
January 31, 2024

Mr. Ryan Clapp
Conservation Agent
Holliston Conservation Commission
703 Washington Street
Holliston, MA 01746

**Re: Definitive Open Space Residential Development (OSRD) Peer Review #2
“Bonney Drive Extension” Bonney Drive, Holliston, MA
CMG ID 2023-270**

Dear Mr. Clapp,

CMG is providing this letter report detailing our second engineering peer review of the “Bonney Drive Extension” Definitive Open Space Residential Development in Holliston, MA (the “Site”). The project Applicant, Murch Prentice Realty Trust is proposing to construct a three (3) lot open space residential development on Assessor’s Parcel Map 7 Block 4 Lot 55.D.

The existing property currently consists of approximately 7.75 +/- Acres located within the Agricultural-Residential B (RES-B) and Groundwater Protection Zoning Districts. This project will require Definitive Subdivision Approval, Site Plan Review, and filing a Notice of Intent with the Holliston Conservation Commission.

CMG is in receipt of the following documents:

- Comment / Response Letter entitled “Definitive Open Space Subdivision Plan “Bonney Drive” Extension, Holliston, MA” prepared by GLM Engineering Consultants, Inc., date January 17, 2024.
- “Definitive Open Space Subdivision “Bonney Drive Extension” A 3 Lot Single Family Residential Subdivision, Holliston, MA”, prepared by GLM Engineering Consultants, Inc., dated August 29, 2023, revise date January 17, 2024.
- “Stormwater Management Report – Bonney Drive Extension, Holliston, MA” prepared by GLM Engineering Consultants, Inc., dated September 7, 2023, revise date January 17, 2024.

CMG is providing the following additional technical comments for the Planning Board’s consideration based on our review of the above listed documents:

Holliston Zoning By-Law Comments:

1. Section V-H 6.A 2) - Applicant should verify with the Fire Department what size vehicle will need to access the cul-de-sac and provide a truck turning diagram to verify there is adequate pavement width for the required design vehicle. Additionally, CMG will defer to public safety regarding the

proposed alignment of the new intersection of Bonney Drive Extension, Bonney Drive, and Hargrave Avenue.

GLM Response (1/17/24): See attached truck turning sketch attached herewith. We are meeting with DPW next week to discuss the intersection layout and traffic signs. (ie. Stop signs and lines)

Comment Addressed

2. Section V-H 8.A (Common Open Space Ownership and Management) CMG is not in receipt of a project narrative to address the proposed Common Open Space Ownership and Management. CMG recommends the applicant submit information regarding conveyance to the Town or a conservation restriction being utilized for the proposed open space.

GLM Response (1/17/24): At this time, it is anticipated the open space will be deeded to a home owner's association.

CMG recommends the Planning Board consider this as a Condition of Approval

3. Section V-H 8.B (Common Open Space Ownership and Management) Applicant should address how the open space shall be available for use by the general public.

GLM Response (1/17/24): Open Space if it remains in a homeowners it will only be accessible for the project residents.

CMG Comment #2: Comment remains. Section V-H 8.B states “The open space shall be available for use by the general public, unless the applicant can provide compelling reasons to the Planning Board why such access is infeasible in whole or in part.”

4. Section V-L 4. 3) b. - For residential developments of single-family detached dwellings, the minimum lot area shall be 40,000 s.f. Proposed Lot 3 consists of a lot area of 38,345 s.f. which is below the required minimum lot area.

GLM Response (1/17/24): The convention plan depicts all lots more than 40,000 s.f., the Open Space requirements minimum lot area is 15,000 s.f., all lots exceed this requirement.

CMG Comment #2: Comment remains. Zoning Section V-L relating to the minimum lot size is relevant to the project's location in a Groundwater Protection District, separate and distinct from the OSRD regulations. CMG believes the project has adequate available area to adjust Lot 3 to meet this requirement.

Holliston Planning Board Subdivision Rules and Regulations Comments:

5. Section 4.3.1 q – The Plan set appears to account for approximately 50 feet of the existing Bonney Drive right-of-way. Existing centerline profile of Bonney Drive should extend to 100 feet.

GLM Response (1/17/24): The profile extends 150 feet from the property boundary. The property boundary is sta. 0+00 the profile extends to sta. -1+50 into Bonnie Drive. See Sheet 6.

Comment Addressed

6. Section 4.3.1. w – Location of proposed landscaping is not provided. Please note, a tree planting detail is provided on Sheet 9 of 10.

GLM Response (1/17/24): Revised the proposed street tree locations have been shown See Sheet 6.

CMG Comment #2: Comment partially addressed. Tree planting species and caliper should also be included on the plan set (Also See Comment 12.)

7. Section 5.2.1 i – Proposed driveway intersection sight distances are not provided.

GLM Response (1/17/24): Revised sight distance shown at the intersection. See Sheet 5.

CMG Comment #2: Intersection sight distance should be measured from 15 ft. back from the edge of the nearest through lane from the location of the driver’s eye. It is unclear if the depicted sight distance measurements are in compliance with state / federal guidelines as they point to the opposite side of the intersection and not where a driver would be stopped to exit from the “Bonney Drive Extension”.

