



Green International Affiliates, Inc.

100 Ames Pond Drive, Suite 200 Tewksbury, MA 01876
T: (978) 923-0400 | www.greenintl.com

	Open Comments
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	Conditions of Approval

Peer Review Comment Form

PROJECT NAME Murphy's Farm **PEER REVIEW**

DATE 6/7/2024

UPDATED: 11/13/2024

PROJECT NO. 24016.0106

NO.	sheet no.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
APPLICATION						
1	4	Subdivision Regulations 6.2.1.5	The Applicant requests waivers for if the submission does not meet regulations. The Applicant shall provide a list of waivers that are applicable to the specific project. The Applicant shall provide explanation stating what is being provided and why a waiver is being requested for each waiver.	A full list of waivers is now provided		
1A	4	Subdivision Regulations 6.2.1.5	A list of waivers was not submitted. Please provide.	The Substantive Waiver Request is now provided for review.		
2		Zoning Bylaw 7.2.2.C	The Applicant shall include an analysis of the impacts of the proposed development, including natural environment, public services, economics, social environment, and visual environment.	While the proposed project is a Multifamily development, it is proposed under 40B, not the Town of Dracut Multifamily Development regulations. As such, we believe that this requirement is not applicable	JT	11/8/2024
SITE PLAN						
3	C-1	Zoning Bylaw 3.2.3	The proposed project is within R-1 zoning district. The R-1 district only permits single family dwelling homes but the applicant is proposing multifamily dwellings. We defer to the Board if this is acceptable.	The project is proposed under 40B, allowing for the construction of multifamily dwellings.	JT	11/8/2024
4	C-1	Zoning Bylaw 2.4.5.B.9	The proposed building height should be added to the zoning table. Please revise.	The proposed buildings do not have full architectural plans, however their height will comply with the zoning bylaw.	EN	10/29/24
5	C-1	Subdivision Regulations 6.4.1 #9	No project benchmark data is shown. Please provide.	Project benchmark data is now provided on sheet C-1	EN	10/29/24
6	C-1	Zoning Bylaw 2.4.12	The site landscaping shall be 20% of the total impervious surface of the project. Please provide the required and provided on the plans.	A waiver to Zoning Bylaw 2.4.12 is requested.		
6A	C-1	Zoning Bylaw 2.4.12	We defer to the Board for waiver approval.			
7	C-1		Please add the date when the wetlands were delineated.	The date when the wetlands were delineated is now shown on sheet C-1.	EN	10/29/24
7A	C-1	MA Wetland Protection Act	The wetlands were delineated in 2015. Per MA Wetland Protection Act, wetland flags are only valid for three years. Therefore, the wetland flags need to be reflagged. Please provide updated flagging and buffer zones.	The site is subject to an ongoing Order of Conditions associated with DEP#145-1050. The latest extension, granting coverage through July 21, 2026, is provided for review.		
8	C-2A	Subdivision Regulations 6.4.2 #8	Benchmark 1 points to a existing catch basin with elevation of 168.51 but the record rim elevation is 168.30, please clarify.	Catch basin rim has been adjusted.	EN	10/29/24
9	C-2A/C-2B	Zoning Bylaw 2.4.5.B.6	Please add bearings and distances of all property lines. It appears some are missing.	Missing bearings and distances are now provided.	EN	10/29/24
10	C-2A/C-2B	Zoning Bylaw 2.4.5.B.17/Town of Dracut Wetland Regulations 5.1.4.2.6	Massmapper has identified streams within the property and these are not identified on the plans. Please update the plans to include labels for existing streams. Please add associated buffers.	All resource areas were delineated and are shown based on Order of Resource Area Delineation associated with DEP#145-1005, and Order of Conditions associated with DEP#145-1050.	MW	10/31/2024
11	C-2A/C-2B	Zoning Bylaw 2.4.5.B.17/ MA Wetlands Protection Act/ Subdivision Regulations 6.4.2.13	The location of areas subject to flooding shall be shown on a plan. There are wetlands onsite that appear to not have an outlet. Please identify if any of the wetlands are isolated land subject to flooding (ILSF) and provide back up calculations. The extend of the ILSF shall be shown on the plans.	Drainage calculations for wetland series B & C (Design point 6) show that the requisite runoff volume is not generated in any of the design storms. As such, wetland series B&C are not ILSF. The remaining internal wetlands have outlets.	JT	11/12/2024
12	C-2A/C-2B	Town of Dracut Wetland Regulations 5.1.4.1.2/5.1.4.1.3	For new construction the Town Wetland Regulations do not allow any disturbance within 25 feet of a resource area and no new buildings, retaining walls, or impervious surfaces within 50 feet of a resource area. The proposed project does not show the 25 foot and 50 foot buffer zones. These should be added to the plans and the plans should be revised as needed to meet the regulations.	A waiver is requested for disturbance within the 25-Ft Buffer, and construction of new buildings and impervious surfaces within the 50-Ft buffer. These buffers are now shown on the plans.		



