



Re-Envisioning Burlington High School – COA Level II Zoning Application Project Narrative

Submitted December 23, 2020

Note to readers - this application has been submitted electronically, with no hard copies. To facilitate review, the COA Level II Checklist below is a “live document” whereby the highlighted areas may be clicked on to jump directly to those content areas of the application. Each of these individual components have been provided with a link to return directly to the checklist. Please note that some sections contain multiple pages and may load slowly. The content areas of the submission have been placed in the order they are listed on the checklist, allowing readers to scroll through the submission sequentially, as with a paper submission. Feedback on the format is welcome.

General Project Description

Burlington School District (BSD) is excited to present their Burlington High School Re-Envisioning project. Generally, the improvements include three additions, significant site improvements to parking areas and improved accessibility to buildings. BSD embarked on this endeavor to address existing deficiencies such as: not meeting current accessibility standards; crumbling infrastructure; outdated plumbing; electrical, heating and ventilation systems; and the school’s “1960” style classrooms.

Burlington School District proposes to reconfigure and modernize Burlington High School (BHS). Three additions will be constructed to consolidate programs, improve accessibility and circulation, and enhance security.

1. The main addition is a three-story structure at the main entrance to house administrative and support functions, provide a new secure entrance vestibule, replace the C Building classrooms, and provide for a modernized library more conveniently located for both student and public access. An auxiliary gym to be located near the main building entrance remains an option but is budget dependent. This application seeks approval for both construction of the auxiliary gym and a free-standing greenhouse to be located on the existing C Building footprint.
2. A second three-story addition will connect A, B, D, and F Buildings near the BHS cafeteria and house an elevator, the Intensive Special Needs (ISN) suite and multiple Science Labs. It will provide a new direct connection between BHS and Burlington Technical Center (BTC).
3. The third addition is located south of the existing gymnasium and provides for a new four-story elevator and egress stair connecting all four levels of A Building and an interior accessible route to the music rooms located at the ground level. The On Top program will continue to be located on the fourth floor of A building.
4. Aging infrastructure will be replaced to decrease maintenance costs and improve energy efficiency. Primary BHS (A, B, and D Buildings) infrastructure upgrades include:
 - Addition of automatic sprinkler system throughout
 - New addressable fire alarm system throughout

- New interior plumbing piping and fixtures
 - New LED lighting and low voltage controls
 - Addition of cooling throughout
 - New heating and ventilation throughout
 - New interior finishes throughout
 - New operable windows
 - New roofs
5. The scope of work for BTC programs housed in F Building will be limited to ADA and Building Code required improvements.
6. The site will see significant infrastructure and site circulation improvements. Major sitework features of the proposal include:
- Regraded parking lot to improve accessibility and traffic flow
 - Stormwater treatment to meet State and City regulations
 - Relocated electrical service with provisions to connect a portable generator for emergency power
 - Improved traffic circulation routes able to support fire department vehicle access
 - New underground utility (sewer, water, power, gas, and stormwater) infrastructure
 - Additional ADA parking distributed across the site
 - Additional and conveniently located bicycle parking
 - Electric Vehicle charging stations
7. C Building will be demolished and E Building will remain on site to be used for possible future BSD programming, with no renovations planned at this time.
8. The project will address the presence of pre-existing asbestos, urban soils, and PCB contamination.

No change in school attendance, staffing or event functions outside the normal year to year variation is anticipated. As a result of these improvements, no additional impacts are anticipated concerning trip ends, water supply, and wastewater disposal.

Background and summary notes on specific sections of the application are provided below.

Stormwater Treatment

The existing high school campus has very little stormwater treatment and mitigation measures. Currently there is a sand filter for the wood chip plant and a pair of dry ponds for the athletic facility on the south side of Institute Road. This project proposes to construct two large gravel wetlands with pre-treatment forebays. The combined wetland will collect and treat over 13 acres of impervious surfaces. The state-of-the-art gravel wetlands not only remove a portion of phosphorous, nitrogen and sediment, they reduce the peak runoff from intense stormwater events. See site plan drawings for proposed plans and details as well as existing conditions.

Building Height

This is a complicated issue. Determining existing building heights per 5.2.6 and the Zoning Administrators 2009 Administrative Interpretation required defining what is a separate building.

While the District uses the nomenclature “Building A”, “Building B”, “Building C”, etc. through and including Building H, some of the “separate” buildings actually share continuous foundation walls and provide for direct interior access between the pair of “buildings” involved. This applies to

- a) Buildings A and B
- b) Buildings D and F

One of the primary objectives of this project is to consolidate the program into a more accessible and compact arrangement. The proposed floor plans indeed further blur the divisions not only between the buildings in each pair but between the two pairs as well.

Buildings G (housing the gas boilers) and H (the woodchip building) are free-standing, unconnected structures which neither share continuous foundation walls nor have direct interior access to any of the other buildings. As such, they seem to clearly qualify as separate buildings. As there are no plans to modify the footprint or building height of either, we have not included them any further in our current evaluation.

While Buildings C and E have independent foundations, they are programmatically integral and physically connected components of the school. There are multiple above grade connectors that provide for direct interior access to both buildings. Given that the renovated facility will be converted from a series of separate “buildings” to a single unified structure with no clear or logical separation into separate “buildings”, it is proposed here to compare the single proposed renovated building, encompassing the existing A, B, D, and F buildings along with all of the additions, to the combined (and currently connected) A, B, C, D, E, and F Buildings.