8. Section 5.4.3 – Street lighting is not provided and no waiver is requested.

GLM Response (1/17/24): Revised streetlight provided at the end of the cul-de-sac. See Sheet 6. Note there is an existing streetlight at the intersection of Bonney & Hargrave.

CMG Comment #2: Comment Partially Addressed. Additional detail on the streetlight should be provided (i.e. Utility Pole with Streetlight, Dark Sky Compliant, lighting specifications). CMG also recommends Applicant consider use of individual post lights at the end of each driveway as an alternative street lighting option.

9. Section 5.4.4 – Proposed underground gas and or electric / cable / telephone utilities layout and/or construction details are not shown on the plan set.

GLM Response (1/17/24): Revised underground gas and elec./tel/cable shown See Sheet 6.

Comment Addressed

10. Section 5.5.1 - Sidewalks are not shown and a waiver is not requested.

GLM Response (1/17/24): Revised plan to include a sidewalk along one side of the roadway. See Sheet 6.

CMG Comment #2: Comment partially addressed. Plans need to provide individual handicap ramp design details, signage, and crosswalk connection and ramp to existing Bonney Drive sidewalk. Additionally, CMG recommends the sidewalk should extend around the entire cul-de-sac with handicap ramps and crosswalk prior to the 30’ radius roundings to allow full ADA/AAB access.

11. Section 5.5.3 – Street sign & stop sign locations, proposed pavement markings, and construction details are not provided.

GLM Response (1/17/24): Currently, I have not had a meeting with DPW to discuss. I have been in contact with DPW and will most likely have this reviewed prior to the meeting.

CMG Comment #2: Comment remains.

12. Section 5.5.5 –Street tree locations, tree planting species, and caliper should be included on the plan set.

GLM Response (1/17/24): Revised provided tree planting locations, See Sheet 6.

CMG Comment #2: Comment partially addressed. Tree planting species and caliper should be included on the plan set (Also See Comment 6).

General Engineering & Drainage Design Comments

13. CMG recommends Applicant's Engineer provide USGS stream stats evaluation to verify whether the mapped stream to the East of the Site is intermittent or perennial.

GLM Response (1/17/24): The stream to the east is not shown as perennial. Stream stats cannot be performed without a perennial mapping. Note the commission approved the driveway crossing down gradient from this site along Prentice Street, which is the same stream and was determined to be intermittent.

Comment Addressed

14. Applicant is proposing drywells to infiltrate the proposed roof areas. CMG recommends the site plans include an overflow device to convey runoff during larger storms. In particular, the 100-year storm appears to have an elevation above the top of the underground infiltration chamber.

GLM Response (1/17/24): Revised Detail to shown overflow at house connection. See Sheet 8.

Comment Addressed

15. CMG recommends a stop sign and stop bar be shown at the end of Bonney Drive Extension prior to the intersection with Bonney Drive & Hargrave Avenue. Applicant to confirm this with the Holliston Public Safety Officer / Police Department.

GLM Response (1/17/24): Currently communicating with DPW to confirm locations at intersection. It is anticipated that we will have a resolution prior to the meeting.

CMG Comment #2: Comment remains.

16. CMG recommends the proposed Outlet Structure Detail Basin #1 detail be revised to include a clay core within the proposed earthen berm.

GLM Response (1/17/24): Revised See Sheet 8.

Comment Addressed

17. Roof drain piping size, material, and layout should be shown if piped directly to the proposed drywell systems.

GLM Response (1/17/24): The roof drains will be shown in more detail in the individual lot designs. We recently submitted the NOI for each individual lot which depicts the roof drains.

CMG recommends the Planning Board consider this as a Condition of Approval

18. Confirm the double-grate catch basin inlet capacity for CB #5 located at the cul-de-sac is adequate for a 25-year storm event.

GLM Response (1/17/24): The calculated inlet flow for CB#5 is 1.47 c.f.s., the approximate inlet capacity for catch basin grate is approximately 2.5 c.f.s., we are proposing a double grate. If further information is required let us know.

Comment Addressed

19. Title Block references the wrong project on the Pre-development runoff, Post Development runoff, and Catch Basin Drainage Areas plan sheets.

GLM Response (1/17/24): Revised See Stormwater Report.

Comment Addressed

Stormwater Standard 1: *No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.*

20. Rational Method calculations are provided in the enclosed Stormwater Management Report. The rainfall intensity for each drainage structure should be consistent throughout the table.

GLM Response (1/17/24): Rational Methodology rainfall intensity is related to time of concentration. Intensity will vary depending on time. I attached a rainfall intensity graph for you to review.

CMG Comment #2: CMG respectfully disagrees with the provided time of concentration values. Additionally, the “Catch Basin Drainage Areas” Figure 3 of 3 doesn’t depict flow path and slopes used for calculations. Given the relative subcatchment sizes and areas of pavement CMG believes a $T_c \text{ min} = 6 \text{ min.}$ should be used for estimating the rainfall intensity value used to size the pipes.

