50 Washington Street, Suite 2000
Westborough, MA 01581
508.480.9900

December 31, 2025

Town Hall
Planning Department
101 Main Street
Ashland, MA 01721

Attn: Jasmin Farinacci, Director of Planning and Community Development

Re: 2nd Peer Review – Planning Board Site Plan Review & Special Permit, Conservation Commission Notice of Intent for Team Hoyt Community YMCA Site Plan - 30 Memorial Drive (Assessor's Map 13, Lot 178)

Dear Members of the Board,

Bohler Engineering MA, LLC is in receipt of a Peer Review comment letter from GCG Associates, Inc, dated November 17, 2025. On behalf of the applicant, MetroWest Young Men's Christian Association, Inc. (MetroWest YMCA), Bohler offers the following responses. For clarity, the latest comments are in *italics***,** while our responses are directly below in **bold** type.

GENERAL COMMENTS

Comment *Response stated that EPA NPDES notice of intent will be filed.*

Response: **No response necessary.**

Comment *Statement (doesn't require a response).*

Response: **No response necessary.**

Comment *GCG recommends adding restriction notes per Book 62400, Page 382, Item A. i. to restrict "extraction, consumption, or utilization of groundwater"; (irrigation well type of device should not be allowed.)*

Response: **The requested language has been added to the plans on plan sheets C-303, C-403, and L-103.**

SITE PLAN SET

C-102 – General Notes & Legend

Comment 2 *Plan sheet C-802, note #29 added, resolved.*

Response: **No response necessary.**

C-201 – Existing Conditions/Demolition Plan

Comment 4. *The trail sign and location of the pavement trail have been added to the plan. There is an existing concrete wheelchair ramp with warning panel at the edge of Memorial Drive.*

Response **The existing ramp has been added to the plan.**

BOHLER

C-301 – Overall Site Layout Plan

Comment 6. *Resolved*

Response: **No response necessary.**

Comment 7. *The building height calculation by the Architect was not included in this revision, which should be reviewed by the Building Department for relief request recommendations.*

Response: **A mean building height calculation has been provided by the Architects and is included as the last page of the plan set.**

Comment 8. *Design table updated with both setbacks, resolved.*

Response: **No response necessary.**

Comment 9. *Relief requested, Board approval required.*

Response: **No response necessary.**

Comment 10. *Total 289 parking spaces were provided, including 8 accessible spaces, resolved*

Response: **No response necessary.**

Comment 11. *Response stated that "parking quantities are based on actual programming in the building and are modeled using YMCA data from the Framingham location, as well as YMCAs throughout the country." Parking demand should be reviewed under the Building Inspector's jurisdiction as 'Section 5.1.2. - Other Use'.*

Response: **Parking information has been provided in a separate response to traffic comments made by Vanasse & Associates, Inc. and has been discussed with the Planning Board.**

Comment 12. *A ZBA variance was granted and recorded on 10-2-2025, resolved.*

Response: **No response necessary.**

Comment 13. The latest parking counts of 289 spaces proposed, which requires 7 accessible spaces by Federal ADA requirements and 6 accessible spaces required per Ashland Section 164-2. A total of 8 accessible spaces proposed, resolved.

Response: **No response necessary.**

C-302 – Site Plan A

Comment 14. *A ZBA variance was granted and recorded on 10-2-2025, resolved.*

Response: **No response necessary.**

Comment 15. *Bollards removed, resolved*

Response: **No response necessary.**

Comment 16. *Additional 26 parking striping provided, snow storage area relocated, resolved.*

Response: **No response necessary.**

Comment 17. *A striped 5-foot-wide no parking/walking area has 5 30 Memorial Drive, Ashland YMCA SPSP Peer Review GCG file # 2576 been added through the middle parking area for walk through path; The safety of vehicular and pedestrian movement within the site is part of the Site Plan Review, Chapter 282 - 9.4.8 – 'Traffic' requirements. By comparison, the southern YMCA parking lot has a safer and more desirable layout with landscape island dividing the middle parking rows and a pick-up/drop-off area. Conversely, the ELC parking lot is expected to have intense traffic trips with designated drop-off and pick-up hours, and parent(s) with young children and/or toddlers pedestrian traffic. Additional safety pedestrian improvement is recommended.*

Response: **Although no specific recommendations were provided, the comment implies that a landscape divider island dividing the middle parking row would provide a safer parking lot. However, a landscape divider island would create a physical barrier to parents with strollers or carrying young children, and would impede direct and quick access through the parking lot to the building.**

As described in the response to a similar comment by Vanasse and Associates, Inc., the maximum number of drop-offs or pick-ups expected to occur concurrently is ten (10), and parents are expected to park in a stall and walk their child into the building. The expected turnaround time is approximately 5 minutes. Staff will occupy 15 spaces and will be encouraged to not use the spaces closest to the front entrance of the building.

