



TOWN OF WINCHESTER
PLANNING BOARD MEETING
TUESDAY, FEBRUARY 15, 2022 @ 7:00PM
REMOTE PARTICIPATION

Join Zoom Meeting:

<https://us02web.zoom.us/j/87018651369?pwd=TnVlQVRqOWQ1cnJKOWtKUUVBWVtNIQT09>

Meeting ID: 870 1865 1369

Passcode: 109946

Join by Phone

(646) 558-8656

	BUSINESS
7:00PM	Open Meeting, Updates and approve Planning Board minutes for: January 18,2022 Executive Session
7:15PM	10 Converse Place
8:15PM	North Main St. (should have 3 quotes and ready to decide)
9:00PM	Executive Session Performance Evaluation
9:30PM	Adjourn

	CORRESPONDENCE
	None

	2022 MEETINGS
Tues. March 1	7:00PM Regular Meeting, Remote Participation



TOWN OF WINCHESTER

Design Review Committee
Town Hall, Winchester, Massachusetts 01890

Juli Riemenschneider, RLA, ASLA, Chair

Ellen Spencer, Vice Chair

Adrian LeBuffe, LEED

Eileen Casciari, RA

Mary Grassi

Tracy Burhans

Jamie Devol, AIA

MEETING MINUTES

Wednesday, February 2, 2022, 7:30 pm - Meeting by Zoom

Present:, Riemenschneider, Spencer, Devol, LeBuffe, Burhans, Casciari, Grassi,
Recording Secretary Nancy Upper

- 1. Open meeting. Vote to approve January 5, 2022, minutes** - All in favor.
- 2. Aberjona Initiative Update for Conservation Commission (Con Com).**
Guest presenters: REED PUGH, Designer and Horticulturalist; ANN STORER, Climate Action Committee member.

The Aberjona Initiative is a sub-working-group of the Conservation Commission. Its two goals are to:

Restore a healthy, sustainable, beautiful, native habitat along the banks of
Winchester's downtown waterways.

Provide a foundation for:

- Cultural displays and events
 - Resident and visitor enjoyment
 - Commercial and business events
 - Town gatherings
- a. Aberjona Initiative Plan:
 - i. Restore visual access to downtown waterways.
 - ii. Add native and attractive plantings to waterways' banks.
 - iii. Create opportunities to involve other groups, such as Wright-Locke Farm and the Winchester Garden Club.
 - b. The Initiative's area of focus extends from the end of Judkins Pond at the High School, through Mill Pond and the Center Falls Dam, to Waterfield Street.

- c. The Initiative's area of immediate focus is Mill Pond between the Mt. Vernon and Main Street bridges.

Said Reed Pugh, "Mill Pond was intended to be the heartbeat in the center of Town."

- d. Accomplishments since 2018:

- i. Trimmed overgrown yews.
- ii. Removed an "immense amount" of biomass and invasive annuals.
- iii. Limited the use of herbicides.
- iv. To pay for the work, used \$40,000 of the Initiative's own funds.

- The Town has no budget for the Aberjona Initiative.
- Initiative members will ask the Town for revenue to complete the project since it benefits residents, visitors, and Town prosperity.

- e. Reed Pugh asked us to "Paint a Picture" in our minds of how a future downtown Winchester might look. Imagine:

- An improved Converse Street bridge.
- A boardwalk built over the dirt path that skirts the southeastern side of Mill Pond.
- Tiers of amphitheater seating on the hillside behind the library.
- All four sides of Mill Pond made accessible and beautiful.
- Pugh said that the Cultural Council, Select Board, and other Town councils, boards, commissions, and committees all have good ideas.

- f. In sum, the Aberjona Initiative ensures the beautification and revitalization of downtown Winchester by, in Pugh's words, "Smart Intent rather than random development."

DRC comments:

- a. You have our complete support.
- b. We will help you with this project in every way we can.
- c. We suggest you submit a proposal to the Capitol Planning Committee to secure funding.

3. **Petition 3954 - 14-16 Oak Street, Winchester MA**

Guest presenters: LARRY MURRAY, Attorney at Murray & Quill, P.C. representing Mr. and Mrs. Kevin O'Donnell; KEVIN O'DONNELL, owner of the 14-16 property and house; BETH STECCHI, the O'Donnells' daughter.

