



Public Works Department

Quality Management Division

September 14, 2021

To: Alyssa Tharrett
Project Manager
Parks & Recreation Department, City of Austin

Re: Zilker Botanical Garden
2220 Barton Springs Rd, Austin, TX 78746
Existing Roof Over Greene Room

Ms. Tharrett,

This letter is in regard to the structural integrity of the existing roof over Greene Room at the Zilker Botanical Garden. A site visit was conducted on September 3, 2021, to perform a structural observation of the existing roof.

The existing roof over the Greene Room is wood framed structure, there are four (4) primary Glulam beams which support wood rafters with a 2x wood deck. Glulam members are built up beams that are laminated between each member which bonds the 2x members together achieving a strong structural member. If the laminates are not properly bonded the structural integrity of the member has been compromised.

The exterior section of the Glulam beams have experienced structural damage due to weathering and wood erosion. See photos A, B, C, D and E. Beam 1 has lost a large section of beams cross-sectional area at the cantilever end that has reduces the structural sectional property of the beam which has affect the structural capacity of the member. This member has failed and needs to be addressed prior to any additional member loss. The fascia has been damaged and must be addressed. See photo B. Beam 2 shows signs of erosion, the extent of the damage is not clear at this time. The cross-sectional property at the cantilever end of the member has been compromised and must be addressed prior to any additional damage. See photo C. Beam 3 has experienced weathering and the cross-sectional property has been compromised at the cantilever end of the member. See photos D and E. Beam 4 appears to have been repaired, the extent of the repair is unknow and repair documents have not been reviewed. The repair material does not match the original wood member sizes of the Glulam and does not appear to be laminated.

The existing Glulam members have been compromised, creating imminent hazard and danger to the health, safety and welfare of the public. The existing wood roof needs to be addressed immediately to minimize any further damage. The room can be used at this time, continuous observation is required to help ensure safety. Roof access should be limited, no one should be allowed on the roof at the cantilevered ends.

If you have questions, please feel free to contact me.

Thank you,

Karim Helmi, PE
City Structural Engineer
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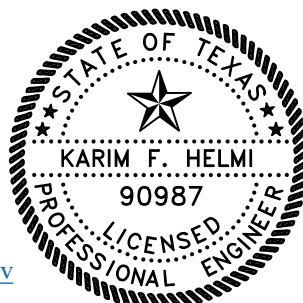




Photo A (Beams 1 and 2)



Photo B (Beam 1)



Photo C (Beam 2)



Photo D (Beams 3 and 4)



Photo E (Beams 3 and 4)