

D-Square Construction LLC

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R.F.I.

(REQUEST FOR INFORMATION)

Project #:	664-12-304	RFI #:	14
Project Name:	Logistics Shelving Project	Date Requested:	04/11/14
Solicitation No.:	VA-262-14-B-0372	Reference:	HVAC Specs
Drawing:	N/A	Specification Section:	N/A

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

There is no Specification Section for HVAC Controls in the Project Manual. Will the VA provide information on the proprietary manufacturer of the existing HVAC Controls System?

OWNER RESPONSE

The HVAC EMS control system is an "existing" condition and not "proprietary". Contractor shall provide HVAC controls which are compatible with the existing system. There is no proprietary restriction on what may be submitted as long as it is fully compatible with the existing condition/system. The existing EMS is controlled by a Metasys, BACNet system.

OWNER TRACKING No.:

AMEND No.:

VA Project Engineer/Manager: *Michael R. Merino, RA*

Date: April 11, 2014

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(REQUEST FOR INFORMATION)

Project #:	664-12-304	RFI #:	15
Project Name:	Logistics Shelving Project	Date Requested:	04/11/14
Solicitation No.:	VA-262-14-B-0372	Reference:	Abatement
Drawing:	N/A	Specification Section:	N/A

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

In Amendment A00003, just issued today, the VA answer for RFI #2 is completely unclear, and on appearance, contradictory. There is a huge monetary cost difference between full abatement of this area and spot abatement of areas that will be disturbed by this project. If full abatement is required for this project, it is likely the budget for the project will be exceeded. The VA answer to RFI #2 states that the contractor abate any and all hazardous material identified in the above noted Attachment #5. This certainly seems to imply that full abatement of all identified ACM fireproofing material will be required. We request a clear and precise answer to the question of whether the full abatement of the fireproofing present in the area of construction for this project is both expected and required.

OWNER RESPONSE

As previously responded to in RFI #02, the contractor shall abate any hazardous material required for the performance of the work and necessary to successfully execute the project whether that abatement is a "complete" abatement or "spot" abatement. The means and methods of construction are the responsibility of the bidder/contractor. At the conclusion of the project, the contractor shall furnish a full and complete project including all necessary abatement to accomplish the work in accordance to the applicable specifications and governing codes/regulations.

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(REQUEST FOR INFORMATION)

Project #:	664-12-304	RFI #:	16
Project Name:	Logistics Shelving Project	Date Requested:	04/11/14
Solicitation No.:	VA-262-14-B-0372	Reference:	Fireproofing Specs
Drawing:	N/A	Specification Section:	N/A

DESCRIPTION OF PROBLEM OR INFORMATION REQUESTED

In either the case of full abatement, or spot abatement of the existing fireproofing for this project, it seems clear the VA expects the fireproofing to be either replaced or repaired. Will the VA provide a Specification for the fireproofing required?

OWNER RESPONSE

Please find Specification Section 07 81 00 – Applied Fireproofing attached.

The contractor shall be responsible to determine the applicable fire rating and/or level of fire-proofing of the existing condition impacted by his or her work and shall patch/repair fireproofing disturbed by new construction or modification in order to provide continuous fire protection per applicable construction code.

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VA Project Engineer/Manager: *Michael R. Merino, RA*

Date: April 11, 2014

**SECTION 07 81 00
APPLIED FIREPROOFING**

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies mineral fiber and cementitious coverings to provide fire resistance to interior structural steel members shown.

1.2 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Manufacturer's Literature and Data:
 - 1. Manufacturer's complete and detailed application instructions and specifications.
 - 2. Manufacturer's repair and patching instructions.
- C. Certificates:
 - 1. Certificate from testing laboratory attesting fireproofing material and application method meet the specified fire ratings.
 - a. List thickness and density of material required to meet fire ratings.
 - b. Accompanied by complete test report and test record.
 - 2. Manufacturer's certificate indicating sprayed-on fireproofing material supplied under the Contract is same within manufacturing tolerance as fireproofing material tested.
- D. Miscellaneous:
 - 1. Manufacturer's written approval of surfaces to receive sprayed-on fireproofing.
 - 2. Manufacturer's written approval of completed installation.
 - 3. Manufacturer's written approval of the applicators of fireproofing material.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver to job-site in sealed containers marked and labeled to show manufacturer's name and brand and certification of compliance with the specified requirements.
- B. Remove damaged containers from the site.
- C. Store the materials off the ground, under cover, away from damp surfaces.
- D. Keep dry until ready for use.
- E. Remove materials that have been exposed to water before installation from the site.

