|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Name:** | The Greenwich (UWSC – 3) | | **Project No.:** | 23-00107 |
| **Project Location:** | 3240 William Colston Avenue, Oakville, ON | | **Date of Visit:** | January 7, 2025 |
| **Visit Requested By:** | Oriser Esprit | | **Weather:** |  |
| **Visit Performed By:** | Mustafa Kartal | | **Page:** | 1 of 25 |
| **Items Reviewed:** | Concealed Membrane Protection, Window Wall, Sealant, Firestopping, Traffic Topping, Insulation, Fire Safety System, Air Barrier | |  |  |
| Distribution: | | |  | |
| Jeff Mitchell | | Branthaven | jmitchell@branthaven.com | |
| Natalia Glinska | | Branthaven | [nglinska@branthaven.com](mailto:nglinska@branthaven.com) | |
| Talis Broks | | Branthaven | tbroks@branthaven.com | |
| Sergey Averyanov | | Caliber Structures | [sergey@caliberstructures.com](mailto:sergey@caliberstructures.com) | |
| Jake Murray | | Caliber Structures | jake@caliberstructures.com | |
| William Chui | | Caliber Structures | william@caliberstructures.com | |
| Mohammad Salhah | | Caliber Structures | mohammad@caliberstructures.com | |
| Sanaz Amouhossein | | Caliber Structures | sanaz@caliberstructures.com | |
| Oriser Esprit | | Caliber Structures | [oriser@caliberstructures.com](mailto:oriser@caliberstructures.com) | |
| Grant Taylor | | Kirkor Architects | gtaylor@kirkorarchitects.com | |

1. OBSERVATIONS
   1. Exterior Closure – Concealed Membrane Protection and Window Wall
      1. A random visual review was performed of the installation of the concealed membrane protection and window wall at Level 20. At the time of the review, the installation was in progress except at the hoist location. **(Refer to Photograph No. 1 - 4).**
      2. **Window Base –** At the balcony slab and by-pass locations, an extruded aluminum T-angle was installed using Tapcons fastened through the inside leg of the angle and to the concrete spaced at a maximum of 12” o.c.
      3. Dow Corning Dowsil 758 sealant was installed between the sill angle and concrete. Plastic shims were installed below the aluminum T-angle for leveling purposes.
      4. At the balcony slab, the Blueskin SA membrane was installed from the angle and over the balcony concrete slab and finished with Dowsil 758 sealant.
      5. Contractor indicated that the Blueskin SA is installed over wet sealant (Dow 758) at the sill angle and at end dams to ensure adequate adhesion.
      6. At the bypass location, Blueskin SA membrane was installed from the L-angle, down the concrete slab edge and over the head metal flashing of the window wall below. The membrane edge at the metal flashing was finished with sealant.
      7. The window frame with T-hook was set on the sill T-angle with plastic shims placed under window frame. Where visible, sealant appeared to be installed at the center of the back leg and the angle was fully sealed to the window frame with T-hook. The sealant was noted to be Tremco Tremsil 600.
      8. At the head and sill locations, two Tek screws were installed from the angle to the vertical mullions of the window wall.
      9. **Window Jamb –** The vertical window wall frames were joined together with aluminum H-coupler. Contractor indicated that the coupler was embedded in sealant (Pecora 896) from both sides of the coupler and then installed between the window frames.
      10. **Window Head –** At the concrete ceiling with precast panel infront of the concrete ceiling, a precast panel was lowered down the slab edge by approximately 12”. At the underside of the concrete ceiling, contractor had installed a head metal flashing (Refer to Photograph No. 3). The head metal flashing was fitted with a thermal break in between the interior and exterior aluminum extrusions; however, the window wall shop drawings only show the exterior extrusion of the head metal flashing. ***Quest to ensure that the as-built condition of the head metal flashing at the noted location is updated in the window wall shop drawings.***
      11. The exterior extrusion of the flashing was pre-installed with exterior gasket. Contractor indicated that the head metal flashing was sealed to the underside of the concrete ceiling with sealant. The head metal flashing was secured to the underside of the concrete ceiling with fasteners spaced at approximately 10”. The window wall shop drawings do not show the spacing of the fasteners at the head metal flashing to the concrete ceiling. Quest Engineer to review and confirm whether the as-built condition is acceptable**.** ***This item was previously noted in SVR No. 61, Item No. 2.1.1.***
      12. From the interior, at the head flashing locations, contractor installed temporary strap anchors and discrete aluminum cover with pre-installed gasket at the window head. Contractor indicated that the strap anchors will be removed, and a continuous aluminum cover will be installed at the window head. The aluminum cover will snap into the metal flashing and the gasket at the aluminum cover will be compressed against the window head.
      13. At concrete ceiling with no precast infront of the ceiling, the head flashing was not installed, and the window frame was secured with 3” head strap anchors. Each strap anchor was secured with one tapcon screw.
      14. At the window head, contractor indicated that the anchors were clipped to the interior side of the frame.
      15. Generally, the installation appeared to be progressing in accordance with the window wall shop drawings, except as noted above.
   2. Exterior Closure – Interior Sealant
      1. A random visual review was performed of interior sealant at Levels 17 - 19. At the time of review, the installation was generally completed at Levels 17 & 18 and was in progress at Level 19 (**Refer to Photograph No. 5 & 6).**
      2. At the **head location**, the joint between the window wall and the concrete slab above was filled with SPF insulation and sealed with Tremco Spectrem 1 sealant. The strap anchors were fully covered in sealant including the fasteners.
      3. Contractor installed the sealant around the vent boxes and tooled it.
      4. Where the sealant was reviewed, the installation appeared to be continuous and of adequate adhesion.
      5. Generally, the installation was noted to be in accordance with contract documents.
   3. Firestopping – Vertical

