

Date January 20, 2016
To Nathaniel Strosberg, Town Planner
From Thomas C. Houston
Project Rail Transit District Apartments
Subject PSC's Evaluation of the Status of Responses to Comments through the Kelley Engineering Group Letter dated January 13, 2016

Corporation, PC (PSC) is in receipt of revised and supplemental information from the Kelly Engineering Group including a letter responding to prior comments dated January 13, 2016. This memorandum incorporates Comments from the Professional Services Corporation, PC (PSC) report dated November 9, 2015, responses from the Kelly Engineering Group dated December 16, 2015, comments from the PSC status memorandum dated January 4, 2016, responses from the Kelly Engineering Group dated January 13, 2016 and our evaluation of the last response from the Kelly Engineering Group.

GENERAL

1. A Landscape Plan was referenced on the Site Plan index to be developed by others, but was not provided. A comprehensive Landscape Design Plan should be developed by a Registered Landscape Architect and should include a schedule of specific species, caliper and heights, and should identify proposed locations of each. Chapter 282, Section 5.4.5 should be referenced for general standards. A waiver has been requested from Section 9.4.4.6 for submission of the landscape plan from the initial submittal.

Response: The Applicant has engaged Ryan Associates, Landscape Architects & Planners, to provide Landscape Architecture services for the project. As discussed at the December 10th Planning Board meeting a landscaping plan will be provided prior to the next Planning Board meeting.

PSC: To be evaluated upon submission of the Landscape Plan.



Response: The landscaping plan as presented at the 01/05/2016 Planning Board hearing is attached.

PSC: OK.

2. A Scenic Road hearing will be required for the portion of the emergency access road construction that falls within the High Street right-of-way.

Response: The applicant will be requesting a Scenic Road hearing for the construction of the Emergency Access Drive.

SC: OK.

Response: Please note that Scenic Road application has since been filed and will be heard on January 21.

PSC: OK.

3. Based upon the number of potential residents in the project and the length of the dead end road to the site from West Union Street, which is many times in excess of the 800 foot allowable maximum, it is strongly recommended that a comprehensively designed, full second access be provided to the project from High Street.

Response: As discussed at the public hearing an alternate emergency access through the MBTA lot is being pursued. There has not been discussion about a permanent driveway access to High to support this project. The current plans show an emergency only access drive to High Street which is similar to the plan which was previously approved. The design team has met with the Fire Department and their consultant and additional site changes have been made based on that meeting. These changes include creating a boulevard type entry from the MBTA road that includes a median strip.

PSC: The applicant is willing to construct a full second access and/or an improved emergency access through the MBTA property pending approval by agencies having jurisdiction – OK.

Response: As discussed at the January 4th Planning Board Meeting the Applicant is obligated to pursue constructing the emergency access through the MBTA Lot as a condition of the Site Plan Modification.

PSC: OK.

4. Earthwork calculations should be provided. (Chapter 343-7.6.13).

Response: The goal of the site design is to result in a balanced site. Earthwork Calculations



have been provided by the site contractor. Based on those calculations it is expected that the project will result in approximately 229,500 CY of excavation and 230,900 CY of fill.

PSC: Copies of the site contractor's calculations should be submitted for the Board's files – OK.

Response: A copy of the cut fill analysis is attached herewith See Attachment 1.

PSC: OK.

5. A Construction Timetable indicating estimated startup and completion dates should be provided. (Chapter 282, Section 9.4.4.11)

Response: Construction is estimated to start in March of 2016 and finish in November of 2017.

PSC: A construction schedule should be maintained during construction and copies provided to the Town Planner to facilitate coordination – OK.

The Construction Schedule will be provided to the town planner prior to construction. Any changes to the schedule will be provided to the Town Planner

PSC: OK.

RULES AND REGULATIONS - The project is subject to the Subdivision Rules and Regulations (Chap 282, §9.4.4)

Response: It should be noted that this project is a modification to an approved site plan. The existing approvals make no mention of subdivision regulations or waivers thereof. On behalf of the applicant we respectfully request all applicable waivers from the Subdivision Rules and Regulations. The proposed project will result in private driveways, utilities and other infrastructure that have been designed appropriately for the proposed use and that will be maintained by the applicant

6. The Traffic Study indicates that the project will generate an average of 2,536 trips per day. The Rules and Regulations define a Collector Street as carrying between 500 and 3,000 trips per day. The main site driveway would be defined as a Collector Street, particularly near the front of the project. The centerline near the second interior intersection should be increased from 150 feet to 500 feet. (Chapter 344-4.A and Chapter 344-12.6.c).

Response: As noted above the applicant requests a waiver from all Subdivision Regulations. The site driveway is a private driveway and is not intended to be a road.

PSC: We do not take exception to the waiver request to reduce the centerline radius.

Response: To the extent a waiver is required it is respectfully requested.



PSC: OK.

7. The roadway pavement should be 2-inch bituminous binder course, a 1-inch leveling course if required by the town and a 1-inch top course. The pavement section on Sheet 14 should be adjusted. (Chapter 344-20.E).

Response: As noted above the applicant requests a waiver from all Subdivision Regulations. The site development is not a roadway and will not be constructed to roadway standards.

