


MEMORANDUM

TO: Thomas Burt, Chairman

CC: Village of Mamaroneck Harbor & Coastal Zone Management Commission
Carolina Fonseca, Building Inspector

FROM: John Kellard, P.E. 
Consulting Village Engineer

DATE: November 19, 2021
Updated March 10, 2023

RE: 572 Van Ranst Place, LLC
572 Van Ranst Place
Section 8, Block 22, Lot 255

PROJECT DESCRIPTION

At the request of the Village of Mamaroneck Harbor & Coastal Zone Management Commission, Kellard Sessions Consulting has reviewed the site plans and supporting documents submitted in conjunction with the above-referenced application. The applicant is proposing a new, 10-unit, 5-story residential structure with 12 on-grade parking spaces. The site presently includes an existing 2-story dwelling and gravel driveway which will be demolished. The property is 6,500 s.f. and is located in the RM-3 Multiple Residence Zoning District and the entire property and its surroundings is located within the FEMA Special Flood Hazard Area (Zone AE).

GENERAL COMMENTS

FLOOD DAMAGE PREVENTION

1. The property is located within an area of Special Flood Hazard, the FEMA Floodplain (Zone AE) of the Mamaroneck River and Sheldrake River. The subject proposal requires a Floodplain Development Permit for the purpose of protecting its citizens from increased flood hazards and ensuring that the project is constructed in a manner which minimizes its exposure to flooding.

The 100-year high water elevation projected for the area is Elevation 25.8 feet. Present elevations across the project site range between 18.9 and 21.05 feet. The first floor of the proposed building is 21.0 feet. The proposed parking area ranges between Elevation 19.78 to 21.37 feet. During a

100-year storm event, it is expected that water depth within the project parking area and first floor lobby will be 4.5 to 6.0 feet deep. Based on the site's topographic relationship to the Mamaroneck River and Sheldrake River, it can be expected that the property will also flood during less intense rainfall events.

The applicant's Engineer provides that the project will result in a slight increase in available floodplain volume. The applicant should submit for our review the full analysis of the available on-site floodplain volume and compensatory storage for both the present condition and proposed completed project.

The applicant has provided a Flood Storage Analysis Plan which evaluates the on-site flood storage volumes under both the present pre-development condition and the proposed post-development condition. The analysis examined flood volumes between Elevations 19 and 22 which elevations represent the lowest and highest ground surface elevations found on-site under both the existing and proposed scenarios. Volumes were computed using the HydroCad program with existing and proposed elevations provided from the Site Plans.

Compensatory storage to off-set floodplain losses must be hydraulically connected to the floodplain and replace the lost volume within equivalent elevation increments. The applicant has examined the compensatory storage within elevation increments of one (1) foot. The flood storage for the post-development scenario provides a greater volume of on-site storage for each one (1) foot elevation increment than the storage presently available.

The applicant has provided sufficient compensatory storage within the proposed design to off-set any floodplain losses due to regrading. The post-development floodplain volumes exceed the pre-development volumes for each one (1) foot increment between the lowest and highest surface elevations found on-site. Comment addressed.

2. Although the proposed residential units are located on the second floor (Elevation 33.00) level above the 100-year high water elevation, the building's elevator and stairwell lobby is located on the first floor below the 100-year flood elevation. Ingress and egress to all residential units are either by the common elevator or two (2) separate stairwells, which exit within the first floor lobby or on-grade outside the lobby. There is no means of exiting the building at an elevation above the 100-year flood elevation. The Village's Building Inspector should review the proposed building plans for conformance with FEMA Regulations and NYS Building Code when processing the Floodplain Development Application.

The applicant has designed an emergency exit from the common stair at the second floor level which exits onto the flat roof above the lobby entrance. The exterior landing, located above the 100-year flood elevation, provides a point of rescue if needed during a storm event.

Comment addressed.

The Village Building Inspector should review the exit for compliance with FEMA and NYS Building Codes when processing the Floodplain Development Application.

