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February 3, 2022

Mr. Daniel White
City of Plainfield Planning Board Secretary
515 Watchung Avenue
Plainfield, NJ 07060

South Avenue Sanitary Sewer Extension Capital Project Review
Plainfield Municipal Utilities Authority
Colliers Engineering & Design Project No. PMU040

Dear Mr. White,

On behalf of Plainfield Municipal Utilities Authority (PMUA), please accept this submission to the City of Plainfield Planning Board for a Capital Project Review during their Public Hearing scheduled for 7:00PM, Thursday, February 17, 2022. Per our discussions with William Nierstedt, Director of Planning, and his February 1, 2022 e-mail correspondence, the Adjacent Property Notification Requirement, Planning Board Application Fee, and Escrow Fees have been waived for PMUA. In addition to this cover letter project explanation, we are providing the following documents (electronic PDFs and one (1) hard copy originals) for your consideration:

- City of Plainfield Planning Board Application
- Proposed South Avenue Sanitary Sewer Installation Preliminary Plan Set (4 sheets) dated November 15, 2021 as prepared by Colliers Engineering & Design.
- South Avenue Capacity Study dated March 2021 as prepared by Maser Consulting (now Colliers Engineering & Design) excerpts: cover page, Table of Contents, Table 6 (page 7 of 9) Summary of Utilized Capacity Following Development, Section 3 – Summary of Recommendations (page 8 of 9), and Future Flow Map A (exhibit 1 of 2).
- Aerial photos and street view photos.

In response to the City's redevelopment efforts and many new proposed residential projects along South Avenue, PMUA Board of Commissioners authorized CED to conduct a Capacity Flow Study of the sanitary sewer within South Avenue. The Study included the installation of four (4) temporary flow meters and one (1) rain gauge, which were provided by the Plainfield Area Regional Sewerage Authority (PARSA). Data for the Study was collected over eight (8) months. The results of the Study projected the daily peak flow will be greater than the current capacity for some identified sections of 8-inch sewer along South and Leland Avenue in study Area A. Based on the current pace of redevelopment on South Avenue, it was recommended that this project be advanced as quickly as possible.

This project originally proposed to replace 1,200 L.F. of the existing 8-inch VCP sewer along Leland Avenue, from North Avenue to South Avenue, and along South Avenue, from Leland Avenue to Atlantic Street with new 12-inch PVC sewer. However, the results of the Subsurface Utility Exploration

(SUE) Survey via ground penetrating radar (GPR) and Topographical Survey revealed numerous existing underground utilities which limited the opportunity to efficiently design a replacement gravity sewer, particularly in Leland Avenue, which also has heavy traffic and an overhead commuter railroad bridge.

During a site investigation with PMUA staff, our office became aware of an existing parallel 15-inch gravity sewer aligned within Leland Avenue to North Avenue. The Sewer Superintendent suggested the design be revised to utilize the existing 15-inch sewer in Leland Avenue rather than trying to construct a new line within the crowded right-of-way. PARSA installed a flow meter within the 15-inch sewer for our office and PMUA to monitor and analyze the existing capacity data. We determined that this existing parallel 15-inch sewer line has sufficient excess capacity for the proposed additional service area.

Based on the 15-inch sewer metering and utility survey results described above, the project design was changed to install only 657 LF 12-inch PVC sanitary sewer along South Avenue in parallel to the existing 8-inch VCP sanitary sewer between Atlantic Street and Leland Avenue and connect to the existing 15-inch sanitary sewer within Leland Avenue via a doghouse manhole. By diverting a portion of the sanitary flow to the 15-inch sewer, this eliminated the need for replacing any sewer within Leland. The revised design also eliminates the need for by-pass pumping. It is noted that all proposed construction may occur overnight to minimize traffic complications.

We are anticipating this project to go out to Public Bid in May of 2022 and be completed by November of 2022. Our preliminary opinion of probable cost for the construction of this project is approximately \$328,000. This project requires coordination with City Department of Public Works, numerous utility companies, Union County soil conservation district, and others.

Mr. Nierstedt recommended that I, Ron Madison, be added as a "participant" to the Planning Board Zoom Meeting. I will be able to share my computer screen to better present this proposed capital project to the Planning Board. My e-mail is ron.madison@colliersengineering.com.

Sincerely,

Colliers Engineering & Design, Inc.
(DBA Maser Consulting)



Ronald B. Madison, PE
Senior Project Manager

RBM/TBE/baw
Enclosures

cc: William Nierstedt, City of Plainfield Director of Planning
Carlos V. Fuetes, PE, City of Plainfield Engineer
Beverly Morris-Gill, PMUA Interim Executive Director/CFO
Stephen Dessino, PMUA Sewer Superintendent