

March 29, 2021

Ashland Zoning Board of Appeals
c/o Peter Matchak
Town Planner/Director
Town of Ashland
101 Main Street
Ashland, MA 01721

RE: A&M Project # 2604-01
DHCD LIP Site Plan Review
Arbella at Ashland, Memorial Drive
Response to Peer Review Comments

Dear Chairman Trefethen, Mr. Matchak and Members of the Zoning Board of Appeals:

On behalf of our Client, UA Senior Manager LLC, Allen & Major Associates Inc. (A&M) would like to provide responses, summarized below as related to a peer review memo prepared by Michael J. Carter, PE of GCG Associates, Inc., dated January 14, 2021 and an email memo prepared by Tony Ma of GCG Associates, Inc., dated December 23, 2020.

The responses to the comments are shown below in **bold** preceded by the original comment shown in *italics*.

Drawing revisions are shown on drawings dated March 25, 2021 as revision 1 attached hereto.

Peer Review Memo prepared by Michael J. Carter, GCG Associates, Inc.

Project Narrative Section 8.0 – Requested Waivers

The Applicant has requested the following preliminary waivers:

Comment 1: Ashland General Bylaw, Chapter 242 - Soil Removal. This project would require a Soil Removal Permit under Planning Board's jurisdiction. This project is being filed under M.G.L. Chapter 40B, Massachusetts Comprehensive Permit Act through the Ashland Zoning Board of Appeals (ZBA). Approval of this Comprehensive Permit and with forthcoming issuance of building permit, this project would meet the Section 242-4 Exemptions, Section C, as "surplus earth resulting from a bona fide construction project." Therefore, granting this waiver should meet the intent of Chapter 242.

Response 1: Noted. No response required.

Comment 2: Chapters 247 and 343, Stormwater Management - this project requires a Stormwater Management Permit (SMP) per Chapter 247 and to comply with Chapter 343 requirements. Waivers for Chapters 247 and 343 have been requested, both chapters are under the Conservation Commission jurisdiction. This peer review will be based on meeting the SMP and Chapter 343 standards. Granting a waiver for Chapters 247 & 343 should not have any negative impacts to the Stormwater Management bylaws. However, this project disturbs more than one acre of land and exceeded the NPDES General Permit for Stormwater Discharges from Construction Activity threshold. An USEPA - NPDES filing and associated SWPPP shall be filed 14 days prior to the start of land clearing.

Response 2: Noted. The applicant is required to prepare and file a SWPPP and NOI with the EPA. This is noted on the plans.

Comment 3: Chapter 280 – Wetlands Protection. The applicant is proposed to subdivide the property to two separate parcels/lots through Planning Board, Approval Not Required (ANR) process and conveying an approximately 20 acres lot to the Town. The existing wetland resource areas would be subdivided into the conveying lot. GCG recommends the applicant to file an Abbreviated Notice of Resource Area Delineation (ANRAD) or a Request for Determination of Applicability (RDA) with Ashland Conservation Commission for the entire parcel (37.99 Acres) to verify the wetland boundary. Once a determination issued. The proposed project would be contained within its own ANR lot with no wetland resource area, and the proposed development would be outside the 100 feet wetland buffer. Hence, 310 CMR 10.00 is not applicable and the applicant does not need to request a waiver for Chapter 280. (Presuming the Town would accept the ANR lot. Otherwise, Notice of Intent (NOI) or RDA filing would be required under 310 CMR 10.00 and subjects to Conservation Commission approval.

Response 3: The applicant has reviewed the land area with the Ashland Conservation Commission and received a negative determination of applicability regarding future filings with the Commission. A copy of the RDA decision is attached hereto.

Comment 4: Chapter 282 – Zoning, Section 5.1.2. Schedule of Parking Area Requirements. Section 5.1 Off-Street Parking Requirement compliance is required under Section 8.4.8 for development within RTD. Section 5.1.2 requires 2 spaces per dwelling unit. The applicant has proposed 109 parking spaces (combined 108 standard stalls, 8 accessible stalls and 43 garage stalls) for the 156 apartment units, 1.02 spaces per unit; 48 parking spaces (combined 24 garage stalls and 24 tandem parking stalls, in front of each garage) for the 24 townhouse style units; and 40 parking spaces (combined 35 standard spaces and 5 accessible spaces) for the club house.

The town house parking spaces appear to be exclusive tandem parking arrangement and should meet the 2 spaces per dwelling unit requirement. (If and only if the tandem parking arrangement is approved by the Board). The applicant has not provided an official floor plan for the club house. Parking spaces requirements should be determined by the uses of the floor area or per seats as determined by the Inspector of Buildings. However, based on the typical accessory service building in a residential development, which is typically restricted to the development residents and their guests use. The proposed 40 parking spaces seems reasonable. The applicant should provide additional data to support their proposed 1 space per dwelling unit for the apartment buildings. Section 4.0 -Transportation of the project narrative report was based on the June 11, 2019 preliminary traffic data with the Ashland Commuter Rail Station in full operation and 288 residential occupied units at Cirrus Apartments. (Cirrus Apartments was approved for 398 units). The report also presented an estimated ITE trip generation based on Senior Adult Housing - Attached (252) uses. The applicant should provide additional details for the age restrictions for this development, including minimum age restriction of residents. Does this development provide shuttle bus arrangement to the commuter rail station? Would the garage parking spaces be exclusive to an assigned unit? As work from home trend being more acceptable, which demands higher parking stalls in residential development. GCG recommends the applicant to

provide additional traffic study for the trip generation, with consideration of full occupancy in Cirrus Apartments and land use code (LUC 221) Multifamily Housing (Mid Rise), and if a left turn exit lane to the MBTA Station is necessary, (narrowing the site entrance to reduce the impact of the existing streetlights. Provide parking demands for the age restricted apartment buildings. At a minimum, GCG recommends providing additional reserve/future parking spaces with associated drainage mitigation layout on site. For reference, Section 8.4.14.12.a. requires 1.8 parking spaces per each dwelling unit for Transit Village Community (TVC) development in RTD.