3. Recent design modifications include an emergency exit from the eastern stairwell at an elevation, which appears to be above the 100-year flood storage elevation. This exit has been provided as an emergency route for rescue purposes during flood events. The exit does not appear to include a landing. The applicant should specify the elevation of the exit and its relationship to the 100-year flood elevation. The Village Building Inspector should review the exit for compliance with FEMA and NYS Building Codes. The applicant should explore providing a landing, perhaps by extending the roof above the building entry to the emergency doorway and providing railings and the roof could be used as an elevated deck for rescue purposes.

The applicant has provided an exterior landing at the same elevation as the emergency exit from the common stair. The landing will provide a location above the base flood elevation, where residents could be rescued if necessary. Comment addressed.

4. Resident parking is proposed within an open parking area under the proposed building. While the living units and mechanical equipment will be elevated above the 100-year high water elevation, vehicles within the parking lot would be inundated during a major storm event. Perhaps the applicant can explain what emergency provisions are planned to protect these vehicles.

See #5 below.

5. During the most recent significant storm event, Hurricane Ida, the entire neighborhood was inundated with flood waters several feet deep. Emergency services in the Village were overwhelmed by the number of residents who required assistance to vacate their homes. The addition of ±25 additional residents who may also need assistance will further tax the Village's emergency responders. The applicant should explain the Emergency Management provisions, which are planned to assure safe evacuation of the building's residents during such storm events. The plan should be reviewed by the Village Fire and Police Departments.

The applicant has prepared a draft Flood Emergency Management Plan (FEMP) for the building. The plan addresses the responsibility of building management in keeping residents prepared to act during a significant storm event. An Incident Commander for the building will coordinate communications, with building residents with Village officials and emergency service personnel.

Evacuation routes and procedures for flood emergencies will be posted and annual flood emergency drills provided to residents. Residents will be notified through emergency text alerts of potential flooding prior to major storm events.

A flood alarm will be located within the elevator pit with emergency sound devices on each floor. The elevator will also be programmed to reset to the first floor which is above the base flood elevation.

The building will be powered by a fuel cell energy system which should make the building independent of the electrical grid, therefore the building will have a much better chance of maintaining power through a storm event. Gas and electric shut offs have also been relocated above the base flood elevation.

The FEMP will better prepare and assist residents during flood emergencies. The applicant should continue the development of the FEMP as comments and recommendations are provided by Village first responders.

STORMWATER MANAGEMENT

6. Since proposed limits of disturbance exceed 2,000 s.f., but is less than one (1) acre, the applicant is required to provide stormwater quality and quantity controls. Stormwater quantity controls include attenuation of the post-development, 25-year storm event to pre-development flow rates. Stormwater quality controls require the applicant to provide treatment for the water quality volume (WQv) through runoff reduction. Since an infiltration practice is being proposed, the system must be sized to store the entire WQv under the invert of the proposed system outlet, prior to infiltration.

The applicant is proposing a stormwater infiltration practice that is required to have pre-treatment in conformance with Chapter 6, Section 6.4 of the New York State Department of Environmental Conservation Stormwater Management Design Manual (NYSDEC SMDM). According to this section of the manual, the sizing of the pre-treatment practice shall be based on the infiltration rate measured at the location of the proposed infiltration practice. Examples of acceptable pre-treatment practices upstream of the stormwater infiltration practices include sedimentation basins, sump pits, grass channels, infiltration, isolator rows, hydrodynamic separators, etc.

- a. For infiltration rates between 0.5 inches/hour and 2 inches/hour, the applicant is to provide pre-treatment storage for 25% of the WQv.
- b. For infiltration rates between 2 inches/hour and 5 inches/hour, the applicant is required to provide pre-treatment storage for 50% of the WQv.

- c. For infiltration rates greater than or equal to 5 inches/hour, the applicant is required to provide pre-treatment storage for 100% of the WQv.

