foam filled boom be considered and accepted.
   a. No foam is allowed. Please see specification 11310.

31. The specs call for a cellular confinement system, installation of geotextile fabrics, and soil compaction in some areas. Has the engineer provided drawings of where he expects the cellular confinement system to be installed? Has locations been determined for where the geotextile fabrics are to be laid down?
   a. Specifications 02519 and 02201 have been removed. Please refer to addendum 1.
LITTER TRAP WITH TRASH BOOM INSTALLATION ON ALAZAN CREEK
PART II - CONSTRUCTION SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS
  01000-Summary of Work
  01040-Contract Coordination
  01051-Grades, Lines and Levels
  01060-Applicable Codes
  01077-Abbreviations, Symbols, Trade Names, and Materials
  01200-Project Meetings
  01300-Submittals
  01400-Quality Control
  01505-Environmental Protection
  01510-Temporary Utilities
  01540-Job Site Security
  01710-Cleaning
  01720-Project Record Documents
  01740-Guarantees & Warranties

DIVISION 2 - SITE WORK
  02000-Mobilization

DIVISION 3 - CONCRETE
  03300-Concrete

DIVISION 4 – MASONRY – (NOT USED)

DIVISION 5 – METALS – (NOT USED)

DIVISION 6 - WOODS AND PLASTICS – (NOT USED)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION – (NOT USED)

DIVISION 8 - DOORS AND WINDOWS – (NOT USED)

DIVISION 9 – FINISHES – (NOT USED)

DIVISION 10 – SPECIALTIES – (NOT USED)

DIVISION 11 – EQUIPMENT
  11310-Litter Trap and Trash Boom System

DIVISION 12 – FURNISHINGS – (NOT USED)

DIVISION 13 - SPECIAL CONSTRUCTION – (NOT USED)
DIVISION 14 - CONVEYING SYSTEMS – (NOT USED)

DIVISION 15 – MECHANICAL – (NOT USED)

DIVISION 16 – ELECTRICAL – (NOT USED)

CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION, JUNE 2008
(NOT INCLUDED, REFER TO AGENCY)
400 – Excavation, Trenching, and Backfilling
515 – Topsoil
516 – Sodding
520 – Hydromulching
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PART 1 GENERAL

1.1 DESCRIPTION

A. Scope
   1. Manufacturer and Vendor shall provide all labor, materials, equipment and
      incidentals as shown, specified or required to furnish and install a litter trap and
      trash boom system at the location shown or indicated on the Exhibit provided in
      Contract Documents.

B. Related Sections
   1. 03300 Concrete

1.2 REFERENCES

A. Standards referenced in this Section are listed below:
   1. American Society of Testing and Materials (ASTM)
      a) ASTM D3350 – Standard Specifications for Polyethylene Plastics Pipe and
         Fitting Materials
      b) ASTM D790 – Standard Test Method for Flexural Properties of
         Unreinforced and Reinforced Plastics and Electrical Insulating Materials
      c) ASTM D1248 – Standard Specification for Polyethylene Plastics Extrusion
         Materials for Wire and Cable
      e) ASTM D1693 – Standard Test Method for Environmental Stress-Cracking
         of Ethylene Plastics
      f) ASTM C1147 – Standard Practice for Determining the Short Term Tensile
         Weld Strength of Chemical-Resistant Thermoplastics
      g) ASTM B209 – Standard Specification for Aluminum and Aluminum-Alloy
         Sheet and Plate
      h) ASTM B313/B313M-02e1 – Standard Specification for Aluminum and
         Aluminum-Alloy Round Welded Tubes

   2. American Welding Society (AWS)
      a) AWS G-1.10M – Guide for the Evaluation of Hot Gas, Hot Gas Extrusion,
         and Heated Tool Butt Thermoplastic Welds
      b) AWS B2.4 – Specification for Welding Procedure and Performance
         Qualifications for Thermoplastics
      c) AWS D1.2M – Structural Welding Code for Aluminum
1.3 QUALIFICATIONS

A. Vendor shall have not less than five years of experience of producing materials and equipment substantially similar to that required, and at time of bid shall submit documentation of at least five similar installations in satisfactory operation for not less than five years each.

B. Vendor responsibilities include:

1. Reviewing litter trap, trash boom, and anchorage system performance and design criteria stated in Contract Documents.

2. Preparing written requests for clarifications or interpretations of performance or design criteria for submittal to ENGINEER or OWNER.

3. Preparing or supervising preparation of design calculations verifying compliance of litter trap, trash boom, and anchorage system with requirements of the Contract Documents.

4. Signing and sealing all calculations and shop drawings.

5. Certifying that:
   a) Design of litter trap, trash boom, and anchorage system was performed in accordance with performance and design criteria stated in the Contract Documents, and design complies with laws and regulations and to prevailing standards of practice.

C. Component Supply and Compatibility

1. Obtain all products furnished under this section regardless of component manufacturer, from a single litter trap and trash boom system manufacturer.

2. Litter trap and trash boom system manufacturer shall prepare, or shall review and approve, all shop drawings and other submittals for all components furnished under this section.

