

**Stagecoach Heights, LLC
12 Claudette Drive
P.O. Box 165
Milford, MA 01757**

September 5, 2003

Mr. Wayne Davies
Chairman
Hopkinton Zoning Board of Appeals
Town Hall
Hopkinton, MA

RE: Stage Coach Heights
 Comprehensive Permit Application

Dear Mr. Davies:

Please find eighteen (18) copies of the following information as discussed at the last Zoning Board of Appeals meeting:

1. **Stagecoach Heights Site Development Plan for Comprehensive Permit in Hopkinton, Massachusetts**, dated 19 March 2001, last revised 05 September 2003, (12 sheets), prepared by Benchmark Engineering Corp. (18 sets);
2. **Cross Sections, Road "B" in Stagecoach Heights, Hopkinton, Massachusetts**, dated 23 April 2003 (1 sheet), last revised 05 September 2003, prepared by Benchmark Engineering Corp. (18 prints);
3. **Street Drain Catchment Areas for Stagecoach Heights in Hopkinton, Massachusetts**, dated 05 September 2003 (1 sheet), prepared by Benchmark Engineering Corp. (18 copies);
4. **Drainage Computations, Stagecoach Heights, Hopkinton, Massachusetts**, dated 23 April 2003, last revised 05 September 2003, prepared by Benchmark Engineering Corp. (18 copies);
5. Revised Runoff Computations, Tables 1 through 6, prepared by Benchmark Engineering Corp. (18 copies);
6. **Independent Data Verification, 1998 Performance Data, Direct Testing Procedures** for the Downstream Defender.
7. **Revised Condominium documents** including Unit Deed, Line Item Budget, Owner-Occupied Status Agreement, Master Deed, Declaration of Trust and Declaration of Easements. (18 copies);
8. **List of documents with most recent revision dates** (18 copies).

In response to Fay, Spofford & Thorndike's review letter dated 22 May 2003, we offer the following responses:

Page No. 2 – Paragraph 1

A post and rail fence is proposed to delineate the limits of the recreation area and has been added to the Site Development Plan.

Page No. 2 – Paragraph 2

A revised list of waivers will be submitted prior to 24 September 2003.

Page No. 2 – Paragraph 3

Public water is proposed for both fire protection and domestic use. The Site Development and Facilities Plan for the Title V septic system design was submitted to the Board of Health for review. A revised plan reflecting the latest changes will be submitted to the Board of Health for review.

Page No. 2 – Paragraph 4

The revised plans reflect the elimination of Road "A". As a result, Road "B" was modified to become a boulevard, with 15-foot wide lanes and a 6-foot wide island.

Benchmark Engineering Corp. disagrees with FS&T's recommendation that the common driveways be designed as Minor Streets. Requiring the common drives to be designed as Minor Streets would substantially increase excessive cuts/fills and land disturbance.

Page No. 2

1. Intersection and/or stopping sight distance. The elimination of the Road "A" and the associated sight distance clearing has eliminated 4,120 S.F. of wetland alteration and the cutting of numerous mature trees.

Necessary improvements to meet sight distance requirements at Road "B" require clearing and earthwork to cut back the existing slope to the east. No wetland alteration or stone walls need be altered for sight distance improvements. Numerous small caliper trees on the existing slope must be removed to cut back the slope to the east.

The sight distance cannot be increased to 500 feet as recommended by FST, as the bridge abutment at Route 495 prevents this. The straight-line sight distance shown on the plans is 465 feet. However, the distance as measured along the Wood Street (as a vehicle would travel) is closer to 480 feet to the east. Benchmark Engineering Corp. suggests the use of advance signage to warn drivers on Wood Street of vehicles entering/exiting.

2. Roadway Cuts/Fills - The applicant is requesting a waiver from the Subdivision Rules and Regulations concerning the construction of proposed roadways resulting in roadway cuts and fills exceeding 8 feet in depth. It is our opinion that it is improbable to avoid excessive cuts and fills on this site due to the undulating topography and limited access. The last several redesigns of the project have balanced the overall cuts and fills. The elimination of Road "A" has eliminated a roadway cut of approximately 17 feet.

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9. As stated above, Benchmark Engineering Corp. disagrees with FS&T's recommendation that the common driveways be designed as Minor Streets. Requiring the common drives to be designed as Minor Streets would substantially increase excessive cuts/fills and land disturbance. Roadway alignment information has been added to the site development plan.
10. Revised cross sections for critical areas of Road "B" are included with this submittal. The cross sections have been revised to show edge of wetlands and guardrail locations.