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

21. The enclosed HydroCAD model shows 147,953 s.f. for the Pre-Development Drainage Areas and 173,818 s.f. for the Post-Development Areas. These areas should be consistent to better document peak rate discharge attenuation.

GLM Response (1/17/24): Revised the areas, P1 was incorrect. The following is a summary of pre and post areas:

Pre-Development Areas:

*E1: 77,589 sf
E2: 70,364 sf
Tot: 147,953 sf*

Post-Development Areas:

*P1: 44,410 sf
P2: 55,450 sf
P3: 42,301 sf
P4: 5,782 sf (Roofs)
Tot: 147,953 sf*

CMG Comment #2: The revised Stormwater Report (1/17/24) lists Area P4 = 2,100 s.f. which differs from the above listed value and when added doesn’t equal the pre-development total.

22. The enclosed Stormwater Management Report utilizes Type III, 24-hour storm events. Per Section 11.11.2.a of the Town of Holliston Stormwater Management and Land Disturbance Regulations, the peak rate calculations shall utilize NOAA Atlas 14 precipitation rates.

GLM Response (1/17/24): Revised See Stormwater Report. Appendix B Rainfall Atlas.

Comment Addressed

Stormwater Standard 3: *Loss of annual recharge of groundwater shall be eliminated or minimized.*

23. Soil test pits were not conducted within the limits of the proposed stormwater infiltration basin. Additionally, test pits are dated May 14, 1997 and appear inconsistent regarding observed groundwater. CMG recommends two (2) test pits be conducted within the limits of the drainage basin to better determine soil horizons and estimated seasonal high groundwater.

GLM Response (1/17/24): On January 5, 2024, test pits were conducted in the stormwater basin. See Sheet 8 for soil logs. (TP24-1 & 24-2).

Comment Addressed

24. Estimated seasonal high groundwater within the limits of the proposed basin is based on groundwater elevations observed on March 30, 2022. It is unclear if these elevations were obtained from soil tests or monitoring well. Please see above comment regarding additional test pits within the footprint of the proposed basin.

GLM Response (1/17/24): See Sheet 8, Soil Logs within Basin.

Comment Addressed

Stormwater Standard 4: *Stormwater management systems shall be designed to remove 80% of the average annual post construction load of Total Suspended Solids (TSS).*

25. CMG is in agreement with GLM’s proposed treatment train, capacity calculations, and water quality volume/ recharge volume calculations. CMG requests GLM include stage-storage tables for the proposed drywells, sediment forebay, and stormwater basin to confirm the documented storage capacities shown in Appendix B of the enclosed Stormwater Management Report.

GLM Response (1/17/24): Revised See Stormwater Report.

CMG Comment #2: Comment Remains. Stage-storage tables are not provided to confirm the documented storage capacities.

26. In order to take the 50% TSS removal credit for the grass swale it must be designed in accordance with the MA-DEP Stormwater Management Standards and a construction detail provided.

GLM Response (1/17/24): Revised TSS Removal See Stormwater Report.

CMG Comment #2: TSS removal calculations not provided.

Stormwater Standard 5: *Land uses with higher potential pollutant loads (LUHPPL), source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.*

Not applicable – Site is not a LUHPPL.

Stormwater Standard 6: *Stormwater discharges within a Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area.*

27. The proposed site improvements are within a Zone II and the Town of Holliston’s Groundwater Protection District. The enclosed Plan Set and Stormwater Management Report adequately address applicable regulations for the critical area.

GLM Response (1/17/24): No Comment.

Comment Addressed

Stormwater Standard 7: *Redevelopment Projects*

Not Applicable – Site is not a redevelopment project.

Stormwater Standard 8: *Construction period erosion and sedimentation control*

28. The Site is > 1 Acre therefore an EPA NPDES 2022 Construction General Permit (CGP) registration and SWPPP is required to be submitted prior to construction. CMG recommends the Planning Board make this a condition of approval.

GLM Response (1/17/24): No Comment.

CMG recommends the Planning Board consider this as a Condition of Approval

29. The enclosed Erosion Control Plan shows a Trap Rock Apron Construction Entrance Detail, but does not show a location for the construction entrance. CMG recommends the location be added to the plan.

GLM Response (1/17/24): Revised See Sheet 7.

Comment Addressed

Stormwater Standard 9: Long term operation and maintenance plan

30. The enclosed Long-Term Operation & Maintenance Plan appears to be in compliance with Standard 9 and Section 11.5.2 of the Town of Holliston's Stormwater Management and Land Disturbance Regulations.

GLM Response (1/17/24): No Comment

Comment Addressed

Stormwater Standard 10: Illicit discharges

31. The Long-Term O&M Plan includes an "illicit discharge statement" and is in compliance with Standard 10.

GLM Response (1/17/24): No Comment

Comment Addressed

If you have any questions or need additional information, please contact me at (508) 864-6802.

Sincerely,
CMG



David T. Faist, PE
Principal Engineer



Robert Lussier, EIT
Project Manager