

**Maumee Watershed Conservancy District
Hancock County Flood Diversion**

***MONTHLY PROGRESS REPORT #9
FOR STANTEC CONSULTING SERVICES INC.***

Period Covered:

10-June-2017 thru 7-July-2017

Submitted by:

**Stantec Consulting Services Inc.
4540 Heatherdowns Boulevard, Suite A
Toledo, Ohio 43614**

**Telephone: (419) 380-8910
Fax: (419) 380-8920**

I. Invoice Summary and Project Financial Status

- Invoice Number 1224512 totaling \$13,839.75, for the authorized Supplemental Services related to field investigations for permitting and aerial survey, is submitted for consideration. This invoice includes time applied by Stantec staff.
- A second invoice, Invoice Number 1224520 totaling \$35,588.16 for the initial stages of preliminary engineering related to the proposed Hydraulic Improvements, is submitted for consideration. This invoice includes time and expenses applied by Stantec staff as well as subconsultant invoices from Bockrath & Associates Engineering and Surveying, LLC (\$14,851.25), Mannik & Smith Group (\$1,179.00) and Hart Associates (\$447.90).
- A third invoice, Invoice Number 1224533 totaling \$22,372.66 for tasks associated with the detailed design and permitting of the Hydraulic Improvements, is submitted for consideration. This invoice includes time and expenses applied by Stantec staff.
- To-date approximately 67.4% of the total authorized funds for the Program have been invoiced.

II. Major Issues and Decisions

Proof of Concept

- The original tasks associated with the Proof of Concept Report are completed and no invoicing will occur for those tasks moving forward.
- Continued coordination with HART for the addition of documents to Program webpage (www.HancockCountyFlooding.com) to reflect the addition of program-related documents.

Hydrology & Hydraulics (H&H) Modeling

- Finalization for the "typical storm" event is complete and incorporated into the HEC-HMS (hydrology) and HEC-RAS (hydraulics) models that will be utilized for the basis of design moving forward.
- Additional calibration and refinement of the model runoff and water surface elevations to reflect additional topographical information generated from the aerial photography of the watershed is underway related to the proposed Hydraulic Improvements within the City of Findlay.

Permitting

- Continued coordination with Mannik & Smith Group (MSG) for permitting consultation with OEPA, USACE and SHPO related to the Hydraulic Improvements. The draft consultation plan has been reviewed by the regulatory agencies and a final version will be issued by July 31st.
- Completed identification of wetland delineation within the area of detailed design of the proposed Hydraulic Improvements. The delineation field work was completed the week of July 3rd. The report and related figures will be developed and provided for draft review by August 15th.

Aerial & Ground-Based Survey

- Bockrath continued coordination with Kucera for processing of aerial mapping of the watershed, as well as completion of ground-based boundary and topographic survey. Stantec and Bockrath staff have also engaged in review of the processed information provided by Kucera.
- Bockrath completed field efforts related to the boundary and topographic surveys for the proposed Hydraulic Improvements. The boundary survey is complete and the

topographic survey outside of the river is complete. Additional efforts within the river will need to be undertaken when river levels are safe for such work.

Hydraulic Improvements Preliminary & Final Engineering

- Field efforts related to geomorphic assessments of the low-head dams within the river have been completed and are with Stantec staff for report development and QA review.
- Field and laboratory efforts for soil borings are completed. A report of the geotechnical study should be completed by the end of July.
- Continued review of applicable prior information for local brownfield sites and began development of strategy for additional investigations and permitting of proposed excavations for the Hydraulic Improvements.
- Continued contact with the Norfolk-Southern RR regarding recommended bridge modifications. Provided a project narrative and conceptual sketches of proposed bridge modifications to NS staff for consideration. Additional follow-up will be on-going for the next several months to obtain an estimate for the cost of the anticipated cooperative agreement with NS.

III. Schedule

Task	Proposed Timeline	Current Status	Anticipated Timeline
A. Data Collection & Analysis			
A.1 – Update Hydraulic Modeling, H&H Data Collection & Analysis	9/9/2016	Complete	N/A
A.2 – Economics Impact Analysis	9/30/2016	Complete	N/A
A.3 – Geotechnical Borings	10/28/2016	Complete	N/A
A.4 – Surveying	9/23/2016	Complete	N/A
A.5 – Pre-Permitting, Mussel Recon, Cultural	10/28/2016	Complete	N/A
A.6 – Transportation	9/30/2016	Complete	N/A
A.7 – Precipitation Modeling	10/31/2016	Complete	N/A
B. - Concept Refinement			
B.1 – Project Adjustments & Improvements	10/14/2016	Complete	N/A
B.2 – Model Refinement	10/14/2016	Complete	N/A
B.3 – Estimating & BCR Analysis	10/14/2016	Complete	N/A
B.4 – Permitting Coordination	10/31/2016	Complete	N/A
B.5 – Report & Presentation	10/31/2016	Complete	N/A
C – Supplemental #1			
C.1 – Wetland Delineation & Habitat Assessment	1/31/2017	Field Work and Report Complete for Diversion Channel	N/A

Task	Proposed Timeline	Current Status	Anticipated Timeline
C.2 – Archaeological Survey	1/31/2017	Field Work and Report for Diversion Channel Complete for areas East of I75	N/A
C.3 – Aerial Surveying	12/31/2016	Aerial Imagery Complete; Processing Nearly Complete	7/31/2017
D – Hydraulic Improvements (Preliminary Design)			
D.1 – Site Assessment & Survey	7/31/2017	Field work nearly complete for Geotech & Surveys; Geotech report undergoing internal QA; Field survey nearly complete	7/31/2017
D.2 – Cultural and Historic Resources	12/31/2017	Coordination with SHPO, USACE and OEPA On-Going	12/31/2017
D.3 – Program Management	On-Going	On-Going	On-Going
E – Hydraulic Improvements (Final Design)			
E.1 – Site Assessment & Survey	9/22/2017	Brownfield data reviewed; Developing plan for additional investigations	9/22/2017
E.2 – Preliminary Design Report	10/6/2017	Internal kickoff underway; consolidating data and updating model runs	10/6/2017
E.3 – Detailed Design	3/23/2018	Internal kickoff efforts underway; initial review of available survey	3/23/2018
E.4 – NSRR Coordination	1/12/2018	Concept plan provided to NS, awaiting reply	1/12/2018
E.5 – Permitting	9/30/2018	Wetland delineation field work complete; Report development underway	9/30/2018
E.6 – Program Management	On-Going	On-Going	On-Going

Respectfully Submitted

STANTEC CONSULTING SERVICES INC.

Adam C. Hoff, P.E.
Principal
Tel: (419) 380-8910
Fax: (419) 380-8920
adam.hoff@stantec.com

APPROVAL OF PAYMENT:

On behalf of the Maumee Watershed Conservancy District and in accordance with the Memorandum of Agreement, I hereby recommend payment in favor of Stantec Consulting Services Inc. by the Hancock County Commissioners in the amount of \$ 71,800.57.

Clark Lynn Army, General Manager

Date