The calculations for this comparison are provided in the plans submitted as part of this application. These calculations demonstrate that the Calculated Average Grade Elevation remains unchanged and the High Roof Elevation is decreased, resulting in a reduction of the Calculated Building Height and a reduction of the existing non-conformity.

Parking

The proposed project includes 324 parking spaces, a net decrease of 6 spaces from the current total. This is well below what the Ordinance requires. A Waiver Request and the associated Parking Management Plan is attached. The largest number of spaces are in the student lot south of Institute Road. Three spaces have been converted to two HCP spaces resulting in a net decrease of one space. This project makes large improvements to the staff parking lot east of the school and north of Institute Road. The lot is located further to the east and has a dedicated entrance lane and exit lane. The proposed parking lot is much less steep and incorporates planted islands to break up the current sea of asphalt. The proposed parking lot also includes a dedicated visitor parking/student drop-off/pick-up lane, electric car charging stations and many accessible parking spaces. See the Overall Landscape Layout and Materials Plan (Sheet L-100 ALT) for details and a summary.

Bicycle Parking

The exit lane of the staff parking lot has a dedicated bike lane, which leads to bike parking spaces adjacent to the main entrance of the school. A second larger bike parking area is located north of the drop off lane and a third smaller area is provided at the southwest lot nearer the ball fields. A total of 120 spaces are proposed. See the Overall Landscape Layout and Materials Plan (Sheet L-100 ALT) for details and a summary. The largest area is designed to accommodate a future canopy. The canopy is not proposed to be constructed at this time but approval is requested for future installation. Specification sheets for the canopy are included in the submission.

Overlay Districts/Natural Areas Assessment

The proposed project involves the Natural Resource Protection Overlay District to the extent there is a disturbance to the wooded area on the hillside between the existing school and North Avenue caused by the construction of the east classroom addition and the demolition activities associated with the removal of C Building. To that end, a Natural Areas Assessment was commissioned by the District. Attached is the report issued by Gilman & Briggs Environmental, dated December 11, 2020. The report concludes that “the Project will not have an undue adverse impact on the natural community and its composition through the rest of the site” provided “the forest edge be avoided as much as possible, and that tree-cutting be minimized” and further provided that “the area of the existing Building C, which will be removed, will be regraded and returned to a vegetated condition.”

Lot Coverage

Lot Coverage has been calculated discounting slopes between 15% and 30% and excluding slopes greater than 30%. There are no bodies of water present on the site. A slope analysis has been submitted with the Lot Coverage Plan. At 33.98%, the existing Lot Coverage exceeds the allowable limits. The proposed plan increases Lot Coverage by 1.2% to 35.18%. Lot Coverage is not a reviewable criterion for this project, but it is noted that the increase has been kept to the minimum required to allow BSD to offer a safe, secure, and functional facility.

Rendered Building Elevations

As with Lot Coverage, review of building elevations and materials are limited for this project. The two main elevations – the south elevation as viewed from Institute Road and the east elevation as viewed from North Avenue – have been submitted. Both elevations render rooftop equipment visible from these public streets. The elevations have been submitted in two formats.

1. Straight orthogonal architectural elevations and
2. Perspective elevations which realistically foreshorten objects behind the primary elevation plane, especially as relates to screened mechanical equipment located back from the edge of the roof.

Cut sheets and specifications for the screening have been included in the submission.

Specification Sheets

Specification sheets for the following are included in this submission:

- Windows and Glazing
- Louvered Mechanical Equipment Screening
- Cementitious Siding
- Exterior Light Fixtures
- Rooftop Mechanical Equipment
- Greenhouse
- Bollards
- Outdoor Benches
- Bicycle Racks
- Bicycle Canopies

Landscape Design Narrative

The proposed landscape plan greatly increases the biodiversity of the high school landscape and adheres to many current best practices. A plant list of primarily native plant material is proposed that includes trees, shrubs, grasses, perennials and native seed mixes for both meadows and detention areas.

Previous large lawn areas are being replaced with seed mixes that will have native grasses and wildflowers, creating habitat and food sources for many small animals and pollinators. These areas will also only require annual mowing reducing maintenance expense and lawn mowing emissions.

The new main parking lot has planting islands with shrub plantings and trees shading much of the paving, reducing the heat island effect and slowing down stormwater runoff. Plant material adjacent to pavement has been selected for toleration of de-icing chemicals. Overall, the planting plan has been tailored for visual interest during the seasons that school is in session, providing fall and winter berries and foliage along with spring blooms.

The stormwater basins are planted with a mixture of container grown and plant plugs along with seed to assure plant establishment within the first growing season.

Site Lighting

A site lighting plan including illumination levels is included as part of the Landscape Design drawings.

Erosion Prevention and Sediment Control (EPSC) Plan

A complete EPSC set of drawings is included at the end of the submission and can be easily separated from the remainder of the application. The EPSC set includes the plan sheets plus two of the detail sheets included in the site plan submission above.

Project Completion Extension Request

As indicated in the EPSC plans, the proposed site construction schedule extends from Summer 2021 through Summer 2025, a period of more than four years. The school district requests the permit timeframe be extended, at a minimum, to accommodate the proposed schedule. If possible, the preference would be to extend the permit timeframe a full five years from April 1, 2021 through March 31, 2026.