

September 4, 2019

Jim Curry  
Vice President – Projects  
JLL Project & Development Services  
3344 Peachtree Road NE, Suite 1100  
Atlanta, GA 30326

Dear Mr. Curry

Please see our pricing for envelope commissioning during the construction and warranty phases.

### **ENVELOPE SCOPE OF SERVICES – CONSTRUCTION PHASE**

1. **Below Grade Waterproofing:**
  - a. Provide observations of the installation of the below grade waterproofing to ensure continuity of the waterproofing system has been achieved.
2. **Thermoplastic Polyolefin (TPO) Membrane Roofing:**
  - a. Observe the installation of the TPO roofing part-time 3 days a week to ensure adherence to specification.
3. **Roof Terrace Roofing System:**
  - a. Observe the installation of the fluid applied rubberized asphalt membrane roofing part-time 3 days a week to ensure adherence to specification.
4. **Glazed Aluminum Curtain Wall Systems:**
  - a. Perform air infiltration tests according to ASTM E 783 at a minimum static air pressure difference
  - b. Perform a water penetration tests according to ASTM E 1105 at a minimum cyclic static-air-pressure difference of 0.67 times the static-air-pressure difference specified for laboratory testing under Part 1 "Performance Requirements" Article, but not less than 4.18 lbf/sq. ft.
  - c. Perform water spray test according the AAMA 501.2.
  - d. Provide a report with applicable photos of each test.
5. **Aluminum Framed Entrances and Storefronts:**
  - a. Perform air infiltration tests according to ASTM E 783 at a minimum static air pressure difference of 6.24 lbf/sq. ft. Perform a total of three (3) test locations.
  - b. Perform a total of three (3) water penetration tests according to ASTM E 1105 at a minimum cyclic static-air-pressure difference of 0.67 times the static-air-pressure difference specified for laboratory testing Perform water spray test according the AAMA 501.2. A minimum area of 75 feet by 1 story of aluminum-framed systems designated by Architect shall be tested and shall occur before installation of interior finishes has begun.
  - c. Provide a report with applicable photos of each test.
6. We shall visit the site at the **Warranty Period Review** to assist in the assessment of the performance of the exterior skin of the building.



## Clarifications

1. For the purpose of this proposal, we have assumed the General Contractor, will be responsible for providing all ladders, lifts, scaffolding, and/or other vertical access equipment where required.
2. We have assumed that area repairs necessary to the building interior, framing, weather barrier, and/or windows that result from administering the air and water tests according to ASTM E783, AAMA 501.2 testing method and the ASTM E1105 testing method shall be made by the General Contractor.
3. We have also assumed that the General Contractor will make available a suitable source of power and water within the immediate vicinity of the windows to be tested at no cost.

## Pricing

1.	Waterproofing Observations: (12 observations @ \$2,000 ea) (Items 3,4 and 5 Scope of Services)	\$ 24,000.00
<del>2.</del>	<del>ASTM E 783 Tests/Retest:</del> <del>(Per Day, up to 2 locations)</del>	<del>\$ 3,750.00</del>
<del>3.</del>	<del>ASTM E 1105 Tests/Retest:</del> <del>(Per Day, up to 2 test locations)</del>	<del>\$ 3,750.00</del>
<del>4.</del>	<del>AAMA 501.2 Tests/Retest:</del> <del>(Per Trip, approximately 200 linear feet)</del>	<del>\$ 3,350.00</del>
<del>5.</del>	<del>Additional On Site Meetings:</del> <del>(Per meeting, up to 2 hour meeting)</del>	<del>\$ 2,000.00</del>
<del>6.</del>	<del>Warranty Period Review:</del>	<del>\$ 6,150.00</del>
<del>7.</del>	<del>Air Barrier Test (assume three days of testing. All openings, vents, louvers etc to be sealed by the General Contractor prior to the test)</del>	<del>\$ 15,000.00</del>
<del>8.</del>	<del>TSCx Administration of Envelope</del>	<del>\$ 4,000.00</del>
<b>Total Budget</b>		<b>\$ 62,000.00</b>

We look forward to working with you and your team on this project. Please call with any question or comments regarding this proposal.

Sincerely,

Richard Dutro, CxA, CPMP, CPD, LEED AP BD+C  
President - Total Systems Commissioning, Inc.