

Phone: (978) 657-9714
Fax: (978) 657-7915

October 11, 2019

Ms. Whitney McClees,
Conservation Agent and Sustainability Coordinator
Conservation Commission
Town Hall
40 Center Street
Fairhaven, MA 02719

RE: Lewis Landing, Fairhaven, MA.
Proposed Multi-Unit Residential Development
Huttleston Ave.

Dear Ms. McClees:

GCG Associates, Inc. has reviewed the following information for the Lewis Landing Multi-Unit Residential Development off Huttleston Avenue in Fairhaven, MA with respect to stormwater and Stormwater related requirements under 310 CMR 10.00 Wetlands Protection Act Regulations.

Plan References: "Lewis Landing, Fairhaven, MA. Proposed Multi-Unit Residential Development, Huttleston Ave., Fairhaven, MA prepared by Prime Engineering, Inc. dated September 9, 2019, consists of:

Cover Sheet
1 – Existing Conditions Plan
2 – Site Layout and Landscaping Plan
3 – Grading and Utilities Plan
4 – Erosion Control Plan
5 – Detail Sheet - 1
6 – Detail Sheet - 2
7 – Architecturals

Documents: WPA Form 3 – Notice of Intent package prepared by Prime Engineering, Inc. dated August 27, 2019

Based upon our review of the above information, we offer the following general comments and comments with respect to compliance with Town Bylaws: Chapters 192 – Wetlands; 194 - Stormwater Management, Illicit Discharge, Soil Erosion, Sediment Control By-Law; 198-31.1 –

Zoning - Stormwater Management and 310 CMR 10.00 Wetlands Protection. The numerical section of the regulations is referenced at the beginning of each comment unless it is a general comment.

GENERAL PLAN AND DEVELOPMENT COMMENTS

The following are general comments with respect to the plans and development of the project.

1. This is a vacant parcel located at the south side of Huttleston Avenue (U.S. Route 6) across street from New Boston Road as identified as Assessor's Map 31 Lots 115A & 117C. The parcel consists of 2.463+/- acres.
2. The applicant has filed a Notice of Intent for a Multi-Unit Residential Development consists of four 3-unit buildings, two storage buildings, one maintenance shed and associated pavement parking lot and utilities. The proposed work area is over 1 acre and requires filing an US EPA - NPDES permit and associated SWPPP. (NPDES NOI shall be filed 14 days prior to construction start.)
3. The proposed work limit also exceeds the Land Disturbance Permit (Chapter 194) threshold and requires filing a permit with the Fairhaven Board of Public Works.
4. The proposed multi-family site development in RC Zoning District requires a Planning Board Special Permit approval per Chapter 198-29. Which requires site design in compliance with Chapter 198-31.1 Stormwater management standards. Hence, stormwater management design is being reviewed to meet 198-31.1 requirements.
5. The project is located within Zone X, Area of Minimal Flood Hazard, (FIRM 25005C0413F, effective 7/7/2009), two series (A1- A-30 and B-1 to B-6) of wetland resource area were identified on the property and requires to file a Notice of Intent with the Fairhaven Conservation Commission and MassDEP.
6. There is no NHESP estimated habitats of rare wildlife or rare species identified in the site vicinity per MassGIS.

PLAN SET

Cover – No comment.

Drawing Sheet -1 – Existing Conditions Plan.

1. Wetland delineation line shown was based on a plan by Allen D. Quintin, dated January 11, 2017 and was not field located by Prime Engineering, Inc. Wetland delineation shown on the plan and Non-Jurisdictional Isolated Land Subject to Flooding status require Conservation Commission review and approval.
2. Plan shown three drain pipes (10"?, 15" and 18") connect to the on-site wetland south of wet flag #A-10, and a dilapidated drainage manhole. The 15" drainpipe appears to collect Huttleston Avenue surface runoff through a pair of catch basins located in front of development site and discharges to the wetland without a benefit of an easement. GCG recommends obtaining an easement to preserve the right of the existing drainpipes.
3. Existing drainage inverts along Huttleston Avenue should be identified on the plan. Assuming the existing 15" and 18" drainpipes have three feet of cover over pipe and they will be exposed at the bottom of proposed constructed wetland basin.

**Lewis Landing
Multi-Unit Residential Development
Huttleston Ave.
GCG Job#1974**

4. Additional soil testing should be performed at the proposed wetland basin area to identify ESHGW by mottling. Applicant needs to proof sufficient water table to support the constructed wetland vegetation. 198-31.1(B)(2)(A)(1)[h] requires soil logs signed by a DEP Certified Soil Elevator.

Drawing Sheet 2 – Site Layout and Landscaping Plan.