1.5.1 A random visual review was performed of the vertical firestopping at the end of the shear wall at the Levels 17 & 18. At the time of review, the installation of firestopping was generally completed **(Refer to Photograph No. 7 & 8).**

* + 1. **Vertical -** At **window wall locations**, the contractor had installed Hilti CFS-SP WB firestopping sealant at the end of the concrete shear wall to back of the window backpan. The sealant was generally observed to be continuous. Approximately 4” mineral wool insulation was installed behind the installed smoke seal sealant.
    2. The installation of the vertical firestopping appeared to be progressing in accordance with the provided **ULC Design No. CED-623639a.**
    3. Generally, the installation was proceeding in accordance with contract documents.
  1. Structure – Traffic Topping – Parking Garage
     1. A random visual review was performed of the top coat of the traffic topping at the P2 level. At the time of review, the installation was generally completed prior to our review **(Refer to Photograph No. 9 - 11).**
     2. At the time of review, the installation of the base coat and top coat was completed at various locations, prior to the review and could not be fully reviewed.
     3. Where visible, the concrete surface was observed to be treated with blasting, the cracks and cold joints in the concrete were routed and filled with sealant. At the upturns from slab to wall (concrete/block), sealant was observed to be installed.
     4. Where completed, the traffic topping appeared to be adequate and consistent. The thickness of the base coat and topcoat could not be confirmed at the time of review.
     5. As per the architectural specifications, Tremco Traffic Topping should be installed at parking garage; however, Neogard TT (FC7500 / FC7510-11) was being used. **Architect to review and approve the substituted product**.
     6. Generally, the installation was noted to be progressing in accordance with the contract documents, except as noted above.
  2. Exterior Closure – Insulation at Window Wall
     1. A random visual review was performed of the installation of the insulation at the window wall backpans at the Level 16. At the time of review, the installation was generally completed, prior to review **(Refer to Photograph No. 12 & 13).**
     2. At the window backpans, 1” mineral wool insulation was installed with adhesive stick pins and washers. Generally, 3 adhesive stick pins were observed on each insulation board. ***Contractor was recommended to install additional sick pins to ensure insulation is fully tight to the window backpan.***
     3. It was noted that the contractor installed the insulation board over the corner post and covered the vertical mullions. No significant gap was noted between the insulation boards.
     4. Generally, the installation was proceeding in accordance with the wall type **W3-C1**.
  3. Fire Safety Systems – Corridor Demising Wall
     1. A random visual review was performed of the demising wall installation between the suites and corridor at Level 8. At the time of review, the installation of the corridor demising wall was generally completed **(Refer to Photograph Nos: 14 - 16)**
     2. Between the suites and corridor, contractor installed 3.5” studs spaced at approximately 24” o.c. 3.5” fibreglass batt insulation was installed within the stud cavities. A layer of fire-rated Type-X 5/8” GWB was installed on the suite side. Two layers of fire-rated GWB were yet to be installed on the corridor side.
     3. Contractor indicated that Tremco TremFlex 834 was installed at the perimeter of the stud prior to the GWB installation on the suite side. Contractor installed TremFlex 834 at the perimeter of the stud on the corridor side.
     4. From the corridor side, at the concrete shear wall with studs on both sides, the firestopping sealant (Hilti CP-606) at the joint between concrete and stud was installed followed by 1” mineral wool insulation over the concrete shear wall as per the architectural detail **2/A7-31**.
     5. Contractor installed Hilti Putty Pad around the electrical box.
     6. Generally, the installation at corridor demising wall was noted to be in accordance with the wall types **P3-H2**.
  4. Fire Safety Systems, Firestopping and Air Barrier (Vent Box) – Pre-board
     1. A visual review was performed of the Level 5 Suites 501 to 514, prior to boarding. The review was performed of the following locations: firestopping system at pipe and electrical penetrations through the floors and walls; suite demising wall fire taping; and air barrier (SPF) at vent boxes **(Refer to Photograph No. 17 - 20).**
     2. At non-insulated and insulated metal pipe penetrations through the concrete floor slab, the contractor installed mineral wool insulation within the annular space around the pipe penetration and covered it with Tremco Fyre-SIL SL firestopping sealant from the top side of the concrete floor (Refer to Photograph No. 9). As per the ULC listing provided by the contractor, the installation at non-insulated metal pipe penetrations and insulated metal pipe penetrations is in accordance with ULC Design No. C-AJ-1064 and C-AJ-5089.
     3. At metal pipe (toilet) penetration through the concrete ceiling slab, the contractor installed mineral wool insulation within the annular space around the pipe penetration and covered it with Hilti MetaCaulk MC 150+ firestopping sealant from the top side of the concrete floor. As per the ULC listing provided by the contractor, the installation at metal pipe penetration is in accordance with ULC Design No. C-AJ-1403.
     4. At the shower XFR pipe penetration through the concrete ceiling, the contractor installed mineral wool insulation within the annular space around the pipe penetration. A single layer of 1”-3/4” wide intumescent wrap strip (Hilti CP648 Wrap Strip) was wrapped around the pipe with overlapped seam secured with tape. The bottom edge of the wrap strip was installed approximately ½” below the bottom surface of the concrete ceiling. Hilti CFS-S SIL GG firestopping sealant was then installed at the concrete/wrap strip interface from the underside of the ceiling. As per the ULC listing provided by the contractor, the installation was in accordance with ULC Design No. F-A-2034.
     5. At the metal pipe (sprinkler) penetrations through the GWB, the contractor installed a bead of RectorSeal MetaCaulk 150+ firestopping sealant at the gypsum board/penetrant interface at point contact location on the suite side of the wall. As per the ULC listing provided by the contractor, the installation was in accordance with ULC Design No. W-L-1144.
     6. At the electrical metallic tubes (EMT) and electrical non-metallic tubes (ENT) penetrations through the GWB, the contractor installed a bead of Hilti FS-ONE MAX firestopping sealant at the gypsum board/penetrant interface at point contact location on the suite side of the wall. As per the ULC listing provided by the contractor, the installation was in accordance with ULC Design No. W-L-8071.
     7. Fire-tape was installed at the GWB joints at the joints between GWB and the concrete wall. Fire-taping was only installed at the bulkhead level and extended below the bulkhead by a minimum of 2”. Contractor indicated to fire-tape the GWB joints below the bulkhead at a later date.
     8. At the exhaust box, GWB had already been installed and installation of the SPF insulation at the vent box could not be fully reviewed. Where visible, SPF insulation appeared to be of consistent thickness.
     9. A number of firestopping deficiencies noted at the time of review. These items were noted to the Caliber. Subsequent to the review, Caliber provided photographs confirming that the noted items were repaired **(Refer to Photograph No. 21 & 22).**
     10. Generally, the installation was proceeding in accordance with the contract documents.