Comment 18. *Resolved.*

Response: **No response necessary.**

Comment 19. *A delivery area has been proposed in front of the YMCA building and shared with the pickup/dropoff area, which is deemed acceptable. However, the proposed ELC (temporarily) loading/delivery area in front of the maintenance shed or in front of the ELC door is questionable. It seems that a loading area could be easily created in front of the maintenance shed by moving the building northward closer to the retaining wall. Board approval required.*

Response: **As noted in our previous response, deliveries to the ELC will be during non-peak hours and a truck may occupy either the parking spaces or drive aisle in front of the ELC delivery door for a short time.**

Comment 20. *The sign is proposed at a location outside the front, side or rear yard; there are no details or dimensions of the sign specified. A Sign Permit is required through the Building Inspector.*

Response: **Comment acknowledged.**

Comment 21. *Response letter stated that 'Shed plans will be provided on future building permit plans.'*

Response: **Comment acknowledged.**

Comment 22. *Do Not Enter removed, resolved.*

Response: **No response necessary.**

Comment 23. *The proposed site walkway has been connected to the multipurpose path/trail within the development property. However, GCG recommends extending the proposed sidewalk along the curbing and onto the Memorial drive right-of-way, with a wheelchair ramp at the driveway corner. Which allows connection to a sidewalk along the site frontage. (See additional comment under item 29).*

Response: **Pedestrian access was discussed with the board and a sidewalk connection along Memorial Drive has been added.**

Comment 24. *The existing utility pole, guy wire, traffic signal not part of this development. The proposed center walkway/sidewalk connection to a single curb opening does not meet the ADA accessible route to the public street and sidewalk requirements. (Accessible Routes from Site Arrival Points, §206.2.1). The proposed contours shown on plan sheet C-402 along Memorial Drive have been graded to form a sidewalk along the roadway. GCG recommends installing a sidewalk along the Memorial Drive roadway, within the right-of-way, and connects to the existing trail path. The Board has the authority to require a sideway along the development frontage under Section 282 - 9.4.8. Furthermore, constructing a sidewalk at the Dunkin' Donuts property is under Ashland DPW's jurisdiction and beyond Section 9.4 - Site Plan Review's scope. The crosswalk in front of the center sidewalk could be eliminated with the new sidewalk along the site frontage. Multiple uncontrolled midblock crosswalks in close proximity in a moderate speed roadway could possibly be ignored by the drivers. MUTCD 11th Edition (December 2023), section 3C.02 Application of Crosswalk Markings, Guidance – 04.D, recommends engineering study should be performed before a marked crosswalk is stalled at uncontrolled approaches.*

Response: **Pedestrian access was discussed with the board and a sidewalk connection along Memorial Drive has been added. The mid-block pedestrian crossing has been eliminated.**

Comment 25. 6' gravel trail width specified, resolved.

Response: **No response necessary.**

C-303 – Site Plan B

Comment 26. *GCG recommends adding restriction notes per Book 62400, Page 382, Item A. i. to restrict "extraction, consumption, or utilization of groundwater".*

Response: **The requested language has been added to the plans on plan sheets C-303, C-403, and L-103.**

Comment 27. *6' gravel trail width specified, resolved.*

Response: **No response necessary.**

C-401 – Overall Grading and Drainage Plan (See C-402 and C-403 Comments Below)

C-402 – Grading and Drainage Plan A

Comment 28. *The eastern driveway egress vehicle safety sight distance should be improved. The steep slope between the proposed parking lot southeasterly corner (contour 251+/-) and the eastern driveway's southwesterly corner (contour 244+/-), created a poor sight line condition. Furthermore, the proposed landscape feature will exaggerate the situation.*

Response: **This has been addressed in a separate response to traffic comments. Sight lines are shown on plan sheet C-301.**

Comment 29. *Any wall exceeding 4 feet in height would require professional structural engineer stamp and certification as required by the Building Code.*

Response: **Comment acknowledged.**

Comment 30. *The response stated that the ADA guidelines require only one accessible route from the street to the site, and the center sidewalk route provides the ADA accessible path. GCG disagrees with the concept that the center walkway serves the ADA accessible route requirement, (see comment 23 above), and 7 30 Memorial Drive, Ashland YMCA SPSP Peer Review GCG file # 2576 recommends installing a sidewalk along Memorial Drive roadway. Since the proposed contours along Memorial Drive have already shaped with the sidewalk form.*

Response: **Pedestrian access was discussed with the Board and a sidewalk connection along Memorial Drive has been added. The mid-block pedestrian crossing has been eliminated.**

