

February 12, 2026

Town Hall
Planning Department
101 Main Street
Ashland, MA 01721

Attn: Jasmin Farinacci, Director of Planning and Community Development

Re: 3rd 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 February 5, 2025. On behalf of the applicant, MetroWest Young Men's Christian Association, Inc. (MetroWest YMCA), Bohler offers the following responses. For clarity, only the remaining open comments regarding the site plan and drainage design are included below. The entire original comment is listed in normal text, and the current open comments are in *italics*, while our responses are directly below in **bold** type.

Comment 40 The plan shows a proposed roof drain #4 directed northward to the soccer field, this is not part of the drainage calculations and should be removed. 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. *(ROOF4-FES) has a calculated peak flow rate of 0.06 cfs, per Storm Sewer table (based on 25-year return period). A properly maintained grass/lawn pad at the outfall should be sufficient to resist erosion, (MSH Table 2.3.1, Vol. 3, Ch.1, Pg.3). GCG recommends removing the riprap armor at the FES outlet, which is too close (within 10') to the edge of ball field.*

Response: The riprap armor has been removed as recommended and replaced with grass.

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. *The response letter stated that the gravel fire access drive has been revised to be paved. Hence, the label "End of asphalt / beginning of gravel" near to Catch Basin D50 should be removed. GCG recommends adding signage to indicate the snow clearing limited at along the edge of grass paver truck turnaround area.*

Response: The label has been removed and additional fire lane signs have been added to plan sheet C-302 to indicate the extent of the grass paver turnaround area.

Comment 48 Underground infiltration system should be equipped with cleanout/inspection ports suitable for cleaning and maintenance. The isolator row plus chambers would require an inlet and a suction port at the two ends. Basins 1 and 4 need suction ports. 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. *DMHs B-40 and B-60 should both be equipped with an internal baffle each to direct the first inch of runoff to the Isolator Row Plus (IRP) System prior to bypass to the manifolds. The weir or elevated bypass manifold's invert must be located at least 9" above the bottom invert of the IRP chamber elevation. (Rhode Island Department of Environmental Management, Office of Water Resources – Stormwater Technology Review Committee, Alternative Stormwater Certification, issued: April 9, 2024, expires: April 9, 2029.) Section I.4.a; Manifold should not connect directly to the OCS B-30, which short circuited the infiltration chamber. IRP should be sized according to Table 1 – StormTech Isolator Row PLUS Sizing Table. The IRP appeared to be undersized, see additional IRP sizing calculations comment below. Since the ELC's roof runoff is considered clean water, the applicant may consider piping the roof runoff directly to the infiltration chambers to reduce the size of IRP. The applicant should verify that CDS2025-5-C water quality unit can be equipped with multiple outlets, which may require a single connection to the manifold.*

Response: Calculations are provided showing that four Stormtech SC-800 units are needed to provide adequate pretreatment based on Stormtech unit flow rates verified by NJCAT. The isolator row is 16 units long and will provide four times the required pretreatment. Also as requested, an internal baffle wall exceeding nine inches in height is proposed in the junction manholes prior to the infiltration basin. Direct connections of inflow manifolds to the infiltration basin row discharging to the outlet control structure have been eliminated. The roof runoff has been diverted directly to the infiltration basin, and not the isolator row. Literature available online confirms that the CDS unit can accept multiple pipe inlets. However, the CDS unit has been relocated from structure A-40 to A-50 so that there are multiple inlets into the unit rather than multiple outlets.

Comment 49 Infiltration basin #5's top of berm contour 233.50 should be shown on the plan, the proposed earth berm is constructed in fill and approximately 6 feet wide at the top. GCG recommends widening the top of berm to a minimum of 10 feet wide, (which also serve as an access maintenance path), the earth berm should be constructed with low permeable core and keyed at least two feet below the existing grade. The infiltration basin should be sized with 1 foot freeboard during the 100-year storm event. An emergency spillway should be provided and sized with brimful conditions without impinging upon the structural integrity of the basin, per SMH Vol.2, Ch. 2, Pg. 91. (i.e., No overtopping earth berm). Spillway should be sized with erosion armor protection. Rip-rap protection has been added to the spillway, 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? *Now Infiltration Basin 4, spillway weir invert elevation should be 232.50, (232.30 labeled) to match HydroCAD report, top of berm (6 labels) should be 233.50 to provide the required 1' freeboard.*

Response: The Basin #4 spillway weir and top of berm elevations have been revised as requested.

