

THE PORT AUTHORITY OF NY & NJ

**PROCUREMENT DEPARTMENT
4 WORLD TRADE CENTER
150 GREENWICH STREET, 21ST FL.
NEW YORK, NY 10007**

4/6/2016

ADDENDUM # 2

To prospective Bidder(s) on Bid # 45543 for 18-Foot Fiberglass Cover Board for Contact Rail per PATH Specifications and Drawing

Now due back on 4/13/2016, no later than 11:00 AM

Originally due on 4/6/2016, no later than 11:00 AM

The following changes/modifications are hereby made to the solicitation documents:

- A. The bid due date is extended to 4/13/2016, no later than 11:00 AM.
- B. Delete Specification "Section C06610 Fiberglass Coverboard and Splice Insert" (5/7/07)" and
Replace it in its entirety with the attached revised Specification "Section C06610 Fiberglass Coverboard and Splice Insert" (04/06/2016)".
The Drawing T-144 revised with signature remains unchanged.

This communication should be initialed by you and annexed to your Bid upon submission. In case any Bidder fails to conform to these instructions, its Bid will nevertheless be construed as though this communication had been so physically annexed and initialed.

THE PORT AUTHORITY OF NY & NJ

SELENE ORTEGA, MANAGER
COMMODITIES & SERVICES DIVISION

BIDDER'S FIRM NAME: _____

INITIALED: _____ DATE: _____

QUESTIONS CONCERNING THIS ADDENDUM MAY BE ADDRESSED TO JOHN SANTIAGO AT John.Santiago@panynj.gov OR (212) 435-4613.

DIVISION 6

SECTION C06610

FIBERGLASS COVERBOARD AND SPLICE INSERT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section specifies requirements for manufacturing, inspecting, testing and shipping of protective coverboard and splice insert for PATH.

1.2 REFERENCES

- A. The following is a list of publications referred to in this Section:
 - 1. American Society for Testing and Materials (ASTM), latest versions:
 - a. ASTM D149: Test Methods for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies.
 - b. ASTM D256: Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics.
 - c. ASTM D495: Test Method for High-Voltage, Low-Current, Dry Arc Resistance of Solid Electrical Insulation.
 - d. ASTM D570: Test Method for Water Absorption of Plastics.
 - e. ASTM D638: Test Method for Tensile Properties of Plastics.
 - f. ASTM D648: Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
 - g. ASTM D695: Test Method for Compressive Properties of Rigid Plastics.

- h. ASTM D790: Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- i. ASTM D2303: Test Methods for Liquid-Containment, Inclined-Plane Tracking and Erosion of Insulating Materials.
- j. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials.
- k. ASTM E162: Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
- l. ASTM E662: Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- m. ASTM F1679: Test Method for Using a Variable Incidence Tribometer (VIT)

1.3 SUBMITTALS

- A. See Appendix "A" for submittal requirements.

1.4 QUALITY CONTROL

- A. Establish a Quality Control Program regulating methods, procedures, and processes to ensure compliance with standards of quality required by this Specification. The Quality Control Program will be subject to audit for conformance.
- B. Records of all inspection and testing by the Contractor shall be kept complete and available to the Engineer for review during the performance of the work and for longer periods required by this Specification.
- C. Products and materials incorporated into the work will be subject to inspection by the Engineer at the Contractor's facilities, the place of manufacture, the shipping point, and at the shipping destination. Inspection and testing by the Engineer will be performed in such a manner as not to unduly delay the work.
- D. The Engineer shall have the option of witnessing any testing. Give the Engineer sufficient notice of when any testing is proposed to be performed. Provide the Engineer free entry at all times to the place of manufacture while work on this Contract is being performed.

- E. Whether or not the Engineer inspects or tests any materials, the Contractor will not be relieved from any responsibility regarding defects or other failures to meet the Contract requirements, nor will such inspection or testing be considered as a guarantee of acceptance of any material which may be delivered later.
- F. The manufacturer may submit previously performed certified testing in accordance with Section 2.03, for the same product for review and approval, in lieu of performing new tests. A letter must accompany test results from the manufacturer certifying that the material being supplied is identical to the material that was tested.