1. No comment.

Drawing Sheet 3 – Grading and Utilities Plan

1. The proposed roof drain chamber infiltration practices are considered UIC Class V Well by US EPA and required to comply with the MassDEP setback requirements. The proposed 4-unit chamber between storage building #2 and south 3-unit building does not meet the 50' wetland setback and 10' building foundation setback; the 2-unit chamber west of storage building #1 does not meet the 10' foundation setback requirement; the single unit chamber northeast of maintenance shed does not meet the 10' foundation setback and 10' open, surface drain (rain garden) setback requirements.
2. 198-31.1(C)(2)(g)[6] – requires basins/ponds designed for stormwater runoff control shall have side slopes at a no steeper than a 4H to 1V grade. And a ten-foot wide bench surround any permanent pool. 2:1 and 3:1 side slopes proposed.
3. 198-31.1(C)(2)(k) - Forebays [1][b] requires forebays to be sized to contain 0.25 inches per impervious acre of contributing drainage and [d] requires forebay be four feet deep.
4. 198-31.1(C)(2)(l) - Fence enclosure for the stormwater basin may be required, depends on permanent pool depth.
5. 198-31.1(C)(2)(n)[6] – CB-1 pipe (all pipes) should have a minimum 24" cover, proposed HDPE pipe requires a waiver.
6. 198-31.1(C)(4)(a)[2] – requires 48-hour detention time for the water quality (198-31.1(A)(1)(b) - First Flush = (1.25"), see 198-33 Definitions) storm.
7. 198-31.1(C)(4)(a)[1 & 6] – requires establishment of, and the methodology with which to maintain, wetland vegetation on the bottom of the basin.
8. MSH Vol.2, Ch.2, Pg. 45 - requires constructed stormwater wetland to have an emergency spillway capable of bypassing runoff from large storms without damage to the impounding structure.
9. MSH Vol.2, Ch.2, Pg. 45 – requires an access for maintenance.
10. Forebay inlet pipe slope should be labeled.
11. DMH to Forebay rim should be specified.
12. Verify there will be enough cover on top of the two existing 15" and 18" drainpipes.
13. Provide pre-treatment in front of rain garden per SMH Vol. 2, Ch.2, Pg. 25.

Drawing Sheet 4 – Erosion Control Plan

1. The Construction entrance (exit) should have a minimum length of 50 feet.
2. Silt sack should be installed at the east entrance catch basin on Huttleston Avenue.

Drawing Sheet 5 – Detail Sheet

1. No comment

**Lewis Landing
Multi-Unit Residential Development
Huttleston Ave.
GCG Job#1974**

Drawing Sheet 6 – Detail Sheet

1. Splash pool surface dimension should be called out (or show on the utilities plan)
2. Rain Garden should consist of 2" – 3" mulch on top of 2.5' to 4' thick Planting Soil (Engineered soil mix for bioretention systems designed to exfiltrate, MSH Vol.2. Ch.2 Pg. 26).
3. Show constructed wetland detail to indicate required volume for deep marsh and shallow marsh.

Drawing Sheet 7 – Architectural

1. No comment

STORMWATER REPORT COMMENTS

1. 198-31.1(C)(2)(k) - Forebays [1][b] requires forebays be sized to contain 0.25 inches per impervious acre of contributing drainage.
2. 198-31.1(A)(1)(b) - requires treatment of the Water quality (First Flush = (1.25" of entire impervious area on site), see First Flush definition for calculation formula (198-33).
3. 198-31.1(A)(1)(a)[2] - No increase will be allowed in the volume of runoff off of the site up to the ten-year, twenty-four-hour design storm. The proposed drainage calculations shown increase of runoff volume during 2-year and 10-year storm events.
4. 198-31.1(C)(2)(n)[1-7] – storm drainage system capacity should be calculated based on 25-year storm event.
5. Please provide roof drain infiltration unit storage volume calculations to meet Groundwater Recharge volume.
6. The proposed Rain Garden requires pre-treatment to qualify for 90% TSS removal.
7. Please verify pre-development paved parking area. The two sub-catchments combined 7,889 s.f. of pavement area. GCG scaled approximately 5,550+/- s.f.
8. 198-31.1(C)(4)(a)[2] - provide water quality volume (First Flush) 24 hour detention volume.

OPERATIONAL AND MAINTENANCE (O&M) PLAN COMMENTS

1. Temporary Erosion Control should include catch basin silt sack.
2. Long term O&M plan 4.0 should include catch basin, street sweeping, constructed wetland, splash pool and rain garden operation and maintenance schedule.
3. O&M plan should provide a signature block for responsible party/operator signature.
4. O&M plan should include estimated annual operation budget and long-term O&M (sample) log.

**Lewis Landing
Multi-Unit Residential Development
Huttleston Ave.
GCG Job#1974**

Summary:

The proposed drainage system layout and design were based on Massachusetts Stormwater Handbook and did not meet the Fairhaven Chapter 198-31.1 Stormwater management standards.

If you have any questions regarding this matter, please contact our office.

Respectfully Submitted,
GCG Associates

Anthony Ma

Anthony C. Ma, P.E.
Senior Project Engineer

**Lewis Landing
Multi-Unit Residential Development
Huttleston Ave.
GCG Job#1974**