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November 10, 2022

Ms. Jacki Byerley, AICP
Planner
Andover Planning Board
36 Bartlett Street
Andover, MA 01810

Ref: 3rd Stormwater Peer Review
Site Plan Review
7 Tantallon, Andover, MA

Dear Ms. Byerley and Members of the Board:

The Horsley Witten Group, Inc. (HW) is pleased to provide the Andover Planning Board with this third peer review letter of the Site Plans and supporting documents for the multifamily redevelopment project, located at 7 Tantallon Road, Andover, Massachusetts. Howard Stein Hudson has submitted the Application on behalf of Neil Rosenberg (Applicant). We understand that the project involves the demolish of an existing structure and the construction of a 24-unit, four story residential building, with 48 parking spaces, utility improvements, and stormwater management on a 0.38-acre parcel.

The proposed redevelopment is located within the 200-foot Riverfront Area of the Shawsheen River and within the 100-year flood plain as documented by the Federal Emergency Management Agency (FEMA). MassDEP classifies the area within the 100-year flood plain as Bordering Land Subject to Flooding (BLSF). HW completed a review of this parcel in 2018 and again in 2020. The Applicant has rectified the incorrect datum and has further adjusted the site layout to increase the landscaped areas and to provide a setback of 50-foot between the parking spaces and the resource area. The proposed redevelopment requires an Order of Conditions from the Andover Conservation Commission.

The following documents and plans were reviewed by HW in response to our November 2, 2022 review letter:

- Response to HW Comments, prepared by Howard Stein Hudson, dated November 8, 2022 (2 pages).

Findings calculated from Stormwater Report and Site Plans dated November 1, 2022:

a. Size of existing property: 1.04 acres (45,346 square feet (sf))
b. Size of proposed property: 1.13 acres (49,097 sf)
c. Size of watershed evaluated, existing and proposed: 1.58 acres (68,923 sf)
d. Existing Building: ~ 9,800 sf, 2 story, mill building, built in 1900
e. Proposed Building: 10,344 sf, four stories, 24 residential units
f. Proposed First Floor Building Elevation: 33.9, for parking only
g. Entire Site within 200-foot Riverfront Area of the Shawsheen River
h. Portion of site and building within 100-foot inner riparian zone

i. Proposed work within 25-foot no disturb zone, 100-foot buffer zone, 200-foot Riverfront Area and within Bordering Land Subject to Flooding (BLSF)

j. Existing building is ~ 72 feet from flagged wetland resource area

k. Proposed building is ~ 80 feet from flagged wetland resource area

l. Proposed 24 parking spaces within first floor new building, 24 surface parking spaces to serve the proposed building and 10 spaces deeded to the abutting property for a total of 58 parking spaces. 8 of the 58 spaces are labeled compact (16' x 9'). Two of the 58 spaces are labeled accessible.

m. Per 521 CMR 23.00 of the Architectural Access Board. A parking lot with 26-50 spaces requires 2 accessible spaces. The proposed building will have 48 parking spaces. The Applicant has provided 1 accessible space interior to the building and 1 accessible space exterior.

n. Ten (18' x 9') surfaces spaces are replicating 10 existing spaces associated with 12 Haverhill Street per deed.

o. The 10 parking spaces associated with 12 Haverhill Street are located within the 25-foot buffer (833 sf).

p. The 10 parking spaces for 12 Haverhill Street are located within the 50-foot buffer (864 sf in addition to 833 sf within 25 feet).

q. Twelve (12) standard spaces and 8 compact spaces are proposed to be restriped for 16 Haverhill Street, which includes pedestrian access to Haverhill Street.

r. Proposed parking spaces for 7 Tantallon located ~ 56 feet from flagged wetland resource area.

s. Mean highwater level and wetland flags and top of stone wall: elevation 27-28 feet NAVD88

t. Existing parking lot and drive aisle grades: elevation 33-34

u. Proposed parking lot and drive aisle grades: elevation 32-34

v. Entire Site within 100-year floodplain, elev. 38 per FIRM Map, revised May 1, 2020

w. Entire Site within 10-year floodplain, elev. 34.5 per Flood Profile, revised May 1, 2020

x. Portion of site within FEMA Floodway per FIRM Map, revised May 1, 2020

y. Existing building encroaching in Floodway by ~ 9 feet (264 sf)

z. Proposed building located outside of FEMA Floodway by ~ 1 foot, per Site Plans dated 11/01/22

aa. Site Plans dated 11/01/2022 indicate 3,432 sf decrease of impervious cover

bb. In accordance with the Massachusetts Stormwater Standards (MSH), Volume 1, Chapter 2, page 20, redevelopment projects are defined to include: Development, rehabilitation, expansion and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area.

Stormwater Standards:

HW has reviewed the documents listed above and has the following comments concerning the stormwater management design in accordance with the Massachusetts Department of Environmental Protection (MassDEP) standards as defined in the Massachusetts Stormwater Handbook (MSH) dated February 2008, the Town of Andover Stormwater Management and Erosion Control Bylaw and Regulations amended May 11, 2021 (Stormwater Bylaw) and standard engineering practice.