Comment 31. *Grading revised, resolved*

Response: **No response necessary.**

Comment 32. *The two accessible spaces in front of the Early Learning Center's southwest building corner did not meet the maximum 2% slope requirement. The slope between spot grades 252.65 and 251.94 has a 2.3% slope and the slope between spot grades 252.15 and 252.42 has a 2.7% slope. Although, the plan labeled "proposed accessible area shall be less than 2% in all directions (Typ.)".*

Response: **The recommended grading changes have been made so that slopes in accessible areas are less than 2% in all directions.**

Comment 33. *GCG recommends installing sidewalk along Memorial Drive to comply with the ADA/AAB accessible route to public street and sidewalk requirement. Sidewalk through driveways (MassDOT Construction Standards Drawing E107.7.0) or similar grading (sidewalk cross slope not to exceed 2% maximum) should be included in the site design.*

Response: **Pedestrian access was discussed with the Board and a sidewalk connection along Memorial Drive has been added. The mid-block pedestrian crossing has been eliminated.**

Comment 34. *Grading revised, resolved.*

Response: **No response necessary.**

Comment 35. *Additional contours have been added along the north side if the retaining wall. The applicant should verify the northerly corner of wall's lower grade, which should 235.28 instead of 236.28. The proposed contour 246 at the southerly end of proposed retaining wall would require grading beyond the limit of work boundary. GCG recommends moving the limit of work boundary westward to match the grading. The work limit is still outside the 25' no disturb buffer.*

Response: **The recommended grading changes have been made.**

Comment 36. *Soil test pit locations have been shown on plan sheets C-401 to C-403, resolved.*

Response: **No response necessary.**

Comment 37. *Stormwater management system has been revised to Stormtech chambers units due to undesirable soil test results (see Drainage Report comments below).*

Response: **No response necessary.**

Comment 38. *Stormwater Management system revised, see Drainage Report comments below..*

Response: **No response necessary.**

Comment 39. *Additional soil test pits performed, resolved.*

Response: **No response necessary.**

Comment 40. *Roof drain #4's 8" FES (flared end section) invert should be updated to 235.01, the proposed 8" roof drain FES is approximately 5 feet from the edge of proposed future soccer field, the end of rip-rap stone would be at the edge of soccer field, which creates a hazardous condition. In addition, the high roof runoff velocity (due to the roof height hydraulic head) would damage the soccer field surface. GCG recommends pulling the roof drain outlet further away from the soccer field and replacing the FES with a level spreader.*

Response: **The FES invert has been updated to 235.01 and moved further away from the soccer field. A preformed scour hole has been added to the outfall to provide protection to the soccer field surface. As further noted in the drainage comments later in this letter, the drainage area contributing to the pipe has been significantly decreased.**

Comment 41. *The applicant should verify the minimum pipe cover over the 8" drainpipe from D50 to D40, GCG calculated approximately 0.8' cover within the gravel path. The ADS pipe manufacturer recommends a minimum of 12" cover over the pipe in non-paved finish.*

Response: **The 8" drainpipe from D50 to D40 and the grading above the pipe have been revised to provide a minimum of 12" cover over the pipe in non-paved finish.**

Comment 40A. *The fire truck driveway and turnaround area have been changed to gravel finish. This driveway is not designated as off-street parking; paved surface is not mandatory (Section 5.1.1). However, any driveway in the RTD district is considered impervious area (Section 10.0 – Definitions - Impervious surface, rail transit district), the proposed gravel surface would be classified as impervious area in the stormwater management. This driveway also serves as service truck access for the lower YMCA floor recreation pool. GCG recommends modifying the gravel surface with structural grid system (Gravelpave2 or Hexpave or similar system) to provide additional structural support over the on-site silty subbase or pave the access drive with hot mix asphalt.*

Response: **The gravel fire access drive has been revised to be paved and grass pavers have been added to the area of the fire truck turnaround.**

Comment 42. *Pipe size and slope replaced by 15" diameter at 1% slope, resolved.*

Response: **No response necessary.**

Comment 43. *Revised to 15" pipe, resolved, see storm sewer table comment below*

Response: **No response necessary.**

Comment 44. *Revised 12" pipe, resolved.*

Response: **No response necessary.**

Comment 45. *Revised to 15" pipe at 1% slope, resolved.*

Response: **No response necessary.**

Comment 46. *Structure eliminated, resolved*

Response: **No response necessary.**

Comment 47. *System dimensions shown on plan sheets, C-904, 905, and 906, resolved.*