- a. Larry Murray spoke on behalf of his clients Mr. and Mrs. Kevin O'Donnell.
 - The O'Donnells have owned this property for more than 45 years.
 - The existing house is a duplex that, over the years, has suffered extensive termite damage.

- The O'Donnells wish to demolish the house and build a new, larger duplex, so their daughter Beth Stecchi, her husband, and the Stecchi's daughter (O'Donnell's granddaughter), can live close to each other.
 - Mr. Murray noted that the Historical Commission viewed plans for the new dwelling and gave "high marks" to how the proposed design would fit into the character of the neighborhood.
- b. DRC compared an archival photo of this 1876 house to illustrations of the proposed new design. DRC comments:
- The front of the existing house is historically significant, so should be preserved. The new design, by Afab Enterprises of Burlington MA, alters the look of the dwelling in number of windows, number of staircases, double-decker effect, the front end gable facing the street, etc.
 - The rear part of the existing house is narrower than the front part, making the rear portion nearly invisible from the street. The new design is for a structure with a single block of uniform width.
 - Indentations in the driveway side of the building don't line up with any other architectural element.
 - The rear section of the new design is taller than the front which creates an undesirable profile and proportion to the entire design.
 - Materials used in the original house may be superior to modern materials proposed for the new design.

DRC favors historical preservation and restoration over demolition and reconstruction.

- c. Larry Murray and Kevin O'Donnell responded:
- Murray: Despite extensive termite damage, the house could be restored, but at a very high cost.
 - O'Donnell: Inside the house, damage to the joists, window frames, etc. is *very bad*. "My wife and I would not move in there if the house is left in place."

DRC recommends unfavorable action on the proposed design. **Vote: 7-0**

Conditions:

- DRC favors restoration of the house. If restoration proves unfeasible, or unaffordable, then:
 - Demolish the old house.
 - Create a new design that is more like the original in façade, roof line, siding, materials, corner boards, porch style, and setback, with a narrower extension at the rear.
- DRC would support a new design that closely resembles the historically significant original house.

4. 10 Converse Place, Winchester MA - Project Update and Discussion.

Guest presenters: DAVID TABENKEN, LEED, Senior Associate at Hacin + Associates; IAN GILLESPIE, Owner, Gillespie and Co. Inc.; SEAN SANGER, ASLA, Principal, Copley Wolff Design Group; Sally Dale, Vice Chair, Clerk, Winchester Planning Board

- a. David Tabenken showed the presentation that he showed to the Winchester Planning Board at their February 1, 2022, meeting.
 - Tabenken’s slides displayed design modifications that, in one DRC member’s words, make “big improvements in breaking up the monolithic mass of the building.”
 - Another DRC member said, “We appreciate the “betterments of architectural details. Our big concern is still the SIZE of the building.” It remains a monolithic mass that blocks views and has adverse effects on surrounding buildings.
 - Tabenken’s slide titled MASSING MODEL AERIAL VIEW - FROM SOUTHEAST shows clearly how the proposed design dwarfs Town Hall.
- b. Just prior to the February 2, 2022, DRC meeting, the 10 Converse Place design team shared a more developed sketch plan and five sections of landscape concepts for the Mill Pond sides of the building. Features include:
 - A multi-use path that links to the Tri-Community Greenway.
 - Slope stabilization at the water’s edge in harmony with the Aberjona Initiative.
 - Stepped terracing. A DRC member commented, “The steps down to the water look like the reverse of the Center Falls dam.” And that, “An intermingling of the stone or concrete steps with vegetation would be more interesting than a monolithic stair.”
 - An overlook terrace supported by a retaining wall and a guardrail.
- c. Sean Sanger commented that the Winchester Conservation Commission gave “really good feedback” on the stepped slope.
- d. A DRC member noted there were some good ideas, but permitting and ownership issues may make them challenging to realize.
- e. Ian Gillespie mentioned that they [the developers] are working with Parterre, the same landscape company that has worked with Reed Pugh works on the Aberjona Initiative.
- f. Gillespie commented that, “We have been discussing this [project] for two years with the Planning Board.”
- g. His comment prompted a DRC member to observe that, in all this time, “We have seen only ONE design concept.”
Another member agreed: “We haven’t seen other designs to get excited about. We’ve just seen you playing with one design.”
- h. A DRC member commented that the project fails to meet the following CDB regulations. See Zoning Bylaw section 7.3.17.4 subsection 4 *Massing*:

Regardless of any preconceived development configuration for

any particular use, new development is expected to:

- *Break down any building type's typical massing to relate to the historic character and mass of Winchester's CBD.*

>>> Member noted that the proposed building will be the largest building in Town, will set a negative precedent for size, and will destroy Winchester's "small-town" character.

