

Peer review of Comprehensive Permit Plan for
Sherborn Village
59 North Main Street

Sherborn, Massachusetts

September 12, 2017

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Engineer/Surveyor

Engineering Design Consultants, Inc
32 Turnpike Road
Southborough, MA 01772

Zoning Districts

Residence-A (RA)

Assessors' Reference

Map 10, Lot 45

Content

Comprehensive Permit
Application

Owner/Applicant

Heritage Properties
490-B Boston Post Road
Sudbury, MA 01776

Plans Dated

July 25, 2017

Location

59 North Main Street, north of
the intersection with Hunting
Lane



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SECTION I: INTRODUCTION

PLANS, DOCUMENTS, AND EXHIBITS

In undertaking the engineering peer review of this project, Professional Services Corporation (PSC) conducted a field reconnaissance of the project site and reviewed the plans, calculations, documentation and exhibits provided by the Project Development Team which included the following materials:

1. Plans entitled *Sherborn Village in Sherborn, Massachusetts (Middlesex County)*' dated July 25, 2017, prepared by Engineering Design Consultants, Inc., Southborough, Massachusetts.
2. Calculations including *Stormwater Calculations for Sherborn Village, a Residential Development located at 59 North Main Street Sherborn, Massachusetts 01772* including *Drainage Summary, Checklist for Stormwater Report, TR-20/TR-55 Hyrdologic Calculations, TSS Removal Calculations, Hydrodynamic Separator Specifications, NRCS Web Soils Survey, FIRM Mapping and Construction Period Pollution Prevention and Sedimentation Control Narrative*, dated July 25, 2017 and prepared by Engineering Design Consultants, Inc.
3. Exhibits, including a letter from Town of Sherborn Town Administrator, dated July 6, 2017 to MassHousing, a letter from Town of Sherborn Town Planner to the Town Administrator, dated December 14, 2016, a Memorandum from the Board of Health to the Board of Selectmen dated December 30, 2016, a Memorandum from The Conservation Commission to the Board of Selectmen, dated December 21, 2016, correspondence from the Sherborn Fire/Rescue Department to the Town Administrator, dated December 4, 2016, correspondence from the Sherborn Police Department to the Town Administrator, dated December 12, 2016, two letters from Heritage Properties to the Board of Appeals, dated May 12, 2017 and May 15, 2017 and a letter from Engineering Design Consultants to the Board of Appeals, dated May 11, 2017.
4. List of requested variances, waivers and exemptions from Engineering Design Consultants, Inc, addressed to the Zoning Board of Appeals, dated May 22, 2017.

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5. Comprehensive Site Approval letter from Massachusetts Housing Finance Agency addressed to Vin Gately, 59 N. Main Street Village, Inc., dated February 21, 2017.

In conducting this peer review, additional information was obtained from the following:

1. 760 CMR 31.00: Housing Appeals Committee: Criteria For Decisions Under MGL c.40B, §§20-23.
2. 760 CMR 56.00: Department of Housing and Community Development.
3. *Massachusetts Department of Housing & Community Development Guidelines G.L.c40B Comprehensive Permit Projects.*
4. *Chapter 40B Handbook for Zoning Boards of Appeal, March 2017.*
5. Review of Flood Insurance Rate Map (FIRM), Map Number 25017C00538F, Middlesex County Massachusetts, effective date July 7th, 2014.
6. *Sherborn Zoning Map* as updated April 17, 2002.
7. *Zoning By-Laws of the Town of Sherborn* as amended ATM 2015.
8. *Sherborn Planning Board Subdivision Rules and Regulations* approved February 9, 2011 (for certain drainage, design, and construction details/ standards only).
9. *United States Department of Agriculture; Natural Resources Conservation Service Soil Survey of Middlesex County, Massachusetts*
10. *Massachusetts Natural Heritage Atlas, 14th Edition*
11. *Massachusetts Environmental Policy Act Office, 301 CMR 11.00 MEPA Regulations*
12. *A site reconnaissance performed by PSC.*

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PROJECT DESCRIPTION

The Project is based upon the Comprehensive Permit Application Submitted by Heritage Properties of Sudbury, Massachusetts to construct a residential development off North Main Street in Sherborn, Massachusetts consisting of twelve (12) single-family units on a total land area of approximately 6.346 acres. The site is found within the Residence-A (RA) district and was previously occupied by a single-family home with a detached barn structure, both of which were razed in May, 2016. Much of the 4.388-acre upland was cleared under the prior use.

