

July 14th, 2021
6092-P

Town of Boxborough Planning Board
29 Middle Road
Boxborough, MA 01719

**RE: Revised Plan Set & Drainage Calculations
Definitive Subdivision – Priest Lane
Boxborough, MA 01719**

Dear Members of the Planning Board:

On behalf of the applicant, Boxborough Town Center, LLC., Dillis & Roy Civil Design Group, Inc. has prepared this letter to submit revised plans & additional information. The revisions were made pursuant to the comments made in the Planning Board Memo dated June 21st, 2021. We have addressed all plan modifications in the latest revision of the plans and have summarized the changes below. The review comments are *italicized* and dated with the responses from Ducharme & Dillis below them in **bold**.

Plan Related Revisions:

- Zoning boundaries & associated districts have been labeled on all applicable plan sheets.
- Registry box was added to all plan sheets.
- Planning Board & Town Clerk endorsement area has been added to all sheets.
- The table on Plan Sheet C1.0 has been updated to reflect the appropriate zoning district.
- The sub-surface infiltration area has been reconfigured to achieve the minimum cover over the lower end of the proposed system.
 - Associated details on Plan Sheet C7.0 have been revised to reflect the revision.
- The previously proposed stone infiltration trench has been redesigned.
 - Proposed grading has been reconfigured to accurately reflect the reconfiguration of the proposed stone infiltration area.
 - Plan Sheet C7.0 has been revised to include a detail of the redesigned infiltration area.
- The Post-Developed HydroCAD model has been revised to properly reflect the redesigned infiltration area. A copy of the revised HydroCAD report is attached to this letter.
 - The Pre-Developed HydroCAD model was not revised.
 - The redesign did not influence the tributary areas to either of the proposed BMP's.
 - The following table provides a summary of peak rates of runoff related to each of the storms for a design point at the naturally occurring low point along Priest Lane.

Table 1: Design Point A (DP-A) Runoff Summary

	Pre-Developed	Post-Developed
2-year	0.31 cfs	0.31 cfs
10-year	1.10 cfs	0.88 cfs
25-year	1.60 cfs	1.23 cfs
100-year	2.73 cfs	2.57 cfs

- The common drive has been increased to 16’ in width with a 2’ gravel shoulder
- Each drive has been increased to 14’ in width with a 2’ gravel shoulder.
- Sections of curbing have been provided to route runoff to the proposed catch basins.
- Radii at the proposed entrance have been increased per a request from the Boxborough Fire Department.
- Increased the length of the fire truck turn around to accommodate the entire length of the apparatus.
- The stone wall rounding’s have been set back from the proposed edge of shoulders.
- Littleton’s Ladder Truck has been used as the design vehicle for the turning maneuvers shown on Plan Sheet C7.2 per the Fire Department’s request.
- A typical driveway cross-section has been provided on Plan Sheet C7.1.

Comments from Places Associates Inc. Letter dated February 19, 2021:

1. The width of the proposed common and single driveways is not shown. All geometry needed to construct the common driveway should be shown on the plan.
CDG Response: Plan Sheet C4.0 has been revised to indicate widths of all drives.

2. The fire truck turn around is inadequate. The Turning Exhibit shows that the end of the fire truck would overhand the edge of pavement. Any snowbanks would impede this truck turn. The turnout should be elongated to accommodate the truck overhang.
CDG Response: The fire truck turn around has been revised to accommodate for the entire length of the apparatus.

3. The plans should include a driveway cross section.
CDG Response: Plan Sheet C7.1 has been revised to include a driveway cross-section.

4. All utilities should be shown as underground.
CDG Response: Utilities are proposed as underground. A note has been added that the final connections must be coordinated between the contractor and appropriate utility company.

5. The shared driveway construction standards, 6104.5.A.9 requires “A turning location within 100 feet of each house served to accommodate Fire Department apparatus.”
CDG Response: The turn-around was initially laid out per a meeting held with the Boxborough Fire Department on March 22, 2021, on site. The layout has been reviewed by the Fire Department.

6. The applicant has requested a waiver to the requirements under Section IV.B to meet the MA Stormwater Standards. It is unclear as to whether the applicant intends to provide drainage calculations demonstrating compliance with the Private/Common Driveway Guidelines 5.A.11. This section requires “No runoff shall be allowed to flow directly into the public way unless the private/common driveway is part of a subdivision which accommodates the runoff in its design.” It is our recommendation that drainage calculations be provided to address any increase in the rate of runoff from the development of these two lots. We agree that full compliance with the water quality standards is not applicable to a two lot development.
CDG Response: Please refer to the submitted Drainage Report revised June 30, 2021.