1. DEFECTS AND DEFICIENCIES
   1. Structure – Traffic Topping – Parking Garage
      1. **Parking Garage -** As per the architectural specifications, Tremco Traffic Topping should be installed at parking garage; however, Neogard TT (FC7500 / FC7510-11) was being used. **Architect to review and approve the substituted product**.
2. REMARKS

In the areas reviewed, the work appears to be proceeding in general conformance with the contract documents.

The above noted items were reviewed with the site representative prior to our departure from site.

The following items were reviewed, and noted in our opinion, to be resolved:

* + 1. **SVR No. 54, Item No. 2.3.1 –** The furred out stud beam appeared to be adequately sealed at the ends. This item was reviewed on site and considered to be resolved.
    2. **SVR No. 68, Item No. 2.2.1 –** The stud rough openings were covered in Blueskin SA as required. This item was reviewed on site and considered to be resolved.
    3. **SVR No. 68, Item No. 2.3.1 –** The exterior sealant at window head was installed from concrete slab above to window frame. This item was reviewed on site and considered to be resolved.

Reviewed by:

Nadine Cowan, P.Eng.

Manager, Building Engineering

**Photographs**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Photograph No. 1: General view of the Blueskin installation at balcony location. |  |  | Photograph No. 2: Blueskin installation at window wall by-pass location. |
|  |  |  |  |
| Photograph No. 3: General view of receptor installation at window wall head location. |  |  | Photograph No. 4: General view of the temporary pressure cap with a gasket. |
|  |  |  |  |
| Photograph No. 5: General view of the interior window wall head sealant. |  |  | Photograph No. 6: General view of the interior window wall head sealant. |
|  |  |  |  |
| Photograph No. 7: General view of the vertical firestopping installation. |  |  | Photograph No. 8: General view of the insulation thickness. |
|  |  |  |  |
| Photograph No. 9: General view of the traffic topping installation. |  |  | Photograph No. 10: General view of the material information. |
|  |  |  |  |
| Photograph No. 11: General view of the material information. |  |  | Photograph No. 12: General view of the insulation installation at window wall back pan. |
|  |  |  |  |
| Photograph No. 13: Insulation thickness measured. |  |  | Photograph No. 14: General view of the corridor demising wall. |
|  |  |  |  |
| Photograph No. 15: Mineral wool insulation installation at concrete shear wall location. |  |  | Photograph No. 16: Hilti Putty pad installation at electrical box. |
|  |  |  |  |
| Photograph No. 17: Firestopping installation at metal pipe penetration through the slab. |  |  | Photograph No. 18: Firestopping installation at toilet pipe penetration through the ceiling slab. |
|  |  |  |  |
| Photograph No. 19: Firestopping installation at electrical penetration through the GWB. |  |  | Photograph No. 20: Firestopping installation at sprinkler pipe penetration through the GWB. |
|  |  |  |  |
| Photograph No. 21: Rectified item. |  |  | Photograph No. 22: Rectified item. |

