



D&L Design Group
Civil Engineering & Land Surveying

115 Water Street • Milford, MA 01757
P:(508) 408-2577 - www.dandldesigngroup.com

Attention: Mr. William Andrews,

January 8, 2024

UPTON ZONING BOARD OF APPEALS

One Main Street, P.O. Box 163, Upton, Massachusetts 01568

Reference: Comprehensive Permit Application (40B)

Upton Apartments 47 Main Street (Route 140)

SITE PLAN APPROVAL REGULATIONS

(8) Landscaping – We recommend the site plan further identify the existing landscape features to be retained including trees (6) inches or more in diameter.

Response: The proposed tree line for the project has been highlighted and clearly labeled on the Site Plan and Landscape Plan in red.

(11) We recommend size of the existing/proposed water main and status of review by the Upton DPW and Fire Department regarding the proposed water main extension layout including location of fire hydrants as shown on Sheet No. C-6.0

Response: The existing water main and size and status has been reviewed by the water department. The proposed watermain for the project will be a 8 inch ductile iron water main and proposed hydrants have been labeled and as shown on the Utility Plan. Fire Department and Water Department have meet on 1/5/24 and have updated the plan as shown on the attached plan set.

(12) Stantec recommends size of the existing sewer main and status of review by the Upton DPW regarding the proposed 8-inch pvc sewer main extension layout as shown on Sheet No. C-6.0 We recommend the applicant provide a profile of the proposed sewer main extension.

Response: The existing sewer main in Main Street has been verified and it is an 8" clay pipe. The sewer department has reviewed the proposed layout of the proposed 8" pvc sewer main. Profile Sheet of the sewer main has been added to the plan set.

(13) We recommend the applicant provide a profile of the proposed drainage system as shown on Sheet No. C-5.0

Response: See profile sheet of proposed drainage.

(14) See comments below regarding stormwater management system.

Response: See Stormwater comments.

(18) We recommend the applicant provide a profile of the proposed sewer system as shown on Sheet No. C-6.0 **Response: See profile sheet of proposed sewer main.**

(20) *Parking – We recommend location of proposed loading areas, fire lanes, compact, visitor spaces and parking calculations showing the required and proposed number of parking spaces.*

Response: See Site Plan. Fire Lane and Load Area have been added to the Site Plan. No compact spaces are being proposed and visitor parking have not been determined. The application has gone with 1.5 spaces per unit for the proposed development.

(21) *Rubbish Collection – We recommend detail of screening and type of container be added to the site plan.*

Response: See Detail Sheet for proposed dumpster detail.

(23) *Note - Proposed note "The Contractor shall give twenty-four notice to pertinent Town Departments before commencing any work in the field "should be added to the site plan.*

Response: Note added to the Site Plan.

STORMWATER MANAGEMENT SYSTEM

The project is designed with no untreated stormwater discharge. We recommend the applicant provide rip-rap sizing calculations to confirm no erosion or scouring occurs at the drainage pipe outfalls and subsurface infiltration chambers. The design storm peak flow should be indicated on the calculations and in agreement with the HydroCAD analysis.

Response: riprap sizing has been calculated and added to the drainage report.

As shown on the Sheet No. C-5.0 the proposed footprint and rip rap outfall of Settling Basin #3 is located within the 30-foot No Disturbance Line from Wetland. We recommend this layout be reviewed by the Conservation Commission.

Response: Project will be submitted to the Upton Conservation Commission for review.

We recommend the existing culvert located on Main Street adjacent to the proposed access drive be identified (pipe size and inverts) on the drainage area maps and request the design engineer confirm no stormwater runoff the project site flows to the culvert.

Response: Drainage Area 3 has been added to the pre & post development maps. No increase runoff or volume is being proposed toward the existing 18" culvert that is located at the entrance at Route 140 Main Street

The Hydraulic/Hydrologic Report includes a pre- and post-development condition site hydrology analysis for the 2-, 10-, 25- and 100-year storm events at two points of interest areas (POI). Review of the peak flows as shown on the summary table and the HydroCAD peak flow analysis for POI No.2 are not in agreement for the 2 thru 100-year storm events.