PSC: The Bituminous Concrete Pavement (Standard) Detail which shows a total pavement thickness of 3 inches with a 1½ inch top course and a 1½ binder course is acceptable. Reference to installation of a leveling course where required should be added to the Detail

Response: A note has been added to the Bituminous Concrete Pavement Detail.

PSC: OK.

8. A Collector Street pavement width is required to be 30 feet. The entrance roadway is 24 feet and should be widened to accommodate the expected 2,500+ daily trips from the project. (Chapter 344-20.H.3).

Response: As noted above the applicant requests a waiver from all Subdivision Regulations. However, working with the fire department the front entry has been reconfigured to two thirteen feet one way access aisles with a 7' green strip.

PSC: The divided section included at the request of the Fire Department is acceptable – OK.

Response: It should be noted that it is our opinion that the Planning Board should waive the requirement that the site development is subject to the Subdivision Rules and Regulations.

PSC: OK.

9. Type VA-4 granite curbing should be provided for roadways in excess of 6% grades. (Chapter 344- 21.A.1)

Response: As noted above the applicant requests a waiver from all Subdivision Regulations.

PSC: Granite curb on steep slopes provides for better control of stormwater runoff and vehicles. We do not concur with the requested waiver of granite curb on steeply sloped roadway segments.

Response: As discussed at the January 4th Planning Board meeting the developer and its successors will be responsible to install and maintain all curbing within the site.



PSC: OK.

10. Granite curb inlet throat stones should be provided for all catch basins along roadway edges having greater than 6% grades, or within granite curb radii. (Chapter 344-21.B)

Response: As noted above the applicant requests a waiver from all Subdivision Regulations.

PSC: Throatstones provide better capture of runoff during intense storm events and are resistant to blockage by leaves and debris. We do not concur with this requested waiver.

Response: Granite Throatstones have been added to the plan.

PSC: OK.

11. The sidewalk section on Sheet 14 should be adjusted to indicate a 2-inch bituminous binder course overlain by a 1-inch top course. The 6-inch gravel base course should be increased to 10 inches. (Chapter 344-22)

Response: As noted above the applicant requests a waiver from all Subdivision Regulations.

SC: We do not take exception to the proposed pavement thickness. Although the difference in thickness is small and therefore not critical, we recommend an 8 inch thick gravel base. Note C1 on Sheet 14 should be revised for consistency.

Response: The plans have been revised to provide an 8" gravel base

PSC: OK.

12. The details indicate that concrete curb stops are to be utilized for the project. Curb stops are difficult to maintain free from plow damage during wintertime snow removal operations. An alternate design should be considered.

Response: As noted above the applicant requests a waiver from all Subdivision Regulations. The site driveway is a driveway and is not intended to be a road.

PSC: Curb stops are inherently problematic; however, this is a private site and the Applicant must accept all risk. Waiver of strict compliance is the Board's decision.

Response: Curb stops are not needed for the project.

PSC: OK.

13. The Rules and Regulations (344-12.C and D) specify centerline grades of between 0.5% and 6% for Collector Streets, leveling areas at intersections (3% maximum for the first 75'), vertical curves at breaks in grade exceeding 2%, and 350-foot sight distances for Collector Streets.



Typically this information would be provided on roadway profiles which were not included in the plan set. Roadway profiles should be provided for Roads A&B, and should include both the proposed centerline vertical geometry and utilities.

Response: As noted above the applicant requests a waiver from all Subdivision Regulations. The main driveway never exceeds 5% in slope, and has a slope of less than 2% at the first two intersections.

PSC: OK.

Response: No response necessary

PSC: No response required.

14. By virtue of the modified Site Plan Review, soil disturbance of 10,000 square feet, development of 5 or more acres, and disturbance of more than 5,000 square feet of land having a slope greater than 15%, the project is subject to the provisions of the Ashland Stormwater Management Bylaw.

Response: A permit has been requested through the conservation commission.

PSC: OK.

Response: No response necessary

PSC: No response required.

15. The previously developed stormwater management watershed drawings that were completed by Allen and Major for the Jefferson at Ashland Station (JPI) project comprehensively analyzed approximately 322.110 acres of tributary drainage area, including the Nyanza superfund site, the Chemical Brook conveyance and the 36"/48"/4' x4' culvert system that discharges to the Sudbury River. The current Ashland Rail Transit Apartments plan analyzes approximately 67 acres, or about one-fifth of the original study area. Several concerns raised during the original hearings centered upon the adequacy of the culverts extending from Chemical Brook to the Sudbury River. This culvert system currently is undersized and results in periodic flooding in the area, (surface overflow to the fire station in March, 2001 was cited on the drawings). Because the project increases volumetric flows, the off-site impacts to the existing stormwater management system should be evaluated under the new design. It is recommended that the 67 acre study area be expanded to include the 322-acres that were originally analyzed under the Allen and Major 2008 plan.

Response: The previous project provided offsite stormwater management (SWM). This approach used a centralized SWM system that anticipated development from all lands within the zoning district. Preliminary discussions with the town planner and conservation agent indicated



that a site by site stormwater management approach is now more desirable. The currently proposed SWM system provides recharge systems throughout the property and a water quality/detention/recharge pond on the property.