**Deficiency Tracking Table**

| **SVR No.** | **Item No.** | **Item Description & Comments** | **Element** | **Date Noted/**  **Cleared** | **SVR No. Cleared** |
| --- | --- | --- | --- | --- | --- |
| 34 | 2.1.2 | **Ground floor, South Wing -** At window wall locations with concrete shear wall behind, contractor to install a fully sealed L-shaped angle from the underside of the concrete ceiling to the window frame to provide an interior seal (Refer to Photograph No. 5). Contractor to repair.  **Update (2024-07-02) –** Contractor indicated to install interior sealant from the exterior. Contractor to ensure sealant is installed at thermal break to underside of concrete ceiling and the sealant is installed behind the exterior head anchors. | Exterior Closure – Window Wall | 2024-05-07 |  |
| 34 | 2.1.3 | **Ground floor, South Wing -** At the window wall locations with concrete shear wall behind, contractor installed head strap anchors from the exterior. Additionally, the head strap anchors were cut short to accommodate the exterior sealant installation (Refer to Photograph No. 6). The installation of the strap anchors from the exterior at the noted location was not provided in the window wall shop drawings. Quest Engineer to review the as-built installation of the head strap anchors at the exterior of the frame and provide an engineering stamped as-built detail reflecting the as-built.  **Update (2024-10-29) -** Quest Engineer in their letter indicated that if Quest can provide an as-built detail then a sealed detail can be provided. **Quest to review and provide an engineering stamped as-built detail.** | Exterior Closure – Window Wall | 2024-05-07 |  |
| 34 | 2.2.1 | **Ground floor, South Wing -** The edge distance of the tapcons from the precast panel was noted to be approximately 1.5”. Precast Panel Engineer to review the edge distance of the tapcons of the jamb angle from the precast panel (Refer to Photograph No. 11). | Exterior Closure – Interior Sealant | 2024-05-07 |  |
| 34 | 2.2.5 | **Ground floor, South Wing -** At a few locations, at precast fins, the window wall installation was complete and the jamb angle for the window wall can not be installed. Pretium recommends installing interior sealant from precast to window thermal break to maintain continuous seal. | Exterior Closure – Interior Sealant | 2024-05-07 |  |
| 34 | 2.2.6 | **Ground floor, South Wing -** At the ground floor, at precast fins with concrete shear wall behind, the window wall installation was complete, and the window jamb angle can not be installed (Refer to Photograph No. 15). Pretium recommended installing interior sealant between the window thermal break and the precast panel. | Exterior Closure – Interior Sealant | 2024-05-07 |  |
| 35 | 2.1.1 | **Ground Floor, South and West elevations -** At the head and sill location, anchor plates were secured to the concrete with 4 bolts and 2 tapcons (Refer to Photograph No. 2). However, as per the curtain wall fastener schedule, 2 bolts per anchor plate should be installed. Quest to review the as-built installation of bolts and tapcons at the anchor plates and provide an engineering stamped revised detail to reflect the as-built condition.  Update (2024-10-29) - – Quest Engineer in their letter indicated that if Quest can provide an as-built detail then a sealed detail can be provided. **Quest to review and provide an engineering stamped as-built detail.** | Exterior Closure – Curtain Wall | 2024-05-10 |  |
| 35 | 2.1.2 | **Ground Floor, South elevation -** At the end of the curtain wall, the precast panel adjacent to the curtain wall was not aligned with the vertical shoulder of the curtain wall and a gap was observed (Refer to Photograph No. 1). Contractor to install a break shape followed by transition membrane from the shoulder of the curtain wall to precast panel to provide a continuous seal. | Exterior Closure – Curtain Wall | 2024-05-10 |  |
| 35 | 2.1.3 | **Ground Floor, South elevation -** At the end of the curtain wall, the vertical mullion was supported on intermediate anchor plate and the flange of the anchor was protruding off of the curtain wall and interfering the wall assembly at the adjacent precast panel (Refer to Photograph No. 3). Caliber and Quest to review the as-built condition of the anchor protruding off of the curtain wall framing system and interfering the adjacent wall assembly. | Exterior Closure – Curtain Wall | 2024-05-10 |  |
| 35 | 2.3.3 | **3rd floor -** The ULC listing for the installation of the horizontal firestopping sealant (Tremco Fyre-Sil SL and Tremco Fyre-Sil GG) between concrete floor and precast panel was not provided. Contractor to provide a requested information. | Firestopping – Horizontal – Precast to Concrete | 2024-05-10 |  |
| 36 | 2.1.1 | **Ground floor, north and south wings -** At a few locations, the overall thickness of shims below the T angle was noted to be 1" which is more than the allowable thickness i.e. 5/8" (Refer to Photograph No. 1). Quest Engineer to review the as-built and provide acceptability.  **Update (2024-10-09) –** This item was from 2nd floor to 9th floor. | Exterior Closure – Window Wall | 2024-05-16 |  |
| 36 | 2.1.2 | **Ground floor** - At multiple locations, the deflection space at the top of the window frame, between frame and the underside of the concrete ceiling, was noted to be approximately ½” which is less than required 1” as per the window wall shop drawings and structural engineer requirements. Quest to review the as-built deflection space and confirm acceptability. Calibre to review with Structural Engineer.  **Update (2024-05-27) –** This item was observed at multiple locations through out the ground floor and 2nd floor. Quest Engineer to review. | Exterior Closure – Window Wall | 2024-05-16 |  |
| 36 | 2.1.3 | **Ground floor, north wing, Suite 114 and 116 -** Oil canning in the metal backpan was observed (Refer to Photograph No. 5). Quest to repair. | Exterior Closure – Window Wall | 2024-05-16 |  |
