

DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

July 14, 2016

Mr. Paul Campbell
Acton Engineering Department
472 Main Street
Acton, MA 01720

Re: Adeline Way
DER Project No. 31342

Dear Mr. Campbell:

Based on your review comments and our telephone conversation, I offer the following responses to your Interdepartmental Communication to the Board of Appeals for Adeline Way (Comprehensive Permit #16-01). Our responses are provided in bold text.

1. The plan proposes 8 units with 3-bedrooms each. The existing property has been assessed 1 "Sewer Betterment Unit" (SBU) which has an outstanding balance of \$6,707.20 for the initial betterment. The additional 7 homes, with 3-bedrooms each, would require an additional Privilege Fee equal to 7 SBUs at \$12,311.52 per SBU. An additional privilege fee of \$86,180.64, plus the outstanding balance, equals a total payment of \$92,887.84 to connect to the sewer. This fee must be paid prior to issuing any building permits. The Board of Selectmen, acting as the Sewer Commissioners, has the authority to waive or reduce the privilege fee if a project is in the public interest. We've attached a memo outlining the Sewer Commissioner Policy for fee relief. At a minimum, the outstanding balance of \$6,707.20 for the initial betterment must be paid prior to the building permits.
No response required
2. In addition to approval of the privilege fee by the Board of Selectmen, the project will require residential sewer connection permits for each of the units and the applicant will be responsible to provide the testing for the sewer main as required by the Acton Sewer Use Regulations.
No response required
3. The sewer main from SMH-1 to SMH-3, but not including SMH-3, shall remain a private sewer as long as Adeline Way remains a private way.
No response required
4. If possible, House #3 should connect to the existing sewer stub on High Street between Lot 7 and 8 and SMH-3 ideally should be located at the existing stub for 248 High Street. The goal is to reduce the number of new connections to the existing sewer main to reduce the potential locations of additional infiltration/inflow to the sewer system.
A sewer service from house #3 to the existing stub will require multiple bends and cleanouts. If this is acceptable, we will include this on the final plans. The main sewer service in Adeline Way will be revised to connect to High Street at the existing stub on the final plans.
5. Typically building sewer connections are not allowed to be made at sewer manholes. If possible, the connections for Lot 2 and 5 should be made at the main to reduce the number of connections at the manholes. Lot 2 may require an additional manhole to achieve this. At a minimum, we request the

applicant submit documentation that the multiple connections at SMH-2 are possible given the pipe sizes and angle of the connections.

The service for Lot 2 can be revised to connect to the main by using a bend with a cleanout, leaving only one service connection at SMH 2, without any conflict with the main line connections. The service from Lot 5 can be shifted such that it connects to the main as well. This will be reflected on the final plans.

6. The increase in runoff towards High Street is minor, but it's an increase nevertheless. The applicant should ensure that the drainage system within the High Street right-of-way is properly sized to handle the increased runoff. The applicant should also explore options to capture some of the runoff toward the end of the private way before it enters the High Street drainage system to help reduce the total runoff.

The proposed catch basins can be moved approximately 10' towards High Street. That along with a revision to the site grading to direct additional runoff to the catch basins will eliminate the increase in runoff to High Street per our telephone conversation. The final plans and drainage calculations will reflect this change.

7. In the Water Balance Calculations, the underground detention calculation assumes the 30.5 inches per year of runoff from the pavement area will be infiltrated however the drainage calculations for the 2- and 10-year storm event show a small minority of the runoff being infiltrated and the vast majority being directed to the overflow.

The 30.5" of runoff from the pavement on site is for the yearly precipitation total of 42". As a total amount, it does not take into account how that precipitation is distributed/received throughout the year. This total can be described as being distributed throughout the year in many small events and fewer larger events.

Review of precipitation data for the last 50 years shows that the monthly, mean precipitation from month to month is fairly consistent (National Weather Service data for Boston area attached). The highest monthly mean is 4.22" and the lowest is 3.12". The average mean precipitation over 12 months is 3.57". Using the 30.5" total runoff from the pavement, the monthly average runoff would be 2.54" per month.

Describing the runoff on a monthly basis still does not reflect how the detention system will recharge runoff. The system will have the ability to store runoff in the 6" of stone at the bottom of the bed. This stone will hold 608 cubic feet of runoff. If you consider the monthly average runoff (2.54" per month) and apply it on a weekly basis ($2.54" / 4 = 0.64"$ per week), the weekly runoff from the pavement would be 510 cubic feet ($0.64" / 12 \times 9556$ s.f.). Given that the detention system can hold and recharge 608 cubic feet, the runoff from the pavement will be retained by the system and recharged, for the smaller events.

