memorandum

Date: July 16, 2022

To: Wendy Cline, City of Ypsilanti
Ron Akers, AICP, City of Ypsilanti

From: OHM Advisors

Re: City of Ypsilanti Department of Public Services Building Inspection

Three buildings were examined at the City of Ypsilanti Department of Public Services (DPS) Yard, 14 W. Forest Avenue, on June 23, 2022. OHM met on site with Wendy Cline of the Ypsilanti staff, and examined the following:

Outside Storage Bldg. – This building houses miscellaneous materials and trailered items. The building has four bays with inoperable railed 12-foot-wide overhead doors. Door jambs are wood and are in poor condition. Door headers consist of steel wide flange beams set atop 4-inch diameter steel posts. The steel wide flange headers appear to be intact with minor surface corrosion. The pipe posts have corroded to failure at their bases, with two column bases completely gone (see Photo No.1). Roofing is corrugated metal and is intact. The roof is supported by wood 2x12 single slope rafters. These rafters appear intact (see Photo No.2). The three walls of the building vary in construction (south is concrete masonry, west is reinforced concrete, and north is wood frame) and appear intact. Recommendation: provide temporary support to the steel headers and remove the pipe posts. Replace all posts, cap plates, and base plates in kind. New posts can be anchored to the existing concrete foundation with new epoxy anchors.

Maintenance Building – This building houses the DPS maintenance and was formerly a coal storage building. The building consists of two reinforced concrete walls 40 feet apart with large wood warren trusses (72 inches high, 5-foot panels, and a flat top) spaced at 12 feet on center. The trusses span between the two concrete walls but are only found in the building center (See Photo No.3). There are no trusses at either the north or south ends of the building, leaving little or no support framing for the building ends. The truss components (chords, webs) have been heavily repaired and replaced. The roof of the building is a much later addition to the trusses and is a 45-degree pitched gable running the length of the building. The roof consists of two shingle layers, a plywood deck, a plank deck, 2x4 purlins, and a 2x6 frame down to the warren trusses (See Photo No.4). A 5-inch-thick layer of sprayed foam insulation coats the entire inside surface of the roof. Roofing observed from the outside is in obvious distress, with decking having sagged (creeped) to permanent large deflections (See Photo No.5). Support for the roof deck is sporadic and inadequate, with no trussed frames or beams to transfer load to the sidewalls or the large trusses. Conclusion and recommendation: ***The gable roof is in distress and represents a hazardous condition that will eventually result in partial collapse***. This roof should be removed and replaced. Repeated additions to roofing and deck loads, together with the lack of support framing between the original trusses and the gable roof deck, have destroyed the building roof. The recommendation is to remove the gable roof and all wood framing down to the two support concrete

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walls. Replace the framework with new engineered wood gable trusses spanning between the two concrete walls and provide conventional wood sheathing, batt insulation, and shingles.

Salt Storage Building – This building was shown by Ms. Cline as a potential future subject of structural inspection in depth. The building is wood, crib-style construction, and presents multiple member failures. Observed on this brief inspection were damaged side columns and shiplap siding, repaired wood truss bottom chords from equipment strikes, and corroded failure of side column bottom clips. Of special note - all wind columns at the north end of the building are completely broken at approximately 15 feet above floor level (See Photo Nos. 6 and 7). The columns have displaced toward the building interior. The recommendation is that this building be examined in detail and the local failures mapped for repair. The building is not occupied and therefore is not a high risk to staff. A precaution may be to close off the building and limit employee access.

Photo No.1

Photo No. 2

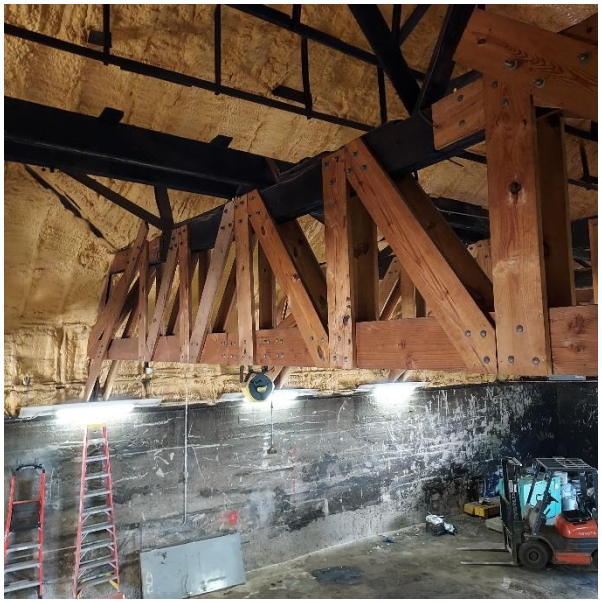

Photo No.3

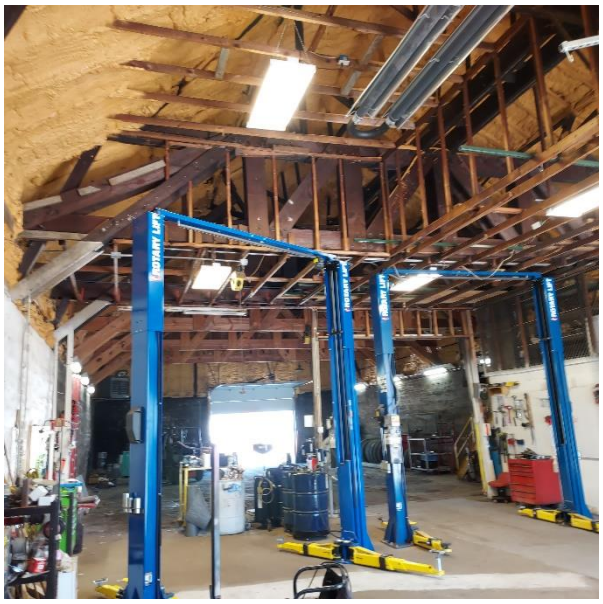

Photo No.4

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Photo No.5

Photo No.6

Photo No.7

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