| 36 | 2.1.5 | **Ground floor -** At a few window backpans, the metal backpan was flush with interior extrusion of the window frame and hence, sealant bite on the substrates was compromised (Refer to Photograph No. 7). Quest to remove the window backpan and re-install sealant to ensure adequate sealant bite on the substrates. | Exterior Closure – Window Wall | 2024-05-16 |  |
| 36 | 2.1.6 | **2nd floor, north wing, northeast corner -** At the end of the balcony slab, the joint between the concrete slab and precast fin was not covered in 2-stage sealant and the Blueskin SA membrane was end dammed over the precast fin without the metal end dam (Refer to Photograph No. 2). Contractor to install sealant between the slab and precast fin, followed by metal end dam with Blueskin SA membrane. | Exterior Closure – Window Wall | 2024-05-16 |  |
| 38 | 2.1.1 | **Ground floor Suite 119, south elevation –** At the window bypass rough opening, contractor installed sealant with mineral wool insulation between precast and concrete slab edge. The precast panel transitioned from the concrete slab edge to concrete curb (Refer to Photograph Nos. 4 and 5). At the concrete curb, contractor was to install sealant across the depth of the precast and over the mineral wool insulation to separate the 2-stage sealant at the bypass and at the concrete curb. | Exterior Closure – Sealant – Precast to Concrete | 2024-05-27 |  |
| 38 | 2.1.2 | **Ground floor, suite 119, south elevation –** At the top of the wall, the precast fin extends beyond the concrete ceiling by approximately 6”. 2nd floor terrace precast coping sits above the extended precast fin (Refer to Photograph No. 6). Contractor to install 2-stage sealant from the precast fin to the concrete ceiling and not to the precast coping above. | Exterior Closure – Sealant – Precast to Concrete | 2024-05-27 |  |
| 39 | 2.1.1 | **2nd floor Terraces of Suite 223 and 201** – The window angle was installed to the concrete curb with fasteners on the outside leg of the T-angle. The angle was pushed to the inside and hence, the inside leg of the T-angle was suspended by approximately 44mm. The fasteners on the outside leg of the T-angle appeared to be approximately 1” (25mm) away from the inside edge of the curb. As per the window wall shop drawings, the any leg of the angle should not be suspended, and the fasteners should be installed on the inside leg of the angle with a minimum of 38mm edge distance (Refer to Photographs Nos. 1 – 3). **Quest Engineer to review and provide comments on the as-built.**  **Update (2024-10-09) –** This item was also observed at the 9th floor concrete curbs with Hilti KH-EZ fasteners.The overhang of the inside leg of the T-angle could not be confirmed at the time of review. Quest Engineer to review and confirm whether the as-built is acceptable.  **Update (2024-11-06)** – Also noted on 13th floor curbs. | Exterior Closure – Window Wall | 2024-06-03 |  |
| 39 | 2.1.2 | **Ground floor,** at the Stair A concrete shear wall, the head anchors were not installed from the interior. Contractor secured the window frames to the ceiling slab edge with two strap anchors from the exterior (Refer to Photograph No. 4). Quest Engineer to confirm. | Exterior Closure – Window Wall | 2024-06-03 |  |
| 39 | 2.3.1 | **2nd floor, 220 and Terrace –** At joints between the precast and slab/curb, roofing membrane over the terrace slab is not compatible with the sealant at the joints between precast and concrete (Refer to Photograph No. 7). Contractor is recommended to install a concrete curb over the slab to separate sealant from the roofing membrane. | Exterior Closure – Sealant – Precast to Concrete | 2024-06-03 |  |
| 39 | 2.4.1 | **2nd Floor -** From the top of the slab, the precast was secured to the slab with a nut and an L-shaped plate. The jamb angle was noted to be in between the plate and the precast panel. Contractor to cut the jamb angle around the plate such that the firestopping sealant is installed from the plate to the precast (Refer to Photograph No. 9). | Firestopping – Horizontal | 2024-06-03 |  |
| 42 | 2.2.1 | **2nd Floor - At the window jamb (L2 all window locations),** contractor installed sealant from the angle/precast to plastic cap of the window frame; however, the sealant should be installed from the angle/precast to thermal break of the window frame (Refer to Photograph No. 6). **Contractor indicated they would repair this location from the exterior** at a later date, by removing the backer rod for the existing interior sealant and using the existing interior sealant as a backing for installing the interior joint from the exterior (interior sealant from angle/precast to thermal break). | Exterior Closure – Interior Sealant | 2024-07-02 |  |
| 43 | 2.2.1 | **13th floor Outdoor Amenity -** At roof anchors, the concrete around the roof anchors was stepped down from the field by 1” to 2” (Refer to Photograph No. 6). Pretium does not recommend step down in the concrete at the roof anchors as the rainwater could accumulate and not drain. Contractor to repair.  **Update (2024-07-23) –** This item was also observed at 5th floor terraces.  **Update (2024-08-22) –** This item was also observed at the 9th floor roof and terraces, south elevation. | Roofing – Hot-Applied Rubberized Asphalt | 2024-07-04 |  |
| 45 | 2.2.2 | **5th floor Roof -** At scupper rough openings, contractor had installed a layer of hot-rubber in the opening; however, the membrane from the scupper rough opening was not in the full contact with the membrane in the field and the concrete was exposed (Refer to Photograph No. 4). Contractor to repair. | Roofing – Hot-Applied Rubberized Asphalt | 2024-07-18 |  |