Evaluation of the intersection of West Union and Memorial Drive intersections and other controlled intersections along West Union should be reviewed to address potential impact.

Response 4: Please refer to the attached MDM Transportation report for discussion relative to traffic generation and levels of service.

The parking demand is borne from the applicant's experience relative to constructing and operating senior campus developments. Through discussions with the Town and as enumerated within the Development Agreement "the parking ratio shall not (sic) less than one parking space per unit". 245 total parking spaces are proposed across the development with the following breakdown:

Townhomes - 48 spaces (2 surface parking and 2 garage spaces)

Clubhouse – 15 standard, 4 accessible, 14 future stalls (as needed)

General spaces/amenity – 2 standard, 1 accessible

Apartments – 110 standard, 8 accessible, 43 garage stalls

It is the applicant's opinion this suffices for parking demand.

Comment 5: Section 282 - 5.2 Loading Requirements. Section 5.2.1, loading space is required for the nonresidential building (Building 3 - Club House). Considering that the club house being an accessory facility of this residential uses. Loading would mostly be limited to single unit trucks and occasional only. There is a potential by-pass lane in front of building 6. Therefore, granting a waiver for 282 - 5.2 should have minimal impacts to this project.

Response 5: Noted. No response required.

Comment 6: Section 282 - 5.2.8 Special Permit, Loading Requirements. Under M.G.L. Section 40 B Comprehensive Permit approval, the ZBA has the authority to require the same standards as stated in Section 5.2. Granting this waive should not have any adverse impacts to Section 5.2.

Response 6: Noted. No response required.

Comment 7: Section 282 – 5.4.4 Interior Landscaping in Parking Areas. The landscaping plan meets the required number of trees associated with each parking cell. Some of the proposed tree locations do not meet the 5' from parking cell requirements. As the tree matures, their root systems may cause pavement damage within their canopy area. Further set back from the parking area may

extend the longevity of the pavement and sidewalk area. (See additional comments for the walkway in front of building 2 and landscape island between buildings 1 and 2 below.)

Response 7: The landscaped islands have been revised as suggested.

Comment 8: Section 282 – 5.4.4.3. Landscaped Islands. This regulation is specified for Commercial H and Commercial V Districts for parking areas containing twenty-five or more spaces. As this is a residential development in RTD district. 282 – 5.4.4.3 is not applicable.

Response 8: Noted. No response required.

Comment 9: Section 282 - 5.7.3.1 – Environmental Standards, Erosion Control. This plan has proposed adequate provisions to protect against erosion, soil instability, and surface water runoff, with loam and seed with erosion control fabric in steep area. Granting this waiver should not have any adverse impacts to the environment. During construction of a project of this size the erosion control procedures are critical due to the significant earthwork. The ZBA may want to consider measures requiring a proper SWPPP be reviewed by the Town prior to construction.

Response 9: The applicant defers to the opinion of the Board regarding this matter.

Comment 10: Section 282 – 5.8 Site Alternation Special Permit. Under this Comprehensive Permit approval, this project should meet the intent and purpose of 5.8.1 and 5.8.2. The applicant has proposed to preserve approximately 20 acres of open area and conveying the lot to the Town, which preserved a natural buffer and limiting the development within an 18+/- acre parcel.

Response 10: Noted. No response required.

Comment 11: Section 282 – 8.4.4. Permitted Uses. Rail Transit Use Table, Permitted Residential component uses: (d). Dwelling Multi-family, For Rent, (N), not permitted. Applicant has requested waiver for 8.4.4. GCG recommends adding waiver request for permitting the proposed club house and outdoor recreation facilities to be part of the Residential Component (for rent) Uses in Area A. These waivers have no impact to the engineering aspects of this project. ZBA approval is required.

Response 11: Noted. The applicant hereby requests this condition be added to the list of waivers for consideration for this project.

Comment 12: Section 282 - 8.4.6.4. Dimensional Requirements. The applicant has requested a waiver to permit 20 units per acre for Dwelling Multifamily, for rent in area A. (Subject to waiver #11 approval). GCG recommends adding waiver request for permitting the proposed club house and outdoor recreation facilities to be part of the Residential Component Uses in Area A. Considering that majority of the dwelling units in Area A are the town houses, the club house, and the southeasterly corner of building #1. This waiver has no impacts to the engineering aspects of this project. ZBA approval is required.

Response 12: Noted. No response required.

Comment 13: Section 8.4.6.11. Building/Structure Height. This section restricts the building height to 3 stories (4 stories at the rear of the building if the slope of the land permits) for multifamily for Rent structure and 2 stories (3 stories at the rear of the building if the slope of the land permits) for age restricted buildings. This waiver request would reduce site disturbance as shown. ZBA approval is required.

Response 13: Noted. The applicant defers to the Board.

Comment 14: Section 282 – 8.4.8 Parking and Loading Requirements (See waiver requests #4 and #5 comments above).

Response 14: Noted. No response required.

Comment 15: Section 282 – 8.4.13 Site Development Plan and meeting Section 9.4 Site Plan Review. This Comprehensive Permit approval would be based on the bylaws and regulations as the Planning Board Site Plan Review and with the ZBA's authority to waiver local requirements. The development still must meet all environmental, public health and safety related standards. Therefore, waiver of 8.4.13 should not have any major adverse impacts to the Town.

