

**State of Rhode Island
Department of Administration / Division of Purchases
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**Solicitation Information
February 7, 2013**

ADDENDUM # 2

RFQ#7459268

**Title: URI – PASTORE HALL AUDITORIUM HVAC REPLACEMENT
BID CLOSING DATE: February 20, 2013 AT 11:00 AM (EST)**

Notice to Vendors:

SEE ATTACHED ADDITIONAL INFORMATION FOR PROJECT

**Thomas Bovis
Interdepartmental Project Manager**

Interested parties should monitor this website, on a regular basis, for any additional information that may be posted.



CREATIVE ENVIRONMENT CORP.

CONSULTING ENGINEERS
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ADDENDUM #2

DATE: February 4, 2013

PROJECT: UNIVERSITY OF RHODE ISLAND
PASTORE HALL ~ AIR HANDLING UNIT REPLACEMENT

URI PROJECT #: KC.G.PAST.2011.002
RI STATE BID #: 7459268

FROM: CREATIVE ENVIRONMENT CORP. (CEC#20981)

TO: ALL BIDDERS

This Addendum forms a part of the Contract Documents and modifies the original bidding documents dated January 20, 2010 and updated October 2012, as noted below. Failure to acknowledge receipt of this Addendum in the space provided on the Bid Form may subject the Bidder to disqualification.

CLARIFICATION OF ITEMS PRESENTED AT THE PRE-BID MEETING:

1. **ROOF:** *Is the Roof work to be included by this contractor? What type of roof is it? Is the Roof under warranty?*
 - 1.1. Work to repair/weather-proof any roof penetrations included in work on this project is the responsibility of this contractor. The roof is a Certainteed roof, and is under warranty. The University uses Apollo Roofing of Providence in order to maintain the roofing. See note 2.1.2 below.
2. **EQUIPMENT PAD:** *Is a concrete pad required for the new ACCUs? What is the size and requirements? What are the bollard requirements?*
 - 2.1. A concrete pad is required. It will not cover the entire area within the bollards due to the structural impact on the building's foundation. See note 2.2.2 below, the attached URI Standard Bollard Detail, and SKM-1 attached for "Detail of Equipment Pad".
3. **FRESH AIR TRENCH:** *How is the fresh air trench to be cleaned? What is the length of the trench?*
 - 3.1. See note 2.1.3 below and the Revision to Specification section "15800 Air Distribution, 3.07 Adjusting and Cleaning" included in this Addendum.

4. ASBESTOS: *Is there any asbestos?*

- 4.1. The University tested the flooring in the area for asbestos, and discovered that it was ACM. The flooring has been removed and disposed of.

REVISIONS AND/OR ALTERATIONS TO THE DRAWINGS:

1. See attached MECHANICAL sketch SKM-1 Detail of Equipment Pad & URI Standard Bollard Detail at CU-1 & CU-2 Dated 2/4/2013 for additions to the contract documents.
2. Refer to the following notes for additions and/or revisions to the Contract Drawings indicated below:
 - 2.1. Drawing M-1: At part plan "First Floor Plan @ Auditorium 124 – Mechanical Ductwork"
 - 2.1.1. Revise supply diffuser S-1 to 3200 cfm (typical of 2)
 - 2.1.2. Revise return register R-1 to 3200 cfm (typical of 2)
 - 2.1.3. Revise the note at the fresh air trench to read: "FRESH AIR TRENCH TO BE CLEANED FROM NEW AHU CONNECTION POINTS TO THE TERMINATION AT EXTERIOR WELL (APPROXIMATELY 50 FEET) INCLUDING AREA DRAINS (REFER TO SPECIFICATION FOR DETAILED INFORMATION)". The Specification section is included as part of this Addendum for revision of Specification section 15800.
 - 2.1.4. At new work shown on the low roof above the Flammable Materials Room #130 add the following note: "ALL PATCHING AND REPAIR OF THE EXISTING ROOF RELATED TO THIS WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. FOLLOW UNIVERSITY STANDARDS FOR THIS WORK."
 - 2.2. Drawing M-2:
 - 2.2.1. All locations noted "5/8" R.L.L., 1-1/8" R.S.L., & 5/8" H.G.B." shall be revised to "1/2" R.L.L., 1-3/8" R.S.L., & 3/4" H.G.B."; and locations noted "(2) 5/8" R.L.L., (2) 1-1/8" R.S.L., & (2) 5/8" H.G.B." shall be revised to "(2) 1/2" R.L.L., (2) 1-3/8" R.S.L., & (2) 3/4" H.G.B."
 - 2.2.2. At the location of CU-1 & CU-2 add the following note: "See SKM-1 for Equipment Pad Detail at this Location"
 - 2.3. Drawing M-3:
 - 2.3.1. Air Handling Unit Schedule: Revise "CFM (SUPPLY)" to 3200 in lieu of 3000
 - 2.3.2. Air Cooled Condensing Unit Schedule : Add Remarks "With Low Ambient Control and Hot Gas Bypass Kit Options"