Response: **No response necessary.**

Comment 48. *Cleanout/inspection ports added; Infiltration Basin 1's isolator plus row (IR) layout did not provide the treatments as intended. The IR should be laid out to collect runoffs from the southern (DMH B-60) inlet and the northern inlet (DMH B-40) with manifolds to direct the WQVs (water quality volume) to the IR for treatment, the excessive runoff should be directed to the rest of the chambers for storage and exfiltration. The IR as shown collects the southern inflow through the (IR) chambers and discharges to the outlet control structure (OCS B-30) at the northern end directly and bypassing the settlement treatments and should be addressed. Infiltration Basin #3 has a similar issue; the IR collected the runoff through the (IR) chambers and flow through the sidewalls to the main chambers system for exfiltration. Stormtech recommends utilizing manifold and inlet control structure with baffle divide to direct WQV to the IR and discharge the remaining runoffs through the top of baffle weir to the chambers system for exfiltration, outlet control system should be connected through the chambers system or manifold. Which allows the WQV (first flush) to store within the IR for settlement. See additional comments under the Drainage Report review below.*

Response: **Basin 1's isolator row has been relocated to collect inflows from DMHs B-40 and B-60.**

Comment 47a. *DMH A-21's 24" outlet pipe invert 237.17 is below the chamber invert at 237.75, pipe should be connected to the chamber.*

Response: **The inlet pipe invert has been raised to 237.92. This elevation is consistent with the Stormtech endcap elevation detail.**

Comment 47b. *Infiltration Basin 3 to DMH A-20, 24" pipe invert at 237.17 is below the chamber invert.*

Response: **The outlet pipe invert has been raised to 237.92. This elevation is consistent with the Stormtech endcap elevation detail.**

C-403 – Grading and Drainage Plan B

Comment 49. *GCG recommends modifying the contours along the rip-rap spillway to form a channel to assure runoff flow within the armored section. Basin Berm and Impervious Core details drawing has been added to plan sheet C-907. The detail has specified an alternate option with installing 40-mil HDPE impervious liner/barrier to 2 feet below existing grade; However, the drawing is showing the liner be installed 5 feet below the existing grade, which should be clarified. Furthermore, the highest fill is approximately 13.3 feet over the existing contour 220, as shown, the liner would be 18 plus feet below the top of berm. Would this alternate be feasible?*

Response: **The applicant will work with the project geotechnical engineer on a recommended depth of liner.**

Comment 50. *GCG did not found the restriction note on landscape plan L-101 as stated in the response letter, restricting "extraction, consumption, or utilization of groundwater" around the Environment Restriction and Easement Area A-2 should be specified on the plan.*

Response: **The requested language has been added to the plans on plan sheets C-303, C-403, and L-103.**

C-501 – Utility Plan

Comment 51. *Resolved.*

Response: **No response necessary.**

Comment 52. *Resolved.*

Response: **No response necessary.**

Comment 53. *No natural gas service connection to ELC building proposed, resolved*

Response: **No response necessary.**

Comment 54. *pressure test was performed on June 5, 2025, with passing result, resolved.*

Response: **No response necessary.**

Comment 55. *Response stated that sewer flows will be provided to the DPW to review.*

Response: **No response necessary.**

C-801 – Overall Erosion and Sediment Control Plan

Comment 56. *The proposed inlet protection to the downstream catch basin to the west on Memorial Drive label arrow should be adjusted.*

Response: **Label arrow has been adjusted to point to the proposed inlet protection.**

C-802 – Erosion and Sediment Control Notes and Details

Comment 57. *Resolved.*

Response: **No response necessary.**

C-901 – Construction Details

Comment 58. *Light duty (1.5" top over 1.5" binder) pavement detail has been proposed throughout the site. Memorial Drive and multi-use path pavement section details as specified have been provided, resolved.*

Response: **No response necessary.**

C-902 – Construction Details

Comment 59. *Plan C-402 has called out "Proposed segmental wall, general contractor (GC) to provide stamped engineering plans. Resolved.*

Response: **No response necessary.**

C-903 – Construction Details

Comment 60. *Basin 1 outlet control structure revised, Base 2 deleted, resolved.*

Response: **No response necessary.**

Comment 61. *Revised and resolved.*

Response: **No response necessary.**

C-904 – Construction Details

Comment 62. *minimum thickness – 3/8" gravel surface over 6" of 1-1/2" gravel course proposed, resolved.*

Response: **No response necessary.**

Comment 61a. *The applicant should revise Outlet Control Structure A-30 (Basin 2) rim elevation to 252.52.*

Response: **Outlet Control Structure A-30 detail has been revised as requested.**

C-904 – Construction Details

Comment 63. *Replaced with SC-800 chambers with infiltration field dimensions, resolved.*

Response: **No response necessary.**

C-905 – Construction Details

Comment 64. *Replaced with SC-800 chambers with infiltration field dimensions, resolved.*

