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## SANDER ENGINEERING CORPORATION

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March 13, 2025

Mr. Jody Hooks  
Director of Public Works  
City of League City  
1701 W League city Parkway  
League City, Texas 77573

Re: Butler Road Lift Station Emergency Bypass and Repairs

22-052

Dear Mr. Hooks,

Subsequent to our letter dated February 13, 2025, outlining the initial investigation and findings of the manhole and gravity line failure immediately upstream of the Butler Road Lift Station, this letter report presents the efforts of the city staff, Wagner Construction (Wagner), and Sander Engineering Corporation (SEC) to further evaluate the failure, consider repair options, and implement the emergency measures and repairs necessary to maintain sanitary flow to the service area.

A timeline of the events is presented below:

- 1/17/2025 - City staff discovered issue, finding a sinkhole on backside of the lift station. City staff contacted Wagner and SEC for assistance. SEC engineers, with assistance if the city staff, inspect the sinkhole, the collapsed fiberglass manhole and backfill, and inspect next upstream manhole on Butler Road. The Operations staff scheduled videotaping of the incoming 42" gravity sewer in order to assess it's condition.
- 1/18/2025 - Wagner Construction mobilized to the site and were approved to start stabilization of area to ensure no service interruptions.
- 1/21/2025 - Wagner was placed on hold due to Winter Storm Enzo
- 1/23/2025 – Wagner remobilizes to site.
- 1/24/2025 - Bypass installation began and was activated 1/26/2025 per SEC flow capacity recommendation.
- 1/29/2025 - After multiple rain events, Wagner began saw-cutting and concrete removal. Trench box and whalers were installed over the course of a couple days. SEC reviewed the video of the incoming 42" gravity sewer which was found to have previously been lined and appeared in good condition, no damage from the failure. The decision was made to keep this section of gravity sewer.
- 2/5/2025 - Groundwater was complicating the work, Wagner installed wellpoints.
- 2/6/2025-2/8/2025 – Wagner began work once ground water levels were dropped. Excavation continued, pipe and base of manhole were assessed for condition.
- 2/10/2025 – Wagner order the manhole box and frame. Base of manhole formed up and area stabilized with 1.5 sack stabilized sand. Area prepped for manhole delivery 2/17/2025.
- 2/17/2025 - Manhole delivered and installation began. Construction and backfill ran through 2/21/2025.
- 2/24/2025 - SewperCoat liner was applied to the new manhole.
- 2/25/2025 - Part of liner sloughed off and required reapplication. Pipe seal from the invert was leaking heavily.

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2/26/2025 - Pipe seal injected with water activated foam and seal with non-shrink grout to complete the repair of pipe seal.

2/27/2025-2/28/2025 – Wagner backfilled the area with select fill. The bypass system was taken offline and demobilized. City Operations staff placed the lift station back online.

3/3/2025 – Wagner completed restoration of the site.

Repairs to the manhole and gravity sewer took forty-six (46) days from discovery of the failure to completion of repairs. SEC engineers visited the site several times during the construction repair and observed the progression of the work. In our opinion, the work was performed efficiently, safely, and in accordance with standard engineering/construction practice. See attached photos.

SEC has reviewed the final invoice from Wagner for \$401,593.20 and recommends payment of the invoice.

Should you have any questions or require additional information, don't hesitate to contact us.

Thank you



Erik D. Miller, P.E.

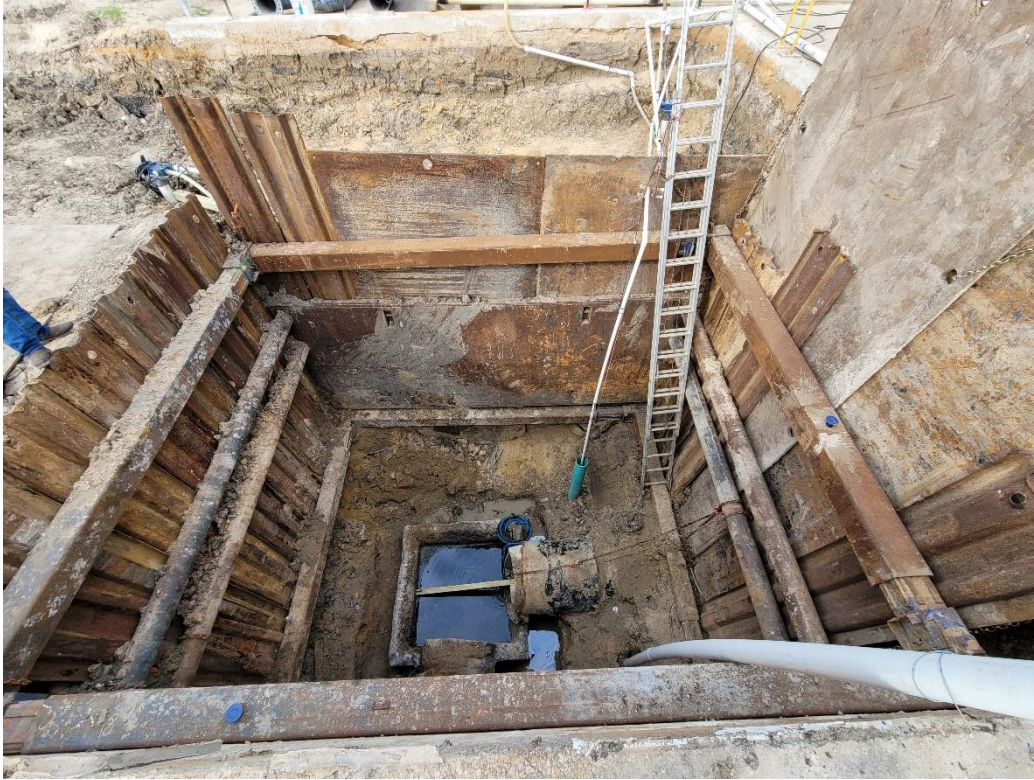
Vice President



Failure of manhole and 42" gravity sewer into lift station



Bypass piping setup



Initial excavation and shoring



Installation of manhole base



Manhole base installed



Installation of manhole cone



Backfill of manhole an installation of manhole cone



Installation of SewperCoat Lining



Manhole installation and backfill complete