The proposed development includes a reduction of 3,432 sf of impervious area. Therefore, the project is considered a redevelopment. In accordance with MassDEP, a redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. Below are comments relating to the standards as presented in the MSH.

The following comments correlate to our November 2, 2022 review letter, follow up comments are provided in **bold underlined font** where applicable.

1. Standard 1 states that no new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

    a. The Applicant proposes to replace the 15-inch existing outfall pipe near the entrance at Haverhill Street with an 18-inch RCP in the same location. The existing invert will be maintained at elevation 24.54 within the stone wall. The outfall replacement work has been designed to minimize disturbance to the riverbank and includes erosion and sediment control measures. The Applicant complies with Standard 1.

        November 2, 2022: No further comment, the Applicant complies with Standard 1.

2. Standard 2 requires that stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

    a. It appears that the Applicant has included a larger area for woods (7,046 sf) under proposed conditions compared to existing conditions (5,624 sf). HW recommends that the Applicant adjust the increased surface area modeled as woods in the HydroCAD model to be open space/grass.

        November 2, 2022: The Applicant has revised the HydroCAD model as suggested. HW has no further comment.

    b. Per Section IX.E.6. of the Andover Stormwater Bylaws, the calculation of runoff volumes and peak rates shall be based on precipitation data provided in NOAA Atlas 14. HW recommends that the Applicant revise the precipitation depths used under existing and proposed conditions accordingly.

        November 2, 2022: The Applicant has revised the HydroCAD model as suggested. HW has no further comment.

    c. HW reviewed the HydroCAD modelling provided by the Applicant, including the watershed maps, drainage areas, and times of concentration (Tc). The comments above should not significantly alter the final flows or volumes. Once the above comments are addressed it appears that the Applicant has adequately designed the proposed stormwater management system to comply with Standard 2.

November 2, 2022: The Applicant has revised the HydroCAD model as suggested. The post development peak flows and volumes are reduced or equivalent to the predevelopment conditions. HW has no further comment, the Applicant complies with Standard 2.

3. Standard 3 requires that the annual recharge from post-development shall approximate annual recharge from pre-development conditions.

    a. The Applicant has noted that the site does not currently provide groundwater recharge and that infiltration practices are not feasible due to utility infrastructure. HW concurs with the Applicant that it has met Standard 3 to the maximum extent practicable by increasing the pervious areas. No further action required.

    November 2, 2022: No further comment, the Applicant complies with Standard 3.

4. Standard 4 requires that the stormwater system be designed to remove 80% Total Suspended Solids (TSS) and to treat 0.5-inch of volume from the impervious area for water quality.

    a. The Applicant has proposed three catch basins which are connected via a closed pipe system to a water quality unit labeled DMH-5. The water quality unit (type CDS 2015-4) discharges to DMH-6 which then discharges to the existing outfall. HW recommends that the Applicant provide the water quality unit sizing calculations to verify that the applied 87.3% TSS removal credit is reasonable.

    November 2, 2022: The Applicant has provided the water quality unit documentation as requested. No further comment.

    b. The O&M Plan notes that DMH-4 will have a deep sump. The plans do not appear to reflect this. HW recommends that the Applicant review the plans and the O&M Plan and adjust as needed.

    November 2, 2022: The Applicant has added a note on Sheet 4 of 11 stating that DMH 4 and DMH 6 will have deep sumps. No further comment.

    c. The Applicant has taken 10% TSS removal credit for sweeping of the parking lot. HW recommends that the Applicant confirm that the method to sweep the parking lot is consistent with Volume 2, Chapter 1, Page 9 of the MSH.

    November 2, 2022: The Applicant has revised the TSS removal calculations to be consistent with the MSH for street sweeping. No further comment.

    The Applicant complies with Standard 4.

5. Standard 5 is related to projects with a Land Use of Higher Potential Pollutant Loads (LUHPPL).

    a. The proposed development is not considered a LUHPPL therefore, Standard 5 is not applicable.

    November 2, 2022: Standard 5 is not applicable.

6. Standard 6 is related to projects with stormwater discharging into a critical area, a Zone II or an Interim Wellhead Protection Area of a public water supply.

    a. The proposed development is not within a critical area, Zone II or an IWPA area, therefore, Standard 6 is not applicable.

    November 2, 2022: Standard 6 is not applicable.

7. Standard 7 is related to projects considered Redevelopment. A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions

    a. The proposed development is considered redevelopment. The Applicant has reduced impervious cover, will improve the water quality of the proposed stormwater runoff, and will shift the proposed building out of the floodway. Once the Applicant has adequately addressed all comments in this letter it is HW's opinion that the project will improve existing conditions and comply with Standard 7.

        November 2, 2022: The Applicant complies with Standard 7.

8. Standard 8 requires a plan to control construction related impacts including erosion, sedimentation, or other pollutant sources.

    a. The Applicant has provided a detail for a proposed construction entrance. However, the Demolition and Erosion Control Plan does not demonstrate where the construction entrance should be installed. HW recommend that the Applicant add the construction entrance to Sheet 2 of 11.