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12A	C-2A/C-2B	Town of Dracut Wetland Regulations 5.1.4.1.2/5.1.4.1.3	The buffers are shown, but the labels are missing. Please provide labels to the buffer zones. We defer to the Board for approval of the waiver request.	Labels for the 25-, 50-, and 100-Ft buffer are now properly shown on the provided plans.		
13	C-3A/3B		Please provide a legend for the Layout and Materials Plan including all different hatches.	A legend is now provided on sheet C-3.	EN	10/29/24
14	C-3A/3B		Please provide more information on snow removal and storage process. How will snow be stored in the proposed playgrounds? What is being installed for the proposed playgrounds?	The proposed playgrounds will be seasonal, allowing for snow storage as required. Final plans for playground equipment will be provided prior to construction.		
14A	C-3A/3B		There shall be no snow storage within wetland buffer zones. Please move snow storage to be outside of the wetland buffer zone.	MA DEP 310 CMR 10.00 does not have provisions preventing snow storage within the wetland buffer.		
15	C-3A/3B	ADA	There is a ramp between 9D and 8D but there is no ramp on the other side of the street. This occurs in other locations as well. There should be sidewalk ramps on both sides of the street. Please revise.	ADA Ramps are now provided at all street crossings.	EN	10/29/24
16	C-3A/3B		There are limited pavement markings throughout the plans. The plans should have crosswalks, stop bars, etc. Please revise.	Crosswalks, stop bars, and other pavement markings are now provided.	EN	10/29/24
17	C-3A/3B	MA Stormwater Handbook V2 CH2	Porous pavement should have a setback of 10 feet from slab foundations, 20 feet from cellar foundations, and 10 feet from property lines. Please confirm these setbacks have been met.	Porous pavement is no longer proposed.	EN	10/29/24
18	C-3A/3B	Subdivision Regulations 7.4.3	There shall be at least two means of egress for each subdivision except for a cul de sac. While there are two means of egress to the site, the houses off of roadway "D" only has one means of egress and they are not part of a cul de sac. We defer to the Board if this is acceptable.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
19	C-3A/3B	Zoning Bylaw 2.4.5.B.8	The cover sheet has a table of required minimum setbacks but it does not state the minimum setbacks provided. The plans also do not show the setbacks for the buildings. Please provide setback distances for the buildings and update the table to indicate what is being provided.	The Land Use Table on sheet C-1 has been updated to provide the minimum setbacks provided.		
19A	C-3	Zoning Bylaw 2.4.5.B.8	The minimum rear setback provided is missing. Please update plans to include rear setback provided or explain why it is N/A.	As disclosed in the substantive waiver request, it is unclear under the Zoning Bylaw if the project lot contains a rear lot line, and which boundary might constitute a rear lot line.		
20	C-3A/3B/D-3	Zoning Bylaw 2.4.5.B.9/2.4.11/Subdivision Regulations 6.4.8 #15	The location, size, and type of all signs and exterior lighting shall be shown on the plans. There are details for stop signs but the stop signs are not shown on the plans. Please show where stop signs will be located on the plans. There are lights shown but no details or photometric plans for the lighting. Please provide lighting details conforming to dark sky compliance.	A waiver is requested for Zoning Bylaw 2.4.5.B.9. The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
20A	C-3A/3B/D-3	Zoning Bylaw 2.4.5.B.9/2.4.11/Subdivision Regulations 6.4.8 #15	We defer to the Board for waiver approval.			
21	C-3A/3B	Subdivision Regulations 6.4.3 #11	North arrow is shown but it is not identified as magnetic or true north. Please indicate on the plans.	Project horizontal datum is NAD83, and is now shown on plan north arrows.	EN	10/29/24
22	C-3A/3B	Zoning Bylaw 6.1.8.1.D	Parking stalls shall be 20' depth but the proposed project provides 18' depth. Please revise.	The parking stalls have been revised as requested.	EN	10/29/24
23	C-3A/3B	Subdivision Regulations 7.6.5.1	Has the project been reviewed by the fire department? Location of hydrants will need to be coordinated with the fire department. Please provide turning movements showing how a fire truck will maneuver through the site and turn around in the cul de sacs.	Project is undergoing review by the fire department to confirm adequacy of hydrant locations and internal movements of a fire truck.		



