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December 4, 2017

RE: City of La Crosse
Ebner Coulee Floodway FIRM Mapping
SEH No. LACRS 142540 14.00

Mr. Christopher Olds
Water Regulations and Zoning Engineer
Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921

Dear Mr. Olds:

SEH Inc. has been contracted by the City of La Crosse to review the effective floodplain mapping and associated hydrologic and hydraulic modeling for the Ebner Coulee watershed as depicted on FIRM panel 55063C 0262D effective 1/06/2012.

We are submitting the following information as an initial request for review and comment by the Wisconsin Department of Natural Resources against the requirements for the State of Wisconsin overview and concurrence in support of a Letter of Map Revision (LOMR) submittal by the City to formally modify the FIRM panel for the Ebner Coulee watershed. We understand that additional detail and effort may be required as part of a LOMR submittal package, but prior to the City expending additional funds, we want to first discuss the proposed approach.

The following is a summary of the provided information:

Draft Ebner Coulee Floodway FIRM Remapping Technical Feasibility Report, dated August 22, 2017. This is referred to as the first phase of the study and was completed to reevaluate and update the hydrologic and hydraulic analysis of the Ebner Coulee watershed and floodplain using USGS regional regression equations to estimate peak flow rates and current HEC-RAS unsteady modeling routines with one-dimensional and two-dimensional capabilities to depict the flow and conveyance conditions of the complex urban floodplain system. The goal of the study was to determine if the use of an alternate hydrology method and inclusion of additional topographic mapping in the upper part of the watershed would result in a significantly different mapping of the 1-percent floodplain as compared to FEMA's effective Flood Insurance Rate Map (FIRM) for the area.

Ebner Coulee Floodway Remapping Study Fact Sheet, dated October 2017. This fact sheet outlines the analysis contained in the Draft Ebner Coulee Floodway FIRM Remapping Technical Feasibility Report. The fact sheet provides a summary overview of the initial analysis as it was presented to the City of La Crosse Flood Task Force Committee.

Ebner Coulee Modeling Phase 2 – Historic Rainfall Analysis Memorandum, dated December 4, 2017 from Brad Woznak and Riley Mondloch to Mr. Bernard Lenz. This memorandum summarizes the analyses and results from Phase 2 of the study which involved developing a HEC-HMS hydrologic model

Engineers | Architects | Planners | Scientists

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to estimate peak flow rates for the Ebner Coulee system. Model calibration and validation was also performed by analyzing historic rainfall events over the past 20 years with calibrated HEC-HMS models combined with a 1D/2D HEC-RAS model to estimate peak water surface elevations and resulting inundation areas. The ultimate goal of this study was to either verify that the FIS discharge rates are appropriate for the associated flood risk, or if not, develop a more appropriate methodology to move the project forward for a FEMA LOMR submittal. The ultimate results of the study indicated that the flow rates developed for a hydrologic model calibrated to the FIS discharge rates resulted in unrealistically high flood inundation areas than those that area experienced under historic conditions. Even lower discharge rates developed utilizing a RRE calibrated hydrologic model seem to over-predict flood inundation areas when comparing to the observed historic conditions.

Once you have had a chance to review the provided information, we would like to schedule a discussion meeting. The goal of the meeting will be to discuss the analysis to date, obtain the State's initial thoughts, and to help estimate the future level of effort required to receive the State's overview and concurrence to support a LOMR to formally update the FIRM for the Ebner Coulee area.

I can be reached at 651.490.2125 or via e-mail at bwoznak@sehinc.com.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.



Brad T Woznak
Sr. Professional Engineer

btw

Enclosure

c: Mr. Bernard Lenz – City of La Crosse

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