

Exhibit A



TECHNICAL MEMORANDUM

To: *Shawn Fort, CFM*
From: *Todd Hensley, P.E. (TX)*
Date: *September 25, 2023*

Subject: ***City of Princeton: Peninsula Sanitary Sewer Study and Feasibility Analysis – Update***

Per the direction of the City of Princeton and No Bad Days, LLC, Kimley-Horn was requested to provide an updated memorandum to the previously approved studies;

- Peninsula Sanitary Sewer Study dated May 4, 2020
- Peninsula Sanitary Sewer Study - Update dated May 3, 2021
- Peninsula Sanitary Sewer Study – Update – Follow up Memo dated April 22, 2022
- Peninsula Sanitary Sewer Study and Feasibility Analysis – Update dated October 14, 2022

Background and Purpose

The City of Princeton has requested an update to the previously approved studies by Kimley-Horn and Associates, Inc. The intent of this memo is to provide updates to the existing studies to supplement the Non-Standard Service Agreement (“NSSA”) with No Bad Days, LLC. This memo will provide updates to the East Basin for an alternate option of serving the No Bad Days tracts, as well as future tracts, with gravity sewer.

Assumptions

Below is a list of assumptions regarding the conditions for the study area:

- The originally approved Peninsula Sanitary Sewer Study dated May 4, 2020 was used as the basis for the revised study provided. Areas previously excluded in the study dated 10/14/2022 have been added back from the original North and East Basins as shown in Exhibit 1 to be sewered by the proposed gravity line.
- The Branch Meadows Addition and Country Time Estates, formerly Basin 1, were removed as directed by the City of Princeton.
- A lift station and force main to pick up a portion of flow has been included on the exhibit per discussions with the City of Princeton.

- Per the previously approved studies, the proposed major gravity lines are graphically represented to show the proposed locations, as identified by specific projects or future potential locations based on existing development.

Analysis

Based on analysis of all the provided data, as well as preliminary limited engineering/routing the proposed sanitary sewer gravity mains, laterals, and performing flow calculations, the following items should be considered for this analysis:

- The peninsula currently has no sewer infrastructure to serve newly developed areas, however the City of Princeton has approved construction plans for the ultimate lift station and one of the proposed force mains represented at the south end of the study area.
- The East Basin, north of the connection point with Arbor Trails was analyzed at the previously identified lateral locations from the approved study **dated April 22, 2022**.
- The gravity mains were studied to determine the change in gravity pipe sizing due to the proposed No Bad Days, LLC NSSA Amendment 1.
- Gravity main and lateral alignments were laid out for each basin to capture the majority of the flow being produced. Additional low-flow grinder pump stations may be necessary to capture flow in some areas of the study area.
- Laterals began at a minimum depth of 8' below the apparent existing ground using LIDAR information.
- Calculations were performed for gravity main and lateral pipe sizing to provide sufficient capacity based on minimum slopes, or previously reviewed construction drawings that were submitted to the City of Princeton, required in the Texas Commission on Environmental Quality Chapter 217.
- The alignment shown will require correspondence with Collin County to place the gravity main within the County Right of Way.

Conclusions and Recommendations

The following conclusions are provided below for the portion of the East Basin analyzed as a part of this sanitary sewer study:

- The East Basin gravity main sizing was updated to include the tracts provided in the No Bad Days, LLC NSSA Amendment 1, as shown on **Exhibit 1**.
All pipe sizes have been calculated based on a nominal pipe diameter.