The project will be served by a single access, interior looped roadway, which will connect the project to North Main Street. Approximately 680 LF of proposed total roadway will be constructed to serve the 12 units. The bituminous roadway construction will include a cape cod berm and an interior gravel-pave reinforced shoulder along the interior of the loop. The project water is proposed via two private on-site wells, each serving six units. Septic flows will be treated using a pressure-dosed system that will discharge to a shared soil absorption system proposed within the roadway loop.

Surface stormwater would be collected in a closed stormdrain system and directed to six subsurface stormwater management galley systems.

The following sections of this report identify revised and supplemental information necessary to accurately compute Statutory Minima and satisfactorily complete the minimum Contents of the Application.

SECTION II – STATUTORY THRESHOLDS

The application includes calculations of statutory minima as they relate to consistency with local needs. Issues relating to the computation of statutory thresholds are summarized as follows:

COMPUTATION OF STATUTORY MINIMA

1. The application includes a computation of the existing 40B Housing Inventory. The Housing Inventory based upon DHCD counts as of February, 2017 indicates that Sherborn has 34

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subsidized housing inventory units (2.3% of its housing inventory), which are 114 units shy of the 10% SHI threshold. The applicant's contribution of three units would increase the Town's SHI from 2.3% to 2.5%.

2. A computation for General Land Area Minimum should be provided to indicate acreage added by the project to the existing Town Low and Moderate Income Housing areas. To meet the threshold, the Land Area Minimum Standard requires that 1.5% of the total Town land area be held for affordable Chapter 40B housing. For Sherborn, 1.5% is equivalent to no more than 153.6 acres (likely less when subtracting wetlands and unbuildable areas). The application does not document existing Chapter 40B land areas toward the statutory minimum.

SECTION III – CONTENTS OF THE APPLICATION

PROJECT ELIGIBILITY LETTER

3. The project Comprehensive Permit application contains correspondence from Massachusetts Housing Finance Agency dated February 21, 2017 regarding the *59 North Main Street Village, Sherborn Project Eligibility/Site Approval Project #895*. The description of the project in the letter appears consistent with the Sherborn Village plans. **OK**
4. The project eligibility letter acknowledges the Town's concern with stormwater management and alterations to the wetland buffer zone and riverfront impacts. MassHousing requires that the applicant discuss during the public hearing, resolution of all environmental conditions per laws, regulations and standards applicable to existing conditions and to the proposed use, including but not limited to compliance with all applicable regulatory restrictions relating to floodplain management, the protection of wetlands (WPA), river and wildlife habitats, conservation areas as well as state environmental protection requirements relating to the protection of the public water supply stormwater runoff and hazardous waste safety, and further that the Applicant should provide evidence of such compliance prior to the issuance of a building permit for the project.
5. The project eligibility letter acknowledges the Town's concern with the project's water supply & wastewater management and requires that the Applicant must comply with Title V regulations regarding the design and construction of individual wells and septic systems, and

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further that the Applicant should provide evidence of such compliance prior to the issuance of a building permit for the project.

6. The project eligibility letter acknowledges the Town's concern with general operation concerns such as the impact of the project on traffic and local roads and further requires the Applicant to provide a detailed traffic study assessing potential impacts of the Project on area roadways, including traffic volumes, crash rates and the safety and level of service (LOS) of area intersections, identifying appropriate traffic mitigation in compliance with all applicable state and local requirements governing site design. The letter also requires the traffic study to review on-site parking and circulation to ensure compliance with industry standards.
7. The project eligibility letter acknowledges the Town's concern with wastewater management and water use and requires the Applicant to be prepared to provide detailed information relative to proposed water and sewer use, potential impacts on existing capacity, and appropriate mitigation. The shared wastewater design is schematic and calculations were not provided in the application.

