



COMMITTEE MEMORANDUM

TO: Neighborhood / Community Affairs Committee

FROM: Kathie G. Brooks, Interim City Manager

DATE: September 24, 2012

SUBJECT: **Discussion Regarding The Upper La Gorce Stormwater Drainage, Specifically, The Budget And Design Criteria Package**

BACKGROUND

The 1997 Stormwater Management Master Plan (SWMMP) identified three (3) basins within the La Gorce neighborhood as priority basins. In May 2002, the design firm of Reynolds, Smith and Hills, Inc. (RS&H) submitted a Basis of Design Report (BODR) for the La Gorce neighborhood, as part of the CIP Office's Neighborhood Improvement Program, which included proposed improvements to these three basins. As RS&H began its design, it recognized the need to include two additional drainage areas on North Bay Road. Over the next several years, RS&H held community meetings and developed preliminary plans. Per the RS&H 2010 Drainage Report, it proposed to meet the required level of service by providing new inlets, pipes, drainage wells, control structures, and outfalls in gravity systems. The final design did not re-grade any streets and designed for a tailwater and groundwater elevation of -0.96 feet NAVD.

The current SWMMP is more comprehensive than the 1997 SWMMP. It has re-evaluated the functionality of each basin and taken a more in-depth look at the drainage deficiencies Citywide. It has also re-defined statistical rainfall data as well as impacts associated to sea level rise.

By comparison, the groundwater and tailwater elevations are 0.67 feet NAVD in the current SWMMP instead of the -0.96 feet NAVD, previously assumed by RS&H. Additional runoff from Alton Road into the North Bay Road stormwater system has also now been identified in the plan which was not accounted for in the earlier design.

ANALYSIS

Following an in-depth analysis of the 100% construction plans developed by RS&H, staff has deemed that the stormwater design will not address nor meet the level of service required by the current SWMMP and cannot be easily modified to do so. As a result, staff has determined that the proposed stormwater system warrants a full re-evaluation, as well as a re-design, to ensure that the current level of service is met.

Stormwater Design

The current SWMMP identifies the need for pump stations and additional injection wells in this area, due to the current stormwater design criteria, and identified additional flows into the system that were not included in the original RS&H design. Additionally, staff is re-evaluating aspects of the original design including the outfalls, sidewalks, and condition of the roadway,

which impact the functioning of the stormwater system and cost.

The size and elevations of the proposed large outfall pipes will need to be adjusted, as these outfalls were originally designed with inverts below the mud lines of the receiving water bodies.

The elevations of the sidewalks will need to be reviewed as there are areas where the sidewalk is lower than the adjacent roadway. These areas will require re-grading of the sidewalk, harmonization of driveways, additional drainage, and/or a change to the roadway profile. These were not contemplated in the RS&H design.

A consultant has been retained to evaluate the condition of the roadway and to provide a recommendation to mill and resurface or reconstruct various sections. The consultant will base its recommendation on the Federal Highway Administration Highway Performance Monitoring System. This includes a visual assessment of the crack severity, a determination of ride quality, and results from core samples. In addition to the roadway condition report recommendation, the engineer of record will have to consider the amount of underground improvements being installed, before a final determination is made regarding roadway reconstruction, milling and resurfacing, or a combination of. For example, if a stormwater line and a watermain are being installed parallel in a roadway, it may be more economical to reconstruct the roadway than to entirely restore the two trenches.

Staff has requested an additional \$4,260,000 in stormwater funding to accommodate the anticipated additional infrastructure that will be required to meet the newly identified stormwater requirements. Staff has also requested an additional \$319,500 in above ground funding to accommodate street re-grading and associated paving that is not associated with stormwater. In total, there is \$16,554,070 available for the project.

La Gorce Budget

Prior Years Funding	\$ 7,475,924
FY 2011/12 Funding	\$ 5,933,348
Requested Additional Funding	\$ 4,579,500
<u>Spent To Date</u>	<u>\$ (1,434,702)</u>
Available Funding	\$16,554,070

Procurement

It is staff's opinion that the most efficient delivery method for this neighborhood improvement project is via a design-build procurement scenario. Currently, staff is developing the design criteria package (DCP), which will furnish sufficient information to allow bidders to prepare a response to the City's request for qualifications. The DCP will specify performance based criteria for the project and the City Engineer, as the design criteria professional, will approve working drawings developed by the selected firm, to ensure statutory compliance with the established DCP.

As part of the due diligence of the DCP development, the City is also conducting additional softdig investigations to mitigate risks related to utility conflicts and provide the City with the opportunity to assist in early utility conflict resolutions, so as to minimize risks that may be assumed by the design-build firm.

The DCP will be based upon the RS&H BODR, survey, watermain design, streetscape design, the current SWMMP, the City Public Works Manual, the roadway assessment, and the additional softdig information.

There will be an engineer of record, working for the design-build firm, who completes the design and takes overall responsibility for it. The design-build firm will prepare signed and sealed contract documents for review by City staff to verify compliance with the DCP intent and regulatory requirements.

A draft DCP was provided to the CIP Department for review. Staff has incorporated the comments generated by this review. Further, the CIP Office retained a design firm and a cost estimating firm to prepare an estimate of the design-build effort. While the design firm and City staff took different approaches to achieve the stormwater level of service, the resulting stormwater cost estimates were similar. Public Works and CIP staff met with the CIP retained design firm to discuss the different design approaches and cost estimates. Once the roadway assessment recommendations and softdig information are incorporated into the DCP, a final version will be available for a constructability review by the CIP Department.

At this time, it is proposed to complete the design phase of the design-build contract in Fiscal Year 2012/2013 and to undertake the construction phase in Fiscal Year 2013/2014.

5900 Block of North Bay Road

The City is also working with FDOT to expedite the construction of drainage improvements on the 5900 block of North Bay Road. A portion of this block is extremely low and experiences tidal flooding during the spring and fall high tides. To resolve this issue, FDOT and the City need to reconstruct the outfalls at 59th Street and add backflow preventers. Staff from the CIP Office and the Public Works Department recently met with FDOT to discuss the design and the best procurement method to advance the construction. The City plans to design and construct these drainage improvements ahead of the La Gorce Neighborhood Improvement project.

CONCLUSION

The above information is provided for discussion by members of the N/CAC.


JGG//FHB/JJF/RWS