Response 15: Noted. No response required.

Comment 16: Section 282 - 9.4 Site Plan Review. This is required under 8.4.13, see comment #15.

Response 16: Noted. No response required.

Comment 17: Section 282 – 9.6 Design Plan Review. This is associated with Section 9.4 Site Plan Review, see comment #15.

Response 17: Noted. No response required.

Comment 18: Section 282 -9.7.3 Rate of Development Bylaw, Building Permit Limitation. This bylaw has been expired. (Four years following its effective date, November 28, 2016). Review whether a waiver is required.

Response 18: The waiver may be superfluous given the expiration of this bylaw. The applicant would remove this from the list of waivers.

Comment 19: Chapter 343 - Stormwater Management. This requirement is associated with Section 247, (comment #2). The stormwater management requirements are part of the public safety standards to protect and prevent flooding to the downstream properties and would be enforced in full extend according to the Massachusetts Stormwater Standards. Also see comments #2 and #3. However, granting waiver for Chapter 343 does not relieve the requirements of the Stormwater Management requirements to protect the public.

Response 19: The application is intended to be in full compliance with the Massachusetts Stormwater Standards for all of the stormwater criteria. It is the opinion of the design team that the 10 stormwater standards continue to be met through these plan revisions.

Comment 20: Chapter 348 – Wetland Protection Regulations. This chapter is associated with Chapter 280, Chapter 247, and Chapter 343. See comments #2, #3 and #19 above. Upon the acceptance of the ANR Lot, (Development Agreement, 20-24 acres lot to be conveyed to Town). The development site would be outside the wetland protection buffer. GCG recommends the applicant file an ANRAD or RDA with the Conservation Commission to confirm the wetland boundary per comment #2. Granting waiver for Chapter 348 does not relieve this project to comply with the Massachusetts Wetland Protection Act and stormwater mitigation requirements.

Response 20: A negative determination of applicability was received by the Ashland Conservation Commission a copy of which is attached hereto.

During the review we have identified additional waivers which may be needed as follows.

Comment 21: This plan does not meet the intent of 282 - 8.4.1.1 - feature and site layouts that are conducive to walking, biking and transit riding. 8.4.1.2 - pedestrian friendliness, alternative suburban living/working environments. GCG recommends adding an ADA compliant walkway to connect the development to Memorial Drive and incorporate a bike path in the design. Pedestrian access is the main objective of Section 8.4.

Response 21: The pedestrian connectivity aspects are discussed as part of the response to comments below. To ensure all aspects are accounted for, the applicant requests a waiver from section 8.4.1.1 and 8.4.12 to allow for the proposed plan.

Comment 22: A waiver for Section 8.4.6.5. Building Separation is required. Buildings 4 and 5 has less than 20 feet separation (14.7' provided). This waiver has no impacts to the engineering aspects of this project. ZBA approval is required.

Response 22: The applicant wishes to add this waiver to the project which requires ZBA approval.

Comment 23: A waiver for Section 8.4.6.8. Side Yard is required. Regulations requires a minimum 25' side yard, the proposed side yard at the northeast side of building 11 (garage) is only 15.3'. Due to the 22+/- feet elevations different along the property line, a retaining wall has been proposed and the proposed building #11 is on top of the wall reinforcement zone. GCG recommends the 25' side yard setback be provided.

Response 23: The revised site plans have relocated the garage away from the property line to meet this setback.

General Comments

Plan Sheet – Cover

Land Usage Table:

Comment 1: Ch. 282 Sect. 8.4.4 dwelling multifamily, for rent is not permitted in RTD Area A and 8.4.6.4, Building Area, requires 20 units per acre for age restricted multifamily for Rent development is permitted in Area E only. The table's Proposed Lot Area of 17.97 +/- acres does not meet the uses requirements (rental unit in Area A). Waivers have been requested for 8.4.4 & 8.4.6.4. The subject property consists of 37.99 acres (per Assessor's record). The plan set is showing an undefined interior property lines, which laid out approximately 17.97 acres of land for this development. The proposed lot area would meet the required 20 units per acres density if the waivers are granted for 8.4.4 and 8.4.6.4. The applicant stated that the subdivided 20+/- acres lot through ANR process would be conveyed to the Town. This review assumes that the Town will accept the open area parcel.

Response 1: Noted. No response required.

Comment 2: Section 8.4.6.(8), required minimum 25' side yard, the proposed side yard at the northeast side of building 11 (garage) is only 15.3'. Waiver is required.

Response 2: The applicant has revised the site layout for building 11 to increase the required separation to the property line as suggested. The waiver will no longer be sought for this building.

Comment 3: Section 8.4.6.(11) requires building to be limited to 2 stories above grade (3 stories at the rear of the building if the slope of the land permits), the proposed multi-family buildings #1 and #2 are 4/5 stories. Waiver requested.

Response 3: Noted. No response required. This waiver can be included as part of the requested waivers for consideration by the Zoning Board.

Comment 4: Section 8.4.14.(12)(a) – requires 1.8 parking spaces per dwelling unit. This development proposed 180 units with 247 parking spaces (1.37 space per dwelling unit proposed). Waiver requested, GCG recommend addition support data and provide reserve/future parking spaces layout.

Response 4: The applicant has familiarity in the senior campus industry where the parking as proposed is sufficient for the development. As part of the Development Agreement entered into with the Select Board dated July 15, 2020, Condition 1.h allows the developer parking flexibility to the extent that "The parking ratio shall not be less than one parking space per unit." The application is consistent with this agreement.

Plan Sheets V-101 – V-102 Existing Conditions Plan

Comment 1: Plan should show entire lot boundary, the southeasterly lot corner should be shown on the plan.

