LAKE ROAD PLAZA
ROOF CONDITION REPORT

Prepared by:
William St Croix
Healthy Home Inspections CFL, LLC
hhicfl@ive.com
321-527-8480

EXECUTIVE SUMMARY
7780 & 7790 Lake Rd Orlando, FL 32821

Scope of Inspection

On Friday, October 27th 2017, a visual site review of the roofing system was conducted on the above referenced property. The review was intended to provide a surface analysis of the roof system assembly and note visible deficiencies. This Limited Commercial Building Inspection was limited to the following items of interest to the client:

1. The condition of the roofing system and components
2. Identify the cause of water leaks throughout the ceiling areas of the building
3. Identify items that would require repair and/or corrective action

Reasonable effort was made to view all safely accessible areas of the subject property. Concealed items cannot normally be inspected without using invasive procedures or special testing equipment that is beyond the scope of this type of general inspection. This limited Commercial Building Inspection Report may not address every problem that may exist with this property at the time of this inspection.

The following attendees were present at the initial meeting October 14th at 9:30 AM

William St Croix, Inspector	Inspector, Healthy Home Inspections CFL, LLC
Steven Stevens	Owner of Subject Property

Statement of Opinion

This report contains professional opinions by the author, based on data received or gathered, to date. Any facts, information circumstances, documents, drawings, photographs, reports, records, or other conditions that have not been reviewed by Healthy Home Inspections CFL, LLC, may change, impact, alter or amend portions of this report. Should any portion of this report be found to contain errors, Healthy Home Inspections CFL, LLC, shall have the opportunity to correct said errors without penalty in any form. This report is furnished in good faith and Healthy Home Inspections CFL, LLC has made every reasonable effort to make this report accurate and authoritative, but Healthy Home Inspections CFL, LLC makes no warranty and assumes no liability for the accuracy or completeness of the report or any damages

resulting from the use, application, or adaptation of the information contained herein, whether such damages are direct or indirect or lost profits or consequential damages.

History

The roof system was installed in 2017. The membrane roofing system consisted of UltraPly TPO thermoplastic polyolefin membrane manufactured by Firestone Building Products Company and was mechanically attached through the insulation to a structurally sloped steel deck supporting the roof system.

The membrane was mechanically fastened with fasteners and Seam Plates at 12" centers on 6" wide laps of the 10-foot-wide sheets. Fastening will be doubled at the 14'.6" foot wide perimeters at Building (1) and 16'.8" wide perimeters for Building (2) by adding and additional row of fasteners to the center of each 10' foot wide sheet. All seams to receive a 1.5" heat weld. Firestone recommends all hand welded seams to consist of a 2" heat weld.

Base flashings at walls and curb consisted of UltraPly TPO thermoplastic polyolefin single-ply membrane set in Firestone UltraPly Bonding Adhesive.

Small penetration flashings consisted of UltraPly TPO membrane the same as roofing membrane.

Metal flashings and drainage components were shop fabricated of materials, gauges, and finishes per shop drawings. All metal to which plies are adhered appeared to be primed per manufacturer's requirements.

The mansard roofs consisted of Spanish "S" clay tile manufactured by Santafe Tile Corp. installed over WeatherLock Specialty Tile & Metal Self-Adhering Membrane. The tile was attached with foam roof tile adhesive paddy and one additional fastener at 12:12 slope.

Recently, it appeared that numerous repairs where attempted evidenced by patching and areas where the membrane seams were cleaned to receive repaired welds. The owner stated that the roof had a history of leaks over several months and did not appeared to be corrected. An infrared scan and capacitance moisture meter detected elevated moisture levels… there was no moderate or significant rainfall within that last several weeks before the moisture survey was conducted.

Site observation

Deficiencies in the roof system:

BUILDING 1:

1. Items noted are as follows: Condensate pipes – secure all condensate pipes to the roof system per manufacturer requirement.
2. Condensate pipes: advisable not to install condensate pipes into scuppers. This will cause standing water problems.
3. Secure exhaust hoods to curbs properly.
4. Per manufacturer's requirements and technical specifications, Firestone does not warrant products incorporated or utilized in the installation that were not furnished by Firestone. This was not complied to. GAF TPO EverGuard corner flashing was installed at curbs and other penetrations. This could void the Manufacturer's warranty.
5. Electric Flex cable: penetrated side of a curb. Recommend installation of lock tight washers and no sealant.
6. Goose neck vents: seal seams of goose neck vents (TYP) against water intrusion.
7. Coping metal: install metal counter flashing over the top of the coping flanges against the vertical walls (TYP).
8. Roof tile: install flashing or concrete over the roof tiles as per contract.
9. Louvers along vertical wall – install metal counter flashing over the flanges of the louvers (TYP) at 2 locations.
10. Taper insulation between scuppers: do not appear to be installed per contract drawings and plans.
11. *Contract drawings require TPO to be 60 mils. The TPO membrane installed was 45 mils
12. Stucco accent bands allowing moisture entry into wall assembly
13. Stucco accent: Missing expansion joints caused damage to accents
14. General note: Verify from roofing contractor, owner, or GC changes contrary to the plans and specifications were approved…otherwise; all work must meet specifications and plans

BUILDING 2:

1. Items noted are as follows: coping metal attachment, contract calls for coping metal to be secured at 12" on center. Not in compliance.
2. Equipment curb B are flashing, add unsupported patches over T-Joints as required per manufacturers installation guide. As needed. (Detail #3 A7.04)
3. Mixed manufacturer components…outside corner patch observed was (GAF) not Firestone. Not compliant with Firestones warranty.