8. There is an existing sidewalk along High Street recently built by the Town through an agreement with the existing home owner. The sidewalk easement paperwork was never finalized. As part of this approval, we request the easement paperwork be finalized and that an easement plan is drawn and recorded at the Registry by the applicant. The proposed plan is changing the location of the sidewalk and subsequently, the location of our original proposed easement. In addition, there is no sidewalk along Cindy Lane, a private drive.

The Applicant is willing to give the easement to the Town for the existing sidewalk. The site plans identify the location of the proposed easement.

9. The applicant has provided a list of waiver requests from the Acton Subdivision Rules & Regulations. Due to the low-speed/low-volume nature of the proposed roadway, we don't foresee an issue with the majority of the waivers however we have the following comments:

8.1.7 – We will defer to Planning/Planning Board regarding the separation between intersecting streets. We don't foresee an issue with this waiver request.

No response required.

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8.1.18 – We will defer to the Fire Department regarding the lack of a turnaround
We have been in contact with the Fire Department regarding this issue. The Fire Chief has reviewed the use of the driveway on Lot 5 for the Departments use to turn around. With some additional flare at the driveway entrance, it will accommodate the turning movement of the Departments ladder truck. The final plans will reflect the additional driveway flare.

9.1.1 – There is no sidewalk abutting Cindy Lane. A contribution to the sidewalk fund could be made in lieu of building a sidewalk.

The Applicant would respectfully request, that since there is sidewalk on High Street in front of the site, that there be no contribution to the Town sidewalk fund required for approval of the Comprehensive Permit.

9.3 – We recommend permanent monuments for the right-of-way of Cindy Lane.

The final plans will include concrete bounds along the new right of way.

The subdivision rules & regulations require the gravel base of the driveway to extend 3-feet under the shoulder of the road.

The final plans will include the extension of the gravel base as required.

10. The applicant has provided a list of waiver requests from the Acton Rules & Regulations for Comprehensive Permits. Due to the low-speed/low-volume nature of the proposed roadway, we don't foresee an issue with the majority of the waivers however High Street is a Scenic Road. Any removal or relocation of the stone walls or trees within High Street right-of-way will require a tree hearing by the Tree Warden and Planning Board.
There are no trees or stonewalls within the right of way for High Street that will be removed or moved as a result of the proposed road construction. If it becomes necessary, the Applicant will request a hearing as required.
11. The vertical datum of the plans is NAVD1988. The plans should have a conversion factor to NGVD1929.
The conversion factor from NAVD 1988 to NGVD1929 is +0.797' for the site. A note will be added to the final plans with this conversion factor.
12. The Fire Department should comment on the accessibility of a fire truck. Based on our templates, the common driveway is adequate for an SU-30 vehicle however no turnaround is provided. A truck would require a private driveway in order to turn around.
Please see our response under Item #9 above.
13. The applicant should add the location of an MUTCD compliant street name sign and make a note of it being a private way.
The final plans will include the location for a compliant street sign.
14. The proposed street name "Adeline Way" will require approval from the Planning Board. We suggest avoiding using the number 4 as that number has given developers trouble marketing units. We recommend the following street numbers and parcel IDs:
The final plans will include the house numbers as suggested.
15. The street numbers will need to be reviewed and approved by the Police and Fire Departments prior to issuing building permits.
No response required.
16. The applicant will need to show two temporary benchmarks that will not be disturbed during construction. The benchmark on the tree on Lot 4 may be disturbed by construction.
A note will be added to the final plans requiring two additional benchmarks to be set, outside the proposed limit of work, prior to construction.
17. There is a typo on the Title Page of the plan. The owner/Applicant should be 248 High Street, not 284 High Street.
The revised plans will correct this error.

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18. The plans should note that no paving shall take place after November 15th and the final course of pavement will be placed after the binder has been exposed to one winter season.

The final plans will include a note to address this requirement.

19. The centerline of the street should be monumented at all points of curvature and tangency using magnetized masonry nails in the final course of pavement. The engineer should add a note that no permanent monuments shall be installed until all construction is completed.

The final plans will include a note to address these requirements.

20. The applicant will be responsible for providing an as-built plan that will be certified by a PE/PLS.

No response required.

I hope that these proposed changes to the final plans and supporting information will satisfy your comments. Please let me know if you need any additional information.

Very truly yours,

DAVID E. ROSS ASSOCIATES, INC.



Robert E. Oliva
Senior Project Manager

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