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May 18, 2017

Mr. Gene Mathews  
Manager of Architectural Services  
**Dollar Tree Stores, Inc.**  
500 Volvo Parkway  
Chesapeake, VA 23320

Re.: Dollar Tree – D10537 Midway Marketplace 189 Hickory Tree Rd, Winston-Salem, NC 27107  
Structural Report on Findings, Site Visit (May 17, 2017)

Dear Gene:

**Broyles and Associates, P.C.** visited the above referenced property to ascertain the structural condition of the building and provide a survey of the floor and roof framing. This report serves as a summary of our findings and recommendations for repairs.

EXISTING CONDITIONS:

The proposed Dollar Tree is a former Walmart Express located in the rural setting of Winston-Salem, North Carolina (See Photo #1). The building is a part of a marketplace strip with high parapet walls and a roof access hatch in the rear of the unit adjacent. The building is in great structural shape. There were no structural deficiencies found during our investigation, except for effervescence on the CMU walls near the loading dock (See Photo #2). We believe the building to have been constructed in the 1970's and renovated in the 2000's.

The building is steel framed with two 24" deep steel truss joists until reaching the column at D7 on the S3 Steel Roofing Plan and then two 44" deep steel truss joists that span the rest of the length of the building (See Photo #3). The truss girders are comprised of double L4X4X1/4 top and bottom chords. They bear on steel columns along with the CMU demising wall on the sides of the building space. The deep steel bar joists are typically spaced at 5'-3" on center running front to rear of the building. The metal deck is a wide rib deck and is in good shape. There is a lot of mechanical and electrical piping that hangs down from the roof deck, especially in the rear of the retail space (See Photo #4). Even though this clutters up the top of the ceiling, it is in good shape and is not a structural concern. There is however, effervescence on the CMU wall in the loading dock room. It does not appear to have caused significant damage, but the roof should be checked for leakage. Again besides the effervescence, there are no structural concerns noted with the roof structure.

The steel framing in the front of the building extends outward past the storefront and bears on exterior concrete and stone columns along with the front store wall (See Photo #5).

There are 36" deep steel joists spaced between the front store columns near the windows from the demising wall on the Bedcock Furniture side and the building wall. The soffit consists of 6" metal studs spaced at 5'-3" on center framing back to the vertical 6" metal stud framing above the storefront windows. The front wall and parapet consists of 6" metal studs spaced at 5'-3" on center with EFIS exterior. There are also 3" diameter pipe diagonal brace at 5'-3" on center that connects from the 36" joist to the metal studs (See Photo #6). There are also L3x3 frame angles that reinforce the steel joists to the metal studs. Structurally, the front canopy and exterior is framed adequately.

There are four existing Lennox RTU's currently on the roof along with a Carrier RTU, however the Carrier and one of the Lennox RTU's will not be above the proposed Dollar Tree unit (See Photo #7). None of the Lennox units are identical, yet they seem to be in good condition. They are typically situated front to rear of the building and are supported by steel bar joists below. Please note that steel angles are present between the bar joists at the curb perimeter. If new RTU's are to be provided, we recommend putting them at these locations. Also, please note that there is a steel angle frame on the roof as well. There are also two refrigeration units near the store unit: a Kysor/Worren Refrigeration unit and a Seasons 4 Refrigeration unit. The Seasons 4 unit is at the back of the marketplace and would not be directly above the proposed Dollar Tree store (See Photo #8). The Kysor/Worren unit would be directly above the proposed Dollar Tree store, but seems in good condition (See Photo #9). The unit bears on steel joists below the roof and is structurally sufficient. In addition, there are two old metal beams and angles to hold RTU's in the very back of the roof on the Marketplace. These are very close to the back bearing wall of the store (See Photo #10). We recommend that if Dollar Tree decides to move these in another location or put RTU's on them, to consult with the structural and mechanical engineers. Please note that the roof consists of a membrane and slopes away from the front of the building.

There is also an overhead door access into the rear - side of the building. A concrete slab slopes down to the overhead door approximately 18" – 24" in height (See Photo #11). The ramp seems to meet Dollar Tree standards. In addition, there looks to be sufficient room for trucks to access the rear of the building and the loading dock area.

#### CONCLUSION:

As mentioned above, this building is in great structural condition with no known structural deficiencies minus effervescence on the back CMU walls. If new mechanical units are to be provided, we recommend that they be located over the existing RTU locations. The front exterior wall consists of 6" metal stud framing and wood framing veneer. Please note that this front wall is load bearing and would need to be modified for additional storefront doors. There are steel framed joists along with CMU masonry in the rear of the building. The store seems to be a great fit for the proposed Dollar Tree with little fix-ups and ready use.

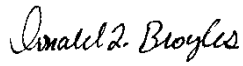
Mr. Gene Mathews, Manager of Architectural Services, **Dollar Tree Stores, Inc.**  
Dollar Tree – D10537 Midway Marketplace 189 Hickory Tree Rd, Winston-Salem, NC 27107  
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February 18, 2017  
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Sincerely,

**BROYLES and ASSOCIATES, P.C.**



Jonathan Broyles  
Structural Engineer Intern



Donald L. Broyles, P.E.  
President  
/dlb



Photo #1 – Former Walmart Express – exterior of front of building. The unit is next to Bedcock Furniture in a Marketplace in Winston-Salem, NC. There are three structural steel columns and splitface CMU wraps at the front of the building.



Photo #2 – Effervescence in the back loading dock areas on the concrete walls. The effervescence seems to be concentrated in the wall opposite to the loading dock overhead door. This was an additional that Walmart provided when they took over this space.





Photo #3 – Steel joist girders extending from side to side of the retail space. Once the joists reach the first column line in the proposed Dollar Tree, the steel joist depth increases from 24” to 44”, due to the RTU’s and other ceiling fixtures on that side of the building.



Photo #4 – Exposed rear corridor ceiling. The ceiling was covered with mechanical and electrical piping, along with other hanging fixtures.





Photo #5 – Exterior view of the brick veneer and metal stud framing behind the storefront.





Photo #6 – Inside front storefront wall was an access platform servicing the front of the building. Steel vertical beams with 3” diameter pipes extended back at each joist location – around 5’-3” on center.



Photo #7 – Existing Lennox RTU’s above the proposed Dollar Tree Store. Two of the newer RTU’s appeared to be in good condition.





Photo #8 – Seasons 4 Refrigeration Unit Originally for Wynn Dixie.  
This unit is located at the back of the Marketplace.





Photo #9 – Kysor/Worren Refrigeration Unit at the front of the proposed Dollar Tree store.



Photo #10 – Steel Beams and Angles that held old RTU’s in back of the Marketplace.





Photo #11 – Loading Dock Ramp located in the back of the Marketplace. There is sufficient room for trucks to maneuver and back into the loading dock. The ramp drops roughly 18” – 24” from the ground surface.