1.4 QUALITY CONTROL

- A. Test for fire endurance in accordance with ASTM E119, for fire rating specified, in a nationally recognized laboratory.
- B. Manufacturer's inspection and approval of surfaces to receive fireproofing as specified under paragraph Examination.
- C. Manufacturer's approval of fireproofing applications.
- D. Manufacturer's approval of completed installation.

- E. Manufacturer's representative shall observe and advise at the commencement of application, and shall visit the site as required thereafter for the purpose of ascertaining proper application.
- F. Pre-Application Test Area.
 - 1. Apply a test area consisting of a typical overhead fireproofing installation, including not less than 4.5 m (15 feet) of beam and deck.
 - a. Apply to one column.
 - b. Apply for the hourly ratings used.
 - 2. Install in location selected by the VA Project Manager, for approval by the representative of the fireproofing material manufacturer and by the Government.
 - 3. Perform Bond test on painted steel in accordance with ASTM E736.
 - 4. Do not proceed in other areas until installation of test area has been completed and approved.
 - 5. Keep approved installation area open for observation as criteria for sprayed-on fireproofing.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - C841-03(R2008).....Installation of Interior Lathing and Furring
 - C847-10.....Metal Lath
 - E84-10.....Surface Burning Characteristics of Building Materials
 - E119-10.....Fire Tests of Building Construction and Materials
 - E605-93(R2006).....Thickness and Density of Sprayed Fire-Resistive Materials
Applied to Structural Members
 - E736-00(R2006).....Cohesion/Adhesion of Sprayed Fire-Resistive Materials
Applied to Structural Members
 - E759-92(R2005).....The Effect of Deflection on Sprayed Fire-Resistive Material
Applied to Structural Members
 - E760-92(R2005).....Impact on Bonding of Sprayed Fire-Resistive Material
Applied to Structural Members
 - E761-92(R2005).....Compressive Strength of Fire-Resistive Material Applied to
Structural Members
 - E859-93(R2006).....Air Erosion of Sprayed Fire-Resistive Materials Applied to
Structural Members
 - E937-93(R2005).....Corrosion of Steel by Sprayed Fire-Resistive Material
Applied to Structural Members
 - E1042-02(R2008).....Acoustically, Absorptive Materials Applied by Trowel or
Spray.

G21-09.....Determining Resistance of Synthetic Polymeric Materials to
Fungi

C. Underwriters Laboratories, Inc. (UL):

Fire Resistance Directory...Latest Edition including Supplements

D. Warnock Hersey (WH):

Certification Listings..Latest Edition

E. Factory Mutual System (FM):

Approval Guide.....Latest Edition including Supplements

PART 2 - PRODUCTS

2.1 SPRAYED-ON FIREPROOFING

A. ASTM E1042, Class (a), Category A.

1. Type I, factory mixed cementitious materials with approved aggregate.
2. Type II, factory mixed mineral fiber with integral inorganic binders minimum 240 kg/m³ (15 lb/ft³) density per ASTM E605 test unless specified otherwise. Use in areas that are completely encased.

B. Materials containing asbestos are not permitted.

C. Fireproofing characteristics when applied in the thickness and density required to achieve the fire-rating specified.

	Characteristic	Test	Results
1.	Deflection	ASTM E759	No cracking, spalling, or delamination when backing to which it is applied has a deflection up to 1/120 in 3m (10 ft.)
2.	Corrosion-Resistance	ASTM E937	No promotion of corrosion of steel.
3.	Bond Impact	ASTM E760	No cracking, spalling, or delamination.
4.	Cohesion/Adhesion (Bond Strength)	ASTM E736	Minimum cohesive/adhesive strength of 9.57 kPa (200 lbf/ft ²) for protected areas. 19.15 kPa (400 lbf/ft ²) for exposed areas.
5.	Air Erosion	ASTM E859	Maximum gain weight of the collecting filter 0.27gm/m ² (0.025 gm/ft ²).
6.	Compressive Strength	ASTM E761	Minimum compressive strength 48 kPa (1000psf).
7.	Surface Burning Characteristics with adhesive and sealer to be used	ASTM E84	Flame spread 25 or less smoke developed 50 or less
8.	Fungi Resistance	ASTM G21	Resistance to mold growth when inoculated with aspergillus niger (28 days for general application)

2.2 ADHESIVE

- A. Bonding adhesive for Type II (fibrous) materials as recommended and supplied by the fireproofing material manufacturer.
- B. Adhesive may be an integral part of the material or applied separately to surface receiving fireproofing material.