3. Components shall be suitable for the specified service conditions and shall be integrated into overall assembly by litter trap and trash boom system manufacturer.
1.4 SUBMITTALS

A. Action Submittals; submit the following:

1. Shop Drawings:
   a) Shop Drawings for the fabrication and installation of all litter trap and trash boom system work. Include plans, details of boom sections and connections, anchorage details, and any accessory items. Shop Drawings shall bear the seal and signature of professional engineer responsible for delegated design.
   b) Vendor’s custom details for litter trap and trash boom system.
   c) Anchorage details including subbase design sealed by a professional engineer licensed in the State of Texas.

2. Product Data
   a) Manufacturer's product literature, specifications, nominal tensile strength, and standard dimension diagrams.

3. Delegated Design Submittals
   a) Design computations or complete analysis of trash boom sections, inter-boom connectors, litter trap device, and anchorage systems, signed and sealed by professional engineer.

   Design shall include reaction loads at each end of the boom line and certification that the boom and connecting hardware meet or exceed the calculated design loads. Texas Professional Engineer’s seal shall be clearly legible including jurisdiction of registration, registration number and name on seal.

   b) Certifications by a professional engineer that the professional engineer has performed the design of the litter trap, trash boom, and anchorage systems in accordance with performance and design criteria stated in the Contract Documents, and that the design complies to laws and regulations, and with prevailing standards of practice.

4. Test Procedure
   a) Submit detailed description of proposed field and manufacturer testing procedures. Do not perform field testing until ENGINEER approves test procedure. If testing occurs at manufacturing facility, then test results/certification of testing will be required to be submitted.
B. Informational Submittals; submit the following:

1. Certificates
   a) Vendor’s standard guarantee for installation of the litter trap, trash boom, and anchorage systems.

2. Supplier Reports
   a) Submit a written report of results of each visit to site by suppliers’ service technician, including purpose and time of visit, tasks performed and results obtained. Submit within two days of completion of visit to the site.

3. Supplier Instructions
   a) Instructions for handling, storing, and installing materials furnished.

4. Qualifications Statements
   a) Vendor, when requested by OWNER.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Delivery
   1. Deliver materials to the site to ensure uninterrupted progress of work.

   2. Upon delivery, Vendor to inspect trash boom and appurtenances for cracking, gouging, chipping, denting, and other damage. Immediately remove from site and replace unacceptable material.

B. Storage

   1. Vendor to provide storage of materials. Store materials to allow convenient access for inspection and identification. Store material off of the ground using pallets, platforms, and other supports.

   2. Litter trap and trash boom system may be stored outdoors without cover.

   3. Vendor and manufacturer are responsible for securing the equipment prior to installation and OWNER will not be responsible for any loss until the job is complete and accepted.
C. Handling

1. Handle litter trap and trash boom system and all appurtenances carefully in accordance with trash boom manufacturer’s recommendations.

2. Avoid unnecessary handling of litter trap and trash boom system.

3. Protect exterior face of trash boom. Replace trash boom sections with damage regardless of cause of damage.

1.6 WARRANTY

A. General Warranty: Special warranty specified in this article shall not deprive OWNER of other rights or remedies OWNER may otherwise have under the Contract Documents and shall be in addition to and run concurrent with other warranties made by Vendor under the Contract Documents. Obligations of Vendor under the Contract Documents shall not be limited in any way by provisions of specified special warranty.

B. Special Warranty of Materials and Equipment:

1. Vendor to warrant that the manufactured and installed littler trap shall be free from defects in materials and workmanship for a period of one (1) year from date of installation. HDPE booms and floats shall be warranted for 20 (twenty) years.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Stormwater Systems, Inc.

B. Approved Equal

2.2 GENERAL LITTER TRAP AND TRASH BOOM SYSTEM REQUIREMENTS

A. Litter trap and trash boom system and all appurtenances shall be new units not previously used for any other purpose.

B. Litter trap and trash boom system shall be effective at trapping and retaining debris at all stream velocities at or below 9.0 feet per second and flows at or below 30,000 cubic feet per second.

C. Design

1. The device shall be specifically designed to capture floating litter/trash/debris in rivers and streams.

2. The device shall incorporate a tidal/wind gate that contains the litter within the trap during a tidal change or wind event.
3. Booms shall contain no foam internal filler and utilize a unique universal connecting system and will display product labels.
4. The litter trap will be equipped with a lift out basket for cleaning. It can also be cleaned using vacuum truck, excavator, or manually.
5. The booms and baskets shall rise and fall with water levels.
6. The booms and baskets shall float on the water surface and shall also be capable of temporarily sitting in a dry stream bed.
7. The booms and baskets shall not have subsurface nets attached.
8. The device shall be designed to contain trash and operate at stream flow conditions up to and including the 100-year flood event.

D. Acceptable materials for plastic materials include:
   1. The resin used in the floats shall be all virgin PE 3408 or equal resin, as defined in ASTM D-3350.
   2. All piping shall have a minimum of 2.3% carbon black UV stabilizer.
   3. No fillers shall be added.