- *Avoid a monolithic appearance.*

>>> Member noted that every Town resident who has attended open meetings about the proposed building says it is too massive.

Member noted to see also, Zoning Bylaw section 9.5 Site Plan Review, subsection 9.5.7 Decision, sub-subsections 1, 2, and 7:

1. *Minimize unreasonable departure from the character, materials, and scale of buildings in the vicinity.*

Member noted that the proposed building departs significantly from others in the vicinity in character and scale.

2. *Minimize any adverse effect on any historic resource.*

>>> Member noted that the proposed design dwarfs the Northmark Bank building across the street, and the Brown and Stanton Block nearby.

7. *Minimize obstruction of scenic views from publicly accessible locations.*

>>> Member noted that the proposed building blocks views on all sides.

- i. As to Planned Unit Development, which includes affordable housing, a DRC member made this comment: "Let's just say it: This is a luxury condo building with a few affordable condo units." The member later emphasized, "This is a profit-driven design."
- j. Gillespie said that on March 15, 2022, the terms of some Planning Board members will expire, and new people will take their places. To vote, members need to attend all the hearings. Between March 1 and March 9, the PB will vote on the 10 Converse Place design.
- k. Sally Dale, PB Vice Chair, said, "The Planning Board will greatly value [a list of] fleshed-out, articulated suggestions" for the building's redesign — from minute details to big ideas. Dale urged DRC to clearly state design recommendations.
Continued Dale, "It is really important to take time to get this right, because this building will last 150 years."
- l. A DRC member agreed, saying, "People walking into Town will wonder how this [massive monolith] happened."
- m. At a previous meeting, DRC members requested a physical model to better understand the scale of the building in relation to the Town Center.

- The 10 Converse Place design team produced an interactive digital model, but did not give DRC enough time to review it prior to DRC's February 2, 2022, meeting.
- DRC members need ample time to study the model to make recommendations.

DRC did not vote on the February 1, 2022, design presented by the development team, because DRC members needed more time to review materials and articulate their recommendations.

- DRC scheduled a meeting for Wednesday, February 16, 2022.
- The meeting will develop design recommendations for 10 Converse Place.

5. Petition 3953 - 21 Laurel Hill Lane, Winchester MA

Guest presenters: DAVID TUELL, property owner; MICAELA TUELL, David's wife

In anticipation of a future family, the Tuells wish to construct in their steeply sloped back yard, a retaining wall that extends the length of the back yard, and at the end of the yard, two 4-foot walls perpendicular to the long wall.

- a. David Tuell showed plans of the proposed walls, and photos of the property as it looks now.
- b. Micaela said they distributed a packet of plans and pictures to neighbors, and all responded positively to the proposed wall designs.
- c. A DRC member commented that most properties in this hilly neighborhood have retaining walls.
- d. DRC landscape professionals noted that the area between the walls would be dry, so advised the Tuells to choose plants, such as evergreen spreading junipers, that require less water.

DRC recommends favorable action on the proposed walls, with three conditions: **Vote 7-0.**

Conditions:

- Instead of installing a guard rail fence, install dense plantings at the top of the walls to protect against drop-off. This should be reviewed for building code compliance by the building inspector.
- Choose plants suitable for dry conditions to grow between the walls.
- DRC agrees with the homeowners' choice of natural stone for the walls.

6. Winchester Nails & Spa Sign - 19 Thompson Street, Winchester MA

DRC Comments and recommendations:

- a. The proposed sign looks "Halloweeny."
- b. The sign is non-illuminating and will not be illuminated, so sign designers chose silver letters on a black background for visibility. The silver-on-black gives the sign still more of a Halloween effect.
- c. Choose a simpler typeface that is more legible from a distance.

- d. Decrease font size, so the “Winchester Nails & Spa” sign does not overpower the “Soul Amour” sign next to it.
- e. Simpler lettering on a white background will make this sign more compatible with other signage on this building.