Response: **No response necessary.**

906 – Construction Details

Comment 65. *Retain-It system replaced with SC-800 Chambers shown on C-905; Basin #3 with MC-3500 chambers shown with infiltration field dimensions. Resolved.*

Response: **No response necessary.**

Comment 66. *Resolved.*

Response: **No response necessary.**

C-907 – Construction Details

Comment 67. *Response stated that sewer pumps details will be provided to the DPW when available.*

Response: **No action needed at this time.**

L-101 – Overall Landscape Plan (See L-102 and L-103 Comments Below)

L-102 & L-103 – Landscape Plans A and B

Comment 68. *The Board may decide on the need for additional new trees.*

Response: **Comment acknowledged.**

Comment 69. *The southwesterly corner of the proposed eastern driveway shoulder area is proposed with (3H:1V) steep grade, GCG has requested reducing the steep slope to improve the*

site grading review. The landscape plan should be incorporated with the grading plan to improve the egress vehicle safety sight distance.

Response: **This comment has been addressed in a separate response to traffic comments by Vanasse and Associates, Inc.**

Comment 70. *Planning Board waiver requested.*

Response: **Comment acknowledged**

L-201 – Overall Lighting Plan

Comment 73. *Resolved.*

Response: **No response necessary.**

Comment 74. *D-BEGA fixture mounting height has been clarified to 20 feet, resolved.*

Response: **No response necessary.**

Comment 75. *Monday to Friday: 5AM to 10PM and Saturday and Sunday: 7 AM to 7 PM specified on plan, resolved.*

Response: **No response necessary.**

L-202 – Lighting Plan A (see L-201 Comments Above)

L-203 – Lighting Plan B

Comment 76. *Confirmed, no outdoor playing fields lighting proposed, resolved.*

.

Response: **No response necessary.**

L-204 – Lighting Details

Comment 77. *20' mounting height proposed, see item 73 above, resolved.*

Response: **No response necessary.**

EX-101 – Fire Truck Turning Plan

Comment 78. *76-foot diameter truck turning area shown as requested by the fire department, Fire Department approval required. Due to the existing silty subbase material on-site, GCG commends improving the proposed gravel drive with HDPE grid or pavement for structural support.*

Response: **The gravel fire access drive has been revised to be paved and grass pavers have been added to the area of the fire truck turnaround.**

V-101 – Existing Conditions

Comment 79. *Resolved.*

.

Response: **No response necessary.**

Architectural Plan – 9 Sheets

Comment 80. *The applicant defers to the Planning Board on future permitting, if needed, for the future building expansion, resolved.*

.

Response: **No response necessary.**

DRAINAGE REPORT

Comment 1. *The applicant has revised the pre-development hydrology calculations based on (Hydrologic Soil Group) HSG 'B'. GCG is aware that Memorial Drive's shoulder area consists of ledge close to the surface as observed during the roadway reconstruction. The project soil test pits indicated refusal at the southern portion of the site between 8 to 10 feet below surface with silty sand and gravel material between topsoil and refusal. Which matches the site topography as it raised approximately 9 feet higher than the roadway. Based on the Memorial Drive utility installation experience, GCG concurs that the site soil is not HSG 'A', sandy soil as expected. Therefore, GCG agrees with the applicants revised pre-development soil condition to HSG 'B'. However, the applicant is unable to control the runoff volume to below the pre-development conditions during the four analysis storms and requests a relief. Based on the HydroCAD report, the increased runoff volume is 0.05 acre feet (af), 0.348 af., 0.514 af., and 0.742 af., for the 2-year, 10-year, 25-year, and 100-year storm events, respectively. The proposed drainage has controlled the peak runoff rates for the study events with but unable to control the runoff volume increases, (Ashland Stormwater Management Chapter 247-1-4), waiver requested.*

Response: **The infiltration basins have been increased in size to provide a reduction in stormwater runoff volumes.**

Comment 1a. *The Post-Development Watershed Map's SE parking lot subsurface chambers system (Basin #2)'s B3 label should be B2 to match the HydroCAD report. The East Driveway Basin #3's label B4 should be B3 to match the HydroCAD report, and the Basin #4 infiltration basin's label B5 should be B4 to match the HydroCAD report.*

Response: **The Post-Development Watershed map has been revised so that all basin labels match the HydroCAD report.**

Comment 2. *Resolved.*

Response: **No response necessary.**

Comment 3. *Sub-catchment P1.7's water surface should match Pond B4, Basin #4infiltration basin surface area at elevation 232.26. (100-year storm event peak, 0.145+/- ac.)*

Response: **The Post-Development Watershed map has been revised to show the extent of Pond B4 during the 100-year storm event peak (0.15 ac.).**

