


MEMORANDUM

TO: Seamus O'Rourke, Chair

CC: Village of Mamaroneck Planning Board
Carolina Fonseca, Building Inspector

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

DATE: July 22, 2022
Updated May 19, 2023

RE: Site Plan Approval
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 Planning Board, Kellard Sessions Consulting has reviewed the 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 unit 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.

A revised submission was made by the applicant, which included design changes to the building which would lessen the damage to the building interior during flood events, relocated mechanical equipment above flood elevations and improves emergency egress from the building during flood events.

GENERAL COMMENTS

1. The property is located within the FEMA Floodplain (Zone AE) of the Mamaroneck River and Sheldrake River. 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 not provided, but appears to be between Elevation 20.2 and 21.0 feet. The proposed parking area ranges between Elevation 19.70 to 21.20 feet. During a 100-year storm event, it is expected that water depth within the project parking area, first floor lobby and mechanical room will be 5-6 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 should provide an analysis of the available on-site floodplain volume and compensatory storage for both the present condition and proposed completed project. No decrease in flood storage will be permitted on-site.

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 the present condition and under the proposed condition. The analysis examined flood volumes between Elevations 19 and 22 which elevations represent the lowest and highest elevations found on-site under both the existing and proposed scenarios. The analysis excluded the depressed storage volumes found within the basement of the existing structure (volume which does not drain), included the volumes occurring within the flooded existing structure (which will drain) and included flood volumes within the proposed building lobby area. Volumes were computed using the HydroCad program with existing and proposed elevations included on the Site Plans. The computations are included within the Stormwater Pollution Prevention Plan & Drainage Analysis.

The floodplain is made up of two (2) areas – the floodway and the floodplain fringe. Construction of buildings is highly restricted within the floodway, however, permitted within the floodplain fringe. The proposed structure is located beyond the limits of the floodway. Construction within the fringe must not adversely impact adjoining or other off-site properties. To ensure no increase of the base flood elevation, the development must not reduce the on-site water holding capacity of the floodplain. Mitigation to off-set the loss of the floodplain from the placement of fill or structures within the floodplain fringe is typically accomplished with compensatory storage.

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

Although the existing building is known to have been inundated with flood waters during Hurricane Ida, the potential flood storage volume provided within buildings located within the floodplain fringe are typically not considered part of the floodplain volume. Existing structures within the floodplain fringe are permitted to flood proof the structure without providing compensatory storage to replace waters which could inundate the structure. Such rights to

improve the structure, restricting flood waters from entering the basement and first floor supports the position that the available flood volumes which could inundate an existing structure should not be counted towards compensatory storage.

The flood storage analysis prepared by the applicant included flood volume within the structure above Elevation 20.3 feet, the lowest grade outside of the structure where hydraulic connectivity and free flow off-site is available. The basement area below Elevation 20.3 was not included within the calculations of floodplain volume. In my opinion, the applicant has taken a conservative approach to their evaluation of the existing site.

Floodplain standards do not permit construction of new residential buildings with finished floors (including basements) below the base flood elevation, except for the parking of vehicles, building access and areas of storage. Building access must be designed, when below the base flood elevation, to automatically equalize hydrostatic flood forces on exterior walls by allowing the entry and exit of flood waters. The proposed building will have an entry lobby located below the base flood elevation which is designed with flood vents which will permit flood waters to enter and exit the building. The applicant has therefore included the volume within the building lobby as available floodplain volume post-construction.

In conclusion, it is my opinion that the applicant has provided sufficient compensatory storage within the proposed design to off-set floodplain losses. Furthermore, the post-construction volumes exceed the existing condition volumes for each one (1) foot increment between the lowest and highest grades found on-site.

2. Although the proposed residential units are located on the second floor level above the 100-year high water elevation, the building's mechanical room, elevator and stairwell lobby is located on the first floor below the 100-year flood elevation. Also, ingress and egress to all residential units are either by the common elevator or two (2) separate stairwells, which empty out 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. It is our understanding that proposed mechanical and electrical systems and metering shall be installed above the 100-year floodplain elevation.

The applicant has relocated the building's mechanical and electrical services to locations within the building which are above the projected 100-year storm event elevation. This includes the elevator cab routing being parked at the second floor level, above the 100-year flood elevation. Electrical and mechanical services within the lobby will be relocated within the ceiling, also above the 100-year elevation.

