
July 22, 2020

Mr. John Love
Chairman – Zoning Board of Appeals
Town of Holliston
703 Washington Street
Holliston, MA 01746

**Re: Civil Engineering Peer Review #2 “Geoffrey Park” 40B Comprehensive Permit Project
Indian Ridge Road South Holliston MA
CMG ID 2020-131**

Dear Mr. Love,

CMG is providing this letter report detailing our engineering peer review of the plans and stormwater report revisions to the proposed “Geoffrey Park” Site Development Plan of Land, a 40B Comprehensive Permit Project located at 0 Indian Ridge Road in Holliston, MA (the “Site”). The project is located on a 12.67 +/- Acre parcel within an “Agricultural Residence B” zoning district.

The Applicant proposes to construct a 24 Unit single family home residential development with 8 homes under MGL Chapter 40B for affordable housing. The proposed project driveway access requires crossing an existing intermittent stream and a portion of the project is within the 100-FT buffer zone of a bordering vegetated wetlands.

CMG is in receipt of the following documents as of Friday July 17, 2020:

- “Site Development Plan of Land A 40B Comprehensive Permit Project “Geoffrey Park” Holliston, Massachusetts” prepared by GLM Engineering Consultants, Inc., date 2/29/20, revise date 5/14/20, revise date July 10, 2020.
- “Stormwater Management Report Off Indian Ridge Road South Holliston MA” prepared by GLM Engineering Consultants, Inc., date 5/14/20, revise date July 10, 2020.
- GLM Engineering Consultants, Inc. Comment Response Letter, date July 10, 2020.

GLM’s 7/10/20 plan and stormwater report revisions address the majority of CMG’s June 9, 2020 civil engineering peer review comments relating to the engineering and stormwater design comments.

CMG is providing the following list of remaining comments based on review of the above 7/10/20 plan revisions for consideration by the Zoning Board of Appeals (ZBA):

General Comments

1. List of Exceptions – in accordance with the Chapter 40B process, the Applicant is to submit a detailed list of exceptions to the regulations. The “Preliminary Request for Waivers” date March 11, 2020 only provides a summary of the overall local regulations and not specific waivers detailing specific Article & Section numbers. CMG recommends the Applicant provide a detailed list of waivers from local zoning and subdivision regulations. The list will provide CMG and the Board with an understanding to the degree of compliance planned for this project.

GLM Response: Waiver List to be provided to the Board.

CMG Comment #2: Comment remains

2. Architectural Style - Two (2) examples of single family architectural building style and floor plans are provided. However, only one single story cape style Design 152596 appears to be shown on the plans. Design 152641 is not shown.

GLM Response: Architectural plans to be provided by the Applicant.

CMG Comment #2: Comment remains

3. Two-family duplex homes are proposed on Lot 14 and 15. It is unclear if these homes will also have garages. CMG recommends architectural floor plans and elevations be provided for these units for review by the Board. Our experience is this information is necessary for the Board to judge the project.

GLM Response: Architectural plans to be provided by the Applicant.

CMG Comment #2: Comment remains

4. Environmental Resource Area – The plans do not reference the date of the wetland flagging but only the company, Applied Ecological Sciences, which performed the delineation. In addition the project proposes an intermittent stream crossing at the entrance to the project.

Determination of the environmental resource areas and their site planning implications are regulated through the Conservation Commission through the Wetlands Protection Act, among other regulations, which is not exempted by the 40B process. Wetlands delineations are typically only valid for three years. Therefore, the Board should consider requesting additional information relating to the wetland flagging to insure the environmental resource areas are adequately defined.

GLM Response: A Notice of Intent has been filed with the Holliston Conservation Commission for review of the wetland resource area impacts.

CMG Comment #2: Suggested Condition of Approval

CMG recommends the Board consider requiring submittal of a valid “Order of Conditions” for the project prior to construction as a Condition of Approval.

5. Sanitary Disposal – The project proposes a shared septic system for the 24 unit housing project. All houses will have individual septic tanks piped to a common gravity sewer system. The gravity sewer system will drain to a 10,000 gallon holding tank with sewer pumping station located adjacent to Lot 2 on the lower portion of the Site. Sanitary sewage will be pumped via a subsurface force main to a shared soil absorption field located in the northwest corner of the Site.