E. Acceptable materials for aluminum materials include:
   1. All aluminum shall be 6061 and meet ASTM B209 Standard Specification.
   2. Aluminum Mesh used in lift-out basket made from 6063-T5 aluminum, with mesh pattern of 3.125” X 2.875” opening for sides and 4.875” X 1.50” on bottom.
   3. Aluminum mesh used in rear gate shall be made from same grade aluminum and shall be a 4.78” X 1.50” opening.

F. Acceptable materials for lift-out baskets include:
   1. Two (2) optional lift-out baskets for mechanical removal using lifting device are offered.
   2. Constructed using aluminum mesh and angle with lifting eye.

G. Acceptable materials for cable and chain materials include:
   1. Boom Cable is 3/8” diameter galvanized zinc plated 7 x 19 strand core wire rope, and will have a 14,400 lbs. breaking strength.
   2. 5/8” Chain is grade 40/43 NACM grade, hot dipped galvanized coating, work load limit is 13,000 lbs.
H. Dimensions and Tolerances:

1. General dimensions shall be shown on all shop drawings.
2. Thicknesses specified shall be +/-3% on all aluminum/stainless components.
3. Thicknesses specified shall be +/-10% on all plastic materials.

I. Workmanship:

1. The finished product shall be free from defect in workmanship.

2.4 ANCHOR REQUIREMENTS

A. Anchors shall be placed on both sides of the bank. No anchors will be permitted mid-span of the litter trap and trash boom system.

B. Trash boom anchors will be located at the approximate location on the contract document. Litter trap anchors will be placed per vendor design as a part of the equipment submittal.

C. Geotechnical survey shall be completed by Vendor to ensure that anchor subbase and design are appropriate for all existing conditions including, but not limited to soil type, groundwater, and weather. Design shall be signed and sealed by a professional engineer licensed in the State of Texas.

D. Anchor subbase and design shall be designed to withstand the 100-year flood.

E. If concrete anchors are needed, Vendor to provide concrete submittal adhering to Section 03300 Concrete.

2.5 SPARE PARTS

A. Spare parts shall be furnished as follows:
   1. One (1) additional trash boom section.
   2. One (1) additional inter boom connector.
   3. Two (2) additional breakaway inter boom connectors
   4. One (1) additional replacement basket for each basket in the design.

2.6 ADDITIONAL ITEMS

A. Operation and Maintenance Manual to include all approved shop drawings and submittals. Manual shall include recommended schedule of maintenance activities. One (1) electronic copy and one (1) hardcopy to be provided OWNER.

PART 3 EXECUTION

3.1 INSPECTION
A. Examine the conditions under which the work will be installed and notify ENGINEER in writing of conditions detrimental to the proper and timely completion of work. Do not proceed with the work until unsatisfactory conditions are corrected.

3.2 INSTALLATION

A. Install litter trap, boom system, and anchorage in accordance with the Contract Documents, laws and regulations, manufacturer’s instructions, and recommendations of workers skilled in installation of trash booms.

B. Do not install litter trap and trash boom system until anchors, if concrete, have reached a minimum of 90% design strength.

C. Install litter trap and trash boom system anchors, if concrete, in accordance with concrete submittal adhering to Section 03300 Concrete.

D. Vendor to locate all utilities and pothole to verify locations. Vendor to stay 5 feet away from utilities.

3.3 FIELD QUALITY CONTROL

A. Site Tests: After installation, Vendor and qualified field service representative of manufacturer shall conduct an inspection of the litter trap system, in the presence of ENGINEER. During inspections, verify that materials and equipment and appurtenances are installed in accordance with the Contract Documents, manufacturer’s instructions, and laws and regulations.

B. Manufacturer’s Services: Provide a qualified, factory trained serviceman to perform the following:

   1. Supervise unloading and installation of materials and equipment.
   2. Instruct Vendor in installing materials and equipment.
   3. Inspect and assist in testing the litter trap and trash boom system after installation and ensure proper operation.
   4. Technician shall revisit the site as often as necessary until installation is acceptable.
   5. All costs, including expenses for travel, lodging, meals, and incidentals, and cost of travel time, for visits to the site shall be included in the contract price.

END OF SECTION
PART 1 GENERAL

1.1 BARRICADES, LIGHTS, AND WATCHMEN:

A. The Contractor is responsible for all damages to the work until accepted by the Authority and the Contractor shall remove all damaged portions and replace them at no cost to the Authority. The responsibility of the Contractor for complete job security will not cease until the project is accepted by the Authority.

B. No public, private, or park road shall be closed overnight. The Contractor shall build and maintain all-weather bypasses and detours, as necessary, with proper lights, barricades, and markings on and across the roads involved in the work.

1.2 MEASUREMENT AND PAYMENT:

No separate payment will be made for any items of work, materials, parts, equipment, supplies, or related items required to perform and complete the requirements of this section. The costs for all such items required shall be considered subsidiary to other items of this Contract and shall not be paid for separately.

PART 2 PRODUCTS (not applicable)

PART 3 EXECUTION (not applicable)

END OF SECTION