Response 1: Noted. The plan limit extent has been adjusted to show the entirety of the property.

Comment 2: Verify deed book number, it appears to be book 63650 page 314.

Response 2: Noted. The reference has been corrected to book 63650, page 314.

Comment 3: Turnoff proposed interior lot lines on the existing conditions plan.

Response 3: Noted. The interior lot lines have been removed.

Comment 4: Show existing sidewalk and grass strip on Memorial Drive (plan sheets V-101 & C-104).

Response 4: The existing sidewalk (multi-modal bike path) and grass strip have been added to the survey.

Comment 5: Show Zoning boundary line, Area A, E and F.

Response 5: The Rail Transit District (RTD) zoning boundary lines have been added to the existing conditions survey.

Comment 6: Verify existing grade at the east end of S75°17'41" E, 147.04' lot line, (west side of the proposed building #10's northwest corner). The adjacent Ashland Transit Apartments site plan shows existing grade approximately 10 feet higher. Mapping standards are +/- half of a contour; this existing grade could eliminate the proposed ten feet high retaining wall section shown on the grading plan.

Response 6: Noted. A&M reviewed the on-the-ground survey data to confirm the elevation data is as shown. We will reconfirm elevations as part of the development layout to ensure everything is constructible as proposed.

Comment 7: Show existing drainage culvert at the southeasterly lot corner, downstream of the drainage outlet PFES 3.

Response 7: Noted. The existing drainage culvert has been added to the plans as requested.

Plan Sheets C-001 – C-002, Abbreviations & Notes

Comment 1: General Notes – note #3 final lot area to be adjusted with waivers approval.

Response 1: Noted. The note has been revised to reflect the requirements associated with the ANR process as well as any necessary waivers.

Comment 2: Note #8, there is no sidewalk connection to the Memorial Drive (MBTA Access Road). Sect. 8.4.1.1 and 8.4.1.2 require pedestrian access and bike path to the neighboring streets.

Response 2: Noted. The note has been revised to reflect this condition. Through the development agreement and design iterative processes, the applicant identified to the Town that the inclusion of a pedestrian sidewalk along the main roadway is not practical to the development given the slope of the roadway and the senior demographic of the residents. The roadway exceeds 7% to compensate for the existing grades of the site. Maintaining an accessibly compliant sidewalk parallel was not feasible.

Comment 3: Note #30, proposed signage is not a part of this application, stated signage to be approved by separate application.

Response 3: Noted. The note reflects that signage must be approved through separate process. If it is incorporated through this site planning process, the note will be further revised.

Comment 4: Erosion & Sedimentation Control Notes – note #34, should include inspections of erosion control after each major storm event in addition to at least once every 7 days.

Response 4: The note has been revised as suggested.

Plan Sheet C-101, Erosion Control Plan

Comment 1: A General NPDES Permit (Notice of Intent) with associated SWPPP is required for this project and should be filed at least 14 days prior to start of construction with US EPA.

Response 1: Noted. The applicant shall be prepared to have a SWPPP on record with the EPA at least 14 days prior to start of construction.

Plan Sheets C-102 – C-104, Layout & Materials Plan

Comment 1: Show snow storage location/area.

Response 1: Designated snow storage areas have not been located onsite given development constraints, slopes, and other site features. Note 31 has been added to the plans to reflect the applicant's desired mode of operation. This note reads:

SNOW REMOVAL MANAGEMENT SHALL BE OVERSEEN BY THE SITE OPERATOR. DESIGNATED AREAS HAVE NOT BEEN LOCATED ON THE SITE PLANS. IT IS THE INTENT THAT THE FACILITY MANAGER WILL STOCKPILE SNOW IN UNUSED AREAS OF THE SITE THAT WILL NOT IMPEDE CIRCULATION, SIGHT LINES, OR PEDESTRIAN AND VEHICLE MOVEMENTS. IF THESE AREAS REACH CAPACITY, THE OPERATOR SHALL BE REQUIRED

TO REMOVE THE SNOW FROM THE PREMISES AND HAUL TO AN APPROVED SNOW MELT/RECEIVING AREA. IN NO CASE SHALL SNOW BE PILED IN BUFFER ZONES, DRAINAGE AREAS, OR WETLAND RESOURCE AREAS.

Accumulated snow will be removed from the site as needed as part of base operations.

Comment 2: Identify the 4' driveway shoulder area surface treatment. Provide additional separation to the roadside drainage swale for snow storage.

Response 2: The roadway shoulder has been labeled with an additional cross section provided for clarity. The roadway shoulder is paved. The required slopes, swale widths, and country drainage are not conducive to providing the roadway snow shelf. Please refer to snow management note above.

Comment 3: Provide traffic study for the level of service (LOS) at the Memorial Drive intersection and the necessary of left turn lane. If possible, narrowing the curb opening to avoid relocating existing lighting(s) at the entrance. As shown, the two sidewalk light poles are inside the curb opening. Show wheelchair ramps connection (with grading) at the Memorial Drive sidewalk.

Response 3: Please refer to the attached traffic and LOS study prepared by MDM Transportation Consultants, Inc. By their summary:

“... adequate capacity is available along Memorial Drive and at its intersection with the proposed site driveway to accommodate the traffic increases that may occur due to the project. The proposed age-restricted residential development is estimated to generate approximately 36 vehicle trips during the weekday morning peak hour and 45 vehicle trips during the weekday evening peak hour. Mainline traffic along Memorial Drive will continue to operate at an overall LOS A during the peak hours and the single lane Site Driveway approach to Memorial Drive will operate at LOS B or better during the peak hours. The project will generally result in queue lengths of 1 vehicle or less on all approaches.”