Comment 63a The inlet manifold should not be connected to the OCS to prevent short circuit. IRP inlet DMHs B-50 and B-60 should be equipped with internal baffle, see comment #48 above, and IRP sizing calculations comment below.

Response: The inlet manifolds have been disconnected from the row of infiltration units discharging to the outlet control structure. Internal baffles have been added to the inlet manholes. Please refer to the inlet structure details on plan sheet C-907.

Comment 64a The system (crushed stone bed length should be 245.71' to match the C-402 and HydroCAD calculations.

Response: Dimensions have been updated to be consistent between HydroCAD, the grading plan, and the infiltration basin details.

Comment 65a The system length should be 34.3' to match the C-402 and HydroCAD calculations.

Response: Dimensions have been updated to be consistent between HydroCAD, the grading plan, and the infiltration basin details.

Comment 67a GCG recommends referencing the outlet control structures (OCS) A-20, A-30, and B-30's base concrete structure to the standard Precast Concrete Storm Drain Manhole detail (with a concrete slab top). So that each OCS structure will meet the H-20 loading requirements.

Response: References to the standard precast concrete storm drain manhole have been added to the inlet and outlet control structure details as recommended.

Comment 67b GCG recommends adding a detail for the yard drain D-30 and CB (D-20) open grate, these two structures should be equipped with 12" diameter grate to match the HydroCAD report.

Response: A 12" Yard Inlet detail has been added to plan sheet C-903.

Drainage Report

Comment 5 HydroCAD Model Pond B2:UG Basin ELC Parking's outlet pipe was based on a 12" culvert, but plan called for 15" diameter drainpipe; Basin length 79.92'L should be verified, and system dimensions should be specified on the plan. Based on the 79.92'L, the end stone requires approximately 14.15" at the two ends. 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. *Now pond B1, underground infiltration basin 1 below ELC parking, Basin #1 - Isolator Row Sizing Calculations was based on 1.04 acres impervious area, the IR sizing volume should be based on the WQV (1" for LUHPPL site). 1.04 ac. = 45,302 s.f.; 1"/12" x 45,302 s.f. = 3,775 c.f. required. Calculations called out 378 c.f.; GCG recommends piping the Sub-catchment P1.R2's (0.709 acres) roof runoff (clean runoff per MSH) to the infiltration chambers directly, since there is no pretreatment required for roof runoff, which should reduce the required IR volume. The IR inlet structure B-40 and B-60 should be equipped with internal baffle (as recommended by StormTech) to direct the 1" WQV volume to the IR. See comment #48 above.*

Response: Please see our response to #48 above regarding the isolator row sizing. The roof runoff has been diverted directly to the infiltration basin as suggested.

Comment 6 HydroCAD Model Pond B3:UG Basin West Driveway with inflow from sub-catchment P1.9 (eastern driveway area), should this basin be Basin 4 – East Driveway? Pond B3 consists of 15 MC-3500 chambers, but plan shown 12 chambers, and system inverts do not match with the drainage plan. 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). *Now Pond B3, the required IR volume should be 0.095 ac. x 43,560 s.f. x 1"/12" = 345 c.f. (calculations shown 34 c.f.); The IR inlet structure DMH A-21 should be equipped with an internal baffle to direct the 1" WQV volume to the IR. See comment #48 above. GCG rough estimated the required IR volume to be at elevation 239.00+/- 11.x. Baffles are needed at the IR inlet structures, (baffle and inverts).*

Response: Basin #3 consists of MC-3500 units, which are larger than the SC-800 units in Basin #1. Based on a flow-based sizing of the isolator row, only one unit is required to provide adequate treatment. Four units are provided, or four times the required pretreatment volume. A baffle is not needed in this case, because the manifold pipe leading to the remainder of the infiltration basin is nearly two feet higher than the pipe leading to the isolator row.

Comment 11x Baffles are needed at the IR inlet structures (baffle and inverts).

Response: Baffles have been added to the Basin #1 inlet structures as discussed above. A baffle is not needed at Basin #3 as also discussed in the preceding comment.

Comment 13b 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. *Main roof will not be draining to roof drain 4, the inflow has been substantially reduced to 0.06 cfs during the 25-year return period (storm sewer table). No riprap armor should be required. GCG recommends replacing the riprap stone with grass/lawn finish due to the proximity the ball field.*

Response: The riprap armor has been removed as recommended and replaced with grass.

GCG Comment Letter Summary

The drainage calculations have demonstrated that the proposed infiltration systems have the capacity to control the post-development flow rates and volumes to below the pre-development conditions. Some modifications for the IR inlet control are required.

We trust the above as well as the attached information are sufficient for your 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.