Comment 4. *Pond B-1 become Pond B-2 (SE Parking Lot subsurface infiltration chambers system) with 390 SC-800 chambers units, the eastern section of the proposed chambers system (bottom of crushed stone at elevation 244.5) is being proposed below test pit 102A's refusal at 244.75. Based on the Memorial Drive reconstruction in 2017 experience, the site's frontage along Memorial Drive was mostly solid ledge. GCG recommends requiring additional test pits to be performed below the southerly edge of proposed underground infiltration basin 2, prior to start of construction as part of the approval conditions.*

Response: **Comment acknowledged, but please note that the borings indicate that refusal was on probable boulders, not ledge. If additional borings are required, the Applicant requests that they be made as part of construction prior to installation of the infiltration basin.**

Comment 5. *GCG does not agree with the underground infiltration Basin 1's isolator row (IR) layout. The IR system provides stormwater runoff inflow pre-treatments. However, the IR as laid out, treated the CB-(B-71) and the ELC building roof drain only, but excluding inflows from CBs (B-51 and B-52). The IR chambers collect runoff from DMH (B-60) with an (outlet control structure) OCS at the northern end of the IR system, which allows the IR storage volume discharge directly through the OCS's orifices and defeated the function of the IR. The IR system should be designed to collect inflows from DMHs B-40 and B-60, with internal baffle at both manholes to direct the first flush WQV to the IR for settlement and divert the remaining runoff through manifolds to the infiltration chambers for exfiltration. The OCS should be installed at the end of chambers system as recommended by the manufacturer ADS.*

Response: **Basin 1's isolator row has been relocated to collect inflows from DMHs B-40 and B-60.**

Comment 6. *The isolator row's upstream manhole should be equipped a high low/concept such that stormwater flow rates or volumes that exceed the capacity of the isolator row bypass through a manifold to the other chambers. This is achieved with either a high-flow weir or an elevated manifold. This creates a differential between the Isolator Row PLUS and the manifold, thus allowing for settlement time in the Isolator Row PLUS. (Per Stormtech Isolator Row Plus summary of testing).*

Response: **An elevated 12" HDPE manifold has been added to Basin 1 that will discharge the first flush to the isolator row, but prohibit flows from directly entering the remainder of the basin until the isolator row fills with water.**

Comment 7. *Basin removed from design, resolved.*

Response: **No response necessary.**

Comment 8. *Pond B5 replaced by infiltration basin #4, resolved.*

Response: **No response necessary.**

Comment 9. *The applicant has revised the pre-development condition's HGS from 'A' soil to 'B' soil which substantially increases the pre-development peak flow rate and volume. Based on the soil logs, there are at least 8.5 to 10 feet separation to refusal (boulder or bedrock), and there was no encountering of any seasonal high groundwater. The applicant should clarify the reasons for infeasible controlling the post-development runoff volumes.*

Response: **The infiltration basins have been increased in size to provide a reduction in stormwater runoff volumes.**

Comment 10. *Additional test pits were performed and found high silt content sand at two test pits (TP-104(IT), 49.9% and TP-105, 63.5%). The remaining five sieves analysis found silt contents at 12.7% to 20.8%, all soil reports indicated low clay (1.4% to 3.2%). Refusal was found at 8.5 feet and below, with no groundwater found in the vicinity of the site. An in-situ falling head infiltration test was performed on-site, but the report indicated the test results may be misrepresented due to possible failing seal between the standing pipe and the ground and recommended the more conservative textual correlations and empirical estimates should be used. However, all exfiltration rates utilized on the calculations were higher than the minimum infiltration rate of 0.17 inches per hour as required under MSH Table RR (Vol. 1, Ch.1, Pg.8.). GCG concurs that the on-site exfiltration rates are slow but are still within the MSH limitation*

Response: **Comment acknowledged.**

Comment 11. *The drainage layout and invert elevations have been revised substantially, see new comments below:*

Response: **Comment acknowledged.**

Comment 11a. *Roof Drains 1 (0.23ac), 2 (021ac), & 3 (0.26ac), have a combined roof area of 0.7 ac. Which is approximately 30,492+/- s.f. and greater than the entire YMCA building roof area of 27,000+/- s.f.*

Response: **The combined roof drain areas account for the future building expansion and therefore remain the same.**

Comment 11b. *Roof drain 4 is not included in the storm sewer table, which is supposed to divert 4,000+/-s.f. roof runoff toward the infiltration basin 4. (The applicant should clarify how the roof drain 4's 4,000+/- s.f. roof surface area collected with the roof layout shown on A1.4 Roof Plan. Which would require regarding the roof area with a specific roof drain collection system.)*

Response: **The architect has confirmed that the main roof will not drain to roof drain #4. This pipe will collect HVAC condensate and possibly the runoff from small canopies. The HydroCAD and pipe sizing calculations have been revised to account for a 200 square foot drainage area.**