It should be noted that the previous approval also incorporated a condition (stormwater condition #4 on page 20) that required the applicant provide a payment of \$114,000 to the town in order to upgrade the culvert in question. The applicant is committed to complying with that previous condition.

PSC: An Agreement was previously reached providing for payment of \$114,000 as off-site mitigation.

Response: As discussed at the Planning Board Hearing the current development agreement did not incorporate a line item for the referenced payment. As noted previously there are many differences between the previously proposed and currently proposed projects. The previous project provided offsite stormwater management (SWM). This approach used a centralized SWM system that anticipated development from all lands within the zoning district. Preliminary discussions with the town planner and conservation agent indicated that a site by site stormwater management approach is now more desirable. This development and future developments will have more localized stormwater management systems that will include recharge systems spread throughout the property and more localized water quality/detention/recharge ponds. The proposed project is smaller than the previous project and will result in a substantial reduction in peak and volume of stormwater flows. The changes to the project will lessen impacts to downstream culverts and streams. Finally, the proposed project will fully comply with the Massachusetts Department of Environmental Protection Stormwater Handbook.

PSC: Under the 100-year storm event, the currently-presented project contributes an approximate four (4) acre-foot increase in stormwater that will discharge from the site into the Northerly Wetlands, then to Chemical Brook and into the aforementioned Sudbury River Culvert. The current plan does not address analysis of this system, particularly with respect to addressing the 100-year off-site flooding impacts from increased volumes from the site.

The proposed stormdrain system attenuates the increase in the peak rate of discharge for post development flows. However, the Northerly Wetland serves to detain flows. Therefore a volume increase will increase the volume of water within the Northerly Wetland. For the 100 year frequency storm event, the peak rate of runoff from the Proposed Project to the Northerly Wetland is 67.68 cfs (predeveloped) and 65.93 cfs (postdeveloped), a 3 percent decrease. For the 100 year frequency storm event, the volume of runoff from the Proposed Project to the Northerly Wetland is 309,987 cu.-ft. (predeveloped) and 487,646 cu.-ft. (postdeveloped), a 57 percent increase. Absent extending the drainage analysis to include the Sudbury River Culvert, we cannot quantify



the extent to which the existing (predeveloped) peak rate of flow will be impacted by the Rail Transit District Apartments. However, we believe that the peak rate of flow (postdeveloped) for the Rail Transit District Apartments Project is likely to be less than the peak rate of flow (postdeveloped) for the previously approved JPI Project.

16. The 13.7-acre design point to the easterly wetlands experiences increases in peak runoff under both the 2-year and 10-year events. The Checklist for Stormwater Report which, indicates under Standard 2 that Peak Rate Attenuation has been met for the 2-year and 10-year 24-hour storms is inconsistent with the calculations.

Response: It is acknowledged that the stormwater management model shows a slight increase in the smaller storms in the easterly watershed. The slight increase in runoff rate at these lower storms is an anomaly of the calculations. The Majority of this area (13.0 Ac) is and will remain undeveloped until a project is proposed on this land. The remaining 0.75 acres will be used for the development of the areas near building #1. The area around building#1 will be collected and treated in the onsite drainage system. However, this area is Hydrogeologic Soil Group A and is currently wooded with an associated runoff curve number of 30. The wooded areas in Hyrdogeologic Soil Group D are 77. When land is removed at the lower curve number the average curve number goes up. In order to demonstrate no realistic impact we have created an analysis that generates runoff form the two soil groups independently. That analysis is included in the revised stormwater management report.

PSC: It is unlikely that measurable flooding will result. Waiver of strict compliance is the Board's decision.

It is our opinion that there will be no increase in runoff. This is for one watershed that is essentially unchanged. As explained above the calculations provided in attachment F of the SWM addendum show no increase within this undeveloped watershed. The developed watersheds show significant decreases in runoff. There is no increase in total runoff rate and therefore no waiver is needed.

PSC: No further comment.

17. The Applicant is requesting a waiver from Chapter 282, Section 9.4.9, which requires no increase in runoff volume. A summary table of pre-developed and post-developed runoff volumes should be provided to assist the board in determining the degree of non-compliance. The request indicates that the design will be constructed to ensure that there would be zero increase in runoff volume measured on annual basis. A supporting calculation was not provided for this annual recharge calculation.

Response: As previously noted the current request is to amend a permit that previously granted this waiver. The new project has reduced buildings, pavement, and the number of units. In



addition this project proposes 10 independent infiltration basins, one for each residential building and one as part of the stormwater management system. In this project design we have demonstrated compliance with the Massachusetts Department of Environmental Protection Stormwater Standard #3(recharge) by using the static method.

PSC: The site plan review provisions of the Zoning Bylaw require that “Drainage shall be designed so that runoff shall not be increased in rate or volume.” The frequency of recurrence of the storm to be used in determining compliance with this provision is not specified. Compliance with the DEP Stormwater Management Standard 3 which is an empirical analysis based on soil type is not sufficient to satisfy the Site Plan Review standard (§9.4.9). Conservatively, waiver should be requested.