The applicant has provided a Stormwater Pollution Prevention Plan, which provides water quality treatment and stormwater retention within an infiltration system below the parking lot. A First Defense vortex treatment system is provided before the infiltration practice to provide pre-treatment removal of trash, sediment and oils. The proposed system has been designed to accommodate all site runoff through the 100-year storm event with zero system discharge from the project site. Comment addressed.

7. The applicant shall submit a maintenance agreement for the proposed stormwater management features for review by the Village Consulting Engineer.

A note has been placed on the Stormwater Management Plan (Sheet C-2). Comment addressed.

EROSION & SEDIMENT CONTROLS

8. The applicant is required to provide an erosion and sediment control plan, which includes all proposed temporary erosion and sediment control practices and includes maintenance and inspection procedures of all proposed erosion and sediment control measures, per the requirements of the NYS Standards and Specifications for Erosion and Sediment Control, dated November 2016.

The applicant has provided a Stormwater Management Plan (Sheet C-2), which includes the temporary sediment and erosion control practices, per the requirements of the NYS Standards and Specifications for Erosion and Sediment Control. Controls include construction fencing, silt fencing, stabilized construction entrance, equipment storage, drain inlet protection, etc. A maintenance schedule and sequencing of temporary controls is also included. Comment addressed.

9. Please provide the following notes on the drawings:
 - The applicant shall include a note on the erosion and sediment control plan which states "All erosion and sediment control measures shall conform to the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016."
 - The applicant shall add a note to the erosion and sediment control plan which states "Soil restoration at the completion of construction shall be implemented in accordance with the soil restoration specified in Chapter 5 of the New York State Department of Environmental Conservation Stormwater Management Design Manual for the restoration of surfaces."

- The applicant shall include a note on the plans which states “Temporary erosion and sediment control measures cannot be removed until site stabilization (80% uniform density of permanent vegetation or permanent mulch/stone) has been achieved.”
- The applicant shall include a note on the plans which states “Any imported soil shall comply with all Federal, State and Local requirements for quality and residential purposes.”
- The applicant should review the construction phase notes on Sheet C-2 and update the municipality name and anticipated start and complete dates.
- The applicant shall include a note on the plans stating “The applicant shall provide an As-Built Plan of the stormwater management system (for all stormwater features including, but not limited to, locations of stormwater infrastructure, invert/rim elevations, pipe locations and sizes, final grading, etc.), certified by the Engineer of Record, prior to the issuance of a Certificate of Occupancy. The As-Built Plan shall also include the final maintenance schedule for the stormwater management features.”

The applicant has included all notes on the project plans. Comment addressed.

10. The applicant shall revise the plans to show construction fence or alternative barrier markers surrounding the proposed infiltration practice footprints during construction to limit compaction from equipment tracking.

Construction fence surrounding the proposed infiltration practice has been provided on Sheet C-2. Comment addressed.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS & REPORT REVIEWED, PREPARED BY HUDSON ENGINEERING & CONSULTING, P.C.:

- Existing Conditions Plan (C-1), dated February 16, 2022
- Stormwater Management Plan (C-2), dated February 16, 2022
- Details (C-3, C-4, C-5), dated February 16, 2022
- Flood Storage Analysis Plan (FS-1), dated July 14, 2022
- Flood Storage Cross Section – Existing (FSC-1), dated July 14, 2022
- *Stormwater Pollution Prevention Plan & Drainage Analysis Report*, dated July 20, 2022

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PLAN REVIEWED, PREPARED BY IQ LANDSCAPE ARCHITECTS, DATED JUNE 15, 2022:

- Landscape Plan (L-1)

PLAN REVIEWED, PREPARED BY SULLIVAN ARCHITECTURE, P.C., DATED OCTOBER 25, 2022:

- Proposed Site Plan, Floor Plans, & Zoning Chart (SP1.0)
- Exterior Elevations (A3.1)
- Exterior Perspectives (A4.1)

JK/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Mamaroneck/Correspondence/2023-03-10_MamHCZMC_572 Van Ranst Place LLC_Review Memo.docx