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November 17, 2017

Ms. Sheila Page, Town Planner
101 Main Street
Town of Ashland
Ashland, MA 01721

RE: Definitive Subdivision Plan
Brogden Road Extension

Dear Ms. Page:

GCG Associates, Inc. has reviewed the following information for Brogden Road Extension Definitive Subdivision Plan in Ashland, MA.

Documents: Application for Planning Board Approval/Permit and Application for Approval of Definitive Subdivision (Form C & Form C-1), Prepared by GLM Engineering Consultants, Inc. Applicant: A & M Realty Trust, Dated October 25, 2017.

Stormwater Report: Definitive Subdivision, "Brogden Road Extension ", Prepared by: GLM Engineering Consultants, Inc., Dated: October 25, 2017.

Plan References: "Definitive Subdivision Plan, Brogden Road Extension," Prepared by: GLM Engineering Consultants, Inc., Dated: October 25, 2017. Sheet index as follows:

Sheet No.	
1	Cover Sheet
2	Existing Conditions Plan
3	Layout Plan (1"=40')
4	Layout Plan (1"=60')
5	Grading, Drainage & Utilities)
6	Plan and Profile of Roadways
7	Erosion Control Plan
8	Details
9	Details

The application is for a Definitive Subdivision approval as required by Ashland Subdivision Control Regulation Chapter 344, and the project will result in the alteration and/or soil disturbance of 10,000 square feet or more, therefore a Stormwater Management Permit (Chapter 343) is required.

The applicant, A & M Realty Trust, seeks to subdivide Assessor's Map 18 Lot 180 (Deed Book 69503 Page 534) to two building lots at the end of Brogden Road in the Town of Ashland. The subject property is approximately 10.69+/- AC, an extension of the existing Brogden Road with a turnaround (cul-de-sac) is proposed to provide the required frontage and access for the new lots. The subject property is located in the Residential "A" District (RA). There is an existing intermittent stream and vegetated wetland located on the northwest portion of the property. A Conservation Commission Notice of Intent filing is required of this development. Stormwater Management is required under the Ashland Regulation Chapter 247. This project requires an Ashland Stormwater Management Permit and NPDES General Permit for Stormwater Discharges from Construction Activity and SWPPP.

Based upon our review of the above information, we offer the following comments with respect to compliance with Town of Ashland Zoning Bylaws and Subdivision Regulations. The numerical section of the regulations is referenced at the beginning of each comment unless it is a general comment.

GENERAL COMMENTS:

Plan

Plan Sheet 1 of 9 - Cover

1. Section 344.12.F.4 - the applicant is requesting waiver for the construction of the cul-de-sac with no center island.

Plan Sheet 2 of 9 – Existing Conditions Plan

1. The subject lot is outside the 0.2% annual chance flood plain, the plan should identify the FIRM reference number and effective date.

2. North Arrow should be shown on the plan.

3. Section 334-8 (B) (2) - Bearing and distance along the existing property boundary should be shown on the plan, closed traverse and closure calculations should be submitted for review.

4. Section 344-8 (B)(11)(J) - Drainage system and underground utilities (Electric, cable, telephone, gas etc.) should be shown on the plan.

5. Section 344-8 (B)(11)(k) - Existing trees (in excess of 15" diameter and 24' in diameter) to be shown within 10 feet of the proposed and existing ways.

Plan Sheet 3 of 9 – Layout Plan (1"=60')

1. Section 344-8 (B)(2) - closed traverse and closure calculations for the whole subdivision; each individual lot, and the street should be submitted for review.

2. Section 344-25 (A) – Monuments shall be installed at the front lot corner.

3. Section 344-25 (B) – Iron rod, pipe or other markers shall be installed at corners of each lot within the subdivision. A drill hole should be installed at the rear lot corner between Lots 1 & 2.

4. Section 344-13 – Easements for the drainage system should be shown on the plan. Lot area should be calculated to show compliance with Chapter 282 Section 10 – definition of Lot Area

Plan Sheet 4 of 9 – Layout Plan (1"=40')

1. See comments for Plan sheet 3 of 9.

Plan Sheet 5 of 9 – Grading Drainage & Utilities Plan

The existing Brogden Road intersects with Ridgewood Street and loop to High Street, Cross Street and Summit Lane. The proposed Brogden Road extension is located at the northeast end of Brogden Road approximately 120 feet from the Ridgewood Street intersection. This short section of roadway serves one house (#32) on Brogden Road. The existing Right-of-Way has a 50 feet width with 22 feet pavement and a single sidewalk on the east side.

The proposed extension will serve two additional single family dwellings, (three dwellings total), with limited future expansion. GCG has reviewed this subdivision submittal as a lane and associated standards.

1. North Arrow should be shown on the plan.

2. Section 344-20 (H)(1) – requires pavement width to be 26 feet width for Lane. The proposed pavement width is 22 feet and matches the existing road width. The applicant should request a waiver for allowing pavement width of 22 feet.

3. Section 344-12 (F)(4) – Requires a landscape island within the cul-de-sac. The applicant has requested for the waiver of the island. The proposed cul-de-sac pavement width has a diameter of 90 feet. A WB-40 vehicle turning path should be shown on a plan to demonstrate emergency vehicle accessibility.

4. Section 344-21 (A)(1) – Requires granite curb (Type VA4) for roadway grade at 6% and greater. The roadway profile shows 6% grade at the cul-de-sac.

