Eric Slusser, P.E.

Phone: (903)-930-4522

Date: 3/10/2024

Subject: Assessment of structural damage at 304 N. Washington Ave, Marshall, TX.

Dear Generation Financial Advisors - GFA:

The sidewalk along the storefronts of the 300 block of N. Washington Avenue has been removed. The building at 304 N. Washington Avenue has experienced some cracking and settlement in the brick facade following the demolition and removal of the sidewalk. Prior to the demolition and removal of the sidewalk, no cracking existed in the bricks or mortar, not like what can be seen currently. The question then becomes, what is the cause of failure? Was it due to a bearing capacity failure of the subgrade, inadequate design of the footer, or was this damage caused during the sidewalk removal process?

There is a saw cut in the concrete running parallel to the storefront so the sidewalk could be removed without damaging the footer under the building. Examining the stores on each side of GFA’s storefront and several others on the block, GFA’s footer is the only one that has damage.

There are several key points to note following the investigation:

* Even with the saw cut, the building footer has sustained damage, which has resulted in cracks and separation in multiple places. Upon closer inspection of the cracks, the broken sections of the footer appear to have shifted laterally, not vertically. The lateral movement of the broken sections of the footer indicates an external force, aside from the weight of the brick, that has caused the cracking to occur.
* The main area of concern is primarily under the window on the left side of the building. There is separation of the footer along where the crack occurred. This also indicates an external force exerted on the footer, not indicative of the vertical load applied by the weight of the brick. The separation and slight twist of the footer indicate it was hit with an external force, likely when the concrete sidewalk was busted up or when the busted debris was cleaned up.
* Another significant item to note is the separation of the brick from the concrete footer under the window area. The brick-and-mortar and the concrete footer are separated. The crack in the brick mortar does not coincide with the crack and separation of the concrete footer. They did not fail simultaneously, but rather, the footer appears to have been damaged, and the brick-and-mortar failed due to being inadequately supported. Because of the manner in which the footer and brick-and-mortar are separated, it appears the separation was caused by an impact and/or external force exerted on the footer.

It is my professional opinion that the failure of the footer, and consequently the failure of the brick façade, was caused by an external force or impact applied during the removal of the sidewalk. This is not due to a bearing capacity problem of the subgrade or an insufficient design of the footer. In essence, the separation of the concrete footer from the brick-and-mortar would not exist as it does currently if either of the two previously mentioned failure types were to have occurred. The crack propagation in the brick-and-mortar is also indicative of a lack of support, meaning the concrete failed first. Ultimately, the brick façade has experienced cracking due to the damaged concrete footer. As noted previously, it is my opinion that the concrete footer failed due to an external force exerted during the removal of the sidewalk and not because of the weight of the brick or an insufficient design of the footer itself.