REVISIONS TO THE SPECIFICATIONS:

1. Specification section "15900 Controls & Instrumentation, 3.02 Sequence of Operation": The Occupied Mode, Cooling sequence shall be modified to read as follows:

Upon a call for cooling, the system shall utilize economizer cooling or 1st stage/2nd stage mechanical cooling to maintain space temperature setpoint. If during the cooling cycle the enthalpy of the interior return air is greater than the outside air, the outside air dampers shall open fully to utilize the lesser enthalpy outside air. If during the cooling

cycle the enthalpy of the interior return air is less than the outside air, the outdoor air dampers shall modulate back to minimum position or to the position determined by the CO2 sensor, and the 1st stage of mechanical cooling shall be energized. Upon a continued call for cooling the 2nd stage of mechanical cooling shall be energized.

2. Specification section "15800 Air Distribution, 3.07 Adjusting and Cleaning" shall be modified to add the following:

D. EXISTING OUTSIDE AIR INTAKE DUCT TRENCH CLEANING

1. GENERAL

a. Scope of Work

- 1) This section defines the minimum requirements necessary to render HVAC components clean, and to verify the cleanliness through inspection and/or testing in accordance with items specified herein and applicable NADCA Standards.*
- 2) The Contractor shall be responsible for the removal of visible surface contaminants and deposits from within the HVAC system in strict accordance with these specifications.*

b. This Section includes information regarding:

- 1) Removing and disposing visible dirt debris and other contaminants.*
- 2) Cleaning and decontaminating outside air intake.*
- 3) Chemical pressure-washing and decontaminating outside air intake duct with an anti-fungicidal treatment.*

c. Submittals

- 1) Product data for each product specified in this section.*
- 2) Material safety data sheets for all products.*
- 3) Project Record: A video or color photograph inspection is recommended to document the condition of the duct both before and after cleaning. This inspection will become part of the Post Project Report. A limited amount of adhered dust is expected on the inside surfaces of HVAC systems and may not indicate a problem. Obvious problems that require cleaning and restoration would include visible microbiological contamination or significant amounts of particulate debris.*
- 4) Qualifications, schedules and reports:*
 - a) Qualification and experience documentation*
 - b) Project schedule and procedures*
 - c) Final report (electronically)*

d. *Quality Assurance*

- 1) *An independent specialty HVAC duct-cleaning contractor shall perform all work referred to in this appendix. The contractor shall have certification from the National Air Duct Cleaners Association (NADCA). Submit information that indicates qualifications and experience.*
- 2) *Conform to NFPA 90A.*
- 3) *Conform to the requirements of the following standards, which do not conflict with regulatory requirements of the contract documents: SMACNA HVAC Standards, NADCA General Specifications for the Cleaning of Commercial Heating and Ventilation Systems, and EPA registration for fungicide coating.*
- 4) *Equipment, Materials and Labor: The HVAC system cleaning contractor shall possess and furnish all necessary equipment, materials and labor to adequately perform the specified services.*
 - a) *The contractor shall assure that its employees have received safety equipment training, medical surveillance programs, individual health data sheets (MSDS) as required for the work by the U.S. Occupational Safety and Health Administration, and as described by the University of Rhode Island's Project Safety Procedures Specification Section 00730.*
 - b) *The contractor shall maintain a copy of all current MSDS documentation and safety certifications at the site at all times, as well as comply with all other site documentation requirements of applicable OSHA programs and this specification.*
 - c) *Contractor shall submit to the owner all Material Safety Data Sheets (MSDS) for all chemical products proposed to be used in the cleaning process.*
 - d) *Licensing: The HVAC system cleaning contractor shall provide proof of maintaining the proper licenses, registration, or certification, as required to do work in this state. Contractor shall comply with all Federal, state and local rules, regulations, and licensing requirements.*
- 5) *A Post Project Report shall be submitted upon completion of the entire cleaning project. The report shall include photographic documentation in color prints of before and after conditions of each duct section.*