Comment 4: Provide site entrance/exit intersection horizontal and vertical sight distance (in the plan set).

Response 4: Sight distance information has been added to Sheet C-602, Vehicle Movement Plan.

Comment 5: Multiple sections of the Zoning regulations emphasize special attention and pedestrian friendliness within the RTD development (8.4.1.(2); 8.4.12.(4), and 8.4.14.(12). Pedestrian sidewalk/walkway connecting to Memorial Drive sidewalk is critical. Bike path should be incorporating in the design.

Response 5: The references within the zoning bylaw are noted. Please refer to Response 2 above under Section “Plan Sheets C-001 – C-002, Abbreviations & Notes”. The inclusion of a sidewalk, or lack thereof, was discussed during the iterative design process with the Town of Ashland during the creation of the Development Agreement.

Comment 6: The proposed lot(s) layout should meet Section 344-4, "Rule of 22 for a Lot" requirements. Drainage outlet at the west side of building 7 and stormwater basin discharge pipe are outside the proposed property boundary. GCG recommends proposed lot to include both drainage pipes and outlets or provide drainage easements for both systems.

Response 6: The configuration of the lots will not meet the "Rule of 22" calculation of Section 344-4. The applicant requests relief to this Section be included as a waiver to the application.

Comment 7: The main driveway connecting Memorial Drive to the loop driveway consists of a set of reverse curves (center radii 90' and 92') with a relatively short tangent, 80' +/-, (between Stations 6+50 to 11+50). In comparison, the Ashland Subdivision of Land regulations Chapter 344 Section 12.A (5) requires a center-line offsets of street jogs with a minimum length of 125'. This driveway serves 180 dwelling units and GCG estimated 1,200+/- vehicle traffic trips per day for age restricted uses. (The applicant shall provide a formal traffic study to verify this assumption). Based on Ch. 344 Article II – Definitions, the proposed driveway function as a Collector Street. However, due to the limited access (private driveway) and reduced speed limit (based on the 15 MPH sign detail) setting. The driveway may be considered a Minor Street. (Minor Street is defined to serve up to 50 dwelling units and between 250 to 1,000 vehicle traffic trips per day. Section 344-12. A(6)(b) requires a minimum center radius of 150' for minor street.

Response 7: The reference to the design parameters and the Ashland Subdivision of Land Regulations is noted. The proposed roadway is considered a driveway and would not be required to meet roadway classification standards. Further, the applicant has included a waiver request from the conditions of the Subdivision of Land Regulations.

Attached hereto is the MDM Transportation report verifying the anticipated number of trips for 180 senior units. The report estimates approximately 698 daily trips (Table 3).

Comment 8: Verify proposed 15 MPH speed limit, add physical traffic calming devices (speed hump and/or raised crosswalk or similar).

Response 8: A&M assigned the lowest operational speed limit to the driveway as an alert to residents of the grade of the roadway and the traffic barriers (guardrails) along certain sections of the roadway. By design, the lowest driveway radii is 92'. Using a maximum side friction factor of 0.320 for a 2% roadway slope, the design speed range falls between 20 and 25 miles per hour with the as- selected nominal speed of 15mph being within a 10 mph tolerance of the calculated value.

Operational adherence to the posted speed limit signs will fall to the onsite property management.

It is the opinion of the development team that traffic calming measures are not required on the roadway. If after initial use, conditions warrant, this can be revisited.

Comment 9: Section 282-8.4.6 (8) – Building 11 (Garage) location does not meet the 25' side yard setback requirement. (15.3' provided). In addition, the grading plan shows 22' elevation drop at this property corner. Tall (6'+) chain link fence should be installed along the top of retaining wall for safety. Detail sheet C-504 calls for 24' retaining wall tie back (reinforced zone fill). GCG recommends relocate building #11 to outside the reinforced soil zone.

Response 9: The layout of building 11 has been revised to address a potential conflict with the retaining wall tie-backs. The separation is now approximately 21 feet from the back of the retaining wall. The wall support will be further evaluated to confirm the exact placement of geogrid reinforcing in this location as the project proceeds.

Comment 10: Section 282-8.4.6.5. – buildings 4 and 5 do not meet the required 20' separation (14.7' provided). Waiver should be required.

Response 10: The applicant requests relief from the 20 foot building separation for Buildings 4 and 5 to allow for the dimensions as shown.

Comment 11: Section 282-8.4.6.11. – Buildings 1 & 2 appear exceeded the 2/3 stories building height. Provide town house building stories and height. Waiver for building story/height has been requested. Architectural elevation plans should be provided for ZBA review.

Response 11: Architectural plans were formally submitted as part of the comprehensive plan application, but were not originally included in the transfer of drawings to GCG. A copy of the architectural elevations shall be made available for review.

The townhomes are designed as 2 story with an above grade height of 36'-11".

Comment 12: Rotate dumpster pad (south of building 5) to face the club house driveway opening.

Response 12: The dumpster pad enclosure has been adjusted as suggested to better align with the drive aisle from the clubhouse.

Comment 13: Section 5.4.4. – provide landscape island with trees in front (northwest) of building #2, between two set of handicap parking spaces to break up the parking cells and provide snow storage area.

Response 13: The islands in front of building 2 have been adjusted to provide additional planting area and snow management zones. This condition has also been replicated along building 1.

Comment 14: Relocate landscape island walkway (between buildings 1 & 2) to two sides to align with walking areas in front of garages.

Response 14: This suggestion has been incorporated into the revised site plan drawings.

Comment 15: Stormwater basin should be equipped with an access gate and clear path with suitable grading for maintenance. Preferable not through the Memorial Drive sidewalk.