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23A	C-3A/3B	Subdivision Regulations 7.6.5.1	The fire truck turning movements overlap the curb and parking stall lines in some locations. Please revise as needed to make sure the fire truck can maneuver within the roadway limits. We recommend that approval from the Fire Department be made a condition of approval.	The provided fire truck turning movement has been revised to make these corrections.		
24	C-4A		Has the project been coordinated with the gas company for work within the ROW? It appears there is proposed work within the easement including a light pole, a proposed tree, etc. Also, is there an existing gas line within the easement? Please show all existing utilities on the plans.	No coordination has occurred yet with the gas company, however coordination will occur prior to any land disturbance within the easement.		
24A	C-4A		We recommend that approval from the gas company be made a condition of approval.			
25	C-4A	MassDOT Design Guide Chapter 8	There is an existing 12" RCP culvert that connects wetland J to wetland A. The proposed project calls to maintain the existing RCP and cross it with a new roadway. Has the pipe been CCTV'd to verify the pipe is in good condition? Also, a 12" culvert is smaller than minimum size for culverts per the MassDOT Project Development Design Guide. The design guide recommends a minimum of 18" for culverts at roadway crossings. We recommend installing a new culvert meeting MassDOT design guide.	A new 18" Culvert is proposed.	EN	10/29/24
26	C-4A	Town of Dracut Wetland Regulations 5.1.4.2.5	Per Town of Dracut Wetland Regulations stormwater discharge to vernal pools are not permitted. The proposed project has stormwater from the site discharging to vernal pools. We defer to the conservation commission if this is acceptable.	A waiver is requested to Town of Dracut Wetland Regulations 5.1.4.2.5		
26A	C-4A	Town of Dracut Wetland Regulations 5.1.4.2.5	We defer to the conservation commission if this is waiver is acceptable.			
27	C-4B		The proposed culvert will require work within the wetlands. We defer to the Conservation Commission if this is acceptable.	The proposed wetland crossing has been removed.	EN	10/29/24
28	C-4A/4B		The match lines between C-4A and C-4B appear to be off. Please revise the viewport so there is no missing information.	The plan set has been revised as requested	EN	10/29/24
29	C-4A/4B		Behind 6B it appears there is a retaining wall crossing over an existing sewer within the Town's easement. Has this wall been coordinated with DPW? What is the material of the existing sewer line?	The proposed retaining wall has been removed.	EN	10/29/24
30	C-4A/4B	Subdivision Regulations 6.4.4 #13	Please add the following note, "No building or structure shall be built or placed on any lot without a permit from the Health Department if such a permit is required."	The requested note is now shown on sheet C-1.	EN	10/29/24
31	C-4A/4B	Subdivision Regulations 7.15.1.2	The applicant shall insure adequate drainage of all low points along the roadways. There are low points between 6E and 5E, 12D and 11D, and near 3E that is curbed with no drainage outlet. By not having a catch basins at the low point or allowing runoff to sheet flow off there are concerns with adequate drainage at low points. Please confirm.	Drainage design has been revised to include closed-drainage with catch basins, manholes, and drainage basins. Catch basins are provided at low points.	JC	10/31/2024
32	C-4A/4B	Stormwater Rules and Regulations G.2	Runoff from roadway F flows onto Wheeler Street. Catch basins should be installed upstream of intersections where proposed work connects to existing streets, to minimize the flows from the proposed area carried over public ways. Please revise.	Roadway 'F' has been removed.	JC	10/31/2024
33	C-4A/4B	Subdivision Regulations 6.4.4.3	The plan shall show how the proposed grades will tie into the existing grades within and outside of the subdivision. There are locations on the Grading, Drainage, and Utilities Plans where the way the grades tie in are not realistic. They are shown tying into an existing grade perpendicular instead of with a radius. This may affect the limit of tree clearing and the amount of work done within wetland buffers. Please revise.	Proposed grading has been revised to tie into existing grade with curves instead of perpendicular lines.	EN	10/29/24
34	C-4A/4B	Subdivision Regulations 6.4.4.1	It is difficult to identify which utilities are existing and which utilities are proposed on the Grading, Drainage, and Utilities Plans. The proposed utilities shall be overlaid existing with a darker line weight. Please revise.	Line weights have been revised for clarity.	EN	10/29/24
35	C-4A/4B, C-5A/5B/5C	Subdivision Regulations 6.4.4.8	The rims and pipe sizes, lengths, and materials should be shown on the Grading, Drainage, and Utility Plans and the Plan and Profile plans. The water line bends should be provided and the tees should be drawn perpendicular. Please revise.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		