2. *PRODUCTS*

a. *HVAC disinfectant/cleaner:*

- 1) *The product shall be EPA-registered formula for disinfecting and cleaning HVAC equipment that is equal to Foster Products 40-80.*
- 2) *Use a stabilized chlorine dioxide with oxine or approved equivalent.*

- b. *Fungicidal Protective Coating: If determined to be necessary as evidenced by an existing mold growth, the coating shall be an EPA-registered polyacrylate emulsion that is specifically formulated for long-term fungicidal activity and HVAC application. It shall be equal to Foster Products 40-20.*

3. EXECUTION

a. Examination

- 1) *Examine the surface intended to support products.*
- 2) *Verify that each product conforms to regulatory requirements and to specification requirements.*
- 3) *Correct any unsatisfactory conditions before applying products referred to in this section.*

b. Equipment

- 1) *Provide a HEPA-filtered vacuum collector system that is capable of maintaining up to 1 inch of static pressure inside the isolated area of ductwork.*
- 2) *Provide HEPA-filtered wet/dry vacuums.*
- 3) *Air Compressor as Required*
 - a) *The contractor shall select an appropriate air-pressure or water-pressure system for washing various HVAC system components. If water pressure is chosen, the pressure shall not exceed 1,000 psig.*
 - b) *The contractor shall repair or replace any area of trench surface that is damaged from excessive air pressure or water pressure.*
- 4) *Use a rotary brush system for mechanical cleaning of ductwork.*

c. Preparation

- 1) *Seal off ends and openings of any ductwork not being immediately worked on.*
- 2) *Isolate duct section to be worked on by using protective seal barriers within the ductwork to prevent loose dirt and debris from migrating to cleaned sections of the duct system.*
- 3) *Each work area shall be protected from soil with a polyethylene plastic sheet. A protective sheet shall cover all surfaces in the work area. After the duct systems have been cleaned in each work area, carefully remove the protective sheeting. Dispose collected dirt and debris in an approved manner. Vacuum floors and other areas in each room to keep them clean.*
- 4) *When using mechanical cleaning methods, strict controls such as physical barriers, devices equipped with HEPA filtered exhaust, and system negative pressure must be used to contain and collect debris. Mechanical cleaning methods incorporate techniques to agitate and dislodge material as well as contain and remove it.*

Agitation devices may include power brushes, pressurized air and water systems, as well as hand tools such as brushes. Collection of dislodged particulate debris is achieved by vacuums. A vacuum collection device with an appropriate capture velocity should be connected to a service opening and operated continuously to collect material as it is dislodged.

- 5) *Debris removed during cleaning shall be collected and precautions must be taken to ensure that Debris is not otherwise dispersed outside the HVAC system during the cleaning process.*
 - 6) *Measures shall be employed to control odors and/or mist vapors during the cleaning process.*
 - 7) *Health and Safety*
 - a) *Safety Standards: Cleaning contractors shall comply with applicable federal, state, and local requirements for protecting the safety of the contractor's employees, building occupants, and the environment. In particular, all applicable standards of the Occupational Safety and Health Administration (OSHA) shall be followed when working in accordance with this specification.*
 - b) *Occupant Safety: No processes or materials shall be employed in such a manner that they will introduce additional hazards into ductwork or occupied spaces.*
 - c) *Disposal of debris: All debris removed from the HVAC system shall be disposed of in accordance with applicable federal, state and local requirements.*
- d. *Sequence of Cleaning and Decontaminating Ducts*
- 1) *Work shall be coordinated with the designated University of Rhode Island representative.*
 - 2) *Clean the outside air intake grate and, well, and area drain.*
 - 3) *Apply products in compliance with the manufacturer's instructions.*
 - 4) *Clean the duct trench. Begin at the air handling unit locations and end at the outdoor well grate. At no point shall dirty ductwork be upstream from clean ductwork.*
 - 5) *Mechanical Cleaning Methodology: The HVAC system duct shall be cleaned using Source Removal mechanical cleaning methods designed to extract contaminants from within the HVAC system and safely remove contaminants from the facility. It is the contractor's responsibility to select Source Removal methods that will render the HVAC system Visibly Clean and capable of passing cleaning verification methods (See applicable NADCA Standards) and other specified tests, in accordance with all general requirements. No cleaning method, or combination of methods, shall be used which could potentially harm the environment or negatively alter the integrity of the system.*