4. Perimeter edge metal at corners: Single ply membrane not properly adhered to edge metal flanges (TYP).
5. Perimeter edge metal: at various locations, the continuous cleat has not been hooked properly to the fascia metal. Also, there are locations where the cleat was not installed as required per contract.
6. Coping cap at wall termination are not properly sealed (TYP)
7. Coping caps at wall termination do not have proper metal counter flashings.
8. Metal counter flashings are not properly secured against high wind conditions.
9. Edge metal not in compliance with SMACNA and specification drawings…coping not sloped to inside of building. Recommend destructive investigation to verify attachment pattern per plans and specification and to verify proper type and fastener size.
10. Galvanized goose neck vent seams are open to water migration.
11. Goose neck vents – install T-Patches at locations required, and are missing as per manufacturer.
12. Condenser units: flex cable and copper tubing that that routes into the goose neck vents, shall have a drip line to protect from water running down the lines into the vents.
13. Advisable to install walk treads next to the A/C units for protection.
14. Open lap seams: Open seams were found along the bare flashing of the A/C units, top of parapet walls, perimeter of scuppers
15. Splash pads: install protection splash pads below each downspout that drain into a lower roof area for protection to the roof system.
16. Interior parapet walls: Found open T-joints and seams along the surface of the vertical walls.
17. Roof head wall flashing roof ties are not properly sealed across the top of the roof tiles at the mansard roof areas. Contract calls for mortar to be applied at minimum. A more positive feature would be to install lead flashing over the roof tiles.
18. Coping metal: various locations, the coping is not properly hooked to the continuous cleats.
19. Roof to wall flashings on tile roof: the angle flashing metal shall be counter flashed with a surface mounted counter flashing. Typically, at all roof to wall flashings for tile roof systems.
20. Downspouts: advisable to install additional wall brackets to properly secure downspouts to the walls (TYP). Wall bracket fasteners should be hidden
21. Condensate pipes: all condensate pipes shall be properly supported across the roof. All supports shall be fully adhered to the roof system for protection to high wind events.
22. Taper crickets: along the rake sides of the building, there are 2 locations that has standing water, corrections advisable to properly drain water.
23. Taper crickets between scuppers: according to the contract drawings, the crickets are to have a 45° taper. This was not complied to during application.
24. Seam sealer: apply seam sealer per manufactures requirements at all locations the membrane has a cut edge exposed to the elements.
25. Condensate pipes: advisable not to place condensate pipes into primary scuppers. This will affect the proper flow of water draining off the roof.

26. Scuppers: not sumped to prevent water from damming at scupper locations
27. Scupper face plate: not fastened or sealed around perimeter
28. Collector heads: not fastened or sealed around perimeter
29. Parapet coping cap transition into single ply membrane using the clad metal for positive terminations.
30. Masonry anchors through termination bar should have sealant or neoprene washers
31. Could not verify screws and plates around curbs and penetrations under the base flashing
32. Many sections of wall membrane not fully adhered. The material membrane was gaged at 45 mils. The contract drawings specify roof field sheet/wall membrane to be 60 mils. This was not complied to.
33. Attachment of roof tiles to decking. Contract calls for roof to each have one fastener along with foam adhesive under each roof tile. At many locations, this was not complied to.
34. Electrical support attachment through the base flashings can void warranties. Corrective action is required to eliminate penetrations.
35. Single ply membrane surface damage: As a roof top observation was done over the single ply membrane, surface damage was found at various locations appear to be cut into the membrane at various locations.
36. Welds not consistent 1.5”-inch for robot welds and 2”-inch for hand welds if required
37. Self-tapping metal screws drilled through sheet metal shavings were not removed from roof and have caused surface rust on membrane.

INTERIOR INSPECTION of GALVINIZED METAL DECK

1. Unit #107: Rust observed on metal truss at truss/wall connection – (left elevation); other areas were observed.

2. Unit #108: Rust observed on bottom chord of metal truss. Other areas were observed.

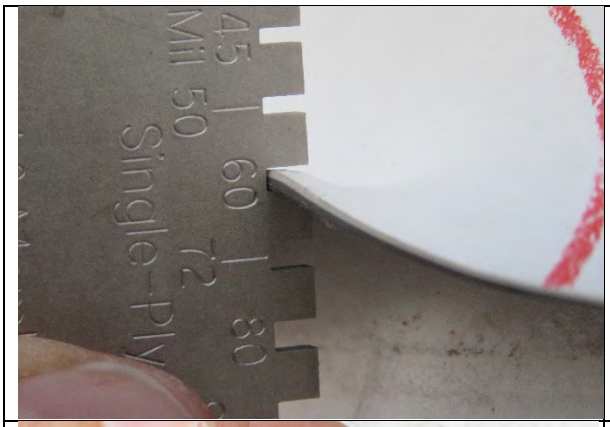
3. Unit #112: Water stain observed at ceiling tile located in storage closet

7790 LAKE ROAD PLAZA BUILDING 1

	**7790 Lake Road Plaza building (1) address**
	**Showing front view elevation**
	**Showing right view elevation.**

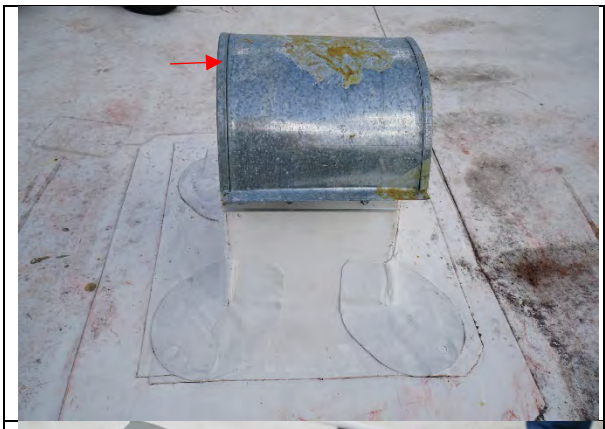
	**Showing left view elevation.**
	**Showing rear view elevation.**
	**Showing aerial (top) view.**

	**General roof view.**
	**Showing aerial photograph of roof tapered system. Bldg. (1)** **The taper crickets between scuppers according to the contract drawings should have a 45° taper. This was not complied to during application.**
	**Showing aerial photograph of roof tapered system. Bldg. (2)** **The taper crickets between scuppers according to the contract drawings should have a 45° taper. This was not complied to during application.**

