



Township of Cranford
PLANNING BOARD MEMORANDUM

To **Kathy Lenahan, Land Use Administrator**

From John Ruschke, P.E., P.P., Mott MacDonald

Date December 12, 2022 – Revised January 30, 2023

Project # 507100769

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CC Cranford Township Planning Board Chairman & Members
Jonathan Drill, Esq., Board of Adjustment Attorney
201 Walnut Avenue, LLC, Applicant
Bahram Farzaneh, P.E., P.P., French & Parrello Associates

Subject **Block 484, Lot 19.01**
201 Walnut Avenue
PB-22-003
Preliminary & Final Site Plan Application
Stormwater Management Review

On behalf of the Township of Cranford (Township) Planning Board and in response to our prior review memorandum dated October 6, 2022, Mott MacDonald has received and reviewed the following additional/revised documents, which have been prepared in support of the above referenced application for Preliminary and Final Site Plan approval associated with the proposed redevelopment of an existing bank to a multi-family residential building. Our review of the subject application was confined to the stormwater management design for the proposed redevelopment:

- Revised Stormwater Management Report for 201 Walnut Avenue, prepared by Bahram Farzaneh, P.E., P.P., of French & Parrello Associates, dated February 4, 2021, last revised November 9, 2022
- Stormwater Facilities Operations & Maintenance Manual for 201 Walnut Avenue, prepared by Bahram Farzaneh, P.E., P.P., of French & Parrello Associates, dated February 5, 2021, revised April 30, 2021
- Revised Preliminary and Final Site Plan for Block 484, Lot 19.01, 201 Walnut Avenue, Township of Cranford, Union County, New Jersey, prepared by Bahram Farzaneh, P.E., P.P., of French & Parrello Associates, dated January 29, 2021, last revised November 9, 2022
- Response letter prepared by Bahram Farzaneh, P.E., P.P., of French & Parrello Associates, dated November 17, 2022

Our review of the proposed stormwater management design has revealed the following technical review comments:

1. Per NJDEP’s Stormwater Best Management Practices (BMP) manual, in instances where the lowest invert in the outlet or overflow structure is below the flood hazard area design flood or tide elevation in a down-gradient waterway or stormwater

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collection system, the effects of tailwater on the hydraulic design of the underdrain and overflow systems, as well as any stormwater quantity control outlets must be analyzed. A one-way valve is proposed on the discharge piping from the proposed underground stormwater detention basin to prevent backwater and loss of storage volume within the basin. The Applicant's professionals are of the opinion that the onsite drainage system will drain out much faster than the time it would take for the Rahway River to reach the 100-year flood elevation. We have confirmed that the onsite culverts provided for flood storage are properly sized. In the event of surcharge of onsite inlets due to downstream tailwater effects, there is potential for ponding of stormwater in the parking lot to approximate elevation 63.3', which is below the proposed first floor elevation of the building (63.5').

2. We take no exception to the Applicant providing a monetary contribution to the Township for offsite stormwater improvements (future express sewer system) in lieu of replacing the section of existing undersized drainage piping in Chestnut Street downstream of the point of connection from their onsite drainage system.
3. The proposed top of weir wall elevation within the proposed detention basin outlet structure (Elevation 60.35') should be revised as necessary so that no runoff overtops the wall during the 100-year storm (Maximum Water Surface Elevation 60.50'), for consistency with the water quantity control calculations provided.
4. The porous pavement detail provides two separate invert elevations for the proposed underdrain piping. Per the BMP manual, the aggregate layer must have sufficient depth to provide at least 3 inches of aggregate above and below the pipe network. This should be checked and plans/details revised as necessary.
5. The Stormwater Facilities Operation and Maintenance (O&M) Manual must be revised for compliance with Chapter 9.6 of the Stormwater BMP manual (NJDEP), to enhance the maintenance plan for the porous paving system. Revisions include, but are not limited to, the following:
 - a. Inspection after each 1" storm
 - b. Annual structural inspection
 - c. Quarterly vacuum sweeping, including spring/autumn cleaning
 - d. Annual surface infiltration testing in Spring
 - e. Restrictions on sealants/coatings/herbicides per the manual requirements
 - f. Snow/ice control

Should you have any questions regarding this memo, please do not hesitate to contact us.