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35A	C-4A/4B, C-5A/5B/5C	Subdivision Regulations 6.4.4.8	Rims, inverts, materials, and lengths have been provided on the Plan and Profile plans addressing the drainage related comments. Please confirm all water and gas tees and bends are shown correctly. The water and gas lines should be shown correctly to confirm their constructible location. The water shall maintain 10' minimum separation from the sewer lines. Please confirm and revise as needed.	As above, the project is not subject to Subdivision Regulations, and so no water/gas tees or bends are shown on the provided plans. However, the Applicant will construct all water mains in compliance with the Kenwood Water District Guidelines, and a note is now provided on sheets 4A through 4C stating that water shall maintain a 10' minimum separation from the sewer lines.		
36	C-5A		What is the purpose of SMH-33 and the pipe to SMH-4? It appears to be at a high point and no services would be connected to it. Please clarify.	The plan set has been revised as requested.	JC	10/31/2024
37	C-5A/5B/5C	Subdivision Regulations 7.15.1.3	The Applicant shall intercept groundwater in the subsoil along the roadway where within three feet of the proposed roadway surface. The test pit information should be added to the profiles to confirm the roadway has at least three feet separation to groundwater. Please revise.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
37A	C-5A/5B/5C	Subdivision Regulations 7.15.1.3	Please clarify if the groundwater is within three feet of the roadway surface and the Applicant is seeking a waiver.	As above, the project is not subject to Subdivision Regulations, and so the test pit information has not been provided on the plan/profile sheets. However, test pits throughout the site indicate that the 3'ft of separation required under the subdivision regulation will be met.		
38	C-5A/5B/5C	Subdivision Regulations 6.4.5 #1	The plans are at scale 1":60' horizontal and 1":12' vertical scales. The Subdivision regulations require 1"=40' horizontal and 1"=4' vertical. We defer to the board if this is acceptable.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
39	C-5A/5B/5C	Zoning Bylaw 2.4.5.B.6/Subdivision Regulations 6.4.5 #2	Please add bearings and distances of all tangents along proposed roadway centerline and the right-of-way. Please add radii, length and central angle of all curves and points of intersection of all tangents with tangent lengths. Please add stationing every 25' in vertical curves, frontages, and lot numbers.	A waiver is requested for Zoning Bylaw 2.4.5.B.6. The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
39A	C-5A/5B/5C	Zoning Bylaw 2.4.5.B.6/Subdivision Regulations 6.4.5 #2	We defer to the Board for waiver approval.			
40	C-5A/5B/5C	Subdivision Regulations 6.4.5 #3	Please provide labels for sight distances on vertical curves. Please show all underground utilities in the profile and provide vertical clearances.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
40A	C-5A/5B/5C	Subdivision Regulations 6.4.5 #3	We defer to the Board for waiver approval.			
41	C-5A/5B/5C	Subdivision Regulations 7.4.8	Are the proposed street names "Roadway X"? If not, add proposed street names to the plans.	Street names to be provided prior to final plan authorization.		
41A	C-5A/5B/5C	Subdivision Regulations 7.4.8	Street names have not been provided. Please provide.	Street names will be provided at the time of plan approval. During design/permitting, we believe that 'Roadway X' with all buildings on that street being numbered #X, provides more clarity during discussion		
42	C-5A/5B/5C	Subdivision Regulations 7.6.2	The minimum grade of the roadway should be 1.5%. Please revise.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
42A	C-5A/5B/5C	Subdivision Regulations 7.6.2	We defer to the Board for waiver approval.			
43	C-5A/5B/5C	Subdivision Regulations 7.6.2	Once the horizontal alignment data is added, confirm the minimum centerline radius and maximum curb return/pavement junction radius are met.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
43A	C-5A/5B/5C	Subdivision Regulations 7.6.2	We defer to the Board for waiver approval.			