7. It is unclear as to whether the common driveway design provides a leveling area at the junction with Priest Lane and at the terminus of the common driveway by the turnaround. The Private/Common Driveway Guidelines 5.A.12 “Require a leveling area at the road intersection of 40-50’ with the grades 4-5% and at the terminus of the common portion of the driveway. Require the geometry at these intersections to accommodate a SU-30 truck turn (ambulance, moving van, fire truck). Minimum centerline radius of 80’. Recommend that a plan and profile of the driveway (vertical scale: 1” = 4’, horizontal scale 1” = 40’) to be part of the submittal so the intent is clear on the plans.”
CDG Response: Please refer to Plan Sheet C7.0 for a profile of the common drive. A 40’ leveling area is being proposed at the required 5%.

8. The applicant has requested a waiver to the requirements of Section IIB2-1 to waive providing a profile. It is our recommendation that a profile be provided to facilitate construction.
CDG Response: Please refer to Plan Sheet C7.0 for a profile of the common drive.

9. The common driveway should include signage indicating the street addresses of the houses and identify the common driveway as private.
CDG Response: Signage has been indicated to Plan Sheet C4.0.

10. The applicant should include with the Definitive Subdivision submittal the draft common driveway agreement between these two lots.

CDG Response: Acknowledged. A draft common driveway agreement between the two lots will be submitted under separate cover.

Comments from the Planning Board:

1. The applicant shall apply to the Planning Board under the Stone Walls Bylaw for the removal of stone wall to allow for the proposed common driveway.
CDG Response: Acknowledged. An application under the Stone Walls Bylaw will be submitted under separate cover.
2. Following the construction of subdivision, the Board shall not allow more housing lots unless the private/common driveway is modified.
CDG Response: Acknowledged.
3. The applicant plans shall meet the Private/Common Driveway Guidelines unless a waiver is requested and approved by the Planning Board.
CDG Response: The design has been laid out to meet the geometric standards stated within the Private/Common Driveway Guidelines. Input from the on-site meeting with the Fire Department on March 22, 2021 was implemented into the layout as well.
4. The applicant shall provide the Common Driveway Covenants & Maintenance Agreement per the Private/Common Driveway Guidelines.
CDG Response: Acknowledged. A Common Driveway Covenant & Maintenance Agreement per the Private/Common Driveway Guidelines will be submitted under separate cover.
5. The applicant shall provide drainage calculations to ensure that no increased runoff to a public way will be generated from this proposed project.
CDG Response: Please refer to the submitted Drainage Report revised June 30, 2021. The project has been designed such that
6. The applicant shall work with the Fire Department to address concerns associated with driveway width. The Fire Department prefers that the driveways are 14 to 16 feet wide.
CDG Response: An onsite meeting occurred with the Fire Department on March 22, 2021 to review the proposed layout the development. The proposed common drive is 16' & each drive is 14' with 2' gravel shoulders.
7. The applicant shall work with the Fire Department to resolve any concerns with the proposed subdivision relating to the location of existing fire cisterns. The Fire Department asked the Planning Board to require that the cistern requirements contained

in the Rules and Regulations Governing the Subdivision of Land be applied to this proposed project.

CDG Response: During the onsite meeting with the Fire Department on March 22, 2021, it was discussed that the existing fire cistern on Priest Lane was sufficient for the proposed development.

8. The applicant shall work with the Fire Department to address concerns associated with turn around and fire truck access easement.

CDG Response: Input from the on-site meeting with the Fire Department on March 22, 2021 was implemented into the layout. The fire truck turn around has been revised to accommodate for the entire length of the apparatus.

9. The Board noted a concern that the existing island on Priest Lane may be an impediment for accessing the driveway for the Fire Department. While Priest Lane is a public road, and the proposed common driveway would be private road, the Board strongly recommends that the applicant work with Fire Department and Public Works Department to ensure that Fire Department has adequate access to proposed common driveway.

CDG Response: The access for the proposed development was initially laid out per a meeting held with the Boxborough Fire Department on March 22, 2021, on site. The layout has been reviewed by the Fire Department. The entrance radii have been increased for additional maneuverability. Per the Fire Department's request, turning maneuvers have been provided for Littleton's largest ladder truck. Please refer to Plan Sheet C7.2.

10. The applicant shall submit a legal opinion to the Planning Board relative to whether this proposal requires a modification to the Priest Lane Definitive Plan Decision. This legal opinion would be submitted to Town Counsel for review and comment.

CDG Response: Acknowledged. A legal opinion will be submitted under separate cover.

We trust this meets your needs at this time. If you have any questions or require any additional information, please contact the undersigned

Regards,

DILLIS & ROY

Civil Design Group, Inc.



Ryan Vickers, E.I.T.
Civil Engineer



Gregory S. Roy, P.E.
Principal