	**The TPO membrane at wall was gaged at 45 mils.** **The contract drawings and specification require The TPO at walls and roof membrane be 60 mils. This was not in compliance.**
	**The TPO membrane at wall was gaged at 45 mils.** **The contract drawings and specification require The TPO at walls and roof membrane be 60 mils. This was not in compliance.**
	**The TPO membrane at wall was gaged at 45 mils.** **The contract drawings and specification require The TPO at walls and roof membrane be 60 mils. This was not in compliance.**

	**Recommend not terminating condensate pipes into scuppers. This condition could potentially trap roof debris and affect roof runoff to drain as designed.** **Recommend consulting with a roofing contractor/engineer about installing sumps to prevent water from damming at primary scuppers**
	**Recommend not terminating condensate pipes into primary scuppers. This condition could potentially trap roof debris and affect roof runoff to drain as designed.** **Recommend consulting with a roofing contractor/engineer about installing sumps to prevent water from damming at primary scuppers**
	**Exhaust hoods/curb connection should be installed with 12”-inch o.c. appropriate fastener and neoprene washer.**

	**Recommend installation of lock tight washers. The sealant will dry, crack, and shrink. This could potentially cause moisture intrusion into the roof assembly. Further evaluation by a licensed HVAC contractor.**
	**Showing electrical clamp support attached with fasteners through the base flashing. This can void Firestone's warranty. Corrective action is required to eliminate penetration.**
	**The flex cable and copper tubing from the HVAC condenser units entering the vent hood shall have a drip line to prevent moisture entry into the roof assembly.**

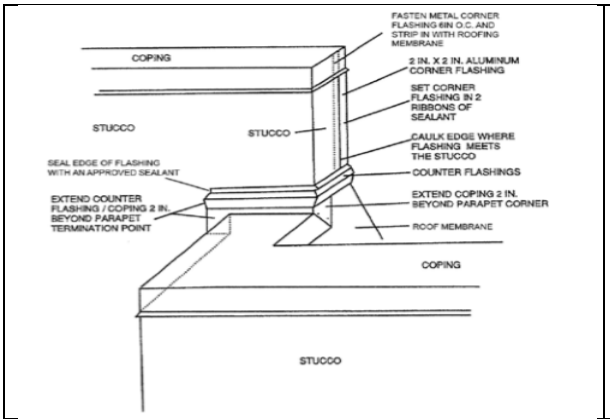
	**The goose neck vent seams are open to water intrusion. Recommend sealing with appropriate sealant.**
	**The vent hood was damaged and should be corrected to prevent moisture entry into the roof assembly.**
	**Exhaust hoods/curb connection should be installed with 12”-inch o.c. appropriate fastener and neoprene washer.**

	**Downspouts should be properly secured with additional hidden brackets. This was observed at all rooftop downspouts.**
	**Downspouts should be properly secured with additional hidden brackets. This was observed at all rooftop downspouts.**
	**General view of the louver access hatch located below roof towers.**

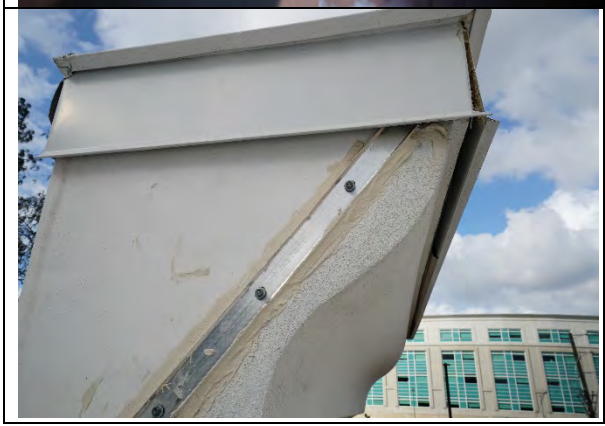
	**Recommend installing metal counter flashing over the louver flange to prevent moisture intrusion.**
	**General view of stucco accent band.**
	**Voids at miters should be sealed with appropriate sealant to prevent moisture intrusion into the wall assembly and the roof assembly.**

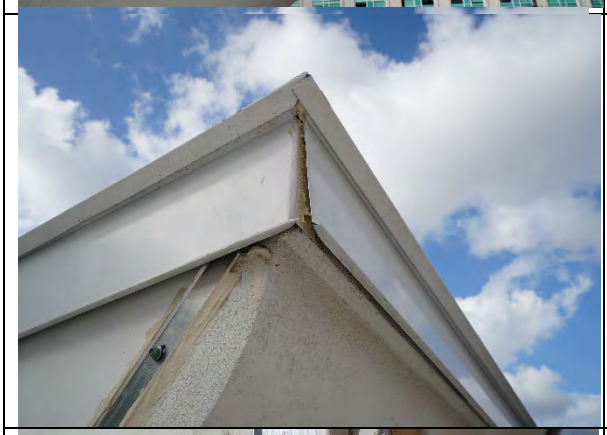
	**All horizontal stucco accent bands should have a 1”-inch cove joint/cant applied at top of stucco band/exterior wall attachment to prevent moisture entry into wall and roof assemblies.**
	**The stucco accent band should have had an expansion joint installed to prevent cracking.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed to prevent moisture intrusion.**

	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed to prevent moisture intrusion.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**
	**Showing improper and poor workmanship of coping termination at parapet wall termination.**

	**Showing a sample Coping Termination at Parapet Wall Detail.**
	**Showing coping cap termination at tilt wall.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**

	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**
	**Showing void at coping cap parapet wall termination.**
	**Roof-to-wall flashing at mansard tile roof tilt wall connection should be counter flashed with a surface mounted flashing. (Typical), at roof-to-wall flashing for tile roof systems.**

