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May 8, 2008

Mr. Jim Mickey
Licking County Planning Commission
Flood Plain Coordinator
20 S. Second St.
Newark, OH 43055



RE: CLOMR Request, Granville Twp., Raccoon Creek

Dear Mr. Mickey,

Enclosed herewith is a Hydraulic Study for a CLOMR-F application. After your review and approval, we will submit to FEMA to request a permit to fill the floodplain in the areas indicated in the report.

If you have any questions or need more information please contact me at 740-345-1921

Sincerely,

Todd D. Willis, PE, PS
Project Manager

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Exhibit C – Annotated FIRM Map

1.0 Introduction

The property owner of 2 parcels located along Raccoon Creek in Granville Twp., Licking County, Ohio is requesting an area currently shown of the FIRM Map, No. 39089C0317H and 39089C0309H, currently in Zone AE and Zone X (Future Base Flood), be filled to allow construction of a commercial development area.

To permit this filling of the floodway fringe, a Conditional Letter of Map Revision (CLOMR) is being requested to remove the area in question from the floodway fringe. This process involves the calculation of the proposed water surface profile elevations after an encroachment is made in the floodplain. In this situation, the encroachment is earthen fill. The sections of Raccoon Creek that were studied range from River Mile 9.161 also known as Section BB to River Mile 8.603 also known as Section AY.

2.0 Floodplain Model Criteria

The flooding modeling criteria for the unincorporated areas of Licking County is a 0.01 ft allowable rise in water surface elevation as a result of an encroachment in the floodplain.

The existing FIRM Map, dated May 2, 2007 shows a floodway boundary on the maps, however, this floodway boundary is based on a 1.0 ft allowable rise in water surface elevations as a result of an encroachment.

A new floodway boundary must be calculated in the area requesting a CLOMR, based on the 0.01 ft allowable rise. In addition, the Base Flood for this analysis is the 100 Year Future Discharge Flows. The Future floodplain boundary is shown on the FIRM Maps and labeled as "Zone X (Future Base Flood)". The floodway boundary shown on the May 2, 2007 FIRM Maps is based on the current 100 Year Discharge Flows and not the Future Flows.

The analysis for this project was performed using the HEC-RAS program. The existing conditions model was calculated using an electronic copy of the HEC-RAS model, which was acquired from FMSM. FMSM is the engineering firm that produced the new FIS and FIRM Maps dated May 2, 2007. Three cross sections were added at River Mile 8.997, 8.978, and 8.711 for use as a comparison during the analysis of the proposed encroachments.

The proposed conditions model was calculated by utilizing the three additional cross sections in the model in the areas requesting the CLOMR. Encroachment Method 4 was used with a 0.01 ft allowable rise in water surface elevations as a result of encroachment fill. Once the allowable encroachment limits were calculated, Encroachment Method 1 was used to establish the final limits of allowable fill in the floodplain. The 100 Year Future Base Flood Flows were used to compare existing conditions to proposed conditions.

3.0 Existing Floodplain Model

The sections of Raccoon Creek that were studied range from River Mile 9.161 also known as Section BB to River Mile 8.603 also known as Section AY. The map of the project area and cross sections of the creek can be seen in Exhibit A.

Three cross sections were added to the existing model at the areas to be filled, so that the existing and proposed water surface elevations can be compared after the encroachment filled is added to the cross sections.

The results of the existing model water surface elevations with the three cross sections added, compared to the existing water surface elevations from the original HEC-RAS model are shown in Exhibit B. Slight differences in water surface elevations through River Mile 9.161 to 8.603 can be seen. These differences are a result of the more detailed analysis of water surface elevations along the existing channel with the addition of the three cross sections.

The existing HEC-RAS model with the three additional cross sections was used as the base condition when comparing water surface elevations for the proposed condition with encroachments.

4.0 Proposed Floodplain Model

The proposed floodplain model was calculated based on encroachment analysis in the floodplain using a 0.01 ft allowable rise in water surface elevations and using the Future Base Flood flows. The existing model included the three additional cross sections and was analyzed with no encroachment and used as the base condition. Encroachment Method 4 was utilized for the analysis with varying target water surface elevation rises until a combination of target rises resulted in a 0.01 ft water surface elevation through the area being studied. Once the target rise was met, the encroachment limits were established and Encroachment Method 1 was modeled to complete the analysis.

The results of the analysis can be seen in Exhibit B and the limits of the proposed floodway on the map and cross sections can be seen in Exhibit A and C.

5.0 Summary

In summary, this CLOMR is being requested for the limits shown on Exhibit A and C. This will permit the owner of the property to fill the existing floodplain up to the encroachment limits established for a 0.01 ft allowable rise in water surface elevations utilizing the Future 100 Year Base Flows.

Once construction of the improvements is complete a Letter of Map Revision (LOMR) will be requested to complete the process of removing the area in question from Zone X (Future Base Flood) and Zone AE.

Conditional Letter of Map Revision
Granville Township, Licking County Ohio
Community No. 390328

EXHIBIT A