Response: Please see response to item 15 above. A waiver of Site Plan Review standard (§9.4.9) has been respectfully requested.

PSC: Waiver has been requested from Chapter 282, Section 9.4.9.

18. Subject to the review of the MEPA Secretary, a New ENF for Lapse of Time filing will likely be required by MEPA under 301 CMR 11.10(2)-(4).

Response: We recently met with the MEPA office. It was agreed that an ENF will be filed. That filing is expected to occur this month.

PSC: OK.

Response: An ENF has been filed with MEPA.

PSC: OK.

19. The Stormwater Management Report narrative indicates that the Rainfall Frequency Atlas for the Eastern United States data (i.e. TP-40) was utilized to determine the Rainfall Intensity (i) that utilized in the rational formula for the pipe design. The TP-40 curves are designed for the TR55/TR20 methodology and should not be used for the rational formula for Rainfall Intensity. Local IDF curves should be utilized based upon time of concentration calculations.

Response: Local IDF for Worcester was used. Also, the Mass DOT IDF curves shown on page 29 of Chapter 8 reference TR -55 as a source.

PSC: OK.

Response: No Comment.

PSC: The Mass DOT IDF curves shown on page 8-29 in Chapter 8 are to be utilized *only* for the rational method (as described on page 8-25 of Chapter 8). The TP-40 curves, referenced in part on page 8-38 are designed to be utilized for the TR-20/TR-55 (NRCS)



methodology, which has been chosen for the analysis of this project. The NRCS calculations should be corrected, using the proper rainfall intensity values and resubmitted. (The full TP-40 curves are provided by NOAA
http://www.nws.noaa.gov/oh/hdsc/PF_documents/TechnicalPaper_No40.pdf)

20. In the existing stormwater model, shallow concentrated flows should be specified as flowing over “Woodland” surfaces rather than “unpaved”.

Response: TR-55 does not specify what type of ground unpaved shallow concentrated flow. See Urban Hydrology for Small Watersheds – TR-55 dated June 1986 figure 3-1 on page 3-2.

PSC: OK.

Response: No Comment.

PSC: “Woodland” surfaces are more appropriate for the model of the existing site. Please refer to the National Engineering Handbook – Part 630 Hydrology, Chap 15 (210–VI–NEH, May 2010)

http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=27002.wba for surfaces (in addition to paved and unpaved), also provided in HEC-19 Figure 52.
<http://www.fhwa.dot.gov/engineering/hydraulics/pubs/hec/hec19.pdf>

21. The roughness coefficient (Manning’s number) should be adjusted from $n=0.011$ to $n=0.012$ for HDPE pipe (ADS N12 is specified in the construction notes). Please verify that pipe segments PA3 (18” HDPE between DMH A3 and DMH A2 near Building #2), PA6 (18” HDPE between DMH A6 and DMH A5 near Building #1), PB14 (18” HDPE between DMH B14 and DMH B13 near Building #5), PB21 (12” HDPE between DMH B20 and DMH B21 near Building #9) and PC4 (24” HDPE between DMH C4 and DMH C3 near Garages H and I) do not surcharge with the corrected coefficient.

Response: The noted pipe sections were reevaluated using an n value of 0.012. Revised calculations are included in the stormwater management report.

PSC: OK.

Response: No Comment.

PSC: OK.

22. Pipe segment PC7 in front of Garage K should be relabeled as a 24-inch pipe on Sheet 11. The inverts and capacity in the calculations are OK for this pipe.

Response: Sheet 11 has been updated accordingly.



PSC: OK.

Response: No Comment.

PSC: OK.

23. According to Test Pit TP-32, near Building #3, groundwater was indirectly observed (through mottling) at a depth of 2.5 feet. Based upon TP-32, the roof water recharge system for the building may not operate 'in-the-dry' as required. The remainder of the buildings' recharge systems appears to be appropriately sited with respect to the absence of observed groundwater in each of their nearby test pits.

Response: According to Test Pit Log #32 no water was found 19' down. The full TP #32 log has been included in the revised stormwater management report. . In addition the bottom of the referenced recharge system is located at elevation 294.8. Existing grade is approximately 294 in this area. The system will maintain 2' separation to seasonal high groundwater.

PSC: The test pit log is not included in the revised stormwater management report.

Response: The referenced Test Pit Log is attached. See Attachment 2.

PSC: OK.

24. Please verify that the correct Rawls Rate was utilized for the three roof recharge systems found within the Narragansett silt loam portion of the site. The recharge rate of 4.0 in/hr. should be adjusted to 2.41 in/hr.

Response: The Rawls Rate for Narragansett soils is based on 1/2 of the maximum 8.27 in/hr. recommended in the Rawls Table. This is based on the percolation tests performed for the previous project. The percolation tests near the stormwater pond (TGG- 7 and TGG- 8) were both under 5 minutes. A percolation rate of 5 minutes per inch is approximately equivalent to 12 inches per hour. However the Rawls rate has been adjusted to the recommended 2.41 in/hr.

PSC: The 2.41 in./hr. rate is appropriate. Note that a Title 5 percolation test is not an acceptable test for saturated hydraulic conductivity, i.e. is not 12 in./hr. See the Massachusetts Stormwater Handbook, Vol. 3, Ch. 1, P. 11.