The current plan set does not provide estimated sewage flow rates or preliminary design data. CMG believes the proposed septic system design will be regulated under State Title V regulations by MassDEP due to the size of the development. CMG recommends the Applicant provide additional information relative to the on-site feasibility of the area proposed for the shared soil absorption system and proposed sewer pump station.

GLM Response: The sewage disposal system will be completed and submitted to the Board of Health for review and approval. .

CMG Comment #2: Suggested Condition of Approval

CMG recommends the ZBA consider requiring submittal of an approved “Subsurface Sewage Disposal Plan” and Board of Health Approval for the project prior to construction as a Condition of Approval.

6. Additional topographic information is needed on the adjacent property at 10 Indian Ridge Road to determine if there are potential issues relating to the proposed soil absorption system grading and required breakout distances.

GLM Response: The sewage disposal system design will address all grading related to the leaching field.

CMG Comment #2: Suggested Condition of Approval (See Comment 5.)

7. Roadway Geometry – The roadway is proposed as a 20-foot pavement width within a 50 ft right of way. The proposed roadway cross section is consistent with the Town of Holliston’s design standards for a “local residential” roadway. The proposed project will further extend the length of the existing Indian Ridge Road South dead-end. Recommend the Applicant include this in the request for waivers.

GLM Response: Waiver requested for length of cul-de-sac.

CMG Comment #2: Comment remains (See Comment 1.)

9. Applicant’s engineer should review road, sidewalk, crosswalk, and proposed handicap ramp layout and grading for conformance with ADA / AAB regulations. Handicap ramp details are not provided and additional detail should be provided regarding the crosswalk between ramps at approximate STA. 6+50.

GLM Response: Revised See Sheet 7 & 16. HC Ramp with crosswalk shown.

CMG Comment #2: Comment Partially Addressed. Applicants Engineer will need to provide detailed grading and handicap ramp and crosswalk details as part of the final construction plans to verify full compliance with applicable ADA / AAB regulations.

10. It is unclear if there is an existing sidewalk on Indian Ridge Road South which the project sidewalk could connect to as part of the existing cul-de-sac re-configuration.

GLM Response: There is no sidewalk on Indian Ridge Road South.

CMG Comment #2: CMG recommends the ZBA consider the extension of the sidewalk through the cul-de-sac to the “Proposed Limit of Construction”. A handicap ramp and level landing should be provided at the end of the sidewalk to provide adequate pedestrian access to the development.

11. There is no roadway lighting proposed for the project. CMG recommends the Applicant’s Engineer consider some level of lighting, especially on the sidewalk side of the road for pedestrian safety.

GLM Response: Street lights may be provided, the location shall be discussed with the ZBA.

CMG Comment #2: Comment remains. CMG recommends the ZBA consider requiring submittal of a lighting plan and photometrics as part of the final construction plans based on discussions with the Applicant.

12. There is no Landscaping Plan or Details provided. CMG recommends the Applicant’s Engineer provide some form of landscape design plan showing street tree locations and typical residential unit planting schematic.

GLM Response: Revised Street trees shown, See Sheet 7 & 16.

CMG Comment #2: Comment Partially Addressed. Applicant’s engineer is now showing street trees planted at approximate 50-FT intervals throughout the project. CMG recommends a tree planting and maintenance easement be provided and the ZBA consider requiring submittal of landscape planting plan and details as part of the final construction plans specifying the types of trees and typical residential unit planting schematic.

13. A “dog park” and “passive recreation amenities” are mentioned in the Comprehensive Permit Application materials, however, it doesn’t appear these areas are shown on the current plan.

GLM Response: This shall be clarified by the Applicant.

CMG Comment #2: Comment remains

Engineering Technical Review Comments

14. CMG recommends a summary table be provided on the Title Sheet tabulating building, parking, walks, roadway, total wetlands, wetland disturbance, wetland replication, remaining open space areas. The table should also include a summary of the 40B housing unit breakdown (25% affordable, and at least 5% fully accessible in accordance with ADA).

GLM Response: Provide project summary See Sheet 1.

CMG Comment #2: Comment partially addressed. CMG notes the percentage and location of affordable units is not provided.

