

22.5104.P001
September 8, 2022

Mr. Ken Rose, CEO
Montgomery County Business Development Center
Old County Courthouse
P.O. Box 1500
Fonda, New York 12068-1500

Re: **Montgomery County Multi-Jurisdictional All Hazard Mitigation Plan Update – Additional Services – Culvert Asset Management Plan**

Dear Mr. Rose:

We are very pleased to be supporting Montgomery County to complete the update to the Multi-Jurisdictional Hazard Mitigation Plan (HMP). Tighe & Bond, whose services in New York are provided by T&B Engineering and Landscape Architecture, P.C. (Tighe & Bond) understands the County has been awarded additional grant funds to expand the work completed as part of the HMP update to develop a Culvert Asset Management Plan (AMP) for County assets. Assets to be incorporated into the system include culverts, bridges, and roads that are susceptible to flooding hazards with a specific focus on assets located on County roads. This letter shall serve as an amendment to our existing agreement dated May 4, 2022 including the agreed upon terms and conditions. Following discussions with your team at the Business Development Center, we understand the additional scope of services will include the following expansion to the scope of existing tasks for the HMP update:

Part 1, Task 2, Data Collection and Transfer will be expanded to include updated GIS maps incorporating stormwater asset data based on existing available municipal/County information and field work performed by County staff outlined in Task 3 below. Tighe & Bond will work with Montgomery County BDC to obtain and incorporate base map information including parcel data, stormwater infrastructure, roadway network, and other baseline data sets as available from New York State GIS Clearinghouse, the North Atlantic Aquatic Connectivity Collaborative (NAACC) data, and/or County data, where available. We will review the available data sets from the Clearinghouse, NAACC, and existing data sets maintained by the County. Tighe & Bond will develop GIS layers from the data sets the County needs to feature for the HMP. This will make the data accessible through the ArcGIS Online applications and mobile devices. Tighe & Bond will develop a data collection form for culvert field assessment. Also, we will review and incorporate existing County paper documents currently used for tracking maintenance and condition of culvert and drainage assets including, as well as requests for maintenance made by members of the public. We will develop a first-draft version of the culvert forms, in conjunction with the forms that will be developed from our base scope of services, for the County's use for up to three weeks, after which we will revise the forms based on user feedback to develop forms in their final version.

Part 1, Task 3, Outreach and Engagement will be expanded to include training of County staff on use of a mobile data collection application that can be used on phones and tablets with the following functionality: view and edit existing GIS data, collect new features, attach photos of specific assets. Tighe & Bond will provide the County with two tablets which can be used by Department Staff to complete data collection. In addition, we will provide the County a smart level to facilitate data collection of culvert assets. We will also provide one four hours of training on device usage and GIS data collection program to Department Staff. This training will be virtual. We will also provide eight hours of in-person training on

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culvert data collection method including four hours of field training. Tighe & Bond will also provide additional support to the County to engage stakeholders and identify flood hazards associated with stream crossings and culverts by developing digital and hard copy outreach materials and by developing a public-facing GIS based webpage. The community will have access to the webpage to provide specific information on flooding at culverts and stream crossings. We assume the County will facilitate posting of information to its website and social media pages, as well as using other existing County-wide communication tools to reach the public.

Part 2, Task 2 Natural Hazard Identification Risk Assessment will be expanded to include mapping of drainage structures including culverts and bridges with a particular focus on structures which have historically posed a hazard condition on County roads. We have assumed up to 200 crossings will be identified by County staff and will be included in the hazard identification and risk assessment and the culvert AMP. Part 2, Task 3 Community Asset Inventory will be expanded to conduct up to two (2) Level of Service workshops with County staff, provide recommendations for field work, and incorporate field results into the GIS database. Task 3 will also be expanded to determine an initial priority ranking of stream crossing structures based on a desktop analysis. Tighe & Bond will conduct a criticality evaluation and prioritization for the culvert asset management plan based on FEMA flood zones, flooding risk, condition of the crossing and maintenance frequency and consistent with the prioritization meeting with County DPW and highway officials and staff.

Part 2, Task 6 Mitigation Actions/Mitigation Strategy will be expanded to develop specific mitigation actions in the HMP update related to culvert asset management. Based on the prioritization plan, Tighe & Bond will meet with the County to identify key culverts to be mitigated as an HMP action item and develop culvert specific mitigation strategies that can be implemented by the County to reduce flood risks in the culvert AMP. Tighe & Bond will prepare a GIS-based map showing the location and numeric prioritization of the culvert structures and prepare a culvert asset management plan. The plan will describe the basis for the culvert assessment and the data collection process, include the list of prioritized culverts including their condition rating, describe the condition and prioritization methodology, and describe key mitigation actions and strategies. Services do not include identification of grant funding opportunities or design of any replacement or modified culvert crossings however these services could be provided under a separate agreement.

Fee

Tighe & Bond will perform these additional services for a lump sum fee of \$70,400, invoiced monthly based on percentage complete. In the event that the scope of work is increased for any reason, the lump sum fee to complete the work shall be mutually revised by written amendment.

Schedule

The additional scope of services will be incorporated into the existing project schedule. We'd like to commence training by late September to provide County staff adequate time in October and November to collect culvert crossing data.

Thank you for the opportunity to provide services to the County. We are looking forward to continuing the work on the HMP update including the additional tasks to develop a stormwater asset management system for the County. If you have any questions or require any additional information, please call me at 518-965-5786 or by email at BNelson@tighebond.com.

Very truly yours,

T&B Engineering and Landscape Architecture, P.C.



Brandee K. Nelson, PE, LEED AP
Vice President



Sharon Rooney, AICP, RLA
Principal Planner

ACCEPTANCE:

On behalf of **Montgomery County**, the scope, fee, and terms of this proposal are hereby accepted.

Authorized Representative

Date

C: Alex Kuttesch