- a) *All methods used shall incorporate the use of vacuum collection devices that are operated continuously during cleaning. A vacuum device shall be connected to the downstream end of the section being cleaned through a predetermined opening. The vacuum collection device must be of sufficient power to render all areas being cleaned under negative pressure, such that containment of debris and the protection of the indoor environment are assured.*
 - b) *All vacuum devices exhausting air inside the building shall be equipped with HEPA filters (minimum efficiency), including hand-held vacuums and wet-vacuums.*
 - c) *All vacuum devices exhausting air outside the facility shall be equipped with Particulate Collection including adequate filtration to contain Debris removed from the HVAC system. Such devices shall exhaust in a manner that will not allow contaminants to re-enter the facility. Release of debris outdoors must not violate any outdoor environmental standards, codes or regulations.*
 - d) *All methods require mechanical agitation devices to dislodge debris adhered to interior HVAC system surfaces, such that debris may be safely conveyed to vacuum collection devices. Acceptable methods will include those, which will not potentially damage the integrity of the ductwork, nor damage porous surface materials such as liners inside the ductwork or system components.*
- 6) *Antimicrobial Agents and Coatings*
- a) *Antimicrobial agents shall be applied if active fungal growth is reasonably suspected, or where unacceptable levels of fungal contamination have been verified through testing or visual inspection.*
 - b) *Application of any antimicrobial agents used to control the growth of fungal or bacteriological contaminants shall be performed after the removal of surface deposits and debris.*
 - c) *When used, antimicrobial treatments and coatings shall be applied in strict accordance with the manufacturer's written recommendations and EPA registration listing.*
 - d) *Antimicrobial coatings shall be applied according to the manufacturer's written instructions. Coating shall be sprayed directly on interior ductwork surfaces, rather than "fogged" downstream onto surfaces.*
- 7) *Cleanliness Verification*
- a) *Verification of intake duct cleanliness will be determined after mechanical cleaning and before the application of any treatment, including biocidal agents and coatings.*
 - b) *Visual Inspection: The HVAC system shall be inspected visually to ensure that no visible contaminants are present.*