Response 15: An access gate and gravel path connection to the main site driveway have been added to the revised plans as suggested.

Comment 16: Section 282-8.4.14 (12)(a) – requires 1.8 parking spaces per each dwelling unit for TVC development, similar to this project. The 24 Town House units are equipped with single car garage and second tandem parking space in front of each garage. These spaces are typically deeded with exclusive right to each town house unit. (Tandem parking layout needs ZBA approval). 40 parking spaces (including 4 accessible spaces) are assigned for the club house use and 159 spaces (including garage and accessible spaces) are proposed for the 2 multi-family buildings with 156 units, average 1.02 spaces per dwelling unit. Waiver has been requested. GCG suggests additional traffic and parking demand study be provided and layout optional reserve/future parking spaces, as utilized by the abutting Cirrus Apartments development.

Response 16: Noted. The revised site drawings include a provision for additional spaces available at the clubhouse center that can be utilized for multiple purposes including event parking, overflow, or visitor spaces if demand warrants. The quantity of spaces has been evaluated by the applicant given demand and similar sites operated by this management group.

Plan Sheet C-105 – C-107, Grading & Drainage Plan

Comment 1: Provide ADA compliance walkway connection to Memorial Drive. The proposed main driveway center slope is at 7.24%, with the inside curve slope of 9+/-%, which meets minor street design (10% maximum) standard, if acceptable by the Board. However, a sidewalk along the driveway would exceed 5% slope and not meeting ADA requirements.

Response 1: This condition is noted. As previously outlined, the slope of the roadway is not conducive to a pedestrian sidewalk along the driveway and has been outlined with the Town as part of the development of the sidewalk. It is acknowledged that the intent of the RTD was integrated pedestrian connectivity, but there is no practical implementation for this project.

Comment 2: Identify if there is any legal restriction within the Shell Oil Company Easement. This plan calls for 7' cut (within stormwater basin) and 11' fill (west of building 10) within the existing easement. The report stated an abandon Shell Oil Company Easement with the functional use of the easement has been vacated but has not been extinguished. Thus, the Shell Oil Company has right to install utilities within the easement. The deep cut for the stormwater basin could affect the utility company's easement uses and possible interrupting the proposed infiltration basin. GCG recommends moving the basin cut area outside the easement.

Response 2: A&M has coordinated with representatives of the Shell Oil Easement. The pipeline has been abandoned with no future plans for re-use. Shell will allow the removal of portions

of the pipeline, as encountered, to facilitate the project. If removal is sought, the applicant is required to engage oversight services by representatives of Shell Oil. This is consistent with the construction of Cirrus Apartments for encountering the pipeline.

Comment 3: Verify existing grade/contour along the property line at the west side of building #10 (northwest corner). The Ashland Transit (Cirrus) Apartments site plan showing existing grade 343+/- at property corner. This plan is showing 33+/- . A section of 10+/- feet retaining wall could be eliminated.

Response 3: This is discussed above. The information on the survey has been checked based on field conditions. However, if an opportunity exists to lessen the wall height, this will be pursued in the development of final construction drawings.

Comment 4: Consider providing additional side yard setback at the building #11 southwest corner by rotating buildings #1 and 11 toward the landscape area, to reduce the height of the proposed retaining wall, as shown the retaining wall is over 22' high.

Response 4: As shown on the revised drawings, the position of building 11 has been adjusted as suggested. It is the decision of the applicant for building 1 to remain as positioned and provide the retaining wall as shown.

Comment 5: Perform deep hole soil test pits to determine ESHGW for stormwater infiltration basin and the two chamber systems. The proposed Stormtech DC-780 Chambers system is 13.5+/- 'below existing grade, with assumed ESHGW 15.5' below surface. GCG recommends multiple test pits be performed per Massachusetts Stormwater Handbook. Soil testing equipment should be suitable to excavate below 16'. Verify soil exfiltration capacity, within the Hydrologic Soil Group (HSG) 'C/D' soil.

Response 5: A&M conducted deep-hole soil testing within the areas of the proposed infiltration basin, subsurface infiltration field 1, and subsurface infiltration field 2. The test pit logs are shown on the grading and drainage sheets as performed by a licensed soil evaluator.

In summary, the testing that occurred at Basin 1 notes that no groundwater was encountered at depths greater than four feet below the bottom of the proposed basin. Areas of boulders were encountered that will need to be removed during construction through mechanical means (excavation or hoe ram). Infiltration testing was performed using a Modified Philip Dunn (MPD) Infiltrometer within the deep holes. An infiltration value of 30 inches per hour was obtained. By stormwater regulations, an in-situ value can be used at a 50% value (i.e. 15 inches per hour). The design rate of 8.27 inches per hour per the stormwater Rawl's table has been maintained to provide an additional factor of safety to the design.

Soil testing below subsurface infiltration basin 1 and 2 yielded less favorable results. Water was general encountered at depths of approximately 18-24". The presence of

water prevented the opportunity to have measurable infiltration test results for the larger infiltration field, however, one data point yielded 0.721 inches per hour.

Given the high presence of groundwater and soil conditions, A&M has elected to modify the subsurface stormwater systems. The revised site plans include the use of a Stormtrap stormwater vault system located in front of building 11. This area is a 'fill' zone as part of the mass earthwork processes and the system will be constructed within the reused onsite fill at elevations above existing grade with no interaction with groundwater (i.e. greater than 4). A design rate of 0.27 inches per hour was used for soil exfiltration values given the known soil types. The revised HydroCAD model is attached hereto. The adjusted peak rate attenuation values and watershed maps are contained within the attached drainage report revision.