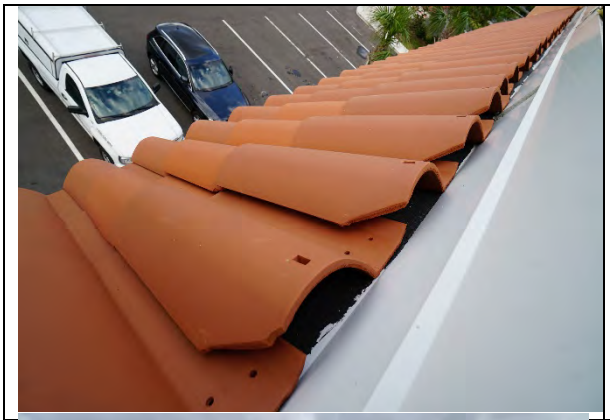
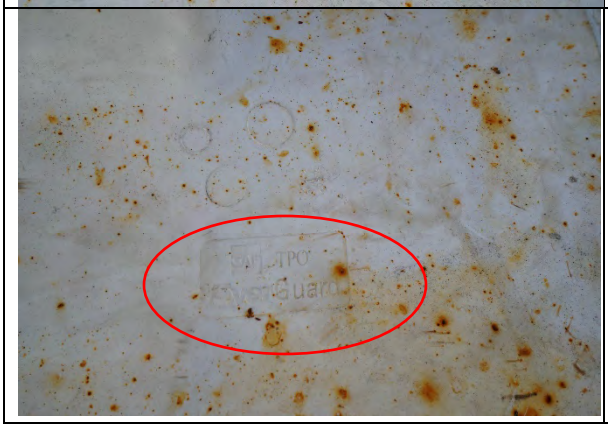
	**Roof-to-wall flashing at mansard tile roof tilt wall connection should be counter flashed with a surface mounted flashing. (Typical), at roof-to-wall flashing for tile roof systems.** **The photograph shows the flashing separating from wall. This condition will allow water to leak into lower roof assembly.**
	**Roof-to-wall flashing at mansard tile roof tilt wall connection should be counter flashed with a surface mounted flashing. (Typical), at roof-to-wall flashing for tile roof systems.** **The photograph shows the flashing separating from wall. This condition will allow water to leak into lower roof assembly.**
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**

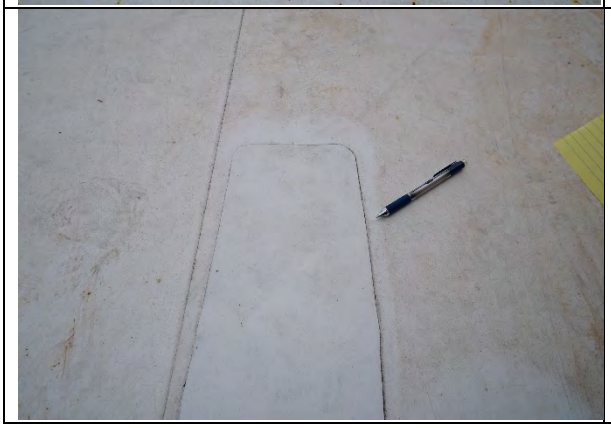
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**

	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**
	**Metal counter flashing at exterior stucco wall/roof connection did not have clips or fasteners to prevent against high wind events.**

	**Plans, specifications and contract require coping metal to be secured 12”-inch o.c. This was not in compliance.**
	**Metal coping cap not in compliance with specifications and contract. Coping was not sloped ½”-inch per foot towards the inside of the roof.**
	**Metal coping cap not in compliance with specifications and contract. Coping was not sloped ½”-inch per foot towards the inside of the roof.**

	**Parapet cap at tilt wall was not sloped ½”-inch per foot towards the inside of the roof per specifications.**
	**Head wall flashing at tile mansard/parapet wall connection was not properly sealed across the top of roof tiles. The contract calls for mortar to be applied at a minimum. A more positive feature would be to install lead flashing or Wakaflex flashing over the roof tiles.**
	**Head wall flashing at tile mansard/parapet wall connection was not properly sealed across the top of roof tiles. The contract calls for mortar to be applied at a minimum. A more positive feature would be to install lead flashing or Wakaflex flashing over the roof tiles.**

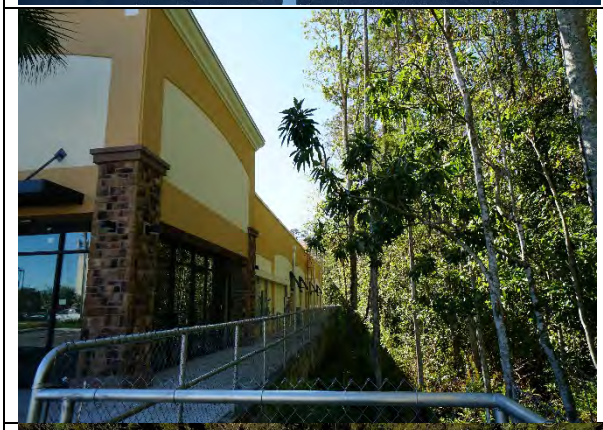
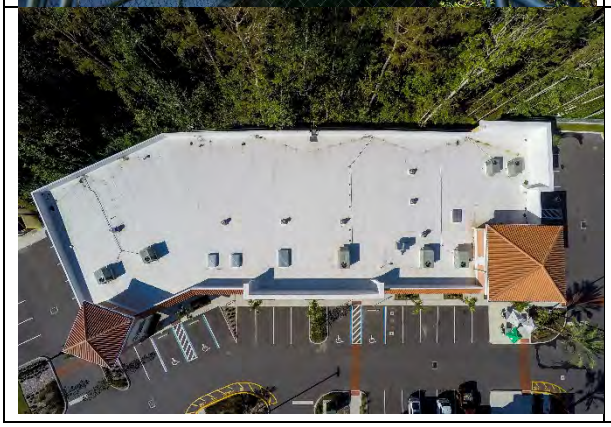
	**Hazardous Condition** **The contract requires that the clay roof tiles be attached to roof with one fastener along with a large paddy of foam adhesive under each tile. At, many locations this was not complied to. This condition is a hazard and requires immediate correction to prevent severe injury or death.**
	**Per manufacturer's requirements and technical specifications, Firestone does not warrant products incorporated or utilized in the installation that were not furnished by Firestone. This was not complied to. GAF TPO EverGuard corner flashing was installed at curbs and other penetrations. This could void the Manufacturer's warranty.**
	**Per manufacturer's requirements and technical specifications, Firestone does not warrant products incorporated or utilized in the installation that were not furnished by Firestone. This was not complied to. GAF TPO EverGuard corner flashing was installed at curbs and other penetrations. This could void the Manufacturer's warranty.**