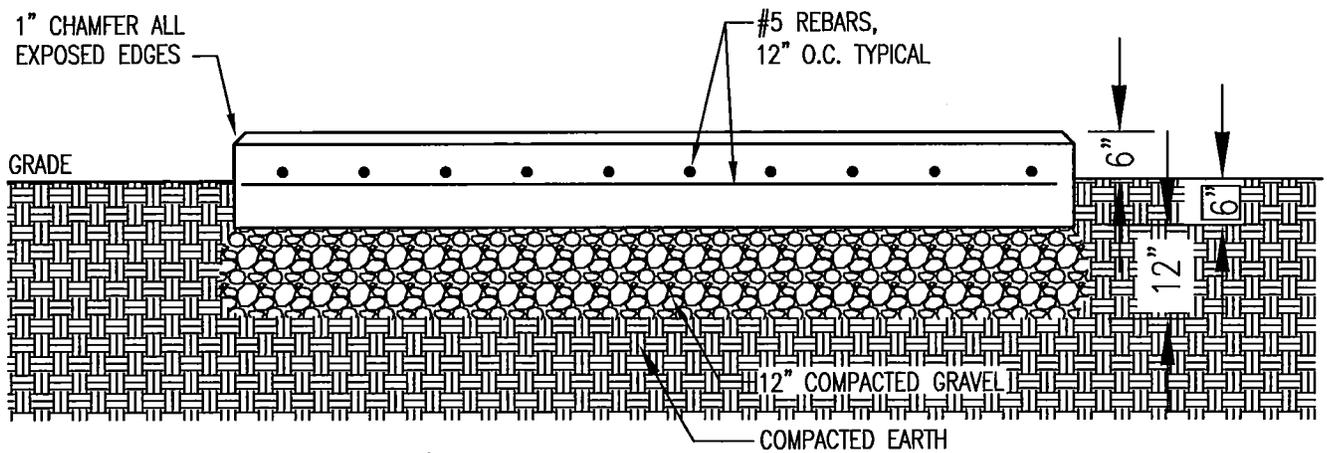
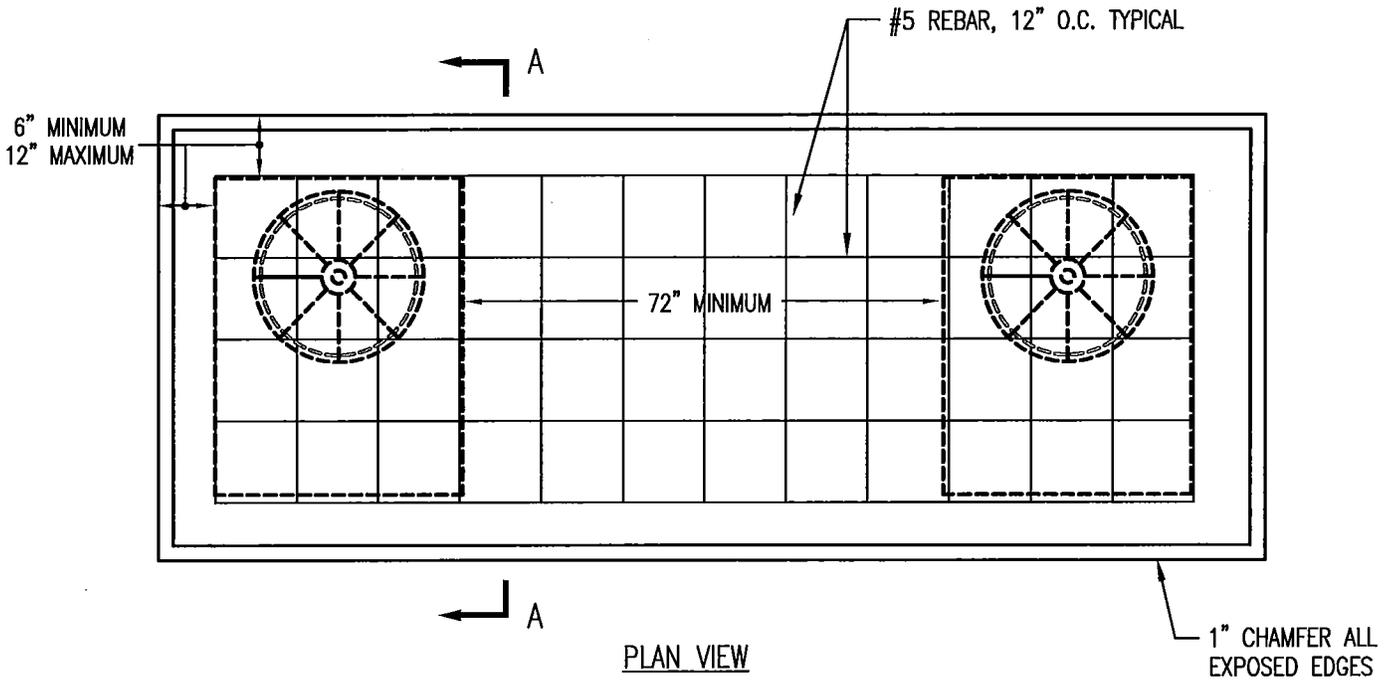
- 1) *If no contaminants are evident through visual inspection, the HVAC system shall be considered clean; however, the owner reserves the right to further verify system cleanliness through Surface Comparison Testing or the NADCA vacuum test specified in the NADCA standards.*
- 2) *If visible contaminants are evident through visual inspection, those portions of the system where contaminants are visible shall be re-cleaned and subjected to re-inspection for cleanliness.*
- 3) *NADCA vacuum test analysis, if required, should be performed by a qualified third party experienced in testing of this nature.*

e. *Post-Project Report*

- 1) *At the conclusion of the project, the Contractor shall provide a report to the owner indicating the following:*
 - a) *Success of the cleaning project, as verified through before/after video or digital color photographs.*
 - b) *Areas of the system found to be damaged and/or in need of repair.*

End of addition to Specification section "15800 Air Distribution, 3.07 Adjusting and Cleaning"

END OF ADDENDUM



CONCRETE EQUIPMENT PAD

NOT TO SCALE

ADDENDUM #2
 RI STATE BID # 7459268
 URI PROJECT #KC.G.PAST.2011.002



HVAC • ELECTRICAL • PLUMBING
 • FIRE PROTECTION •

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PROJECT TITLE
 RENOVATIONS TO
 UNIVERSITY OF RHODE ISLAND
 PASTORE HALL AUDITORIUM
 ROOM 124