18. The apparent easement depicted in the northwest corner of Parcel A should be labeled.

GLM Response: Revised See Sheet 2. The applicant has indicated that this easement has been abandoned. .

CMG Comment #2: CMG recommends documentation be provided relating to the abandonment of this easement.

19. The existing easements located at the end of Indian Ridge Road are not labeled (i.e. drainage, utility, etc.). CMG recommends Applicant’s Engineer confirm a water main loop connection is feasible through these easements.

GLM Response: Revised See Sheet 2. The applicant is not proposing to extend the water line beyond the property line. The intent is for future connection by the Town of Holliston.

CMG Comment #2: The 20’ wide utility easement should be labeled on Sheet 7 of 17 and a note provided relating to the construction of the proposed water line stub and termination at the property line.

20. Applicant should provide the Board with confirmation from the Town of Holliston Water Department that there will be adequate pressure and volume for the proposed project.

GLM Response: The applicant is working with the DPW.

CMG Comment #2: CMG recommends correspondence be provided from the Holliston DPW to the ZBA relating to the water service status for the project.

25. Plan should quantify proposed number of individual residential unit parking and guest parking areas. It is unclear if two-family units will have garages.

GLM Response: All units will have garages. Each home can accommodate a minimum of 4 vehicles.

CMG Comment #2: CMG recommends a note be provided on the plan set relating to the proposed parking accommodations. (Also see Comments 2 & 3).

31. Sewer force main pipe is not depicted in the profile view on Sheet 7 of 14.

GLM Response: The sewer force main is not shown at this time. The pipes will be set approximately at the same depth of the water line. To show both lines in the profile view would be confusing.

CMG Comment #2: CMG recommends a note be provided on the plan & profile sheets regarding the sewer force main.

34. The proposed roadway intersection STA 5+00 / STA 16+47 slope exceeds 2% for greater than 150 ft. in all directions. Applicant's Engineer should explore alternatives to the 4 % plus slopes shown or provide supporting information the proposed intersection grades will provide safe stopping and sight distances within the development.

GLM Response: Waiver requested. Traffic consultant may provide additional information.

CMG Comment #2: CMG recommends Applicant's Traffic consultant provide supporting information that the proposed loop road intersection meets applicable AASHTO design requirements, safety standards, and crosswalk ADA/AAB requirements.

35. Roadway profile exceeds 8% grade between STA 13+0 & 15+00. Applicant's engineer should evaluate whether this can be adjusted to provide a less steep approach to the intersection.

GLM Response: Waiver requested. Traffic consultant may provide additional information.

CMG Comment #2: CMG recommends Applicant's Traffic consultant provide supporting information that the proposed loop road intersection meets applicable AASHTO design and safety standards.

41. Wetland crossing cross section and retaining wall details are not provided.

GLM Response: Revised See Sheet 16.

CMG Comment #2: CMG recommends a steel guard rail and fencing be provided along the top of the retaining wall for the entire length of the retaining wall and for side slopes greater than 3:1.

42. CMG believes MassDEP will require the proposed intermittent stream crossing meet the State of Massachusetts Stream Crossing Standards based on our recent experience with similar projects. This will most likely require a three sided culvert design instead of the 18" culvert shown. Applicant's Engineer should explore this option and revise the plans accordingly.

GLM Response: A Notice of Intent has been filed with the conservation commission for review and approval.

CMG Comment #2: Suggested Condition of Approval

CMG recommends the ZBA consider requiring submittal of a valid "Order of Conditions" for the project prior to construction as a Condition of Approval.

43. Proposed wetland replication area grading and soil cross section is not shown. Additional detail is needed to evaluate if the design will provide adequate conditions for the proposed wetland plantings.

GLM Response: The wetland specifications are noted in the Technical Specifications.

CMG Comment #2: Suggested Condition of Approval

CMG recommends the ZBA consider requiring submittal of a valid "Order of Conditions" for the project prior to construction as a Condition of Approval.

Stormwater Management Design Comments

45. Additional off-site drainage area should be included in the evaluation of the stream culvert crossing design to determine the capacity needed. Available MassGIS Lidar topographic mapping and/or Streamstats web site may be used to provide this information.

GLM Response: Revised Stormwater Report See Appendix F.

CMG Comment #2: Comment partially addressed. Watershed map documenting the upstream area should be provided.