        November 2, 2022: The Applicant has added the construction entrance to the Demolition and Erosion Control Plan as requested. No further comment.

    b. HW recommends that the Applicant add silt sacks to catch basins in Haverhill Street that are within 100 feet of the construction entrance.

        November 2, 2022: The Applicant has added a note to the Demolition and Erosion Control Plan regarding placement of silt sacks in catch basins on Haverhill Street. No further comment.

        The Applicant complies with Standard 8.

9. Standard 9 requires a long-term operation and maintenance (O&M) plan shall be developed and implemented to ensure that stormwater management systems function as designed.

    a. As noted above the method to sweep the parking lot to obtain 10% TSS removal should be consistent with Volume 2, Chapter 1, Page 9 of the MSH. The O&M Plan notes that the parking lots will be swept quarterly using a mechanical sweeper. This method receives 0% credit.

        November 2, 2022: The Applicant has revised the O&M Plan to include mechanical sweeping monthly which is consistent with the MSH to receive 5% TSS removal credit. No further comment.

    b. The Applicant has included language in the O&M Plan regarding the garage floor drains. HW understands that the Applicant has received permission from the Board of State Examiners of Plumbers and Gas Fitters to tie the garage floor drains into the stormwater system to be treated with Stormceptors (HW notes that the proposed CDS unit is similar to a stormceptor). The floor drain connection is not obvious on the plan set. HW recommends that the Applicant add the connection pipe.

        November 2, 2022: The Applicant has added a not regarding the floor drain

connection to the Grading and Drainage Plan. No further comment.

c. HW recommends that the Conservation Commission require receipt of the long-term stormwater maintenance on an annual basis as a condition of approval.

November 2, 2022: HW recommends that the Conservation Commission or Planning Board require receipt of the long-term stormwater maintenance on an annual basis as a Special Condition.

d. HW recommends that the Conservation Commission include a condition of approval prohibiting vehicle washing on the property.

November 2, 2022: HW recommends that the Conservation Commission or Planning Board require receipt of the long-term stormwater maintenance on an annual basis as a Special Condition.

e. HW recommends that the Applicant include a statement indicating how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance.

November 2, 2022: The Applicant has noted that the units will be rentals, therefore the responsible party will remain the owner of the building. The Conservation Commission or Planning Board may choose to include as a Special Condition written notification if the property is sold.

The Applicant complies with Standard 9.

10. Standard 10 requires that an Illicit Discharge Compliance Statement be provided.

a. The Applicant has indicated they have not provided an illicit discharge. HW recommends that the Town of Andover requires that receipt of a signed Illicit Discharge Compliance Statement be obtained prior to land disturbance.

November 2, 2022: The Applicant has provided the signed illicit discharge statement. HW has no further comment.

The Applicant complies with Standard 10.

11. Compensatory Storage within Floodplain:

a. The Applicant has provided Pre and Post compensatory flood storage calculations up to the 100-year floodplain elevation (elevation 38). HW is satisfied that the Applicant has provided compensatory flood storage for the proposed development at slightly more than a 1:1 ratio.

November 2, 2022: No further comment.

12. Miscellaneous:

a. HW recommends that the Applicant turn on the existing contour lines and elevation numbers on Sheet 2, 4, and 5.

November 2, 2022: The Applicant has not acknowledged this comment. HW's previous comment stands.

November 10, 2022: The Applicant has provided a letter stating that the final plans will include the contour lines and elevations as requested. HW has no further comment.

b. Cover Sheet dated 8/31/22 lists Proposed Lot Area as 49,097 sf. Page 5 of narrative in Stormwater Report dated August 2022 lists Lot Area as 49,432 sf. HW recommends that the Applicant confirm and verify that the correct value is on the plans.

   November 2, 2022: The Applicant has not acknowledged this comment. HW's previous comment stands.

   November 10, 2022: The Applicant has provided a letter stating that the Proposed Lot Area of 49,097 sf as provided on the Cover Sheet dated 8/31/22 is accurate. HW has no further comment.

c. HW notes that the narrative provided by the Architect for the Planning Board is not consistent with the Civil narrative and site plans.

   November 2, 2022: The Applicant has not acknowledged this comment. HW's previous comment stands.

   November 10, 2022: The Applicant has provided a letter stating that the Civil Plans revised as of November 1, 2022 supersede the Architectural narrative. HW has no further comment.

d. November 2, 2022: HW recommends that the Applicant clearly label the three accessible parking spaces.

   November 10, 2022: The Applicant has provided a letter stating that the proposed building will have 48 parking spaces therefore requires 2 accessible parking spaces as shown on the plan set. HW has no further comment.

Conclusions

HW is satisfied that the Applicant has adequately addressed our comments.. Please contact Janet Bernardo at 857-263-8193 or at jbernardo@horsleywitten.com if you have any questions regarding these comments.

Sincerely,

HORSLEY WITTEN GROUP, INC.

Janet Carter Bernardo, P.E.
Associate Principal