September 27, 2024

Mr. Charles E. Millard, Jr.
Chair Bristol Planning Board
Town of Bristol Town Hall
10 Court Street
Bristol, RI 02809

RE: Master Plan Phase
Mt. Hope High School

Dear Mr. Millard and Members of the Bristol Planning Board:

This letter is written **in opposition to the granting** of Master Plan approval, and/or granting any waivers/deferrals in the application for the required RIDEM permits. The Master Plan – Supplemental Information provided by Pare Corporation, dated September 25, 2024, regarding Flood Plain, is both non-responsive and quite frankly, in my opinion, insulting to the neighbors' concerns with the existing flood problems.

The main concern is the flooding issue that is currently affecting our neighborhood, the high school, Chestnut Street, and adjacent areas of the Silver Creek watershed. The flooding problems are progressively getting worst and need to be addressed in a responsible and comprehensive manner. I believe the best way to address the flooding problem is to do the following:

Recommendations

1. Update the Silver Creek Drainage study using the latest version of the HEC RAS (Version 6.5 February, 2024) model and input the current increased rainfall amounts into the model.
2. Use the HEC RAS model to determine the impact of:
3. *existing (since 2007) and proposed new developments within the watershed.
   *the impact of filling in 40,000 square feet of wetlands upstream.
   *the impact of removing the old high school building. Could currently be acting as a dam blocking flood runoff to the high school property.
   *the decision to have the existing culverts remain.
   *the impact of sea level rise.
   the ability of the culvert(s) under St Mary's Cemetery to convey flood waters and their condition.

The Recommendations are based on the following Key Findings:

Key Findings From Master Plan---Supplemental Information

- **Using FEMA Map to Locate New High School is a Risk Not Worth Taking**

The supplemental information ignores the flood problems and bases its response on an outdated and erroneous FEMA map by citing Bristol Code of Ordinance Section 28-302

and Section 29-303. The Professional Consultants use the excuse that the FEMA map is the 'official' flood plain designation, and that the Beta study did not submit a 'Letter of Map Revision' to change the flood elevations.

The mere fact the FEMA map identifies: "Area of Minimal Flood Hazard" for Chestnut Street and the area in front of the high school shows that the map is not only outdated but inaccurate. This area is well known for flooding and traffic closures. Using *Rogers Free Library* digitized Bristol Phoenix, flooding and the closure of Chestnut Street was noted at least 14 times from 2001-2010. A police officer is quoted as saying per Bristol Phoenix "...and Chestnut Street saw flooding so bad that the police said a current running in the water was strong enough to sweep people off their feet." (Bristol Phoenix, October 20, 2005, page 12.)

It is our opinion that to locate a $200 (two hundred) million-dollar new high school based on a technicality that the FEMA map is correct, and Beta did not apply for a Letter of Map Revision is a risk not worth taking. This approach is beyond comprehension as it defies common sense and the overwhelming evidence of the flood problem affecting the high school area as well as all property within the Silver Creek Watershed.

- **BWRSD Informational Sessions and Design Team Outreach**

During these meetings we were told that our flooding concerns would be taken seriously; that there is a lot of oversight, including RIDEM permitting, to ensure flooding issues would be addressed. Furthermore, in an article written by Ethan Hartley for East Bay RI dated July 26, 2023, he asked the question of BWRSD: "if plans took into consideration rising sea levels and increased incidents of heavy rainfalls," the reply was: "This would be better answered by the professional on our design team. But I do know that planning for climate change has been top-of-mind,..."

- **Disconnect From What Was Assured.**

We are now at a point in realizing that the flooding problems within our neighborhood, as well as all property south of the Silver Creek Watershed to Silver Creek Bridge on Hope Street are not being properly addressed with the most accurate and recent data. It is our opinion that the Professional Consultants are not considering climate change by relying on a 2014 FEMA Map. Moreover, BWRSD is requesting waivers of State permits required for submission at the Preliminary Plan stage of review with the following permits to be provided as a condition of approval to be submitted prior to Final Plan Review. Such a waiver or deferral is contrary to what BWRSD assured; the argument that permits are provided as a condition of approval prior to Final Review is questionable and problematic.

- **RI Coastal Resources Management Council Questions Reliability of FEMA Maps**

The use of FEMA maps for flood plain designation has been determined to be unreliable by CRMC "These maps however are typically out of date and based on historical flooding and past development. They don't anticipate climate change trends, they often ignore rising sea levels, and they don't account for rapidly expanding development in flood prone suburban regions according to critics." The article continues to say that "Fugate (former Director CRMC) noted that FEMA maps are fundamentally inaccurate because of the geographical points they rely on called transits are two widely spaced". (eco' RI news; June 15, 2018). The Beta study had 23 sub watersheds and nearly 30 transits including Elbow Creek. Elbow Creek connects to Silver Creek in the high school area.