Comment 11.c. *Line 1 – A40-BSN2 Storm Sewer table shown 18" at 1%, plan shown 18" at 0%. (increase pipe size to 24", see Line 2 comment).*

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.d. *Line 2 – A50 -A40, table shown 24" at 1%, plan shown 18" at 1%. If this is 24" pipe, Line 1 should be increased to 24".*

Response: **The storm sewers calculations have been revised to match the information shown on the plans. Please note that there will be discrepancies in pipe slopes between the plans and the storm sewers program due to rounding of inverts and because the program does not allow a zero slope as noted in some responses below.**

Comment 11.e. *Line 8 – A41 – A60, table shown 15" at 0.51%, plan shown 12" at 0.5%. This pipe should require a minimum of 15" diameter. There should be a 0.1 drop within the DMH (A-41). The plan shows a 15" in and 12" out at the at same invert 247.97.*

Response: **The upstream pipe size from A-41 has been revised to 15" and a 0.1 ft drop has been added within the manhole.**

Comment 11.f. *Line 9 – A42 – A41, table shown 50' length 15" at 0.78%, the plan shows 79' length at 0.5%.*

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11.g. *Line 10 – Roof 2 - A41, table shown 8" pipe, plan shows 12".*

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11.h. Line 19 – A31 – BSN2, table shown 18" slope at 1%, plan shows slope at 0%.

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.i. Line 21 – A10 – HDWL, rim elevation should be 244.92, table shown surcharge.

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11jl. Line 22 – A30 – A10, table shown upper invert 243.88, down stream invert 242.76; plan shown 244.00 and 242.88, respectively. Rim elevation should be 252.52.

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11.k. Line 23 – BSN2 – A30, table shown 24" at 1% slope, inverts at 243.05 (up) and 243.00 (down), both inverts are below the system stone (bottom of stone proposed at 244.50); plan shown 24" at 0%, invert at 245.19. Rim elevation at 244.71 is 7.8' below surface.

Response: **The upstream rim elevation at Basin 2 has been changed to 252.52 (DMH A-30), and the calculated HGL is below this elevation.**

Comment 11l Line 15 – B40 – BSN1, table shown 24" at 1%, inverts 241.05 and 241.00, inverts are below the basin #1 bottom of stone at 242.50.

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11.m. Line 16 - B50 - B40, table shown HGL at 252.00, higher than rim elevation at 247.18, surcharged during 25-year return.

Response: **The HGL issues have been resolved.**

Comment 11.n. Line 17 – B51 - B50, table shown HGL at 253.30, higher than rim elevation at 247.43, surcharged.

Response: **The HGL issues have been resolved.**

Comment 11.o. Line 18 – B60 – B50, B60 should be B52 (Double catch basin). Also shown surcharged during the 25-year event.

Response: **The HGL issues have been resolved.**

Comment 11.p. Line 24 – A20 - A10, table shown 24" pipe, rim at 242.16; Plan shown 12" pipe with rim at 245.70.

Response: **The storm sewers calculations have been revised to match the information shown on the plans.**

Comment 11.q. Line 25 – BSN3 – A20, table shown 24" pipe at 1.00%, Inverts Up at 237.17, Dn at 237.12; Plan shown 24" at 0%, both inverts are below the chamber invert at 237.75.

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.r. *Line 26 – B60 – BSN1, table shown 24" at 1.00%, Inverts Up 241.05, Dn 241.00, Plan shown 24" at 0% with inverts at 243.19.*

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.s. *Line 30 – B20 – B10, table shown 15" pipe, plan shown 12".*

Response: **The storm sewers calculations have been revised.**

Comment 11.t. *Line 32 – BSN1 – B30, table shown 24" at 1%; plan shown 24" at 0%, DMH B30 inlet invert at 243.19.*

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.u. *Line 33 - A21 – BSN3, table shown 24" pipe at 1.00%, Inverts Up at 237.05, Dn at 237.00; Plan shown 24" at 0%, both inverts are below the chamber invert at 237.75.*

Response: **The storm sewers calculations have been revised to match the information shown on the plans. The upper invert of the pipe was raised by .01 in storm sewers because 0% slopes are not allowed in the program, so there is an unavoidable discrepancy between the slopes on the plans and the slopes listed in the pipe sizing calculations.**

Comment 11.v. *Roof Drain 4 to FES, pipe capacity and velocity should be included in the Storm Sewer table.*

Response: **The drainage area from Roof Drain 4 has been significantly reduced, based on confirmation that the main roof will not be draining to this pipe, and the pipe will mostly collect HVAC condensate and possibly small building canopies.**