| 49, 51 | 2.1.1, 2.1.1 | **Ground Floor -** At the time of review, the ground floor expansion joint tie-in with the below grade waterproofing and vertical expansion joint was yet to commence. Contractor was recommended to provide a tie-in detail for horizontal and vertical expansion joints with the ground floor and below grade waterproofing, prior to the tie-in (Refer to Photograph No. 6).  Update (2024-08-19) - **Southwest Corner, Center Air-Shaft, South-East Air-Shaft -** Pretium, via Procore (RFI-301), dated September 19, 2024, provided preliminary recommendations based on the existing conditions of the poured concrete expansion joint (not per arch dwgs) at the noted locations. Architect, Caliber, Soprema and Waterproofing contractor (KC Structural) to review and provide comments. | Waterproofing – Hot-Applied Rubberized Asphalt | 2024-08-09 |  |
| 50 | 2.2.1 | **2nd floor Suite 220/221 -** Between the suites, contractor installed 2.5” studs spaced at approximately 24” o.c. At the end of the demising wall, the studs were approximately 2” away from the window backpan. The gap between the stud and the window backpan was filled with mineral wool insulation and Hilti CFS-SP WB; however, as per the architectural detail **5/A7-27**, a layer of the fire-rated GWB should be installed at the face of the stud prior to the firestopping sealant (Refer to Photograph No. 11). Contractor to repair or Architect to accept. | Fire Safety Systems – Suite Demising Wall | 2024-08-14 |  |
| 51 | 2.2.1 | **2nd floor -** The contractor had installed 2.5” structural studs spaced approximately 2” away from the mineral wool insulation. Two layers 3.5” fibreglass insulation was installed within 2” gap and within the 2.5” stud cavities; however, as per the architectural wall **W6-C2**, 3.5” studs with 3.5” fibreglass insulation should have been installed and butted up against the 2” mineral wool insulation. Pretium does not recommend R-value exceeding over R20. Architect to accept the as-built condition.  **Update (2024-10-02) –** Also observed on the ground floor Suites. | Exterior Closure – Insulation | 2024-08-19 |  |
| 52 | 2.1.1 | **2nd floor, Concrete Curbs -** The contractor had installed 2.5” studs butted against the 1” mineral wool insulation (R-4) followed by a layer 3.5” fibreglass insulation (R12) in the cavity; however, as per the architectural detail 7/A7-15, 2.5” fibreglass insulation should have been installed (Refer to Photograph No. 2). **Arch to update wall type in SI or Record Dwgs.**  **Update (2024-09-30) –** This item was also observed at 3rd floor and 5th floor. | Exterior Closure – Insulation | 2024-08-22 |  |
| 53 | 2.1.1 | **5th Floor -** At locations where T-angle was shimmed 1” or higher using plastic horseshoe shims, grout with backer rod was observed between T-angle and concrete (Refer to Photographs Nos. 2 and 3). Quest engineer to confirm whether the depth of the grout with backer rod is acceptable. | Exterior Closure – Window Wall | 2024-08-29 |  |
| 54 | 2.1.1 | **3rd Floor –** At L-shaped precast panels, 2 rows of abutting studs (3.5” and 2.5”) were installed approximately 3” away from the sheathing board and 3 layers of 3.5” fibreglass insulation (R36 total) were installed at the sheathing board and between the stud cavities (Refer to Photographs 1 and 2); however, as per the architectural detail **6/A7-35**, only 1 row of 3.5” studs with 2 layers of 3.5” fibreglass insulation should have been installed (Refer to Photograph No. 3). Existing wall assembly total (R-36). Pretium does not recommend R-value exceeding R-20. ***Site indicated that the Architect verbally accepted the as-built condition.*** ***Arch to update wall type in SI or Record Dwgs.*** | Exterior Closure – Insulation – Precast Panel | 2024-09-09 |  |
| 54 | 2.1.2 | **3rd Floor -** The horizontal drywall track between the precast and window frame above was not installed at some of the window back pan locations (vertical studs extended from slab to slab instead of 2 stacked studs). The horizontal track between the precast panel and window frame should have been continuous through the length of the precast panel. This as-built condition does not provide adequate support for the poly return to the window wall sill. Instead, the poly is loosely returned into the stud space and the poly was taped around the vertical studs. Pretium recommended installing horizontal track between the precast panel and window frame at all locations. However, 2 stacked studs should be constructed at other floors with this configuration. **Contractor to repair or Architect to review and approve if acceptable.**  **2024-09-24 –** Noted again on L3.  **2024-09-30 –** Also observed at 5th floor. | Exterior Closure – Insulation – Precast Panel | 2024-09-09 |  |
| 54 | 2.1.3 | **3rd Floor, Concrete Curbs -** At concrete curb with window wall above, vertical studs were installed from slab to slab; however, an intermediate horizontal track should have installed to separate the two assemblies as per architectural detail 7/A7-15 (Refer to Photograph No. 6). Instead, the poly is loosely returned into the stud space and the poly was taped around the vertical studs **Contractor to repair or Architect to accept.** This item was also observed at 2nd floor.  **2024-09-30** – Also observed at 5th floor. | Exterior Closure – Concrete Curbs | 2024-09-09 |  |
| 54 | 2.2.3 | **Suite – 413** - At Suite 413, concrete ceiling slab is recessed 2” from the surrounding ceiling. Contractor installed two 6” heavy gauge studs coupled together as a furred-out stud beam to the underside of the ceiling. At the head, the window frames were secured to the stud with strap anchors spaced at approximately 8” o.c. Each strap anchor was secured to stud with 2 fasteners. **Quest Engineer to confirm whether the as-built condition is acceptable**. | Exterior Closure – Window Wall | 2024-09-09 |  |