7. Adjourn.

SUMMARY of Design Review Committee VOTES — February 02, 2022			
Minutes #	Item	Address	Vote
3.	Petition 3954	14-16 Oak Street	Unfavorable action 7-0 with conditions
5.	Petition 3953	21 Laurel Hill Road	Favorable action 7-0 with conditions.

Next meeting: Wednesday, February 16, 2022. Location to be announced.

Respectfully submitted by Recording Secretary Nancy Upper.

January 19, 2022

Town of Winchester Conservation Commission
Attn: Elaine Vreeland
Conservation Agent
Town of Winchester
71 Mt. Vernon Street
Winchester, MA 01890

**Reference: Response to VHB Peer Review Letter
10 Converse Place
Winchester, MA 01890**

Members of the Planning Board:

Our office has received and reviewed the peer review letter prepared by Luke Boucher, PE and Jake San Antonio, PE of Vanasse Hangen Brustlin, Inc (VHB) dated November 29, 2021. Our office has provided the following responses, where necessary, to the comments raised by Mr. Boucher, Mr. San Antonio, and VHB in their review.

FEMA 100-Year Floodplain and Regulatory Floodway

Comment #1: As proposed work and grading are proposed in close proximity to these elevations, VHB recommends that the Applicant revise the floodplain extents on the project site based on the effective floodplain elevations to demonstrate that the proposed work does not encroach into the 100-year FEMA Floodplain elevation or Regulatory Floodway.

Response #1: The existing FEMA AE Zone boundary was originally depicted based on the graphical interpretation by the project surveyor. Our office agrees that, within an AE Zone, the boundary can be shown with more precision than the FEMA mapping provides due to the inclusion of elevation data for the specific zone. The boundary has been adjusted on Sheets C1.0 - Existing Conditions Plan, C1.1 – Demolition, Removals and Protection Plan, C2.0 – Site Layout and Materials Plan, C3.0 – Grading and Drainage Plan, C4.0 – Utility Plan and C5.0 – Erosion and Sedimentation Control Plan.

Comment #2: While nearly all the proposed work is located above the 100-year FEMA Floodplain elevation (19.9 Feet NAVD88) and Regulatory Floodway, the proposed elevation 20 contour located north of WF-13 and WF-14 along the south side of the Site indicates a small amount of fill within the 100-year FEMA Floodplain elevation and Regulatory Floodway. VHB recommends

revising the grading in this area to eliminate the proposed modification to the elevation 20 contour.

Response #2: The work noted in the comment refers to the placement of riprap stabilization to protect the existing edge of Mill Pond at the emergency overflow discharge point for the underground stormwater management system. Given that this discharge point is not expected to have any outflow until the 1% annual chance (100-year) storm has occurred, and the corresponding FEMA calculated water elevation will be at flood level, we concur that the riprap protection can be removed from below the flood elevation and limited to only areas at or above elevation 19.9.

Stormwater Management Report

Comment #3: The Pre-Development Watershed Map indicates that the existing building discharges to Point of Analysis (POA) #2, Mill Pond. The building appears to have a flat roof with internal roof drains; however, the discharge location of these roof drains is not indicated on the plans. The Applicant should provide information on the existing roof drain system to confirm that it is tributary to POA #2 and does not discharge into the municipal closed drainage system on Converse Place.

Response #3: During the design of the overall project, building plans for the existing building were not available for review. The design goals for the project have always been to infiltrate as much stormwater runoff as possible while also reducing the rate and volume of runoff that goes to the municipal drainage network. Without building plans to review during design, the most conservative assumption was determined to be that the building discharged to Mill Pond and not the municipal system. Since the post development condition infiltrates 100% of the proposed building area and reduces rates and volumes to both the municipal system and Mill Pond, and only allows runoff from vegetated surfaces to flow to Mill Pond, we believe the conservative approach that was employed is appropriate. If the building is determined to have a connection to the municipal system, then the rates and volumes to the municipal system are even further reduced; however, the conclusions to the report and analysis do not change.

Comment #4: The Pre-Development HydroCAD model utilizes a timespan of 5 to 20 hours. As a result, the surface runoff volumes reported in the tables on page 6 may be underestimating total runoff volumes generated for the entire storm duration because they are excluding volumes in the beginning and end of the event. As an increase in the pre-development volumes would not result in any required changes to the design of the post-development stormwater system, it is VHB's opinion that no change is required.

