

Lithia Dodge East 5500 L St. Omaha, NE





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Litha East 5500 L St, Omaha, Nebraska



Perimeter Photos

Failed Joints at North Rear Wall



Inadequate Downspout Elbows

Control Joints Look Good







Minor Efflorescence





Roof Overview Section 1



Existing Coping Stone Still Usable



Missing Roof Jack Cap



Missing Coping Stone



Water Evidence in Block Below Missing Coping



Nicely Flashed and Installed HVAC Details



Roof Overview Section 2



Nicely Flashed and Installed Cap Metal

Nicely Flashed and Installed HVAC Details



Roof Overview Section 3



Pulling Membrane at Vertical Wall (East)



Pulling At Curb



Pulling Membrane at Vertical Wall (North)



Membrane Pulling Against Metal Flashings











Roof Overview Section 3



Minor Rusting at Seams (Typical)



Possibly Vandalized HVAC Unit



Possibly Vandalized HVAC Unit



Missing Roof Jack Cap

Rusting Panel Behind HVAC Unit



Roof System:

Roof sections 1,2 and 4 use a Trapezoidal Standing Seam Metal System. Water flows at approximately 2" per foot to gutters and downspouts.

Section 3 uses a Ballasted EPDM system with insulation on a metal deck. Water flows at approximately 1/2" per foot to an internal gutter.

Roof Evaluation

Section 1 is in good condition overall. The metal has virtually no rusting and field seams look good. There are fasteners in places that have lifted, but this is not uncommon for a roof of this age. The ridge has gaps where each panel seam enters the ridge cap because the gasket seals of this detail have aged and worn out. Again, this is not uncommon for a roof of this age and does not necessarily mean that leaking is occurring. A **roof jack (furnace stack) cap is missing.** This is certainly letting water into the HVAC system. A **coping stone on the northwest corner has detached and fallen on to the roof field.** This has exposed the parapet wall masonry to water. Water penetration into the masonry can be seen on this corner all the way down the wall with darker wet spots along the top half of the wall and efflorescence (white mist) in the block towards the bottom of the wall. The rear block wall itself is in good condition. Control joints in the block look good. There just a few failed joints just below the gutter run. **Downspouts do not have adequate extensions and water is running along the base of wall**. This is causing erosion along this detail.

Section 2 is in excellent condition. The field is rust free and panel seams look excellent. The parapet walls on this section nicely and properly flashed with EPDM membrane and topped with cap metal. HVAC units were nicely flashed with crickets to direct water around them. A very nice installation.

Section 3 is in good condition overall. The roof has good slope which really helps a roof's life expectancy. The field is loaded with skylights which is often a liability from a roofing perspective but these were nicely flashed at the time of installation and the skylight metal components look to be in nice shape as well. **Two of these skylight curbs have heavily pulled EPDM membrane. The entire north vertical wall and entire east parapet wall have significantly pulled membrane.** It is pulling to a point where it is pressing against the metal wall flashing above and could cut open in the future. Pulling is very common with Ballasted systems. At the gutter edge, **a metal gravel stop edge was installed along the entire run instead of installing drain bar. This was a poor idea.** The raised 2" edge of the gravel stop negates some of the great roof slope and is causing water to pond along this edge. Slots were cut in, but this is not sufficient and leaves more opportunities for failures in the future. This edge will deteriorate faster than other components of the system, but is acceptable for now. It should be noted that a far better design in the future will be to install a Fully Adhered EPDM system. First of all, the roof's relatively small size would have made upgrading to a fully adhered roof quite inexpensive. This would have eliminated any realistic possibility of pulling (especially with all the curbs that exist on this little roof). Finally, a fully adhered roof would have eliminated the need for drain bar or gravel stop edge at the gutter, allowing clear water flow to the internal gutter. This internal gutter likely has freeze problems in the winter. **Finally, a roof jack cap is missing on this section**.

Section 4 is in excellent condition. There is minor rusting starting at the field seams, but this can be monitored year and could be coated in 5-7 years to extend the system for another 10 years. A large HVAC unit has fallen panels and some wind damage. The panels are on the roof field. A condensation line from this unit is causing significant surface rust down one panel as the water from the unit runs down it to the gutter.

Roof Section Summary

Recommendations:

Section 1 should have the existing coping stone secured back on the parapet wall and sealed. Any masonry joints directly below this detail that have failed because of this should be cleaned and sealed as well. The missing roof jack cap on section 1 should be replaced and properly secured. It would also be advisable to add downspout extensions to direct water away from the foundation. The rear block wall should have the few runs of failing joints filled with sealant. Budget number for this work would be \$900.

Section 2 has no immediate work needed.

Section 3 should have the north and east vertical walls cut open, the membrane relaxed and new membrane installed and tied into the roof field to alleviate the pulling. RPF strip (a strip that uses fasteners and plates drilled into the masonry) should be installed first to pin the new membrane to the wall to help keep the walls from pulling apart in the future. Merely cutting the rubber and gluing in new membrane up the wall is far cheaper but will pull apart again very easily. Two skylight curbs that are pulling should be reflashed in the same manner. The missing roof jack cap should be replaced. A budget number for all repairs on this section would be \$3100.

Section 4 should have an HVAC contractor inspect the metal panels to insure that they can be properly resecured or they should be replaced. It would be advisable to have the contractor inspect the entire unit as it appears possible that it was vandalism and not wind that caused some of the damage. An extension hose should be installed on the condensation line and it should be run to the gutter to stop the rusting that is being caused on that metal roof panel.

Estimated Life:

Section 1: The roof should perform for another 10+ years.

Section 2: The roof should perform for another 10+ years.

- Section 3. The roof should perform for another 7-9 years with reflashing repair.
- Section 4: The roof should perform for another 10+ years.





Building Overview