| 54 | 2.3.1 | **Suite 406/407 –** The vertical plane of precast panel dropped approximately 18” below the concrete ceiling of the 4th floor. At the horizontal joint between the underside of the concrete ceiling and precast panel, Caliber indicated that sealant with backer rod was installed. At one end, vertical plane of the precast panel overhangs a vertical precast fin, and the vertical sealant joint was between the precast panels had not appeared to be installed. Contractor to repair (Refer to Photograph No. 8). | Exterior Closure – Sealant | 2024-09-09 |  |
| 54 | 2.3.2 | **Suite – 413** - At Suite 413, concrete ceiling slab is recessed 2” from the surrounding ceiling. Contractor installed two heavy gauge studs coupled together as a furred-out stud beam to the underside of the ceiling. Caliber indicated that the cavity between the studs was filled with insulation. The furred-out stud beam was then covered in Blueskin SA; however, at the ends, the studs were exposed and not fully covered in Blueskin SA. This item was noted to Caliber (Refer to Photograph No. 10). ***Contractor to repair***. | Exterior Closure – Air/Vapour Barrier | 2024-09-09/ 2025-01-07 | **76** |
| 55 | 2.1.1 | **Suite 416/417 -** At the hollow U-shaped precast panel, insulation was not installed at interior face of precast at 3rd and 4th floors. Contractor to install continuous pinned vinyl faced semi-rigid insulation or 2lbs close cell spray foam as per architectural detail 16/A7-28 (Refer to Photograph No. 1).  **Suite 416/417 -** The architectural detail 16/A7-28 shows a concrete rib at the 4th floor slab, separating the 3rd floor and 4th floor. The concrete rib would then be firestopped horizontally to the precast panel. However, the concrete rib on the 4th floor was not installed. **Architect to review and advise on the fire separation between the floors with the as-built condition of the U-shaped precast panel.** | Exterior Closure – Insulation – Precast Panel | 2024-09-17 |  |
| 55 | 2.2.1 | **Suite 416/417 -** At the hollow U-shaped precast panel, the architectural detail 16/A7-28 shows a concrete rib at the 4th floor slab, separating the 3rd floor and 4th floor. The concrete rib would then be firestopped horizontally to the precast panel. However, the concrete rib on the 4th floor was not installed. **Architect to review and advise on the fire separation between the floors with the as-built condition of the U-shaped precast panel.** | Firestopping – Precast Panel | 2024-09-17 |  |
| 56 | 2.1.1 | **3rd Floor -** At L-shaped precast panel locations with window above and concrete shear wall/column behind, insulation and studs over the sheathing board were not installed (Refer to Photograph No. 1). Pretium recommended installing mineral wool insulation instead of fibreglass insulation and mineral wool to be fully fit in the cavity between the concrete and precast panel and between the concrete and window wall above precast panel. At sides of the column/wall, install a fully sealed metal closure from the column/wall to sheathing board at precast panel and window wall above the precast panel. This item was noted to Caliber. Contractor to repair. | Exterior Closure – Insulation & Vapour Retarder – Precast Panel | 2024-09-23 |  |
| 56 | 2.2.1 | **P1 level –** At shaft ceiling, between the HVAC duct and shaft liner panel, contractor installed fibreglass batt insulation, however, as per the architectural ceiling type C8-C3, mineral wool insulation should be installed. Contractor to repair or Architect or review and accept the as-built condition. | Exterior Closure – Insulation & Vapour Retarder – Precast Panel | 2024-09-23 |  |
| 58 | 2.1.1 | The contractor had installed the Spray Fire-Resistive Material (SFRM) by GCPAT MONOKOTE MK-6/HY at the steel plates and rods for 2hr fire rating between the suites and floors. The contractor indicated ULC Design No. X771 was used for this application; however, the noted ULC Listing was not provided. **Contractor to provide the requested information.** | SFRM | 2024-09-30 |  |
| 60 | 2.1.2 | **13th Floor, Outdoor Amenity -** Contractor had cut the roofing insulation and installed copper and gas lines in the insulation. Mechanical engineer to advise whether copper and gas lines installed in the insulation are acceptable and Architect to advise whether reduced insulation is acceptable. | Roofing - Insulation | 2024-10-08 |  |
| 61 | 2.1.1 | **8th Floor –** At the 8th floor, at the concrete ceiling with precast panel infront of the concrete ceiling, the head metal flashing was secured to the underside of the concrete ceiling with fasteners spaced at approximately 10”. The window wall shop drawings do not show the spacing of the fasteners at the head metal flashing to the concrete ceiling. Quest Engineer to review and confirm whether the as-built condition is acceptable. | Exterior Closure – Window Wall | 2024-10-09 |  |
| 64 | 2.1.1 | **SW Corner, ground floor -** A layer of hot-applied rubberized asphalt over the retaining wall of the adjacent building (Upper West-2) and at the garage roof deck of this building (Greenwich); however, the flanges of the SopraJoint were noted to be **not** bonded to the hot-rubber behind. This item was noted to Contractor and Caliber (Refer to Photograph No. 7). **Contractor to repair and bond the flanges of the SopraJoint to hot-rubber behind.** | Expansion Joint – Parking Garage Roof Deck – Upper West – 2 and Greenwich | 2024-10-25 |  |
| 68 | 2.1.3 | **8th Floor -** At the **east elevation**, at transition from heated space to balcony slab, the 2-stage sealant was vertically installed along the slab edge, between the slab edge and precast panel. However, the two sealants were not connected. The two-stage sealant at the noted location should be fully joined together (Refer to Photograph No. 4). This item was noted to Caliber and contractor. **Contractor to repair.** | Exterior Closure – Soffit - Sealant | 2024-11-14 |  |