Comment 6: Update drainage systems to match post-development watershed plan. Assure 'DC-780' chambers to be specified to meet the dep cover soil loading (SC740 chamber was used in the drainage calculations with similar storage volume).

Response 6: Noted. The drainage plans and report have been adjusted to match the Stormtrap water storage system noted above.

Comment 7: The parking layout in front of the club house shown on the site plan should match the post-development watershed plan. Verify the latest layout.

Response 7: Noted. The layouts between drawings have been synced.

Comment 8: Adjust grading behind building 7 to provide 15' setback from chambers system to downhill slope.

Response 8: This drainage system has been removed. The comment is no longer applicable.

Comment 9: Earth berm (with swale) should be provided along the southside of PCB 22A & PCB 24A to prevent sub-catchment P-3 runoff entering P-1 as shown on the post-development watershed plan.

Response 9: Stone check dams are specified at behind each catch basin located within the country drainage swales to prevent drainage carryover.

Comment 10: Add PAD 1 (rear of buildings 6 & 8) and roof drainpipes. Update drainage labels to match Stormwater Conveyance Sizing Report. PCBs 14 & 15 should be PDMHs. Update infiltration basin outlet pipe and provide drainage easement for the two outfalls

Response 10: Noted. The drain pipe table has been revised and is contained within the updated drainage report.

Comment 11: Connection Building 5 roof drain to DMH instead of CB to prevent resuspension of sediments in large storms.

Response 11: The pipe connection has been rerouted as suggested.

Comment 12: Verify PDMH-12 outlet invert, which is higher than the inlet.

Response 12: The structure inverts have been adjusted and corrected.

Comment 13: The drainage trunk lines with 4% to 5% slopes have excessive high velocity (for 25-year storm event), addition comments on the drainage report below. May consider increase the drops in manhole to reduce pipe slope or utilize corrugated (interior) drainpipe.

Response 13: The pipes have been adjusted to incorporate steps in the main trunk line to reduce velocities. The velocities are approximately 11 feet per second and are within the tolerances for smooth wall ADA pipe.

Comment 14: Provide infiltration basin emergency overflow spillway and maintenance access path.

Response 14: The basin overflow is design through the outlet control structure.

Plan Sheet C-108, Profile Plan

Comment 1: Driveway profile meets Minor Street requirements. Update drainage system profile per drainage report.

Response 1: The profiles have been adjusted as suggested.

Plan Sheet C-501 – C-505, Details

Comment 1: Catch basin – Detail 13, catch basin weep hole should be plugged.

Response 1: The detail has been revised.

Comment 2: Precast drain manhole – detail 12, specified cement concrete or brick and mortar invert similar to MassDOT E202.4.0 Standard Details. Call out interior diameter, drainage plan shown difference diameter manhole.

Response 2: The detail has been revised.

Comment 3: Provide drop manhole detail.

Response 3: A drop manhole detail has been added.

Comment 4: Provide roadside swale section.

Response 4: A roadway cross section has been added to the profile sheet. A swale detail has been added to the plans.

Comment 5: Provide infiltration basin and Storm chamber Outlet Control Structure detail. Orifices plate, frame, and cover, etc.

Response 5: Outlet control structure and details have been added to the revised plans.

Comment 6: Provide driveway cross-section, should area gravel base and surface treatment (if gravel finish should be modeled as such in the drainage calculations).

Response 6: A driveway cross-section has been added to the profile sheet.

Comment 7: Provide SC310 Chamber detail and setback to downhill slope.

Response 7: The SC310 details have been removed and replaced with pertinent Stormtrap system details.

Comment 8: Provide CDS unit(s) detail.

Response 8: CDS details have been provided.

Plan Sheet CC-601 = C-602, Vehicle Movement Plan

Comment 1: Verify intersection sight distance and dumpster pickup between buildings 5 & 6.

Response 1: The intersection sight distance with Memorial Drive has been added to the profile sheet. The adjusted dumpster position provides direct access for pickup.

Plan Sheet L-101 – L-103, Landscape Plan

Comment 1: Add interior parking cell landscape island with tree in front of building #2.

Response 1: Noted. This landscaped island has been revised.

Comment 2: Revise tree/walkway in the parking cell landscape island between buildings #1 & #2.

Response 2: Noted. This landscaped island has been revised.

Comment 3: Provide infiltration basin access path.

Response 3: The landscaping has been adjusted to provide access to the infiltration basin.

Provide project timetable/schedule per Section 9.4.4.12

An updated schedule shall be provided under separate cover.

Provide architectural rendering and/or cross-section per Section 9.4.4.12

Architectural information was submitted with the Comprehensive Permit application. An additional copy is attached hereto for GCG review inclusive of floor plans, etc.

(provide floor plans to confirm units and bedrooms and club house uses)

As noted above.

Provide lighting detail and photometric plan per 9.4.4.8

A lighting and photometric plan has been included in the revised drawings.

Traffic Report as deemed necessary per 9.4.8

Comment 1: GCG recommends a traffic study to analysis the necessary of two exit lanes and the proposed one parking space per dwelling unit for this age (62+) restricted multi-family uses. Majority of the age restricted residents would still be in the work force, a professional opinion for these matters should be considered.

Response 1: Please refer to the attached MDM Transportation Consultants report for discussion. The entrance has been revised on recommendation to a single exit lane.

Comment 2: Evaluation of the intersection of West Union and Memorial Drive intersections and other controlled intersections along West Union should be reviewed to address potential impact.

Response 2: Please refer to the attached MDM Transportation Consultants report for discussion.