Response: As noted above 2.41 in/hr. was changed for the rawls rate.

PSC: OK.

25. To ensure that the recharge systems only intercept 'clean' roof water flows, the yard drain connection east of Building #9 from CB B24A should not connect to the roofdrain recharge system, but should be directed instead to the site stormwater system. The remainder of the



building roofwater systems are segregated from the site systems and are OK.

Response: This drain has been re-directed as requested.

PSC: OK.

Response: No Comment.

PSC: No response required.

26. As required Stormwater Management Standard #10, an Illicit Discharge Statement has been provided. It should be signed and dated.

Response: The applicant has signed the illicit discharge statement.

PSC: OK.

Response: No Comment.

PSC: No response required.

27. The name and 24hr/7 day contact information of the person responsible for the site's development is required for the stormwater management permit submission. (Chapter 343-7.6.16.b.13.g)

Response: The applicant will provide this information prior to commencement of construction.

PSC: OK.

Response: No Comment.

PSC: No response required.

28. The Operation and Maintenance Plan should include a plan showing the location of the systems and facilities including catch basins, manholes/access lids, main and stormwater devices. (Chapter 343- 7.6.17.1.c)

Response: The Operation and Maintenance Plan has been revised to show more detail on the plan view.

PSC: OK.

Response: No Comment.

PSC: No response required.

29. The O&M Plan should include maintenance agreements that specify the person(s) responsible



for operation and maintenance, and the person(s) responsible for financing maintenance and emergency repairs (Chapter 343-7.6.17.1.d.2 and 3). Changes in personnel and/or ownership should be provided to the Commission. (Chapter 343-7.6.17.2.a).

Response: The Operation and Maintenance Plan has been revised to reflect the above. However the applicant is not in position to award maintenance contracts at this time. We request that this requirement be incorporated into a condition within the conservation commission approval.

PSC: A revised Operation and Maintenance Plan was not provided. Designation of specific persons responsible for operations and maintenance and financing maintenance and repair can be conditioned.

Response: The revised O&M Plan is attached. See Attachment 3.

PSC: OK.

30. Water Quality Volume calculations have been provided that indicate the WQV is provided in the Water Quality Forebay and Sediment Forebay of the Stormwater Management Pond. The Town requires that Best Management Practices (BMPs) must be designed to remove 80% of the average annual post- development total suspended solids (TSS) and 40% for total phosphorus (TP), and 30% for total nitrogen (TN). Because the design captures the Water Quality Volume, it is presumed that a BMP complies with this performance goal. OK.

Response: No comment.

31. Regular street sweeping of the MBTA Access Road should be included in the Erosion and Sedimentation Control notes found in the Stormwater report.

Response: Street Sweeping of MBTA Access Road will be incorporated into the Construction Period Stormwater Pollution Prevention Plan.

PSC: A revised the Construction Period Stormwater Pollution Prevention Plan was not provided.

Response: The applicant has agreed to provide the Conservation Commission and the Planning Board copies of the SWPPP two weeks prior to commencement of construction.

PSC: OK.

32. Catchbasins located in profile sag points, such as CB-13A (near Garage N), CB-11A (near Garage M), CB-11 (near Garage L), CB-C8A (near Garage K), CB-C7A (near Garage J), CB-14A (near Garage 14A) and CB-C3A (near Garage H) should be upgraded to double grate structures. (344-14.C)



Response: The noted catch basins have been changed to double grate structures.

PSC: OK.

Response: No Comment

PSC: No response required.

33. Cascade grates should be specified for catchbasin structures located on steeper grades, such as CB-14A near Garage O (6.7% grade), CB-C5A between Building #4 and #5 (10% grade), and CB-B3A near Building #2 (10% grade).

Response: all areas with slopes over 5.0% have been changed to cascade catch basins.

PSC: OK.

Response: No Comment.

PSC: No response required.

34. The area of alteration exceeds 1 acre, therefore an EPA NPDES Construction General Permit will be required. This would require the preparation and submission of a Stormwater Pollution Prevention Plan (SWPPP).

Response: A SWPPP plan will be completed prior to construction. The final SWPPP will be provided to the Conservation Commission.

PSC: Submission of a copy of the SWPPP to the Conservation Commission can be conditioned.

Response: As noted above a copy of the SWPPP will be provided two weeks prior to construction.

PSC: OK.

35. The Notice of Intent did not include the emergency access road construction, which occurs within the 100-foot buffer of the vegetated wetland within the calculated fee (under Category 3c).

Response: It is our opinion that the Notice of Intent did include the Emergency Access Road and the associated fees were paid properly. There is no point source discharge and no building in this area.

PSC: To be determined by the Conservation Commission.

Response: See Attachment 3 for a Memo by EcoTec, Inc.



PSC: OK.

TRAFFIC AND SITE PARKING

36. The project provides 716 parking spaces for 398 units or 1.8 spaces per unit, which is generally sufficient for a project of this type and complies with Zoning. OK

Response: No comment.

PSC: No response required.