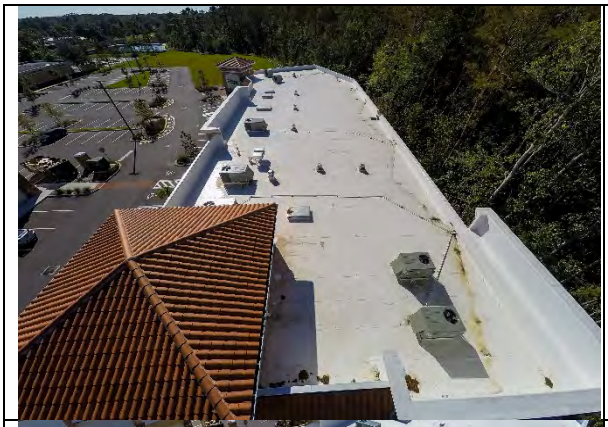
	**Per manufacturer's requirements and technical specifications, Firestone does not warrant products incorporated or utilized in the installation that were not furnished by Firestone. This was not complied to. GAF TPO EverGuard corner flashing was installed at curbs and other penetrations. This could void the Manufacturer's warranty.**
	**Self-tapping metal screws drilled through sheet metal shavings were not removed from roof and have caused surface rust on membrane.**
	**Recommend adding edge cut sealant per manufacturer's requirements. This condition was observed at many locations and needs to be sealed everywhere the membrane has a cut edge.**

	**Showing a TPO membrane cut edged sealed per manufacturer's requirements.**
	**Showing open lap seam underneath counterflashing.**
	**Showing condensate pipes with incorrect slope. This condition can cause moisture not to drain properly clogging the pipes.**

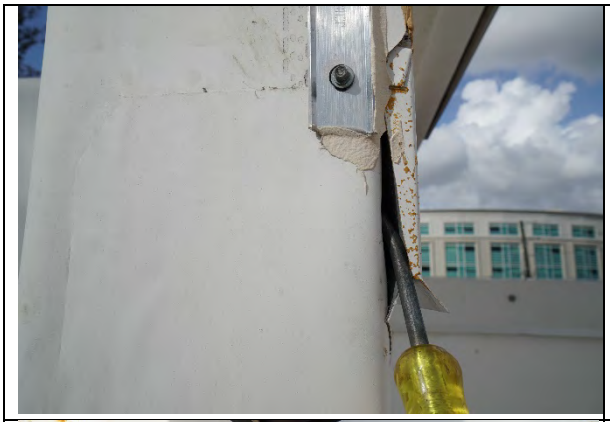
7780 LAKE ROAD PLAZA BUILDING 2

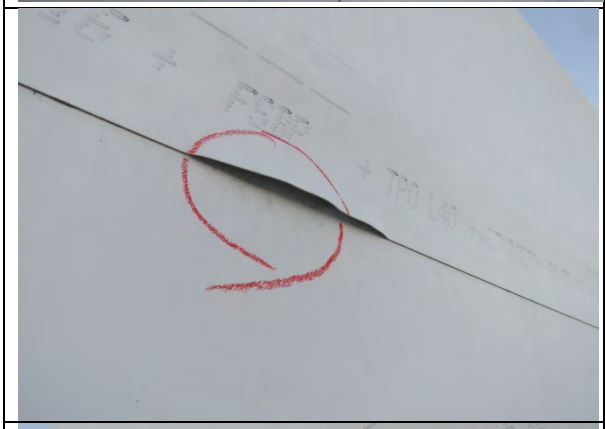
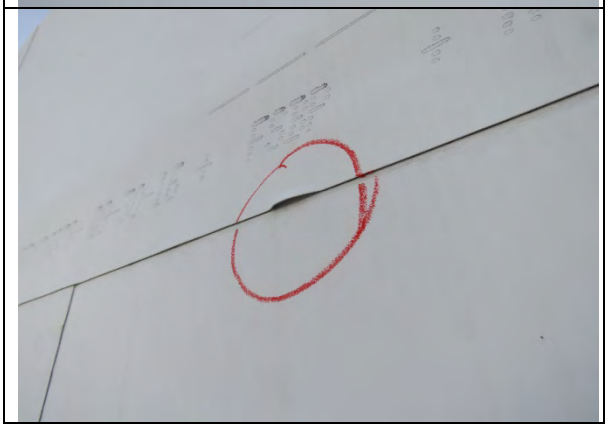
	**7780 Lake Road Plaza Building (2) address.**
	**Showing front view elevation.**
	**Showing right view elevation.**

	**Showing left view elevation.**
	**Showing rear view elevation.**
	**Showing aerial (top) view**

	**Showing aerial photograph of roof tapered system. Bldg. (2)** **The taper crickets between scuppers according to the contract drawings should have a 45° taper. This was not complied to during application.**
	**Showing aerial photograph of roof tapered system. Bldg. (2)** **The taper crickets between scuppers according to the contract drawings should have a 45° taper. This was not complied to during application.**
	**Showing aerial photograph of roof tapered system. Bldg. (2)** **The taper crickets between scuppers according to the contract drawings should have a 45° taper. This was not complied to during application.**