PART 2 – PRODUCTS

2.1 PROTECTIVE COVER

- A. The protective cover shall be of a non-conductive material, such as fiberglass-reinforced polyester. Material used for the protective cover shall be of a type that will not separate or warp under service conditions during its expected useful life of 25 years. It shall contain no less than 32%-35% continuous strand glass mat, roving, or combination thereof, based on product weight of 2.7+/- lbs/ft. A polymeric surface veil shall be used on all exterior surfaces.
- B. The protective cover shall be designed to maintain throughout its specified useful life, the clearances and cross section indicated on the Contract Drawings. Standard length of protective cover shall be 18 feet.
- C. The protective cover shall be designed to meet all specifications, while being supported at a maximum of 10-foot support spacing.
- D. Fiberglass protection board shall not deflect more than 1-1/2 inches when a concentrated load of 300 pounds is applied at the center of a 10-foot section secured by brackets at each end.
- E. Fiberglass protection board shall not twist more than a deviation of 3 degrees from a straight horizontal line when a concentrated load of 300 pounds is applied at the outer edge of the center of a 10-foot section secured by brackets at each end.
- F. Fiberglass splice insert shall, when inserted into adjoining lengths of fiberglass protection boards, produce flexural strength properties of the jointed protection boards equal to that of a continuous protection board.
- G. The color of the protective cover shall be light gray.

- H. The protective cover shall be designed to withstand temperatures of -20°F to $+120^{\circ}\text{F}$ and wind loading of 30 pounds per foot without undergoing any permanent thermal or structural deformation.
- I. The protective cover shall be compatible with the contact rail appurtenances detailed in the Contract Drawings.

2.2 PROTECTIVE COVER SPLICE INSERT

- A. The splice insert shall be designed to connect two adjacent protective covers together as shown in the Contract Drawings.
- B. In addition, the splice insert shall meet the following:
 - 1. Splice insert shall be fabricated of nonconductive, fire-retardant material, such as fiberglass-reinforced polyester.
 - 2. Material used for the splice insert shall meet all specified requirements of the protective cover material.
 - 3. The splice inserts shall be able to be fastened to a standard length of protective cover by use of a two-component epoxy that is suitable for use with fiberglass material.

2.3 PROCEDURE FOR TESTING PROTECTIVE COVER MATERIAL

- A. An independent testing laboratory must perform the following tests and the results must be certified. PATH requires two copies of the certified laboratory reports. Thirty-nine coverboard samples shall be subjected to the following tests:
 - 1. Radiant Panel Index Test (three samples)
 - 2. Flame Spread Index Test (three samples)
 - 3. Dielectric Strength Test (three samples)
 - 4. Arc Resistance Test (three samples)
 - 5. Tracking Resistance Test (three samples)
 - 6. Water Absorption Test (three samples)
 - 7. Izod Impact Strength Test (three samples)

8. Flexural Strength Test (three samples)
 9. Tensile Strength Test (three samples)
 10. Compressive Strength Test (three samples)
 11. Heat Distortion Test (three samples)
 12. Specific Optical Smoke Density Test (three samples)
- B. Radiant Panel Index Test:
1. The Radiant Panel Index, I, shall be determined by tests in accordance with ASTM E162, with I not exceeding 75 and with the additional provision that there shall be no flaming drippings.
- C. Flame Spread Index Test:
1. The Flame Spread Index shall be determined by test in accordance with ASTM E84 with the FSI not exceeding 25.
- D. Dielectric Strength Test:
1. The Dielectric Strength Test shall conform to ASTM D149, Method A (short time method). Samples shall exhibit a dielectric strength of not less than 200 volts per mil applied to the sample material surfaces without breakdown.
- E. Arc Resistance Test:
1. The Arc Resistance Test shall conform to ASTM D495. Samples shall exhibit a time to failure of not less than 140 seconds. This test may be performed prior to adding the polymeric surface veil.
- F. Tracking Resistance Test:
1. The Tracking Resistance Test shall conform to ASTM D2303. Samples shall exhibit a failure at not less than 600 minutes at 2,500 volts. This test may be performed prior to adding the polymeric surface veil.
- G. Water Absorption Test:

1. The Water Absorption Test shall conform to ASTM D570. The samples under this test shall not have gained more than 0.50 percent of their original weight after immersion in water for 24 hours.
- H. Izod Impact Strength Test:
1. The Izod Impact Strength Test shall conform to ASTM D256. The average Izod Impact Strength shall be twenty-five-foot-pounds per inch in accordance with Method "A".
- I. Flexural Strength Test:
1. The Flexural Strength Test shall conform to ASTM D790. Samples shall exhibit a failure at not less than 25,000 psi.
- J. Tensile Strength Test:
1. The Tensile Strength Test shall conform to ASTM D638. Samples shall exhibit a failure at not less than 25,000 psi.
- K. Compressive Strength Test:
1. The Compressive Strength Test shall conform to ASTM D695. Samples shall exhibit a failure at not less than 20,000 psi.
- L. Heat Distortion Test:
1. The Heat Distortion Test shall conform to ASTM D648. Samples shall exhibit a failure at not less than 180 degrees C at 264 psi.
- M. Specific Optical Smoke Density Test:
1. The Specific Optical Smoke Density Test shall conform to ASTM E662, for both flaming and non-flaming modes. The Specific Optical Smoke Density, D Values shall not exceed 100 within 90 seconds after the start of the tests and shall not exceed 200 within four minutes after the start of the test. The chlorine content of the material used shall not exceed an amount which will emit more than 10 parts per million of chlorine into the surrounding atmosphere during the smoke test.

2.4 PROCEDURE FOR TESTING PROTECTIVE COVER

A. Test Acceptance Criteria:

1. If any of the tested protective covers fail to meet any of the requirements of the tests listed in Section 2.03, one additional protective cover from the same lot shall be tested. If it fails, the entire lot of protective covers will be rejected.

PART 3 – EXECUTION

3.1 PACKAGING

A. Packaging shall be as follows:

1. Protective Cover Board:
 - a. Bundles will consist of 75 boards.
 - b. The boards shall be stacked 25 high by 3 across.
 - c. The ends of the bundles shall be protected with ¼” plywood. All bundles shall be strapped in three areas with non-metallic bands.
2. Splice insert:
 - a. Splice inserts shall be boxed in a ¼” plywood box which shall contain no more than one hundred inserts per box.

3.2 SHIPMENT AND ACCEPTANCE

A. Shipment

1. Fiberglass protection board shall be shipped to the locations indicated in the Bid Documents.
2. Fiberglass protection board stacks shall be identified with the description, quantity, PATH purchase order number and the name of the manufacturer.
3. Fiberglass protection board stacks shall be stacked and secured in an open bed trailer truck, suitable for removal with overhead cranes or high lifts.

B. Acceptance:

1. Final acceptance of fiberglass protection board will be subject to verification of count and inspection.
2. Any fiberglass protection board which does not comply with PATH's requirements or which, notwithstanding test, inspection or acceptance at any previous time or location is found to contain deficiencies, will be rejected.
3. The manufacturer shall assume the expense of handling and transporting rejected material.

END OF SECTION C06610

APPENDIX “A”

SUBMITTALS

- A. Before the start of manufacturing submit to the Engineer for approval the following:
1. The name and location of the manufacturer.
 2. Certification of the testing facility to be used.
 3. Within 30-day of receipt of a signed purchase order, the manufacturer shall submit shop drawings of the protective cover and splice insert and specifications for the epoxy adhesive for approval by the Engineer.
 4. Submit to the Manager, Materials Engineering Division, Port Authority Technical Center, 241 Erie Street, Jersey City, New Jersey 07310-1397 for approval all certified test reports for chemical, physical, and electrical tests required by Part 2 of this Specification.
 5. Previous testing data for the same protective coverboard may be submitted for review and approval by the Engineer, in lieu of performing new testing, in accordance with the paragraph outlined in Section 1.04F.

END OF APPENDIX “A”

APPENDIX "B"

QUANTITIES

The approximate quantities of protective coverboard are as follows:

Protective Coverboard: 4,050 L.F. (225 PCS OF 18 L.F.)

END OF APPENDIX "B"