5. Section 344-23 (B)(1) – Proposed Catch Basin intervals exceeded the required 300 feet. Double grates catch basin should be used.

6. Section 344-18 – Existing and proposed underground utilities gas (if any), electric, cable and telephone should be shown on the plan.

7. Section 334-21 (A)(1) – Requires granite curb (Type VA4) for roadway grade is at 6% and greater. The roadway profile shows 6% grade at the cul-de-sac.

8. Massachusetts Stormwater Handbook (MSH) - An access path with reasonable slope and easement should be provided to access to the infiltration basin.

9. MSH requires an access path around the entire basin perimeter. The access area shall be no less than 15 feet. The plan proposes a 8 feet wide berm along the top of the basin. GCG recommends a minimum width of 10 feet. An easement should be provided for the infiltration basin.

10. MSH requires all infiltration basin must have an emergency spillway capable of bypassing runoff from large storm without damage to the impounding structure.

11. The two proposed roof drain chambers systems do not meet the MassDEP Standard Design Guidelines for Shallow UIC Class V Injection Wells. The bottom of the system shall meet the two feet separation to seasonal high groundwater for all stormwater wells.

Plan Sheet 6 of 9 – Plan and Profile

1. Existing and proposed underground utilities should be shown on the plan.

2. North Arrow should be shown on the plan.

3. Section 344-38 (J) – Water - no dead ends shall be permitted. On dead-end streets, the full size water main shall be extended through easements to connect with existing water mains. On approved dead-end water mains, a valve shall be located with a hydrant within fifteen (15) feet of the dead end.

4. Section 344-50 – water mains shall extend to the front of the property before service connections are constructed.

5. Section 344-55 – The owner of a new home or building erected beyond the existing water main in any town street shall extend the main to the middle of his property before a service is supplied.

6. Wheel chair ramp should be identified at the end of the proposed sidewalk.

7. The proposed Brogden Road extension profile vertical curve meets the sight distance requirements for Lane. The plan should show the calculated sight distance base on the proposed “K” value.

8. Sewer manholes should have a minimum of 0.1 feet drop between the inlet and outlet inverts.

Plan Sheet 7 of 9 – Erosion Control Plan

1. North Arrow should be shown on the plan.

2. Additional erosion control should be provided at the north side of the roof drain chamber on Lot 1.

Plan Sheet 8 of 9 – Detail

1. Sewer service force main to sewer manhole connection detail should be provided to protect the sewer structure.

2. Sewer Main Trench Detail per Section 326-16 should be provided on the plan.

3. Typical Sewer Building Connection section B-B should comply with Sewer Main Trench Detail per Section 326-16.

4. Typical Hydrant Assembly Detail is shown on the plan, but is not proposed on the utilities plan.

5. Granite Curb (VA4) detail should be shown on the plan.

Plan Sheet 9 of 9 – Detail

1. Typical Right of Way Cross Section should be 50 feet wide, dimensions should be adjusted accordingly.

2. Proposed 22' pavement width would require Planning Board wavier.

3. Precast Concrete Catch Basin Detail calls for Mass Standard catch basin hood.

4. Pipe end protection detail should be added on the plan.

5. Roof Drain infiltration chambers overflow outlet does not match the Stormwater report calculations. Overflow outlet erosion protection should be provided. Two feet separation from bottom of system to seasonal high groundwater is required.

6. Infiltration basin bottom elevation, steel grate elevation should match with the drainage calculations. An anti-seep collar should be specified on the outlet pipe. Top dike with should be 10 feet wide minimum. Emergency spillway and drawdown device should be provided.

7. Sediment Forebay inlet pipe end protection should be provided.

Stormwater Report

1. There are existing catch basins on Brogden Road and Ridgewood Street before the intersection. The runoff from the intersection and approximately 120 feet of Brogden Road pavement drains to the proposed cul-de-sac and discharge to the infiltration basin through a single catch basin. These sections of existing pavement runoff should be included in the pre and post runoff analysis. As presented, the additional runoff may overtop the infiltration basin.

2. There is no treatment for the two driveways runoff. Since not all the impervious areas drain to the infiltration basin, calculations to demonstrate compliance with the 65% Rule should be provided. (SMH - Volume 3, Chapter 1, Page 27 Other Considerations for Standard 3).

3. Water Mounding calculations should be provided. (SMH - Volume 3, Chapter 1, Page 28)

4. Subcatchment D3 infiltration basin surface should be treated as water surface with Cn value of 98.

5. Catch basin should be limited to 300 feet apart. The 25-year storm peak runoff would require a double grates catch basin.

6. Roof drain chambers system should meet MassDEP Standard Design Guidelines for Shallow UIC Class V Injection Wells. The bottom of the system shall meet the two feet separation to seasonal high groundwater for all stormwater wells. Models RP1 and RP2 provided storage for up to the 10-year storm event with an 8 inches diameter grate overflow. However, the detail plan shown two 6 inches grate overflow.

7. Infiltration Basin should be equipped with an emergency spillway sized per SMH.

8. Sediment Forebay sizing calculations should be provided.

9. Annual cost estimate for the O&M plan should be provided.

10. Sample for O&M plan should be included.

If you have any questions regarding this matter, please contact our office.

Respectfully Submitted,
GCG Associates

Michael J. Carter

Michael J. Carter, P.E.
Project Manager