

1500 County Road 269 Leander, TX 78641

PO Box 2029 Leander, TX 78646-2029

EXHIBIT A

Statement of Work (SOW) No. 4

TO MASTER SERVICES AGREEMENT

Statement of Work No. 4 to the Master Services Agreement between the City of Manor, Texas, as CITY, and George Butler Associates, Inc., as ENGINEER, dated October 7, 2020.

Through this SOW, CITY hereby authorizes ENGINEER to undertake the work assignment described in the following, said assignment to be performed within the terms and conditions defined in said Master Services Agreement, except as modified herein.

ASSIGNMENT: Professional Engineering Services to establish a comprehensive plan for the CITY to address Inflow and Infiltration (I/I) removal from the sanitary sewer collection system. To accomplish this, an accurate, up-to-date inventory of the collection system will be established. A targeted sanitary sewer evaluation study (SSES) will be performed subsequently to identify I/I sources within the CITY's collection system. An actionable plan will be developed with a multi-year focus in mind. The ENGINEER will provide this comprehensive plan in three (3) phases. This SOW encompasses the first two (2) phases of this plan.

SCOPE OF SERVICES:

Phase I – Establishing a Network

TASK 100: ADMINISTRATION

Coordinate project goals and align CITY and ENGINEER expectations and purposes. Subtasks will include:

SUBTASK 1: Contract Maintenance

SUBTASK 2: Kickoff Meeting

SUBTASK 3: Progress Meetings

TASK 200: GIS MAP CREATION AND INVENTORY

SUBTASK 1: Development of a sewer GIS Map and Flow Meter Basins: The ENGINEER will utilize the CITY's existing sanitary sewer map to develop an initial GIS project map and data set.

SUBTASK 2: Provide Manhole Designation: By utilizing existing records, manhole identification protocols will be established to provide a numbering system that demonstrates clarity of location within the system and a uniform approach to numbering future manholes.

SUBTASK 3: Populate Sanitary Sewer System in GIS: Utilizing as-built data and/or report mapping, physical data of the main interceptors will be collected, added and enumerated into the GIS map data set.



PO Box 2029 Leander, TX 78646-2029

SUBTASK 4: Establish Inventory: The ENGINEER will review CITY Records and tabulate all necessary data to determine basin characteristics including pipe material and age to assist with field investigation strategies.

TASK 300: PHASE I REPORTING

SUBTASK 1: Report Preparation: Prepare a report that summarizes the results of Task 200 which will include the established manhole numbering protocol and provide a conclusive collection system inventory summary.

SUBTASK 2: Draft Report Submission

SUBTASK 3: Final Report Submission

Phase II - Sanitary Sewer Evaluation Study (SSES) Phase I - Flow and Rainfall Monitoring

TASK 400: ADMINISTRATION

Coordinate project goals and align CITY and ENGINEER expectations and purposes. Subtasks will include:

SUBTASK 1: Contract Maintenance

SUBTASK 2: Kickoff Meeting

SUBTASK 3: Progress Meetings

TASK 500: Flow and Rainfall Monitoring

SUBTASK 1: Flow Monitoring: The ENGINEER will provide flow monitoring equipment and data gathering at a minimum of thirteen (13) flow monitoring sites for a period of 90 days.

SUBTASK 2: Rainfall Monitoring: The ENGINEER will provide rainfall monitoring at three (3) sites in the CITY. These sites will be spatially selected and appropriate to collect rainfall data patterns and volumes across the CITY.

SUBTASK 3: Groundwater Monitoring: To gain a baseline understanding of how the system reacts to groundwater levels, piezometers, level only meters that measure groundwater levels, will be installed in one (1) location simultaneously during flow and rainfall monitoring in the CITY.

SUBTASK 4: Adjustments to Data and Mass Balance: The ENGINEER will adjust the data based on site service results. Typical adjustments are made for level drift and for manning calculations when velocities are not recorded.

SUBTASK 5: Quality Control Reporting: The ENGINEER will submit an electronic midterm and final quality control report indicating the adjustments made to the data and equipment failures that occurred during the monitoring period.



PO Box 2029 Leander, TX 78646-2029

SUBTASK 6: Wet Weather Checks: The Engineer will check approximately 60 manholes during wet weather conditions to identify locations of I/I.

TASK 600: Identification of Excessive I/I

SUBTASK 1: Identification of I/I Parameters: Flow parameters will be determined for each metering site to gain an understanding of how the system reacts to rainfall events. The flow parameters will include average daily dry-weather flow (ADDF), infiltration, peak inflow rates and rain-to-sewer volumetric analysis.

SUBTASK 2: Identification of Excessive I/I: Based on results of the I/I parameter calculations, ENGINEER will compare findings to established excessive I/I flow thresholds for each parameter.

TASK 700: Identify Expected Growth Potential

SUBTASK 1: Review of Projected Growth Potential from 2020 CIF Update: Utilizing the completed 2020 CIF Update, ENGINEER will review the extents of existing CITY boundaries and confirm areas for the greatest probability of population (commercial, residential and industrial) expansion in the CITY.

TASK 800: Recommend I/I Field Investigations

SUBTASK 1: Select Basins for I/I Field Investigations: Based on work completed in Tasks 400 through 600, ENGINEER shall identify basins needed for SSES investigation.

TASK 900: Phase II Reporting

SUBTASK 1: Report Preparation: Prepare a report that summarizes findings of the monitoring period, I/I determination, recommended I/I field investigation and future growth expectations and capacity needs.

SUBTASK 2: Draft Report Submission

SUBTASK 3: Final Report Submission

ADDITIONAL SERVICES:

Services specifically excluded under this Agreement include:

- 1. Hydraulic Capacity Spreadsheet Model with Growth Expectations Included.
- 2. Further I/I Investigations (This will be included in the next phase of the comprehensive plan).
- 3. Any designs or reports not specifically listed.
- 4. Additional meetings and site visits not specifically listed.
- 5. Any other service not specifically listed.



1500 County Road 269 Leander, TX 78641

PO Box 2029 Leander, TX 78646-2029

COMPENSATION:

Phase I – Establishing a Network	
TASK 100 FEE:	\$6 <i>,</i> 486
TASK 200 FEE:	\$14,184
TASK 300 FEE:	\$13,652
Phase I SUBTOTAL:	\$34,322

 Phase II – SSES Phase I – Flow and Rainfall Monitoring

 TASK 400 FEE:
 \$11,464

 TASK 500 FEE:
 \$67,614

 TASK 600 FEE:
 \$9,560

 TASK 700 FEE:
 \$4,156

 TASK 800 FEE:
 \$2,556

 TASK 900 FEE:
 \$13,652

 Phase II SUBTOTAL:
 \$109,002

Phases I & II Grand Total: \$143,324

CITY OF MANOR, TEXAS

GEORGE BUTLER ASSOCIATES, INC.

Dany S. Beck

Ву:_____

Date: _____

Date: <u>6/7/2021</u>_____

Ву:____