48. Catch basin inlet capacity evaluation should be provided to determine if additional catch basins, Massachusetts cascade grates, and/or double grate catch basins are required.

GLM Response: Catch basins 21, 15, & 28 exceed 2 c.f.s. inlet flow. The plan has been revised that double rim shall be required for these catch basins.

CMG Comment #2: Comment partially addressed. CMG recommends these catch basins also be shown a double grates and labelled in the plan view.

53. Two (2) additional subcatchments and off-site stormwater discharge points appear to be located at the northwest corner of the property and should be included in both the Pre and Post development analysis. It appears there are two additional distinct off-site discharge points onto the #10 Indian Ridge Road property and the N/F Dillahun property to the North in the area of the proposed septic system.

GLM Response: Revised Stormwater Report.

CMG Comment #2: Comment partially addressed. Hydrology calculation show a slight increase in off-site flow in the proposed condition at design point P4 & P5. CMG recommends Applicants engineer re-visit grading and/or drywell design of these areas so as not to increase off-site flow.

55. In the proposed condition overview section of the report, 25-year and 100-year volume outflow is slightly different than the HydroCAD calculations.

GLM Response: Revised Stormwater Report.

CMG Comment #2: Comment remains. Peak elevations and Outflow shown the “Summary of Retention Basin” Table in the report still slightly differ from the values listed in the HydroCAD calculations.

59. Roof drain drywells should be provided for the rear roof drains on Lots 2, 3, 4, 5, 6, and 13 as they are not directed to the on-site stormwater infiltration basin. Standard 3 requires all new impervious areas to be recharged on-site.

GLM Response: Revised See Sheet 7 & 15. Note roof recharge provide on Lots 2, 3, 4, 5, 6, 9, 10, & 13. .

CMG Comment #2: CMG recommends a note be added to the roof recharge detail noting soil testing must be complete and witnessed by the Holliston Board of Health Agent at each drywell location prior to construction to confirm 2 ft. separation to estimated seasonal high groundwater (ESHGW).

60. Estimated seasonal high groundwater elevation separation distance and peak elevations for each design storm event should be shown on the Detention Basin Typical Section detail on Sheet 12 of 14.

GLM Response: Revised See Sheet 13.

CMG Comment #2: It appears there is a minor typographical error, peak elevations shown on the Detail are slightly different than the calculations.

71. The Site is > 1 Acre therefore an NPDES SWPPP is required to be submitted prior to construction. CMG recommends the Zoning Board of Appeals make this a condition of approval.

GLM Response: Agreeable to condition of approval.

CMG Comment #2: Suggested Condition of Approval

CMG recommends the ZBA consider requiring the submittal of NPDES CGP E-NOI Registration verification and NPDES - Stormwater Pollution Prevention Plan (SWPPP) prior to construction.

78. Stormceptor STC450i treatment catch basin units are listed in the O&M Plan but not shown on the plans or details.

GLM Response: Revised See Sheet 17.

CMG Comment #2: CMG recommends each water quality unit detail also correspond with the same treatment unit number shown on the plan (i.e. Treatment Unit #4 = CDS1515-3-C).

79. Maintenance and inspection schedule for deep sump hooded catch basins and rip-rap aprons are not provided.

GLM Response: Revised Stormwater Report.

CMG Comment #2: Inspection schedule for deep sump catch basins should be 4 times / year.

80. Post construction "operation and maintenance log form" is not provided.

GLM Response: Revised Stormwater Report.

CMG Comment #2: Comment partially addressed. Inspection form should note the specific BMPs to the inspected and the frequency of inspections (i.e. monthly) as noted in the O&M Plan.

81. An Illicit Discharge Statement is provided, however, not signed by the property owner. CMG recommends the ZBA require a signed copy be provided as a condition of approval.

CMG Comment #2: Suggested Condition of Approval

CMG recommends the ZBA consider requiring the submittal of a signed Illicit Discharge Compliance Statement along with the Final Long Term Stormwater System Operation and Maintenance Plan prior to construction.

Please contact me if you have any questions or need additional information at (508) 864-6802.

Sincerely,
CMG ENVIRONMENTAL, INC.



David T. Faist, PE
Principal Engineer – Engineering Services

cc. Karen Sherman, Holliston Town Planner