37. Twenty-one (21) spaces are marked as handicap accessible and all are provided as outdoor surface parking. The former project separated the required handicap accessible parking spaces, calculating surface and garage parking separately, using the ratios required in 521 CMR 23.2.1. (See Note 1 on the Allen & Major Sheet C8-1). This project does not specify any accessible spaces in the garages, but if calculated using 521 CMR 23.2.1, then six (6) accessible spaces would be required in the 168 structured spaces.

Response: The previous project proposed car ports and therefore the closest accessible parking spaces could be covered. In this case the garages are not located in the closest accessible locations. In order to address this comment we have provided six handicap access garages.

PSC: OK.

Response: No Comment

PSC: No response required.

38. The architectural plans do not indicate individual building mail facilities. Please indicate whether the project will be served by a central mail facility. If not located in the Community Center/Clubhouse, the mail facility should be identified on the plan and provided with a suitable pullout or parking area.

Response: Mail will be distributed within the main hallway for each building.

PSC: OK. The Post Master's final concurrence with the mail box locations should be documented for the Board's records.

Response: The Applicant agrees to provide the Planning Board details on mail delivery when the details are worked out with the Post Master.

PSC: OK.



39. Each of the apartment buildings, and clubhouse is accessible on at least two sides. Please verify that the Fire Chief is satisfied with access along each of the interior driveways, including the turning radii into Driveway B, between Buildings #4 and #5.

Response: A preliminary meeting with the Ashland Fire Department was held on November 9th. Although all the turning radii work for the largest engine The Ashland Fire Department hired Maurice Pilette of Mechanical Designs Ltd for peer review of all fire protection features on the project. The revised plans incorporate all the required changes.

PSC: The Fire Department's final concurrence should be documented for the Board's records.

Response: The applicant has had three working sessions with the Fire Department. It is expected that the Fire Department will provide a final letter prior to the close of the public hearing.

PSC: Awaiting final Fire Department Letter.

40. To ensure adequate access by emergency personnel, parking should be prohibited from the connecting site drives that do not include dedicated parking spaces, for example, Driveway A, between Buildings #2 and #3, and Driveway B, between Buildings #4 and #5. No Parking signs should be considered on at least one side of each such drive.

Response: No parking signs will be incorporated into the final plan.

PSC: "No Parking" signs (MUTCD R7-1) can be located with minimal effort and should be added to the drawings prior to Decision.

Response: The signs have been added to the revised plan.

PSC: OK.

41. Verify that within the 8-space parking area across from the clubhouse entrance, there will be a dedicated handicap accessible parking space.

Response: The clubhouse is handicap accessible.

PSC: An accessible parking space is shown in the proximate parking area – OK.

Response: No Comment.

PSC: No response required.

42. The drawings should indicate whether the project is to be phased. If phased, the first phase should clearly indicate completion of the secondary access road, construction of the large detention basin, completion of the looped water system and construction all pavements and



utilities required to maintain full emergency access and provide utilities for the phase as a stand-alone project. Permanent dead-end lengths of more than 800 feet are prohibited by the town, so the secondary access to High Street would be required even for construction of Buildings 1 and 2, adjacent to the MBTA road.

Response: The project will not be phased. Emergency Access will be provided consistent with the requirements of the Ashland Police and Fire Departments.

PSC: OK.

Response: No Comment

PSC: No response required.

43. Given the relative density of the project, snow storage may be an issue, particularly after larger events. Dedicated snow storage locations should be provided on the drawings that preclude the use of shared parking areas.

Response: Snow storage areas are shown on the revised plan

PSC: Snow storage areas are shown – OK. The Landscaping Plan should be coordinated to incorporate salt tolerant herbaceous plantings in designated snow storage locations.

Response: The Landscaping Plans and the revised Site Plans are consistent.

PSC: OK.

44. The plans do not provide details for traffic or directional signage. If required, a Not A Thru Street sign should be provided at the Road A entrance.

Response: The suggested sign has been incorporated into the revised plan.

PSC: The “Not a Thru Street” sign is added – OK. “Stop Signs” (MUTCD R1-1) and stop lines, “Speed Limit” signs (MUTCD R2-1), and “No Parking” signs (MUTCD R7-1) should also be shown.

Response: All recommended signs have been added to the revised plan.

PSC: OK.

45. The pavement marking detail on Sheet 14 should be corrected to show 20-foot depth parking stalls.

Response: Sheet 14 has been updated accordingly.

PSC: OK.



Response: No Comment.

PSC: No response required.

UTILITIES

46. Similar to the previously-approved 500-unit project, the existing town water system is to be looped through the site from the MBTA access road and from High Street. The previously approved 12-inch water main is now to be replaced with an 8-inch service which may not be adequate for the project.

Response: The submitted site plan shows the water loop through the site to High Street.

PSC: The layout of the water distribution system is OK. A calculation of available fire flow at the highest point on the site should be provided based on a location specific fire flow test.

Response: Per the development agreement the MBTA Roadway design will bring adequate pressure and flow to the front door of the project.

PSC: OK.

47. The age, condition and materials of the existing water main in High Street should be provided on the drawings. The proposed pipe material and connection technique should be reviewed with the DPW Water and Sewer Division. The connection technique to the MBTA Access Road system should also be reviewed with DPW.

