RESOLUTION NO. 61-2022

Introduced by Joel Hagy

A RESOLUTION AUTHORIZING THE CITY MANAGER TO ACCEPT THE PROPOSAL AND ENTER INTO AN AGREEMENT WITH OHM ADVISORS FOR ENGINEERING SERVICES TO DEVELOP A SYSTEM-WIDE STORMWATER MANAGEMENT PLAN (PHASE I) IN AN AMOUNT NOT TO EXCEED FIFTY-TWO THOUSAND AND 00/100 DOLLARS ($52,000.00)

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF HURON, OHIO:

SECTION 1. That the City Manager shall be, and he hereby is, authorized and directed to accept the proposal and enter into an agreement with OHM Advisors for engineering services to develop a system-wide Stormwater Management Plan (Phase I) in an amount not to exceed Fifty-Two Thousand and 00/100 Dollars ($52,000.00), which agreement shall be in substantially in the form of Exhibit "A" attached hereto and made a part hereof.

SECTION 2. That this Council hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of this Council and that all deliberations of this Council and of its Committees, if any, which resulted in formal action, were taken in meetings open to the public in full compliance with applicable legal requirements, including O.R.C. §121.22.

SECTION 3. That this Resolution shall be in full force and effect from and immediately after its adoption.

Monty Tapp, Mayor

ATTEST: Jerri Weekerner
Clerk of Council

ADOPTED: 14 JUN 2022

April 20, 2022

Stuart Hamilton
Service Director
City of Huron
417 Main Street
Huron, OH 44839

RE: City of Huron, Ohio Stormwater Management Plan Assistance
Recommendation for System-wide Stormwater Management Plan

Dear Mr. Hamilton:

Recent flooding complaints suggest that portions of the City of Huron's sewer infrastructure do not have adequate capacity to handle recent storm events and/or coastal flooding from Lake surges. Specifically, residents of the northwest region of the City have reported instances of flooding. OHM Advisors met with the City to look at some of the sites where flooding has been reported. Based on our conversations with City staff, we understand that the City is experiencing a combination of stormwater and coastal flooding. We recommend a system-wide flooding study to evaluate risks and identify infrastructure deficiencies across the City. A system-wide flooding study would provide a framework for decision makers to develop and prioritize capital improvements targeted at flooding mitigation. Depending on scope, the goals of a system-wide study may include:

- Provide the City with a flooding risk assessment, identifying the magnitude of flooding that could be expected and at what frequency and potential impacts.
- Develop recommendations to improve the level of service to residents, reduce risks to public health and infrastructure, and improve resiliency to climatic conditions.
- Provide the City with an updatable Geographic Information System (GIS) database for collecting, organizing, and storing data for the stormwater collection system using the latest available hardware and software.
- Survey key system components to develop the GIS database and to allow future generations to access infrastructure data (e.g., material, type, size, age) with greater ease.
- Evaluate the structural and operational condition of various system components and store the data in the GIS database.
- Provide the City with an adaptable hydraulic model with key trunkline stormwater sewers and open channel drains that can be continually updated.
- Identify long-term operations and maintenance strategies to maintain a reasonable structural condition into perpetuity.
- Provide recommendations for developing a prioritized Capital Improvement Plan.

The City of Huron faces flooding risks from several fronts. Located on the shores of Lake Erie and split by the Huron River, it is critical to understand the risks not only of stormwater runoff, but also of impacts on system performance resulting from changes in water levels in the receiving waterbodies. In order to assess these risks, we strongly recommend that the City conduct a systematic review of the stormwater infrastructure. A proposed work plan is included with this recommendation, outlining scope items that could be included. Please review these items and consider the short- and long-term benefits to City managers and residents. We are excited to continue this

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discussion with the City and would be pleased to provide a more detailed walk through of potential deliverables to aid in the decision making.

OHM has significant experience bringing collection systems experts together on similar projects, and our team brings several key advantages that will benefit the City of Huron:

1. Local presence, ideal for fieldwork and public engagement.
2. Experience with the City of Huron and it's collection system challenges.
3. Depth of experience with footing drain disconnection programs.
4. Experience developing and analyzing detailed hydraulic models of city-wide stormwater systems.
5. Asset Management Planning experts.