Response #4: Our office agrees with this comment. The modeling was inadvertently truncated from 5 to 20 hours instead of the intended 0 to 72 hour run that was performed for the post development condition. While this does not affect the calculated peak rates for the

predevelopment model, it does slightly underestimate the total volume of runoff in the predevelopment condition. The changes are presented below.

Point of Analysis #1

2-Year Runoff Volume	5-20 hrs = 798 cf	0-72 hrs = 855 cf
10-Year Runoff Volume	5-20 hrs = 1,281 cf	0-72 hrs = 1,387 cf
25-Year Runoff Volume	5-20 hrs = 1,694 cf	0-72 hrs = 1,842 cf
2-Year Runoff Volume	5-20 hrs = 2,616 cf	0-72 hrs = 2,856 cf

Point of Analysis #2

2-Year Runoff Volume	5-20 hrs = 1,535 cf	0-72 hrs = 1,682 cf
10-Year Runoff Volume	5-20 hrs = 3,426 cf	0-72 hrs = 3,697 cf
25-Year Runoff Volume	5-20 hrs = 5,109 cf	0-72 hrs = 5,479 cf
2-Year Runoff Volume	5-20 hrs = 8,882 cf	0-72 hrs = 9,457 cf

Based on the results above, the post development condition removes a higher percentage of runoff volume from the municipal system and Mill Pond than initially reported. We agree that no changes to the design are necessary.

Comment #5: The Stormwater Management Report indicates that the project is considered a redevelopment project for the purposes of Standard 7 of the Massachusetts Stormwater Standards, but that the project has been designed to meet all of the Massachusetts Stormwater Standards. As the project results in an increase in impervious area (from 59.1% impervious under pre-development conditions to 85.8% impervious under post-development conditions), the project is not considered a redevelopment. As a result, the Applicant should revise the narrative and DEP Checklist for Stormwater Report accordingly.

Response #5: Our office agrees with this comment. The narrative and checklist have been updated accordingly.

Comment #6: Under Standard 3 – Stormwater Recharge, the Capture Area Adjustment calculation appears to be incorrect. Instead of increasing the required recharge volume, the calculation is showing that the adjustment is reducing the required recharge volume. In addition, it appears that the incorrect value for the pre-adjusted value is used in the calculation. The Applicant should revise the calculations and all associated calculations accordingly.

Response #6: The Capture Area Adjustment calculations should be revised to reflect the following:

Total Site Impervious Area = 22,213 sf

Total Impervious Area to BMP = 17,987 sf

Ratio = 22,213/17,987 = 1.23

Rv (unadjusted) = 1,111 cf

Rv (adjusted) = 1,111 cf x 1.23 = 1,366.5 cf, say 1,367 cf.

This would require a total water quality volume of 1,367 cubic feet. The static calculation for the proposed water quality volume is 7,123 cubic feet; therefore, no design changes are necessary. The calculation will be updated in the revised Stormwater Management Report.

Comment #7: Under Standard 4 – Water Quality, the Applicant indicates that the 80% TSS removal requirement is satisfied through the 80% TSS removal associated with the subsurface infiltration system. This methodology does not account for the 4,226 sf of on-site impervious area, which is approximately 19% of the total on-site impervious area. The Applicant should provide calculations demonstrating that 80% TSS removal is achieved for the entire site. The Town’s Engineering Department has indicated that it is acceptable to use a composite TSS removal rate that credits overtreatment in some areas (i.e. the subsurface infiltration system) to account for less than 80% TSS removal in others. We respectfully defer to the Conservation Commission for a determination on the acceptability of this approach.

Response #7: In order to obtain the 80% TSS removal for the entire site, additional grading and area drains have been added along the eastern portion of the building to collect and capture runoff produced from adjacent patios and bike path. This water is then directed through a water quality unit and into the proposed infiltration system. Porous pavers are proposed along the western and northern portions of the building within the property in order to provide storage and infiltration of runoff produced from these hardscaped areas. These changes can be found on sheet C3.0 and supporting calculations within the Stormwater Management Report.

Comment #8: As the project is located within soils with rapid infiltration rates, 44% TSS removal pretreatment is required, and the 1.0-inch water quality volume applies. The Applicant should revise the calculations to demonstrate compliance with this requirement.