The entry lobby, exit stairs and elevator walls which are below the 100-year flood levels are now proposed as concrete walls with an epoxy finish. The applicant notes that this should permit easier clean up and repair after a storm event.

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 exit their homes. The addition of ±25 additional residents who may also need assistance will further tax the Village's emergency responders. The applicant should prepare an Emergency Management Plan, which addresses safe evacuation of the building's residents during such storm events. We would recommend the plan be reviewed by the Fire Department and Police Department.

The project proposes a state of the art rooftop fuel cell system capable of supplying energy to residents during a power outage. The applicant notes that the uninterrupted power will permit residents to remain inside the building with less need for immediate rescue, all evading pressure on Village emergency responders.

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

The Village Building Inspector should review the exit for compliance with FEMA and NYS Building Codes.

The applicant notes that they have spoken to Fire Chief Vincent Costa and have forwarded copies of the submission to him. The Planning Board may wish to engage in a more detailed conversation with the Chief.

3. The applicant is proposing a new curb cut onto Van Ranst Place, as well as new utility services within the Village right-of-way. The applicant will need to obtain a curb cut permit and utility work permit from the Village Department of Public Works.
4. The applicant should specify invert elevations and pipe slope of the proposed 4" building sewer. Please also provide an evaluation confirming the proposed 4" sewer main is adequate to serve the building based on fixture count.
5. The applicant should specify on the Site Plan proposed streetscape improvements along the property frontage.

6. Village Code specifies parking spaces to be 9 feet wide x 19 feet long. Proposed spaces do not comply with the Code. Also, the proposed 21 foot wide drive aisle provides limited room to maneuver in and out of parking spaces. A minimum 25 foot wide aisle is required in the vicinity of the first floor lobby wall.

The applicant has widened the proposed parking spaces to a nine (9) foot width and has widened the drive aisle to permit maneuvering into and out of parking spaces. The applicant is proposing 14 parking spaces, of which two (2) spaces are vehicle lifts above spaces below.

7. In accordance with Village Code, all parking areas are to be curbed.
8. The applicant should provide a detail of the proposed asphalt driveway and parking spaces. This should also include a curb detail. Village curb detail and a Village sidewalk detail should also be provided for work within the Village right-of-way.

Comment addressed.

9. 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 discharge from the project site. The site's driveway and lobby elevations should be adjusted to permit surface discharge to Van Ranst Place prior to entering the building's lobby should a blockage occur within the drainage collection or treatment system.

Comment addressed.

10. The proposed First Defense pre-treatment unit should not be located under the proposed building. Such location would limit access to the structure.

Comment addressed.

11. The NYS Stormwater Management Design Manual requires that infiltration practices be located a minimum of 10 feet from structures. The proposed system is located against a pier and footing, which is supporting the building. The system should be adjusted accordingly.

12. 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.

The applicant notes that they intend to notify all residents to remove vehicles from the premises prior to a major storm. A more detailed Emergency Management Plan seems warranted.

The applicant has provided a more detailed Flood Management Plan which provides the framework of the emergency management procedures for the proposed community.

13. The applicant shall submit a maintenance agreement for the proposed stormwater management features for review by the Village Consulting Engineer.
14. 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.

15. 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."

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- 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."

Comment addressed.

16. 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.

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 REVIEWED, PREPARED BY HUDSON ENGINEERING & CONSULTING, P.C., DATED APRIL 26, 2023:

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

PLANS REVIEWED, PREPARED BY SULLIVAN ARCHITECTURE, P.C., DATED MAY 10, 2023:

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

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PLAN REVIEWED, PREPARED BY IQ LANDSCAPE ARCHITECTS, DATED AUGUST 16, 2022:

- Landscape Plan (L-1)

DOCUMENTS REVIEWED:

- Letter, prepared by Cuddy & Feder, LLP, dated July 15, 2022
- Letter, prepared by Sullivan Architecture, P.C., dated July 15, 2022
- Draft Flood Emergency Management Plan

JK/dc

https://kellardsessionsconsulti.sharepoint.com/sites/Kellard/Municipal/Mamaroneck/Correspondence/2023-05-19_MamPB_572 Van Ranst Place, LLC_Review Memo.docx