Page No. 3 – Paragraph 1

- The limits of the recreation area will be bounded with a post and rail fence, and is depicted on the Site Development Plan.
- The applicant is proposing to provide a row of Jack Pines atop a 3-foot high berm to provide buffering for the buildings from Route 495. The height of the Jack Pines has been revised to 7 to 8 feet high. Jack Pines are proposed because of their fast growth.
- The plans have been revised to incorporate comments received from DEP during the appeal process. The elimination of the Road "A" and the associated sight distance clearing has eliminated all of the alteration of Bordering Vegetated Wetland (4,120 S.F.) that was previously proposed. The construction of Road "B" will still result in the permanent alteration of 795 S.F. of Isolated Wetland. Benchmark Engineering Corp. believes the applicant will receive a Superseding Order of Conditions based on the revised plans.
- FST is not specific as to what aspects of the roadway design do not comply with the Subdivision Rules and Regulations. Regarding the common driveways, Benchmark Engineering Corp. disagrees with FS&T's recommendation that the common driveways be designed as Minor Streets. Requiring the common drives to be designed as Minor Streets would substantially increase excessive cuts/fills and land disturbance. Regarding Road "B", the cross section of Road "B" does not comply with the typical roadway cross section for a Minor Street because the street is designed as a boulevard to compensate for the elimination of Road "A".

Page No. 4 - Paragraph 1

- a) The street drainage system design is based on a 25-year storm event as called for in the Subdivision Rules and Regulations. A rainfall intensity of 5.9 inches/hour with a 5-minute time of concentration was used in the drain design. This rainfall intensity figure is commonly used in eastern Massachusetts as a 25-year event.

A plan showing the drainage areas tributary to the proposed catch basins is enclosed with this resubmittal.

- b) As stated above, the street drainage system is designed based on a 25-year storm event using the Rationale Method as required in the Subdivision Rules and Regulations.

Runoff calculations, which involve duration and volume of runoff, were generated using the SCS Urban Hydrology for Small Watersheds as required in the Subdivision Rules and Regulations.

The SCS based runoff calculations were used to size and design the stormwater basins and drain pipes contributing to the basins. As shown on the Drainage Computations spread sheet, the capacity of the pipes carrying runoff to Basin A and Basin B are in excess of the 100-year event. For example, the 100-year storm event to Basin A is 25.80 CFS and the 30" inlet pipe has a capacity of 27.54 CFS. The 100-year storm event to Basin B is 16.78 CFS while the inlet pipe has a capacity of 19.88 CFS.

- c) The drainage system has been revised so that catch basins are no greater than 250 feet apart or from a high point in the roadway.
- d) The applicant will provide 2 feet of separation from the bottom of the infiltration system to estimated seasonal high groundwater.

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- j) The roadway cross culvert was eliminated along with Road "A".
- k) Downstream Defenders by Hydro International are now being proposed in place of Stormceptors. Downstream Defenders are proposed prior to the inlet to Detention Basin A and at lower portion of Road "B". Documentation for the Downstream Defender is included in this submittal.
- l) Subdrains around the perimeter of the detention basins will control groundwater. The subdrains are depicted on the plans. The bottom of the detention basins shall be seeded with *New England Erosion Control/Restoration Mix*, produced by New England Wetland Plants, Inc., at a rate of 35 lbs./acre. The sideslopes of the detention basins shall be seeded with *Mass Slope Mix* at a rate of 35 lbs./acre.

Additional comments regarding the Detail Sheets

1. Precast Catch Basin Detail. The catch basin detail has been revised to depict a 4-foot sump and hood on the outlet pipe.
2. Grassed "Biofilter" Swales are no longer being proposed. The detail has been eliminated.
3. The applicant agrees that all retaining walls will be designed or certified by a licensed structural

Conservation Commission letter of 25 June 2003

We have revised the roadway layout, keeping it away from the vernal pool area to the maximum extent feasible as requested. This necessitated the change from two driveways to a single access boulevard, which has been shown on the revised plans submitted with this package.

Design Review Committee letter of 25 June 2003

We have revised the site plans in accordance with revisions requested by the Design Review Committee as follows:

1. We have added additional landscaping as requested. The trees will be staggered when planted to fill in gaps. We have also changed the arborvitae's trees to Jack Pines that are wider and faster growing.
2. Road A has been eliminated in the revised plans. Additional screening for these units will be provided.
3. The detention pond has been redesigned to appear to be more like a natural landform. Boulders or ledge, if encountered, will be left along the edge to add visual interest and make it seem more natural as requested.
4. A ten (10) foot wide path has been added out to the fire hydrant that has been placed at the boundary of the property with 495.
5. Quantities have been added to the landscape plant material list as requested.
6. Jack pines will be planted rather than arborvitae which are 6 to 7 feet tall on a 3 foot high berm to be finished with bark mulch as suggested.
7. Lighting details have been included on the revised plans. Lighting will be shielded and cast downward so that it does not impact abutters. Lighting impact will be minimal due to the difference in elevation between abutters and the proposed buildings.
8. A school bus waiting area has been added to the plans in the area recommended by the School Department and discussed with the Design Review Committee. This area is adjacent to Wood Street in an area where there is overhead lighting from the streetlights.

Hopkinton Affordable Housing Committee

We have been in communication with the Hopkinton Affordable Housing Committee in regard to the draft Lottery Documents we submitted. The Committee is developing a format for all Comprehensive Permit Developments in Hopkinton to use for their lotteries. We will work with the Committee on this format.

Thank you for the opportunity to respond to these issues.

Very truly yours,

Janice Hannert