SHEET CONTENTS:
 EQUIPMENT PAD DETAIL

PROJECT No.
 20981

SCALE:
 NTS

DRAWN BY:
 JLR

CHECKED BY:
 RCN

DATE:
 2-4-13

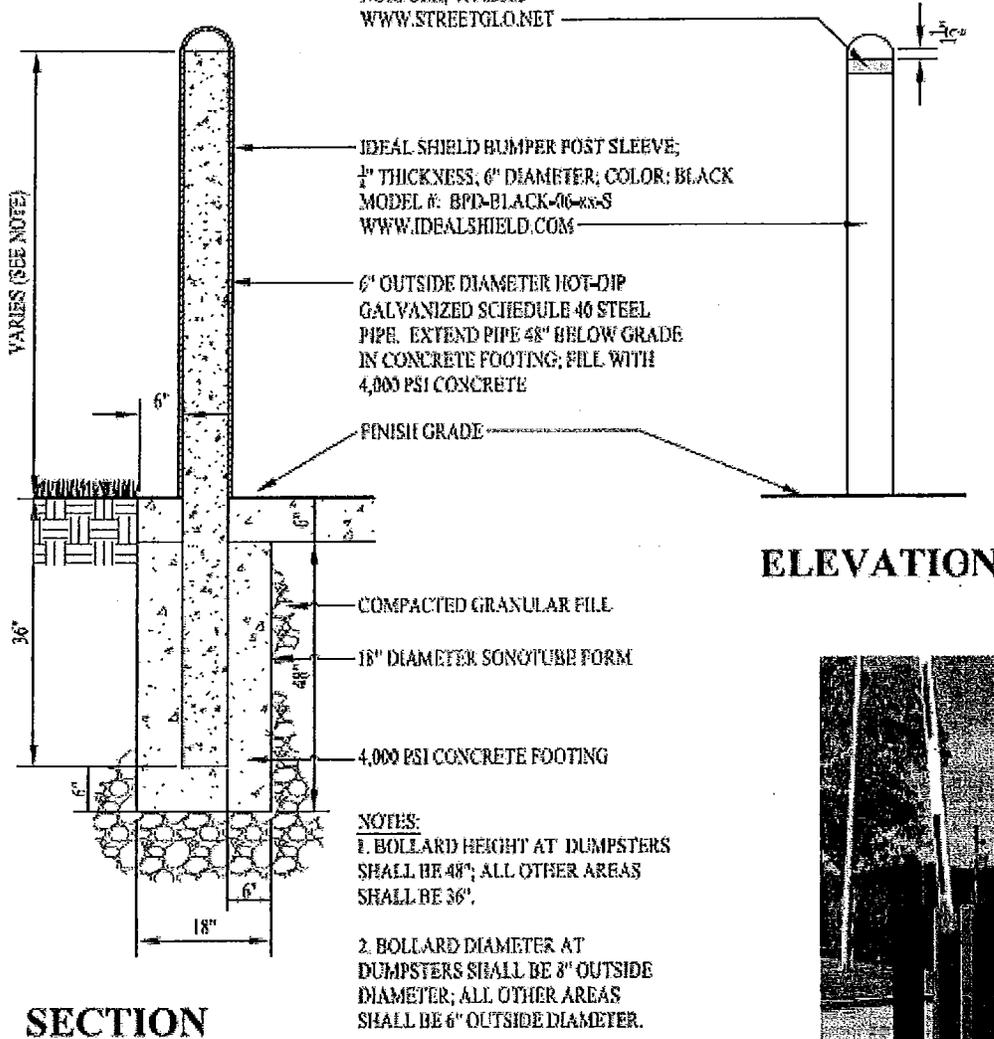
DWG. REFERENCE

M-2

SKETCH No.

SKM-1

2" WIDE BLACK REFLECTIVE TAPE FURNISHED
 BY: STREETGLO REFLECTIVE DECALS
 2415 LAFAYETTE BLVD.
 NORFOLK, VA 23323
 WWW.STREETGLO.NET



Bollard with black reflective tape

UTILITY BOLLARD
 SCALE: 1/2" = 1'-0"

URI STANDARD UTILITY BOLLARD DETAIL
 PASTORE HALL AIR HANDLING UNIT REPLACEMENT
 ROOM 124
 ADDENDUM #2 (ATTACHMENT) 2/4/13