Response: HydroCad calculations have been done again taking into account the new drainage area#3 and summary table has been updated

As per the Hydraulic/Hydrologic calculations, proposed infiltration basins and subsurface infiltration chamber systems are designed for the 2 through 100-year storm events. We

recommend design engineer provide hydraulic calculations of the closed drainage system identifying the drainage areas and system capacities for the 25 through 100-year storm events.

Response: Pipe sizing calculations have been done and submitted.

The proposed recharge volume is provided by two (2) infiltration basins (nos.1&2) and subsurface infiltration chamber system. We note review of the submitted soil logs within the infiltration basin footprints indicated the estimated depth of seasonal high groundwater (SHGW) varies between 24- inches and 28 inches. In general, grading of the infiltration basin bottom results in an excavation between 1 and 3 feet. As such, Stantec questions the feasibility of installing the infiltration basins at the selected locations while providing a two-foot separation to SHGW from the bottom of each infiltration basin. We recommend these items be further addressed by the design engineer.

Response: All basin have been raised to have a 4 foot separation to ground water.

Recommend cross sections of the proposed infiltration basins (nos.1&2) and subsurface infiltration chamber system identifying items such as existing and proposed grades, refusal and/or seasonal high groundwater be provided on the plans.

Request the stage-storage worksheets be reviewed and label the (2) infiltration basins (nos.1&2), subsurface infiltration chamber system and volume provided for each stormwater control measure.

We note the 72-hour drawdown calculations for the infiltration basins and subsurface infiltration system identified a K value associated with a Hydrologic Soil Group (HSG) A which is not in agreement with the HSG C as identified in the HydroCAD analysis.

Response: drawdown calculations have been updated using the K value associated with Group C soils.

4. *We request TSS Removal worksheets at each discharge point be provided to document the treatment train meets the 80% TSS Removal Requirement.*

Response: TSS worksheet have been added to the Drainage Report.

Review of the submitted require water quality volume table identifies an increase in impervious area of 64,390 square feet which is not in agreement with increase in impervious area of 86,790 square feet as noted on the Recharge Volume Summary Table. We note the required water quality volume is based on the total increase in impervious area.

Response: Water quality has been recalculated using the 86,760 s.f.

5. *The project area is not associated with a land use with higher potential pollutant load; therefore, this standard is not applicable.*

Response: No response required.

6. *The project is not associated with stormwater discharges near a critical area; therefore, this standard is not applicable.*

Response: No response required.

7. *This project is a redevelopment; therefore, this standard is applicable.*

Response: No response required.

8. *Stantec recommends the submitted Erosion Control Plan and Narrative include a construction sequence, maintenance, and inspection program during construction. The design engineer should review the need for additional erosion control measures in areas of land disturbance. Proposed location construction staging equipment and areas of where earth and construction materials will be stockpiled on-site should be identified on the plan. We further recommend the Stormwater Pollution Prevention Plan, as required by the NPDES General Permit, be submitted to the Board prior to the start of any construction activities.*

Response: A proposed Erosion Control Plan was submitted as part of this plan set for this project. Construction Sequence was added to the Erosion Control Plan. A proposed inspection program was provided as part of the drainage report. Proposed staging area has been added to the Erosion Control Plan. A SWPPP has been prepared and will be submitted once project is approved and a start date has been determined by the applicant.

9. *An operation and maintenance plan are included as part of the Stormwater Report submittal.*

Response: None required.

10. *An illicit discharge statement was not included as part of this submission.*

Response: has been added to the report.

If you have any questions on this project please contact me.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Peter Lavoie', with a long horizontal flourish extending to the right.

Peter Lavoie
Project Engineer