EVIDENCE OF SITE CONTROL

8. Evidence of Site Control – The applicant has provided a copy of the Quitclaim Deed for the parcel conveying the property to HP Sherborn, LLC (June 23, 2015 for \$1,275,000). (DB 65811, pp 274-275).
9. A copy of the Purchase and Sale Agreement, dated November 1, 2016 from HP Sherborn, LLC to 59 Main Street Village, Inc., was provided (for \$1,950,000)
10. Any easement rights held by others (if any) should be added to the plan.

EXISTING SITE CONDITIONS

11. As set forth in the Department of Housing and Community Development's Guidelines for Local Review of Comprehensive Permits, the Applicant is required to submit a narrative detailing "alternative site uses under existing zoning." An endorsed Site Plan was supplied, showing



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development of the project in conformance with existing Zoning dimensional requirements for RA. **OK.**

12. Several large trees, between 24-inches and 48-inches in diameter have been identified on the plan for preservation. Proposed grade changes and the proximity of construction near the project entrance and Unit 12 make it unlikely that three large trees (30-inch, 36-inch and 48-inch) deciduous specimens will be maintained. Specific construction-stage and permanent measures to provide for tree protection should be specified.
13. Inspection of the of Flood Insurance Rate Map (FIRM), Map Number 25017C00538F, Middlesex County Massachusetts, effective date July 7th, 2014 indicates that the entirety of the site falls outside the 100-year jurisdictional floodplain of the perennial stream. The site is located outside the Zone X, with less than 0.2% chance of annual flooding (500-year floodplain).
14. The wetlands and resource areas indicated on the drawings should be referenced by date and the delineator. An Order of Resource Area Delineation (ORAD) was issued by the Sherborn Commission (DEP #283-0361) on December 23, 2014 and it should be referenced on the drawing. If requested by the applicant, the Sherborn Conservation Commission would need to extend the ORAD prior to its three-year expiry date on December 23, 2017.
15. All abutting parcels (including any registered Land Court parcels) should be clearly designated on the drawings.
16. Both existing well and septic soil absorption areas are located for the adjacent properties at #55 and #61 North Main Street. Well locations for properties across North Main Street (#58 and #60) have been provided as well. Well setback radii have been provided, consistent with Section 10.1 in the Board of Health Regulations. **OK.**

EXISTING SITE CONDITIONS REPORT

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17. A first level Environmental Assessment in accordance with MGL Ch. 21E should be furnished if available.
18. The narrative does not address methods or extent of investigation for any features of historic or archeological significance, but indicates that none are currently known.

PROPOSED SITE DEVELOPMENT PLANS

Site Planning

19. The project proposes 28 bedrooms on the 6.04 acre site which would result in 3,080 GPD of sewage flows. As on-site wells are proposed for potable water, the project is subject to nitrogen loading limitations as defined under 310 CMR 15.214(2) and would be subject to effluent limitations of 440 GPD/acre under a conventional design (or 550 GPD/acre for recirculating sand filter).
20. The architectural drawings indicate an optional loft space that should be construed as a third bedroom for each 2-BR unit. For age 55 and over units, sewer generation increases from 150 GPD for two-bedroom to 330 GPD for three-bedroom units. The sewer generation flows would increase to 3,960 GPD (for the third bedroom). The locus does not have sufficient land area to support excess nitrogen loading from a third bedroom for all twelve units.
21. Please indicate the percentage of Riverfront buffer that will be altered as a result of the project. No more than 10% of the available riverfront should be altered by development of the project. 310 CMR 10.58(4)(d)1.
22. Although the drawings indicate twenty-two (22) test pits and eighteen (18) monitoring wells have been advanced on the site, and soils have been discussed in a general manner based upon the NRCS Soils Atlas and mapping, site specific test pit information has not been provided, but will be required beneath the soils absorption systems and the stormwater retention/detention areas.
23. The Infiltration Trench System detail on Plan Sheet 6 provided the design bottom elevation for each of the six (6) Cultec Systems. Estimated Seasonal High Groundwater (ESHGW) beneath each system should be provided in this table. A minimum 2-foot vertical separation to ESHGW

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is required beneath the stone for each system. If less than four feet is provided, then groundwater mounding calculations will also be required.