Response: No response provided.

PSC: No response provided.

Response: Details will be coordinated with the Ashland Water Department.

PSC: OK.

48. The former JPI plans included full designs for utility upgrades in the MBTA Access Road, including water, sewer force main system, telephone and electric utilities, and stormwater management upgrades, including cross culverts, sediment forebays and basin designs. Please indicate whether the current project will utilize the previously designed upgrades within the Access Road, or whether changes will be necessary to the design.

Response: No response provided.

PSC: No response provided.



Response: Allen and Major are currently designing the MBTA Access Road modifications on behalf of the Town.

PSC: OK.

49. The project proposes to connect to the existing town sewer system which is to be extended up the MBTA Access Road. The applicant is required to submit the design to the DPW that conforms to §326-11. The project will generate in excess of 43,780 GPD from the dwellings, plus flows from the clubhouse building. The applicant should document the status of the anticipated connection to the existing sewer system in Union Street (§326-10.B, §326-10.F.)

Response: No response provided.

PSC: No response provided.

Response: Allen and Major are currently designing the MBTA Access Road modifications on behalf of the Town.

PSC: OK.

50. Determine whether the DPW Water and Sewer Division will require a master meter with backflow devices. The location of the meter pit should be indicated on the drawings and coordinated to minimize tree clearance.

Response: No response provided.

PSC: No response provided.

Response: The location has been added to the revised plan. Details will be coordinated with Ashland DPW.

PSC: We could not locate the meter pits on the drawing.

51. The applicant should confer with the Fire Department and provide documentation from the Department indicating their concurrence that the building access, water pressure and volume, alarms, and other fire protection related matters are deemed safe and acceptable.

Response: No response provided.

PSC: No response provided.

Response: As noted above the Applicant has been and will continue to work with the Fire Department.

PSC: Awaiting final Fire Department Letter.



52. Fire flow calculations should be provided for the project that demonstrate compliance with Insurance Services Office (ISO) fire flow guidelines while maintaining a residual pressure of 20 pounds per square inch (psi). Static pressure should be 60 psi desirable with a minimum 35 psi. Flow tests were performed on two hydrants in West Union Street (Hyd #244 and #245) and two hydrants in High Street (Hyd #315 at 107 High Street and Hyd #320 at 29 High Street) for the former project on August 24, 2007. Fire officials should verify that the former tests are sufficient for the current project. It is noted that the static pressure was below optimal at the 29 High Street hydrant.

Response: No response provided.

PSC: No response provided.

Response: Allen and Major are currently designing the MBTA Access Road modifications on behalf of the Town. The design will include a water distribution system with adequate flow and pressure for this development and future developments.

PSC: OK.

53. A trench detail should be provided for water, gravity sewer (Chapter 326-14,15), forcemain and stormdrain trenches that specify pipe materials, bedding materials and depths, compaction methods and required depth of cover.

Response: A trench detail has been added to the plan.

PSC: OK.

Response: No Comment

PSC: No response required.

54. A water/sewer crossing detail should be provided.

Response: A crossing detail has been added to the plan.

PSC: OK.

Response: No Comment

PSC: No response required.

55. A standard direct inlet sewer manhole should be provided in the details. There do not appear to be any drop manhole structures in the sewer design, which are discouraged by the town, so the detail on Sheet 17 should be eliminated. (The 8-inch invert callout into SMH B1 on Sheet 10 should be corrected)



Response: The sewer detail has been revised accordingly.

PSC: OK.

Response: No Comment

PSC: No response required.

56. A note should indicate on the details that all structures will accommodate an H-20 loading.

Response: All structures are intended to accommodate H-20 Loading.

PSC: The requested note has not been added to the drawings.

Response: A note has been added within the construction notes.

PSC: OK.

57. A pavement restoration detail should be provided for the utility and roadway connections to High Street and MBTA Access Road. (Chapter 330-9), (Chapter 334-58).

Response: A Trench Patch detail has been incorporated into the plan.

PSC: The trench patch detail has not been added to the drawings.

Response: See "pavement match sawcut detail" on sheet 14.

PSC: OK.

LANDSCAPING, LIGHTING AND SECURITY

58. Signage has not been indicated in the submittal. For the initial submission only, a waiver has been requested from the required "location, dimensions, height and characteristics of proposed signs" (Section 9.4.4.7). It is anticipated that proposed sign details will be forthcoming in subsequent submissions.

Response: Signage will not be available until the building permit stage of the project.

PSC: A signage submission can be conditioned.

Response: No Comment.

PSC: No response required.

59. Road signs indicating "Private Way" or other appropriate wording should be provided to temper unnecessary intrusion of off-site traffic. (Section 8.4.14.12).



Response: Site signage will be incorporated into the landscaping plan.

PSC: To be evaluated upon submission of the Landscape Plan.

Response: Road signs have been added to the revised site plan.

PSC: OK.

60. Site lighting has not been indicated in the drawings. A waiver has been requested from Section 9.4.4.8 with a note that the landscape architect is currently developing a compliant lighting plan. Section 8.4.14.11.d lighting requirements for a Transit Village Community should be coordinated in the design.