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44	C-5A/5B/5C	Dracut Bylaws Chapter 13 Section 16 (B)/ FHA/ADA	The plans do not show any accessible parking spaces. The plans should be revised to have a minimum of 2% of the parking to be accessible parking. Please revise.	Accessible parking spaces are now provided throughout the development.	JC	10/31/2024
45	C-5A/5B/5C	Subdivision Regulations 6.4.5.3.vi-xi	All existing and proposed utilities shall be shown on the profile sheets, including proposed drainage, water, electric, telephone, cable, and gas. Please label vertical clearances between any crossing utilities. Please revise.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
45A	C-5A/5B/5C	Subdivision Regulations 6.4.5.3.vi-xi	It is recommended to provide this information to confirm there are no utility conflicts. We defer to the Board for waiver approval.			
46	C-5A/5B/5C, D-1	Subdivision Regulations 7.6.2	The maximum paved width should be 22' for a Residential roadway and 26' for a Neighborhood roadway. The proposed plan provides a 26' pavement width. Please clarify why the proposed project is using the Neighborhood roadway width instead of the Residential width. There is also no ROW shown for the roadway. Please clarify why there is no proposed ROW shown.	The roadways have been reduced to 22' in width.	JWT	10/31/2024
47	C-5B/5C		The force main that crosses the box culvert does not have a positive pitch and will be full under the culvert at all times. Is there a way to allow the force main to have a positive pitch?	The proposed force main has been removed.	JC	10/31/2024
48	C-5B	MA Stormwater Handbook V2 CH2	Pervious pavement shall not be installed on slopes steeper than 5%. A portion of roadway F is steeper than 5%. Please revise.	Porous pavement is no longer proposed.	JC	10/31/2024
49	C-6A		Please provide perimeter controls for the work along Wheeler Street.	No work is now proposed along Wheeler Street.	JC	10/31/2024
50	C-6A		How will infiltration BMPs be protected during construction?	Erosion control details and notes provided on sheet D-2. Infiltration BMPs are not to receive stormwater runoff from unstabilized areas.		
50A	C-6A/D-2		Note 12 only refers to catch basin protection. There are no notes describing how the stormwater basins will be protected from sediment from runoff and compaction from construction vehicles. Please provide additional notes or show on the plans.	The "General Construction Sequencing" note on sheet D-1 has been updated to indicate the order that construction will occur in order to protect stormwater basins from sediment runoff/compaction.		
51	C-6A/6B		Please provide inlet protection for new catch basins.	The plan set has been revised as requested.	JC	10/31/2024
52	C-6A/6B	Subdivision Regulations 6.4.6 #8	Add/edit note to see full project notes on sheet D-1.	The plan set has been revised as requested.	JC	10/31/2024
53	D-1	Subdivision Regulations 6.4.8 #1	For the typical cross section, please add guardrail location, depth of cover for all underground utilities, and widths for curb, grass strips, parking, and ROW guardrail location. Please provide 5' minimum depth of cover for water lines to prevent pipes from freezing.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations. 5-Ft minimum cover has been specified in the roadway cross-section detail.		
53A	D-1	Subdivision Regulations 6.4.8 #1	It is recommended to provide a more detailed typical roadway cross section to assist the contractor to install properly. It is recommended to have more than one typical section to represent the different roadway cross sections throughout the project. For example the roadway cross section does not show parking on either side of the road and this type of roadway is used for most of the project. The guardrail should be shown to determine the location of it offset from the edge of road. Please revise.	As above, the project is not subject to Subdivision Regulations, and so cross sections for every roadway configuration are not provided. However, a "Typical Roadway Cross-Section (Half-Curb/Half Swale)" and a "Typical Parking Stall Cross Section" are now provided on sheet D-1. We believe that the combination of these three cross sections will provide sufficient information for every roadway configuration.		
54	D-1	Subdivision Regulations 7.9.3	The sidewalks shall meet ADA compliance. Accessible curb ramp type A is not an ADA compliant ramp. This allows for a greater than 2% cross slope. Accessible curb ramp type C should have a callout noting 1.5% slope for the triangular portion to align with MassDOT standard detail E 107.6.0. Accessible curb Ramp type A and D, per MassDOT standard details, the minimum transition length should be 6'6". ACR Type E, the curb and curb transition labels are pointing to the wrong place. Please revise curb ramp details.	The plan set has been revised as requested.	JC	10/31/2024
55	D-1		Where does the underdrain for the retaining wall drain to? Please show on the plans.	No retaining walls are now proposed.	JC	10/31/2024



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56	D-1		Please show the curb in the timber guardrail detail.	No curb is proposed along the segment of Roadway 'A' which will utilize the guardrail.	JC	10/31/2024
57	D-1	MA Stormwater Handbook V2 CH2	Please provide minimum of 3' separation to seasonal high groundwater for porous pavement per MA Stormwater Handbook.	Porous pavement is no longer proposed.	JC	10/31/2024
58	D-3		Provide detail for Eone pump station with back up calculations for sizing.	The Eone pump station has been removed.	JC	10/31/2024
59	D-4	Stormwater Rules and Regulations G.18	Catch basins adjacent to curbing shall be built with granite curb inlet. Please revise detail.	The plan set has been revised as requested.	JC	10/31/2024
60	D-4	Subdivision Regulations 6.4.8 #2 	Please provide cross sections for all infiltration and detention basins with elevation of seasonal high groundwater. The lined detention basin appears to have some permanent ponding based on invert information and assuming the liner is buried. Please revise.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
60A	D-4	Subdivision Regulations 6.4.8 #2 	A detail showing the stormwater basins in cross section view is recommended in order for the contractor to correctly install the basins. It is unclear where the liner will be installed for DB-1 and what will be installed above it. It is unclear if the basins will just be graded or if they will be loam and seeded or if new material will be installed. The cross section should also include the elevation of seasonal high groundwater relative to the bottom of the basin to confirm separation requirements are met. Please provide more detail to better understand what is being proposed.	As above, the project is not subject to Subdivision Regulations, and so cross sections for drainage basins are not provided.		
61	D-4		Provide size of pipe in typical infiltration trench detail. Also, IT-1 elevations in the detail do not match the plans. Please revise.	Previously proposed infiltration trenches have been removed. Infiltration Trench details have been updated to show newly proposed trenches.	JT	11/12/2024
61A	D-4		IT-2 and IT-3 elevations in the detail do not match the plans. Please revise.	Trenches IT-2 and IT-3 have been removed.		
62	D-4		Based on CDCL-14, it appears that IB-3 has less than 2' separation to groundwater. Please revise to have a minimum of 2' separation to groundwater.	The plan set has been revised as requested.	JC	10/31/2024
63	D-4	MA Stormwater Handbook V2 CH2	Infiltration basin should be a minimum of 50 feet from any slope greater than 15%. IB-3 appears to be within 50 feet of a slope greater than 15% and is infiltrating next to a wall. It is not recommended to infiltration against a wall. Please revise.	The previously proposed IB-3 has been removed.	JC	10/31/2024
64		Subdivision Regulations 6.3.1.7/6.4.7	Please provide landscape plans for proposed landscaping.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
64A		Subdivision Regulations 6.3.1.7/6.4.7	We defer to the Board for waiver approval.			