	**Showing roof deflection at parapet wall/roof connection. This condition allows water to pond. Infrared thermography and capacitance moisture scanner showed elevated levels of moisture. This location is above Quest Diagnostics where active leaks were detected.**
	**Missing tapered cricket. Ponding water was observed. Recommend correction by adding tapered cricket to allow water to drain as designed.**
	**Open lap seam at top corner of parapet wall.**

	**Showing open lap seam underneath counterflashing.**
	**Showing open lap seam at outside corner patch at base of goose neck vent.**
	**Missing T-patch at base of goose neck per manufacturers requirements.**

	**Showing open lap seam underneath counter flashing.**
	**Open lap seam at parapet wall.**
	**Open lap seam at parapet wall.**

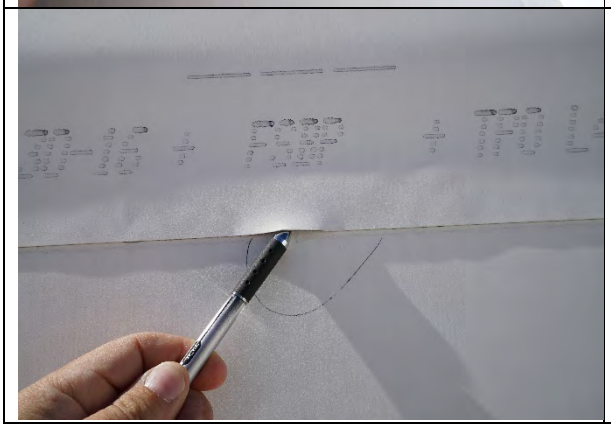
	**Open roof membrane lap seam located at base of curb.**
	**Open lap seam outside corner patch at base of A/C curb.**
	**Open lap seam outside corner patch at base of A/C curb.**

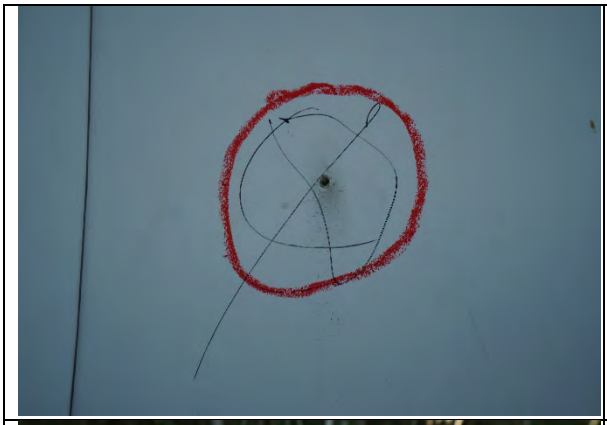
	**Recommend adding edge cut sealant per manufacturer's requirements. This condition was observed at many locations and needs to be sealed everywhere the membrane has a cut edge.**
	**Open laps seams in corner wall/roof connection at right rear elevation for building (2) above Quest Diagnostics.**
	**Open laps seams in corner wall/roof connection at right rear elevation for building (2) above Quest Diagnostics.** **This most likely appears to be the location of leak above Quest Diagnostics.**

	**Walk pads not correctly welded per manufacturer's requirements.**
	**Showing open lap seams in roof membrane at base of RTU's**
	**Showing open lap seam at roof tower exterior wall/parapet wall connection. This condition can potentially allow moisture entry into both the wall and roof assemblies**

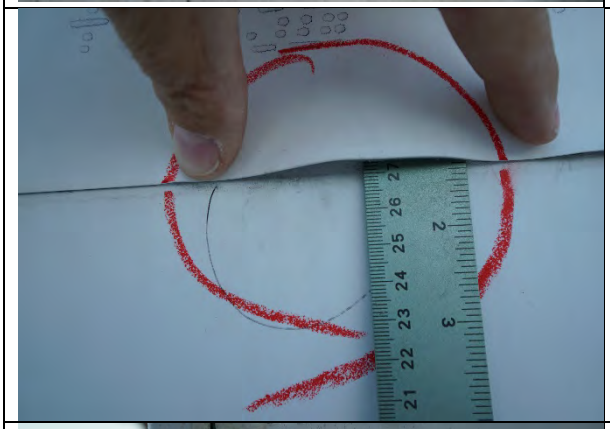
	**Missing T-patches at base of vent hood and other location were observed. Manufacturer requires this.**
	**Open lap seams at inside corner of parapet wall.**
	**Showing a puncture to the surface roof membrane. Corrective action required to prevent water leaking beneath membrane and into the roof assembly.**

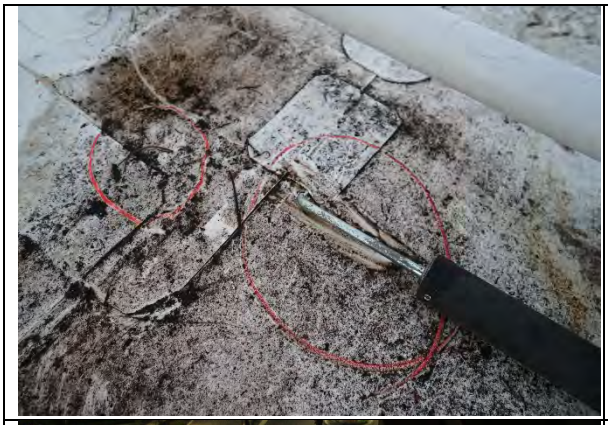
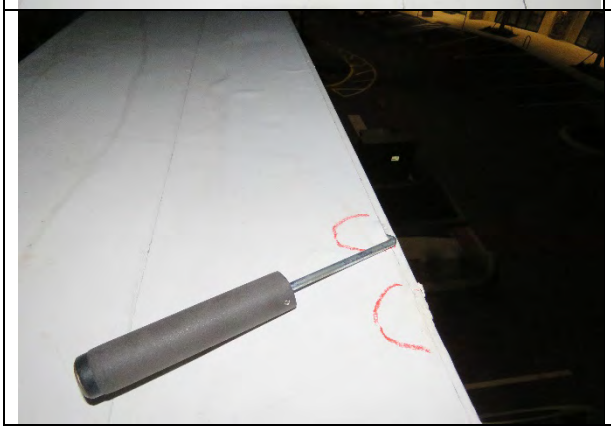
	**Many sections of the large and small parapet walls were not fully adhered with bonding adhesive as required by specification.**
	**Many sections of the large and small parapet walls were not fully adhered with bonding adhesive as required by specification.**
	**Single-ply membrane surface damage founded at various locations. The slice did not appear to penetrate the membrane, but further evaluation required.**