It is interesting to note that the FIS, in which the FEMA map is based on, did not consider the impact of sea levels. The FIS study said, "based on the results of the new coastal analysis, riverine backwater elevations have changed but are not incorporated into the new coastal study. The backwater elevations for East Branch Silver Creek, Walker Creek West Branch Creek will need to be updated in future revisions" (Flood Insurance Study, FEMA, 2013, p.12)

- **Acknowledge the Serious Flooding Problems and Perform a Responsible and Comprehensive Examination**

Let's not repeat the mistakes of the past. Flooding is serious and the impact of climate change worsens it. To disregard the flooding concerns is irresponsible. Therefore, it is critical that the most updated technical resources and tools are used.

It's worth noting that the BWRSC Professional Consultants conferred with U.S. Army Corps of Engineers regarding the special study of the Silver Creek Watershed. And they were told there is no preliminary data available. Moreover, the Professional Consultants concluded: "At this time, the Study does not include information that would supersede the FEMA Flooding Mapping depicted in the Master Plan." (Master Plan—Supplemental p. 3) Therefore, if there is no preliminary data available, how can the Professional Consultants conclude that the flood elevations would not change. The question then becomes how do the Professional Consultants plan on dealing with and when the revised FEMA study does show changes in flood elevations?

Summary of Key Findings From Master Plan-September 12

- **Flooding exists in our neighborhood, at the high school, at Chestnut Street, and adjacent areas of the Silver Creek watershed.** The problem of flooding was recently confirmed by the September 2nd, 2021 storm event that closed streets including Chestnut and flooded properly including Mount Hope high school. That storm event had a much smaller rainfall amount (essentially equal to a 25-year

storm event) than what would have occurred with a 100 -year storm event, in which the flood plain designation in elevations are based.

- **There is a proposed hotel development filling in 40,000 square feet of wetlands upstream of the new school site,** which potentially could increase flooding in the proposed location of the new high school. Potential increase in flooding from this proposed hotel development is a concern of the neighborhood, as expressed in a petition signed by over 100 residents. Also, many letters were written in opposition to DEM granting the permit without the hotel applicant performing the proper analysis of potential increase in downstream flooding. The Town Council also wrote a letter to DEM stressing the flooding concerns and included the Silver Creek drainage study to RIDEM quoting from there letter "that provides a comprehensive analysis of the area and highlights relevant factors." Additionally, the council stated there needs to be careful review because of the potential impact on construction of the new high school.
- **The use of an outdated flood map, which is included in the Master Plan Report.and the absence of the 2007 Silver Creek drainage study.** The flood plain (FEMA) identified in the Master Plan report is based on a FEMA flood insurance study dated February 21, 2013. The map National Flood Hazard Layer Firmette is based on the 2013 FIS that states "hydraulic analysis for the East Branch Ssilver Creek was obtained from the original FIS for the Town of Bristol (US Department of Urban and Housing Development 1971)"
- **The Town of Bristol commissioned Silver Creek Drainage Study,** Bristol RI (Beta Engineers-Scientists, November 2007). The Silver Creek Study utilized HEC RAS which is the proper method or the standard of practice for flood plain analysis. The analysis of the Silver Creek study showed potential increases in the flood elevations, including in the area of the high school campus.
- **Rainfall amounts have increased**. Changes have been made since the FEMA and Beta studies. The Rhode Island Stormwater Design and Installation Manual (RIDEM and CRMC, 2015) increased the rainfall amount associated with the 100-year Storm Event. Therefore, increased rainfall amounts will increase runoff that will have the potential to further increase flood elevation.
- **Storm events are occurring more frequently** and more significantly.
  In a newspaper article from the Providence Journal dated September the 7, 2022 It said "we're in a different time zone now' said Boving who studies hydrology. Historical design parameters can be thrown out of the window where in a new climate what was 100-year storm back then is more like a 25 or 10 year storm today". (Providence Journal, September 7, 2022, p.10A)
- **There is a rise in sea level** that restrict flow and causes backup again increasing flood areas and elevations.
- **Stormwater Management proposed by BWRSD is not addressing the serious flood problem**. The intent of stormwater management is to mitigate the increase

in stormwater flow rate, resulting from additional impervious areas to predevelopment rates. Generally, this is accomplished by detaining the stormwater and releasing it at a controlled rate similar to the predevelopment rate. One of the concerns with this approach is what RIDEM classified as "Coincidental peaks". "...it is possible that upstream peak discharge may arrive at the same time a downstream structure is releasing its peak discharge, thus increasing the total discharge" (*Rhode Islan Stormwater Design and Installation Manual,* RIDEM CRMC, 2015 p3-20). BWRSD and the Consultants must understand and take the existing flooding issue seriously and perform the proper analysis. Stormwater Management is not the proper examination for flood problems.

We understand the need to construct a new high school and we also understand the project schedule, but we feel it is necessary to do the proper examination. Let's not repeat the mistakes of the past by exacerbating an already flooding problem or by locating the high school in a flood prone area.

Therefore, we request that **the Planning Board does not approve the granting** of Master Plan approval, and/or granting any waivers/deferrals in the application for the required RIDEM permits.

Thank you for your attention to this request. I will be happy to answer any questions that you may have.

Sincerely:

Edward J Spinard

Edward J Spinard
35 Dartmouth Street

cc: Diane Williamson Director of Community Development