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Stormwater Report						
65		Subdivision Regulations 7.15.4/Stormwater Rules and Regulations 7.B.2.e.	The site shall be designed to ensure post development peak volumes do not exceed predevelopment peak volumes. Please provide a table showing the pre vs post peak volumes.	A waiver has been requested for Stormwater Rules and Regulations 7.B.2.e. The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
65A		Subdivision Regulations 7.15.4/Stormwater Rules and Regulations 7.B.2.e.	We defer to the Board for waiver approval.			
66	HydroCAD		The HydroCAD model has a total existing area of 50.96 acres and proposed area of 48.91 acres. Please revise HydroCAD calculations so the total existing area matches the total proposed area.	The plan set has been revised as requested.	JC	10/31/2024
67	HydroCAD		The HydroCAD model is showing that the porous pavement is completely flat but the roadway is pitched. The volume within the porous pavement should only account for the amount of storage in the porous pavement before it overflows at the low point. Please revise.	Porous pavement is no longer proposed.	MW	10/31/2024
68	HydroCAD	Stormwater Rules and Regulations 7.G.15	IB-2 has less than 1 foot of freeboard. Please revise to have a minimum of 1 foot of freeboard.	The previously proposed IB-2 has been removed.	JC	10/31/2024
69			Water Quality flow rate calculations should be provided to confirm the correct stormceptor model is provided. Please provide.	Water Quality flow rate calculations are now provided for review.		
69A			A WQF rate has been provided for a CDS structure. There are no details for the CDS structure in the plans and there are no callouts to indicate where a CDS structure will be used. Please revise plans to indicate where CDS structure will be used. If multiple CDS structures will be used, the water quality flowrate should be calculated for each in the stormwater report and the required WQF should be noted in plan details. Please revise.	"DMH-1" is now properly called out as a CDS structure. Manufacturer calculations are now provided as part of the drainage report, and a construction detail is now shown on sheet D-3.		
70	Tab 5: Closed Drainage System Calculations	Subdivision Regulations 7.15.9.2	Please provide inlet analysis calculations showing the grates have capacity and gutter spreads at the inlets.	The project is proposed under 40B and is not a subdivision, and is not subject to Subdivision regulations.		
70A	Tab 5: Closed Drainage System Calculations	Subdivision Regulations 7.15.9.2	We recommend these calculations be provided since roadways are being designed as part of the project. This will verify that the spacing of the drainage inlets are adequate. Please provide or explain how spacing between inlets were determined.	As above, the project is not subject to Subdivision Regulations, however inlet analysis calculations are now provided.		
71	Tab 5: Closed Drainage System Calculations	Stormwater Rules and Regulations G.12	Closed drainage is designed for the 10 year storm event. Drainage pipes shall be sized to contain the 25 year storm event. Please revise.	Waiver requested for Stormwater Rules and Regulations G.12		
71A	Tab 5: Closed Drainage System Calculations	Stormwater Rules and Regulations G.12	We defer to the Board for waiver approval.			
72	Tab 5	Stormwater Rules and Regulations G.14/Subdivision Regulations 7.15.4/Stormwater Rules and Regulations 7.G.14	Provide backup calculations showing the proposed 15' box culvert meets stream crossing standards in accordance with the latest edition of the Massachusetts Stream Crossing Handbook and is designed for the 50 year storm event.	Box culvert has been removed.	JC	10/31/2024
73	O&M		Who will be responsible for the maintenance of the pervious pavement?	Porous pavement is no longer proposed.	JC	10/31/2024
74	O&M		Who will be responsible for the maintenance of the EONE pump stations? Who would be alerted for an emergency failure?	The Eone pump station has been removed	JC	10/31/2024
75	O&M	MA Stormwater Handbook V2 CH2	Porous pavement should be cleaned using vacuum sweeping machines monthly. Please revise.	Porous pavement is no longer proposed.	JC	10/31/2024