2.3 SEALER

- A. Sealer for Type II (fibrous) material as recommended and supplied by the fireproofing material manufacturer.
- B. Surface burning characteristics as specified for fireproofing material.
- C. Fungus resistant.
- D. Sealer may be an integral part of the material or applied separately to the exposed surface. When applied separately use contrasting color pigmented sealer, white preferred.

2.4 WATER

- A. Clean, fresh, and free from organic and mineral impurities.
- B. pH of 6.9 to 7.1.

2.5 MECHANICAL BOND MATERIAL

- A. Expanded Metal Lath: ASTM C847, minimum weight of 0.92 kg/m² (1.7 pounds per square yard).
- B. Fasteners: ASTM C841.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Verify surfaces to receive fireproofing are clean and free of dust, soot, oil, grease, water soluble materials or any foreign substance which would prevent adhesion of the fireproofing material.
- B. Verify hangers, inserts and clips are installed before the application of fireproofing material.
- C. Verify ductwork, piping, and other obstructing material and equipment is not installed that will interfere with fireproofing installation.
- D. Verify concrete work on steel decking and concrete encased steel is completed.
- E. Verify temperature and enclosure conditions are required by fire-proofing material manufacturer.

3.2 APPLICATION

- A. Do not start application until written approval has been obtained from manufacturer of fireproofing materials that surfaces have been inspected by the manufacturer or his representative, and are suitable to receive sprayed-on fireproofing.
- B. Coordinate application of fireproofing material with other trades.
- C. Application of Metal Lath:
 - 1. Apply to beam and columns having painted surfaces which fail ASTM E736 Bond Test requirements in pre-application test area.

2. Apply to beam flanges 300 mm (12-inches) or more in width.
 3. Apply to column flanges 400 mm (16-inches) or more in width.
 4. Apply to beam or column web 400 mm (16-inches) or more in depth.
 5. Tack weld or mechanically fasten on maximum of 300 mm (12-inch) center.
 6. Lap and tie lath member in accordance with ASTM C841.
- D. Mix and apply in accordance with manufacturer's instructions.
1. Mechanically control material and water ratios.
 2. Apply adhesive and sealer, when not an integral part of the materials, in accordance with the manufacturer's instructions.
 3. Apply to density and thickness indicated in UL Fire Resistance Directory, FM Approval Guide, or WH Certification Listings unless specified otherwise. Test in accordance with ASTM E119.
 4. Minimum applied dry density per cubic meter (cubic foot) for the underside of the walk on deck (interstitial) hung purl in or beam and steel deck, columns in interstitial spaces and mechanical equipment rooms shall be as follows:
 - a. Type I - 240 kg/m³ (15 lb/ft³).
- E. Application shall be completed in one area, inspected and approved by VA Project Manager before removal of application equipment and proceeding with further work.

3.3 FIELD TESTS

- A. Tests of applied material will be performed by VA retained Testing Laboratory. See Section 01 45 29, TESTING LABORATORY SERVICES.
- B. VA Project Manager will select area to be tested in specific bays on each floor using a geometric grid pattern.
- C. Test for thickness and density in accordance with ASTM E605. Areas showing thickness less than that required as a result of fire endurance test will be rejected.
- D. Areas showing less than required fireproofing characteristics will be rejected on the following field tests.
 1. Test for cohesion/adhesion: ASTM E736.
 2. Test for bond impact strength: ASTM E760.

3.3 PATCHING AND REPAIRING

- A. Inspect after mechanical, electrical and other trades have completed work in contact with fireproofing material, but before sprayed material is covered by subsequent construction.
- B. Perform corrective measures in accordance with fireproofing material Manufacturer's recommendations.
 1. Respray areas requiring additional fireproofing material to provide the required thickness, and replace dislodged or removed material.
 2. Spray material for patching by machine directly on point to be patched, or into a container and then hand apply.

3. Hand mixing of material is not permitted.

C. Repair:

1. Respray all test and rejected areas.

2. Patch fireproofing material which is removed or disturbed after approval.

D. Perform final inspection of sprayed areas after patching and repair.

3.5 SCHEDULE

A. Apply fireproofing material on existing interior structural steel members as applicable/required for the project.

B. Type I:

1. One hour fire rating where occurs.

2. Two hour fire rating where occurs.

3. Three hour fire rating where occurs.

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