10/18/2024

RE: Newmarket Jr/Sr High School – Newmarket, NH

ATTN: Dave Reilly

Test Cut Findings:

Upper Roof: → 2 cuts taken

- Gravel Surface BUR
- (2) layers ½" Wood Fiber Board
- 2.7" Polyiso
- BUR set in asphalt directly over Tectum Deck → Tectum deck is assumed to be structurally sloped to center line drains

Gyptec Polymer Fastener Pull Test

390.6 lbf

401.2 lbf

Lower Roof: → 2 Cuts taken

Adjacent to Stairwell Window

- Smooth Surface BUR w/ Fluid Applied Coating
- (2) layers ½" Wood Fiber Board → Mechanically fastened
- ¼" Gypsum
- 2.25" Polyiso
- BUR set in asphalt directly over Tectum Deck → Tectum deck is assumed to be structurally sloped from the center of the roof out. This was confirmed visually from inside.

Roof Highpoint in Center

- Smooth Surface BUR w/ Fluid Applied Coating
- (2) layers ½" Wood Fiber Board → Mechanically fastened
- 2.7" Polyiso
- BUR set in asphalt directly over Tectum Deck → Tectum deck is assumed to be structurally sloped from the center of the roof out. This was confirmed visually from inside.

Gyptec Polymer Fastener Pull Test

428.0lbf

399.2 lbf

Observations:

- The BUR roof applied directly over the tectum deck will remain in place and be reclassified as an existing vapor barrier in the new roof system. Removal of this layer will likely lead to significant damage to the tectum deck and is not necessary for code.
- Given the consistent net thickness of the existing roof systems at all test cut locations it is likely the roof decks are structurally sloped to the existing drain location and are assisted by tapered insulation crickets. We were able to confirm this visually from the underside on Section 5 but not Sections 3 & 4.
- Fastener pull tests yielded acceptable values for the Gyptec Polymer Fastener with minimum penetration into the deck of 1.5".

Revised Scope of Work/Assembly: → Refer to current RFP for items not explicitly listed below.

- Remove existing roof system(s) including flashings, sheet metal work and insulation down to BUR layer installed over Tectum Deck.
- Clear BUR surface of any loose dirt/debris.
- Install (2) layers of new 2.5" Type II, Class 1, Grade 2 Polyisocyanurate.
- Install new crickets using tapered Type II, Class 1, Grade 2 Polyisocyanurate, crickets will be sized per NRCA recommendations with ½" slope.
- Install new 8' x 8' sumps at drain locations with tapered Type II, Class 1, Grade 2 Polyisocyanurate, sumps will have ½" slope.
- Install new Type II, Class 4, Grade 1 high density polyisocyanurate, mechanically fastened to the Tectum Deck with Gyptec Polymer Fasteners and Plates.
- Install new 60-mil Non-Reinforced EPDM fully adhered with all flashing and detail requirements to meet specified warranty terms.

ALTERNATE BID: Provide price for fully tapered insulation system in the event the structural deck is determined to be flat. Tapered system would use the same polyiso products specified above, ¼" overall slope with ½" crickets, Minimum R-30.