Response #8: Calculations within the stormwater management report have been revised to reflect a 1.0 inch water quality volume. All proposed systems remain in compliance given their static storage volumes.

Comment #9: The Applicant states that additional test pits were performed in August 2021; however, test pit logs associated with these test pits were not submitted. The Applicant should submit the test pit logs to support their use of the selected ESHGW elevation or provide a calculation for an adjusted groundwater elevation based on the above.

Response #9: The test pit logs were included in the upper left corner of Sheet C3.0, Grading and Drainage Plan.

Comment #10: The LID Measures section of the DEP Checklist for Stormwater Report indicates that the project will not result in disturbance to any Wetland Resource Area; however, it appears that the proposed riprap at the outfall into Mill Pond extends into Bank and Land Under Water. The Applicant should either revise the design to eliminate this encroachment into resource areas or should revise the checklist accordingly.

Response #10: As noted in the response to Comment 2, the extent of the riprap slope has been pulled back to remain out of any Natural Resource areas.

Comment #11: The Standard 1 section of the DEP Checklist for Stormwater Report indicates that outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth and that supporting calculations are included; however, these calculations do not appear to be included in the report. The Applicant should provide these calculations.

Response #11: These calculations were inadvertently left out of the original report. Calculations documenting compliance with standard 1 have been attached to the updated Stormwater Management Report.

Comment #12: The Standard 4 section of the DEP Checklist for Stormwater Report indicates that the project is subject to a TMDL; however, no discussion is included in the narrative. The Applicant should revise the report to include discussion on compliance with any TMDLs.

Response #12: This item should not have been checked in the original documentation. The Aberjona River in this area is listed as a waterbody requiring a TMDL; however, one has not yet been established. The updated checklist is included with the updated Stormwater Management Report.

Comment #13: Section 0. Of the Operation and Maintenance Control Plan describes the 648-654 Main Street Project. The Applicant should revise this section to reflect the current project.

Response #13: This has been revised in the updated Operation and Maintenance Control Plan.

Comment #14: The Applicant should revise Figure O&M 1: Operation and Maintenance Plan to indicate the locations of the proposed area drains and riprap apron.

Response #14: This figure has been revised accordingly and included in the updated Operation and Maintenance Plan.

Comment #15: Section 5.2 of the Operation and Maintenance Control Plan indicates that "If upon visual inspection it is found that sediment has accumulated to an average depth exceeding six (6)

inches, the system should be back-flushed.” If this depth of sediment is observed in the system, it likely means that the majority of the crushed stone layer underlying the infiltration systems is fouled with sediment, preventing infiltration through the bottom of the system. Backflushing the system will likely only redistribute sediment throughout the crushed stone layer. As requested on the 648-654 Main Street project, the Applicant should revise the O&M Plan to describe the backflushing procedure in greater detail...

Response #15: The Operation and Maintenance Plan has been updated to include the language that was used for the 648 to 654 Main Street project.

Comment #16: VHB agrees with the statement made in Section 5.2 of the Operation and Maintenance Control Plan, which reads “The key component to ensuring the long-term performance of the system is to remain diligent about the maintenance of the stormwater BMP’s located upstream of the infiltration system, in this case the area drains and roof leaders. Ensuring these upstream units function as intended will help to eliminate the inflow of debris and sediment into the infiltration system.” To minimize risk for sediment to enter the system, VHB recommends that the Applicant consider providing additional treatment at the area drains.

Response #16: Our office agrees with this comment. These areas will almost certainly see higher than average concentrations of sand and sediment, especially in the winter months to provide traction during slippery conditions. In order to provide additional treatment for these areas, an inline sediment removal device (Cascade Separator CS-3) has been added to the overall treatment train. This will provide approximately 80% TSS removal in advance of the runoff entering the infiltration system.

Comment #17: In accordance with the Drainage Design Standards included in Section 2.0 of the Winchester Checklist of Items for Notice of Intent Filings, the calculations indicate that the proposed stormwater management system has been sized to reduce peak runoff rates and total runoff volumes under post-development conditions for the 2-, 10-, 25-, and 100-yr storm events.

Response #17: Our office agrees and no response is required.