24. Project lighting is not indicated within the site. Proposed lighting should be developed with photometrics using specific light fixtures that are consistent with residential scale and style typically acceptable in the town.
25. Please indicate whether a streetlight is proposed for the project entrance at its intersection with North Main Street.
26. Although driver visibility appears sufficient, stopping sight distance and intersection sight distance information should be provided at the entrance along North Main Street in both directions.
27. A more detailed plan prepared by a Landscape Architect or other qualified professional should be submitted indicating active and passive recreational facilities. Extending on-site pathways to connect the project to the town-owned land north of the project should also be evaluated and considered.
28. Please indicate whether each unit will be individually served for trash removal. In the event that dumpsters are required, all dumpsters should have permanent, attractive enclosures.
29. Multifamily developments typically are required to have common mailbox locations, which can present significant site circulation issues. The location for a common mailbox facility with associated parking/pullout should be shown.
30. A *Stormwater Pollution Prevention Plan* (SWPPP) was submitted and are generally sufficient. The Project Manager and Person and Entity responsible for plan compliance, as well as the Owner of the Stormwater System, as well as the person responsible for financing maintenance and emergency repairs should be added to the SWPPP when known.
31. The SWPPP should specify weekly street sweeping of North Main Street.
32. The applicant should confer with the Sherborn Fire/Rescue Department and provide documentation from the Department indicating their concurrence with fire access to buildings, unit separation, available pressure and volumes from the on-site well system (whether

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supplemental water tank, auxiliary pumping, etc. will be required), alarms, and other fire protection related matters. Please indicate whether the buildings are to be sprinklered.

33. The applicant should confer with Police Officials and provide documentation indicating that they are satisfied with access and safety issues during construction and operation of the project.
34. Any temporary construction signage should be shown and details provided on the size, illumination, style, and legend.
35. A permanent entrance sign has not been shown. Details on the size, illumination, style, and legend of any proposed sign should be given.
36. The site should be fenced and secured during construction.
37. Given the density of this project, snow storage is a significant concern. Snow storage areas should be designated outside paved or on adjacent grassed areas that maximize recharge, outside well setback areas. The interior soil absorption field and all buffer zones should specifically be prohibited for snow storage.
38. All walkway and any common parking area grades (common mailbox area) should adhere to all current Architectural Access Board regulations.

Access, Circulation, and Parking

39. As designed, the 18-foot wide interior driveway is narrow for two-way traffic, particularly for a project of this density with cars maneuvering out of closely spaced driveways into two way traffic movements. Unless the pavement width is increased, preferably to a minimum 22 feet, the design will be congested. Parking should be prohibited along the roadway edges.
40. The curvilinear geometry should aid in limiting vehicle speeds, however the project is not designed with a sidewalk that should be included to help segregate pedestrians from traffic.
41. Fire officials should verify that they are satisfied with exterior access to the rear of Units 3, 4 and 5. Rear access is also limited behind Units 8 and 10 with rear decks about 15 feet from the no alteration zone.



42. The geometry of the roadway should accommodate the largest Fire/Rescue Department's design vehicle. Concern was expressed regarding the roadway geometry in the rear of the site. Documentation should be provided indicating that the Department's concerns have been addressed and should include approval for the layout and methods of construction of the on-site access and circulation system.
43. For safety, vertical faced granite curb or precast concrete curb should be specified along both sides of the main drive and intersection radii.

Grading

44. Construction of the proposed site improvements will likely include reuse of onsite materials. General information on the structural reuse of onsite soil types should be provided.
45. The proposed grades do not differ significantly from existing grades. It is not anticipated that significant quantities of native material will be exported from the project. Similarly, the site should not require import of bulk material for fill. **OK.**

Landscaping

46. The applicant should be encouraged to limit turf areas due to water demand and requirements for lawn chemicals and fertilizer. A Turf Management plan should be provided that adequately protects the adjacent resource areas from nitrate and phosphate loadings.
47. A *Tree Protection Plan* should be provided for the trees to be preserved along the front of the site.
48. Minimal landscape improvements are proposed for the project. Street trees should be considered to enhance the appearance of the project.

PROJECT IMPACTS

49. The Applicant should prepare and submit for review, a detailed management plan indicating the organization and funding mechanism for a homeowners' association or other organization that



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will be responsible for maintaining the on-site parking, access, utilities, and landscaping and for contributing to ongoing maintenance of the shared wastewater facility.