Stormwater Report

Massachusetts Stormwater Management Standards Analysis:

Comment 1: This report referenced 90% Total Suspended Solids (TSS) removal and 60% average annual load of Total Phosphorous (TP) removal requirements under NPDES MS4 General Permit. However, the current Stormwater Management bylaws Chapter 247 and 343 have not been updated to reflect these requirements. Section 343-8.1.6 calls for using the most recent version of the Massachusetts DEP Stormwater Management Standards and BMPS must be designed to remove 80% of TSS, 40% TP, and 30% for total nitrogen (TN). Furthermore, the Massachusetts Stormwater Handbook (MSH) is based on the 80% TSS removal standards and thus reflected in their BMP's rating. GCG review would be based on MSH requirements and with consideration to meet the MS4 requirements.

Response 1: Noted. No response required.

Comment 2: Verify Table 3.2C, and table 3.2D Design Point 2 Existing runoff and volume peak. It appears to have discrepancy with the HydroCAD report.

Response 2: The HydroCAD report has been revised as noted.

Comment 3: Verify the grass cover area in the existing conditions HydroCAD report. The Existing Watershed Plan show tree line along the Memorial Drive frontage.

Response 3: The HydroCAD report has been revised as noted.

Comment 4: HydroCAD time span should be expanded to 24 hours minimum to account for full volume.

Response 4: Noted. The HydroCAD time span has been extended as suggested.

Comment 5: Remove Catch Basin Areas 1 & 2 from sub-catchment P-1. These two areas do not flow through infiltration basin. Which affect the peak runoff rate and volume to the (proposed flared end section) PFES 3. Recalculate pre-and post- peak rate and volume accordingly.

Response 5: These catch basins have been removed from the link. The resultant flow and volume are noted in the attached drainage report.

Comment 6: P-1 infiltration surface should be modeled with pervious area with CN 98. Clarify driveway shoulders (4' each side) finish surface (gravel?) model accordingly.

Response 6: The driveway shoulders are pavement and have been modeled accordingly. The P-1 infiltration surface has been updated within the model.

Comment 7: Infiltration basin and storm chamber systems are subject to soil testing to verify ESHGW. A 2 feet separation to the bottom of infiltration system is required. The USDA Web Soil Survey report does not support the depth to water table and depth the restrictive feature for (312B – Woodbridge fine sandy loam, HSG 'C/D') at the DC-780 chamber system location. Abutting Cirrus Apartments development experienced extremely silty soil and trapped water for days. GCG recommends perform soil testing prior to finalize the drainage design.

Response 7: Soil testing occurred as noted in earlier responses. The drainage system has been modified to reflect the observed conditions.

Comment 8: The proposed CDS proprietary treatment units should be called out on the plan and locations. The CDS treatment unit was approved by NJDEP similar to Massachusetts TARP certification, for TSS Removal Rate of 50% (NJDEP letter dated January 9, 2015, available through Contech website). GCG concurs that the CDS unit combined with the deep sump catch basin pretreatment meets the 44% TSS removal pre-treatment prior to discharge to a rapid infiltration basin and comply with MassDEP infiltration basin standards. However, the deep sump catch basin 62.5% TSS removal, does not meet the 80% TSS removal standards. MassDEP qualify the infiltration

and with pre-treatment (44% TSS removal required for rapid infiltration soil) with 80% TSS removal credit. MassDEP does not break down TSS credit

Response 8: The CDS units have been noted on the plan. A&M has limited the TSS credit for CDS units to 50% despite higher claims by the manufacturer.

In noting compliance, A&M notes meeting the overall TSS removal requirements of 80% for the site. There are three individual treatment trains: 1 infiltration basin (92% removal); 2 Stormtrap system (92% removal), and street catch basins (62% removal) representing a treated area of 14.2 acres. The weighted average of treatment across the site is 90.4%.

Comment 9: Pipe flow velocity for PDMHs 11, 12, 18, 19, 20, 21, 22 and 23 have full flow velocity between 12.32 to 17.39 ft/s during 25-year storm event, with partial flow could reaching 115% of the full flow velocity. GCG recommends sizing the pipe and slope to control the full flow capacity to 10 ft/s and hence controlling the partial flow velocity below the 12 ft/s target.

Response 9: Pipe slopes have been adjusted to reduce the potential velocities.

Comment 10: Provide drainage channel/swale flow capacity calculations, and velocity to evaluate erosion control.

Response 10: A drainage swale flow capacity chart has been included using the flattest portion of the swale as the limiting calculation. The experienced velocities are addressed through rip-rap lining of the swale.

Comment 11: Provide soil testing and calculate drawing down time and water mounding calculations accordingly.

Response 11: Draw down time is included within the drainage report. Water mounding calculations are required where less than 4 feet occurs between the bottom of a stormwater management system and groundwater. Based on soil testing and placement, the proposed systems achieve this separation.

Comment 12: Operation and maintenance plan – Deep Sump Hooded Catch Basin shall be inspected and cleaning 4 times per year. Call out mowing drainage channel to maintain grass height not to exceed 6" height and removal debris at least once per year. Provide annual maintenance budget and sample O&M log.

Response 12: Noted. The O&M has been revised as suggested.

Comment 13: Register Storm Chambers (Shallow UIC Class V Injection Wells) to MassDEP prior to installation and operation.

Response 13: Noted. No response required at this time. A UIC registration will be sought as part of the project.

A&M believes these responses will provide sufficient information for the final review of this application.

If you require any additional information, please feel free to contact me.

Very truly yours,

ALLEN & MAJOR ASSOCIATES, INC.



Philip Cordeiro, P.E.

Branch Manager

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cc: J. Smetana, UA Senior Manager
File

Enclosure: Comprehensive Permit site plans – revision 1 dated March 25, 2021
Drainage Report and Attachments
RDA Decision
MDM Transportation Site Analysis Report
Architectural Drawings (by others)