	**Single-ply membrane surface damage founded at various locations. The slice did not appear to penetrate the membrane, but further evaluation required.**
	**Open lap underneath edge flashing parapet wall transition.**
	**Open lap seams at parapet wall.**

	**Showing a puncture to the surface wall membrane. Corrective action required to prevent water leaking beneath membrane and into the wall/roof assemblies.**
	**Showing open lap seam at top of larger parapet wall.**
	**Showing open lap in corner of parapet wall/tower exterior wall connection.**

	**Open lap seams at parapet wall.**
	**Open lap seams at scuppers. This scupper was located above Quest Diagnostic where leaks were reported.** **The contractor made several attempts to repair leak. Infrared thermography and a capacitance moisture scans identified elevated moisture levels. A visible inspection was made at the interior sealing where staining was visible. Recommend further evaluation.**
	**Open lap seams at scuppers. This scupper was located above Quest Diagnostic where leaks were reported.** **The contractor made several attempts to repair leak. Infrared thermography and a capacitance moisture scans identified elevated moisture levels. A visible inspection was made at the interior sealing where staining was visible. Recommend further evaluation.**

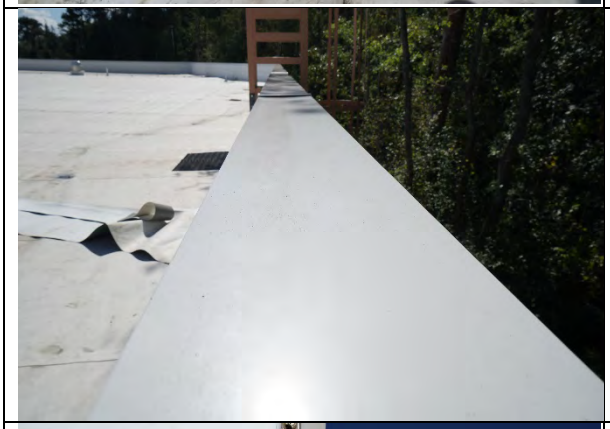
	**Open lap seams at scuppers. This scupper was located above Quest Diagnostic where leaks were reported.** **The contractor made several attempts to repair leak. Infrared thermography and a capacitance moisture scans identified elevated moisture levels. A visible inspection was made at the interior sealing where staining was visible. Recommend further evaluation.**
	**Open lap seams at parapet wall.** **At many locations found welds not consistent with the 1.5”-inch weld per manufacturer’s specifications.**
	**Open lap seams were found along parapet walls, perimeters of scuppers, on top of parapet walls and roof membrane,**

	**Open laps seams observed at roof membrane close to parapet wall.**
	**Open laps at top of parapet wall. This condition will allow moisture to leak beneath membrane and potentially leak into the roof assembly.**
	**Open laps at top of parapet wall. This condition will allow moisture to leak beneath membrane and potentially leak into the roof assembly.**

	**Showing open lap seam at top inside corner of parapet wall.**
	**Missing splash pads at bottom of downspouts. This condition will accelerate the deterioration of the membrane.**
	**Missing splash pads at bottom of downspouts. This condition will accelerate the deterioration of the membrane.**

	**Downspouts need additional brackets to be properly secured.**
	**Missing bracket at the top section of the downspout. Recommend securing bracket to wall.**
	**The scupper face plate should be fastened to exterior wall and sealed around perimeter.** **The collector heads should also be attached with appropriate fasteners and sealed around perimeter.**

	**The brackets (straps) should be properly secured to the walls. The Brackets should be hidden.**
	**Condensate pipes shall be properly supported across the roof. All supports should be fully adhered to the roof system for protection from high wind events.**
	**Plans, specifications and contract require coping metal to be secured 12”-inch o.c. This was not in compliance.**

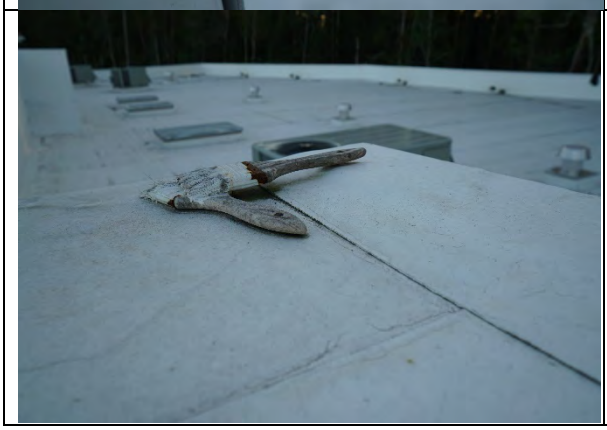
	**Recommend not terminating condensate pipes into scuppers. This condition could potentially trap roof debris and affect roof runoff to drain as designed.** **Recommend consulting with a roofing contractor/engineer about installing sumps to prevent water from damming at primary scuppers**
	**Metal coping cap not in compliance with specifications and contract. Coping was not sloped ½"-inch per foot towards the inside of the roof.**
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**

	**Showing screw hole in metal flashing. Recommend sealing to prevent moisture entry.**
	**Termination should be sealed with appropriate sealant per drawings.**
	**Masonry anchors through termination bar should have appropriate sealant or neoprene washers.**

