HISTORIC FRANKLIN TENNESSEE

MEMORANDUM

DATE: September 7, 2021

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
Vernon Gerth, Assistant City Administrator
Paul Holzen, Director of Engineering
Jimmy Wiseman, Assistant Director of Engineering

SUBJECT: Brownland Farms – Floodplain/Floodway Manipulation Summary

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The proposed development of Brownland Farms has numerous challenges associated with floodway and floodplain. To maximize the development potential of the property, the developer is proposing to manipulate the floodway and floodplain. Flood plain alterations are allowed within Title 23 of the City of Franklin Municipal Code. Alteration within the floodplain shall not cause a net decrease in flood storage capacity below the project's 100-year floodplain elevation unless it is shown that the proposed alteration or filling will not cause an increase in the regulatory flood level (100-year event), increase velocities, or aggravate flooding on other properties and will not unduly restrict flood flows. In addition, developers are required to provide compensatory cut in the amount of 150 percent (1.5:1) for all fill in floodplains.

To manipulate floodway and floodplain within the City of Franklin, an applicant is required to hire a Tennessee licensed professional engineer qualified to perform Hydrologic and Hydraulic (H&H) studies. In the case of Brownland Farms Development, the applicant hired BARGE Design Solutions to complete an H&H study. In addition to consulting with BARGE Design Solutions, the developer, at the request of the City of Franklin, hired Civil and Environmental Consultants, Inc. to provide a peer review of the H&H study. City engineering staff has no objections to this study.

The existing floodway and plain between Hillsboro Road and the downstream end of the property includes an east split, west split and the main Harpeth River conveyance. These splits are commonly associated with sharp bends along the main conveyance of a river or stream where discharge can leave the main channel and enter again at some point further downstream. The developer is proposing to improve the flow along the main Harpeth River conveyance to allow for the elimination of the west split. This engineered solution helps to maximize the development potential of the property. As required by municipal code, the developer is required to provide 150 percent compensatory cut to fill within the flood plain. Currently, the developer is proposing to fill 213,854 CY of material and will be required to cut a minimum of 320,781 CY (1.5 x 213,854 CY) of material. The developer is proposing to cut 348,007 CY of material from the floodplain. This will create an additional 27,000,000 gallons of storage. The material cut within the floodplain is often used to fill across the site and maximize the amount of developable land. As shown in the BARGE Design H&H study, the proposed development will lower the

effective water surface elevation across the proposed property and has no adverse effect. It should be noted that the H&H study shows very little benefit outside of the project limits and will only lower the upstream water surface elevation by .02' (approximately ¼") and will have no impact on the downstream water surface elevation.

In summary, staff has no objections to the H&H study completed by BARGE Design and reviewed by Civil and Environmental Consultants, Inc. The proposed engineering of the floodway and floodplain simply allows the developer to maximize the development potential of the property. The improvements provide little to no benefit outside the limits of the development project. While the floodway and floodplain are an important part of this development, the Board of Mayor and Aldermen should focus its discussion on the merits of the development and how it conflicts with sections of Envision Franklin and feedback obtained from the general public.