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76	Test Pits	MA Stormwater Handbook V2 CH2	IB-2 has no test pits nearby. Please provide a test pit where the BMP is proposed to confirm soils and seasonal high groundwater.	The previously proposed IB-2 has been removed.	JC	10/31/2024
77	Test Pits		Please provide additional test pits/borings for porous pavement. At a minimum there should be additional test pits/borings performed to verify soils and seasonal high ground water for 8G and 5D due to limited or no test pits performed within these areas for proposed porous pavement.	Porous pavement is no longer proposed.	JC	10/31/2024
78	Existing Conditions Watershed Plan		Please confirm that EWA-2B and PWA-2B would discharge to DP-2 and not DP-1. Based on the contours it appears these areas would discharge to DP-1.	Proposed work associated with Roadway F has been removed. No changes in flow to Design Point 2 are now proposed	JC	10/31/2024
79	Existing Conditions Watershed Plan		EWA-5B discharges to a wetland that has a 12" culvert discharging to another wetland. This wetland should be a separate discharge point. The pre and post peak rates and volumes should be compared for this wetland. Please revise.	The wetland is wholly contained to the site and modeled as a pond to account for the culvert discharge. We do not see the need to separate the subcatchments to determine the off-site runoff.	MW	10/31/2024
80	Existing Conditions Watershed Plan		Please conform boundary between EWA-7 and EWA-8. It appears EWA-8 should be larger and EWA-7 should be smaller.	The plan set has been revised as requested.	JC	10/31/2024
81	Proposed Conditions Watershed Plan		Additional grading should be provided to the grading plans to confirm the area shown in PWA-5H will discharge to the proposed catch basin and not run onto neighboring properties.	The plan set has been revised as requested.	JC	10/31/2024
82	Proposed Conditions Watershed Plan		Additional grading should be provided to the grading plans to confirm the area shown in PWA-5D. The current grading indicates the area around 4A/5A would discharge toward building 1D instead of around the building. Please revise.	The plan set has been revised as requested.	JC	10/31/2024
83	Proposed Conditions Watershed Plan	MA Stormwater Handbook V2 CH2	Porous pavement must not receive runoff from other drainage areas. Please revise.	Porous pavement is no longer proposed.	JC	10/31/2024
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84	C-4A		There is no pretreatment for stormwater discharging to DB-1. Please provide pretreatment.	DMH-1 is now properly labeled as a "CDS", providing pre-treatment for Subsurface System-1 (Previously DB-1)		
85	C-4A/D-3		There are no Drain Manhole Details. Many DMHs appear to require a structure larger than the standard 4' diameter. For example PDMH-8 appears to require a larger manhole based on pipe configuration. Please identify larger manholes, otherwise revise configuration to accommodate 4' manhole structures. Please revise plans and include details.	A Drain Manhole detail is now provided on sheet D-3. DMH Configurations have been revised to accommodate 4' manhole structures.		
86	C-4A		Information for pipes in and out of SUB-1 are missing. Please provide lengths, diameters, materials, slopes, and inverts.	The previous 'Sub-1' has been reconfigured and is now 'Subsurface System-3'. Detailed information for pipes in/out of each subsurface system are now provided on sheet D-4.		
87	C-4A		PWA-5D shows a portion of the property at 23 Elizabeth drive discharging to PHW-3 culvert. It appears there is a stone wall being installed/replaced along the property line which would block runoff from 23 Elizabeth Road to enter the culvert and would result in ponding at the wall on their property. Please provide a drainage solution to this issue.	As shown on sheet C-3, a portion of this stone wall will be removed in order to construct the roadway and drainage system.		
88	C-4A		There are several utility conflicts. For example, gas line is conflicting with PDMH-3B and pipe leaving PDMH-3A conflicts with light pole. Please revise design to eliminate utility conflicts.	Utility conflicts have been eliminated.		
89	C-4A		The contours for DB-1 are not constructable due to contour 135 passing through contour 134. Please revise.	DB-1 has been replaced with Subsurface System-1		
90	C-4A		Please provide inverts for POS structures. Please revise.	Inverts for POS are provided in the detail for each system on sheet D-4. These inverts are intentionally left off of sheet C-4A.		