50. Any impacts to abutters from construction noise, vibration, or any required blasting should be identified.
51. The project driveway is directly opposite the existing residence across North Main Street at #58 North Main Street. This residence should be plotted on the drawings in relation to the driveway. Headlights from exiting cars will impact this residence and should be mitigated. A contribution toward off-site vegetated screening should be coordinated with the property owner.
52. Landscape design should include screening residential abutters on both sides of the project. Screening should be focused in the non-buildable parcel A on the left side of the project, and behind Units 11 and 12 on the right.
53. The extent of construction traffic including truck trips should be identified. Proposed truck routes and scheduling should be shown. The analysis should include a distribution breakdown.
54. A dedicated location should be provided on the site for equipment fueling operations that is sited outside the wetland and riverfront buffers and minimizes the potential for contamination of individual wells from spills.
55. The development team should provide a rough construction schedule with anticipated milestone dates for major components of the project. Verify that the project will be constructed as a single phase.
56. The MassHousing Project Eligibility letter recommended that the applicant provide a detailed traffic study, assessing the potential impacts of the Project on area roadways, including traffic volumes, crash rates, and the safety and level of service of area intersections. The Study should identify appropriate traffic mitigation, and should address on-site parking and circulation. The estimated traffic generated from the project should be evaluated based upon the ITE Trip Generation Manual, 9th Edition (latest). Peak hour generation should be addressed in the analysis.

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57. A Traffic Management Plan should be submitted that has the approval of the Sherborn Chief of Police. As a minimum the Traffic Management Plan should identify the number of truck trips, proposed truck routes, and an overall construction schedule.

PRELIMINARY ARCHITECTURAL DESIGN

58. The affordable units have been designated on the plans as Unit #2, #4 and #12. Each of the affordable units are designated as three-bedroom units (Architectural Type A). All others are designated as two bedroom units and should be uniformly distributed throughout all buildings. Verify the proposed distribution of the affordable units.
59. Preliminary architectural drawings were provided for review depicting six types of units. In addition to bedroom counts, the building floor plans should be evaluated to include the study, loft and similar rooms that should be counted as “bedrooms” for the purposes of determining sewage generation. There is not a significant difference between the three-bedroom configuration and two-bedroom layout between the unit types and it appears all units could use the loft as the third bedroom.
60. Information on exterior finishes should be provided.
61. The height of each building should be calculated, as set forth in the Zoning Bylaw.

UTILITIES PLAN

62. Specific arrangements for operation and maintenance of the sewer dosing chamber should be detailed.
63. Water for the project will be drawn from two on-site wells. Construction Note #6 references an 8-inch CLDI water main, which does not appear to be correct. Additional detail of the design should be provided including pipe sizes, pump details, backup generation, etc.
64. Verify pipe materials, depth of cover and minimum separation between services for water and sewer services.

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UTILITIES PLAN – STORMDRAINS

65. The plan shows all the on-site galleys that accommodate runoff are retention systems. In order for each system to be effective, it must be empty prior to a storm event. All basins must be designed such that spring high groundwater is two feet below the bottom of the basin. Soils information should be provided.
66. Logs of test pits were not furnished with the plans or report. Existing groundwater elevations must be determined for each of the six systems. Provide soils test data including soils classification, observed groundwater and mottled soils elevations in the footprint of each system.
67. Pipe capacity calculations for the stormdrain system should be added to the stormwater management report.

REQUIRED EXEMPTIONS

68. The application documents variances required from the Zoning By-Laws of the Town of Sherborn. An additional section was identified that will require a variance. Section 4.3.6. Number and Location of Dwellings on One Lot.
69. A variance has been requested from Section 5.2.6.a of the By-Laws regarding permanent monument signage. The proposed project signage should be provided for evaluation by the Board.
70. Submit a tabulation of departures from the Planning Board's Rules & Regulations, which serve as Town construction standards, particularly Section 4.0- *Design Standards* and Section 5.0- *Required Improvements*. Describe why there is a public interest in allowing various downgrades.

FEDERAL AND STATE PERMITS AND MEPA COMPLIANCE

71. An NPDES General Construction Permit is required for sites involving disturbance greater than or equal to 1 acre.

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