Response: Site signage will be incorporated into the landscaping plan.

PSC: Site lighting to be evaluated upon submission of the Landscape Plan. Final design of the lighting system can be addressed by the electrical engineer of record during final building design.

Response: Site lighting as presented at the Planning Board hearing is submitted 20 ft. poles with dark sky compliant LED lighting is planned for the development.

PSC: OK.

61. The 'Recycle Center' should be provided with attractive screening which should be detailed on the drawings.

Response: The recycle center is a fully enclosed building.

PSC: OK.

Response: No Comment

PSC: No response required.

62. There are numerous interior intersections, each of which should adhere to the sightline requirements of Section 5.6. The landscape design should address sightlines by maintaining free of obstruction, the vertical heights of between 2-1/2 feet and 8 feet within the 20-foot intersection sightline triangles.

Response: The final landscaping plan will incorporate this requirement.

PSC: Shrubs are located at several intersections. Absent specific species designations, sight distance conflicts cannot be evaluated.



63. The site slopes are graded at a 2:1 ratio (2 feet horizontal per 1 foot vertical). A special permit is required from 5.7.3.1. for slopes steeper than 3:1.

Response: A special permit was requested.

PSC: OK.

Response: No Comment

PSC: No response required.

64. All slopes steeper than 10:1 (10%) are required to be constructed with compacted 4-inches of topsoil stabilized with vegetation, and/or retained with a masonry, reinforced concrete, stone or other suitable wall. (5.7.3.2). For slopes greater than 15%, the applicant has requested a waiver from (former) Section 282-27.E which required a minimum 8-inch depth of topsoil. The requested 6-inch depth appears suitable if compacted and vegetated.

Response: A waiver was requested for the use 4" of topsoil.

PSC: Waiver of strict compliance is the Board's decision.

Response: No further comment

65. A Site Alteration Special Permit will be required from the Planning Board for clearing in excess of 5,000 square feet and grading more than 100 cu-yds of earth. Earthwork calculations should be provided and the area of clearing should be calculated. (Section 5.8.2). Additional submission requirements are detailed in (Section 5.8.4).

Response: It is our opinion that the project qualifies for an exemption under section 5.8.3.1 "clearing of land zoned residential when such a parcel is in a submission for development to the Planning Board."

PSC: OK.

Response: No Comment

PSC: No response required.

66. A watering and maintenance schedule for the site landscaping should be provided in the specifications on the landscape plan when submitted. A 2-year guarantee should be provided for all plants. (344-29.B.)

Response: The construction site is not a subdivision road. The landscaping will be maintained by the land owners. A maintenance schedule and 2 year guarantee will be incorporated into the final landscaping plan.



PSC: To be evaluated upon submission of the Landscape Plan.

Response: As noted above the applicant has requested a waiver from the entire subdivision regulations. The applicant takes great pride in landscaping and will require similar guarantees from all of the suppliers and contractors. The applicant will own and operate this property and will be responsible for maintenance of the landscaping.

PSC: OK, provided that the two year guarantee is added to the Landscaping Plan.

67. All dead trees or shrubs should be replaced within one growing season as a condition of approval.

Response: No comment

68. The Landscape Design plan should identify any perimeter specimen plantings to be preserved if possible.

Response: All trees outside the erosion control line will be preserved to the maximum extent practical.

PSC: OK.

Response: No comment.

PSC: No response required.

69. A certification should be provided that the design is compliant with the provisions of the Massachusetts Architectural Access Board and Federal ADA requirements.

Response: The plan has been modified to incorporate a statement of compliance.

PSC: The statement of compliance has not been added to the drawings.

Response: A note has been added to sheet 2

PSC: OK.

70. The location of each building's Knox Box, or other type rapid entry key boxes should be provided at an accessible location near each building main entrance as coordinated with the Fire Chief, and should be clearly labeled on the drawings. §150-1

Response: All fire protection features will be coordinated with the Ashland Fire Department and their peer review consultant.

SC: OK. The Fire Department's final concurrence should be documented for the Board's



record

Response: As noted above the applicant is pursuing a note from the Ashland Fire Department.

PSC: Awaiting final Fire Department Letter.

LANDSCAPING (NEW)

PSC is in receipt of the Landscaping Plans entitled “Street Trees,” Sheets L-4.0 and L-4.1. We offer the following comments for consideration.

71. The Street Trees plans show trees and shrubs adjacent to onsite driveways similar to the layout of street trees in a subdivision. Broad categories of plants such as “street trees” and “evergreen trees” are shown. In our opinion this is sufficient to indicate the design intent; however, if the Planning Board requires specific species selection it should so advise the Applicant.
72. To limit the spread of disease, we recommend extensive monoplantings be avoided.
73. Information concerning details of building plantings is not provided.
74. The extent of turf is not shown.
75. Large slopes are required for the project. A specific method for restoration of these areas should be developed. We recommend that all slopes along the site perimeter be seeded with a native plant mix including wildflowers and trees. This should be supplemented with hand planting of native tree seedlings. A mulch with tackifier or other slope stabilization method should be specified to limit erosion while the seeding becomes established.