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91	C-4A		There are many catch basins located at cross walks. Please revise grading and catch basin locations to avoid low points at these locations.	Catch basins have been relocated out of the path of travel for cross walks.		
92	D-2		A check dam detail is included, but not identified on plans. Please indicate on plans where check dams are proposed.	The provided check-dam detail is included as they are referenced in the "Construction Sequencing" note on sheet D-1. Check-dams are to be installed as-needed during construction based on site conditions.		
93	D-3		Indicate on plans when "Typical Catch Basin with Curb Inlet" or "Shallow Cover Catch Basin at Vertical Curb Detail" are being used, there seems to be some overlap on when they would be used. If these do not have a four foot deep sump they will need to discharge to a manhole with a deep sump and hood. Catch basin structures without deep sumps shouldn't be needed due to no issues with existing utilities. Therefore, all catch basins should have deep sumps and hoods. Please revise details or explain why structures with no sumps are needed.	"Shallow Cover Catch Basin at Vertical Curb Detail" has been removed. "Typical Catch Basin with Curb Inlet" detail has been revised to refer ONLY to grate/frame configuration.		
94	D-3		Double grate catch basins appear to be much larger than typical catch basins in plan view, but the detail shows that their basin structures are roughly the same size. Please clarify. Also, please provide a hood on the double grate catch basin detail.	The Double Catch Basins have been updated in plan view to approximate to-scale size. A hood for the outlet pipe is also provided.		
95	D-4		There are currently no contours for forebays to confirm the design meets the calculations. Please provide contours to the forebays to clearly define the separation between the basins and the forebays.	Forebays are now shown with contours.		
96	D-4		There are two infiltration basins listed at IB-2. Please revise so there is only one IB-2.	IB-2 has been repurposed as 'Subsurface System-2'		
97	D-4		The pipe orientation does not match the isolator row detail. There are no additional manholes and piping to connect the isolator row to the rest of the subsurface system. Please revise.	A revised typical "Isolator Row" detail is provided for the new Subsurface Systems.		
98	D-4		The typical outlet structure shows the invert out at the same elevation as the vertical orifice but the inverts for DB-1, DB-2, IB-1, and IB-3 show the vertical orifice much higher than the outlet pipe. It is not clear if this is feasible with the proposed inverts and vertical tee. Please review and confirm. Also, the outlet pipe would be permanently submerged. The inverts should be adjusted to match the detail or the detail should be revised. Please revise.	Revised		
99	D-4		The test pits are not shown in the details for IB-1, IB-2, IB-3, DB-1, DB-2, and infiltration trench. Were test pits performed at all BMP locations? Please provide test pits for each BMP and provide seasonal high groundwater elevation at each BMP.	Additional test pits have been performed. All test pit logs are now located on sheet D-5. Seasonal high groundwater elevation is now shown at each BMP.		
100	D-4/HydroCAD		The detail should note how many chambers are proposed and how many isolator rows are proposed. The detail only notes how many isolator rows are proposed. It is not clear if the isolator rows are being accounted for in the HydroCAD model. The isolator rows should not be accounted for because they won't infiltrate like the rest of the system since they are subject to more sediment. Please confirm and revise.	Isolator rows are sized off-line in HydroCAD. No storage or infiltration credit is taken. A revised Isolator Row detail showing a typical inlet/outlet with water quality weir is provided on sheet D-4.		
101	D-4/HydroCAD		The outlet manhole for the subsurface system appears to have a weir per the HydroCAD calcs. There should be detail for this structure and the inverts should be identified on the plan. Please revise.	A typical subsurface system outlet structure detail is now provided on sheet D-4.		
102	HydroCAD		DB-1 is modelling a 6" horizontal orifice. It is not clear where this is in the plans. It appears this is the HDPE/PVC tee in the outlet structure. It is assumed the bottom of the tee is capped and the top is open. The outlet pipe is an 8" pipe so, it is not clear that the tee is a 6x6x8 tee. The orifice is also modelled at elevation 134.90' which is the same elevation as the rim of the structure. This is not constructable as it would conflict with the rim. Please clarify and revise.	N/a		
103	HydroCAD		DB-2, IB-1, and IB-3 are modelling a 48"x48" orifice/grate but DB-1 does not model the grate. The current configuration of the outlet structure can't be modeled in hydroCAD due to having two layers of controlling devices (outside and inside the structure). Please explain why the approach taken is the most accurate and conservative option.	N/a		
104	HydroCAD		IB-3 is modelling a 15" pipe but the plans show 12" pipe. Please clarify.	IB-3 (Now Subsurface System-4) now correctly models a 12" outlet pipe.		



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105	HydroCAD		The proposed Tc calcs have varying (50'-100') sheet flow entries but existing Tc calcs all have the first 50' as sheet flow. Typical industry standard is to have the first 50' as sheet flow for Tc calcs. Please revise proposed Tc calcs to use sheet flow for the first 50'.	Calculations have been revised as requested.		
106	HydroCAD		The proposed Tc calcs for PWA-5C and PWA-8B have direct entries or 7.4 min and 7.3 min respectively. Typical industry practice is to only use direct entry for Tc of 6 min when calculated Tc is 6 min or less. Please revise.	The proposed Tc entries for PWA-5C and PWA-8B were based off of the Tc from the closed-drainage calculations. The Tc for these watersheds in HydroCAD have been revised to 6 min.		
107	Recharge Calcs		The recharge calcs for the subsurface system notes that the lowest invert is at 146.70 but the HydroCAD models the weir at elevation 144.70. Please revise.	Calculations have been revised as requested.		
108	Recharge Calcs/HydroCAD		The recharge calcs for IB-3 use 2.41 in/hr infiltration rate but the HydroCAD calc use 8.270 in/hr. Please confirm and revise infiltration rate.	Calculations have been revised as requested.		
109	Forebay Calcs		How was the isolator row sized? Please provide backup calculations to confirm it provides adequate pretreatment.	Isolator Row stage-storage tables are provided in the drainage report for each system.		
110	O&M Plan		The manufacturer's O&M instructions for the stormceptor (or CDS unit) and subsurface chamber system should be included in the O&M plan. Please revise. Please confirm if stormceptor or CDS unit is being proposed and revise as needed.	O&M Has been revised as requested.		