Comment 11.w. *The Storm Sewer table (based on 25-year return period) showed multiple drain lines with HGL (hydraulic grade line) higher than the ground/rim upstream elevation, which indicated surcharge conditions during the 25-year storm event. The applicant should address all surcharge issues. Ponding on top of the inlet structures are acceptable during the less frequency storm (100-year) event, but it should be contained locally without spillovers during the 100-year storm event.*

Response: **The HGL issues have been resolved.**

Comment 12. *The report submitted multiple test summaries for the CDS water quality units dated between 2011 to 2014. GCG recommends utilizing the NJDES's certification letter dated March 21, 2017, which certified the Continuous Deflective Separator (CDS) Stormwater Treatment Device by Contech Engineering Solutions, LLC. On-line installation with TSS removal rate 50%. The current MSH does not have sufficient data to address the nutrient removal (TP & TN) credit. However, most of the Massachusetts communities*

and the draft Massachusetts Stomwater Handbook have recommended utilizing the US EPA - Region 1's Stormwater Best Management. Practices (BMP) Performance Analysis performance chart or their EPA BMP Extrapolation Tool to address the nutrient removal and 90% TSS removal (if applicable) requirements

Response: **As stated in our previous response to this comment, there is zero discharge from every basin for the one inch rainfall, and therefore the TP & TN removal rate is 100% for the TP and TN associated with the one inch water quality "first flush" rainfall. The EPA performance chart has been added to the drainage report and shows a minimum 90% TSS and nutrient removal rate for one inch of storage within the infiltration basins.**

Comment 13a *13.a Sub-catchment P1.10A discharges onto Memorial Drive without treatments, this small sub-catchment with less than 1 cfs outflow during the 2-year storm event and could be considered De Minimis Stormwater Discharge for purposes of Standard 4. Moreover, this sub-catchment is not collected to the infiltration system, the applicant should provide calculations to adjust the infiltration volume requirements as required under the 65% rule, MSH Vol.3, Ch.1, Pg. 27.*

Response: **The recharge calculations have been revised to account for area P1.10A discharging to the road.**

Comment 13.b *Roof drain 4's 8" drainpipe is expected to have high flow velocity, due to the hydraulic head (height of roof), and discharges within 5 feet of the soccer field. GCG recommends installing a level spreader as erosion protection.*

Response: **A preformed scour hole has been added to the outfall to provide protection to the soccer field surface. As noted previously, the main roof will not be draining to this roof, and flow velocities will most likely be less than originally anticipated.**

<u>TRANSPORTATION IMPACT ASSESSMENT (TIA)</u>

Comment 1. *289 parking spaces provided, resolved.*

Response: **No response necessary.**

Comment 2. *Response stated that a separate traffic peer review is being performed. The applicant should be aware that 116 rental units, Chapter 40B project, are currently being reviewed by the Ashland Zoning Board of Appeals across Memorial Drive from this site. The project also utilizes Memorial Drive for site access.*

Response: **Comment acknowledged.**

Comment 3. *The applicant has improved the driveway leveling transition area, resolved.*

Response: **No response necessary.**

Comment 4. *The response stated that a future separate traffic response will address the safety sight distance concerns*

Response: **A separate letter by MDM Transportation Consultants responding to comments by Vanasse Associates, Inc. states that adequate sight lines are provided at both driveways.**

Comment 5. *Based on the proposed grading/contours shown along the site frontage, the grading appeared to accommodate a 5 feet wide sidewalk along Memorial Drive. GCG recommends installing the sidewalk to complete the connection with the ADA/AAB pedestrian access proposed in the middle of the site.*

Response: **A sidewalk has been added along Memorial Drive as requested.**

Comment 6. *GCG recommends providing additional pedestrian safety access improvements at the ELC parking lot. See comment #16 above.*

Response: **Please see the response to comment #16.**

Comment 7. *GCG is expecting the updated TIA to address the safety sight distance concerns.*

Response: **A separate letter by MDM Transportation Consultants responding to comments by Vanasse Associates, Inc. states that adequate sight lines are provided at both driveways.**

CONSERVATION COMMISSION NOI

Comment 2. *The applicant is unable to control the post-development runoff volume increases during the four analysis storm events.*

Response: **The infiltration basins have been increased in size to provide a reduction in stormwater runoff volumes.**

SUMMARY

The applicant is unable to control the post-development runoff volume to below the pre-development conditions as required under the Stormwater Management regulations, The applicant will discuss the issues with the Board and request relief if necessary.

We trust the above as well as the attached information are sufficient for your continued review of the project. Should you have any questions or require additional information, please do not hesitate to contact us at (508) 480-9900.

Sincerely,

Bohler Engineering MA, LLC

Andrew Platt

Lucien DiStefano

Cc: GCG ASSOCIATES, INC.