| 68 | 2.1.4 | **8th Floor -** At the underside of the balcony ceiling with unheated space (balcony) above, a furring channel was installed and butted against precast panel along the length of the precast panel; however, as per the architectural detail **2/A7-19**, furring channel should not be in contact with the precast panel and a metal flashing, stopped away from the precast panel, should be installed at the end of the soffit (Refer to Photograph No. 5). The metal flashing should be fully sealed to the underside of the concrete ceiling and at the joints between the metal flashing. This item was reviewed with Caliber. **Contractor to remove the furring channel and repair as per the noted architectural detail 2/A7-19 (Refer to Attachment No. 2).**  **Update (2024-12-18)** – The furring channel was reinstalled and did not butt up against the back of the precast panel. | Exterior Closure – Soffit – Unheated Space | 2024-11-14 |  |
| 68 | 2.2.1 | **8th Floor -** At 8th floor window head stud rough openings, 8” steel studs were installed with an exterior sheathing board and Blueskin SA was installed over the stud; however, Blueskin SA was not continued beyond the stud and over the sheathing board. At a few locations, 2 rows of abutting 8” studs were used and the Blueskin SA did not fully cover the studs (Refer to Photograph No. 6). Contractor to fully cover the stud rough openings in Blueskin SA and continue the Blueskin SA over the sheathing board. The installation of the soffit was in progress at the time of review. **Contractor to remove the soffit sheathing board and repair as noted**. | Exterior Closure – Air/Vapour Barrier – Window Wall | 2024-11-14/ 2025-01-07 | **76** |
| 68 | 2.3.1 | **8th Floor -** At the head joint between the window frame and underside of the concrete ceiling, the sealant was installed from the plastic cap of the window frame to concrete (Refer to Photograph No. 7); however, the sealant should be installed from the window mullion to the concrete. This item was noted to Caliber and contractor. Contractor to repair. | Exterior Closure – Exterior Sealant – Window Wall | 2024-11-14/ 2025-01-07 | **76** |
| 68 | 2.4.1 | At the bottom of the 9th floor parapet wall, contrary to the architectural detail **4/A7-19**, a sealant between the concrete slab and the precast panel was not installed and the window wall installation at the floor below had already been completed (Refer to Photograph No. 8 and Refer to Attachment No. 3). Contractor to repair or Architect to review the as-built and advise whether the as-built condition is acceptable. | Exterior Closure – Sealant – Precast Panel and Concrete Curb | 2024-11-14 |  |
| 70 | 2.1.1 | **7th Floor Suites -** 2 layers of fire-rated GWB were noted between the acoustical wall and suite demising wall, and 1 layer of GWB was observed at the suite side. However, as per wall type **P3-J2**, 2 layers should be installed at the suite side and 1 layer should be installed between the acoustical wall and suite demising wall. **Contractor to repair or the architect to review and advise (Refer to Photographs Nos. 9).** | Fire Safety System – Suite Demising Wall | 2024-11-28 |  |
| 70 | 2.2.1 | **8th Floor -** The sealant between the concrete ceiling and precast panel was not installed and the stud installation had already been completed. However, as per the architectural detail 1/A7-19a, sealant should be installed at the noted joint (Refer to Photograph No. 15). Contractor to repair. | Exterior Closure – Sealant – Precast Panel and Concrete Ceiling | 2024-11-28 |  |
| 73 | 2.1.1 | **8th floor –** At the back of the precast panel, the mineral wool insulation at the back of the precast panel was not installed and the studs installation had been completed (Refer to Photograph No. 2). Contractor to install mineral wool insulation along with the fibreglass insulation and vapour retarder at the precast panels as per the architectural wall type 1/A7-19a. | Exterior Closure – Insulation & Vapour Retarder - Precast Panel | 2024-12-11 |  |
| 73 | 2.2.1 | **9th floor -** At the swing door locations, the 6-mil from the concrete curb was sealed to the beauty cap of the sill angle; however, the 6-mil poly should be sealed to the sill angle (Refer to Photograph No. 3). Contractor to repair. | Exterior Closure – Vapour Retarder - Precast Panel | 2024-12-11 |  |
| 75 | 2.1.1 | **2nd floor to 4th floors -** At the **horizontal joint between the precast panels**, contractor had installed a weep hole in the exterior sealant (Refer to Photograph No. 1). However, no weep hole should be installed in the horizontal sealant joint between the precast panels as per the architectural detail 14/A7-25. Contractor to repair as noted. | Exterior Closure – Sealant – Precast Panel | 2024-12-18 |  |
| 75 | 2.1.2 | **2nd floor to 4th floors -** At the **vertical joints between the precast panels**, contractor installed a weep hole at the underside of the precast panel with no transverse joint (Refer to Photograph No. 2). However, as per the architectural detail 9/A7-25, transverse weep hole should be provided at the vertical face, between the precast panels. Contractor to repair as noted. | Exterior Closure – Sealant – Precast Panel | 2024-12-18 |  |
| 75 | 2.1.3 | **2nd floor to 4th floors -** At the **2nd, 3rd and 4th floors, L-shaped precast panels with heated space above**, the sealant at the bottom of the ceiling slab edge to precast panel was not installed (Refer to Photograph No. 3 and 4). Contractor to **a)** install sealant at the bottom of the slab edge to precast panel as per the architectural detail **5 & 6/A7-16** and **b)** at transition from heated space to balcony, the sealant should loop back (2-stage vertically) to the firestopping sealant at the top of the slab edge to precast panel. | Exterior Closure – Sealant – Precast Panel and Concrete Ceiling | 2024-12-18 |  |
| 76 | 2.1.1 | **Parking Garage -** As per the architectural specifications, Tremco Traffic Topping should be installed at parking garage; however, Neogard TT (FC7500 / FC7510-11) was being used. **Architect to review and approve the substituted product**. | Traffic Topping – Parking Garage | 2025-01-07 |  |

Two