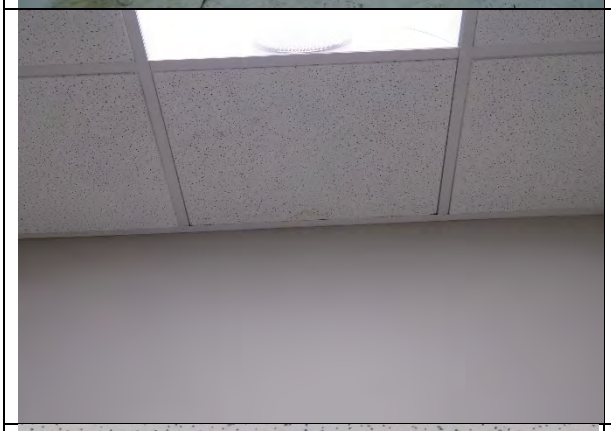
	**The perimeter edge metal at various locations was not hooked properly to the fascia metal. Also, observed, many locations did not have any continuous cleats installed as required per specifications and contract.**
	**Metal counter flashing at exterior stucco wall/roof connection did not have clips or fasteners to prevent against high wind events.**
	**Metal counter flashing at exterior stucco wall/roof connection did not have clips or fasteners to prevent against high wind events.**

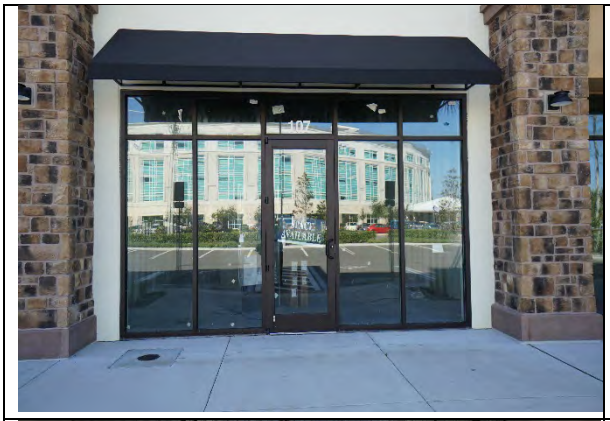
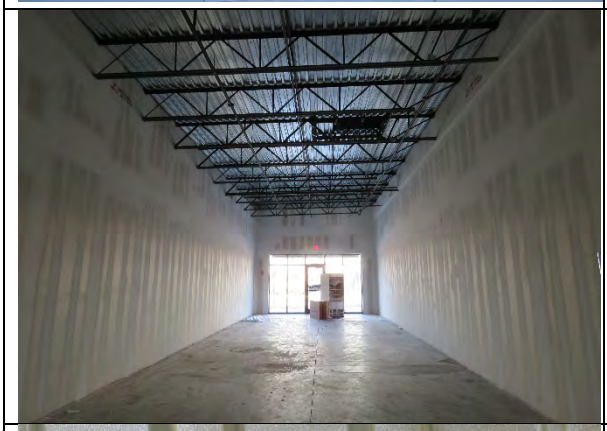
	**Exhaust hoods/curb connection should be installed with 12”-inch o.c. with appropriate fastener and neoprene washer.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**

	**Recommend installation of lock tight washers. The sealant will dry, crack, and shrink. This could potentially cause moisture intrusion into the roof assembly. Further evaluation by a licensed HVAC contractor.**
	**Improper termination of metal coping cap at parapet wall termination. Metal counter flashing should be installed over the top of the coping flanges. Expansion and contraction will cause voids potentially allowing moisture to enter the parapet wall and roof assemblies.**
	

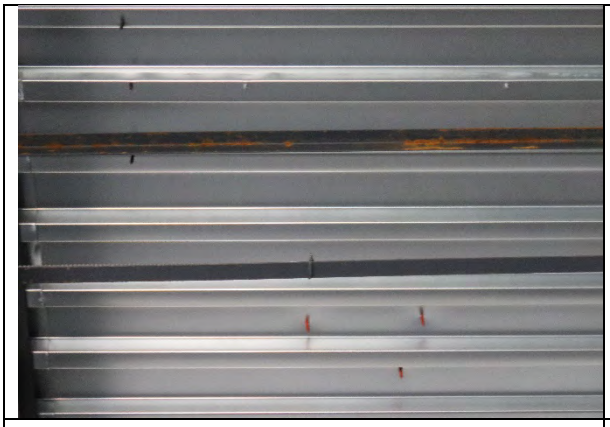
	**Metal coping cap not in compliance with specifications and contract. Coping was not sloped ½”-inch per foot towards the inside of the roof.**
	**Showing open seam at edge flashing at parapet wall**
	**Showing paint brushes stuck to membrane at top of parapet wall.**

	**Showing left over TPO membrane left of roof.**
	**Plans, specifications and contract require coping metal to be secured 12”-inch o.c. This was not in compliance.**
	**Showing roof deflection at parapet wall/roof connection. This condition allows water to pond. Infrared thermography and capacitance moisture scanner showed elevated levels of moisture. This location is above Quest Diagnostics where active leaks were detected.**

	**Showing close-up photograph of deflection above Quest Diagnostics. The stained roof membrane indicates moisture not draining towards primary scuppers as designed.**
	**Showing water stain at storage area closet along the exterior perimeter walls. These stains reappeared after previous roof leak was repaired.**
	**Showing a close-up photograph of stained ceiling tile located in Quest Diagnostic storage closet.**

	**General view of exterior unit #107**
	**General view of interior unit #107**
	**Showing rust on steel trusses under the metal roof deck indicates roof leaks.**

	**Showing rust on steel trusses under the metal roof deck indicates roof leaks.**
	**General view of unit # 108**
	**General view of interior unit # 108**

	**Showing rust on steel trusses under the metal roof deck indicates roof leaks.**