SCOPE OF SERVICES

Our proposed scope for this project is a phased approach starting with data collection to build a database of the City's existing stormwater assets and gathering information on flooding issues. Future phase work could include quantifying the hydraulic performance of the stormwater system and preparing recommendations for capital improvement projects. Subsequent phases should target longer-term system maintenance and funding solutions. The proposed work plan for the first phase of work is as follows:

PHASE 1 TASKS

Task 1 - Create Stormwater Geodatabase (GIS)

Under this task, OHM will obtain available information from existing sewer location maps to create a geodatabase of the City's storm sewer system assets. This task is not intended to result in a comprehensive and complete stormwater asset database, rather to be a starting point for efforts to continue to build on. The focus of populating a geodatabase will be those assets which are critical to hydraulic modeling of the system performance in Phase 2. Specific work effort will include the following:

- A kickoff meeting with the City will be held to discuss obtaining information, maps and plans of existing storm sewers. We understand that the City is working to collect and scan existing sewer system maps to build an electronic record of the storm sewer system. We also understand the Erie Soil & Water Conservation District (ESWCD) agreement with the City includes the creation of a GIS map layer and data collection app for mapping the storm sewer system. OHM will further develop the efforts already initiated by ESWCD and the City's Street Department. This information will serve as the starting foundation for the geodatabase.
- Develop stormwater GIS database of major stormwater assets needed for hydrologic/hydraulic modeling in Task 4 of Phase 2. Database information will focus on manhole/pipe connectivity and manhole and pipe naming convention to eliminate duplicate IDs.
- Identify missing rim/invert elevations for major sewer components for the hydrologic/hydraulic modeling task.
- Deliver geodatabase to City staff.

Deliverable:

- GIS geodatabase framework of major stormwater system components

Task 2 – Data Collection/Field Services

Under this task, OHM will collect background data for building the hydrologic/hydraulic model and developing a full understanding of flooding extends and drivers. Specific work efforts will include the following:

- Review the compiled list of flood calls (City spreadsheet) and cross reference with the City's sewer map. This data will help determine areas where additional modeling may be necessary. The contact information in this table will be used to reach out to specific homeowners if additional data is needed, such as photos or high-water mark identification (surveyors will collect data afterwards).
- Collect USGS stream flow data from Gage # 04199000 (Huron River near Milan, OH approximately 6 miles upstream from Lake Erie) and historic USACE Great Lakes Water Levels data from Lake Erie. The stream flow and lake level data can be used to set boundary conditions in the hydraulic model.
- Collect FEMA Flood Insurance Study and Flood Insurance Rate Map data for the City/FEMA.
- Record drawing research will include a review of available record drawings and addition of key data (rim/invert, pipe diameter, pipe material, installation year) to the stormwater geodatabase (GIS) for those components identified for the hydrologic/hydraulic model. This effort will be performed prior to survey to minimize the required field effort. OHM will identify remaining data needs and create a map for the field survey effort.
- Field survey will include survey of identified manholes and collecting key data: rim, invert elevations, and pipe sizes. Following the field efforts, the collected data will be added to the stormwater component geodatabase that was developed under Task 1. This work will be limited to larger-diameter sewers (generally 24-inch diameter and larger) for which rim/invert data are missing and no information could be collected through record drawings.
- Drain and culvert data collection will start with coordination with City staff and confirmation of specific reaches of open drains for cross section and culvert survey. These reaches will be limited to those identified as necessary to complete the hydraulic model of the stormwater system backbone. It is assumed that up to six individual cross sections will be surveyed to supplement existing data. GIS-based contours will be used to extend cross sections into the floodplain. Where culverts are encountered, culvert sizes and invert elevations will be measured. Roadway overtopping elevations will be determined using existing GIS-based contours. FEMA hydraulic model data (from previous studies, where available) will be used to supplement field survey and contour data.

Deliverable:

- Technical Report summarizing the data collection efforts and results

SERVICES NOT INCLUDED

The following items are not included in the scope of services:

- Cleaning and televising of storm sewer pipes.
- Hydraulic modeling of the stormwater system.
- Additional meetings and/or presentations not listed in the scope of services above.
- Concept and detailed design of capital improvements (long or short term).

SCHEDULE

Upon receiving a notice to proceed from the City, OHM will begin work immediately on Phase 1 tasks. We anticipate completion of Phase 1 tasks within 8 months from the date of authorization.

FEE SCHEDULE

The fee estimate was developed based on the scope within this letter proposal and includes estimated work efforts applied to the respective standard hourly billing rates for OHM. The following summary includes fee estimates separated by task and phase.

Stormwater Management Plan – Phase 1 Fee		
Task	**Description**	**Fee**
1	Optimize Stormwater Geodatabase (GIS)	$ 10,000
2	Data Collection / Field Services	$ 42,000
Phase 1 Total		**$ 52,000**

Sincerely,
OHM Advisors

Russell Critelli, PE, PMP
Principal/Manager of Cleveland
Russ.critelli@ohm-advisors.com
D: 216.865.1339

Authorization to Proceed

Signature Date

Stuart Hamilton, Acting City Manager
Printed Name Title

CC: Matt Lasko, City Manager