Comment #18: The Groundwater Mounding Calculation included in the Stormwater Management Report uses a value of 148.00 for the horizontal hydraulic conductivity. Per the notes included in the USGS calculation used by the Applicant, the horizontal hydraulic conductivity is typically assumed to be 10x the vertical hydraulic conductivity. Given the 2.41 in/hr value assumed for vertical hydraulic conductivity elsewhere in the report, a value of approximately 48 would be anticipated. While the value used in the calculation is consistent with the table provided on page 133 of the report, the Applicant should provide documentation for this assumption.

Response #18: The value used in the model was obtained from MassDEP groundwater mounding seminar from 2012. The cover and the data sheet for the presentation material is included in the updated Stormwater Management Report. In the event the value for the

horizontal hydraulic conductivity were to be changed from 148 to 48, the maximum mound would that is calculated would change from 0.325 feet to 0.782 feet. The resulting mound would still provide separation from the bottom of the system to the high point of the mound to drain the water quality volume, and no surface breakout would occur.

Comment #19: The existing conditions plan indicates that the catch basin in the parking lot is full of water and that the discharge location of the pipe is unknown. While a discharge pipe was not observed during VHB's visual inspection of the slope adjacent to Mill Pond, it is possible that such a pipe exists. VHB recommends that the catch basin be cleaned and the Applicant determine the discharge location, either through visual inspection and/or through research of plans for the previous development. If the existing catch basin discharges directly to Mill Pond, the Applicant may have an opportunity to connect the proposed discharge from the subsurface infiltration system into the existing pipe, which could eliminate the need for work within the Regulated Floodway, Bank, and Land Under Water.

Comment #19: Our office does not see the point in cleaning the catch basin to determine the discharge location. The structure will be removed and any pipes that leave the structure will be sealed and abandoned in place. Even if a discharge location were to be discovered, we are of the opinion that the emergency overflow as designed, with the modified riprap pad, would be a better option for the subsurface infiltration system discharge. This location is not expected to discharge any runoff until the 100-year storm event (8.92 inches of rainfall in 24 hours) has been exceeded. The updated riprap apron will eliminate the proposed work within the regulated areas noted in the comment.

Comment #20: The Applicant should consider the potential for stormwater to travel in the pipe bedding material at the discharge pipe from the subsurface infiltration system. VHB recommends that the Applicant add an anti-seep collar on this discharge pipe to ensure the system functions as intended. An anti-seep collar detail is already included on Sheet C6.2.

Response #20: An anti-seep collar has been added to the updated plans as shown on Sheet C3.0, Grading and Drainage Plan.

Comment #21: The R-Tank Infiltration System Detail on Sheet C6.1 appears to indicate that the material above the system is different than the material on the sides and below the system. The HydroCAD model and callouts on Sheet C3.0 indicate that 12 inches of crushed stone is proposed over the system chambers. The Applicant should provide documentation that the crushed stone meets the top backfill requirements indicated in the detail.

Response #21: The R-Tank specifications call for "Free draining stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System)" to be placed for at least the first 12" above the system. The detail on Sheet C6.1 has been updated accordingly.

Comment #22: While the “R-Tank” subsurface infiltration/detention systems appear to be proposed in only non-vehicular areas, subject only to pedestrian traffic, proper installation and backfilling of these systems will still be critical to retaining their structural integrity. Particular care should be paid regarding the overlapping and securing of the geotextile fabric surrounding each system and the placement of GeoGrid above the system. We respectfully recommend that the Planning Board require the design engineer or manufacturer be present on-site during the installation of these systems and provide written affidavit certifying that the installation was performed in accordance with manufacturer’s requirements.

Response #22: Our office does not object to this proposed condition.

Comment #23: Sheet C2.0. indicates that permeable pavers are proposed in Converse Place. The detail on Sheet C6.0 indicates that the drainage system of the permeable pavement system should be designed to accommodate expected infiltration rates, storage capacities, outlet flow rates, and other site specific conditions” and that the “subgrade should be sloped to aid in drainage.” The Applicant should provide additional information on how this system will function, including whether or not existing inlet structures along Converse Place will be retained and where water in the reservoir layer will discharge if it is unable to infiltrate through the underlying geotextile fabric and compacted subgrade.

Response #23: The proposed redesign for Converse Place will no longer be part of the project.

Sincerely,

Beals Associates, Inc.